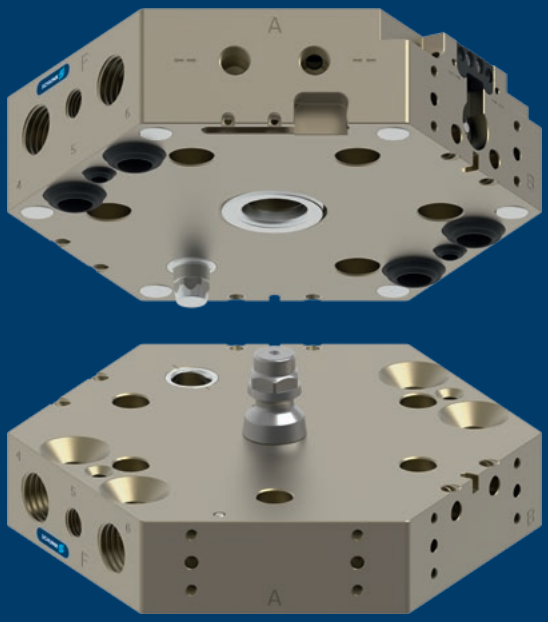


Hand in hand for tomorrow

SCHUNK

Product data sheet

Automatic tool changers CPB

Versatile. Reliable. Precise.

Automatic tool changers CPB

Pneumatically actuated tool changer with self-retaining function in the event of a loss of compressed air, the integrated piston spring ensures that gap formation is minimized.

Field of application

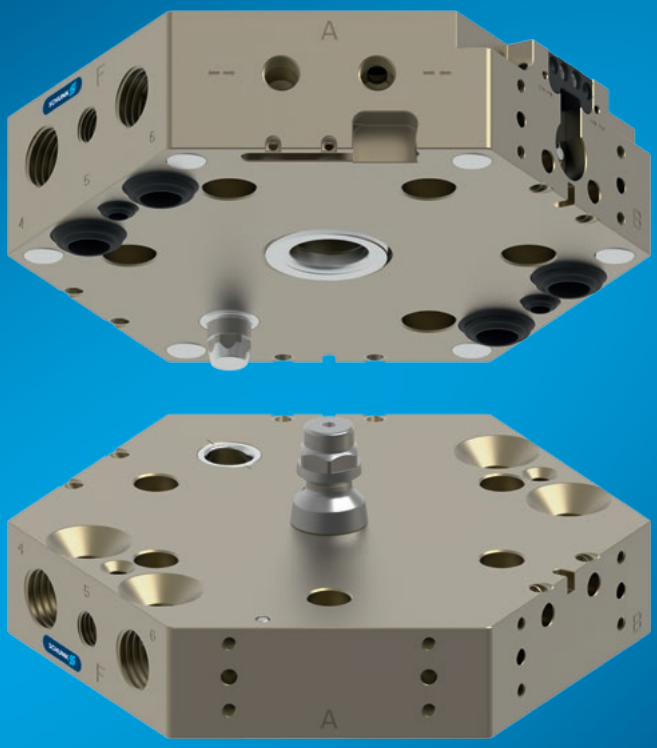
Universally applicable (e.g., for handling tasks or machine loading) with short change-over times between an end effector such as a gripper or a customer's tool.

Advantages – Your benefits

Tried-and-tested locking mechanism The positive-locking, self-retaining pin mechanism made of vacuum-hardened stainless steel is based on over 20 years of experience in stationary workholding, and offers maximum stability as well as long service life

Integrated energy supply Additional pneumatic feed-throughs ensure a reliable supply of handling modules and tools

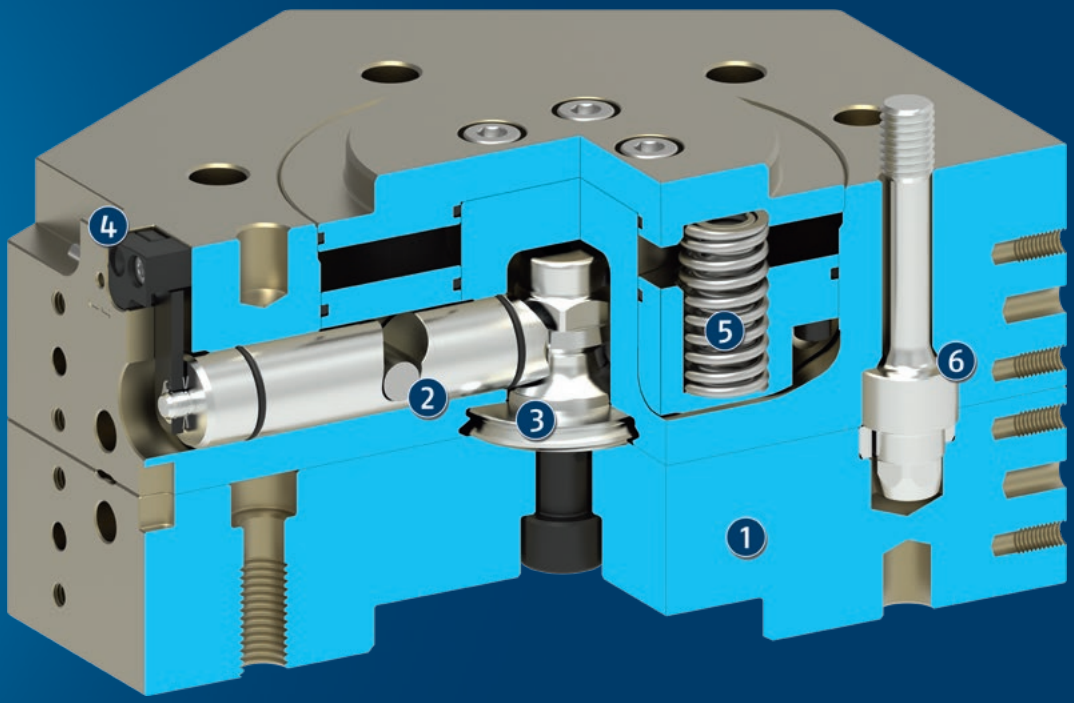
Easy assembly The integrated ISO interface in accordance with ISO 9409 on the robot and tool side enables quick assembly and reduces the effort involved in commissioning



Sizes
Quantity: 7

Functional description

The automatic tool changer CPB consists of a change master (CPB-K) and a change adapter (CPB-A). The CPB-K that is mounted on the robot couples and decouples the CPB-A which is mounted on the tool. The pneumatically actuated clamping slide and the high-precision locking pin ensure a reliable connection. Suitable option modules supply the coupled tool.



① **Housing**
Weight-optimized due to the use of high-strength, hard-coated aluminum alloy

② **Locking mechanism**
Functional parts are made of hardened stainless steel. The integrated clamping slides ensure a quick and fixed connection. Self-retaining during compressed air drop. Integrated spring prevents gap formation between master and adapter.

③ **Short taper centering**

④ **Sensor monitoring of the locking device**
Optional, for monitoring in a reliable process

⑤ **Pressure spring made of stainless steel**

⑥ **Fitting screw**
Attached directly to the interface, it ensures that the moments around Mz are absorbed.

General notes about the series

Actuation: pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

Operating principle: piston-actuated clamping slides with integrated spring (to support the locked position)

Media transmission: variable via attachment feed-through modules, depending on the unit size

Housing: The housing consists of high-strength, hard-coated aluminum alloy The functional components are made of hardened corrosion free steel.

Warranty: 24 months

Service life characteristics: on request

Harsh environmental conditions: Please note that use under harsh environmental conditions (e.g. in the coolant area, cast and grinding dust) can considerably reduce the service life of the units, and we will not take over any warranty. However, in many cases we can find a solution. Please contact us for assistance.

Minimum pressure: The minimum pressure is the required minimum pressure to lock the system. This pressure must be continuously present during operation.

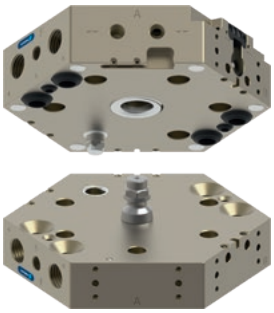
Self-retaining: The automatic tool changer has a self-retaining feature that prevents the tool from falling off in case of the pressure drop.

Application example

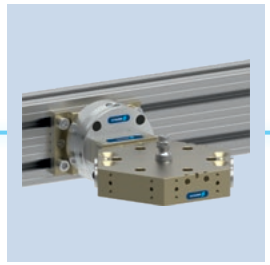
1. Automatic tool changers CPB
2. Optional modules COB
3. 2-finger parallel gripper PGN-plus-P

SCHUNK offers more ...

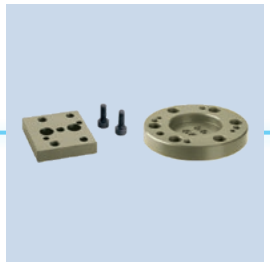
The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



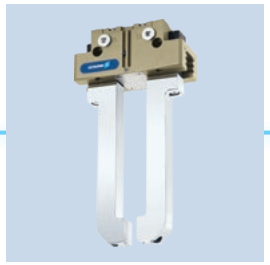
Optional modules COB



Modular storage rack CTS B



Adapter plates



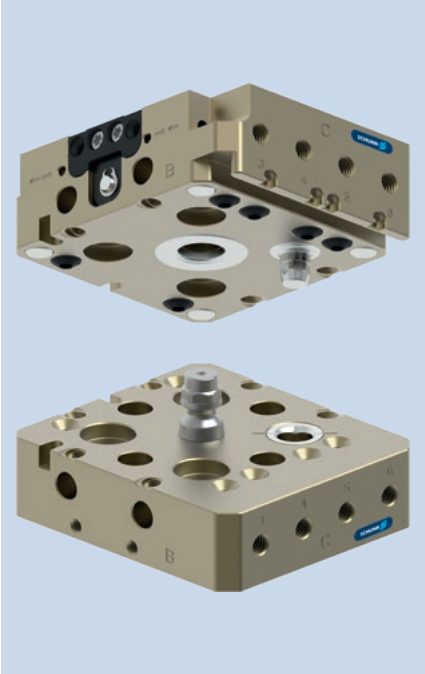
Universal gripper

Proximity switch

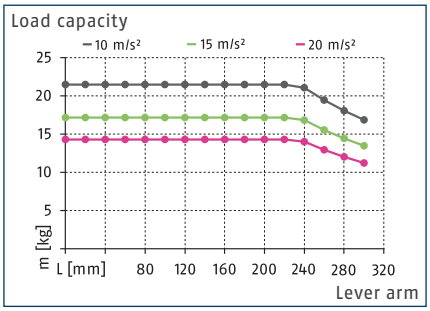
ⓘ For more information on these products can be found on the following product pages or at schunk.com.

