



Axis Modules

pneumatic

SOMMER
automatic

Axis Modules

XY-Compensation

Order no.	Stroke XY-Ebene ± [mm]	Handling weight recommended [kg]	Page
Product Information			6
XY70	3	6	10
XY100	5	12	12
XY160	8	30	14
XY220	10	150	16
XY320	15	400	18



XYZ-Compensation

Order no.	Stroke XY-Ebene ± [mm]	Stroke Z-Achse [mm]	Handling weight recommended [kg]	Page
XYZ70	3	6	6	20
XYZ100	5	10	12	22
XYZ160	8	16	30	24
XYZ220	10	25	150	26





Crash protector

Order no.	deviation Z [mm]	deviation horizontal [°]	Handling weight recommended [kg]	Page
Things worth knowing CS-serie				30
CS80-B	12,5	12,5	6	34
CS100-B	10,5	12,5	12	36
CS160	18,0	9,0	60	38



Alignment Compensator

Order no.	deviation horizontal ± [mm]	Handling weight recommended [kg]	Page
Things worth knowing FG-serie			42
FG79	2	10	46
FG100	4	20	48





Axis Modules

pneumatic



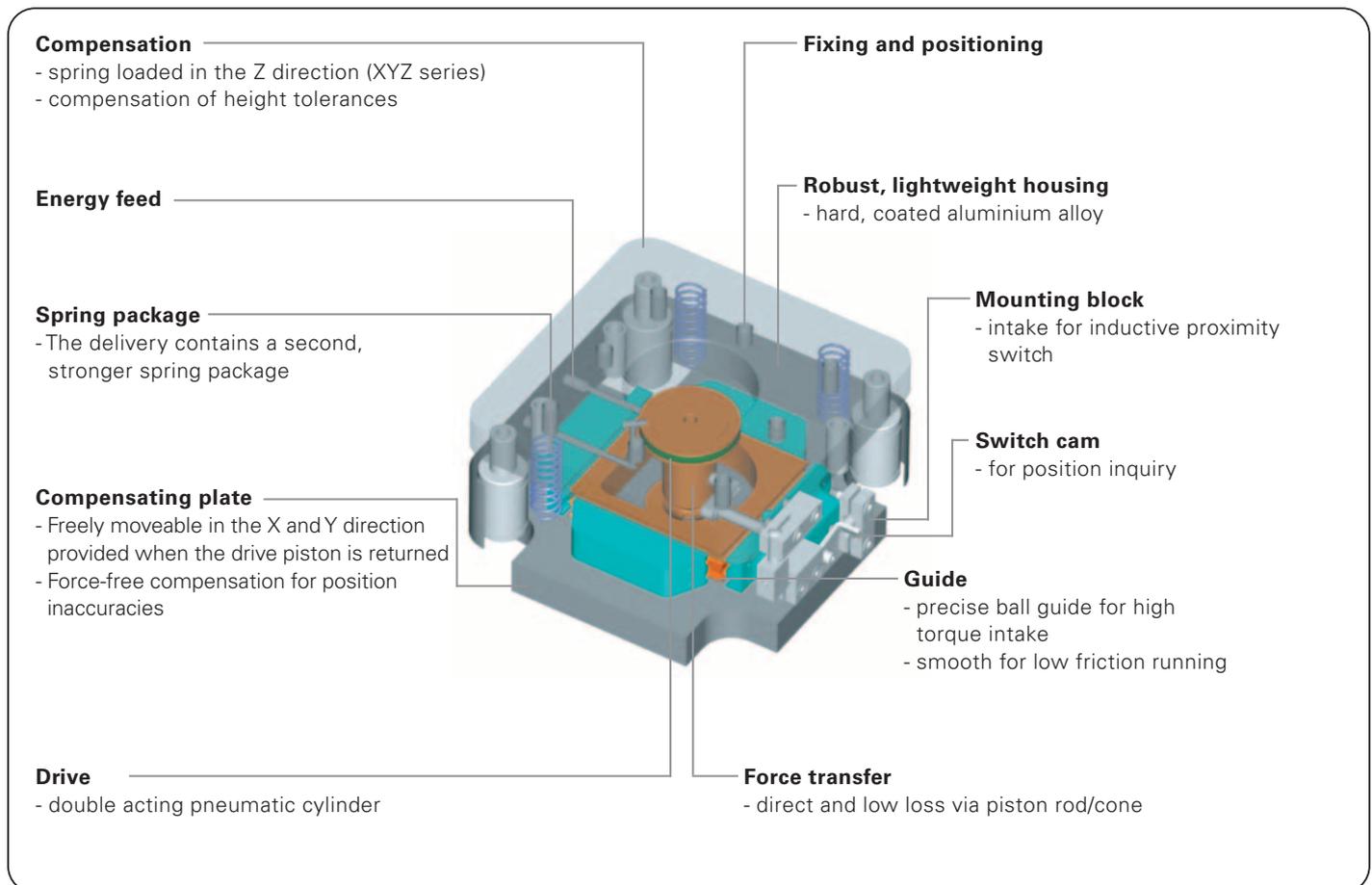
XY-Series
XYZ-Series

Axis Modules

➤ Features

- Precise compensation in the X and Y axis with integrated centring mechanism, up to 4000 N centring force and +/- 15 mm stroke
- Compensates for position errors when gripping and thus prevents tension in the gripper jaws
- Position inquiry for „centred and locked“ or „open and compensating“ via inductive proximity switch
- Additional Z stroke up to 25 mm length to compensating for height tolerances or as extension protection (XYZ series)

Functional diagram



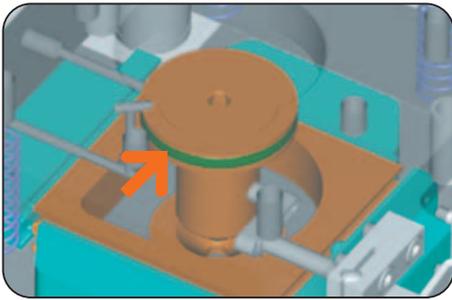
Terms

Centring force:	operating force generated by the pneumatic piston for middlee centring of the blancing plate
Handling weight:	recommended weight with central extension and 6 bar operating pressure
Repeatability:	dispersion of stop position at 50/100 consecutive swivel cycles
Cycle:	distance covered by the piston in one open and close movement
Maintenance:	<p>maintenance free up to 10 Mio. cycles (please see the owner's manual for conditions, download from www.sommer-automatic.com)</p> <ul style="list-style-type: none"> • long maintenance intervals keep costs down • long durability

Model

Order no.	Stroke X/Y	Stroke Z	centring force	Recommended handl weight
XY70	+/- 3 mm	-	70 N	6,0 kg
XY100	+/- 5 mm	-	250 N	12,0 kg
XY160	+/- 8 mm	-	750 N	30,0 kg
XY220	+/- 10 mm	-	1250 N	150,0 kg
XY320	+/- 15 mm	-	4000 N	400,0 kg
XYZ70	+/- 3 mm	6 mm	70 N	6,0 kg
XYZ100	+/- 5 mm	10 mm	250 N	12,0 kg
XYZ160	+/- 8 mm	16 mm	700 N	30,0 kg
XYZ220	+/- 10 mm	25 mm	1200 N	150,0 kg

Axis Modules



Drive

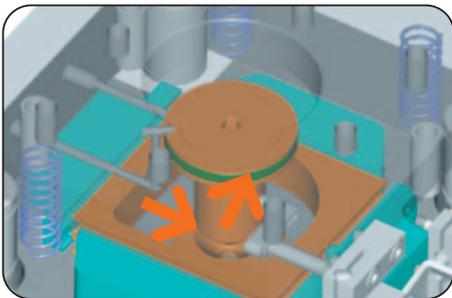
Double acting pneumatic cylinder

- Maximum drive force when locking and unlocking
- Centring force up to 4000 N



Compensation

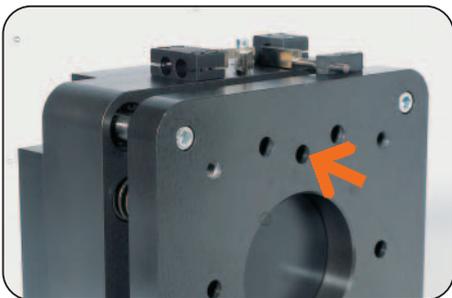
- Compensation plate in X and Y direction freely moveable
- Stroke up to +/- 15 mm
- Force-free compensation for position inaccuracies



Force transfer

Direct and low loss via piston rod/cone

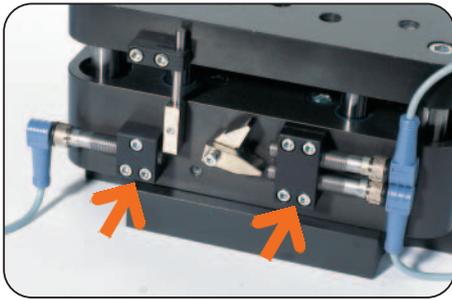
- Maximum centring force
- High repeatability



Machine connection

Energy supply, attachment and positioning-possibilities on several sides

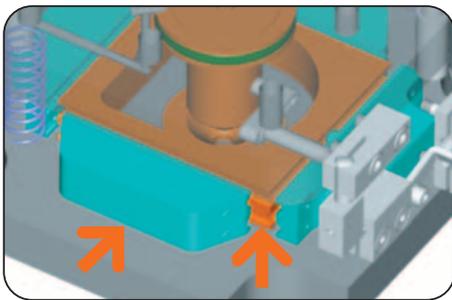
- Machine and tool side with stable threads and pin holes
- Simple connection, low design effort
- Optimum integration into the workroom through individual mounting position



Position sensing

Intake for inductive proximity switch

- Indirect position sensing of piston positions in the X and Y position
- Direct position sensing in the Z position for XYZ series
- Compact
- For inductive proximity switch up to 12 mm diameter



Guide

Hardened steel ball guide

- For maximum force and torque intake
- Very smooth ball track or ball circuit guide (XY320)
- Precise

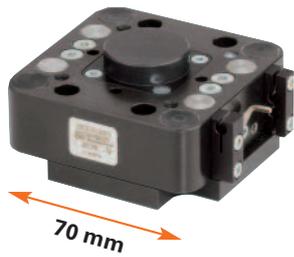


Stroke compensation

Only on XYZ series

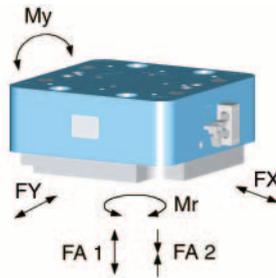
- Stroke compensation spring loaded in Z direction
- Stroke up to 25 mm
- Compensation of height tolerances

Axis Modules



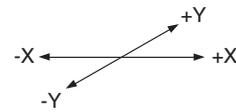
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

Max. compensation stroke see chart technical data



Included in the delivery

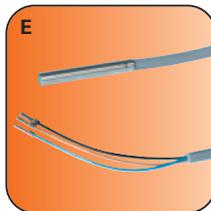


Mounting block
Order no. KB4-04

Accessory list



Pneumatic fittings
Order no. WVM5



Proximity switch
Order no. NJ4-E2

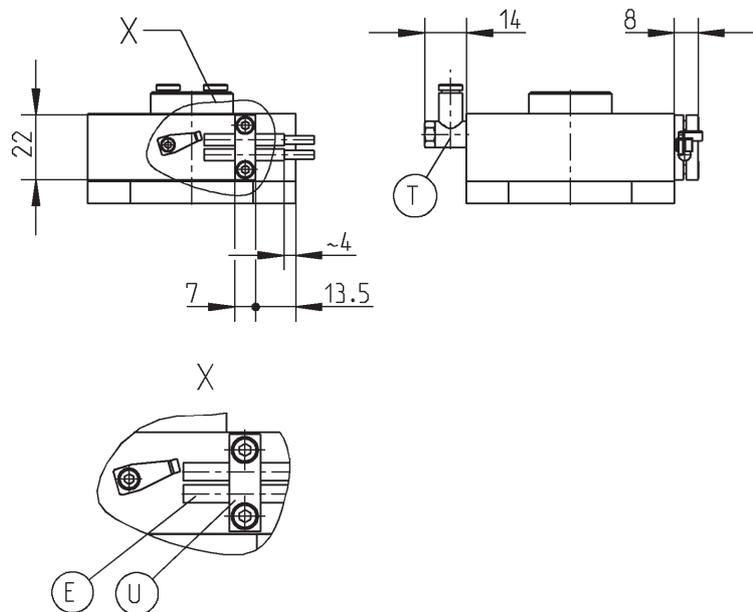


Pneumatic fittings
Order no. GVM5



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

Accessories

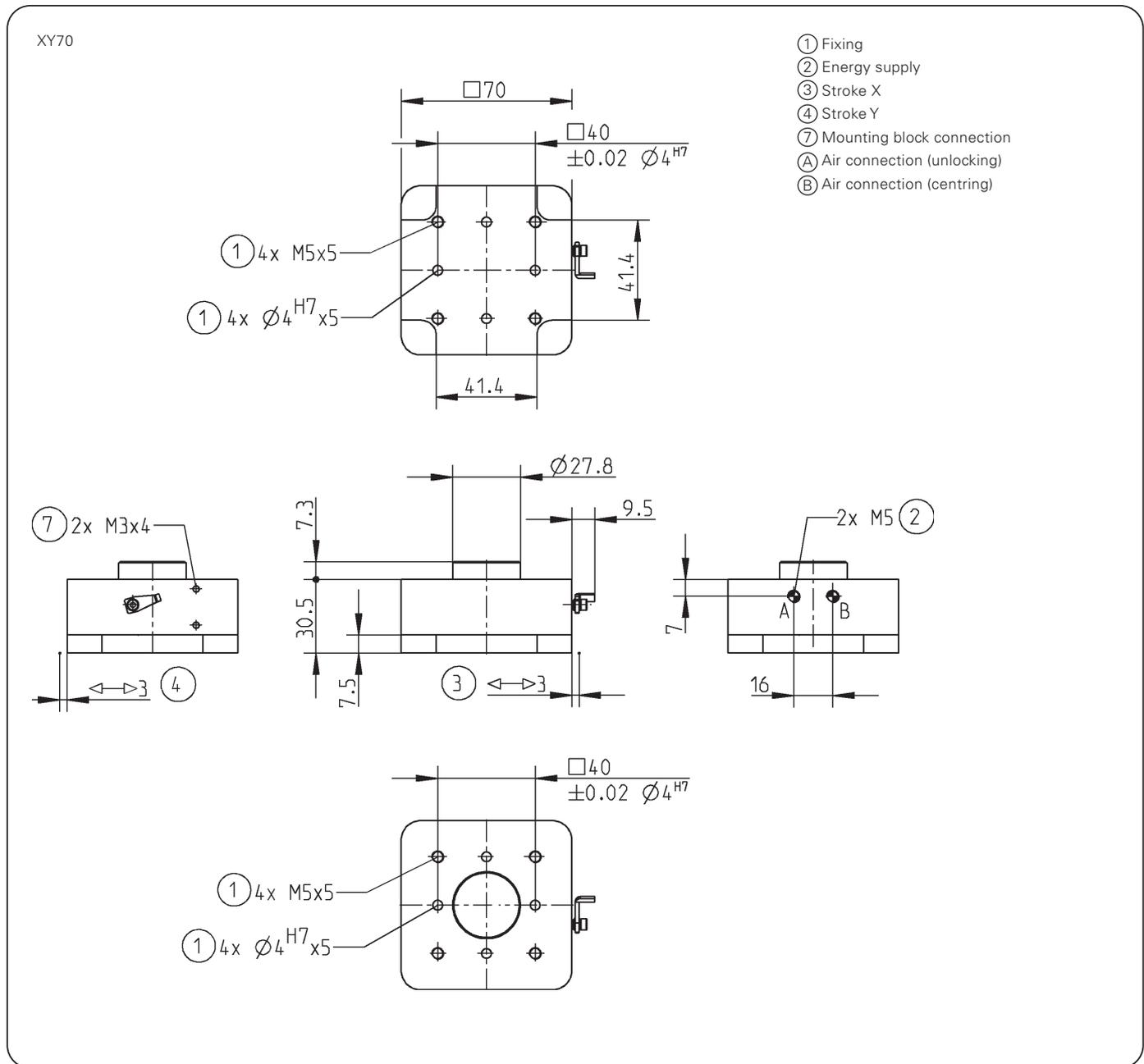


Subject to change without prior notice

Order no.:	XY70
Stroke X/Y level +/- [mm]:	3
Centring force X/Y level [N]:	70
Recommended handling weight [kg]*:	6
FA1 [N]:	600
FA2 [N]:	1200
FX [N]:	100
FY [N]:	100
Mr [Nm]:	9
My [Nm]:	2,5
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [g]:	500

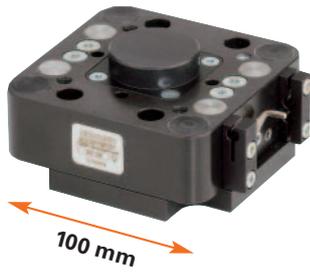
All data measured at 6 bar

* at central mounting



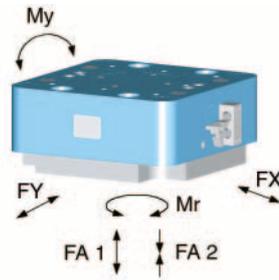
Subject to change without prior notice

Axis Modules



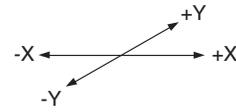
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

