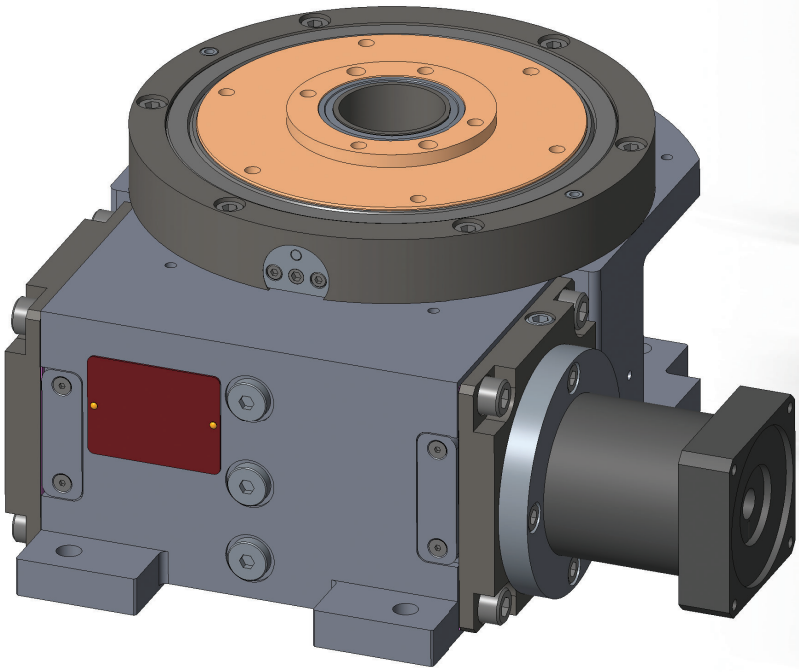
GLOBOIDAL CAM SERVO TABLES

RIGS04 - RIGS06 - RIGS09

RIG-SERVO



- Flexible programming
- High precision
- Rigid output turret mounted on crossed roller bearings
- High dynamic performance
- Planetary gearbox pre-arrangement for customer preferred motor available
- Compact sealed aluminium housing
- Universal mounting positions
- Long life lubrication

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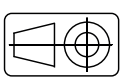
The units of measure comply with the SI international metric index

General manufacturing tolerances comply with standard UNI – ISO 2768-1 UNI EN 22768-1

Illustrations and drawings according to 3970 (ISO 128-82)

The drawings are represented with the traditional method 

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Therefore, the data contained in this catalogue are not binding.

This catalogue supersedes all earlier versions.

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GLOBOIDAL CAM SERVO TABLE

General

RIGS tables are globoidal constant speed cam units equipped with a planetary gearbox.
The globoidal cam turns an output disc carrying a set of roller followers.
Globoidal cam and output disc are preloaded one against the other to guarantee zero backlash in any position of the output disc.
The preload system, the zero backlash and the needle rollers ensure smooth motion, high rigidity and repeatability, high efficiency and a unit long life.
RIG Servo units (RIGS) are available in 3 sizes: RIGS04, RIGS06 and RIGS09.

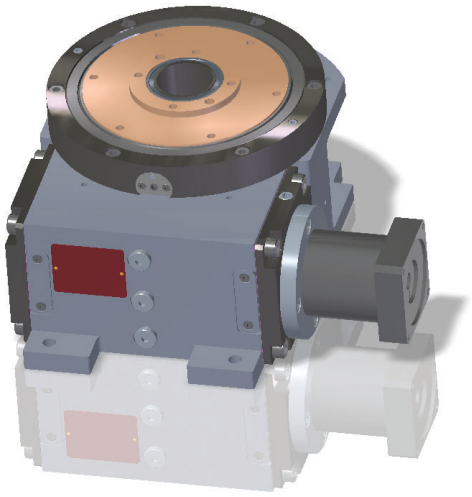


Fig. 1 Configuration

STANDARD CONFIGURATION

- Output version with fixed central through hole.
- Crossed roller bearing output disc.
- Universal mounting.

ACCESSORIES AND VARIANTS

- Holes for reference pins on housing feet.
- Motorisation on opposite side of the table.
- Supply of the table without reducer (VL version).

Motion law

The unit must be programmed according to the constant acceleration motion law shown in Fig. 2.
The motion law is made of an initial and of a final section of constant acceleration each of those corresponding to ¼ of the total transfer time and a central section of constant speed corresponding to ½ of the transfer time.
The transfer times depend on the application data and can be obtained from the selection diagrams in the following paragraphs.

