

## General Purpose Grippers Overview

### GS p.622



Uses linear bearings instead of ball bearings  
Normally Open or Normally Closed option  
Interchangeable replacement for other OEM styles  
Sensor ready

### GW p.623



Normally Open or Normally Closed option  
Interchangeable replacement for other OEM styles  
Sensor ready

### GS - Large p.630



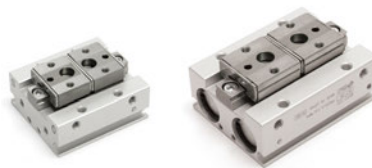
Uses linear bearings instead of ball bearings  
Extends the range of standard GS grippers  
Excellent large general-purpose parallel gripper

### SMC - Parallel & Angular p.624



Good quality, reliable parallel and angular grippers  
Fits EMI's Gimatic mounting brackets  
Normally Open or Normally Closed option  
Sensor ready

### SMC - Low Profile Parallel p.668



Height is approximately 1/3rd the size of the MHZ2 / GS gripper.  
Double Acting  
Fits EMI's Gimatic mounting brackets  
Sensor ready

### Mounting Brackets p.628



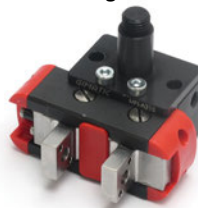
For Gimatic GS & GW Grippers  
For SMC MHZ2 & MHC2 Grippers

### SGP-S p.654



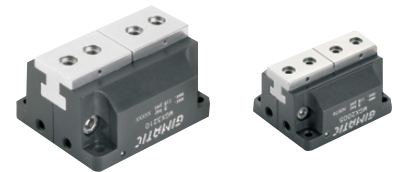
High performance in a very compact size  
Interchangeable with >S< Style PGR grippers  
Improved jaw design for secure finger mounting  
New sensor slot for midstroke detection

### SGP-S Mounting Bracket p.660



Aluminum mounting brackets fit size 20–40 grippers  
Fits Ø10mm and Ø14mm extension tubes  
Plastic mounting brackets fit size 25 and 32 grippers  
Can be used with PGR grippers

### MGX p.690



Flat profile with robust guidance  
High gripping force and dimensional accuracy  
Lightweight, small dimensions  
Spring open, spring close options

### SZ p.676



Long stroke — 8mm to 30mm  
Narrow profile, self centering  
Improved jaw guidance  
Double acting with spring close by special order

### PE p.708



Low profile and long stroke: 10mm to 200mm  
Consistent grip force in both directions  
Strong grip force  
Sensor ready

### Sensor Reference Guide p.1010



We updated our Sensor Reference Guide to include new SSQ and Teachable PRO sensors. Locate the gripper you need and easily find which sensors are compatible and which detect midstroke.

**General Purpose Grippers Overview**

**DH**

p.724



2-jaw, double acting  
Normally Open or Normally Closed option  
Sensor ready  
Interchangeable replacement for other OEM styles

**TH**

p.726



3-jaw, double acting  
Normally Open or Normally Closed option  
Sensor ready  
Interchangeable replacement for other OEM styles

**PQ**

p.728



Double acting with spring return, able to be setup as NO or NC depending on jaw choice  
Strong & rugged design  
Strokes from 15mm to 63mm  
Sensor ready

**GX-S**

p.696



Radial acting  
Interchangeable replacement for other OEM styles  
Sensor ready

**XP / XT**

p.718



2-jaw & 3-jaw parallel grippers  
Lightweight  
Normally Open or Normally Closed option  
Sensor ready

**T**

p.732



Double acting  
Sensor ready

**XR / XA**

p.718



2-jaw radial grippers (XR)  
2-jaw angular grippers (XA)  
Lightweight, high gripping force  
Normally Open or Normally Closed option  
Sensor ready

**PN**

p.692



2 & 3-jaw angular-acting grippers  
Easy mounting interface on threaded stud  
Lightweight, high efficiency  
Sensor ready

**Angular AA**

p.706



Strong grip force  
Hardened steel jaws have mounting holes for custom fingers  
Many mounting accessories available

**SX**

p.720



2-jaw, self-centering gripper  
Completely sealed, ideal for Clean Room applications  
Very high grip force  
Sensor ready

**SXT**

p.722



3-jaw, self-centering gripper  
Completely sealed, ideal for Clean Room applications  
Very high grip force  
Sensor ready

**JP**

p.734



High performance in a compact size  
Heavy-duty gripping  
Sensor ready  
Interchangeable replacement for other OEM styles

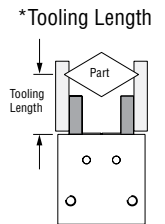
# Gimatic Parallel Grippers



GS - Parallel Grippers

	Quick#	Part#	Price	Opening Force at 20mm*	Closing Force at 20mm*	Opening Force at 40mm*	Closing Force at 40mm*	Finger Stroke	Weight
Double Acting	6325	GS-10	\$142.00	5 lbf	4 lbf	4 lbf	4 lbf	4.6mm	45g
	6326	GS-16	\$145.00	16 lbf	13 lbf	12 lbf	11 lbf	6.8mm	98g
	6327	GS-20	\$161.00	38 lbf	32 lbf	31 lbf	28 lbf	10.4mm	207g
	6328	GS-25	\$186.00	52 lbf	47 lbf	43 lbf	38 lbf	14.4mm	365g
Normally Open	6329	GS-10-NO	\$142.00	-	2 lbf	-	1 lbf	4.6mm	46g
	6330	GS-16-NO	\$145.00	-	8 lbf	-	5 lbf	6.8mm	99g
	6331	GS-20-NO	\$161.00	-	21 lbf	-	17 lbf	10.4mm	209g
	6332	GS-25-NO	\$186.00	-	32 lbf	-	23 lbf	14.4mm	369g
Normally Closed	6333	GS-10-NC	\$142.00	3 lbf	-	2 lbf	-	4.6mm	46g
	6334	GS-16-NC	\$145.00	9 lbf	-	5 lbf	-	6.8mm	99g
	6335	GS-20-NC	\$161.00	28 lbf	-	22 lbf	-	10.4mm	209g
	6336	GS-25-NC	\$186.00	37 lbf	-	28 lbf	-	14.4mm	369g

Great grip force, quality, price, and value! Once you try these grippers, you'll probably standardize on using these for all of your robotic EOAT needs.



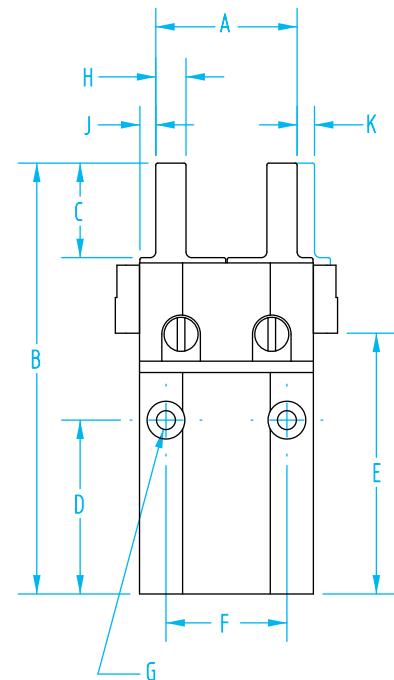
Finger Blanks on page 637



Mounting brackets on page 628

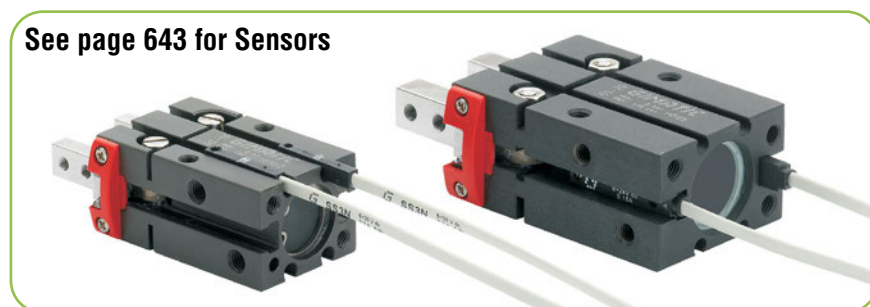


See page 630 for additional sizes and dimensional information



Don't want to machine custom fingers from scratch? Start with these aluminum or nylon finger blanks. They are easy to shape to your particular part.

See page 643 for Sensors



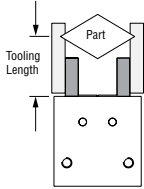
# Gimatic Angular Grippers

## GW - Angular Grippers

	Quick#	Part#	Price	Opening Force at 20mm*	Closing Force at 20mm*	Opening Force at 40mm*	Closing Force at 40mm*	Finger Stroke	Weight
Double Acting	6337	GW-10	\$99.00	2 lbf	2 lbf	1 lbf	1 lbf	40°	39g
	6338	GW-16	\$122.00	12 lbf	8 lbf	5 lbf	4 lbf		88g
	6339	GW-20	\$124.00	20 lbf	17 lbf	10 lbf	9 lbf		171g
	6340	GW-25	\$139.00	40 lbf	36 lbf	20 lbf	20 lbf		300g
Normally Open	6341	GW-10-NO	\$99.00	-	1 lbf	-	-	40°	39g
	6342	GW-16-NO	\$122.00	-	5 lbf	-	3 lbf		89g
	6343	GW-20-NO	\$124.00	-	11 lbf	-	6 lbf		173g
	6344	GW-25-NO	\$139.00	-	26 lbf	-	15 lbf		304g
Normally Closed	6345	GW-10-NC	\$99.00	2 lbf	-	-	-	40°	39g
	6346	GW-16-NC	\$122.00	9 lbf	-	4 lbf	-		89g
	6347	GW-20-NC	\$124.00	15 lbf	-	8 lbf	-		173g
	6348	GW-25-NC	\$139.00	28 lbf	-	14 lbf	-		304g



\*Tooling Length



You can't go wrong with these grippers. They have a high grip force and a life rating of 10,000,000 cycles. Yet they are very competitively priced.

Finger Blanks  
on page 649

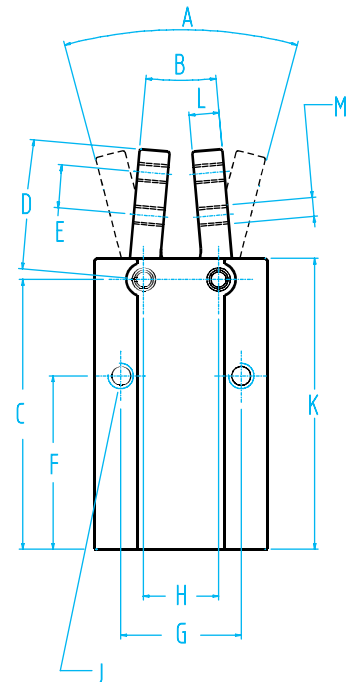


Don't want to machine custom fingers from scratch?  
Start with these aluminum or nylon finger blanks.  
They are easy to shape to your particular part.

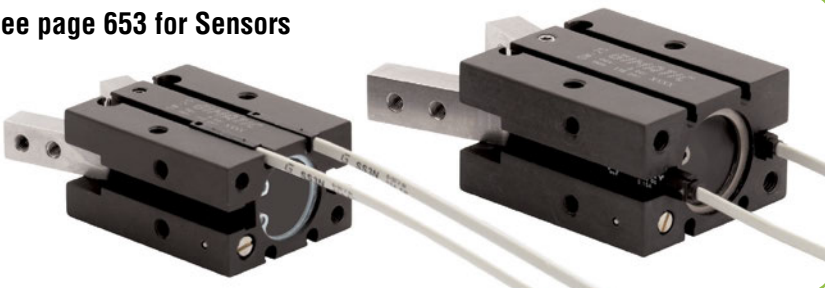
Mounting brackets  
on page 628



See page 644 for additional sizes  
and dimensional information



See page 653 for Sensors

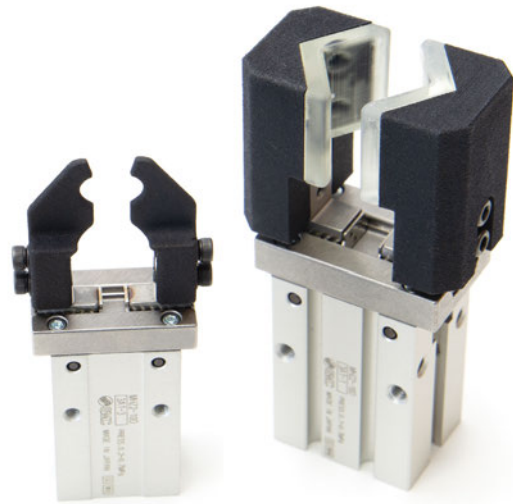


Fittings Available  
on page 1047



## SMC Parallel Grippers – MHZ2

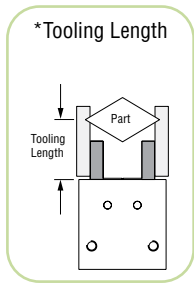
- Double acting (-\_D), normally closed (-\_C), or normally open (-\_S) models.
- Additional narrow jaw models (\_DN) available online.
- Bore sizes from 10mm to 40mm.
- Optional sensors available.
- Finger blanks available on page 637.
- Mounting brackets on page 628.
- MHF2 low-profile parallel grippers on page 668.



Contact EMI for custom designed and manufactured fingers.

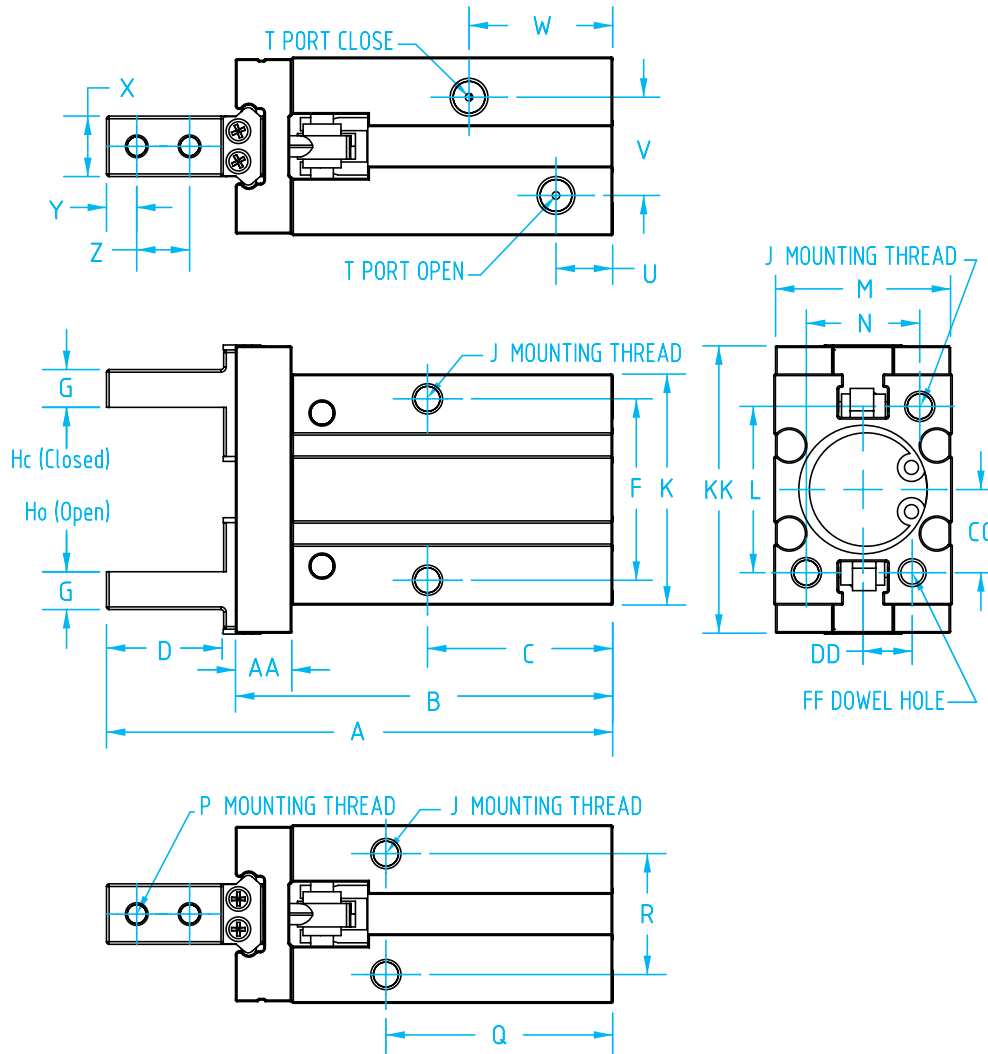


	Quick#	Part#	Price	Opening Force at 20mm*	Closing Force at 20mm*	Opening Force at 40mm*	Closing Force at 40mm*	Finger Stroke	Weight
Double Acting	2109	MHZ2-10D	\$191.30	8 lbf	5 lbf	6 lbf	3 lbf	4mm	55g
	2110	MHZ2-16D	\$196.75	22 lbf	17 lbf	15 lbf	10 lbf	6mm	115g
	2111	MHZ2-20D	\$279.80	33 lbf	22 lbf	32 lbf	21 lbf	10mm	235g
	2112	MHZ2-25D	\$334.45	54 lbf	36 lbf	52 lbf	34 lbf	14mm	430g
Normally Open	2117	MHZ2-10S	\$191.30	-	3 lbf	-	1 lbf	4mm	55g
	2118	MHZ2-16S	\$196.75	-	14 lbf	-	7 lbf	6mm	115g
	2119	MHZ2-20S	\$279.80	-	18 lbf	-	17 lbf	10mm	240g
	2120	MHZ2-25S	\$334.45	-	27 lbf	-	25 lbf	14mm	435g
Normally Closed	2121	MHZ2-10C	\$191.30	6 lbf	-	4 lbf	-	4mm	55g
	2122	MHZ2-16C	\$196.75	19 lbf	-	12 lbf	-	6mm	115g
	2123	MHZ2-20C	\$279.80	29 lbf	-	28 lbf	-	10mm	240g
	2124	MHZ2-25C	\$334.45	44 lbf	-	42 lbf	-	14mm	435g



Use Quick#s for easy online ordering.

SMC Parallel Grippers – MHZ2



	MHZ2-10	MHZ2-16	MHZ2-20	MHZ2-25
A	57.0	67.3	84.8	102.7
AA	6.0	7.5	9.5	11.0
B	43.8	50.0	62.3	74.6
C	23.0	24.5	29.0	30.0
D	12.0	15.0	20.0	25.0
F	16.0	24.0	30.0	36.0
FF	Ø2 H9	Ø3 H9	Ø4 H9	Ø4 H9
CC	7.6	11.0	16.8	21.8
DD	5.2	6.5	7.5	10.0
G	4.0	5.0	8.0	10.0
Ho	15.2	20.9	26.3	33.3
Hc	11.2	14.9	16.3	19.3
J	M3	M4	M5	M6
K	23.0	30.6	42.0	52.0
KK	29.0	38.0	50.0	63.0
L	18.0	22.0	32.0	40.0
M	16.4	23.6	27.6	33.6
N	12.0	15.0	18.0	22.0
P	M2.5	M3	M4	M5
Q	27.0	30.0	35.0	36.5
R	11.4	16.0	18.6	22.0
T	M3	M5	M5	M5
U	9.0	7.5	10.0	10.7
V	11.0	13.0	15.0	20.0
W	19.0	19.0	23.0	23.5
X	5.0	8.0	10.0	12.0
Y	3.0	4.0	5.0	6.0
Z	5.7	7.0	9.0	12.0

Quick#	Part#	Signal	Connection	Price	Size 10	All other sizes
<b>SMC 3-wire Straight T-Slot Sensors to detect fully open / fully closed</b>						
2243	Y7PL-PNP	PNP	with lead, 3m long	\$44.00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2244	Y59AL-NPN	NPN	with lead, 3m long	\$34.95	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>SMC 3-wire Straight C-Slot Sensors for midstroke detection</b>						
5430	D-M9PL	PNP	with lead, 3m long	\$33.70	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>
2412	D-M9NL	NPN	with lead, 3m long	\$33.70	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>
5497	D-M9P-SAPC	PNP	with M8 male connector, 0.5m long	\$42.06	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>
5498	D-M9N-SAPC	NPN	with M8 male connector, 0.5m long	\$42.06	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>
211	SMC-BMG2-012	T-Slot Adaptor for SMC C-Slot Sensors		\$2.66	(*) Purchase separately	

## SMC Angular Grippers – MHC2

- Double acting (-\_D), or normally open (-\_S) models.
- Bore sizes from 10mm to 25mm.
- Built-in variable throttle.
- Optional sensors available.
- Finger blanks available on page 649.
- Mounting brackets on page 628.



	Quick#	Part#	Price	Closing Force at 87psi		Finger Stroke	Weight
				at 20mm	at 40mm		
Double Acting	2101	MHC2-10D	\$129.00	3 lbf	-	40°	39g
	2102	MHC2-16D	\$134.50	10 lbf	6 lbf		91g
	2103	MHC2-20D	\$161.80	20 lbf	10 lbf		180g
	2104	MHC2-25D	\$180.35	37 lbf	20 lbf		311g
Normally Open	2105	MHC2-10S	\$129.00	2 lbf	-	40°	39g
	2106	MHC2-16S	\$134.50	9 lbf	4 lbf		92g
	2107	MHC2-20S	\$161.80	16 lbf	8 lbf		183g
	2108	MHC2-25S	\$180.35	31 lbf	17 lbf		316g

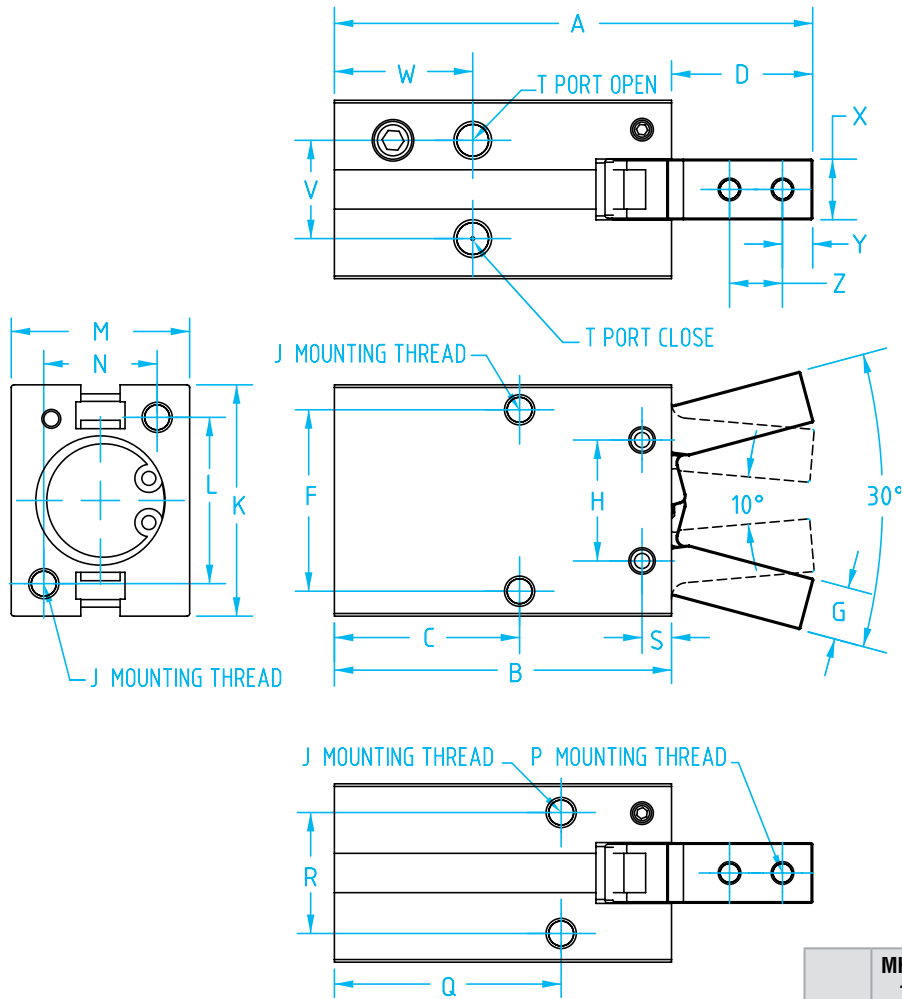
Quick#	Part#	Signal	Connection	Price
<b>SMC 3-wire T-Slot Straight Sensors to detect fully open / fully closed</b>				
2243	Y7PL-PNP	PNP	with lead, 3m long	\$44.00
2244	Y59AL-NPN	NPN	with lead, 3m long	\$34.95
<b>SMC 3-wire C-Slot Straight Sensors for midstroke detection - Purchase Adaptor Separately</b>				
5430	D-M9PL	PNP	with lead, 3m long	\$33.70
2412	D-M9NL	NPN	with lead, 3m long	\$33.70
5497	D-M9P-SAPC	PNP	with M8 male connector, 0.5m long	\$42.06
5498	D-M9N-SAPC	NPN	with M8 male connector, 0.5m long	\$42.06
211	SMC-BMG2-012	T-Slot Adaptor for SMC C-Slot Sensors		\$2.66

Fittings Available  
on page 1047



Use Quick#s for easy online ordering.

SMC Angular Grippers – MHC2



Contact EMI for custom designed and manufactured fingers.

	MHC2-10	MHC2-16	MHC2-20	MHC2-25
A	52.4	62.5	78.7	92.0
B	38.6	44.6	55.2	60.4
C	23.0	24.5	29.0	30.0
D	13.8	17.9	23.5	31.6
F	16.0	24.0	30.0	36.0
G	4.0	7.0	8.0	10.0
H	10.0	16.0	20.0	25.0
J	M3	M4	M5	M6
K	23.0	30.6	42.0	52.0
L	18.0	22.0	32.0	40.0
M	16.4	23.6	27.6	33.6
N	12.0	15.0	18.0	22.0
P	M2.5	M3	M4	M5
Q	27.0	30.0	35.0	36.5
R	11.4	16.0	18.6	22.0
S	2.8	3.9	4.5	4.6
T	M3	M5	M5	M5
V	10.4	13.0	15.0	20.0
W	18.8	18.3	22.2	23.5
X	6.4	8.0	10.0	12.0
Y	3.0	4.0	5.2	8.0
Z	5.7	7.0	9.0	12.0



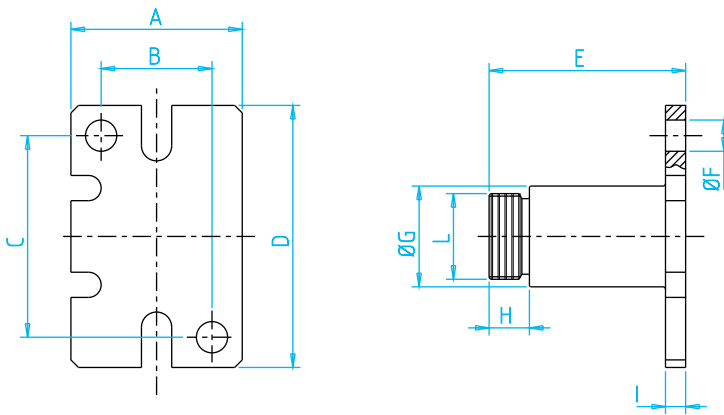
## Aluminum Mounting Brackets



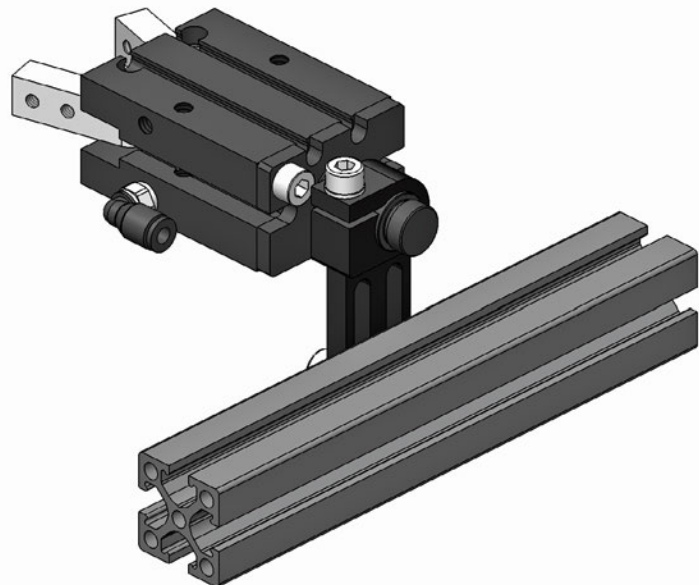
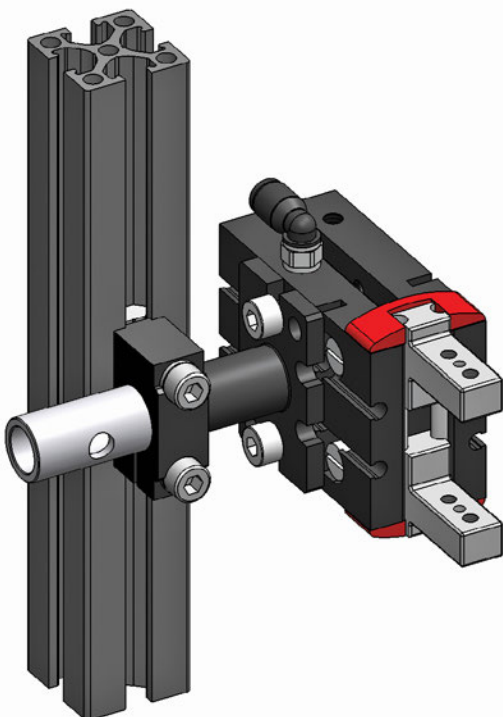
Mounting Brackets for Gimatic GS / GW and SMC MHZ2 / MHC2 Grippers

Quick#	Part#	Price	For gripper	Wt.
7317	MFI-A321	\$26.57	__-10 & GX-16S	8g
7318	MFI-A322	\$29.04	__-16	18g
7319	MFI-A323	\$37.00	__-20	29g
7320	MFI-A324	\$42.11	__-25	57g

*Includes fasteners.*



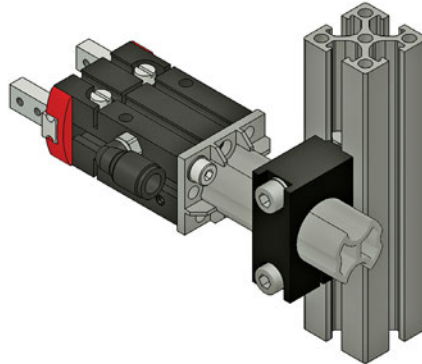
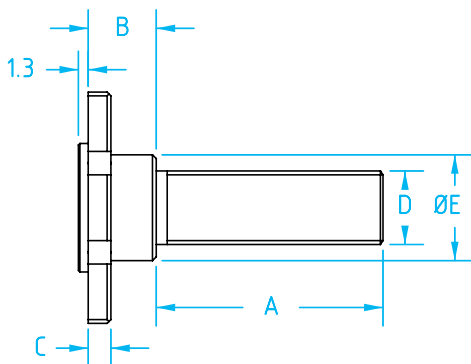
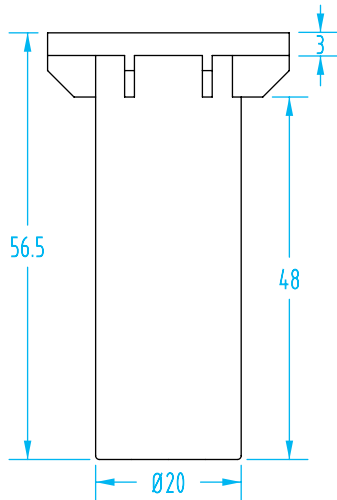
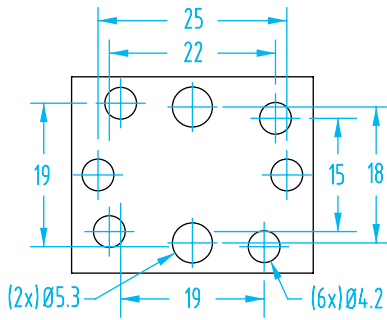
Quick#	7317	7318	7319	7320
For:	__-10	__-16	__-20	__-25
A	17.5	24	28	34
B	12	15	18	22
C	18	22	32	40
D	23.5	31	42	52
E	21	26.5	30	39
F	Ø3.1	Ø4.1	Ø5.2	Ø6.2
G	Ø10	Ø14	Ø14	Ø20
H	5	6	6	8
I	2	2.5	4	4
L	M8x1	M12x1	M12x1	M17x1



# Composite Mounting Brackets

For use with Gimatic and SMC

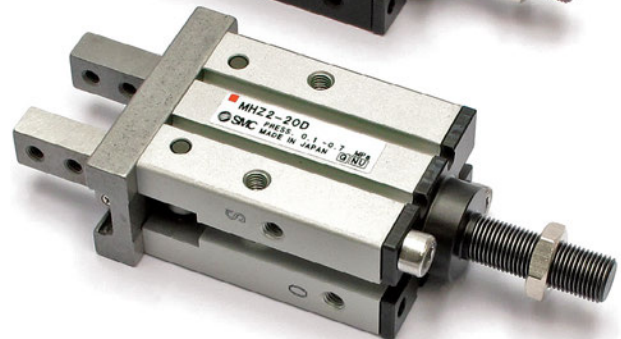
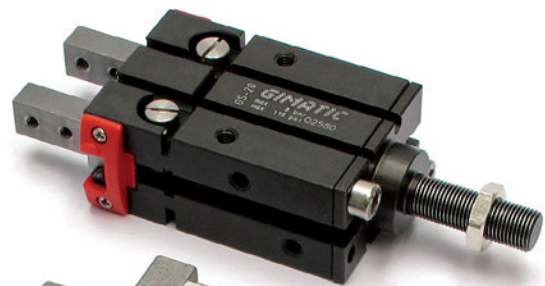
(Dimensioned drawings shown full scale)



Composite Mounting Brackets for Compact Grippers

Quick#	Part#	Price	For gripper	Wt.
6375	MFP-A01	\$3.43	Gimatic: GS-16, GW-16, SMC: MHZ2-16, MHC2-16	26g

Order fasteners separately, see page 1076.



Fittings Available  
on page 1047



Mounting Brackets for Gimatic GS- and GW-; and SMC MHZ2- and MHC2- Grippers

Quick#	Part#	Price	For gripper	A	B	C	D	E	Wt.
1918	GMB-GSGW-10	\$32.25	__-10	25	8	3	G1/8"	10	9g
1919	GMB-GSGW-16	\$32.25	__-16	30	9	3	G1/8"	14	14g
1920	GMB-GSGW-20	\$32.25	__-20	30	10	3	G1/8"	20	21g
1921	GMB-GSGW-25	\$32.25	__-25	30	13	5	M15x1	20	43g

Includes fasteners.

## Parallel Gripper – GS

- Self-centering.
- Double acting.
- Long life and reliability, maintenance free.
- Different options for fastening.
- Optional sensors available on page 643.
- Spring closed (-NC) or spring open (-NO) option.
- Use FDA approved lubricant and stainless steel parts.
- Finger blanks available on page 637.
- Patented backlash adjusting system.



### Double Acting Models

Quick#	6325	6326	6327	6328	6784	6785
Part#	GS-10	GS-16	GS-20	GS-25	GS-32	GS-40
Price	\$142.00	\$145.00	\$161.00	\$186.00	\$514.00	\$717.00
Medium	Filtered, lubricated / non-lubricated compressed air					
Pressure range	36–116 psi	21.7–116 psi		14.5–116 psi		
Opening total gripping force at 87 psi	8 lbf	22.4 lbf	47.6 lbf	63.4 lbf	112.4 lbf	157.4 lbf
Closing total gripping force at 87 psi	6.3 lbf	19.4 lbf	41.8 lbf	57 lbf	96.6 lbf	138 lbf
Total stroke (+/- 0.3mm)	4.6mm	6.8mm	10.4mm	14.4mm	22mm	30mm
Maximum repeatability tolerance	±0.02mm					
Mid-stroke detection with Gimatic Sensor	Yes, see Sensor Reference Guide on page 1010 for details.					
Mid-stroke detection with SMC Sensor	Yes, with D-M9_ SMC sensors and included sensor bracket (see page 1004)					
Weight	45g	98g	207g	365g	645g	1155g

### Normally Open Models

Quick#	Part#	Price	Finger Stroke	Wt.
6329	GS-10-NO	\$142.00	4.6mm	46g
6330	GS-16-NO	\$145.00	6.8mm	99g
6331	GS-20-NO	\$161.00	10.4mm	209g
6332	GS-25-NO	\$186.00	14.4mm	369g

### Normally Closed Models

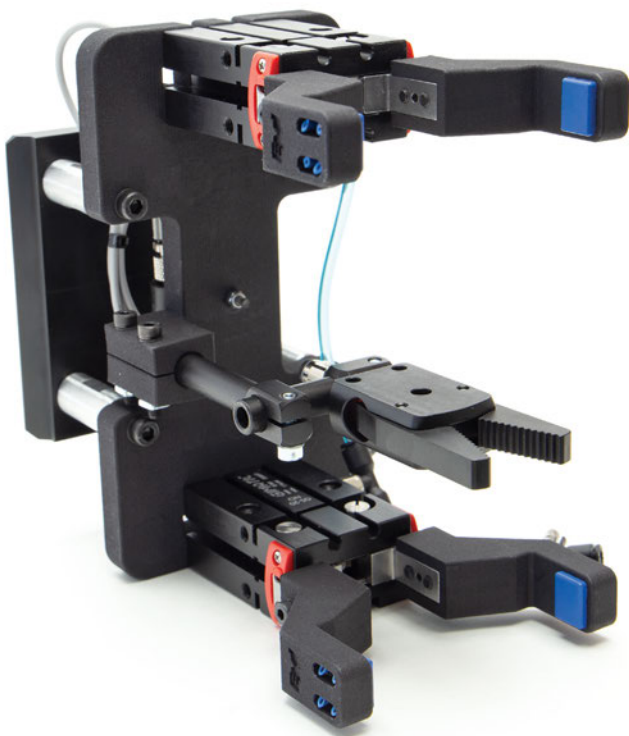
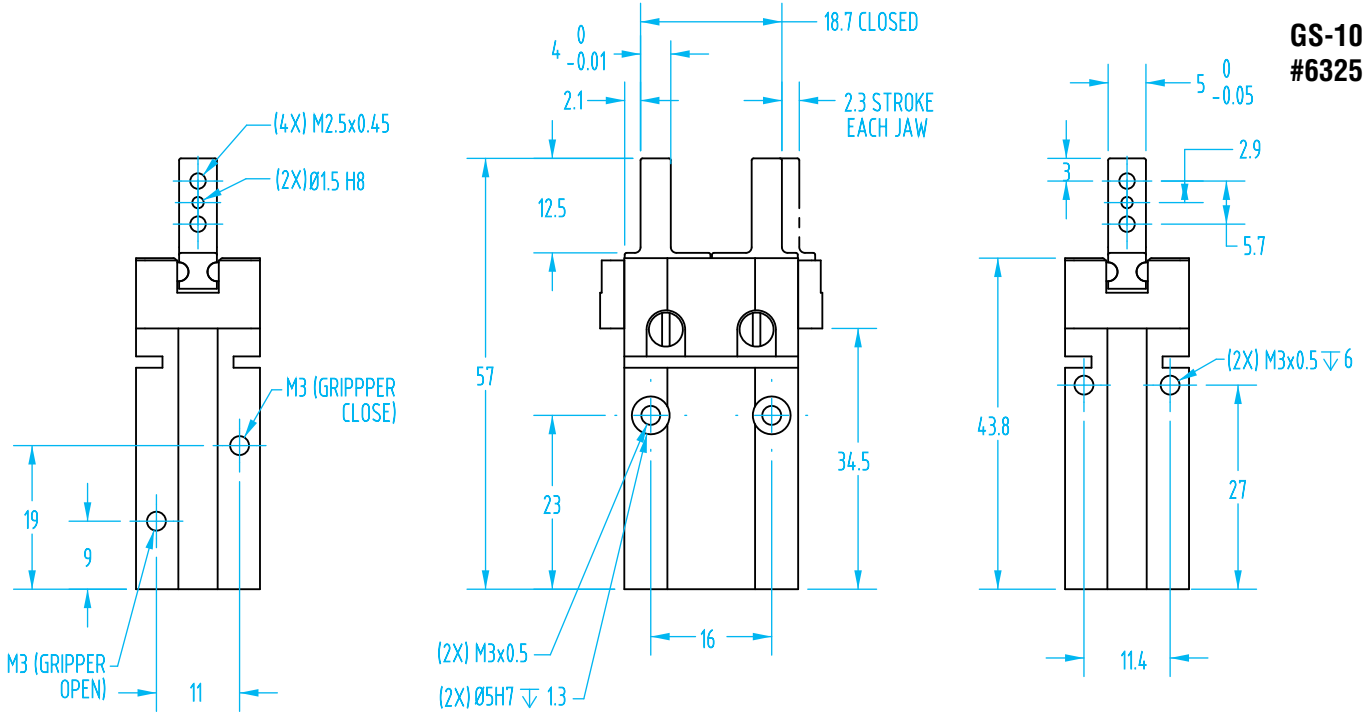
Quick#	Part#	Price	Finger Stroke	Wt.
6333	GS-10-NC	\$142.00	4.6mm	46g
6334	GS-16-NC	\$145.00	6.8mm	99g
6335	GS-20-NC	\$161.00	10.4mm	209g
6336	GS-25-NC	\$186.00	14.4mm	369g

Use Quick#s for easy online ordering.

**Parallel Gripper – GS**

**GS-10  
#6325**

(Dimensioned drawing shown full scale)



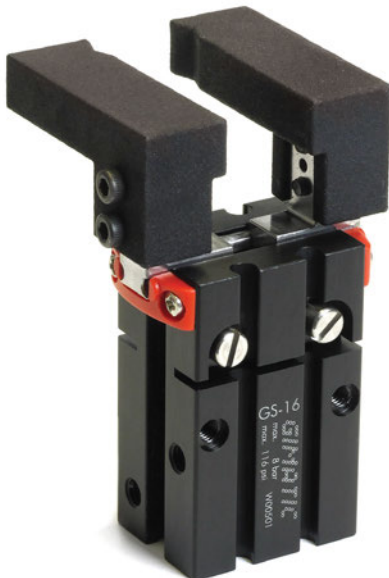
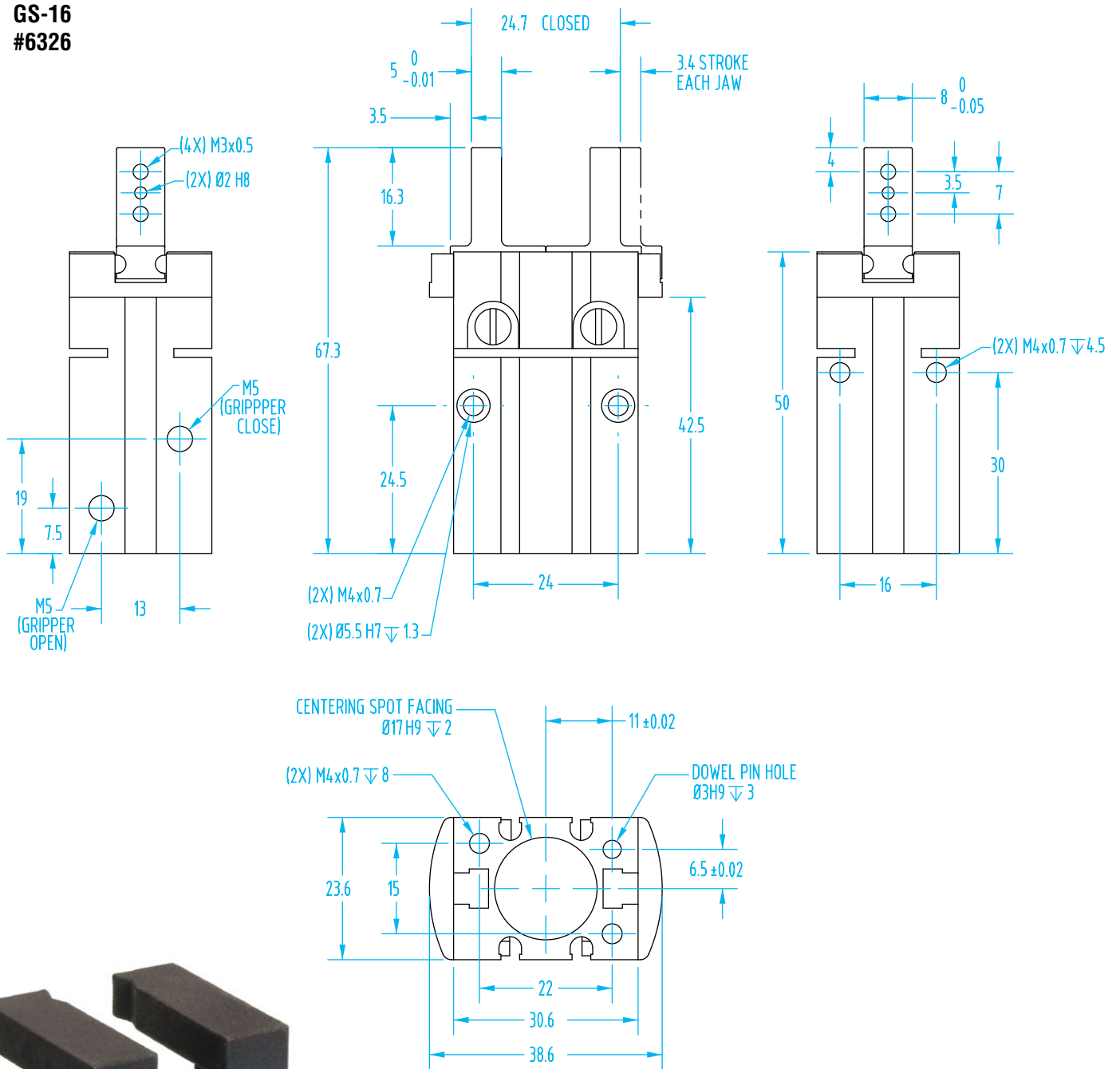
**Custom 3D Printed or Machined  
Fingers from EMI!**

EMI's in-house 3D printing and CNC equipment allow us to provide custom fingers quickly and cost effectively.

# Parallel Gripper – GS

(Dimensioned drawing shown full scale)

**GS-16  
#6326**



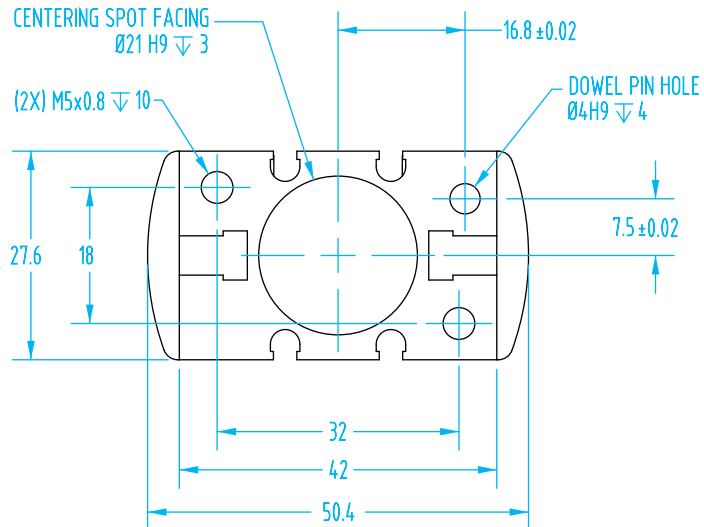
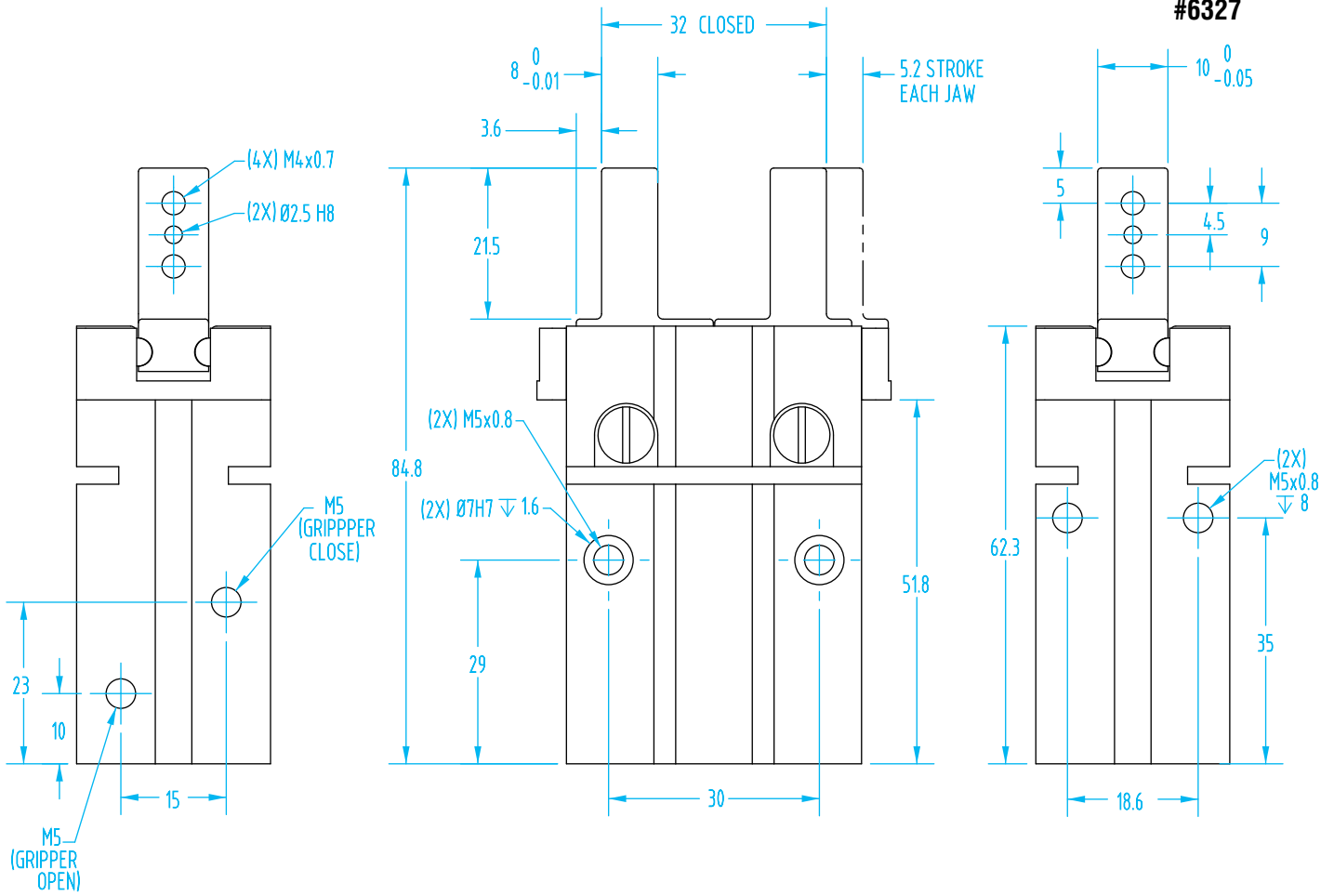
## Custom 3D Printed or Machined Fingers from EMI!

EMI's in-house 3D printing and CNC equipment allow us to provide custom fingers quickly and cost effectively.

