



Superior Clamping and Gripping



Product data sheet

Manual change system SHS 040

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 signal, pneumatic, fluid and communication modules for universal energy transmission possibilities

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



Sizes
Quantity: 6



Handling weight
9 .. 58 kg



Moment load Mx
15 .. 320 Nm

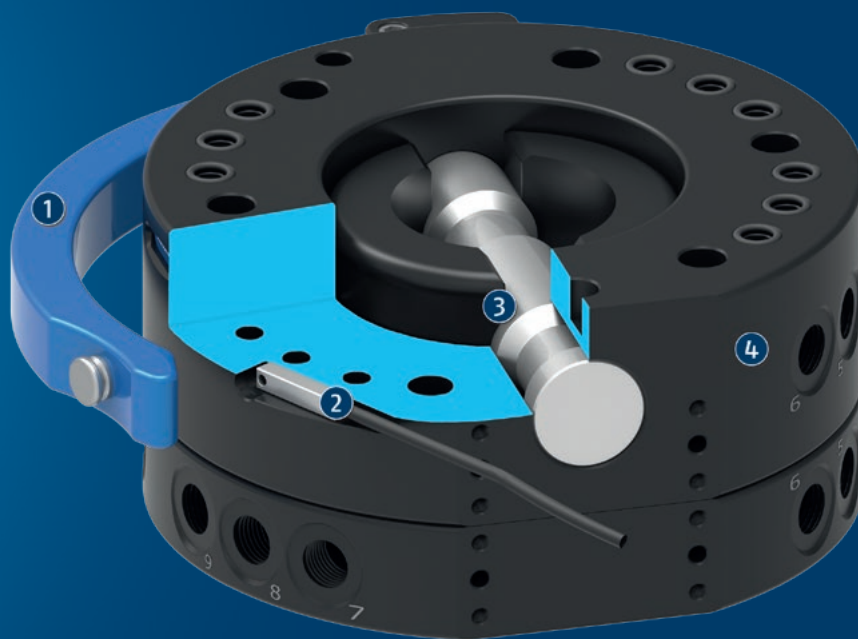


Moment load Mz
25 .. 775 Nm

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 pin**
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.

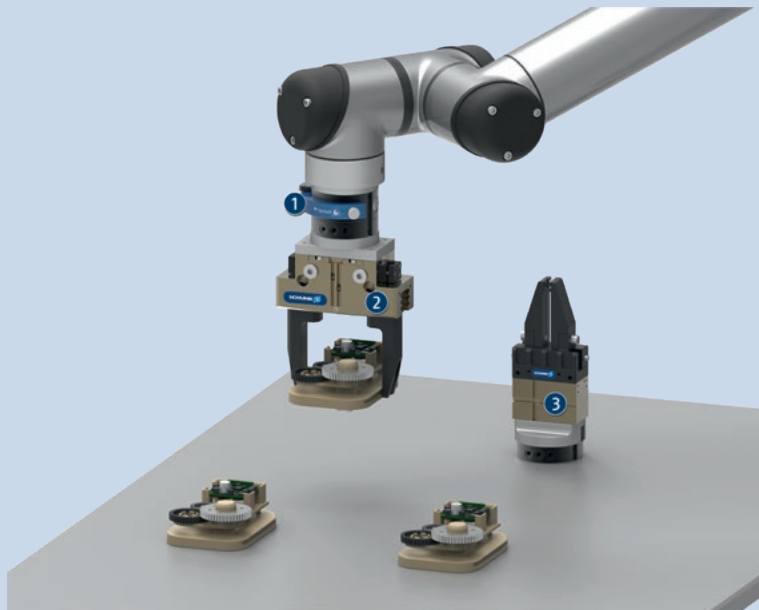
Media transmission: Optional via electrical modules and/or fluid modules. Pneumatic feed-through already integrated.

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 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



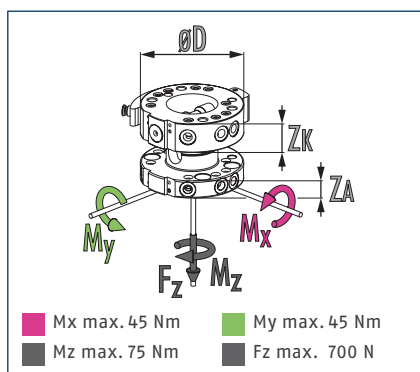
Inductive proximity switch



Electronic module

① For more information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com).

