

Features

Bumpers
 Reduce noise and dissipate energy, thus permitting faster cycle times and increased production rates.

Jaws
 Hardened stainless steel jaws are standard.

Mounting
 Combination side and rear tapped holes are standard and provide for design flexibility. Both mounting positions include dowel holes for alignment.

Ports
 Standard M5 female ports or optional Presto-lok right angle flow controls.

Magnetic Piston
 Standard on all grippers.

Body
 Machined from an aluminum extrusion that is anodized and permanently sealed. This results in a smooth seal surface which guarantees long seal life and low breakaway pressure.

Sensors
 Grippers may be ordered with proximity, Hall Effect or reed sensors. A "prox ready" option is also available.

Sensor Grooves
 All gripper sizes are equipped with two sensor grooves for standard Parker sensors.

Multiple Function
 Jaw travel either grip open or grip close.

Operation

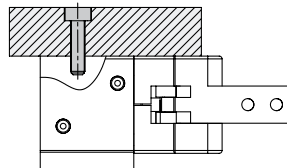
Operating Characteristic Double acting, wide opening
 Gripping Force @ 100 PSI 11 - 134 lbs
 Stroke -5° to +180°
 Operating Pressure Range 40 - 100 PSI (3 - 7 bar)

Not recommended for applications containing:

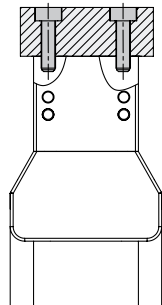
- Dirt or grit
- Machining chips
- Environments with loose particulate
- Mechanism lubricant that could cause contamination

Mounting

Gripper mounts with screws and locates with dowel pin holes for accuracy.



Gripper mounts with screws and locates with center pilot diameter for accuracy.

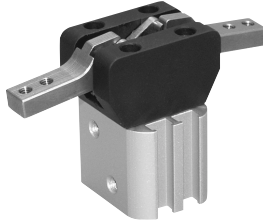


Warning! Protect drive and bearing mechanism from falling debris when mounted with fingers up.

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P5G-AW3

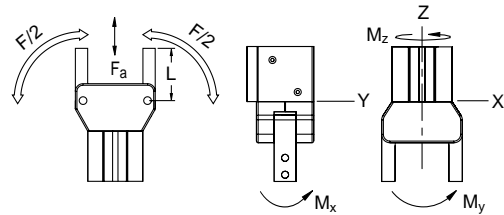
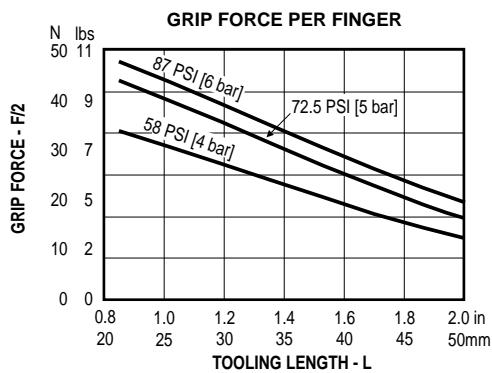


Total Grip Force (100 psi @ 25 mm)	13.9 lbs	62 N
Stroke (Degree)	-5 to +180	
Weight	0.29 lbs	0.13 kg
Bore Size	0.62 in	16 mm
Cylinder Volume	0.11 in ³	1.807 cm ³
Repeatability	±0.001 in	±0.03 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

Note: See model code and ordering information page for complete part number selection.

