

Features

Jaws
 Hardened stainless steel jaws are standard.

Magnetic Piston
 Standard on all grippers.

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

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.

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

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

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

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

Multiple Function
 Jaw travel either grip open or grip close.

Operation

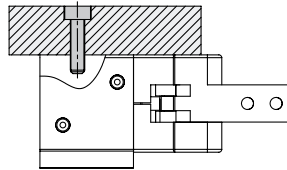
Operating Characteristic	Double acting
Gripping Force @ 100 PSI	11 - 134 lbs
Stroke	-5° to +30°
Operating Pressure Range	40 - 100 PSI (3 - 7 bar)

Not recommended for applications containing:

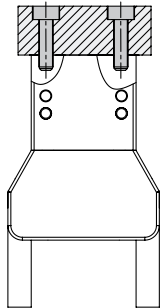
- Dirt or grit
- Machining chips
- Environments with loose particulate
- Mechanism lubricant that could cause contamination

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.

Contents

P5G-AA3	154
P5G-AA4	155
P5G-AA5	156
P5G-AA6	157
Right Angle Flow Controls	158
Sprint Return Option	158
Sensors	159
Fluorocarbon Seals	159
Ordering Information	160
Seal Kits	160

P5G-AA3

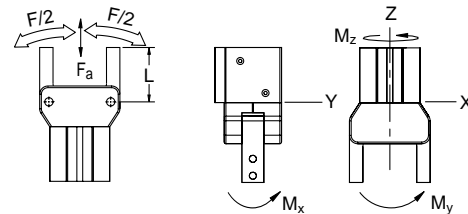
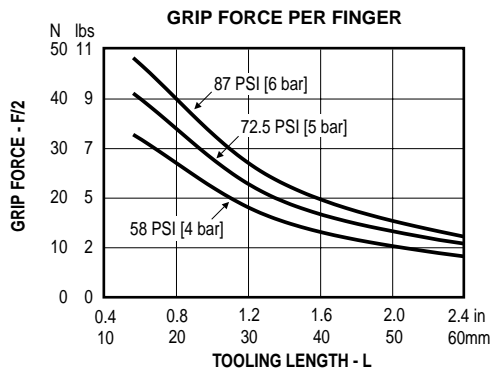


Total Grip Force (0.7 Mpa @ 25 mm)	17.4 lbs	77.7 N
Stroke (Degree)	-5 to +30	
Weight	0.27 lbs	0.122 kg
Bore Size	0.62 in	16 mm
Cylinder Volume	0.07 in ³	1.14 cm ³
Repeatability	± 0.003 in	± 0.076 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