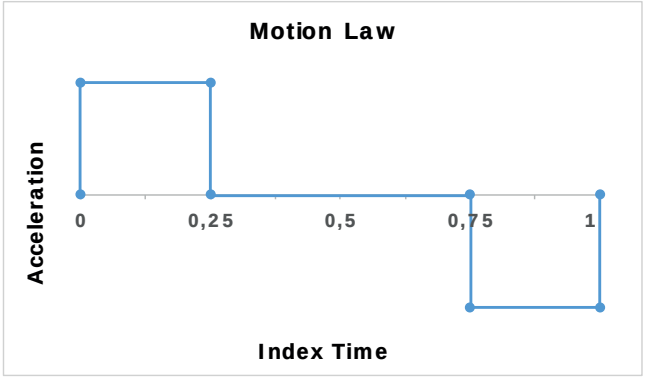
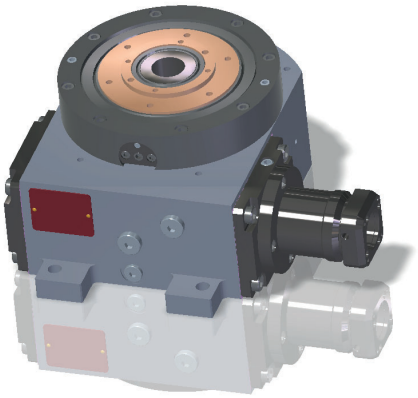
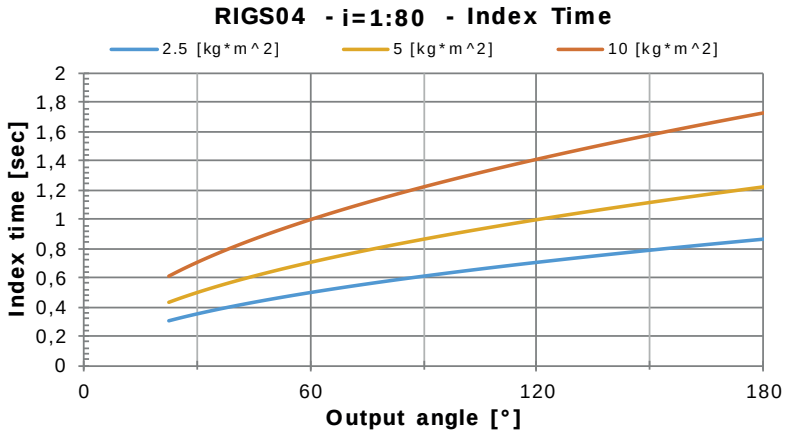


Fig. 2 Motion law

RIGS04 - SELECTION



Reduction ratio A (i= 1:80)

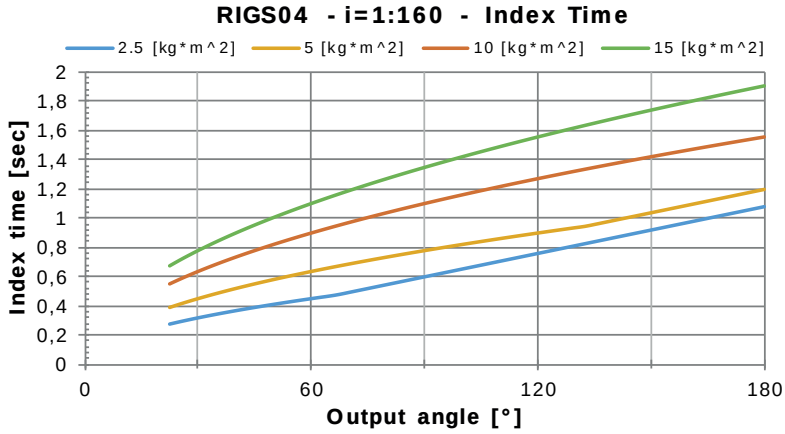


MOTOR.

Nominal Torque: 1.1Nm
Maximum speed: 5000rpm

Graph. 1 Index time A

Reduction ratio B (i= 1:160)



MOTOR.