CPB 040

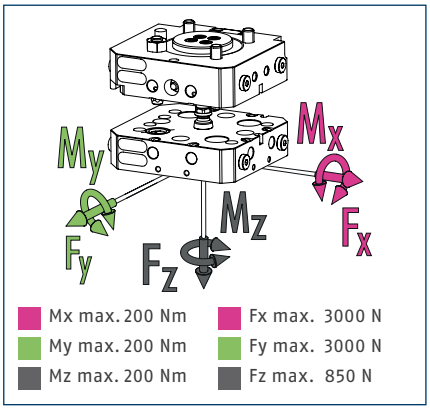
Automatic tool changers



Load chart



Max. loads

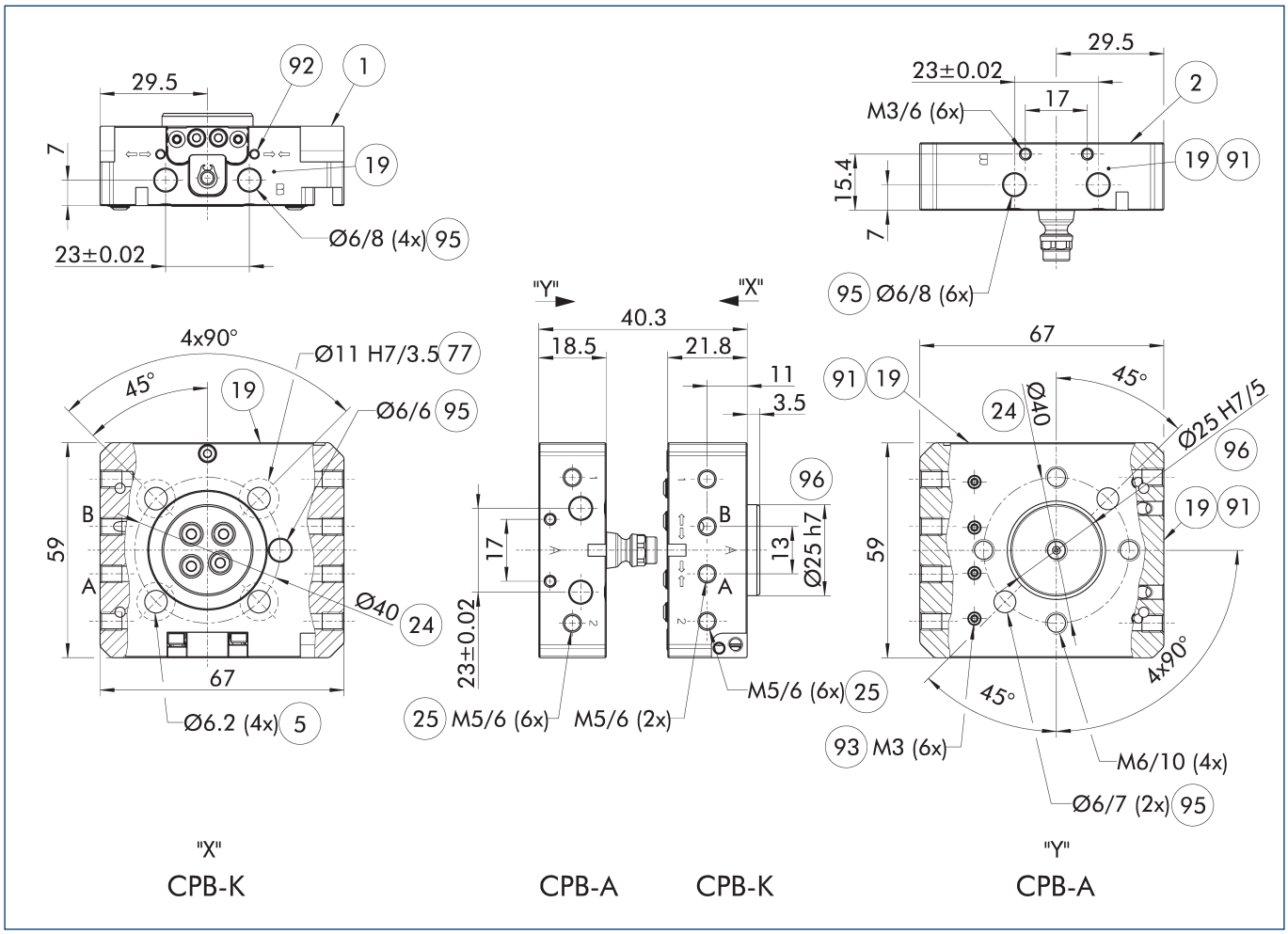


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 040-K	CPB 040-A
		Change head	Tool
ID		1595203	1595207
Lock sensing		prepared	
Locking force	[N]	850	
Locking force provided by spring force	[N]	200	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	0.22	0.19
Max. distance when locking	[mm]	0.5	
Number of pneumatic feed-throughs		6x M5	6x M5
Lock/unlock main connection		M5	
Max. permissible XY axis offset	[mm]	±1	±1
Max. permissible angular offset XY	[°]	±0.8	±0.8
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-40-4-M6	
Tool-side connection			ISO 9409-1-40-4-M6
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		2 x B	2 x B / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	2.7	
Lock cylinder volume	[cm³]	2.8	
Cylinder volume per double stroke	[cm³]	5.5	
Flow rate at 6 bar (per feed-through)		150 l/min (M5)	150 l/min (M5)
Max. dynamic moment Mx	[Nm]	100	100
Max. dynamic moment My	[Nm]	100	100
Max. dynamic moment Mz	[Nm]	100	100
Force Fx max. dynamic	[N]	1000	1000
Force Fy max. dynamic	[N]	1000	1000
Force Fz max. dynamic	[N]	425	425

Main view

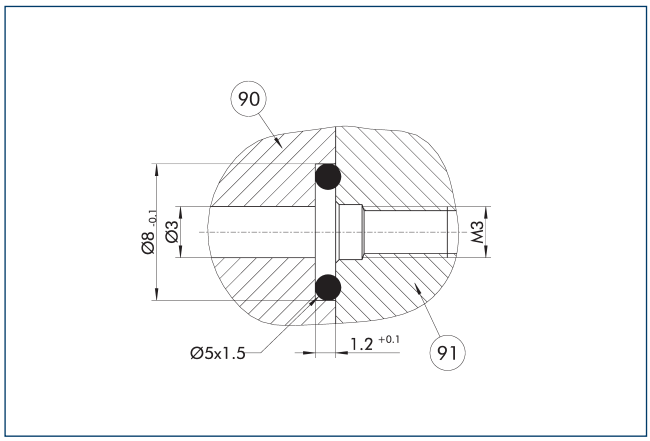


The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked
B, b Air connection unlocked

(1) Robot-side connection
(2) Tool-side connection
(5) Through hole for connection with screws
(19) Mounting surface for options
(24) Bolt circle
(25) Pneumatic feed-throughs
(77) Clearance for fitting screw
(91) Screw connection diagram for storage adapters
(92) LED display when using the optional sensors for interlock monitoring
(93) Hose-free direct connection
(95) Fit for centering pins
(96) Fit for centering

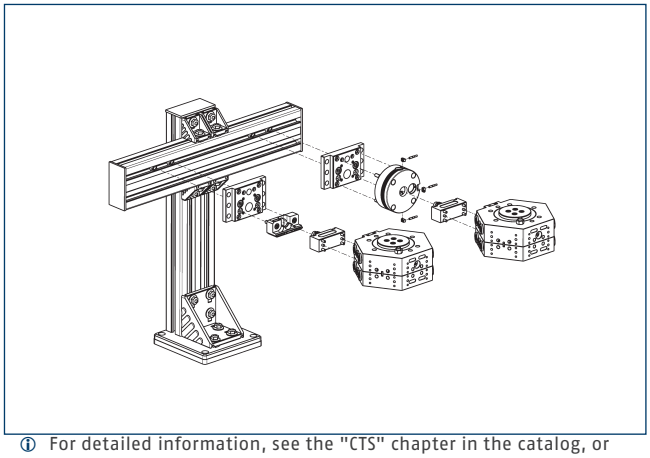
Hose-free direct connection



(90) Adapter plate (91) Tool

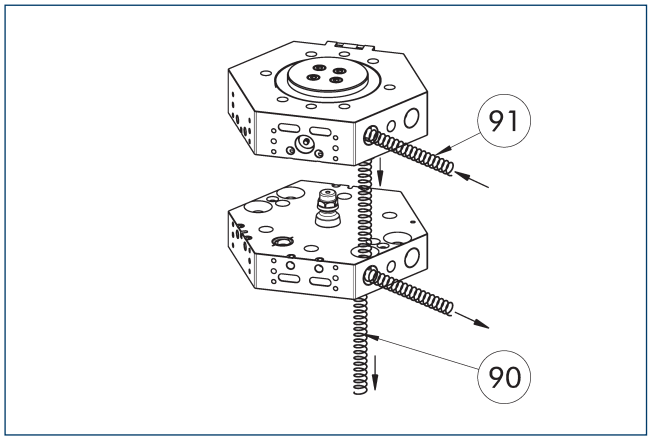
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Modular storage rack CTS B



ⓘ For detailed information, see the "CTS" chapter in the catalog, or visit schunk.com.

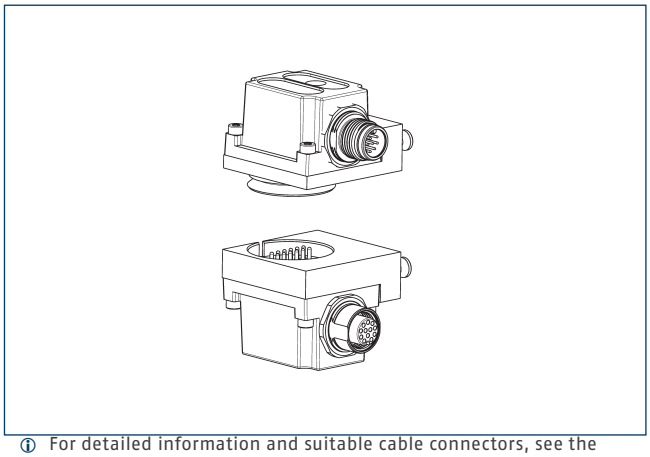
Pneumatic feed-through



(90) Feed-through axial (91) Feed-through radial

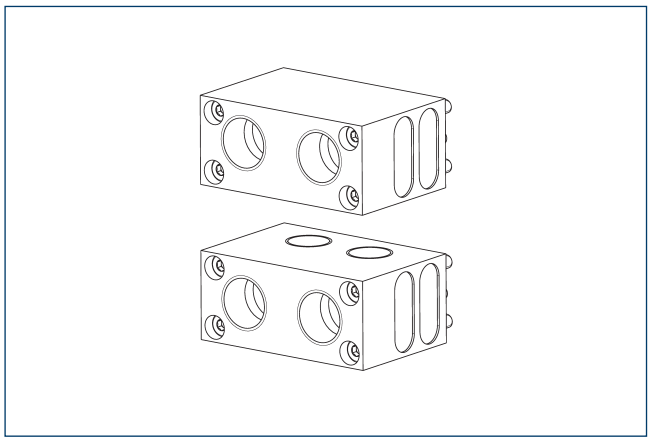
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

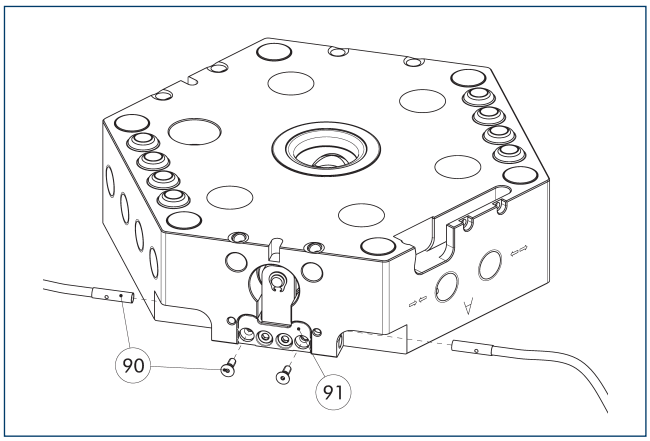


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B
COB Z82-B/2BJ	1610150	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Lock sensing



(90) Attachment kit for lock/unlock monitoring

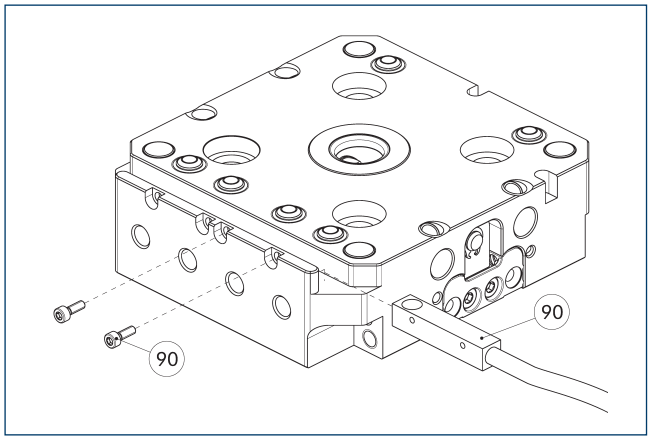
(91) Bracket (already pre-assembled)

The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100	1618207	

ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

Presence monitoring



(90) Attachment kit for presence monitoring

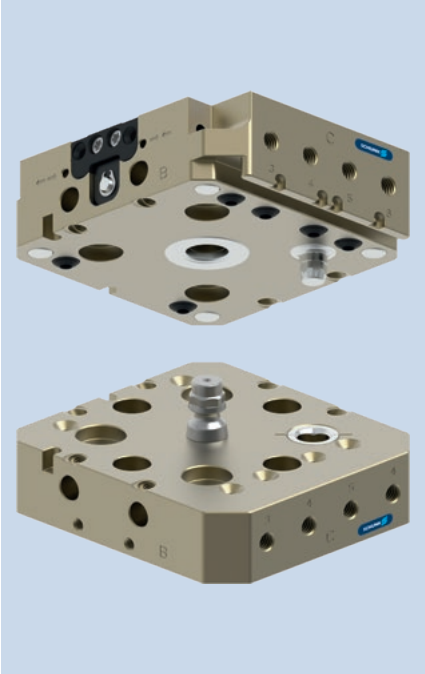
End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100-RTL	1618209	

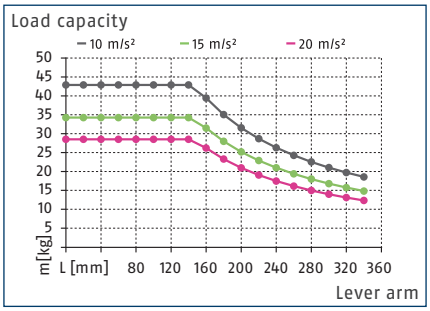
ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