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

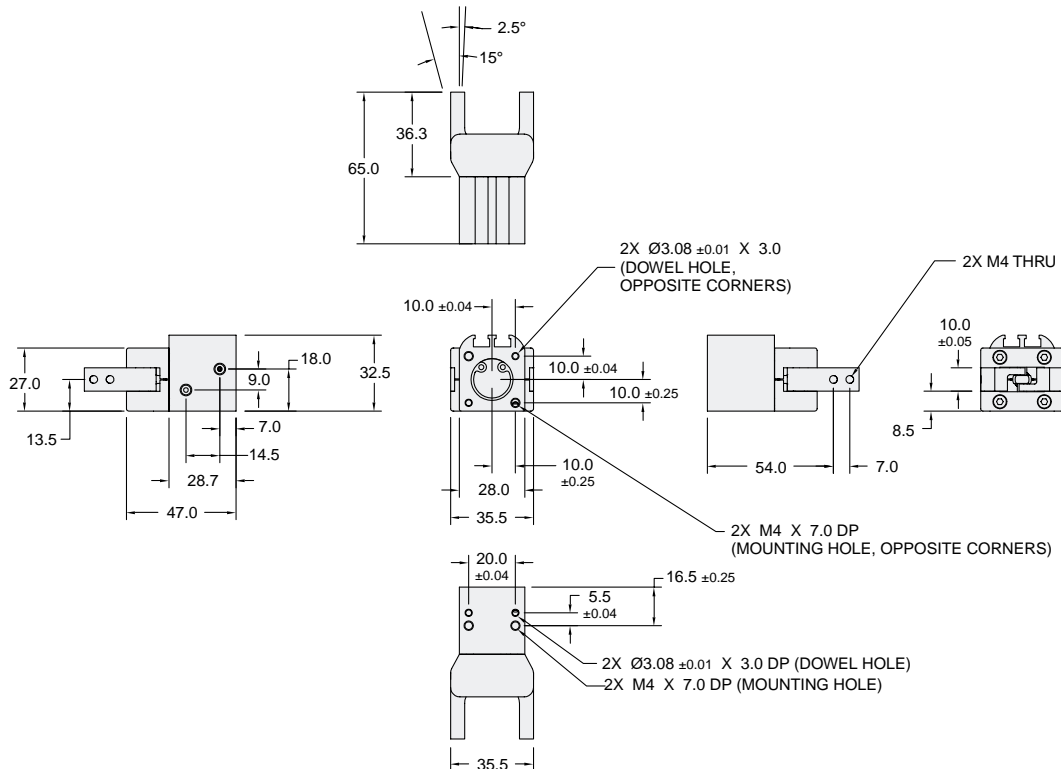
Loading Information



Maximum Loading Capacity

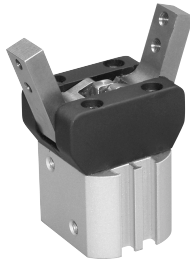
Load	Static	
Axial Forces (Fa)	20.1 lbs	88 N
Moment (Mx)	38.7 in-lbs	4.3 Nm
Moment (My)	38.7 in-lbs	4.3 Nm
Moment (Mz)	37.8 in-lbs	4.2 Nm

Dimensional Information



Dimensions in mm.

P5G-AA4

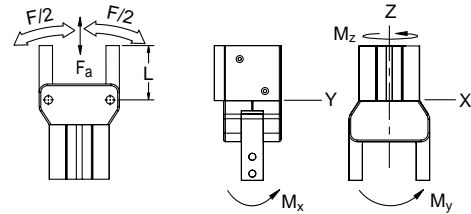
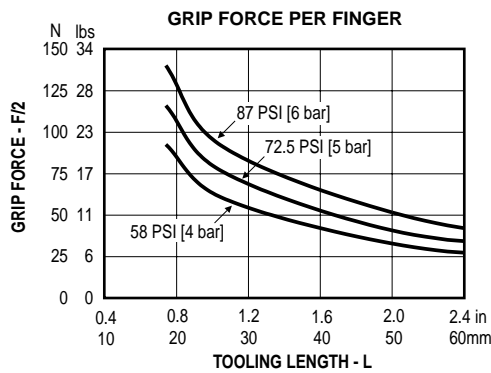


Total Grip Force (0.7 Mpa @ 25 mm)	46.9 lbs	208.8 N
Stroke (Degree)	-5 to +30	
Weight	0.54 lbs	0.244 kg
Bore Size	0.98 in	25 mm
Cylinder Volume	0.3 in ³	4.9 cm ³
Repeatability	± 0.003 in	± 0.076 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