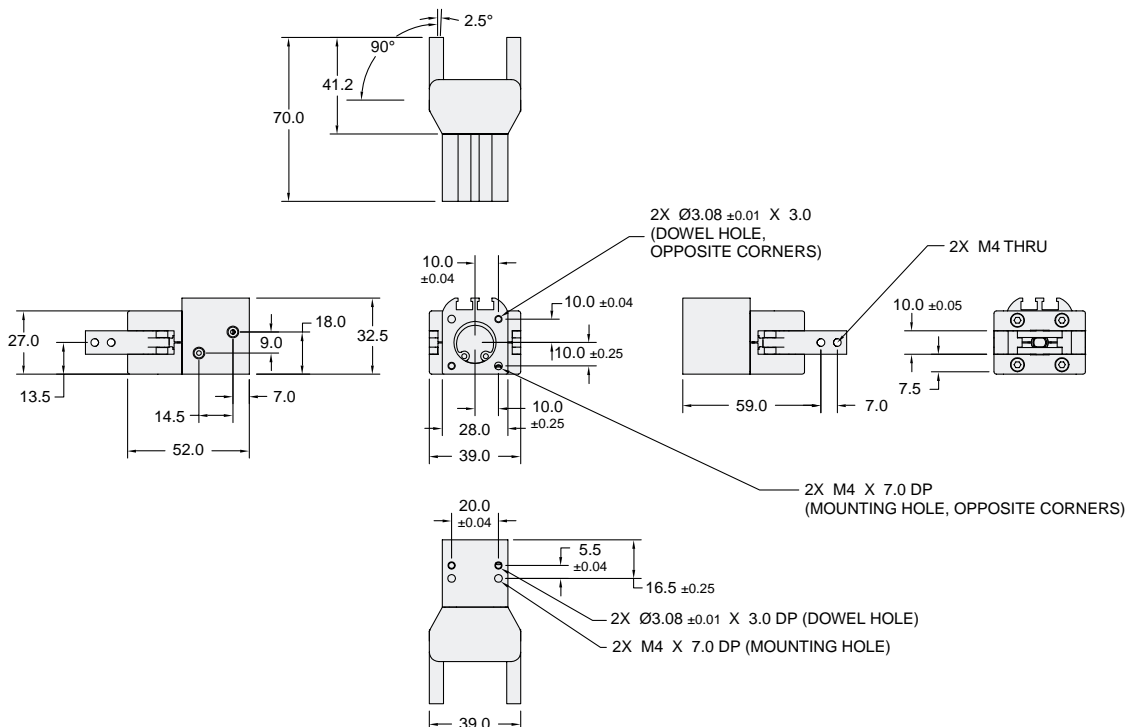
Loading Information



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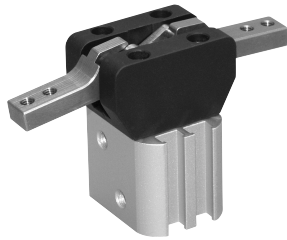
Loading Capacity	Static	
Axial Forces (Fa)	20.1 lbs	88 N
Moment (Mx)	38.7 in-lbs	4.3 Nm
Moment (My)	38.7 in-lbs	4.3 Nm
Moment (Mz)	37.8 in-lbs	4.2 Nm

Dimensional Information



Dimensions in mm.

P5G-AW4

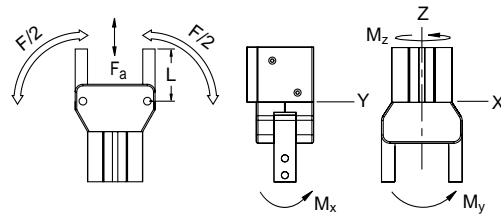
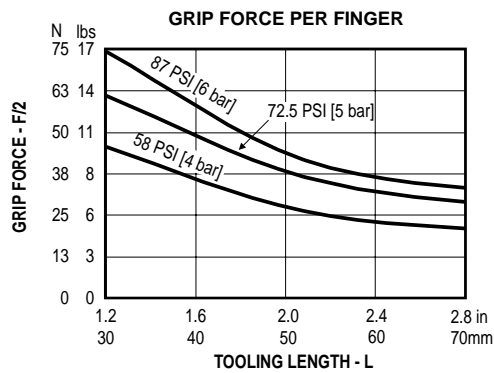


Total Grip Force (100 psi @ 30 mm)	38.5 lbs	171.6 N
Stroke (Degree)	-5 to +180	
Weight	0.61 lbs	0.27 kg
Bore Size	0.98 in	25 mm
Cylinder Volume	0.35 in ³	5.702 cm ³
Repeatability	±0.001 in	±0.03 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

Note: See model code and ordering information page for complete part number selection.

