

# PRODUCT CATALOGUE

# GRIP

Innovative and solution  
driven tool changer  
technology

GET YOUR GRIP ON.



---

"Our creativity is your added value."

"My responsibility is to create a cooperative and constructive working environment which allows my team to be at its creative best." Hasan Canti

## The GRIP Team

We are always at your service

## Sustainability



Grip goes green

We have one planet. It is our duty to become more efficient, conserve energy, and reduce our CO<sub>2</sub> Footprint. To be more conscious and sustainable in our choices.

## Social Responsibility

Be socially responsible in our thinking and actions. Improve the lives of those less fortunate and donate to charities and organizations.

---



---

# TABLE OF CONTENT

---

## Manual tool changers

SHWConnector

SHW-PConnector

MGWConnector

SWSConnector

SWAConnector

BaseConnector SHW160

BaseConnector SWS200

SHSConnector

---

## Automatic tool changers

AC 063

---

## Feeding through

SEKEnergyCoupling

MEK-PM Multi-Energy-Coupling

MEK Multi-Energy-Coupling

MEK-R Multi-Energy-Coupling

DDF Multi Swivel

---

## Gripping

GP Parallel Gripper

GZ Angular Gripper

GI Internal Gripper

GIS Internal Gripper Short

---

## Accessories

ZS Centering disc

YAY-Adapter

RSGU Signal transmitter with LED

VKS Square Socket Key

VS2 Safety Lock

ACTray

---

# MANUAL TOOL CHANGERS

One connection – 1000 possibilities

- Lightweight, robust, accurate, fast, efficient, intuitive
- Made of high-strength aluminium or steel
- Connection interface according to ISO 9409-1
- Simple, fast and intuitive operation
- Cost-effective
- Quickly accessible



Innovative, precise, modern, intuitive and fast - these are the main characteristics of the Tool-Changer from the German manufacturer GRIP GmbH. Standardize the interface for your industrial robot or cobot - connect and disconnect any tool in seconds.

---

## SHW Connector

The SHW end of arm tool changer consists of a cylindrical bolt which locks the upper and lower assembly together. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the end of arm tools are correctly aligned with the robot arm.



## SHW-P Connector

The SHW-P Connector is an evolution of the SHW Connector.

The SHW-P Connector has integrated pneumatic feed-throughs which allow it to be used in wider variety of applications. The new SHW-P tool changer is 100% compatible with the standard SHW Connector.



## MGW Connector

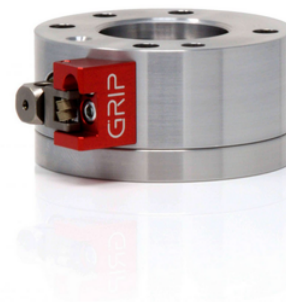
The MGW is our universal tool changer for almost every application and we have made it even better! The new system is of higher quality and offers more safety and accuracy. The innovations are a response to the current requirements of our customers. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.



## SWS Connector

The SWS Connector is our tool changer for applications with increased force and torque loads. The semi-cylindrical bolt accurately joins the upper and lower assembly without play. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

---



## SWA Connector

The SWA Connector has a very low-profile tool changer for applications with limited space. The transverse screw clamps the upper and lower assembly of the SWA with two wedge-shaped locking flanges, creating a form-fit without any play.

---



## Base Connector SHW160 & SWS200

They allow quick and easy removal of the entire robot arm. The robot arm is bolted to the quick connect system, which in turn is bolted to the table or cell. This manual connection system allows companies to use the same robot in multiple different cells without having to unscrew the robot each time. A simple lever allows the robot to be released from its current position and moved to a new position. The whole process takes only a few seconds. This allows companies to use the robots they have more flexibly and optimise the use of their resources.

---



## SHS Connector

The SHS Connector - the original one with the blue hand lever can be purchased directly from the manufacturer. The thrust lever system was developed by GRIP over 10 years ago and is among the most popular manual tool changers in the world. It is available for immediate delivery.

---



# SHW CONNECTOR

The SHW Connector is a manual end of arm tool changer with an optimized locking mechanism. The tool changer consists of a cylindrical bolt which locks the upper and lower assembly together. A centering disc can be installed on both the upper assembly(robot side) and lower assembly(tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

## SHW Connector Advantages:

- Interface according to DIN EN ISO 9409-1
- High repeatability < 0.02 mm
- Durable – over 5000 application changes with no loss in accuracy
- Withstands high loads with low dead weight
- Toolless due to integrated operating lever
- Improved operating lever with pure folding movement
- Intuitive operation: can be released and closed with one hand
- Lightweight made of high-strength aluminum, anodized
- Integrated mounting surface for energy feed-through
- Locking pin secures the hand lever against unintentional release

## SIZES

SHW050

SHW063

SHW080

SHW100

SHW125

SHW160



# G-SHW050

## Technical specifications

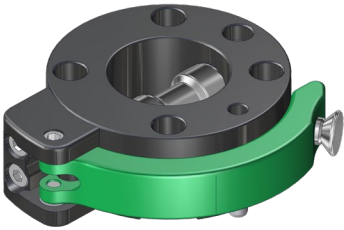
GRIP

### Operating mode:

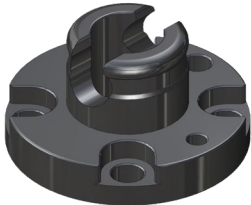
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Interface according to DIN EN ISO 9409-1

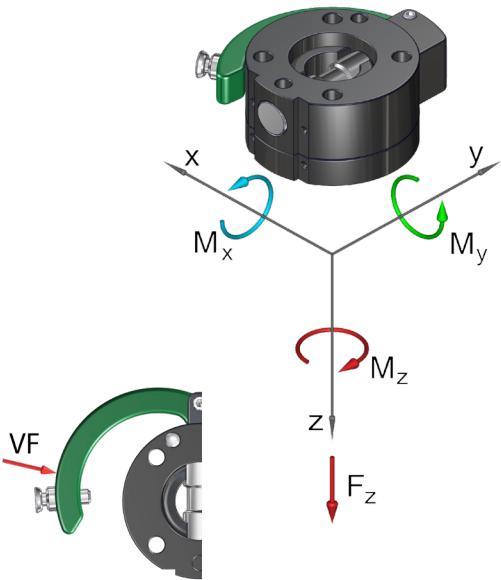


1



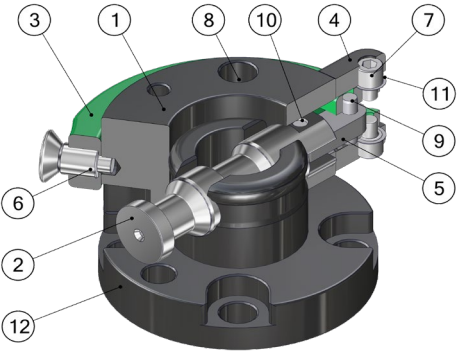
2

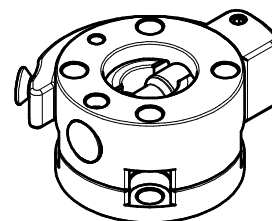
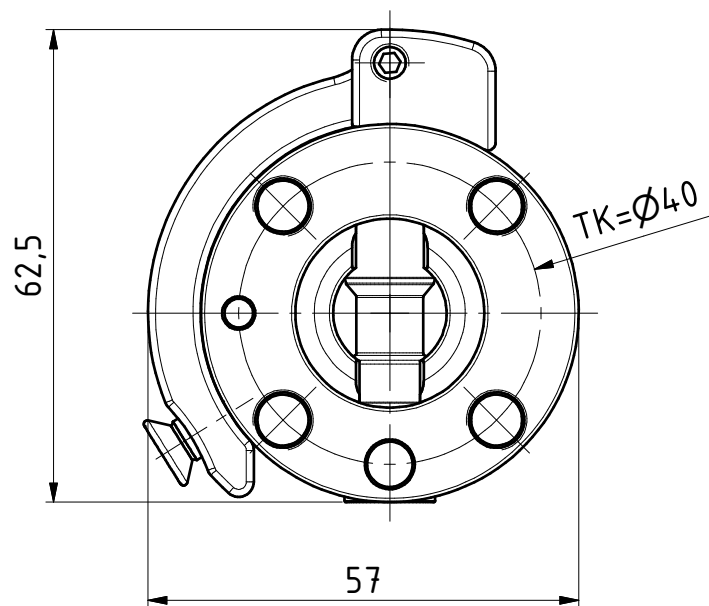
Technical specifications		SHW050
Basic material		Al. anod.
External diameter x height [mm]		50 x 32
Pitch circle diameter [mm]		40
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		540
Compression -Fz [kN]		48
Torsion Mz [Nm]		54
Bending Mx, My [Nm]		50
Mass [kg]	upper assembly	0,13
	lower assembly	0,05
Recommended load [kg]		8* / 12**
Locking force VF [N]		4 - 50
Locking stroke VH [mm]		0 - 0,8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

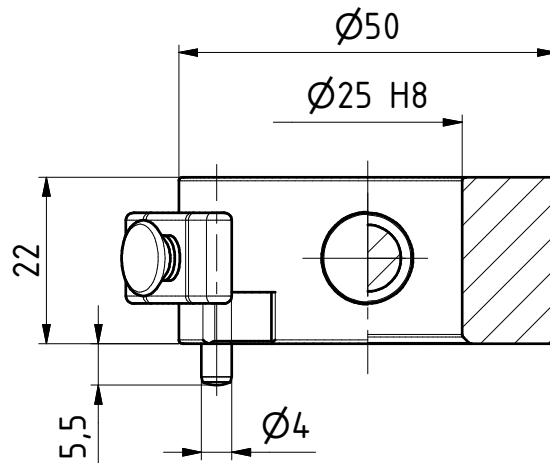
Thrust lever change system Ø50, drilled acc. to ISO...	
G-SHW050-20	upper assembly, Al, anodized
G-SHW050-2U	lower assembly, Al, anodized



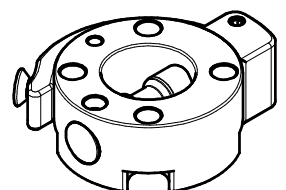
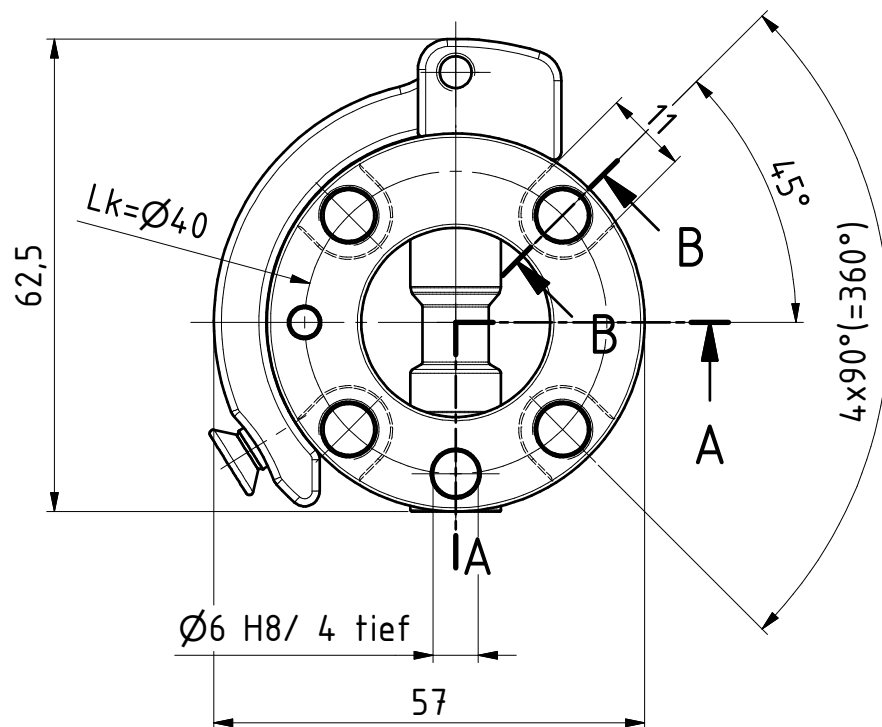
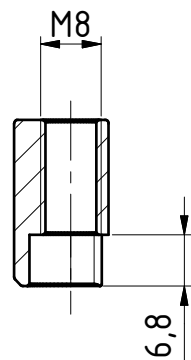


**GRIP**  
GRIP GmbH Handhabungstechnik

A-A



B-B

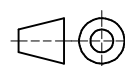


Datum 27.08.2021

Maßstab 1:1

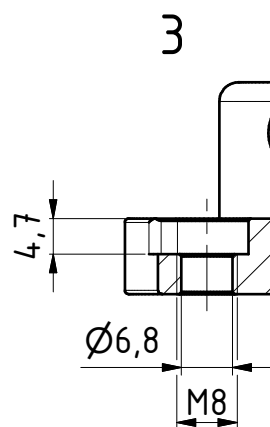
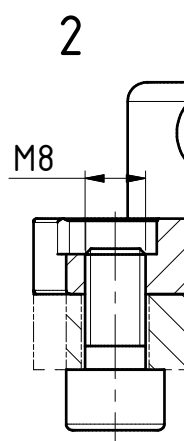
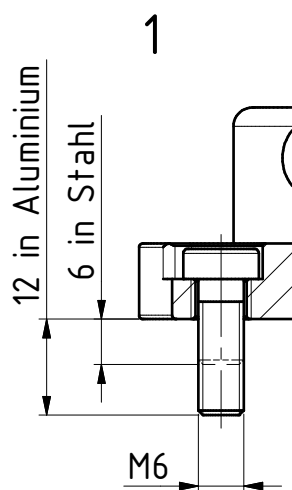
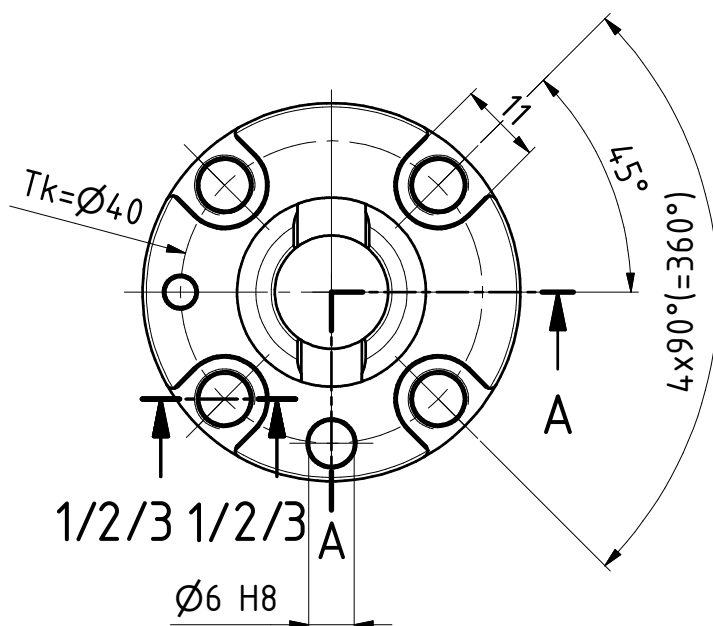
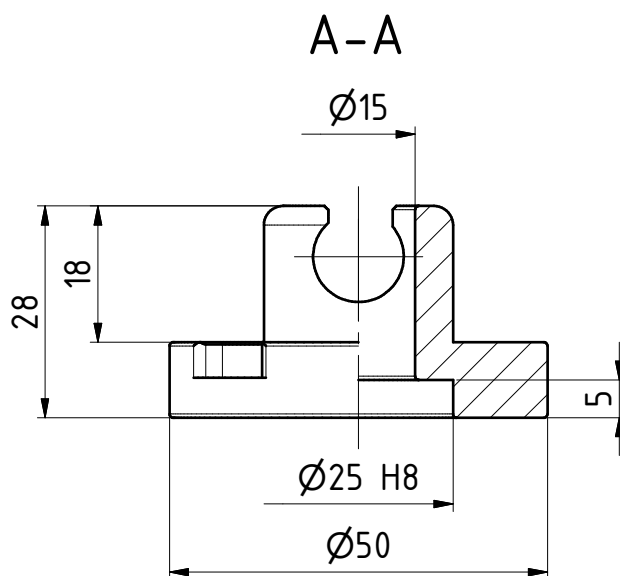
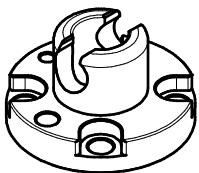
Zeichnungsnummer

G-SHW050-20



**GRIP**  
GRIP GmbH Handhabungstechnik



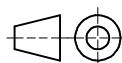


Datum 27.08.2021

Maßstab 1:1

Zeichnungsnummer

G-SHW050-2U



**GRIP**

GRIP GmbH Handhabungstechnik

# G-SHW063

## Technical specifications

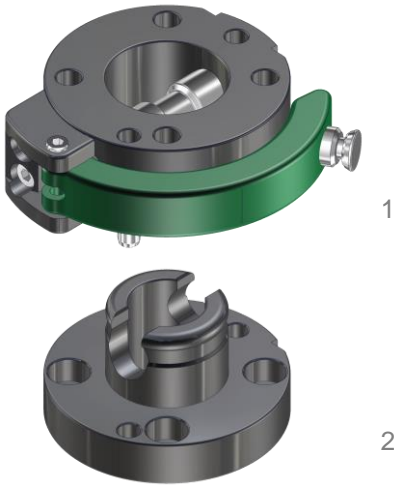
GRIP

### Operating mode:

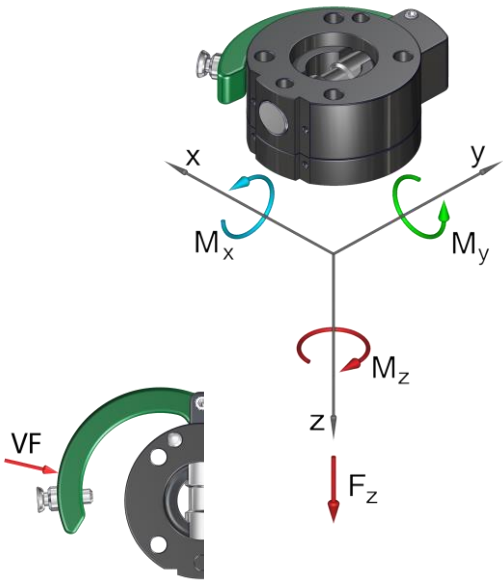
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of a power coupling **SEK** for electrical and pneum. ducts
- Interface according to DIN EN ISO 9409-1



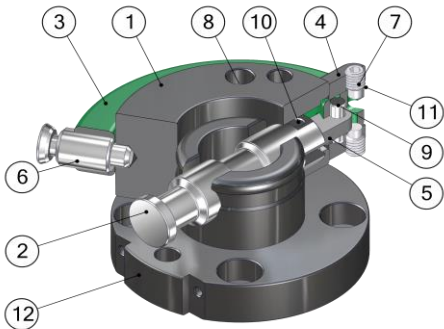
Technical specifications		SHW063
Basic material		Al. anod.
External diameter x height [mm]		63 x 38
Pitch circle diameter [mm]		50
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		700
Compression -Fz [kN]		80
Torsion Mz [Nm]		80
Bending Mx, My [Nm]		70
Mass [kg]	upper assembly	0,25
	lower assembly	0,1
Recommended load [kg]		18* / 24**
Locking force VF [N]		4 - 50
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



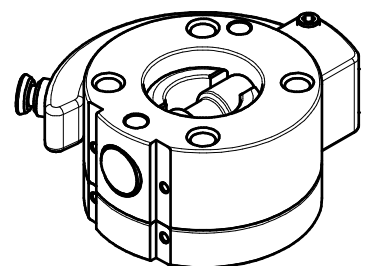
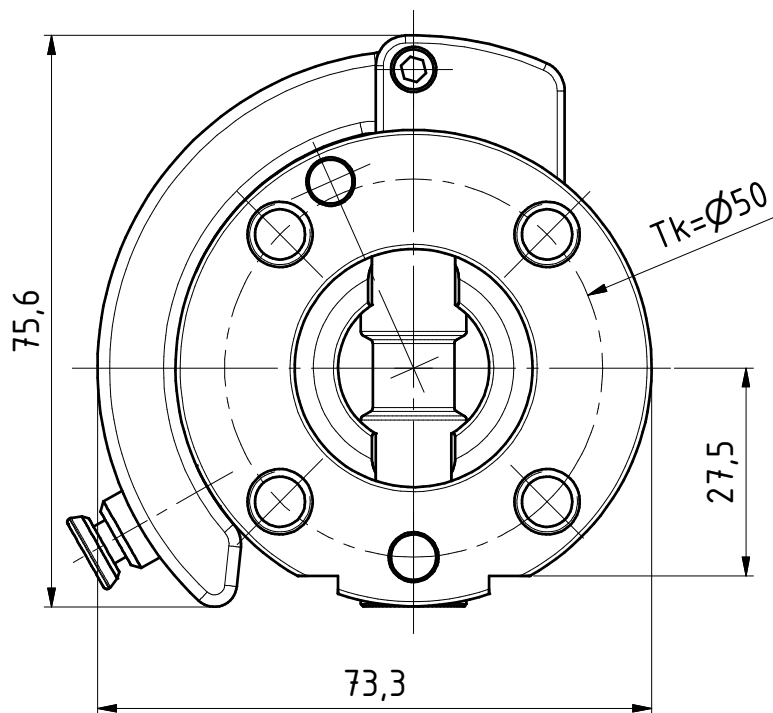
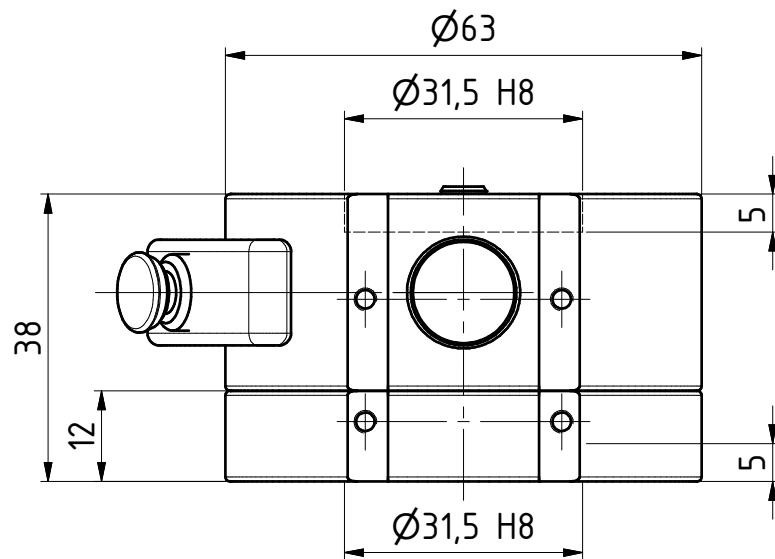
Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### Thrust lever change system Ø63, drilled acc. to ISO...

G-SHW063-2OE	upper assembly, E-Mount, Al, anodized
G-SHW063-2UE	lower assembly, E-Mount, Al, anodized
G-SHW063-2UE-30MK1	lower assembly, E-Mount, Al, anodized, M6 thread



G-SHW063-2UE-30MK1

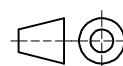


Datum 11.11.2016

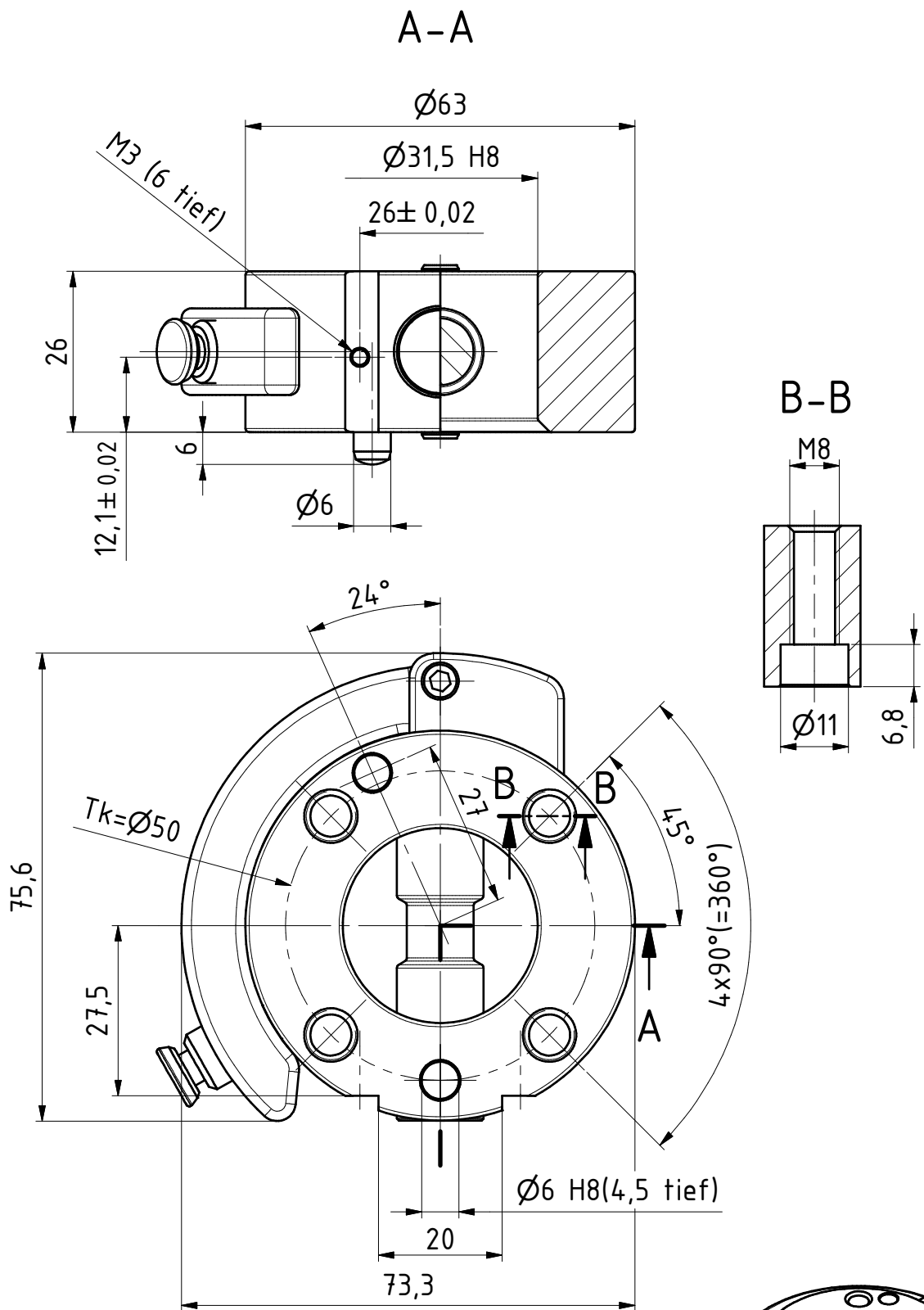
Maßstab 1:1

Zeichnungsnummer

G-SHW063-2ZE



**GRIP**  
GRIP GmbH Handhabungstechnik

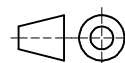


Datum 11.11.2016

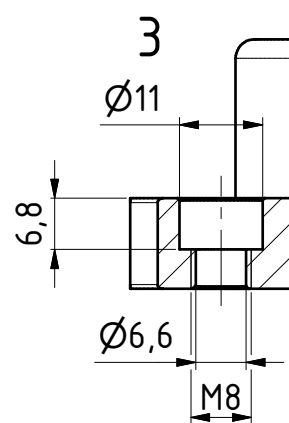
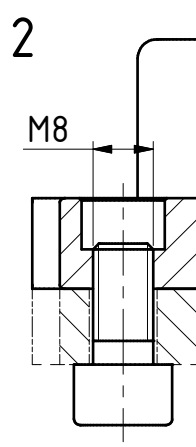
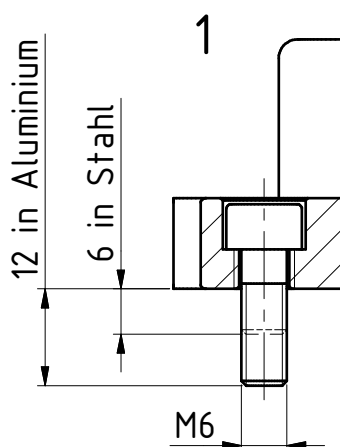
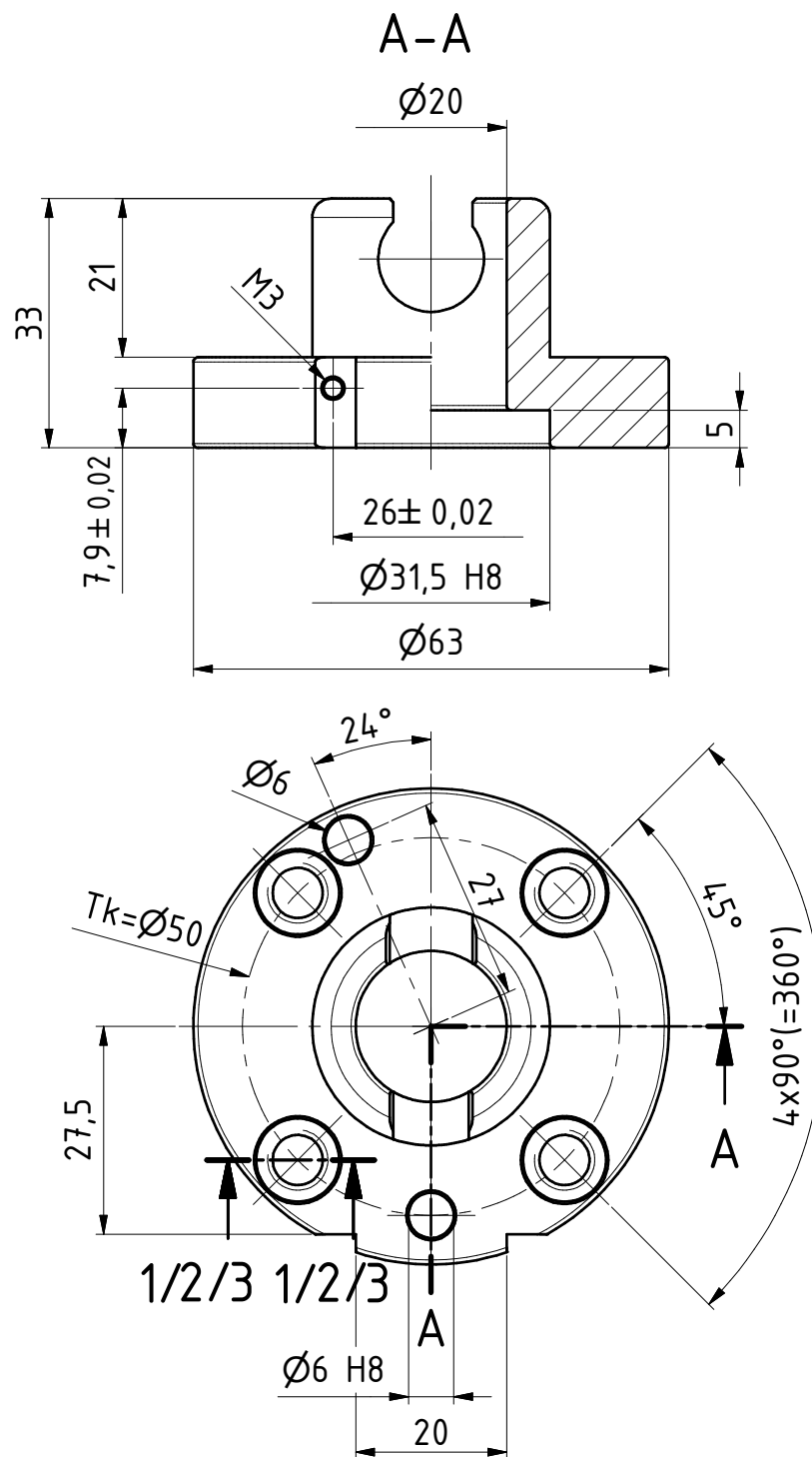
Maßstab 1:1

Zeichnungsnummer

G-SHW063-20E

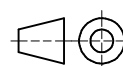


**GRIP**  
GRIP GmbH Handhabungstechnik

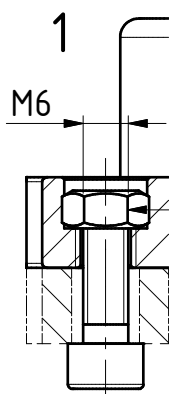
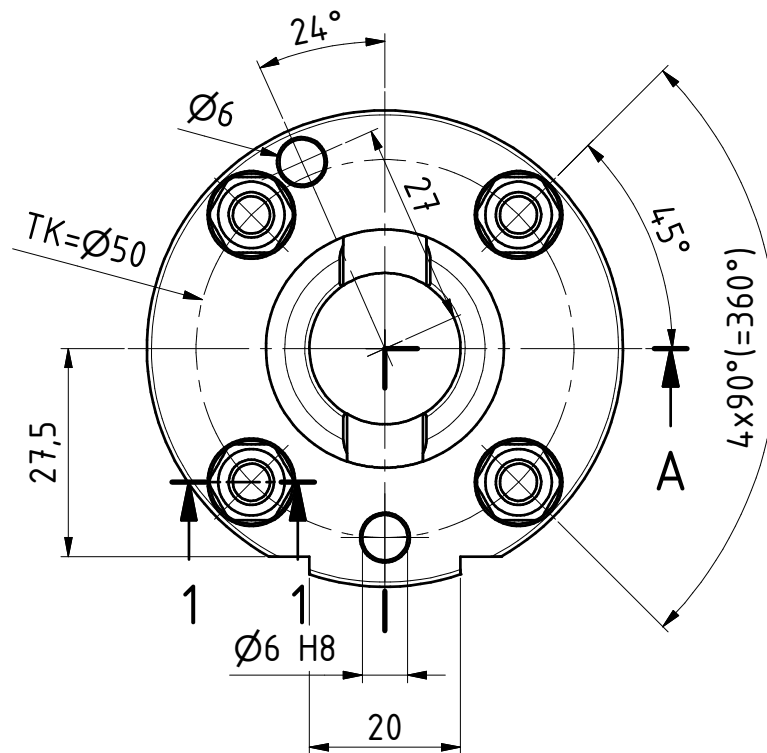
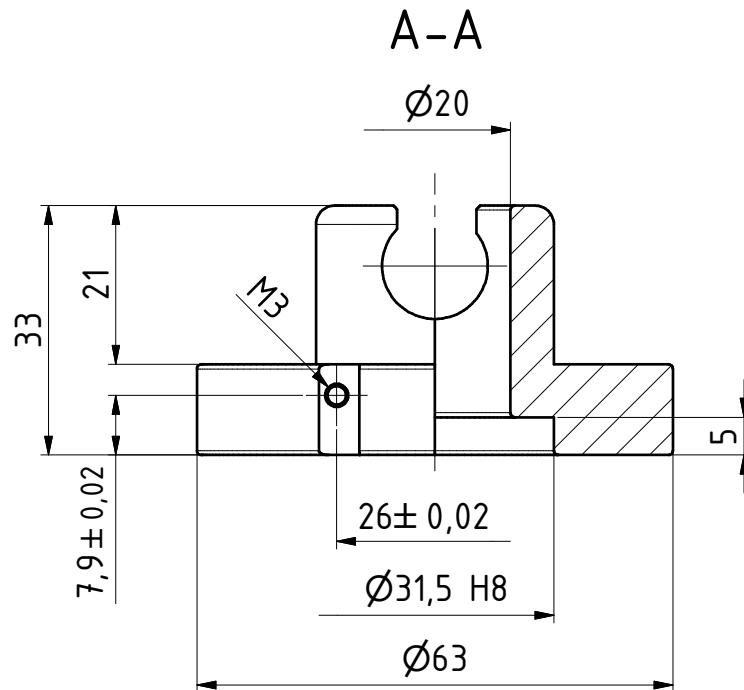


Datum 27.08.2021 Maßstab 1:1

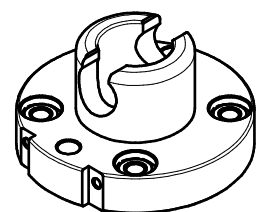
Zeichnungsnummer  
G-SHW063-2UE



**GRIP**  
GRIP GmbH Handhabungstechnik



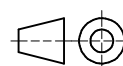
4 x Sechskantmutter  
ISO 4032-M6-A2 eingepresst



Datum 15.09.2022 Maßstab 1:1

Zeichnungsnummer

G-SHW063-2UE-30MK1



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SHW080

## Technical specifications

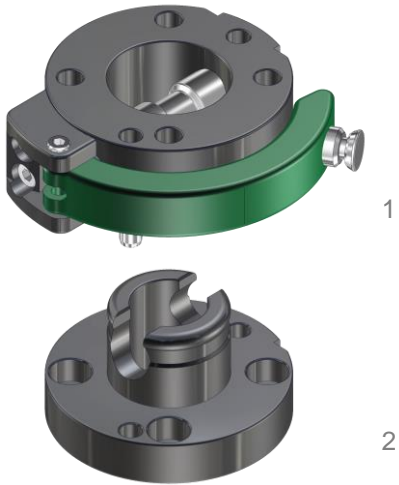
# GRIP

### Operating mode:

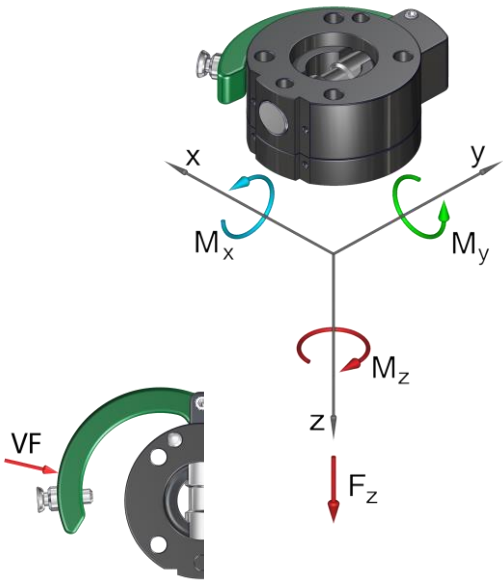
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight  
Intuitive operation  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Holds up to 5,000 changing cycles  
Optional connection of a power coupling **SEK** for electrical and pneum. ducts  
Interface according to DIN EN ISO 9409-1



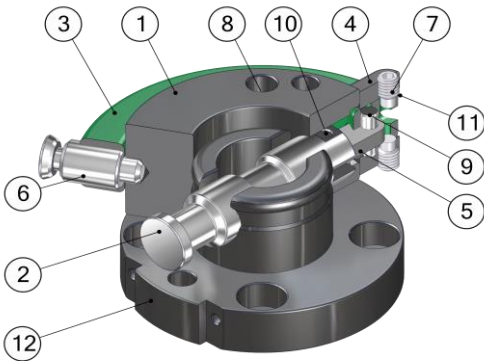
Technical specifications		SHW080
Basic material		Al. anod.
External diameter x height [mm]		80 x 45
Pitch circle diameter [mm]		63
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		800
Compression -Fz [kN]		160
Torsion Mz [Nm]		100
Bending Mx, My [Nm]		100
Mass [kg]	upper assembly	0,41
	lower assembly	0,2
Recommended load [kg]		20* / 28**
Locking force VF [N]		5 - 60
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
★ This guideline applies to the following assumptions: Acceleration: <b>10 m/s²</b> , gravity distance: <b>100 mm</b> , double safety		
★★ This guideline applies to the following assumptions: Acceleration: <b>5 m/s²</b> , gravity distance: <b>100 mm</b> , double safety		



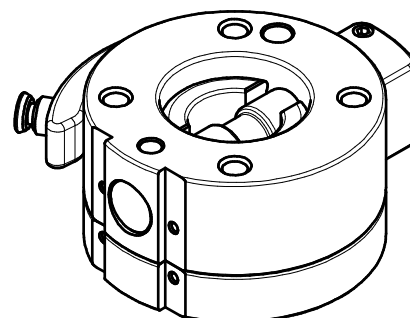
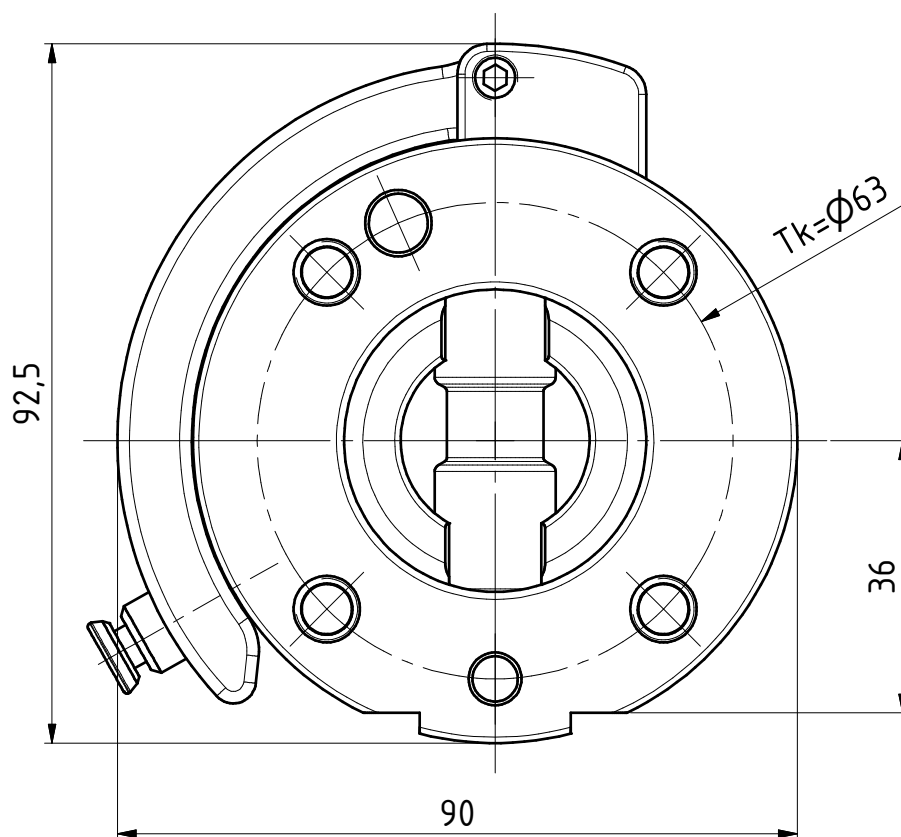
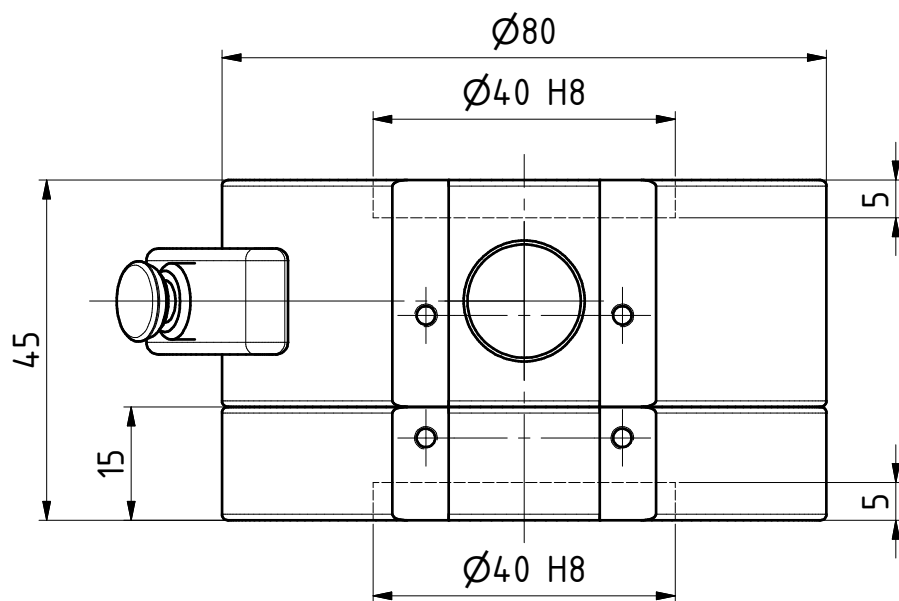
Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### Thrust lever change system Ø80, drilled acc. to ISO...

G-SHW080-2OE	upper assembly, E-Mount, Al, anodized
G-SHW080-2UE	lower assembly, E-Mount, Al, anodized





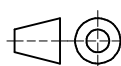


Datum 11.11.2016

Maßstab 1:1

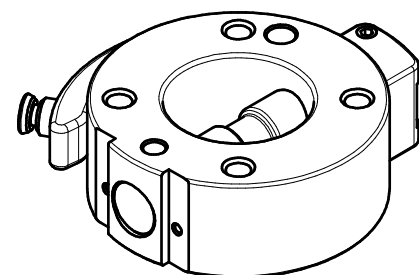
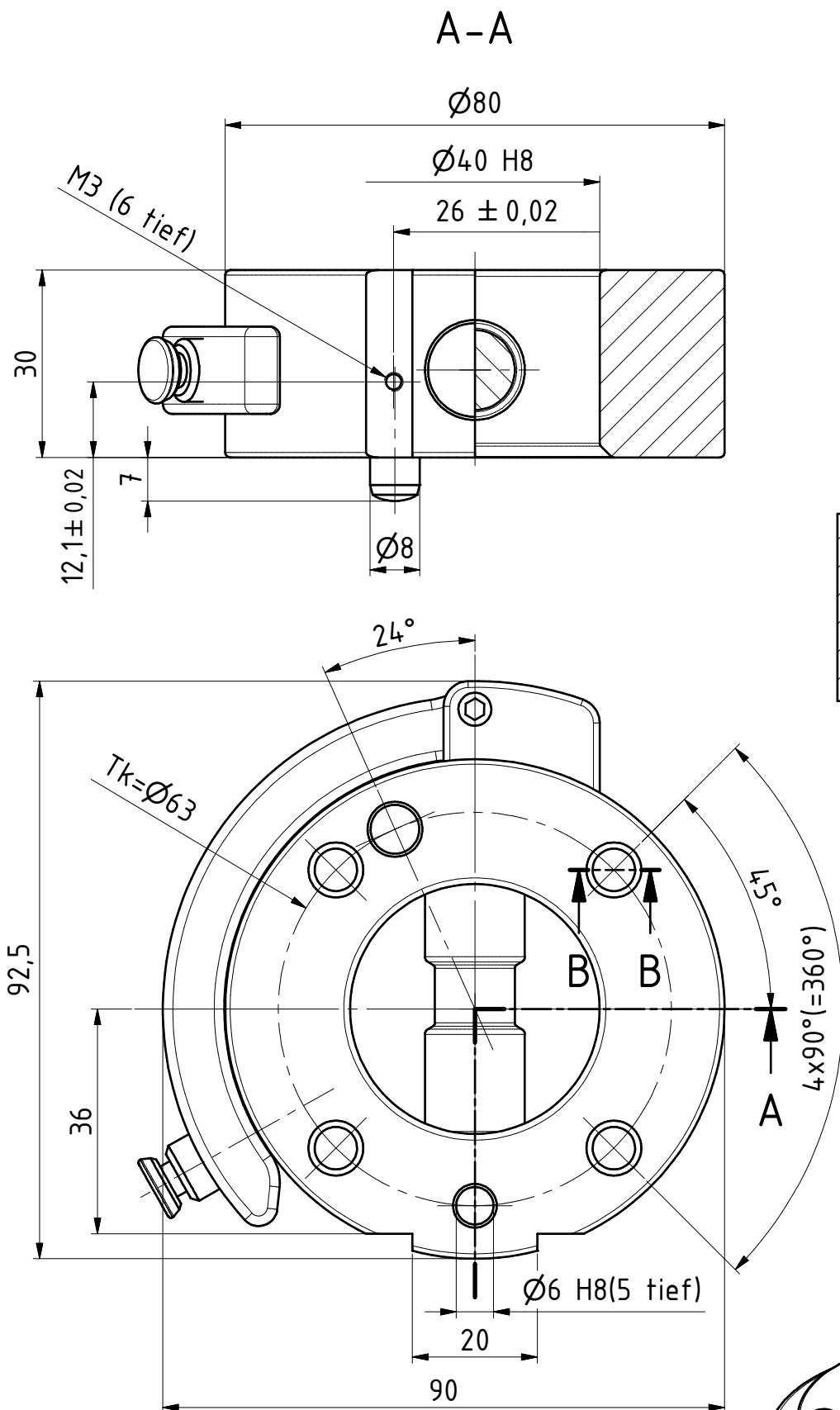
Zeichnungsnummer

G-SHW080-2ZE



**GRIP**

GRIP GmbH Handhabungstechnik

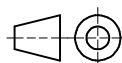


Datum 11.11.2016

Maßstab 1:1

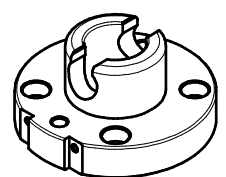
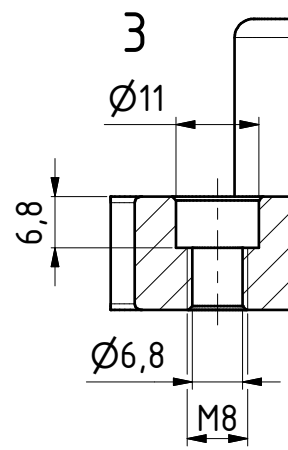
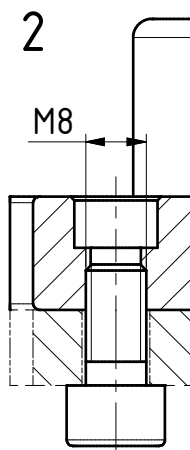
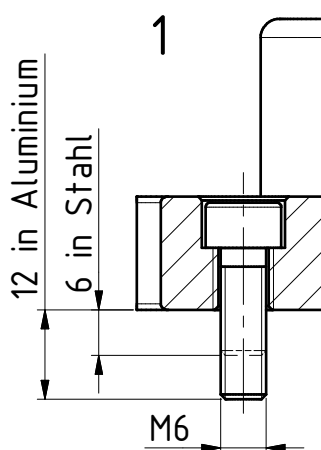
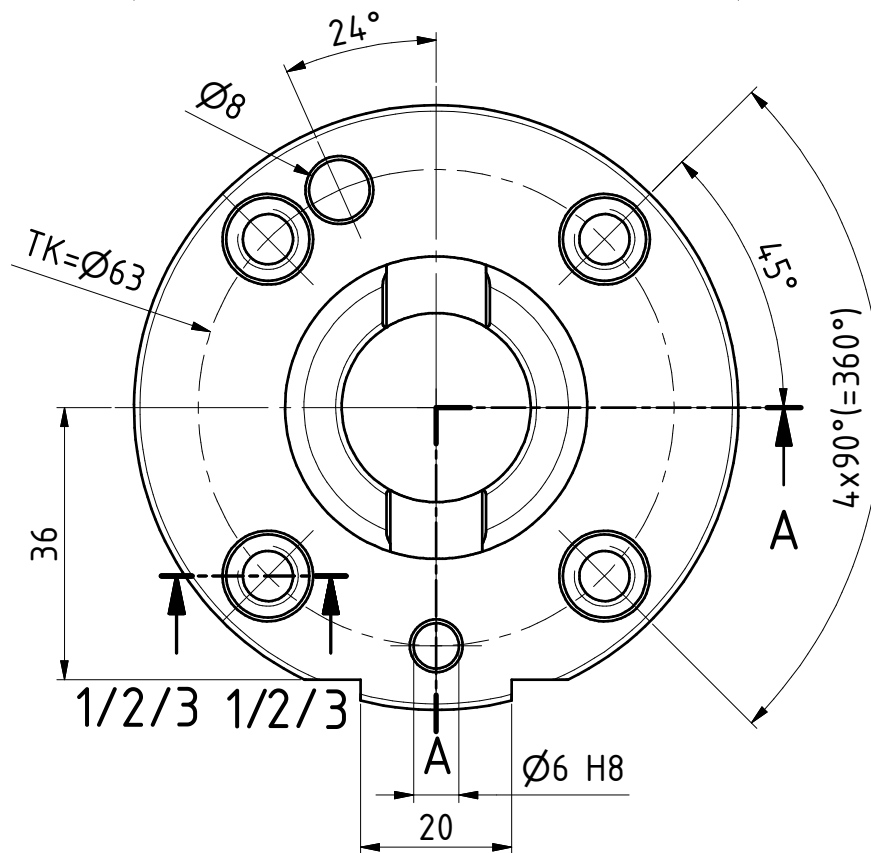
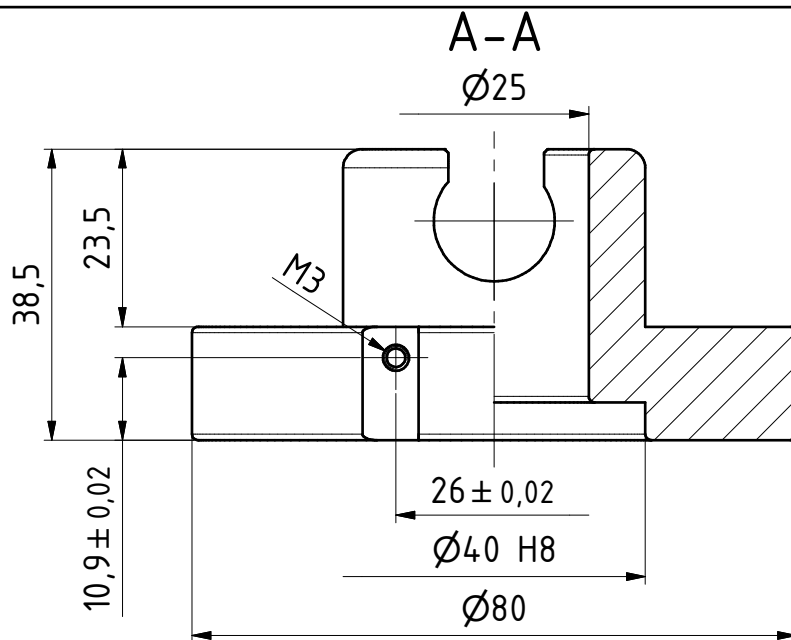
Zeichnungsnummer

G-SHW080-20E



**GRIP**

GRIP GmbH Handhabungstechnik

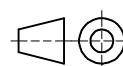


Datum 01.09.2021

Maßstab 1:1

Zeichnungsnummer

G-SHW080-2UE



**GRIP**

GRIP GmbH Handhabungstechnik

# G-SHW100

## Technical specifications

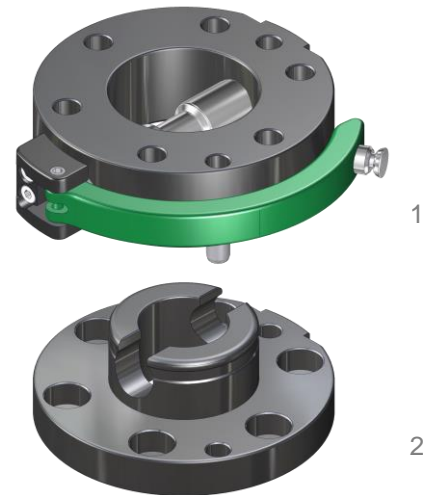
# GRIP

### Operating mode:

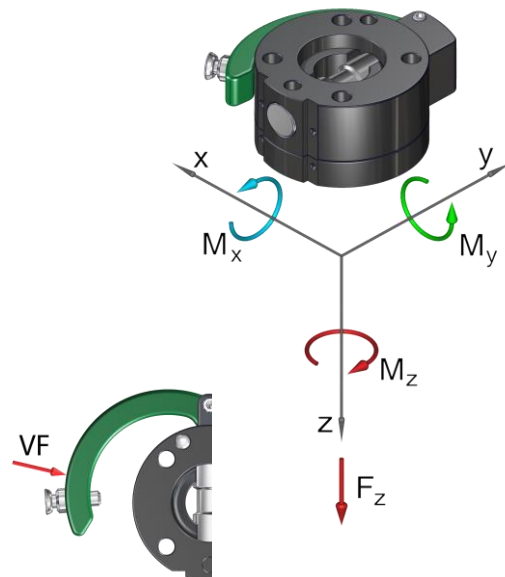
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight  
Intuitive operation  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Holds up to 5,000 changing cycles  
Optional connection of a power coupling **SEK** for electrical and pneum. ducts  
Interface according to DIN EN ISO 9409-1



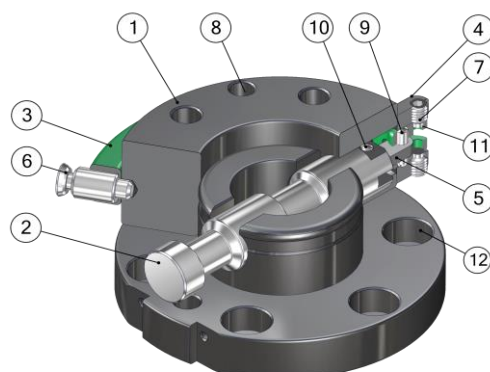
Technical specifications		SHW100
Basic material		Al. anod.
External diameter x height [mm]		100 x 47
Pitch circle diameter [mm]		80
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.000
Compression -Fz [kN]		219
Torsion Mz [Nm]		140
Bending Mx, My [Nm]		130
Mass [kg]	upper assembly	0,74
	lower assembly	0,35
Recommended load [kg]		25* / 34**
Locking force VF [N]		6 - 70
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: <b>10 m/s²</b> , gravity distance: <b>100 mm</b> , double safety		
** This guideline applies to the following assumptions: Acceleration: <b>5 m/s²</b> , gravity distance: <b>100 mm</b> , double safety		

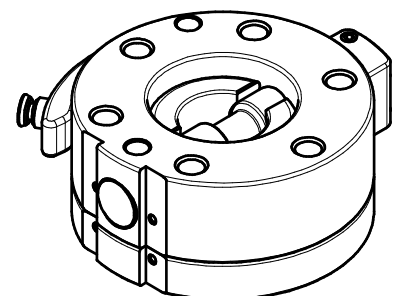
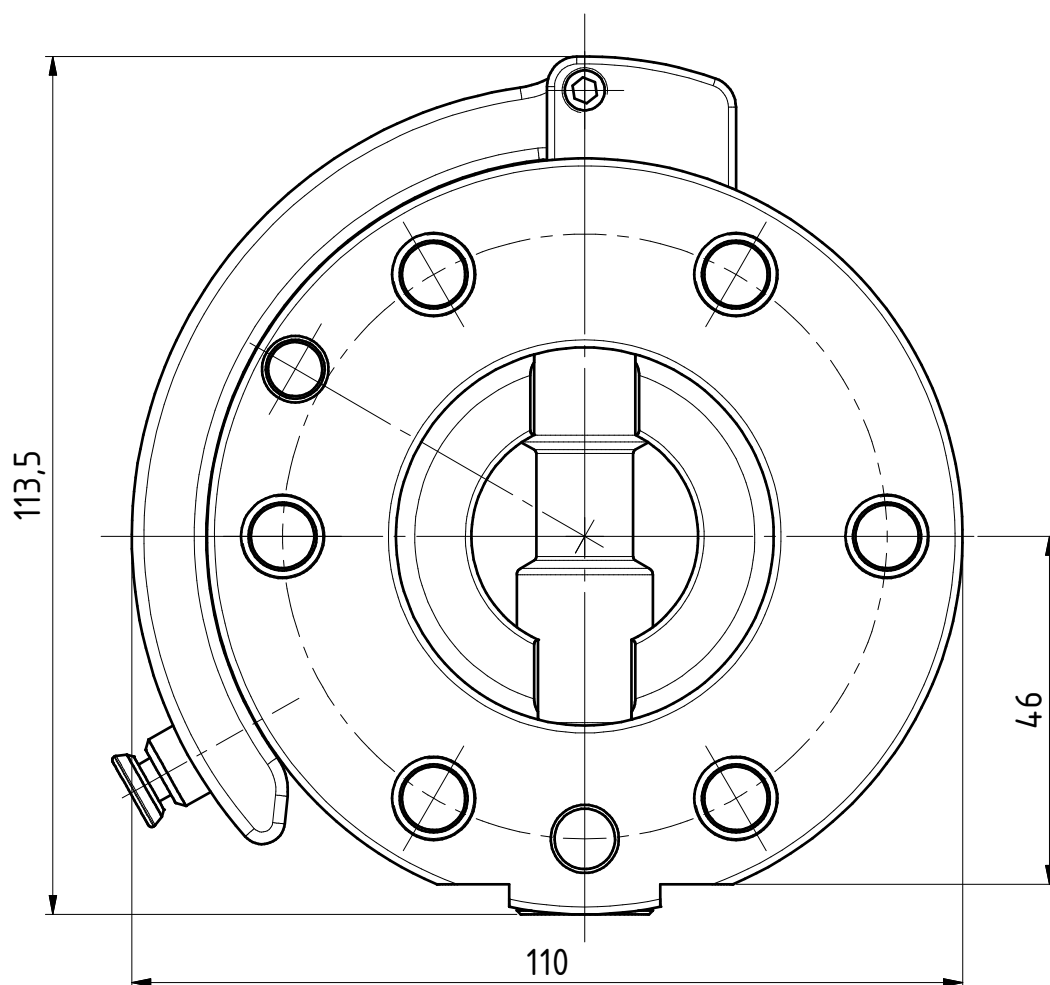
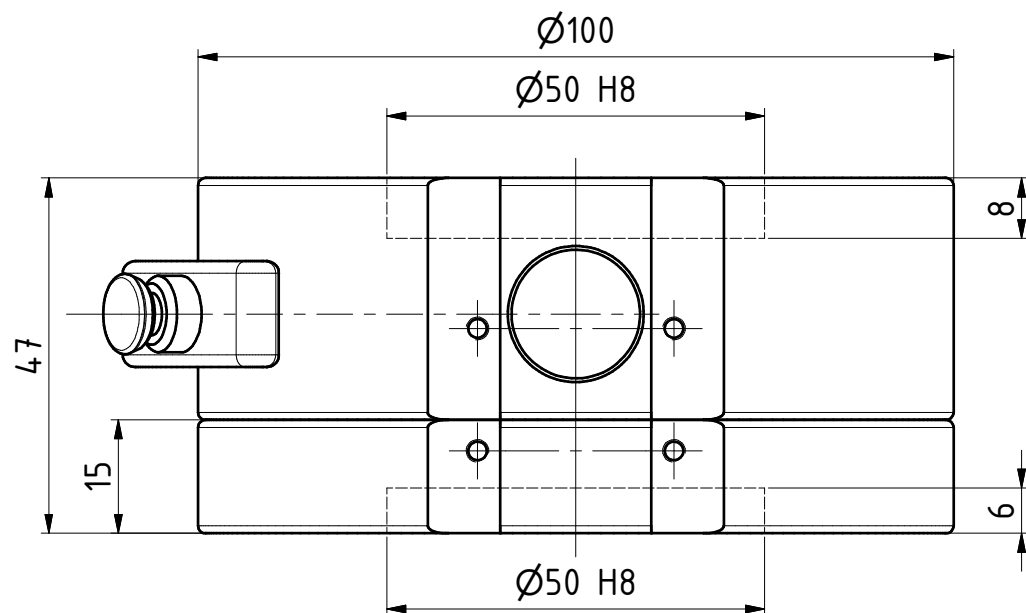


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### Thrust lever change system Ø100, drilled acc. to ISO...

G-SHW100-2OE	upper assembly, E-Mount, Al, anodized
G-SHW100-2UE	lower assembly, E-Mount, Al, anodized



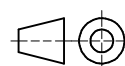


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-SHW100-2ZE



**GRIP**  
GRIP GmbH Handhabungstechnik







# G-SHW125

## Technical specifications

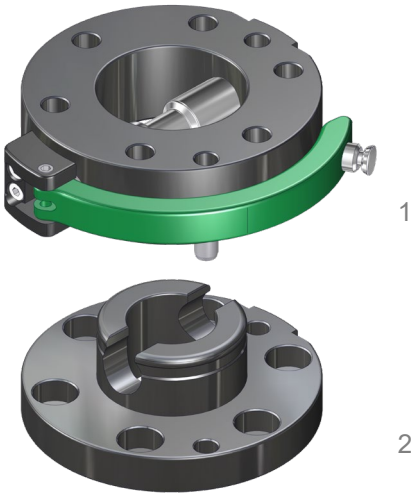
GRIP

### Operating mode:

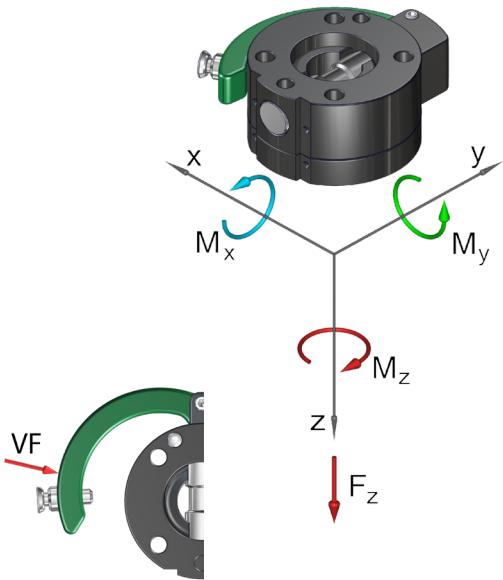
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of a power coupling **SEK** for electrical and pneum. ducts
- Interface according to DIN EN ISO 9409-1

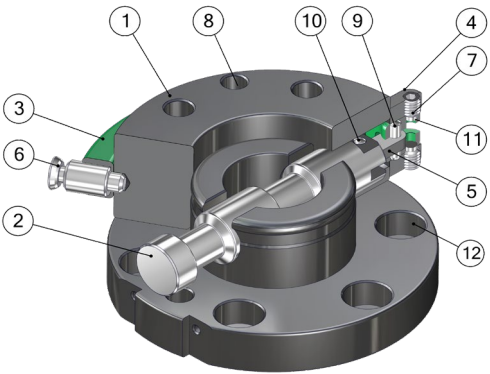


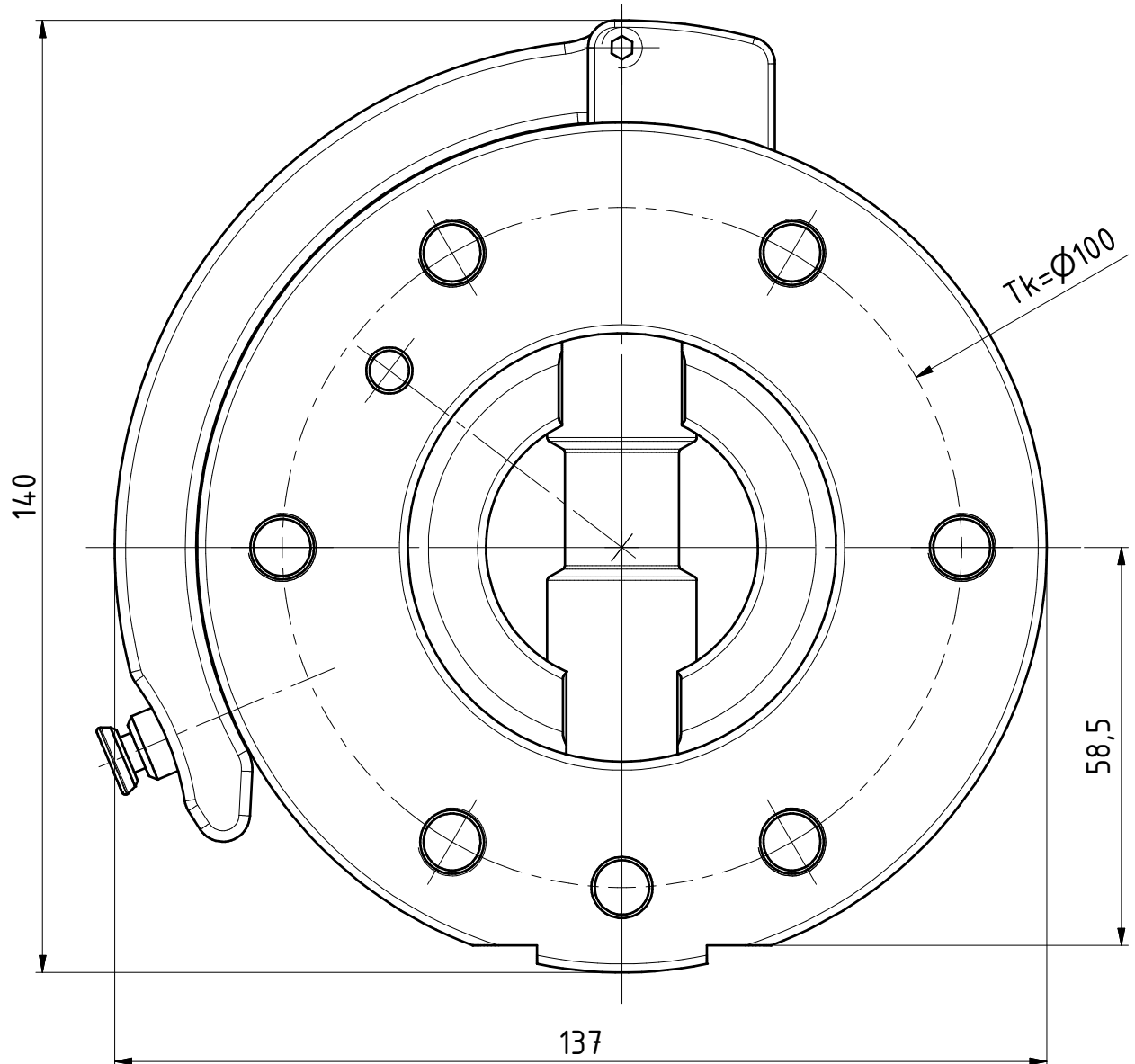
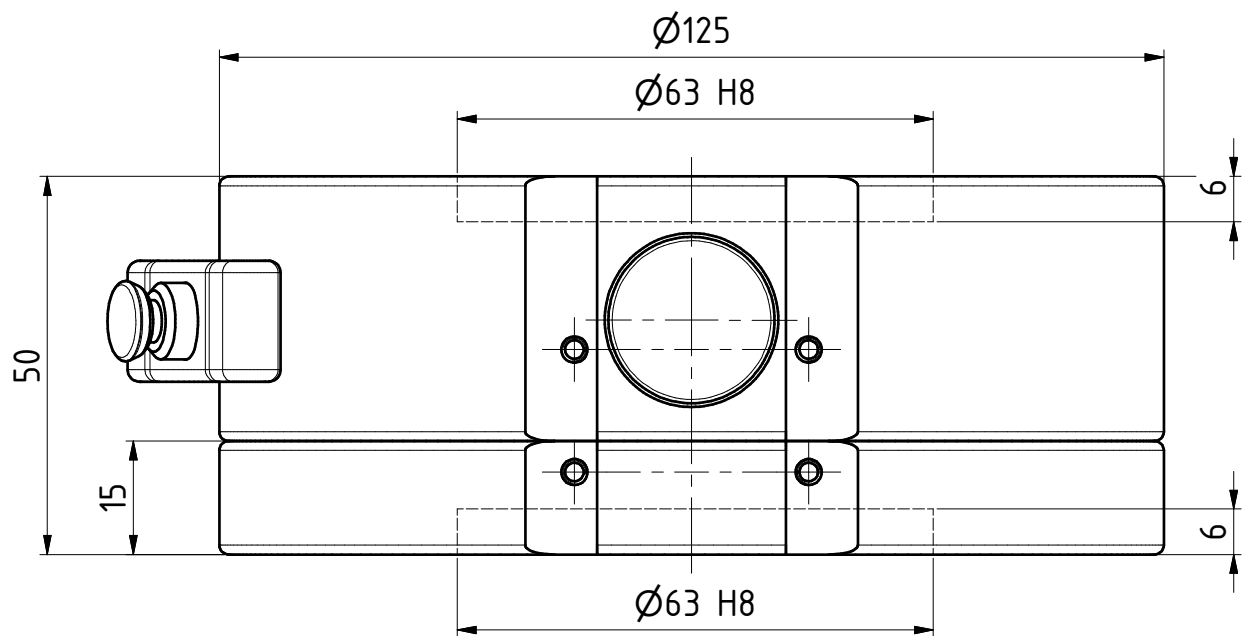
Technical specifications		SHW125
Basic material		Al. anod.
External diameter x height [mm]		125 x 50
Pitch circle diameter [mm]		100
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.200
Compression -Fz [kN]		377
Torsion Mz [Nm]		180
Bending Mx, My [Nm]		180
Mass [kg]	upper assembly	1,3
	lower assembly	0,55
Recommended load [kg]		40* / 55**
Locking force VF [N]		8 - 80
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

Thrust lever change system Ø125, drilled acc. to ISO...		
G-SHW125-2OE	upper assembly, E-Mount, Al, anodized	
G-SHW125-2UE	lower assembly, E-Mount, Al, anodized	



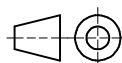


Datum 11.11.2016

Maßstab 1:1

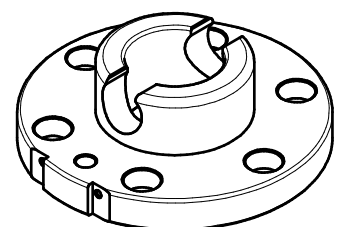
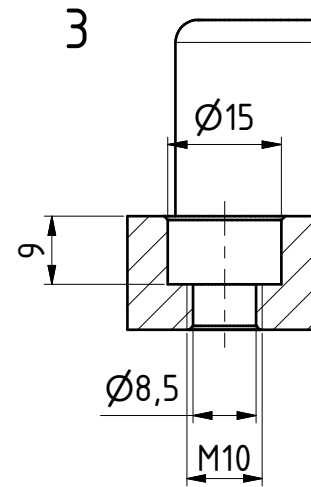
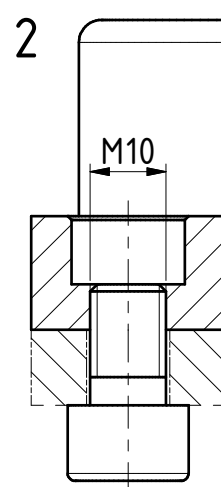
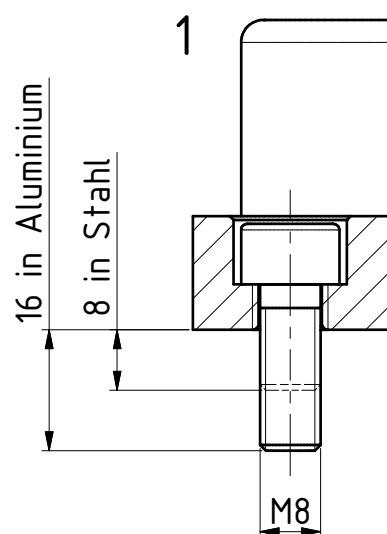
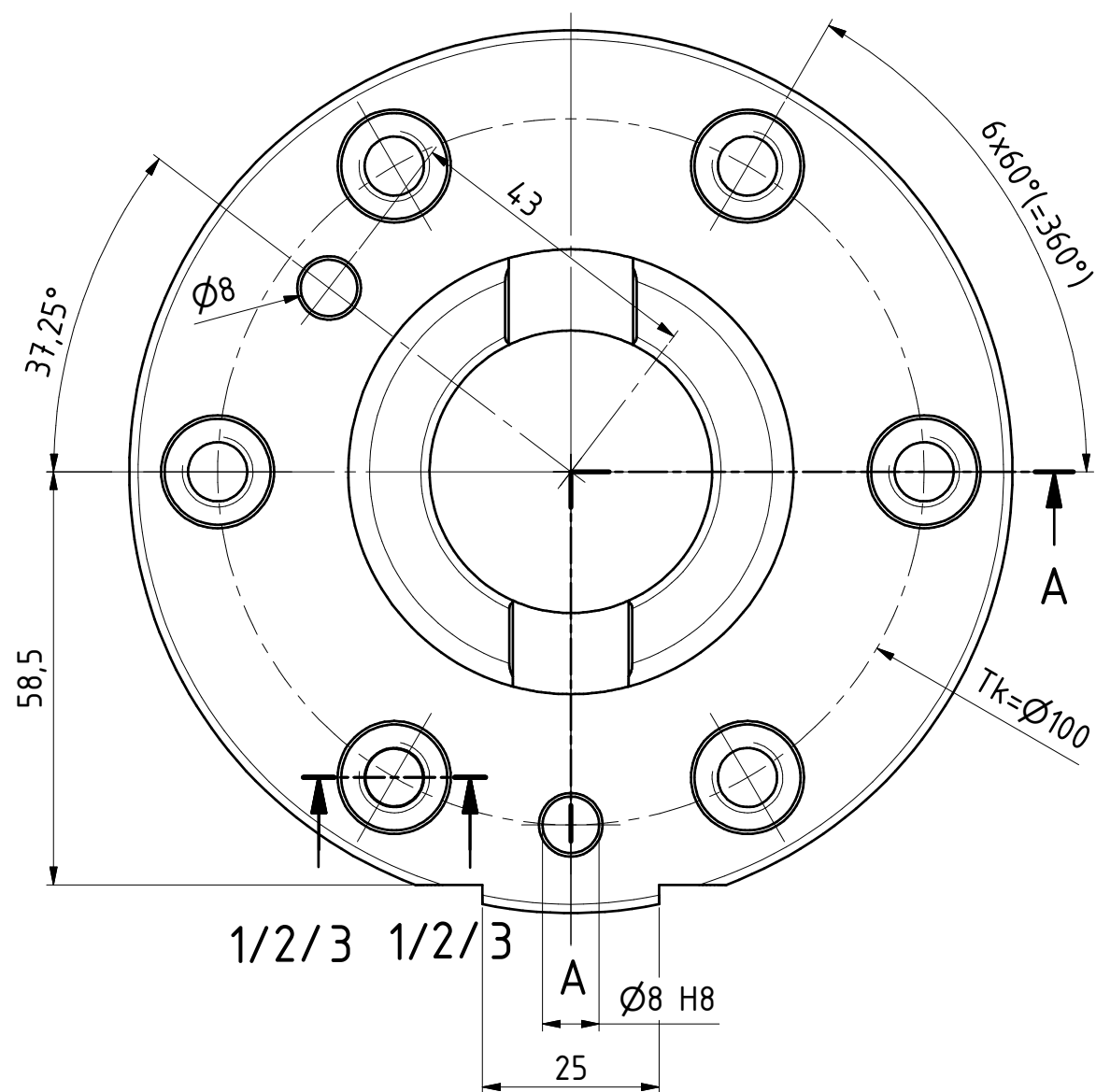
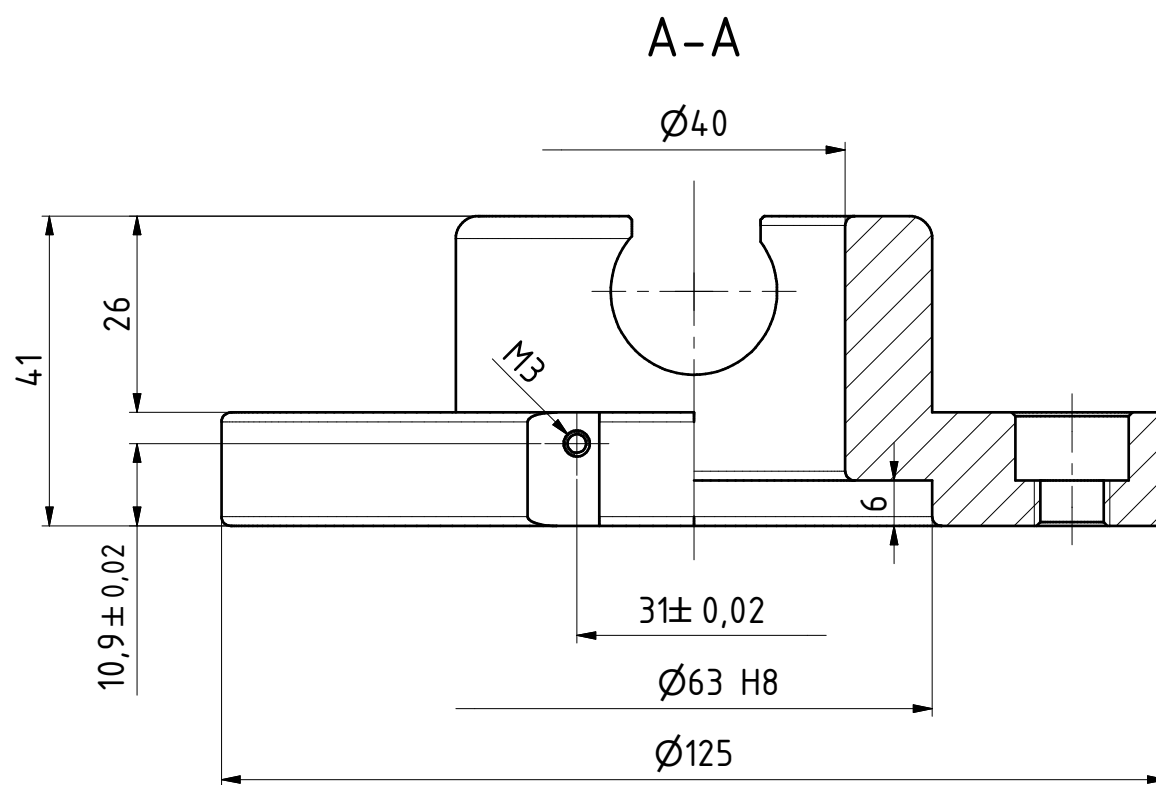
Zeichnungsnummer

G-SHW125-2ZE



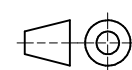
**GRIP**  
GRIP GmbH Handhabungstechnik





Datum 03.09.2021 Maßstab 1:1

Zeichnungsnummer  
G-SHW125-2UE



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SHW160

## Technical specifications

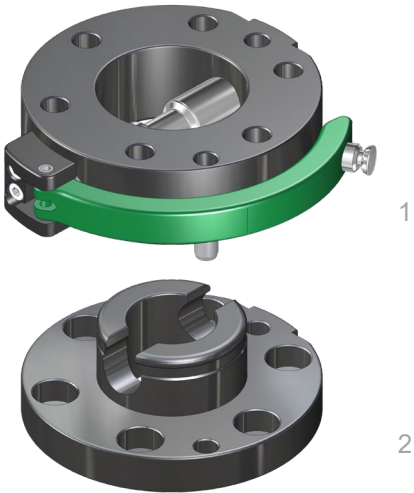
GRIP

### Operating mode:

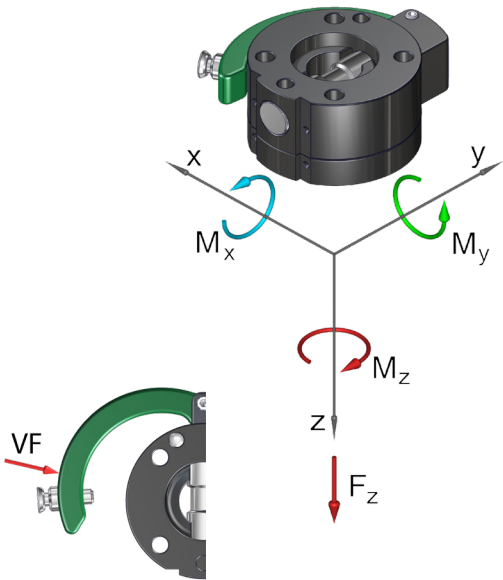
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of a power coupling **SEK** for electrical and pneum. ducts
- Interface according to DIN EN ISO 9409-1

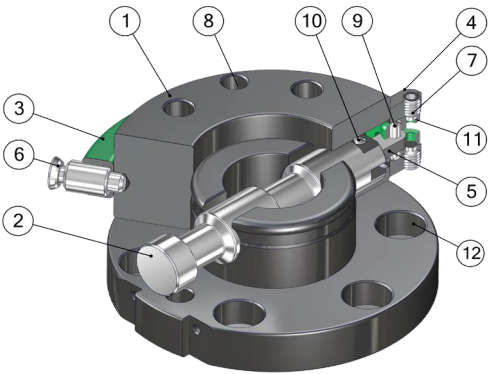


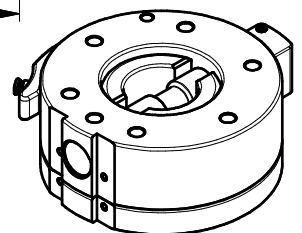
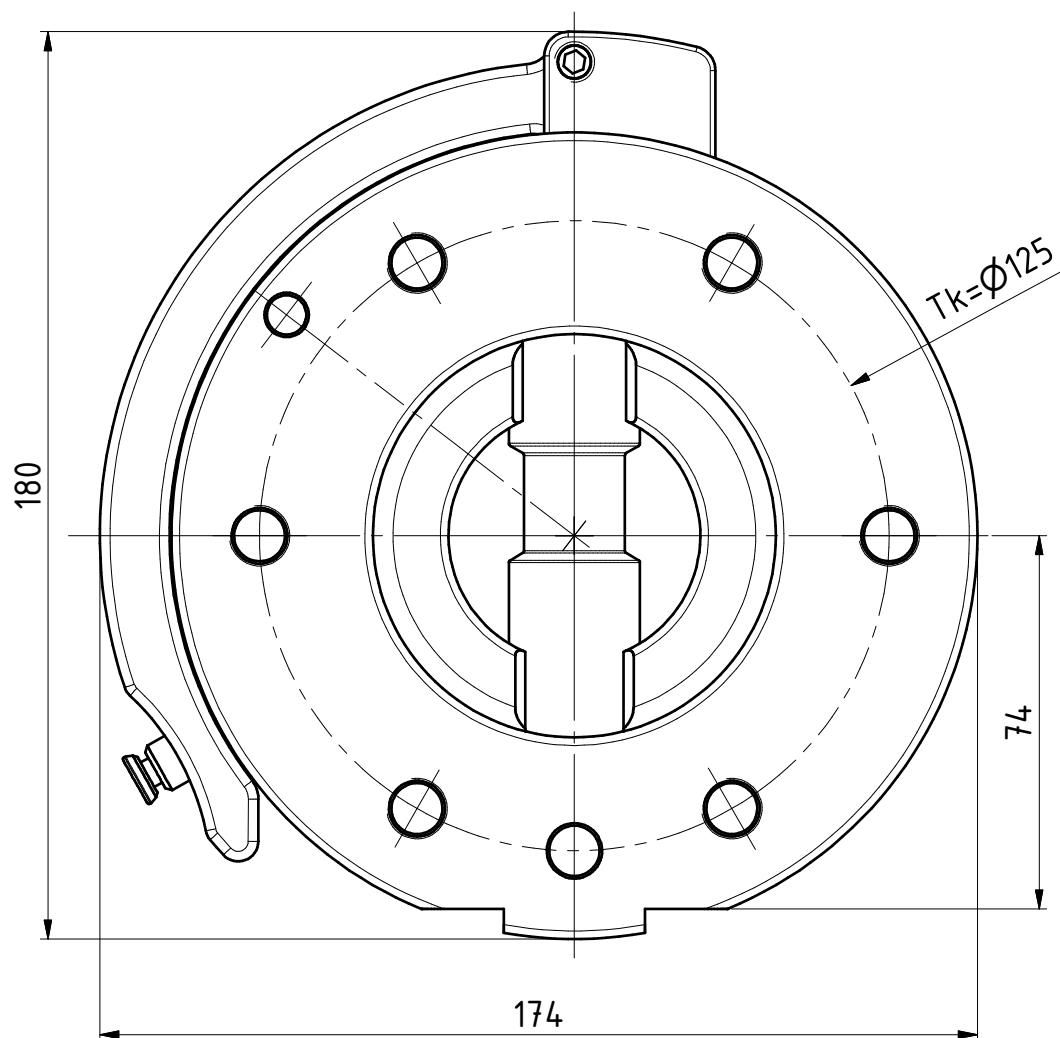
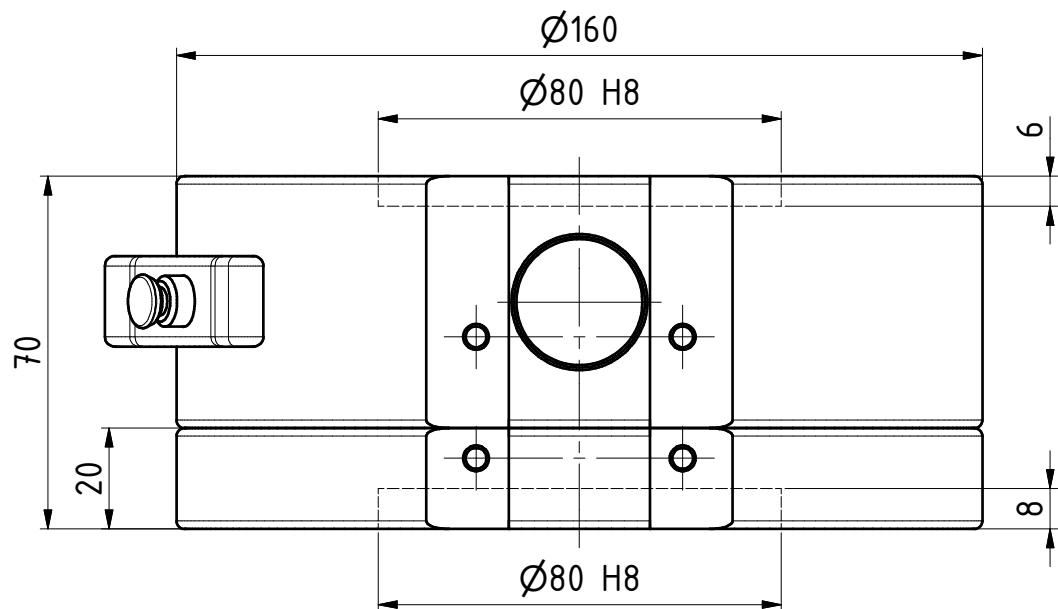
Technical specifications		SHW160
Basic material		Al. anod.
External diameter x height [mm]		160 x 70
Pitch circle diameter [mm]		125
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		2.000
Compression -Fz [kN]		626
Torsion Mz [Nm]		300
Bending Mx, My [Nm]		320
Mass [kg]	upper assembly	2,8
	lower assembly	1,2
Recommended load [kg]		52* / 68**
Locking force VF [N]		10 - 100
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

Thrust lever change system Ø160, drilled acc. to ISO...		
G-SHW160-2OE	upper assembly, E-Mount, Al, anodized	
G-SHW160-2UE	lower assembly, E-Mount, Al, anodized	



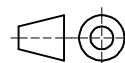


Datum 11.11.2016

Maßstab 1:1.5

Zeichnungsnummer

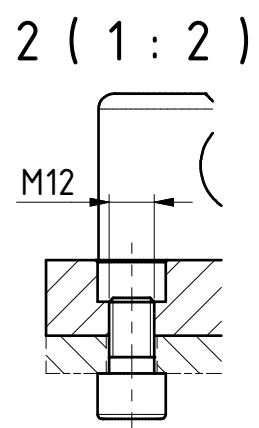
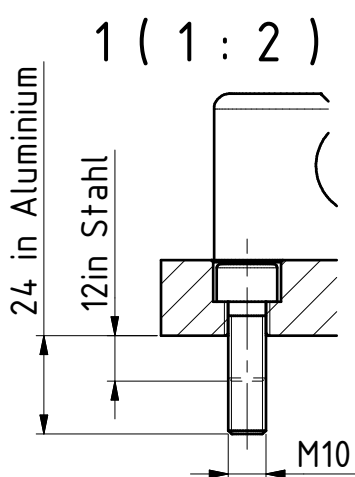
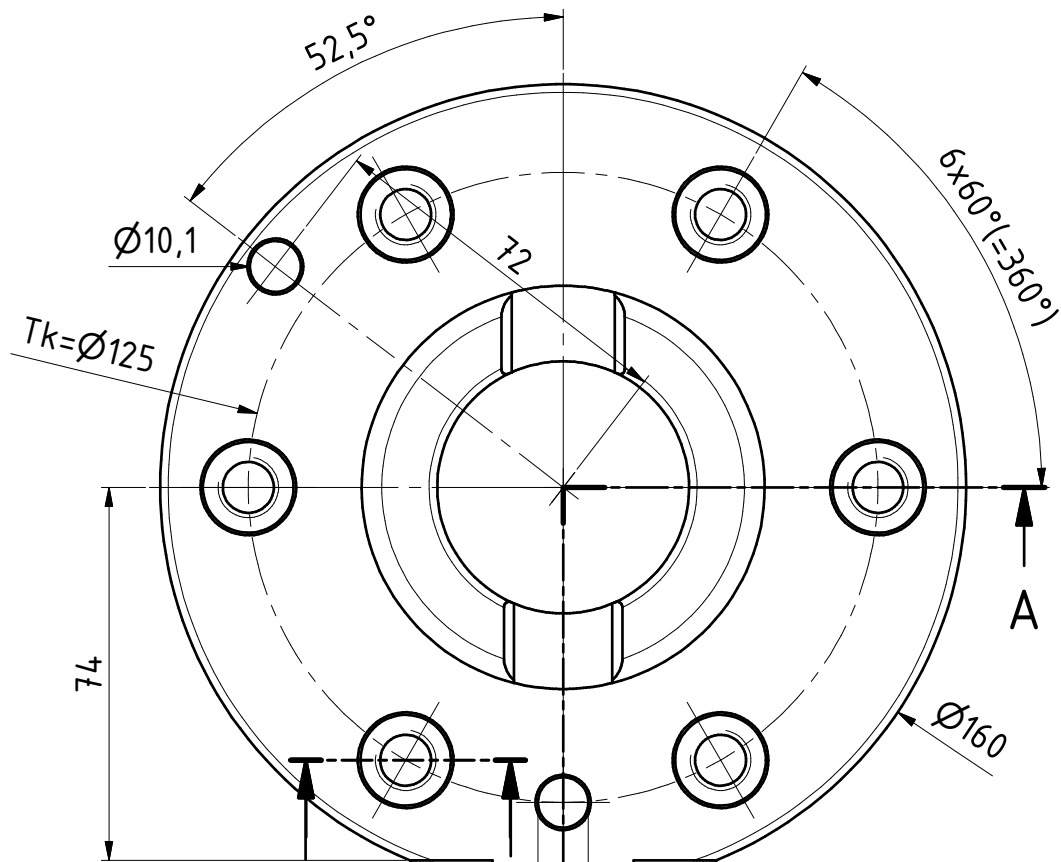
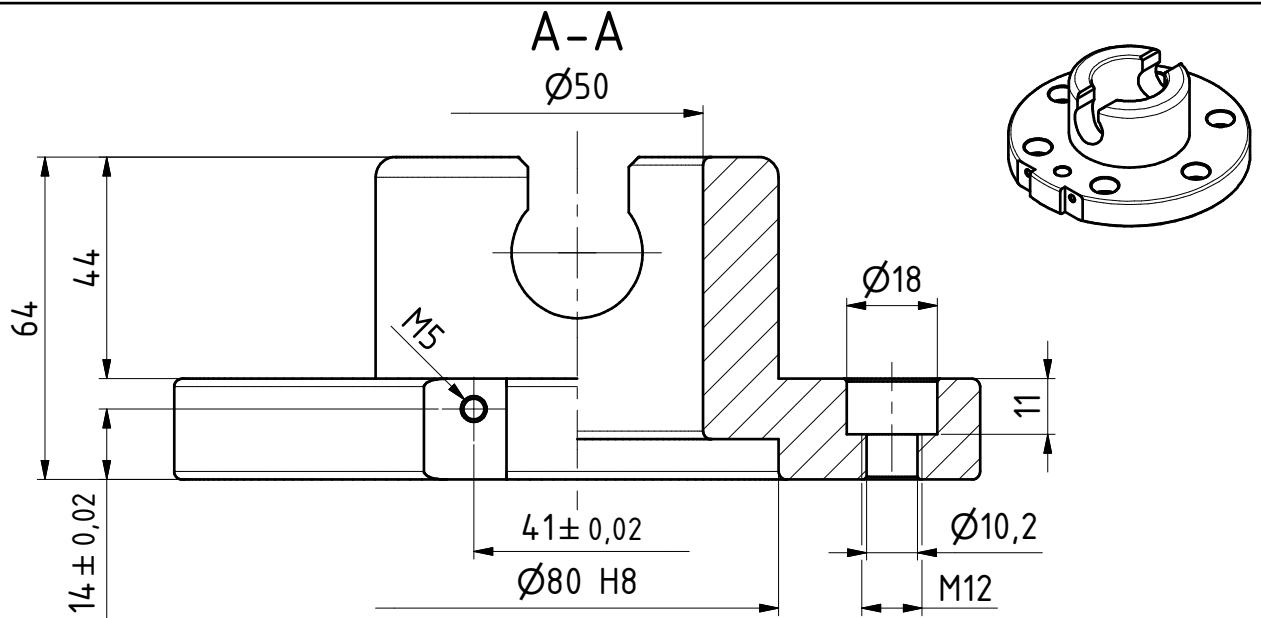
G-SHW160-2ZE



**GRIP**  
GRIP GmbH Handhabungstechnik





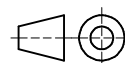


Datum 03.09.2021

Maßstab 1:1,5

Zeichnungsnummer

G-SHW160-2UE



**GRIP**  
GRIP GmbH Handhabungstechnik

# SHW-P CONNECTOR

The SHW Connector is a manual end of arm tool changer with integrated air feed-throughs and an optimized locking mechanism. The tool changer consists of a cylindrical bolt which locks the upper and lower assembly together. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

## SHW-P Connector Advantages:

- Integrated pneumatic feed-throughs
- Interface according to DIN EN ISO 9409-1
- High repeatability < 0.02 mm
- Durable - over 5000 application changes with no loss in accuracy
- Withstands high loads with low dead weight
- Toolless due to integrated operating lever
- Improved operating lever with pure folding movement
- Intuitive operation: can be released and closed with one hand
- Lightweight made of high-strength aluminum, anodized
- Integrated mounting surface for energy feed-through
- Locking pin secures the hand lever against unintentional release

## SIZES

SHW063-P

SHW080-P

SHW100-P

SHW125-P

SHW160-P



# G-SHW063-P

## Technical specifications

GRIP

### Operating mode:

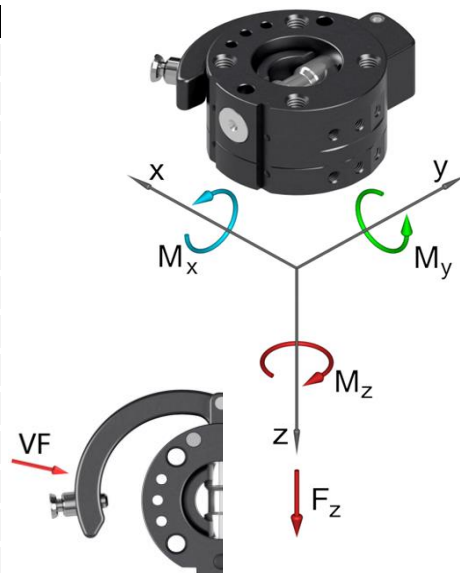
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of an energy feed-through **SEK** for electrical and pneumatic ducts
- With 6 integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1

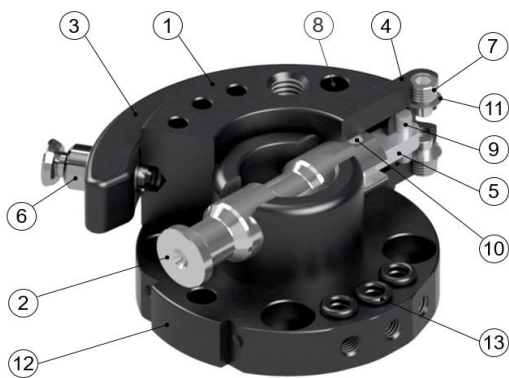


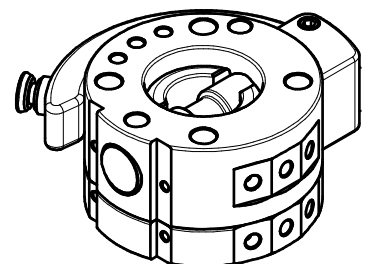
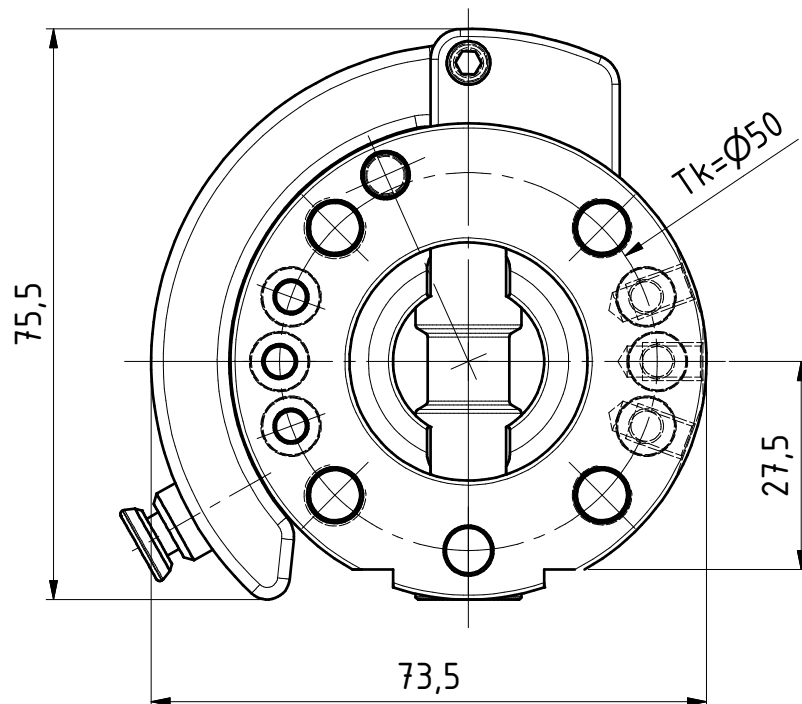
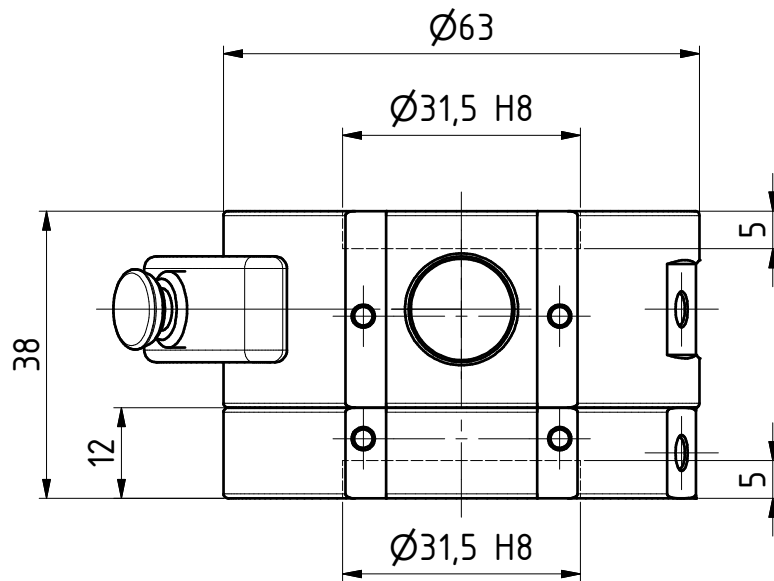
Technical specifications		SHW063-P
Basic material		Al. anod.
External diameter x height [mm]		63 x 38
Pitch circle diameter [mm]		50
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		700
Compression -Fz [kN]		80
Torsion Mz [Nm]		80
Bending Mx, My [Nm]		70
Mass [kg]	upper assembly	0,25
	lower assembly	0,1
Recommended load [kg]		18* / 24**
Locking force VF [N]		4 - 50
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	3 x M5 a. 3 x D=4
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	O-ring

SHW063 Connector, drilled acc. to ISO...		
G-SHW063-2OEP	upper assembly, E-Mount, 6 pneum. ducts, Al, anodized	
G-SHW063-2UEP	lower assembly, E-Mount, 6 pneum. ducts, Al, anodized	



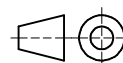


Datum 30.06.2023

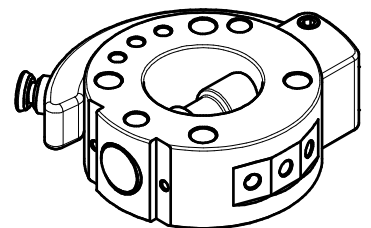
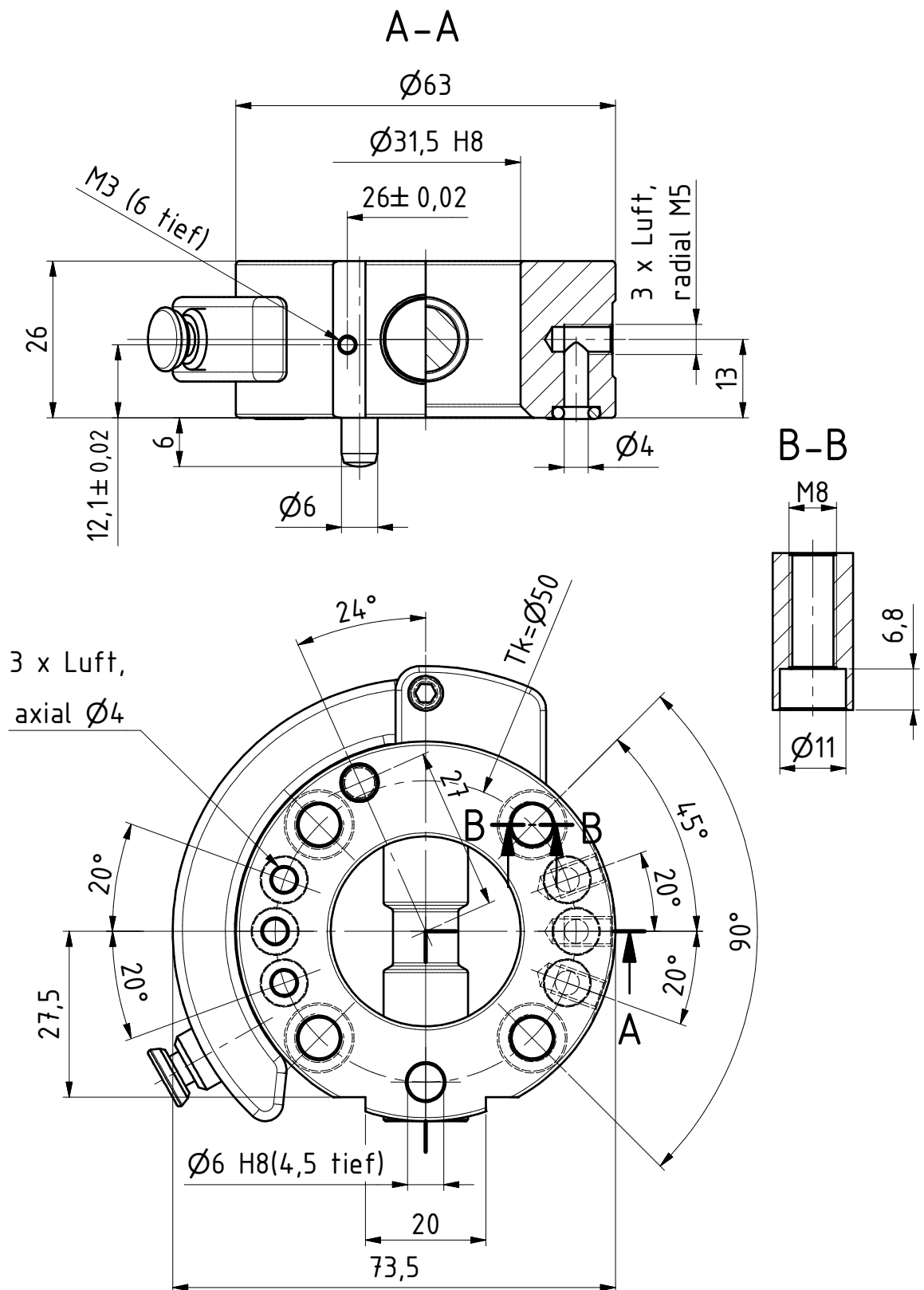
Maßstab 1:1

Zeichnungsnummer

G-SHW063-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik

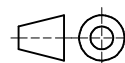


Datum 30.06.2023

Maßstab 1:1

Zeichnungsnummer

G-SHW063-20EP



**GRIP**

GRIP GmbH Handhabungstechnik



# G-SHW080-P

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of an energy feed-through **SEK** for electrical and pneumatic ducts
- With 6 integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1

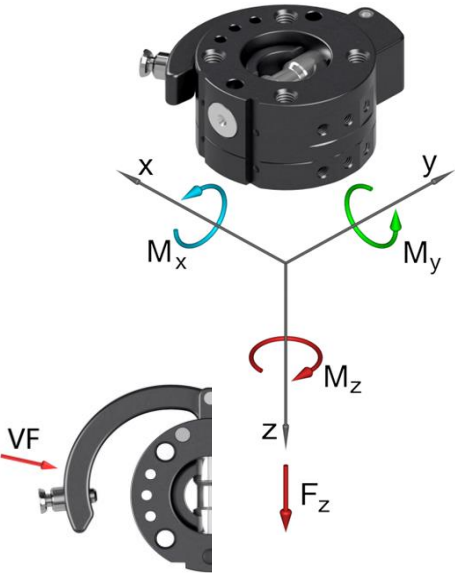


1



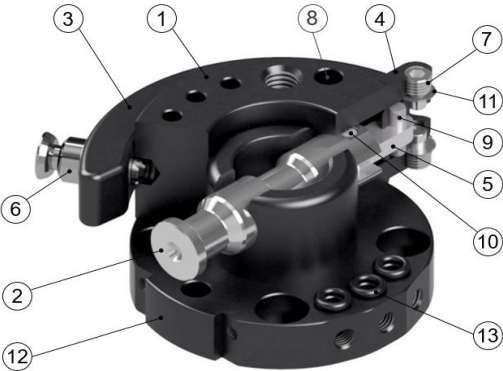
2

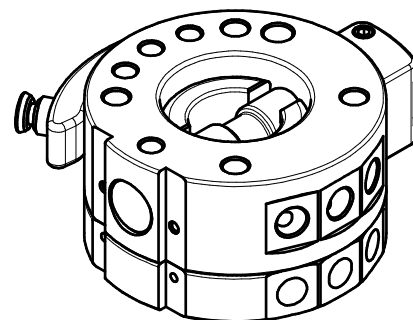
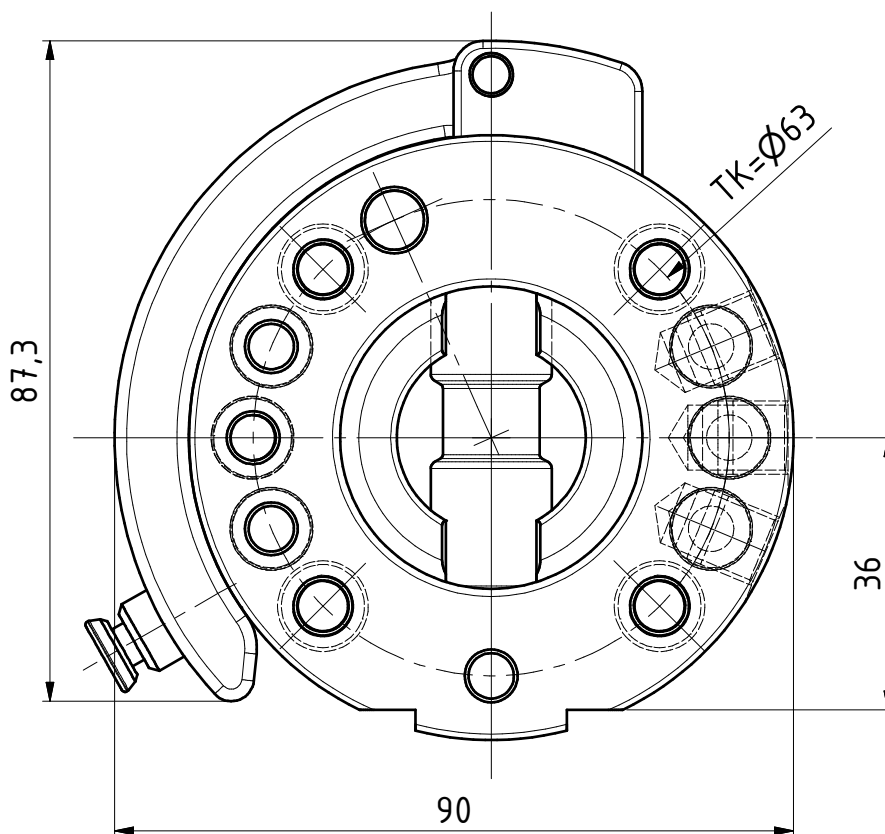
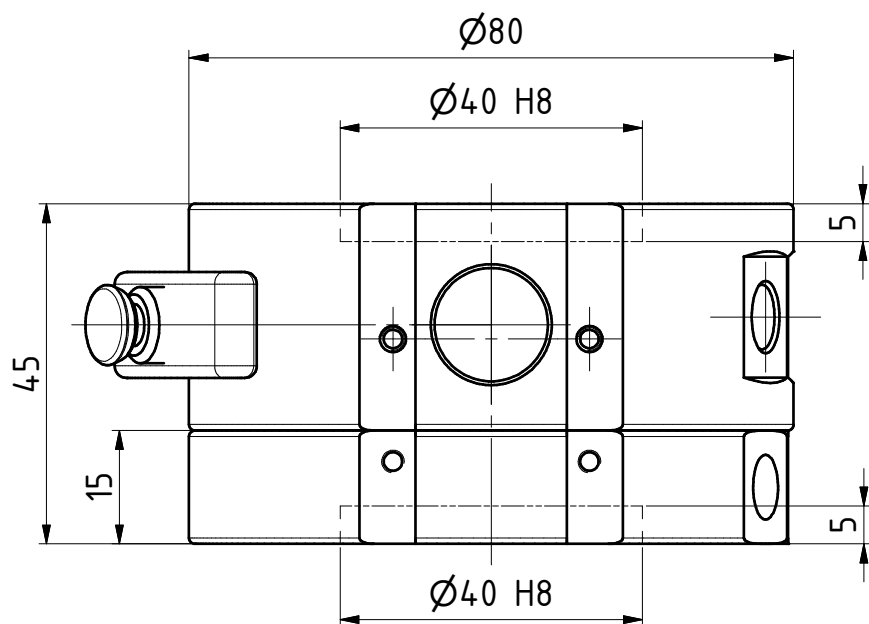
Technical specifications		SHW080-P
Basic material		Al. anod.
External diameter x height [mm]		80 x 45
Pitch circle diameter [mm]		63
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		800
Compression -Fz [kN]		160
Torsion Mz [Nm]		100
Bending Mx, My [Nm]		100
Mass [kg]	upper assembly	0,41
	lower assembly	0,2
Recommended load [kg]		20* / 28**
Locking force VF [N]		5 - 60
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	3 x G1/8 a. 3 x D=6
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	O-ring

SHW080 Connector, drilled acc. to ISO...		
G-SHW080-2OEP	upper assembly, E-Mount, 6 pneum. ducts, Al, anodized	
G-SHW080-2UEP	lower assembly, E-Mount, 6 pneum. ducts, Al, anodized	



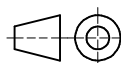


Datum 30.06.2023

Maßstab 1:1

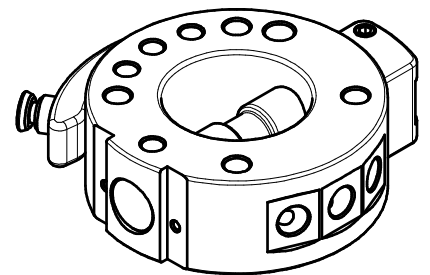
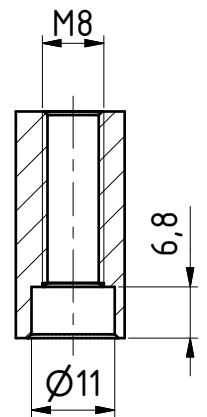
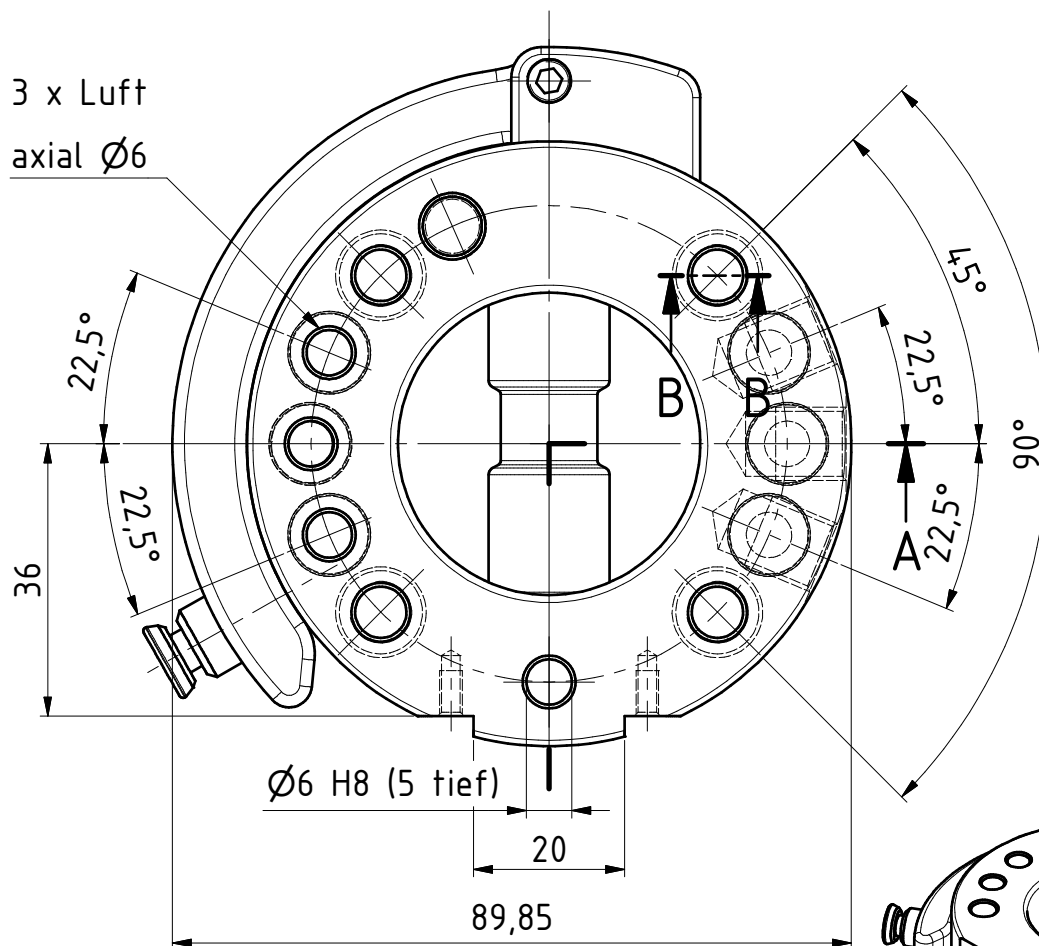
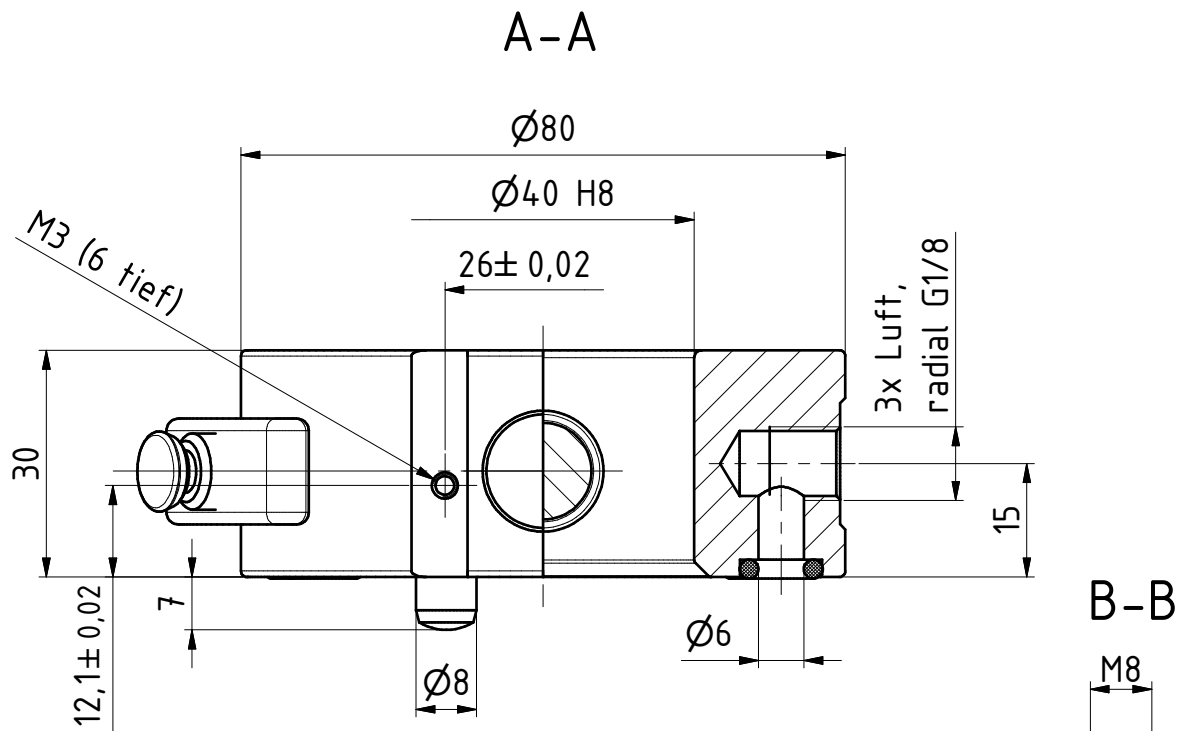
Zeichnungsnummer

G-SHW080-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik



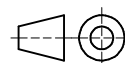


Datum 30.06.2023

Maßstab 1:1

Zeichnungsnummer

G-SHW080-20EP



**GRIP**  
GRIP GmbH Handhabungstechnik



# G-SHW100-P

## Technical specifications

GRIP

### Operating mode:

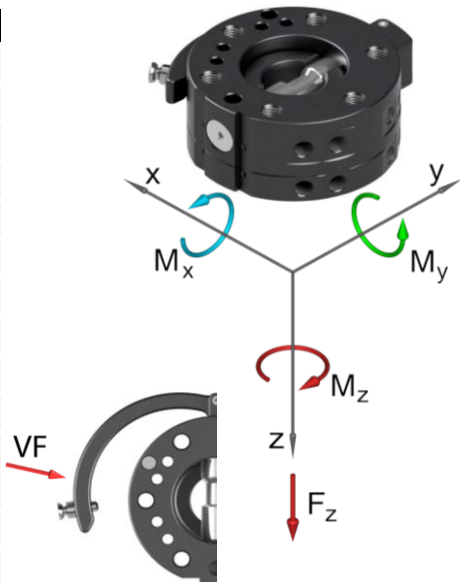
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of an energy feed-through **SEK** for electrical and pneumatic ducts
- With 6 integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1



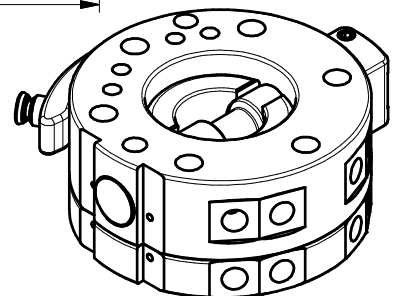
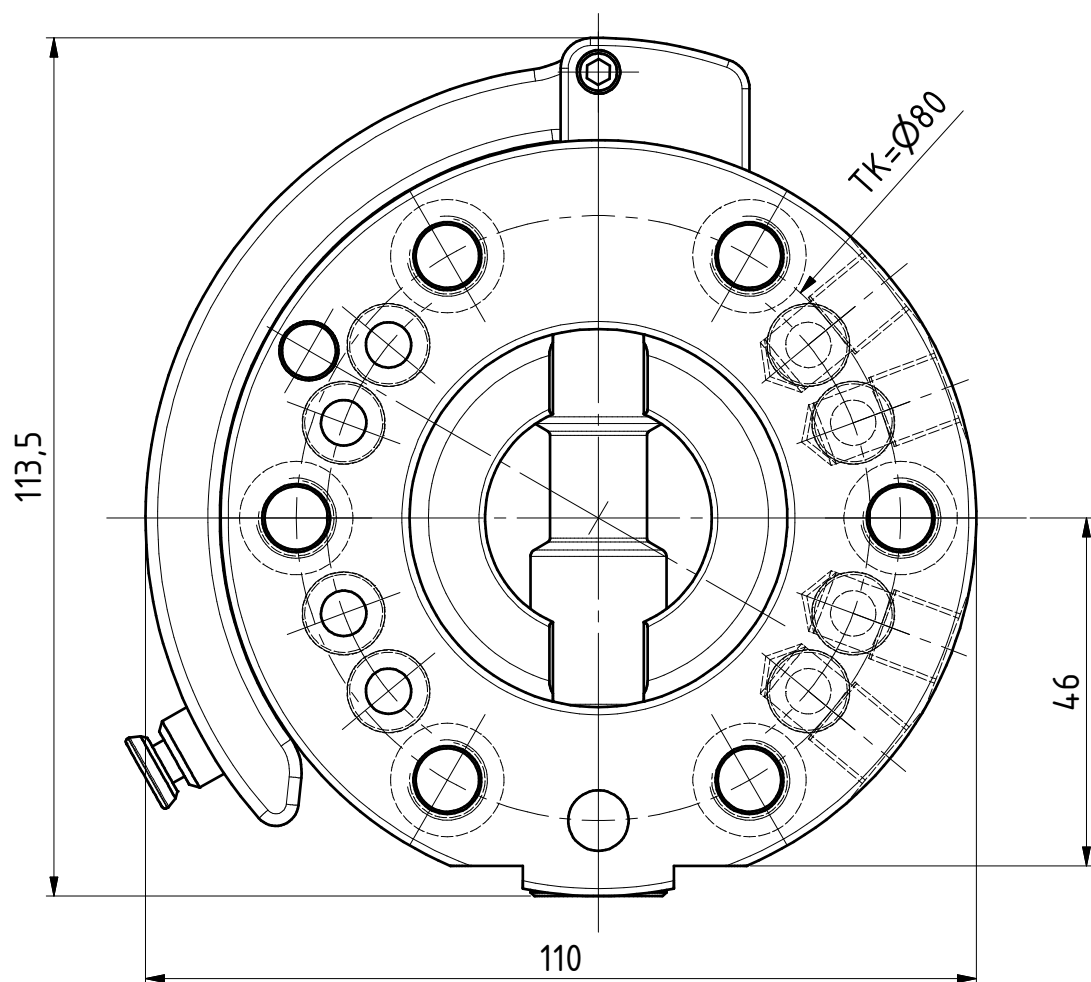
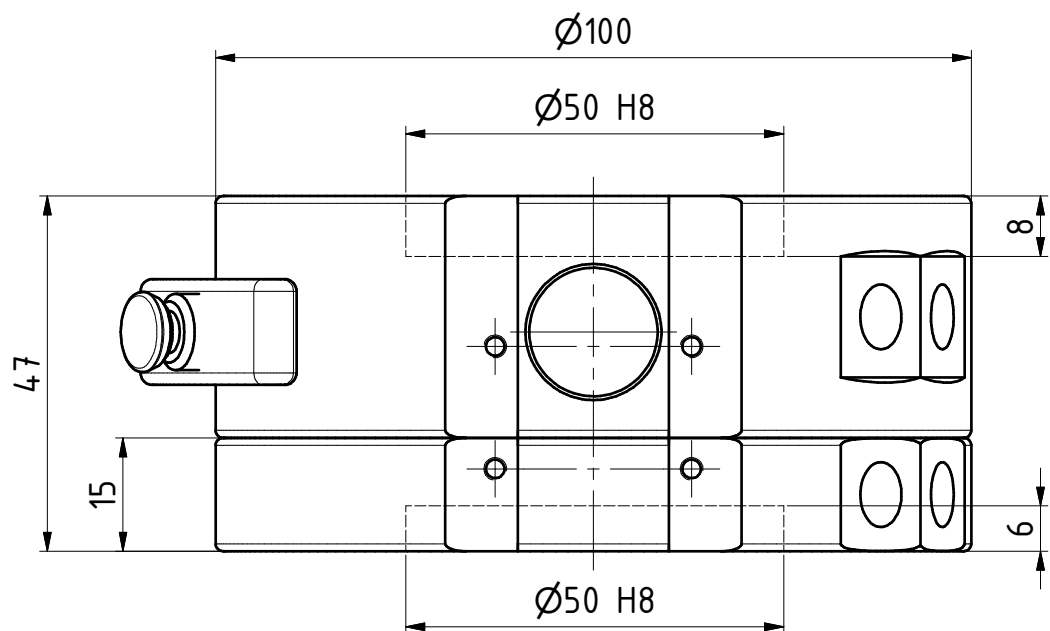
Technical specifications		SHW100-P
Basic material		Al. anod.
External diameter x height [mm]		100 x 47
Pitch circle diameter [mm]		80
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.000
Compression -Fz [kN]		219
Torsion Mz [Nm]		140
Bending Mx, My [Nm]		130
Mass [kg]	upper assembly	0,74
	lower assembly	0,35
Recommended load [kg]		25* / 34**
Locking force VF [N]		6 - 70
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	4 x G1/8 a. 4 x D=6
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	O-ring

SHW100 Connector, drilled acc. to ISO...		
G-SHW100-2OEP	upper assembly, E-Mount, 8 pneum. ducts, Al, anodized	
G-SHW100-2UEP	lower assembly, E-Mount, 8 pneum. ducts, Al, anodized	



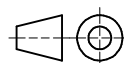


Datum 30.06.2023

Maßstab 1:1

Zeichnungsnummer

G-SHW100-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik





# G-SHW125-P

## Technical specifications

GRIP

### Operating mode:

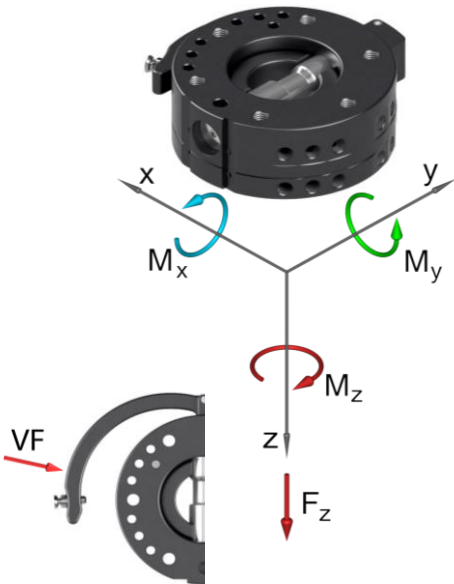
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of an energy feed-through **SEK** for electrical and pneumatic ducts
- With 12 integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1



Technical specifications		SHW125-P
Basic material		Al. anod.
External diameter x height [mm]		125 x 50
Pitch circle diameter [mm]		100
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.200
Compression -Fz [kN]		377
Torsion Mz [Nm]		180
Bending Mx, My [Nm]		180
Mass [kg]	upper assembly	1,3
	lower assembly	0,55
Recommended load [kg]		40* / 55**
Locking force VF [N]		8 - 80
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	6 x G1/8 a. 6 x D=6
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

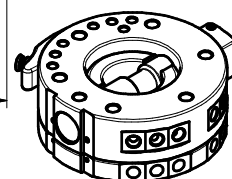
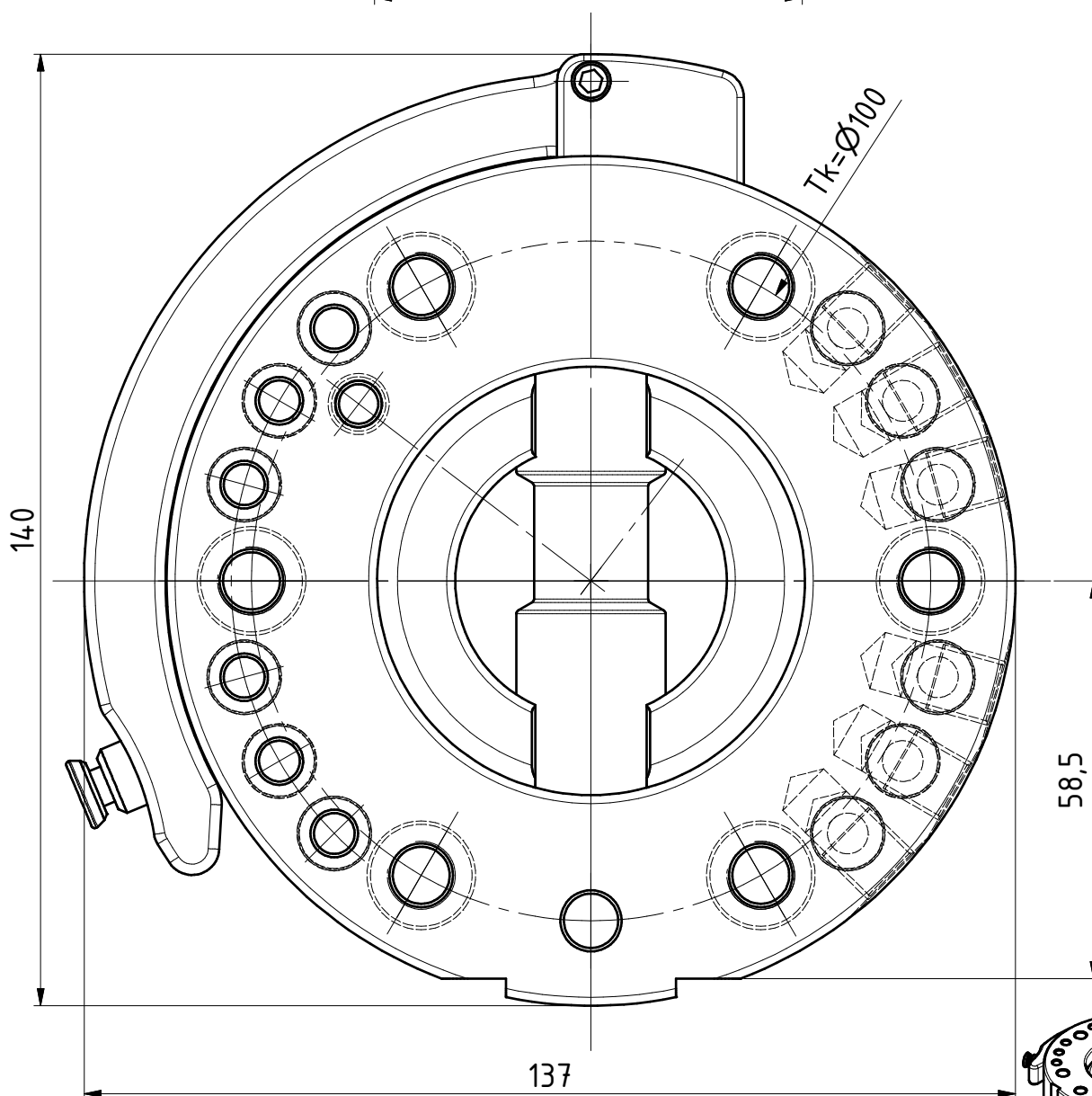
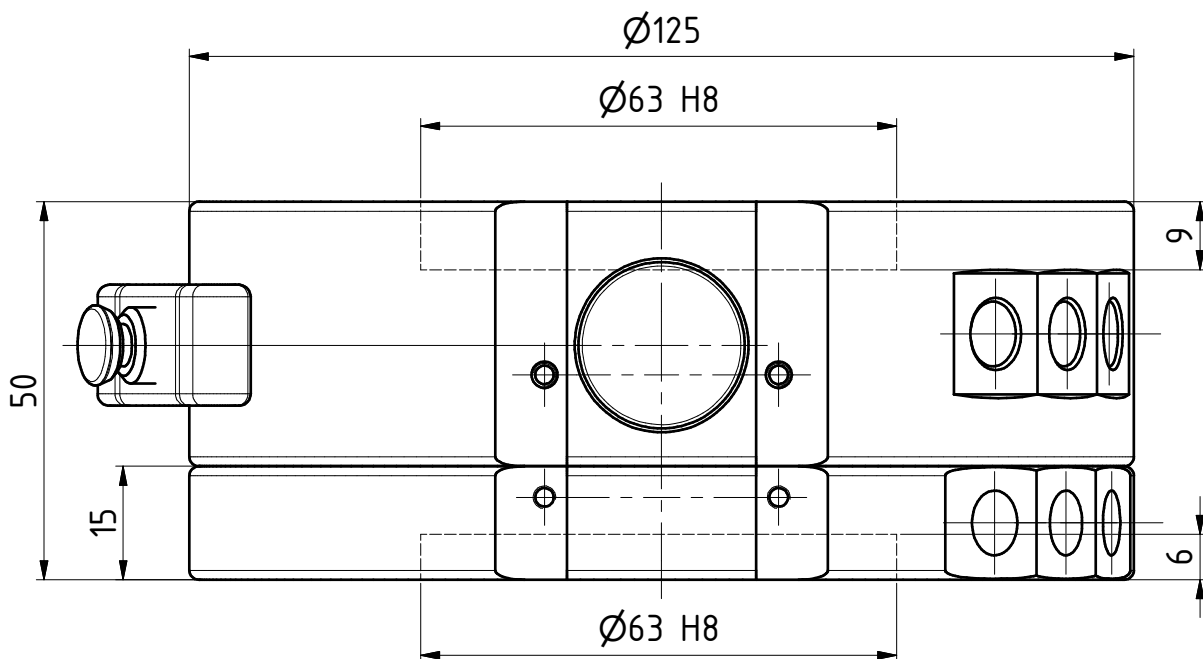


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	O-ring

### SHW125 Connector, drilled acc. to ISO...

G-SHW125-2OEP	upper assembly, E-Mount, 12 pneum. ducts, Al, anodized
G-SHW125-2UEP	lower assembly, E-Mount, 12 pneum. ducts, Al, anodized



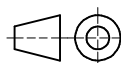


Datum 30.06.2023

Maßstab 1:1,5

Zeichnungsnummer

G-SHW125-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik







# G-SHW160-P

## Technical specifications

GRIP

### Operating mode:

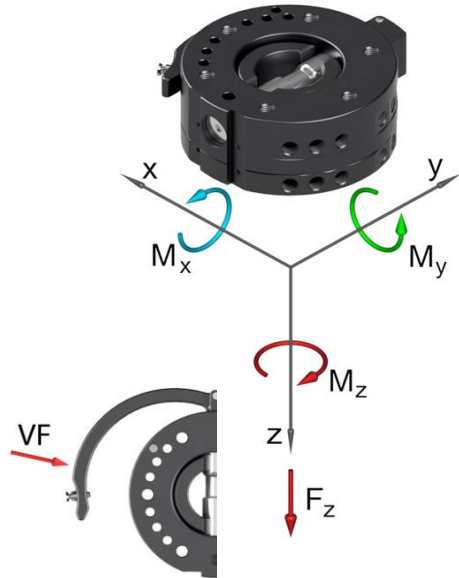
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

- Withstands high loads with low dead weight
- Intuitive operation
- Can be released and closed with one handle
- High repeat accuracy +/- 0.02 mm
- Holds up to 5,000 changing cycles
- Optional connection of an energy feed-through **SEK** for electrical and pneumatic ducts
- With 12 integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1

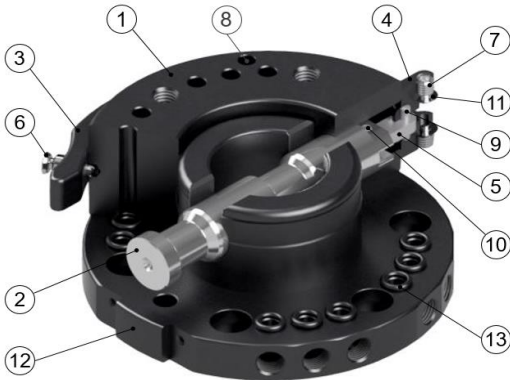


Technical specifications		SHW160-P
Basic material		Al. anod.
External diameter x height [mm]		160 x 70
Pitch circle diameter [mm]		125
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		2.000
Compression -Fz [kN]		626
Torsion Mz [Nm]		300
Bending Mx, My [Nm]		320
Mass [kg]	upper assembly	2,8
	lower assembly	1,2
Recommended load [kg]		52* / 68**
Locking force VF [N]		10 - 100
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	6 x G1/4 a. 6 x D=8
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

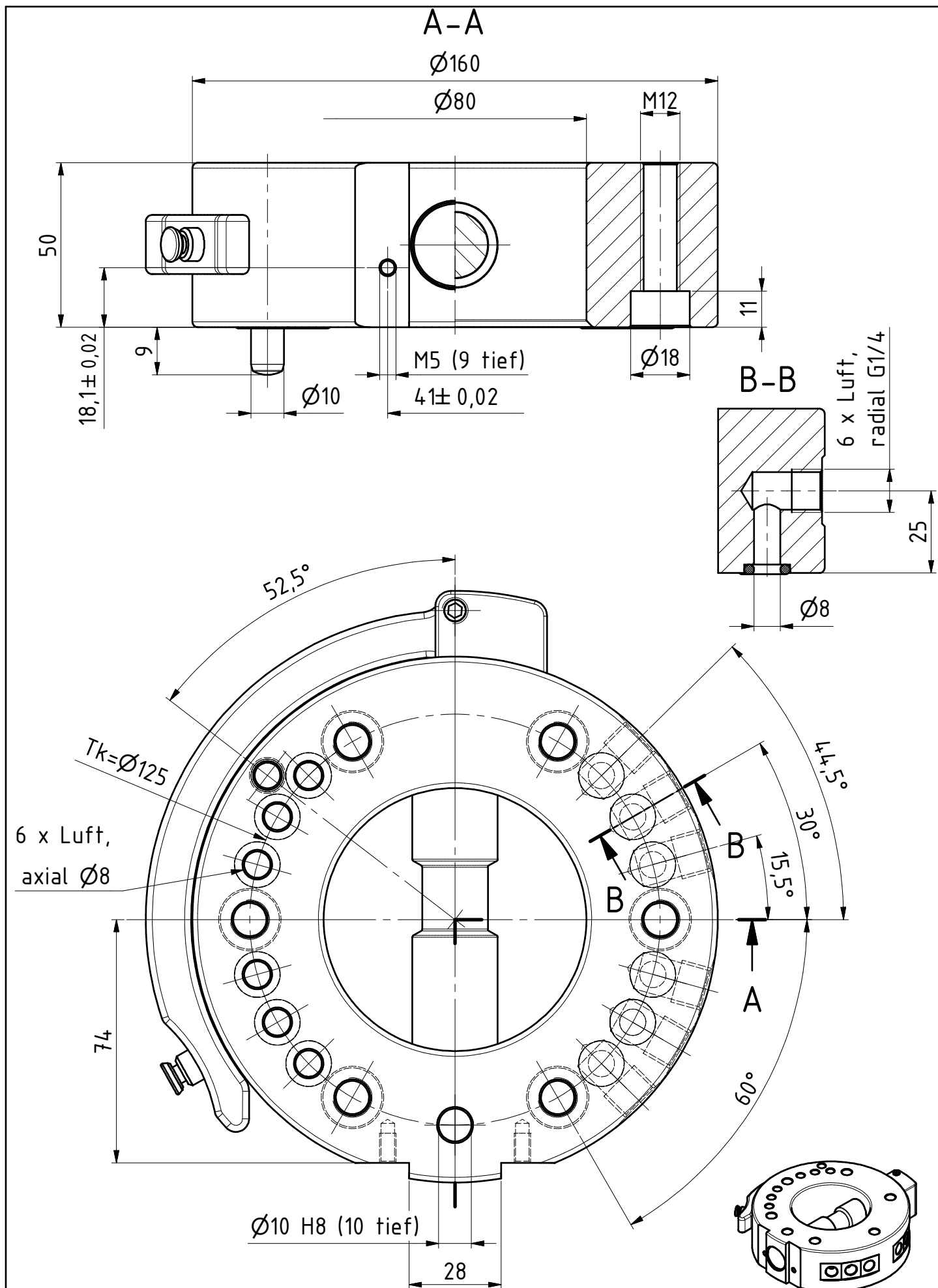


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	O-ring

SHW160 Connector, drilled acc. to ISO...		
G-SHW160-2OEP	upper assembly, E-Mount, 12 pneum. ducts, Al, anodized	
G-SHW160-2UEP	lower assembly, E-Mount, 12 pneum. ducts, Al, anodized	





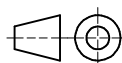


Datum 30.06.2023

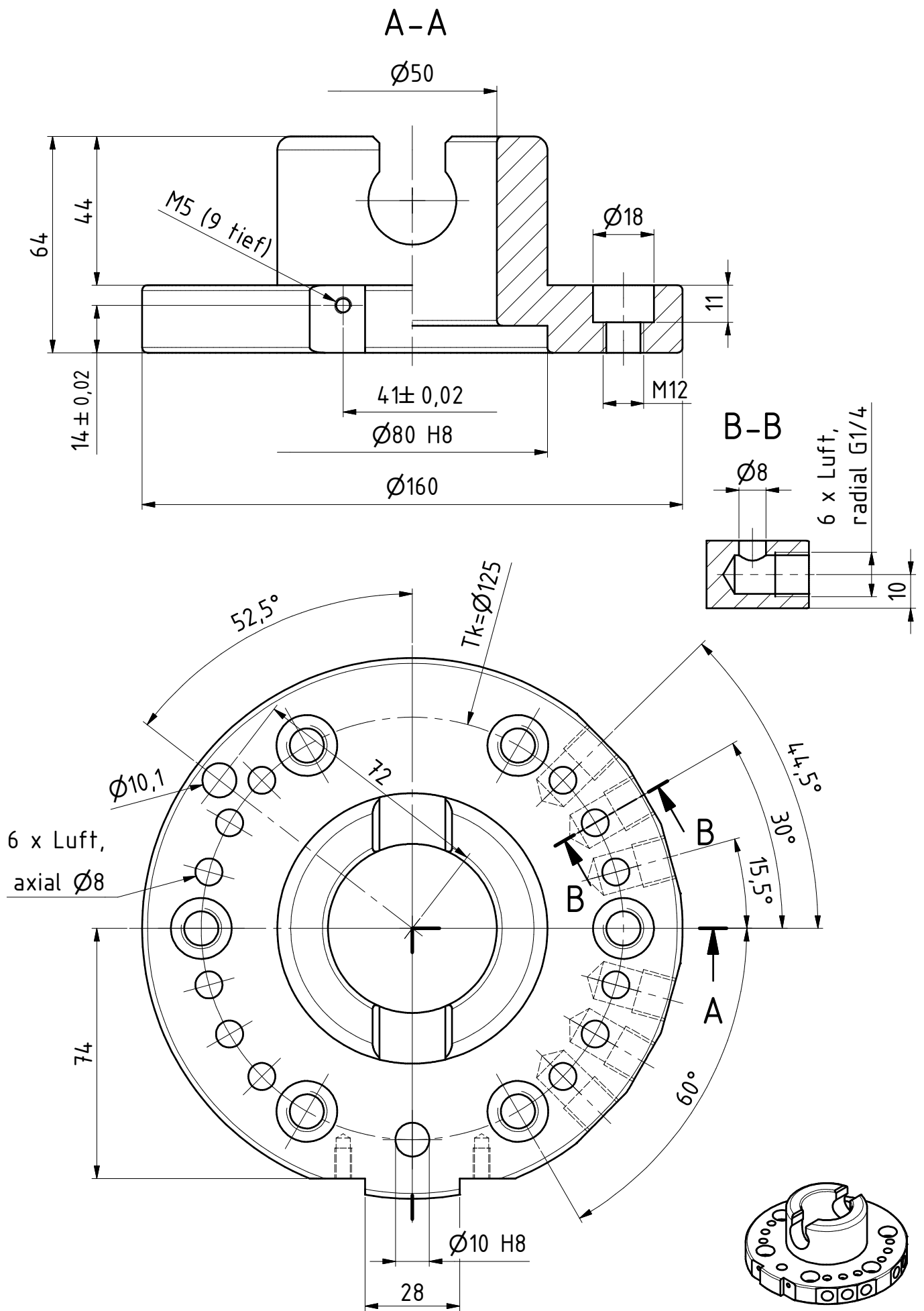
Maßstab 1:1,5

Zeichnungsnummer

G-SHW160-20EP



**GRIP**  
GRIP GmbH Handhabungstechnik

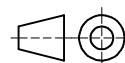


Datum 30.06.2023

Maßstab 1:1,5

Zeichnungsnummer

G-SHW160-2UEP



**GRIP**

GRIP GmbH Handhabungstechnik

# MGW CONNECTOR

The MGW end of arm tool changer is our universal tool changer for multiple applications and we have made it even better! The new system is of higher quality and offers more safety and accuracy. The innovations are a response to the current requirements of our customers. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

## MGW Connector Advantages:

- Interface according to DIN EN ISO 9409-1
- Durable - over 5000/10.000 application changes with no loss in accuracy
- Withstands high loads
- No tool required due to integrated operating lever
- Intuitive operation
- Can be released and closed with one hand
- Protection against unintentional opening for dynamic applications
- Spring-loaded locking pin secures hand lever against self-releasing
- Lightweight made of high-strength aluminum, anodized
- Optional mounting surface for energy feed-through

\*Cycles dependent upon the MGW material.

By turning the semi cylindrical bolt by 180°, the upper assembly and lower assembly are secured together. When locking, the lower assembly is pulled up by the lever action. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

MGW Connectors can be modified to meet your needs. Please inquire about special applications.

## SIZES

MGW050  
MGW063  
MGW080  
MGW100  
MGW125  
MGW160



## G-MGW050

### Technical specifications

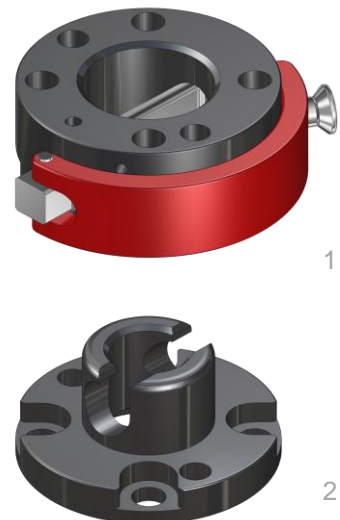
# GRIP

#### Operating mode:

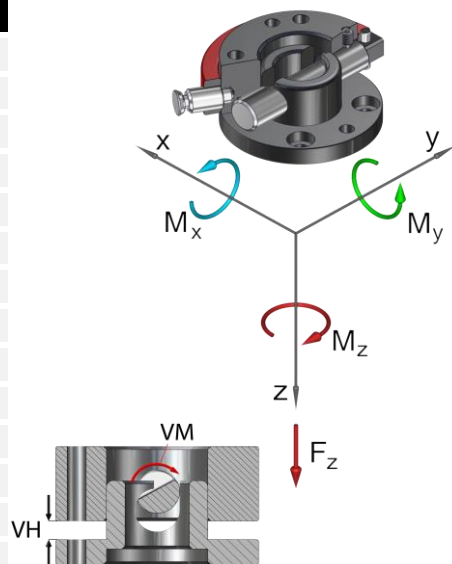
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

#### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1



Technical specifications		MGW050		
Basic material		Al. anod.	VA	St, nitrated
External diameter x Height [mm]		50 x 30		
Pitch circle diameter [mm]		40		
Repeat accuracy +/- [mm]		0,02		
Tension Fz [N]		700	1.100	1.320
Compression -Fz [kN]		48	72	96
Torsion Mz [Nm]		40	60	78
Bending Mx, My [Nm]		50	70	80
Mass [kg]	upper assembly	0,14	0,28	
	lower assembly	0,05	0,13	
Recommended load [kg] *		10	14	16
Locking torque VM [Nm]		1 - 4	2 - 6	
Locking stroke VH [mm]		0 - 5		
Operating temperature range [°C]		-30 to +120		
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety				



#### Manual gripper change system Ø50, drilled acc. to ISO...

G-MGW050-2O	upper assembly, Al, anodized
G-MGW050-2O-N	upper assembly, steel, nitrated
G-MGW050-2O-V	upper assembly, VA
G-MGW050-2U	lower assembly, Al, anodized
G-MGW050-2U-N	lower assembly, steel, nitrated
G-MGW050-2U-V	lower assembly, VA

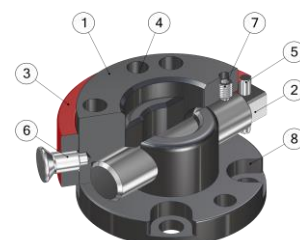
#### Replacement semi-cylindrical bolt...

EG-MGW050-HB	for MGW050
EG-MGW050-HB-VA	for MGW050, out off VA

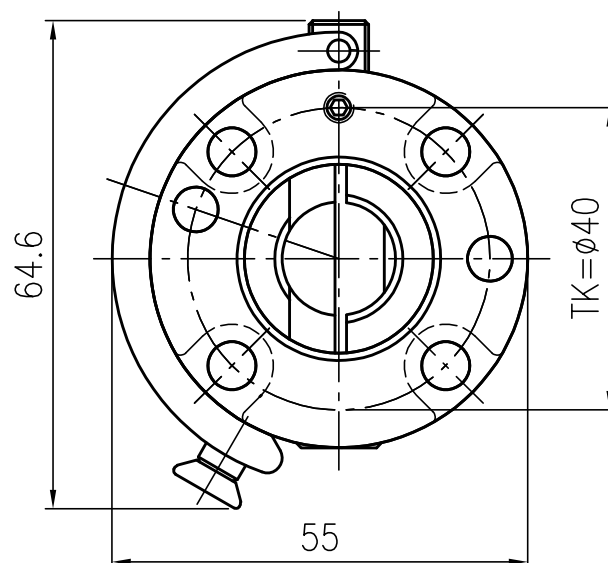
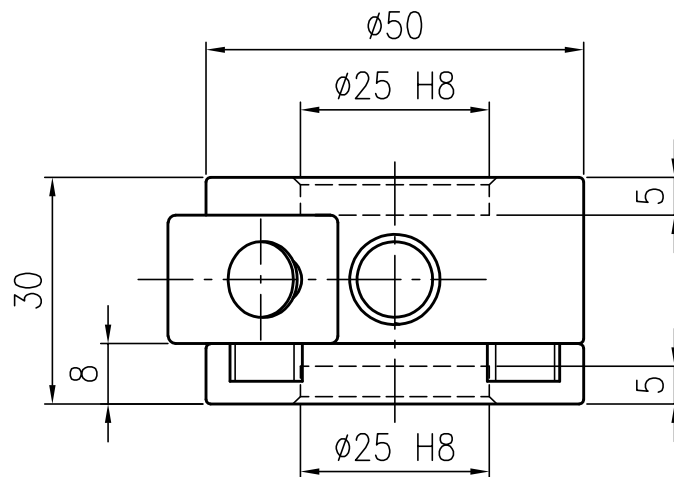
#### Replacement hand lever

EG-MGW050-HH	for MGW050
--------------	------------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly





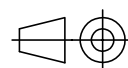


Datum 08.11.2016

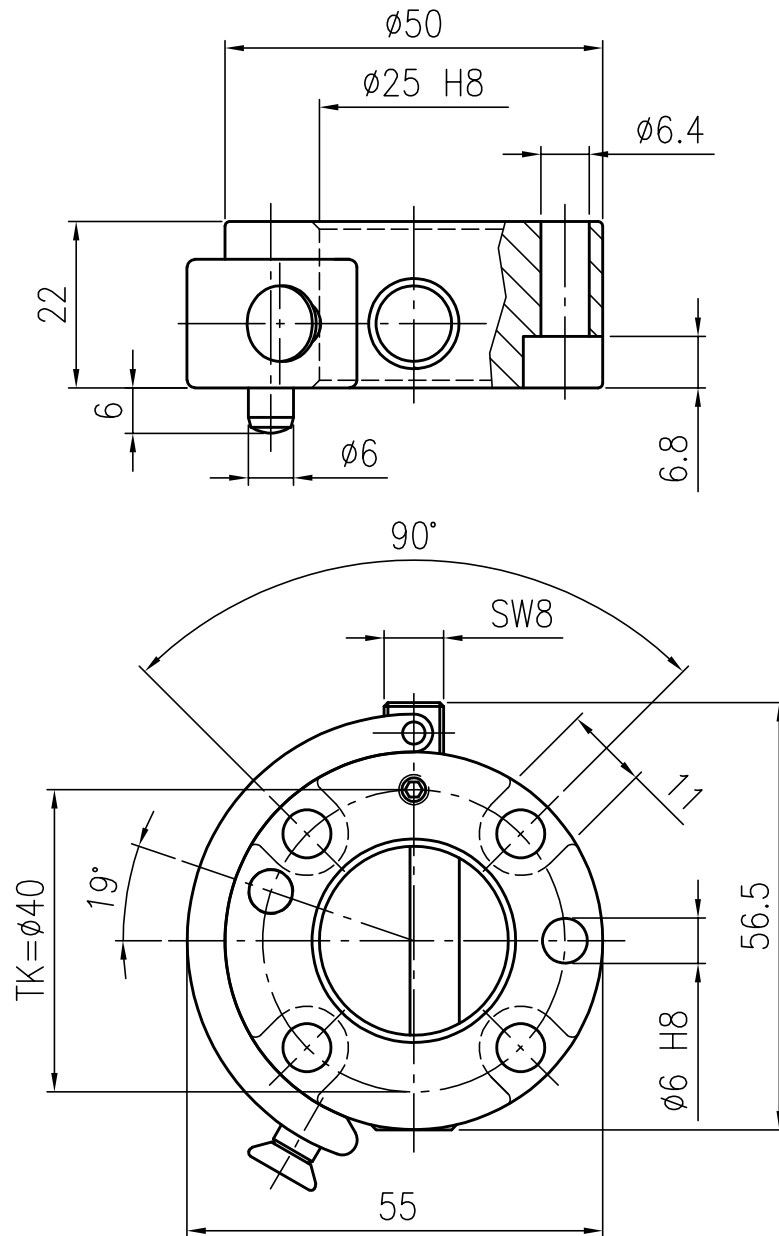
Maßstab 1:1

Zeichnungsnummer

G-MGW050-2Z



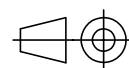
**GRIP**  
GRIP GmbH Handhabungstechnik



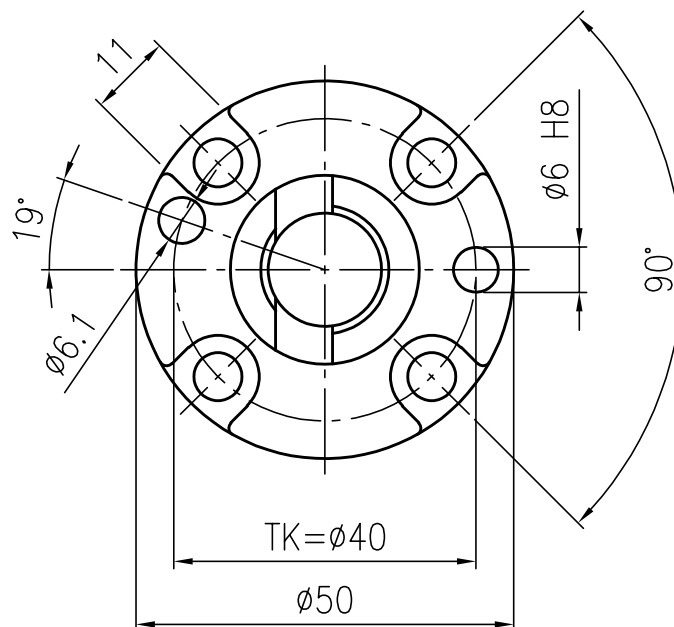
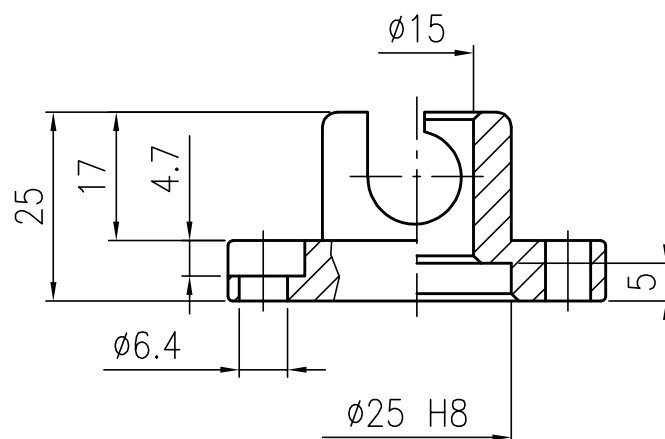
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW050-20
Stahl	G-MGW050-20-S
St. nitriert	G-MGW050-20-N
VA	G-MGW050-20-V

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MGW050-20



**GRIP**  
GRIP GmbH Handhabungstechnik



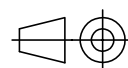
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW050-2U
Stahl	G-MGW050-2U-S
St. nitriert	G-MGW050-2U-N
VA	G-MGW050-2U-V

Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

G-MGW050-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-MGW063

## Technical specifications

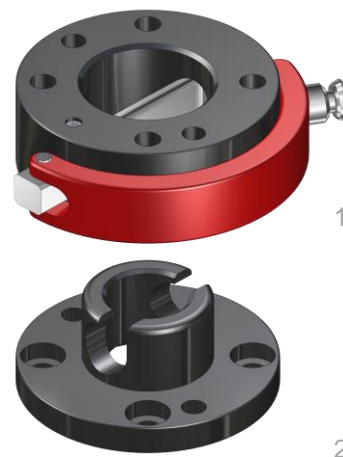
# GRIP

### Operating mode:

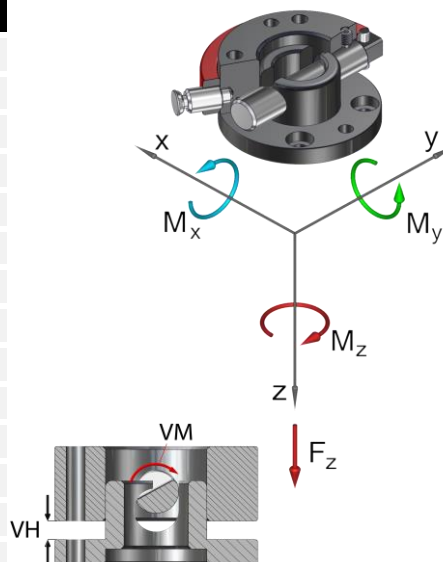
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1  
Optional connection of a Multi energy coupling **MEK**



Technical specifications		MGW063		
Basic material		Al. anod.	VA	St, nitrated
External diameter x Height [mm]		63 x 32		
Pitch circle diameter [mm]		50		
Repeat accuracy +/- [mm]		0,02		
Tension Fz [N]		900	1.500	1.800
Compression -Fz [kN]		89	134	178
Torsion Mz [Nm]		60	80	105
Bending Mx, My [Nm]		70	100	115
Mass [kg]	upper assembly	0,26	0,48	
	lower assembly	0,08	0,23	
Recommended load [kg] *		16	20	22
Locking torque VM [Nm]		1,5 - 5	3 - 8	
Locking stroke VH [mm]		0 - 6		
Operating temperature range [°C]		-30 to +120		
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety				



### Manual gripper change system Ø63, drilled acc. to ISO...

G-MGW063-2O	upper assembly, Al, anodized
G-MGW063-2OE	upper assembly, E-Mount, Al, anodized
G-MGW063-2OEN	upper assembly, E-Mount, steel, nitrated
G-MGW063-2O-N	upper assembly, steel, nitrated
G-MGW063-2O-V	upper assembly, VA
G-MGW063-2U	lower assembly, Al, anodized
G-MGW063-2UE	lower assembly, E-Mount, Al, anodized
G-MGW063-2UEN	lower assembly, E-Mount, steel, nitrated
G-MGW063-2U-N	lower assembly, steel, nitrated
G-MGW063-2U-V	lower assembly, VA

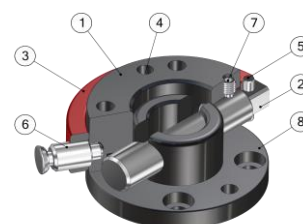
### Replacement semi-cylindrical bolt...

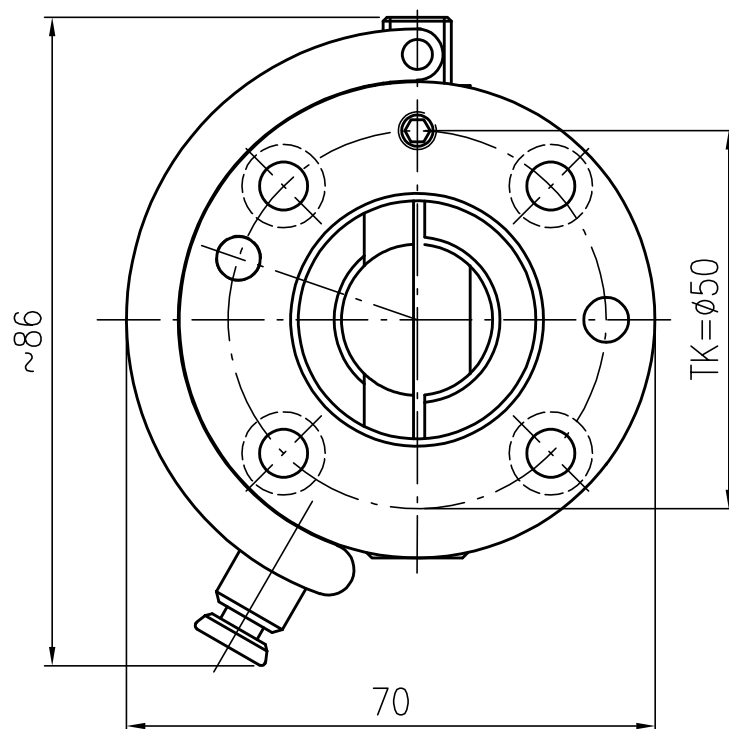
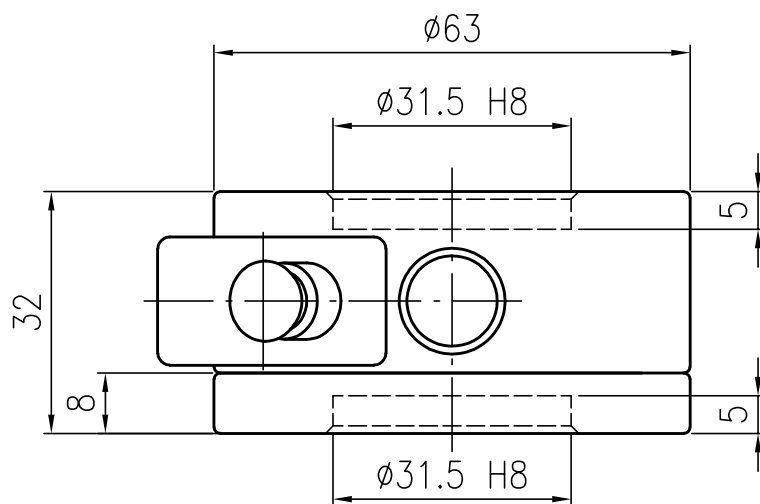
EG-MGW063-HB	for MGW063
EG-MGW063-HB-VA	for MGW063, out off VA

### Replacement hand lever

EG-MGW063-HH	for MGW063
--------------	------------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly



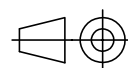


Datum 08.11.2016

Maßstab 1:1

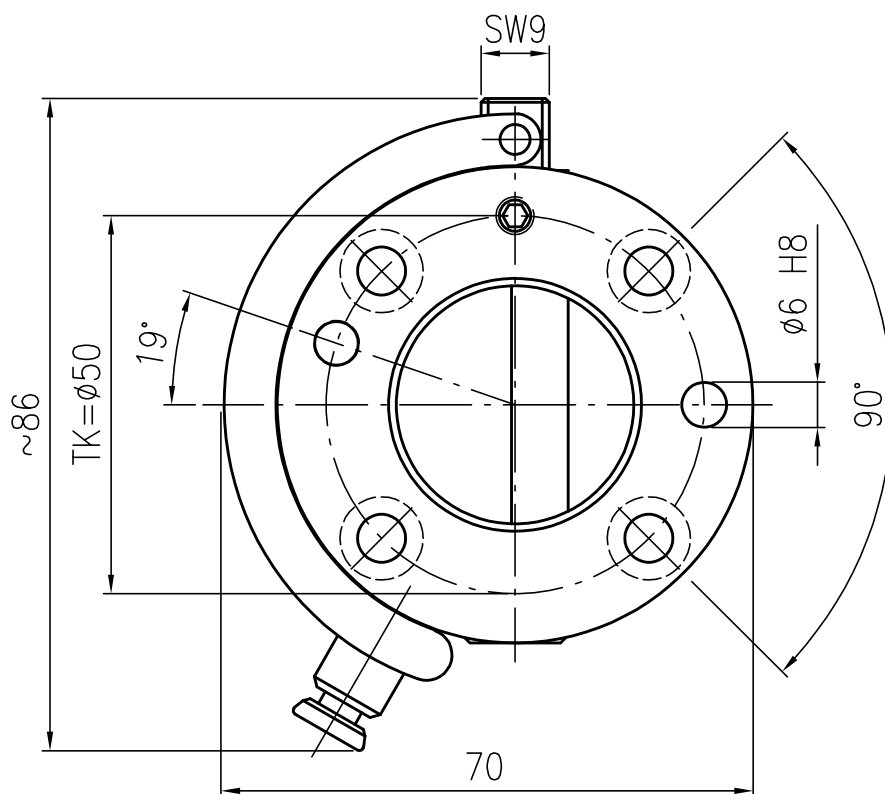
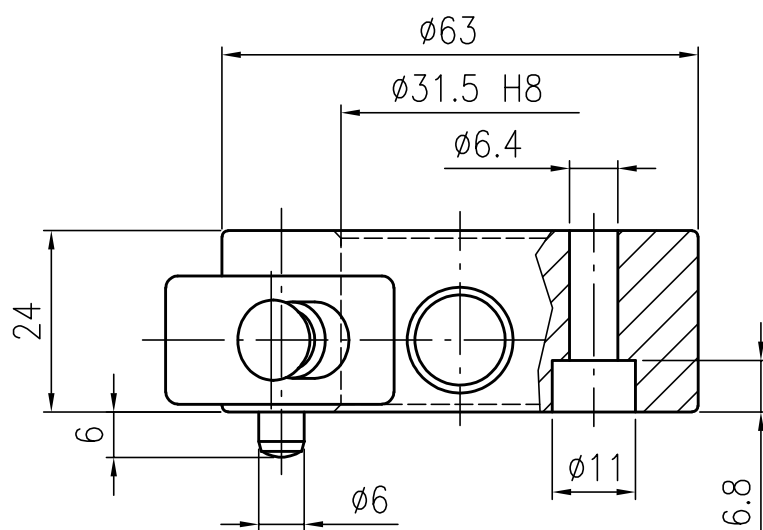
Zeichnungsnummer

G-MGW063-2Z



**GRIP**

GRIP GmbH Handhabungstechnik



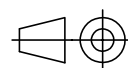
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW063-20
Stahl	G-MGW063-20-S
St. nitriert	G-MGW063-20-N
VA	G-MGW063-20-V

Datum 08.11.2016

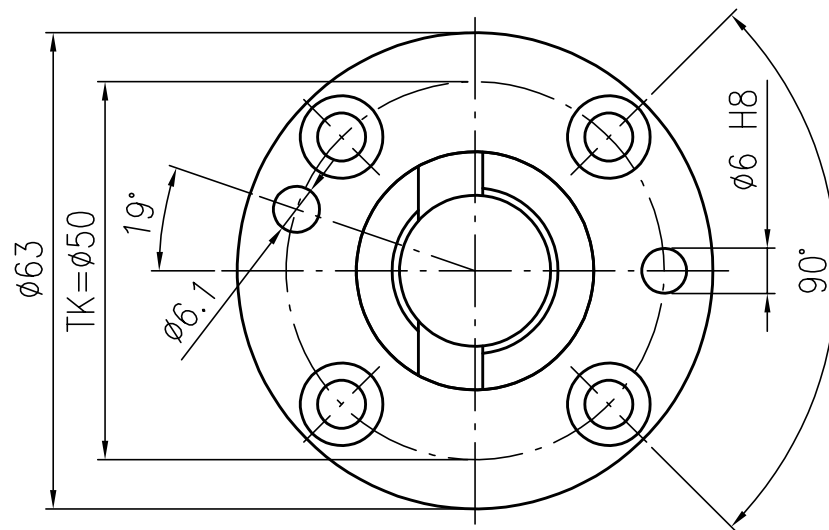
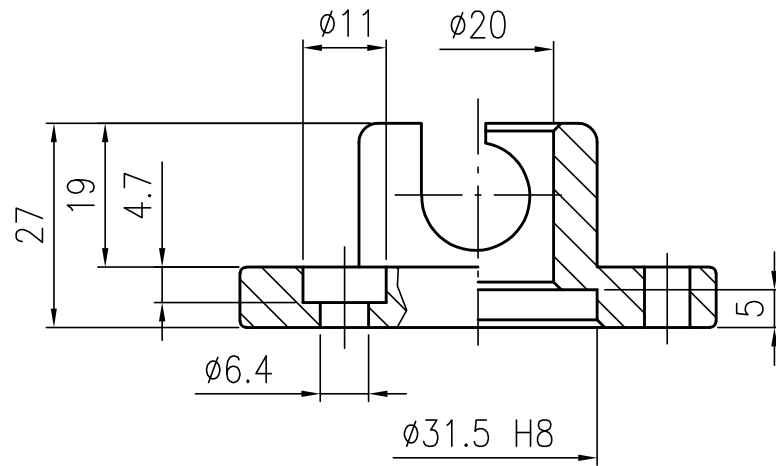
Maßstab 1:1

Zeichnungsnummer

G-MGW063-20



**GRIP**  
GRIP GmbH Handhabungstechnik



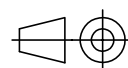
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW063-2U
Stahl	G-MGW063-2U-S
St. nitriert	G-MGW063-2U-N
VA	G-MGW063-2U-V

Datum 08.11.2016

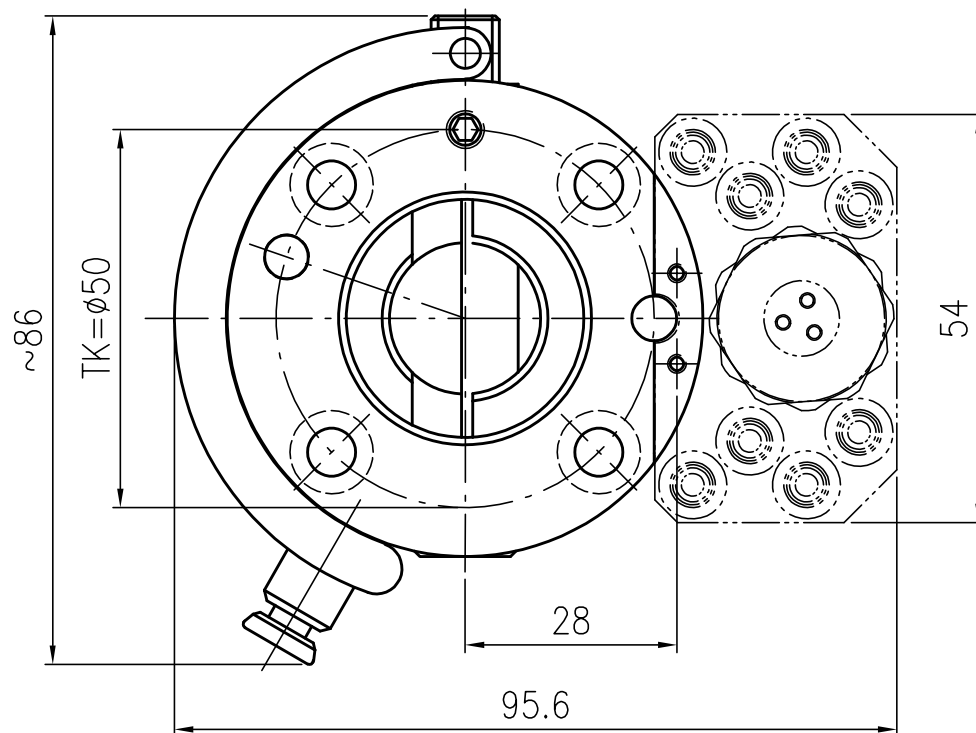
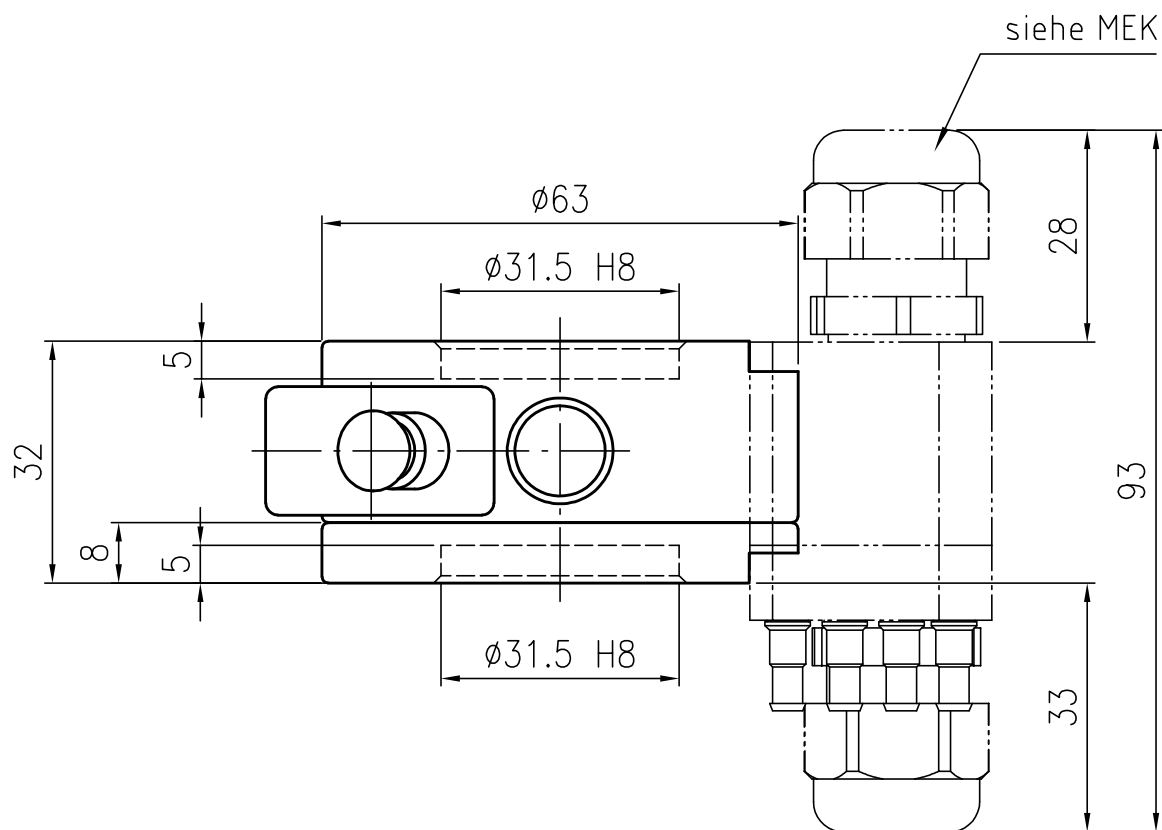
Maßstab 1:1

Zeichnungsnummer

G-MGW063-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

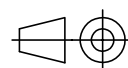


Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

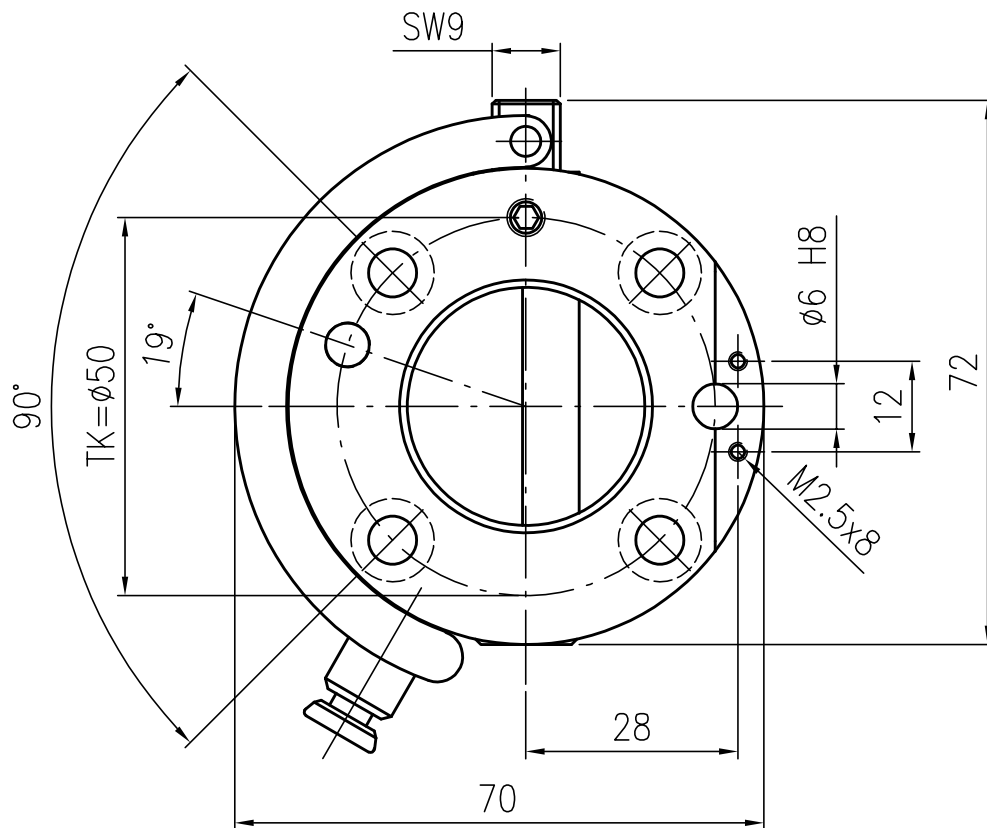
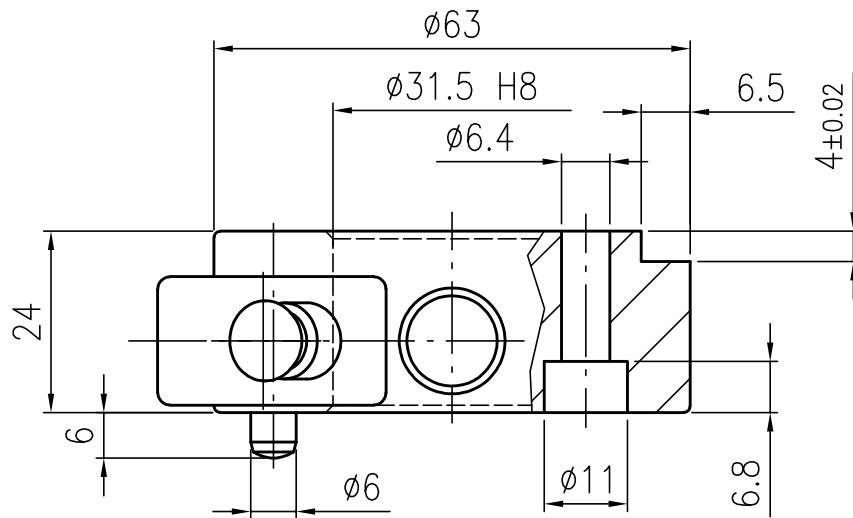
G-MGW063-2ZE



**GRIP**

GRIP GmbH Handhabungstechnik





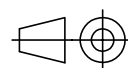
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW063-20E
Stahl	G-MGW063-20ES
St. nitriert	G-MGW063-20EN

Datum 08.11.2016

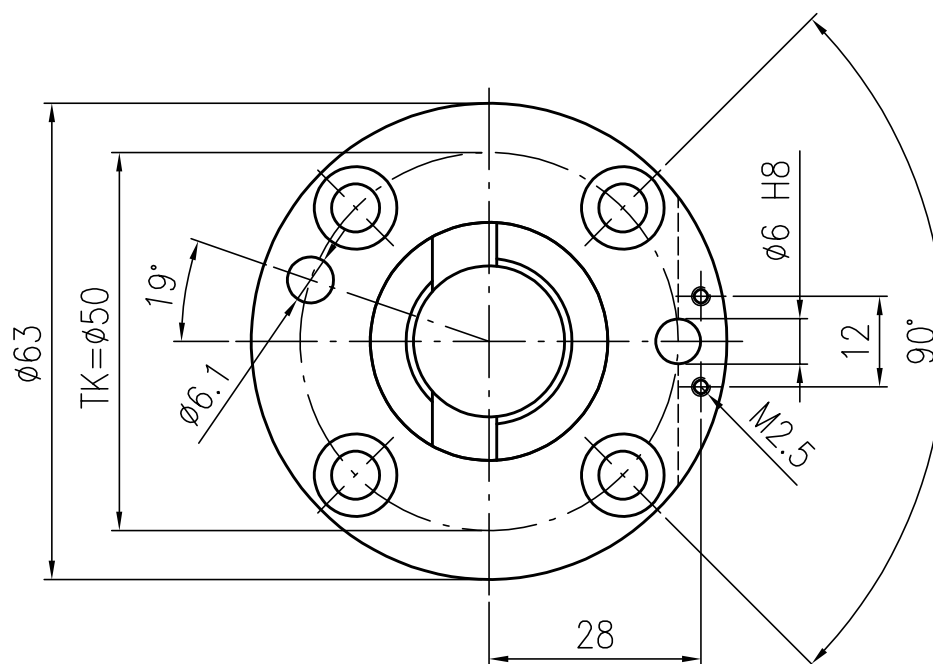
Maßstab 1:1

Zeichnungsnummer

G-MGW063-20E



**GRIP**  
GRIP GmbH Handhabungstechnik



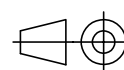
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW063-2UE
Stahl	G-MGW063-2UES
St. nitriert	G-MGW063-2UEN

Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

G-MGW063-2UE



# G-MGW080

## Technical specifications

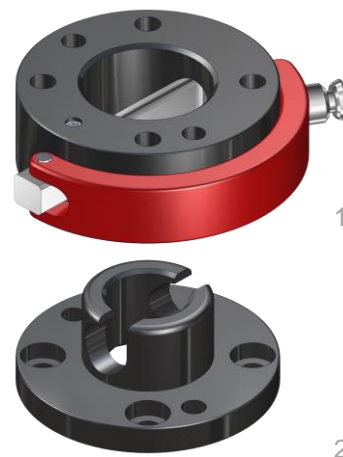
# GRIP

### Operating mode:

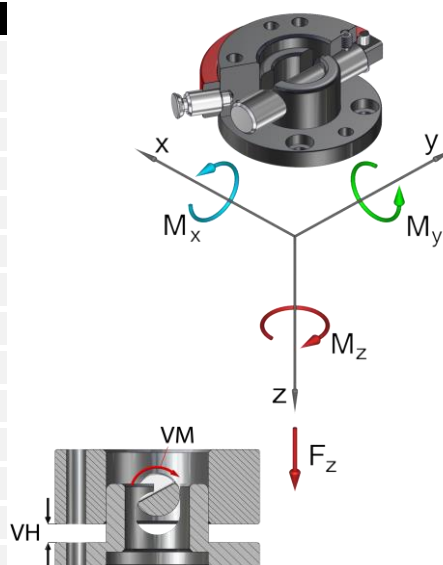
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1  
Optional connection of a Multi energy coupling **MEK**



Technical specifications		MGW080	
Basic material		Al. anod.	St, nitrated
External diameter x Height [mm]		80 x 37	
Pitch circle diameter [mm]		63	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.000	3.000
Compression -Fz [kN]		157	313
Torsion Mz [Nm]		80	120
Bending Mx, My [Nm]		100	160
Mass [kg]	upper assembly	0,45	0,92
	lower assembly	0,15	0,5
Recommended load [kg] *		20	28
Locking torque VM [Nm]		1,5 - 6	3 - 9
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety			



### Manual gripper change system Ø80, drilled acc. to ISO...

G-MGW080-2O	upper assembly, Al, anodized
G-MGW080-2OE	upper assembly, E-Mount, Al, anodized
G-MGW080-2OEN	upper assembly, E-Mount, steel, nitrated
G-MGW080-2O-N	upper assembly, steel, nitrated
G-MGW080-2U	lower assembly, Al, anodized
G-MGW080-2UE	lower assembly, E-Mount, Al, anodized
G-MGW080-2UEN	lower assembly, E-Mount, steel, nitrated
G-MGW080-2U-N	lower assembly, steel, nitrated

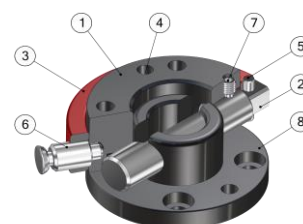
### Replacement semi-cylindrical bolt...

