

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



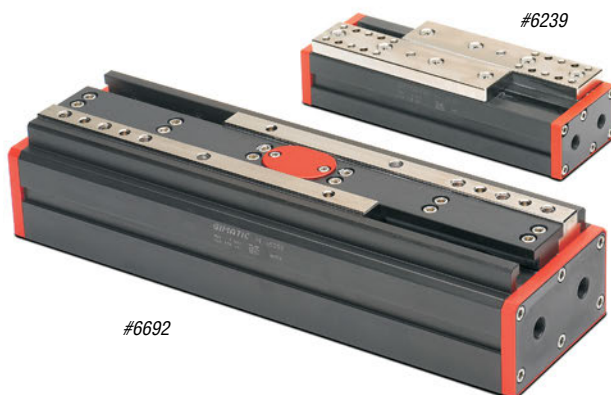
#6246



#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 ($\pm 0.25\text{mm}$)	2x5mm	2x12.5mm	2x20mm	2x40mm	2x75mm	2x100mm
Cycle air consumption	7cm ³	14cm ³	21cm ³	39cm ³	71cm ³	97cm ³
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

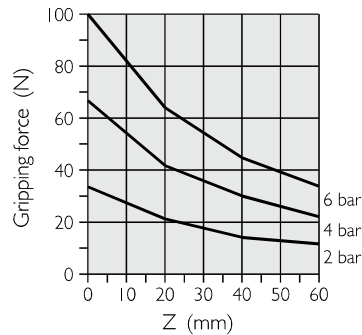
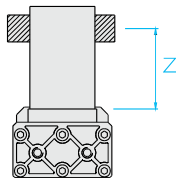
The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length 'Z' and the overhanging 'X'.

Reference:

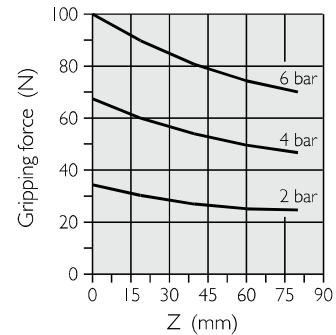
Force: N x 0.225 = lbf

Pressure: bar x 14.5 = psi

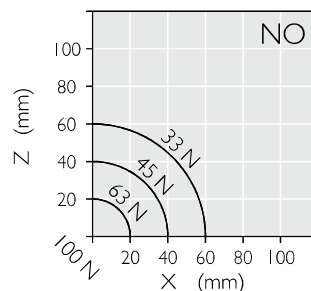
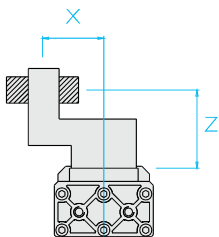
PE-1610



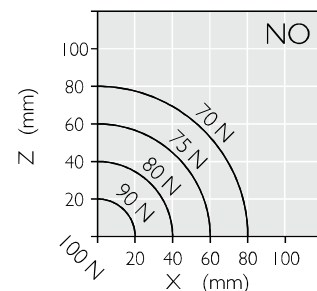
PE-1625/40/80/150/200



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

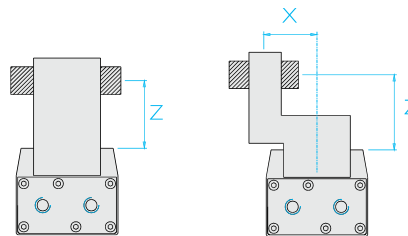
Quick#	6240	6242	6243	6239	6241
Part#	PE-2520	PE-2540	PE-2560	PE-25100	PE-25200
Price	\$509.00	\$622.00	\$685.00	\$1,074.00	\$1,413.00
Medium	Filtered, lubricated / non-lubricated compressed air				
Pressure range	30–116 psi				
Total gripping force at 87 psi	103.4 lbf				
Stroke ($\pm 0.25\text{mm}$)	2x10mm	2x20mm	2x30mm	2x50mm	2x100mm
Cycle air consumption	44cm ³	74cm ³	102cm ³	146cm ³	263cm ³
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.

