



Superior Clamping and Gripping



## Product Information

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 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  
Quantity: 6



Handling weight  
9 .. 58 kg



Moment load  $M_x$   
15 .. 320 Nm

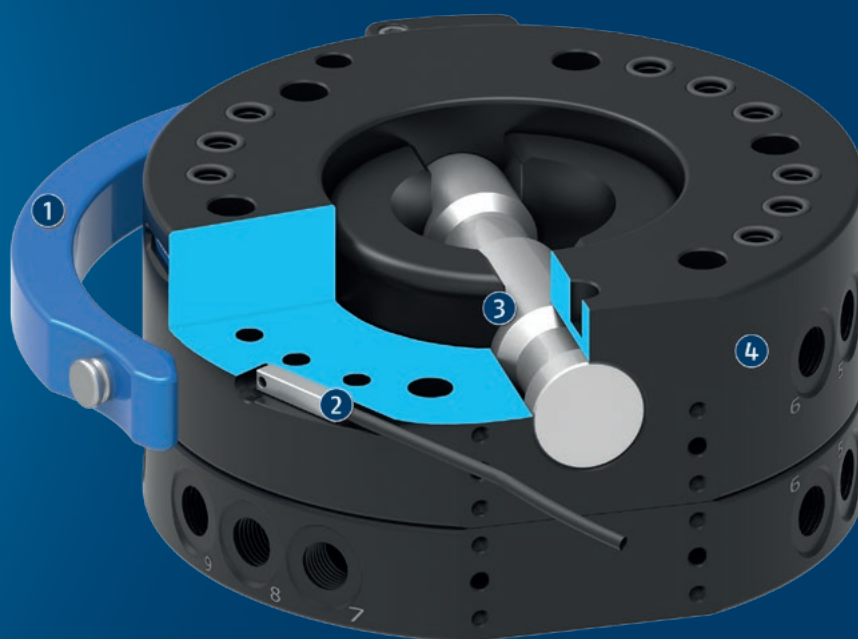


Moment load  $M_z$   
25 .. 775 Nm

## 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.

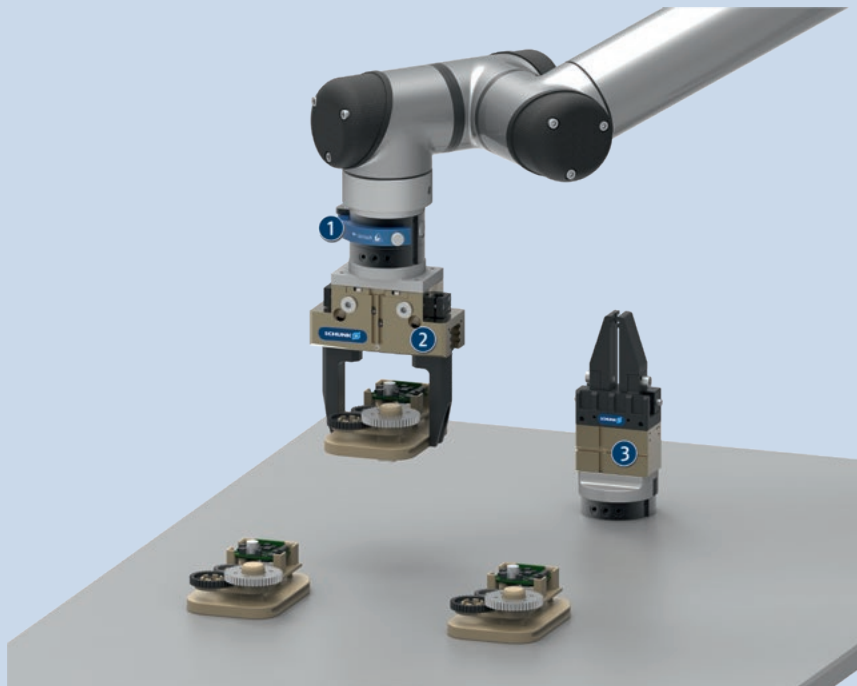
**Energy transmission:** Optional via electrical modules and/or fluid modules. Pneumatic feed-through already integrated.

