

Radial Gripper – GX-S

- Double acting.
- Self-centering.
- Very high gripping force at the end of the closing stroke.
- Long life and reliability, maintenance free.
- Optional sensors available on page 705.



Quick#	6939	6940	6941	6942
Part#	GX-10S	GX-16S	GX-20S	GX-25S
Price	\$228.00	\$244.00	\$256.00	\$270.00
Medium	Filtered, lubricated / non-lubricated compressed air			
Pressure range	36–116 psi			
Opening maximum total torque at 87 psi	6.2 in-lbf	21.2 in-lbf	40.8 in-lbf	76 in-lbf
Closing maximum total torque at 87 psi	4.6 in-lbf	18.6 in-lbf	37.2 in-lbf	70.8 in-lbf
Stroke (±4°)	2 x 90°			
Maximum repeatability tolerance	±0.05°			
Midstroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.			
Weight	70g	140g	290g	510g

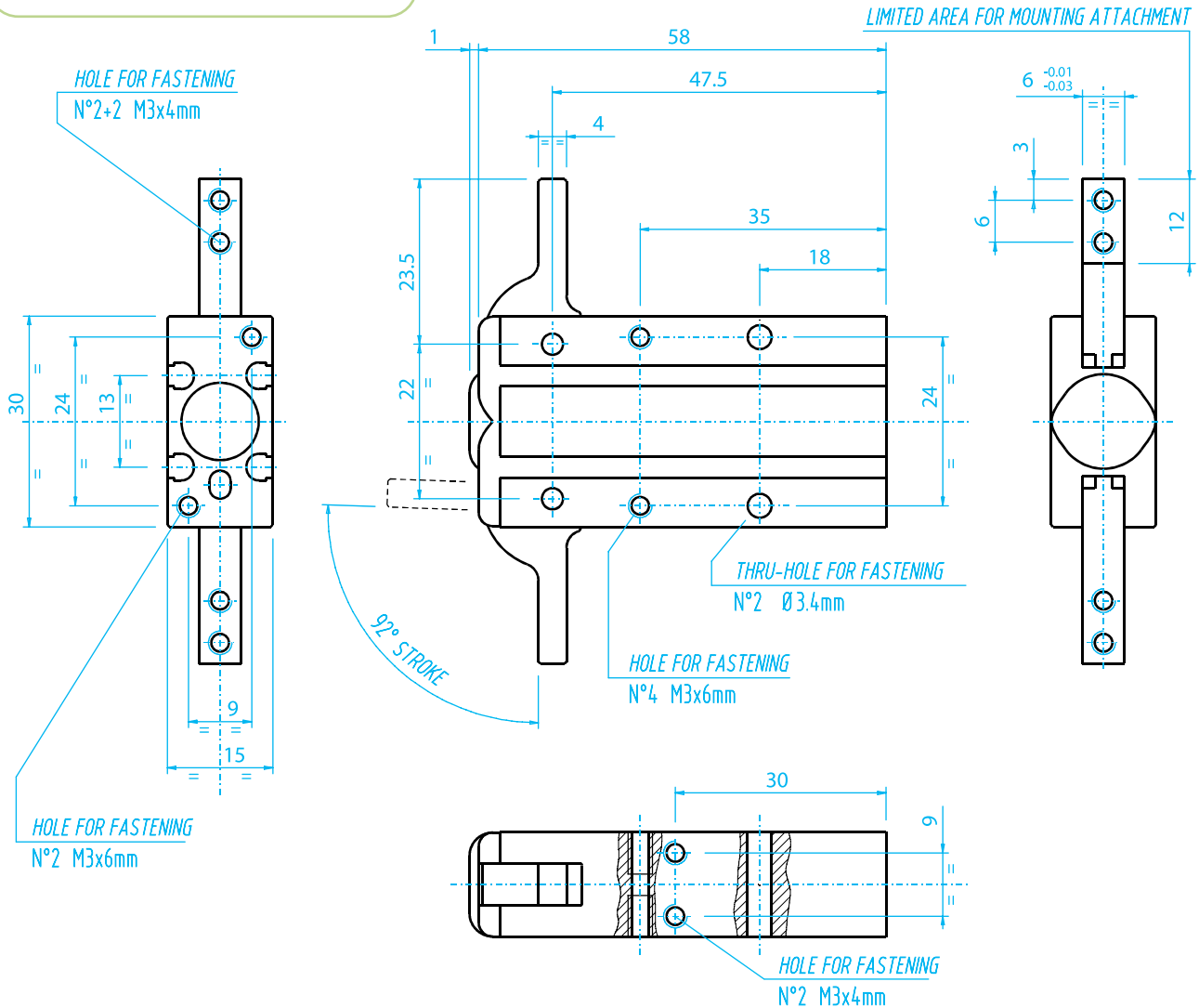
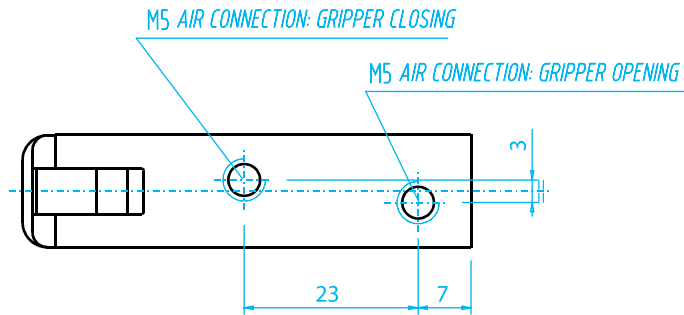
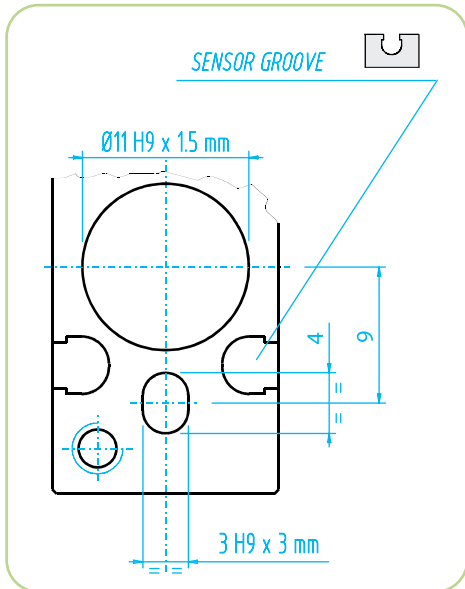


