

Superior Clamping and Gripping

SCHUNK®

Product Information

Manual change system SHS 100

Flexible. Compact. Intuitive.

Manual change system SHS

Manual tool change system with integrated air feed-through, locking monitoring, and optional electric feed-through.

Field of application

Excellently suitable for use in the flexible production of products with a comprehensive range of variants in which reliable manual changes are required.





Advantages – Your benefits

Series with six unit sizes for optimal size selection and a broad application range

Integrated pneumatic feed-through for a safe power supply of the handling modules and tools

The locking lever is opened sideways this allows the changer to be easily operated even in confined spaces

Optional locking and presence monitoring thus increased process reliability

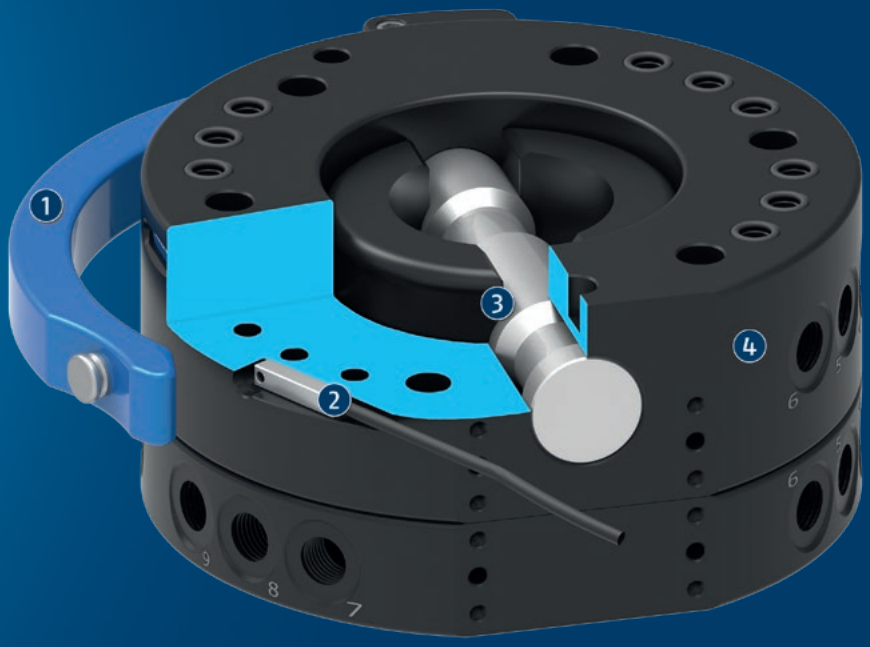
Wide range of electric, pneumatic, and fluid modules for universal energy transmission possibilities

ISO mounting pattern for easy assembly to most types of robots without needing additional adapter plates

Sizes	Handling weight	Moment load M_x	Moment load M_z
Quantity: 6	9 .. 58 kg	15 .. 320 Nm	25 .. 775 Nm

Functional description

The manual change system (SHS) consists of a manual change head (SHK) and a manual change adapter (SHA). The manual change head (SHK) is form-fit locked with the manual change adapter (SHA), and due to the patented locking it is free from play. A pin is pushed forward or backward via a locking lever for locking or unlocking. An integrated pneumatic feed-through supplies the tool with energy.



① **Locking lever**
for manual actuation

② **Lock sensing**
optional, for process-reliable monitoring of the locking condition

③ **Locking bolt**
made of corrosion-free steel for easy and secure locking

④ **Air feed-through**
without interfering contours due to the integration into the housing. Also suitable for vacuum.

General notes about the series

Actuation: Manual via locking lever

Operating principle: by turning the locking lever, the head and adapter are locked and unlocked.