**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



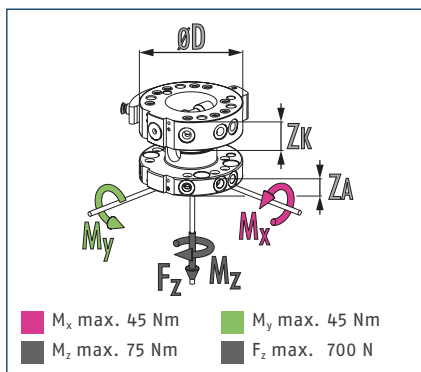
Inductive proximity switches



Electronic module

① For more information on these products can be found on the following product pages or at [schunk.com](http://schunk.com). Please contact us: SCHUNK technical hotline +49-7133-103-2696

### Dimensions and maximum loads



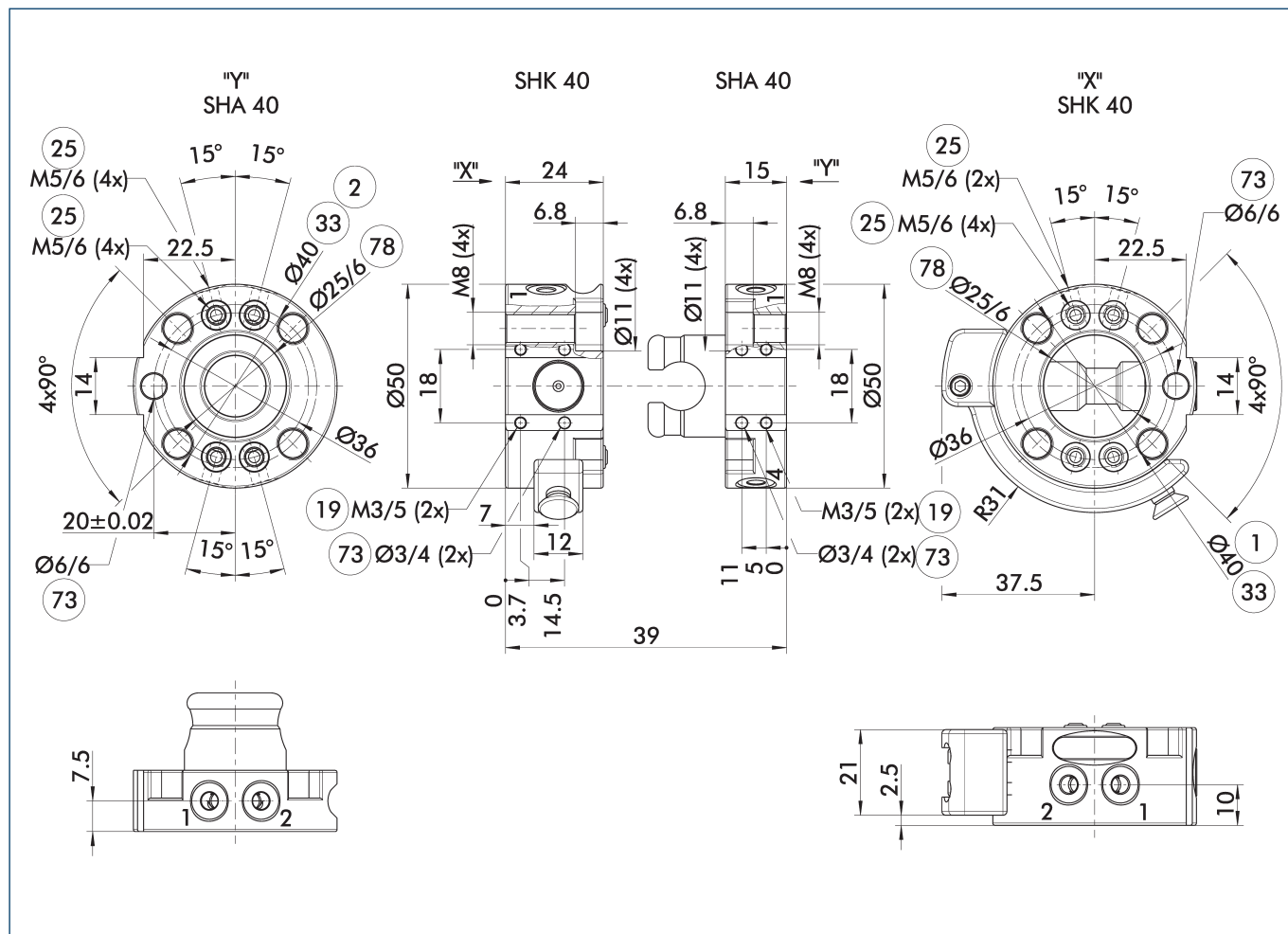
ⓘ This is the max. sum of all forces and moments which are permitted to act on the change system for ensuring proper functioning.