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**GX-10S
#6939**

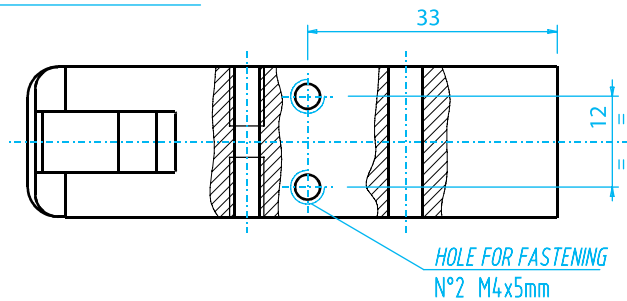
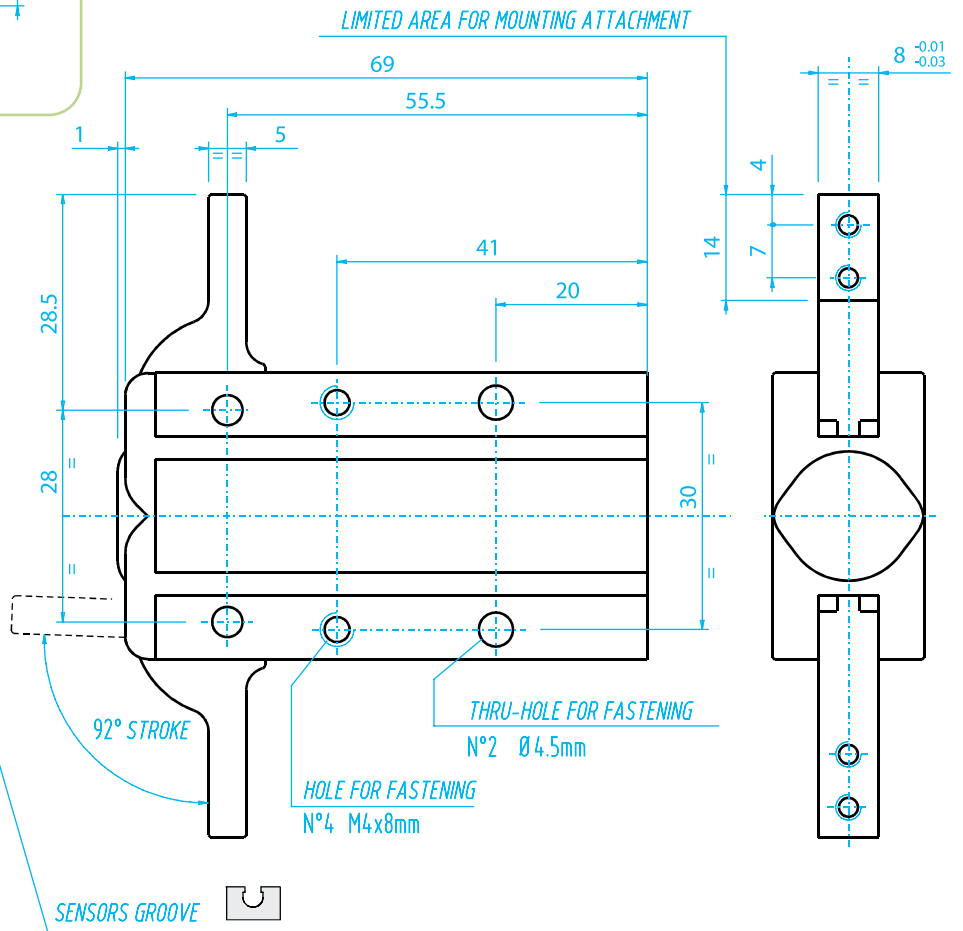
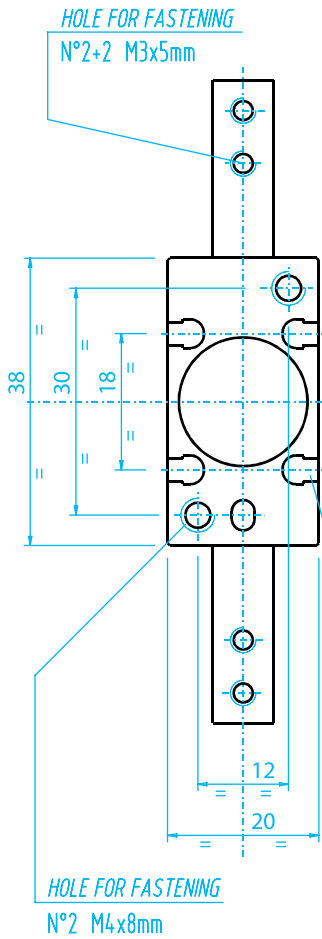
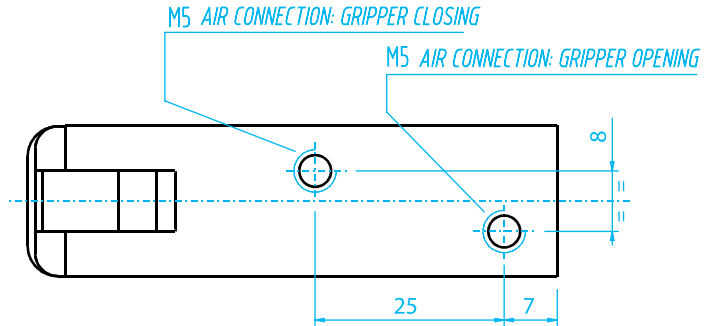
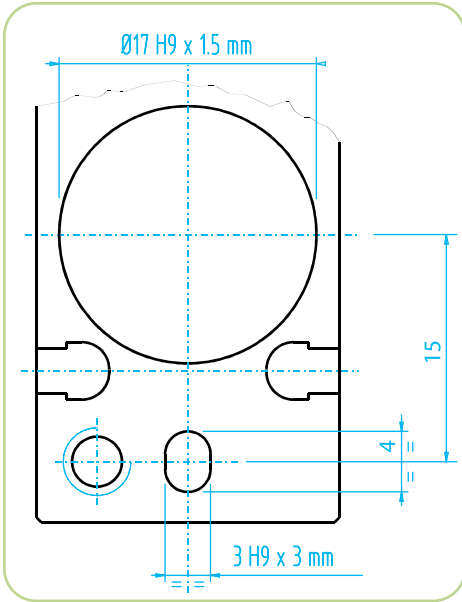
(Dimensioned drawing shown full scale)