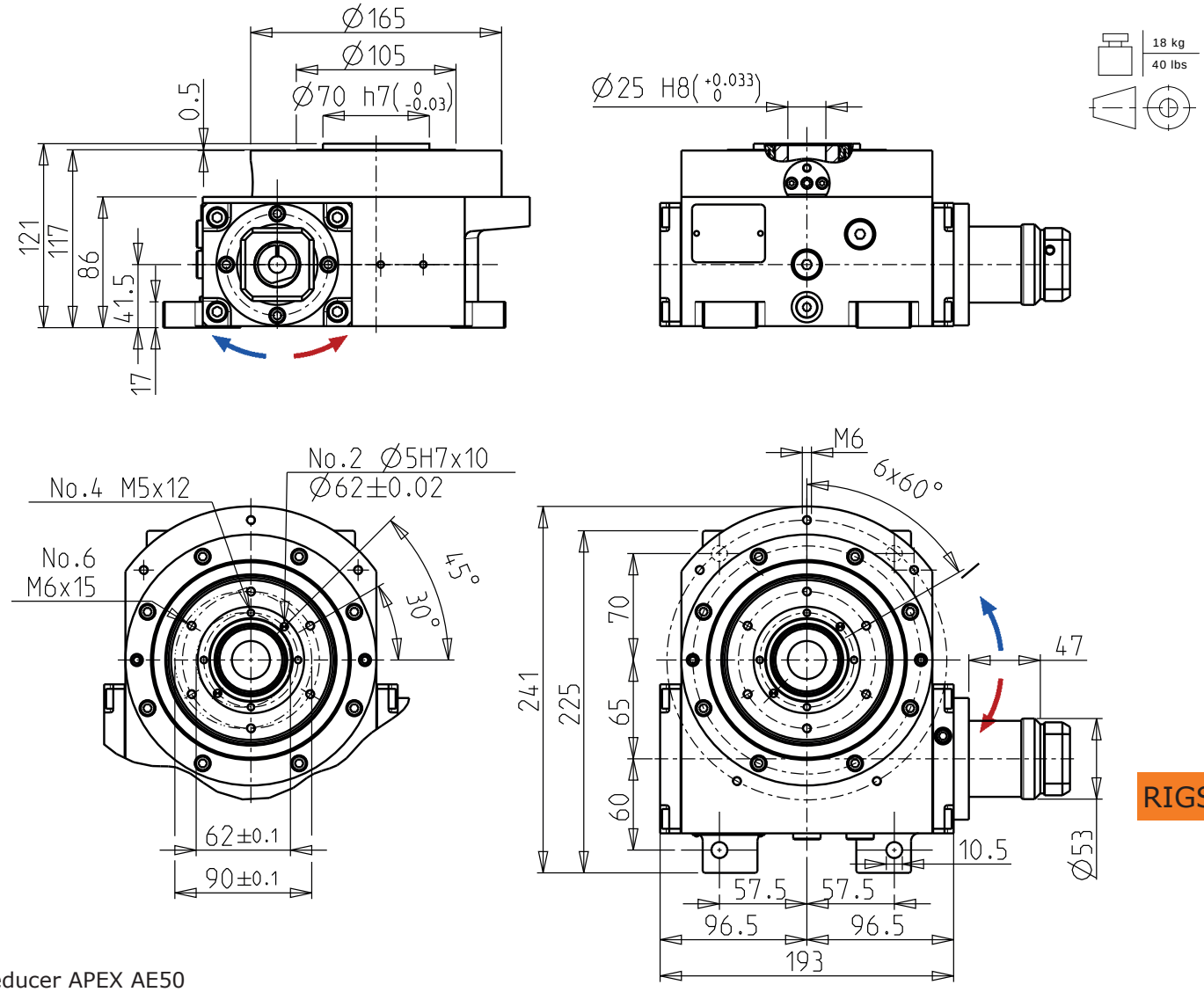
Nominal Torque: 0.7Nm
Maximum speed: 5000rpm

Graph. 2 Index time B

It is customer's responsibility to check the servomotors' thermal characteristics when a servomotor with a nominal torque smaller than the one indicated is selected.

RIGS04	Available reduction ratios	Suggested max. output plate diameter	Concentricity Precision	Concentricity on Ø	Planarity Precision	Unit backlash
	80 - 160	750 mm	0.02 mm	70 mm	0.01 mm	≤30"

RIGS04 - OVERALL DIMENSIONS



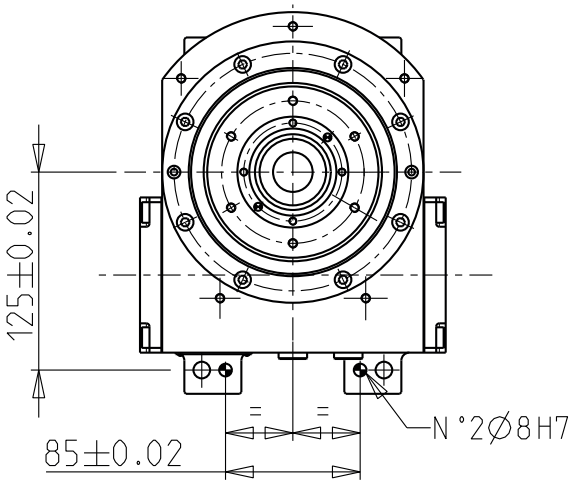
Reducer APEX AE50
Maximum motor shaft Ø12x28

Fig. 3 Overall dimensions

NOTES

- By reversing the direction of rotation of the input shaft, the direction of rotation of the output disc is reversed.
- Direction of rotation as indicated by the arrows in the overall dimensions drawing.

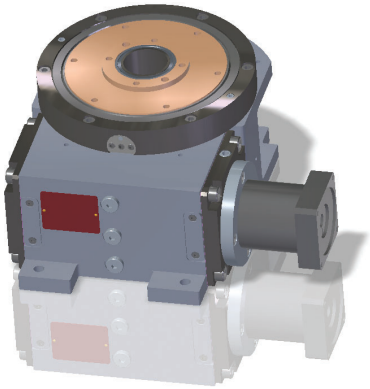
RIGS04 - OPTIONAL REFERENCE HOLES



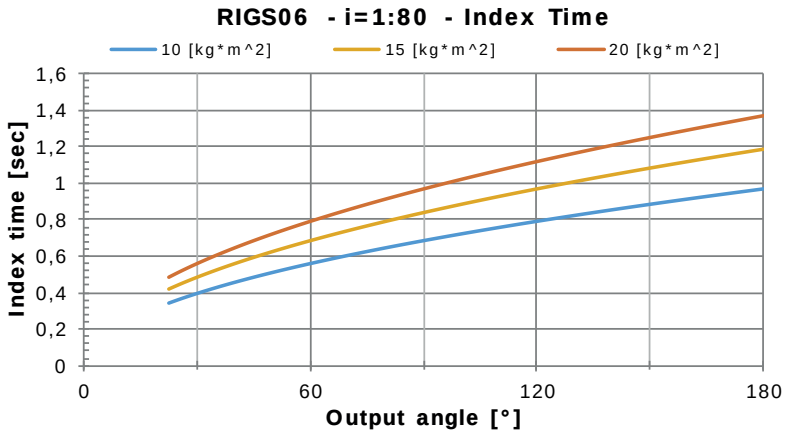
Two dowel holes can be drilled in the table feet, as indicated in Fig. 4.
The two holes allow precise positioning and make the table interchangeable.