### Technical data

Description		SHK-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.

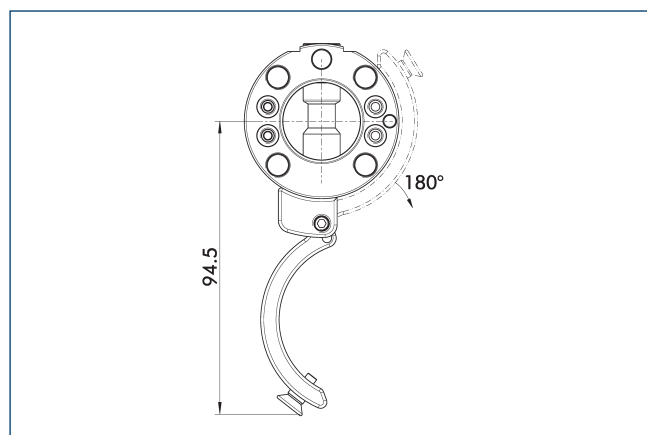
## Main view



The main view shows the unit in its basic version.

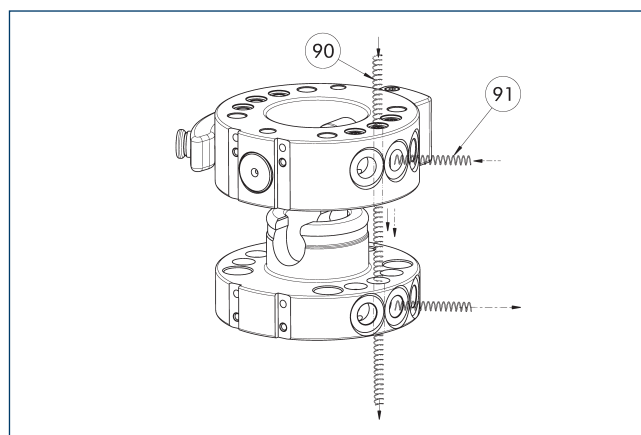
- |                                 |                             |
|---------------------------------|-----------------------------|
| ① Robot-side connection         | ③③ DIN ISO-9409 bolt circle |
| ② Tool-side connection          | ⑦③ Fit for centering pins   |
| ①⑨ Mounting surface for options |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

## 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.

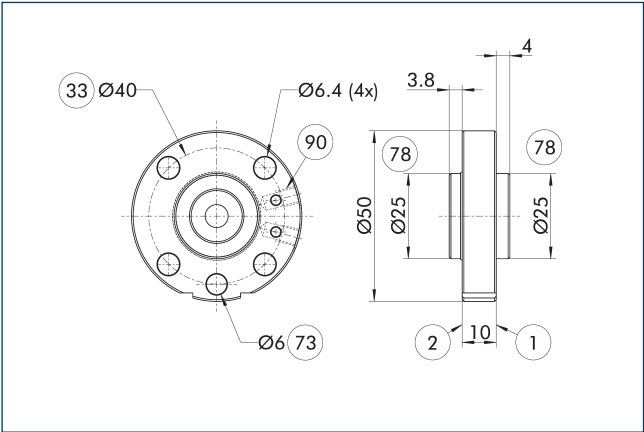
## Pneumatic feed-through



- |                       |                        |
|-----------------------|------------------------|
| ⑨⑨ 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-A040-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