Radial Gripper – GX-S

(Dimensioned drawings shown full scale)

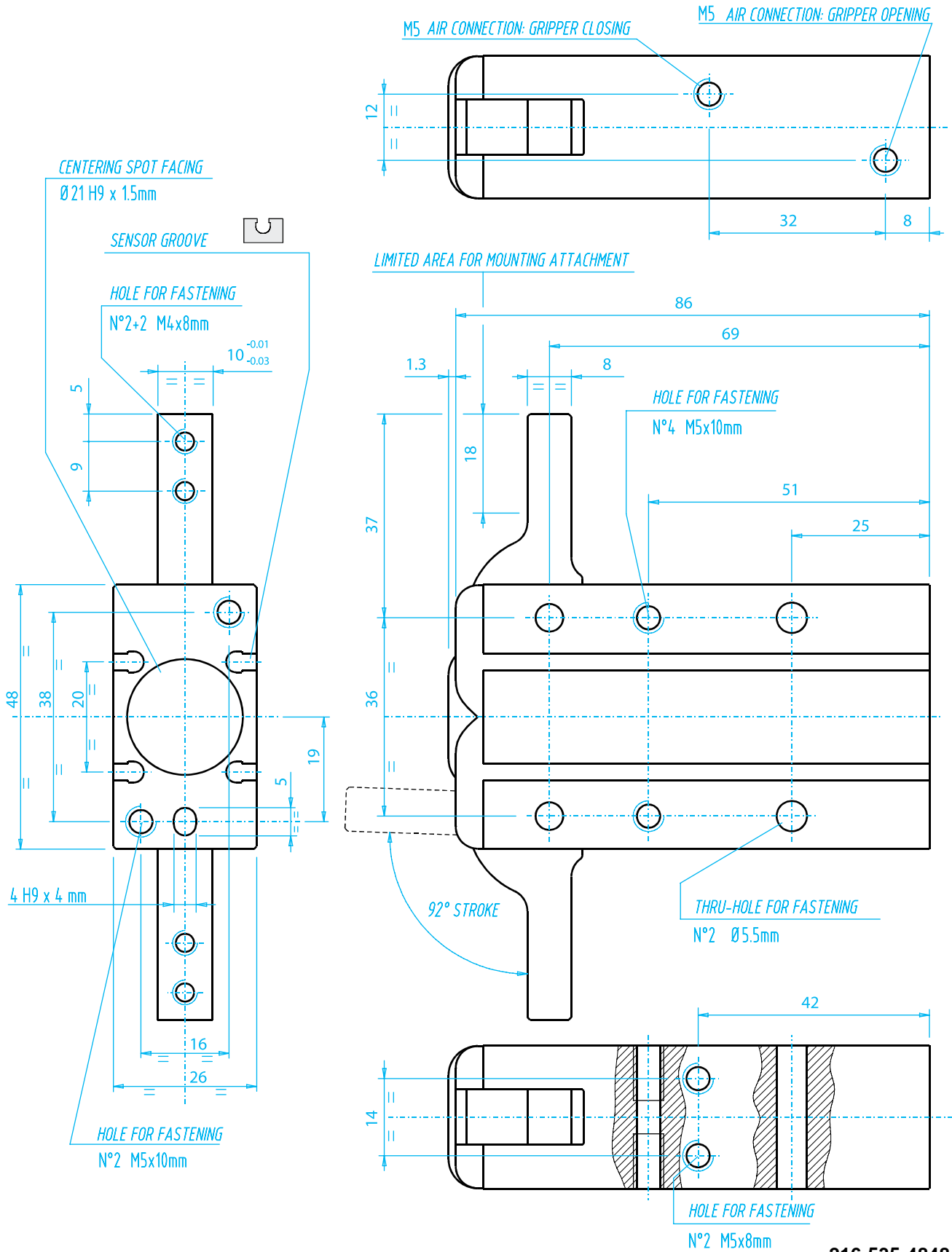
GX-16S
#6940



Radial Gripper – GX-S

