



Robotics Accessories



SOMMER
automatic

Robotics *Accessories*

Tool Changer

Order no.	Connection flange	Handling weight recommended [kg]	Page
Product Information			6
WWR40F/WWR40L	TK40	15	10
WWR50F/WWR50L	TK50	15	12
WWR63F/WWR63L	TK63	50	14
WWR80F/WWR80L	TK80	50	16
WWR100F/WWR100L	TK100	90	18
WWR125F/WWR125L	TK125	200	20
WWR160F/WWR160L	TK160	200	22
Energy elements			32



Manuel Changer

Order No.	Connection flange	Handling weight recommended [kg]	Page
Product Information			28
HWR80F/HWR80L	TK80	50	32
Energy elements			34



Rotary Pneumatic Manifolds

Order No.	Connection flange	Handling weight recommended [kg]	Page
Product Information			38
DVR40I4	TK40	15	42
DVR50I4	TK50	15	44
DVR63I6	TK52	50	46
DVR80I6	TK80	50	48
DVR100I4/DVR100I8	TK100	90	50
DVR125I4/DVR125I8	TK125	200	52
DVR160I4/DVR160I8	TK160	200	54



Axial Compensation

Order no.	Connection flange	Handling weight recommended [kg]	Page
Product Information			58
AR40	TK40	15	62
AR40P	TK40	15	64
AR50	TK50	15	66
AR50P	TK50	15	68
AR63	TK63	50	70
AR63P	TK63	50	72
AR80	TK80	50	74
AR80P	TK80	50	76
AR100	TK100	90	78
AR100P	TK100	90	80
AR125	TK125	200	82
AR125P	TK125	200	84
AR160	TK160	200	86
AR160P	TK160	200	88



Crash Protector

Order no.	Connection flange Z [mm]	Handling weight recommended [kg]	Page
Product Information			92
CSR50	12,5	6	96
CSR63	10,5	12	98
CSR80	14,0	35	100
CSR100	118,0	60	102



Attachment Plate

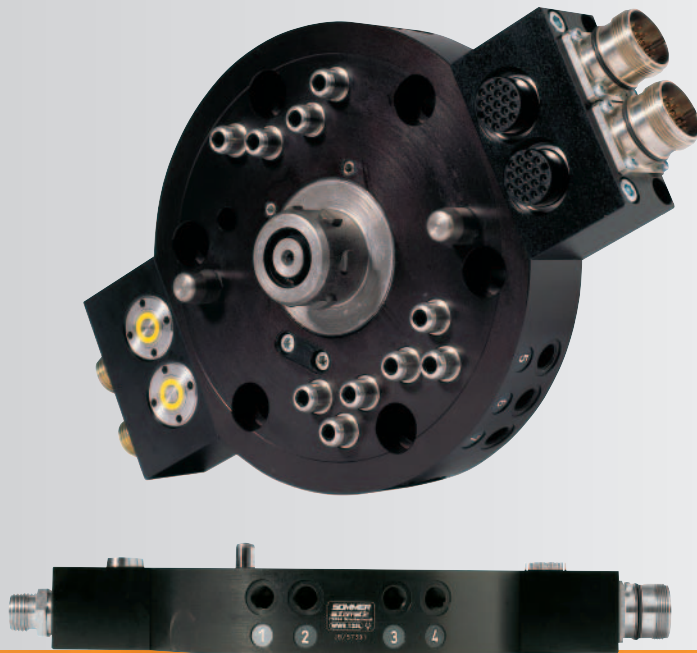
Order no.	for Gripper	Page
APRGPIISO25	GP404, GP1804	104
APRGPIISO31-5	GP406, GP1806	104
APRGPIISO40	GP408, GP1808	104
APRGPIISO50	GP410, GP1810	104
APRGPIISO63	GP412, GP1812	104
APRGPIISO80	GP416, GP1816	104
APRGPIISO100	GP420, GP1820	104
APRGPIISO125	GP430, GP1830	104
APRGDISO31-5	GD304, GD1704	104
APRGDISO40	GD306, GD1706	104
APRGDISO50	GD308, GD1708	104
APRGDISO63	GD310, GD1710	104
APRGDISO80	GD312, GD1712	104
APRGDISO100	GD316, GD1716	104
APRGDISO125	GD320, GD1720	104





*Tool **Changers***

pneumatic



WWR-Series

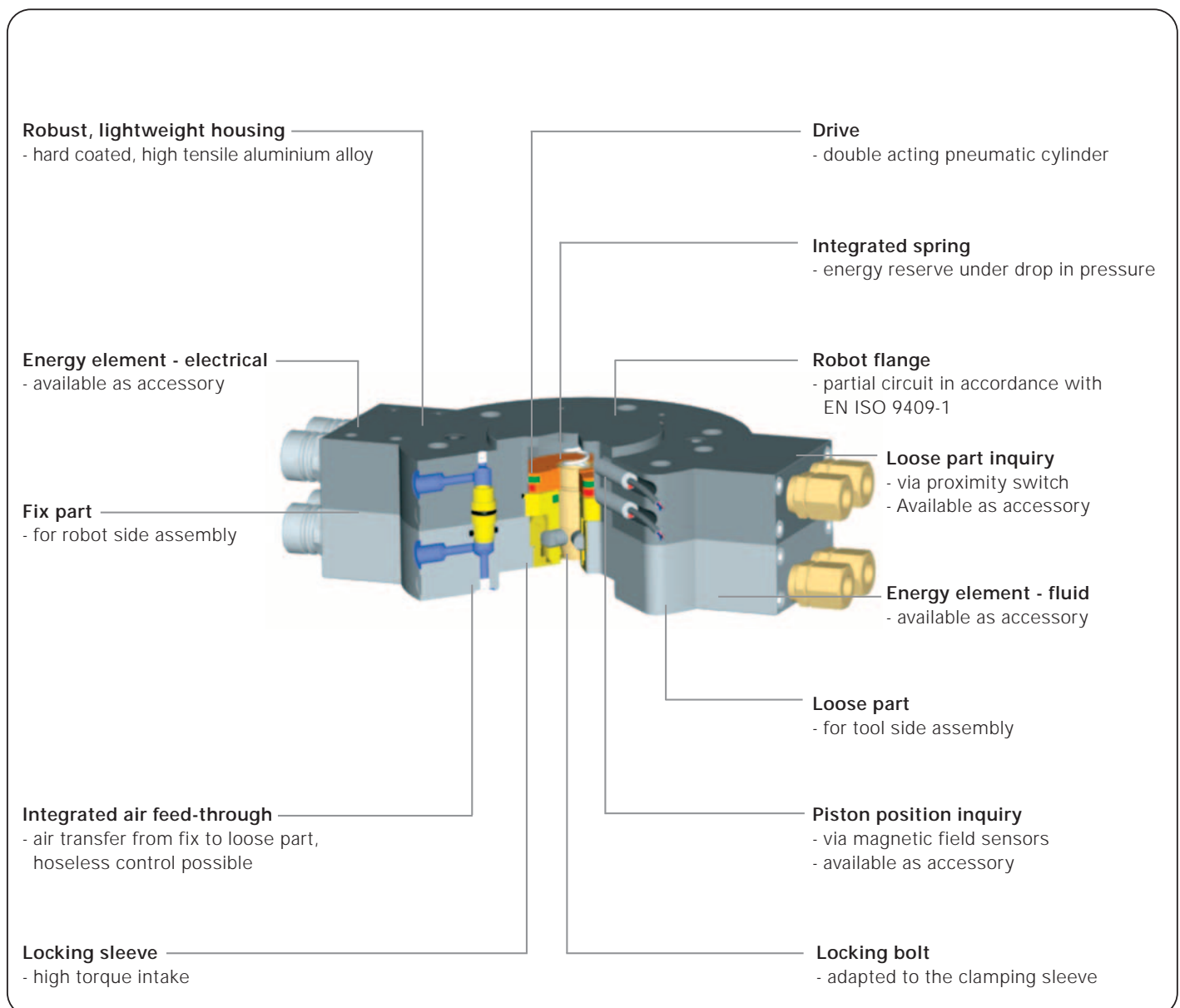
SOMMER
automatic

Tool **Changer** for Robots

➤ Highlights

- Flat structuring
- High force and torque intake
- Partial circuit produced in accordance with EN ISO 9409-1, for direct connection to the robots
- Variable energy transfer
- Axial hoseless air transfer possible

Functional diagram



Terms

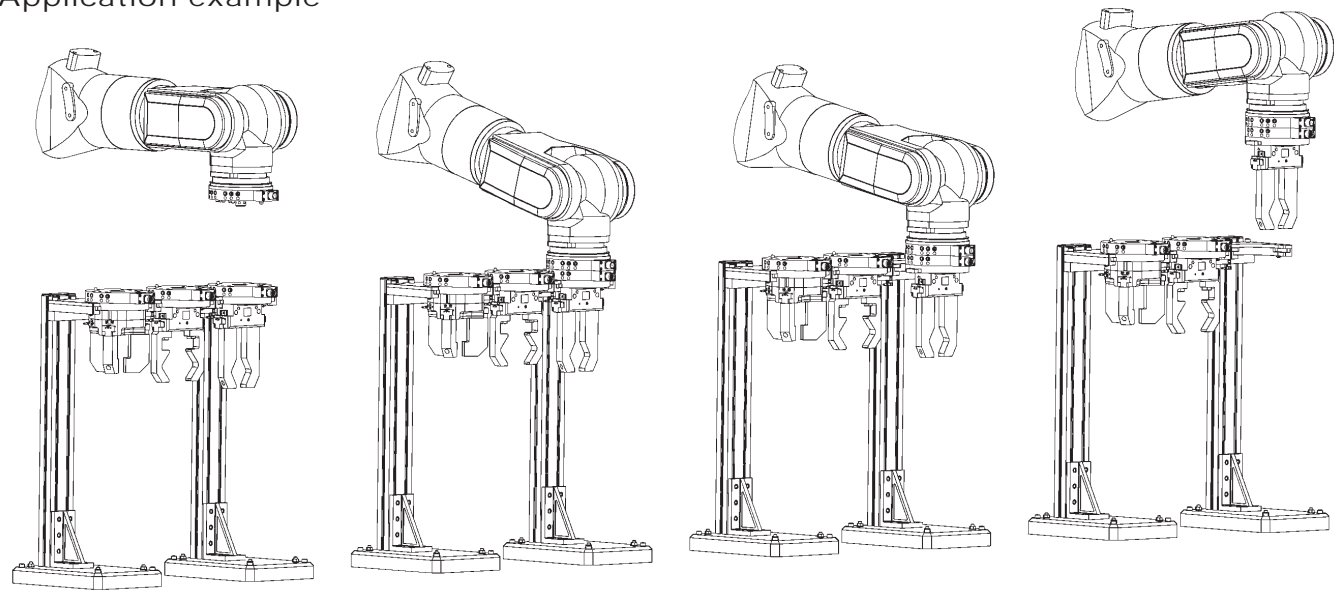
Recommended handling weight:	guide value, when dimensioning, the authorised force and moment loads must be observed
Locking stroke:	distance covered autonomously by the loose part when locking
Joining force:	force that must be applied by robot when joining fix part loose part
Release force:	force that must be applied by robot when releasing fix part and loose part
Cycle:	changing procedure
Maintenance:	maintenance free bis 5 Mio. cycle (please see the owner's manual for conditions, download from www.sommer-automatic.com) <ul style="list-style-type: none"> • long maintenance intervals keep costs down • long durability

Model

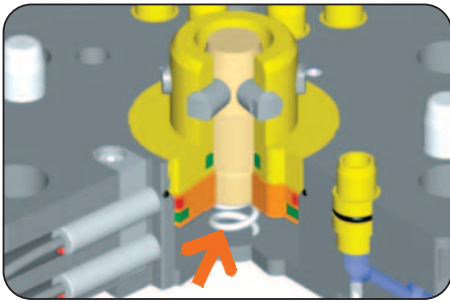
F:	fix part, for robot side assembly
L:	Loose part, for tool-side assembly

Order no.	Connecting flange after EN ISO 9409-1	Recommended handling weight	Hight in locking position	Energy transfer pneumatic
WWR40F/WWR40L	TK40	15 kg	37 mm	4x
WWR50F/WWR50L	TK50	15 kg	37 mm	4x
WWR63F/WWR63L	TK63	50 kg	45 mm	6x
WWR80F/WWR80L	TK80	50 kg	45 mm	6x
WWR100F/WWR100L	TK100	90 kg	49 mm	6x
WWR125F/WWR125L	TK125	200 kg	65 mm	10x
WWR160F/WWR160L	TK160	200 kg	65 mm	10x

Application example



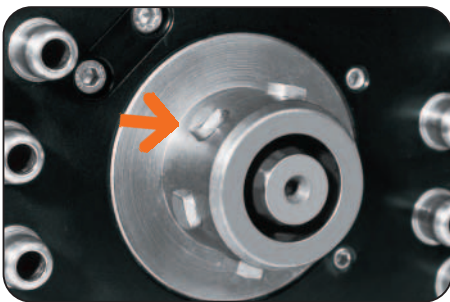
Tool **Changer** for Robots



Locking drive

Double acting pneumatic cylinder with integrated pressure spring

- Process safe
- Safeguarded locking force under drop in pressure



Locking mechanics

Possitive connection due to clamping sleeve fitted index bolts

- Highest torque intake due to line contact
- Self limitation under drop in pressure



Connecting flange for Roboter

Partial circuit produced in accordance with EN ISO 9409-1

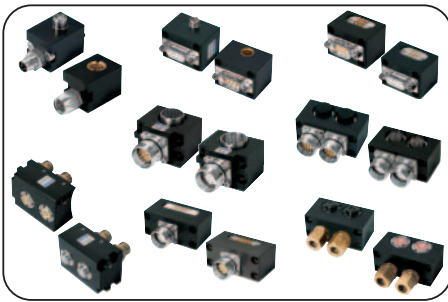
- Direct, without adapter plate, mountable on the robot flange
- Products with same EN ISO flange can be combined and exchanged
- Low construction effort



Air transfer

Up to 10 pneumatic feed-through

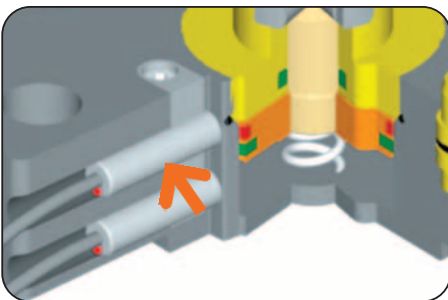
- Energy supply of loose part on the application
- Vacuum suitable
- Hoseless connection to DVR rotor distributor possible



Energy elements

For hydraulic and electrical energy transfer

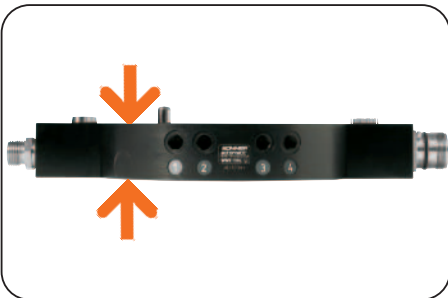
- Standardised and packaged
- Short set up time for maintenance work
- Customer-specifically modifiable, e.g. with an identification system
- Available as accessory



Sensing

Indirect locking piston position sensing via magnetic field sensor and direct loose part sensing via proximity switch

- Process safe
- satisfy highest requirements with respect to safety and integration into machine control



Housing

Extremely flat design and weight optimised

- Structure height allows optimum exploitation of robot torque loading
- Low own weight, thus higher extension load possible on robot
- Cost saving by lowest robot influence on handling weight



Storage station

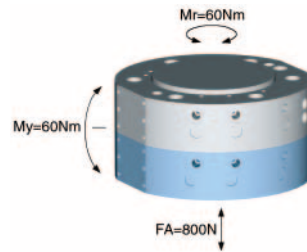
Customer-specific design and finish

- Contact us!
- We would be pleased to take on your application and develop an individually adapted system for you

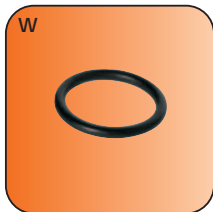
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery

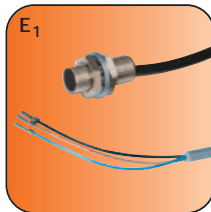


O-Ring
Order no. COR0040150

Accessory list



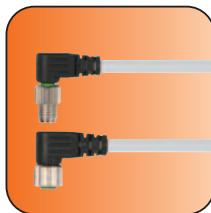
Pneumatic fittings
Order no. GVM5



Proximity switch
Order no. NJ5-E2



Energy elements
see page 32



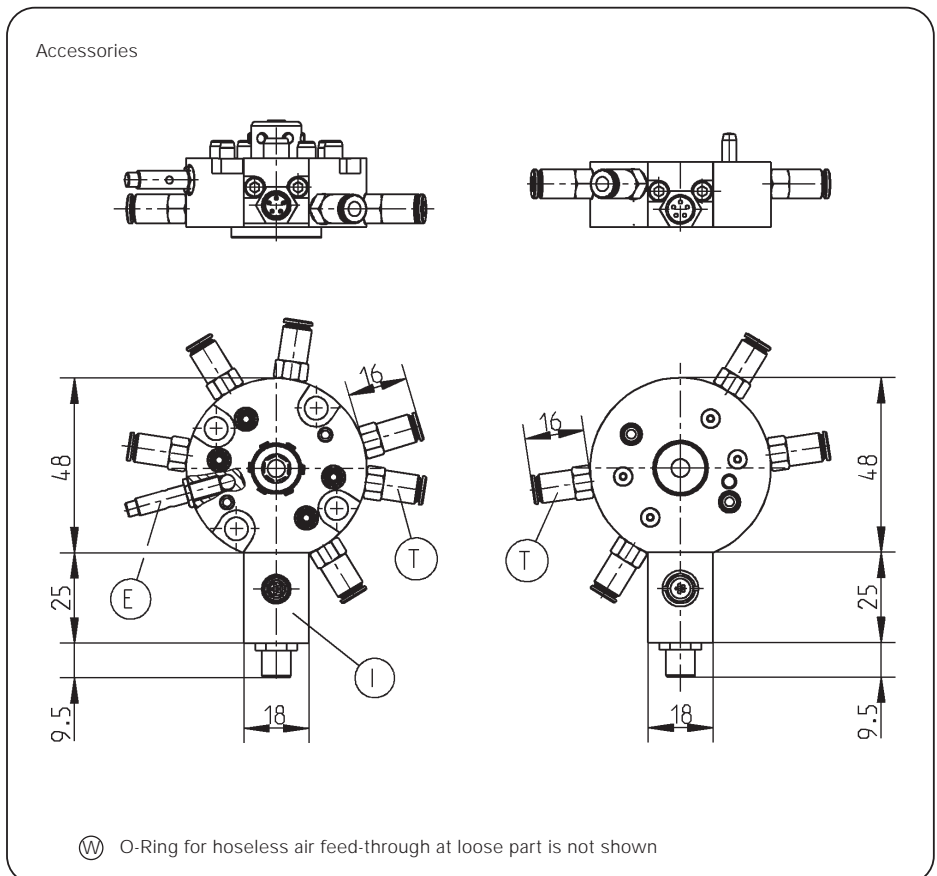
Cable angled plug 4-pole*
Order no. KAW300B4 (F)
Order no. KAW300S4 (L)



Plug 3-pole
Order no. S12-G-3



Plug, 4-pole
Order no. S8-G-4
Order no. B8-G-4



Subject to change without prior notice

* Connector for Energy element

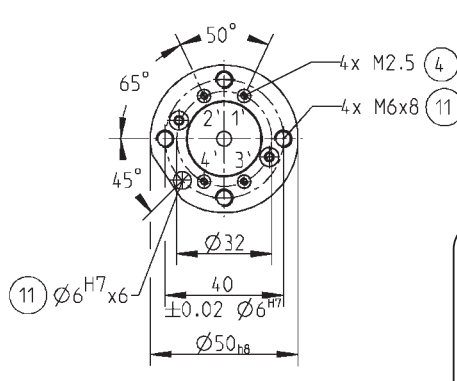
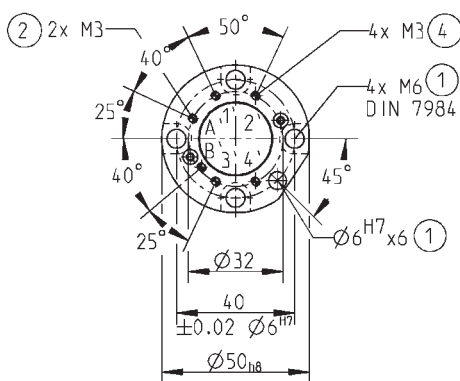
Order no.:	WWR40F	WWR40L
Connecting flange:	TK40 after EN ISO 9409-1	TK40 after EN ISO 9409-1
Recommended handling weight [kg]:	15	-
Pneumatic energy transfer *:	4x	4x
Electrical/hydraulic energy transfer **:	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	0,3	-
Repetition accuracy in Z [mm]:	0,01	-
Repetition accuracy in X, Y [mm]:	0,02	-
Joining force [N]:	50	-
Release force [N]:	30	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	2,5	-
Moment of inertia [kg/cm³]:	0,34	0,33
Weight [g]:	110	100

All data measured at 6 bar

* Vakuum possible

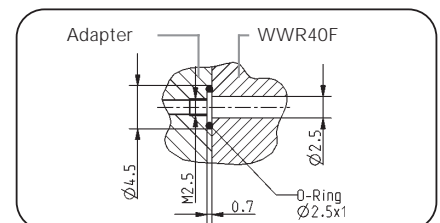
** see page 32

WWR40

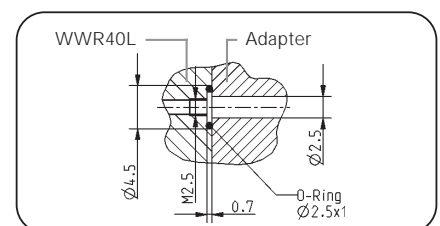


- ① Fixing robot side
- ② Energy supply
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑩ Inquiry pin, loose part available
- ⑪ Fixing tool side

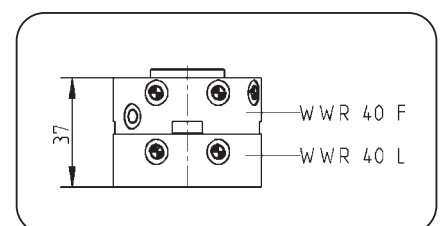
* replaced by DIN EN ISO 4762



Hostless energy connection (robot side)



Hostless air connection (tool side)



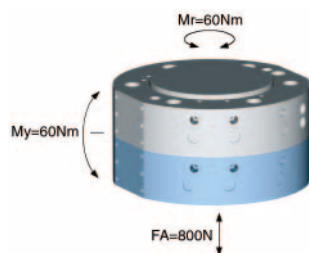
Total height in locked position

Subject to change without prior notice

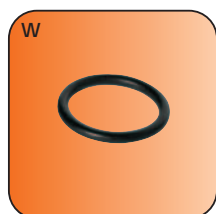
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery

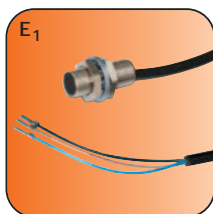


O-Ring
Order no. COR0040150

Accessory list



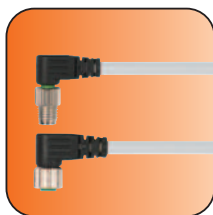
Pneumatic fittings
Order no. GVM5



Proximity switch
Order no. NJ5-E2



Energy elements
see page 32



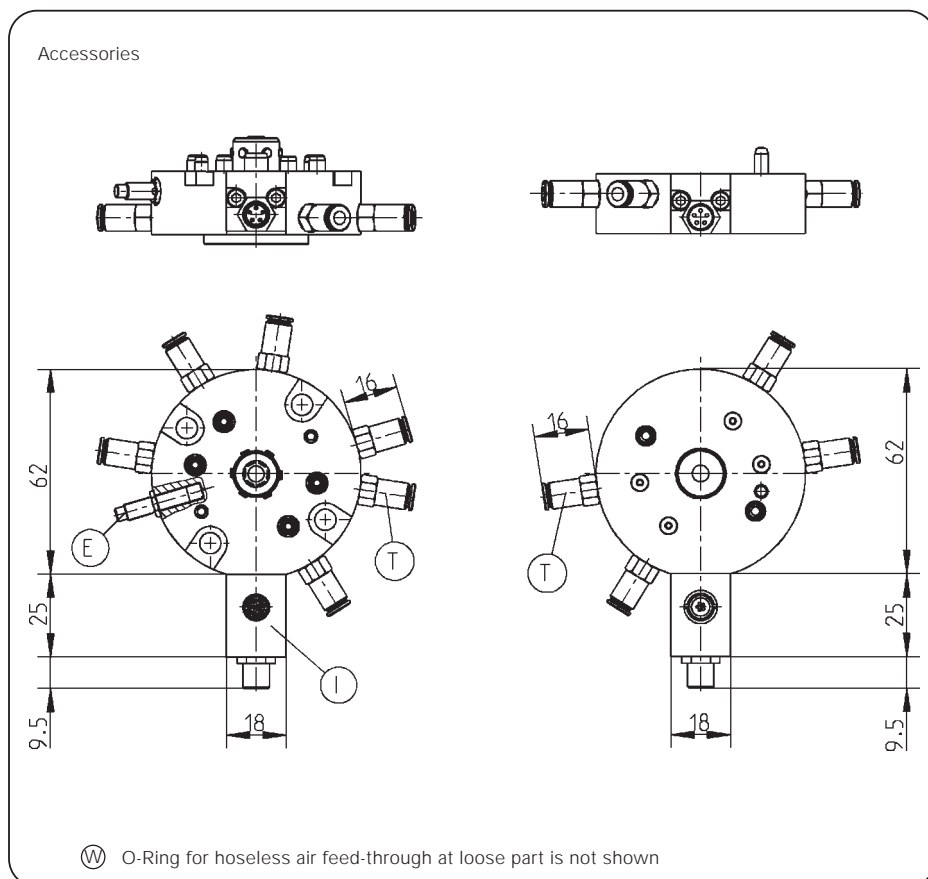
Cable angled plug 4-pole*
Order no. KAW300B4 (F)
Order no. KAW300S4 (L)



Plug 3-pole
Order no. S12-G-3



Plug, 4-pole
Order no. S8-G-4
Order no. B8-G-4



Subject to change without prior notice

* Connection for Energy element

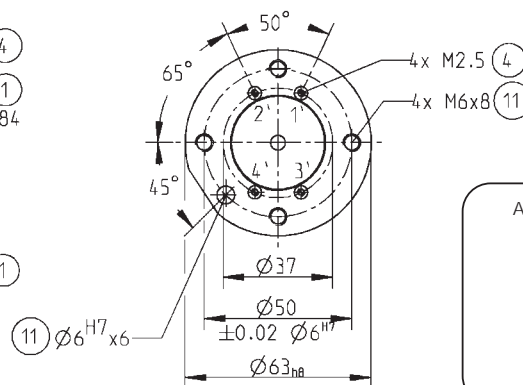
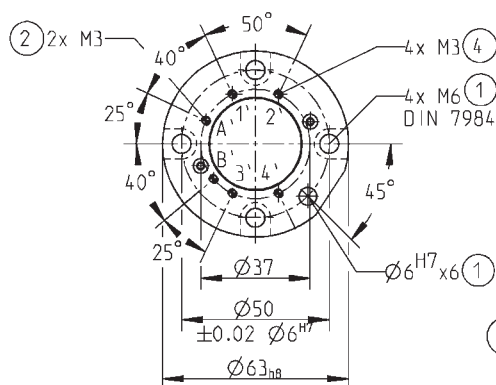
Order no.:	WWR50F	WWR50L
Connecting flange:	TK50 after EN ISO 9409-1	TK50 after EN ISO 9409-1
Recommended handling weight [kg]:	15	-
Pneumatic energy transfer *:	4x	4x
Electrical/hydraulic energy transfer **:	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	0,3	-
Repetition accuracy in Z [mm]:	0,01	-
Repetition accuracy in X, Y [mm]:	0,02	-
Joining force [N]:	50	-
Release force [N]:	30	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	2,5	-
Moment of inertia [kg/cm³]:	0,82	0,78
Weight [g]:	150	190

All data measured at 6 bar

* Vakuum possible

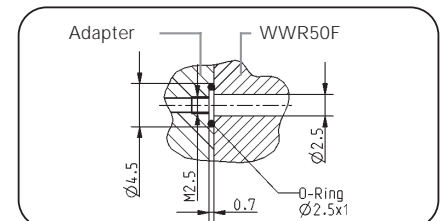
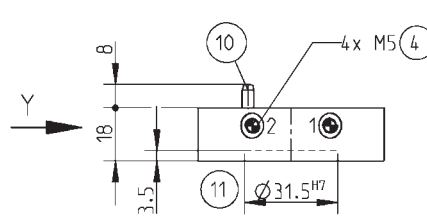
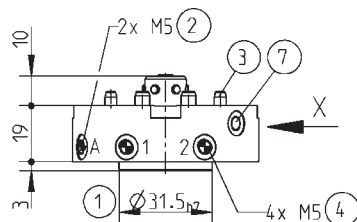
** see page 32

WWR50

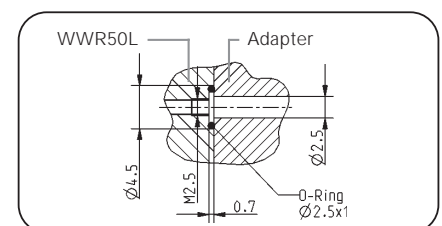


- ① Fixing robot side
- ② Energy supply
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑩ Inquiry pin, loose part available
- ⑪ Fixing tool side

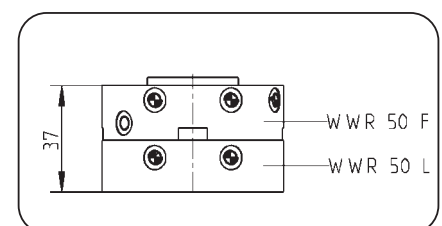
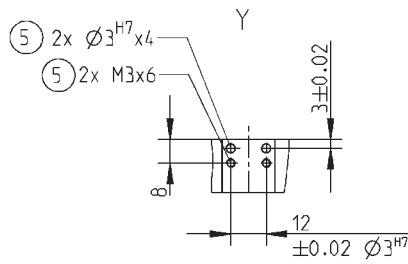
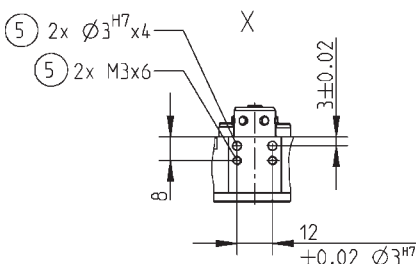
* replaced by DIN EN ISO 4762



Hoseless Energy connection (robot side)
Hoseless Air connection (robot side)



Hoseless Air connection (tool side)



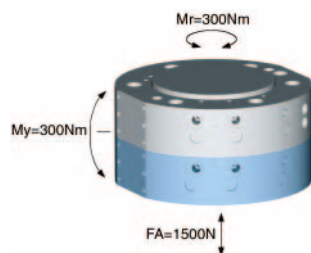
Total height in locked position

Subject to change without prior notice

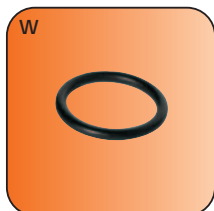
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery



O-Ring
Order no. COR0040150

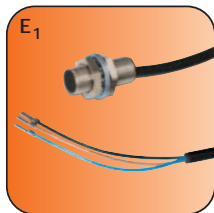
Accessory list



Pneumatic fittings
Order no. GVM5



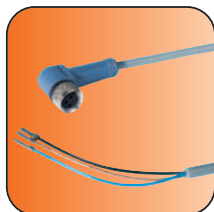
Proximity switch
Order no. NJ8-E2S



Magnetic field sensor
Order no. MFS07M



Energy elements
see page 32

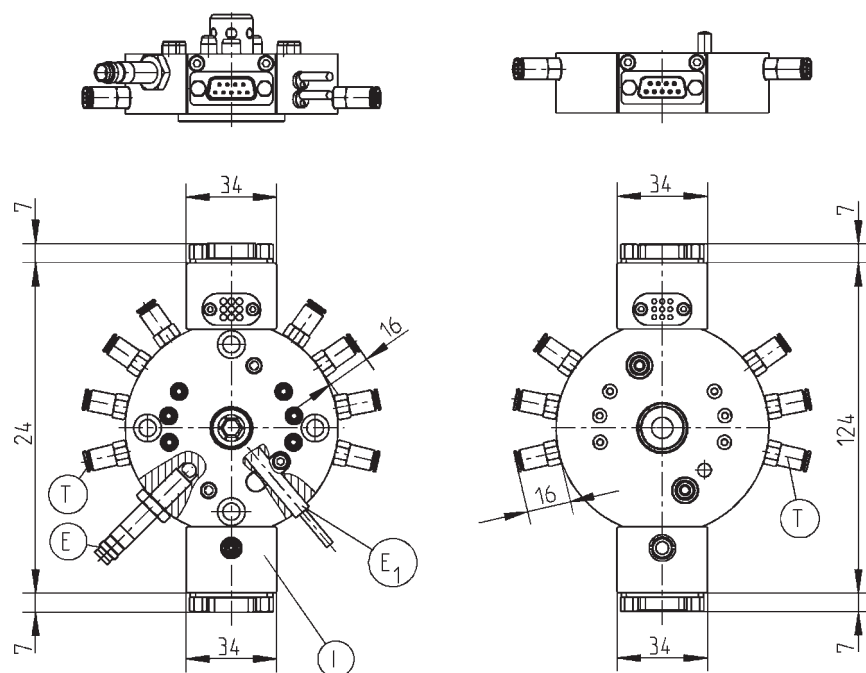


Cable angled plug
Order no. KAW500



Plug 3-pole
Order no. S12-G-3

Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

Order no.:	WWR63F	WWR63L
Connecting flange:	TK63 after EN ISO 9409-1	TK63 after EN ISO 9409-1
Recommended handling weight [kg]:	50	-
Pneumatic energy transfer *:	6x	6x
Electrical/hydraulic energy transfer **::	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	1	-
Repetition accuracy in Z [mm]:	0,01	-
Repetition accuracy in X, Y [mm]:	0,02	-
Joining force [N]:	110	-
Release force [N]:	60	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	5,5	-
Moment of inertia [kg/cm³]:	3,36	2,8
Weight [g]:	400	350

All data measured at 6 bar

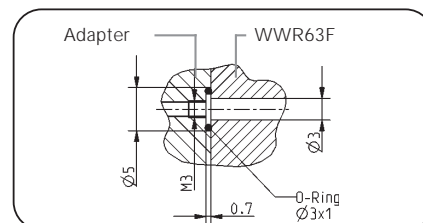
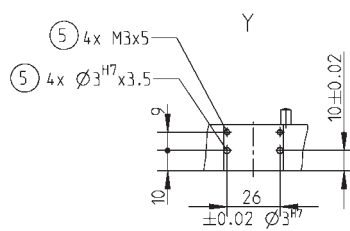
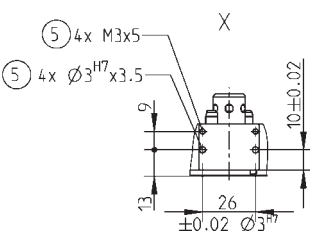
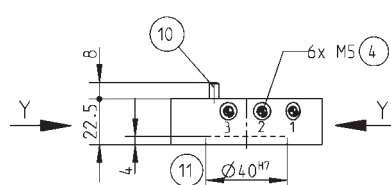
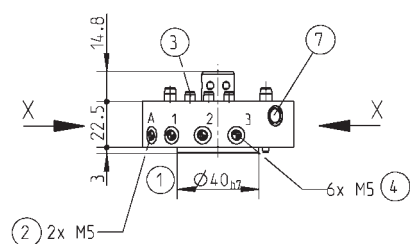
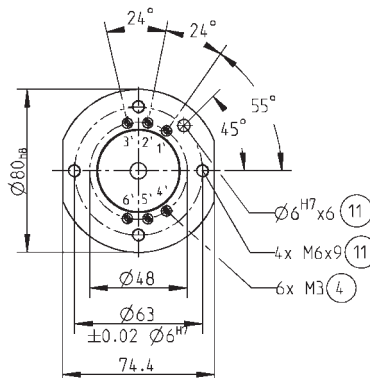
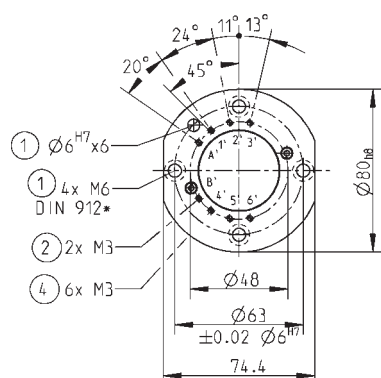
* Vakuum possible