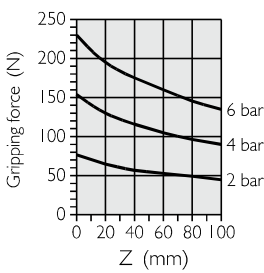


Reference:

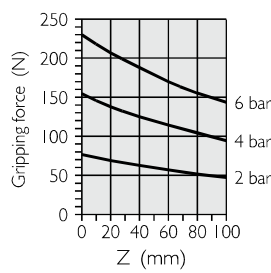
Force: $N \times 0.225 = \text{lbf}$

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

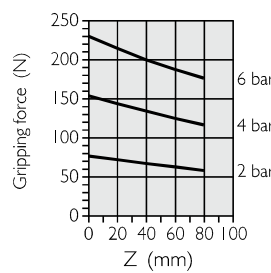
PE-2520



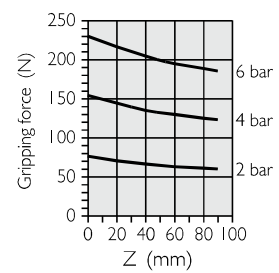
PE-2540



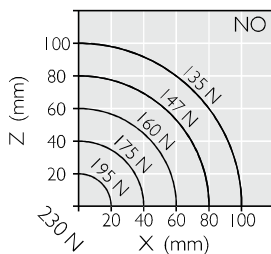
PE-2560



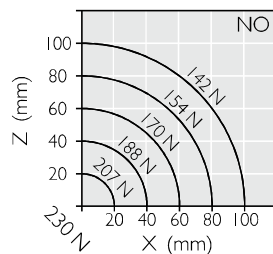
PE-25100/200



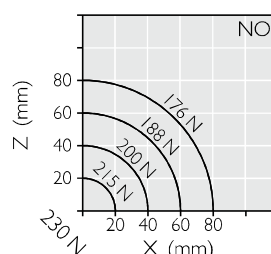
PE-2520 (6 bar)



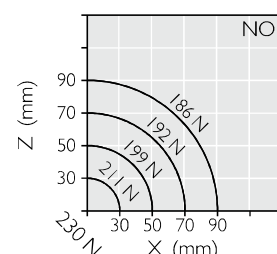
PE-2540 (6 bar)



PE-2560 (6 bar)



PE-25100/200 (6 bar)



Parallel Gripper – PE

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

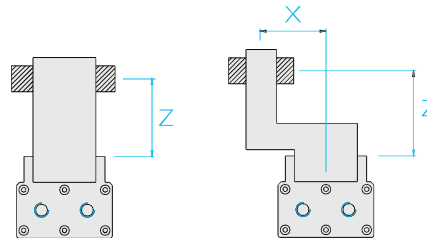
Quick#	6244	6245	6246	6247	6692
Part#	PE-4520	PE-4540	PE-4560	PE-4580	PE-45200
Price	\$883.00	\$976.00	\$1,060.00	\$1,626.00	\$1,724.00
Medium	Filtered, lubricated / non-lubricated compressed air				
Pressure range	30–116 psi				
Total gripping force at 87 psi	314.8 lbf				404.6 lbf
Stroke (± 0.25mm)	2x10mm	2x20mm	2x30mm	2x40mm	2x100mm
Cycle air consumption	132cm ³	208cm ³	257cm ³	371cm ³	940cm ³
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.