CPB 050

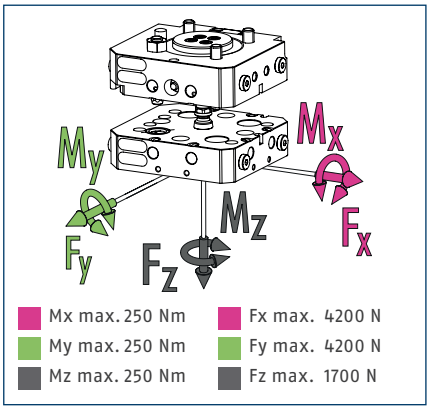
Automatic tool changers



Load chart



Max. loads

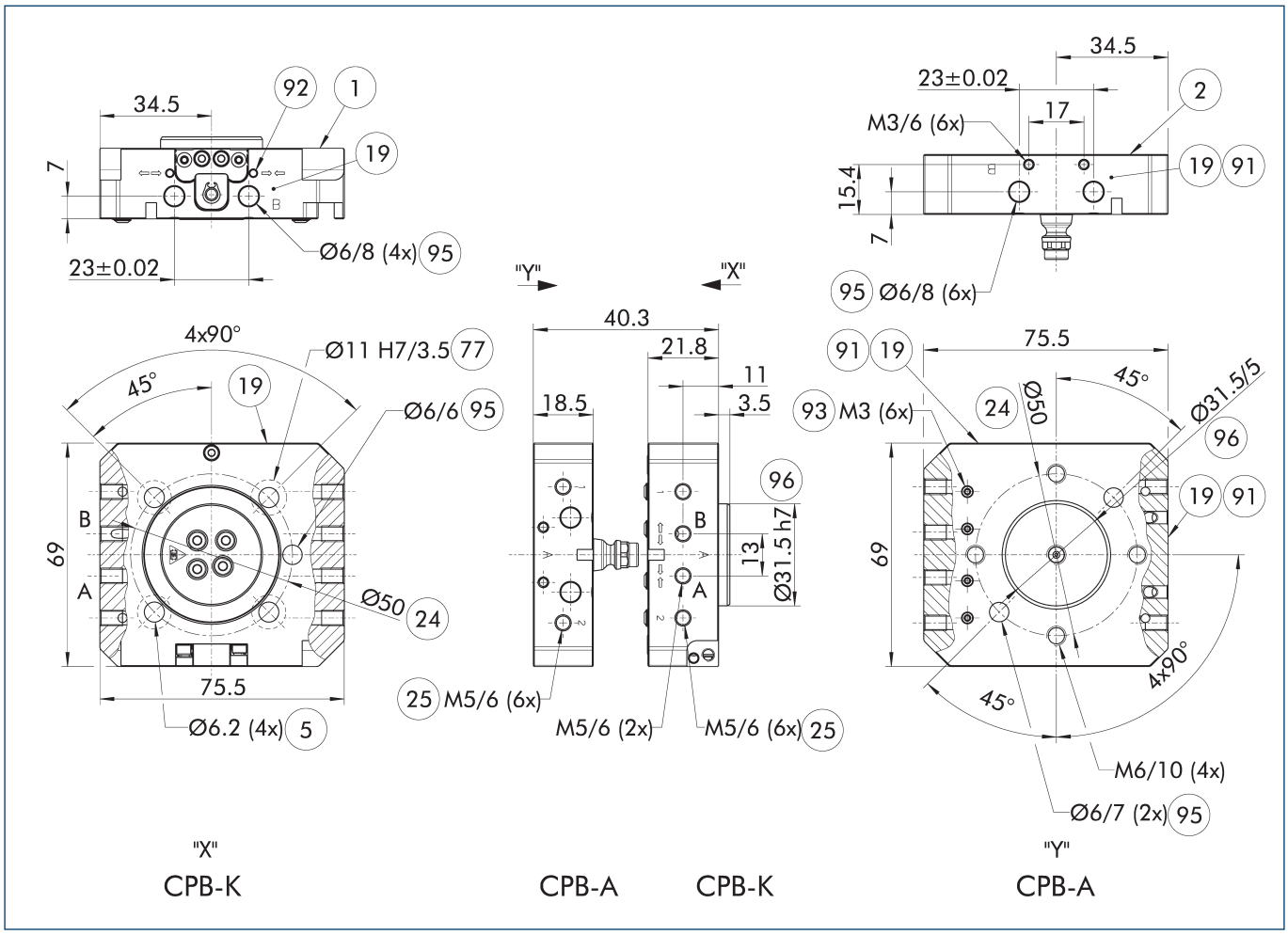


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 050-K	CPB 050-A
		Change head	Tool
ID		1595210	1595211
Lock sensing		prepared	
Locking force	[N]	1700	
Locking force provided by spring force	[N]	350	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	0.33	0.24
Max. distance when locking	[mm]	0.5	
Number of pneumatic feed-throughs		6x M5	6x M5
Lock/unlock main connection		M5	
Max. permissible XY axis offset	[mm]	±1	±1
Max. permissible angular offset XY	[°]	±0.8	±0.8
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-50-4-M6	
Tool-side connection			ISO 9409-1-50-4-M6
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		2 x B	2 x B / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	5.2	
Lock cylinder volume	[cm³]	5.2	
Cylinder volume per double stroke	[cm³]	10.4	
Flow rate at 6 bar (per feed-through)		150 l/min (M5)	150 l/min (M5)
Max. dynamic moment Mx	[Nm]	125	125
Max. dynamic moment My	[Nm]	125	125
Max. dynamic moment Mz	[Nm]	125	125
Force Fx max. dynamic	[N]	1400	1400
Force Fy max. dynamic	[N]	1400	1400
Force Fz max. dynamic	[N]	850	850

Main view

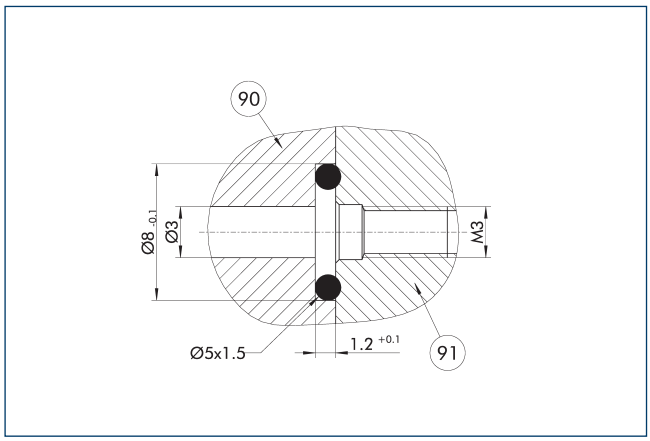


The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked
B, b Air connection unlocked

(1) Robot-side connection
(2) Tool-side connection
(5) Through hole for connection with screws
(19) Mounting surface for options
(24) Bolt circle
(25) Pneumatic feed-throughs
(77) Clearance for fitting screw
(91) Screw connection diagram for storage adapters
(92) LED display when using the optional sensors for interlock monitoring
(93) Hose-free direct connection
(95) Fit for centering pins
(96) Fit for centering

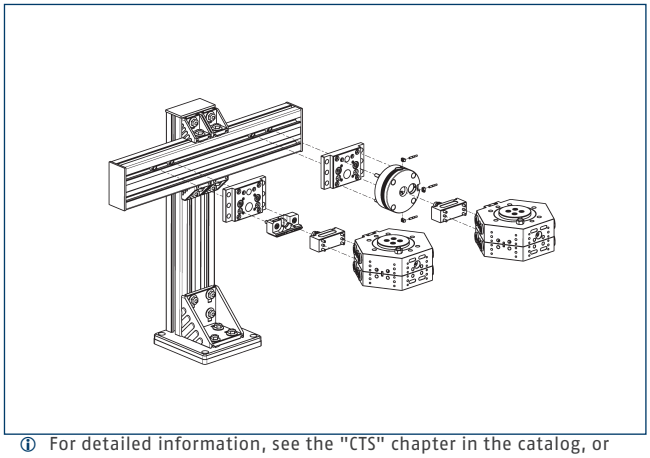
Hose-free direct connection



(90) Adapter plate (91) Tool

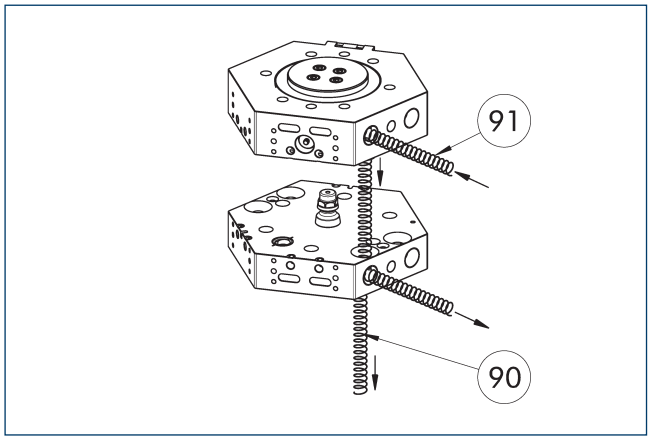
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Modular storage rack CTS B



ⓘ For detailed information, see the "CTS" chapter in the catalog, or visit schunk.com.

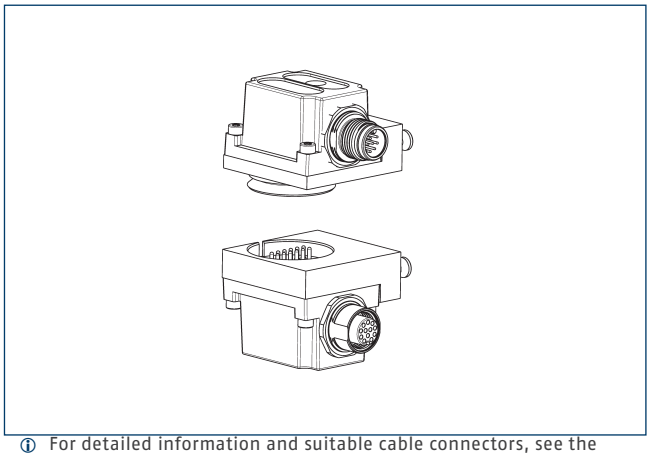
Pneumatic feed-through



(90) Feed-through axial (91) Feed-through radial

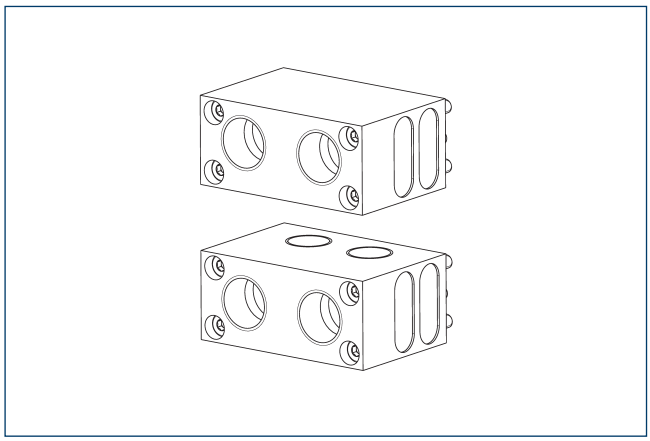
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

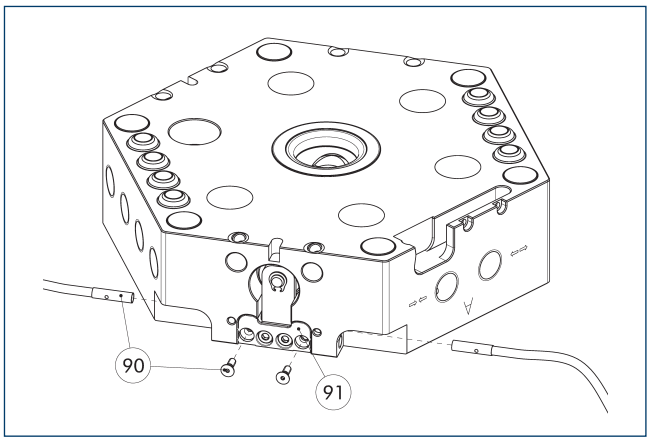


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B
COB Z82-B/2BJ	1610150	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Lock sensing



(90) Attachment kit for lock/unlock monitoring

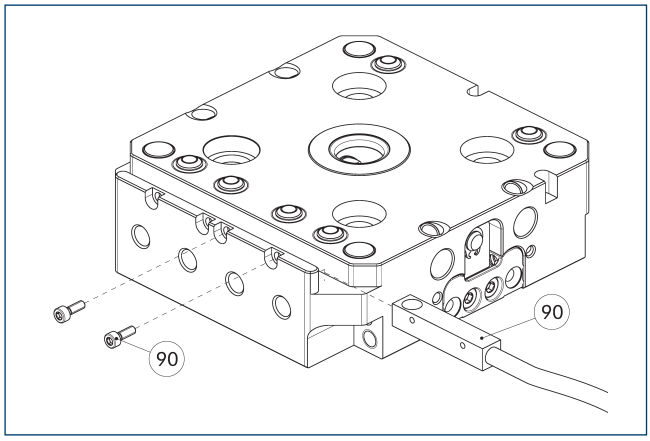
(91) Bracket (already pre-assembled)

The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100	1618207	

ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

Presence monitoring



(90) Attachment kit for presence monitoring

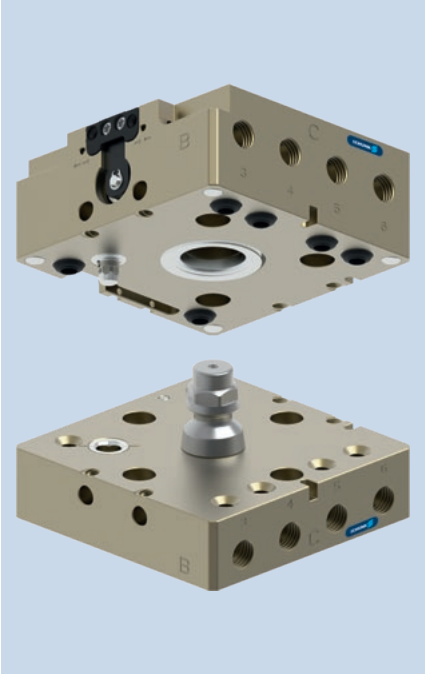
End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100-RTL	1618209	