** see page 32

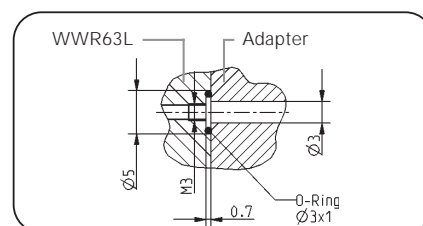
WWR63

- ① Fixing robot side
- ② Energy supply
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑩ Inquiry pin, loose part available
- ⑪ Fixing tool side

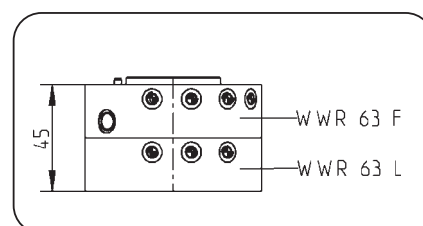
* replaced by DIN EN ISO 4762



Hoseless energy connection (robot side)
Hoseless air connection (robot side)



Hoseless air connection (tool side)



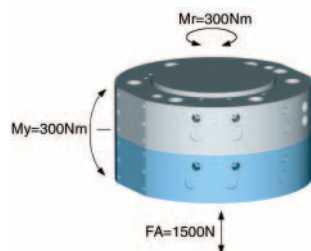
Total height in locked position

Subject to change without prior notice

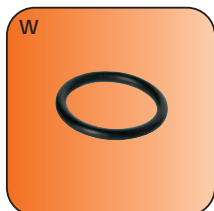
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery



O-Ring
Order no. COR0040150

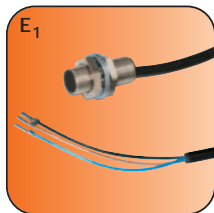
Accessory list



Pneumatic fittings
Order no. GVM5



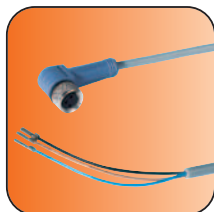
Proximity switch
Order no. NJ8-E2S



Magnetic field sensor
Order no. MFS07M



Energy elements
see page 32

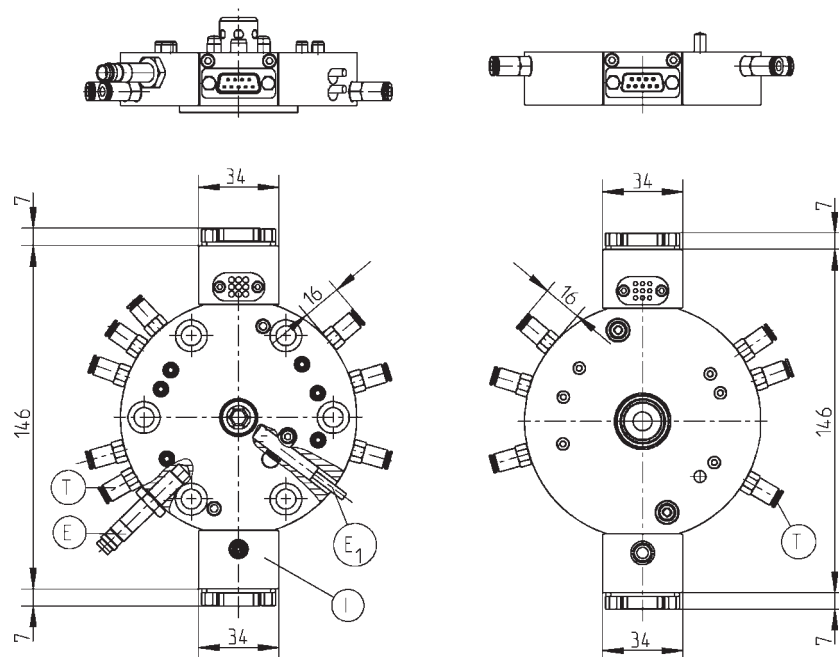


Cable angled plug
Order no. KAW500



Plug 3-pole
Order no. S12-G-3

Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

Order no.:	WWR80F	WWR80L
Connecting flange:	TK80 after EN ISO 9409-1	TK80 after EN ISO 9409-1
Recommended handling weight [kg]:	50	-
Pneumatic energy transfer *:	6x	6x
Electrical/hydraulic energy transfer **::	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	1	-
Repetition accuracy in Z [mm]:	0,01	-
Repetition accuracy in X, Y [mm]:	0,02	-
Joining force [N]:	100	-
Release force [N]:	60	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	7,7	6,3
Moment of inertia [kg/cm³]:	3,36	2,8
Weight [g]:	600	500

All data measured at 6 bar

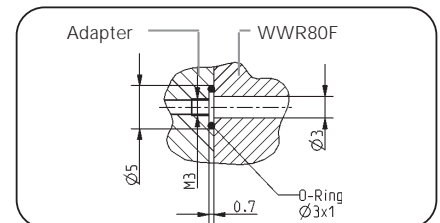
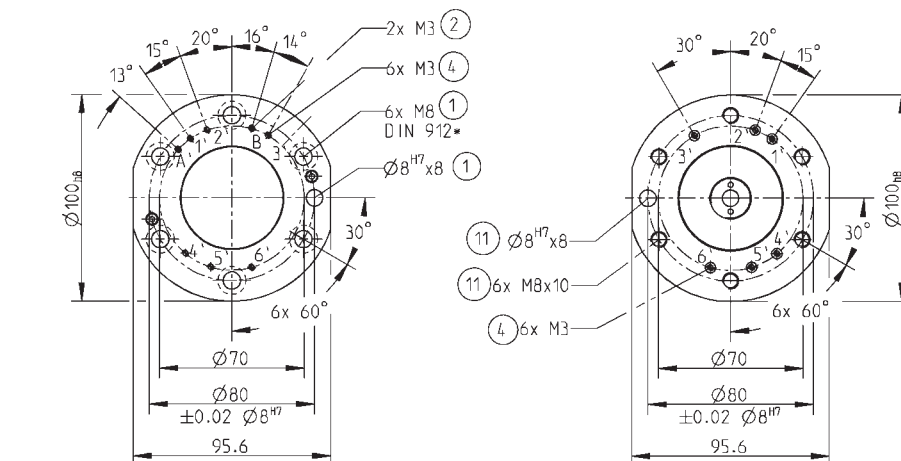
* Vakuum possible

** see page 32

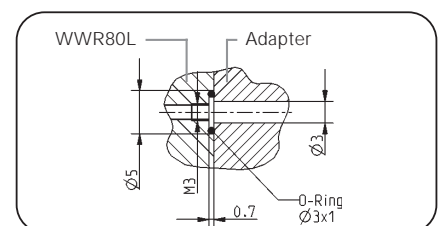
WWR80

- ① Fixing robot side
- ② Energy supply
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑩ Inquiry pin, loose part available
- ⑪ Fixing tool side

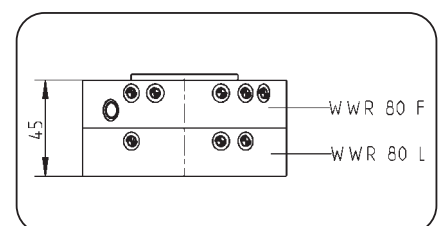
* replaced by DIN EN ISO 4762



Hoseless Energy connection (robot side)
Hoseless air connection (robot side)



Hoseless air connection (tool side)



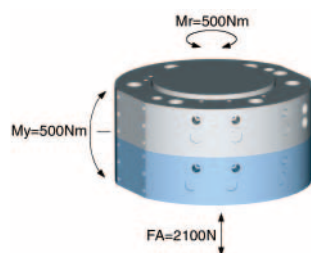
Total height in locked position

Subject to change without prior notice

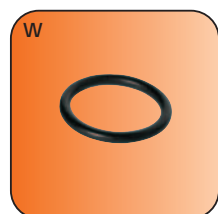
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments

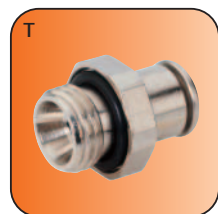


Included in the delivery



O-Ring
Order no. COR0070150

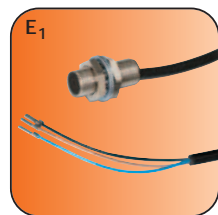
Accessory list



Pneumatic fittings
Order no. GV1/8x6



Proximity switch
Order no. NJ8-E2S



Magnetic field sensor
Order no. MFS07M



Energy elements
see page 32

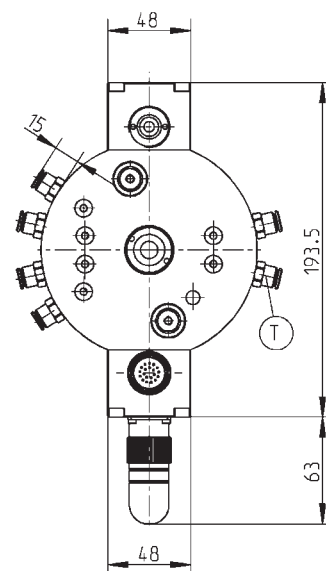
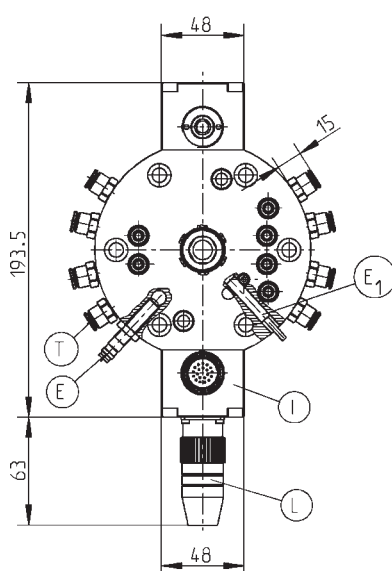
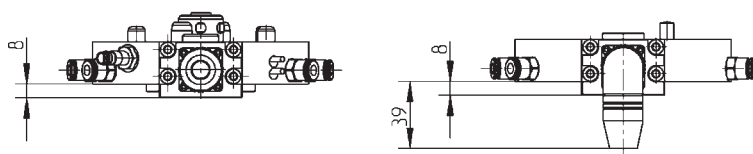


Circular connector
see page 22



Plug 3-pole
Order no. KAW500

Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

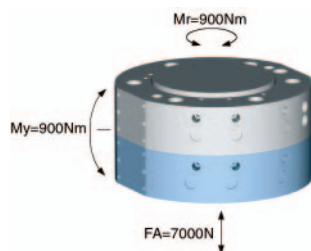
*** see page 32*



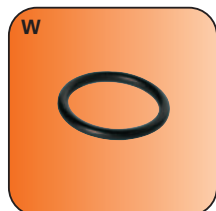
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery



O-Ring
Order no. COR0070150

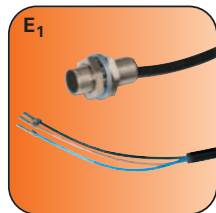
Accessory list



Pneumatic fittings
Order no. GV1/8x6



Proximity switch
Order no. NJ8-E2S



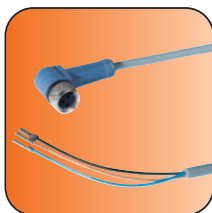
Magnetic field sensor
Order no. MFS08M



Energy elements
see page 34

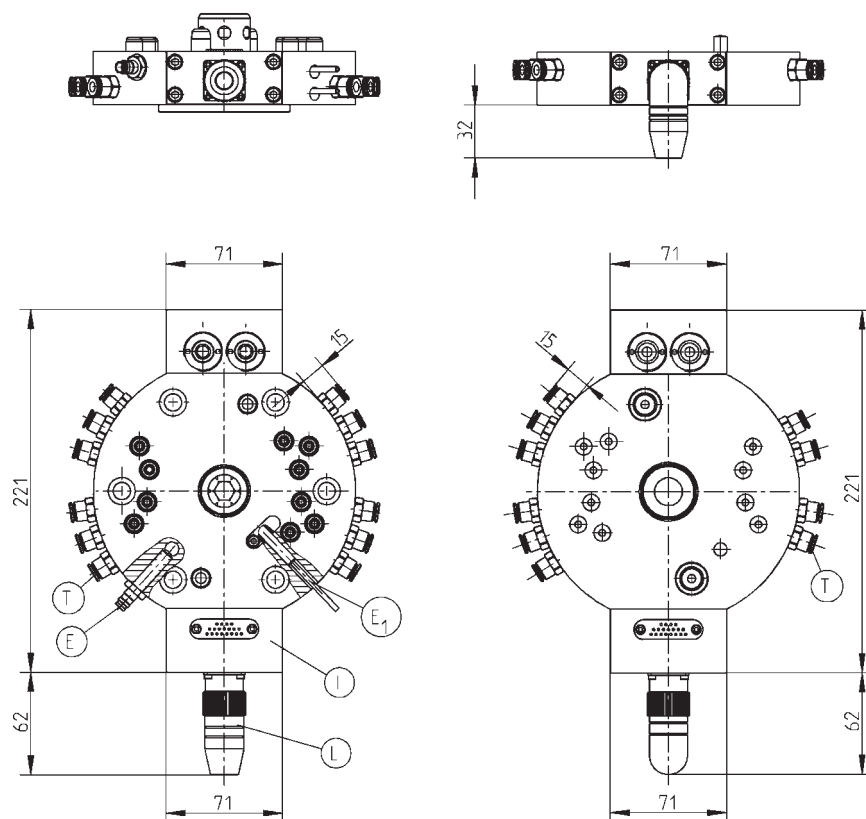


Circular connector
see page 35



Cable angled plug
Order no. KAW500

Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

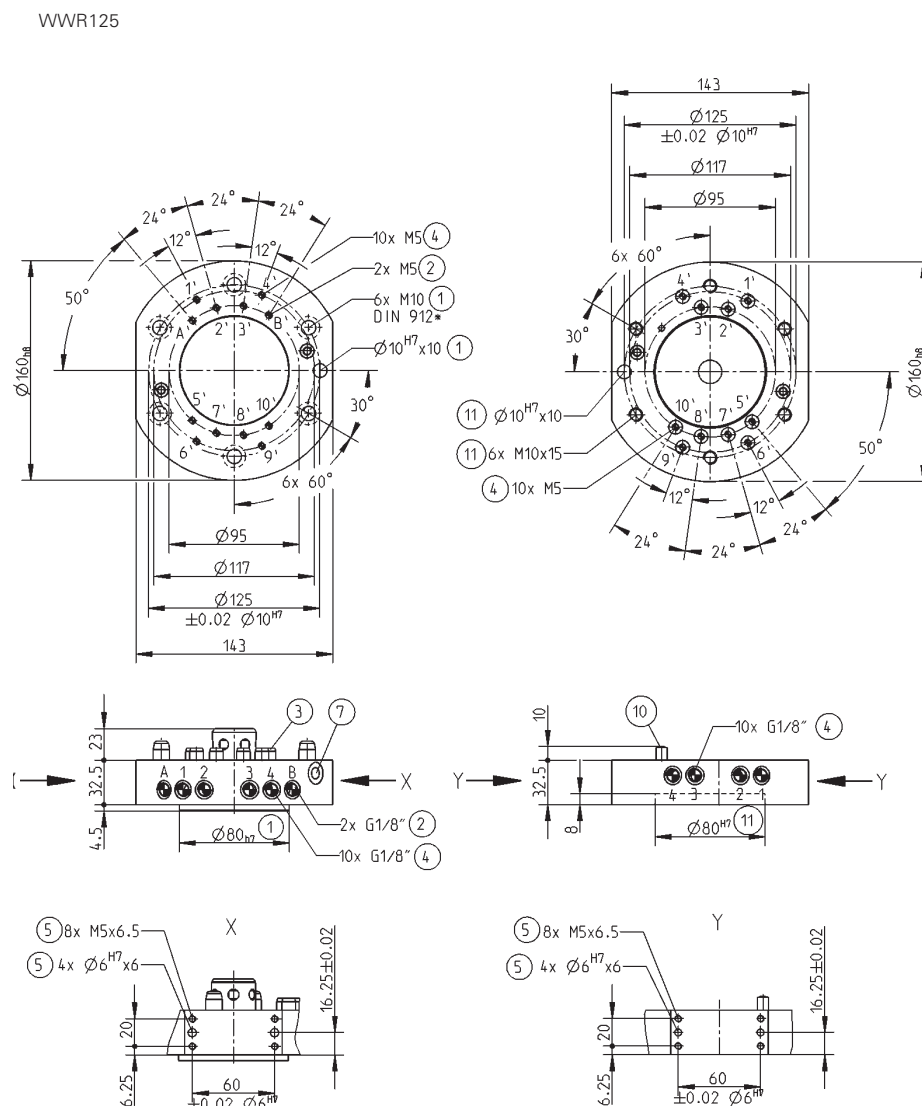
Subject to change without prior notice

Order no.:	WWR125F	WWR125L
Connecting flange:	TK125 after EN ISO 9409-1	TK125 after EN ISO 9409-1
Recommended handling weight [kg]:	200	-
Pneumatic energy transfer*:	10x	10x
Electrical/hydraulic energy transfer**:	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	1	-
Repetition accuracy in Z [mm]:	0,01	-
Repetition accuracy in X, Y [mm]:	0,02	-
Joining force [N]:	150	-
Release force [N]:	80	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	30	-
Moment of inertia [kg/cm³]:	61,3	48,6
Weight [kg]:	1,9	1,5

All data measured at 6 bar

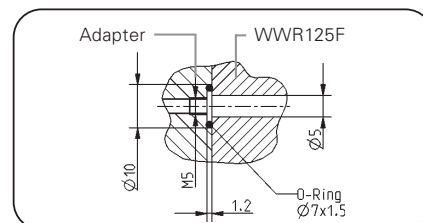
* Vakuum possible

** see page 32

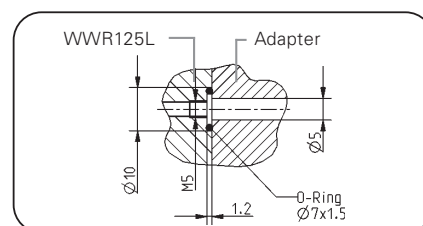


- ① Fixing robot side
- ② Energy supply
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑦ Intake proximity switch
- ⑩ Inquiry pin, loose part available
- ⑪ Fixing tool side

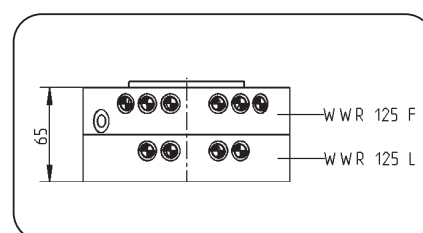
* replaced by DIN EN ISO 4762



Schlauchlose Energy supply (roboterseitig)
Schlauchlose Air channel (roboterseitig)



Hoseless air connection (tool side)



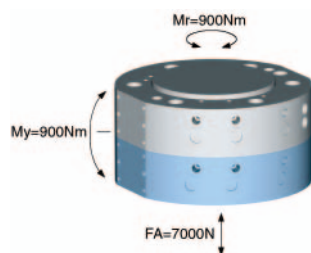
Total height in locked position

Subject to change without prior notice

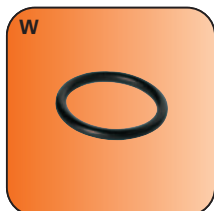
Tool **Changer** for Robots

Forces and Moments

Max allowable static forces and moments



Included in the delivery



O-Ring
Order no. COR0070150

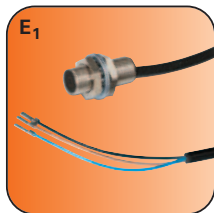
Accessory list



Pneumatic fittings
Order no. GV1/8x6



Proximity switch
Order no. NJ8-E2S



Magnetic field sensor
Order no. MFS08M



Energy elements
seepage 34

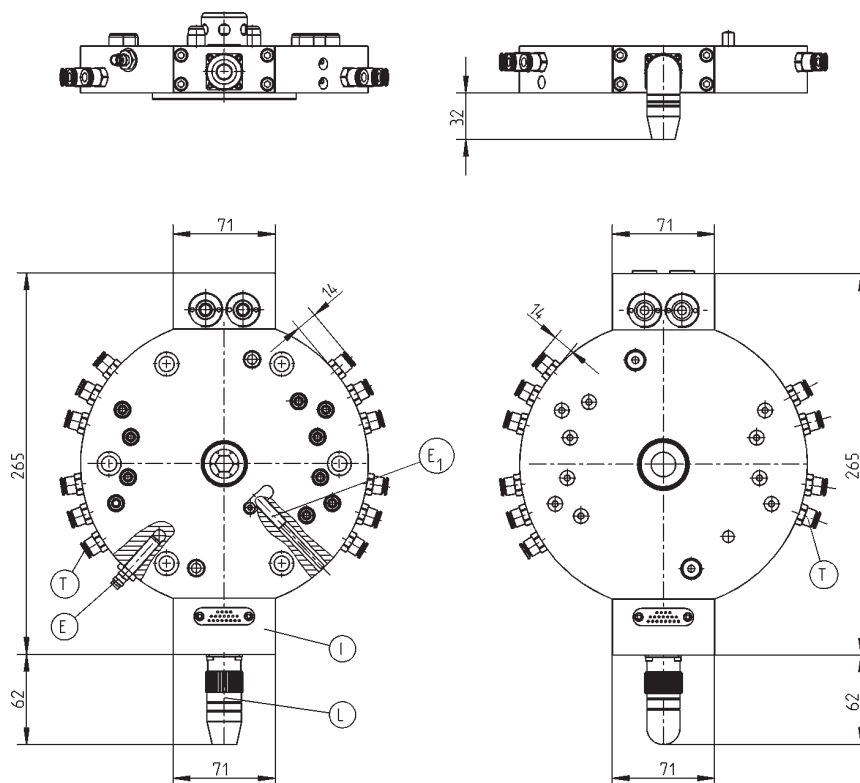


Circular connector
see page 35



Cable angled plug
Order no. KAW500

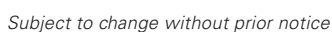
Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

** see page 32





Manual Tool **Changers**

for Robots



HWR-Series

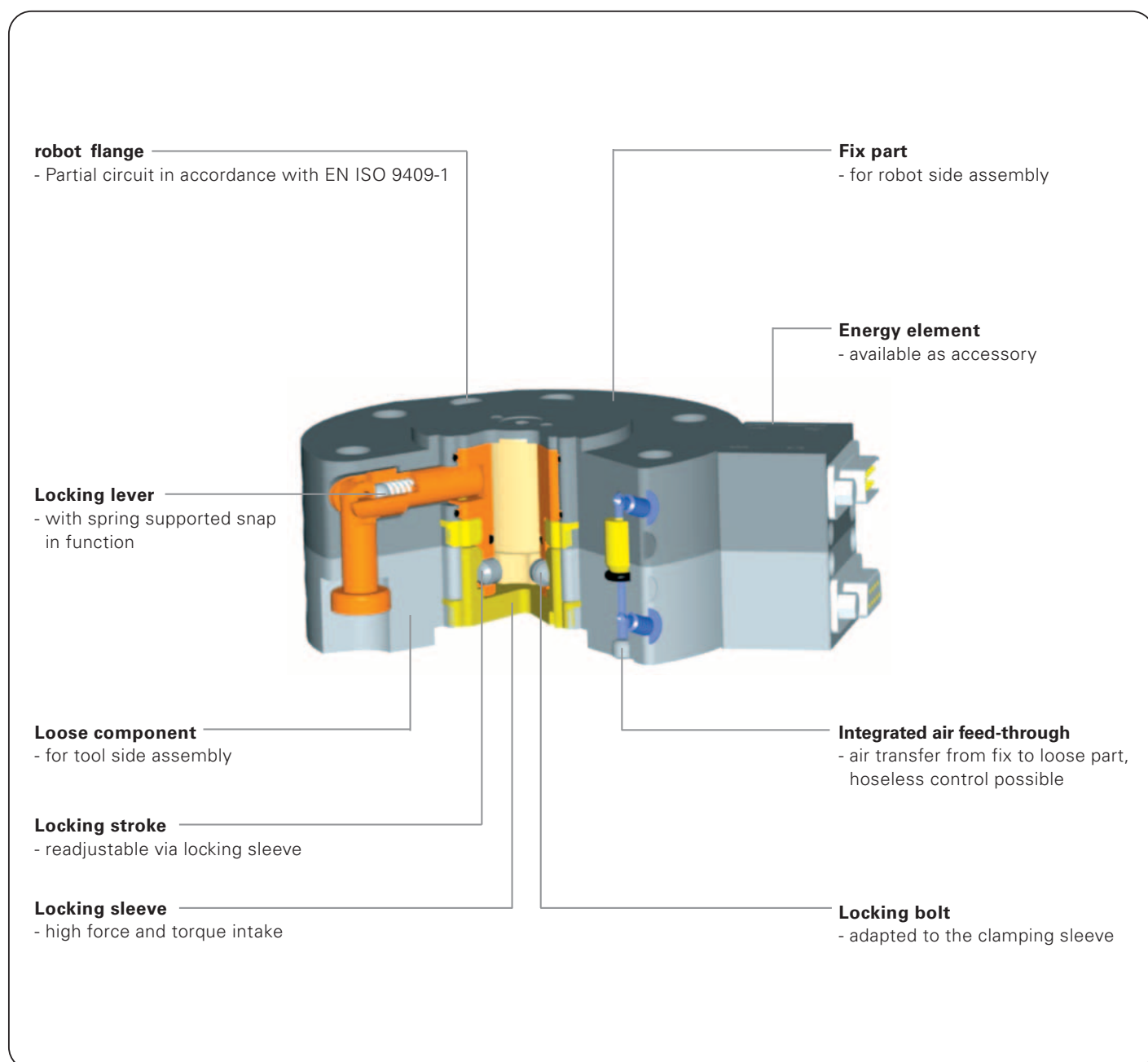
SOMMER
automatic

Manual Tool **Changer** for Robots

➤ Highlights

- Easy handling, quick change times
- High force and torque intake
- Integrated air feed-through as standard
- Partial circuit produced in accordance with EN ISO 9409-1, for direct connection to the robots

Funktion schematic



Terms

Recommended handling weight:	guide value, when dimensioning, the authorised force and moment loads must be observed
Locking stroke:	distance covered autonomously by the loose part when locking
Joining force:	force that must be applied by robot when joining fix part and loose part
Release force:	force that must be applied by robot whenreleasing fix part and loose part
Cycle:	distance covered by the fixed component piston in the locking and unlocking movement
Maintenance:	maintenance free (please see the owner’s manual for conditions, download unter www.sommer-automatic.com)

Model

F:	Fix part, for robot side assembly
L:	Loose part, for tool side assembly

Order no.	Connecting flange after EN ISO 9409-1	Recommended handling weight	Height in locked position	Energy transfer pneumatic
HWR80F/HWR80L	TK80	50 kg	45 mm	6x

1, 2, 3 easy changed



Start - Home position locked



1 - Locking lever unlocked

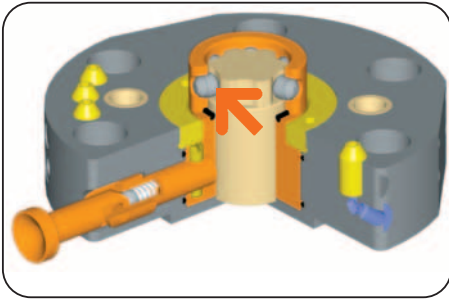


2 - Mechanism unlocked



3 - tool Changer decoupling

Manual Tool **Changer** for Robots



Locking mechanics

Possitive connection between locking bolts and clamping sleeve

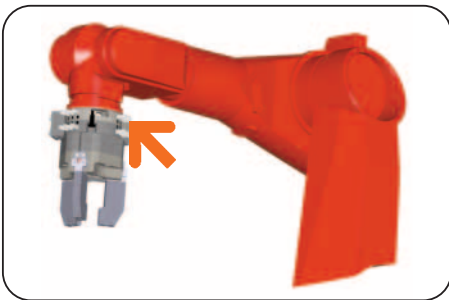
- High force and torque load
- High handling weight



Locking lever

Spring return, completely sunk into the housing

- No additional interference contours
- Easiest handling



Connecting flange for Roboter

Partial circuit produced in accordance with EN ISO 9409-1

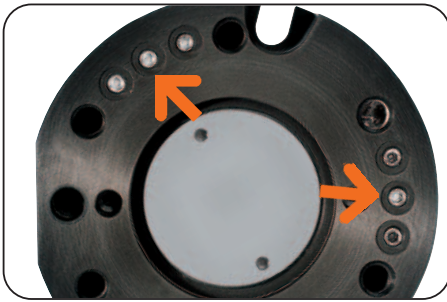
- Direct, without adapter plate, mountable on the robot flange
- Products with same EN ISO flange can be combined and exchanged
- Low design effort



Integrated air feed-through

Up to 6 separate energy feed-through possible

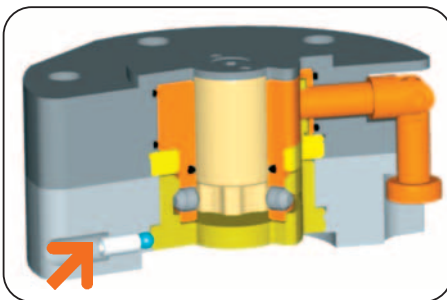
- Vacuum suitable
- Minimisation of interference contours



Hoseless pneumatic connection

Up to 6 separate energy feed-through possible

- Connection to DVR80 possible



Loose part alignment

To be carried out by the customer

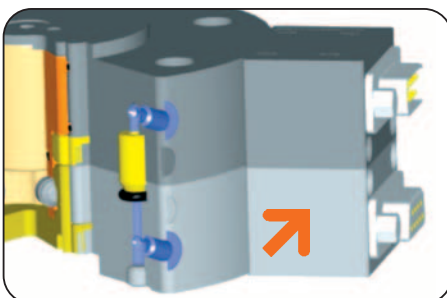
- Play free adjustment of locking via clamping sleeve
- Follow-up alignment possible for operating wear



Centring pins

Hardened steel pins with 30° angle

- Force-free coupling and uncoupling
- Non-rotation safety
- Adjustable



Energy elements

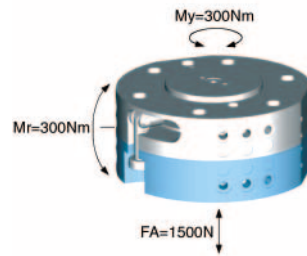
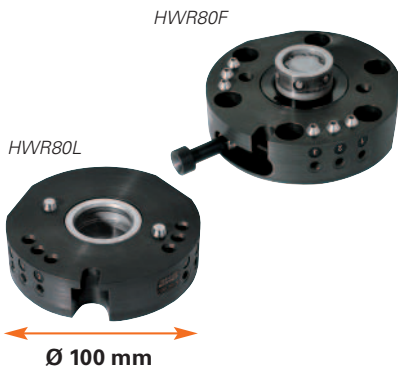
For hydraulic and electrical energy transfer

- Standardised and packaged
- Short set up time for maintenance work
- Custom-specifically modifiable, e.g. with an identification system
- Available as accessory

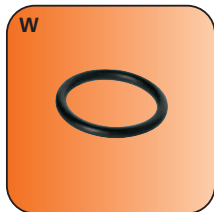
Manual Tool **Changer** for Robots

Forces and Moments

Max. allowable static forces and moments



Included in the delivery



O-Ring
Order No. COR0040150

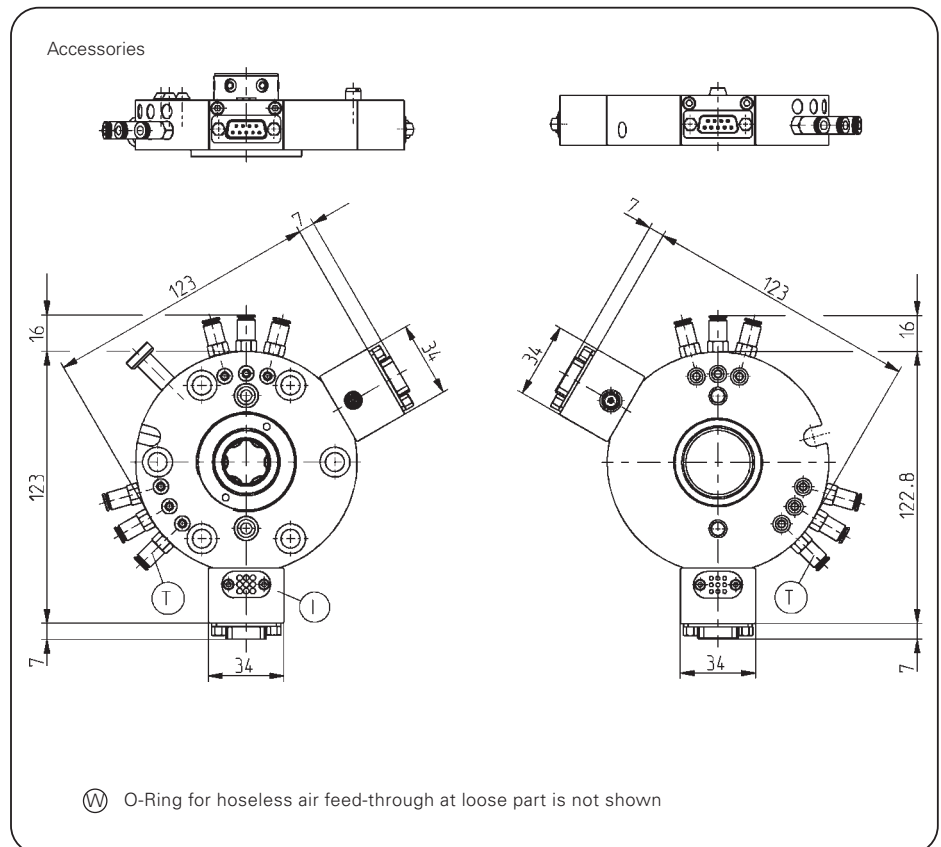
Accessory list



Pneumatic fittings
Order No. GVM5



Energy elements
Order No. NJ8-E2S



Subject to change without prior notice

Order No.:	HWR80F	HWR80L
Connecting flange:	TK80 after EN ISO 9409-1	TK80 after EN ISO 9409-1
Recommended handling weight [kg]:	50	-
Pneumatic energy transfer*:	6x	6x
Electrical/hydraulic energy transfer**:	optional	optional
Self limitation when locking:	mechanical	mechanical
Locking stroke [mm]:	1	-
Repetition accuracy in Z [mm]:	0,01	0,01
Repetition accuracy in X, Y [mm]:	0,02	0,02
Joining force [N]:	-	-
Release force [N]:	-	-
Min./max. operating pressure [bar]:	4/10	4/10
Min./max. operating temperature [°C]:	5/80	5/80
Air volume per cycle [cm³]:	-	-
Moment of inertia [kg/cm³]:	3,36	2,8
Weight [g]:	660	480