Dimensions and maximum loads



① 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-040-000-000 | SHA-040-000-000 |
|-----------------------------------|------|-------------------------------|-------------------------|
| | | Manual change head | Manual change adapter |
| ID | | 0310400 | 0310401 |
| Recommended handling weight | [kg] | 9 | 9 |
| Lock sensing | | optionally via attachment kit | |
| Repeat accuracy | [mm] | 0.02 | 0.02 |
| Weight | [kg] | 0.14 | 0.075 |
| Max. distance when locking | [mm] | 1 | 1 |
| Number of pneumatic feed-throughs | | 4 | 4 |
| Feed-throughs for radial use | | 2 | 4 |
| Pitch circle diameter | [mm] | 40 | 40 |
| Connection flange according to | | ISO 9409-1-40-4-M6 | |
| Min./max. ambient temperature | [°C] | 5/60 | 5/60 |
| Dimensions Ø D x Z* | [mm] | 50 x 24 | 50 x 15 |
| Screw connection diagram | | S5/S7 via adapter plate | S5/S7 via adapter plate |

* 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.

Technical drawing of the SHK 40 and SHA 40 hydraulic cylinders, showing front, side, and detail views with dimensions and part numbers.

SHK 40

SHA 40

"Y" SHA 40

"X" SHK 40

"Y" SHA 40

"X" SHK 40

Dimensions and part numbers are indicated throughout the drawing, including:

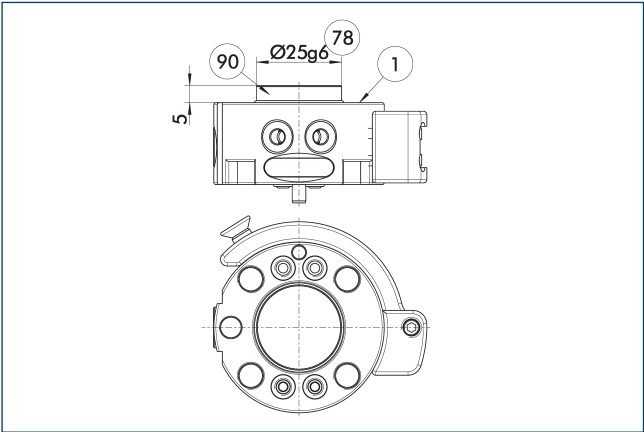
- 25 M5/6 (4x)
- 25 M5/6 (4x)
- 15° 15°
- 22.5
- Ø40
- 33
- 78
- Ø25/6
- Ø36
- 4x90°
- 14
- 20±0.02
- 15° 15°
- Ø6/6
- 73
- 19 M3/5 (2x)
- 73 Ø3/4 (2x)
- 7
- 12
- 0
- 3.7
- 14.5
- 39
- Ø50
- 18
- M8 (4x)
- Ø11 (4x)
- 6.8
- 24
- "X"
- 15
- 6.8
- Ø11 (4x)
- M8 (4x)
- 18
- Ø50
- 11
- 5
- 0
- M3/5 (2x)
- 19
- Ø3/4 (2x)
- 73
- 25 M5/6 (2x)
- 25 M5/6 (2x)
- 15° 15°
- 22.5
- Ø25/6
- 78
- Ø36
- 4x90°
- 14
- 37.5
- R31
- Ø4.2 (2x)
- 25
- 73
- 33
- Ø6/6
- 1
- Ø40
- 7.5
- 21
- 2.5
- 10

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

[illegible]

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.

Centering disc for SHK

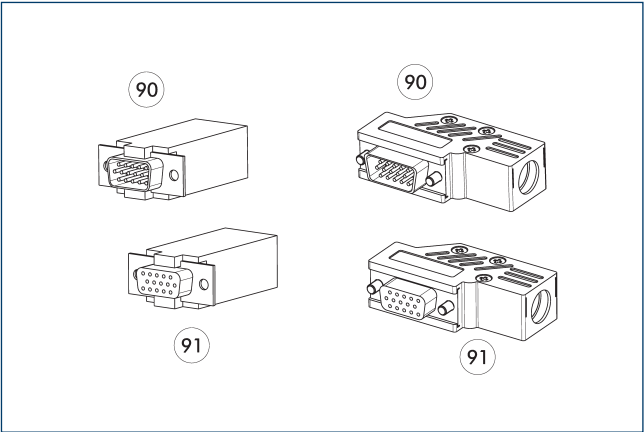


- ① Robot-side connection
- ⑨0 Centring disc
- ⑦8 Fit for centering

| Description | ID | |
|----------------|---------|--|
| Centering disc | | |
| A-HWK-040-BOSS | 0302742 | |

- ① Serves as a fitting collar for centering on mechanical interfaces, e. g. on the robot.

Cable connector



- ⑨0 D-sub connecting plug
- ⑨1 D-sub connector

| Description | ID | |
|--------------------------------------|---------|--|
| Angled cable connector, robot-side | | |
| KAS-A15-K-90 | 0301301 | |
| Angled cable connector, tool-side | | |
| KAS-A15-A-90 | 0301302 | |
| Straight cable connector, robot-side | | |
| KAS-A15-K-0 | 0301264 | |
| Straight cable connector, tool-side | | |
| KAS-A15-A-0 | 0301265 | |

- ① Detailed information and further cable connectors can be found at [schunk.com](https://www.schunk.com)



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