**Parallel Gripper – GS**

(Dimensioned drawing shown full scale)

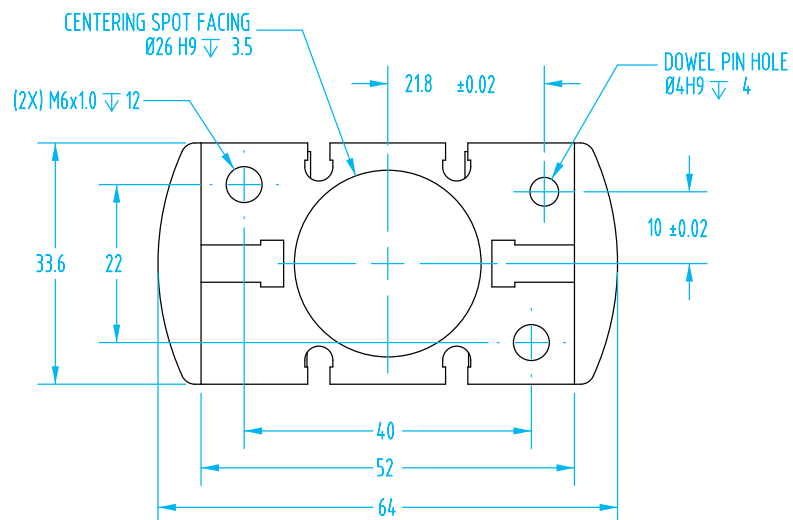
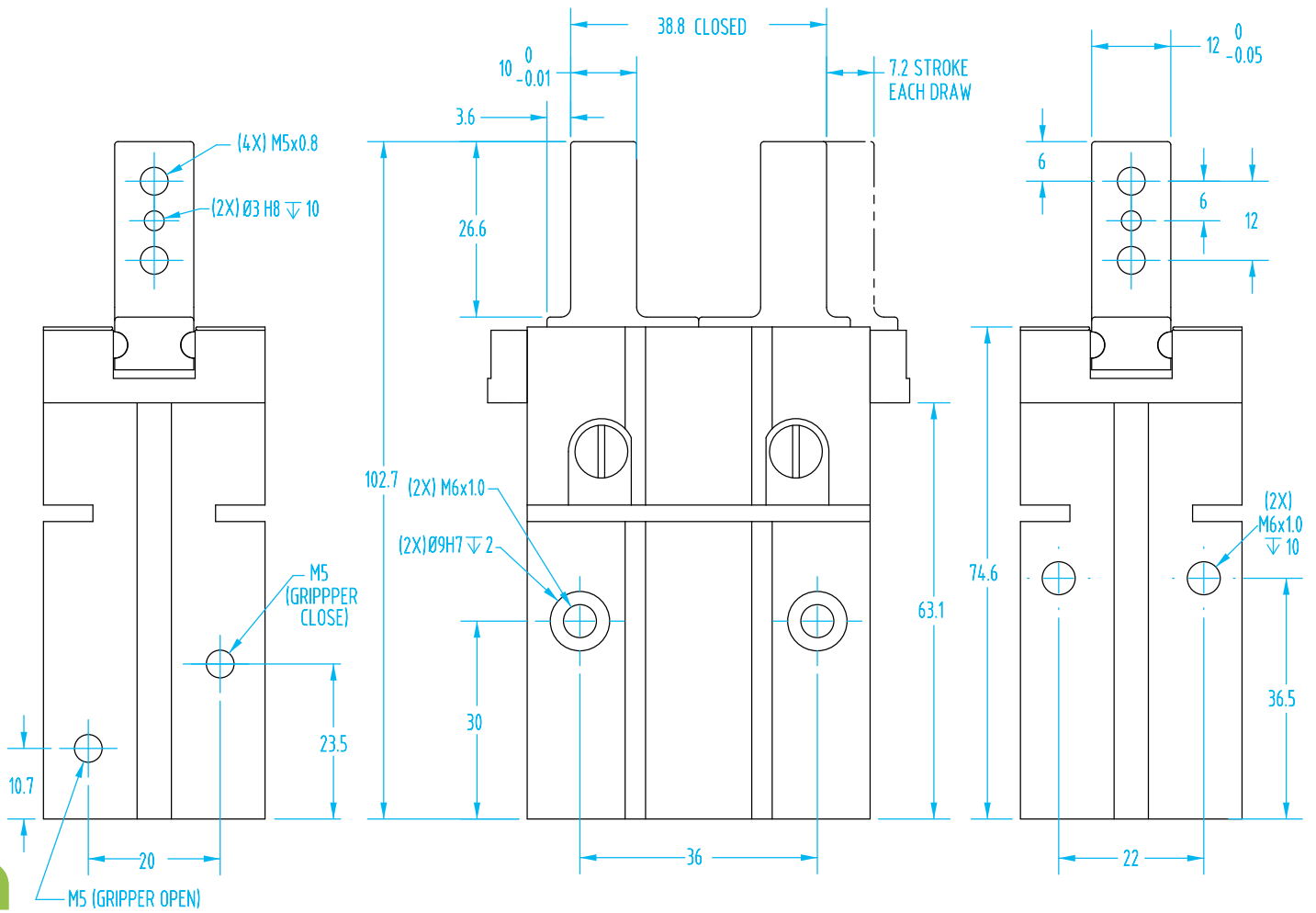
**GS-20  
#6327**



# Parallel Gripper – GS

(Dimensioned drawing reduced to fit)

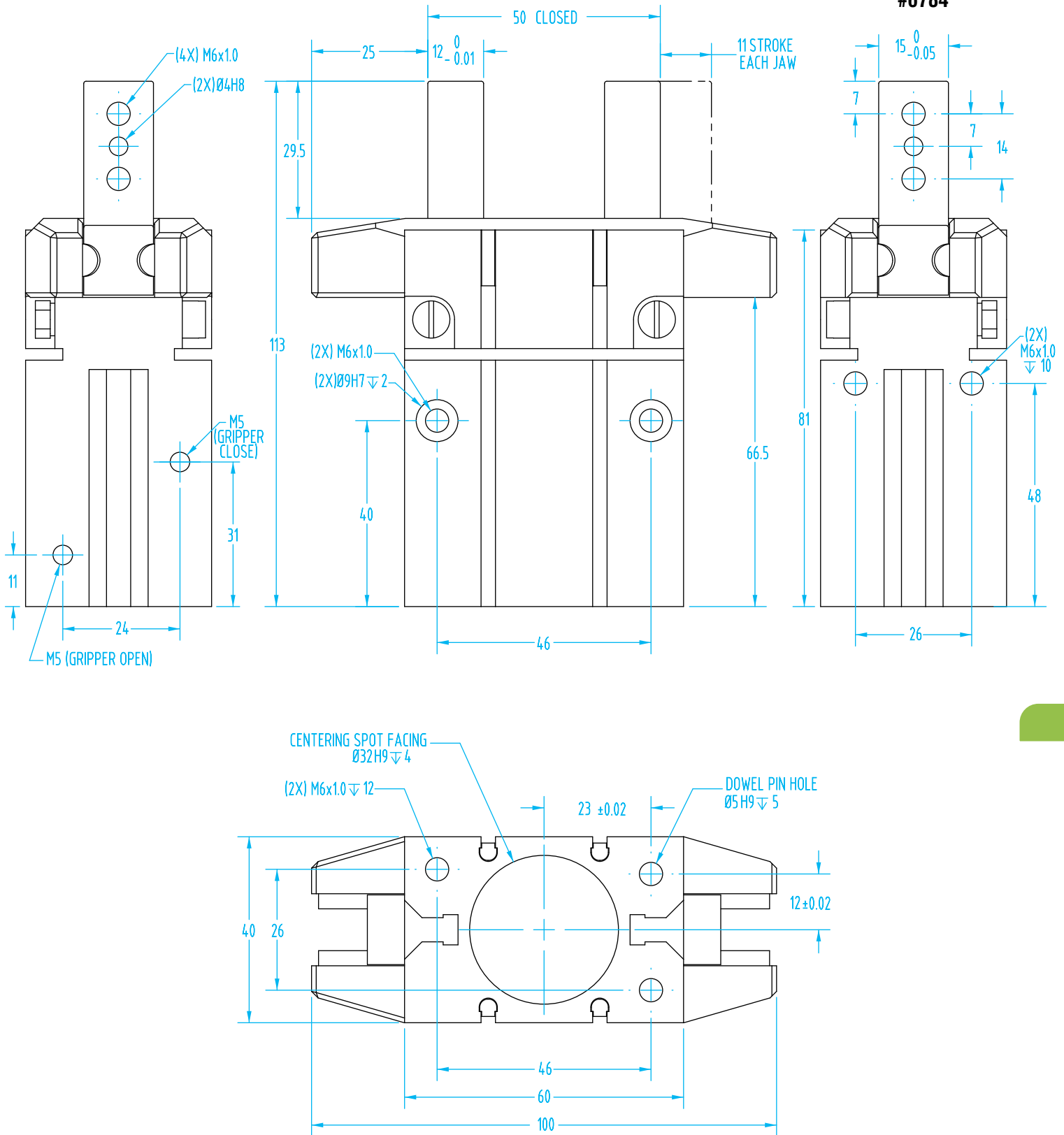
GS-25  
#6328



**Parallel Gripper – GS**

(Dimensioned drawing reduced to fit)

**GS-32  
#6784**

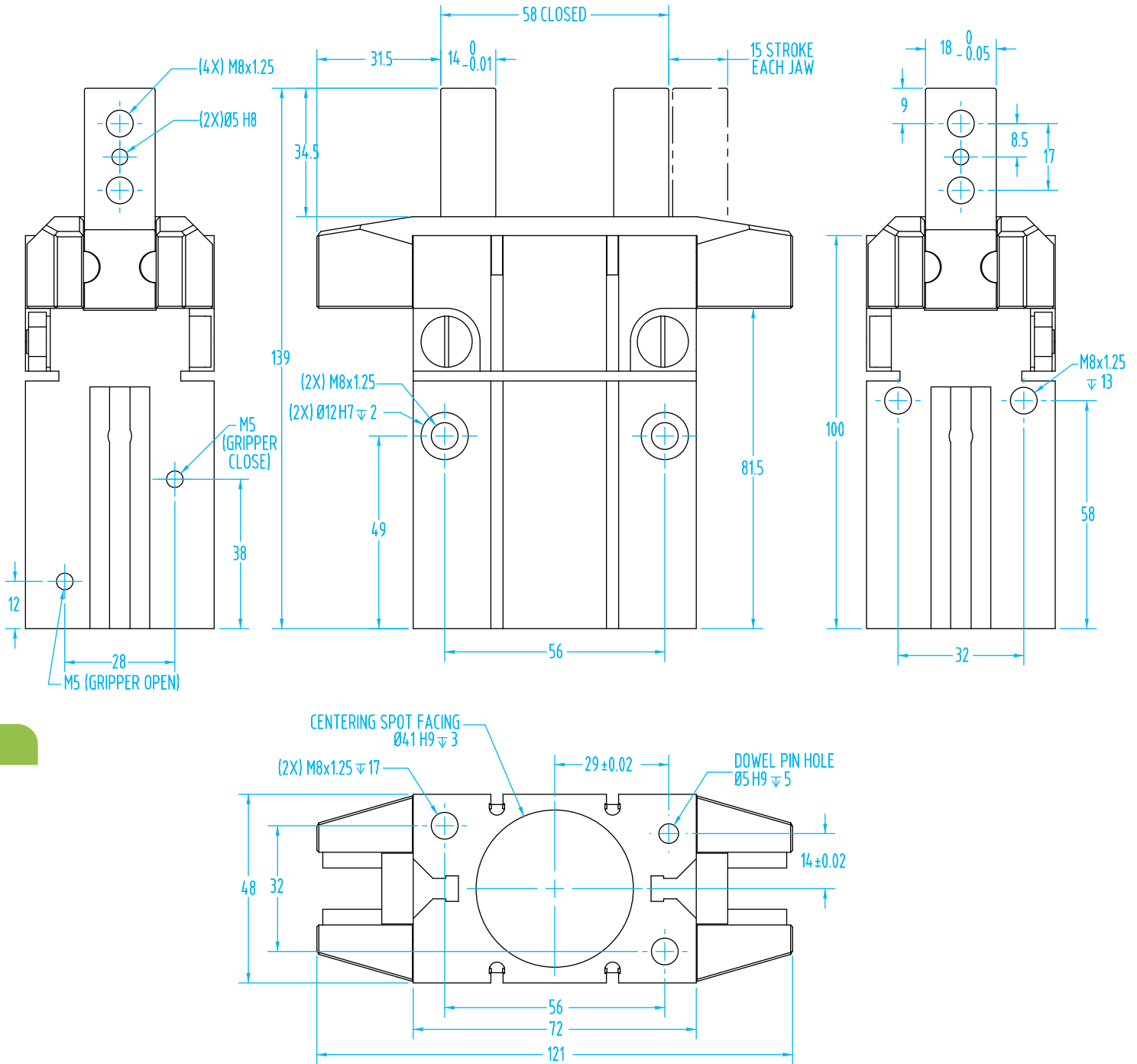




# Parallel Gripper – GS

(Dimensioned drawing reduced to fit)

GS-40  
#6785



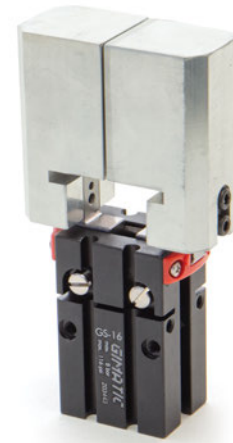
## Finger Blanks for GS Grippers

**Machine these finger blanks to your part's shape or contact EOAT Engineering for help!**

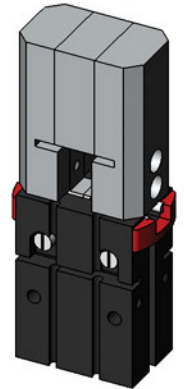
**For more information on custom finger blanks for your application visit our 3D printing section on page 102.**

Quick#	Part#	Material	For:	Wt. (g)	Price
5884	GS-10-FBA	Aluminum	GS-10 & MHZ2-10	68	\$25.09
7462	GS-10-FBN	Nylon	MHZ2-10	3.5	\$19.30
5886	GS-16-FBA	Aluminum	GS-16 & MHZ2-16	134	\$31.00
7463	GS-16-FBN	Nylon	MHZ2-16	7	\$23.85
5888	GS-20-FBA	Aluminum	GS-20 & MHZ2-20	210	\$35.36
7464	GS-20-FBN	Nylon	MHZ2-20	11	\$27.20
5890	GS-25-FBA	Aluminum	GS-25 & MHZ2-25	338	\$38.55
7465	GS-25-FBN	Nylon	MHZ2-25	18	\$29.65

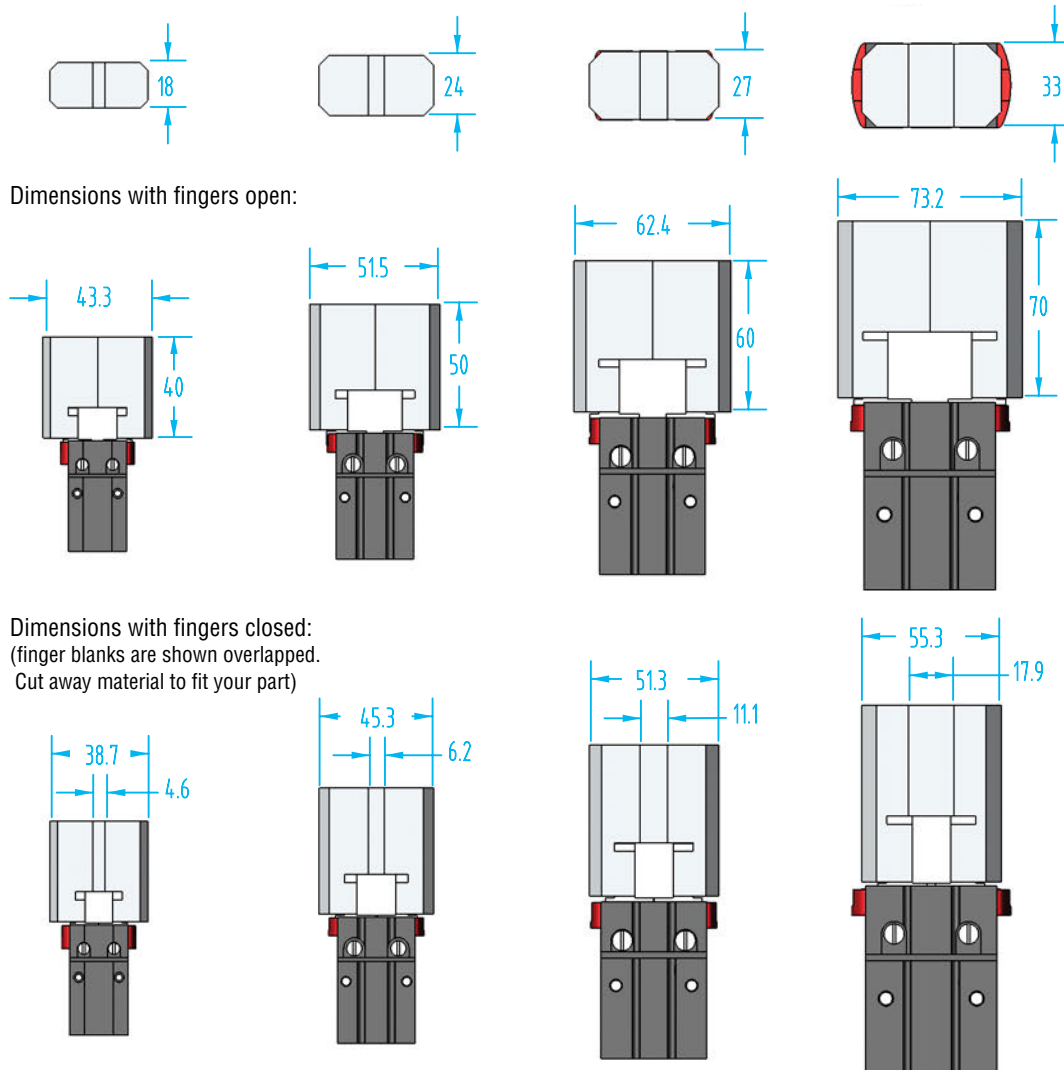
Note: Mounting Hardware Included



Gripper Fingers shown fully open.



Gripper Fingers shown closed. (fingers overlap) Cut away material to fit your part.

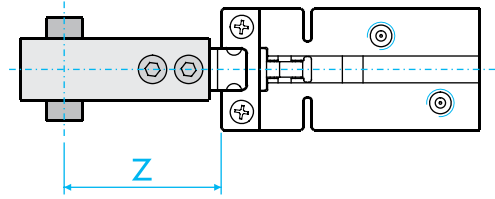


# Parallel Gripper – GS

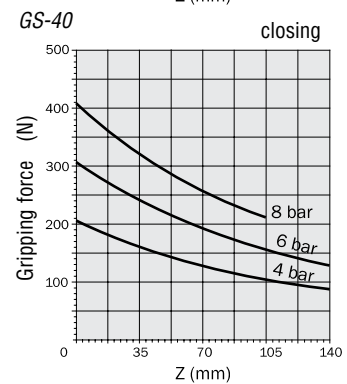
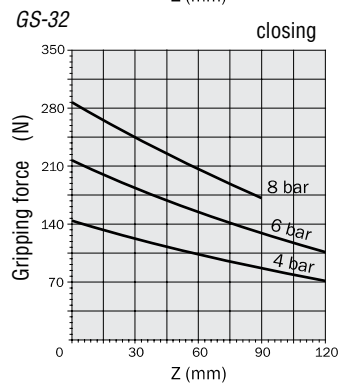
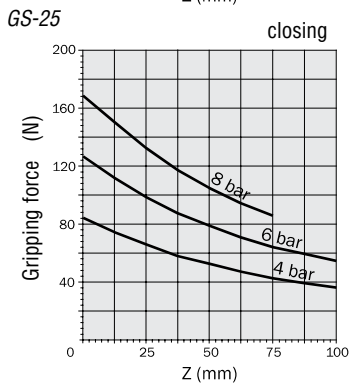
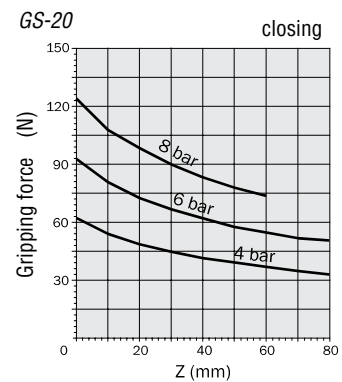
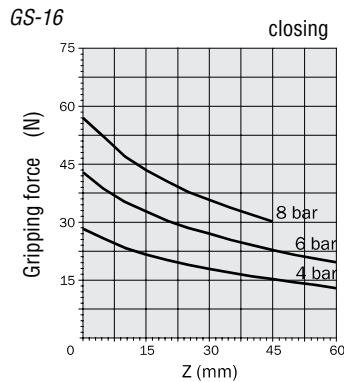
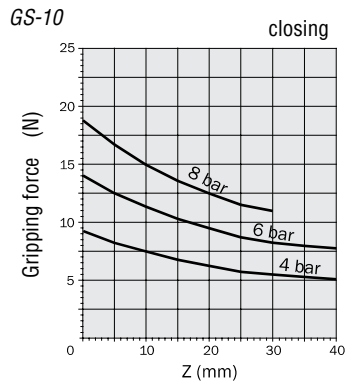
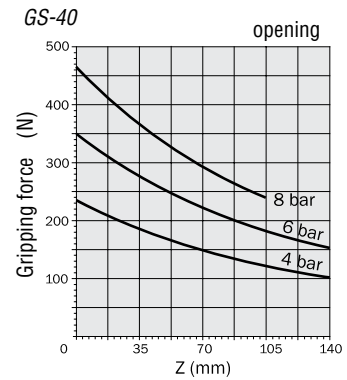
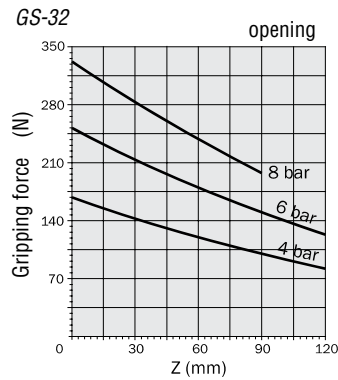
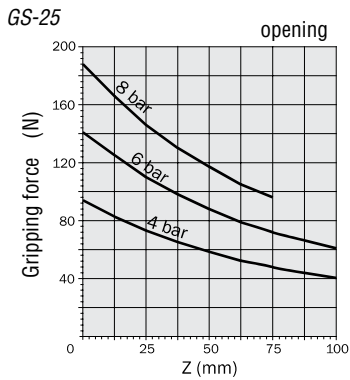
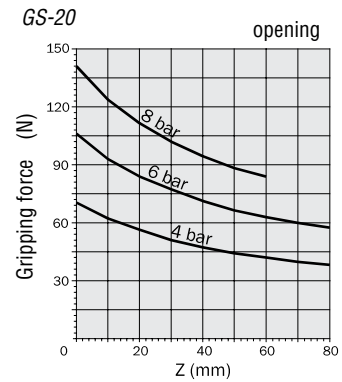
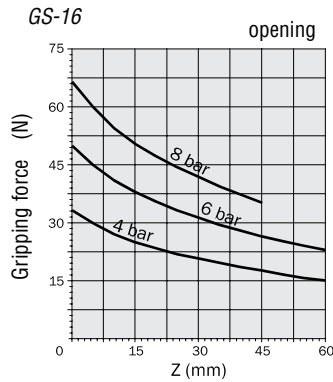
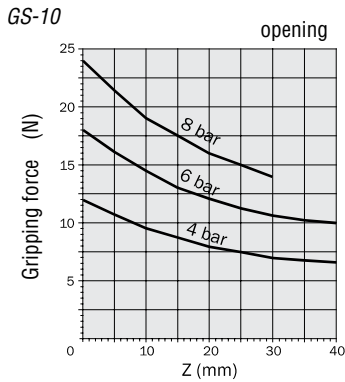
## Gripping force

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

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



**Reference:**  
**Force:** N x 0.225 = lbf  
**Torque:** Nm x 8.850 = in-lbf  
**Pressure:** bar x 14.5 = psi

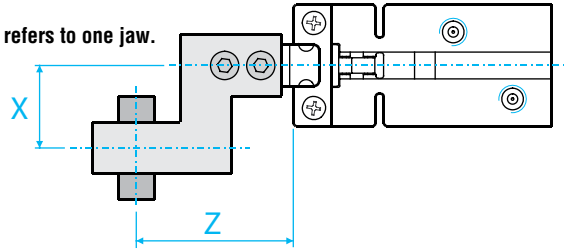


# Parallel Gripper – GS

## Gripping force

The graphs show the gripping force on each jaw, as a function of the gripping tool length 'Z' and the overhanging 'X' at 6 bar (87psi).

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



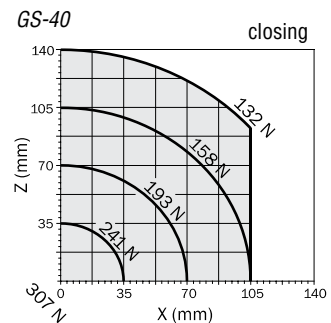
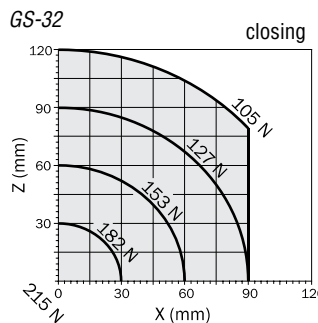
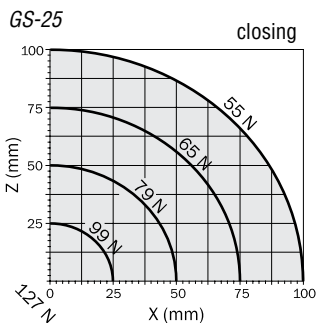
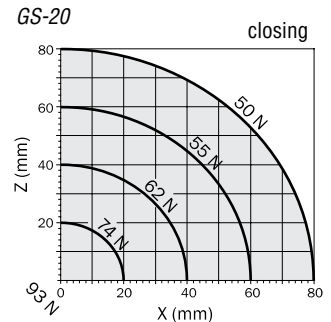
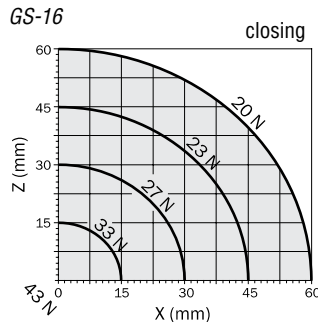
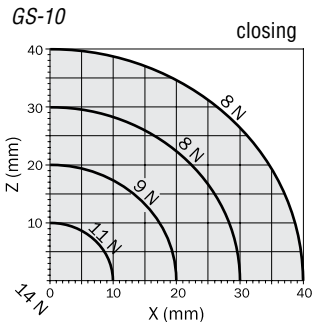
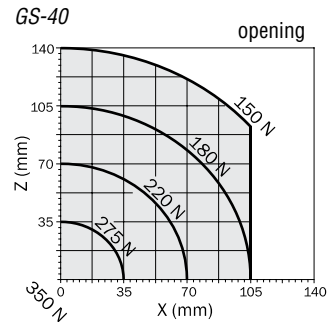
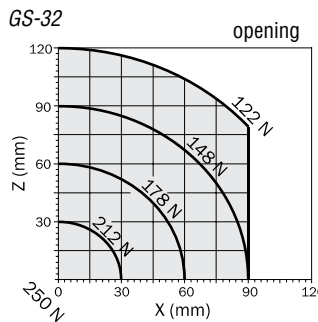
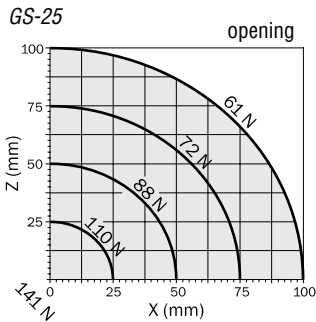
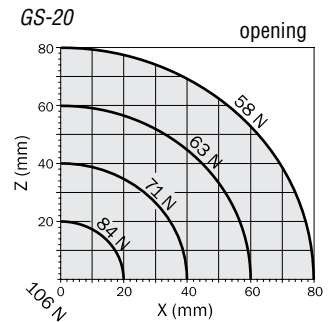
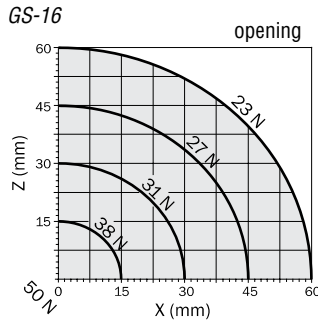
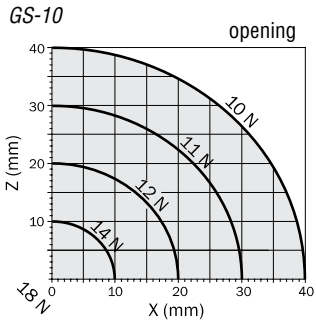
**Reference:**

**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



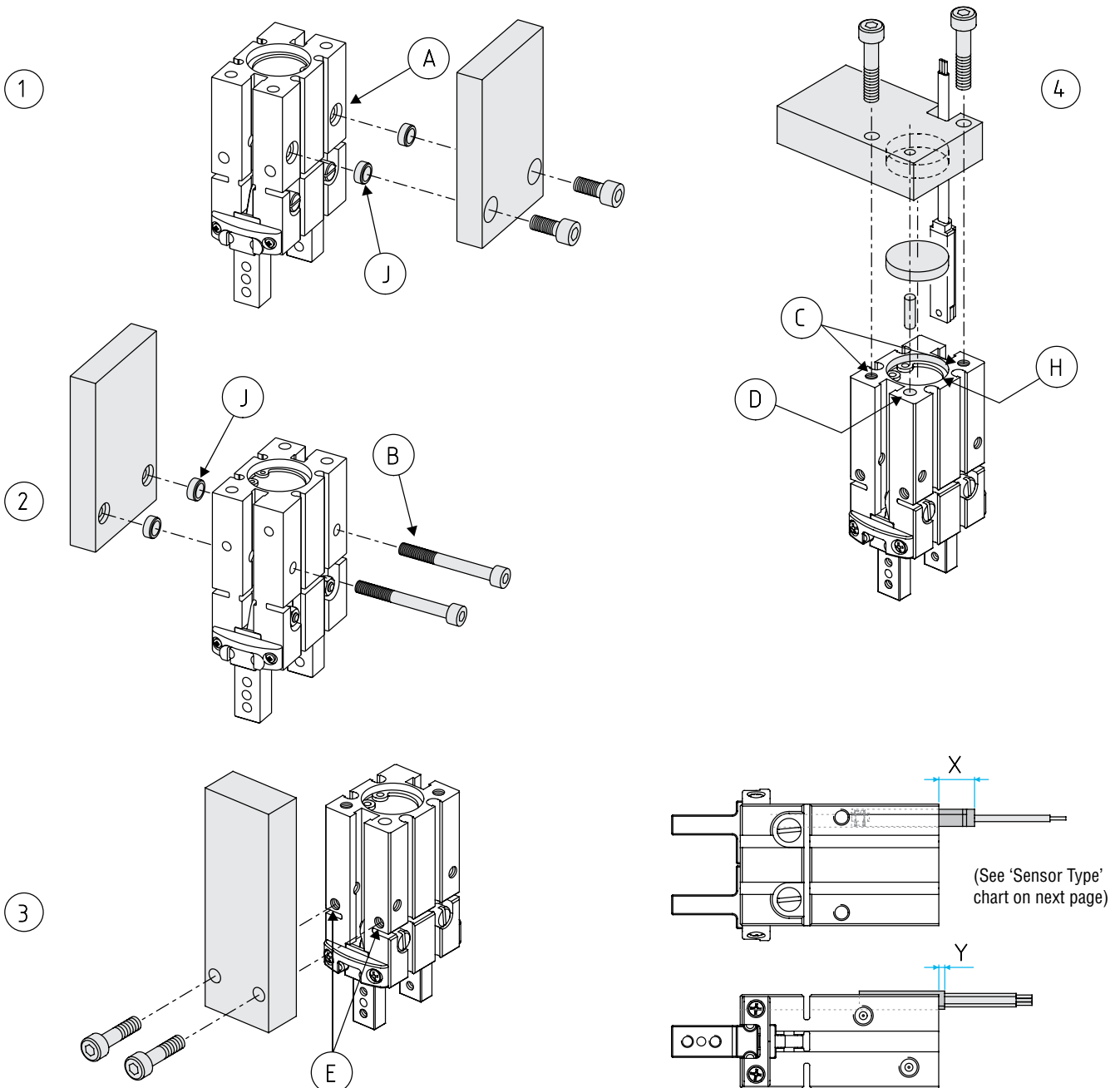
## Parallel Gripper – GS

### 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.

- 1- To fasten the gripper on the wide side, use a plate with two thru-holes and two screws to be screwed on the threaded holes (A) on the gripper housing. Use 2 centering sleeves (J), where available.
- 2- It is possible to fasten the gripper on the wider side also with two screws (B) passing through the threaded holes (A). In this case sensors on the T-slot could be unusable. Use 2 centering sleeves (J), where available.
- 3- To fasten the gripper on the narrow side, two screws passing through the holes on the plate, must be screwed into the threaded holes (E) on the gripper housing.
- 4- The gripper can be fastened on the bottom as well, using two screws passing through the holes on the plate and screwed into the threaded holes (C) on the gripper housing.

For the reference use a pin on the dowel pin hole (D) and centering disc in the spot face (H). In this case the necessary room for sensor must be provided (X and Y).



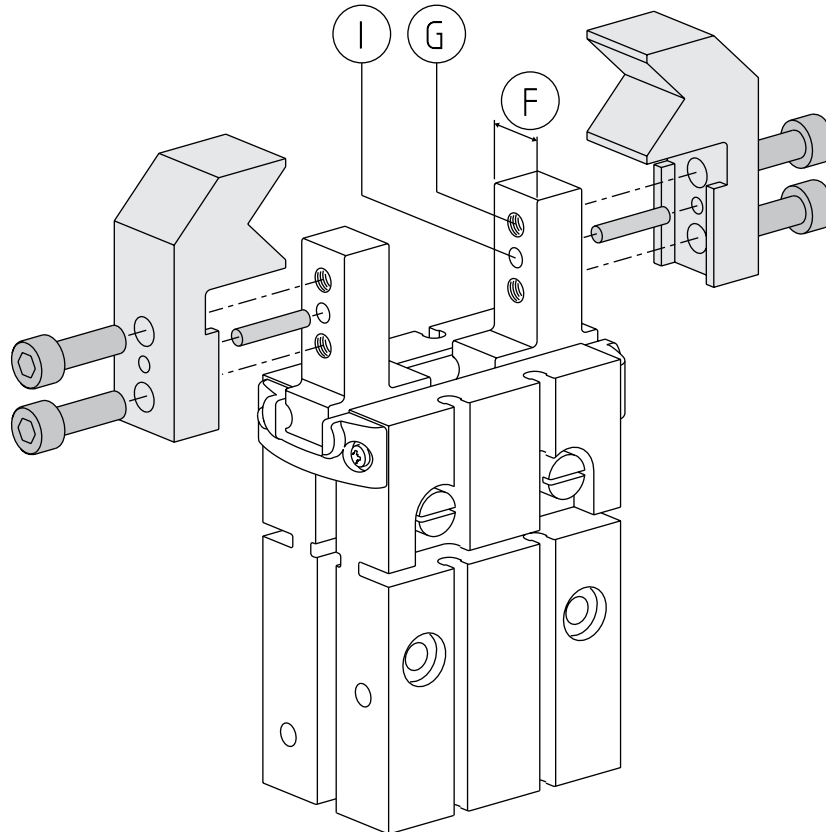
## Parallel Gripper – GS

### Gripper tool fastening

The gripping tools must be as short and light as possible.

They must be fastened by two screws (G).

For a precise positioning on the jaw use the calibrated dimension (F), or the dowel pin holes (I).



	GS-10	GS-16	GS-20	GS-25	GS-32	GS-40
<b>A</b>	M3 x 5.5mm	M4 x 8mm	M5 x 10mm	M6 x 12mm	M6 x 12mm	M8 x 21mm
<b>B</b>	M2.5 x 22mm	M3 x 30mm	M4 x 35mm	M5 x 45mm	M5 x 50mm	M6 x 60mm
<b>C</b>	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm	M6 x 12mm	M8 x 17mm
<b>D</b>	Ø2H9 x 3mm	Ø3H9 x 3mm	Ø4H9 x 4mm	Ø4H9 x 4mm	Ø5H9 x 5mm	Ø5H9 x 5mm
<b>E</b>	M3 x 6mm	M4 x 4.5mm	M5 x 8mm	M6 x 10mm	M6 x 10mm	M8 x 21mm
<b>F</b>	5 <sup>-0.05</sup> mm	8 <sup>-0.05</sup> mm	10 <sup>-0.05</sup> mm	12 <sup>-0.05</sup> mm	12 <sup>-0.05</sup> mm	18 <sup>-0.05</sup> mm
<b>G</b>	M2.5 x 4mm	M3 x 5mm	M4 x 8mm	M5 x 10mm	M6 x 12mm	M8 x 18mm
<b>H</b>	Ø11H9 x 2mm	Ø17H9 x 2mm	Ø21H9 x 3mm	Ø26H9 x 3.5mm	Ø34H9 x 4mm	Ø41 <sup>+0.02</sup> / <sub>-0.05</sub> x 3mm
<b>I</b>	Ø1.5H8 x 4mm	Ø2H8 x 5mm	Ø2.5H8 x 8mm	Ø3H8 x 10mm	Ø4H8 x 12mm	Ø5H8 x 14mm
<b>J</b>	2.4mm	2.5mm	3mm	4mm	4mm	5mm

	GS-10	GS-16	GS-20	GS-25	GS-32	GS-40
<b>SC</b>	-	X = 2mm	X = 0mm	X = 0mm	X = 0mm	X = 0mm
<b>SL</b>	X = 10mm + cable	X = 10mm + cable	X = 9mm + cable	X = 7mm + cable	X = 7mm + cable	X = 7mm + cable
<b>SN</b>	-	X = 0 mm	X = 0 mm	X = 0 mm	X = 0mm	X = 0mm
<b>SS</b>	X = 2 mm + cable	X = Y = 3 mm + cable	X = Y = 1 mm + cable	X = Y = 1 mm + cable	cable	cable

Sensor Type

# Parallel Gripper – GS

## Gripping

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

### Reference:

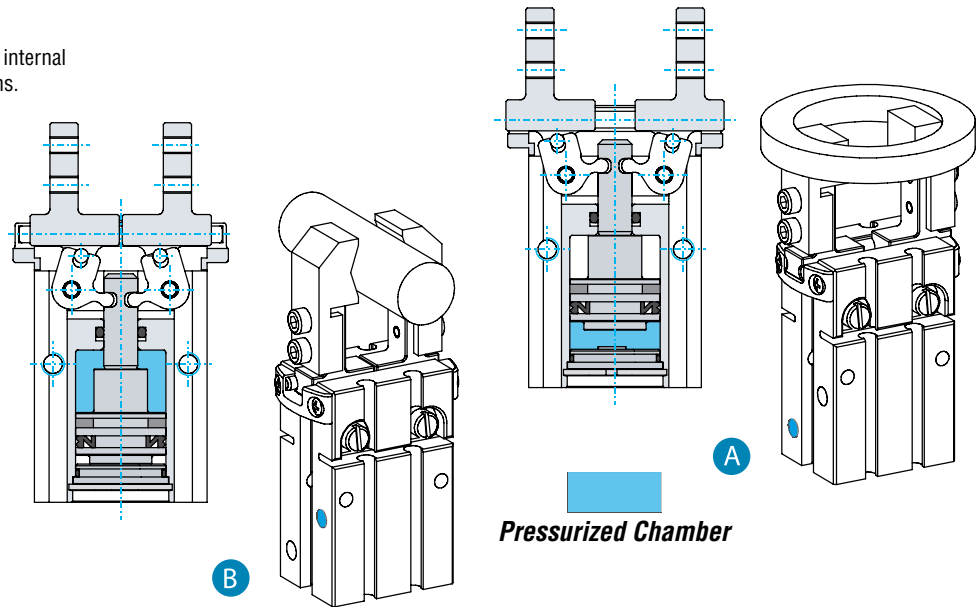
**Force:** N x 0.225 = lbf

**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



## Spring open or Spring close

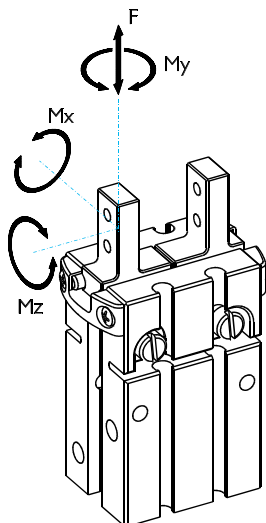
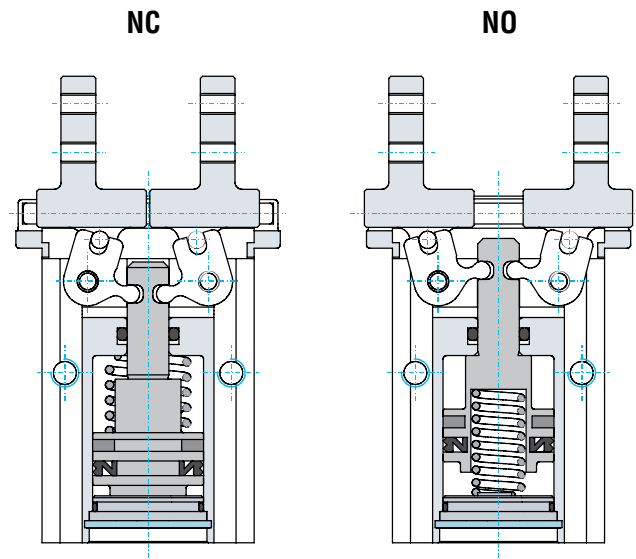
It is also available, on request, with a closing (-NC) or opening (-NO) spring, providing, after a pressure black-out, about one-fourth of the output force at 87psi.

## 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 s, Mx s, My s, Mz s, are maximum permitted static loads. Static means with motionless jaws. F d, Mx d, My d, Mz d, are maximum permitted dynamic loads. Dynamic means with running jaws.

The following tables show the specified maximum loads (m) on each gripping tool as function of closing or opening time. Use flow controllers (not supplied) to get the proper speed.



	GS-10	GS-16	GS-20	GS-25	GS-32	GS-40
<b>F s</b>	25N	50N	75N	125N	200N	300N
<b>Mx s</b>	0.4Nm	1.5Nm	5Nm	8Nm	18Nm	30Nm
<b>My s</b>	0.4Nm	1.5Nm	5Nm	8Nm	12Nm	20Nm
<b>Mz s</b>	0.4Nm	1.5Nm	5Nm	8Nm	18Nm	30Nm
<b>F d</b>	0.4N	0.8N	1.5N	2.5N	3.5N	4.5N
<b>Mx d</b>	0.4Ncm	1.5Ncm	5Ncm	8Ncm	18Ncm	30Ncm
<b>My d</b>	0.4Ncm	1.5Ncm	5Ncm	8Ncm	18Ncm	30Ncm
<b>Mz d</b>	0.4Ncm	1.5Ncm	5Ncm	8Ncm	18Ncm	30Ncm
<b>m 0.2s</b>	40g	80g	150g	250g	350g	450g
<b>m 0.12s</b>	35g	65g	125g	200g	250g	300g
<b>m 0.09s</b>	30g	55g	100g	150g	200g	-
<b>m 0.07s</b>	25g	45g	75g	100g	-	-
<b>m 0.05s</b>	20g	35g	50g	-	-	-
<b>m 0.02s</b>	15g	25g	-	-	-	-
<b>m.0.01s</b>	10g	-	-	-	-	-

# Parallel Gripper – GS

## 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	GS-10	All other GS Grippers	
<b>Gimatic 3-wire Straight SS style magneto-resistive sensors</b>							
1882	SS4N225G	PNP	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
1883	SS4M225G	NPN	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
6282	SS3N203G	PNP	M8 male connector, 0.3m long	\$31.16	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
1884	SS3M203G	NPN	M8 male connector, 0.3m long	\$31.16	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7440	K-SENS	*Allows 'C' channel sensors to work in 'T' channels		\$4.82	(*) Must purchase separately		
<b>Gimatic 90° Lead exit, 3-wire SN style magneto-resistive sensors</b>							
6278	SN4N225G	PNP	with lead, 2.5m long	\$27.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6357	SN4M225G	NPN	with lead, 2.5m long	\$27.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6277	SN3N203G	PNP	M8 male connector, 0.3m long	\$31.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6356	SN3M203G	NPN	M8 male connector, 0.3m long	\$31.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Note: M8 Extension cables Quick#'s 2582 & 2583 available on page 985.							

Quick#	Part#	Signal	Description	Price	GS10	All other GS Grippers	
<b>Gimatic Programmable "PRO" magneto-resistive sensors with 3 output signals for C-Slots</b>							
7521	PRO-SS4N225G	PNP	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7522	PRO-SS4M225G	NPN	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7525	PRO-SS3N215G	PNP	M8 male connector, 0.3m long	\$92.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7625	PRO-SS3M215G	NPN	M8 male connector, 0.3m long	\$92.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7523	PRO-SN4N225G	PNP	with lead, 2.5m long	\$70.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7524	PRO-SN4M225G	NPN	with lead, 2.5m long	\$70.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7526	PRO-SN3N215G	PNP	M8 male connector, 0.3m long	\$92.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7626	PRO-SN3M215G	NPN	M8 male connector, 0.3m long	\$92.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Gimatic Programmable "PRO" magneto-resistive sensors with 2 output signals for C-Slots</b>							
7644	PRO-SSR4N225G	PNP	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7645	PRO-SSR4M225G	NPN	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7646	PRO-SSR3N215G	PNP	M8 male connector, 0.3m long	\$87.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7647	PRO-SSR3M215G	NPN	M8 male connector, 0.3m long	\$87.00	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7440	K-SENS	*Allows 'C' channel sensors to work in 'T' channels		\$4.82	(*) Must purchase separately		

See Sensor Reference Guide on page 1010 for a complete list of sensors for GS Grippers including those that detect midstroke.





## Angular Gripper – GW

- Self-centering
- Double acting
- Long life and reliability, maintenance free.
- Different options for fastening.
- Optional sensors available on page 653.
- Spring closed (-NC) or spring open (-NO) option.
- Finger Blanks available on page 649.



Mounting brackets available on page 628.

The Gimatic GW series piston rod is totally guided for the entire stroke and it can't move from its seat. This feature has been designed to avoid failures on the jaws.



### Double Acting Models

Quick#	6337	6338	6339	6340
Part#	GW-10	GW-16	GW-20	GW-25
Price	\$99.00	\$122.00	\$124.00	\$139.00
Medium	Filtered, lubricated / non-lubricated compressed air			
Pressure range	30–116 psi			
Opening total torque at 87 psi	2 in-lbf	8 in-lbf	16 in-lbf	32 in-lbf
Closing total torque at 87 psi	1.4 in-lbf	6.4 in-lbf	14 in-lbf	28 in-lbf
Stroke ( $\pm 1^\circ$ )	2x20°			
Maximum repeatability tolerance	$\pm 0.04^\circ$			
Weight	39g	88g	180g	300g

### Normally Open Models

Quick#	Part#	Price	Finger Stroke	Wt.
6341	GW-10-NO	\$99.00	40°	39g
6342	GW-16-NO	\$122.00	40°	89g
6343	GW-20-NO	\$124.00	40°	173g
6344	GW-25-NO	\$139.00	40°	304g

### Normally Closed Models

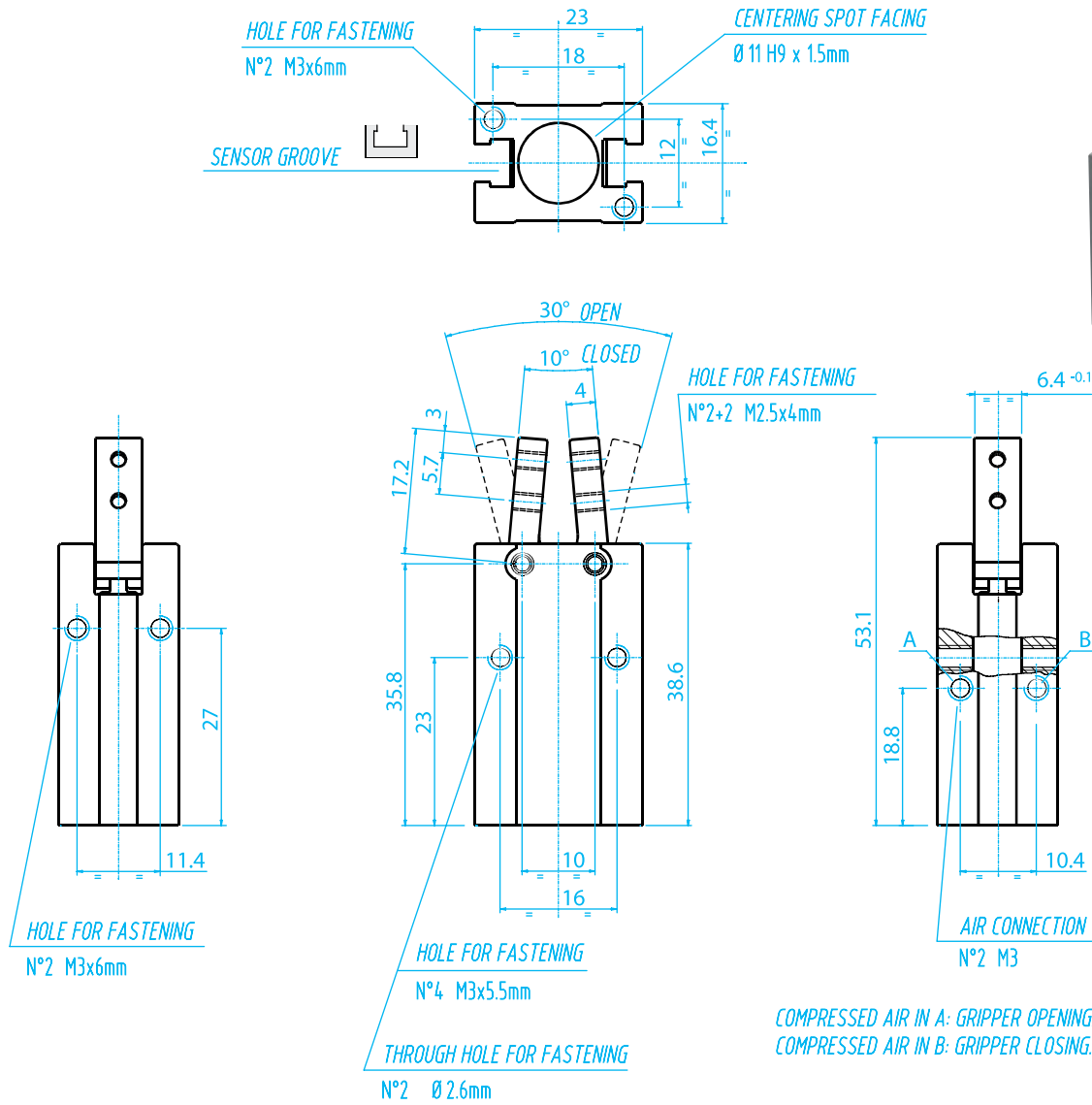
Quick#	Part#	Price	Finger Stroke	Wt.
6345	GW-10-NC	\$99.00	40°	39g
6346	GW-16-NC	\$122.00	40°	89g
6347	GW-20-NC	\$124.00	40°	173g
6348	GW-25-NC	\$139.00	40°	304g

Use Quick#s for easy online ordering.

**Angular Gripper – GW**

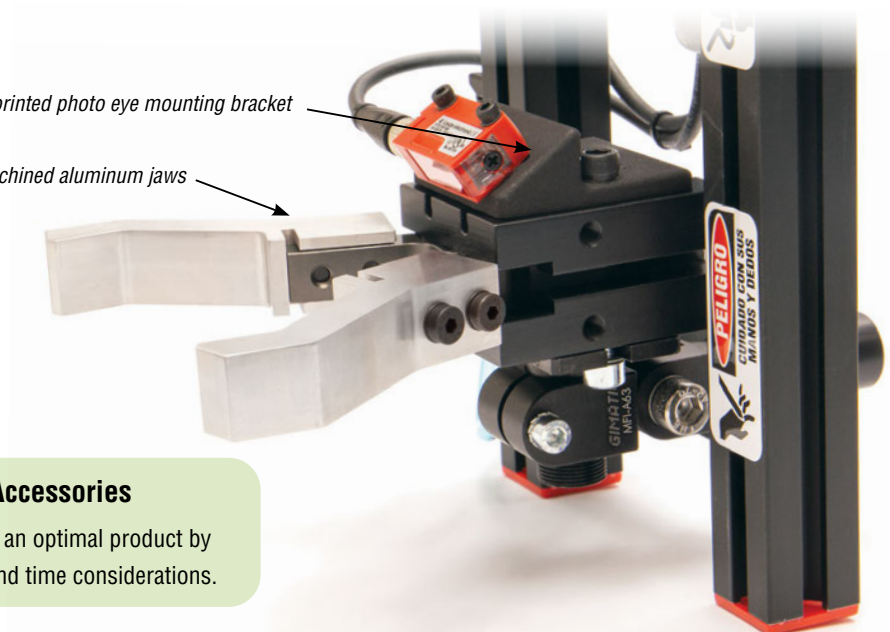
(Dimensioned drawing shown full scale)

**GW-10  
#6337**



EMI 3D printed photo eye mounting bracket

EMI Machined aluminum jaws



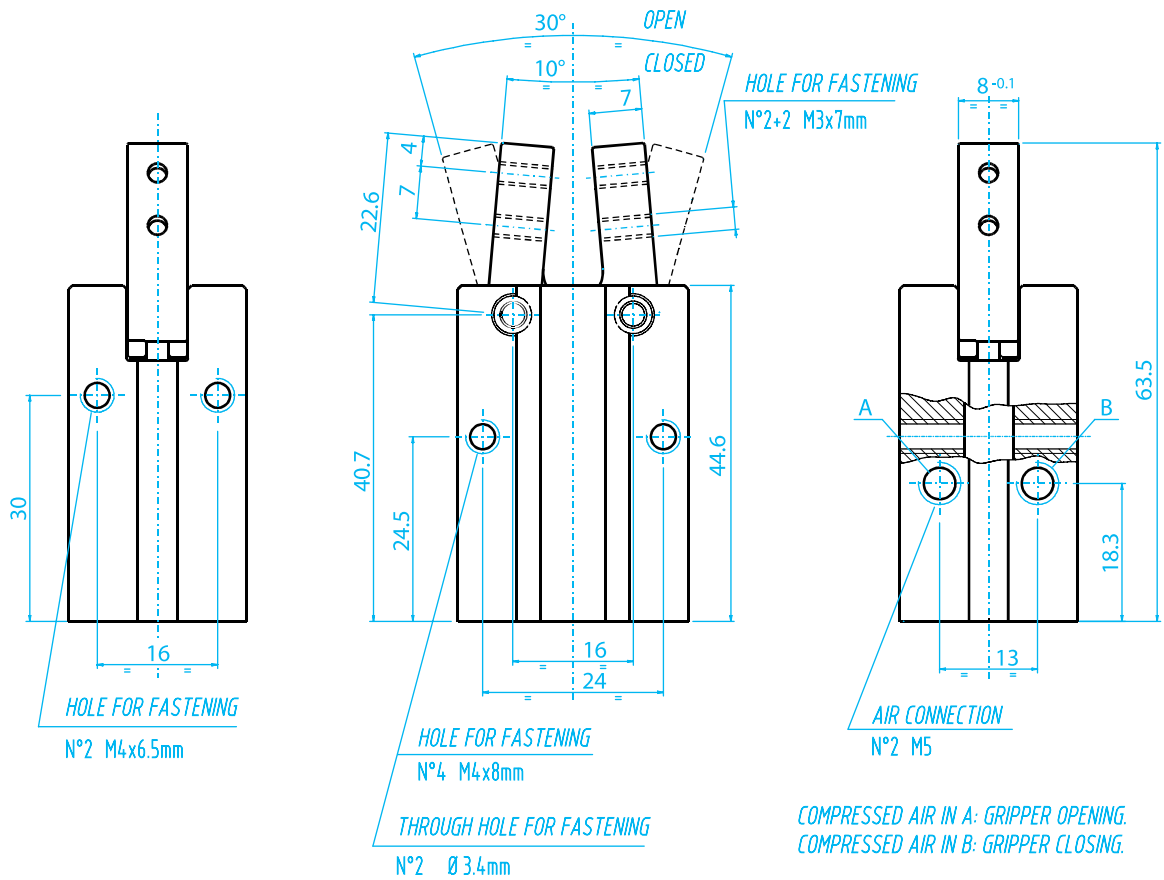
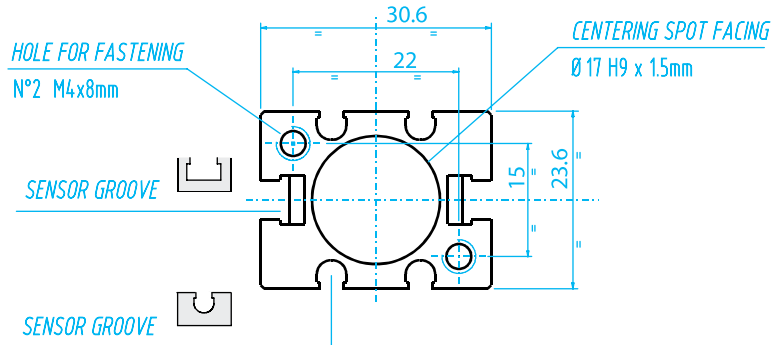
**Custom Machined and 3D Printed Accessories**

EMI engineers will work with you to develop an optimal product by analyzing your project requirements, cost, and time considerations.

# Angular Gripper – GW

(Dimensioned drawing shown full scale)

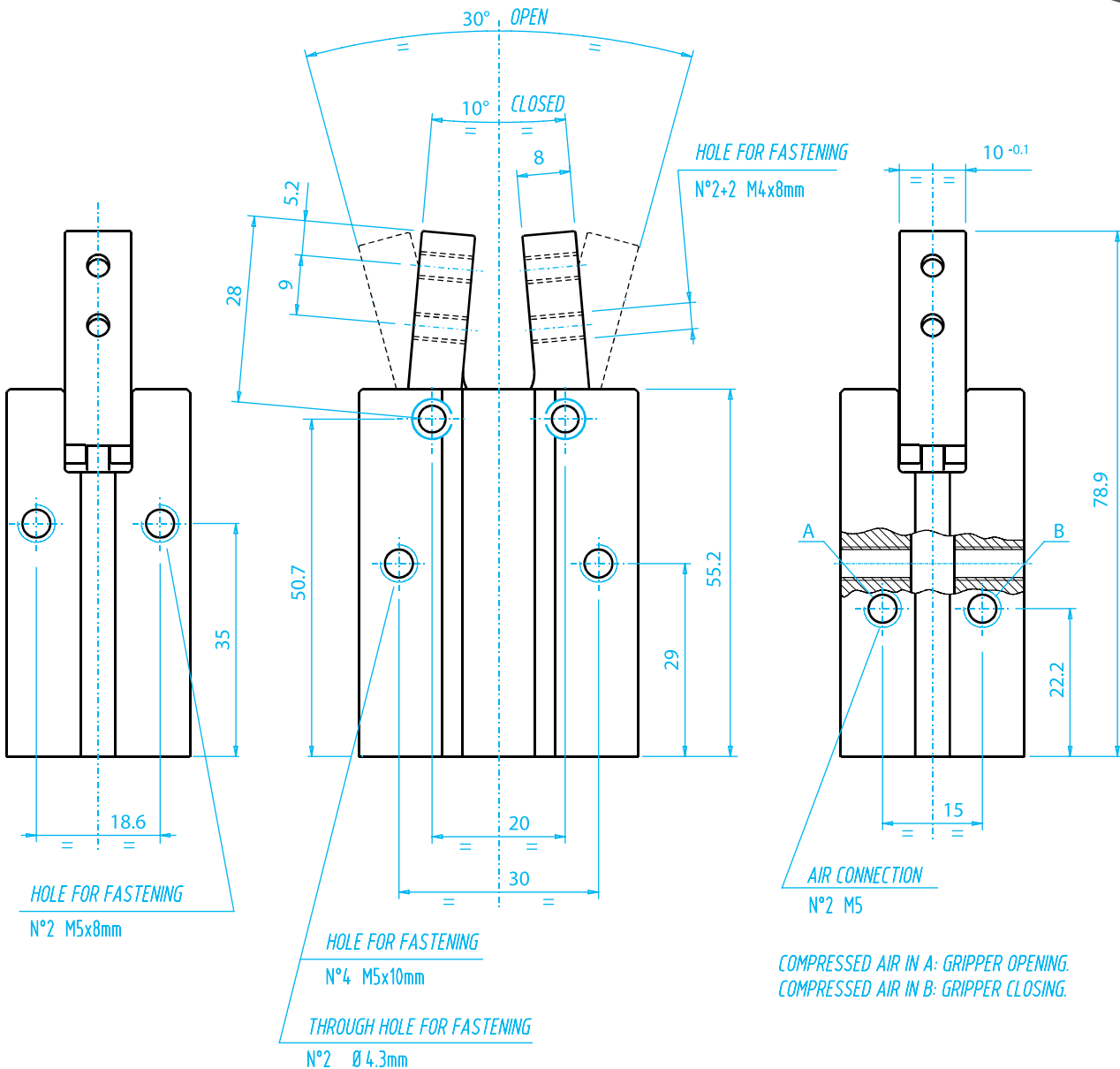
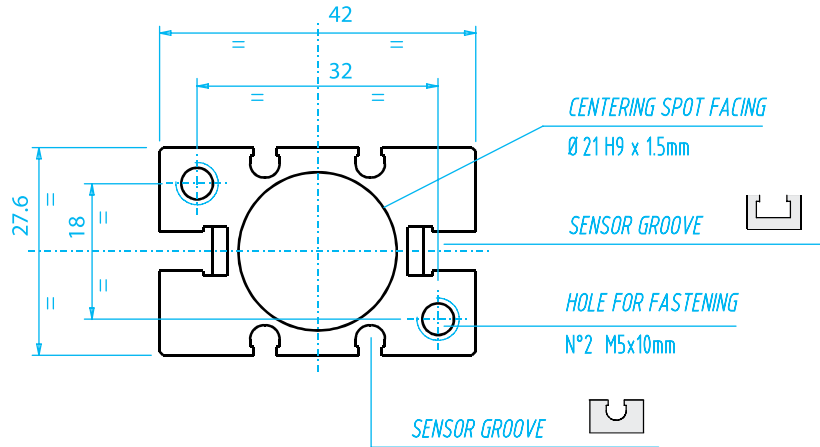
GW-16  
#6338



**Angular Gripper – GW**

**GW-20  
#6339**

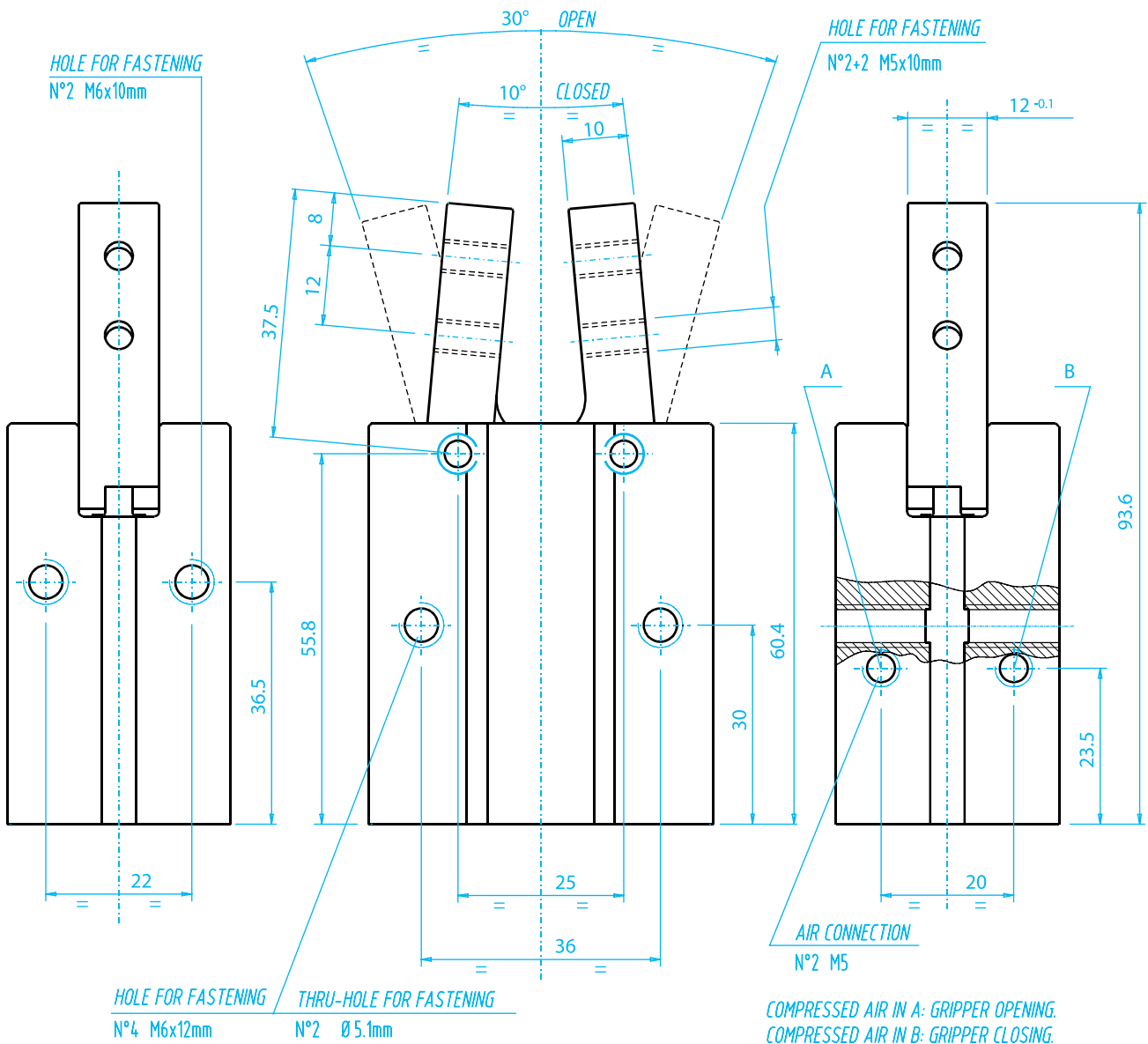
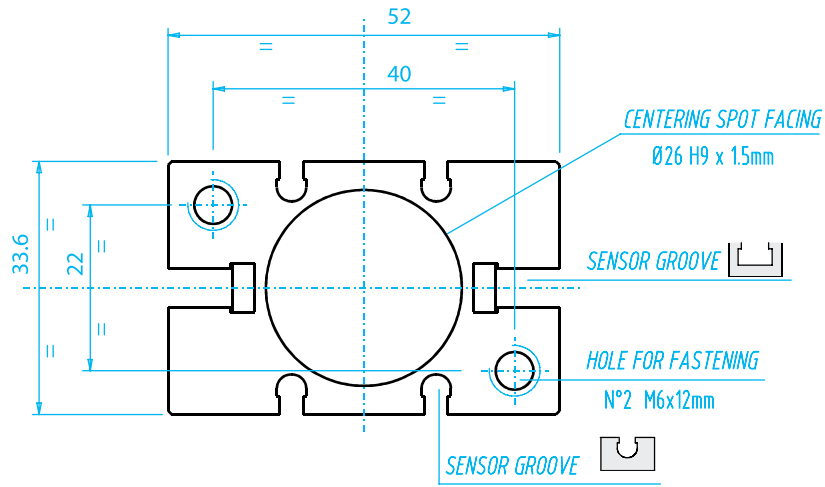
(Dimensioned drawing shown full scale)



# Angular Gripper – GW

(Dimensioned drawing shown full scale)

GW-25  
#6340



## Finger Blanks for GW Grippers

Machine these finger blanks to your part's shape or contact EOAT Engineering for help!