Max. compensation stroke see chart technical data



Included in the delivery

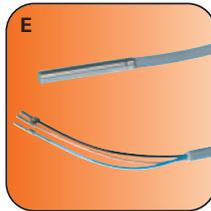


Mounting block
Order no. KB4-04

Accessory list



Pneumatic fittings
Order no. WVM5



Proximity switch
Order no. NJ4-E2

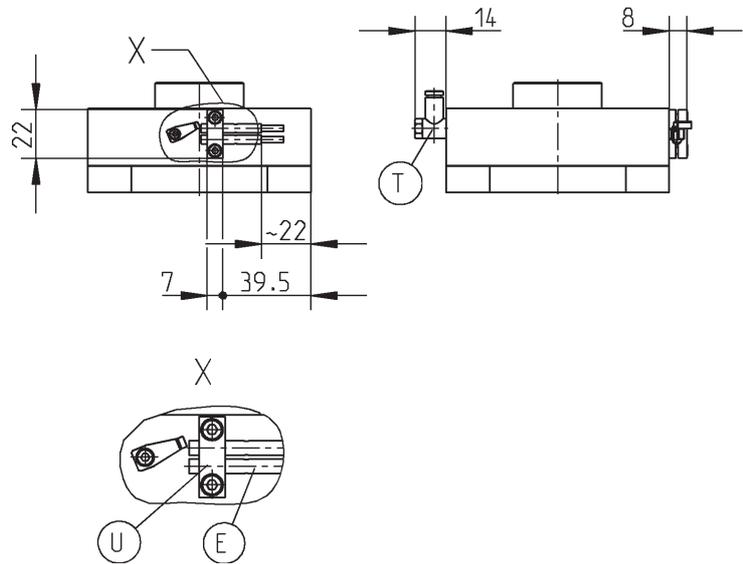


Pneumatic fittings
Order no. GVM5



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

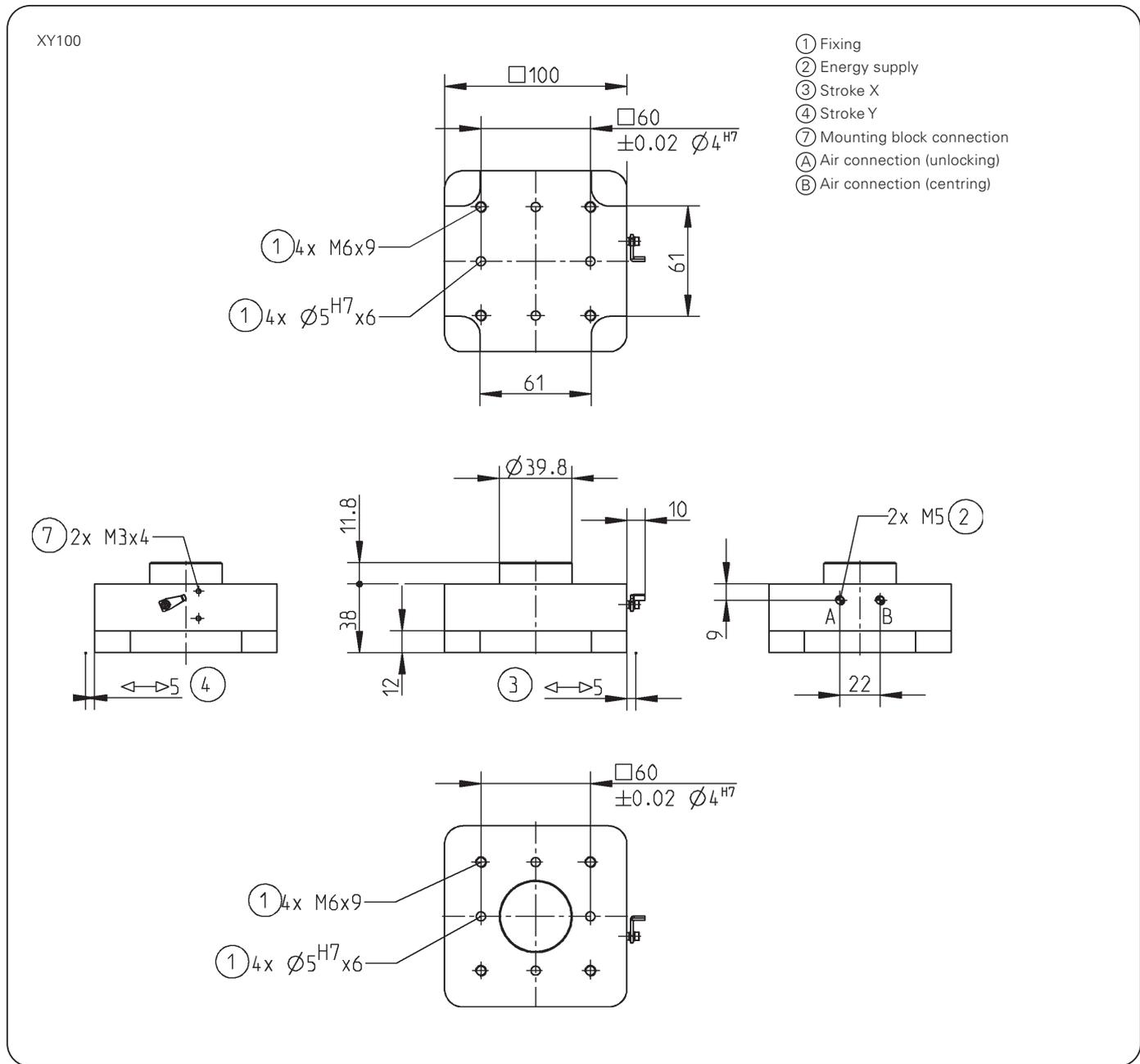
Accessories



Subject to change without prior notice

Order no.:	XY100
Stroke X/Y level +/- [mm]:	5
Centring force X/Y level [N]:	250
Recommended handling weight [kg]*:	12
FA1 [N]:	900
FA2 [N]:	1800
FX [N]:	200
FY [N]:	200
Mr [Nm]:	11
My [Nm]:	4,5
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,3

All data measured at 6 bar
 * at central mounting



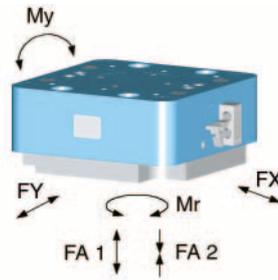
Subject to change without prior notice

Axis Modules



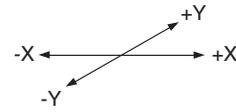
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

Max. compensation stroke see chart technical data



Included in the delivery



Mounting block
Order no. KB8-42

Accessory list



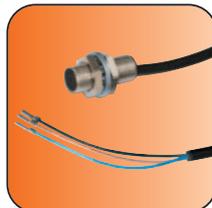
Pneumatic fittings
Order no. WV1/8x6



Proximity switch
Order no. NJ8-E2S



Pneumatic fittings
Order no. GV1/8x6



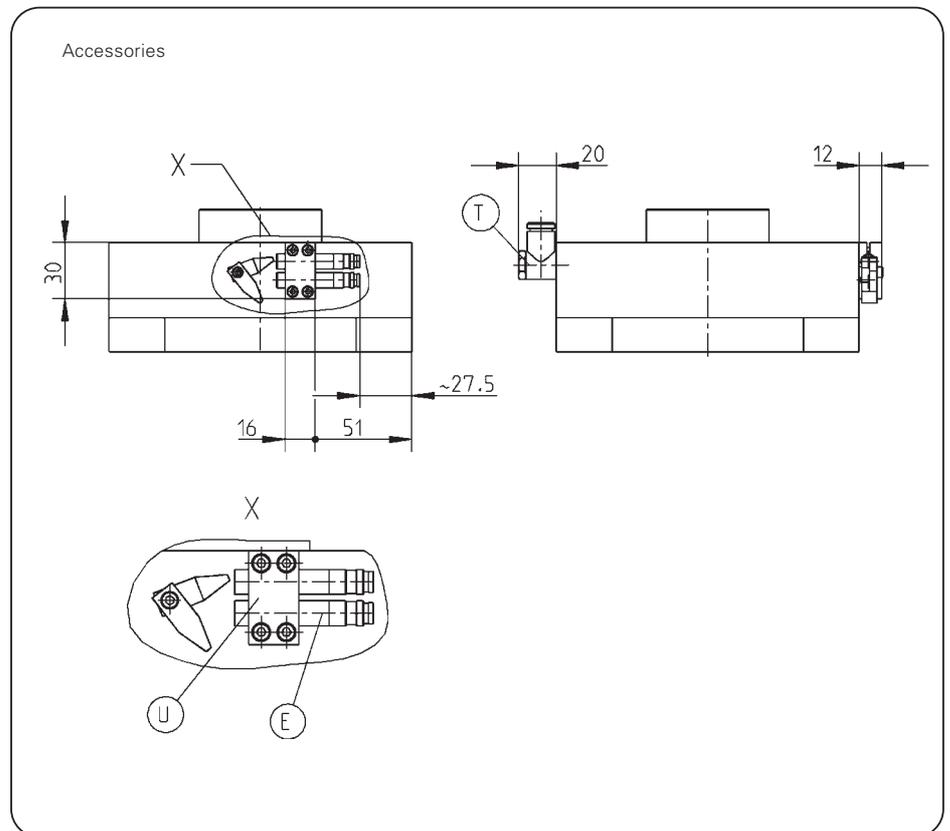
Proximity switch
Order no. NJ8-E2



Cable angled plug
Order no. KAW500



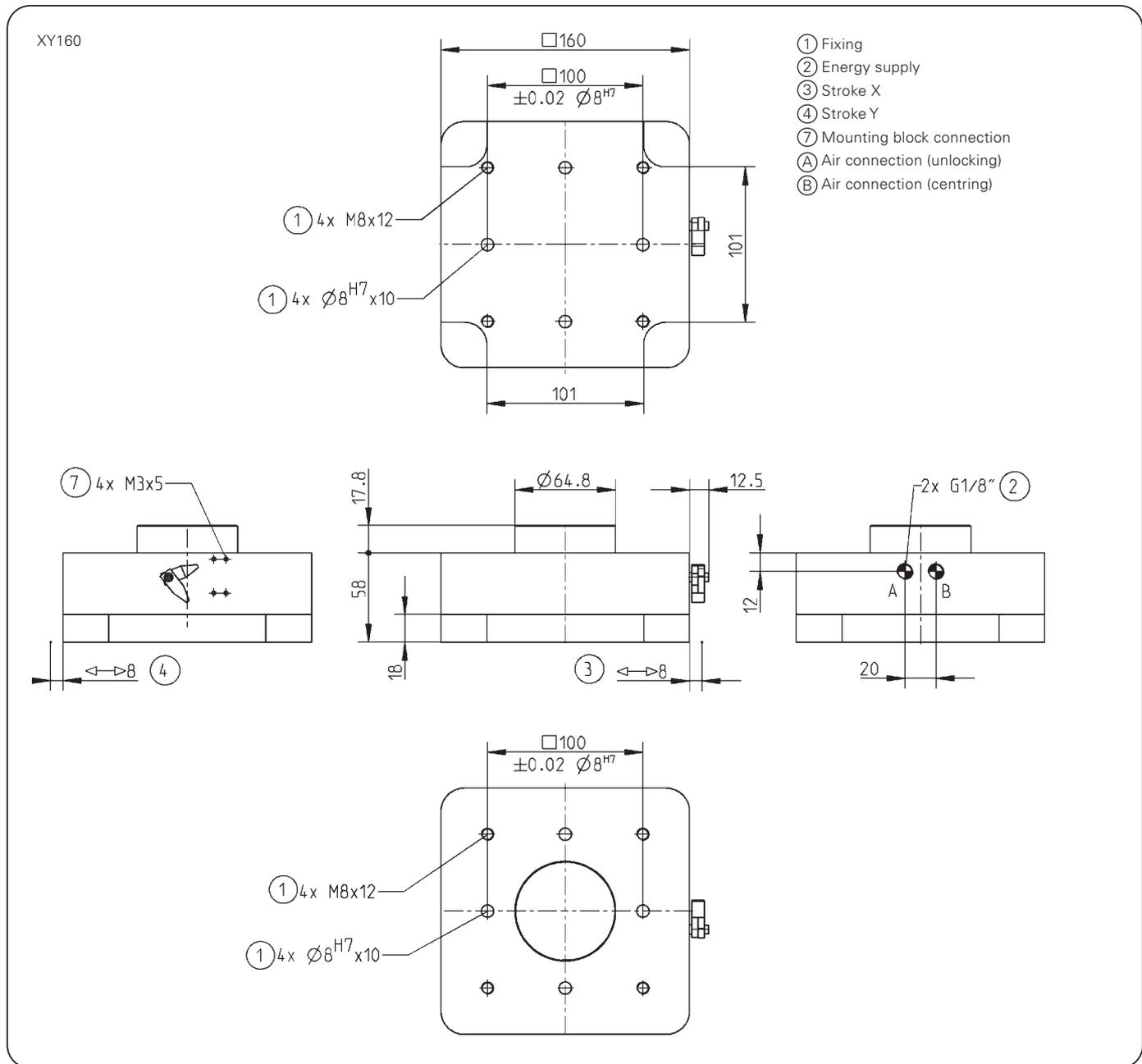
Plug 3-pole
Order no. S12-G-3



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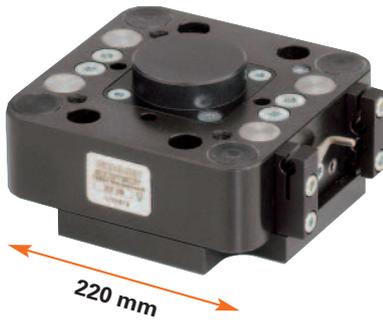
Order no.:	XY160
Stroke X/Y level +/- [mm]:	8
Centring force X/Y level [N]:	700
Recommended handling weight [kg]*:	30
FA1 [N]:	1500
FA2 [N]:	3000
FX [N]:	600
FY [N]:	600
Mr [Nm]:	20
My [Nm]:	12
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	4,5