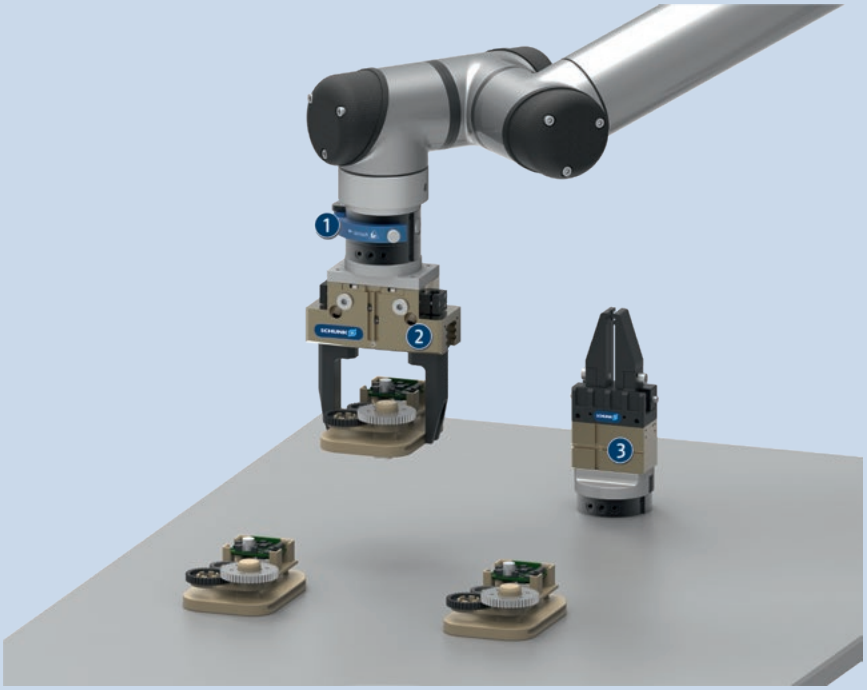
Energy transmission: Optional via electrical modules and/or fluid modules. Pneumatic feed-through already integrated.

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

Warranty: 24 months

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.

Handling weight: is the weight of the total load attached to the flange. When designing, the permissible forces and moments have to be paid attention to. Please note that exceeding the recommended handling weight will shorten the lifespan.



Application example

Handling tool with manual tool change system for gripping of middle and small parts.

1. Manual change system SHS
2. 2-finger parallel gripper PGN-plus-P with customized gripper fingers
3. 2-finger parallel gripper MPG-plus with customized gripper fingers

SCHUNK offers more ...

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





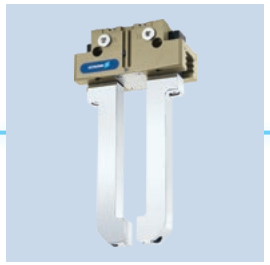
Rotary feed-through



Compensation unit



Anti-collision and overload protection sensor



Universal gripper



Inductive proximity switches



Electronic module

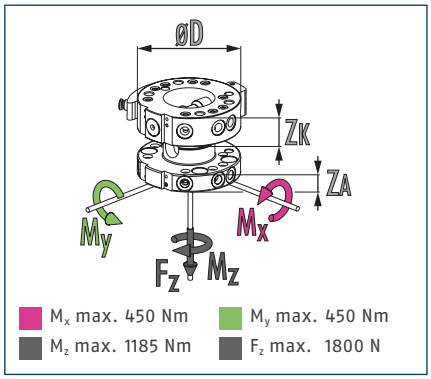
ⓘ For more information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