Fig. 4 Optional holes

RIGS06 - SELECTION



Reduction ratio A (i= 1:80)



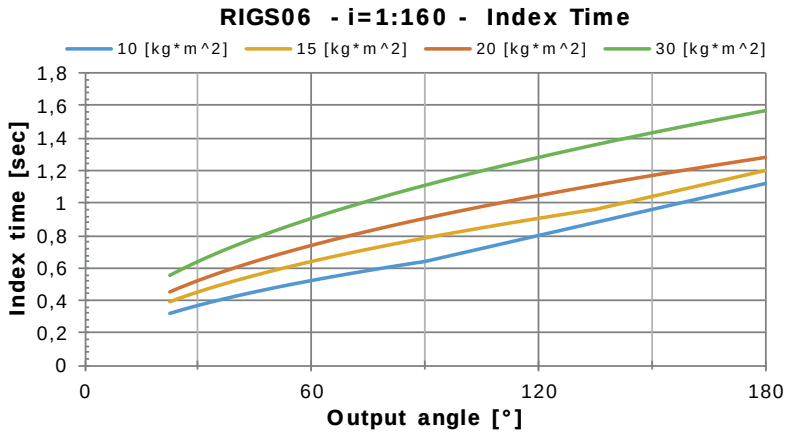
MOTOR.

Nominal Torque: 3.5Nm
Maximum speed: 5000rpm

RIGS06

Graph.. 3 Index time A

Reduction ratio B (i= 1:160)



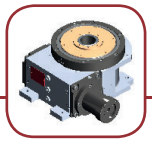
MOTOR.