All data measured at 6 bar
 * at central mounting



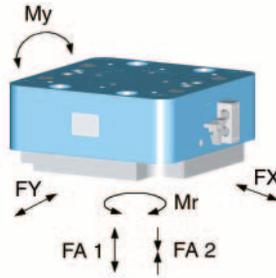
Subject to change without prior notice

Axis Modules



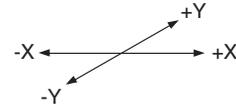
Forces and Moments

Max. Forces and Moments see chart technical data

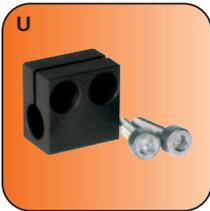


Compensation level

Max. compensation stroke see chart technical data



Included in the delivery



Mounting block
Order no. KB12-04

Accessory list



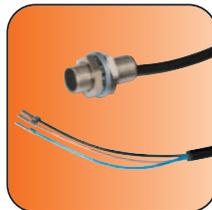
Pneumatic fittings
Order no. WV1/4x6



Proximity switch
Order no. NJ12-E2S



Pneumatic fittings
Order no. GV1/4x6



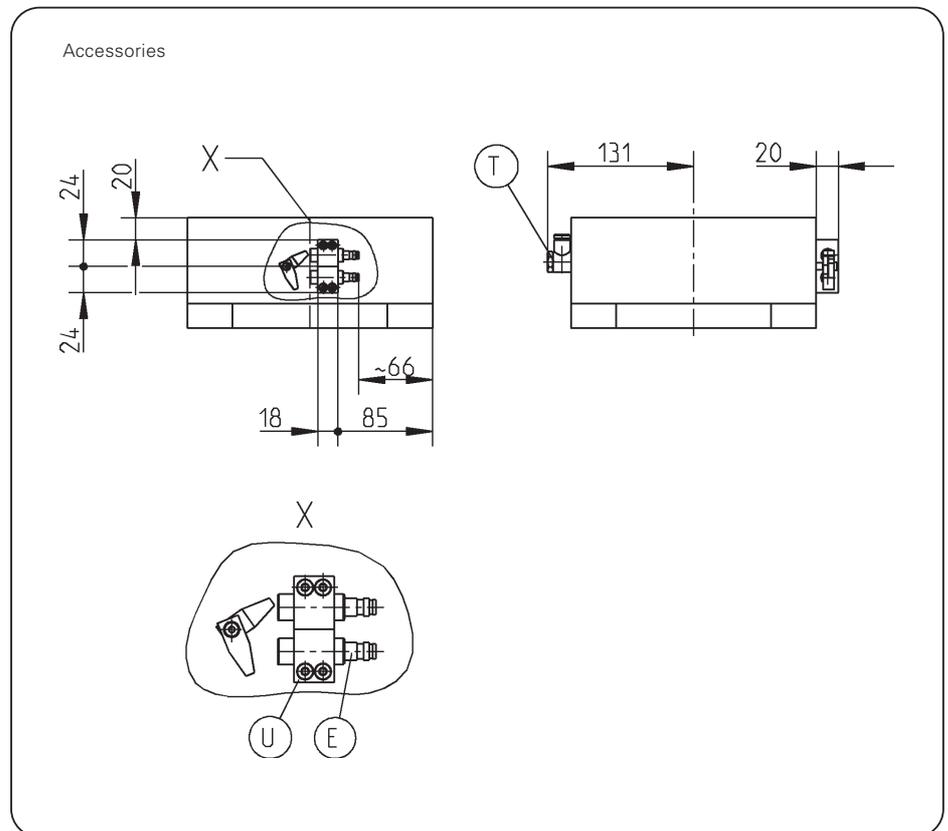
Proximity switch
Order no. NJ8-E2



Cable angled plug
Order no. KAW500



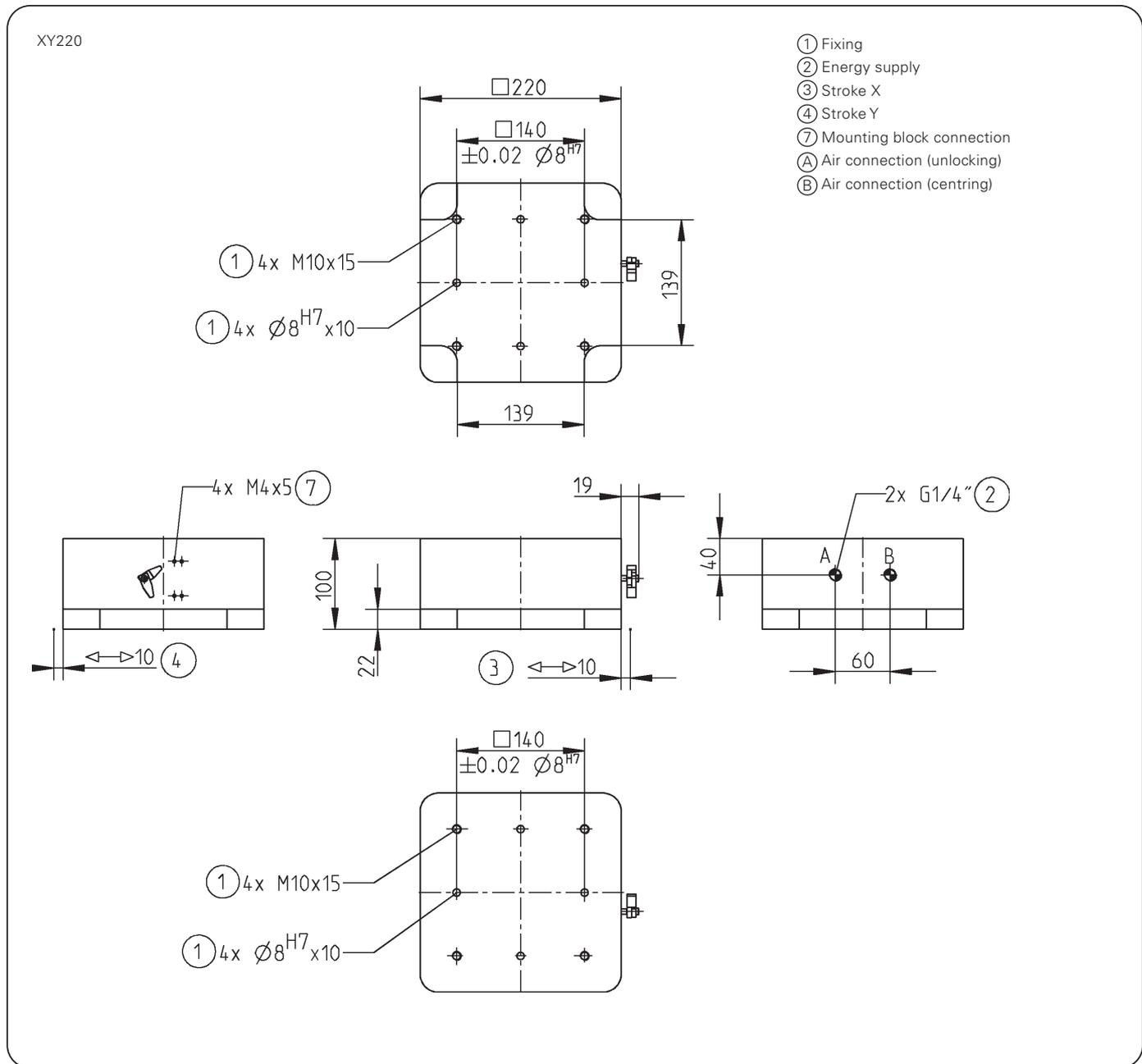
Plug 3-pole
Order no. S12-G-3



Subject to change without prior notice

Order no.:	XY220
Stroke X/Y level +/- [mm]:	10
Centring force X/Y level [N]:	1200
Recommended handling weight [kg]*:	150
FA1 [N]:	2500
FA2 [N]:	5000
FX [N]:	650
FY [N]:	650
Mr [Nm]:	30
My [Nm]:	30
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	14,5

All data measured at 6 bar
 * at central mounting



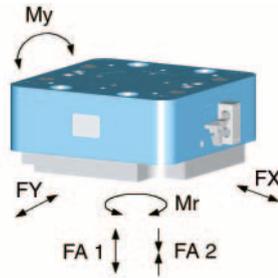
Subject to change without prior notice

Axis Modules



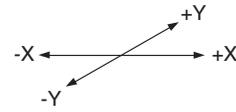
Forces and Moments

Max. Forces and Moments see chart technical data

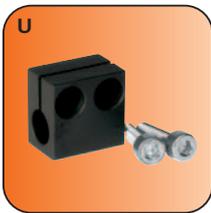


Compensation level

Max. compensation stroke see chart technical data



Included in the delivery



Mounting block
Order no. KB12-04

Accessory list



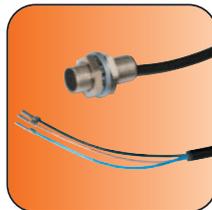
Pneumatic fittings
Order no. WV1/4x6



Proximity switch
Order no. NJ12-E2S



Pneumatic fittings
Order no. GV1/4x6



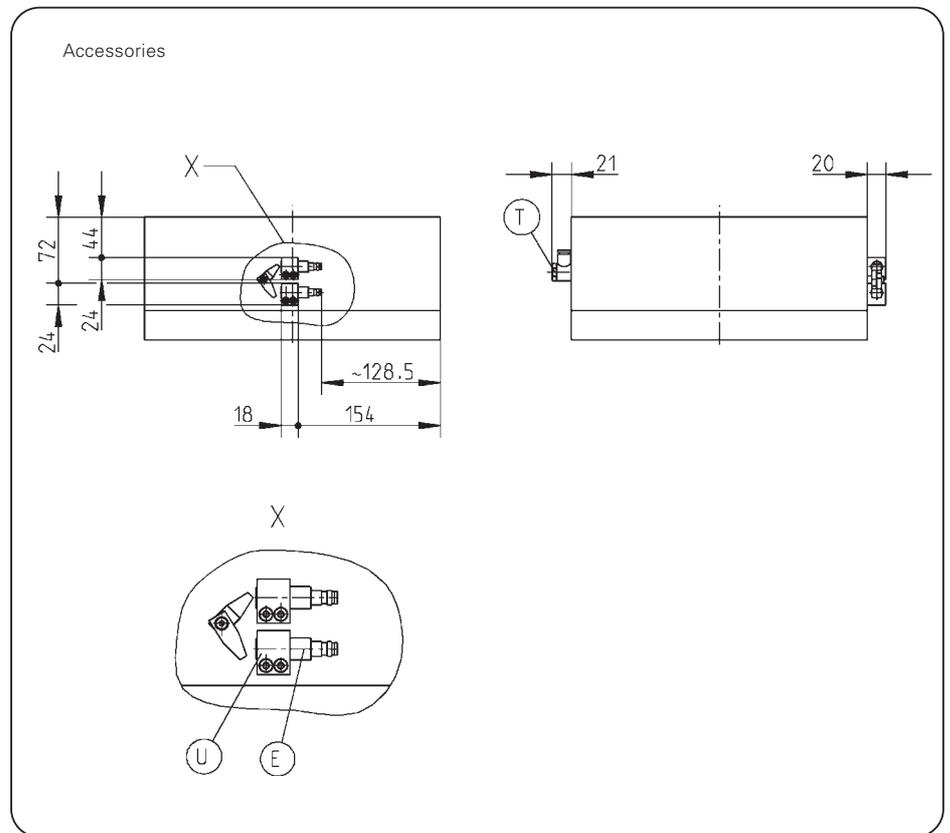
Proximity switch
Order no. NJ8-E2



Cable angled plug
Order no. KAW500



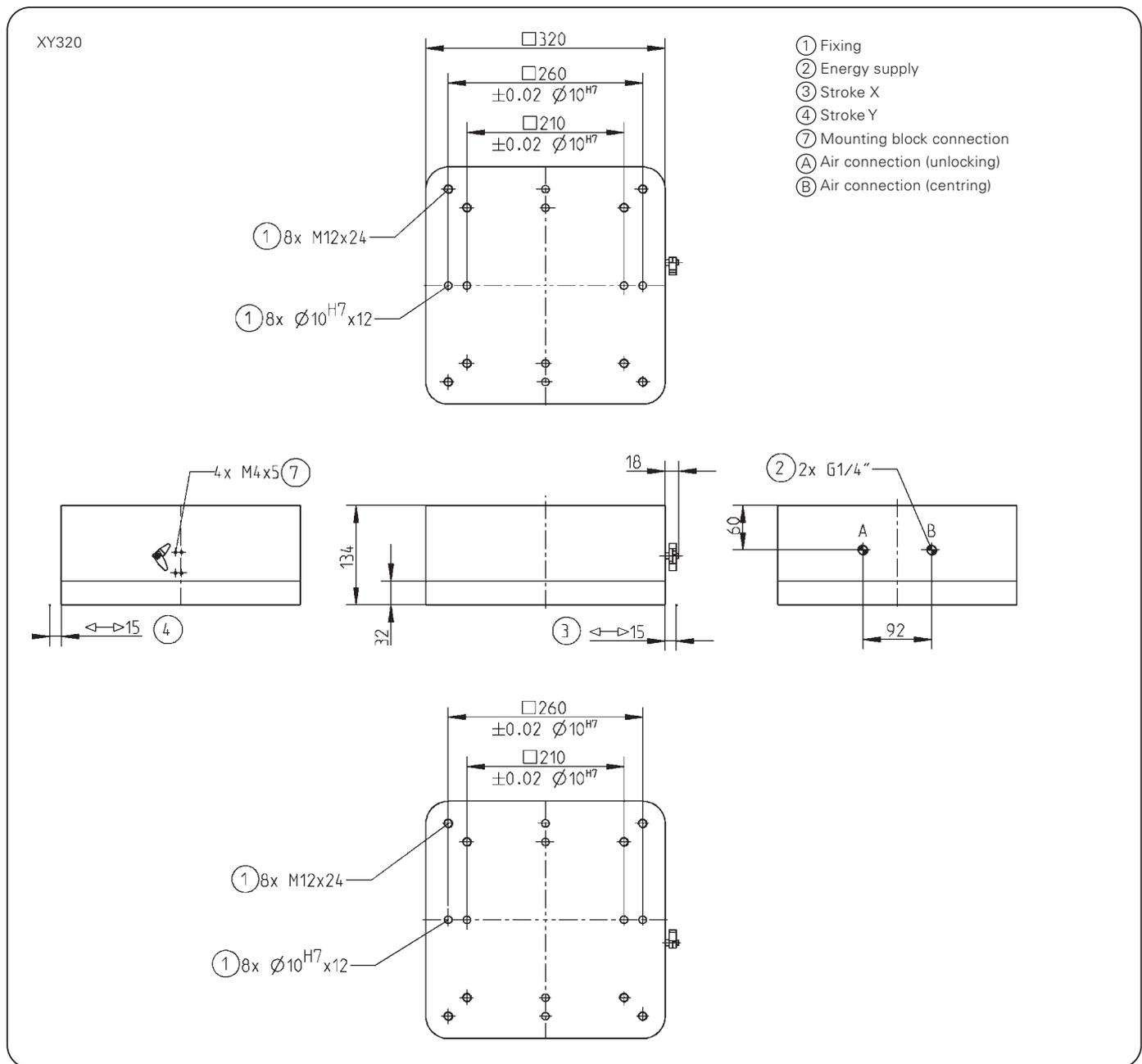
Plug 3-pole
Order no. S12-G-3



Subject to change without prior notice

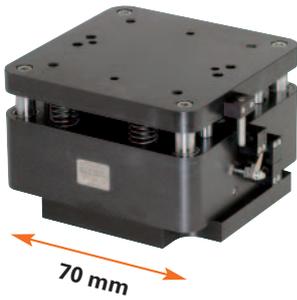
Order no.:	XY320
Stroke X/Y level +/- [mm]:	15
Centring force X/Y level [N]:	4000
Recommended handling weight [kg]*:	400
FA1 [kN]:	10
FA2 [kN]:	20
FX [kN]:	10
FY [kN]:	10
Mr [Nm]:	500
My [Nm]:	500
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	39,0

All data measured at 6 bar
 * at central mounting



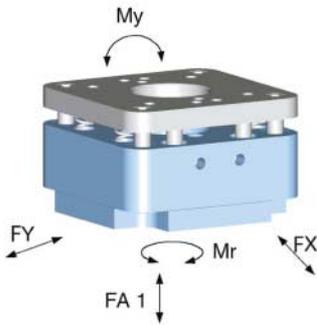
Subject to change without prior notice

Axis Modules



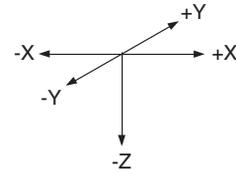
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

Max. compensation stroke see chart technical data



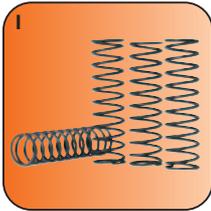
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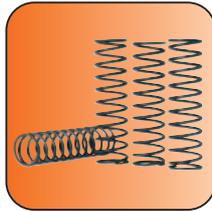
Mounting block
Order no. KB4-04



Mounting block
Order no. KB4-05



Spring package 1
(pre-assemble)
Order no. CFED07020

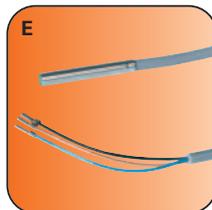


Spring package 2
(pre-assemble)
Order no. CFED07040

Accessory list



Pneumatic fittings
Order no. WVM5



Proximity switch
Order no. NJ4-E2

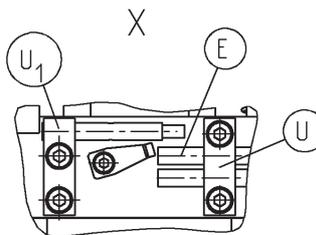
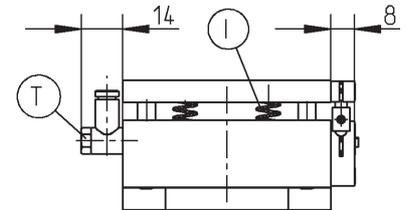
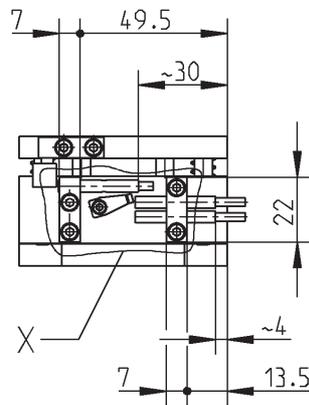