All data's measured at 6 bar

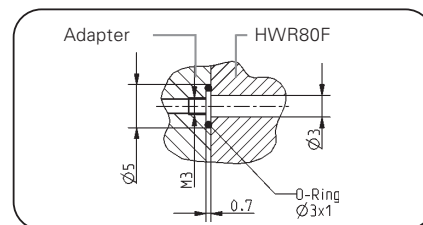
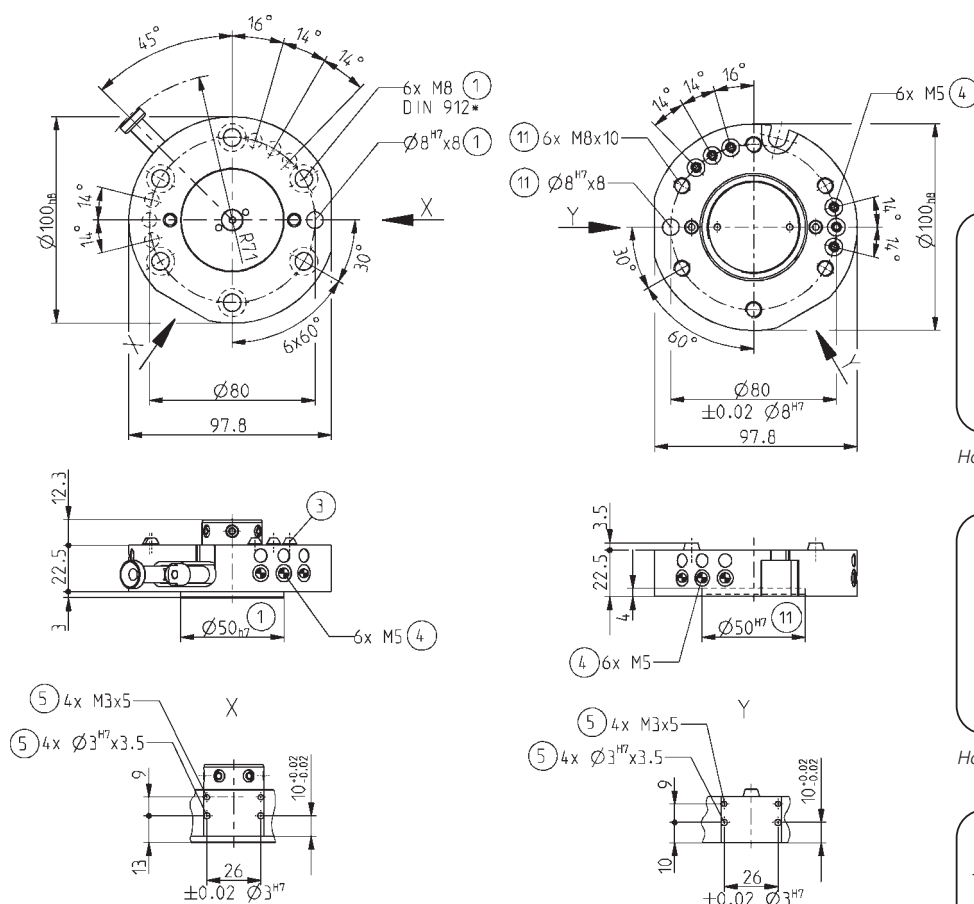
** see page 32

* vacuum possible at energy transmission pneumatic

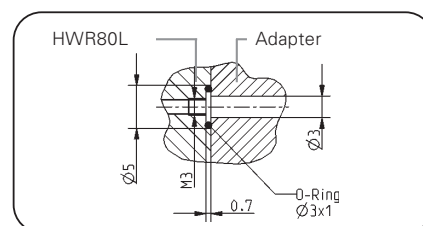
HWR80

- ① Fixing machine side
- ③ Air transfer
- ④ Integrated air feed-through
- ⑤ Fixing energy element
- ⑪ Fixing tool side

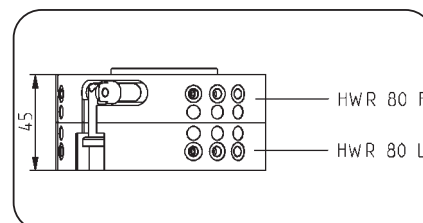
* equivalent to DIN EN ISO 4762



Hoseless air connection (robot side)



Hoseless air connection (tool side)

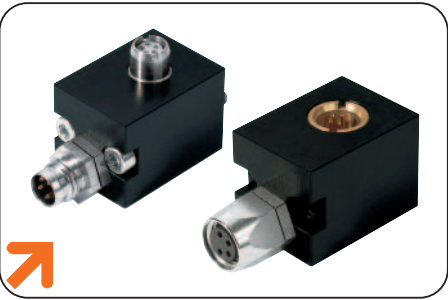




height in locked position

Subject to change without prior notice

Energy *elements*





suitable for WWR40 and WWR50



electrical	Order No.	WER02 FS04	WER02 LS04
	Suitable for:	fix part	loose part
	Connecting category:	RST	RST
	Electrical connection:	RST	RST
	Number of contact pins:	4	4
	Nominal power [A]:	4	4
	Operating voltage AC [V]:	60	60
	Operating voltage DC [V] *:	75	75
	Weight [g]:	30	30
	Pin assignment:		
		male	female

suitable for WWR63/WWR80/HWR80



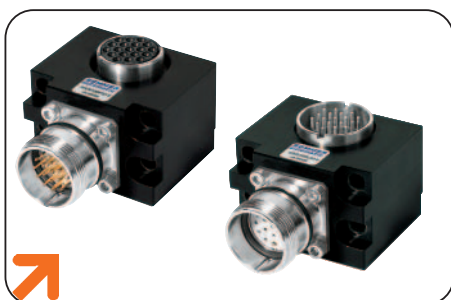
electrical	Order no.	WER03 FS04	WER03 LS04	WER03 FF09	WER03 LF09
	Suitable for:	fix part	loose part	fix part	loose part
	Connecting category:	RST	RST	FST	FST
	Electrical connection:	RST	RST	Sub-D	Sub-D
	Number of contact pins:	4	4	9	9
	Nominal current [A]:	4	4	5	5
	Operating voltage AC [V]:	60	60	230	230
	Operating voltage DC [V] *:	75	75	250	250
	Weight [g]:	60	60	60	60
	Pin assignment:				
		male	female	male	female

* indicated for user grounding, 60V without grounding

FST = flat connector
RST = round connector

Subject to change without prior notice

suitable for WWR100



electrical

Order no.	WER04 FL06	WER04 LL06	WER04 FS19	WER04 LS19	WER04 FF18	WER04 LF18
Suitable for:	fix part	loose part	fix part	loose part	fix part	loose part
Connecting category:	RST	RST	RST	RST	FST	FST
Electrical connection:	RST	RST	RST	RST	RST	RST
Number of contact pins:	5+PE	5+PE	19	19	18	18
Nominal current [A]:	15	15	5	5	6	6
Operating voltage AC [V] *:	600	600	150	150	150	150
Weight [g]:	200	200	200	200	200	200
Pin assignment:						



fluid

Order no.	WER04 FH1	WER04 LH1	WER04 FH2	WER04 LH2
Suitable for:	fix part	losse part	fix part	loose part
Number of fluid couplings:	1	1	2	2
Max. operating pressure [bar] **:	300	300	300	300
Max. coupling pressure [bar] ***:15	15	15	15	
Weight [g]:	200	200	350	350

Order no.	WER04 FH1D	WER04 LH1D	WER04 FH2D	WER04 LH2D
Suitable for:	fix part	losse part	fix part	loose part
Number of fluid couplings:	1	1	2	2
Max. operating pressure [bar] **:	300	300	300	300
Max. coupling pressure [bar] ***:300	300	300	300	300
Weight [g]:	200	200	350	350

* indicated for user grounding, 60V without grounding

** from approx. 50 bar at H1 and approx. 100 bar at H2, there must be a external support of the WER!

*** attend coupling force, see diagram page 35

FST = flat connector
RST = round connector

Subject to change without prior notice

Energy *elements*

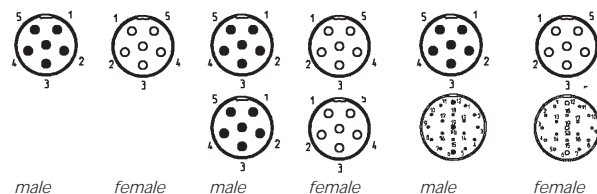
suitable for WWR125 und WWR160



electrical

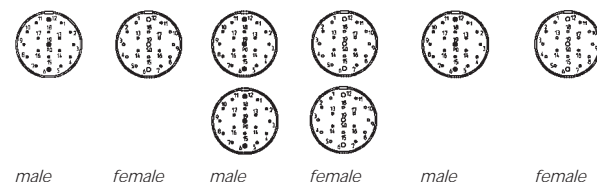
Order no.	WER05 FL06	WER05 LL06	WER05 FL06L06	WER05 LL06L06	WER05 FL06S19	WER05 LL06S19
Suitable for:	fix part	loose part	fix part	loose part	fix part	loose part
Connecting category:	RST	RST	RST	RST	RST	RST
Electrical connection:	RST	RST	RST	RST	RST	RST
Number of contact pins:	5+PE	5+PE	5+PE/5+PE	5+PE/5+PE	5+PE/19	5+PE/19
Nominal current [A]:	15	15	15/15	15/15	15/6	15/6
Operating voltage AC [V] *:	600	600	600/600	600/600	600/150	600/150
Weight [g]:	300	300	310	310	310	310

Pin assignment:



Order no.	WER05 FS19	WER05 LS19	WER05 FS19S19	WER05 LS19S19	WER05 FF19	WER05 LF19
Suitable for:	fix part	loose part	fix part	loose part	fix part	loose part
Connecting category:	RST	RST	RST	RST	FST	FST
Electrical connection:	RST	RST	RST	RST	RST	RST
Number of contact pins:	19	19	19/19	19/19	19	19
Nominal current [A]:	6	6	6/6	6/6	6	6
Operating voltage AC [V] *:	150	150	150/150	150/150	150	150
Weight [g]:	300	300	310	310	300	300

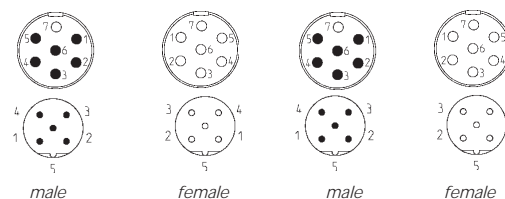
Pin assignment:



BUS-Transfer

Order no.	WER05 FPB	WER05 LPB	WER05 FDB	WER05 LDB
Suitable for:	fix part	loose part	fix part	loose part
BUS-ART:	Profibus	Profibus	Device Net	Device Net
Connecting category:	RST	RST	RST	RST
Electrical connection:	RST	RST	RST	RST
Number of contact pins:	6	6	6	6
Nominal current [A]:	6	6	6	6
Operating voltage AC [V] *:	250	250	250	250
Weight [g]:	300	300	300	300

Pin assignment:



fluid



Order no.	WER05 FH2	WER05 LH2	WER05 FH2D	WER05 LH2D
Suitable for:	fix part	loose part	fix part	loose part
Connecting category:	2	2	2	2
Max. operating pressure [bar] **:	300	300	300	300
Max. coupling pressure [bar] ***:15	15	300	300	300
Weight [g]:	300	300	300	300

* indicated for user grounding, 60V without grounding

** from approx. 50 bar at H1 and approx. 100 bar at H2, there must be a external support of the WER!

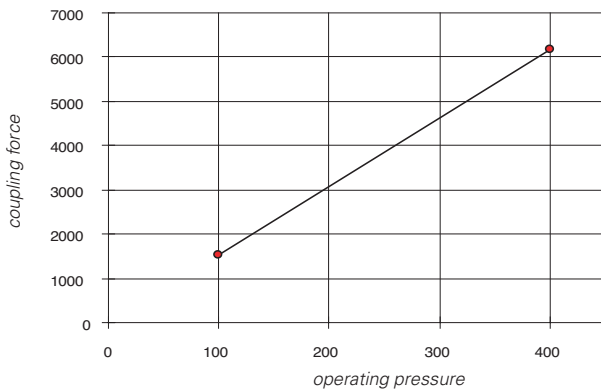
*** attend coupling force, see diagram page 35

FST = flat connector
RST = round connector

Subject to change without prior notice

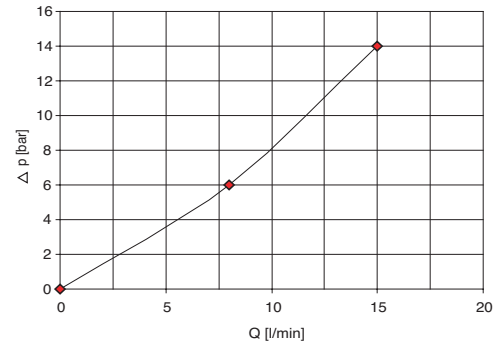
Coupling force-diagramm

shows the needed force to join the coupling (H1), against the pressure



Flow-restrictor-diagramm

show the drag Δp against the flow rate Q



values determined at tests at 20°C with HP22

Circular connector



Straight fix part:
Order no.
RSTVLM23G**06**B
RSTVSM23G**12**B
RSTVSM23G**19**B

Straight loose part:
Order no.
RSTVLM23G**06**S
RSTVSM23G**12**S
RSTVSM23G**19**S



Angle fix part:
Order no.
RSTVLM23W**06**B
RSTVSM23W**12**B
RSTVSM23W**19**B

Angle loose part:
Order no.
RSTVLM23W**06**S
RSTVSM23W**12**S
RSTVSM23W**19**S

Subject to change without prior notice



*Rotary **Distributor***

pneumatic



DVR-Series

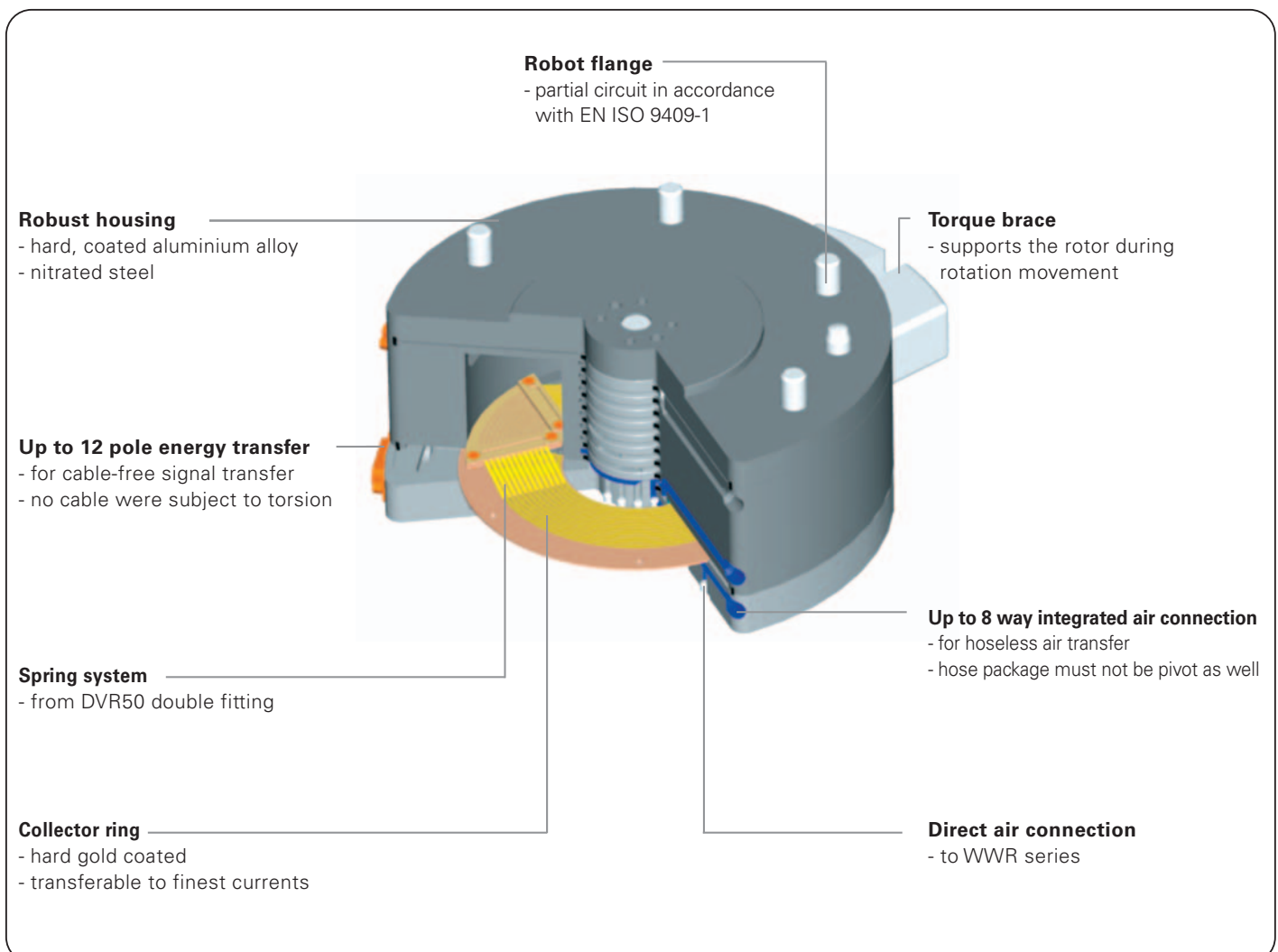
SOMMER
automatic

Rotary *Distributor* for Robots

➤ Highlights

- High transfer rate up to 250 Volts at 6 Amperes per track
- Small starting torque and continuous torque
- BUS signal transfer possible
- Partial circuit produced in accordance with EN ISO 9409-1, for direct connection to the robots
- Up to 10 Mio. rotations maintenance free, possible due to hard gold/gold plated contact transfer
- Extremely flat design
- High torque intake

Functional diagram



Terms

Recommended handling weight:

Constant torque:

Loose torque:

Maintenance:

from dimensioning, the authorised force and moment loads must be observed
resistance generated by the sliding friction during the rotation movement within the rotor distributor

resistance generated by the static friction within the rotor distributor when starting

maintenance free up to 10 Mio. revolutions
(please see the owner's manual for conditions,
download from www.sommer-automatic.com)

- long maintenance intervals keep costs down
- long durability

Model

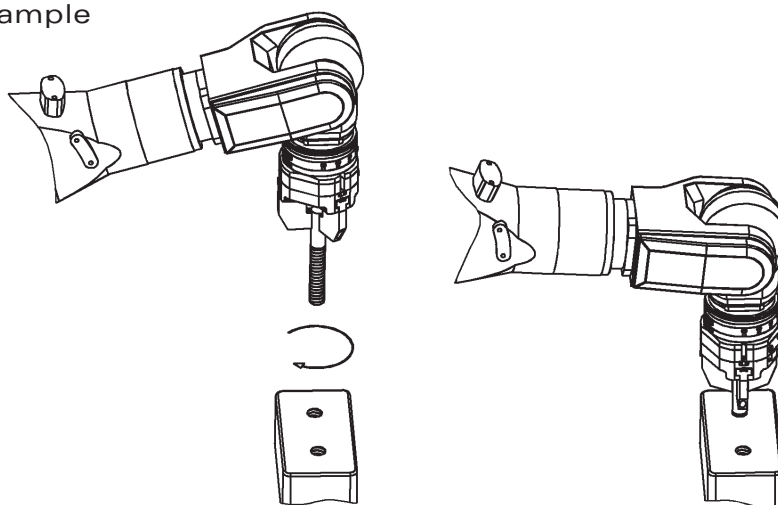
I4: Integrated 4 way hoseless pneumatic feed-through

I6: Integrated 6 way hoseless pneumatic feed-through

I8: Integrated 8 way hoseless pneumatic feed-through

Order no.	Connecting flange after EN ISO 9409-1	Recommended handlings weight	Height	Energy transfer pneumatic	Energy transfer elektrical
DVR40I4	TK40	15 kg	38 mm	4x	4x
DVR50I4	TK50	15 kg	38 mm	4x	4x
DVR63I6	TK63	50 kg	53 mm	6x	6x
DVR80I6	TK80	50 kg	53 mm	6x	6x
DVR100I4	TK100	90 kg	58 mm	4x	8x
DVR100I8	TK100	90 kg	82 mm	8x	8x
DVR125I4	TK125	200 kg	58 mm	4x	12x
DVR125I8	TK125	200 kg	82 mm	8x	12x
DVR160I4	TK160	200 kg	58 mm	4x	12x
DVR160I8	TK160	200 kg	82 mm	8x	12x

application example



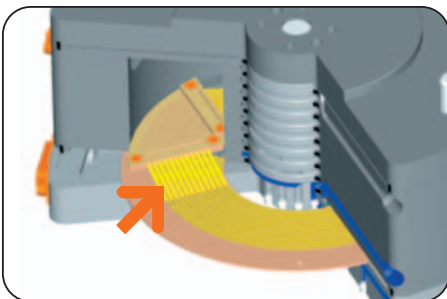
Rotary **Distributor** for Robots



Electrical transfer

Up to 12 signals transferable

- BUS transfer possible
- Standardised connections



Transfer system

Mirror finish polished and special hard gold plated rims and spring system with gold contacts

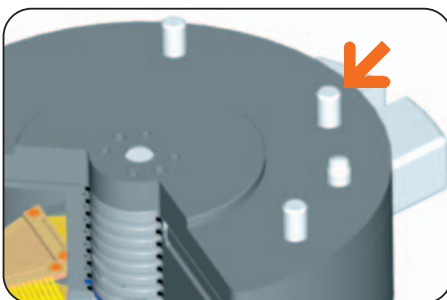
- Highest contact quality, from DVR 50 double fitting spring system
- Performance and signal transfer possible
- Very high durability up to 10 mio. rotations



Torque brace

intake of built up torque

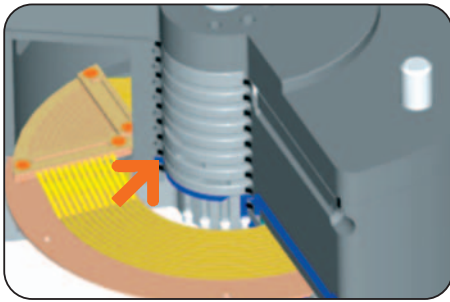
- Easiest integration in the application
- Low design effort



Connecting flange for Roboter

Partial circuit produced in accordance with EN ISO 9409-1

- Direct, without adapter plate, mountable on the robot flange
- Products with same EN ISO flange can be combined and exchanged
- Low design effort



Air transfer

Up to 8 pneumatic feed-through

- Energy supply of robot application
- Vacuum suitable
- Hoseless air supply possible
- Low friction, durable rotation seal sets

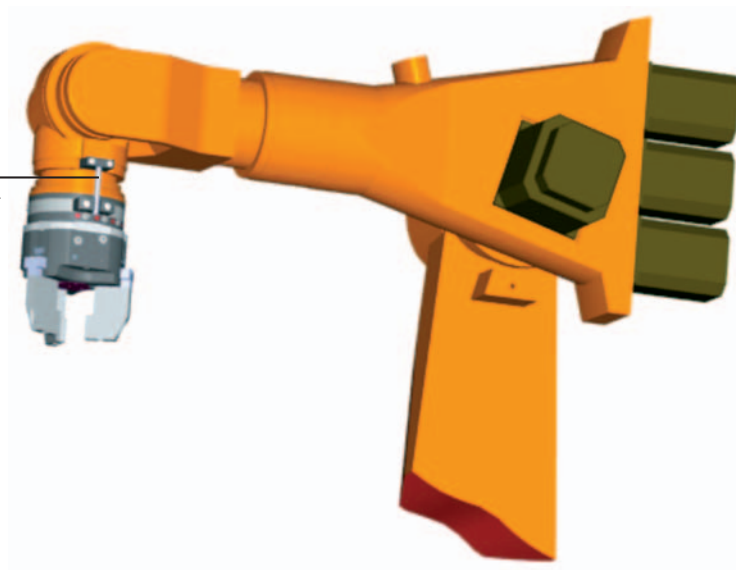


Housing

- Low design height allows optimum exploitation of robot torque loading
- Cost saving by lowest robot influence on handling weight

application example

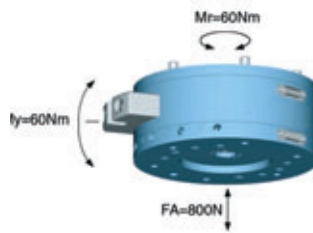
Torque brace
- Produced by the customer



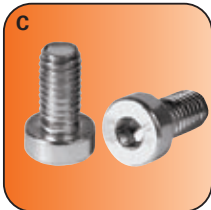
Rotary **Distributor** for Robots

Forces and Moments

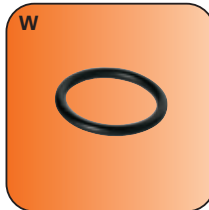
Max. allowable static forces and moments



Included in the delivery



Screw
Order no. C7984060129



O-Ring
Order no. COR0020100

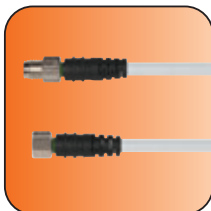
Accessory list



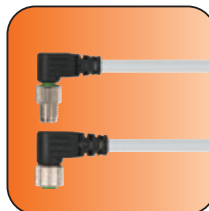
Pneumatic fittings
Order no. GVM5



Pneumatic fittings
Order no. WVM5



Cable straight plug 4-pole
Order no. KAG300B (F)
Order no. KAG300S (L)



Cable angled plug 4-pole
Order no. KAW300B (F)
Order no. KAW300S (L)

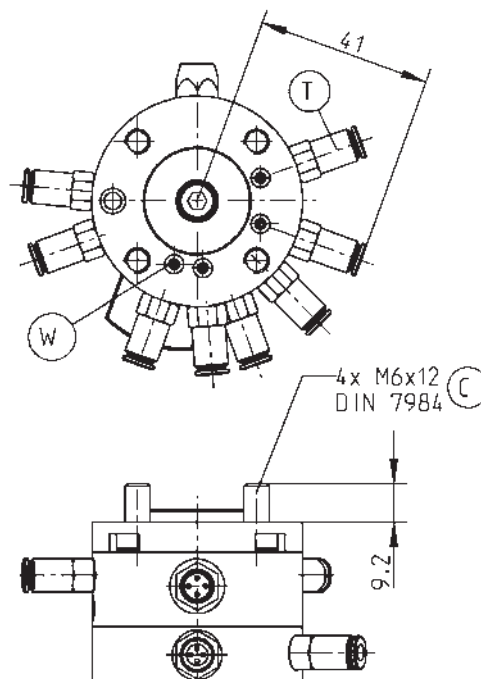


Plug, 4-pole
Order no. S8-G-4
Order no. B8-G-4



Angle plug, 4-pole
Order no. S8-W-4
Order no. B8-W-4

Accessories



Subject to change without prior notice

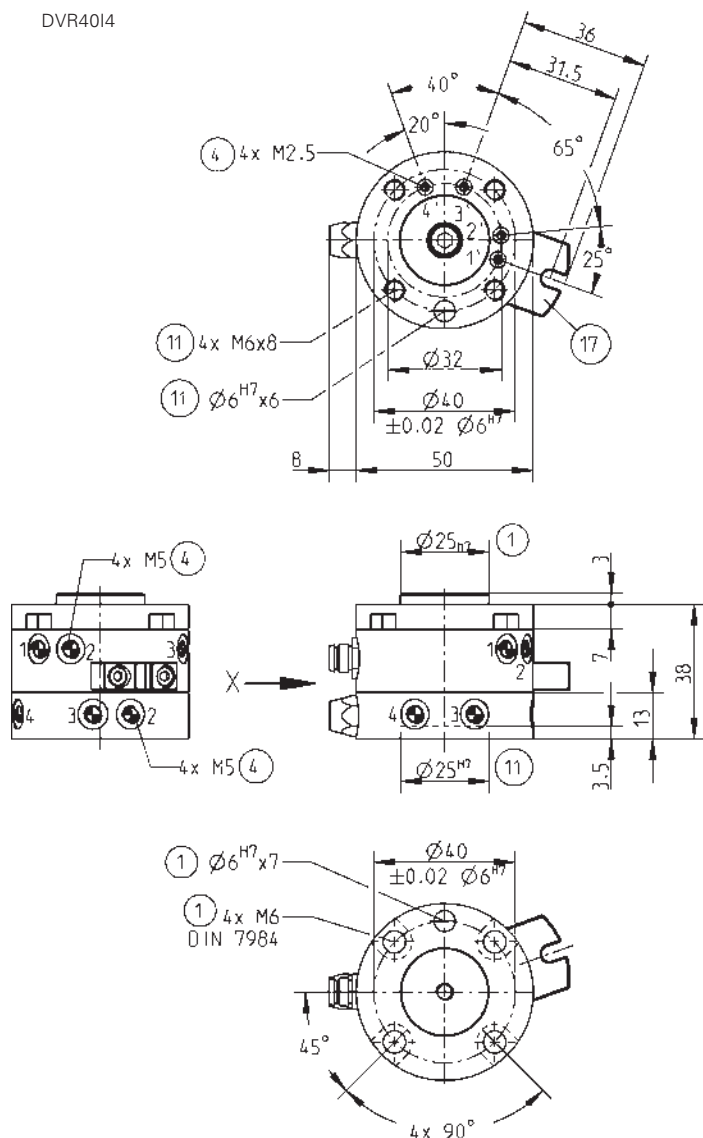
Order no.:
DVR40I4

Connecting flange:	TK40 after EN ISO 9409-1
Building height [mm]:	3
Recommended handling weight [kg]:	15
Pneumatic energy transfer*:	4x
Electrical energy transfer:	4-pole
Max. current [A]:	3
Max. voltage [V]:	24
Maximum acceleration [m/s ²]:	22
Maximum speed [U/min.] / [°/s]:	120/720
Radial run out ± [mm]:	0.02
Axial run out ± [mm]:	0.02
Constant torque [Nm]:	<1.0
Loose torque [Nm]:	<1.5
Max. operating pressure [bar]:	10
Min./max. operating temperature [°C]:	5/80
Moment of inertia [kg/cm ²]:	0.7
Protection class:	IP 40
Weight [g]:	200

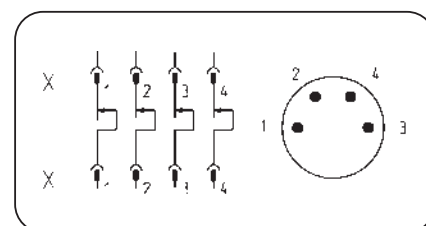
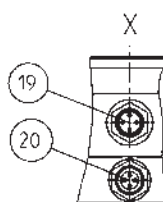
All data measured at 6 bar

* Vacuum suitable

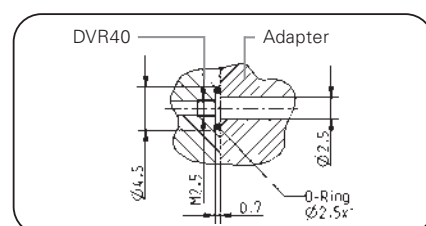
DVR40I4



- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side



PIN-assignment



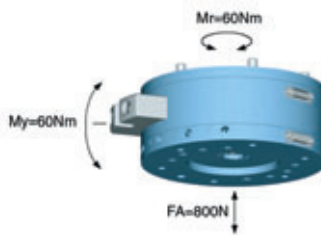
Hoseless air connection (tool side)

Subject to change without prior notice

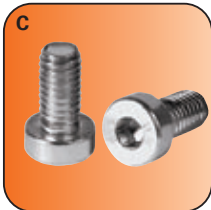
Rotary **Distributor** for Robots

Forces and Moments

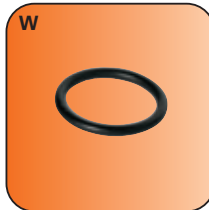
Max. allowable static forces and moments



Included in the delivery



Screw
Order no. C7984060129



O-Ring
Order no. COR0020100

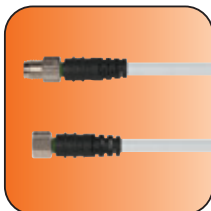
Accessory list



Pneumatic fittings
Order no. GVM5



Pneumatic fittings
Order no. WVM5



Cable straight plug 4-pole
Order no. KAG300B (F)
Order no. KAG300S (L)



Cable angled plug 4-pole
Order no. KAW300B (F)
Order no. KAW300S (L)

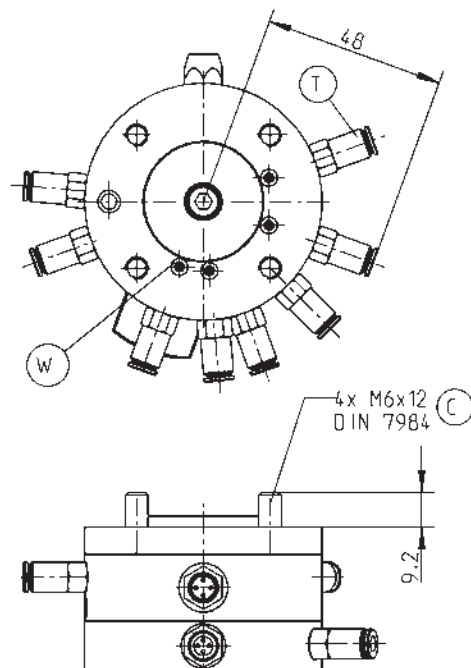


Plug, 4-pole
Nr. de com. S8-G-4
Nr. de com. B8-G-4



Angle plug, 4-pole
Nr. de com. S8-W-4
Nr. de com. B8-W-4

Accessories



Subject to change without prior notice

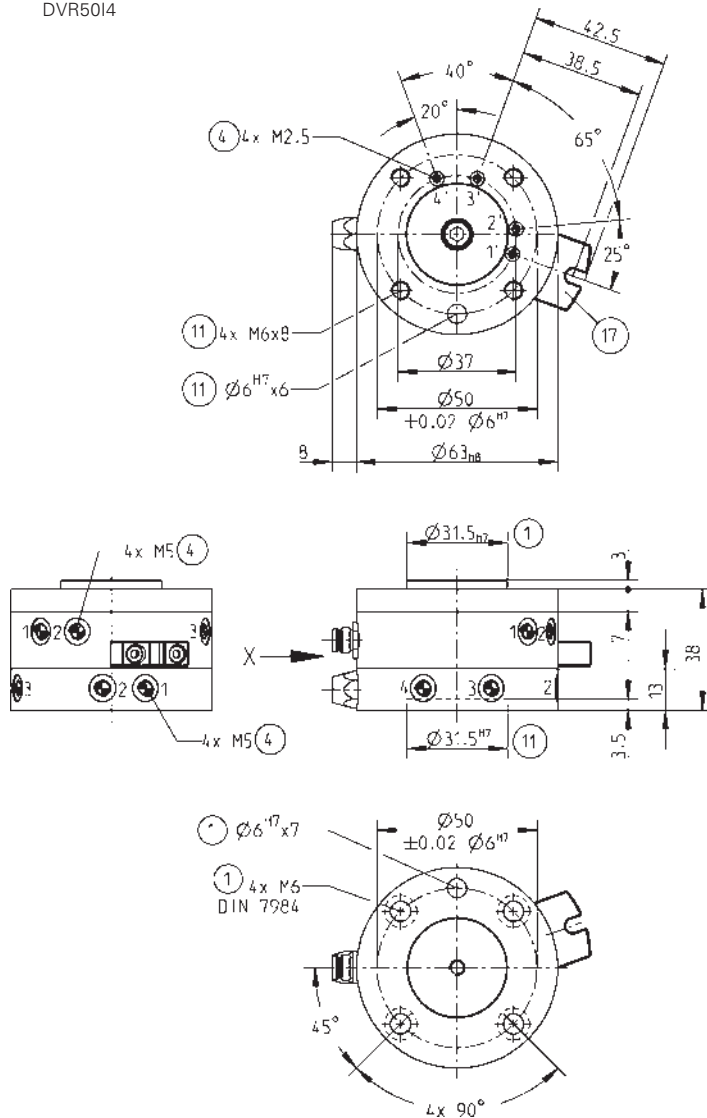
Order no.:
DVR5014

Connecting flange:	TK50 after EN ISO 9409-1
Building height [mm]:	38
Recommended handling weight [kg]:	15
Pneumatic energy transfer:	4x
Electrical energy transfer:	4-pole
Max. current [A]:	3
Max. voltage [V]:	24
Maximum acceleration [m/s ²]:	22
Maximum speed [U/min.] / [°/s]:	120/720
Radial run out ± [mm]:	0.02
Axial run out ± [mm]:	0.02
Constant torque [Nm]:	<1,0
Loose torque [Nm]:	<1,5
Max. operating pressure [bar]*:	10
Min./max. operating temperature [°C]:	5/80
Moment of inertia [kg/cm ²]:	8.1
Protection class:	IP 40
Weight [g]:	600

