

# GRIP Base Connector SWS

Assembly and Operating Manual

# GRIP

Dear customer,

Congratulations!

You have chosen the best product we know how to make with our 30 years of experience and passion for precision.

Please follow the instructions in this manual to avoid mistakes and save time.

In case you need further information or you have further requests we will be glad to be at your disposal.

With best regards,

Your GRIP GmbH

GRIP GmbH Handhabungstechnik  
Alter Hellweg 70  
44379 Dortmund, Germany

Tel. +49 231 96450 01

info@grip-gmbh.com  
www.grip-gmbh.com



## GRIP Base Connector SWS

	Contents	Page
1	Operation	2
2	Safety	2
	2.1 Symbol	2
	2.2 Intended use	2
	2.3 Environmental and operating conditions	2
	2.4 Safety indication	2
3	Warranty	3
4	Scope of delivery	3
5	Technical data	3
6	Assembly	4
7	Maintenance and care	5
	7.1 Disassembly	5
	7.2 Torque specifications	5
8	Parts list	5
	8.1 Spare and wear parts	5
9	Exploded view	6
10	EC-Declaration of incorporation	7

## 1 Operation

To open the change system, insert the square socket key on the square of the semi-cylindrical bolt and turn counter-clockwise ("to the left") by 180 ° to the stop. The upper and lower assembly can now be pulled apart. When joining the parts, the hand lever must be set to open position. Now, upper and lower assembly can be pushed into each other.

By turning the semi-cylindrical bolt clockwise ("to the right") 180° up to the stop, the system is locked. Afterwards the hand lever is folded and latched.

## 2 Safety

### 2.1 Symbol



This symbol indicates possible hazards to persons or the Base Connector SWS.

### 2.2 Intended purpose

The Base Connector SWS has been designed as an interface between robot and working table. Furthermore, the Base Connector can also be used in special solutions, automation and also as a general mechanical standard interface. The unit may only be used in the context of its technical specifications. The system is intended for the installation in a machine. The requirements of the applicable instructions must be considered and adhered to.

### 2.3 Environmental and operating conditions

Use this unit only in dry and splash-proof environments at room temperature as well as within the application parameters defined in the technical specifications. If this is not the case, warranty cannot be accepted. Exceptions are units designed especially for the respective conditions.

### 2.4 Safety indication

Dangers may arise from the unit, if:

- the product is not installed or inserted properly,
- the system is not used for its intended purpose,
- the safety and installation notes are not observed.

Everyone who is responsible for assembly, commissioning and maintenance must read and understand the complete operating instructions. Improper use, which affects the function und operational safety of the Base Connector, is prohibited.



#### **CAUTION! Risk of pinching the fingers when closing the Base Connector**

When closing the connector ensure fingers are not between the upper and lower assembly.



#### **NOTICE!**

The unit may only be operated if the machine in which the unit is installed complies with the relevant provisions of the machinery directive 2006-42-EC.

## 3 Warranty

If the product is used as intended in 1-shift operation the warranty is valid for 24 months from the ex-works delivery date under observance the mandatory maintenance and lubrication intervals and the given operating conditions. Generally parts touching the work piece and wear parts are not part of the warranty. Wear parts are listed in chapter 8.1. The unit is considered to be defective if its basic function "Lock" is no longer functioning.

## 4 Scope of Delivery

- SWS as painted in Image 6 depending on the order number of the upper or lower assembly.

## 5 Technical Data

Behold technical data sheets: TD-BC-SWS-EN

## 6 Assembly

The upper assembly of the Base Connector is mounted to the base of the robot. The lower assembly is mounted to the working table. If the Base Connector SWS can not be installed directly, adapter flanges can be used. Use screws according to DIN 912 or ISO 4762. The screw-in depth of the screws must be observed. We recommend the use of a "medium-tight" screw lock.

Optionally, the SWS can be provided with a MEK Energy Coupling. To mount the MEK the "E" option must be specified when ordering the SWS. The MEK is available in different versions. The MEK enables the simultaneous coupling of electrical and pneumatic lines when opening or closing the SWS. The MEK is mounted with two cylinder screws to the upper and lower assemblies. For further installation instructions, please refer to the assembly and operating instructions of the MEK.