Nominal Torque: 2Nm
Maximum speed: 5000rpm

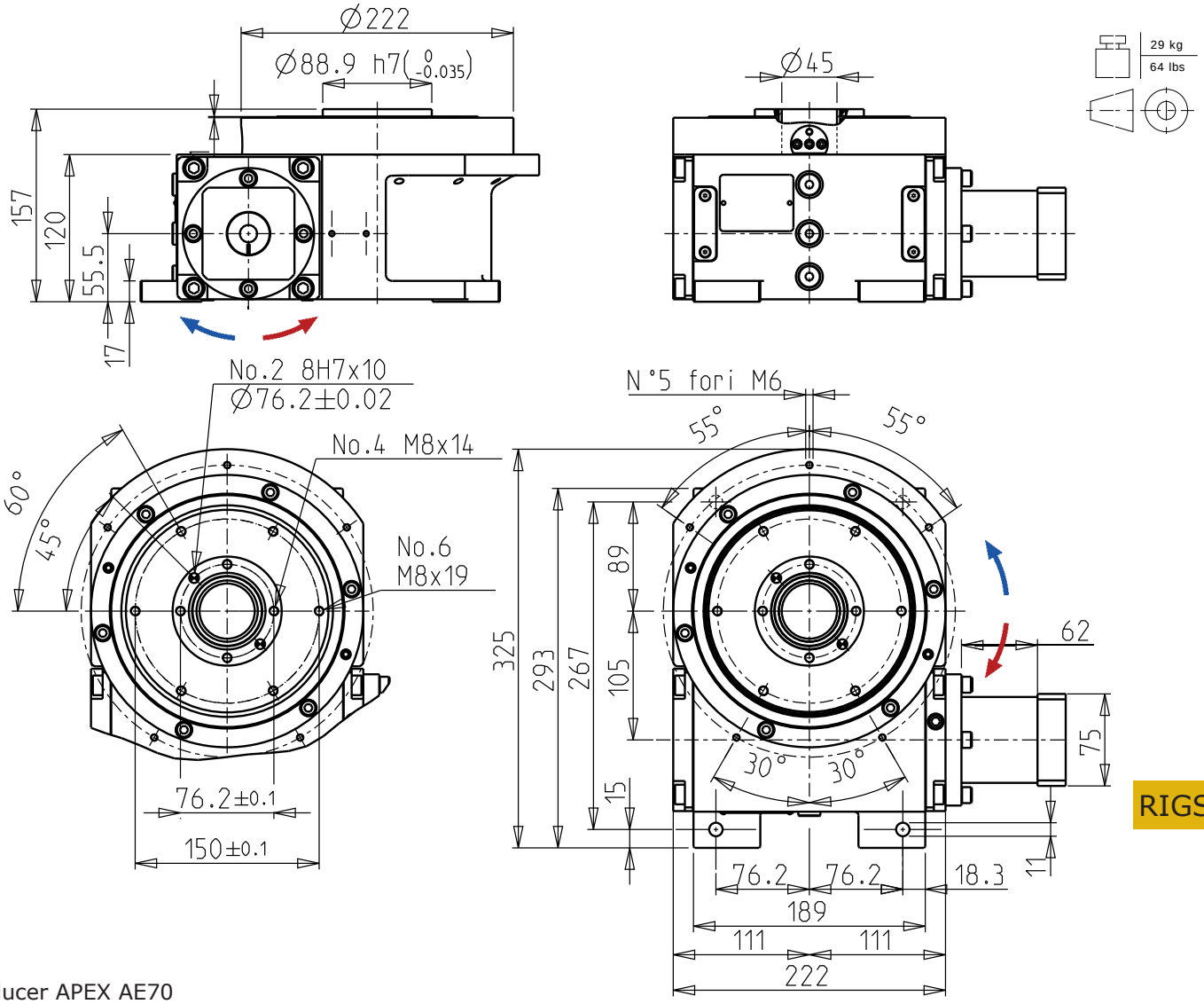
Graph. 4 Index time B

It is customer's responsibility to check the servomotors' thermal characteristics when a servomotor with a nominal torque smaller than the one indicated is selected.

RIGS06	Available reduction ratio	Suggested max. output plate diameter	Concentricity Precision	Concentricity on Ø	Planarity Precision	Unit backlash
	80 - 160	1200 mm	0.03 mm	88.9 mm	0.01 mm	≤30"



RIGS06 - OVERALL DIMENSIONS



Reducer APEX AE70
Maximum motor shaft Ø16x32

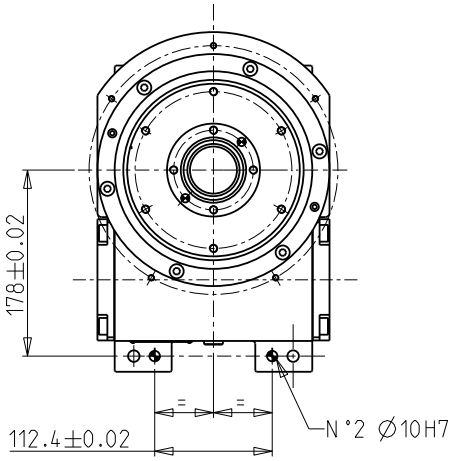
Fig. 5 Overall dimensions

RIGS06

NOTES

- By reversing the direction of rotation of the input shaft, the direction of rotation of the output disc is reversed.
- Direction of rotation as indicated by the arrows in the overall dimensions drawing.

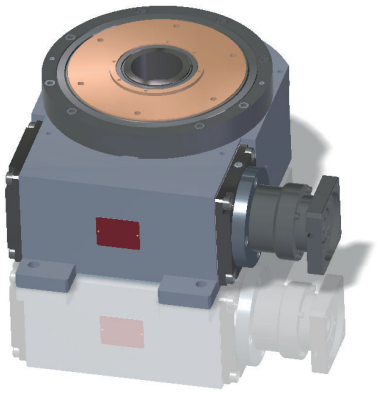
RIGS06 - OPTIONAL REFERENCE HOLES



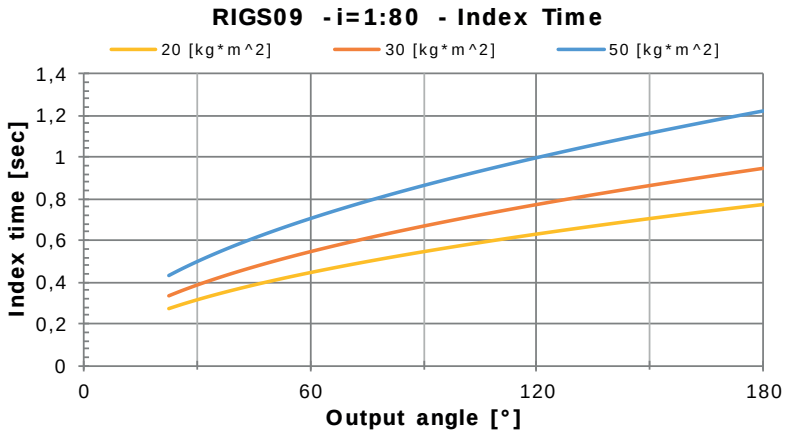
Two dowel holes can be drilled in the table feet, as indicated in Fig. 6.
The two holes allow precise positioning and make the table interchangeable.

Fig. 6 Optional holes

RIGS09 - SELECTION



Reduction ratio A (i= 1:80)

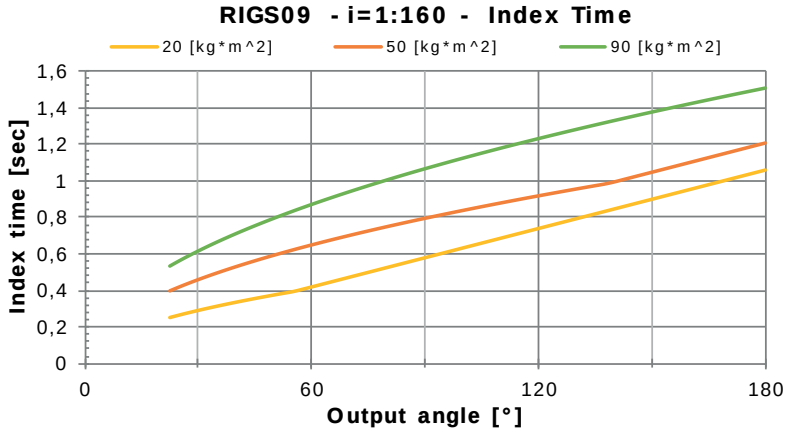


MOTOR.