SHS 100

Manual change system



Dimensions and maximum loads



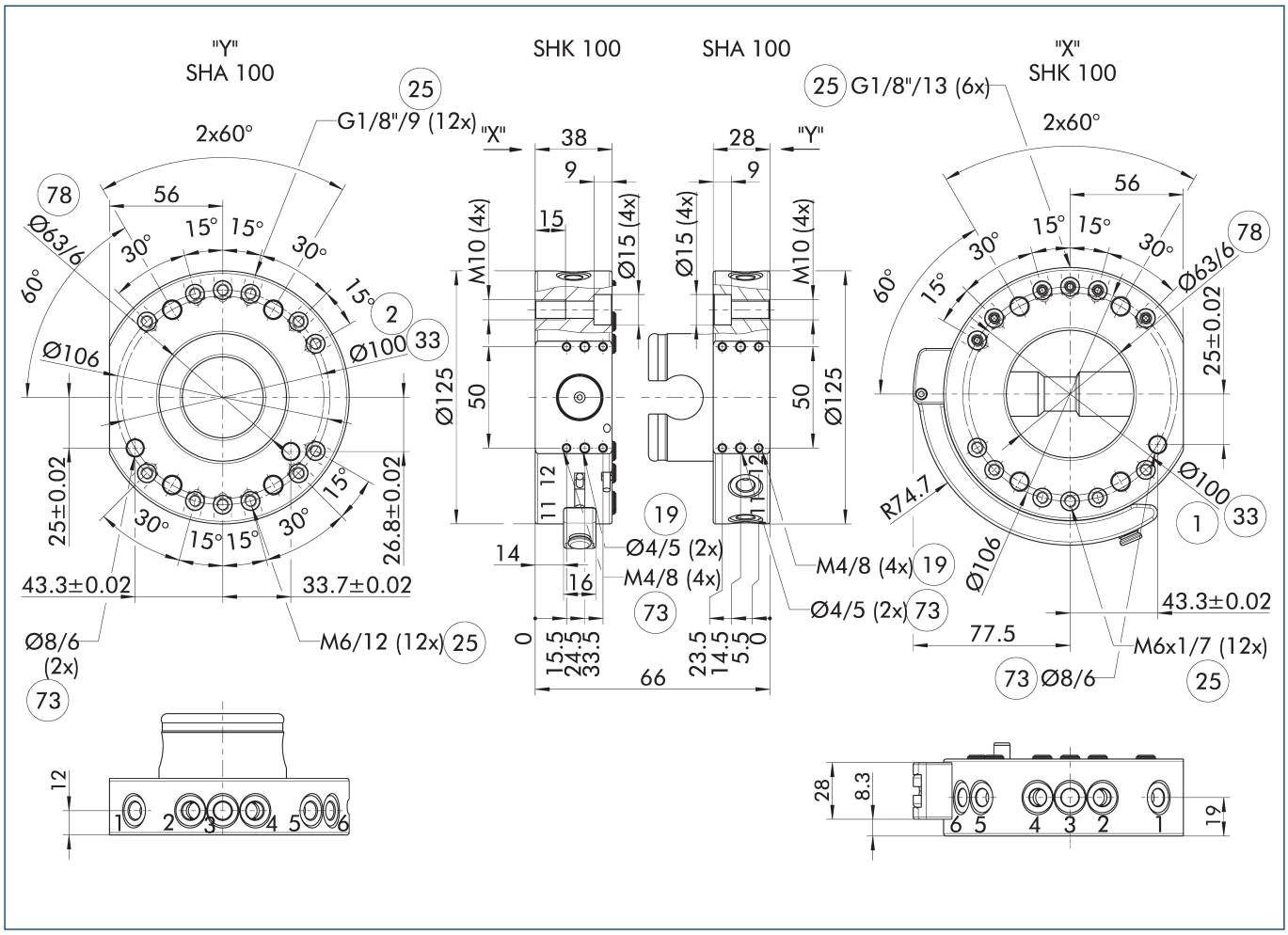
ⓘ This is the max. sum of all forces and moments which are permitted to act on the change system for ensuring proper functioning.

Technical data

Description		SHK-100-000-000	SHA-100-000-000
		Manual change head	Manual change adapter
ID		0310440	0310441
Recommended handling weight	[kg]	43	43
Lock sensing		optional	
Repeat accuracy	[mm]	0.02	0.02
Weight	[kg]	1.3	0.55
Max. distance when locking	[mm]	1	1
Number of pneumatic feed-throughs		12	12
Feed-throughs for radial use		6	12
Pitch circle diameter	[mm]	100	100
Connection flange according to		ISO 9409-1-100-6-M8	
Min./max. ambient temperature	[°C]	5/60	5/60
Dimensions Ø D x Z*	[mm]	125 x 38	125 x 28
Screw connection diagram		J	J

* Please note that the heights of the change master (ZK) and change adapter (ZA) differ. The sum represents the total height of a coupled change system.

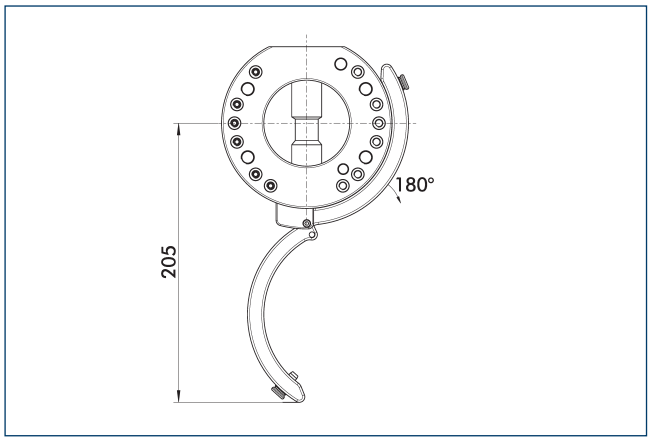
Main view



The main view shows the unit in its basic version.