Pneumatic fittings
Order no. GVM5



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

Accessories



Subject to change without prior notice

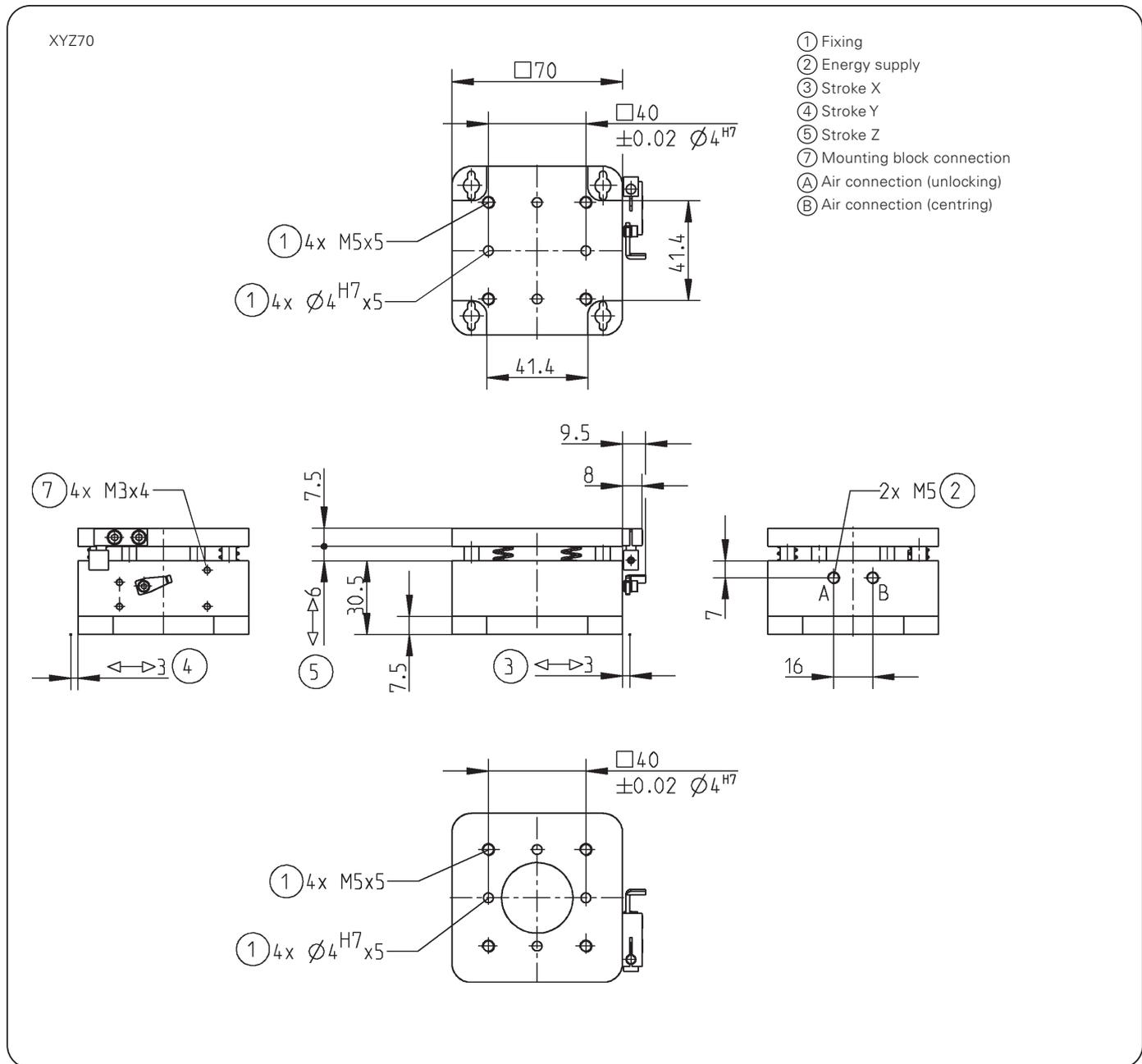
Order no.:	XYZ70
Stroke X/Y level +/- [mm]:	3
Stroke Z-axis [mm]:	6
Centring force X/Y level [N]:	70
Spring force Z-axis (Spring package 1) min./max. [N]**:	50/65
Spring force Z-axis (Spring package 2) min./max. [N]***:	60/85
Recommended handling weight [kg]*	6
FA1 [N]:	600
FX [N]:	100
FY [N]:	100
Mr [Nm]:	9
My [Nm]:	2,5
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [g]:	600

All data measured at 6 bar

* at central mounting

** Spring package 1 preset

*** Spring package 2 will be delivered separately and can be changes if required



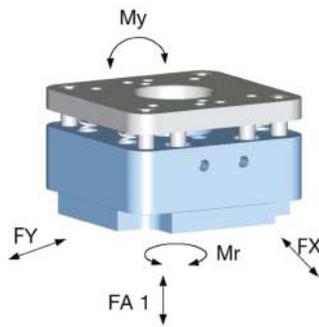
Subject to change without prior notice

Axis Modules



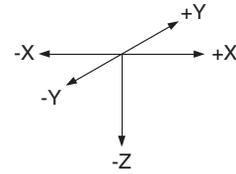
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

Max. compensation stroke see chart technical data



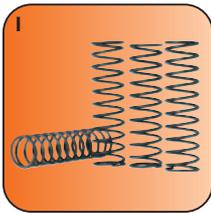
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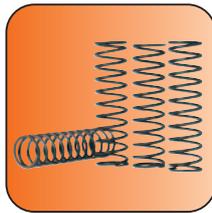
Mounting block
Order no. KB4-04



Mounting block
Order no. KB4-05



Spring package 1
(pre-assemble)
Order no. CFED0702

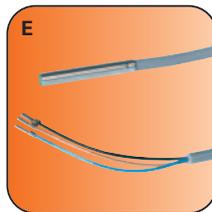


Spring package 2
(pre-assemble)
Order no. CFED07040

Accessory list



Pneumatic fittings
Order no. WVM5



Proximity switch
Order no. NJ4-E2

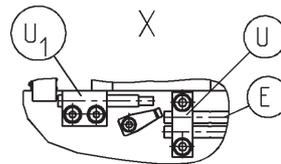
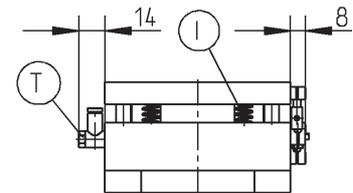
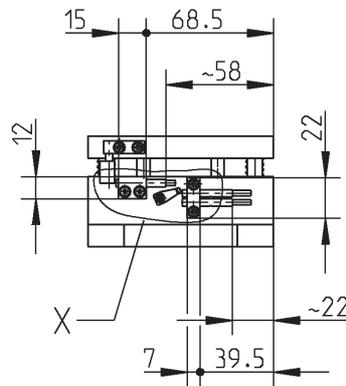


Pneumatic fittings
Order no. GVM5



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

Accessories



Subject to change without prior notice



Order no.:	XYZ100
Stroke X/Y level +/- [mm]	5
Stroke Z-axis [mm]:	10
Centring force X/Y level [N]:	250
Spring force Z-axis (Spring package 1) min./max. [N]**:	34/80
Spring force Z-axis (Spring package 2) min./max. [N]***:	40/100
Recommended handling weight [kg]*:	12
FA1 [N]:	900
FX [N]:	200
FY [N]:	200
Mr [Nm]:	11
My [Nm]:	4,5
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,6

All data measured at 6 bar

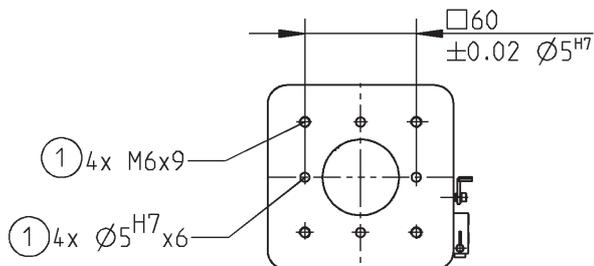
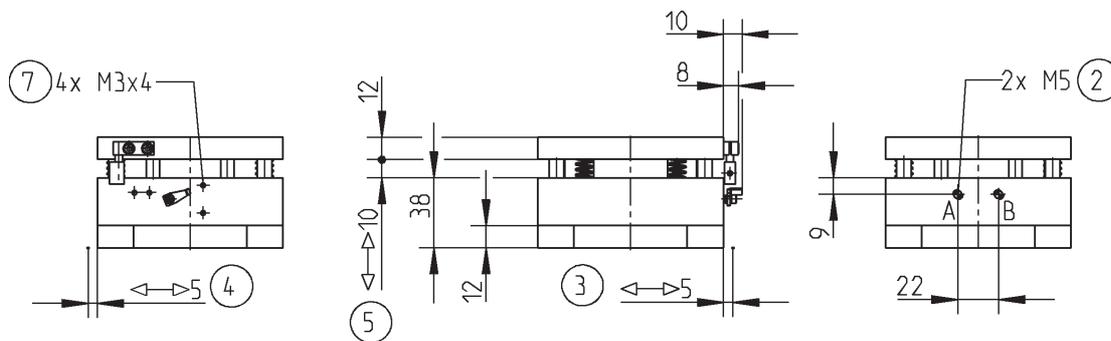
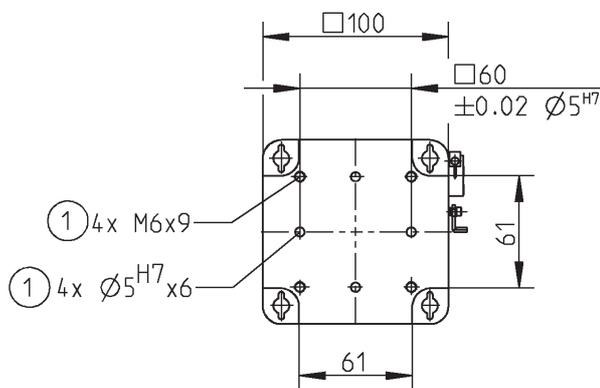
* at central mounting

** Spring package 1 preset

*** Spring package 2 will be delivered separately and can be changes if required

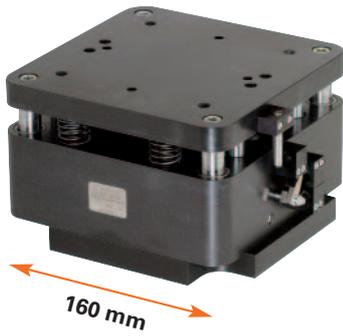
XYZ100

- ① Fixing
- ② Energy supply
- ③ Stroke X
- ④ Stroke Y
- ⑤ Stroke Z
- ⑦ Mounting block connection
- Ⓐ Air connection (unlocking)
- Ⓑ Air connection (centring)



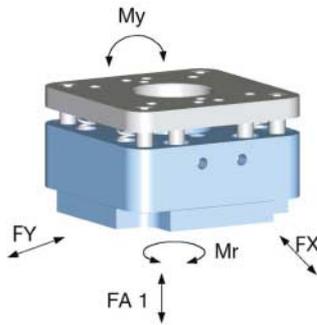
Subject to change without prior notice

Axis Modules



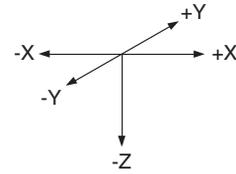
Forces and Moments

Max. Forces and Moments see chart technical data



Compensation level

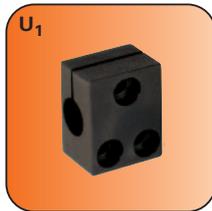
Max. compensation stroke see chart technical data



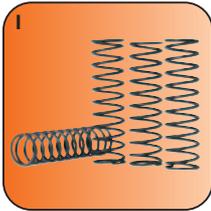
Included in the delivery



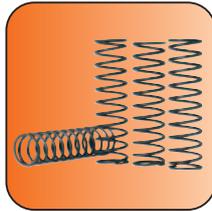
Mounting block
Order no. KB8-42



Mounting block
Order no. KB8



Spring package 1
(pre-assemble)
Order no. CFED16030



Spring package 2
Order no. CFED16040

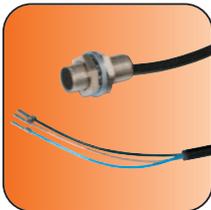
Accessory list



Pneumatic fittings
Order no. WV1/8x6



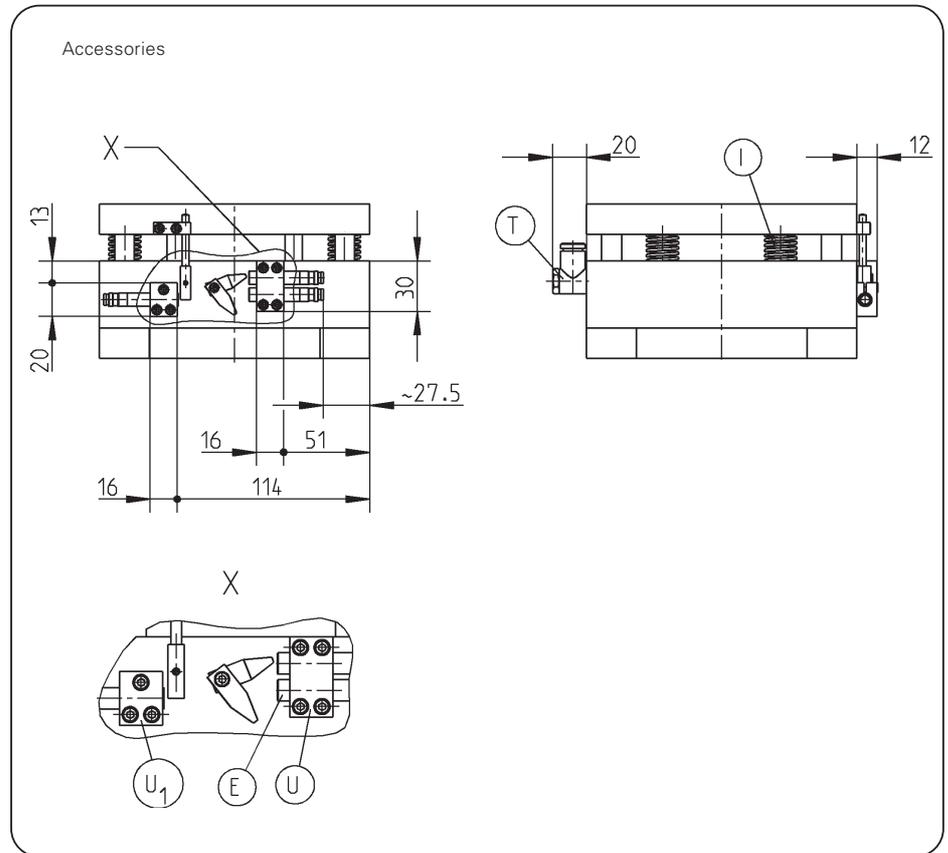
Proximity switch
Order no. NJ8-E2S



Proximity switch
Order no. NJ8-E2



Cable angled plug
Order no. KAW500



Subject to change without prior notice

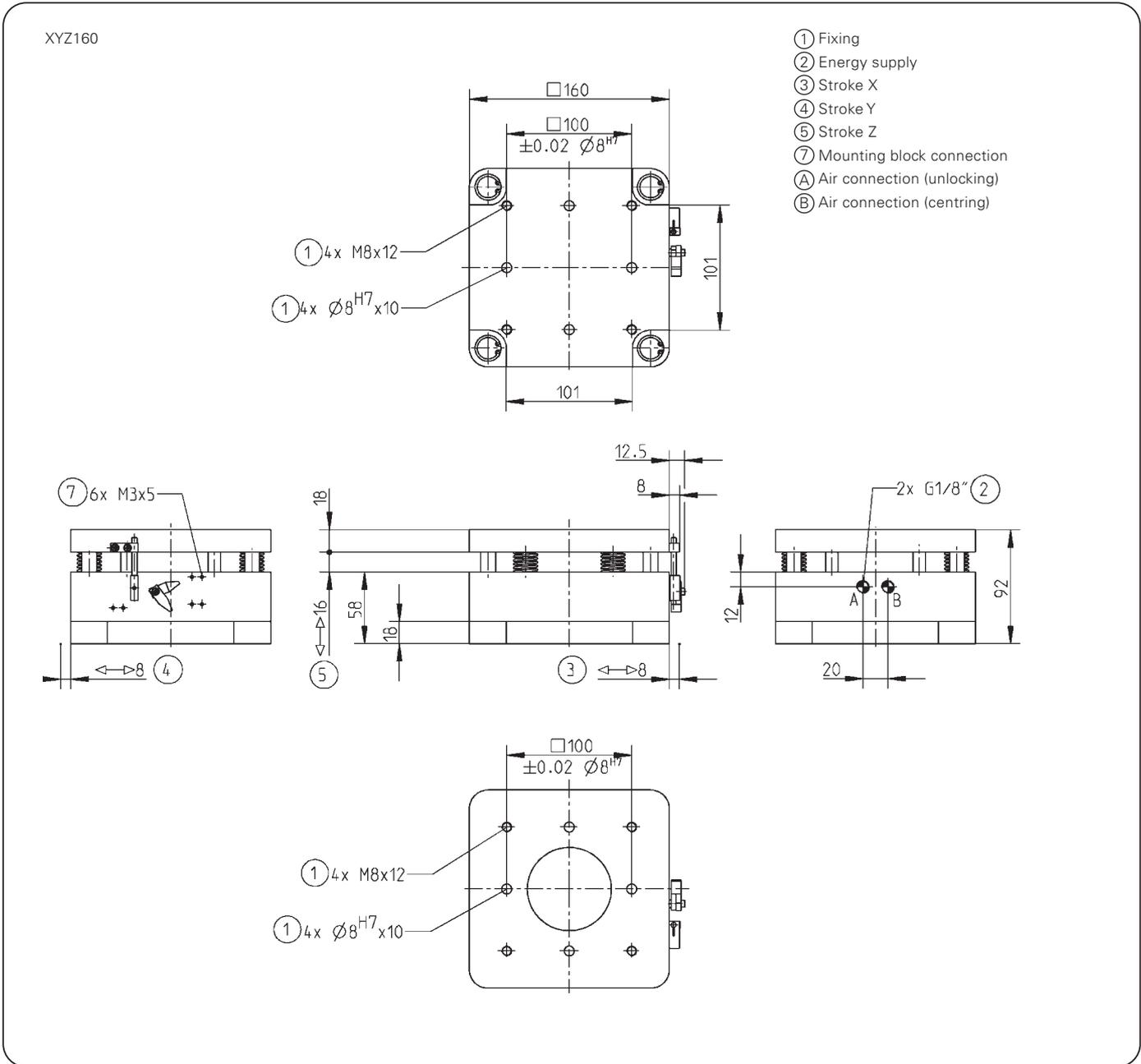
Order no.:	XYZ160
Stroke X/Y level +/- [mm]:	8
Stroke Z-axis [mm]:	16
Centring force X/Y level [N]:	700
Spring force Z-axis (Spring package 1) min./max. [N]**:	150/250
Spring force Z-axis (Spring package 2) min./max. [N]***:	200/320
Recommended handling weight [kg]*:	30
FA1 [N]:	1500
FX [N]:	600
FY [N]:	600
Mr [Nm]:	20
My [Nm]:	12
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	6,1