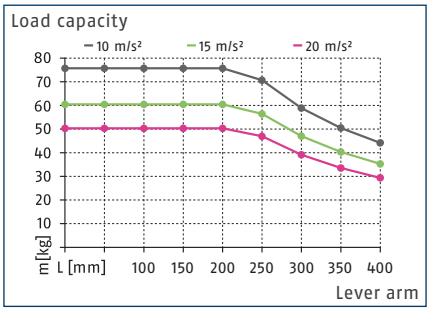
ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

CPB 063

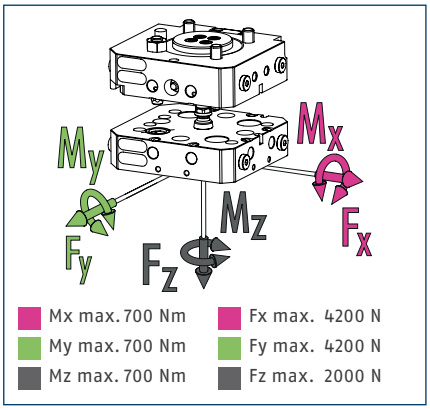
Automatic tool changers



Load chart



Max. loads

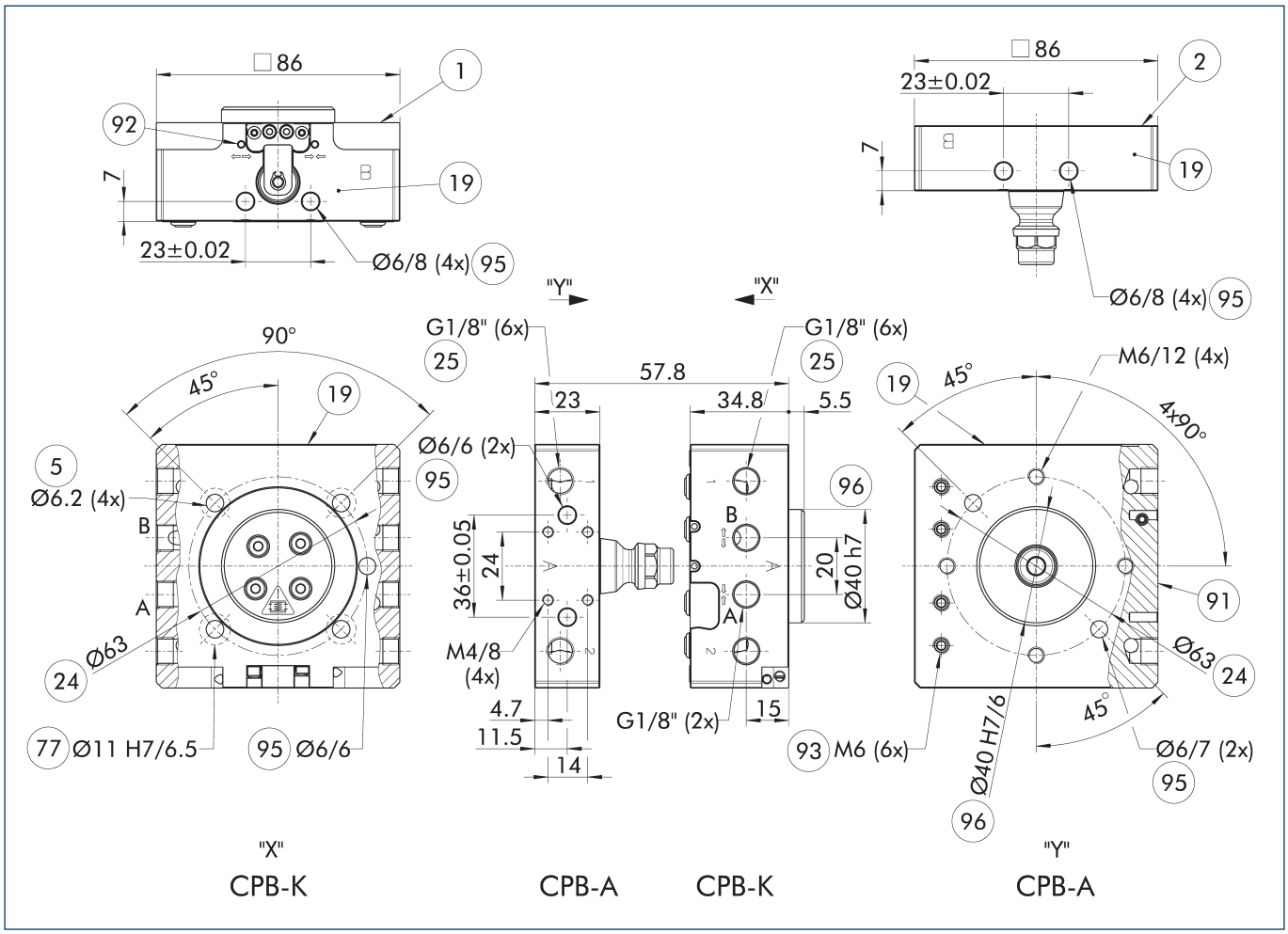


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 063-K	CPB 063-A
		Change head	Tool
ID		1595213	1595214
Lock sensing		prepared	
Locking force	[N]	2000	
Locking force provided by spring force	[N]	450	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	0.72	0.51
Max. distance when locking	[mm]	1	
Number of pneumatic feed-throughs		6x G1/8"	6x G1/8"
Lock/unlock main connection		G1/8"	
Max. permissible XY axis offset	[mm]	±2	±2
Max. permissible angular offset XY	[°]	±1	±1
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-63-4-M6	
Tool-side connection			ISO 9409-1-63-4-M6
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		2 x B	2 x B / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	11.9	
Lock cylinder volume	[cm³]	11.2	
Cylinder volume per double stroke	[cm³]	23.1	
Flow rate at 6 bar (per feed-through)		650 l/min (G1/8")	650 l/min (G1/8")
Max. dynamic moment Mx	[Nm]	350	350
Max. dynamic moment My	[Nm]	350	350
Max. dynamic moment Mz	[Nm]	350	350
Force Fx max. dynamic	[N]	1500	1500
Force Fy max. dynamic	[N]	1500	1500
Force Fz max. dynamic	[N]	1600	1600

Main view

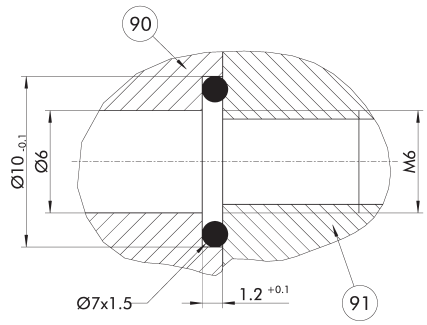


The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked
B, b Air connection unlocked

(1) Robot-side connection
(2) Tool-side connection
(5) Through hole for connection with screws
(19) Mounting surface for options
(24) Bolt circle
(25) Pneumatic feed-throughs
(77) Clearance for fitting screw
(91) Screw connection diagram for storage adapters
(92) LED display when using the optional sensors for interlock monitoring
(93) Hose-free direct connection
(95) Fit for centering pins
(96) Fit for centering

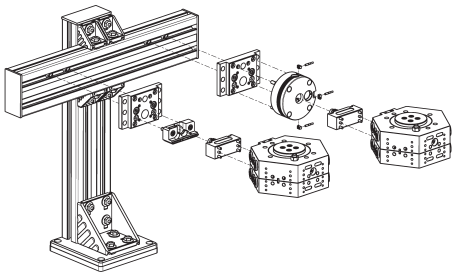
Hose-free direct connection



(90) Adapter plate (91) Tool

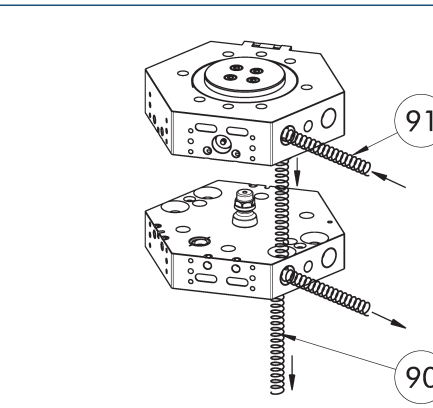
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Modular storage rack CTS B



ⓘ For detailed information, see the "CTS" chapter in the catalog, or visit schunk.com.

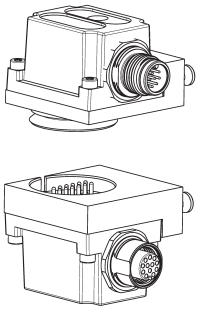
Pneumatic feed-through



(90) Feed-through axial (91) Feed-through radial

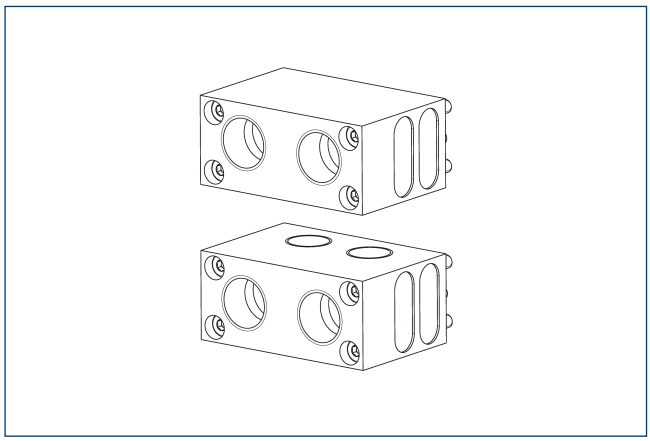
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

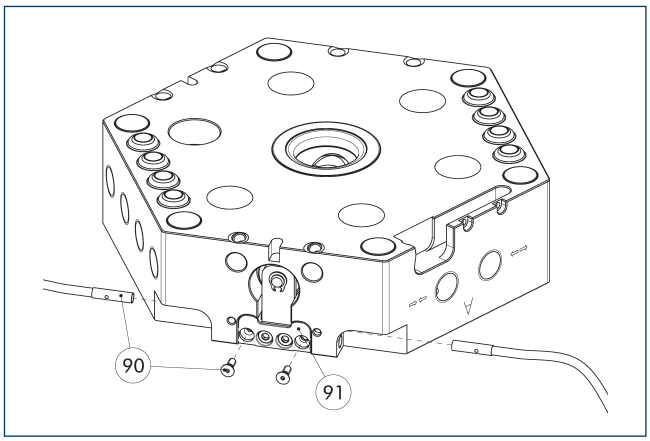


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B
COB Z82-B/2BJ	1610150	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Lock sensing



(90) Attachment kit for lock/unlock monitoring

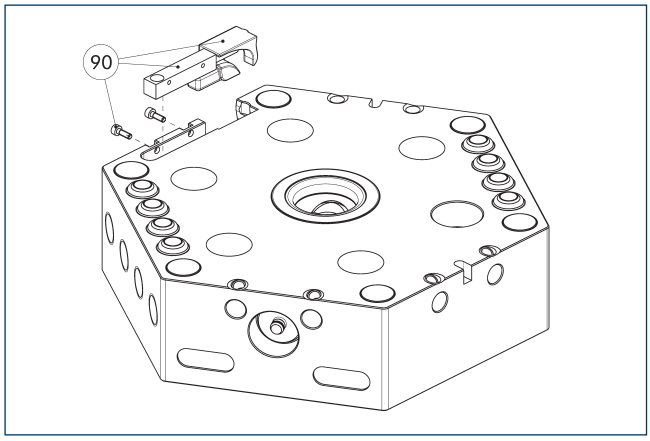
(91) Bracket (already pre-assembled)

The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100	1618207	

ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

Presence monitoring



(90) Attachment kit for presence monitoring

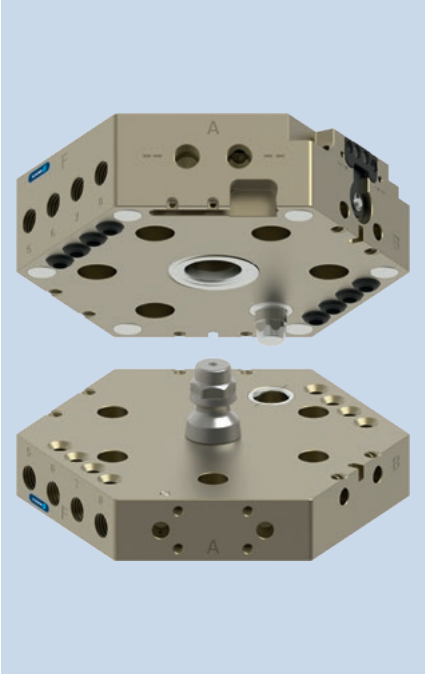
End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100-RTL	1618209	