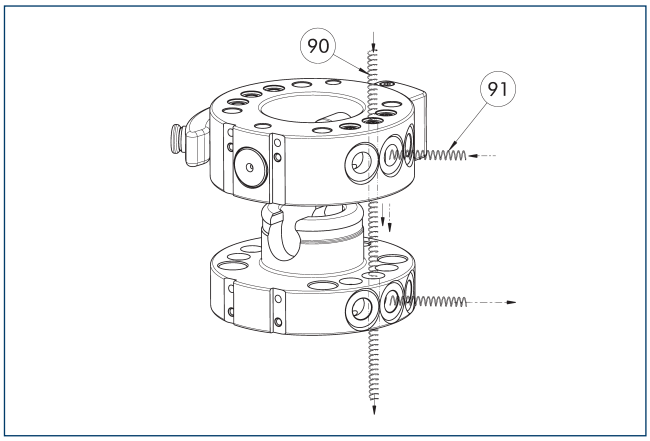
1. Robot-side connection
2. Tool-side connection
19. Mounting surface for options
25. Pneumatic feed-throughs
33. DIN ISO-9409 bolt circle
73. Fit for centering pins
78. Fit for centering

Interference Contour when locking/unlocking



The drawing shows the interfering contour when locking and unlocking. The specified values may vary depending on the opening angle of the locking lever.

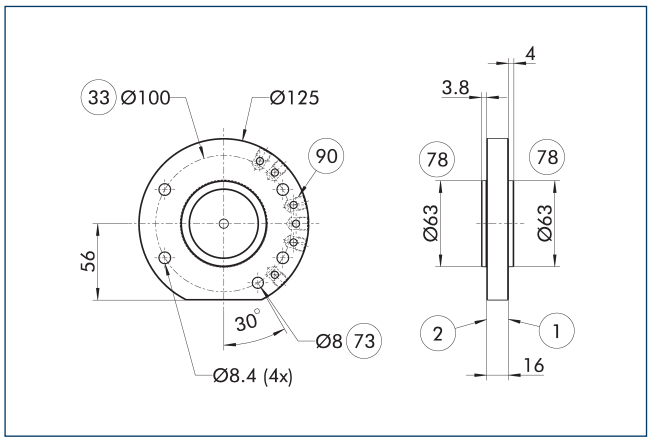
Pneumatic feed-through



90. Feed-through axial
91. Feed-through radial

The changing system has pneumatic feed-throughs. They can be used hose-free via the adapter plate (axial) or with a hose (radial). Some of the feed-throughs can be used axially.

Adapter plate ISO-A100-P-radial



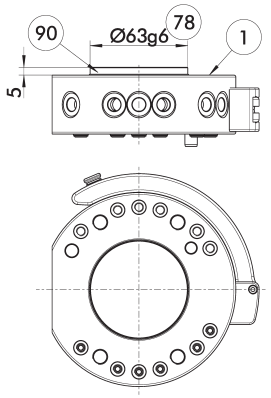
(1) Robot-side connection
(2) Tool-side connection
(33) DIN ISO-9409 bolt circle
(73) Fit for centering pins
(78) Fit for centering
(90) Connections for radial air feed-through

Robot side adapter plate

Description	ID	
Robot side		
A-SHK-100-P-RADIAL	1391567	

ⓘ Adapter plate with radial air connections for using the integrated axial air connections of the SHK.

Centering disc for SHK

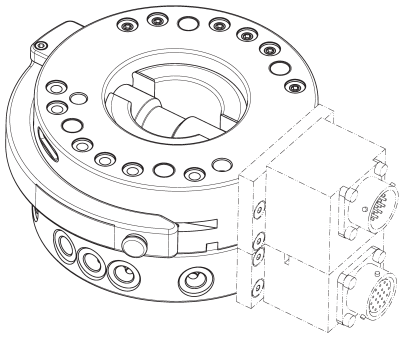


(1) Robot-side connection
(78) Fit for centering

Description	ID	
Centering disc		
A-HWK-100-BOSS	0302802	

ⓘ Serves as a fitting collar for centering on mechanical interfaces, e. g. on the robot.