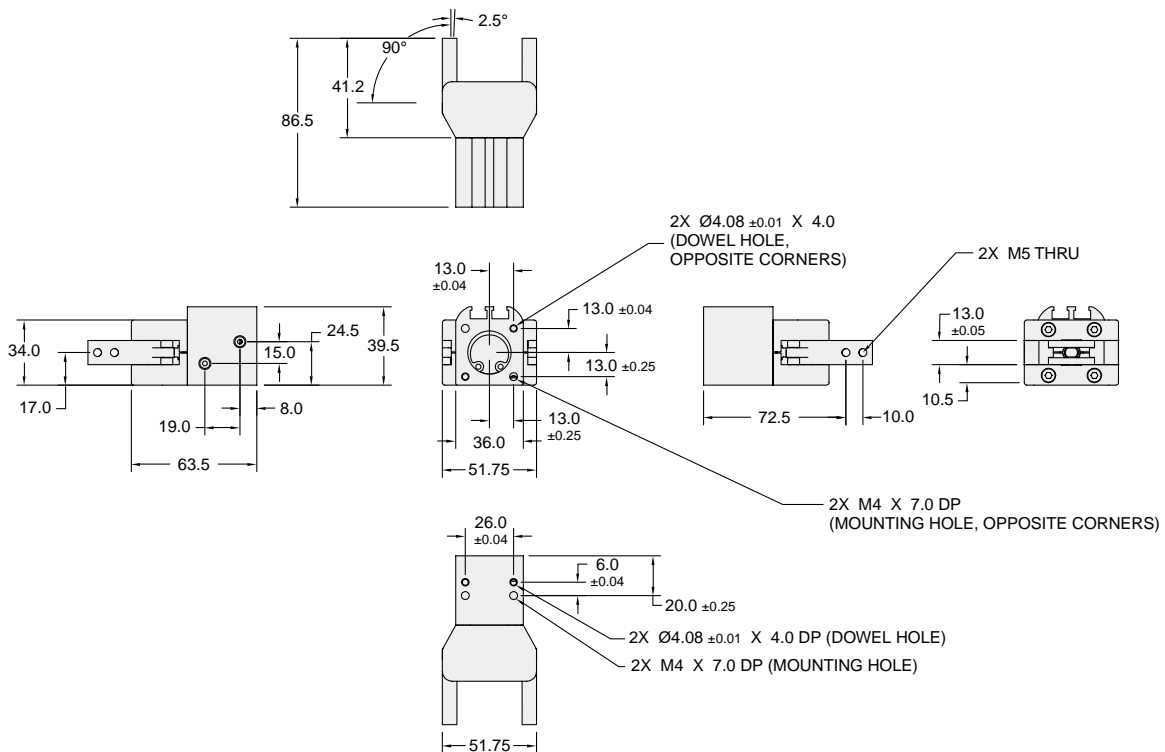
Loading Information



Maximum Loading Capacity

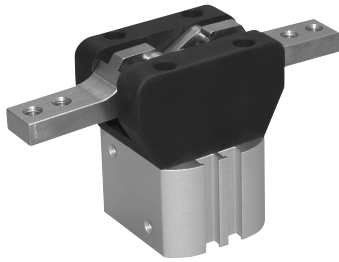
Loading Capacity	Static	
Axial Forces (Fa)	40 lbs	175 N
Moment (Mx)	49.5 in-lbs	5.5 Nm
Moment (My)	49.5 in-lbs	5.5 Nm
Moment (Mz)	37.8 in-lbs	4.5 Nm

Dimensional Information



Dimensions in mm.

P5G-AW5

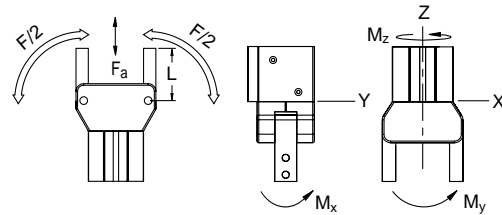
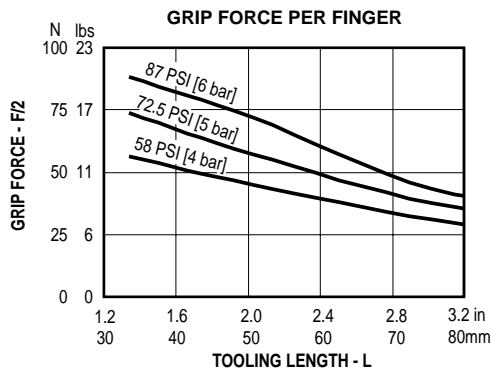


Total Grip Force (100 psi @ 30 mm)	46.9 lbs	208.8 N
Stroke (Degree)	-5 to +180	
Weight	0.92 lbs	0.41 kg
Bore Size	1.25 in	32 mm
Cylinder Volume	0.66 in ³	10.758 cm ³
Repeatability	±0.001 in	±0.03 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

Note: See model code and ordering information page for complete part number selection.

