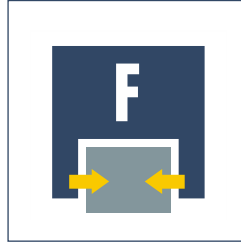




Size
50



Weight
0.080 kg



Gripping force
13 N



Stroke per finger
4.5 mm



Workpiece weight
0.065 kg

Application example



Rotary gripper module for small components

1 KTG 50 2-Finger Parallel Gripper with workpiece-specific fingers

2 MRU 14.1-E-4 Miniature Rotary Unit

Grippers for small components

2-Finger parallel gripper with center bore

Area of application

Gripping and movement of small to medium-sized workpieces in low contaminated environments, equipped with end-to-end center bore for workpiece feeding, sensor systems or actuators

Your advantages and benefits

Low weight

for weight-reduced handling solutions

Long stroke

in proportion to size

Base jaws guided on roller bearings

for precise gripping

Through center bore

for workpiece feeding, sensor systems or actuators

Air supply via hose-free direct connection or fitting connections

for the flexible supply of compressed air in all automation systems



General information on the series

Working principle

Synchronized double piston

Housing material

Aluminum alloy, hard-anodized

Base jaw material

Aluminum alloy, hard-anodized

Actuation

Pneumatic, with filtered compressed air (10 µm): Dry, lubricated or non-lubricated