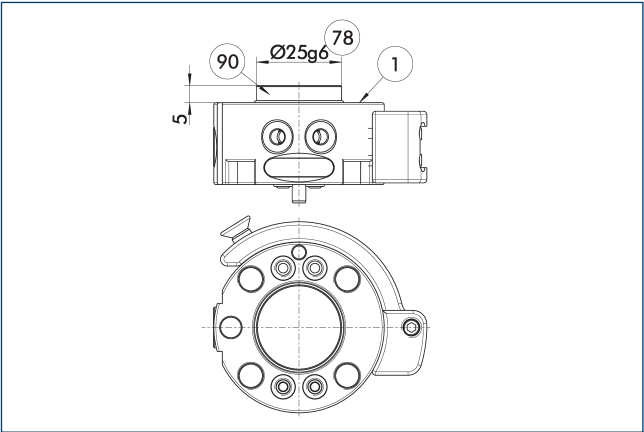
Robot side adapter plate

Description	ID	
Robot side		
A-SHK-040-P-RADIAL	1391534	

- 1

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
- 90

Centring disc

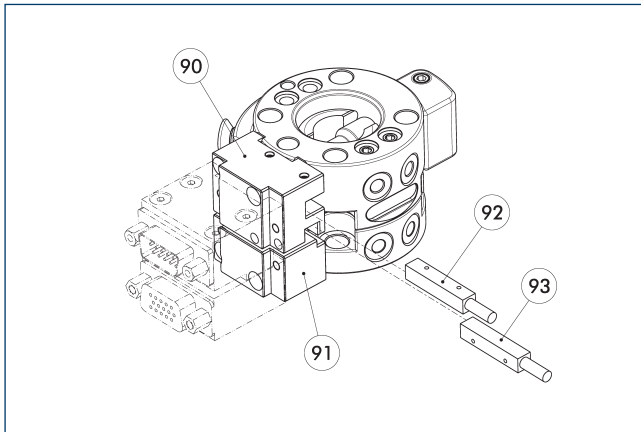
Description	ID	
Centering disc		
A-HWK-040-BOSS	0302742	

- 1

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



## Accessories

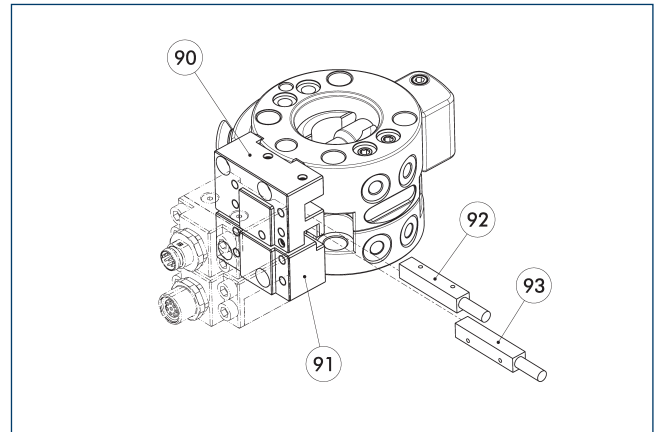


- 90 Robot side adapter plate      92 Locking sensor  
 91 Tool side adapter plate      93 Tool side presence sensor

Description	ID	Description
Robot side		
SHK-040-AK0-S7	1304690	Adapter plate
Tool side		
SHA-040-AK0-S7	1304691	Adapter plate
Inductive proximity switches		
IN 5-S-M12	0301569	
IN 5-S-M8	0301469	
Signal feed-through module		
SW0-A15-A	9936356	
SW0-A15-K	9936357	
SW0-E10-011-A	9935802	
SW0-E10-011-K	9935801	
SW0-E20-011-A	9936526	
SW0-E20-011-K	9936525	
SW0-EM8-011-A	9966154	
SW0-EM8-011-K	9966153	

① 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.

## Accessories

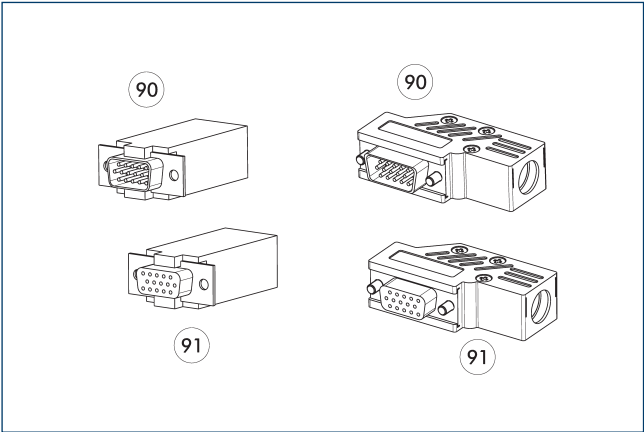


- 90 Robot side adapter plate      92 Locking sensor  
 91 Tool side adapter plate      93 Tool side presence sensor

Description	ID	Description
Robot side		
SHK-040-AK0-S5	1304684	Adapter plate
Tool side		
SHA-040-AK0-S5	1304688	Adapter plate
Inductive proximity switches		
IN 5-S-M12	0301569	
IN 5-S-M8	0301469	
Signal feed-through module		
SW0-B15-A	9937327	
SW0-B15-K	9937326	
SW0-E10-005-A	9935800	
SW0-E10-005-K	9935799	
SW0-E2A-A	9941290	
SW0-E2A-K	9941289	
SW0-E3A-A	9941632	
SW0-E3A-K	9941631	
SW0-EM8-005-A	9966151	
SW0-EM8-005-K	9966150	

① 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



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	

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



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Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.  
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