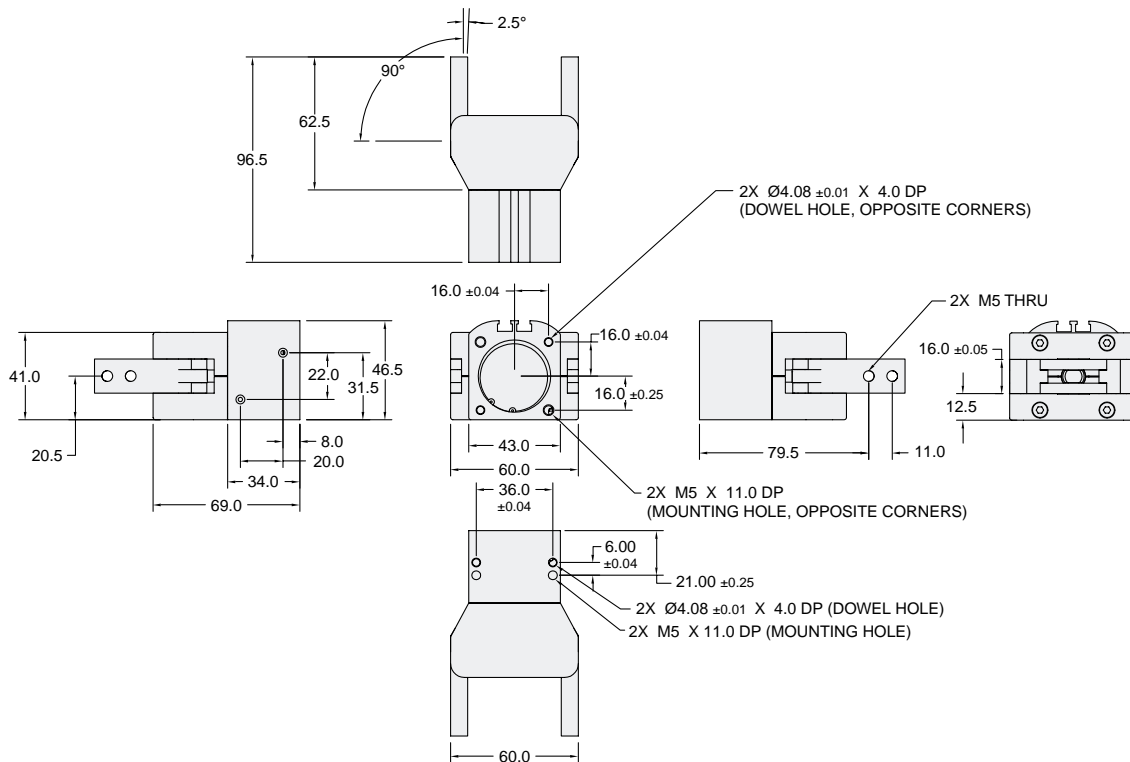
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Maximum Loading Capacity

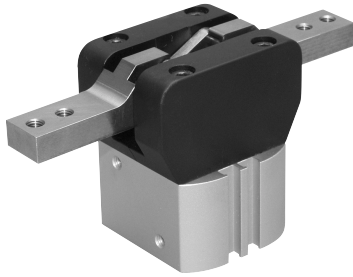
Loading Capacity	Static	
Axial Forces (Fa)	69.9 lbs	306 N
Moment (Mx)	76.4 in-lbs	8.5 Nm
Moment (My)	80.9 in-lbs	9 Nm
Moment (Mz)	53.1 in-lbs	5.9 Nm

Dimensional Information



Dimensions in mm.

P5G-AW6

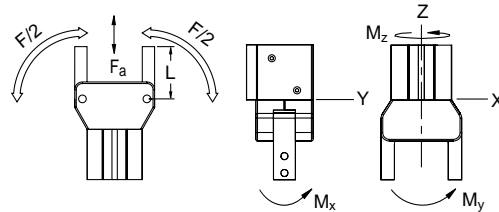
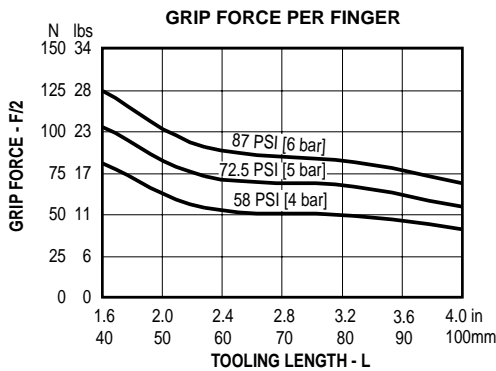


Total Grip Force (100 psi @ 40 mm)	65 lbs	290 N
Stroke (Degree)	-5 to +180	
Weight	1.30 lbs	0.59 kg
Bore Size	1.57 in	40 mm
Cylinder Volume	1.06 in ³	17.367 cm ³
Repeatability	±0.001 in	±0.03 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

Note: See model code and ordering information page for complete part number selection.