Nominal Torque: 11Nm
Maximum speed: 5000rpm

Graph. 5 Index time A

Reduction ratio B (i= 1:160)



MOTOR.

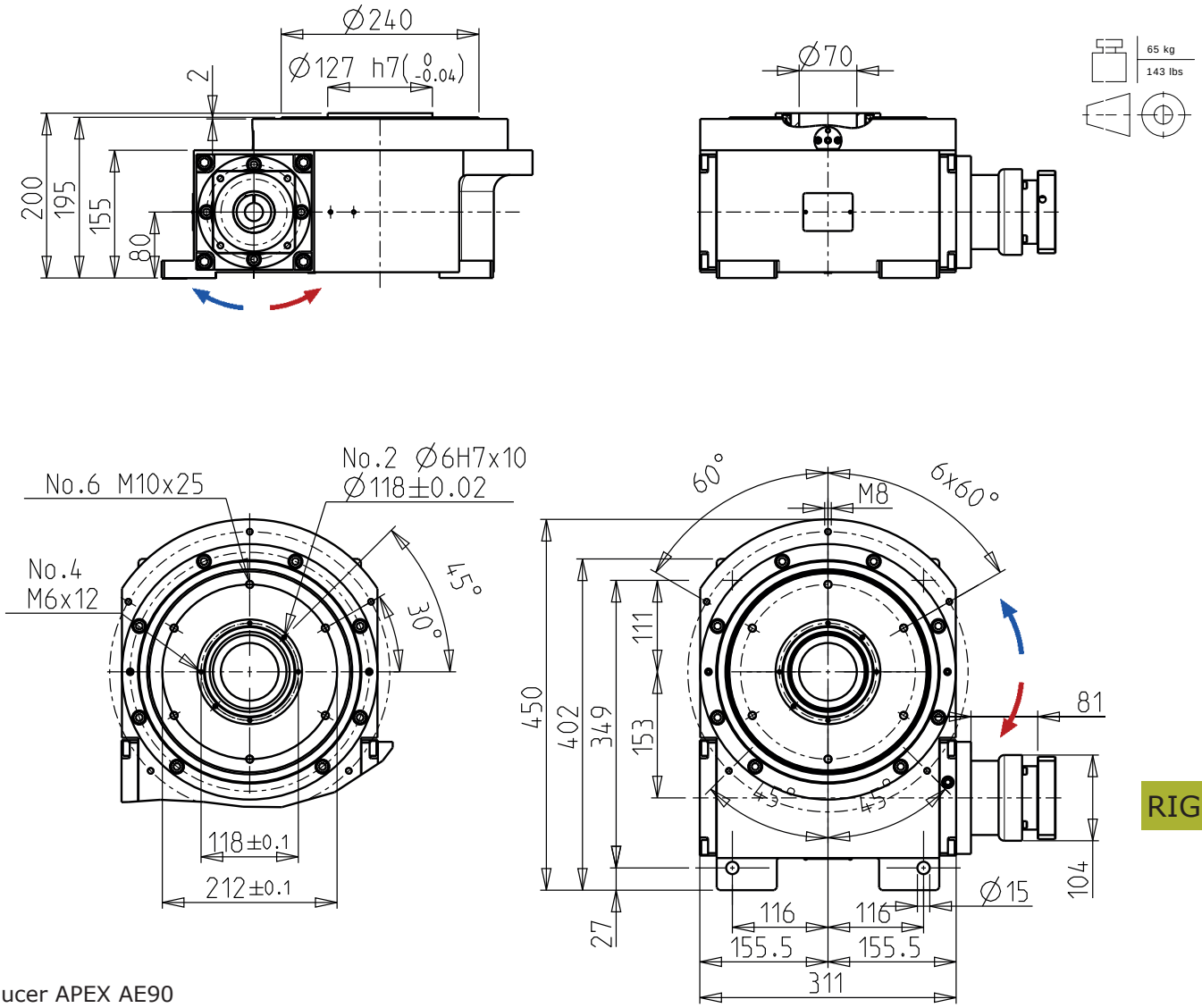
Nominal Torque: 6.5Nm
Maximum speed: 5000rpm

Graph. 6 Index time B

It is customer's responsibility to check the servomotors' thermal characteristics when a servomotor with a nominal torque smaller than the one indicated is selected.