Pressure medium: Required quality class of compressed air according to DIN ISO

8573-1: Quality class 4

Warranty

24 months

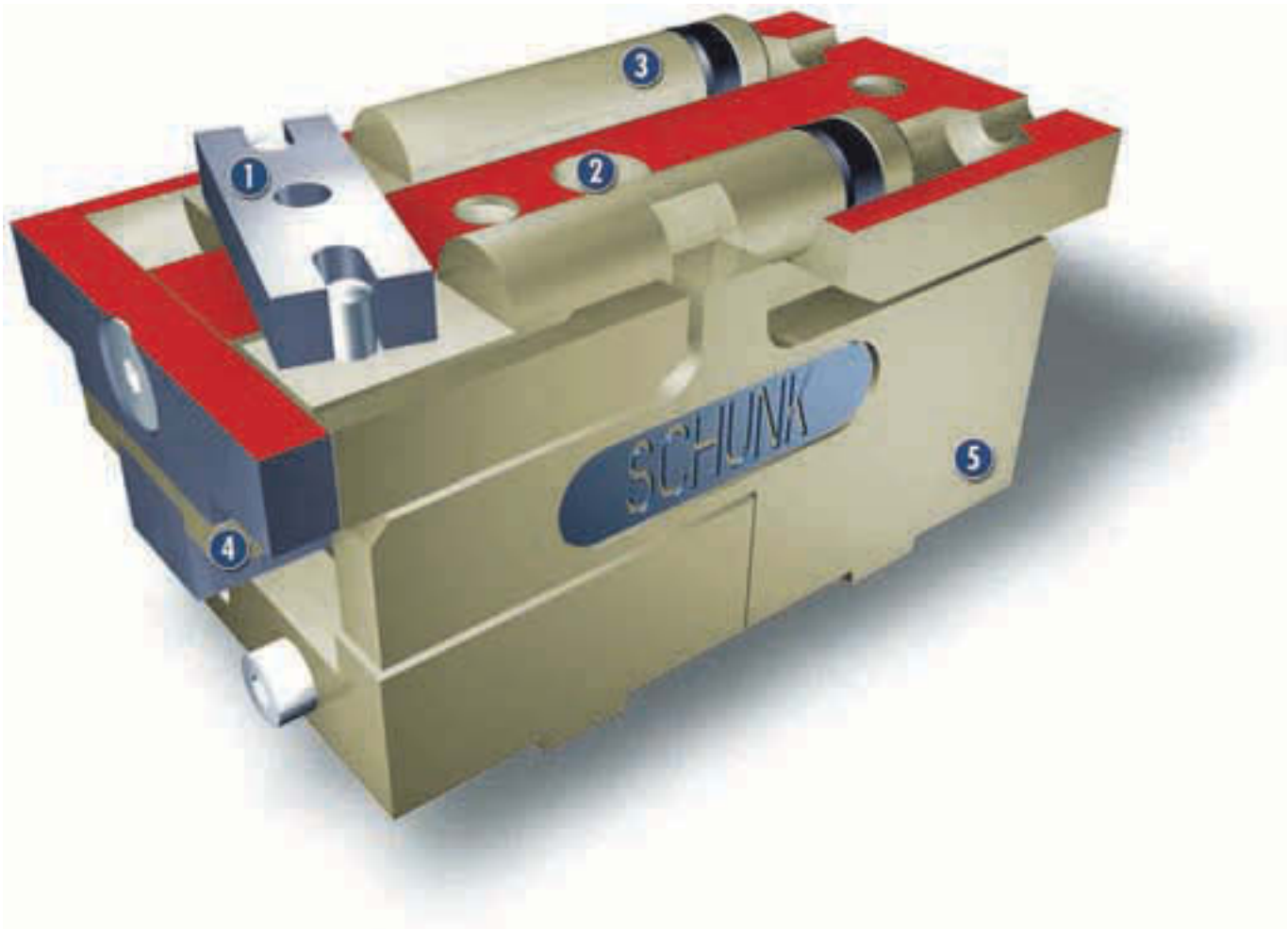
Scope of delivery

Brackets for proximity switches, centering sleeves, centering pins, O-rings for direct connection, assembly and operating manual with manufacturer's declaration

Gripping force safety device

possible with SDV-P pressure maintenance valve

Sectional diagram



- 1 Kinematics**
synchronization using lever principle for centric clamping

2 Center bore
through-bore for workpiece feeding, sensor systems or actuators (ejector)
- 3 Drive**
through pneumatic double piston system

4 Roller guide
exact gripping thanks to precise base jaw guide
- 5 Housing**
weight-reduced through the use of a hard-anodized, high-strength aluminum alloy

Function description

The application of pressure on the first or second piston sets the base jaws, each of which is guided by a carrier on the piston, in motion. The movement is synchronized by means of lever kinematics.

Options and special information

Available with reinforced jaw guides on request. Gripping force can be maintained by the SDV-P pressure maintenance valve.

Accessories

SCHUNK accessories – the suitable complement for the highest level of functionality, reliability and controlled production of all automation modules.

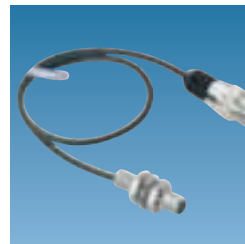
Centering sleeves



Fittings



IN inductive proximity switches



W/WK/KV/GK sensor cables



HM carbide inserts



V sensor distributors



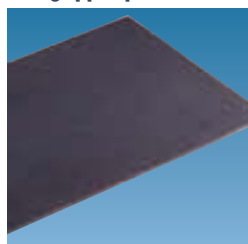
Quentes plastic inserts



Finger blanks



HKI gripper pads



SDV-P pressure maintenance valves



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You can find more detailed information on our accessory range in the "Accessories" catalog section.

General information on the series

Gripping force

is the arithmetic total of the gripping force applied to each base jaw at distance P (see illustration), measured from the upper edge of the gripper.

Finger length

is measured from the upper edge of the gripper housing in the direction of the main axis.

Repeat accuracy

is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight

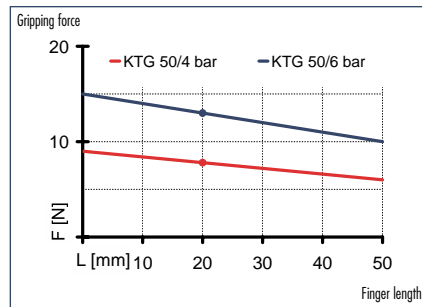
The recommended workpiece weight is calculated for a force type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit clamping.

Closing and opening times

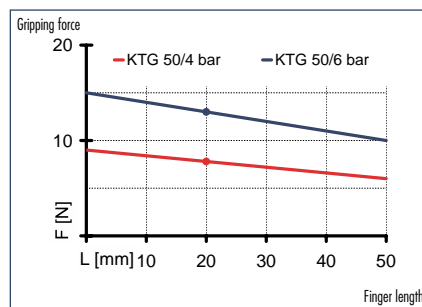
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