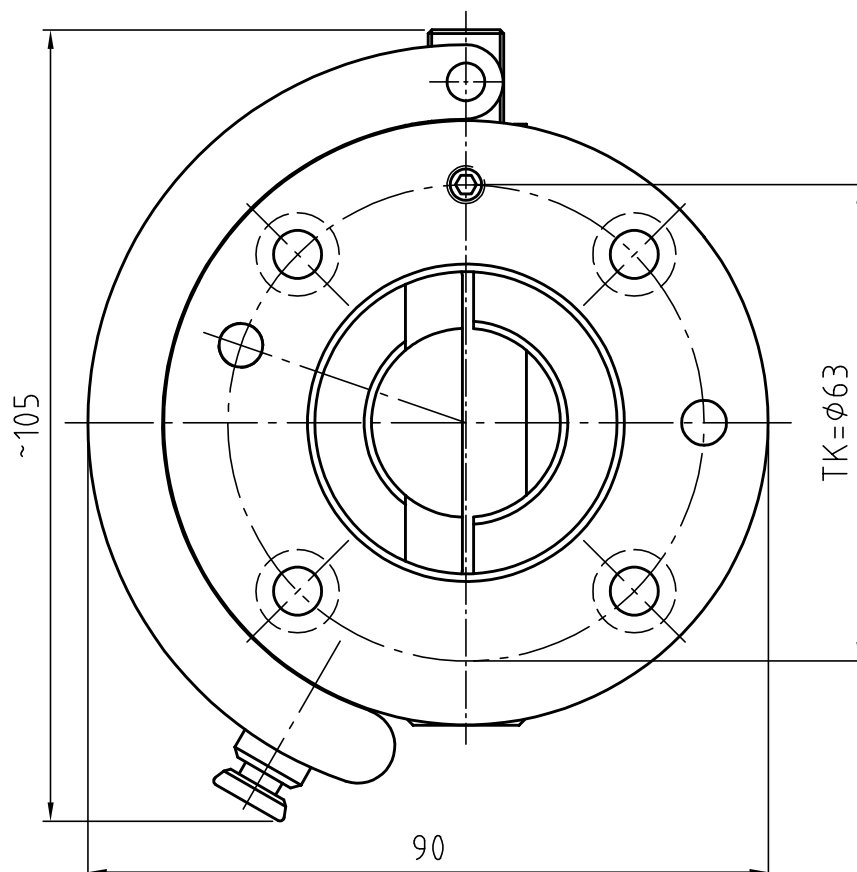
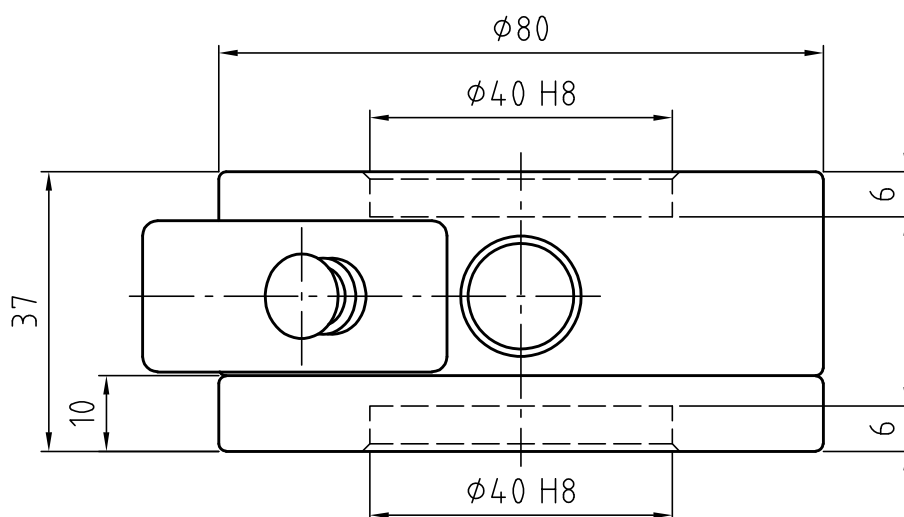
EG-MGW080-HB	for MGW080
EG-MGW080-HB-VA	for MGW080, out off VA

### Replacement hand lever

EG-MGW080-HH	for MGW080
--------------	------------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly



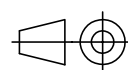


Datum 08.11.2016

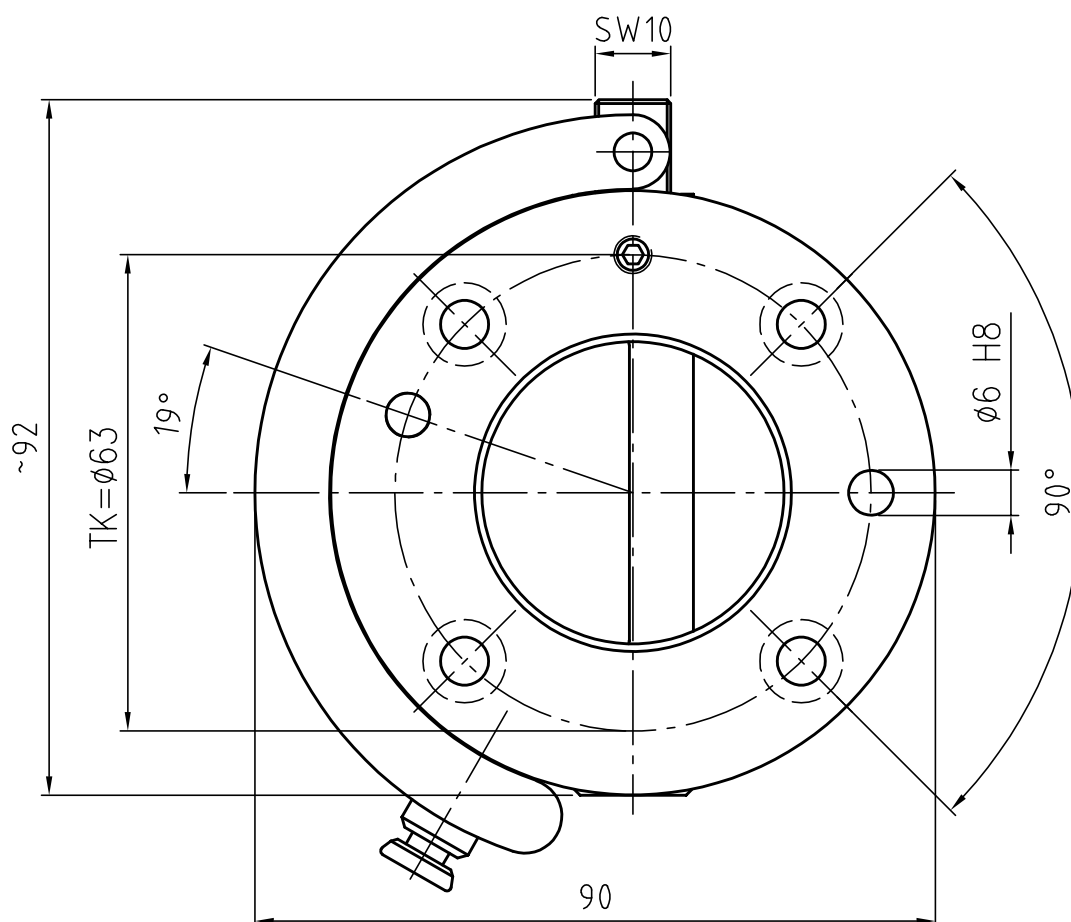
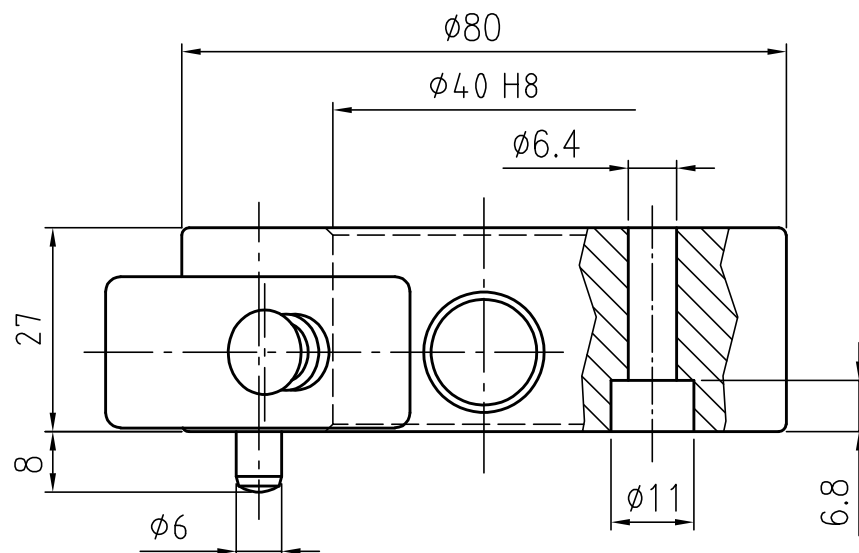
Maßstab 1:1

Zeichnungsnummer

G-MGW080-2Z



**GRIP**  
GRIP GmbH Handhabungstechnik



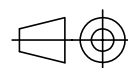
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW080-20
Stahl	G-MGW080-20-S
St. nitriert	G-MGW080-20-N

Datum 08.11.2016

Maßstab 1:1

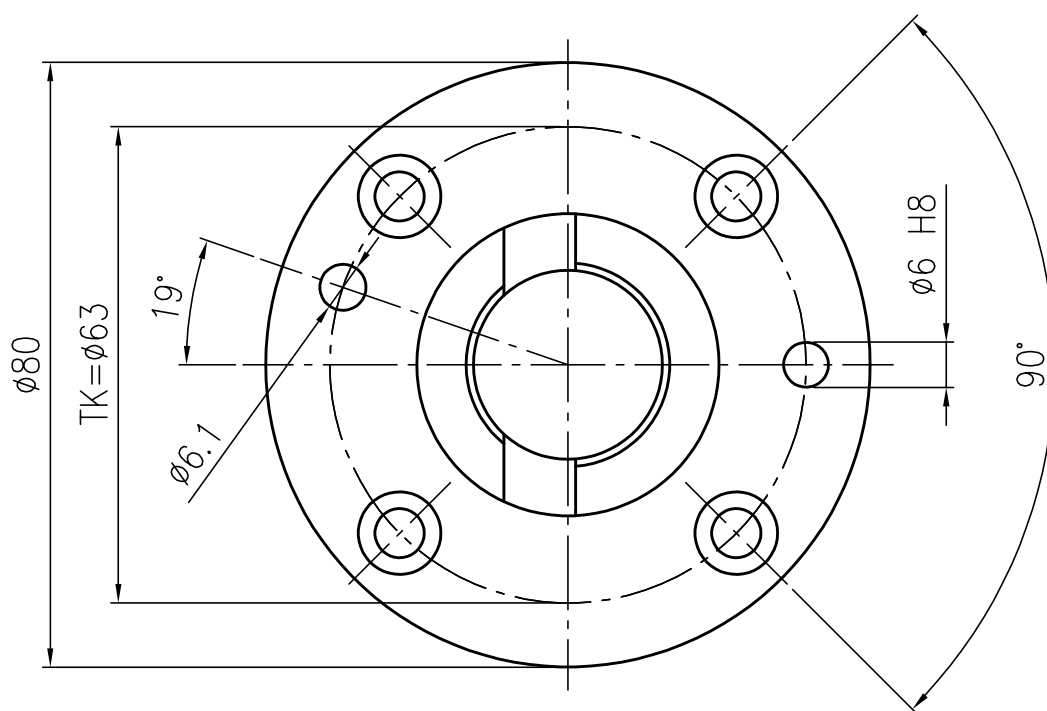
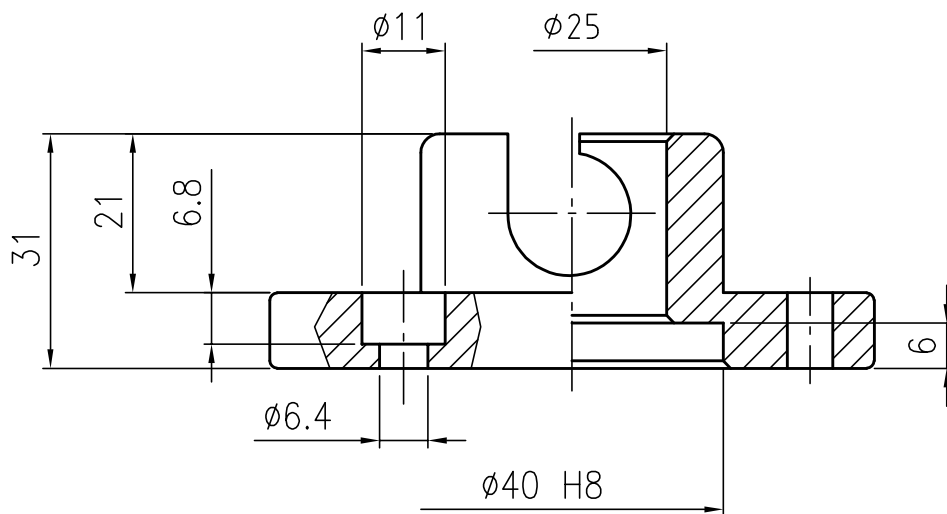
Zeichnungsnummer

G-MGW080-20



**GRIP**

GRIP GmbH Handhabungstechnik



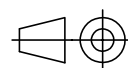
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW080-2U
Stahl	G-MGW080-2U-S
St. nitriert	G-MGW080-2U-N

Datum 08.11.2016

Maßstab 1:1

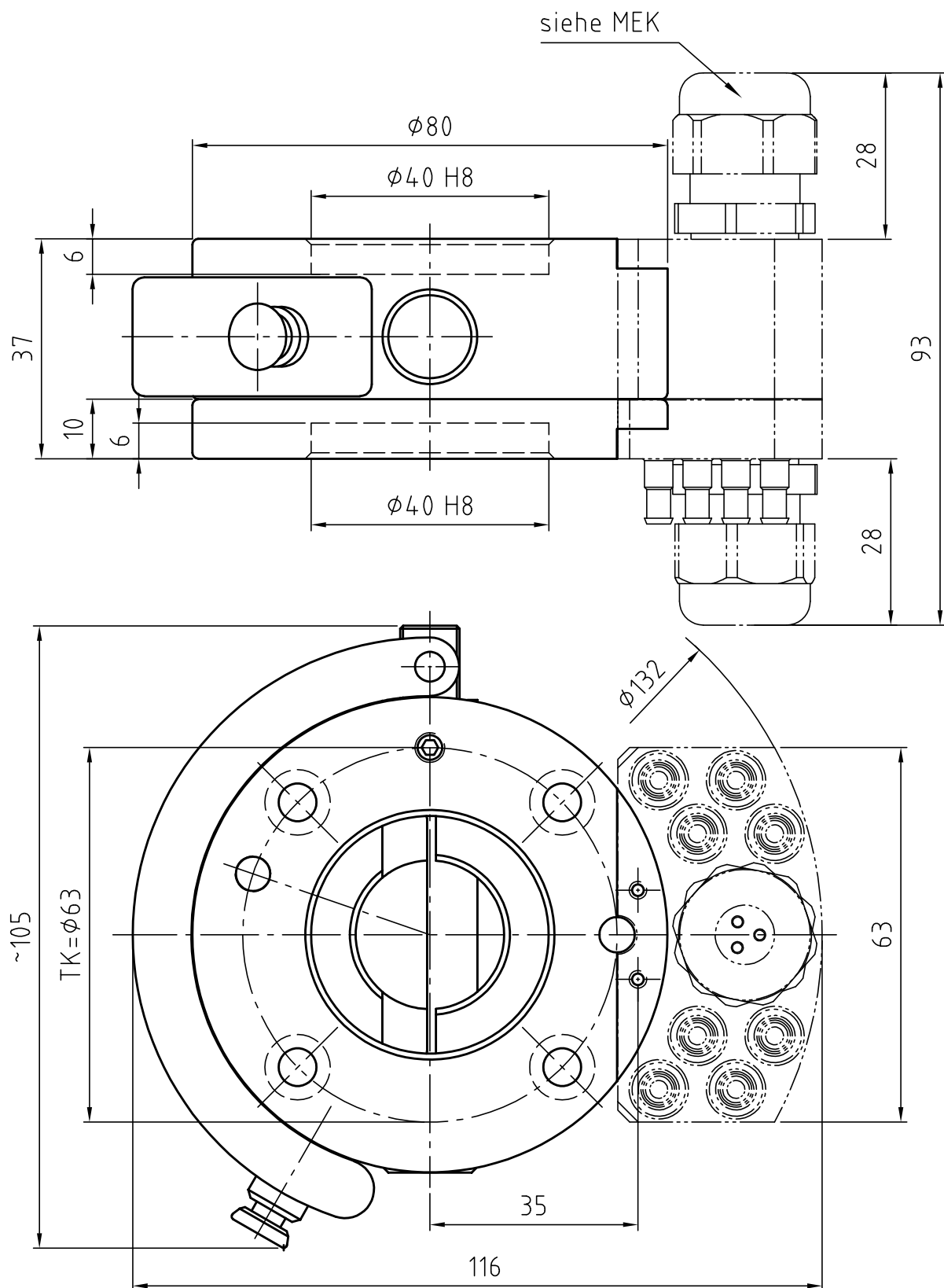
Zeichnungsnummer

G-MGW080-2U



**GRIP**

GRIP GmbH Handhabungstechnik

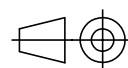


Datum 08.11.2016

Maßstab 1:1

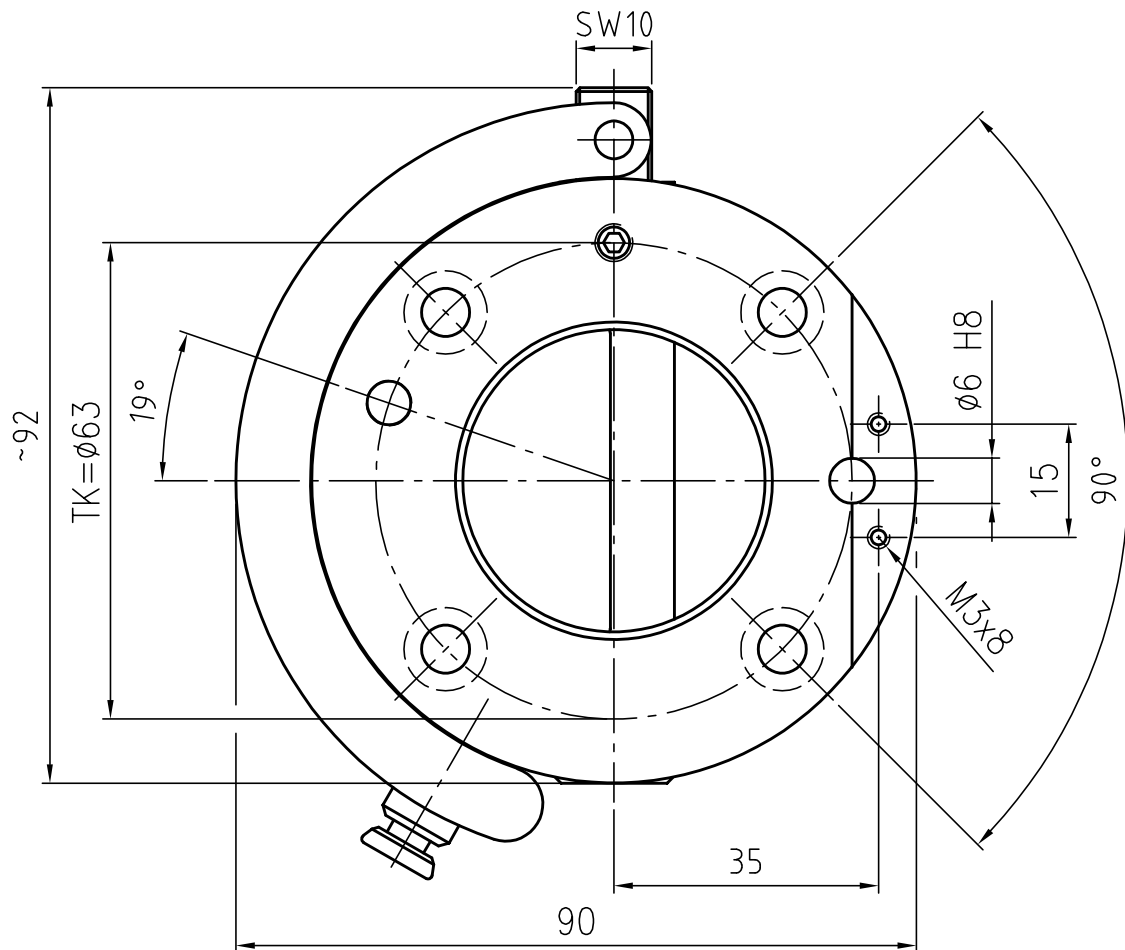
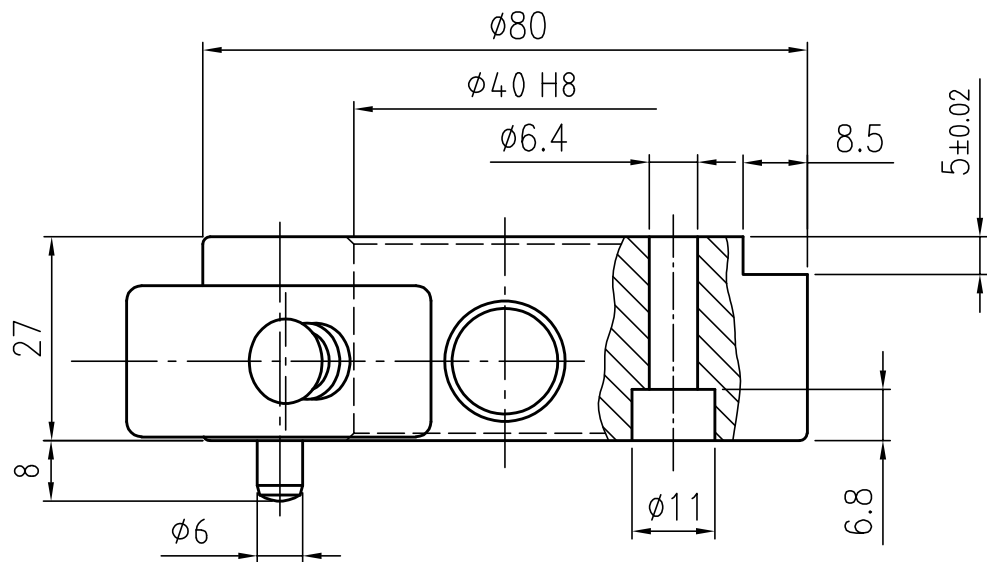
Zeichnungsnummer

G-MGW080-2ZE



**GRIP**

GRIP GmbH Handhabungstechnik



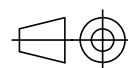
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW080-20E
Stahl	G-MGW080-20ES
St. nitriert	G-MGW080-20EN

Datum 08.11.2016

Maßstab 1:1

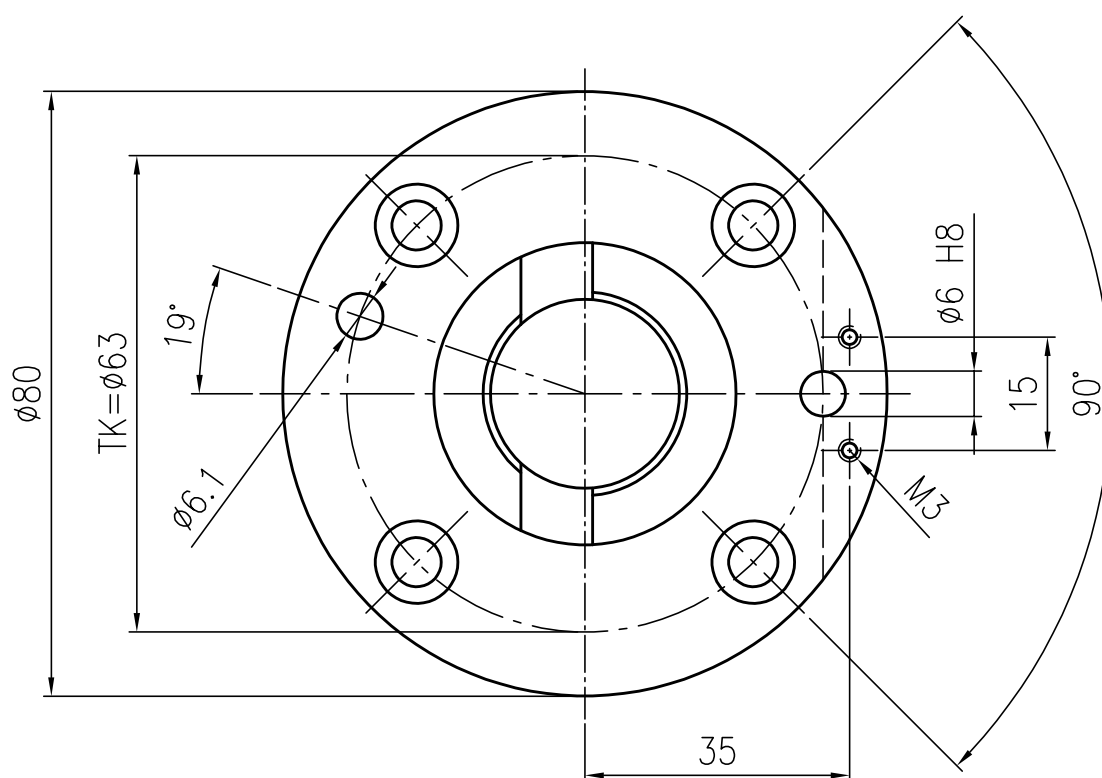
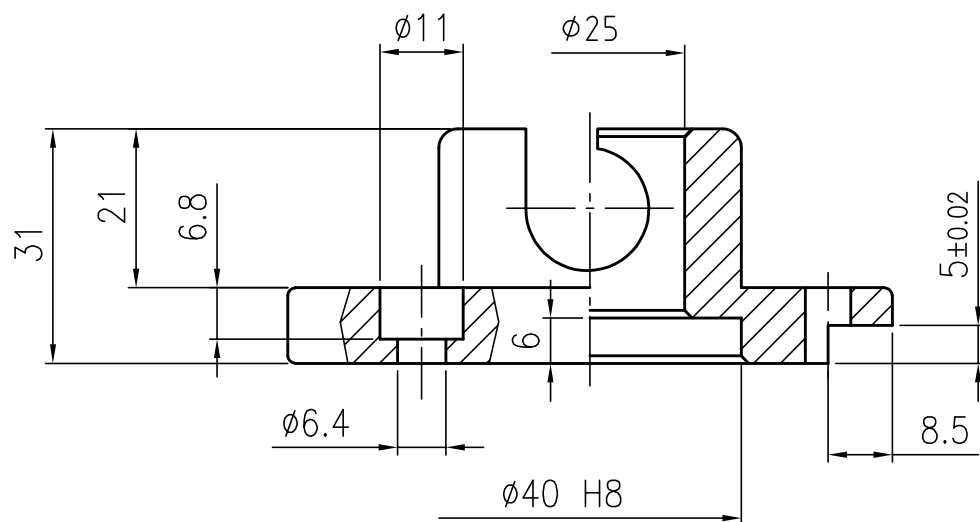
Zeichnungsnummer

G-MGW080-20E



**GRIP**  
GRIP GmbH Handhabungstechnik





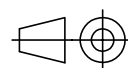
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW080-2UE
Stahl	G-MGW080-2UES
St. nitriert	G-MGW080-2UEN

Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

G-MGW080-2UE



**GRIP**

GRIP GmbH Handhabungstechnik

## G-MGW100

### Technical specifications

# GRIP

#### Operating mode:

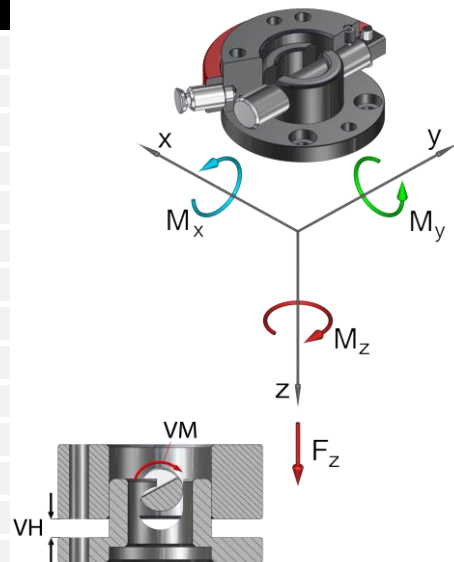
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

#### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1  
Optional connection of a Multi energy coupling **MEK**



Technical specifications		MGW100	
Basic material		Al. anod.	St, nitrated
External diameter x Height [mm]		100 x 45	
Pitch circle diameter [mm]		80	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.200	4.200
Compression -Fz [kN]		219	439
Torsion Mz [Nm]		110	185
Bending Mx, My [Nm]		130	205
Mass [kg]	upper assembly	0,74	1,53
	lower assembly	0,35	1,01
Recommended load [kg] *		28	39
Locking torque VM [Nm]		2 – 10	3 – 14
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety			



#### Manual gripper change system Ø100, drilled acc. to ISO...

G-MGW100-2O	upper assembly, Al, anodized
G-MGW100-2OE	upper assembly, E-Mount, Al, anodized
G-MGW100-2OEN	upper assembly, E-Mount, steel, nitrated
G-MGW100-2O-N	upper assembly, steel, nitrated
G-MGW100-2U	lower assembly, Al, anodized
G-MGW100-2UE	lower assembly, E-Mount, Al, anodized
G-MGW100-2UEN	lower assembly, E-Mount, steel, nitrated
G-MGW100-2U-N	lower assembly, steel, nitrated

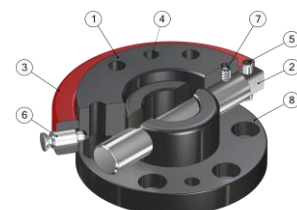
#### Replacement semi-cylindrical bolt...

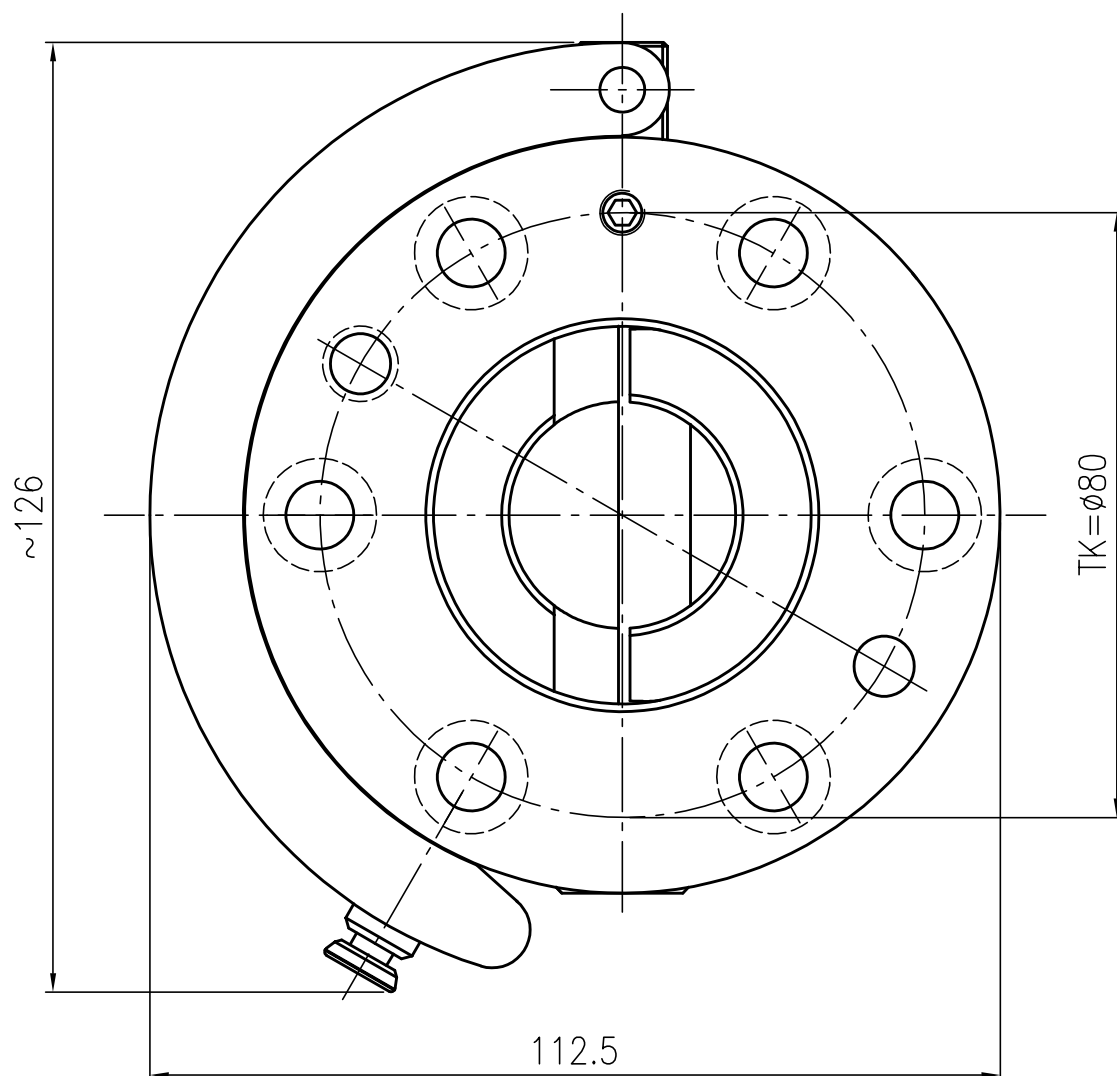
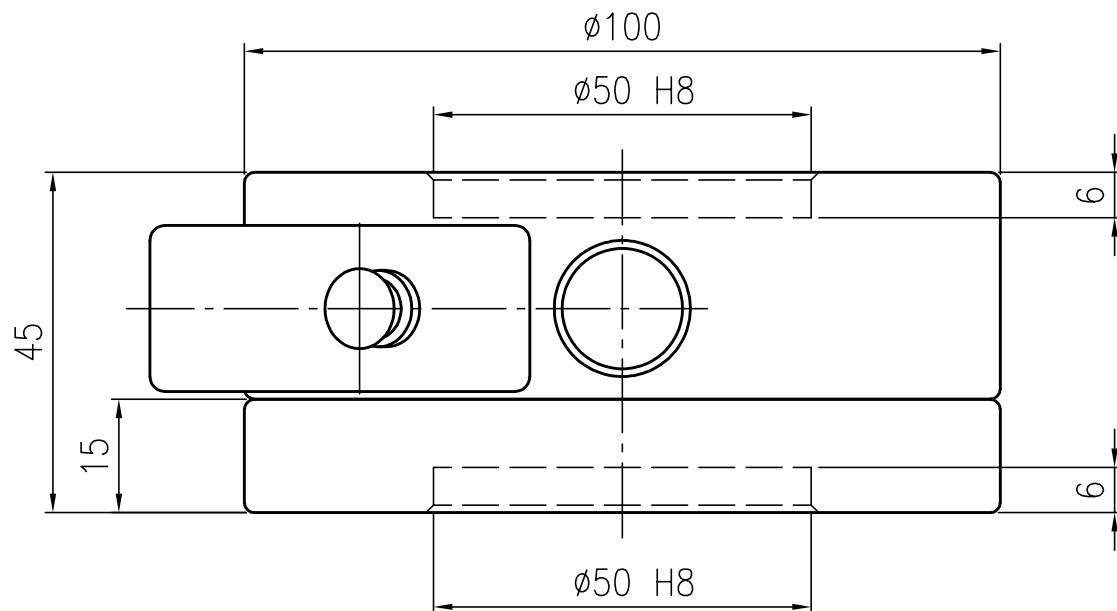
EG-MGW100-HB	for MGW100
EG-MGW100-HB-VA	for MGW100, out off VA

#### Replacement hand lever

EG-MGW100-HH	for MGW100
--------------	------------

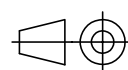
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly



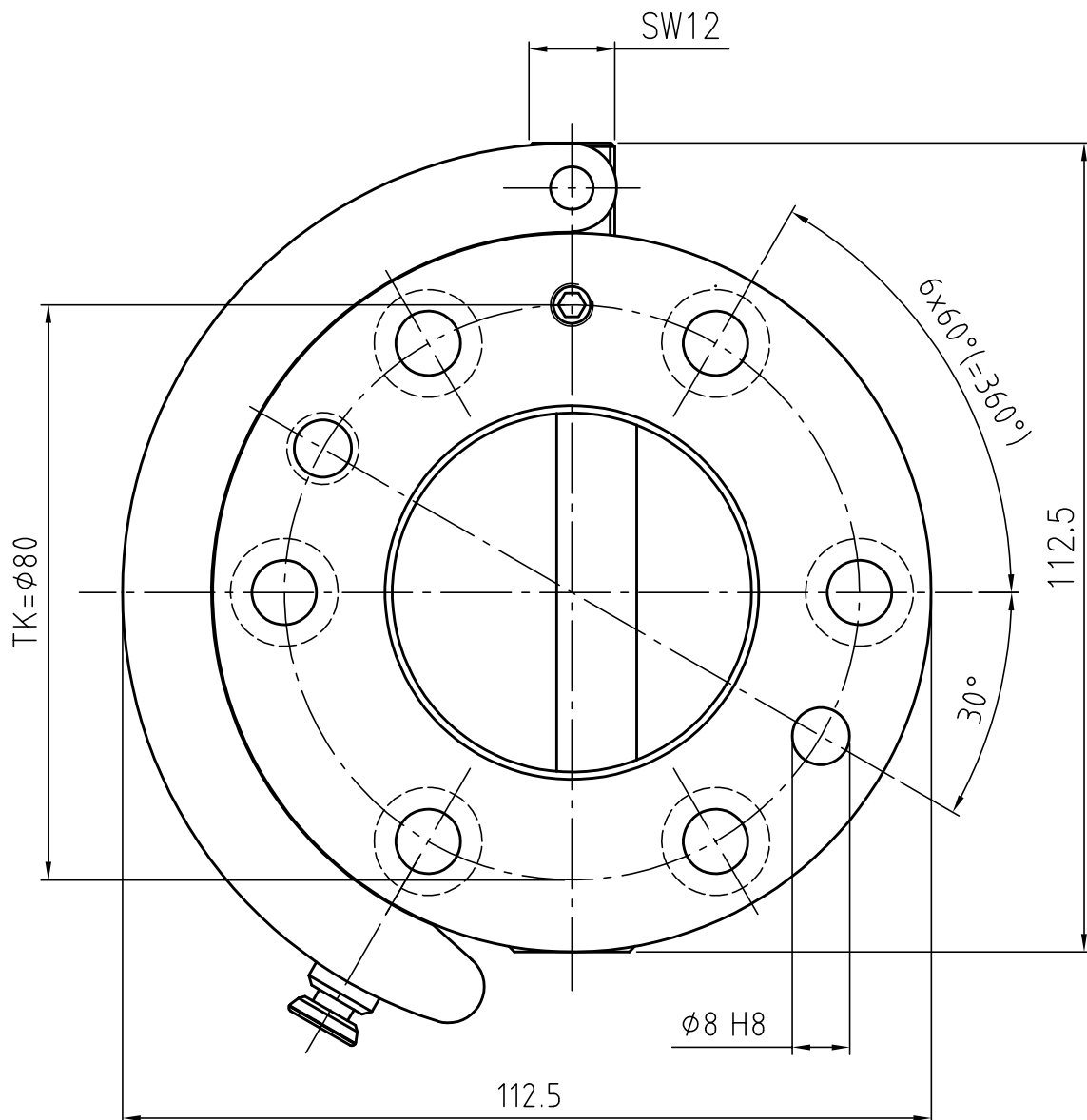
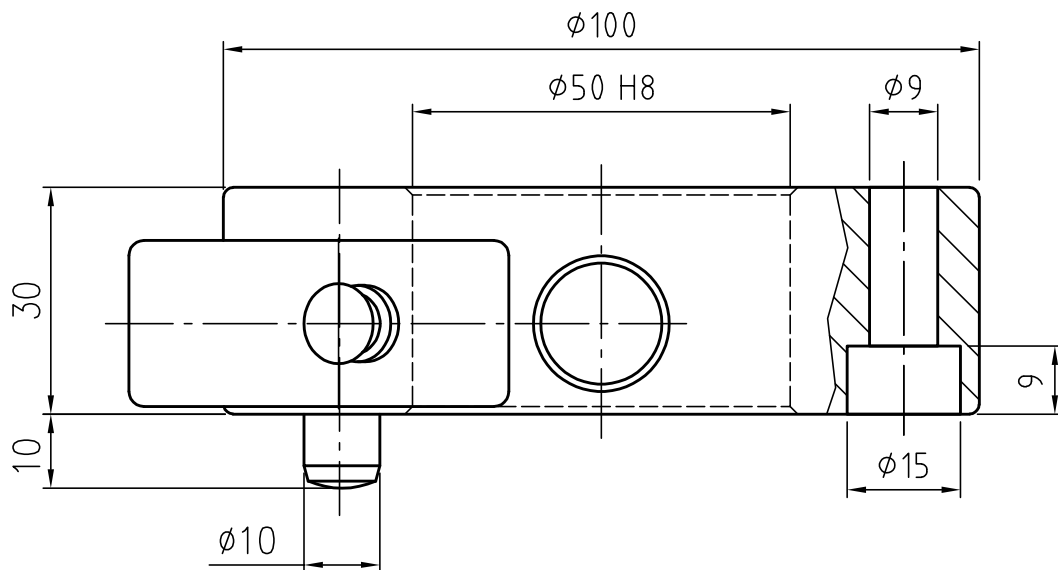


Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MGW100-2Z



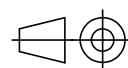
**GRIP**  
GRIP GmbH Handhabungstechnik



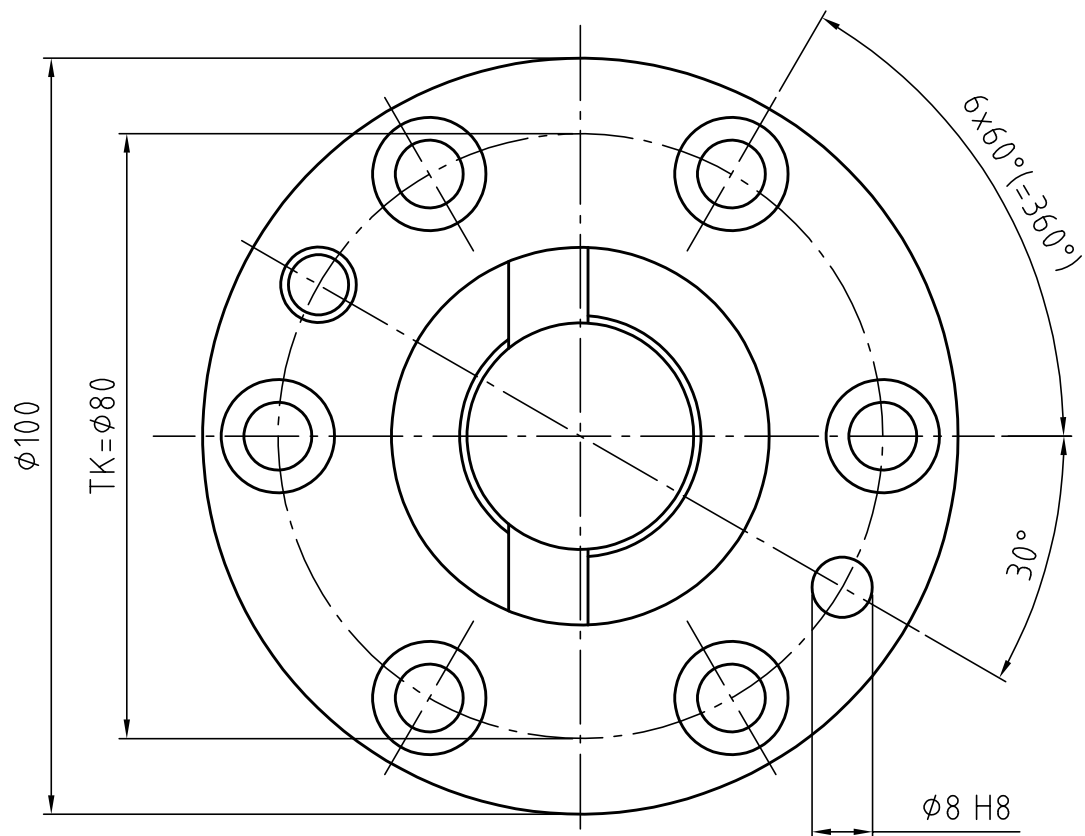
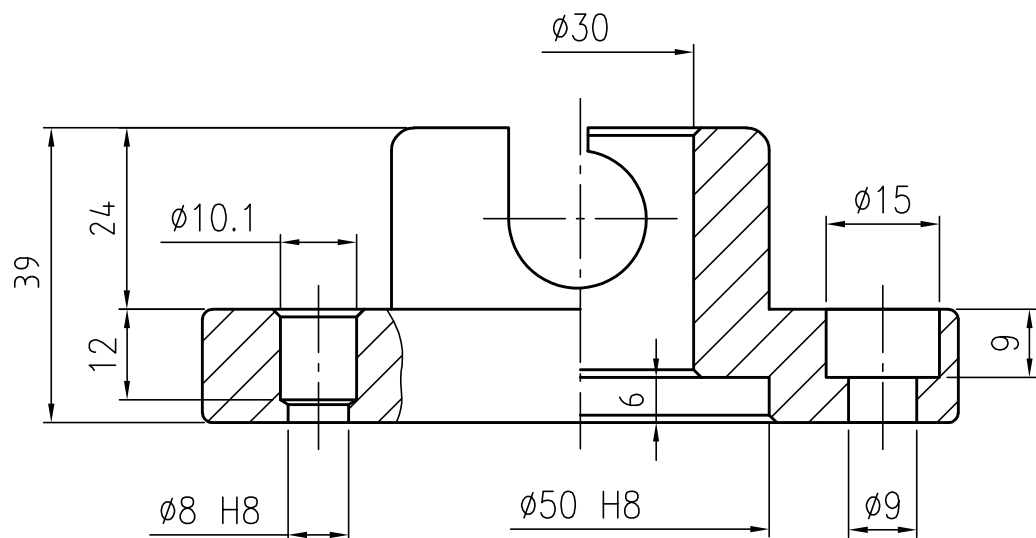
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW100-20
Stahl	G-MGW100-20-S
St. nitriert	G-MGW100-20-N

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MGW100-20



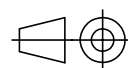
**GRIP**  
GRIP GmbH Handhabungstechnik



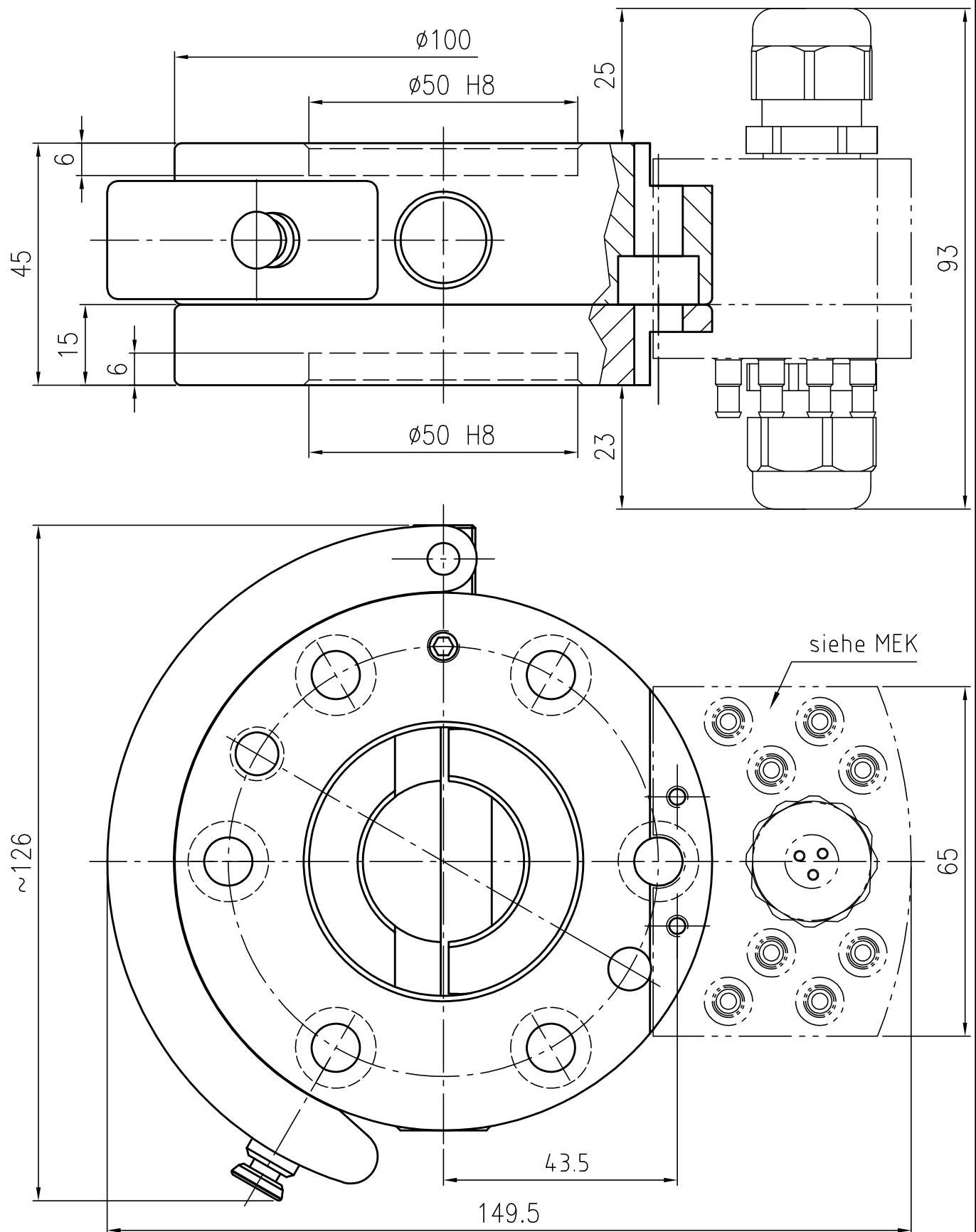
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW100-2U
Stahl	G-MGW100-2U-S
St. nitriert	G-MGW100-2U-N

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MGW100-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

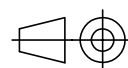


Datum 08.11.2016

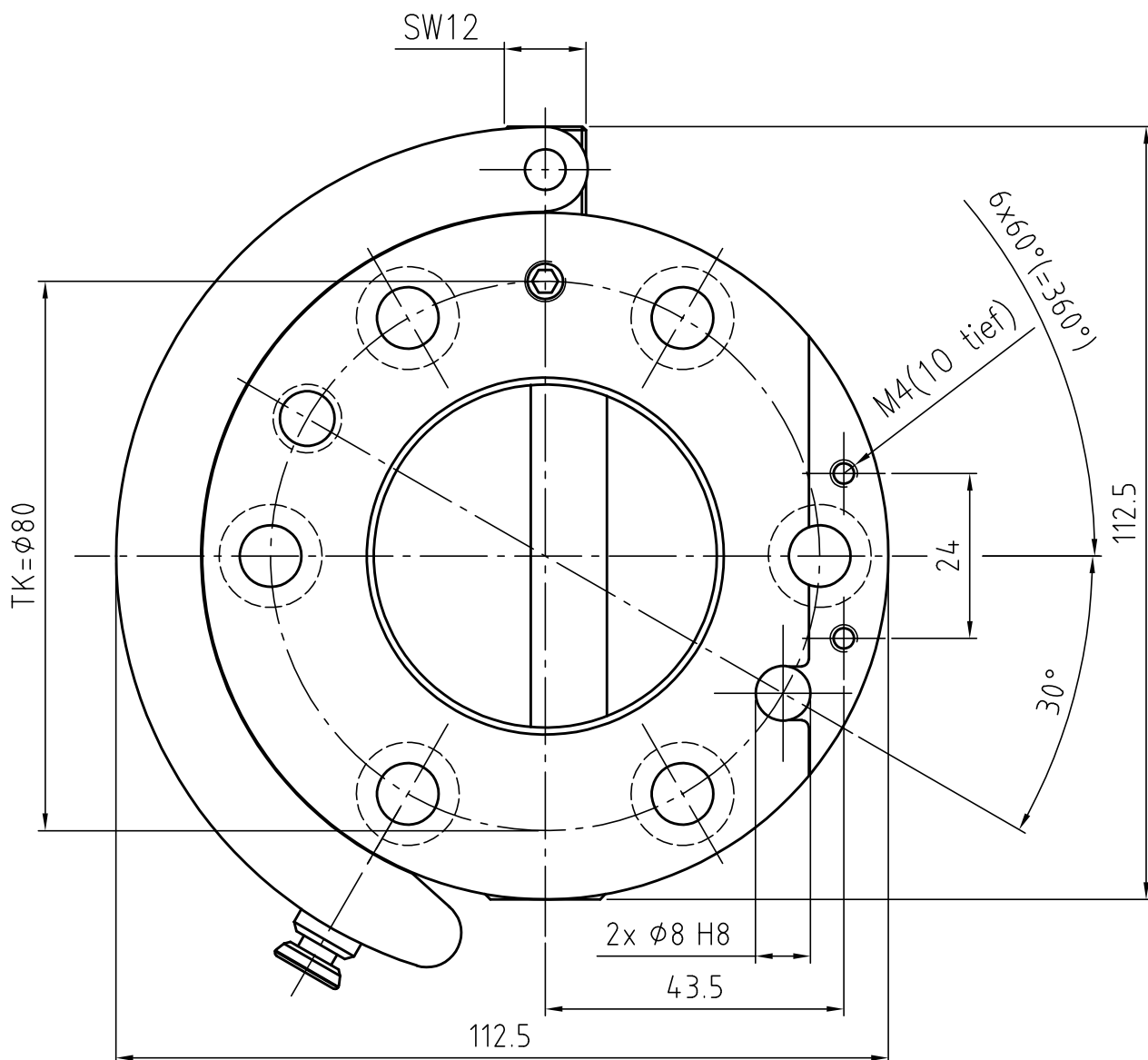
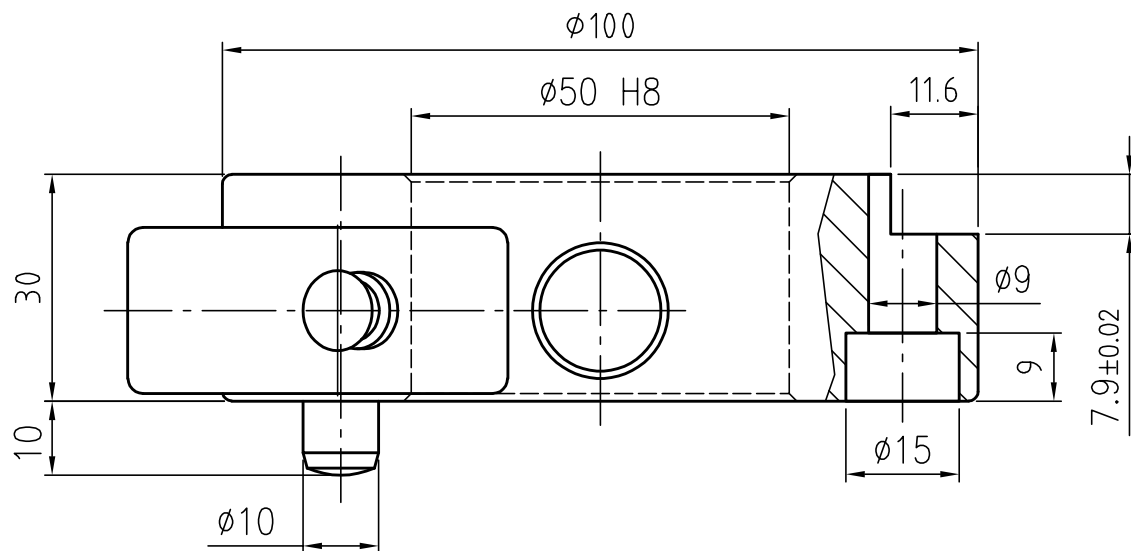
Maßstab 1:1

Zeichnungsnummer

G-MGW100-2ZE



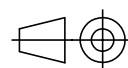
**GRIP**  
GRIP GmbH Handhabungstechnik



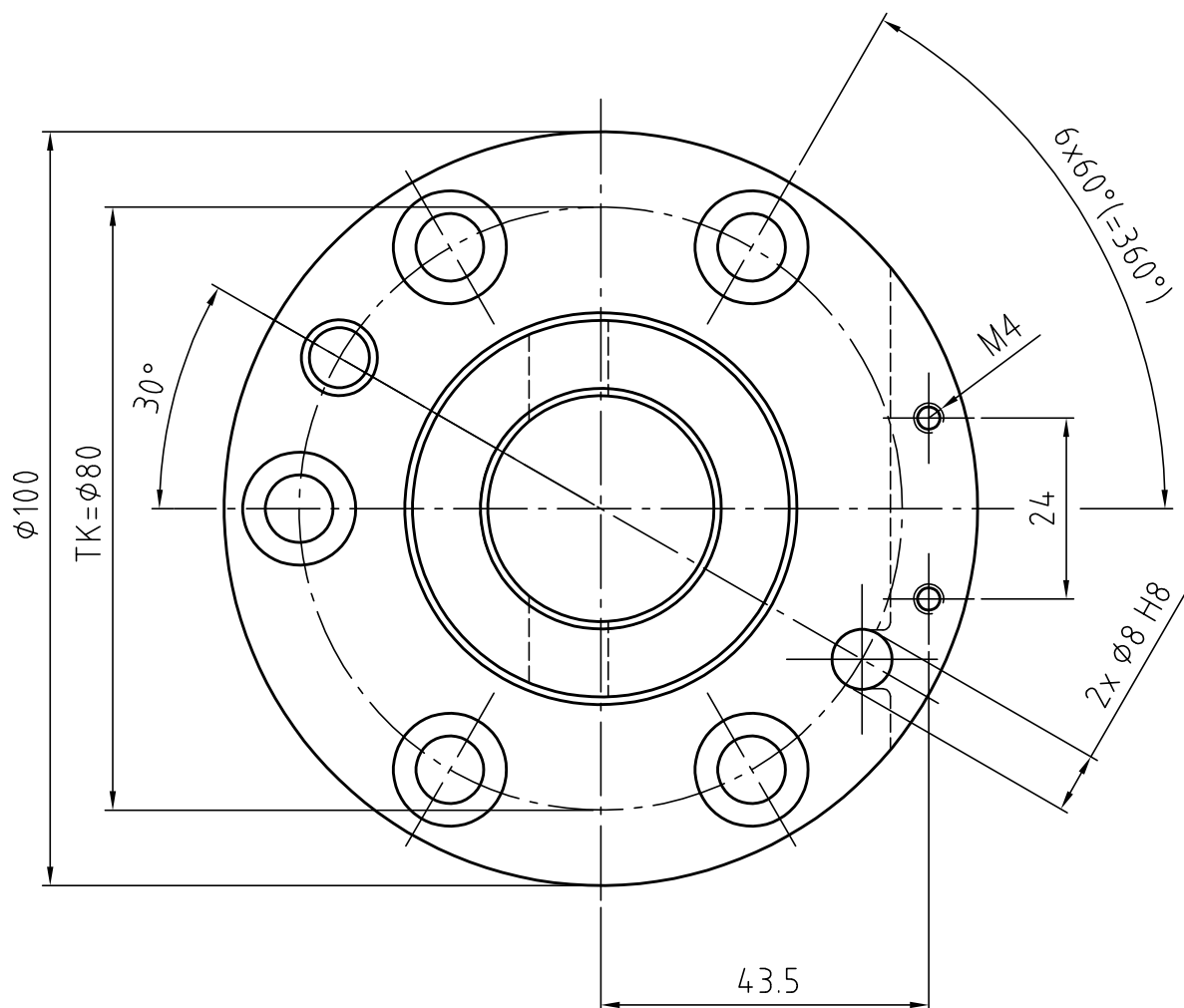
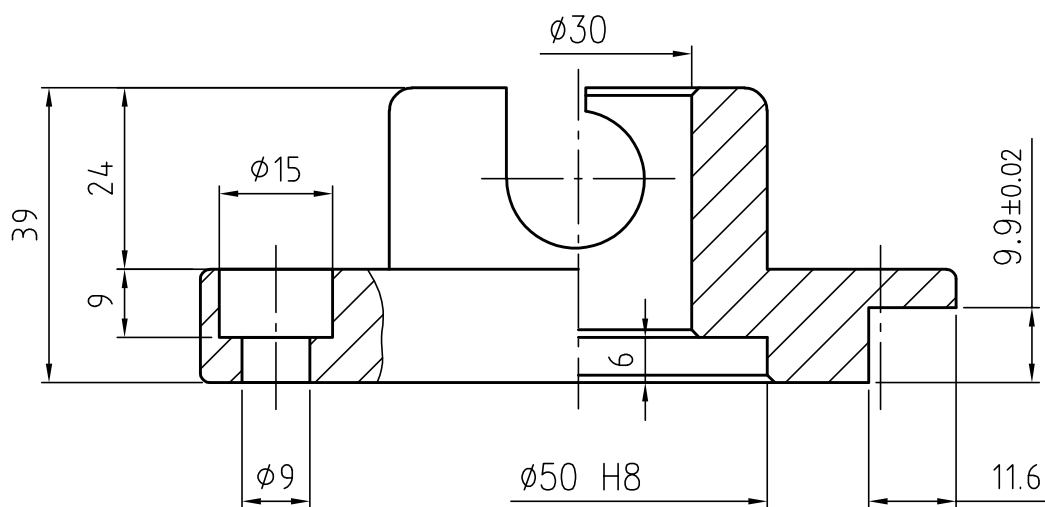
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW100-20E
Stahl	G-MGW100-20ES
St. nitriert	G-MGW100-20EN

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MGW100-20E



**GRIP**  
GRIP GmbH Handhabungstechnik



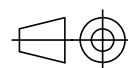
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW100-2UE
Stahl	G-MGW100-2UES
St. nitriert	G-MGW100-2UEN

Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

G-MGW100-2UE



**GRIP**

GRIP GmbH Handhabungstechnik



## G-MGW125

### Technical specifications

# GRIP

#### Operating mode:

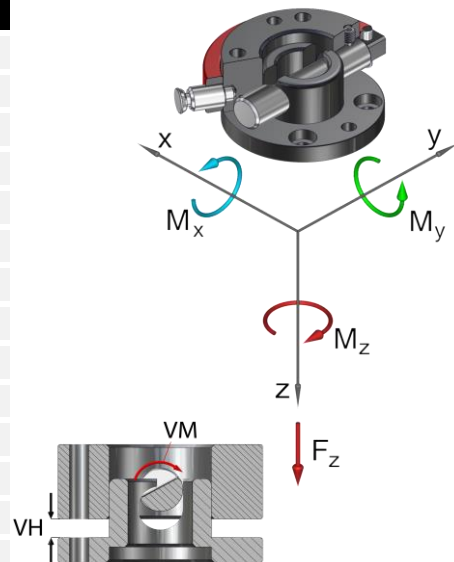
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

#### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1  
Optional connection of a Multi energy coupling **MEK**



Technical specifications		MGW125	
Basic material		Al. anod.	St, nitrated
External diameter x Height [mm]		125 x 50	
Pitch circle diameter [mm]		100	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.500	5.200
Compression -Fz [kN]		377	754
Torsion Mz [Nm]		150	210
Bending Mx, My [Nm]		180	250
Mass [kg]	upper assembly	1,3	2,8
	lower assembly	0,55	1,6
Recommended load [kg] *		40	55
Locking torque VM [Nm]		2 – 16	3 – 20
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety			



#### Manual gripper change system Ø125, drilled acc. to ISO...

G-MGW125-2O	upper assembly, Al, anodized
G-MGW125-2OE	upper assembly, E-Mount, Al, anodized
G-MGW125-2OEN	upper assembly, E-Mount, steel, nitrated
G-MGW125-2O-N	upper assembly, steel, nitrated
G-MGW125-2U	lower assembly, Al, anodized
G-MGW125-2UE	lower assembly, E-Mount, Al, anodized
G-MGW125-2UEN	lower assembly, E-Mount, steel, nitrated
G-MGW125-2U-N	lower assembly, steel, nitrated

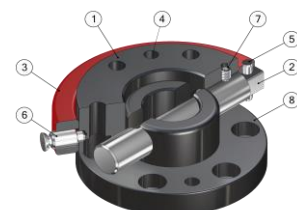
#### Replacement semi-cylindrical bolt...

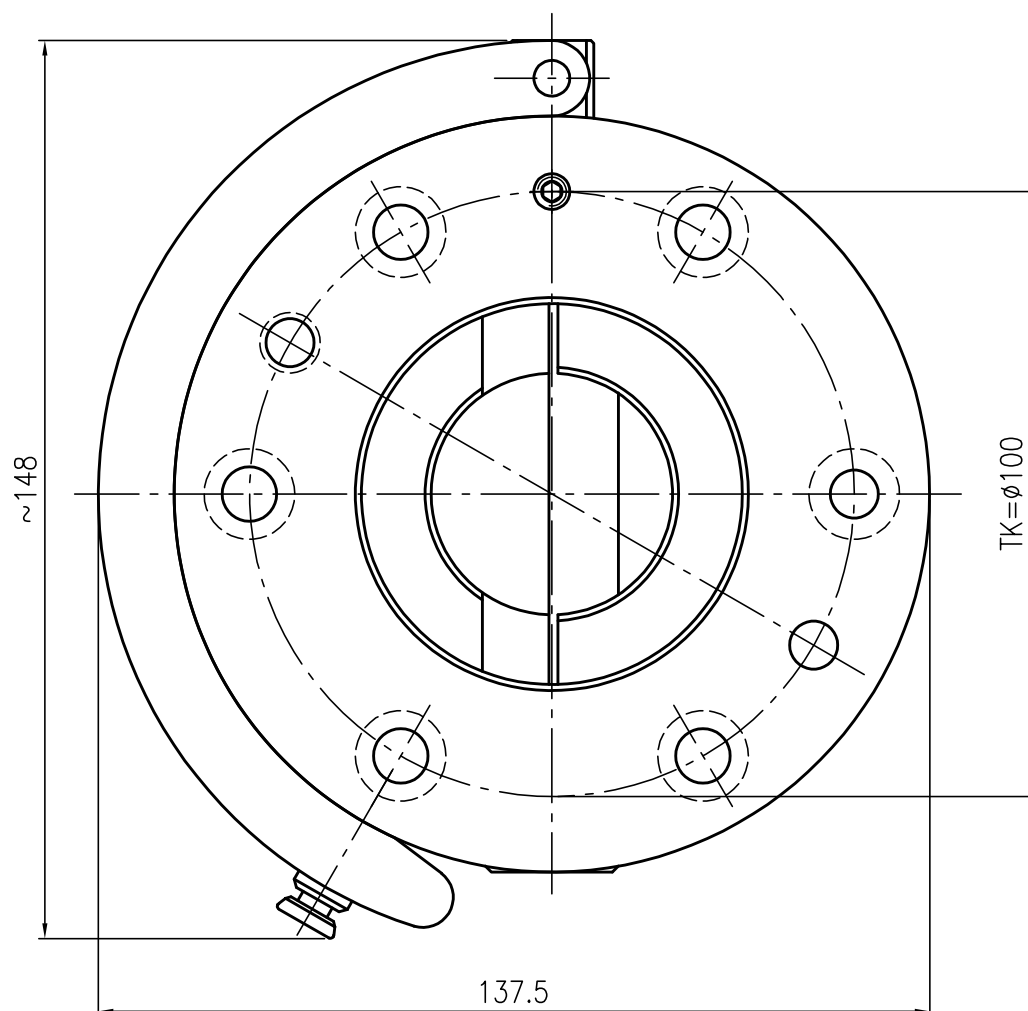
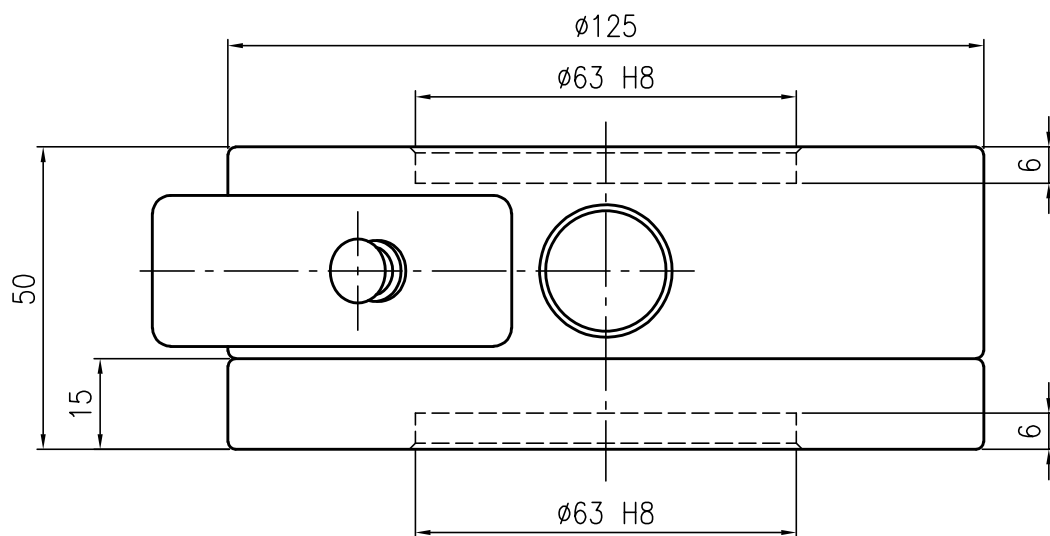
EG-MGW125-HB	for MGW125
EG-MGW125-HB-VA	for MGW125, out off VA

#### Replacement hand lever

EG-MGW125-HH	for MGW125
--------------	------------

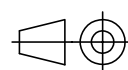
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly



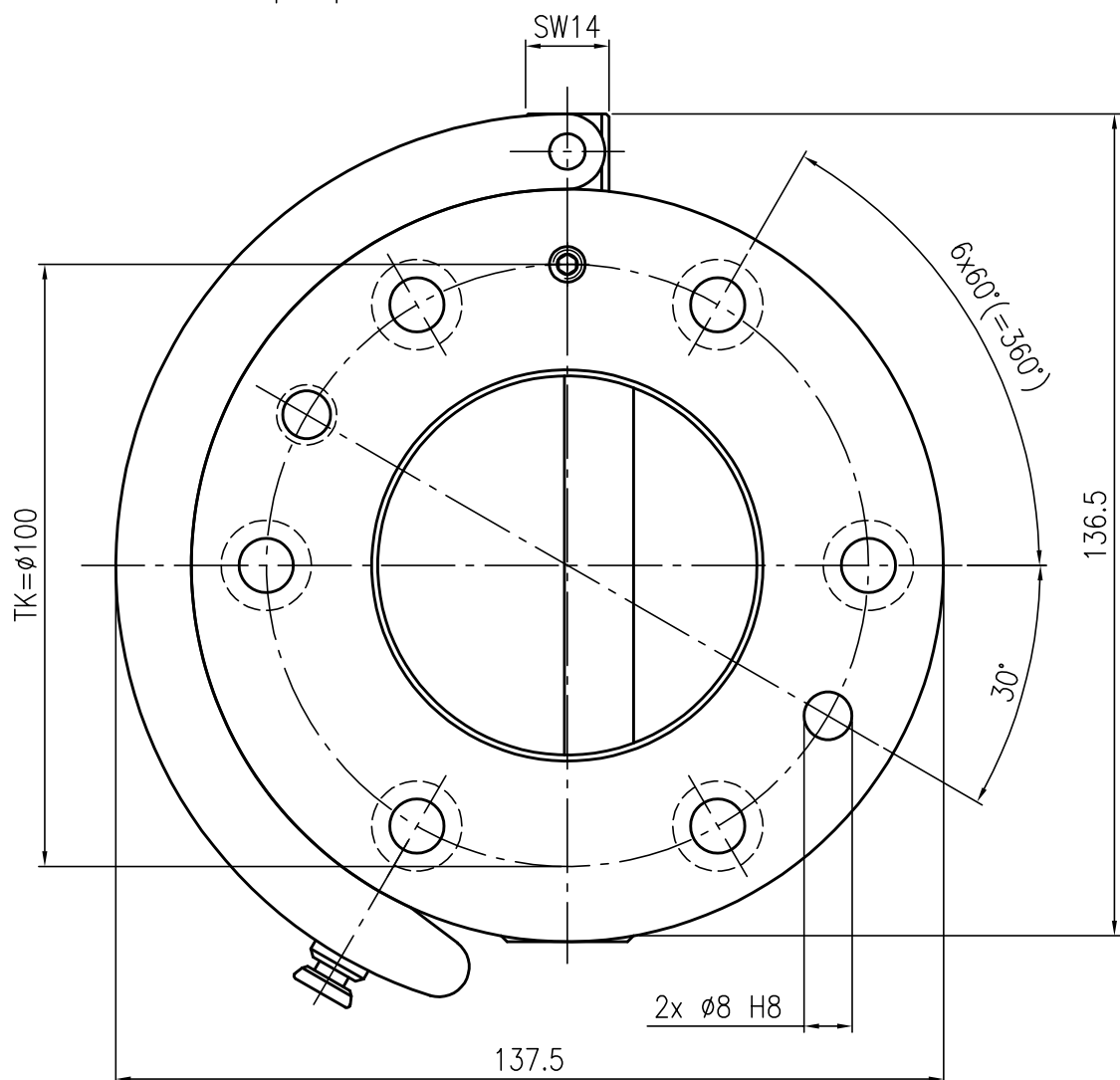
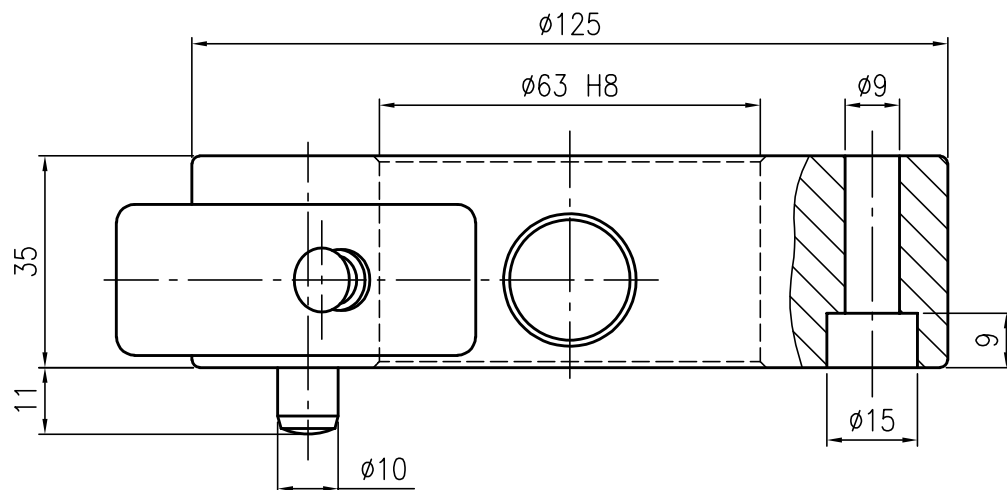


Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-MGW125-2Z



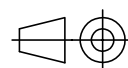
**GRIP**  
GRIP GmbH Handhabungstechnik



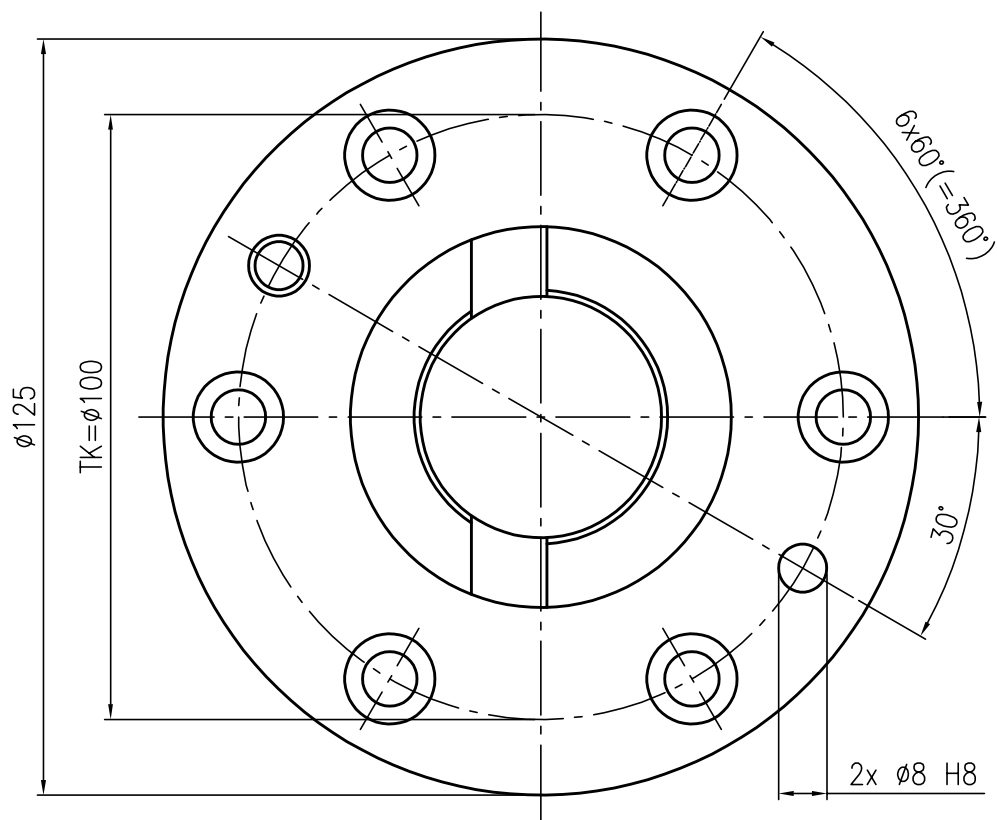
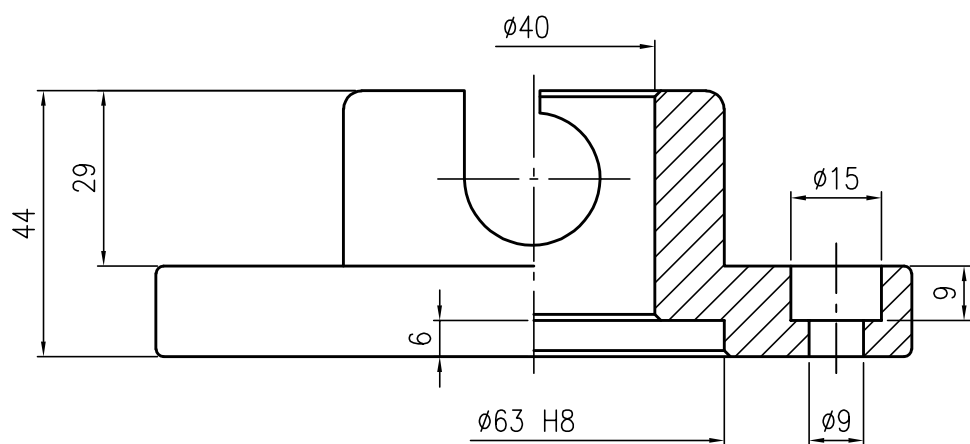
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW125-20
Stahl	G-MGW125-20-S
St. nitriert	G-MGW125-20-N

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-MGW125-20



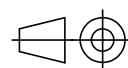
**GRIP**  
GRIP GmbH Handhabungstechnik



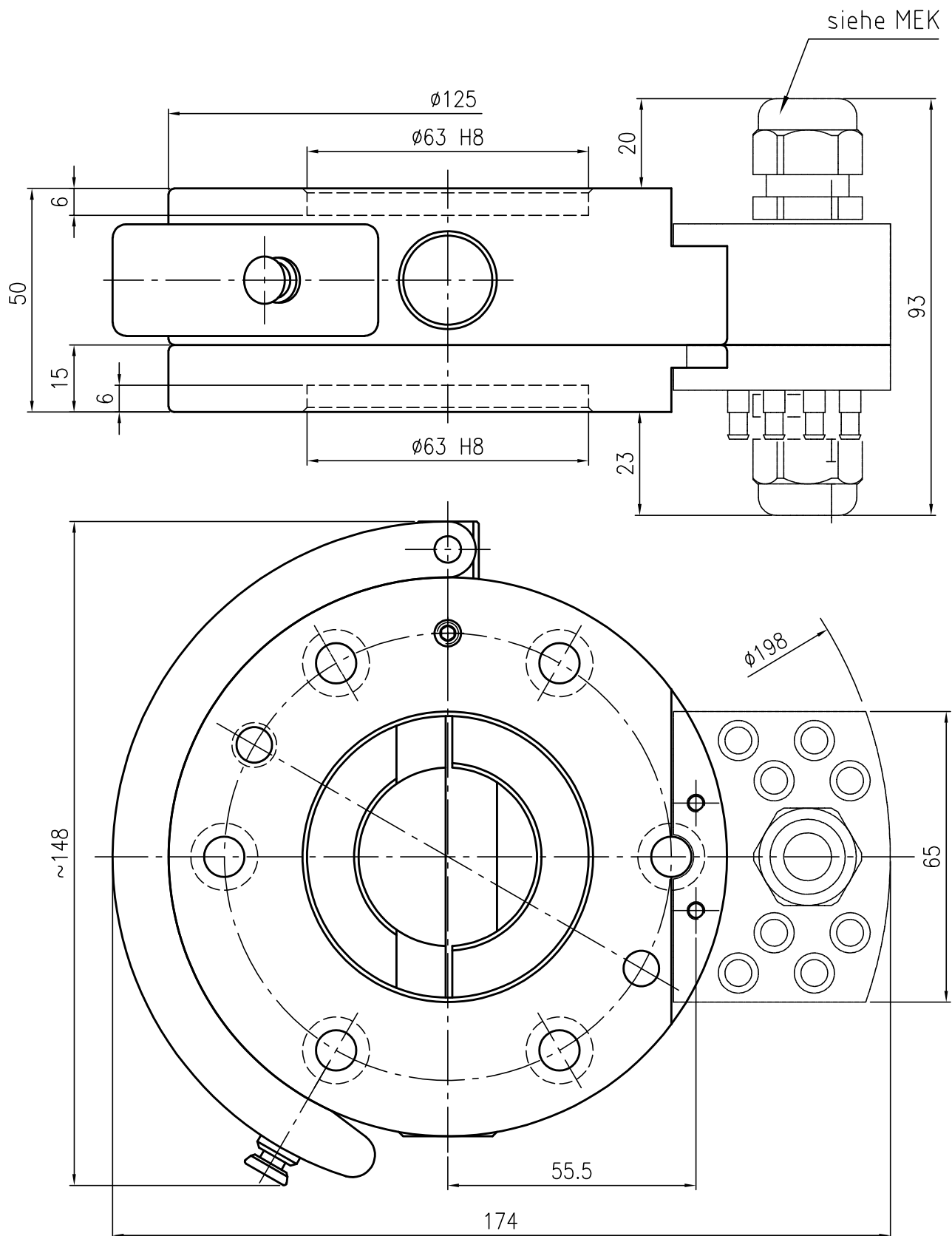
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW125-2U
Stahl	G-MGW125-2U-S
St. nitriert	G-MGW125-2U-N

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-MGW125-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

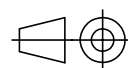


Datum 08.11.2016

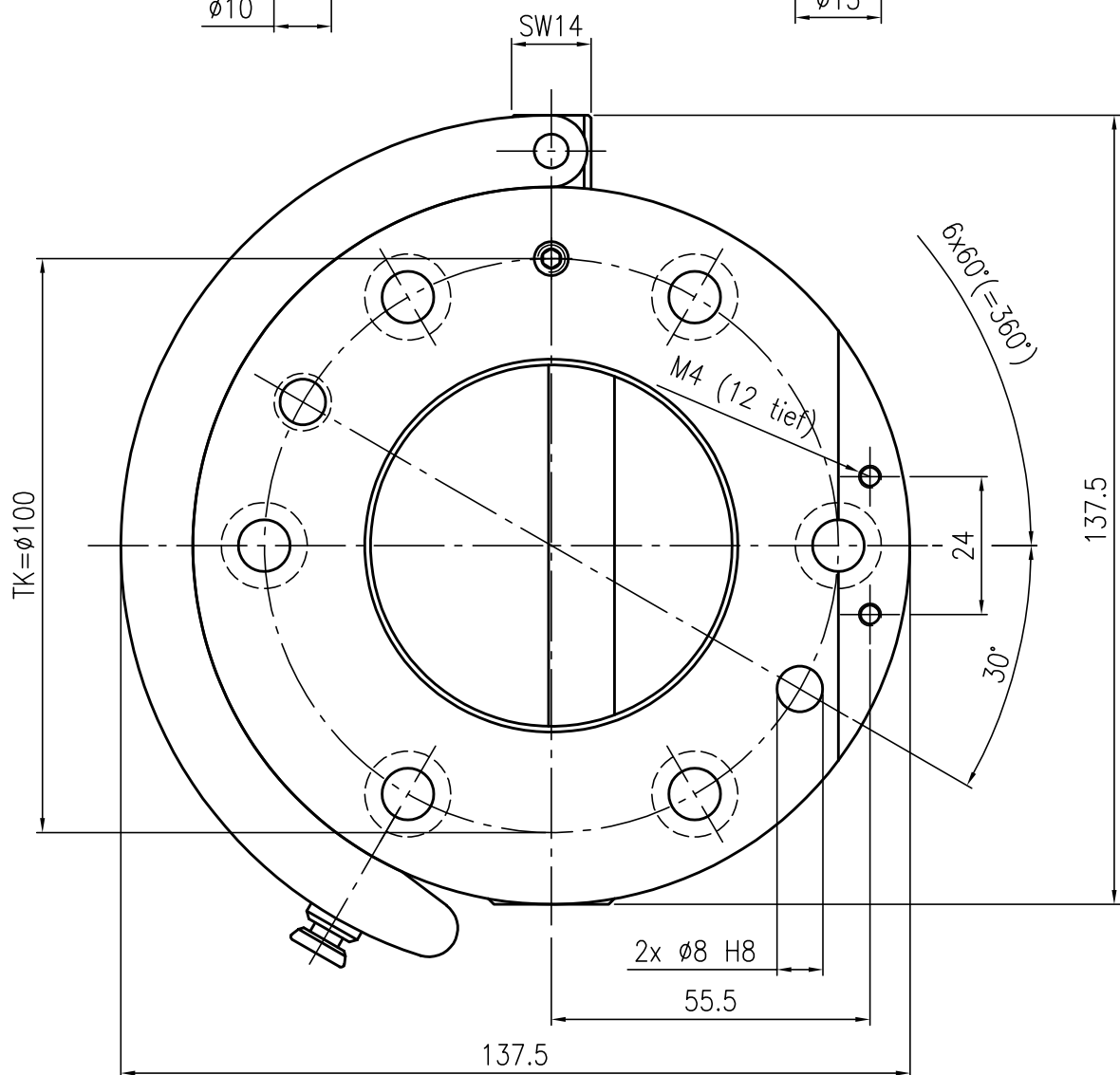
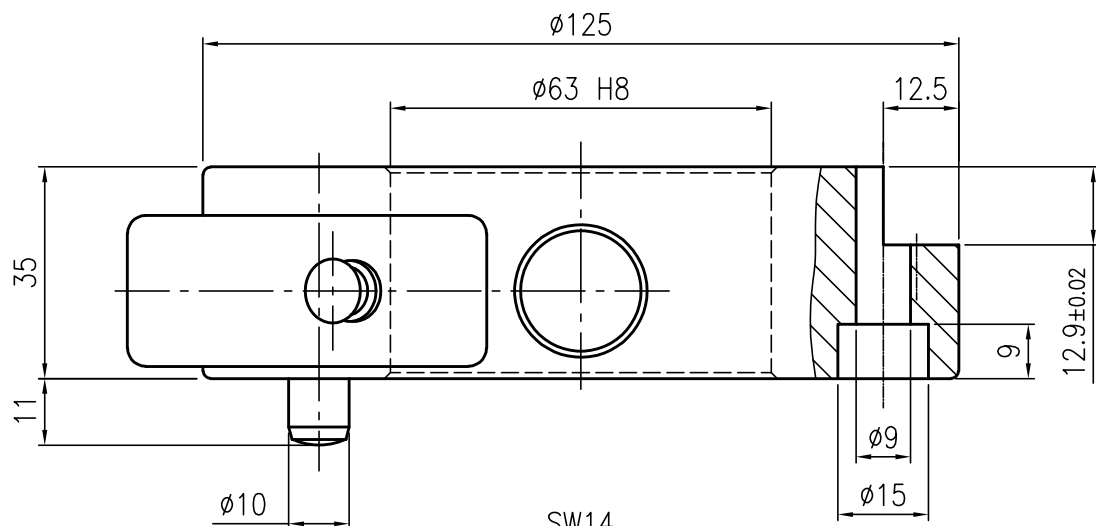
Maßstab 1:1.25

Zeichnungsnummer

G-MGW125-2ZE



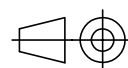
**GRIP**  
GRIP GmbH Handhabungstechnik



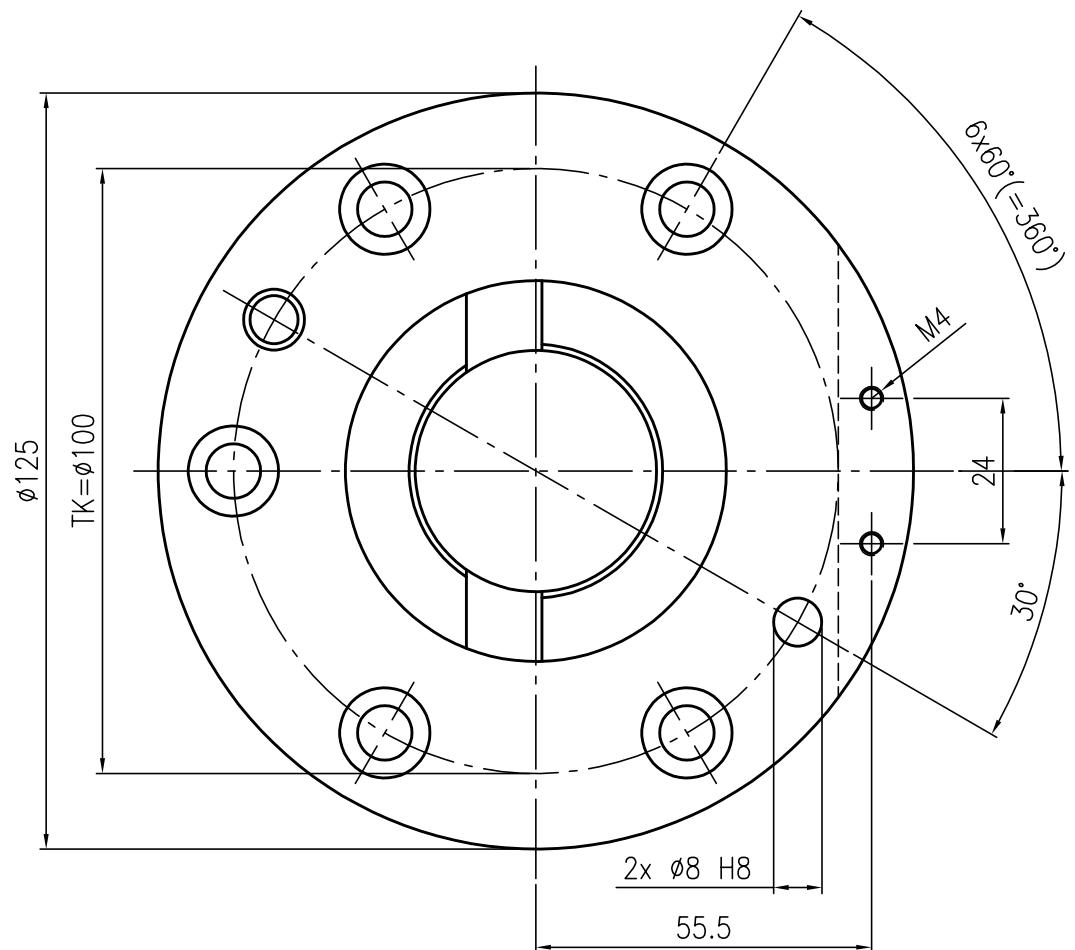
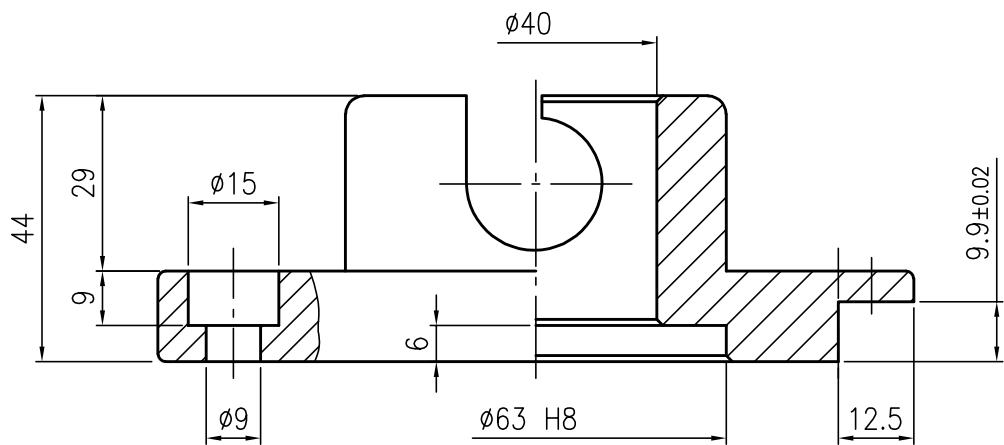
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW125-20E
Stahl	G-MGW125-20ES
St. nitriert	G-MGW125-20EN

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-MGW125-20E



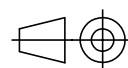
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-MGW125-2UE
Stahl	G-MGW125-2UES
St. nitriert	G-MGW125-2UEN

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-MGW125-2UE



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-MGW160

## Technical specifications

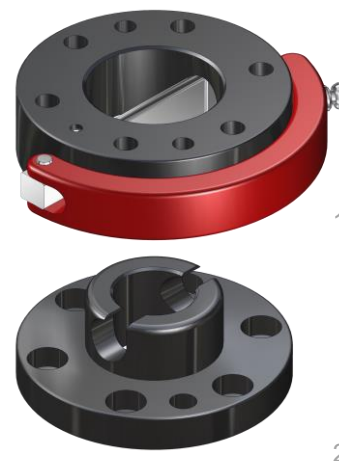
# GRIP

### Operating mode:

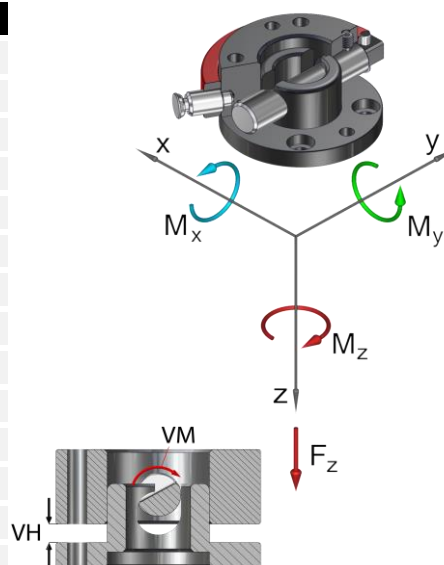
By rotating the semi-cylindrical bolt by 180°, the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Withstands high loads with low dead weight  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Resilient locking pin secures hand lever against independent releasing  
Holds up to 5,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface acc. to DIN EN ISO 9409-1  
Optional connection of a Multi energy coupling **MEK**



Technical specifications		MGW160	
Basic material		Al. anod.	St, nitrated
External diameter x Height [mm]		160 x 70	
Pitch circle diameter [mm]		125	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		2.500	10.000
Compression -Fz [kN]		626	1.252
Torsion Mz [Nm]		250	1.000
Bending Mx, My [Nm]		320	1.000
Mass [kg]	upper assembly	2,8	6,6
	lower assembly	1,3	3,85
Recommended load [kg]		75 *	120 **
Locking torque VM [Nm]		3 - 24	4 - 30
Locking stroke VH [mm]		0 - 10	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, 1.6 times safety			
** This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, 1.6 times safety			



### Manual gripper change system Ø160, drilled acc. to ISO...

G-MGW160-2O	upper assembly, Al, anodized
G-MGW160-2OE	upper assembly, E-Mount, Al, anodized
G-MGW160-2OEN	upper assembly, E-Mount, steel, nitrated
G-MGW160-2O-N	upper assembly, steel, nitrated
G-MGW160-2U	lower assembly, Al, anodized
G-MGW160-2UE	lower assembly, E-Mount, Al, anodized
G-MGW160-2UEN	lower assembly, E-Mount, steel, nitrated
G-MGW160-2U-N	lower assembly, steel, nitrated

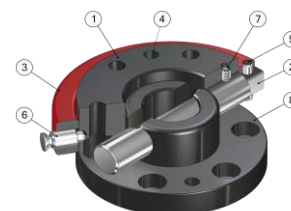
### Replacement semi-cylindrical bolt...

EG-MGW160-HB	for MGW160
EG-MGW160-HB-VA	for MGW160, out off VA

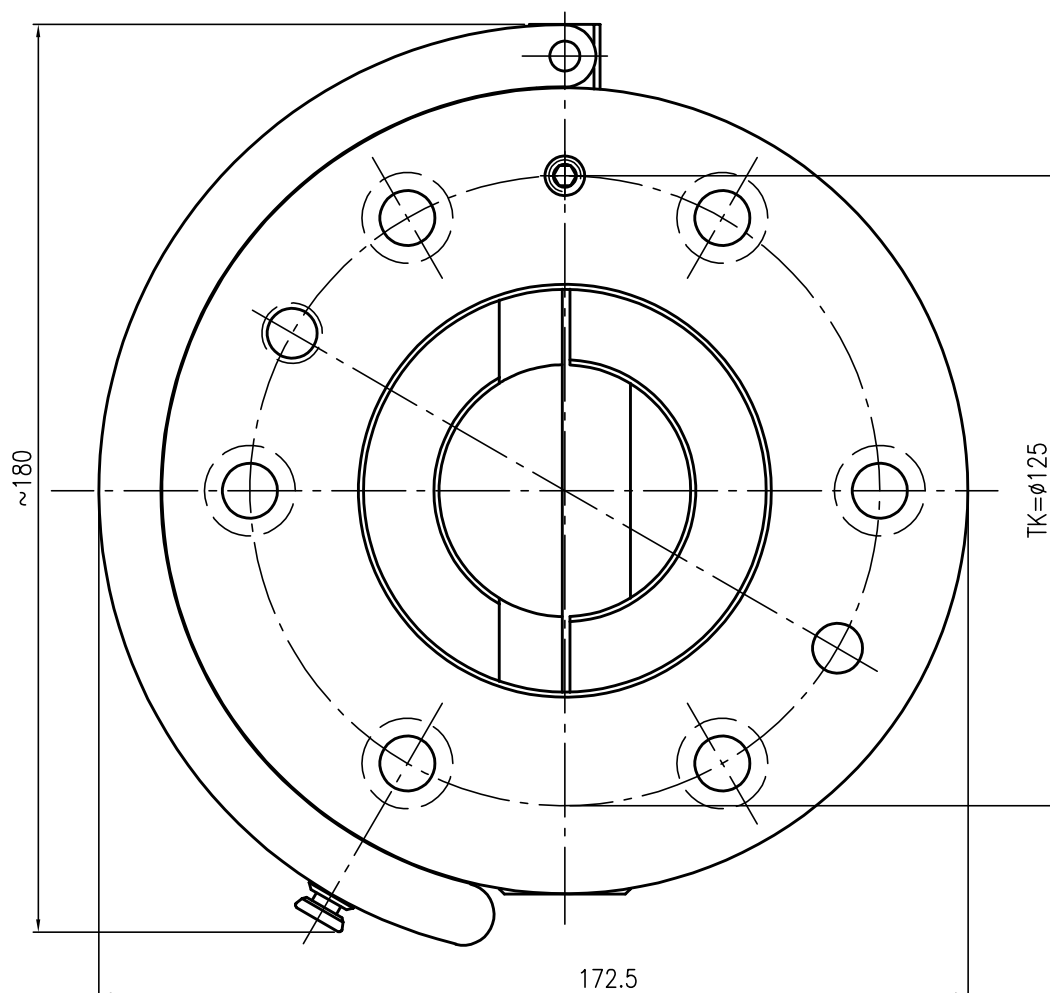
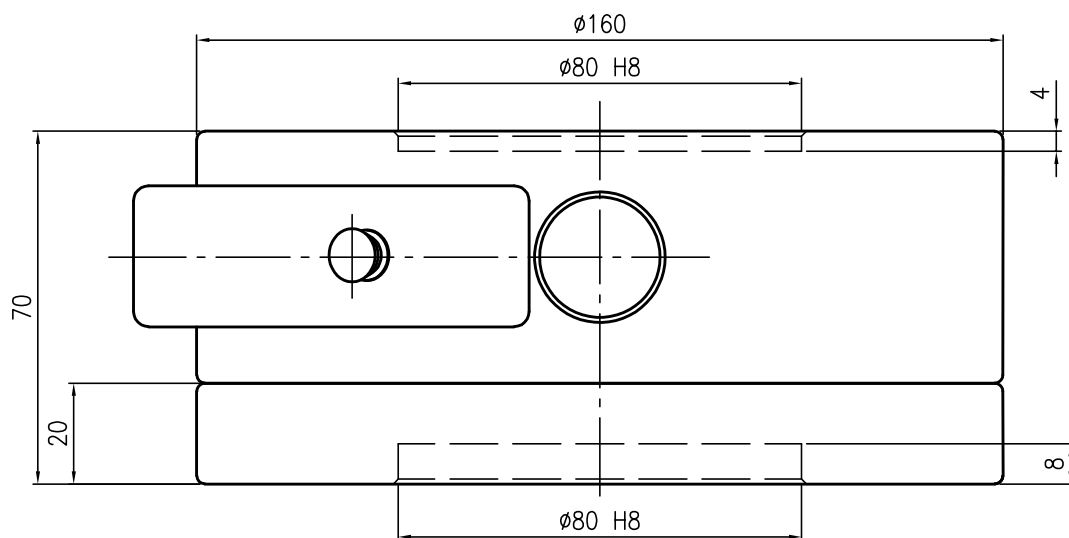
### Replacement hand lever

EG-MGW160-HH	for MGW160
--------------	------------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Hand lever
4	Index pin
5	Cylinder bolt
6	Spring locking pin
7	Setscrew
8	Lower assembly

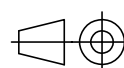




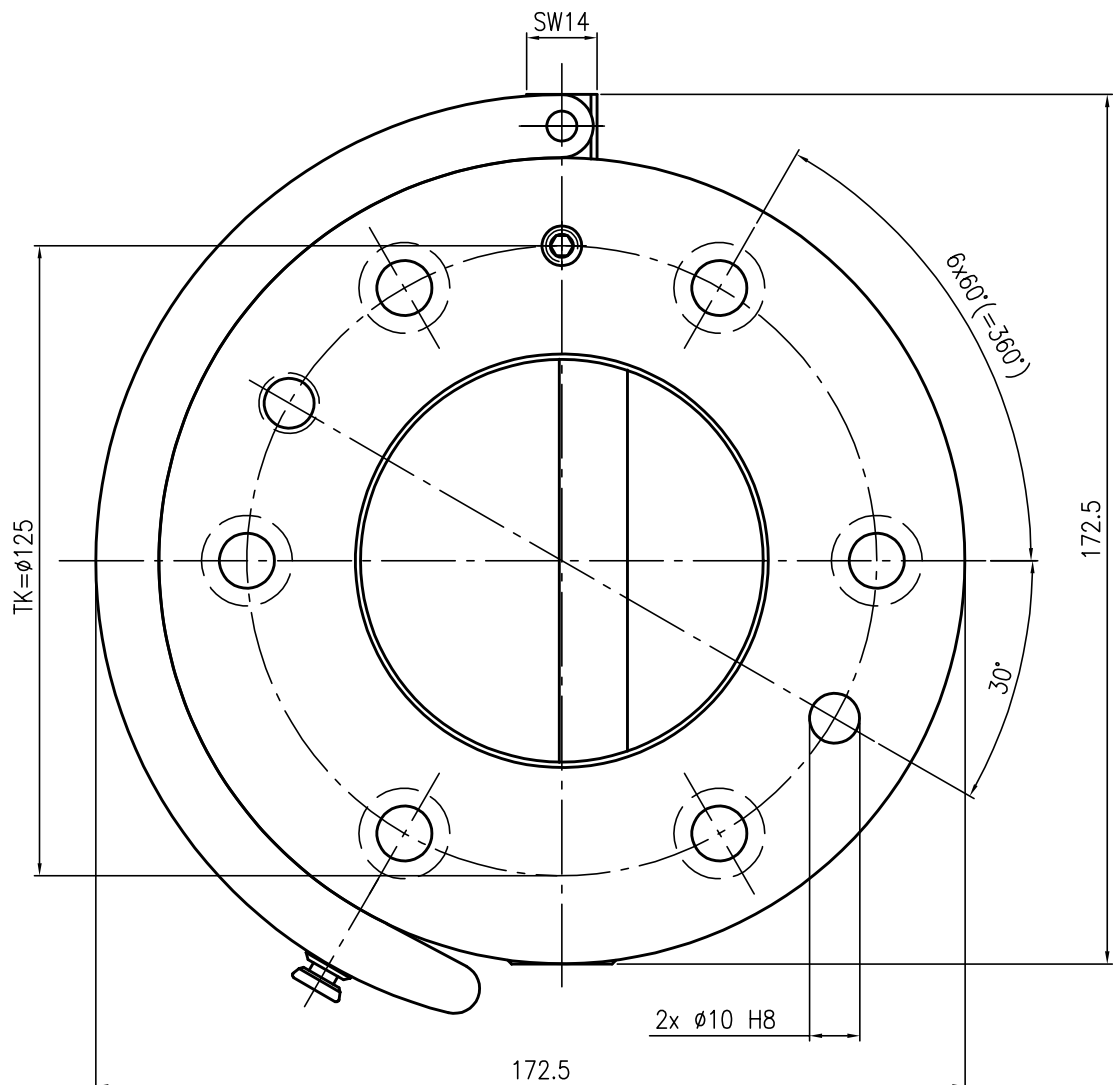
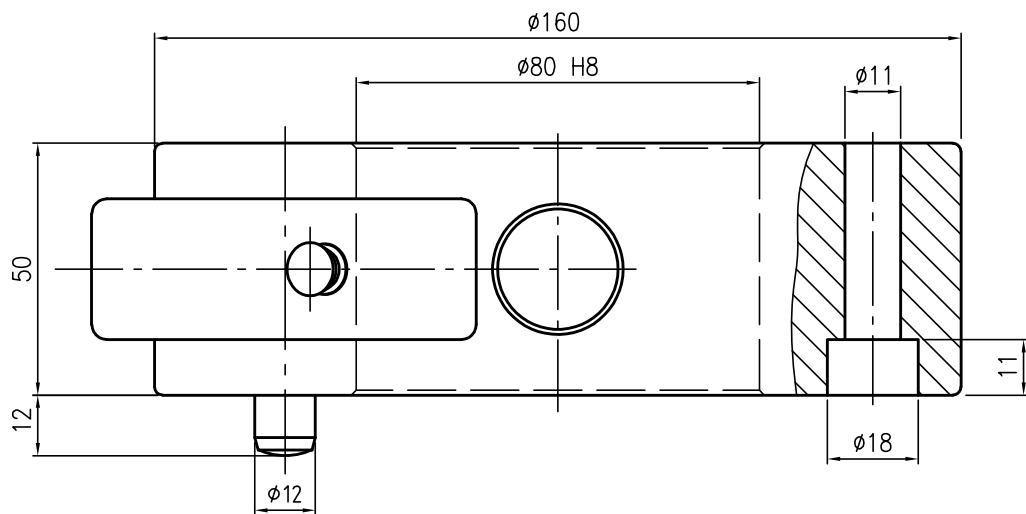


Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-2Z



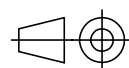
**GRIP**  
GRIP GmbH Handhabungstechnik



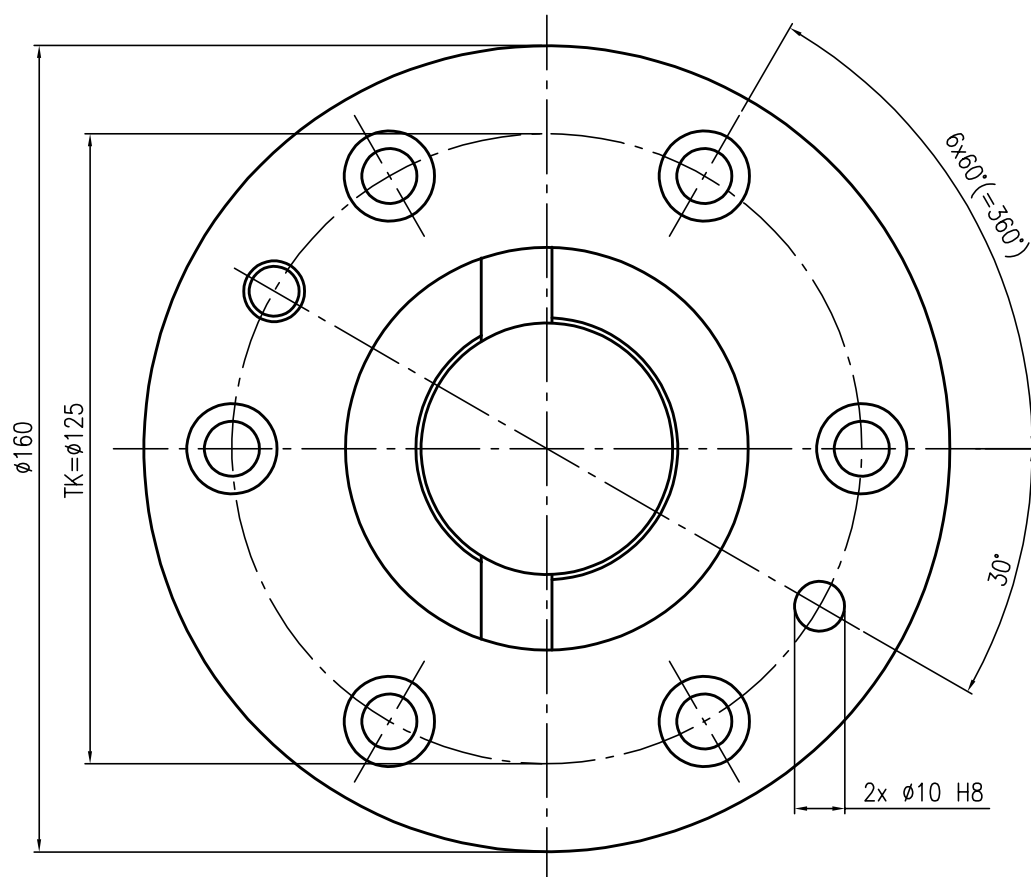
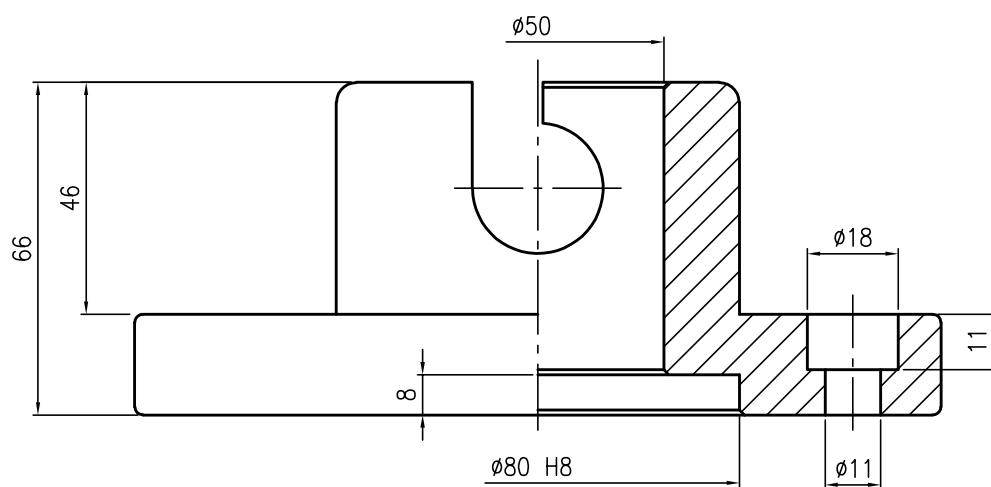
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW160-20
Stahl	G-MGW160-20-S
St. nitriert	G-MGW160-20-N

Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-20

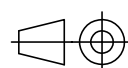


**GRIP**  
GRIP GmbH Handhabungstechnik

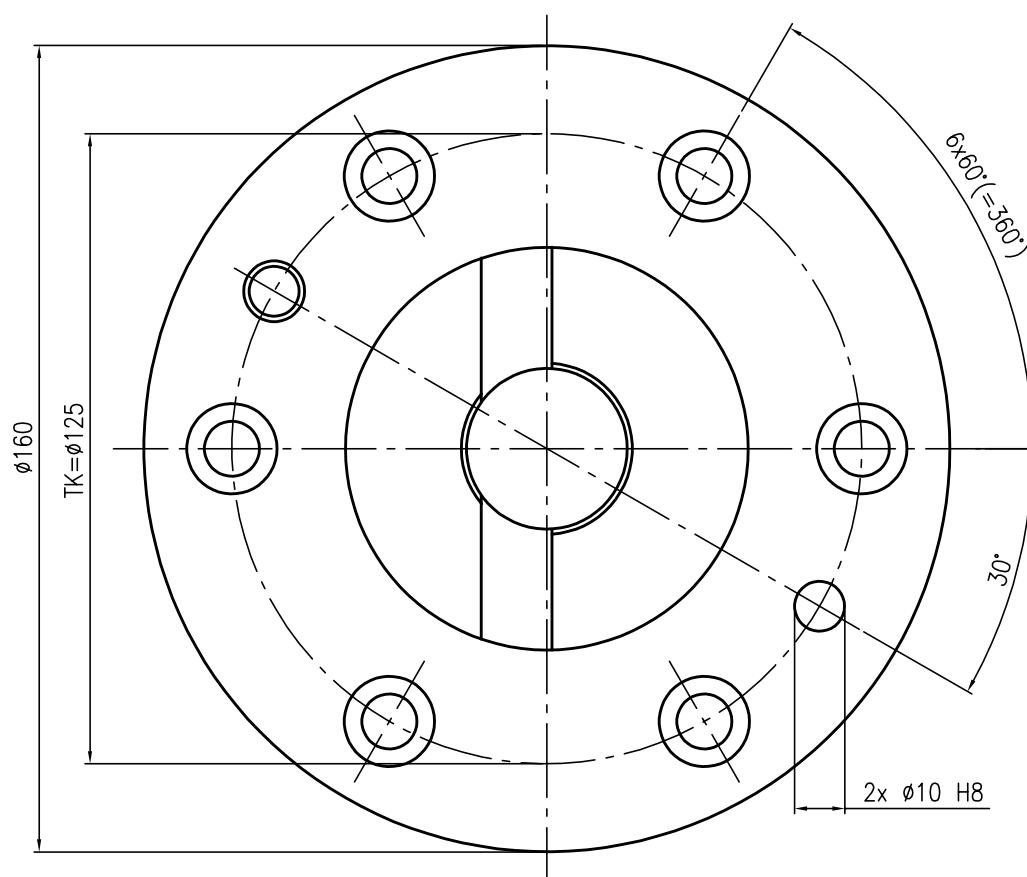
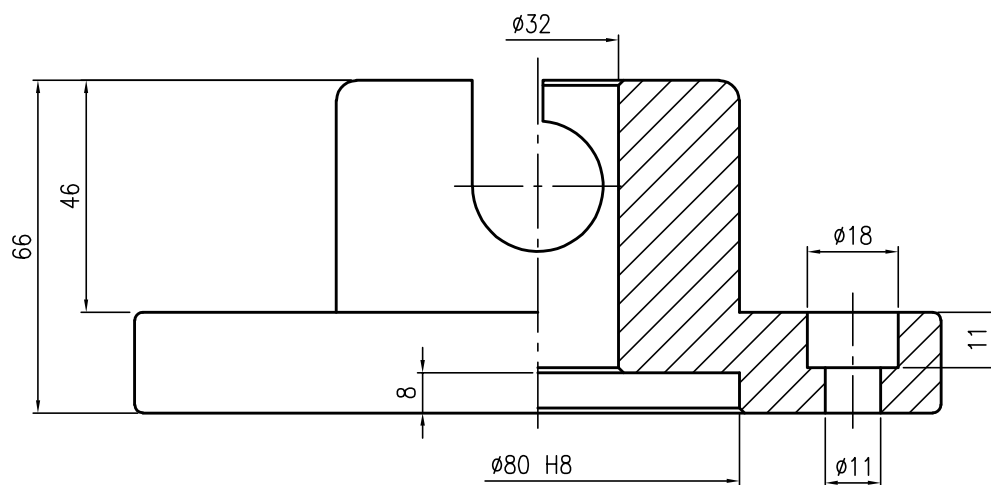


Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-2U



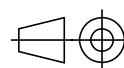
**GRIP**  
GRIP GmbH Handhabungstechnik



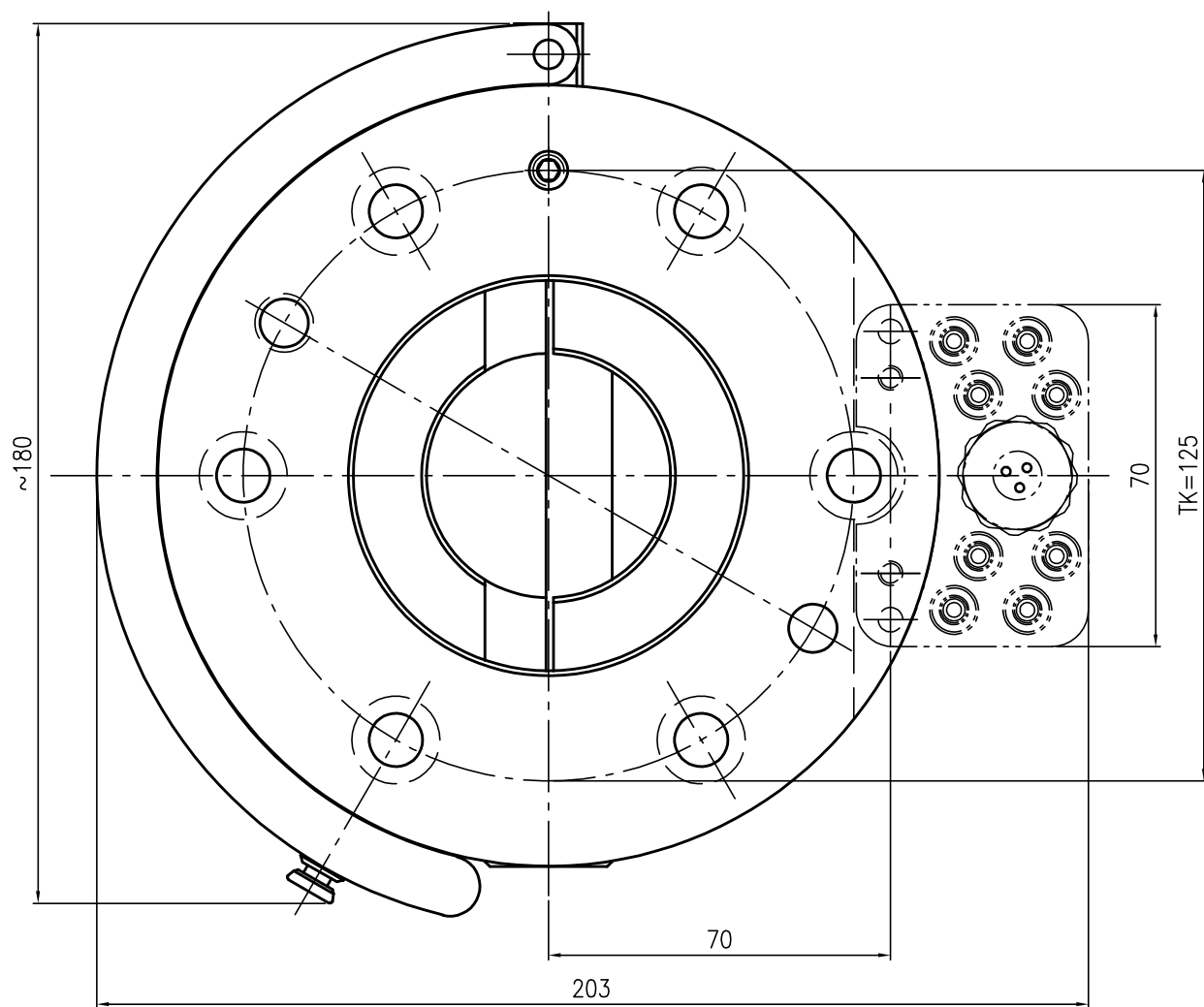
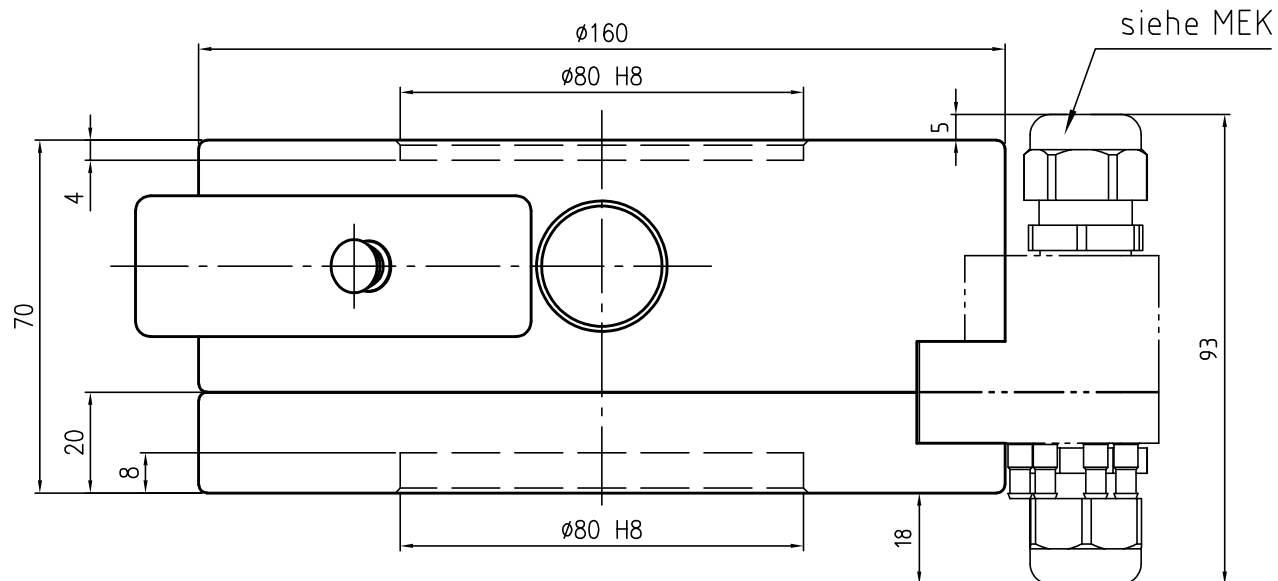
Grundmaterial	Bestellnummer Unterteil
Stahl	G-MGW160-2U-S
St. nitriert	G-MGW160-2U-N

Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-2U-N

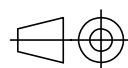


**GRIP**  
GRIP GmbH Handhabungstechnik

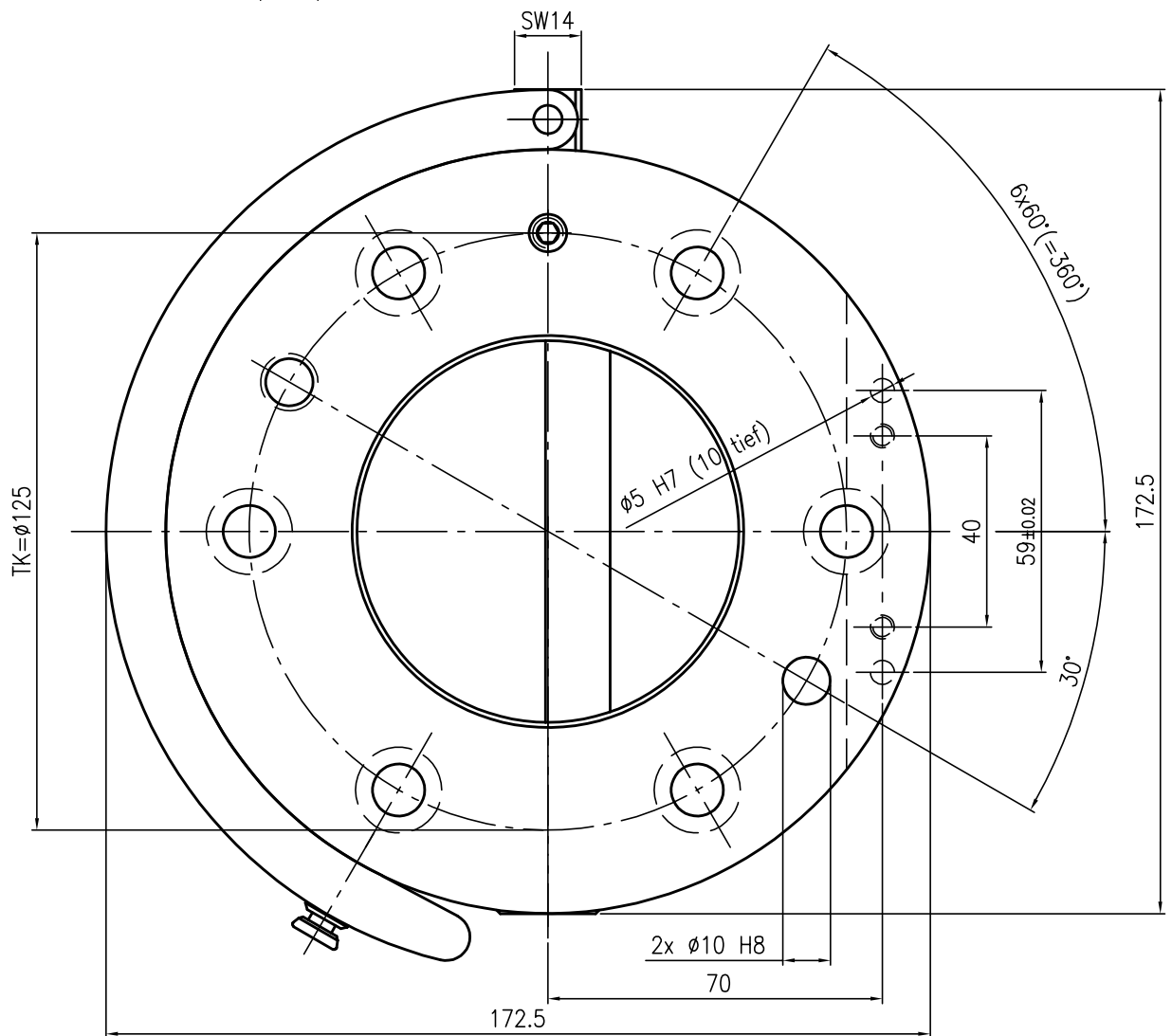
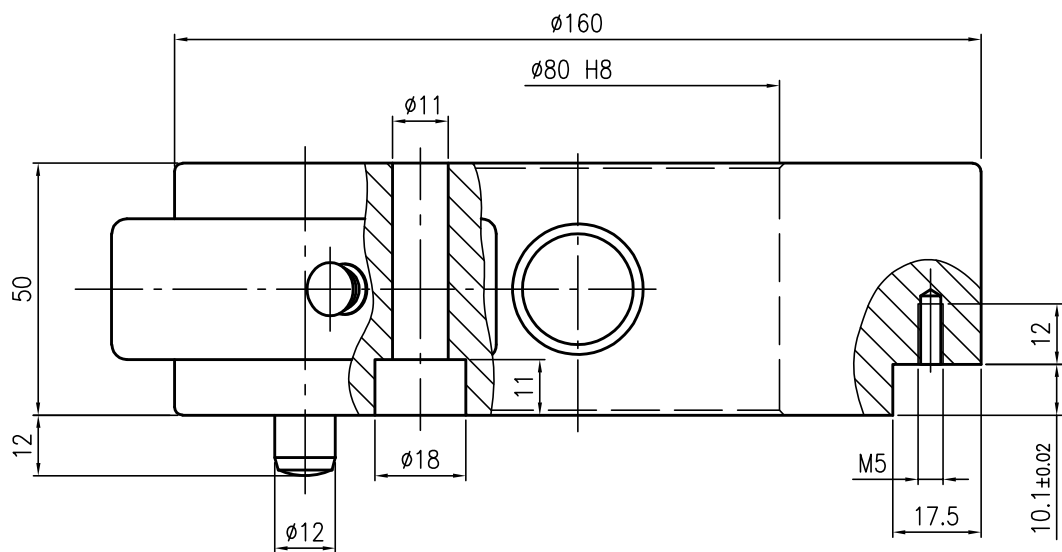


Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-2ZE



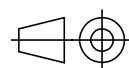
**GRIP**  
GRIP GmbH Handhabungstechnik



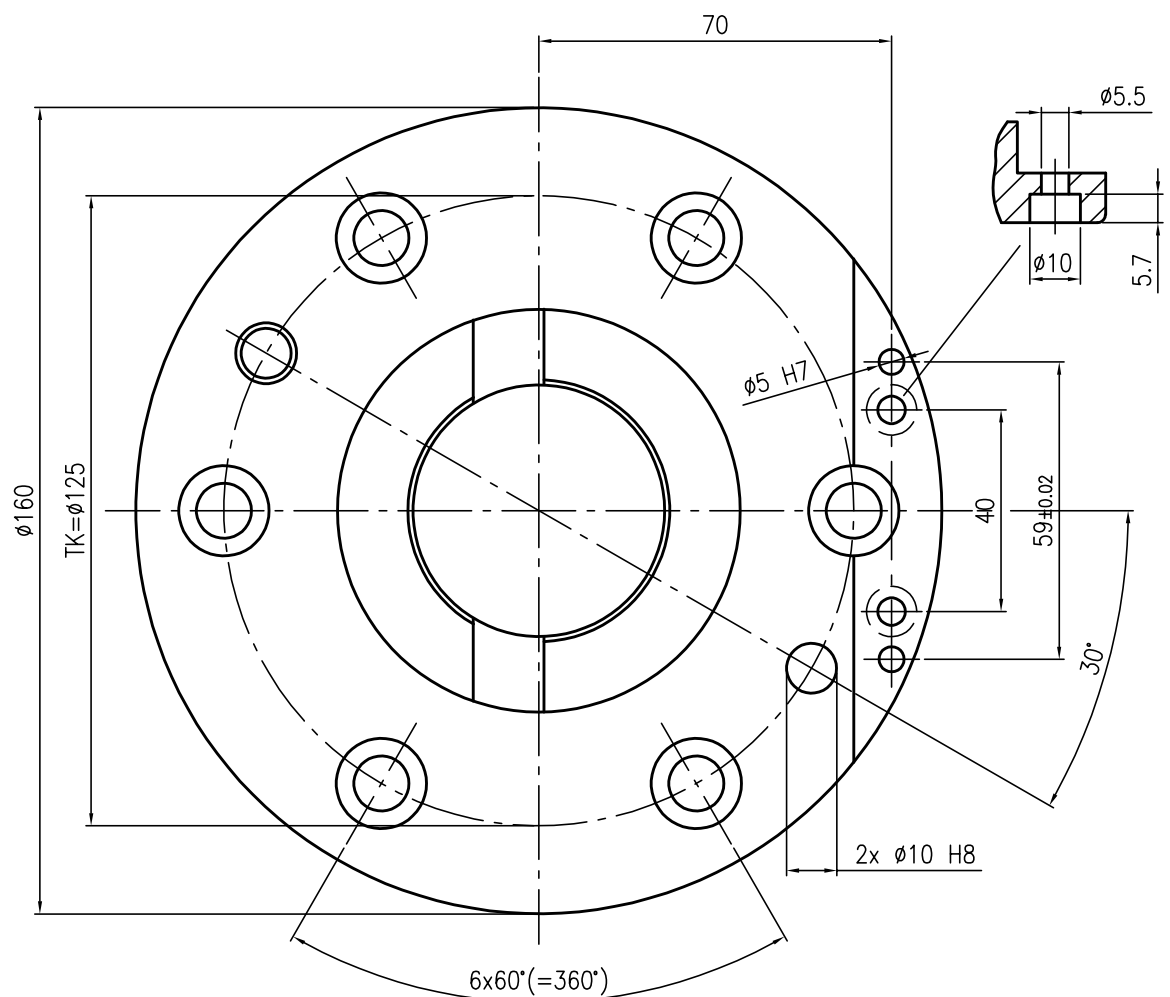
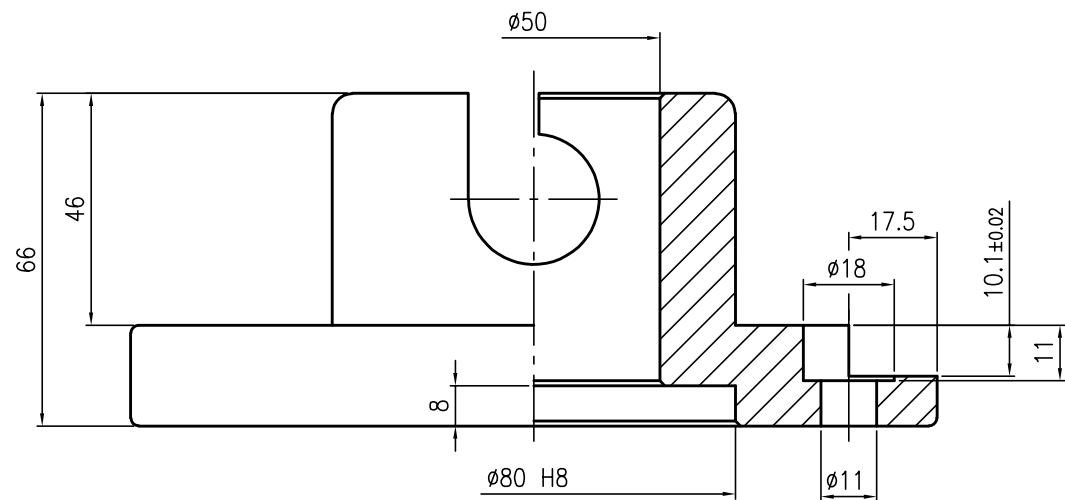
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-MGW160-20E
Stahl	G-MGW160-20ES
St. nitriert	G-MGW160-20EN

Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-20E

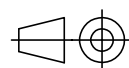


**GRIP**  
GRIP GmbH Handhabungstechnik

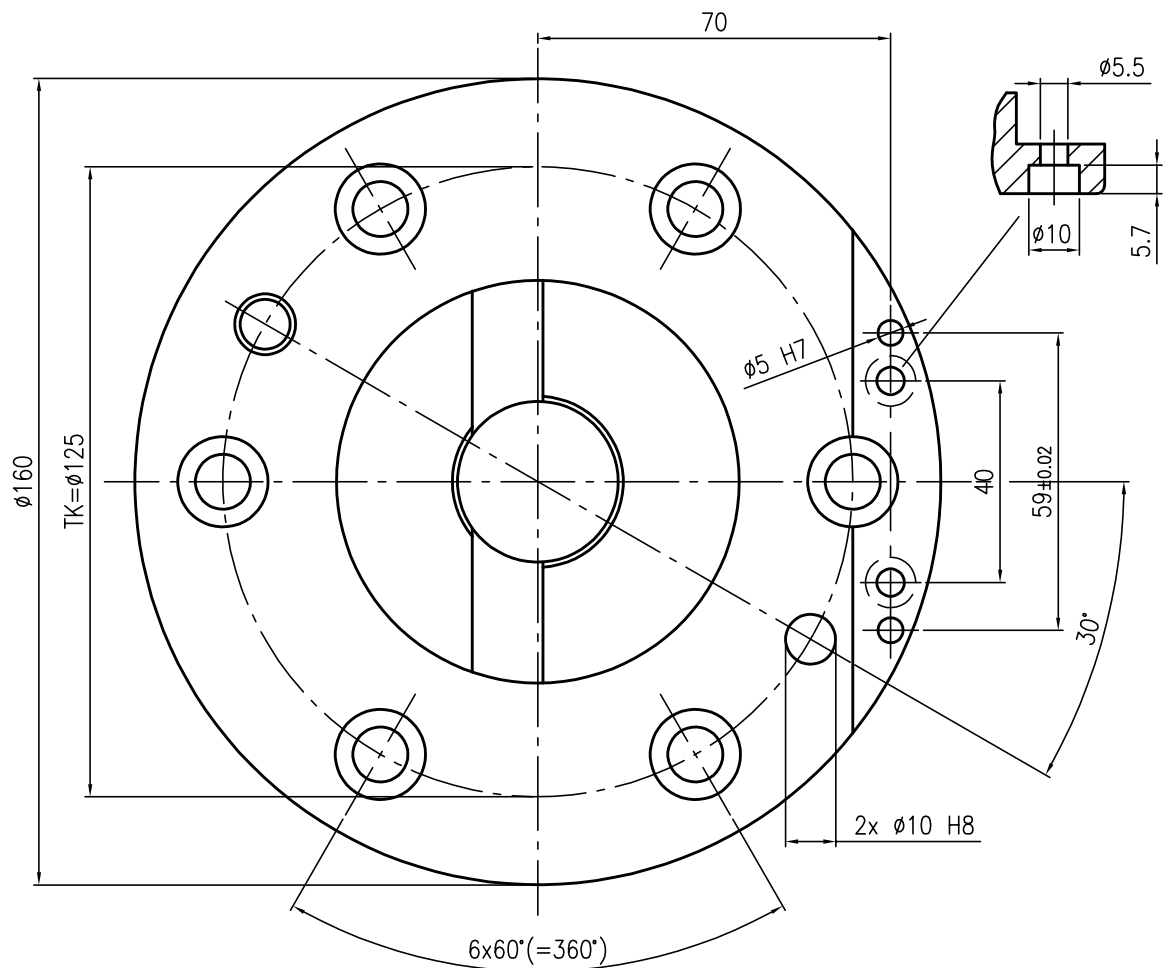
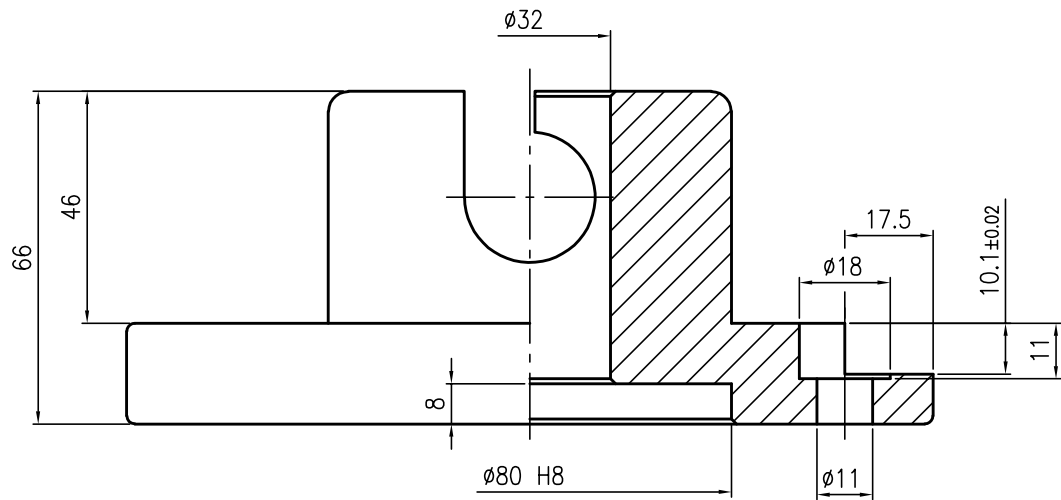


Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
 G-MGW160-2UE



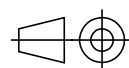
**GRIP**  
 GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Unterteil
Stahl	G-MGW160-2UES
St. nitriert	G-MGW160-2UEN

Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-MGW160-2UEN



**GRIP**  
GRIP GmbH Handhabungstechnik



# SWS CONNECTOR

The SWS end of arm tool changer is our heavy duty tool changer for applications with increased force and torque loads. The semi-cylindrical bolt accurately joins the upper and lower assembly without play. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) of the robot and ensures that the tools are correctly aligned with the robot arm.

## SWS Connector Advantages:

- Operation with square socket key
- Optional Safety-Lock. Prevents unintentional opening in dynamic applications
- Steel version, optionally nitrated
- Optional mounting surface for energy feed-through
- Withstands high loads
- Can be opened and closed with one handle
- High repeatability < 0.02 mm
- Durable - over 10.000 application changes with no loss in accuracy
- When locking, the lower assembly is pulled up by the locking action
- Interface according to DIN EN ISO 9409-1

SWS Connectors can be modified to meet your needs. Please inquire about special applications.

## SIZES

SWS050  
SWS063  
SWS080  
SWS100  
SWS125  
SWS160  
SWS160-B02  
SWS200



# G-SWS050

Technical specifications

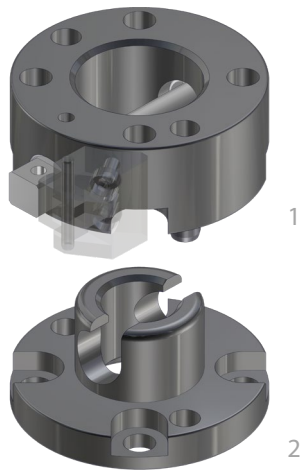
GRIP

### Operating mode:

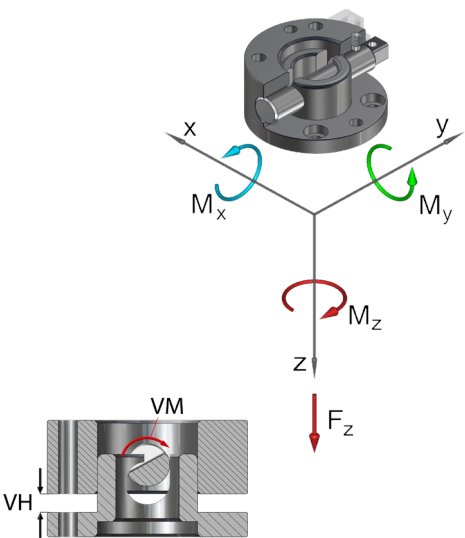
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

- Cost-effective alternative to the MGW
- Without hand lever, thereby low interference contours
- High repeat accuracy +/- 0,02 mm
- Holds up to 10,000 changing cycles
- During locking, the lower assembly is pulled around the locking stroke
- Interface according to DIN EN ISO 9409-1



Technical specifications		SWS050	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		50 x 30	
Pitch circle diameter [mm]		40	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		700	1.320
Compression -Fz [kN]		72	96
Torsion Mz [Nm]		60	78
Bending Mx, My [Nm]		70	80
Mass [kg]	upper assembly	0,28	
	lower assembly	0,13	
Recommended load [kg] *		14	16
Locking moment VM [Nm]		2 - 6	
Locking stroke VH [mm]		0 - 5	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 100 mm, double safety			



### Quick change system Ø50, drilled according to ISO...

G-SWS050-2O	upper assembly, steel
G-SWS050-2O-N	upper assembly, steel, nitrated
G-MGW050-2U-N	lower assembly, steel, nitrated

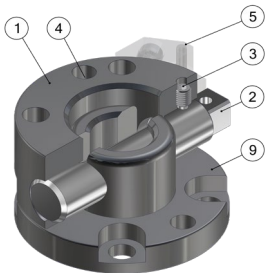
### Replacement semi-cylindrical bolt safety...

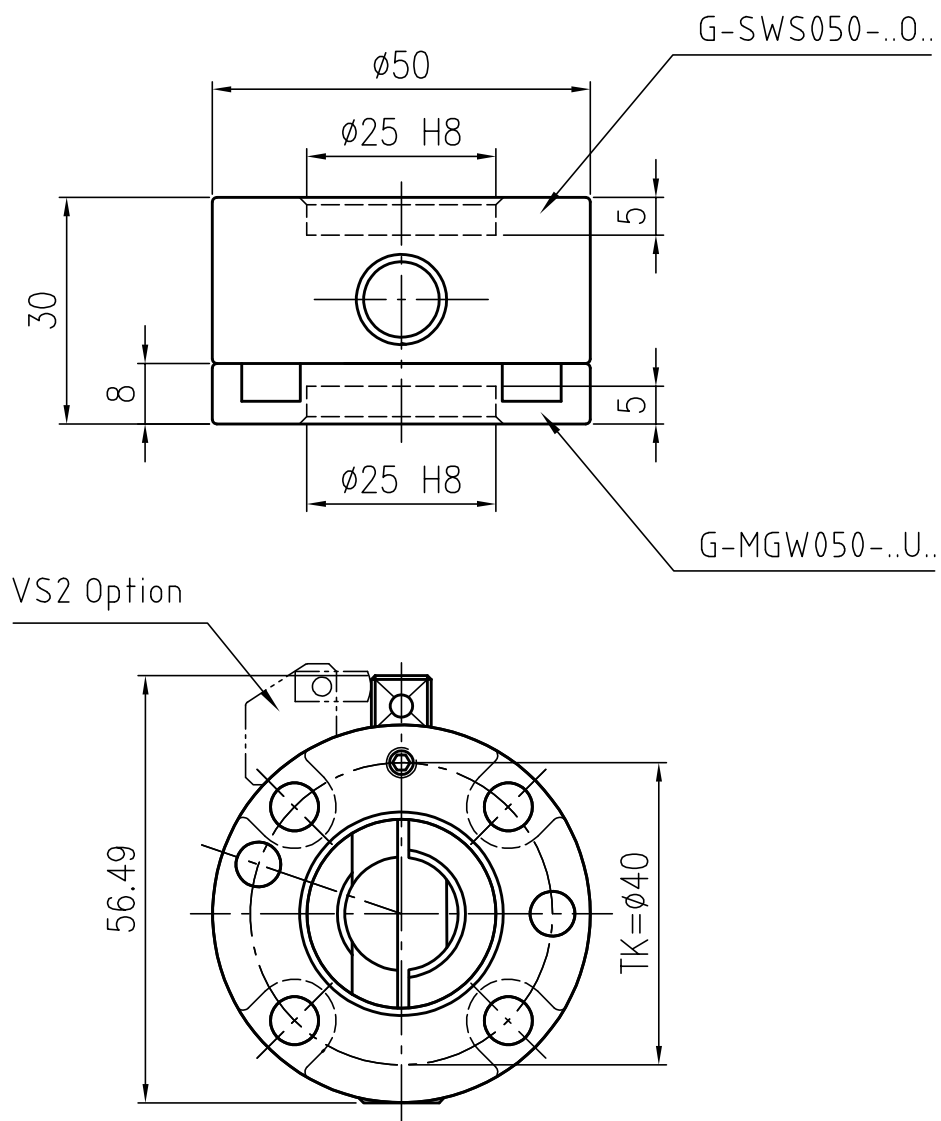
EG-SWS050-VS2	for SWS050
---------------	------------

### Square socket key...

ZG-VKS050-SW08	for SW 08
----------------	-----------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock (opt.)
9	Lower assembly



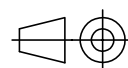


Datum 08.11.2016

Maßstab 1:1

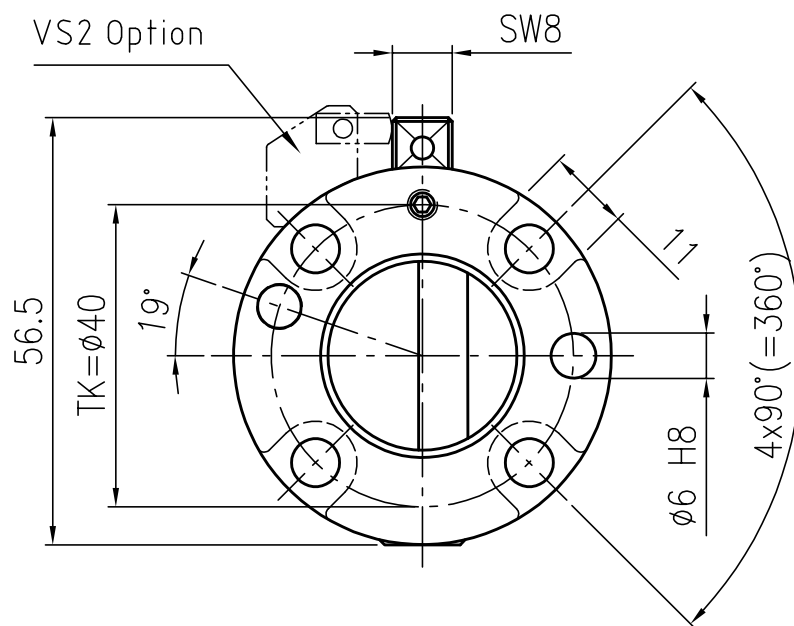
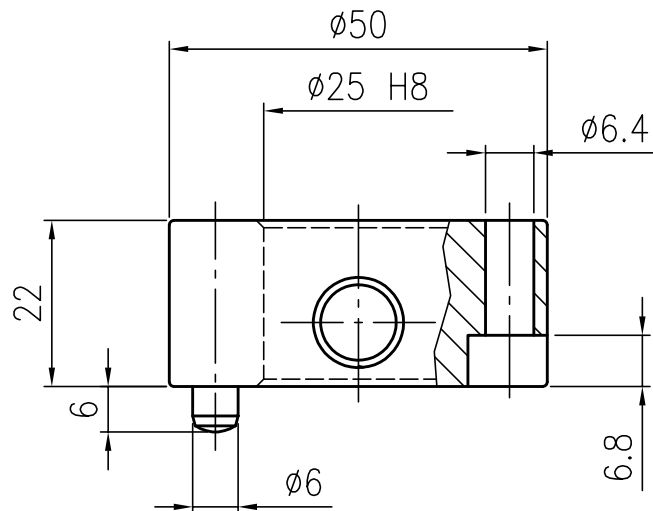
Zeichnungsnummer

G-SWS050-2Z



**GRIP**

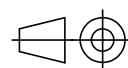
GRIP GmbH Handhabungstechnik



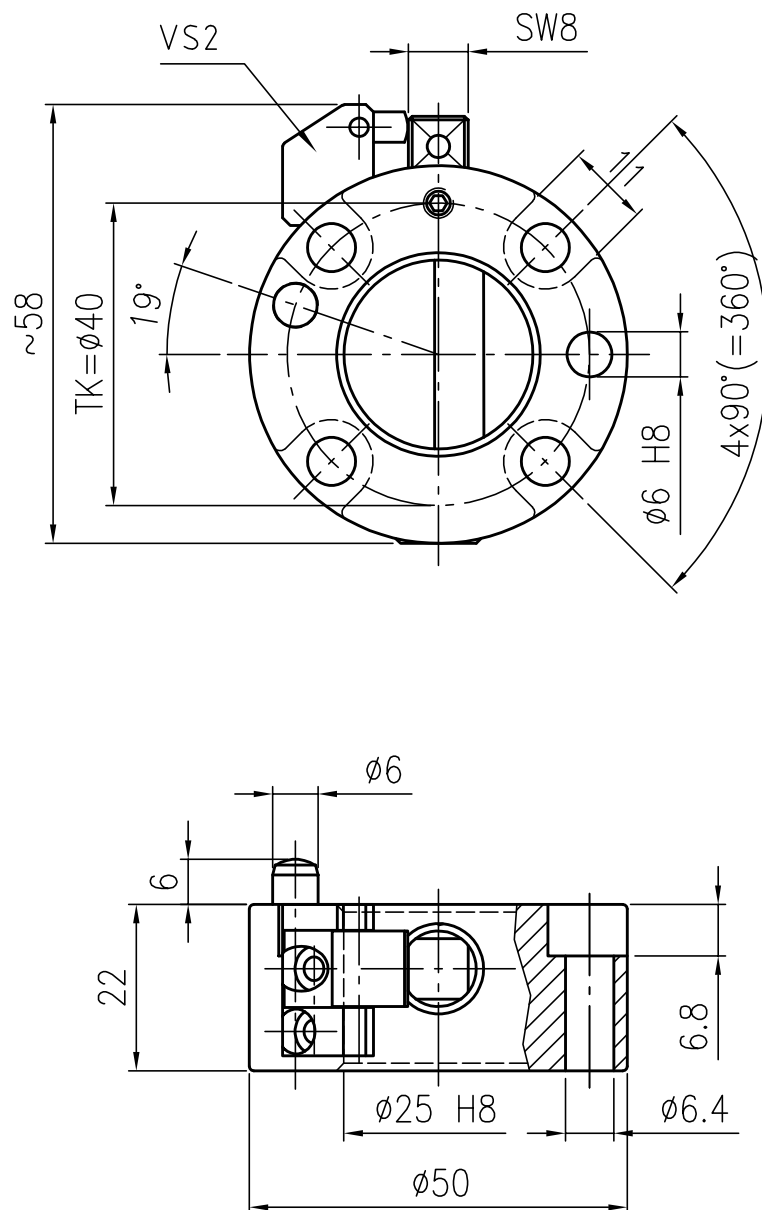
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS050-20
St. nitriert	G-SWS050-20-N

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS050-20



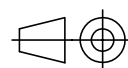
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS050-20-VS2
St. nitriert	G-SWS050-20-N-VS2

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS050-20-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-SWS063

### Technical specifications

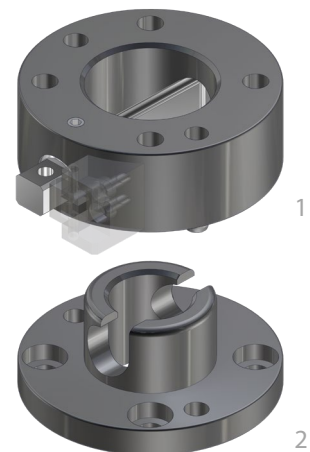
# GRIP

#### Operating mode:

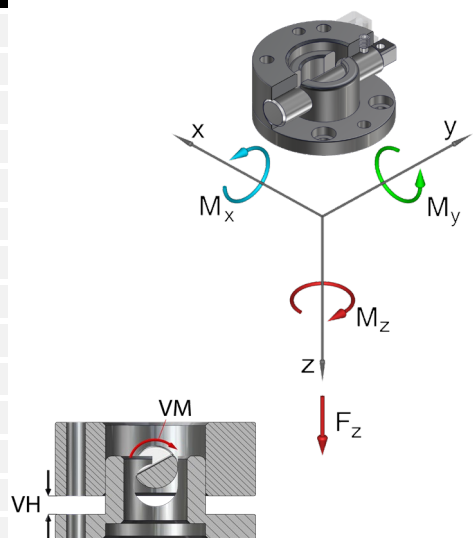
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

#### Advantages:

Cost-effective alternative to the MGW  
Without hand lever, thereby low interference contours  
High repeat accuracy +/- 0,02 mm  
Optional connection of a power coupling MEK for electrical and pneumatical ducts  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



Technical specifications		SWS063	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		63 x 32	
Pitch circle diameter [mm]		50	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.500	1.800
Compression -Fz [kN]		134	178
Torsion Mz [Nm]		80	105
Bending Mx, My [Nm]		100	115
Mass [kg]	upper assembly	0,48	
	lower assembly	0,23	
Recommended load [kg] *		20	22
Locking moment VM [Nm]		3 - 8	
Locking stroke VH [mm]		0 - 6	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 100 mm, double safety			



#### Quick change system Ø63, drilled according to ISO...

G-SWS063-2O	upper assembly, steel
G-SWS063-2OE	upper assembly, steel, E-Mounting
G-SWS063-2OEN	upper assembly, steel, E-Mounting, nitrated
G-SWS063-2O-N	upper assembly, steel, nitrated
G-MGW063-2UEN	lower assembly, E-Mounting, steel, nitrated
G-MGW063-2U-N	lower assembly, steel, nitrated

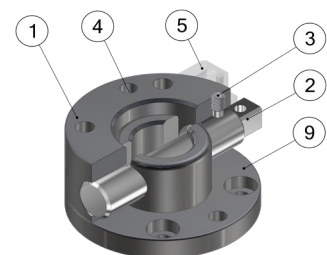
#### Replacement semi-cylindrical bolt safety...

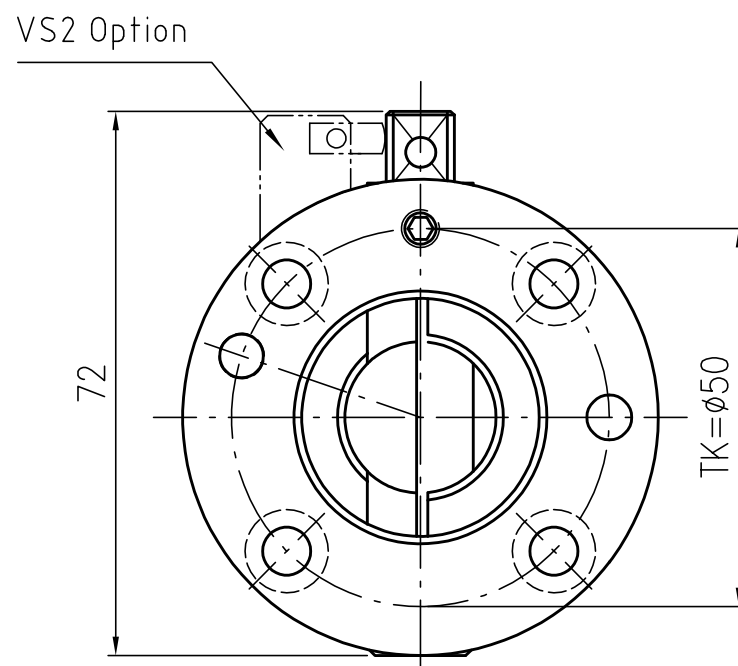
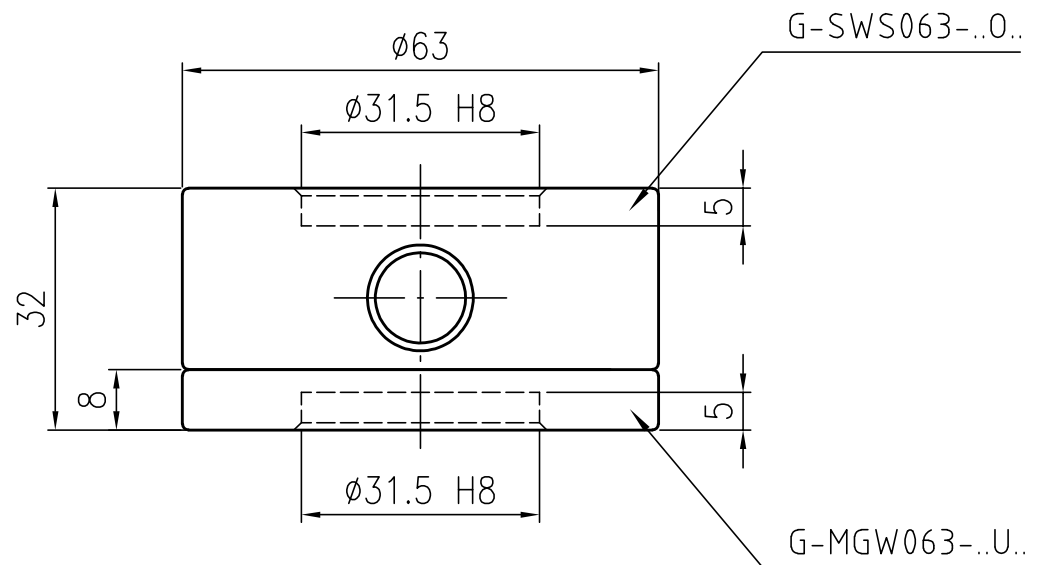
EG-SWS063-VS2	for SWS063
---------------	------------

#### Square socket key...

ZG-VKS063-SW09	for SW 09
----------------	-----------

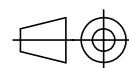
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock (opt.)
9	Lower assembly



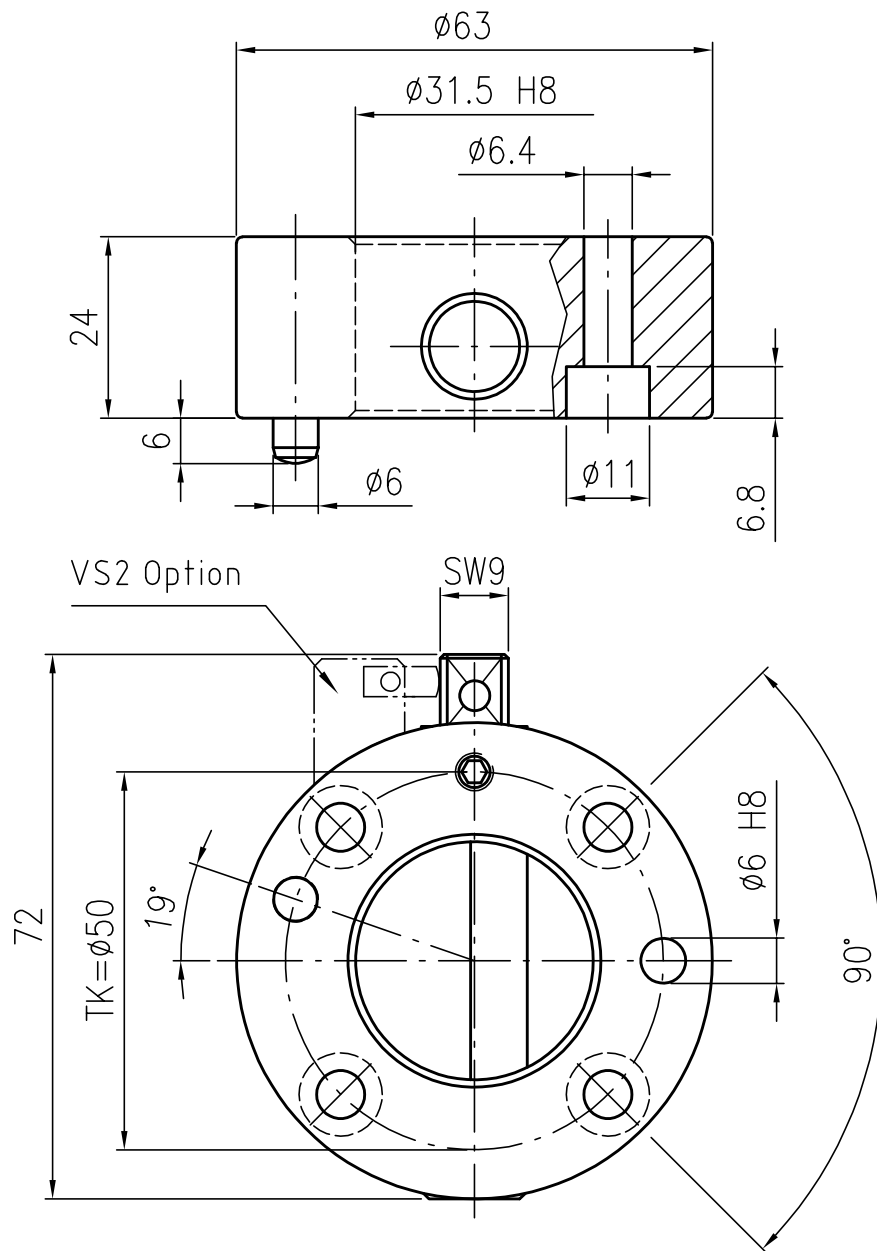


Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS063-2Z



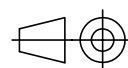
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS063-20
St. nitriert	G-SWS063-20-N

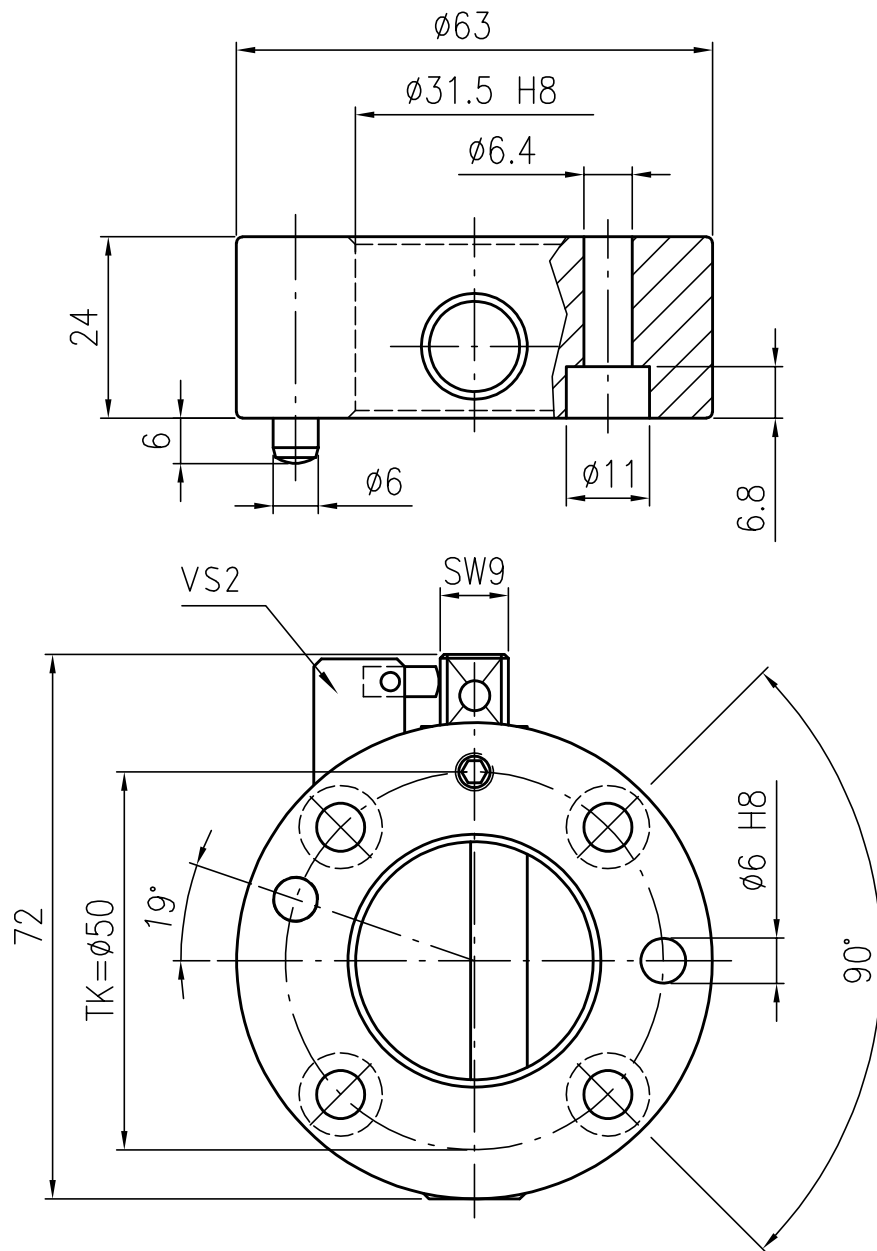
Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS063-20



**GRIP**  
GRIP GmbH Handhabungstechnik

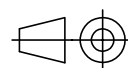




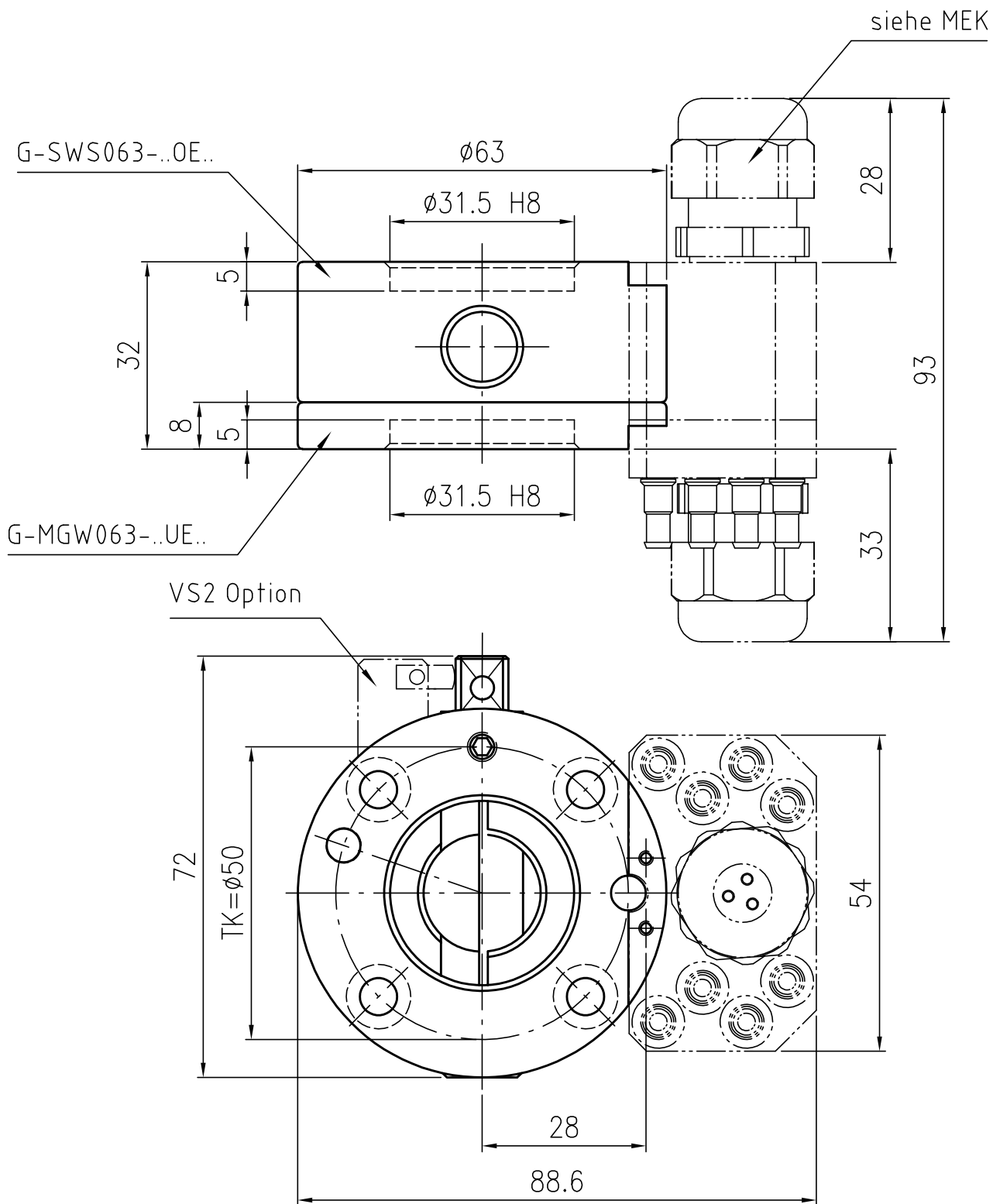
Grundmaterial	Bestellnummer Oberteil
St. nitriert mit Verdrehsicherung	G-SWS063-20-N-VS2

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS063-20-N-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik

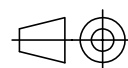


Datum 08.11.2016

Maßstab 1:1

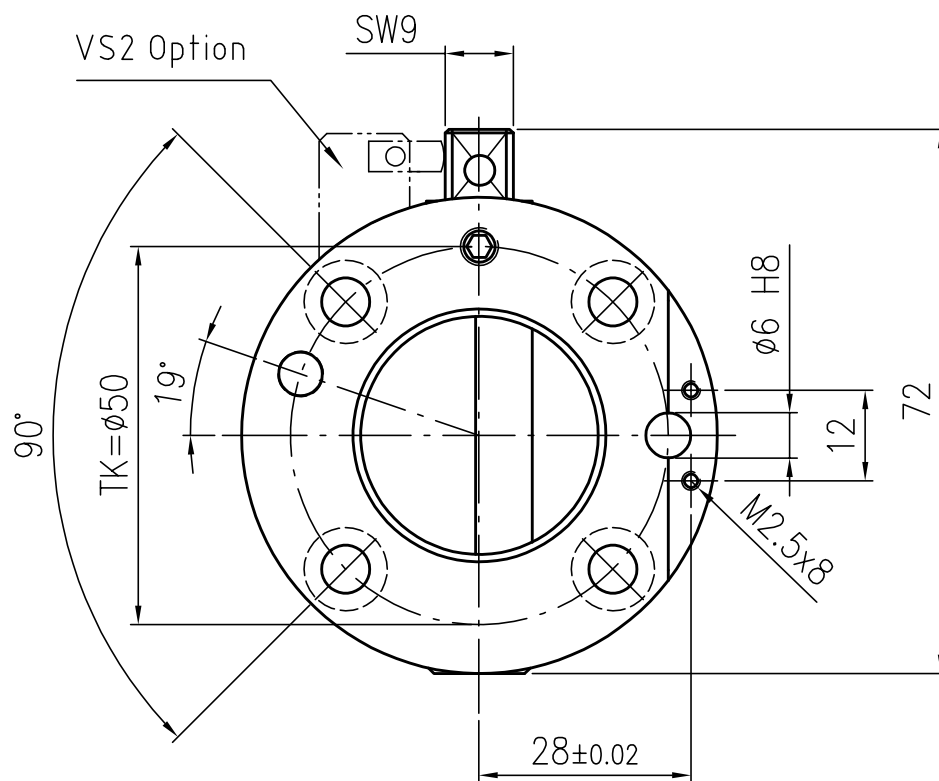
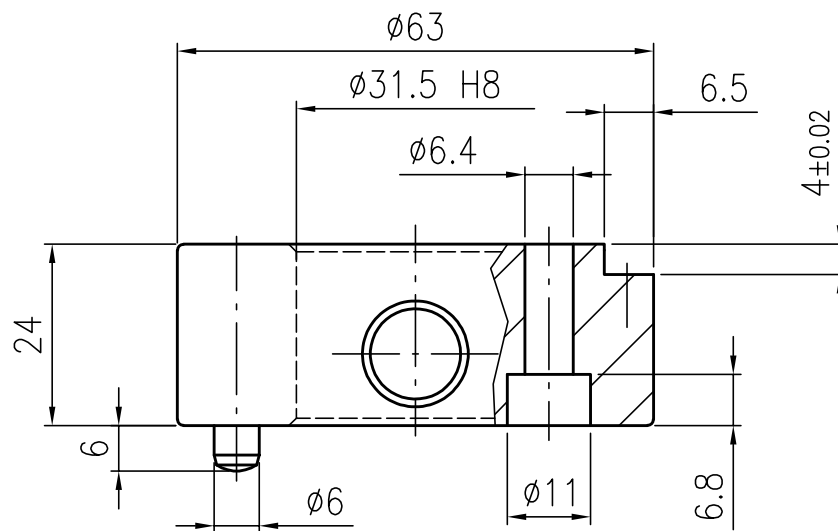
Zeichnungsnummer

G-SWS063-2ZE



**GRIP**

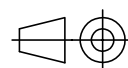
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS063-20E
St. nitriert	G-SWS063-20EN

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS063-20E



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWS080

## Technical specifications

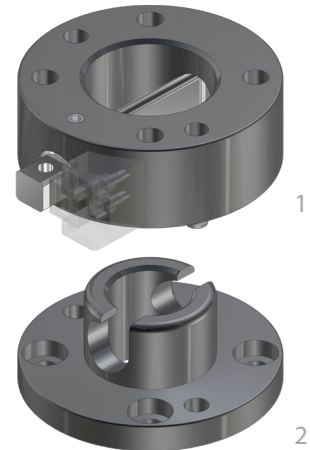
# GRIP

### Operating mode:

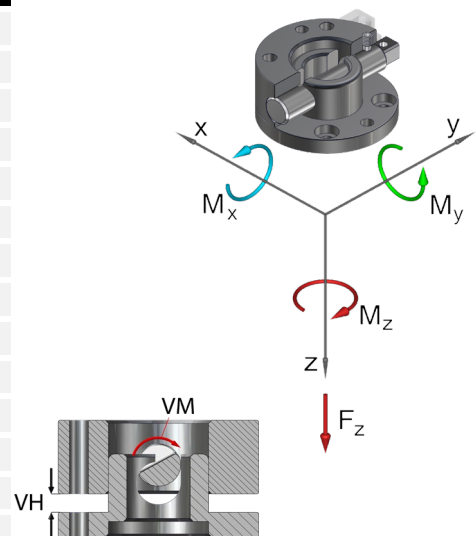
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Cost-effective alternative to the MGW  
Without hand lever, thereby low interference contours  
High repeat accuracy +/- 0,02 mm  
Optional connection of a power coupling MEK for electrical and pneumatical ducts  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



Technical specifications		SWS080	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		80 x 37	
Pitch circle diameter [mm]		63	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		2.500	3.000
Compression -Fz [kN]		235	313
Torsion Mz [Nm]		100	120
Bending Mx, My [Nm]		140	160
Mass [kg]	upper assembly	0,92	
	lower assembly	0,5	
Recommended load [kg] *		25	28
Locking moment VM [Nm]		3 - 9	
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 100 mm, double safety			



### Quick change system Ø80, drilled according to ISO...

G-SWS080-2O	upper assembly, steel
G-SWS080-2OE	upper assembly, steel, E-Mounting
G-SWS080-2OEN	upper assembly, steel, E-Mounting, nitrated
G-SWS080-2O-N	upper assembly, steel, nitrated
G-MGW080-2UEN	lower assembly, E-Mounting, steel, nitrated
G-MGW080-2U-N	lower assembly, steel, nitrated

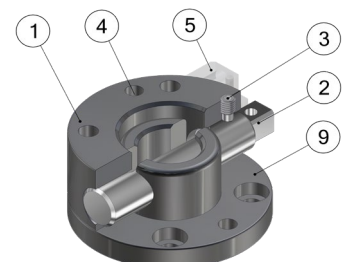
### Replacement semi-cylindrical bolt safety...

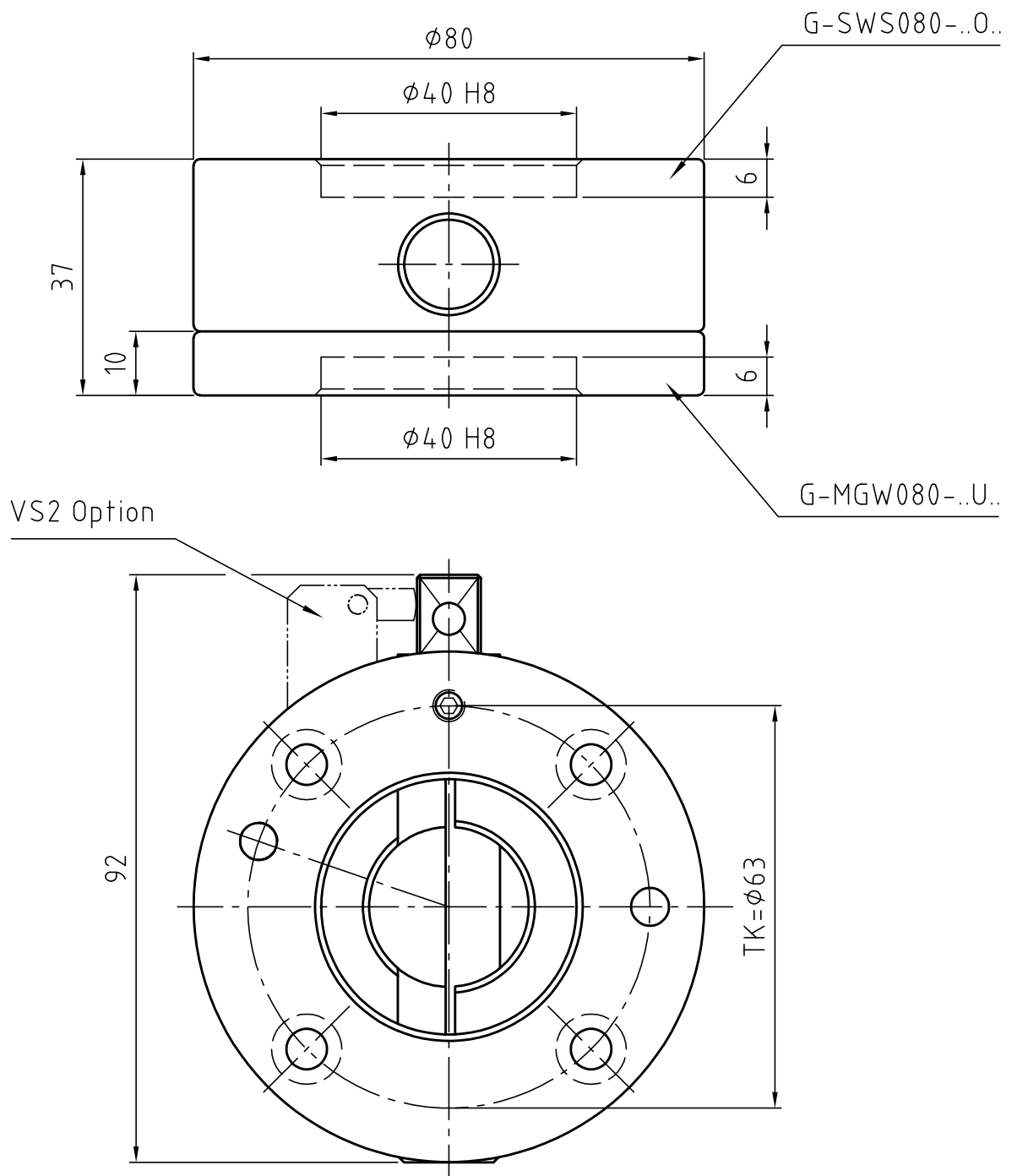
EG-SWS080-VS2	for SWS080
---------------	------------

### Square socket key...

ZG-VKS080-SW10	for SW 10
----------------	-----------

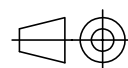
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock (opt.)
9	Lower assembly



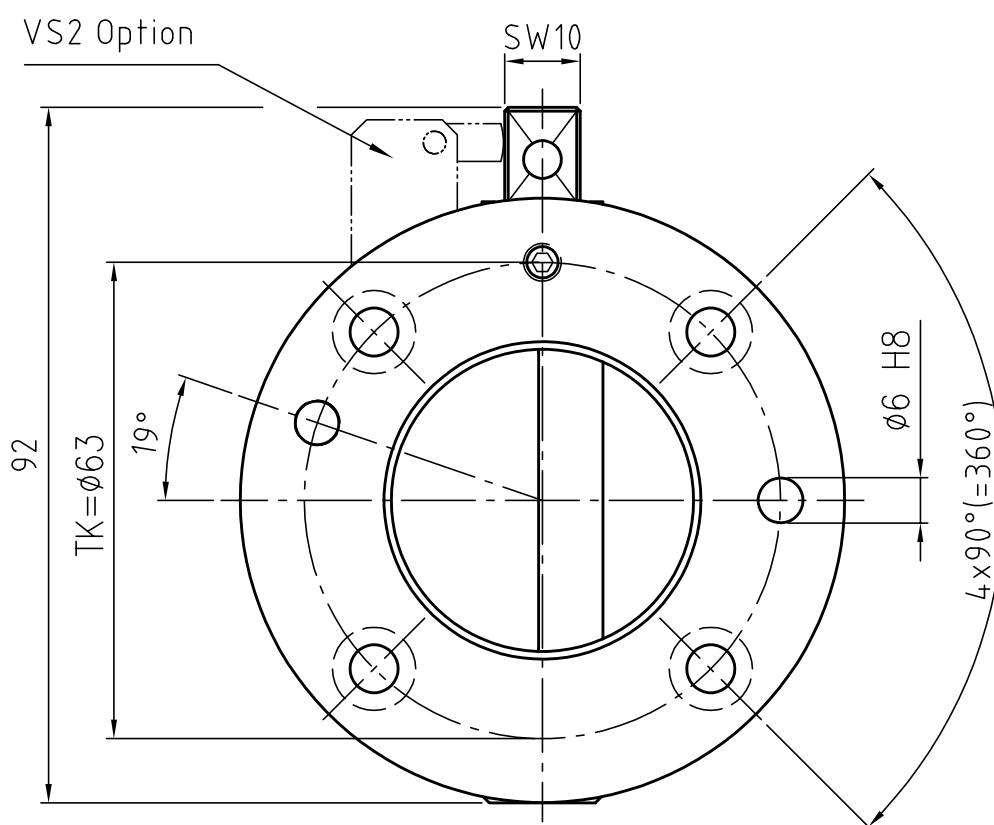


Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS080-2Z

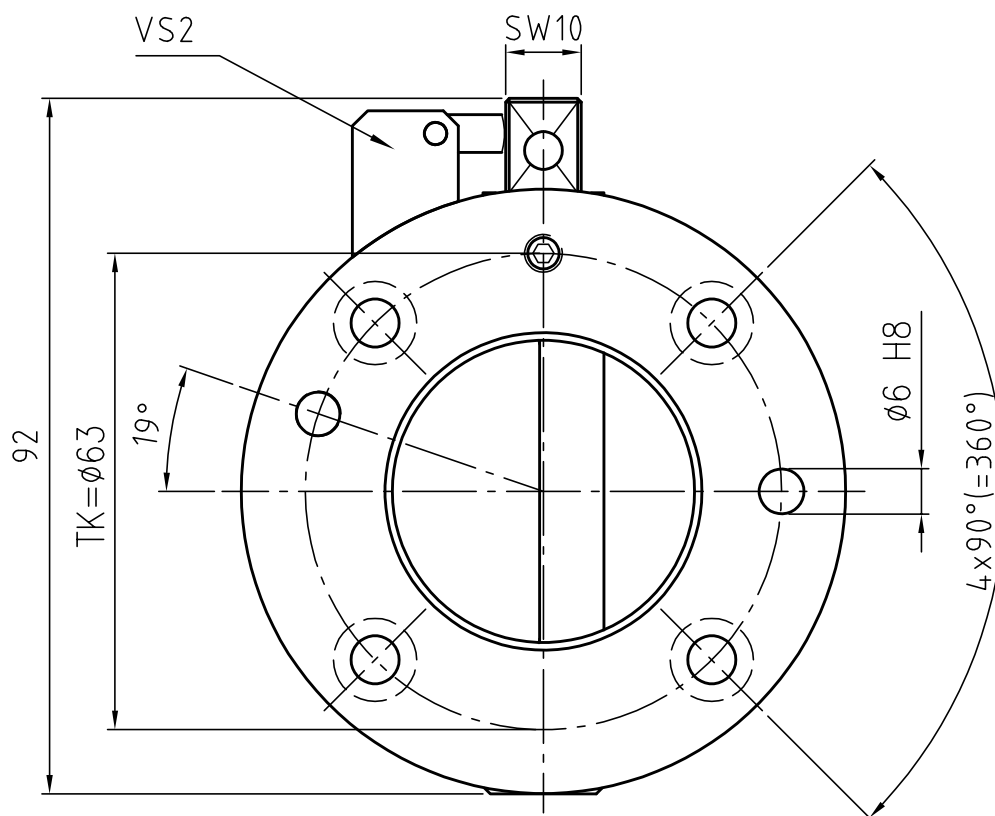
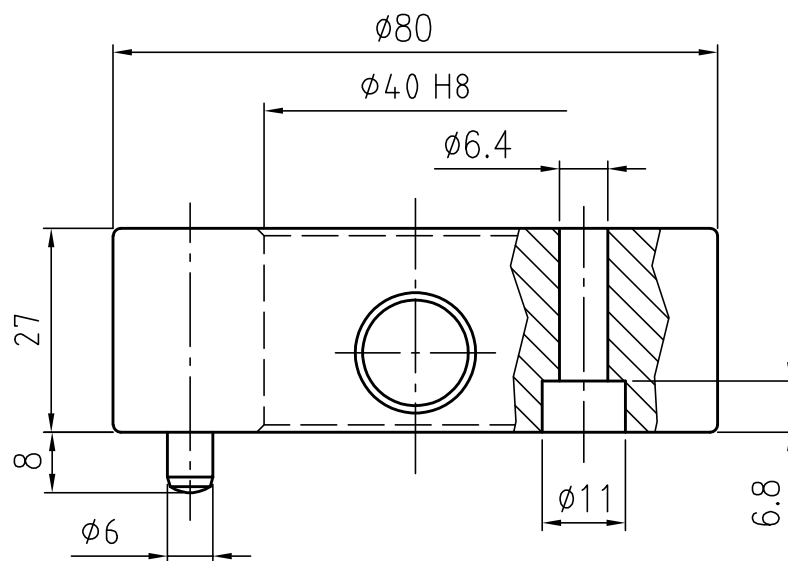


**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS080-20
St. nitriert	G-SWS080-20-N

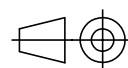
**GRIP**  
GRIP GmbH Handhabungstechnik



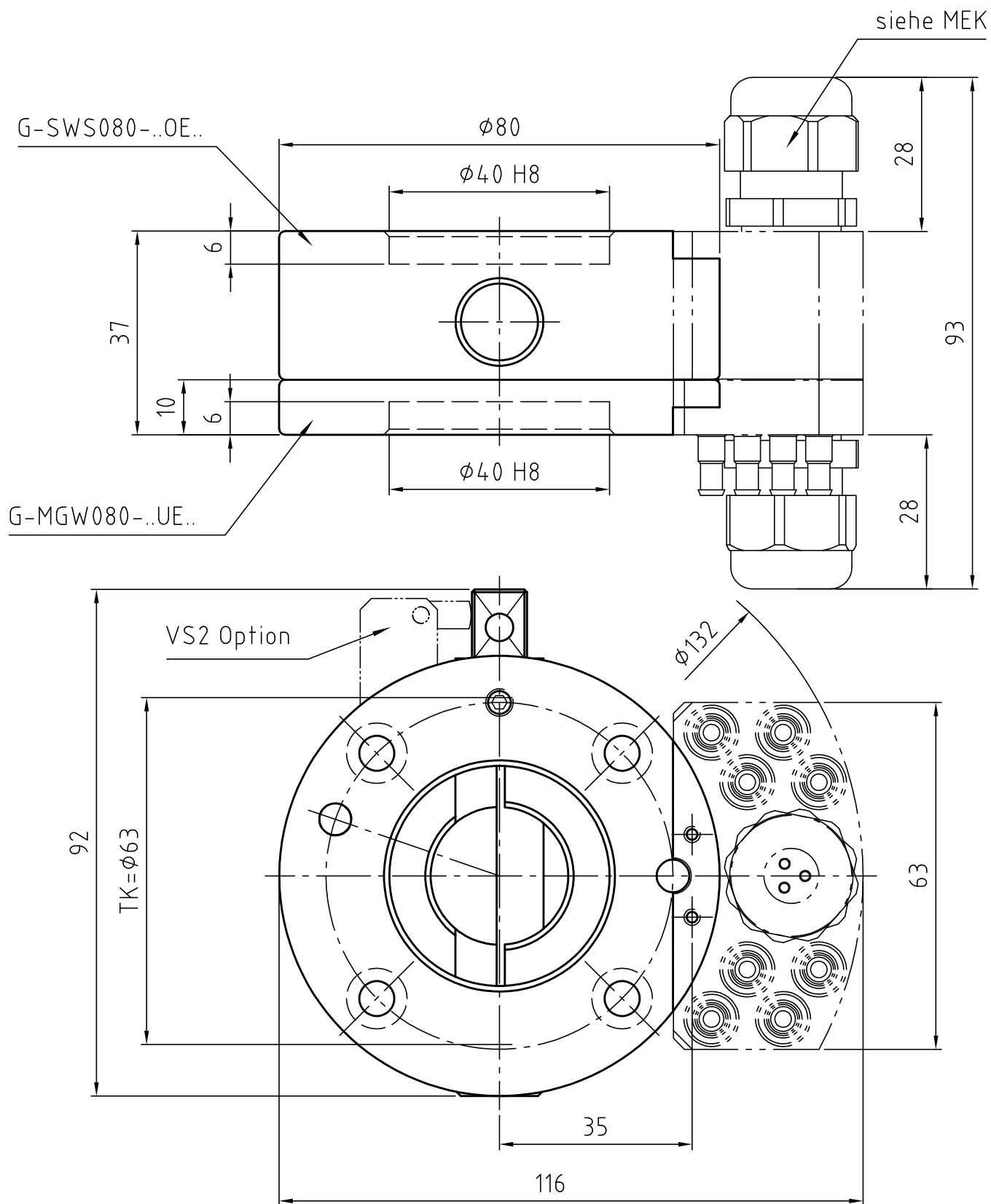
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS080-20-VS2
St. nitriert	G-SWS080-20-N-VS2

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS080-20-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik

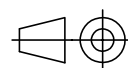


Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

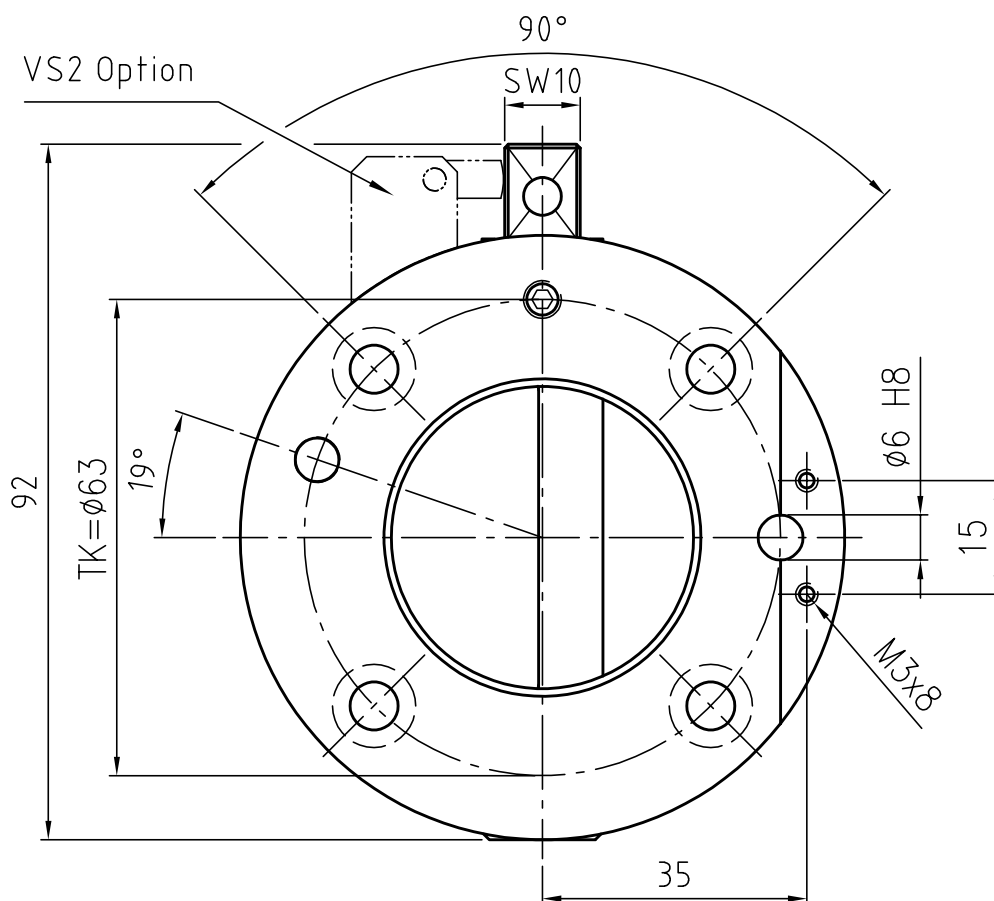
G-SWS080-2ZE



**GRIP**

GRIP GmbH Handhabungstechnik





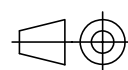
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS080-20E
St. nitriert	G-SWS080-20EN

Datum 08.11.2016

Maßstab 1:1

Zeichnungsnummer

G-SWS080-20E



# G-SWS100

## Technical specifications

# GRIP

### Operating mode:

By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Cost-effective alternative to the MGW

Without hand lever, thereby low interference contours

High repeat accuracy +/- 0,02 mm

Optional connection of a power coupling MEK for electrical and pneumatical ducts

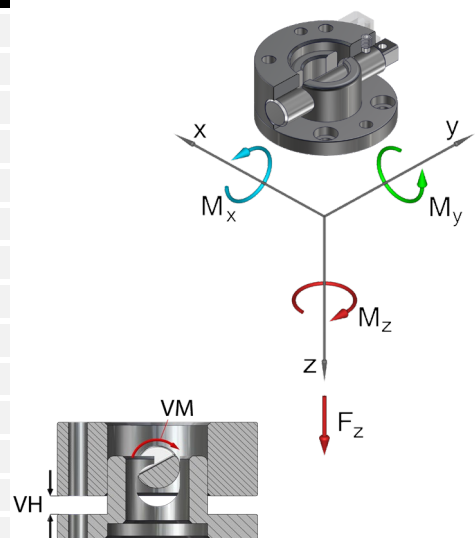
Holds up to 10,000 changing cycles

During locking, the lower assembly is pulled around the locking stroke

Interface according to DIN EN ISO 9409-1



Technical specifications		SWS100	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		100 x 45	
Pitch circle diameter [mm]		80	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		3.500	4.200
Compression -Fz [kN]		329	439
Torsion Mz [Nm]		140	185
Bending Mx, My [Nm]		180	205
Mass [kg]	upper assembly	1,53	
	lower assembly	1,01	
Recommended load [kg] *		35	39
Locking moment VM [Nm]		3 - 14	
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 100 mm, double safety			



### Quick change system Ø100, drilled according to ISO...

G-SWS100-2O	upper assembly, steel
G-SWS100-2OE	upper assembly, steel, E-Mounting
G-SWS100-2OEN	upper assembly, steel, E-Mounting, nitrated
G-SWS100-2O-N	upper assembly, steel, nitrated
G-MGW100-2UEN	lower assembly, E-Mounting, steel, nitrated
G-MGW100-2U-N	lower assembly, steel, nitrated

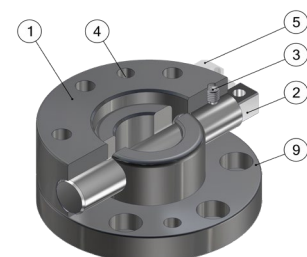
### Replacement semi-cylindrical bolt safety...

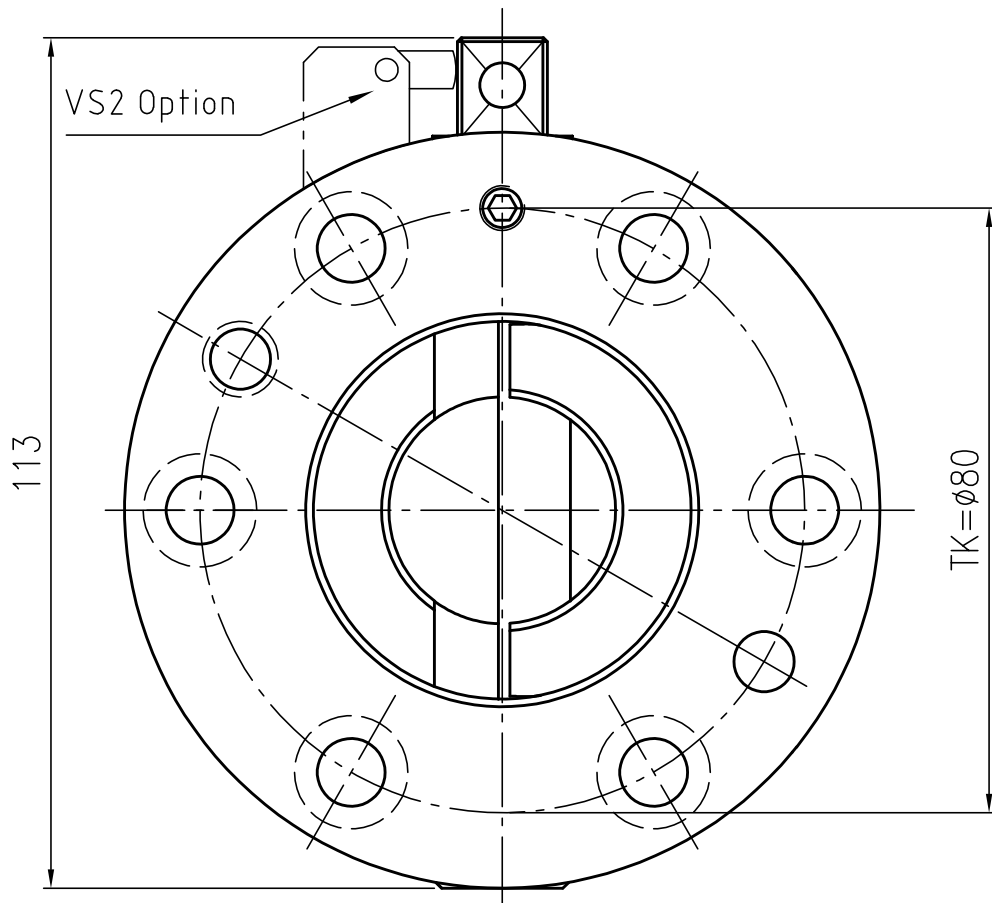
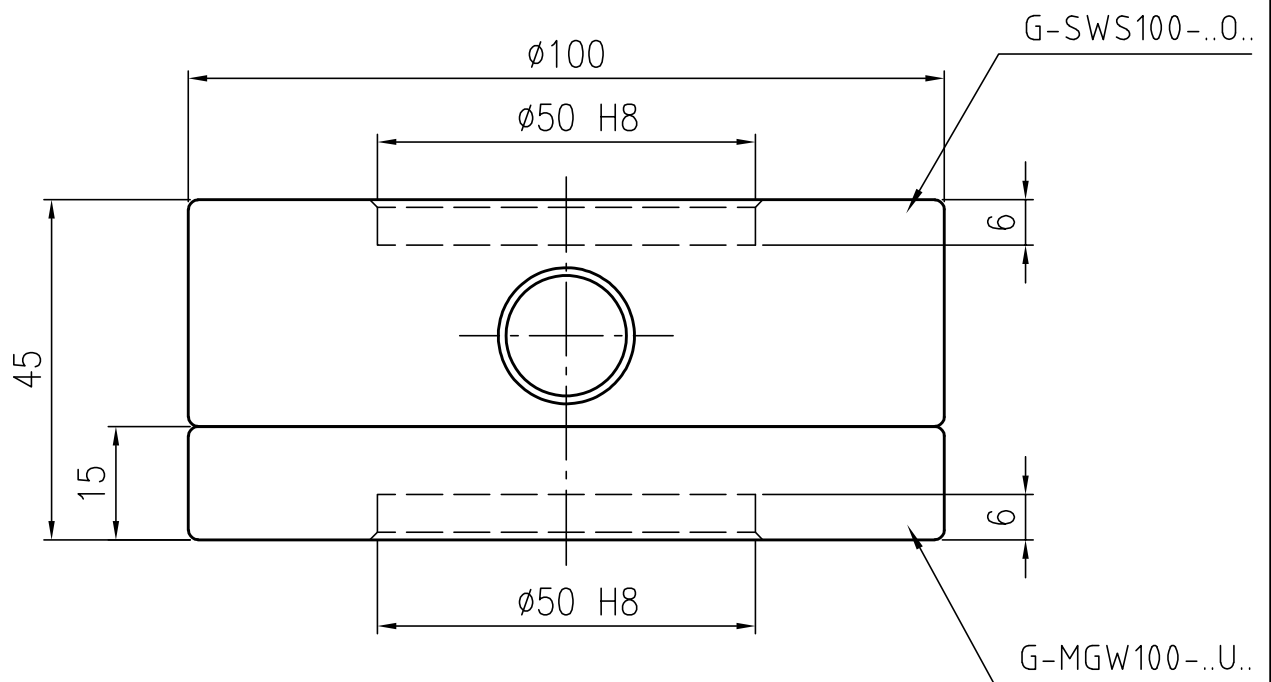
EG-SWS100-VS2	for SWS100
---------------	------------

### Square socket key...

ZG-VKS100-SW12	for SW 12
----------------	-----------

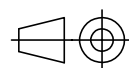
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock (opt.)
9	Lower assembly



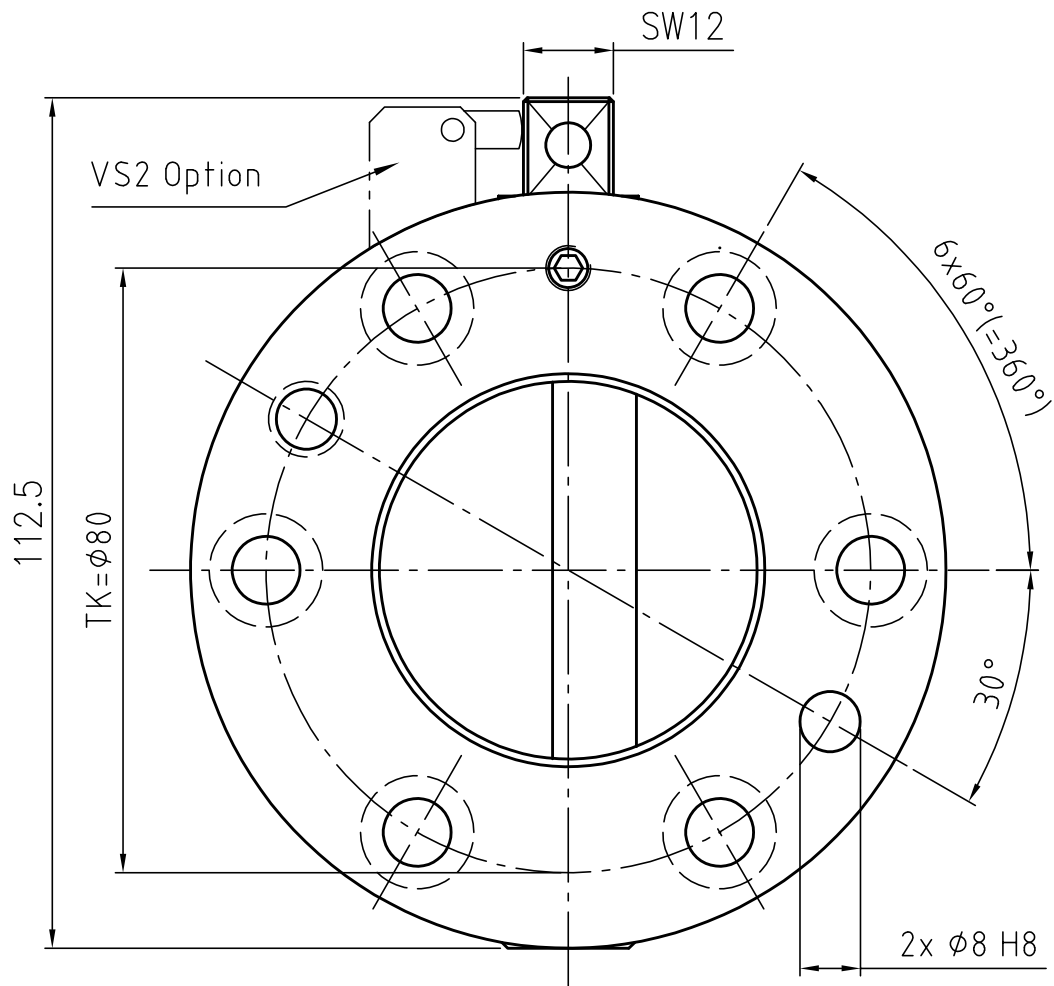
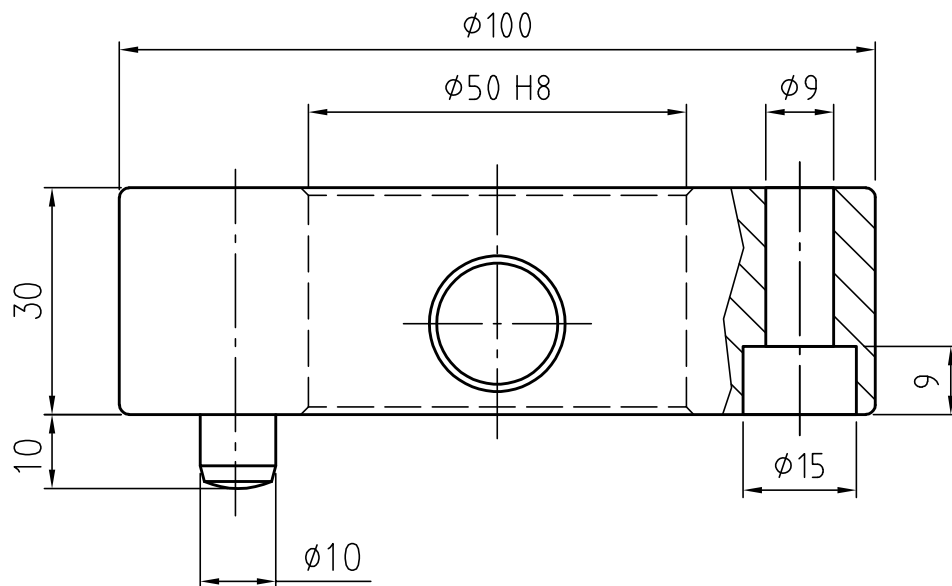


Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS100-2Z



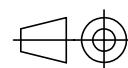
**GRIP**  
GRIP GmbH Handhabungstechnik



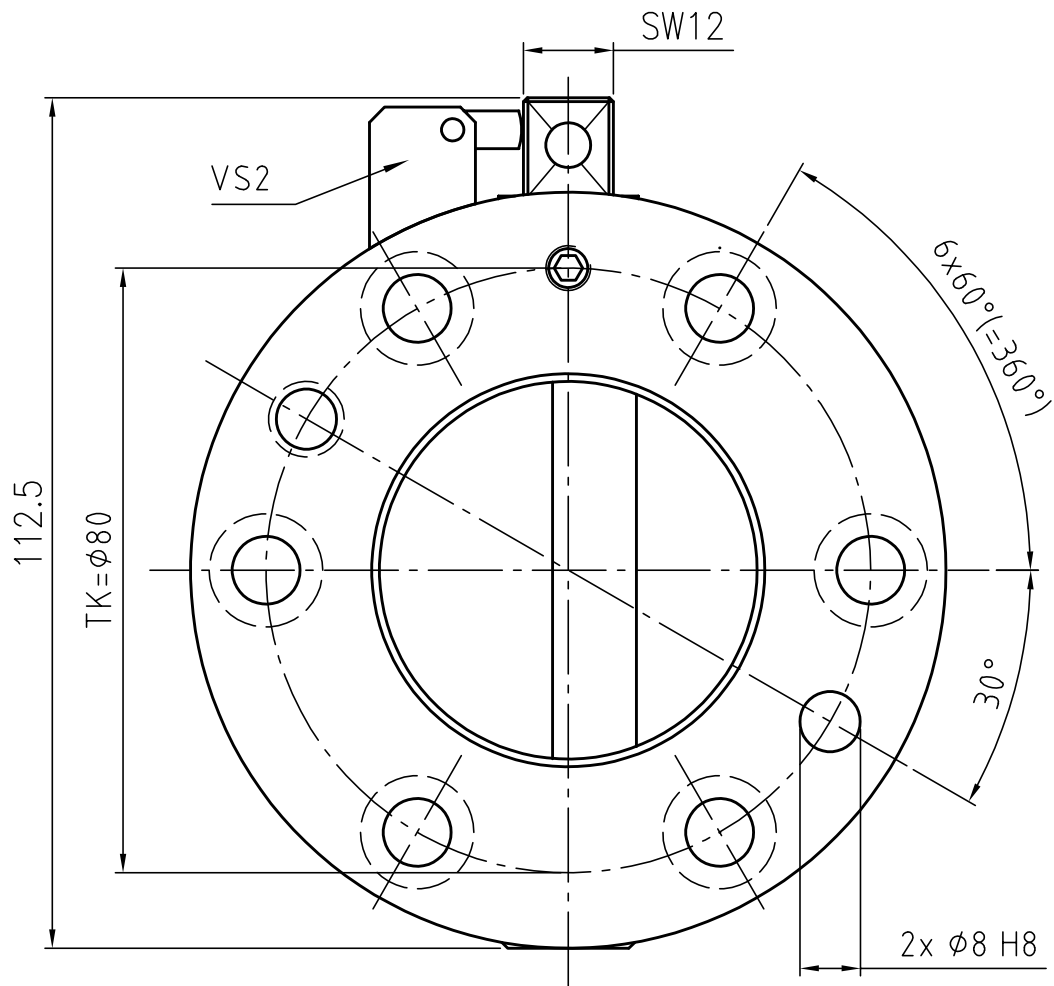
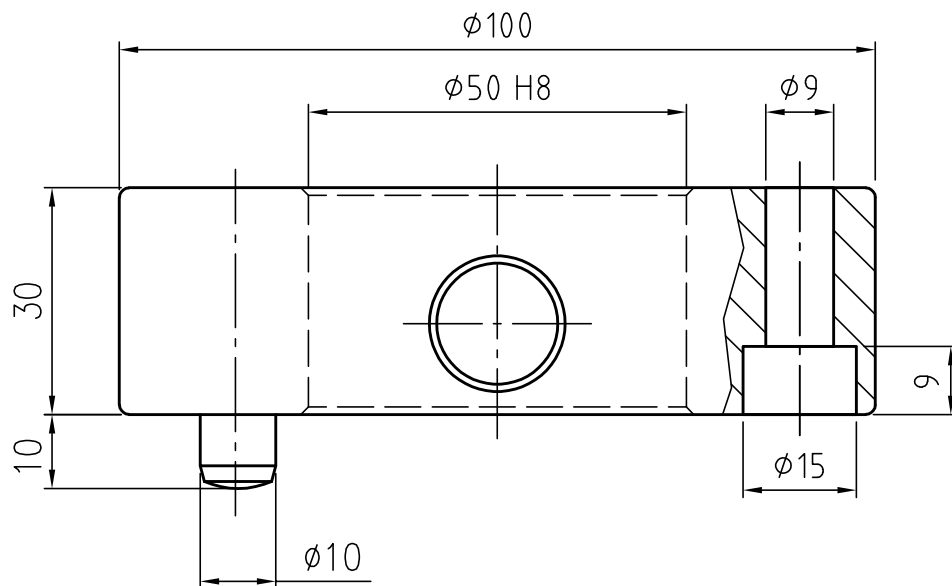
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS100-20
St. nitriert	G-SWS100-20-N

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS100-20



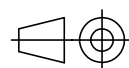
**GRIP**  
GRIP GmbH Handhabungstechnik



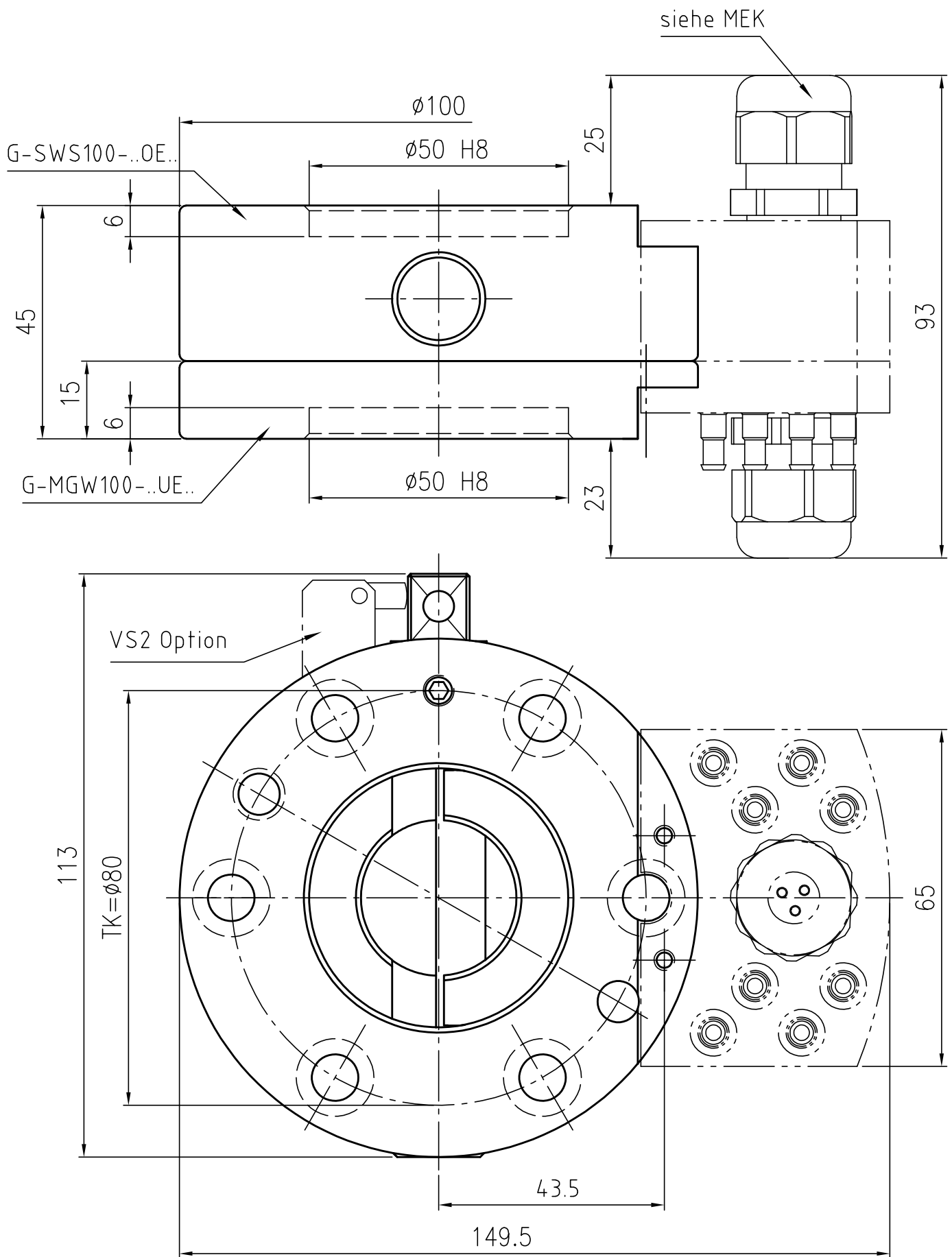
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS100-20-VS2
St. nitriert	G-SWS100-20-N-VS2

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS100-20-VS2

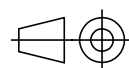


**GRIP**  
GRIP GmbH Handhabungstechnik

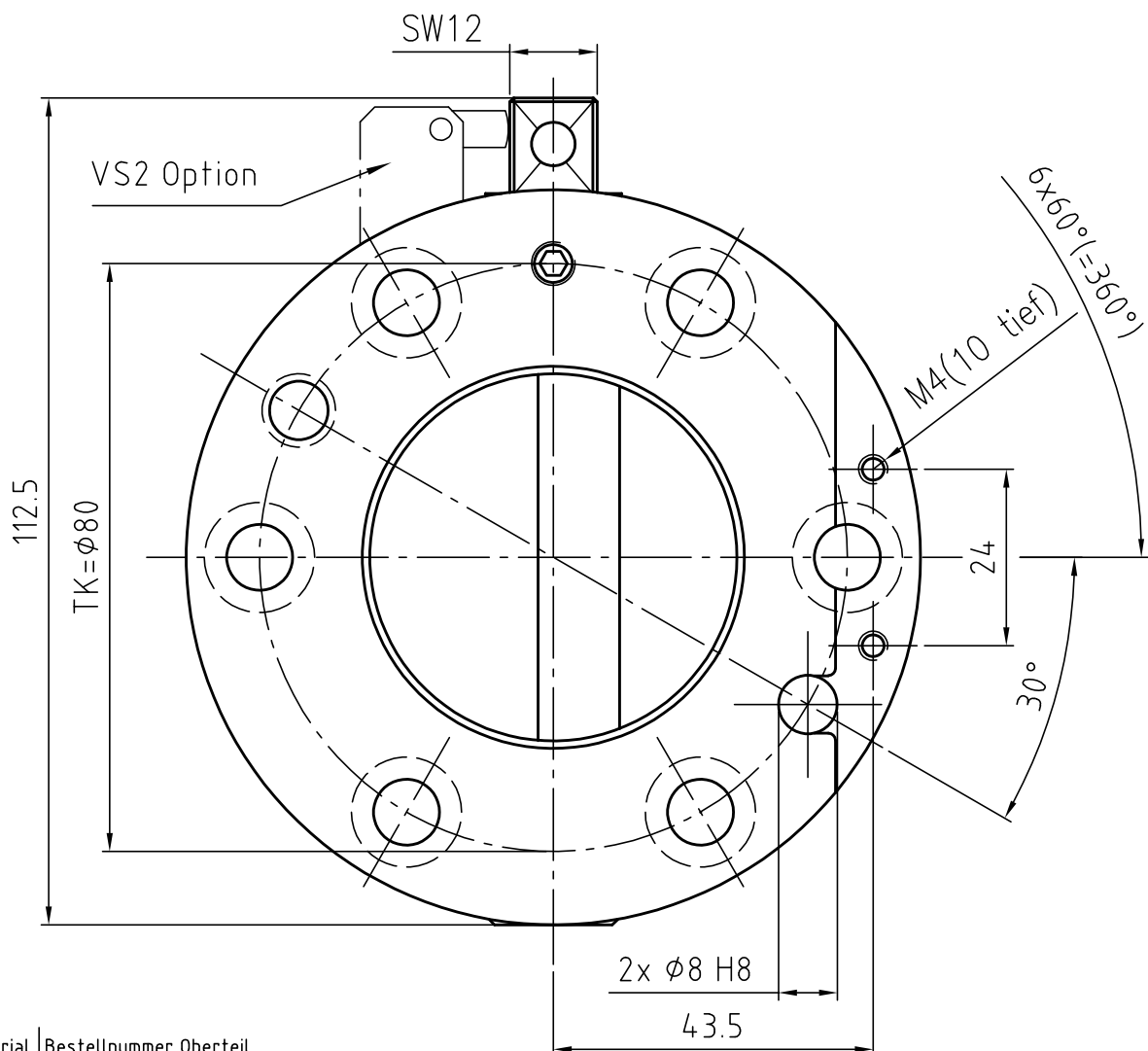
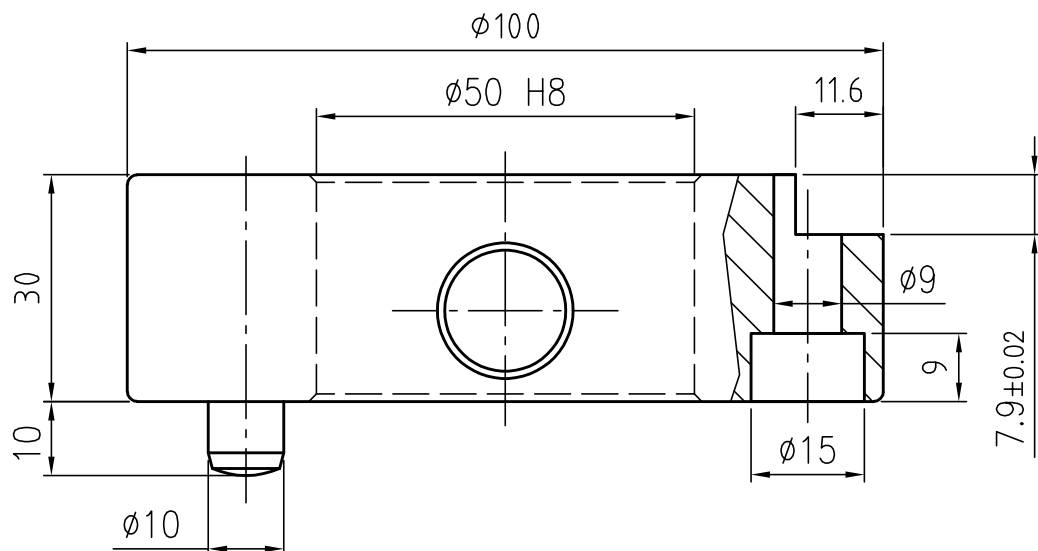


Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS100-2ZE



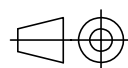
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS100-20E
St. nitriert	G-SWS100-20EN

Datum 08.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWS100-20E



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWS125

## Technical specifications

# GRIP

### Operating mode:

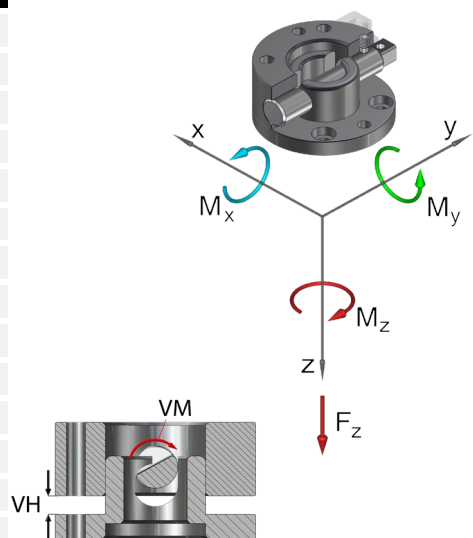
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

- Cost-effective alternative to the MGW
- Without hand lever, thereby low interference contours
- High repeat accuracy +/- 0,02 mm
- Optional connection of a power coupling MEK for electrical and pneumatical ducts
- Holds up to 10,000 changing cycles
- During locking, the lower assembly is pulled around the locking stroke
- Interface according to DIN EN ISO 9409-1



Technical specifications		SWS125	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		125 x 50	
Pitch circle diameter [mm]		100	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		4.500	5.200
Compression -Fz [kN]		565	754
Torsion Mz [Nm]		180	210
Bending Mx, My [Nm]		220	250
Mass [kg]	upper assembly	2,8	
	lower assembly	1,6	
Recommended load [kg] *		50	55
Locking moment VM [Nm]		3 - 20	
Locking stroke VH [mm]		0 - 8	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 100 mm, 1.7 times safety			



### Quick change system Ø125, drilled according to ISO...

G-SWS125-2O	upper assembly, steel
G-SWS125-2OE	upper assembly, steel, E-Mounting
G-SWS125-2OEN	upper assembly, steel, E-Mounting, nitrated
G-SWS125-2O-N	upper assembly, steel, nitrated
G-MGW125-2UEN	lower assembly, E-Mounting, steel, nitrated
G-MGW125-2U-N	lower assembly, steel, nitrated

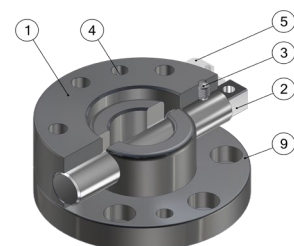
### Replacement semi-cylindrical bolt safety...