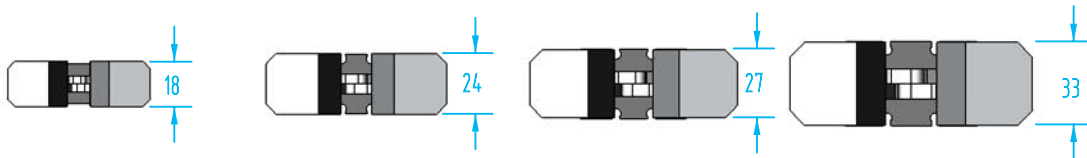
For more information on custom finger blanks for your application visit our 3D printing section on page 102.

Quick#	Part#	Material	For:	Wt. (g)	Price
5892	GW-10-FBA	Aluminum	GW-10 & MHC2-10	57	\$25.09
7466	GW-10-FBN	Nylon		3	\$19.30
5894	GW-16-FBA	Aluminum	GW-16 & MHC2-16	117	\$31.00
7467	GW-16-FBN	Nylon		6	\$23.85
5896	GW-20-FBA	Aluminum	GW-20 & MHC2-20	170	\$35.36
7468	GW-20-FBN	Nylon		9	\$27.20
5898	GW-25-FBA	Aluminum	GW-25 & MHC2-25	268	\$38.55
7469	GW-25-FBN	Nylon		14	\$29.65

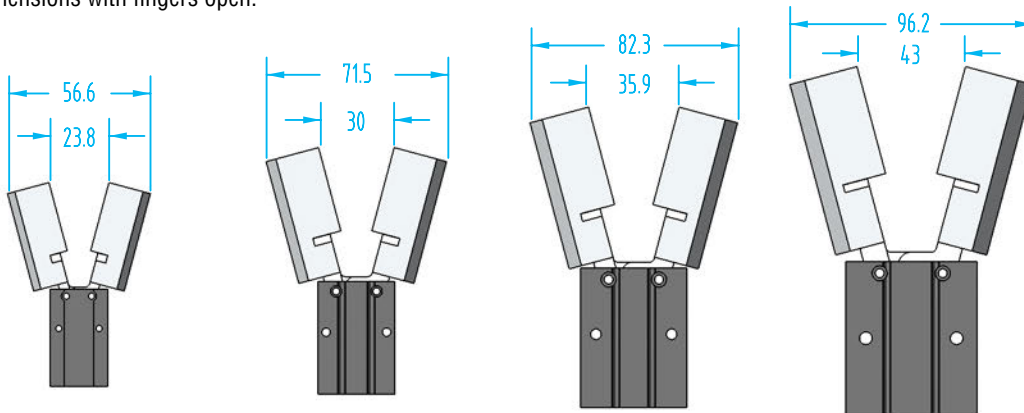
Note: Mounting Hardware Included



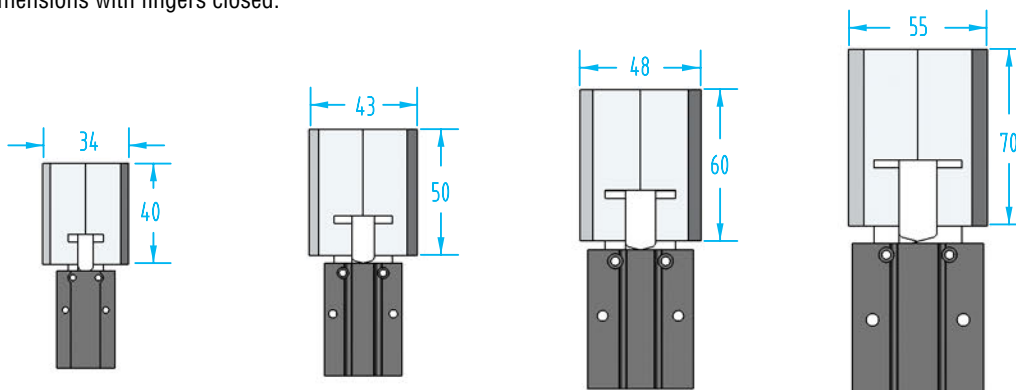
Gripper Fingers shown fully open.



Dimensions with fingers open:



Dimensions with fingers closed:



# Angular Gripper – GW

## Gripping force

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

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

### Reference:

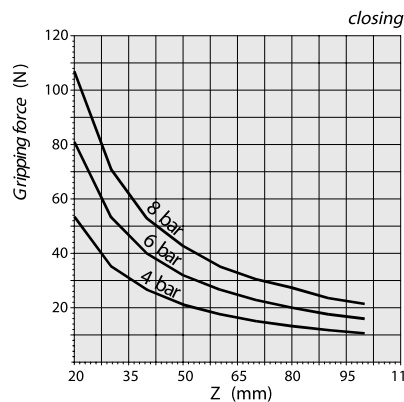
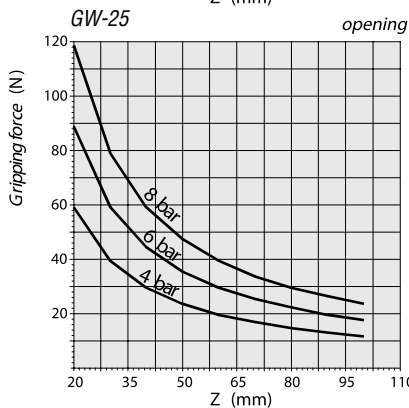
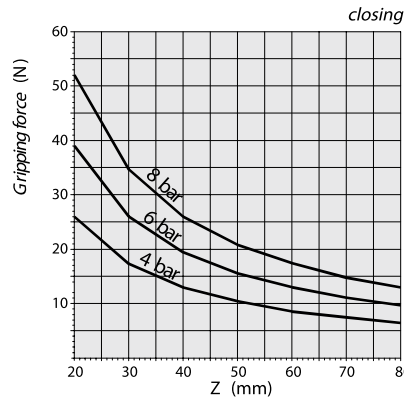
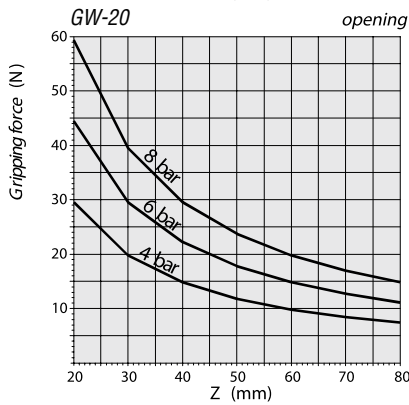
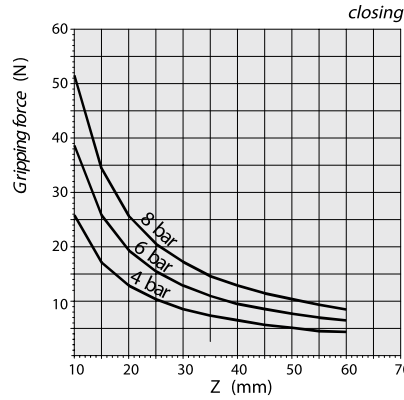
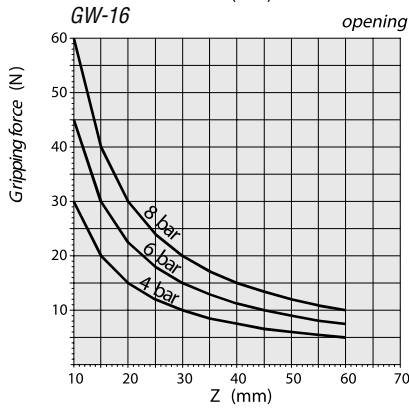
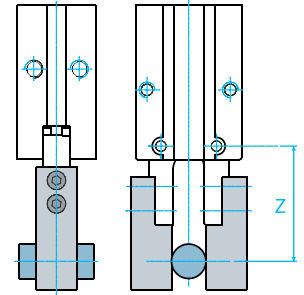
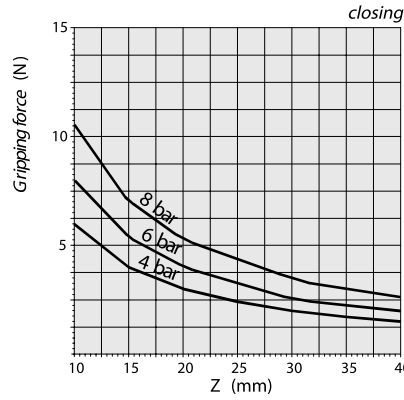
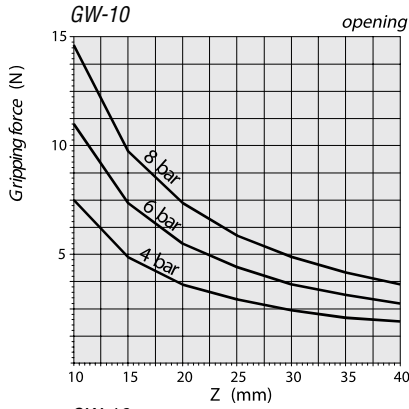
**Force:** N x 0.225 = lbf

**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



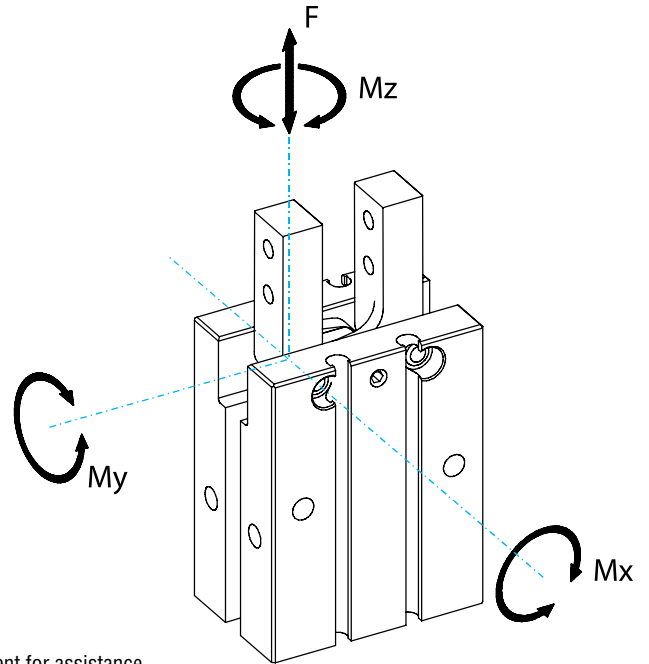
## Angular Gripper – GW

### 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.

	GW-10	GW-16	GW-20	GW-25
<b>F</b>	40 N	60 N	100 N	100 N
<b>Mx</b>	0.4 Nm	1.2 Nm	1.5 Nm	2.2 Nm
<b>My</b>	0.5 Nm	0.9 Nm	2.2 Nm	2.2 Nm
<b>Mz</b>	0.5 Nm	0.9 Nm	2.2 Nm	2.2 Nm

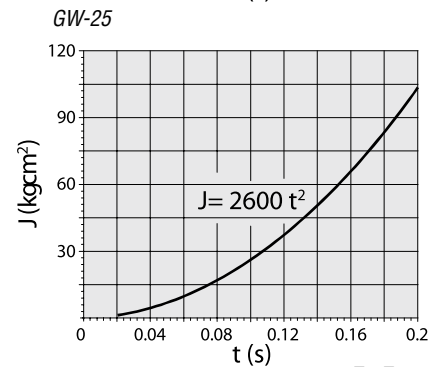
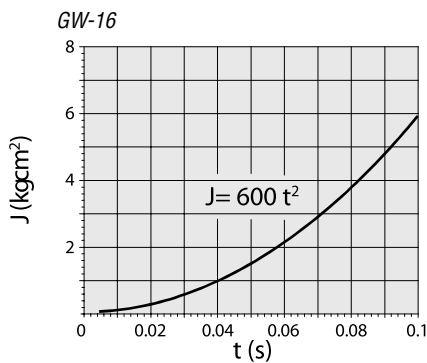
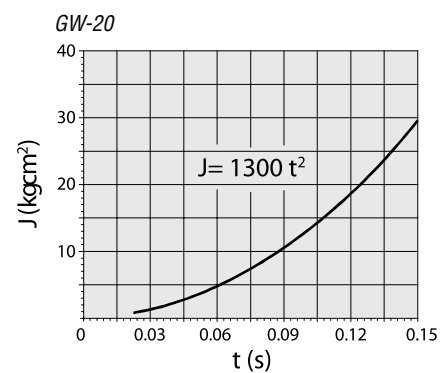
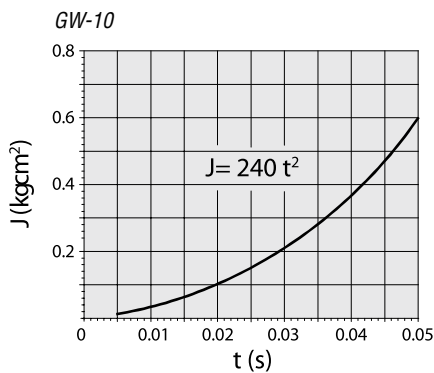


**Reference:**  
**Force:** N x 0.225 = lbf  
**Torque:** Nm x 8.850 = in-lbf  
**Torque:** Ncm x 0.089 = in-lbf  
**Pressure:** bar x 14.5 = psi  
 Call our Engineering Department for assistance

### 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.

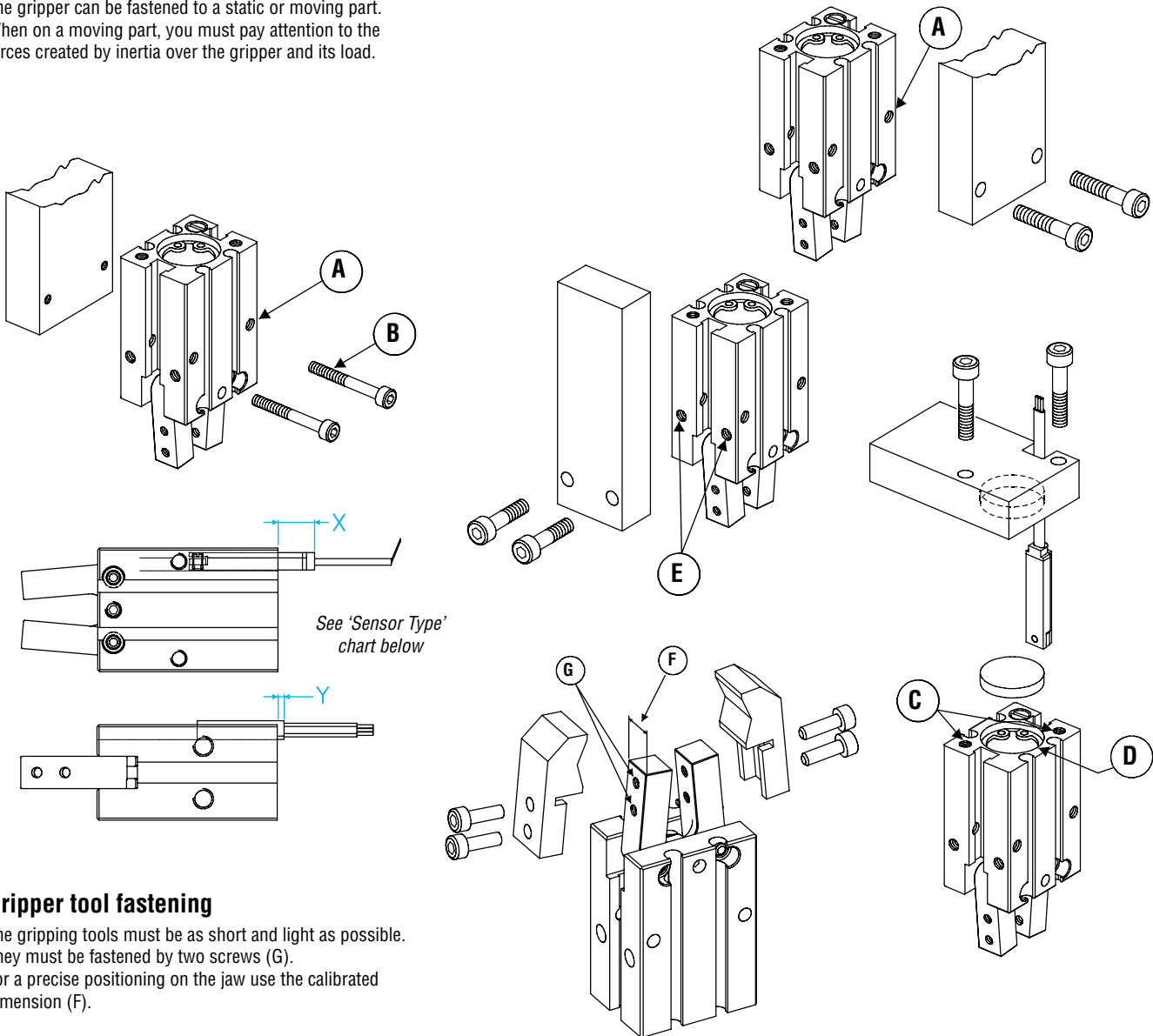




# Angular Gripper – GW

## 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 (G). For a precise positioning on the jaw use the calibrated dimension (F).

	GW-10	GW-16	GW-20	GW-25
<b>A</b>	M3 x 5.5mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
<b>B</b>	M2.5 x 22mm	M3 x 30mm	M4 x 35mm	M5 x 45mm
<b>C</b>	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
<b>D</b>	ø11H9 x 1.5mm	ø17H9 x 1.5mm	ø21H9 x 1.5mm	ø26H9 x 1.5mm
<b>E</b>	M3 x 6mm	M4 x 6.5mm	M5 x 8mm	M6 x 10mm
<b>F</b>	6.4 <sup>-0.1</sup> mm	8 <sup>-0.1</sup> mm	10 <sup>-0.1</sup> mm	12 <sup>-0.1</sup> mm
<b>G</b>	M2.5 x 4mm	M3 x 7mm	M4 x 8mm	M5 x 10mm

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

# Angular Gripper – GW

## Sensors

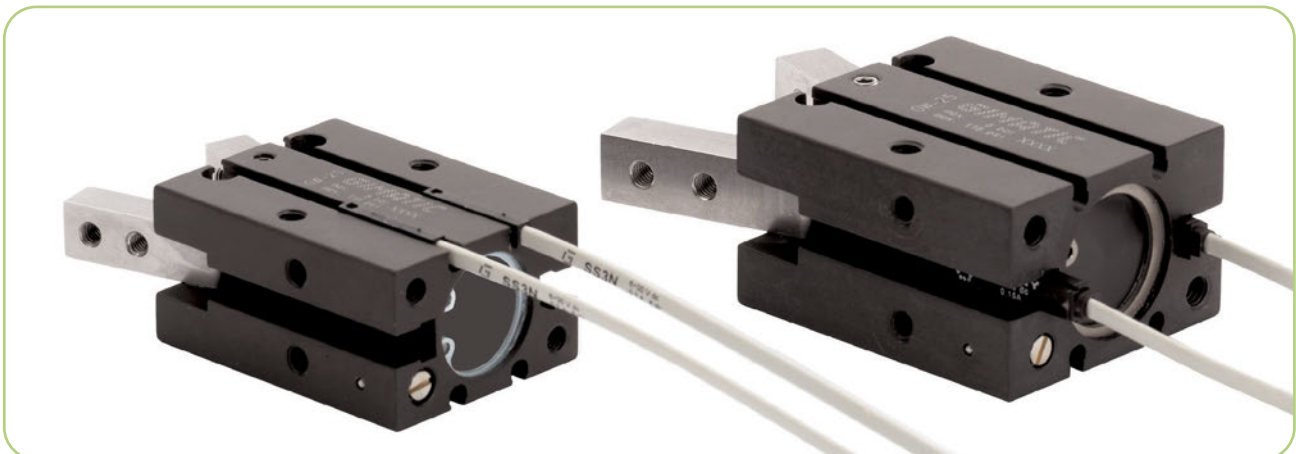
The operating position can be checked by sensors (optional), that detect the magnet on the piston inside. Proximity near a large mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.



Quick#	Part#	Signal	Connection	Price	GW-10	All other GW Grippers	
<b>3-wire SL &amp; SS style magneto-resistive sensors</b>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
792	SL4N225G	PNP	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
793	SL4M225G	NPN	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6274	SL3N203G	PNP	M8 male connector, 0.3m long	\$31.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6456	SL3M203G	NPN	M8 male connector, 0.3m long	\$31.16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1882	SS4N225G	PNP	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
1883	SS4M225G	NPN	with lead, 2.5m long	\$27.20	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
6282	SS3N203G	PNP	M8 male connector, 0.3m long *	\$31.16	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
1884	SS3M203G	NPN	M8 male connector, 0.3m long *	\$31.16	<input checked="" type="checkbox"/> (*)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (*)
7440	K-SENS	*Allows 'C' channel sensors to work in 'T' channel slots		\$4.82	*Must purchase separately		
<b>90° Lead exit, 3-wire SC &amp; SN style magneto-resistive sensors</b>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6273	SC4N225G	PNP	with lead, 2.5m long	\$30.30	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6455	SC3N203G	PNP	M8 male connector, 0.3m long	\$34.62	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6278	SN4N225G	PNP	with lead, 2.5m long	\$27.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6357	SN4M225G	NPN	with lead, 2.5m long	\$27.20	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6277	SN3N203G	PNP	M8 male connector, 0.3m long	\$31.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6356	SN3M203G	NPN	M8 male connector, 0.3m long	\$31.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: M8 Extension cables Quick#s 2582 & 2583 available on page 985.

See Sensor Reference Guide on page 1010 for a complete list of sensors for GW Grippers.



## Compact Parallel Gripper – SGP-S

- Self-centering.
- Double acting.
- High performance in a compact size.
- Patented backlash adjusting system.
- The rugged construction lends itself to heavy-duty applications for a trouble-free long life without maintenance.
- Mounting Brackets available on page 660.
- Finger Blanks available on page 662.
- Sensor ready.

**New Sizes, Check EMI's Website for Info!**



Quick#	7693	6780	6781	6782	6783	7694
Part#	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
Price	\$237.00	\$271.00	\$271.00	\$307.00	\$320.00	\$336.00
Medium	Filtered, lubricated / non-lubricated compressed air					
Pressure range	36–116 psi			30–116 psi		
Opening total gripping force at 87 psi	7.2 lbf	10.4 lbf	23.4 lbf	30.2 lbf	36 lbf	65.2 lbf
Closing total gripping force at 87 psi	6.2 lbf	9 lbf	21.2 lbf	27 lbf	32.8 lbf	56.6 lbf
Total stroke (± 0.3mm)	3mm	4mm	6mm	8mm	12mm	16mm
Maximum repeatability tolerance	±0.02mm					
Mid-stroke detection capability	with PRO-SN	Yes, with use of PRO-SN..HSG sensors				
Weight	19g	33g	43g	86g	170g	250g

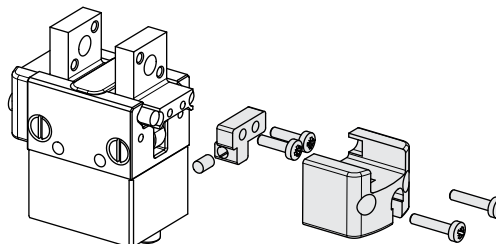
**\*New Sensor Slot Design Changes\* Grippers Now Accept PRO-SN Teachable Sensors**

### Upgrade Earlier Grippers

Old grippers can be upgraded to use new teachable PRO-SN.. sensor.

#### SGP-S Kit to Upgrade

Quick#	Part#	For:	Price
7596	SGP-20S-KU	SGP-20S	\$6.70
7597	SGP-25S-KU	SGP-25S	\$6.70
7598	SGP-32S-KU	SGP-32S	\$6.70
7599	SGP-40S-KU	SGP-40S	\$6.70



## Compact Parallel Gripper – SGP-S

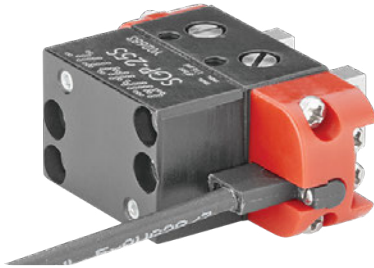
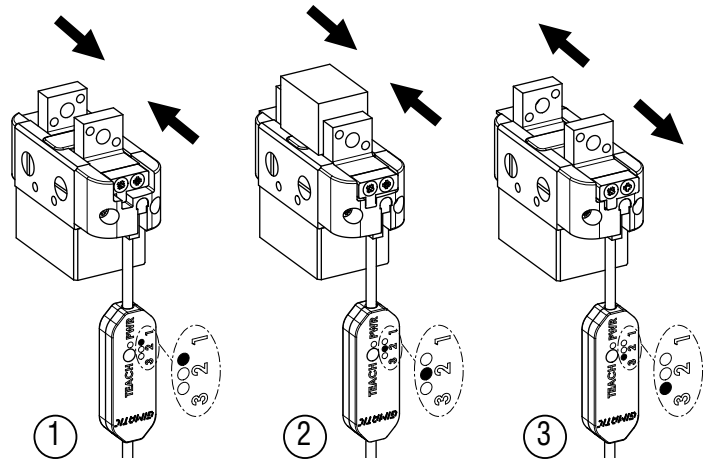
### Sensors

With teachable PRO sensors, the detected positions can be adjusted by a teaching procedure, so that 3 digital outputs can be:

- Output 1 - totally closed gripper [1];
- Output 2 - gripped part intermediate position [2];
- Output 3 - totally open gripper [3].

This achieves accurate three position sensing with one sensor: open, part captured, part missed.

PRO-SN and PRO-SN..HSG teachable sensors are highly accurate and ideal for part confirmation/ mid-stroke detection. See page 978 for more information.



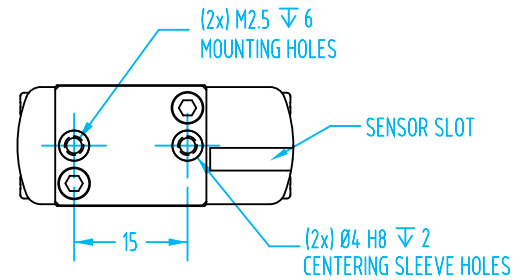
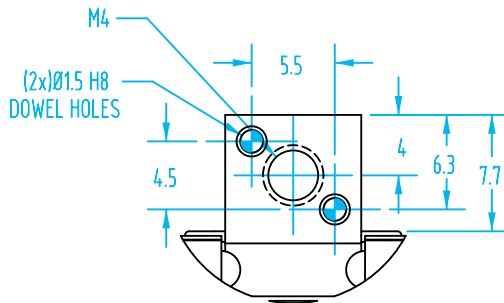
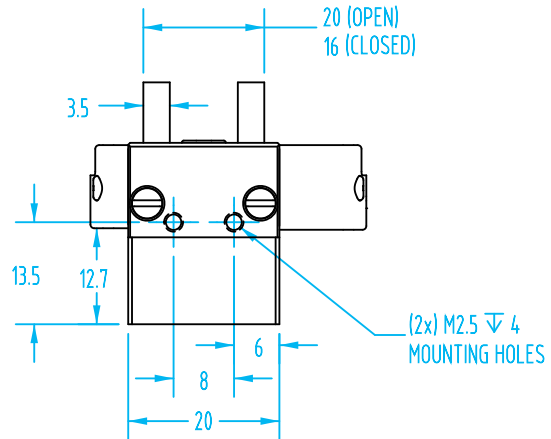
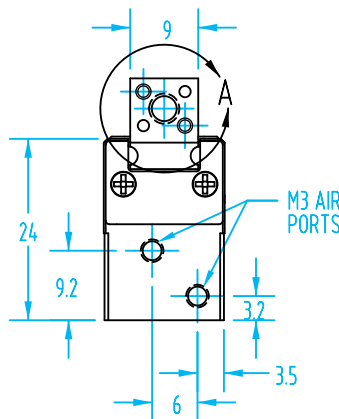
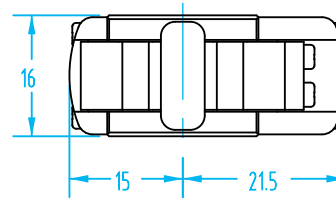
Quick#	Part#	Signal	Description	Price	SGP-16S	All other SGP's
<b>Gimatic Programmable "PRO" magnetoresistive sensors with 3 output signals</b>						
7523	PRO-SN4N225G	PNP	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7524	PRO-SN4M225G	NPN	with lead, 2.5m long	\$70.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7526	PRO-SN3N215G	PNP	with M8 connector, 1.5m long	\$92.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7626	PRO-SN3M215G	NPN	with M8 connector, 1.5m long	\$92.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Gimatic Programmable, "PRO...HSG" magnetoresistive sensors with 3 output signals</b>						
7635	PRO-SN4N225HSG	PNP	with lead, 2.5m long	\$70.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7636	PRO-SN4M225HSG	NPN	with lead, 2.5m long	\$70.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7633	PRO-SN3N215HSG	PNP	with M8 connector, 1.5m long	\$80.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7634	PRO-SN3M215HSG	NPN	with M8 connector, 1.5m long	\$80.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# Compact Parallel Gripper – SGP-S

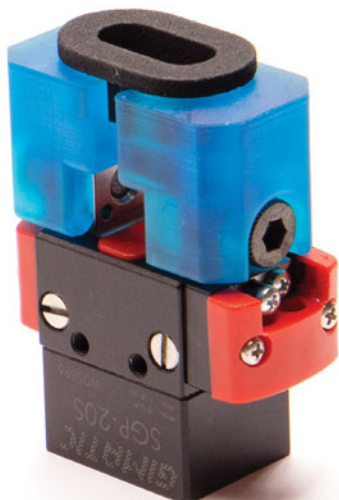
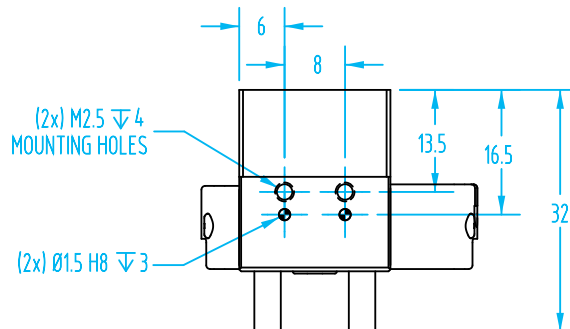
(Dimensioned drawing shown full scale)

**SGP-20S**  
**#6780**

#6780 & #6781 must use  
barb fittings, see page 1070.



DETAIL A  
SCALE 2 : 1



## Custom 3D Printed or Machined Fingers from EMI!

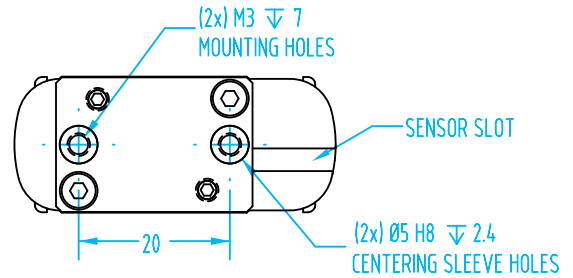
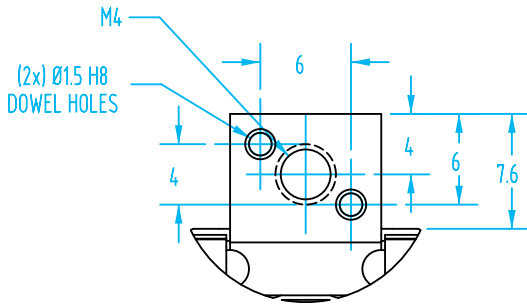
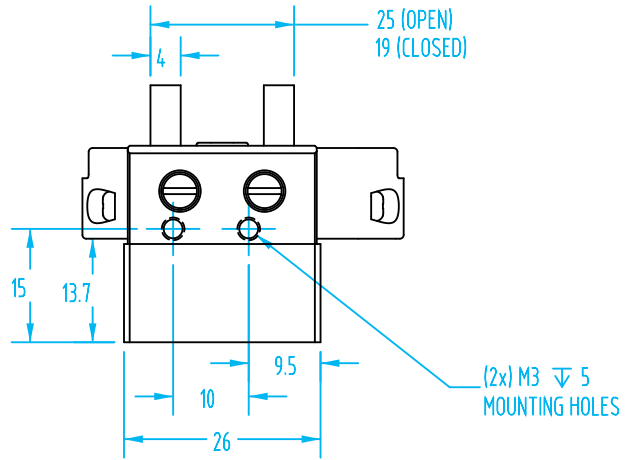
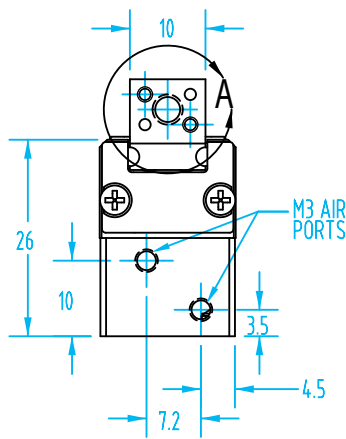
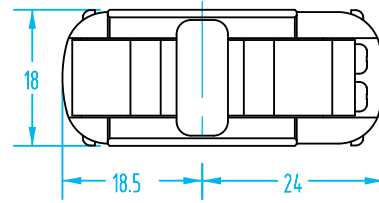
EMI's in-house 3D printing and CNC equipment allow us to provide custom fingers quickly and cost effectively.

**Compact Parallel Gripper – SGP-S**

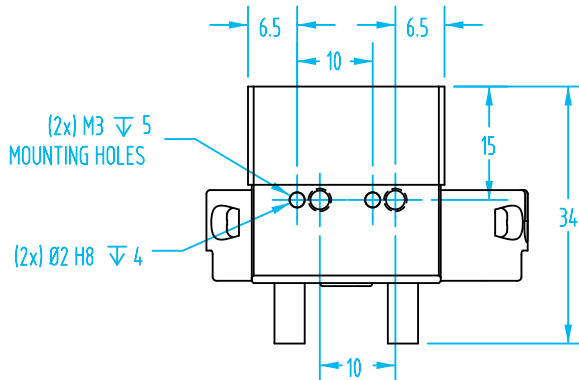
(Dimensioned drawing shown full scale)

**SGP-25S  
#6781**

#6780 & #6781 must use barb fittings, see page 1070.



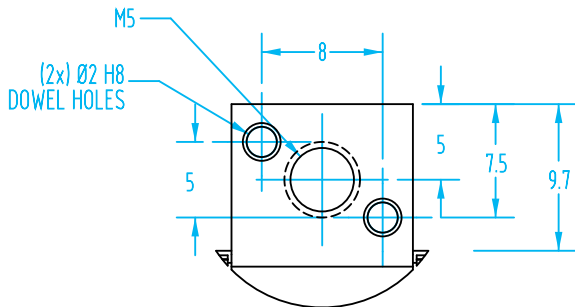
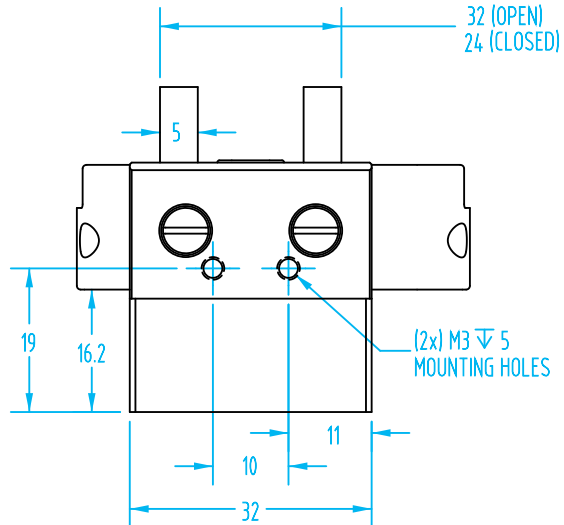
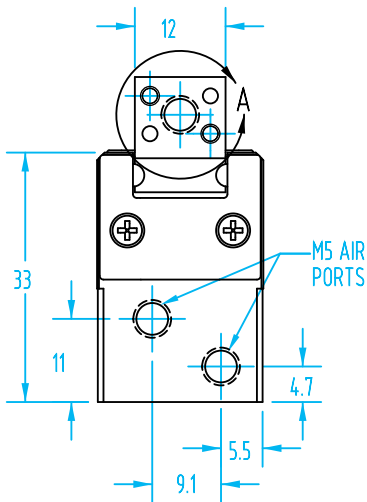
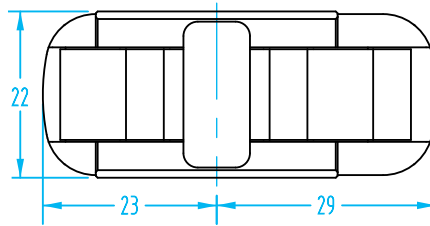
DETAIL A  
SCALE 2 : 1



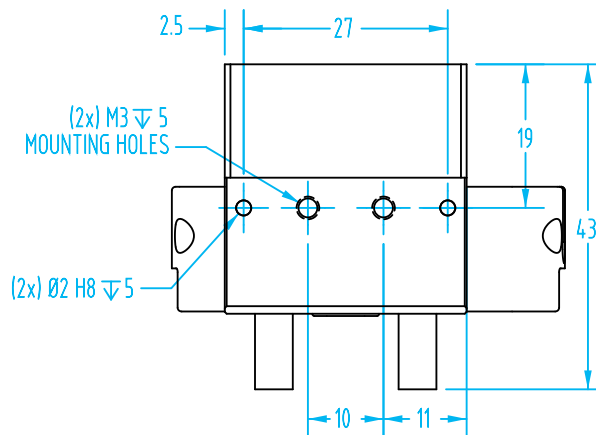
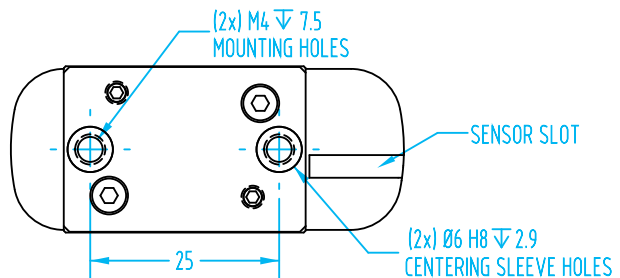
# Compact Parallel Gripper – SGP-S

(Dimensioned drawing shown full scale)

**SGP-32S**  
**#6782**



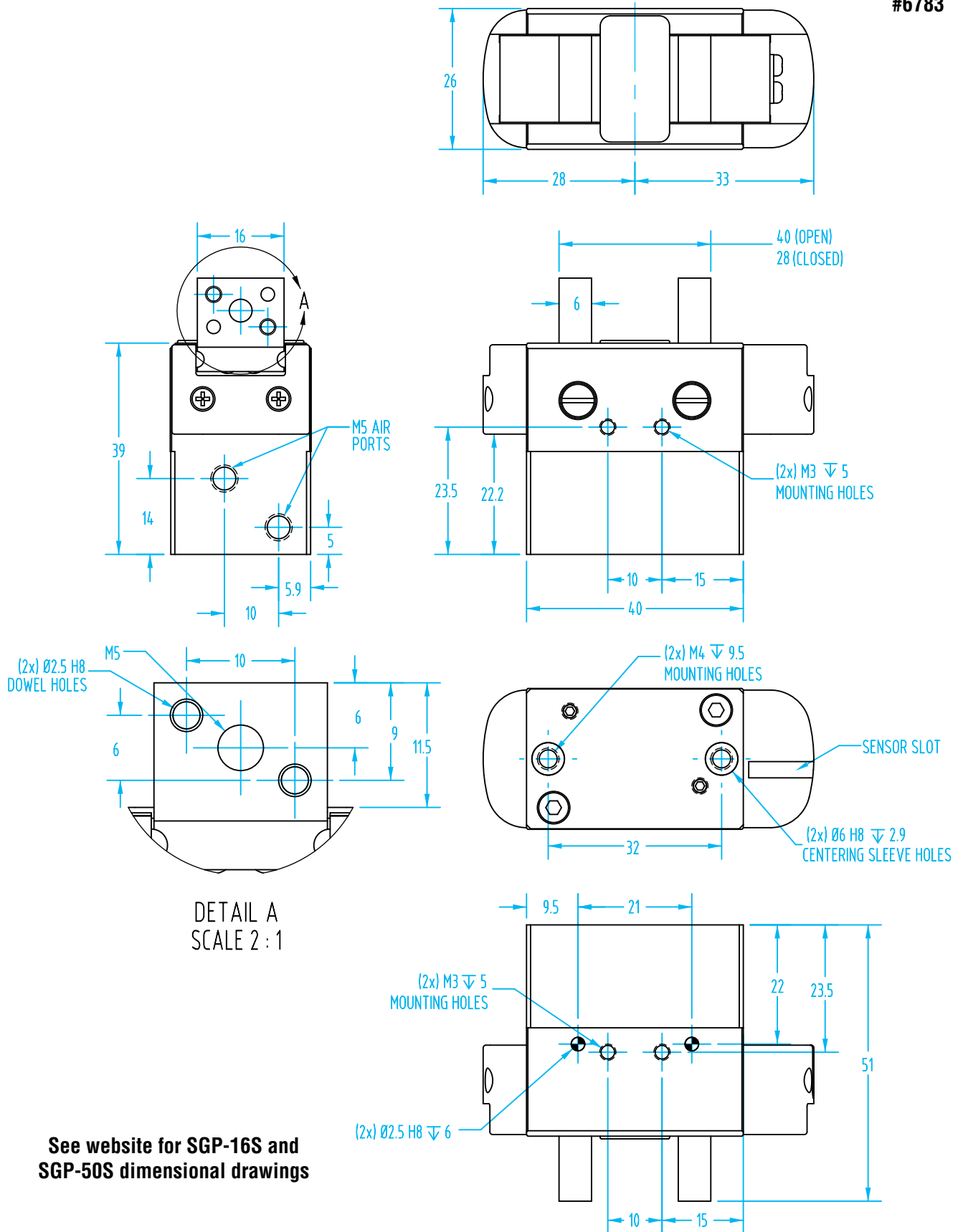
DETAIL A  
SCALE 2 : 1



**Compact Parallel Gripper – SGP-S**

(Dimensioned drawing shown full scale)

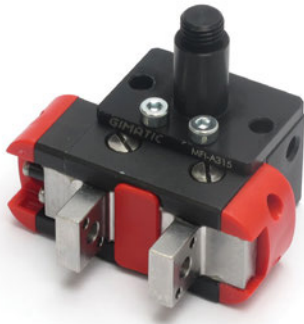
**SGP-40S  
#6783**



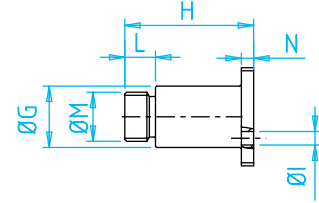
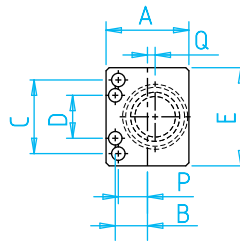
See website for SGP-16S and SGP-50S dimensional drawings



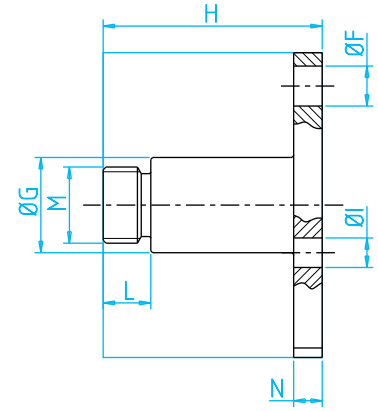
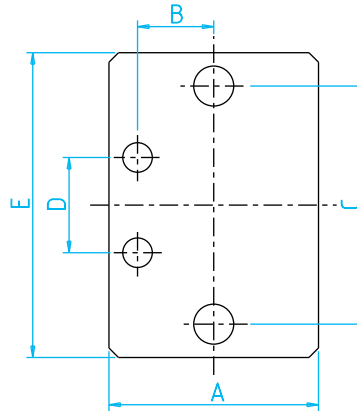
## SGP-S Compact Parallel Gripper Aluminum Mounting Brackets



For Q#7726, MFI-A502:



For all others:



### Mounting Brackets for Compact Grippers

Quick#	Part#	Price	Use with:	Wt.
7726	MFI-A502	\$27.92	SGP-16S	4.2
7324	MFI-A317	\$30.78	SGP-20S	7g
7325	MFI-A316	\$25.41	SGP-25S	9g
7326	MFI-A315	\$25.70	SGP-32S	11g
7327	MFI-A314	\$30.50	SGP-40S	25g
7727	MFI-A503	\$33.44	SGP-50S	43.2

Hardware Included.

	A	B	C	D	E	F	G	H	I	L	M	N	P	Q
MFI-A502	13.5	5.25	12	7	16	/	Ø10	21	Ø2.2	5	M8x1	2	4.75	1.25
MFI-A317	16	5.5	15	8	20	Ø2.6	Ø10	21	Ø2.6	5	M8x1	2	/	/
MFI-A316	18	6	20	10	26	Ø3.1	Ø10	22	Ø3.1	5	M8x1	3	/	/
MFI-A315	22	8	25	10	32	Ø4.2	Ø10	23	Ø3.1	5	M8x1	3	/	/
MFI-A314	26.5	10.25	32	10	40	Ø4.1	Ø10	34	Ø3.1	6	M12x1	4	/	/
MFI-A503	30	/	40	/	50	Ø5.2	Ø20	39	/	8	M17x1	4	/	/

Fittings Available  
on page 1047



### Extension Tube

Quick#	Part#	Price	OD	Length	Thread	Wt.
5993	OF10L60	\$7.64	10	60	M8x1	7g
5842	OF14L80	\$7.50	14	80	M12x1	10g

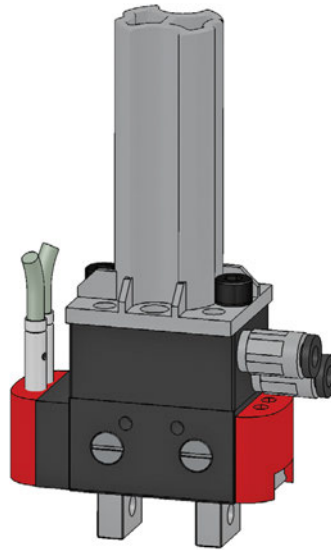
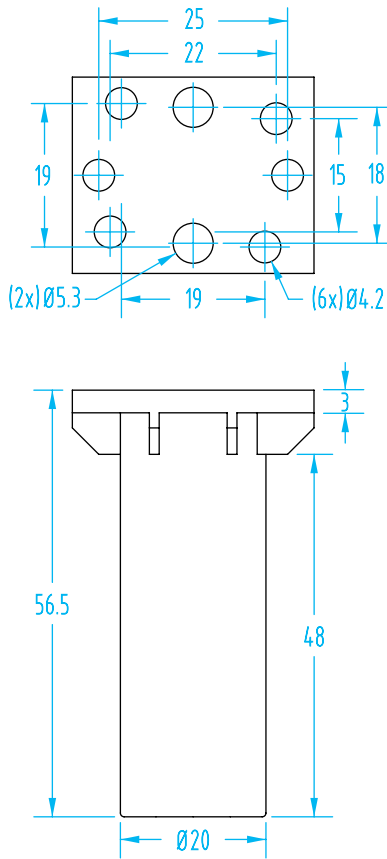


### Extension Tube

Quick#	Part#	Price	OD	Length	Thread	Wt.
3562	VLR10-30	\$8.40	10	30	M8x1	3g
3563	VLR10-60	\$8.40	10	60	M8x1	7g
3531	VLR10-90	\$8.40	10	90	M8x1	11g
3384	VLR14-40	\$8.40	14	40	M12x1	6g
3385	VLR14-80	\$10.50	14	80	M12x1	14g
3386	VLR14-120	\$10.50	14	120	M12x1	23g

### SGP-S Compact Parallel Gripper Composite Mounting Brackets

(Dimensioned drawings shown full scale)

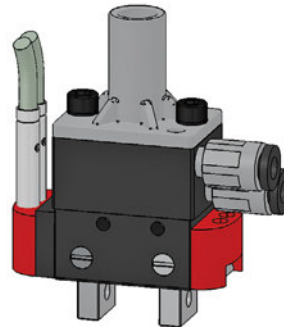
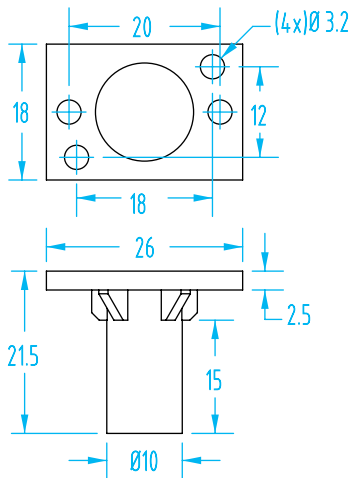


#6375 for use with SGP-32S

**Composite Mounting Brackets for Compact Grippers**

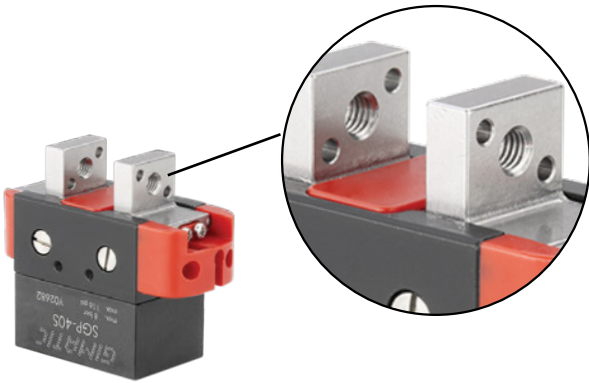
Quick#	Part#	Price	Use with:	Wt.
6375	MFP-A01	\$3.43	SGP-32S	26g
6378	MFP-A04	\$3.02	SGP-25S	5g

*Order fasteners separately, see 1077.*



#6378 for use with SGP-25S

# Compact Parallel Gripper Finger Blanks for SGP-S & PGR-P – NEW STYLE

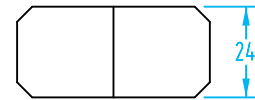
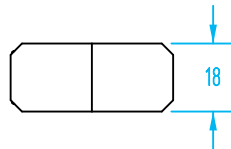
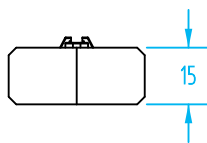


**Finger Blanks on this page are intended to fasten to SGP-S grippers that have a threaded mounting hole on the jaw.**

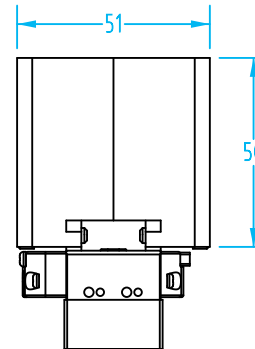
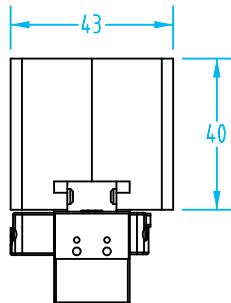
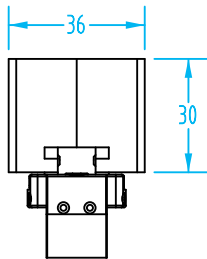
Finger Blanks for SGP-S Grippers

Quick#	Part#	Price	Fits SGP-S	Material	Wt.
7722	SGP-16-FBA2	\$26.02	SGP-16S	Aluminum	40g
7723	SGP-16-FBP2	\$26.02		Nylon	17g
7392	SGP-20-FBA2	\$25.09	SGP-20S & PGR-P20	Aluminum	35g
7393	SGP-20-FBP2	\$19.30		Nylon	19g
7395	SGP-25-FBA2	\$31.00	SGP-25S & PGR-P25	Aluminum	72g
7396	SGP-25-FBP2	\$23.85		Nylon	38g
7397	SGP-32-FBA2	\$35.36	SGP-32S & PGR-P32	Aluminum	117g
7398	SGP-32-FBP2	\$27.20		Nylon	61g
7399	SGP-40-FBA2	\$38.55	SPG-40S & PGR-P40	Aluminum	196g
7400	SGP-40-FBP2	\$29.65		Nylon	102g
7724	SGP-50-FBA2	\$32.29	SGP-50S & PGR-P50	Aluminum	640g
7725	SGP-50-FBP2	\$32.29		Nylon	247g

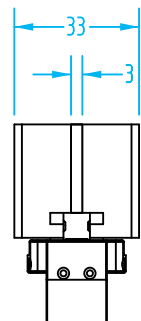
Machine these finger blanks to your part's shape or contact EOAT Engineering for help! For more information on custom finger blanks for your application visit our 3D printing section on page 102.