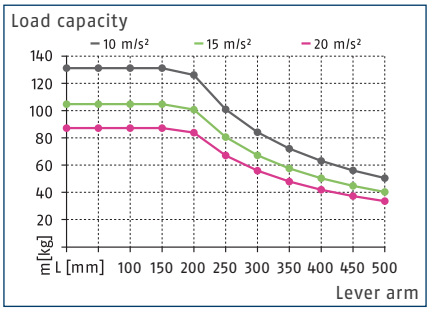
ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

CPB 080

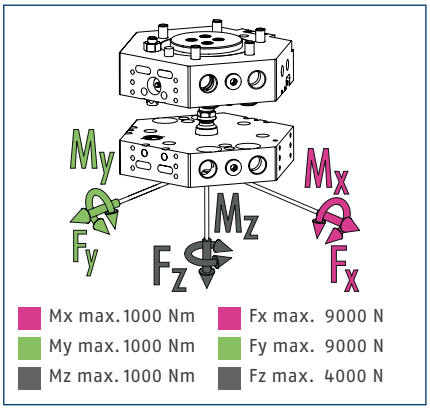
Automatic tool changers



Load chart



Max. loads

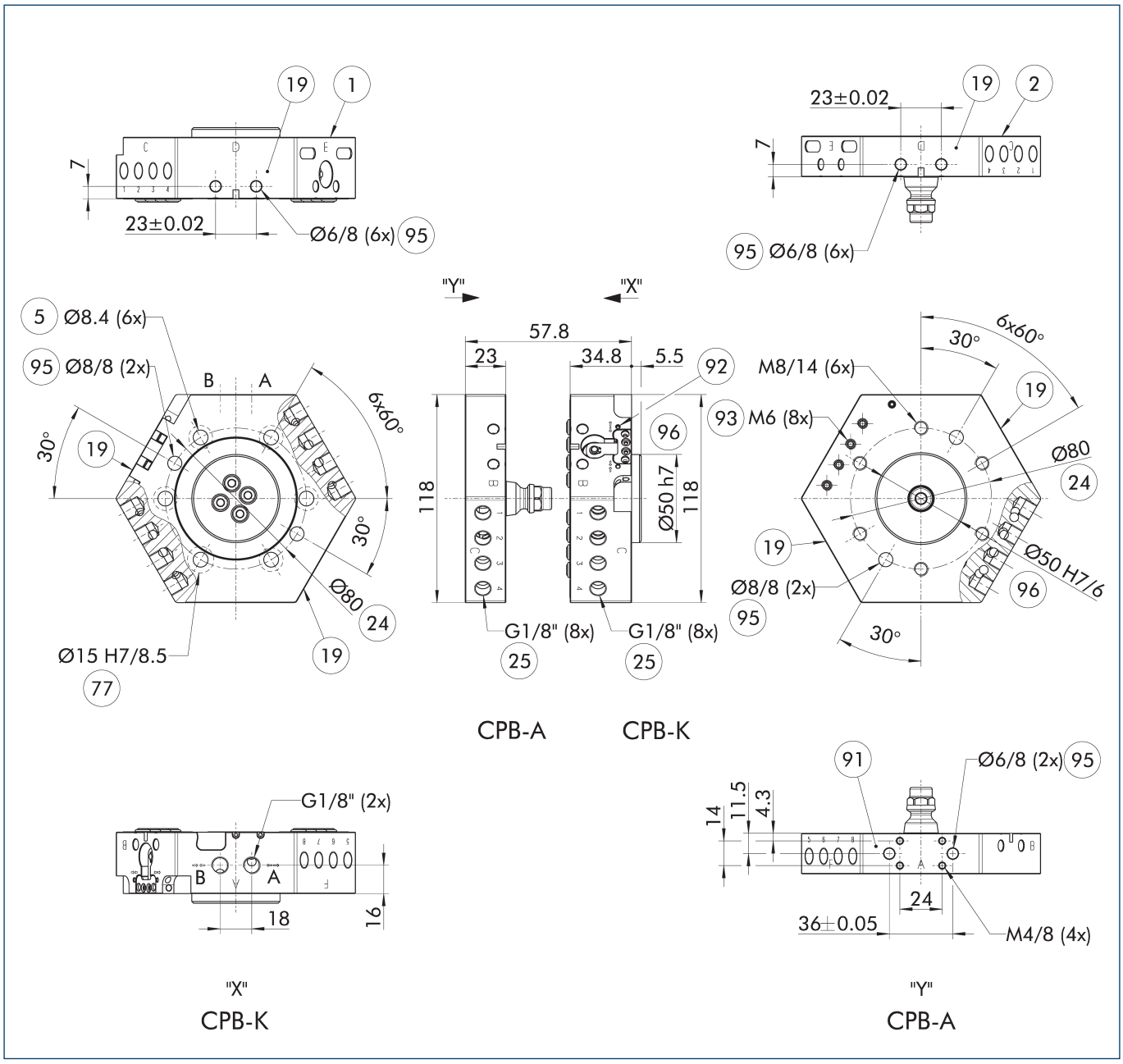


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 080-K	CPB 080-A
		Change head	Tool
ID		1595216	1595217
Lock sensing		prepared	
Locking force	[N]	4000	
Locking force provided by spring force	[N]	1000	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	1.15	0.78
Max. distance when locking	[mm]	1	
Number of pneumatic feed-throughs		8x G1/8"	8x G1/8"
Lock/unlock main connection		G1/8"	
Max. permissible XY axis offset	[mm]	±2	±2
Max. permissible angular offset XY	[°]	±1	±1
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-80-6-M8	
Tool-side connection			ISO 9409-1-80-6-M8
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		3 x B	3 x B / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	23	
Lock cylinder volume	[cm³]	23.5	
Cylinder volume per double stroke	[cm³]	46.5	
Flow rate at 6 bar (per feed-through)		650 l/min (G1/8")	650 l/min (G1/8")
Max. dynamic moment Mx	[Nm]	500	500
Max. dynamic moment My	[Nm]	500	500
Max. dynamic moment Mz	[Nm]	500	500
Force Fx max. dynamic	[N]	3000	3000
Force Fy max. dynamic	[N]	3000	3000
Force Fz max. dynamic	[N]	2600	3600

Main view

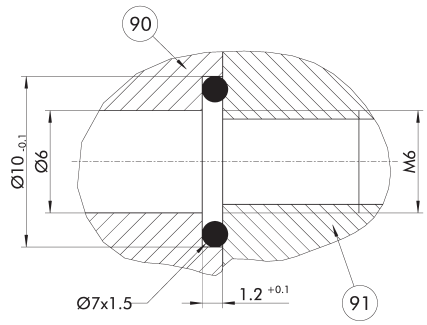


The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked
B, b Air connection unlocked

(1) Robot-side connection
(2) Tool-side connection
(5) Through hole for connection with screws
(19) Mounting surface for options
(24) Bolt circle
(25) Pneumatic feed-throughs
(77) Clearance for fitting screw
(91) Screw connection diagram for storage adapters
(92) LED display when using the optional sensors for interlock monitoring
(93) Hose-free direct connection
(95) Fit for centering pins
(96) Fit for centering

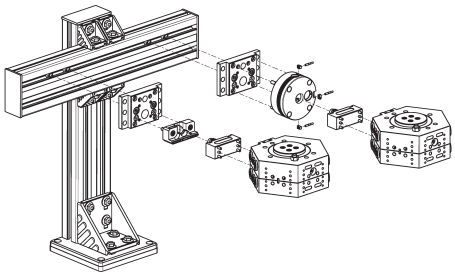
Hose-free direct connection



(90) Adapter plate (91) Tool

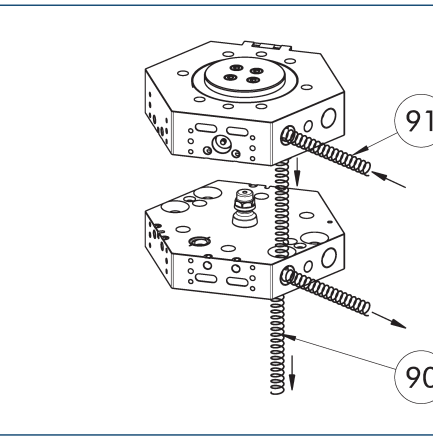
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Modular storage rack CTS B



ⓘ For detailed information, see the "CTS" chapter in the catalog, or visit schunk.com.

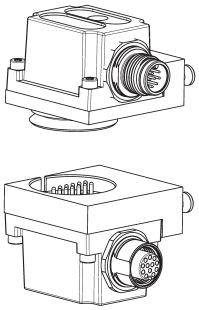
Pneumatic feed-through



(90) Feed-through axial (91) Feed-through radial

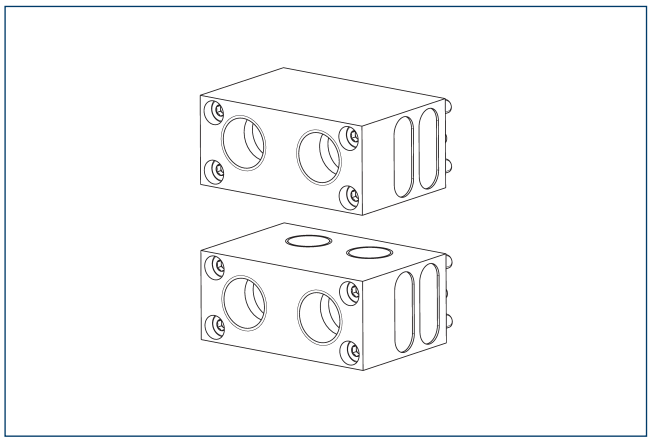
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

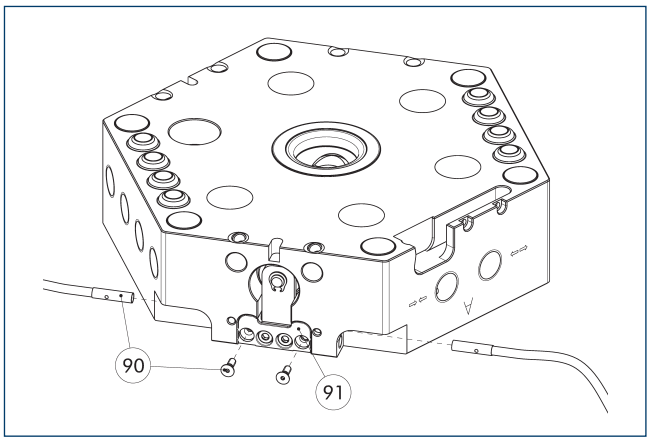


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B
COB Z82-B/2BJ	1610150	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Lock sensing



(90) Attachment kit for lock/unlock monitoring

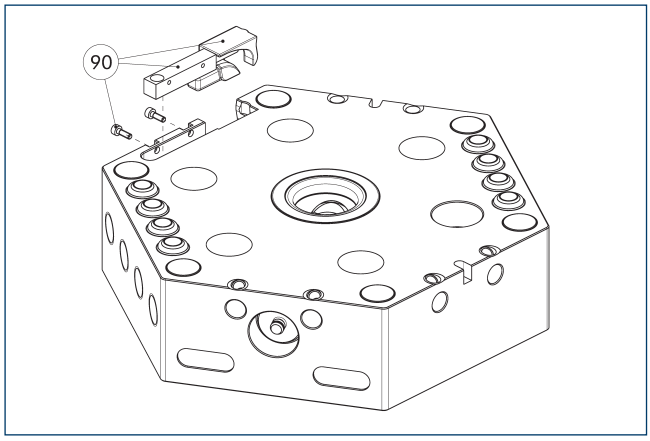
(91) Bracket (already pre-assembled)

The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100	1618207	

ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

Presence monitoring



(90) Attachment kit for presence monitoring

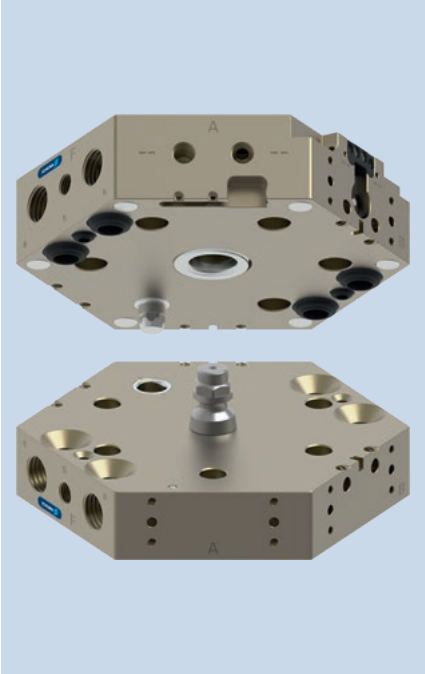
End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100-RTL	1618209	

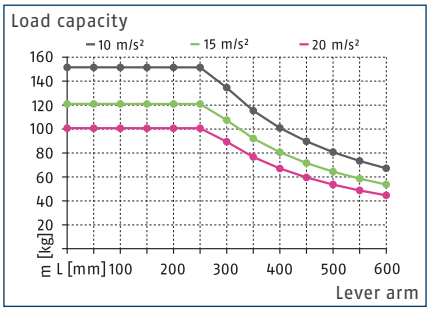
ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