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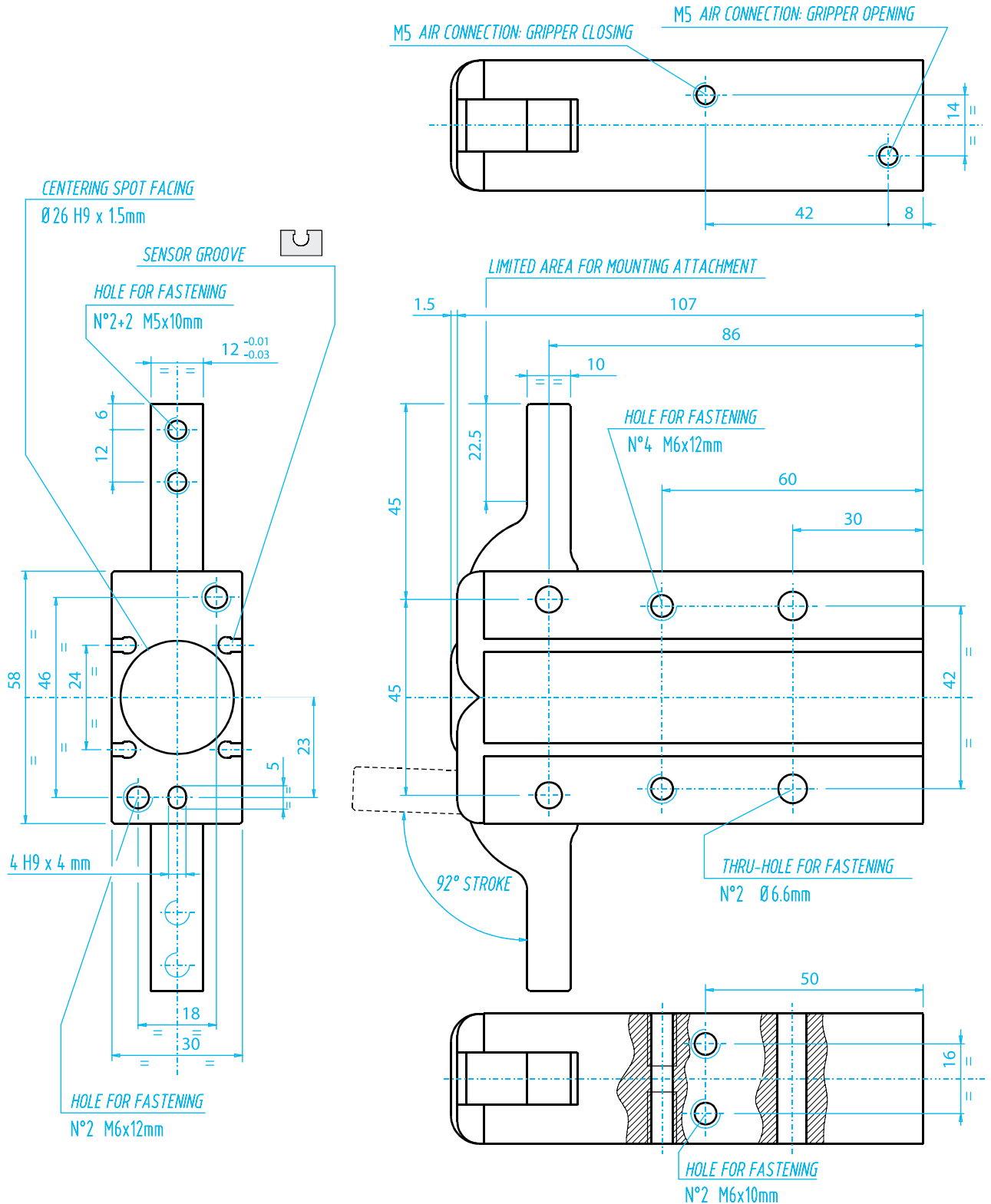
**GX-20S
#6941**



Radial Gripper – GX-S

(Dimensioned drawings reduced to fit)