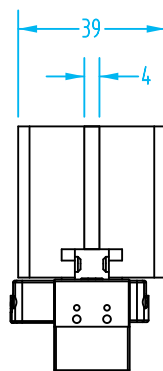
Dimensions with fingers open:



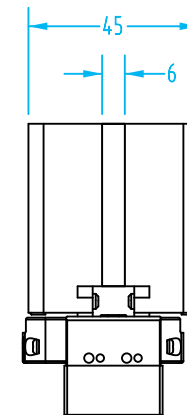
Dimensions with fingers closed:  
(finger blanks are shown overlapped. Cut away material to fit your part)



Size 16



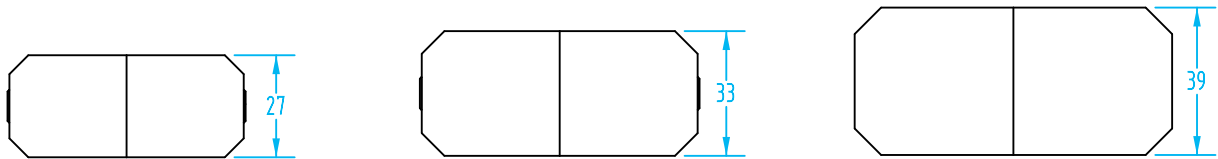
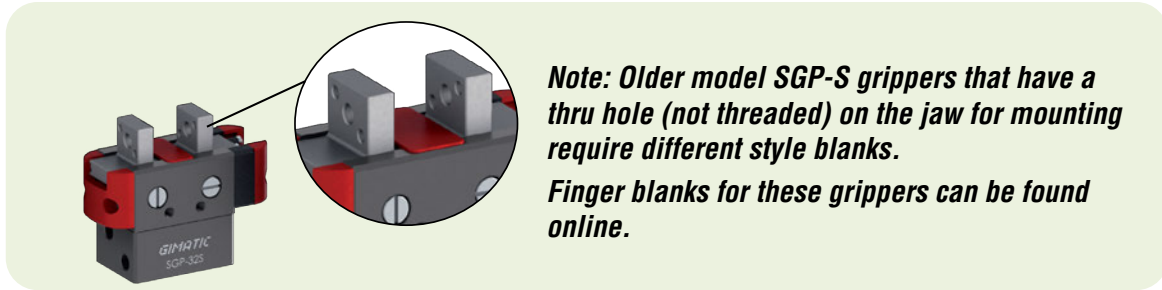
Size 20



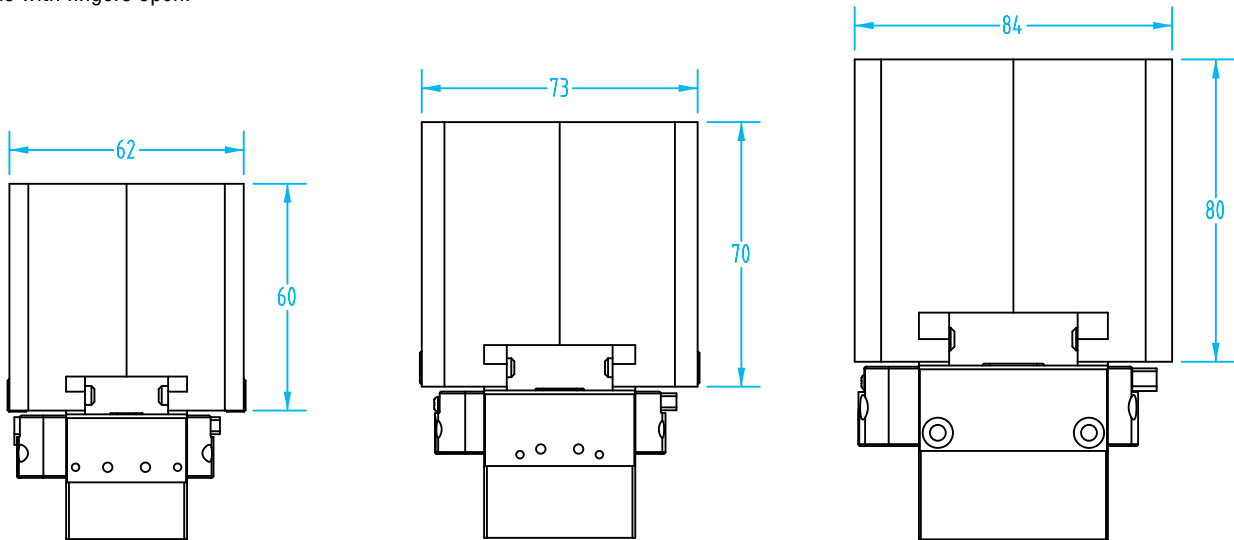
Size 25

## Compact Parallel Gripper Finger Blanks for SGP-S & PGR-P – NEW STYLE

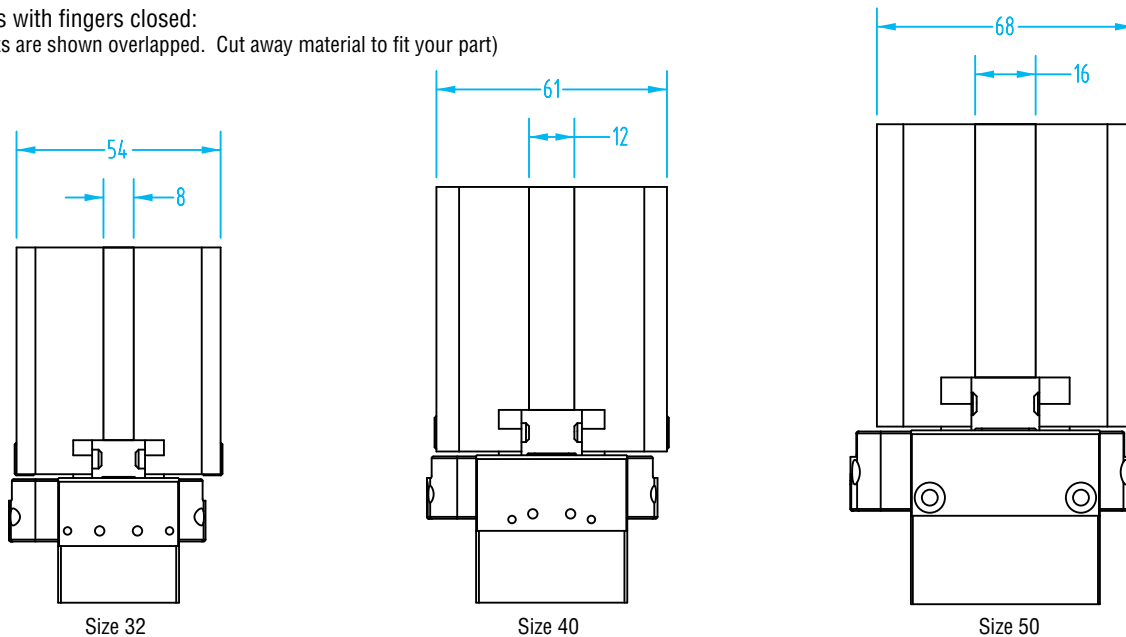
(Dimensioned drawings shown half scale)



Dimensions with fingers open:



Dimensions with fingers closed:  
(finger blanks are shown overlapped. Cut away material to fit your part)



Size 32

Size 40

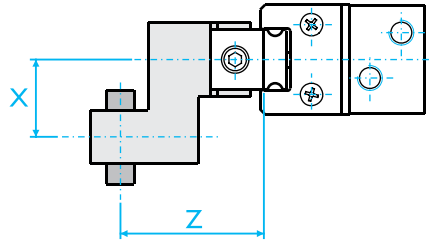
Size 50

# Compact Parallel Gripper – SGP-S

## Gripping force

The graphs show the medium gripping force on each jaw, as a function of the operating pressure, the gripping tool length 'Z' and the overhanging 'X'.

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



**Reference:**

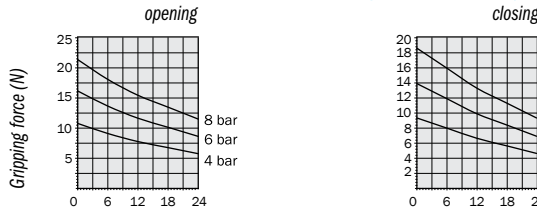
**Force:** N x 0.225 = lbf

**Torque:** Nm x 8.850 = in-lbf

**Torque:** Ncm x 0.089 = in-lbf

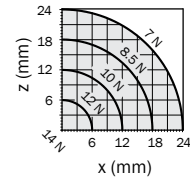
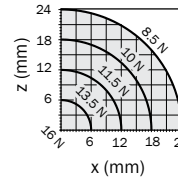
**Pressure:** bar x 14.5 = psi

SGP-16S

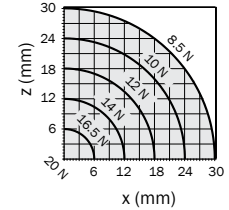
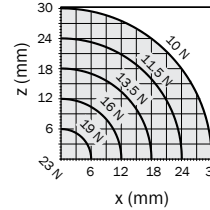
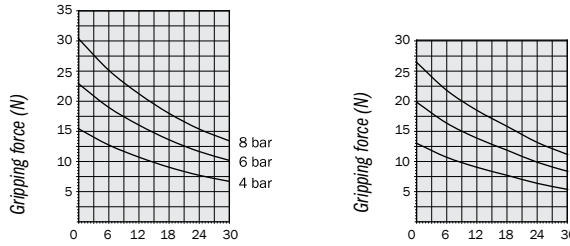


opening (6 bar)

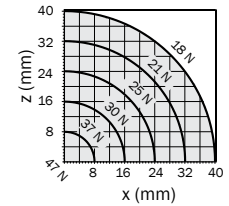
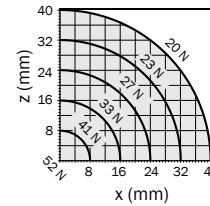
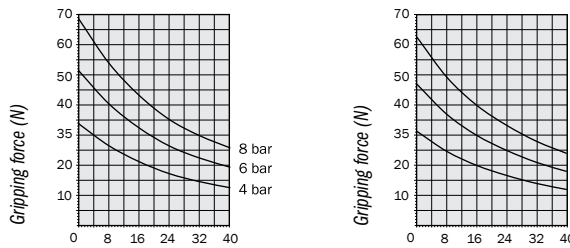
closing (6 bar)



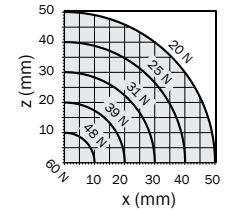
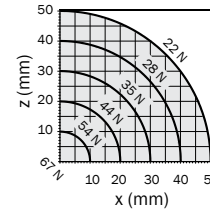
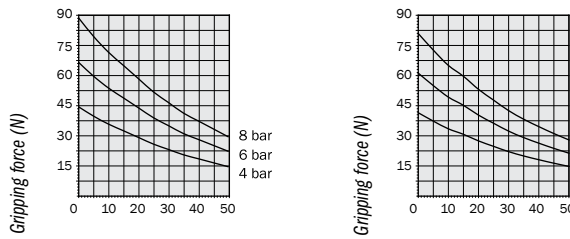
SGP-20S



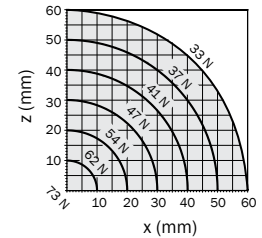
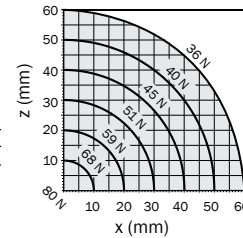
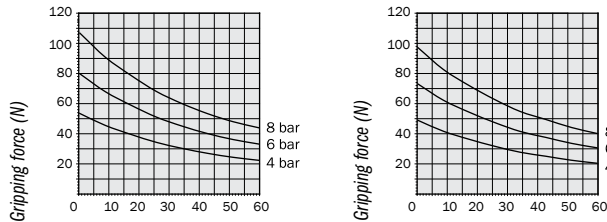
SGP-25S



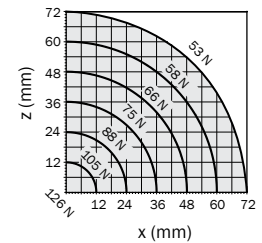
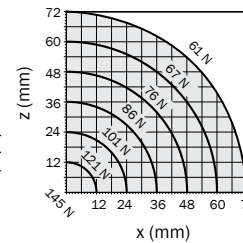
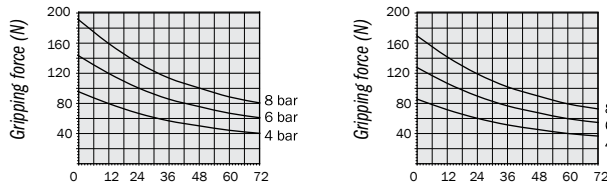
SGP-32S



SGP-40S



SGP-50S

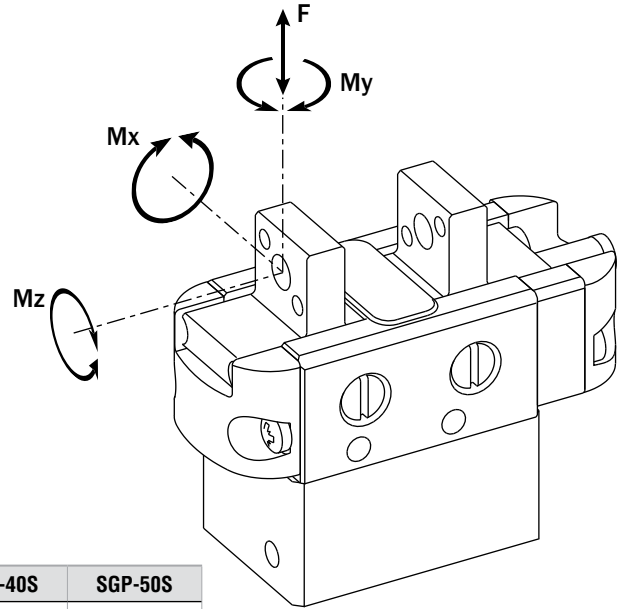


## Compact Parallel Gripper – SGP-S

### 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 s, Mx s, My s, Mz s, are maximum permitted static loads. Static means with motionless jaws.  
 F d, Mx d, My d, Mz d, are maximum permitted dynamic loads. Dynamic means with running jaws.  
 The following tables show the specified maximum loads (m) on each gripping tool as function of closing or opening time. Use flow controllers (not supplied) to get the proper speed.



	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
<b>F s</b>	20 N	30 N	50 N	100 N	160 N	240 N
<b>Mx s</b>	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
<b>My s</b>	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
<b>Mz s</b>	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
<b>F d</b>	0.2 N	0.3 N	0.5 N	1 N	1.6 N	2.4 N
<b>Mx d</b>	0.5 Ncm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
<b>My d</b>	0.5 Ncm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
<b>Mz d</b>	0.5 Ncm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
<b>m 0.2s</b>	20g	30g	50g	100g	160g	240g
<b>m 0.05s</b>	13g	15g	30g	60g	80g	150g
<b>m 0.02s</b>	10g	10g	20g	40g	-	-

**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

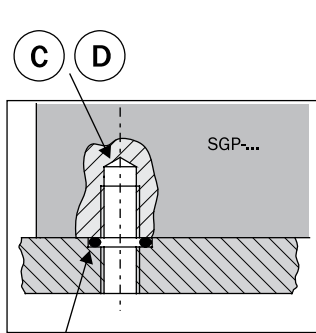
### Compressed air feeding

The compressed air feeding can be accomplished on the lateral air ports (A and B) with fittings and hoses (not supplied). Or it can be accomplished directly through the bottom air ports (C and D) removing the plugs, except SGP-20S.

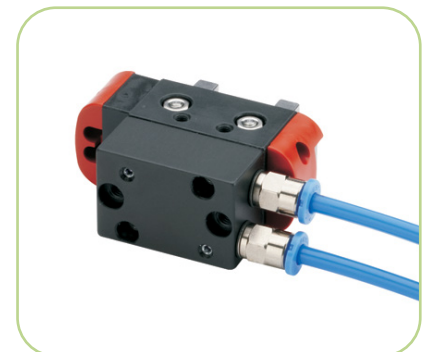
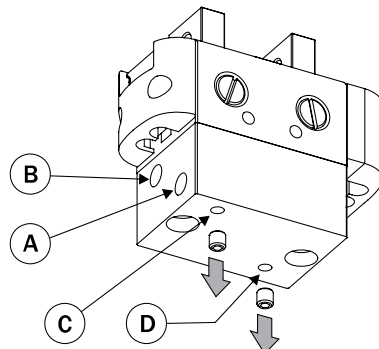
Compressed air in A or C: gripper opening.  
 Compressed air in B or D: gripper closing.

The compressed air, must be filtered from 5 to 40µm. Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper. The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.

Fittings Available on page 1047



O-Ring Ø1x3  
 O-Ring groove Ø5H11x0.65<sup>+0.1</sup>

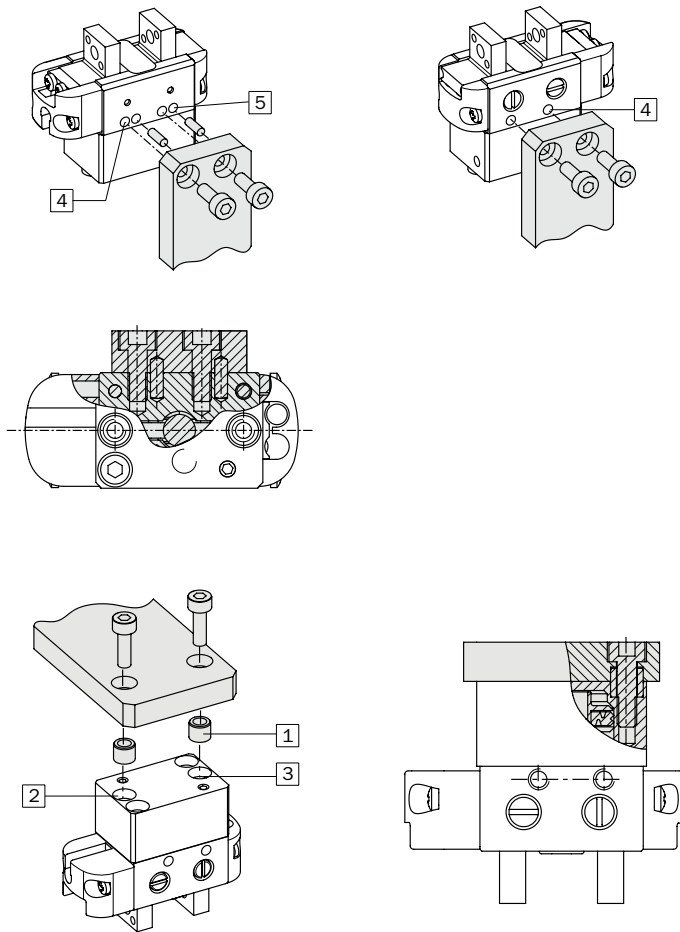


## Compact Parallel Gripper – SGP-S

### Mounting

The gripper can be mounted 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.

1. To fasten the gripper on one side, use a plate with two through holes and two screws to be screwed on the threaded holes (4). They are on both sides of the gripper housing. The dowel pin holes (5) are on one only side.
2. To fasten gripper to base use two screws passing through the holes in the plate and screwed in the threaded holes (2). Use also the two centering sleeves (1) supplied in the packaging, in the calibrated holes (3).



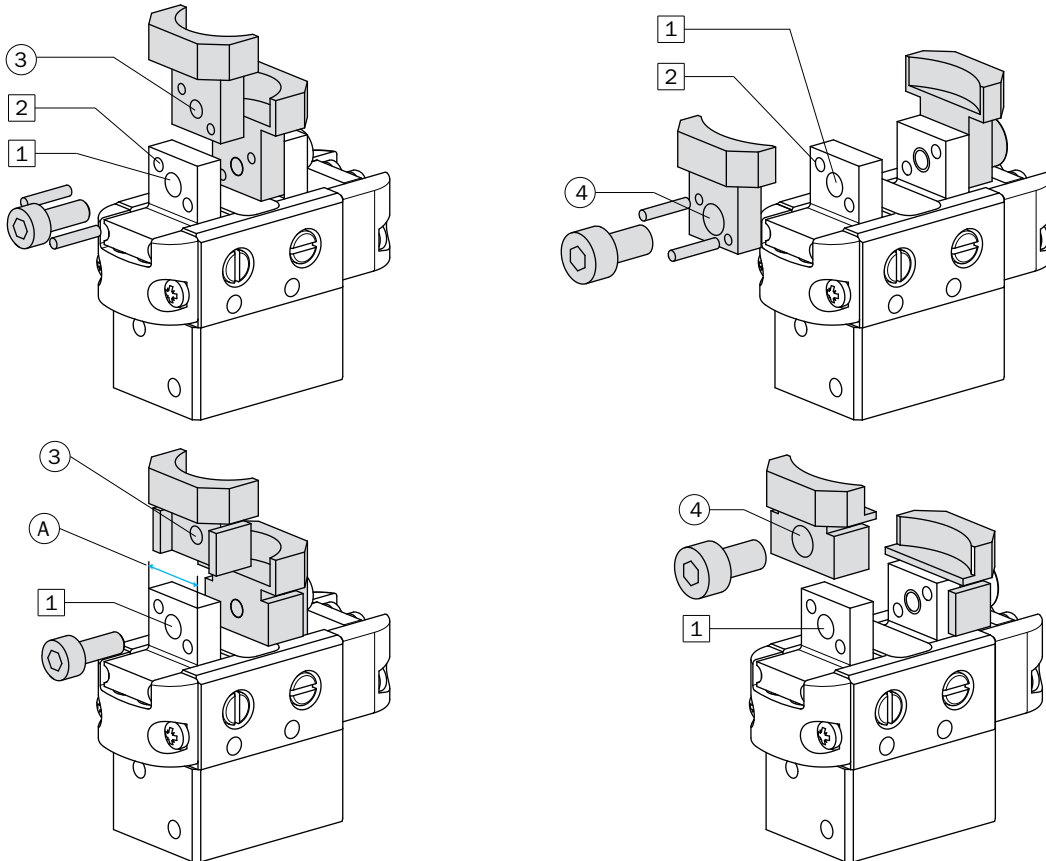
	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
1	Ø4h8 x Ø2 x 3 mm	Ø4h8 x Ø2.6 x 4 mm	Ø5h7 x Ø3.2 x 4.4 mm	Ø6h7 x Ø4.2 x 5.3 mm	Ø6h7 x Ø4.2 x 5.3 mm	Ø8h8 x Ø5.2 x 5.3 mm
2	M2x2.8 mm	M2.5x6 mm	M3x7 mm	M4x7.5 mm	M4x9.5 mm	M5x8 mm
3	Ø3H8 x 1.2 mm	Ø4H8 x 2 mm	Ø5H8 x 2.4 mm	Ø6H8 x 2.9 mm	Ø6H8 x 2.9 mm	Ø8H8 x 2.5 mm
4	M1.6x2.4 mm	M2.5x4 mm	M3x5 mm	M3x5 mm	M3x5 mm	M5x8.4 mm
5	Ø3H8 x 1.5 mm	Ø1.5H8 x 3 mm	Ø2H8 x 4 mm	Ø2H8 x 5 mm	Ø2.5H8 x 6 mm	Ø8H8 x 2.5 mm

## Compact Parallel Gripper – SGP-S

### Jaw Fastening

The gripping tools must be as short and light as possible.

They must be fastened by one screw in the threaded hole (1) to be screwed in the threaded hole (3) on the gripping tool. Or, by a screw passing through (4) and tightened into (1). For a precise positioning on the jaw use the calibrated dimension (A), or the dowel pin holes (2).

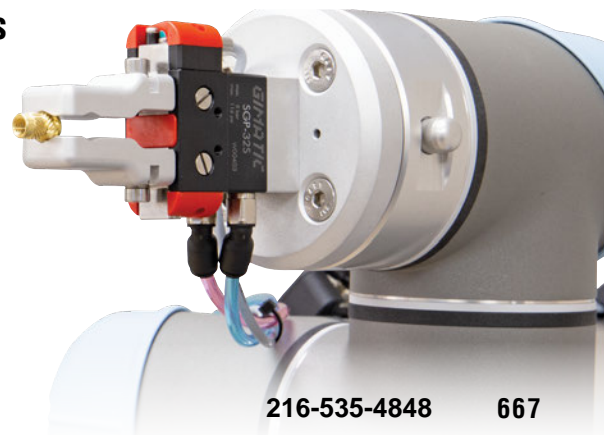


	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
1	M3	M4	M4	M5	M5	M6
2	Ø1.5H8 x 3.5 mm	Ø1.5H8 x 3.5 mm	Ø1.5H8 x 4 mm	Ø2H8 x 5 mm	Ø2.5H8 x 6 mm	Ø3H8 x 8 mm
3	M2	M3	M3	M4	M4	M5
4	Ø3.3 mm	Ø4.3 mm	Ø4.3 mm	Ø5.3 mm	Ø5.3 mm	Ø6.3 mm
A	7.5 mm	9 -0.05 mm	10 -0.05 mm	12 -0.05 mm	16 -0.05 mm	18 -0.05 mm

Note: '1' dimension is now a threaded mounting hole - 2/2018

### EMI Gripper Kit – Two-Jaw SGP32-S for Industrial Cobots

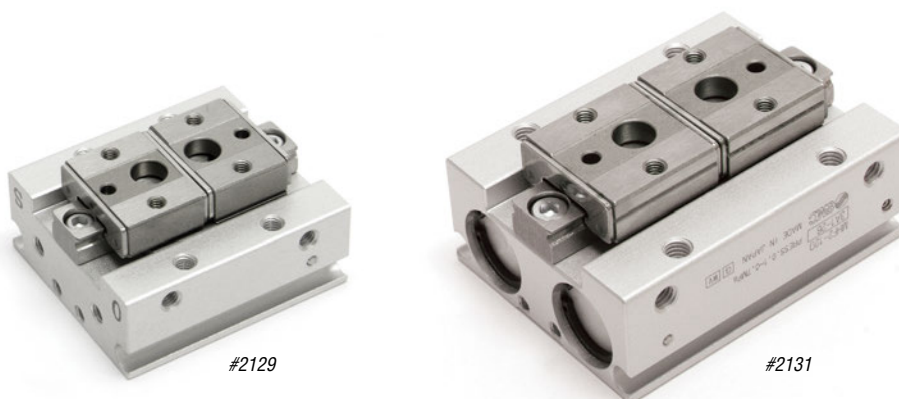
- This versatile kit can be adapted to other SGP Gripper sizes.
- CRK-SGP32S-A Mass: 285g (subject to change per configuration).
- Includes 5/2 solenoid valve and cable management clamps.
- Includes 1 inductive sensor for mid-stroke workpiece detection.
- Includes an interface plate that mounts directly to any robot.
- Includes 0–8mm V-Groove fingers.
- See 150 page for more information.





## Low Profile Parallel Gripper – MHF2

- Double acting.
- Low profile gripper with space-saving design.
- Height is approximately 1/3rd the size of the MHZ2 / GS gripper.
- Double piston construction achieves strong gripping force.
- Many options for fastening and feeding.
- Optional sensors available.
- Additional MHF2 grippers with 16mm & 20mm bore also available.

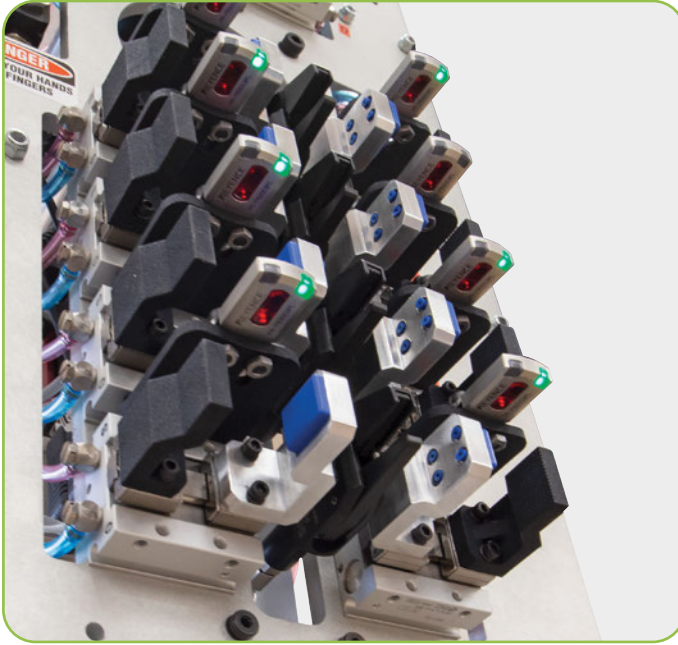


Quick#	2129	2130	2131	2132
Part#	MHF2-8D	MHF2-8D1	MHF2-12D	MHF2-12D1
Price	\$265.00	\$276.00	\$303.00	\$321.00
Medium	Filtered, lubricated / non-lubricated compressed air			
Pressure range	21–101.5 psi		14–101.5 psi	
Total gripping force at 87psi	4.2 lbf		10.7 lbf	
Total stroke	8mm	16mm	12mm	24mm
Cylinder bore	8mm	8mm	12mm	12mm
Mid-stroke detection capability	Yes with SMC D-M9... sensors			
Weight	65g	85g	155g	190g

### Optional Sensors for MHF2 Grippers

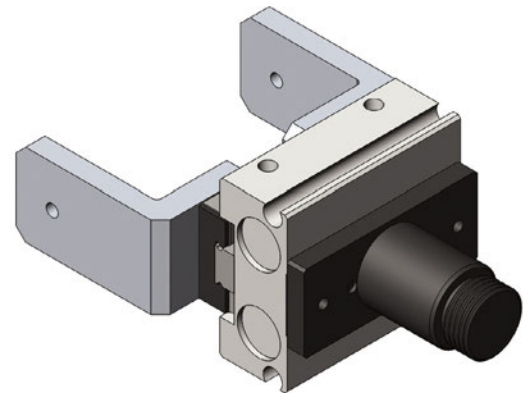
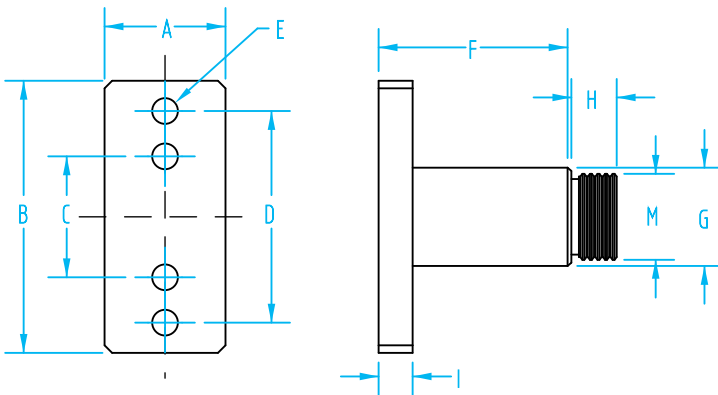
Quick#	Part#	Price	Description
5430	D-M9PL	\$33.70	PNP, 3-wire Straight wit lead, 3m long
2412	D-M9NL	\$33.70	NPN, 3-wire Straight with lead, 3m long
5497	D-M9P SACP	\$42.06	PNP, 3-wire Straight with M8 connector, 0.5m long
5498	D-M9N SACP	\$42.06	NPN, 3-wire Straight with M8 connector, 0.5m long

## Low Profile Parallel Gripper – MHF2



Custom machined or 3D printed gripper fingers from EMI are ideal for use on EOAT in plastics as well as on collaborative robot grippers. We've been designing 3D printed gripper fingers since 2013. Take advantage of EMI's experience and talk with an EMI engineer about custom designed gripper fingers for your application.

Direct mount these low profile grippers for a plate-based EOAT. Brackets are also available with Ø14 clampable post and M12x1 threads for extensions.



**Mounting Brackets for MHF2 Grippers**

Quick#	Part#	Price	Description
2155	GSG-LPG8-MB	\$36.43	For 2129, 2130
2156	GSG-LPG12-MB	\$36.90	For 2131, 2132

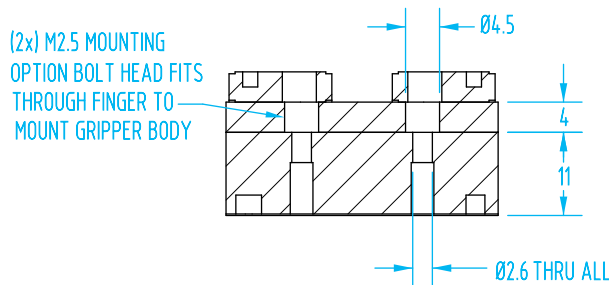
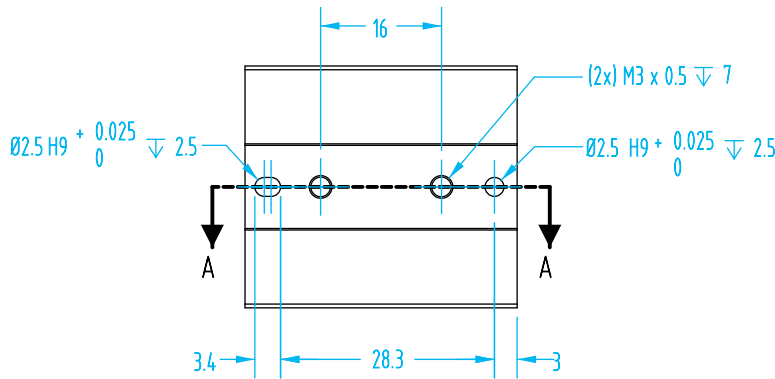
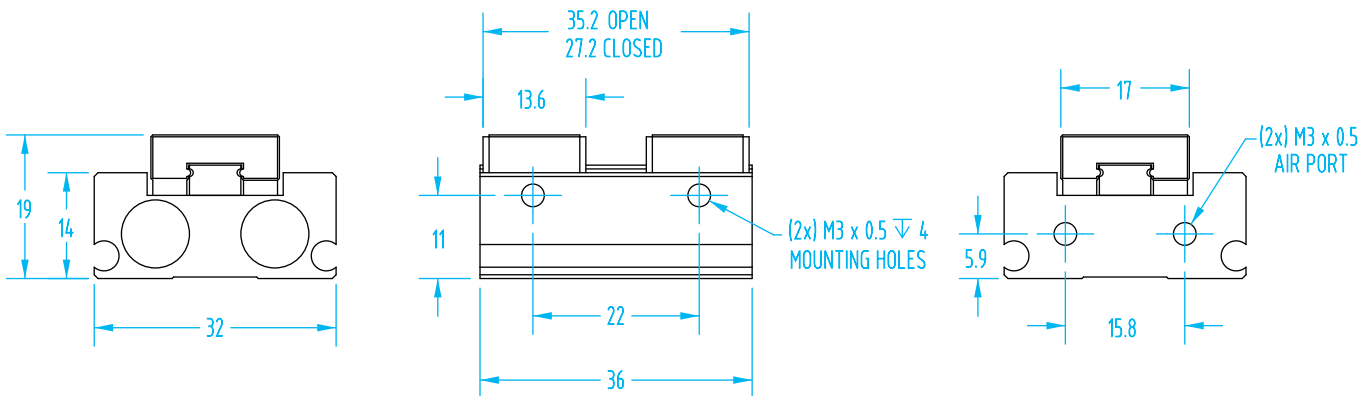
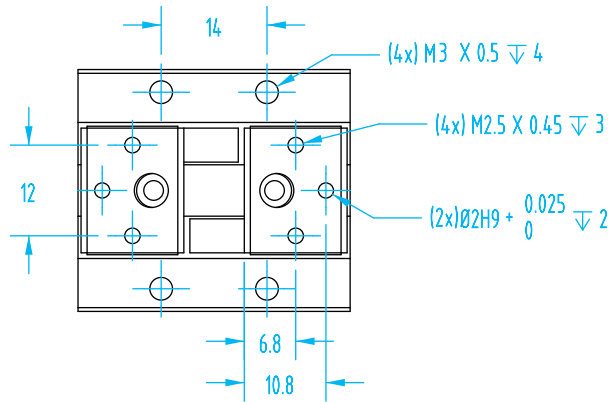
*\*Note: mounting hardware included*

	2155	2156
<b>For:</b>	2129, 2130	2131, 2132
A	16	16
B	36	50
C	16	26
D	28	42
E	Ø3.4 Thru	Ø4.5 Thru
F	25	25
G	14	14
H	6	6
J	4.5	4.5
M	M12x1	M12x1

# Low Profile Parallel Gripper – MHF2

(Dimensioned drawing shown full scale)

**MHF2-8D  
#2129**

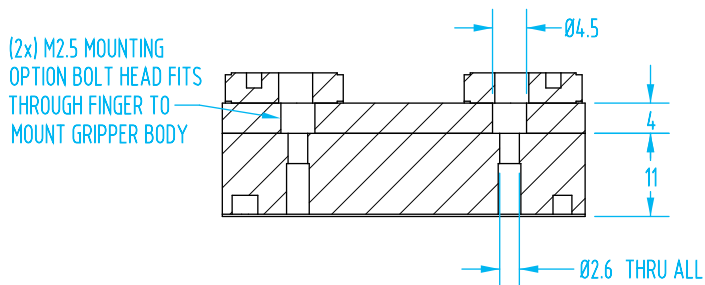
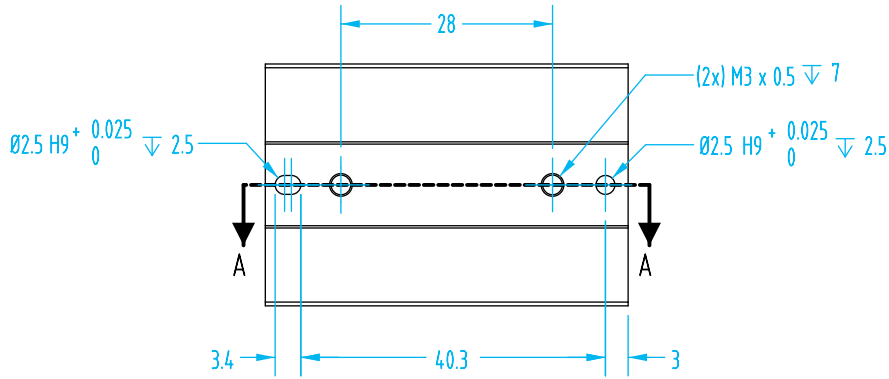
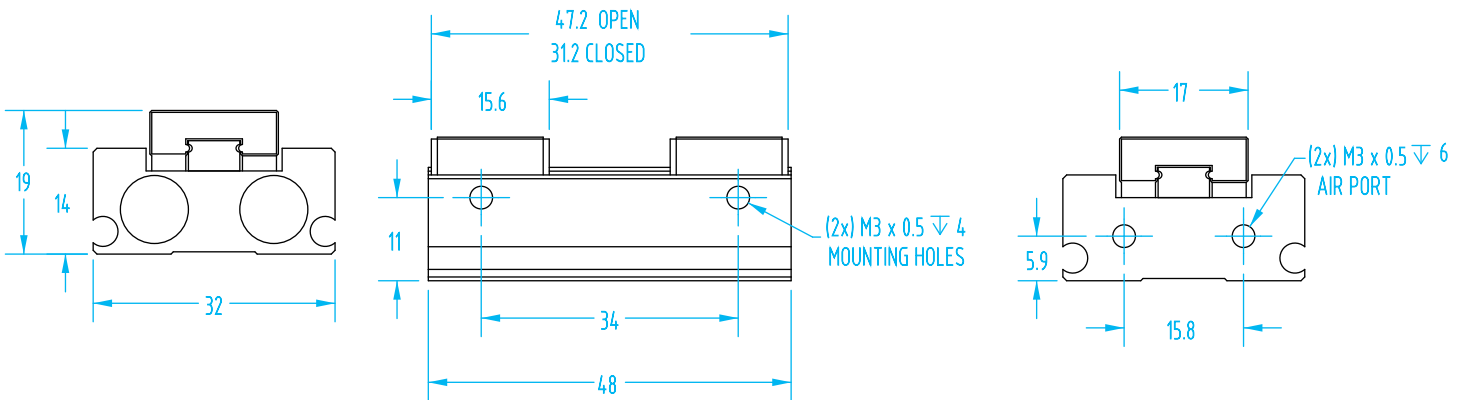
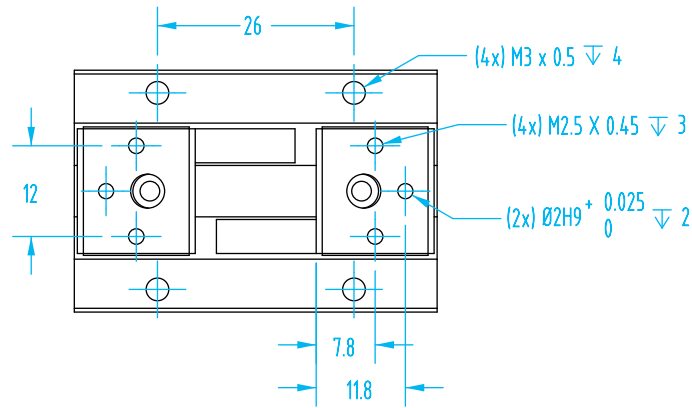


SECTION A-A

**Low Profile Parallel Gripper – MHF2**

(Dimensioned drawing shown full scale)

**MHF2-8D1  
#2130**

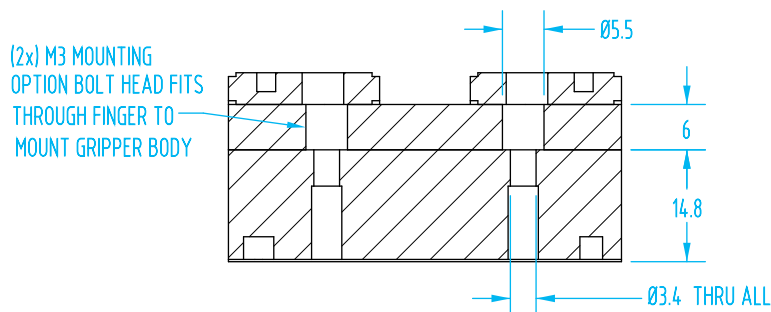
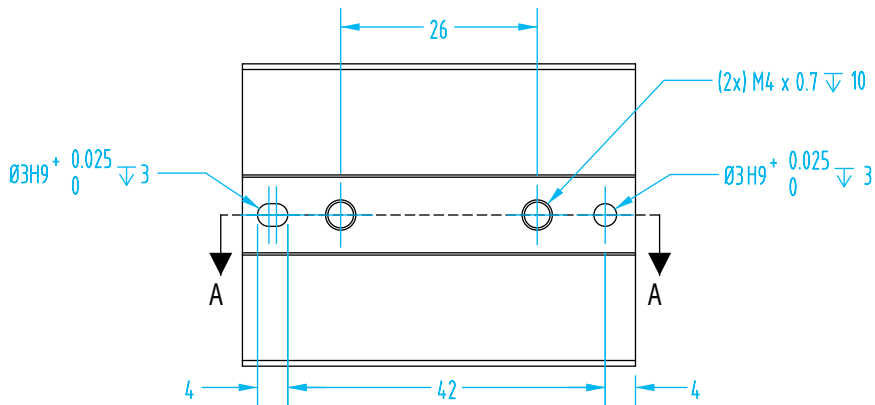
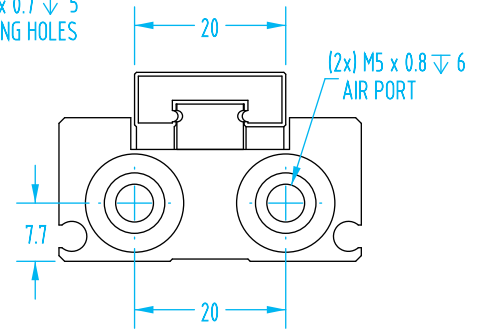
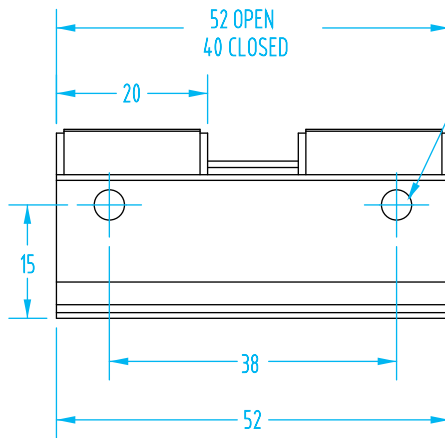
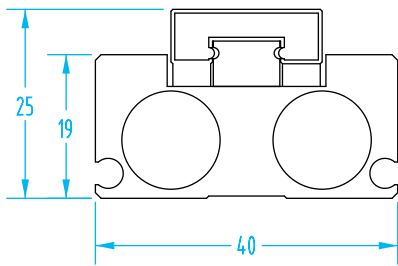
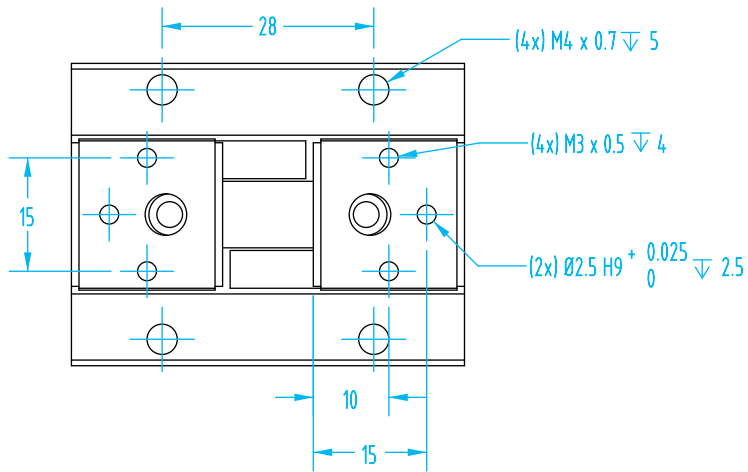


SECTION A-A

# Low Profile Parallel Gripper – MHF2

(Dimensioned drawing shown full scale)

**MHF2-12D  
#2131**

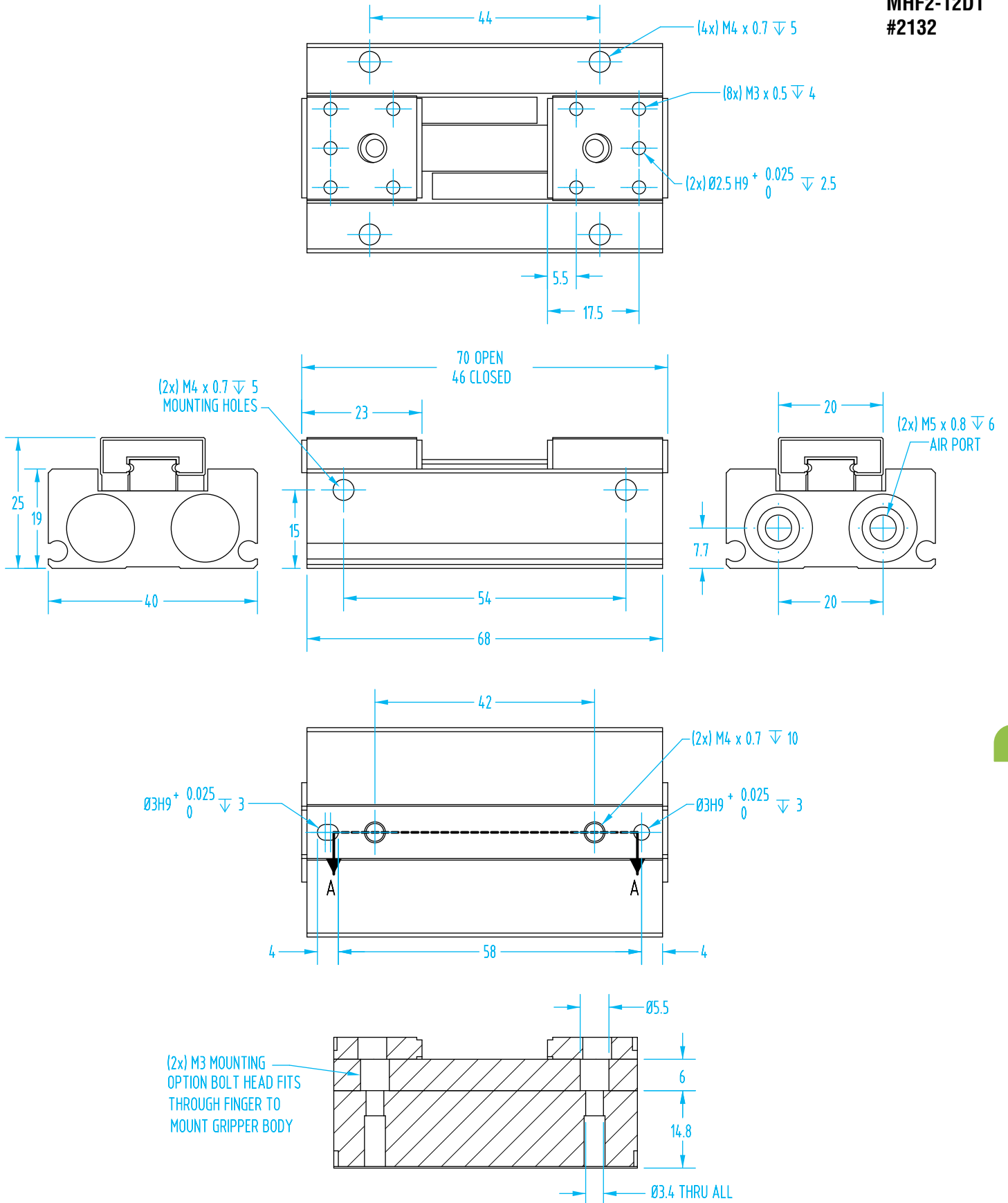


SECTION A-A

**Low Profile Parallel Gripper – MHF2**

(Dimensioned drawing shown full scale)

**MHF2-12D1  
#2132**

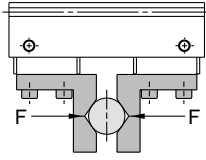


SECTION A-A

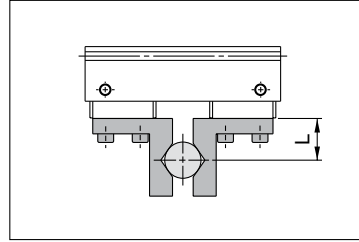
# Low Profile Parallel Gripper – MHF2

## Gripping force

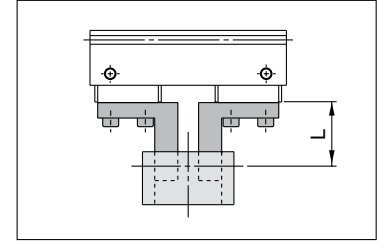
The effective gripping force shown in the graphs below is expressed as  $F$ , which is the thrust of one finger when both fingers are in full contact with the workpiece as shown in the figure.



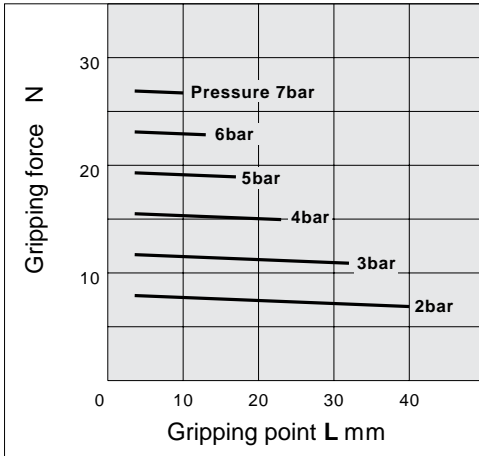
External Gripping



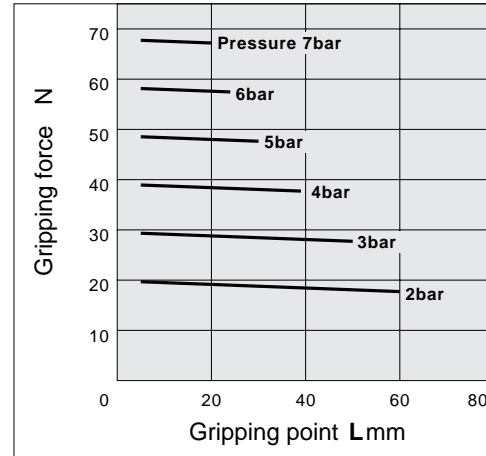
Internal Gripping



MHF2-8D



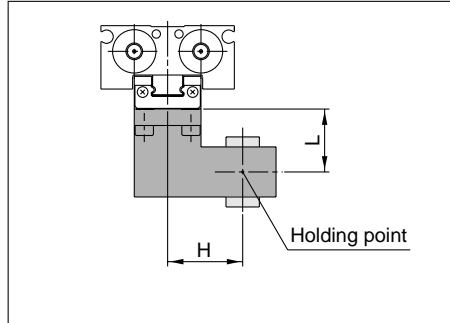
MHF2-12D



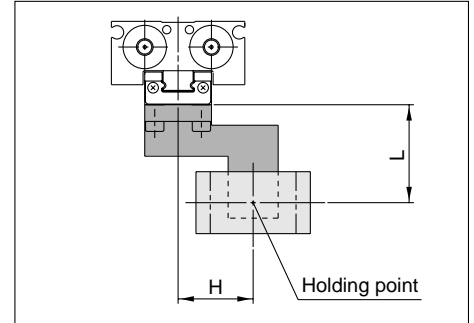
The gripper should be operated so that the amount of overhang "H" will stay within the range given in the graphs.

If the workpiece gripping point goes beyond the range limits, this will have an adverse effect on the life of the gripper.

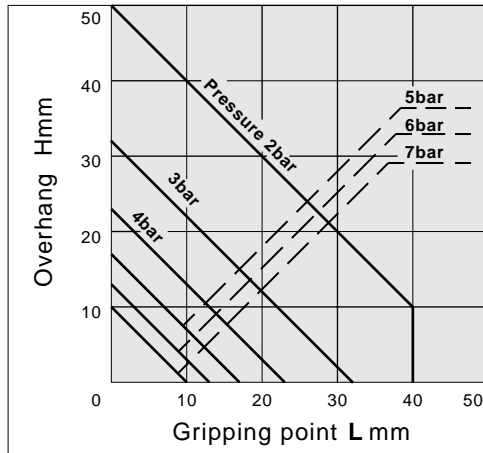
External Gripping



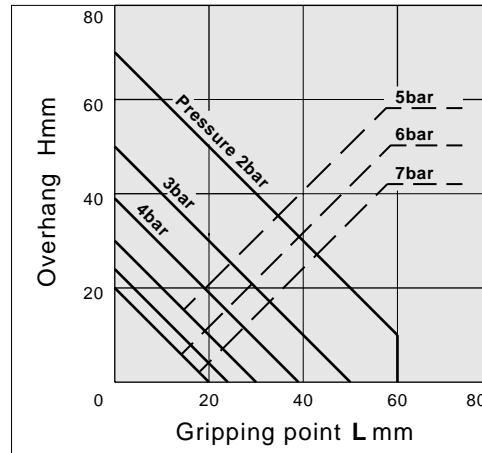
Internal Gripping



MHF2-8D



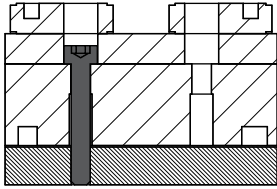
MHF2-12D



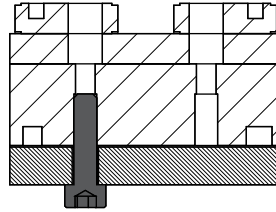
**Low Profile Parallel Gripper – MHF2**

**MHF2-8D  
#2129**

M2.5 X 0.45 THROUGH  
GRIPPER MOUNTING OPTION

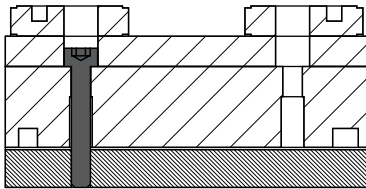


M3 X 0.5 BEHIND  
GRIPPER MOUNTING OPTION

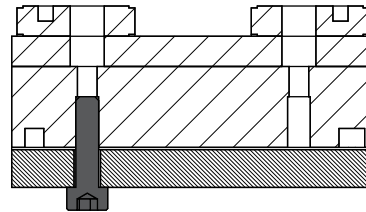


**MHF2-8D1  
#2130**

M2.5 X 0.45 THROUGH  
GRIPPER MOUNTING OPTION

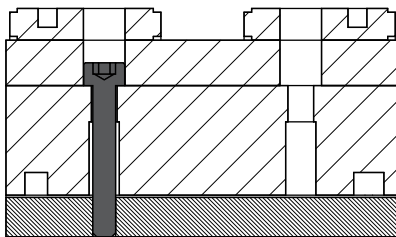


M3 X 0.5 BEHIND  
GRIPPER MOUNTING OPTION

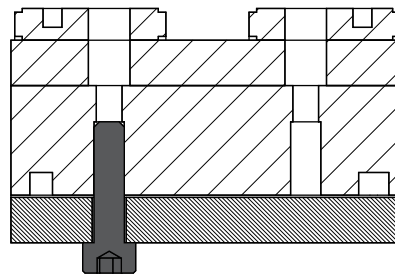


**MHF2-12D  
#2131**

M3 X 0.5 THROUGH  
GRIPPER MOUNTING OPTION

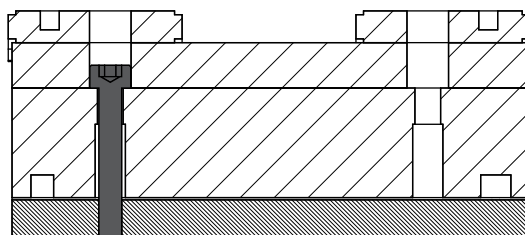


M4 X 0.7 BEHIND  
GRIPPER MOUNTING OPTION

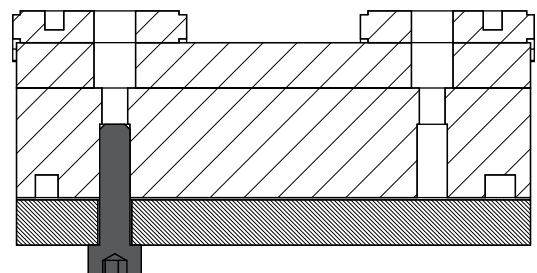


**MHF2-12D1  
#2132**

M3 X 0.5 THROUGH  
GRIPPER MOUNTING OPTION



M4 X 0.7 BEHIND  
GRIPPER MOUNTING OPTION





## Wide Angle Gripper – SZ

- Improved jaw guidance.
- Self-centering.
- Double acting, Normally Open, and Normally Closed models available.
- Different options for fastening and feeding.
- Stainless steel jaws.
- Optional sensors on page 684.
- New sizes 08 & 20.



