

2-jaw self centering angular pneumatic gripper (series GW)

- Double acting.
- Long life and reliability, maintenance free.
- Various options for fastening.
- Optional proximity magnetic sensors.
- Spring closed (-NC) or spring open (-NO) option.
- FDA-H1 food-grade grease.



GW-10

GW-16

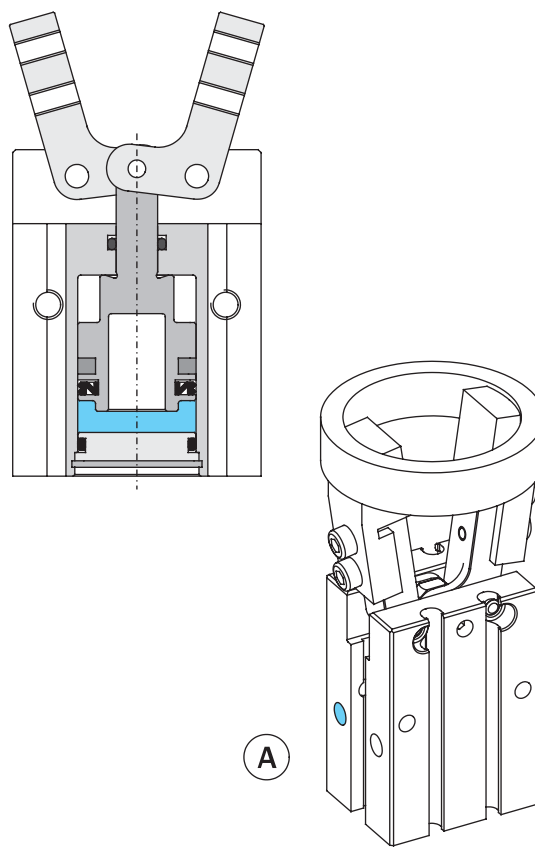
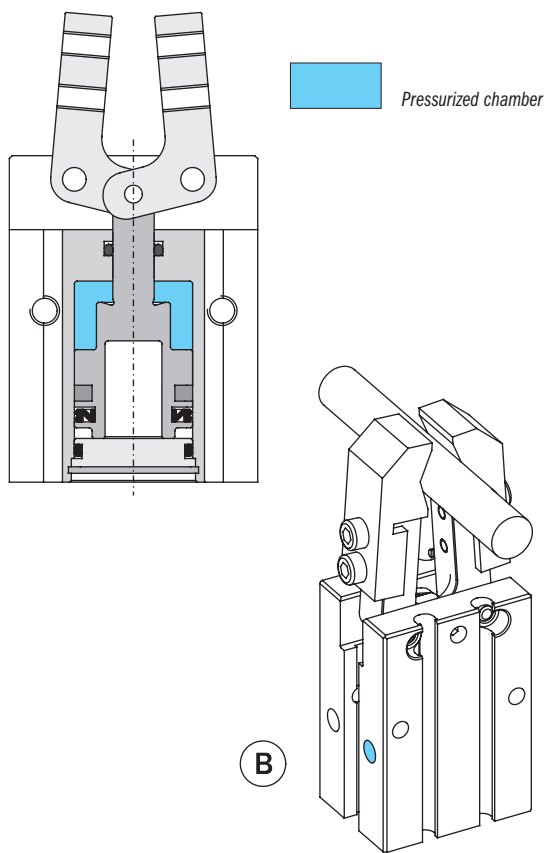
GW-20