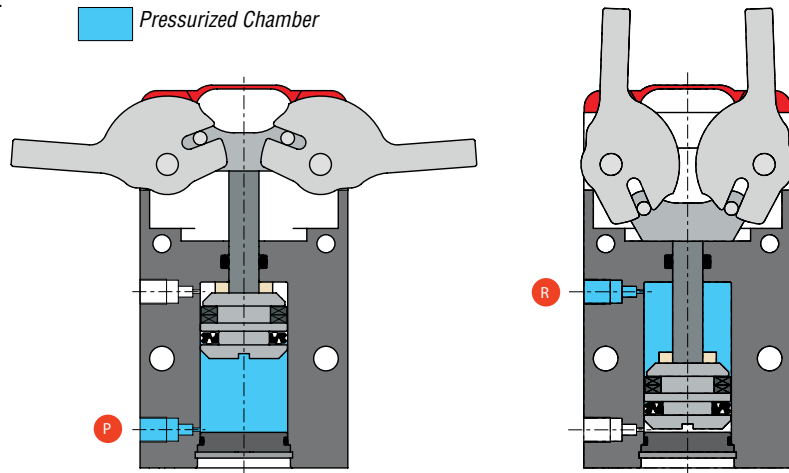
GX-25S
#6942



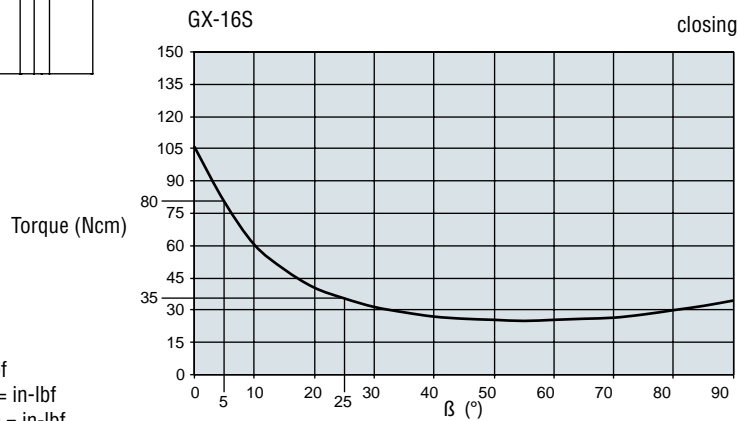
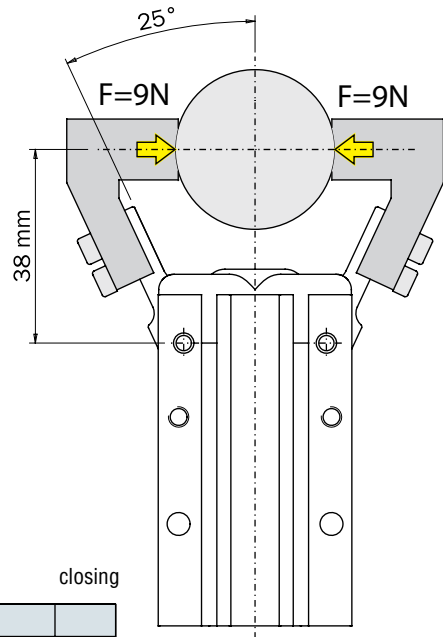
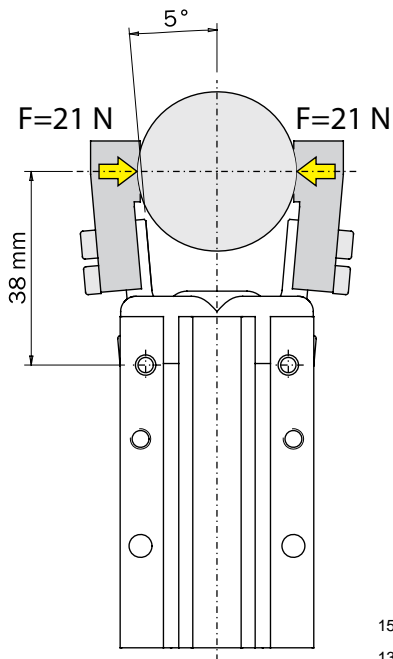
Radial Gripper – GX-S

Gripping

Because the gripper has a double-acting motion, it can be used for internal or external gripping.



The gripping force depends on the shape of the gripping tools.



Reference:

Force: N x 0.225 = lbf

Torque: Nm x 8.850 = in-lbf

Torque: Ncm x 0.089 = in-lbf

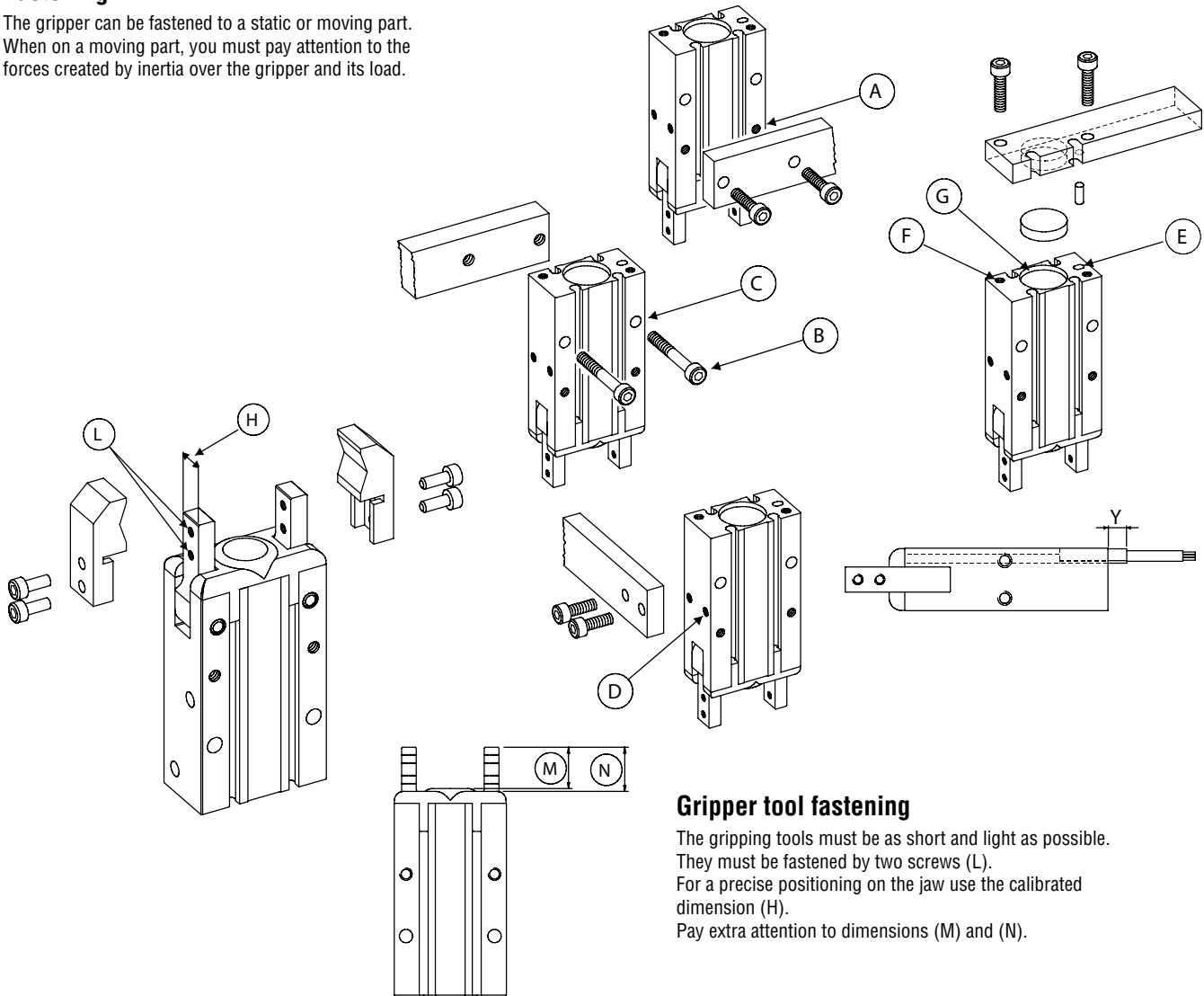
Pressure: bar x 14.5 = psi

Call our Engineering Department for assistance

Radial Gripper – GX-S

Fastening

The gripper can be fastened to a static or moving part. When on a moving part, you must pay attention to the forces created by inertia over the gripper and its load.



Gripper tool fastening

The gripping tools must be as short and light as possible. They must be fastened by two screws (L). For a precise positioning on the jaw use the calibrated dimension (H). Pay extra attention to dimensions (M) and (N).

	GX-10S	GX-16S	GX-20S	GX-25S
A	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
B	M3 x 22mm	M4 x 30mm	M5 x 35mm	M6 x 40mm
C	ø3.4mm	ø4.5mm	ø5.5mm	ø6.6mm
D	M3 x 4mm	M4 x 5mm	M5 x 8mm	M6 x 10mm
E	3H9 x 3mm	3H9 x 3mm	4H9 x 4mm	4H9 x 4mm
F	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
G	ø11H9 x 1.5mm	ø17H9 x 1.5mm	ø21H9 x 1.5mm	ø26H9 x 1.5mm
H	6 ^{±0.01} mm	8 ^{±0.01} mm	10 ^{±0.01} mm	12 ^{±0.01} mm
L	M3 x 4mm	M3 x 5mm	M4 x 8mm	M5 x 10mm
M	11.7mm	14mm	18.7mm	22.5mm
N	13mm	15mm	20mm	24mm

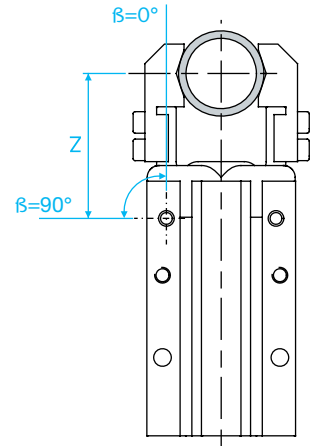
Sensor Type	GX-10S	GX-16S	GX-20S	GX-25S
SN	Y = 4mm	Y = 2mm	Y = 1mm	Y = 0mm
SS	Y = 4 mm + cable	Y = 2mm + cable	Y = 1mm + cable	Y = 0mm + cable

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Gripping force

The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length 'Z' and the angular position 'β' of the jaw.

The force shown in these graphs refers to one jaw.
The total force is double.