Alternatively, the "E" option can also be used as a module mounting surface in order to mount any modules on the Base Connector SWS



**CAUTION!**

Perform assembly work only when the power supply is switched off!



**CAUTION! Risk of pinching the fingers when closing the Base Connector SWS**

When closing the connector ensure fingers are not between the upper and lower assembly.

Image 1

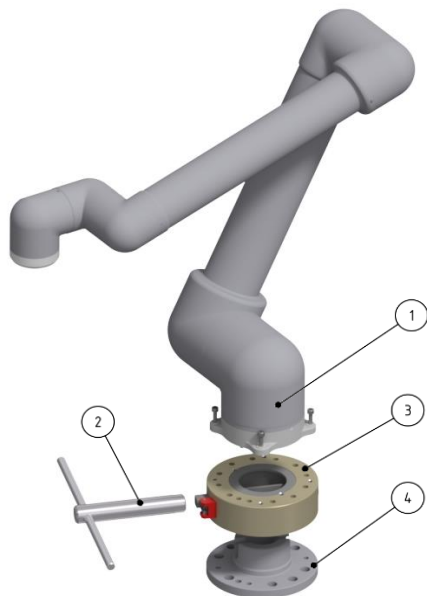
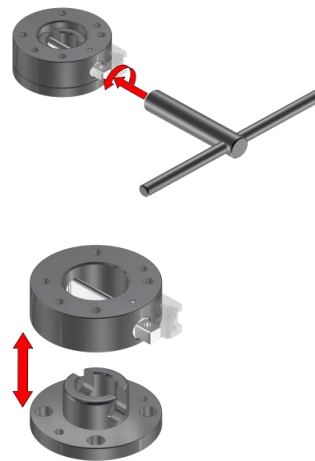


Image 2



Pos.	Description	
1.	Robot	
2.	ZG-VKS160-SW20	Square socket wrench SW20
3.	G-SWS200-2ON-BC01	Base Connector SWS200, upper assembly
4.	G-SWS200-2U-N	SWS Connector, lower assembly

**7 Maintenance and care**

The Base Connector SWS is virtually maintenance-free. Check the semi-cylindrical bolt in regular intervals for correct function. Keep the mating surface and the moving parts clean and lubricate them slightly.

Spare parts and component parts of the SWS can be found on our homepage:  
www.grip-gmbh.com

**7.1 Disassembly of the Base Connector SWS**

(Behold Image 5)

1. Disassemble the Base Connector
2. Loosen the Setscrew (Pos. 3).
3. To disassemble the semi-cylindrical bolt (Pos. 2) from the other component parts (Pos. 5, 6, 7 and 8), remove the cylinder bolt (Pos. 8).
4. Clean all parts thoroughly. Inspect for wear and defects.
5. Lubricate all mating surfaces.

For assembly, reverse the order.