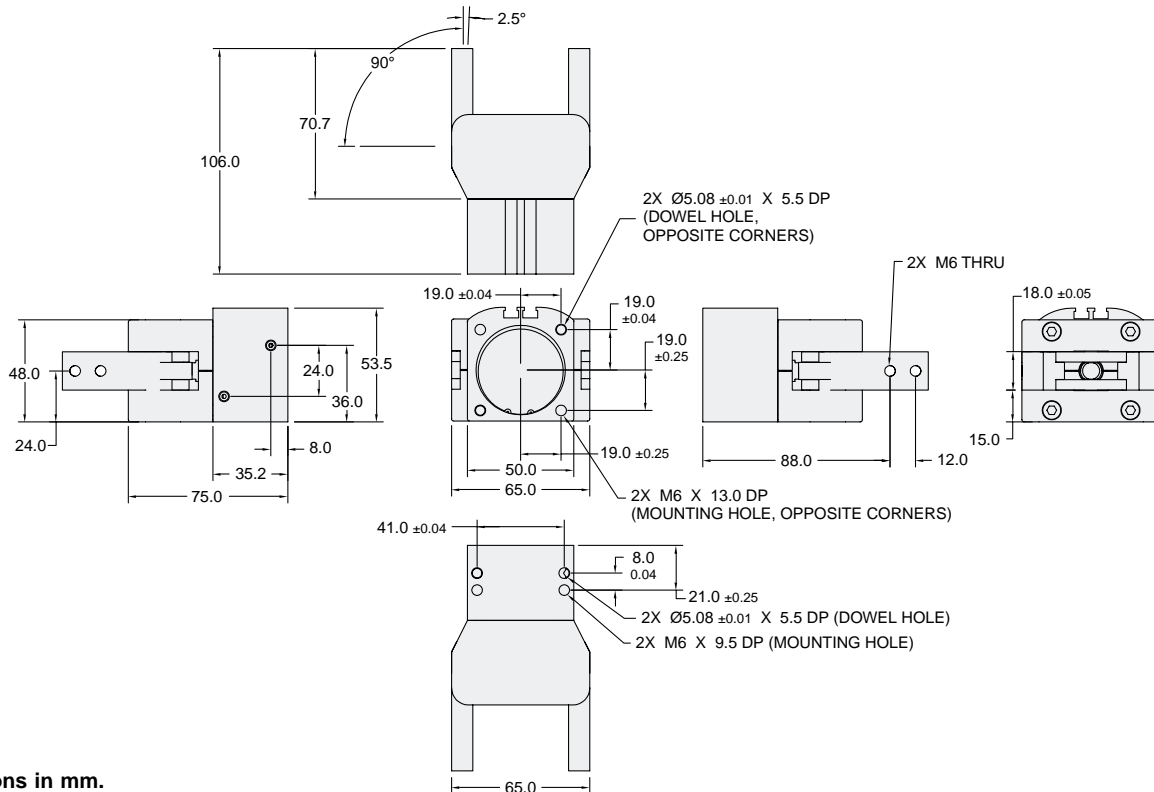
Loading Information



Maximum Loading Capacity

Loading Capacity	Static	
Axial Forces (Fa)	110.1 lbs	482 N
Moment (Mx)	116.9 in-lbs	13 Nm
Moment (My)	123.2 in-lbs	13.7 Nm
Moment (Mz)	75.5 in-lbs	8.4 Nm

Dimensional Information

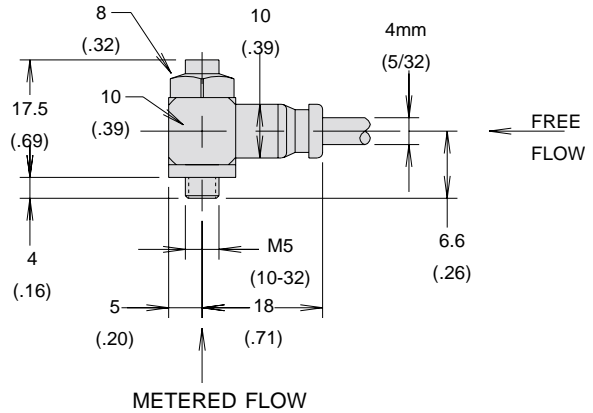


Dimensions in mm.