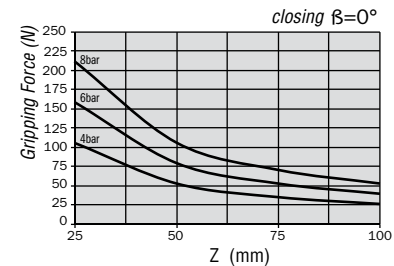
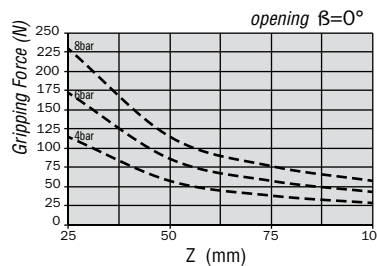
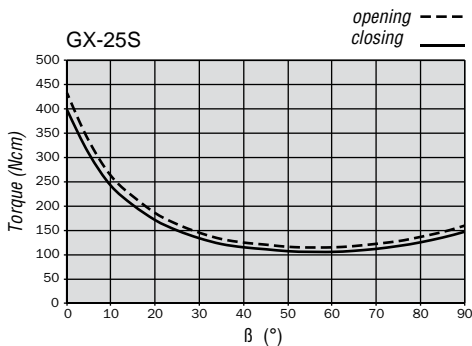
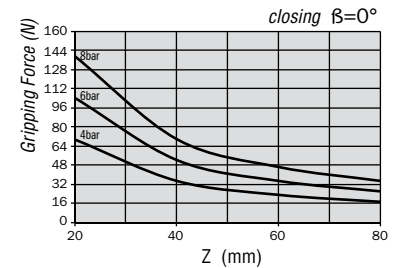
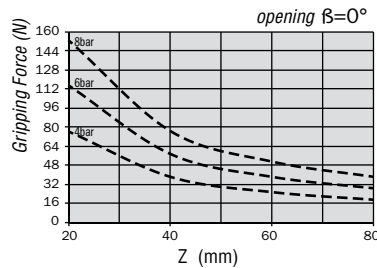
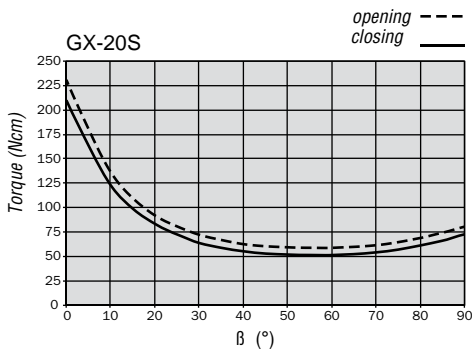
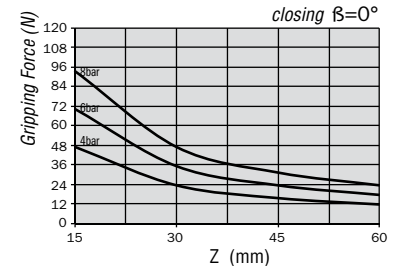
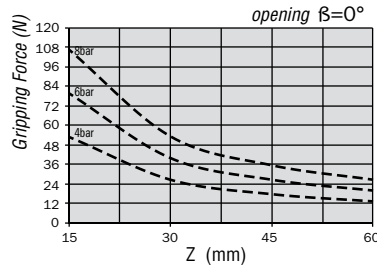
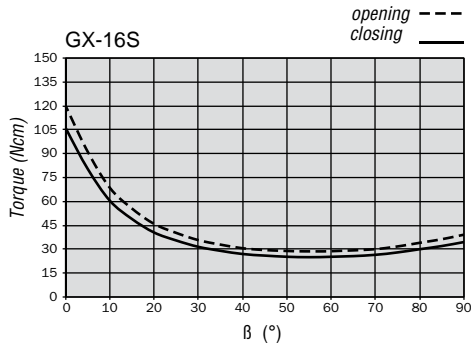
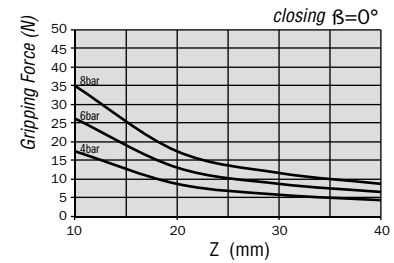
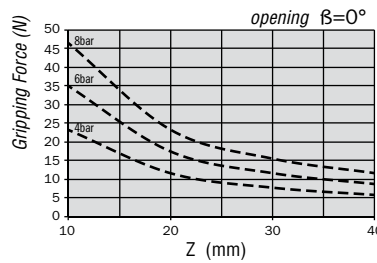
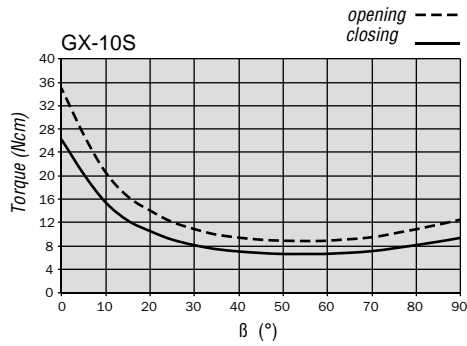
Reference:

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Torque: Nm x 8.850 = in-lbf

Torque: Ncm x 0.089 = in-lbf

Pressure: bar x 14.5 = psi



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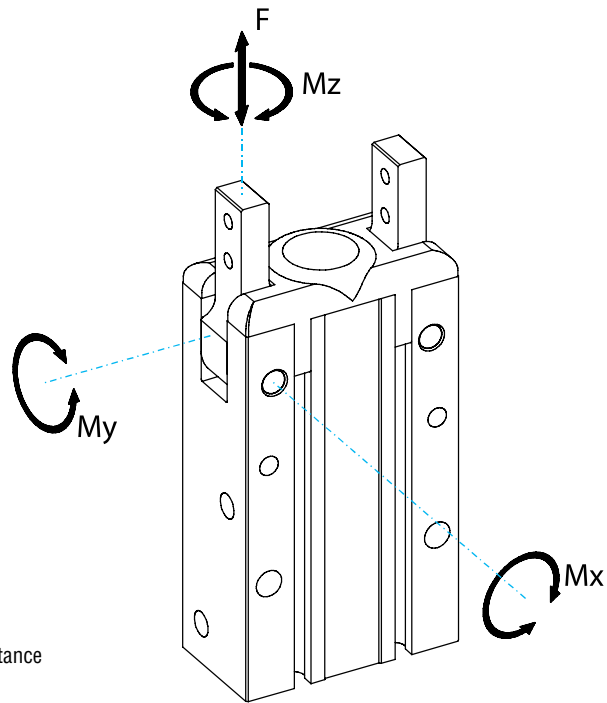
Safety loads

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, Mx, My, Mz, are maximum permitted static loads. Static means with motionless jaws.