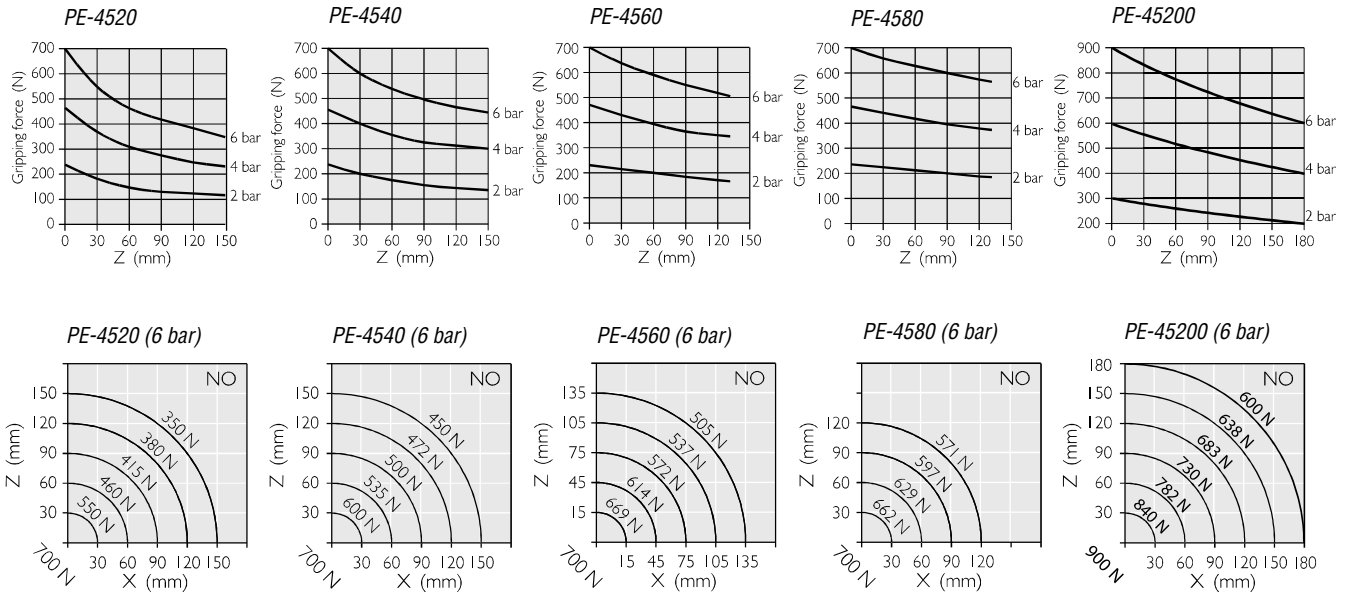
Gripping Force

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.



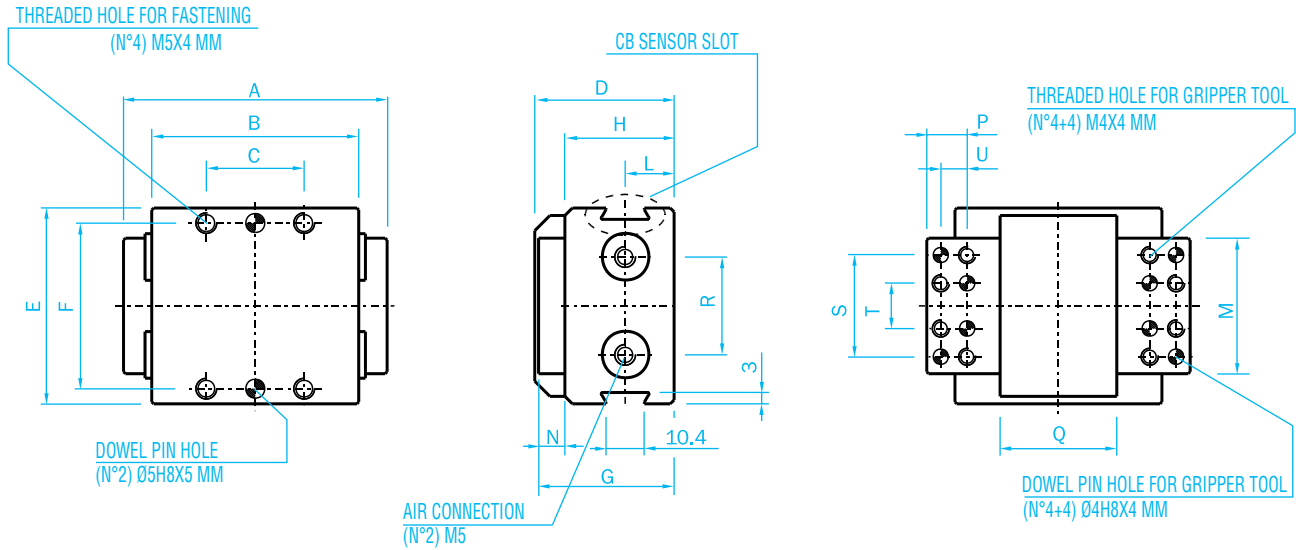
Reference:
Force: N x 0.225 = lbf
Pressure: bar x 14.5 = psi