CPB 100

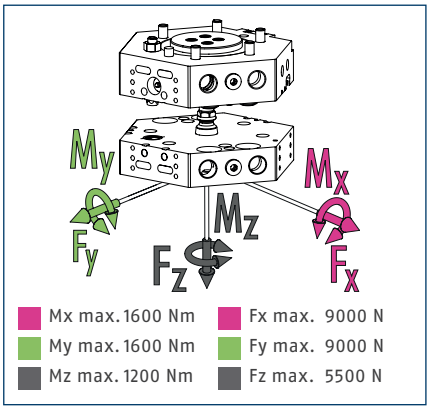
Automatic tool changers



Load chart



Max. loads

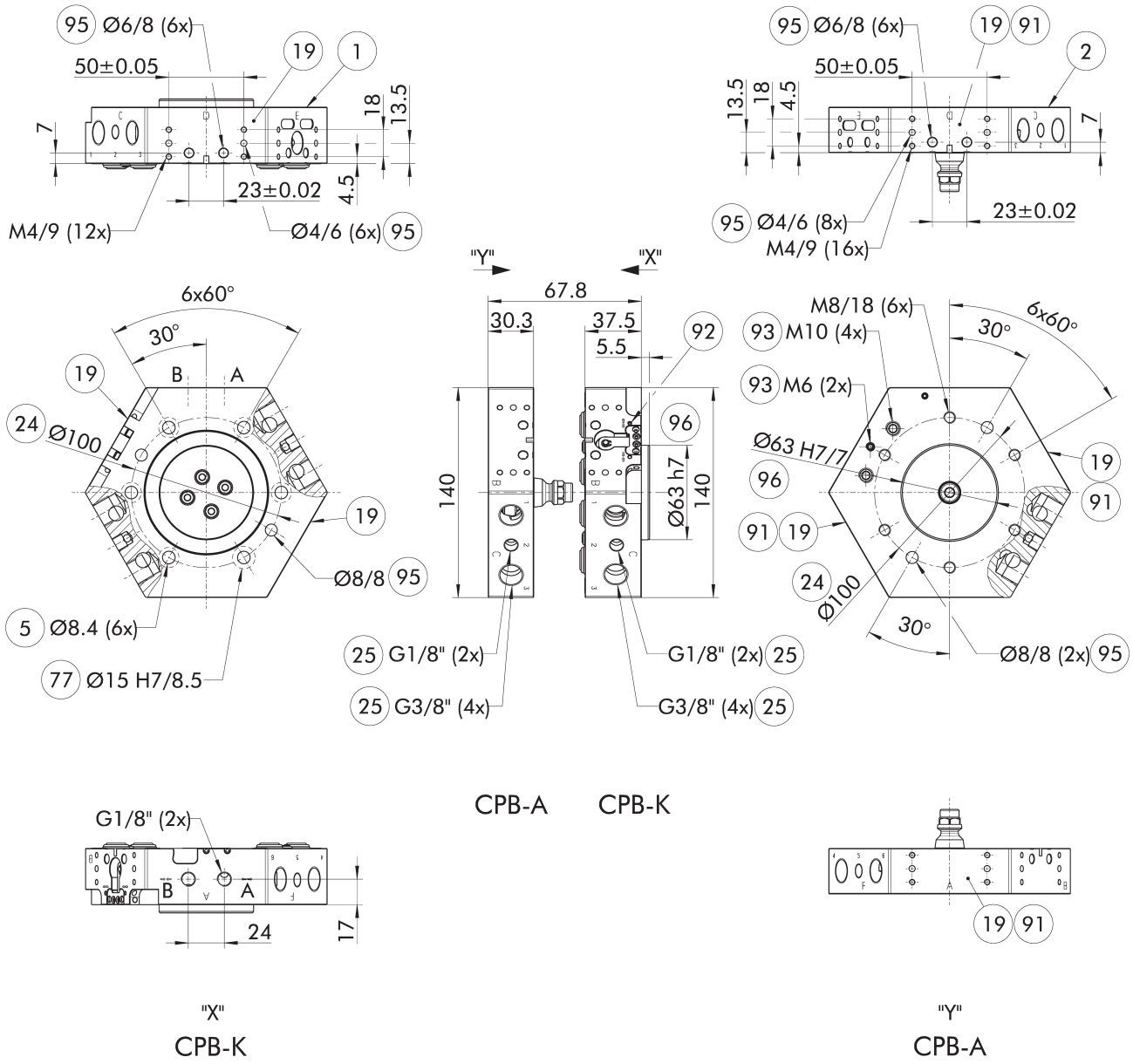


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 100-K	CPB 100-A
		Change head	Tool
ID		1595219	1595220
Lock sensing		prepared	
Locking force	[N]	5500	
Locking force provided by spring force	[N]	1500	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	1.7	1.33
Max. distance when locking	[mm]	1	
Number of pneumatic feed-throughs		2x G1/8"	2x G1/8"
Number of pneumatic feed-throughs		4x G3/8"	4x G3/8"
Lock/unlock main connection		G1/8"	
Max. permissible XY axis offset	[mm]	±2	±2
Max. permissible angular offset XY	[°]	±1	±1
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-100-6-M8	
Tool-side connection			ISO 9409-1-100-6-M8
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		3 x B / 3 x J	3 x B / 3 x J / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	34.3	
Lock cylinder volume	[cm³]	34.1	
Cylinder volume per double stroke	[cm³]	68.4	
Flow rate at 6 bar (per feed-through)		650 l/min (G1/8")	650 l/min (G1/8")
Flow rate at 6 bar (per feed-through)		1.400 l/min (G3/8")	1.400 l/min (G3/8")
Max. dynamic moment Mx	[Nm]	800	800
Max. dynamic moment My	[Nm]	800	800
Max. dynamic moment Mz	[Nm]	600	600
Force Fx max. dynamic	[N]	3000	3000
Force Fy max. dynamic	[N]	3000	3000
Force Fz max. dynamic	[N]	3600	4500

Main view



The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked

B, b Air connection unlocked

1 Robot-side connection

2 Tool-side connection

5 Through hole for connection with screws

19 Mounting surface for options

24 Bolt circle

25 Pneumatic feed-throughs

77 Clearance for fitting screw

91 Screw connection diagram for storage adapters

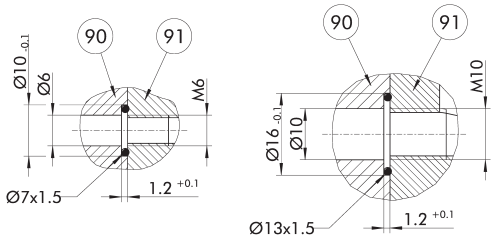
92 LED display when using the optional sensors for interlock monitoring

93 Hose-free direct connection

95 Fit for centering pins

96 Fit for centering

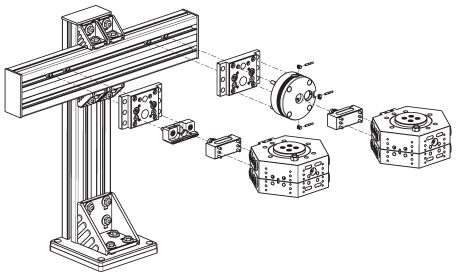
Hose-free direct connection



(90) Adapter plate (91) Tool

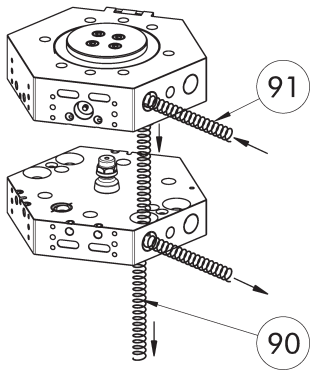
The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Modular storage rack CTS B



ⓘ For detailed information, see the "CTS" chapter in the catalog, or visit schunk.com.

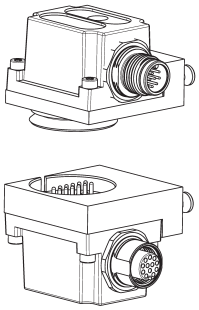
Pneumatic feed-through



(90) Feed-through axial (91) Feed-through radial

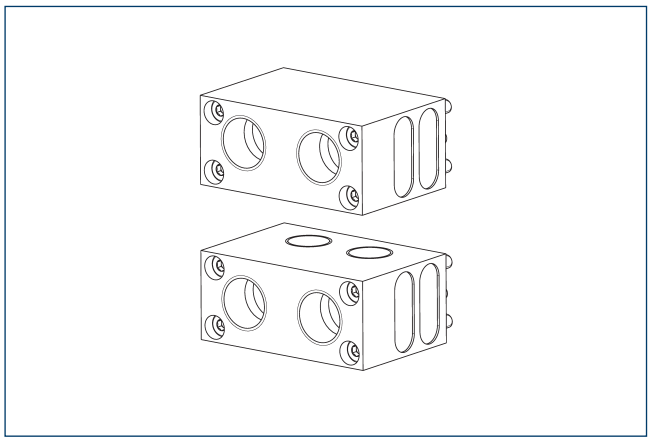
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

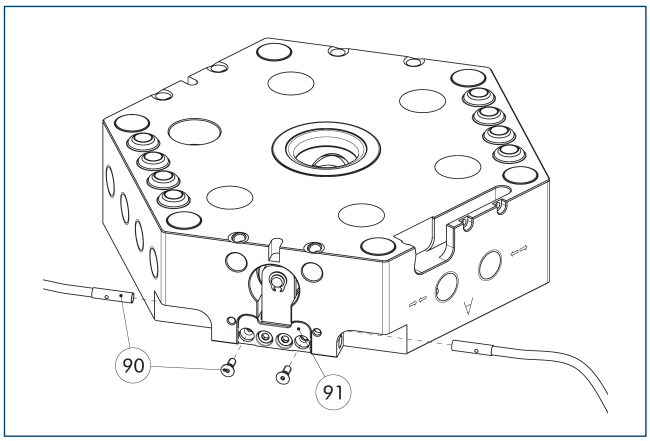


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B
COB Z82-B/2BJ	1610150	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Lock sensing



(90) Attachment kit for lock/unlock monitoring

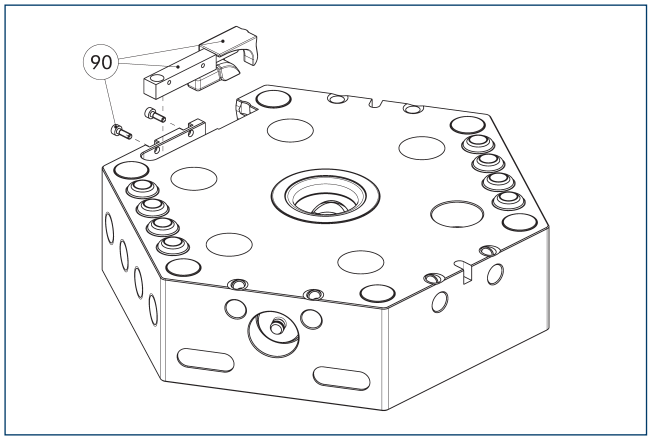
(91) Bracket (already pre-assembled)

The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100	1618207	

ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

Presence monitoring



(90) Attachment kit for presence monitoring

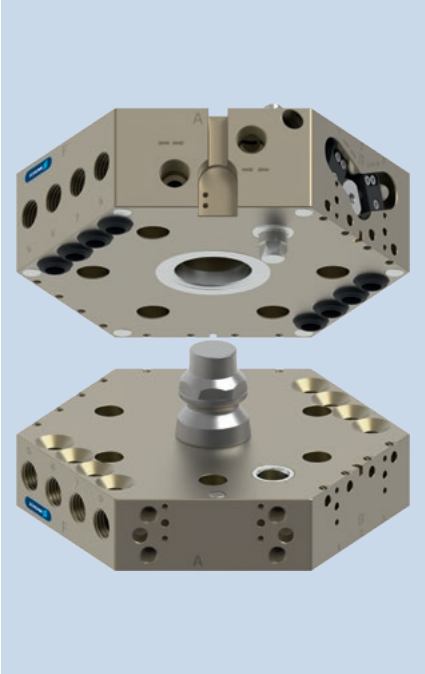
End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-040-100-RTL	1618209	

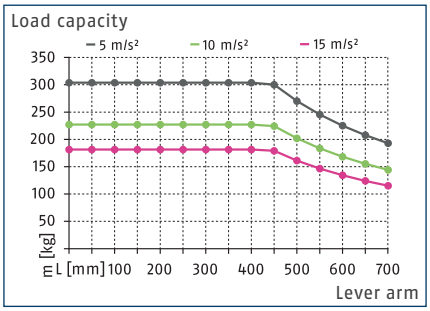
ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