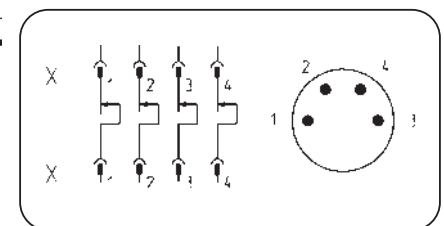
All data measured at 6 bar

* Vacuum suitable

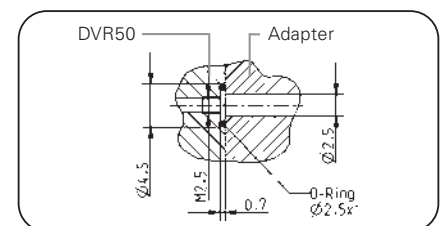
DVR5014



- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side



PIN-assignment



Hoseless air connection (tool side)

Subject to change without prior notice

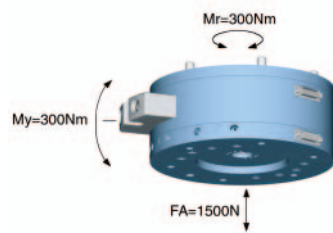
Rotary **Distributor** for Robots

Forces and Moments

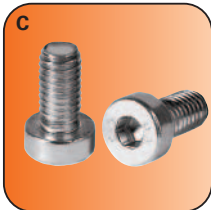
Max. allowable static forces and moments



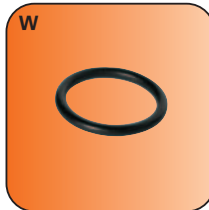
Ø 80 mm



Included in the delivery



Screw
Order no. C7984060129



O-Ring
Order no. COR0020100

Accessory list

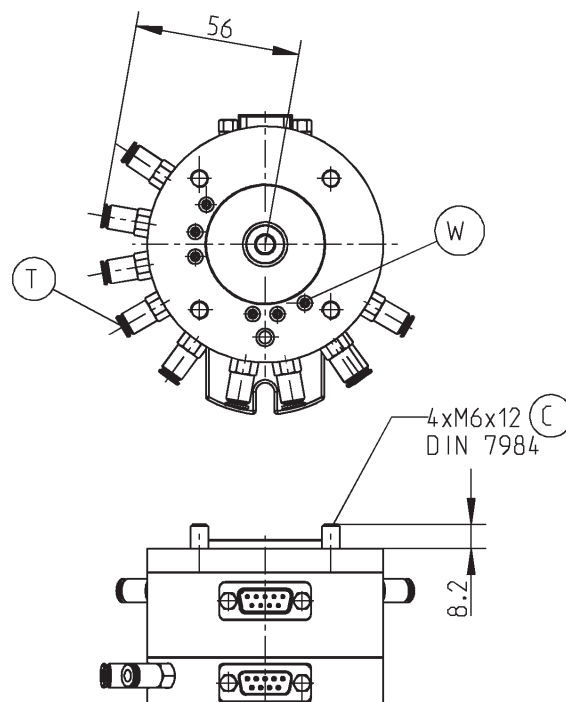


Pneumatic fittings
Order no. GVM5



Pneumatic fittings
Order no. WVM5

Accessories



Subject to change without prior notice

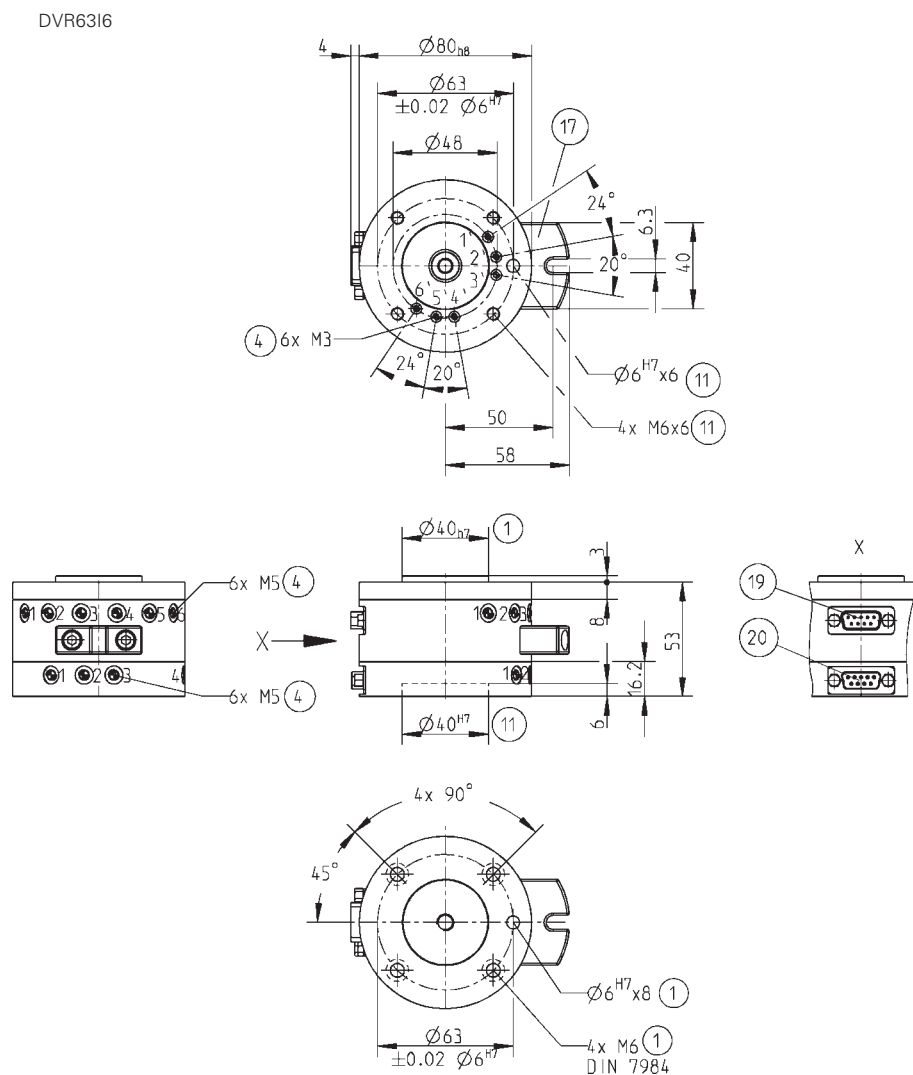
DVR63I6

Connecting flange:	TK63 after EN ISO 9409-1
Building height [mm]:	53
Recommended handling weight [kg]:	50
Pneumatic energy transfer:	6x
Electrical energy transfer:	6-pole
Max. current [A]:	6
Max. voltage [V]:	250
Maximum acceleration [m/s ²]:	22
Maximum speed [U/min.] / [°/s]:	120/720
Radial run out ± [mm]:	0,03
Axial run out ± [mm]:	0,03
Constant torque [Nm]:	2,0
Loose torque [Nm]:	3,0
Max. operating pressure [bar]*:	10
Min./max. operating temperature [°C]:	5/80
Moment of inertia [kg/cm ²]:	10,5
Protection class:	IP 64
Weight [kg]:	1,2

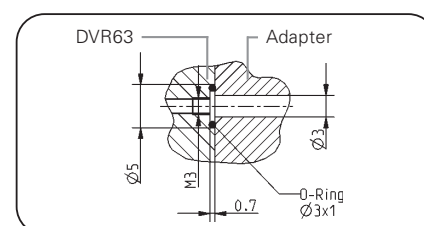
All data measured at 6 bar

* Vacuum suitable

- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side



PIN-assignment



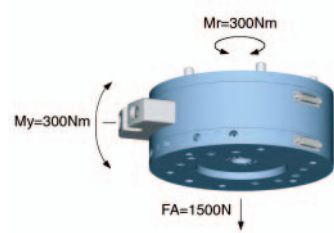
Hoseless air connection (tool side)

Subject to change without prior notice

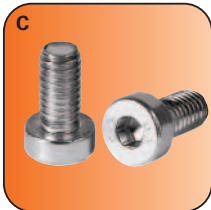
Rotary **Distributor** for Robots

Forces and Moments

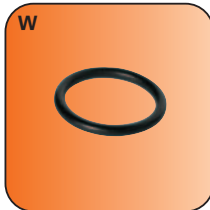
Max. allowable static forces and moments



Included in the delivery



Screw
Order no. C7984080169



O-Ring
Order no. COR0020100

Accessory list

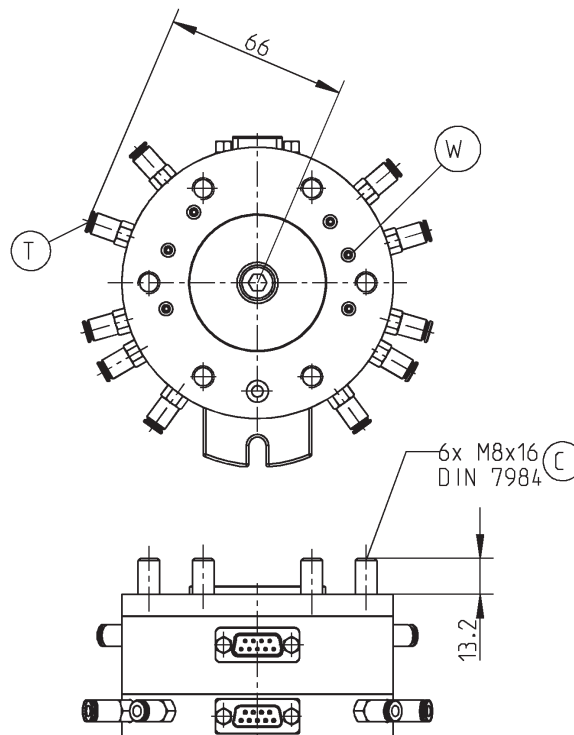


Pneumatic fittings
Order no. GVM5



Pneumatic fittings
Order no. WVM5

Accessories



Subject to change without prior notice

DVR80I6

* Vacuum suitable

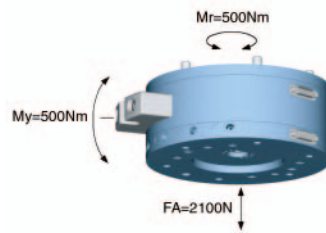


49

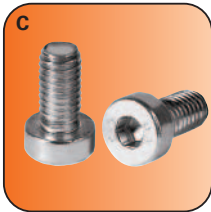
Rotary **Distributor** for Robots

Forces and Moments

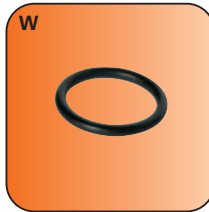
Max. allowable static forces and moments



Included in the delivery



Screw
Order no. C0912080169



O-Ring
Order no. COR0020100

Accessory list

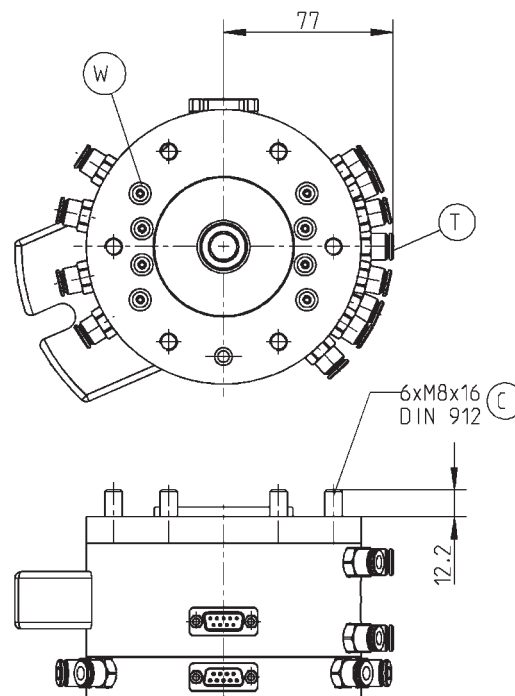


Pneumatic fittings
Order no. GV1/8x6



Pneumatic fittings
Order no. WV1/8x6

Accessories



Ⓜ O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

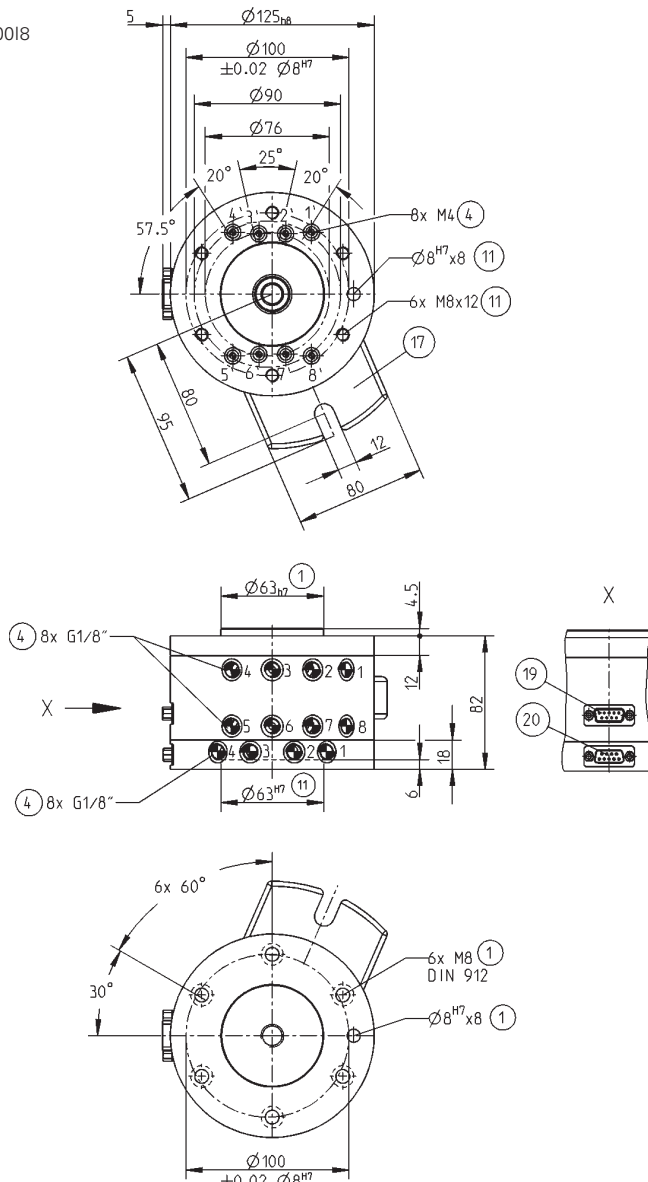
Order no.:

	DVR100i4	DVR100i8
Connecting flange:	TK100 after EN ISO 9409-1	TK100 after EN ISO 9409-1
Building height [mm]:	58	82
Recommended handling weight [kg]:	90	90
Pneumatic energy transfer:	4x	8x
Electrical energy transfer:	8-pole	8-pole
Max. current [A]:	6	6
Max. voltage [V]:	250	250
Maximum acceleration [m/s ²]:	20	20
Maximum speed [U/min.] / [°/s]:	100/600	100/600
Radial run out ± [mm]:	0,04	0,04
Axial run out ± [mm]:	0,04	0,04
Constant torque [Nm]:	2,0	4,0
Loose torque [Nm]:	4,0	6,0
Max. operating pressure [bar]*:	10	10
Min./max. operating temperature [°C]:	5/80	5/80
Moment of inertia [kg/cm ²]:	86	100
Protection class:	IP 64	IP 64
Weight [kg]:	3,8	4,5

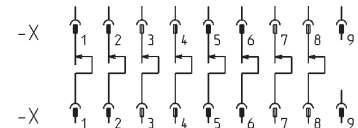
All data measured at 6 bar

* Vacuum suitable

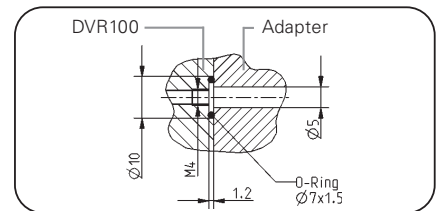
DVR100i8



- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side

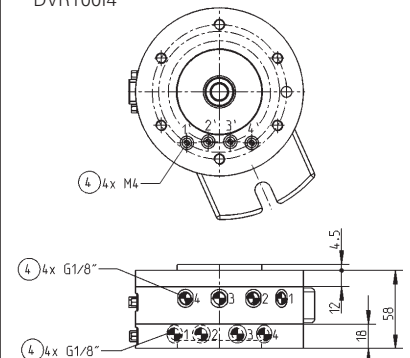


PIN-assignment



Hoseless air connection (tool side)

DVR100i4

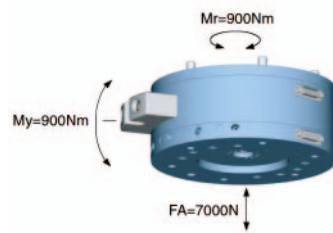


Subject to change without prior notice

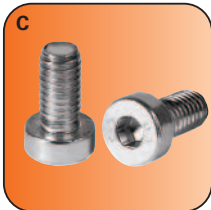
Rotary **Distributor** for Robots

Forces and Moments

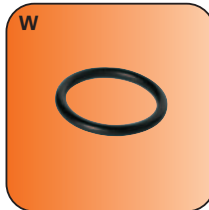
Max. allowable static forces and moments



Included in the delivery



Screw
Order no. C7984100209



O-Ring
Order no. COR0020100

Accessory list

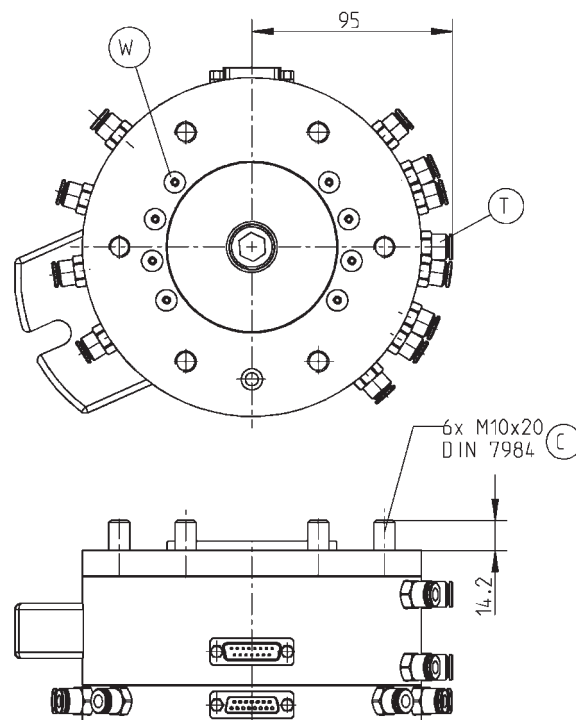


Pneumatic fittings
Order no. GV1/8x6



Pneumatic fittings
Order no. WV1/8x6

Accessories



(W) O-Ring for hoseless air feed-through at loose part is not shown

Subject to change without prior notice

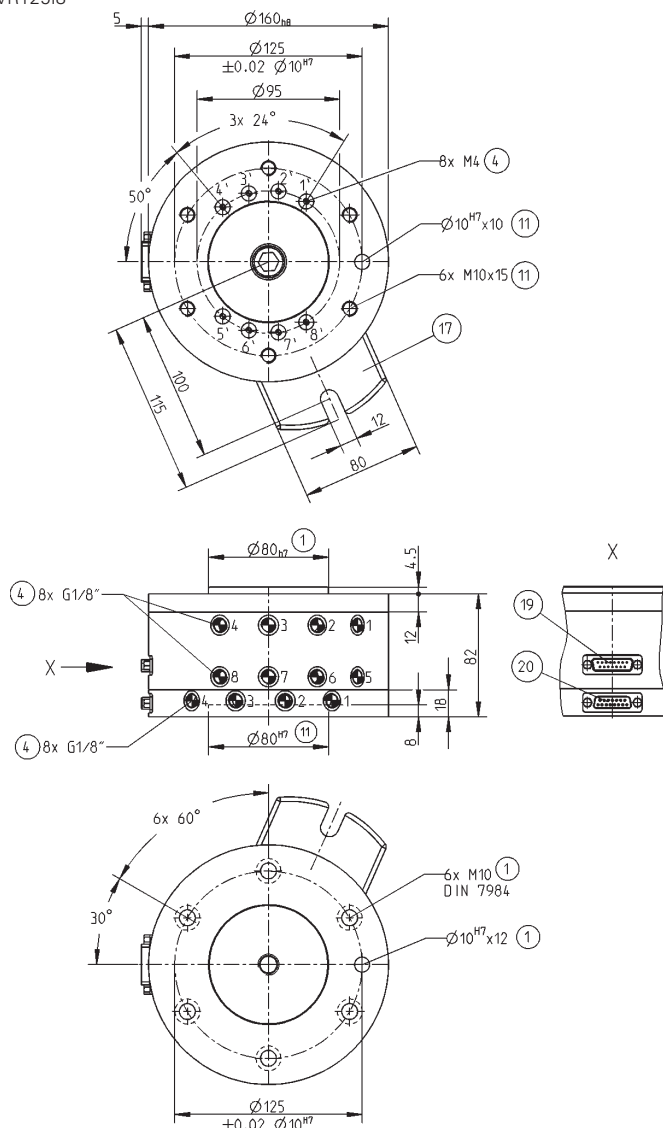


Order no.:	DVR125I4	DVR125I8
Connecting flange:	TK125 after EN ISO 9409-1	TK125 after EN ISO 9409-1
Building height [mm]:	58	82
Recommended handling weight [kg]:	200	200
Pneumatic energy transfer:	4x	8x
Electrical energy transfer:	12-pole	12-pole
Max. current [A]:	6	6
Max. voltage [V]:	250	250
Maximum acceleration [m/s ²]:	20	20
Maximum speed [U/min.] / [°/s]:	100/600	100/600
Radial run out ± [mm]:	0,05	0,05
Axial run out ± [mm]:	0,05	0,05
Constant torque [Nm]:	4,0	5,0
Loose torque [Nm]:	5,0	6,0
Max. operating pressure [bar]*:	10	10
Min./max. operating temperature [°C]:	5/80	5/80
Moment of inertia [kg/cm ²]:	220	225
Protection class:	IP 64	IP 64
Weight [kg]:	5,9	7,0

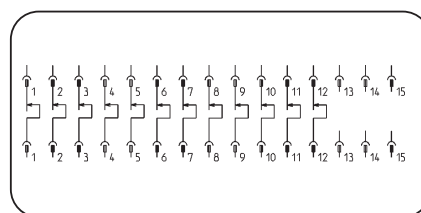
All data measured at 6 bar

* Vacuum suitable

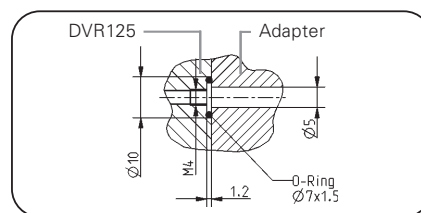
DVR125I8



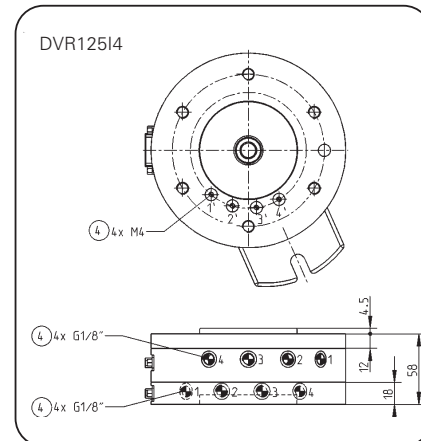
- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side



PIN-assignment



Hoseless air connection (tool side)

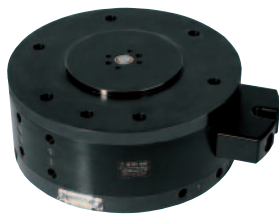


Subject to change without prior notice

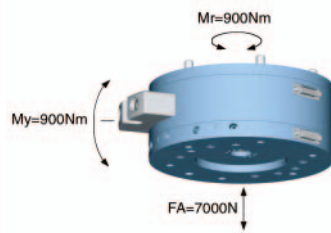
Rotary **Distributor** for Robots

Forces and Moments

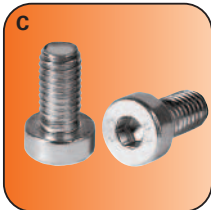
Max. allowable static forces and moments



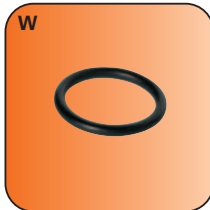
Ø 200 mm



Included in the delivery



Screw
Order no. C7984100209



O-Ring
Order no. COR0020100

Accessory list

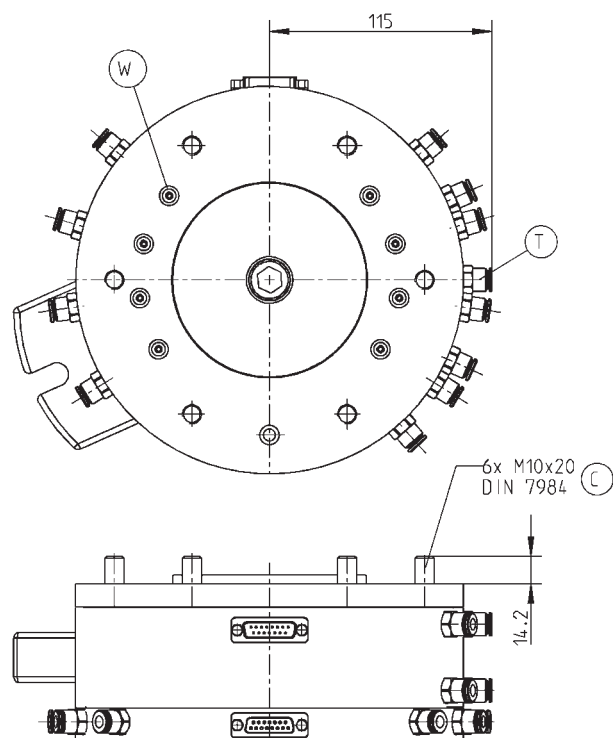


Pneumatic fittings
Order no. GV1/8x6



Pneumatic fittings
Order no. WV1/8x6

Accessories



(W) O-Ring for hoseless air feed-through at loose part is not shown

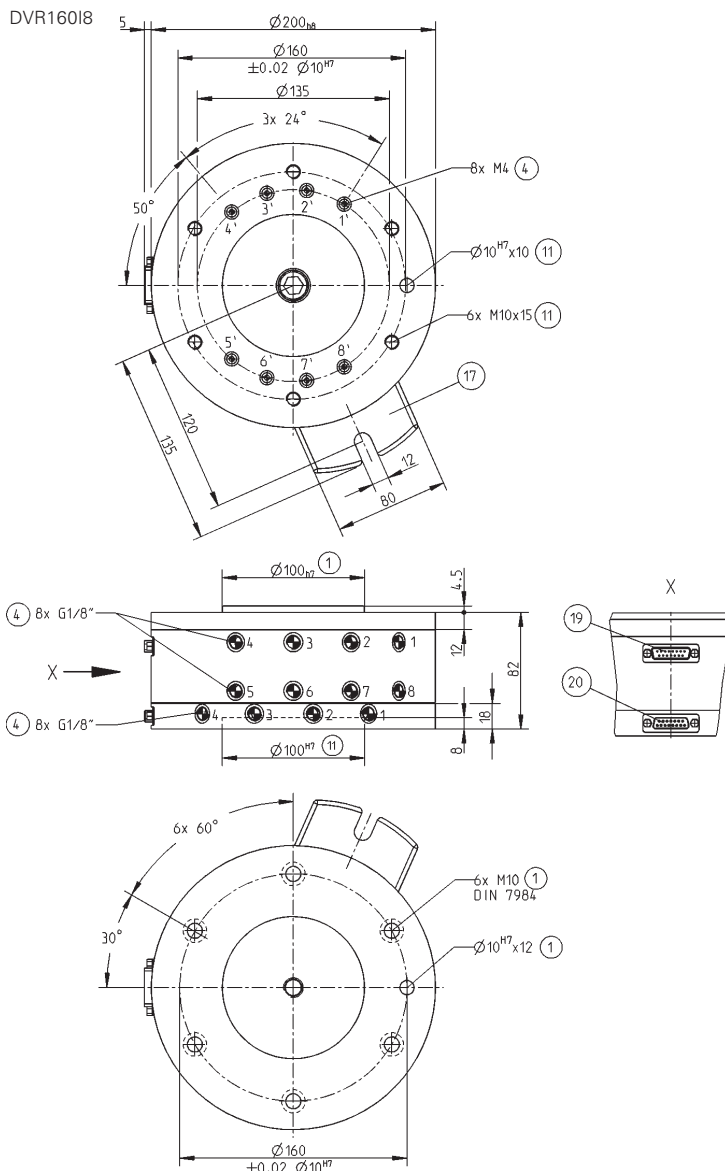
Subject to change without prior notice



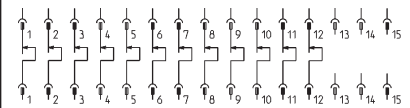
Order no.:	DVR160I4	DVR160I8
Connecting flange:	TK160 after EN ISO 9409-1	TK160 after EN ISO 9409-1
Building height [mm]:	58	82
Recommended handling weight [kg]:	200	200
Pneumatic energy transfer:	4x	8x
Electrical energy transfer:	12-pole	12-pole
Max. current [A]:	6	6
Max. voltage [V]:	250	250
Maximum acceleration [m/s ²]:	20	20
Maximum speed [U/min.] / [°/s]:	100/600	100/600
Radial run out ± [mm]:	0,05	0,05
Axial run out ± [mm]:	0,05	0,05
Constant torque [Nm]:	4,0	5,0
Loose torque [Nm]:	5,0	6,0
Max. operating pressure [bar]*:	10	10
Min./max. operating temperature [°C]:	5/80	5/80
Moment of inertia [kg/cm ²]:	480	580
Protection class:	IP 64	IP 64
Weight [kg]:	9,1	11

All data measured at 6 bar

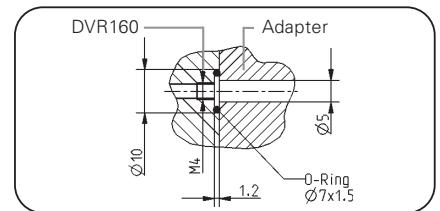
* Vacuum suitable



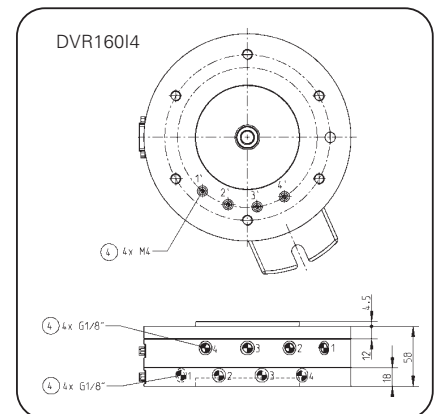
- ① Fixing machine side
- ④ Integrated air connection
- ⑪ Fixing tool side
- ⑰ Torque brace
- ⑲ Electrical energy transfer machine side
- ⑳ Electrical energy transfer tool side



PIN-assignment



Hoseless air connection (tool side)



Subject to change without prior notice



Axial Compensation Modules

pneumatic



AR-Series

SOMMER
automatic

Axial Compensation Modules

➤ Highlights

- Compensation in the X,Y,Z direction and radial about the Z axis
- Large central hole for cable and hose feed-through, on AR series
- Pneumatically lockable central position, on ARP series
- Partial circuit produced in accordance with EN ISO 9409-1, for direct connection to the robots
- Flat design

Functional diagram

ARP Axis compensation with integrated central locking

Robot connecting flange

- Partial circuit in accordance with EN ISO 9409-1

Guide bolt with disc

- Nitrated steel

Robust, lightweight housing

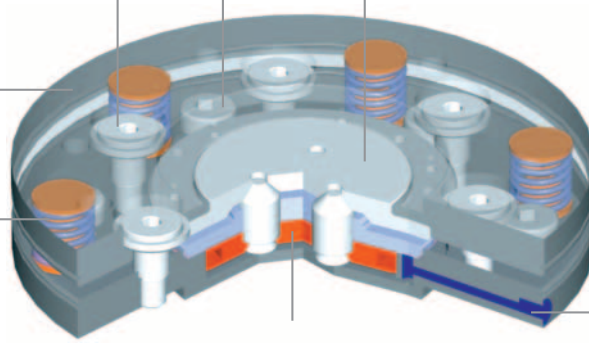
- Hard, coated aluminium alloy

Spring package

- From size 63, stronger one is available
- From size 100, 3 springs can be removed

Locking

- 3 locking pistons
- Nitrated steel



Locking drive

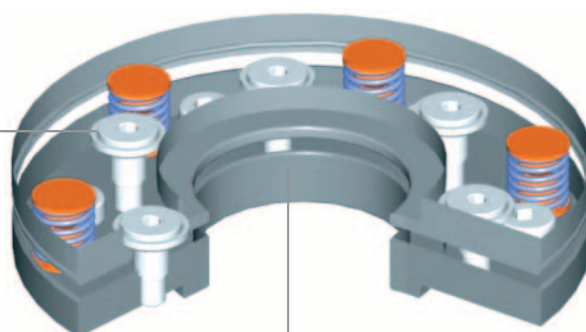
- Single effect pneumatic cylinder

Energy feed

AR identical design to ARP only without locking

Guide bolt with ball cup

- Nitrated steel



Extremely large central hole

- For cable and hose feed-through

Terms

Recommended handling weight: guide value, from dimensioning, the authorised force and moment loads must be observed

Horizontal displace force: force to be applied to reach stop

Vertical displace force: force to be applied to reach stop

Centring force when locking: Centrale retention force at 6 bar

Maintenance: maintenance free up to 5 Mio. deviationen
(please see the owner's manual for conditions,
download from www.sommer-automatic.com)

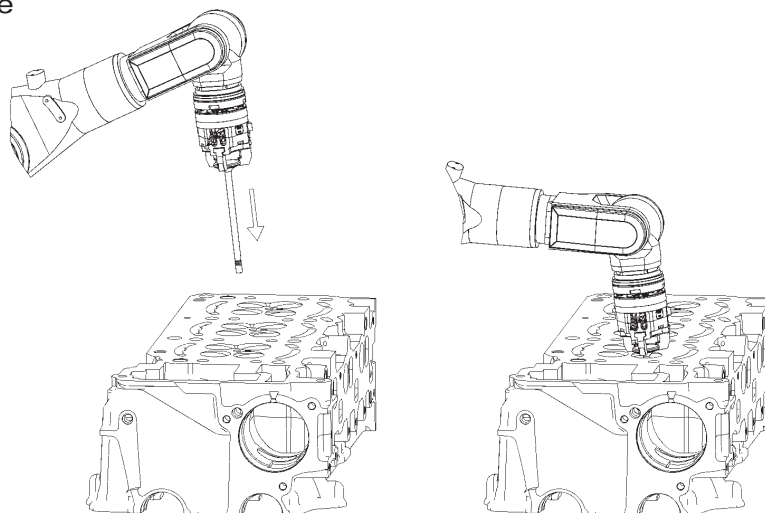
- long maintenance intervals keep costs down
- long durability