### Double Acting

Quick#	7655	6760	6761	7657	6762	6763	6764
Part#	SZ08	SZ12	SZ16	SZ20	SZ25	SZ32	SZ40
Price	\$172.00	\$181.00	\$192.00	\$194.00	\$218.00	\$268.00	\$297.00
Medium	Filtered, lubricated / non-lubricated compressed air						
Pressure range	29–116 psi			14.5–116 psi			
Opening total gripping force at 87 psi	6.2 lbf	11.2 lbf	20.2 lbf	33.7 lbf	51.7 lbf	85.4 lbf	139.4 lbf
Closing total gripping force at 87 psi	6.2 lbf	11.2 lbf	20.2 lbf	33.7 lbf	51.7 lbf	85.4 lbf	139.4 lbf
Total stroke (± 0.4mm)	7mm	8mm	12mm	16mm	20mm	25mm	30mm
Maximum working frequency	3 Hz	3Hz	3Hz	2 Hz	2Hz	2Hz	2Hz
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.						
Weight	32g	101g	164g	290g	474g	783g	1135g

### Normally Open

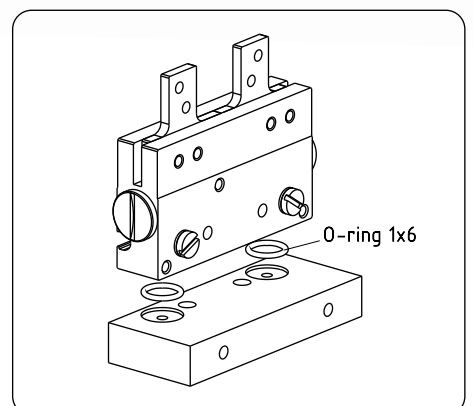
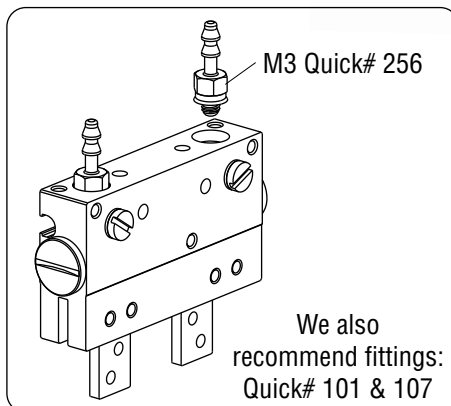
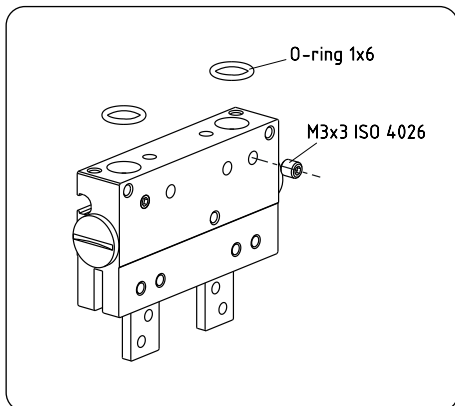
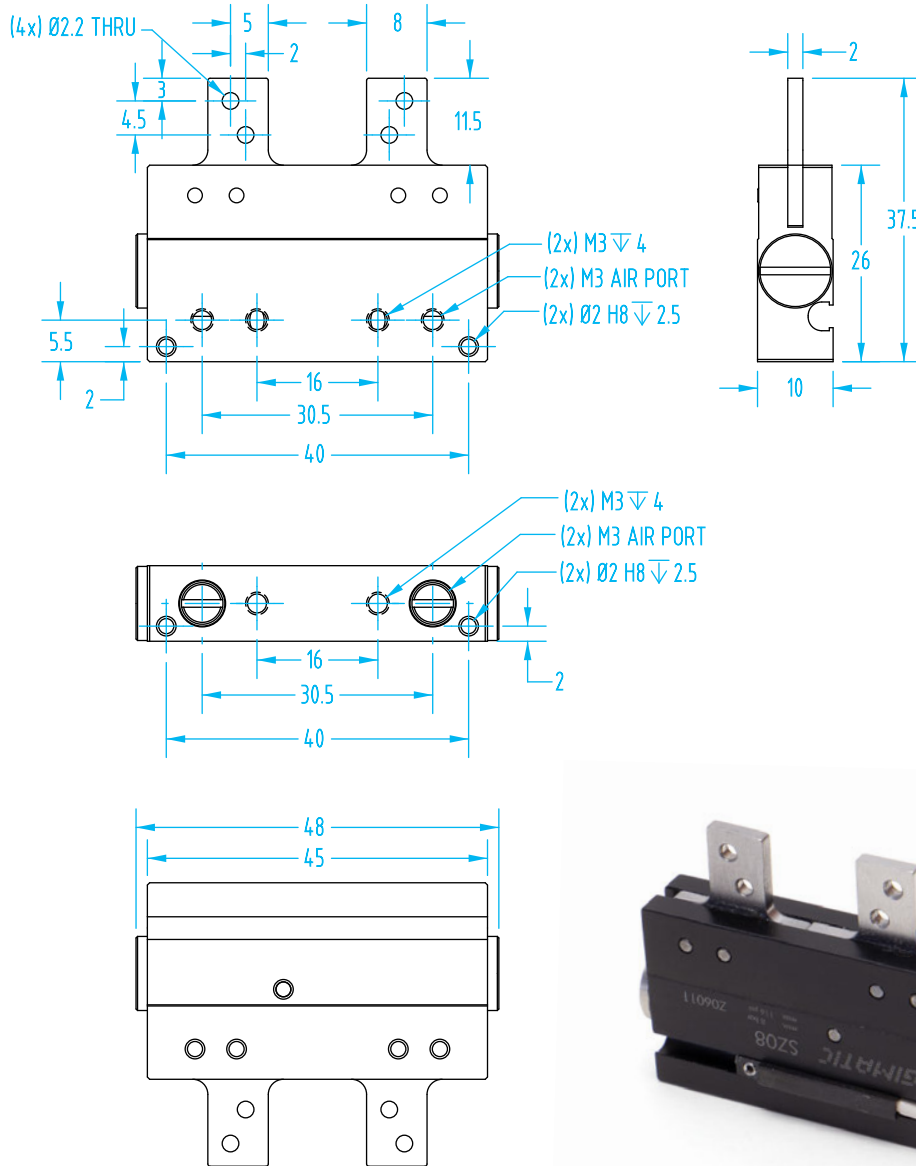
Quick#	7656	7651	7652	7658	7653	7654	Not available
Part#	SZ08-NO	SZ12-NO	SZ16-NO	SZ20-NO	SZ25-NO	SZ32-NO	SZ40-NO
Price	\$180.00	\$189.00	\$201.00	\$210.00	\$228.00	\$278.00	-
Opening total gripping force at 87 psi	8.5 lbf	13.4 lbf	24.2 lbf	41.3 lbf	62.9 lbf	102.1 lbf	-
Closing total gripping force at 87 psi	4 lbf	8.9 lbf	16.1 lbf	26 lbf	40.4 lbf	68.7 lbf	-

See EMI website for more information about SZ Normally Open and Normally Closed grippers

**Wide Angle Gripper – SZ**

**SZ08, SZ08-NO**  
**#7655 , #7656**

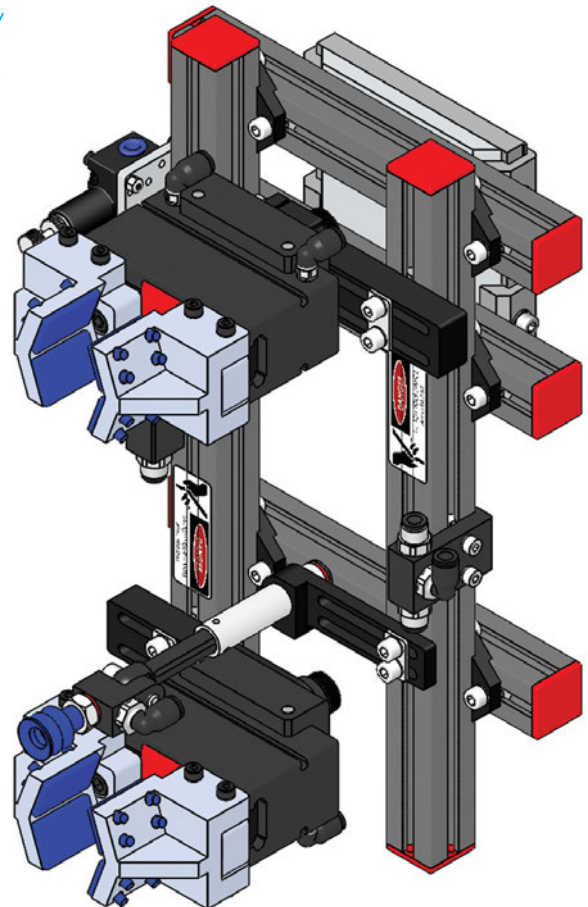
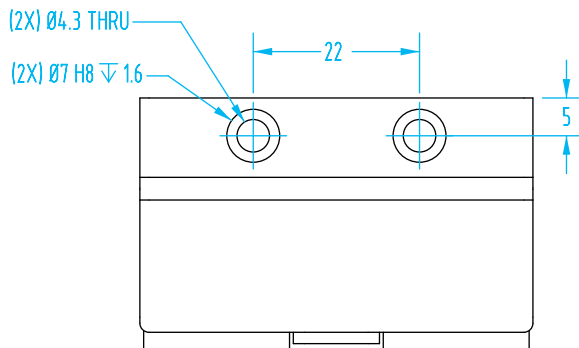
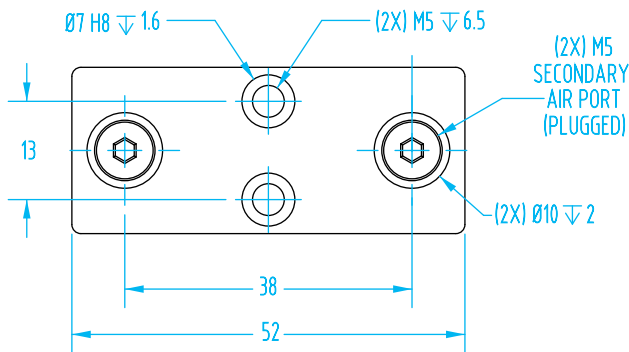
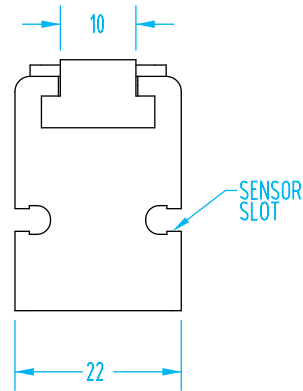
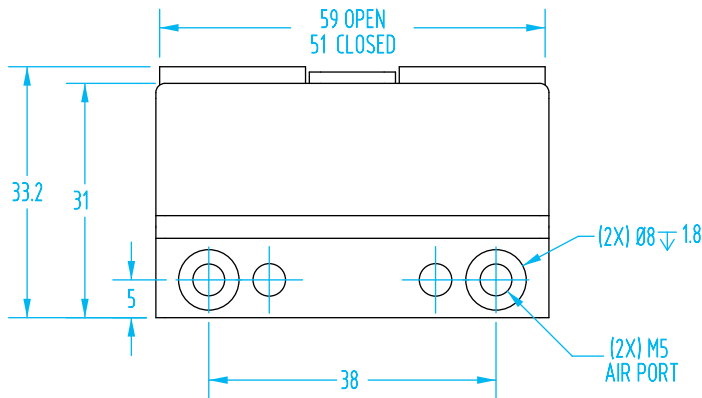
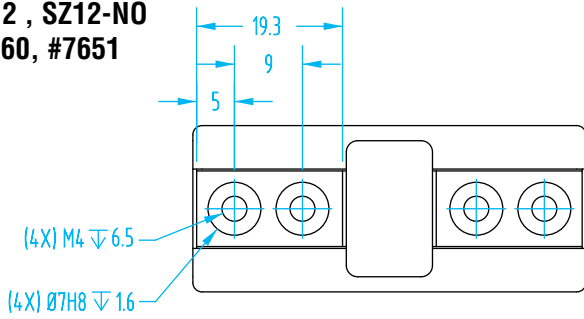
(Dimensioned drawing shown full scale)



# Wide Angle Gripper – SZ

(Dimensioned drawing shown full scale)

**SZ12 , SZ12-NO  
#6760, #7651**

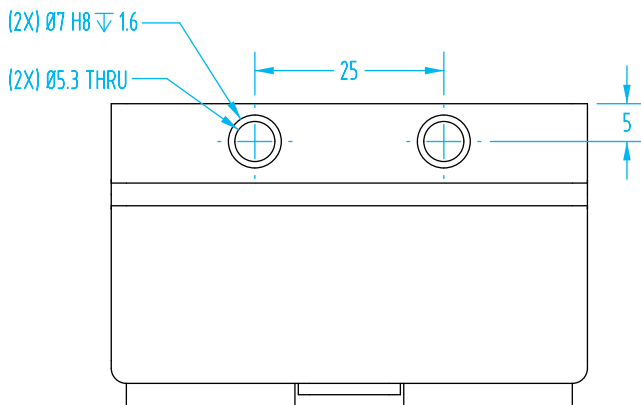
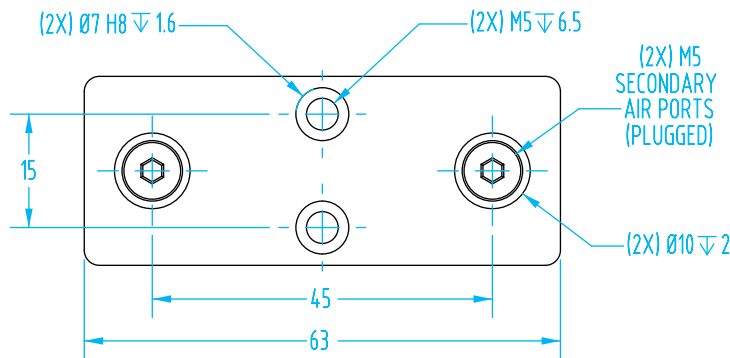
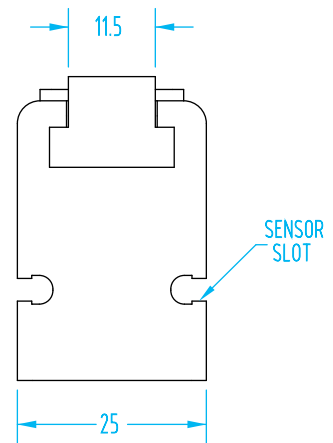
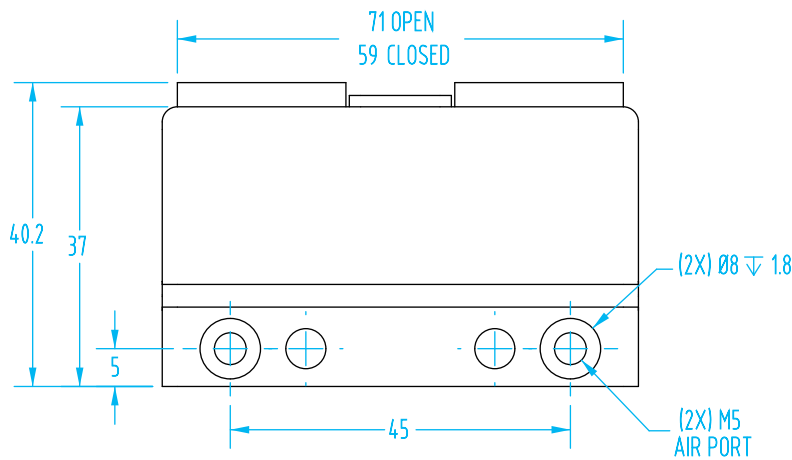
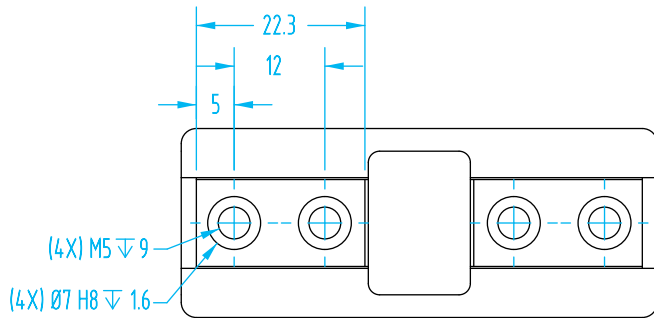


**Custom 3D Printed or Machined  
Fingers from EMI!**

**Wide Angle Gripper – SZ**

(Dimensioned drawing shown full scale)

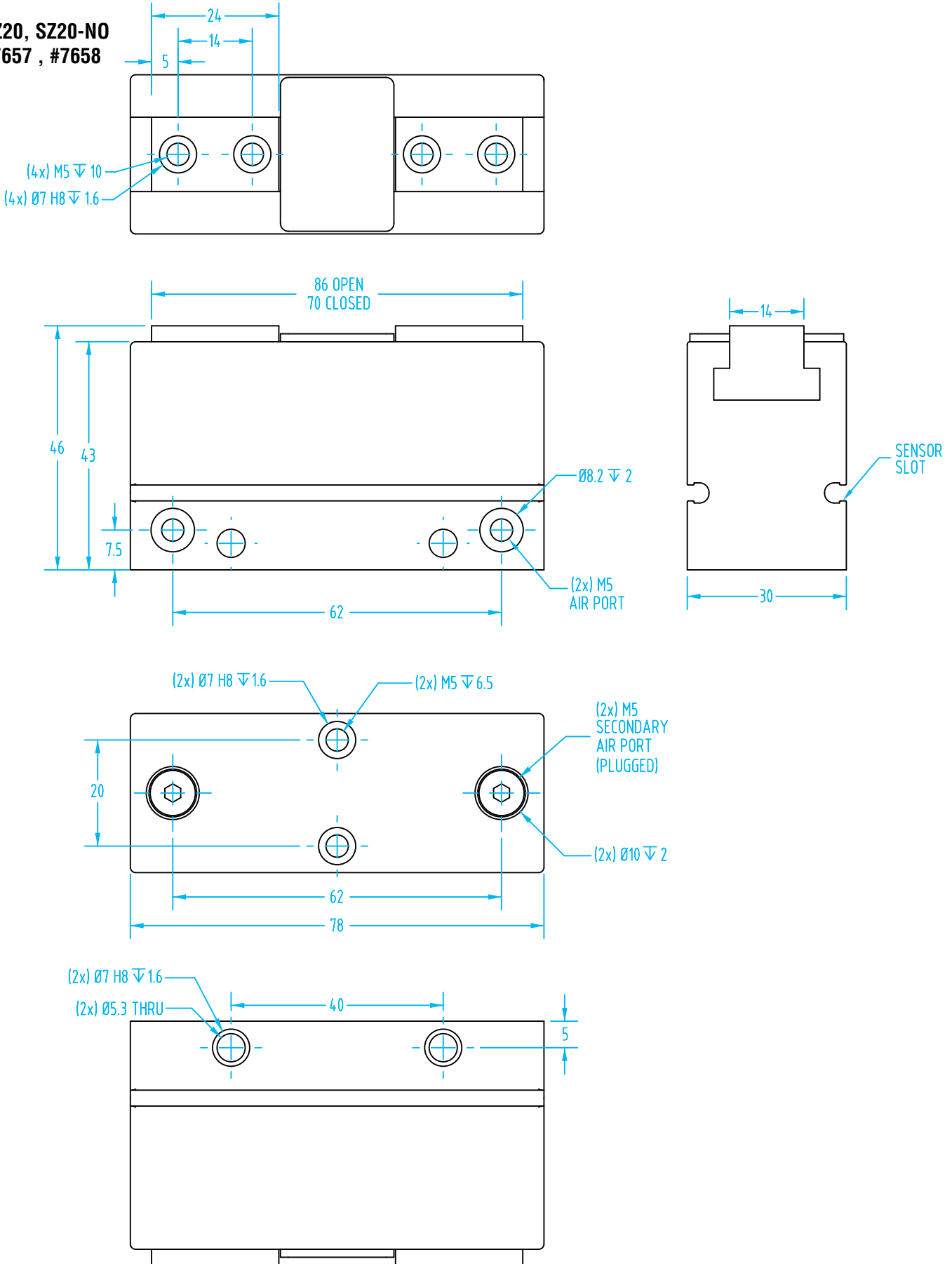
**SZ16, SZ16-NO  
#6761, #7652**



# Wide Angle Gripper – SZ

(Dimensioned drawing shown full scale)

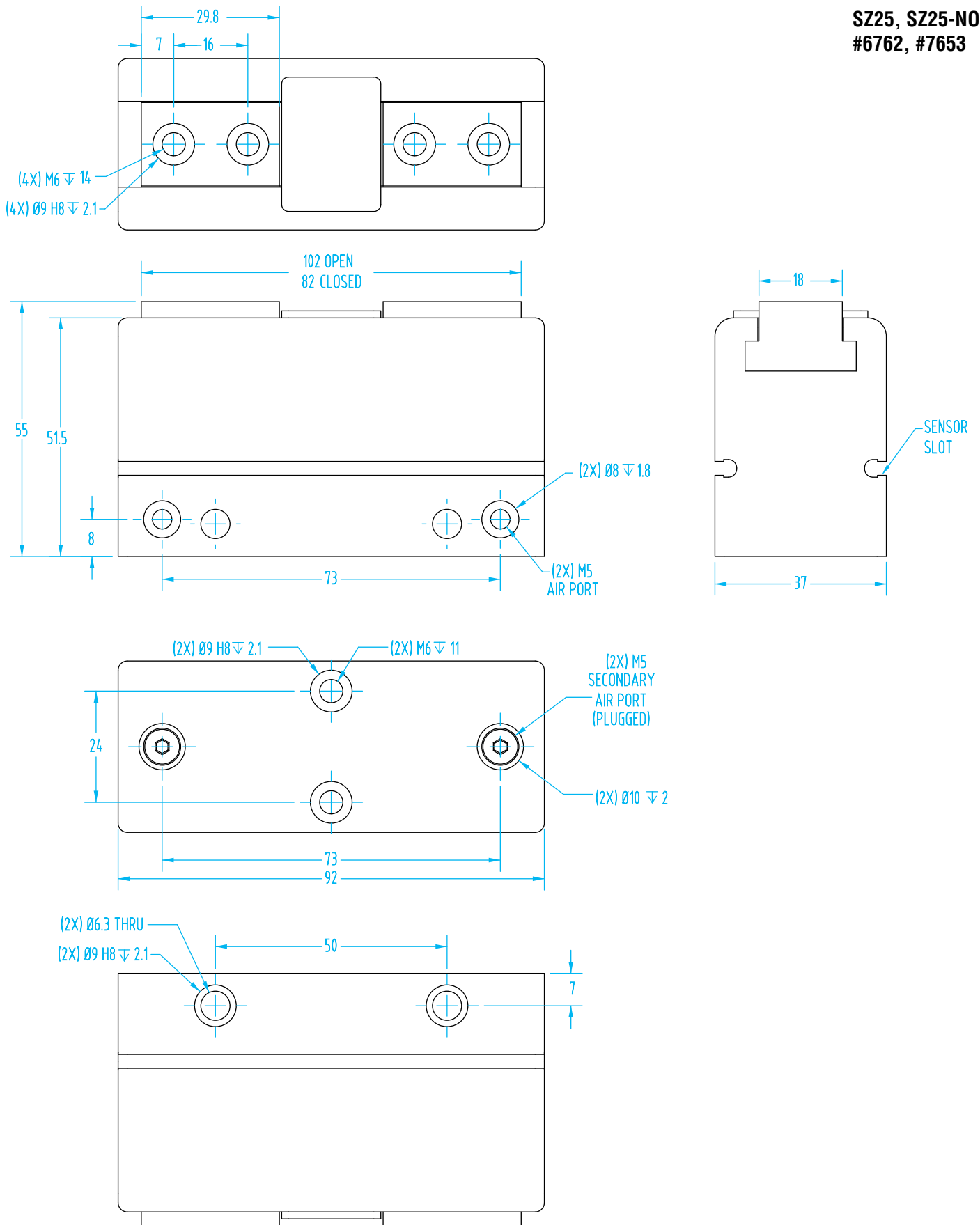
**SZ20, SZ20-N0  
#7657, #7658**



**Wide Angle Gripper – SZ**

(Dimensioned drawing shown at 90% scale)

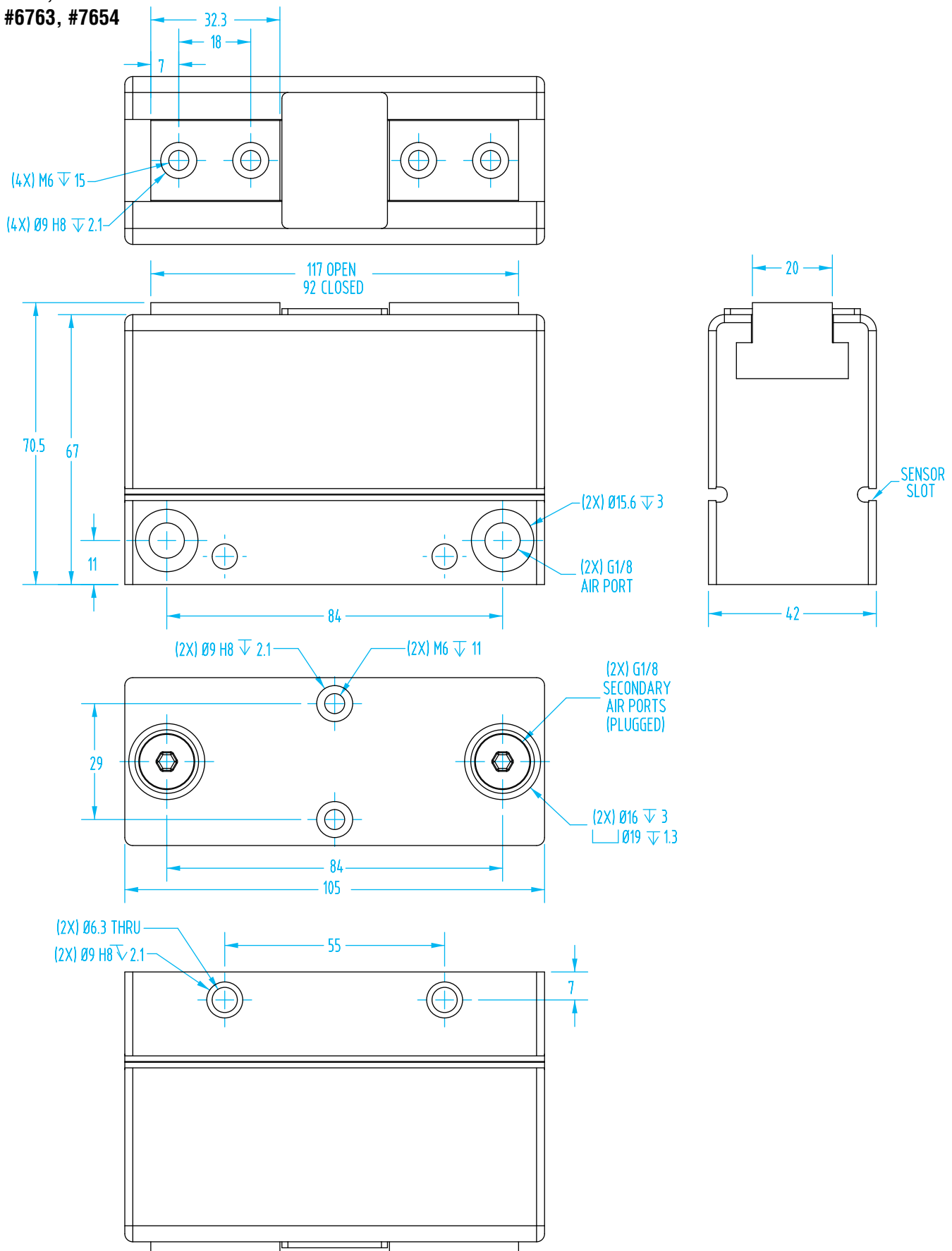
**SZ25, SZ25-N0  
#6762, #7653**



# Wide Angle Gripper – SZ

(Dimensioned drawing shown at 75% scale)

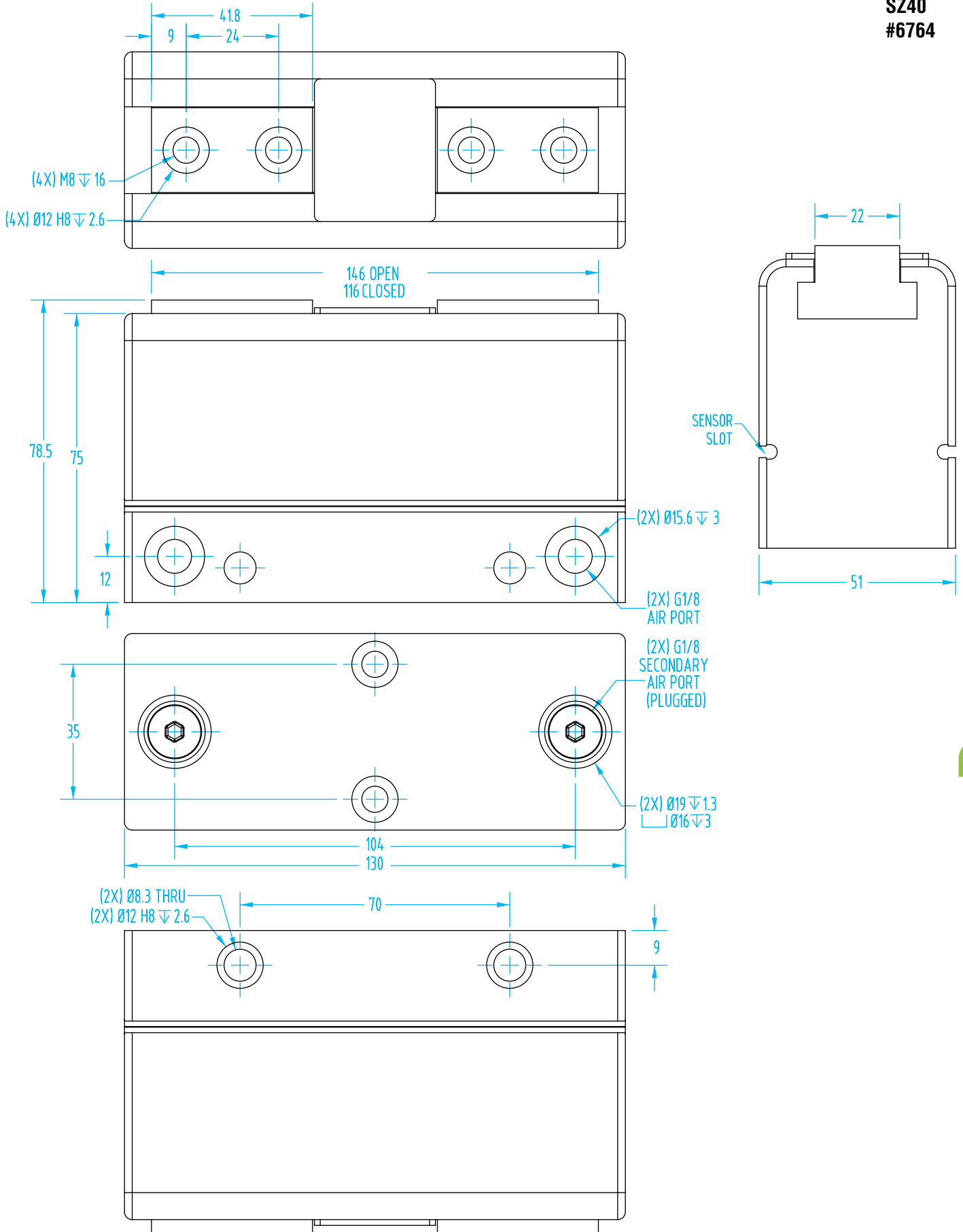
**SZ32, SZ32-N0**  
**#6763, #7654**



**Wide Angle Gripper – SZ**

**SZ40  
#6764**

(Dimensioned drawing shown at 75% scale)

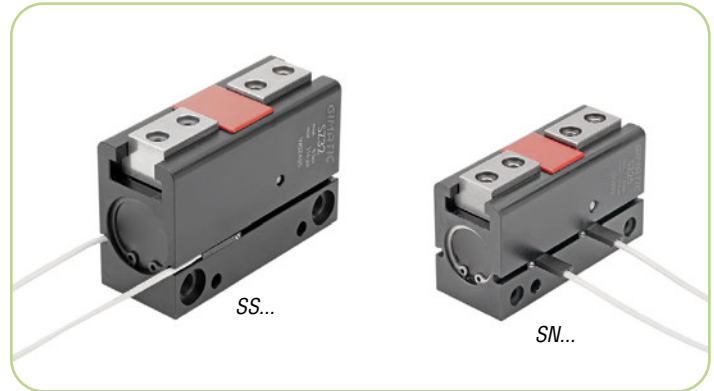




## Wide Angle Gripper – SZ

### Sensors

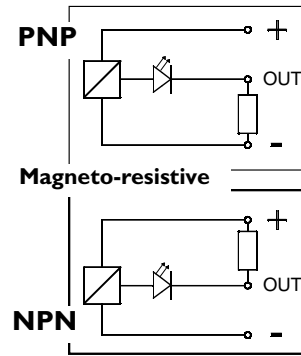
The operating position can be checked by sensors (optional), that detect the magnet on the piston inside. Therefore a nearby big mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.



Quick#	Part#	Type	Connection	Price
<b>3-wire, SS type 'C' slot magnetoresistive sensor</b>				
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
<b>3-wire, 90° Lead exit, SN type 'C' slot magnetoresistive sensor</b>				
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 985.

See Sensor Reference Guide on page 1010 for a complete list of sensors for SZ Grippers.



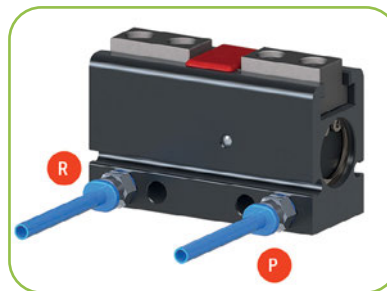
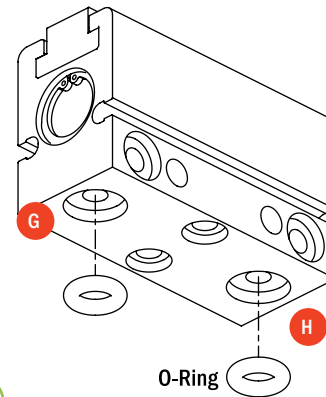
### Compressed air feeding

The compressed air feeding can be accomplished on the lateral air ports (P and R) with fittings and hoses (not supplied). Or it can be accomplished directly through the bottom air ports (G and H) by removing the plugs (E and F).

Compressed air in P - H: gripper opening.

Compressed air in R - G: gripper closing.

The compressed air, must be filtered from 5 to 40 µm. Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper. The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



	SZ08	SZ12	SZ16	SZ20	SZ25	SZ32	SZ40
<b>O-Ring</b>	Ø1x6	Ø2.62x5.23	Ø2.62x5.23	Ø2.62x5.23	Ø2.62x5.23	Ø1.78x15.6	Ø1.78x15.6

**Wide Angle Gripper – SZ**

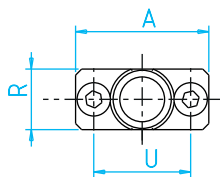
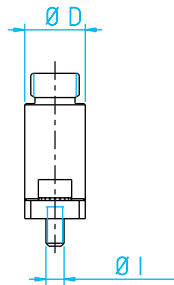
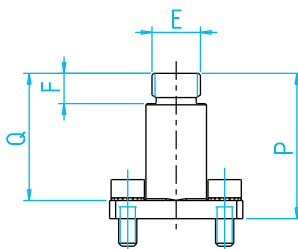
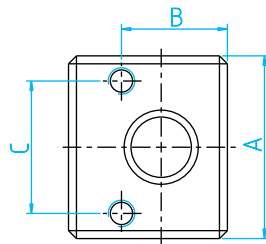
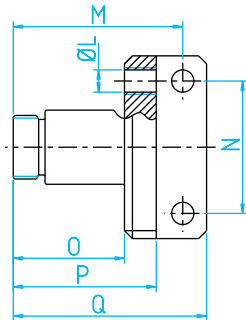
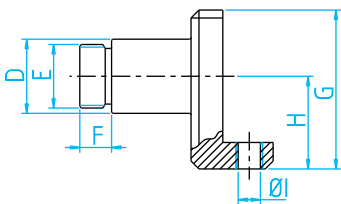


#7322

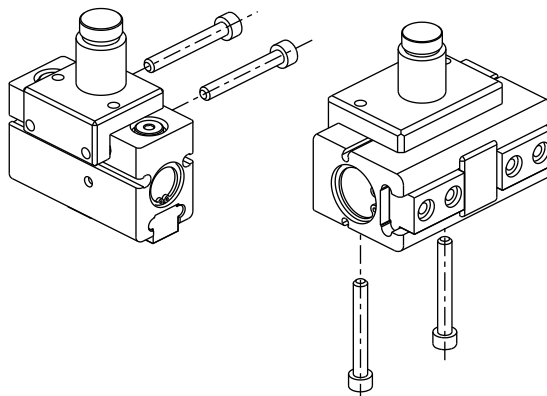
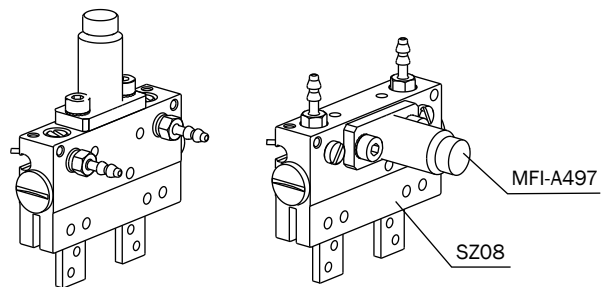
**Mounting Brackets for SZ Grippers**

Quick#	Part#	Price	Use with:	Wt.
7716	MFI-A497	\$23.04	SZ08..	8g
7321	MFI-A325	\$33.40	SZ12..	33g
7322	MFI-A326	\$34.41	SZ16..	41g
7717	MFI-A499	\$53.88	SZ20..	90g
7323	MFI-A327	\$56.34	SZ25..	140g

*Hardware included.*



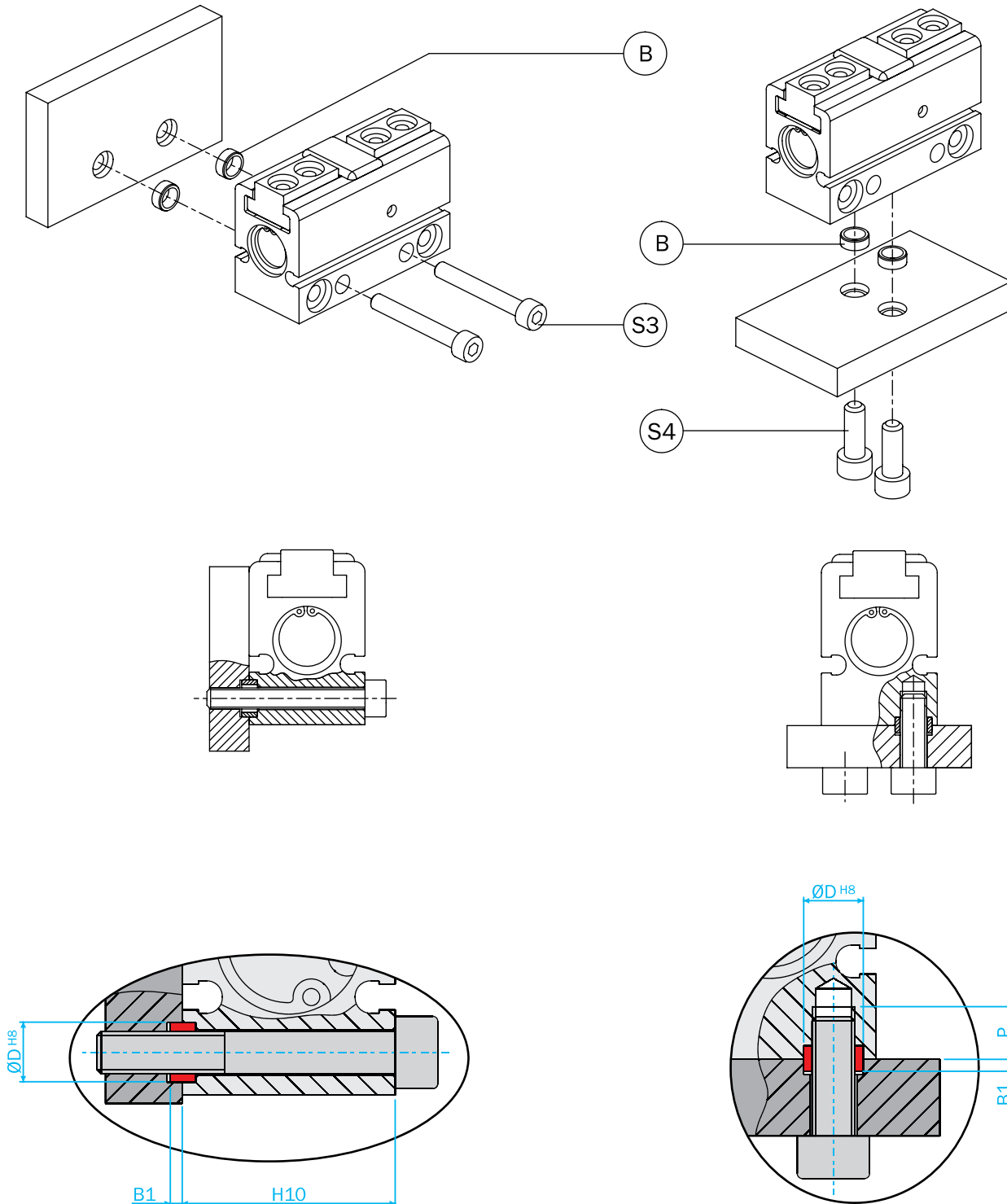
Quick#	7716	7321	7322	7717	7323
<b>For:</b>	<b>SZ08</b>	<b>SZ12</b>	<b>SZ16</b>	<b>SZ20</b>	<b>SZ25</b>
A	22	29	34.5	50	62
B	-	17	20	25	30
C	16	22	25	40	50
D	Ø10	Ø14	Ø14	Ø20	Ø20
E	M8x1	M12x1	M12x1	M17x1	M17x1
F	5	6	6	8	8
G	-	28	30	38	45
H	-	17	17.5	23	26.5
I	M3	M4	M5	M5	M6
L	-	M4	M5	M5	M6
M	-	32	32	42	46
N	-	22	25	40	50
O	-	21	21	29	29
P	24	27	27	37	39
Q	21	35.5	36.5	49	52
R	10	-	-	-	-



## Wide Angle Gripper – SZ

### Fastening

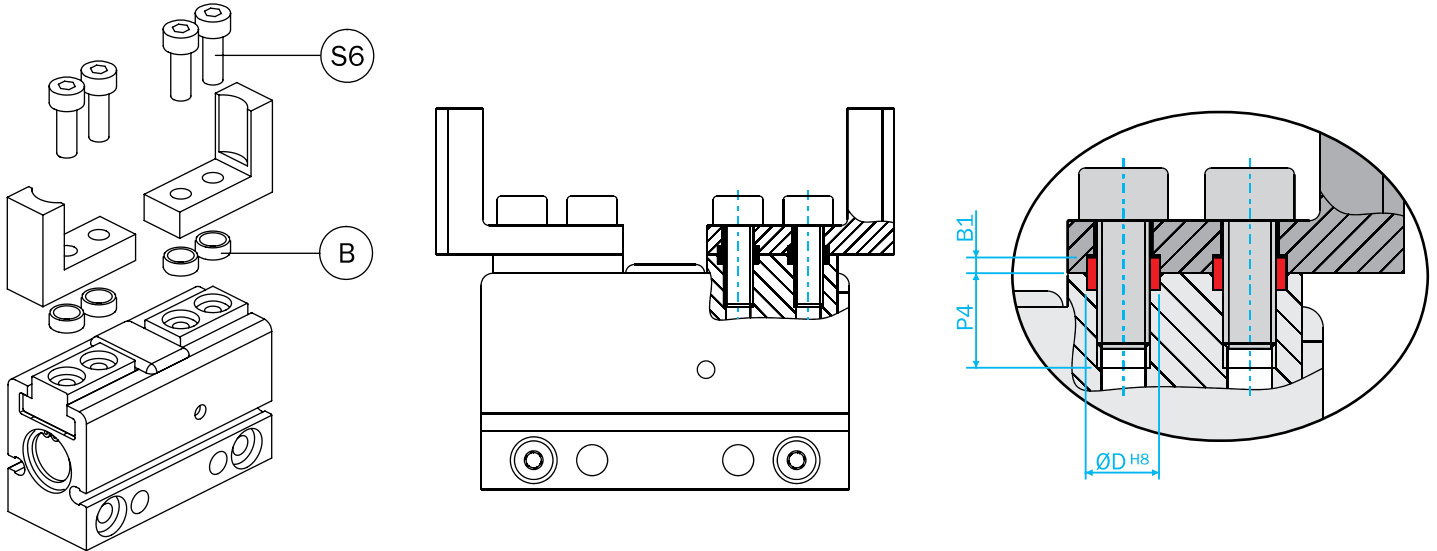
The gripper can be fastened to a static or moving part. When on a moving part, you must pay attention to the forces created by inertia over the gripper and its load. It can be fastened to one side or to the base. Use two(2) screws (S3) and two(2) centering sleeves (B).



## Wide Angle Gripper – SZ

### Jaw Fastening

The gripping jaws should be as short and light as possible. They must be fastened by two(2) screws (S6) and two(2) centering sleeves (B).



Four (4) centering sleeves (B) for the gripping tools and two (2) centering sleeves (B) for housing are supplied in the packaging.

	SZ08	SZ12	SZ16	SZ20	SZ25	SZ32	SZ40
<b>B</b>	-	Ø7 H=3	Ø7 H=3	Ø7 H=3	Ø9 H=4	Ø9 H=4	Ø12 H=5
<b>B1</b>	-	1.4	1.4	1.4	1.9	1.9	2.4
<b>D</b>	-	Ø7 H <sup>8</sup>	Ø7 H <sup>8</sup>	Ø7 H <sup>8</sup>	Ø9 H <sup>8</sup>	Ø9 H <sup>8</sup>	Ø12 H <sup>8</sup>
<b>S3</b>	M3	M4	M5	M5	M6	M6	M8
<b>S4</b>	M3	M5	M5	M5	M6	M6	M8
<b>P5</b>	-	6.5	6.5	6.5	11	11	15
<b>H10</b>	-	22	25	30	37	42	51
<b>S6</b>	M2	M4	M5	M5	M6	M6	M8
<b>P4</b>	-	6.5	9	10	14	15	16

**Custom 3D Printed or Machined  
Fingers from EMI!**

See our Material Comparison Charts on page 109 to choose the best material for your application!

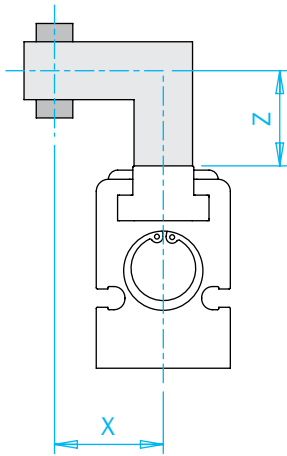


# Wide Angle Gripper – SZ

## 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 overhanging 'X'.

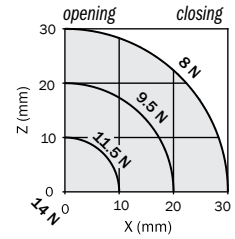
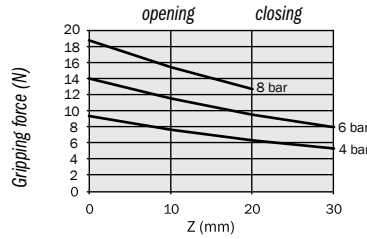
The force shown in these graphs refers to one jaw. The total force is double.



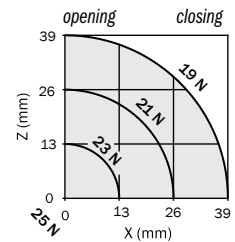
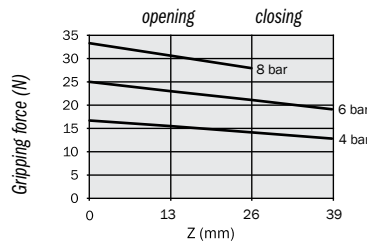
**Reference:**

- 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

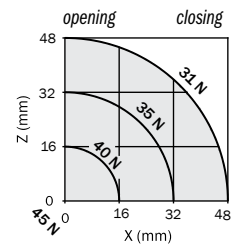
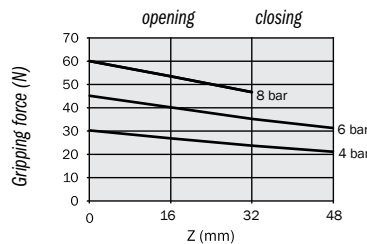
SZ08



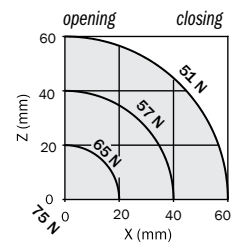
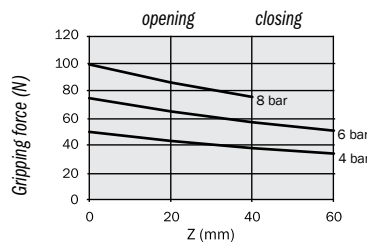
SZ12



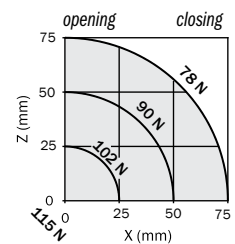
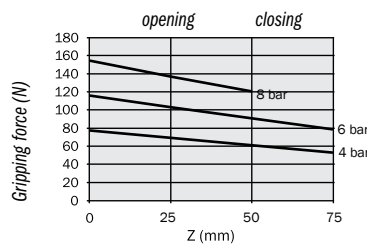
SZ16



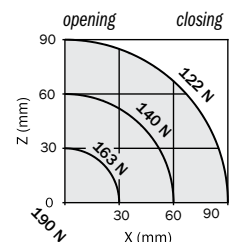
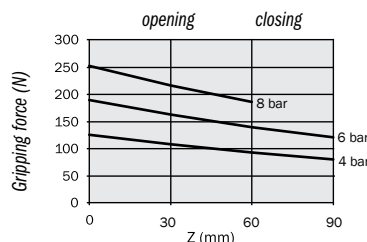
SZ25



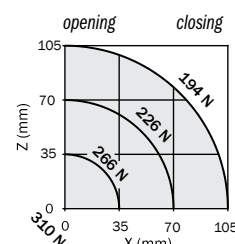
SZ25



SZ32



SZ40



## Wide Angle Gripper – SZ

### 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.

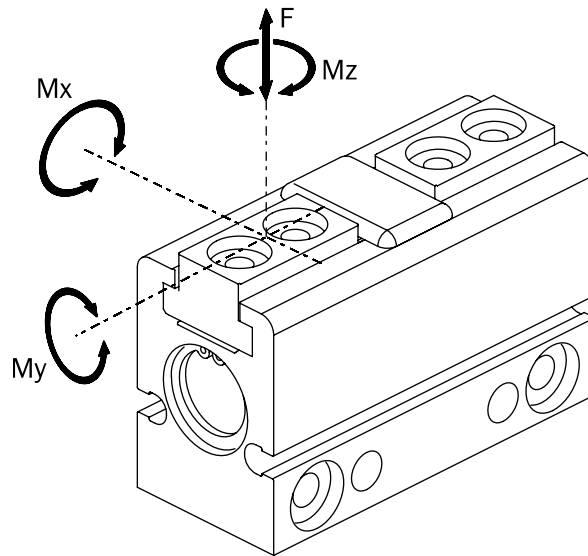
$F_s$ ,  $M_x s$ ,  $M_y s$ ,  $M_z s$ , are maximum permitted static loads.

Static means with motionless jaws.

$F_d$ ,  $M_x d$ ,  $M_y d$ ,  $M_z d$ , are maximum permitted dynamic loads. Dynamic means with running jaws.

The following tables show the specified maximum loads (m) on each gripping tool as function of closing or opening time. Use flow controllers (not supplied) to get the proper speed.

Fittings Available  
on page 1047



#### Reference:

**Force:**  $N \times 0.225 = \text{lbf}$

**Torque:**  $Nm \times 8.850 = \text{in-lbf}$

**Torque:**  $Ncm \times 0.089 = \text{in-lbf}$

**Pressure:**  $\text{bar} \times 14.5 = \text{psi}$

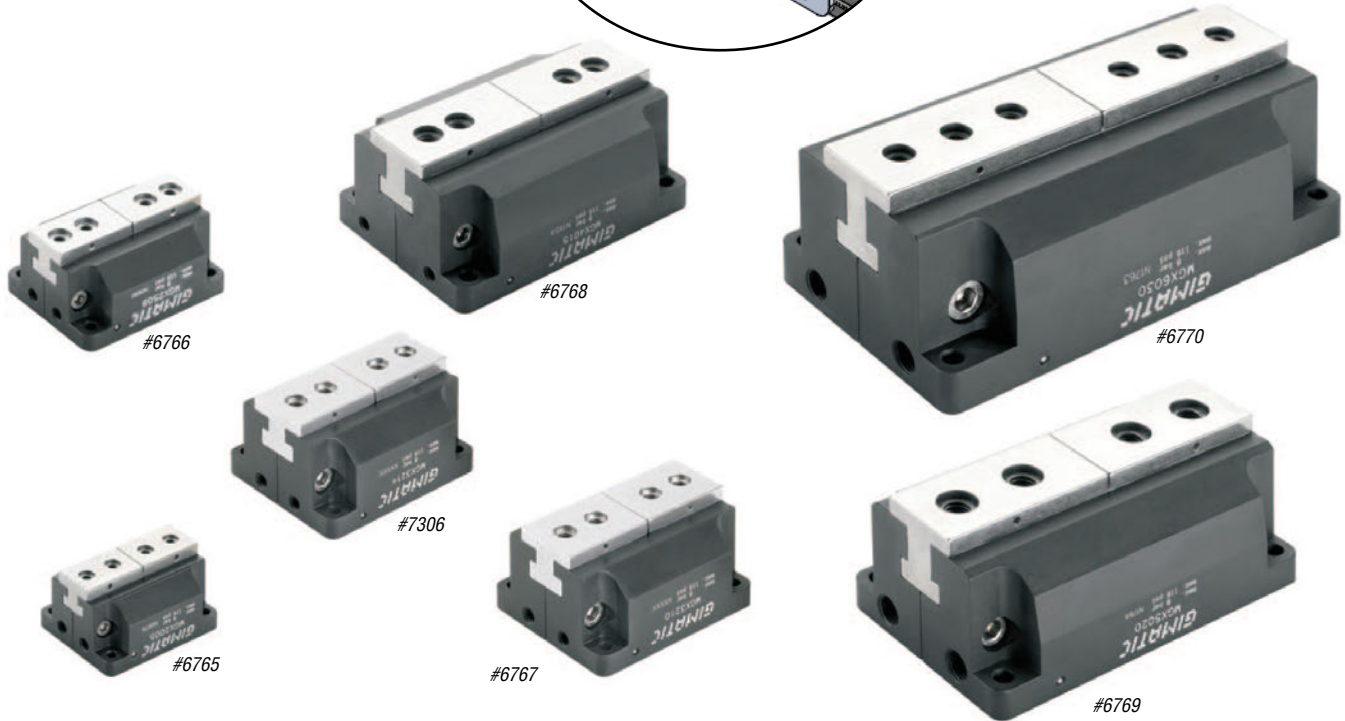
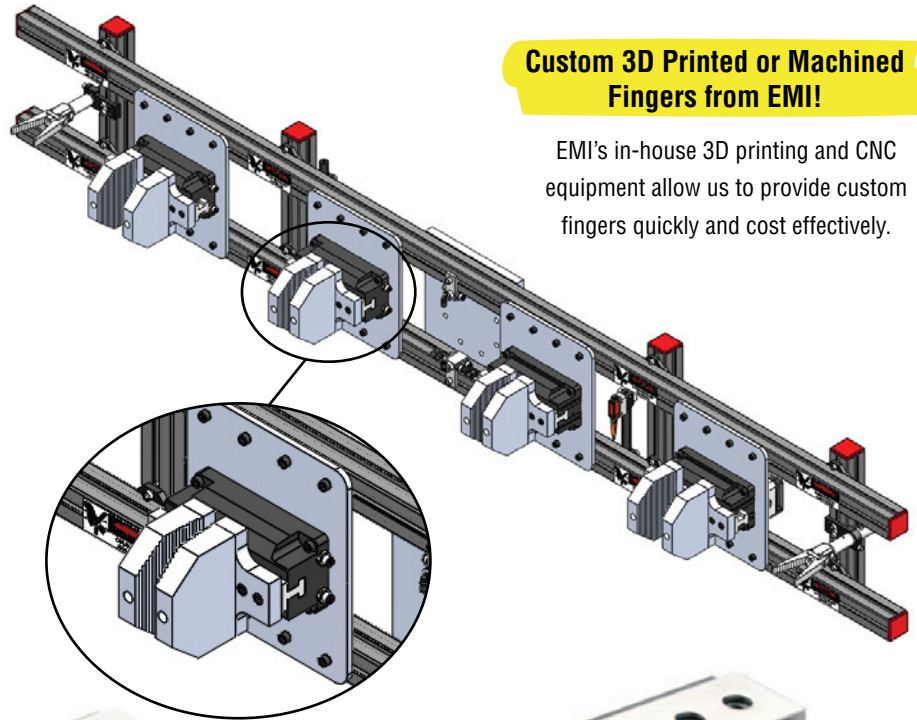
	SZ08	SZ12	SZ16	SZ20	SZ25	SZ32	SZ40
<b>F s</b>	10 N	50 N	100 N	150 N	200 N	400 N	700 N
<b>Mx s</b>	0.25 Nm	0.5 Nm	2 Nm	4 Nm	6 Nm	18 Nm	36 Nm
<b>My s</b>	0.25 Nm	0.3 Nm	1.5 Nm	3 Nm	4 Nm	12 Nm	24 Nm
<b>Mz s</b>	0.25 Nm	0.5 Nm	2 Nm	4 Nm	6 Nm	18 Nm	36 Nm
<b>F d</b>	0.2 N	1 N	2 N	3 N	4 N	8 N	12 Nm
<b>Mx d</b>	0.25 Nm	1Ncm	4 Ncm	8 Ncm	12 Ncm	24 Ncm	36 Ncm
<b>My d</b>	0.25 Nm	0.8 Ncm	3 Ncm	6 Ncm	8 Ncm	16 Ncm	24 Ncm
<b>Mz d</b>	0.25 Nm	1 Ncm	4 Ncm	8 Ncm	12 Ncm	24 Ncm	36 Ncm
<b>m 0.3s</b>	-	-	-	-	-	800g	1200g
<b>m 0.2s</b>	-	-	-	300g	400g	600g	900g
<b>m 0.12s</b>	-	-	200g	250g	320g	400g	600g
<b>m 0.07s</b>	20g	100g	160g	200g	240g	300g	-
<b>m 0.05s</b>	15g	80g	120g	150g	160g	-	-
<b>m 0.04s</b>	10g	60g	80g	-	-	-	-
<b>m 0.02s</b>	8g	40g	-	-	-	-	-

## High-Precision Gripper – MGX

- Flat profile.
- Self-centering.
- Robust guidance.
- High gripping force.
- Lightweight and small size.
- High dimensional accuracy.
- Spring closed (-NC) or spring open (-NO) option available.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

**Custom 3D Printed or Machined Fingers from EMI!**

EMI's in-house 3D printing and CNC equipment allow us to provide custom fingers quickly and cost effectively.