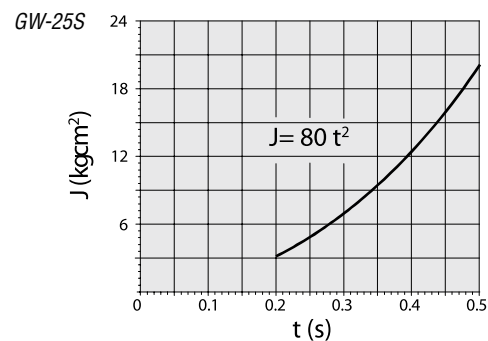
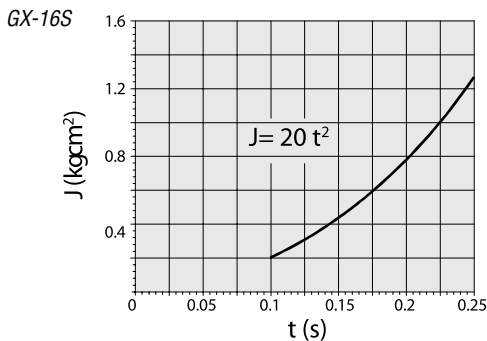
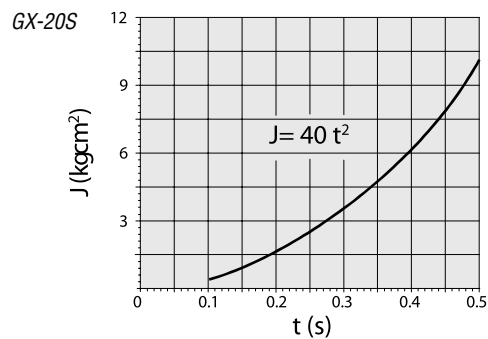
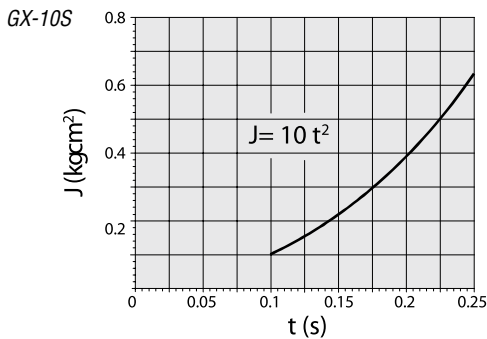
	GX-10S	GX-16S	GX-20S	GX-25S
F	35 N	60 N	100 N	140 N
Mx	0.5 Nm	2 Nm	4 Nm	7 Nm
My	0.5 Nm	1 Nm	2 Nm	4 Nm
Mz	0.5 Nm	2 Nm	4 Nm	7 Nm

Reference:
Force: N x 0.225 = lbf
Torque: Nm x 8.850 = in-lbf
Torque: Ncm x 0.089 = in-lbf
Pressure: bar x 14.5 = psi
 Call our Engineering Department for assistance



Speed adjustment

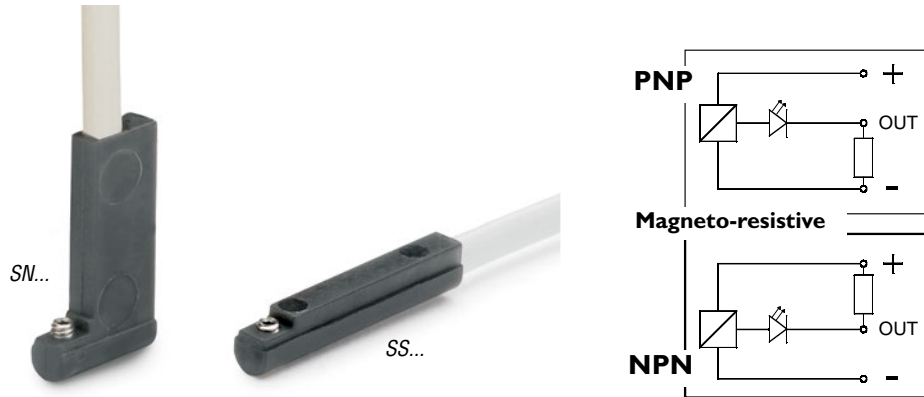
The graphs show the maximum permitted moment of inertia on each gripping tool (J), as a factor of the opening or closing time (t). Use flow controllers (not supplied) to get the proper speed.



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Sensors

The operating position can be checked by sensors (optional), that detect the magnet on the piston inside. Proximity near a large mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.



Quick#	Part#	Signal	Connection	Price
3-wire, SS style magneto-resistive sensors				
1882	SS4N225G	PNP	with lead, 2.5m long	\$27.20
1883	SS4M225G	NPN	with lead, 2.5m long	\$27.20
6282	SS3N203G	PNP	M8 male connector, 0.3m long	\$31.16
1884	SS3M203G	NPN	M8 male connector, 0.3m long	\$31.16
90° Lead exit, 3-wire SN style magneto-resistive sensors				
6278	SN4N225G	PNP	with lead, 2.5m long	\$27.20
6357	SN4M225G	NPN	with lead, 2.5m long	\$27.20
6277	SN3N203G	PNP	M8 male connector, 0.3m long	\$31.16
6356	SN3M203G	NPN	M8 male connector, 0.3m long	\$31.16

Note: M8 Extension cables Quick#'s 2582 & 2583 available on page 987.
See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