Model

P: Lockable centre via single effect cylinder

Order no.	Connecting flange nach EN ISO 9409-1	Recommended handling weight	Height
AR40	TK40	15 kg	21,5 mm
AR40P	TK40	15 kg	21,5 mm
AR50	TK50	15 kg	21,5 mm
AR50P	TK50	15 kg	21,5 mm
AR63	TK63	50 kg	24 mm
AR63P	TK63	50 kg	24 mm
AR80	TK80	50 kg	24 mm
AR80P	TK80	50 kg	24 mm
AR100	TK100	90 kg	26 mm
AR100P	TK100	90 kg	26 mm
AR125	TK125	200 kg	28 mm
AR125P	TK125	200 kg	28 mm
AR160	TK160	200 kg	28 mm
AR160P	TK160	200 kg	28 mm

application example



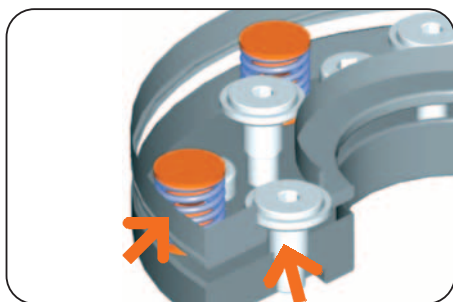
Axial *Compensation Modules*



Central bore AR

Up to Ø 60 mm

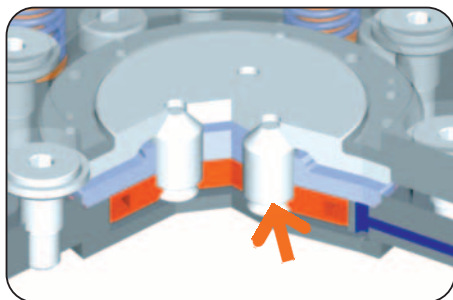
- For cable and hose feed-through
- Reduces interference contours



Compensation AR

Ball cup principle combined with spring package

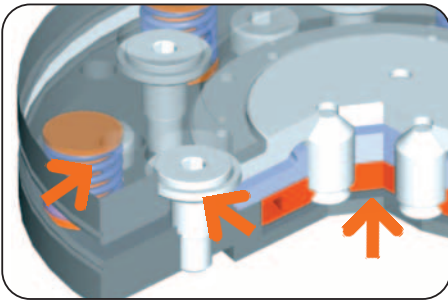
- X,Y,Z direction and radial about the Z axis
- From AR63 an additional, stronger spring package 2 is included
- From AR100 compensation can be sensitised by removing 3 springs



Locking drive ARP

Single effect pneumatic cylinder with spring return

- Centring force up to 1600 N
- Suitable at high speeds



Compensation ARP

Locking drive combined with spring package

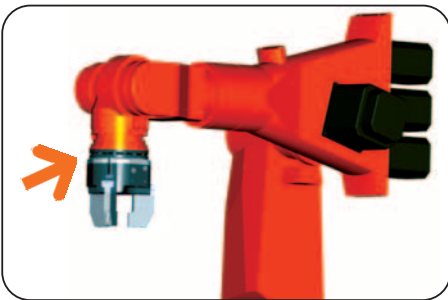
- X,Y,Z direction and radial about the Z axis
- From AR63 an additional, stronger spring package 2 is included
- From AR100P compensation can be sensitised by removing 3 springs



Housing

Flat design and weight optimised

- Design height allows optimum exploitation of robot torque loading
- Low own weight, thus higher extension load possible on robot
- Cost saving by lowest robot influence on handling weight



Connecting flange for Roboter

Partial circuit produced in accordance with EN ISO 9409-1

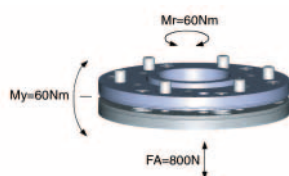
- Direct, without adapter plate, mountable on the robot flange
- Products with same EN ISO flange can be combined and exchanged
- Low design effort

Axial Compensation Modules

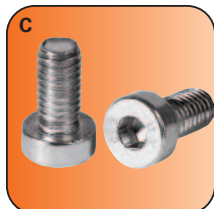


Forces and Moments

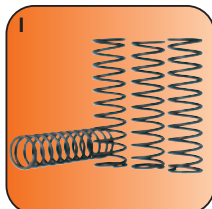
Max. allowable static and moments



Included in the delivery

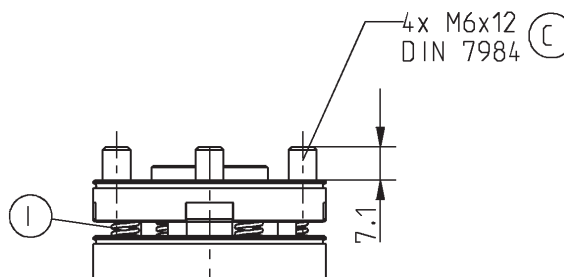


Screw
Order no. C7984060129



Spring package 1
(pre-assembled)
Order no. CFED11180

Accessories



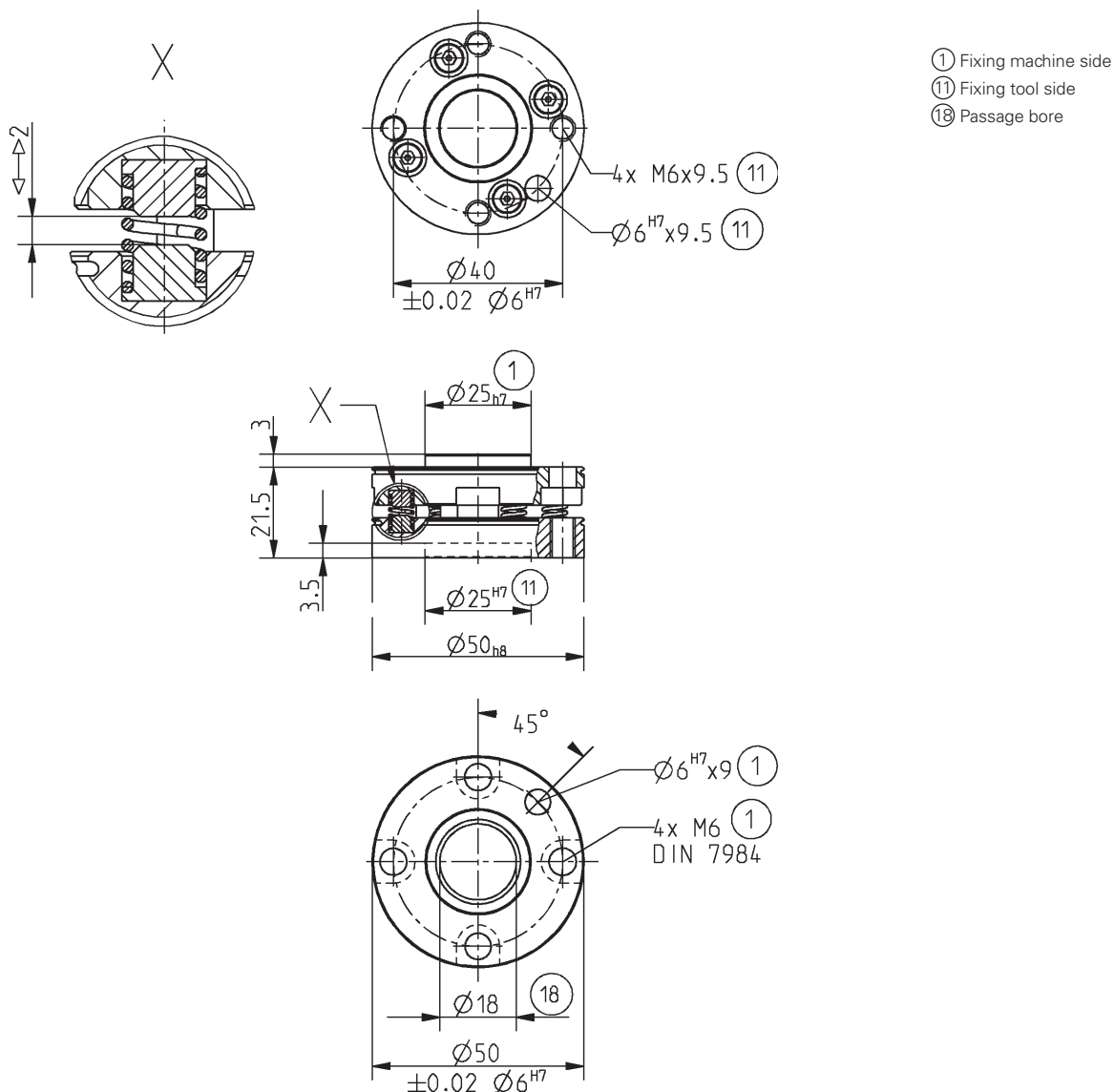
Subject to change without prior notice

Order no.:
AR40

Connecting flange:	TK40 after EN ISO 9409-1
Building height [mm]:	21,5
Recommended handling weight [kg]:	15
Horizontal deviation \pm [mm/°]:	2/1
Vertical deviation \pm [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	2
Twisting moment on stop M_r [Nm]:	2,5
Horizontal displace force to stop F_H [N]:	60
Vertical displace force to stop F_V [N]:	120
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Moment of inertia [kg/cm²]:	0,35
Weight [g]:	100

All data measured at 6 bar

AR40



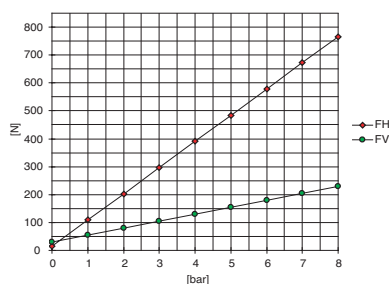
Subject to change without prior notice

Axial Compensation Modules



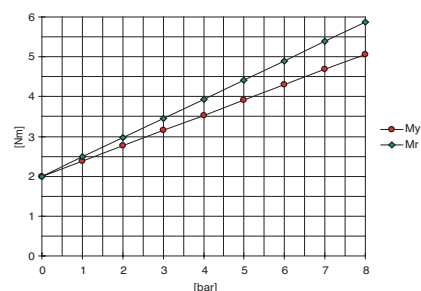
Spring package 1

Deviation force horizontal and vertical against the pressure



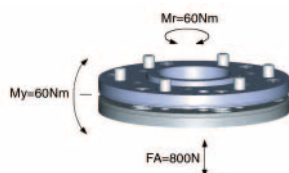
Spring package 1

Deviation moment axial and radial against the pressure

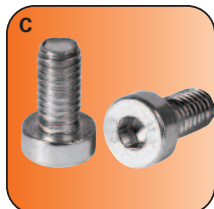


Forces and Moments

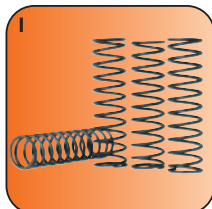
Max. allowable static and moments



Included in the delivery

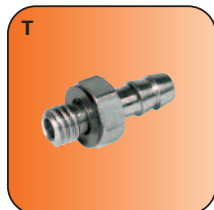


Screw
Order no. C7984060129



Spring package 1
(pre-assembled)
Order no. CFED11180

Accessory list

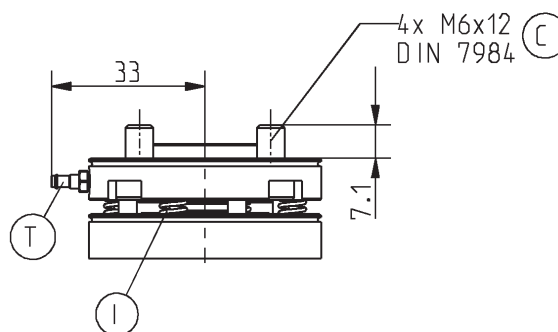


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories



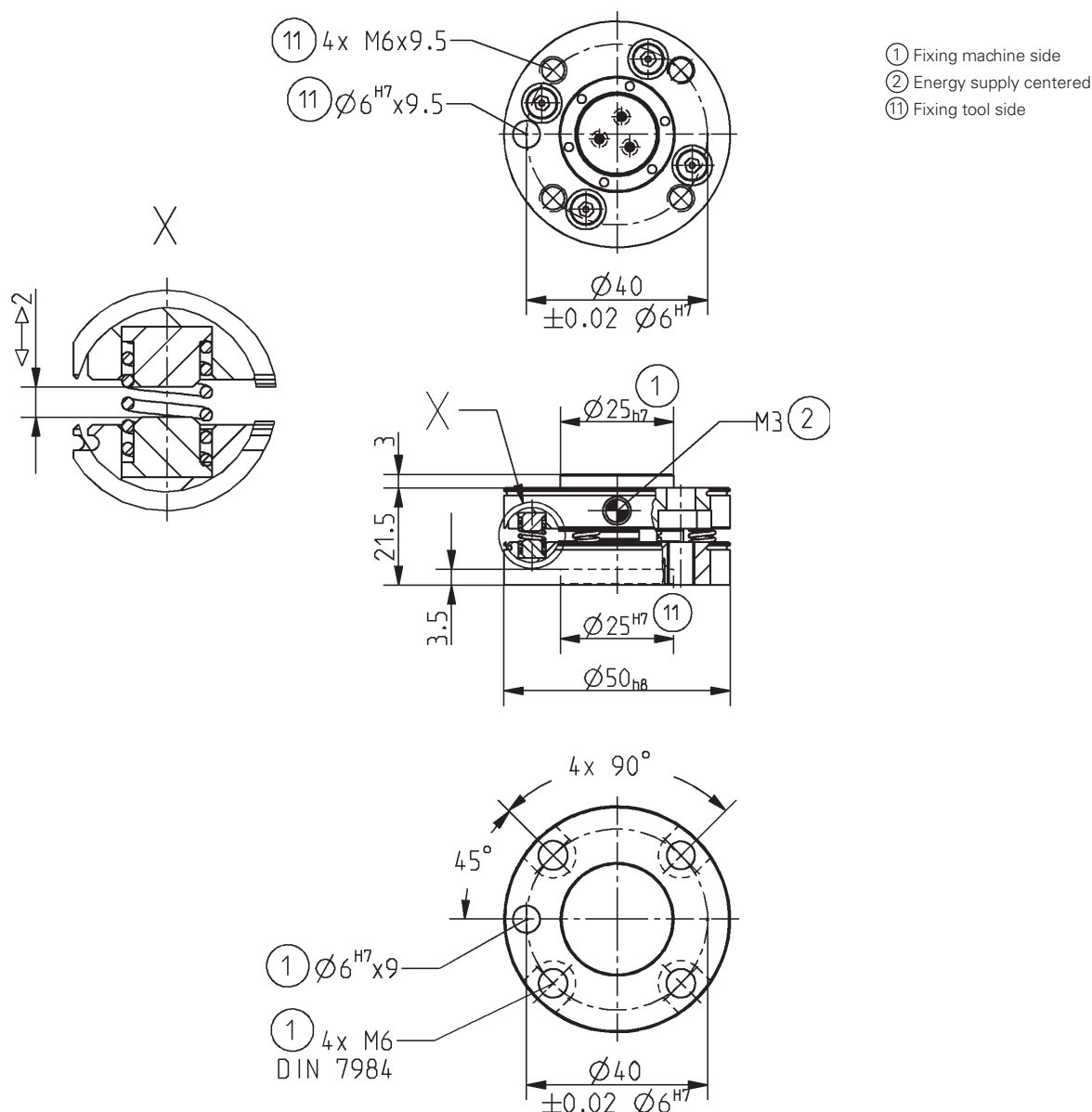
Subject to change without prior notice

**Order no.:****AR40P**

Connecting flange:	TK40 after EN ISO 9409-1
Building height [mm]:	21,5
Recommended handling weight [kg]:	15
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	see diagram
Twisting moment on stop M_r [Nm]:	see diagram
Horizontal displace force to stop F_H [N]:	see diagram
Vertical displace force to stop F_V [N]:	see diagram
Centring force when locking [N]:	170
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	2
Min./max. operating pressure [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Moment of inertia gesamt [kg/cm²]:	0,5
Weight [g]:	150

All data measured at 6 bar

AR40P



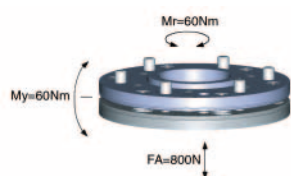
Subject to change without prior notice

Axial Compensation Modules

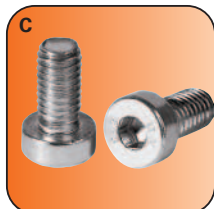


Forces and Moments

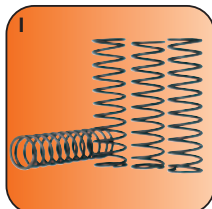
Max. allowable static and moments



Included in the delivery

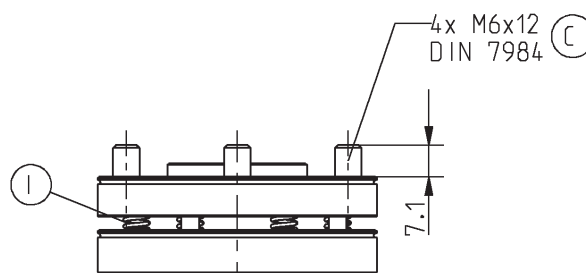


Screw
Order no. C7984060129



Spring package 1
(pre-assembled)
Order no. CFED11180

Accessories



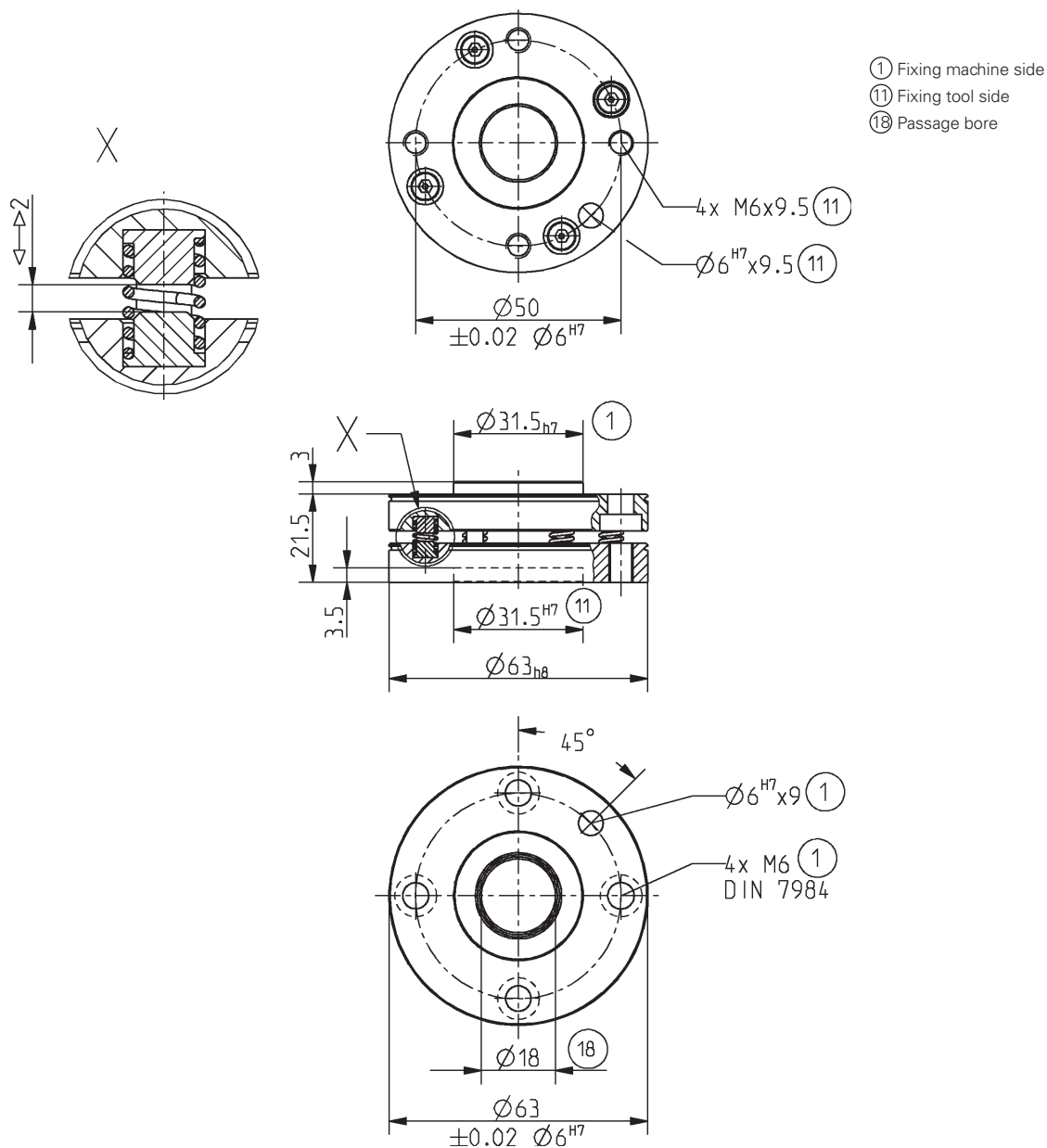
Subject to change without prior notice

Order no.:
AR50

Connecting flange:	TK50 after EN ISO 9409-1
Building height [mm]:	21,5
Recommended handling weight [kg]:	15
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	2,5
Twisting moment on stop M_r [Nm]:	2,5
Horizontal displace force to stop F_H [N]:	60
Vertical displace force to stop F_V [N]:	120
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	0,9
Weight [g]:	170

All data measured at 6 bar

AR50



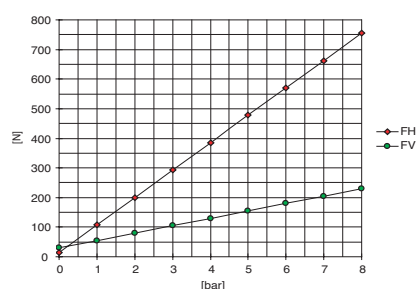
Subject to change without prior notice

Axial Compensation Modules



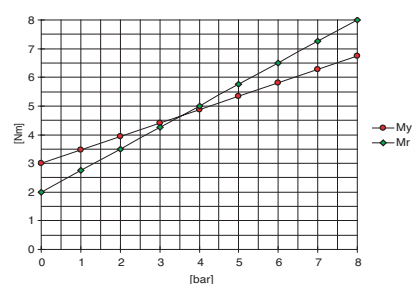
Spring package 1

Deviation force horizontal and vertical against the pressure



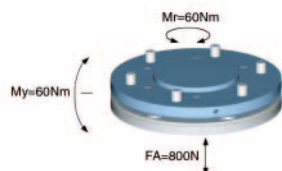
Spring package 1

Deviation moment axial and radial against the pressure

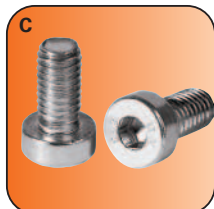


Forces and Moments

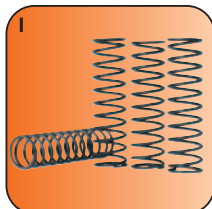
Max. allowable static and moments



Included in the delivery

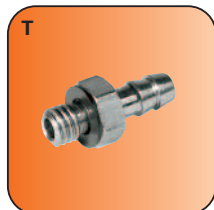


Screw
Order no. C7984060129



Spring package 2
(pre-assembled)
Order no. CFED11180

Accessory list

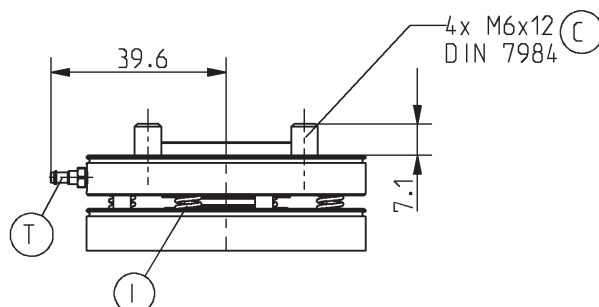


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories



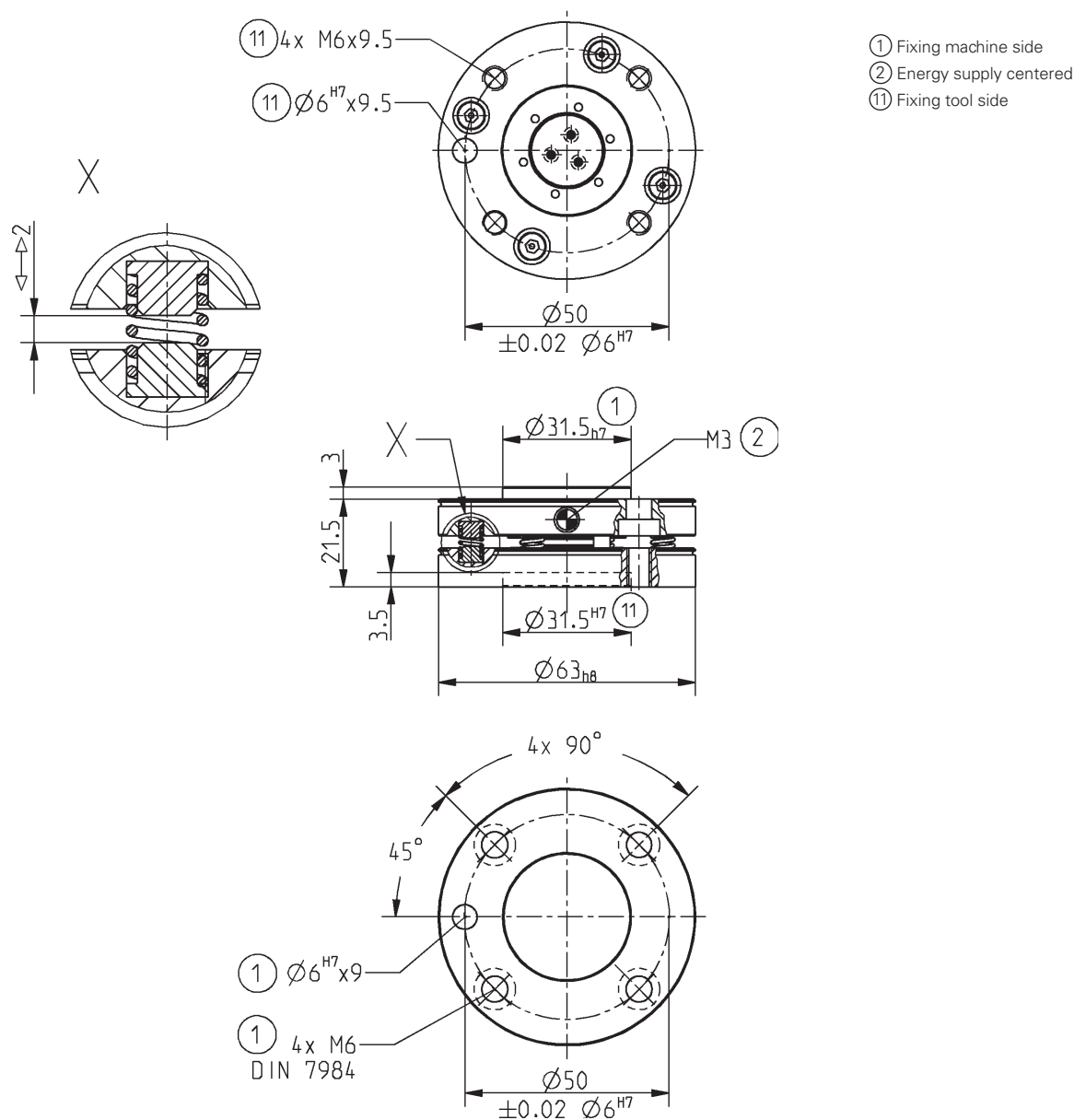
Subject to change without prior notice

**Order no.:****AR50P**

Connecting flange:	TK50 after EN ISO 9409-1
Building height [mm]:	21,5
Recommended handling weight [kg]:	15
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	see diagram
Twisting moment on stop M_r [Nm]:	see diagram
Horizontal displace force to stop F_H [N]:	see diagram
Vertical displace force to stop F_V [N]:	see diagram
Centring force when locking [N]:	170
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	2
Min./max. operating pressure [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	1,1
Weight [g]:	220

All data measured at 6 bar

AR50P



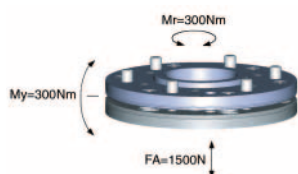
Subject to change without prior notice

Axial Compensation Modules

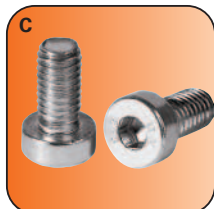


Forces and Moments

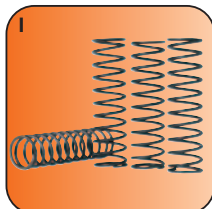
Max. allowable static and moments



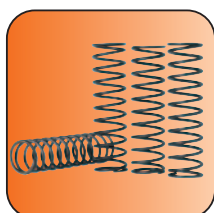
Included in the delivery



Screw
Order no. C7984060149

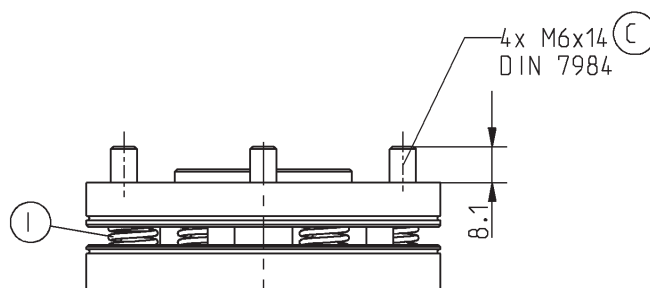


Spring package 1
(pre-assembled)
Order no. CFED63000



Spring package 2
Order no. CFED63010

Accessories



Subject to change without prior notice

Order no.:

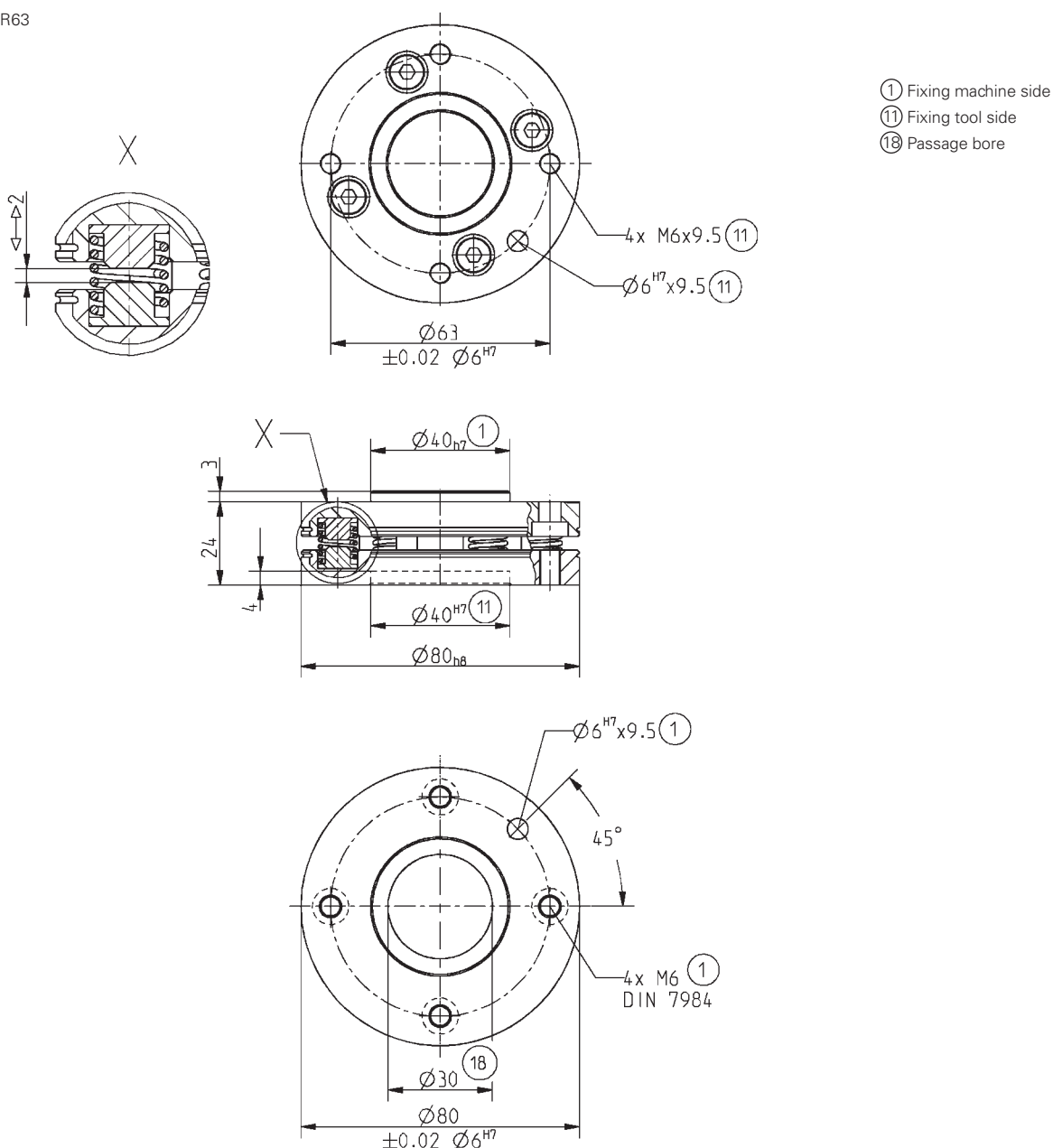
AR63

Connecting flange:	TK63 after EN ISO 9409-1
Building height [mm]:	24
Recommended handling weight [kg]:	50
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	5/8
Twisting moment on stop M_r [Nm]:	10/15
Horizontal displace force to stop F_H [N]:	310/500
Vertical displace force to stop F_V [N]:	240/380
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	2,5
Weight [g]:	300

All data measured at 6 bar

Standard spring / hard

AR63



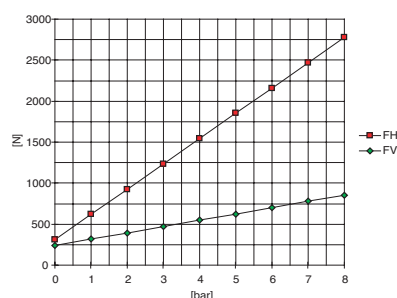
Subject to change without prior notice

Axial Compensation Modules



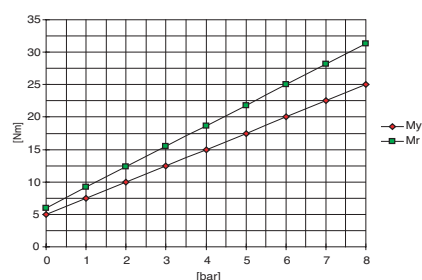
Spring package 1

Deviation force horizontal and vertical against the pressure



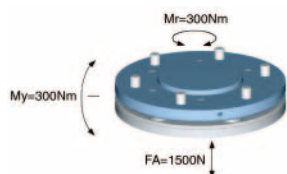
Spring package 1

Deviation moment axial and radial against the pressure



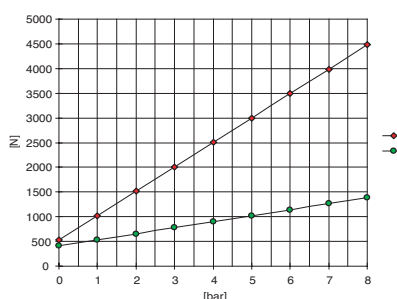
Forces and Moments

Max. allowable static and moments



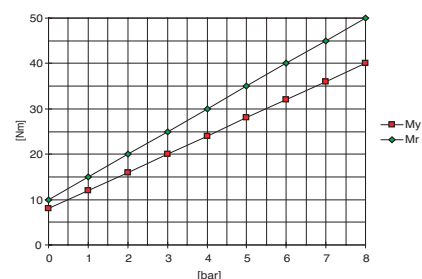
Spring package 2

Deviation force horizontal and vertical against the pressure

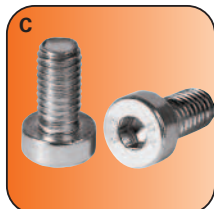


Spring package 2

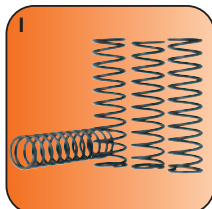
Deviation moment axial and radial against the pressure