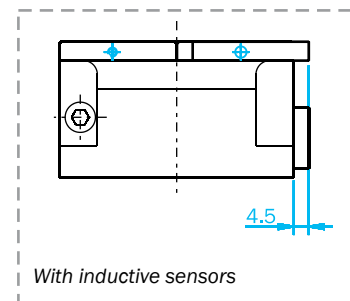
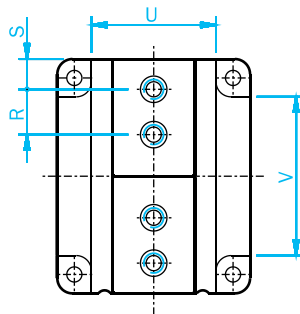
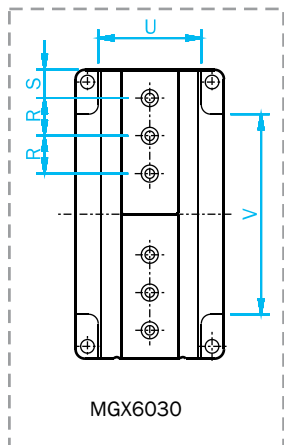
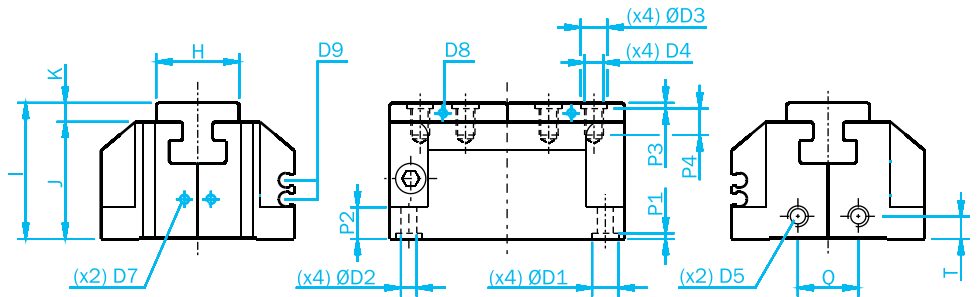
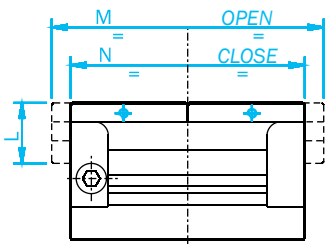
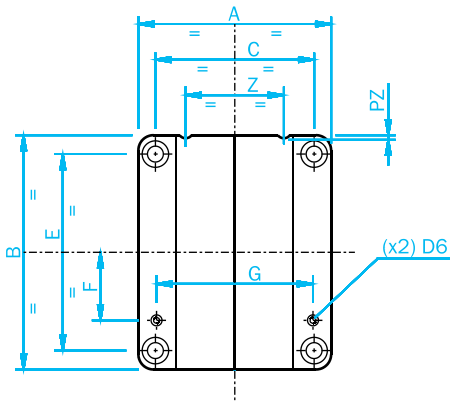
Quick#	6765	6766	6767	7306	6768	6769	6770
Part#	MGX2005	MGX2508	MGX3210	MGX3214	MGX4015	MGX5020	MGX6030
Price	\$484.00	\$546.00	\$609.00	\$609.00	\$641.00	\$703.00	\$766.00
Medium	Filtered, lubricated / non-lubricated compressed air						
Pressure range	30–116 psi						
Total gripping force at 87 psi	40.2 lbf	65.2 lbf	103.4 lbf	72 lbf	168.6 lbf	292.2 lbf	373.2 lbf
Total stroke (±0.3mm)	5mm	8mm	10mm	14.6mm	15mm	20mm	30mm
Maximum repeatability tolerance	±0.02mm						
Midstroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.						
Weight	95g	150g	270g	270g	545g	900g	1525g

# High-Precision Gripper – MGX

**Reference:**

- D2-** Thru-hole for gripper fastening
- D5-** Air Connection
- D6-** Direct air feeding
- D7-** Inductive sensor mounting hole
- D8-** Inductive sensor mounting hole
- D9-** Sensor slot

	MGX2005	MGX2508	MGX3210	MGX3214	MGX4015	MGX5020	MGX6030
<b>A</b>	35.8	42	51	51	61.2	70	78.6
<b>B</b>	44	55	62	62	93	118	153
<b>C</b>	28.3	33	42	42	51	58	66
<b>D1</b>	Ø5 H7	Ø7 H7	Ø7 H7	Ø7 H7	Ø7 H7	Ø9 H7	Ø9 H7
<b>D2</b>	Ø3.2	Ø4.2	Ø4.2	Ø4.2	Ø5.2	Ø6.2	Ø6.2
<b>D3</b>	Ø5 H7	Ø7 H7	Ø7 H7	Ø7 H7	Ø9 H7	Ø12 H7	Ø9 H7
<b>D4</b>	M3	M4	M5	M5	M6	M8	M6
<b>D5</b>	M5	M5	M5	M5	M5	G1/8"	G1/8"
<b>D6</b>	M3	M3	M3	M3	M3	M3	M3
<b>E</b>	36.5	46	52	52	80	105	140
<b>F</b>	12.5	15.5	18	18	27.5	37	43.5
<b>G</b>	27.2	333.6	41.4	41.4	49.6	58.6	67.6
<b>H</b>	14	16	22	22	25	28	30
<b>I</b>	26	28.5	36	36	42	49	58
<b>J</b>	22	24	31	31	37	43	51
<b>K</b>	4	4.5	5	5	5	6	7
<b>L</b>	11.2	12.7	16	16	20	25	29
<b>M</b>	49	63	72	76	108	138	183
<b>N</b>	44	55	62	62	93	118	153
<b>P1</b>	1.2	1.5	1.5	1.5	1.5	2	2
<b>P2</b>	5.5	6	8.4	8.4	9	10	13.5
<b>P3</b>	1.2	1.5	1.5	1.5	2	2.5	2.5
<b>P4</b>	5	5.2	7	7	9	12	12
<b>Q</b>	11	12	16	16	31.2	32	40
<b>R</b>	9	10	12	12	12	24	20
<b>S</b>	5.5	6	8	8	12.5	14	15
<b>T</b>	5.8	6	6	6	6	8	8
<b>U</b>	20.8	24	33	33	41.2	46	54.6
<b>V</b>	29	37	42	42	65	88	106
<b>Z</b>	17	20	26	26	30	33	35
<b>PZ</b>	0.5	0.5	0.8	0.8	0.8	0.8	0.8





## Compact Angular Gripper – PN

- Double acting.
- Self-centering.
- High efficiency and reliability due to few moving parts.
- Two or three jaws.
- Optional sensors available.

**2022–2023 Design Changes,  
Now accept SN Style Sensors**



**Fittings Available  
on page 1047**



Quick#	7735	7736	7737	7738	7739	7740
Part#	GSG-PN-010-2	GSG-PN-010-3	GSG-PN-016-2	GSG-PN-016-3	GSG-PN-025-2	GSG-PN-025-3
Price	\$162.00	\$234.00	\$208.00	\$280.00	\$367.00	\$477.00
Medium	Filtered, lubricated / non-lubricated compressed air					
Pressure range	30–116 psi					
Max. torque at 87 psi each jaw	1.32 in-lbf	0.88 in-lbf	5 in-lbf	3.36 in-lbf	22.03 in-lbf	14.69 in-lbf
Total gripper torque at 87 psi	2.65 in-lbf	2.65 in-lbf	10.08 in-lbf	10.08 in-lbf	44.07 in-lbf	44.07 in-lbf
Stroke ( $\pm 1^\circ$ )	2 x 19°	3 x 19°	2 x 19°	3 x 19°	2 x 19°	3 x 19°
Maximum repeatability tolerance	$\pm 0.1^\circ$					
Weight	32g	36g	100g	110g	340g	400g

Use Quick#s for easy online ordering.

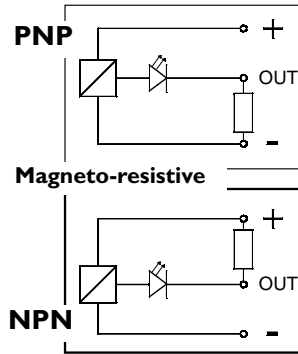
For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

## Compact Angular Gripper – PN

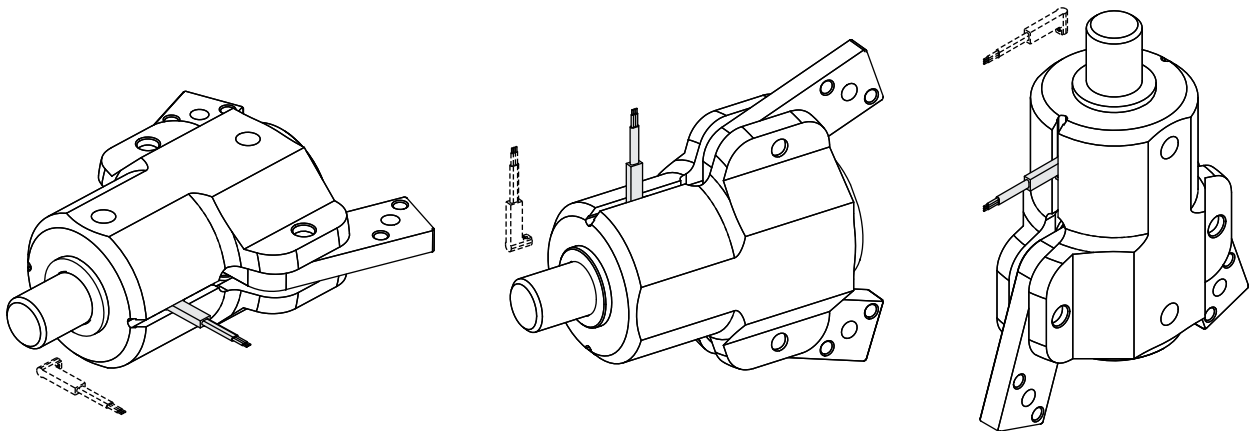
### Sensors

The operating position can be checked by sensors fitted in the guides of the grippers body. These sensors detect the position by means of a magnet placed in the piston.

SN...



Quick#	Part#	Signal	Connection	Price
<b>90° Lead exit, 3-wire SN style magneto-resistive sensors</b>				
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



### Safety loads

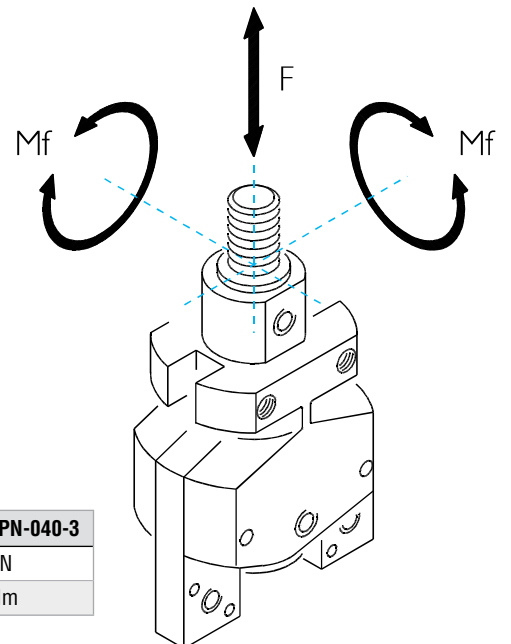
Please observe on the following table the maximum permitted values. Overloading can damage the gripper cause functioning troubles and endanger the safety of the operator. F, Mf: are maximum permitted static loads.

**Reference:**

**Force:** N x 0.225 = lbf

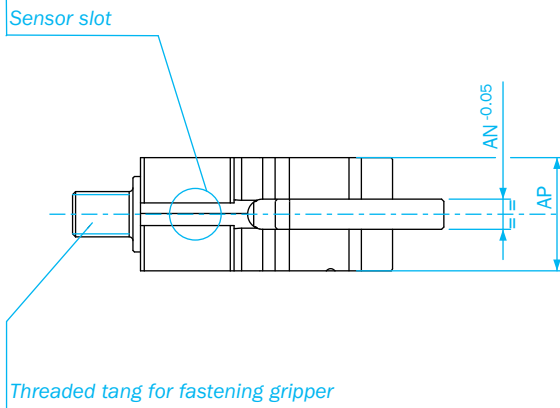
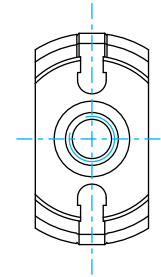
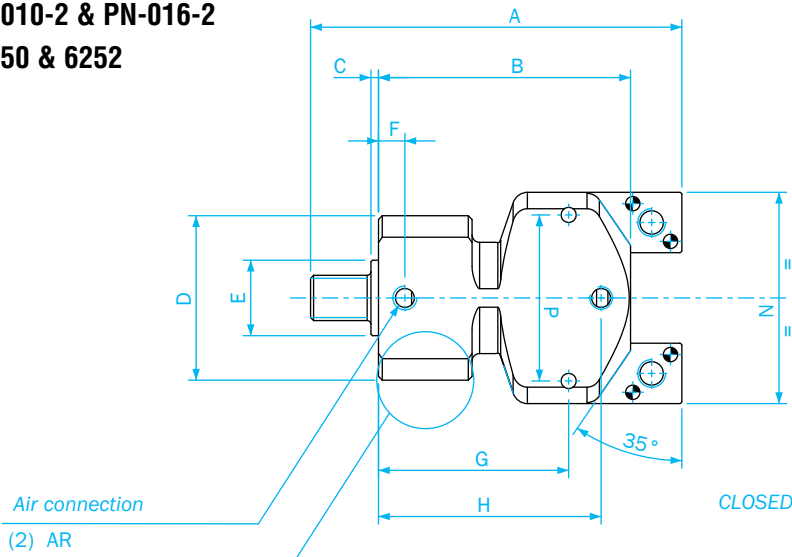
**Torque:** Nm x 8.850 = in-lbf

	PN-010-2	PN-010-3	PN-016-2	PN-016-3	PN-025-2	PN-025-3	PN-040-2	PN-040-3
<b>F</b>	12N		23N		103N		191N	
<b>Mf</b>	0.2 Nm		0.4 Nm		4 Nm		10 Nm	

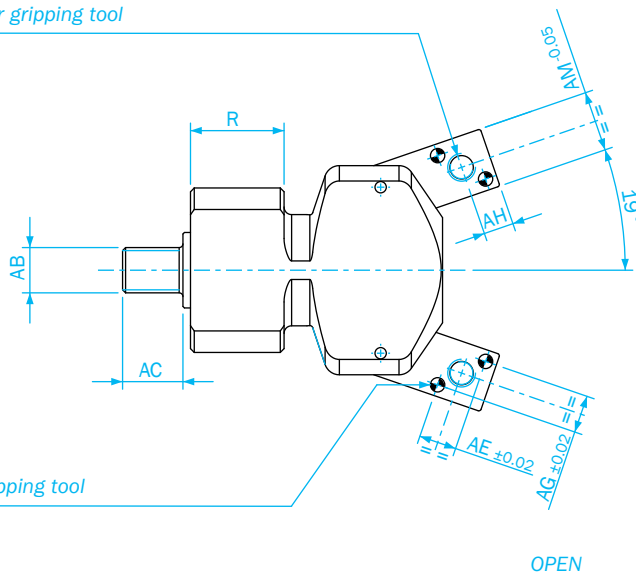


# Compact Angular Gripper – PN

PN-010-2 & PN-016-2  
#6250 & 6252



Threaded hole for gripping tool  
(1+1) AS

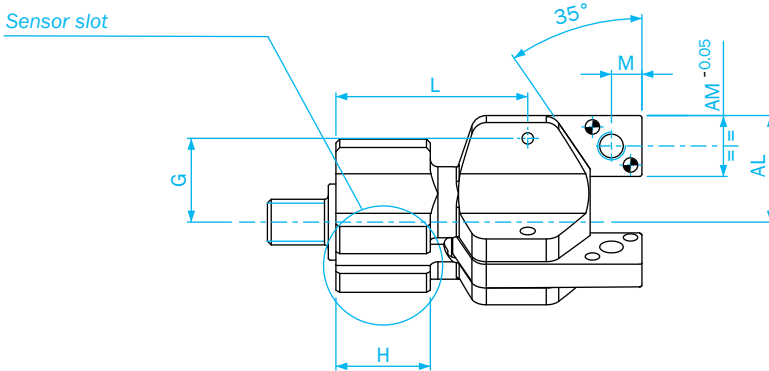
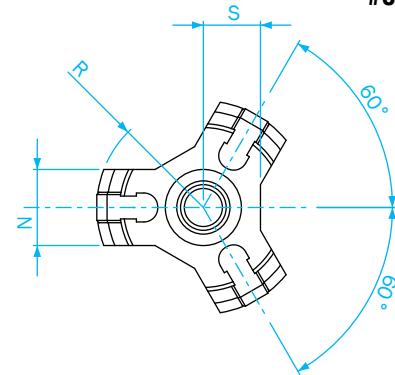
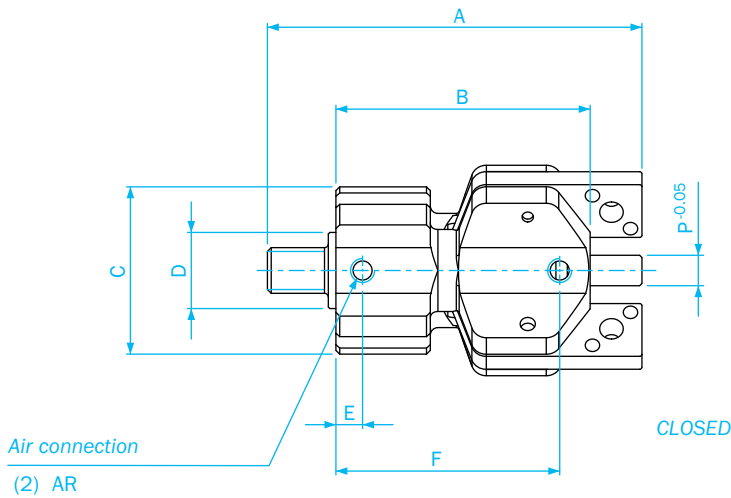


Two-Finger Style

	GSG-PN-010-2	GSG-PN-016-2
A	49.2	70.5
B	33.4	48.2
C	1	1
D	Ø22	Ø28.8
E	Ø10 h8	Ø10 h8
F	3.5	4.5
G	26.2	36
H	29.5	41
N	28	44
P	22	35
R	12.4	19.5
AB	M6	M8
AC	8	11.5
AE	5	7
AG	5	8
AH	4	5.5
AM	8	12
AN	4	6
AP	15	22
AR	M3	M5
AS	M3	M4
AT	Ø1.5 H8	Ø2 H8
AV	Ø28	Ø44

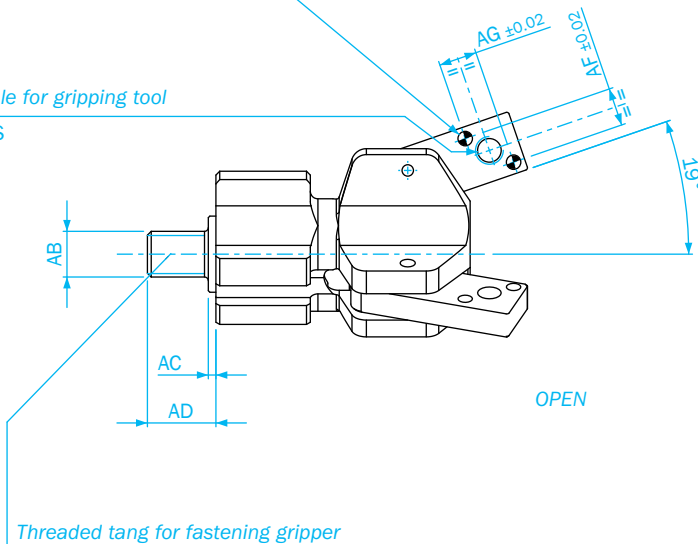
**Compact Angular Gripper – PN**

**PN-016-3  
#6253**



*Dowel pin hole for gripping tool  
(2+2+2) AT*

*Threaded hole for gripping tool  
(1+1+1) AS*



Three-Finger Style

	GSG-PN-010-3	GSG-PN-016-3
<b>A</b>	49.2	70.5
<b>B</b>	33.4	48.2
<b>C</b>	Ø22	Ø28.8
<b>D</b>	Ø10 h8	Ø10 h8
<b>E</b>	3.5	4.5
<b>F</b>	29.4	41
<b>G</b>	11	17.5
<b>H</b>	12.4	19.5
<b>L</b>	25.2	36
<b>M</b>	4	5.5
<b>N</b>	10	15
<b>P</b>	4	6
<b>R</b>	Ø28	Ø44
<b>S</b>	7.5	11
<b>AB</b>	M6	M8
<b>AC</b>	1	1
<b>AD</b>	9	12.5
<b>AF</b>	5	8
<b>AG</b>	5	7
<b>AL</b>	14	22
<b>AM</b>	8	12
<b>AR</b>	M3	M5
<b>AS</b>	M3	M5
<b>AT</b>	Ø1.5 H8	Ø2 H8

## 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.



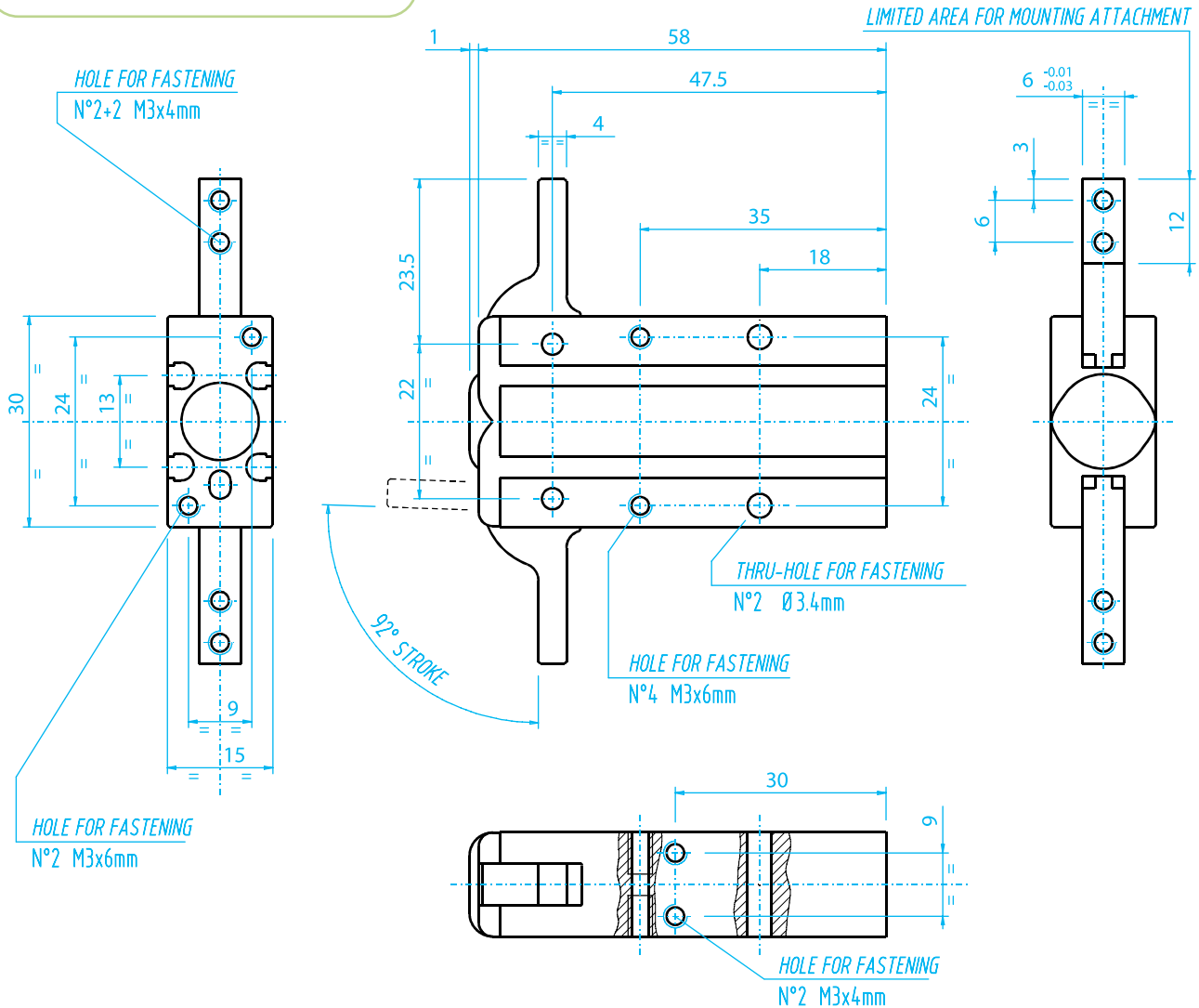
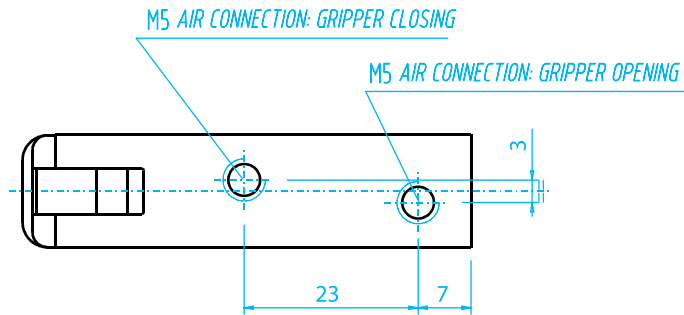
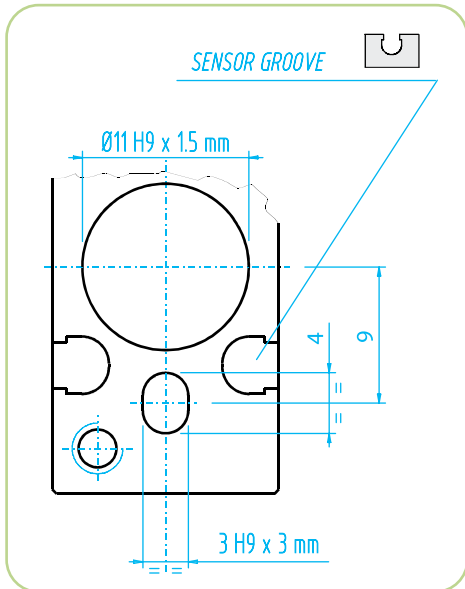
Quick#	6939	6940	6941	6942
Part#	GX-10S	GX-16S	GX-20S	GX-25S
Price	\$228.00	\$244.00	\$256.00	\$270.00
Medium	Filtered, lubricated / non-lubricated compressed air			
Pressure range	36–116 psi			
Opening maximum total torque at 87 psi	6.2 in-lbf	21.2 in-lbf	40.8 in-lbf	76 in-lbf
Closing maximum total 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



**Radial Gripper – GX-S**

**GX-10S  
#6939**

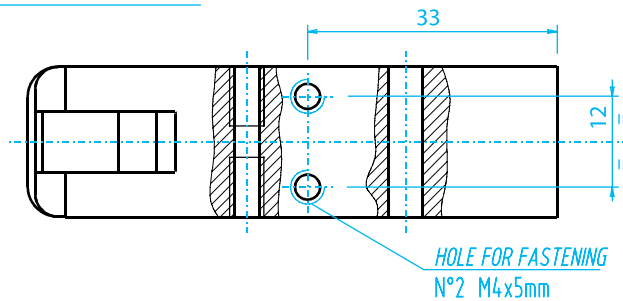
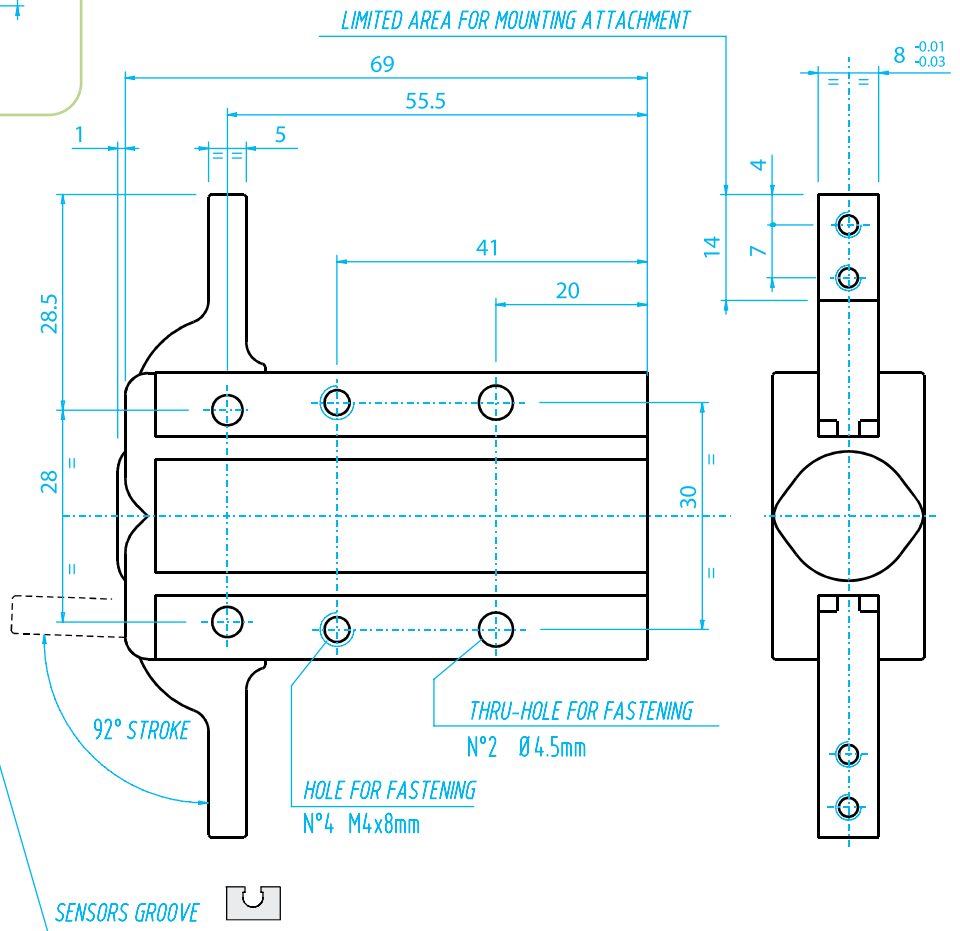
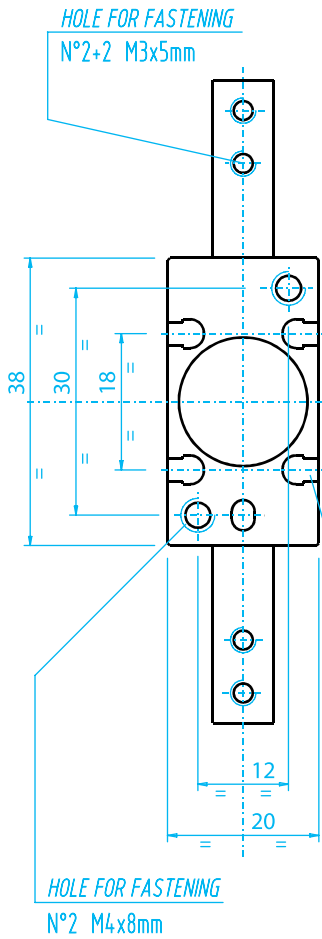
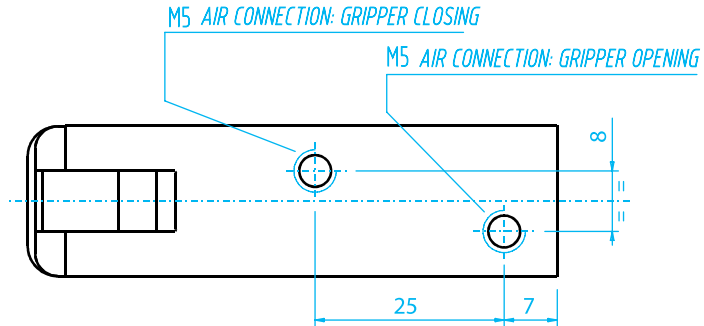
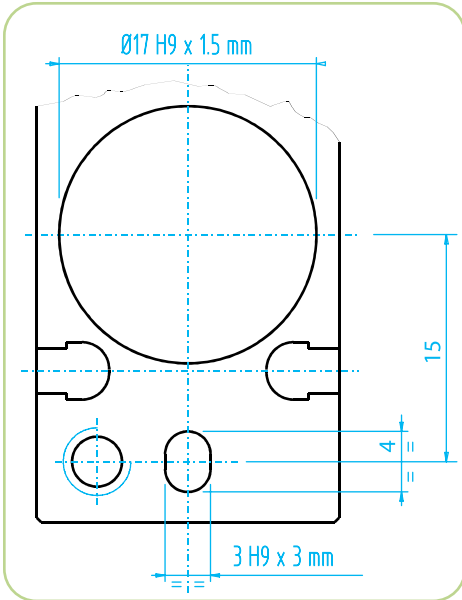
(Dimensioned drawing shown full scale)



# Radial Gripper – GX-S

(Dimensioned drawings shown full scale)

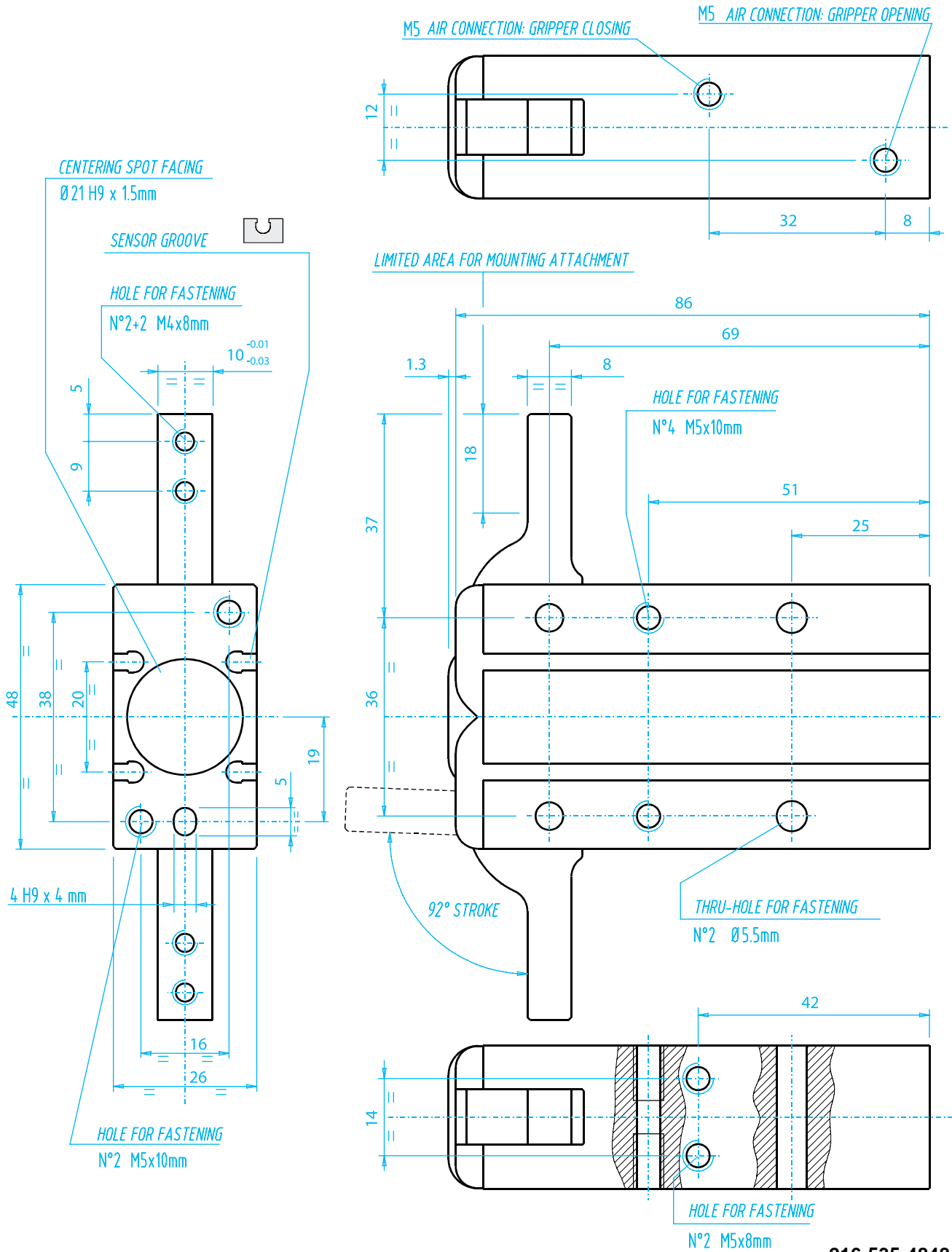
**GX-16S**  
**#6940**



**Radial Gripper – GX-S**

(Dimensioned drawings shown full scale)

**GX-20S  
#6941**

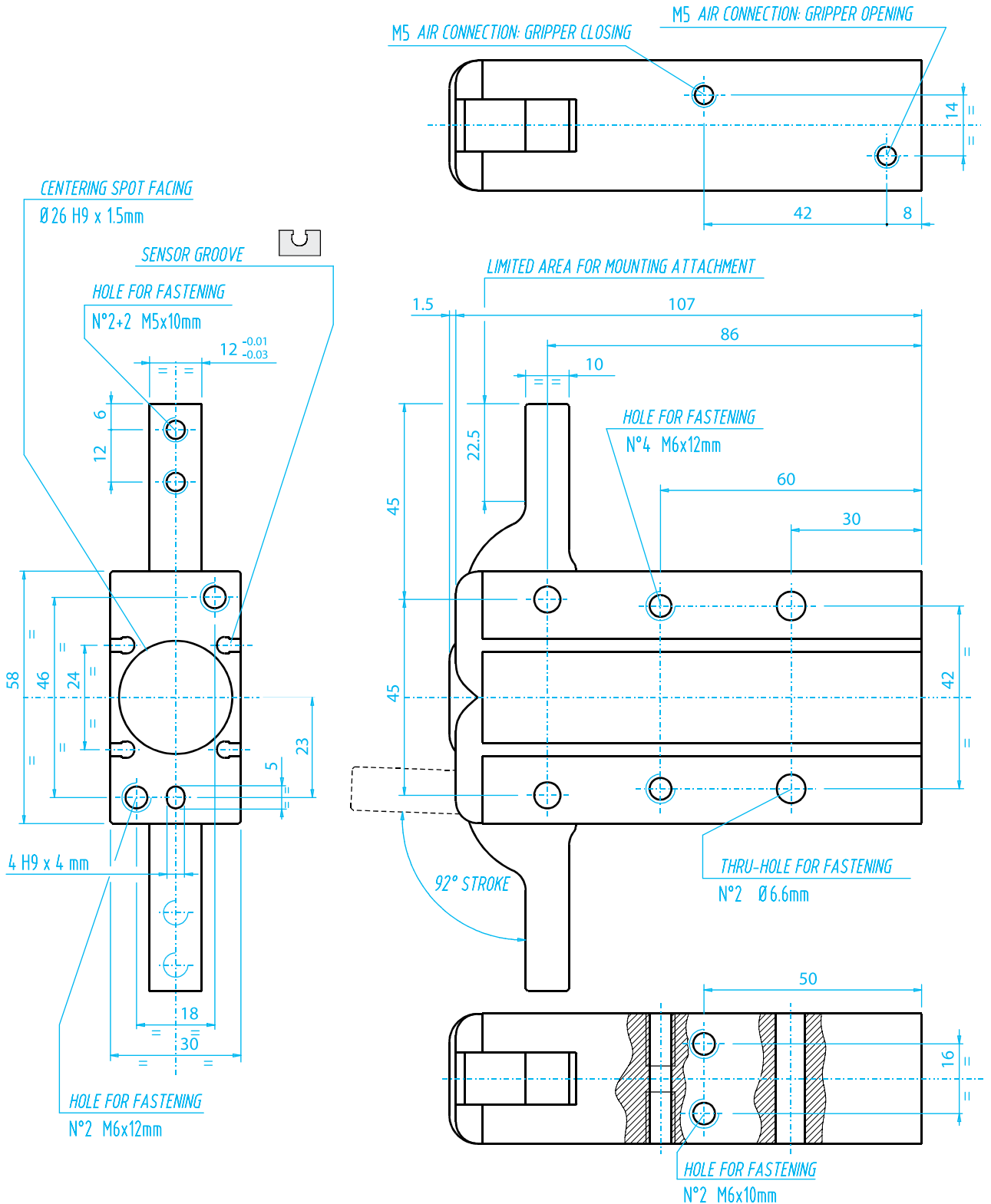




# Radial Gripper – GX-S

(Dimensioned drawings reduced to fit)

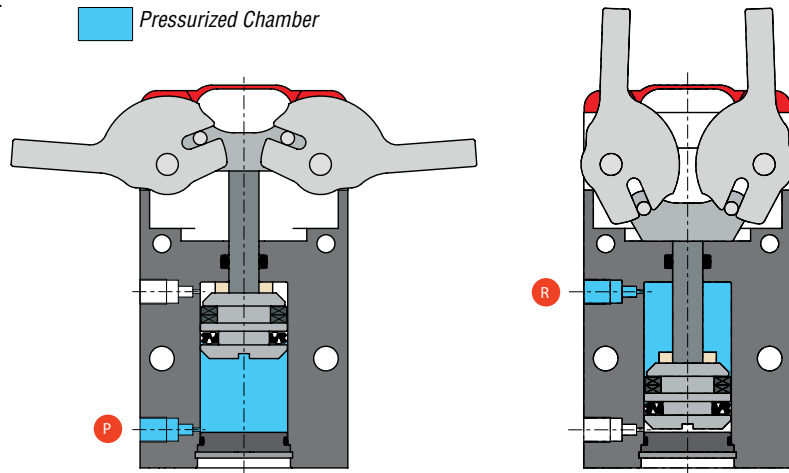
GX-25S  
#6942



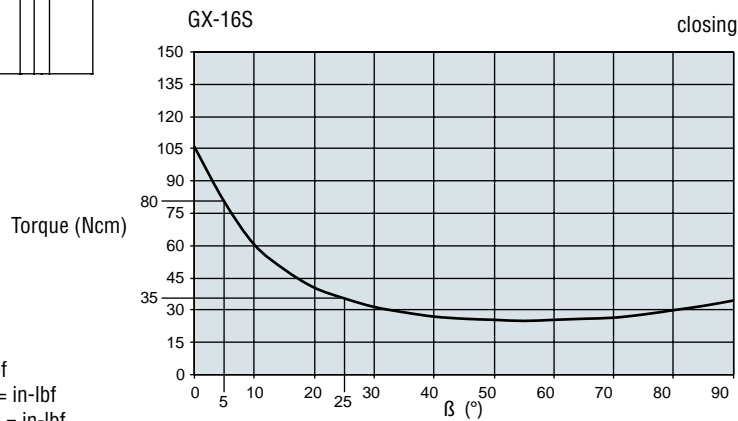
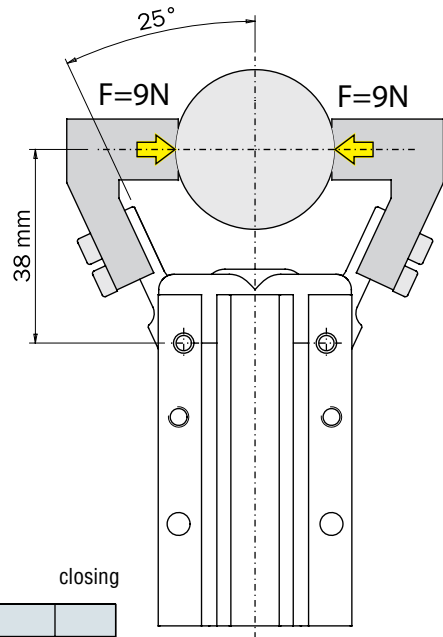
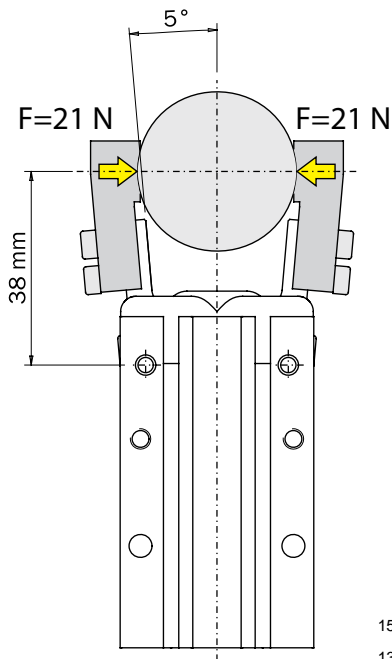
# Radial Gripper – GX-S

## 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

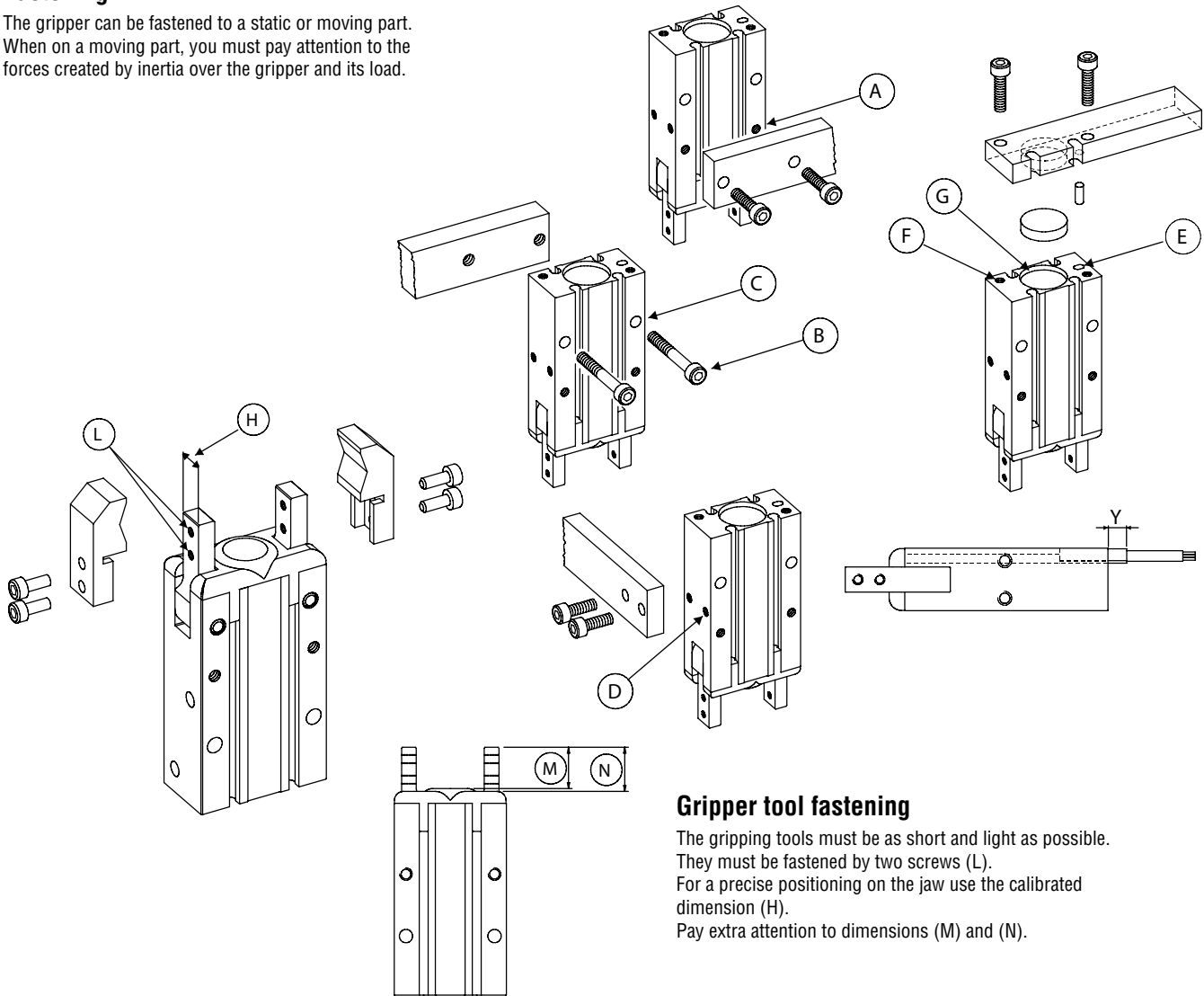
**Pressure:** bar x 14.5 = psi

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
<b>A</b>	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
<b>B</b>	M3 x 22mm	M4 x 30mm	M5 x 35mm	M6 x 40mm
<b>C</b>	ø3.4mm	ø4.5mm	ø5.5mm	ø6.6mm
<b>D</b>	M3 x 4mm	M4 x 5mm	M5 x 8mm	M6 x 10mm
<b>E</b>	3H9 x 3mm	3H9 x 3mm	4H9 x 4mm	4H9 x 4mm
<b>F</b>	M3 x 6mm	M4 x 8mm	M5 x 10mm	M6 x 12mm
<b>G</b>	ø11H9 x 1.5mm	ø17H9 x 1.5mm	ø21H9 x 1.5mm	ø26H9 x 1.5mm
<b>H</b>	6 <sup>±0.01</sup> mm	8 <sup>±0.01</sup> mm	10 <sup>±0.01</sup> mm	12 <sup>±0.01</sup> mm
<b>L</b>	M3 x 4mm	M3 x 5mm	M4 x 8mm	M5 x 10mm
<b>M</b>	11.7mm	14mm	18.7mm	22.5mm
<b>N</b>	13mm	15mm	20mm	24mm

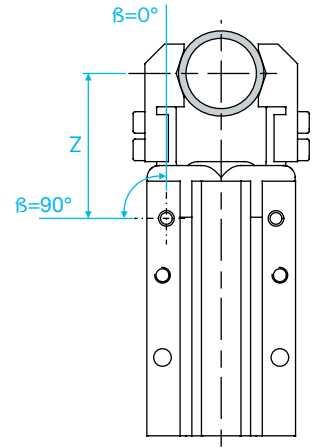
Sensor Type	GX-10S	GX-16S	GX-20S	GX-25S
<b>SN</b>	Y = 4mm	Y = 2mm	Y = 1mm	Y = 0mm
<b>SS</b>	Y = 4 mm + cable	Y = 2mm + cable	Y = 1mm + cable	Y = 0mm + cable

# Radial Gripper – GX-S

## 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.



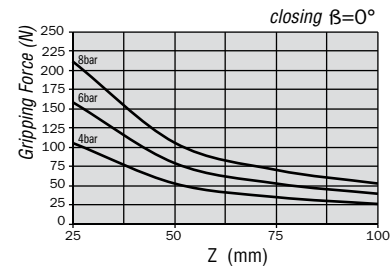
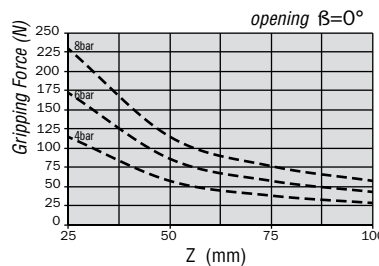
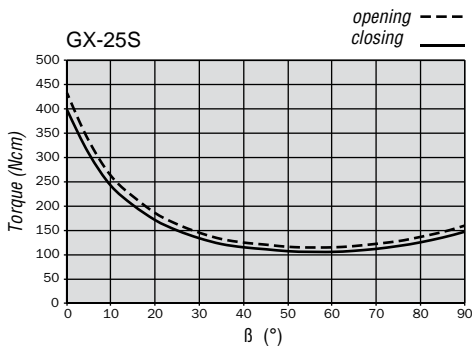
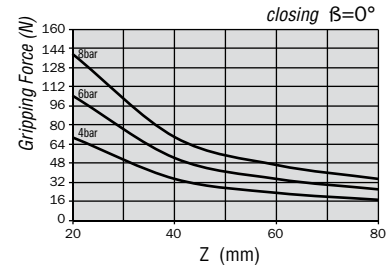
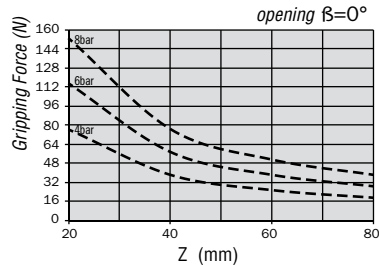
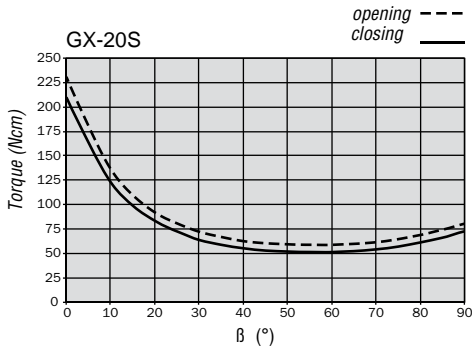
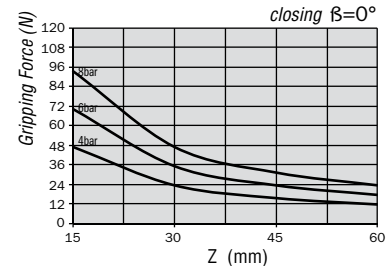
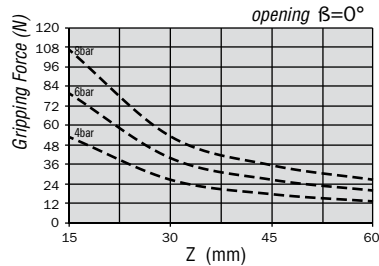
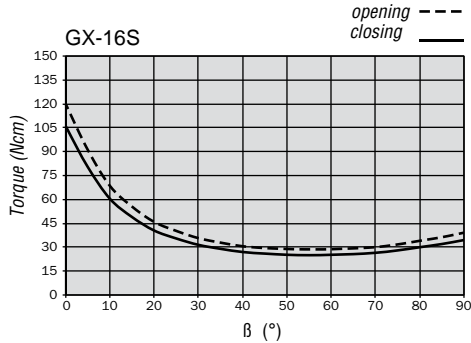
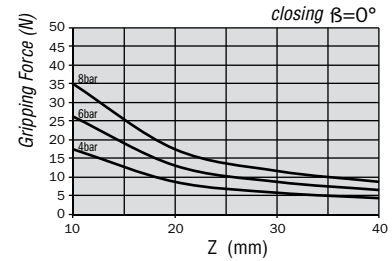
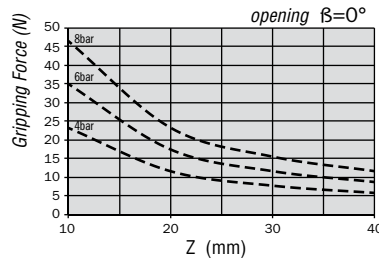
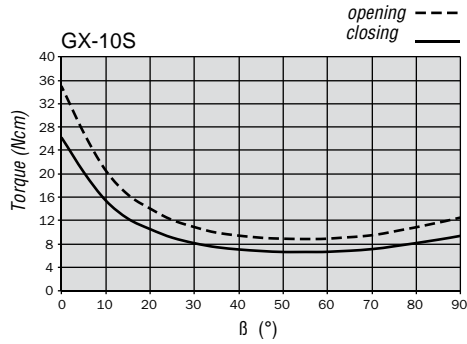
**Reference:**

**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



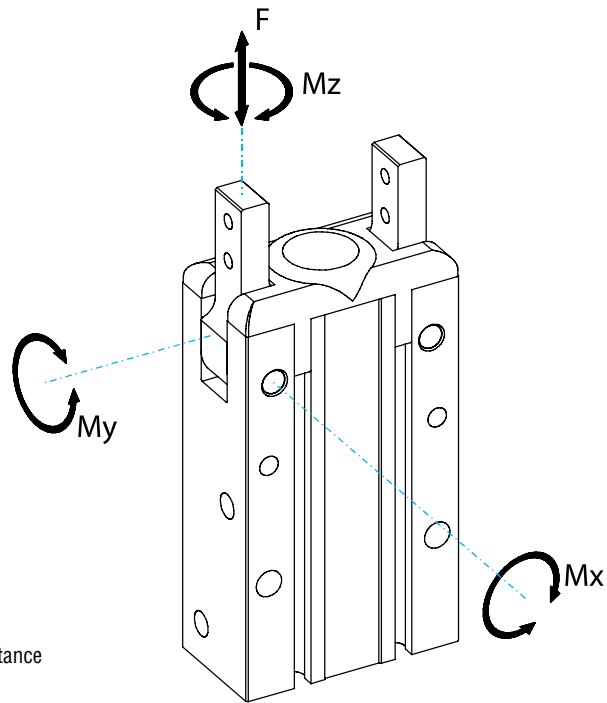
# Radial Gripper – GX-S

## 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.

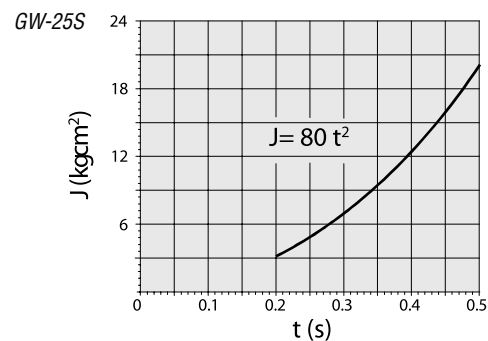
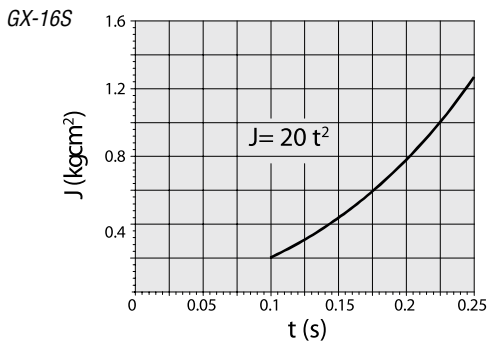
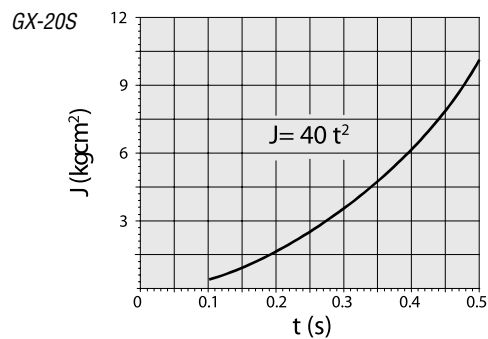
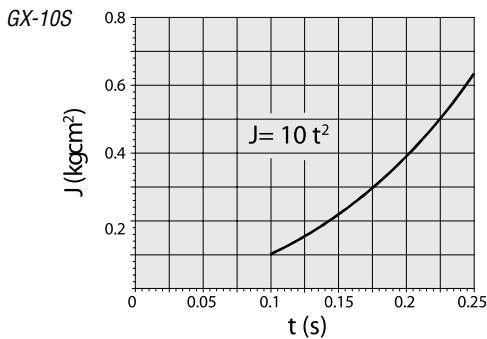
	GX-10S	GX-16S	GX-20S	GX-25S
<b>F</b>	35 N	60 N	100 N	140 N
<b>Mx</b>	0.5 Nm	2 Nm	4 Nm	7 Nm
<b>My</b>	0.5 Nm	1 Nm	2 Nm	4 Nm
<b>Mz</b>	0.5 Nm	2 Nm	4 Nm	7 Nm



**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

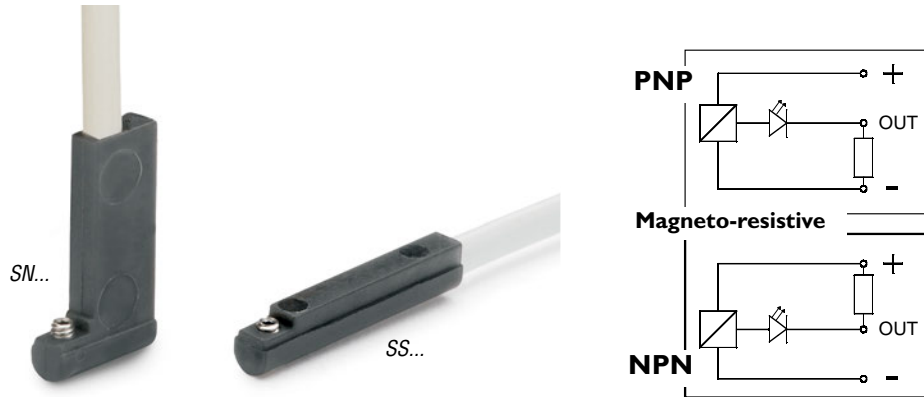
The graphs show the maximum permitted moment of inertia on each gripping tool (J), as a factor of the opening or closing time (t). Use flow controllers (not supplied) to get the proper speed.