GW-25

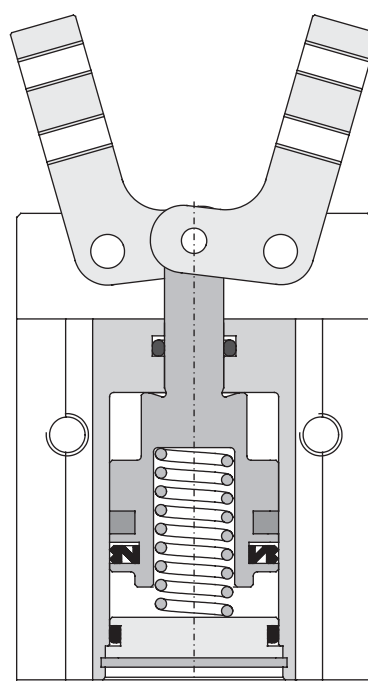
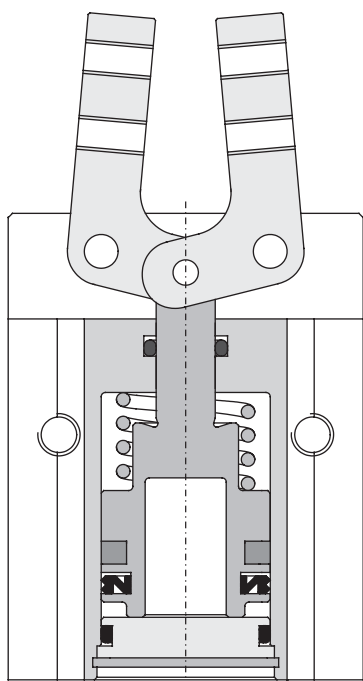
	GW-10	GW-16	GW-20	GW-25
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air			
Pressione di esercizio Operating pressure range	2 ÷ 8 bar			
Temperatura di esercizio Operating temperature range	5° ÷ 60°C.			
Coppia di serraggio per griffa in apertura a 6 bar Opening torque at 6 bar on each jaw	11 Ncm	45 Ncm	89 Ncm	178 Ncm
Coppia di serraggio totale in apertura a 6 bar Opening total torque at 6 bar	22 Ncm	90 Ncm	178 Ncm	356 Ncm
Coppia di serraggio per griffa in chiusura a 6 bar Closing torque at 6 bar on each jaw	8 Ncm	36 Ncm	78 Ncm	160 Ncm
Coppia di serraggio totale in chiusura a 6 bar Closing total torque at 6 bar	16 Ncm	72 Ncm	156 Ncm	320 Ncm
Corsa Stroke (±1°)	2x20°	2x20°	2x20°	2x20°
Frequenza max funzionamento continuativo Maximum working frequency	3 Hz	3 Hz	2 Hz	2 Hz
Consumo d'aria per ciclo Cycle air consumption	0.7 cm ³	3 cm ³	6 cm ³	11 cm ³
Tempo di chiusura senza carico Closing time without load	0.005 s	0.005 s	0.02 s	0.02 s
Ripetibilità Repetition accuracy	0.04°	0.04°	0.04°	0.04°
Peso Weight	39 g	88 g	180 g	300 g

Gripping

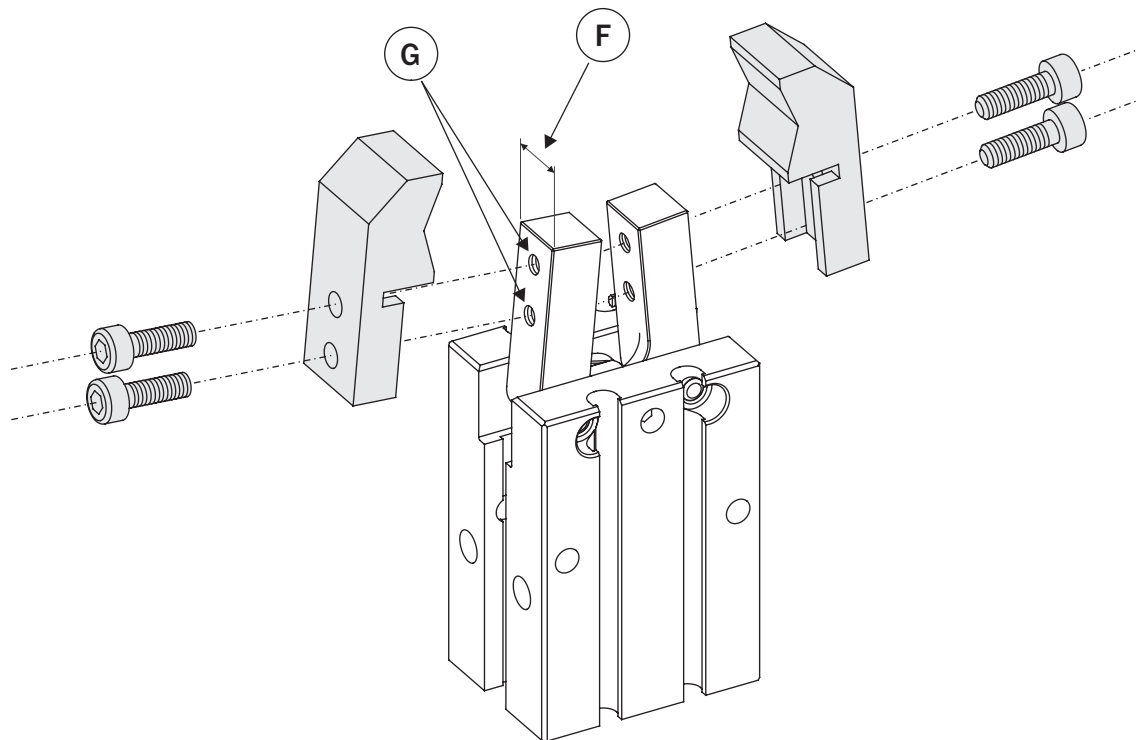
The gripper is double-acting for either internal (A) or external (B) gripping applications. The opening force is higher.