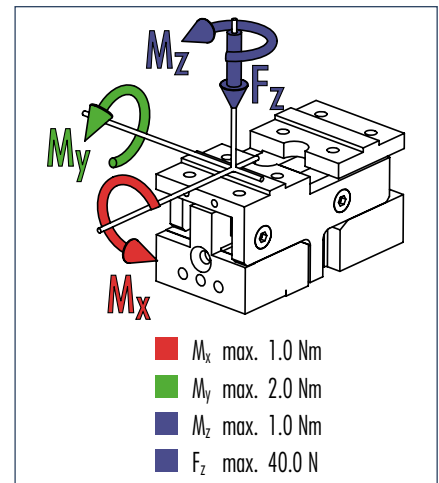
Gripping force, I.D. gripping



Gripping force, O.D. gripping



Finger load

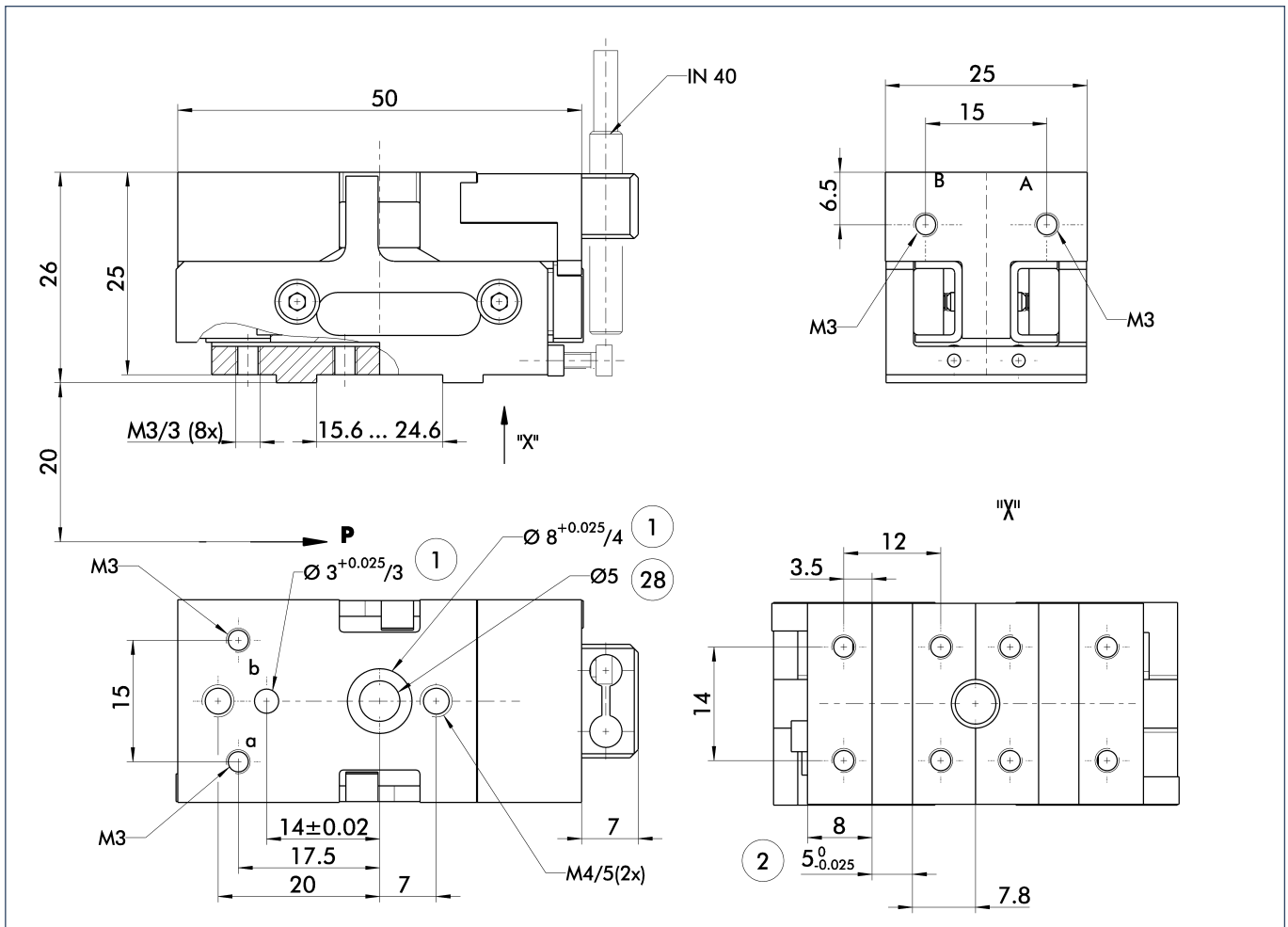


ⓘ Moments and forces apply per base jaw and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	KTG 50
ID	0300275
Stroke per jaw	[mm] 4.5
Closing force	[N] 13.0
Opening force	[N] 13.0
Weight	[kg] 0.08
Recommended workpiece weight	[kg] 0.065
Air consumption per double stroke	[cm ³] 0.23
Nominal pressure	[bar] 6.0
Minimum pressure	[bar] 1.0
Maximum pressure	[bar] 7.0
Closing time	[s] 0.05
Opening time	[s] 0.05
Max. permitted finger length	[mm] 50.0
Max. permitted weight per finger	[kg] 0.04
IP rating	20
Min. ambient temperature	[°C] -10.0
Max. ambient temperature	[°C] 90.0
Repeat accuracy	[mm] 0.02
Diameter of center bore	[mm] 5.0