CPB 125

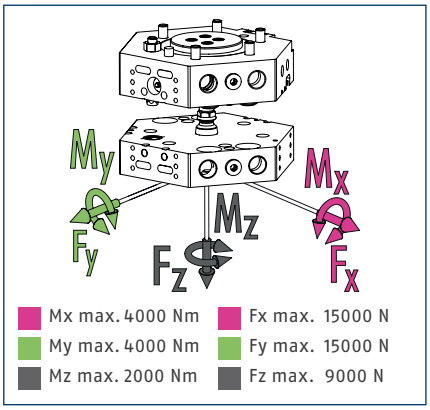
Automatic tool changers



Load chart



Max. loads

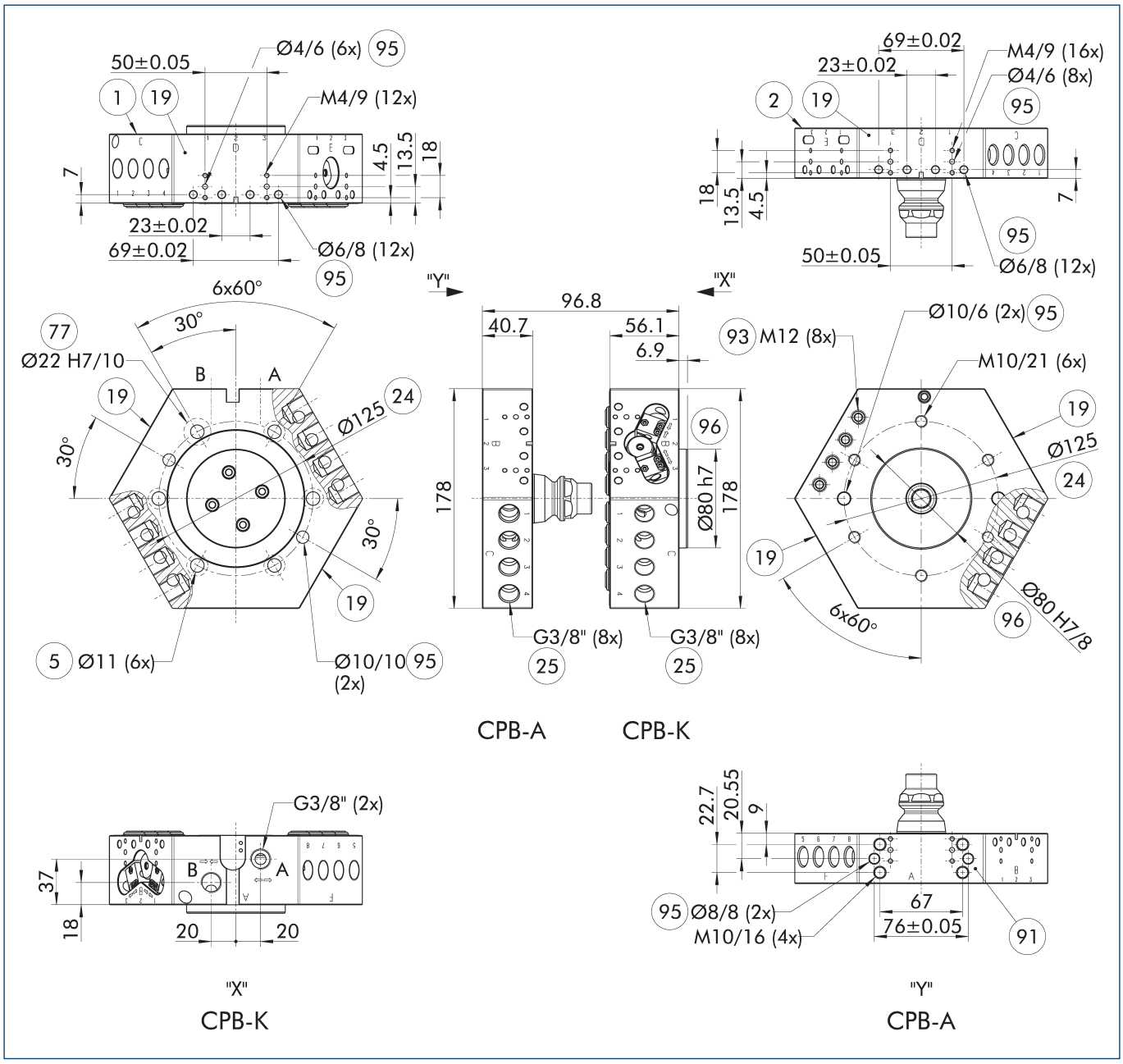


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 125-K	CPB 125-A
		Change head	Tool
ID		1595221	1595223
Lock sensing		prepared	
Locking force	[N]	9000	
Locking force provided by spring force	[N]	2200	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	4.01	3.21
Max. distance when locking	[mm]	1.5	
Number of pneumatic feed-throughs		8x G3/8"	8x G3/8"
Lock/unlock main connection		G3/8"	
Max. permissible XY axis offset	[mm]	±2	±2
Max. permissible angular offset XY	[°]	±1	±1
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-125-6-M10	
Tool-side connection			ISO 9409-1-125-6-M10
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		3 x B / 3 x J	3 x B / 3 x J / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	81.1	
Lock cylinder volume	[cm³]	87.5	
Cylinder volume per double stroke	[cm³]	168.6	
Flow rate at 6 bar (per feed-through)		1.400 l/min (G3/8")	1.400 l/min (G3/8")
Max. dynamic moment Mx	[Nm]	2000	2000
Max. dynamic moment My	[Nm]	2000	2000
Max. dynamic moment Mz	[Nm]	1000	1000
Force Fx max. dynamic	[N]	5000	5000
Force Fy max. dynamic	[N]	5000	5000
Force Fz max. dynamic	[N]	4500	1150

Main view



The drawing shows the basic version of the tool changer without taking account of the dimensions of the options described below.

A, a Air connection locked
B, b Air connection unlocked

(1) Robot-side connection
(2) Tool-side connection
(5) Through hole for connection with screws
(19) Mounting surface for options
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(91) Screw connection diagram for storage adapters
(92) LED display when using the optional sensors for interlock monitoring
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(95) Fit for centering pins
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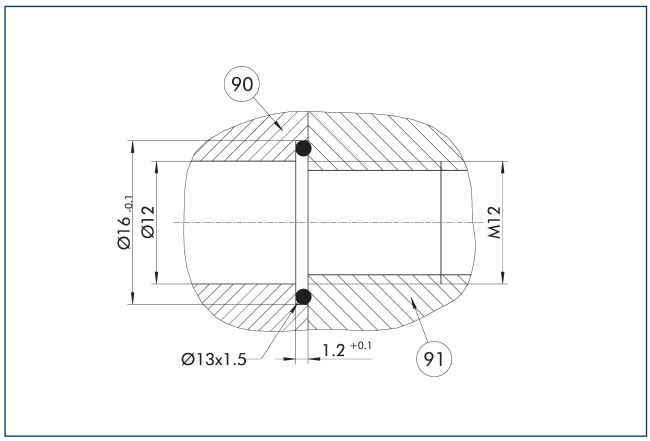
Hose-free direct connection

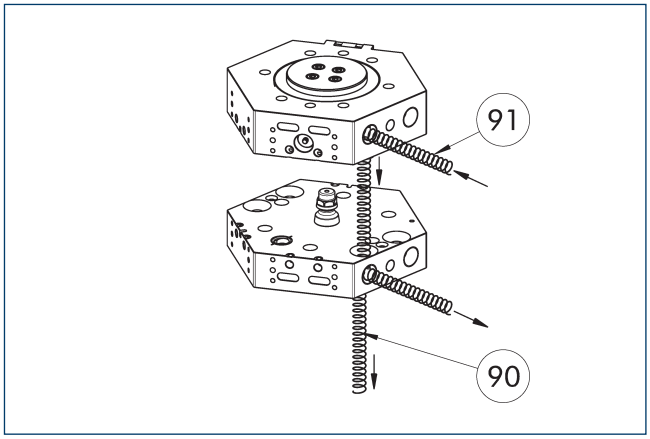


90 Adapter plate

91 Tool

The direct connection is used for supplying compressed air without hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Pneumatic feed-through

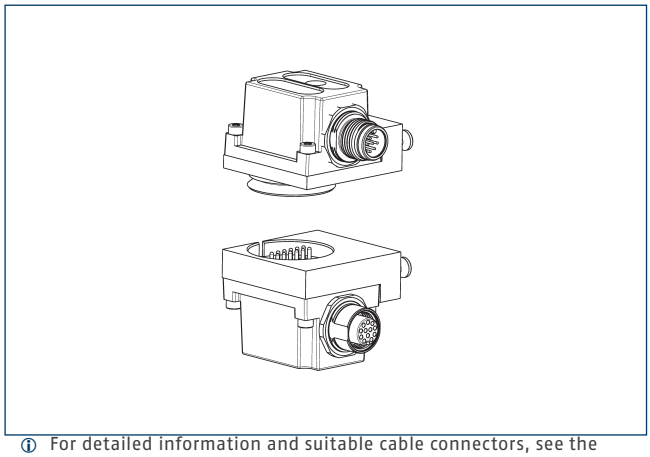


90 Feed-through axial

91 Feed-through radial

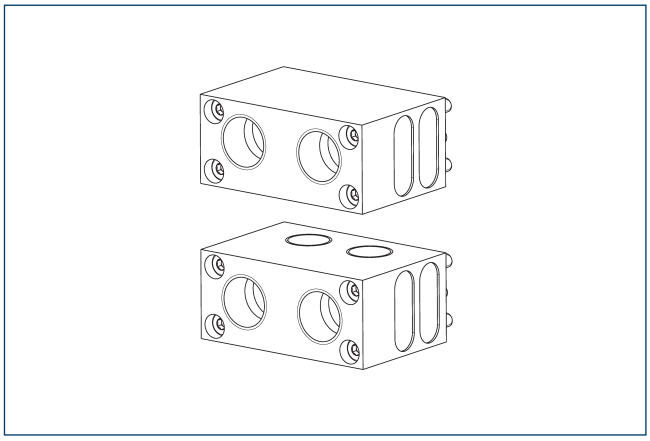
The tool changer has pneumatic feed-throughs. On the tool side, these can be used both axially hose-free via the customer's adapter plate and radially with a hose connection.

Optional modules COB



ⓘ For detailed information and suitable cable connectors, see the "COB" chapter in the catalog, or visit schunk.com.

Optional modules COS

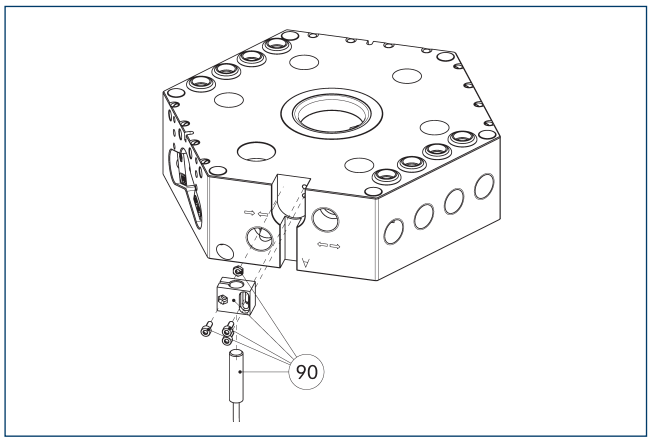


An adapter plate is sometimes required to mount COS option modules on CPB tool changers.

Description	ID	Screw connection diagram
Adapter plate		
COB Z81-B/J	1610145	B

ⓘ For detailed information and suitable cable connectors, see the "COS" chapter in the catalog, or visit schunk.com.

Presence monitoring



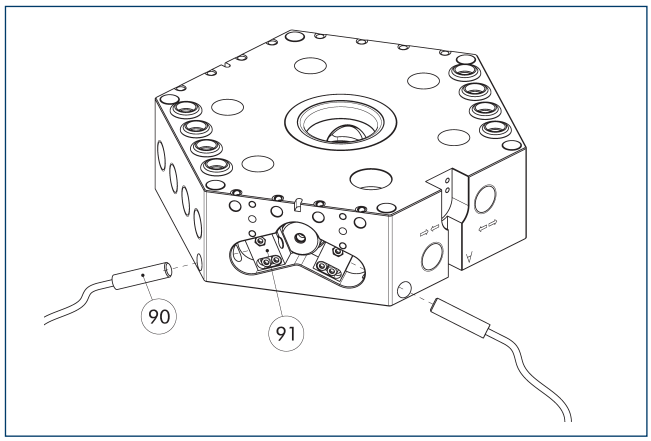
(90) Attachment kit for presence monitoring

End position monitoring can be mounted with an attachment kit.

Description	ID	
Attachment kit for proximity switch		
AS-CPB-125-160-RTL	1618211	

ⓘ For each CPB-K, an attachment kit (sensor included) is required for presence monitoring.

Lock sensing



(90) Sensor for lock status monitoring

(91) Bracket (already pre-assembled)

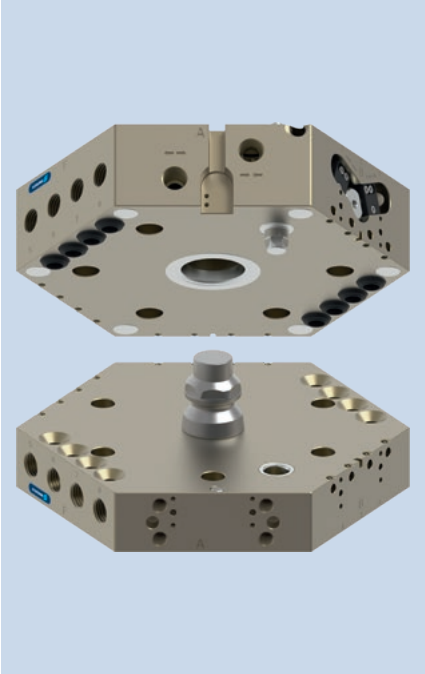
The drawing shows the installation situation with the prepared locking monitoring.