# Radial Gripper – GX-S

## 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
<b>3-wire, SS style magnetoresistive sensors</b>				
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
<b>90° Lead exit, 3-wire SN style magnetoresistive sensors</b>				
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.*

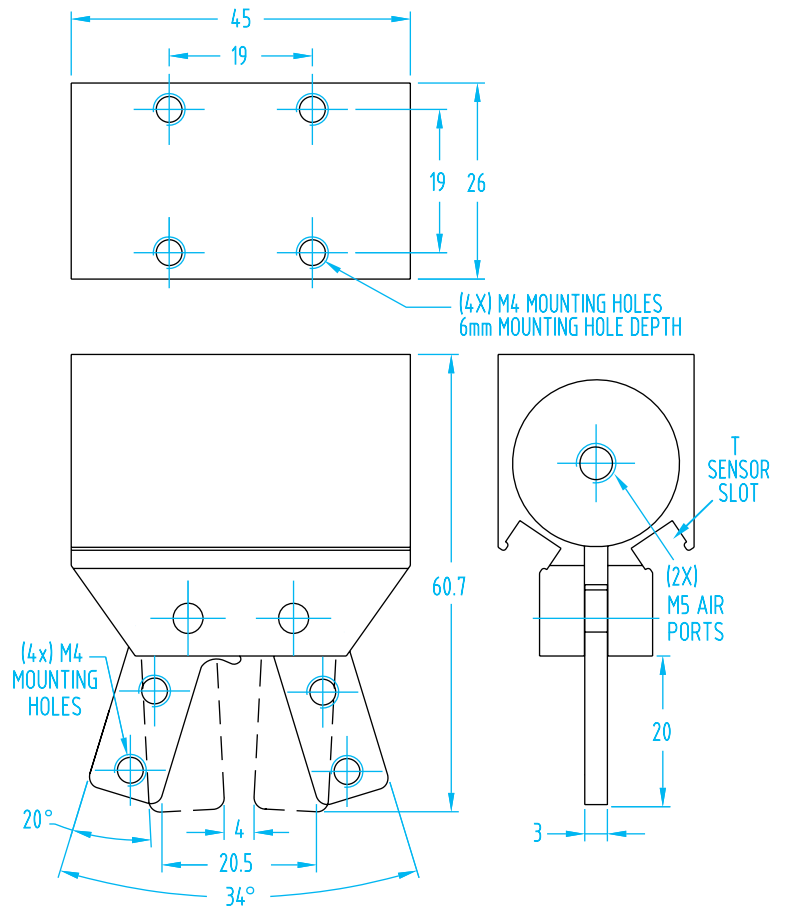


# Angular Gripper – AA



- M4 threads on the jaw to mount your own fingers.
- The AA-21 features the same strong mechanism used for the popular #790 & #791 sprue grippers. Its practical design and strong grip force have become the standard for many sprue gripping applications. The hardened steel jaws have mounting holes for custom made fingers used in very specific applications. The AA-21 is the base gripper we use for our special deep reach and large diameter grippers.
- Mounting Brackets available on page 458–459.

(Dimensioned drawings shown full scale)

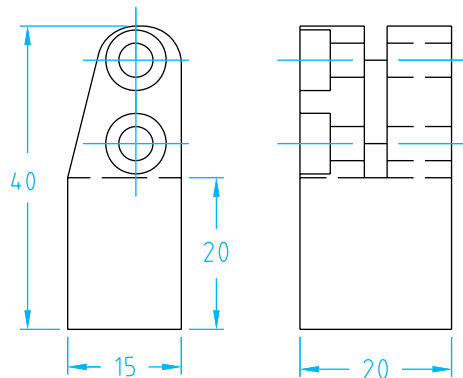


AA-21 - Angular Gripper

Quick#	Part#	Price	Weight	Style	lbs. Force at 25mm Tooling Length*	lbs. Force at 35mm Tooling Length*
1476	GSG-AA-21-NO	\$235.00	94g	Spring Open	22.5 lbf	16.0 lbf
1477	GSG-AA-21	\$235.00	92g	Double Acting	27.0 lbf	19.5 lbf
<i>Order sensors separately</i> * Force when compressed air is supplied at 87psi. Tooling length is measured from jaw pivot point.						
792	SL4N225G	\$27.20	PNP	T-slot, 3-wire with lead, 2.5m long		
6274	SL3N203G	\$31.16	PNP	T-slot, 3-wire with M8 male connector, 0.3m long*		
793	SL4M225G	\$27.20	NPN	T-slot, 3-wire with lead, 2.5m long		
6456	SL3M203G	\$31.16	NPN	T-slot, 3-wire with M8 male connector, 0.3m long*		

See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

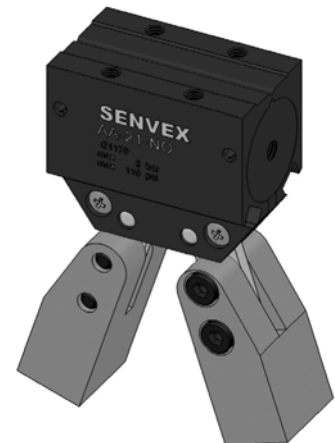
Don't want to machine custom fingers from scratch? Start with these aluminum finger blanks. They are easy to shape to your particular part.



AA-21 - Finger Blanks - priced per pair

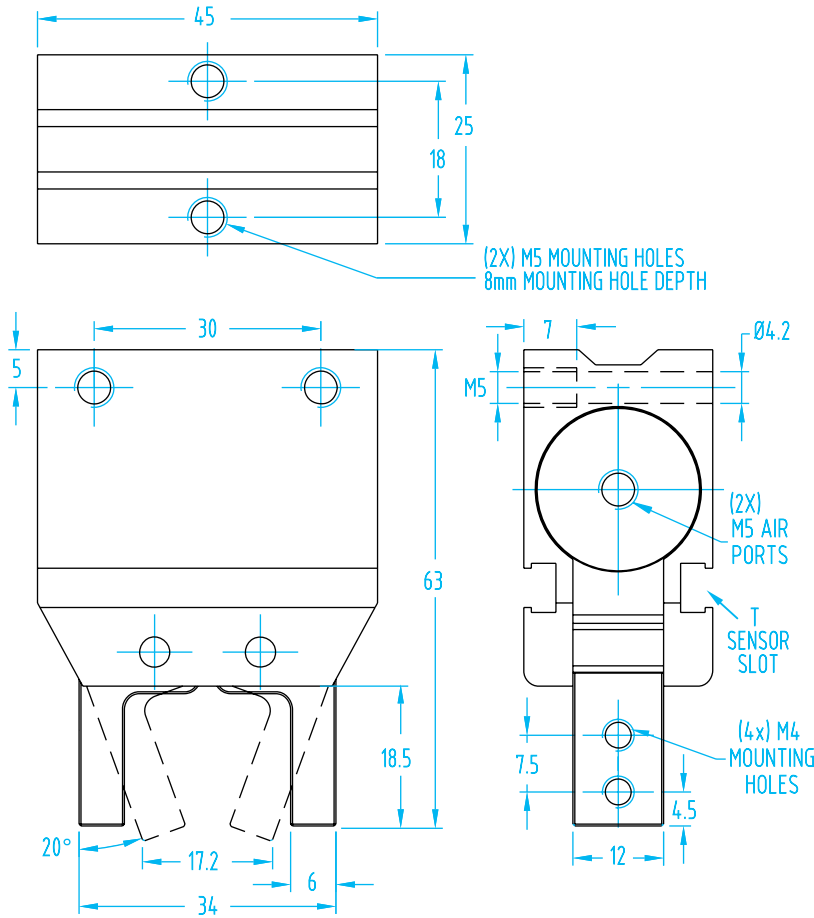
Quick#	Part#	Material	Price
1858	GSG-FB-AA21	Aluminum	\$29.76

Includes fasteners.



Angular Gripper – AA

(Dimensioned drawings shown full scale)



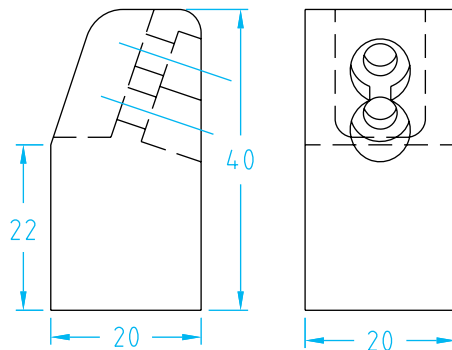
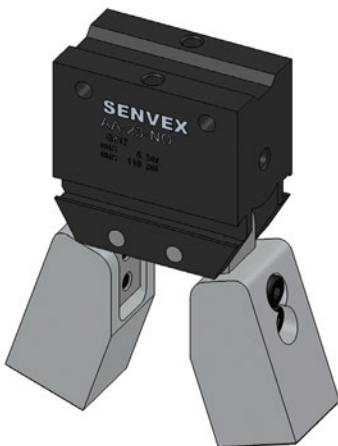
- This is the same gripper body as the #1473 and #1474 sprue grippers. It has excellent grip force, dual sensor grooves, and jaws with M4 threads to mount your own fingers.
- Mounting Brackets available on page 458–459.



AA-23 - Angular Gripper

Quick#	Part#	Price	Weight	Style	lbs. Force at 25mm Tooling Length*	lbs. Force at 35mm Tooling Length*
1753	GSG-AA-23-NO	\$205.00	102g	Spring Open	22.5 lbf	16.0 lbf
1754	GSG-AA-23	\$205.00	100g	Double Acting	27.0 lbf	19.5 lbf
<i>Order sensors separately</i>		* Force when compressed air is supplied at 87psi. Tooling length is measured from jaw pivot point.				
792	SL4N225G	\$27.20	PNP	T-slot, 3-wire with lead, 2.5m long		
6274	SL3N203G	\$31.16	PNP	T-slot, 3-wire with M8 male connector, 0.3m long*		
793	SL4M225G	\$27.20	NPN	T-slot, 3-wire with lead, 2.5m long		
6456	SL3M203G	\$31.16	NPN	T-slot, 3-wire with M8 male connector, 0.3m long*		

See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.



Don't want to machine custom fingers from scratch? Start with these aluminum finger blanks. They are easy to shape to your particular part.

AA-23 - Finger Blanks - priced per pair

Quick#	Part#	Material	Price
1859	GSG-FB-AA23	Aluminum	\$29.76

Includes fasteners.



## Parallel Gripper – PE

- Double acting (single acting upon request for PE-25... and PE-45...).
- Self centering
- High efficiency and reliability due to few moving parts.
- Wide choice of stroke.
- The gripping force is constant in both directions along total stroke.
- Optional sensors available on page 717.



#6247



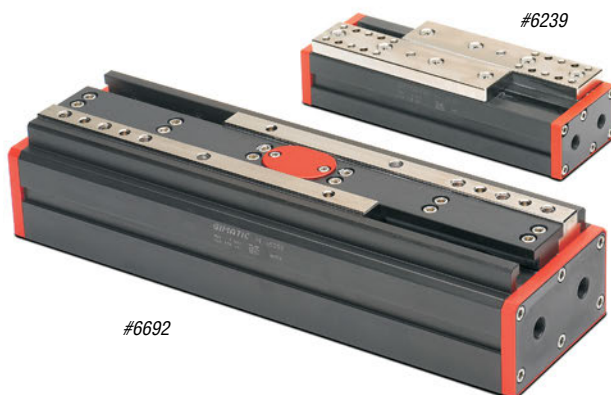
#6246



#6245



#6244



#6692



#6239



#6241



#6243



#6242



#6240



#6235



#6234



#6238



#6237



#6236



#6233

# Parallel Gripper – PE

PE-1610, PE-1625, PE-1640, PE-1680, PE-16150 and PE-16200

Quick#	6233	6236	6237	6238	6234	6235
Part#	PE-1610	PE-1625	PE-1640	PE-1680	PE-16150	PE-16200
Price	\$290.00	\$436.00	\$476.00	\$705.00	\$1,130.00	\$1,229.00
Medium	Filtered, lubricated / non-lubricated compressed air					
Pressure range	30–116 psi					
Total gripping force at 87 psi	45 lbf					
Stroke (± 0.25mm)	2x5mm	2x12.5mm	2x20mm	2x40mm	2x75mm	2x100mm
Cycle air consumption	7cm <sup>3</sup>	14cm <sup>3</sup>	21cm <sup>3</sup>	39cm <sup>3</sup>	71cm <sup>3</sup>	97cm <sup>3</sup>
Maximum repeatability tolerance	0.03mm					
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.					
Weight	200g	250g	350g	500g	900g	1200g

Use Quick#s for easy online ordering.



### PE-16.. Mounting Bracket

Quick#	Part#		Price
7620	I36K	M16x1 Thread, 56mm long post	\$44.15

Dimensional drawing online.

### Gripping Force

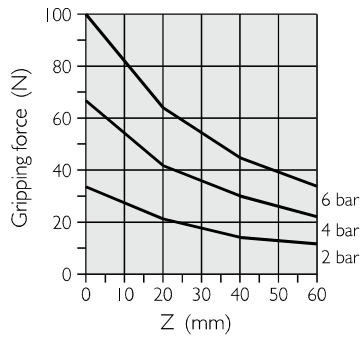
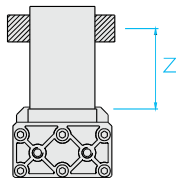
The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length 'Z' and the overhanging 'X'.

### Reference:

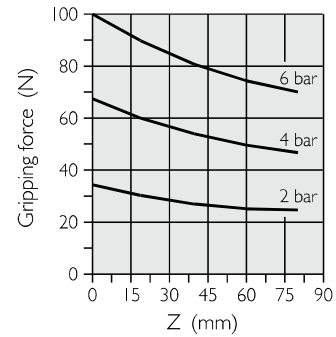
**Force:** N x 0.225 = lbf

**Pressure:** bar x 14.5 = psi

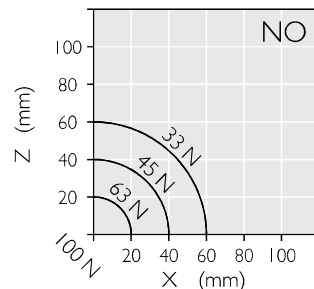
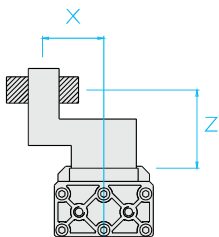
PE-1610



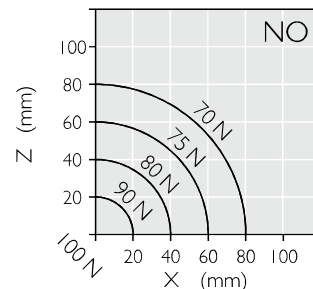
PE-1625/40/80/150/200



PE-1610 (6 bar)



PE-1625/40/80/150/200 (6 bar)



# Parallel Gripper – PE

PE-2520, PE-2540, PE-2560, PE-25100 and PE-25200

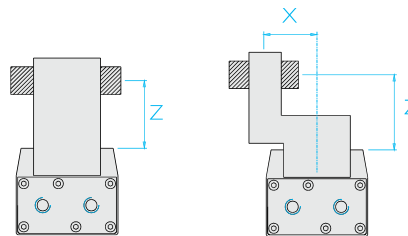
Quick#	6240	6242	6243	6239	6241
Part#	PE-2520	PE-2540	PE-2560	PE-25100	PE-25200
Price	\$509.00	\$622.00	\$685.00	\$1,074.00	\$1,413.00
Medium	Filtered, lubricated / non-lubricated compressed air				
Pressure range	30–116 psi				
Total gripping force at 87 psi	103.4 lbf				
Stroke ( $\pm 0.25\text{mm}$ )	2x10mm	2x20mm	2x30mm	2x50mm	2x100mm
Cycle air consumption	44cm <sup>3</sup>	74cm <sup>3</sup>	102cm <sup>3</sup>	146cm <sup>3</sup>	263cm <sup>3</sup>
Maximum repeatability tolerance	0.04mm				
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.				
Weight	700g	980g	1285g	1235g	2800g

Sensors available on page 717.

## 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 overhanging 'X'.

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

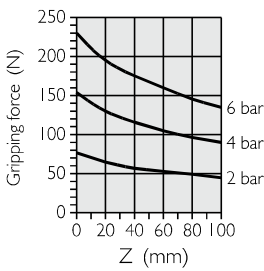


Reference:

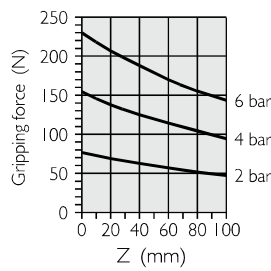
Force:  $N \times 0.225 = \text{lbf}$

Pressure:  $\text{bar} \times 14.5 = \text{psi}$

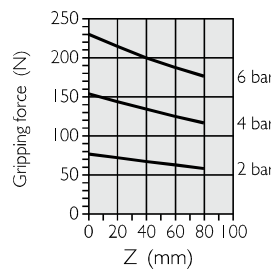
PE-2520



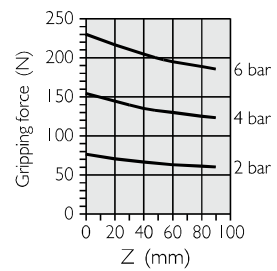
PE-2540



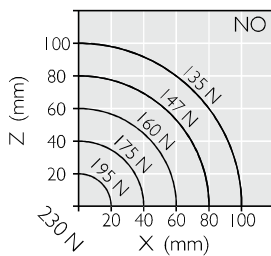
PE-2560



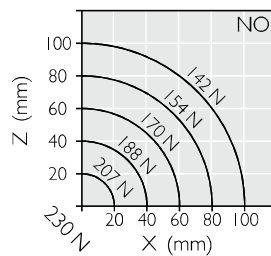
PE-25100/200



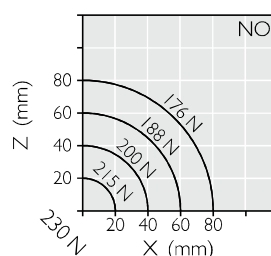
PE-2520 (6 bar)



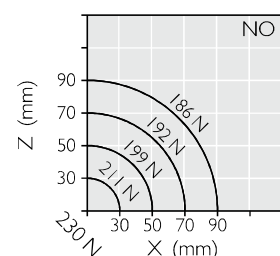
PE-2540 (6 bar)



PE-2560 (6 bar)



PE-25100/200 (6 bar)



# Parallel Gripper – PE

## PE-4520, PE-4540, PE-4560, PE-4580 and PE-45200

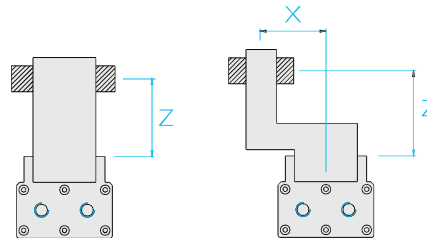
Quick#	6244	6245	6246	6247	6692
Part#	PE-4520	PE-4540	PE-4560	PE-4580	PE-45200
Price	\$883.00	\$976.00	\$1,060.00	\$1,626.00	\$1,724.00
Medium	Filtered, lubricated / non-lubricated compressed air				
Pressure range	30–116 psi				
Total gripping force at 87 psi	314.8 lbf				404.6 lbf
Stroke (± 0.25mm)	2x10mm	2x20mm	2x30mm	2x40mm	2x100mm
Cycle air consumption	132cm <sup>3</sup>	208cm <sup>3</sup>	257cm <sup>3</sup>	371cm <sup>3</sup>	940cm <sup>3</sup>
Maximum repeatability tolerance	0.04mm				
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.				
Weight	1840g	2250g	2715g	3300g	3800g

Sensors available on page 717.

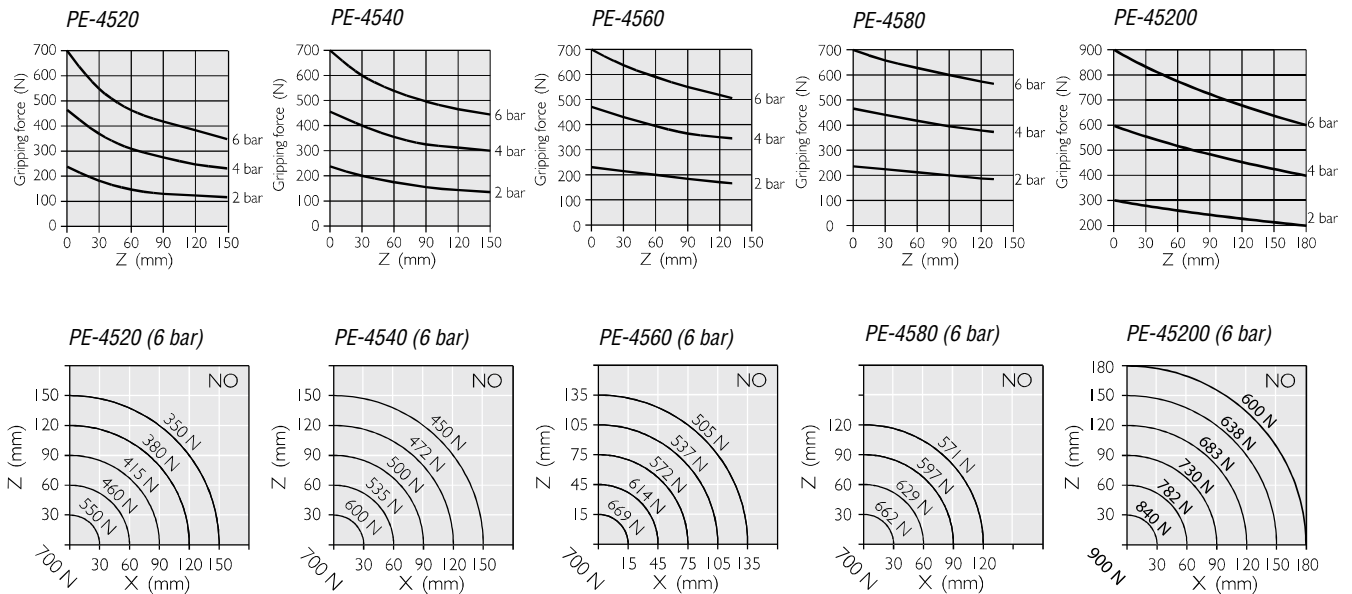
### Gripping Force

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

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



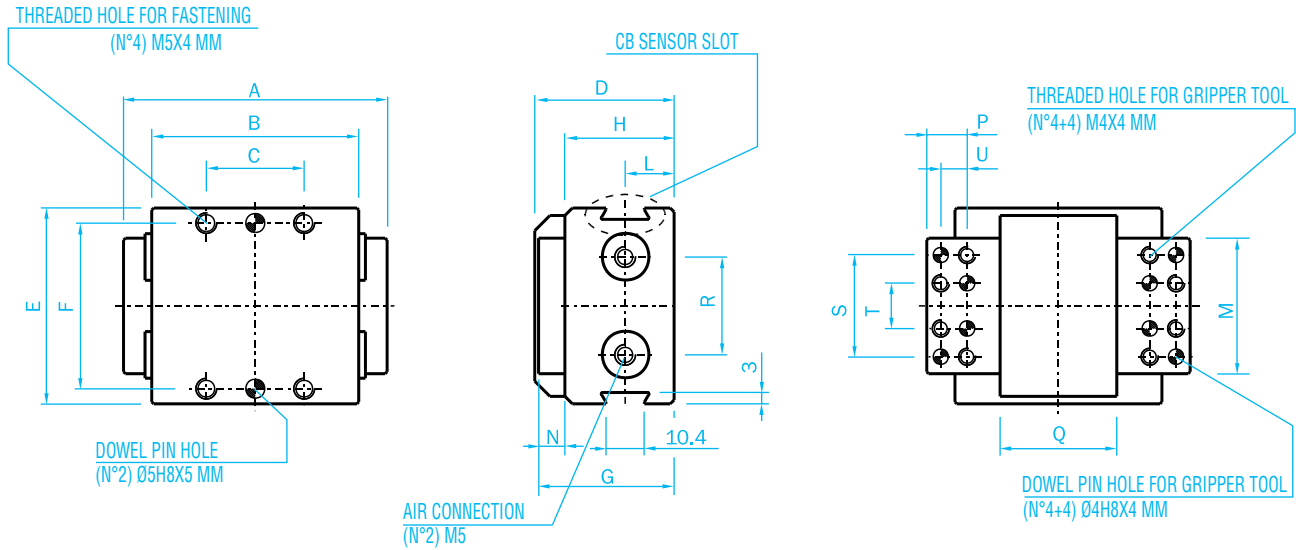
**Reference:**  
**Force:** N x 0.225 = lbf  
**Pressure:** bar x 14.5 = psi



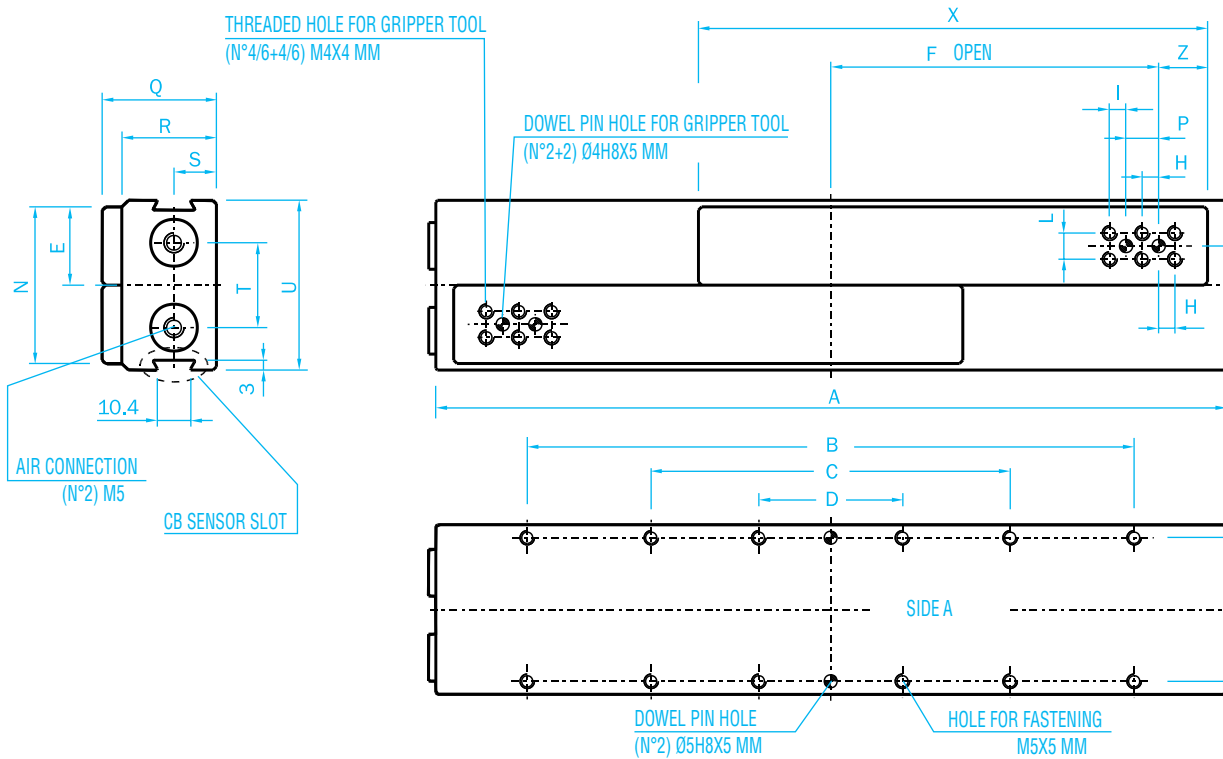
# Parallel Gripper – PE

## PE-1610

	A	B	C	D	E	F ± 0.02	G	H	L	M	N	P	Q	R ± 0.02	S ± 0.02	T ± 0.02	U ± 0.02
PE-1610	62	60	26	37	52	44	36	29	13	36	7	11.75	31	26	27	12	7



## PE-1625, PE-1640, PE-1680, PE-16150 & PE-16200

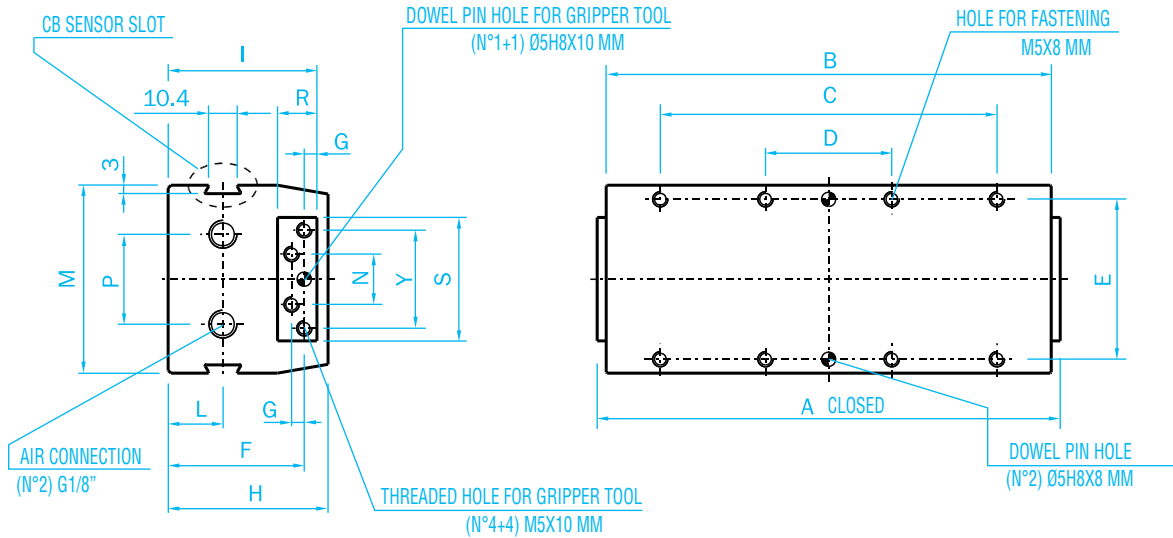


	A	B	C	D	E	F	G ± 0.02	H	I	L	M	N	P ± 0.02	Q	R	S	T	U	X	Z
PE-1625	70	-	-	26	24	12.5	44	5	-	12	12	48	12	37	29	13	26	52	41.5	14.5
PE-1640	99	-	-	60	24	26.5	44	5	-	8	12	48	10	37	29	13	26	52	63	15
PE-1680	155	-	-	60	24	54.5	44	5	5	8	12	48	10	37	29	13	26	52	99	15
PE-16150	263	-	200	60	24	108.5	44	5	5	8	12	48	10	37	29	13	26	52	172	15
PE-16200	337	280	200	60	24	145.5	44	5	5	8	12	48	10	37	29	13	26	52	221	15

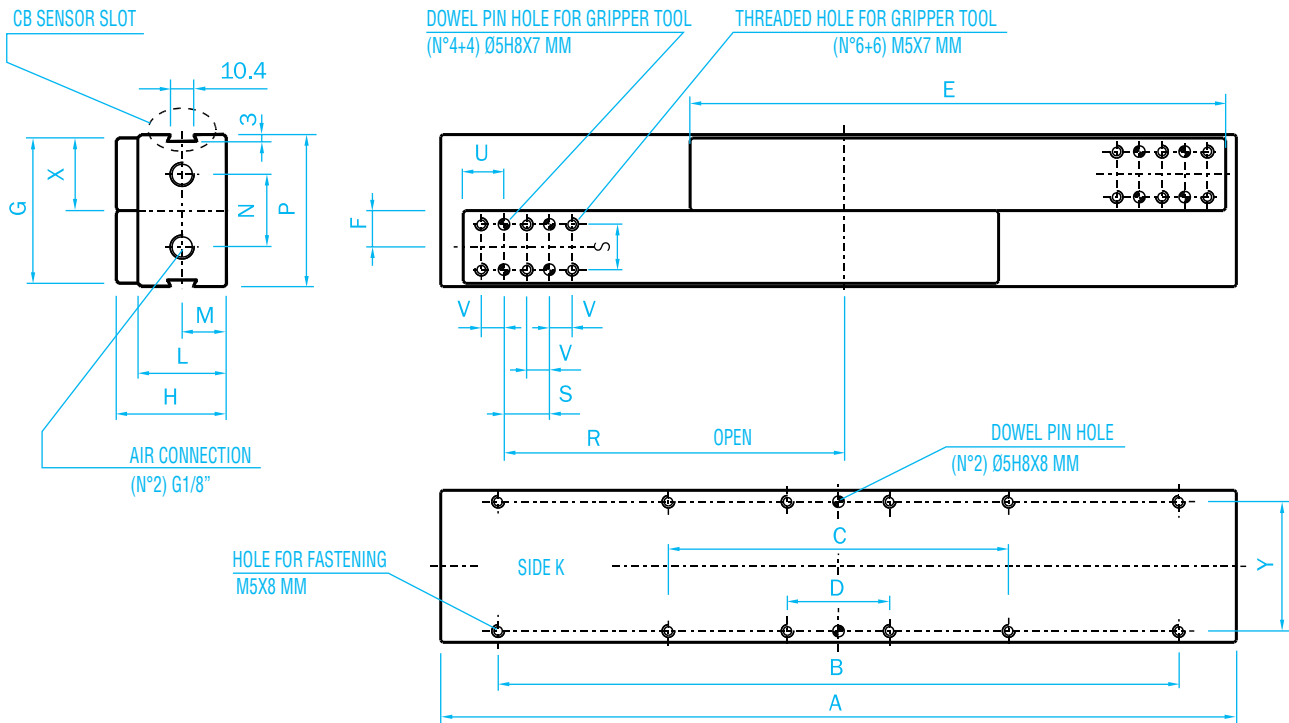
Parallel Gripper – PE

PE-2520, PE-2540, & PE-2560

	A	B	C	D	E	F	G	H	I	L	M	N	P	Y	R	S
					± 0.02		± 0.02								-0.05	-0.05
PE-2520	90	83.6	-	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44
PE-2540	130	123.6	-	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44
PE-2560	165	158.6	120	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44



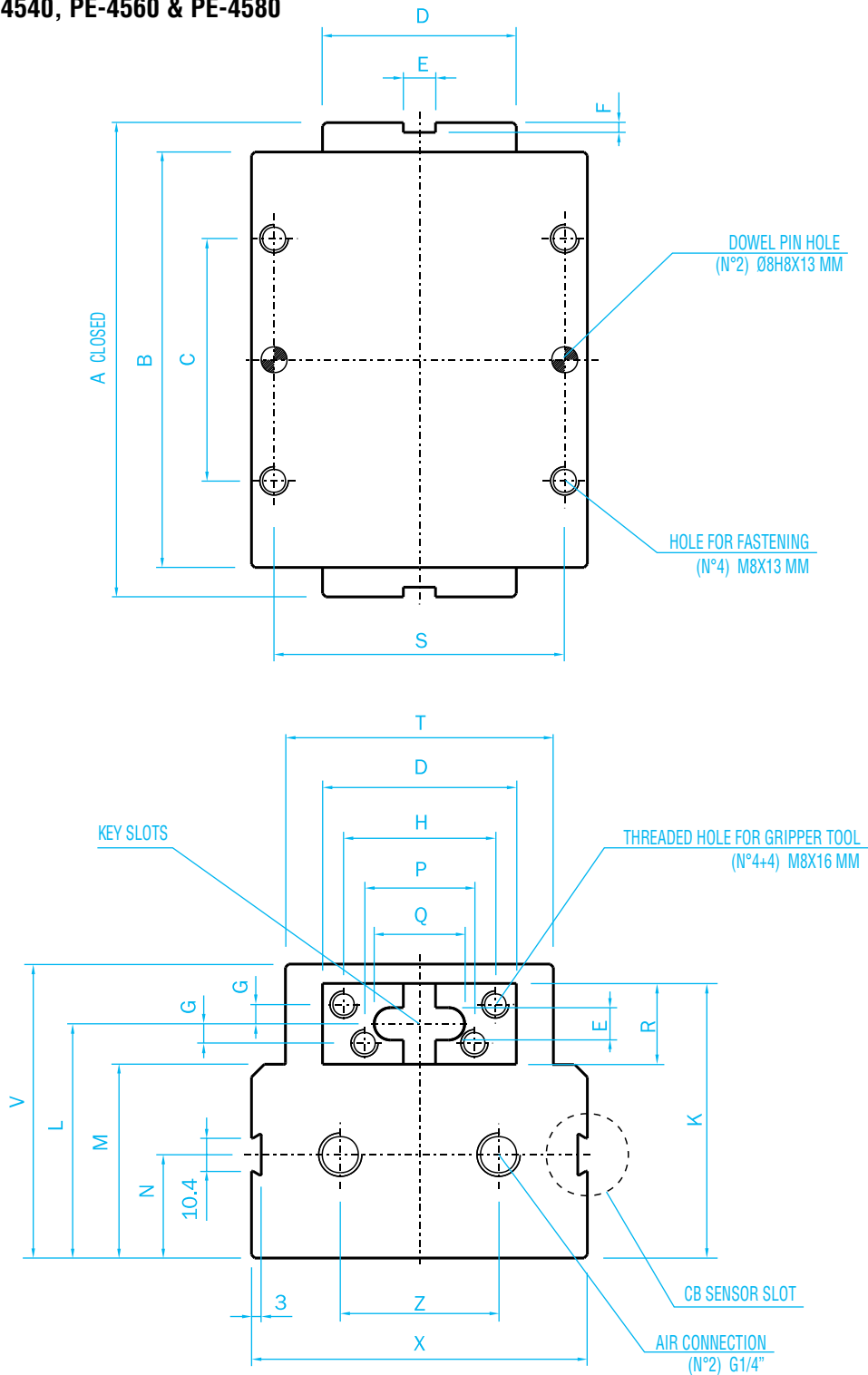
PE-25100 & PE-25200



	A	B	C	D	E	F	G	H	L	M	N	P	Y	R	S	U	X	V
													± 0.02		± 0.02			
PE-25100	200.6	-	150	45	136	16	64	48.5	39	19.5	32	67	57	75	20	18	32	10
PE-25200	350.6	300	150	45	236	16	64	48.5	39	19.5	32	67	57	150	20	18	32	10

# Parallel Gripper – PE

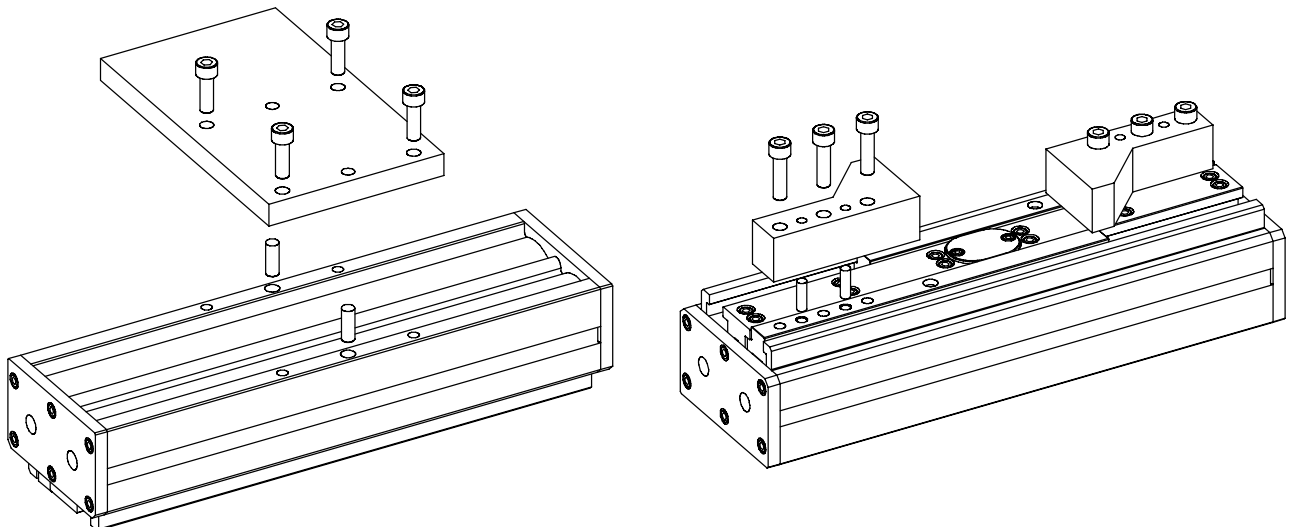
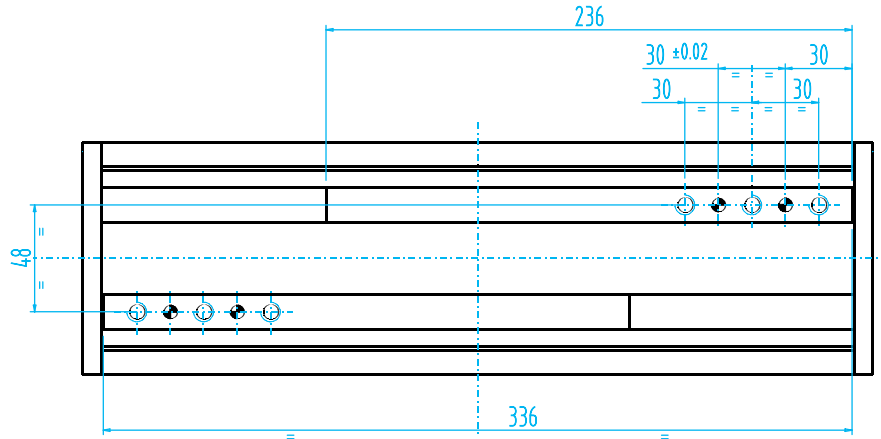
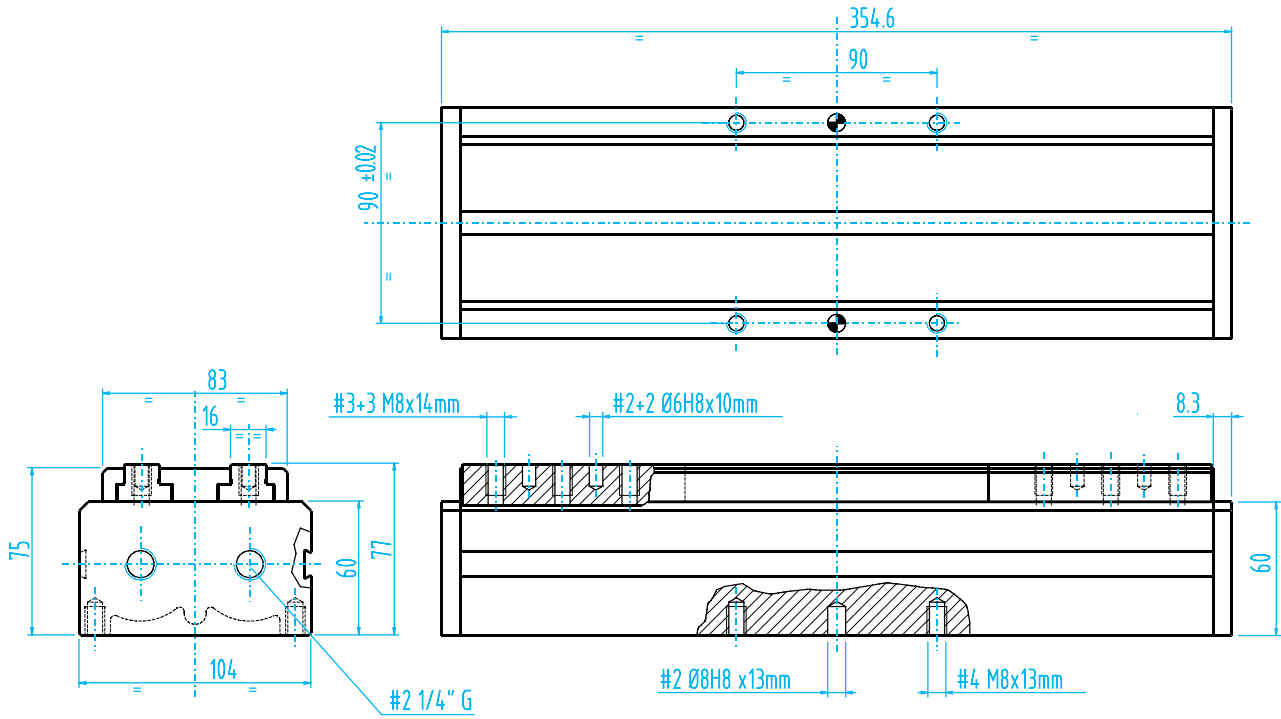
PE-4520, PE-4540, PE-4560 & PE-4580



	A	B	C	D -0.05	E +0.05	F	G	H	L	M	N	P	Q	R -0.05	S ± 0.02	T	V	X	K	Z
PE-4520	110	100.6	50	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4540	140	128.6	75	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4560	170	160.6	90	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4580	210	200.6	90	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49

**Parallel Gripper – PE**

PE-45200





## Parallel Gripper – PE

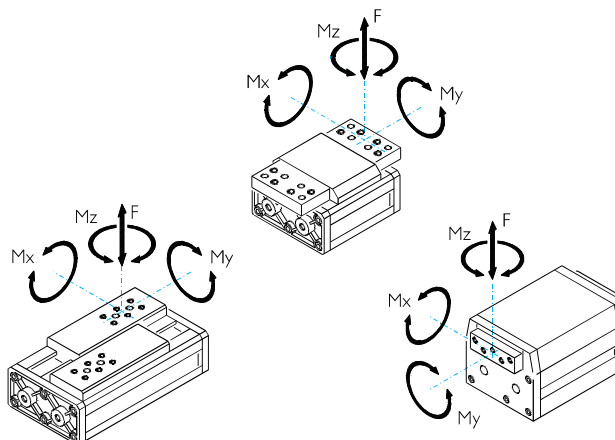
### Safety loads

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.

$F_s$ ,  $M_x_s$ ,  $M_y_s$ ,  $M_z_s$ , are maximum permitted static loads. Static means motionless jaws.

$F_d$ ,  $M_x_d$ ,  $M_y_d$ ,  $M_z_d$ , are maximum permitted dynamic loads. Dynamic means running jaws.

The following tables show the specified maximum loads (m) on each gripping tool as a function of closing or opening time. Use flow controllers (not supplied) to get the proper speed.



	PE-1610	PE-1625	PE-1640	PE-1680	PE-16150	PE-16200
<b>F s</b>	48 N	166 N	166 N	163 N	163 N	163 N
<b>Mx s</b>	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
<b>My s</b>	2.4 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm
<b>Mz s</b>	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
<b>F d</b>	0.48 N	1.7 N	1.7 N	1.6 N	1.6 N	1.6 N
<b>Mx d</b>	2.4 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm
<b>My d</b>	2.4 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm
<b>Mz d</b>	2.4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm
<b>m 0.8s</b>	-	166g	166g	163g	163g	163g
<b>m 0.5s</b>	-	108g	108g	106g	106g	106g
<b>m 0.3s</b>	48g	93g	93g	91g	-	-
<b>m 0.2s</b>	31g	83g	83g	81g	-	-
<b>m 0.1s</b>	24g	60g	60g	-	-	-

	PE-2520	PE-2540	PE-2560	PE-25100	PE-25200
<b>F s</b>	326 N	326 N	326 N	300 N	300 N
<b>Mx s</b>	14 Nm	15 Nm	18 Nm	21 Nm	21 Nm
<b>My s</b>	5 Nm	5 Nm	5 Nm	6 Nm	6 Nm
<b>Mz s</b>	14 Nm	15 Nm	18 Nm	21 Nm	21 Nm
<b>F d</b>	3.3 N	3.3 N	3.3 N	3 N	3 N
<b>Mx d</b>	14 Ncm	15 Ncm	18 Ncm	21 Ncm	21 Ncm
<b>My d</b>	5 Ncm	5 Ncm	5 Ncm	6 Ncm	6 Ncm
<b>Mz d</b>	14 Ncm	15 Ncm	18Ncm	21 Ncm	21 Ncm
<b>m 0.5s</b>	-	-	-	300g	300g
<b>m 0.3s</b>	326g	326g	326g	195g	195g
<b>m 0.2s</b>	212g	212g	212g	150g	150g
<b>m 0.1s</b>	163g	163g	163g	105g	-

	PE-4520	PE-4540	PE-4560	PE-4580	PE-45200
<b>F s</b>	730 N	730 N	730 N	730 N	730 N
<b>Mx s</b>	69 Nm	86 Nm	88 Nm	88 Nm	110 Nm
<b>My s</b>	41 Nm	41 Nm	41 Nm	41 Nm	40 Nm
<b>Mz s</b>	69 Nm	86 Nm	88 Nm	88 Nm	110 Nm
<b>F d</b>	7 N	7 N	7 N	7 N	14 N
<b>Mx d</b>	69 Ncm	86 Ncm	88 Ncm	88 Ncm	110 Ncm
<b>My d</b>	41 Ncm	41 Ncm	41 Ncm	41 Ncm	40 Ncm
<b>Mz d</b>	69 Ncm	86 Ncm	88 Ncm	88 Ncm	110 Ncm
<b>m 0.5s</b>	-	-	-	700g	1400g
<b>m 0.3s</b>	700g	450g	450g	350g	700g
<b>m 0.2s</b>	450g	350g	350g	300g	500g
<b>m 0.1s</b>	350g	300g	300g	-	-

Reference: Force:  $N \times 0.225 = lbf$  | Torque:  $Nm \times 8.850 = in-lbf$  | Torque:  $Ncm \times 0.089 = in-lbf$  | Pressure:  $bar \times 14.5 = psi$

## Parallel Gripper – PE

### Sensors

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

CB... sensors are recommended for midstroke detection.

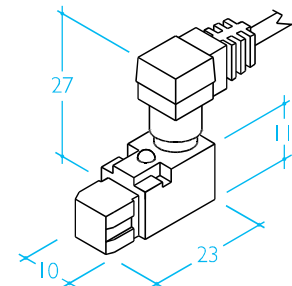
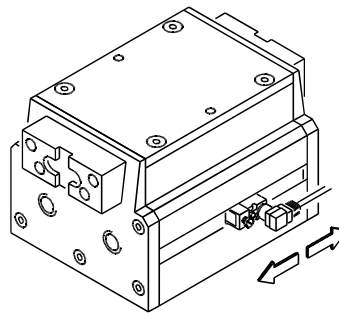
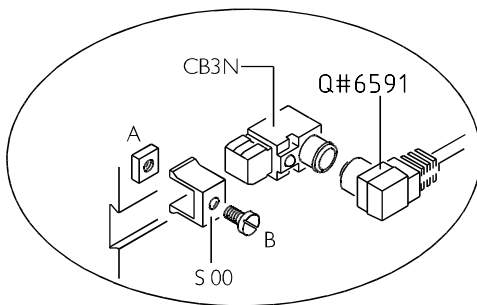


Quick#	Part#	Signal	Connection	Price
6126	CB3N2-G	PNP	3-wire sensor with M8 Connector	\$22.88
1794	CB3M2-G	NPN	3-wire sensor with M8 Connector	\$22.90
(*) Purchase extension cable #6591 separate for these sensors.				
6591	CFSM890325	3m 3-wire extension with M8 female connector		\$7.18

See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

### For mounting:

- 1- Insert the square nut (A) in its seat on the "S 00" bracket
- 2- Insert the bracket into the groove
- 3- Insert the sensor into the bracket
- 4- Run the sensor until the lamp is on
- 5- Lock the bracket with the screw (B) but don't overtighten it



## PLG-PRO Gripper Kit for Sawyer with PE-1640

Contact: [Cobots@EMICorp.com](mailto:Cobots@EMICorp.com)

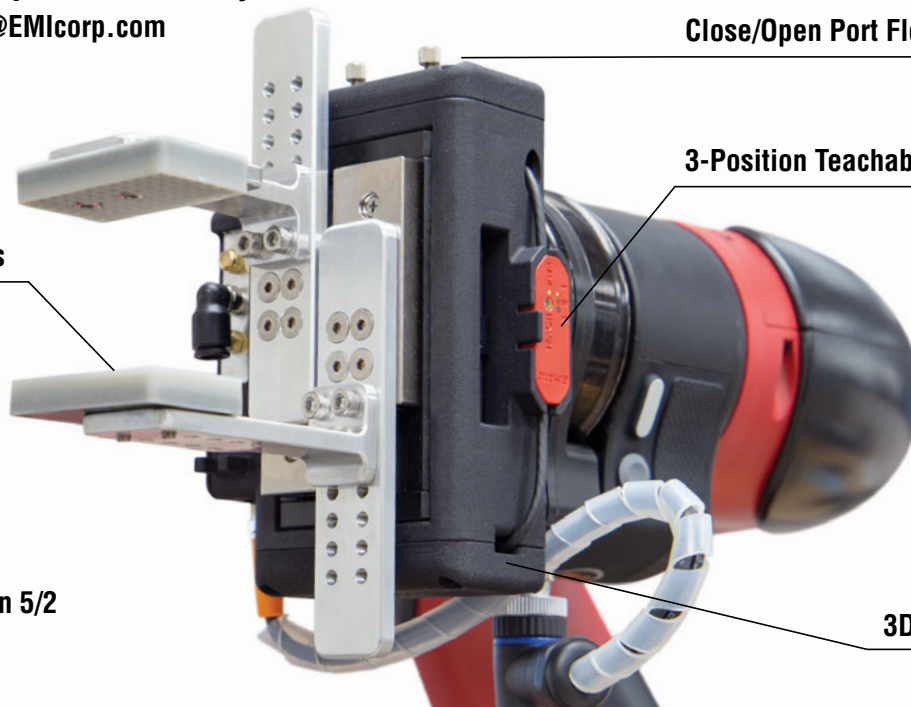
Close/Open Port Flow Controls

Silicone Pads

3-Position Teachable Sensor

Not shown: Built-in 5/2 solenoid valve

3D Printed Shroud



## X-Grippers

- XP-...: Two-jaw parallel gripper.
- XT-...: Three-jaw parallel gripper.
- XA-...: Two-jaw angular gripper.
- XR-...: Two-jaw radial gripper.
- Double acting.
- Self-centering.
- Very high performance/cost ratio.
- Gripper mounting possible on two sides.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.



#6292



#6291



#6288



#6287



#6290



#6289



#6294



#6293

For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

# X-Grippers

Note: XP-20 and XP-26 use special FDA approved 'Molykote white bearing grease' and have stainless screws. Both can be used in food applications. Bodies are made of POM (-58°–210°F) and are not recommended for wash down.