It is also available, on request, with a closing (-NC) or opening (-NO) spring, providing, after a pressure black-out, about one fourth of the output force at 6 bar.



The gripping tools must be as short and light as possible. They must be fastened by two screws in the threaded holes (G). For a precise positioning on the jaw use the calibrated dimension (F).



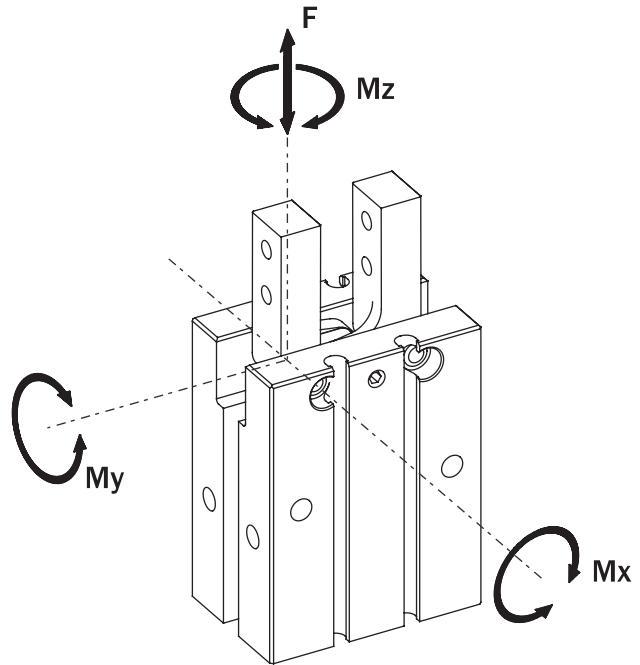
	GW-10	GW-16	GW-20	GW-25
A	M3x5.5 mm	M4x8 mm	M5x10 mm	M6x12 mm
B	M2.5x22 mm	M3x30 mm	M4x35 mm	M5x45 mm
C	M3x6 mm	M4x8 mm	M5x10 mm	M6x12 mm
D	Ø11H9 x 1.5 mm	Ø17H9 x 1.5 mm	Ø21H9 x 1.5 mm	Ø26H9 x 1.5 mm
E	M3x6 mm	M4x6.5 mm	M5x8 mm	M6x10 mm
F	6.4 ^{-0.1} mm	8 ^{-0.1} mm	10 ^{-0.1} mm	12 ^{-0.1} mm
G	M2.5x4 mm	M3x7 mm	M4x8 mm	M5x10 mm

	GW-10	GW-16	GW-20	GW-25
SC	/	X=2 mm	X=0 mm	X=0 mm
SL	X=10 mm + cable	X=10 mm + cable	X=10 mm + cable	X=10 mm + cable
SN	X=2 mm	X=Y=3 mm	X=Y=3 mm	X=Y=2 mm
SS	X=2 mm + cable	X=Y=3 mm + cable	X=Y=3 mm + cable	X=Y=2 mm + cable