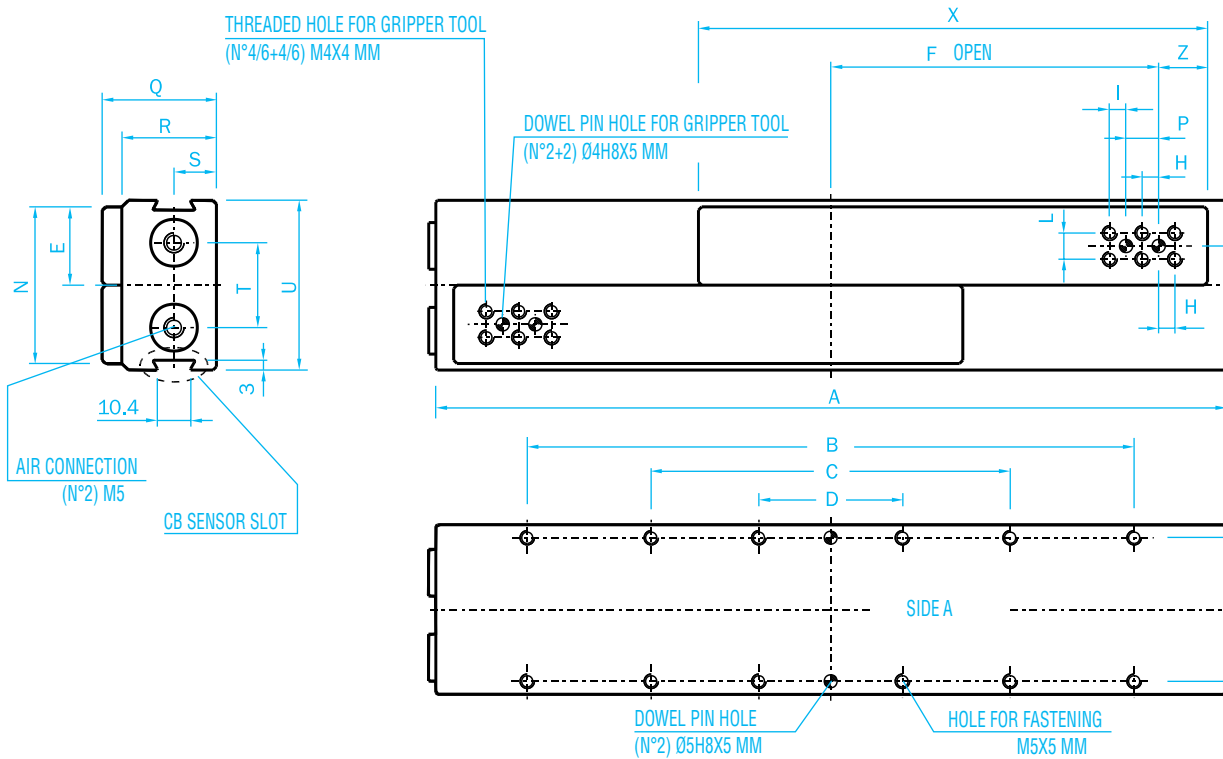
Parallel Gripper – PE

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

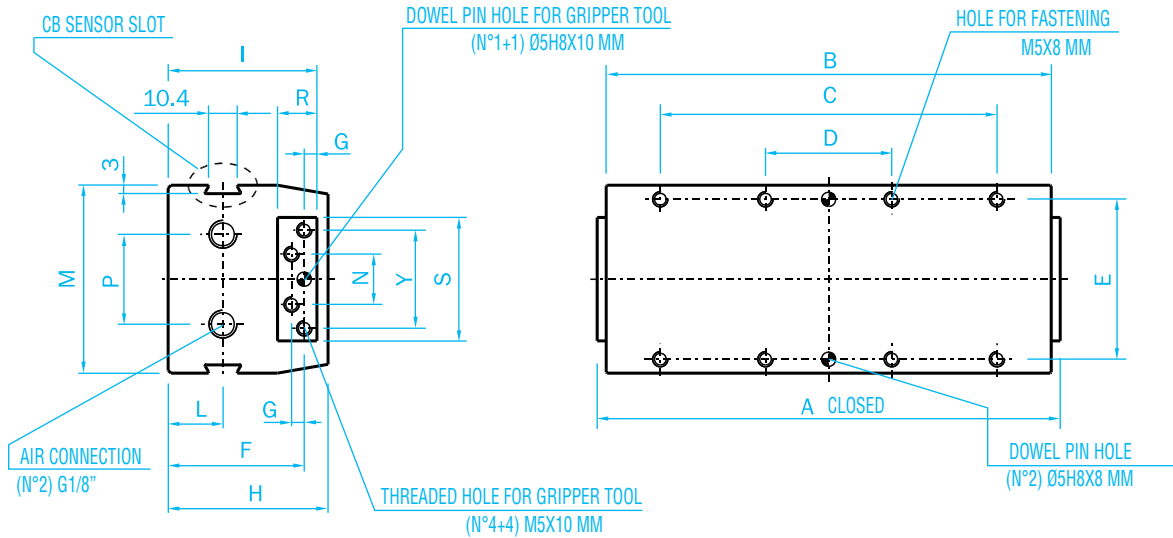


	A	B	C	D	E	F	G ± 0.02	H	I	L	M	N	P ± 0.02	Q	R	S	T	U	X	Z
PE-1625	70	-	-	26	24	12.5	44	5	-	12	12	48	12	37	29	13	26	52	41.5	14.5
PE-1640	99	-	-	60	24	26.5	44	5	-	8	12	48	10	37	29	13	26	52	63	15
PE-1680	155	-	-	60	24	54.5	44	5	5	8	12	48	10	37	29	13	26	52	99	15
PE-16150	263	-	200	60	24	108.5	44	5	5	8	12	48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