Main views

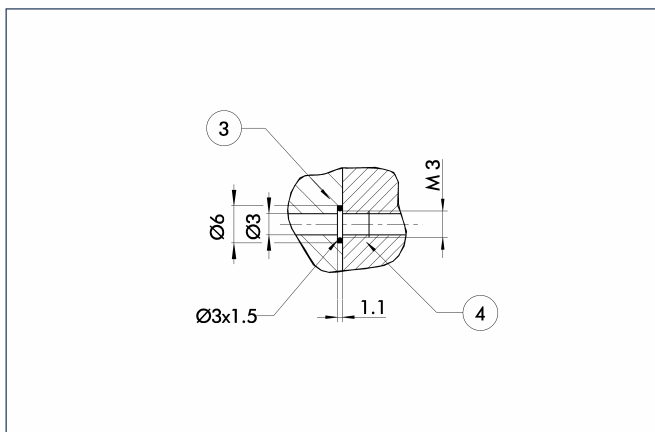


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

① The SDV-P pressure maintenance valve can be used as a gripping force safety device (see "Accessories" catalog section).

- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- ① Gripper connection
- ② Finger connection
- ②⑧ Through-bore

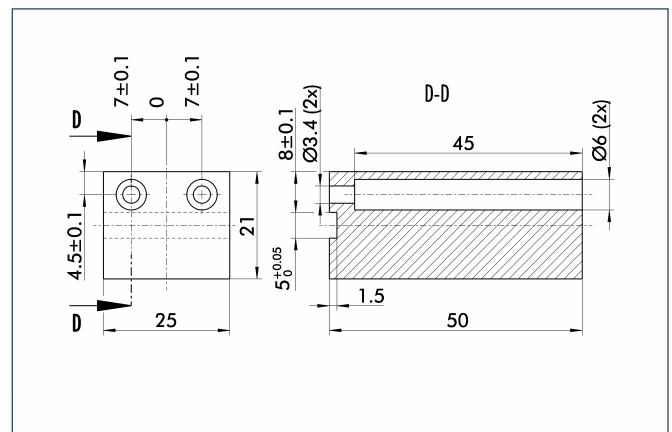
Hoseless direct connection



- ③ Adapter
- ④ Gripper

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

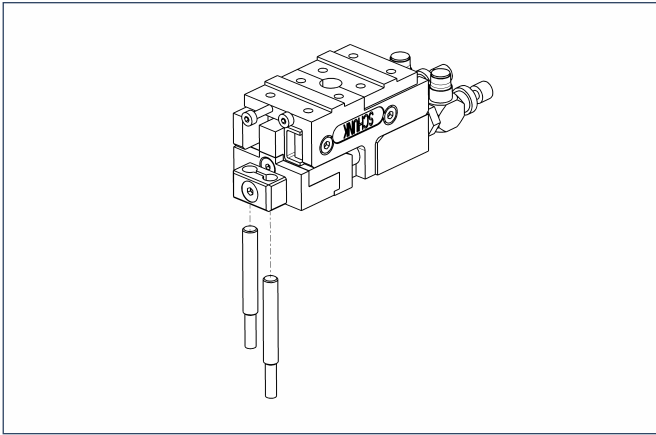
Finger blanks



Finger blanks for customized subsequent machining

Description	Material	Scope of delivery	ID
RB 50	Aluminum	2	0300280

Sensor system



End position monitoring: Inductive proximity switches, for direct mounting

Description	ID	Recommended product
IN 40/S-M12	0301574	
IN 40/S-M8	0301474	•
INK 40/S	0301555	

- ① Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

Extension cables for proximity switches/magnetic switches

Description	ID
GK 3-M8	0301622
KV 10-M12	0301596
KV 10-M8	0301496
KV 20-M12	0301597
KV 20-M8	0301497
KV 3-M12	0301595
KV 3-M8	0301495
W 3-M12	0301503
W 5-M12	0301507
WK 3-M8	0301594
WK 5-M8	0301502

- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