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

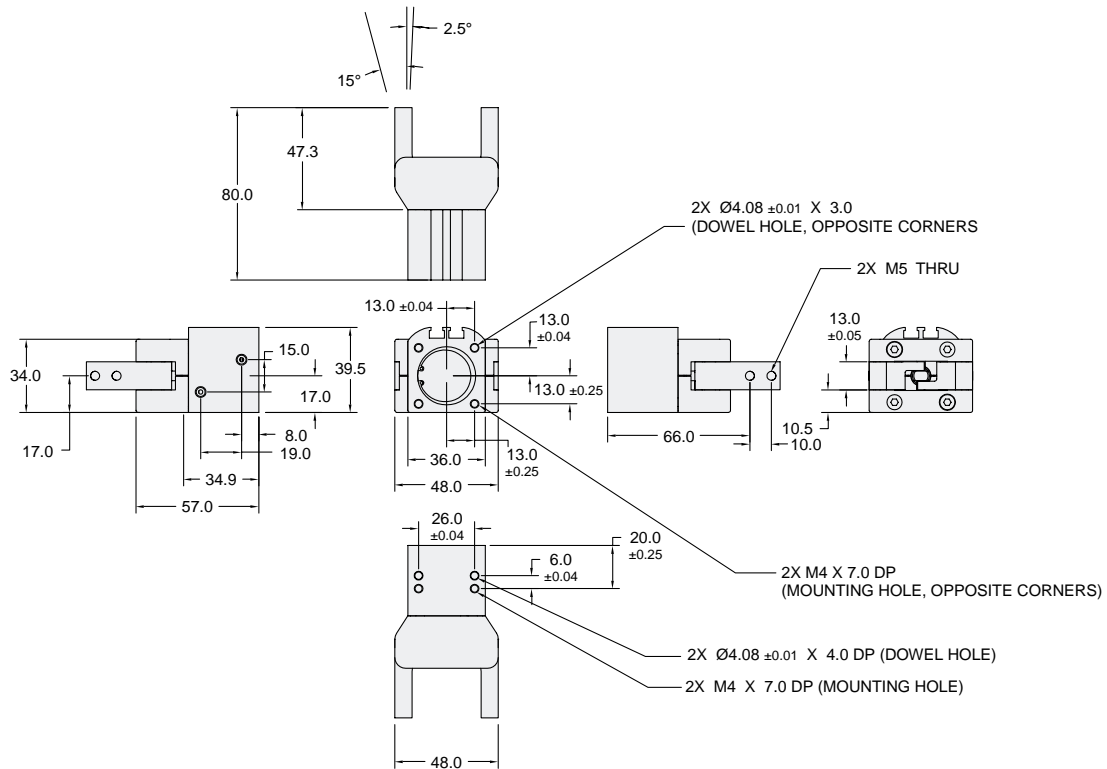
Loading Information



Maximum Loading Capacity

Load	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-AA5

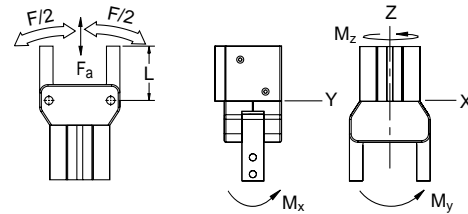
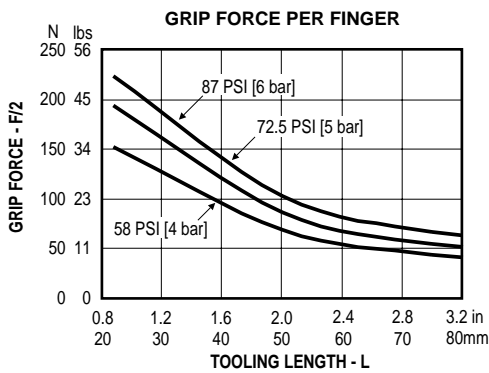


Total Grip Force (0.7 Mpa @ 25 mm)	108.2 lbs	481.4 N
Stroke (Degree)	-5 to +30	
Weight	.90 lbs	0.4 kg
Bore Size	1.25 in	32 mm
Cylinder Volume	0.58 in ³	9.5 cm ³
Repeatability	± 0.003 in	± 0.076 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