EG-SWS125-VS2	for SWS125
---------------	------------

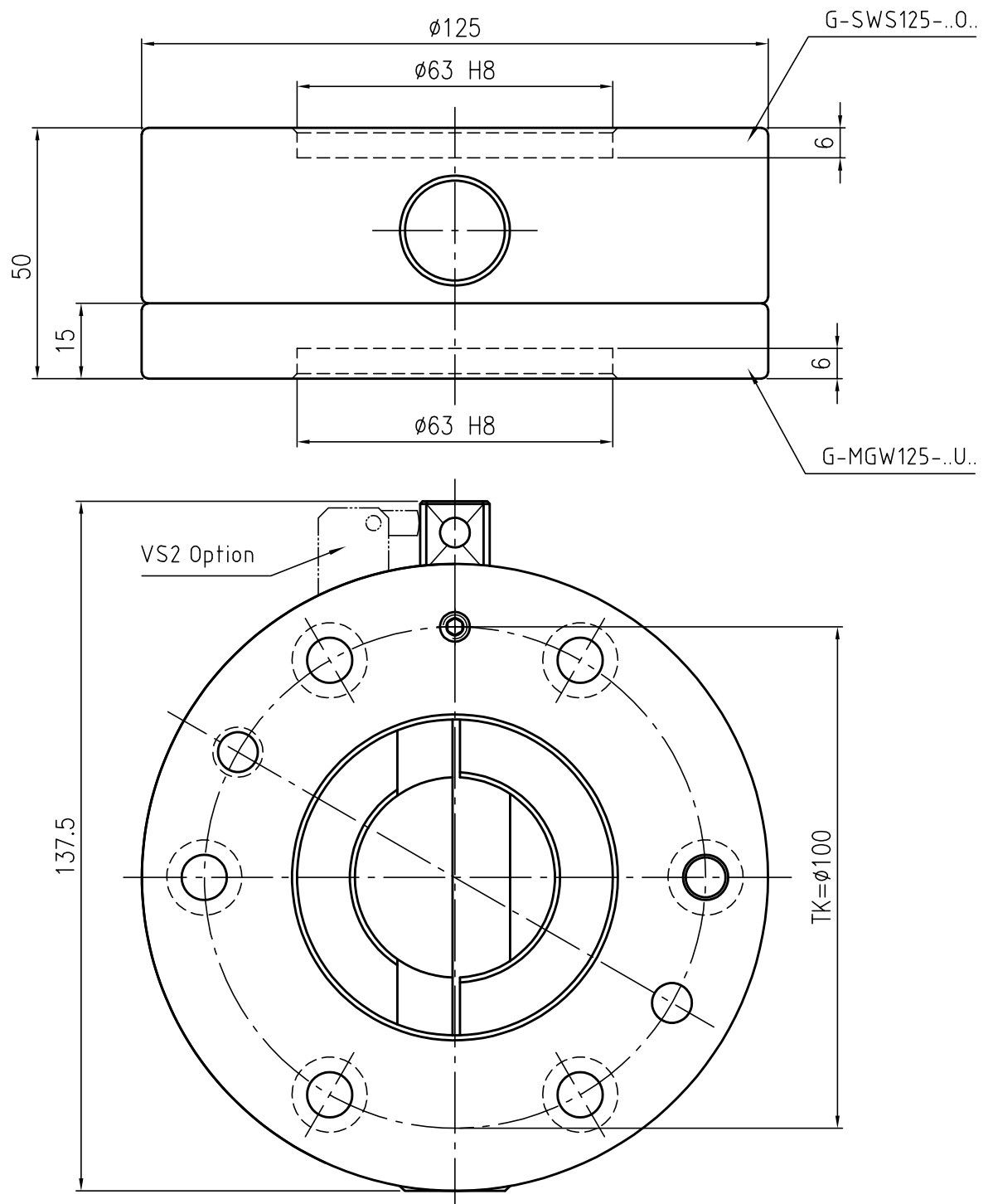
### Square socket key...

ZG-VKS125-SW14	for SW 14
----------------	-----------

Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock (opt.)
9	Lower assembly

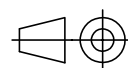




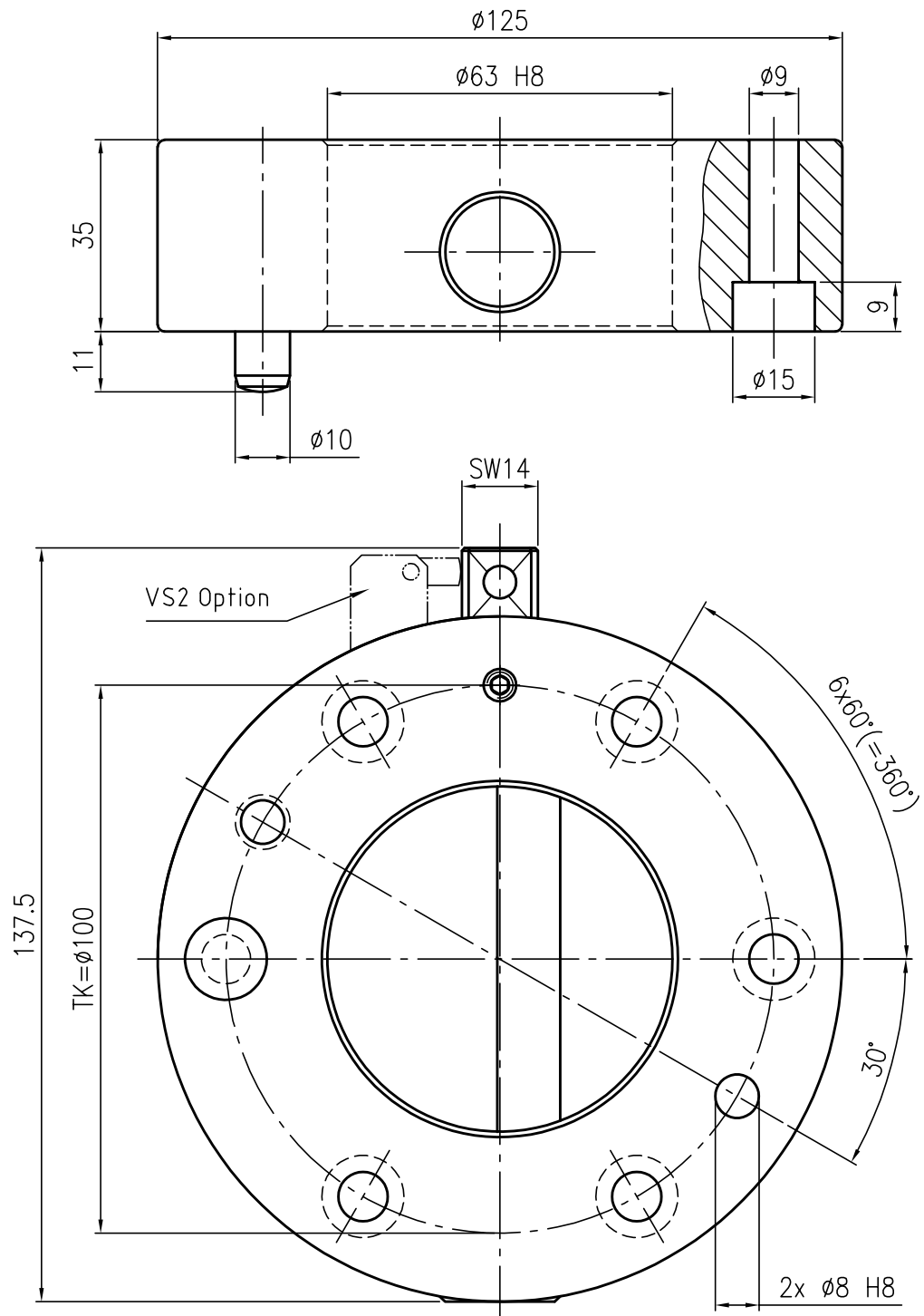


Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-SWS125-2Z



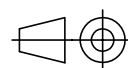
**GRIP**  
GRIP GmbH Handhabungstechnik



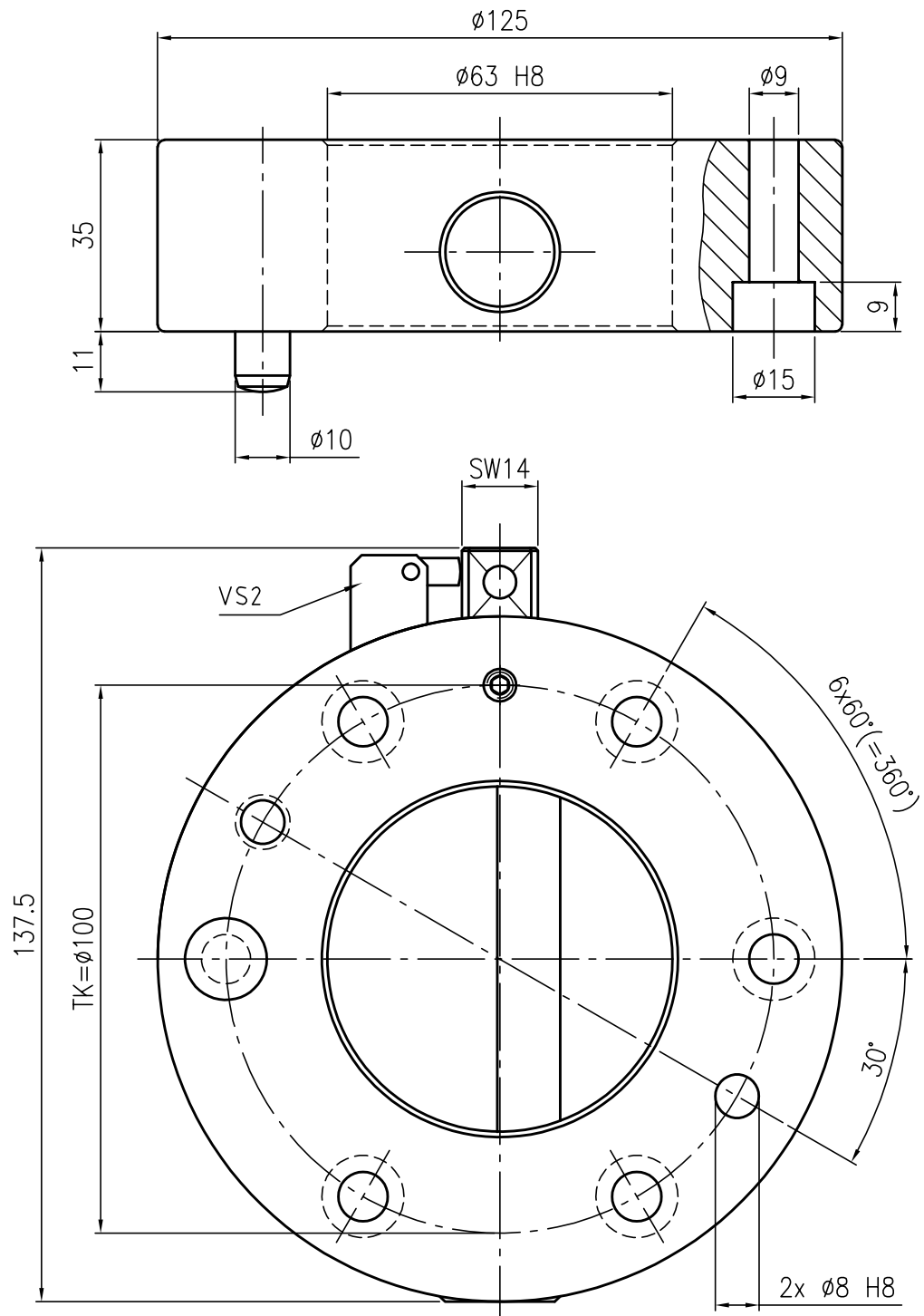
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS125-20
St. nitriert	G-SWS125-20-N

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-SWS125-20



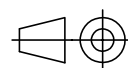
**GRIP**  
GRIP GmbH Handhabungstechnik



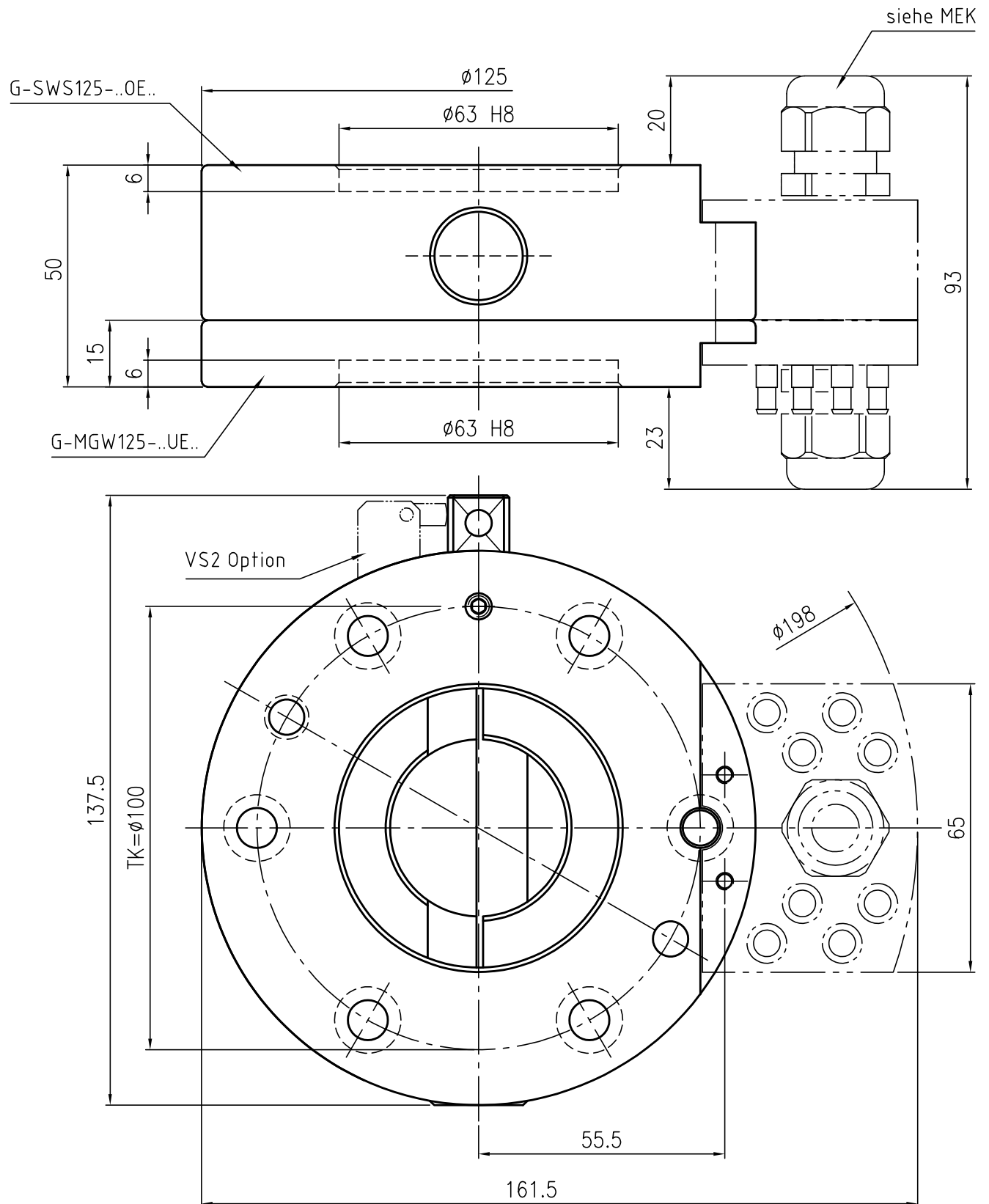
Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS125-20-VS2
St. nitriert	G-SWS125-20-N-VS2

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-SWS125-20-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik

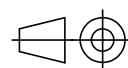


Datum 08.11.2016

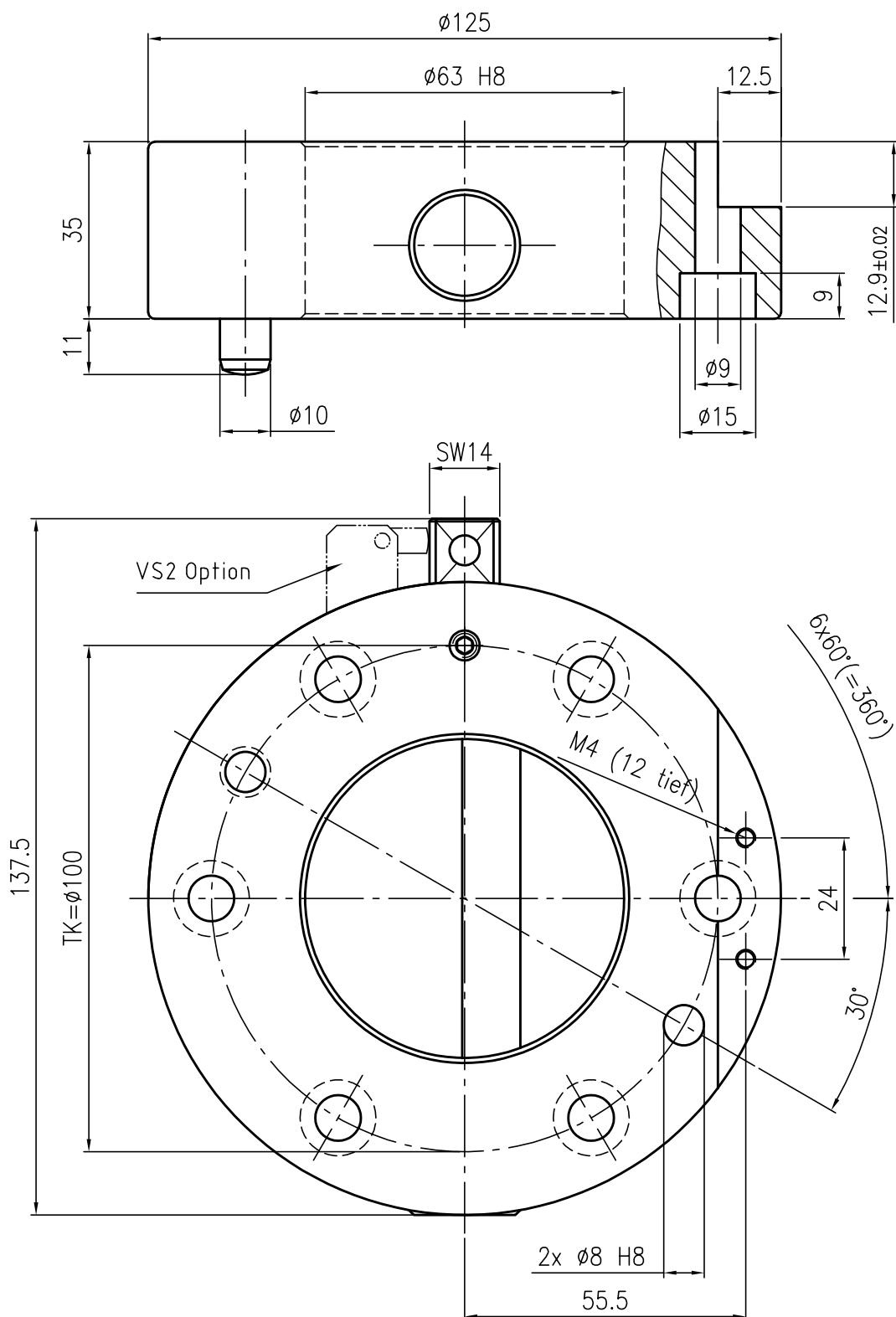
Maßstab 1:1.25

Zeichnungsnummer

G-SWS125-2ZE



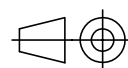
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS125-20E
St. nitriert	G-SWS125-20EN

Datum 08.11.2016 Maßstab 1:1.25

Zeichnungsnummer  
G-SWS125-20E



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWS160

## Technical specifications

# GRIP

### Operating mode:

By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Cost-effective alternative to the MGW

Without hand lever, thereby low interference contours

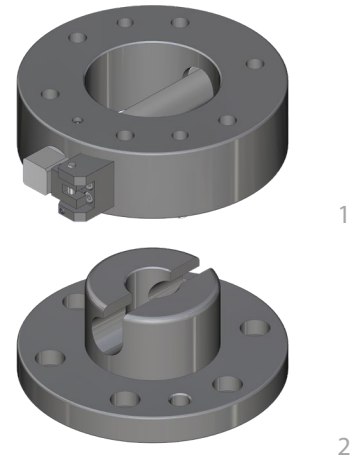
High repeat accuracy +/- 0,02 mm

Optional connection of a power coupling MEK for electrical and pneumatical ducts

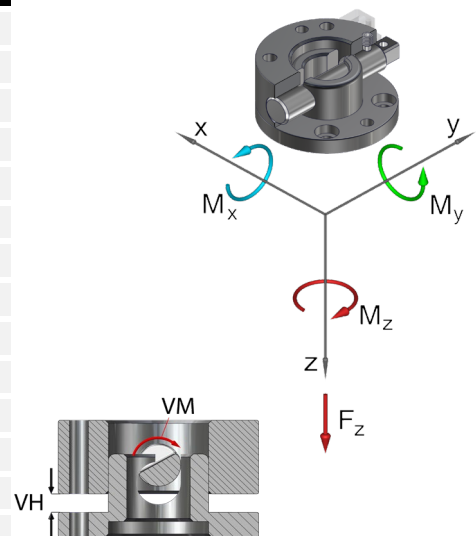
Holds up to 10,000 changing cycles

During locking, the lower assembly is pulled around the locking stroke

Interface according to DIN EN ISO 9409-1



Technical specifications		SWS160	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		160 x 70	
Pitch circle diameter [mm]		125	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		8.000	10.000
Compression -Fz [kN]		939	1.252
Torsion Mz [Nm]		750	1.000
Bending Mx, My [Nm]		850	1.000
Mass [kg]	upper assembly	6,6	
	lower assembly	3,85	
Recommended load [kg] *		100	120
Locking moment VM [Nm]		4 - 30	
Locking stroke VH [mm]		0 - 10	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 200 mm, 1.7 times safety			



### Quick change system Ø160, drilled according to ISO, steel...

G-SWS160-2O	upper assembly, with anti-rotation-protection
G-SWS160-2O-N	upper assembly, nitrated, with anti-rotation-protection
G-SWS160-2OEN	upper assembly, E-Mounting, nitrated, anti-rotation-p.
G-SWS160-2U	lower assembly
G-SWS160-2U-N	lower assembly, nitrated
G-SWS160-2UEN	lower assembly, E-Mounting, nitrated

### Replacement semi-cylindrical bolt...

EG-SWS160-HB	for SWS160
--------------	------------

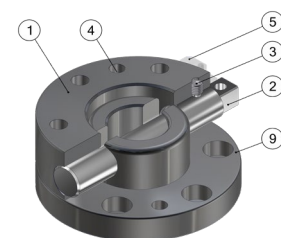
### Replacement semi-cylindrical bolt safety...

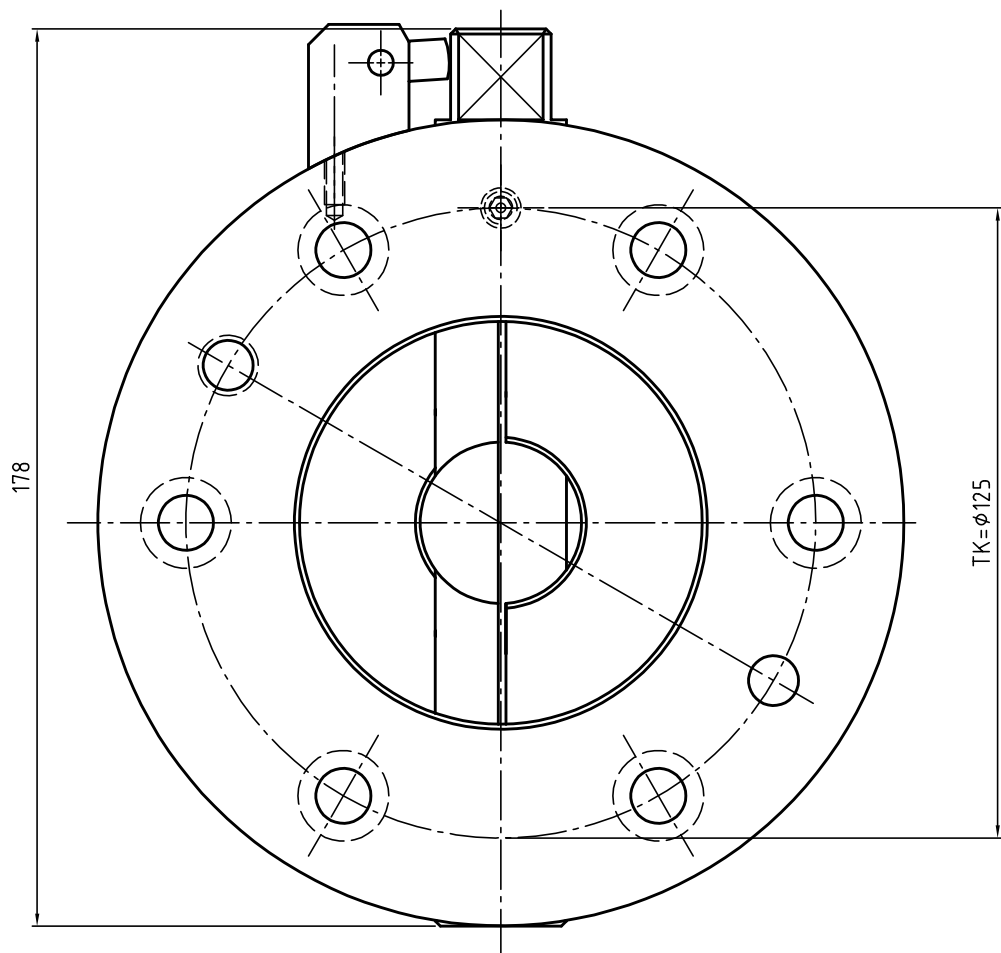
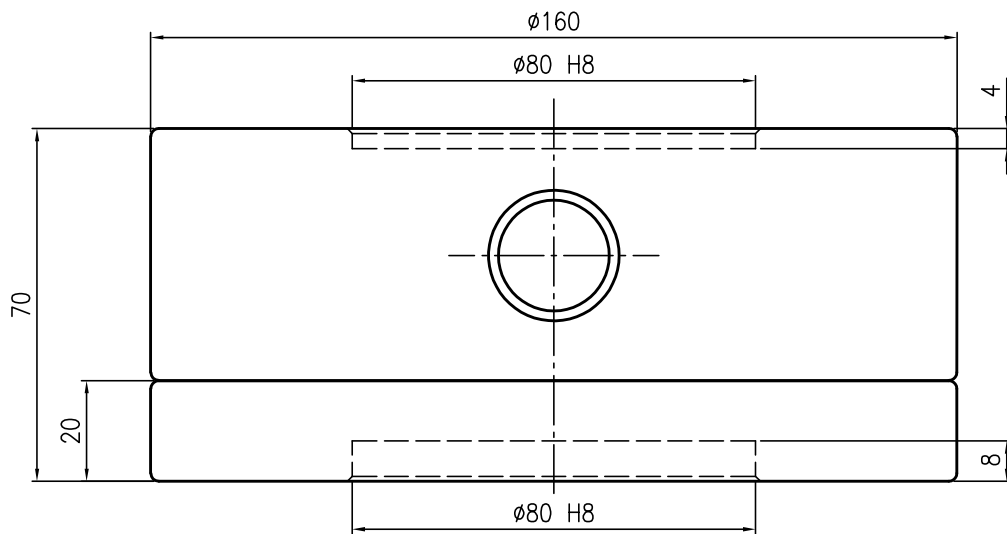
EG-SWS160-VS2	for SWS160
---------------	------------

### Square socket key...

ZG-VKS160-SW20	for SW 20
----------------	-----------

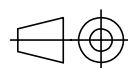
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock
9	Lower assembly



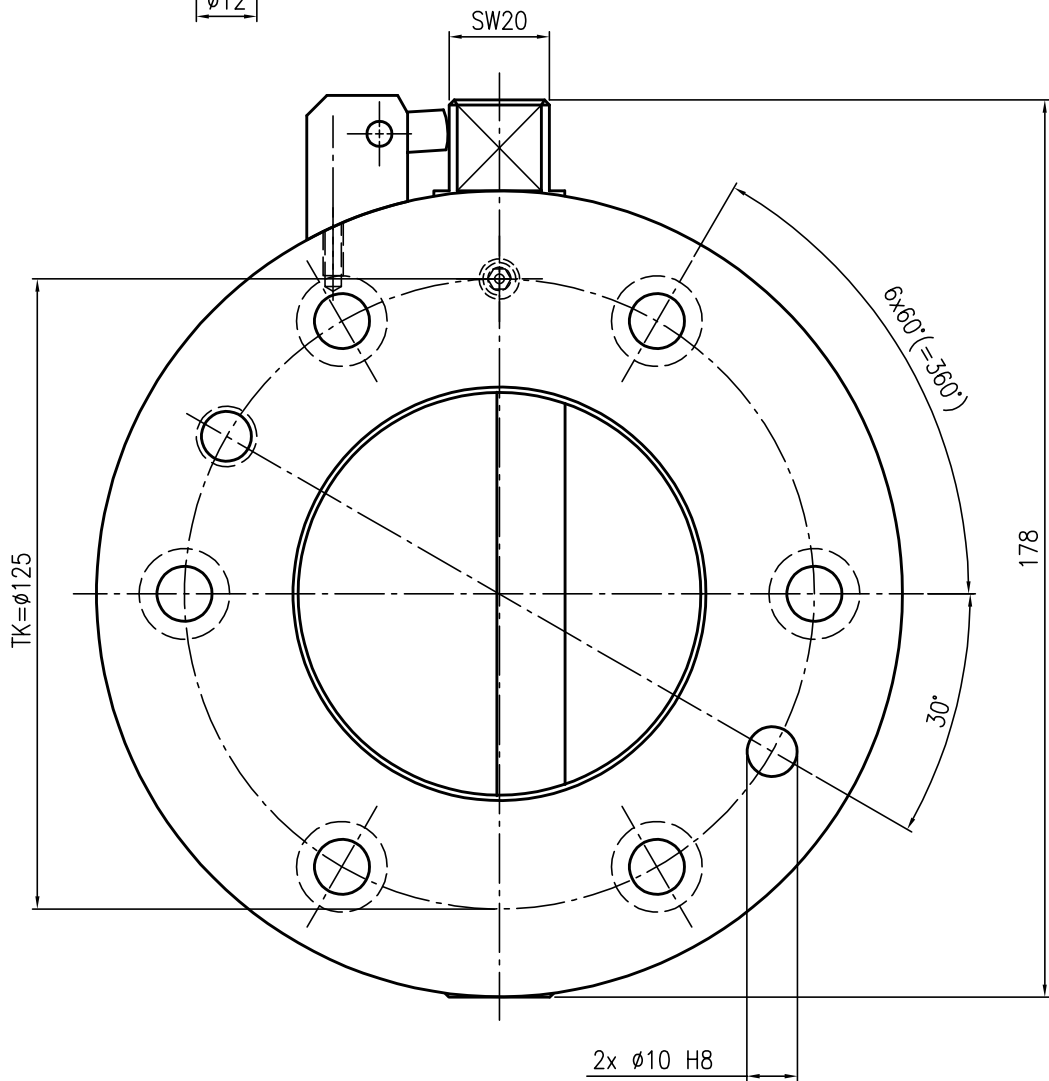
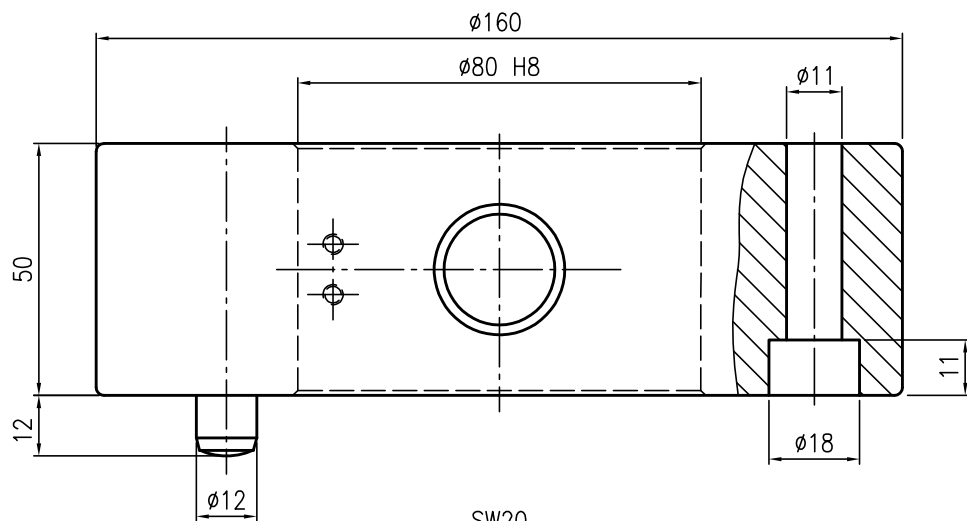


Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2Z



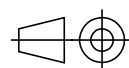
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Oberteil
Stahl	G-SWS160-20
St. nitriert	G-SWS160-20-N

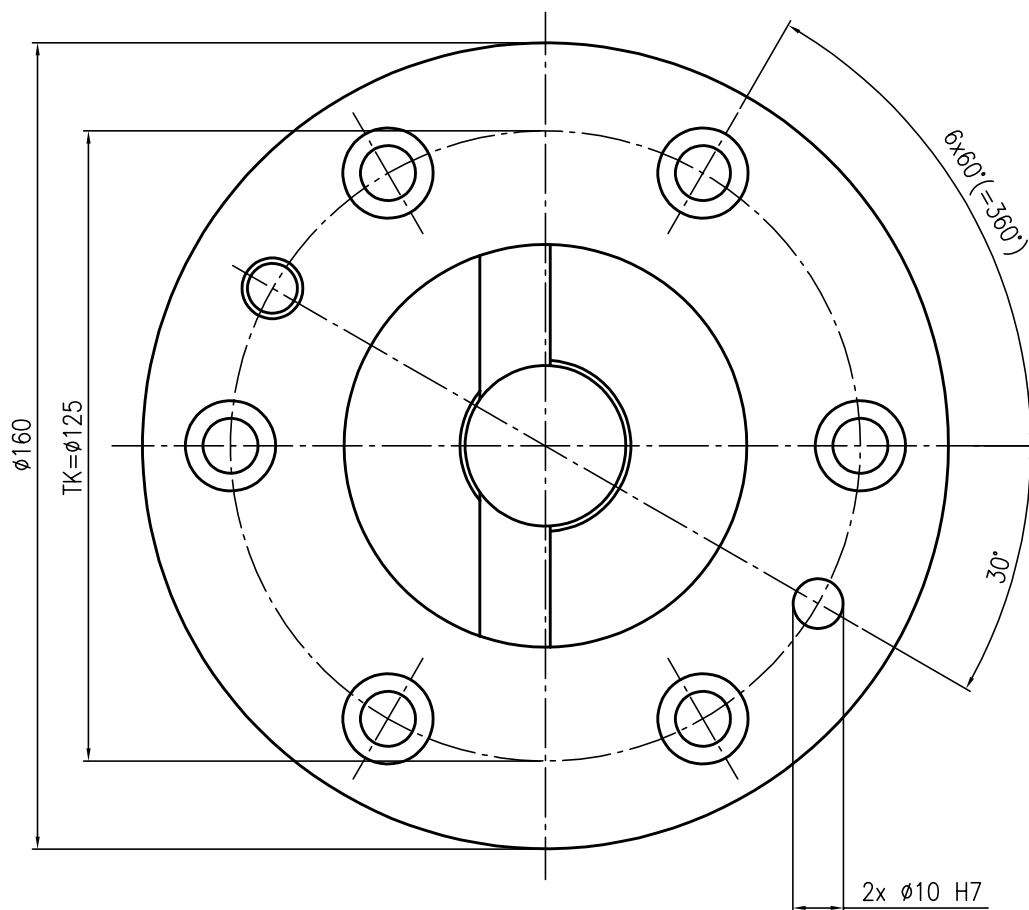
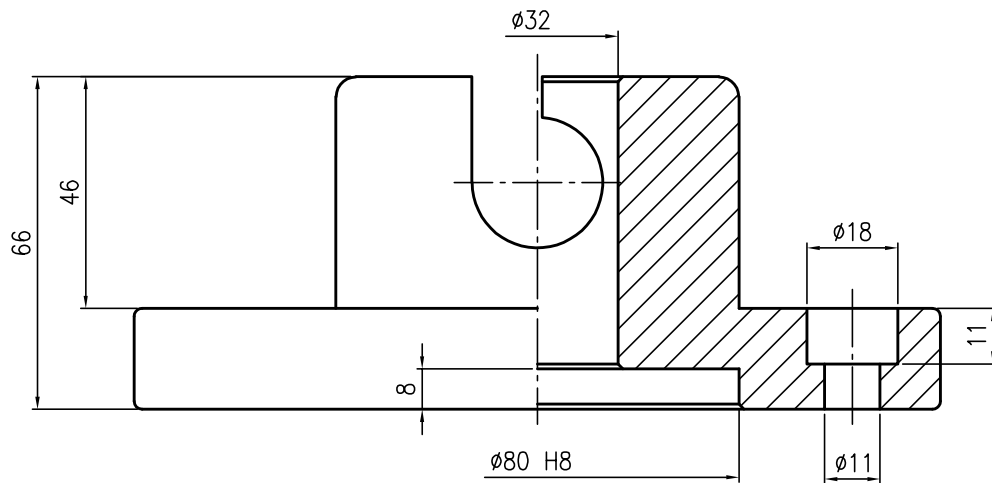
Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-20



**GRIP**  
GRIP GmbH Handhabungstechnik

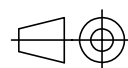




Grundmaterial	Bestellnummer Unterteil
Stahl	G-SWS160-2U
St. nitriert	G-SWS160-2U-N

Datum 08.11.2016 Maßstab 1:1.5

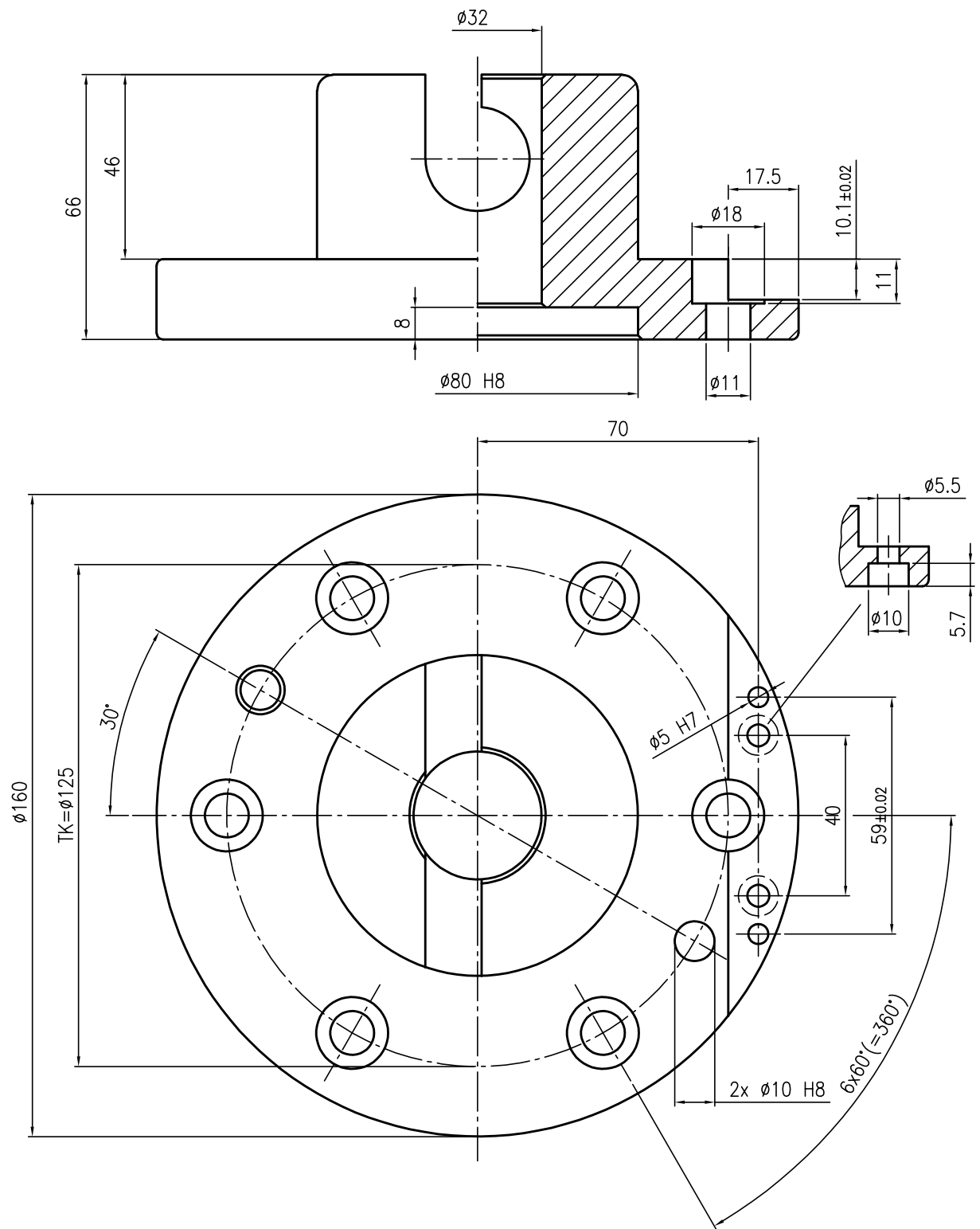
Zeichnungsnummer  
G-SWS160-2U



**GRIP**  
GRIP GmbH Handhabungstechnik



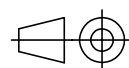




Grundmaterial	Bestellnummer Unterteil
Stahl	G-SWS160-2UE
St. nitriert	G-SWS160-2UEN

Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2UE



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWS160-B02

Technical specifications

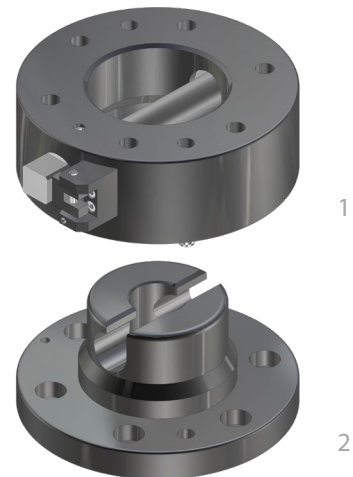
# GRIP

## Operating mode:

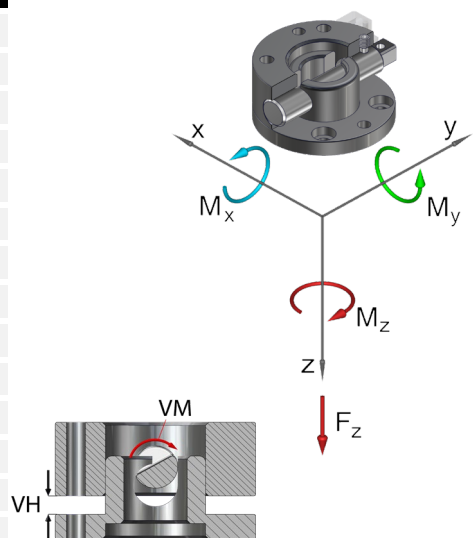
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

## Advantages:

Reinforced version with pre-centring  
 Cost-effective alternative to the MGW  
 Without hand lever, thereby low interference contours  
 High repeat accuracy +/- 0,02 mm  
 Optional connection of a power coupling MEK for electrical and pneumatical ducts  
 Holds up to 10,000 changing cycles  
 During locking, the lower assembly is pulled around the locking stroke  
 Interface according to DIN EN ISO 9409-1



Technical specifications		SWS160-B02	
Basic material		steel	steel, nitrated
External diameter x Height [mm]		160 x 80	
Pitch circle diameter [mm]		125	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		8.000	10.000
Compression -Fz [kN]		939	1.252
Torsion Mz [Nm]		750	1.000
Bending Mx, My [Nm]		950	1.200
Mass [kg]	upper assembly	6,6	
	lower assembly	3,85	
Recommended load [kg] *		110	130
Locking moment VM [Nm]		4 - 30	
Locking stroke VH [mm]		0 - 10	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 200 mm, 1.7 times safety			



## Quick change system Ø160, B02, drilled according to ISO...

G-SWS160-2O/B02	steel, anti-rotation-protection, - pre-centring
G-SWS160-2OEN/B02	E-Mounting, steel, nitrated, with anti-rotation-protection, - pre-centring
G-SWS160-2O-N/B02	steel, nitrated, with anti-rotation-protection, - pre-centring
G-SWS160-2U/B02	lower assembly, steel, with pre-centring
G-SWS160-2UEN/B02	lower assembly, steel, nitrated, with pre-centring, E-Mounting
G-SWS160-2U-N/B02	lower assembly, steel, nitrated, with pre-centring

## Replacement semi-cylindrical bolt...

EG-SWS160-HB	for SWS160
--------------	------------

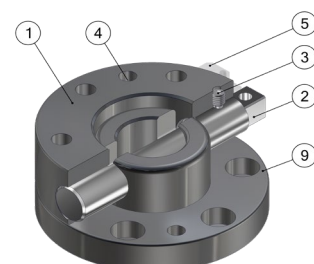
## Replacement semi-cylindrical bolt safety...

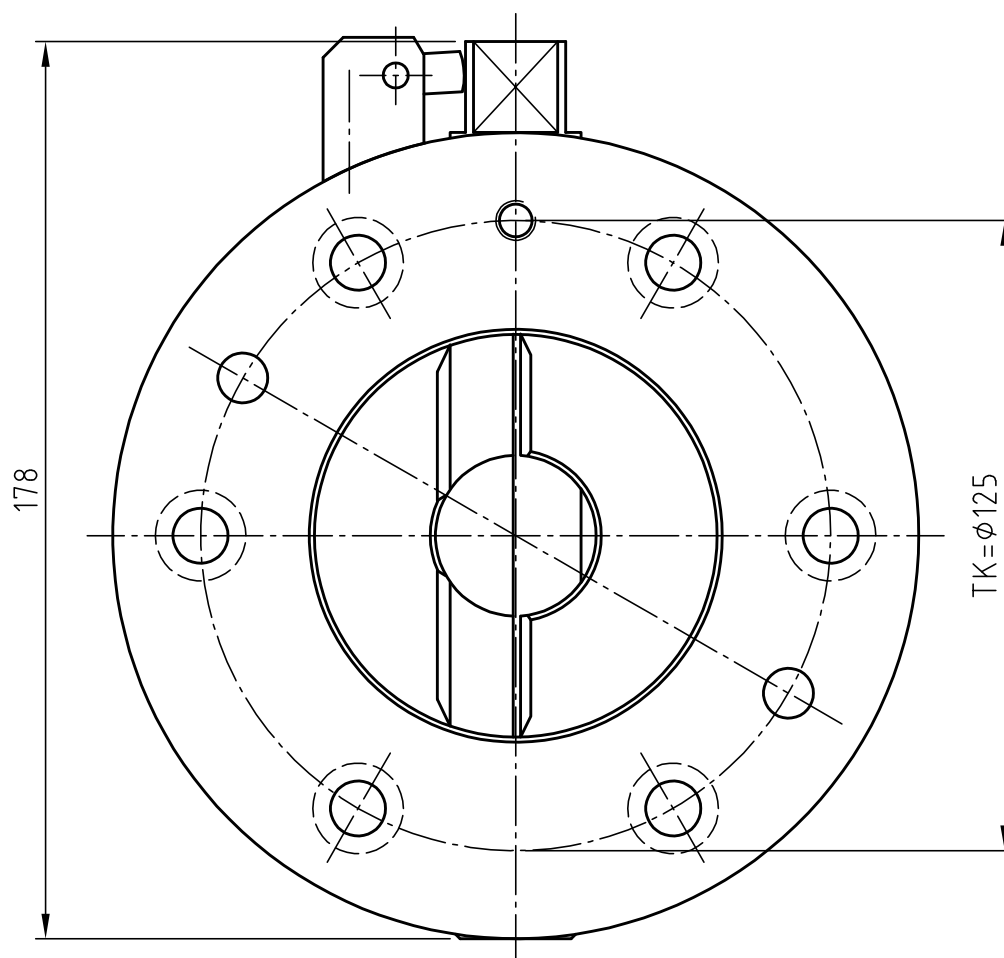
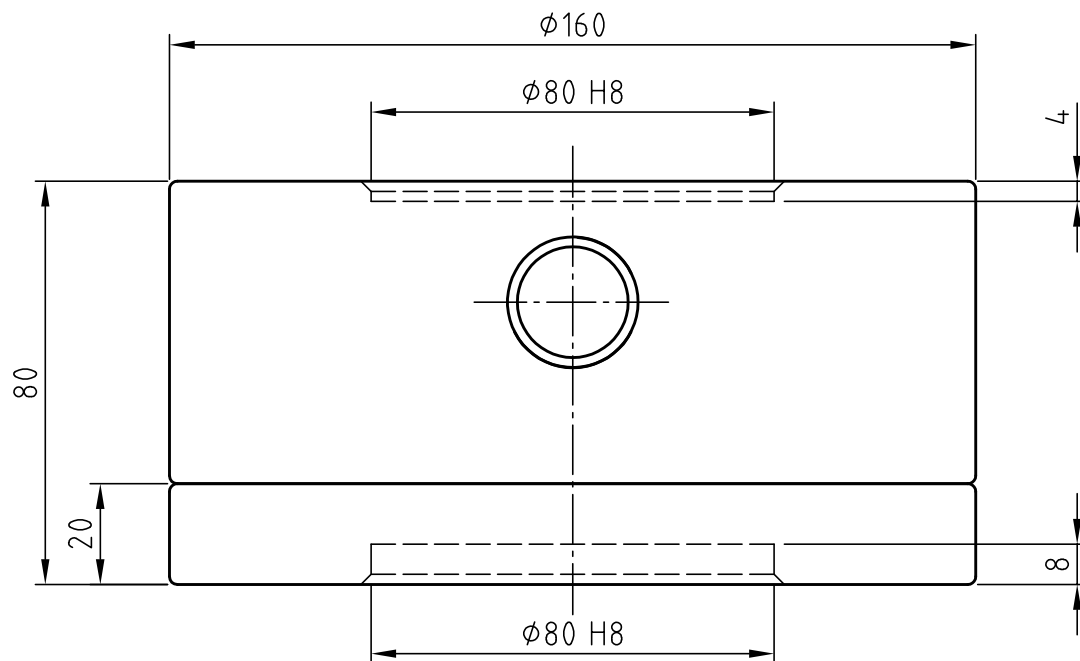
EG-SWS160-VS2	for SWS160
---------------	------------

## Square socket key...

ZG-VKS160-SW20	for SW 20
----------------	-----------

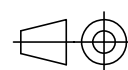
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock
9	Lower assembly





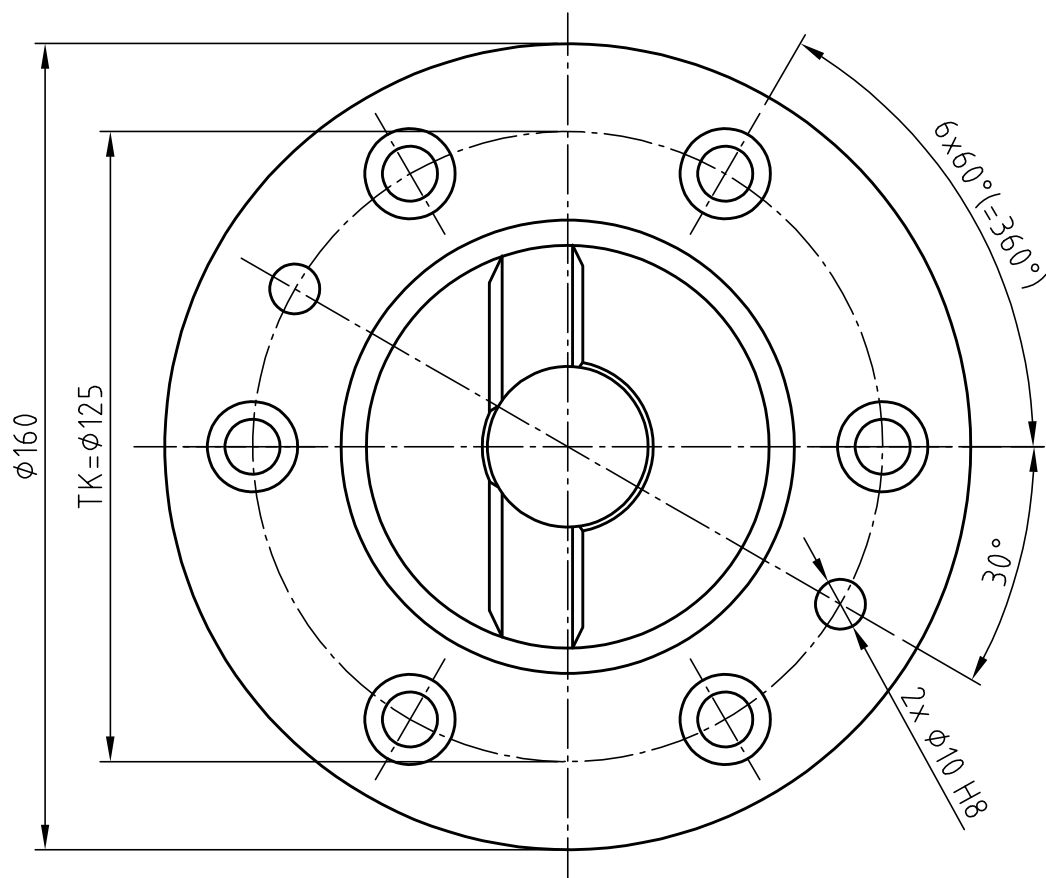
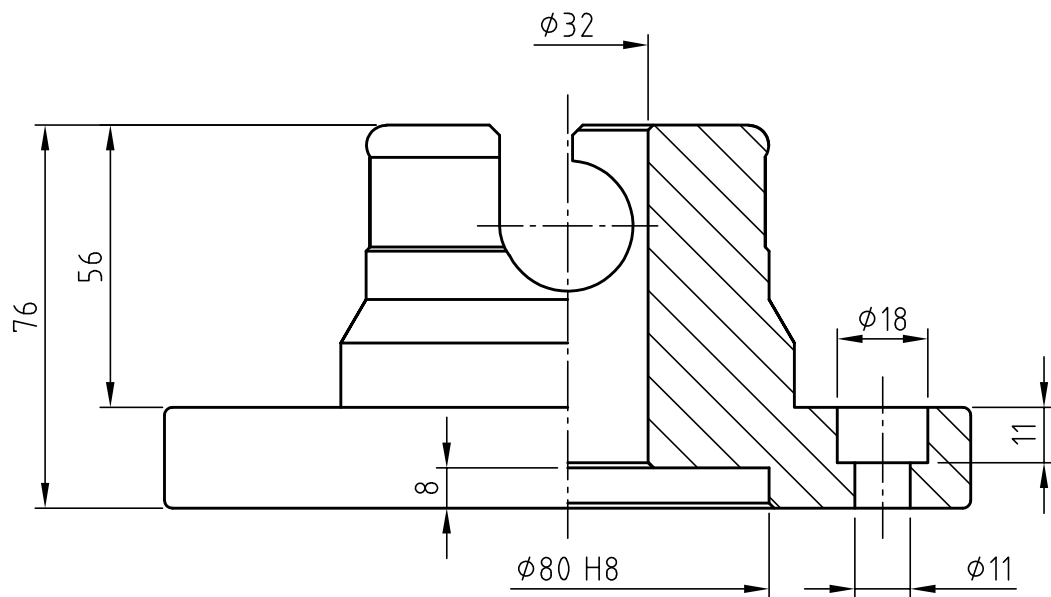
Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2Z/B02



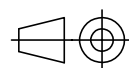
**GRIP**  
GRIP GmbH Handhabungstechnik





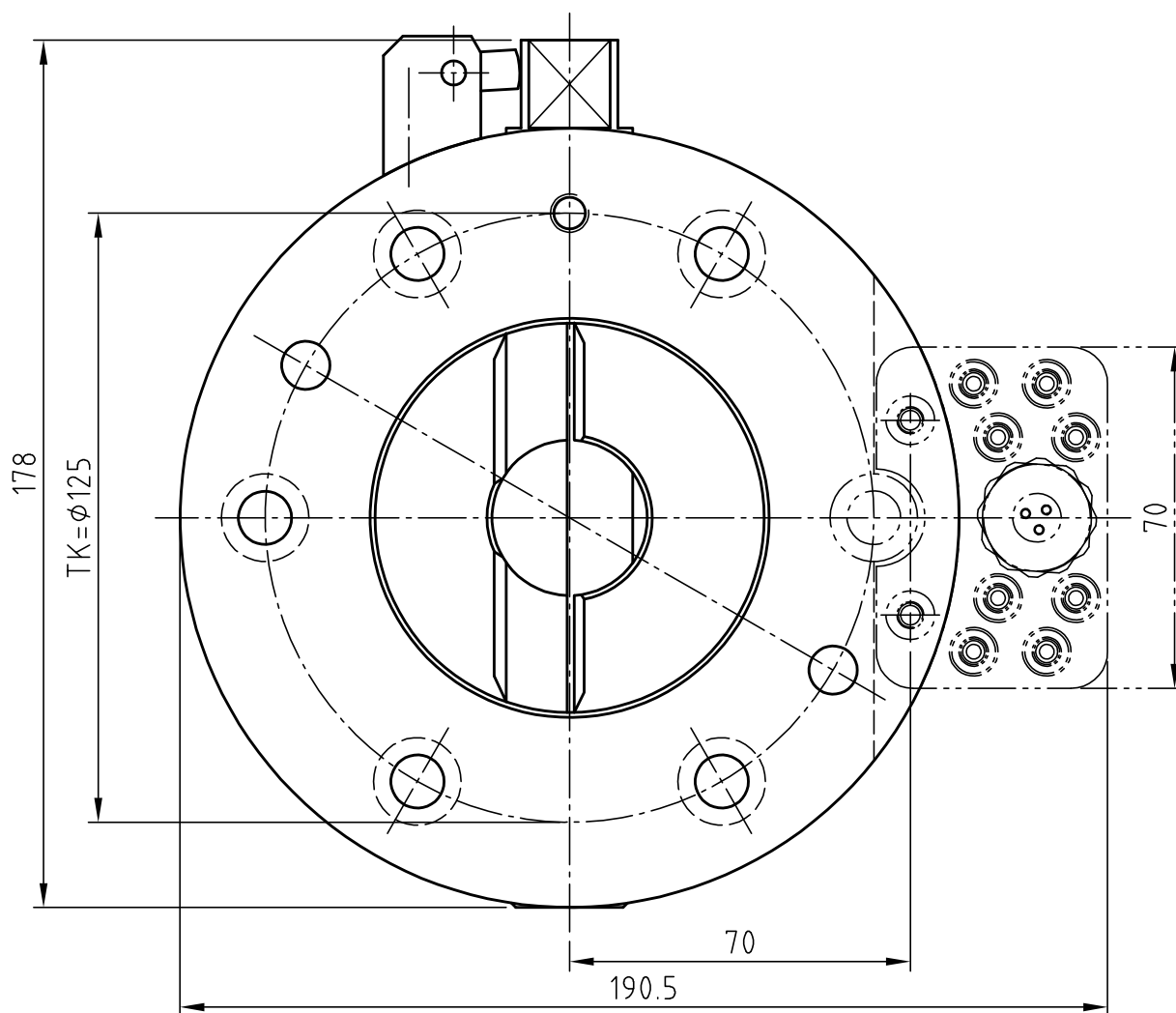
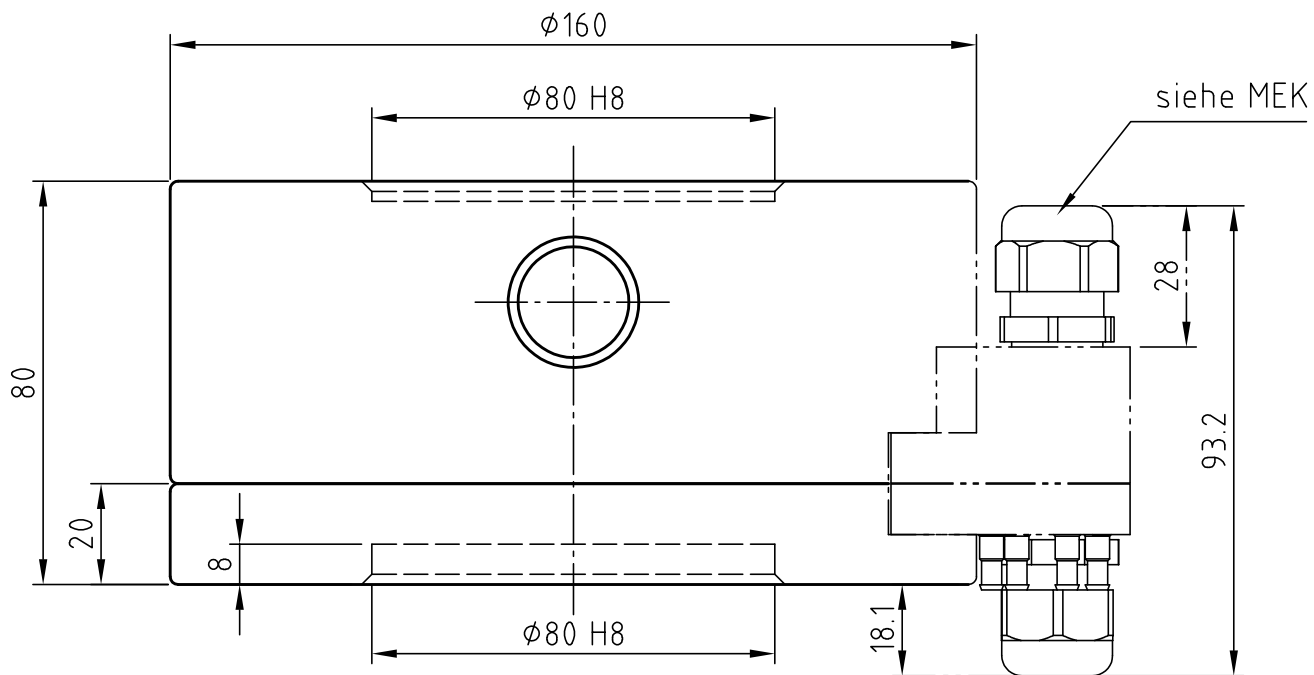
Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2U-N/B02



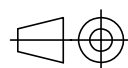
**GRIP**  
GRIP GmbH Handhabungstechnik





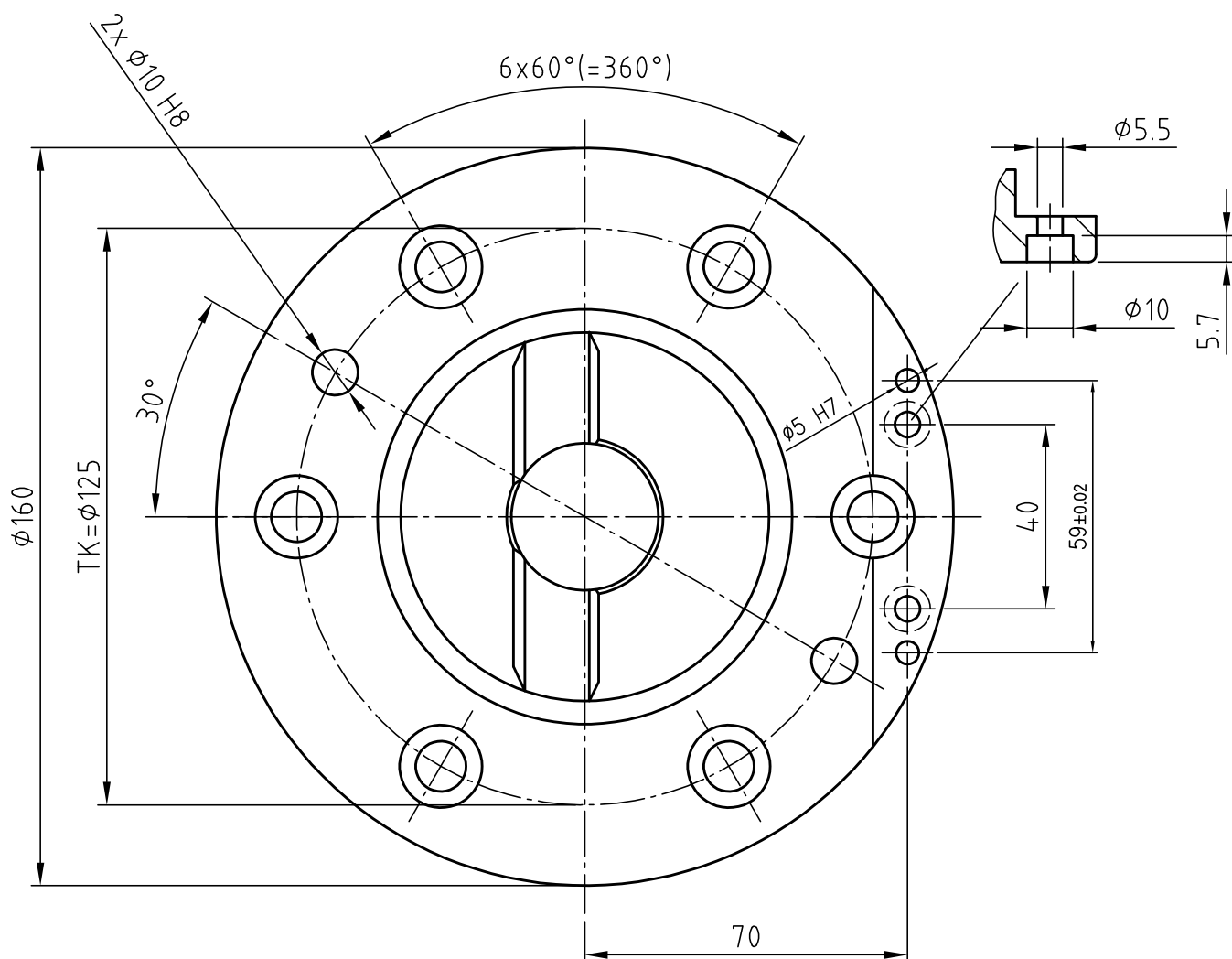
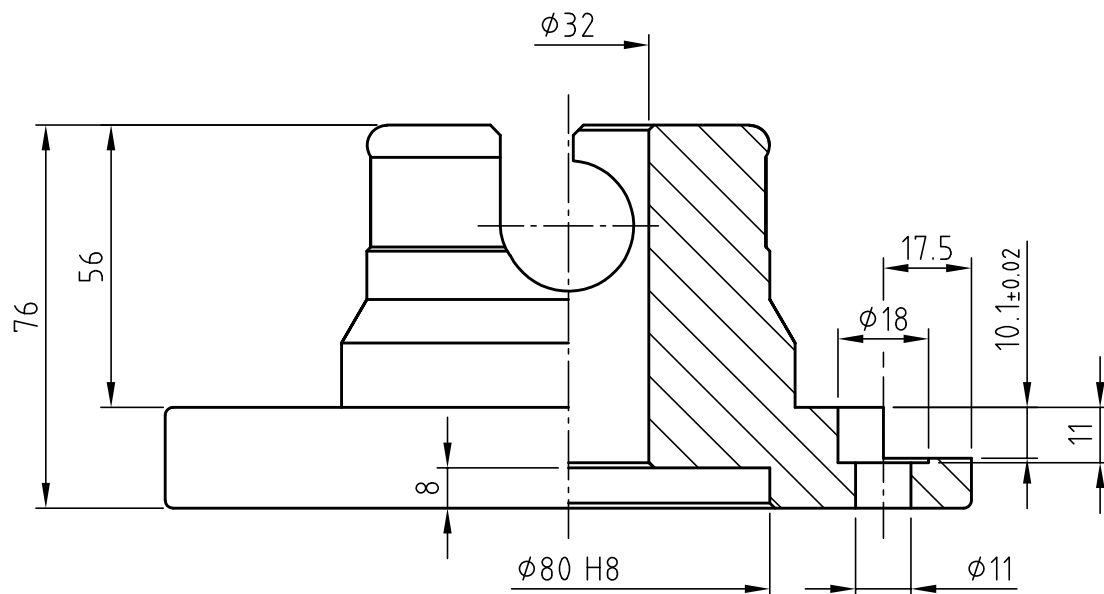
Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2EZ/B02



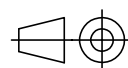
**GRIP**  
GRIP GmbH Handhabungstechnik





Datum 08.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWS160-2UEN/B02



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWS200

## Technical specifications

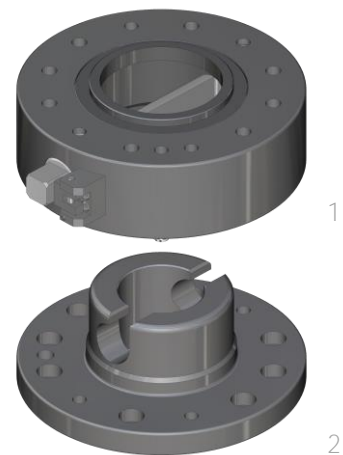
# GRIP

### Operating mode:

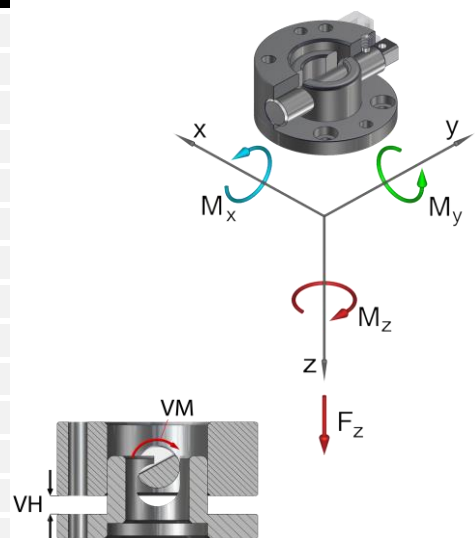
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

Cost-effective alternative to the MGW  
Without hand lever, thereby low interference contours  
High repeat accuracy +/- 0,02 mm  
Optional connection of a power coupling MEK for electrical and pneumatical ducts  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1  
Low dead weight due to the combination of steel and aluminum



Technical specifications		SWS200
Basic material		steel, nitrated + Al
External diameter x Height [mm]		200 x 85
Pitch circle diameter [mm]		160
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		14.500
Compression -Fz [kN]		1.480
Torsion Mz [Nm]		1.250
Bending Mx, My [Nm]		1.350
Mass [kg]	upper assembly	6,4
	lower assembly	6
Recommended load [kg] *		160
Locking moment VM [Nm]		5 - 35
Locking stroke VH [mm]		0 - 10
Operating temperature range [°C]		-30 to +120
<small>* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 200 mm, 1,7 times safety</small>		



### Quick change system Ø200...

#### drilled according to ISO, steel, nitrated, with pre-centring...

G-SWS200-2OEN	upper assembly, E-Mounting, anti-rotation-prot.
G-SWS200-2OEN-M12	for M12, upper assembly, E-Mounting, anti-rotation-protection
G-SWS200-2O-N	upper assembly, anti-rotation-protection
G-SWS200-2O-N-M12	for M12, upper assembly, anti-rotation-protection
G-SWS200-2UEN	lower assembly, E-Mounting
G-SWS200-2UEN-M12	for M12, lower assembly, E-Mounting
G-SWS200-2U-N	lower assembly
G-SWS200-2U-N-M12	for M12, lower assembly

### Replacement semi-cylindrical bolt...

EG-SWS200-HB	for SWS200
--------------	------------

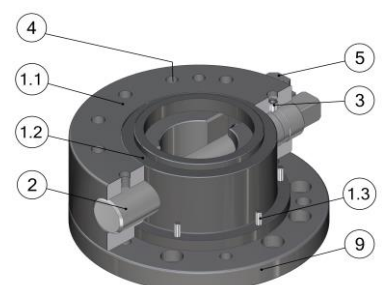
### Replacement semi-cylindrical bolt safety...

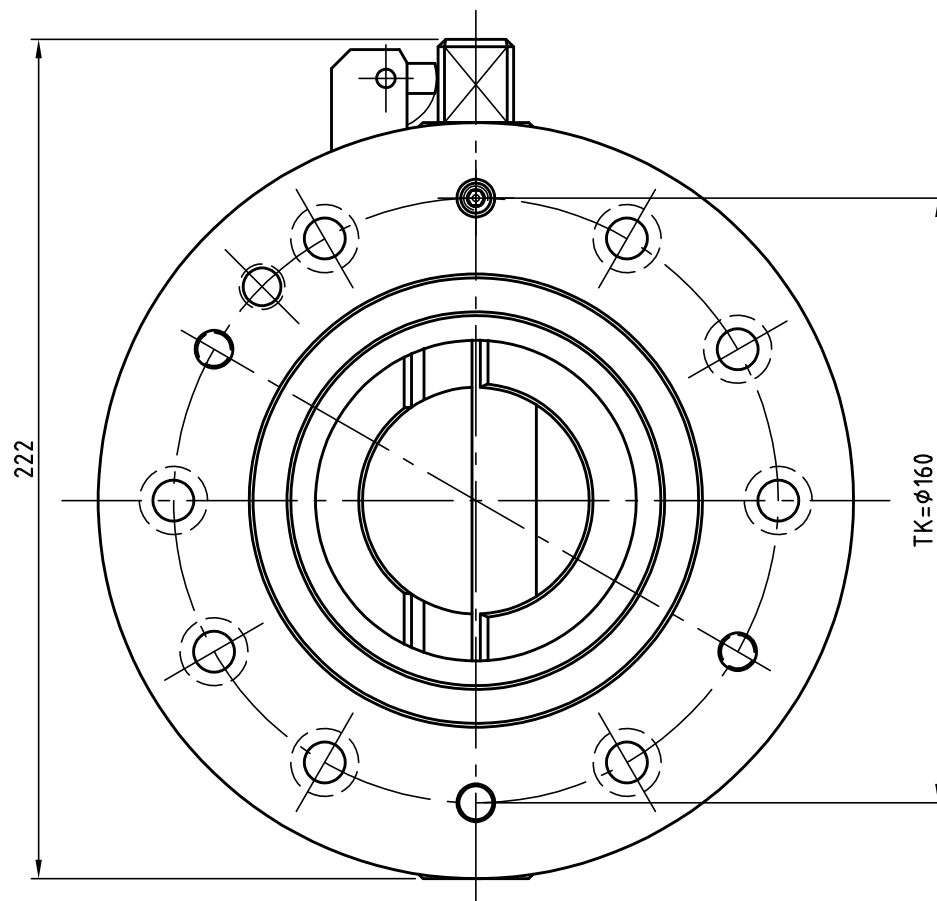
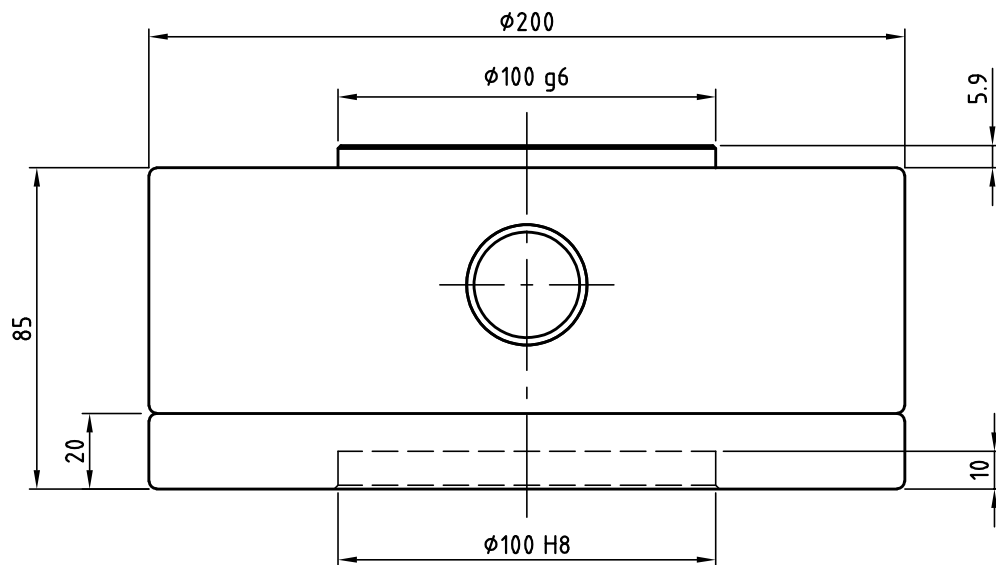
EG-SWS200-VS2	for SWS200
---------------	------------

### Square socket key...

ZG-VKS160-SW20	for SW 20
----------------	-----------

Pos.	Description
1.1	Upper assembly ring (Al)
1.2	Upper assembly hull (st)
1.3	Screw
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock
9	Lower assembly



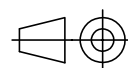


Datum 10.11.2016

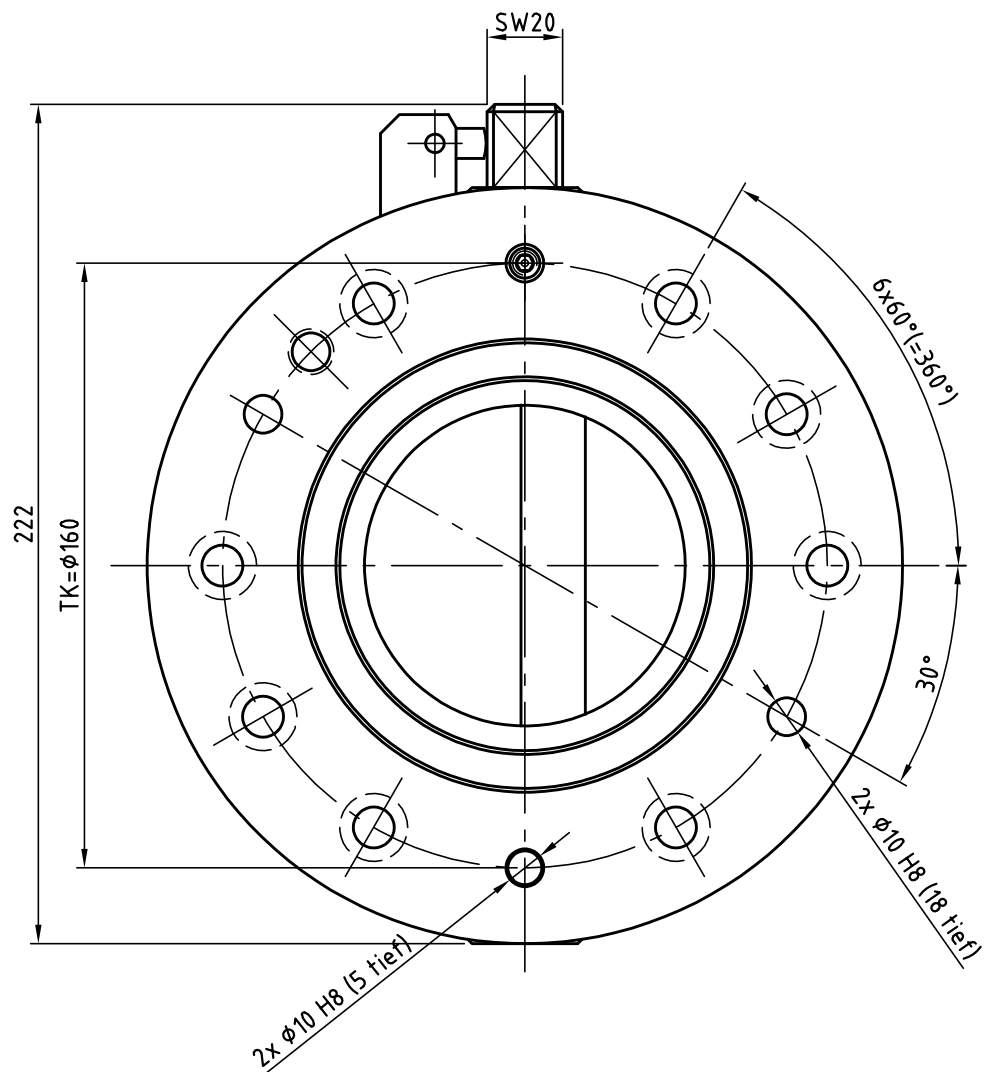
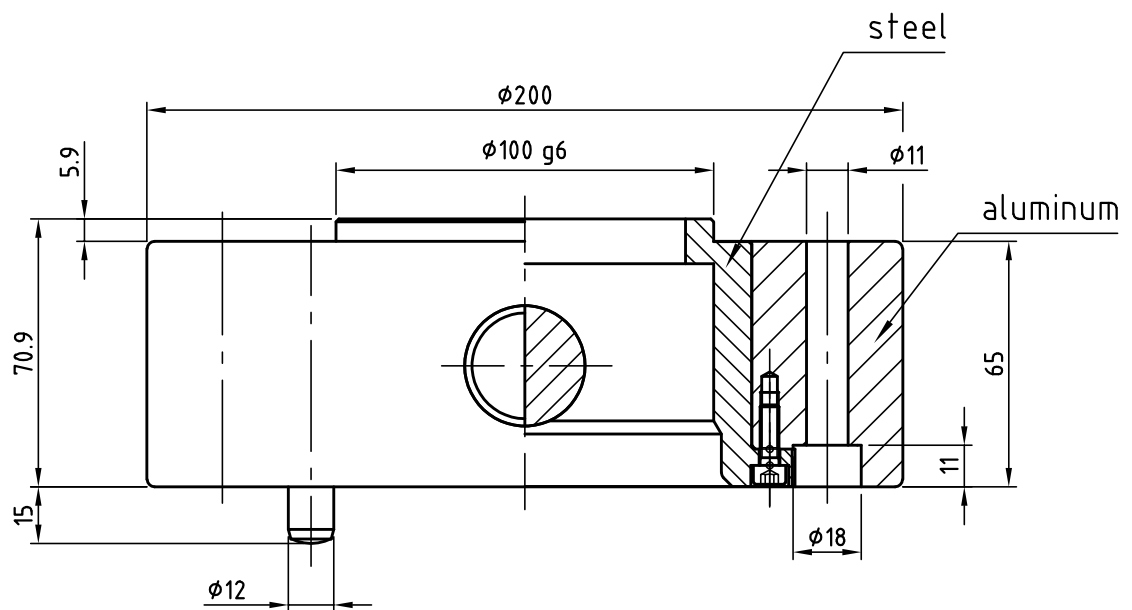
Maßstab 1:2

Zeichnungsnummer

G-SWS200-2Z



**GRIP**  
GRIP GmbH Handhabungstechnik

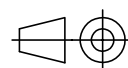


Datum 10.11.2016

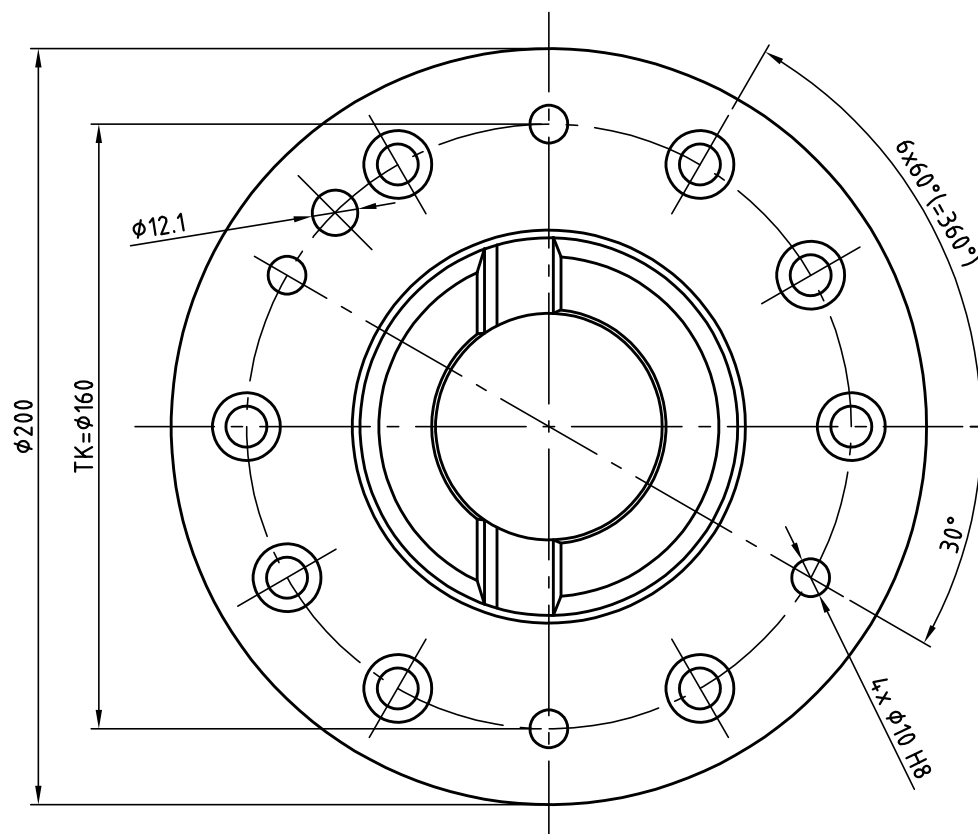
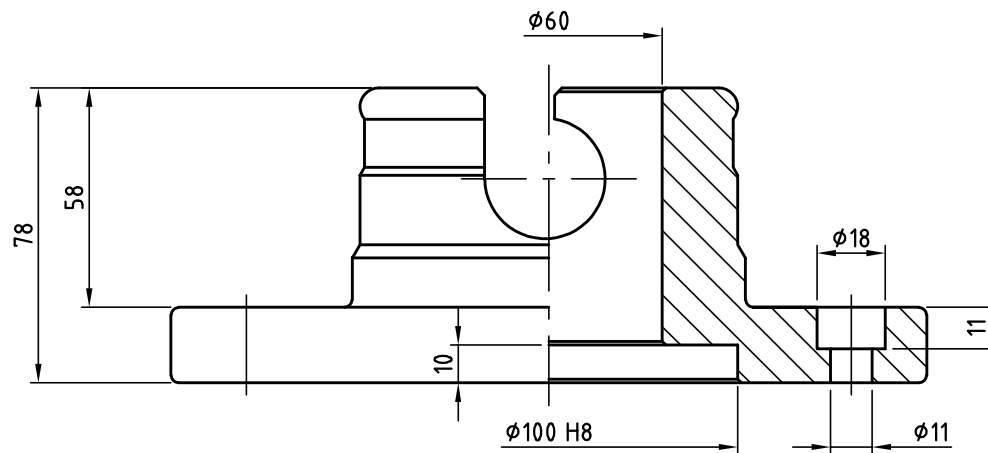
Maßstab 1:2

Zeichnungsnummer

G-SWS200-20-N



**GRIP**  
GRIP GmbH Handhabungstechnik

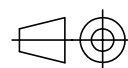


Datum 10.11.2016

Maßstab 1:2

Zeichnungsnummer

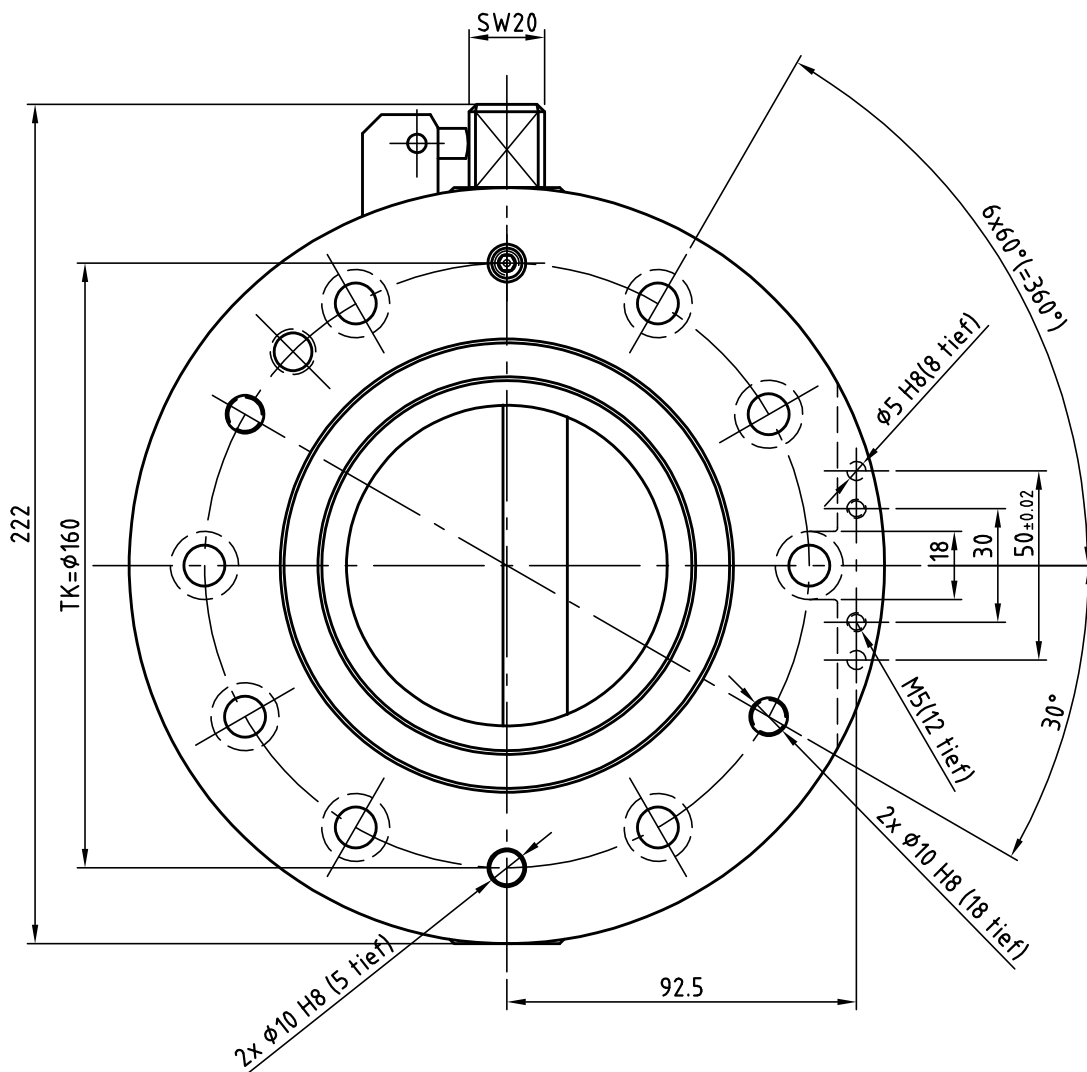
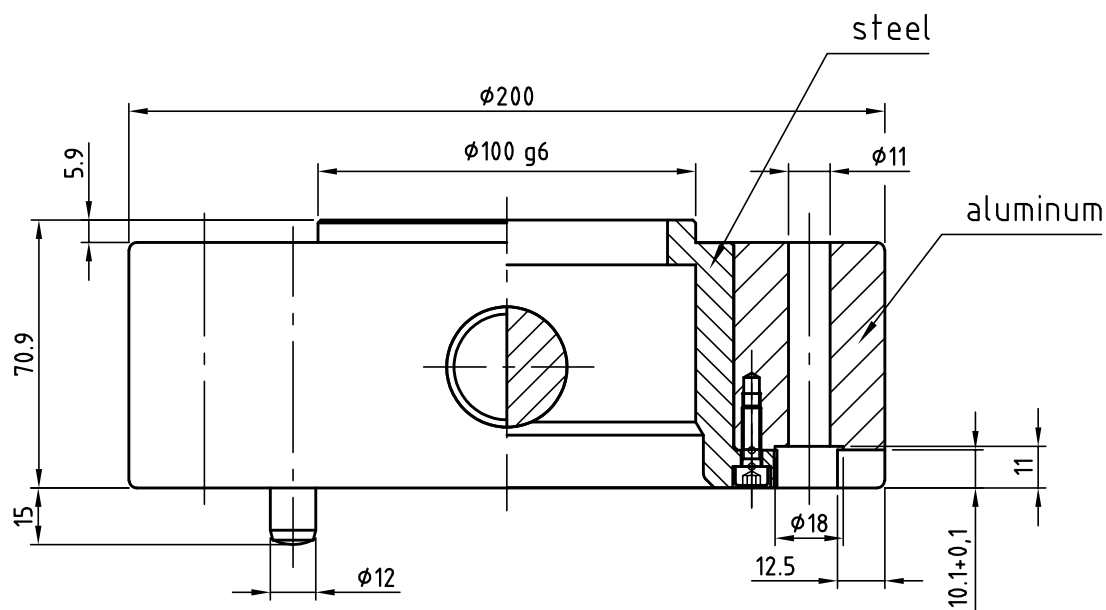
G-SWS200-2U-N



**GRIP**  
GRIP GmbH Handhabungstechnik





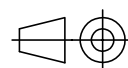


Datum 10.11.2016

Maßstab 1:2

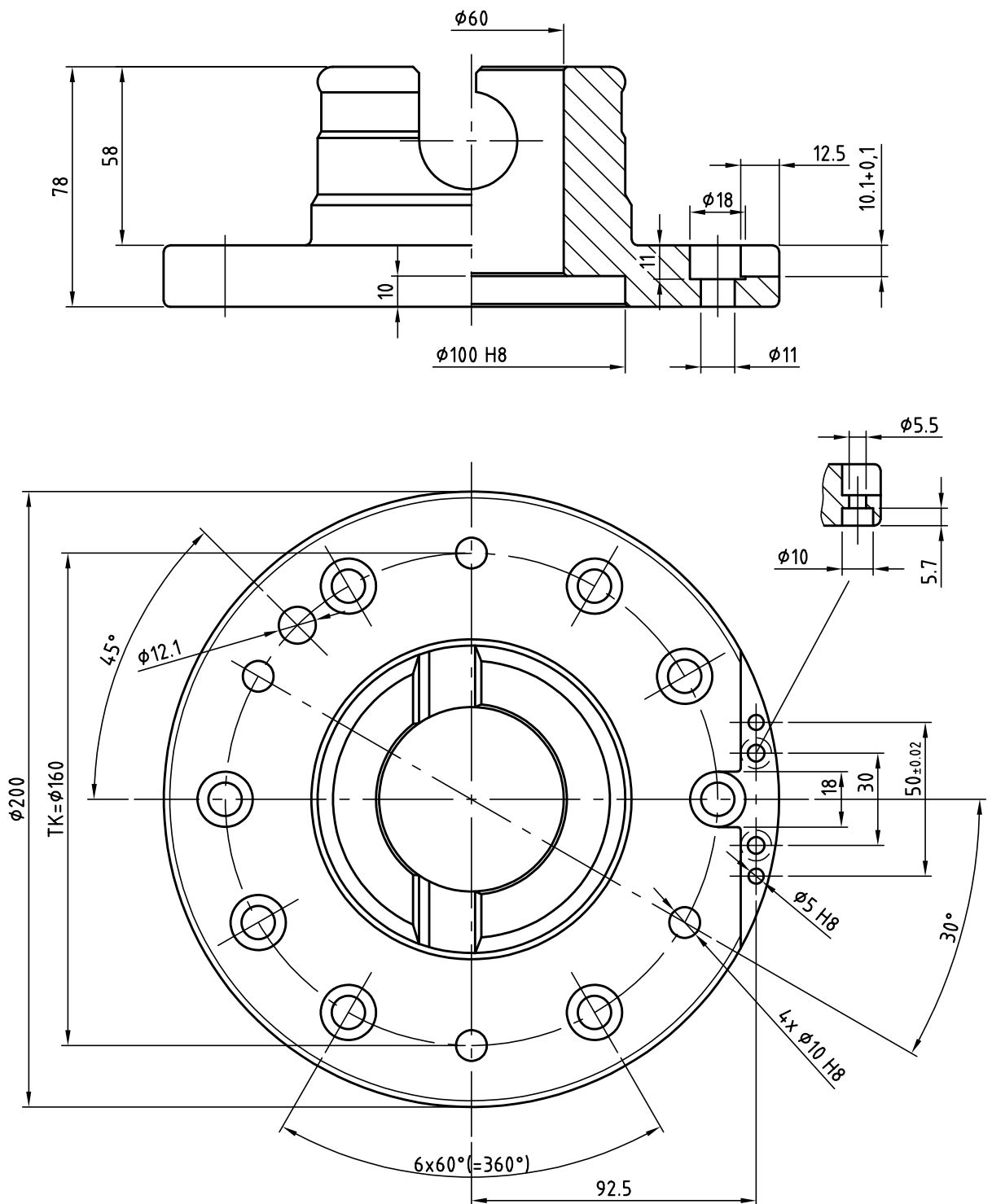
Zeichnungsnummer

G-SWS200-20EN



**GRIP**

GRIP GmbH Handhabungstechnik

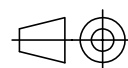


Datum 10.11.2016

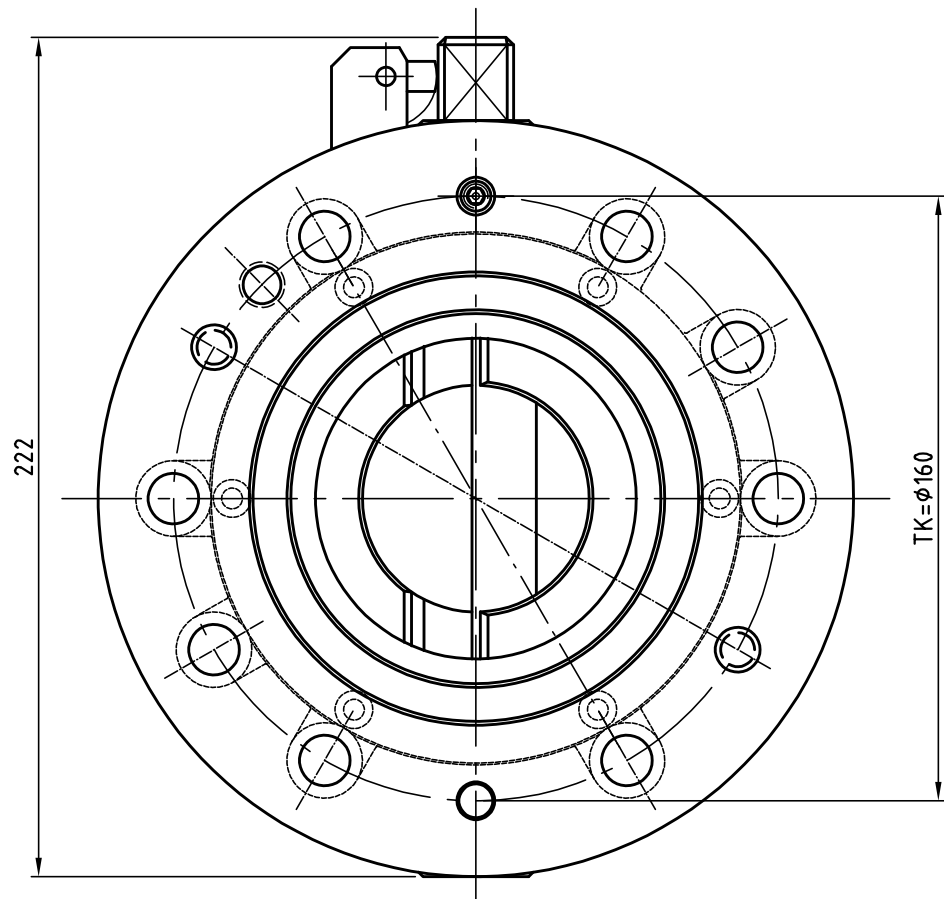
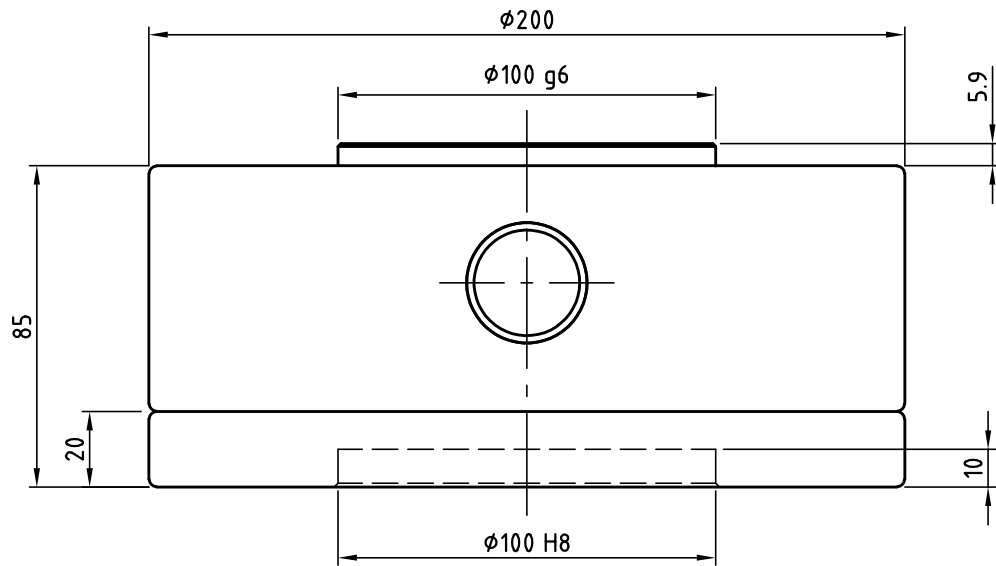
Maßstab 1:2

Zeichnungsnummer

G-SWS200-2UEN

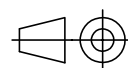


**GRIP**  
GRIP GmbH Handhabungstechnik

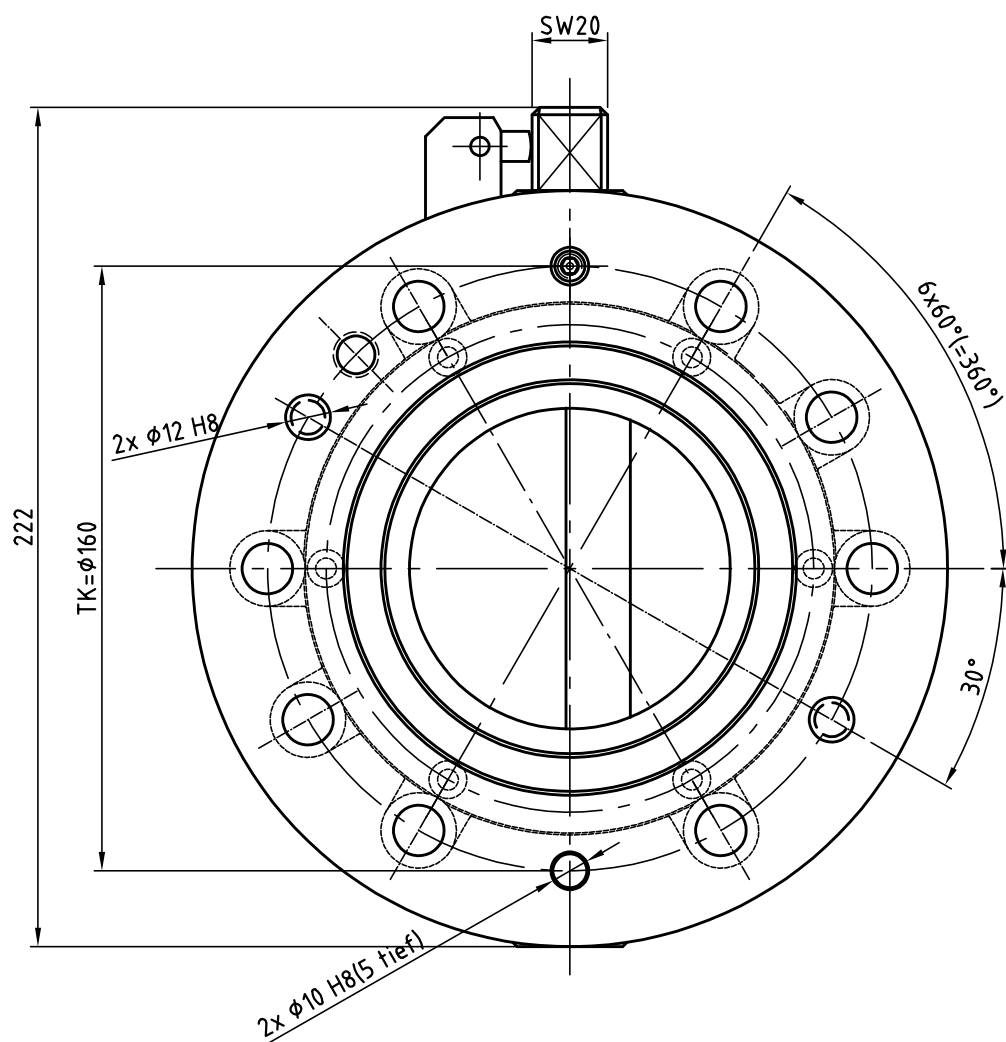
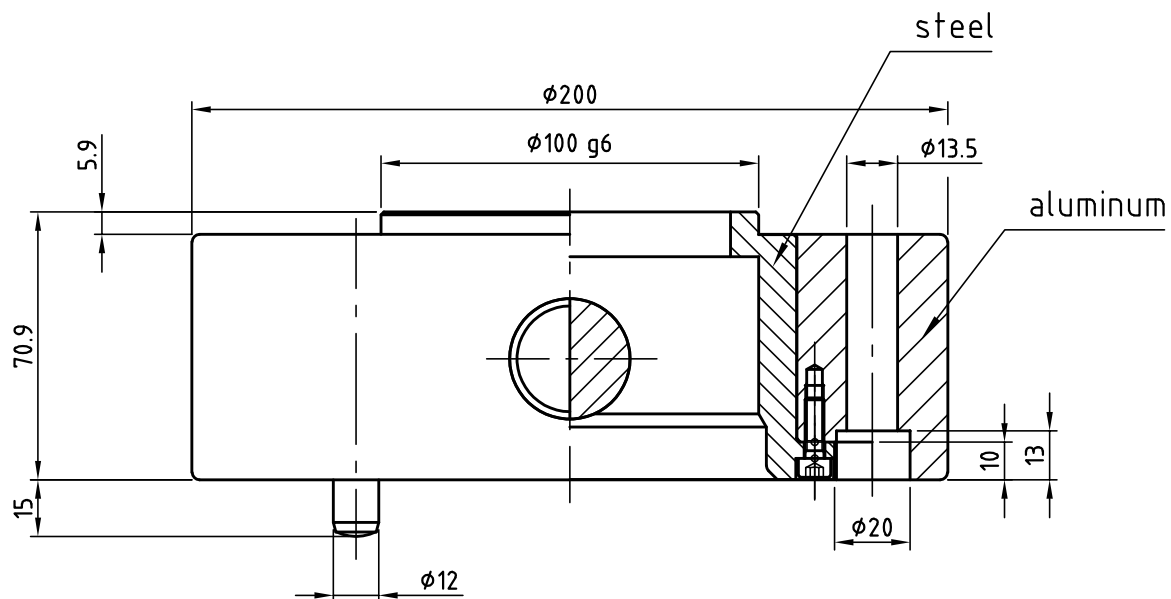


Datum 10.11.2016 Maßstab 1:2

Zeichnungsnummer  
G-SWS200-2Z-M12



**GRIP**  
GRIP GmbH Handhabungstechnik

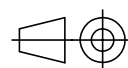


Datum 10.11.2016

Maßstab 1:2

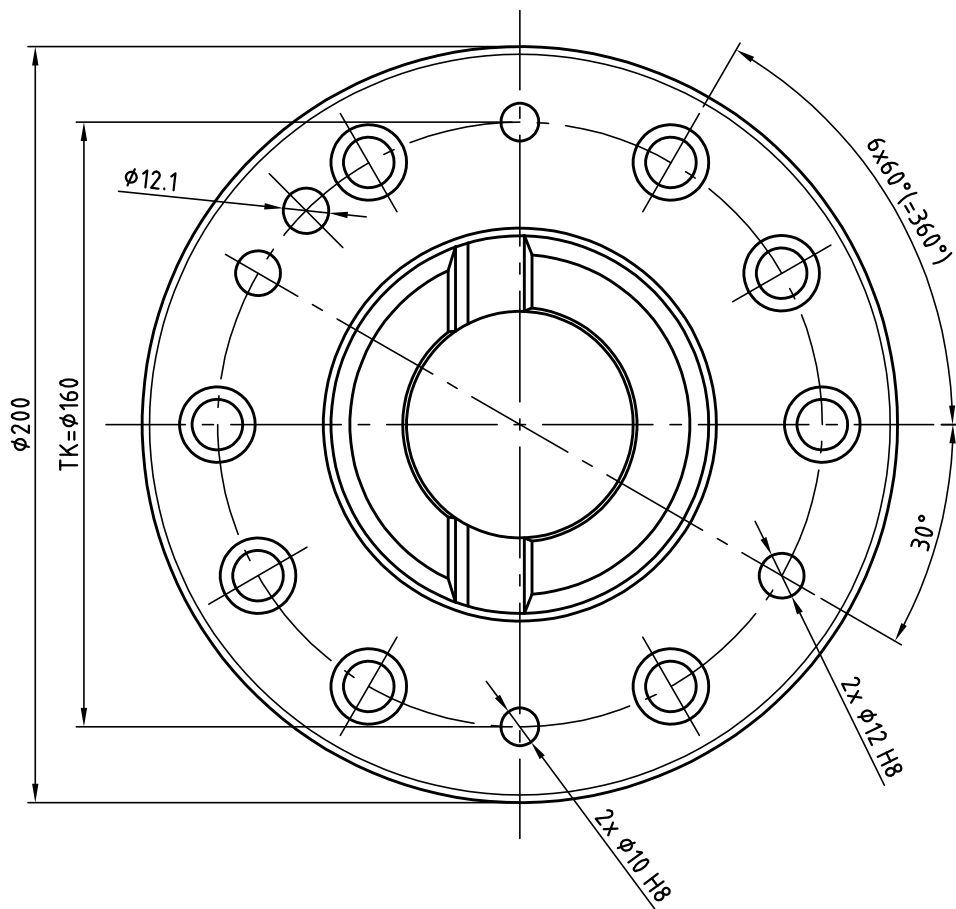
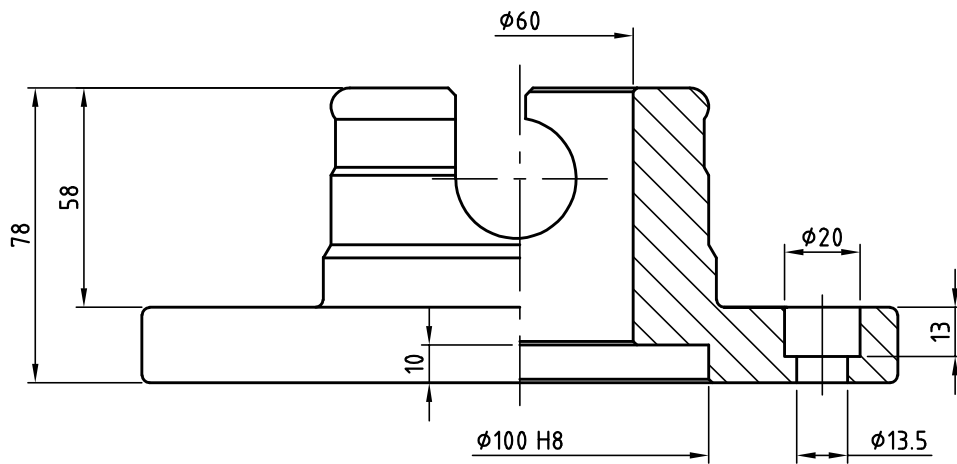
Zeichnungsnummer

G-SWS200-20-N-M12



**GRIP**

GRIP GmbH Handhabungstechnik

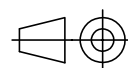


Datum 10.11.2016

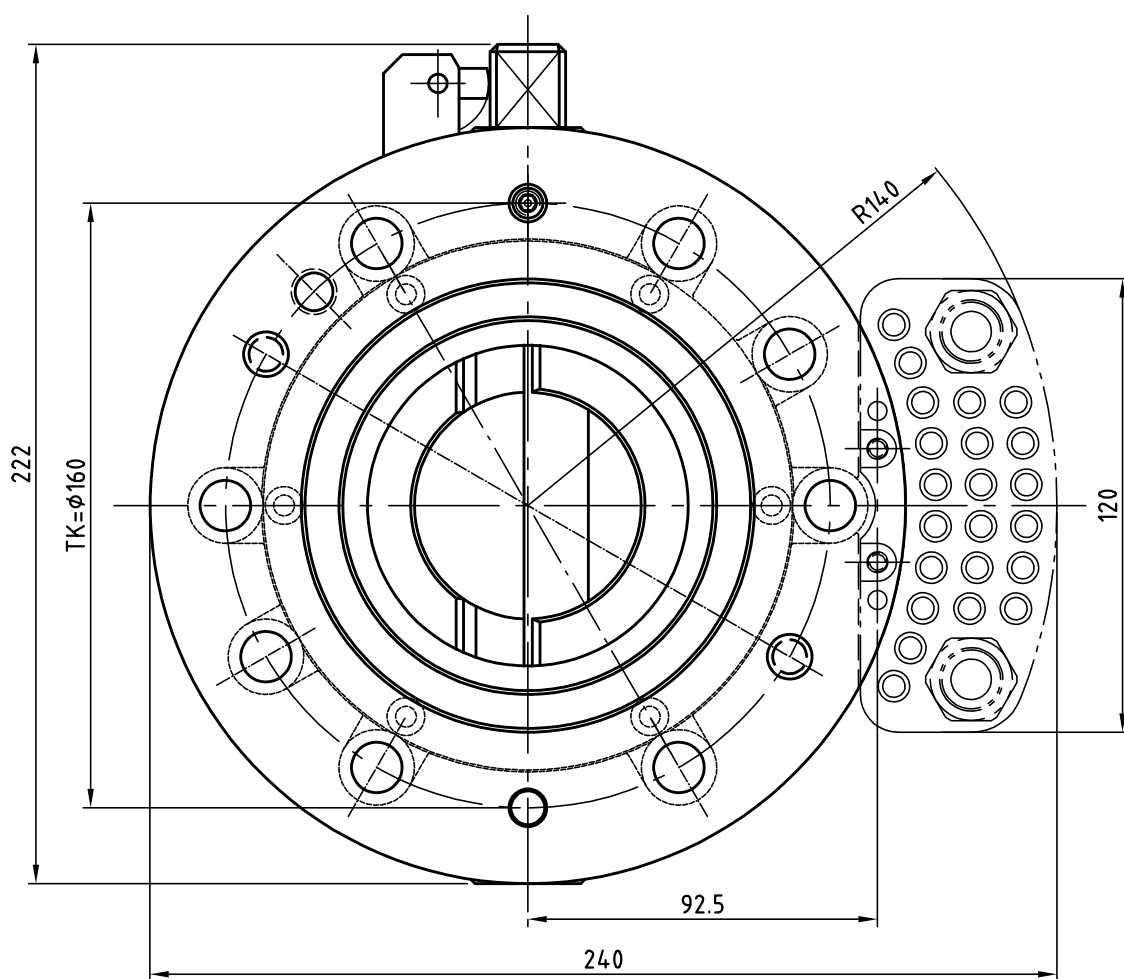
Maßstab 1:2

Zeichnungsnummer

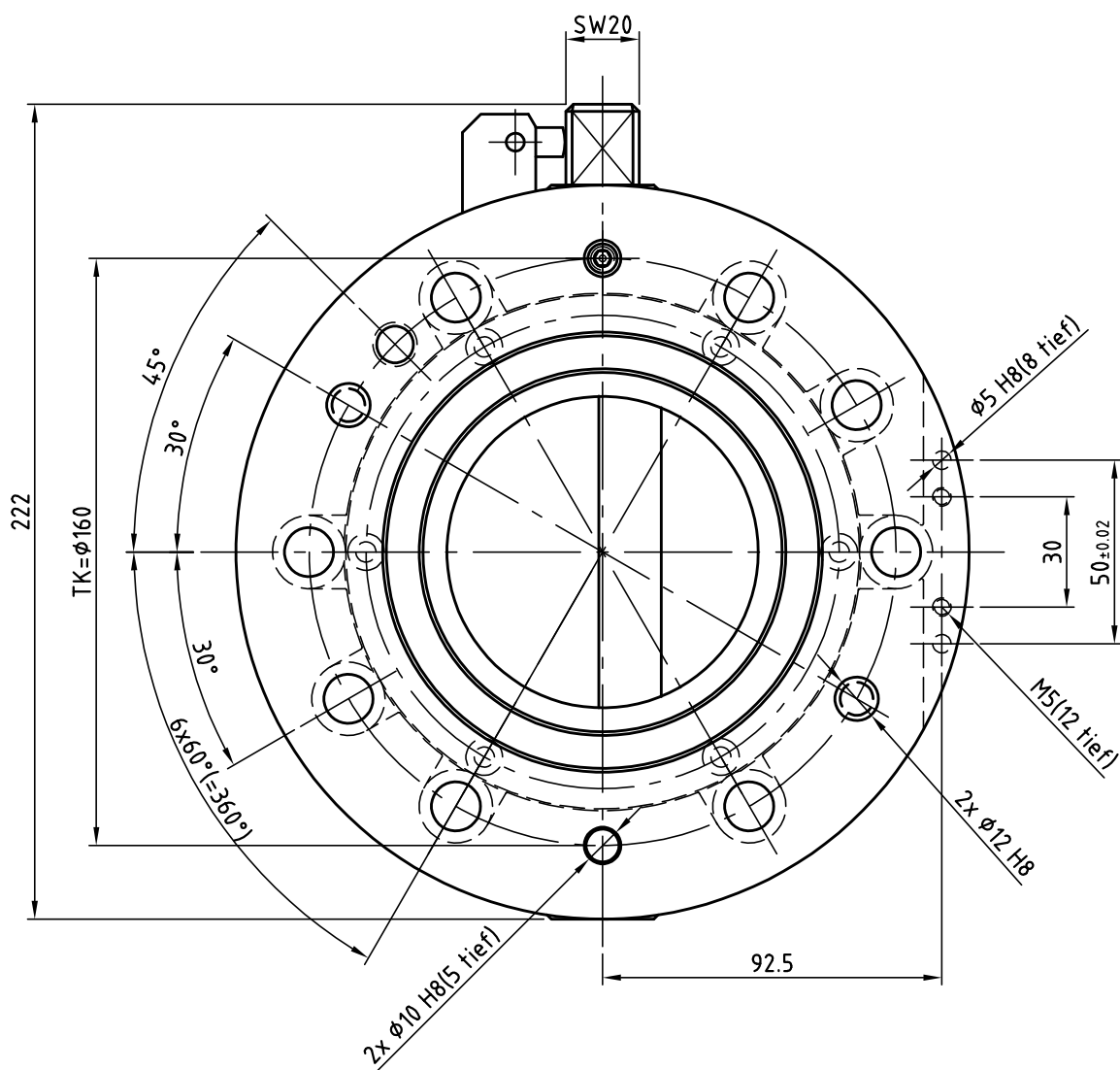
G-SWS200-2U-N-M12

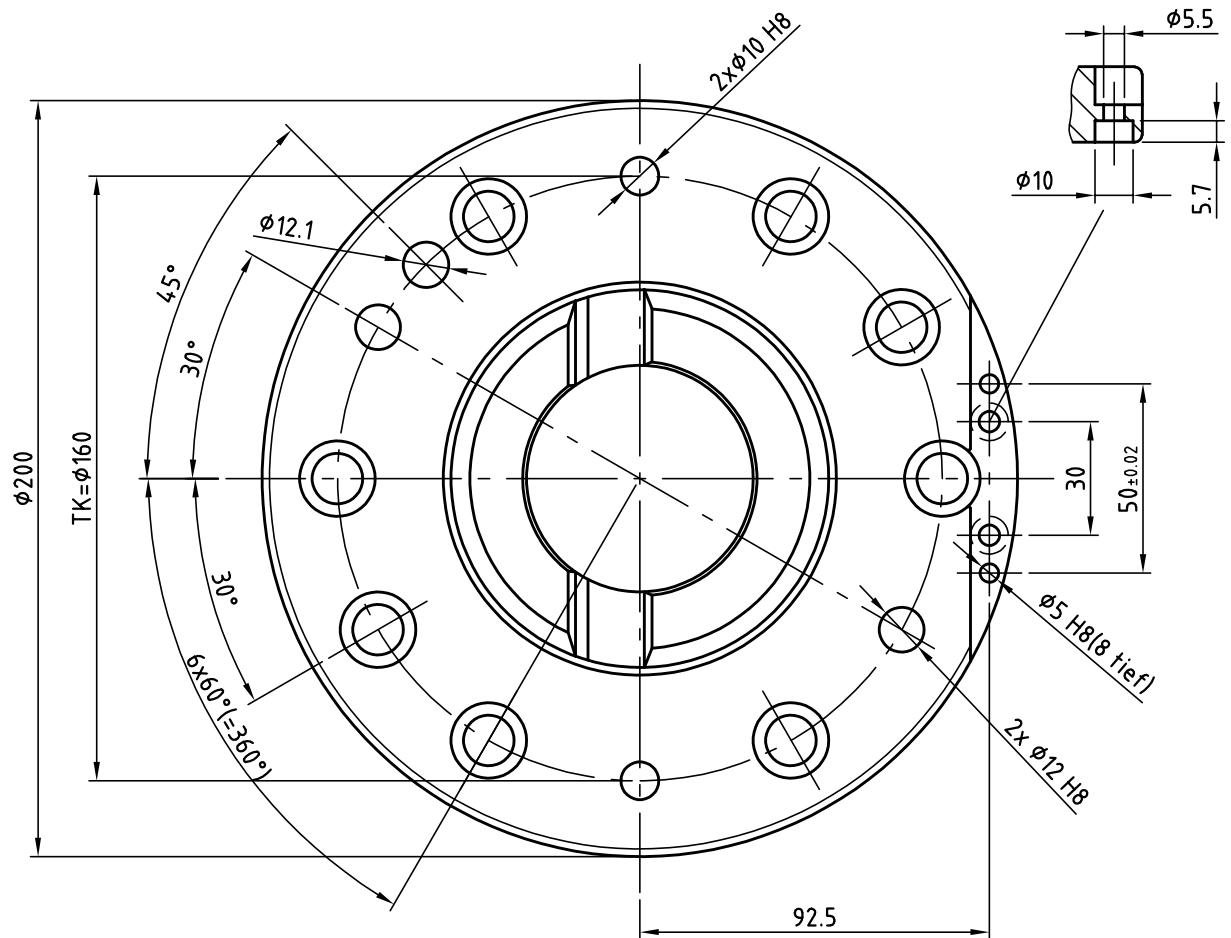
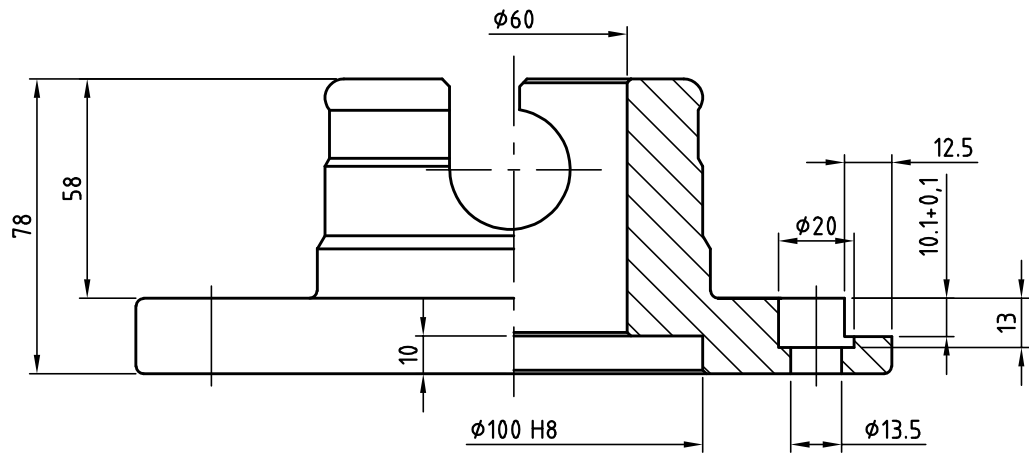


**GRIP**  
GRIP GmbH Handhabungstechnik



**GRIP**  
GRIP GmbH Handhabungstechnik



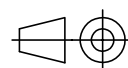


Datum 10.11.2016

Maßstab 1:2

Zeichnungsnummer

G-SWS200-2UEN-M12



**GRIP**

GRIP GmbH Handhabungstechnik



# G-SWS250

## Technical specifications

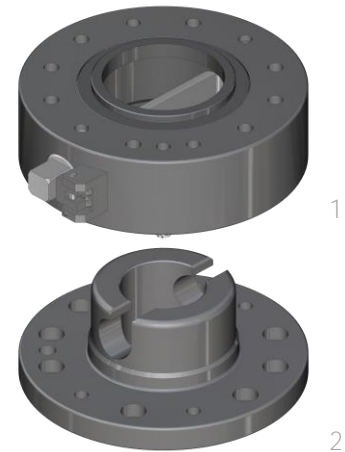
# GRIP

### Operating mode:

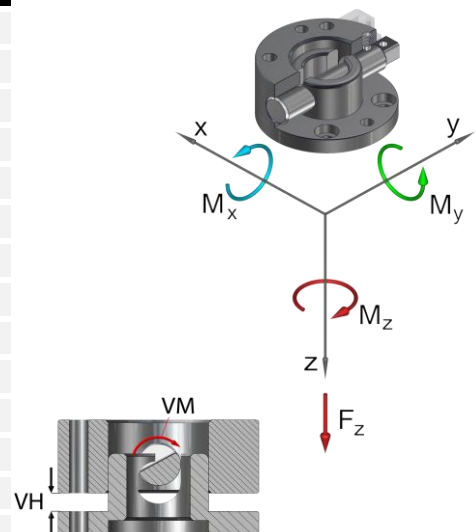
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

### Advantages:

- Cost-effective alternative to the MGW
- Without hand lever, thereby low interference contours
- High repeat accuracy +/- 0,02 mm
- Optional connection of a power coupling MEK for electrical and pneumatical ducts
- Holds up to 10,000 changing cycles
- During locking, the lower assembly is pulled around the locking stroke
- Interface according to DIN EN ISO 9409-1
- Low dead weight due to the combination of steel and aluminum



Technical specifications		SWS250
Basic material		steel, nitrated + Al
External diameter x Height [mm]		250 x 104
Pitch circle diameter [mm]		200
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		18.500
Compression -Fz [kN]		1.950
Torsion Mz [Nm]		1.600
Bending Mx, My [Nm]		1.800
Mass [kg]	upper assembly	11,6
	lower assembly	12,2
Recommended load [kg] *		200
Locking moment VM [Nm]		6 - 40
Locking stroke VH [mm]		0 - 10
Operating temperature range [°C]		-30 to +120
<small>* This guideline applies to the following assumptions: Acceleration: 10m/s², gravity distance: 250 mm, 1,5 times safety</small>		



### Quick change system Ø250...

#### drilled according to ISO, steel, nitrated...

G-SWS250-2OEN	upper assembly, E-Mounting, with anti-rotation-protection, - pre-centring
G-SWS250-2O-N	upper assembly, with anti-rotation-protection
G-SWS250-2UEN	lower assembly, E-Mounting, with pre-centring
G-SWS250-2U-N	lower assembly, steel, nitrated

### Replacement semi-cylindrical bolt...

EG-SWS250-HB	for SWS250
--------------	------------

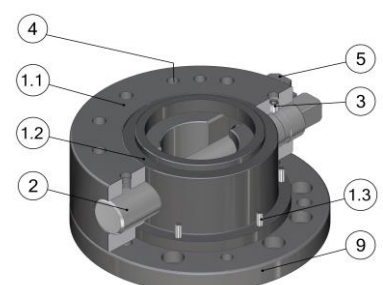
### Replacement semi-cylindrical bolt safety...

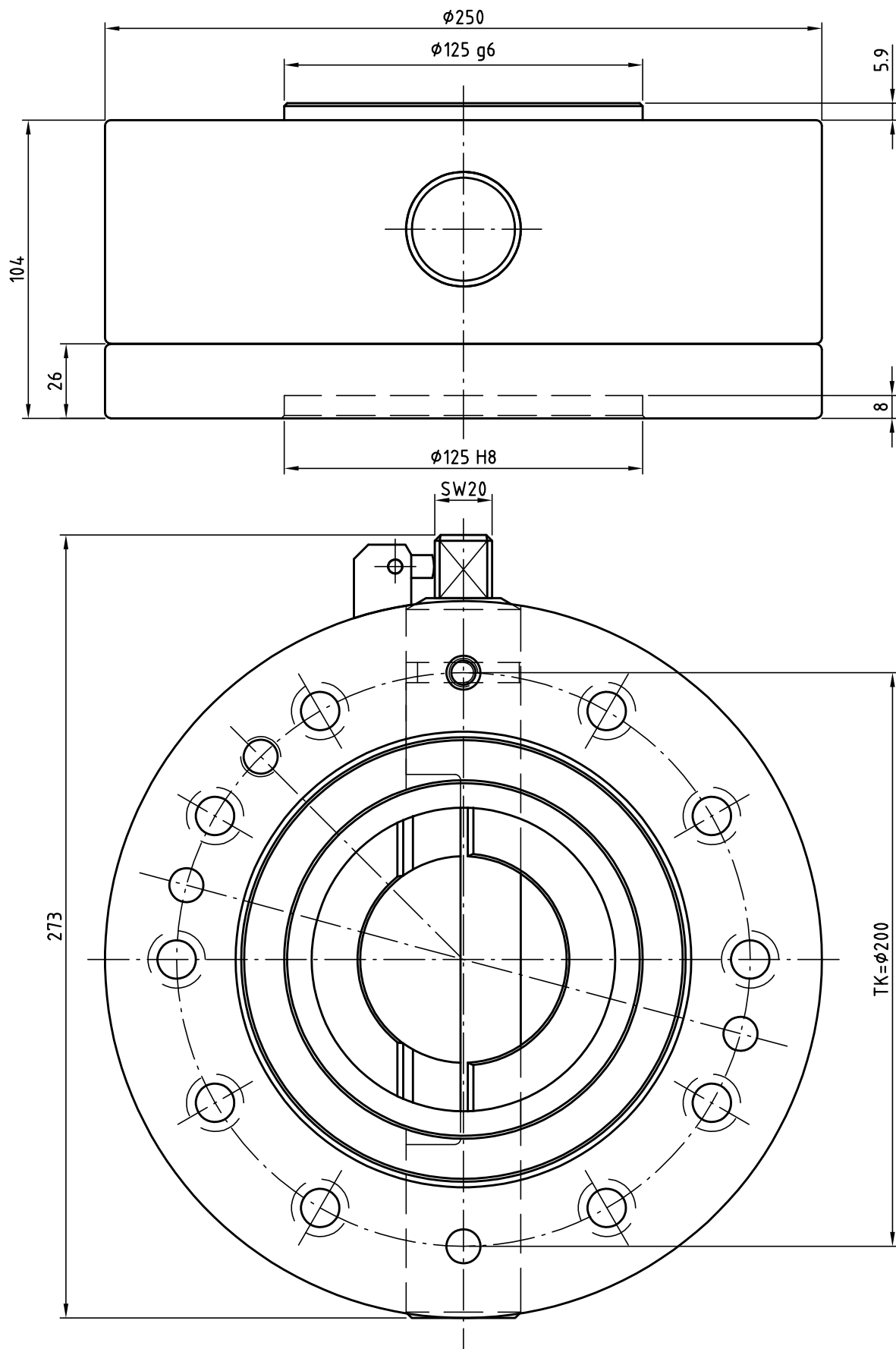
EG-SWS250-HB	for SWS250
--------------	------------

### Square socket key...

ZG-VKS160-SW20	for SW 20
----------------	-----------

Pos.	Description
1.1	Upper assembly ring (Al)
1.2	Upper assembly hull (st)
1.3	Screw
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock
9	Lower assembly



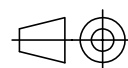


Datum 10.11.2016

Maßstab 1:2

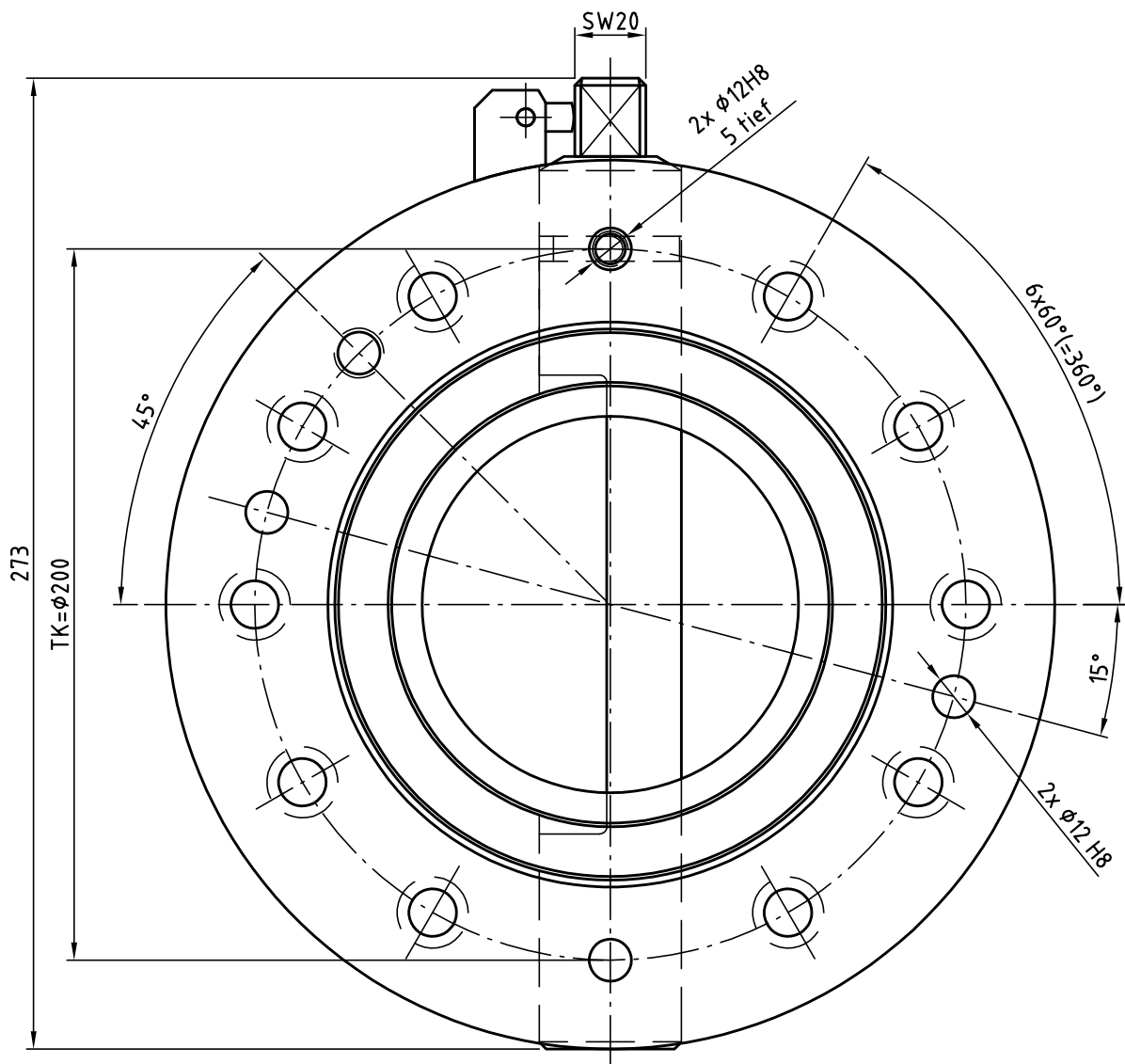
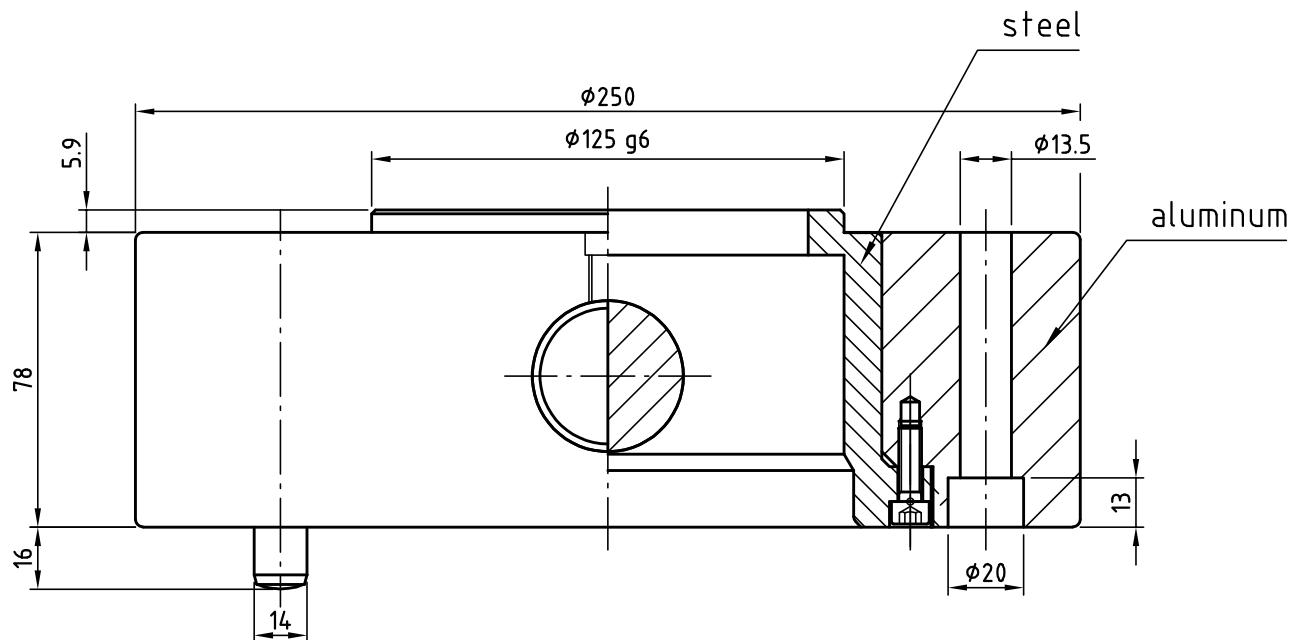
Zeichnungsnummer

G-SWS250-2Z



**GRIP**

GRIP GmbH Handhabungstechnik

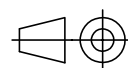


Datum 10.11.2016

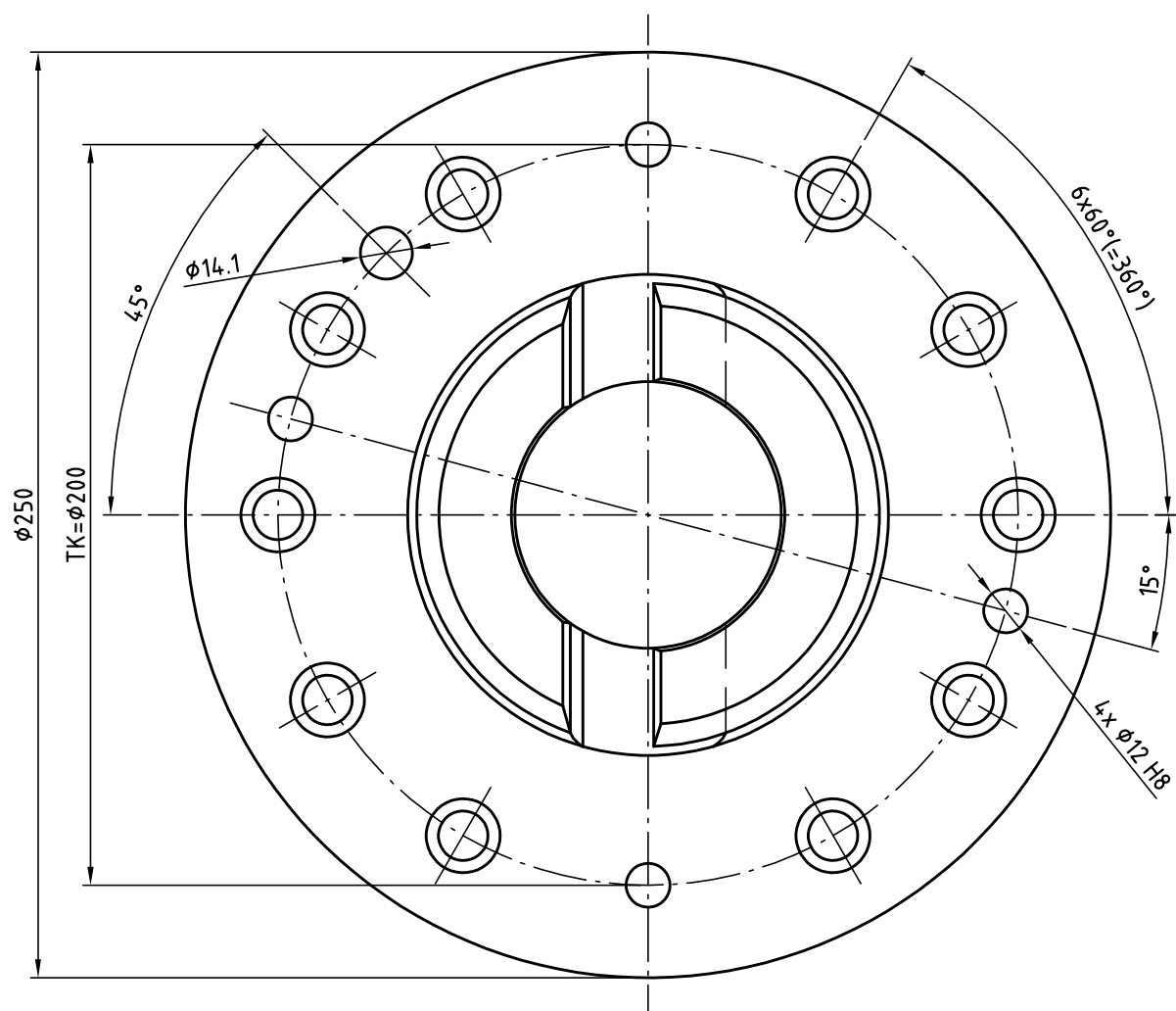
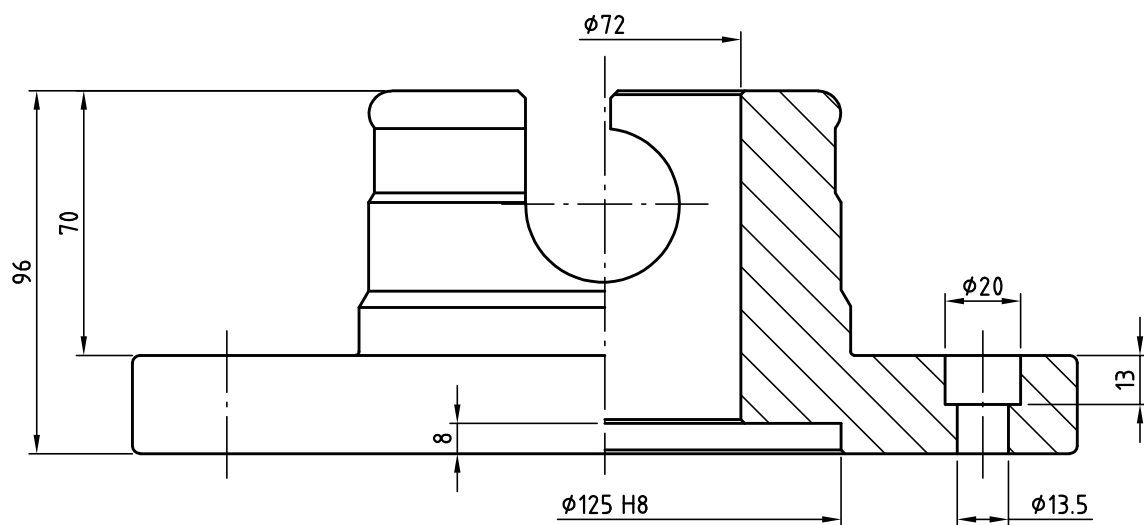
Maßstab 1:2

Zeichnungsnummer

G-SWS250-20-N



**GRIP**  
GRIP GmbH Handhabungstechnik

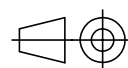


Datum 10.11.2016

Maßstab 1:2

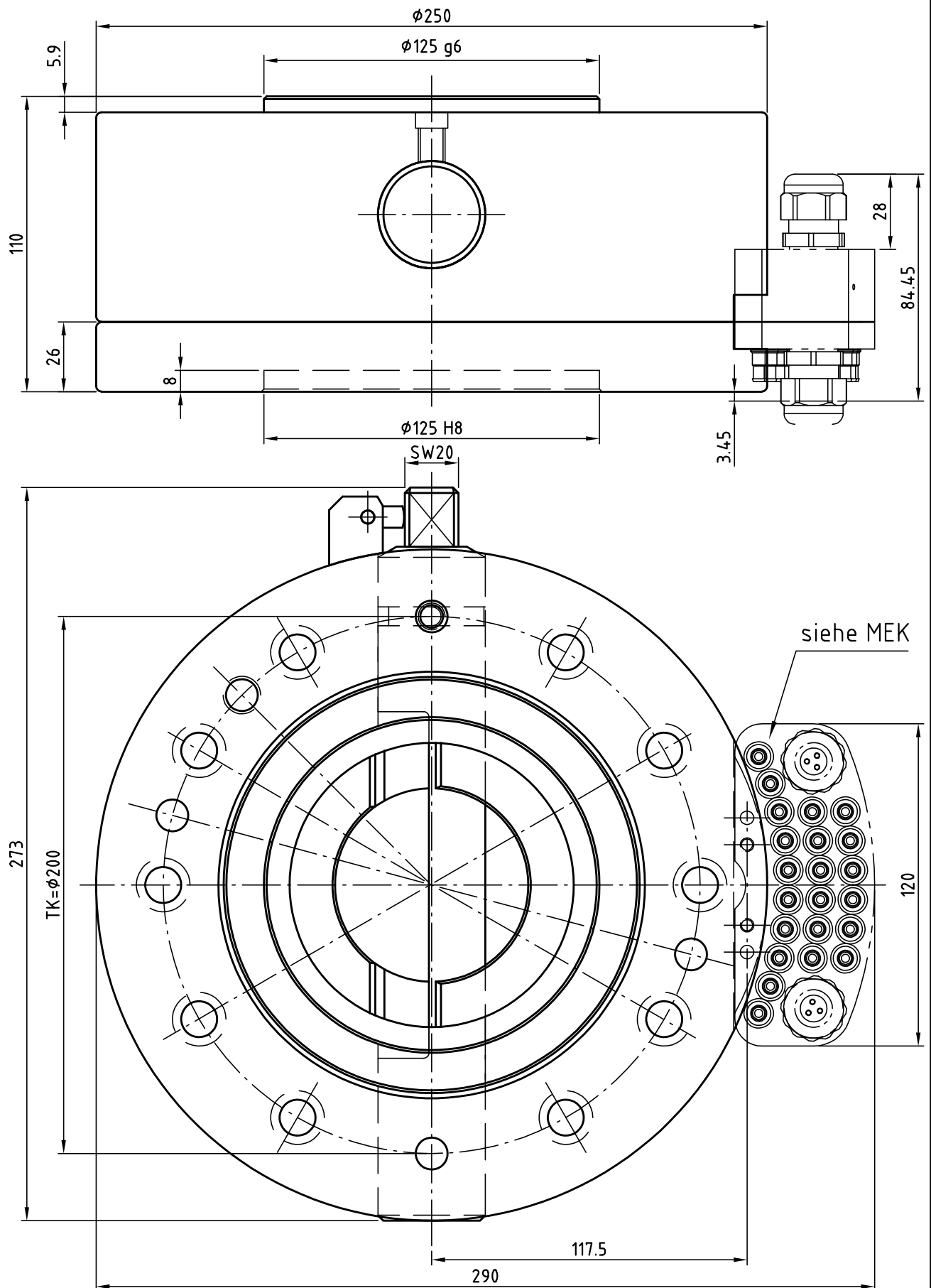
Zeichnungsnummer

G-SWS250-2U-N



**GRIP**

GRIP GmbH Handhabungstechnik

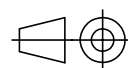


Datum 10.11.2016

Maßstab 1:2

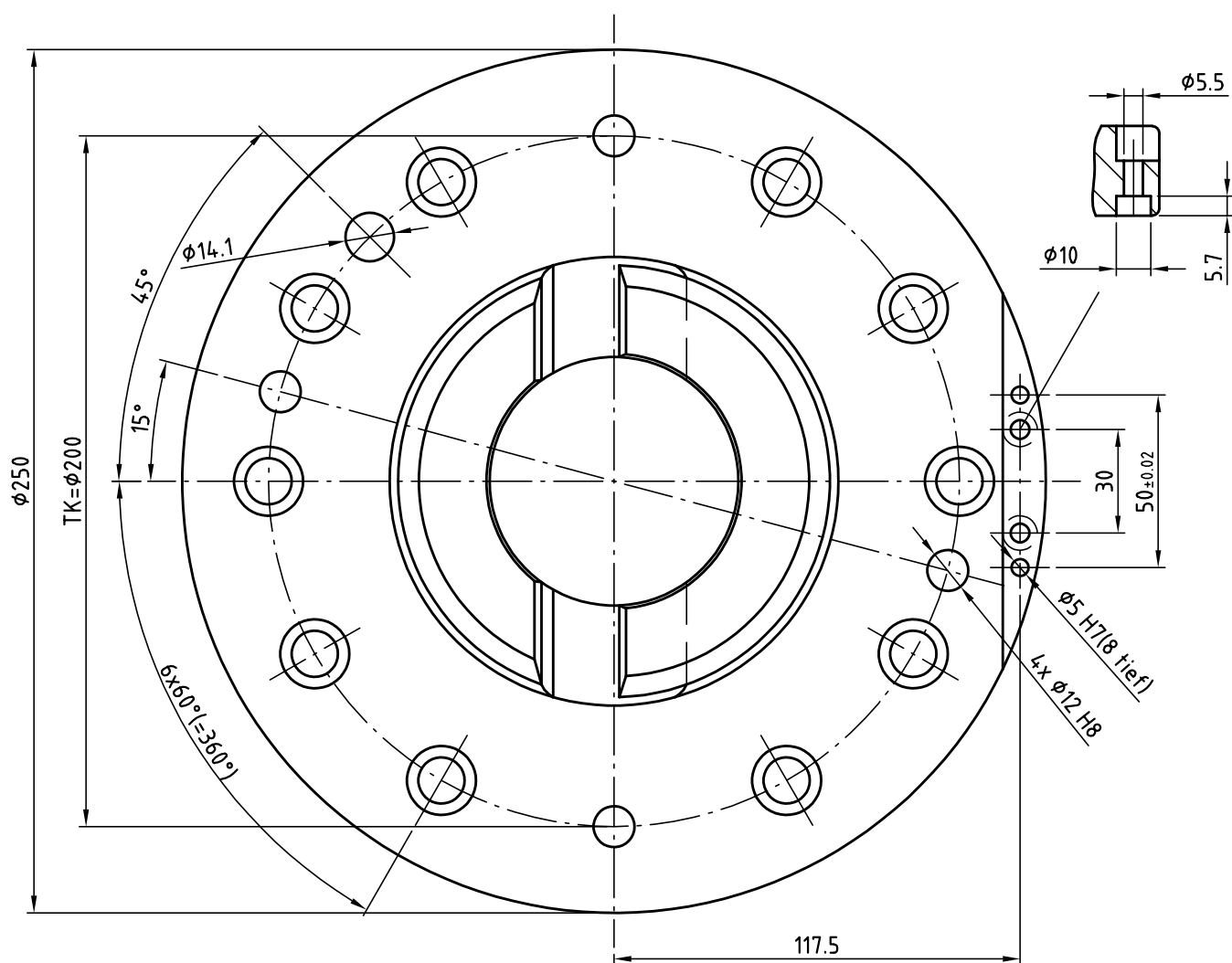
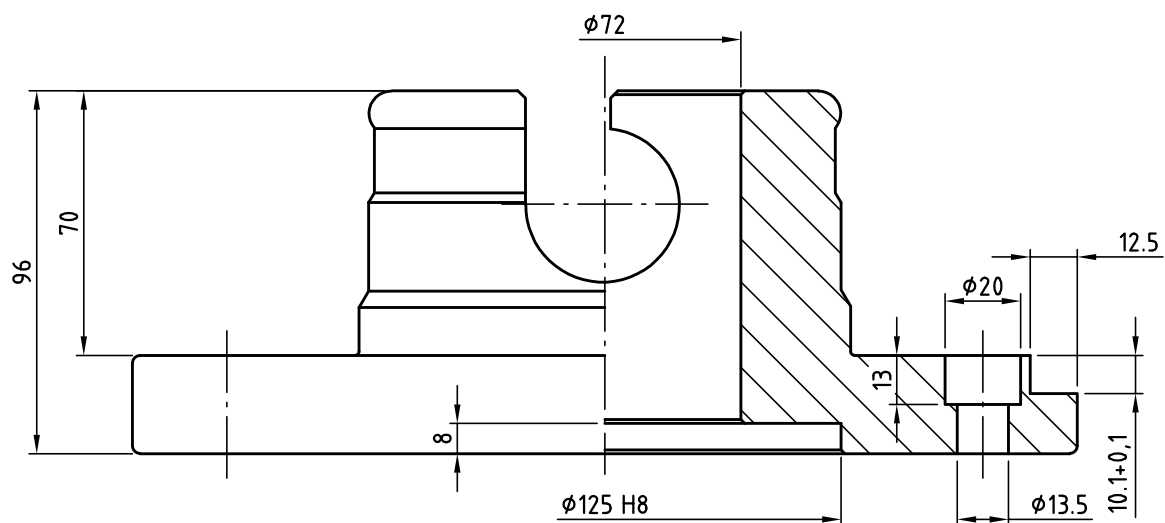
Zeichnungsnummer

G-SWS250-2ZE



**GRIP**  
GRIP GmbH Handhabungstechnik



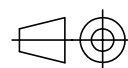


Datum 10.11.2016

Maßstab 1:2

Zeichnungsnummer

G-SWS250-2UEN



**GRIP**

GRIP GmbH Handhabungstechnik

# SWA CONNECTOR

The SWA Connector has a very low profile for end of arm tool applications with very little space. The transverse screw clamps the upper and lower assembly of the SWA with two wedge-shaped locking flanges, creating a form-fit without any play.

## SWA Connector Advantages:

- Extremely low profile
- Easy to use
- Low weight, made of high-strength aluminum, anodized
- Available in steel, optionally nitrated
- High repeatability < 0.02 mm
- Durable - over 10.000 application changes with no loss in accuracy
- Interface according to DIN EN ISO 9409-1

SWA Connectors can be modified to meet your needs. Please inquire about special applications.

## SIZES

SWA050  
SWA063  
SWA080  
SWA100  
SWA125  
SWA160





## G-SWA050

### Technical specifications

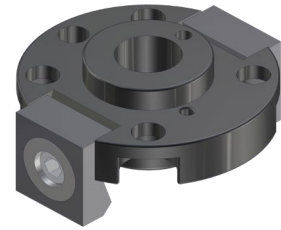
# GRIP

#### Operating mode:

By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

#### Advantages:

Reduced height to a minimum  
Very low interference contours  
High repeat accuracy +/- 0,02 mm  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



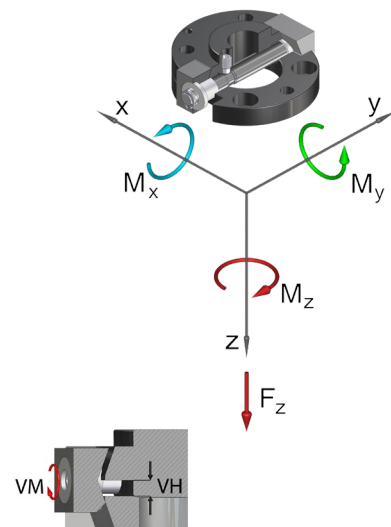
1



2

Technical specifications		SWA050	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		50 x 20	
Pitch circle diameter [mm]		40	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		800	920
Compression -Fz [kN]		48	96
Torsion Mz [Nm]		60	70
Bending Mx [Nm]		60	70
Bending My [Nm]		40	48
Mass [kg]	Upper assembly	0,11	0,2
	Lower assembly	0,03	0,1
Recommended load [kg] *		8	9
Locking torque VM [Nm]		16	
Locking stroke VH [mm]		0 - 6	
Operating temperature range [°C]		-30 to +120	

\* This guideline applies to the following assumptions:  
Acceleration: 10 m/s², gravity distance: 100 mm, 2,5 times safety

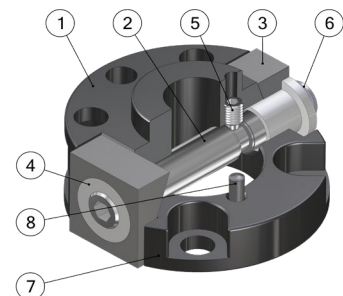


#### Quick change adapter Ø50, drilled according to ISO...

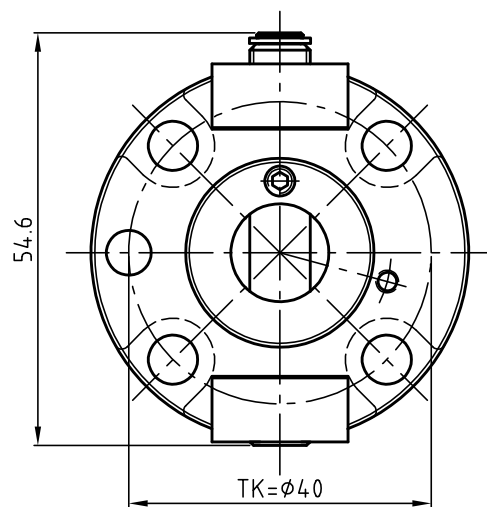
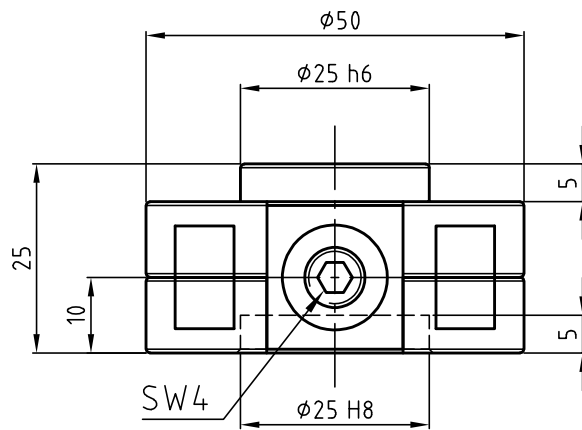
G-SWA050-2O	upper assembly, Al, anodized
G-SWA050-2O-N	upper assembly, steel, nitrated
G-SWA050-2U	lower assembly, Al, anodized
G-SWA050-2U-N	lower assembly, steel, nitrated

#### Replacement axis...

EG-SWA050-A	for SWA050
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

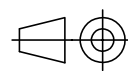


Datum 10.11.2016

Maßstab 1:1

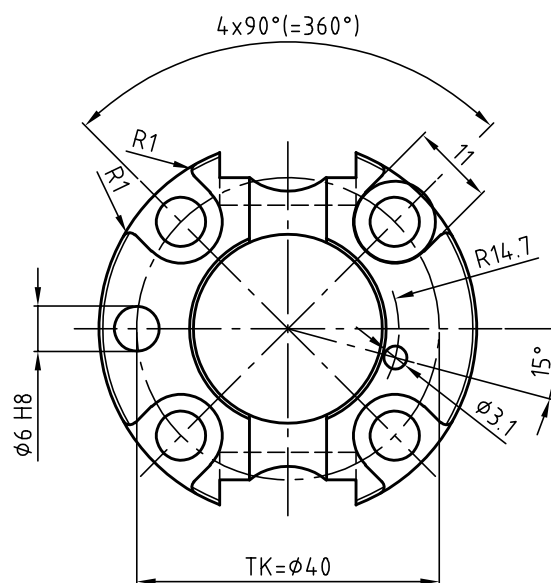
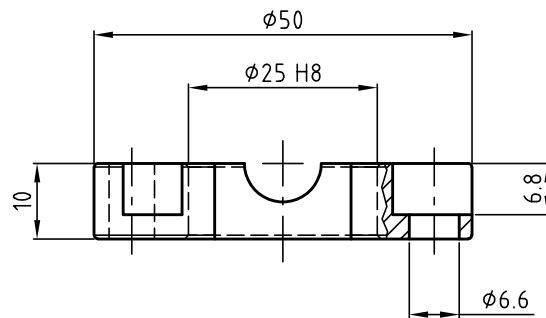
Zeichnungsnummer

G-SWA050-2Z



**GRIP**  
GRIP GmbH Handhabungstechnik

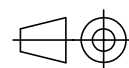




Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA050-2U
Stahl	G-SWA050-2U-S
St. nitriert	G-SWA050-2U-N
VA	G-SWA050-2U-V

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWA050-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWA063

## Technical specifications

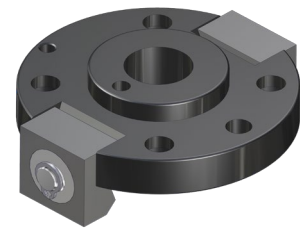
# GRIP

### Operating mode:

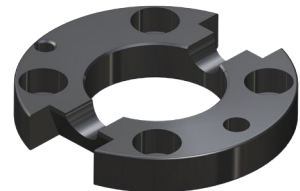
By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

### Advantages:

Reduced height to a minimum  
Very low interference contours  
High repeat accuracy +/- 0,02 mm  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1

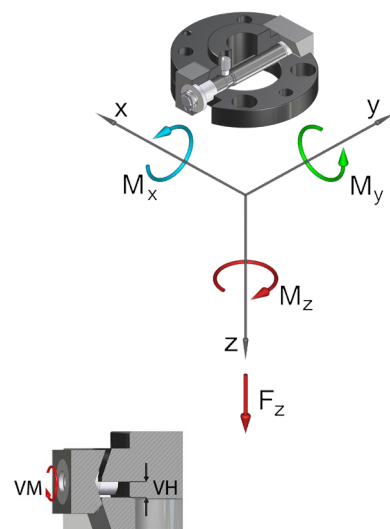


1



2

Technical specifications		SWA063	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		63 x 20	
Pitch circle diameter [mm]		50	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.000	1.150
Compression -Fz [kN]		89	178
Torsion Mz [Nm]		80	90
Bending Mx [Nm]		70	80
Bending My [Nm]		50	60
Mass [kg]	Upper assembly	0,16	0,35
	Lower assembly	0,05	0,15
Recommended load [kg] *		10	12
Locking torque VM [Nm]		16	
Locking stroke VH [mm]		0 - 6	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s² gravity distance: 100 mm 2.5 times safety			

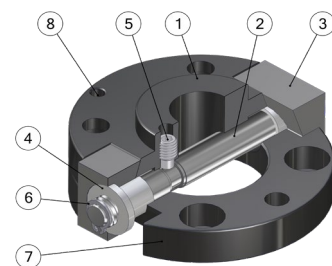


### Quick change adapter Ø63, drilled according to ISO...

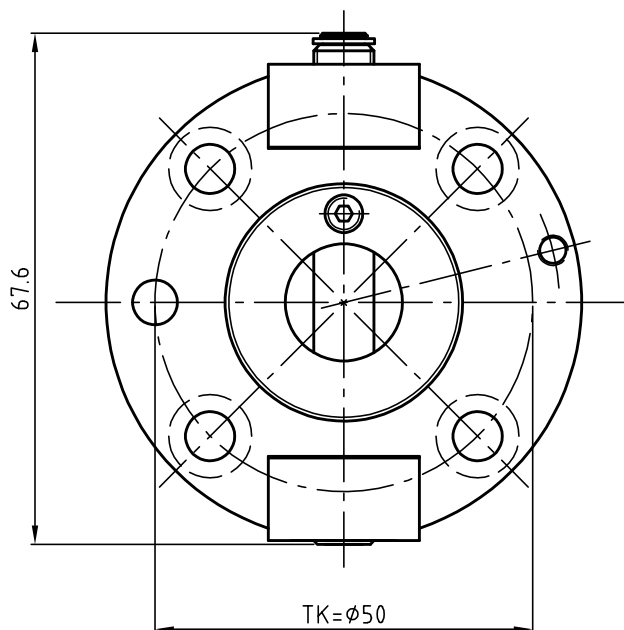
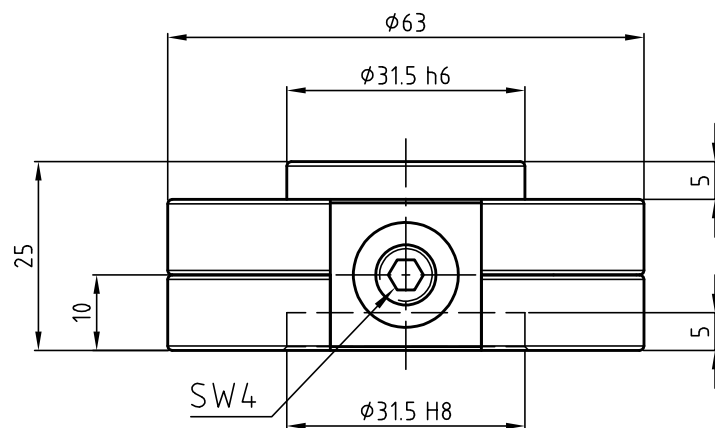
G-SWA063-2O	upper assembly, Al, anodized
G-SWA063-2O-N	upper assembly, steel, nitrated
G-SWA063-2U	lower assembly, Al, anodized
G-SWA063-2U-N	lower assembly, steel, nitrated

### Replacement axis...

EG-SWA063-A	for SWA063
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

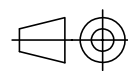


Datum 10.11.2016

Maßstab 1:1

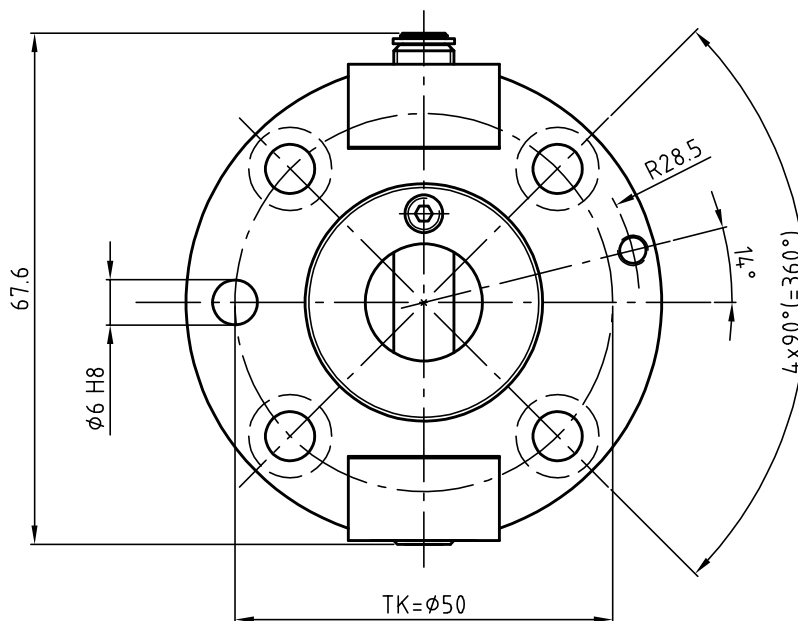
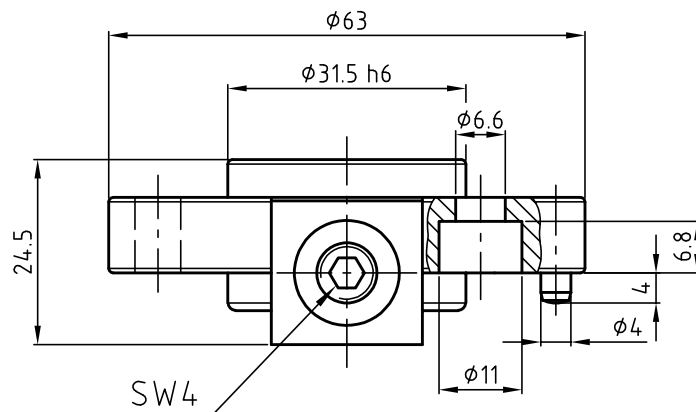
Zeichnungsnummer

G-SWA063-2Z



**GRIP**

GRIP GmbH Handhabungstechnik



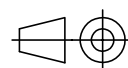
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-SWA063-20
Stahl	G-SWA063-20-S
St. nitriert	G-SWA063-20-N

Datum 10.11.2016

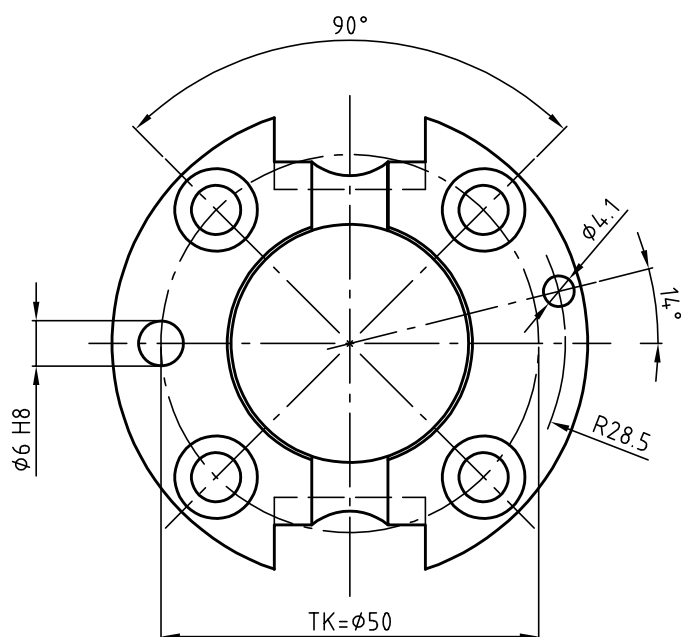
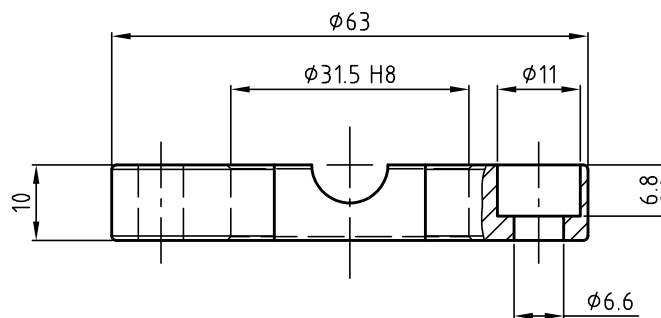
Maßstab 1:1

Zeichnungsnummer

G-SWA063-20



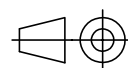
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA063-2U
Stahl	G-SWA063-2U-S
St. nitriert	G-SWA063-2U-N

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWA063-2U



**GRIP**  
GRIP GmbH Handhabungstechnik



# G-SWA080

## Technical specifications

# GRIP

### Operating mode:

By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

### Advantages:

Reduced height to a minimum

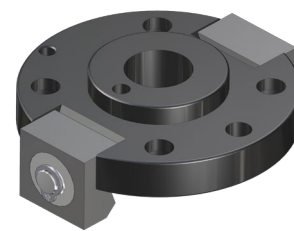
Very low interference contours

High repeat accuracy +/- 0,02 mm

Holds up to 10,000 changing cycles

During locking, the lower assembly is pulled around the locking stroke

Interface according to DIN EN ISO 9409-1

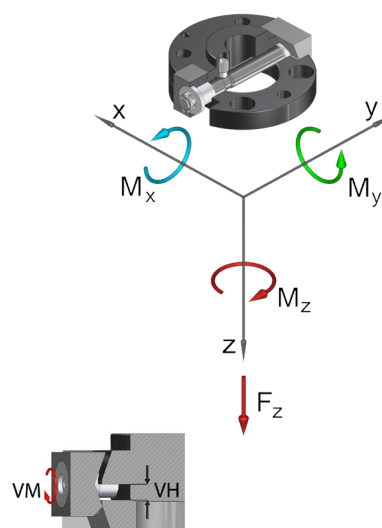


1



2

Technical specifications		SWA080	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		80 x 20	
Pitch circle diameter [mm]		63	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.200	1.400
Compression -Fz [kN]		157	313
Torsion Mz [Nm]		140	160
Bending Mx [Nm]		120	140
Bending My [Nm]		80	90
Mass [kg]	Upper assembly	0,25	0,5
	Lower assembly	0,1	0,25
Recommended load [kg] *		16	18
Locking torque VM [Nm]		16	
Locking stroke VH [mm]		0 - 6	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, 2,5 times safety			

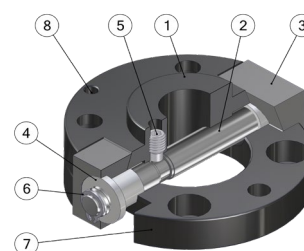


### Quick change adapter Ø80, drilled according to ISO...

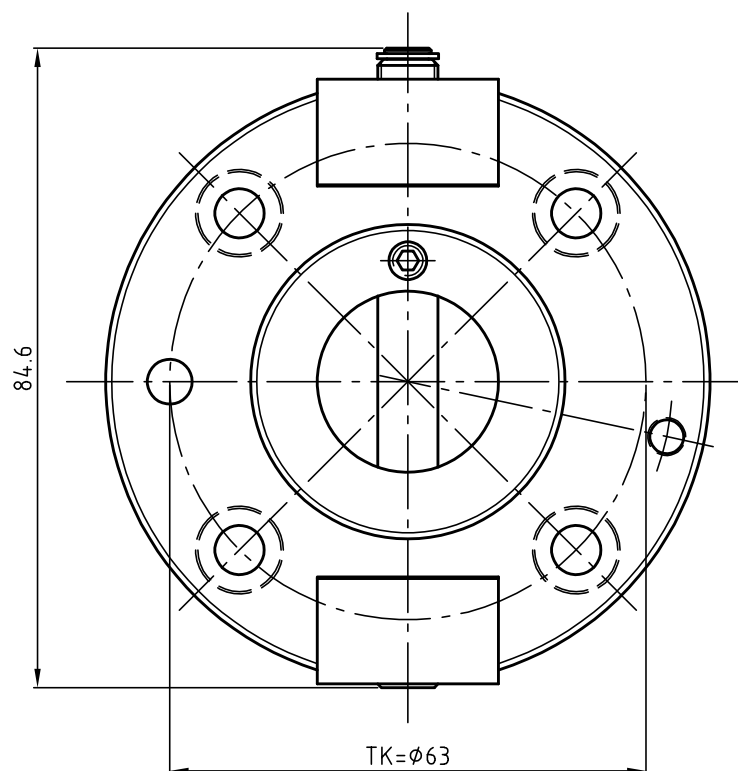
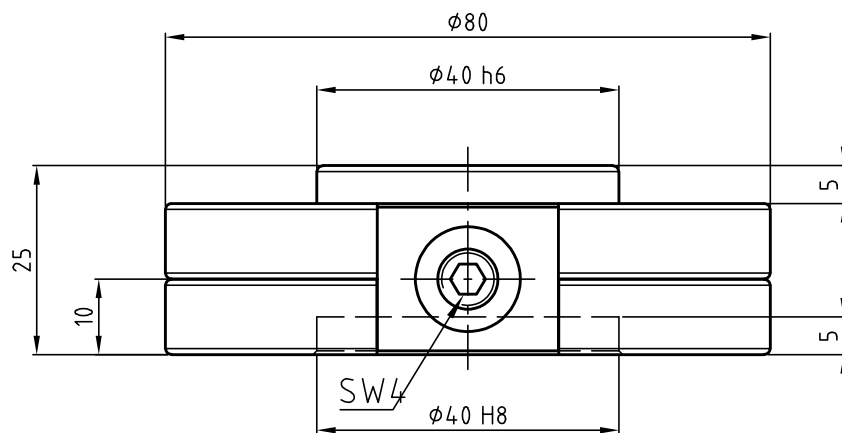
G-SWA080-2O	upper assembly, Al, anodized
G-SWA080-2O-N	upper assembly, steel, nitrated
G-SWA080-2U	lower assembly, Al, anodized
G-SWA080-2U-N	lower assembly, steel, nitrated

### Replacement axis...

EG-SWA080-A	for SWA080
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

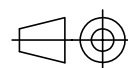


Datum 10.11.2016

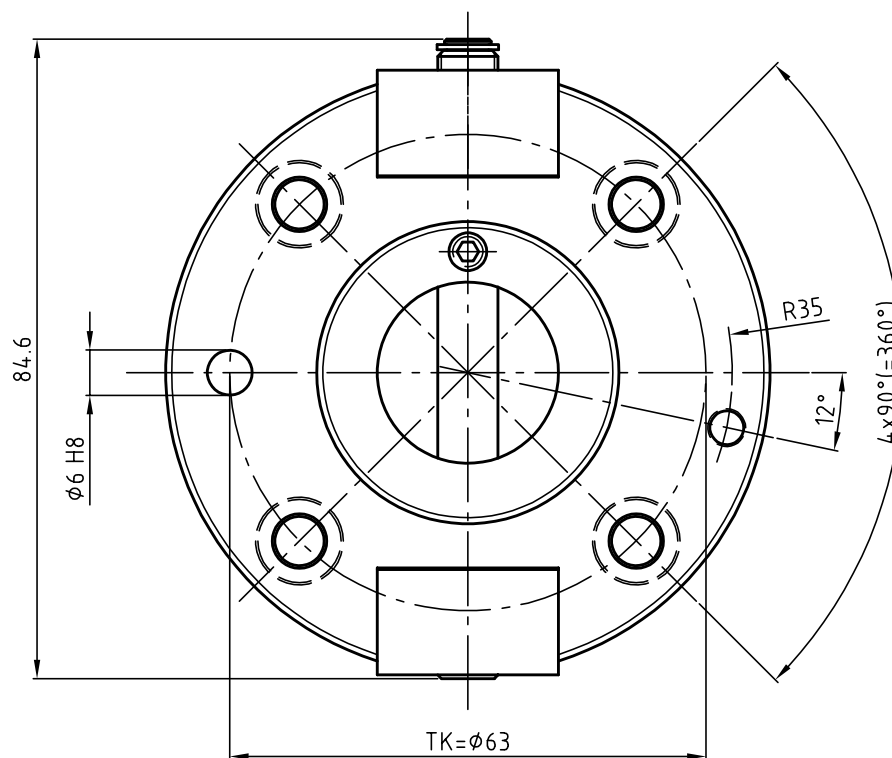
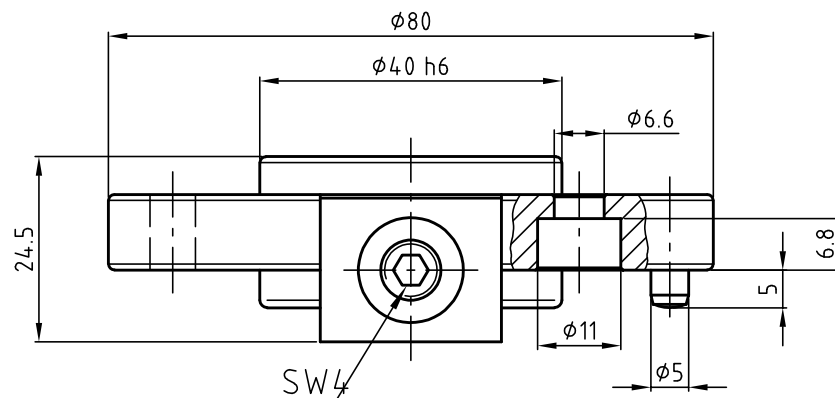
Maßstab 1:1

Zeichnungsnummer

G-SWA080-2Z



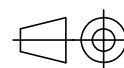
**GRIP**  
GRIP GmbH Handhabungstechnik



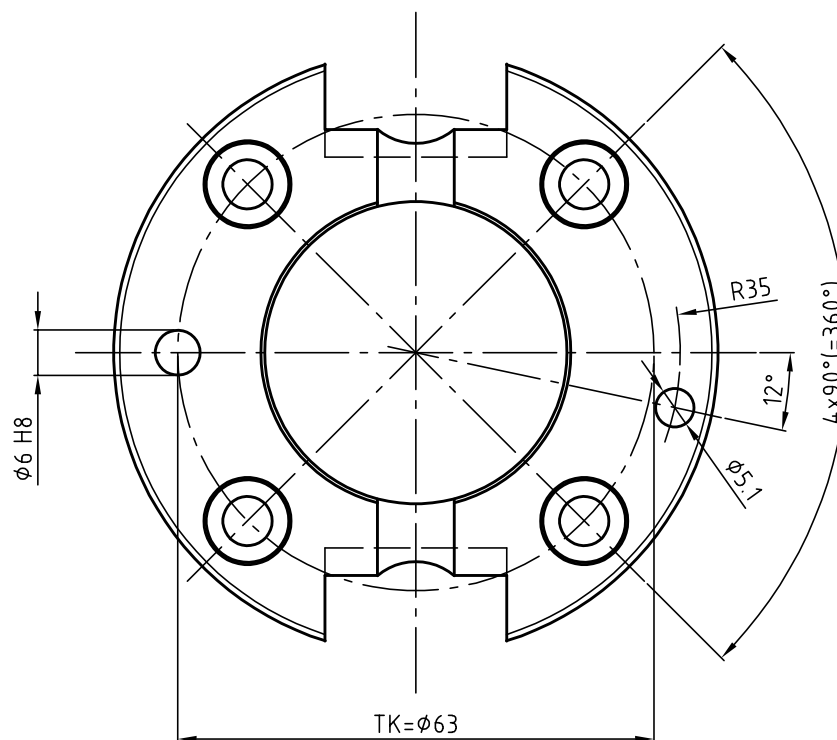
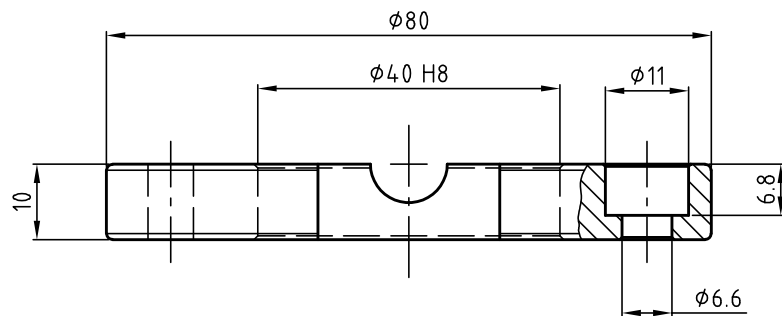
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-SWA080-20
Stahl	G-SWA080-20-S
St. nitriert	G-SWA080-20-N

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWA080-20



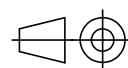
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA080-2U
Stahl	G-SWA080-2U-S
St. nitriert	G-SWA080-2U-N

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-SWA080-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWA100

## Technical specifications

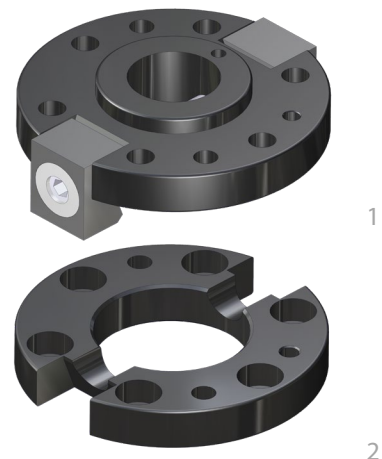
# GRIP

### Operating mode:

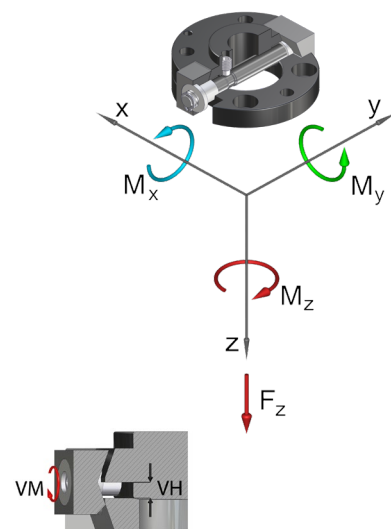
By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

### Advantages:

Reduced height to a minimum  
Very low interference contours  
High repeat accuracy +/- 0,02 mm  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



Technical specifications		SWA100	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		100 x 30	
Pitch circle diameter [mm]		80	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.500	1.700
Compression -Fz [kN]		219	439
Torsion Mz [Nm]		200	220
Bending Mx [Nm]		160	185
Bending My [Nm]		110	125
Mass [kg]	Upper assembly	0,55	1,1
	Lower assembly	0,2	0,6
Recommended load [kg] *		22	25
Locking torque VM [Nm]		24	
Locking stroke VH [mm]		0 - 10	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s² gravity distance: 100 mm 2.5 times safety			