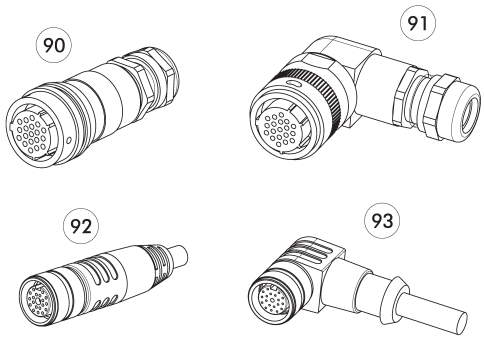
Electric feed-through module



Description	ID	No. Pins
Signal feed-through module		
SWO-G19-A	9940650	19
SWO-G19-K	9940649	19
SWO-MT8-A	9937158	
SWO-MT8-K	9937157	
SWO-R19-A	9935816	19
SWO-R19-K	9935815	19
SWO-R26-A	9935820	26
SWO-R26-K	9935819	26
SWO-R32-A	9941388	32
SWO-R32-K	9941387	32
SWO-RE5-A	9957445	
SWO-RE5-K	9957444	
SWO-RF19-A	9948657	19
SWO-RF19-K	9948654	19

ⓘ A change system with adapter plate or feed-through module are optionally available, and can be ordered as a complete assembly group. Please contact us for assistance.

Cable connector/cable extension



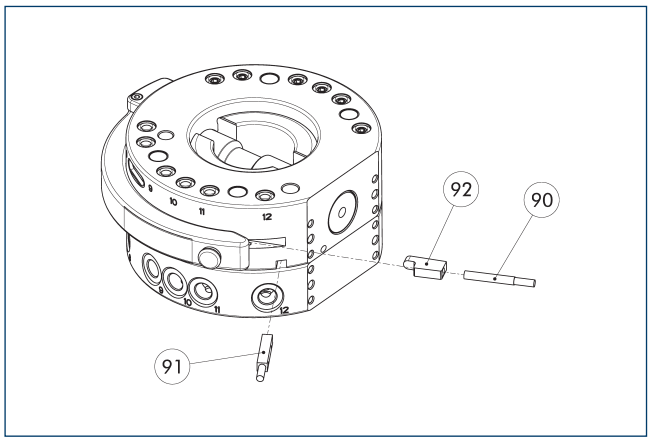
90 Connection plug / socket straight
91 Connection plug / socket at an angle
92 Connection plug / socket straight with extension cable
93 Connection plug / socket at an angle with extension cable

Other cable lengths on request.

Description	ID	Length
		[m]
Angled cable connector, robot-side		
KAS-19B-K-90-C	0301294	
Angled cable connector, tool-side		
KAS-19B-A-90-C	0301295	
Angled cable connector with cable, robot-side		
KV-10-SWK-19F-90	0302173	10
KV-3-SWK-19B-90	0302179	3
KV-5-SWK19B-90	0302190	5
KV-5-SWK-19F-90	0302172	5
Angled cable connector with cable, tool-side		
KV-3-SWA-19B-90	0302191	3
KV-3-SWA-19F-90	0302175	3
Straight cable connector, robot-side		
KAS-19B-K-0-C	0301283	
Straight cable connector, tool-side		
KAS-19B-A-0-C	0301284	
Straight cable connector with cable, robot-side		
KV-10-SWK-19F-0	0302171	10
KV-3-SWK-19B-0	0302176	3
KV-5-SWK-19B-0	0302177	5
KV-5-SWK-19F-0	0302170	5
Straight cable connector with cable, tool-side		
KV-3-SWA-19B-0	0302178	3
KV-3-SWA-19F-0	0302174	3

ⓘ For more detailed information and other cable connectors, see catalog chapter "Options" or visit our website.

Monitoring via inductive proximity switches



(90) Locking sensor IN 40-S-...
(91) Workpiece presence sensor IN 5-S-...
(92) A sensor bracket is included in the scope of delivery

Description	ID	Often combined
Inductive proximity switches		
IN 40-S-M12	0301574	
IN 40-S-M8	0301474	
IN 5-S-M12	0301569	
IN 5-S-M8	0301469	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
clip for plug/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M12	0301747	
V4-M8	0301746	
V8-M12	0301752	
V8-M8	0301751	

ⓘ For more detailed information and other cable extensions, see catalog chapter "Accessories" or visit our website.

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