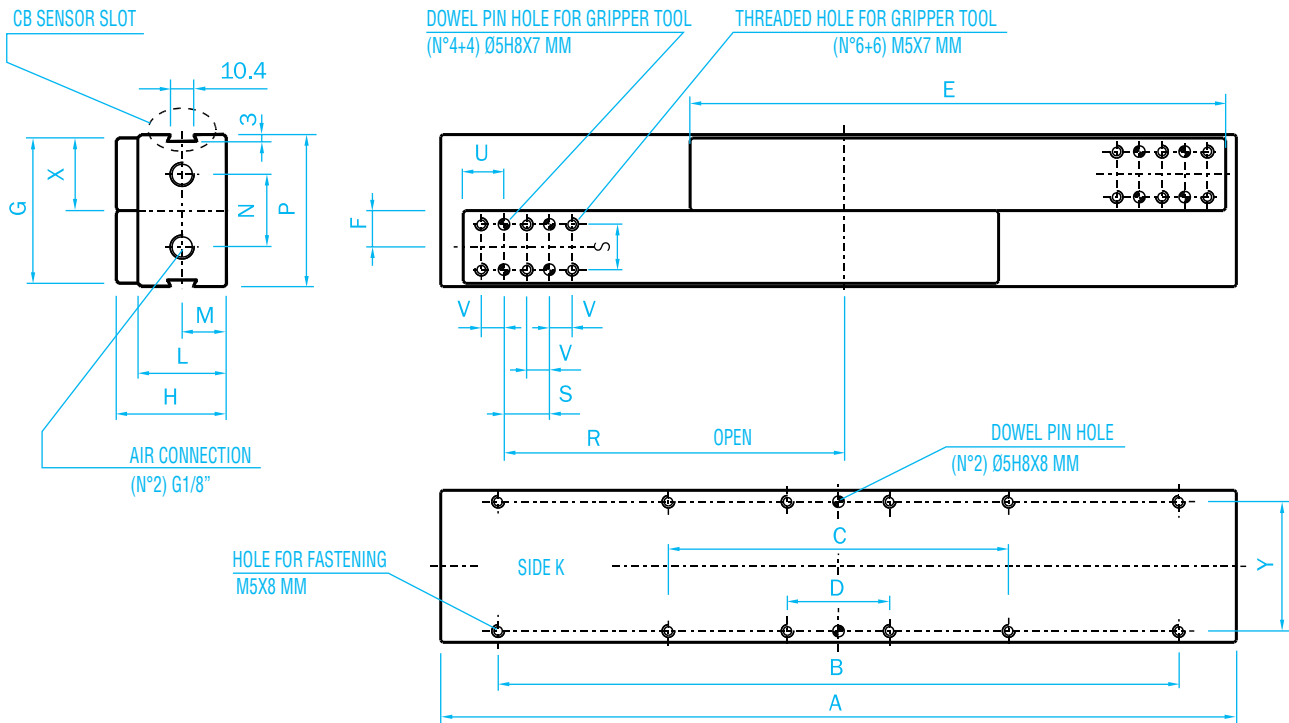
Parallel Gripper – PE

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