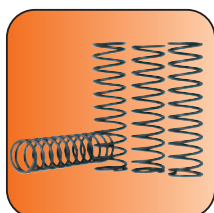
Included in the delivery



Screw
Order no. C7984060149

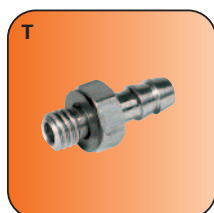


Spring package 1
(pre-assembled)
Order no. CFED63000

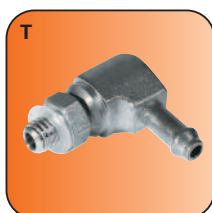


Spring package 2
Order no. CFED63010

Accessory list

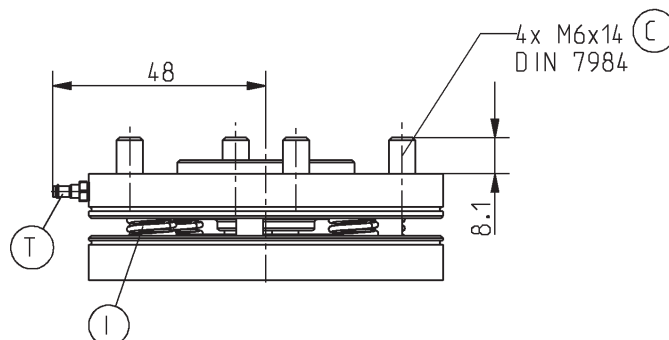


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories



Subject to change without prior notice

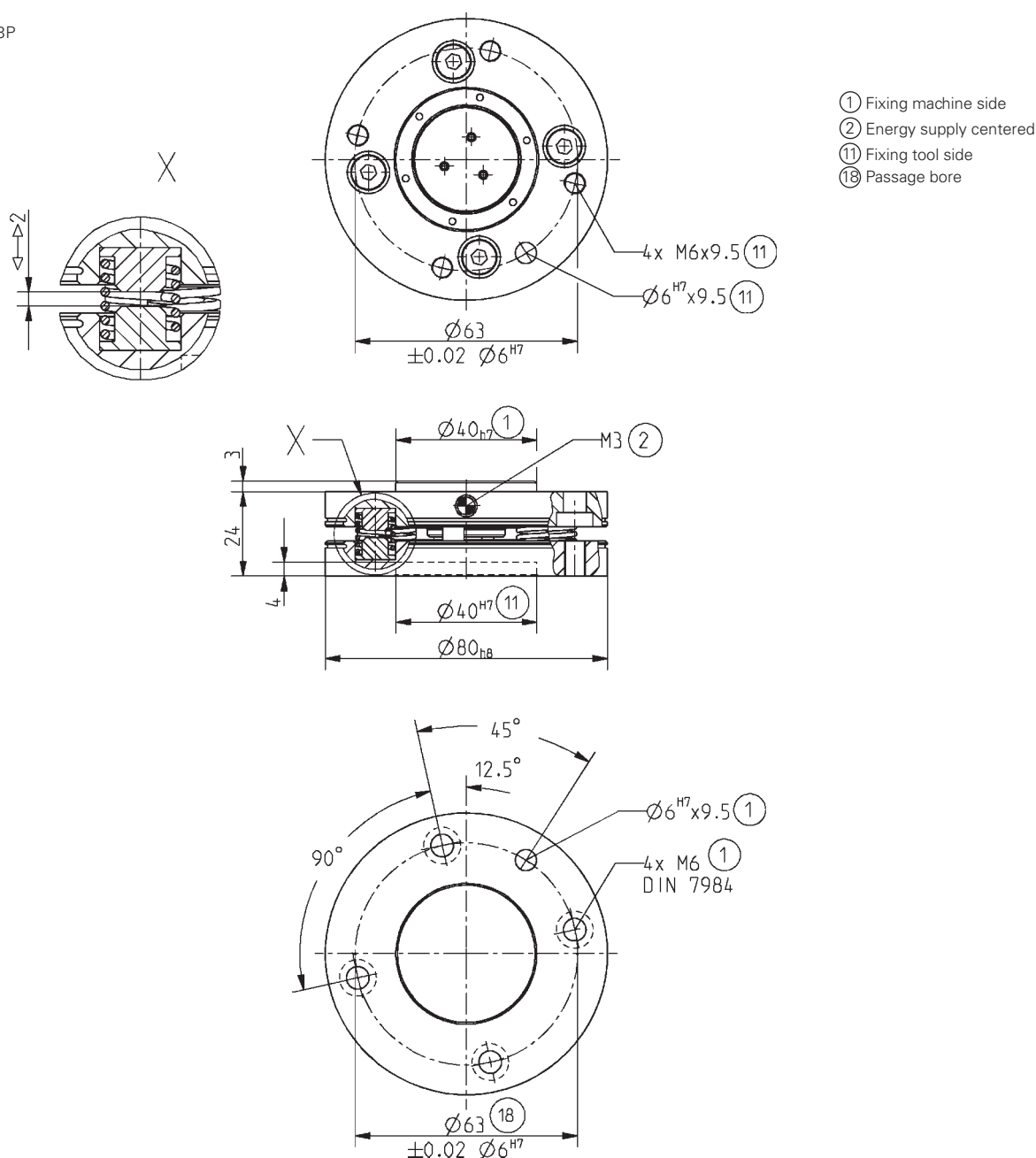
Order no.:

AR63P

Connecting flange:	TK63 after EN ISO 9409-1
Building height [mm]:	24
Recommended handling weight [kg]:	50
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	see diagram
Twisting moment on stop M_r [Nm]:	see diagram
Horizontal displace force to stop F_H [N]:	see diagram
Vertical displace force to stop F_V [N]:	see diagram
Centring force when locking [N]:	600
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	3,6
Min./max. operating pressure [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	2,8
Weight [g]:	360

All data measured at 6 bar

AR63P



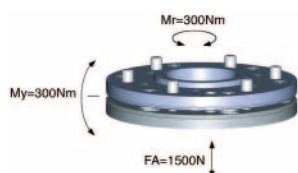
Subject to change without prior notice

Axial Compensation Modules

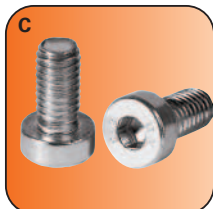


Forces and Moments

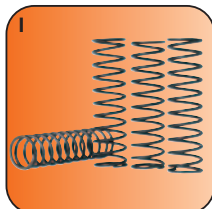
Max. allowable static and moments



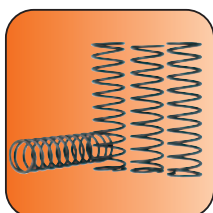
Included in the delivery



Screw
Order no. C7984060169

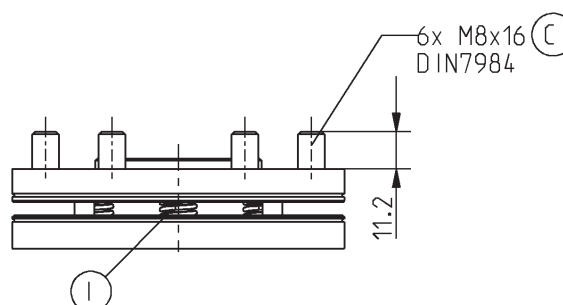


Spring package 1
(pre-assembled)
Order no. CFED63000



Spring package 2
Order no. CFED63010

Accessories



Subject to change without prior notice

Order no.:

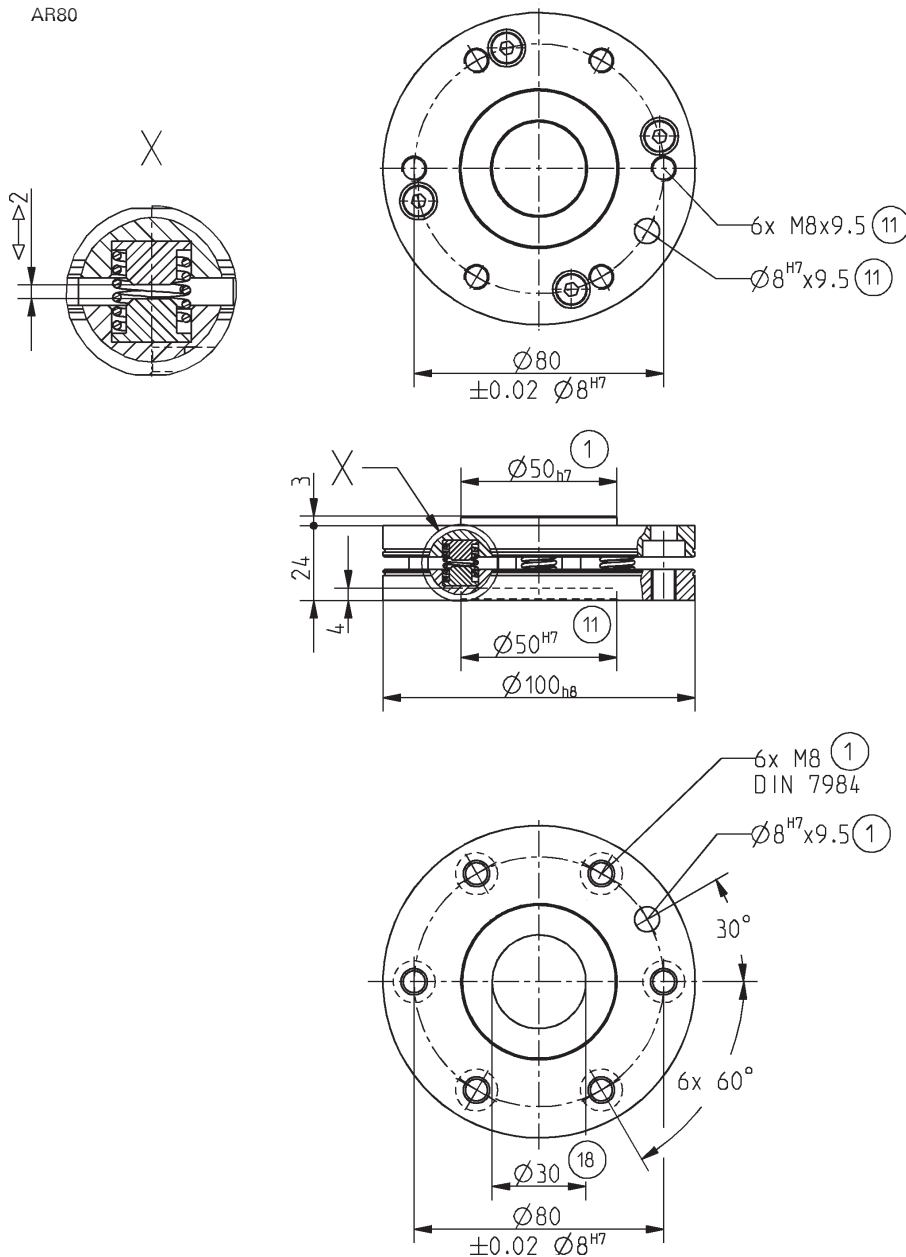
AR80

Connecting flange:	TK80 after EN ISO 9409-1
Building height [mm]:	24
Recommended handling weight [kg]:	50
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	5
Twisting moment on stop M_r [Nm]:	10
Horizontal displace force to stop F_H [N]:	310
Horizontal displace force to stop F_V [N]:	240
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	5,4
Weight [g]:	430

All data measured at 6 bar

AR80

- ① Fixing machine side
- ⑪ Fixing tool side
- ⑱ Passage bore



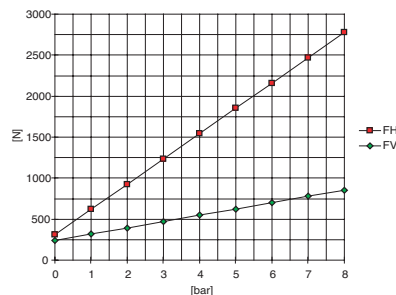
Subject to change without prior notice

Axial Compensation Modules



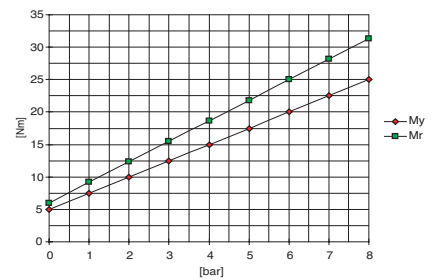
Spring package 1

Deviation force horizontal and vertical against the pressure



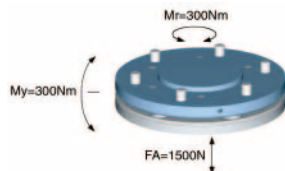
Spring package 1

Deviation moment axial and radial against the pressure



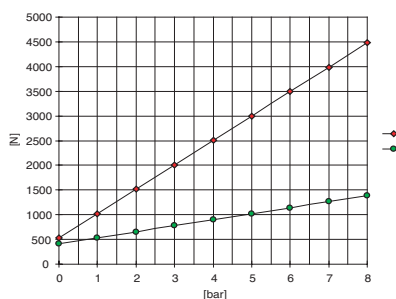
Forces and Moments

Max. allowable static and moments



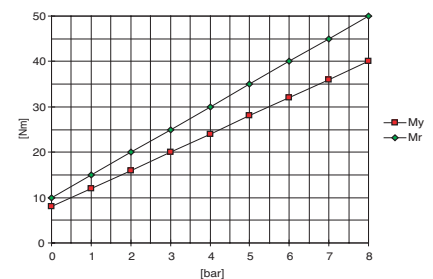
Spring package 2

Deviation force horizontal and vertical against the pressure

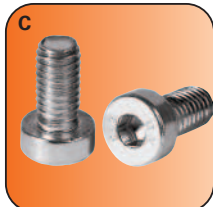


Spring package 2

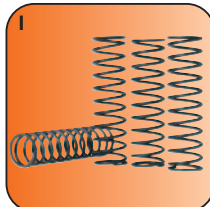
Deviation moment axial and radial against the pressure



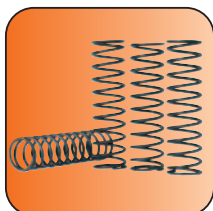
Included in the delivery



Screw
Order no. C7984060169

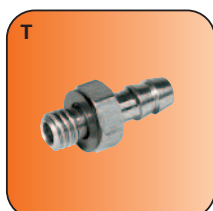


Spring package 1
(pre-assembled)
Order no. CFED63000



Spring package 2
Order no. CFED63010

Accessory list

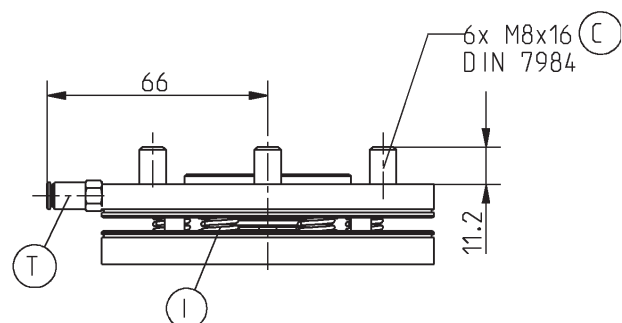


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories



Subject to change without prior notice

Order no.:

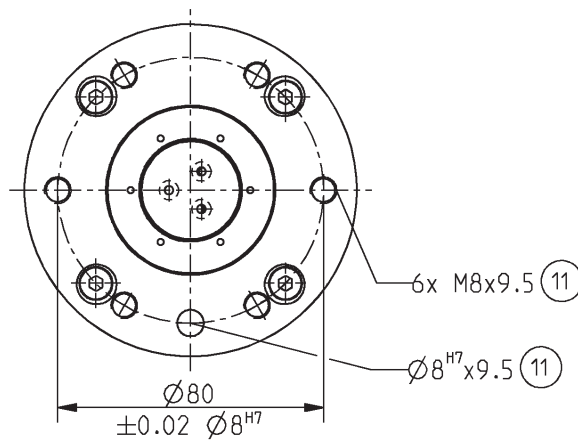
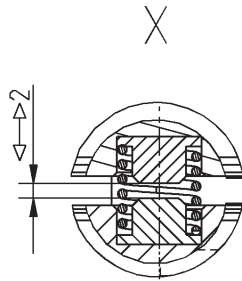
AR80P

Connecting flange	TK80 after EN ISO 9409-1
Building height [mm]:	24
Recommended handling weight [kg]:	50
Horizontal deviation [mm/°]	2/1
Vertical deviation [mm/°]	2/1
Bending moment on stop M_y [Nm]	see diagram
Twisting moment on stop M_r [Nm]*	see diagram
Horizontal displace force to stop F_H [N]	see diagram
Vertical displace force to stop F_V [N]	see diagram
Centring force when locking [N]	600
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm ³]	3,6
Min./max. operating pressure [bar]	1/8
Min./max. operating temperature [°C]	5/80
Total moment of inertia [kg/cm ²]	6,2
Weight [g]	500

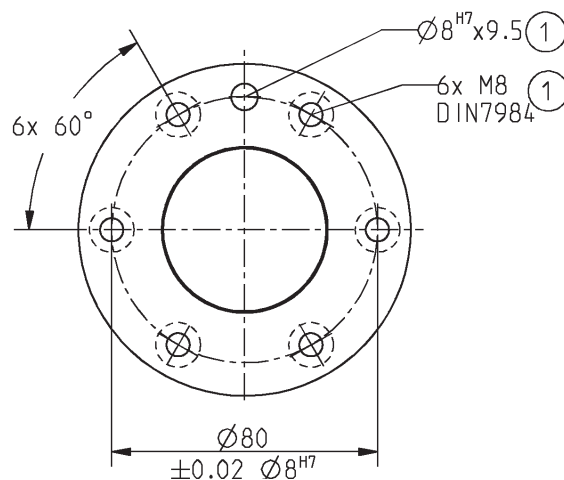
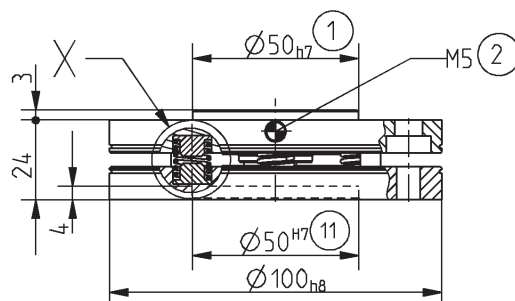
All data measured at 6 bar

*Standard spring(1)

AR80P



- ① Fixing machine side
- ② Energy supply centered
- ⑪ Fixing tool side



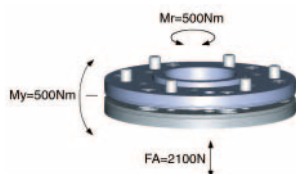
Subject to change without prior notice

Axial Compensation Modules

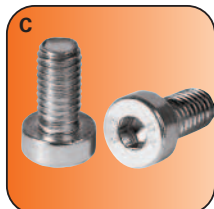


Forces and Moments

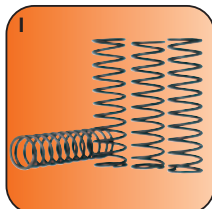
Max. allowable static and moments



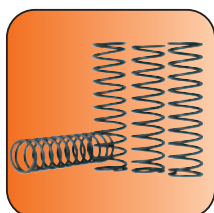
Included in the delivery



Screw
Order no. C7984060169

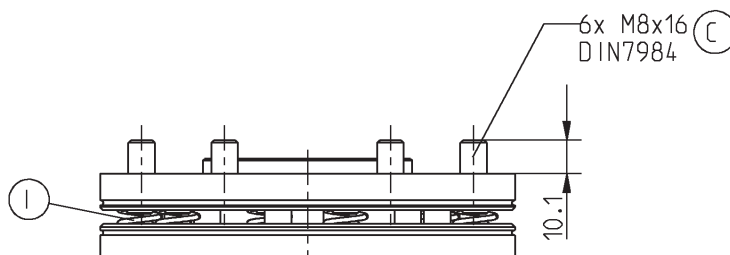


Spring package 1
(pre-assembled)
Order no. CFED10050



Spring package 2
Order no. CFED10060

Accessories



Subject to change without prior notice

Order no.:

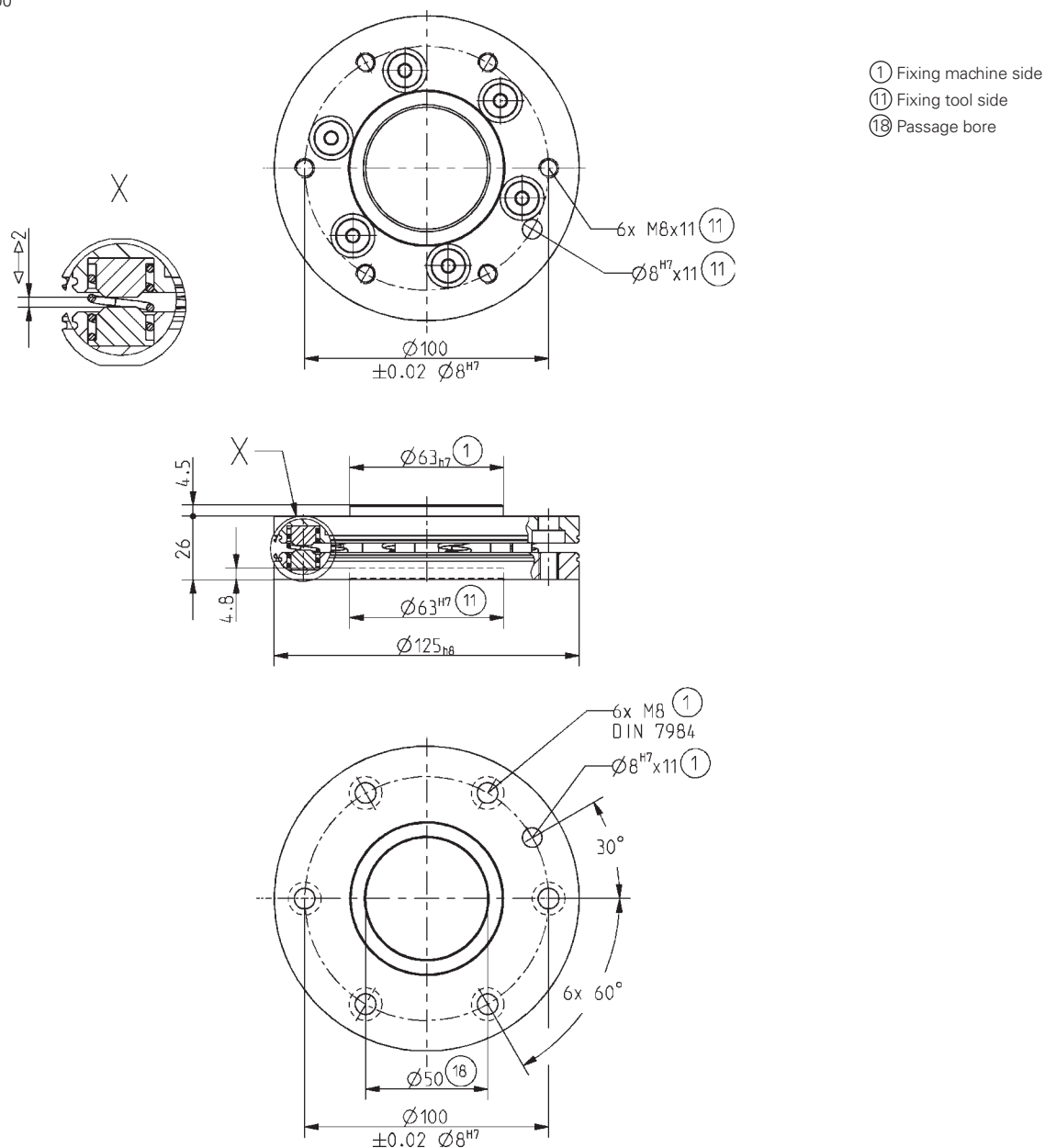
AR100

Connecting flange:	TK100 after EN ISO 9409-1
Building height [mm]:	26
Recommended handling weight [kg]:	90
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	15/36
Twisting moment on stop M_r [Nm]*:	40/100
Horizontal displace force to stop F_H [N]:	900/1800
Vertical displace force to stop F_V [N]:	480/900
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	13
Weight [g]:	680

All data measured at 6 bar

*Standard / hard (6 springs)

AR100



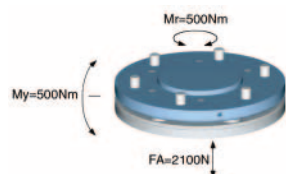
Subject to change without prior notice

Axial Compensation Modules



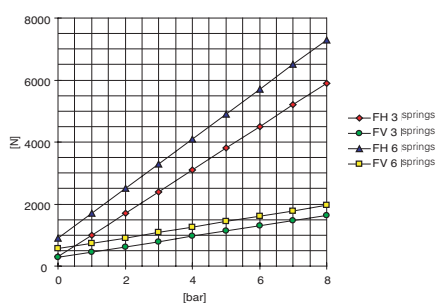
Forces and Moments

Max. allowable static and moments



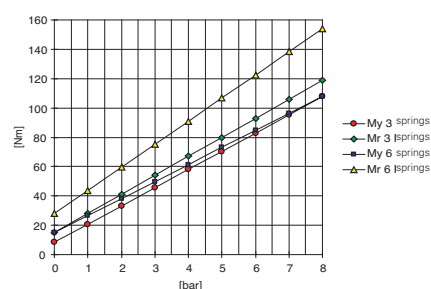
Spring package 1

Deviation force horizontal and vertical against the pressure



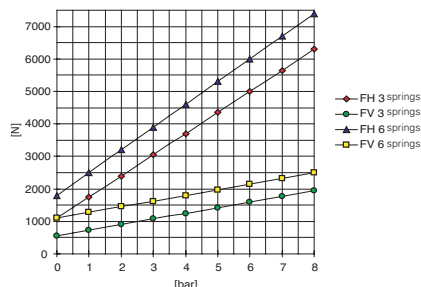
Spring package 1

Deviation moment axial and radial against the pressure



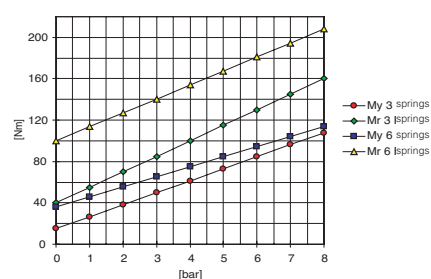
Spring package 2

Deviation force horizontal and vertical against the pressure

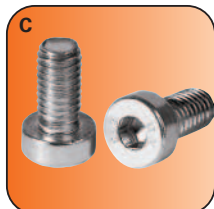


Spring package 2

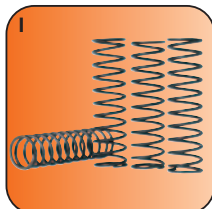
Deviation moment axial and radial against the pressure



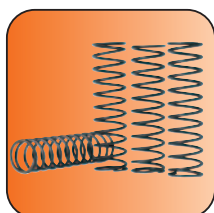
Included in the delivery



Screw
Order no. C7984060169

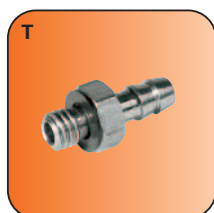


Spring package 1
(pre-assembled)
Order no. CFED10050

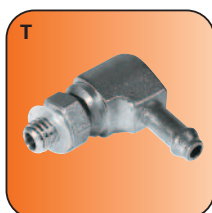


Spring package 2
Order no. CFED10060

Accessory list

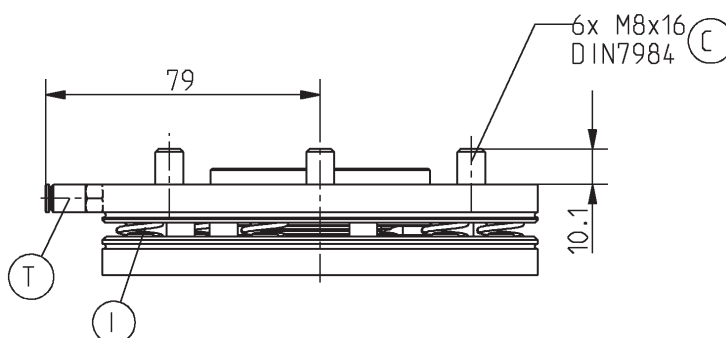


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories

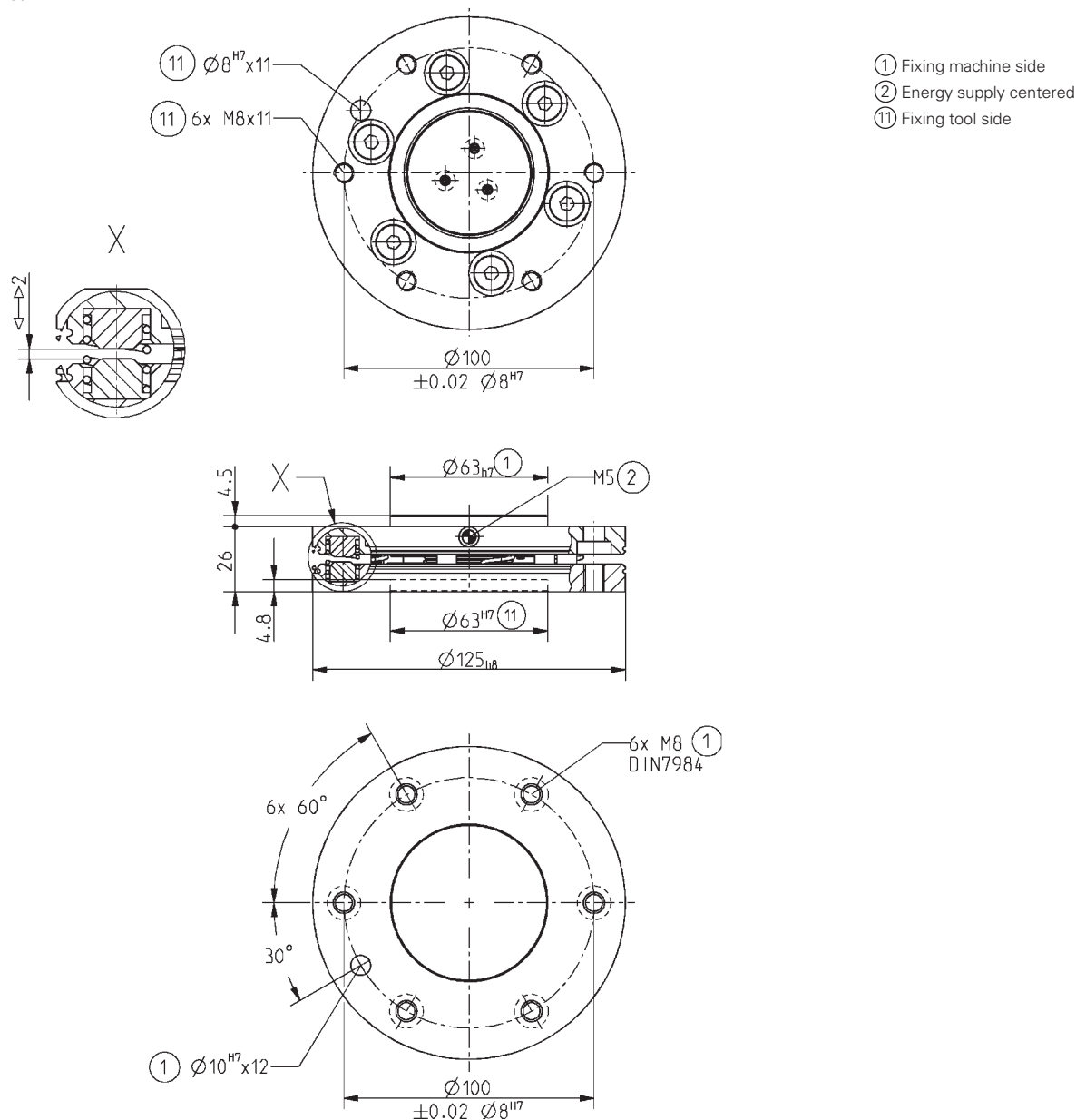


Subject to change without prior notice

Order no.:	AR100P
Connecting flange:	TK100 after EN ISO 9409-1
Building height [mm]:	26
Recommended handling weight [kg]:	90
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	see diagram
Twisting moment on stop M_r [Nm]:	see diagram
Horizontal displace force to stop F_H [N]:	see diagram
Vertical displace force to stop F_V [N]:	see diagram
Centring force when locking [N]:	1400
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	8,5
Min./max. operating pressure [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	17
Weight [g]:	850

All data measured at 6 bar

AR100P



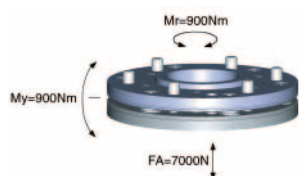
Subject to change without prior notice

Axial Compensation Modules

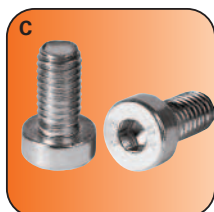


Forces and Moments

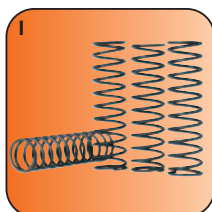
Max. allowable static and moments



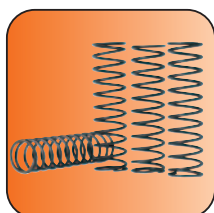
Included in the delivery



Screw
Order no. C7984060189

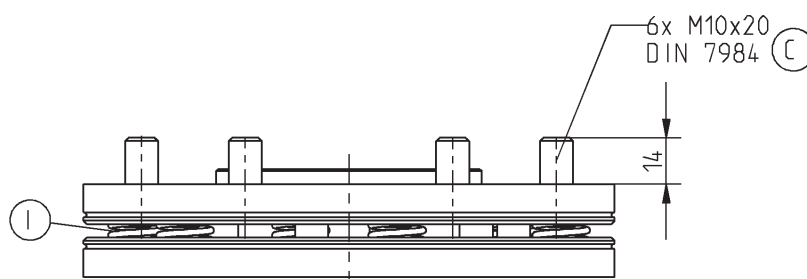


Spring package 1
(pre-assembled)
Order no. CFED12500



Spring package 2
Order no. CFED12510

Accessories



Subject to change without prior notice

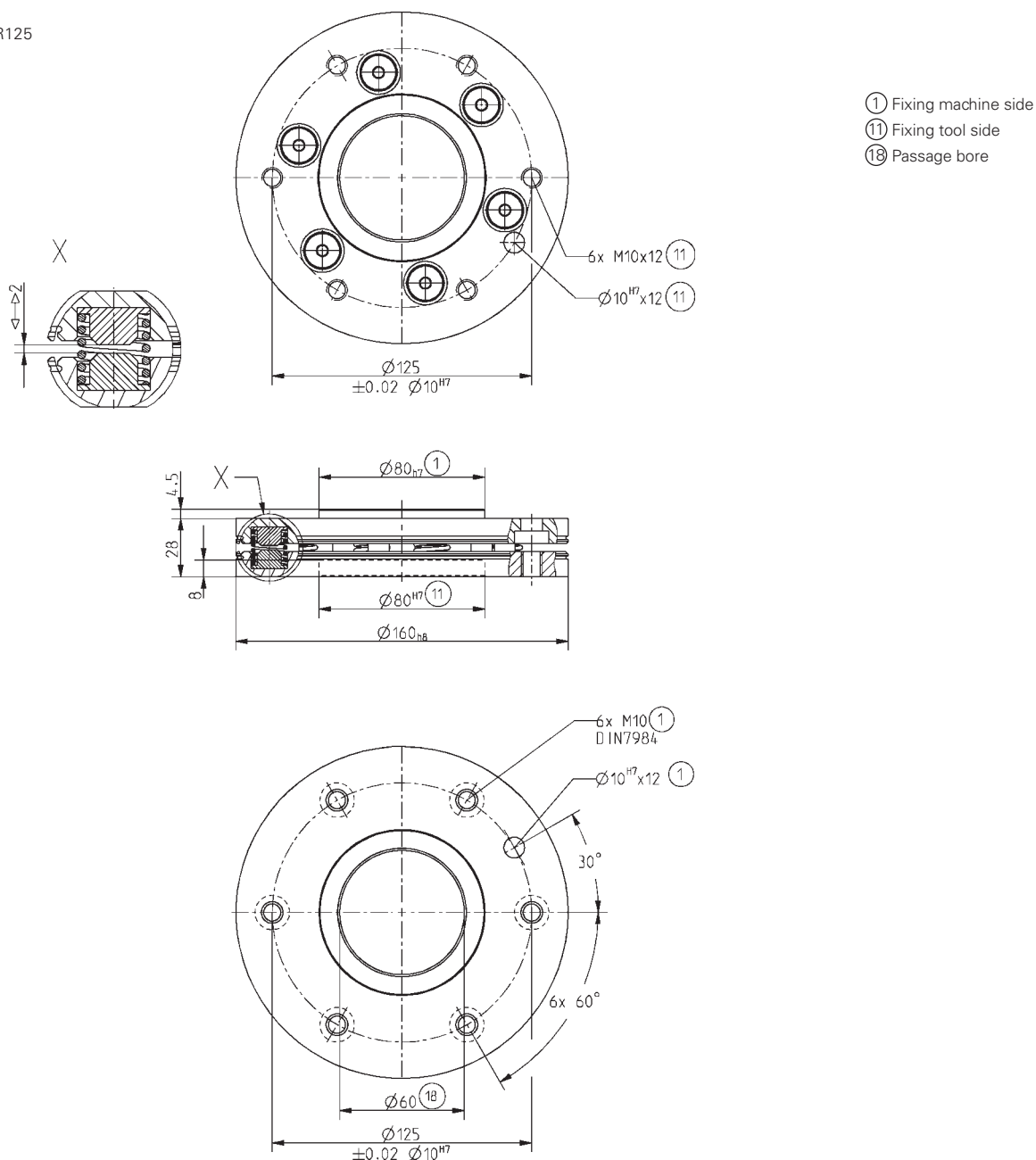
Order no.:

AR125

Connecting flange:	TK125 after EN ISO 9409-1
Building height [mm]:	28
Recommended handling weight [kg]:	200
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	25/60
Twisting moment on stop M_r [Nm]:	70/180
Horizontal displace force to stop F_H [N]:	1500/3000
Vertical displace force to stop F_V [N]:	800/1500
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	42
Weight [kg]:	1,3

All data measured at 6 bar
with 6 springs standard / hard

AR125



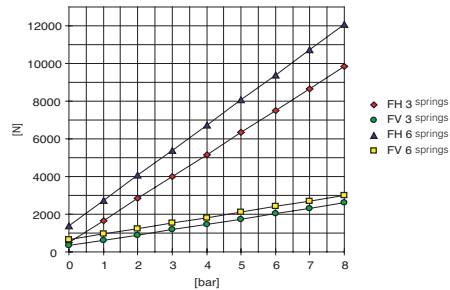
Subject to change without prior notice

Axial Compensation Modules



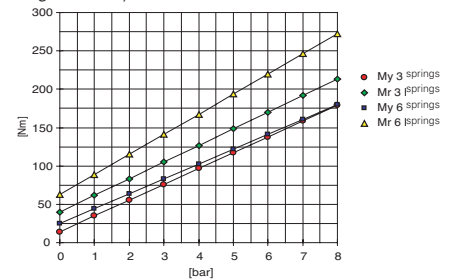
Spring package 1

Deviation force horizontal and vertical against the pressure



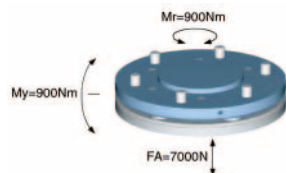
Spring package 1

Deviation moment axial and radial against the pressure



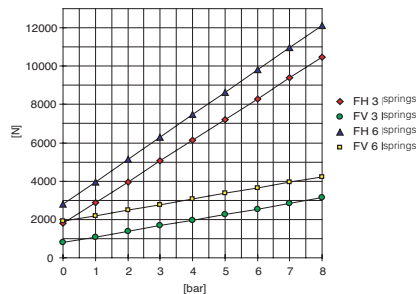
Forces and Moments

Max. allowable static and moments



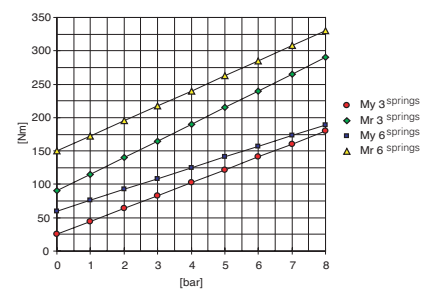
Spring package 2

Deviation force horizontal and vertical against the pressure

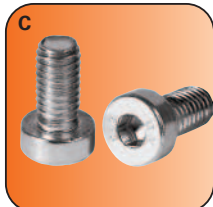


Spring package 2

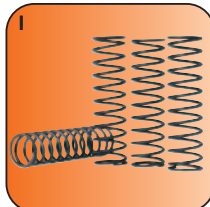
Deviation moment axial and radial against the pressure



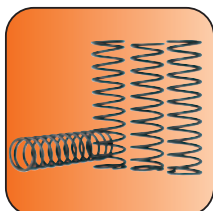
Included in the delivery



Screw
Order no. C7984060189

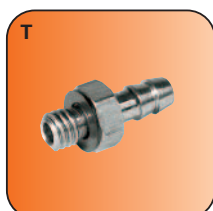


Spring package 1
(pre-assembled)
Order no. CFED12500



Spring package 2
Order no. CFED12510

Accessory list

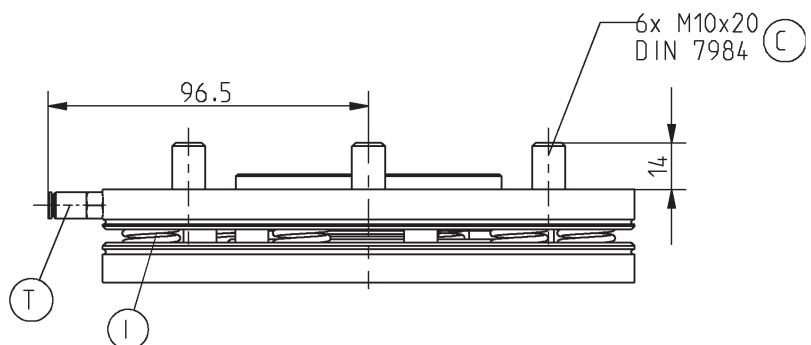


Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

Accessories

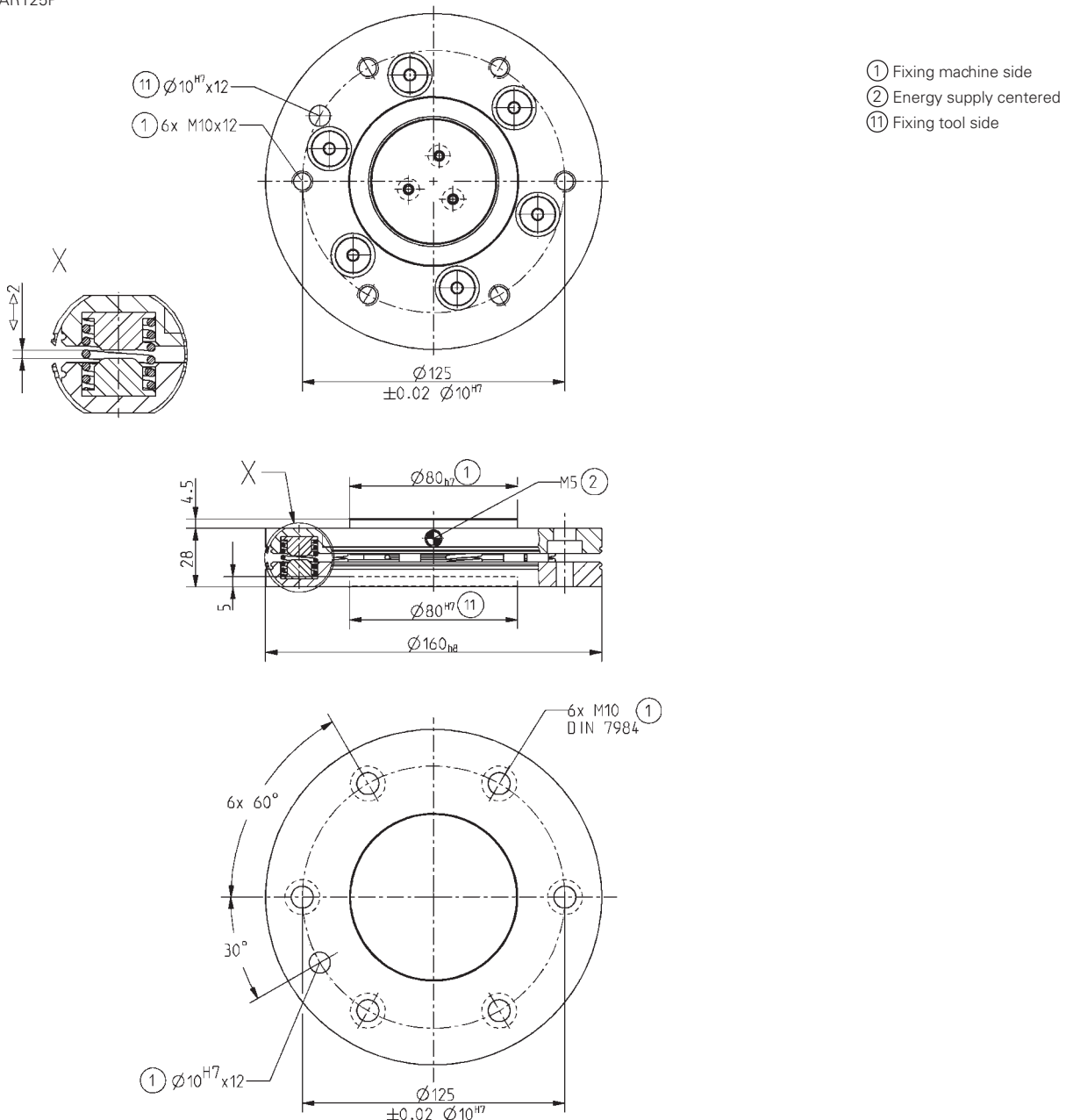


Subject to change without prior notice

Order no.:	AR125P
Connecting flange:	TK125 after EN ISO 9409-1
Building height [mm]:	28
Recommended handling weight [kg]:	200
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	see diagram
Twisting moment on stop M_r [Nm]:	see diagram
Horizontal displace force to stop F_H [N]:	see diagram
Vertical displace force to stop F_V [N]:	see diagram
Centring force when locking [N]:	3000
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	14
Min./max. operating pressure [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	61
Weight [kg]:	1,9

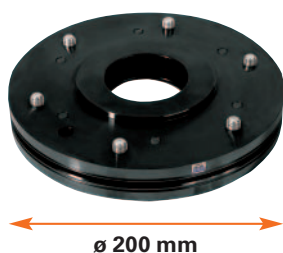
All data measured at 6 bar

AR125P



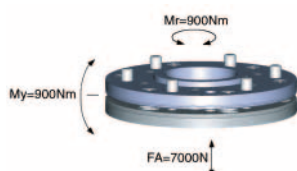
Subject to change without prior notice

Axial Compensation Modules

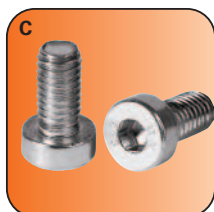


Forces and Moments

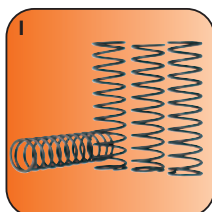
Max. allowable static and moments



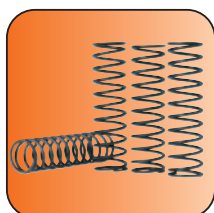
Included in the delivery



Screw
Order no. C7984060189

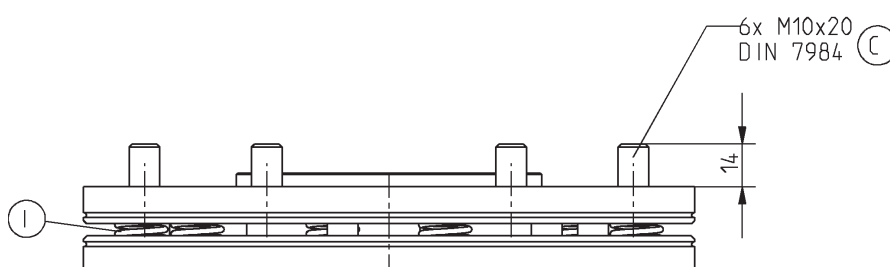


Spring package 1
(pre-assembled)
Order no. CFED12500



Spring package 2
Order no. CFED12510

Accessories



Subject to change without prior notice

Order no.:

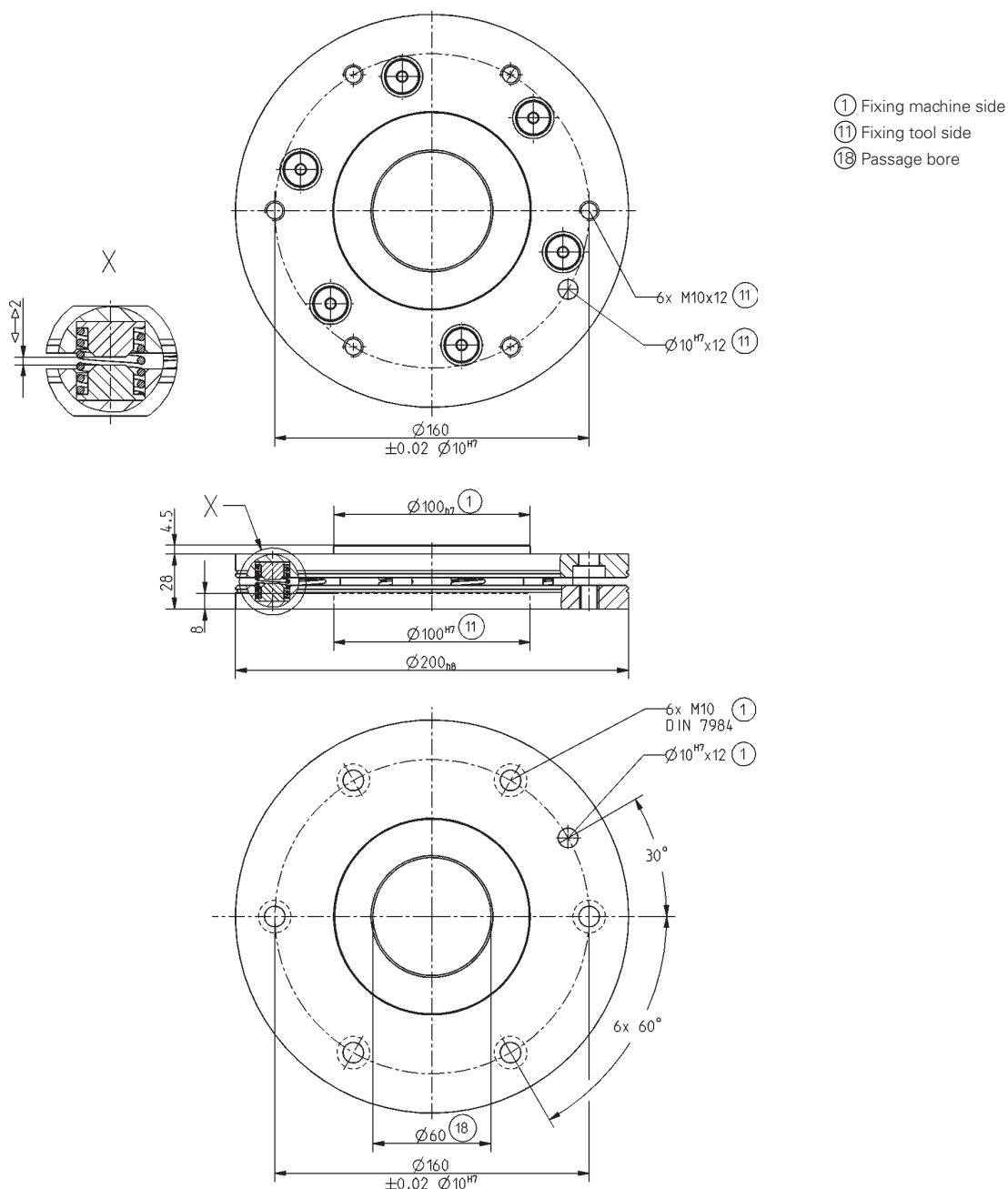
AR160

Connecting flange:	TK160 after EN ISO 9409-1
Building height [mm]:	28
Recommended handling weight [kg]:	200
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending moment on stop M_y [Nm]:	40/70
Twisting moment on stop M_r [Nm]:	100/240
Horizontal displace force to stop F_H [N]:	1500/9000
Vertical displace force to stop F_V [N]:	800/1500
Centring force when locking [N]:	-
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	-
Min./max. operating pressure [bar]:	-
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	260
Weight [kg]:	5

All data measured at 6 bar

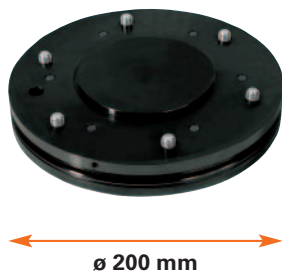
Standard / hard 6 springs

AR160



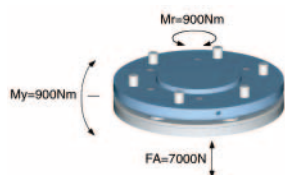
Subject to change without prior notice

Axial Compensation Modules



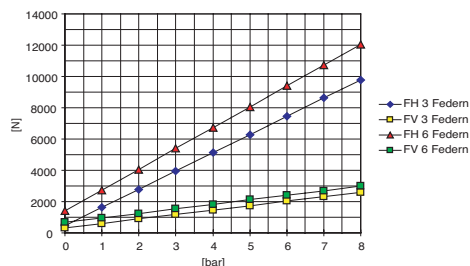
Forces and Moments

Max. allowable static and moments



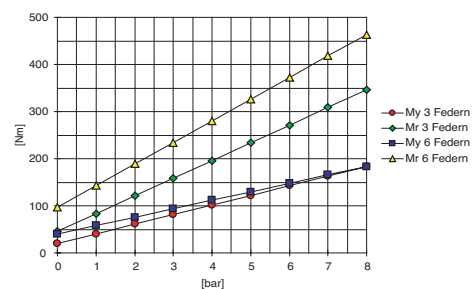
Spring package 1

Deviation force horizontal and vertical against the pressure



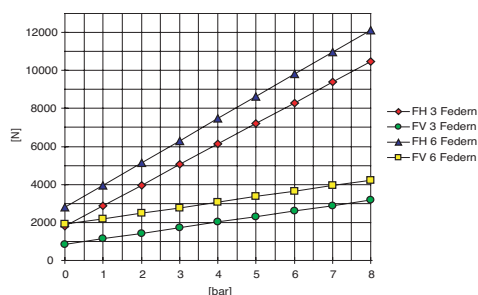
Spring package 1

Deviation moment axial and radial against the pressure



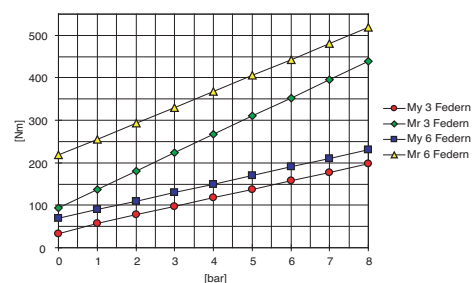
Spring package 2

Deviation force horizontal and vertical against the pressure

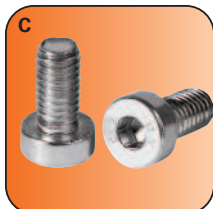


Spring package 2

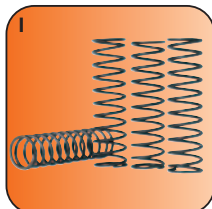
Deviation moment axial and radial against the pressure



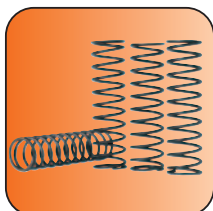
Included in the delivery



Screw
Order no. C7984060189

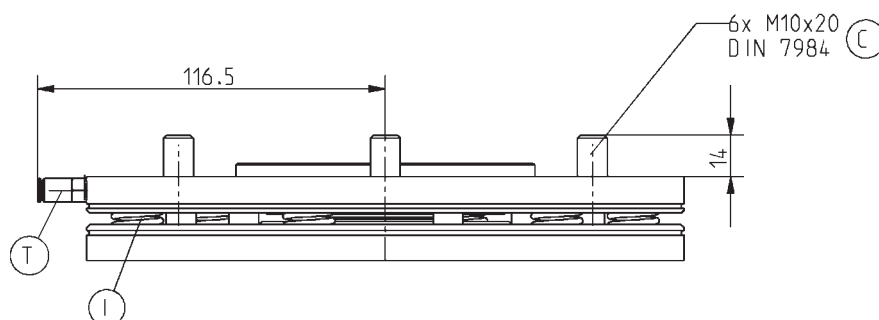


Spring package 1
(pre-assembled)
Order no. CFED12500

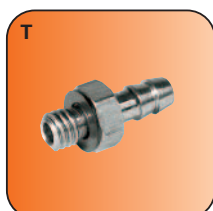


Spring package 2
Order no. CFED12510

Accessories



Accessory list



Pneumatic fittings
Order no. GVM3



Pneumatic fittings
Order no. WVM3

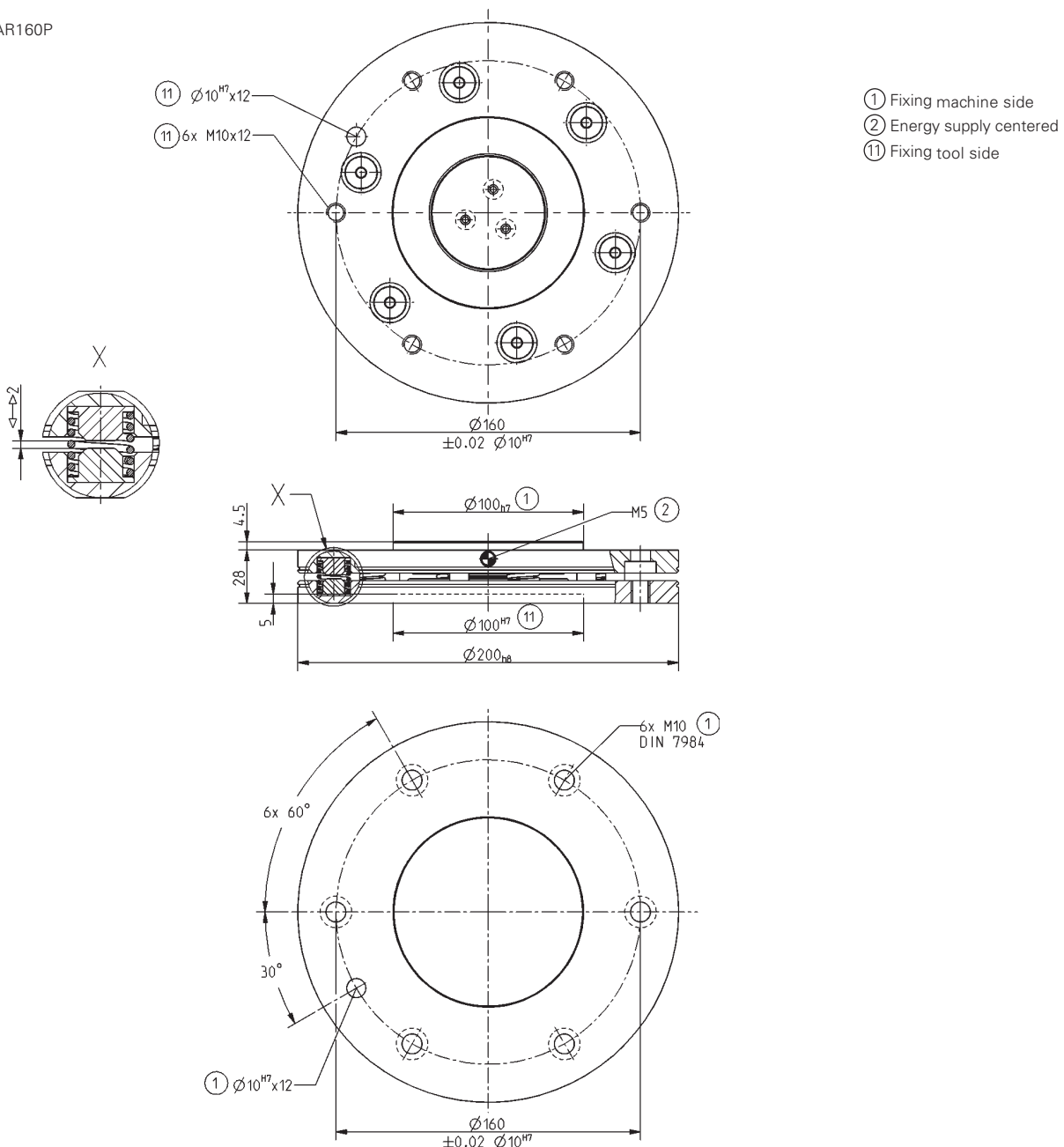
Subject to change without prior notice

AR160P

Connecting flange:	TK160 after EN ISO 9409-1
Building height [mm]:	28
Recommended handling weight [kg]:	200
Horizontal deviation [mm/°]:	2/1
Vertical deviation [mm/°]:	2/1
Bending torque on stop M_y [Nm]:	see diagram
Twisting torque on stop M_r [Nm]:	see diagram
Horizontal shunting force to stop FH [N]:	see diagram
Vertical shunting force to stop FV [N]:	see diagram
Centring force when locking [N]:	3000
Horizontal repetition accuracy \pm [mm/°]:	0,05
Vertical repetition accuracy \pm [mm/°]:	0,05
Air volume per cycle [cm³]:	14
Min./max. operating pressure. [bar]:	1/8
Min./max. operating temperature [°C]:	5/80
Total moment of inertia [kg/cm²]:	115
Weight [kg]:	5,60

All data measured at 6 bar

AR160P



Subject to change without prior notice



*Crash***protection**

pneumatic



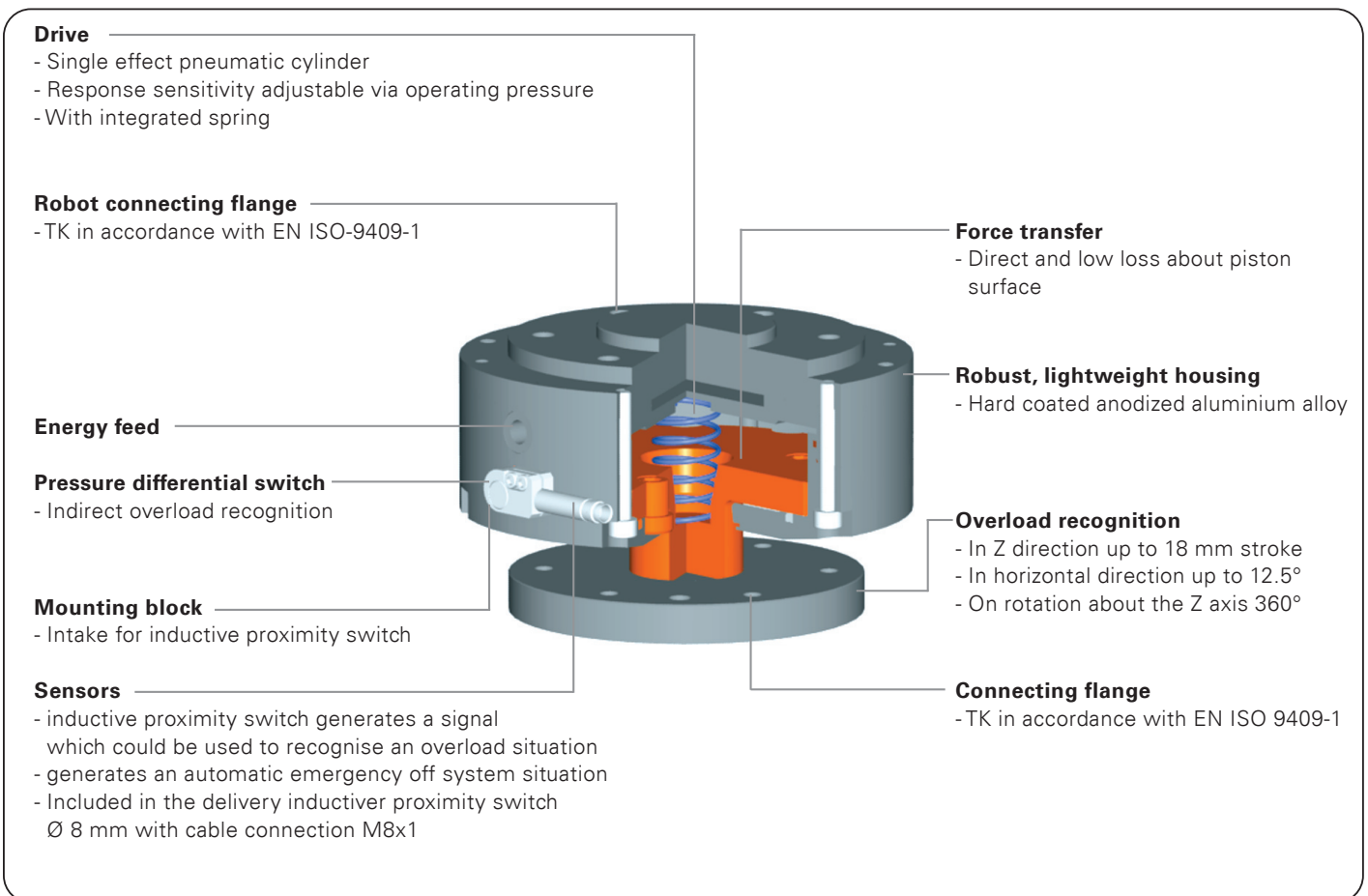
CSR Series

SOMMER
automatic

↑ Highlights

- Effective and rapid reaction collision protection with compressed air impacted pistons
- Required torques and forces infinitely adjustable via operating pressure
- by traveling of the flange plate, a signal will be generated, which could be used for emergency stop control of the system
- Simple and precise reset in the start position following an overload reaction
- Partial circuit produced in accordance with EN ISO 9409-1, for direct connection to the robots

Functional diagram



Terms

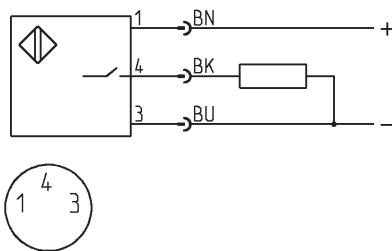
Handling weight:	recommended weight at central mounting and 6 bar operating pressure
Repeatability:	at end stops after 50/100 consecutive cycles
Cycle:	distance covered by the piston in one open and close movement
Maintenance:	the crash protection must be function checked after every deviation and emergency stop situation

Model

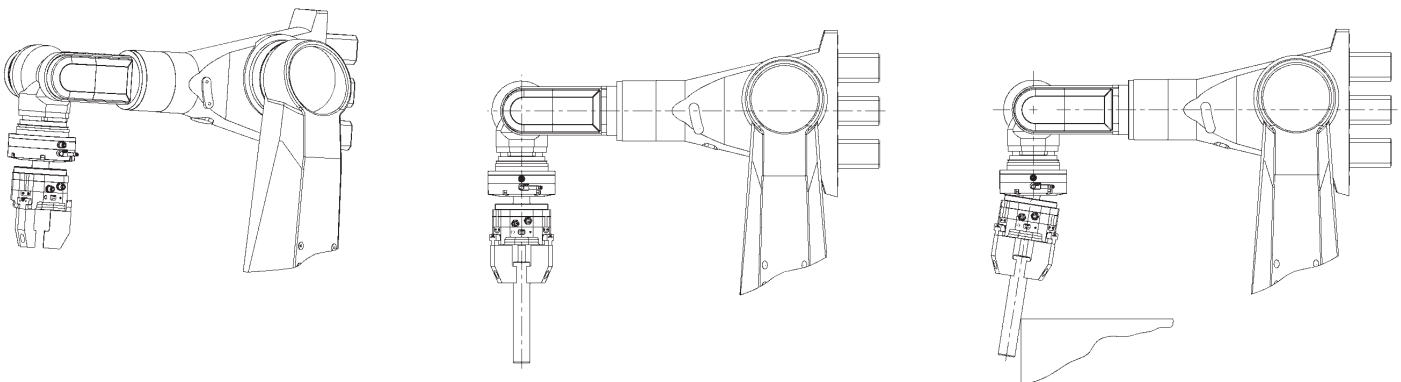
Order no.	Deviation in Z	Horizontal deviation	Recommended handling weight
CSR50	12.5 mm	12,5°	6 kg
CSR63	10.5 mm	12,5°	12 kg
CSR80	14.0 mm	9°	35 kg
CSR100	18.0 mm	9°	60 kg

Technical data about the mounted proximity switch

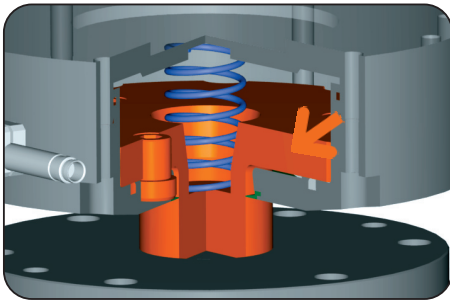
Operating voltage:	10...30V DC
Operating current:	200 mA
Voltage drop:	≤ 2,5V
Output:	PNP normally open, short circuit-proof
System of protection:	IP 65 at screwed condition with cable plug
Diagram:	



Application example



Crash**protection**



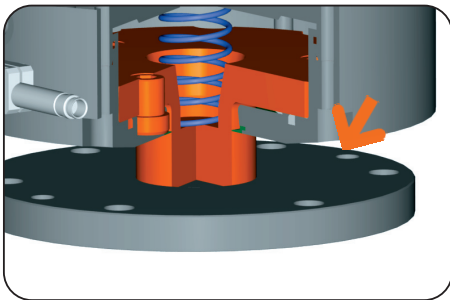
Drive

- Single effect pneumatic cylinder
- With integrated spring



Overload recognition

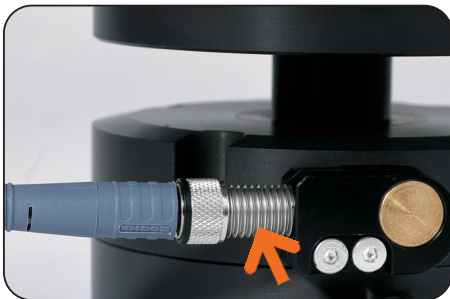
- In Z direction up to 18 mm stroke
- In horizontal direction up to 12.5°
- On rotation about the Z axis 360°



Position maintenance

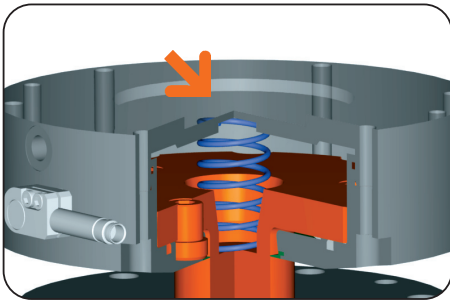
Forces and torques infinitely adjustable via operating pressure

- The operating pressure regulates the contact sensitivity
- allowed operating pressure from 0,5 - 6 bar



Sensors

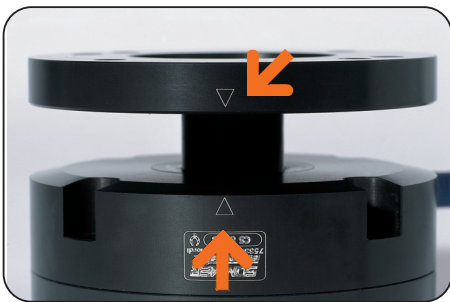
- included in the delivery inductive proximity switch \varnothing 8 mm with cable connection M8 x 1 generates a signal which could be used to recognise overload and automatic emergency stop situation