**7.2 Torque specifications**

M6 – 8,5 Nm; M8 – 20,6 Nm; M10 – 41 Nm; M12 – 71 Nm

**8 Parts list**

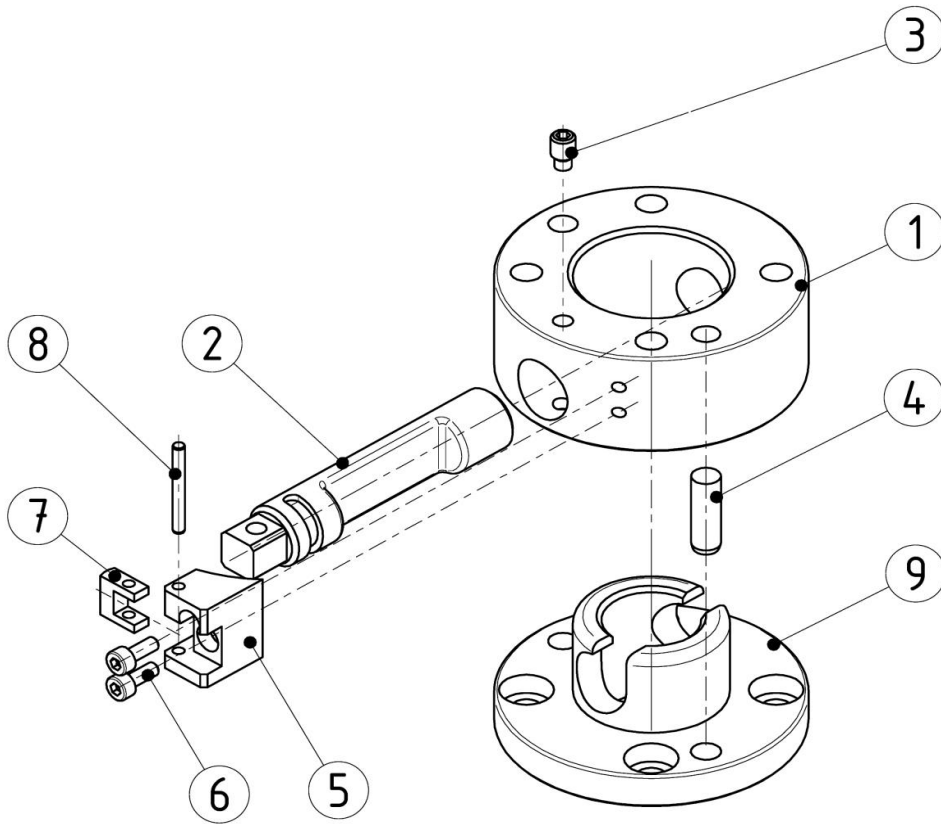
Pos.	Description	Quantity
1	Upper assembly	1
2	Semi-cylindrical bolt	1
3	Setscrew	1
4	Index pin	1
5	Housing VS2	1
6	Screw VS2	2
7	Flap VS2	1
8	Cylinder bolt VS2	1
9	Lower assembly SWS	1

**8.1 Spare and wear parts**

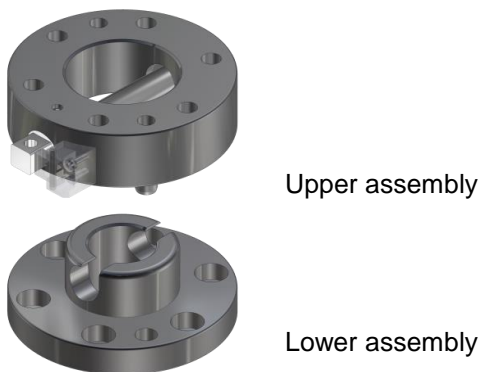
Pos.	Description	Order-No.	Quantity
2	Semi-cylindrical bolt	EG-SWS200-HB	1
10	Square socket wrench	ZG-VKS160-SW20	1
11	Anti-rotation-protection	EG-SWS200-VS2	1

**9 Exploded view**

**Image 5**



**Image 6**



**10 EC - Declaration of incorporation**

according to the Machinery Directive 2006/42/EC, annex II B

The producer / distributor GRIP GmbH Handhabungstechnik  
Alter Hellweg 70  
D-44379 Dortmund, Germany

hereby declares that the following products

**Product designation:** Base Connector SWS

**Functional description:** Systems for the manual and form-closed exchange of components such as grippers and tools on robots or receptacles

**Type designation:** G-SWS200

The provisions of the above-mentioned directives -including their effective amendments- comply with the time of the declaration.

He further states that the following essential requirements of the Machinery Directive 2006/42/EC were applied and observed:  
annex I, numerics: 1.1.2; 1.1.3; 1.1.5; 1.3.2; 1.7.4

He further states that the specific technical documentation has been drawn up in accordance with annex VII, Part B.

The following harmonized standard has been applied:

EN ISO 12100:2010 Safety of Machinery- Basic concepts, general principles for design- Part 1:  
Basic terminology and methodology

Safety of Machinery- Basic concepts, general principles for design- Part 2:  
Technical principles

In the case of reasoned requests, the specific documents shall be sent to the national authorities as follows: Post

The product mentioned above may only be put into operation if it has been established applicable that the unit, into which the above-mentioned product is to be incorporated, complies with the provisions of the Machinery Directive 2006/42/EC.

Authorized representative Dipl.-Ing. (FH) Hasan Canti

Location: Dortmund  
Date: 15.09.2022



Dipl.-Ing. (FH) Hasan Canti  
Executive Director