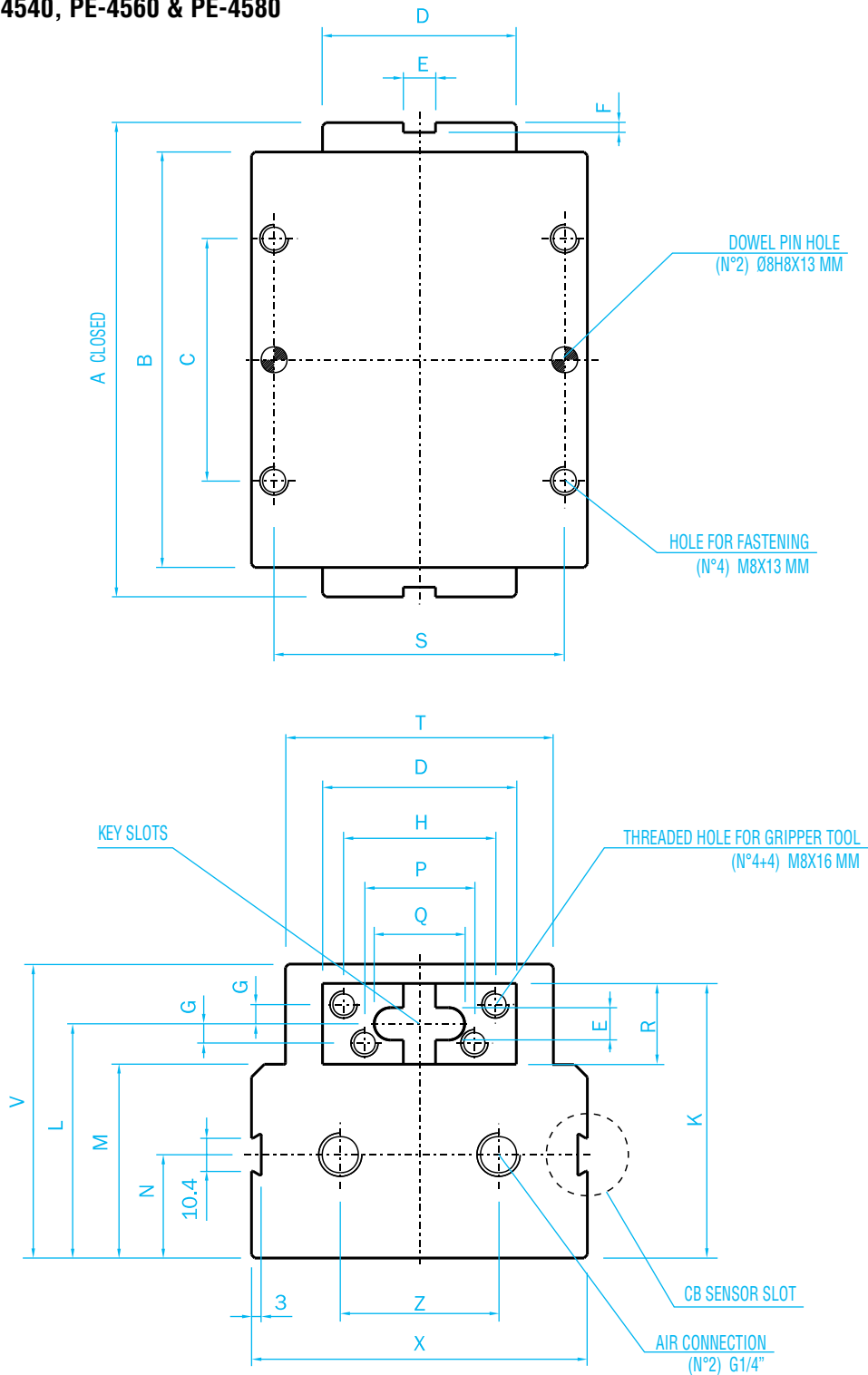
PE-25100 & PE-25200



	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

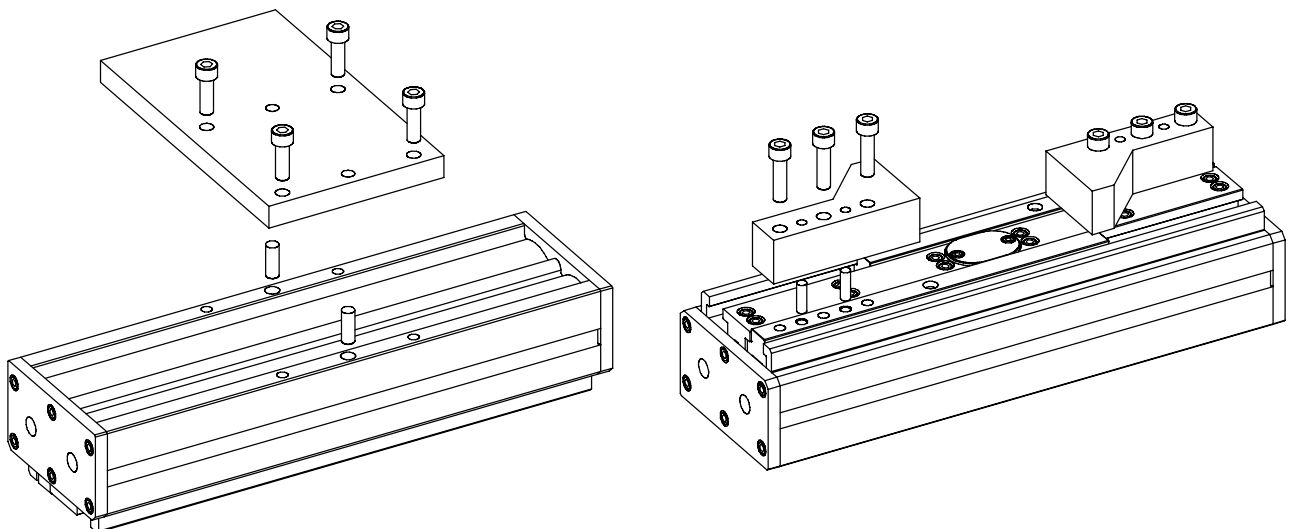