Part#	XP-20	XP-26
Quick#	<b>6289</b>	<b>6290</b>
Price	<b>\$279.00</b>	<b>\$388.00</b>
Pressure range	30–116 psi	
Closing total gripping force at 87 psi	38 lbf	49.4 lbf
Opening total gripping force at 87 psi	45 lbf	54 lbf
Total stroke ( $\pm 0.2$ mm)	8mm	13.2mm
Closing time without load	0.02s	0.05s
Maximum repeatability tolerance	$\pm 0.02$ mm	
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.	
Weight	160g	300g

Part#	XT-20	XT-26
Quick#	<b>6293</b>	<b>6294</b>
Price	<b>\$345.00</b>	<b>\$475.00</b>
Pressure range	36–116 psi	
Closing total gripping force at 87 psi	38.4 lbf	49.2 lbf
Opening total gripping force at 87 psi	45 lbf	54 lbf
Stroke ( $\pm 0.2$ mm)	3 x 3.6mm	3 x 6.6mm
Closing time without load	0.02s	0.05s
Maximum repeatability tolerance	$\pm 0.02$ mm	
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.	
Weight	210g	350g

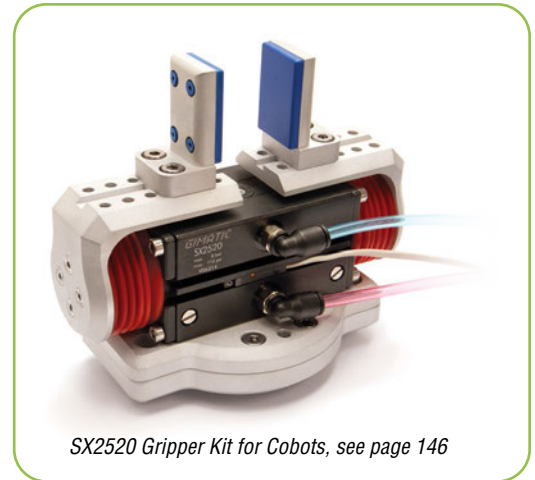
Part#	XA-20	XA-26
Quick#	<b>6287</b>	<b>6288</b>
Price	<b>\$235.00</b>	<b>\$305.00</b>
Pressure range	30–116 psi	
Closing total torque at 87 psi	8.2 in-lbf	14 in-lbf
Opening total torque at 87 psi	8.8 in-lbf	15 in-lbf
Stroke ( $\pm 2^\circ$ )	2 x 30°	2 x 32°
Closing time without load	0.02s	0.03s
Maximum repeatability tolerance	$\pm 0.04^\circ$	
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.	
Weight	140g	250g

Part#	XR-20	XR-26
Quick#	<b>6291</b>	<b>6292</b>
Price	<b>\$268.00</b>	<b>\$336.00</b>
Pressure range	30–116 psi	
Closing maximum torque at 87 psi each jaw	13.3 in-lbf	26.5 in-lbf
Opening maximum torque at 87 psi each jaw	14.2 in-lbf	28.3 in-lbf
Stroke ( $\pm 2^\circ$ )	2 x 92°	2 x 92°
Closing time without load	0.08s	0.12s
Maximum repeatability tolerance	$\pm 0.06^\circ$	
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.	
Weight	140g	260g

Use Quick#s for easy online ordering.

## Two-Jaw Completely Sealed Gripper – SX

- Parallel, self-centering gripper.
- Suitable for Clean Room applications.
- Designed for use in harsh environments.
- Completely sealed, with IP67 protection class.
- Very high grip force.
- Normally closed models available on request.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.



SX2520 Gripper Kit for Cobots, see page 146



#7164

#7167

#7169

Quick#	7164	7165	7166	7167	7168	7169	7170	7171
Part#	SX2510	SX2520	SX4020	SX4040	SX5030	SX5060	SX6340	SX6380
Price	\$587.00	\$594.00	\$808.00	\$827.00	\$1042.00	\$1121.00	\$1199.00	\$1433.00
Medium	Filtered, lubricated / non-lubricated compressed air							
Operating pressure range	30–116 psi							
Total Opening force at 87 psi	112.4 lbf	112.4 lbf	292 lbf	292 lbf	472 lbf	472 lbf	764 lbf	764 lbf
Total Closing force at 87 psi	87.6 lbf	87.6 lbf	224.8 lbf	224.8 lbf	360 lbf	360 lbf	562 lbf	562 lbf
Stroke (±0.5mm)	10mm	20mm	20mm	40mm	30mm	60mm	40mm	80mm
Opening / closing time without load	0.03s	0.05s	0.03s	0.08s	0.06s	0.10s	0.20s	0.30s
Repetition accuracy	0.05mm							
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.							
Weight	260g	310g	750g	900g	1300g	1700g	2800g	3500g

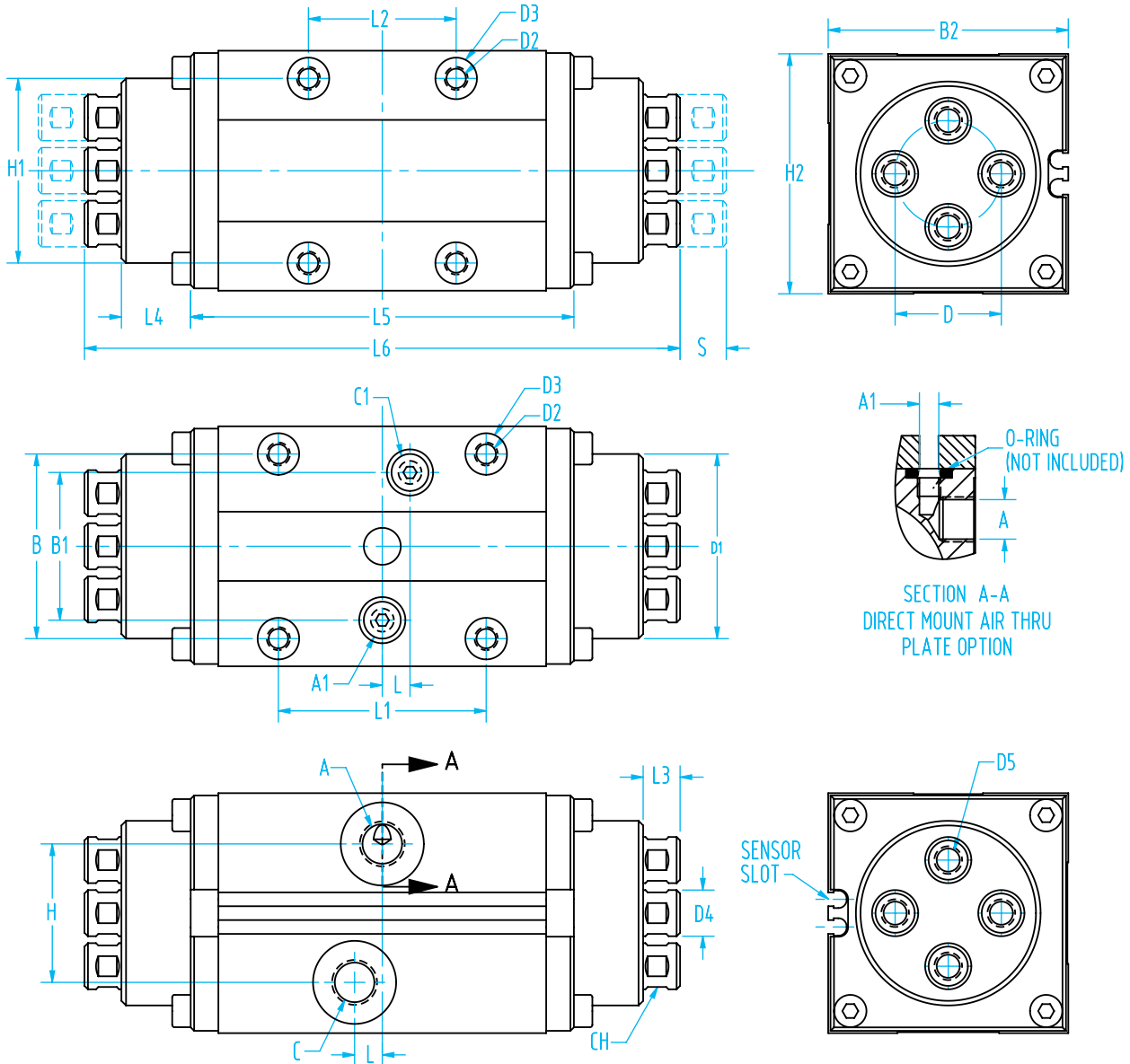


**Optional Silicone Bellows to protect columns (sold individually)**

Quick#	Part#	Price	For Gripper
7176	SX25S01	\$26.10	SX25__
7177	SX40S01	\$27.35	SX40__
7178	SX50S01	\$28.70	SX50__
7179	SX63S01	\$30.06	SX63__

For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

## Two-Jaw Completely Sealed Gripper – SX



	SX2510	SX2520	SX4020	SX4040	SX5030	SX5060	SX6340	SX6380
<b>A</b>	M5	M5	G1/8	G/8	G1/8	G1/8	G1/8	G1/8
<b>A1</b>	M5	M5	M5	M5	M5	M5	G1/8	G1/8
<b>B</b>	±0.02	23	23	40	40	50	50	60
<b>B1</b>		22.5	22.5	32	32	38	38	45
<b>B2</b>		38	38	52	52	64	64	79
<b>C</b>	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8
<b>C1</b>		M5	M5	M5	M5	M5	G1/8	G1/8
<b>D</b>	±0.02	Ø15	Ø15	Ø23	Ø23	Ø33	Ø33	Ø38
<b>D1</b>		Ø27	Ø27	Ø40	Ø40	Ø50	Ø50	Ø63
<b>D2</b>		M4 ↓ 6.5	M4 ↓ 6.5	M5 ↓ 10	M5 ↓ 10	M6 ↓ 10	M6 ↓ 10	M8 ↓ 15
<b>D3</b>	H8	Ø7	Ø7	Ø9	Ø9	Ø9	Ø9	Ø12
<b>D4</b>	f7	Ø6	Ø6	Ø10	Ø10	Ø12	Ø12	Ø16
<b>D5</b>		M3 ↓ 6	M3 ↓ 6	M6 ↓ 12	M6 ↓ 12	M8 ↓ 20	M8 ↓ 20	M10 ↓ 20
<b>H</b>		22.5	22.5	30	30	40	40	45
<b>H1</b>	±0.02	23	23	40	40	50	50	60
<b>H2</b>		38	38	52	52	64	64	79
<b>L</b>		-	-	6	6	10	10	10
<b>L1</b>	±0.02	30	30	45	45	50	50	70
<b>L2</b>	±0.02	30	30	32	32	35	35	50
<b>L3</b>		7.5	7.5	8	8	8.5	8.5	9.5
<b>L4</b>		7.5	7.5	15	15	18	18	26
<b>L5</b>		59	73	84	110	106	146	133
<b>L6</b>		89	103	130	156	159	199	204
<b>S</b>		5	10	10	20	15	30	20
<b>CH</b>		5	5	9	9	11	11	14

A/A1: Supply compressed air to open gripper  
 C/C1: Supply compressed air to close gripper  
 S: Stroke per finger (x2 for full gripper stroke)  
 CH: Wrench size  
 Options: Direct mount/air through plate option requires an o-ring to seal air between the plate and gripper (see section view A-A). This option also requires a plug to be placed in the A/C ports since compressed air will be supplied to the A1/C1 ports.

## Three-Jaw Completely Sealed Gripper – SXT

- Parallel, self-centering gripper.
- Suitable for Clean Room applications.
- Designed for use in harsh environments.
- Completely sealed, with IP67 protection class.
- Very high grip force.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.



Quick#	7172	7173	7174	7175
Part#	SXT2505	SXT4008	SXT5012	SXT6315
Price	\$813.00	\$978.00	\$1147.00	\$1433.00
Medium	Filtered, lubricated / non-lubricated compressed air			
Operating pressure range	36–116 psi			
Total Opening force at 87 psi	168.6 lbf	438 lbf	708 lbf	1113 lbf
Total Closing force at 87 psi	131.4 lbf	337.2 lbf	540 lbf	810 lbf
Stroke (±0.5mm)	3x5mm	3x8mm	3x12mm	3x15mm
Opening / closing time without load	0.02s	0.02s	0.05s	0.15s
Repetition accuracy	0.05mm			
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.			
Weight	420g	1100g	2000g	3800g

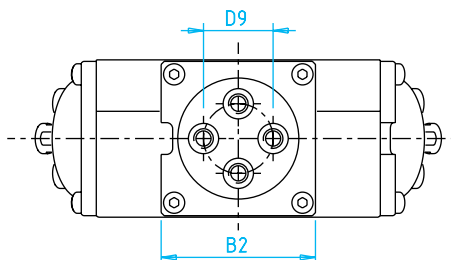
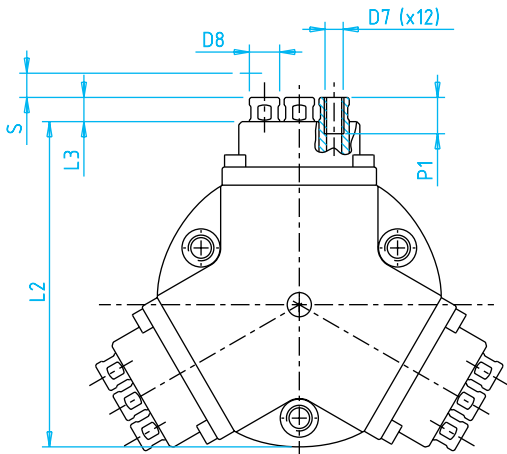
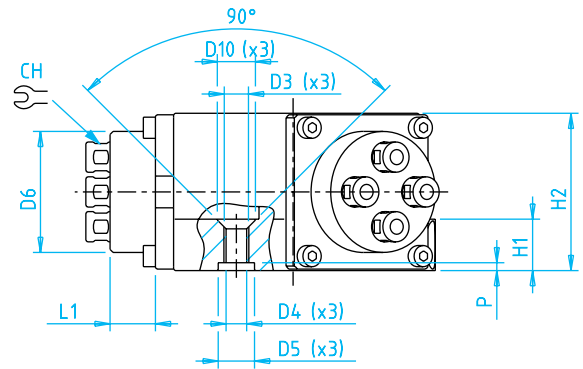
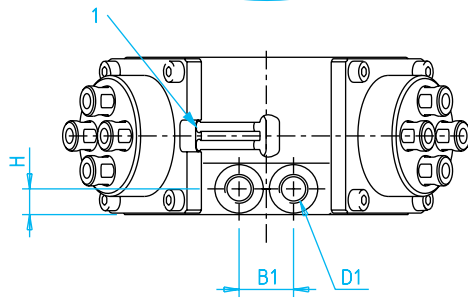
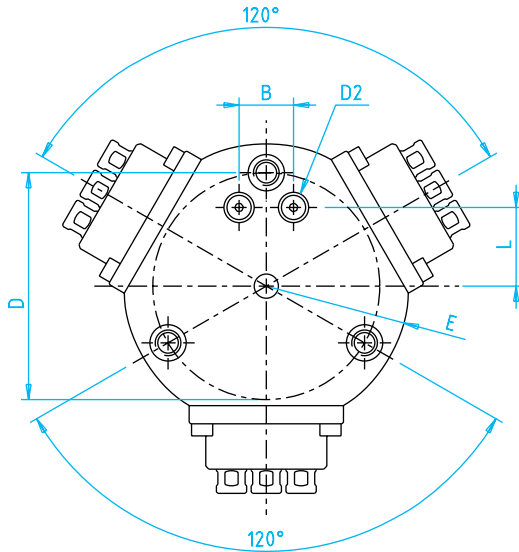


Optional Silicone Bellows to protect columns (sold individually)

Quick#	Part#	Price	For Gripper
7176	SX25S01	\$26.10	SXT2505
7177	SX40S01	\$27.35	SXT4008
7178	SX50S01	\$28.70	SXT5012
7179	SX63S01	\$30.06	SXT6315

For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

### Three-Jaw Completely Sealed Gripper – SXT



	SXT2505	SXT4008	SXT5012	SXT6315
<b>B</b>	16	18	24	24
<b>B1</b>	16	18	24	24
<b>B2</b>	38	51	63	78
<b>D</b>	±0.02 Ø59	Ø75	Ø98	Ø114
<b>D1</b>	M5	G1/8	G1/8	G1/8
<b>D2</b>	M3	M5	M5	M5
<b>D3</b>	Ø5.2	Ø6.8	Ø6.8	Ø8.5
<b>D4</b>	M6	M8	M8	M10
<b>D5</b>	H8 Ø9	Ø12	Ø12	Ø14
<b>D6</b>	Ø27	Ø40	Ø50	Ø63
<b>D7</b>	M3	M6	M8	M10
<b>D8</b>	f7 Ø6	Ø10	Ø12	Ø14
<b>D9</b>	±0.02 15	Ø23	Ø33	Ø38
<b>D10</b>	Ø11.2	Ø12.6	Ø12.6	Ø17.3
<b>E</b>	R36	R47	R58	R69
<b>H</b>	6	8.5	10	11
<b>H1</b>	12	17	20	22
<b>H2</b>	38	52	64	80
<b>L</b>	24	26	38	45
<b>L1</b>	7.5	15	18	26
<b>L2</b>	78	107.5	141.5	162
<b>L3</b>	7.5	8	8.5	9.5
<b>P</b>	±0.1 2.1	2.6	2.6	2.6
<b>P1</b>	6	12	20	20
<b>S (x2)</b>	5	8	12	15
<b>CH</b>	5	9	11	14



## Two-Jaw Parallel Self-Centering Gripper – DH

- Double acting, with normally closed (-NC) or normally open (-NO) option.
- Self-centering.
- Many jaw strokes available.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

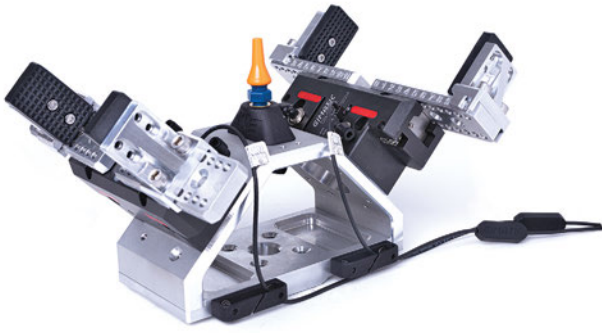


Quick#	7180	7181	7182	7183	7184	7185	7186
Part#	DH1905	DH2208	DH2204	DH2712	DH2706	DH3516	DH3508
Price	\$618.00	\$650.00	\$650.00	\$707.00	\$707.00	\$786.00	\$786.00
Medium	Filtered, lubricated / non-lubricated compressed air						
Operating pressure range	29–116 psi				22–116 psi		
Total opening force at 87 psi	33.7 lbf	45 lbf	90 lbf	65.2 lbf	130.4 lbf	112.4 lbf	224.8 lbf
Total closing force at 87 psi	30.6 lbf	40.4 lbf	80.9 lbf	58.5 lbf	116.9 lbf	98.9 lbf	197.8 lbf
Stroke ( $\pm 0.3$ mm)	5mm	8mm	4mm	12mm	6mm	16mm	8mm
Opening / closing time without load	0.01s	0.02s	0.02s	0.03s	0.03s	0.03s	0.03s
Repetition accuracy	0.02mm						
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.						
Weight	87g	148g	150g	255g	260g	460g	470g

Use Quick#s for easy online ordering.

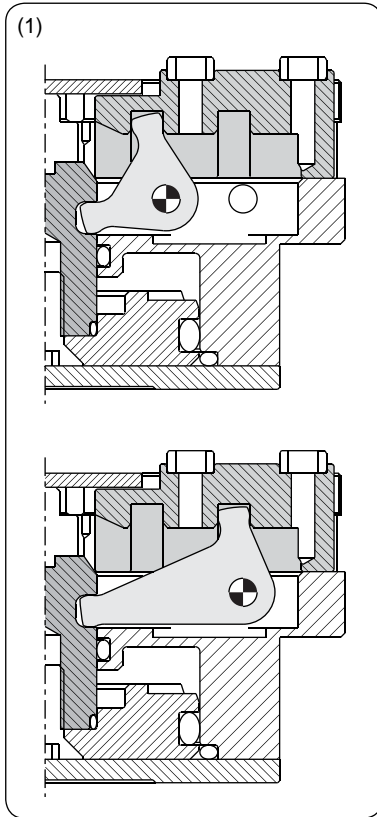
For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

## Two-Jaw Parallel Self-Centering Gripper – DH

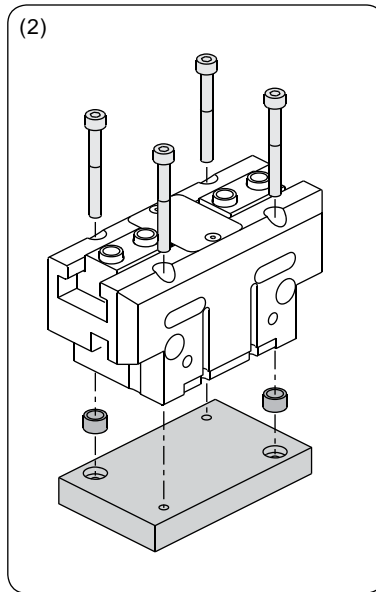


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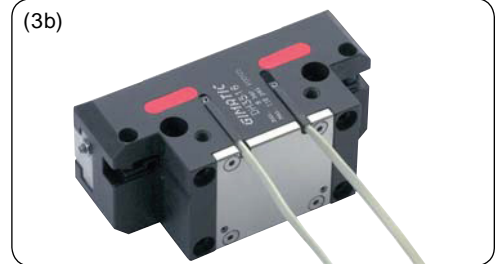
**Automate your Machine Tending Process!**  
**Find our Machine Tending Gripper Kits for DH & TH grippers on page 162.**



(1) High efficiency force transmission / long stroke or short stroke.



(2) Possibility of front fastening with through screws.



(3) Optional teachable PRO (3a), SS or SN (3b), or inductive (3c) sensors available.

Quick#	7187	7188	7189	7190	7191	7192	7193	7194
Part#	DH4420	DH4410	DH5526	DH5512	DH6632	DH6616	DH8750	DH8728
Price	\$894.00	\$894.00	\$1044.00	\$1044.00	\$1405.00	\$1405.00	\$1796.00	\$1796.00
Medium	Filtered, lubricated / non-lubricated compressed air							
Operating pressure range	22–116 psi							
Total opening force at 87 psi	182 lbf	364.2 lbf	281 lbf	607 lbf	413.6 lbf	827.3 lbf	701.4 lbf	1236.4 lbf
Total closing force at 87 psi	164.1 lbf	328.2 lbf	249.5 lbf	539.5 lbf	368.7 lbf	737.4 lbf	638.4 lbf	1124 lbf
Stroke (±0.3mm)	20mm	10mm	26mm	12mm	32mm	16mm	50mm	28mm
Opening / closing time without load	0.08s	0.08s	0.11s	0.08s	0.15s	0.15s	0.21s	0.21s
Repetition accuracy	0.02mm							
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.							
Weight	780g	800g	1350g	1370g	2630g	2670g	4990g	5050g

## Three-Jaw Parallel Self-Centering Gripper – TH

- Double acting, with normally closed (-NC) or normally open (-NO) option.
- Self-centering.
- Three jaw stroke range from 2 to 16mm.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.
- Optional pusher bar to assist in part retention or release.



Optional Push Bar

Quick#	Part#	Price	For Gripper
7530	TH27K	\$103.00	#7146
7531	TH33K	\$109.00	#7147 & #7148
7532	TH45K	\$115.00	#7149 & #7150
7533	TH54K	\$123.00	#7151 & #7152
7534	TH76K	\$134.00	#7153 & #7154
7535	TH96K	\$140.00	#7155 & #7156
7536	TH125K	\$153.00	#7157 & #7158



TH76..



TH33..



TH54..



TH45..



TH2725

Quick#	7146	7147	7148	7149	7150	7151	7152
Part#	TH2725	TH3304	TH3302	TH4506	TH4503	TH5408	TH5404
Price	\$758.00	\$786.00	\$786.00	\$804.00	\$804.00	\$846.00	\$846.00
Medium	Filtered, lubricated / non-lubricated compressed air						
Operating pressure range	22–116 psi						
Total opening force at 87 psi	64.2 lbf	96 lbf	192 lbf	178.8 lbf	357 lbf	256.2 lbf	512.4 lbf
Total closing force at 87 psi	58.7 lbf	85.5 lbf	168.6 lbf	165 lbf	330 lbf	236.1 lbf	478.8 lbf
Stroke (±0.5mm)	3x2.5mm	3x4mm	3x2mm	3x6mm	3x3mm	3x8mm	3x4mm
Opening / closing time without load	0.02s	0.02s	0.02s	0.05s	0.05s	0.05s	0.05s
Repetition accuracy	0.02mm						
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.						
Weight	117g	237g	240g	430g	440g	760g	770g

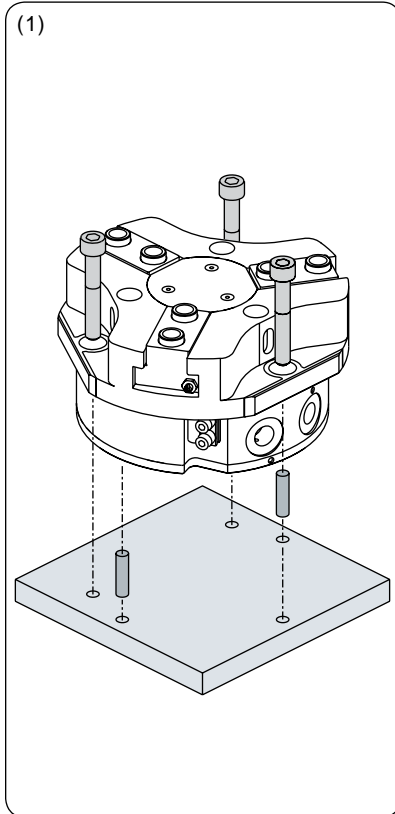
For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

## Three-Jaw Parallel Self-Centering Gripper – TH

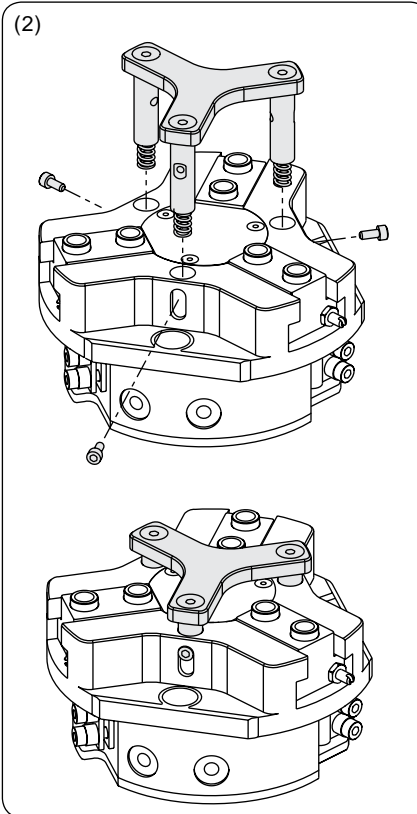


**NEW**

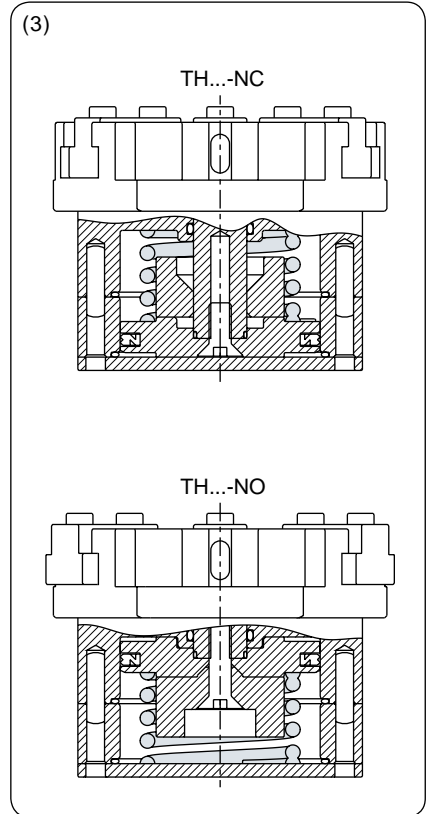
**Automate your Machine Tending Process!**  
**Find our Machine Tending Gripper Kits for**  
**DH & TH grippers on page 162.**



(1) Possibility of front fastening with through screws.



(2) This accessory is NOT included and can be installed to hold payload during the gripper release.



(3) Double acting with optional springs (normally closed or normally open).

Quick#	7153	7154	7155	7156	7157	7158
Part#	TH7610	TH7605	TH9613	TH9606	TH12516	TH12508
Price	\$946.00	\$946.00	\$1134.00	\$1134.00	\$1787.00	\$1787.00
Medium	Filtered, lubricated / non-lubricated compressed air					
Operating pressure range	22–116 psi					
Total opening force at 87 psi	512.4 lbf	1011.6 lbf	816 lbf	1767 lbf	1382.4 lbf	2745 lbf
Total closing force at 87 psi	485.4 lbf	964.5 lbf	782.4 lbf	1686 lbf	1267.8 lbf	2522.4 lbf
Stroke (±0.5mm)	3x10mm	3x5mm	3x13mm	3x6mm	3x16mm	3x8mm
Opening / closing time without load	0.20s	0.20s	0.20s	0.20s	0.30s	0.30s
Repetition accuracy	0.02mm					
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.					
Weight	1420g	1430g	2450g	2490g	4920g	4990g

## Two-Jaw Self-Centering Parallel Gripper – PQ

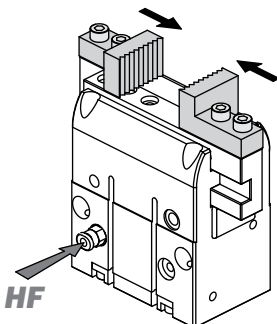
- Double acting, can be NO or NC.
- Can be setup as Normally Open or Normally Closed by swapping the jaw that each gripper finger is mounted to. See website for additional information.
- Robust guidance.
- Self-centering.
- Strokes from 8mm to 63mm.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.



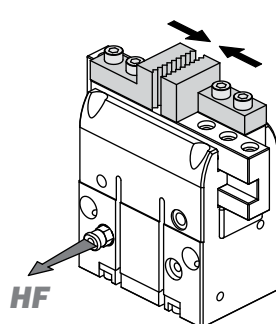
Quick#	7138	7139	7140	7141	7142	7143	7144	7145
Part#	PQ1608	PQ2012	PQ2516	PQ3015	PQ3523	PQ4533	PQ5047	PQ6063
Price	\$315.00	\$327.00	\$361.00	\$650.00	\$705.00	\$854.00	\$935.00	\$1,166.00
Medium	Filtered, lubricated / non-lubricated compressed air							
Operating pressure range	51–116 psi							
Total gripping force at 87 psi	27 lbf	40.4 lbf	64.4 lbf	90 lbf	126 lbf	206.8 lbf	301.2 lbf	418 lbf
Stroke (±0.5mm)	8mm	12mm	16mm	15mm	23mm	33mm	47mm	63mm
Maximum working frequency	2Hz	2Hz	2Hz	2Hz	2Hz	1Hz	1Hz	1Hz
Repetition accuracy	0.02mm							
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.							
Weight	63g	110g	200g	330g	610g	1270g	2430g	4900g

Use Quick#s for easy online ordering.

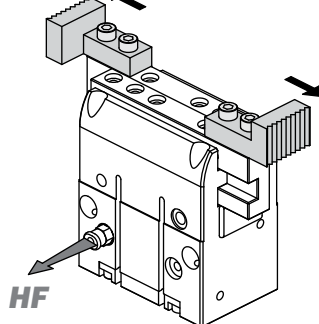
Normally open with outside gripping



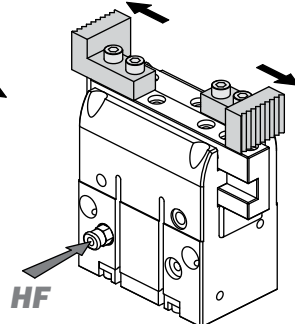
Normally closed with outside gripping



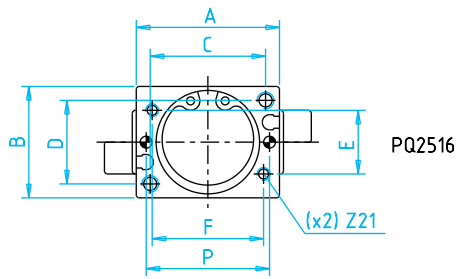
Normally open with inside gripping



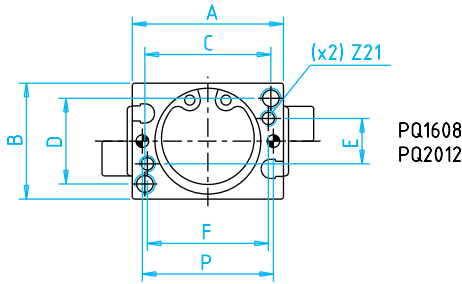
Normally closed with inside gripping



## Two-Jaw Self-Centering Parallel Gripper – PQ

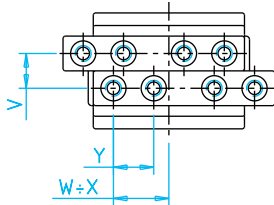
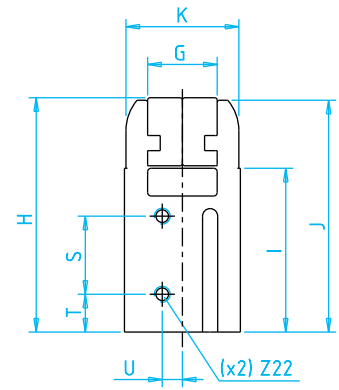
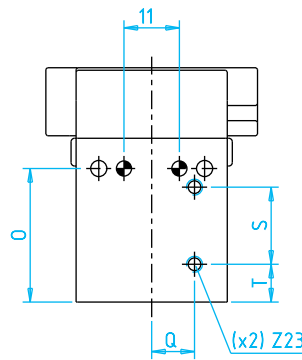
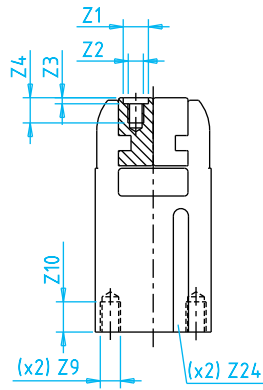
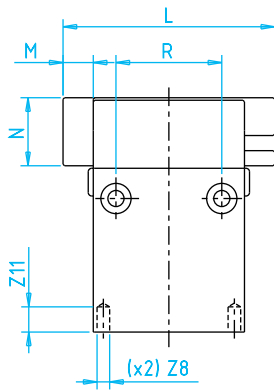
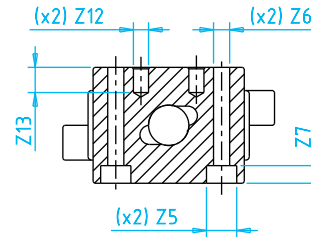


PQ2516



PQ1608  
PQ2012

- Z1 - Spot face for the centering sleeve of the gripping tool
- Z2 - Threaded hole for the gripping tool fastening
- Z6 - Through hole for the gripper side fastening
- Z9 - Threaded hole for the gripper fastening on the bottom
- Z12 - Spot face for the centering sleeve of the gripper body
- Z15 - Through hole for the gripper fastening on the bottom
- Z17 - Main port for air fittings
- Z21 - Ports for direct air supply from the bottom
- Z22 - Air supply ports
- Z23 - Air supply ports
- Z24 - C-slot sensor slots

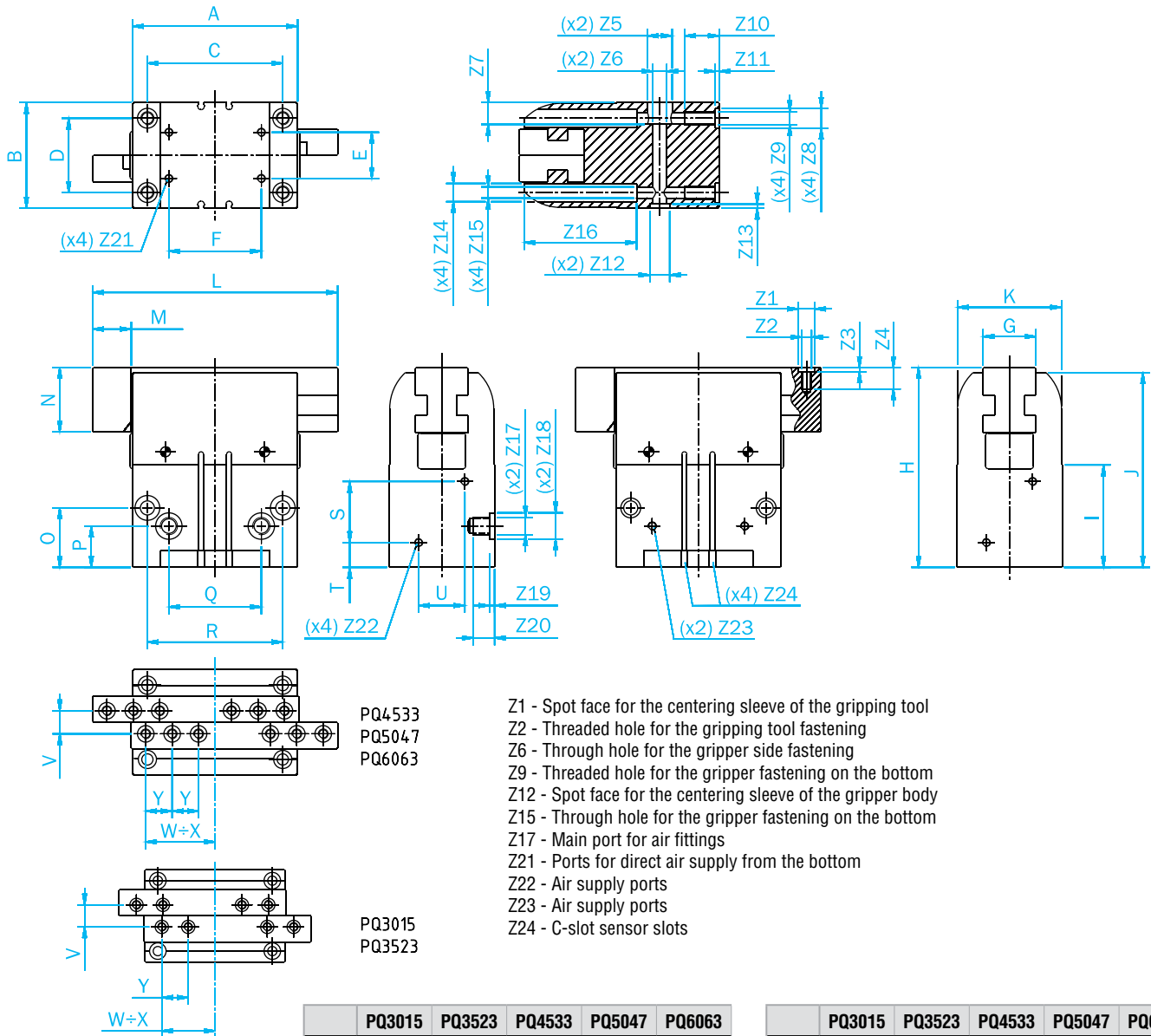


W ÷ X is the range of distance from centerline (min to max). Minimum is the X dimension (fully closed), Maximum is the W dimension (fully open).

	PQ1608	PQ2012	PQ2516
A	24	30	36
B	18	23	28
C	20	25	29
D	14	17	21
E	7	9	16
F	19.4	24	28
G	11	13.8	16
H	44	46.5	57
I	32.5	32.5	37.5
J	43.5	46	56
K	17.5	22.4	27
L	32	42	52
M	4	6	8
N	11	13.5	18
O	26	26.5	28.5
P	21	26	31
Q	7.5	8.5	11
R	17	21	24
S	13.5	15.3	16
T	7	7.5	8
U	3.7	4	8
V	5.5	6.9	8
W	13	17	21
X	9	11	13
Y	6	8	9

	PQ1608	PQ2012	PQ2516
Z1	5	5	6
Z2	M3	M3	M4
Z3	1.2	1.2	2.5
Z4	4	5	7.5
Z5	Ø5	Ø6	Ø6
Z6	Ø2.6	Ø3.2	Ø3.2
Z7	3	3.5	3.5
Z8	Ø2H7	Ø2.5H7	Ø3H7
Z9	M3	M4	M4
Z10	5	6	6
Z11	3	5	5
Z12	Ø2.5H7	Ø3H7	Ø3H7
Z13	3	5	5
Z14	M2.5	M3	M3
Z15	M3	M3	M5
Z16	M2.5	M3	M3
Z17	M5	M5	M5
Z18	-	-	-
Z19	-	-	-
Z20	5	5	5
Z21	M3	M4	M3
Z22	-	-	-
Z23	M5	M5	M5

## Two-Jaw Self-Centering Parallel Gripper – PQ



- Z1 - Spot face for the centering sleeve of the gripping tool
- Z2 - Threaded hole for the gripping tool fastening
- Z6 - Through hole for the gripper side fastening
- Z9 - Threaded hole for the gripper fastening on the bottom
- Z12 - Spot face for the centering sleeve of the gripper body
- Z15 - Through hole for the gripper fastening on the bottom
- Z17 - Main port for air fittings
- Z21 - Ports for direct air supply from the bottom
- Z22 - Air supply ports
- Z23 - Air supply ports
- Z24 - C-slot sensor slots

	PQ3015	PQ3523	PQ4533	PQ5047	PQ6063
A	50	64	80	100	125
B	38	42	50	64	80
C	42	52	66	82	100
D	27	32	38	45	56
E	20	18	26	28	34
F	28	36	44	56	70
G	20	24	28	32	42
H	55	70	93	121	156
I	30	38	45	62	85
J	53	68	90	118	153
K	37.6	41.6	49	63	79
L	65.5	87.5	118.5	148.5	191.5
M	7.5	11.5	16.5	23.5	31.5
N	18	22	33	39	45
O	25	22	34	36	55
P	17	25	24	25	40
Q	28	35	44	56	70
R	42	52	66	82	100
S	-	-	-	37	44
T	-	-	-	15	24
U	-	-	-	28	34
V	8	10	12	14	16
W	24.8	35.7	52.2	65.6	79.8
X	17.3	24.2	35.7	42	48.3
Y	10	12	14	16	20

	PQ3015	PQ3523	PQ4533	PQ5047	PQ6063
Z1	Ø5 H8	Ø6 H8	Ø8 H8	Ø10 H8	Ø12 H8
Z2	M3	M4	M5	M6	M6
Z3	1.2	2.5	2.5	2.5	2.5
Z4	7.2	9.5	11.5	13	12.5
Z5	Ø6	Ø9	Ø11	Ø15	Ø15
Z6	Ø3.5	Ø5.2	Ø6.6	Ø8.5	Ø8.5
Z7	10	10	9	13.2	17
Z8	Ø6 H8	Ø8 H8	Ø10 H8	Ø12 H8	Ø12 H8
Z9	M4	M5	M6	M8	M8
Z10	10.5	14	18	21	22.5
Z11	2.5	2.5	2.5	2.5	2.5
Z12	Ø6 H8	Ø8 H8	Ø10 H8	Ø12 H8	Ø12 H8
Z13	2.5	2.5	2.5	2.5	2.5
Z14	Ø6	Ø7.5	Ø9	Ø11	Ø11
Z15	Ø3.3	Ø4.2	Ø5	Ø6.8	Ø6.8
Z16	22	38	45	68	82
Z17	M5	M5	M5	G1/8	G1/8
Z18	-	-	Ø10	Ø16	Ø18
Z19	-	-	2.5	3	3
Z20	5	5	9.3	13	16.3
Z21	M3	M4	M5	M5	M5
Z22	-	-	-	M5	M5
Z23	M5	M5	M5	M5	M5

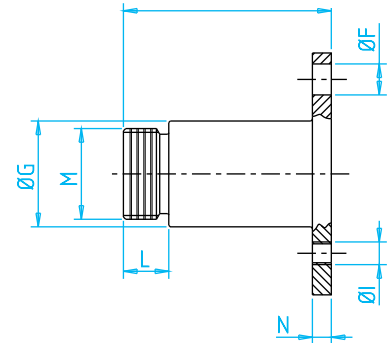
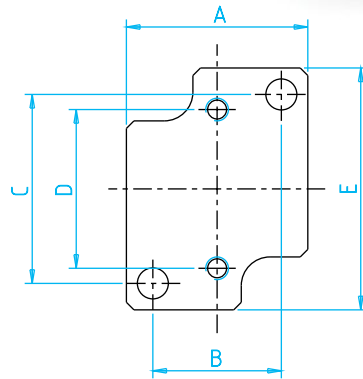
## Two-Jaw Self-Centering Parallel Gripper – PQ

### Mounting Brackets for PQ Grippers

Quick#	Part#	Price	Use with:	Wt.
7328	MFI-A318	\$28.00	PQ1608	11g
7329	MFI-A319	\$30.50	PQ2012	18g
7330	MFI-A320	\$27.60	PQ2516	20g


Includes Fasteners.

Quick#	7328	7329	7330
For:	PQ1608	PQ2012	PQ2516
A	19.5	24	28
B	14	17	21
C	20	25	29
D	17	21	24
E	25.5	32	36
F	Ø3.1	Ø4.2	Ø4.2
G	Ø10	Ø14	Ø14
H	22	27.5	29
I	M2.5	M3	M3
L	5	6	6
M	M8x1	M12x1	M12x1
N	3	2.5	4



## Online product pages have all the information you need!

**Product Detail**






**6327 Gimatic Parallel Gripper GS-20**

A reliable, maintenance-free gripper with many different options for fastening. GS Grippers feature a patented backlash adjusting system. Great grip force, quality, price, and value! Once you try these grippers, you'll probably standardize on using these for all of your robotic/EOAT needs.

Custom 3D printed gripper fingers are available, Contact EOAT Engineering today!

Item #: GS 20  
**\$161.00** Each  
 Quantity:   
[Add to Cart](#)

Available: In Stock  
[CAD File Download](#)  
[Exploded View & Parts List](#)  
[Technical Specifications](#)  
[Additional Specifications](#)  
[360 Degree View](#)

Overview

Technical Specifications




Dimensional Drawing

Sensor Options

Midstroke Sensor Detection













- 207g
- 10.4mm Stroke
- Double Acting
- MS Air port
- Finger blanks & Mounting brackets available
- Optional magnetic sensors available
- Mid-stroke detection capability with use of hall effect sensor or Gimatic PRO sensor
- Opening total gripping force at 87psi: 48lbf
- Closing total gripping force at 87psi: 42lbf

**Related Items**

- Application examples
- CAD file downloads
- Additional specifications
- Dimensional drawings
- Related items
- Replacement parts

**Related Items**

 1920 Aluminum Mounting Bracket for size 20 Grippers Item #: GMB G5GW 20 <b>\$31.00</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 5888 Aluminum Finger Blanks for GS-20 Why machine custom fingers from scratch? Start with these aluminum finger blanks. They are easy to shape to your part. Item #: GS 20 FBA <b>\$27.20</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 5889 Acetal Finger Blanks for GS-20 Why machine custom fingers from scratch? Start with these acetal finger blanks. They are easy to shape to your part. Item #: GS 20 FBP <b>\$27.20</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 102 Threaded Male MS Push-In Fitting for 4mm Tube Item #: GSF QMC M504 <b>\$3.10</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>
 104 Threaded Male MS Push-In Fitting for 6mm Tube Item #: GSF QMC M506 <b>\$4.40</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 118 Threaded Male MS Push-In Elbow Fitting for 4mm Tube Item #: GSF QME M504 <b>\$3.30</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 120 Threaded Male MS Push-In Elbow Fitting for 6mm Tube Item #: GSF QME M506 <b>\$3.50</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>	 7319 Mounting Bracket for Gimatic & SMC size 20 Item #: MFI A323 <b>\$37.00</b> Each Qty: <input type="text"/> <a href="#">Add to Cart</a>
 960 4mm Blue Polyurethane Tubing - 25' Coil Item #: GSU PB 0424	 957 4mm Clear Polyurethane Tubing - 25' Coil Item #: GSU PB 0424	 966 4mm Red Polyurethane Tubing - 25' Coil Item #: GSU PB 0424	 961 6mm Blue Polyurethane Tubing - 25' Coil Item #: GSU PB 0604



### Easy online ordering!

- Track Orders
- Create Supply Lists
- Order from History
- Export Purchase Orders



## Parallel Pneumatic Gripper – T

- Double acting
- Self-centering
- Air feeding accessible directly from the fixing plate.
- Possible to mount it on front with through screws.
- High gripping force with low weight.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

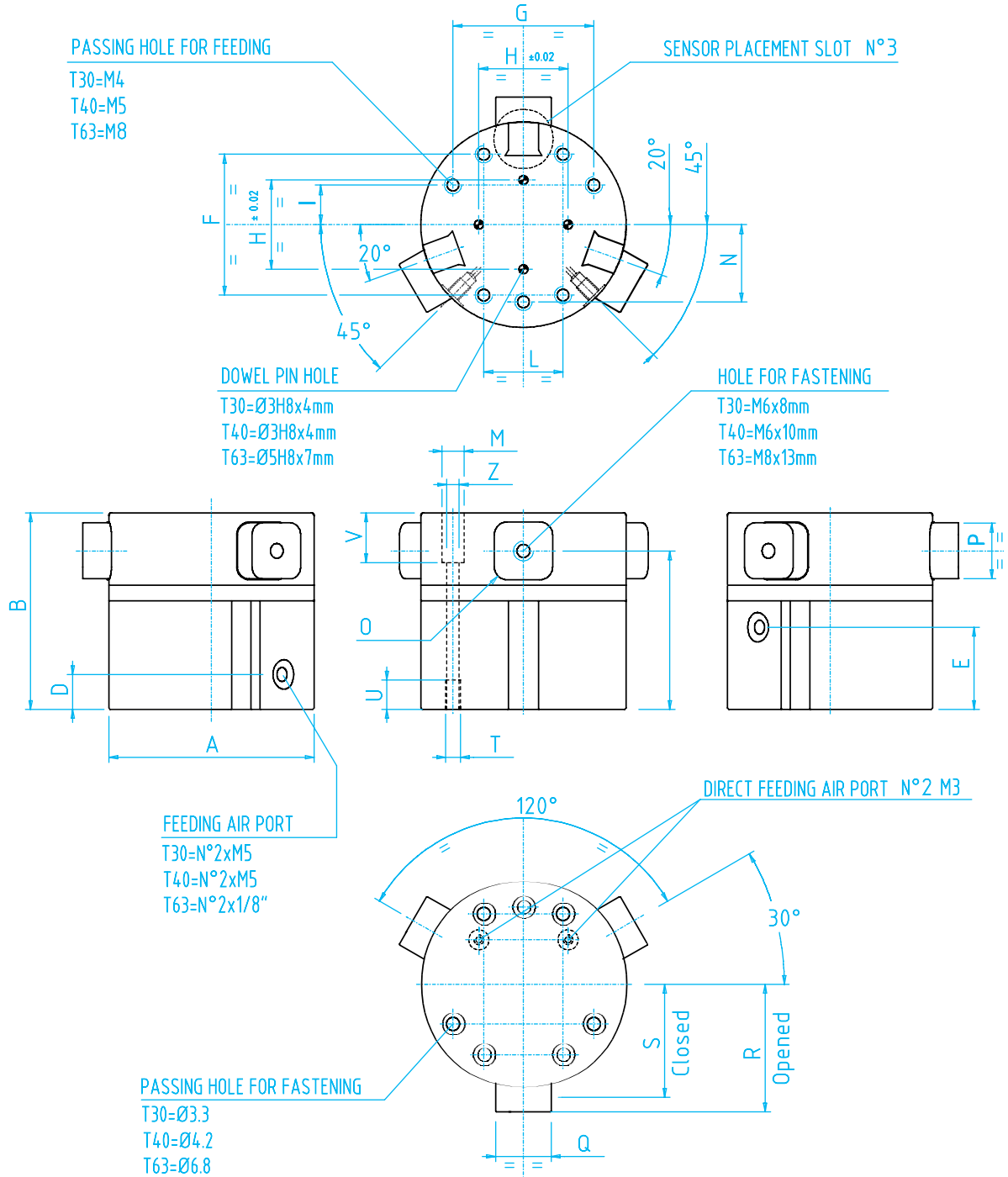


Quick#	6284	6285	6286
Part#	T30	T40	T63
Price	\$489.00	\$591.00	\$698.00
Medium	Filtered, lubricated / non lubricated compressed air		
Pressure range	36–116 psi		
Repeatability	±0.02mm	±0.02mm	±0.02mm
Closing time without load	0.01s	0.01s	0.05s
Maximum working frequency	4Hz	3Hz	2Hz
Air consumption per cycle	12cm <sup>3</sup>	19cm <sup>3</sup>	94cm <sup>3</sup>
Stroke (±0.2mm)	3x3mm	3x5mm	3x9mm
Opening gripping force at 87 psi	77.4 lbf	135 lbf	324 lbf
Closing gripping force at 87 psi	70.8 lbf	121.5 lbf	297 lbf
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.		
Weight	325g	745g	1680g

For more information visit: [www.EMlcorp.com](http://www.EMlcorp.com)

Parallel Pneumatic Gripper – T

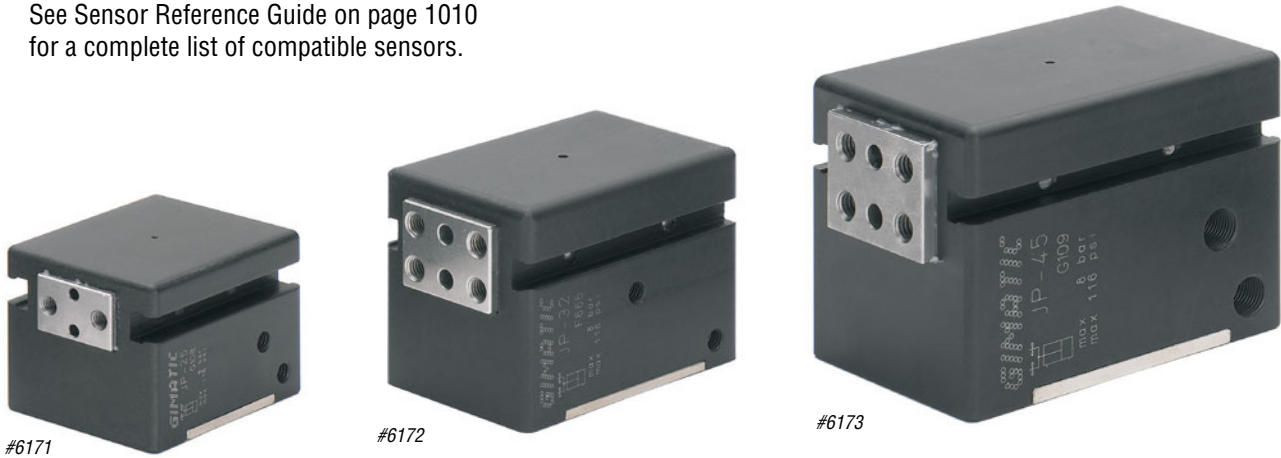
T30, T40, & T63



	A	B	C	D	E	F	G	H ±0.02	I	L	M	N	O	P -0.05	Q -0.05	R	S	T	U	V	Z
<b>T30</b>	ø50	59	49.5	8	27	37	-	30.4	-	21	ø6	-	3	14	14	30.5	27.5	M4	8	14	ø3.3
<b>T40</b>	ø70	67	54	11.9	28	48	48	30.4	13.5	27	ø7.5	26.3	4	19	19	43.6	38.5	M5	10	17	ø4.2
<b>T63</b>	ø90	90.5	72.8	12	38	66	-	59	-	38	ø10.5	-	5	26	26	60.6	51.5	M8	16	28.5	ø6.8

## Parallel Gripper – JP

- Double acting.
- Self-centering.
- High gripping force.
- Suitable for heavy-duty applications.
- See Sensor Reference Guide on page 1010 for a complete list of compatible sensors.

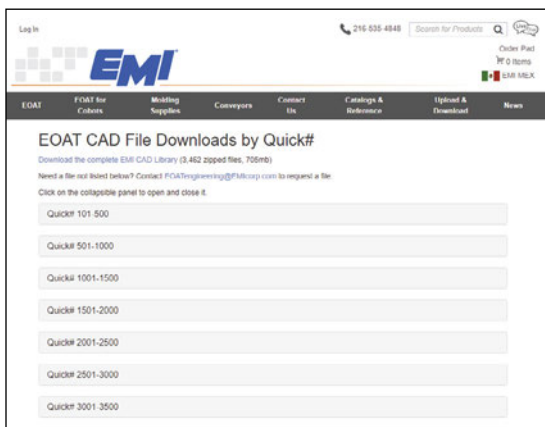


Quick#	6171	6172	6173
Part#	JP-25	JP-32	JP-45
Price	\$436.00	\$484.00	\$586.00
Medium	Filtered, lubricated / non-lubricated compressed air		
Pressure range	36–116 psi		
Opening total gripping force at 87 psi	60.7 lbf	157.4 lbf	224.8 lbf
Closing total gripping force at 87 psi	54 lbf	134.8 lbf	209 lbf
Total stroke (±0.2mm)	9.5mm	12mm	18.9mm
Maximum repeatability tolerance	0.02mm		
Mid-stroke detection capability	Yes, see Sensor Reference Guide on page 1010 for details.		
Weight	240g	450g	1050g

Use Quick#s for easy online ordering.

### Building your own EOAT? Download the 3D CAD files you need to ensure an accurate design.

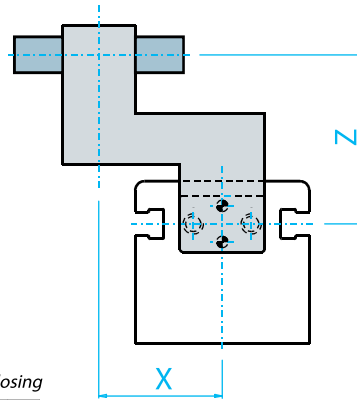
Our EOAT CAD Library has over 3,400 components and is updated daily. Download all or individual files, or preview them by Quick# with EMI's 360° View before downloading!



# Parallel Gripper – JP

## Gripping force

The graphs show the medium gripping force on each jaw, as a function of the operating pressure, the gripping tool length 'Z' and the overhanging 'X'.



**Reference:**  
**Force:** N x 0.225 = lbf  
**Pressure:** bar x 14.5 = psi