RIGS09	Available reduction ratios	Suggested max. output plate diameter	Concentricity Precision	Concentricity on Ø	Planarity Precision	Unit backlash
	80 - 160	1700 mm	0.03 mm	127 mm	0.02 mm	≤30"

RIGS09 - OVERALL DIMENSIONS



Reducer APEX AE90
Maximum motor shaft Ø24x38

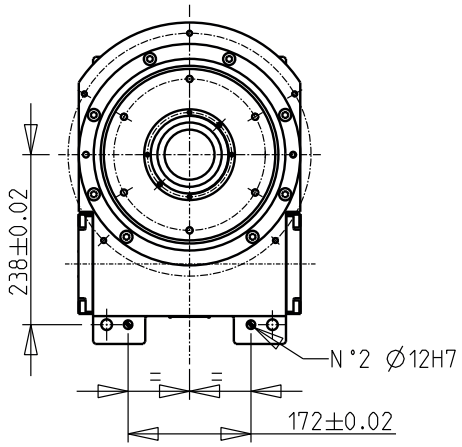
Fig. 7 Overall dimensions

RIGS09

NOTES

- By reversing the direction of rotation of the input shaft, the direction of rotation of the output disc is reversed.
- Direction of rotation as indicated by the arrows in the overall dimensions drawing.

RIGS09 - OPTIONAL REFERENCE HOLES



Two dowel holes can be drilled in the table feet, as indicated in Fig. 8.
The two holes allow precise positioning and make the table interchangeable.

Fig. 8 Optional holes

LOAD CAPACITY OF THE OUTPUT BEARING

The load capacities indicated in the table and represented in the graphs below refer to the table mounted in position V5 and represent the maximum values for each type of load applied individually. The capacity to withstand combined loads must be evaluated using the diagrams shown in Graph. 7.

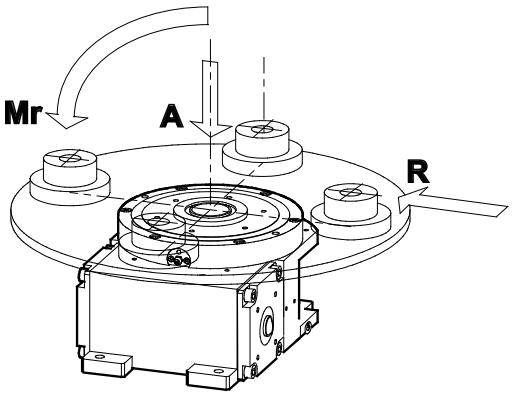
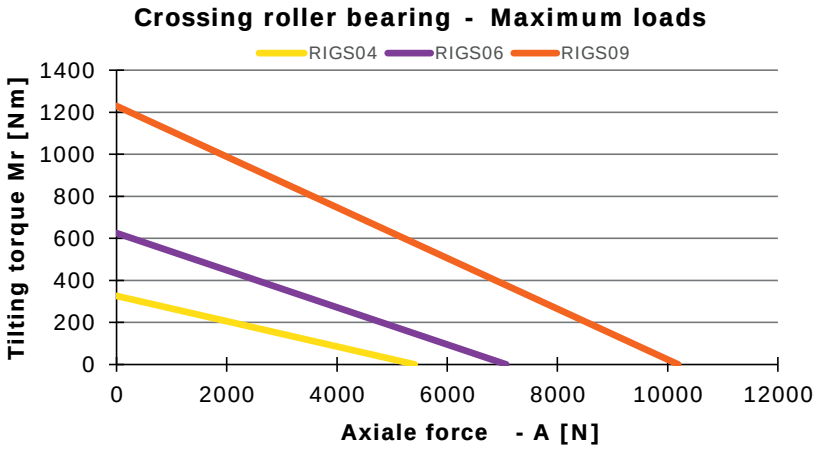


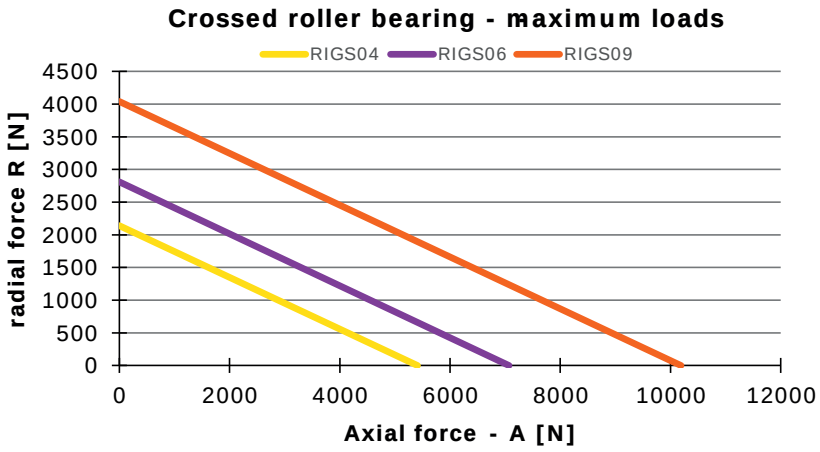
Fig. 9 Loads diagram

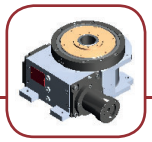
SERIES	STATIC LOAD CAPACITIES		
	AXIAL A [N]	RADIAL R [N]	TILTING Mr [Nm]
RIGS04	5410	2140	326
RIGS06	7070	2810	625
RIGS09	10190	4040	1230

Tab. 1 Load capacities



Graph. 7 Static load capacities





LUBRICATION

Lubrication of the tables is the long-life type using ISO VG150 mineral oil. RIGS tables are delivered already filled with the required quantity of lubricant. For mountings in position V5, the output plate bearing is already lubricated during assembly, so no additional lubrication is required. Lubrication of the reducers and reduction gears is independent and must be carried out according to the instructions provided by the manufacturers of single products.