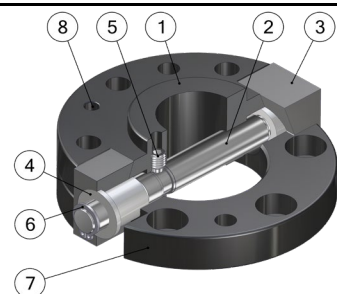


### Quick change adapter Ø100, drilled according to ISO...

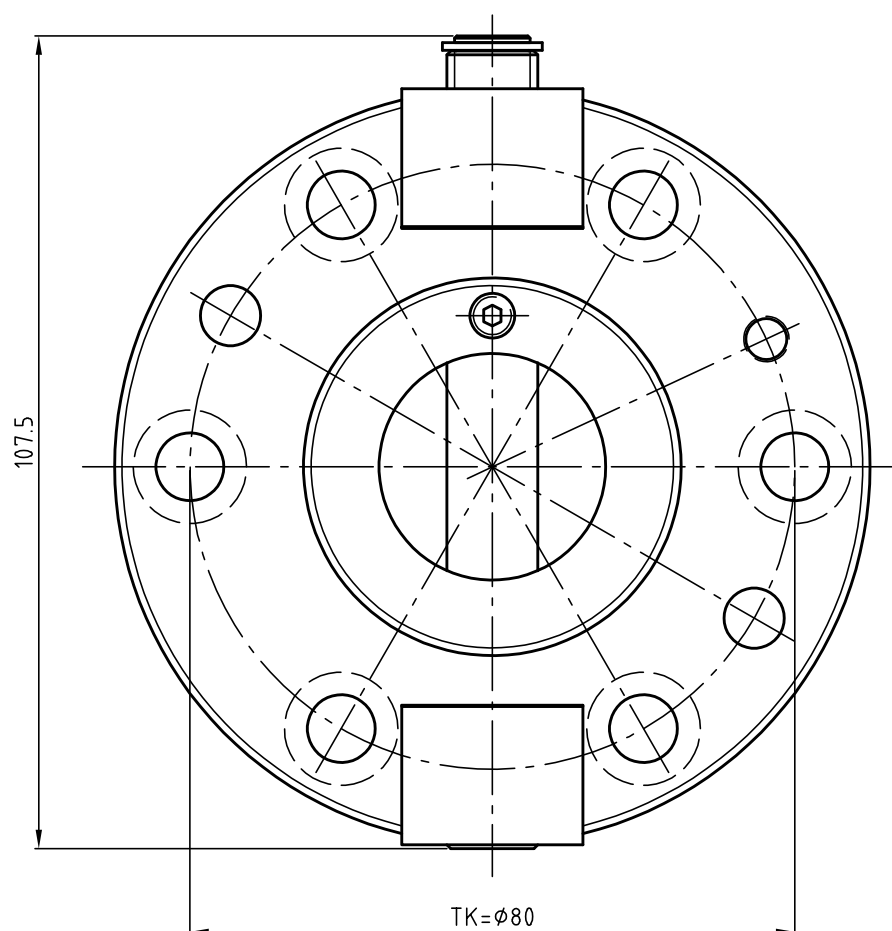
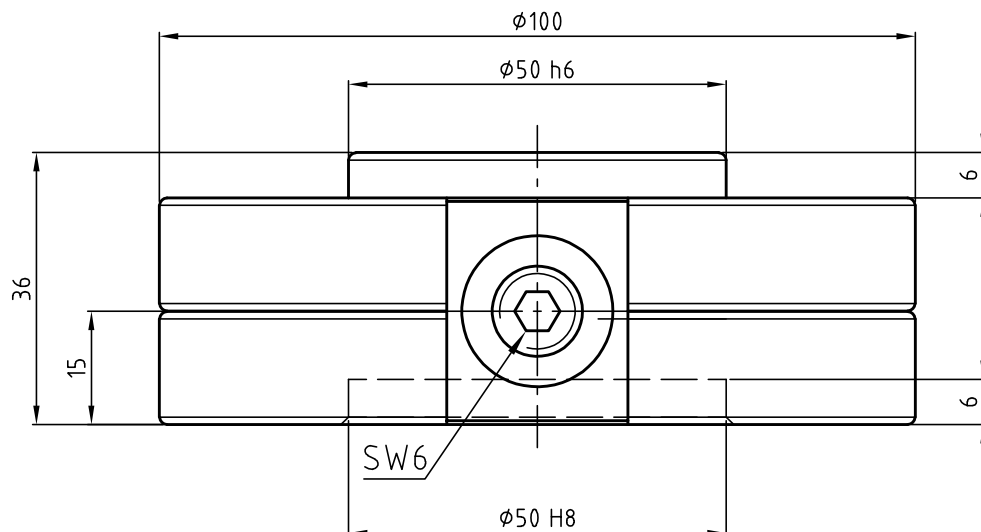
G-SWA100-2O	upper assembly, Al, anodized
G-SWA100-2O-N	upper assembly, steel, nitrated
G-SWA100-2U	lower assembly, Al, anodized
G-SWA100-2U-N	lower assembly, steel, nitrated

### Replacement axis...

EG-SWA100-A	for SWA100
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

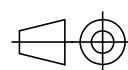


Datum 10.11.2016

Maßstab 1:1

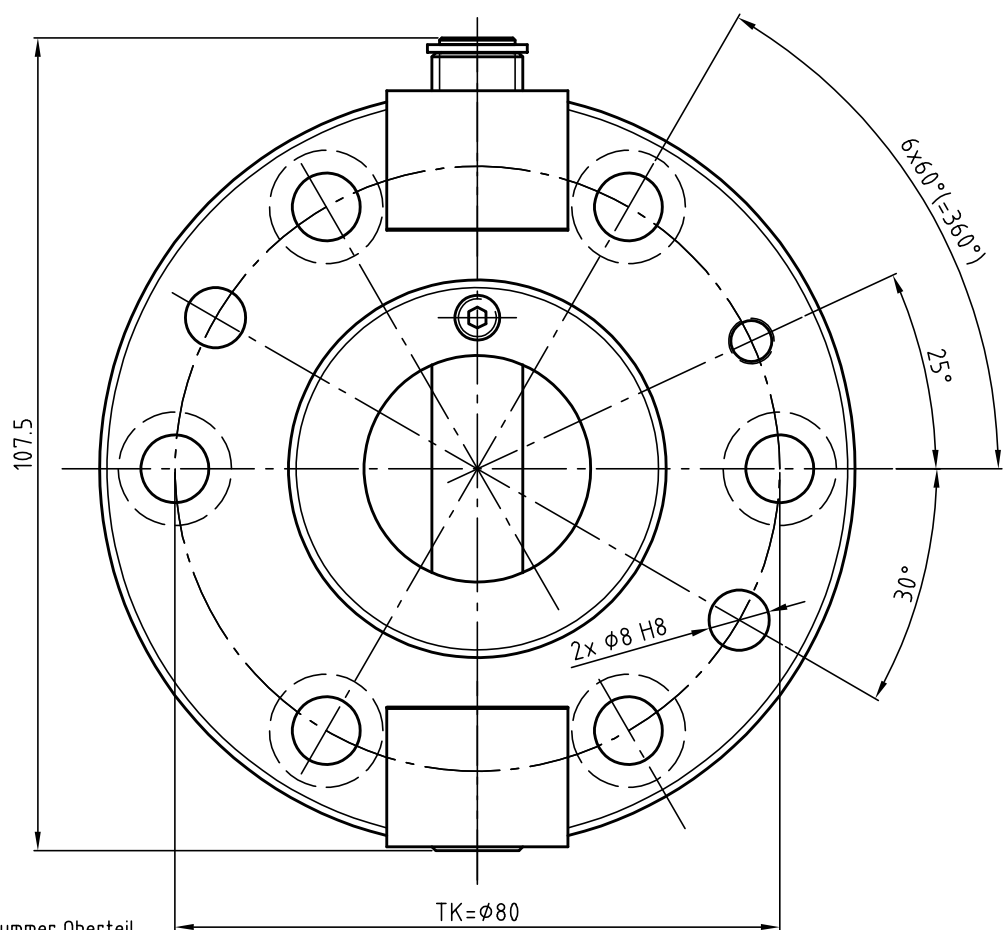
Zeichnungsnummer

G-SWA100-2Z

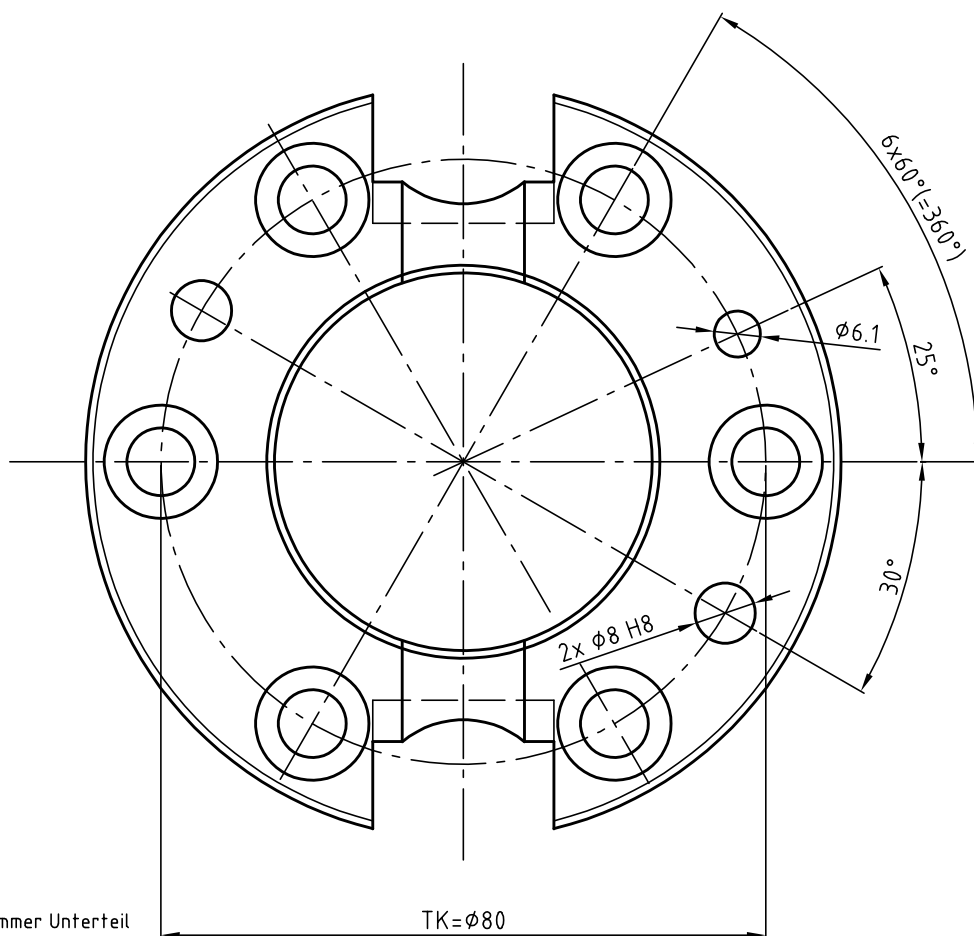
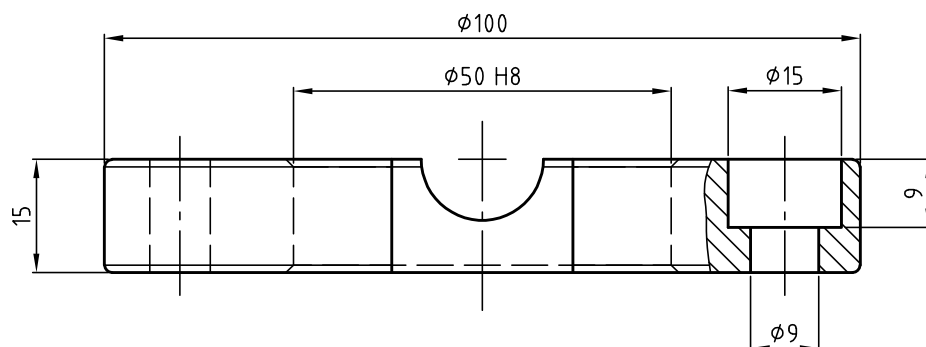


**GRIP**

GRIP GmbH Handhabungstechnik



**GRIP**  
GRIP GmbH Handhabungstechnik



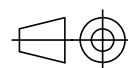
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA100-2U
Stahl	G-SWA100-2U-S
St. nitriert	G-SWA100-2U-N

Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

G-SWA100-2U



**GRIP**

GRIP GmbH Handhabungstechnik



# G-SWA125

## Technical specifications

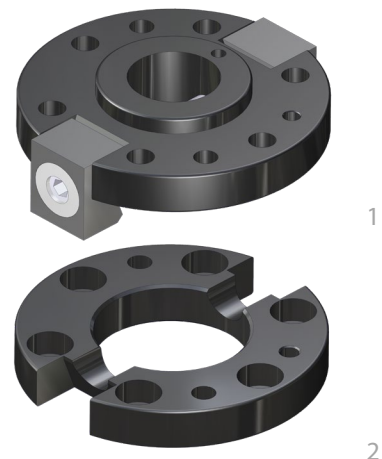
# GRIP

### Operating mode:

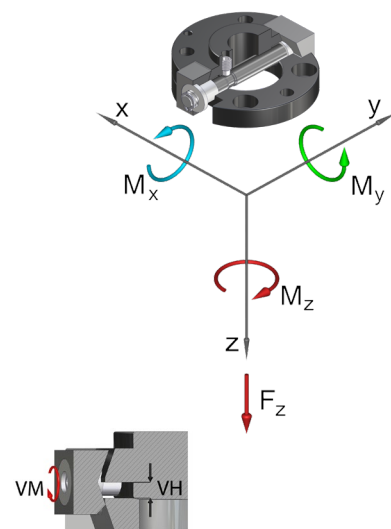
By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

### Advantages:

Reduced height to a minimum  
Very low interference contours  
High repeat accuracy +/- 0,02 mm  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



Technical specifications		SWA125	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		125 x 30	
Pitch circle diameter [mm]		100	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		1.800	2.100
Compression -Fz [kN]		377	754
Torsion Mz [Nm]		300	350
Bending Mx [Nm]		220	250
Bending My [Nm]		150	175
Mass [kg]	Upper assembly	0,8	1,6
	Lower assembly	0,35	1
Recommended load [kg] *		30	35
Locking torque VM [Nm]		36	
Locking stroke VH [mm]		0 - 11	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s² gravity distance: 100 mm 2.5 times safety			

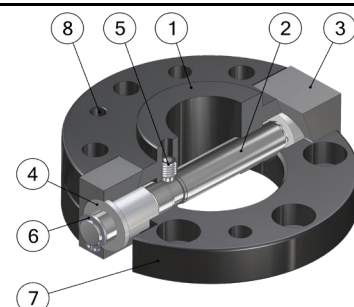


### Quick change adapter Ø125, drilled according to ISO...

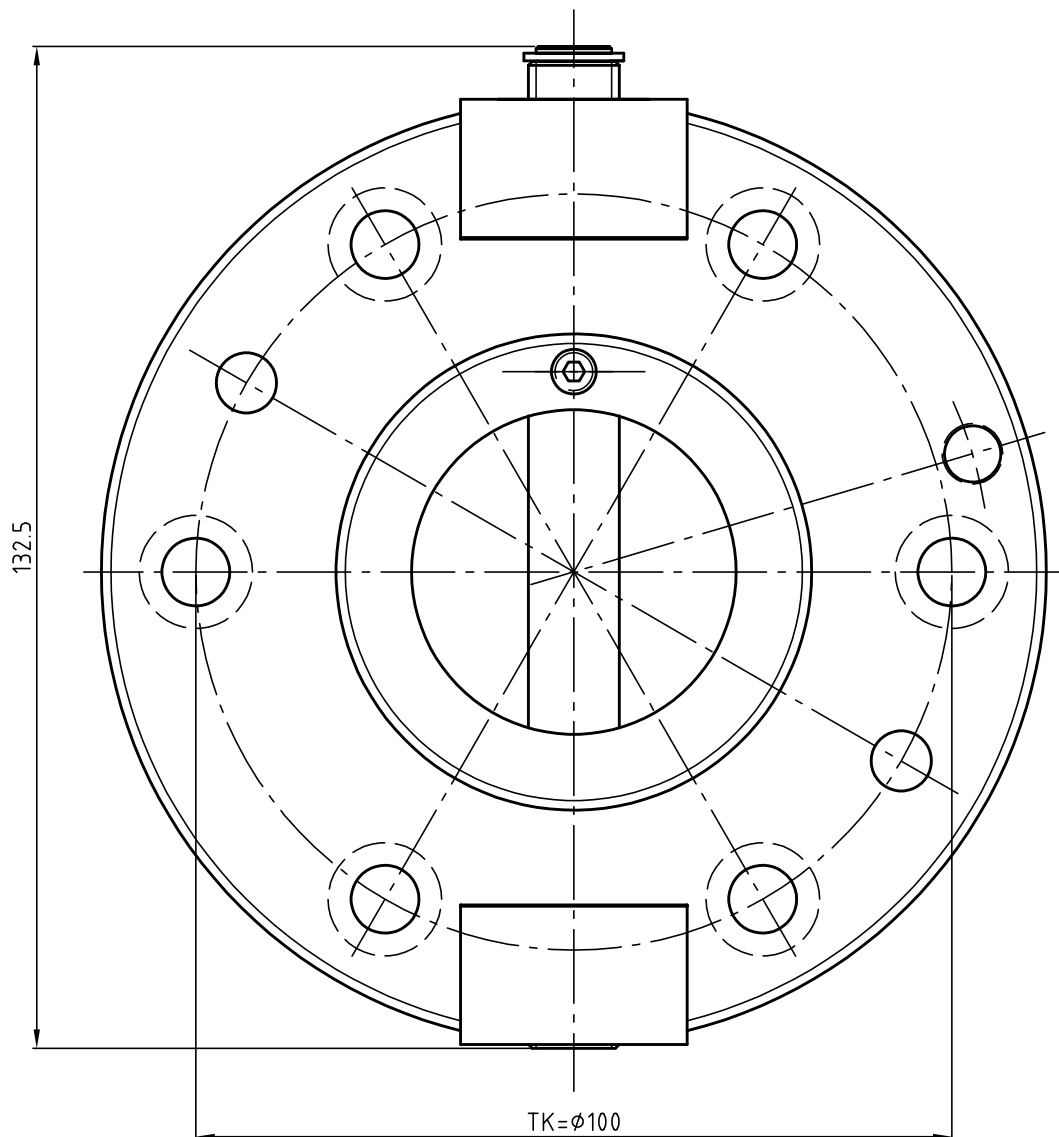
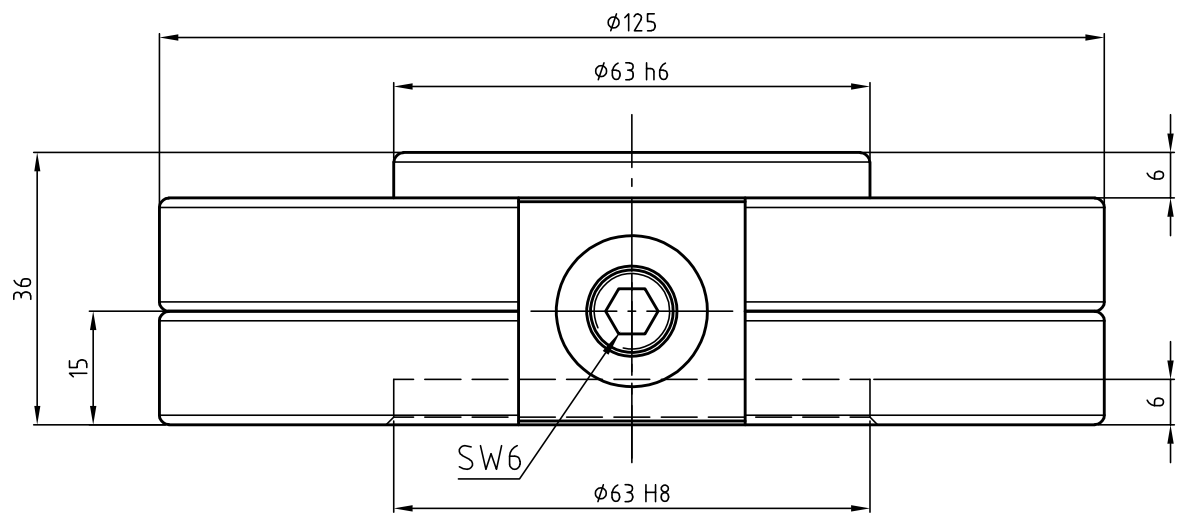
G-SWA125-2O	upper assembly, Al, anodized
G-SWA125-2O-N	upper assembly, steel, nitrated
G-SWA125-2U	lower assembly, Al, anodized
G-SWA125-2U-N	lower assembly, steel, nitrated

### Replacement axis...

EG-SWA125-A	for SWA125
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

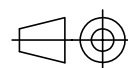


Datum 10.11.2016

Maßstab 1:1

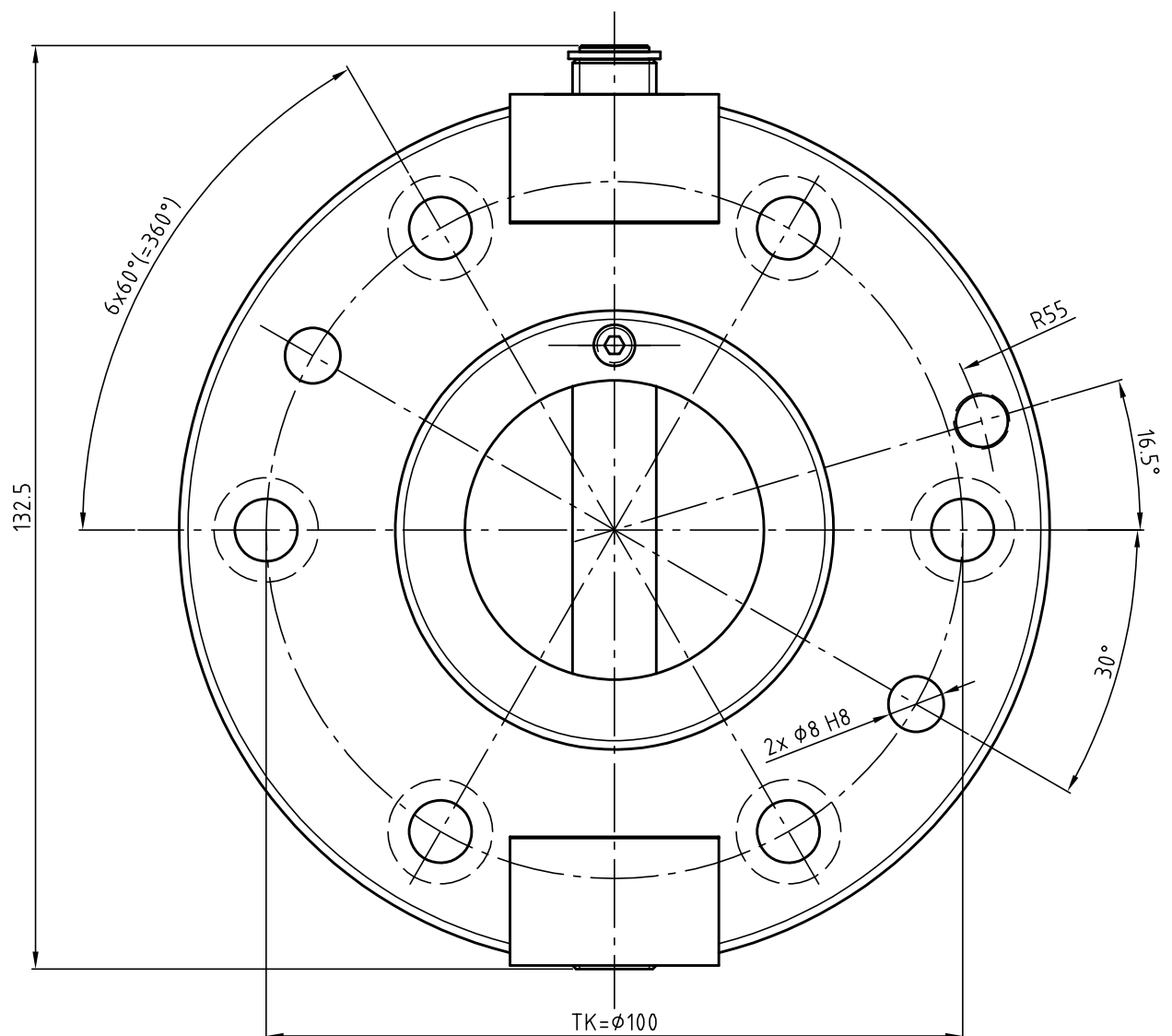
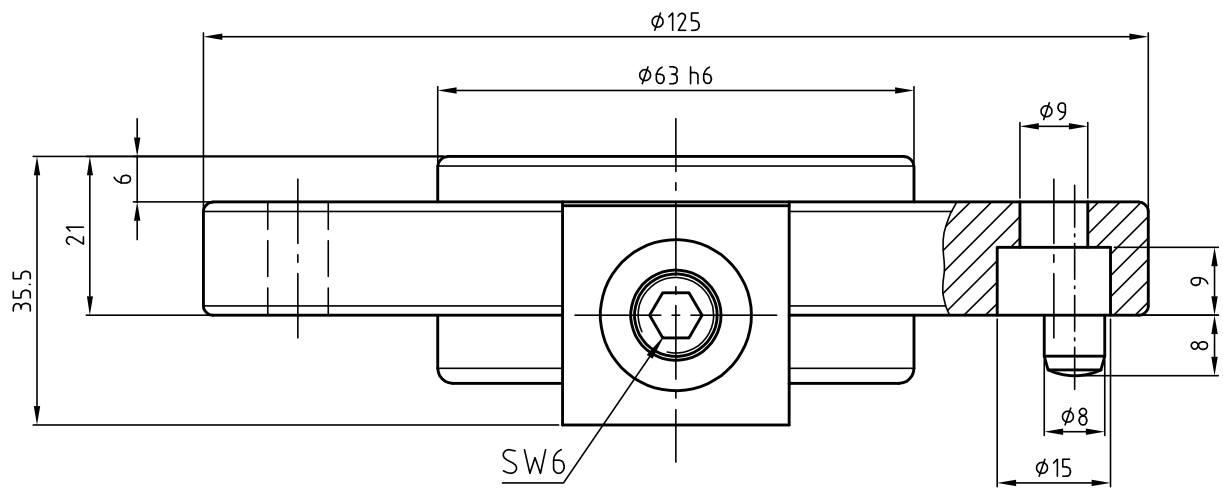
Zeichnungsnummer

G-SWA125-2Z



**GRIP**

GRIP GmbH Handhabungstechnik



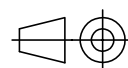
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-SWA125-20
Stahl	G-SWA125-20-S
St. nitriert	G-SWA125-20-N

Datum 10.11.2016

Maßstab 1:1

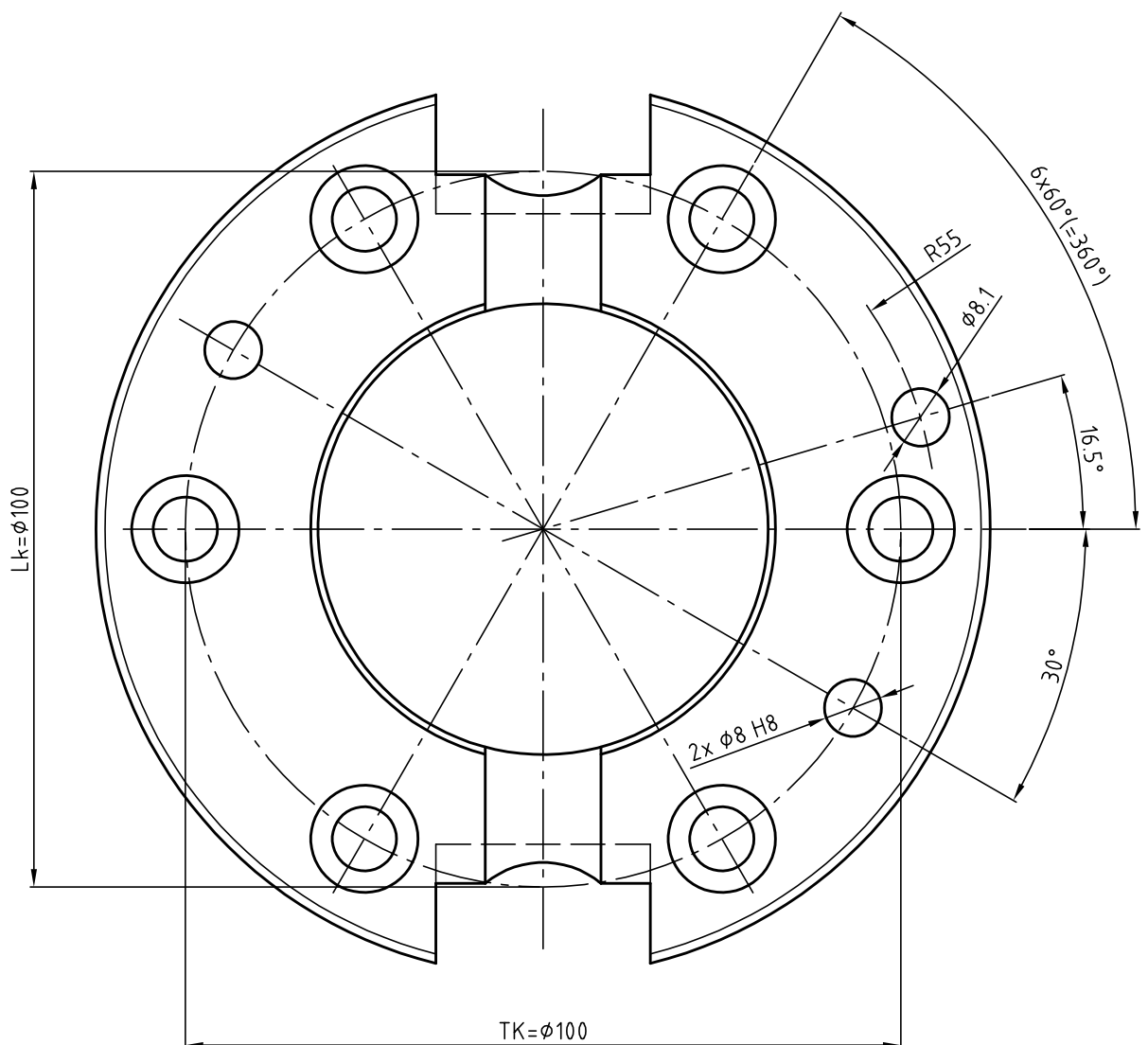
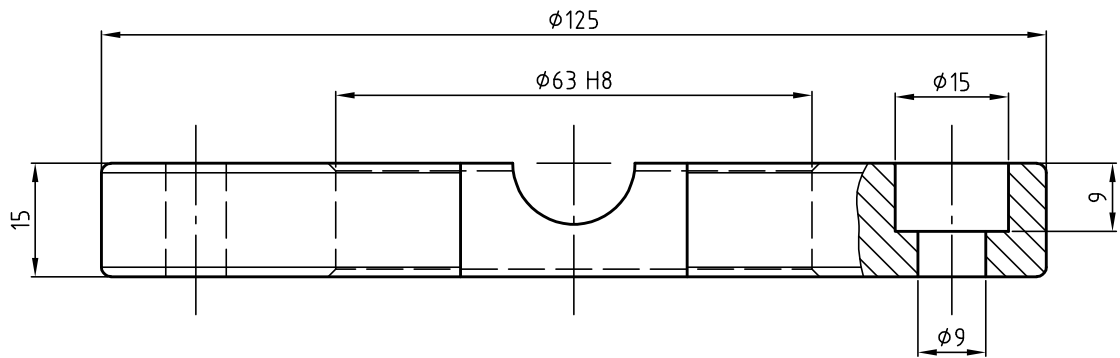
Zeichnungsnummer

G-SWA125-20



**GRIP**

GRIP GmbH Handhabungstechnik



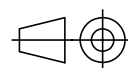
Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA125-2U
Stahl	G-SWA125-2U-S
St. nitriert	G-SWA125-2U-N

Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

G-SWA125-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SWA160

## Technical specifications

# GRIP

### Operating mode:

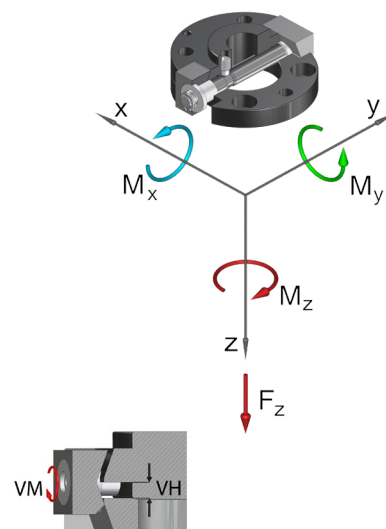
By turning the axis, the upper (1) and the lower assembly (2) are locked. The wedge-shaped flanges brace the system in a form-closed manner.

### Advantages:

Reduced height to a minimum  
Very low interference contours  
High repeat accuracy +/- 0,02 mm  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1



Technical specifications		SWA160	
Basic material		Al, anod.	St, nitrated
External diameter x height [mm]		160 x 40	
Pitch circle diameter [mm]		125	
Repeat accuracy +/- [mm]		0,02	
Tension Fz [N]		2.800	3.300
Compression -Fz [kN]		626	1.252
Torsion Mz [Nm]		460	500
Bending Mx [Nm]		350	410
Bending My [Nm]		280	320
Mass [kg]	Upper assembly	1,75	3,5
	Lower assembly	0,8	2
Recommended load [kg] *		56	62
Locking torque VM [Nm]		40	
Locking stroke VH [mm]		0 - 14	
Operating temperature range [°C]		-30 to +120	
* This guideline applies to the following assumptions: Acceleration: 10 m/s² gravity distance: 100 mm 2.5 times safety			

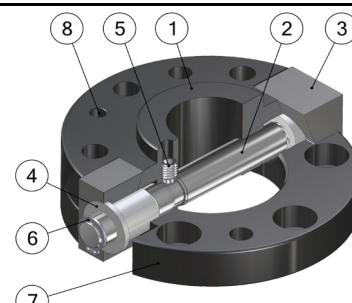


### Quick change adapter Ø160, drilled according to ISO...

G-SWA160-2O	upper assembly, Al, anodized
G-SWA160-2O-N	upper assembly, steel, nitrated
G-SWA160-2U	lower assembly, Al, anodized
G-SWA160-2U-N	lower assembly, steel, nitrated

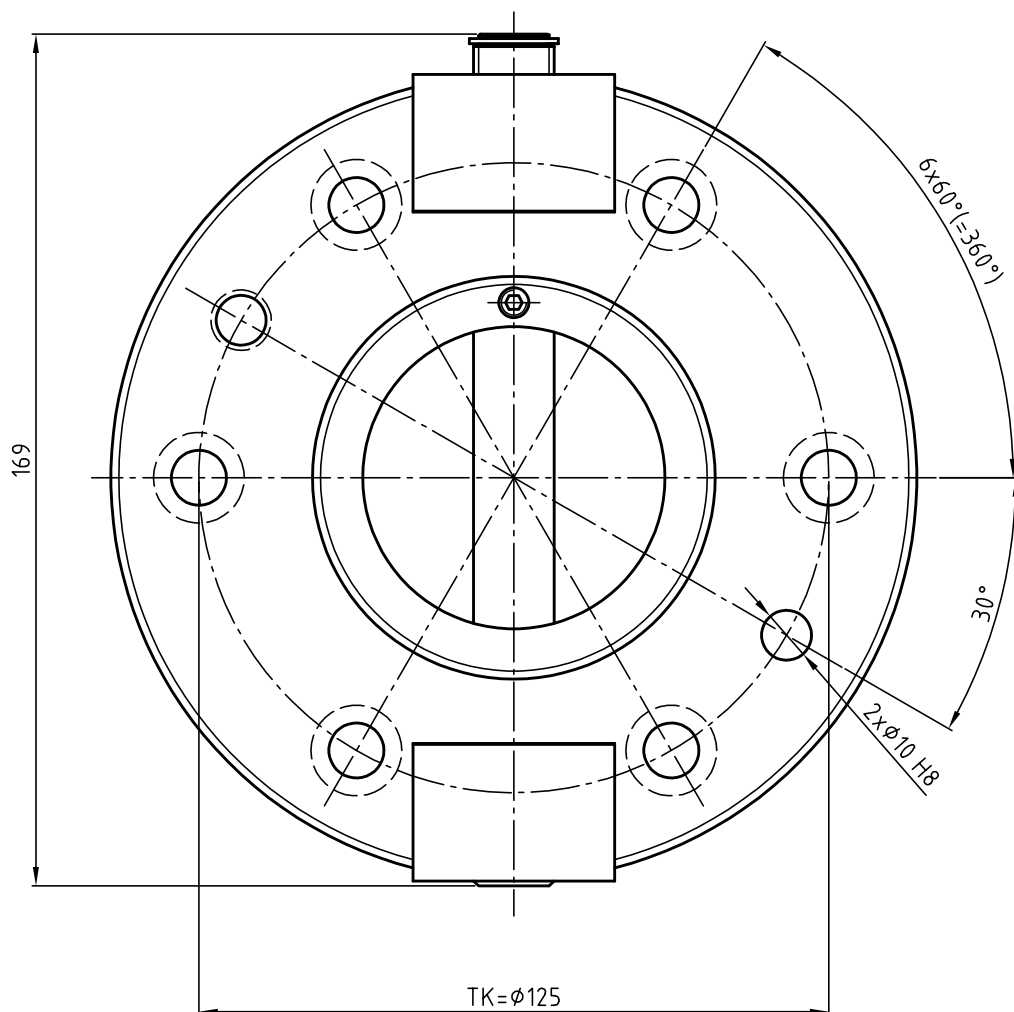
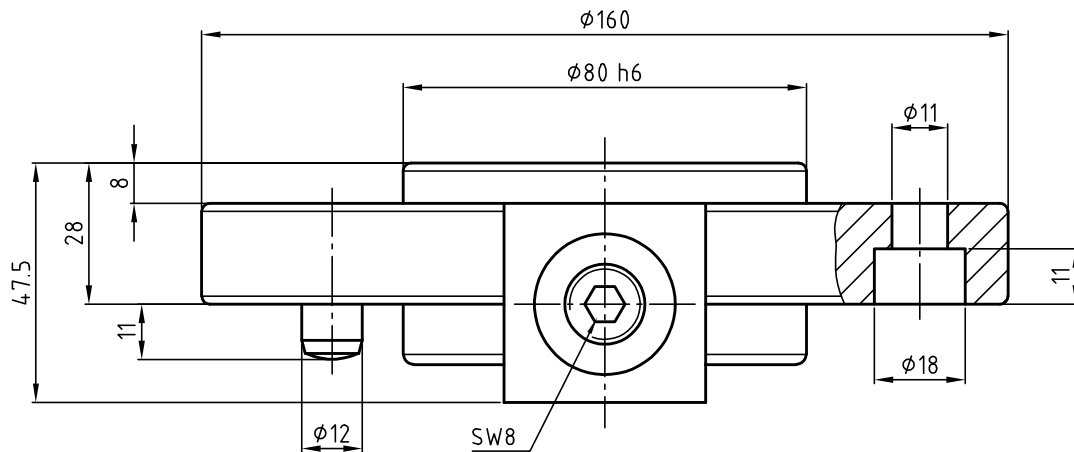
### Replacement axis...

EG-SWA160-A	for SWA160
-------------	------------



Pos.	Description
1	Upper assembly
2	Axis
3	Flange
4	Screw nut
5	Setscrew
6	Locking ring
7	Lower assembly
8	Index pin

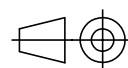




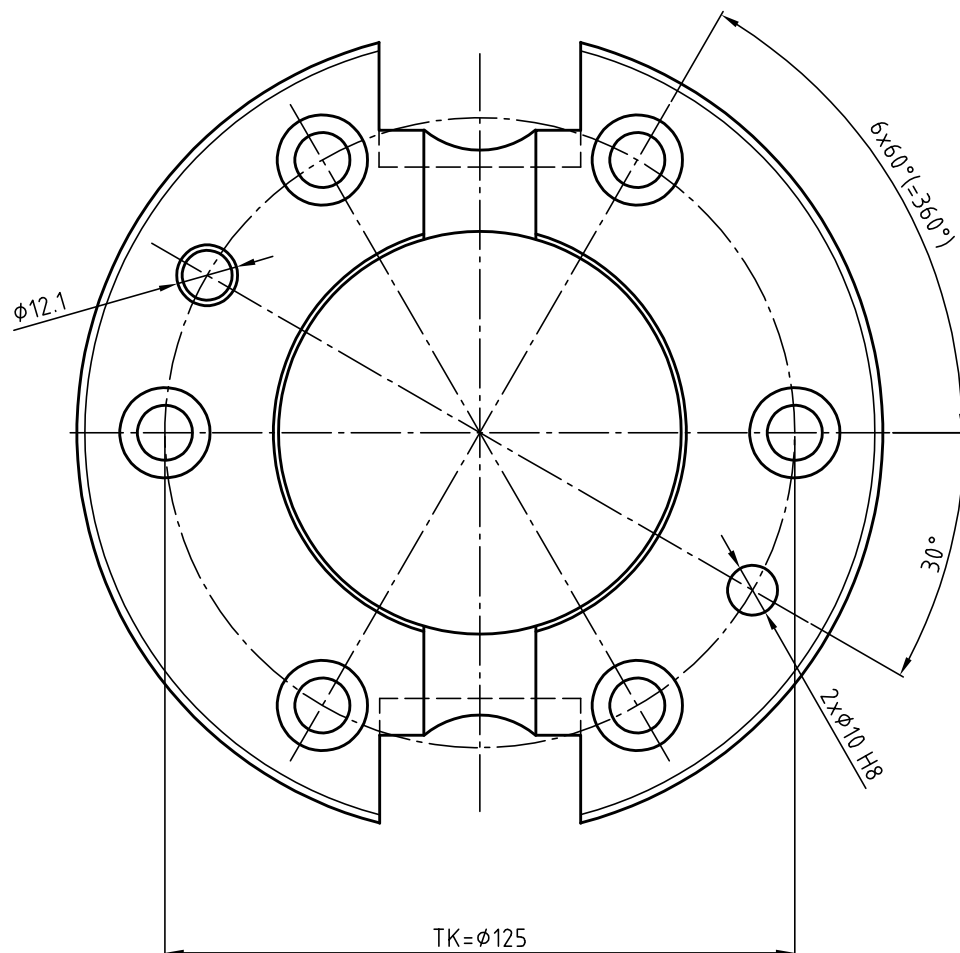
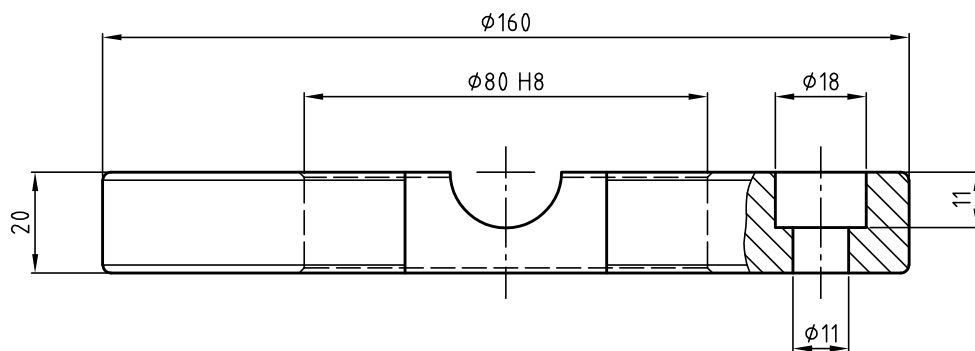
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-SWA160-20
Stahl	G-SWA160-20-S
St. nitriert	G-SWA160-20-N

Datum 10.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWA160-20



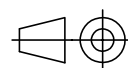
**GRIP**  
GRIP GmbH Handhabungstechnik



Grundmaterial	Bestellnummer Unterteil
Al. eloxiert	G-SWA160-2U
Stahl	G-SWA160-2U-S
St. nitriert	G-SWA160-2U-N

Datum 10.11.2016 Maßstab 1:1.5

Zeichnungsnummer  
G-SWA160-2U



**GRIP**  
GRIP GmbH Handhabungstechnik

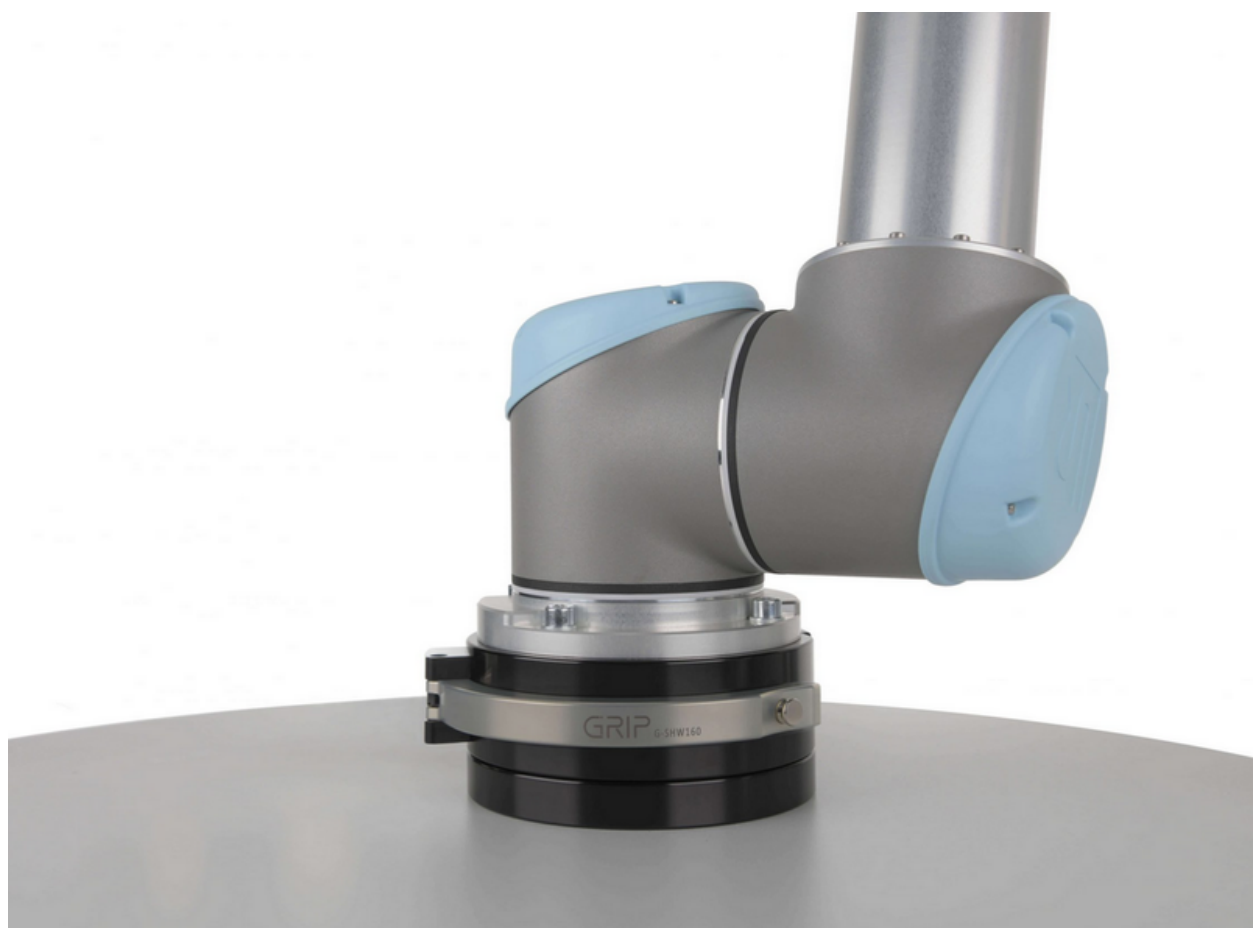


# BASE CONNECTOR SHW160

The GRIP Base Connector allows quick and easy removal of the entire robot arm. The robot arm is bolted to a special tool changer which is bolted to a table or cell. This manual tool changer system allows companies to use the same robot in multiple different cells without having to unscrew the robot everytime. A simple lever allows the robot to be released from its current position and taken to a new position. The entire process takes only a few seconds. It enables companies to be more flexible with the robots that they have and optimizes the use of their resources.

## Base Connector Advantages:

- Allows transfer of entire robot arm
- Optimization of robot cells and resources
- Intuitive to use
- Very strong
- Repeat accuracy < 0.02 mm

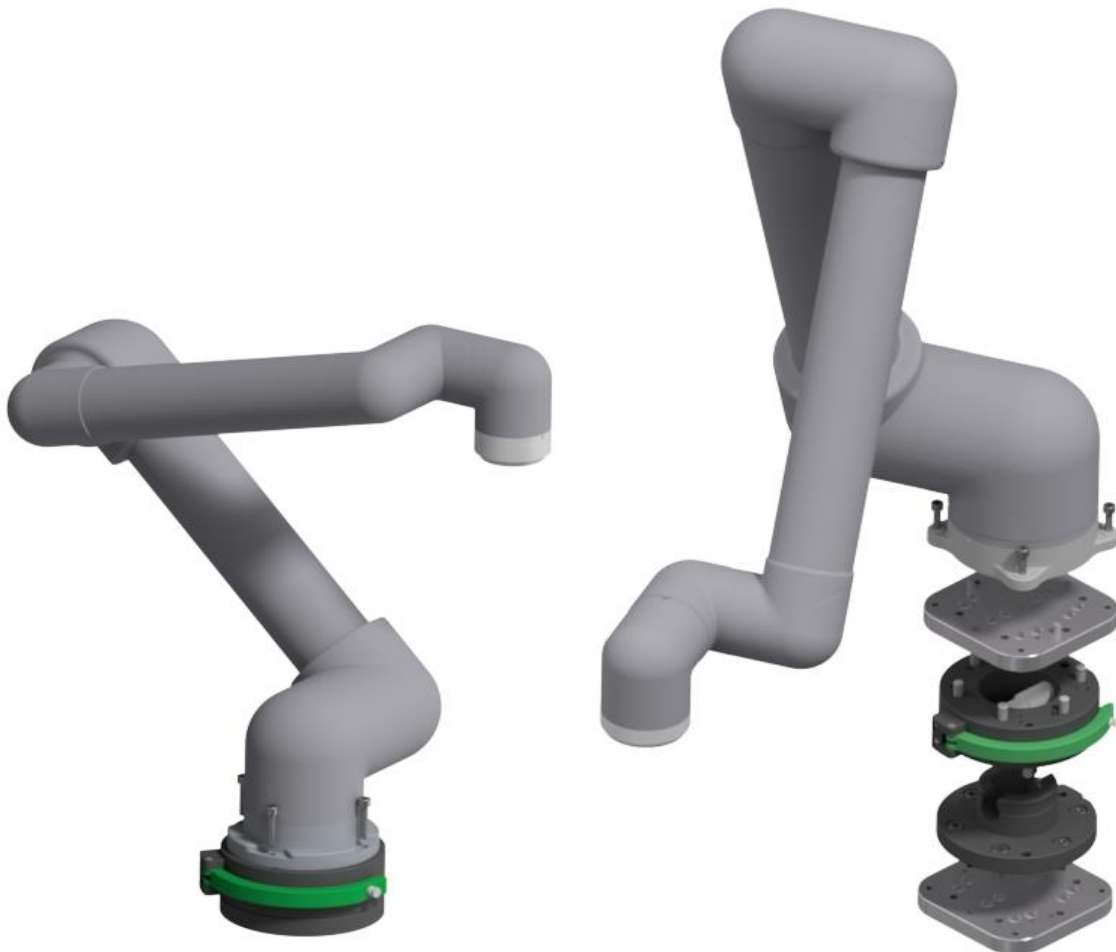


## Base Connector SHW

The **Base Connector SHW160** is the optimal connection between the robot and its base. It takes only seconds to change out the robot or place it into a different application. The intuitive and safe operation will make your robot more flexible.

The **Base Connector SHW160** is compatible with all light robots / cobots with a max payload of approximately 8 kg and a robot weight of approximately 25 kg. Please inform us of the robot manufacturer to ensure the correct drill hole pattern.

**\* In case of extreme loads we recommend the Base Connector SWS200. Please consult us for the best configuration.**

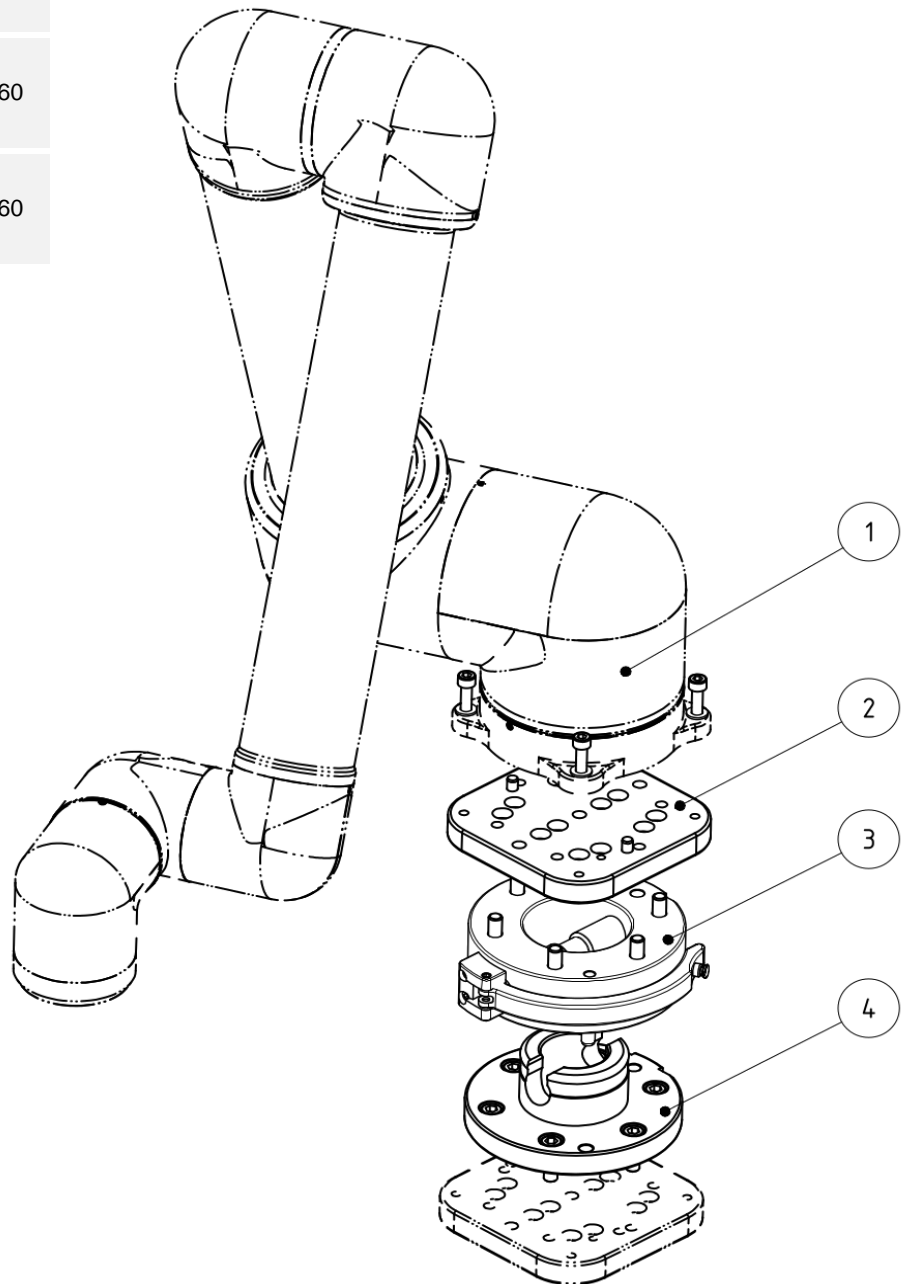


**Base Connector SHW160**

The **Base Connector SHW160** is the ideal mechanical connection for light robots. The intuitive operation is easy and does not require any tools.

The SHW upper assembly, as depicted in the drawing, is mounted to the base of the robot. The lower assembly is mounted to the work surface.

Pos.	Description
1	<b>Robot</b>
2	<b>G-UF158-20</b> Universal flange Aluminum 158x158x20
3	<b>G-SHW160-2OE-BC</b> Base Connector SHW160 Upper assembly
4	<b>G-SHW160-2UE-BC</b> Base Connector SHW160 Lower assembly



# Base Connector SHW160

Technical specifications

GRIP

### Operating mode:

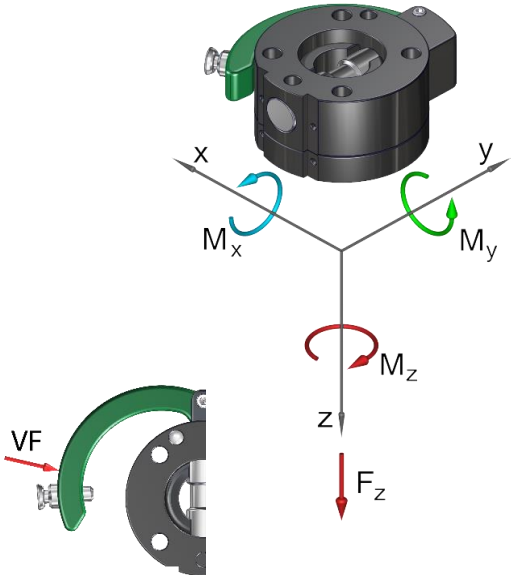
By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Allows removal or installation of the entire robot arm within seconds  
Intuitive operation  
Can be released and closed with one handle  
High repeat accuracy +/- 0.02 mm  
Holds up to 5,000 changing cycles  
Interface according to DIN EN ISO 9409-1



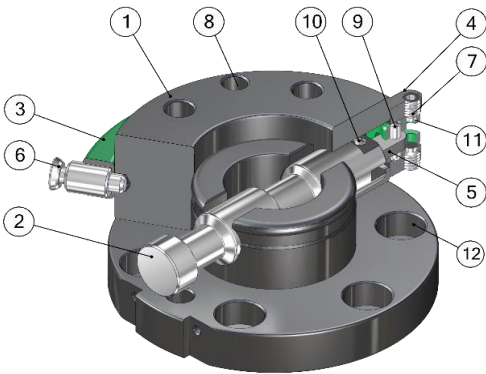
Technical specifications		SHW160
Basic material		Al. anod.
External diameter x height [mm]		160 x 70
Pitch circle diameter [mm]		125
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		2.000
Compression -Fz [kN]		626
Torsion Mz [Nm]		300
Bending Mx, My [Nm]		320
Mass [kg]	upper assembly	2,8
	lower assembly	1,2
Recommended load [kg]		25*
Locking force VF [N]		10 - 100
Locking stroke VH [mm]		0 - 1
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 3 m/s², gravity distance: 500 mm, double safety		

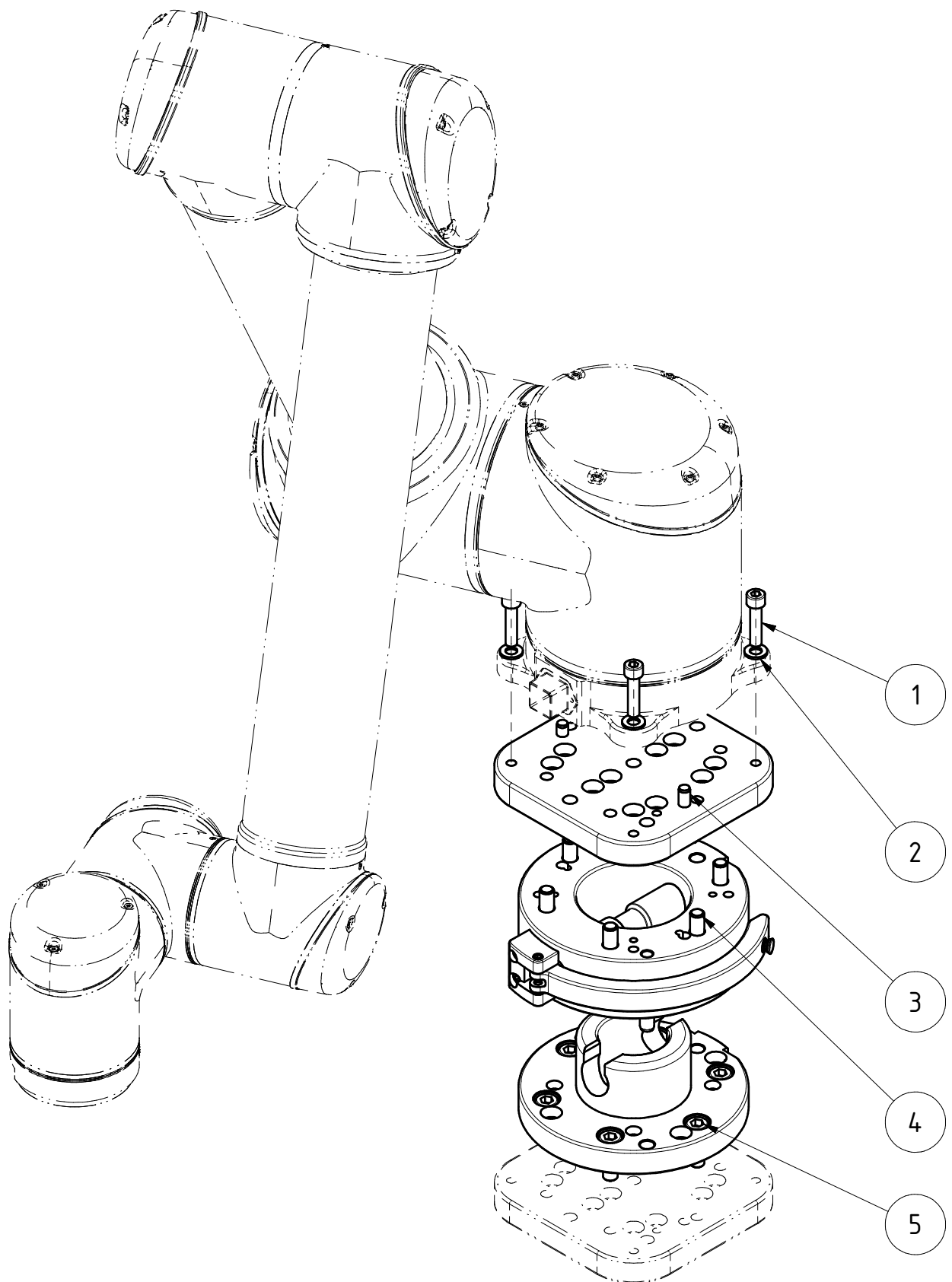


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
8	Index pin
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### Thrust lever change system Ø160, drilled acc. to ISO...

G-SHW160-2OE-BC	upper assembly, E-Mount, Al, anodized
G-SHW160-2OE-BC01	upper assembly, E-Mount, Al, anodized, UR
G-SHW160-2UE-BC	lower assembly, E-Mount, Al, anodized
G-SHW160-2UE-BC01	lower assembly, E-Mount, Al, anodized, UR



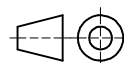


Stückliste			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	4	ISO 4762 - M8 x 35	Innensechskantschraube
2	4	DIN 125 - A 8,4	Unterlegscheibe
3	2	ISO 2338 - 8 m6 x 20	Zylinderstift
4	6	DIN 912 - M10 x 55	Zylinderkopfschraube
5	6	ISO 4762 - M10 x 25	Innensechskantschraube

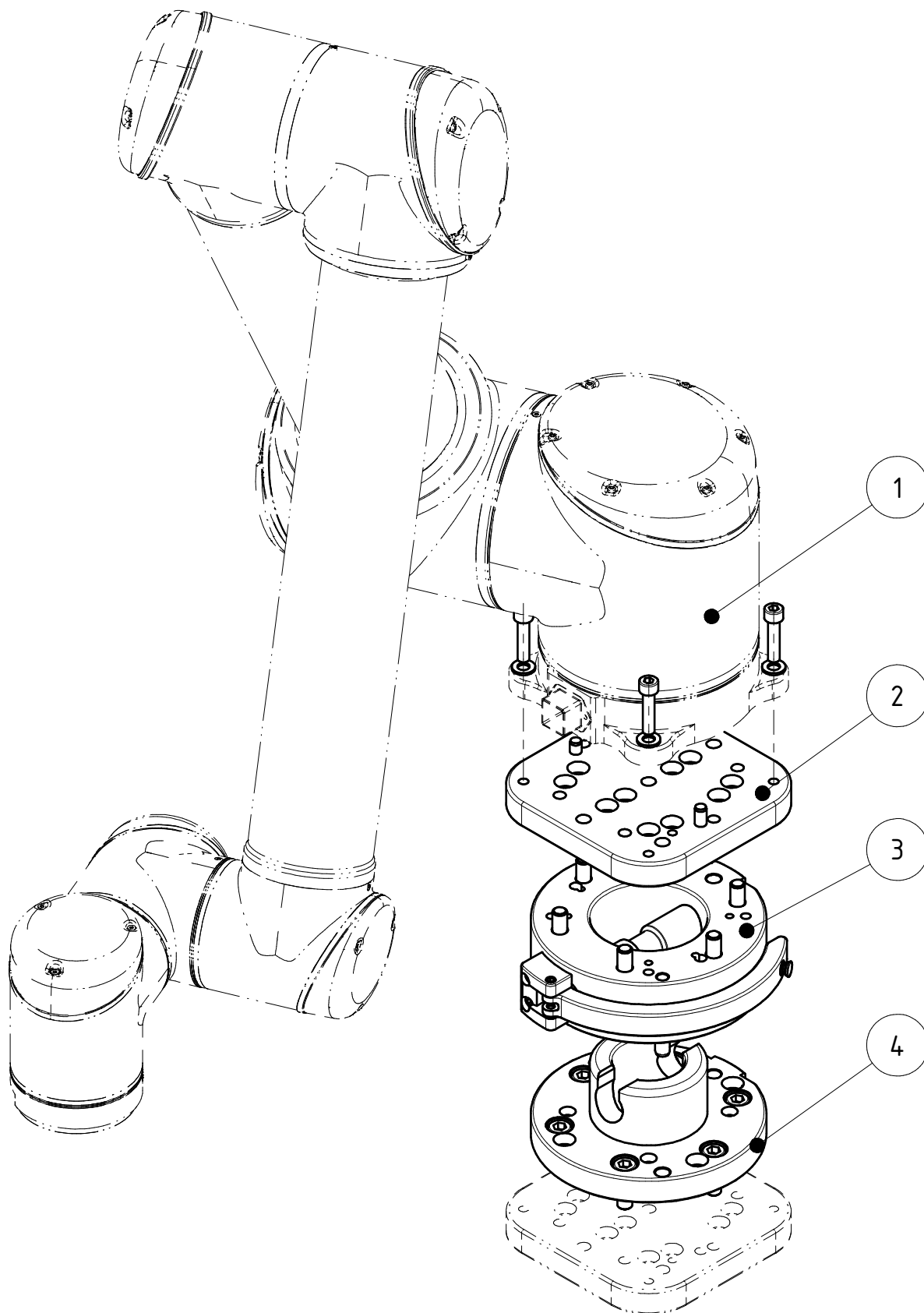
Datum 04.08.2020 Maßstab 1:4

Zeichnungsnummer

Base Connector SHW160-Normteile



**GRIP**  
GRIP GmbH Handhabungstechnik



#### Stückliste

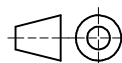
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	UR3/5/10/16	Universal Robot 3/5/10/16
1	1	G-UF158-20	Universalflansch (UR10/16)
3	1	G-SHW160-20E-BC01	SHW Oberteil
4	1	G-SHW160-2UE-BC01	SHW Unterteil

Datum 04.08.2020

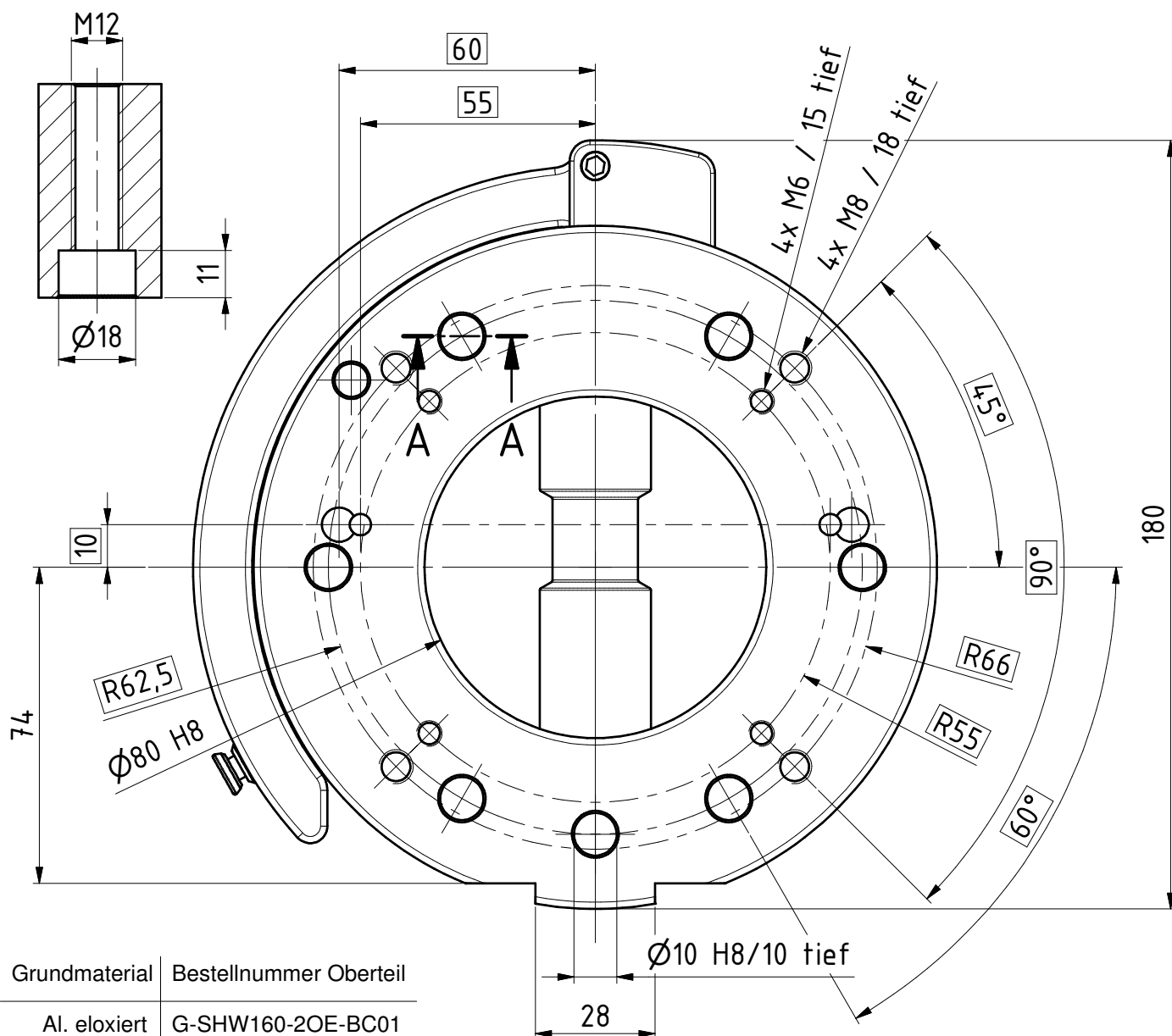
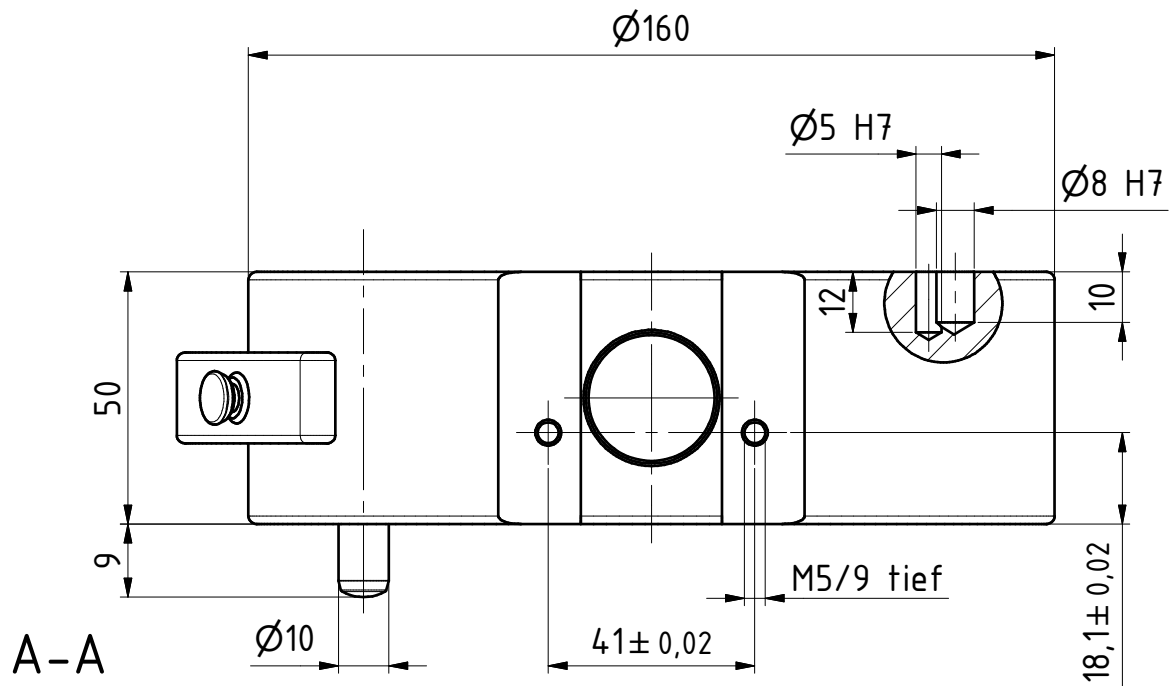
Maßstab 1:4

Zeichnungsnummer

Base Connector SHW160



**GRIP**  
GRIP GmbH Handhabungstechnik



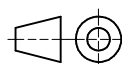
Grundmaterial	Bestellnummer Oberteil
Al. eloxiert	G-SHW160-2OE-BC01

Datum 04.08.2020

Maßstab 1:1,5

Zeichnungsnummer

G-SHW160-2OE-BC01



**GRIP**  
GRIP GmbH Handhabungstechnik

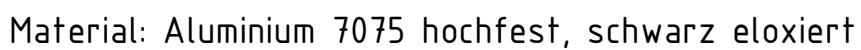




Technical drawing of a mechanical part, likely a shaft or rod, showing dimensions and features. The part is cylindrical with a total length of 20. Key dimensions and features include:

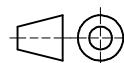
- Overall length: 20
- Outer diameter:  $\varnothing 15$
- Inner diameter (hole):  $\varnothing 9$
- Step height (difference between outer and inner diameters): 9
- Inner diameter (hole) at the right end:  $\varnothing 6$
- Radius at the right end: 12

Bohrbild SHW/MGW160



Maßstab 1:1,5

G-UF158-20



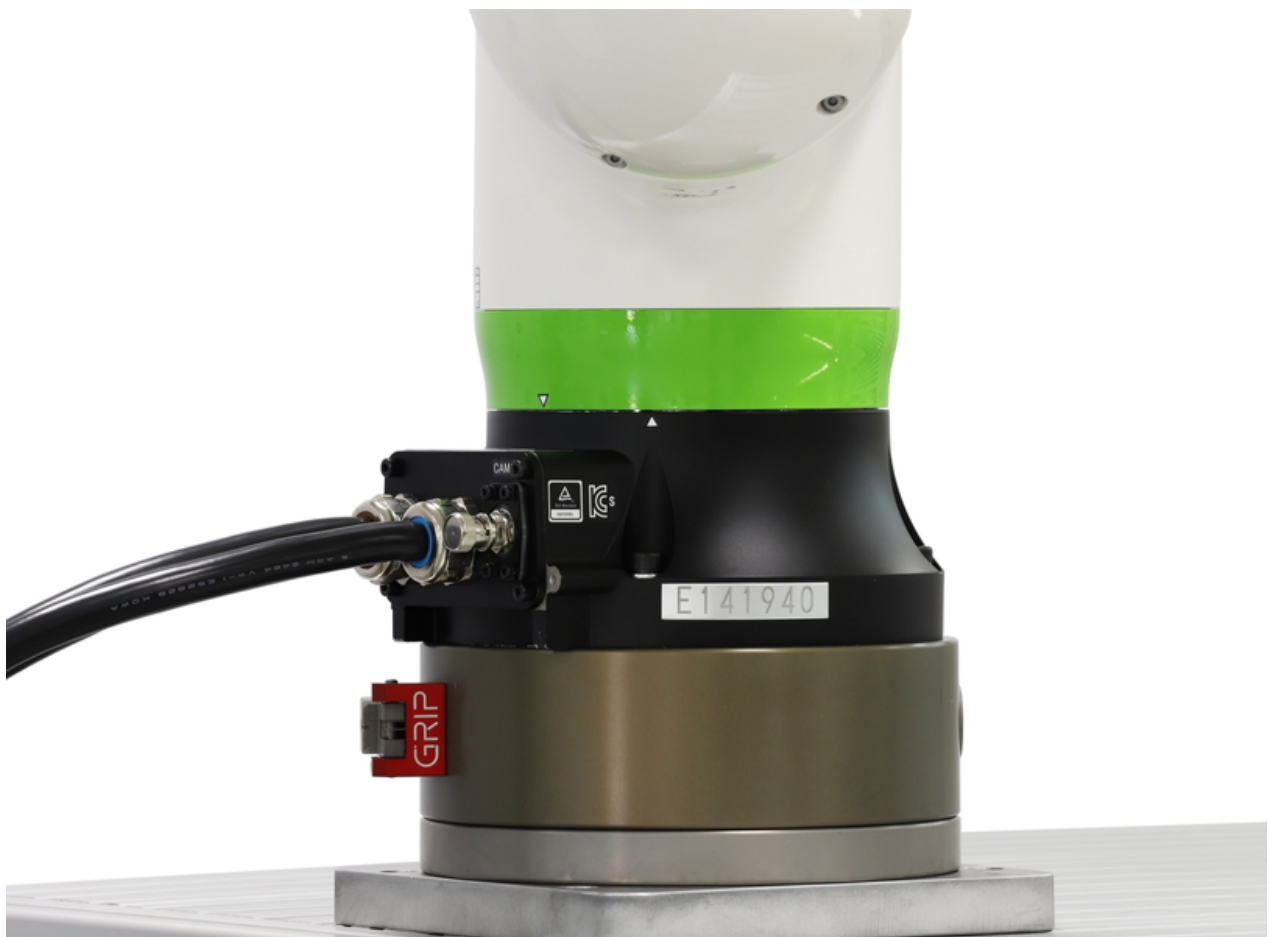
GRIP GmbH Handhabungstechnik

# BASE CONNECTOR SWS200

The GRIP Base Connector allows quick and easy removal of the entire robot arm. The robot arm is bolted to a special tool changer which is bolted to a table or cell. This manual tool changer system allows companies to use the same robot in multiple different cells without having to unscrew the robot everytime. A simple lever allows the robot to be released from its current position and taken to a new position. The entire process takes only a few seconds. It enables companies to be more flexible with the robots that they have and optimizes the use of their resources.

## Base Connector Advantages:

- Allows transfer of entire robot arm
- Optimization of robot cells and resources
- Intuitive to use
- Very strong
- Repeat accuracy < 0.02 mm



## Base Connector SWS

The **Base Connector SWS200** is the optimal connection between the robot and its base. It takes only seconds to change out the robot or place it into a different application. The intuitive and safe operation will make your robot more flexible.

The **Base Connector SWS200** is compatible with all light robots / cobots with a max payload of approximately 16 kg and a robot weight of approximately 50 kg. Please inform us of the robot manufacturer to ensure the correct drill hole pattern.

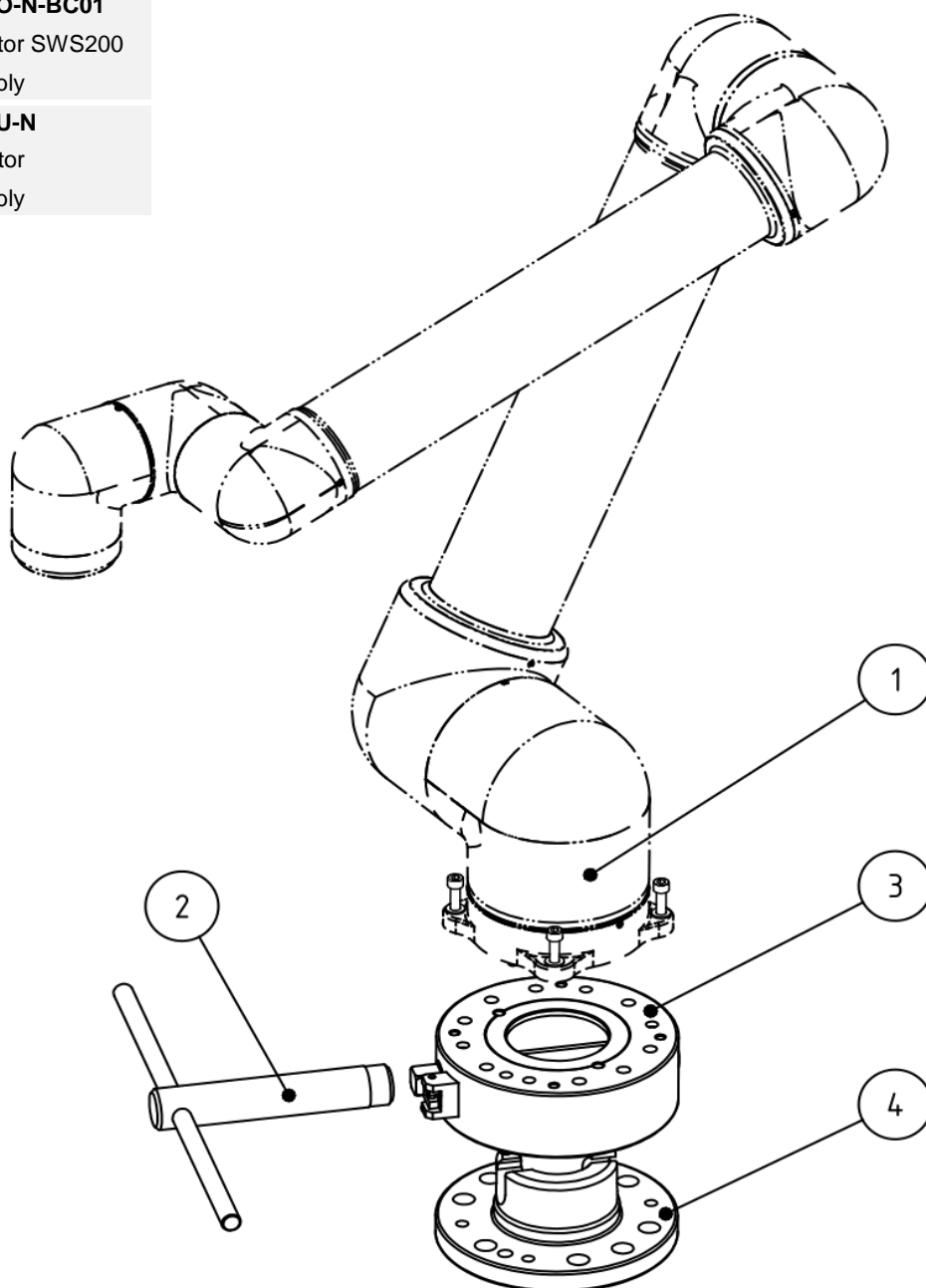


**Base Connector SWS200**

The **Base Connector SWS200** is the ideal mechanical connection for light robots. The intuitive operation is easy and does not require any tools.

The SWS upper assembly, as depicted in the drawing, is mounted to the base of the robot. The lower assembly is mounted to the work surface.

Pos.	Description
1	Robot
2	ZG-VKS160-SW20 Square Socket Key
3	G-SWS200-20-N-BC01 Base Connector SWS200 Upper assembly
4	G-SWS200-2U-N SWS Connector Lower assembly



# Base Connector SWS200

Technical specifications

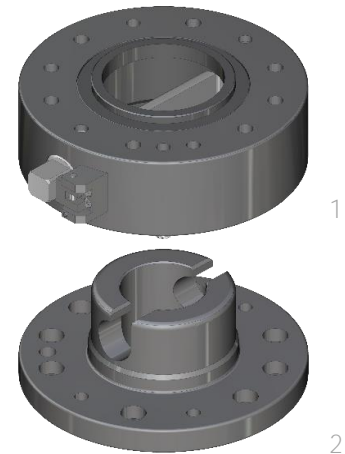
# GRIP

## Operating mode:

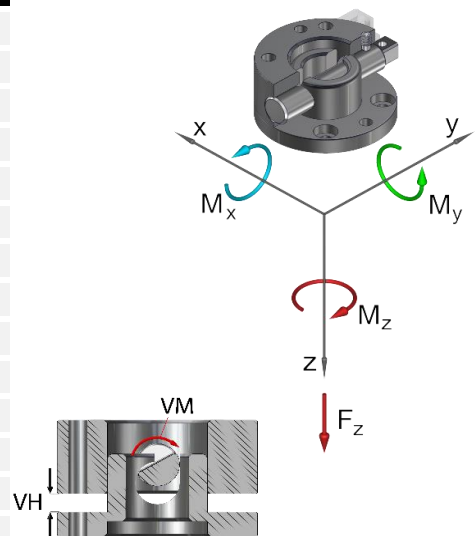
By rotating the semi-cylindrical bolt by 180° the upper assembly (1) and the lower assembly (2) are braced in a form-closed manner

## Advantages:

Without hand lever, thereby low interference contours  
High repeat accuracy +/- 0.02 mm  
Optional connection of a power coupling MEK for electrical and pneumatical ducts  
Holds up to 10,000 changing cycles  
During locking, the lower assembly is pulled around the locking stroke  
Interface according to DIN EN ISO 9409-1  
Low dead weight due to the combination of steel and aluminum



Technical specifications		SWS200
Basic material		steel, nitrated + Al
External diameter x Height [mm]		200 x 85
Pitch circle diameter [mm]		160
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		14.500
Compression -Fz [kN]		1.480
Torsion Mz [Nm]		1.250
Bending Mx, My [Nm]		1.350
Mass [kg]	upper assembly	6,4
	lower assembly	6
Recommended load [kg] *		50
Locking moment VM [Nm]		5 - 35
Locking stroke VH [mm]		0 - 10
Operating temperature range [°C]		-30 to +120
<small>* This guideline applies to the following assumptions: Acceleration: 3m/s², gravity distance: 1.000 mm, 1,7 times safety</small>		



## Quick change system Ø200...

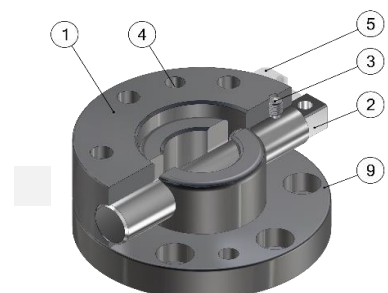
drilled according to ISO, steel, nitrated, with pre-centring...

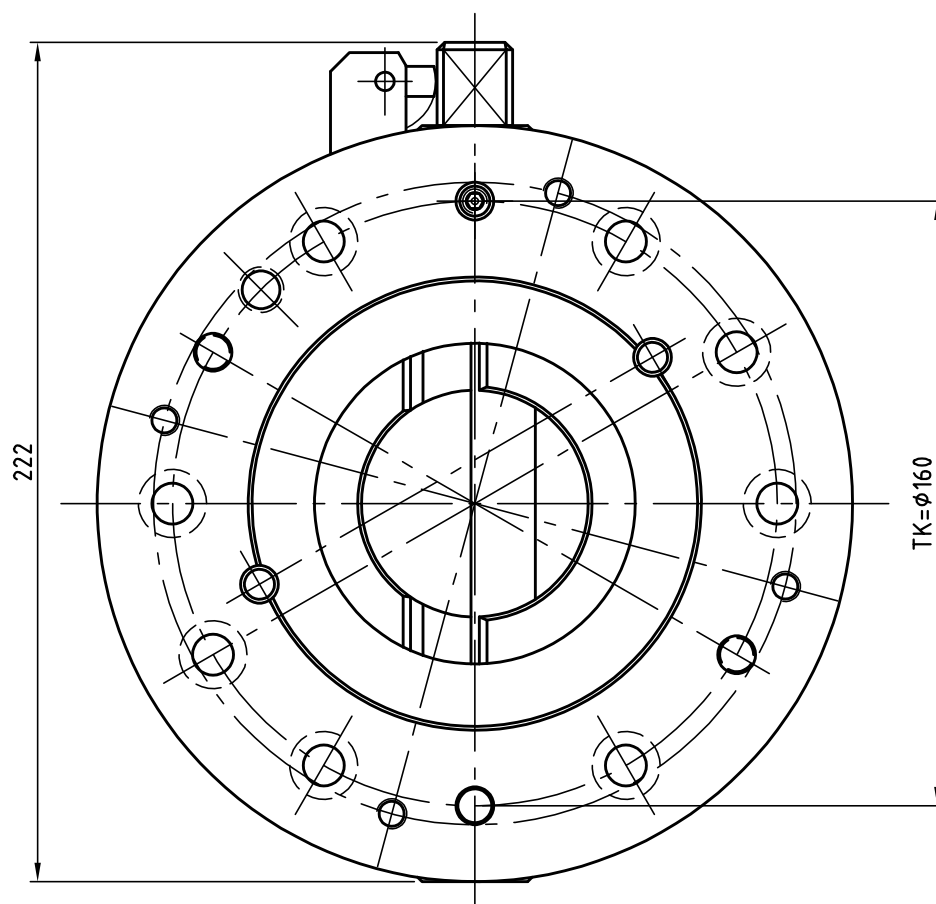
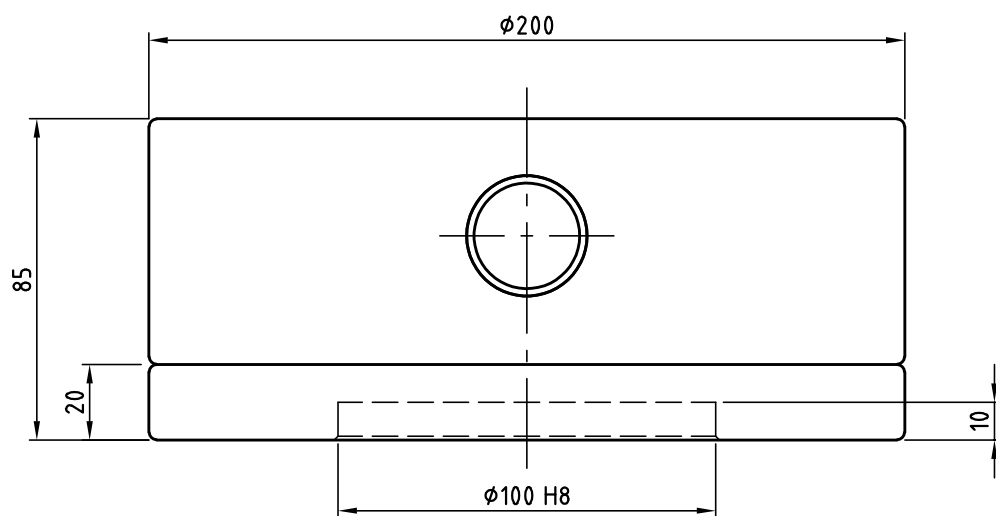
G-SWS200-2O-N-BC01	upper assembly, anti-rotation-protection, UR
G-SWS200-2OEN-BC01	upper assembly, E-Mounting, anti-rotation-prot., UR
G-SWS200-2U-N	lower assembly
G-SWS200-2UEN	lower assembly, E-Mounting

## Square socket key...

ZG-VKS160-SW20	for SW 20
----------------	-----------

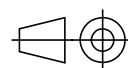
Pos.	Description
1	Upper assembly
2	Semi-cylindrical bolt
3	Setscrew
4	Index pin
5	Anti-rotation lock
9	Lower assembly





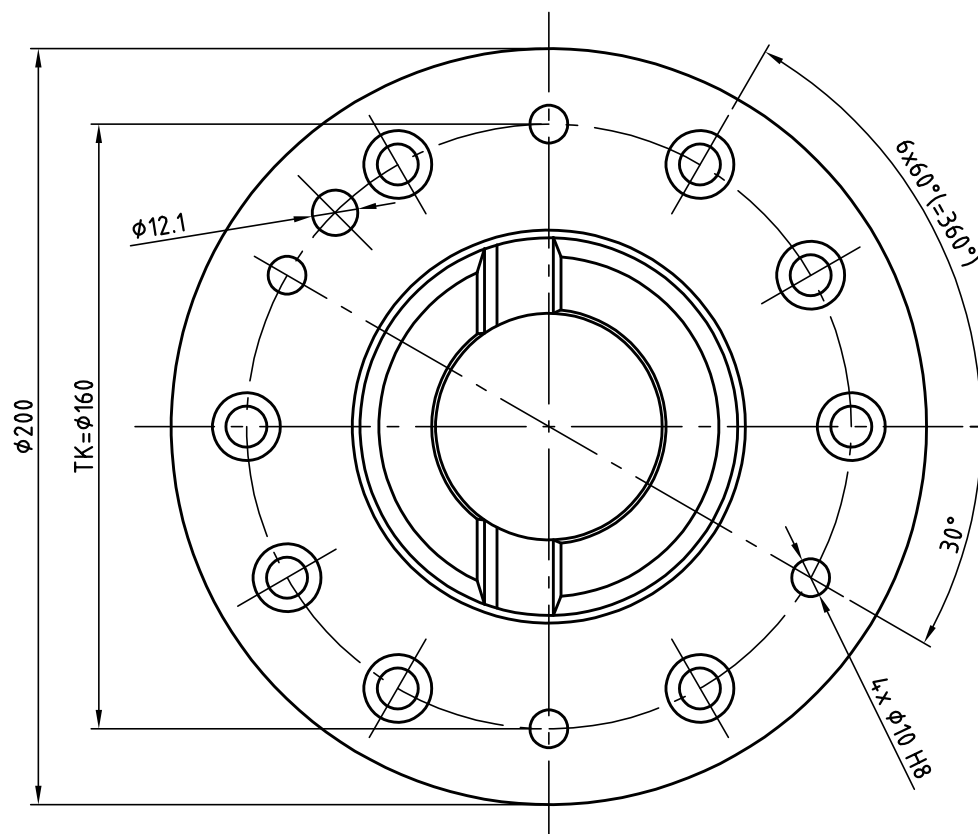
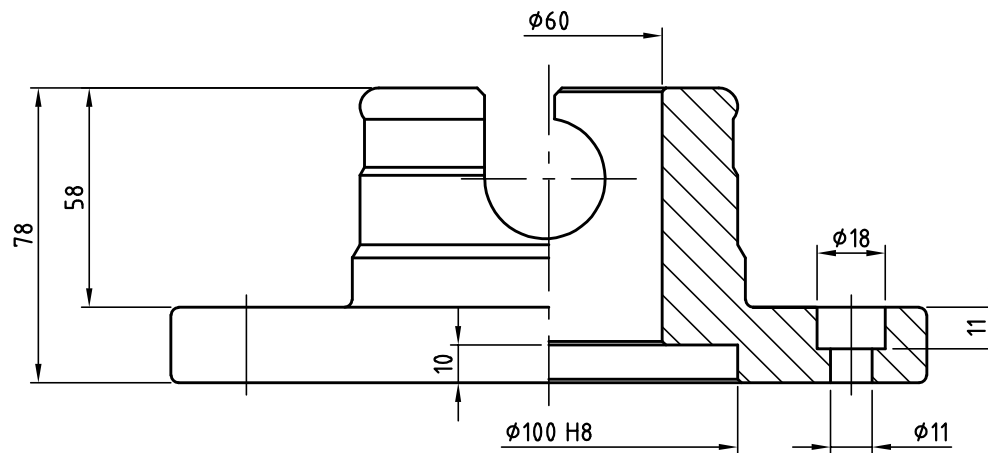
Datum 04.12.2020 Maßstab 1:2

Zeichnungsnummer  
G-SWS200-2Z-BC01



**GRIP**  
GRIP GmbH Handhabungstechnik



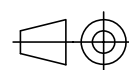


Datum 10.11.2016

Maßstab 1:2

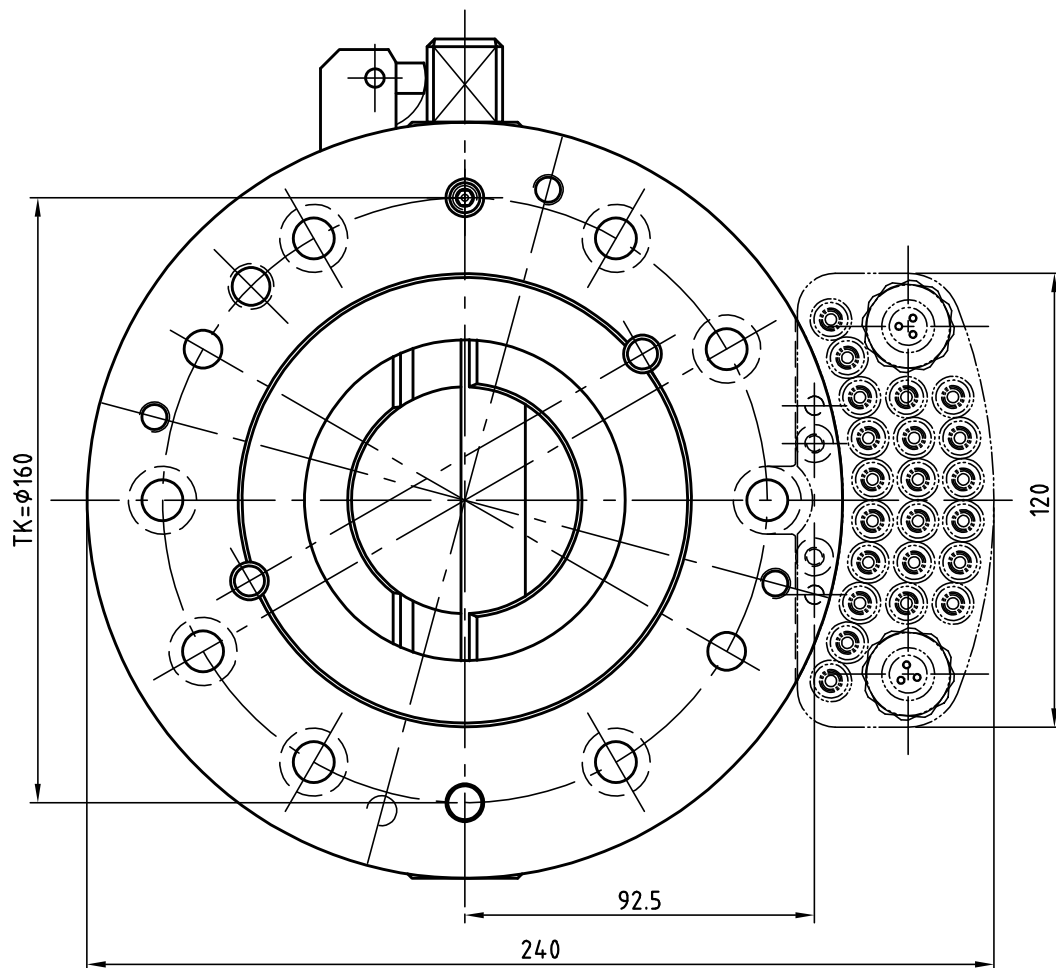
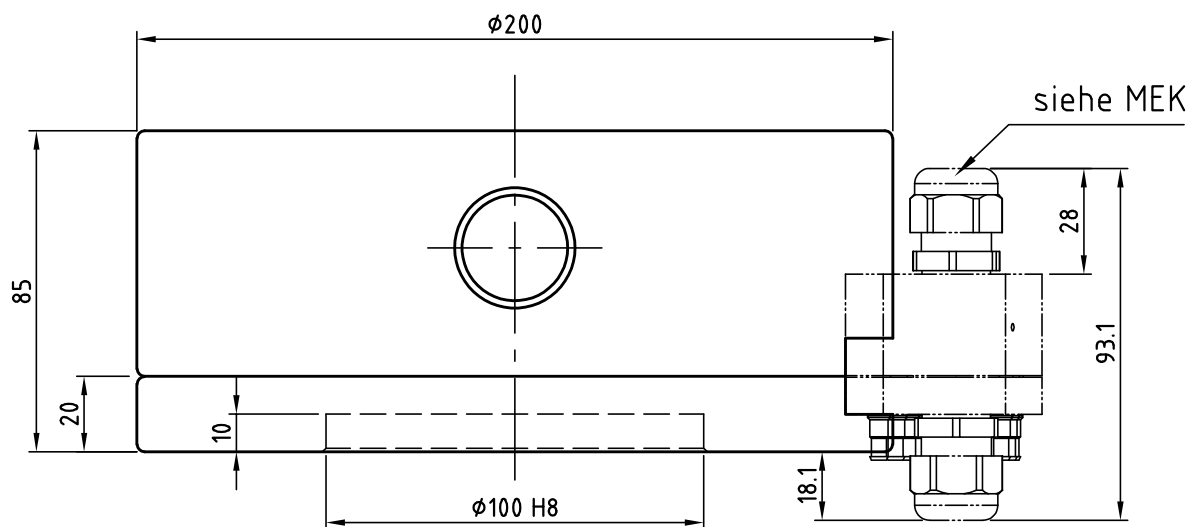
Zeichnungsnummer

G-SWS200-2U-N



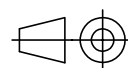
**GRIP**  
GRIP GmbH Handhabungstechnik



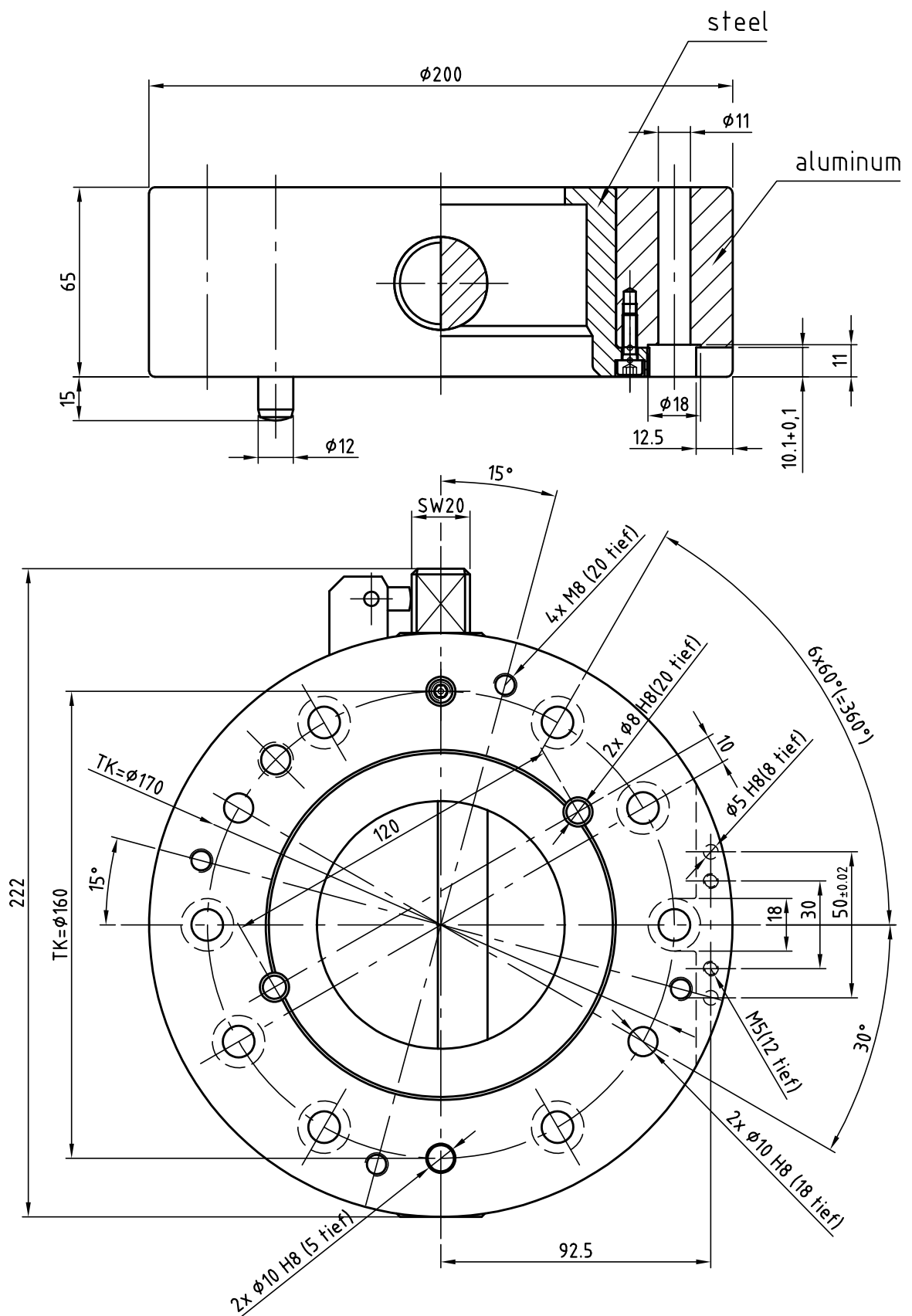


Datum 04.12.2020 Maßstab 1:2

Zeichnungsnummer  
G-SWS200-2ZE-BC01



**GRIP**  
GRIP GmbH Handhabungstechnik

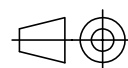


Datum 04.12.2020

Maßstab 1:2

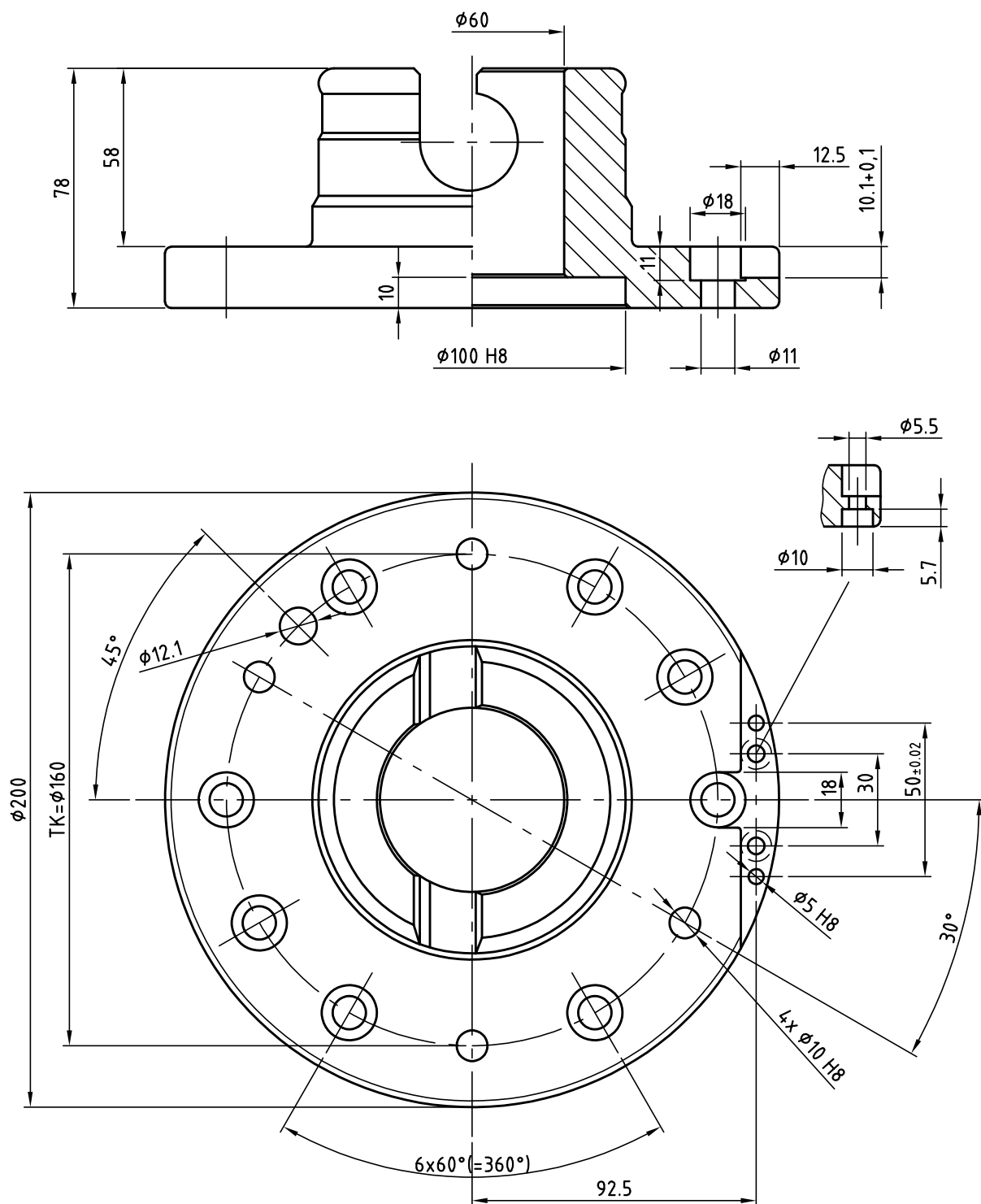
Zeichnungsnummer

G-SWS200-20EN-BC01



**GRIP**

GRIP GmbH Handhabungstechnik

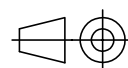


Datum 10.11.2016

Maßstab 1:2

Zeichnungsnummer

G-SWS200-2UEN



**GRIP**

GRIP GmbH Handhabungstechnik

# SHS CONNECTOR

The SHS Connector is equipped with integrated pneumatic feedthroughs, with electrical feedthroughs being optional. The Connector consists of a cylindrical bolt which locks the upper and lower assemblies. Closing the lever to lock, cinches the two assemblies together. A centering disc can be installed on both the upper assembly (robot side) and lower assembly (tool side) and ensures that the tools are correctly aligned with the robot arm.

## SHS Connector Advantages:

- Integrated pneumatic feedthroughs
- Integrated mounting surface for energy feed-through
- Withstands high loads
- Tool-free thanks to integrated operating lever
- High repeatability < 0.02 mm
- Durable - over 5.000 change cycles without loss of repeatability
- Interface according to DIN EN ISO 9409-1
- Intuitive operation: Can be opened and closed with one hand
- Low weight - made of high-strength anodized aluminum
- Locking pin secures hand lever against accidental release

## SIZES

SHS050  
SHS063  
SHS080  
SHS100  
SHS125  
SHS160



# G-SHS050

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

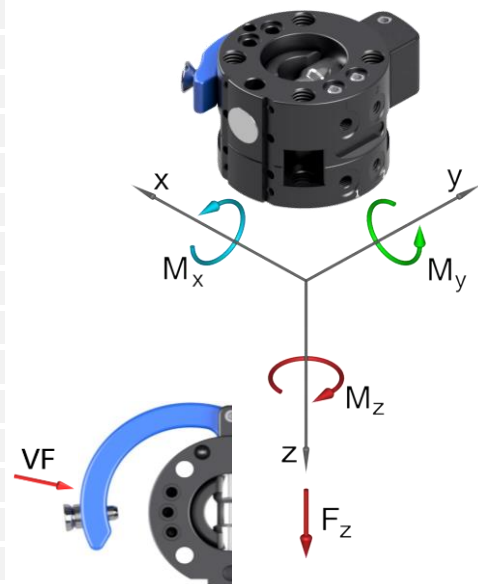
Optional connection of an energy feed-through for electrical and pneumatic ducts

With 4 integrated pneumatic ducts

Interface according to DIN EN ISO 9409-1-40-4-M6



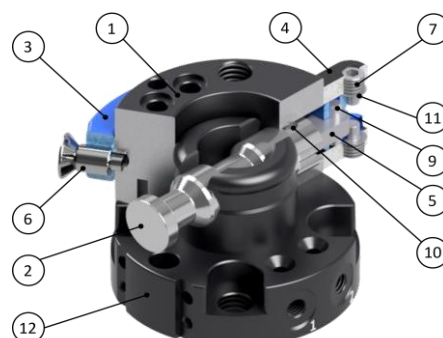
Technical specifications		SHS050
Basic material		Al. anod.
External diameter x height [mm]		50 x 39
Pitch circle diameter [mm]		40
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		700
Compression -Fz [kN]		48
Torsion Mz [Nm]		75
Bending Mx, My [Nm]		45
Mass [kg]	upper assembly	0,13
	lower assembly	0,07
Recommended load [kg]		8* / 12**
Locking force VF [N]		4 - 50
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	2 x M5 a. 2 x D=2,8
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

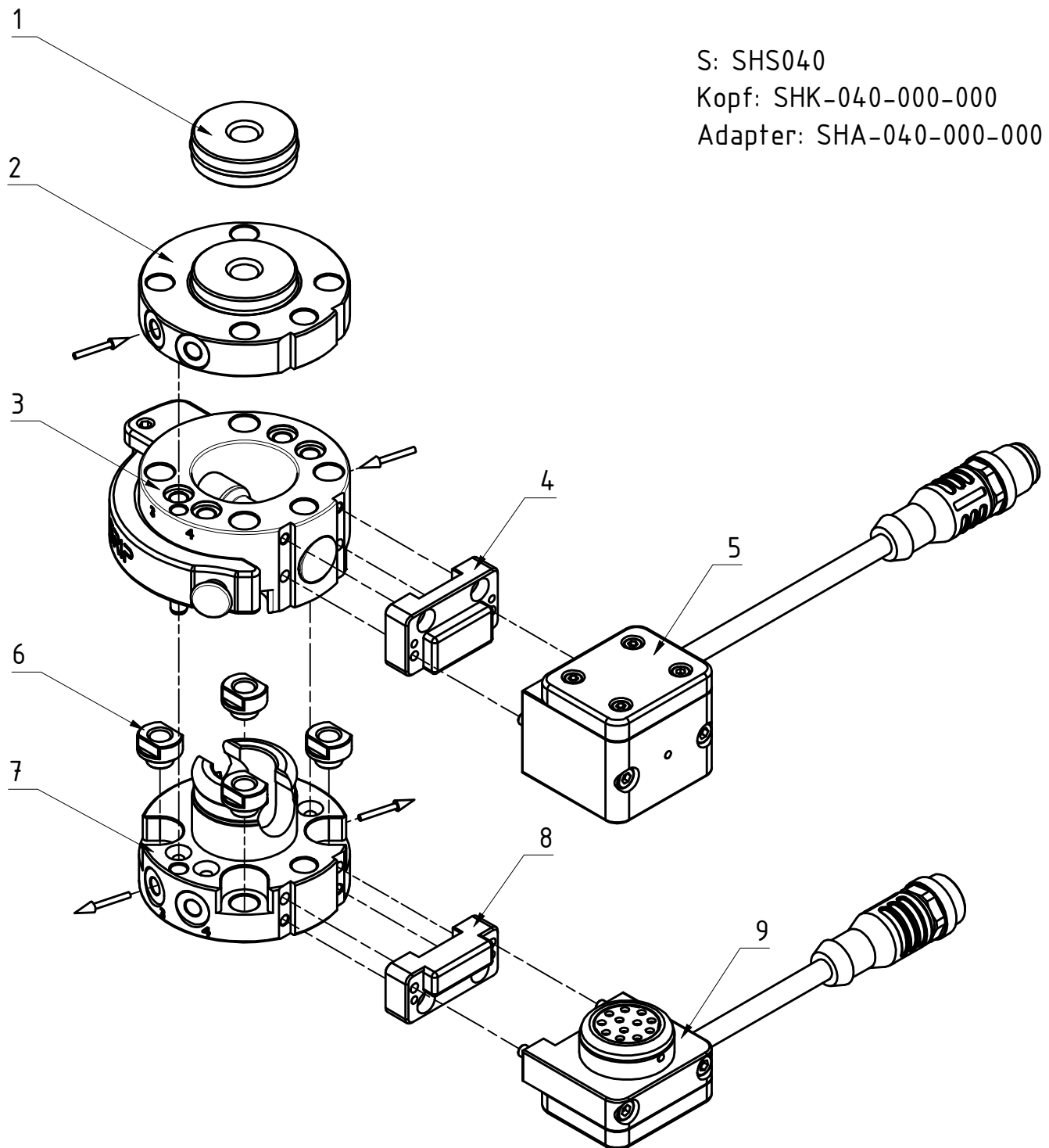
### SHS050 Connector, drilled acc. to ISO...

G-SHS050-O-K040	upper assembly, E-Mount, 4 pneum. ducts, Al, anodized
G-SHS050-U-A040	lower assembly, E-Mount, 4 pneum. ducts, Al, anodized

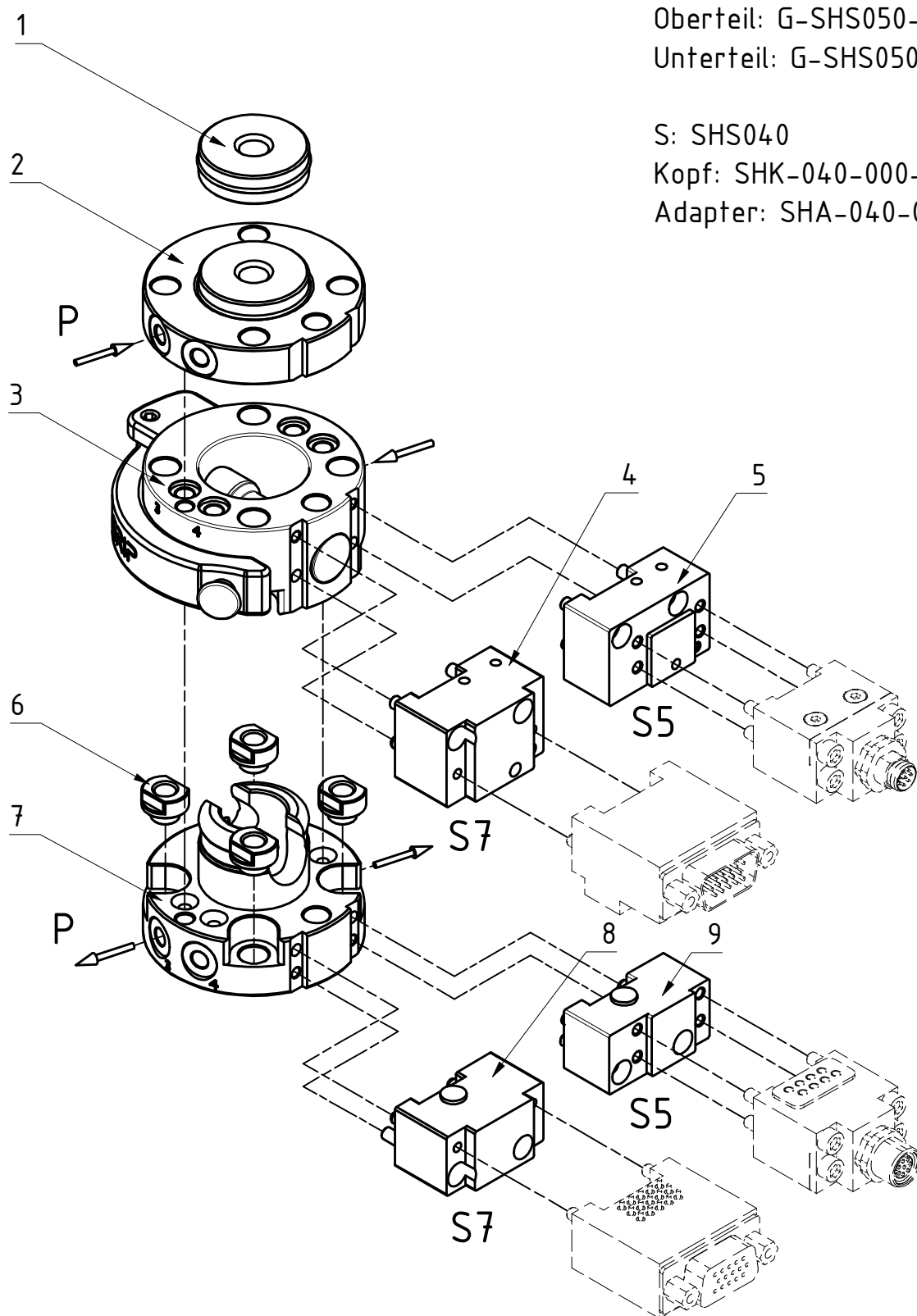


GRIP: G-SHS050  
 Oberteil: G-SHS050-O-K040  
 Unterteil: G-SHS050-U-A040

S: SHS040  
 Kopf: SHK-040-000-000  
 Adapter: SHA-040-000-000

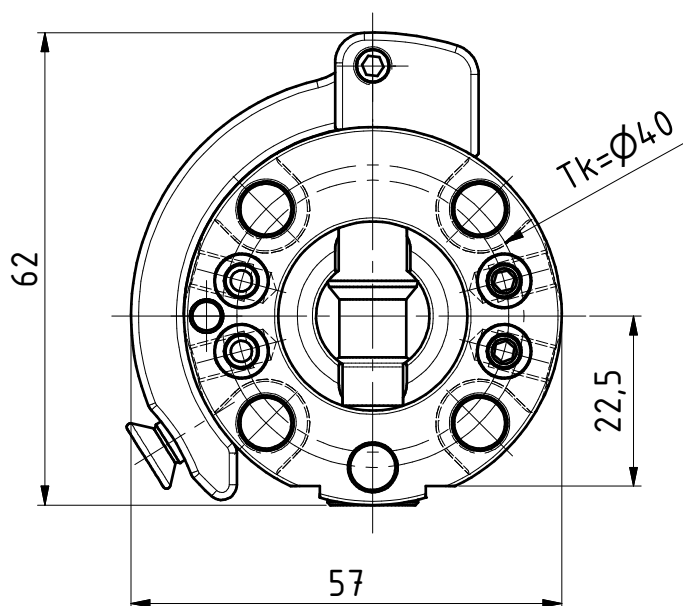
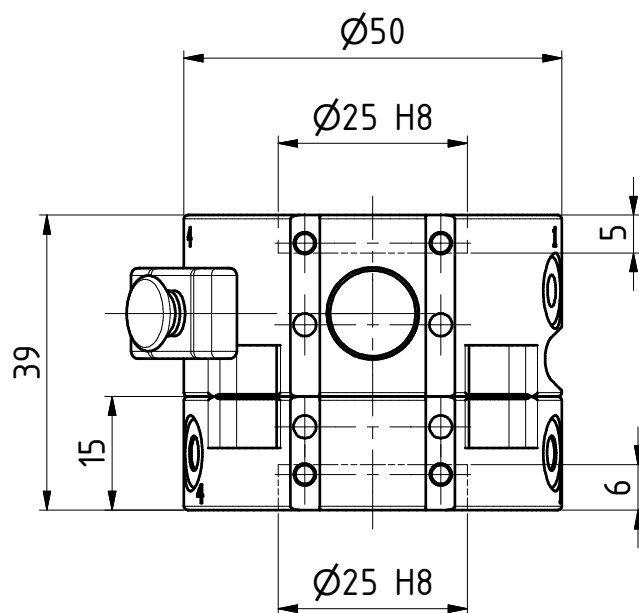


Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS050-1	Zentrierscheibe, Al, eloxiert
2	G-ZS050-S2P	Pneumatikflansch inkl. G-ZS050-1
3	G-SHS050-O-K040	Oberteil, Kopf, TK=40
4	ZG-AP-SEK100-SHS050-O	Adapterplatte, Oberteil, für SEK100
5	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
6	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)
7	G-SHS050-U-A040	Unterteil, Adapter, TK=40
8	ZG-AP-SEK100-SHS050-U	Adapterplatte, Unterteil, für SEK100
9	G-SEK100-U-1E12-300-M12	SEK100 Unterteil

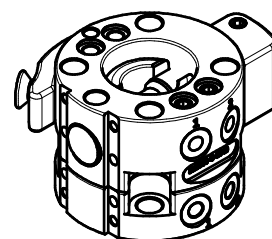


GRIP: G-SHS050  
 Oberteil: G-SHS050-O-K040  
 Unterteil: G-SHS050-U-A040  
  
 S: SHS040  
 Kopf: SHK-040-000-000  
 Adapter: SHA-040-000-000

Pos.	GRIP Art.-Nr.	Beschreibung	S Art.-Nr.	S ID
1	G-ZS050-1	Zentrierscheibe, Al, eloxiert	A-HWK-040-BOSS	0302742
2	G-ZS050-S2P	Pneumatikflansch inkl. G-ZS050-1	A-SHK-040-P-RADIAL	1391534
3	G-SHS050-O-K040	Oberteil, Kopf, TK=40	SHK-040-000-000	0310400
4	ZG-SHS050-O-K040-S7	Adapterplatte K040-S7	SHK-040-AKO-S7	1304690
5	ZG-SHS050-O-K040-S5	Adapterplatte K040-S5	SHK-040-AKO-S5	1304684
6	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)		
7	G-SHS050-U-A040	Unterteil, Adapter, TK=40	SHA-040-000-000	0310401
8	ZG-SHS050-U-A040-S7	Adapterplatte A040-S7	SHA-040-AKO-S7	1304691
9	ZG-SHS050-U-A040-S5	Adapterplatte A040-S5	SHA-040-AKO-S5	1304688



( 1 : 2 )

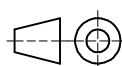


Datum 17.04.2024

Maßstab 1:1

Zeichnungsnummer

G-SHS050-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik



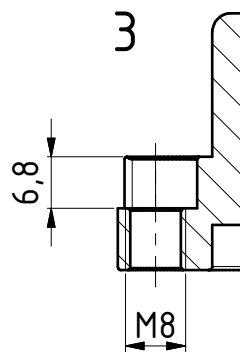
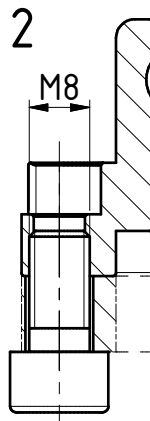
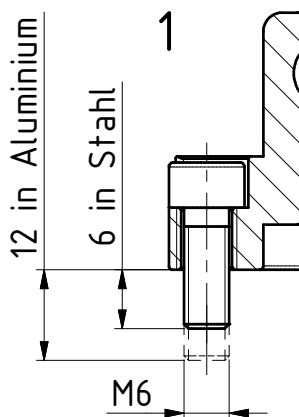
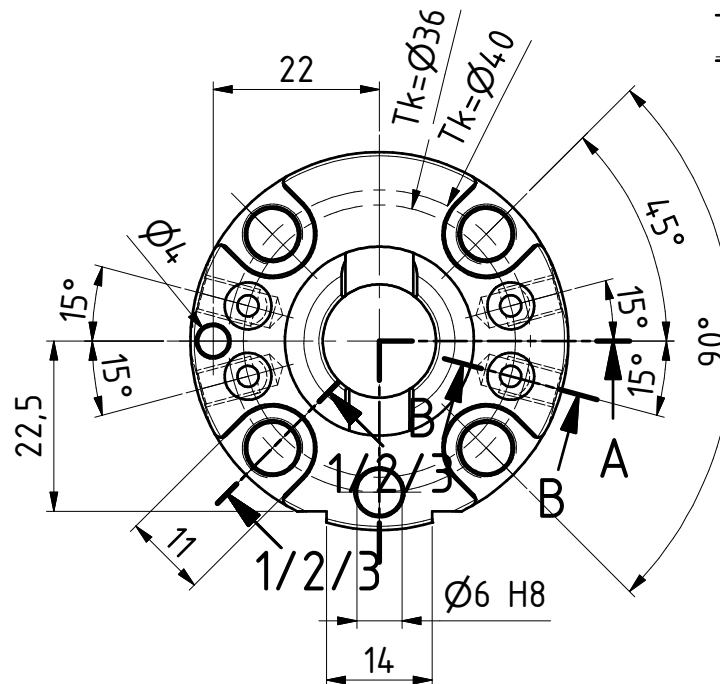


Technical drawing of a mechanical part (Fig. 1.10) showing a cross-section with dimensions and tolerances. The part is a cylindrical component with a central hole and a smaller hole on the side. The dimensions and tolerances are as follows:

- Overall height: 34
- Distance from top to the center of the side hole: 19
- Distance from the center of the side hole to the top of the main hole:  $10,3 \pm 0,02$
- Distance from the center of the side hole to the bottom of the main hole:  $4 \pm 0,02$
- Overall diameter:  $\varnothing 50$
- Inner diameter of the main hole:  $\varnothing 25 \text{ H8}$
- Inner diameter of the side hole:  $\varnothing 3 \text{ H8}$
- Thread specification: 2x M3
- Distance between the two M3 threads:  $18 \pm 0,02$
- Top hole diameter:  $\varnothing 15$
- Bottom hole diameter: 6

Technical drawing of a radial M5 screw. The drawing shows a cross-section of the screw with the following dimensions and labels:

- $\varnothing 2,8$ : Diameter of the screw.
- 4 x Luft, radial M5: 4 x Luft, radial M5
- 7,5: Length of the screw.



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SHS063

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

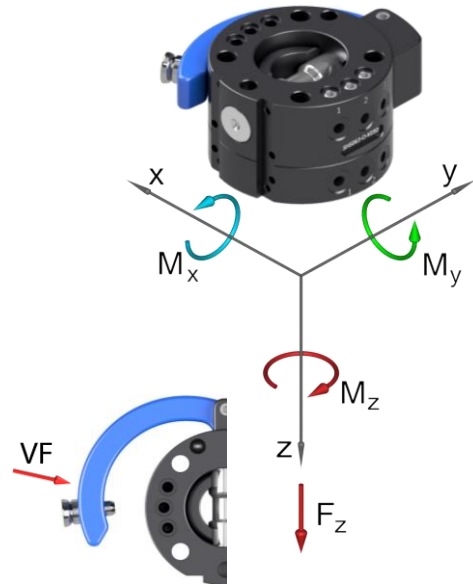
Optional connection of an energy feed-through for electrical and pneumatic ducts

With 6 integrated pneumatic ducts

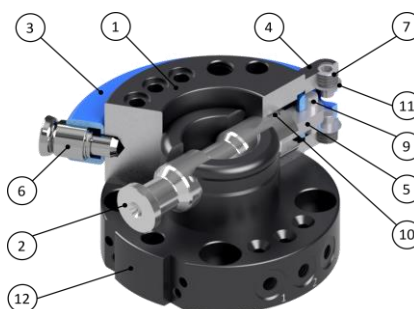
Interface according to DIN EN ISO 9409-1-50-4-M6



Technical specifications		SHS063
Basic material		Al. anod.
External diameter x height [mm]		63 x 42,5
Pitch circle diameter [mm]		50
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		900
Compression -Fz [kN]		135
Torsion Mz [Nm]		80
Bending Mx, My [Nm]		75
Mass [kg]	upper assembly	0,25
	lower assembly	0,12
Recommended load [kg]		18* / 24**
Locking force VF [N]		4 - 50
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	3 x M5 a. 3 x D=2,8
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

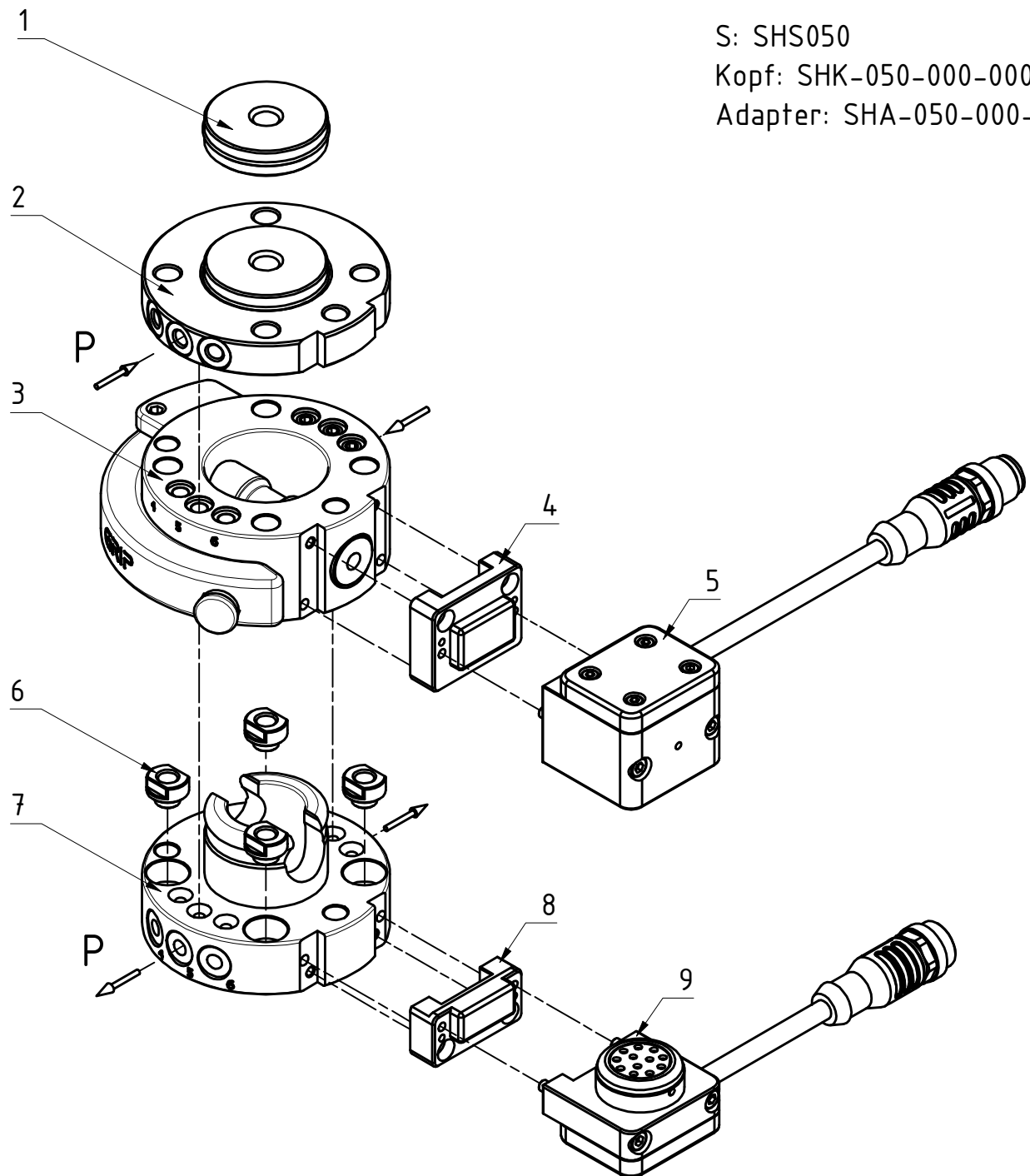


Pos.	Description	SHS063 Connector, drilled acc. to ISO...	
1	Upper assembly	G-SHS063-O-K050	upper assembly, E-Mount, 6 pneum. ducts, Al, anodized
2	Crossway bolt (CB)	G-SHS063-U-A050	lower assembly, E-Mount, 6 pneum. ducts, Al, anodized
3	Hand lever	G-SHS063-U-A050-M6	lower a., E-Mount, 6 pneum. ducts, Al, anodized, M6 inserts
4	Holder		
5	Strap pin (SP)		
6	Spring locking pin		
7	Guiding screw		
9	Cylinder bolt SP		
10	Cylinder bolt CB		
11	Shim ring		
12	Lower assembly		

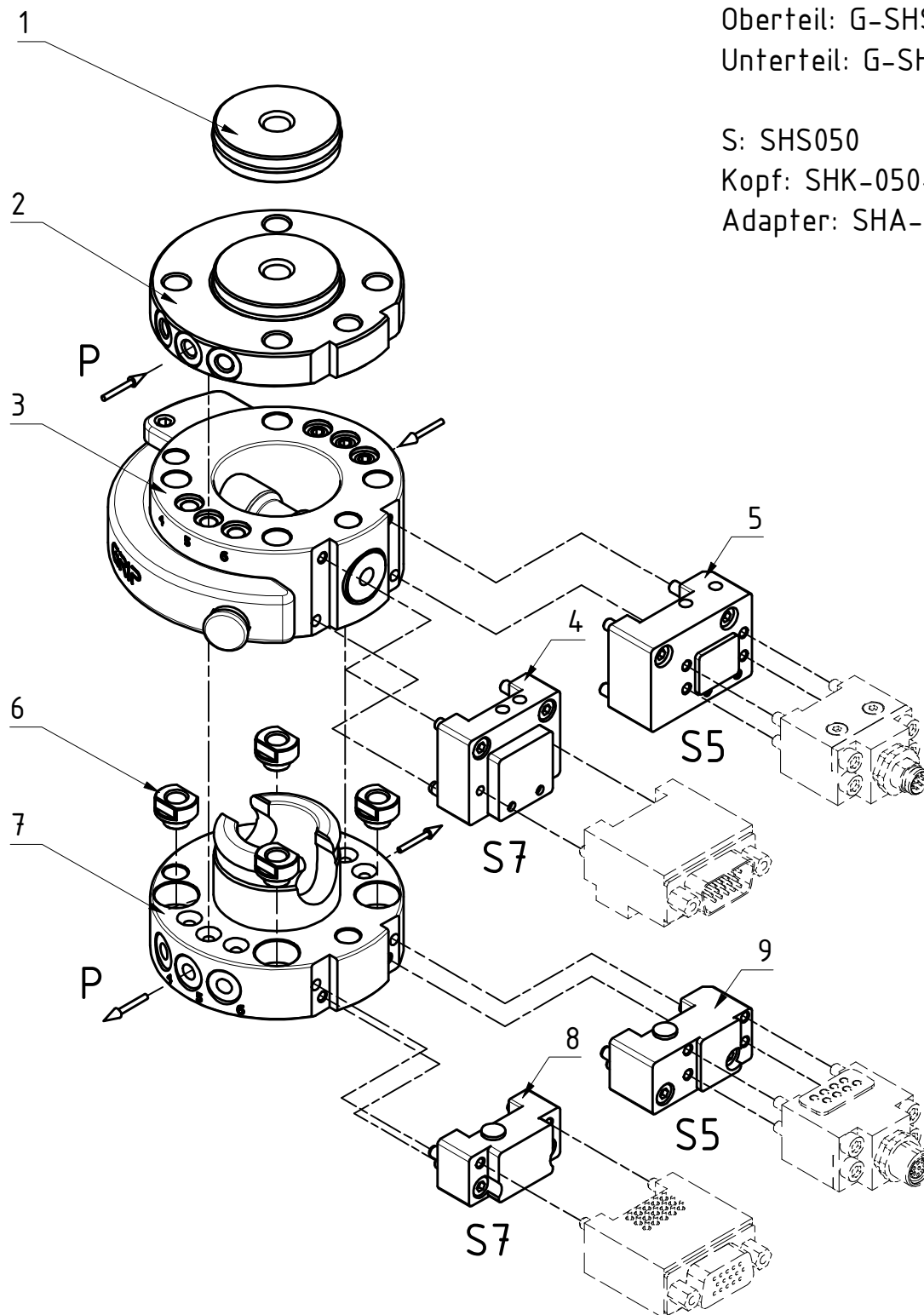


GRIP: G-SHS063  
 Oberteil: G-SHS063-O-K050  
 Unterteil: G-SHS063-U-A050

S: SHS050  
 Kopf: SHK-050-000-000  
 Adapter: SHA-050-000-000

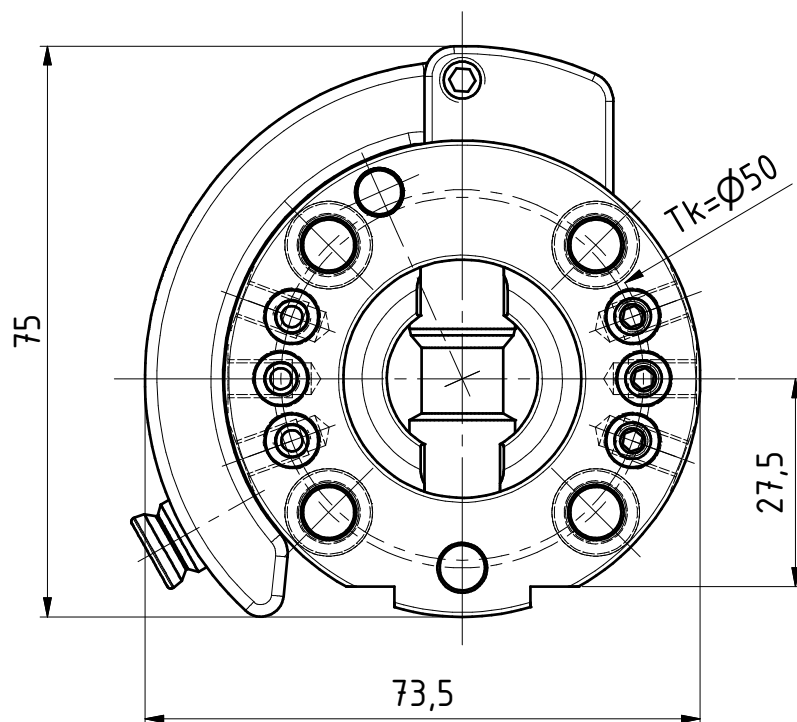
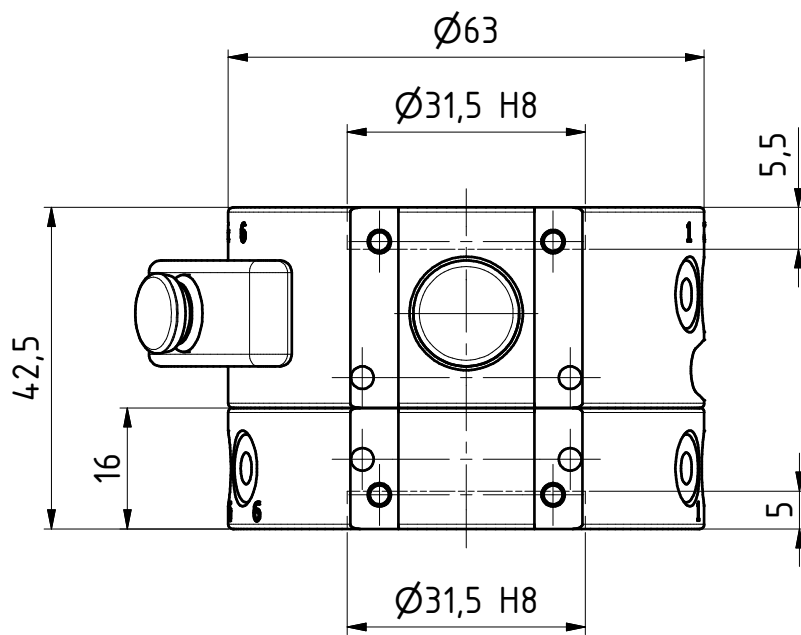


Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS063-1	Zentrierscheibe, Al, eloxiert
2	G-ZS063-S3P	Pneumatikflansch inkl. G-ZS063-1
3	G-SHS063-O-K050	Oberteil, Kopf, TK=50
4	ZG-AP-SEK100-SHS063-O	Adapterplatte, Oberteil, für SEK100
5	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
6	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)
7	G-SHS063-U-A050	Unterteil, Adapter, TK=50
8	ZG-AP-SEK100-SHS063-U	Adapterplatte, Unterteil, für SEK100
9	G-SEK100-U-1E12-300-M12	SEK100 Unterteil

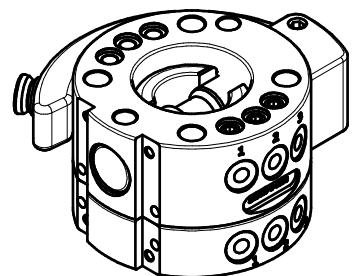


GRIP: G-SHS063  
 Oberteil: G-SHS063-O-K050  
 Unterteil: G-SHS063-U-A050  
  
 S: SHS050  
 Kopf: SHK-050-000-000  
 Adapter: SHA-050-000-000

Pos.	GRIP Art.-Nr.	Beschreibung	S Art.-Nr.	S ID
1	G-ZS063-1	Zentrierscheibe, Al, eloxiert	A-HWK-050-BOSS	0302752
2	G-ZS063-S3P	Pneumatikflansch inkl. G-ZS063-1	A-SHK-050-P-RADIAL	1391557
3	G-SHS063-O-K050	Oberteil, Kopf, TK=50	SHK-050-000-000	0310410
4	ZG-SHS063-O-K050-S7	Adapterplatte K050-S7	SHK-050-AKO-S7	1304734
5	ZG-SHS063-O-K050-S5	Adapterplatte K050-S5	SHK-050-AKO-S5	1304699
6	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)		
7	G-SHS063-U-A050	Unterteil, Adapter, TK=50	SHA-050-000-000	0310411
8	ZG-SHS063-U-A050-S7	Adapterplatte A050-S7	SHA-050-AKO-S7	1304738
9	ZG-SHS063-U-A050-S5	Adapterplatte A050-S5	SHA-050-AKO-S5	1304710



( 1 : 2 )

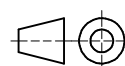


Datum 17.04.2024

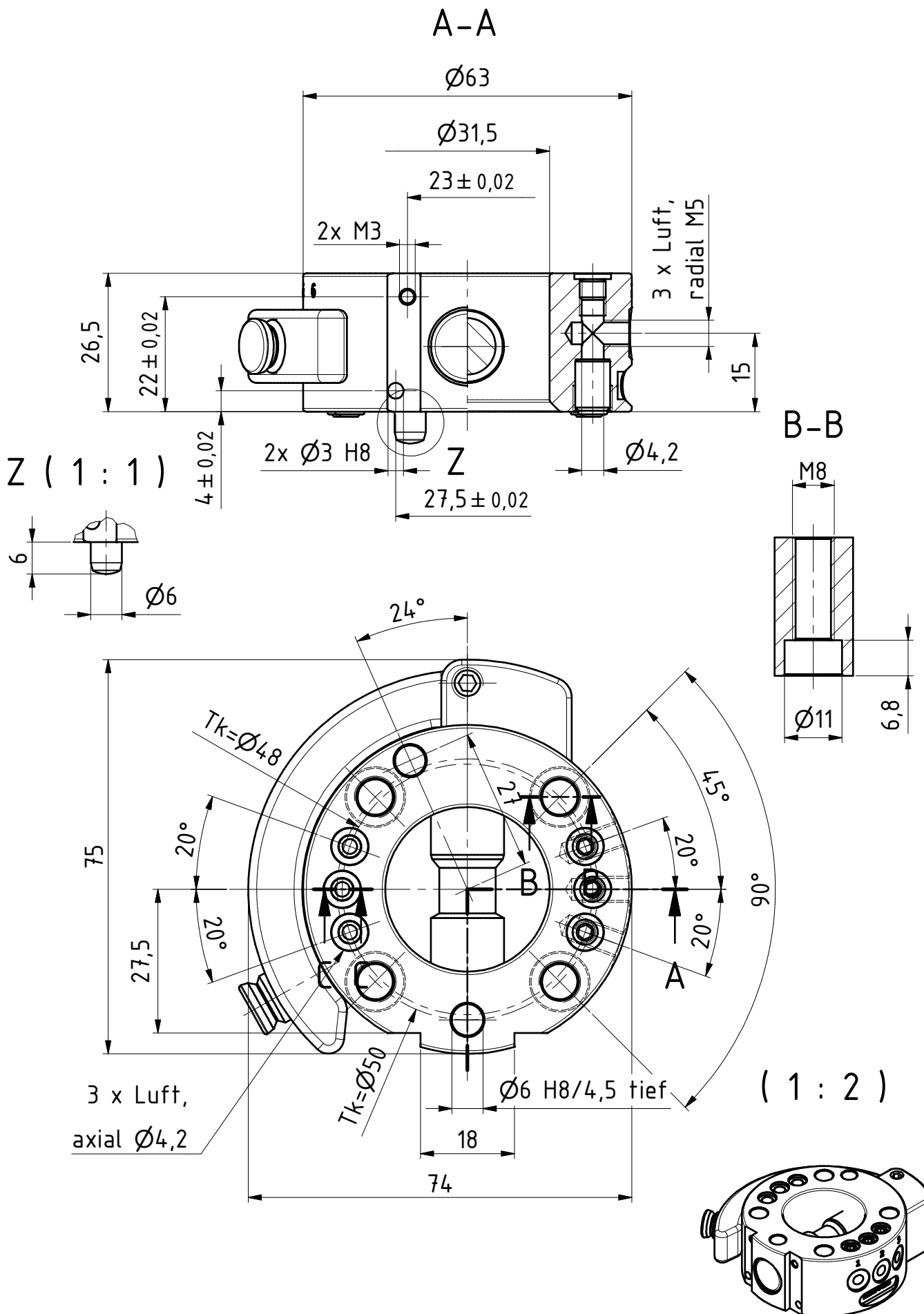
Maßstab 1:1

Zeichnungsnummer

G-SHS063-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik

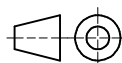


Datum 17.04.2024

Maßstab 1:1

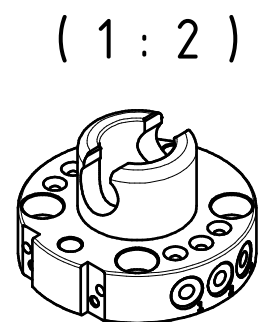
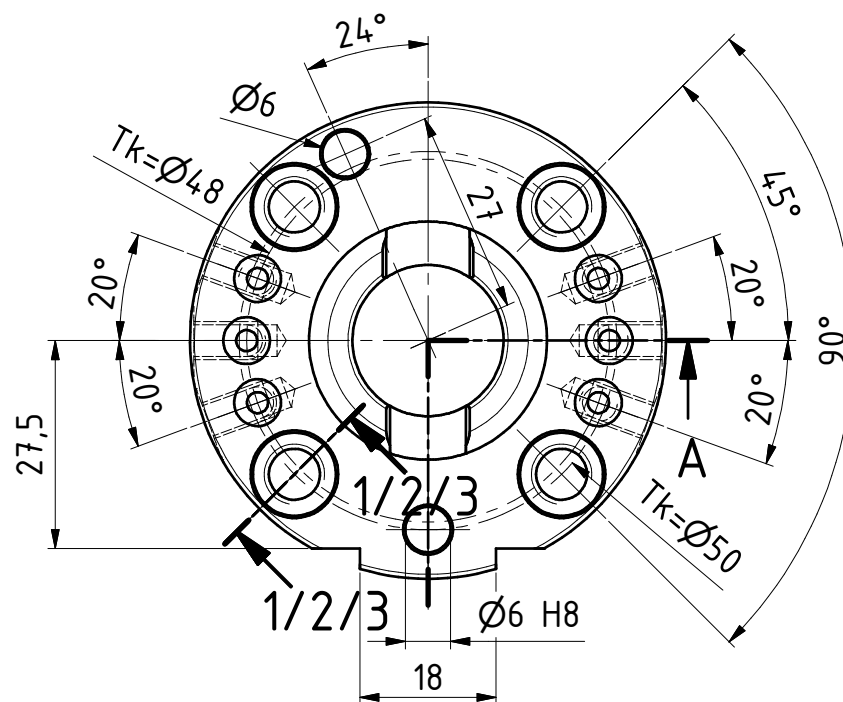
Zeichnungsnummer

G-SHS063-0-K050



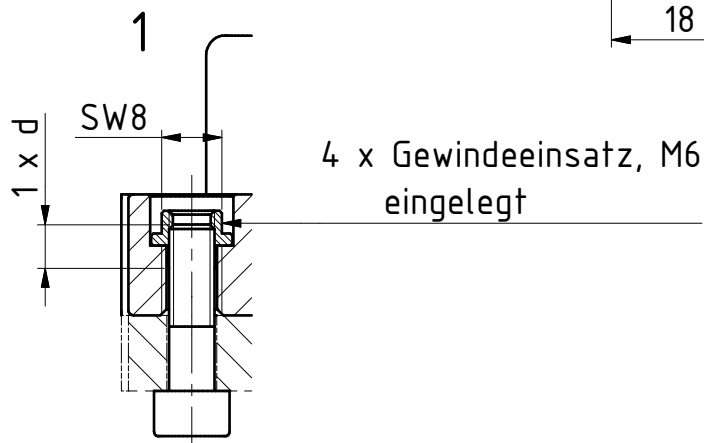
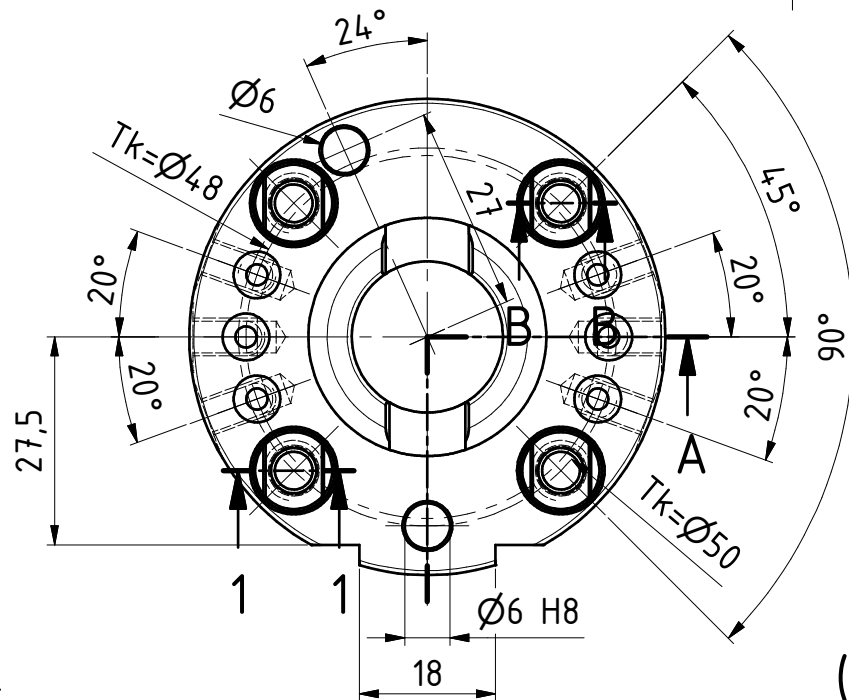
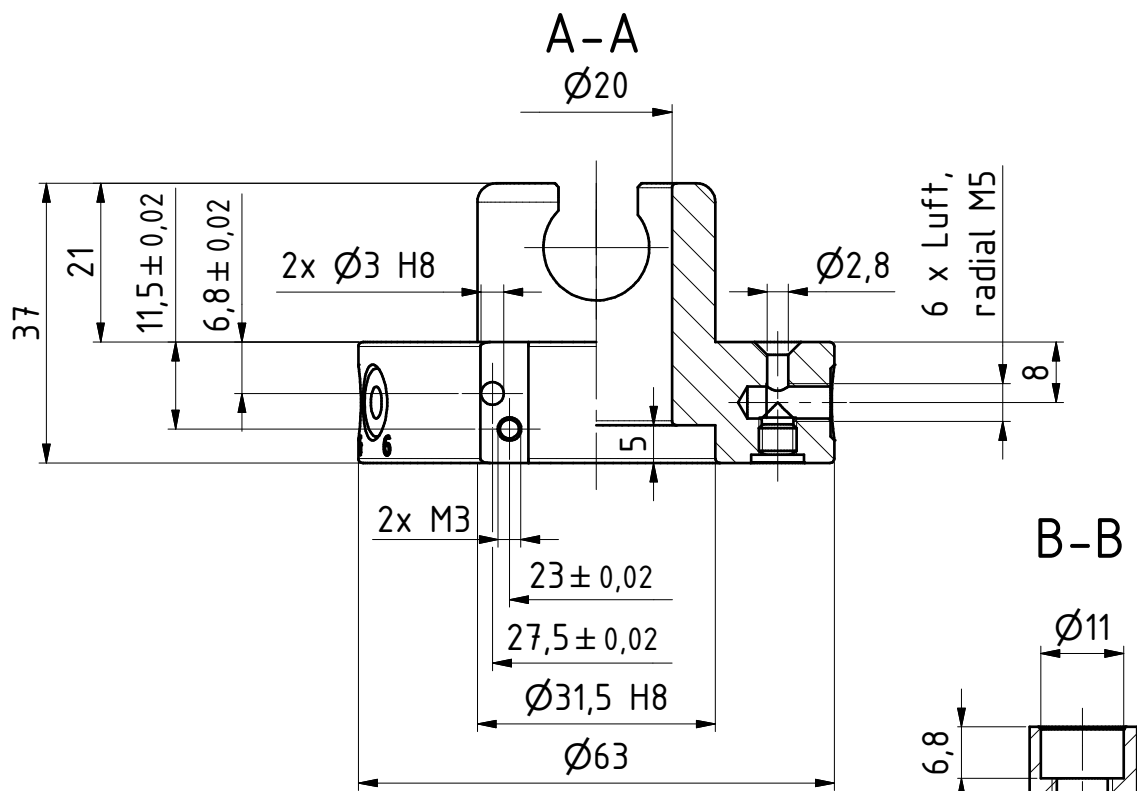
**GRIP**

GRIP GmbH Handhabungstechnik



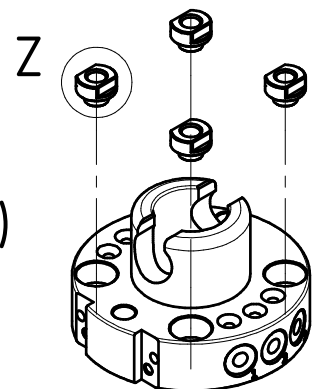
**GRIP**  
GRIP GmbH Handhabungstechnik





( 1 : 2 )

Z ( 1 : 1 )

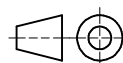


Datum 17.04.2024

Maßstab 1:1

Zeichnungsnummer

G-SHS063-U-A050-M6



**GRIP**

GRIP GmbH Handhabungstechnik

# G-SHS080

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

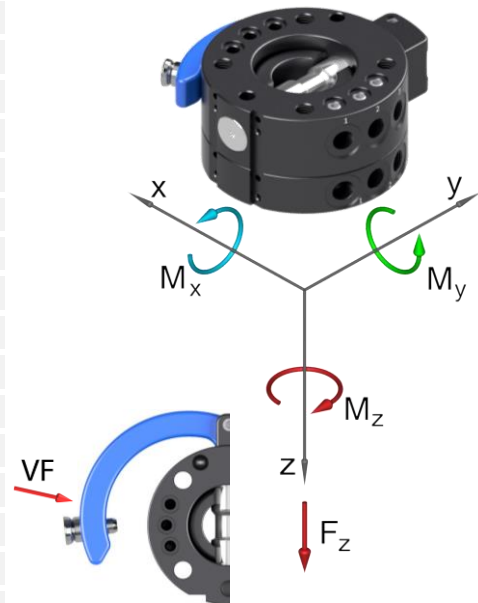
Optional connection of an energy feed-through for electrical and pneumatic ducts

With 6 integrated pneumatic ducts

Interface according to DIN EN ISO 9409-1-63-4-M6



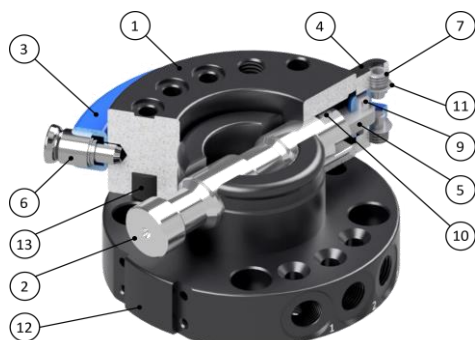
Technical specifications		SHS080
Basic material		Al. anod.
External diameter x height [mm]		80 x 46,5
Pitch circle diameter [mm]		63
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1000
Compression -Fz [kN]		160
Torsion Mz [Nm]		240
Bending Mx, My [Nm]		150
Mass [kg]	upper assembly	0,42
	lower assembly	0,23
Recommended load [kg]		20* / 28**
Locking force VF [N]		5 - 60
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	3 x G1/8 a. 3 x D=5
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	Pneumatic seals

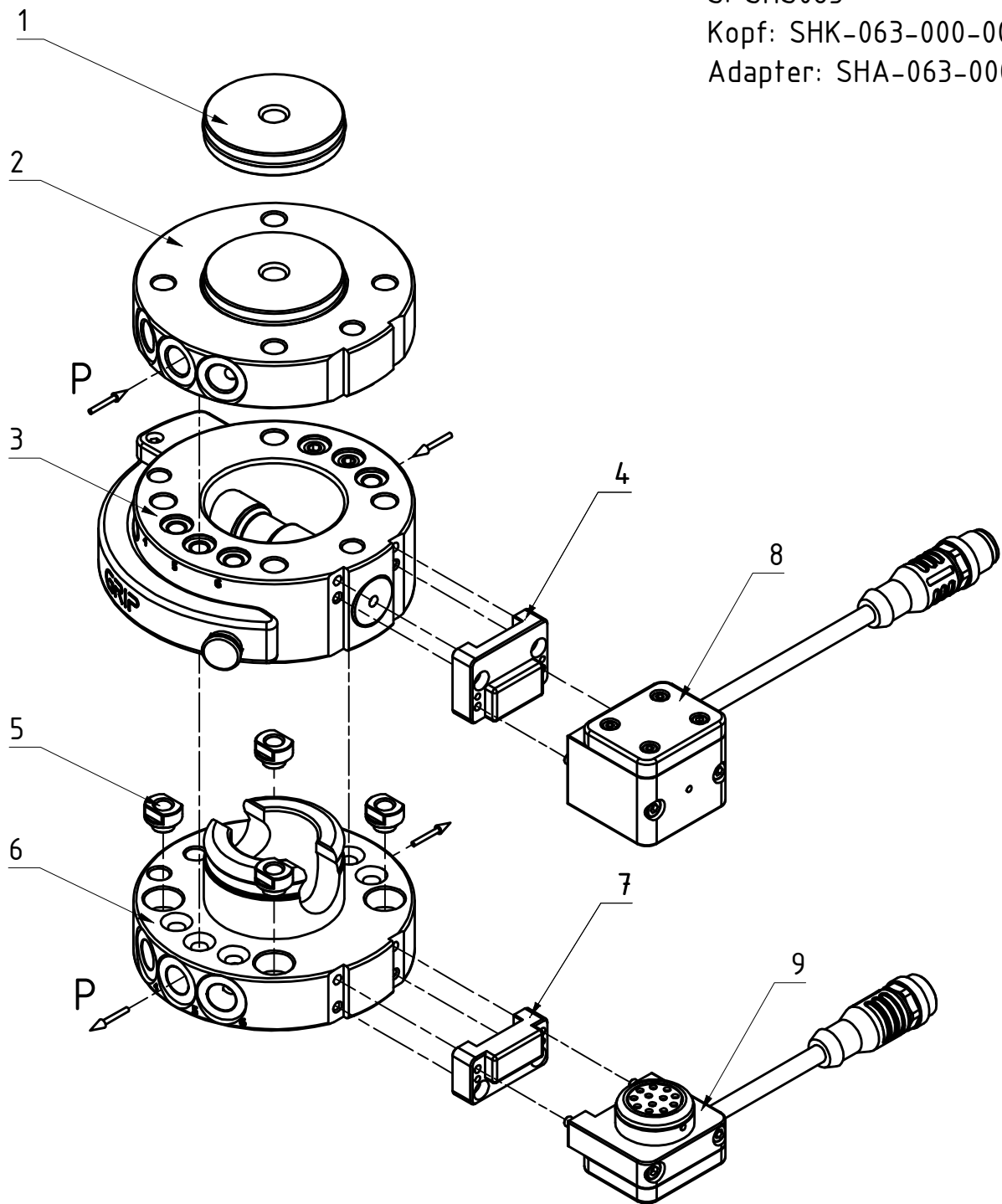
### SHS080 Connector, drilled acc. to ISO...

G-SHS080-O-K063	upper assembly, E-Mount, 6 pneum. ducts, Al, anodized
G-SHS080-U-A063	lower assembly, E-Mount, 6 pneum. ducts, Al, anodized



GRIP: G-SHS080  
 Oberteil: G-SHS080-O-K063  
 Unterteil: G-SHS080-U-A063

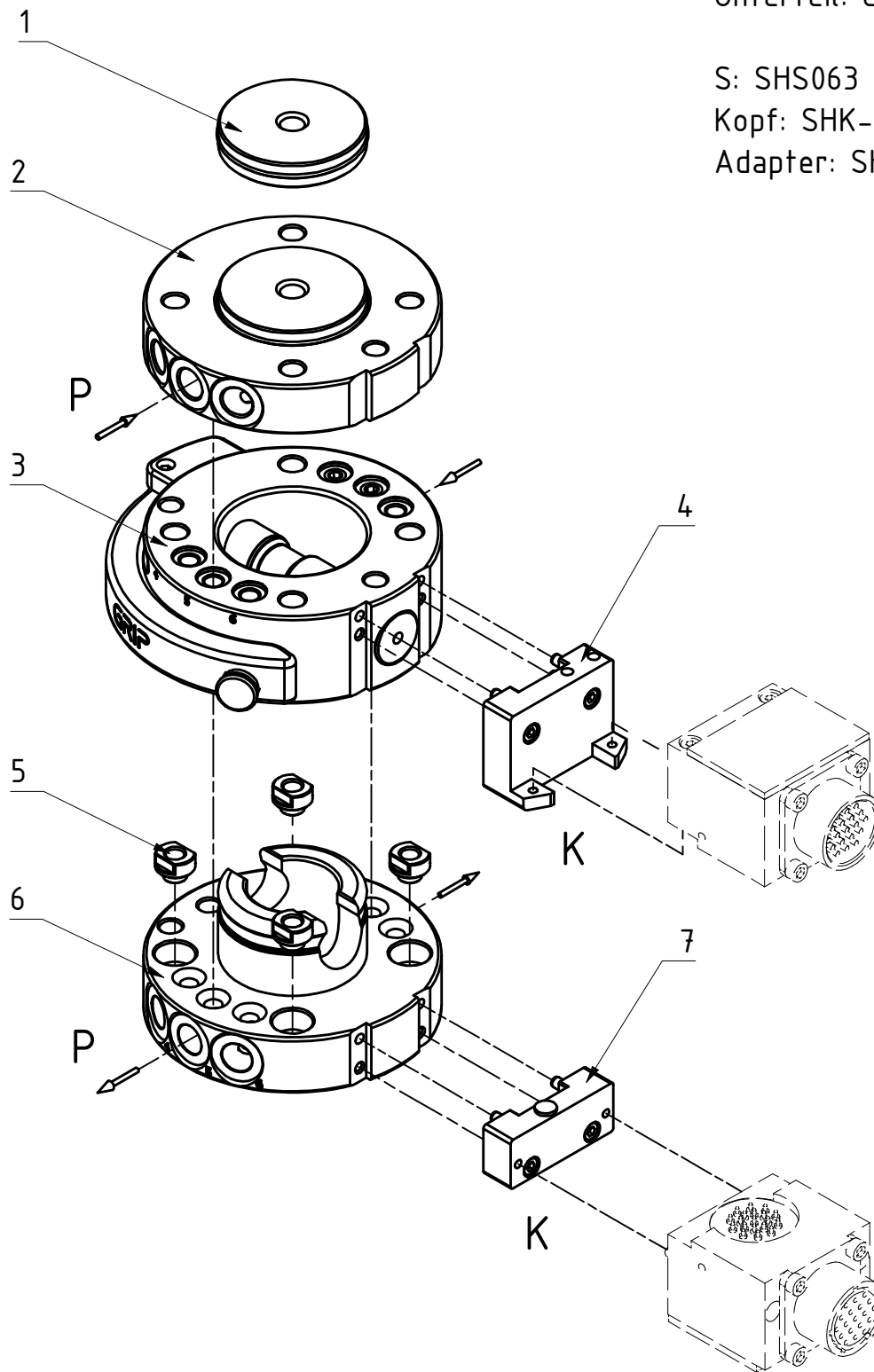
S: SHS063  
 Kopf: SHK-063-000-000  
 Adapter: SHA-063-000-000



Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS080-1	Zentrierscheibe, Al, eloxiert
2	G-ZS080-S3P	Pneumatikflansch inkl. G-ZS080-1
3	G-SHS080-O-K063	Oberteil, Kopf, TK=63
4	ZG-AP-SEK100-SHS080-O	Adapterplatte, Oberteil, für SEK100
5	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)
6	G-SHS080-U-A063	Unterteil, Adapter, TK=63
7	ZG-AP-SEK100-SHS080-U	Adapterplatte, Unterteil, für SEK100
8	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
9	G-SEK100-U-1E12-300-M12	SEK100 Unterteil

GRIP: G-SHS080  
 Oberteil: G-SHS080-O-K063  
 Unterteil: G-SHS080-U-A063

S: SHS063  
 Kopf: SHK-063-000-000  
 Adapter: SHA-063-000-000



Pos.	GRIP Art.-Nr.	Beschreibung	S Art.-Nr.	S ID
1	G-ZS080-1	Zentrierscheibe, Al, eloxiert	A-HWK-063-BOSS	0302765
2	G-ZS080-S3P	Pneumatikflansch inkl. G-ZS080-1	A-SHK-063-P-RADIAL	1391562
3	G-SHS080-O-K063	Oberteil, Kopf, TK=63	SHK-063-000-000	0310420
4	ZG-SHS080-O-K063-K	Adapterplatte K063-K	SHK-063-AK0-K	1304742
5	ZG-GE-M6	Gewindeeinsatz M6, VA (50, 63, 80)		
6	G-SHS080-U-A063	Unterteil, Adapter, TK=63	SHA-063-000-000	0310421
7	ZG-SHS080-U-A063-K	Adapterplatte A063-K	SHA-063-AK0-K	1304745







# G-SHS100

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

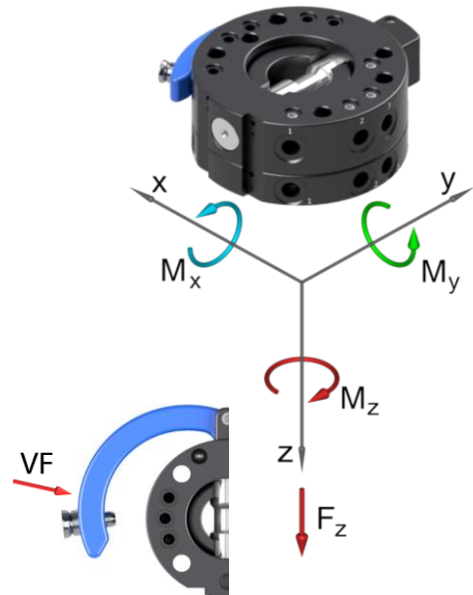
Optional connection of an energy feed-through for electrical and pneumatic ducts

With 9 integrated pneumatic ducts

Interface according to DIN EN ISO 9409-1-80-6-M8



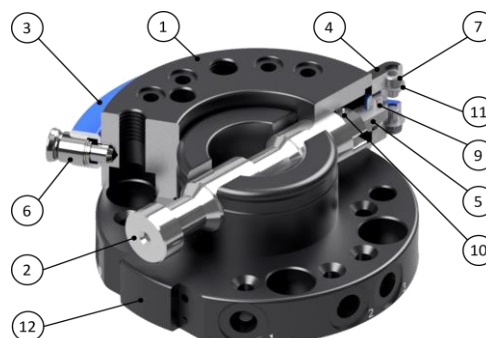
Technical specifications		SHS100
Basic material		Al. anod.
External diameter x height [mm]		100 x 48
Pitch circle diameter [mm]		80
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.600
Compression -Fz [kN]		219
Torsion Mz [Nm]		465
Bending Mx, My [Nm]		300
Mass [kg]	upper assembly	0,62
	lower assembly	0,36
Recommended load [kg]		25* / 34**
Locking force VF [N]		6 - 70
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	4 x G1/8 a. 5 x D=5
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		



Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### SHS100 Connector, drilled acc. to ISO...

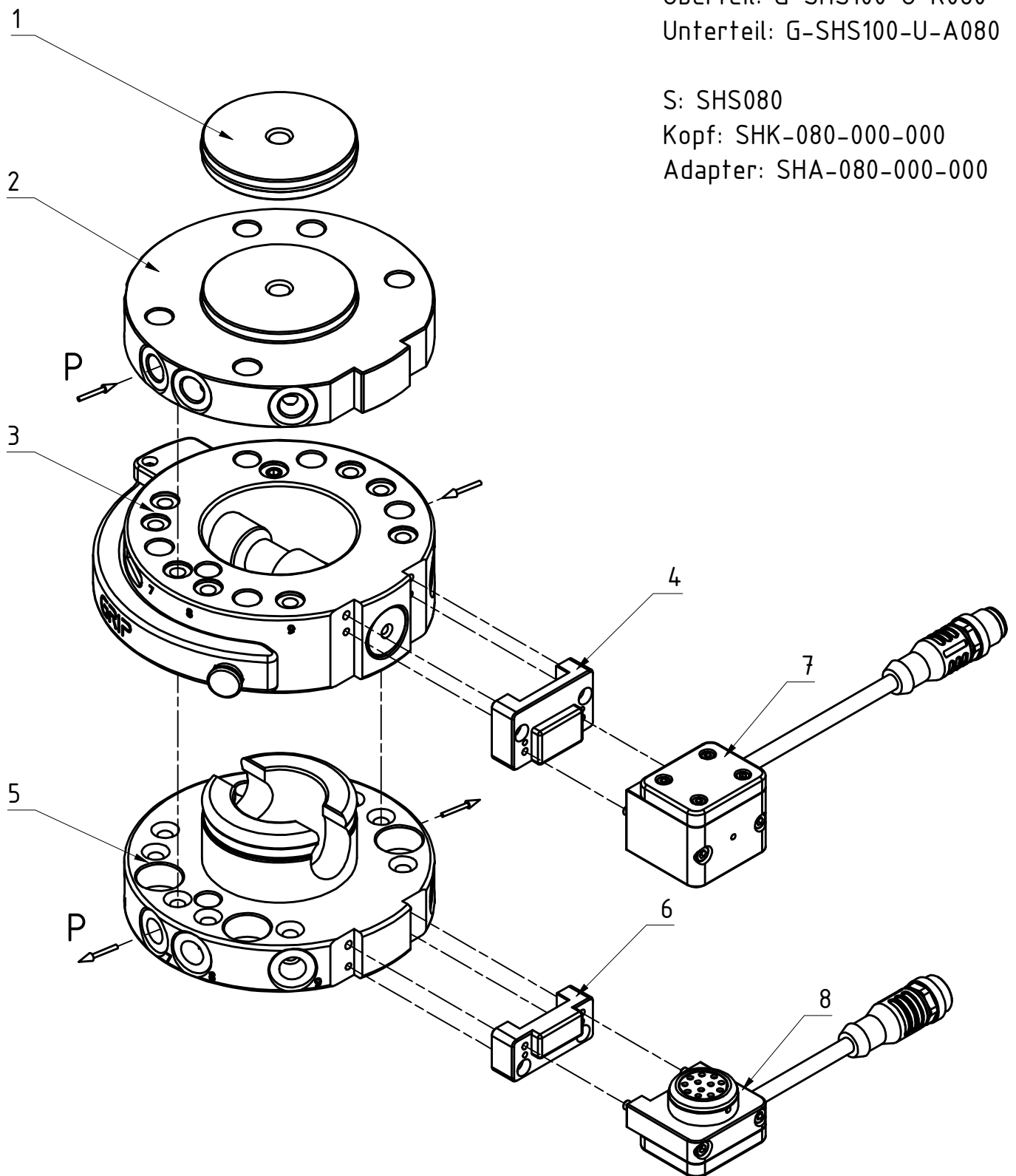
G-SHS100-O-K080	upper assembly, E-Mount, 9 pneum. ducts, Al, anodized
G-SHS100-U-A080	lower assembly, E-Mount, 9 pneum. ducts, Al, anodized



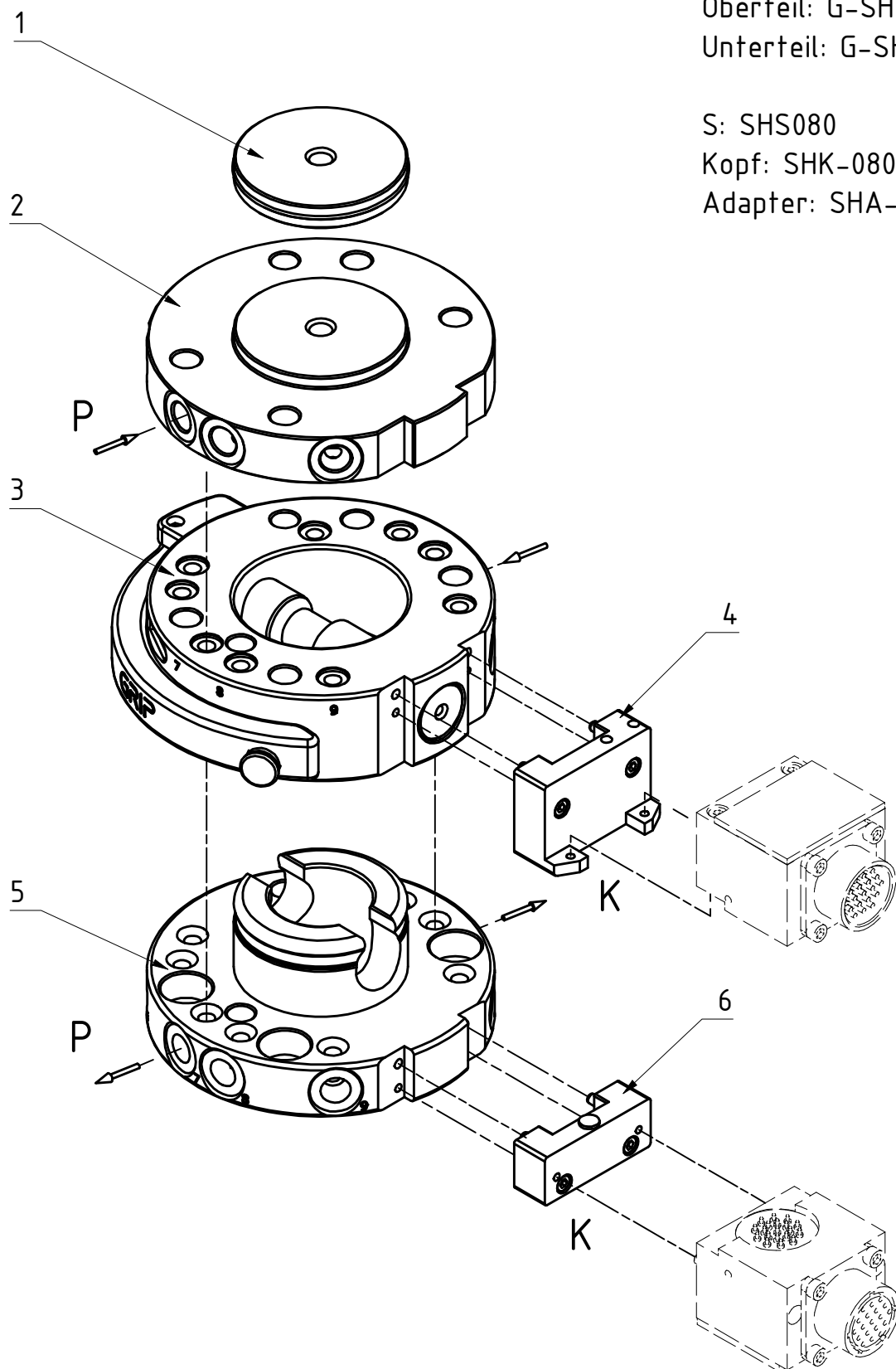


GRIP: G-SHS100  
 Oberteil: G-SHS100-O-K080  
 Unterteil: G-SHS100-U-A080

S: SHS080  
 Kopf: SHK-080-000-000  
 Adapter: SHA-080-000-000



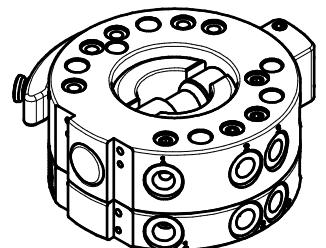
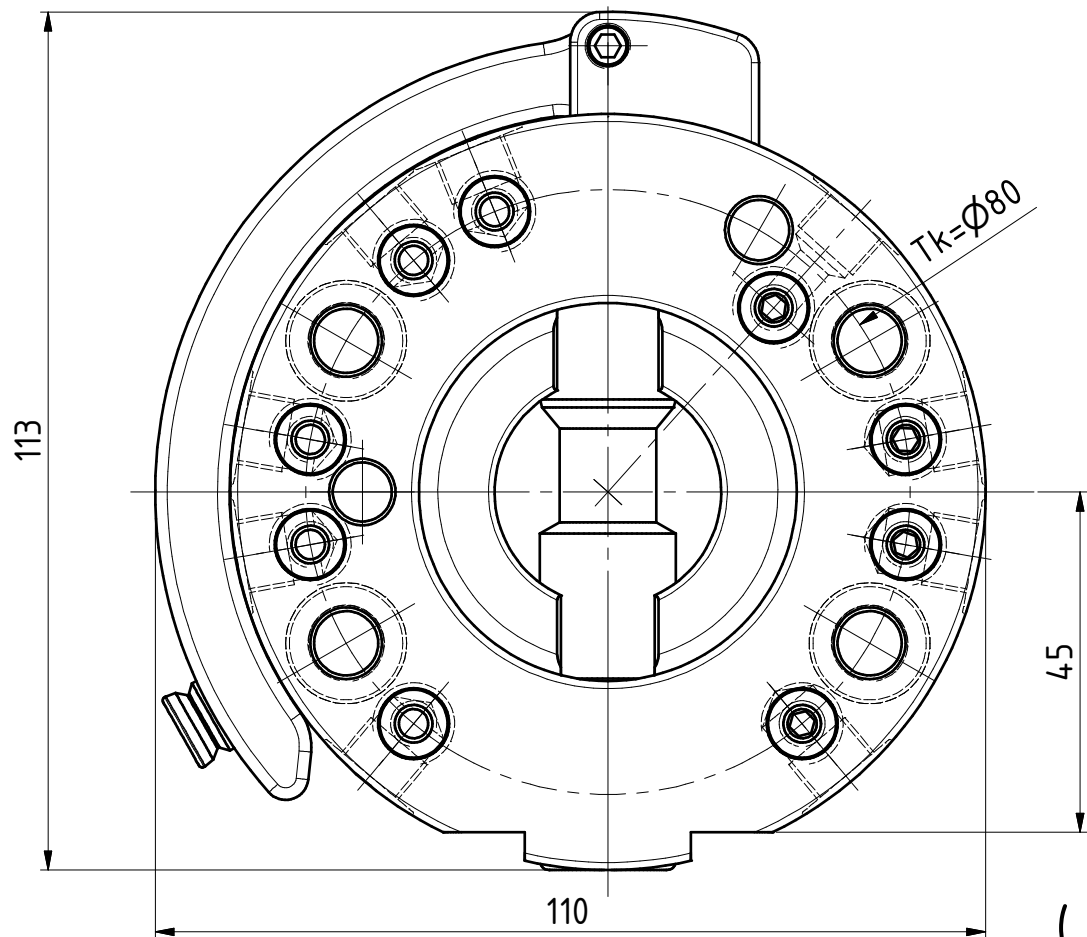
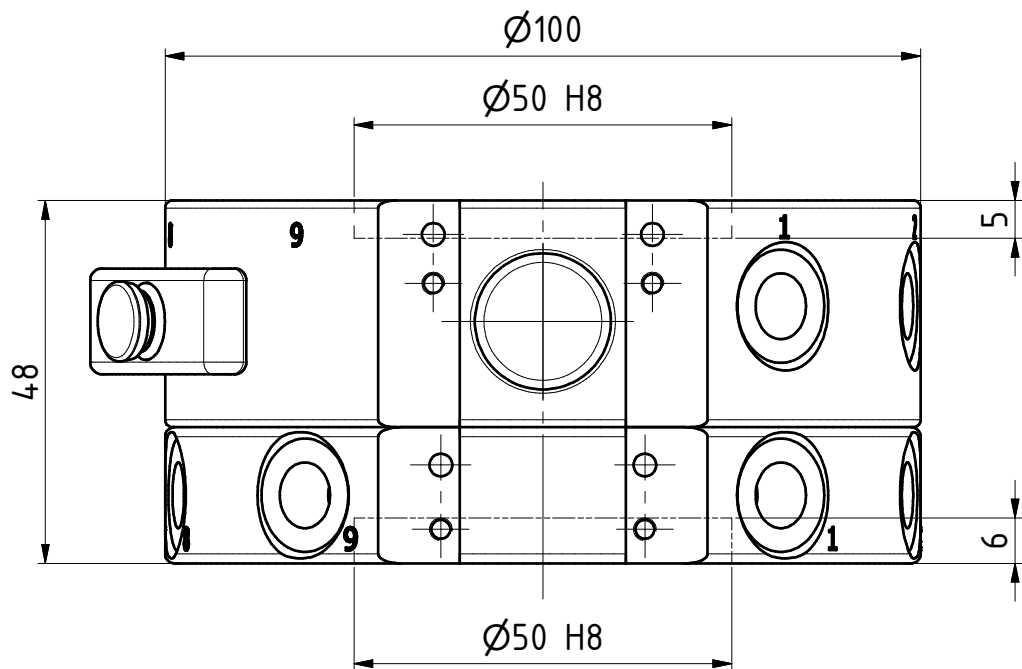
Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS100-1	Zentrierscheibe, Al, eloxiert
2	G-ZS100-S5P	Pneumatikflansch inkl. G-ZS100-1
3	G-SHS100-O-K080	Oberteil, Kopf, TK=80
4	ZG-AP-SEK100-SHS100-O	Adapterplatte, Oberteil, für SEK100
5	G-SHS100-U-A080	Unterteil, Adapter, TK=80
6	ZG-AP-SEK100-SHS100-U	Adapterplatte, Unterteil, für SEK100
7	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
8	G-SEK100-U-1E12-300-M12	SEK100 Unterteil



GRIP: G-SHS100  
 Oberteil: G-SHS100-O-K080  
 Unterteil: G-SHS100-U-A080

S: SHS080  
 Kopf: SHK-080-000-000  
 Adapter: SHA-080-000-000

Pos.	GRIP Art.-Nr.	Beschreibung	S Art.-Nr.	S ID
1	G-ZS100-1	Zentrierscheibe, Al, eloxiert	A-HWK-080-BOSS	0302782
2	G-ZS100-S5P	Pneumatikflansch inkl. G-ZS100-1	A-SHK-080-P-RADIAL	1391564
3	G-SHS100-O-K080	Oberteil, Kopf, TK=80	SHK-080-000-000	0310430
4	ZG-SHS100-O-K080-K	Adapterplatte K080-K	SHK-080-AKO-K	1304759
5	G-SHS100-U-A080	Unterteil, Adapter, TK=80	SHA-080-000-000	0310431
6	ZG-SHS100-U-A080-K	Adapterplatte A080-K	SHA-080-AKO-K	1304762

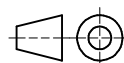


Datum 17.04.2024

Maßstab 1:1

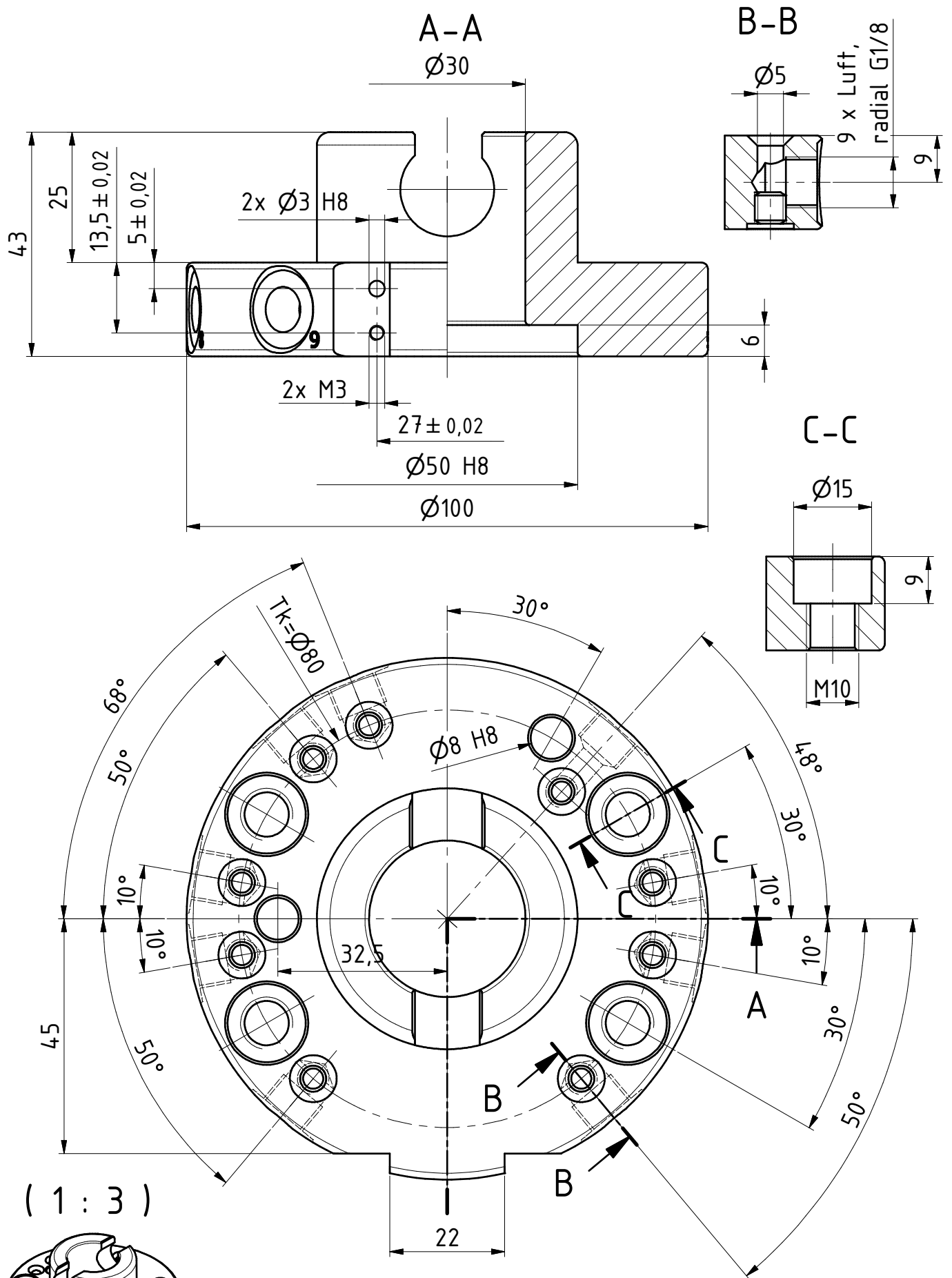
Zeichnungsnummer

G-SHS100-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik



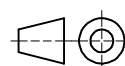


Datum 17.04.2024

Maßstab 1:1

Zeichnungsnummer

G-SHS100-U-A080



**GRIP**  
 GRIP GmbH Handhabungstechnik



# G-SHS125

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

Optional connection of an energy feed-through for electrical and pneumatic ducts

With 12 integrated pneumatic ducts

Interface according to DIN EN ISO 9409-1-100-6-M8

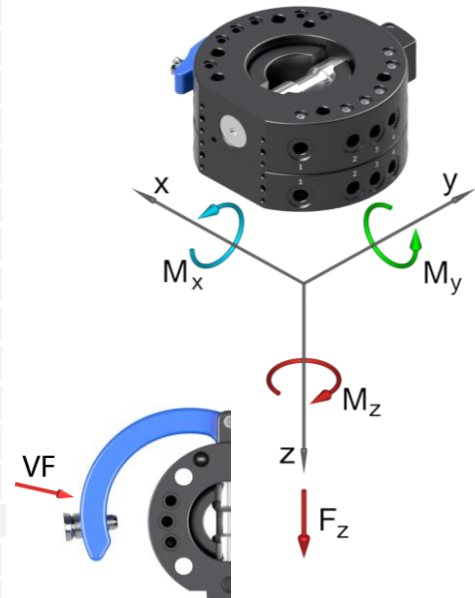


1



2

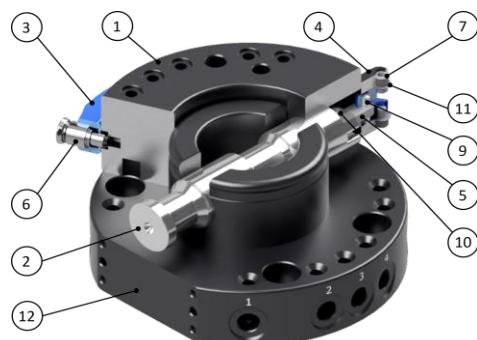
Technical specifications		SHS125
Basic material		Al. anod.
External diameter x height [mm]		125 x 66
Pitch circle diameter [mm]		100
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1.800
Compression -Fz [kN]		377
Torsion Mz [Nm]		1185
Bending Mx, My [Nm]		450
Mass [kg]	upper assembly	1,18
	lower assembly	0,87
Recommended load [kg]		40* / 55**
Locking force VF [N]		8 - 80
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	6 x G1/8 a. 6 x D=5
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

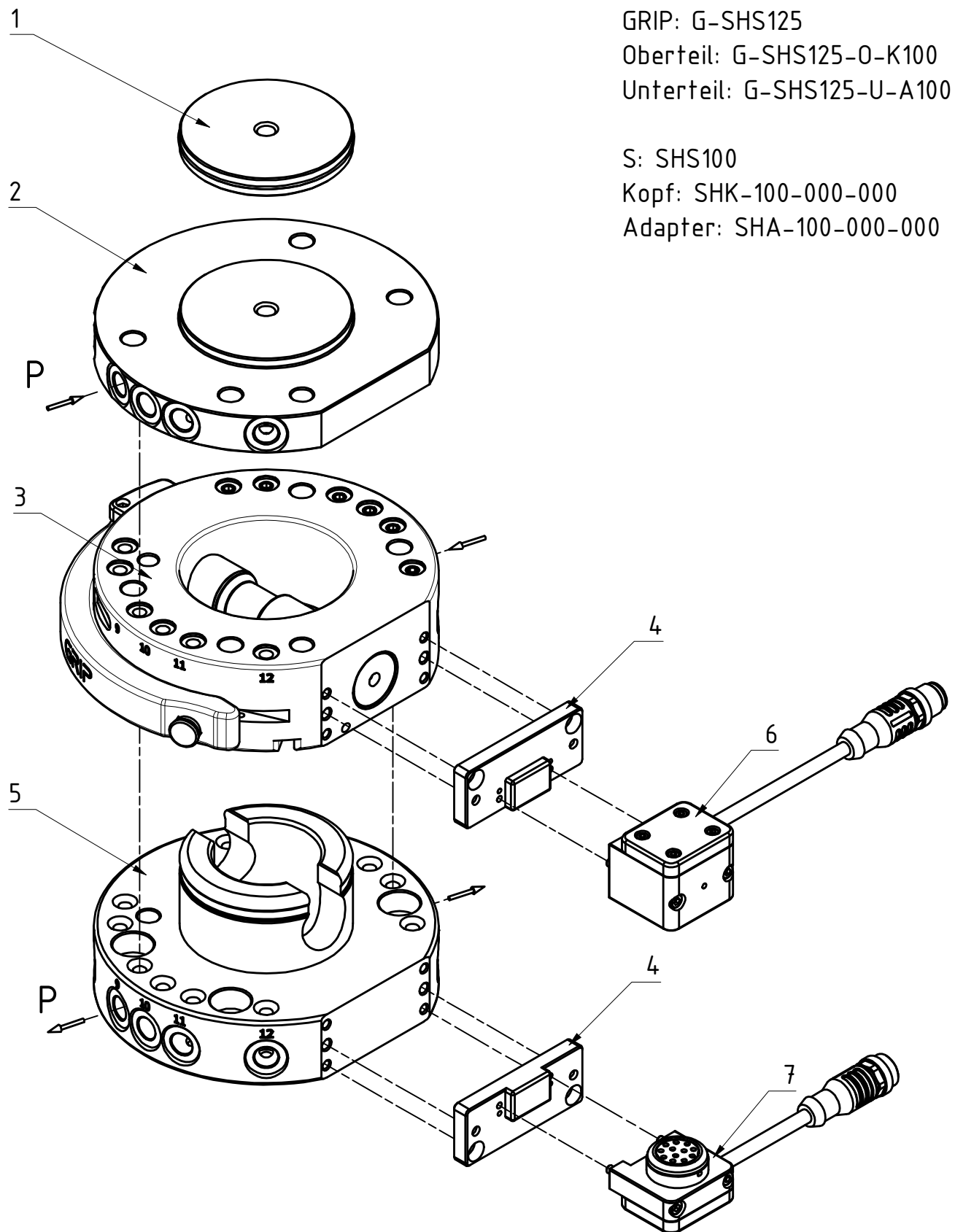


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly

### SHS125 Connector, drilled acc. to ISO...

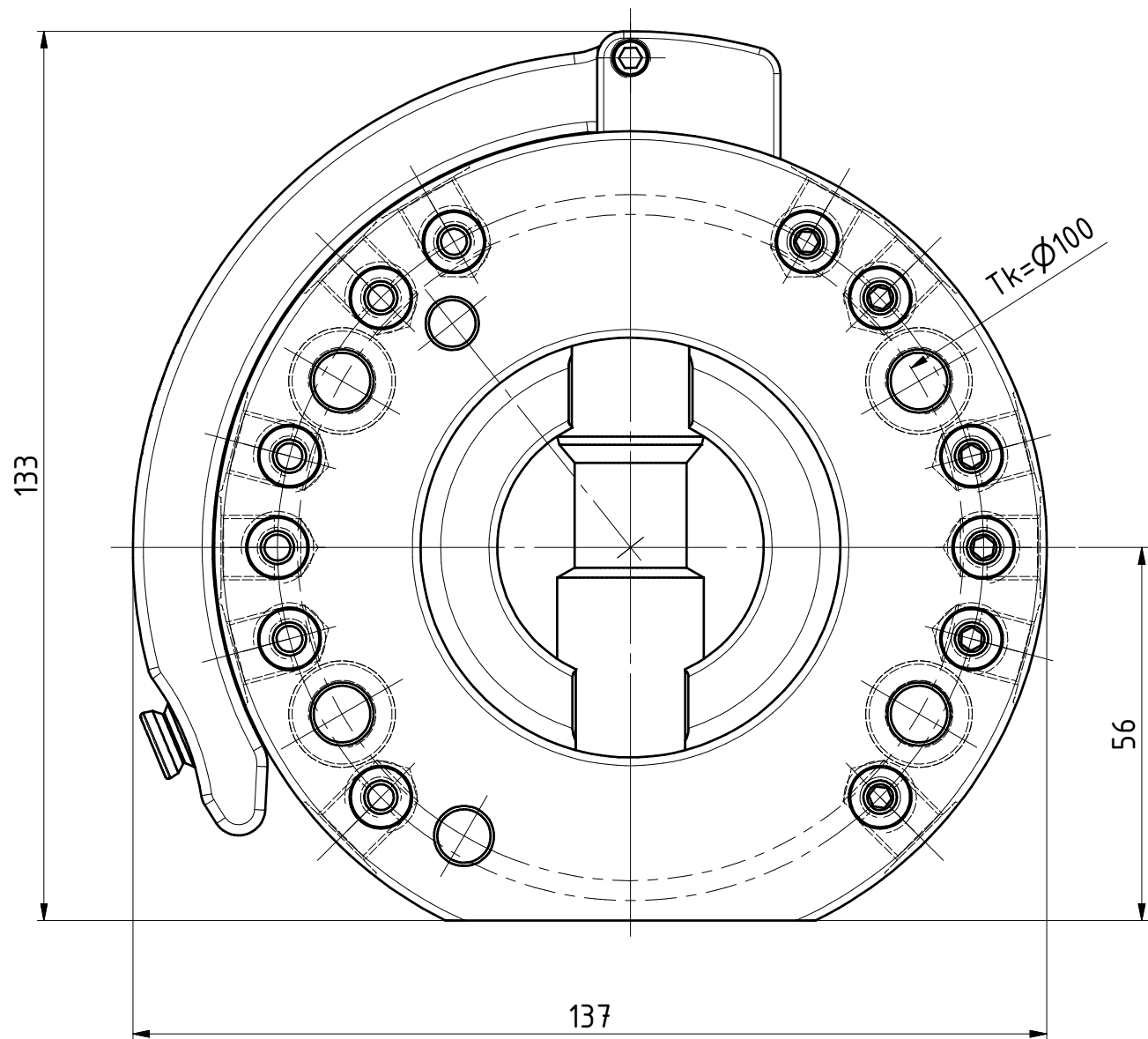
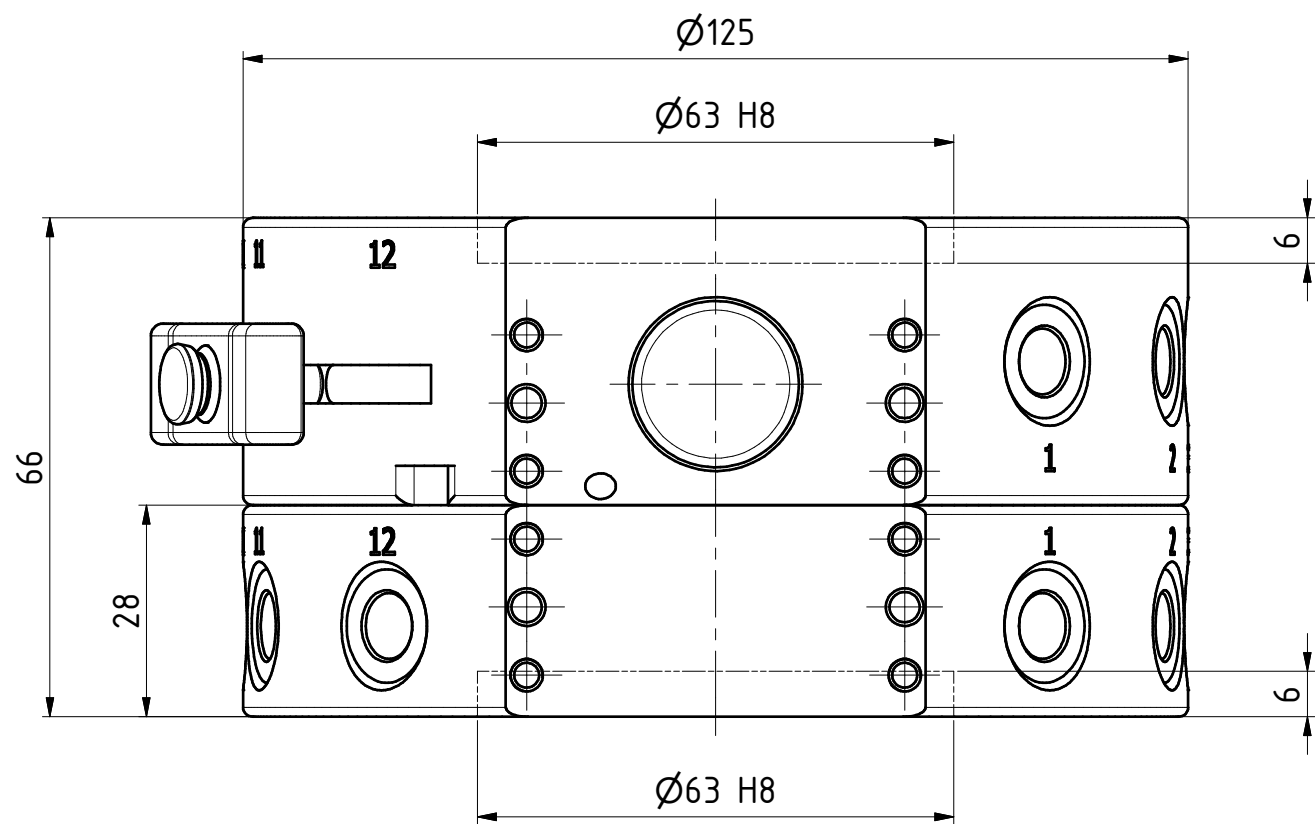
G-SHS125-O-K100	upper assembly, E-Mount, 12 pneum. ducts, Al, anodized
G-SHS125-U-A100	lower assembly, E-Mount, 12 pneum. ducts, Al, anodized



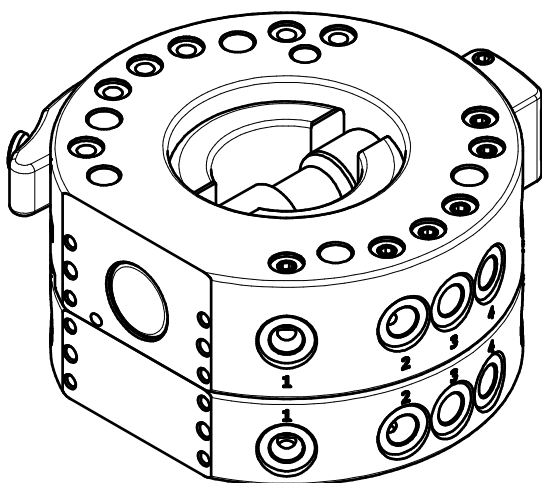


Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS125-1	Zentrierscheibe Al, eloxiert
2	G-ZS125-S6P	Pneumatikflansch inkl. G-ZS125-1
3	G-SHS125-O-K100	Oberteil, Kopf, TK=100
4	ZG-AP-SEK100-SHS125	Adapterplatte, für SEK100
5	G-SHS125-U-A100	Unterteil, Adapter, TK=100
6	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
7	G-SEK100-U-1E12-300-M12	SEK100 Unterteil



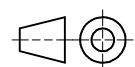


( 1 : 2 )



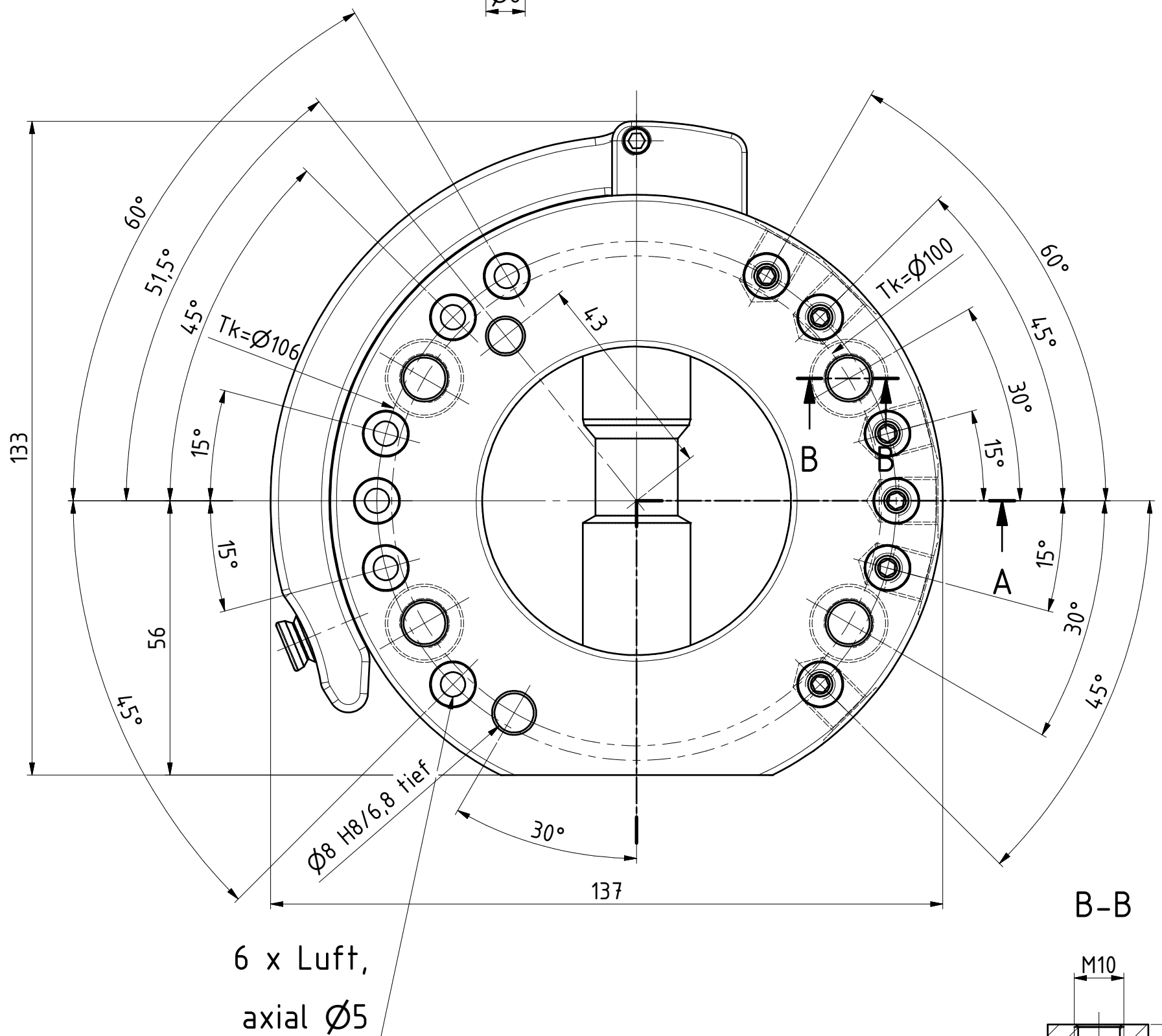
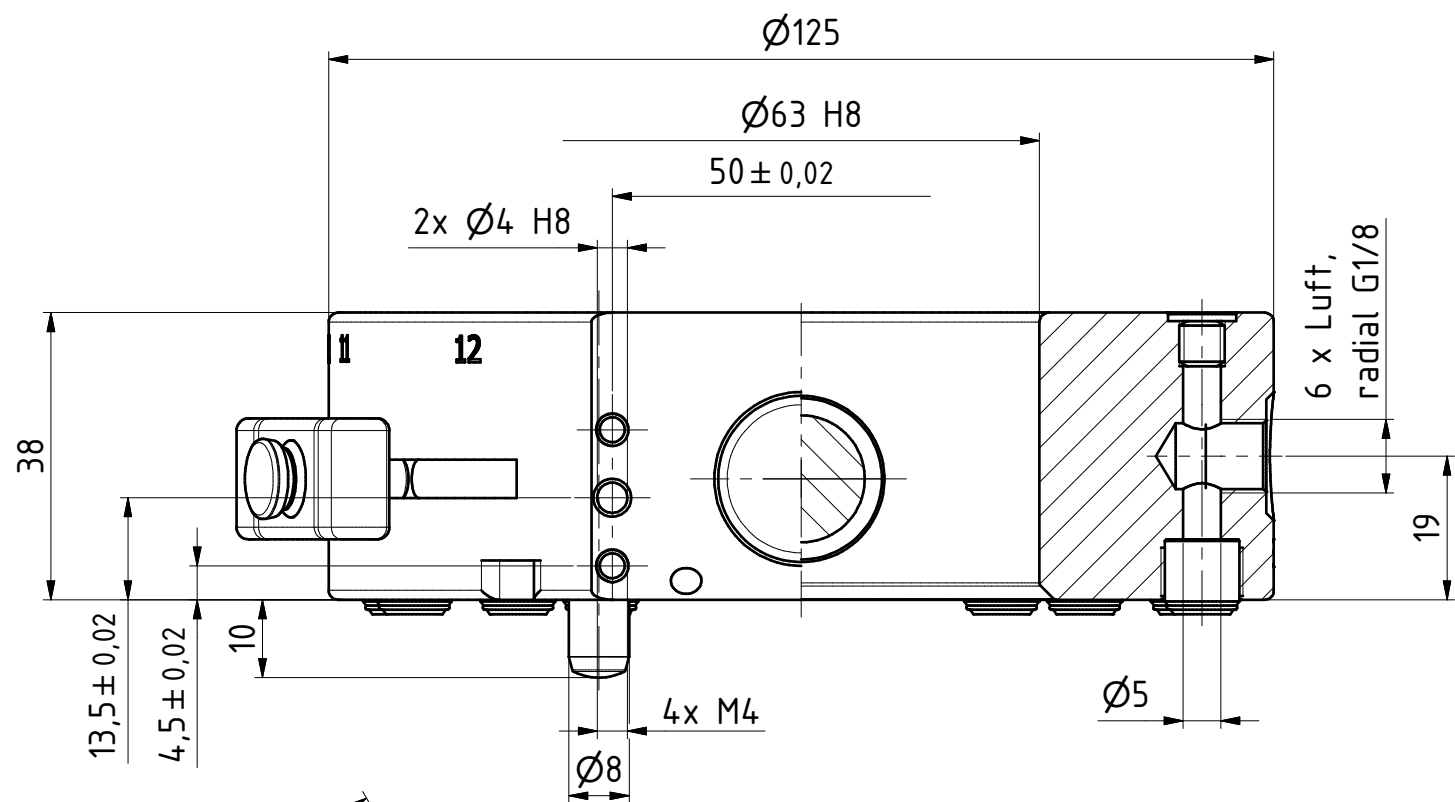
Datum 17.04.2024 Maßstab 1:1

Zeichnungsnummer  
G-SHS125-2ZEP

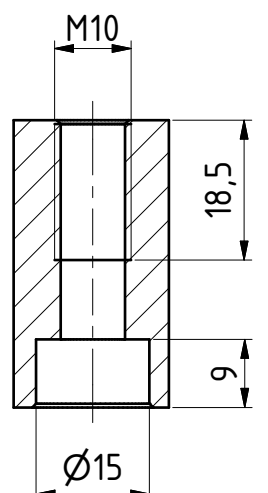
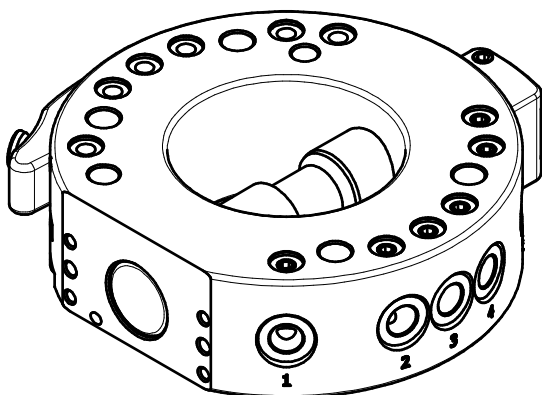


**GRIP**  
GRIP GmbH Handhabungstechnik

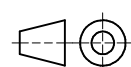
A-A



B-B


$$(1:2)$$


Datum 17.04.2024	Maßstab 1:1
Zeichnungsnummer G-SHS125-0-K100	



**GRIP**  
GRIP GmbH Handhabungstechnik



# G-SHS160

## Technical specifications

GRIP

### Operating mode:

By operating the hand lever on the upper assembly (1), the crossway bolt is displaced radially. The crossway bolt is pressed into the bore of the lower assembly (2).