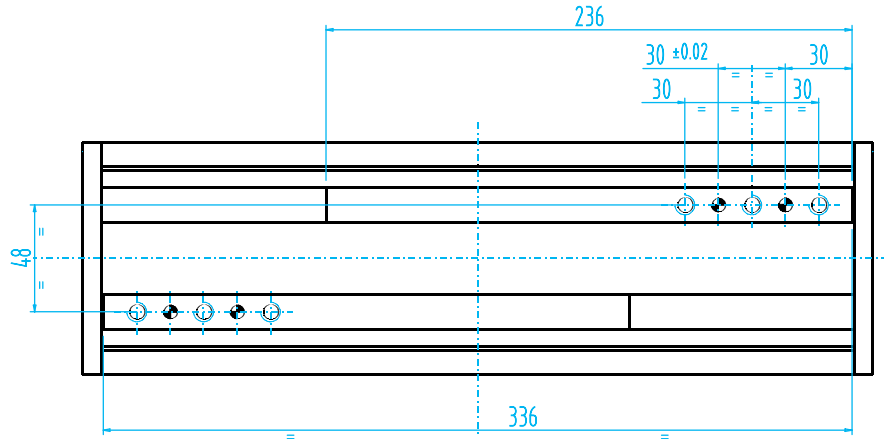
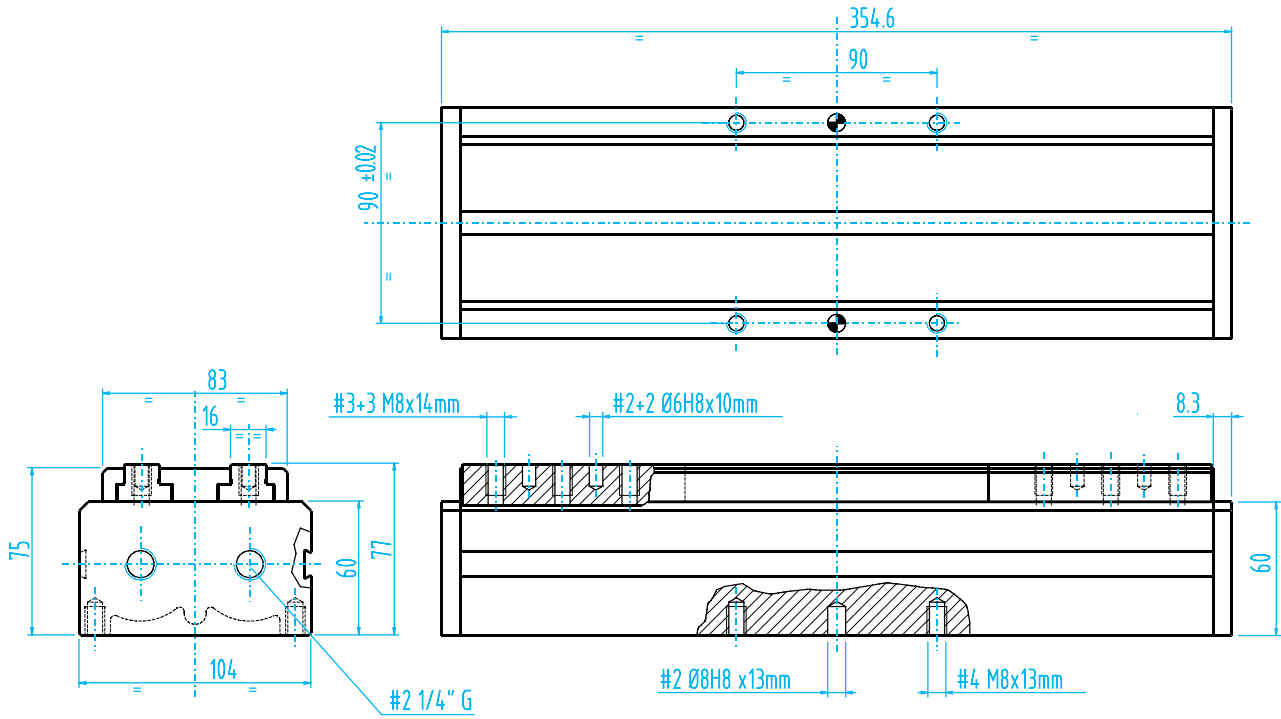
PE-4520, PE-4540, PE-4560 & PE-4580