TABLE MOUNTING POSITIONS

The table can be mounted in all positions, since it is equipped with long-life lubrication and supplied with the right quantity of oil.

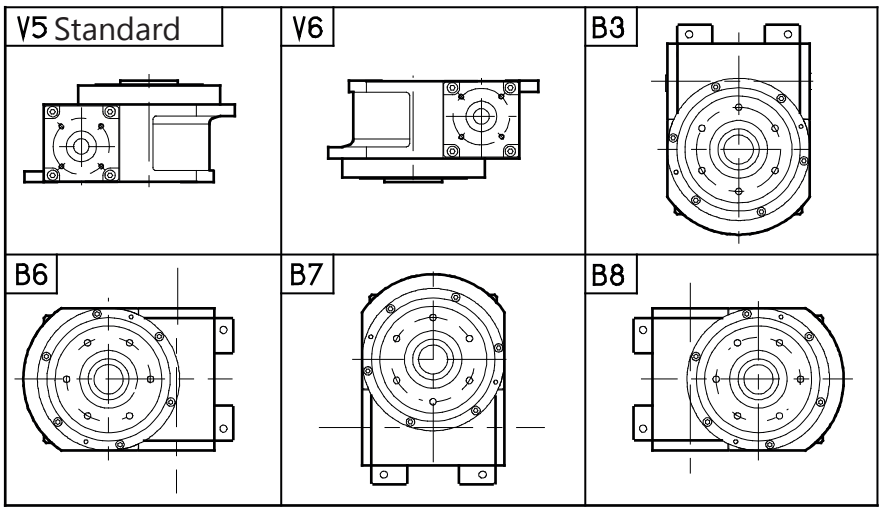


Fig. 10 Table mounting positions

Unless specified otherwise, the RIGS tables are supplied for the standard V5 mounting position.

REDUCER INPUT SIDE

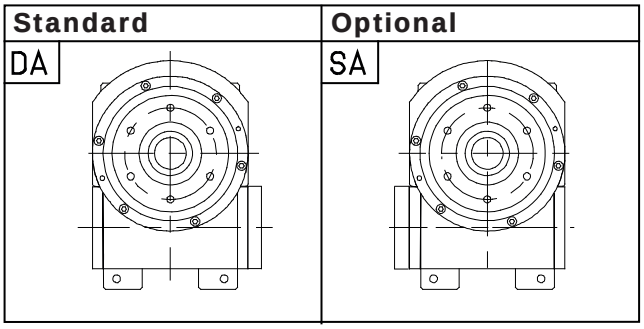


Fig. 11 Reducer input side

Unless specified otherwise, the RIGS tables are supplied with the input shaft in position **DA**.

ORDERING CODES

The ordering code of the RIGS tables is created by following an alphanumeric classification and formed according to the diagram provided here below.
When placing an order, please refer to this diagram in order to avoid mistakes and misunderstandings

RIGS [ ] - [ ] - [ ] - [ ] - [VCT] - [ ]

- Size (RIGS04 - RIGS06 - RIGS09)
- Reduction ratio (i=1:80), B (i=1:160)
- Mounting position (V5, V6, ..., B8 - Pag. 13 - Fig. 10)
- Gearbox input side (DA, SA, - Pag. 13 - Fig. 11)
- Output hub (VCT)
- Optional reference holes (F)

Describe clearly any additional features required.

Ordering code:
RIGS06 table, reduction ratio "A" (1:80), V5 mounting position, gearbox input side DA, VCT output hub and optional reference holes.
Reducer pre-arranged for motor "Motor description".

RIGS06 - A - VRP - V5 - DA - VCT - F

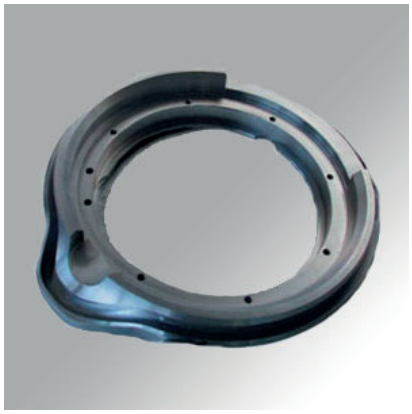
[to create]

in movement with the times

Products

Cam Mechanisms and special products

Compact double spherical cam mechanism for mechanical automation



Combination of flat cam and globoidal profiled cam

Barrell shaped cam

Globoidal cam mechanism with four synchronized intermittent movements. Bilateral outputs.

Mechanism with different cams producing seven synchronized intermittent and oscillating movements in output

Parallel shaft mechanism with flat cam

Flat cam with conjugate profiles

... the culture of precision

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