All data measured at 6 bar

* at central mounting

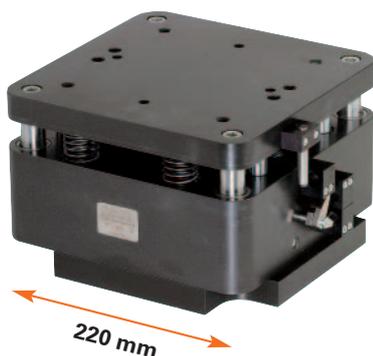
** Spring package 1 preset

*** Spring package 2 will be delivered separately and can be changes if required



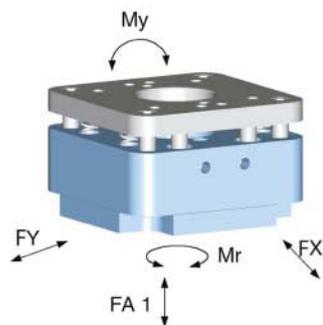
Subject to change without prior notice

Axis Modules



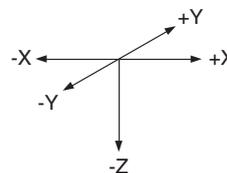
Forces and Moments

Max. Forces and Moments see chart technical data

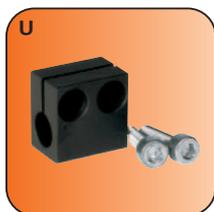


Compensation level

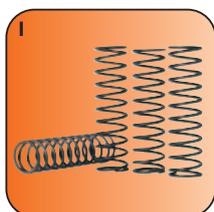
Max. compensation stroke see chart technical data



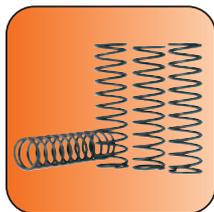
Included in the delivery



Mounting block
Order no. KB8-42



Spring package 1
(vormontiert)
Order no. CFED16030



Spring package 2
Order no. CFED16040

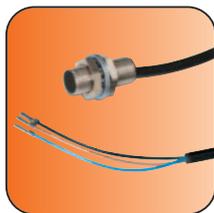
Accessory list



Pneumatic fittings
Order no. WV1/4x6



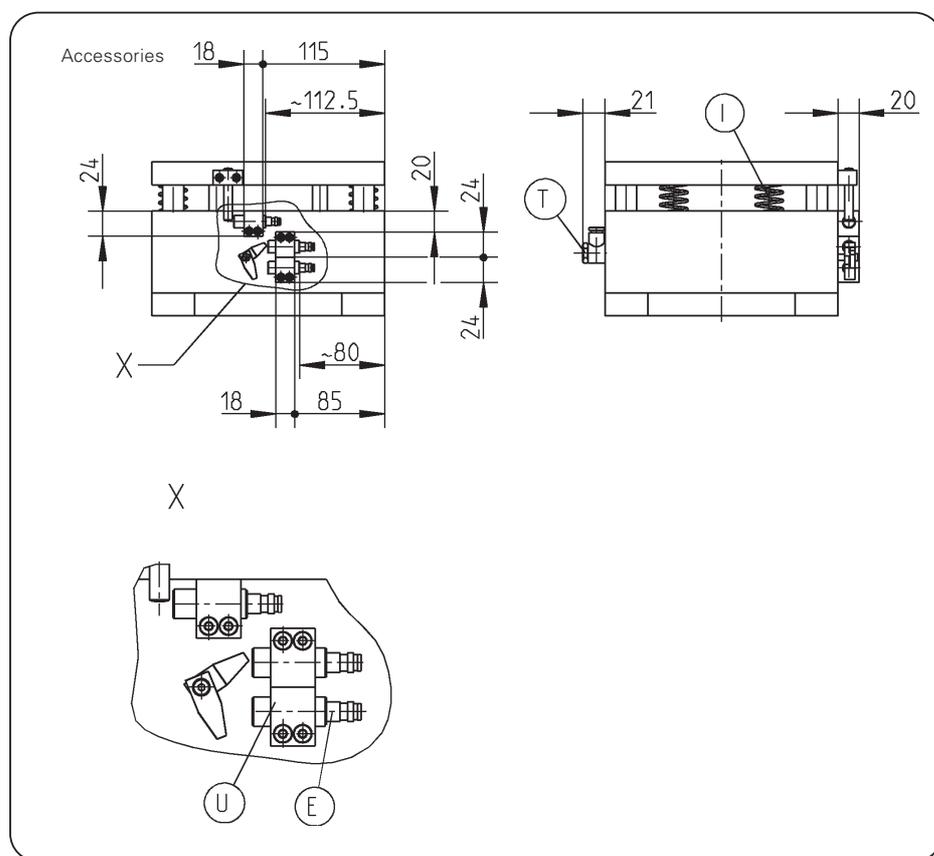
Proximity switch
Order no. NJ12-E2S



Proximity switch
Order no. NJ12-E2



Cable angled plug
Order no. KAW500



Subject to change without prior notice

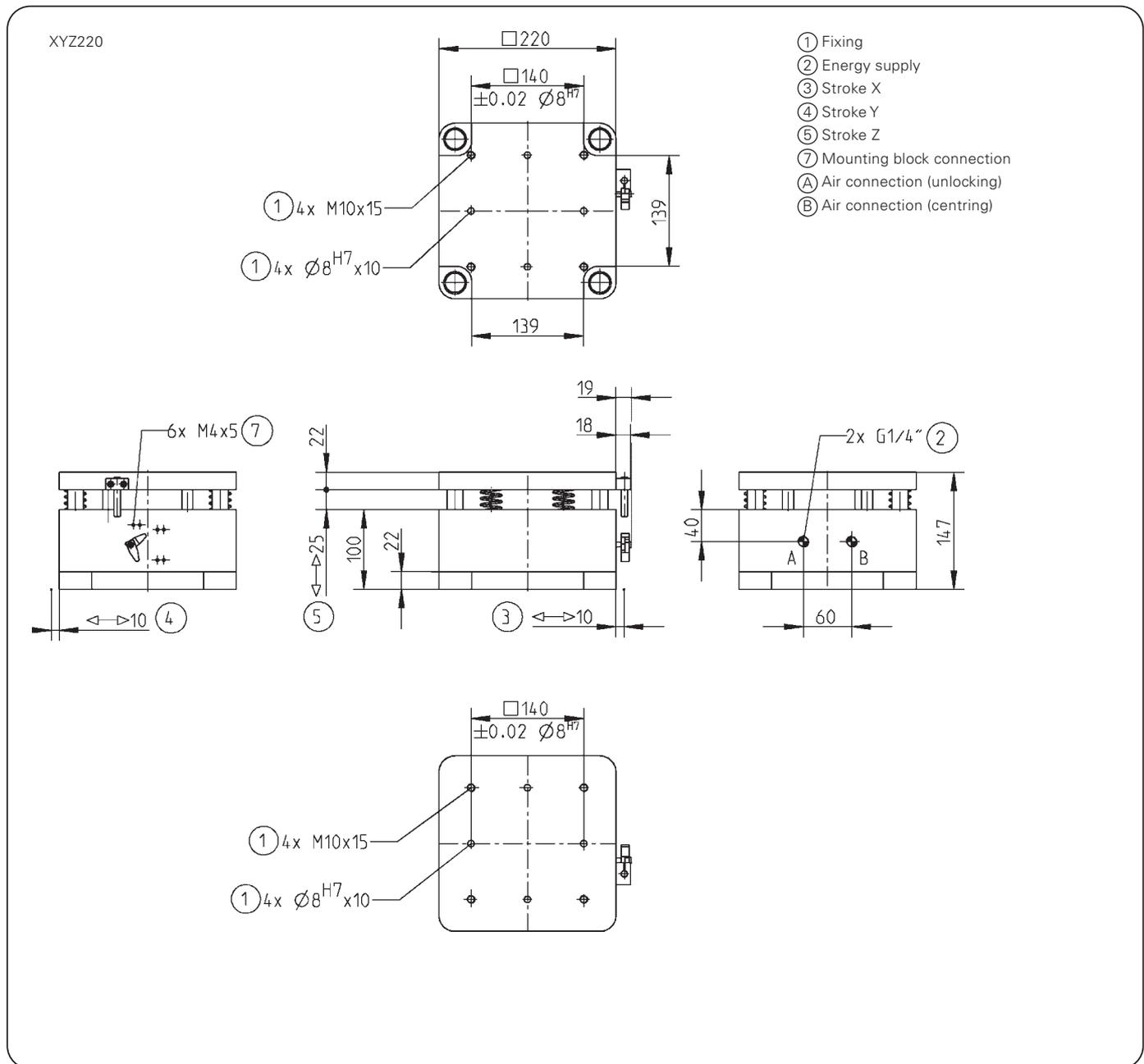
Order no.:	XYZ220
Stroke X/Y level +/- [mm]	10
Stroke Z-axis [mm]:	25
Centring force X/Y level [N]:	1200
Spring force Z-axis (Spring package 1) min./max. [N]**:	360/480
Spring force Z-axis (Spring package 2) min./max. [N]***:	445/600
Recommended handling weight [kg]*:	150
FA1 [N]:	2500
FX [N]:	650
FY [N]:	650
Mr [Nm]:	30
My [Nm]:	30
Repeatability +/- [mm]:	0,05
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	19,0

All data measured at 6 bar

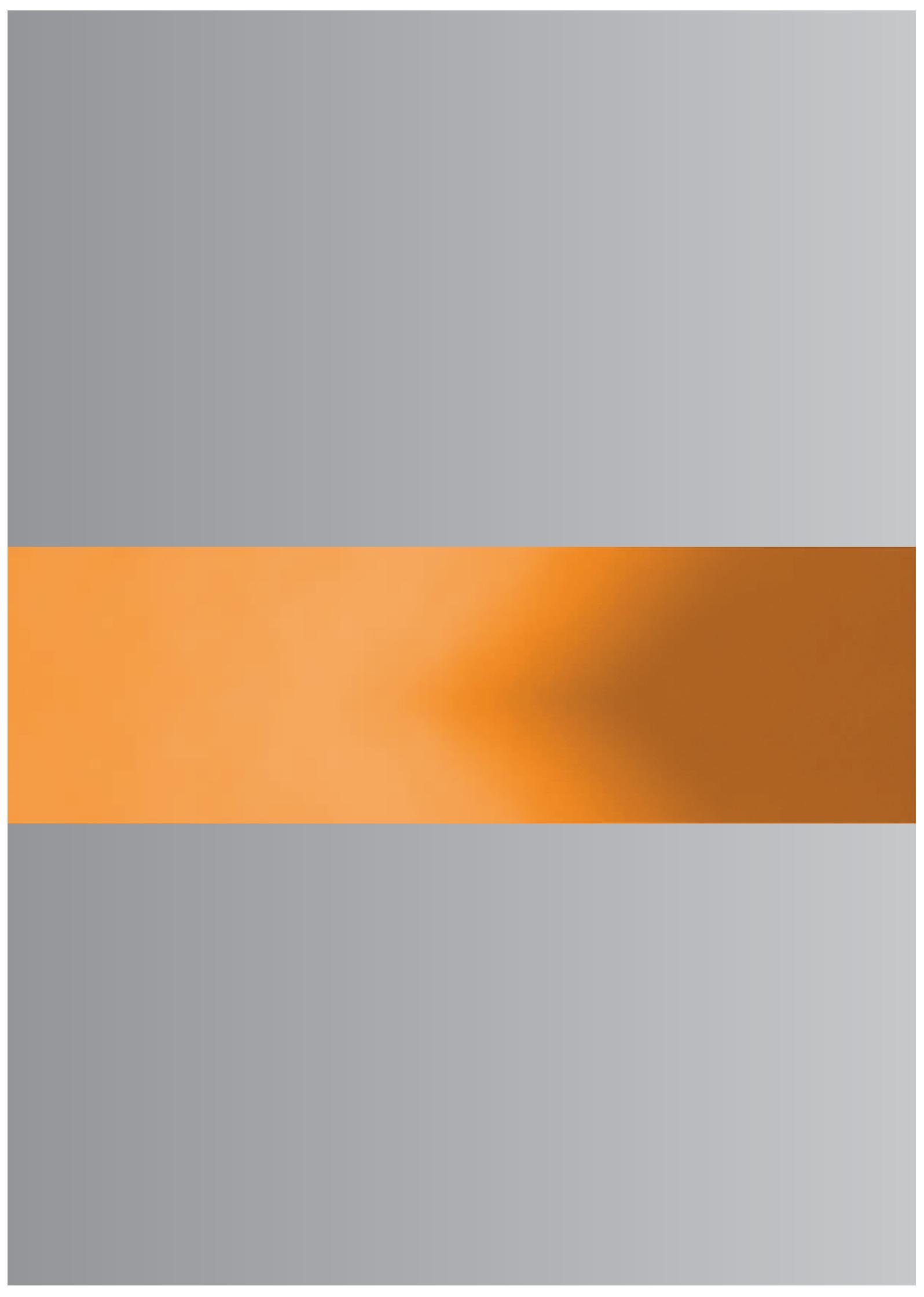
* at central mounting

** Spring package 1 preset

*** Spring package 2 will be delivered separatly and can be changes if required



Subject to change without prior notice



Crash **Protection**

pneumatic



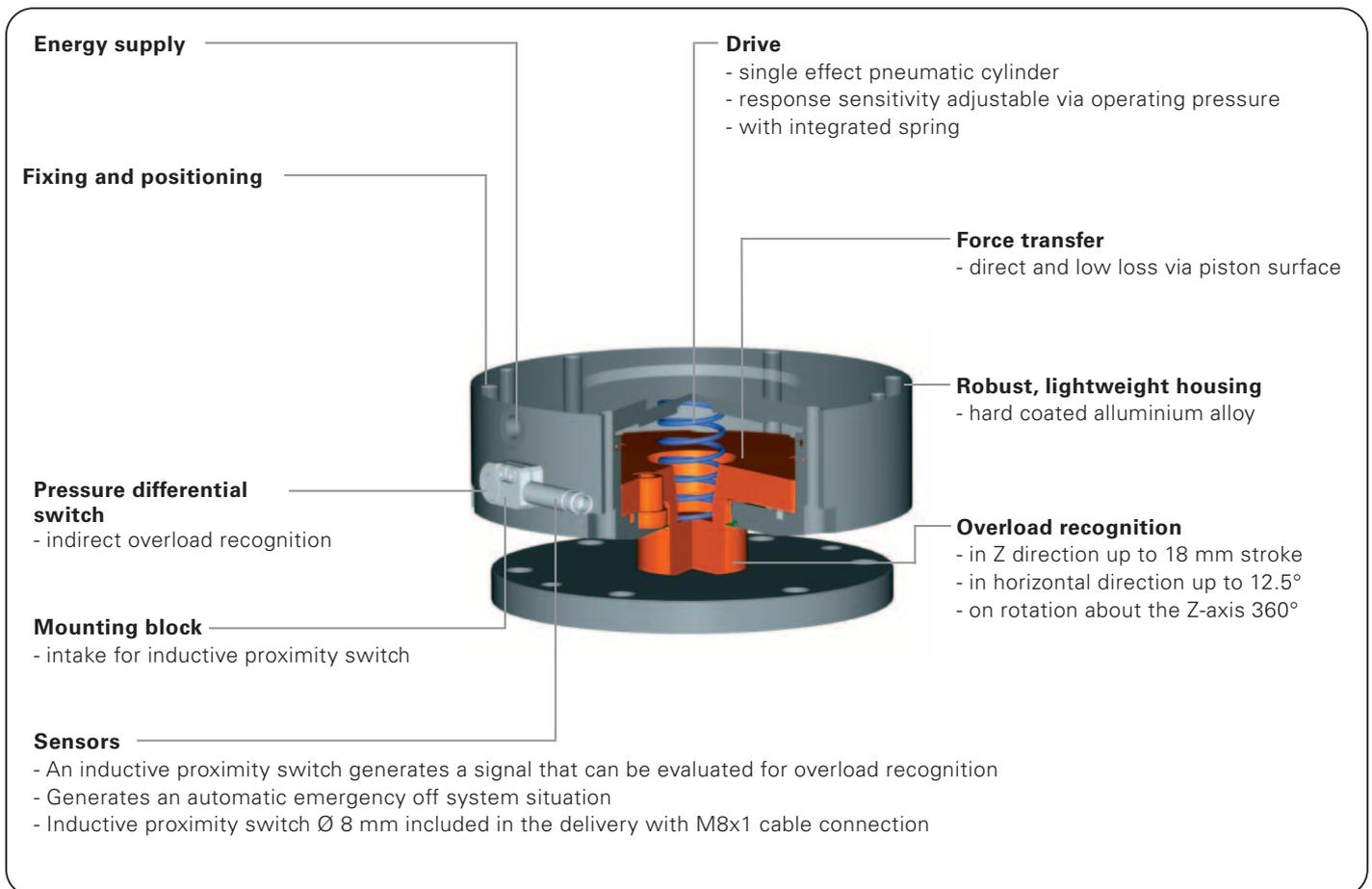
CS Series

Crash Protection

Features

- Effective and rapid reaction collision protection with compressed air impacted piston
- Required moments and forces infinitely adjustable via operating pressure
- Deviation by the tool generates a signal that can be used to control the system emergency off
- Simple and precise reset in the start position following an overload reaction (manual)