	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

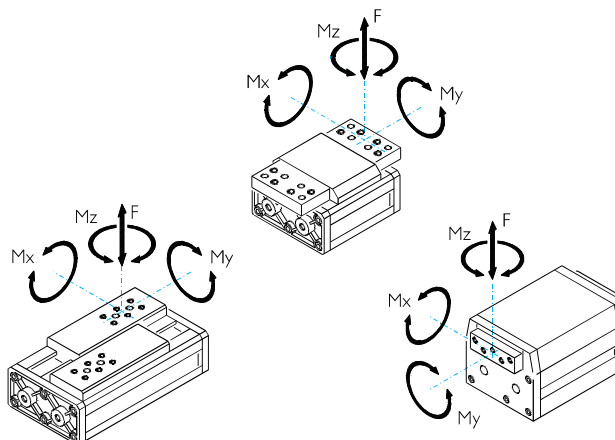
Safety loads

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

F d, Mx d, My d, Mz 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
F s	48 N	166 N	166 N	163 N	163 N	163 N
Mx s	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
My s	2.4 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm
Mz s	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
F d	0.48 N	1.7 N	1.7 N	1.6 N	1.6 N	1.6 N
Mx d	2.4 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm
My d	2.4 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm
Mz d	2.4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm
m 0.8s	-	166g	166g	163g	163g	163g
m 0.5s	-	108g	108g	106g	106g	106g
m 0.3s	48g	93g	93g	91g	-	-
m 0.2s	31g	83g	83g	81g	-	-
m 0.1s	24g	60g	60g	-	-	-

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

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

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 – 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.

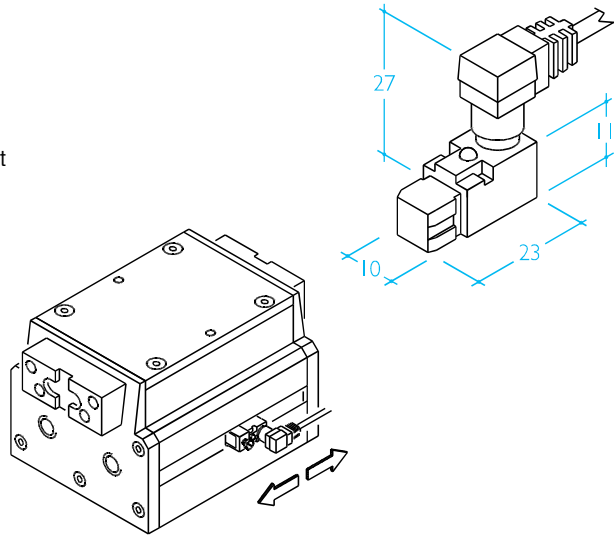
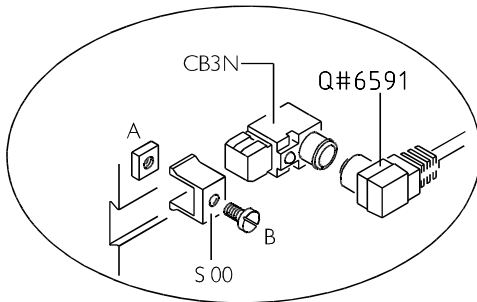


Quick#	Part#	Signal	Connection	Price
6126	CB3N2-G	PNP	3-wire sensor with M8 Connector	\$22.88
1794	CB3M2-G	NPN	3-wire sensor with M8 Connector	\$22.90
(*) Purchase extension cable #6591 separate for these sensors.				
6591	CFSM890325	3m 3-wire extension with M8 female connector		\$7.18

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

Close/Open Port Flow Controls

Silicone Pads

3-Position Teachable Sensor

Not shown: Built-in 5/2 solenoid valve

3D Printed Shroud