### Advantages:

Withstands high loads with low dead weight

Intuitive operation

Can be released and closed with one handle

High repeat accuracy +/- 0.02 mm

Holds up to 5,000 changing cycles

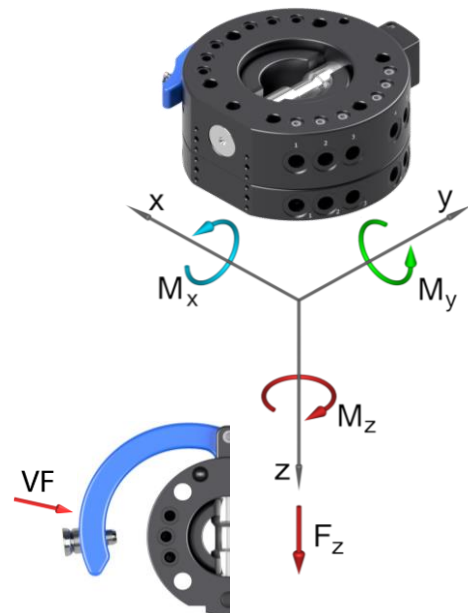
Optional connection of an energy feed-through for electrical and pneumatic ducts

With 12 integrated pneumatic ducts

Interface according to DIN EN ISO 9409-1-125-6-M10



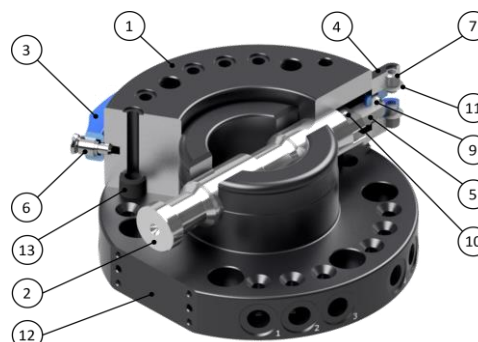
Technical specifications		SHS160
Basic material		Al. anod.
External diameter x height [mm]		160 x 78
Pitch circle diameter [mm]		125
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		3.000
Compression -Fz [kN]		626
Torsion Mz [Nm]		2325
Bending Mx, My [Nm]		960
Mass [kg]	upper assembly	2,42
	lower assembly	1,45
Recommended load [kg]		52* / 68**
Locking force VF [N]		10 - 100
Locking stroke VH [mm]		0 - 1
Pneumatic ducts	connection	6 x G1/4 a. 6 x D=6,5
	max. pressure p [bar]	-1 to 8
Operating temperature range [°C]		-30 to +120
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

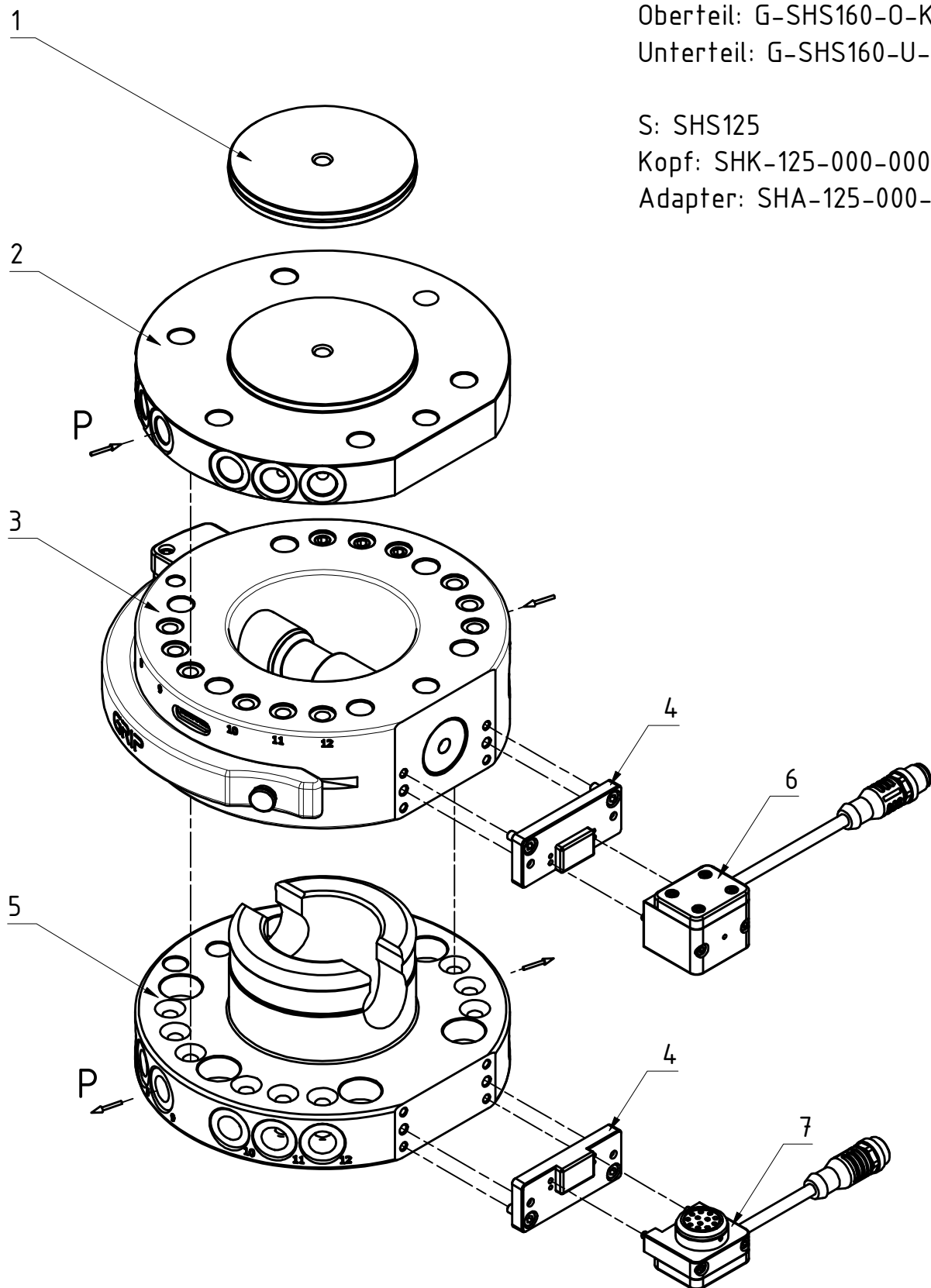


Pos.	Description
1	Upper assembly
2	Crossway bolt (CB)
3	Hand lever
4	Holder
5	Strap pin (SP)
6	Spring locking pin
7	Guiding screw
9	Cylinder bolt SP
10	Cylinder bolt CB
11	Shim ring
12	Lower assembly
13	Pneumatic seals

### SHS160 Connector, drilled acc. to ISO...

G-SHS160-O-K125	upper assembly, E-Mount, 12 pneum. ducts, Al, anodized
G-SHS160-U-A125	lower assembly, E-Mount, 12 pneum. ducts, Al, anodized

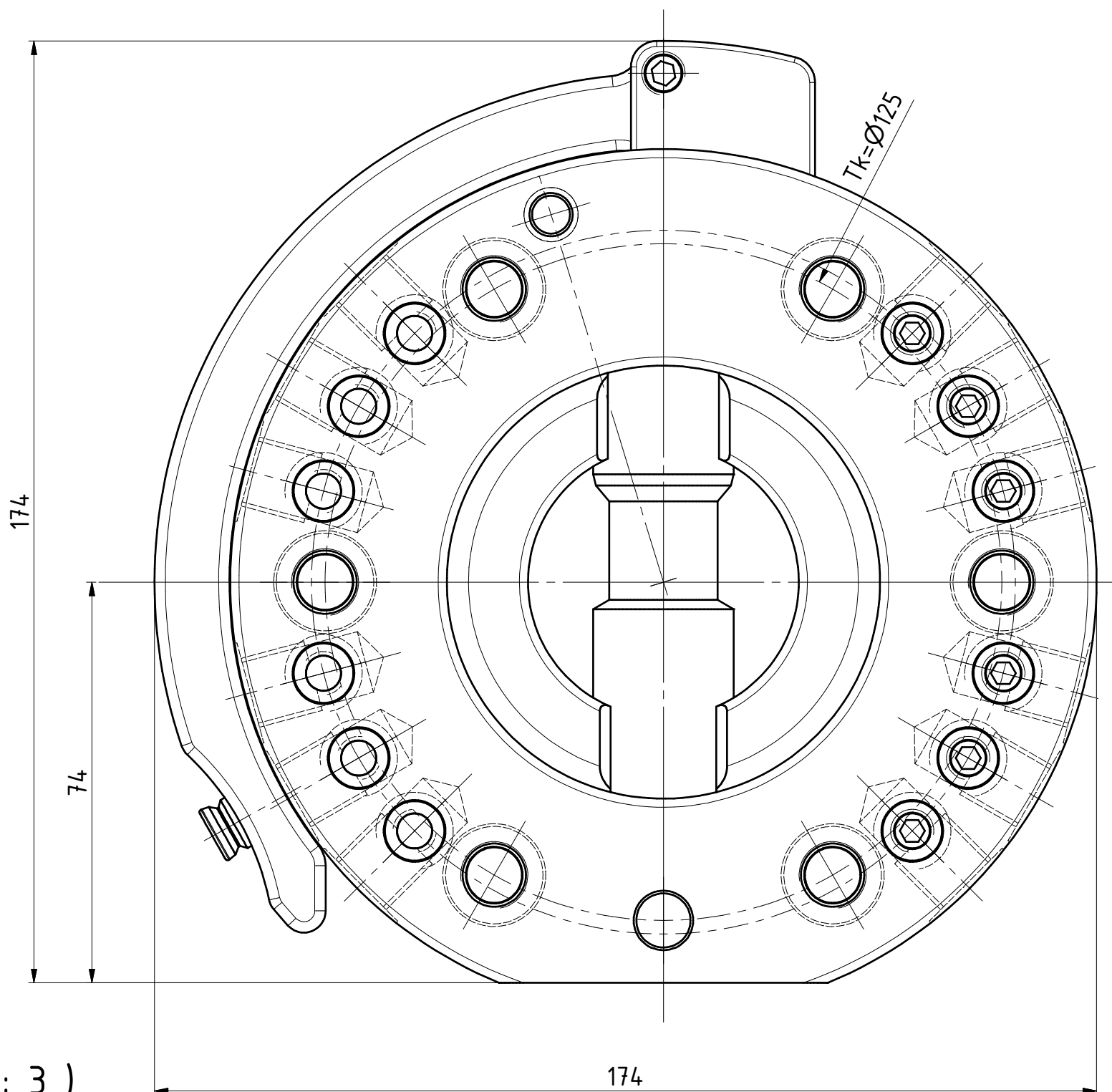
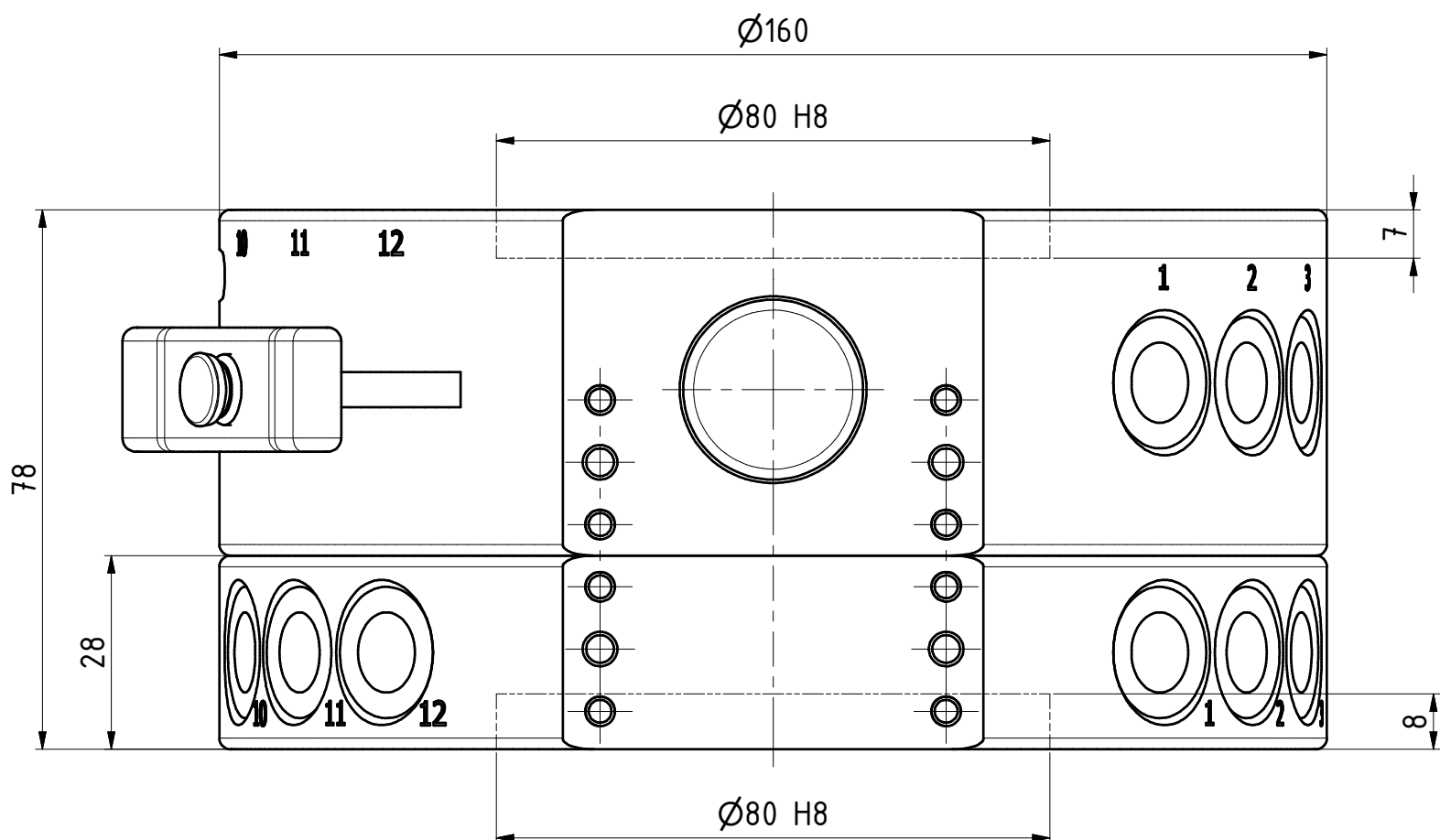




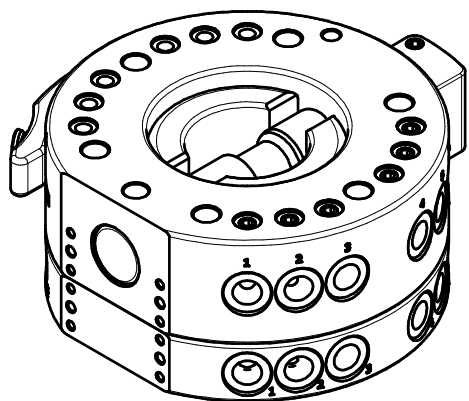
GRIP: G-SHS160  
 Oberteil: G-SHS160-O-K125  
 Unterteil: G-SHS160-U-A125

S: SHS125  
 Kopf: SHK-125-000-000  
 Adapter: SHA-125-000-000

Pos.	GRIP Art.-Nr.	Beschreibung
1	G-ZS160-1	Zentrierscheibe Al, eloxiert
2	G-ZS160-S6P	Pneumatikflansch inkl. G-ZS160-1
3	G-SHS160-O-K125	Oberteil, Kopf, TK=125
4	ZG-AP-SEK100-SHS125	Adapterplatte, für SEK100
5	G-SHS160-U-A125	Unterteil, Adapter, TK=125
6	G-SEK100-O-1E12-300-M12	SEK100 Oberteil
7	G-SEK100-U-1E12-300-M12	SEK100 Unterteil



( 1 : 3 )









# AUTOMATIC TOOL CHANGERS

One connection – 1000 possibilities

- Interface according to DIN EN ISO 9409-1
- Fully automatic tool change
- High repeatability < 0.02 mm
- Durable - withstands more than 1.000.000 tool change cycles
- Withstands high loads at low dead weight
- No external energy such as compressed air or electrical power is required
- Integrated pneumatic grommets
- The robot's own movement activates the locking and unlocking mechanism
- Spring-loaded pin provides additional safety during operation

The Auto Connector is a new type of mechanical coupling system that allows fully automatic tool changing. The system consists of an upper assembly and a lower assembly. A locking mechanism is located in the upper assembly to ensure a precise and form-fitting fit between the upper and lower assemblies. The locking and unlocking mechanism is activated by the robot's own movement. Trays allow multiple tool types to be parked at the end of the arm. No external power source is required for automatic tool change.

---



## AC063

The AC063 automatic tool change is a new type of mechanical coupling system that allows fully automatic tool change. The system consists of an upper assembly and a lower assembly. A locking mechanism is located in the upper assembly to ensure a precise and form-fitting fit between the upper and lower assemblies. The locking and unlocking mechanism is activated by the robot's own movement. Trays allow multiple tool types to be parked at the end of the arm. No external power source is required for automatic tool change.

---

## AC063

The Auto Connector is a fully automatic mechanical end of arm tool changer. The system is composed of an upper assembly and a lower assembly. The upper assembly houses the locking mechanism, which ensures a precise and form-locking fitment between the upper and lower assembly. The locking and unlocking mechanism is activated through the robot's own movement. Trays make it possible to park multiple types of end of arm tools. An external energy source is not required for the Auto Connector to perform its automatic tool change.

### Auto Connector Advantages:

- Fully automatic end of arm tool changer
- Interface according to DIN EN ISO 9409-1
- High repeatability < 0.02 mm
- Durable - withstands over 10.000.000 changing cycles
- Withstands high loads with low dead weight
- The robot's own movement activates the locking and unlocking mechanism
- No external energy such as compressed air or electric are required
- Integrated pneumatic feedthroughs
- Module for electric actuated tools is optional
- Machined out of high strength aluminum and anodized
- A spring actuated pin ensures additional safety during operation



## G-AC063

### Technical specifications

# GRIP

#### Operating mode:

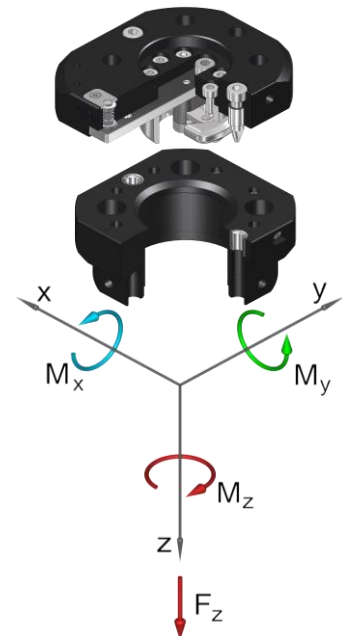
The upper assembly (1) and lower assembly (2) are automatically locked and unlocked by the robot's traverse path onto the tray.

#### Advantages:

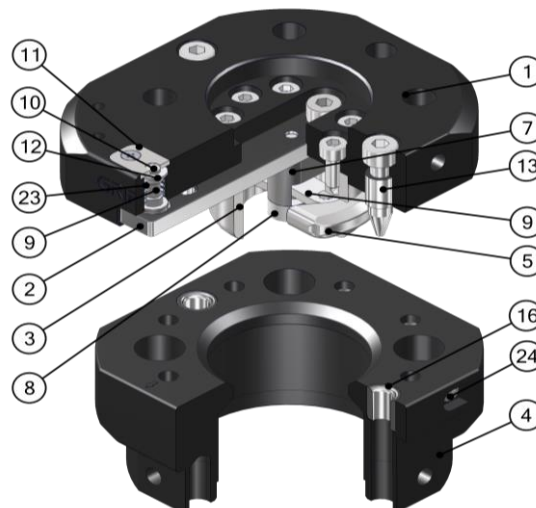
- Semi-automatic tool changing system
- No external locking and unlocking energy required
- Self-locking, secured locking mechanism
- Withstands high loads with low dead weight
- High repeat accuracy +/- 0.02 mm
- Withstands over 1.000.000 changing cycles
- Optional connection of a power coupling **SEK** for electrical ducts
- Six** integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1

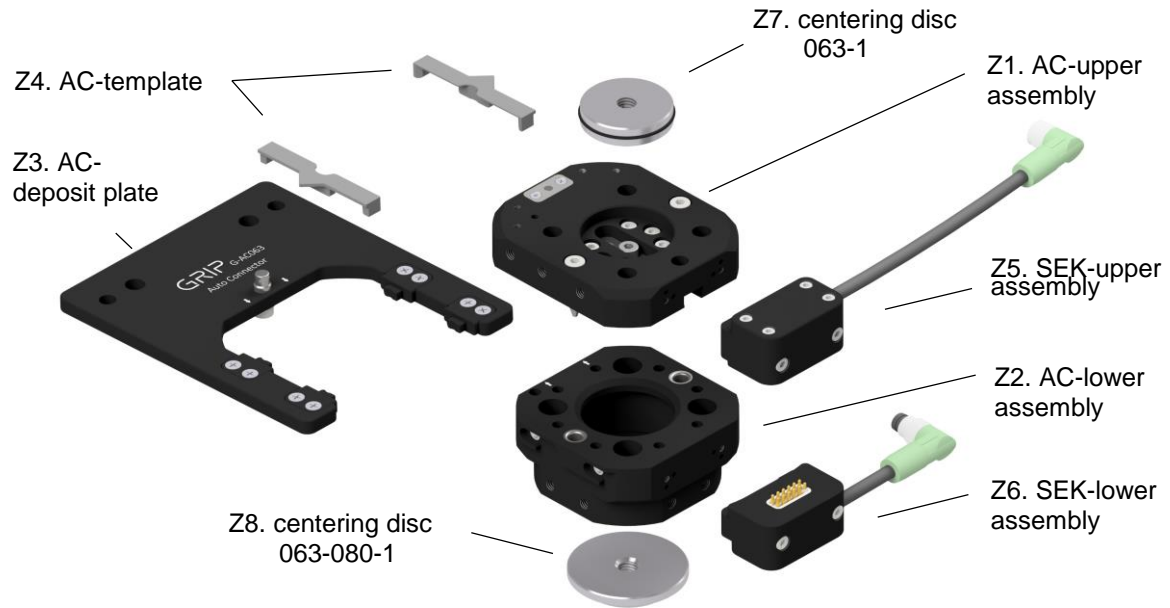


Technical specifications		AC063
Basic material		Al, anod.
Length x width x height [mm]		74 x 63 x 44
Pitch circle diameter [mm]		50
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1875
Compression -Fz [kN]		65
Torsion Mz [Nm]		69
Bending Mx, My [Nm]		59
Mass [kg]	upper assembly	0,24
	lower assembly	0,15
Recommended load [kg]		15* / 20**
Locking stroke VH [mm]		1,5
Locking force VF [N]		30 - 100
Pneumatic ducts	connection	6 x M5
	max. pressure p [bar]	-1 bis 8
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

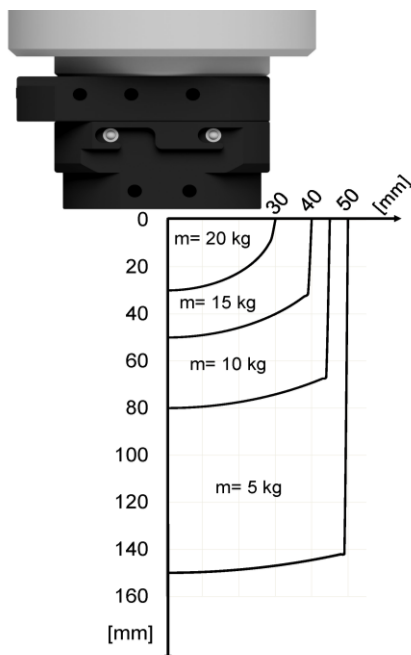


Pos.	Description
1	Upper assembly
2	Slider
3	Tappet
4	Lower assembly
5	Jaw 1
6	Jaw 2 (not visible)
7	Carrier
8	Connecting pin (slider)
9	Connecting pin (jaws)
10	Locking pin
11	Spring cover
12	Spring seat
13	Positioning pin
16	Drill bushing
23	Spring
24	Spring plunger



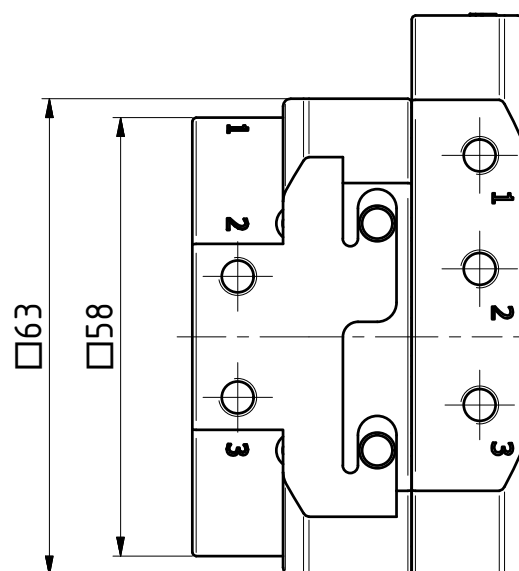
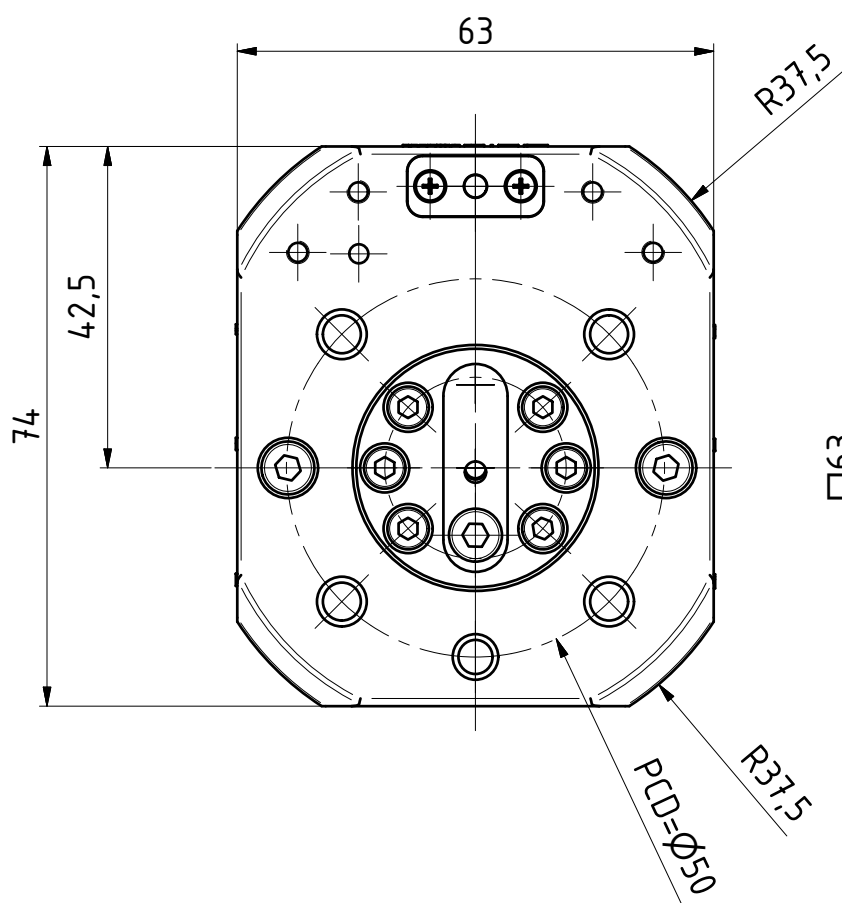
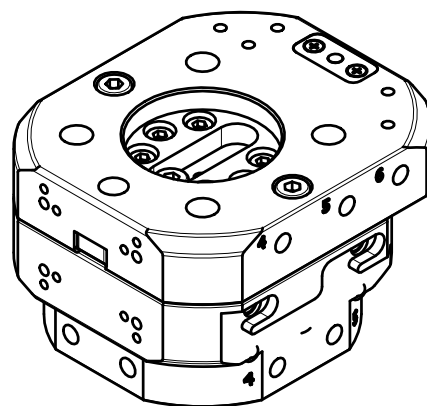
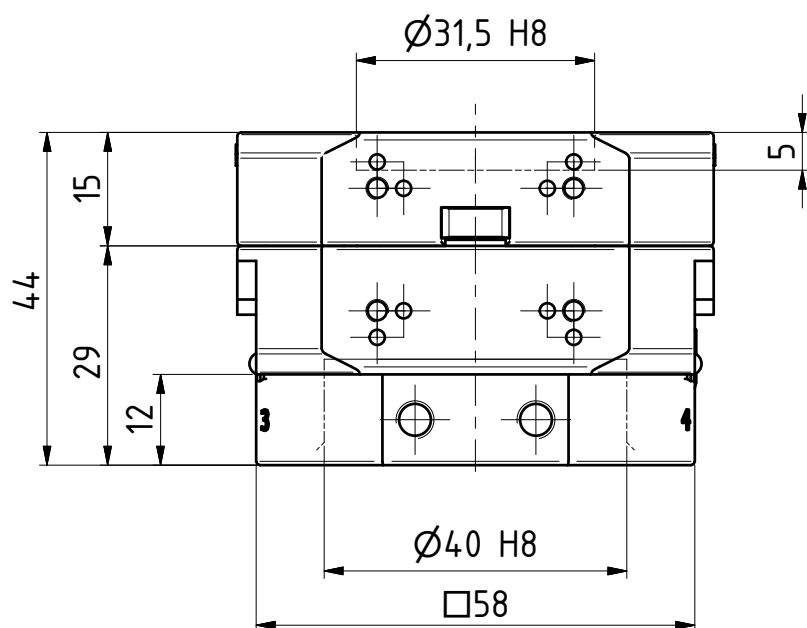


Pos.	Auto Connector Ø63, drilled acc. to ISO...	
Z1.	G-AC063-2OEP	upper assembly, E-Mount, 6 pneumatic ducts, Al, anodized
Z2.	G-AC063-2UEP	lower assembly, E-Mount, 6 pneumatic ducts, Al, anodized
	Accessory Auto Connector Ø63	
Z3.	G-AC063-A1-01	tray for AC063, single, Al, anodized
Z4.	ZG-AC063-A1-S1	programming-template 063 (2x)
Z5.	G-SEK100-O-1FE12-300-M8	electric coupling, upper assembly, plug M8, 8-poles, female
Z6.	G-SEK100-U-1FE12-40-M8	electric coupling, lower assembly, plug M8, 8-poles, male
Z7.	G-ZS063-1	centering disc
Z8.	G-ZS063-080-1	centering disc
	Spare and wear parts Auto Connector Ø63	
17.	EG-AC063-DS	gasket kit (8 x O-ring)
23.	EG-AC063-DF01	spring



### AC063 payload

payload as a function of  
center of mass distance

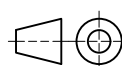


Datum 08.07.21

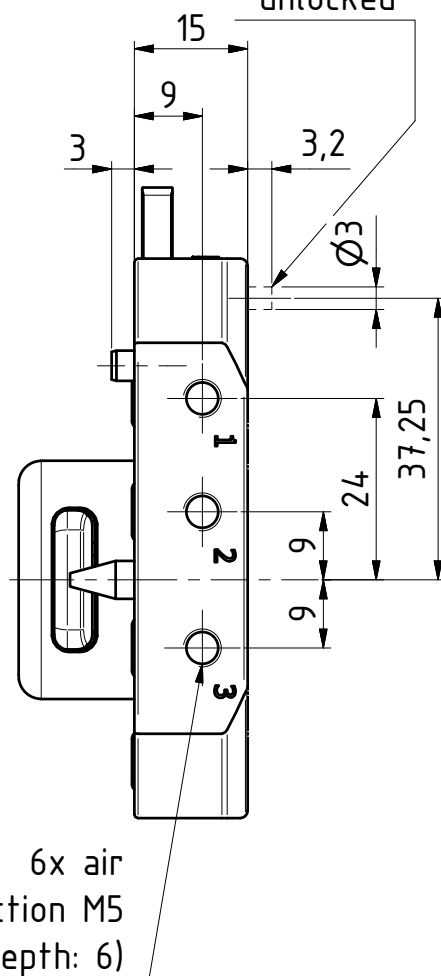
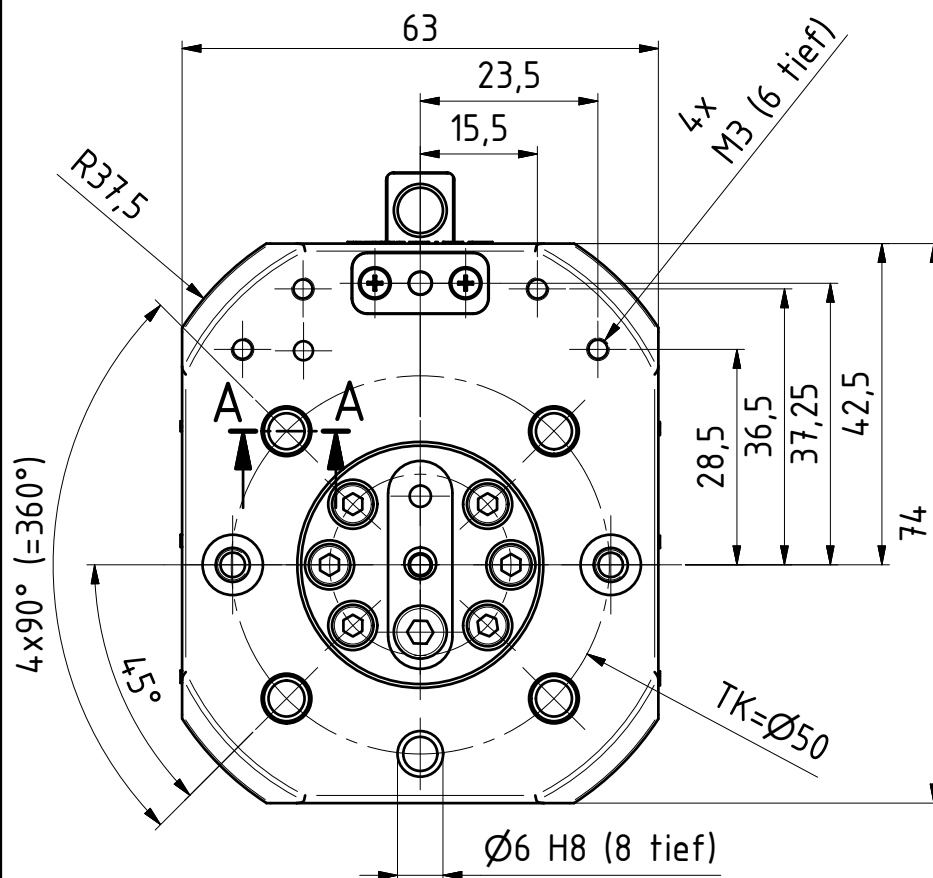
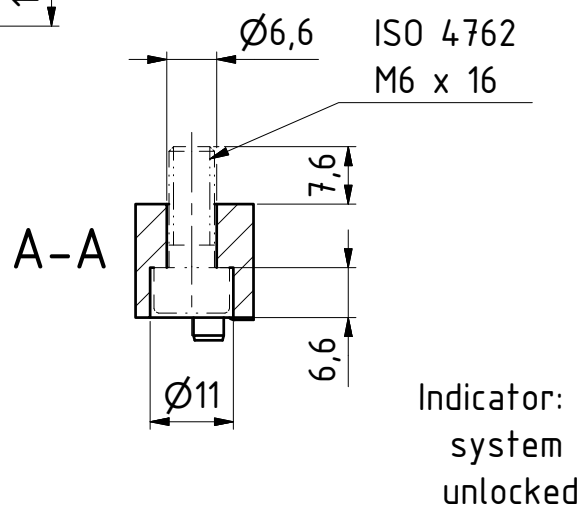
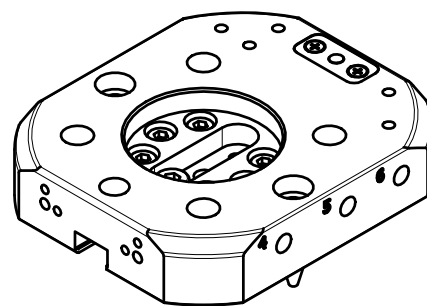
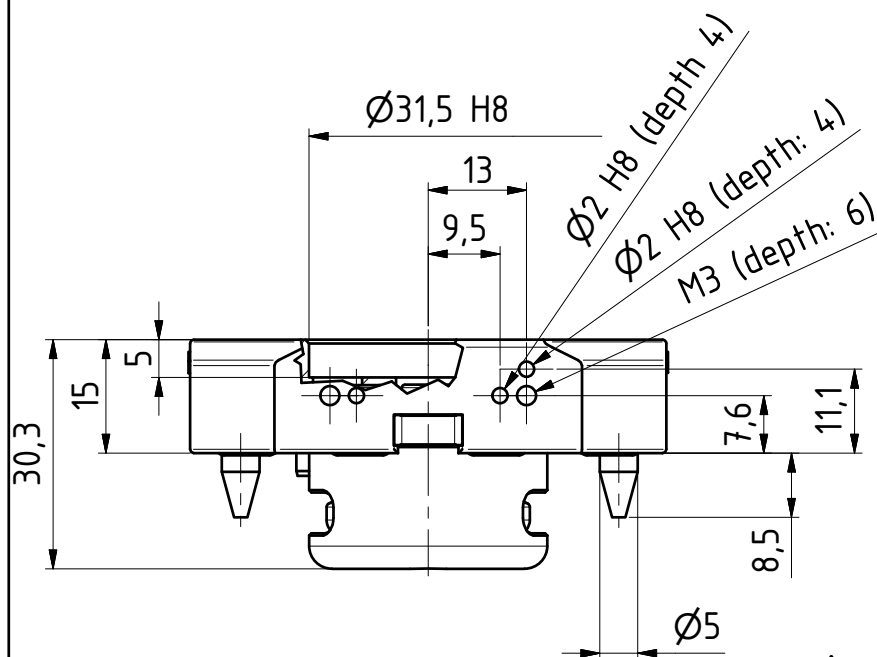
Maßstab 1 : 1

Zeichnungsnummer

2D G-AC063-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik

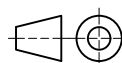


Datum 08.07.21

Maßstab 1 : 1

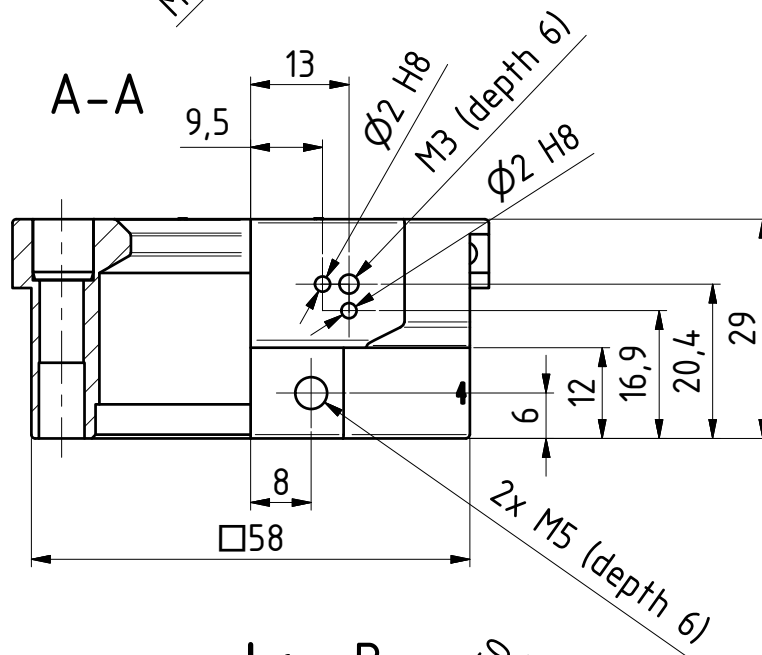
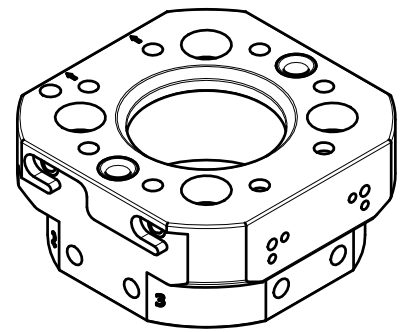
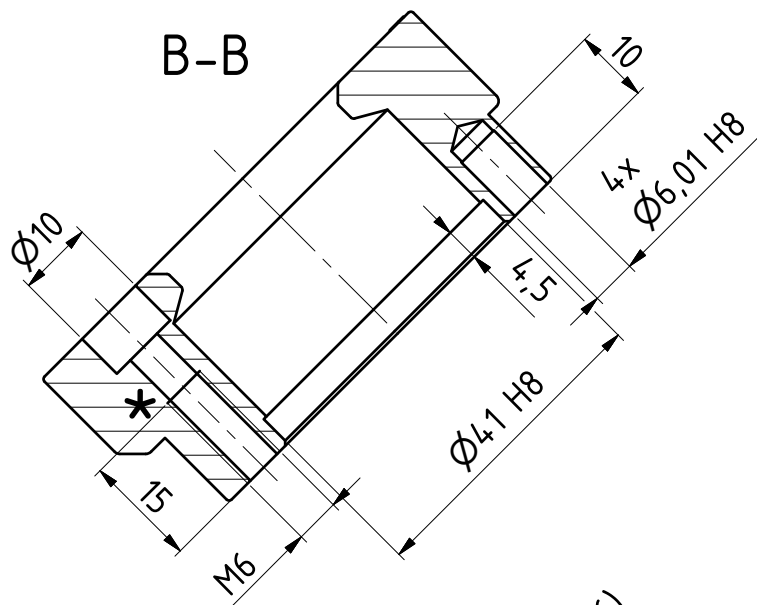
Zeichnungsnummer

G-AC063-20EP

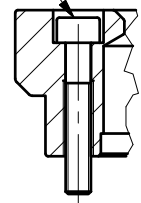


**GRIP**

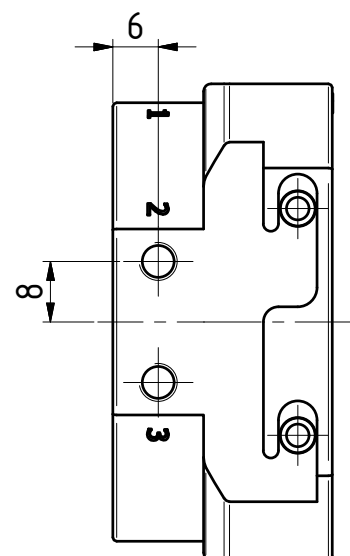
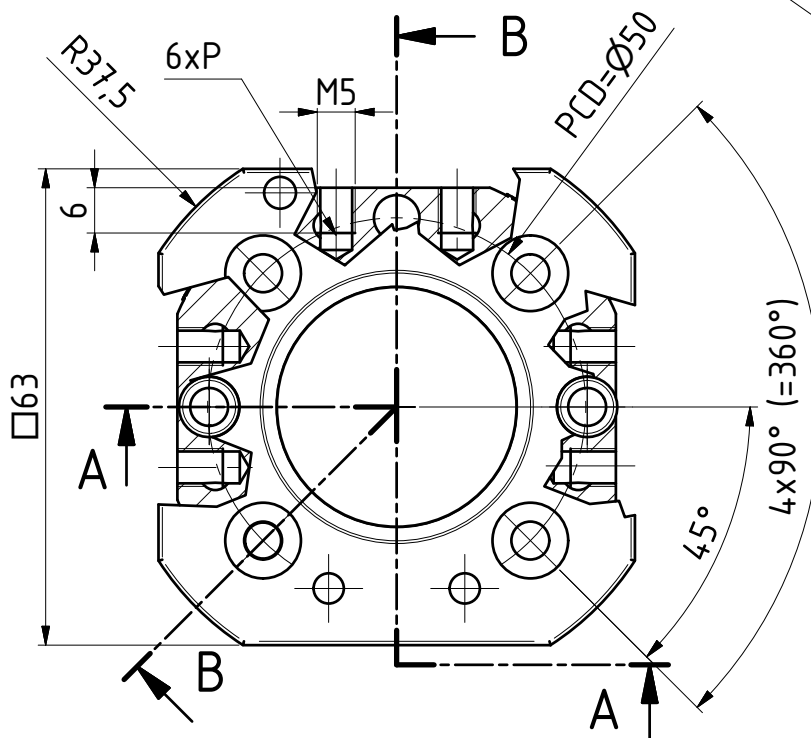
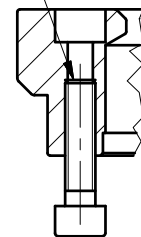
GRIP GmbH Handhabungstechnik



\*A  
ISO 4762 M5



\*B  
ISO 4762 M6

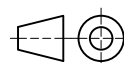


Datum 08.07.21

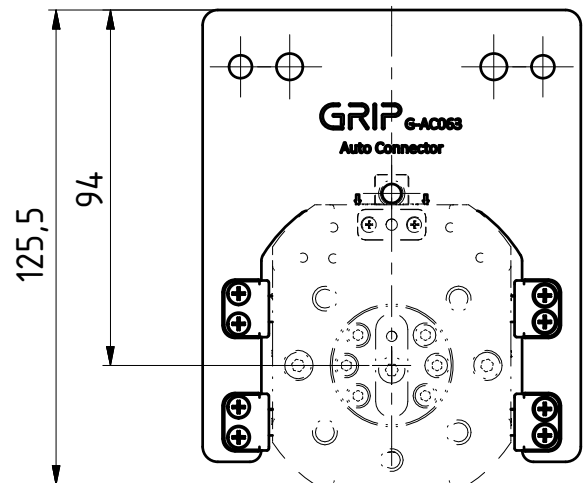
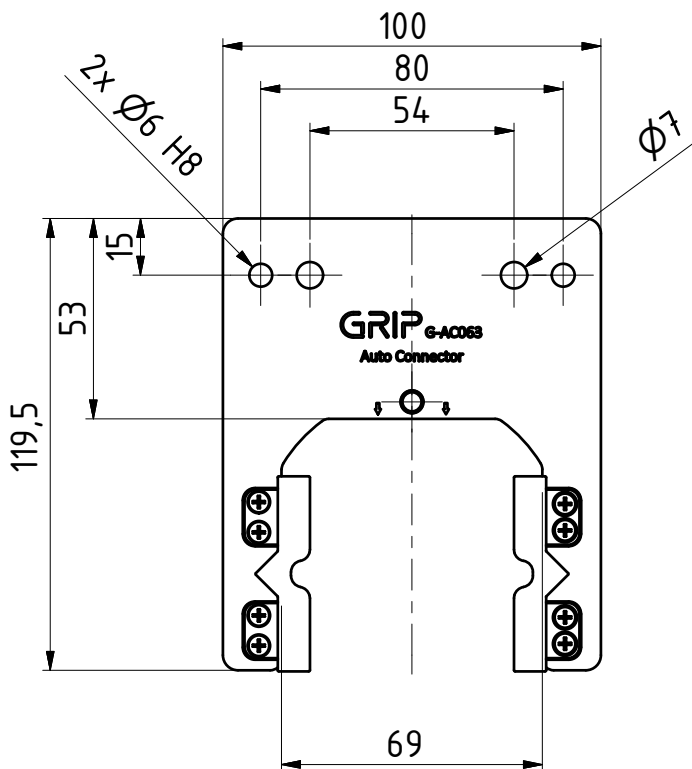
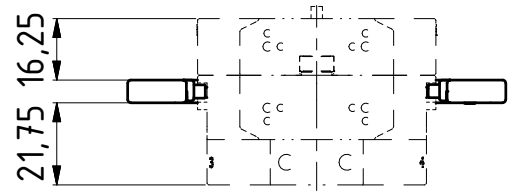
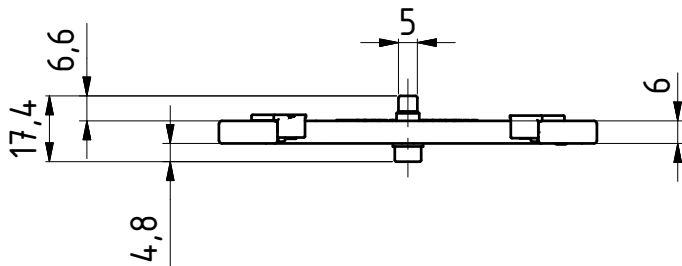
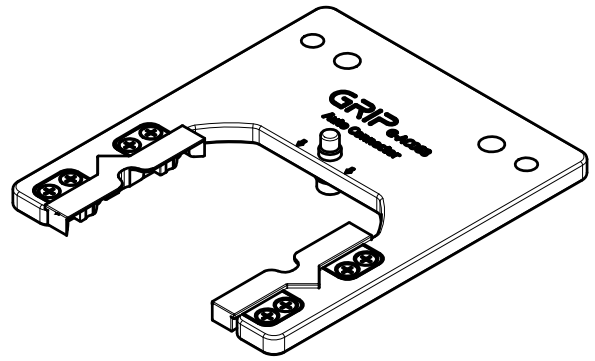
Maßstab 1 : 1

Zeichnungsnummer

G-AC063-2UEP



**GRIP**  
GRIP GmbH Handhabungstechnik

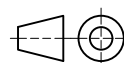


Datum 08.07.21

Maßstab 1 : 2

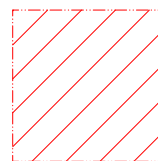
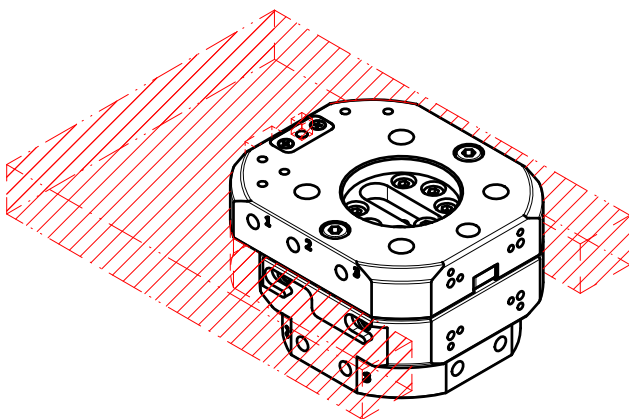
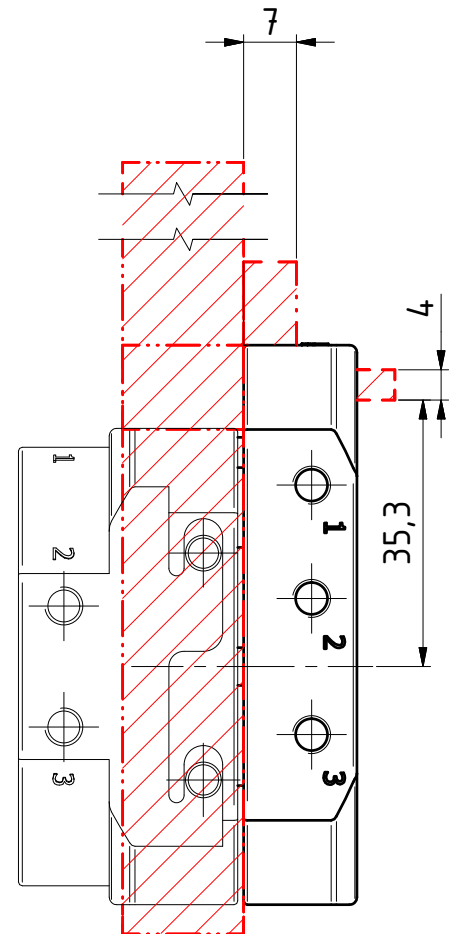
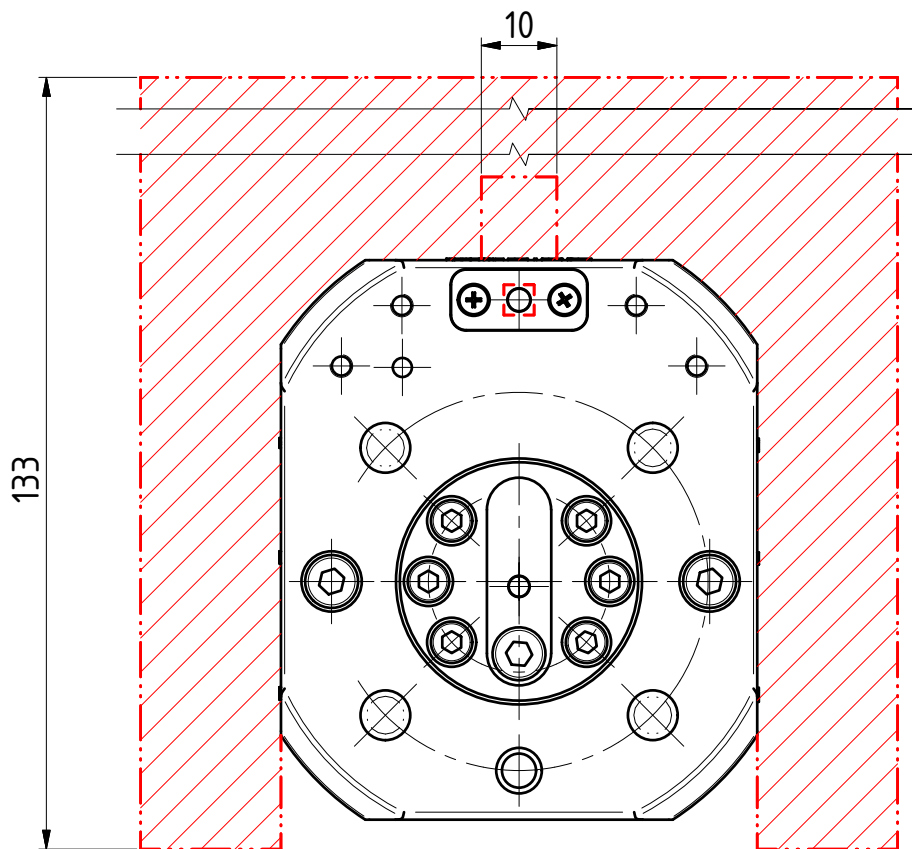
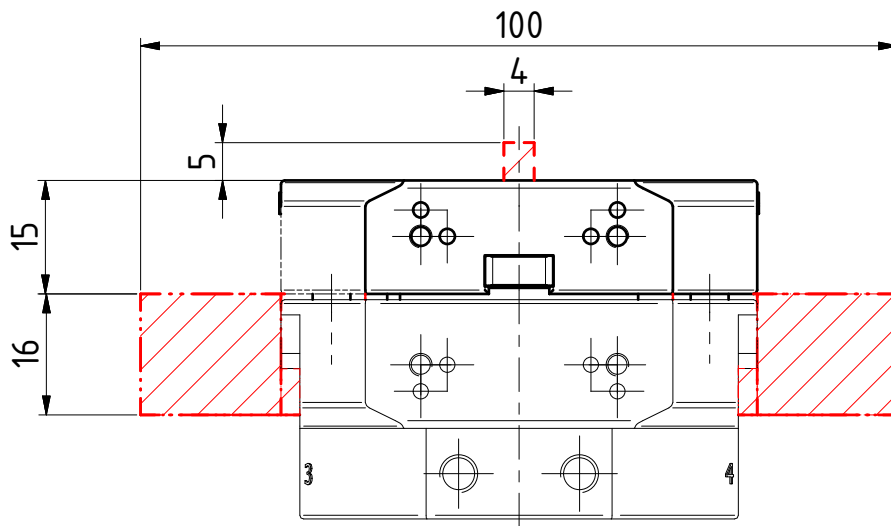
Zeichnungsnummer

G-AC063-A1-01



**GRIP**  
GRIP GmbH Handhabungstechnik





**Collision area!**  
**Keep clear!**

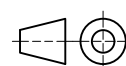
Do not mount tools in this area.  
Risk of collision.

Datum 08.07.21

Maßstab

Zeichnungsnummer

G-AC063 Collision Area



**GRIP**  
GRIP GmbH Handhabungstechnik

# FEEDING THROUGH

Standardized products for feeding through compressed air and electrical signals

Products for the implementation of compressed air and electrical signal transmission. Our pinnacle in grommets, the DDF Multi Swivel, prevents twisting of air and/or vacuum lines during endless rotational movements, so that rotating tools are elegantly supplied with driving energy.

In addition to our DDF Multi-Swivel, we also offer media transfer modules that are fully compatible with the offered tool-changers: MEK Multi Energy Coupling and SEK Energy Coupling.

---

## SEK Energy Coupling

The SEK Energy Coupling is a SHW Connector accessory that enables the transmission of energy, air and vacuum.



## MEK-PM Multi-Energy-Coupling

The MEK-PM Multi-Energy Coupling is a further development of our MEK series. The inlets and outlets for the pneumatic and electrical lines are horizontally arranged. This reduces the height profile of the MEK-PM. Pneumatic hoses can be connected to the coupling by means of push-in fittings (connection M5).

---

## MEK Multi-Energy-Coupling

The MEK Multi-Energy-Coupling is an MGW Connector accessory that enables the transmission of energy, air and vacuum.



## MEK-R Multi-Energy-Coupling

The MEK-R Multi-Energy-Coupling is a further development of our MEK series. The four air feedthroughs are equipped with check valves on the robot side. This allows the MGW-R coupling to be released under activated compressed air. In addition, the electrical contacts on the MEK-R have been replaced with spring contacts.



## DDF Multi Swivel

Solution for the rotatable feed-through of 2 to 4 compressed air or vacuum lines.

The compressed air is fed through channels inside the DDF. This prevents twisting of the pneumatic lines during endless rotary movements.

# SEK ENERGY COUPLING

The SEK Energy Coupling is a SHW Connector accessory that enables the transmission of energy, air and vacuum.

## SEK Advantages:

- Extends the mechanical interfaces of the SHW Connector
- Replaces additional plug connections
- Transmits 12x electrical signals from the upper to the lower assembly

The SEK Energy Coupling is a SHW Connector accessory that enables the transmission of energy, air and vacuum.

## SIZES

SEK100

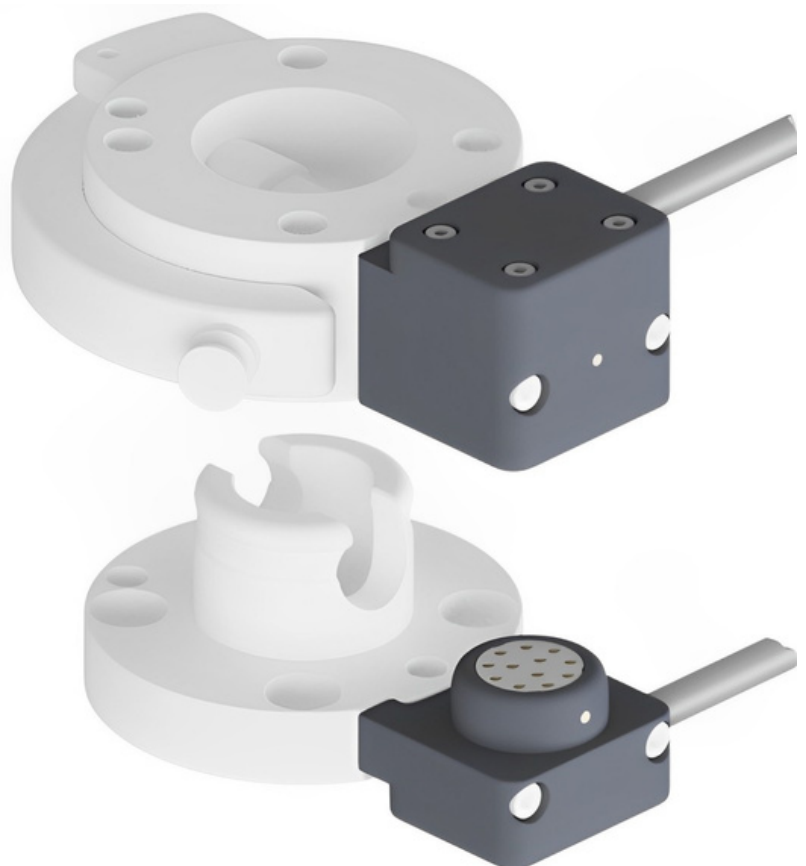
SEK100-P

SEK100-FE

SEK125

AP-SEK100-SHW125

AP-SEK100-SHW160

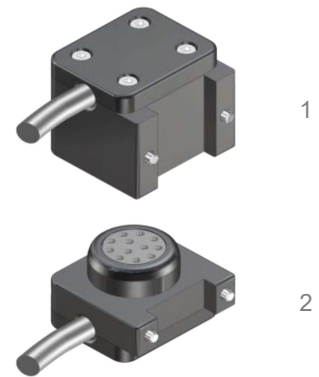


### Operating mode:

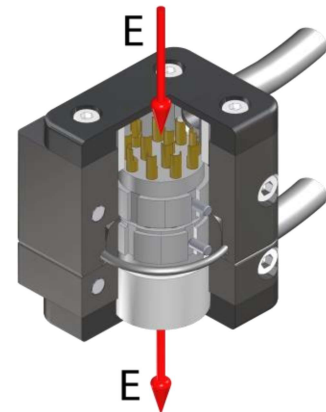
The SEK upper assembly is mounted on the SHW upper assembly.  
The SEK lower assembly is mounted on the SHW lower assembly accordingly. The SEK is automatically coupled by the mechanical connection of the exchange system.

### Advantages:

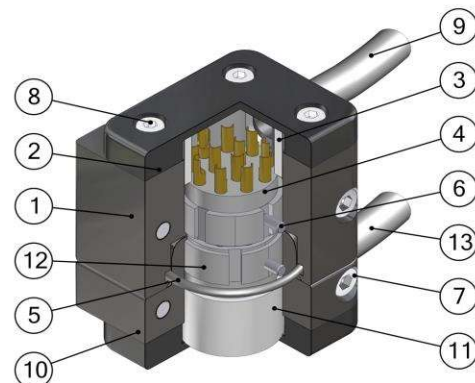
Mechanical and electric connections are established simultaneously.  
Withstands up to 50,000 changing cycles  
Individual wiring  
Coding of the interchange parts



Technical specifications		SEK100
Basic material		Al, anod.
Compatible with		<b>SHW 063, 080, 100</b>
Adaptable to		<b>SHW 125, 160</b>
Width x depth x height [mm]		34 x 32 x 29,5
No. of poles E		12
Rated current per pole I [A]		9
Rated voltage U [V]		63
Contact resistance per pole R [mΩ]		3
Contact durability (cycles)		50.000
Mass [kg]	upper assembly	0,07
	lower assembly	0,045
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120

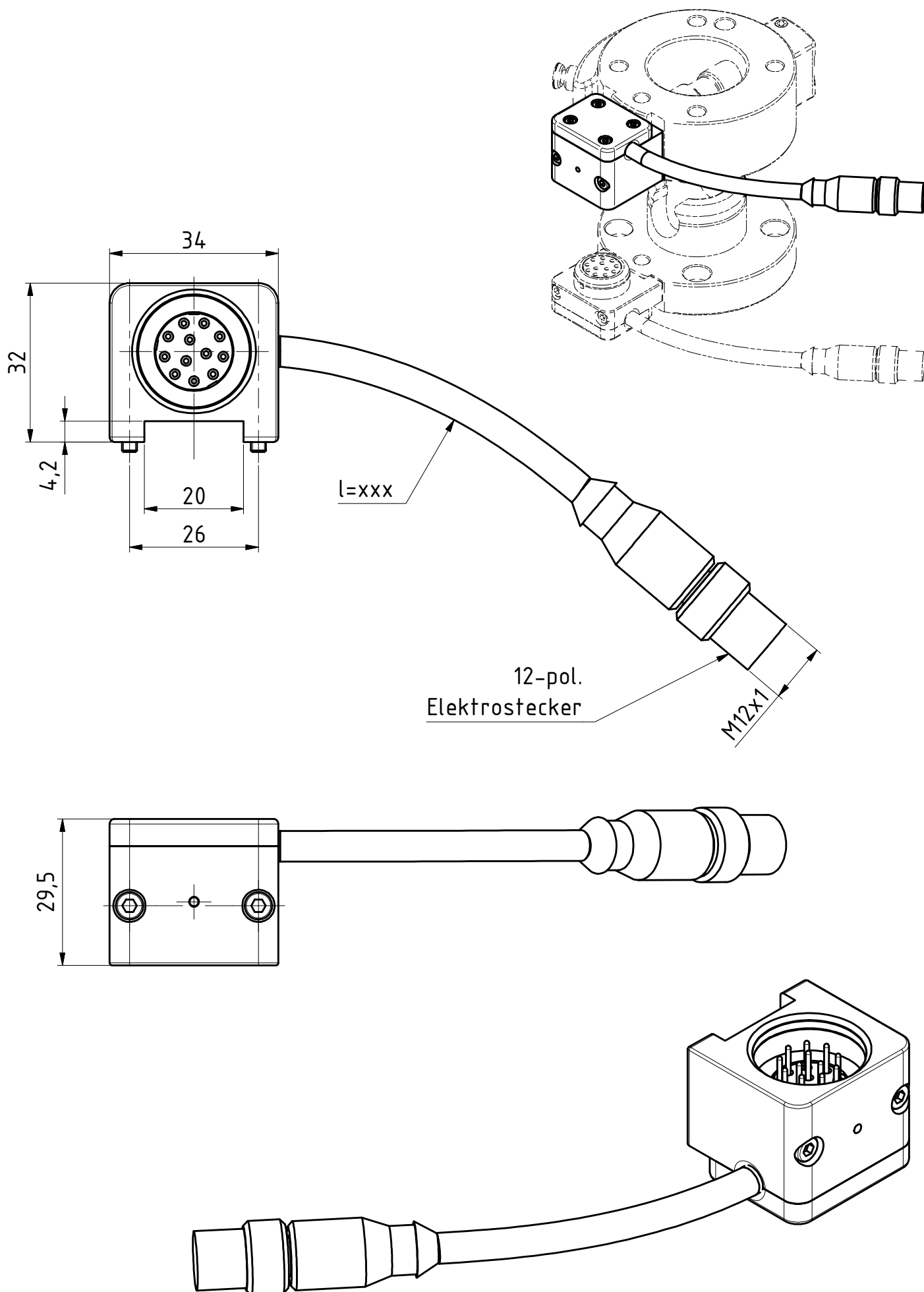


Pos.	Description
1	Upper assembly 1E
2	Cap
3	Distance bush upper assembly
4	Insulating body with pins
5	O-Ring
6	Cylindrical pin
7	Mounting screw
8	Screw for Cap
9	Cable on the robot side
10	Lower assembly 1E
11	Distance bush lower assembly
12	Insulating body with bushings
13	Cable on gripper side



**SEK energy feed-through with pneumatic ducts...**

G-SEK100-O-1E12-300-M12	upper assembly, electrical plug, 12 poles, cable L= 300 mm, plug M12x1, 12 poles
G-SEK100-U-1E12-300-M12	lower assembly, electrical bushing, 12 poles, cable L= 300 mm, bushing M12x1, 12 poles
G-SEK100-O-1E12-300-M8	upper assembly, electrical plug, 12 poles, cable L= 300 mm, plug M8, 8 poles
G-SEK100-U-1E12-40-M8	lower assembly, electrical bushing, 12 poles, cable L= 300 mm, bushing M8, 8 poles

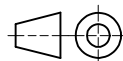


Datum 11.11.2016

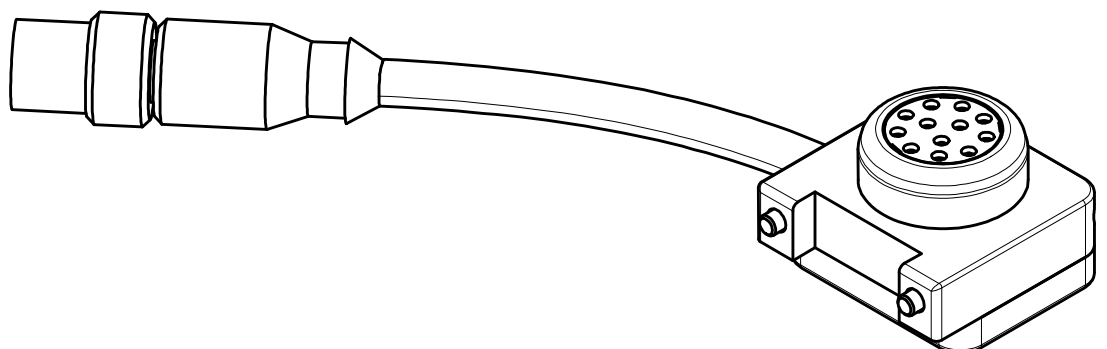
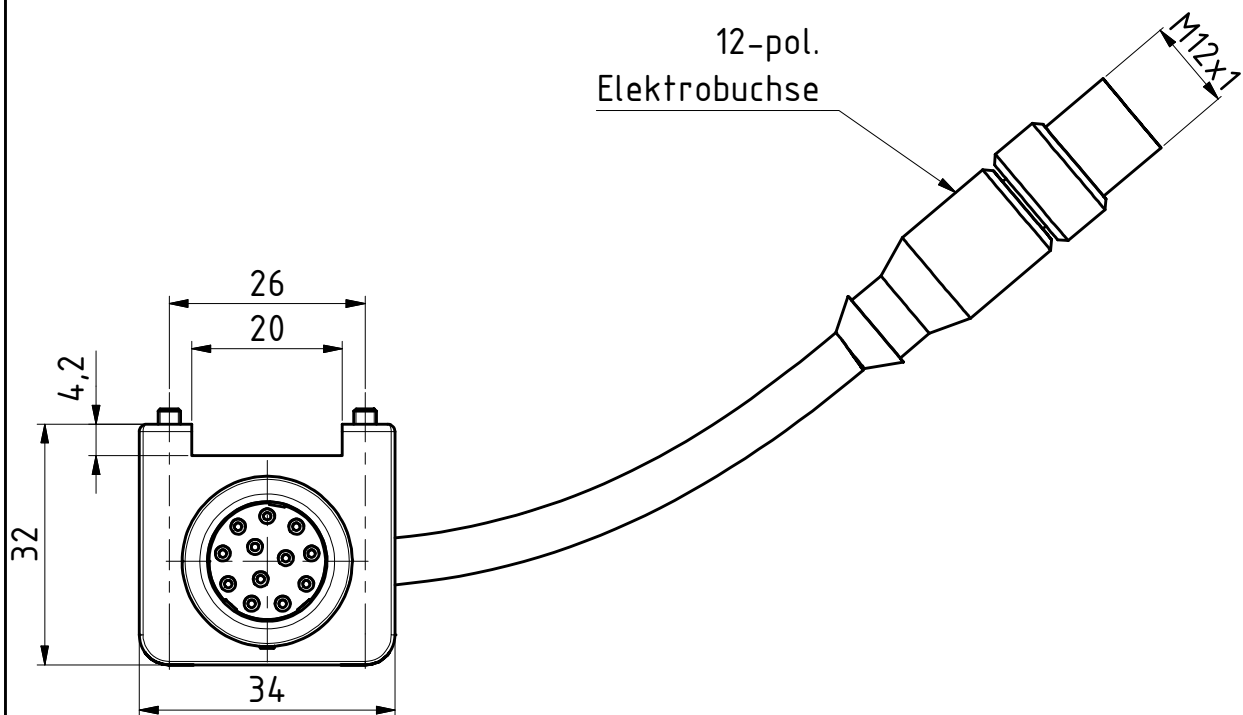
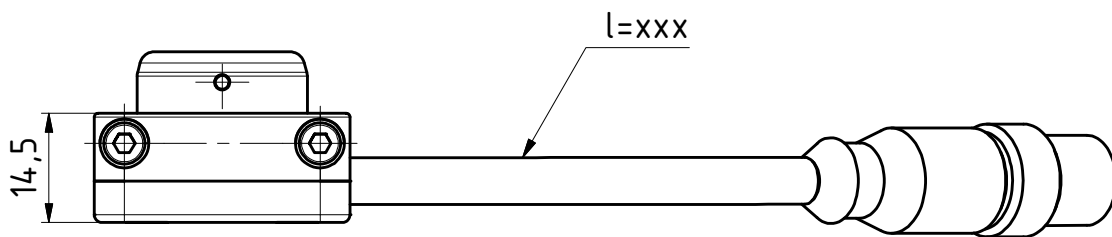
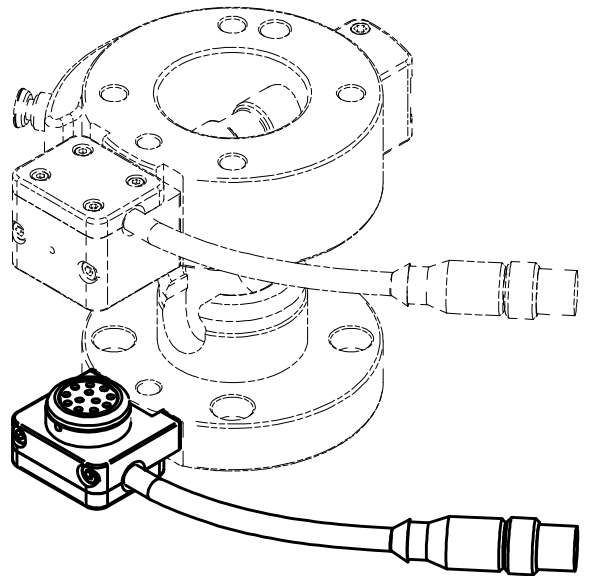
Maßstab 1:1

Zeichnungsnummer

G-SEK100-O-1E12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik

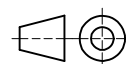


Datum 11.11.2016

Maßstab 1:1

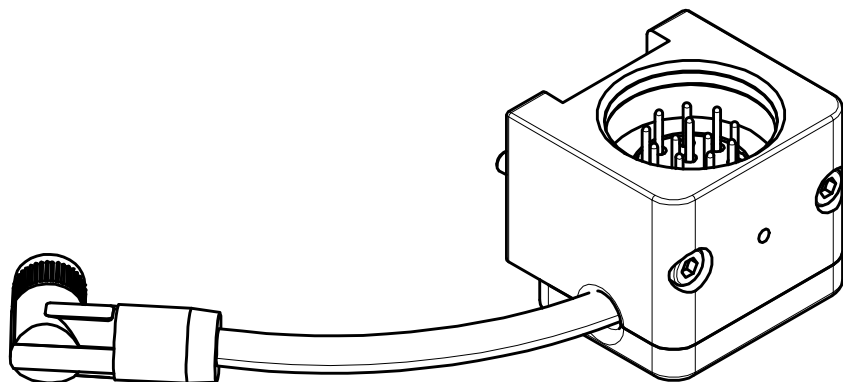
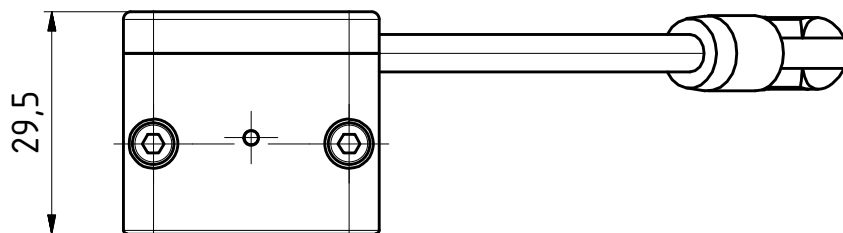
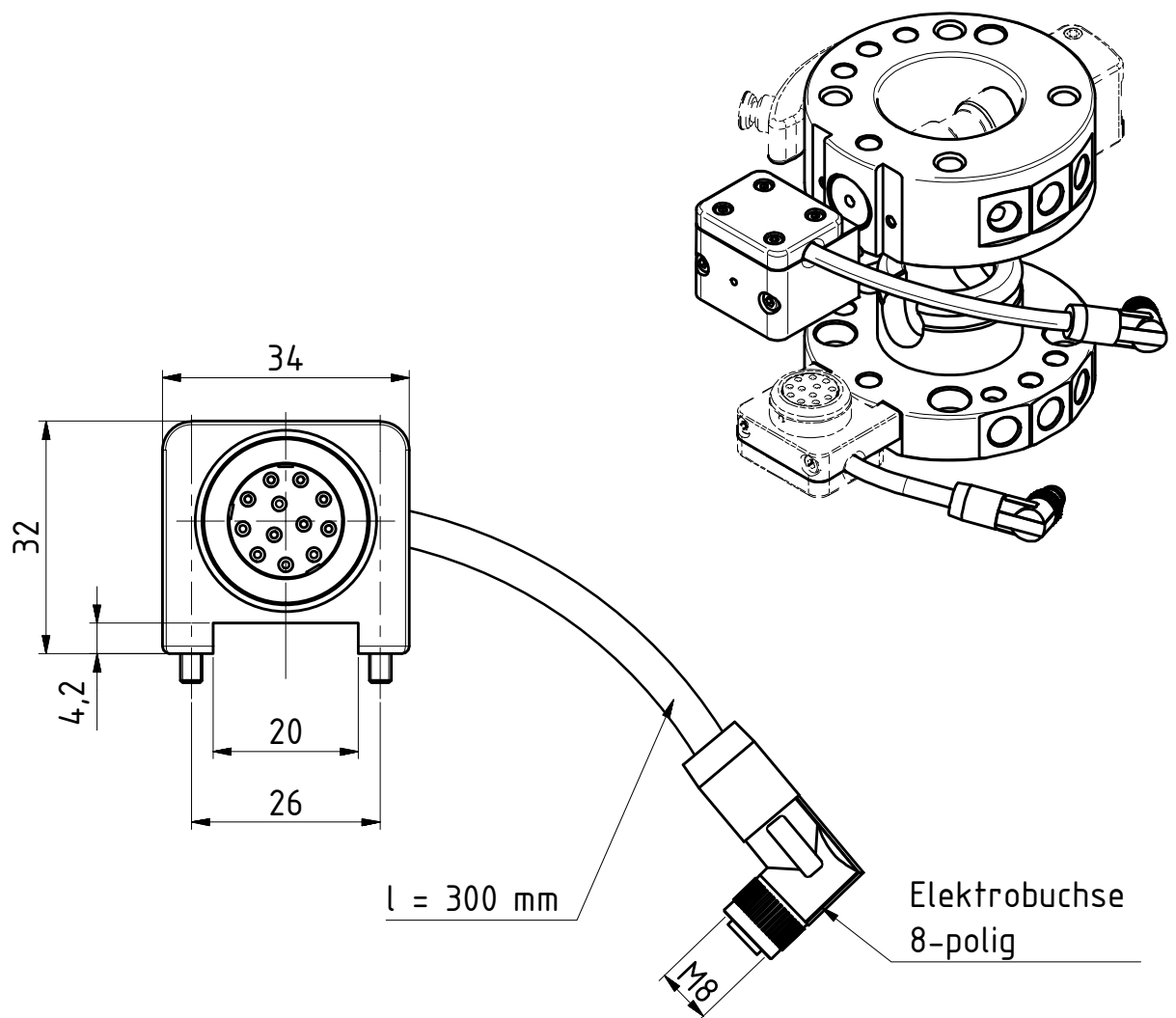
Zeichnungsnummer

G-SEK100-U-1E12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik



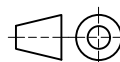


Datum 23.10.19

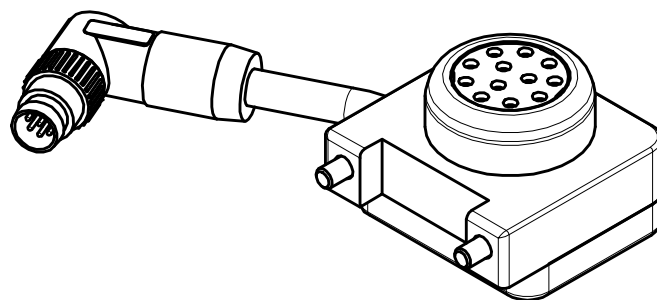
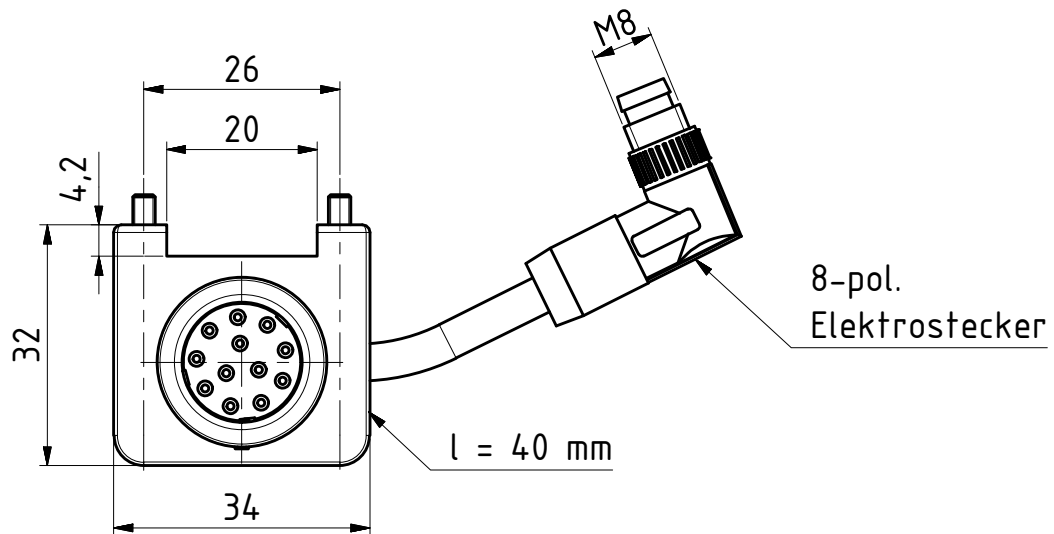
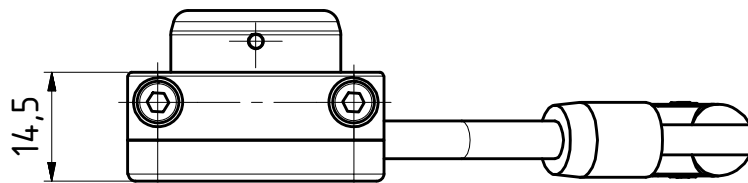
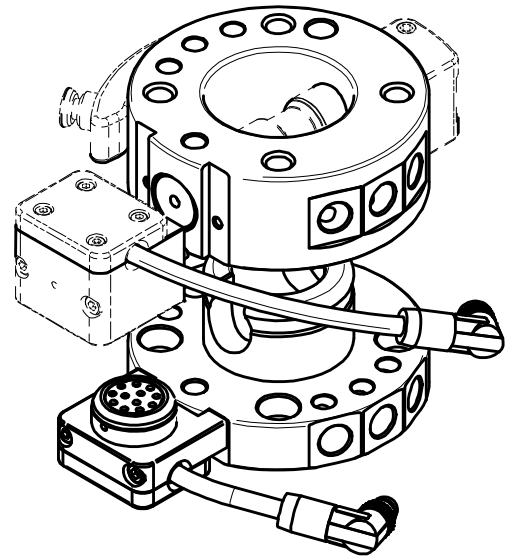
Maßstab 1:1

Zeichnungsnummer

G-SEK100-O-1E12-300-M8



**GRIP**  
GRIP GmbH Handhabungstechnik

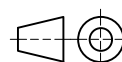


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-SEK100-U-1E12-40-M8



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-SEK100-P

## Technical specifications

GRIP

### Operating mode:

The SEK upper assembly is mounted on the SHW upper assembly.  
The SEK lower assembly is mounted on the SHW lower assembly accordingly. The SEK is automatically coupled by the mechanical connection of the exchange system.

### Advantages:

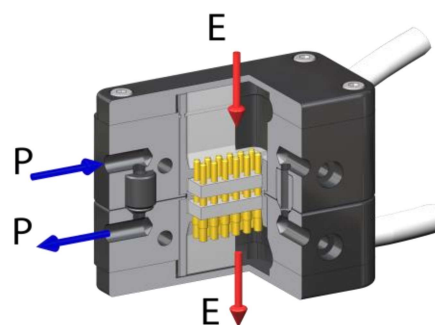
Mechanical, electric and pneumatic connections are established simultaneously.

Withstands up to 1,000,000 changing cycles

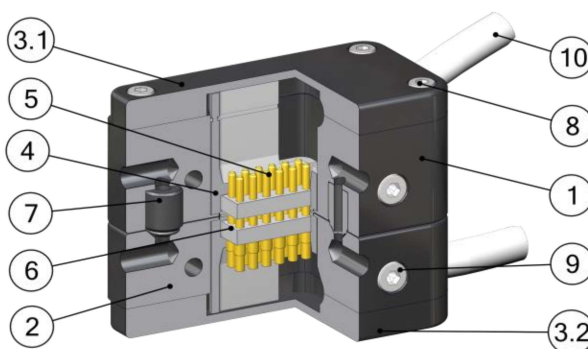
Individual wiring and coding of the interchange parts



Technical specifications		SEK100-P
Basic material		Al, anod.
Compatible with		SHW 063, 080, 100 ; AC063
Adaptable to		SHW 125, 160
Width x depth x height [mm]		52 x 33,5 x 45
Signal ducts		12
Rated current I [A]		2
Rated voltage U (max. voltage) [V]		63 (120)
Contact resistance per pole R [mΩ]		20
Number P		6
Cross section A per P [mm²]		6,16
Operating pressure p [bar]		-1 to 8
Nominal width NW [mm]		M5
Contact durability (cycles)		50.000
Mass [kg]	upper assembly	0,09
	lower assembly	0,08
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120

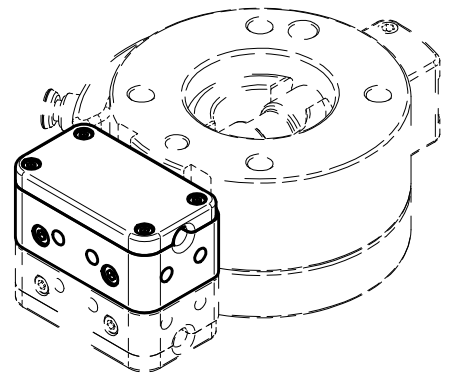


Pos.	Description
1	Upper assembly
2	Lower assembly
3.1	Upper cap
3.2	Lower cap
4	Insulation frame
5	Electric bushings
6	Electric spring pins
7	Pneumatic sealing
8	Screw
9	Mounting screw
10	Cable (optional)

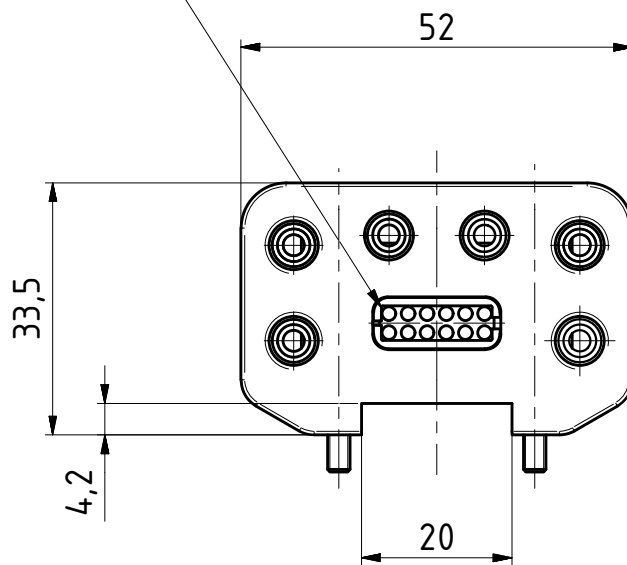


**SEK energy feed-through with pneumatic ducts...**

G-SEK100-O-6PM5-1FE12	upper assembly, 6 pneumatic ducts M5, electrical bushings, 12 poles
G-SEK100-O-6PM5-1FE12-2000OE	upper assembly, 6 pneumatic ducts M5, electrical bushings, 12 poles, cable L= 2000 mm, open end
G-SEK100-O-6PM5-1FE12-300-M12	upper assembly, 6 pneumatic ducts M5, electrical bushings, 12 poles, cable L= 300 mm, plug M12
G-SEK100-U-6PM5-1FE12	lower assembly, 6 pneumatic ducts M5, electrical spring pins, 12 poles
G-SEK100-U-6PM5-1FE12-2000OE	lower assembly, 6 pneumatic ducts M5, electrical spring pins, 12 poles, cable L= 2000 mm, open end
G-SEK100-U-6PM5-1FE12-300-M12	lower assembly, 6 pneumatic ducts M5, electrical spring pins, 12 poles, cable L= 300 mm, bushing M12

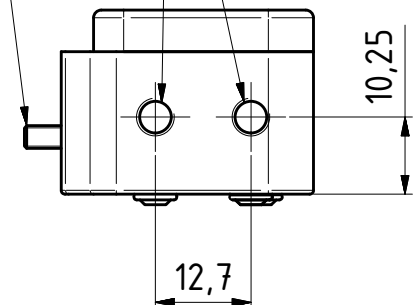
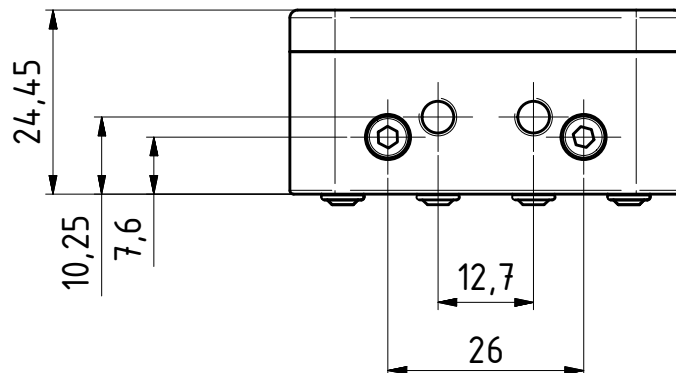


electr. contact  
12-pol. fem.



pneum. connections  
M5 (6x)

ISO 4762  
M3 x 35

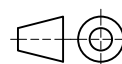


Datum 22.09.22

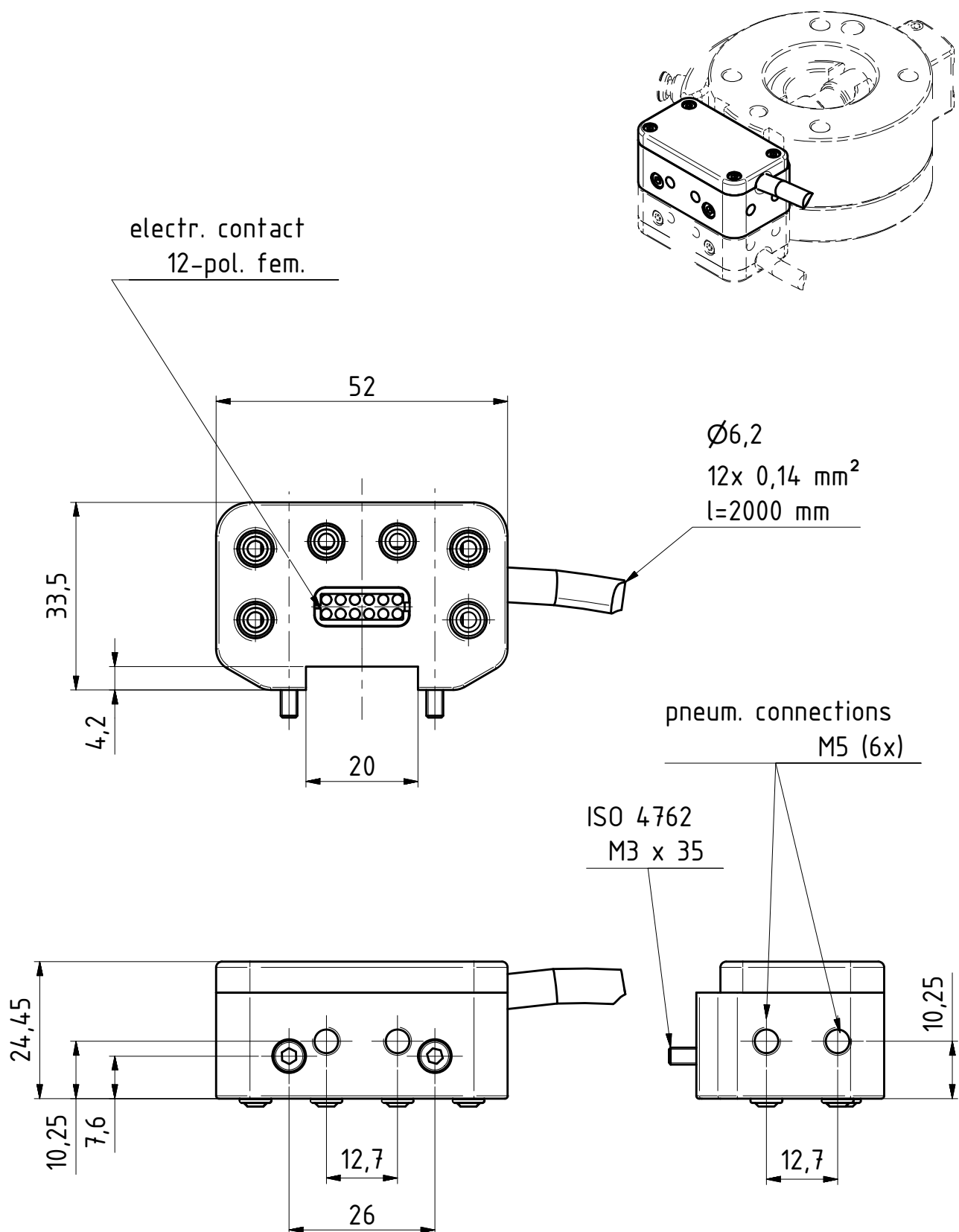
Maßstab 1 : 1

Zeichnungsnummer

G-SEK100-0-6PM5-1FE12



**GRIP**  
GRIP GmbH Handhabungstechnik

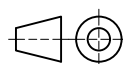


Datum 22.09.22

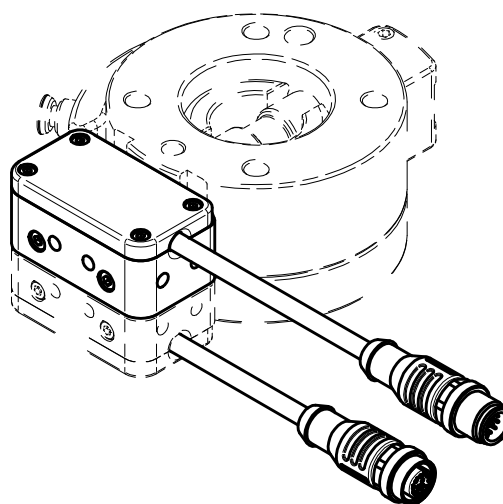
Maßstab 1 : 1

Zeichnungsnummer

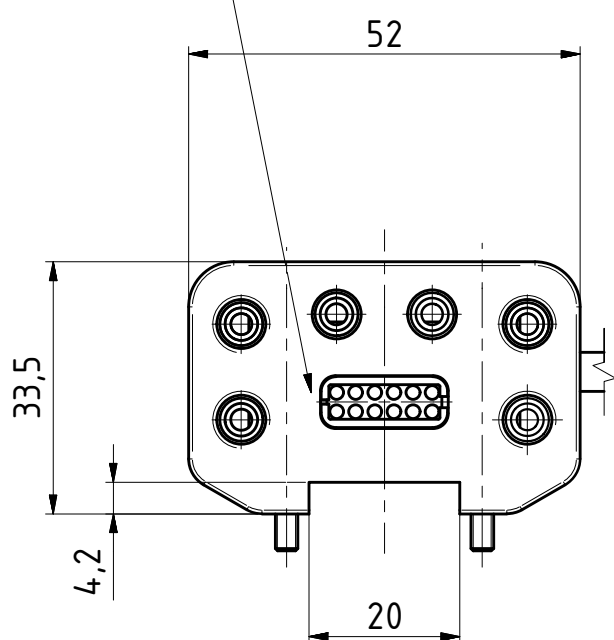
G-SEK100-O-6PM5-1FE12-20000E



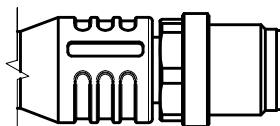
**GRIP**  
GRIP GmbH Handhabungstechnik



electr. contact  
12-pol. fem.

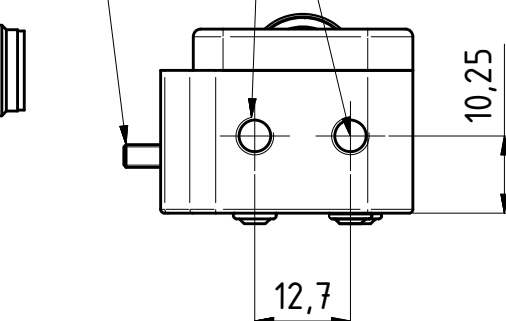
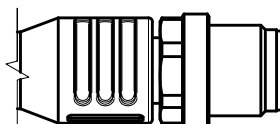
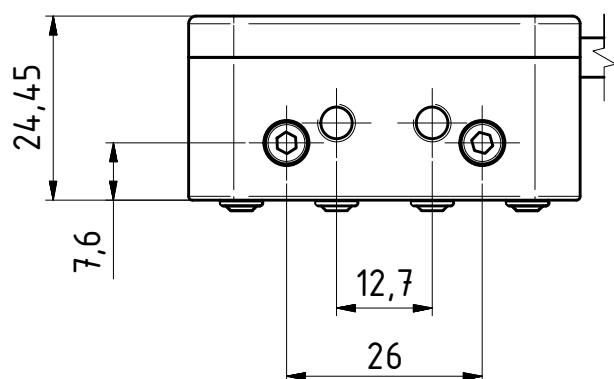


M12 male  
12x 0,14mm<sup>2</sup>  
l=300mm



pneum. connections  
M5 (6x)

ISO 4762  
M3 x 35

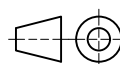


Datum 22.09.22

Maßstab 1 : 1

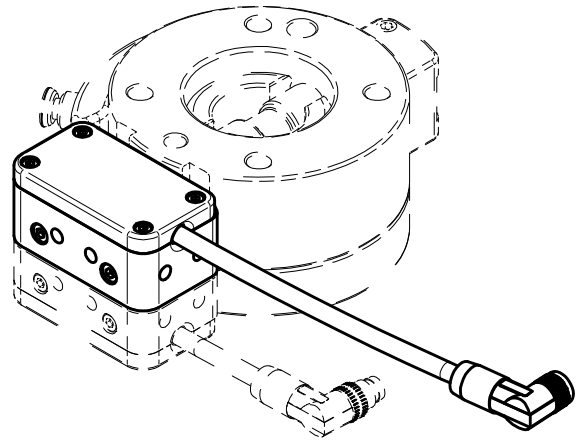
Zeichnungsnummer

G-SEK100-O-6PM5-1FE12-300-M12

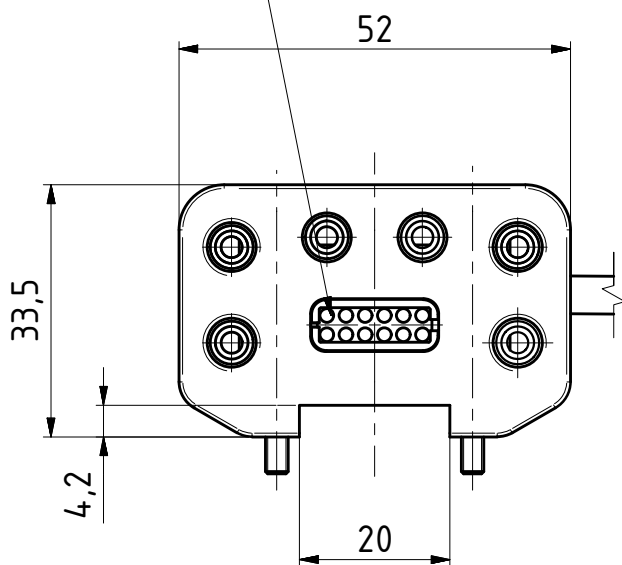


**GRIP**

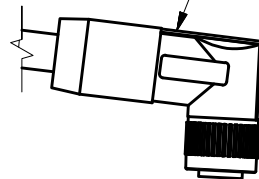
GRIP GmbH Handhabungstechnik



electr. contact  
12-pol. fem.

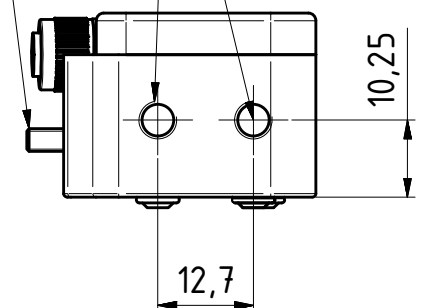
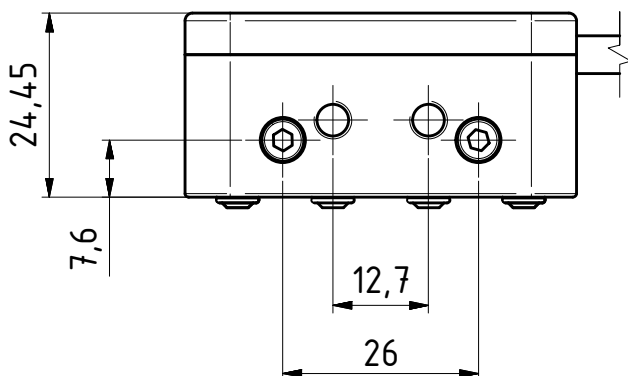


M8 fem.  
8x 0,14mm<sup>2</sup>  
l=300mm



pneum. connections  
M5 (6x)

ISO 4762  
M3 x 35

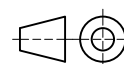


Datum 22.09.22

Maßstab 1 : 1

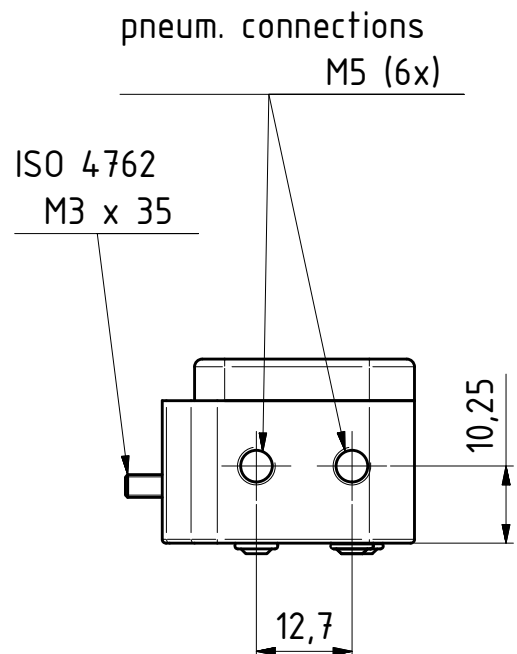
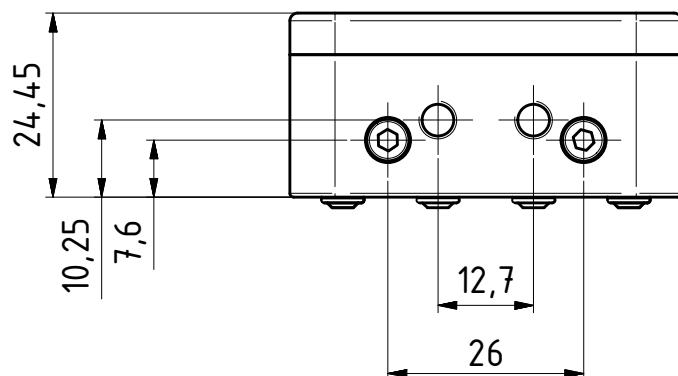
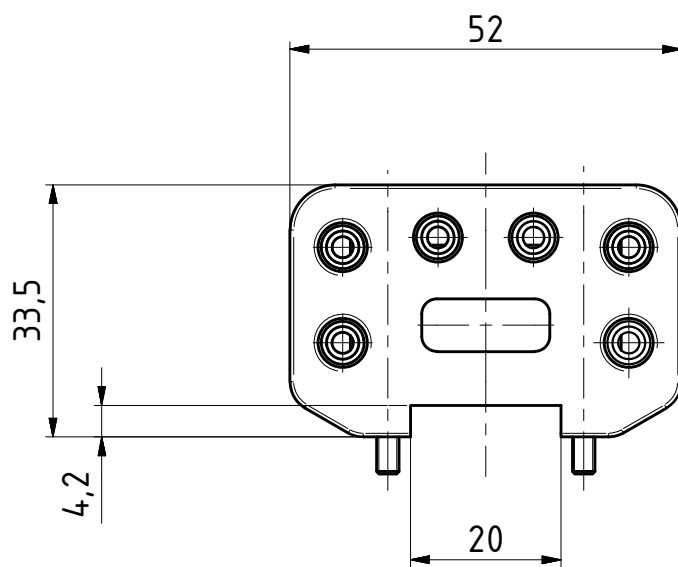
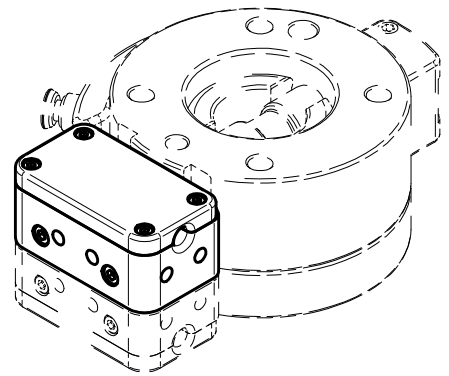
Zeichnungsnummer

G-SEK100-O-6PM5-1FE12-300-M8



**GRIP**  
GRIP GmbH Handhabungstechnik



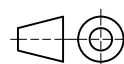


Datum 22.09.22

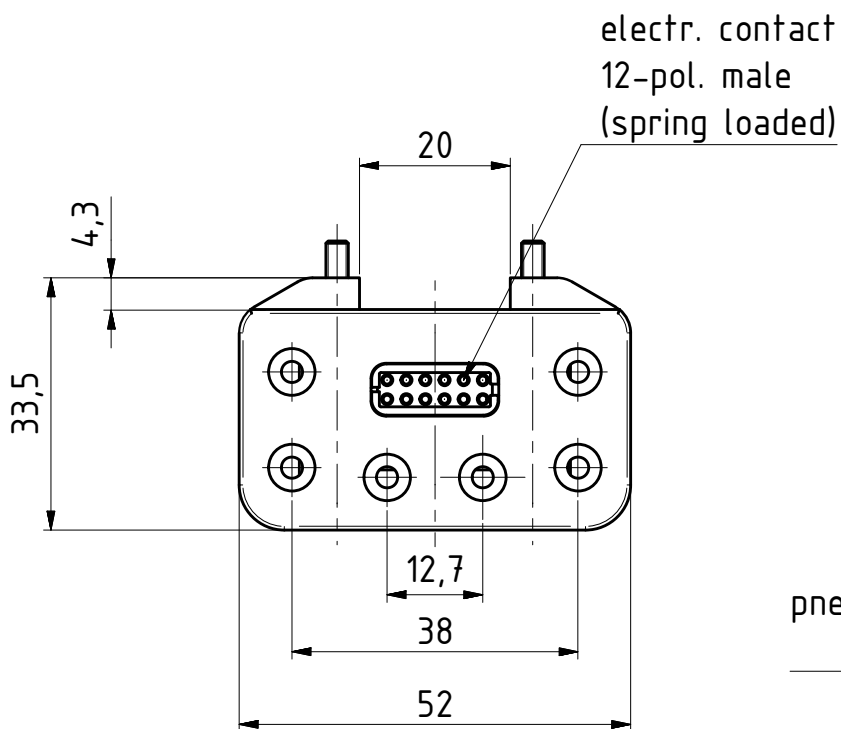
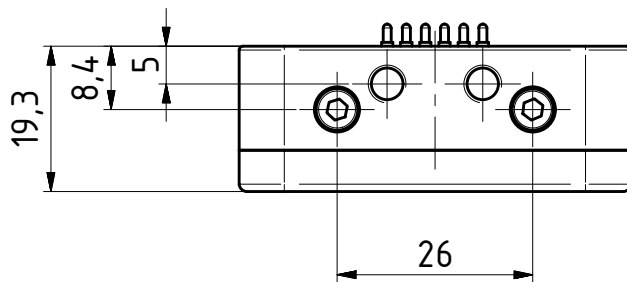
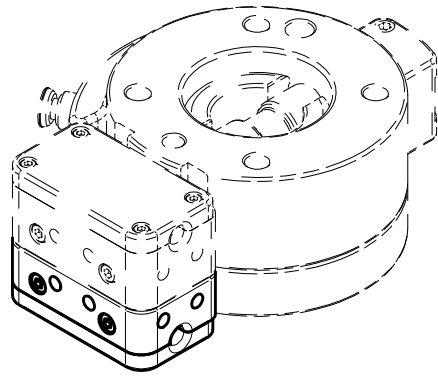
Maßstab 1 : 1

Zeichnungsnummer

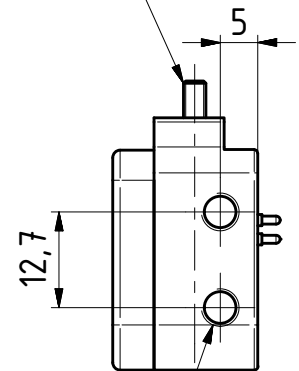
G-SEK100-0-6PM5



**GRIP**  
GRIP GmbH Handhabungstechnik



ISO 4762  
M3x35



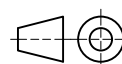
pneum. connections  
M5 (6x)

Datum 15.02.22

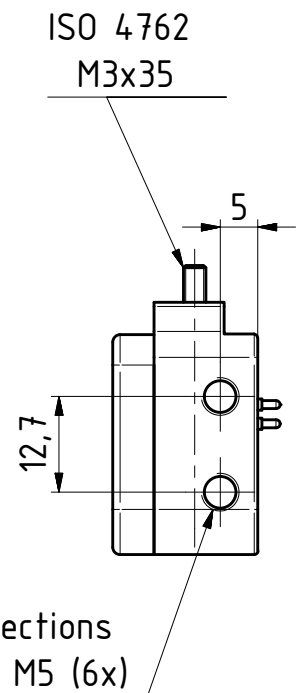
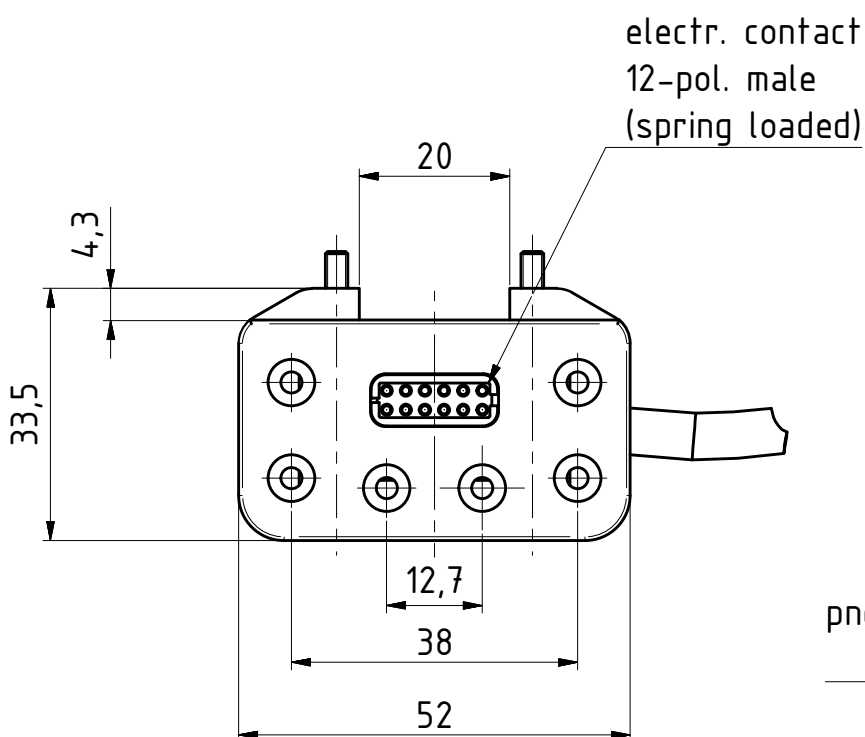
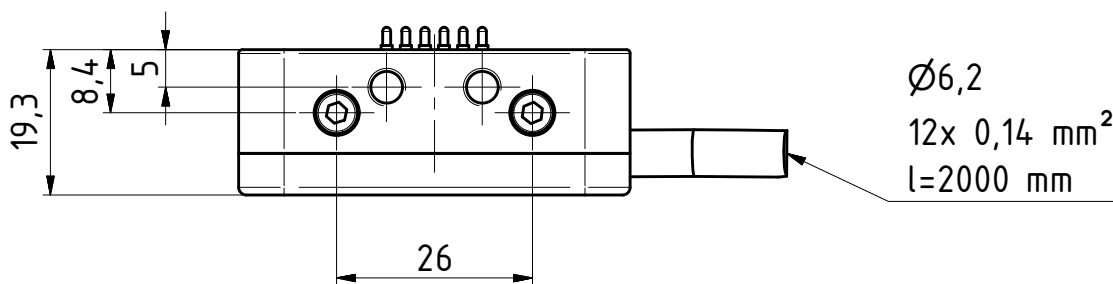
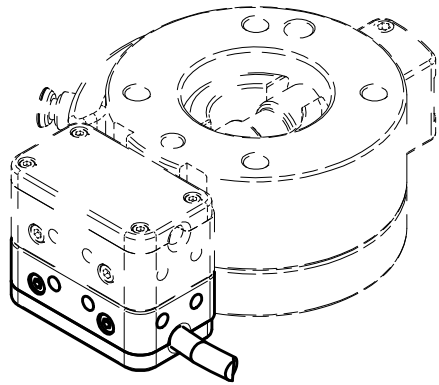
Maßstab 1 : 1

Zeichnungsnummer

G-SEK100-U-6PM5-1FE12



**GRIP**  
GRIP GmbH Handhabungstechnik

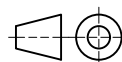


Datum 15.02.22

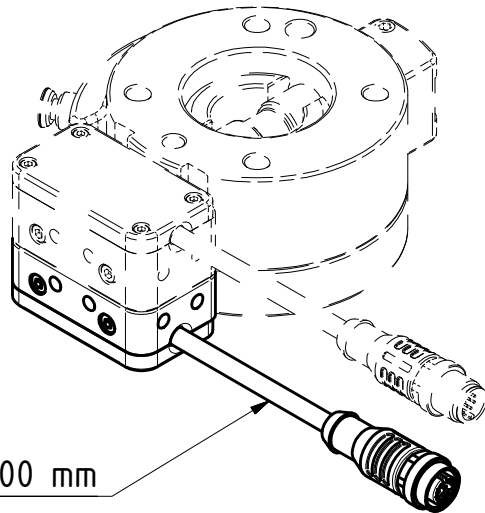
Maßstab 1 : 1

Zeichnungsnummer

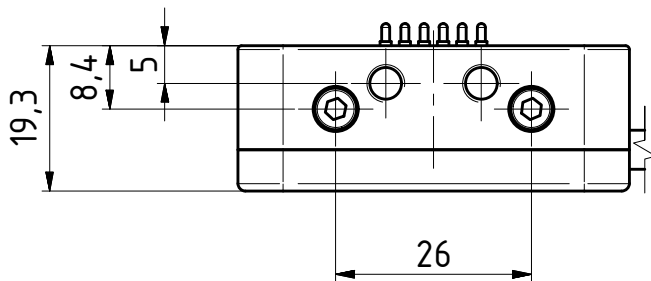
G-SEK100-U-6PM5-1FE12-2000-OE



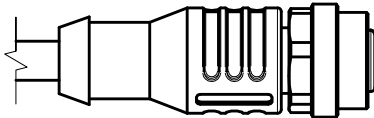
**GRIP**  
GRIP GmbH Handhabungstechnik



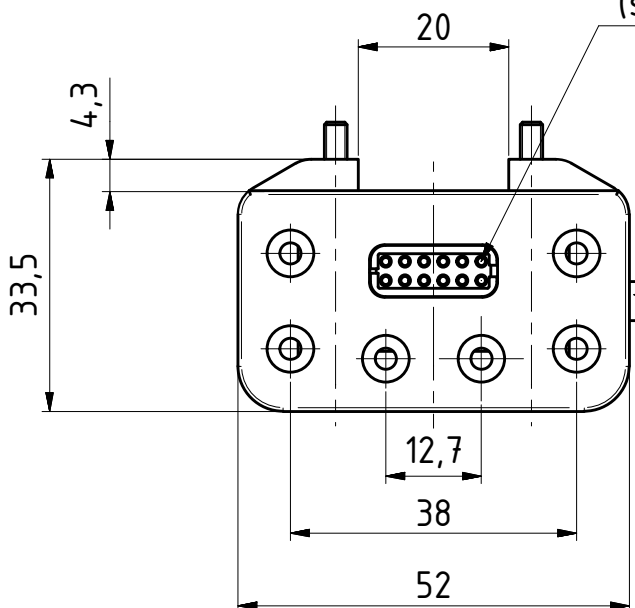
$l = 300 \text{ mm}$



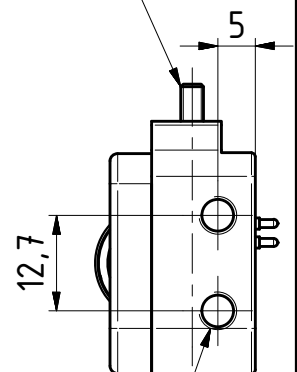
M12 fem.  
12x 0,14mm<sup>2</sup>  
 $l=300\text{mm}$



electr. contact  
12-pol. male  
(spring loaded)



ISO 4762  
M3x35



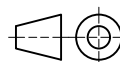
pneum. connection  
M5 (6x)

Datum 15.02.22

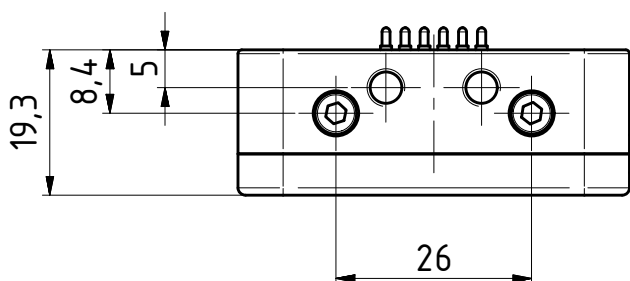
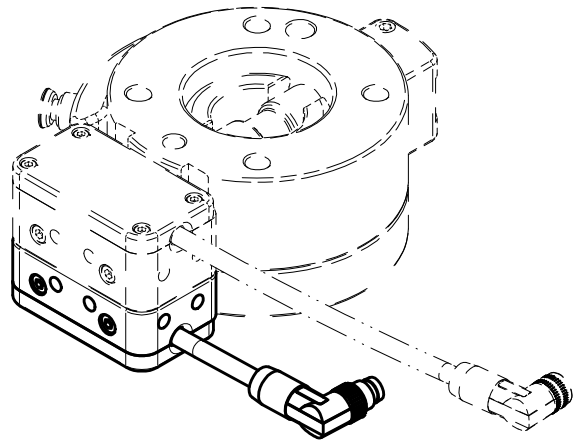
Maßstab 1 : 1

Zeichnungsnummer

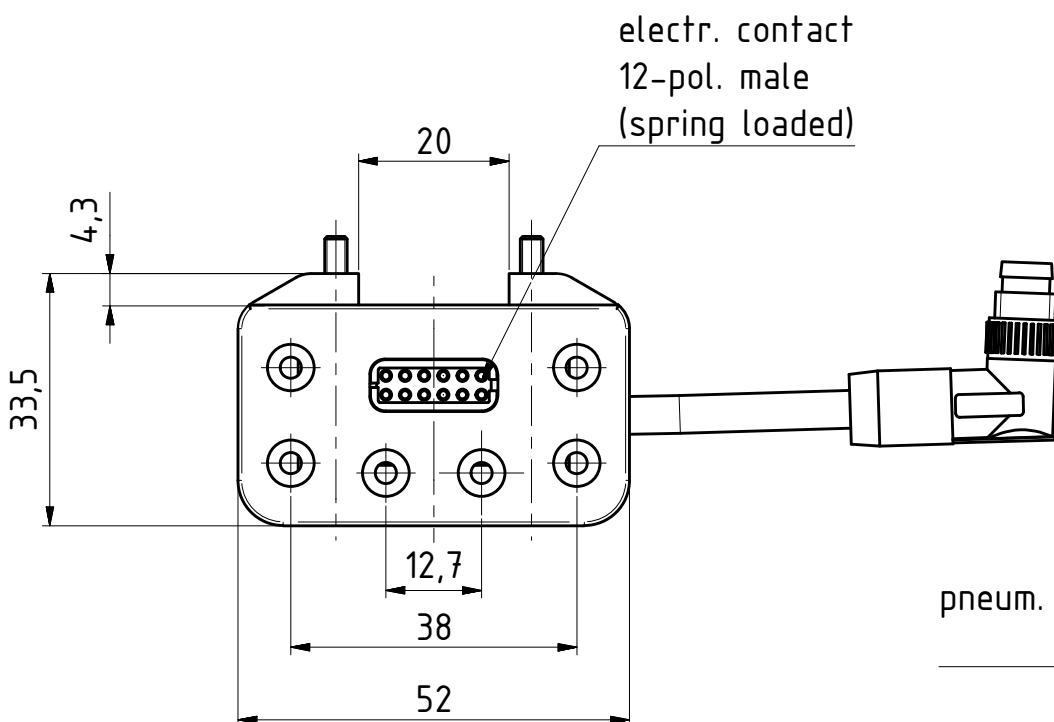
G-SEK100-U-6PM5-1FE12-300-M12



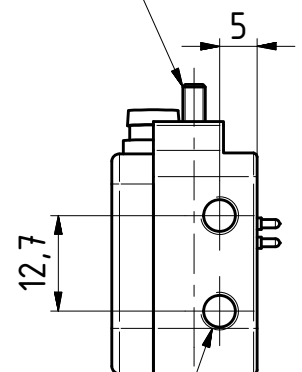
**GRIP**  
GRIP GmbH Handhabungstechnik



M8 female  
8x 0,14mm<sup>2</sup>  
l=40mm



ISO 4762  
M3x35



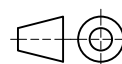
pneum. connection  
M5 (6x)

Datum 15.02.22

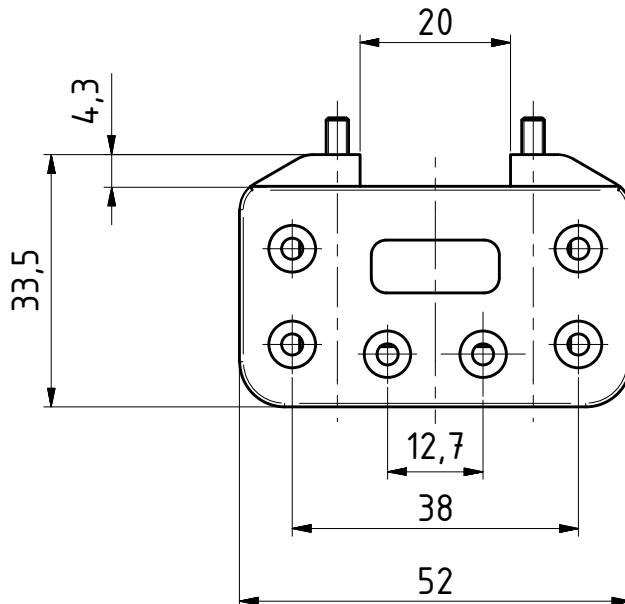
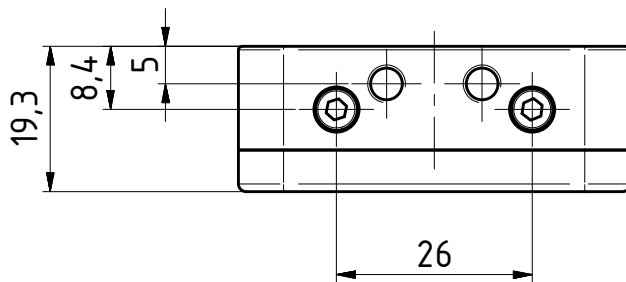
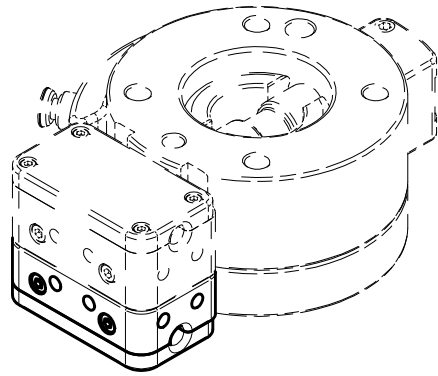
Maßstab 1 : 1

Zeichnungsnummer

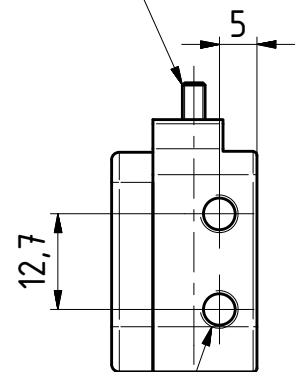
G-SEK100-U-6PM5-1FE12-40-M8



**GRIP**  
GRIP GmbH Handhabungstechnik



ISO 4762  
M3x35



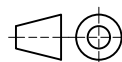
pneum. connections  
M5 (6x)

Datum 15.02.22

Maßstab 1 : 1

Zeichnungsnummer

G-SEK100-U-6PM5



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-SEK100-1FE12

### Technical specifications

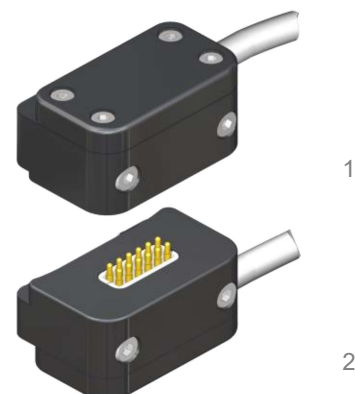
# GRIP

#### Operating mode:

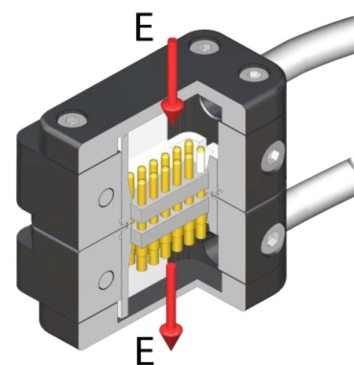
The SEK upper assembly is mounted on the SHW upper assembly.  
The SEK lower assembly is mounted on the SHW lower assembly accordingly. The SEK is automatically coupled by the mechanical connection of the exchange system.

#### Advantages:

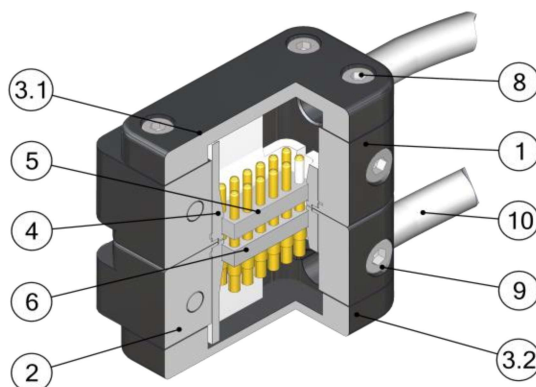
Mechanical and electric connections are established simultaneously  
Withstands up to 1,000,000 changing cycles  
Individual wiring and coding of the interchange parts



Technical specifications		SEK100-1FE12
Basic material		Al, anod.
Compatible with		<b>SHW 063, 080, 100 ; AC063</b>
Adaptable to		<b>SHW 125, 160</b>
Width x depth x height [mm]		38 x 25,5 x 40
Signal ducts		12
Rated current I [A]		2
Rated voltage U (max. voltage) [V]		63 (120)
Contact resistance per pole R [mΩ]		20
Contact durability (cycles)		50.000
Mass [kg]	upper assembly	0,04
	lower assembly	0,04
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120

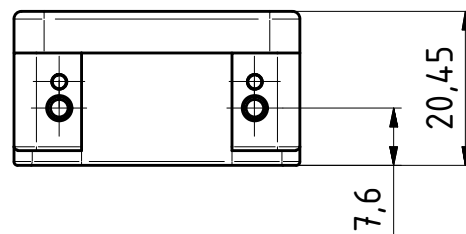
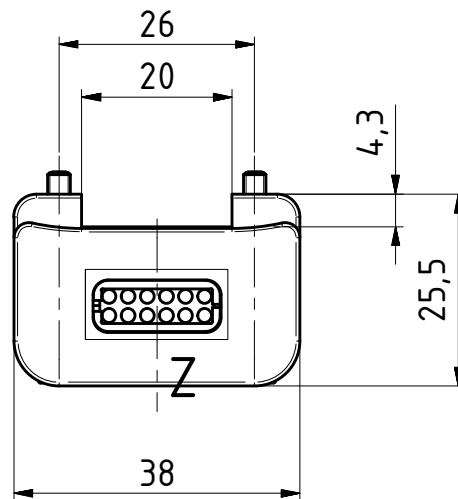
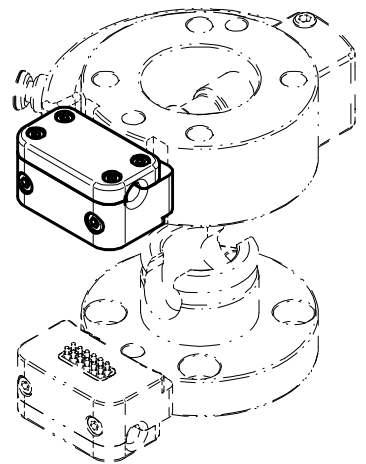


Pos.	Description
1	Upper assembly
2	Lower assembly
3.1	Upper cap
3.2	Lower cap
4	Insulation frame
5	Electric bushings
6	Electric spring pins
8	Screw
9	Mounting screw
10	Cable (optional)

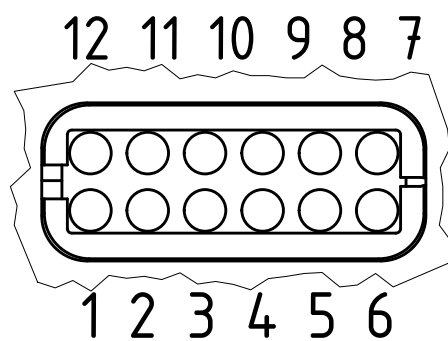


SEK energy feed-through with spring contacts...	
G-SEK100-O-1FE12	upper assembly, electrical bushings, 12 poles, suitable for spring contacts
G-SEK100-O-1FE12-2000OE	upper assembly, electrical bushings, 12 poles, suitable for spring contacts, cable L= 2000 mm, open end
G-SEK100-O-1FE12-300-M12	upper assembly, electrical bushings, 12 poles, suitable for spring contacts, cable L= 300 mm, plug M12
G-SEK100-U-1FE12	lower assembly, electrical spring pins, 12 poles
G-SEK100-U-1FE12-2000OE	lower assembly, electrical spring pins, 12 poles, cable L= 2000 mm, open end
G-SEK100-U-1FE12-300-M12	lower assembly, electrical spring pins, 12 poles, cable L= 300 mm, bushing M12





Z  
Kontaktleiste  
FEB12

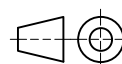


Datum

Maßstab 1 : 1

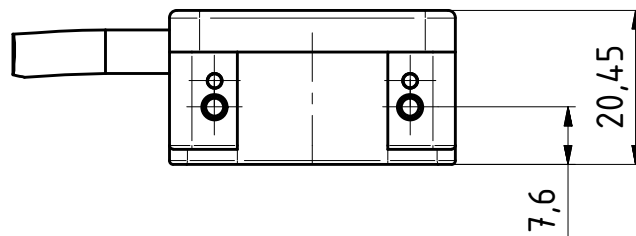
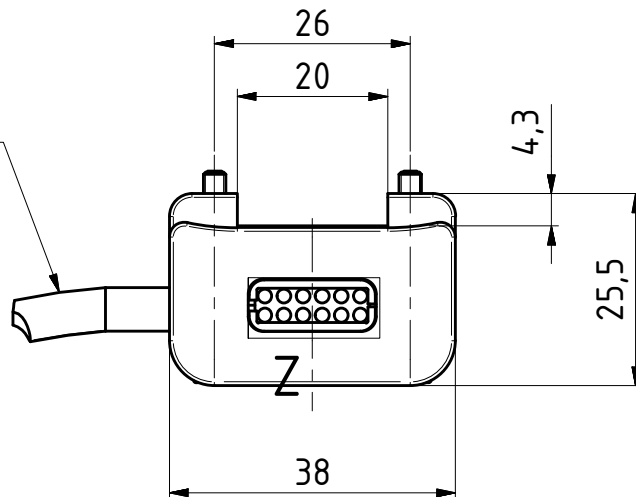
Zeichnungsnummer

G-SEK100-O-1FE12

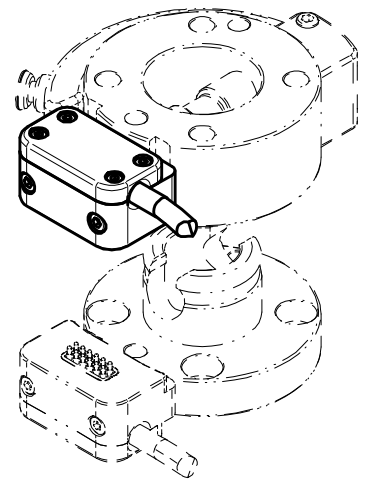
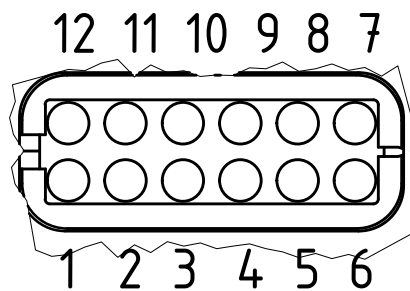


**GRIP**  
GRIP GmbH Handhabungstechnik

l = 2000 mm  
(12 pol)



Z  
Kontaktleiste  
FEB12



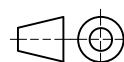
Belegung	
1	weiß
2	braun
3	grün
4	gelb
5	grau
6	rosa
7	blau
8	rot
9	schwarz
10	violett
11	grau/rosa
12	blau/rot

Datum 23.03.21

Maßstab 1 : 1

Zeichnungsnummer

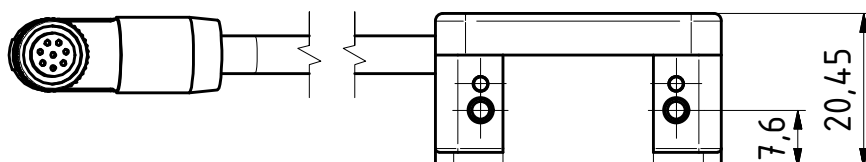
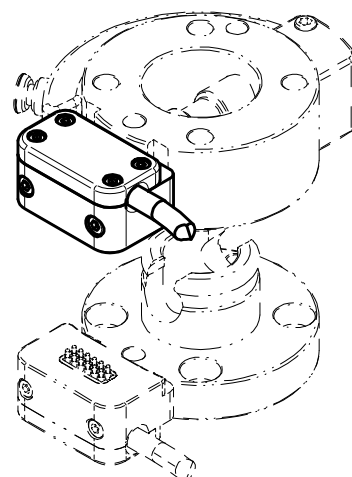
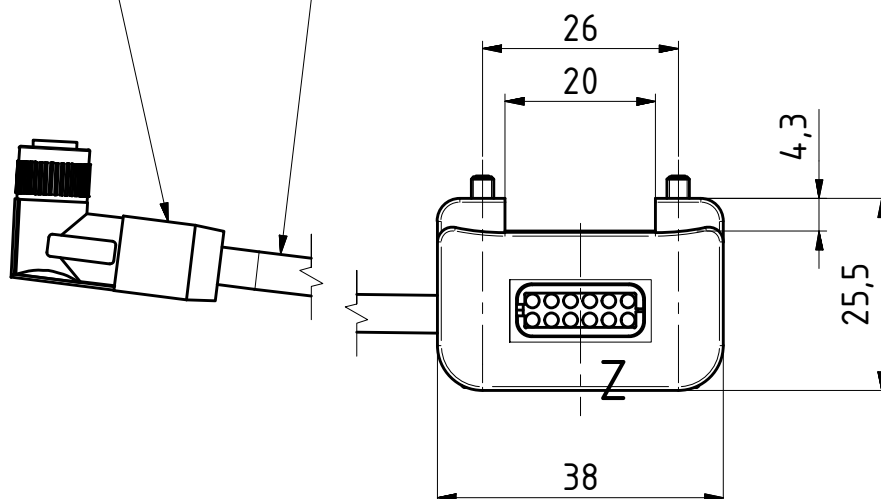
G-SEK100-O-1FE12-20000E



**GRIP**  
GRIP GmbH Handhabungstechnik

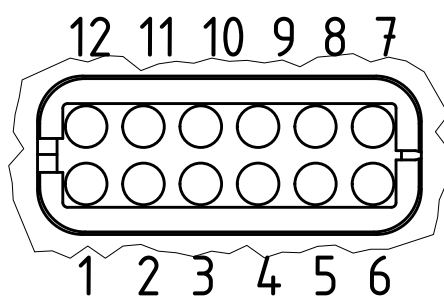
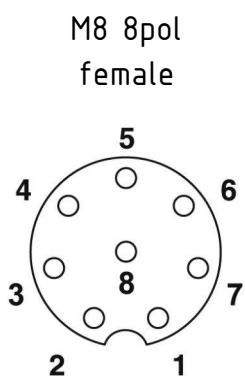
M8 8pol  
female

l= 300 mm



Z

Kontaktleiste  
FEB12



### Kontaktbelegung

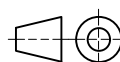
PIN	M8 8pol weibl.
1	weiß
2	braun
3	grün
4	gelb
5	grau
6	rosa
7	blau
8	rot
9	---
10	---
11	---
12	---

Datum

Maßstab 1 : 1

Zeichnungsnummer

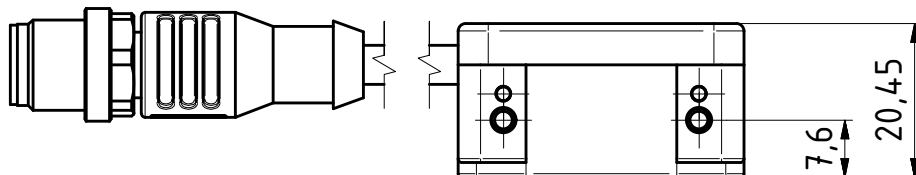
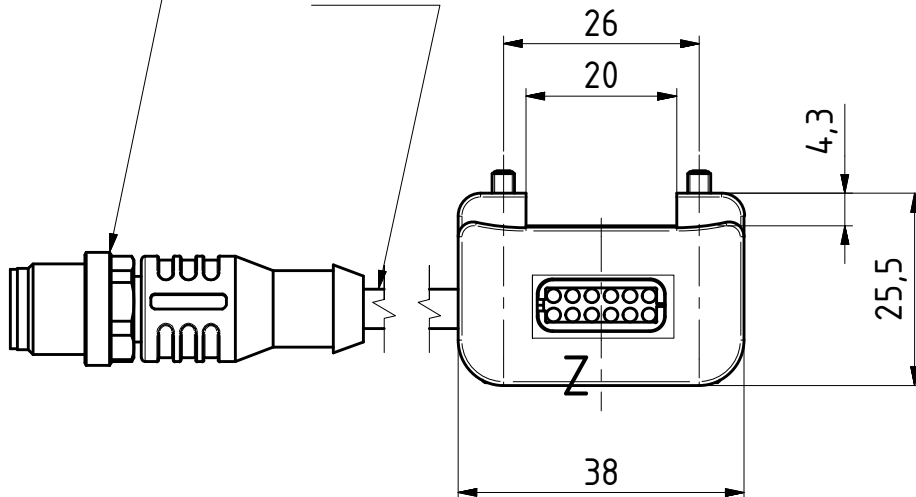
G-SEK100-O-1FE12-300-M8



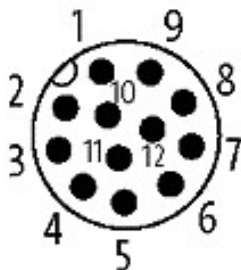
**GRIP**  
GRIP GmbH Handhabungstechnik

M12 12pol.  
male

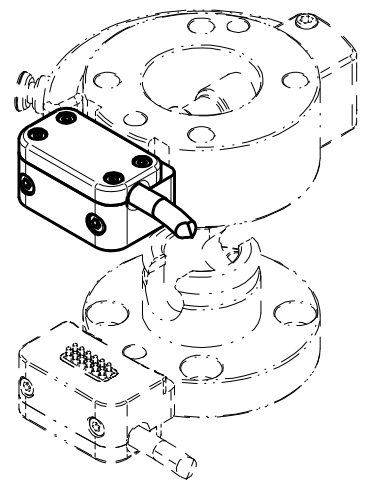
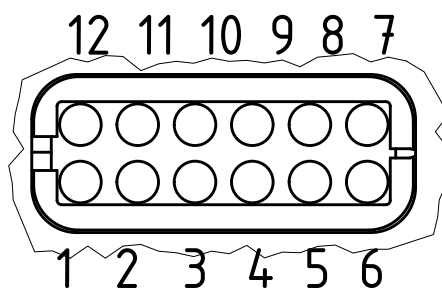
l= 300



M12 12pol  
Male



Z  
Kontaktleiste  
FEB12



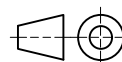
FEB12 female	colour	M12 male
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/ pink	11
12	blue/ red	12

Datum

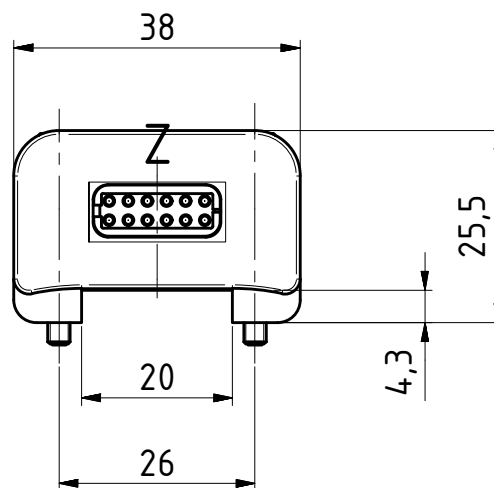
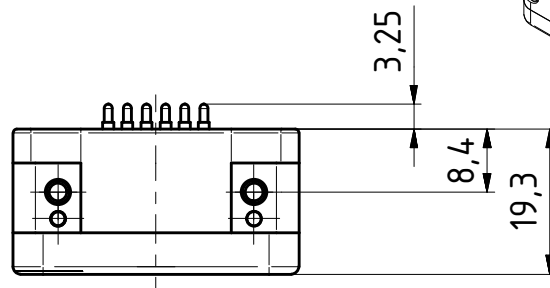
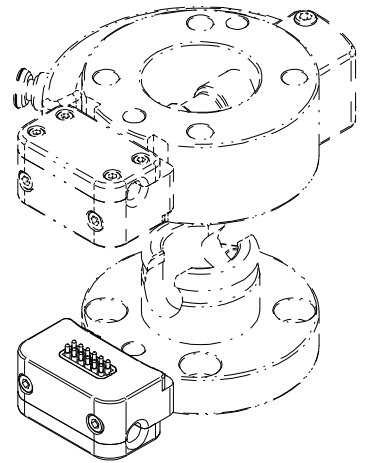
Maßstab 1 : 1

Zeichnungsnummer

G-SEK100-O-1FE12-300-M12

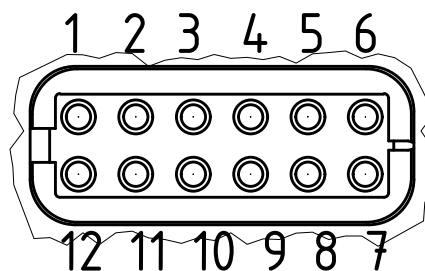


**GRIP**  
GRIP GmbH Handhabungstechnik



Z ( 3 : 1 )

FES12

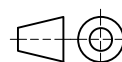


Datum

Maßstab 1 : 1

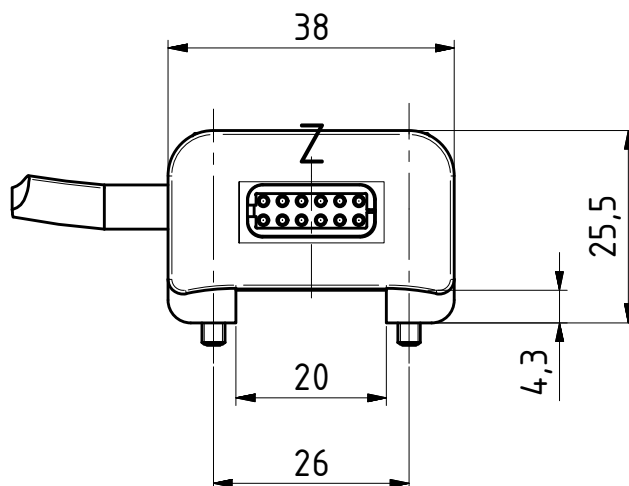
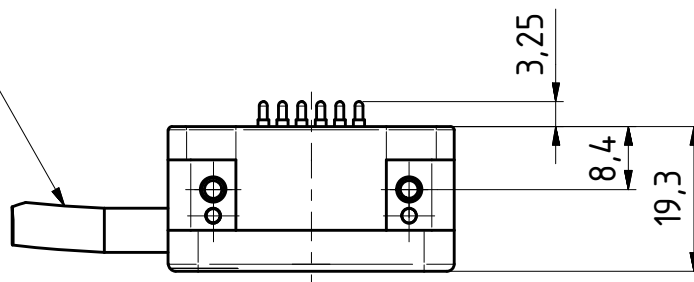
Zeichnungsnummer

G-SEK100-U-1FE12

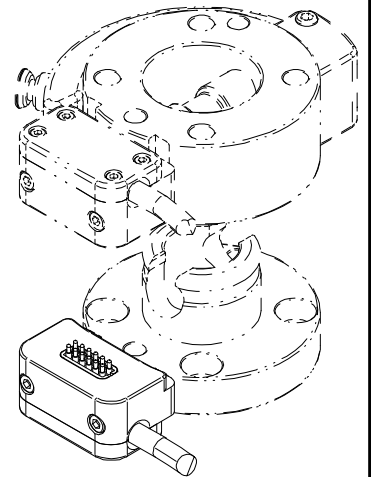
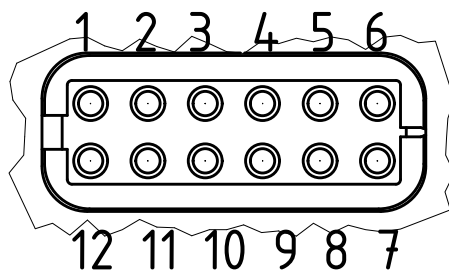


**GRIP**  
GRIP GmbH Handhabungstechnik

l= 2000 mm



Z  
Kontaktleiste  
FES12



#### Belegung

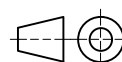
1	weiß
2	braun
3	grün
4	gelb
5	grau
6	rosa
7	blau
8	rot
9	schwarz
10	violett
11	grau/rosa
12	blau/rot

Datum

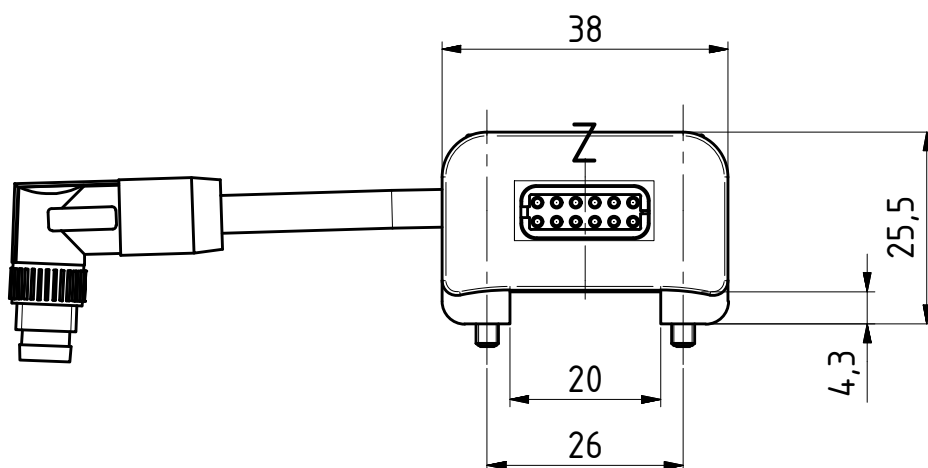
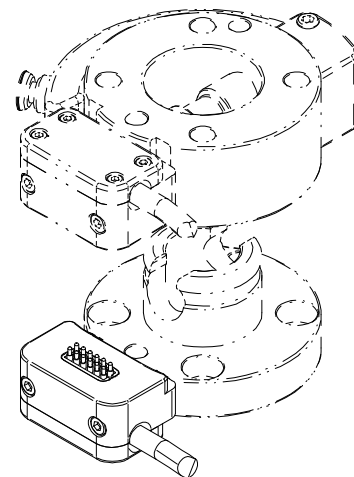
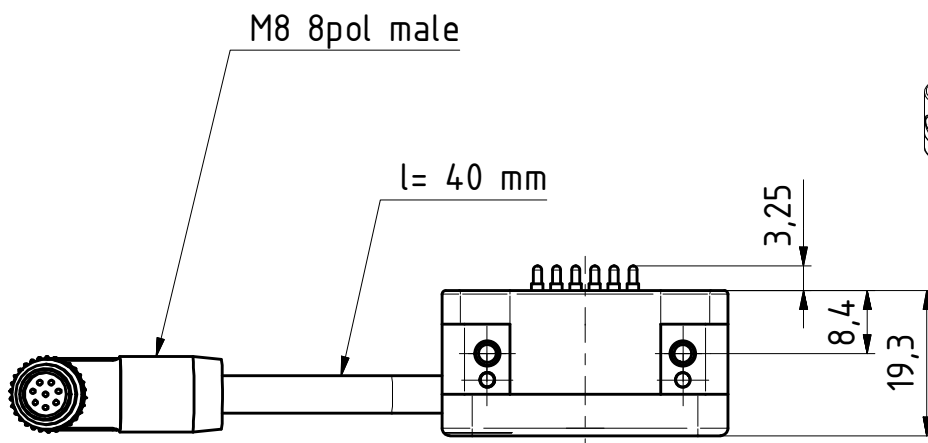
Maßstab 1 : 1

Zeichnungsnummer

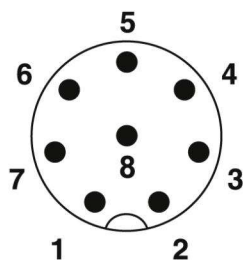
G-SEK100-U-1FE12-20000E



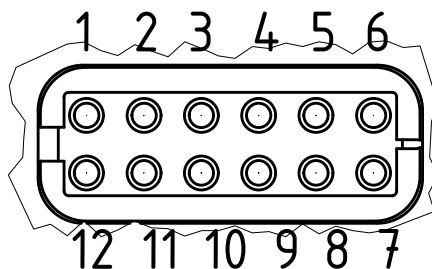
**GRIP**  
GRIP GmbH Handhabungstechnik



M8 8pol  
male



Z  
Kontaktleiste  
FES12



#### Kontaktbelegung

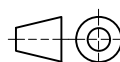
PIN	M8 8pol männl.
1	weiß
2	braun
3	grün
4	gelb
5	grau
6	rosa
7	blau
8	rot
9	---
10	---
11	---
12	---

Datum 23.03.21

Maßstab 1 : 1

Zeichnungsnummer

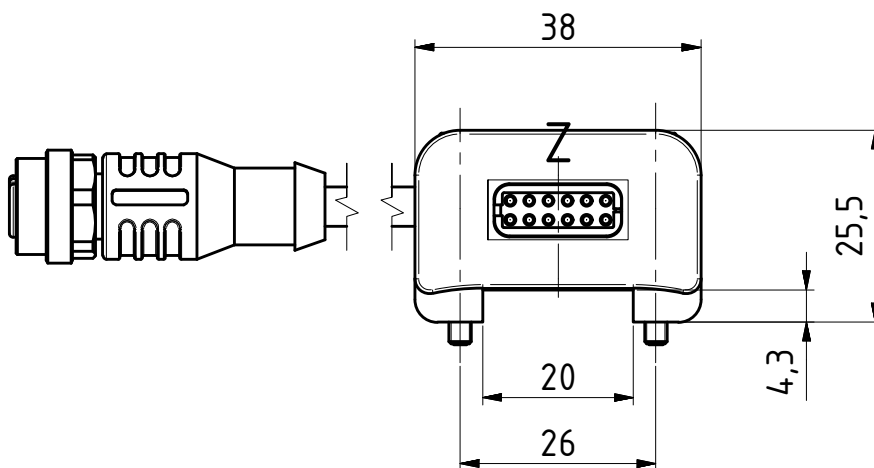
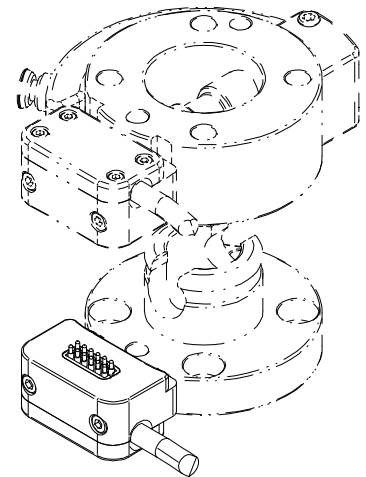
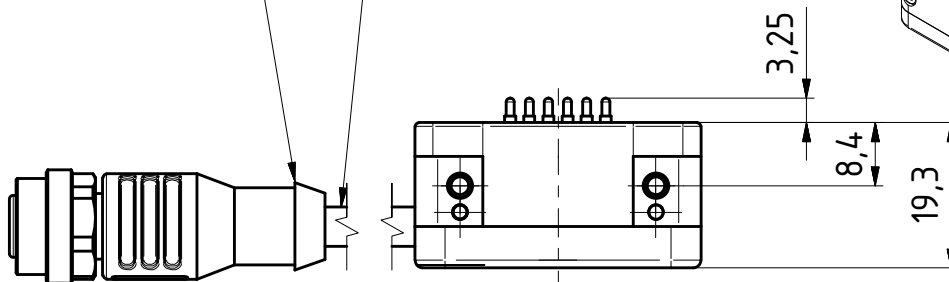
G-SEK100-U-1FE12-40-M8



**GRIP**  
GRIP GmbH Handhabungstechnik

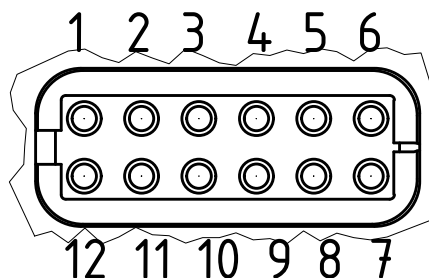
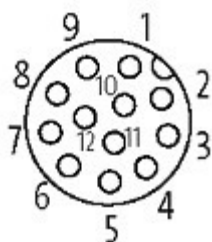
M12 12pol female

l= 300 mm



Z  
Kontaktleiste  
FES12

M12 12pol  
Female



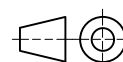
FES12 male	colour	M12 fem.
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/ pink	11
12	blue/ red	12

Datum

Maßstab 1 : 1

Zeichnungsnummer

G-SEK100-U-1FE12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik

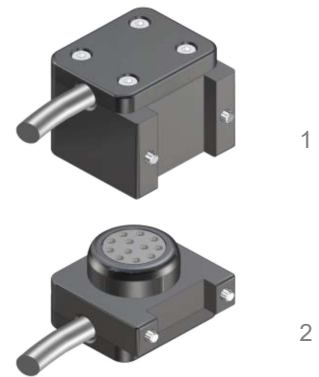


### Operating mode:

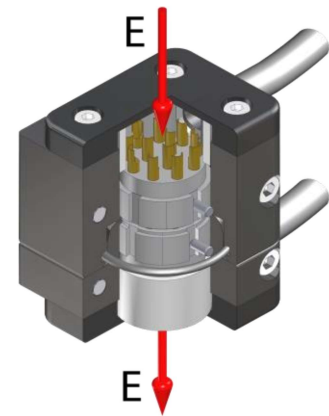
The SEK upper assembly is mounted on the SHW upper assembly.  
The SEK lower assembly is mounted on the SHW lower assembly accordingly. The SEK is automatically coupled by the mechanical connection of the exchange system.

### Advantages:

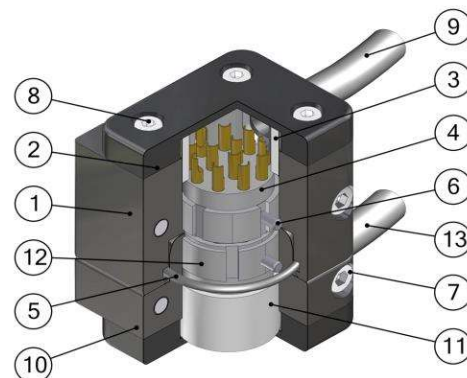
Mechanical and electric connections are established simultaneously.  
Withstands up to 50,000 changing cycles  
Individual wiring  
Coding of the interchange parts



Technical specifications		SEK125
Basic material		Al, anod.
Compatible with		<b>SHW125</b>
Width x depth x height [mm]		44 x 32 x 29,5
No. of poles E		12
Rated current per pole I [A]		9
Rated voltage U [V]		63
Contact resistance per pole R [mΩ]		3
Contact durability (cycles)		50.000
Mass [kg]	upper assembly	0,095
	lower assembly	0,057
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120

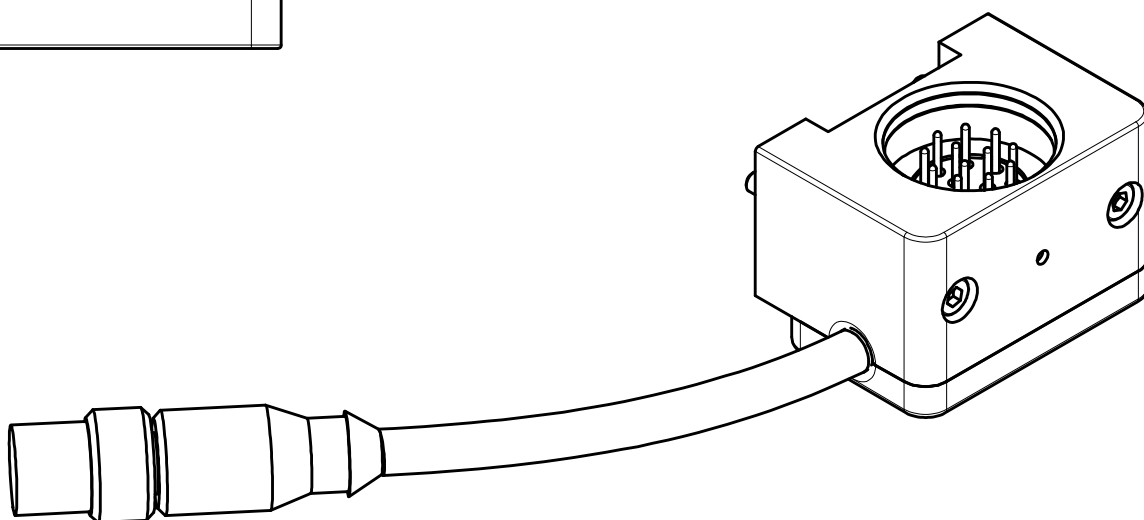
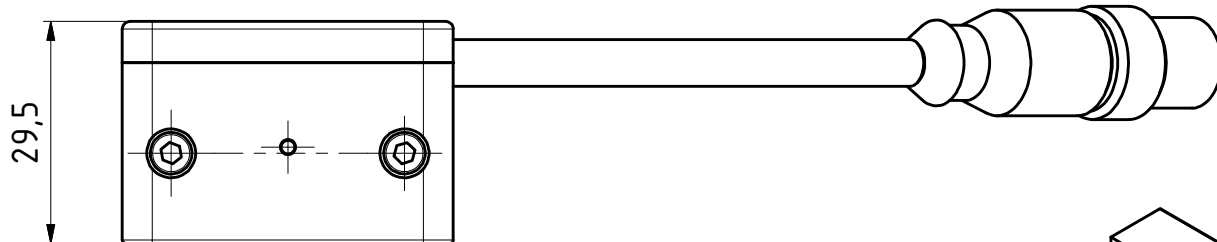
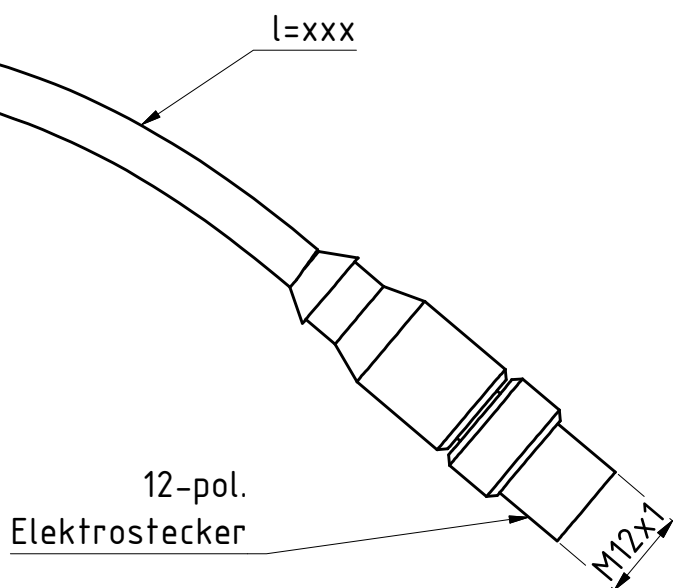
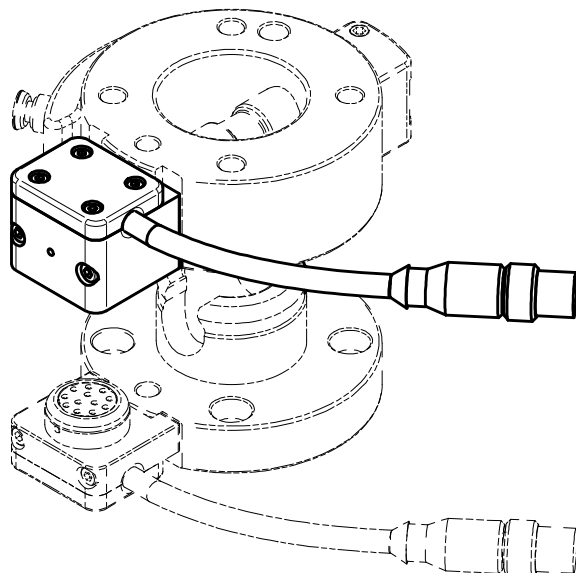
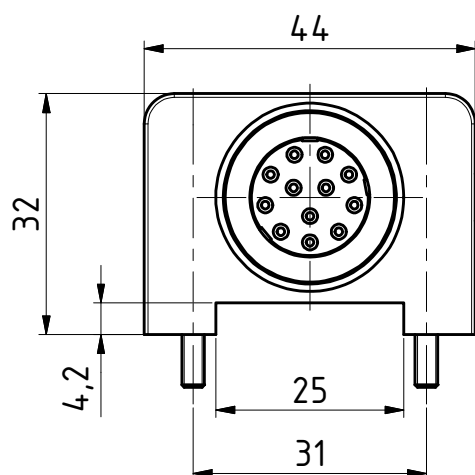


Pos.	Description
1	Upper assembly 1E
2	Cap
3	Distance bush upper assembly
4	Insulating body with pins
5	O-Ring
6	Cylindrical pin
7	Mounting screw
8	Screw for Cap
9	Cable on the robot side
10	Lower assembly 1E
11	Distance bush lower assembly
12	Insulating body with bushings
13	Cable on gripper side



**SEK energy feed-through...**

G-SEK125-O-1E12-300-M12	upper assembly, electrical plug, 12 poles, cable L= 300 mm, plug M12x1, 12 poles
G-SEK125-U-1E12-300-M12	lower assembly, electrical bushing, 12 poles, cable L= 300 mm, bushing M12x1, 12 poles

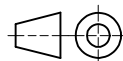


Datum 11.11.2016

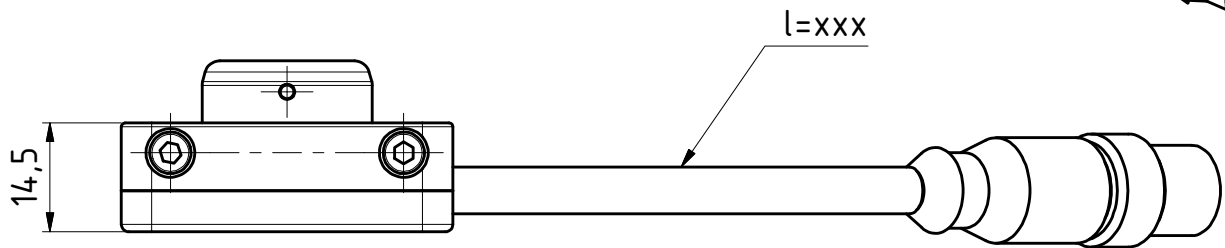
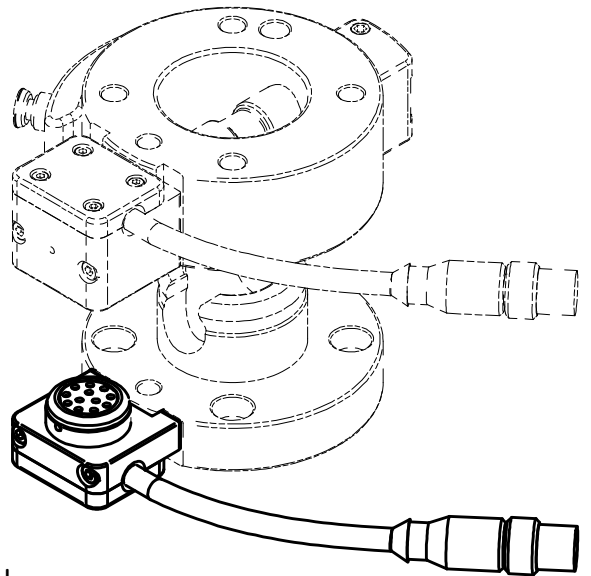
Maßstab 1:1

Zeichnungsnummer

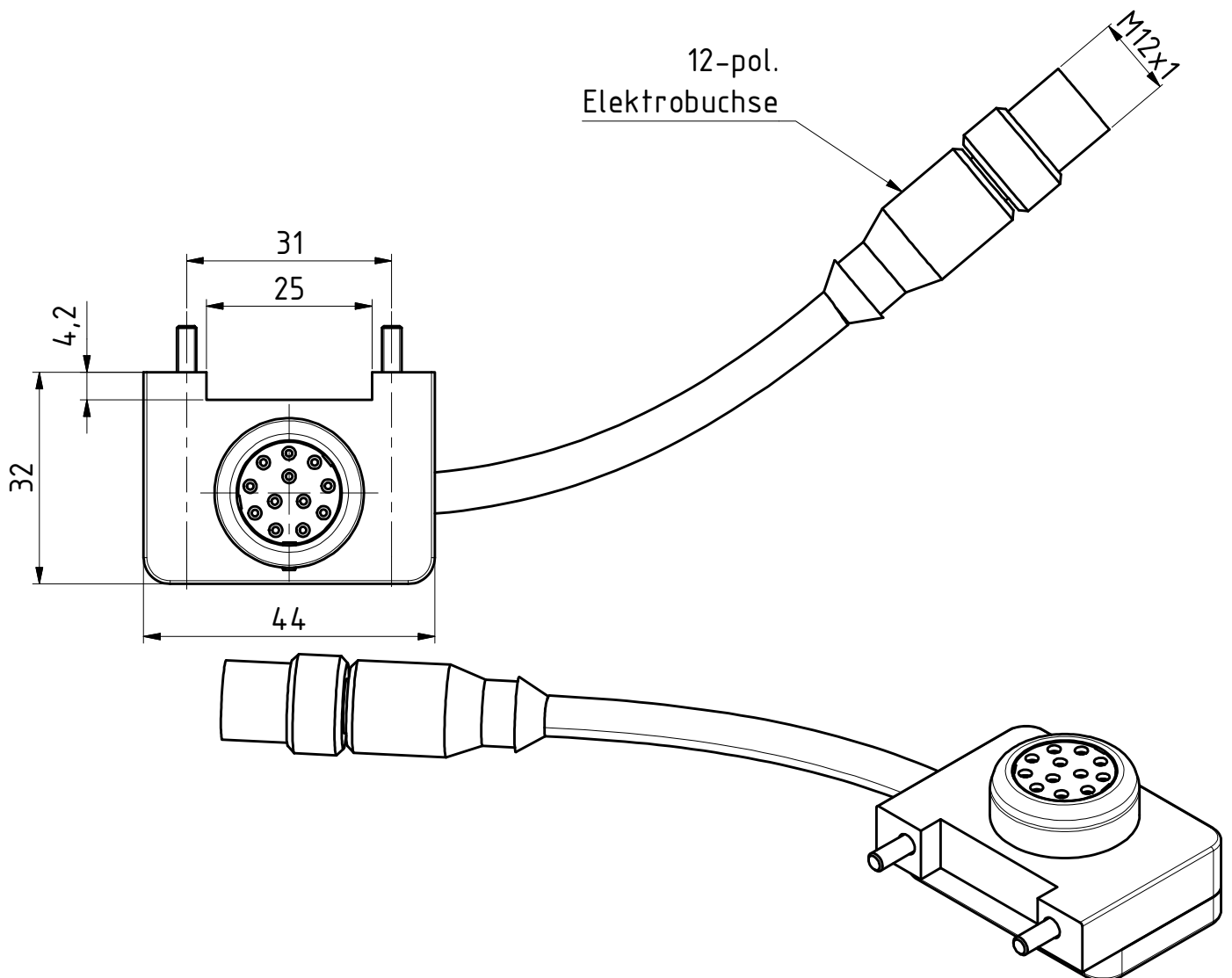
G-SEK125-O-1E12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik



12-pol.  
Elektrobuchse

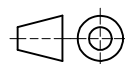


Datum 11.11.2016

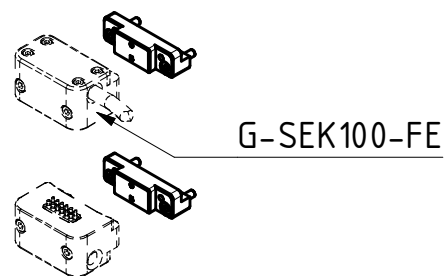
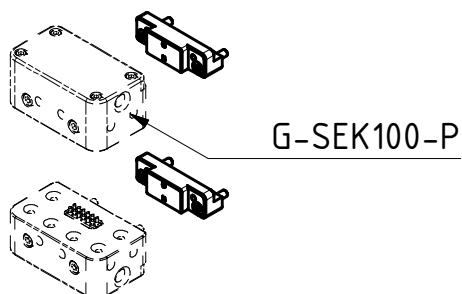
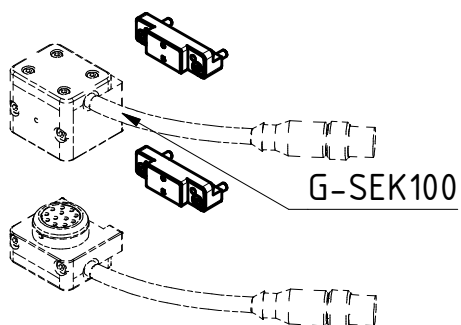
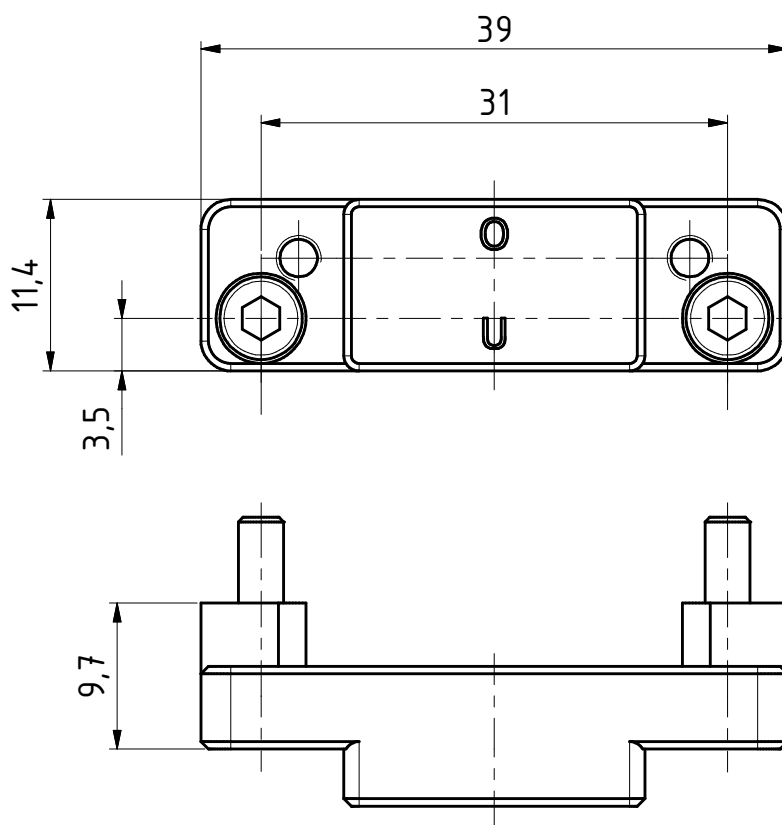
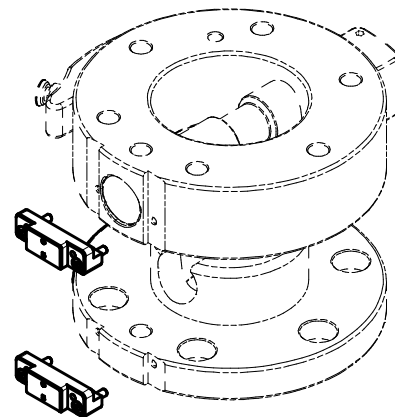
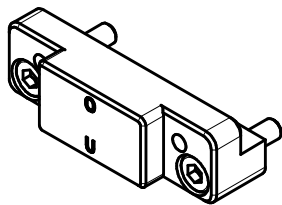
Maßstab 1:1

Zeichnungsnummer

G-SEK125-U-1E12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik

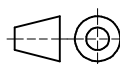


Datum 15.11.2022

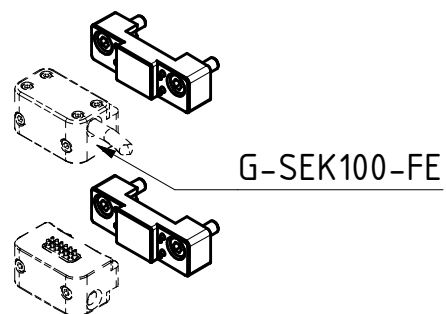
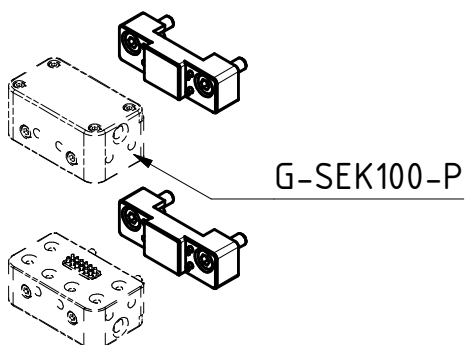
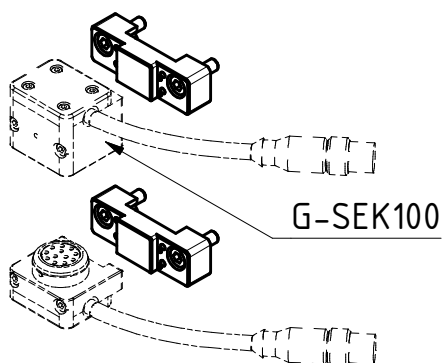
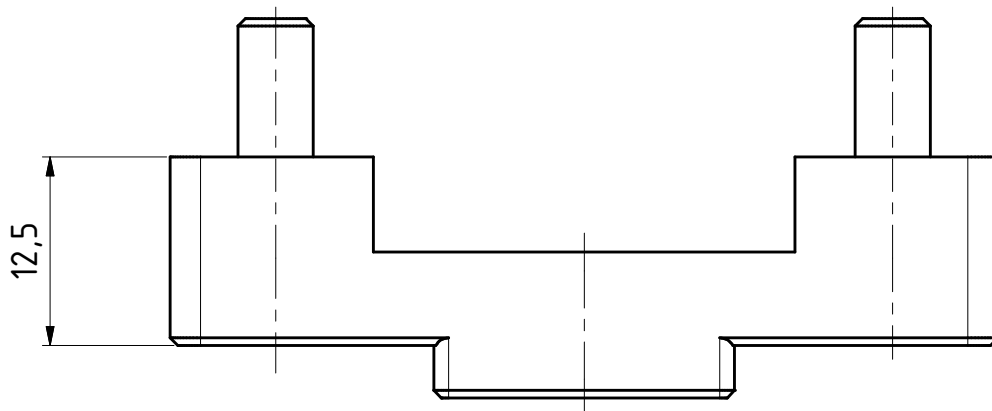
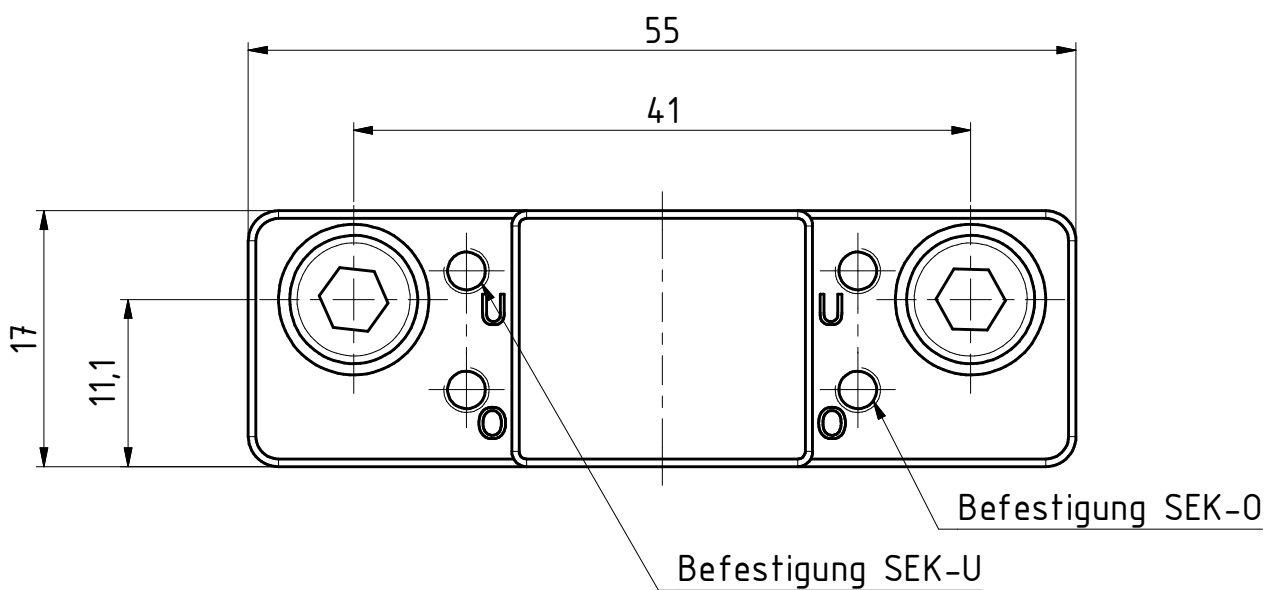
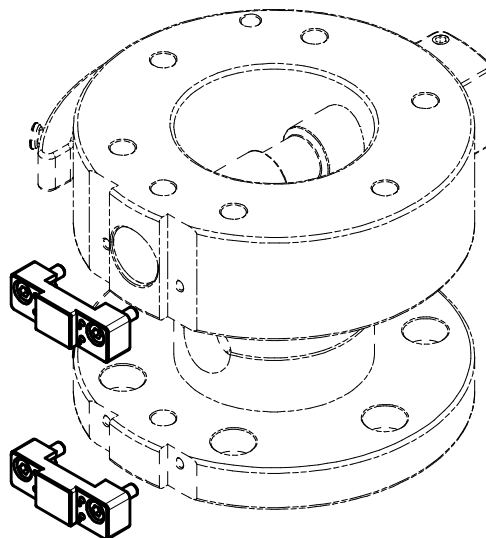
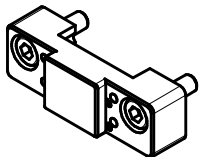
Maßstab 2:1

Zeichnungsnummer

ZG-AP-SEK100-SHW125

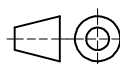


**GRIP**  
GRIP GmbH Handhabungstechnik



Datum 14.10.2022 Maßstab 2:1

Zeichnungsnummer  
ZG-AP-SEK100-SHW160



**GRIP**  
GRIP GmbH Handhabungstechnik

# MEK-PM MULTI-ENERGY-COUPLING

The MEK-PM Multi-Energy Coupling is a further development of our MEK series. The inlets and outlets for the pneumatic and electrical lines are horizontally arranged. This reduces the height profile of the MEK-PM. Pneumatic hoses can be connected to the coupling by means of push-in fittings (connection M5).