Safety loads

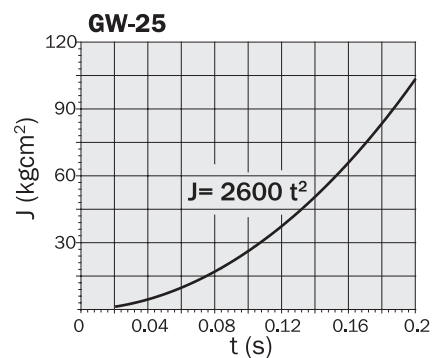
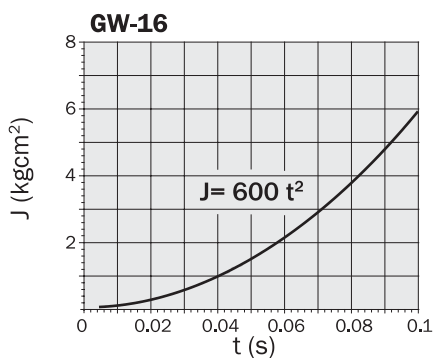
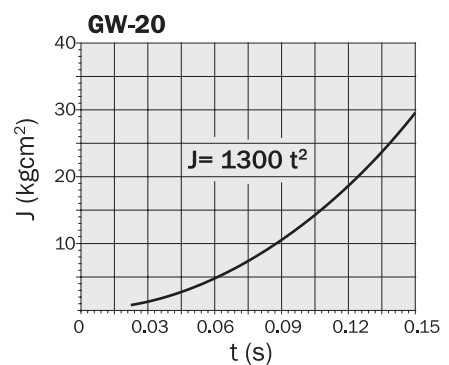
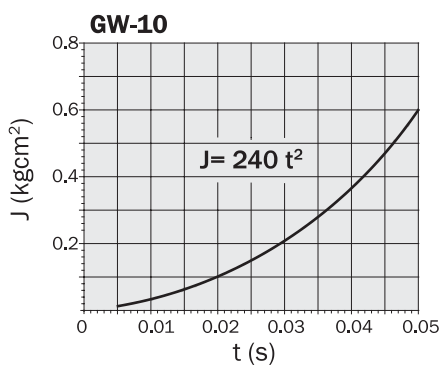
Check the table for maximum permitted loads.
Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.
 F , M_x , M_y , M_z , are maximum permitted static loads.
Static means with motionless jaws.

	GW-10	GW-16	GW-20	GW-25
F	40 N	60 N	100 N	100 N
M_x	0.4 Nm	1.2 Nm	1.5 Nm	2.2 Nm
M_y	0.5 Nm	0.9 Nm	2.2 Nm	2.2 Nm
M_z	0.5 Nm	0.9 Nm	2.2 Nm	2.2 Nm



Speed adjustment

The graphs show the maximum permitted moment of inertia on each gripping tool (J), as a factor of the opening or closing time. Use flow controllers (not supplied) to get the proper speed.

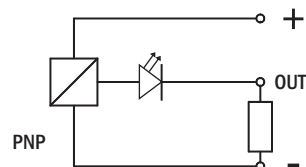
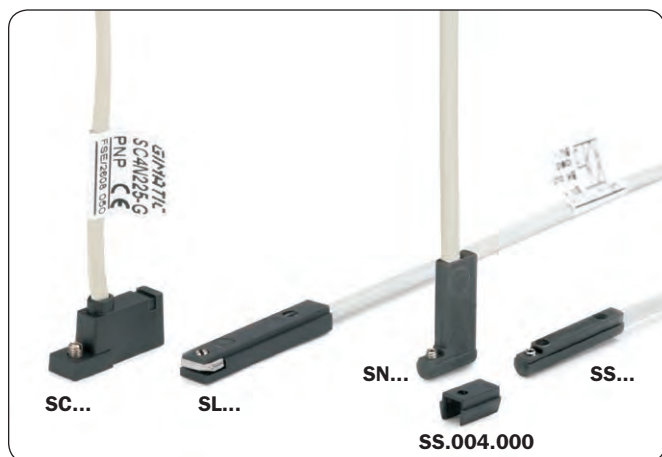


Sensors

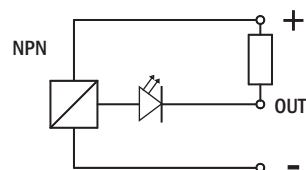
The operating position can be checked by one or more magnetic sensors (optional), that detect the position by the magnet on the piston inside.

Therefore a near big mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.