Functional diagram





Terms

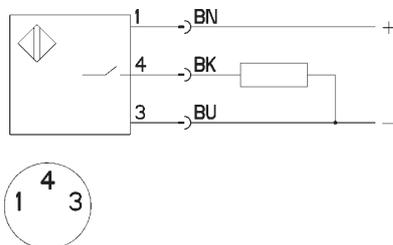
- Handling weight:** recommended weight at central mounting and 6 bar operating pressure
- Repeatability:** at end stops after 50/100 consecutive cycles
- Maintenance:** the crash protection must be function checked after every deviation and emergency stop situation

Model

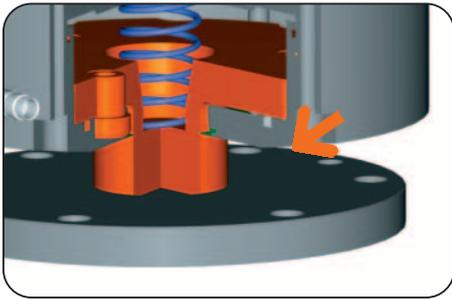
Order no.	Deviation in Z	Horizontal deviation	Recommended handling weight
CS80-B	12,5 mm	12,5°	6 kg
CS100-B	10,5 mm	12,5°	12 kg
CS160	18,0 mm	9,0°	60 kg

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:**



Crash Protection



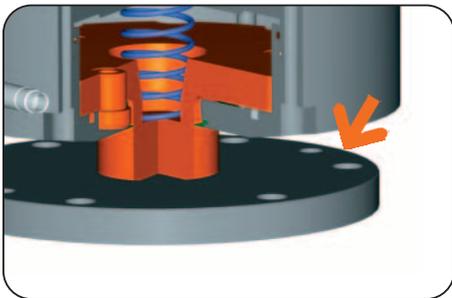
Drive

- 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

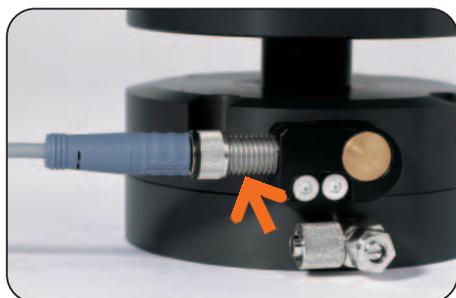
- The operating pressure regulates the contact sensitivity
- Reliable operating pressure of 0.5 – 6 bar



Machine connection

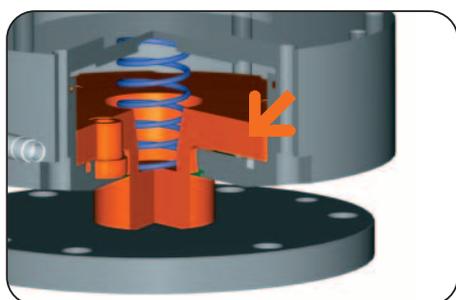
Energy feed, fixing and positioning options

- Machine and tool side with stable threads and pin holes
- Simple connection, low design effort
- Defined position by means of centring disc and pin hole



Sensors

- An inductive proximity switch \varnothing 8 mm included in the delivery with M8x1 cable connection generates a signal, that can be evaluated for overload recognition and automatic emergency off system situation



Force transfer

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



Home position

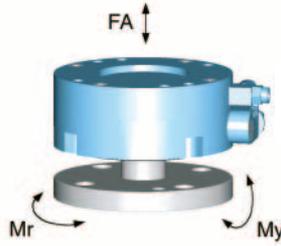
- A mechanically indexed position guarantees a reproducible zero point position after overload reaction
- Precise repetition accuracy even after any overload reaction

Crash Protection



Forces and Moments

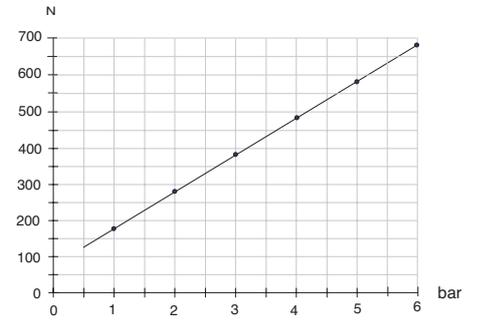
Max. Forces and Moments see chart technical data



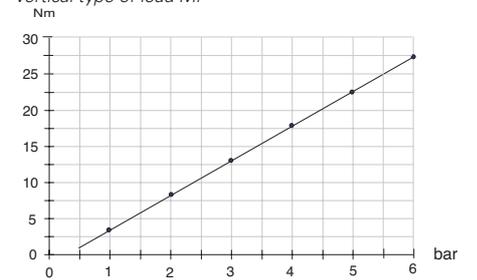
Air pressurisation

shows force and moments against the pressure

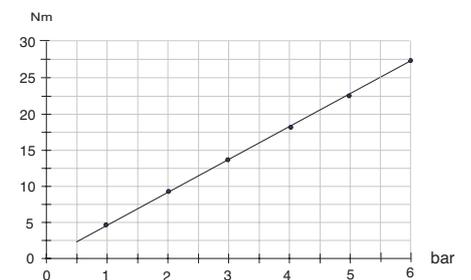
axial type of load FA



vertical type of load Mr



torsional type of load My



Included in the delivery



Proximity switch
Bst.-Nr. NJ8-E2S-04

Accessory list



Pneumatic fittings
Order no. WVM5



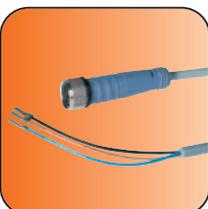
Adapter plate
Order no. CS-P80



Centering disc
Order no. ZE40H7x6



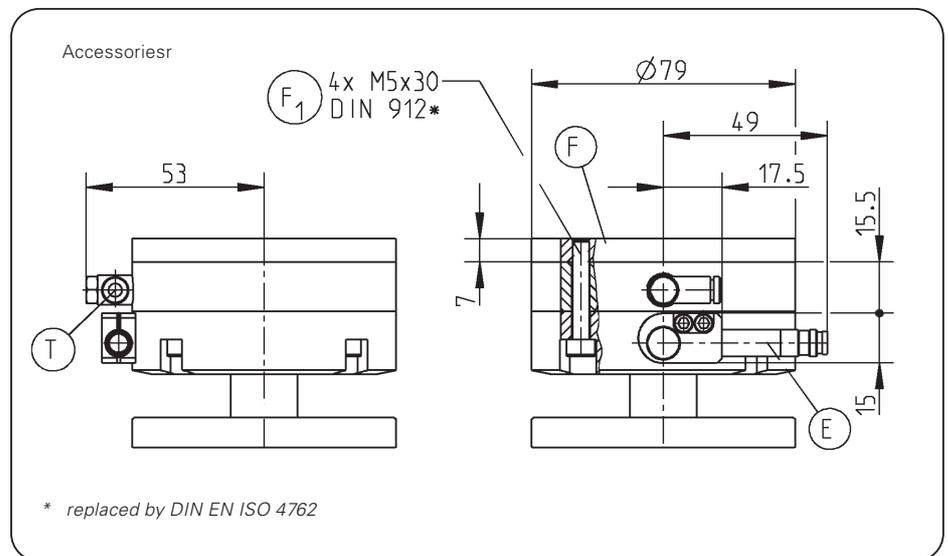
Cable angled plug
Order no. KAW500



Cable straight plug
Order no. KAG500



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

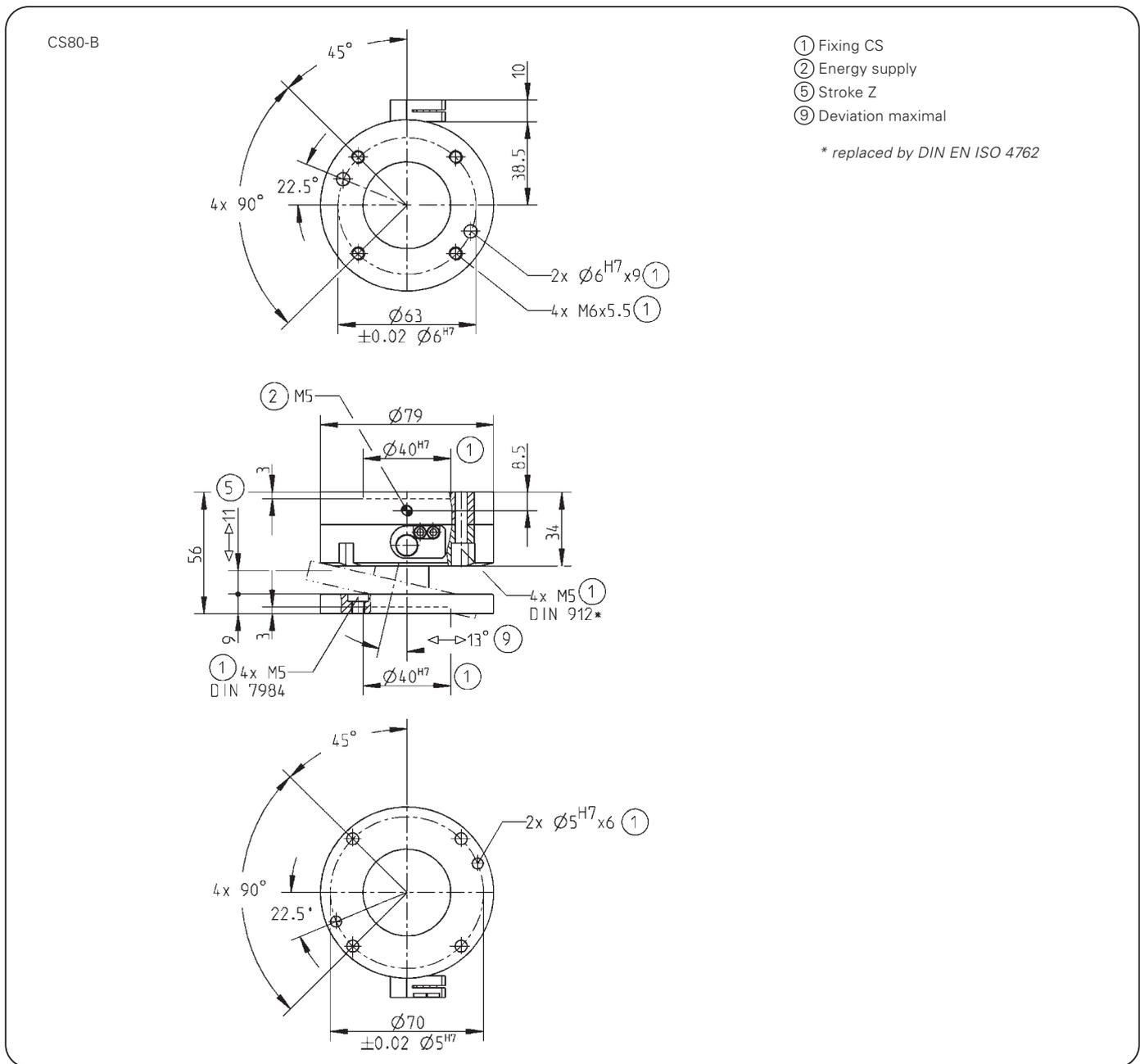


Subject to change without prior notice



Order no.:	CS80-B
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
FA [N]:	460
Mr [Nm]:	20
My [Nm]:	8,5
Min./max. operating pressure [bar]:	0,5/6
Min./max. operating temperature [°C]:	5/80
Weight [g]:	400

All data measured at 6 bar
 * at central mounting



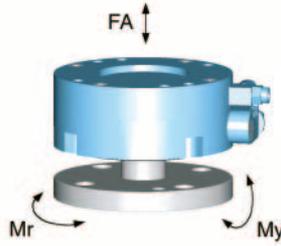
Subject to change without prior notice

Crash Protection



Forces and Moments

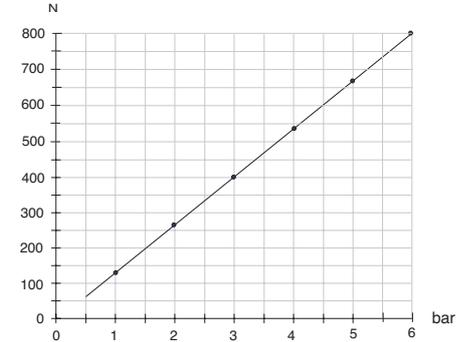
Max. Forces and Moments see chart technical data



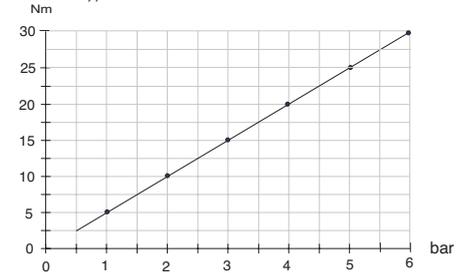
Air pressurisation

shows force and moments against the pressure

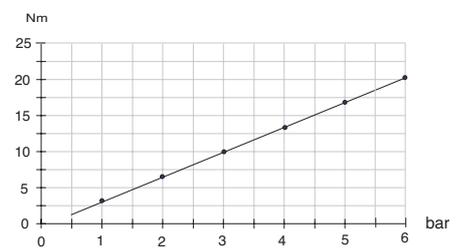
axial type of load F_A



vertical type of load M_r



torsional type of load M_y



Included in the delivery



Proximity switch
Order no. NJ8-E2S-04

Accessory list



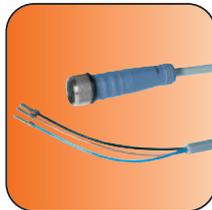
Pneumatic fittings
Order no. WVM5



Adapter plate
Order no. CS-P100



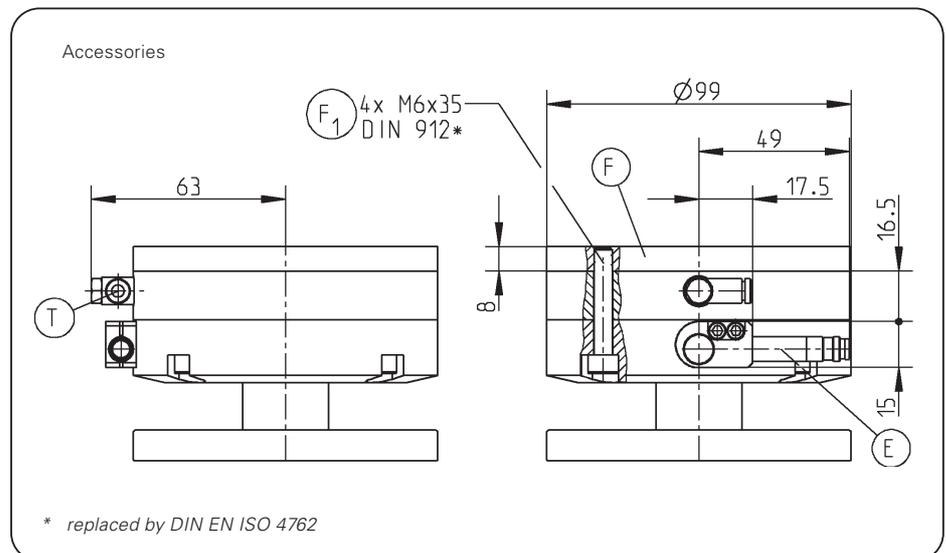
Cable angled plug
Order no. KAW500



Cable straight plug
Order no. KAG500



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



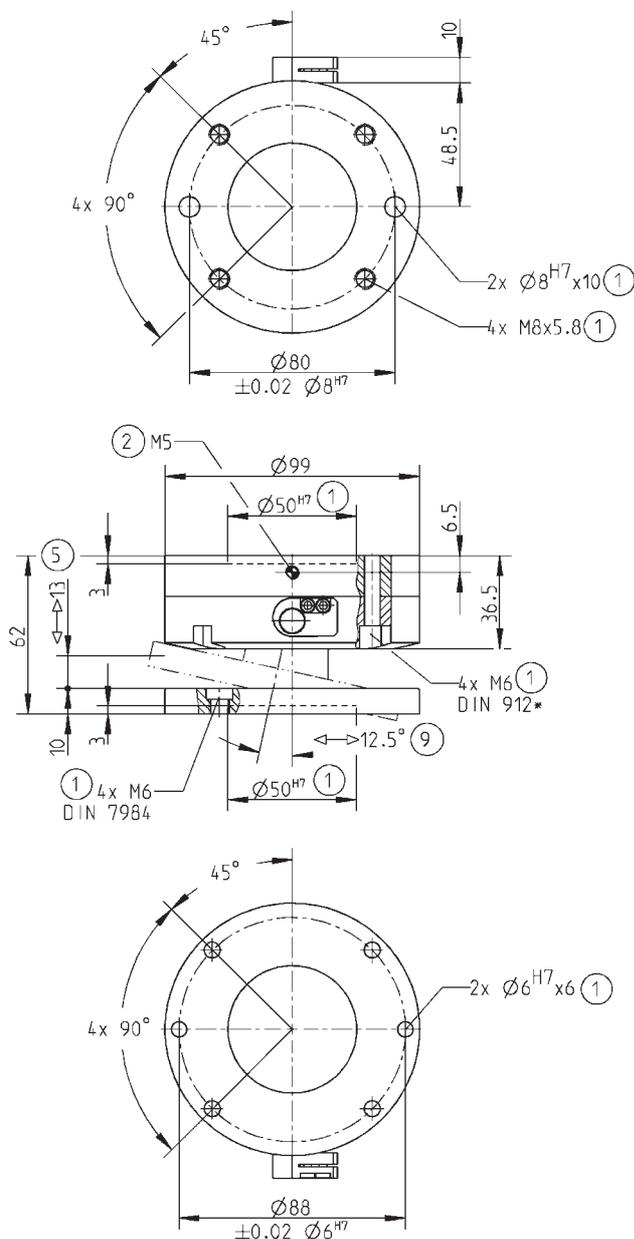
Subject to change without prior notice



Order no.:	CS100-B
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
FA [N]:	830
Mr [Nm]:	29,5
My [Nm]:	20,0
Min./max. operating pressure [bar]:	0,5/6
Min./max. operating temperature [°C]:	5/80
Weight [g]:	800