Right Angle Flow Control (3)

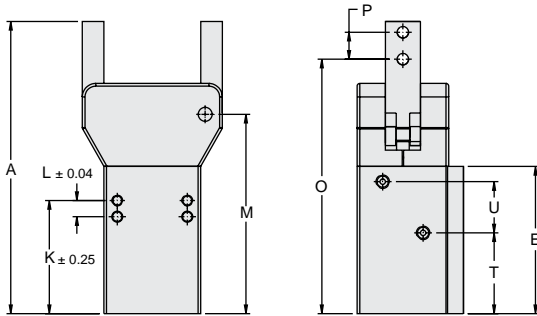
Right angle flow control valves allow precise adjustment of speed by metering exhaust air flow. Presto-Lok push-in ports provide 360° orientation capability.

When using the 180° gripper, it is suggested to slow the finger motion to prevent high inertial loads.



Spring Return (C)

The spring return option allows for an automatic reset and jaw return. Selecting the spring return option creates a single-acting gripper component that may reduce the number of directional control valves needed to operate automated machinery.



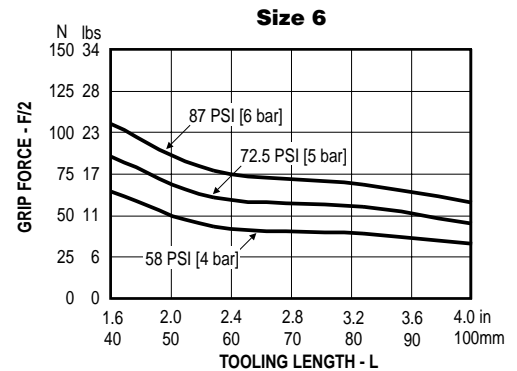
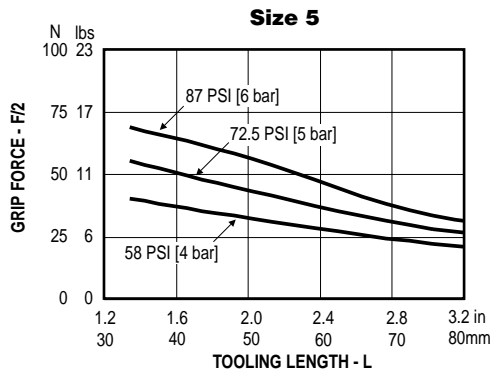
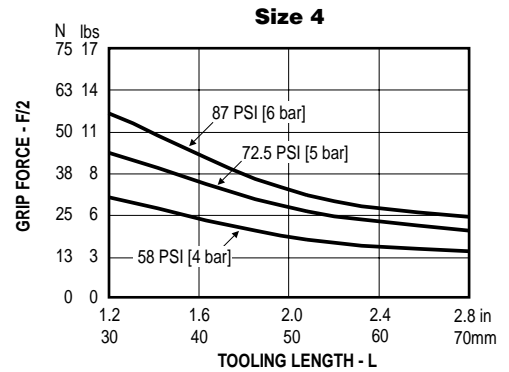
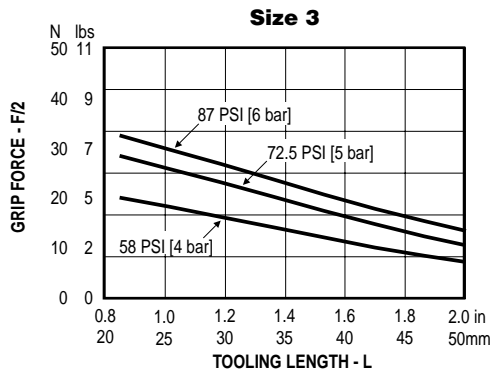
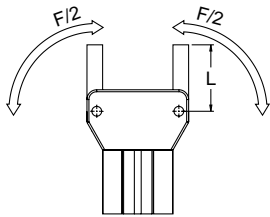
Dimensions

Spring return will increase body length.

Size	A	E	K	L	M	O	P	T	U
3	86	44.7	32.5	5.5	59.3	75	7	23	14.5
4	108.5	54.7	42	6	74.5	94.5	10	30	19
5	116.5	54	41	6	77	99.5	11	28	20
6	131	60.2	46	8	85	113	12	33	22

Gripping Force

The total grip force is defined as the sum of the forces applied by both jaws. Distance (L) is the distance from the pivot of the gripper to the center of the contact on the workpiece.