Use sensors:



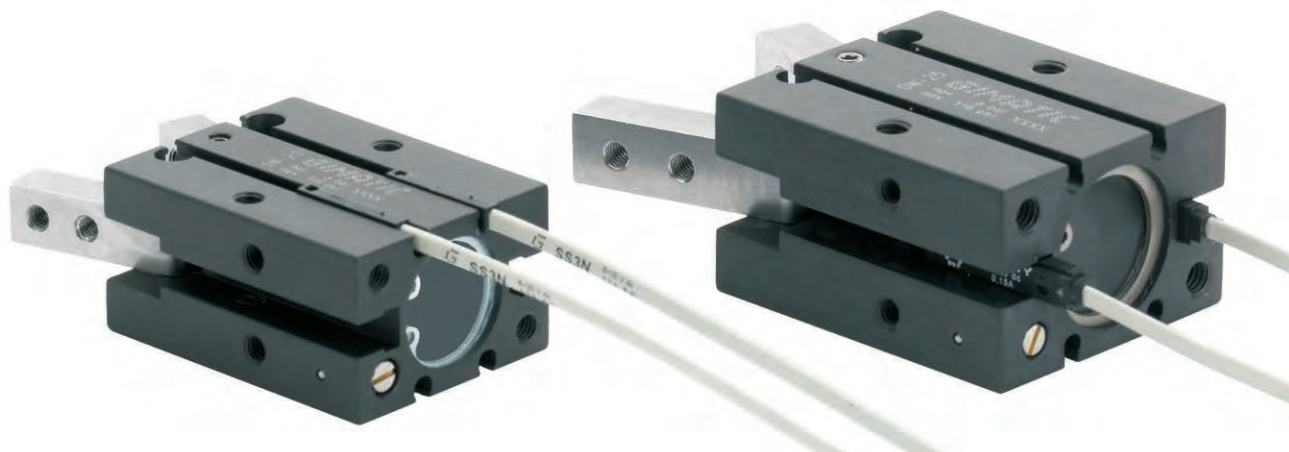
Magneto-resistive



			GW-10		GW-16		GW-20		GW-25	
			U	U	U	U	U	U	U	U
SC4N225Y	PNP	Cavo 2.5m / 2.5m cable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SC3N203Y	PNP	Connettore M8 / M8 snap plug connector	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SL4N225-G	PNP	Cavo 2.5m / 2.5m cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SL4M225-G	NPN	Cavo 2.5m / 2.5m cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SL3N203-G	PNP	Connettore M8 / M8 snap plug connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SL3M203-G	NPN	Connettore M8 / M8 snap plug connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SN4N225-G	PNP	Cavo 2.5m / 2.5m cable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SN4M225-G	NPN	Cavo 2.5m / 2.5m cable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SN3N203-G	PNP	Connettore M8 / M8 snap plug connector	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SN3M203-G	NPN	Connettore M8 / M8 snap plug connector	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SS4N225-G	PNP	Cavo 2.5m / 2.5m cable	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	
SS4M225-G	NPN	Cavo 2.5m / 2.5m cable	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	
SS3N203-G	PNP	Connettore M8 / M8 snap plug connector	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	
SS3M203-G	NPN	Connettore M8 / M8 snap plug connector	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (1)	

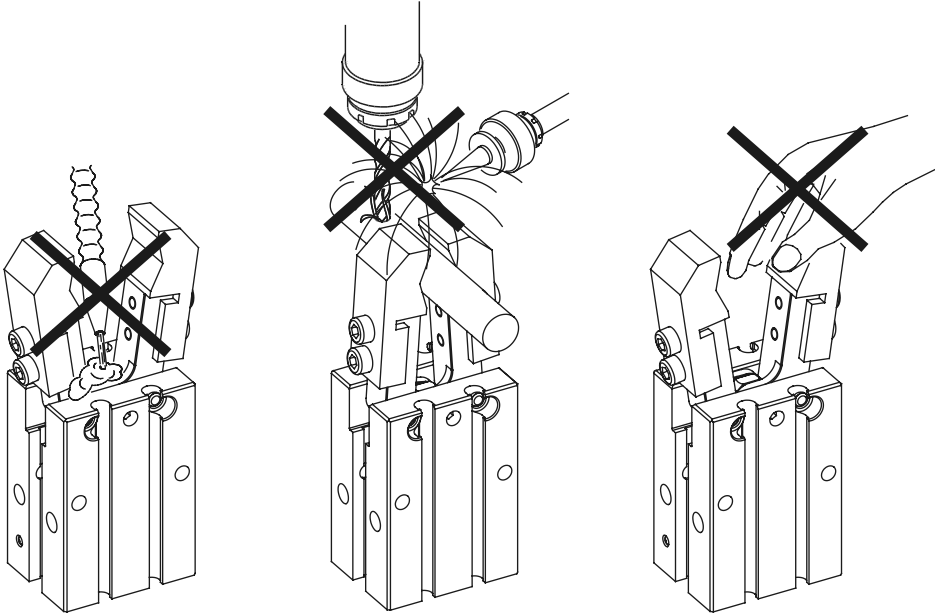
(1)

By the adapter (SS.004.000) provided with the pack K-SENS.