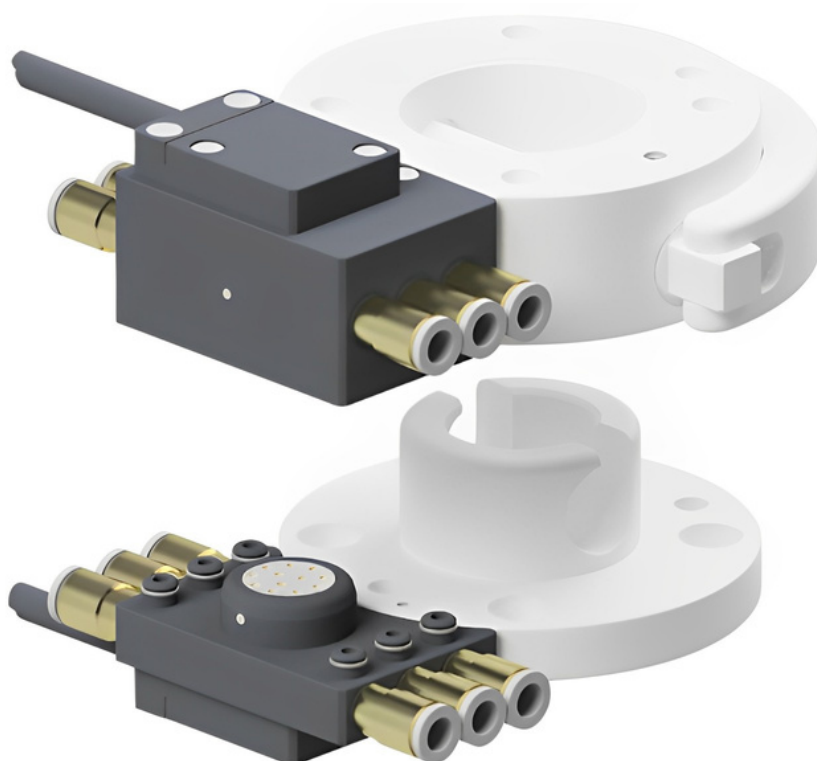
## MEK-PM Advantages:

- Horizontally arranged pneumatic and electrical connections
- For metric pneumatic fittings
- Simultaneous mechanical, electrical and pneumatic connection

## SIZES

MEK063-PM

MEK080-PM



### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

Can withstand 50,000 alternating cycles

Individual wiring

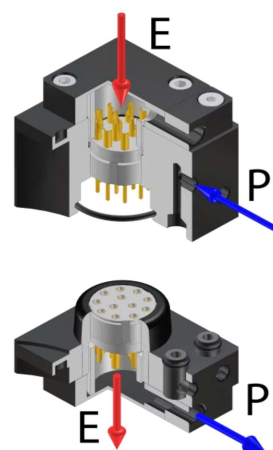
Coding of the interchangeable parts



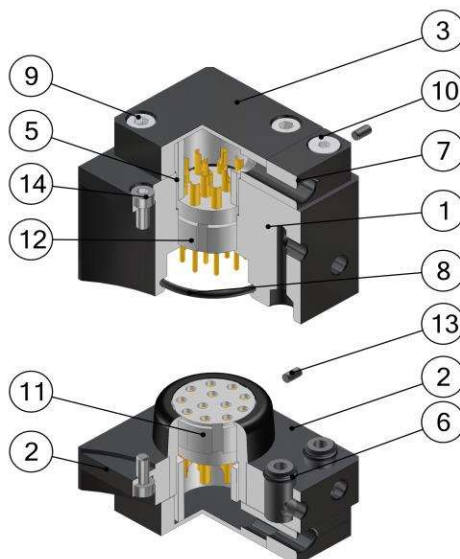
1

2

Technical specifications		MEK063	
Suitable for		MGW063, SWS063	
Pneumatic ducts	number P	3	
	nominal width NW [mm]	M5	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,11	
	lower assembly	0,06	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	Lower assembly
3	Cover
5	Distance bushing
6	O-Ring
7	Strain relief
8	O-Ring
9	Socket head screw
10	Countersunk head screw
11	Electrical bushing
12	Electrical plug
13	Cylindrical pin
14	Mounting screw
15	Cable (optional)





## Multi energy coupling Ø63, 6 x air...

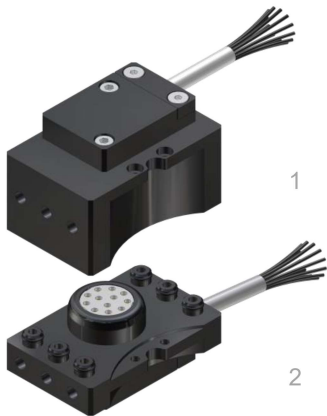
G-MEK063-O-3PM5-1E12	upper assembly, M5 radial, electrical plug 12 poles
G-MEK063-U-3PM5-1E12	lower assembly, M5 radial, electrical bushing 12 poles

Operation mode:

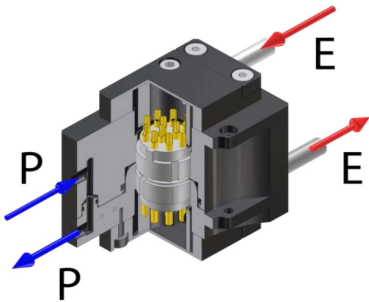
The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

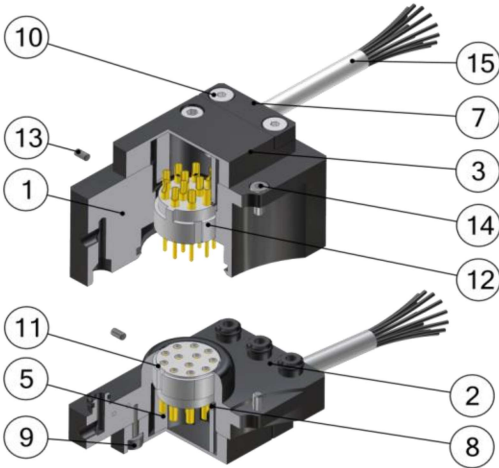
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



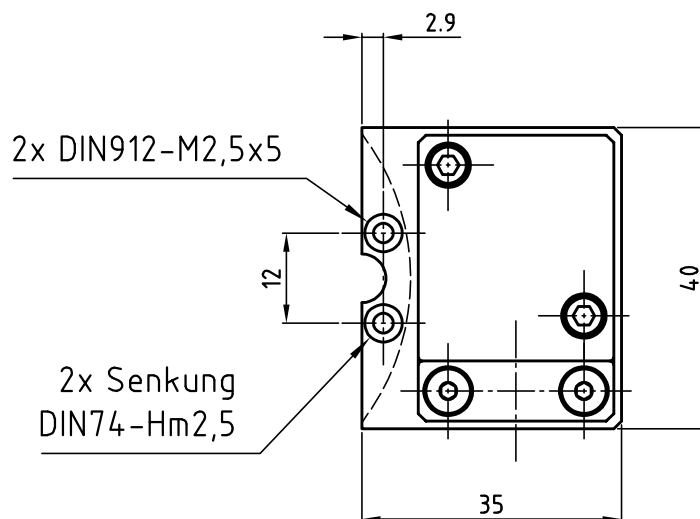
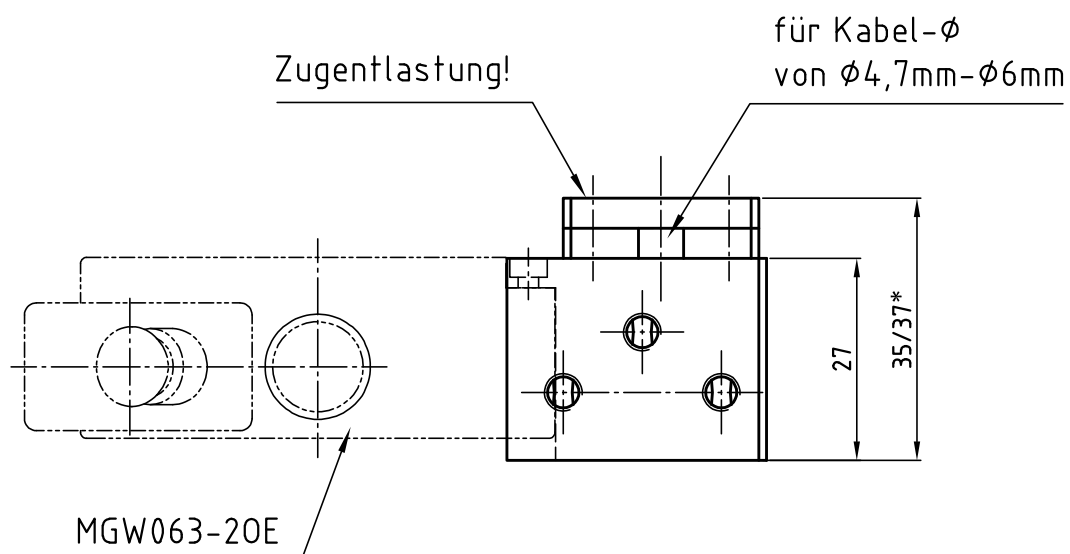
Technical specifications		MEK063	
Suitable for		MGW063, SWS063	
Pneumatic ducts	number P	6	
	nominal width NW [mm]	M5	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,11	
	lower assembly	0,06	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	Lower assembly
3	Cover
5	Distance bushing
6	O-Ring
7	Strain relief
8	O-Ring
9	Socket head screw
10	Countersunk head screw
11	Electrical bushing
12	Electrical plug
13	Cylindrical pin
14	Mounting screw
15	Cable (optional)



Multi energy coupling Ø63...	
G-MEK063-O-6PM5	upper assembly, 6 x air, M5 radial
G-MEK063-U-6PM5	lower assembly, 6 x air, M5 radial
G-MEK063-O-6PM5-1E12	upper assembly, 6 x air, M5 radial, electrical plug 12 poles
G-MEK063-U-6PM5-1E12	lower assembly, 6 x air, M5 radial, electrical bushing 12 poles
G-MEK063-O-6PM5-1E12-M12-300	upper assembly, 6 x air, M5 radial, electrical plug 12 poles, with 300 mm cable, plug M12
G-MEK063-U-6PM5-1E12-M12-300	lower assembly, 6 x air, M5 radial, electrical bushing 12 poles, with 300 mm cable , bushing M12



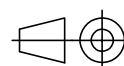
Bestellnummer Oberteil

G-MEK063-O-3PM5-1E12

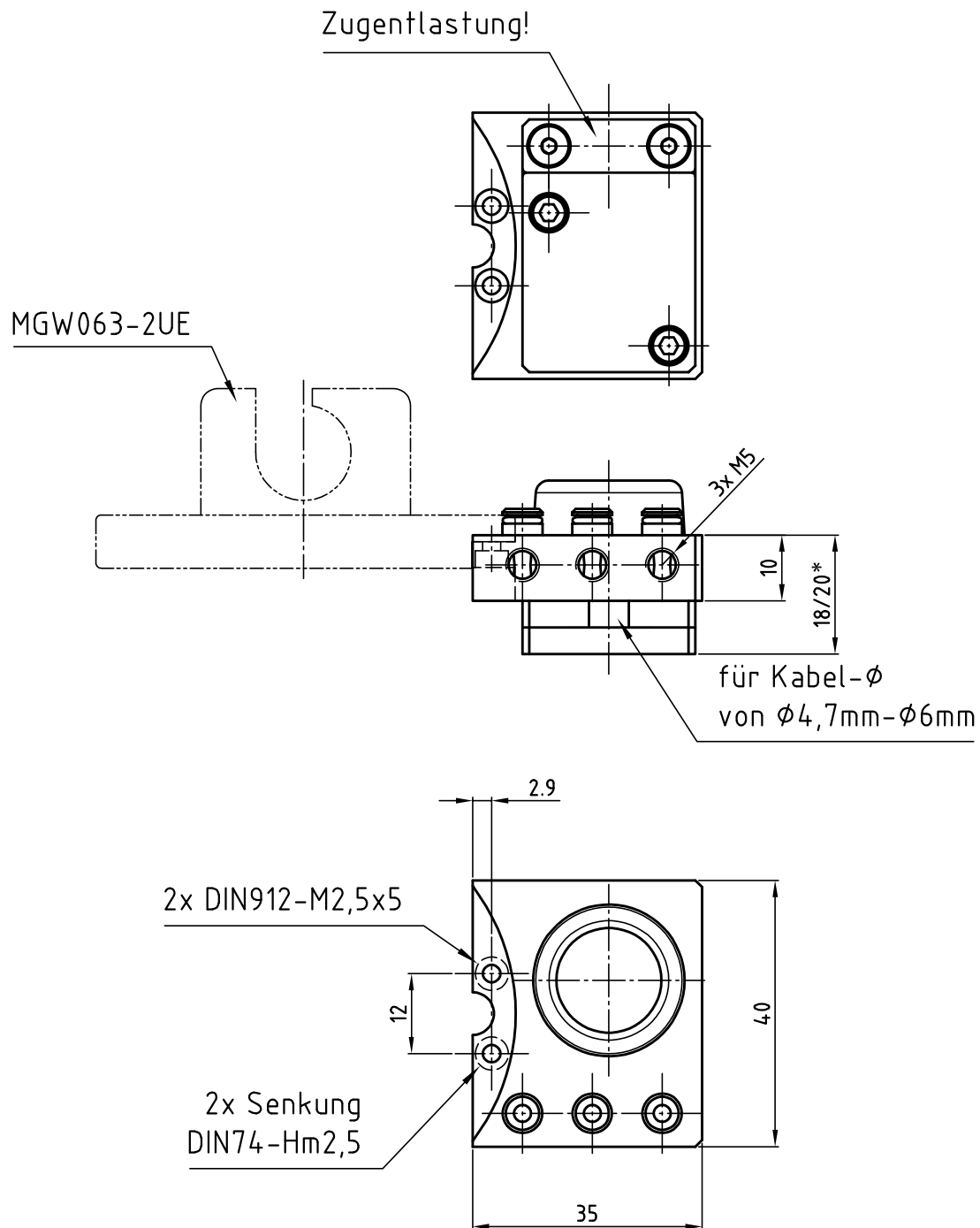
G-MEK063-O-3PM5-1E6-C\*

Datum 22.01.2018 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-O-3PM5-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



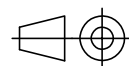
Bestellnummer Unterteil

G-MEK063-U-3PM5-1E12

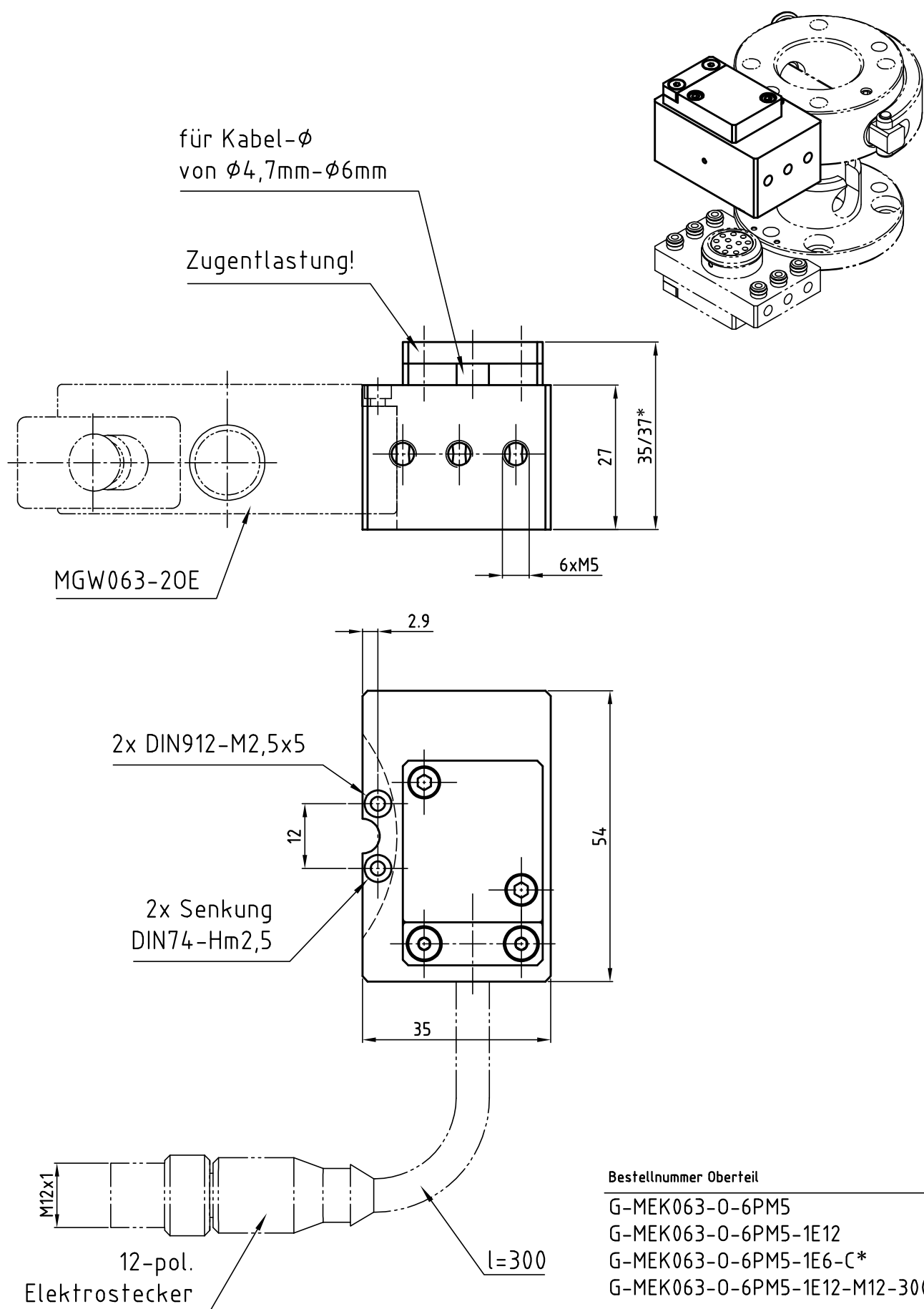
G-MEK063-U-3PM5-1E6-C\*

Datum 22.01.2018 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-U-3PM5-1E

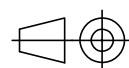


**GRIP**  
GRIP GmbH Handhabungstechnik

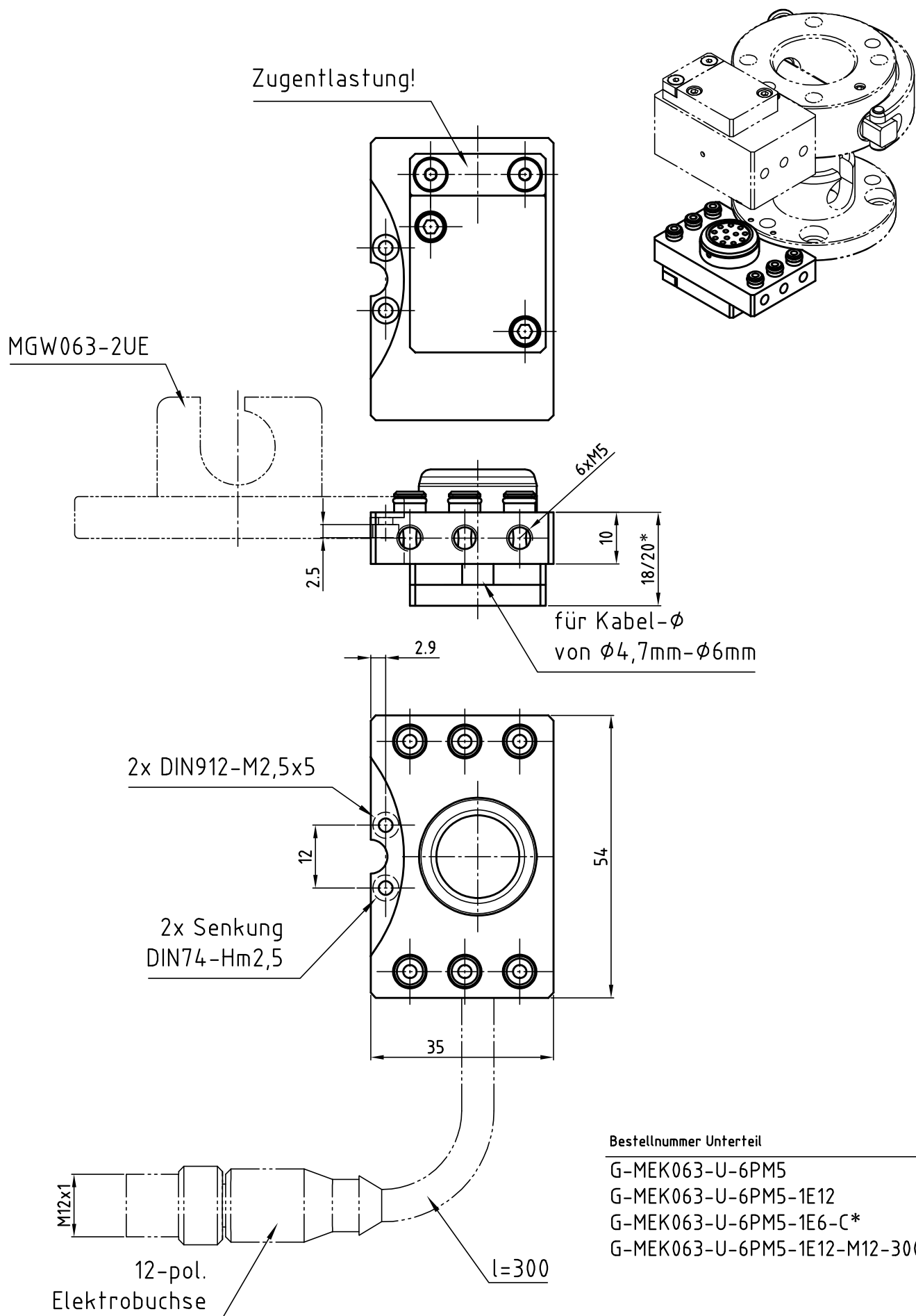


Datum 22.01.2018 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-0-6PM5-1E

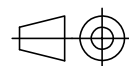


**GRIP**  
GRIP GmbH Handhabungstechnik



Datum 22.01.2018 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-U-6PM5-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

Operation mode:

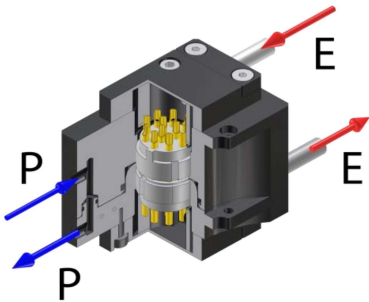
The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

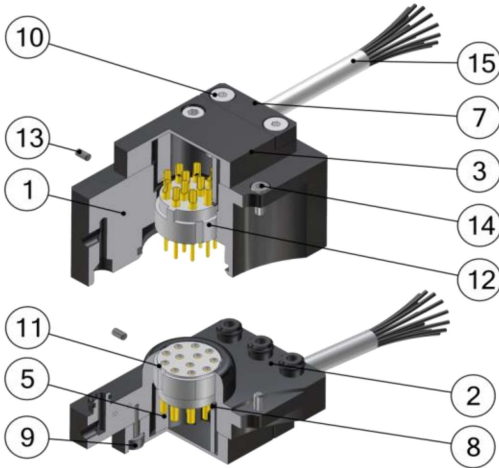
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



Technical specifications		MEK080	
Suitable for		MGW080, SWS080	
Pneumatic ducts	number P	6	
	nominal width NW [mm]	M5	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,11	
	lower assembly	0,06	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	

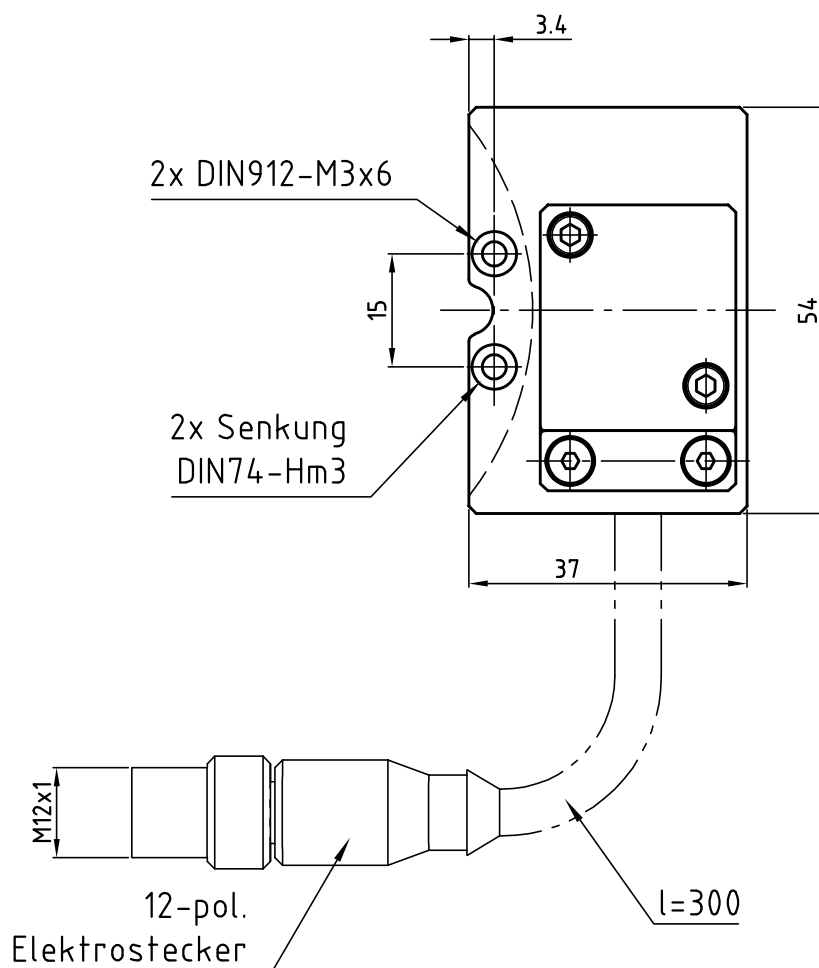
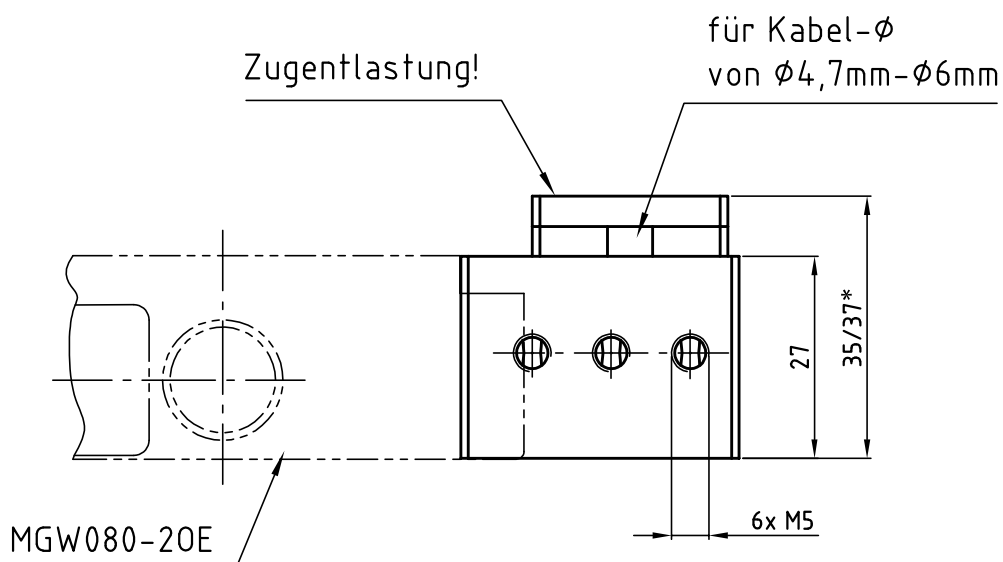


Pos.	Description
1	Upper assembly
2	Lower assembly
3	Cover
5	Distance bushing
6	O-Ring
7	Strain relief
8	O-Ring
9	Socket head screw
10	Countersunk head screw
11	Electrical bushing
12	Electrical plug
13	Cylindrical pin
14	Mounting screw
15	Cable (optional)





Multi energy coupling Ø80...	
G-MEK080-O-6PM5	upper assembly, 6 x air, M5 radial
G-MEK080-U-6PM5	lower assembly, 6 x air, M5 radial
G-MEK080-O-6PM5-1E12	upper assembly, 6 x air, M5 radial, electrical plug 12 poles
G-MEK080-U-6PM5-1E12	lower assembly, 6 x air, M5 radial, electrical bushing 12 poles
G-MEK080-O-6PM5-1E12-M12-300	upper assembly, 6 x air, M5 radial, electrical plug 12 poles, with 300 mm cable, plug M12
G-MEK080-U-6PM5-1E12-M12-300	lower assembly, 6 x air, M5 radial, electrical bushing 12 poles, with 300 mm cable , bushing M12



Bestellnummer Oberteil

G-MEK080-0-6PM5

G-MEK080-0-6PM5-1E12

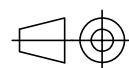
G-MEK080-0-6PM5-1E6-C\*

G-MEK080-0-6PM5-1E12-M12-300

Datum 14.06.2018 Maßstab 1:1

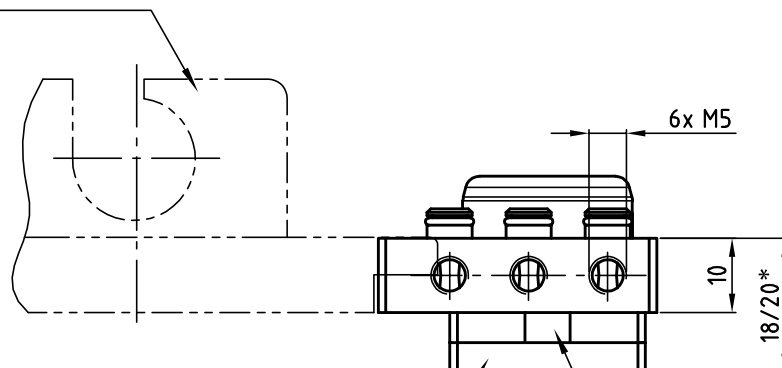
Zeichnungsnummer

G-MEK080-0-6PM5-1E



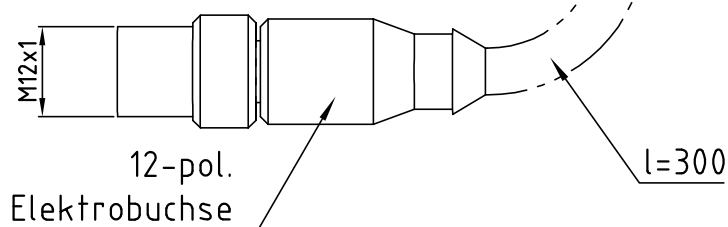
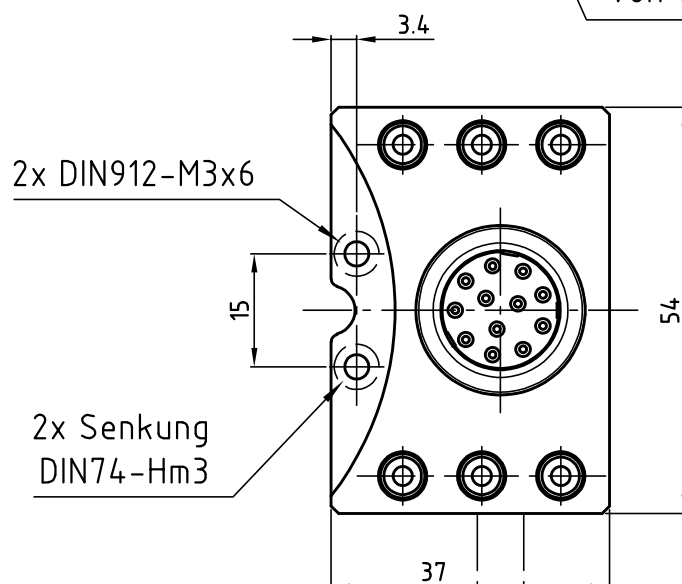
**GRIP**  
GRIP GmbH Handhabungstechnik

MGW080-2UE



Zugentlastung!

für Kabel-φ  
von φ4,7mm-φ6mm



Bestellnummer Unterteil

G-MEK080-U-6PM5

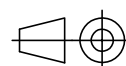
G-MEK080-U-6PM5-1E12

G-MEK080-U-6PM5-1E6-C\*

G-MEK080-U-6PM5-1E12-M12-300

Datum 14.06.2018 Maßstab 1:1

Zeichnungsnummer  
G-MEK080-U-6PM5-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

# MEK MULTI-ENERGY-COUPLING

The MEK Multi-Energy-Coupling is an MGW Connector accessory to that enables the transmission of energy, air and vacuum.

## MEK Multi-Energy-Coupling Advantages:

- Extends the mechanical interfaces MGW
- Replaces additional plug connections
- Transmits compressed air from the upper to the lower assembly
- Conducts vacuum from upper to lower assembly
- Conducts 12x electrical signals from the upper to the lower assembly

MEK Multi-Energy-Couplings can be modified to meet your needs. Please inquire about special applications.

## SIZES

MEK063

MEK080

MEK100

MEK125

MEK160

MEK200



Operation mode:

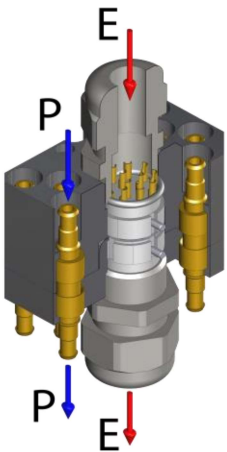
The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

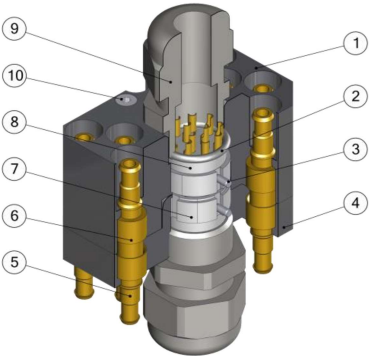
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



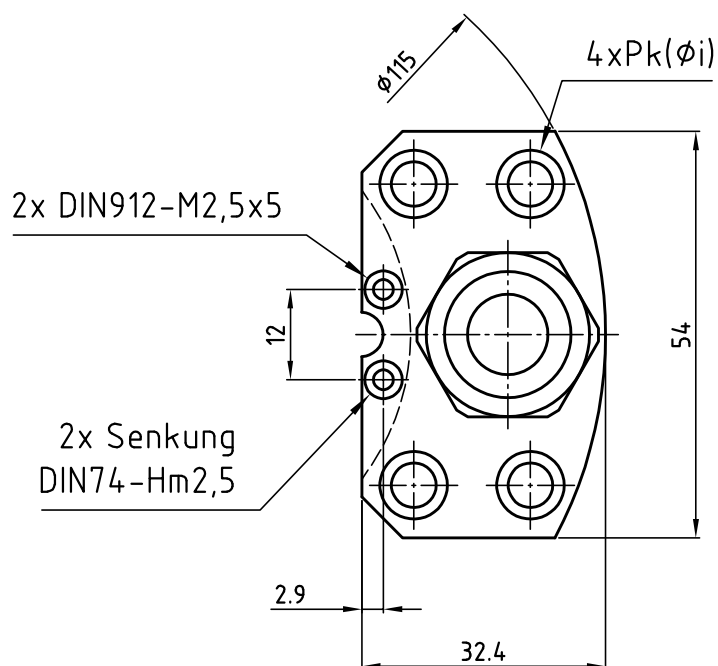
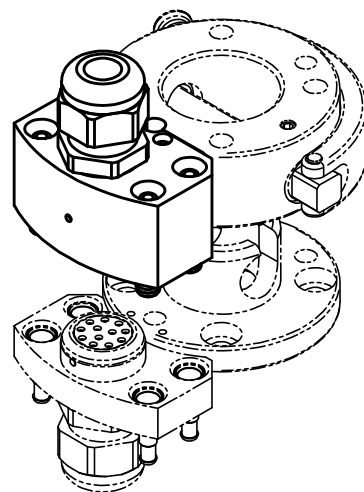
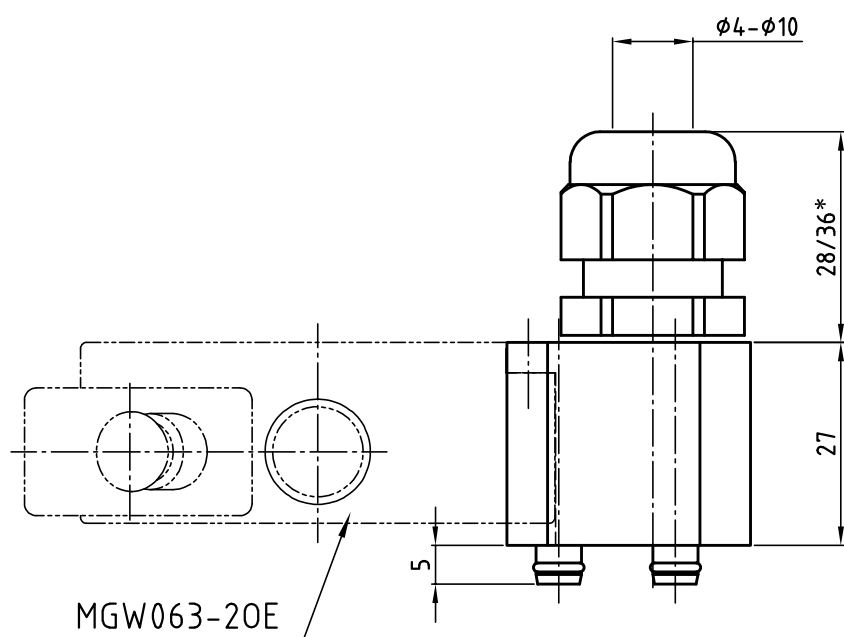
Technical specifications		MEK063	
Suitable for		MGW063, SWS063	
Pneumatic ducts	number P	4 / 8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,11	
	lower assembly	0,06	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



Multi energy coupling Ø63...	
G-MEK063-O-4PK2-1E12	upper assembly, 4 x air, ID = 2 mm, electrical plug 12 poles
G-MEK063-O-4PK2-1E6-C	upper assembly, 4 x air, ID = 2 mm, electrical plug 6 poles
G-MEK063-O-4PK3-1E12	upper assembly, 4 x air, ID = 3 mm, electrical plug 12 poles
G-MEK063-O-4PK3-1E6-C	upper assembly, 4 x air, ID = 3 mm, electrical plug 6 poles
G-MEK063-O-4PK4-1E12	upper assembly, 4 x air, ID = 4 mm, electrical plug 12 poles
G-MEK063-O-4PK4-1E6-C	upper assembly, 4 x air, ID = 4 mm, electrical plug 6 poles
G-MEK063-O-8PK2-1E12	upper assembly, 8 x air, ID = 2 mm, electrical plug 12 poles
G-MEK063-O-8PK2-1E6-C	upper assembly, 8 x air, ID = 2 mm, electrical plug 6 poles
G-MEK063-O-8PK3-1E12	upper assembly, 8 x air, ID = 3 mm, electrical plug 12 poles
G-MEK063-O-8PK3-1E6-C	upper assembly, 8 x air, ID = 3 mm, electrical plug 6 poles
G-MEK063-O-8PK4-1E12	upper assembly, 8 x air, ID = 4 mm, electrical plug 12 poles
G-MEK063-O-8PK4-1E6-C	upper assembly, 8 x air, ID = 4 mm, electrical plug 6 poles
G-MEK063-U-4PK2-1E12	lower assembly, 4 x air, ID = 2 mm, electrical bushing 12 poles
G-MEK063-U-4PK2-1E6-C	lower assembly, 4 x air, ID = 2 mm, electrical bushing 6 poles
G-MEK063-U-4PK3-1E12	lower assembly, 4 x air, ID = 3 mm, electrical bushing 12 poles
G-MEK063-U-4PK3-1E6-C	lower assembly, 4 x air, ID = 3 mm, electrical bushing 6 poles
G-MEK063-U-4PK4-1E12	lower assembly, 4 x air, ID = 4 mm, electrical bushing 12 poles
G-MEK063-U-4PK4-1E6-C	lower assembly, 4 x air, ID = 4 mm, electrical bushing 6 poles
G-MEK063-U-8PK2-1E12	lower assembly, 8 x air, ID = 2 mm, electrical bushing 12 poles
G-MEK063-U-8PK2-1E6-C	lower assembly, 8 x air, ID = 2 mm, electrical bushing 6 poles
G-MEK063-U-8PK3-1E12	lower assembly, 8 x air, ID = 3 mm, electrical bushing 12 poles
G-MEK063-U-8PK3-1E6-C	lower assembly, 8 x air, ID = 3 mm, electrical bushing 6 poles
G-MEK063-U-8PK4-1E12	lower assembly, 8 x air, ID = 4 mm, electrical bushing 12 poles
G-MEK063-U-8PK4-1E6-C	lower assembly, 8 x air, ID = 4 mm, electrical bushing 6 poles



Bestellnummer Oberteil

G-MEK063-O-4Pk2-1E12

G-MEK063-O-4Pk3-1E12

G-MEK063-O-4Pk4-1E12

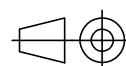
G-MEK063-O-4Pk2-1E6-C\*

G-MEK063-O-4Pk3-1E6-C\*

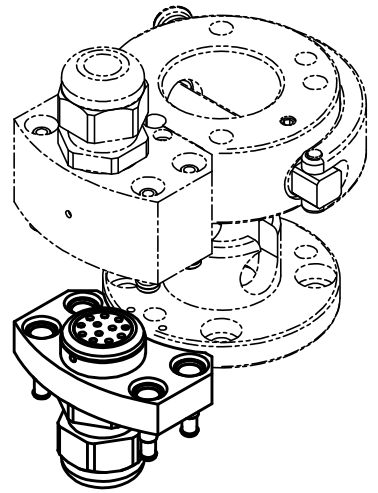
G-MEK063-O-4Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

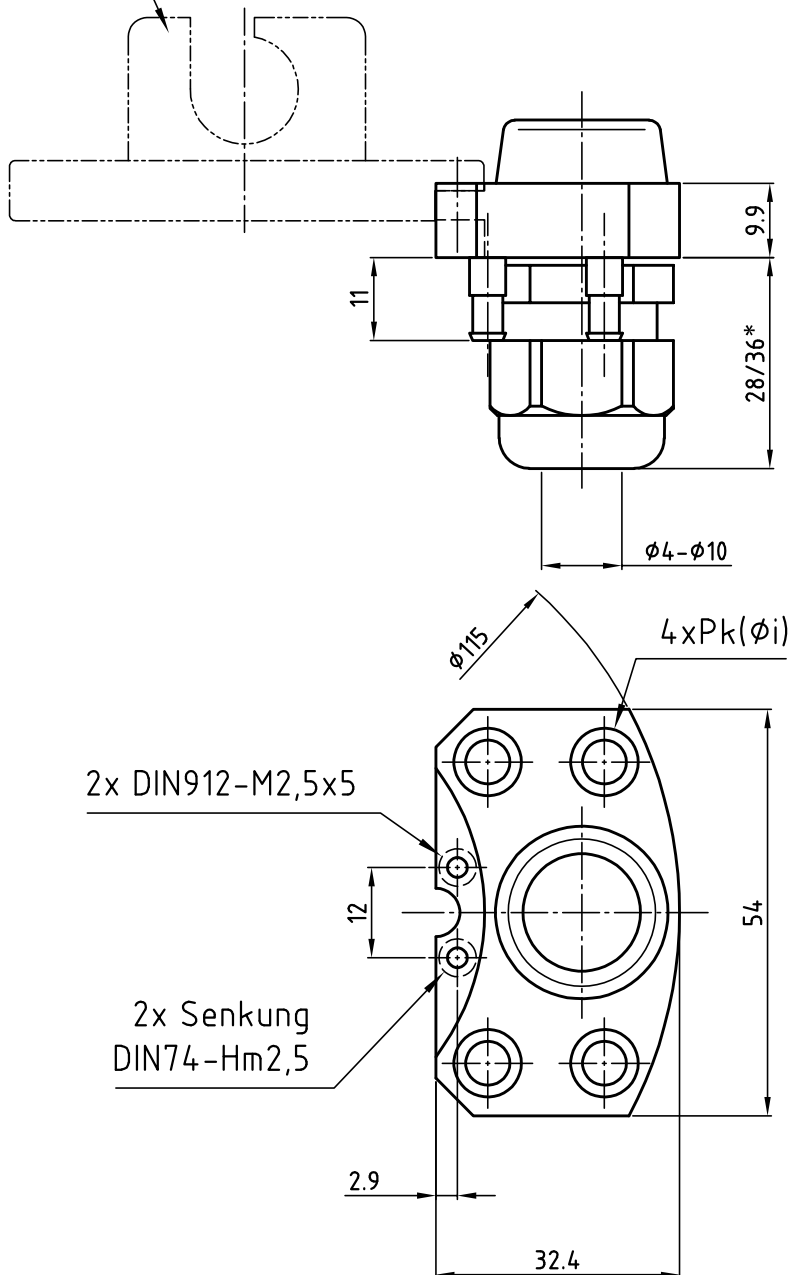
Zeichnungsnummer  
G-MEK063-O-4P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



MGW063-2UE



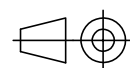
Bestellnummer Unterteil

G-MEK063-U-4Pk2-1E12  
G-MEK063-U-4Pk3-1E12  
G-MEK063-U-4Pk4-1E12

G-MEK063-U-4Pk2-1E6-C\*  
G-MEK063-U-4Pk3-1E6-C\*  
G-MEK063-U-4Pk4-1E6-C\*

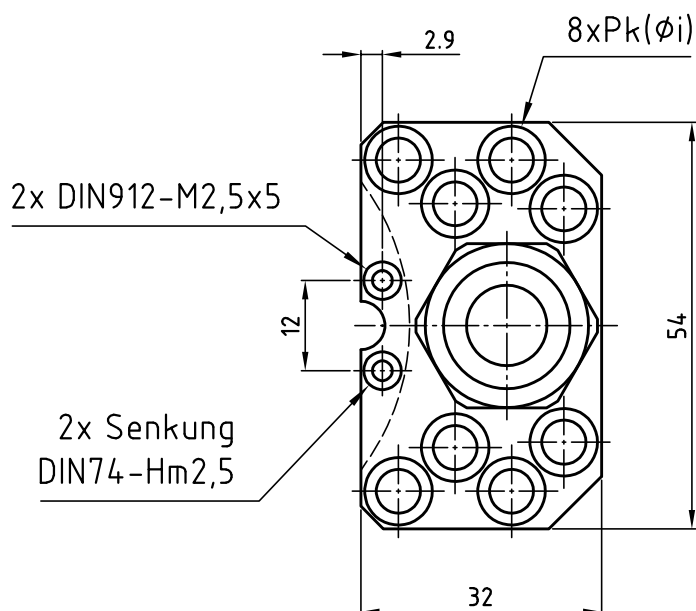
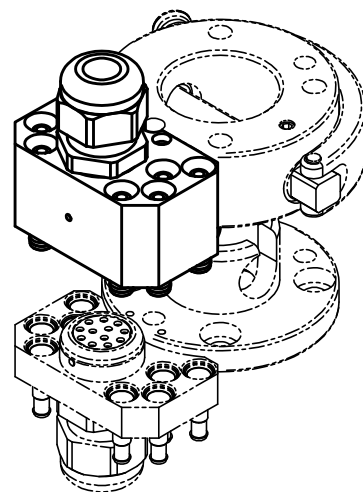
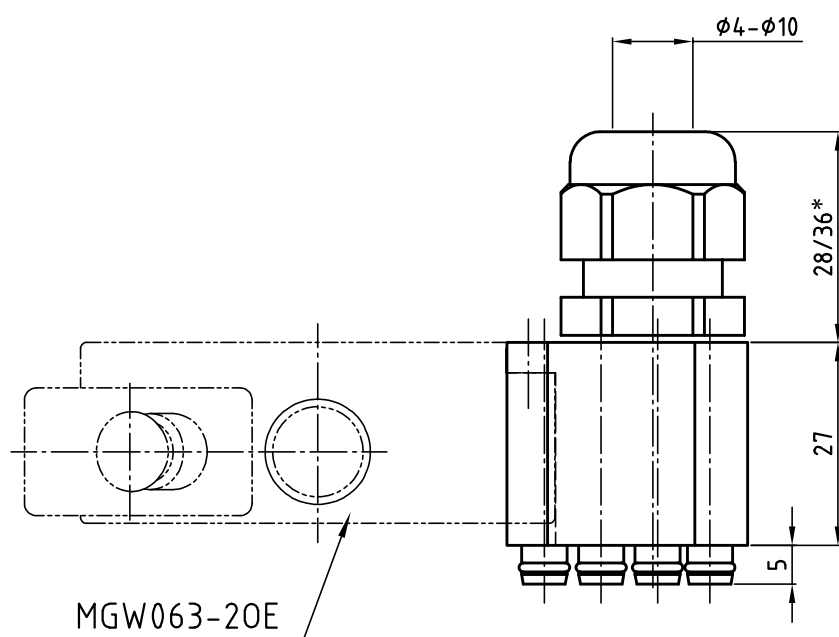
Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-U-4P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik





Bestellnummer Oberteil

G-MEK063-O-8Pk2-1E12

G-MEK063-O-8Pk3-1E12

G-MEK063-O-8Pk4-1E12

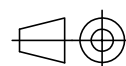
G-MEK063-O-8Pk2-1E6-C\*

G-MEK063-O-8Pk3-1E6-C\*

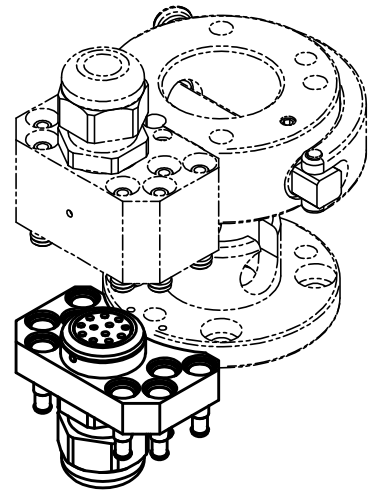
G-MEK063-O-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

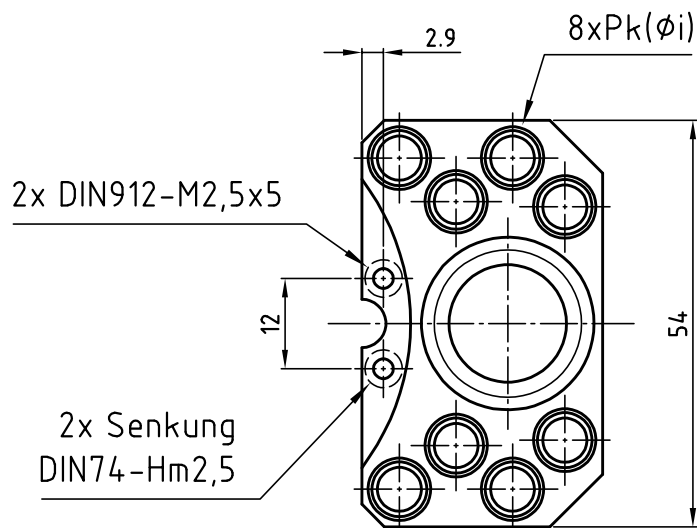
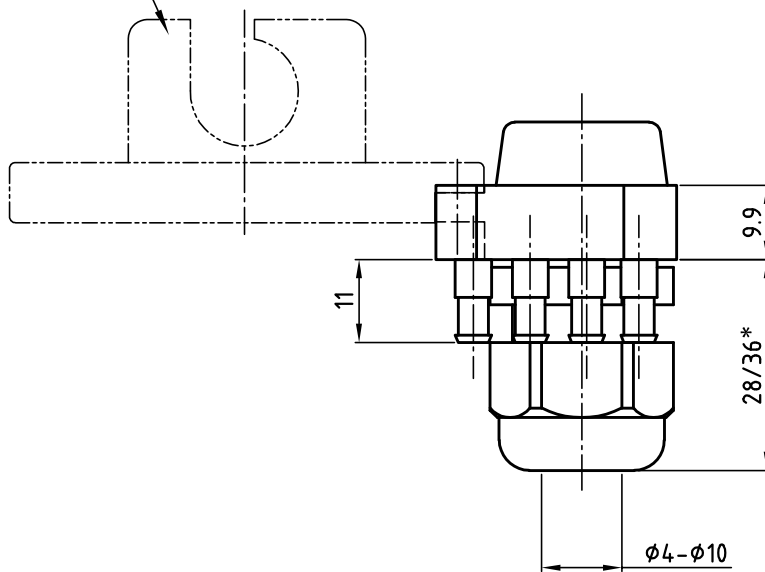
Zeichnungsnummer  
G-MEK063-O-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



MGW063-2UE



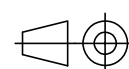
Bestellnummer Unterteil

G-MEK063-U-8Pk2-1E12  
G-MEK063-U-8Pk3-1E12  
G-MEK063-U-8Pk4-1E12

G-MEK063-U-8Pk2-1E6-C\*  
G-MEK063-U-8Pk3-1E6-C\*  
G-MEK063-U-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK063-U-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

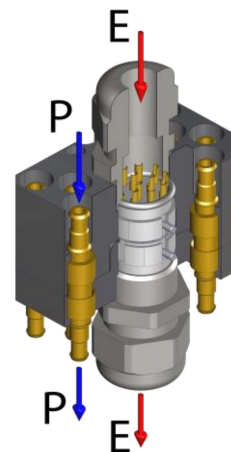
Can withstand 50,000 alternating cycles

Individual wiring

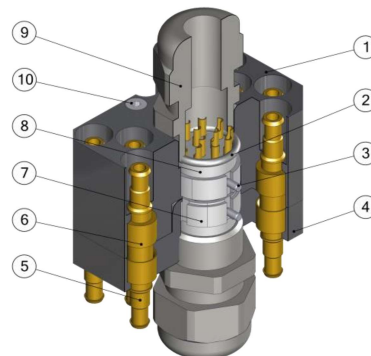
Coding of the interchangeable parts



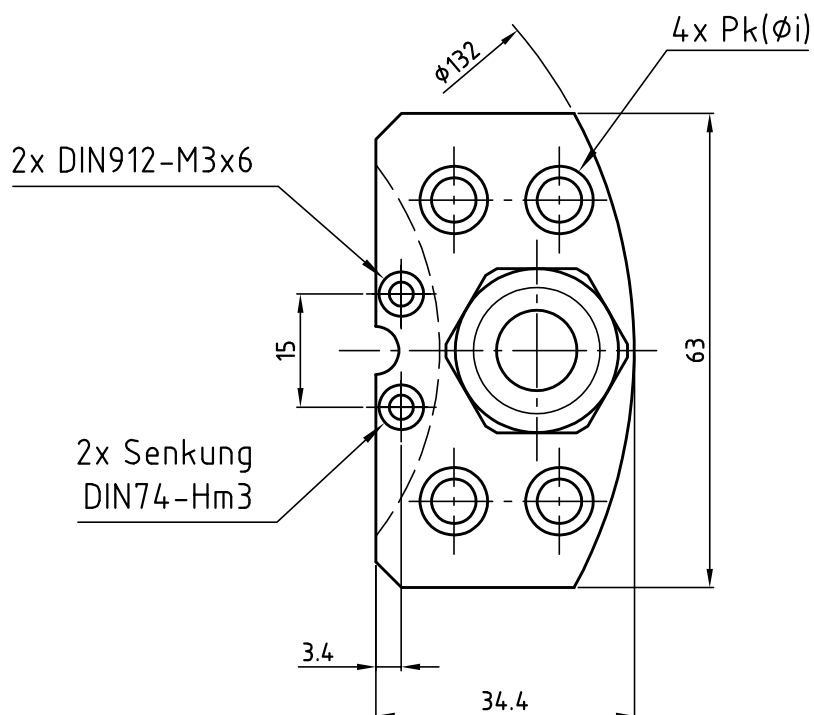
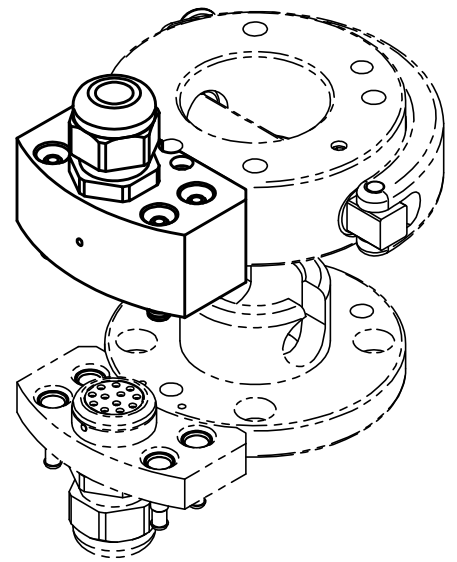
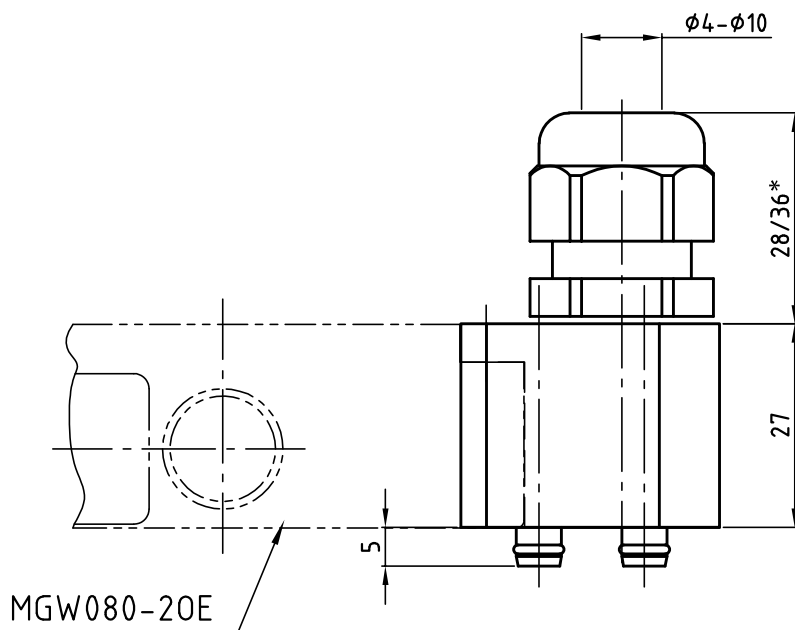
Technical specifications		MEK080	
Suitable for		MGW080, SWS080	
Pneumatic ducts	number P	4 / 8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,15	
	lower assembly	0,07	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



Multi energy coupling Ø80...	
G-MEK080-O-4PK2-1E12	upper assembly, 4 x air, ID = 2 mm, electrical plug 12 poles
G-MEK080-O-4PK2-1E6-C	upper assembly, 4 x air, ID = 2 mm, electrical plug 6 poles
G-MEK080-O-4PK3-1E12	upper assembly, 4 x air, ID = 3 mm, electrical plug 12 poles
G-MEK080-O-4PK3-1E6-C	upper assembly, 4 x air, ID = 3 mm, electrical plug 6 poles
G-MEK080-O-4PK4-1E12	upper assembly, 4 x air, ID = 4 mm, electrical plug 12 poles
G-MEK080-O-4PK4-1E6-C	upper assembly, 4 x air, ID = 4 mm, electrical plug 6 poles
G-MEK080-O-8PK2-1E12	upper assembly, 8 x air, ID = 2 mm, electrical plug 12 poles
G-MEK080-O-8PK2-1E6-C	upper assembly, 8 x air, ID = 2 mm, electrical plug 6 poles
G-MEK080-O-8PK3-1E12	upper assembly, 8 x air, ID = 3 mm, electrical plug 12 poles
G-MEK080-O-8PK3-1E6-C	upper assembly, 8 x air, ID = 3 mm, electrical plug 6 poles
G-MEK080-O-8PK4-1E12	upper assembly, 8 x air, ID = 4 mm, electrical plug 12 poles
G-MEK080-O-8PK4-1E6-C	upper assembly, 8 x air, ID = 4 mm, electrical plug 6 poles
G-MEK080-U-4PK2-1E12	lower assembly, 4 x air, ID = 2 mm, electrical bushing 12 poles
G-MEK080-U-4PK2-1E6-C	lower assembly, 4 x air, ID = 2 mm, electrical bushing 6 poles
G-MEK080-U-4PK3-1E12	lower assembly, 4 x air, ID = 3 mm, electrical bushing 12 poles
G-MEK080-U-4PK3-1E6-C	lower assembly, 4 x air, ID = 3 mm, electrical bushing 6 poles
G-MEK080-U-4PK4-1E12	lower assembly, 4 x air, ID = 4 mm, electrical bushing 12 poles
G-MEK080-U-4PK4-1E6-C	lower assembly, 4 x air, ID = 4 mm, electrical bushing 6 poles
G-MEK080-U-8PK2-1E12	lower assembly, 8 x air, ID = 2 mm, electrical bushing 12 poles
G-MEK080-U-8PK2-1E6-C	lower assembly, 8 x air, ID = 2 mm, electrical bushing 6 poles
G-MEK080-U-8PK3-1E12	lower assembly, 8 x air, ID = 3 mm, electrical bushing 12 poles
G-MEK080-U-8PK3-1E6-C	lower assembly, 8 x air, ID = 3 mm, electrical bushing 6 poles
G-MEK080-U-8PK4-1E12	lower assembly, 8 x air, ID = 4 mm, electrical bushing 12 poles
G-MEK080-U-8PK4-1E6-C	lower assembly, 8 x air, ID = 4 mm, electrical bushing 6 poles



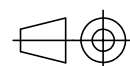
Bestellnummer Oberteil

G-MEK080-O-4Pk2-1E12  
G-MEK080-O-4Pk3-1E12  
G-MEK080-O-4Pk4-1E12

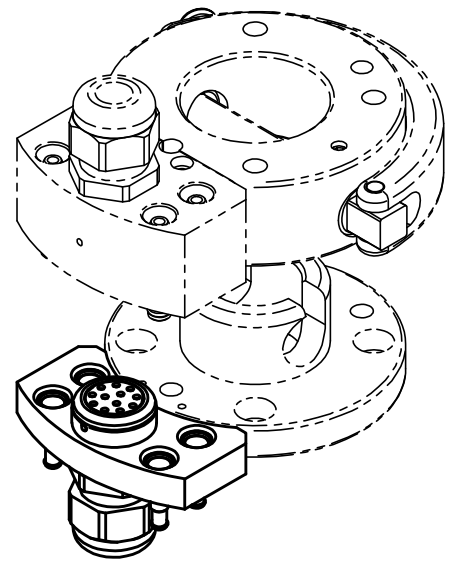
G-MEK080-O-4Pk2-1E6-C\*  
G-MEK080-O-4Pk3-1E6-C\*  
G-MEK080-O-4Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

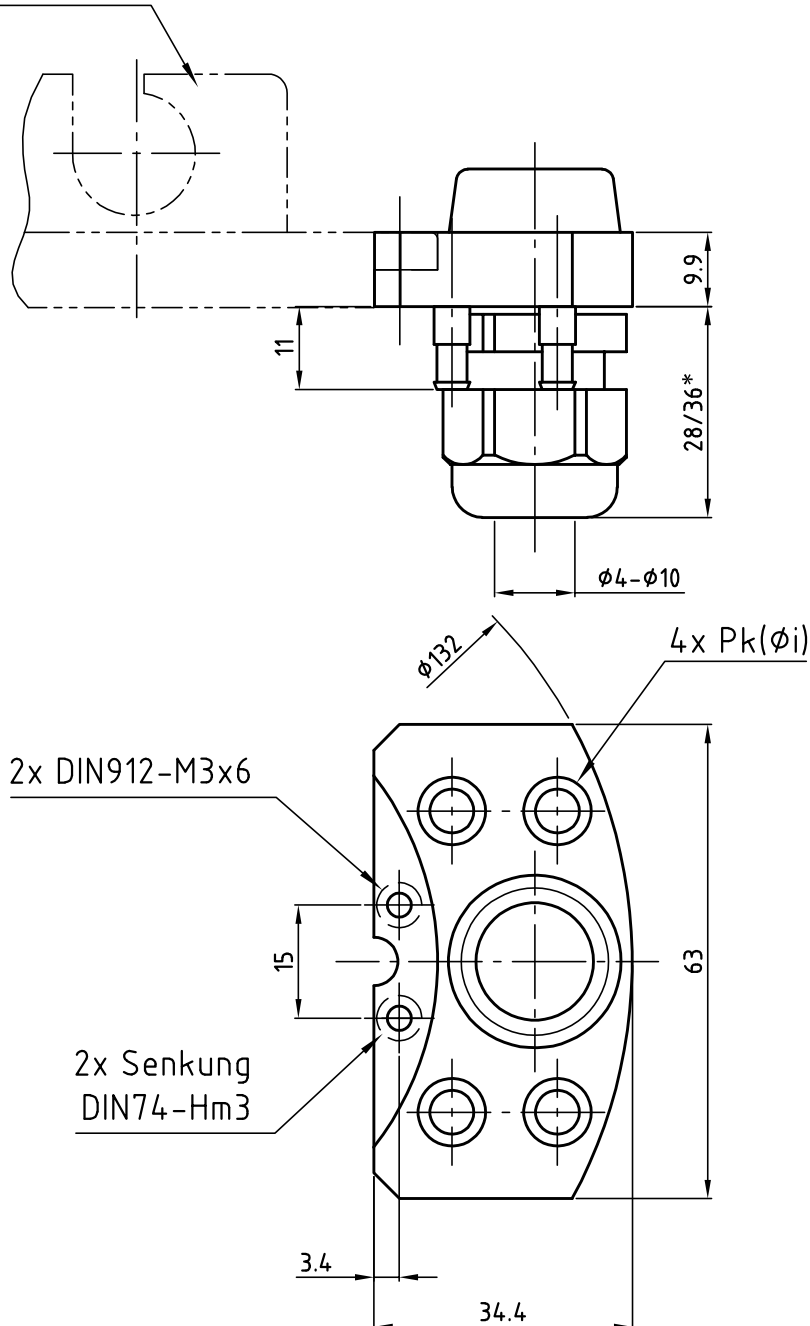
Zeichnungsnummer  
G-MEK080-O-4P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



MGW080-2UE



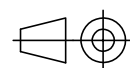
Bestellnummer Unterteil

G-MEK080-U-4Pk2-1E12  
G-MEK080-U-4Pk3-1E12  
G-MEK080-U-4Pk4-1E12

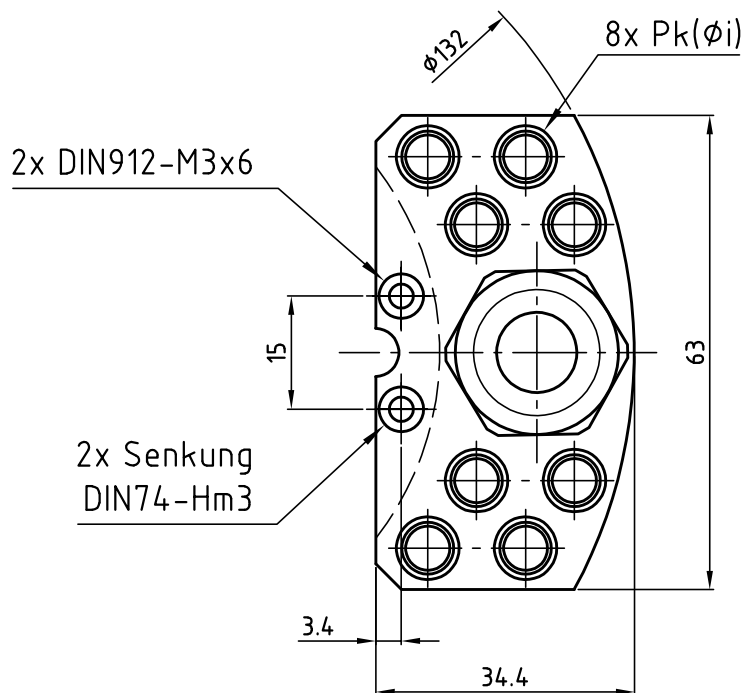
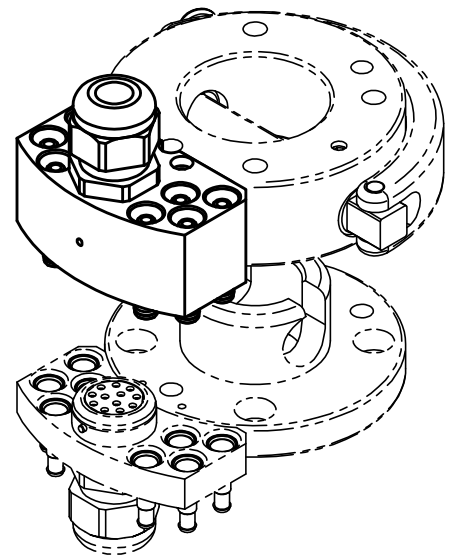
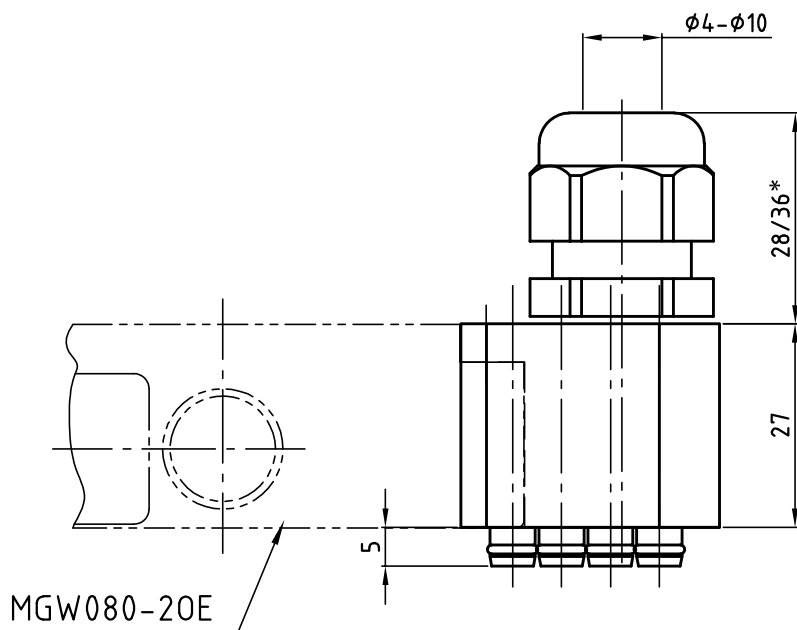
G-MEK080-U-4Pk2-1E6-C\*  
G-MEK080-U-4Pk3-1E6-C\*  
G-MEK080-U-4Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK080-U-4P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



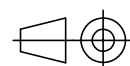
Bestellnummer Oberteil

G-MEK080-O-8Pk2-1E12  
G-MEK080-O-8Pk3-1E12  
G-MEK080-O-8Pk4-1E12

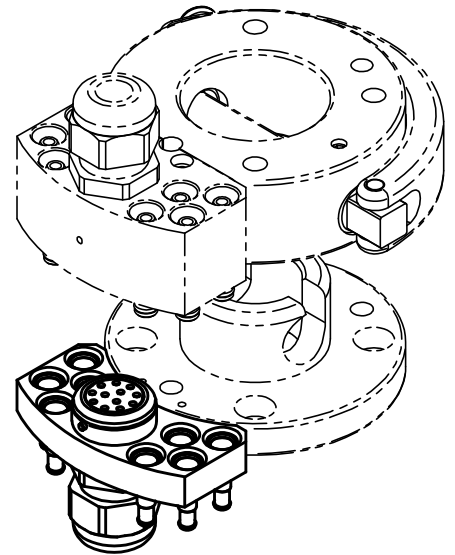
G-MEK080-O-8Pk2-1E6-C\*  
G-MEK080-O-8Pk3-1E6-C\*  
G-MEK080-O-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

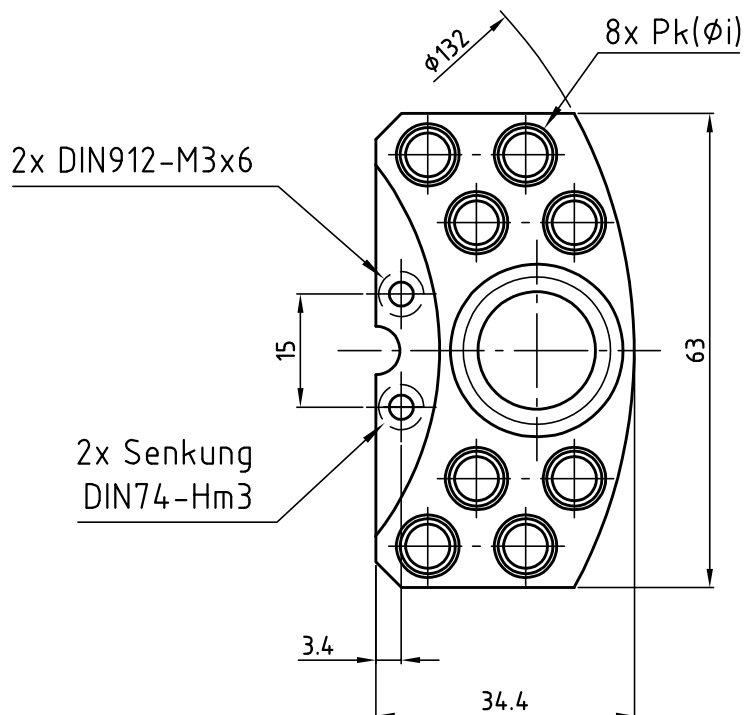
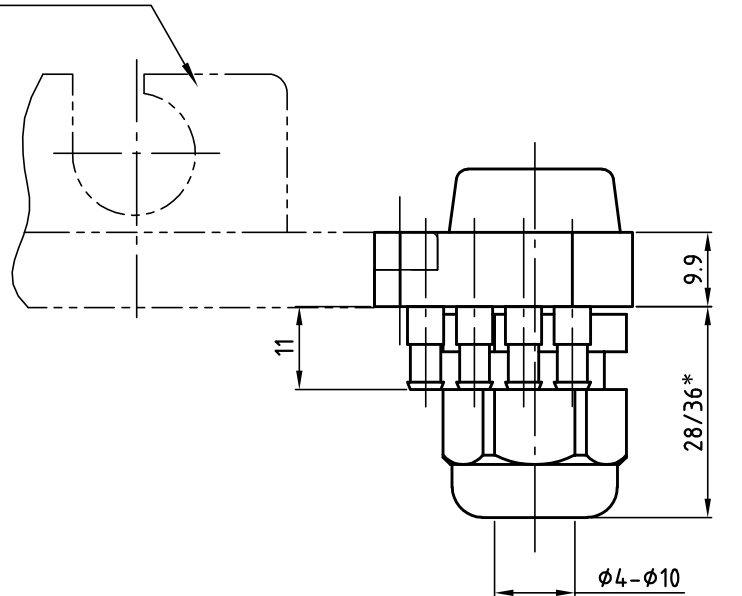
Zeichnungsnummer  
G-MEK080-O-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



MGW080-2UE



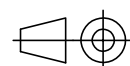
Bestellnummer Unterteil

G-MEK080-U-8Pk2-1E12  
G-MEK080-U-8Pk3-1E12  
G-MEK080-U-8Pk4-1E12

G-MEK080-U-8Pk2-1E6-C\*  
G-MEK080-U-8Pk3-1E6-C\*  
G-MEK080-U-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK080-U-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

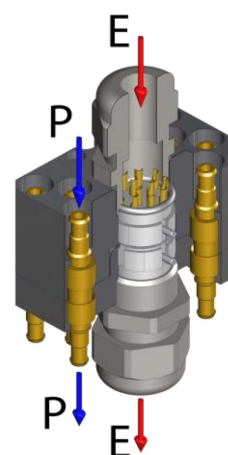
Can withstand 50,000 alternating cycles

Individual wiring

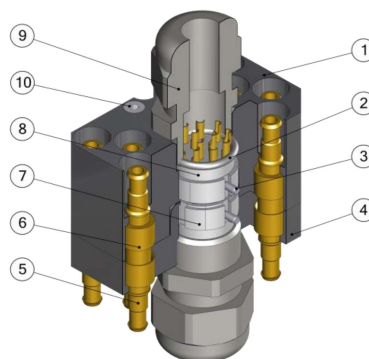
Coding of the interchangeable parts



Technical specifications		MEK100	
Suitable for		MGW 100, SWS100	
Pneumatic ducts	number P	8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,2	
	lower assembly	0,13	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



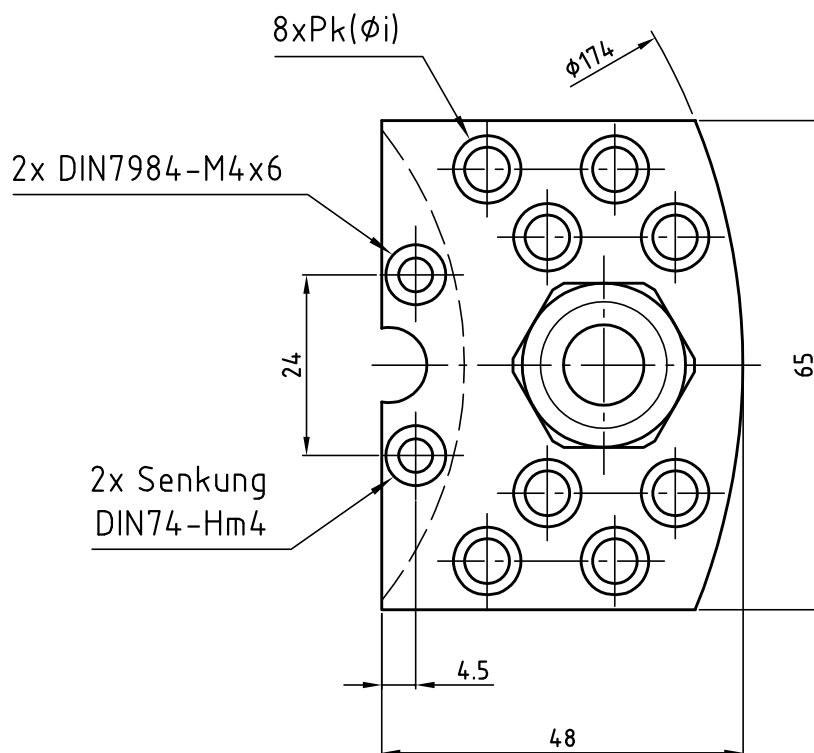
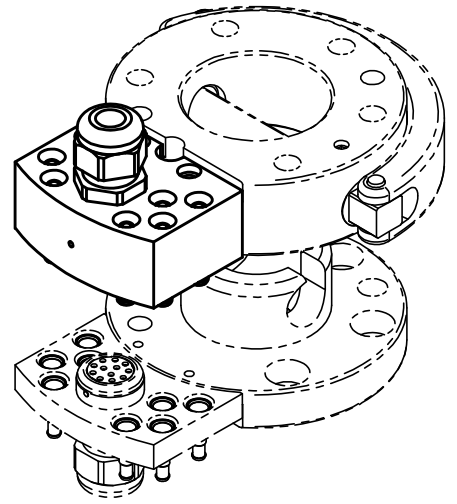
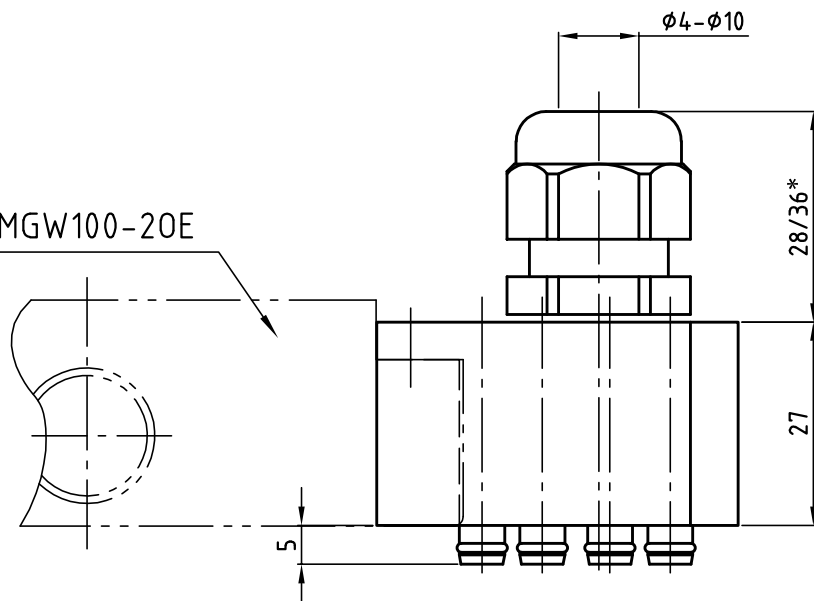
Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



**Multi energy coupling Ø100, 8 x air...**

G-MEK100-O-8PK2-1E12	upper assembly, ID = 2 mm, electrical plug 12 poles
G-MEK100-O-8PK2-1E6-C	upper assembly, ID = 2 mm, electrical plug 6 poles
G-MEK100-O-8PK3-1E12	upper assembly, ID = 3 mm, electrical plug 12 poles
G-MEK100-O-8PK3-1E6-C	upper assembly, ID = 3 mm, electrical plug 6 poles
G-MEK100-O-8PK4-1E12	upper assembly, ID = 4 mm, electrical plug 12 poles
G-MEK100-O-8PK4-1E6-C	upper assembly, ID = 4 mm, electrical plug 6 poles
G-MEK100-U-8PK2-1E12	lower assembly, ID = 2 mm, electrical bushing 12 poles
G-MEK100-U-8PK2-1E6-C	lower assembly, ID = 2 mm, electrical bushing 6 poles
G-MEK100-U-8PK3-1E12	lower assembly, ID = 3 mm, electrical bushing 12 poles
G-MEK100-U-8PK3-1E6-C	lower assembly, ID = 3 mm, electrical bushing 6 poles
G-MEK100-U-8PK4-1E12	lower assembly, ID = 4 mm, electrical bushing 12 poles
G-MEK100-U-8PK4-1E6-C	lower assembly, ID = 4 mm, electrical bushing 6 poles

MGW100-20E



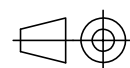
Bestellnummer Oberteil

G-MEK100-O-8Pk2-1E12  
G-MEK100-O-8Pk3-1E12  
G-MEK100-O-8Pk4-1E12

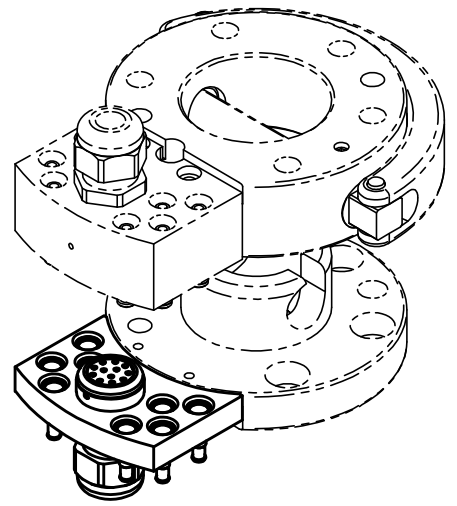
G-MEK100-O-8Pk2-1E6-C\*  
G-MEK100-O-8Pk3-1E6-C\*  
G-MEK100-O-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

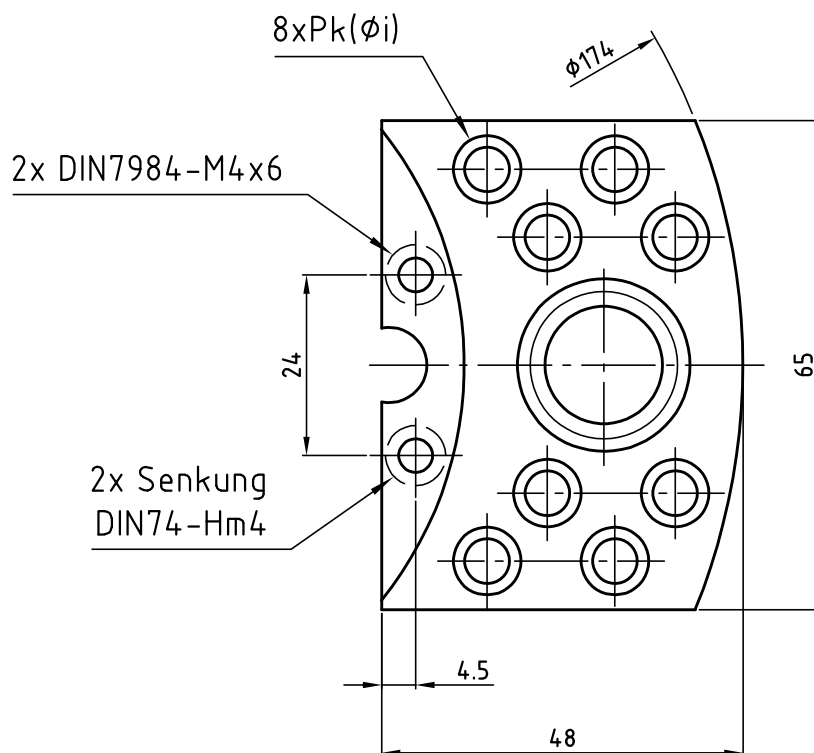
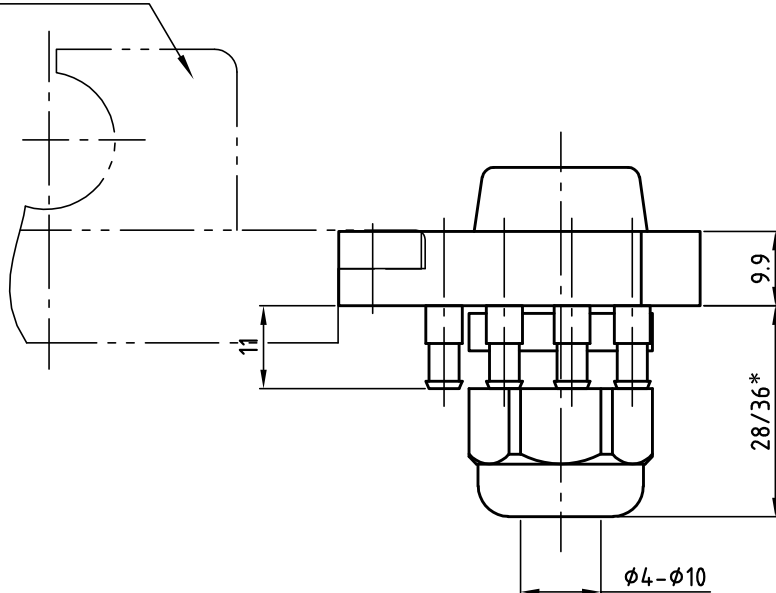
Zeichnungsnummer  
G-MEK100-O-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



MGW100-2UE



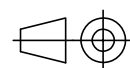
Bestellnummer Unterteil

G-MEK100-U-8Pk2-1E12  
G-MEK100-U-8Pk3-1E12  
G-MEK100-U-8Pk4-1E12

G-MEK100-U-8Pk2-1E6-C\*  
G-MEK100-U-8Pk3-1E6-C\*  
G-MEK100-U-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK100-U-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-MEK125

## Technical specifications

GRIP

### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

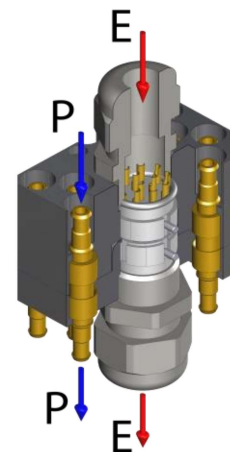
Can withstand 50,000 alternating cycles

Individual wiring

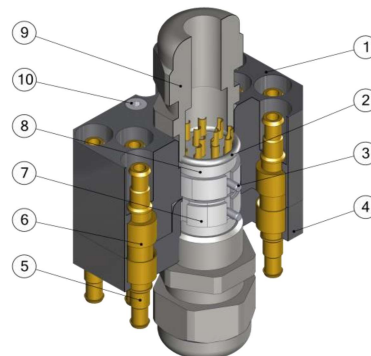
Coding of the interchangeable parts



Technical specifications		MEK125	
Suitable for		MGW 125, SWS125	
Pneumatic ducts	number P	8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,3	
	lower assembly	0,15	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	

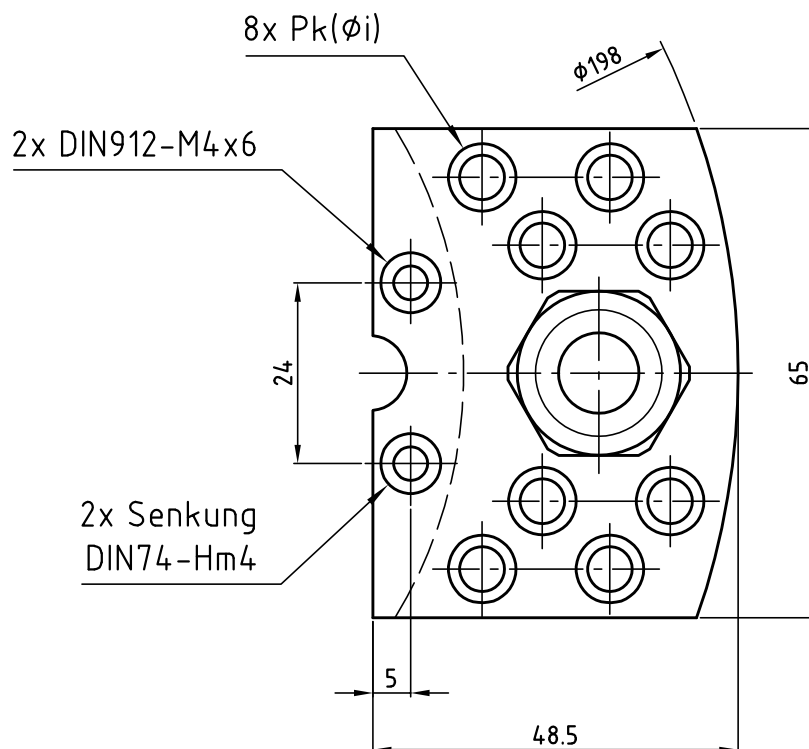
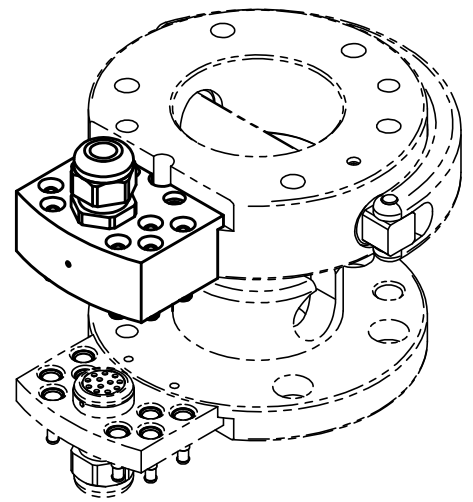
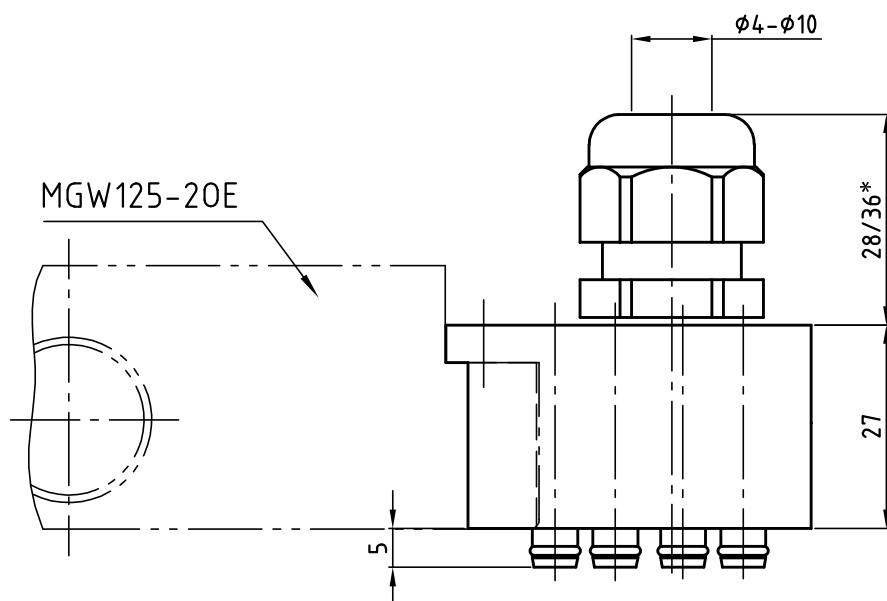


Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



**Multi energy coupling Ø125, 8 x air...**

G-MEK125-O-8PK2-1E12	upper assembly, ID = 2 mm, electrical plug 12 poles
G-MEK125-O-8PK2-1E6-C	upper assembly, ID = 2 mm, electrical plug 6 poles
G-MEK125-O-8PK3-1E12	upper assembly, ID = 3 mm, electrical plug 12 poles
G-MEK125-O-8PK3-1E6-C	upper assembly, ID = 3 mm, electrical plug 6 poles
G-MEK125-O-8PK4-1E12	upper assembly, ID = 4 mm, electrical plug 12 poles
G-MEK125-O-8PK4-1E6-C	upper assembly, ID = 4 mm, electrical plug 6 poles
G-MEK125-U-8PK2-1E12	lower assembly, ID = 2 mm, electrical bushing 12 poles
G-MEK125-U-8PK2-1E6-C	lower assembly, ID = 2 mm, electrical bushing 6 poles
G-MEK125-U-8PK3-1E12	lower assembly, ID = 3 mm, electrical bushing 12 poles
G-MEK125-U-8PK3-1E6-C	lower assembly, ID = 3 mm, electrical bushing 6 poles
G-MEK125-U-8PK4-1E12	lower assembly, ID = 4 mm, electrical bushing 12 poles
G-MEK125-U-8PK4-1E6-C	lower assembly, ID = 4 mm, electrical bushing 6 poles



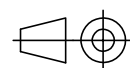
Bestellnummer Oberteil

G-MEK125-O-8Pk2-1E12  
G-MEK125-O-8Pk3-1E12  
G-MEK125-O-8Pk4-1E12

G-MEK125-O-8Pk2-1E6-C\*  
G-MEK125-O-8Pk3-1E6-C\*  
G-MEK125-O-8Pk4-1E6-C\*

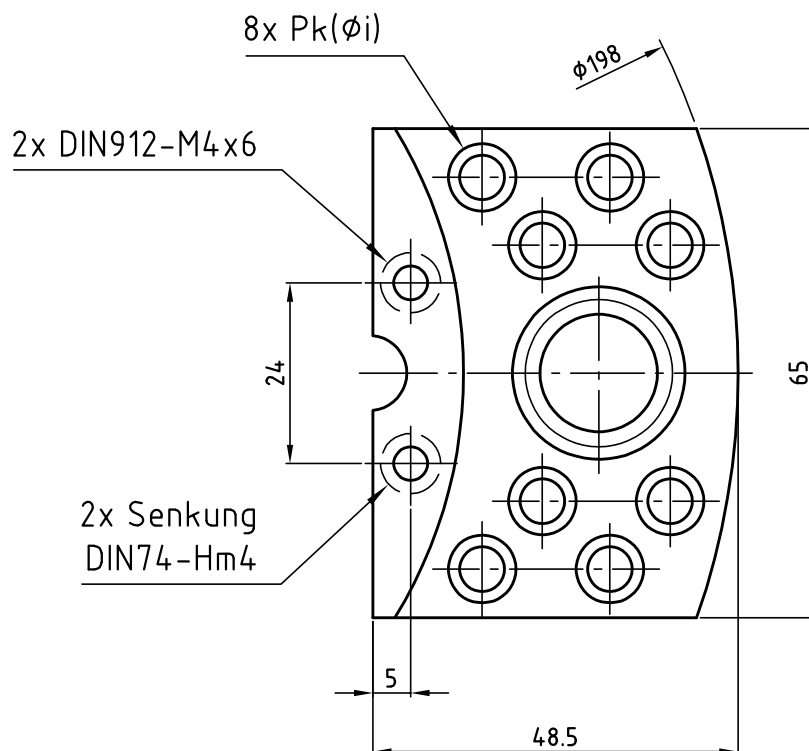
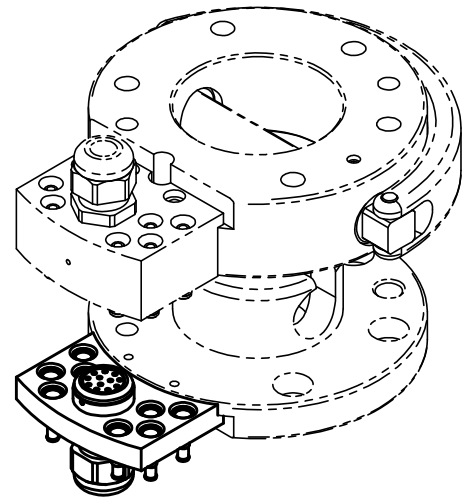
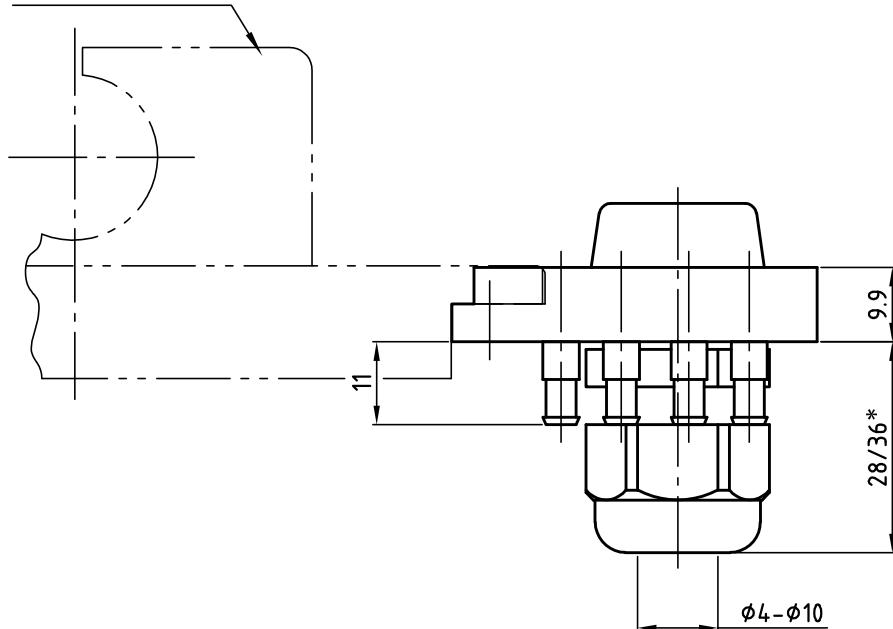
Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK125-O-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

MGW125-2UE



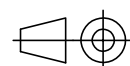
Bestellnummer Unterteil

G-MEK125-U-8Pk2-1E12  
G-MEK125-U-8Pk3-1E12  
G-MEK125-U-8Pk4-1E12

G-MEK125-U-8Pk2-1E6-C\*  
G-MEK125-U-8Pk3-1E6-C\*  
G-MEK125-U-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK125-U-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



# G-MEK160-8P-2E

## Technical specifications

GRIP

### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

Can withstand 50,000 alternating cycles

Individual wiring

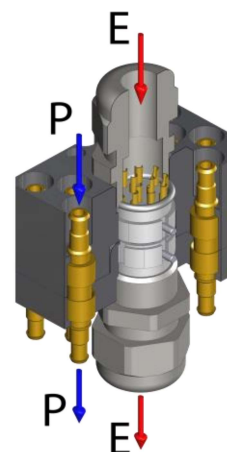
Coding of the interchangeable parts



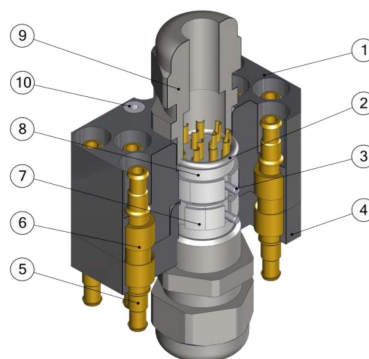
1

2

Technical specifications		MEK160-8P-2E	
Suitable for		MGW 160, SWS160	
Pneumatic ducts	number P	8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	2 x 12	2 x 6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,3	
	lower assembly	0,2	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



**Multi energy coupling Ø160-8P-2E, 8 x air...**

G-MEK160-O-8PK4-2E12	upper assembly, ID = 4 mm, 2 x electrical plug 12 poles
G-MEK160-O-8PK4-2E6-C	upper assembly, ID = 4 mm, 2 x electrical plug 6 poles
G-MEK160-U-8PK4-2E12	lower assembly, ID = 4 mm, 2 x electrical bushing 12 poles
G-MEK160-U-8PK4-2E6-C	lower assembly, ID = 4 mm, 2 x electrical bushing 6 poles

G-MEK160-8P-1E

Technical specifications



Operation mode:

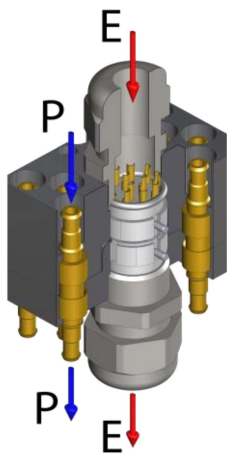
The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

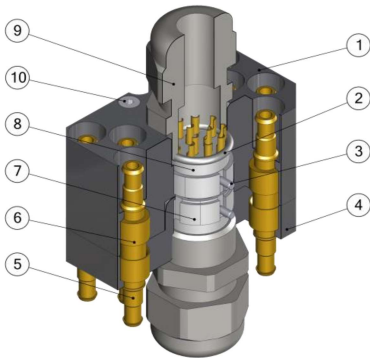
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



Technical specifications		MEK160-8P-1E	
Suitable for		MGW 160, SWS160	
Pneumatic ducts	number P	8	
	nominal width NW [mm]	PK2 / PK3 / PK4	
	operating pressure p [bar]	-1 to 8	
Electrical ducts	no. of poles E	12	6
	rated current per pole I [A]	9	20
	rated voltage U [V]	63	125
	contact resistance per pole R [mΩ]	3	1,3
	contact durability (cycles)	50.000	
Mass [kg]	upper assembly	0,2	
	lower assembly	0,12	
Protection class (higher requirement only on request)		IP40	
Operating temperature range [°C]		-30 to +120	



Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11
10	Mounting screw O



## Multi energy coupling Ø160-8P-1E, 8 x air...

G-MEK160-O-8PK4-1E12	upper assembly, ID = 4 mm, electrical plug 12 poles
G-MEK160-O-8PK4-1E6-C	upper assembly, ID = 4 mm, electrical plug 12 poles
G-MEK160-U-8PK4-1E12	lower assembly, ID = 4 mm, electrical bushing 12 poles
G-MEK160-U-8PK4-1E6-C	lower assembly, ID = 4 mm, electrical bushing 12 poles

Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

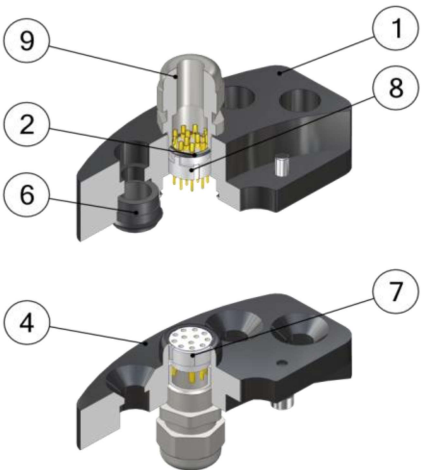
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



Technical specifications		MEK160-4G3/8-E
Suitable for		MGW 160, SWS160
Pneumatic ducts	number P	4
	nominal width NW [mm]	G3/8
	operating pressure p [bar]	-1 to 8
Electrical ducts	no. of poles E	1 x 12
	rated current per pole I [A]	9
	rated voltage U [V]	63
	contact resistance per pole R [mΩ]	3
	contact durability (cycles)	50.000
Mass [kg]	upper assembly	0,35
	lower assembly	0,17
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120



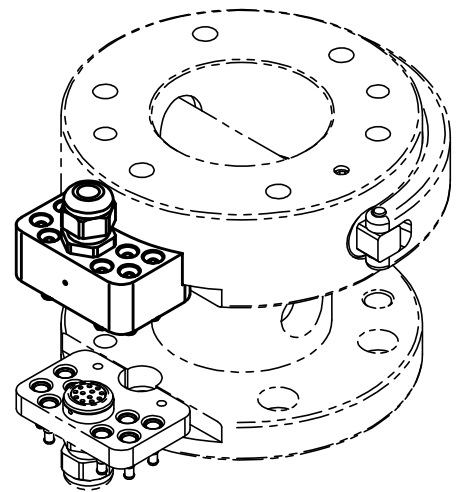
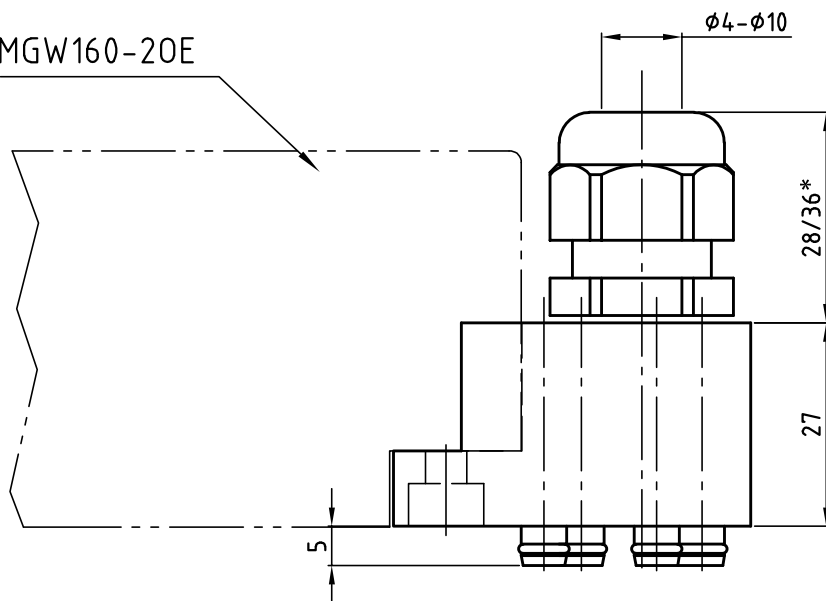
Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
6	Moulded seal
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland Pg11



## Multi energy coupling Ø160-4G3/8-1E12

G-MEK160-O-4G3/8-1E12	upper assembly, 4 x air, G3/8 radial, 1 x electrical plug 12 poles
G-MEK160-U-4G3/8-1E12	lower assembly, 4 x air, G3/8 radial, 1 x electrical bushing 12 poles

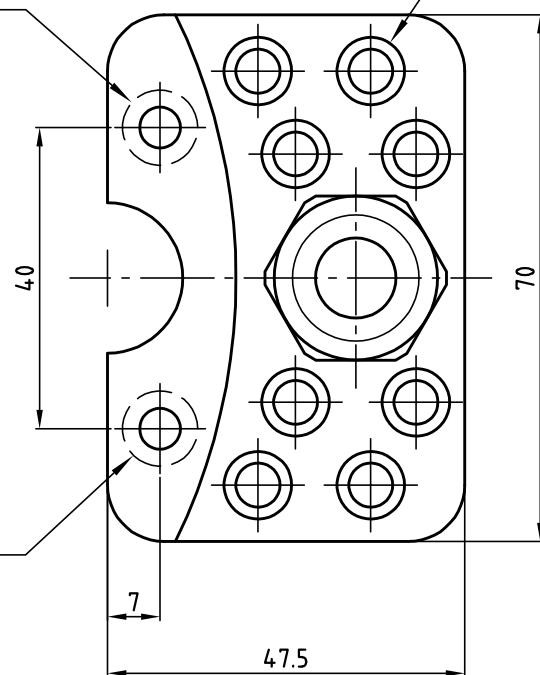
MGW160-20E



2x DIN912-M5x12

8xPk( $\phi$ i)

2x Senkung  
DIN74-Km5



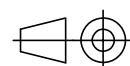
Bestellnummer Oberteil

G-MEK160-O-8Pk2-1E12  
G-MEK160-O-8Pk3-1E12  
G-MEK160-O-8Pk4-1E12

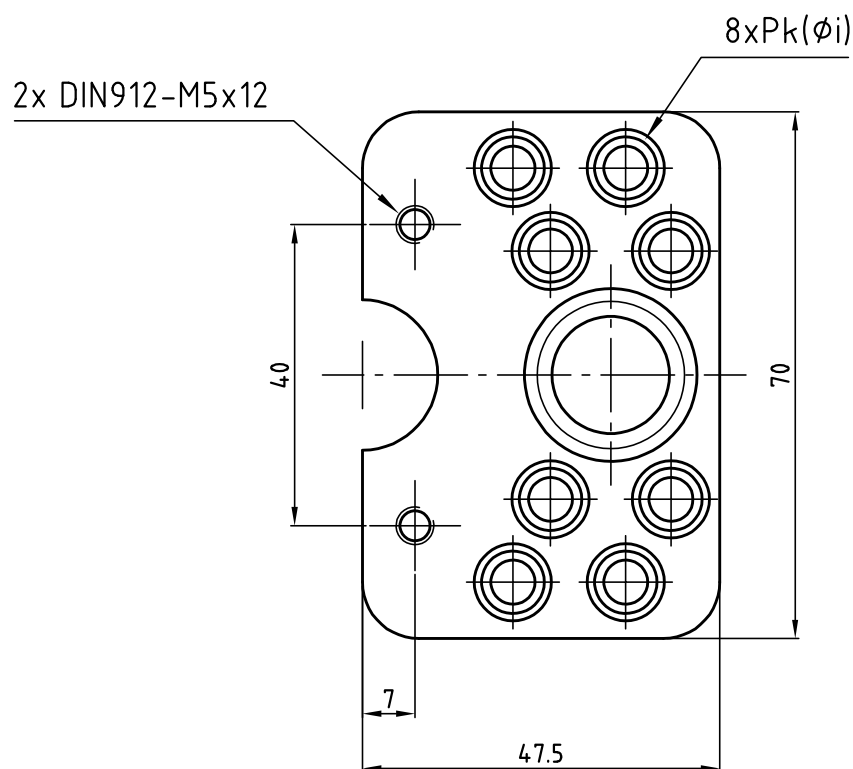
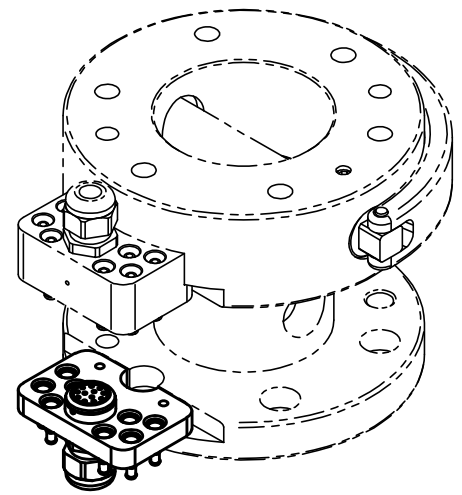
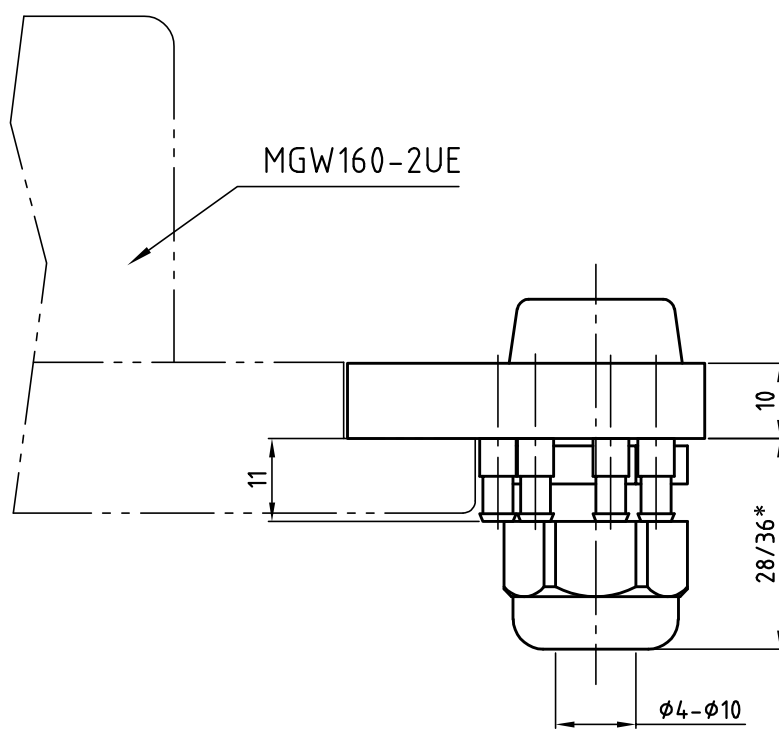
G-MEK160-O-8Pk2-1E6-C\*  
G-MEK160-O-8Pk3-1E6-C\*  
G-MEK160-O-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK160-O-8P-1E



**GRIP**  
GRIP GmbH Handhabungstechnik



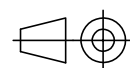
#### Bestellnummer Unterteil

G-MEK125-U-8Pk2-1E12  
 G-MEK125-U-8Pk3-1E12  
 G-MEK125-U-8Pk4-1E12

G-MEK125-U-8Pk2-1E6-C\*  
 G-MEK125-U-8Pk3-1E6-C\*  
 G-MEK125-U-8Pk4-1E6-C\*

Datum 10.11.2016 Maßstab 1:1

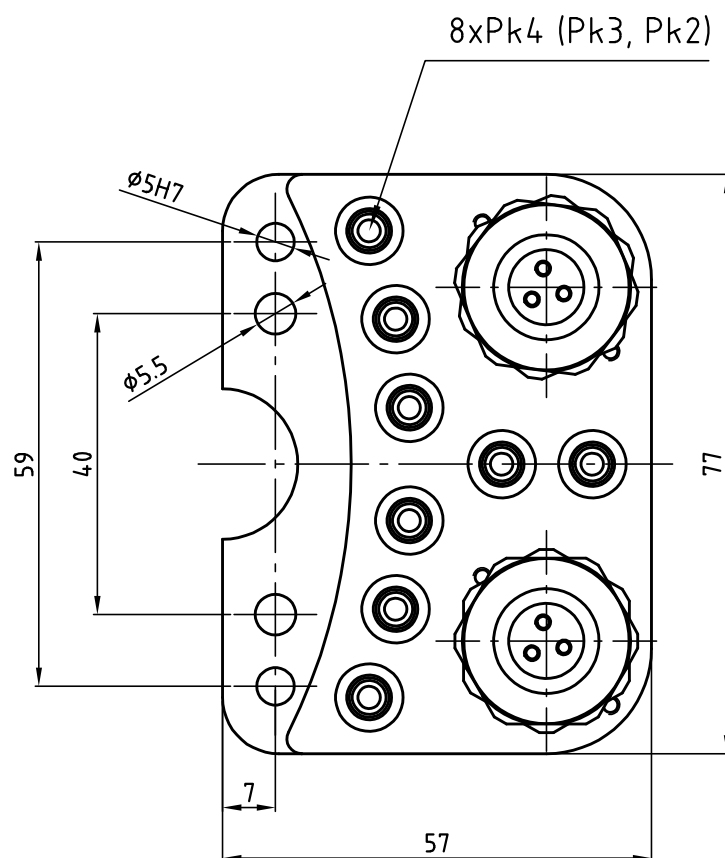
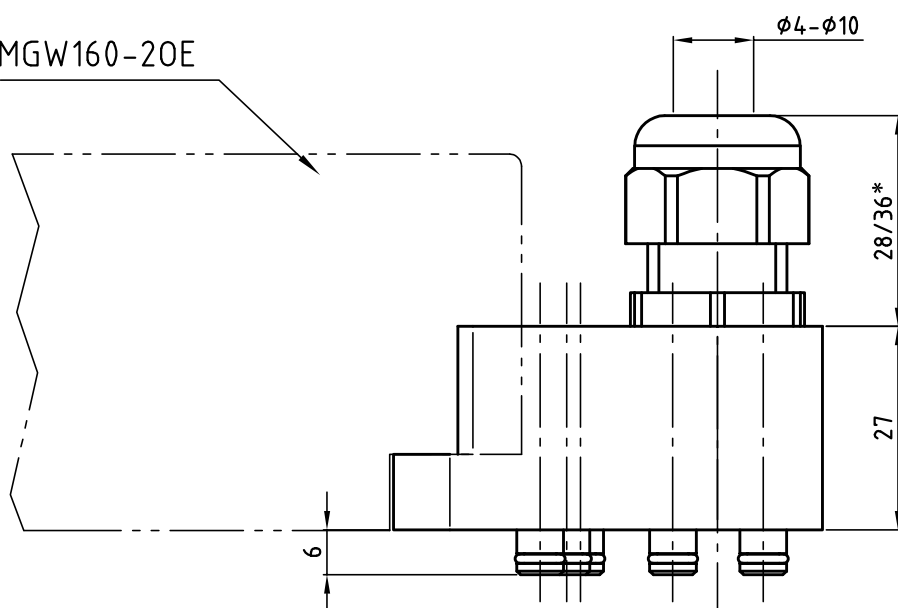
Zeichnungsnummer  
 G-MEK160-U-8P-1E



**GRIP**  
 GRIP GmbH Handhabungstechnik



MGW160-20E



Bestellnummer Oberteil

G-MEK160-O-8Pk2-2E12

G-MEK160-O-8Pk3-2E12

G-MEK160-O-8Pk4-2E12

G-MEK160-O-8Pk2-2E6-C\*

G-MEK160-O-8Pk3-2E6-C\*

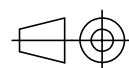
G-MEK160-O-8Pk4-2E6-C\*

Datum 10.11.2016

Maßstab 1:1

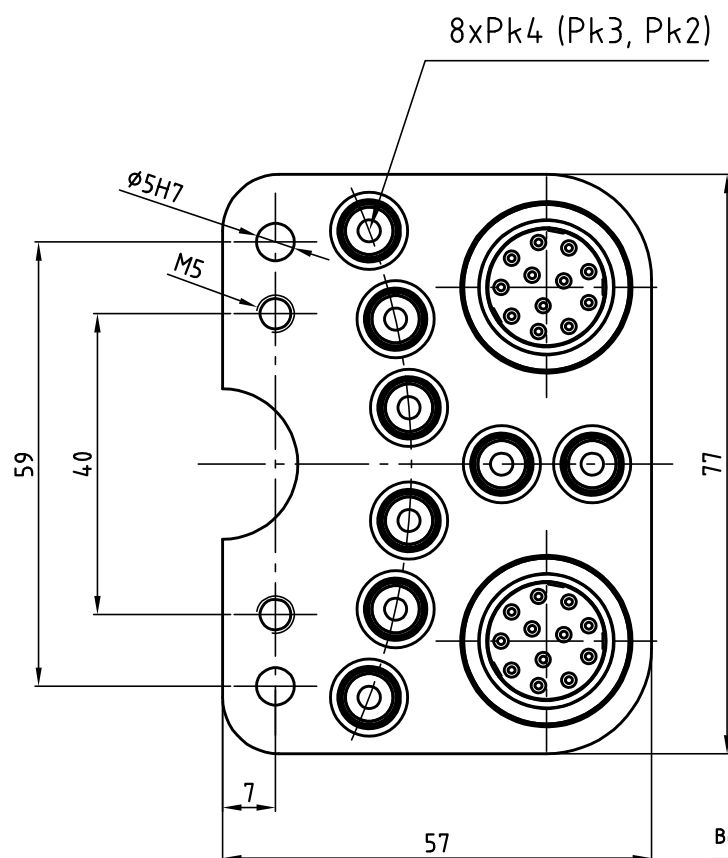
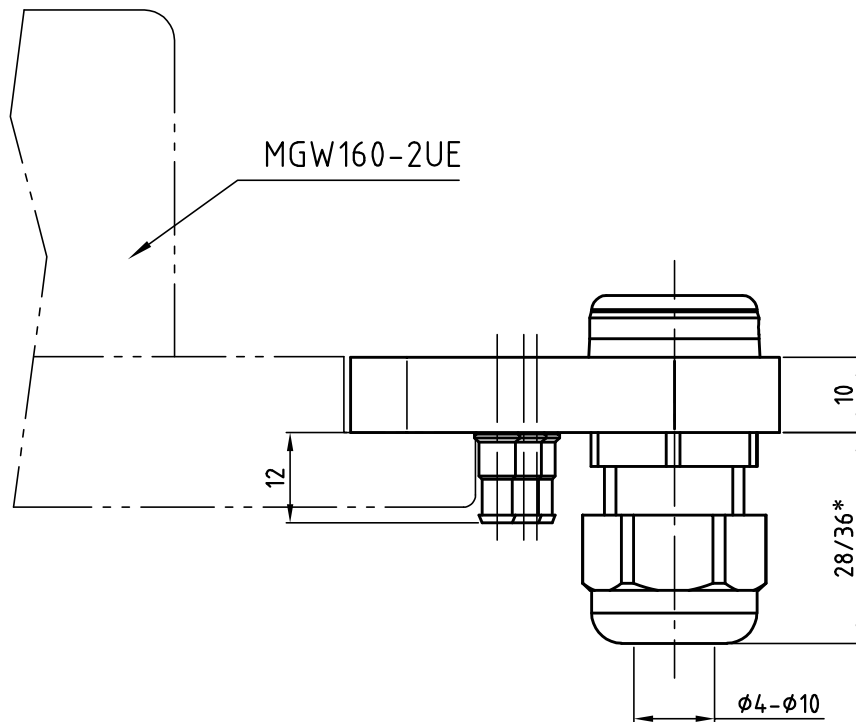
Zeichnungsnummer

G-MEK160-O-8P-2E



**GRIP**

GRIP GmbH Handhabungstechnik



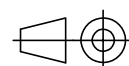
Bestellnummer Unterteil

G-MEK160-U-8Pk2-2E12  
G-MEK160-U-8Pk3-2E12  
G-MEK160-U-8Pk4-2E12

G-MEK160-U-8Pk2-2E6-C\*  
G-MEK160-U-8Pk3-2E6-C\*  
G-MEK160-U-8Pk4-2E6-C\*

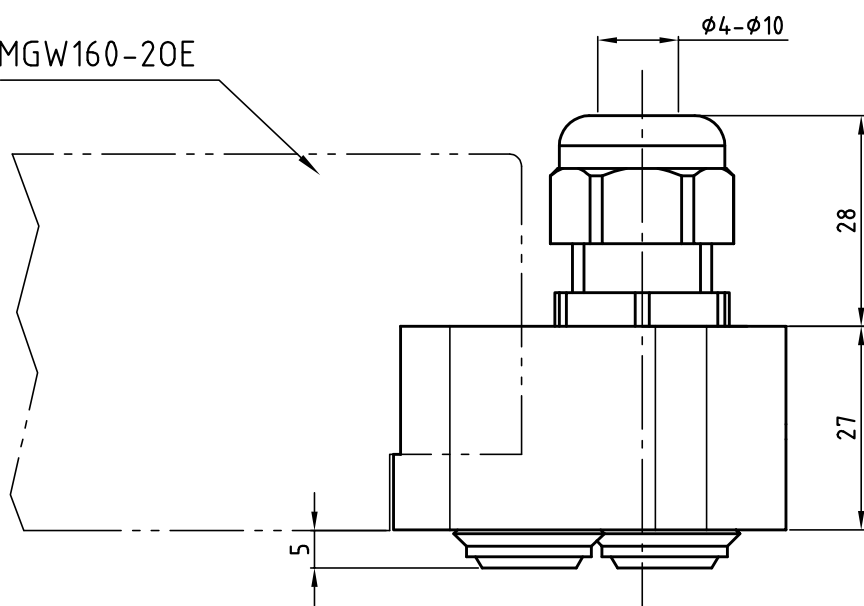
Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK160-U-8P-2E



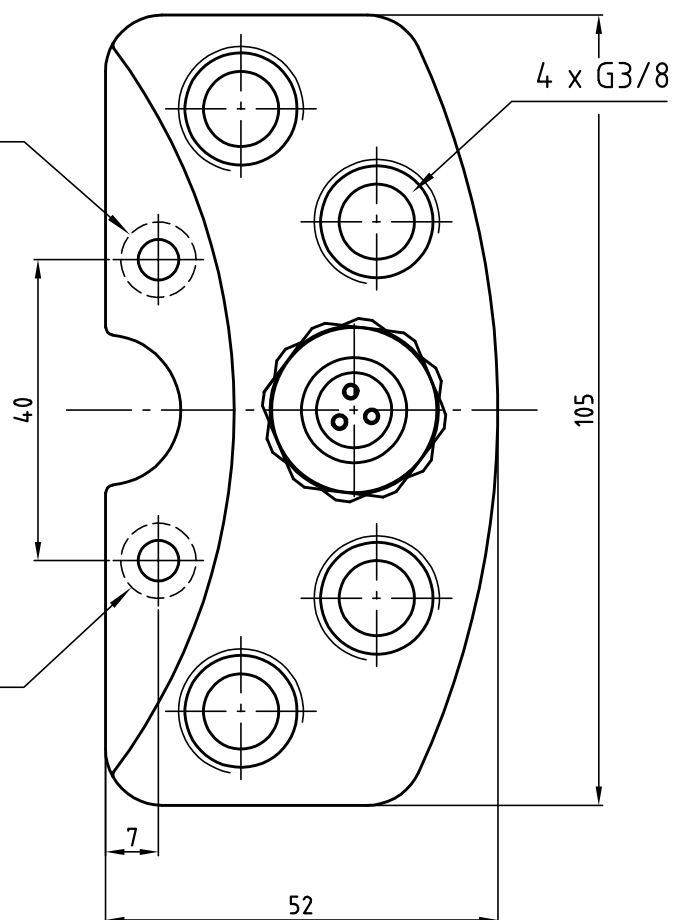
**GRIP**  
GRIP GmbH Handhabungstechnik

MGW160-20E



2x DIN912-M5x12

2x Senkung  
DIN74-Km5



Bestellnummer Oberteil

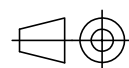
G-MEK160-0-4G3/8-1E12

Datum 10.11.2016

Maßstab 1:1

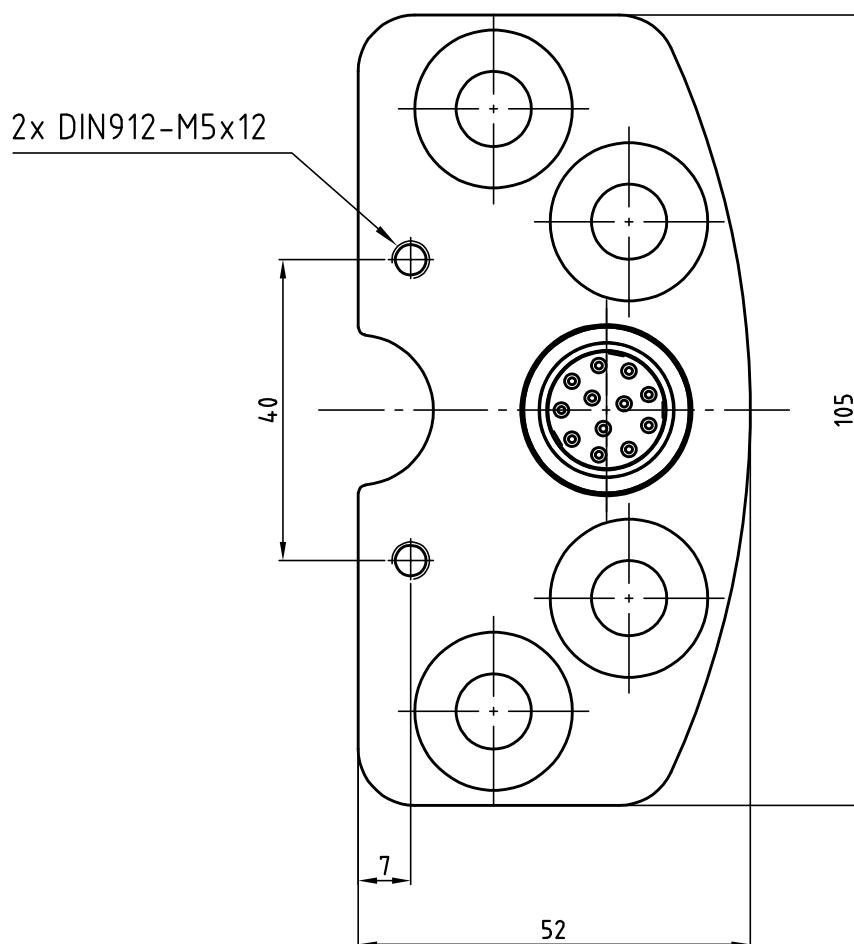
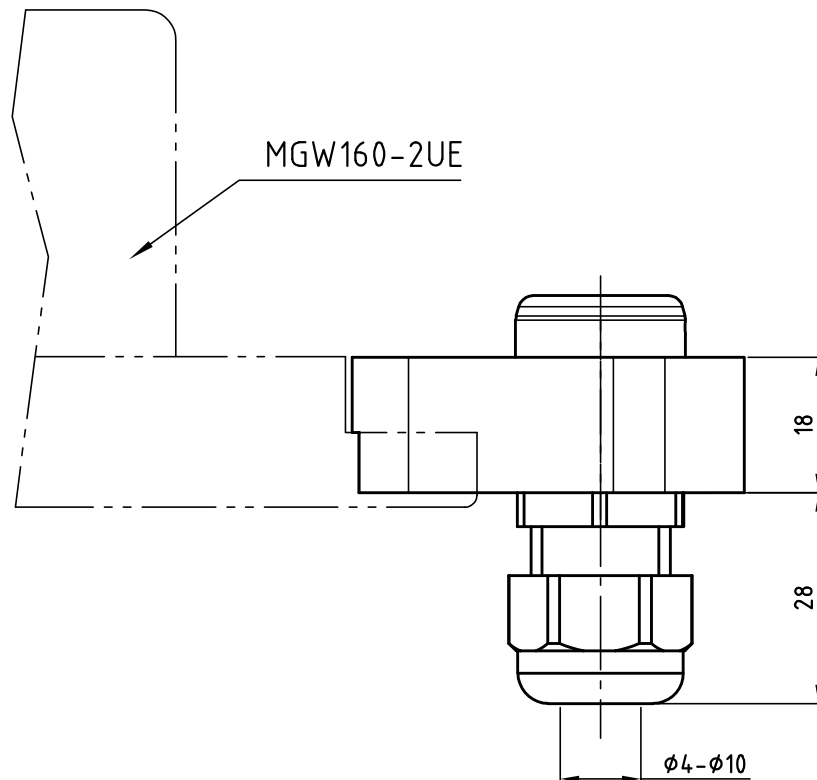
Zeichnungsnummer

G-MEK160-0-4G3/8-1E



**GRIP**

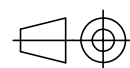
GRIP GmbH Handhabungstechnik



Bestellnummer Unterteil  
G-MEK160-U-4G3/8-1E12

Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer  
G-MEK160-U-4G3/8-1E



**GRIP**  
GRIP GmbH Handhabungstechnik

Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

Advantages:

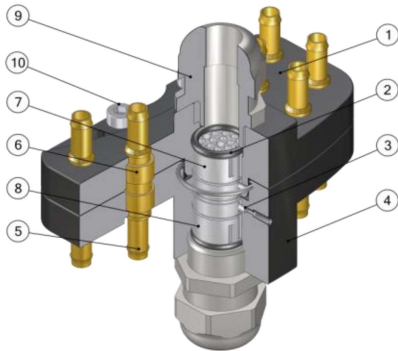
- Mechanical, pneumatic and electric connections are established simultaneously.
- Can withstand 50,000 alternating cycles
- Individual wiring
- Coding of the interchangeable parts



Technical specifications		MEK200
Suitable for		SWS200
Pneumatic ducts	number P	8
	nominal width NW [mm]	PK6
	operating pressure p [bar]	-1 to 8
Electrical ducts	no. of poles E	1 x 19
	rated current per pole I [A]	7
	rated voltage U [V]	63
	contact resistance per pole R [mΩ]	3
	contact durability (cycles)	50.000
Mass [kg]	upper assembly	0,24
	lower assembly	0,23
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120



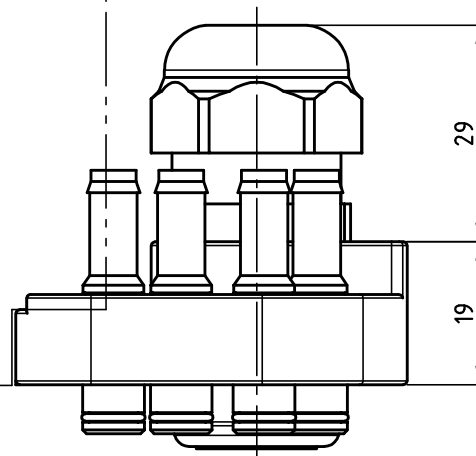
Pos.	Description
1	Upper assembly
2	O-Ring
3	Cylindrical pin
4	Lower assembly
5	Female coupling
6	Male coupling
7	Insulation body / bushings
8	Insulation body / pins
9	Screwed cable gland M20
10	Mounting screw O



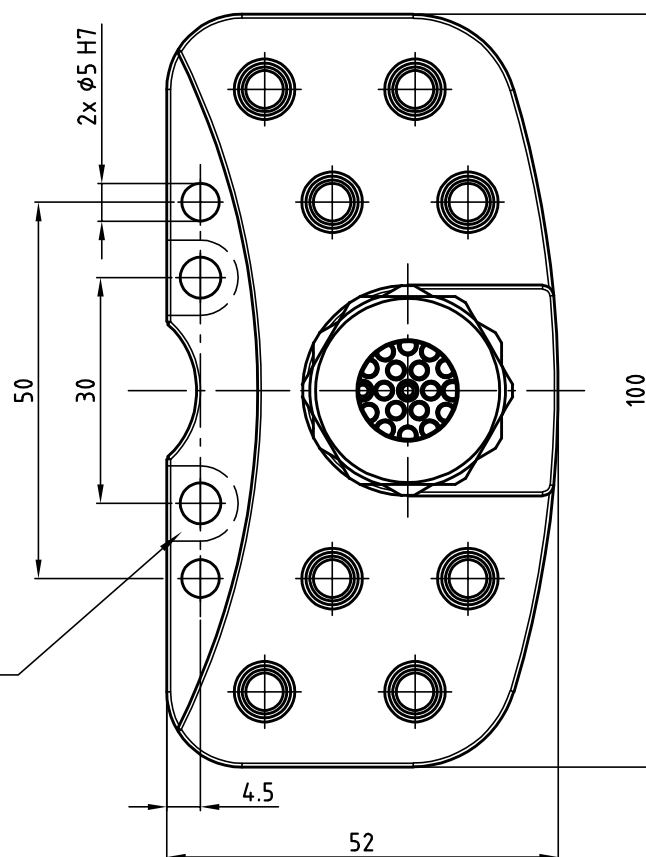
## Multi energy coupling Ø200, 8 x air...

G-MEK200-O-8Pk6-1E19C-M20	upper assembly, ID = 6 mm, 1 x electrical bushing, 19 poles
G-MEK200-U-8Pk6-1E19C-M20	lower assembly, ID = 6 mm, 1 x electrical plug, 19 poles

SWS200-20E

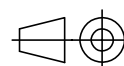


2x DIN912-M5x12

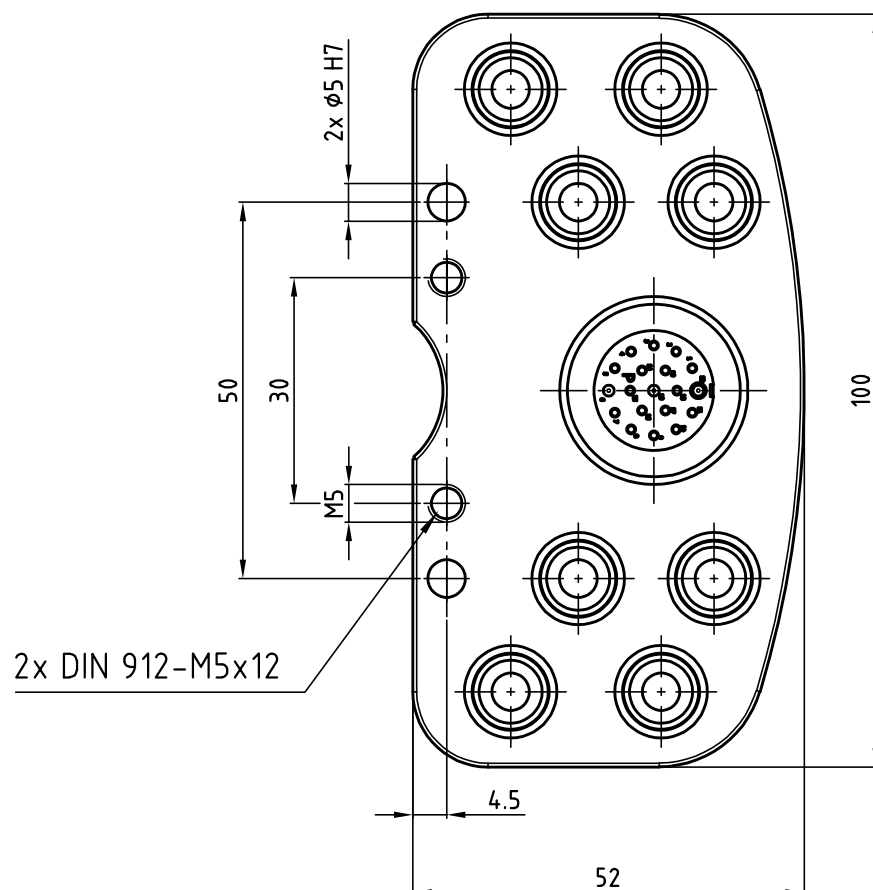
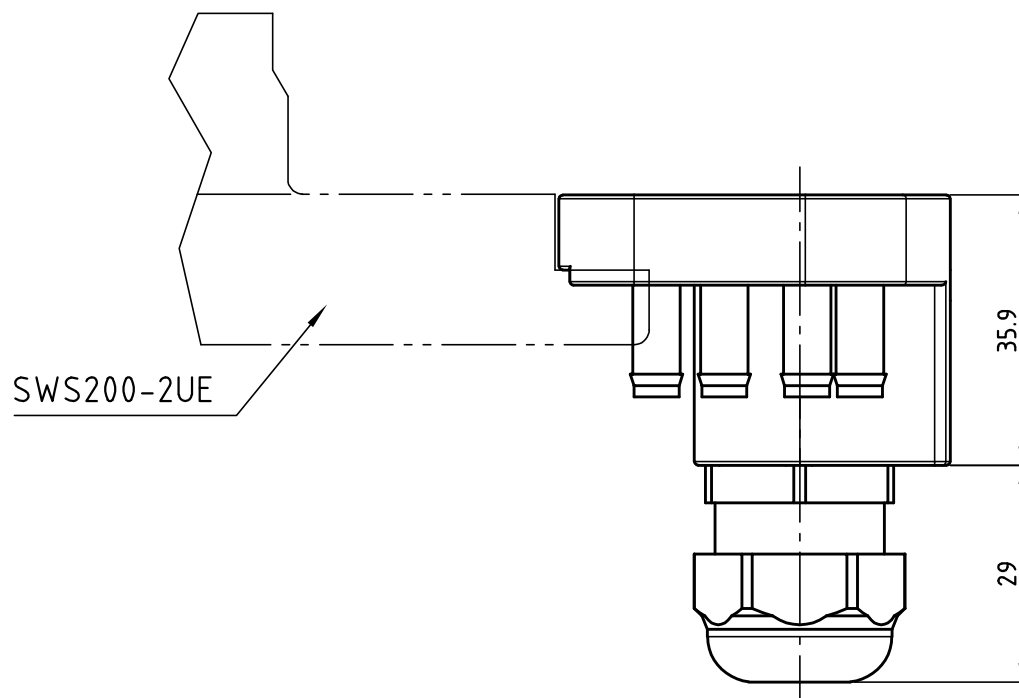


Datum 29.11.2017 Maßstab 1:1

Zeichnungsnummer  
G-MEK200-0-8Pk6-1E19C

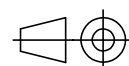


**GRIP**  
GRIP GmbH Handhabungstechnik



Datum 29.11.2017 Maßstab 1:1

Zeichnungsnummer  
G-MEK200-U-8Pk6-1E19C



**GRIP**  
GRIP GmbH Handhabungstechnik



# MEK-R MULTI-ENERGY-COUPLING

The MEK-R Multi-Energy-Coupling is a further development of our MEK series. The four air feedthroughs are equipped with check valves on the robot side. This allows the MGW-R coupling to be released under activated compressed air. In addition, the electrical contacts on the MEK-R have been replaced with spring contacts.

## MEK-R Multi-Energy-Coupling Advantages:

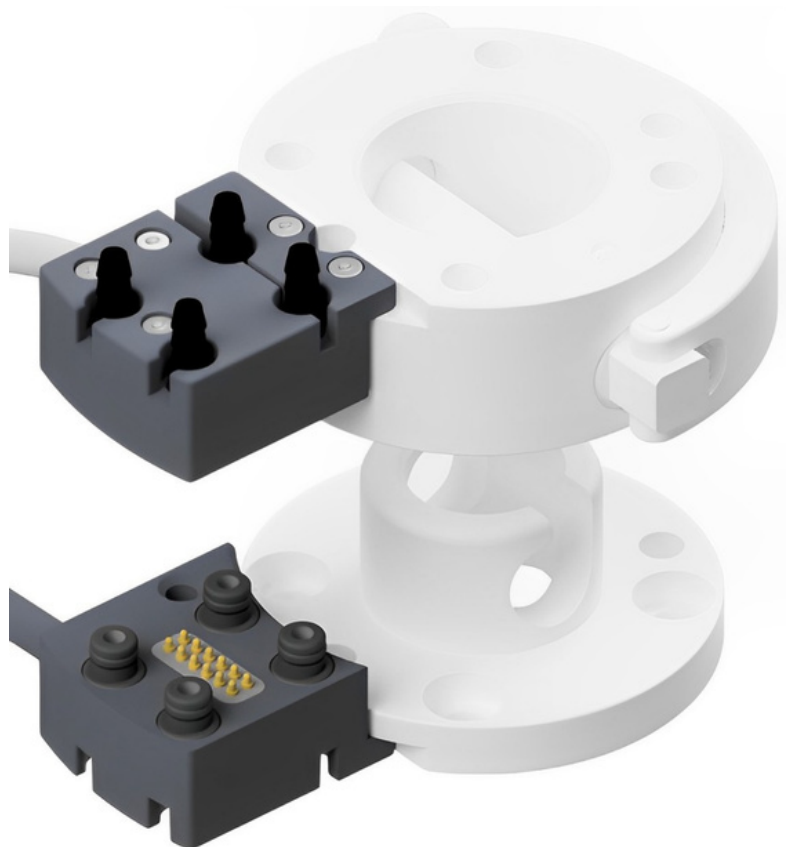
- Improved electrical connection through the use of spring-loaded contacts
- Automatic closure of the pneumatic feedthroughs through the use of check valves
- Simultaneous mechanical, electrical and pneumatic connection

MEK Multi-Energy-Couplings can be modified to meet your needs. Please inquire about special applications.

## SIZES

MEK063-R

MEK100-R



# G-MEK063-R

## Technical specifications

GRIP

### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

Can withstand 50,000 alternating cycles

Individual wiring

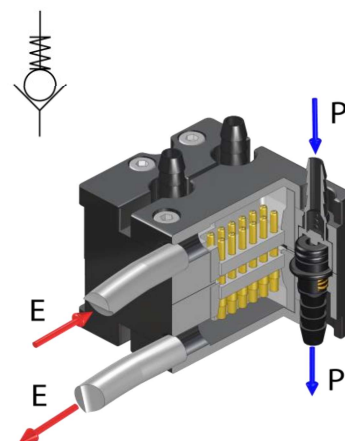
Coding of the interchangeable parts

Improved electrical connection by spring mounted poles

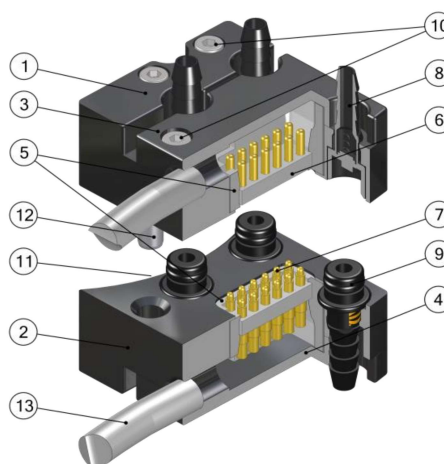
Automatic closing of pneumatic ducts by integrated check valves



Technical specifications		MEK063-R
Suitable for		MGW063, SWS063
Pneumatic ducts	number P	4
	nominal width NW [mm]	PR4
	operating pressure p [bar]	-1 to 8
Electrical ducts	no. of poles E	12
	rated current I [A]	2
	rated voltage U (max. voltage) [V]	63 (120)
	contact resistance per pole R [mΩ]	<20
	contact durability (cycles)	50.000
Mass [kg]	upper assembly	0,11
	lower assembly	0,06
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120

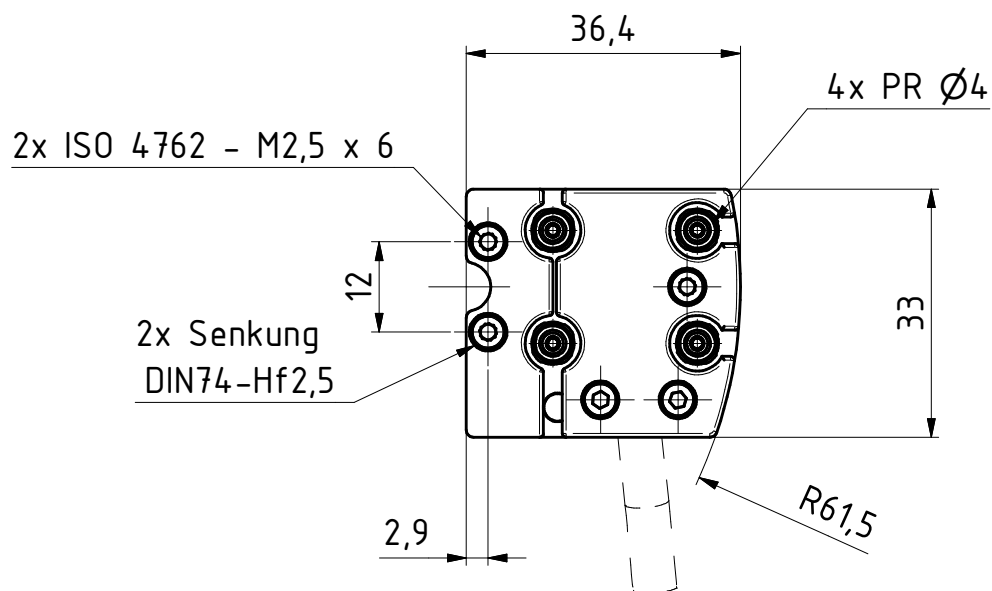
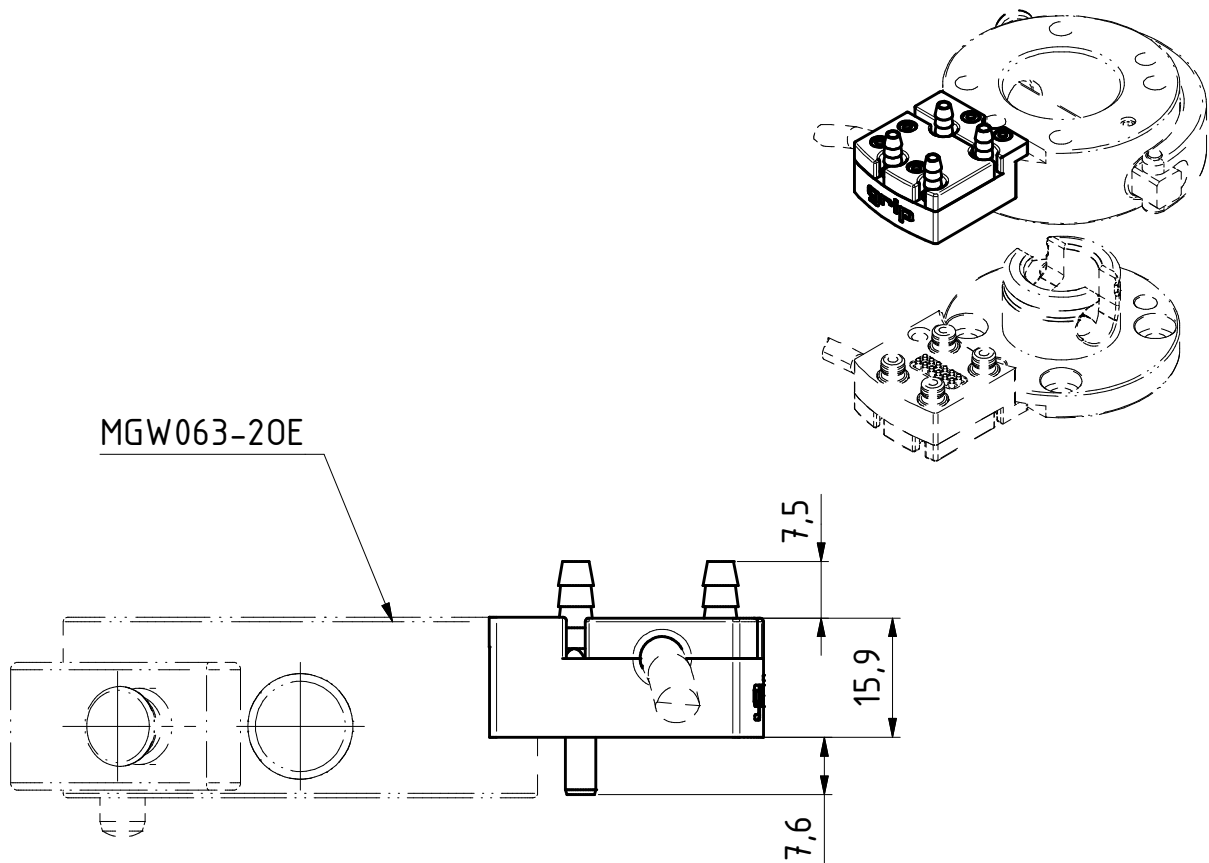


Pos.	Description
1	Upper assembly
2	Lower assembly
3	Upper cover
4	Lower cover
5	Insulation frame
6	Electrical bushing strip
7	Electrical plug strip
8	Female coupling (check valve)
9	Male coupling
10	Mounting screw
11	Mounting screw
12	Index pin
13	Cable (optional)



**Multi energy coupling Ø63 with check valve**

G-MEK063-O-4PR4	upper assembly, 4 x air with check valve, ID = 4 mm
G-MEK063-O-4PR4-1FE12	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol.
G-MEK063-O-4PR4-1FE12-2000OE	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol., 2000 mm cable, open end
G-MEK063-O-4PR4-1FE12-300-M12	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol., 300 mm cable, M12 circular plug-in connector
G-MEK063-U-4PR4	lower assembly, 4 x air, ID = 4 mm
G-MEK063-U-4PR4-1FE12	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles
G-MEK063-U-4PR4-1FE12-2000OE	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles, 2000 mm cable, open end
G-MEK063-U-4PR4-1FE12-300-M12	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles, 300 mm cable, M12 circular plug-in connector



Bestellnummer Oberteil

G-MEK063-0-4PR4

G-MEK063-0-4PR4-1FE12

G-MEK063-0-4PR4-1FE12-20000E

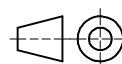
G-MEK063-0-4PR4-1FE12-300-M12

Datum 31.01.2018

Maßstab 1:1

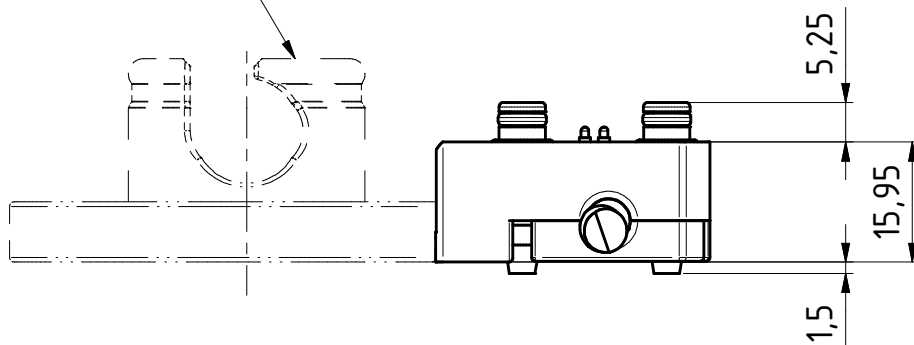
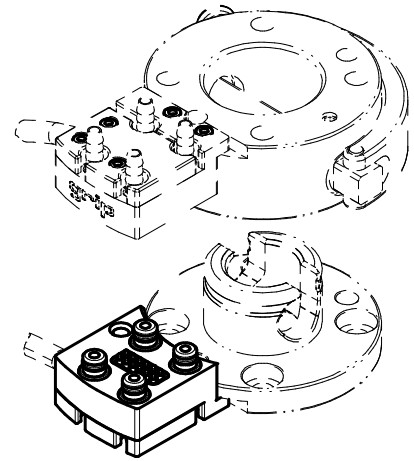
Zeichnungsnummer

G-MEK063-0-4PR4-1E12



**GRIP**  
GRIP GmbH Handhabungstechnik

MGW063-2UE



2x ISO 4762 - M2,5 x 5

36,4

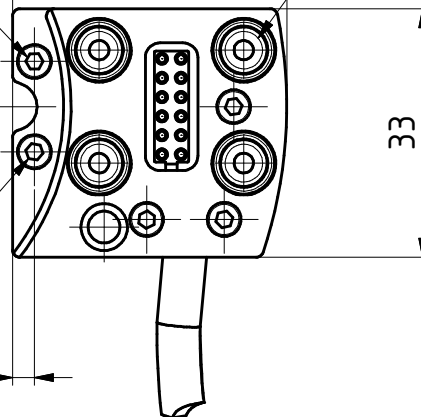
4x PR Ø4

12

33

2x Senkung  
DIN 74 - Hf2,5

2,9



Bestellnummer Unterteil

G-MEK063-U-4PR4

G-MEK063-U-4PR4-1FE12

G-MEK063-U-4PR4-1FE12-20000E

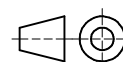
G-MEK063-U-4PR4-1FE12-300-M12

Datum

Maßstab

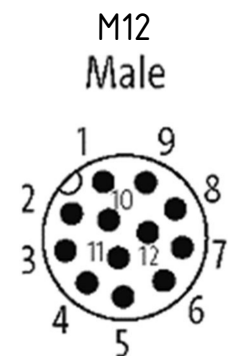
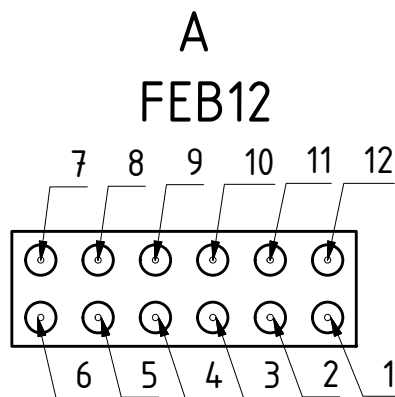
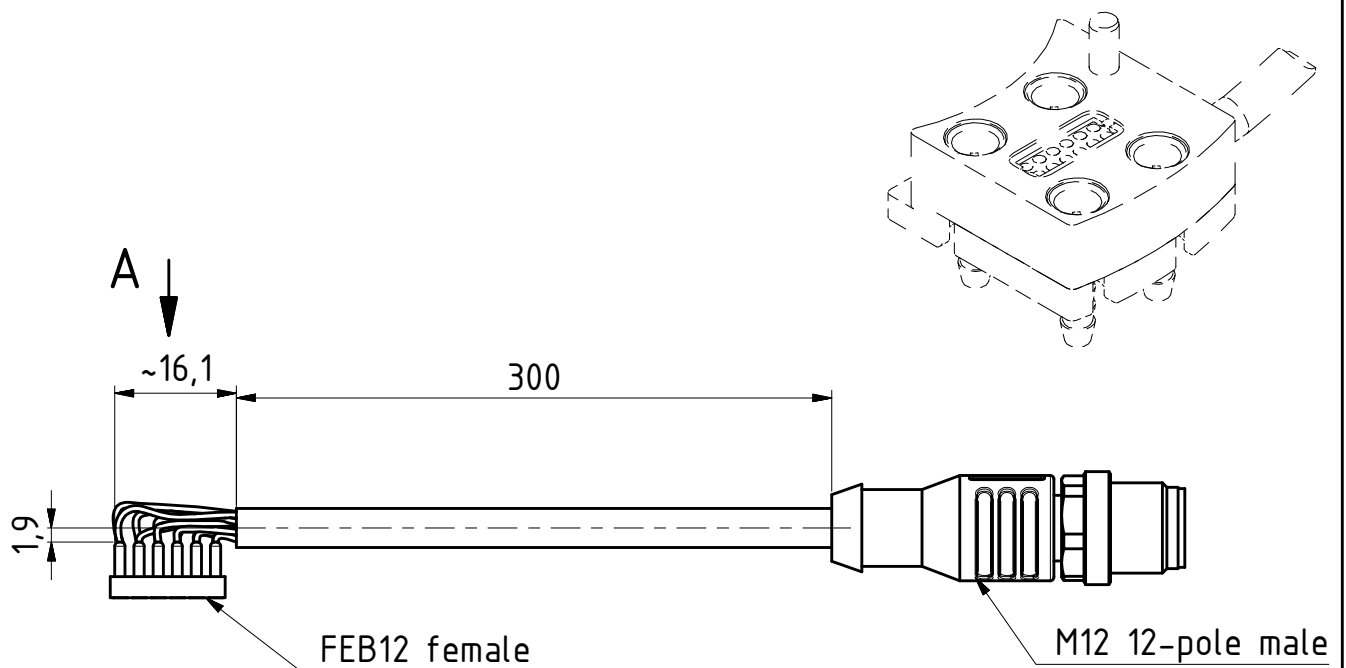
Zeichnungsnummer

G-MEK063-U-4PR4-1FE12



**GRIP**

GRIP GmbH Handhabungstechnik



FEB12 female	colour	M12 male
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/pink	11
12	blue/red	12

#### Technische Daten

Kontaktleiste FEB12 (f/w)

Leiste 2 reihig mit je 6

Interface-Pins ;

Nennstrom: 2A;

Kontaktwiderstand: < 20mΩ;

Rastermaß: 2,45 mm ;

vergoldet;

Lötanschluss

#### Technische Daten M12

Rundsteckverbinder (m)

nach IEC-61076-2-...

Betriebsspannung: max 30 V

Verschmutzungsgrad: 3

Isolierstoffgruppe: 2

Isolationswiderstand:  $\geq 10^3 \Omega$

Strombelastbarkeit: 1,5 A / 40°C

Umgebungstemperatur: -30°C - +90°C

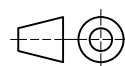
Schutzart im gesteckten und verriegelten Zustand: IP67

Datum 20.04.20

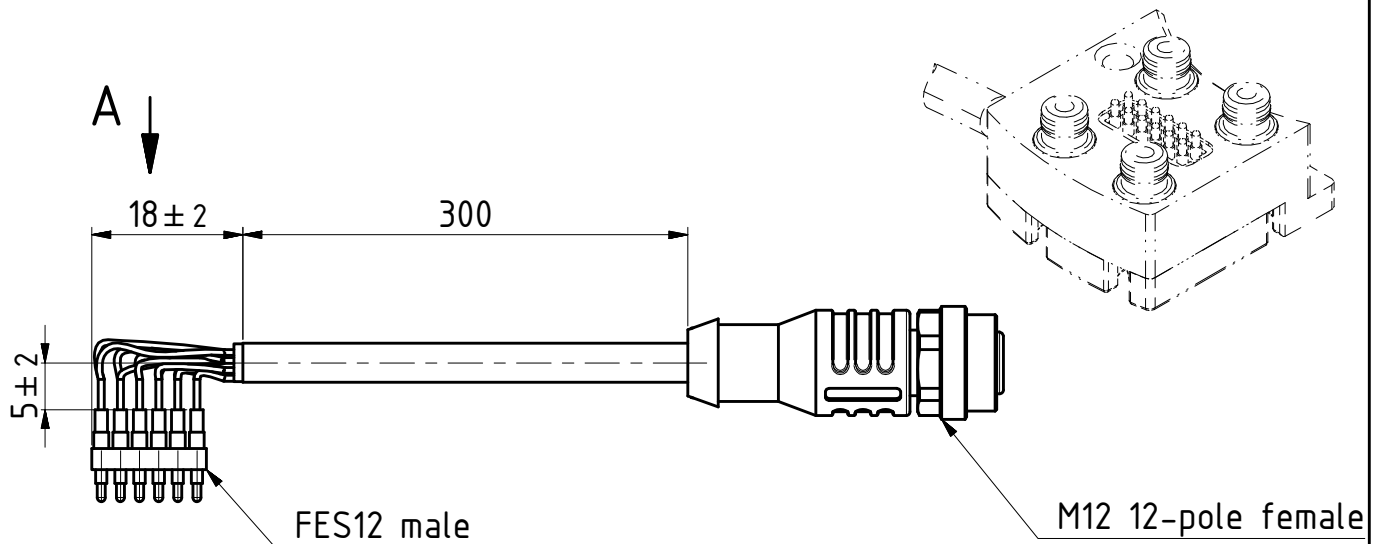
Maßstab

Zeichnungsnummer

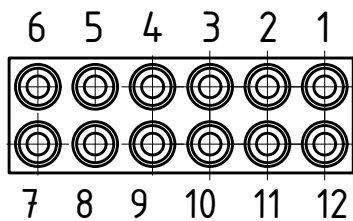
EG-MEK-FEB12-300-M12



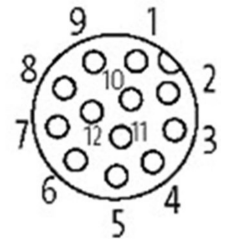
**GRIP**  
GRIP GmbH Handhabungstechnik



**A**  
**FES12**  
**Lötkelchseite**



**M12**  
**Female**



Federkontaktstecker FES12  
(männl./male)  
Leiste 12 polig (2x 6 reihig)  
Federkraft: 0,6N bei 0,7 mm;  
Nennstrom je Kontakt: 2A;  
Kontaktwiderstand: < 20 mΩ;  
Rastermaß: 2,54 mm;  
vergoldet;  
Lötanschluss;  
max Hub. 2,4 mm

FES12 male	colour	M12 fem.
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/ pink	11
12	blue/ red	12

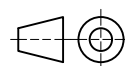
Technische Daten M12  
Rundsteckverbinder Buchse  
(weibl./female)  
nach IEC-61076-2-...  
Betriebsspannung: max 30 V  
Verschmutzungsgrad: 3  
Isolierstoffgruppe: 2  
Isolationswiderstand:  $\geq 10^3 \Omega$   
Strombelastbarkeit: 1,5A/40°C  
Umgebungstemp.: -30°C...90°C  
Schutzart im gesteckten und  
verriegelten Zustand: IP67

Datum 20.04.20

Maßstab

Zeichnungsnummer

EG-MEK-FES12-300-M12



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-MEK100-R

## Technical specifications

GRIP

### Operation mode:

The MEK upper assembly (1) is mounted on the MGW or SWS upper assembly. The MEK lower assembly (2) fits onto the MGW or SWS lower assembly. The MEK is automatically coupled by the mechanical connection of the change system.

### Advantages:

Mechanical, pneumatic and electric connections are established simultaneously.

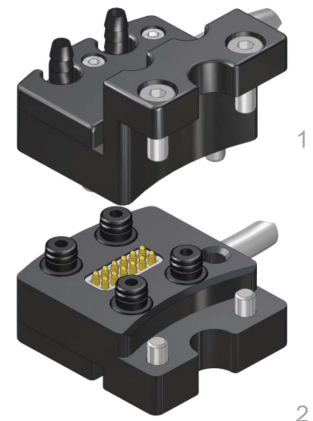
Can withstand 50,000 alternating cycles

Individual wiring

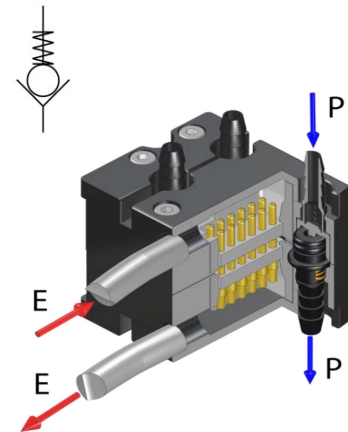
Coding of the interchangeable parts

Improved electrical connection by spring mounted poles

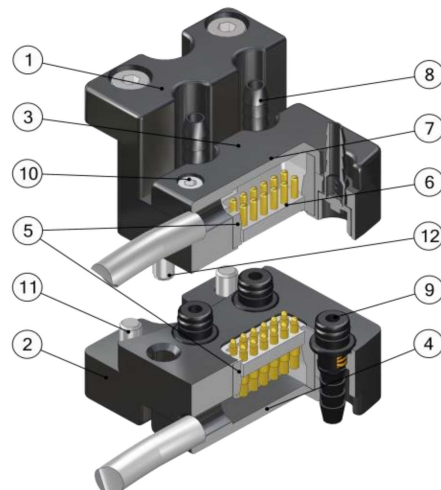
Automatic closing of pneumatic ducts by integrated check valves



Technical specifications		MEK100-R
Suitable for		MGW100, SWS100
Pneumatic ducts	number P	4
	nominal width NW [mm]	PR4
	operating pressure p [bar]	-1 to 8
Electrical ducts	no. of poles E	12
	rated current I [A]	2
	rated voltage U (max. voltage) [V]	63 (120)
	contact resistance per pole R [mΩ]	<20
	contact durability (cycles)	50.000
Mass [kg]	upper assembly	0,11
	lower assembly	0,06
Protection class (higher requirement only on request)		IP40
Operating temperature range [°C]		-30 to +120



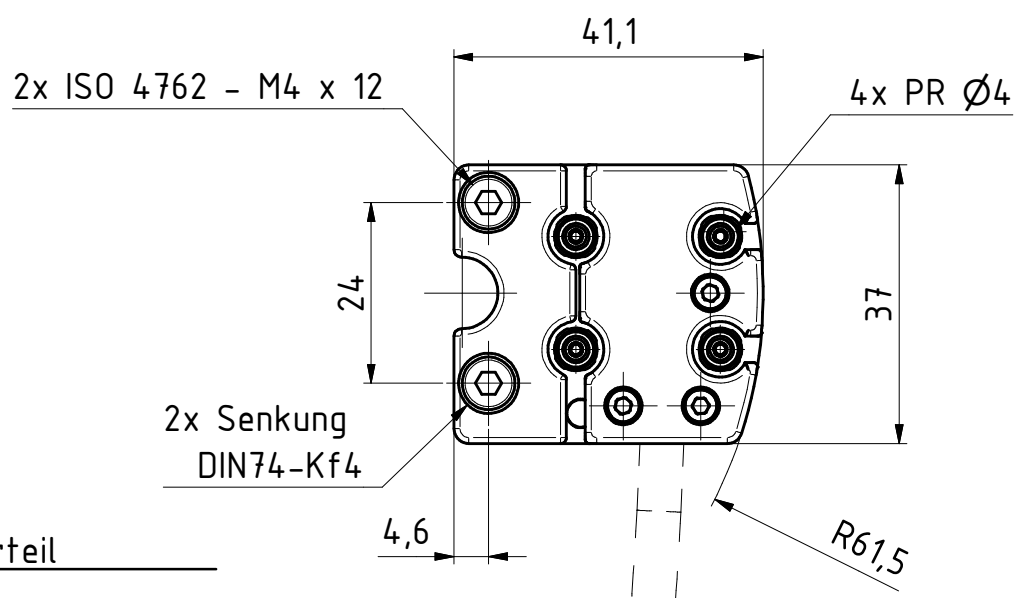
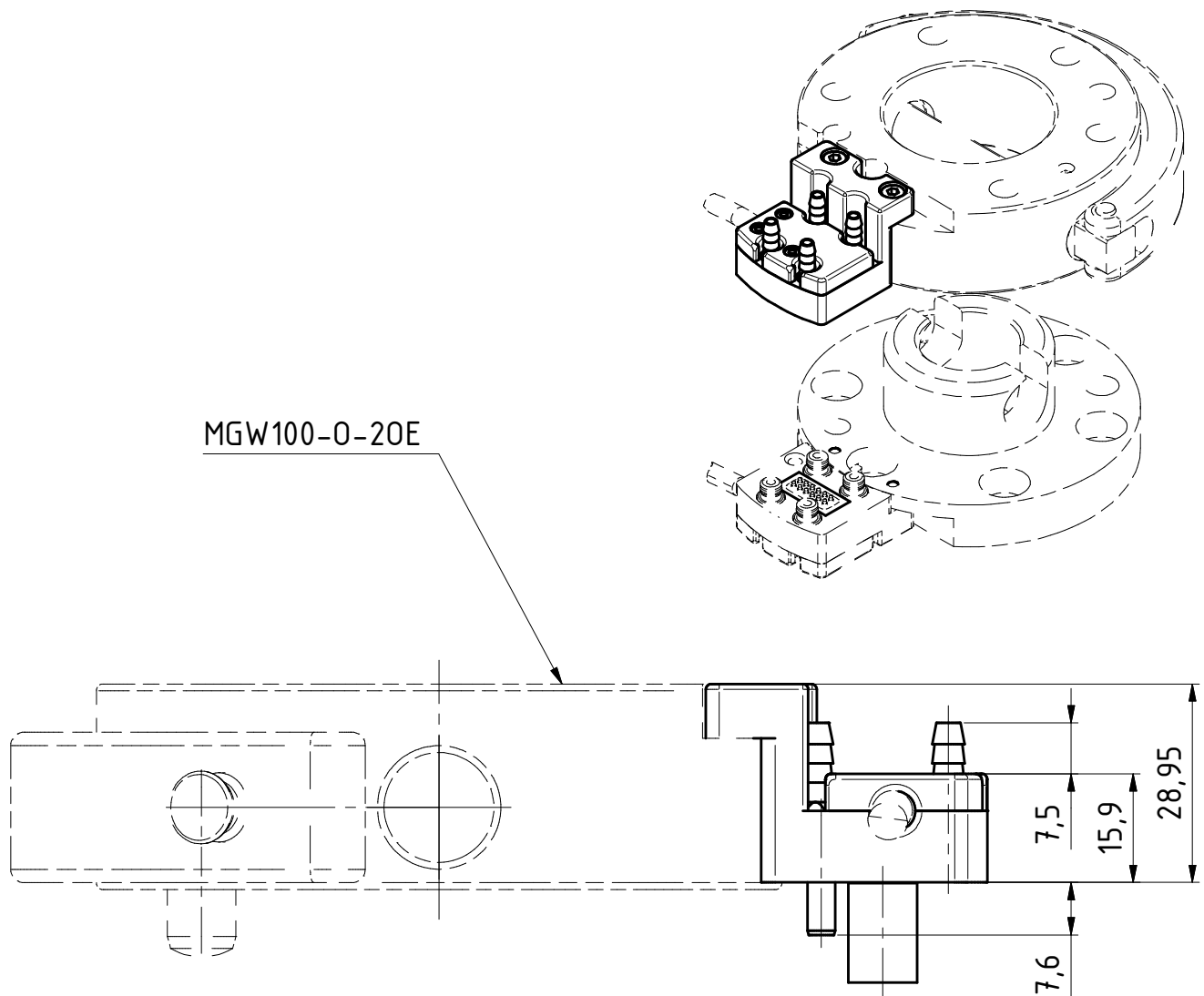
Pos.	Description
1	Upper assembly
2	Lower assembly
3	Upper cover
4	Lower cover
5	Insulation frame
6	Electrical bushing strip
7	Electrical plug strip
8	Female coupling (check valve)
9	Male coupling
10	Mounting screw
11	Mounting screw
12	Index pin
13	Cable (optional)





**Multi energy coupling Ø100 with check valve**

G-MEK100-O-4PR4	upper assembly, 4 x air with check valve, ID = 4 mm
G-MEK100-O-4PR4-1FE12	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol.
G-MEK100-O-4PR4-1FE12-2000OE	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol., 2000 mm cable, open end
G-MEK100-O-4PR4-1FE12-300-M12	upper assembly, 4 x air with check valve, ID = 4 mm, el. socket for suspension, 12 pol., 300 mm cable, M12 circular plug-in connector
G-MEK100-U-4PR4	lower assembly, 4 x air, ID = 4 mm
G-MEK100-U-4PR4-1FE12	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles
G-MEK100-U-4PR4-1FE12-2000OE	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles, 2000 mm cable, open end
G-MEK100-U-4PR4-1FE12-300-M12	lower assembly, 4 x air, ID = 4 mm, spring mounted electrical plug, 12 poles, 300 mm cable, M12 circular plug-in connector



Bestellnummer Oberteil

G-MEK100-O-4PR4

G-MEK100-O-4PR4-1FE12

G-MEK100-O-4PR4-1FE12-20000E

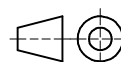
G-MEK100-O-4PR4-1FE12-300-M12

Datum 29.05.2018

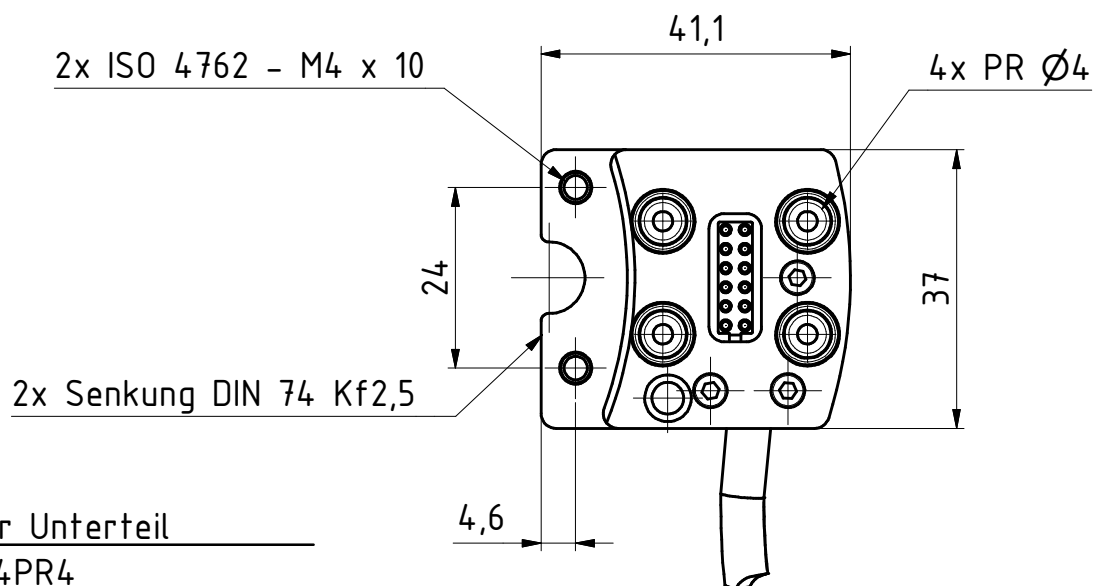
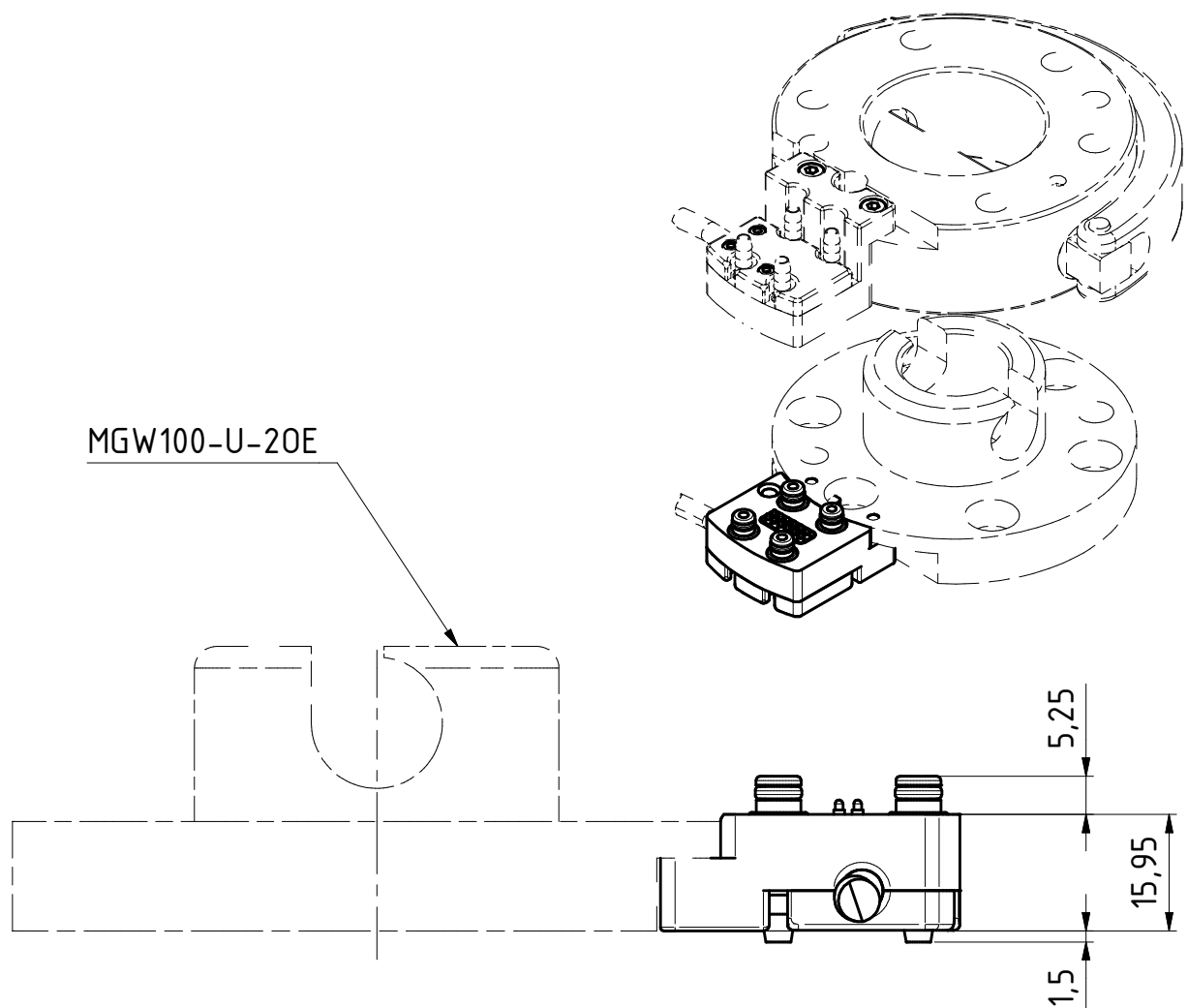
Maßstab 1:1

Zeichnungsnummer

G-MEK100-O-4PR4-1E12



**GRIP**  
GRIP GmbH Handhabungstechnik



Bestellnummer Unterteil

G-MEK100-U-4PR4

G-MEK100-U-4PR4-1FE12

G-MEK100-U-4PR4-1FE12-20000E

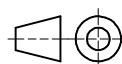
G-MEK100-U-4PR4-1FE12-300-M12

Datum 29.05.18

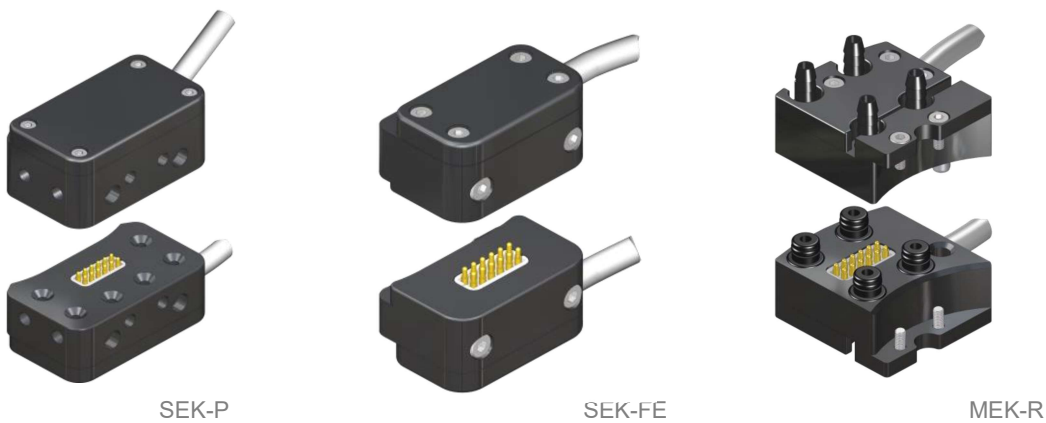
Maßstab

Zeichnungsnummer

G-MEK100-U-4PR4-1FE12



**GRIP**  
GRIP GmbH Handhabungstechnik



Products	Electrical connection	Cable variants
SEK-P / SEK-FE / MEK-R upper assembly	Electric strip, female (suitable for spring contacts)	M8-bushing, M12-plug, open end
SEK-P / SEK-FE / MEK-R lower assembly	Electric strip, male (including spring contacts)	M8-plug, M12-bushing, open end



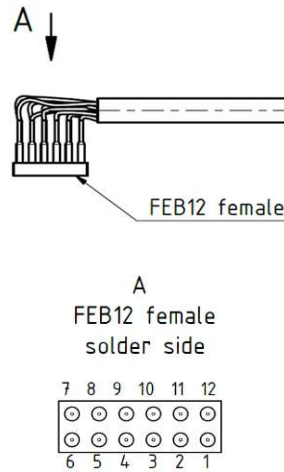
Products	Electrical connection	Cable variants
SEK / MEK-PM upper assembly	Insulating body with pin contacts	M8-bushing, M12-plug, open end
SEK / MEK-PM lower assembly	Insulating body with socket contacts	M8-plug, M12-bushing, open end



As standard, we offer the listed products for self-soldering.  
 The contact assignment of the pre-assembled connections can be found in the following data sheets.

Ordering example: G-SEK100-O/U-1FE12  
 G-MEK063-O/U-6PM5-1E12

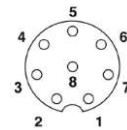
FEB12
Electric strip, female
12-poles (female)
Strip 2x 6 rows
Rated current per pole: 2A
Contact resistance < 20mΩ
Contact spacing: 2,54mm
Gilded
Solder connection



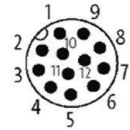
M8-bushing

M12-plug

M8 female

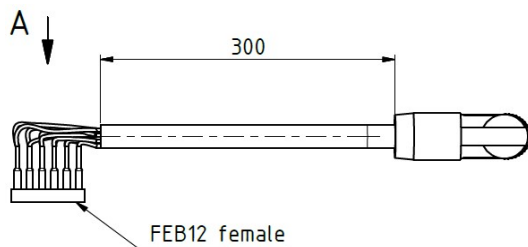


M12 Male



300-M8

300mm cable, circular connector M8-bushing



pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	---
10	---
11	---
12	---

M8-bushing

8 poles (female)

Cable: drag chain suitable  
According to IEC-61076-2-104  
Operating voltage: max 30 V  
Rated current (at 30°): 1,5 A  
Temperature range: -25...85°C  
Cable: PUR halogen-free

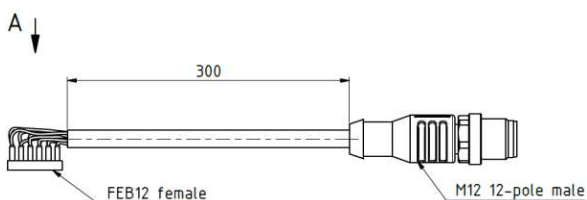
included in: G-SEK100-O-1FE12-300-M8

G-MEK063-O-4PR4-1FE12-300-M8

spare part: EG-MEK-FEB12-300-M8-BW

300-M12

300mm cable, circular connector M12 plug



FEB12 female	colour	M12 male
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/pink	11
12	blue/red	12

M12-plug

12 poles (male)

Cable: drag chain suitable  
12 x 0,14mm<sup>2</sup>, Ø5,6  
According to IEC-61076-2-104  
Operating voltage: max 30 V  
Rated current (at 30°): 1,5 A  
Insulation resistance: ≥10<sup>3</sup>Ω  
Temperature range: -25...85°C  
Cable: PUR halogen-free

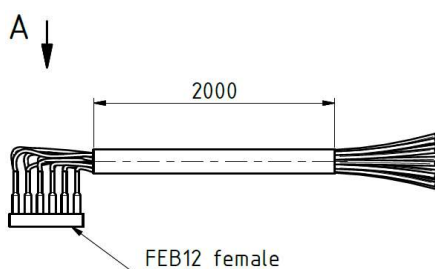
included in: G-SEK100-O-1FE12-300-M12

G-MEK063-O-4PR4-1FE12-300-M12

spare part: EG-MEK-FEB12-300-M12

2000-OE

2000mm cable, open end



pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	black
10	violet
11	grey-pink
12	blue-red

Open end

12 poles

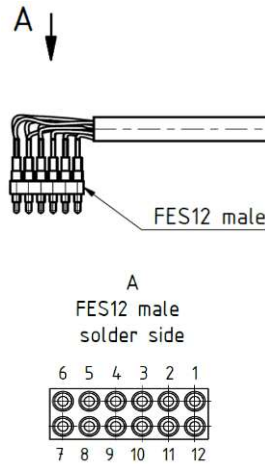
Cable: drag chain suitable  
Outer-Ø (D): 5,6 ± 0,2mm  
Nominal voltage: ≤300V  
Bending radius:  
- fixed installation: >5 x D  
- in motion: >10 x D  
Wire cross-section: 12 x 0,14mm<sup>2</sup>  
Insulation resistance: ≥10<sup>3</sup>Ω  
Temperature range: -25...85°C  
Material: PUR halogen-free  
Rated current (at 30°): 2 A

included in: G-SEK100-O-1FE12-2000-OE

G-MEK063-O-4PR4-1FE12-2000-OE

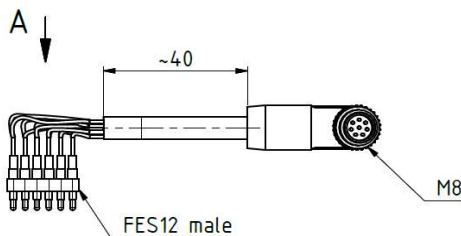
spare part: EG-MEK-FEB12-2000OE

FES12
Electric strip, male
Spring contacts
12 poles (male)
Strip 2x 6 rows
Spring force: 0,6N at 0,7mm
Rated current per pole: 2A
Contact resistance < 20mΩ
Contact spacing: 2,54mm
Gilded
Solder connection
Max stroke: 2,4mm



M8 plug	M12 bushing
M8 male	M12 Female

40-M8
40mm cable, circular connector M8 plug



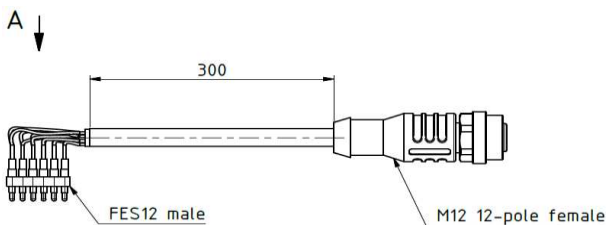
pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	---
10	---
11	---
12	---

M8 plug
8 poles (male)
Cable: drag chain suitable
Operating voltage: max 30 V
Rated current (at 30°): 1,5 A
Temperature range: -25...85°C
Cable: PUR halogen-free

included in: G-SEK100-U-1FE12-40-M8  
G-MEK063-U-4PR4-1FE12-40-M8

spare part: EG-MEK-FES12-40-M8-SW

300-M12
300mm cable, circular connector M12 bushing



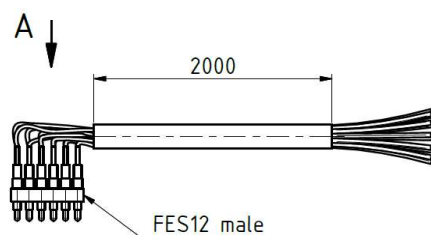
FES12 male	colour	M12 fem.
1	white	3
2	brown	1
3	green	4
4	yellow	6
5	grey	8
6	pink	5
7	blue	2
8	red	9
9	black	7
10	violet	10
11	grey/pink	11
12	blue/red	12

M12 bushing
12 poles (female)
Cable: drag chain suitable
12 x 0,14mm <sup>2</sup> , Ø5,6
According to IEC-61076-2-104
Operating voltage: max 30 V
Rated current (at 30°): 1,5 A
Insulation resistance: ≥10 <sup>3</sup> Ω
Temperature range: -25...85°C
Cable: PUR halogen-free

included in: G-SEK100-U-1FE12-300-M12  
G-MEK063-U-4PR4-1FE12-300-M12

spare part: EG-MEK-FES12-300-M12

2000-OE
2000mm cable, open end



pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	black
10	violet
11	grey-pink
12	blue-red

Open end
12 poles
Cable: drag chain suitable
Outer-Ø (D): 5,6 ± 0,2mm
Nominal voltage: ≤300V
Bending radius:
- fixed installation: >5 x D
- in motion: >10 x D
Wire cross-section: 12 x 0,14mm <sup>2</sup>
Insulation resistance: ≥10 <sup>3</sup> Ω
Temperature range: -25...85°C
Material: PUR halogen-free
Rated current (at 30°): 2 A

included in: G-SEK100-U-1FE12-2000-OE  
G-MEK063-U-4PR4-1FE12-2000-OE  
spare part: EG-MEK-FES12-2000OE

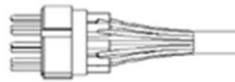
### IKS12

Insulating body with pins

12 poles (male)

Rated current per pole: 9A

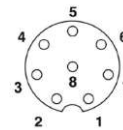
Contact resistance < 3mΩ



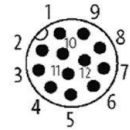
### M8 bushing

### M12 plug

M8 female

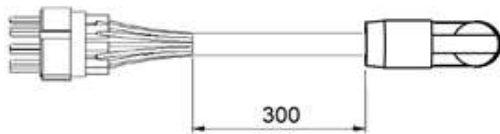


M12 Male



### 300-M8

300mm cable, circular connector M8 bushing



pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	---
10	---
11	---
12	---

### M8 bushing

8 poles (female)

Cable: drag chain suitable

According to IEC-61076-2-104

Operating voltage: max 30 V

Rated current (at 30°): 1,5 A

Temperature range: -25...85°C

Cable: PUR halogen-free

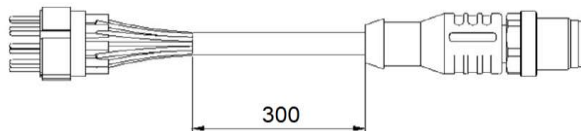
included in: G-SEK100-O-1E12-300-M8

G-MEK063-O-6PM5-1E12-300-M8

spare part: EG-MEK-IKS12-300-M8-BW

### 300-M12

300mm cable, circular connector M12 plug



pin assignment	
1	brown
2	blue
3	white
4	green
5	pink
6	yellow
7	black
8	grey
9	red
10	violet
11	grey-pink
12	blue-red

### M12 plug

12 poles (male)

Cable: drag chain suitable

12 x 0,14mm<sup>2</sup>, Ø5,6

According to IEC-61076-2-104

Operating voltage: max 30 V

Rated current (at 30°): 1,5 A

Insulation resistance: ≥10<sup>3</sup>Ω

Temperature range: -25...85°C

Cable: PUR halogen-free

included in: G-SEK100-O-1E12-300-M12

G-MEK063-O-6PM5-1E12-300-M12

spare part: EG-MEK-IKS12-300-M12

### 2000-OE

2000mm cable, open end



pin assignment	
1	brown
2	blue
3	white
4	green
5	pink
6	yellow
7	black
8	grey
9	red
10	violet
11	grey-pink
12	blue-red

### Open end

12 poles

Cable: drag chain suitable

Outer-Ø (D): 5,6 ± 0,2mm

Nominal voltage: ≤300V

Bending radius:

- fixed installation: >5 x D

- in motion: >10 x D

Wire cross-section: 12 x 0,14mm<sup>2</sup>

Insulation resistance: ≥10<sup>3</sup>Ω

Temperature range: -25...85°C

Material: PUR halogen-free

Rated current (at 30°): 2 A

included in: G-SEK100-O-1E12-2000-OE

G-MEK063-O-6PM5-1E12-2000-OE

spare part: EG-MEK-IKS12-2000-OE

### IKB12

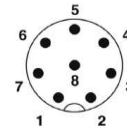
Insulating body with bushings  
12 poles (female)  
Rated current per pole: 9A  
Contact resistance < 3mΩ



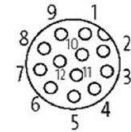
### M8 plug

### M12 bushing

M8 male

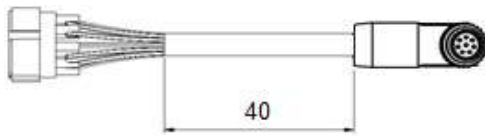


M12 Female



### 40-M8

40mm cable, circular connector M8 plug



pin assignment	
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red
9	---
10	---
11	---
12	---

### M8 plug

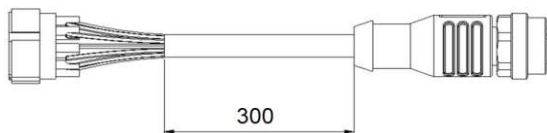
8 poles (male)  
Cable: drag chain suitable  
Operating voltage: max 30 V  
Rated current (at 30°): 1,5 A  
Temperature range: -25...85°C  
Cable: PUR halogen-free

included in: G-SEK100-U-1E12-40-M8  
G-MEK063-U-6PM5-1E12-40-M8

spare part: EG-MEK-IKB12-40-M8-SW

### 300-M12

300mm cable, circular connector M12 bushing



pin assignment	
1	brown
2	blue
3	white
4	green
5	pink
6	yellow
7	black
8	grey
9	red
10	violet
11	grey-pink
12	blue-red

### M12 bushing

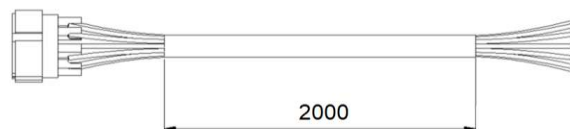
12 poles (female)  
Cable: drag chain suitable  
12 x 0,14mm<sup>2</sup>, Ø5,6  
According to IEC-61076-2-104  
Operating voltage: max 30 V  
Rated current (at 30°): 1,5 A  
Insulation resistance: ≥10<sup>3</sup>Ω  
Temperature range: -25...85°C  
Cable: PUR halogen-free

included in: G-SEK100-U-1E12-300-M12  
G-MEK063-U-6PM5-1E12-300-M12

spare part: EG-MEK-IKB12-300-M12

### 2000-OE

2000mm cable, open end



pin assignment	
1	brown
2	blue
3	white
4	green
5	pink
6	yellow
7	black
8	grey
9	red
10	violet
11	grey-pink
12	blue-red

### Open end

12 poles  
Cable: drag chain suitable  
Outer-Ø (D): 5,6 ± 0,2mm  
Nominal voltage: ≤300V  
Bending radius:  
- fixed installation: >5 x D  
- in motion: >10 x D  
Wire cross-section: 12 x 0,14mm<sup>2</sup>  
Insulation resistance: ≥10<sup>3</sup>Ω  
Temperature range: -25...85°C  
Material: PUR halogen-free  
Rated current (at 30°): 2 A

included in: G-SEK100-U-1E12-2000-OE  
G-MEK063-U-6PM5-1E12-2000-OE  
spare part: EG-MEK-IKB12-2000-OE



# DDF MULTI SWIVEL

Solution for the rotatable feed-through of 2 to 4 compressed air or vacuum lines. The compressed air is fed through channels inside the DDF. This prevents twisting of the pneumatic lines during endless rotary movements.

## DDF Multi Swivel Advantages:

- For unlimited rotary movements, such as robot axes
- Prevents the twisting of air channels
- Low weight, made of high-strength aluminum, anodized
- Optional with integrated roller bearings
- Durable
- ISO flange
- Quick connection of the pneumatic lines?
- Interfaces according to DIN EN ISO 9409-1

DDF Multi Swivels can be modified to meet your needs. Please inquire about special applications.



G-DDF050

Technical specifications

GRIP

Operating mode:

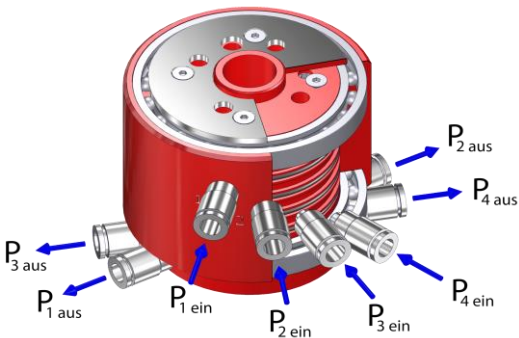
The compressed air is routed through channels inside the DDF. These channels prevent the pneumatic lines from becoming twisted, when the multi swivel is rotated.

Advantages:

- Light and robust
- ISO-flange
- No twisting of the air conduction
- Quick connection of pneumatic tubes
- Interface according to DIN EN ISO 9409-1

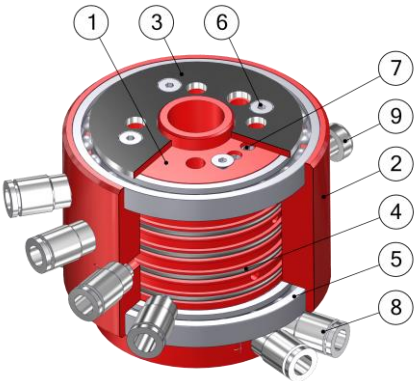


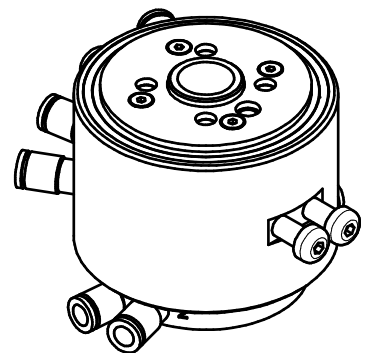
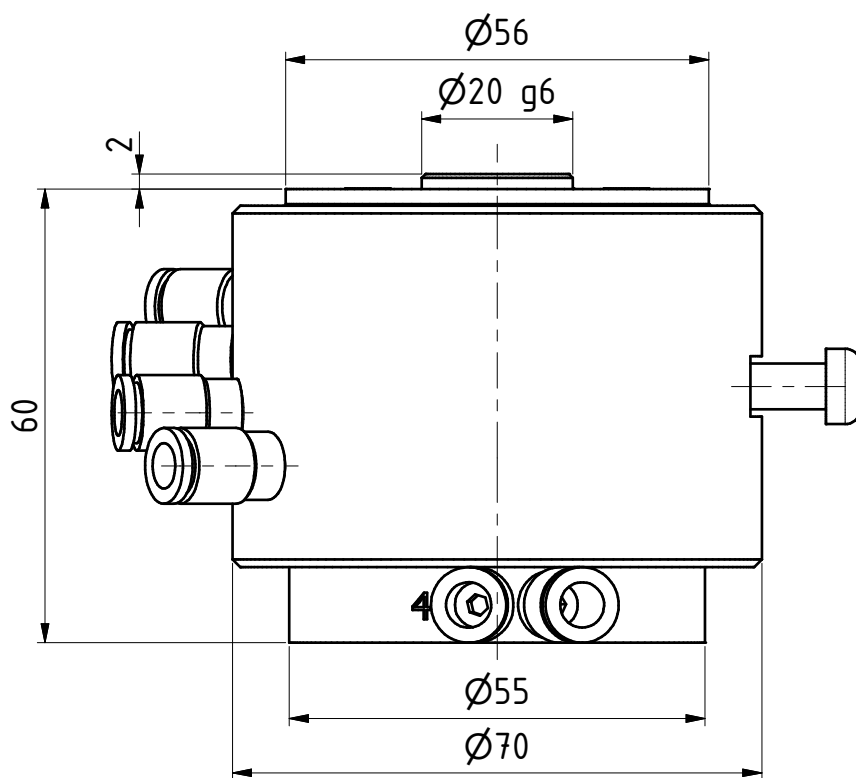
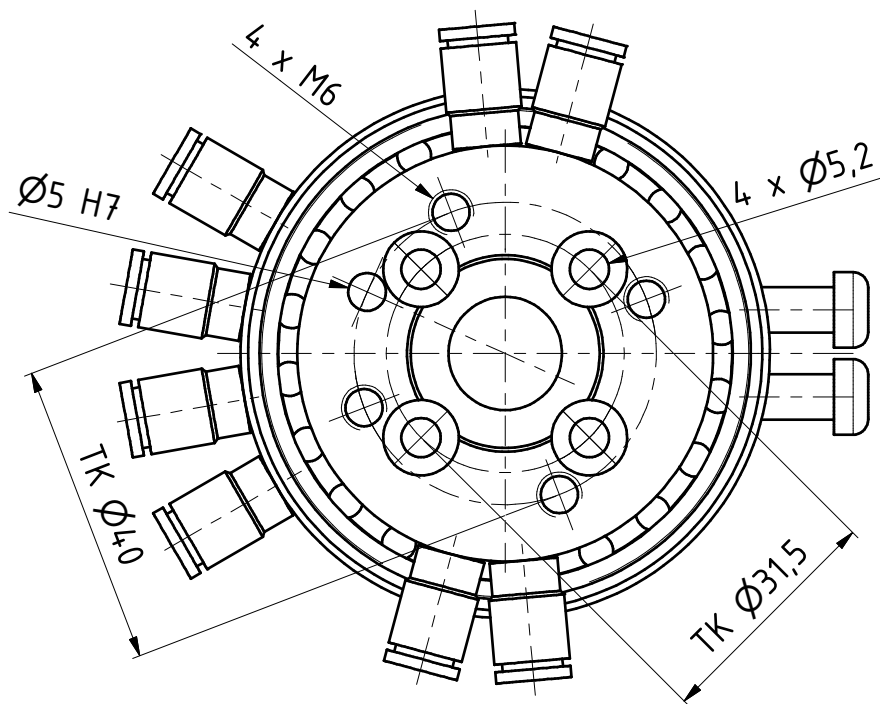
Technical specifications	DDF050
Basic material	Al. anod., SS
Medium	Compressed air, filtered oiled und unoled
Operating pressure range	-1 to 8 bar
Number of ducts	4
Tube external diameter	6 mm
Threaded connection comp. air	M5
Dead weight	690 g
Max. speed	60 / min
Initial torque	1 Nm
Ambient temperature	5 - 40 °C
Mounting flange	according to ISO9409-1
Operating temperature range [°C]	-30 to +120



Pos.	Description
1	Flange
2	Ring
3	Disc
4	Piston seal
5	Grooved ball bearing
6	Counter-sunk screw
7	Setscrew
8	Straight connection
9	Fitting Screw

Multi swivel Ø50...		
G-DDF050-2-4/NW4	with grooved ball bearing + universal seals 4 x air	
Replacement gasket kit...		
EG-DDF050-2-DS-4	for 4 x air DDF050 with grooved ball bearing	



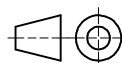


Datum 26.03.2020

Maßstab 1:1

Zeichnungsnummer

G-DDF050-2-4/NW4



**GRIP**  
GRIP GmbH Handhabungstechnik

# GRIPPING

Standardized products for different gripping tasks

Our pneumatic grippers GP Parallel Gripper and GZ Angular Gripper are characterized by their compact and robust design. They are available in five different sizes. In 2009 we introduced our pneumatic GI Internal Grippers followed by our GIS Internal Gripper in 2016. The Internal Grippers are available in 16 sizes from 5 to 20 mm. The Internal Grippers are unique in the handling technology industry.

GRIP Grippers have proven their worth for over 25 years with well-known companies.

---

## GP Parallel Gripper

Parallel Gripper with linear jaw movement. The double-acting cylinder is actuated by compressed air which actuates the movements. The vertical movement is converted into opposing horizontal movement via two angularly arranged springs.



## GZ Angular Gripper

The Angular Gripper with pivoting jaw movement. The double-acting cylinder is actuated by compressed air which actuates the movements. An eccentric mechanism ensures a long service life and a constant gripping torque. In contrast to the Parallel Gripper, the gripping force safety device can only be designed as a closing-GS-version.

---

## GI Internal Gripper

The GI Internal Gripper is an inflatable bellows gripper for internal gripping. The Internal Grippers plunge into bore holes. Applying pneumatic pressure to the silicone membrane increases the outer diameter. This friction against the bore hole wall holds the Gripper in place. The silicone membrane automatically retracts once the pressure is relieved



## GIS Internal Gripper Short

The GIS Internal Gripper Short is a further development of the GI Internal Gripper with an optimized gripping zone. The Internal Grippers plunge into bore holes. Applying pneumatic pressure to the silicone membrane increases the outer diameter. This friction against the bore hole wall holds the Gripper in place. The silicone membrane automatically retracts once the pressure is relieved.



# GP PARALLEL GRIPPER

Parallel Gripper with linear jaw movement. The double-acting cylinder is actuated by compressed air which actuates the movements. The vertical movement is converted into opposing horizontal movement via two angularly arranged springs. The grippers are driven by a wedge gear and can be equipped with a gripping force safety compression spring. The gripper position can be communicated using a reed switch on the drive cylinder (type "RS..."). Depending on the installation, the gripping force safety device has a closing (GS) or opening (GÖ) effect.

The GP parallel grippers were developed to match the sizes of the quick connect systems. The compact design of the gripper allows it to be used in the most difficult industrial conditions. The modular design makes possible a large number of high-quality design options while maintaining costs.

## GP Parallel Gripper Advantages:

- Wedge gear guided for optimal performance
- Extremely Durable
- Two stroke version available
- Interface according to DIN EN ISO 9409-1
- Low weight made of high-strength aluminum and steel
- Optional "open" gripping force safety compression spring
- Optional "close" gripping force safety compression spring
- Piston position communicated with a proximity switch ZG-RSGU01

GP Parallel Grippers can be modified to meet your needs. Please inquire about special applications.

## SIZES

GP050  
GP063  
GP080  
GP100  
GP125

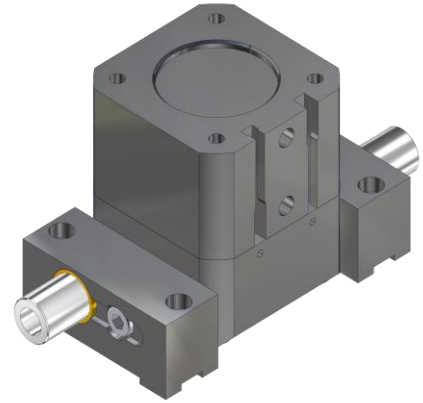


### Operating mode:

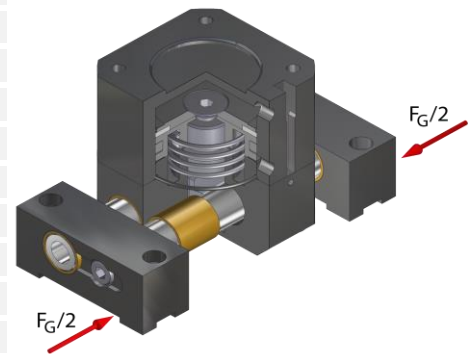
The double-acting cylinder is operated via pneum. compressed air and actuates the power unit. By two angularly arranged springs, which engage in the grooves of the bolts, the vertical is converted into horizontal movement.