Stroke Adjust (A, B, D, F, G)

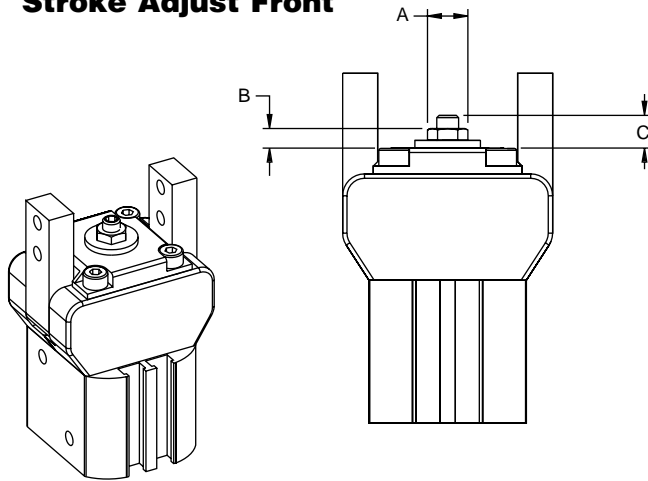
Use the stroke adjust option when exact travel distances are needed. Fully adjustable internal stops permit precise stopping locations anywhere within the jaw travel. The stroke adjust option is available in two configurations:

- Stroke adjust front
- Stroke adjust rear

This gives the machine designer the flexibility to create the best possible design within limited space requirements.

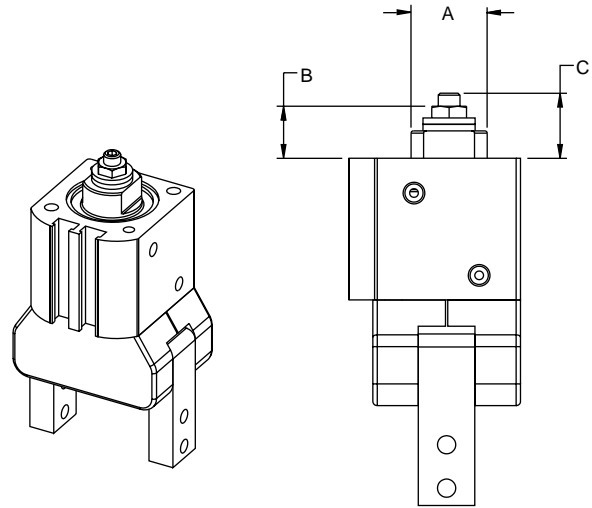
NOTE: Stroke adjust rear is not available with spring return.

Stroke Adjust Front



Size	Style	A	B	C
3	180°	8	3	11.5
4	180°	9.5	4.5	14.5
5	180°	9.5	4.5	16
6	180°	9.5	4.5	14.5

Stroke Adjust Rear



Size	Style	A	B	C (Max)
3	180°	10.5	10	14.5
4	180°	15	11.5	19
5	180°	20	14	21.5
6	180°	24	12.5	21.5

NOTE: Stroke adjust rear not available with spring return.

Adjustment Tools

Gripper Size	Socket Stroke Adjuster		Nut	
	Size	Wrench	Size	Wrench
3	M4	2 mm	M4	7 mm
4	M5	2.5 mm	M5	8 mm
5	M5	2.5 mm	M5	8 mm
6	M5	2.5 mm	M5	8 mm

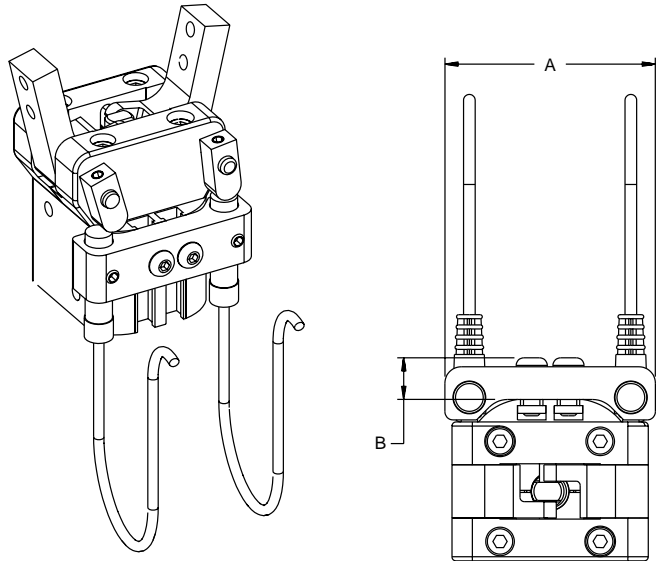
All dimensions in mm

Proximity Sensors
Prox Ready (PJ)

Proximity sensors provide feedback on the position of the gripper fingers by sensing the metal screw that is attached to the gripper jaw. The sensor is adjustable along the full travel of the steel screw and is held in place by the set screw.

Care should be taken when adjusting the sensor so that the adjustable screw does not physically contact the sensor. Distance from the screw to the sensor should be approximately 1 mm (0.04 inches).