Caution

Avoid the gripper coming into contact with the following media: coolants which cause corrosion, grinding dust or glowing sparks. Make sure that nobody can place his/her hand between the gripping tools and there are no objects in the path of the gripper. The gripper must not run before the whole machine, on which it is mounted, complies with the laws or safety norms of your country.

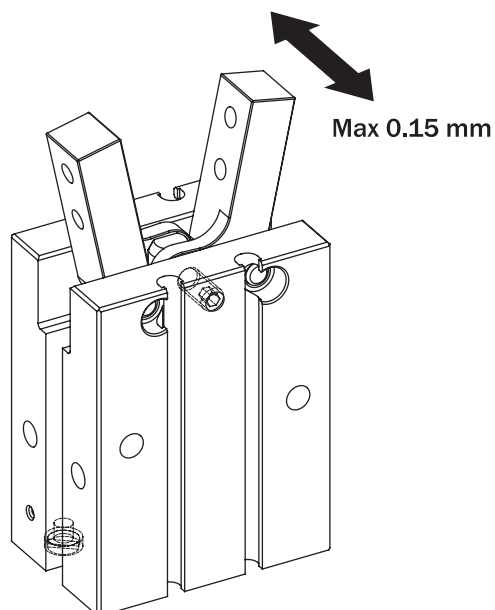


Maintenance

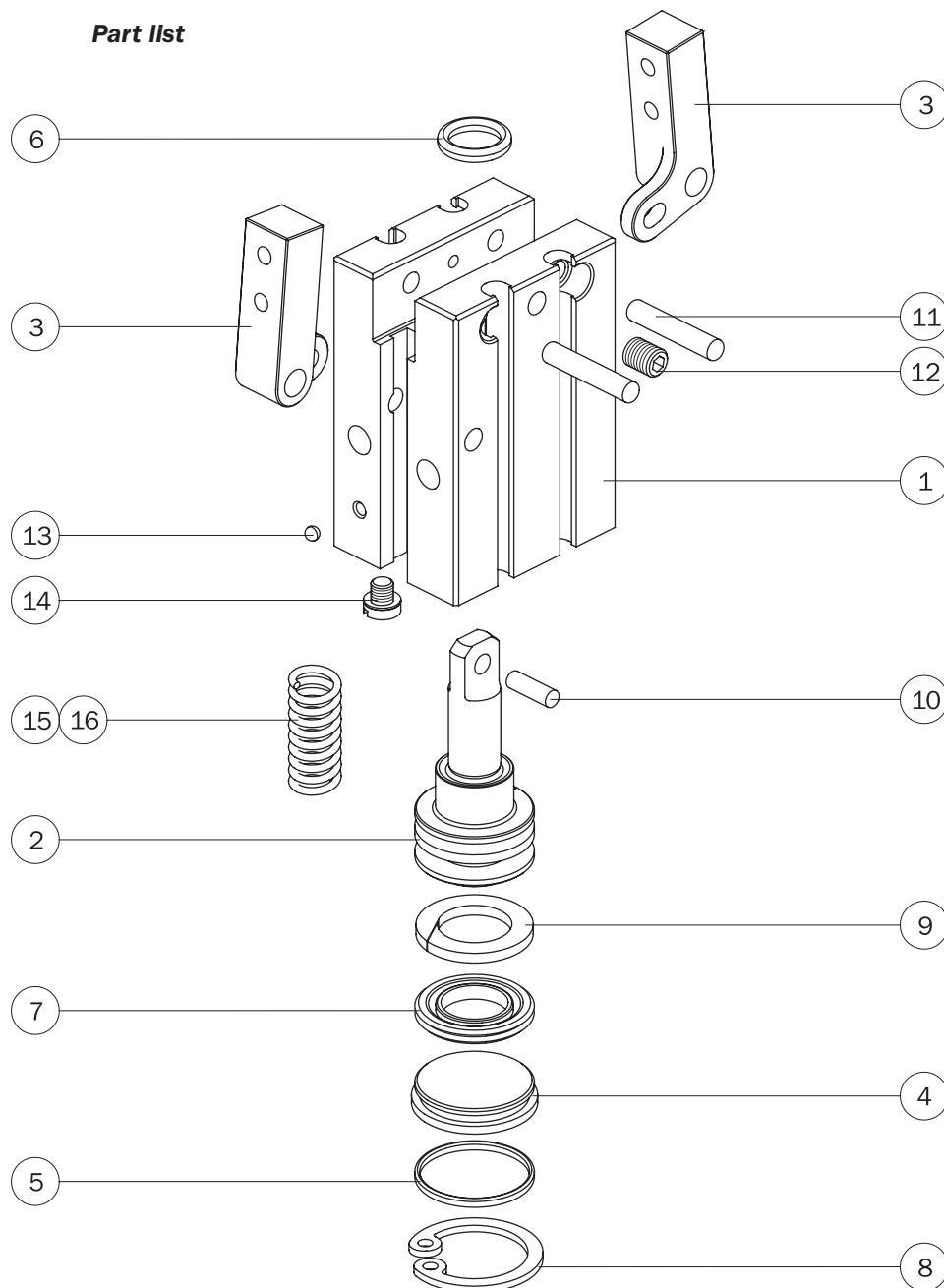
Grease the gripper after 10 million cycles with:

- BERULUB FG-H 2 EP
(Lubricant NSF H1 Registration No. 140486).

The figure below shows the jaw backlash.
NEVER REMOVE THE PLUGS.



Part list



		GW-10	GW-16	GW-20	GW-25		
1	Corpo pinza	GW-10-01	GW-16-01	GW-20-01	GW-25-01	Gripper housing	1
2	Pistone	GW-10-02	GW-16-02	GW-20-02	GW-25-02	Piston	2
3	Griffa	GW-10-03	GW-16-03	GW-20-03	GW-25-03	Jaw	3
4	Tappo	GS-10-06	GS-16-06	GS-20-06	GS-25-06	Cap	4
5	O-RING	Ø1.78x6.75 (GUAR-012)	Ø1x14 (GUAR-084)	Ø1.78x17.17 (GUAR-076)	Ø1.78x21.95 (GUAR-025)	O-RING gasket	5
6	O-RING	Ø1x5 (GUAR-021)	Ø1.78x6.75 (GUAR-012)	Ø1.78x6.75 (GUAR-012)	Ø1.78x7.66 (GUAR-045)	O-RING gasket	6
7	Guarnizione dinamica	10x5x2.4 (GUAR-106E)	16x9x2.5 (GUAR-002P)	20x13x2.5 (GUAR-040P)	25x18x2.4 (GUAR-003M)	Dynamic gasket	7
8	Anello elastico per int.	Ø11 mm DIN 472	Ø17 mm DIN 472	Ø21 mm DIN 472	Ø26 mm DIN 472	Retaining ring	8
9	Magnete	GS-10-11	PAR-16-10B	PAR-20-10B	PAR-25-10B	Magnet	9
10	Spina di riferimento	Ø2x6.3 mm DIN 5402	Ø2.5x7.8 mm DIN 5402	Ø3x10 mm DIN 6325	Ø4x12 mm DIN 6325	Dowel pin	10
11	Spina di riferimento	Ø2.5x15.8 mm DIN 5402	Ø3x16 mm DIN 6325	Ø4x20 mm DIN 6325	Ø4x21.8 mm DIN 5402	Dowel pin	11
12	Vite senza testa	M3x4 mm INOX DIN913	M4x5 mm INOX DIN913	M4x8 mm INOX DIN913	M5x10 mm INOX DIN913	Grub screw	12
13	Sfera	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ball	13
14	Tappo M3	-	DT-205	DT-205	DT-205	Plug	14
15	Molla (solo per NC)	GS-10-08	GW-16-08	GS-20-08	PAR-25-11B	Spring (only NC)	15
16	Molla (solo per NO)	GS-10-09	PAR-16-12B	PAR-20-12B	GS-25-09	Spring (only NO)	16