All data measured at 6 bar
 * at central mounting

CS100-B



- ① Fixing CS
- ② Energy supply
- ⑤ Stroke Z
- ⑨ Deviation maximal

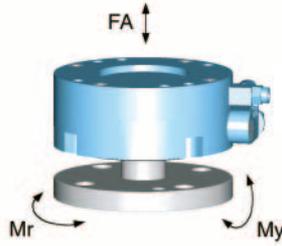
* replaced by DIN EN ISO 4762

Subject to change without prior notice

Crash Protection

Forces and Moments

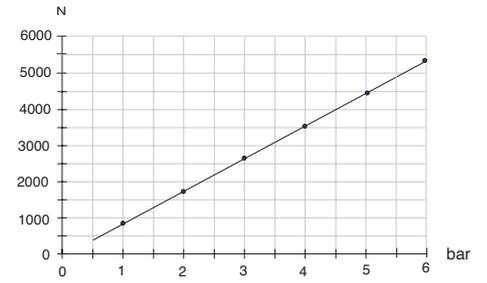
Max. Forces and Moments see chart technical data



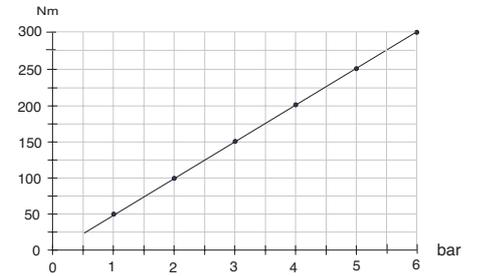
Air pressurisation

shows force and moments against the pressure

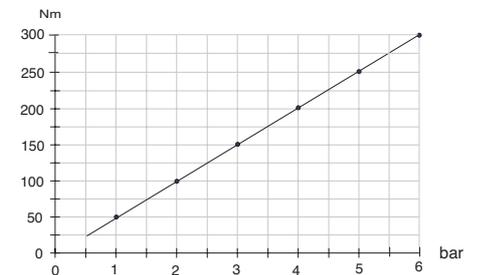
axial type of load FA



vertical type of load Mr



torsional type of load My



Included in the delivery



Proximity switch
Order no. NJ8-E2S/04

Accessory list



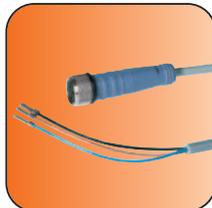
Pneumatic fittings
Order no. WV1/8x6



Adapter plate
Order no. CS-P160



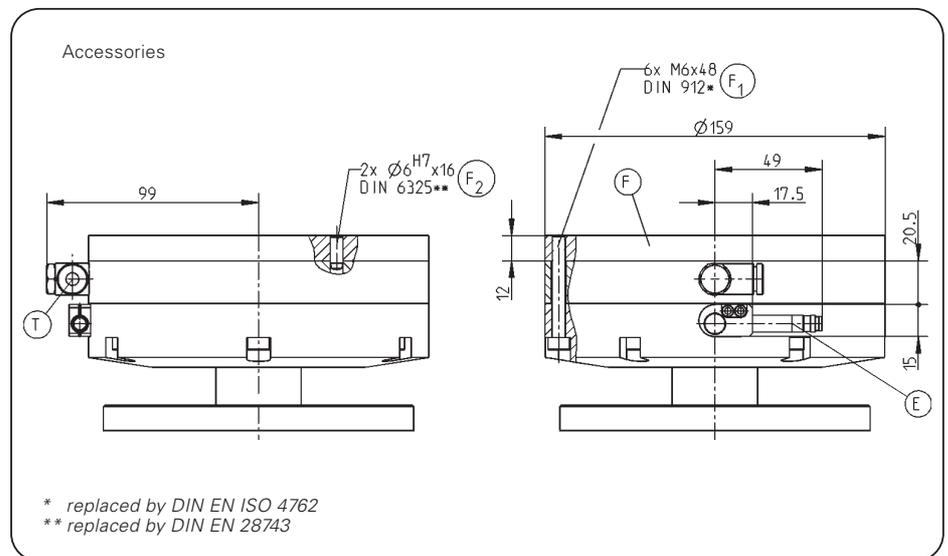
Cable angled plug
Order no. KAW500



Cable straight plug
Order no. KAG500



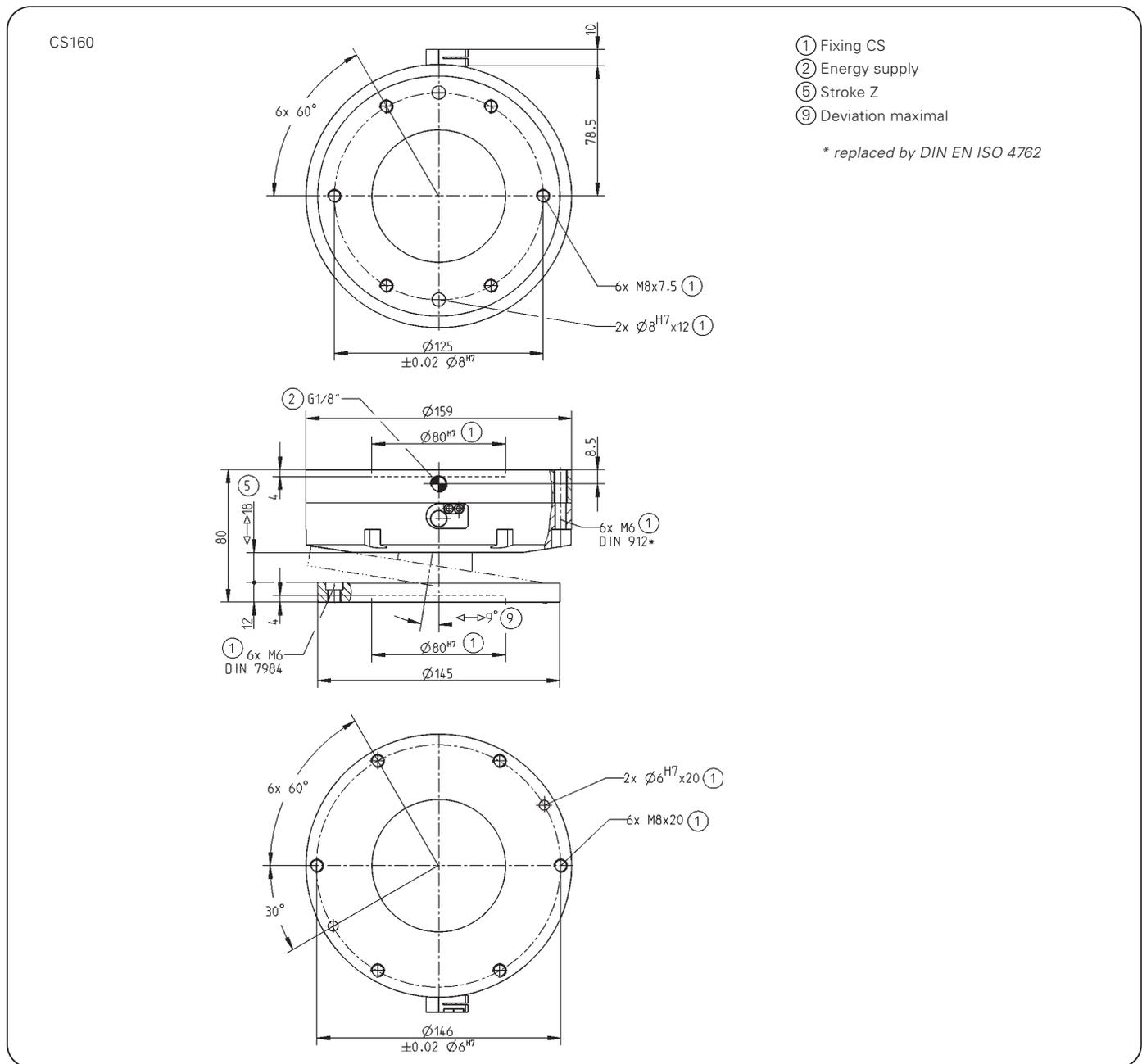
Plug 3-pole
Order no. S12-G-3



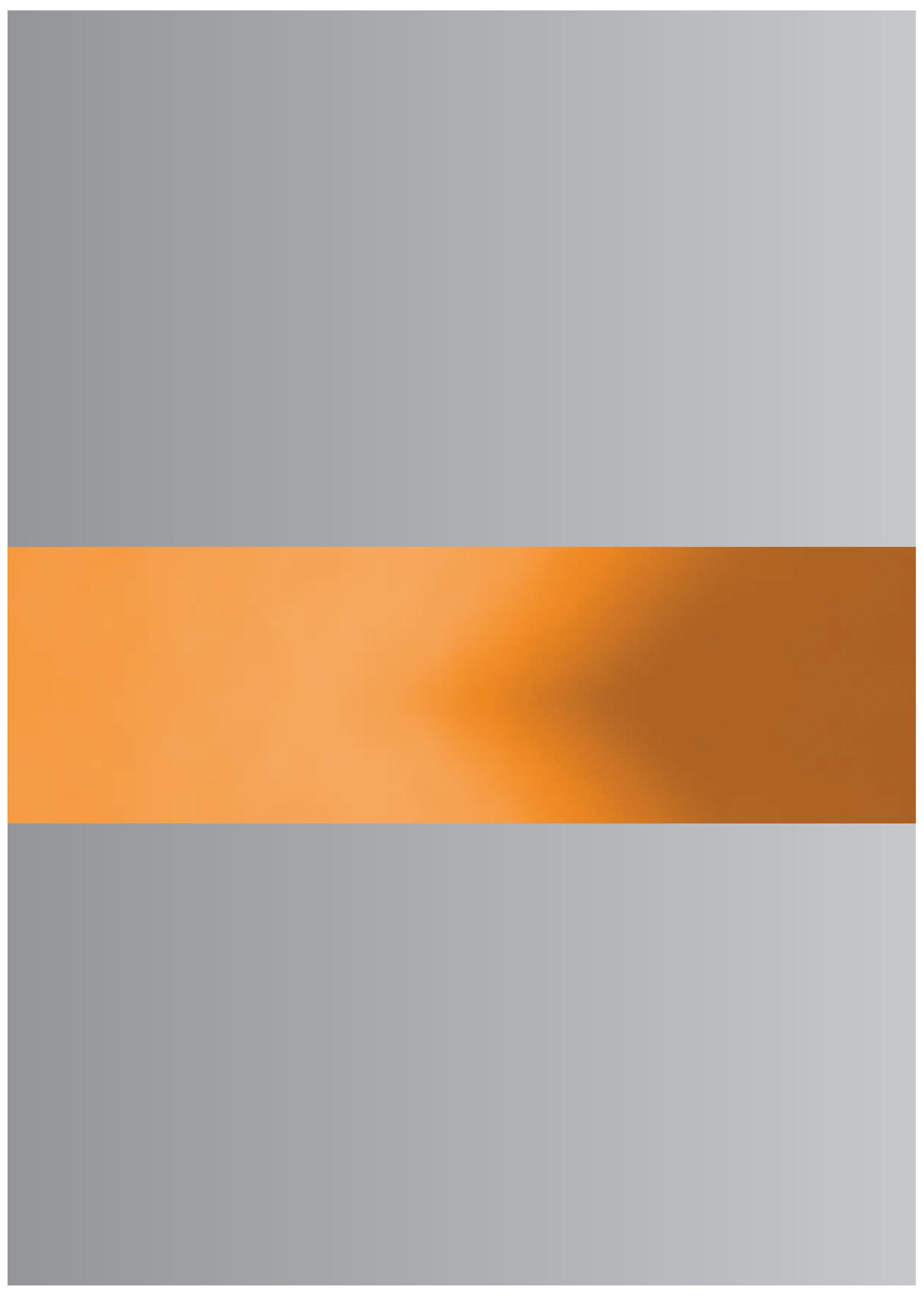
Subject to change without prior notice

Order no.:	CS160
Recommended handling weight [kg]*:	60
Deviation Z [mm]:	18
Axial repeat accuracy +/- [mm]:	0,05
Horizontal deviation [°]:	9
Radial repetition accuracy +/- [mm]:	0,05
FA [N]:	5300
Mr [Nm]:	300
My [Nm]:	300
Min./max. operating pressure [bar]:	0,5/6
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	2,8

All data measured at 6 bar
 * at central mounting



Subject to change without prior notice



Alignment Compensator

pneumatic



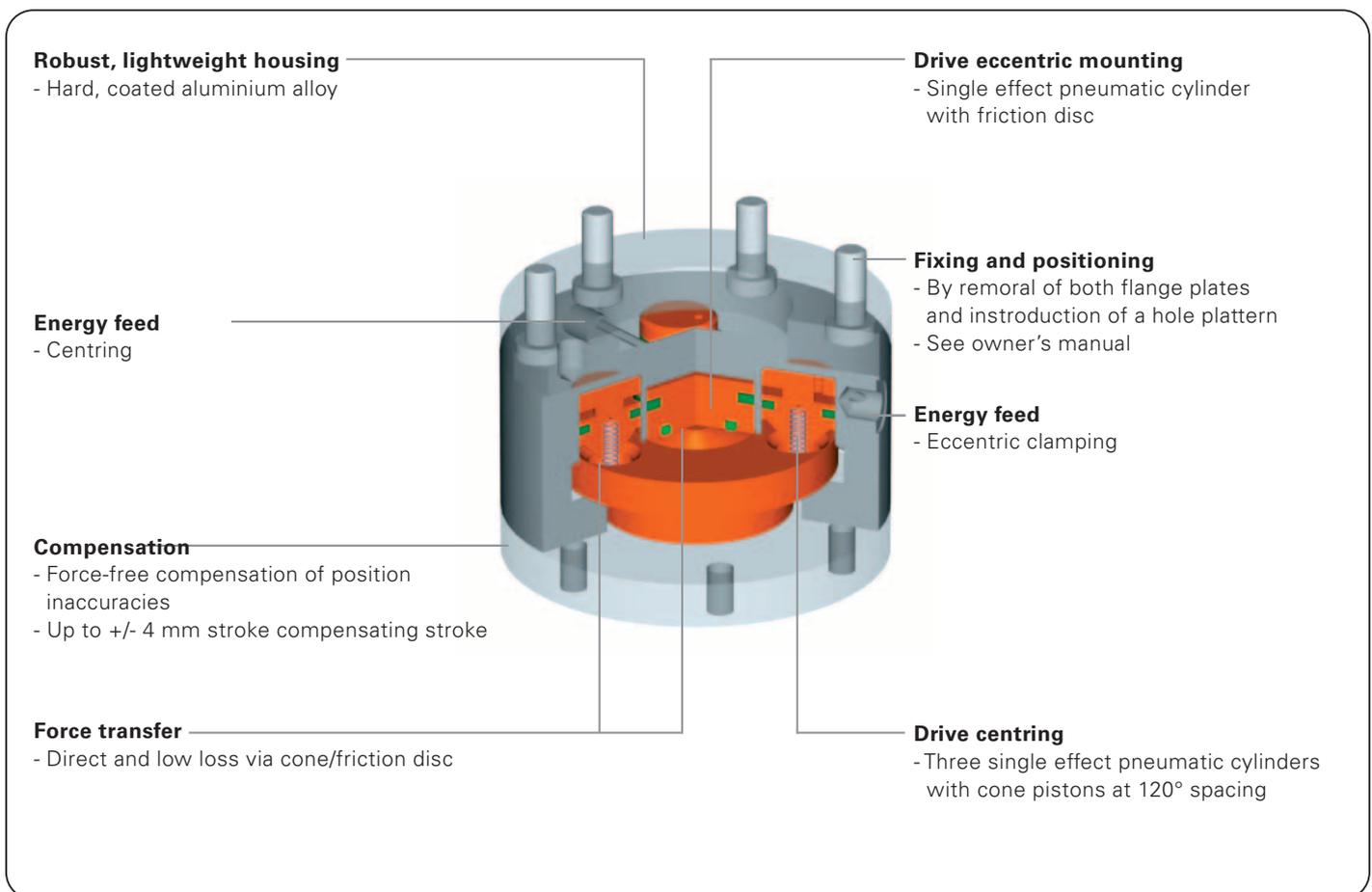
FG Series

Alignment Compensator

➤ Features

- Compact alignment compensator for plane-parallel compensation of position errors
- Allows compensation in the X and Y level within a range up to +/- 4 mm stroke
- Centring via an integrated centring mechanism with up to 250 N centring force
- Eccentric clamping with up to 200 N force

Functional diagram



Terms

- Centering force:** operating force generated by the pneumatic piston for centring of the balancing plate
- Handling weight:** recommended weight with central extension and 6 bar operating pressure
- Repeatability:** dispersion of stop position at 50/100 consecutive swivel cycles
- Cycle:** distance covered by the piston in one open and close movement
- Maintenance:** maintenance free up to 10 Mio. cycles
(please see the owner’s manual for conditions, download from www.sommer-automatic.com)
 - long maintenance intervals keep costs down
 - long durability

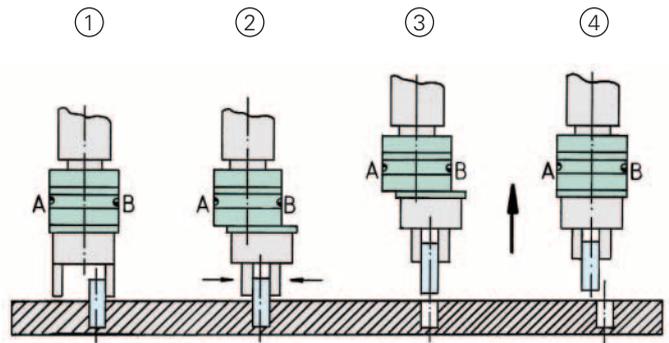
Model

Order no.	Diviation horizontal	Centring force	Recommended handling weight
FG79	+/- 2 mm	50 N	10 kg
FG100	+/- 4 mm	250 N	20 kg

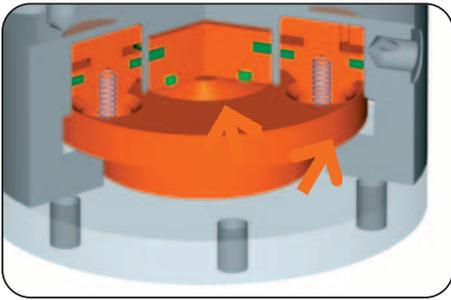
Function

Air connection A centres the connecting plate in the middle. Connection B stops the respective position of the connecting plate.