See Sensors section for sensor specifications.



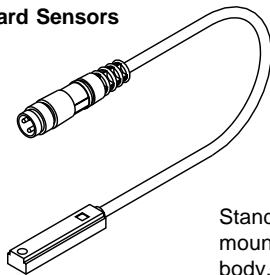
Size	A	B
3	42	10.3
4	51.5	10.2
5	59	10.2
6	66	10.2

Reed and Hall Effect Sensors

Reed or Hall effect sensors mount in the sensor mounting grooves located in the gripper body. A magnetic piston is standard for ease of field addition of sensors.

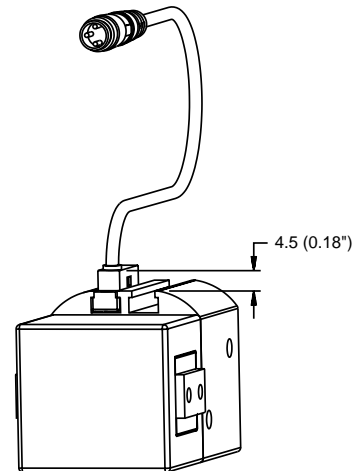
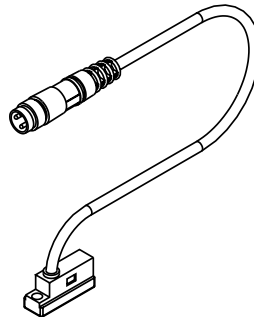
See Sensors section for specifications.

Standard Sensors



Standard sensors mount flush to the body. Sensor shown with connector. Lead wires also available.

Short Sensors



Fluorocarbon Seals (V)

Standard abrasion resistant nitrile seals should be used for general purpose applications with temperatures of -18° to 82°C (0° to 180°F). Fluorocarbon seals are recommended for high temperature applications up to 121°C (250°F). The items shown in the table should be considered when planning high temperature applications.

	Temperature Range
Magnets	-27° to 130°C (-16° to 266°F)
Bumpers	-27° to 90°C (-16° to 195°F)
Sensors	-25° to 75°C (-13° to 167°F)
Proximity Sensors	-25° to 70°C (-13° to 158°F)

Model Code and Ordering Information

P5G - **A** **W** **4** **B** **A** **N** **H** **B** **S** - **A**

Global Pneumatic Grippers

P5G

Series

A – Automation

Type

W – 180° Angular

Size

3 – 16 mm 5 – 32 mm
 4 – 25 mm 6 – 40 mm

Ports

3 – Prestolok Flow Control 4mm (5/32") tube diameter

Function

A – Standard

Spring/Stroke Adjust Options

A – Spring Return, Stroke Adjust Front
 C – Spring Return
 F – No Spring, Stroke Adjust Front
 G – No Spring, Stroke Adjust Rear
 N – No Option (Standard)

Sensors

NN – No Sensors
 PJ – Proximity Sensor Ready

Standard Hall Effect

HA – (2) NPN w/Plug*
 HB – (2) PNP w/Plug*
 HC – (1) NPN w/Plug*
 HD – (1) PNP w/Plug*
 HE – (2) NPN w/o Plug**
 HF – (2) PNP w/o Plug**
 HG – (1) NPN w/o Plug**
 HK – (1) PNP w/o Plug**

Short Hall Effect

HV – (2) PNP w/Plug*
 HY – (1) PNP w/Plug*
 KB – (2) PNP w/o Plug**
 KD – (1) PNP w/o Plug**

Standard Reed

RA – (2) w/Plug*
 RB – (1) w/Plug*
 RC – (2) w/o Plug**
 RD – (1) w/o Plug**

Proximity

PA – (2) NPN Plug-in †
 PB – (2) PNP Plug-in †
 PC – (1) NPN Plug-in †
 PD – (1) PNP Plug-in †
 PE – (2) NPN Potted ‡
 PF – (2) PNP Potted ‡
 PG – (1) NPN Potted ‡
 PK – (1) PNP Potted ‡

* 0.27m cable

** 3m cable

† 5m cable

‡ 6m lead

Seals

S – Standard
 F – Fluorocarbon

Design Series

A – Current Design Series

Seal Kits

Size	Nitrile Seal Kit	Fluorocarbon Seal Kit
P5G-AW3	PSK-P5GAW3	PSK-P5GAW3-F
P5G-AW4	PSK-P5GAW4	PSK-P5GAW4-F
P5G-AW5	PSK-P5GAW5	PSK-P5GAW5-F
P5G-AW6	PSK-P5GAW6	PSK-P5GAW6-F