### Advantages:

High life span  
Two stroke variants stroke 1 or stroke 2  
Mechanical interface according to DIN EN ISO 9409-12  
Low dead weight  
Optional gripping force safety device "opening" via pressure spring (7)  
Optional gripping force safety device "closing" via pressure spring (7)  
Depending on the mounting, gripping force safety device "closing" or "opening"  
Universal jaws (15) for easy mounting of specific fingers  
Piston position detection by means of proximity switch ZG-RSGU01 / 300-M8

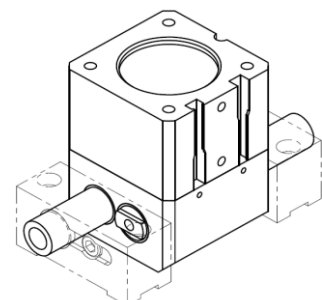


Technical specifications				GP050
Gripping force at 6 bar	FG [N]	stroke 1	opening	650
			shutting	560
		stroke 2	opening	325
			shutting	280
Gripping force factor	fg [N/ bar]	stroke 1	opening	108
			shutting	93
		stroke 2	opening	54
			shutting	46,5
Gripping force safety device	FS [N]	stroke 1	min.	340
			max.	480
		Stroke 2	min.	170
			max.	240
System stroke per jaw	h [mm]	stroke 1		3
		stroke 2		6
Recommended component weight			mw [kg]	5
Weight gripper			mg [kg]	0,3
Operating pressure (with gripping force safety device)				5 ...6 bar
Operating pressure (without gripping force safety device)				2 ...6 bar
Air consumption per Hub			V [ccm]	4,2
Air connection			Pmax = 10 bar	M5
Mounting flange			ISO	4 x M4 on TK ø40
Operating temperature range [°C]				-30 to +120



### Parallel gripper Ø50...

G-GP050-I1-GÖ	ISO-flange, Hub 1 gripping force safety device opening
G-GP050-I1-GS	ISO-flange, Hub 1 gripping force safety device shutting
G-GP050-I1-O	ISO-flange, Hub 1 without gripping force safety device
G-GP050-I2-GÖ	ISO-flange, Hub 2 gripping force safety device opening
G-GP050-I2-GS	ISO-flange, Hub 2 gripping force safety device shutting
G-GP050-I2-O	ISO-flange, Hub 2 without gripping force safety device

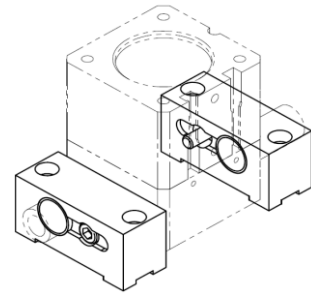


### Equipment GP

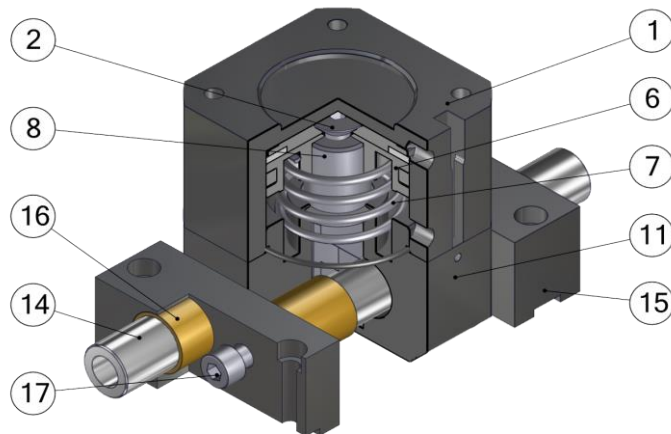
ZG-GP050-UB	Universal jaw for GP050 pair
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug

### Spare parts GG

EG-GG050-DS	Gasket set for gripper size 050
-------------	---------------------------------

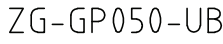


Pos.	Description
1	Cylinder ISO
2	Countersunk screw
3	Cap
4	Magnetic ring
5	Quadrat ring 1
6	Cone
7	Compression spring
8	Power unit 1/2
9	Quadrat ring 2
10	O- Ring
11	Housing
12	Cylinder head screw housing
13	Plain bearing bushing housing
14	Bolt 1/2
15	Universal jaw
16	Plain bearing bushing UB
17	Cylinder head screw UB



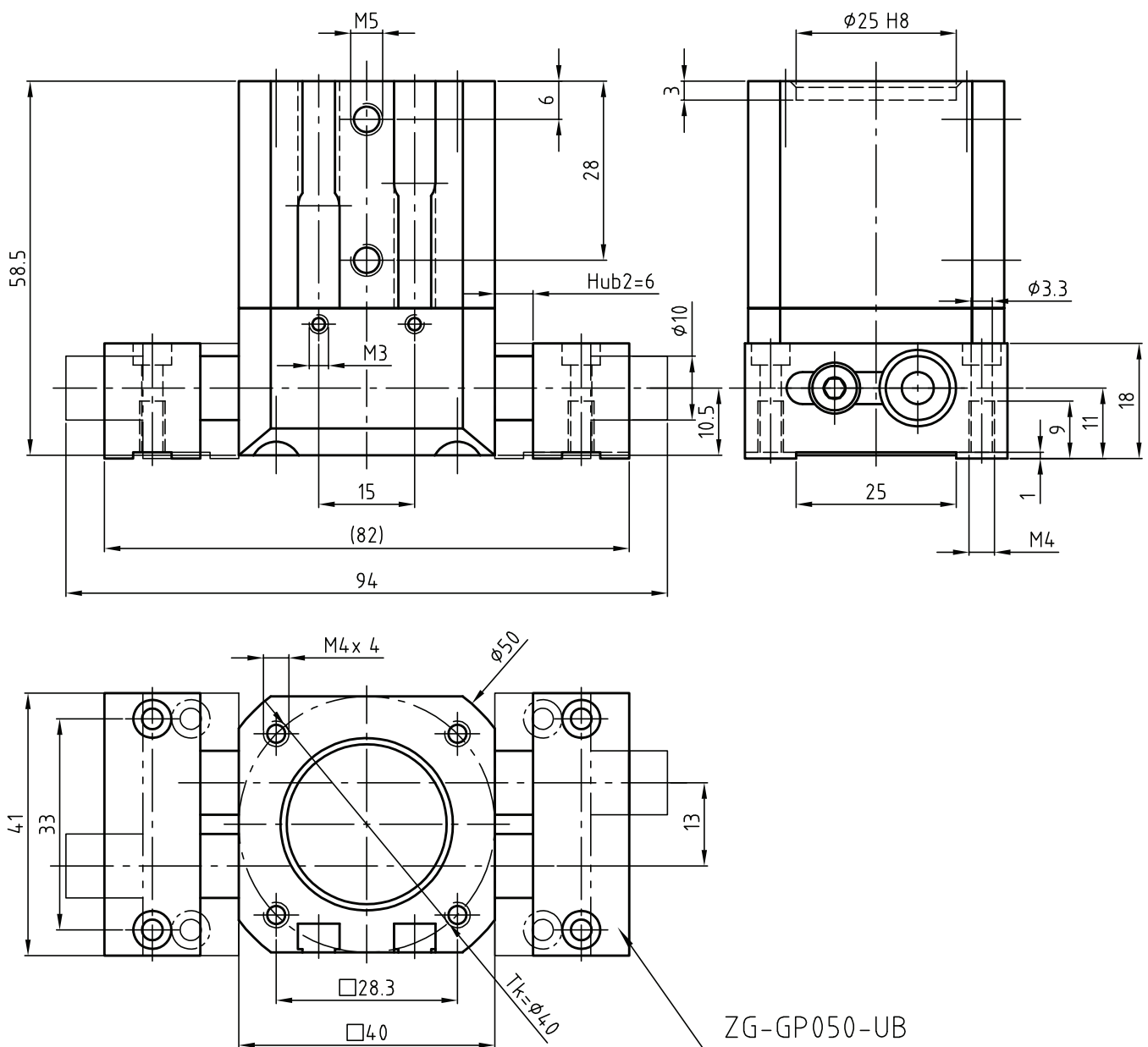






**GRIP**  
GRIP GmbH Handhabungstechnik





Bestellnummer

G-GP050-I2-GÖ

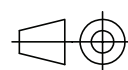
G-GP050-I2-0

Datum 10.11.2016

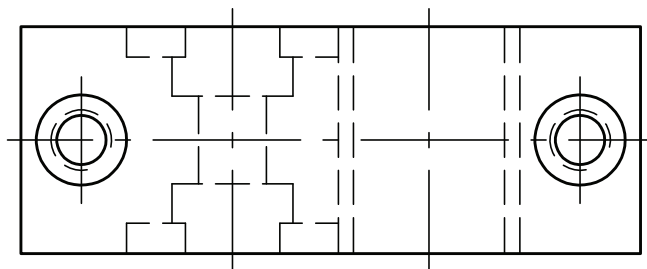
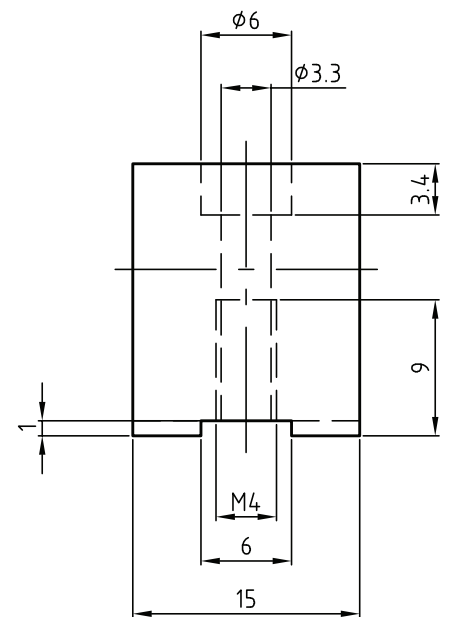
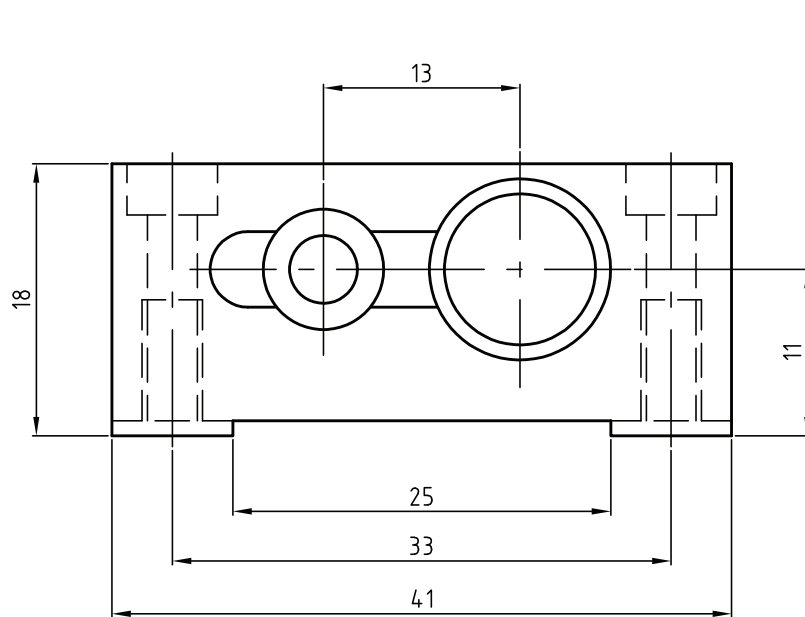
Maßstab 1:1

Zeichnungsnummer

G-GP050-I2-0

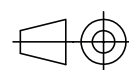


**GRIP**  
GRIP GmbH Handhabungstechnik



Datum 10.11.2016 Maßstab 2:1

Zeichnungsnummer  
ZG-GP050-UB (Paar)



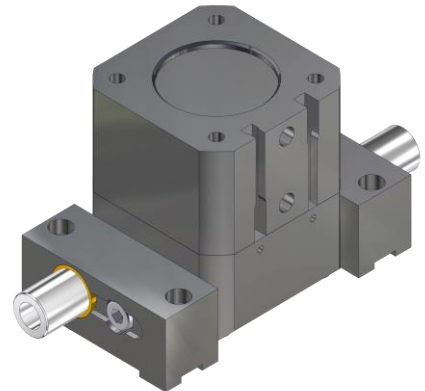
**grip**  
GRIP GmbH Handhabungstechnik

**Operating mode:**

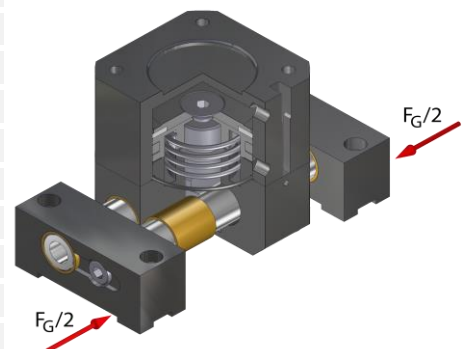
The double-acting cylinder is operated via pneum. compressed air and actuates the power unit. By two angularly arranged springs, which engage in the grooves of the bolts, the vertical is converted into horizontal movement.

**Advantages:**

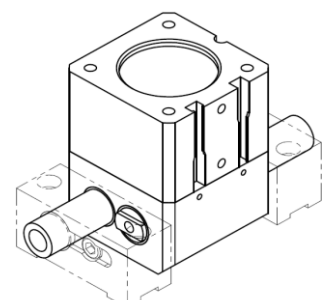
High life span  
 Two stroke variants stroke 1 or stroke 2  
 Mechanical interface according to DIN EN ISO 9409-12  
 Low dead weight  
 Optional gripping force safety device "opening" via pressure spring (7)  
 Optional gripping force safety device "closing" via pressure spring (7)  
 Depending on the mounting, gripping force safety device "closing" or "opening"  
 Universal jaws (15) for easy mounting of specific fingers  
 Piston position detection by means of proximity switch ZG-RSGU01 / 300-M8



Technical specifications				GP063
Gripping force at 6 bar	FG [N]	stroke 1	opening	1200
			shutting	1000
		stroke 2	opening	600
			shutting	500
Gripping force factor	fg [N/ bar]	stroke 1	opening	200
			shutting	166
		stroke 2	opening	100
			shutting	83
Gripping force safety device	FS [N]	stroke 1	min.	500
			max.	760
		Stroke 2	min.	250
			max.	380
System stroke per jaw	h [mm]	stroke 1		4
		stroke 2		8
Recommended component weight			mw [kg]	10
Weight gripper			mg [kg]	0,4
Operating pressure (with gripping force safety device)				5 ...6 bar
Operating pressure (without gripping force safety device)				2 ...6 bar
Air consumption per Hub			V [ccm]	10
Air connection			Pmax = 10 bar	M5
Mounting flange			ISO	4 x M5 on TK ø50
Operating temperature range [°C]				-30 to +120


**Parallel gripper Ø63...**

G-GP063-I1-GÖ	ISO-flange, Hub 1 gripping force safety device opening
G-GP063-I1-GS	ISO-flange, Hub 1 gripping force safety device shutting
G-GP063-I1-O	ISO-flange, Hub 1 without gripping force safety device
G-GP063-I2-GÖ	ISO-flange, Hub 2 gripping force safety device opening
G-GP063-I2-GS	ISO-flange, Hub 2 gripping force safety device shutting
G-GP063-I2-O	ISO-flange, Hub 2 without gripping force safety device

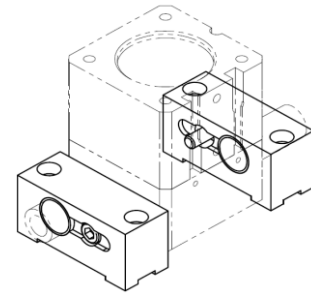


**Equipment GP**

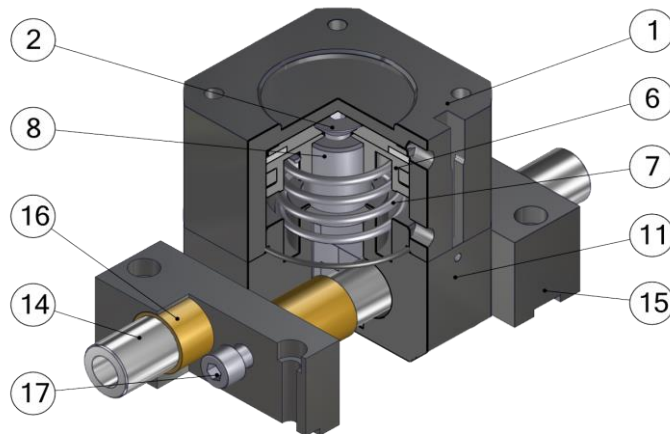
ZG-GP063-UB	Universal jaw for GP063 pair
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug

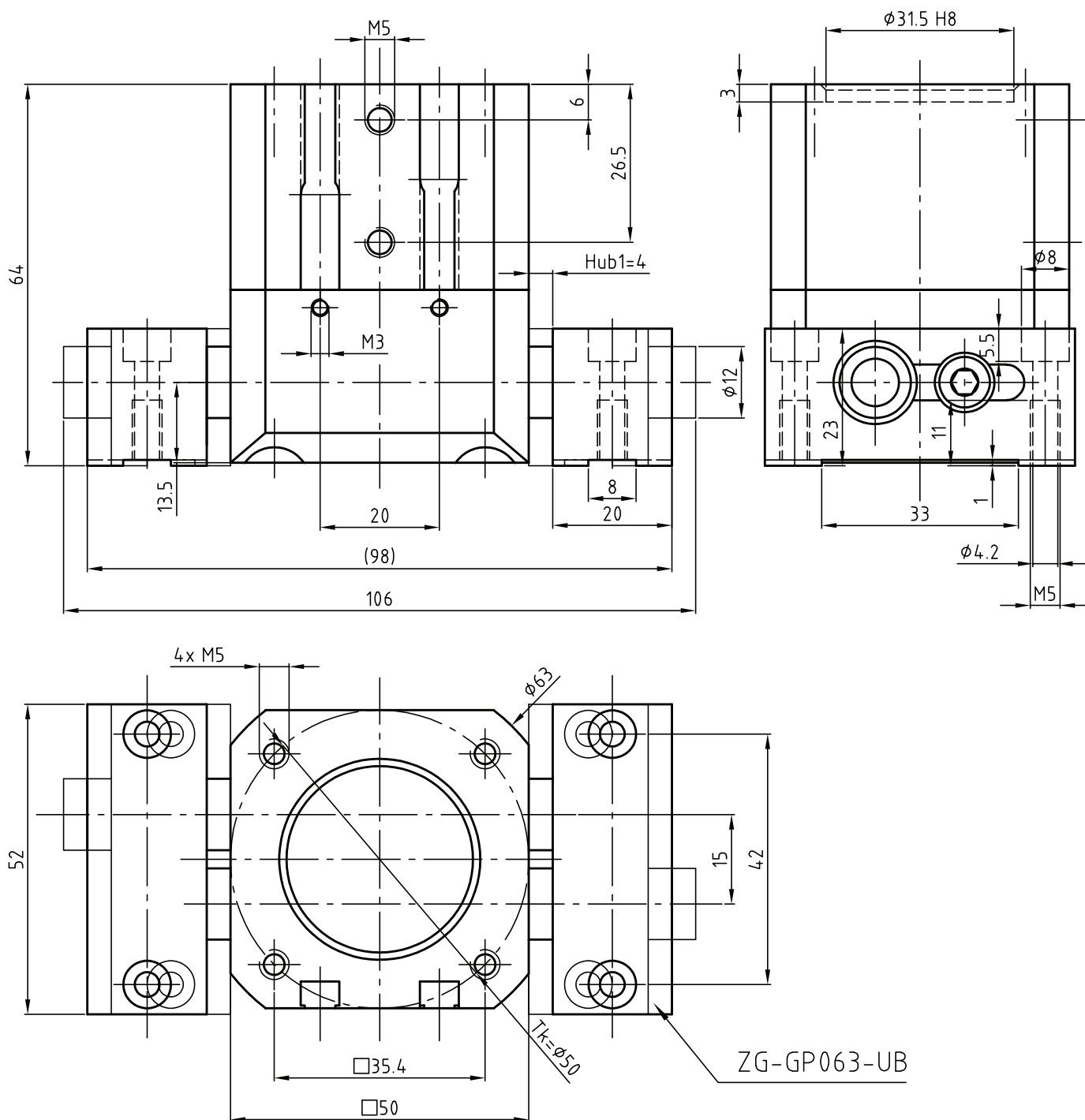
**Spare parts GG**

EG-GG063-DS	Gasket set for gripper size 063
-------------	---------------------------------



Pos.	Description
1	Cylinder ISO
2	Countersunk screw
3	Cap
4	Magnetic ring
5	Quadrat ring 1
6	Cone
7	Compression spring
8	Power unit 1/2
9	Quadrat ring 2
10	O- Ring
11	Housing
12	Cylinder head screw housing
13	Plain bearing bushing housing
14	Bolt 1/2
15	Universal jaw
16	Plain bearing bushing UB
17	Cylinder head screw UB



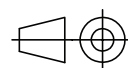


Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

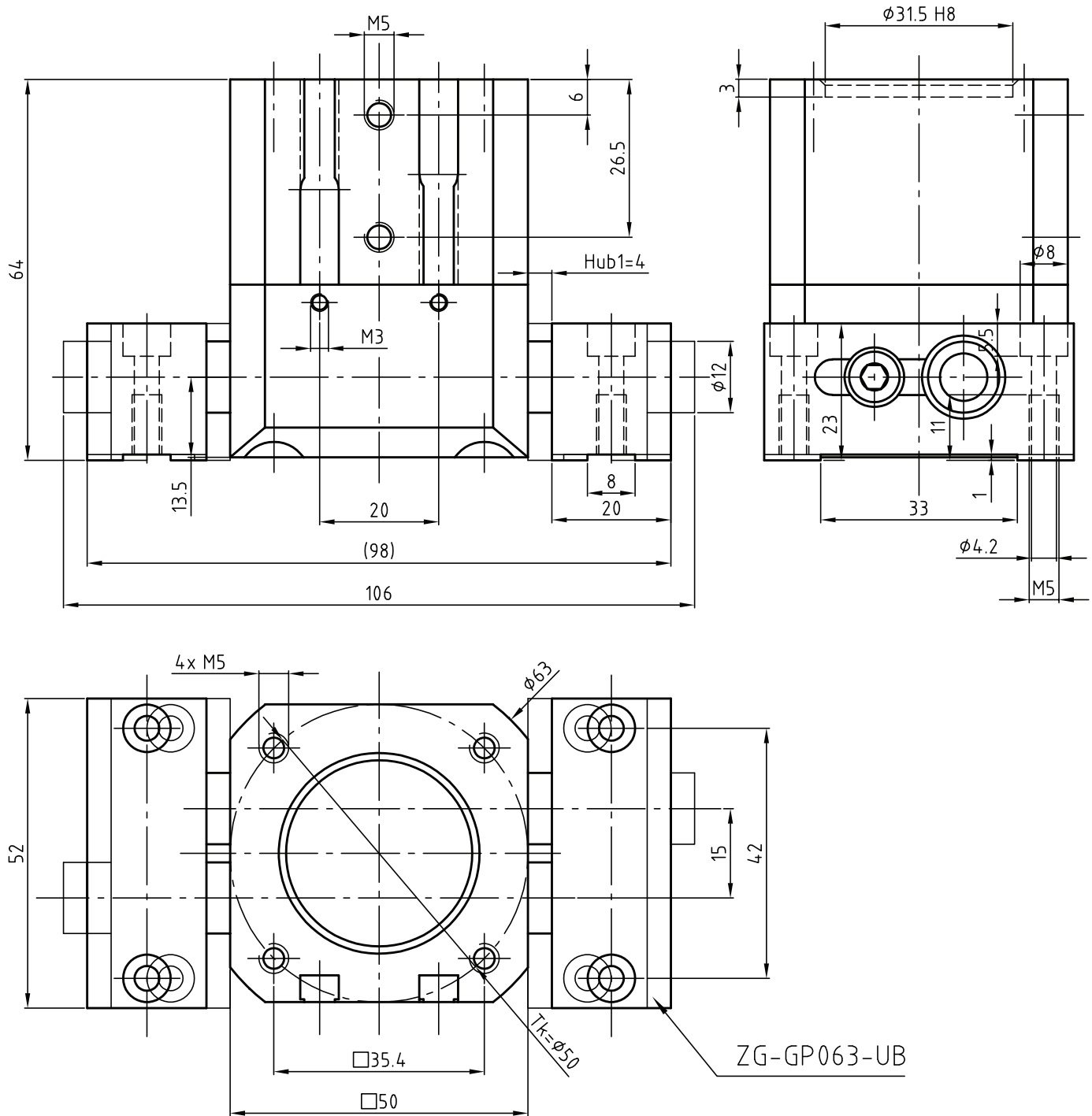
G-GP063-I1-GS



**GRIP**

GRIP GmbH Handhabungstechnik





Bestellnummer

G-GP063-I1-G0

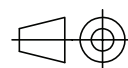
G-GP063-I1-0

Datum 10.11.2016

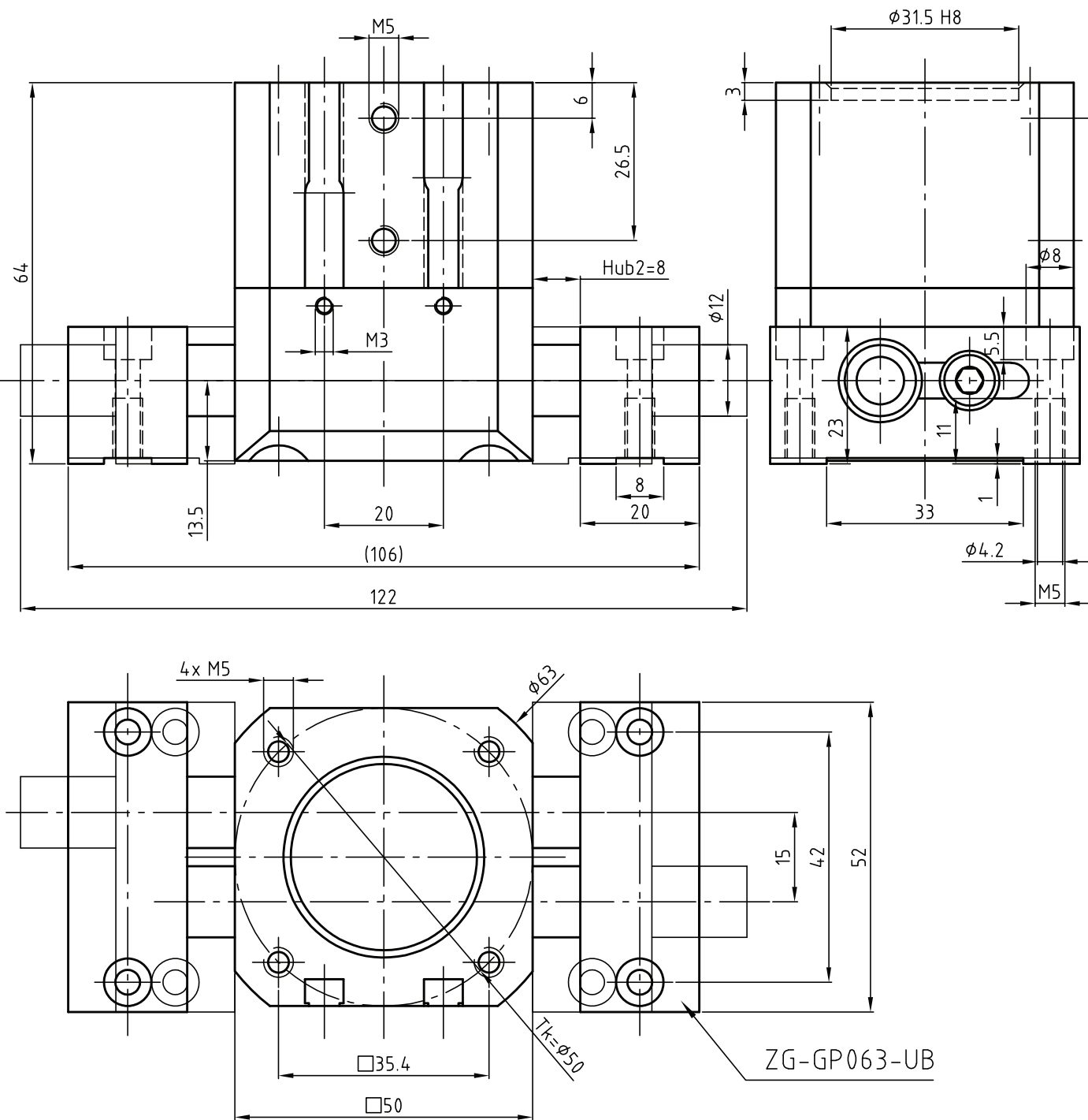
Maßstab 1:1

Zeichnungsnummer

G-GP063-I1-0



**GRIP**  
GRIP GmbH Handhabungstechnik

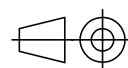


Datum 10.11.2016

Maßstab 1:1

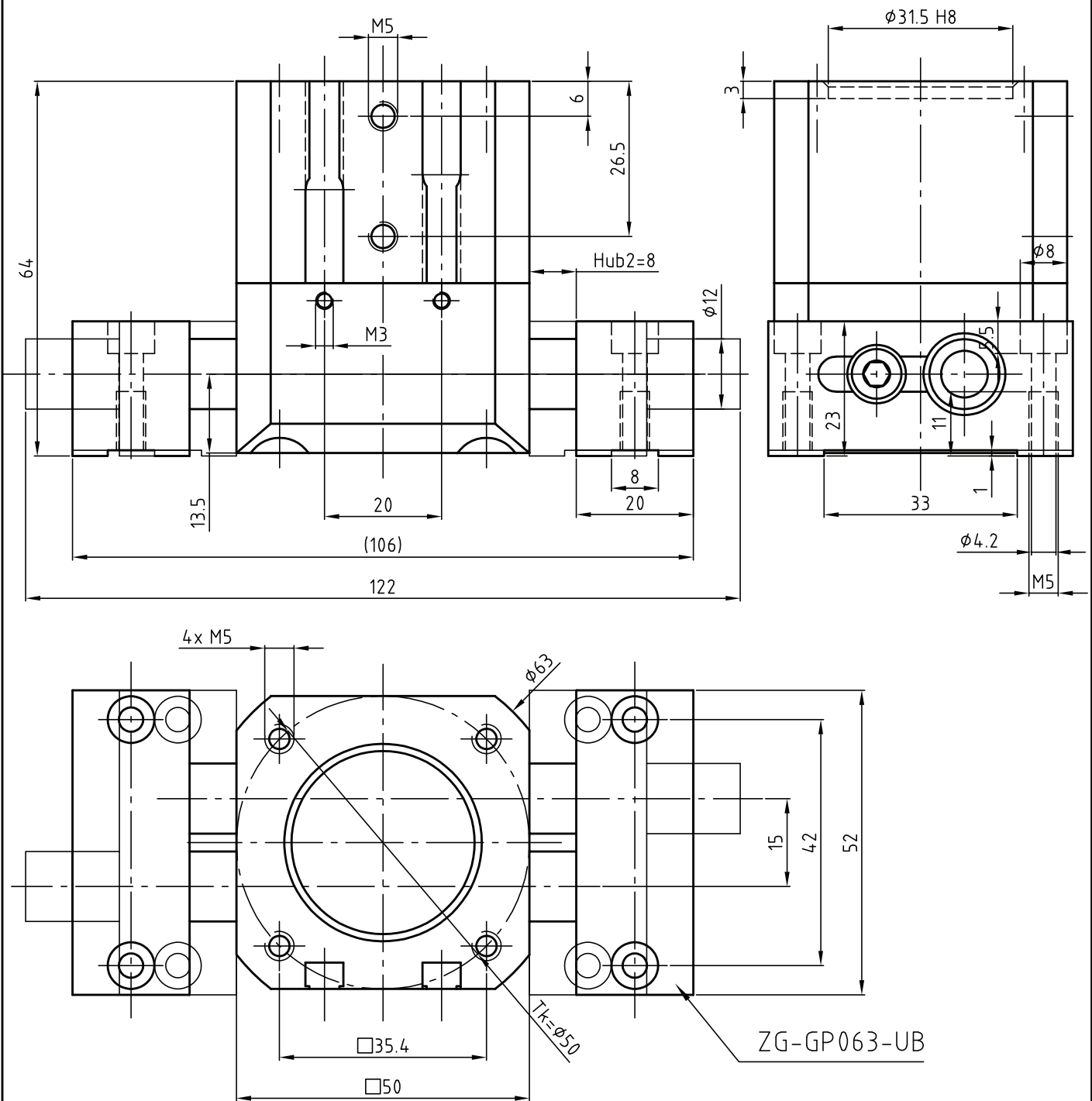
Zeichnungsnummer

G-GP063-I2-GS



**GRIP**

GRIP GmbH Handhabungstechnik



Bestellnummer

G-GP063-I2-G0

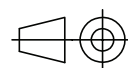
G-GP063-I2-0

Datum 10.11.2016

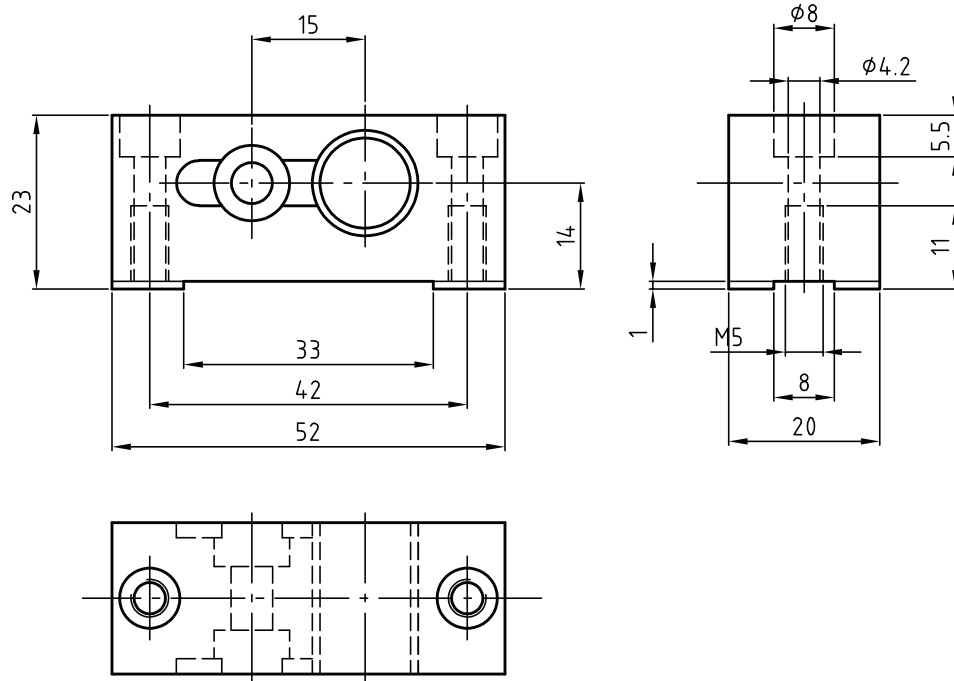
Maßstab 1:1

Zeichnungsnummer

G-GP063-I2-0



**GRIP**  
GRIP GmbH Handhabungstechnik

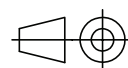


Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

ZG-GP063-UB (Paar)



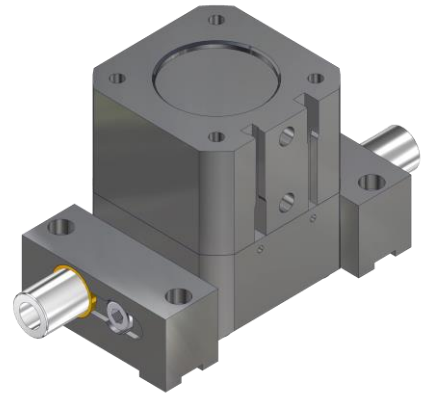
**GRIP**  
GRIP GmbH Handhabungstechnik

**Operating mode:**

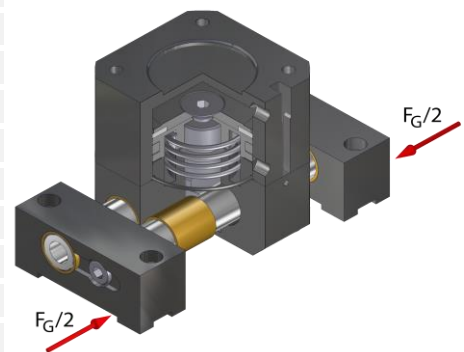
The double-acting cylinder is operated via pneum. compressed air and actuates the power unit. By two angularly arranged springs, which engage in the grooves of the bolts, the vertical is converted into horizontal movement.

**Advantages:**

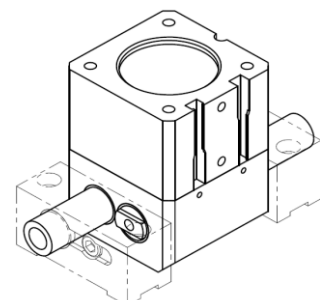
High life span  
 Two stroke variants stroke 1 or stroke 2  
 Mechanical interface according to DIN EN ISO 9409-12  
 Low dead weight  
 Optional gripping force safety device "opening" via pressure spring (7)  
 Optional gripping force safety device "closing" via pressure spring (7)  
 Depending on the mounting, gripping force safety device "closing" or "opening"  
 Universal jaws (15) for easy mounting of specific fingers  
 Piston position detection by means of proximity switch ZG-RSGU01 / 300-M8



Technical specifications				GP080
Gripping force at 6 bar	FG [N]	stroke 1	opening	1800
			shutting	1600
		stroke 2	opening	900
			shutting	800
Gripping force factor	fg [N/ bar]	stroke 1	opening	300
			shutting	266
		stroke 2	opening	150
			shutting	133
Gripping force safety device	FS [N]	stroke 1	min.	320
			max.	790
		Stroke 2	min.	160
			max.	395
System stroke per jaw	h [mm]	stroke 1	5	
		stroke 2	10	
Recommended component weight			mw [kg]	15
Weight gripper			mg [kg]	0,9
Operating pressure (with gripping force safety device)				5 ...6 bar
Operating pressure (without gripping force safety device)				2 ...6 bar
Air consumption per Hub			V [ccm]	19,6
Air connection			Pmax = 10 bar	M5
Mounting flange			ISO	4 x M6 on TK ø63
Operating temperature range [°C]				-30 to +120


**Parallel gripper Ø80...**

G-GP080-I1-GÖ	ISO-flange, Hub 1 gripping force safety device opening
G-GP080-I1-GS	ISO-flange, Hub 1 gripping force safety device shutting
G-GP080-I1-O	ISO-flange, Hub 1 without gripping force safety device
G-GP080-I2-GÖ	ISO-flange, Hub 2 gripping force safety device opening
G-GP080-I2-GS	ISO-flange, Hub 2 gripping force safety device shutting
G-GP080-I2-O	ISO-flange, Hub 2 without gripping force safety device



## G-GP080

### Technical specifications

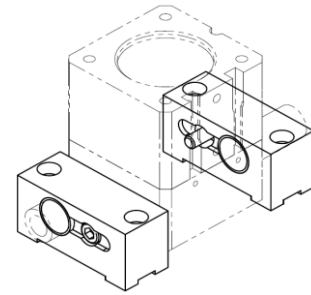
# GRIP

#### Equipment GP

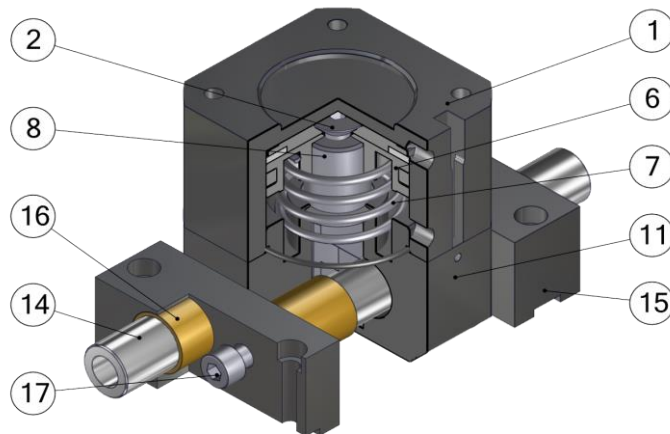
ZG-GP080-UB	Universal jaw for GP080 pair
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug

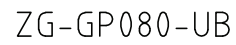
#### Spare parts GG

EG-GG080-DS	Gasket set for gripper size 080
-------------	---------------------------------



Pos.	Description
1	Cylinder ISO
2	Countersunk screw
3	Cap
4	Magnetic ring
5	Quadrat ring 1
6	Cone
7	Compression spring
8	Power unit 1/2
9	Quadrat ring 2
10	O- Ring
11	Housing
12	Cylinder head screw housing
13	Plain bearing bushing housing
14	Bolt 1/2
15	Universal jaw
16	Plain bearing bushing UB
17	Cylinder head screw UB





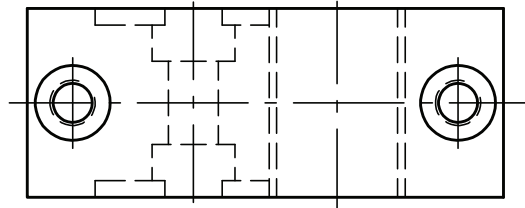
**GRIP**  
GRIP GmbH Handhabungstechnik











# G-GP100

## Technical specifications

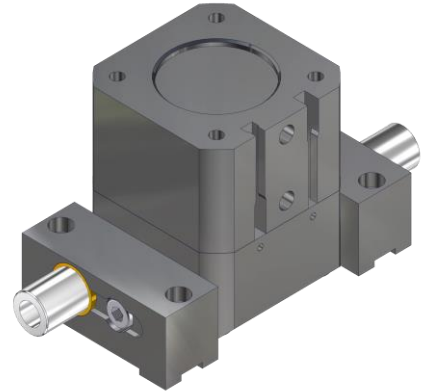
GRIP

### Operating mode:

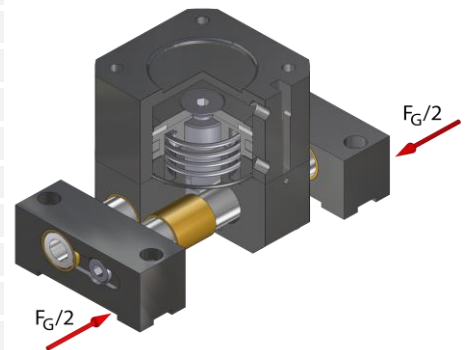
The double-acting cylinder is operated via pneum. compressed air and actuates the power unit. By two angularly arranged springs, which engage in the grooves of the bolts, the vertical is converted into horizontal movement.

### Advantages:

High life span  
Two stroke variants stroke 1 or stroke 2  
Mechanical interface according to DIN EN ISO 9409-12  
Low dead weight  
Optional gripping force safety device "opening" via pressure spring (7)  
Optional gripping force safety device "closing" via pressure spring (7)  
Depending on the mounting, gripping force safety device "closing" or "opening"  
Universal jaws (15) for easy mounting of specific fingers  
Piston position detection by means of proximity switch ZG-RSGU01 / 300-M8

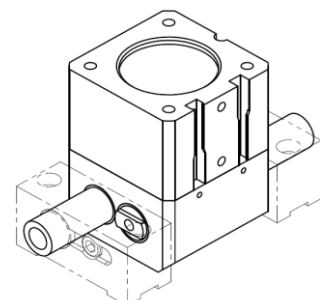


Technical specifications				GP100
Gripping force at 6 bar	FG [N]	stroke 1	opening	3200
			shutting	2800
		stroke 2	opening	1600
			shutting	1400
Gripping force factor	fg [N/ bar]	stroke 1	opening	530
			shutting	466
		stroke 2	opening	265
			shutting	233
Gripping force safety device	FS [N]	stroke 1	min.	770
			max.	1500
		Stroke 2	min.	385
			max.	750
System stroke per jaw	h [mm]	stroke 1		6
		stroke 2		12
Recommended component weight			mw [kg]	25
Weight gripper			mg [kg]	1,9
Operating pressure (with gripping force safety device)				5 ...6 bar
Operating pressure (without gripping force safety device)				2 ...6 bar
Air consumption per Hub			V [ccm]	38,6
Air connection			Pmax = 10 bar	G 1/8
Mounting flange			ISO	4 x M8 on TK ø80
Operating temperature range [°C]				-30 to +120



### Parallel gripper Ø100...

G-GP100-I1-GÖ	ISO-flange, Hub 1 gripping force safety device opening
G-GP100-I1-GS	ISO-flange, Hub 1 gripping force safety device shutting
G-GP100-I1-O	ISO-flange, Hub 1 without gripping force safety device
G-GP100-I2-GÖ	ISO-flange, Hub 2 gripping force safety device opening
G-GP100-I2-GS	ISO-flange, Hub 2 gripping force safety device shutting
G-GP100-I2-O	ISO-flange, Hub 2 without gripping force safety device



## G-GP100

### Technical specifications

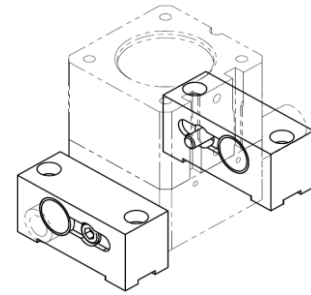
# GRIP

#### Equipment GP

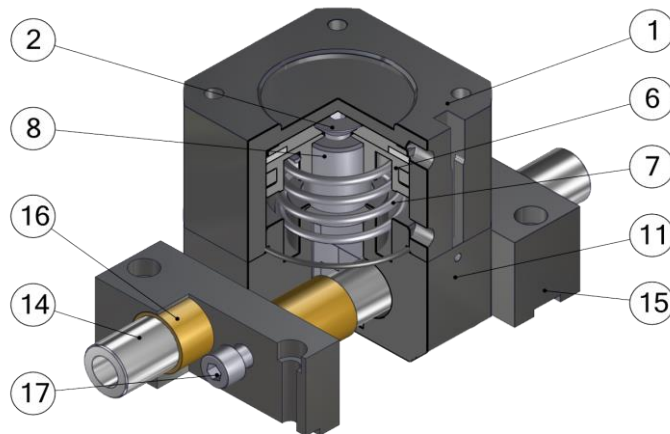
ZG-GP100-UB	Universal jaw for GP100 pair
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug

#### Spare parts GG

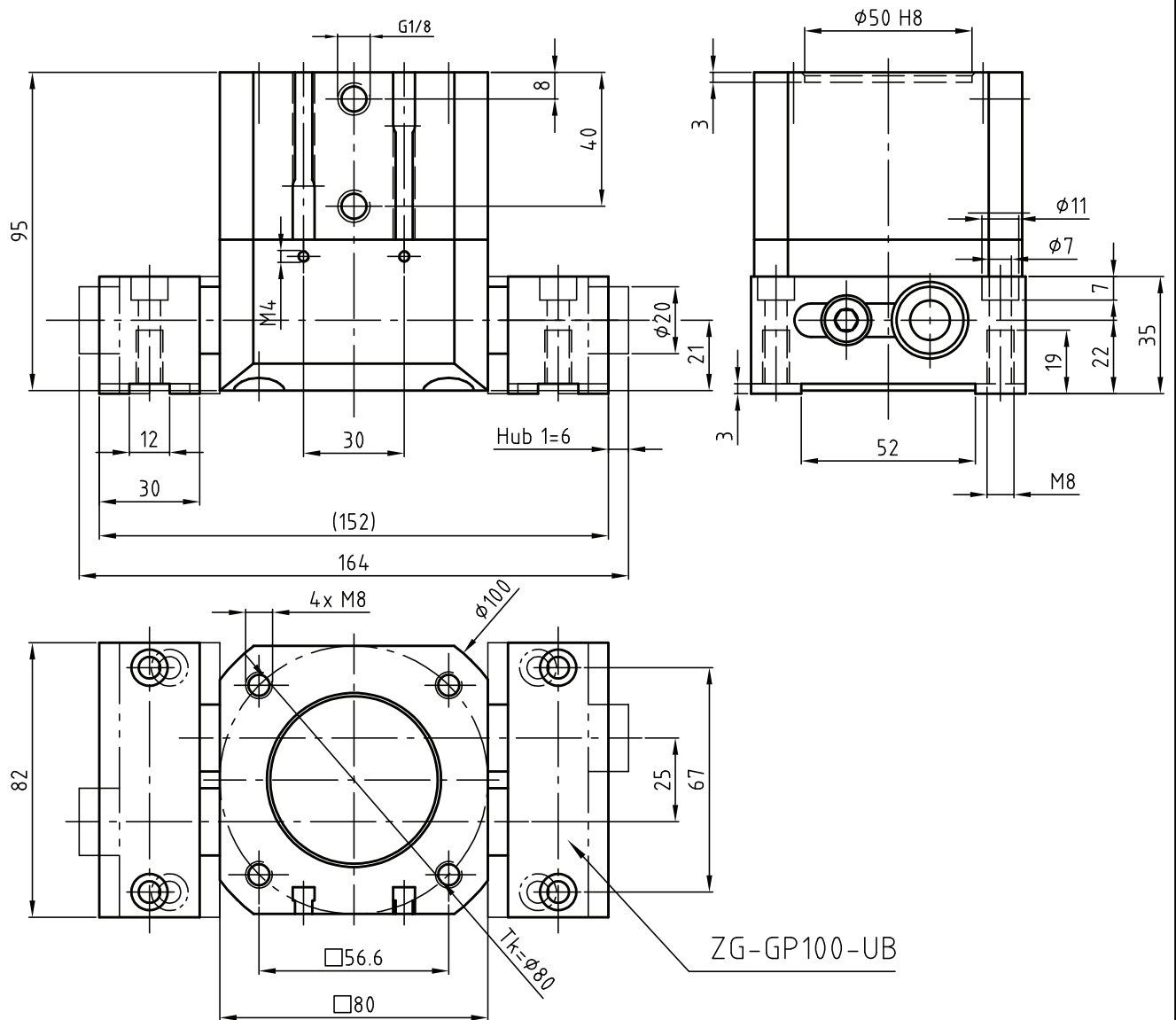
EG-GG100-DS	Gasket set for gripper size 100
-------------	---------------------------------



Pos.	Description
1	Cylinder ISO
2	Countersunk screw
3	Cap
4	Magnetic ring
5	Quadrat ring 1
6	Cone
7	Compression spring
8	Power unit 1/2
9	Quadrat ring 2
10	O- Ring
11	Housing
12	Cylinder head screw housing
13	Plain bearing bushing housing
14	Bolt 1/2
15	Universal jaw
16	Plain bearing bushing UB
17	Cylinder head screw UB



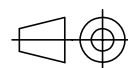




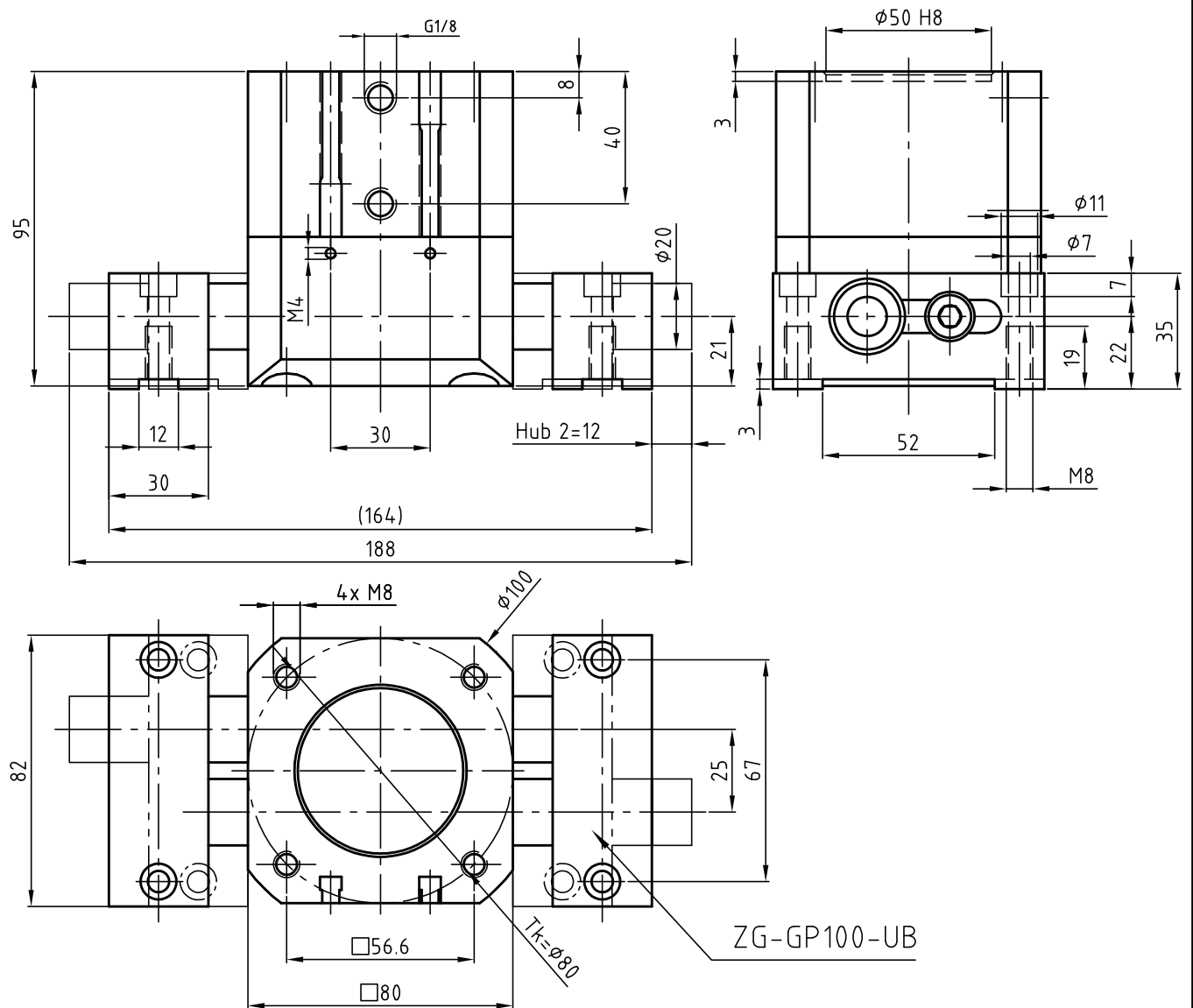
Bestellnummer  
G-GP100-I1-G0  
G-GP100-I1-0

Datum 10.11.2016 Maßstab 1:2

Zeichnungsnummer  
G-GP100-I1-0



**GRIP**  
GRIP GmbH Handhabungstechnik

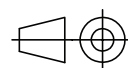


Datum 10.11.2016

Maßstab 1:2

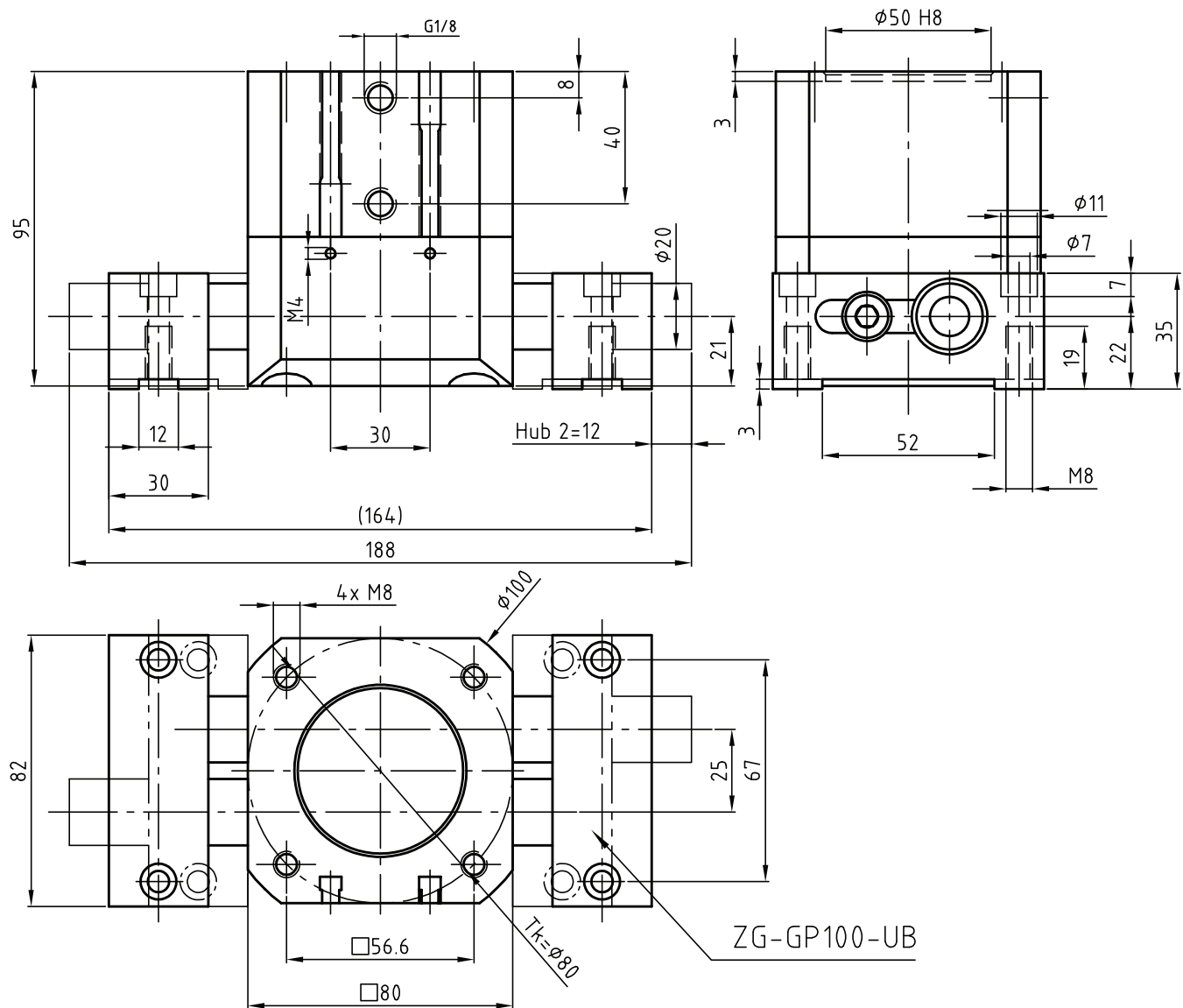
Zeichnungsnummer

G-GP100-12-GS



**GRIP**  
GRIP GmbH Handhabungstechnik

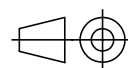




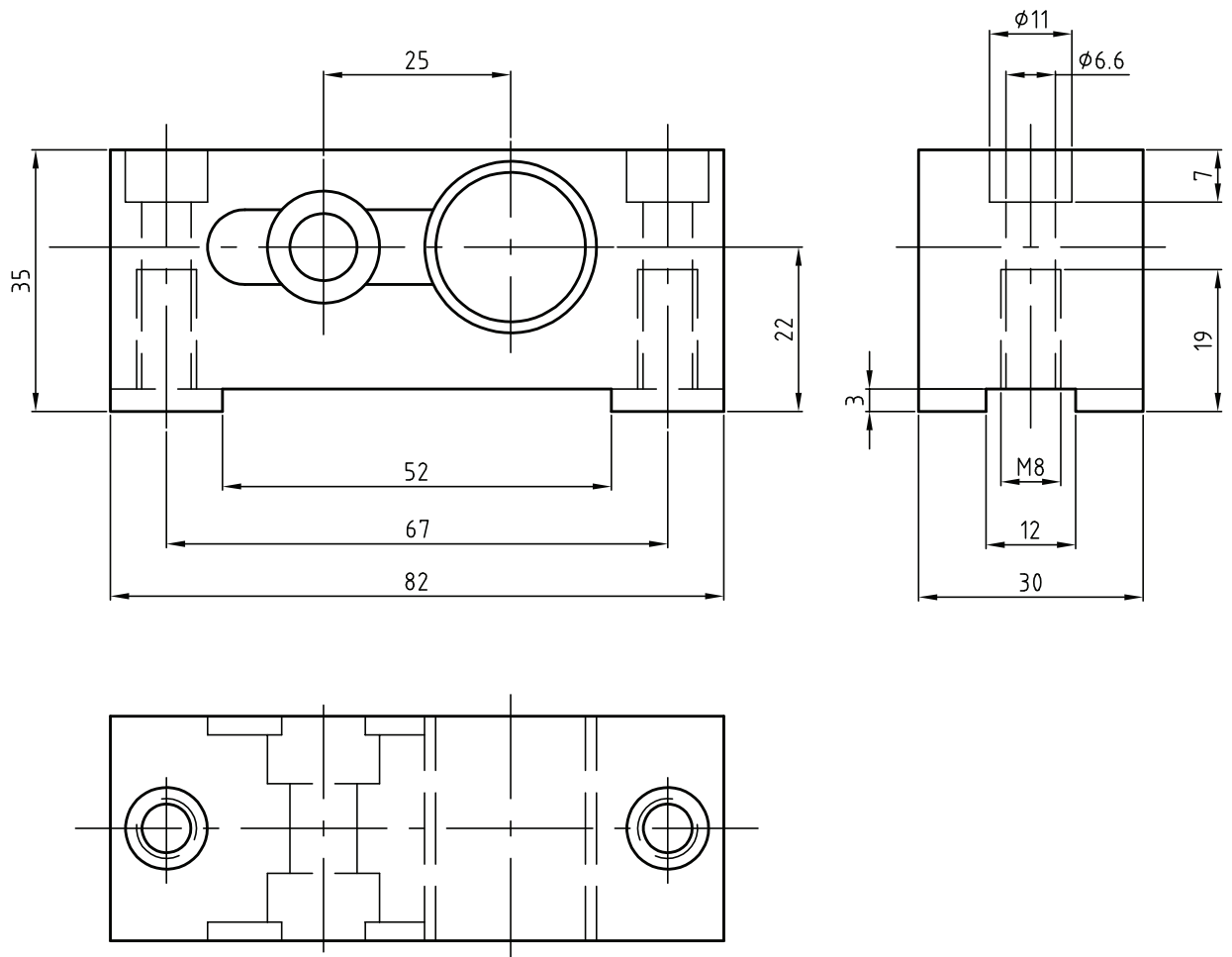
Bestellnummer  
G-GP100-I2-GÖ  
G-GP100-I2-O

Datum 10.11.2016 Maßstab 1:2

Zeichnungsnummer  
G-GP100-I2-O



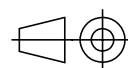
**GRIP**  
GRIP GmbH Handhabungstechnik



Datum 10.11.2016 Maßstab 1:1

Zeichnungsnummer

ZG-GP100-UB (Paar)



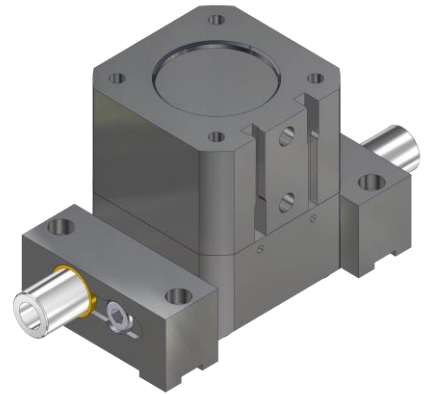
**GRIP**  
GRIP GmbH Handhabungstechnik

### Operating mode:

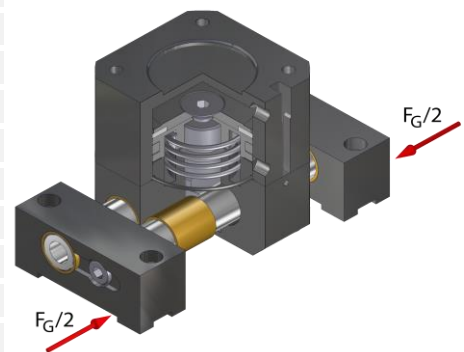
The double-acting cylinder is operated via pneum. compressed air and actuates the power unit. By two angularly arranged springs, which engage in the grooves of the bolts, the vertical is converted into horizontal movement.

### Advantages:

High life span  
Two stroke variants stroke 1 or stroke 2  
Mechanical interface according to DIN EN ISO 9409-12  
Low dead weight  
Optional gripping force safety device "opening" via pressure spring (7)  
Optional gripping force safety device "closing" via pressure spring (7)  
Depending on the mounting, gripping force safety device "closing" or "opening"  
Universal jaws (15) for easy mounting of specific fingers  
Piston position detection by means of proximity switch ZG-RSGU01 / 300-M8

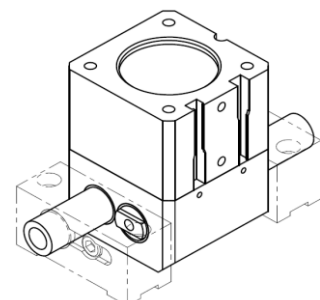


Technical specifications				GP125
Gripping force at 6 bar	FG [N]	stroke 1	opening	4900
			shutting	4100
		stroke 2	opening	2450
			shutting	2050
Gripping force factor	fg [N/ bar]	stroke 1	opening	816
			shutting	683
		stroke 2	opening	408
			shutting	341,5
Gripping force safety device	FS [N]	stroke 1	min.	1100
			max.	2200
		Stroke 2	min.	550
			max.	1100
System stroke per jaw	h [mm]	stroke 1	7	
		stroke 2	14	
Recommended component weight			mw [kg]	40
Weight gripper			mg [kg]	3
Operating pressure (with gripping force safety device)				5 ...6 bar
Operating pressure (without gripping force safety device)				2 ...6 bar
Air consumption per Hub			V [ccm]	70,4
Air connection			Pmax = 10 bar	G 1/8
Mounting flange			ISO	4 x M8 on TK ø100
Operating temperature range [°C]				-30 to +120



### Parallel gripper Ø125...

G-GP125-I1-GÖ	ISO-flange, Hub 1 gripping force safety device opening
G-GP125-I1-GS	ISO-flange, Hub 1 gripping force safety device shutting
G-GP125-I1-O	ISO-flange, Hub 1 without gripping force safety device
G-GP125-I2-GÖ	ISO-flange, Hub 2 gripping force safety device opening
G-GP125-I2-GS	ISO-flange, Hub 2 gripping force safety device shutting
G-GP125-I2-O	ISO-flange, Hub 2 without gripping force safety device

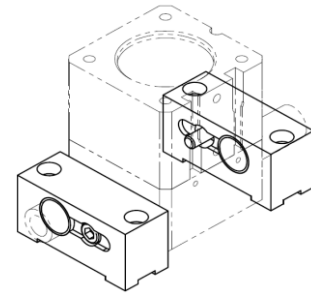


**Equipment GP**

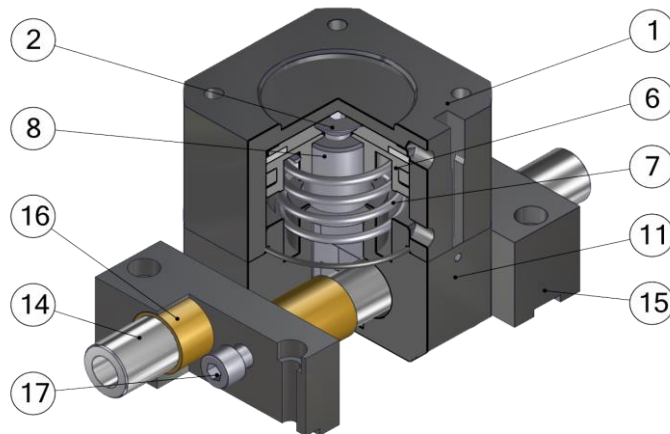
ZG-GP125-UB	Universal jaw for GP125 pair
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug

**Spare parts GG**

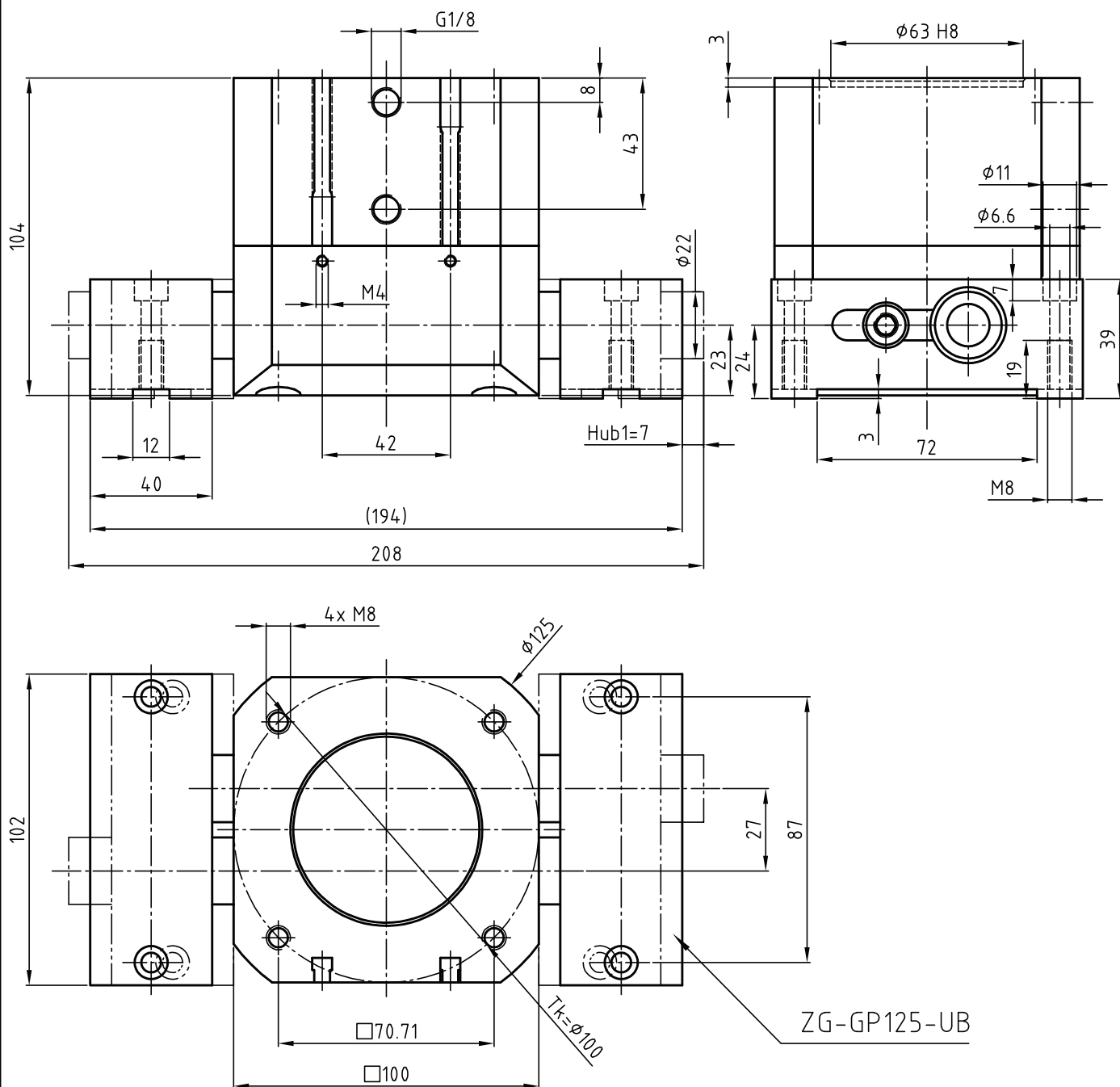
EG-GG125-DS	Gasket set for gripper size 125
-------------	---------------------------------



Pos.	Description
1	Cylinder ISO
2	Countersunk screw
3	Cap
4	Magnetic ring
5	Quadrat ring 1
6	Cone
7	Compression spring
8	Power unit 1/2
9	Quadrat ring 2
10	O- Ring
11	Housing
12	Cylinder head screw housing
13	Plain bearing bushing housing
14	Bolt 1/2
15	Universal jaw
16	Plain bearing bushing UB
17	Cylinder head screw UB







Bestellnummer

G-GP125-I1-G0

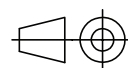
G-GP125-I1-0

Datum 10.11.2016

Maßstab 1:2

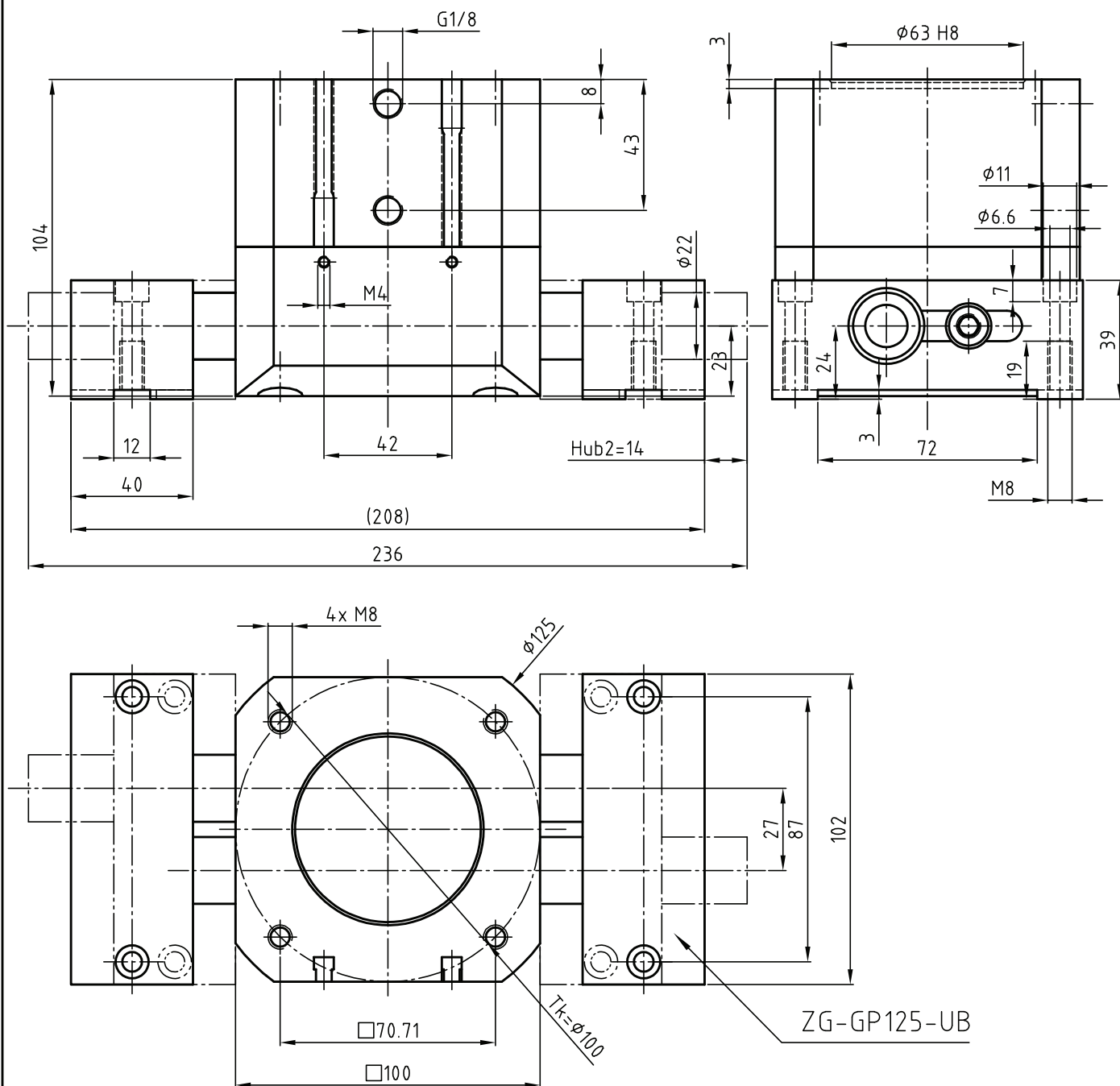
Zeichnungsnummer

G-GP125-I1-0



**GRIP**

GRIP GmbH Handhabungstechnik

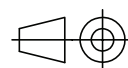


Datum 10.11.2016

Maßstab 1:2

Zeichnungsnummer

G-GP125-I2-GS

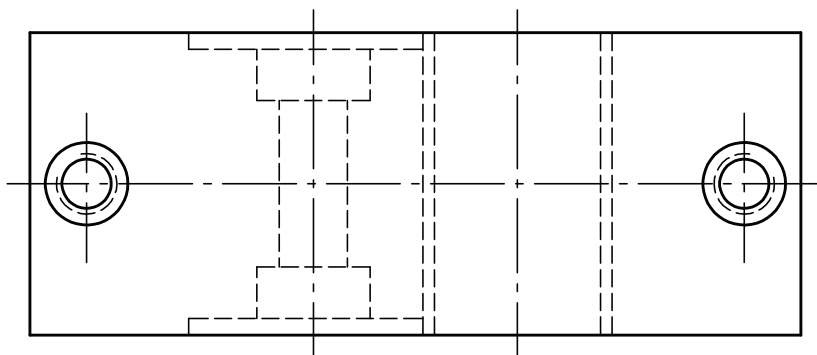
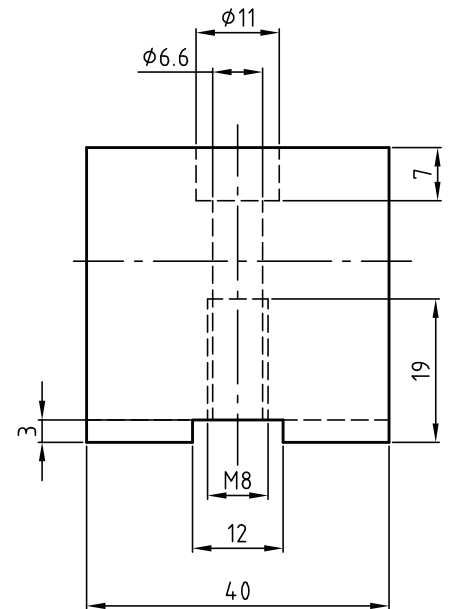
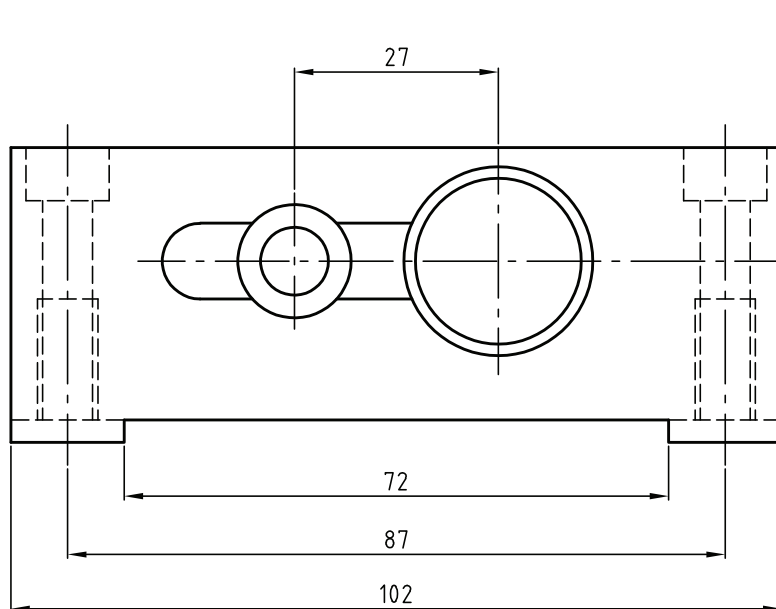


**GRIP**

GRIP GmbH Handhabungstechnik





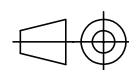


Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

ZG-GP125-UB



**GRIP**  
GRIP GmbH Handhabungstechnik

# GZ ANGULAR GRIPPER

The Angular Gripper with pivoting jaw movement. The double-acting cylinder is actuated by compressed air which actuates the movements. An eccentric mechanism ensures a long service life and a constant gripping torque. In contrast to the Parallel Gripper, the gripping force safety device can only be designed as a closing -GS- version.

## GZ Angular Gripper Advantages:

- Interface according to DIN EN ISO 9409-1
- Low weight made of high-strength aluminum and steel
- Extremely Durable
- Eccentric drive for constant gripping torque over the entire gripping range
- Uniform torque over the entire opening and closing range of the fingers
- Opening angle has 60° degrees of adjustability
- Optional "closing" gripping force safety device
- Piston position communicated with a proximity switch ZG-RSGU01

GZ Angular Grippers can be modified to meet your needs. Please inquire about special applications.

## SIZES

GZ050

GZ063

GZ080

GZ100

GZ125



# G-GZ050

## Technical specifications

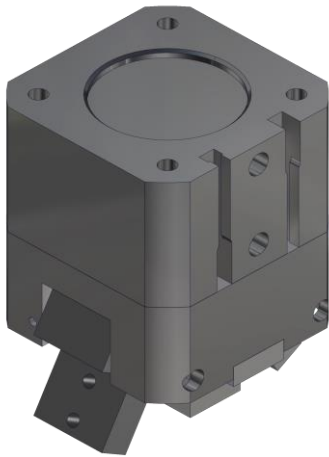
GRIP

### Operating mode:

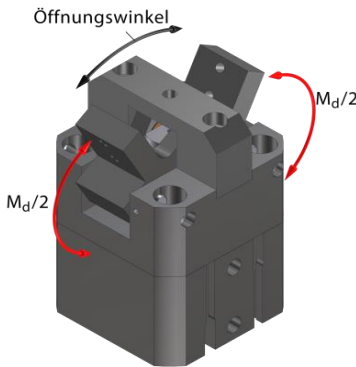
The double-acting cylinder is operated by pneum. compressed-air and actuates the power unit. An eccentric mechanism ensures a long service life and a constant gripping moment. In contrast to the parallel gripper, the gripping safety device is only capable of being closed -GS-.

### Advantages:

- High service life by robust mechanics
- Constant torque over the entire opening and closing range of the fingers
- Mechanical interface according to DIN EN ISO 9409-1
- Low dead weight
- Optional gripping force safety device "shutting"
- Piston position monitoring using inductive proximity switch ZG-RSGU01 / 300-M8

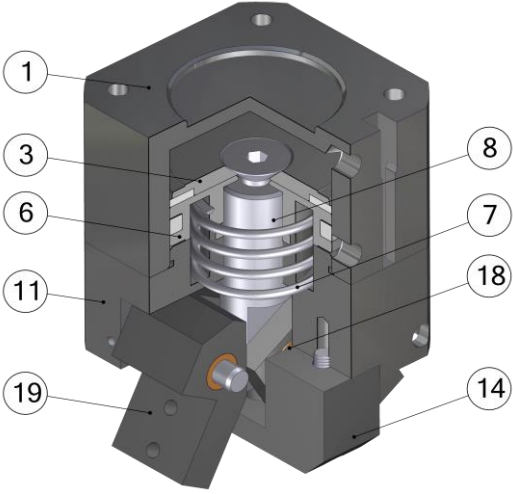


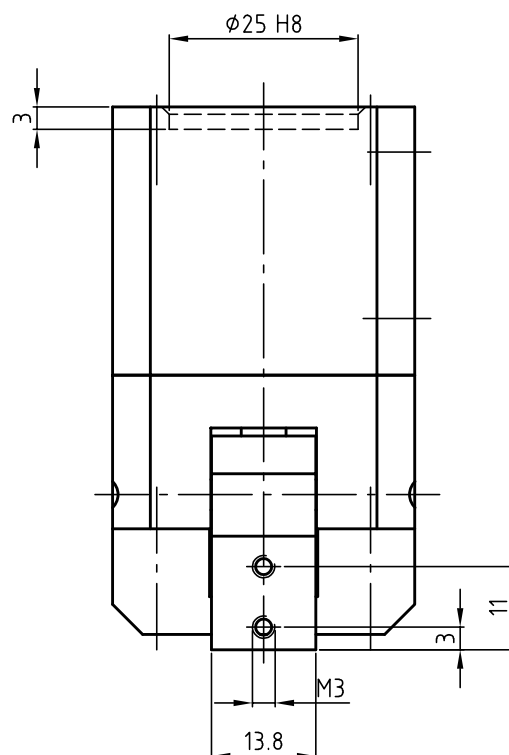
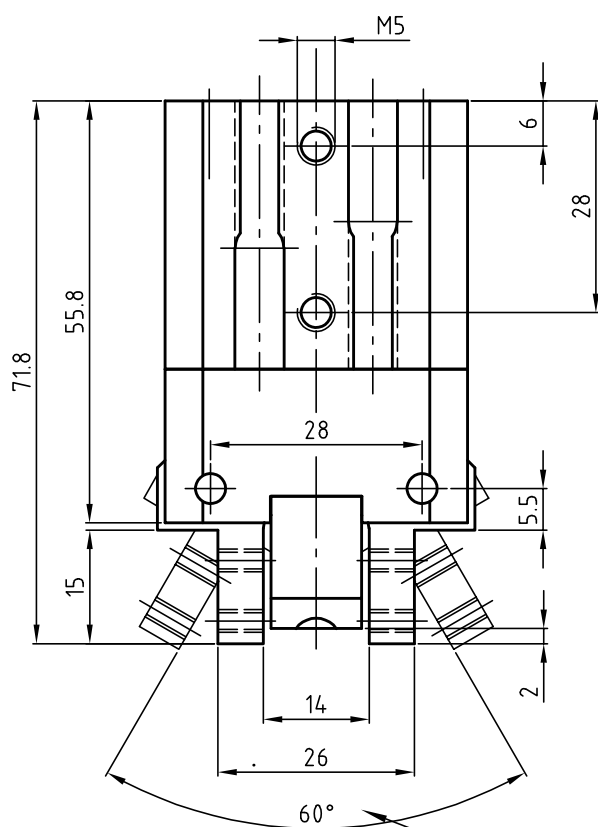
Technical specifications		GZ050
Torque at 6 bar	Md [Nm]	4,9
Md factor	fg [Nm/bar]	0,8
Opening angle		60°
Gripper weight	mg [kg]	0,3
Operating pressure (with gripping force safety device)		5 ...6 bar
Operating pressure (without gripping force safety device)		2 ...6 bar
Air consumption	V [ccm]	4,2
Air supply	Pmax = 10 bar	M5
Mounting flange	ISO	4 x M4 - TK ø40
Operating temperature range [°C]		-30 to +120



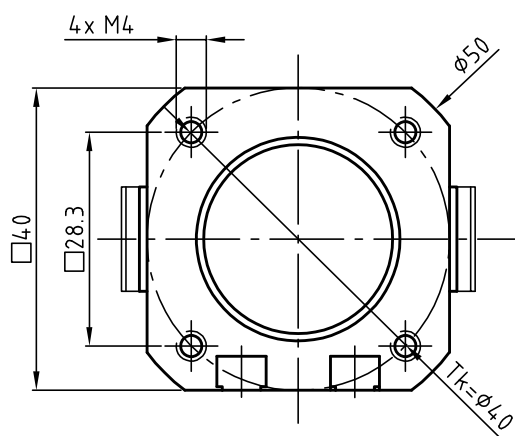
Pos.	Description
1	Cylinder ISO
2	Counter sunk screw, galvanized
3	Piston cover
4	Magnetic ring
5	Sealing ring 1
6	Piston
7	Pressure spring
8	Power unit
9	Sealing ring 2
10	O-Ring
11	Housing
12	Cylindrical pin finger
13	Cylinder screw housing
14	Stop
15	Cylinder screw stop
16	Setscrew power unit
17	Sinter bronze connection
18	Eccentric
19	Finger
20	Cylindrical pin eccentric

Pincer gripper Ø50...	
G-GZ050-IGS	ISO-flange gripping force safety device shutting
G-GZ050-IO	ISO-flange without gripping force safety device
Accessories GZ	
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug
Spare Parts GG	
EG-GG050-DS	Gasket kit for gripper size 050





mittels zentralem Endschlag  
von 0° bis 60°  
stufenlos einstellbar



Bestellnummer

G-GZ050-IGS

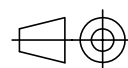
G-GZ050-IO

Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GZ050-IO



**GRIP**

GRIP GmbH Handhabungstechnik

# G-GZ063

## Technical specifications

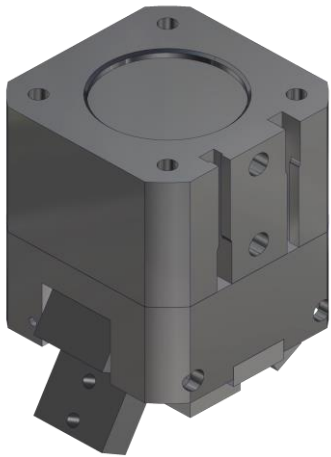
GRIP

### Operating mode:

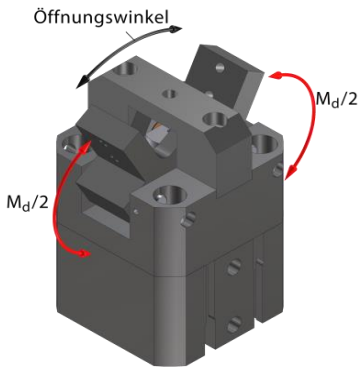
The double-acting cylinder is operated by pneum. compressed-air and actuates the power unit. An eccentric mechanism ensures a long service life and a constant gripping moment. In contrast to the parallel gripper, the gripping safety device is only capable of being closed -GS-.

### Advantages:

- High service life by robust mechanics
- Constant torque over the entire opening and closing range of the fingers
- Mechanical interface according to DIN EN ISO 9409-1
- Low dead weight
- Optional gripping force safety device "shutting"
- Piston position monitoring using inductive proximity switch ZG-RSGU01 / 300-M8

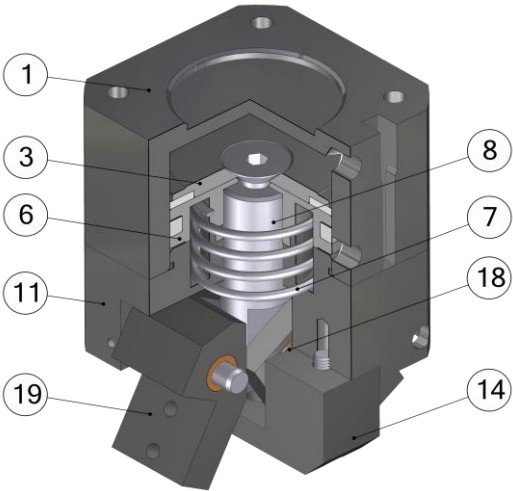


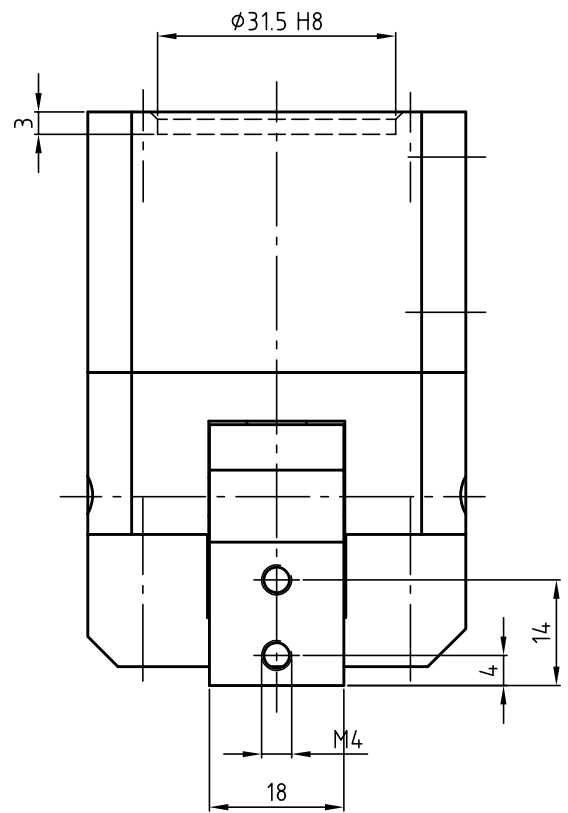
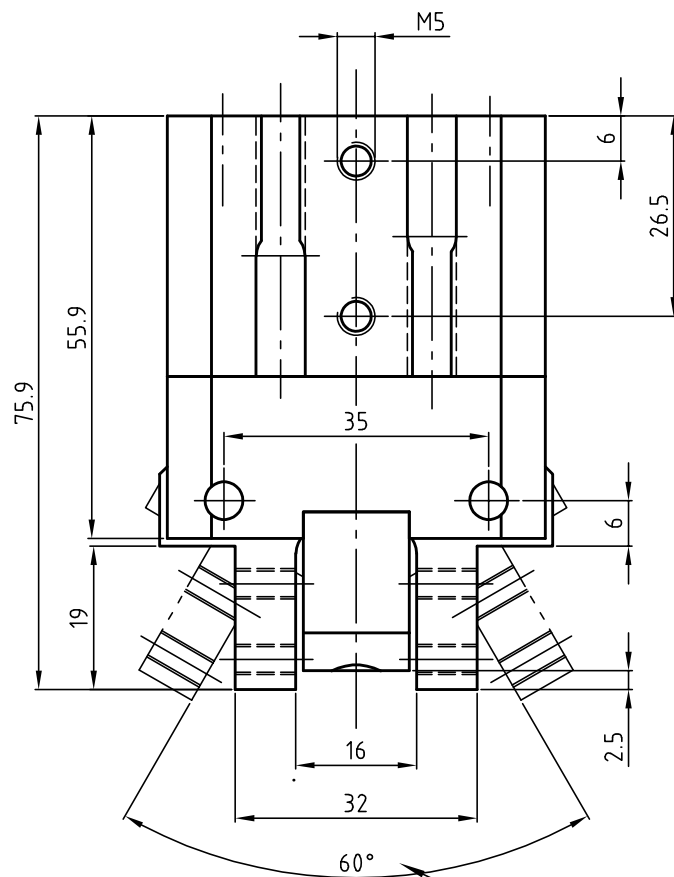
Technical specifications		GZ063
Torque at 6 bar	Md [Nm]	11,4
Md factor	fg [Nm/bar]	1,9
Opening angle		60°
Gripper weight	mg [kg]	0,4
Operating pressure (with gripping force safety device)		5 ...6 bar
Operating pressure (without gripping force safety device)		2 ...6 bar
Air consumption	V [ccm]	10
Air supply	Pmax = 10 bar	M5
Mounting flange	ISO	4 x M5 - TK ø50
Operating temperature range [°C]		-30 to +120



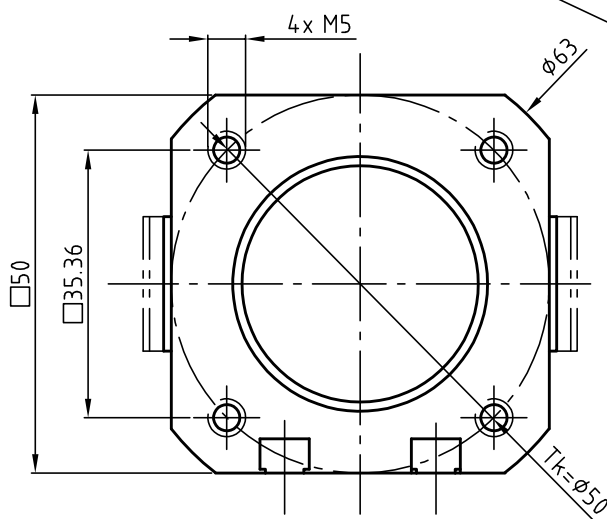
Pos.	Description
1	Cylinder ISO
2	Counter sunk screw, galvanized
3	Piston cover
4	Magnetic ring
5	Sealing ring 1
6	Piston
7	Pressure spring
8	Power unit
9	Sealing ring 2
10	O-Ring
11	Housing
12	Cylindrical pin finger
13	Cylinder screw housing
14	Stop
15	Cylinder screw stop
16	Setscrew power unit
17	Sinter bronze connection
18	Eccentric
19	Finger
20	Cylindrical pin eccentric

Pincer gripper Ø63...	
G-GZ063-IGS	ISO-flange gripping force safety device shutting
G-GZ063-IO	ISO-flange without gripping force safety device
Accessories GZ	
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug
Spare Parts GG	
EG-GG063-DS	Gasket kit for gripper size 063





mittels zentralem Einschlag  
von 0° bis 60°  
stufenlos einstellbar



Bestellnummer

G-GZ063-IGS

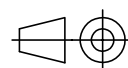
G-GZ063-IO

Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GZ063-IO



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-GZ080

## Technical specifications

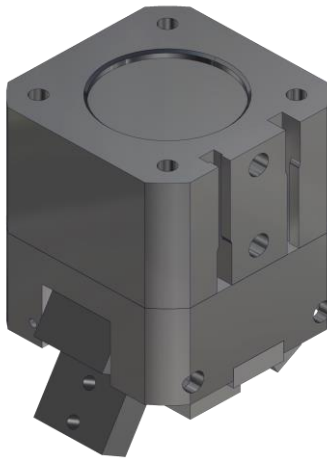
GRIP

### Operating mode:

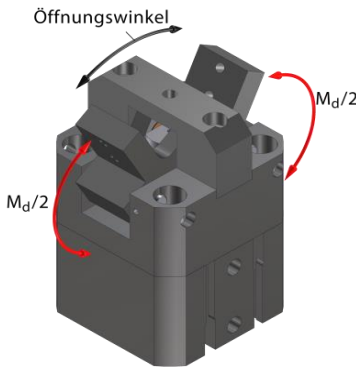
The double-acting cylinder is operated by pneum. compressed-air and actuates the power unit. An eccentric mechanism ensures a long service life and a constant gripping moment. In contrast to the parallel gripper, the gripping safety device is only capable of being closed -GS-.

### Advantages:

- High service life by robust mechanics
- Constant torque over the entire opening and closing range of the fingers
- Mechanical interface according to DIN EN ISO 9409-1
- Low dead weight
- Optional gripping force safety device "shutting"
- Piston position monitoring using inductive proximity switch ZG-RSGU01 / 300-M8

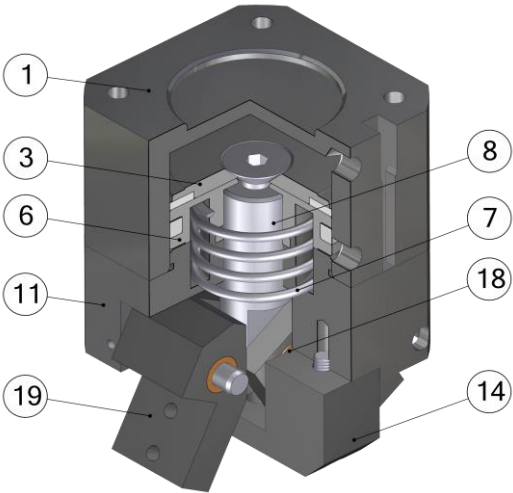


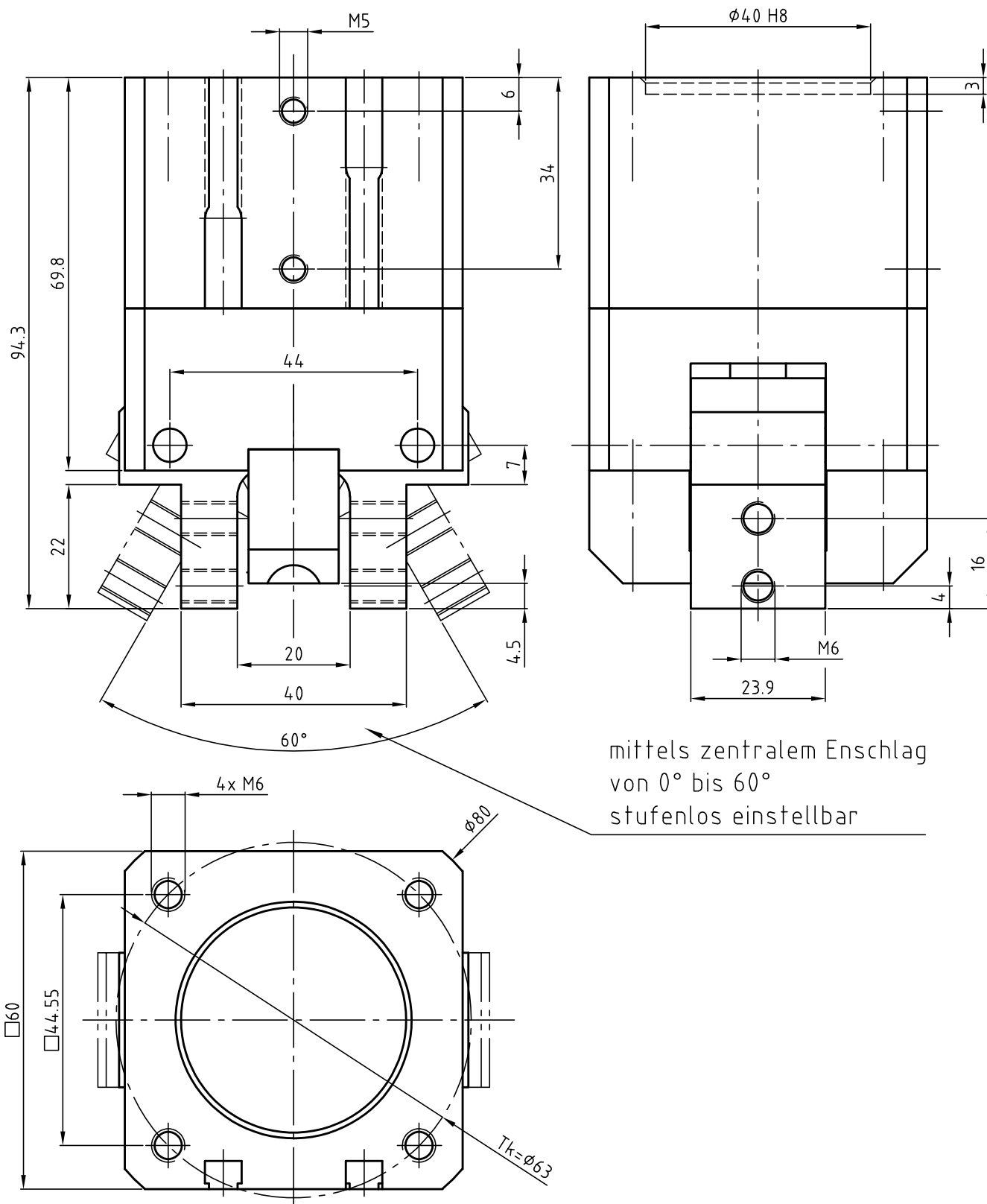
Technical specifications		GZ080
Torque at 6 bar	Md [Nm]	22
Md factor	fg [Nm/bar]	3,6
Opening angle		60°
Gripper weight	mg [kg]	0,9
Operating pressure (with gripping force safety device)		5 ...6 bar
Operating pressure (without gripping force safety device)		2 ...6 bar
Air consumption	V [ccm]	19,6
Air supply	Pmax = 10 bar	M5
Mounting flange	ISO	4 x M6 - TK ø63
Operating temperature range [°C]		-30 to +120



Pos.	Description
1	Cylinder ISO
2	Counter sunk screw, galvanized
3	Piston cover
4	Magnetic ring
5	Sealing ring 1
6	Piston
7	Pressure spring
8	Power unit
9	Sealing ring 2
10	O-Ring
11	Housing
12	Cylindrical pin finger
13	Cylinder screw housing
14	Stop
15	Cylinder screw stop
16	Setscrew power unit
17	Sinter bronze connection
18	Eccentric
19	Finger
20	Cylindrical pin eccentric

Pincer gripper Ø80...	
G-GZ080-IGS	ISO-flange gripping force safety device shutting
G-GZ080-IO	ISO-flange without gripping force safety device
Accessories GZ	
ZG-RSGU-01	Signal transmitter with LED
ZG-RSGU01-300-M8	Signal transmitter with LED, with M8 plug
Spare Parts GG	
EG-GG080-DS	Gasket kit for gripper size 080





Bestellnummer

G-GZ080-IGS

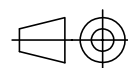
G-GZ080-IO

Datum 10.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GZ080-IO



**GRIP**

GRIP GmbH Handhabungstechnik



## G-GZ100

### Technical specifications

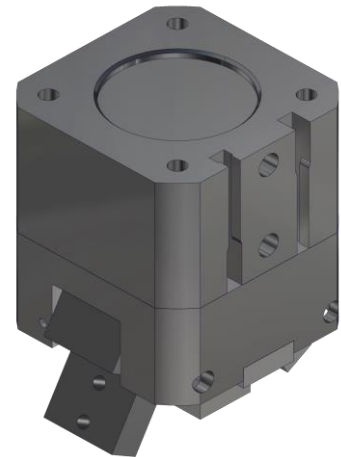
# GRIP

#### Operating mode:

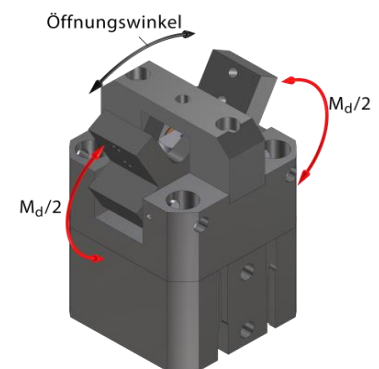
The double-acting cylinder is operated by pneum. compressed-air and actuates the power unit. An eccentric mechanism ensures a long service life and a constant gripping moment. In contrast to the parallel gripper, the gripping safety device is only capable of being closed -GS-.

#### Advantages:

High service life by robust mechanics  
Constant torque over the entire opening and closing range of the fingers  
Mechanical interface according to DIN EN ISO 9409-1  
Low dead weight  
Optional gripping force safety device "shutting"  
Piston position monitoring using inductive proximity switch ZG-RSGU01 / 300-M8



Technical specifications		GZ100
Torque at 6 bar	Md [Nm]	47,6
Md factor	fg [Nm/bar]	7,9
Opening angle		60°
Gripper weight	mg [kg]	1,9
Operating pressure (with gripping force safety device)		5 ...6 bar
Operating pressure (without gripping force safety device)		2 ...6 bar
Air consumption	V [ccm]	38,6
Air supply	Pmax = 10 bar	G 1/8
Mounting flange	ISO	4 x M8 - TK ø80
Operating temperature range [°C]		-30 to +120



Pos.	Description
1	Cylinder ISO
2	Counter sunk screw, galvanized
3	Piston cover
4	Magnetic ring
5	Sealing ring 1
6	Piston
7	Pressure spring
8	Power unit
9	Sealing ring 2
10	O-Ring
11	Housing
12	Cylindrical pin finger
13	Cylinder screw housing
14	Stop
15	Cylinder screw stop
16	Setscrew power unit
17	Sinter bronze connection
18	Eccentric
19	Finger
20	Cylindrical pin eccentric

#### Pincer gripper Ø100...

G-GZ100-IGS ISO-flange gripping force safety device shutting

G-GZ100-IO ISO-flange without gripping force safety device

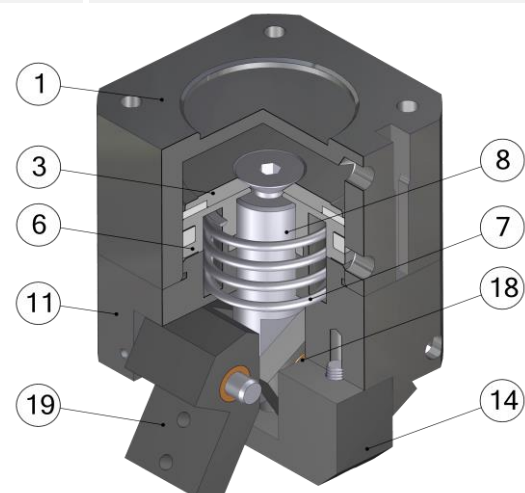
#### Accessories GZ

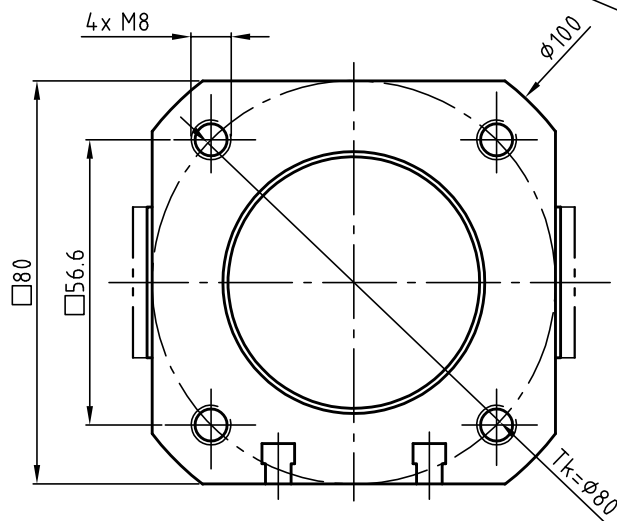
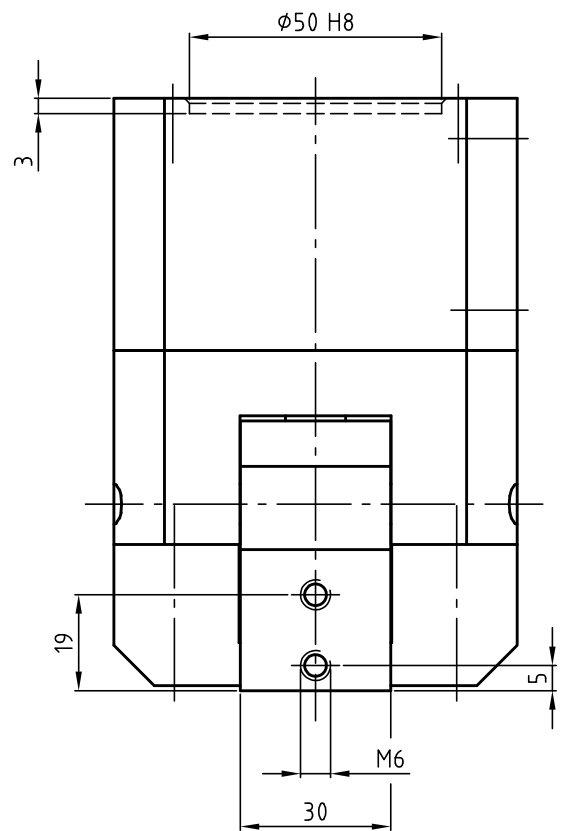
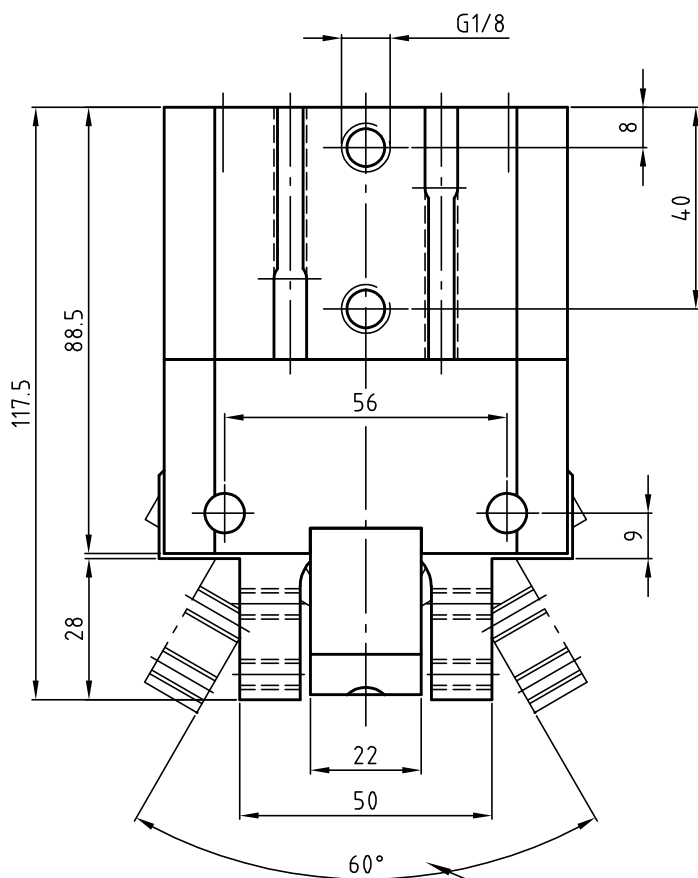
ZG-RSGU-01 Signal transmitter with LED

ZG-RSGU01-300-M8 Signal transmitter with LED, with M8 plug

#### Spare Parts GG

EG-GG100-DS Gasket kit for gripper size 100





mittels zentralem Endschlag  
von 0° bis 60°  
stufenlos einstellbar

Bestellnummer

G-GZ100-IGS

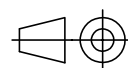
G-GZ100-IO

Datum 10.11.2016

Maßstab 1:1.5

Zeichnungsnummer

G-GZ100-IO



**GRIP**  
GRIP GmbH Handhabungstechnik

# G-GZ125

## Technical specifications

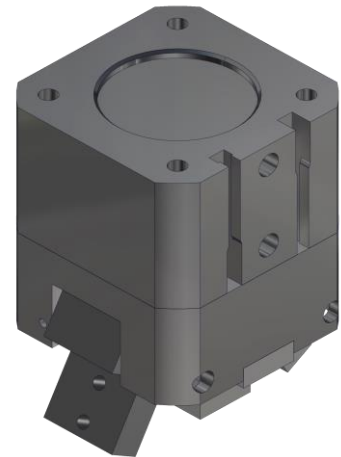
# GRIP

### Operating mode:

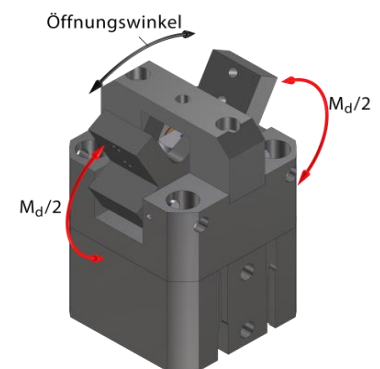
The double-acting cylinder is operated by pneum. compressed-air and actuates the power unit. An eccentric mechanism ensures a long service life and a constant gripping moment. In contrast to the parallel gripper, the gripping safety device is only capable of being closed -GS-.

### Advantages:

- High service life by robust mechanics
- Constant torque over the entire opening and closing range of the fingers
- Mechanical interface according to DIN EN ISO 9409-1
- Low dead weight
- Optional gripping force safety device "shutting"
- Piston position monitoring using inductive proximity switch ZG-RSGU01 / 300-M8



Technical specifications		GZ125
Torque at 6 bar	Md [Nm]	87,5
Md factor	fg [Nm/bar]	14,6
Opening angle		60°
Gripper weight	mg [kg]	3
Operating pressure (with gripping force safety device)		5 ...6 bar
Operating pressure (without gripping force safety device)		2 ...6 bar
Air consumption	V [ccm]	70,4
Air supply	Pmax = 10 bar	G 1/8
Mounting flange	ISO	4 x M8 - TK ø100
Operating temperature range [°C]		-30 to +120



Pos.	Description
1	Cylinder ISO
2	Counter sunk screw, galvanized
3	Piston cover
4	Magnetic ring
5	Sealing ring 1
6	Piston
7	Pressure spring
8	Power unit
9	Sealing ring 2
10	O-Ring
11	Housing
12	Cylindrical pin finger
13	Cylinder screw housing
14	Stop
15	Cylinder screw stop
16	Setscrew power unit
17	Sinter bronze connection
18	Eccentric
19	Finger
20	Cylindrical pin eccentric

### Pincer gripper Ø125...

G-GZ125-IGS ISO-flange gripping force safety device shutting

G-GZ125-IO ISO-flange without gripping force safety device

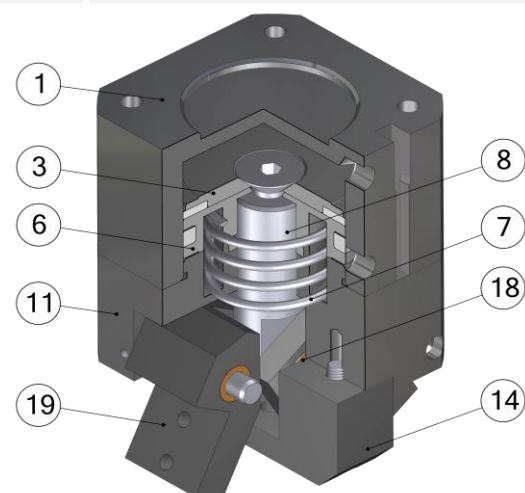
### Accessories GZ

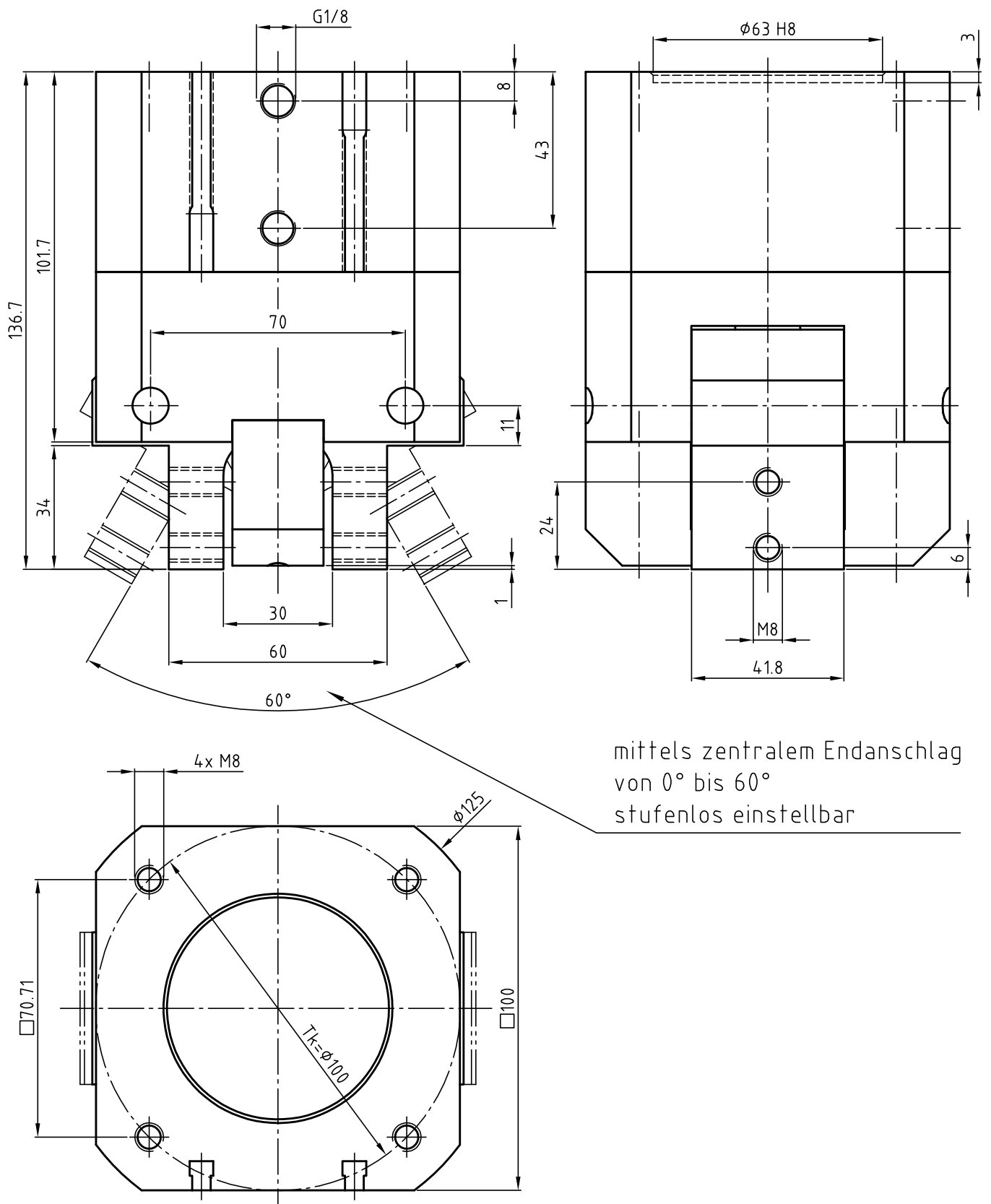
ZG-RSGU-01 Signal transmitter with LED

ZG-RSGU01-300-M8 Signal transmitter with LED, with M8 plug

### Spare Parts GG

EG-GG125-DS Gasket kit for gripper size 125





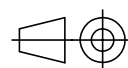
Bestellnummer  
G-GZ125-IGS  
G-GZ125-IO

Datum 10.11.2016

Maßstab 1:1.5

Zeichnungsnummer

G-GZ125-IO



**GRIP**  
GRIP GmbH Handhabungstechnik

# GI INTERNAL GRIPPER

The GI Internal Gripper is an inflatable bellows gripper for internal gripping. The Internal Grippers plunge into bore holes. Applying pneumatic pressure to the silicone membrane increases the outer diameter. This friction against the bore hole wall holds the Gripper in place. The silicone membrane automatically retracts once the pressure is relieved.

## GI Internal Gripper Advantages:

- Enables gripping of objects with small bores
- Tapered end ensures smooth insertion/operation
- Available in multiple sizes 5 mm–20 mm (1 mm increments)
- Operating temperature range: –40 to 300°Celsius
- Durable - over 500.000 cycles
- Replaceable silicon bladder
- Lightweight
- Simple gripping principle
- Excellent value
- Ideal for injection molding applications

GI Internal Grippers can be modified to meet your needs. Please inquire about special applications.

## SIZES

GI005–008

GI009–012

GI013–016

GI017–020



## G-GI005

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible

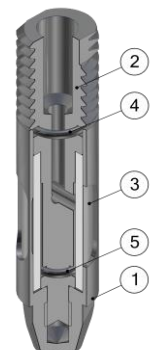
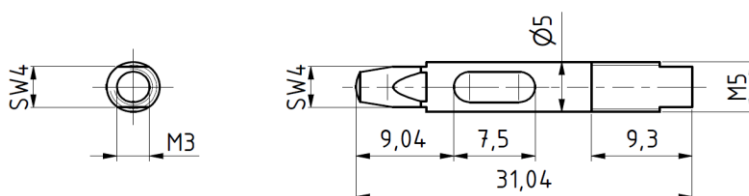
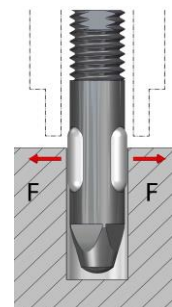
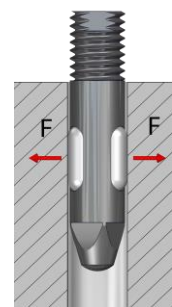


#### Technical specifications

	GI005
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	4
For bore diameter [mm]	5,1 – 6,0
Allowed component weight [kg]	0,4
Gripper weight [kg]	0.003
Compressed air connection Ø	M3
Assembly Ø	M5
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø005...

G-GI005 External diameter 5, screw thread M5

#### Replacement tube

EG-GI005-S for internal gripper GI005

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI006

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

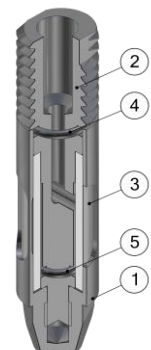
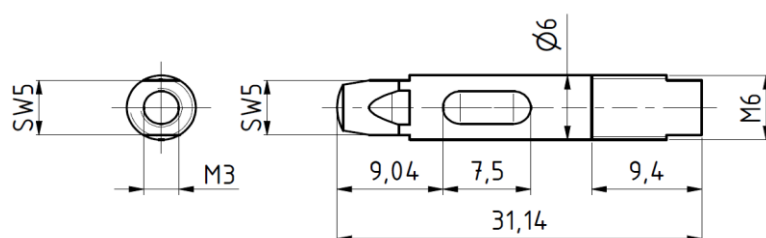
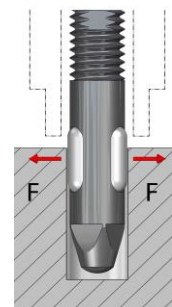
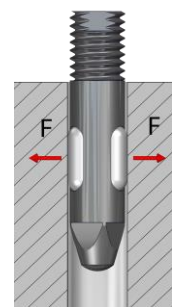
#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GI006
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	5
For bore diameter [mm]	6,1 – 7,0
Allowed component weight [kg]	0,5
Gripper weight [kg]	0.005
Compressed air connection Ø	M3
Assembly Ø	M6
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø006...

G-GI006 External diameter 6, screw thread M6

#### Replacement tube

EG-GI006-S for internal gripper GI006

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI007

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

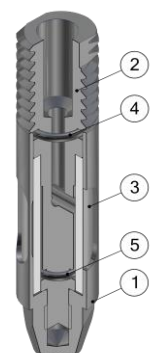
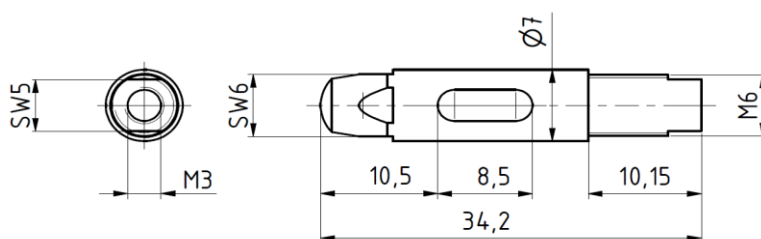
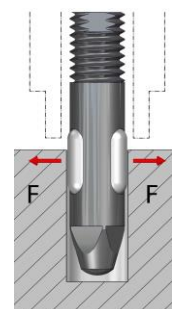
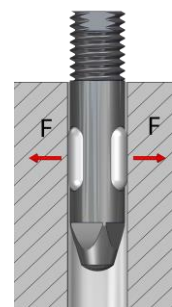
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI007
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	7
For bore diameter [mm]	7,1 – 8,0
Allowed component weight [kg]	0,7
Gripper weight [kg]	0.007
Compressed air connection Ø	M3
Assembly Ø	M6
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø007...

G-GI007 External diameter 7, screw thread M6

#### Replacement tube

EG-GI007-S for internal gripper GI007

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2



## G-GI008

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

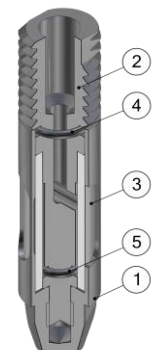
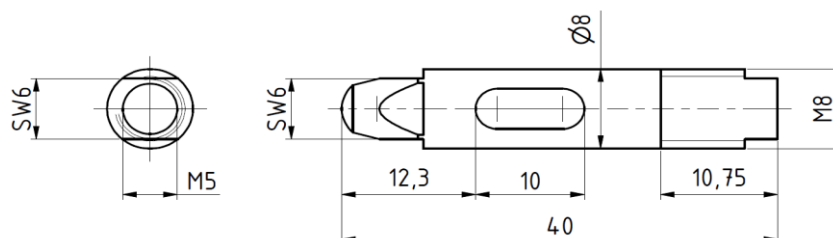
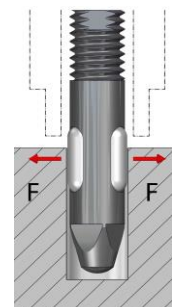
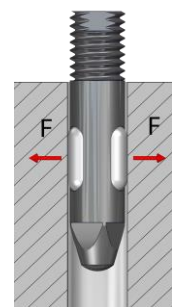
#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GI008
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	17
For bore diameter [mm]	8,1 – 9,0
Allowed component weight [kg]	1,7
Gripper weight [kg]	0.01
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



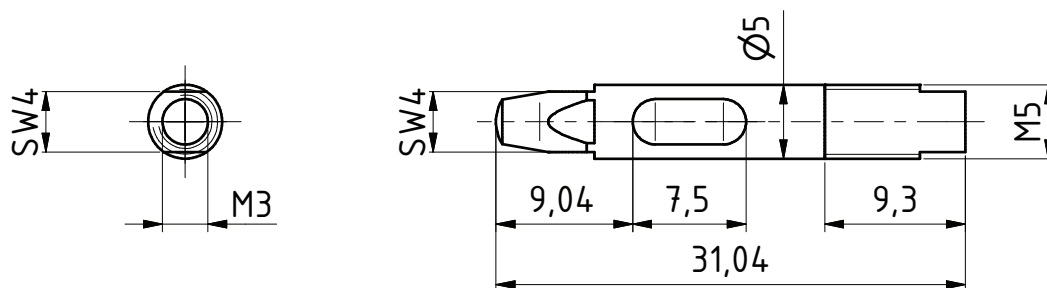
#### Internal gripper Ø008...

G-GI008 External diameter 8, screw thread M8

#### Replacement tube

EG-GI008-S for internal gripper GI008

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

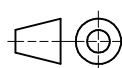


Datum 11.11.2016

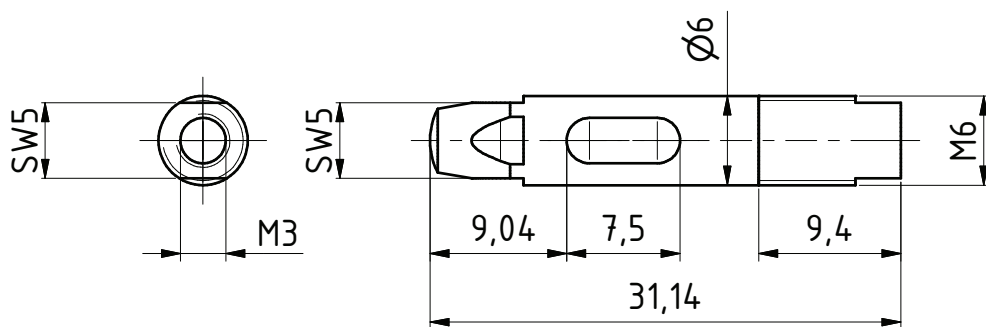
Maßstab 2:1

Zeichnungsnummer

G-GI005



**GRIP**  
GRIP GmbH Handhabungstechnik

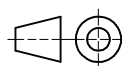


Datum 11.11.2016

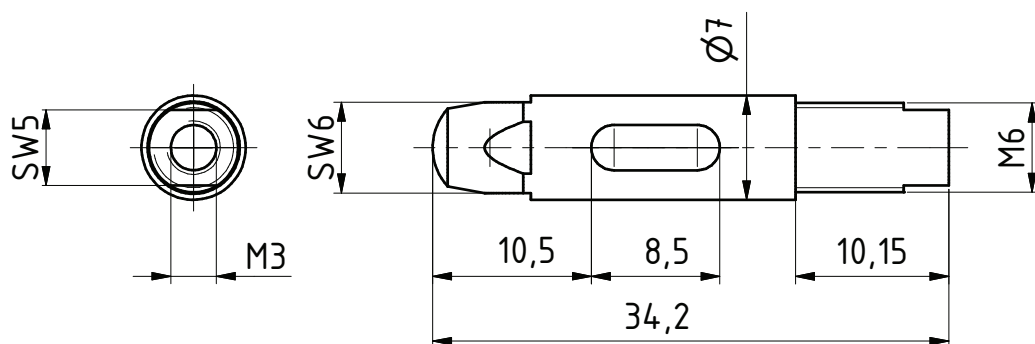
Maßstab 2:1

Zeichnungsnummer

G-GI006



**GRIP**  
GRIP GmbH Handhabungstechnik

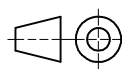


Datum 11.11.2016

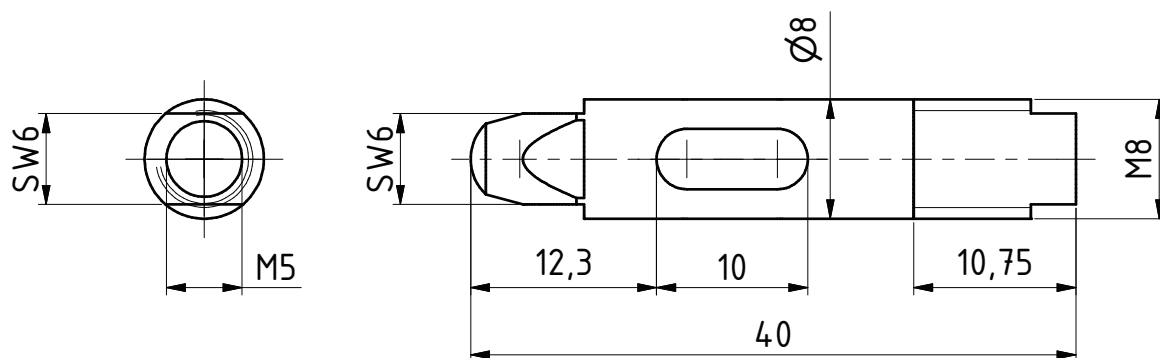
Maßstab 2:1

Zeichnungsnummer

G-GI007



**GRIP**  
GRIP GmbH Handhabungstechnik

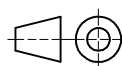


Datum 11.11.2016

Maßstab 2:1

Zeichnungsnummer

G-GI008



**GRIP**  
GRIP GmbH Handhabungstechnik

**Operating mode:**

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

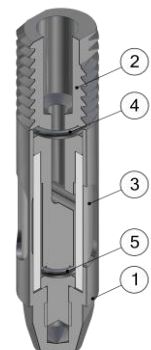
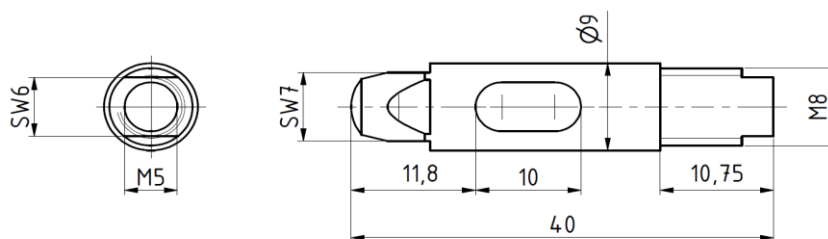
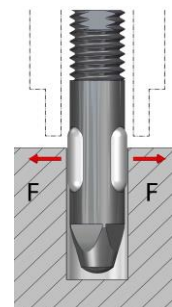
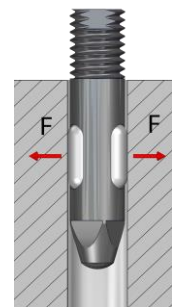
**Advantages:**

Minimum installation size possible  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GI009
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	17
For bore diameter [mm]	9,1 – 10,0
Allowed component weight [kg]	1,7
Gripper weight [kg]	0.012
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

**Internal gripper Ø009...**

G-GI009 External diameter 9, screw thread M8

**Replacement tube**

EG-GI009-S for internal gripper GI009

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI010

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

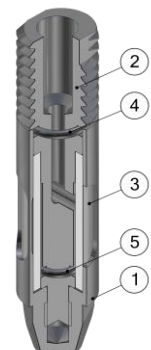
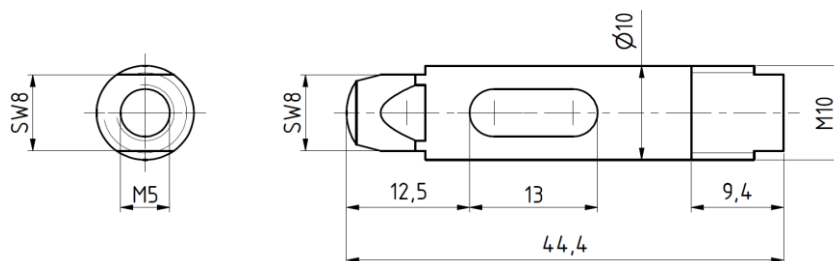
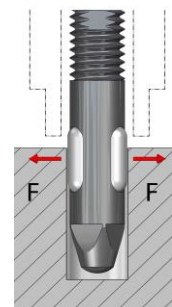
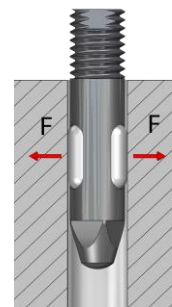
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI010
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	20
For bore diameter [mm]	10,1 – 11,0
Allowed component weight [kg]	2
Gripper weight [kg]	0.018
Compressed air connection Ø	M5
Assembly Ø	M10
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø010...

G-GI010 External diameter 10, screw thread M10

#### Replacement tube

EG-GI010-S for internal gripper GI010

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI011

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

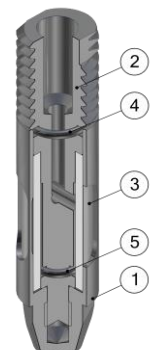
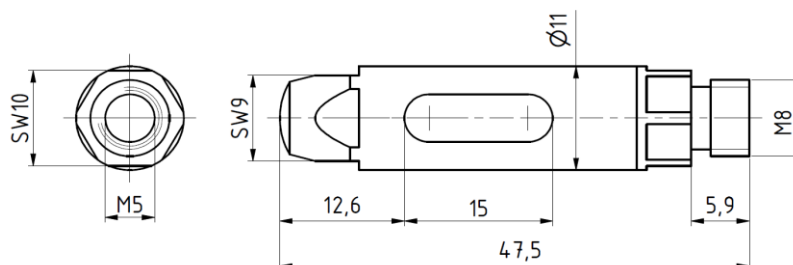
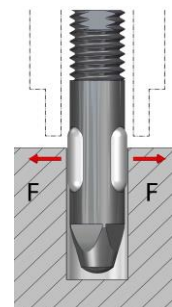
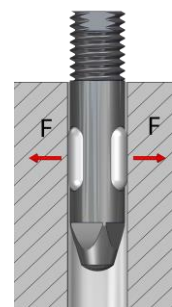
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI011
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	25
For bore diameter [mm]	11,1 – 12,0
Allowed component weight [kg]	2,5
Gripper weight [kg]	0,022
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø011...

G-GI011 External diameter 11, screw thread M8

#### Replacement tube

EG-GI011-S for internal gripper GI011

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2



## G-GI012

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible

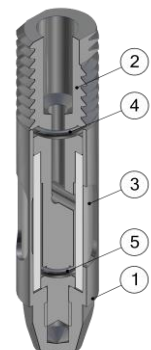
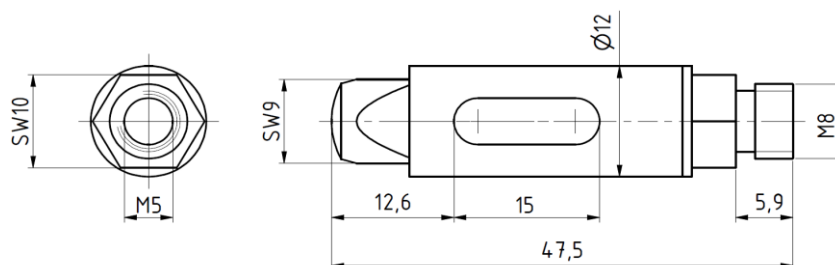
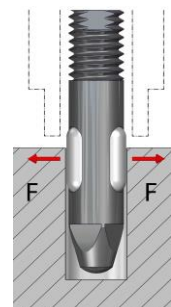
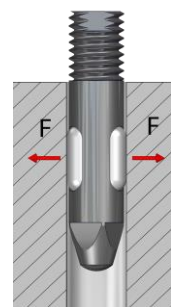


#### Technical specifications

	GI012
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	30
For bore diameter [mm]	12,1 – 13,5
Allowed component weight [kg]	3
Gripper weight [kg]	0,026
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



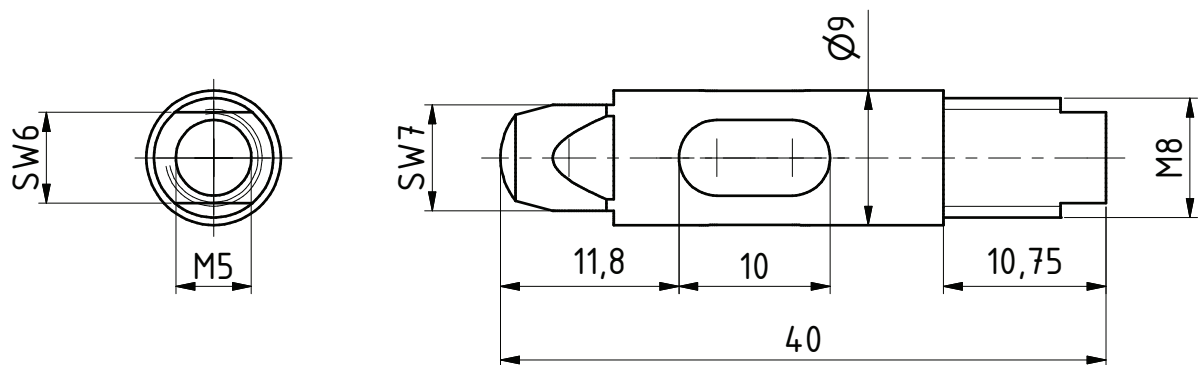
#### Internal gripper Ø012...

G-GI012 External diameter 12, screw thread M8

#### Replacement tube

EG-GI012-S for internal gripper GI012

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

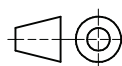


Datum 11.11.2016

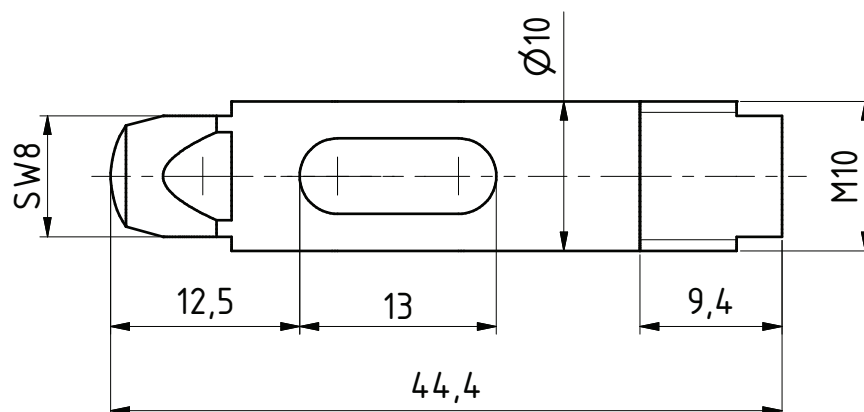
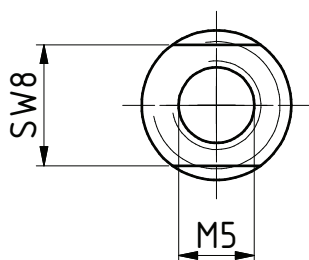
Maßstab 2:1

Zeichnungsnummer

G-GI009



**GRIP**  
GRIP GmbH Handhabungstechnik

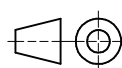


Datum 11.11.2016

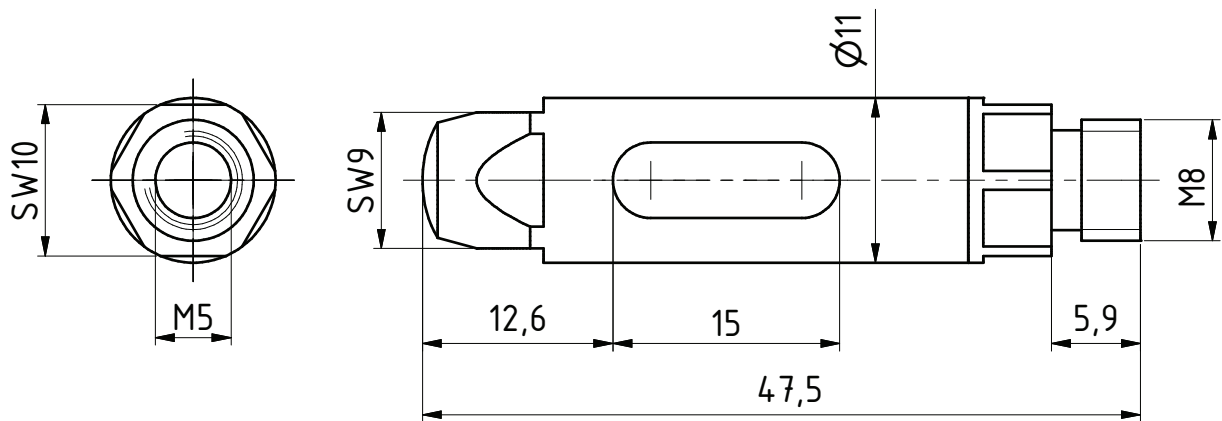
Maßstab 2:1

Zeichnungsnummer

G-GI010



**GRIP**  
GRIP GmbH Handhabungstechnik

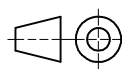


Datum 11.11.2016

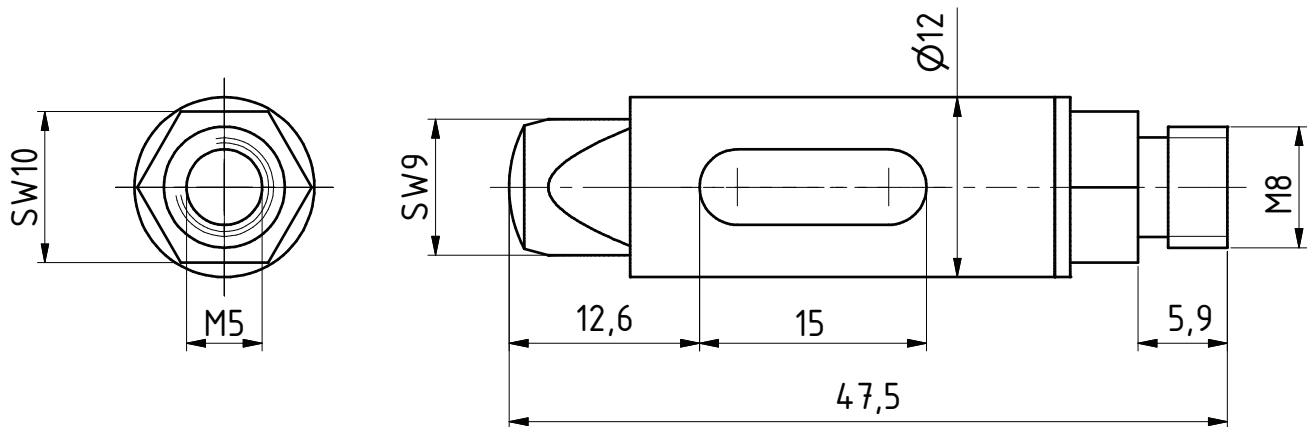
Maßstab 2:1

Zeichnungsnummer

G-GI011



**GRIP**  
GRIP GmbH Handhabungstechnik

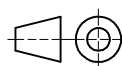


Datum 11.11.2016

Maßstab 2:1

Zeichnungsnummer

G-GI012



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-GI013

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

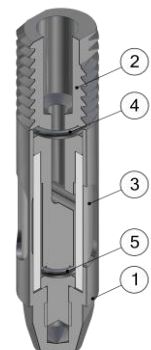
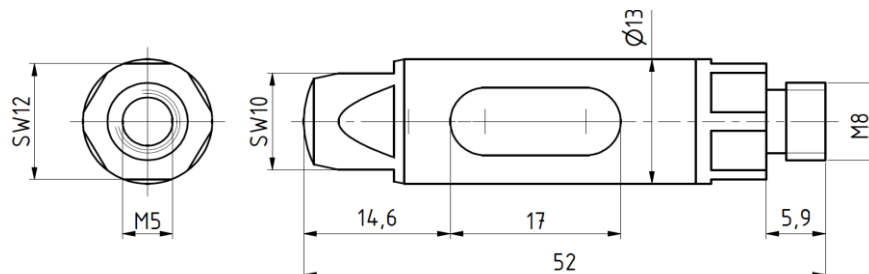
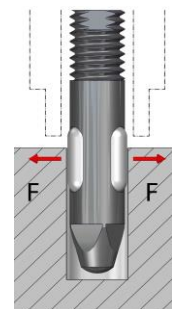
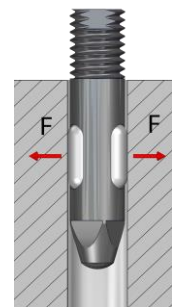
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI013
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	40
For bore diameter [mm]	13,1 – 14,5
Allowed component weight [kg]	4
Gripper weight [kg]	0.032
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



Internal gripper Ø013...	
G-GI013	External diameter 13, screw thread M8
Replacement tube	
EG-GI013-S	for internal gripper GI013

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI014

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

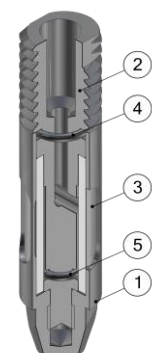
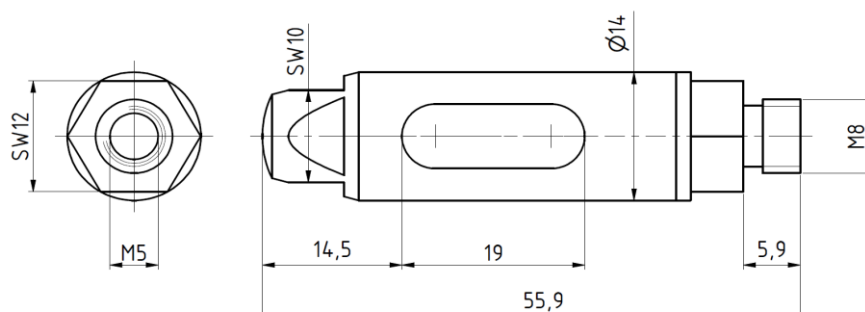
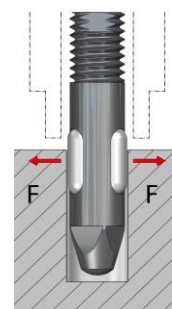
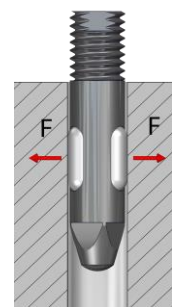
#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GI014
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	45
For bore diameter [mm]	14,1 – 15,5
Allowed component weight [kg]	4,5
Gripper weight [kg]	0.04
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø014...

G-GI014 External diameter 14, screw thread M8

#### Replacement tube

EG-GI014-S for internal gripper GI014

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI015

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

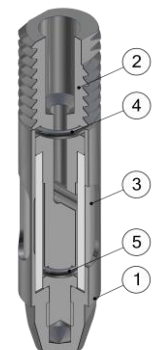
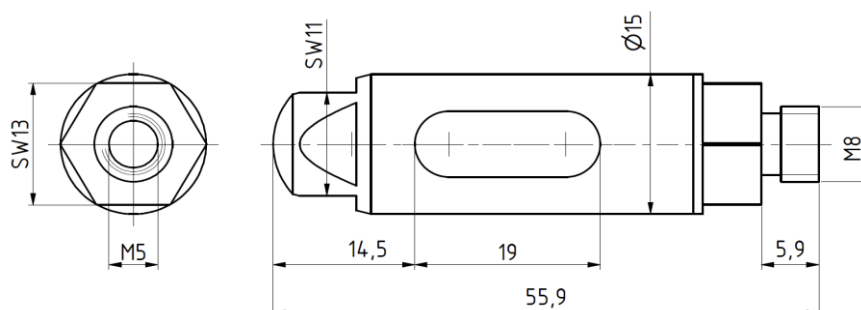
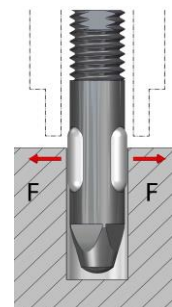
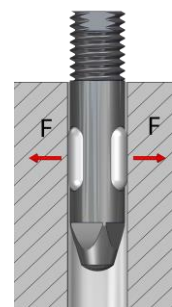
#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GI015
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	45
For bore diameter [mm]	15,1 – 16,5
Allowed component weight [kg]	4,5
Gripper weight [kg]	0.046
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø015...

G-GI015 External diameter 15, screw thread M8

#### Replacement tube

EG-GI015-S for internal gripper GI015

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2



## G-GI016

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

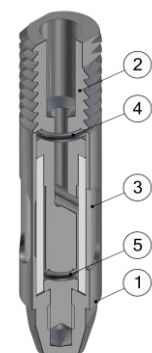
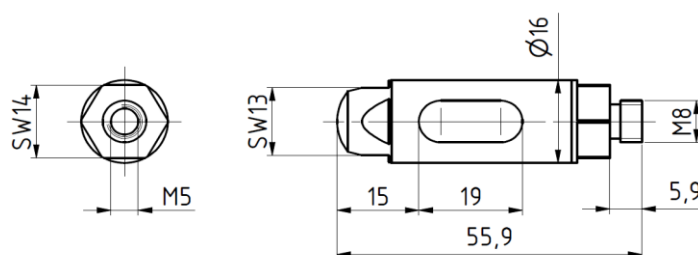
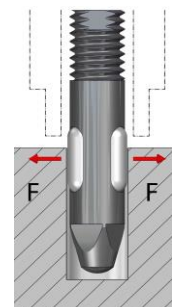
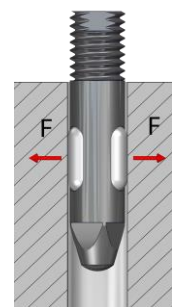
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI016
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	16,1 – 17,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.054
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



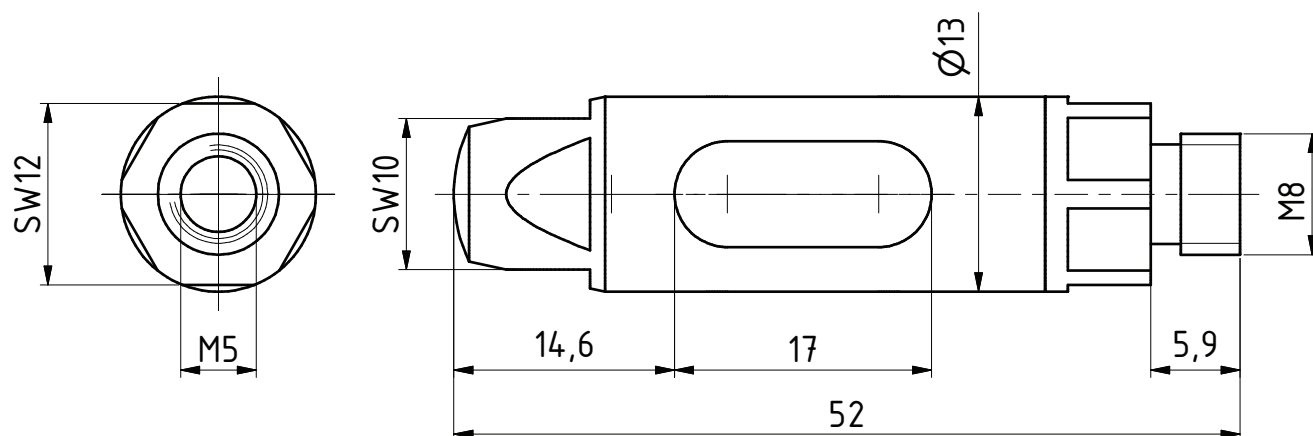
#### Internal gripper Ø016...

G-GI016 External diameter 16, screw thread M8

#### Replacement tube

EG-GI016-S for internal gripper GI016

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

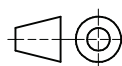


Datum 11.11.2016

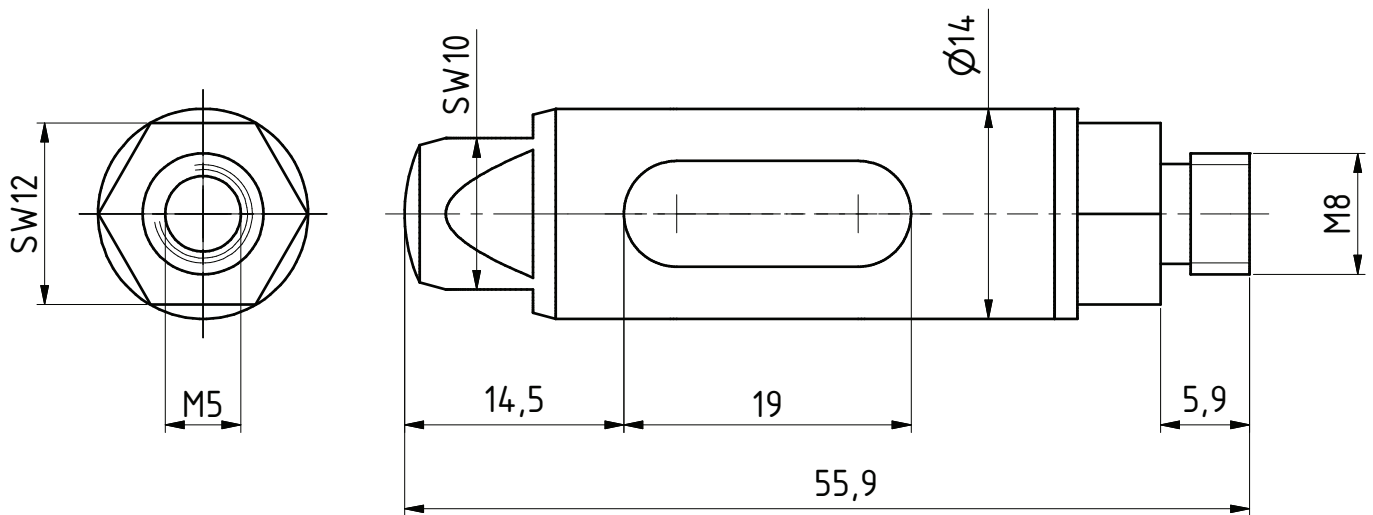
Maßstab 2:1

Zeichnungsnummer

G-GI013



**GRIP**  
GRIP GmbH Handhabungstechnik

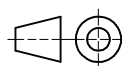


Datum 11.11.2016

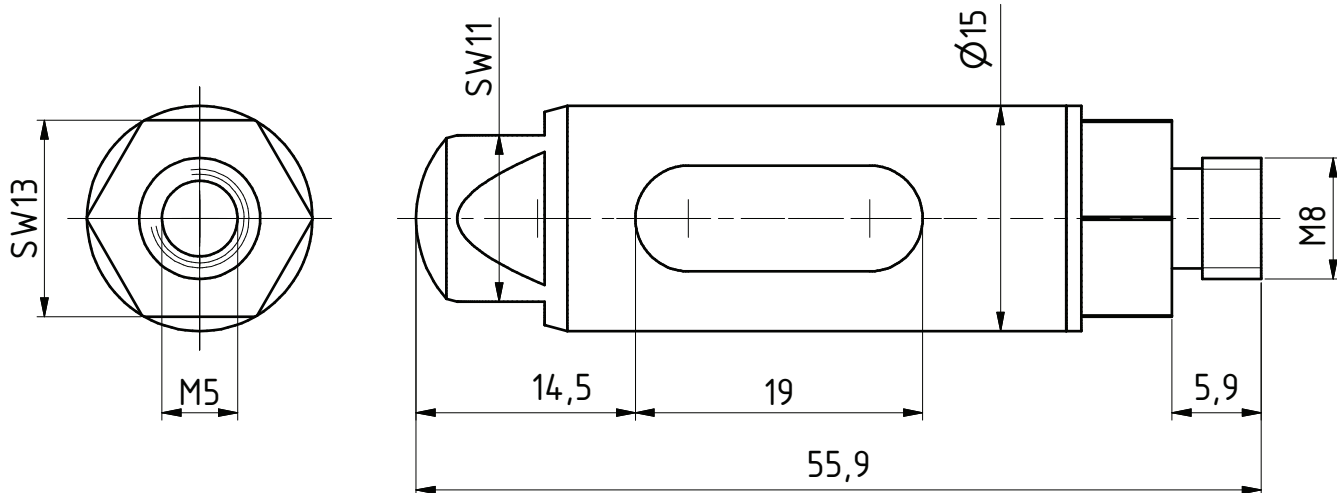
Maßstab 2:1

Zeichnungsnummer

G-GI014



**GRIP**  
GRIP GmbH Handhabungstechnik

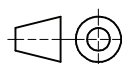


Datum 11.11.2016

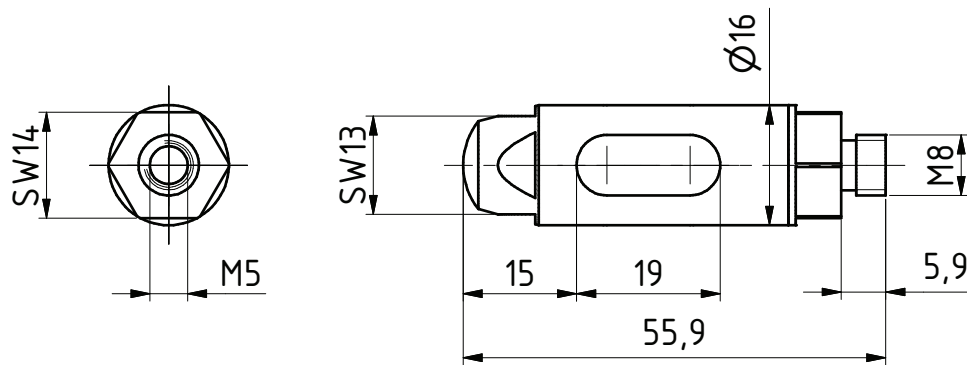
Maßstab 2:1

Zeichnungsnummer

G-GI015



**GRIP**  
GRIP GmbH Handhabungstechnik

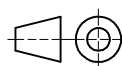


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GI016



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-GI017

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

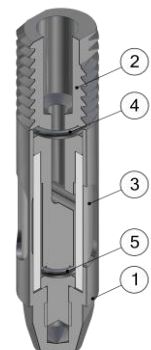
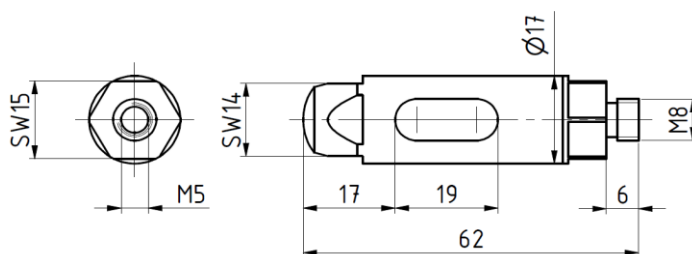
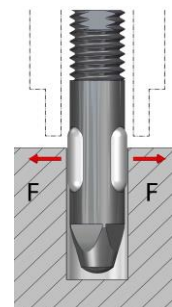
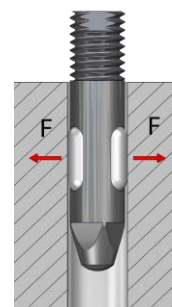
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI017
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	17,1 – 18,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.07
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø017...

G-GI017 External diameter 17, screw thread M8

#### Replacement tube

EG-GI017-S for internal gripper GI017

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI018

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

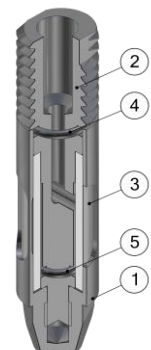
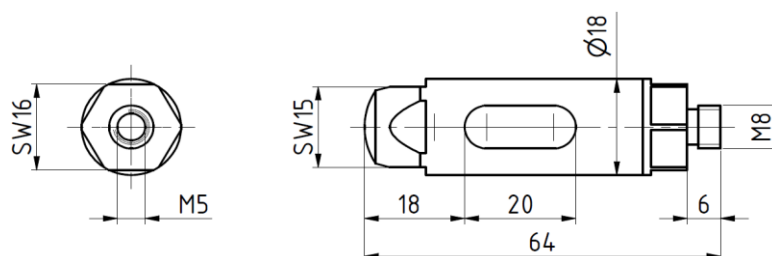
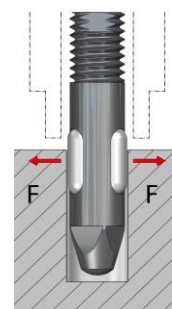
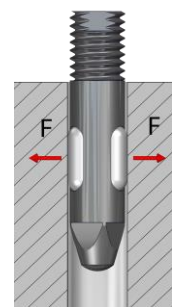
#### Advantages:

Minimum installation size possible  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GI018
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	18,1 – 19,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.084
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper Ø018...

G-GI018 External diameter 18, screw thread M8

#### Replacement tube

EG-GI018-S for internal gripper GI018

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

## G-GI019

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

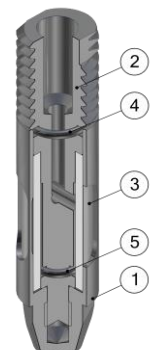
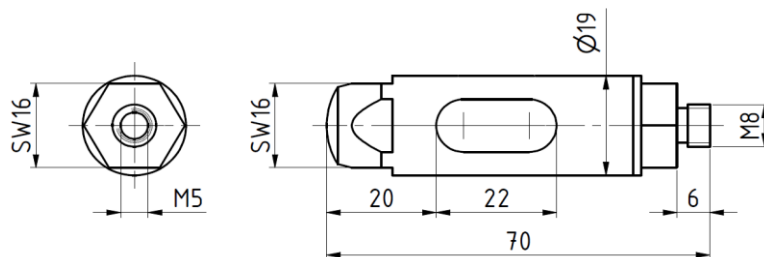
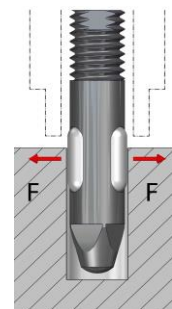
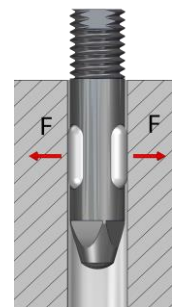
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI019
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	60
For bore diameter [mm]	19,1 – 21,0
Allowed component weight [kg]	6
Gripper weight [kg]	0.102
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



Internal gripper Ø019...	
G-GI019	External diameter 19, screw thread M8
Replacement tube	
EG-GI019-S	for internal gripper GI019

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2



## G-GI020

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

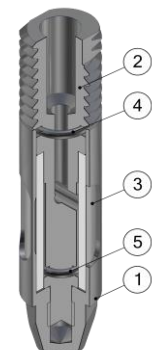
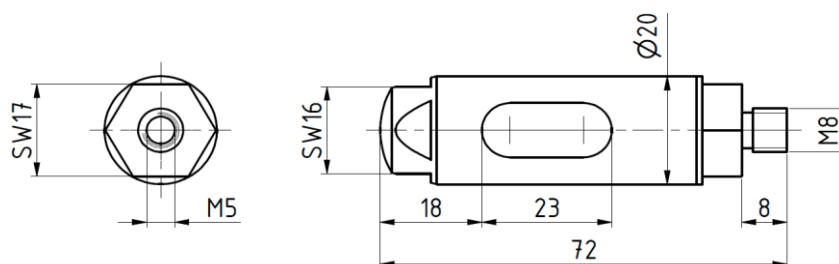
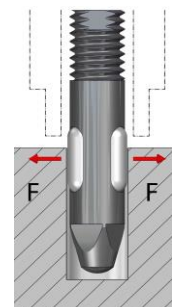
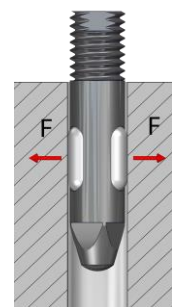
#### Advantages:

- Minimum installation size possible
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GI020
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	60
For bore diameter [mm]	20,1 – 21,5
Allowed component weight [kg]	6
Gripper weight [kg]	0.114
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C

Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



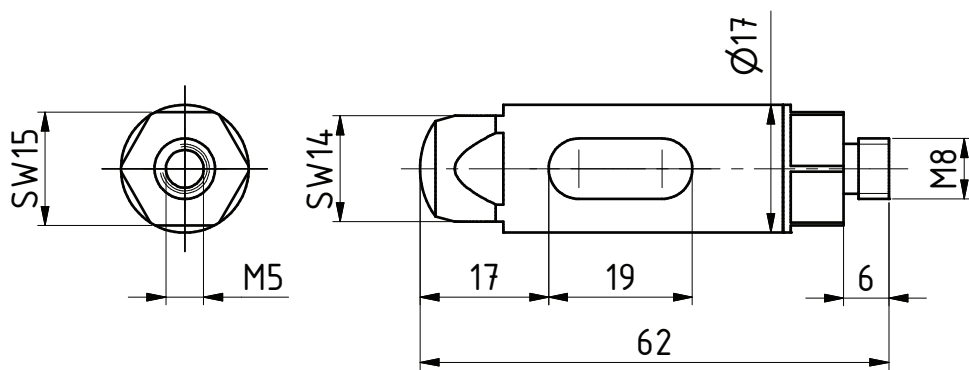
#### Internal gripper Ø020...

G-GI020 External diameter 20, screw thread M8

#### Replacement tube

EG-GI020-S for internal gripper GI020

Pos.	Description
1	Hull
2	Mandrel
3	Tube
4	O-ring 1
5	O-ring 2

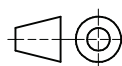


Datum 11.11.2016

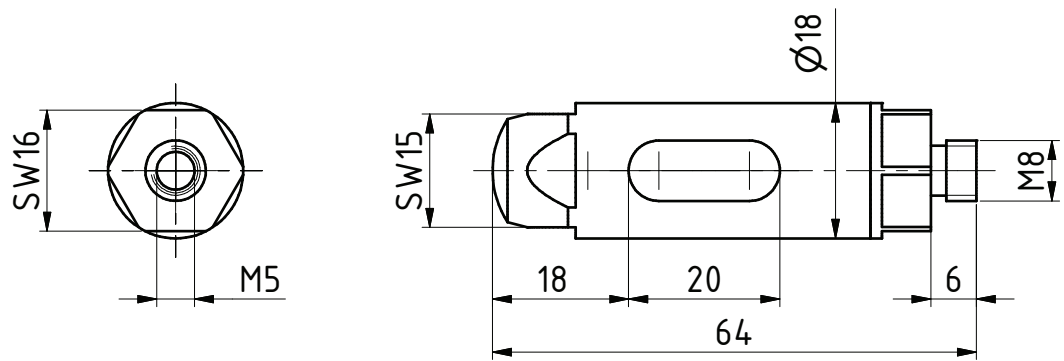
Maßstab 1:1

Zeichnungsnummer

G-GI017



**GRIP**  
GRIP GmbH Handhabungstechnik

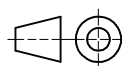


Datum 11.11.2016

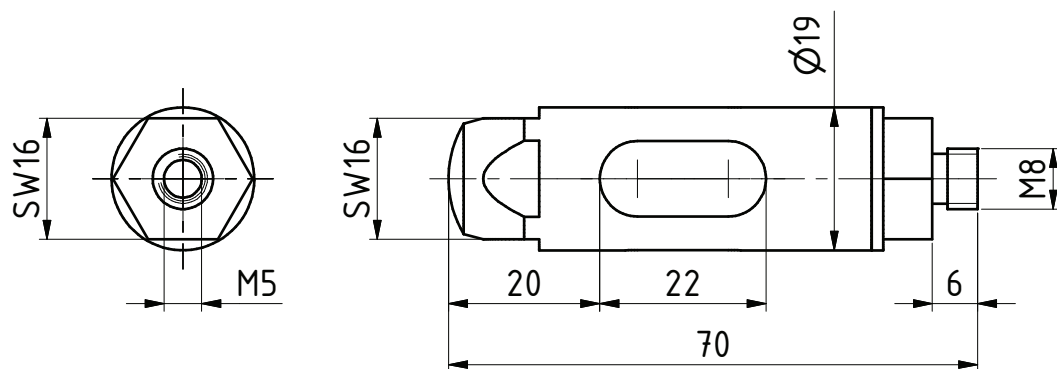
Maßstab 1:1

Zeichnungsnummer

G-GI018



**GRIP**  
GRIP GmbH Handhabungstechnik

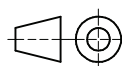


Datum 11.11.2016

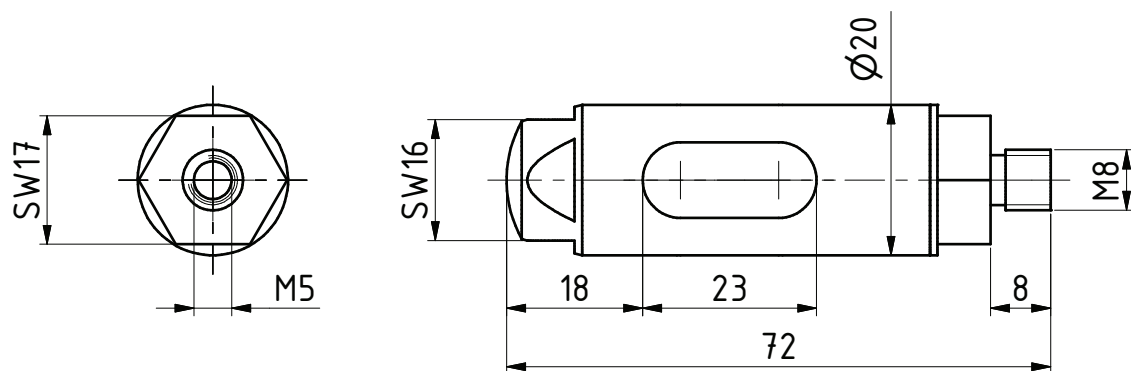
Maßstab 1:1

Zeichnungsnummer

G-GI019



**GRIP**  
GRIP GmbH Handhabungstechnik

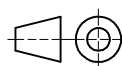


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GI020



**GRIP**  
GRIP GmbH Handhabungstechnik

# GIS INTERNAL GRIPPER SHORT

The GI Internal Gripper is an inflatable bellows gripper for internal gripping. The Internal Grippers plunge into bore holes. Applying pneumatic pressure to the silicone membrane increases the outer diameter. This friction against the bore hole wall holds the Gripper in place. The silicone membrane automatically retracts once the pressure is relieved.

## GIS Internal Gripper Advantages:

- Enables gripping of objects with small bores
- Blunt end allows full insertion (important in applications with limited hole depth)
- Available in multiple sizes 5 mm–20 mm (1 mm increments)
- Operating temperature range: –40 to 300°Celsius
- Durable - over 500.000 cycles
- Replaceable silicon bladder
- Lightweight
- Simple gripping principle
- Excellent value
- Ideal for injection molding applications

GIS Internal Grippers can be modified to meet your needs. Please inquire about special applications.

## SIZES

GIS005–008

GIS009–012

GIS013–016

GIS017–020



## G-GIS005

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

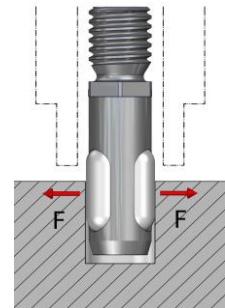
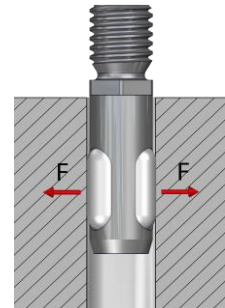
#### Advantages:

- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



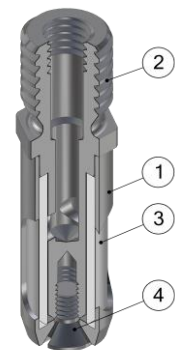
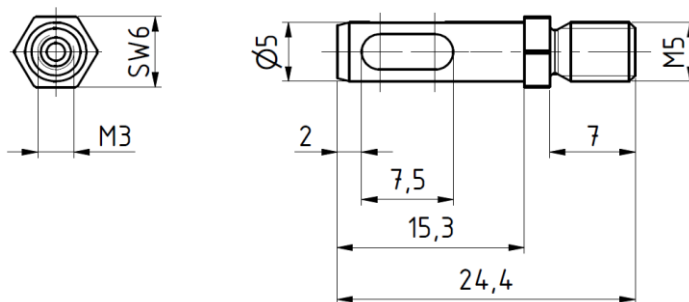
#### Technical specifications

Technical specifications	GIS005
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	4
For bore diameter [mm]	5,1 – 6,0
Allowed component weight [kg]	0,4
Gripper weight [kg]	0.003
Compressed air connection Ø	M3
Assembly Ø	M5
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø005...

G-GIS005 External diameter 5, screw thread M5

#### Replacement tube

EG-GI005-S for internal gripper counter bore GIS005

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

## G-GIS006

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

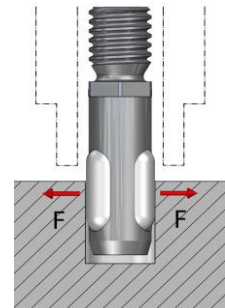
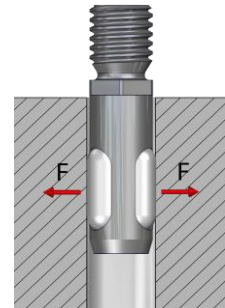
#### Advantages:

Minimum installation size possible  
Width across flats for assembly  
Minimum immersion depth  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



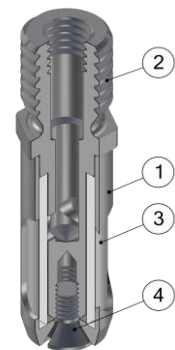
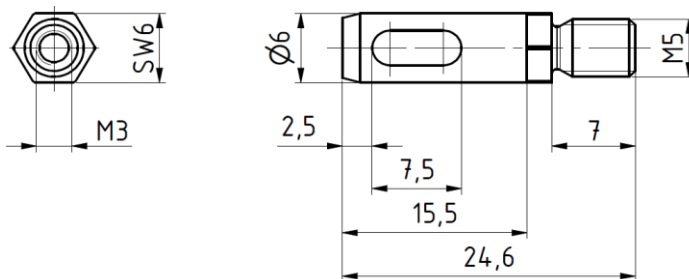
#### Technical specifications

	GIS006
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	5
For bore diameter [mm]	6,1 – 7,0
Allowed component weight [kg]	0,5
Gripper weight [kg]	0.003
Compressed air connection Ø	M3
Assembly Ø	M5
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø006...

G-GIS006 External diameter 6, screw thread M5

#### Replacement tube

EG-GI006-S for internal gripper counter bore GIS006

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw



**Operating mode:**

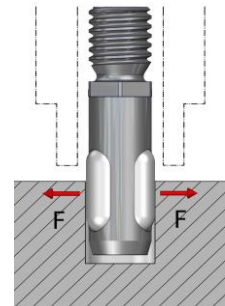
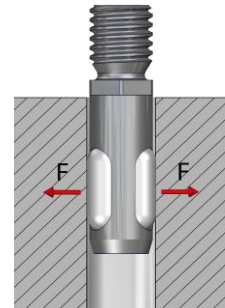
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

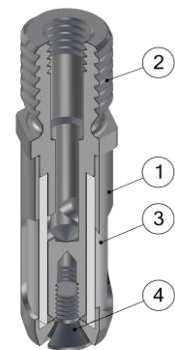
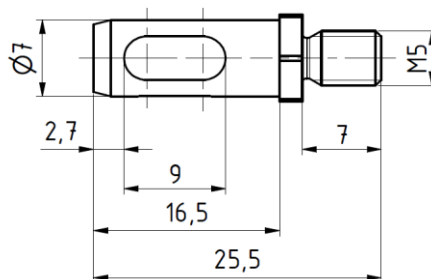
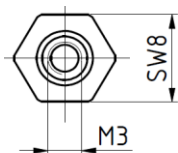
- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible


**Technical specifications**
**GIS007**

Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	7
For bore diameter [mm]	7,1 – 8,0
Allowed component weight [kg]	0,7
Gripper weight [kg]	0.005
Compressed air connection Ø	M3
Assembly Ø	M5
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C


**Limits of the application range**

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	


**Internal gripper lowering Ø007...**

G-GIS007 External diameter 7, screw thread M5

**Replacement tube**

EG-GI007-S for internal gripper counter bore GIS007

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

**Operating mode:**

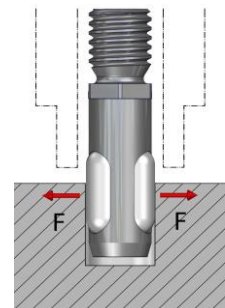
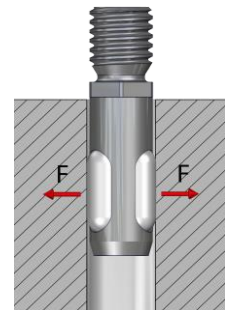
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

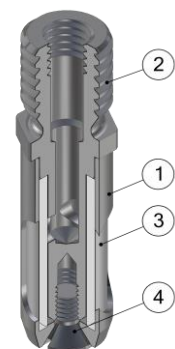
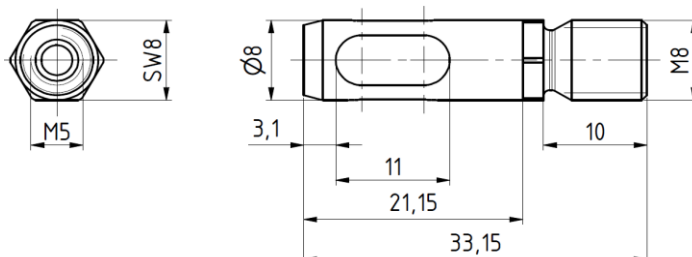
Minimum installation size possible  
 Width across flats for assembly  
 Minimum immersion depth  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GIS008
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	17
For bore diameter [mm]	8,1 – 9,0
Allowed component weight [kg]	1,7
Gripper weight [kg]	0.008
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

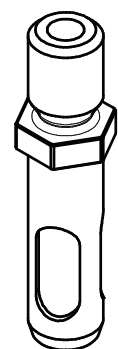
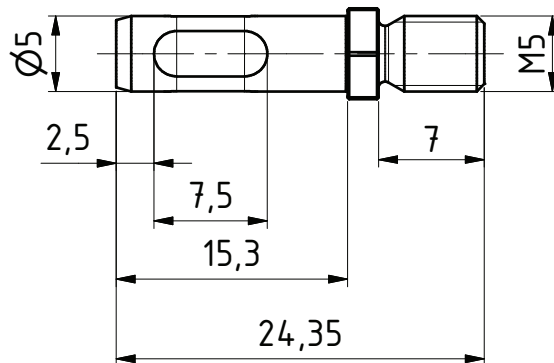
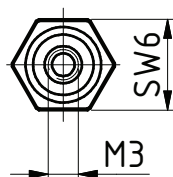
**Internal gripper lowering Ø008...**

G-GIS008 External diameter 8, screw thread M8

**Replacement tube**

EG-GI008-S for internal gripper counter bore GIS008

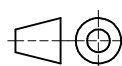
Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw



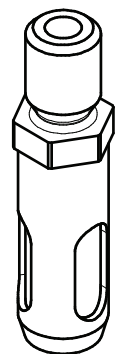
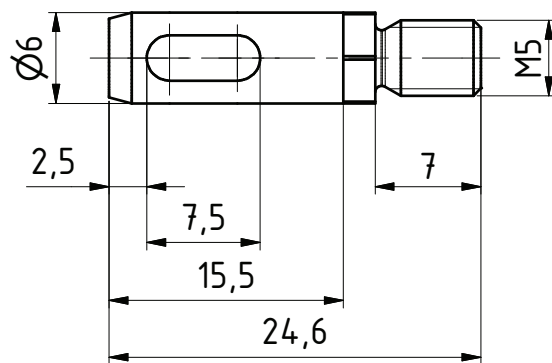
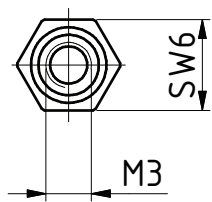
Datum 11.11.2016

Maßstab 2:1

Zeichnungsnummer  
G-GIS005



**GRIP**  
GRIP GmbH Handhabungstechnik

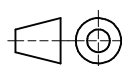


Datum 11.11.2016

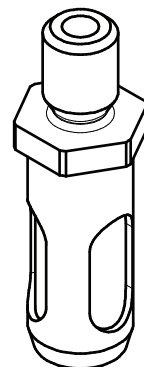
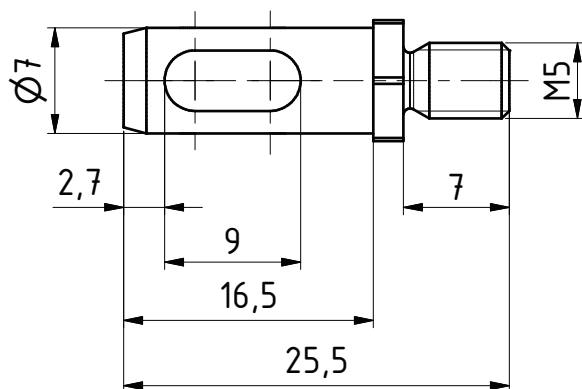
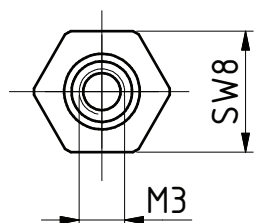
Maßstab 2:1

Zeichnungsnummer

G-GIS006



**GRIP**  
GRIP GmbH Handhabungstechnik

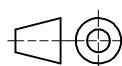


Datum 11.11.2016

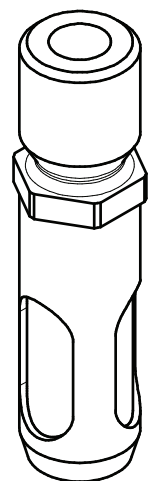
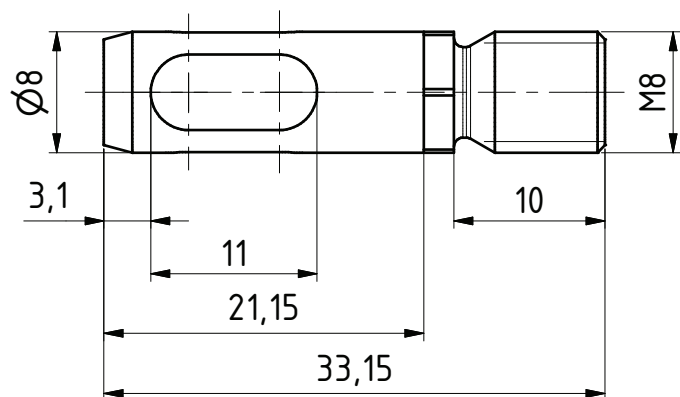
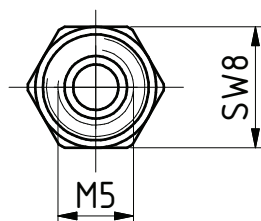
Maßstab 2:1

Zeichnungsnummer

G-GIS007



**GRIP**  
GRIP GmbH Handhabungstechnik

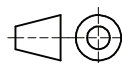


Datum 11.11.2016

Maßstab 2:1

Zeichnungsnummer

G-GIS008



**GRIP**  
GRIP GmbH Handhabungstechnik

**Operating mode:**

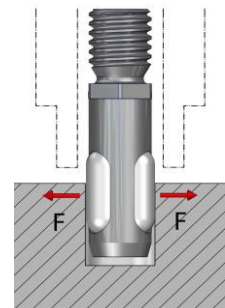
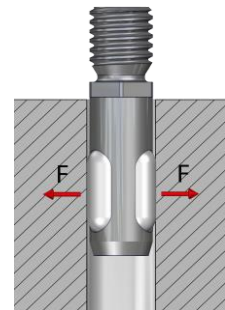
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

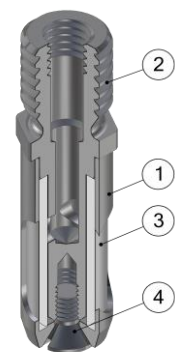
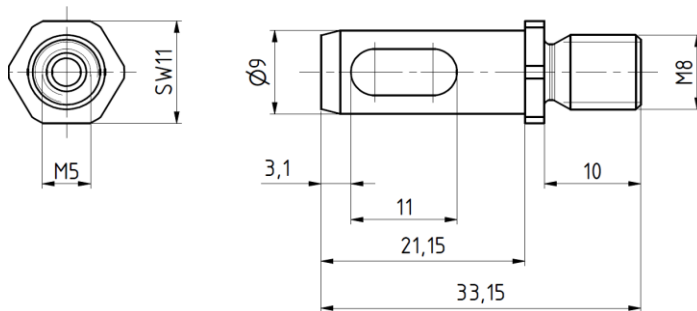
Minimum installation size possible  
 Width across flats for assembly  
 Minimum immersion depth  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GIS009
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	17
For bore diameter [mm]	9,1 – 10,0
Allowed component weight [kg]	1,7
Gripper weight [kg]	0.01
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

**Internal gripper lowering Ø009...**

G-GIS009 External diameter 9, screw thread M8

**Replacement tube**

EG-GI009-S for internal gripper counter bore GIS009

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

## G-GIS010

### Technical specifications

# GRIP

#### Operating mode:

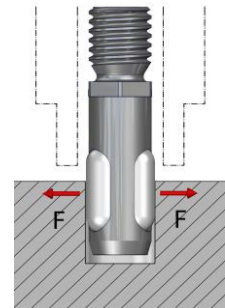
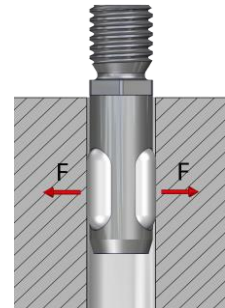
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

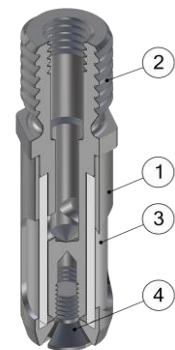
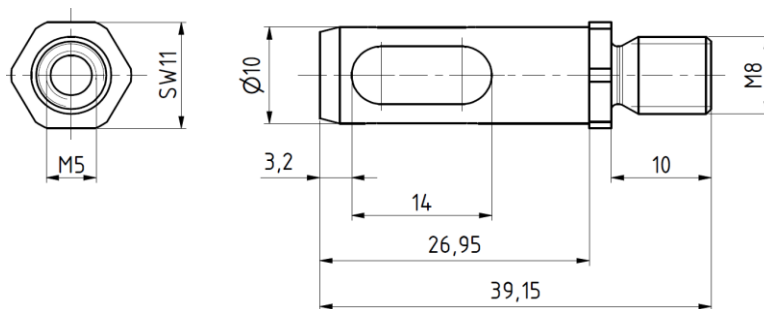
Minimum installation size possible  
Width across flats for assembly  
Minimum immersion depth  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GIS010
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	20
For bore diameter [mm]	10,1 – 11,0
Allowed component weight [kg]	2
Gripper weight [kg]	0.013
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø010...

G-GIS010      External diameter 10, screw thread M8

#### Replacement tube

EG-GI010-S      for internal gripper counter bore GIS010

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw



**Operating mode:**

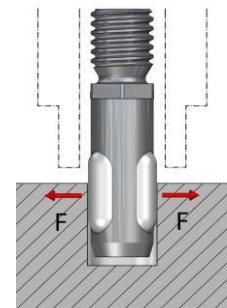
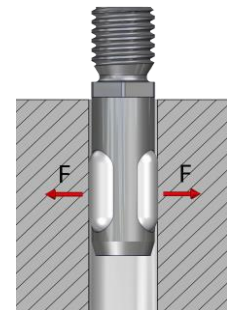
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

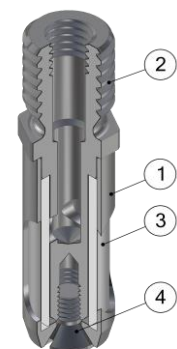
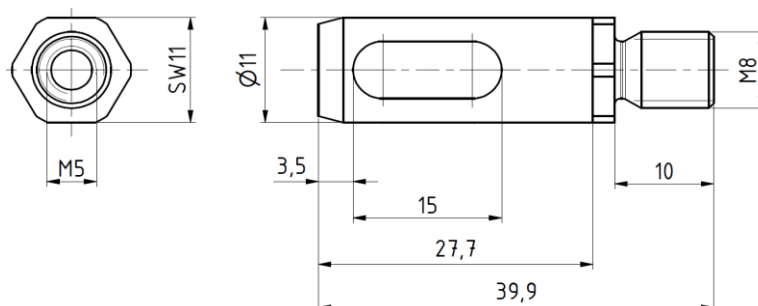
Minimum installation size possible  
 Width across flats for assembly  
 Minimum immersion depth  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GIS011
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	25
For bore diameter [mm]	11,1 – 12,0
Allowed component weight [kg]	2,5
Gripper weight [kg]	0.016
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

**Internal gripper lowering Ø011...**

G-GIS011 External diameter 11, screw thread M8

**Replacement tube**

EG-GI011-S for internal gripper counter bore GIS011

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

**Operating mode:**

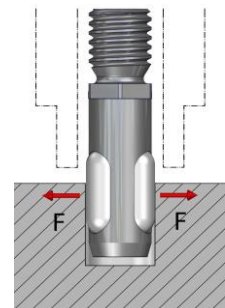
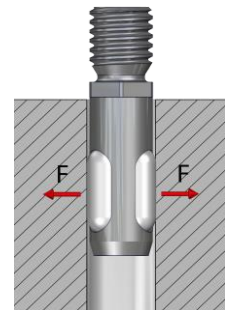
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

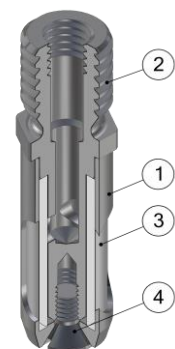
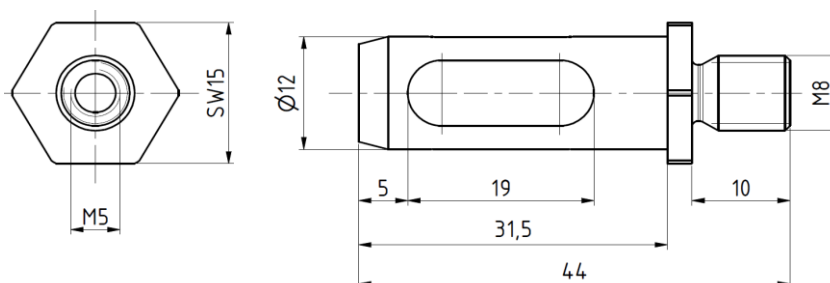
Minimum installation size possible  
 Width across flats for assembly  
 Minimum immersion depth  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GIS012
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	30
For bore diameter [mm]	12,1 – 13,5
Allowed component weight [kg]	3
Gripper weight [kg]	0.023
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

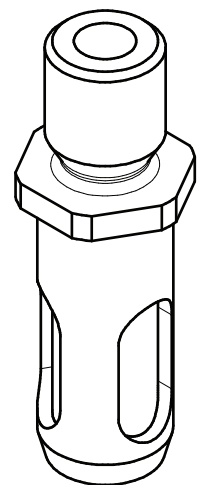
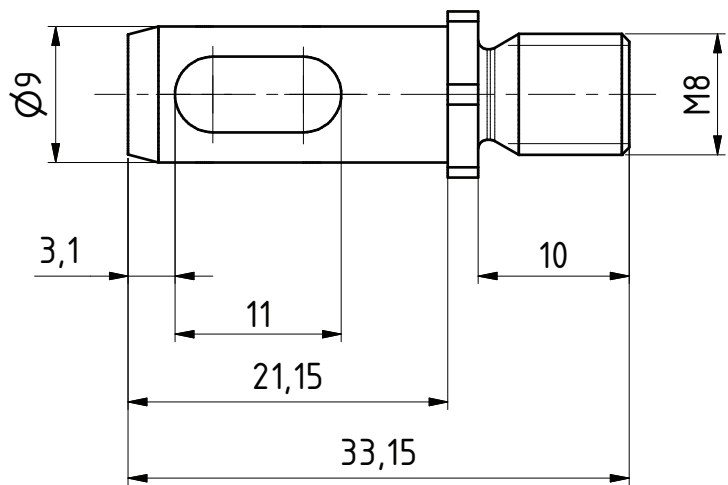
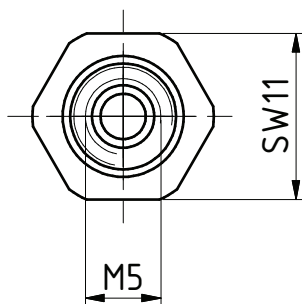
**Internal gripper lowering Ø012...**

G-GIS012 External diameter 12, screw thread M8

**Replacement tube**

EG-GI012-S for internal gripper counter bore GIS012

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

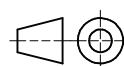


Datum 11.11.2016

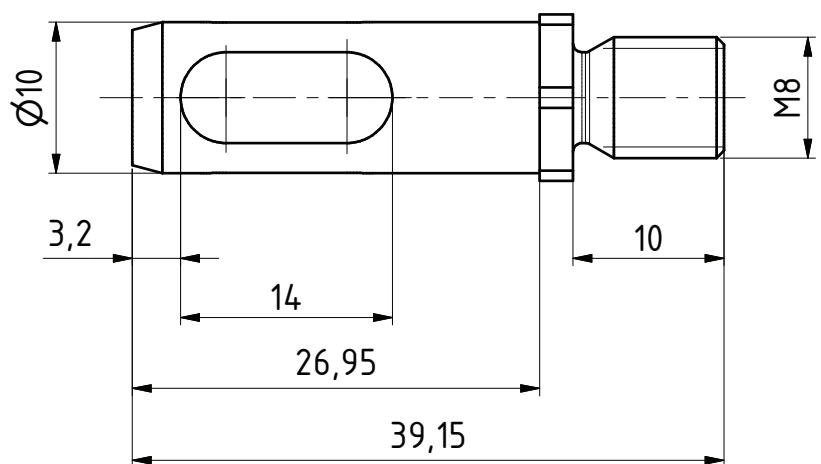
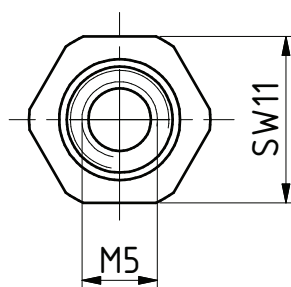
Maßstab 2:1

Zeichnungsnummer

G-GIS009



**GRIP**  
GRIP GmbH Handhabungstechnik

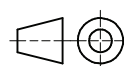


Datum 11.11.2016

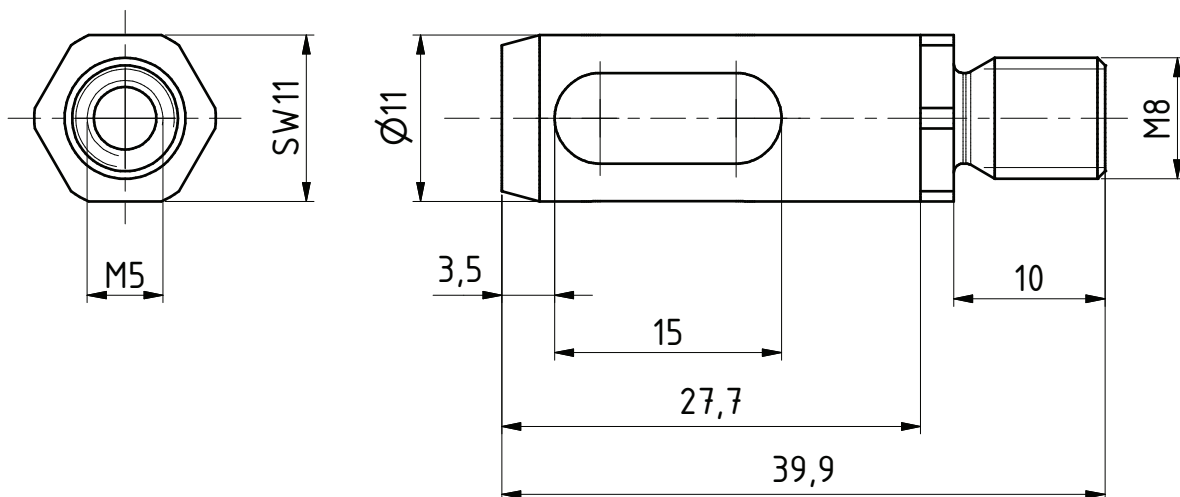
Maßstab 2:1

Zeichnungsnummer

G-GIS010



**GRIP**  
GRIP GmbH Handhabungstechnik

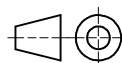


Datum 11.11.2016

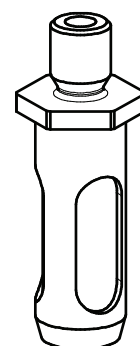
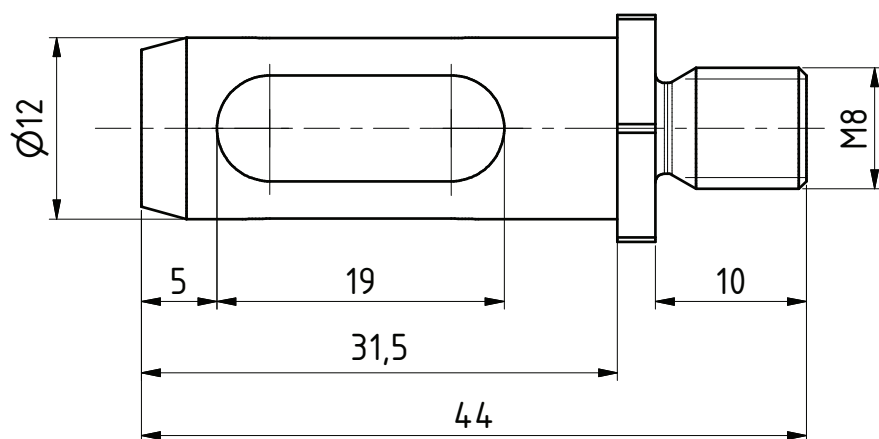
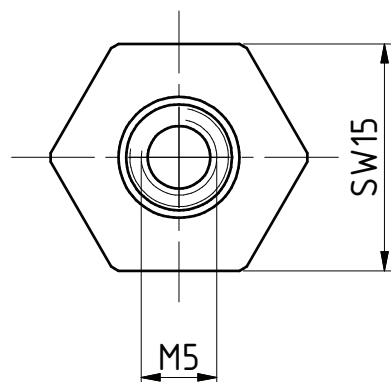
Maßstab 2:1

Zeichnungsnummer

G-GIS011



**GRIP**  
GRIP GmbH Handhabungstechnik

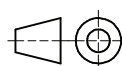


Datum 11.11.2016

Maßstab 2:1

Zeichnungsnummer

G-GIS012



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-GIS013

### Technical specifications

# GRIP

#### Operating mode:

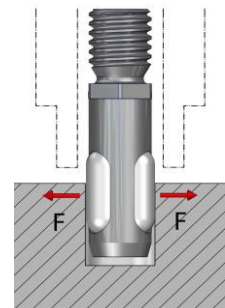
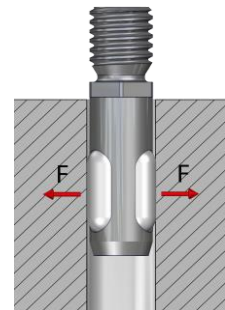
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

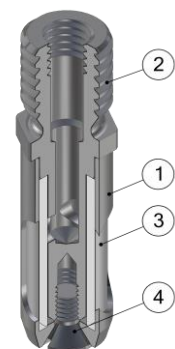
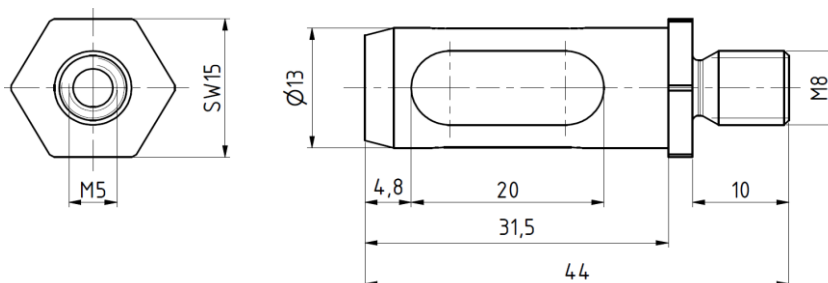
- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



Technical specifications	GIS013
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	40
For bore diameter [mm]	13,1 – 14,5
Allowed component weight [kg]	4
Gripper weight [kg]	0.027
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = D <sub>GIS</sub> +10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø013...