- ① The robot with alignment compensater and gripper travels from above over the component to be extracted. A+B is pressure free.
- ② The gripper jaws close - the gripper axle moves plane-parallel until the gripper is central to the component. This position is locked by compressed air in B. The component can be safely extracted in the Z direction, without tilting.
- ③ The robot travels back along the Z axis and extracts the component from the device. There is now a choice of whether to maintain this outside central position or to recentre in the robot axis - depending on whether the component or robot is inaccurate.
- ④ We decide on centring in the robot axis and apply air in connection A whilst B is switched pressure free. This elegant solution protects your robot, equipment and components as no transverse forces occur.



Alignment **Compensator**



Drive

Centring

- Three single effect pneumatic cylinders with cone pistons at 120° spacing

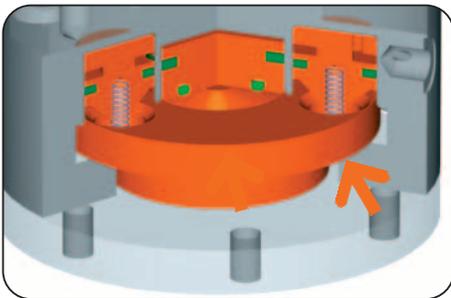
Eccentric clamping

- Single effect pneumatic cylinder with friction disc



Compensation

- Force-free compensation for position inaccuracies
- Up to +/- 4 mm compensation stroke in the X and Y level



Force transfer

Centring

- Direct and low loss via three pistons with cones

Eccentric clamping

- Direct and low loss via pistons and friction disc



Machine connection

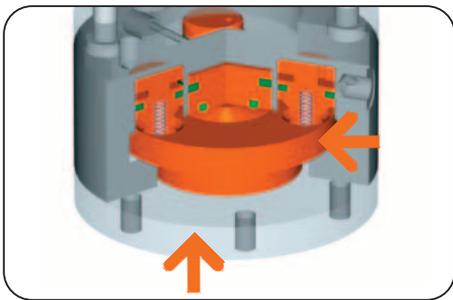
Fixing and positioning options

- Machine and tool side with removable adapter plate (see owner's manual)
- Defined centre by means of centring disc



Weight optimised

- Robust, lightweight housing
- Hard, coated aluminium alloy



Function parts

- in nitrated steel
- High wear resistance



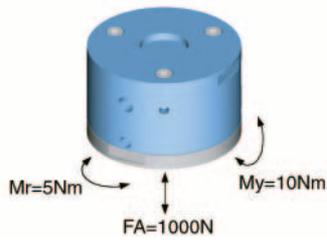
Energy feed

- Separate energy connection for the „centring“ and eccentric clamping“ functions

Alignment **Compensator**

Forces and Moments

Max. Forces and Moments see chart technical data



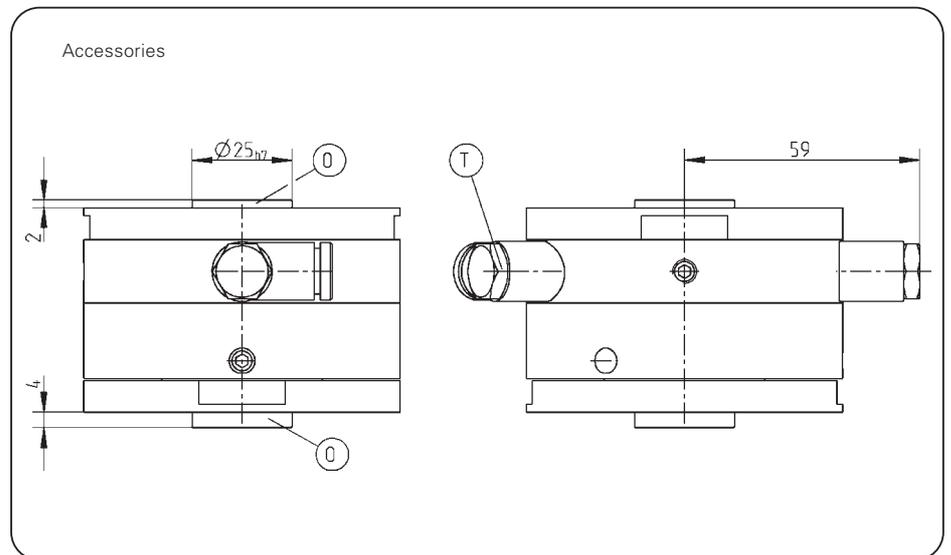
Accessory list



Pneumatic fittings
Order no. WV1/8x6



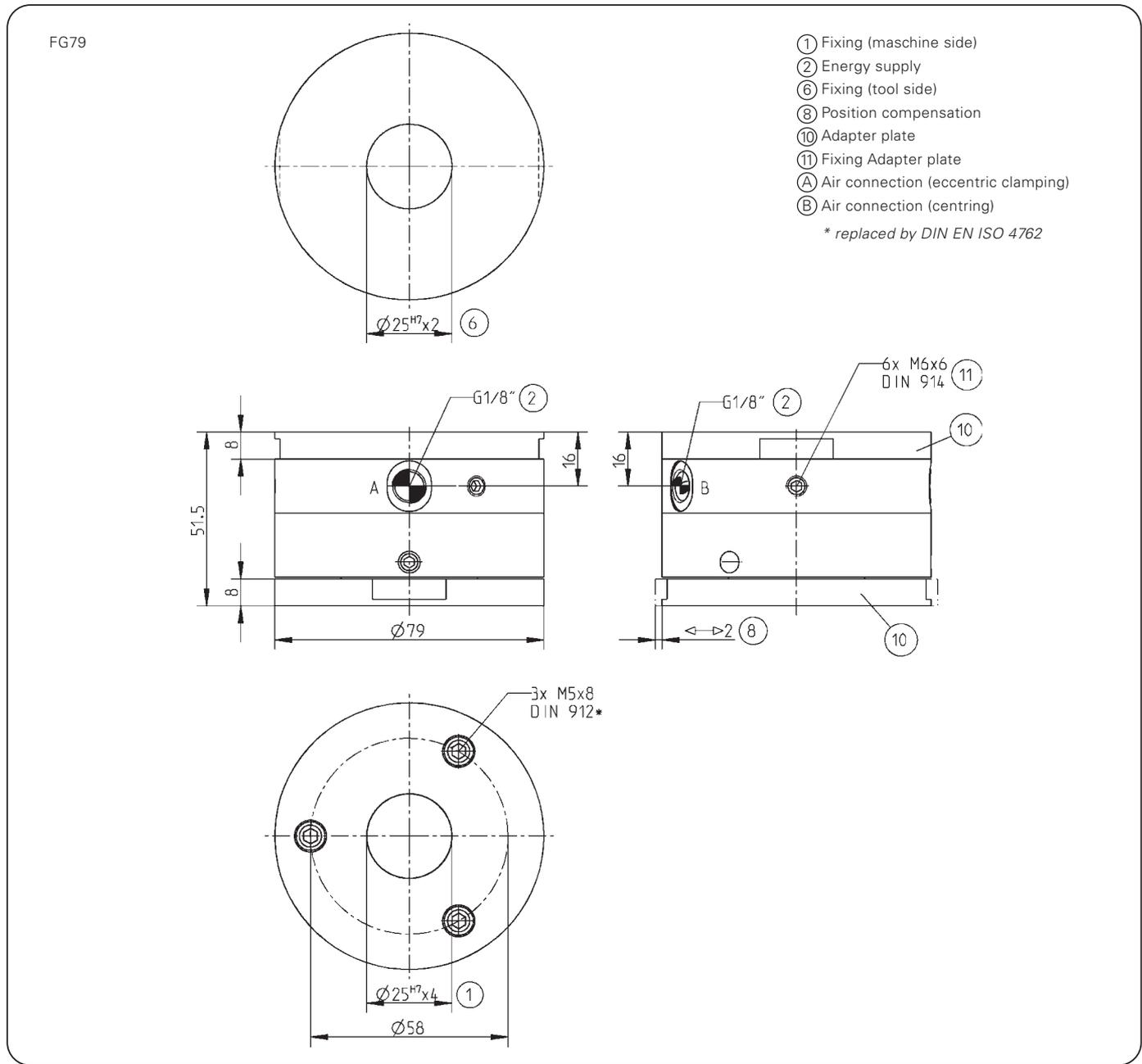
Centring disc
Order no. ZE25H7x6



Subject to change without prior notice

Order no.:	FG79
Recommended handling weight [kg]*:	10
Horizontal deviation +/- [mm]:	2
Rotation angle max. [°]*:	12
Retention force centred [N]:	50
Retention force decentred [N]:	120
Repeatability +/- [mm]:	0,02
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [g]:	900

All data measured at 6 bar
 * at central mounting



Subject to change without prior notice

Alignment Compensator

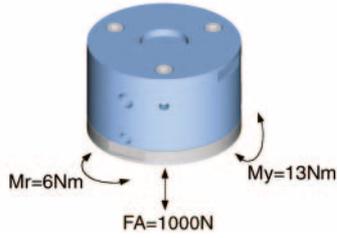
Forces and Moments

Max. Forces and Moments see chart technical data



Ø 100 mm

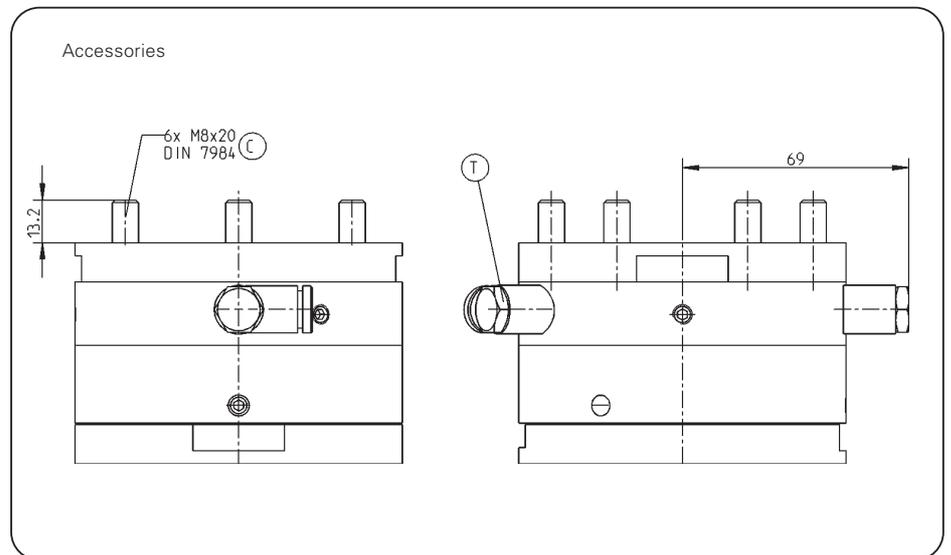
Picture shows FG79



Accessory list



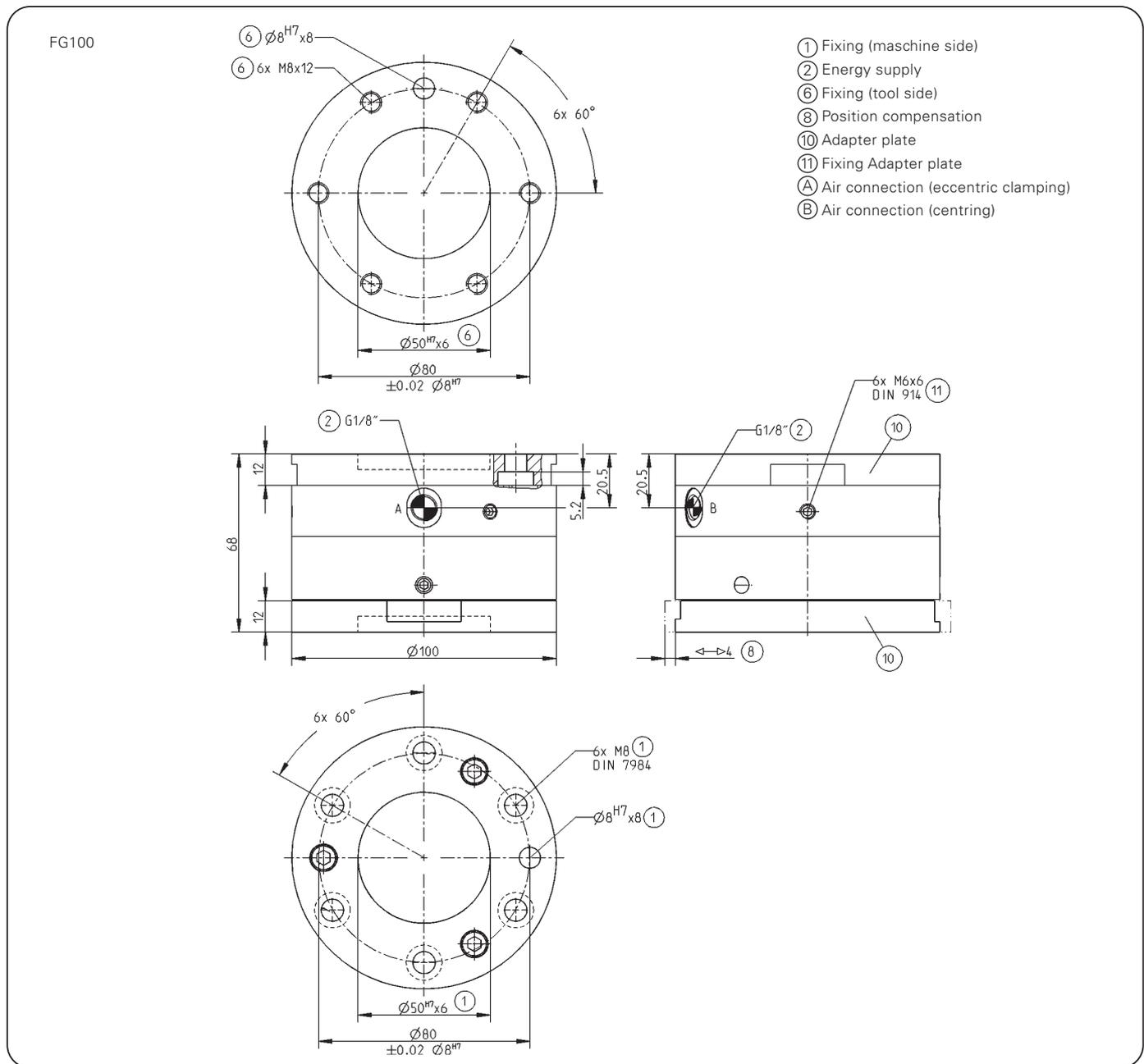
Pneumatic fittings
Order no. WV1/8x6



Subject to change without prior notice

Order no.:	FG100
Recommended handling weight [kg]*:	20
Horizontal deviation +/- [mm]:	4
Rotation angle max. [°]*:	9
Retention force centred [N]:	250
Retention force decentred [N]:	200
Repeatability +/- [mm]:	0,02
Min./max. operating pressure [bar]:	4/8
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,7

All data measured at 6 bar
 * a montaggio centrato



Subject to change without prior notice



➤ 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