Description	ID	Often combined
Inductive proximity switch		
IN 80-S-M8	0301478	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
Clip for connector/socket		
CLI-M8	0301463	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Sensor distributor		
V2-M8	0301775	●
V4-M8	0301746	
V8-M8	0301751	

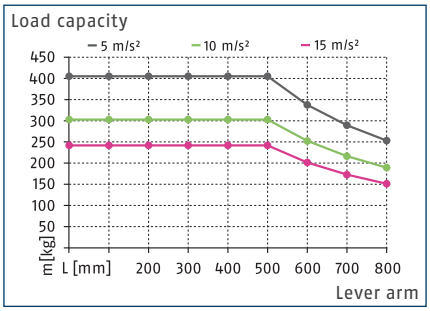
ⓘ Two attachment kits (sensor included) are required for each unit, as well as optional extension cables. Please consider the minimum permissible bending radii for sensor cables. These are generally 35 mm.

CPB 160

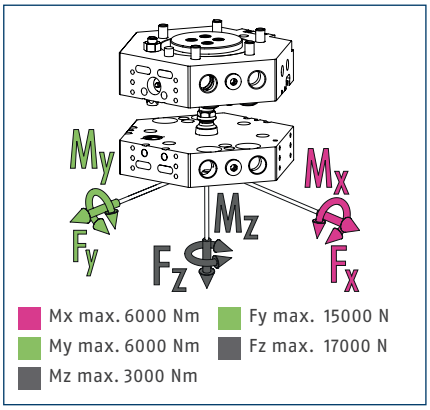
Automatic tool changers



Load chart



Max. loads

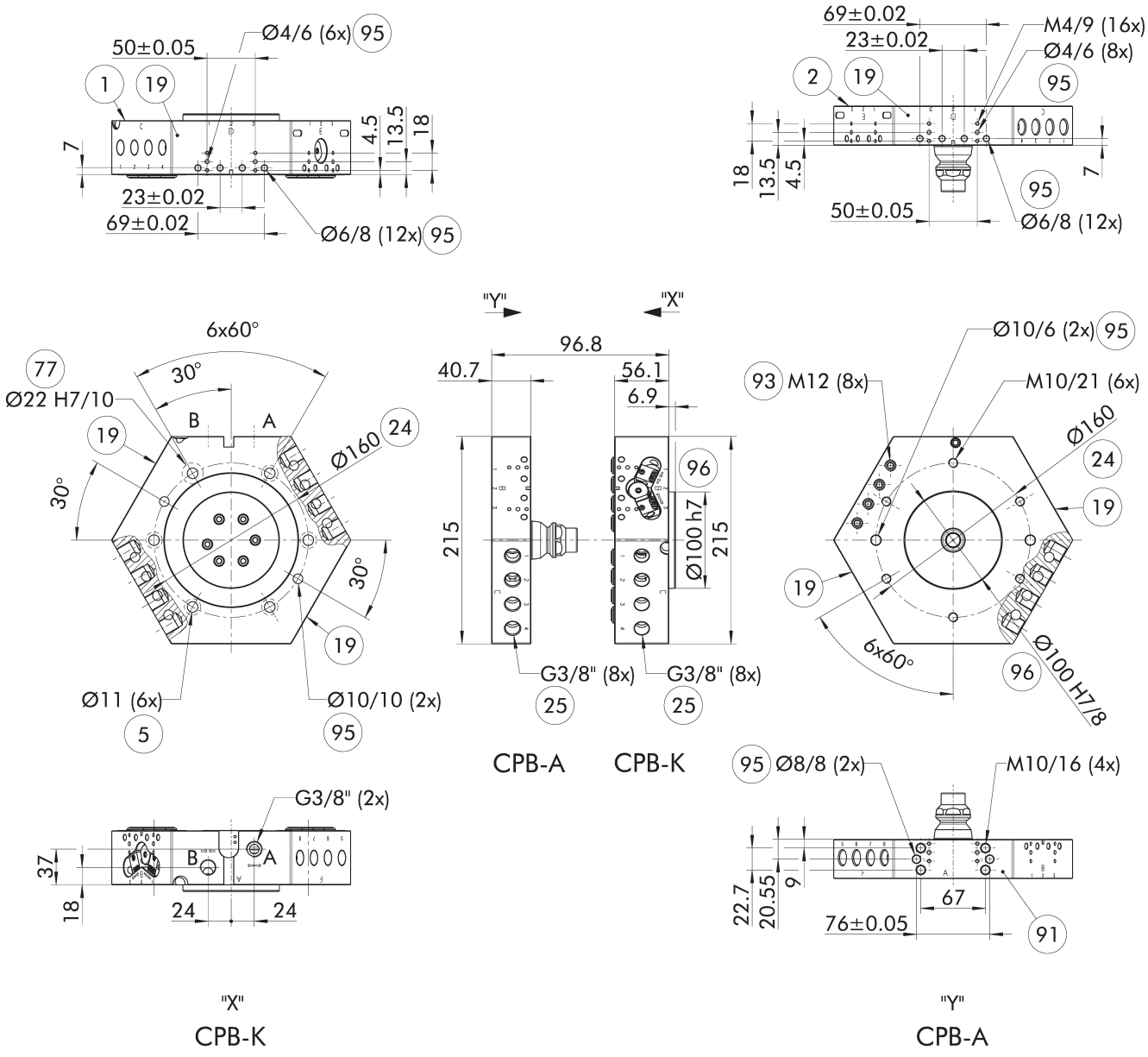


ⓘ This is the sum of all static loads that are permitted to act on the tool changer.

Technical data

Description		CPB 160-K	CPB 160-A
		Change head	Tool
ID		1595224	1595225
Lock sensing		prepared	
Locking force	[N]	17000	
Locking force provided by spring force	[N]	4000	
Repeat accuracy	[mm]	0.015	
Weight	[kg]	5.99	4.57
Max. distance when locking	[mm]	1.5	
Number of pneumatic feed-throughs		8x G3/8"	8x G3/8"
Lock/unlock main connection		G3/8"	
Max. permissible XY axis offset	[mm]	±2	±2
Max. permissible angular offset XY	[°]	±1	±1
Max. permissible angular offset Z	[°]	±2	±2
Robot-side connection		ISO 9409-1-160-6-M10	
Tool-side connection			ISO 9409-1-160-6-M10
Min./max. ambient temperature	[°C]	5/60	5/60
Nominal operating pressure	[bar]	6	6
Min./max. operating pressure	[bar]	4.5/7	4.5/7
Screw connection diagram		3 x B / 3 x J	3 x B / 3 x J / 1 x CTS
Opening/closing time	[s]	0.5/0.5	
Unlock cylinder volume	[cm³]	135.7	
Lock cylinder volume	[cm³]	140.6	
Cylinder volume per double stroke	[cm³]	276.3	
Flow rate at 6 bar (per feed-through)		1.400 l/min (G3/8")	1.400 l/min (G3/8")
Max. dynamic moment Mx	[Nm]	3000	3000
Max. dynamic moment My	[Nm]	3000	3000
Max. dynamic moment Mz	[Nm]	1500	1500
Force Fx max. dynamic	[N]	6000	6000
Force Fy max. dynamic	[N]	6000	6000
Force Fz max. dynamic	[N]	11500	11500
ForcesFx max.	[N]	1500	15000

Main view



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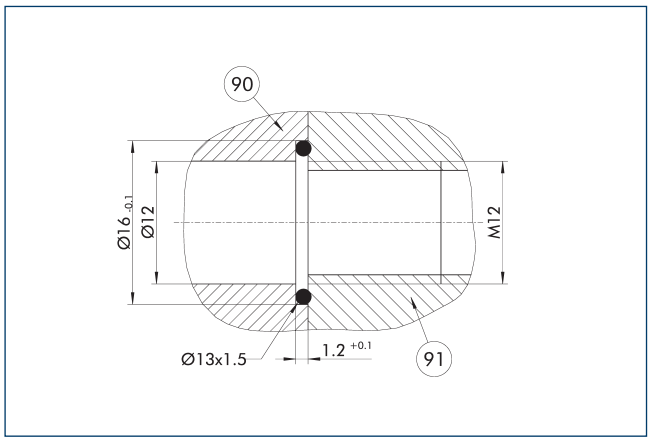

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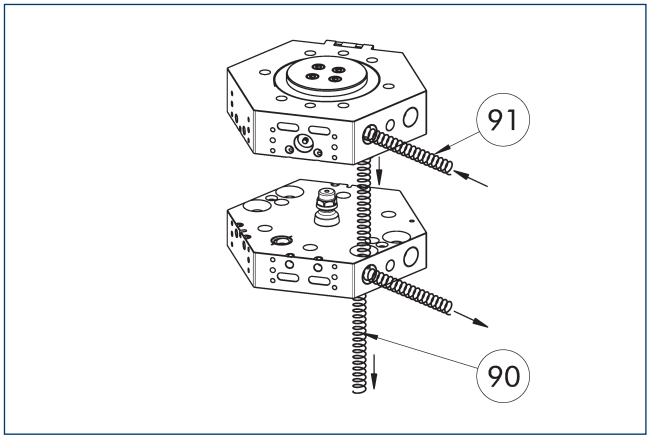

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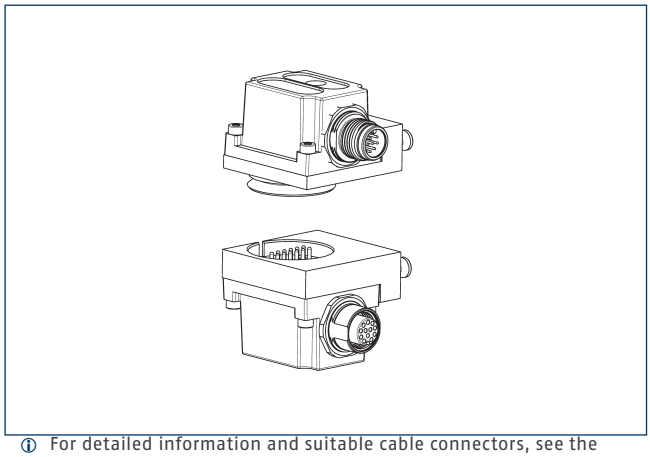

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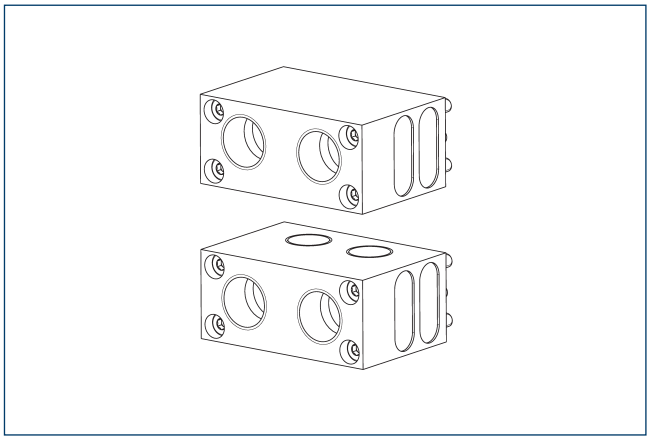

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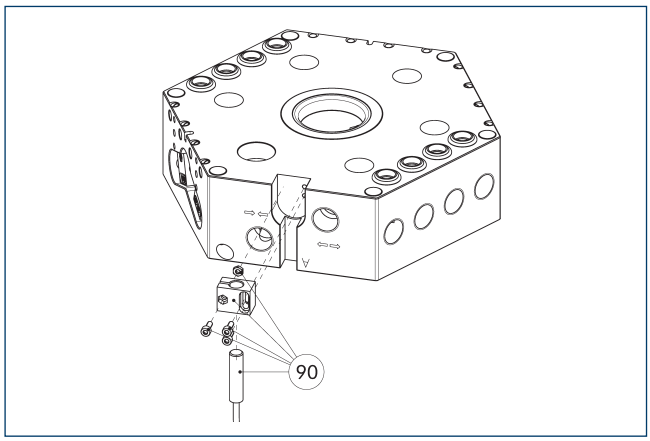

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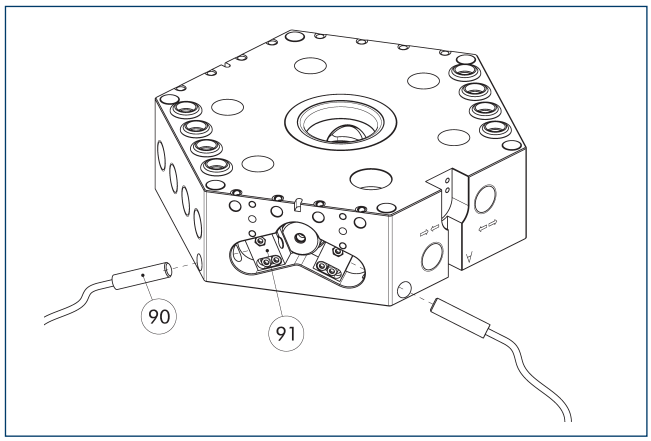

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