G-GIS013 External diameter 13, screw thread M8

#### Replacement tube

EG-GI013-S for internal gripper counter bore GIS013

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

## G-GIS013-12KL1

### Technical specifications

# GRIP

#### Operating mode:

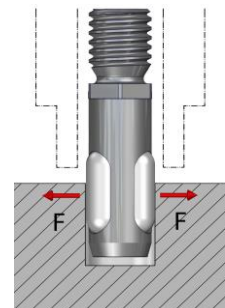
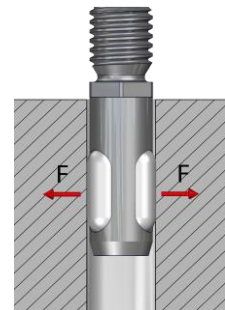
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

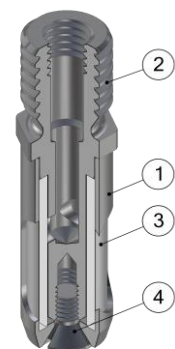
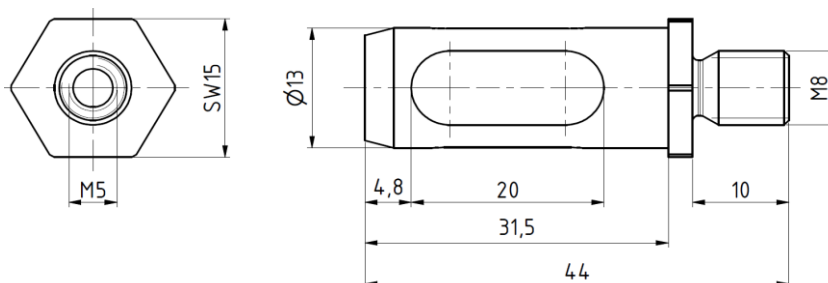
Minimum installation size possible  
Width across flats for assembly  
Minimum immersion depth  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



Technical specifications	GIS013-12KL1
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	40
For bore diameter [mm]	13,1 – 14,5
Allowed component weight [kg]	4
Gripper weight [kg]	0.028
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø013...

G-GIS013-12KL1 External diameter 13, screw thread M8, made of 1.4112

#### Replacement tube

EG-GI013-S for internal gripper counter bore GIS013

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw



## G-GIS014

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

#### Advantages:

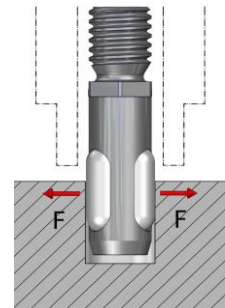
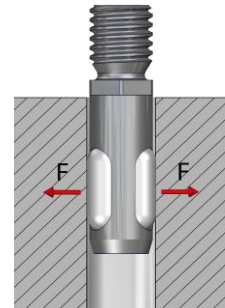
- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



#### Technical specifications

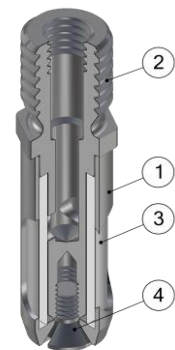
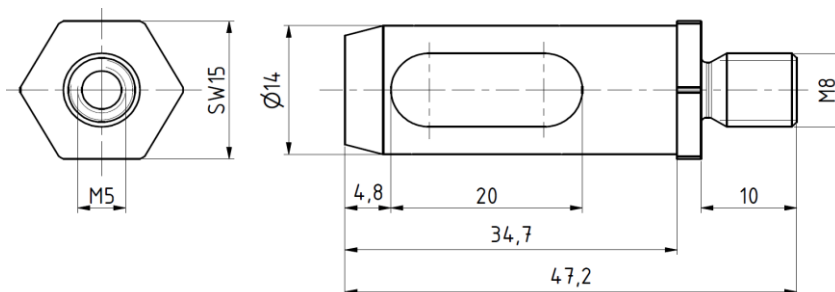
#### GIS014

Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	45
For bore diameter [mm]	14,1 – 15,5
Allowed component weight [kg]	4,5
Gripper weight [kg]	0.034
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø014...

G-GIS014 External diameter 14, screw thread M8

#### Replacement tube

EG-GI014-S for internal gripper counter bore GIS014

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

## G-GIS015

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

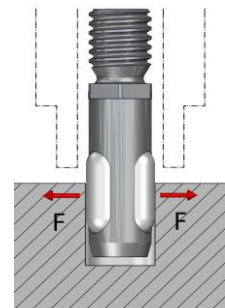
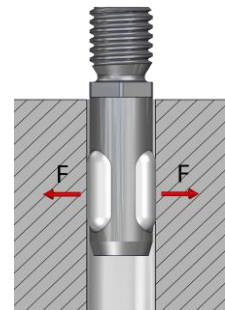
#### Advantages:

- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



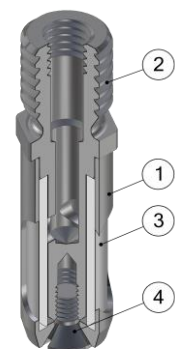
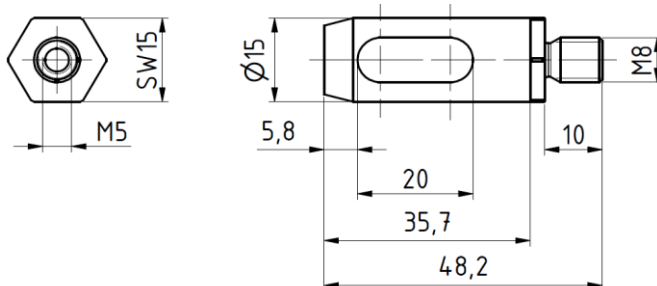
#### Technical specifications

	GIS015
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	45
For bore diameter [mm]	15,1 – 16,5
Allowed component weight [kg]	4,5
Gripper weight [kg]	0.04
Compressed air connection Ø	M5
Assembly Ø	M8
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = D <sub>GIS</sub> +10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø015...

G-GIS015 External diameter 15, screw thread M8

#### Replacement tube

EG-GI015-S for internal gripper counter bore GIS015

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

## G-GIS016

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

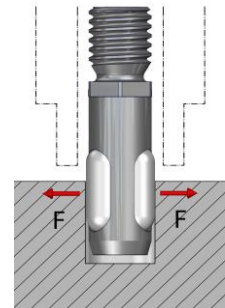
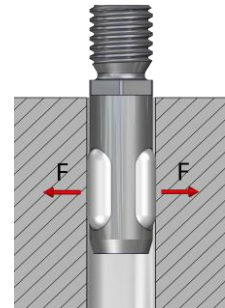
#### Advantages:

Minimum installation size possible  
Width across flats for assembly  
Minimum immersion depth  
Low gripper weight  
Simple gripper principle  
Cost-efficient  
Quick membrane replacement possible  
Indirect request via pressure switch in the supply line possible



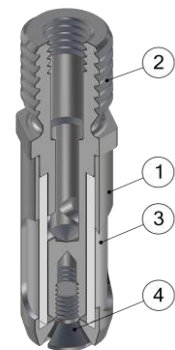
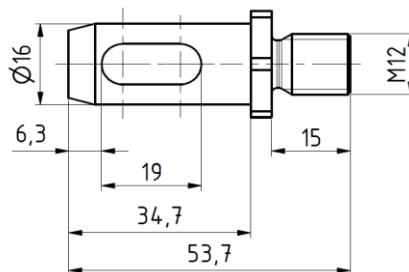
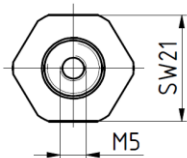
#### Technical specifications

	GIS016
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	16,1 – 17,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.061
Compressed air connection Ø	M5
Assembly Ø	M12
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



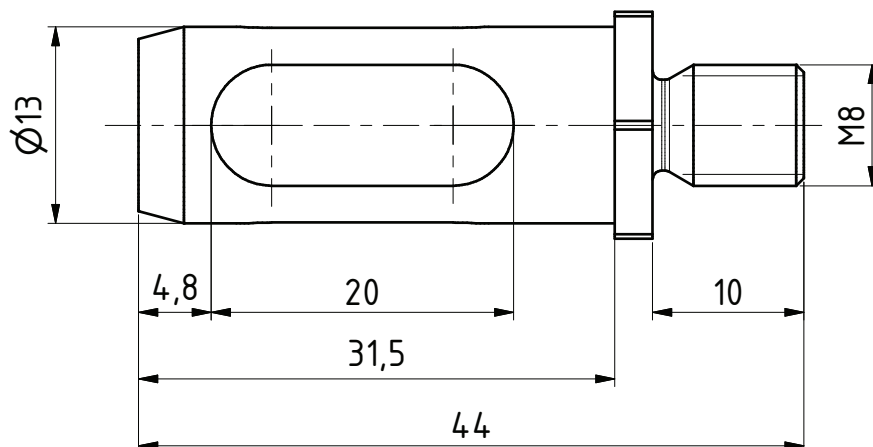
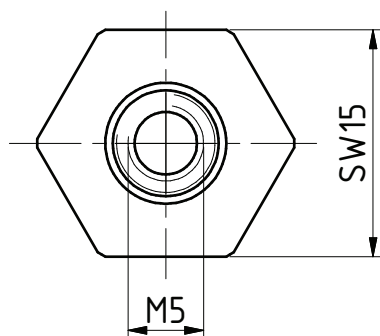
#### Internal gripper lowering Ø016...

G-GIS016	External diameter 16, screw thread M12
----------	--

#### Replacement tube

EG-GI016-S	for internal gripper counter bore GIS016
------------	--

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

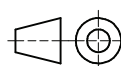


Datum 11.11.2016

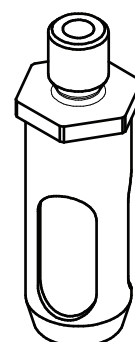
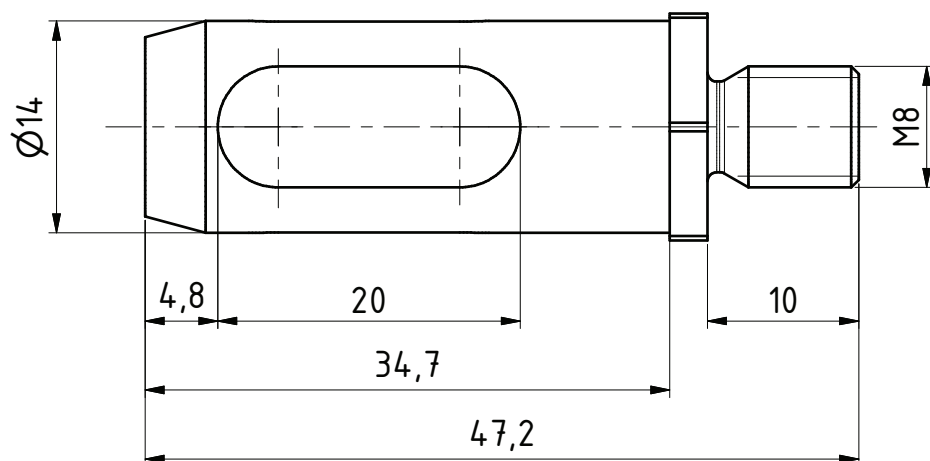
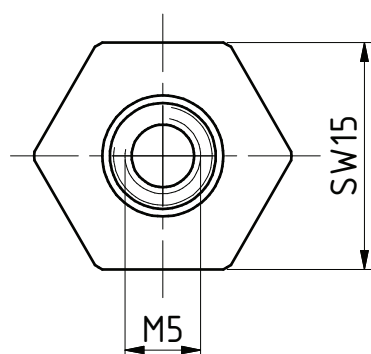
Maßstab 2:1

Zeichnungsnummer

G-GIS013



**GRIP**  
GRIP GmbH Handhabungstechnik

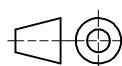


Datum 11.11.2016

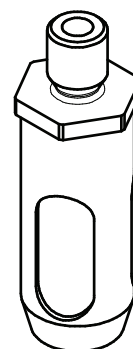
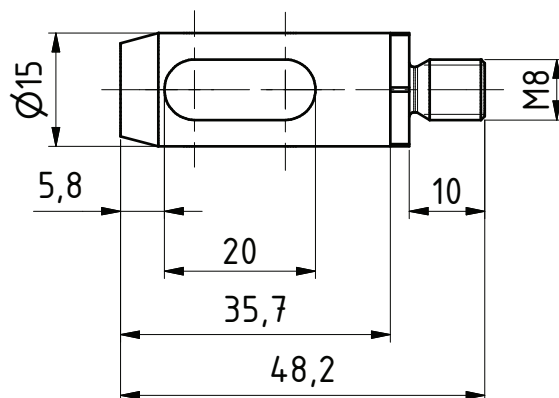
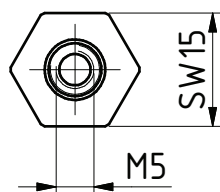
Maßstab 2:1

Zeichnungsnummer

G-GIS014



**GRIP**  
GRIP GmbH Handhabungstechnik

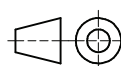


Datum 11.11.2016

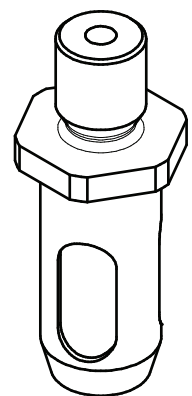
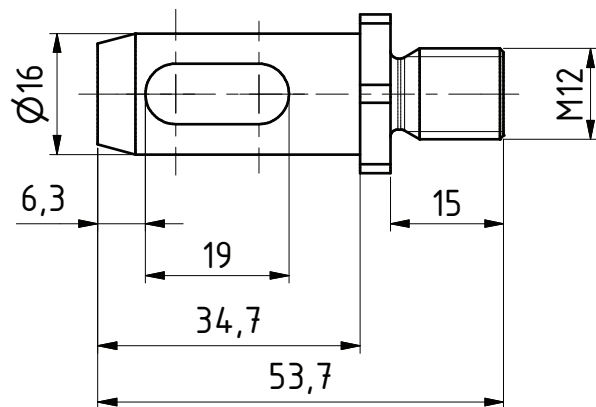
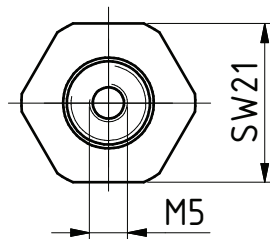
Maßstab 1:1

Zeichnungsnummer

G-GIS015



**GRIP**  
GRIP GmbH Handhabungstechnik

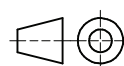


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GIS016



**GRIP**  
GRIP GmbH Handhabungstechnik

## G-GIS017

### Technical specifications

# GRIP

#### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

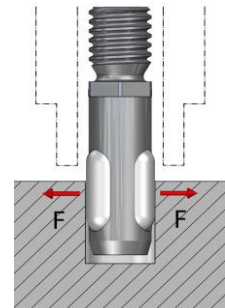
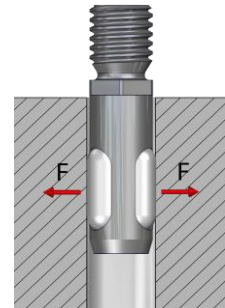
#### Advantages:

- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



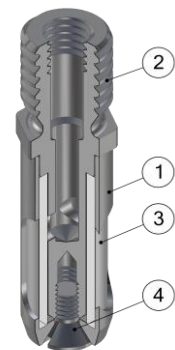
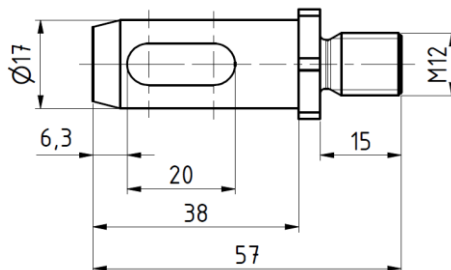
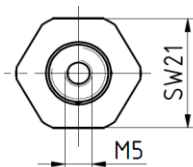
#### Technical specifications

Technical specifications	GIS017
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	17,1 – 18,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.072
Compressed air connection Ø	M5
Assembly Ø	M12
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



#### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



#### Internal gripper lowering Ø017...

G-GIS017 External diameter 17, screw thread M12

#### Replacement tube

EG-GI017-S for internal gripper counter bore GIS017

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw



### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

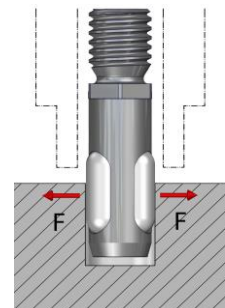
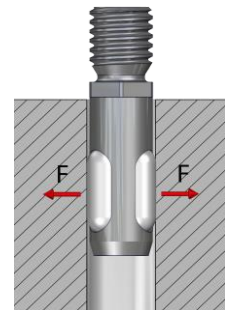
### Advantages:

- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



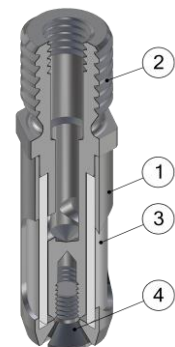
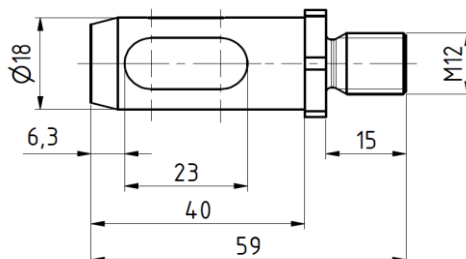
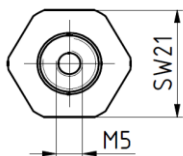
### Technical specifications

	GIS018
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	50
For bore diameter [mm]	18,1 – 19,5
Allowed component weight [kg]	5
Gripper weight [kg]	0.08
Compressed air connection Ø	M5
Assembly Ø	M12
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



### Internal gripper lowering Ø018...

G-GIS018 External diameter 18, screw thread M12

### Replacement tube

EG-GI018-S for internal gripper counter bore GIS018

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

**Operating mode:**

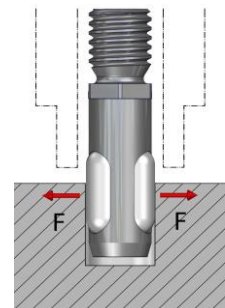
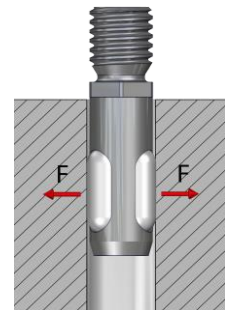
The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

**Advantages:**

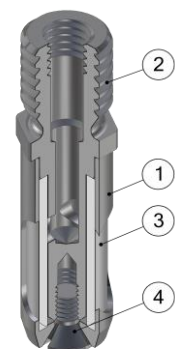
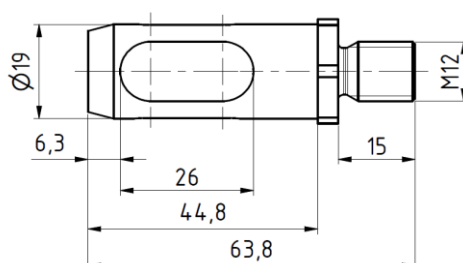
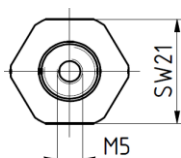
Minimum installation size possible  
 Width across flats for assembly  
 Minimum immersion depth  
 Low gripper weight  
 Simple gripper principle  
 Cost-efficient  
 Quick membrane replacement possible  
 Indirect request via pressure switch in the supply line possible



Technical specifications	GIS019
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	60
For bore diameter [mm]	19,1 – 21,0
Allowed component weight [kg]	6
Gripper weight [kg]	0.096
Compressed air connection Ø	M5
Assembly Ø	M12
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



Limits of the application range	
Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	

**Internal gripper lowering Ø019...**

G-GIS019 External diameter 19, screw thread M12

**Replacement tube**

EG-GI019-S for internal gripper counter bore GIS019

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

### Operating mode:

The internal grippers dip into drillings, enlarge their external diameter by expansion of the silicone membrane, under pressure, and thus frictionally engaged hold to the bore wall. When pressure is switched off, the silicone membrane self-reliant retracts into the grippers inside due to its elastic behavior.

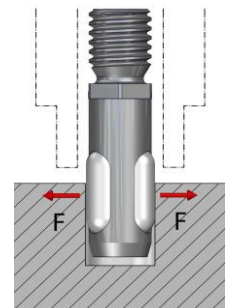
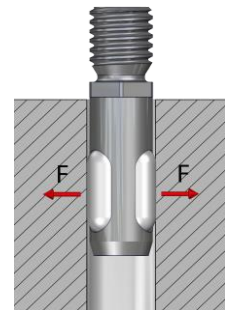
### Advantages:

- Minimum installation size possible
- Width across flats for assembly
- Minimum immersion depth
- Low gripper weight
- Simple gripper principle
- Cost-efficient
- Quick membrane replacement possible
- Indirect request via pressure switch in the supply line possible



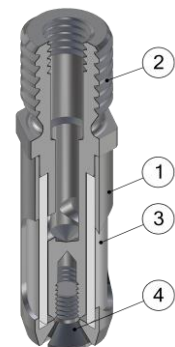
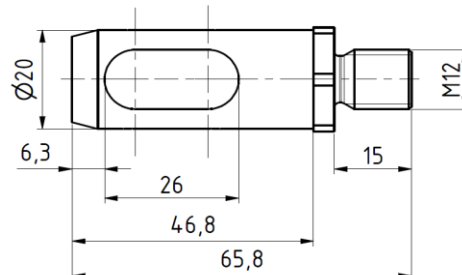
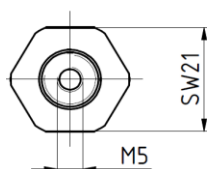
### Technical specifications

Technical specifications	GIS020
Working pressure [bar]	3 - 6
Grip force at 6 bar [N]	60
For bore diameter [mm]	20,1 –21,5
Allowed component weight [kg]	6
Gripper weight [kg]	0.11
Compressed air connection Ø	M5
Assembly Ø	M12
Stroke cycles at ideal application conditions	500.000
Membrane material	Silicone rubber
Temperature range	-40° C to 300° C



### Limits of the application range

Minimum immersion depth of the membrane [%]	60
To protect the membrane from damage at low installation depth, use customers hull	DH = DGIS+10%
Reduced grip force, when the membrane is not completely covered	



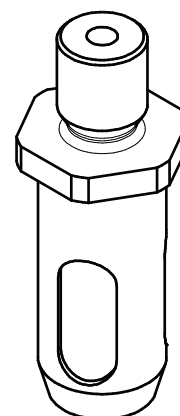
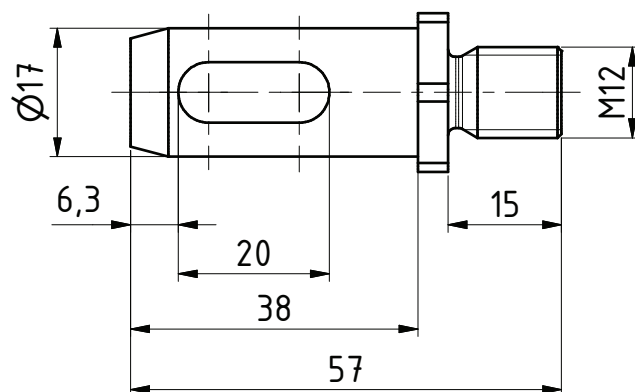
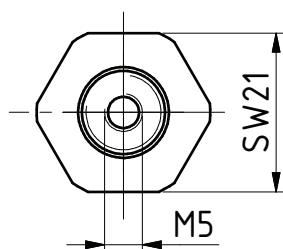
### Internal gripper lowering Ø020...

G-GIS020	External diameter 20, screw thread M12
----------	--

### Replacement tube

EG-GI020-S	for internal gripper counter bore GIS020
------------	--

Pos.	Description
1	Hull
2	Arbor
3	Tube
4	Counter sunk screw

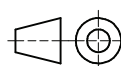


Datum 11.11.2016

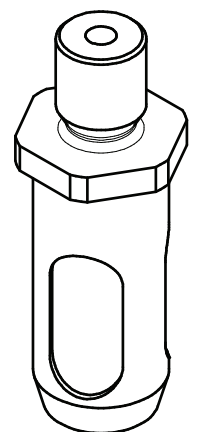
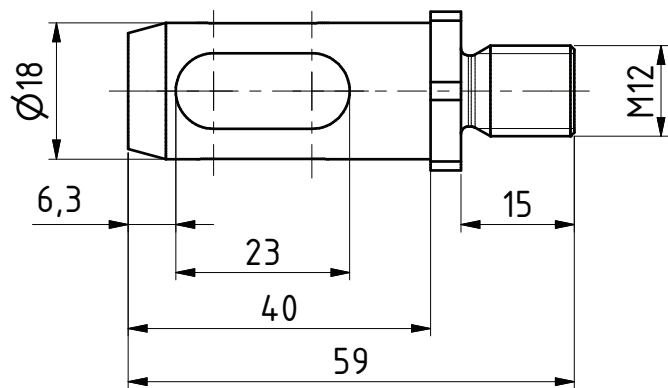
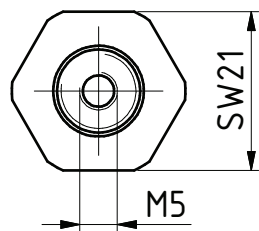
Maßstab 1:1

Zeichnungsnummer

G-GIS017



**GRIP**  
GRIP GmbH Handhabungstechnik

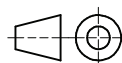


Datum 11.11.2016

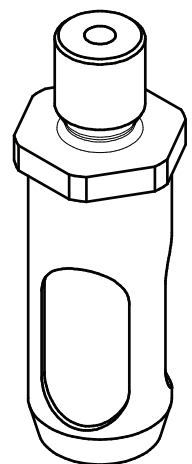
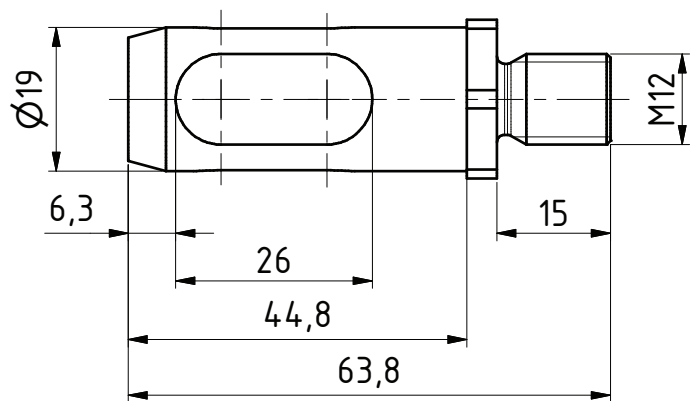
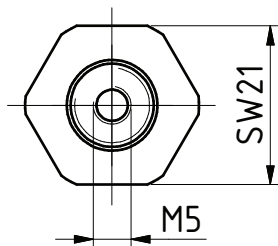
Maßstab 1:1

Zeichnungsnummer

G-GIS018



**GRIP**  
GRIP GmbH Handhabungstechnik

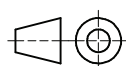


Datum 11.11.2016

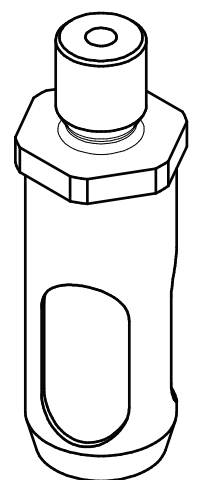
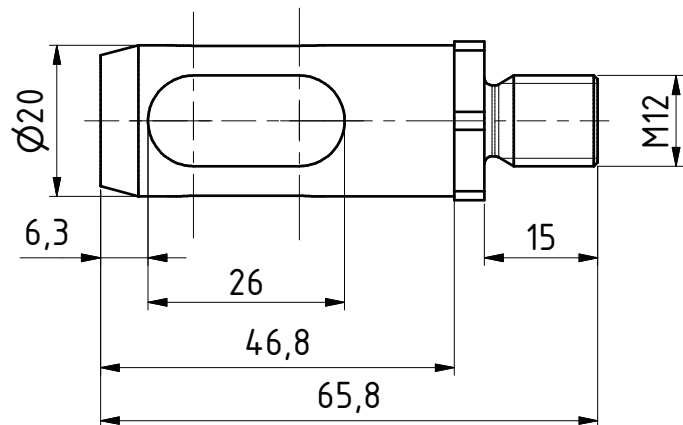
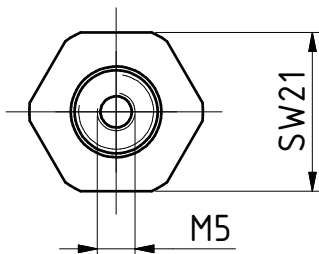
Maßstab 1:1

Zeichnungsnummer

G-GIS019



**GRIP**  
GRIP GmbH Handhabungstechnik

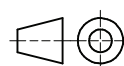


Datum 11.11.2016

Maßstab 1:1

Zeichnungsnummer

G-GIS020



**GRIP**  
GRIP GmbH Handhabungstechnik

# ACCESSORIES

Standardized products for carrying out compressed air, electrical signals and other additional functions

---

## ZS Centering disc

A centering disc can be installed on both the upper assembly(robot side)and lower assembly(tool side)of the robot and ensures that the tools are correctly aligned with the robot arm.



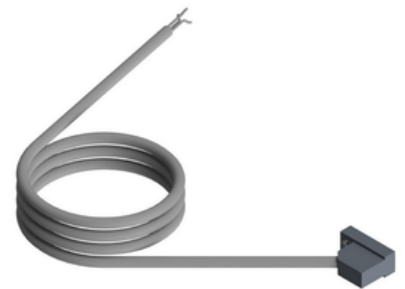
## YAY-Adapter

The Y-Adapter connects two tools to a robot flange.

---

## RSGU Signal transmitter with LED

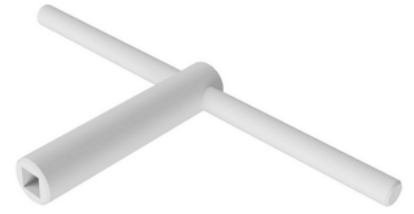
We recommend the RSGU signal transmitter as an accessory for our GP and GZ Grippers. The electronic magnetic switch enables the piston position to be queried and thus the status of the gripper. For example "open" or "closed". It is designed as PNP-closer and is compatible with all our Gripper sizes. The sensor is inserted into the prepared grooves on the Grippers. The switching position can then be fixed via a set screw.





## VKS Square Socket Key

The Square Socket Key is the optimal operating tool for our SWS Connector. It is required when using the safety lock device VS2. By inserting the key, the spring-loaded flap of the safety lock is disengaged.



## VS2 Safety Lock

The VS2 Safety Lock is the optimal accessory for our connectors SWS050,063,080,100,125. For sizes SWS160,200,250 the VS2 Safety Lock is standard and comes premounted.

## AC Tray

The AC tray is responsible for securely holding the Auto Connector lower assembly and respective tool. Additional trays can be added at any time making for a highly flexible and adaptable system.

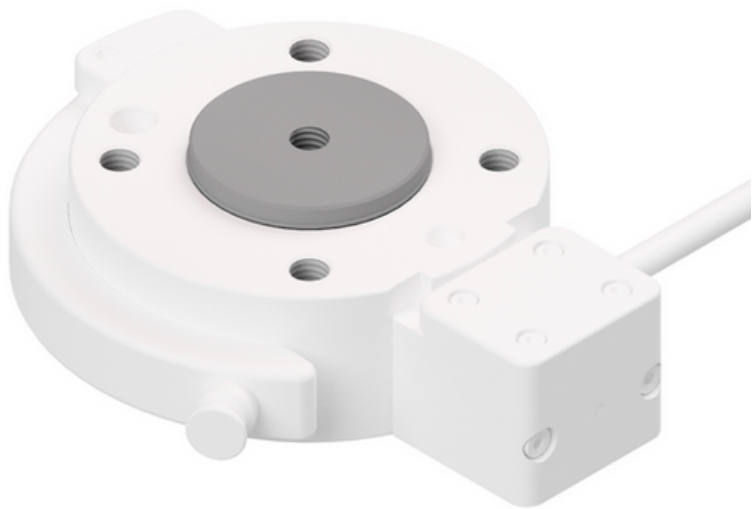


# ZS CENTERING DISC

A centering disc can be installed on both the upper assembly(robot side)and lower assembly(tool side)of the robot and ensures that the tools are correctly aligned with the robot arm.

## ZS Centering disc Advantages:

- Ensures precise centering
- Installation on both the upper assembly(robot side)and lower assembly(tool side)possible
- Compatible with MGW,SHW and SWS Connectors
- Easy to remove due to the central threaded hole



## COMPATIBLE FOR

SHW



MGW



SWS



GP Parallel Gripper



GZ Angular Gripper



## ZS Centering Disc

Technical specifications

# GRIP

### Operating Mode:

The use of a centering disc ensures that the upper assembly and/or lower assembly of the Connector are properly centered

### Advantages:

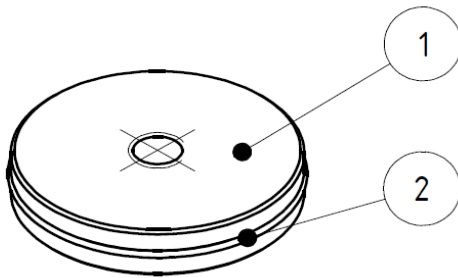
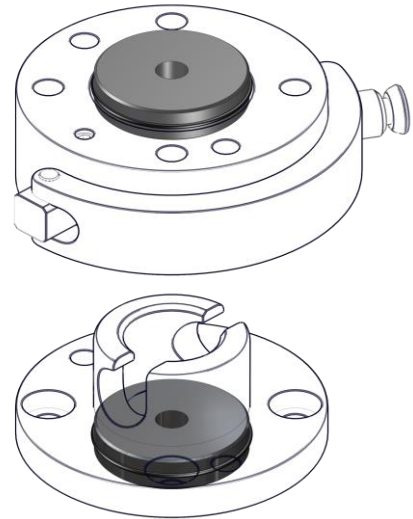
Increases the centering accuracy

Can be added as an option at any time

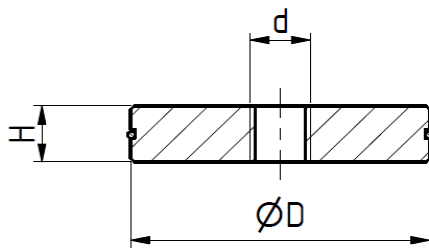
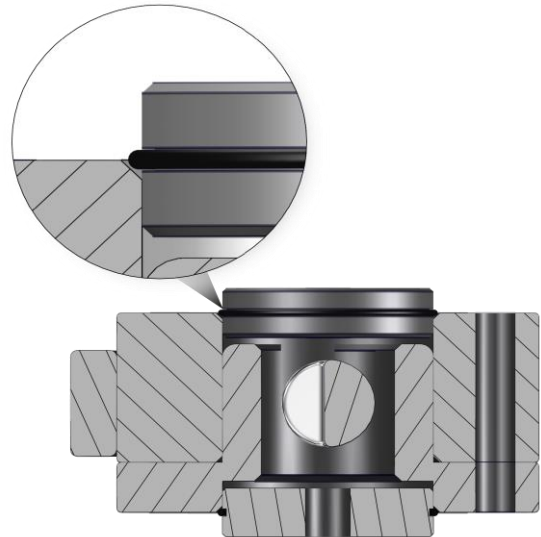
Cost-effective

Assembly possible in upper assembly (robot-side) and lower assembly (tool-side)

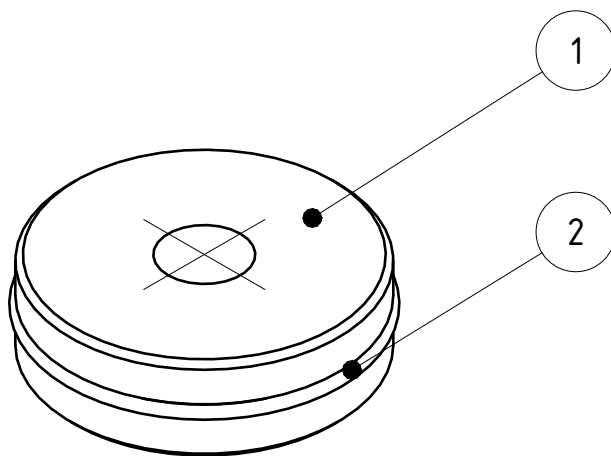
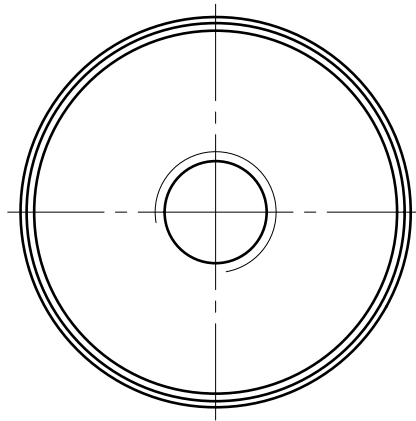
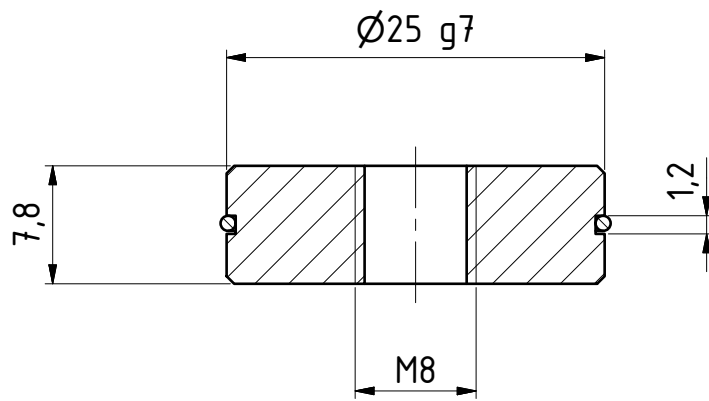
Suitable for Connectors **MGW**, **SHW** and **SWS**



Pos.	Description
1	Centering disc
2	O-Ring



Technical specifications		Size					
		050	063	080	100	125	160
Order number		G-ZS050-1	G-ZS063-1	G-ZS080-1	G-ZS100-1	G-ZS125-1	G-ZS160-1
Material		aluminum, natural anodized / O-Ring NBR					
Diameter [mm]	D	25 g7	31,5 g7	40 g7	50 g7	63 g7	80 g7
Height [mm]	H	7,8					
Threaded bore	d	M8					
Mass [g]		10	16	26	42	67	109
Operating temperature range		-30 to +120					

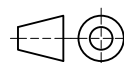


G-ZS050-1			
Pos.	Anzahl	Bestnr.	Benennung
1	1	G-ZS050-1	Zentrierscheibe 050
2	1	O-23x1 NBR70	O-Ring

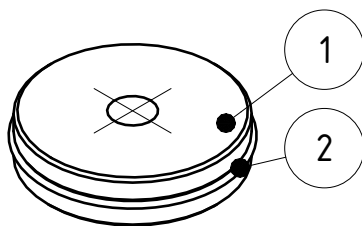
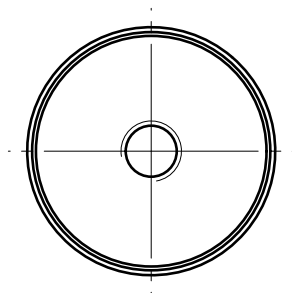
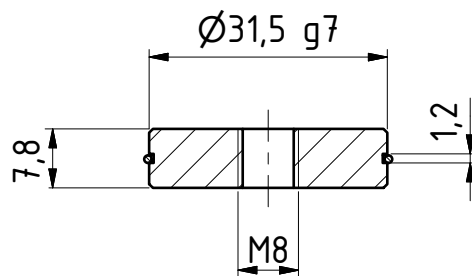
Datum 22.10.19

Maßstab 2:1

Zeichnungsnummer  
G-ZS050-1



**GRIP**  
GRIP GmbH Handhabungstechnik



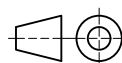
G-ZS063-1			
Pos.	Anzahl	Bestnr.	Benennung
1	1	G-ZS063-1.1	Zentrierscheibe 063
2	1	O-30x1 NBR70	O-Ring

Datum 22.10.19

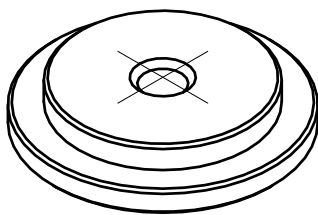
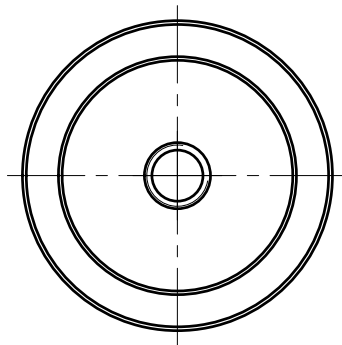
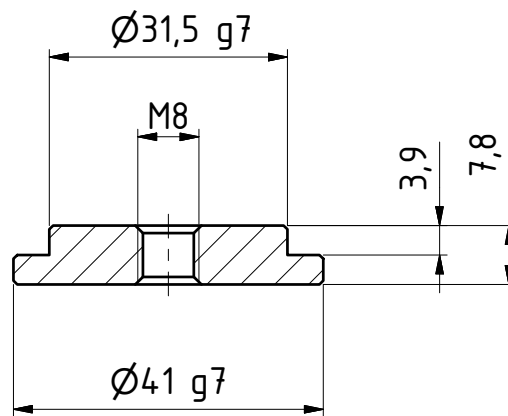
Maßstab 1:1

Zeichnungsnummer

G-ZS063-1



**GRIP**  
GRIP GmbH Handhabungstechnik

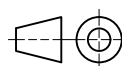


Datum 17.09.21

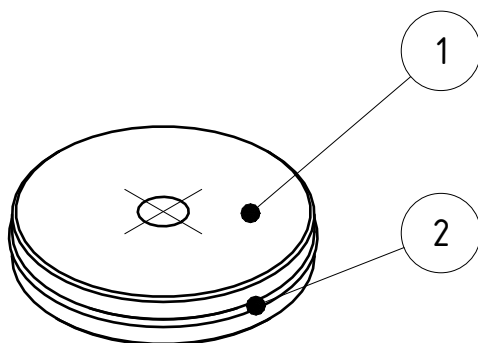
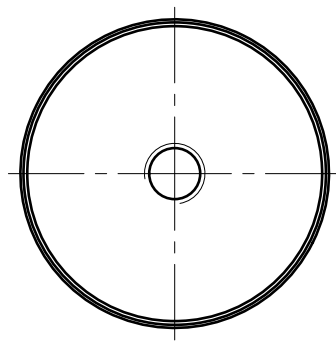
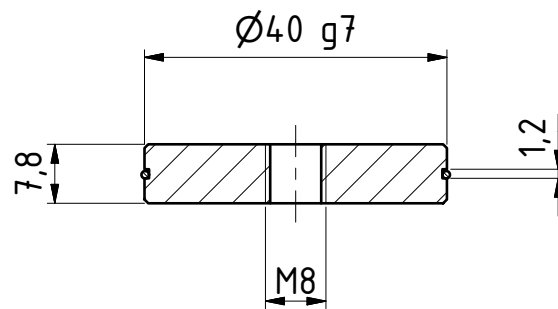
Maßstab 1 : 1

Zeichnungsnummer

G-ZS063-080-1



**GRIP**  
GRIP GmbH Handhabungstechnik



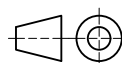
G-ZS080-1			
Pos.	Anzahl	Bestnr.	Benennung
1	1	G-ZS080-1.1	Zentrierscheibe 080
2	1	O-38x1 NBR70	O-Ring

Datum 22.10.19

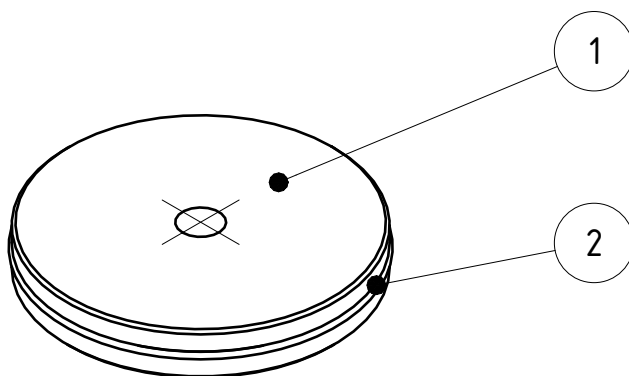
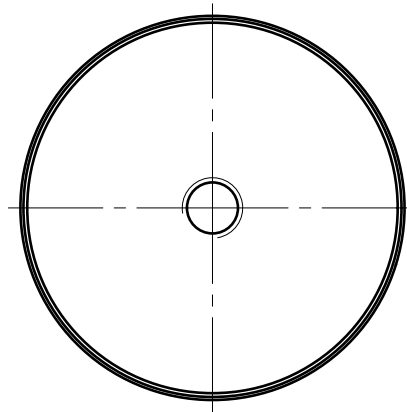
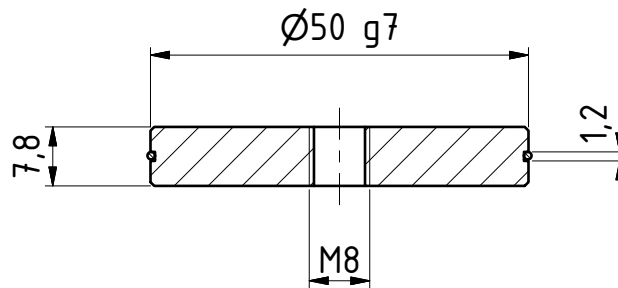
Maßstab 1:1

Zeichnungsnummer

G-ZS080-1



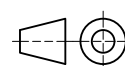
**GRIP**  
GRIP GmbH Handhabungstechnik



Stückliste			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-ZS100-1.1	Zentrierscheibe 100
2	1	O-46x1 NBR70	O-Ring

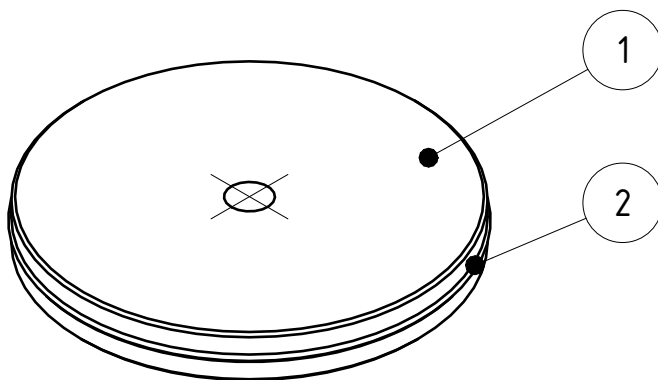
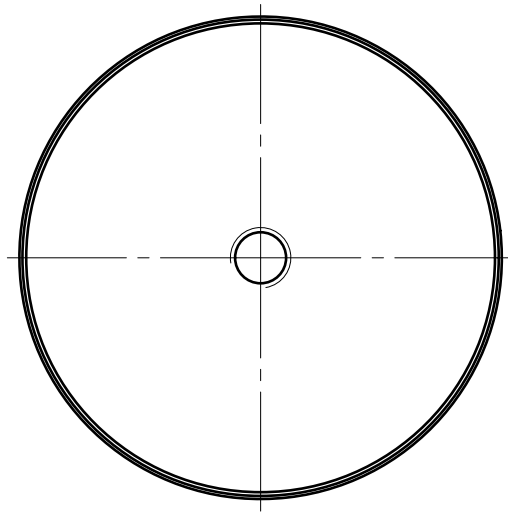
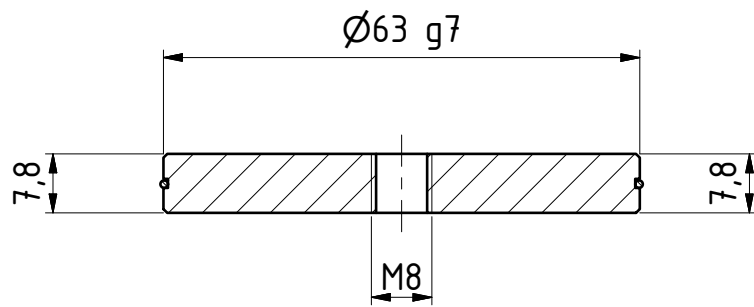
Datum 24.03.2020 Maßstab 1:1

Zeichnungsnummer  
G-ZS100-1



**GRIP**  
GRIP GmbH Handhabungstechnik





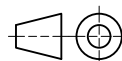
G-ZS125-1			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-ZS125-1.1	Zentrierscheibe 125
2	1	O-61x1 NBR70	O-Ring

Datum 24.03.2020

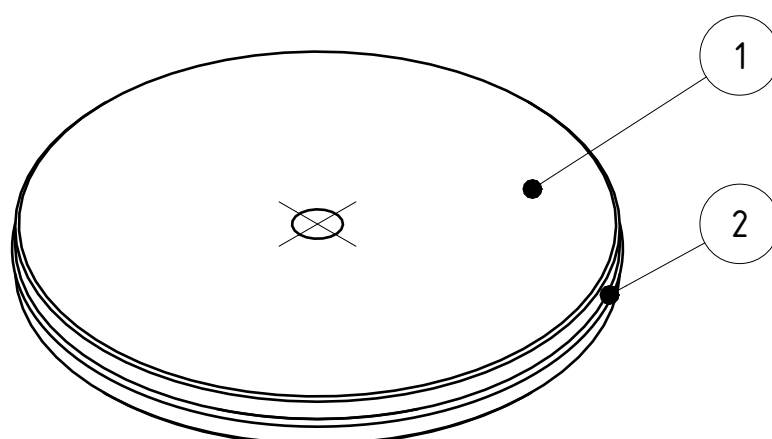
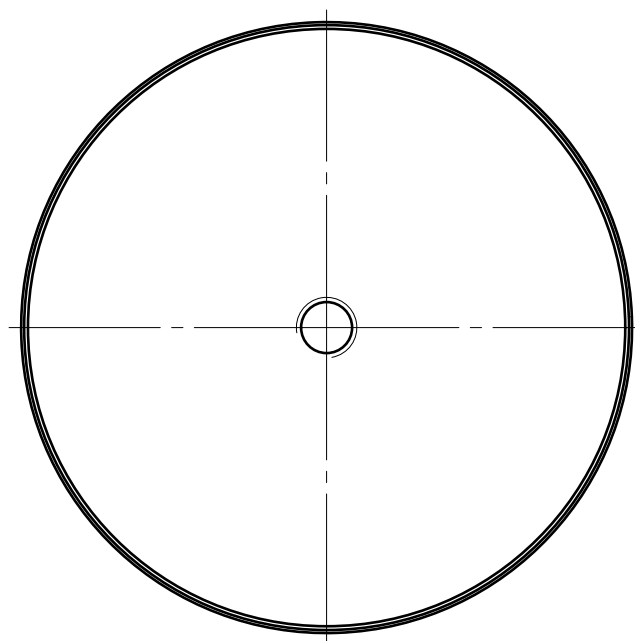
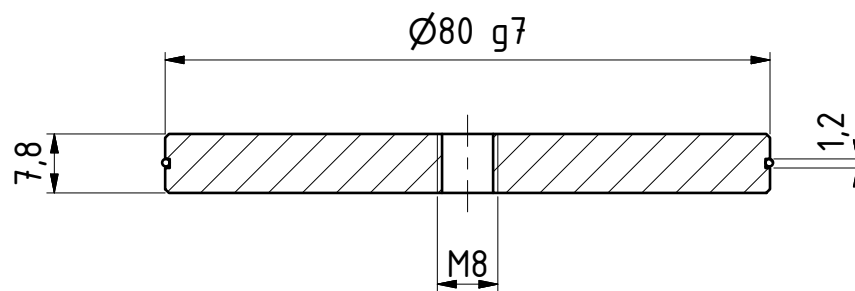
Maßstab 1:1

Zeichnungsnummer

G-ZS125-1



**GRIP**  
GRIP GmbH Handhabungstechnik

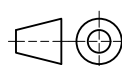


G-ZS160-1			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-ZS160-1.1	Zentrierscheibe 160
2	1	O-76x1 NBR70	O-Ring

Datum 24.03.2020

Maßstab 1:1

Zeichnungsnummer  
G-ZS160-1



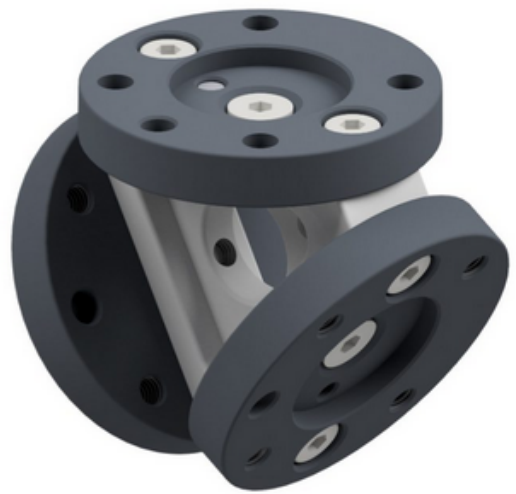
**GRIP**  
GRIP GmbH Handhabungstechnik

# YA Y-ADAPTER

The Y-Adapter connects two tools to a robot flange.

## Y-Adapter Advantages:

- Allows two tools to be connected to a robot arm at the same time
- Interface according to DIN EN ISO 9409-1
- Available in four sizes
- Pitch circle diameter 50 mm
- Universal Robots UR3, UR5, UR10, UR16
- Compatible with FANUC, YASKAWA, OMRON...



## COMPATIBLE FOR

SHW



MGW



SWS



SWA



## GRIP Y-Adapter

Technical specifications

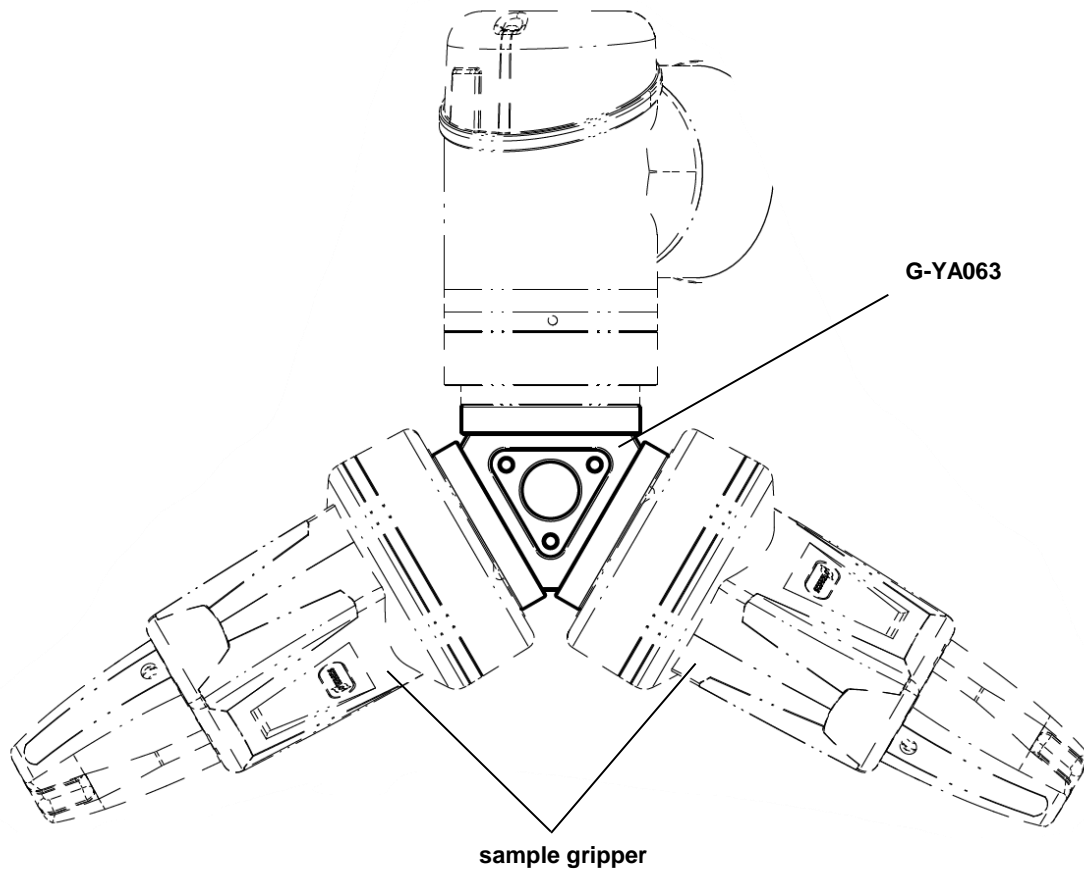
# GRIP

### GRIP Y-Adapter

The **GRIP Y-Adapter** allows the installation of two tools, for example, two grippers on one robot. With a pinch circle diameter of 50 mm, it's **suitable for most robots**.

By using the GRIP Y-Adapter, your robots cycle time and flexibility will be optimized.

The **GRIP Y-Adapter** is available in four versions: **G-YA063-S1; G-YA063-S2; G-YA063-S3; G-YA063-S4**



## G-YA063

### Technical specifications

# GRIP

#### Operating Mode:

The Y-Adapter connects two tools with one robot flange.

#### Advantages:

Increase of robot flexibility

Optimized cycle time

Interface according to DIN EN ISO 9409-1

High-strength aluminum, black and green anodized

Compatible with every 50 mm pitch circle diameter robot type



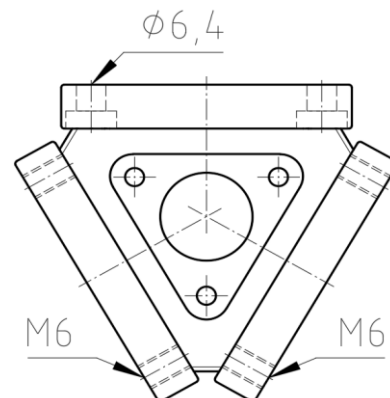
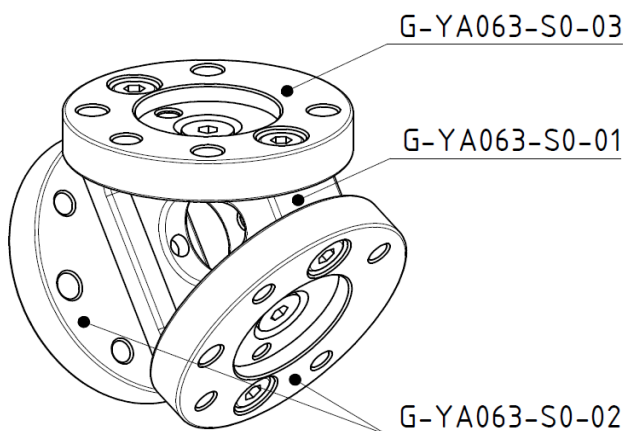
Technical specifications	YA063
Basic material	aluminum, anodized
Flange diameter [mm]	63
Pitch circle diameter [mm]	50
Repeat accuracy +/- [mm]	0,02
Mass [kg]	0,34
Recommended load [kg]	24
Operating temperature range [°C]	-30 to +120

#### G-YA063-S1

1 x G-YA063-S0-01

2 x G-YA063-S0-02

1 x G-YA063-S0-03



#### Y-Adapter

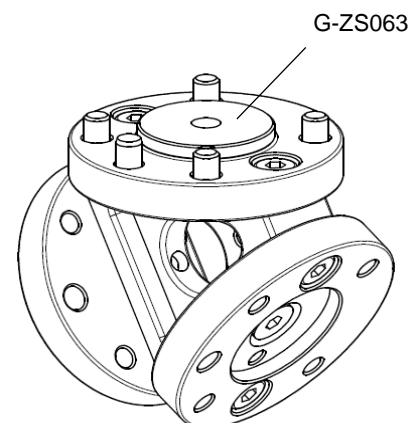
G-YA063-S1 Y-Adapter set 1

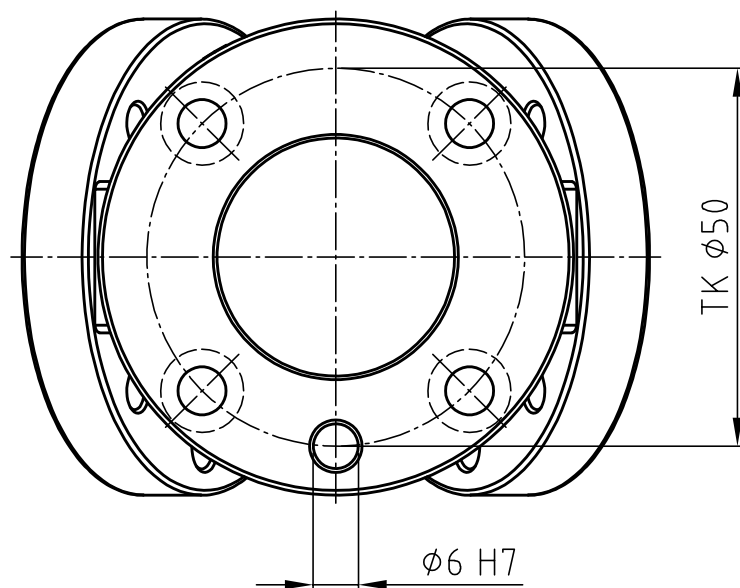
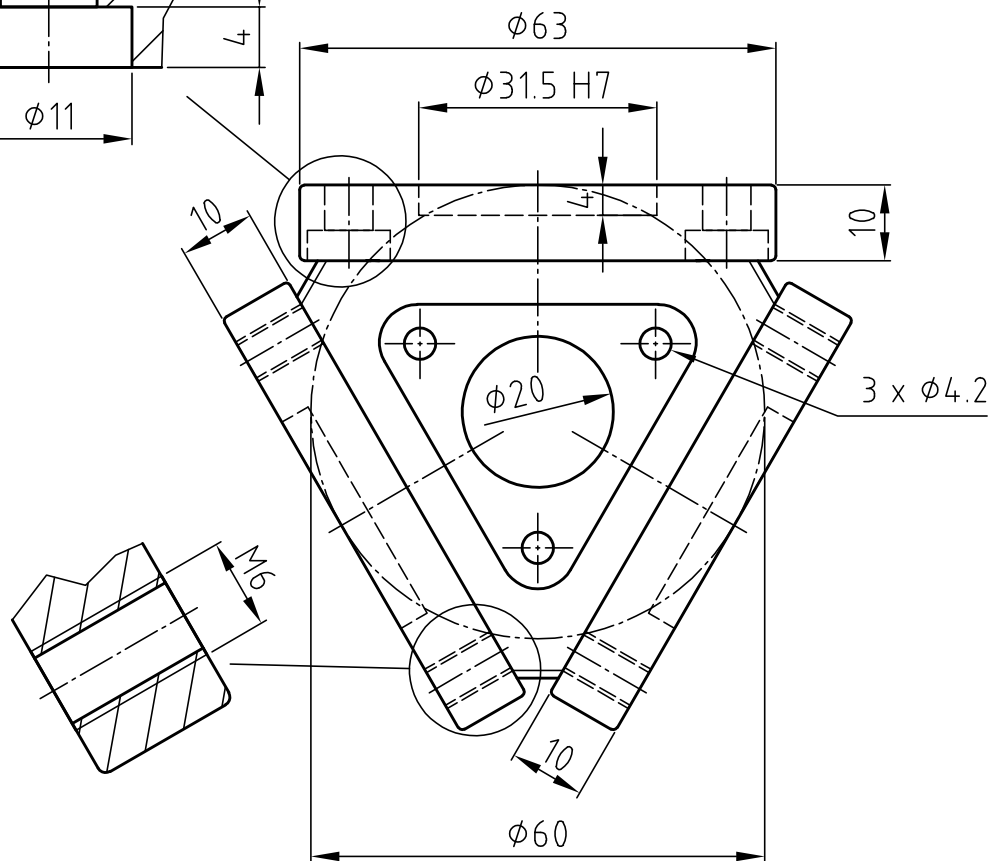
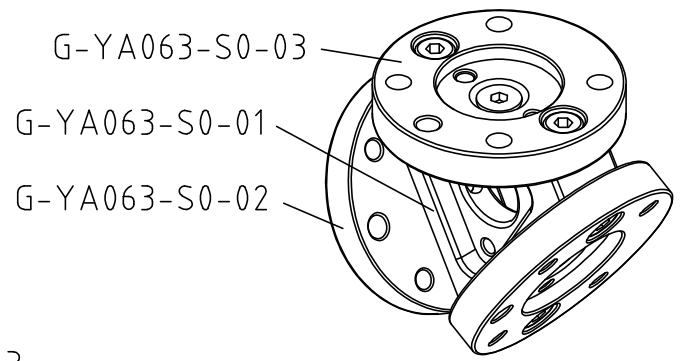
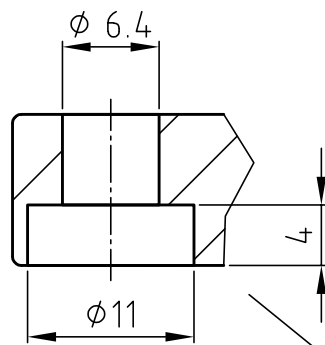
#### Spare Parts

G-YA063-S0-01	Y-Assembly
G-YA063-S0-02	Y-Flange 063 with M6 thread
G-YA063-S0-03	Y-Flange 063 with D6,4 counter bore

#### Accessories

G-ZS063	Centering disk for MGW063
---------	---------------------------



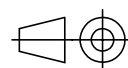


Datum 26.03.2020

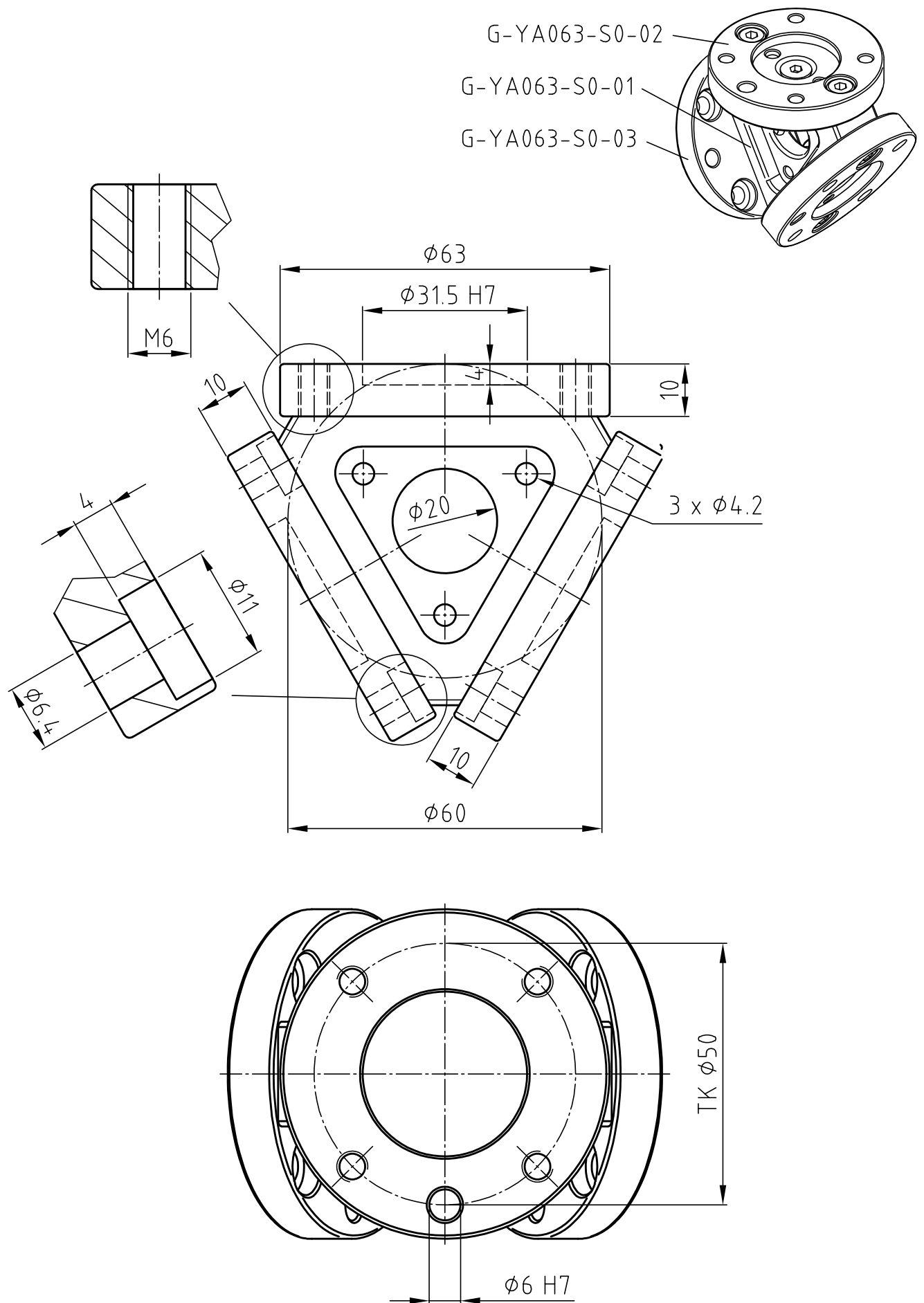
Maßstab 1:1

Zeichnungsnummer

G-YA063-S1

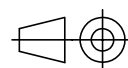


**GRIP**  
GRIP GmbH Handhabungstechnik

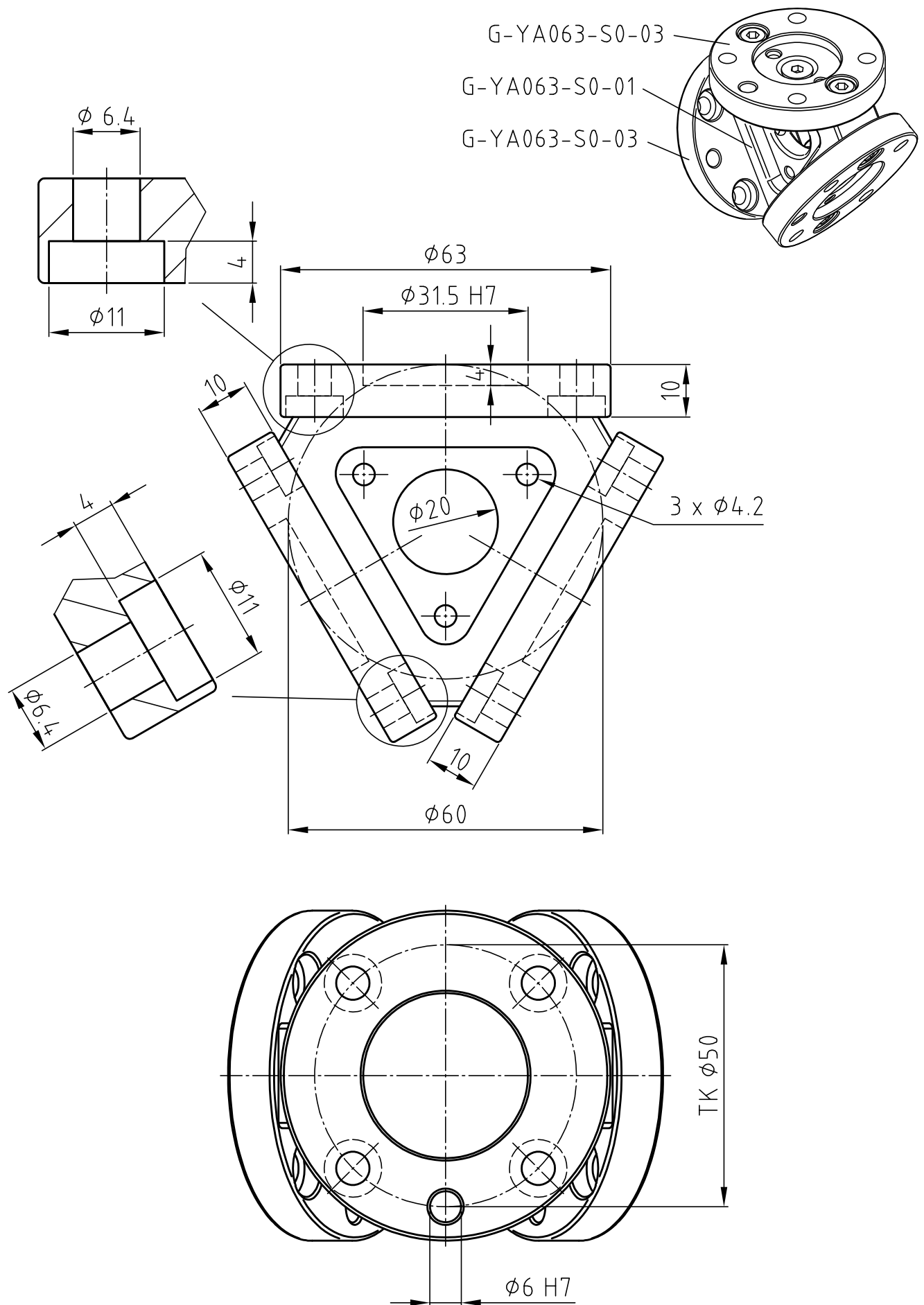


Datum 26.03.2020 Maßstab 1:1

Zeichnungsnummer  
G-YA063-S2

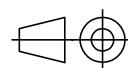


**GRIP**  
GRIP GmbH Handhabungstechnik



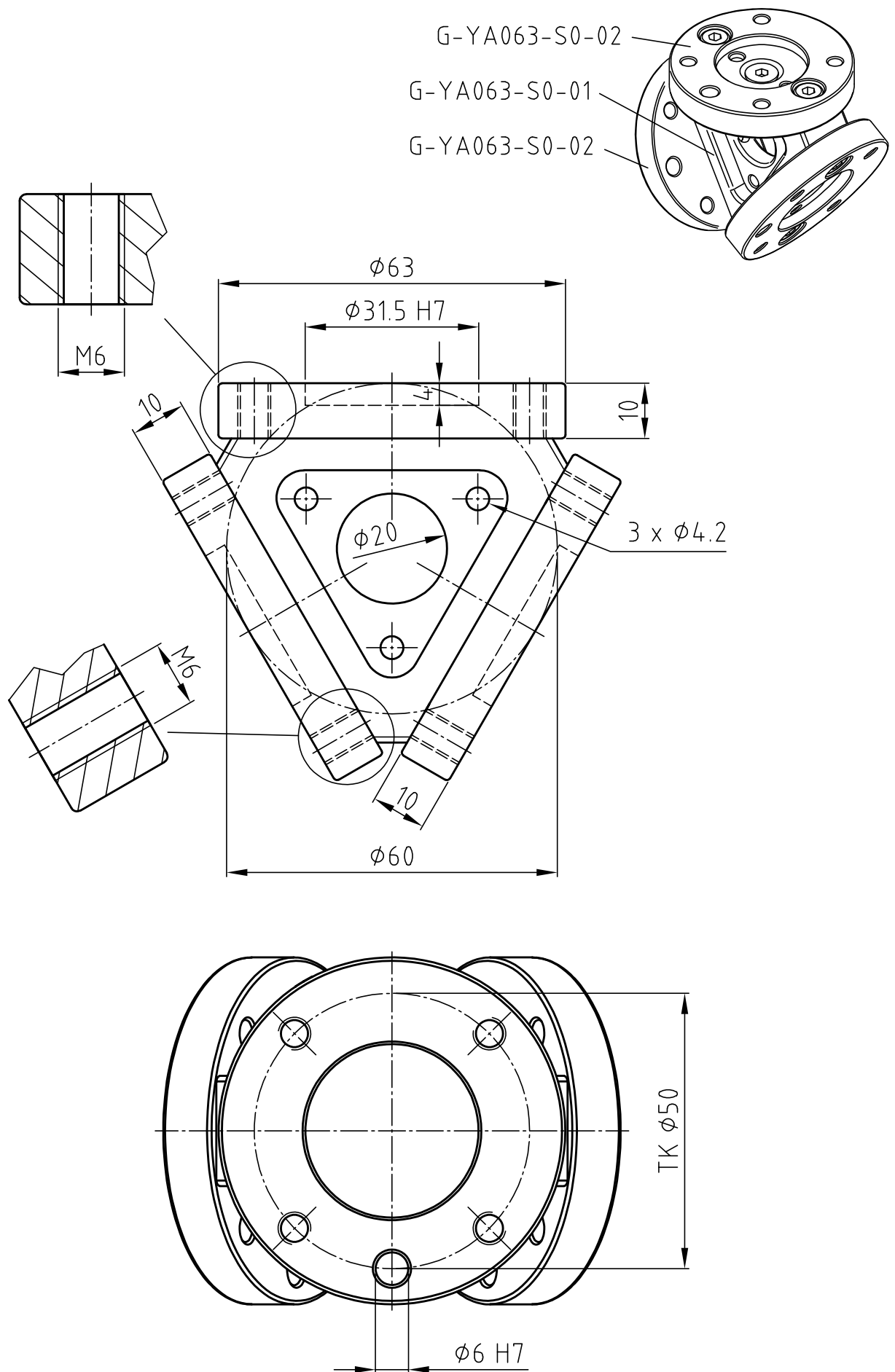
Datum 26.03.2020 Maßstab 1:1

Zeichnungsnummer  
G-YA063-S3



**GRIP**  
GRIP GmbH Handhabungstechnik



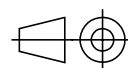


Datum 26.03.2020

Maßstab 1:1

Zeichnungsnummer

G-YA063-S4



**GRIP**

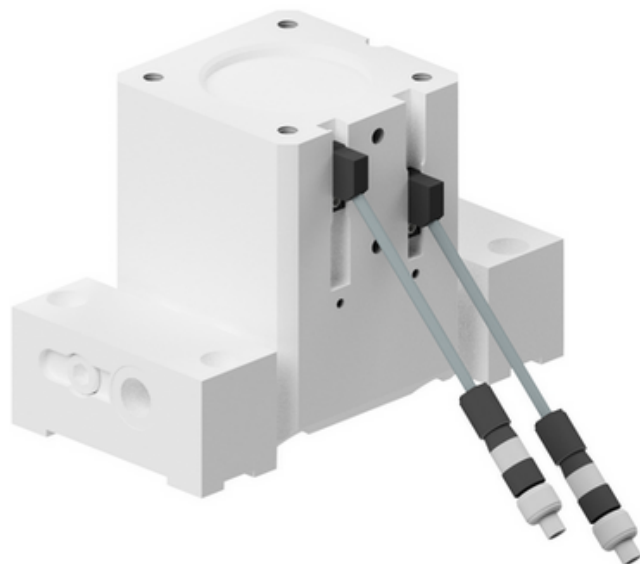
GRIP GmbH Handhabungstechnik

# RSGU SIGNAL TRANSMITTER WITH LED

We recommend the RSGU signal transmitter as an accessory for our GP and GZ Grippers. The electronic magnetic switch enables the piston position to be queried and thus the status of the gripper. For example "open" or "closed". It is designed as PNP-closer and is compatible with all our Gripper sizes. The sensor is inserted into the prepared grooves on the Grippers. The switching position can then be fixed via a set screw.

The signal transmitter with LED is available in two versions:

- The ZG-RSGU-01 has a 2 meter long and open end cable
- The ZG-RSGU01-300-M8 has a 300 mm long cable with an M8 connector



## COMPATIBLE FOR

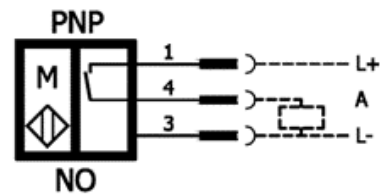
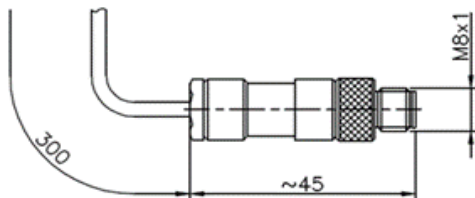
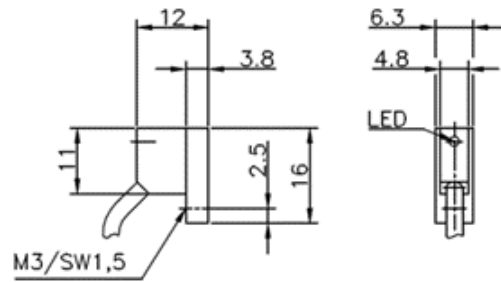
GP Parallel Gripper



GZ Angular Gripper

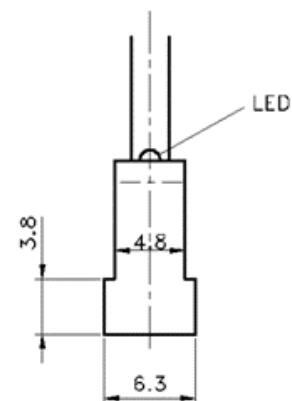
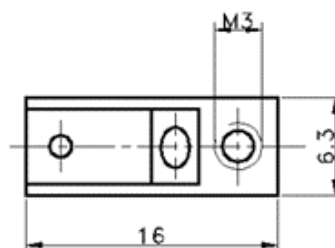
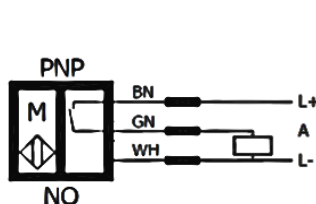
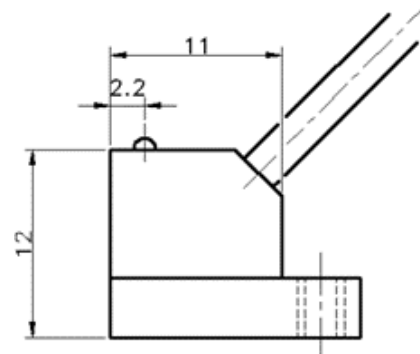


Technical specifications	RSGU01-300-M8
DC 3-Wire	16x12x6,3 mm
Switching output	PNP-closing contact
Operating voltage UB	10 - 30V DC
Rated operational current Ie	max. 200 mA
Voltage drop Du	≤3V (at I <sub>max</sub> = 400mA)
Temperature range	- 25° C ... +80° C
Short-circuit strength	integrated
Inverse-polarity protection	integrated
Protection class DIN 60 5029	IP67
Switching status display	LED
Connection M8	0,3m PVC Wire: 3x0,04 mm <sup>2</sup>
Housing material	Plastic material
Torque of fastening screw	0.8 Nm
Operating temperature range [°C]	-30 to +120

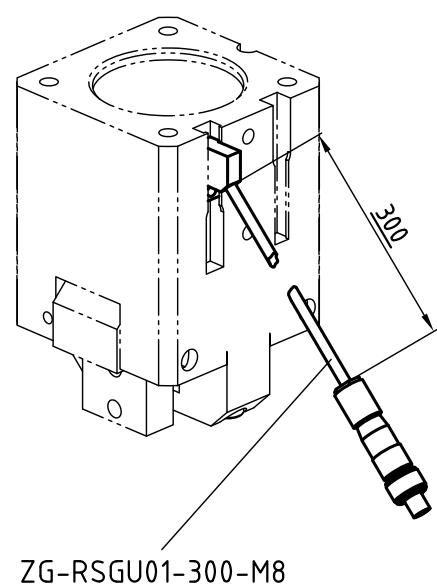
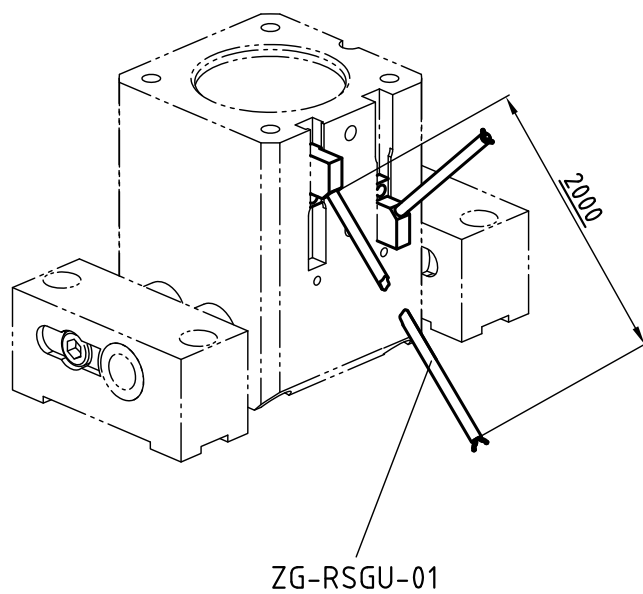
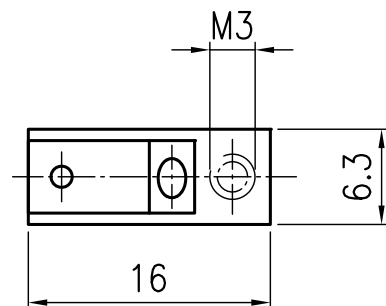
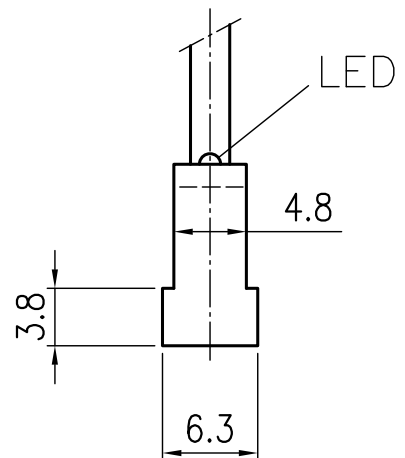
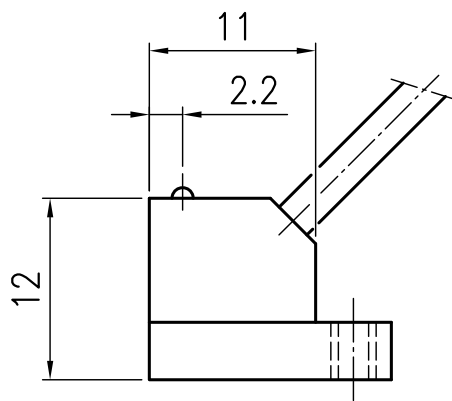

**Electronic magnetic switch**

ZG-RSGU01-300-M8 for G-GP..., Signal transmitter with LED, with M8 plug

Technical specifications	RSGU01
DC 3-Wire	16x12x6,3 mm
Switching output	PNP-closing contact
Operating voltage UB	10 - 30V DC
Rated operational current Ie	max. 200 mA
Voltage drop Du	≤3V (at I <sub>max</sub> = 400mA)
Temperature range	- 25° C ... +80° C
Short-circuit strength	integrated
Inverse-polarity protection	integrated
Protection class DIN 60 5029	IP67
Switching status display	LED
Connection M8	2 m PVC Wire: 3x0,04 mm <sup>2</sup>
Housing material	Plastic material
Torque of fastening screw	0.8 Nm
Operating temperature range [°C]	-30 to +120


**Electronic magnetic switch**

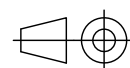
ZG-RSGU01 Magnetic proximity switch



Datum 26.03.2020 Maßstab 2:1

Zeichnungsnummer

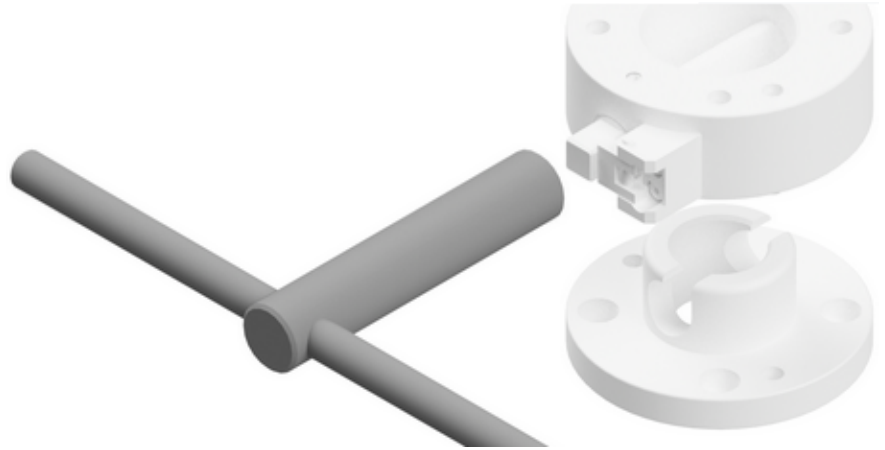
G-RSGU



**GRIP**  
GRIP GmbH Handhabungstechnik

## VKS SQUARE SOCKET KEY

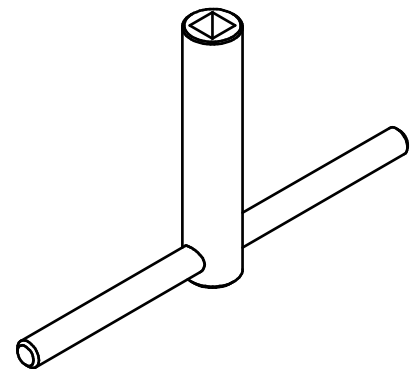
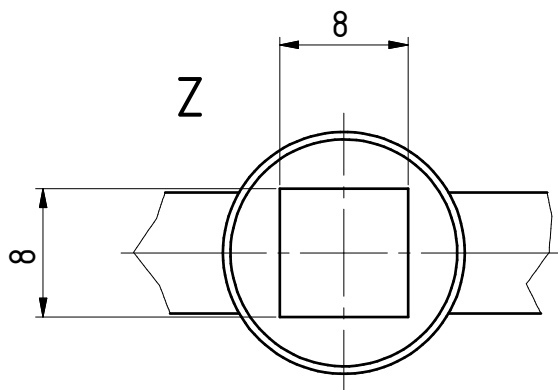
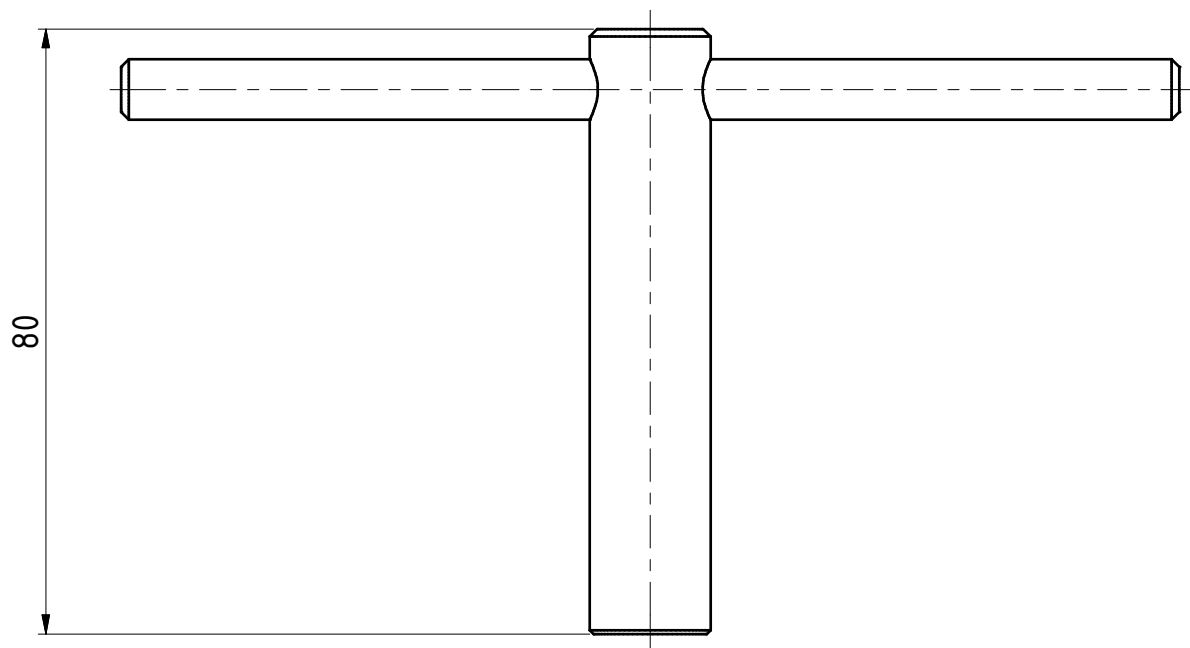
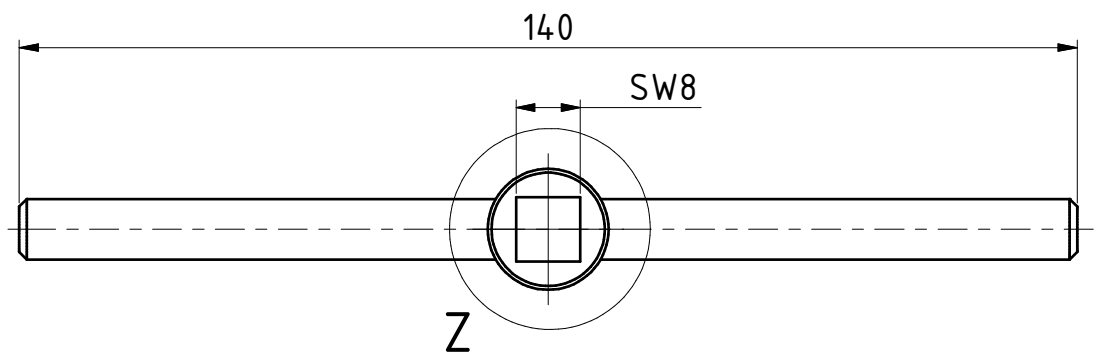
The Square Socket Key is the optimal operating tool for our SWS Connector. It is required when using the safety lock device VS2. By inserting the key, the spring-loaded flap of the safety lock is disengaged.



COMPATIBLE FOR

SWS





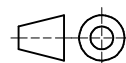
passend zu SWS050

Datum 10.02.2016

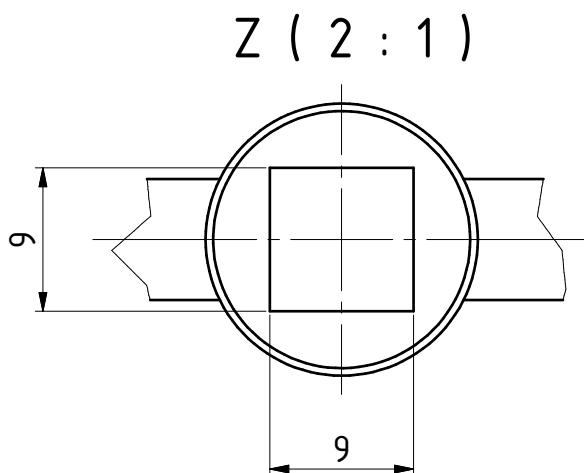
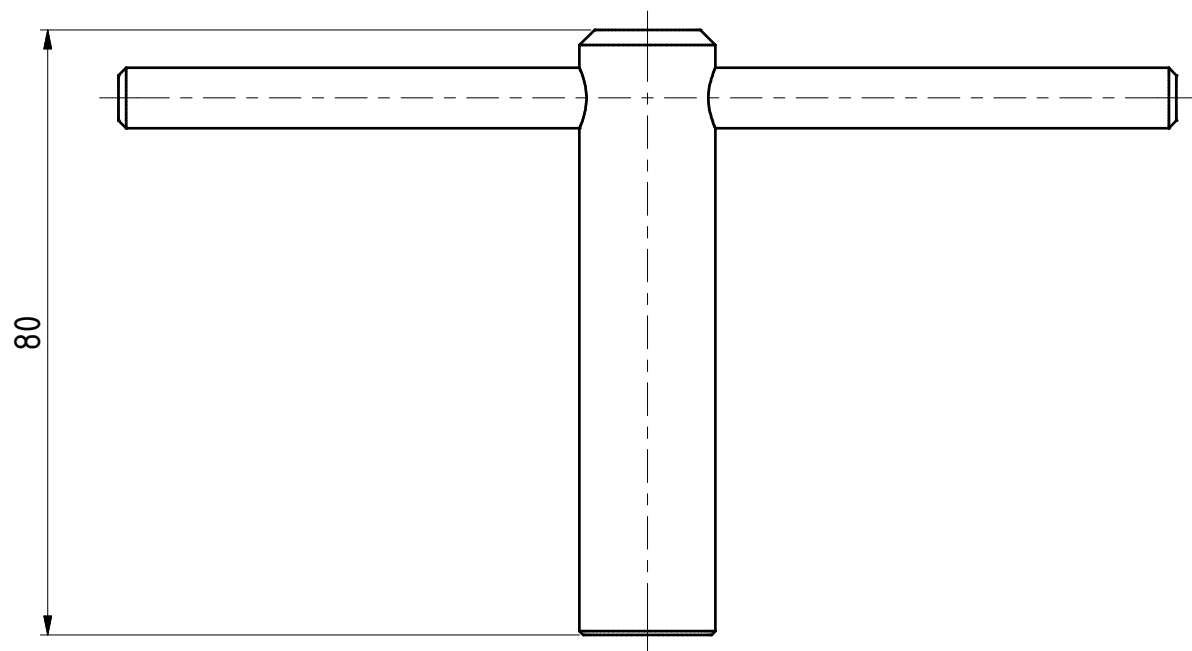
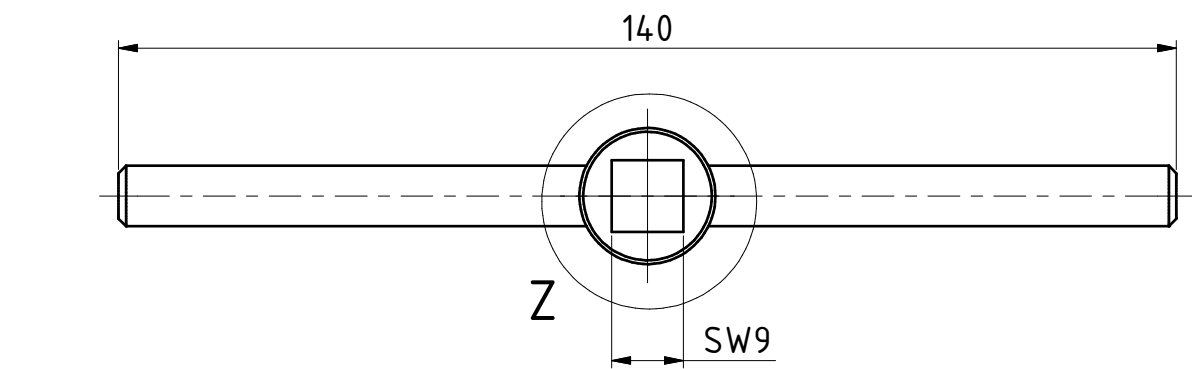
Maßstab 1:1

Zeichnungsnummer

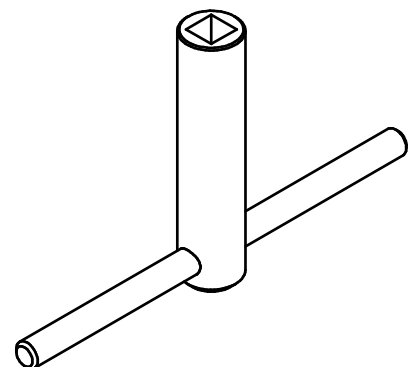
ZG-VKS050-SW08



**GRIP**  
GRIP GmbH Handhabungstechnik

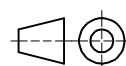


passend zu SWS063

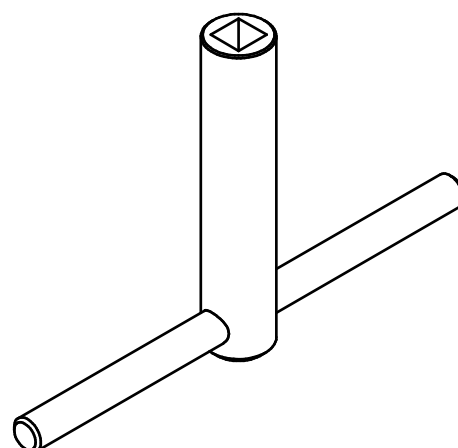
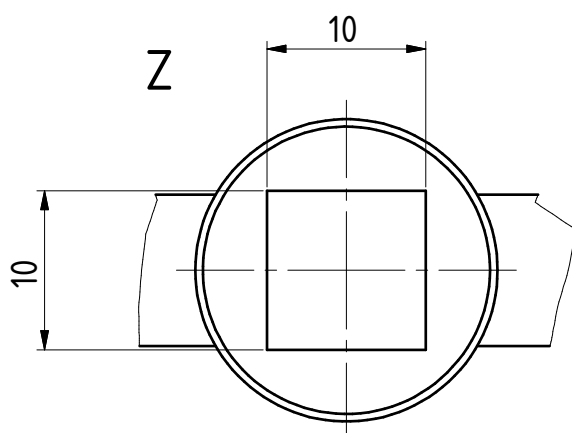
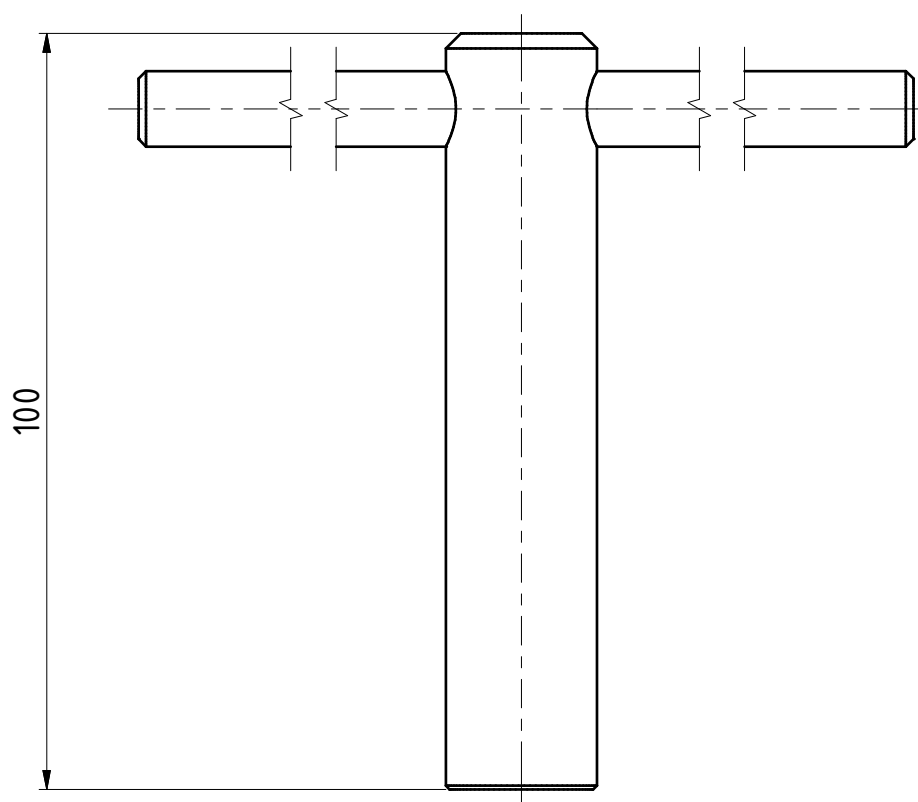
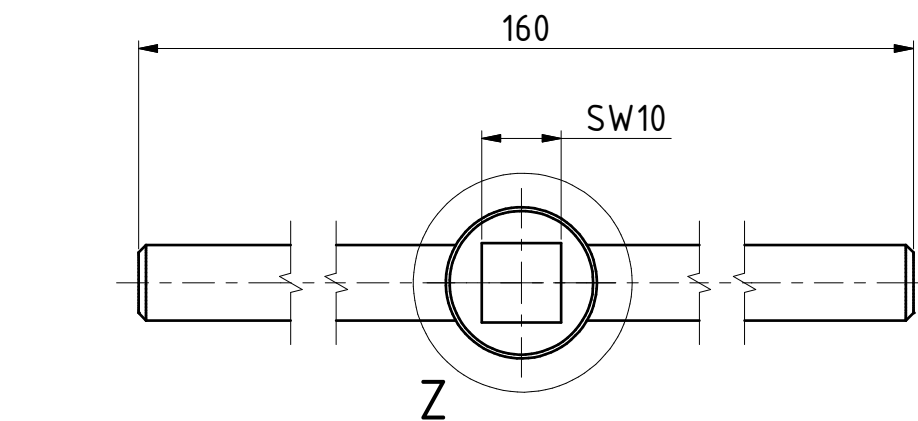


Datum 23.03.2020 Maßstab 1:1

Zeichnungsnummer  
ZG-VKS063-SW09



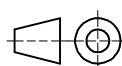
**GRIP**  
GRIP GmbH Handhabungstechnik



passend zu SWS080

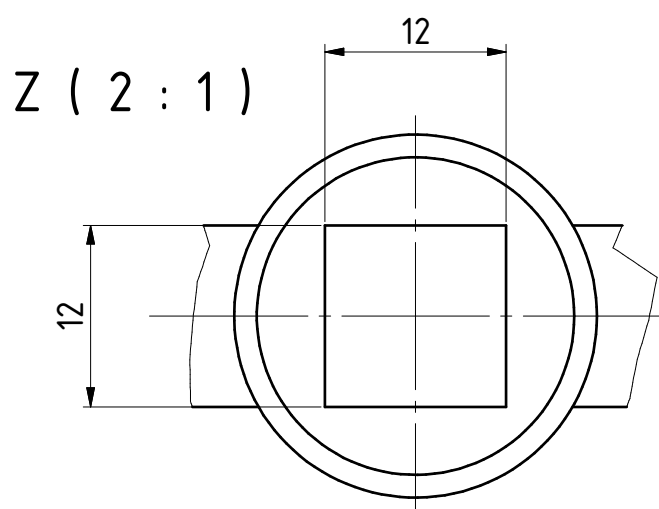
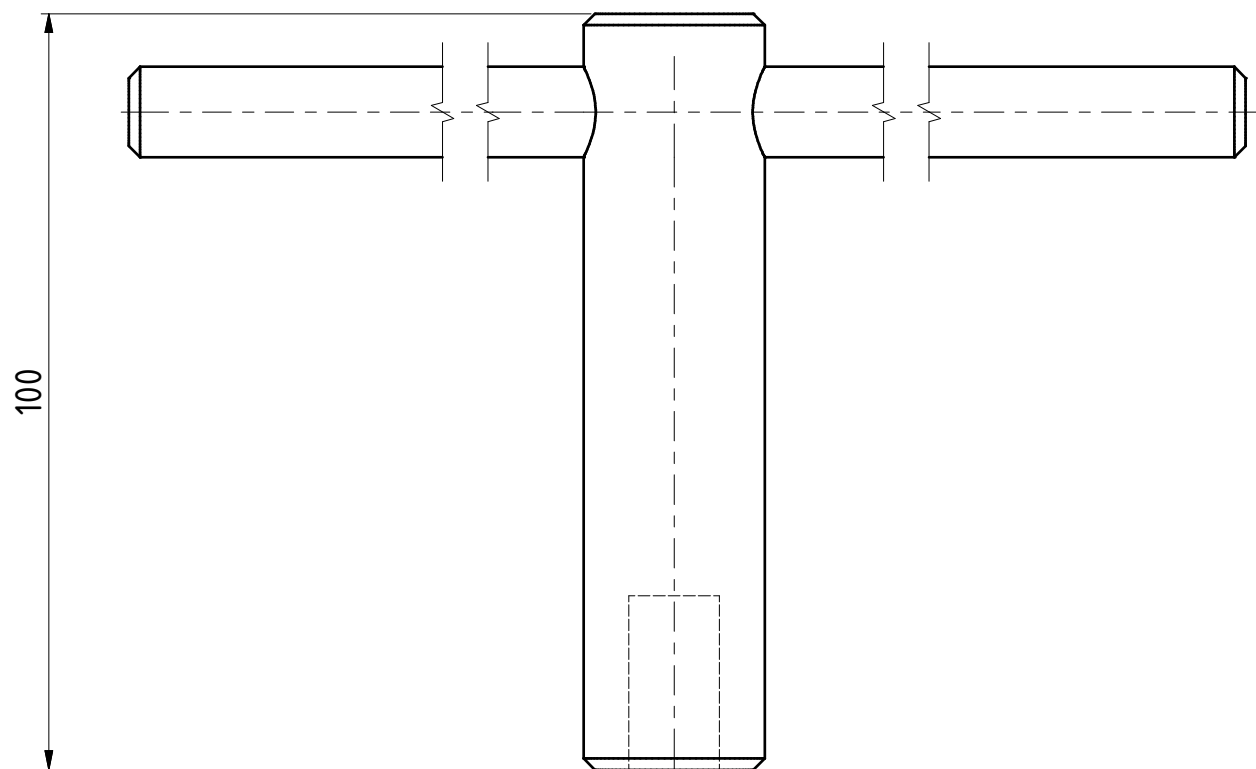
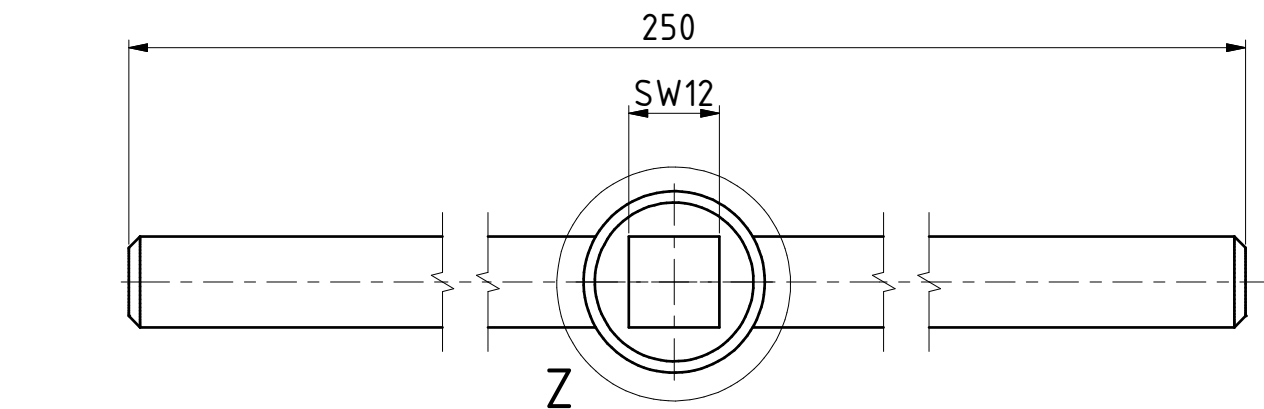
Datum 23.03.2020 Maßstab 1:1

Zeichnungsnummer  
ZG-VKS080-SW10

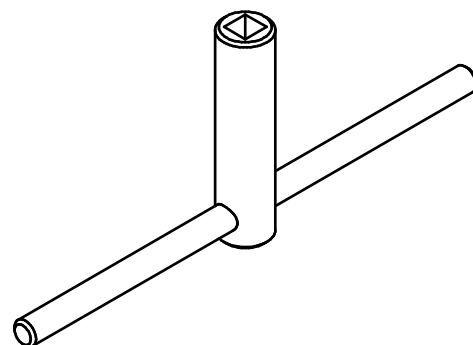


**GRIP**  
GRIP GmbH Handhabungstechnik



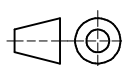


passend zu SWS100

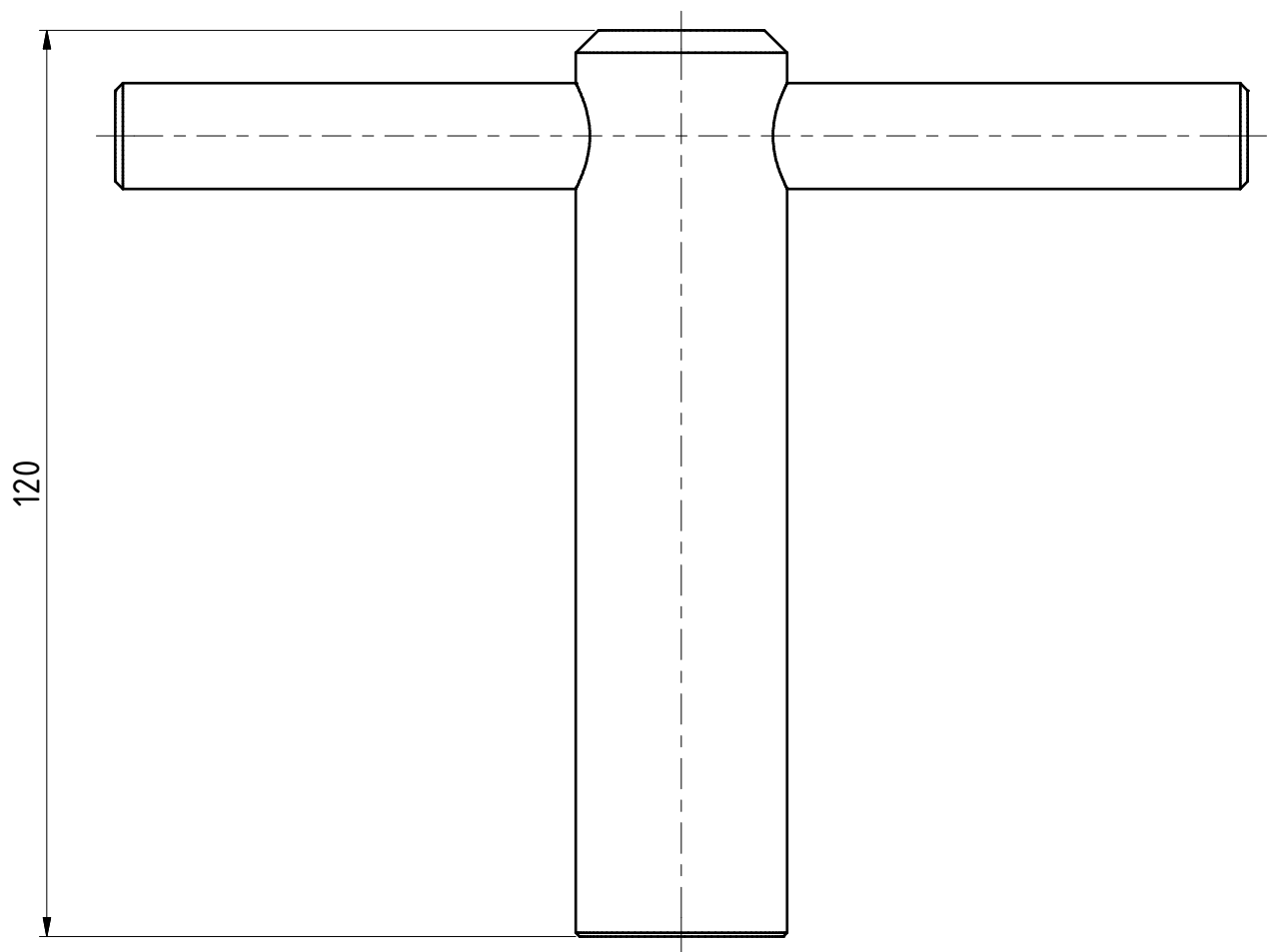
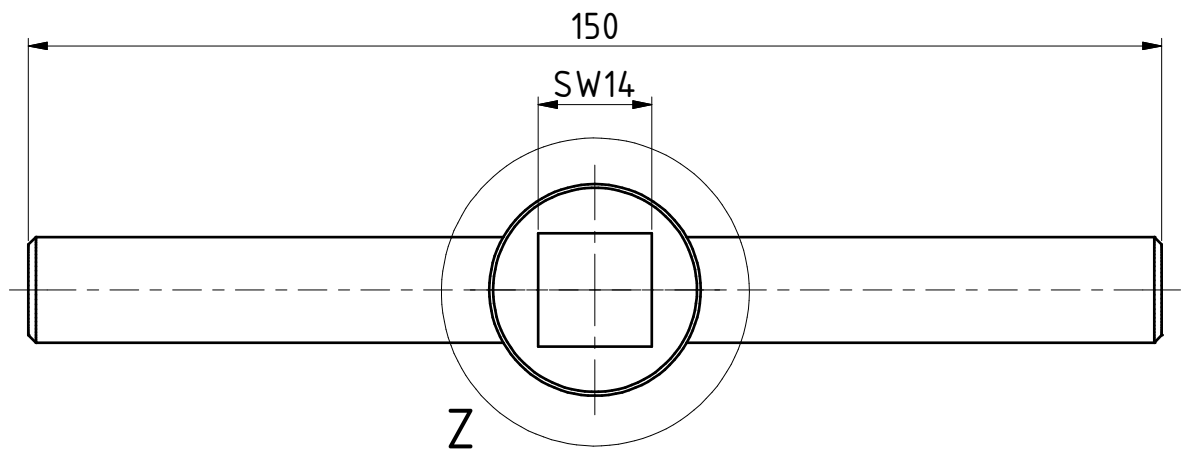


Datum 23.03.2020 Maßstab 1:2

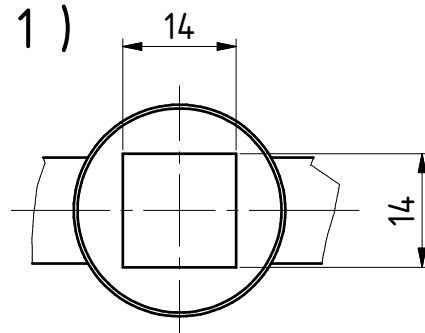
Zeichnungsnummer  
ZG-VKS100-SW12



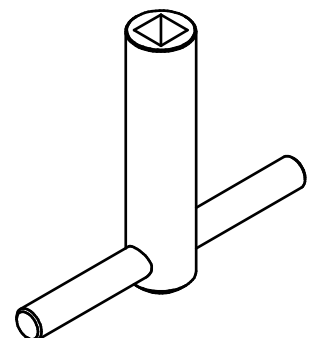
**GRIP**  
GRIP GmbH Handhabungstechnik



Z ( 1 : 1 )



passend zu SWS125

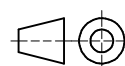


Datum 23.03.2020

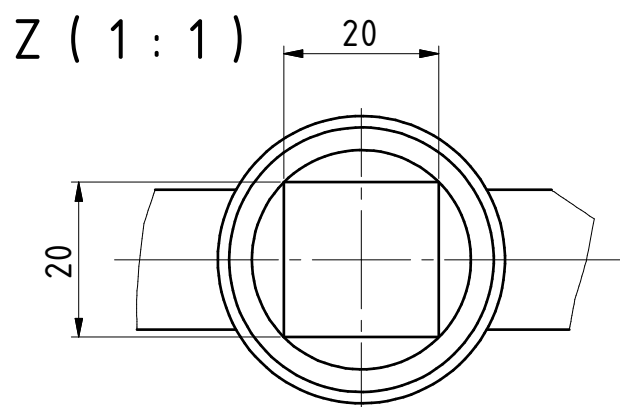
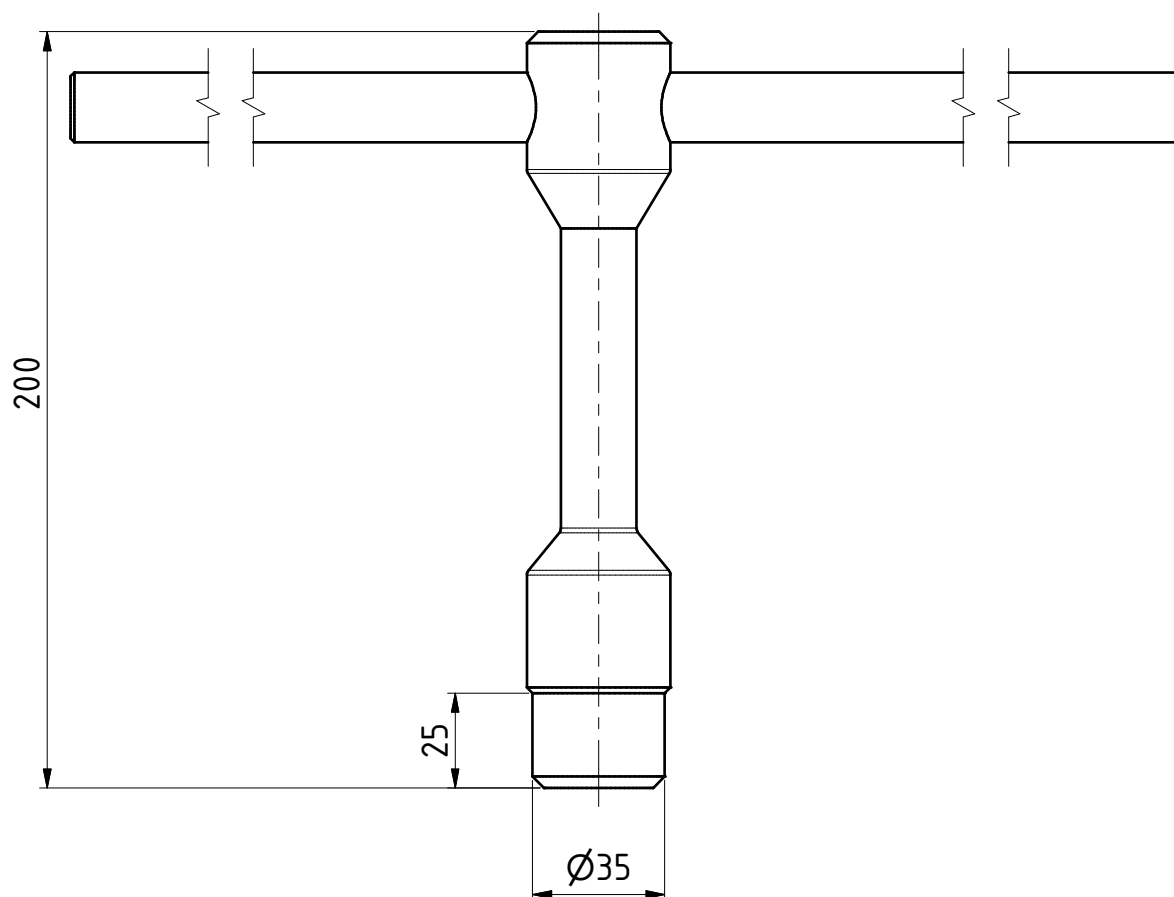
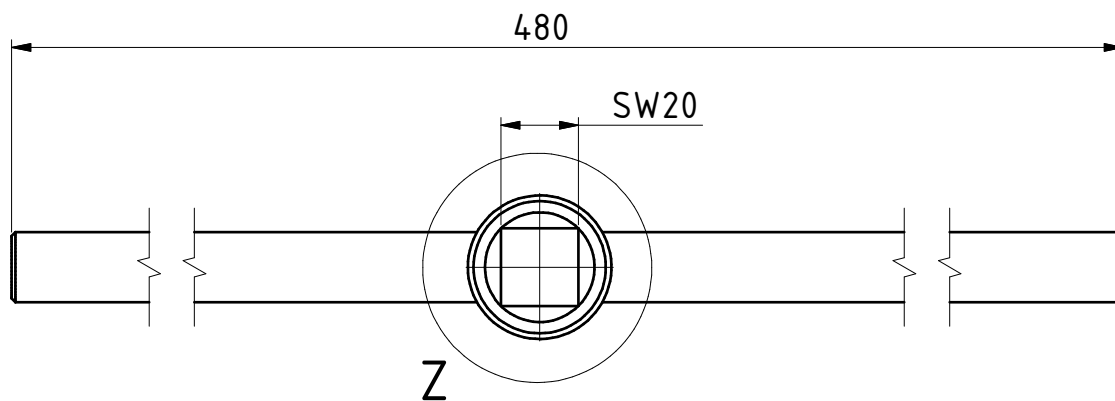
Maßstab 1:2

Zeichnungsnummer

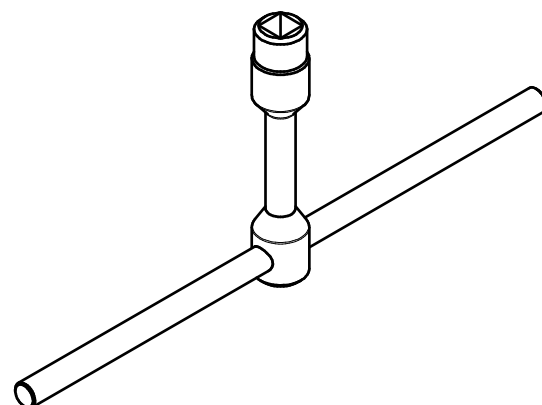
ZG-VKS125-SW14



**GRIP**  
GRIP GmbH Handhabungstechnik



passend zu SWS160, 200, 250

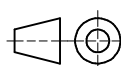


Datum 12.04.2019

Maßstab 1:2

Zeichnungsnummer

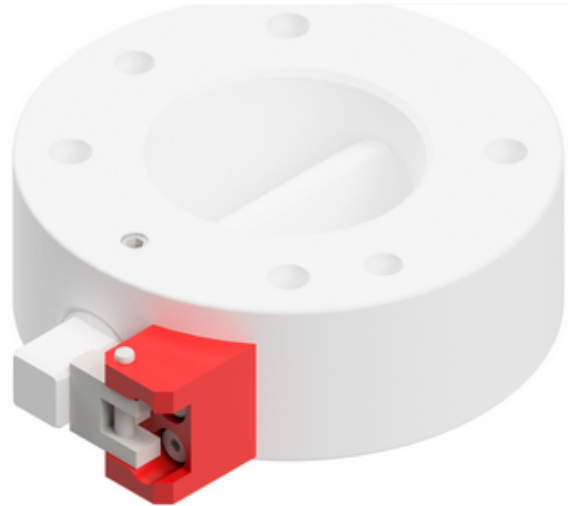
ZG-VKS160-SW20



**GRIP**  
GRIP GmbH Handhabungstechnik

## VS2 SAFETY LOCK

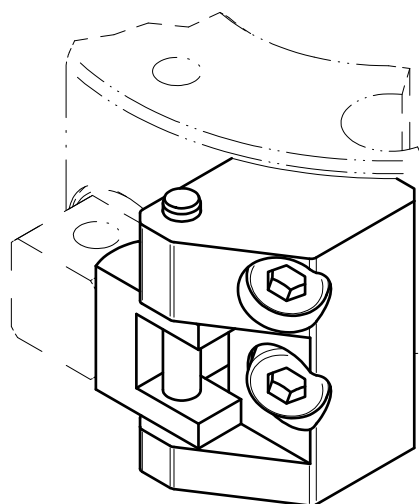
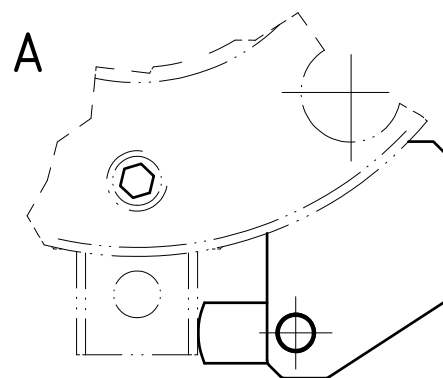
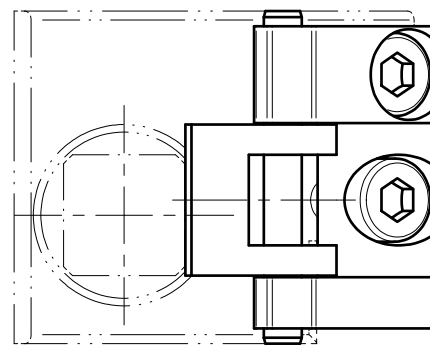
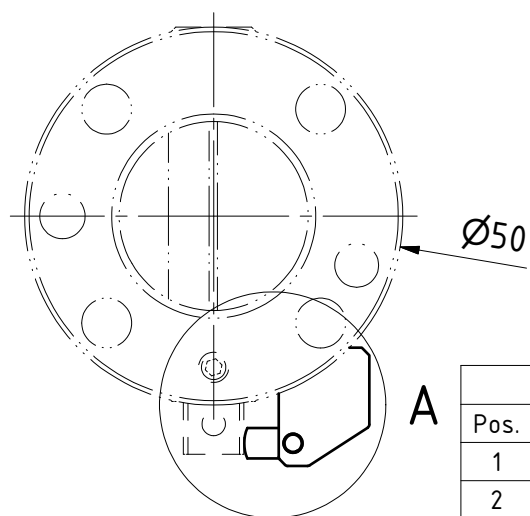
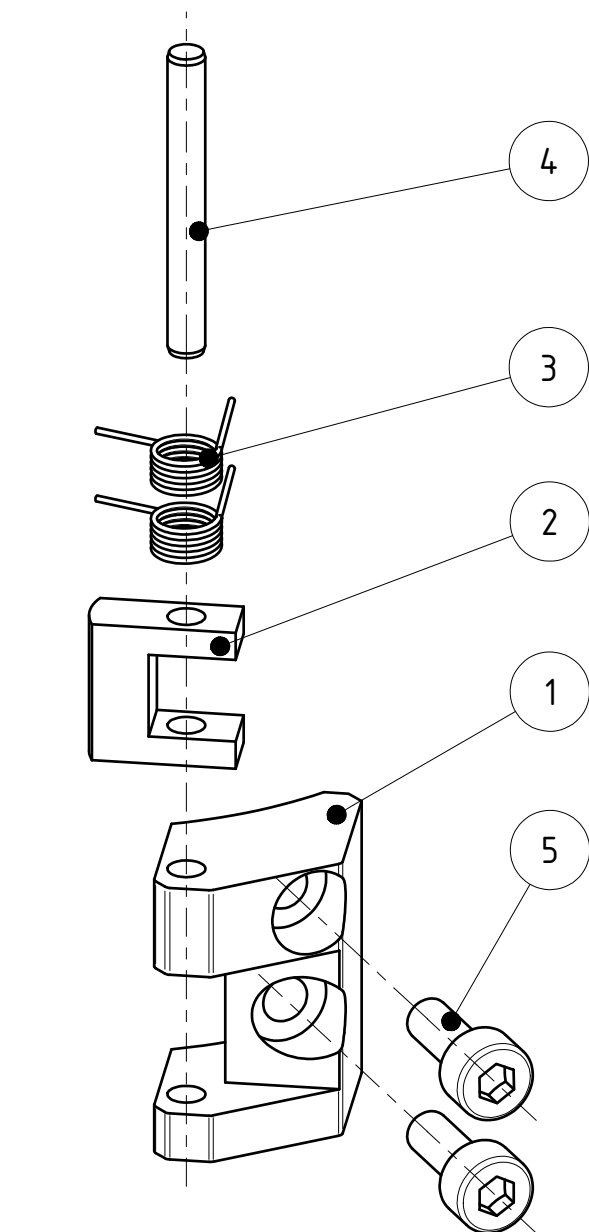
The VS2 Safety Lock is the optimal accessory for our connectors SWS050,063,080,100,125. For sizes SWS160,200,250 the VS2 Safety Lock is standard and comes premounted.



COMPATIBLE FOR

SWS

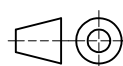




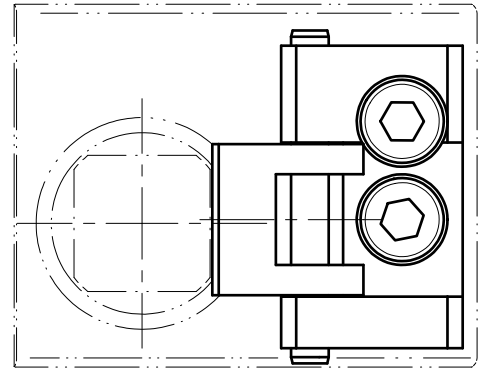
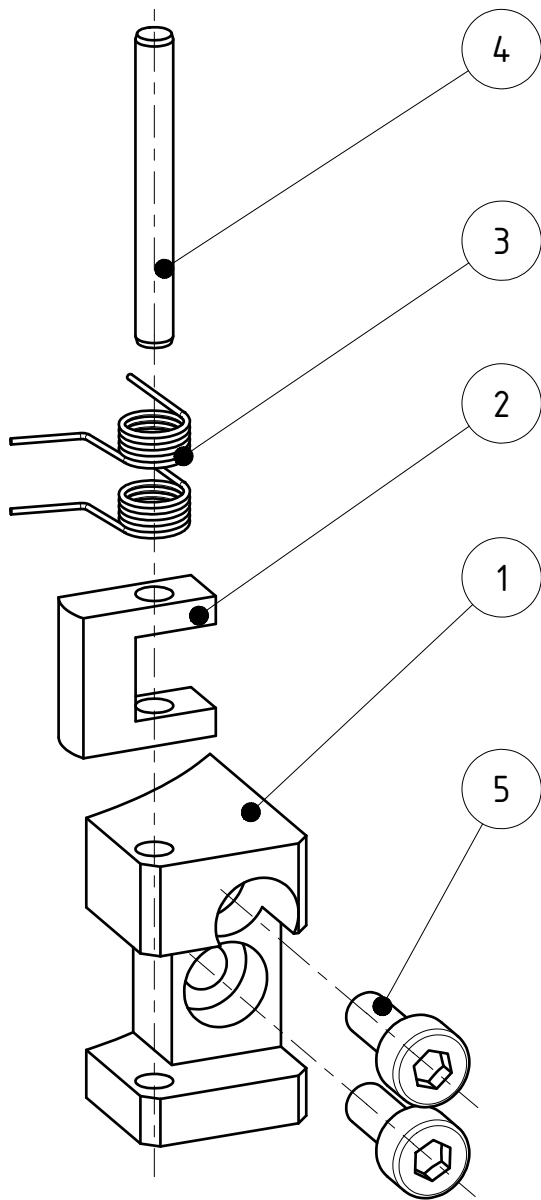
EG-SWS050-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS050-3.1	Halter
2	1	G-SWS063-3.2	Klappe
3	2	M04R21	Drehfeder
4	1	ISO 8734 - 2,5 x 22 - A	Zylinderstift, gehärtet
5	2	DIN 912 - M3 x 8	Zylinderkopfschraube

Datum 23.03.2020 Maßstab 2:1

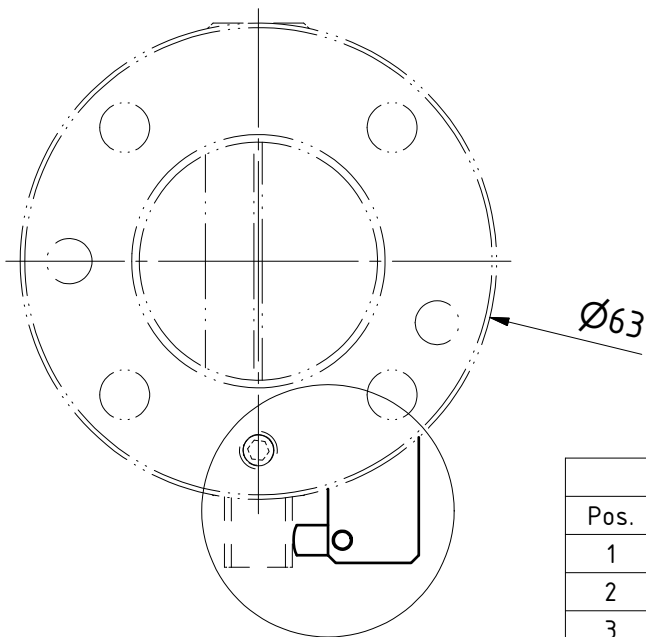
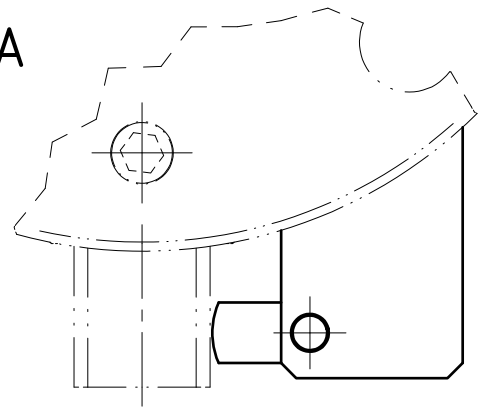
Zeichnungsnummer  
EG-SWS050-VS2



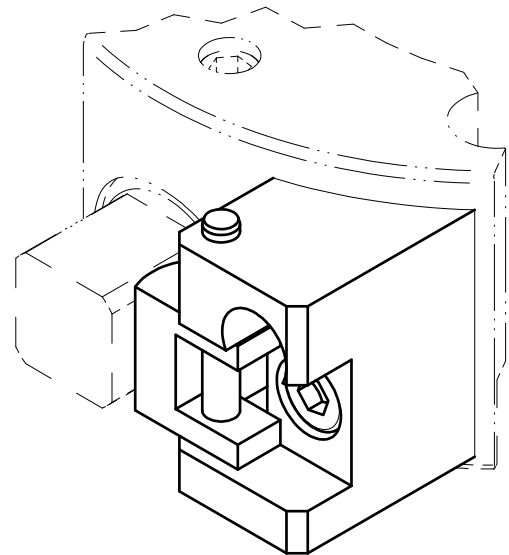
**GRIP**  
GRIP GmbH Handhabungstechnik



A



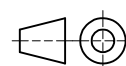
A



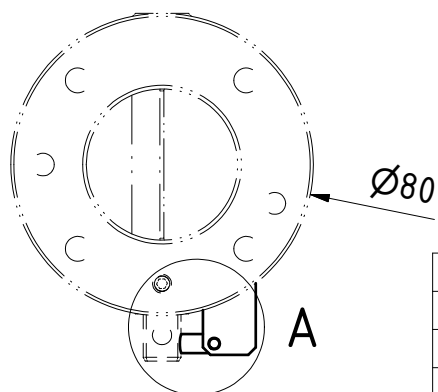
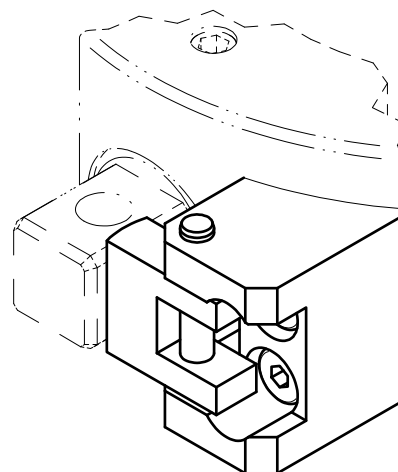
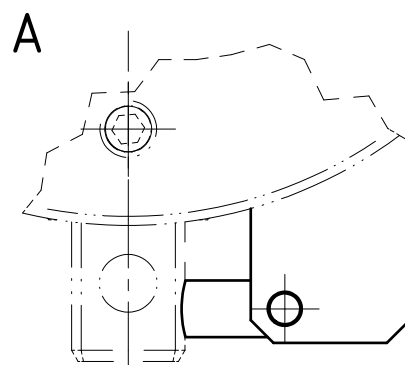
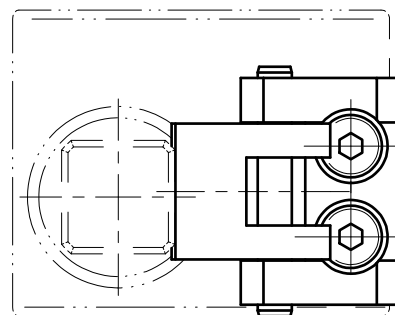
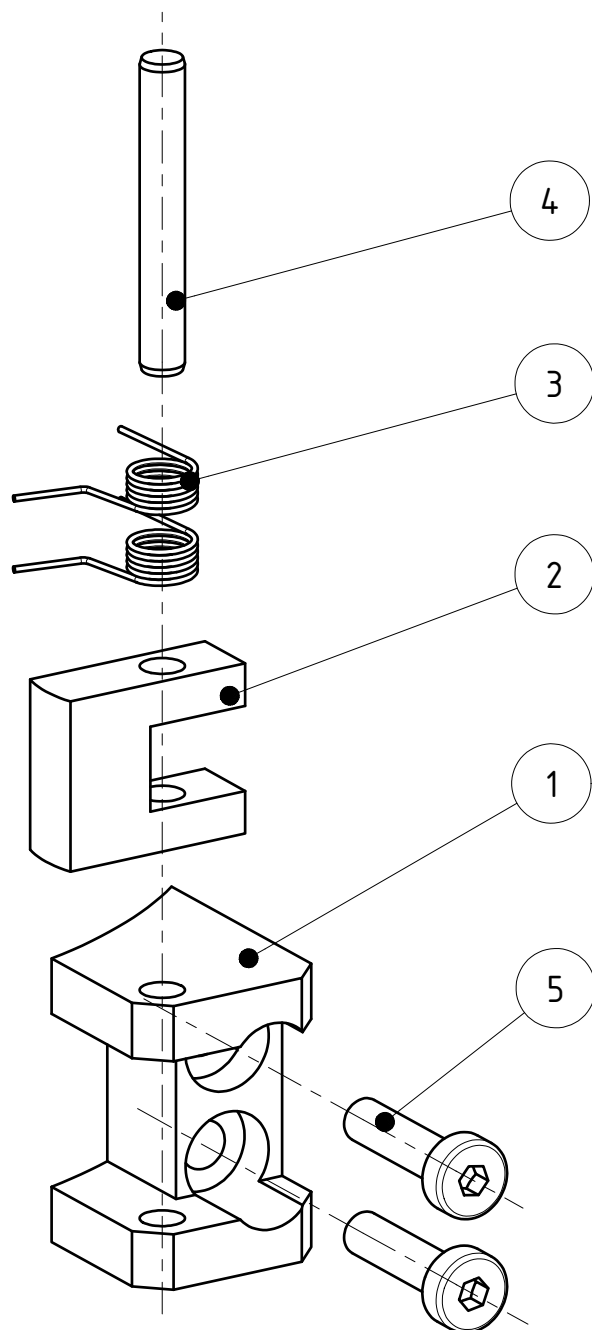
EG-SWS063-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS063-3.1	Halter
2	1	G-SWS063-3.2	Klappe
3	2	M04R21	Drehfeder
4	1	ISO 8734 - 2,5 x 22 - A	Zylinderstift, gehärtet
5	2	ISO 4762 - M3 x 8	Innensechskantschraube

Datum 23.03.2020 Maßstab 2:1

Zeichnungsnummer  
EG-SWS063-VS2



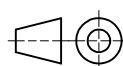
**GRIP**  
GRIP GmbH Handhabungstechnik



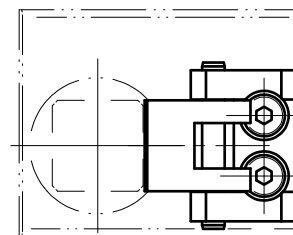
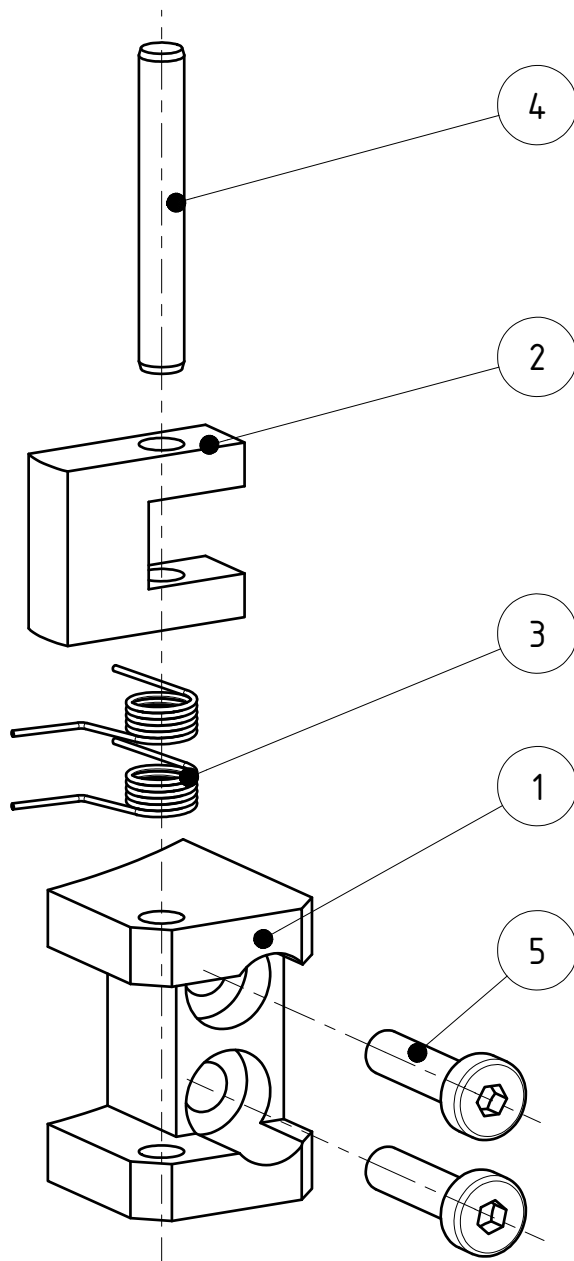
EG-SWS080-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS080-3.1	Halter
2	1	G-SWS080-3.2	Klappe
3	2	M04R21	Drehfeder
4	1	ISO 8734 - 3 x 22 - A	Zylinderstift, gehärtet
5	2	DIN 7984 - M3 x 12	Zylinderkopfschraube

Datum 23.03.2020 Maßstab 2:1

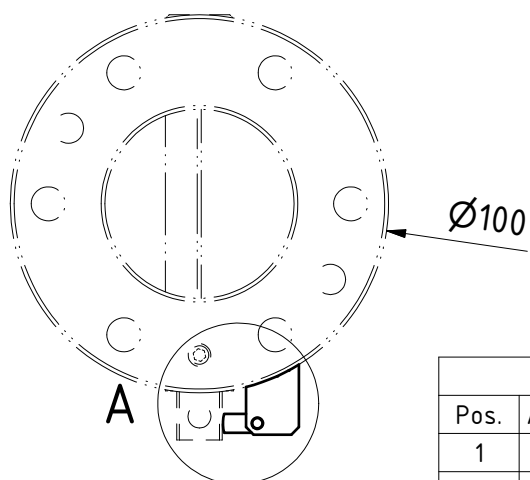
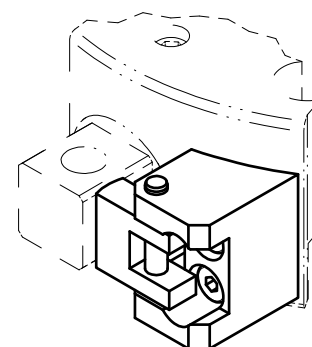
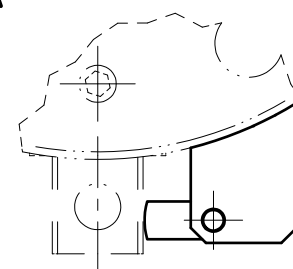
Zeichnungsnummer  
EG-SWS080-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik



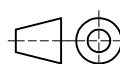
A



EG-SWS100-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS100-3.1-Halter	G-SWS100-VS2 Halter
2	1	G-SWS080-3.2-Klappe	G-SWS100-VS2 Klappe
3	2	M04R21	Drehfeder
4	1	ISO 8734 - 3 x 22 - A	Zylinderstift, gehärtet
5	2	DIN 7984 - M3 x 12	Zylinderkopfschraube

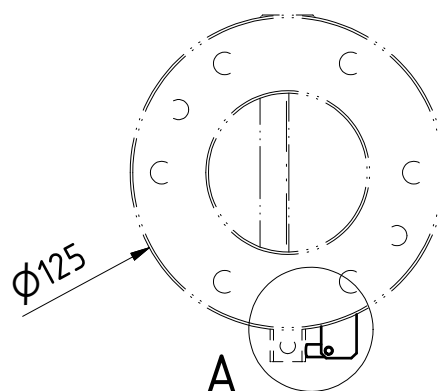
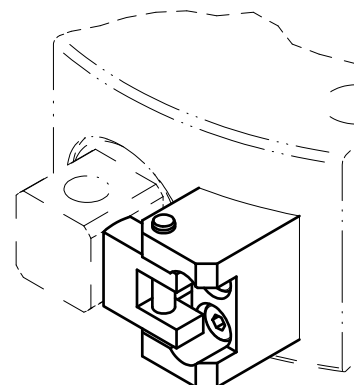
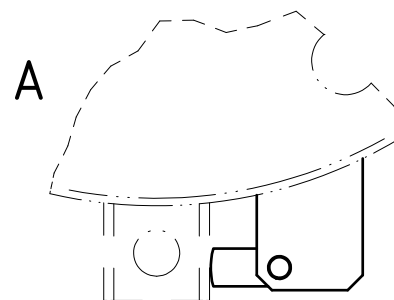
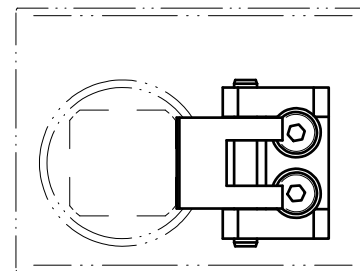
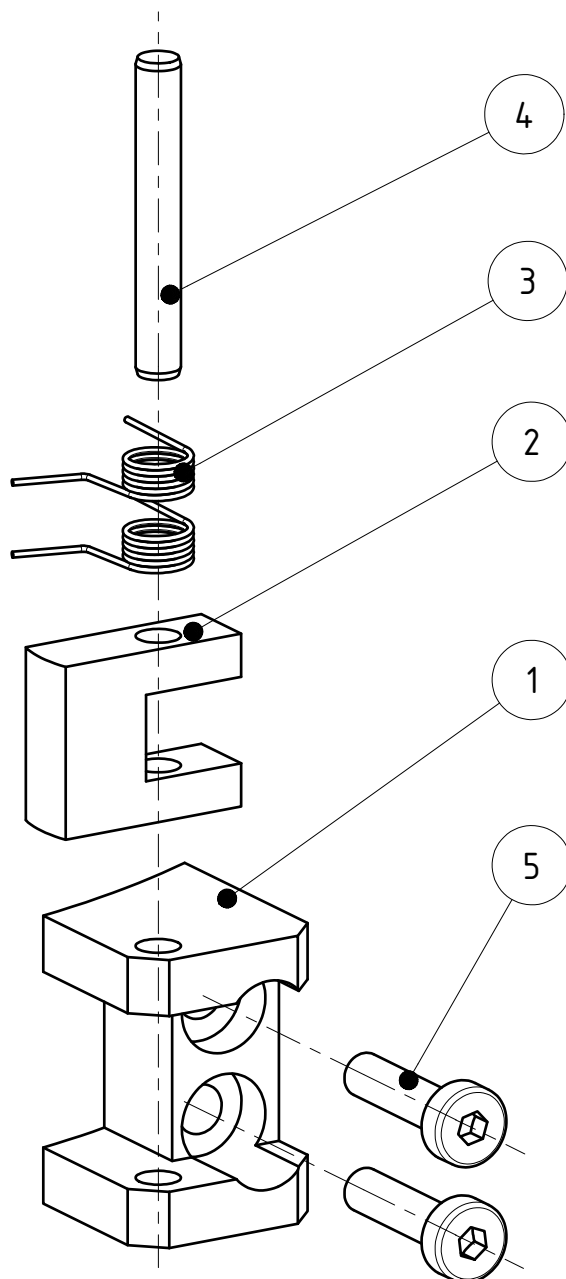
Datum 23.03.2020 Maßstab 2:1

Zeichnungsnummer  
EG-SWS100-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik





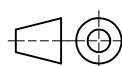
EG-SWS125-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS125-3.1	Halter
2	1	G-SWS080-3.2	Klappe
3	2	M04R21	Drehfeder
4	1	ISO 8734 - 3 x 22 - A	Zylinderstift, gehärtet
5	2	DIN 7984 - M3 x 12	Zylinderkopfschraube

Datum 23.03.2020

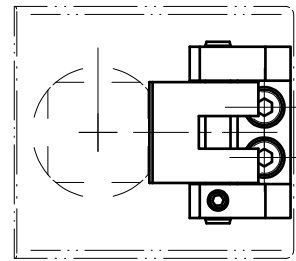
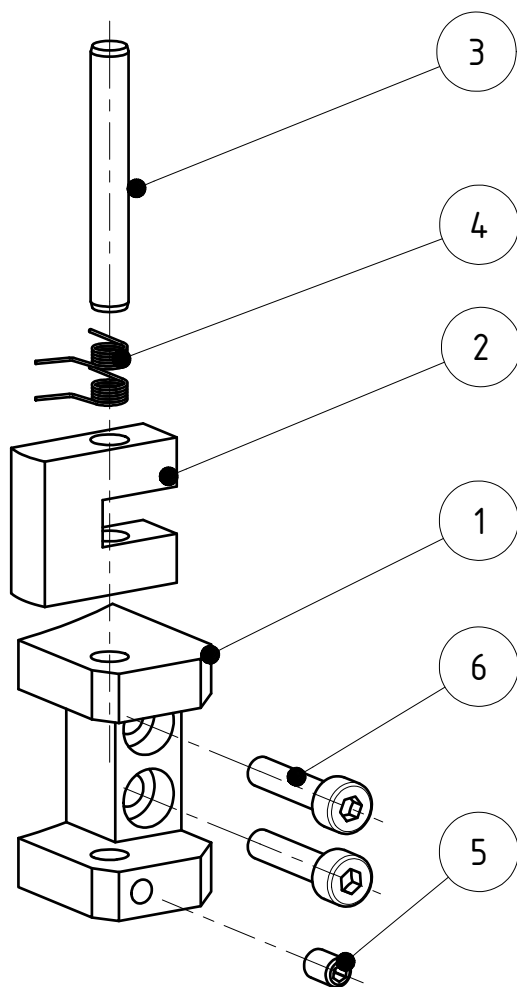
Maßstab 2:1

Zeichnungsnummer

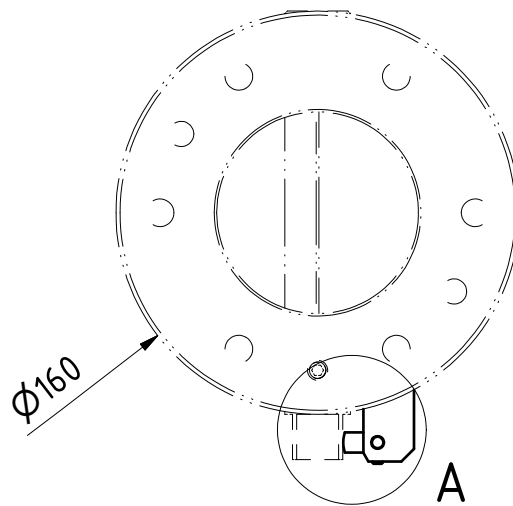
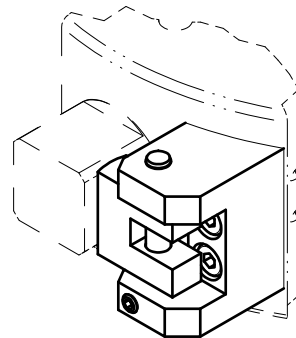
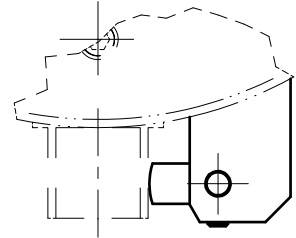
EG-SWS125-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik



A



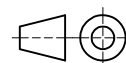
EG-SWS160-VS2			
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS160-3.1	Halter
2	1	G-SWS160-3.2	Klappe
3	1	ISO 8734 - 5 x 36 - A	Zylinderstift, gehärtet
4	2	M05R2124	
5	1	DIN 913 - M4 x 6	Gewindestift
6	2	ISO 4762 - M4 x 18	Innensechskantschraube

Datum 23.03.2020

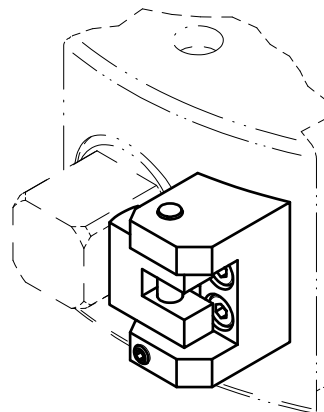
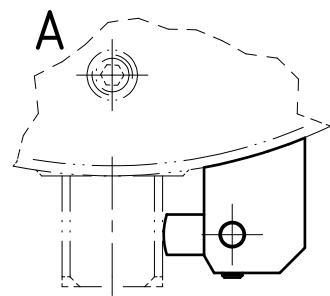
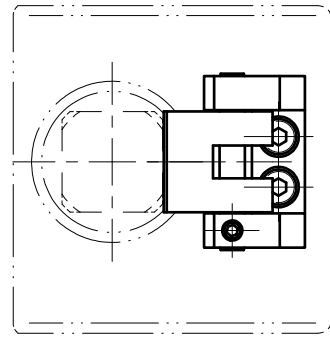
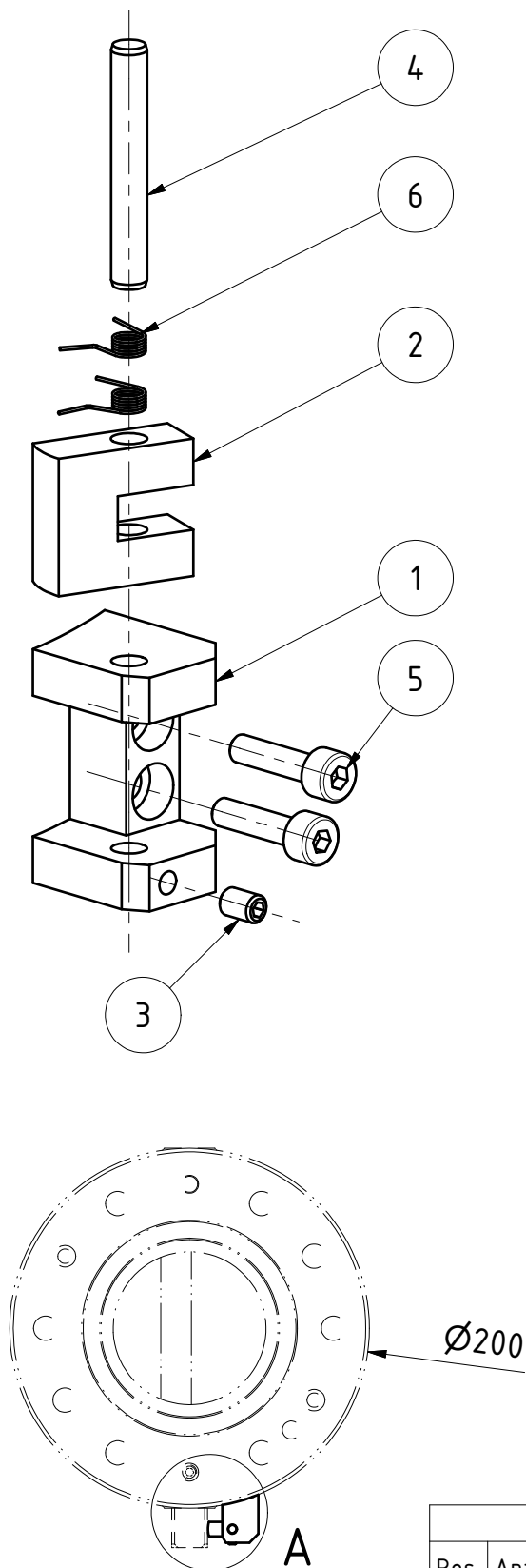
Maßstab 1:1

Zeichnungsnummer

EG-SWS160-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik



EG-SWS200-VS2

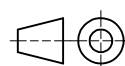
Pos.	Anzahl	Benennung	Zchnr./ Bestnr. /Norm
1	1	G-SWS200-3.1	Halter
2	1	G-SWS160-3.2	Klappe
3	1	DIN 913 - M4 x 6	Gewindestift
4	1	ISO 8734 - 5 x 35 - A	Zylinderstift
5	2	DIN 912 - M4 x 16	Zylinderkopfschraube
6	2	M04R21	Drehfeder

Datum

Maßstab 1:1

Zeichnungsnummer

EG-SWS200-VS2



**GRIP**  
GRIP GmbH Handhabungstechnik

# ACTRAY

The AC tray is responsible for securely holding the Auto Connector lower assembly and respective tool. Additional trays can be added at any time making for a highly flexible and adaptable system.

## AC Tray Advantages:

- Provides a secure hold for the Auto Connector and tool
- The tray position can be easily changed depending upon application
- Is compatible with all major EAOT on the market



COMPATIBLE FOR

AC063



## G-AC063

### Technical specifications

# GRIP

#### Operating mode:

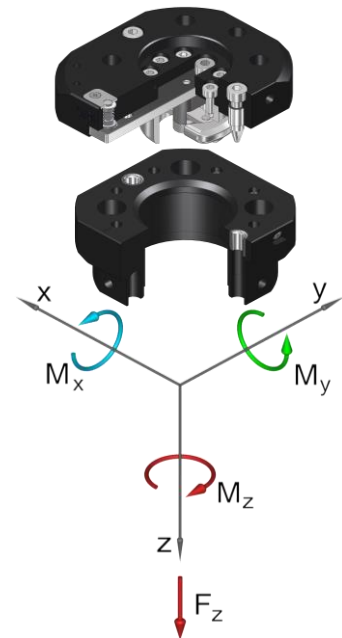
The upper assembly (1) and lower assembly (2) are automatically locked and unlocked by the robot's traverse path onto the tray.

#### Advantages:

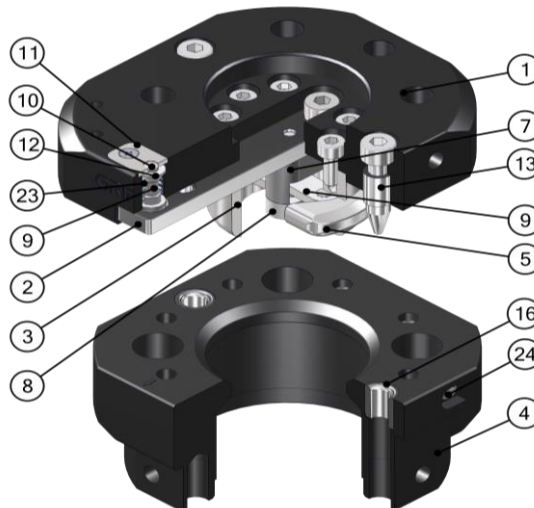
- Semi-automatic tool changing system
- No external locking and unlocking energy required
- Self-locking, secured locking mechanism
- Withstands high loads with low dead weight
- High repeat accuracy +/- 0.02 mm
- Withstands over 100.000 changing cycles
- Optional connection of a power coupling **SEK** for electrical ducts
- Six** integrated pneumatic ducts
- Interface according to DIN EN ISO 9409-1

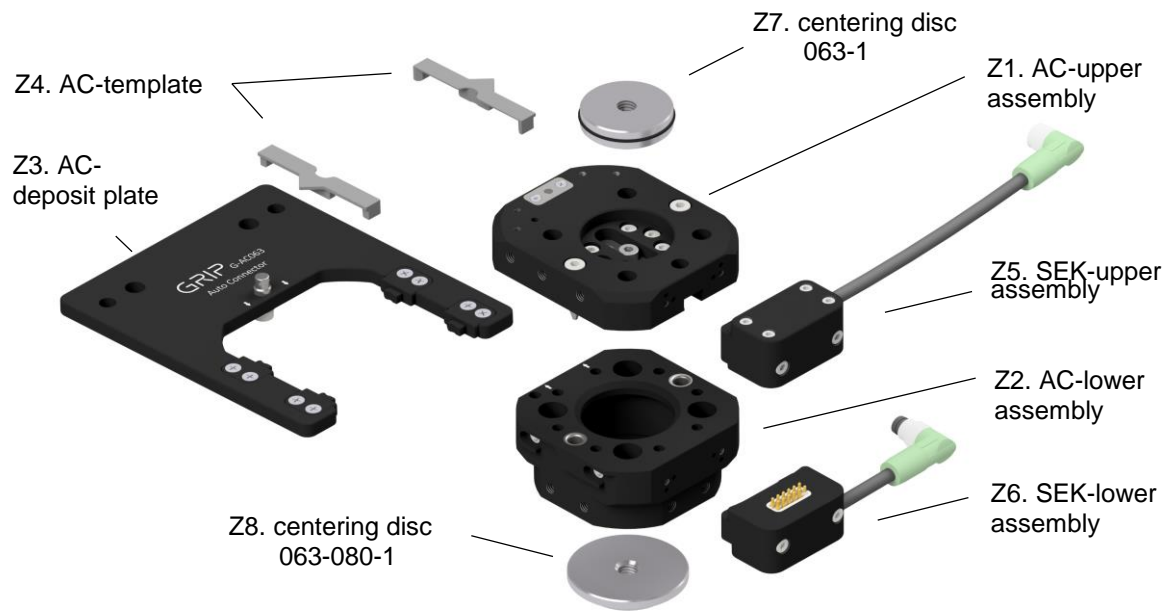


Technical specifications		AC063
Basic material		Al, anod.
External diameter x height [mm]		73 x 42
Pitch circle diameter [mm]		50
Repeat accuracy +/- [mm]		0,02
Tension Fz [N]		1875
Compression -Fz [kN]		65
Torsion Mz [Nm]		69
Bending Mx, My [Nm]		59
Mass [kg]	upper assembly	0,24
	lower assembly	0,15
Recommended load [kg]		15* / 20**
Locking stroke VH [mm]		1,5
Locking force VF [N]		30 - 100
Pneumatic ducts	connection	6 x M5
	max. pressure p [bar]	-1 bis 8
* This guideline applies to the following assumptions: Acceleration: 10 m/s², gravity distance: 100 mm, double safety		
** This guideline applies to the following assumptions: Acceleration: 5 m/s², gravity distance: 100 mm, double safety		

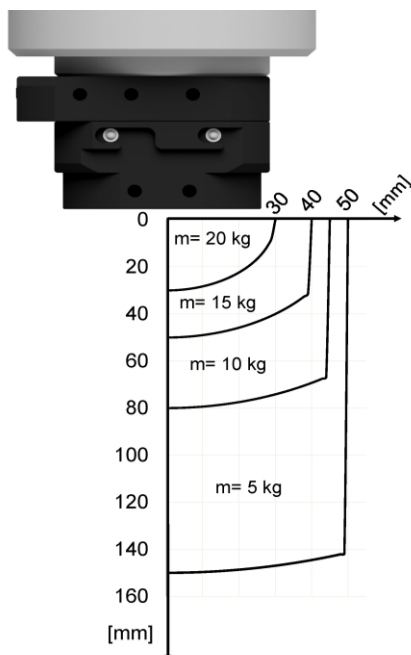


Pos.	Description
1	Upper assembly
2	Slider
3	Tappet
4	Lower assembly
5	Jaw 1
6	Jaw 2 (not visible)
7	Carrier
8	Connecting pin (slider)
9	Connecting pin (jaws)
10	Locking pin
11	Spring cover
12	Spring seat
13	Positioning pin
16	Drill bushing
23	Spring
24	Spring plunger



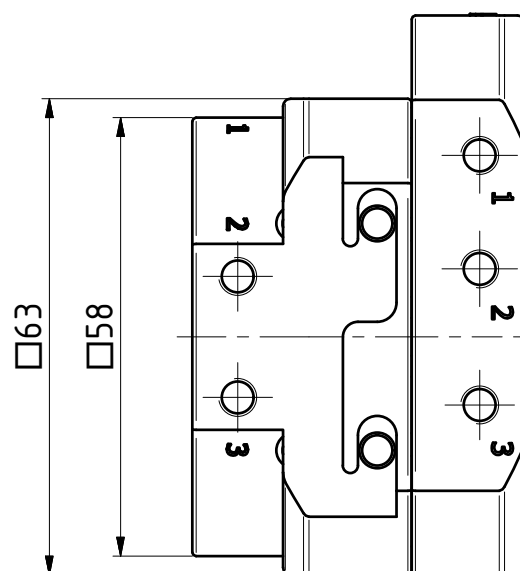
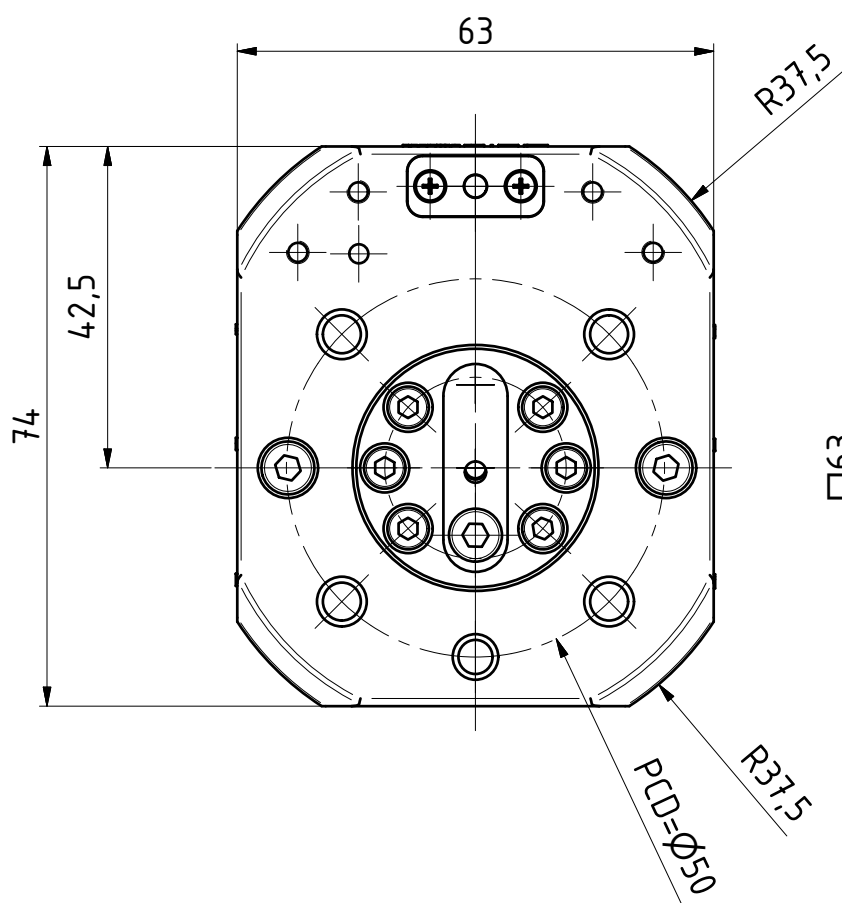
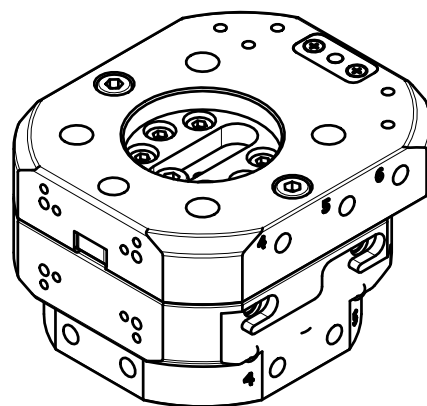
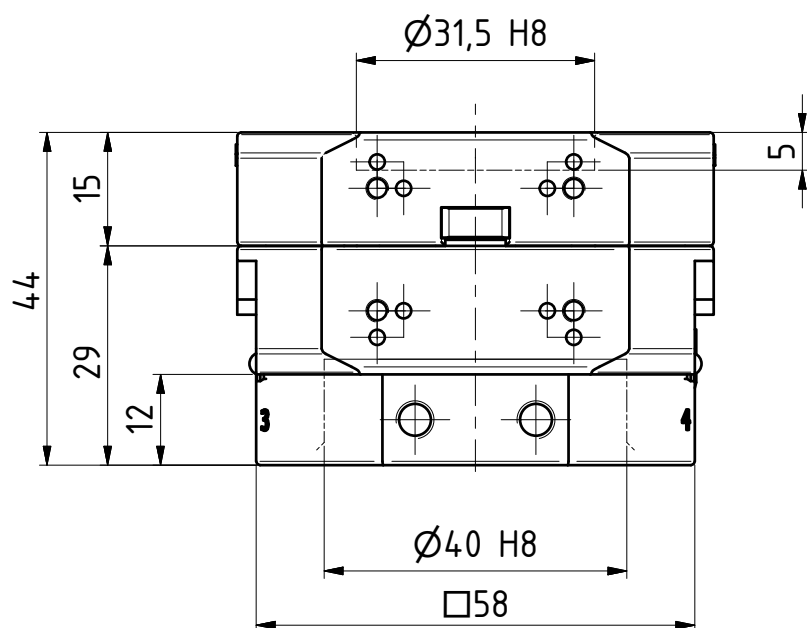


Pos.	Auto Connector Ø63, drilled acc. to ISO...	
Z1.	G-AC063-2OEP	upper assembly, E-Mount, 6 pneumatic ducts, Al, anodized
Z2.	G-AC063-2UEP	lower assembly, E-Mount, 6 pneumatic ducts, Al, anodized
	Accessory Auto Connector Ø63	
Z3.	G-AC063-A1-01	tray for AC063, single, Al, anodized
Z5.	G-SEK100-O-1FE12-300-M8	electric coupling, upper assembly, plug M8, 8-poles, female
Z6.	G-SEK100-U-1FE12-40-M8	electric coupling, lower assembly, plug M8, 8-poles, male
Z7.	G-ZS063-1	centering disc
Z8.	G-ZS063-080-1	centering disc
	Spare and wear parts Auto Connector Ø63	
17.	EG-AC063-DS	gasket kit (8 x O-ring)
23.	EG-AC063-DF01	spring
Z4.	EG-AC063-A1-S1	programming-template 063 (2x)



### AC063 payload

payload as a function of  
center of mass distance

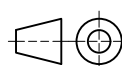


Datum 08.07.21

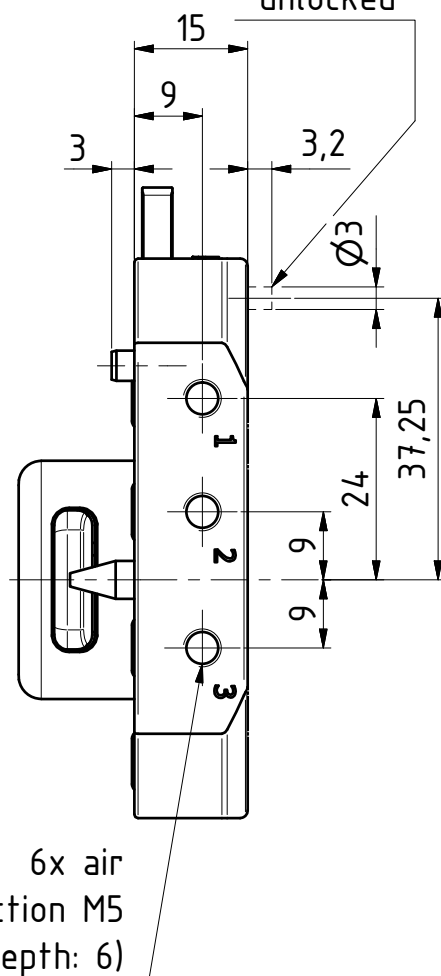
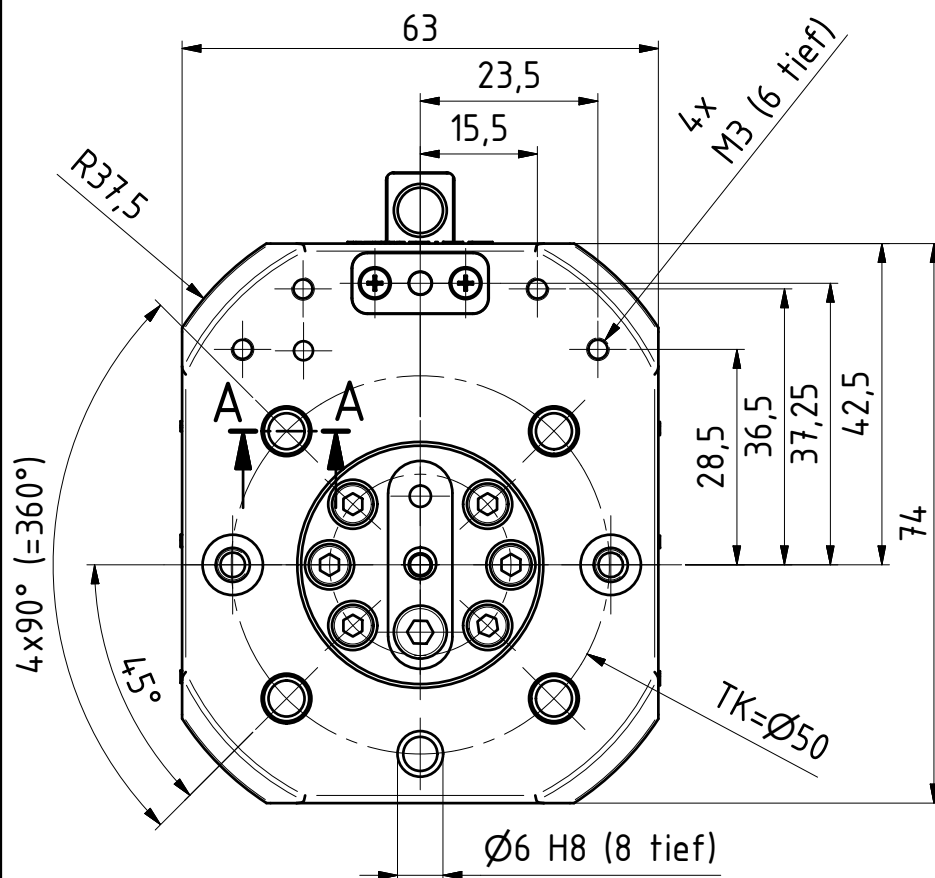
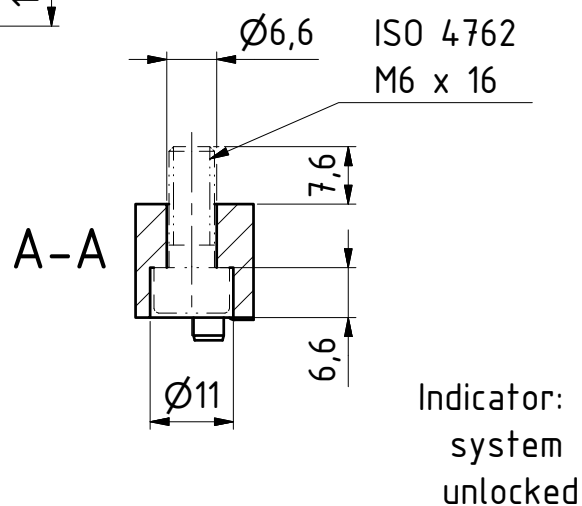
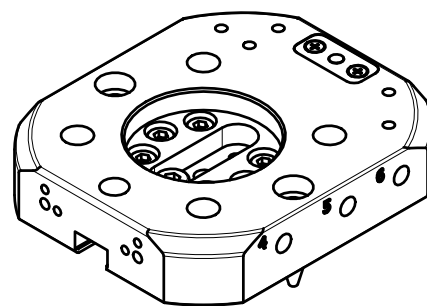
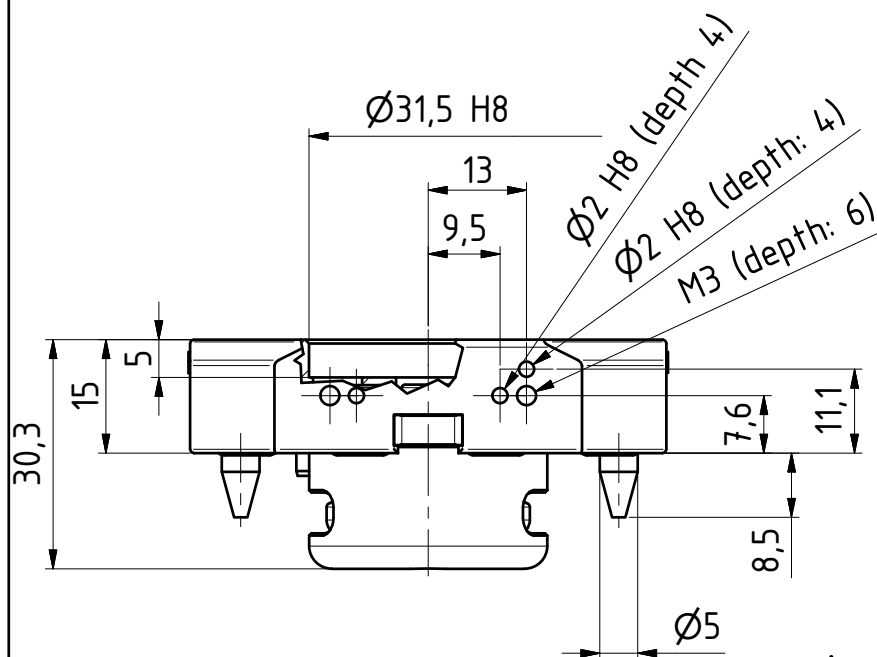
Maßstab 1 : 1

Zeichnungsnummer

2D G-AC063-2ZEP



**GRIP**  
GRIP GmbH Handhabungstechnik

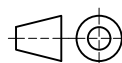


Datum 08.07.21

Maßstab 1 : 1

Zeichnungsnummer

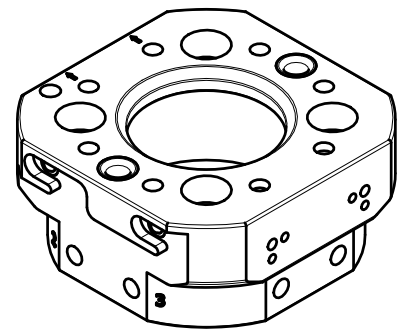
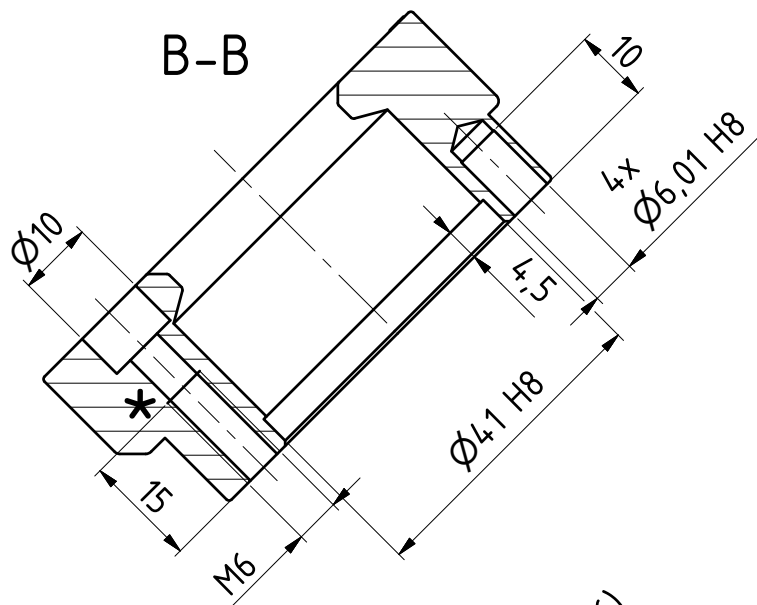
G-AC063-20EP



**GRIP**

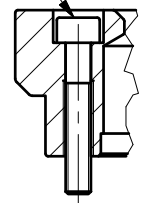
GRIP GmbH Handhabungstechnik





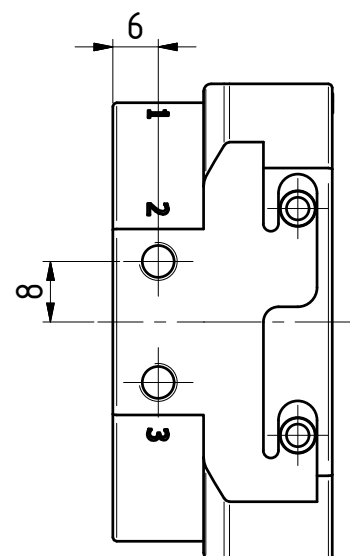
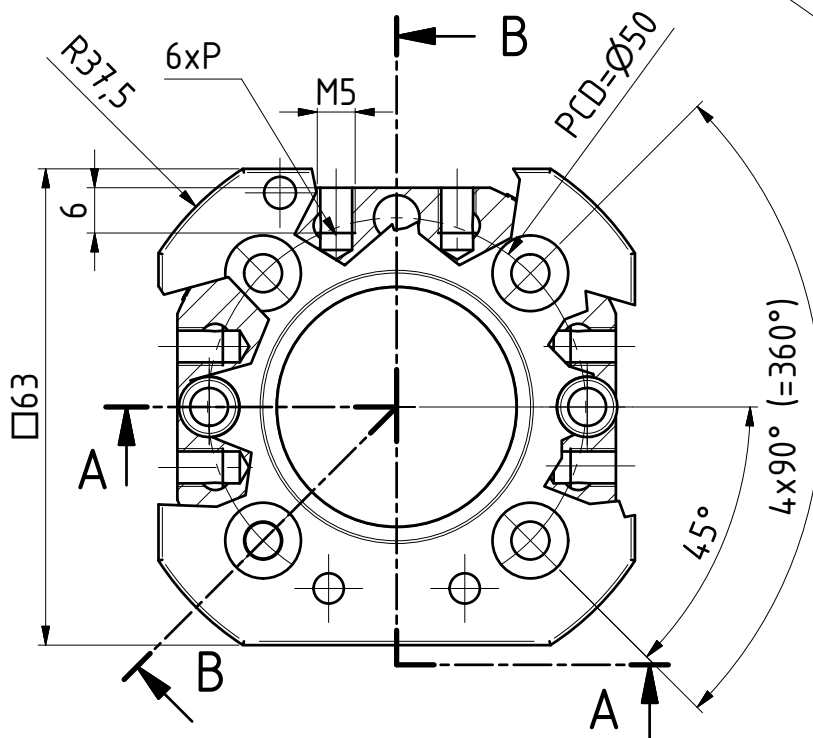
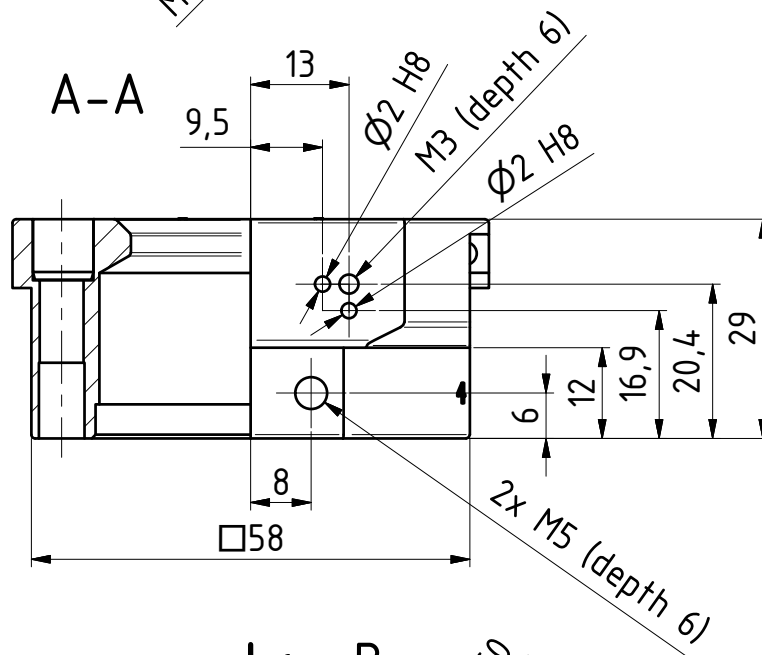
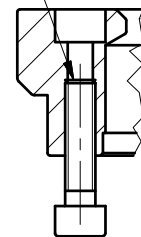
\*A

ISO 4762 M5



\*B

ISO 4762 M6

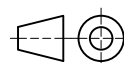


Datum 08.07.21

Maßstab 1 : 1

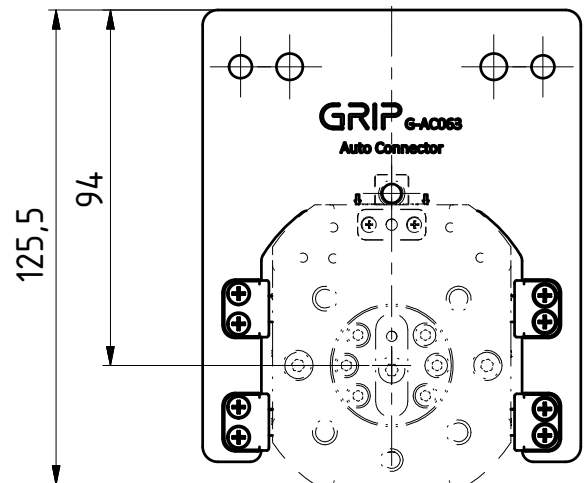
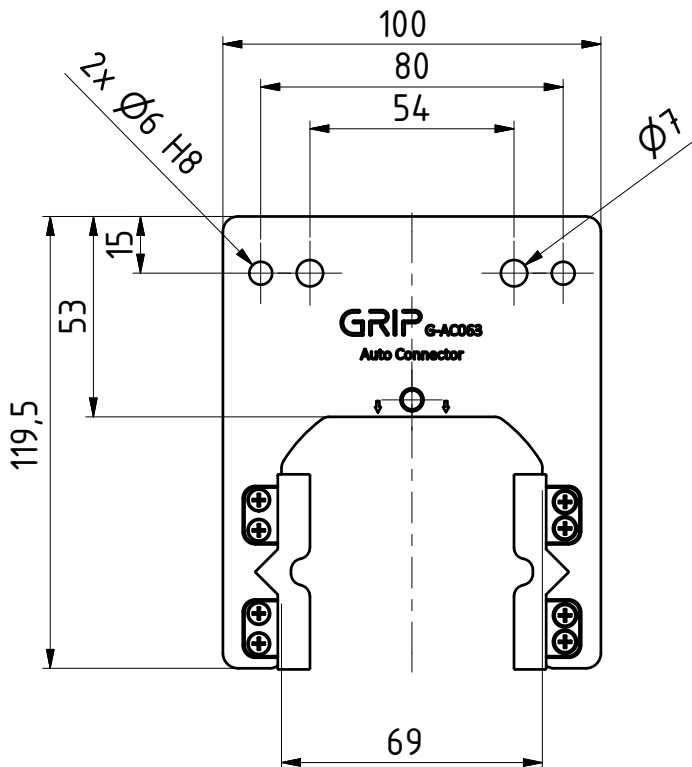
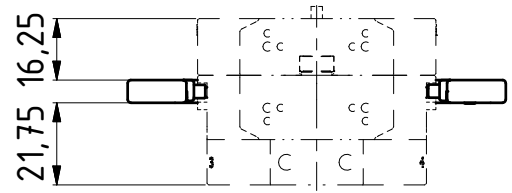
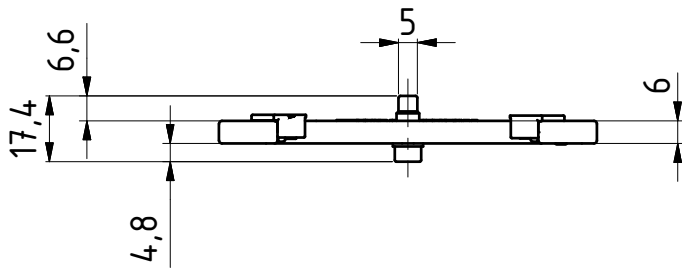
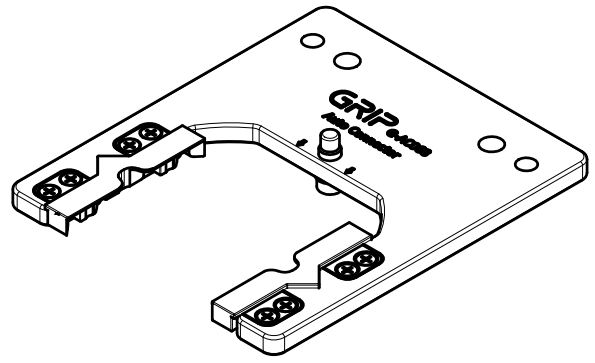
Zeichnungsnummer

G-AC063-2UEP



**GRIP**

GRIP GmbH Handhabungstechnik

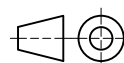


Datum 08.07.21

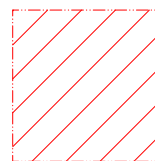
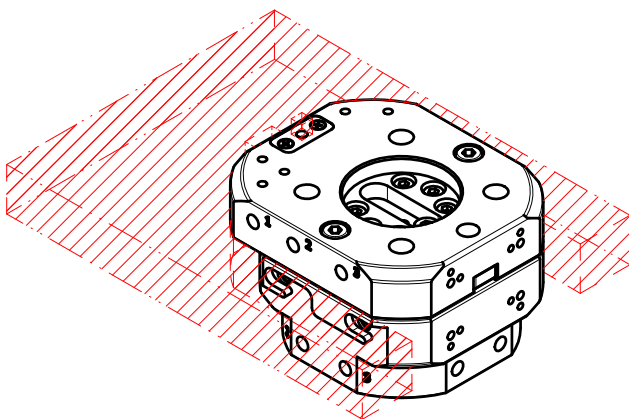
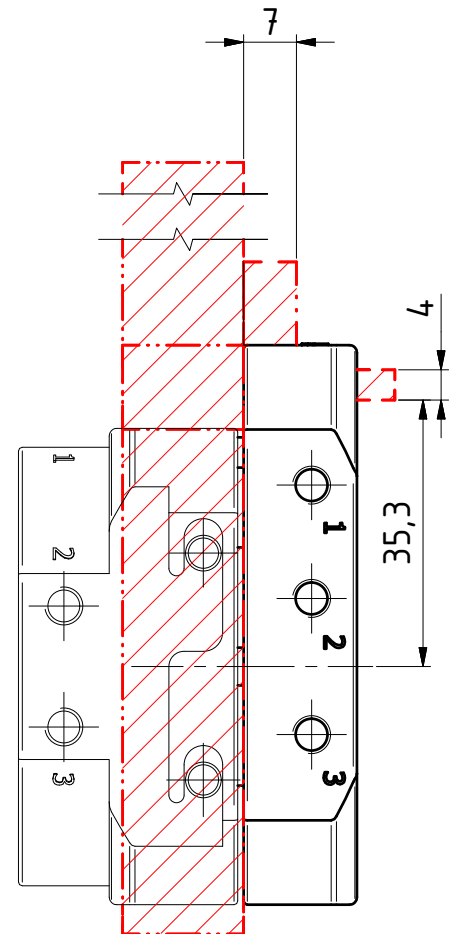
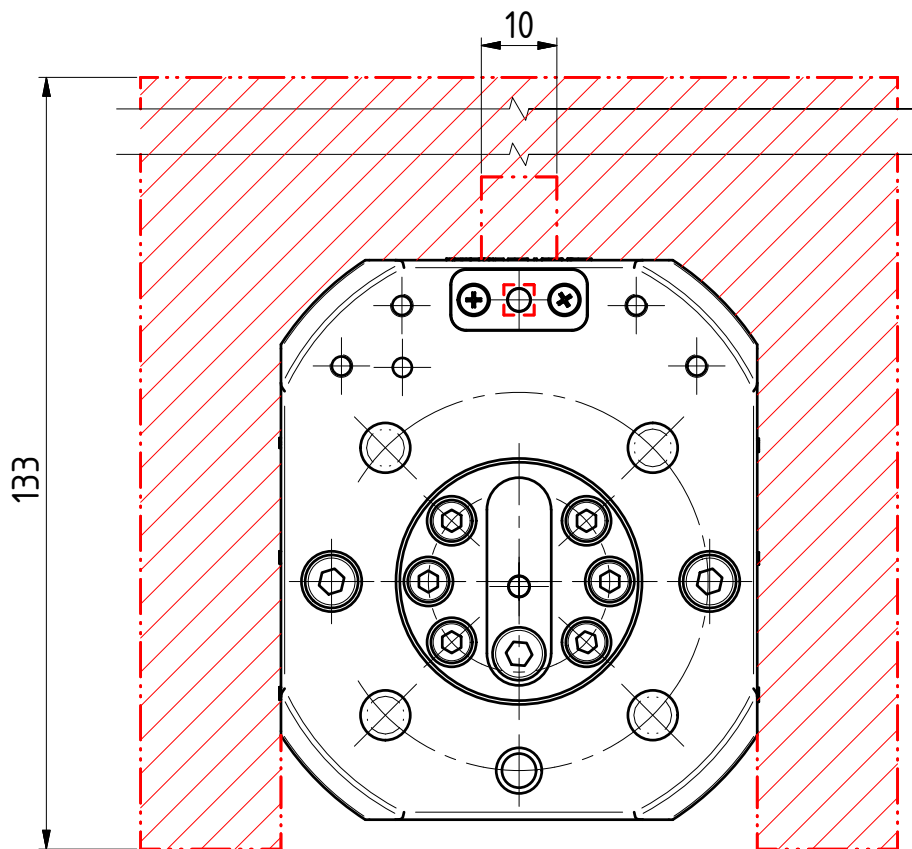
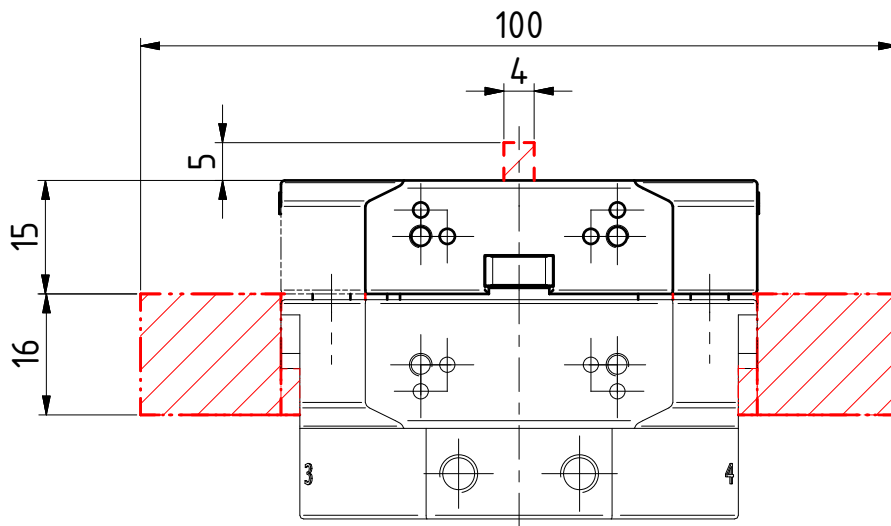
Maßstab 1 : 2

Zeichnungsnummer

G-AC063-A1-01



**GRIP**  
GRIP GmbH Handhabungstechnik



**Collision area!**  
**Keep clear!**

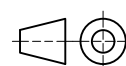
Do not mount tools in this area.  
Risk of collision.

Datum 08.07.21

Maßstab

Zeichnungsnummer

G-AC063 Collision Area



**GRIP**  
GRIP GmbH Handhabungstechnik

PRODUCT CATALOGUE

GRIP

**NN** SYSTEMS  
Motion Solution