Connecting flange for Robot

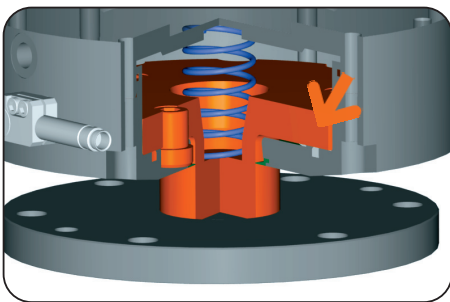
Partial circuit produced in accordance with EN ISO 9409-1

- Direct, without adapter plate, mountable on the robot flange
- Products with same EN ISO flange can be combined and exchanged
- Low design effort



Home position

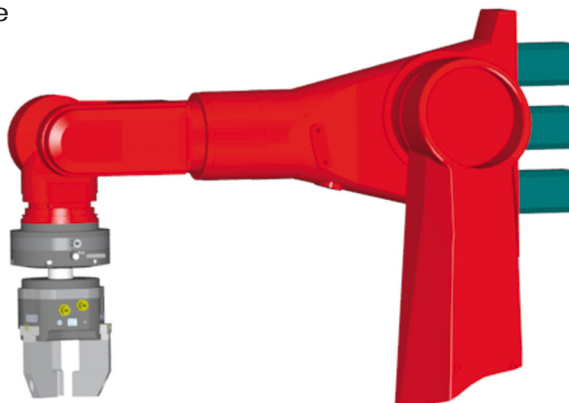
- A mechanically indexed position guarantees a reproducible zero point position after overload reaction
- Precise repetition accuracy even after any overload reaction



Force transfer

- Direct and low loss via piston surface
- Optimum force steering of drive force in holding force

Application example

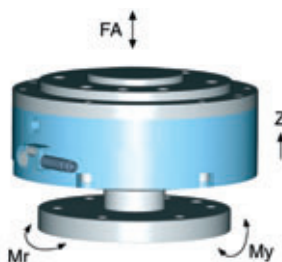


Crashprotection



Forces and Moments

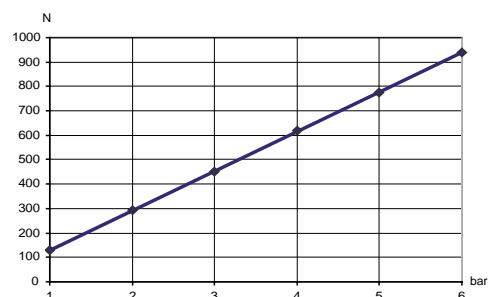
max. forces and moments see chart technical data



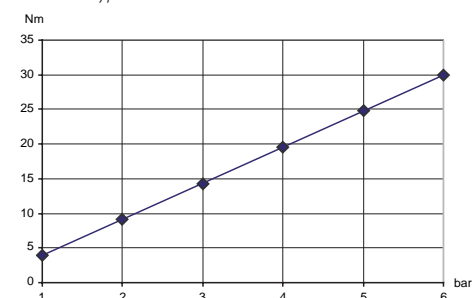
Air pressurisation

shows force and moments in dependence to the pressure

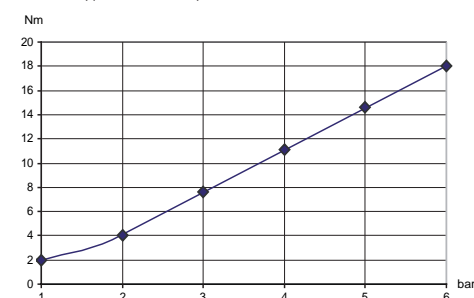
axial type of load FA



Torsional type of load Mr



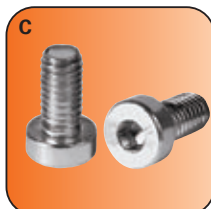
vertical type of load My



Included in the delivery



Proximity switch
Order no. NJ8-E2S-04



Screw
Order no. C912080169

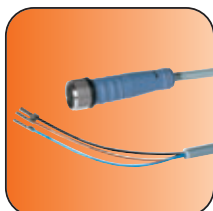
Accessory list



Pneumatic fittings
Order no. WVM5



Cable angled plug
Order no. KAW500

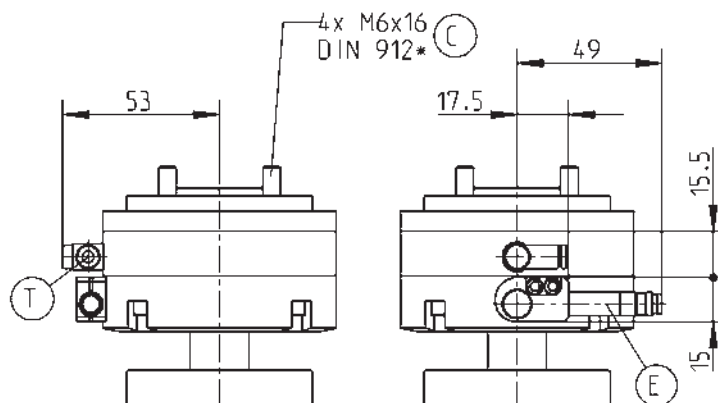


Cable straight plug
Order no. KAG500



Plug 3-pole
Order no. S12-G-3

Accessories



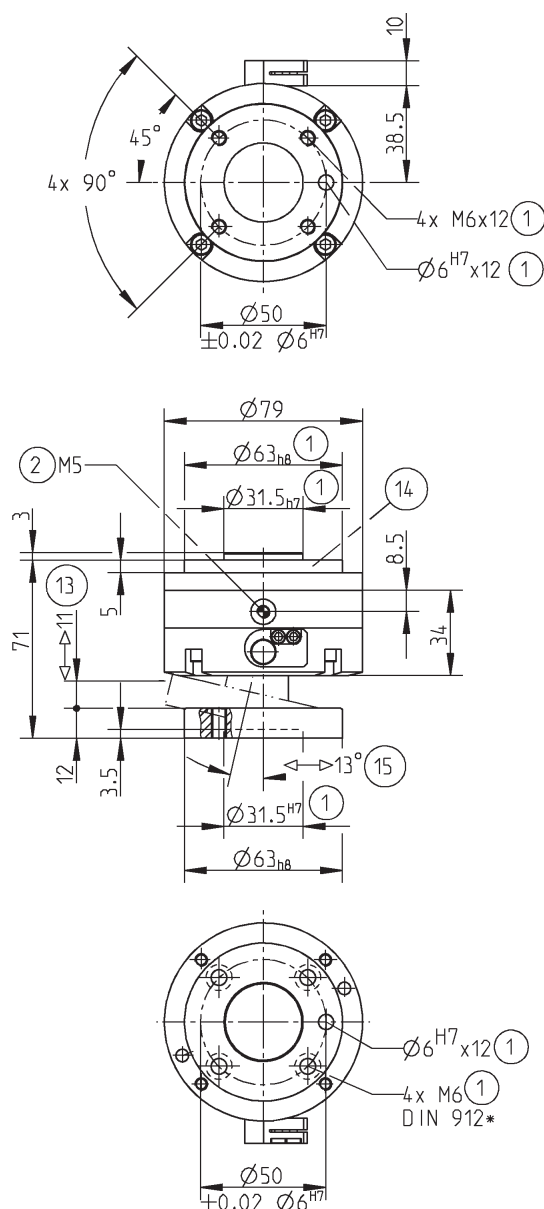
Subject to change without prior notice

Order no.:	CSR50
Connecting flange:	TK50 after EN ISO 9409-1
Building height [mm]:	71
Recommended handling weight [kg]*:	6
Deviation Z [mm]:	12,5
Axial repeat accuracy +/- [mm]:	0,05
Horizontal deviation [°]:	12,5
Radial repetition accuracy +/- [mm]:	0,05
Min./max. operating pressure. [bar]:	0,5/6
Min./max. operating temperature [°C]:	5/80
Weight [g]:	700

All data measured at 6 bar

* at central mounting

CSR50



- ① Fixing CSR
- ② Energy supply
- ⑬ Stroke Z
- ⑭ Adapter plate
- ⑮ Deviation maximal

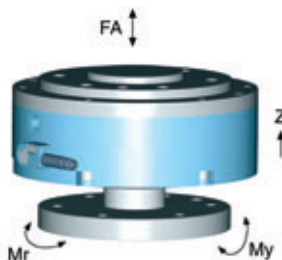
Subject to change without prior notice

Crashprotection



Forces and Moments

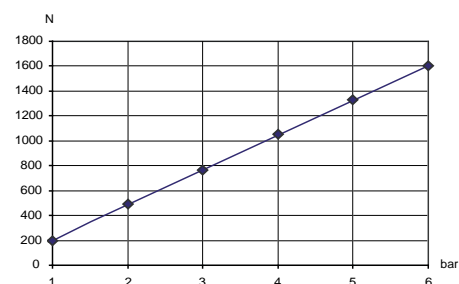
max. forces and moments see chart technical data



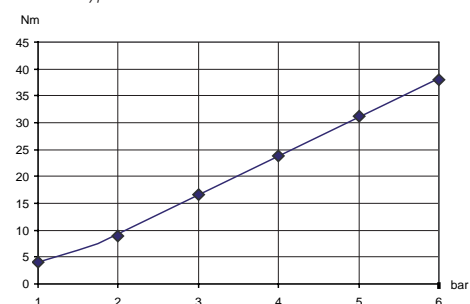
Air pressurisation

shows force and moments in dependence to the pressure

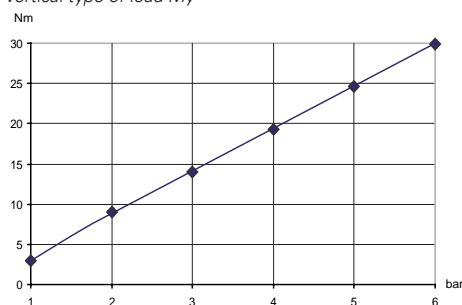
axial type of load FA



Torsional type of load Mr



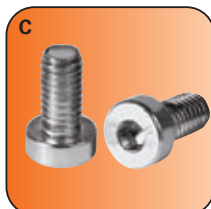
vertical type of load My



Included in the delivery



Proximity switch
Order no. NJ8-E2S-04



Screw
Order no. C912080169

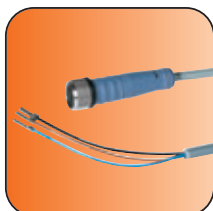
Accessory list



Pneumatic fittings
Order no. WVM5



Cable angled plug
Order no. KAW500

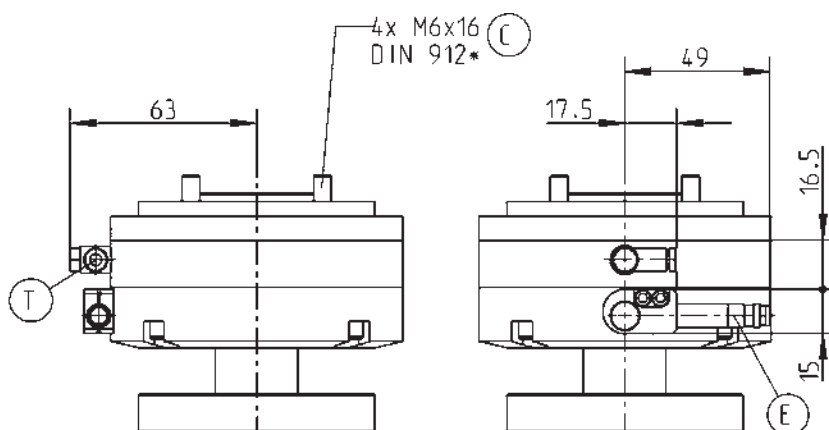


Cable straight plug
Order no. KAG500



Plug 3-pole
Order no. S12-G-3

Accessories



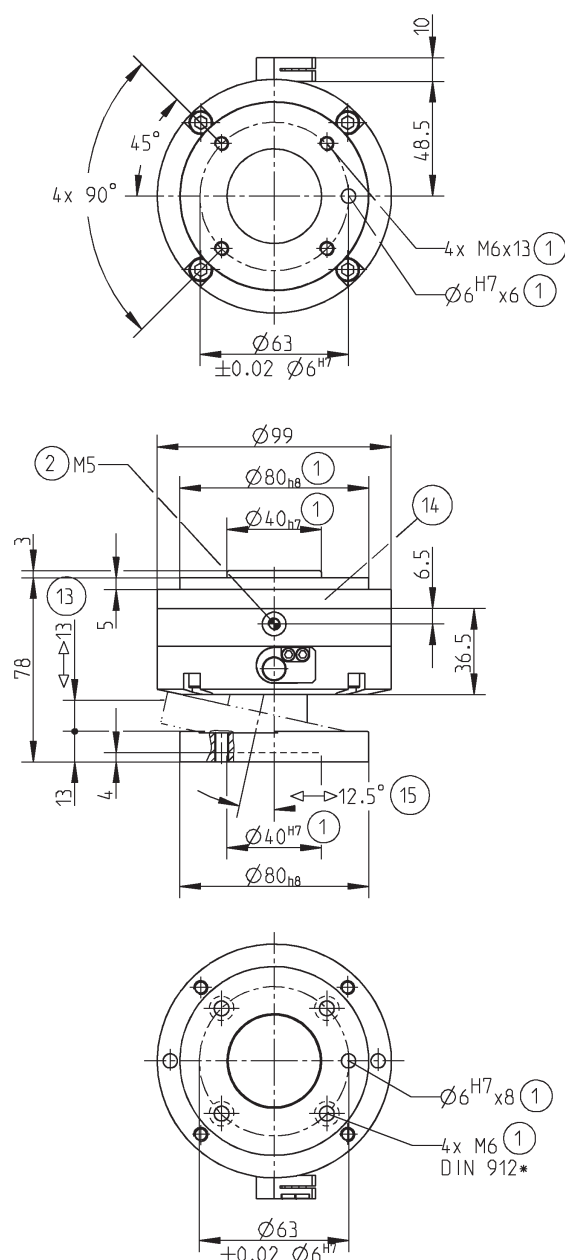
Subject to change without prior notice

Order no.:	CSR63
Connecting flange:	TK63 after EN ISO 9409-1
Building height [mm]:	78
Recommended handling weight [kg]*:	12
Deviation Z [mm]:	10,5
Axial repeat accuracy +/- [mm]:	0,05
Horizontal deviation [°]:	12.5
Radial repetition accuracy +/- [mm]:	0.05
Min./max. operating pressure. [bar]:	0.5/6
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,1

All data measured at 6 bar

* at central mounting

CSR63



- ① Fixing CSR
- ② Energy supply
- ⑬ Stroke Z
- ⑭ Adapter plate
- ⑮ Deviation maximal

Subject to change without prior notice

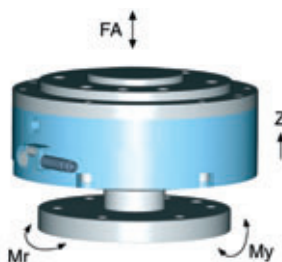
Crashprotection



ø 124 mm

Forces and Moments

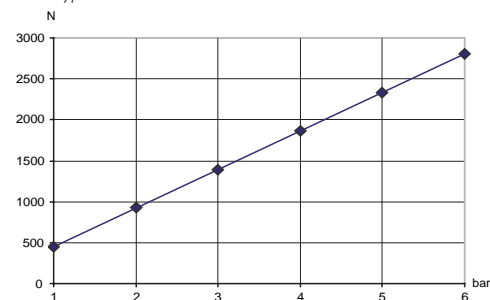
max. forces and moments see chart technical data



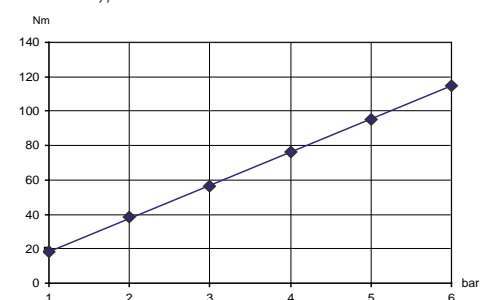
Air pressurisation

shows force and moments in dependence to the pressure

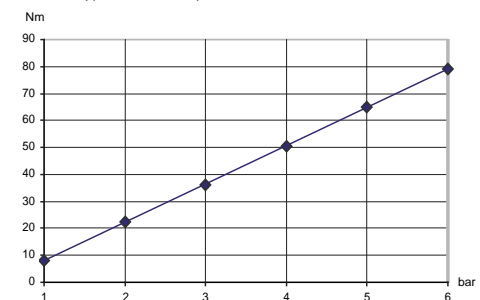
axial type of load FA



Torsional type of load Mr



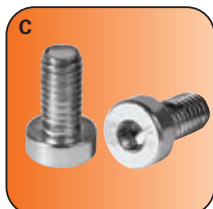
vertical type of load My



Included in the delivery



Proximity switch
Order no. NJ8-E2S-04



Screw
Order no. C912080169

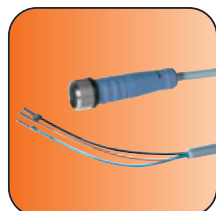
Accessory list



Pneumatic fittings
Order no. WVM5



Cable angled plug
Order no. KAW500

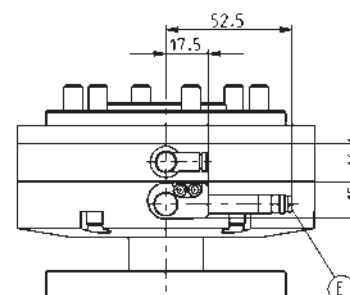
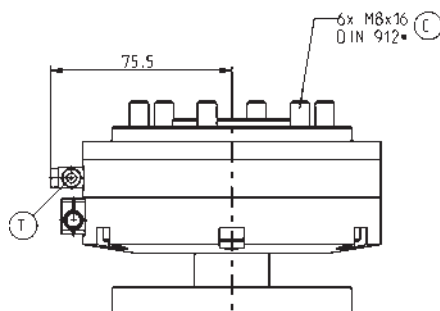


Cable straight plug
Order no. KAG500



Plug 3-pole
Order no. S12-G-3

Accessories



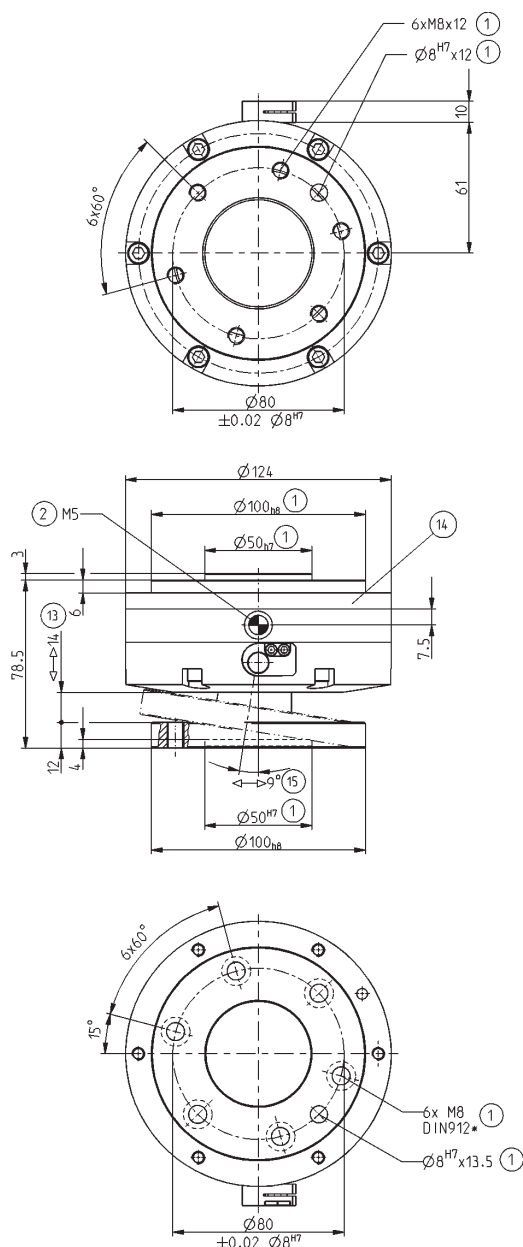
Subject to change without prior notice

Order no.:	CSR80
Connecting flange:	TK80 after EN ISO 9409-1
Building height [mm]:	78,5
Recommended handling weight [kg]*:	35
Deviation Z [mm]:	14
Axial repeat accuracy +/- [mm]:	0,05
Horizontal deviation [°]:	9
Radial repetition accuracy +/- [mm]:	0.05
Min./max. operating pressure. [bar]:	0.5/6
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,5

All data measured at 6 bar

* at central mounting

CSR80



- ① Fixing CSR
- ② Energy supply
- ⑬ Stroke Z
- ⑭ Adapter plate
- ⑮ Deviation maximal

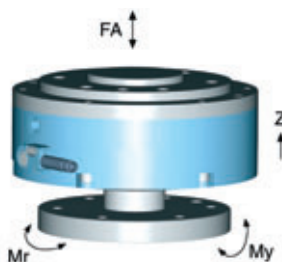
Subject to change without prior notice

Crashprotection



Forces and Moments

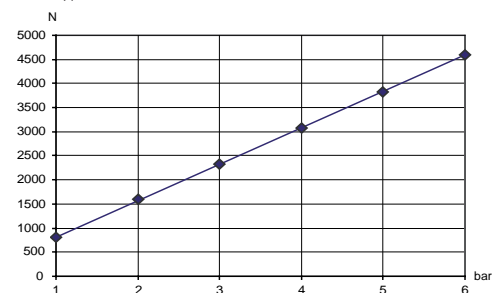
max. forces and moments see chart
technical data



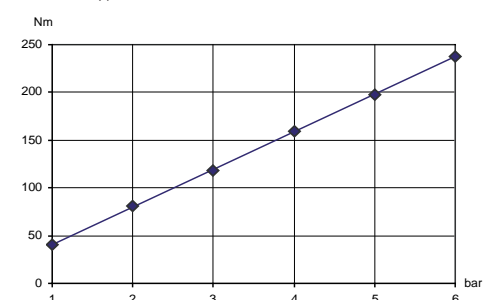
Air pressurisation

shows force and moments in dependence to the
pressure

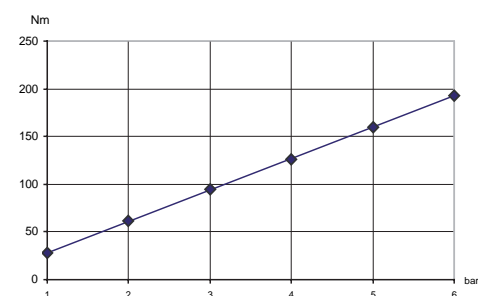
axial type of load F_A



Torsional type of load M_r



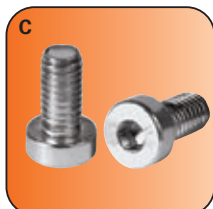
vertical type of load M_y



Included in the delivery



Proximity switch
Order no. NJ8-E2S-04



Screw
Order no. C912080209

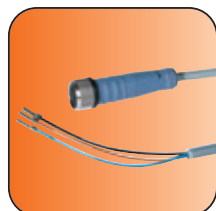
Accessory list



Pneumatic fittings
Order no. WVM5



Cable angled plug
Order no. KAW500

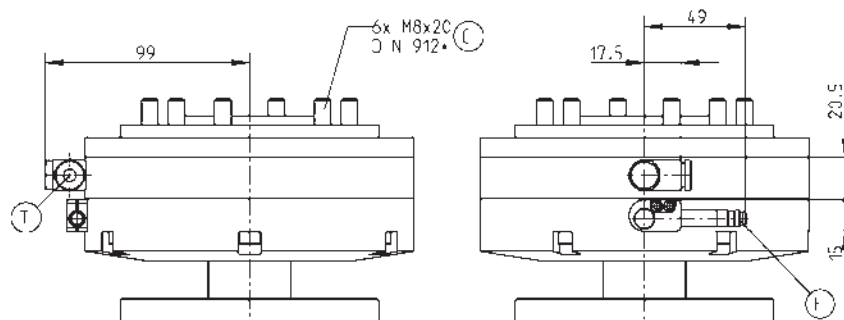


Cable straight plug
Order no. KAG500



Plug 3-pole
Order no. S12-G-3

Accessories



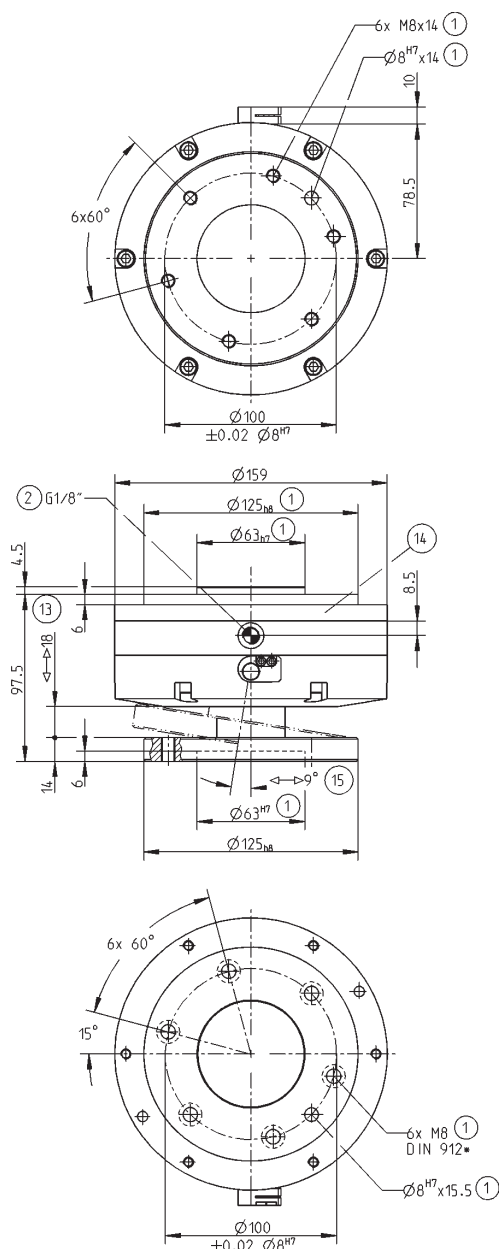
Subject to change without prior notice

Order no.:	CSR100
Connecting flange:	TK100 after EN ISO 9409-1
Building height [mm]:	97,5
Recommended handling weight [kg]*:	60
Deviation Z [mm]:	18
Axial repeat accuracy +/- [mm]:	0.05
Horizontal deviation [°]:	9
Radial repetition accuracy +/- [mm]:	0.05
Min./max. operating pressure. [bar]:	0.5/6
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	3,3

All data measured at 6 bar

* at central mounting

CSR100

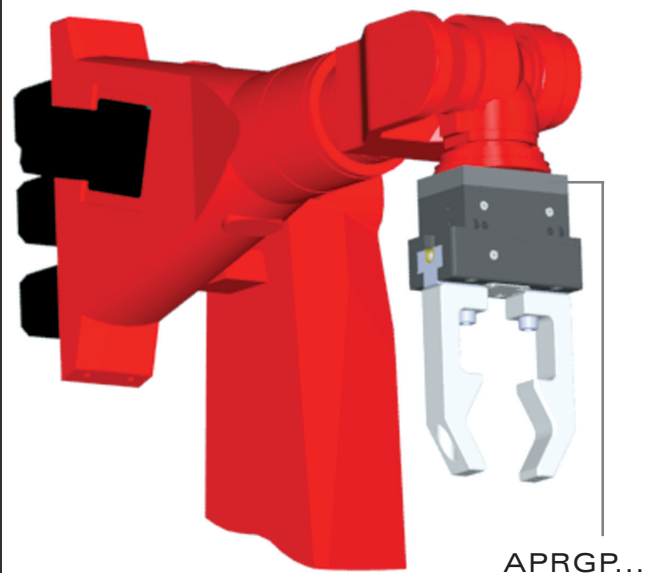
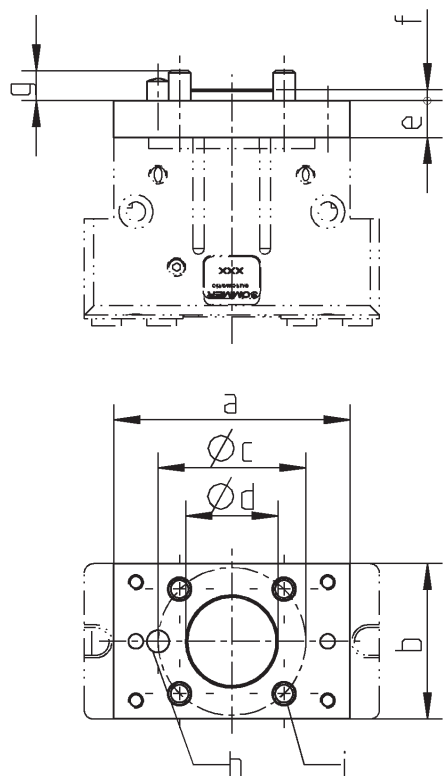


- ① Fixing CSR
- ② Energy supply
- ⑬ Stroke Z
- ⑭ Adapter plate
- ⑮ Deviation maximal

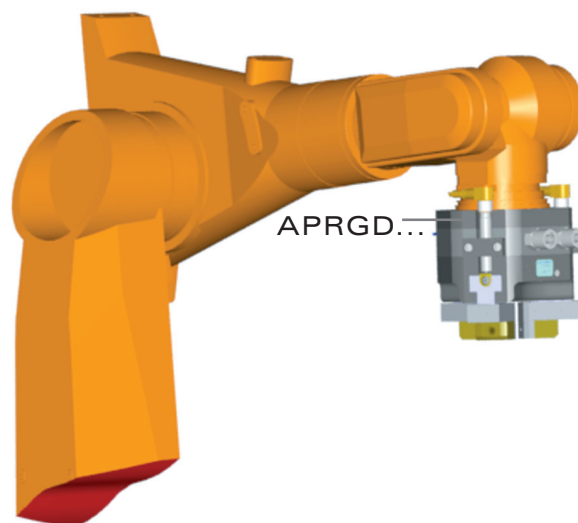
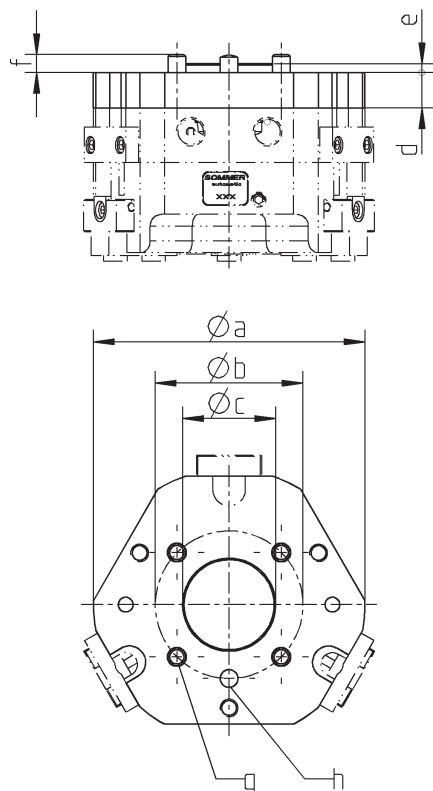
Subject to change without prior notice

Adapter *plates*

for Parallel gripper



for Three-jaw gripper



Subject to change without prior notice



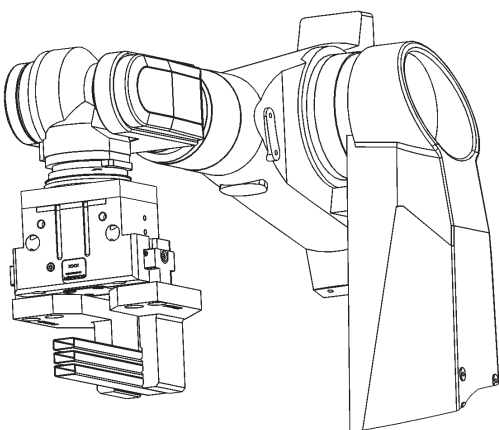
Parallel gripper

Order no.	Gripper	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	f [mm]	g [mm]	h [Screw DIN912]	i [Straight pin]	Weight [kg]
APRGPISO25	GP404, GP1804	42	28	25	16	6	2.5	6	4x M4	ø 4m6	0.02
APRGPISO31-5	GP406, GP1806	52	36	31.5	20	8	2.5	7	4x M5	ø 5m6	0.04
APRGPISO40	GP408, GP1808	64	42	40	25	10	3.0	8	4x M6	ø 6m6	0.07
APRGPISO50	GP410, GP1810	80	50	50	31.5	10	3.0	8	4x M6	ø 6m6	0.10
APRGPISO63	GP412, GP1812	100	60	63	40	10	3.0	8	4x M6	ø 6m6	0.20
APRGPISO80	GP416, GP1816	125	100	80	50	15	3.0	9	6x M8	ø 8m6	0.40
APRGPISO100	GP420, GP1820	160	120	100	63	15	4.5	9	6x M8	ø 8m6	1.00
APRGPISO125	GP430, GP1830	220	150	125	80	20	4.5	12	6x M10	ø 10m6	1.80

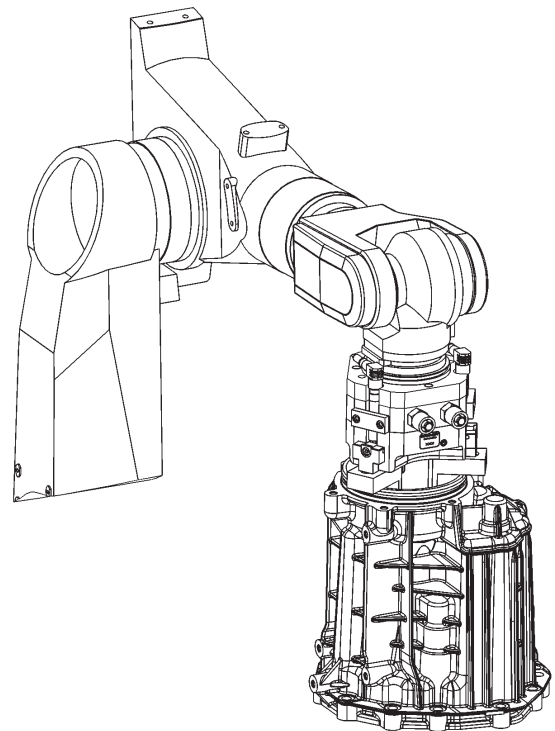
Three-jaw gripper

Order no.	Gripper	a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	f [mm]	g [Screw DIN912]	h [Straight pin]	Weight [kg]
APRGDISO31-5	GD304, GD1704	57	31.5	20.0	8	2.5	7	4x M5	ø 5m6	0.05
APRGDISO40	GD306, GD1806	74	40	25.0	10	3.0	8	4x M6	ø 6m6	0.10
APRGDISO50	GD308, GD1708	92	50	31.5	10	3.0	8	4x M6	ø 6m6	0.20
APRGDISO63	GD310, GD1710	114	63	40.0	10	3.0	8	4x M6	ø 6m6	0.30
APRGDISO80	GD312, GD1712	139	80	50.0	15	3.0	9	6x M8	ø 8m6	0.60
APRGDISO100	GD316, GD1716	179	100	63.0	15	4.5	9	6x M8	ø 8m6	1.00
APRGDISO125	GD320, GD1720	218	125	80.0	20	4.5	12	6x M10	ø 10m6	1.80

Fixing screws and pins for the mentioned gripper are included in the delivery



Parallel gripper



Three-jaw gripper



➤ Grippers <i>pneumatic</i>	01
➤ Grippers <i>electrical</i>	02
➤ Grippers <i>hydraulic</i>	03
➤ Grippers <i>Special</i>	04
➤ Grip & Rotate Modules <i>pneumatic</i>	05
➤ Separators	06
➤ Swivel Units <i>pneumatic</i>	07
➤ Swivel Units <i>electrical</i>	08
➤ Swivel Units <i>hydraulic</i>	09
➤ Rotation Jaws <i>pneumatic</i>	10
➤ Axial Compensation Modules	11
➤ Tool Changers	12
➤ Robotics Accessories	13
➤ Linear Cylinders	14
➤ Shock Absorber	15
➤ Air Vane Motors	16
➤ Rotary Cylinders	17
➤ Vacuum Components	18
➤ Accessorios	19