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

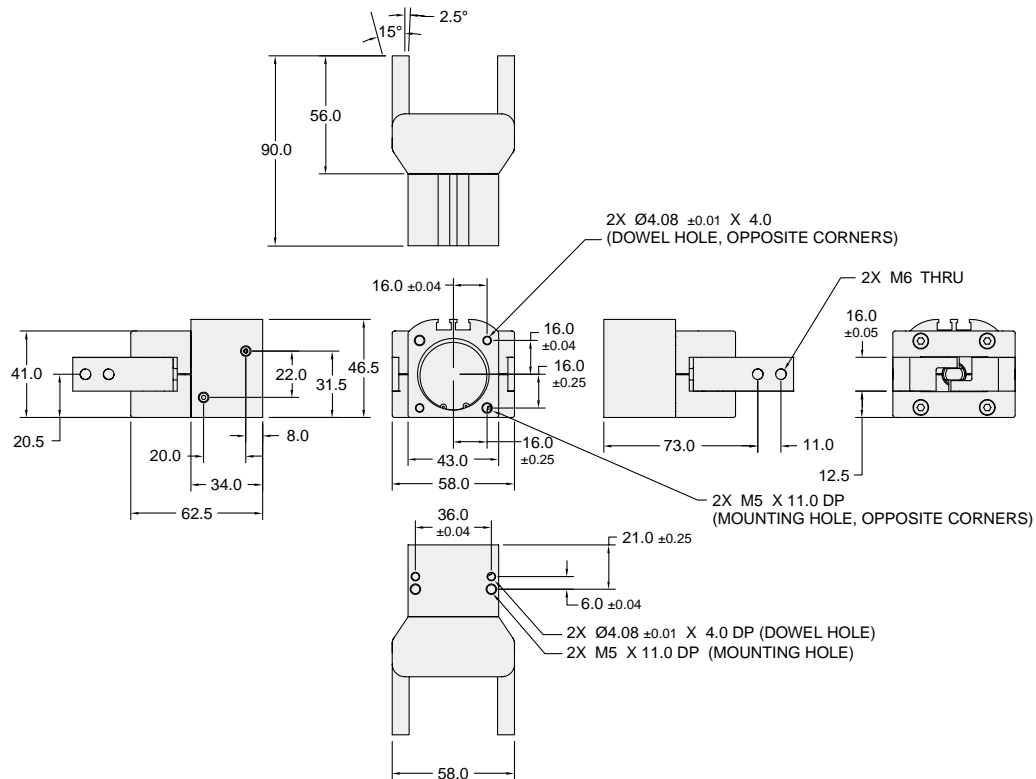
Loading Information



Maximum Loading Capacity

Load	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-AA6

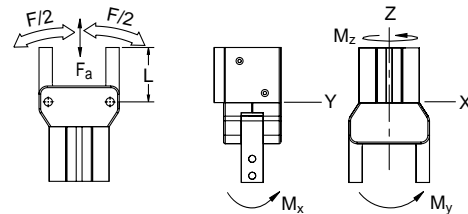
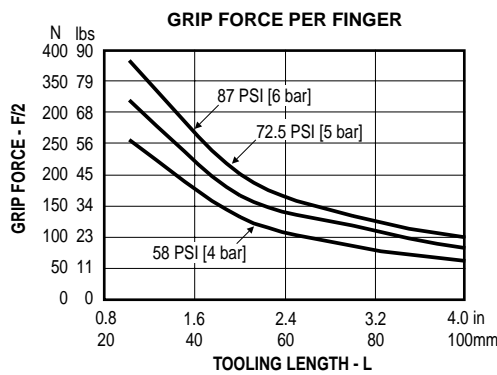


Total Grip Force (0.7 Mpa @ 25 mm)	198.1 lbs	881.6 N
Stroke (Degree)	-5 to +30	
Weight	1.28 lbs	0.58 kg
Bore Size	1.57 in	40 mm
Cylinder Volume	0.92 in ³	15.07 cm ³
Repeatability	± 0.003 in	± 0.076 mm
Temperature Range*	-4° to 180° F	-20° to 82° C
Pressure Range	4-100 psi	0.3-7 bar
Filtration Requirement	40 micron (dry air)	

* Fluorocarbon seals available for high temperature applications

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

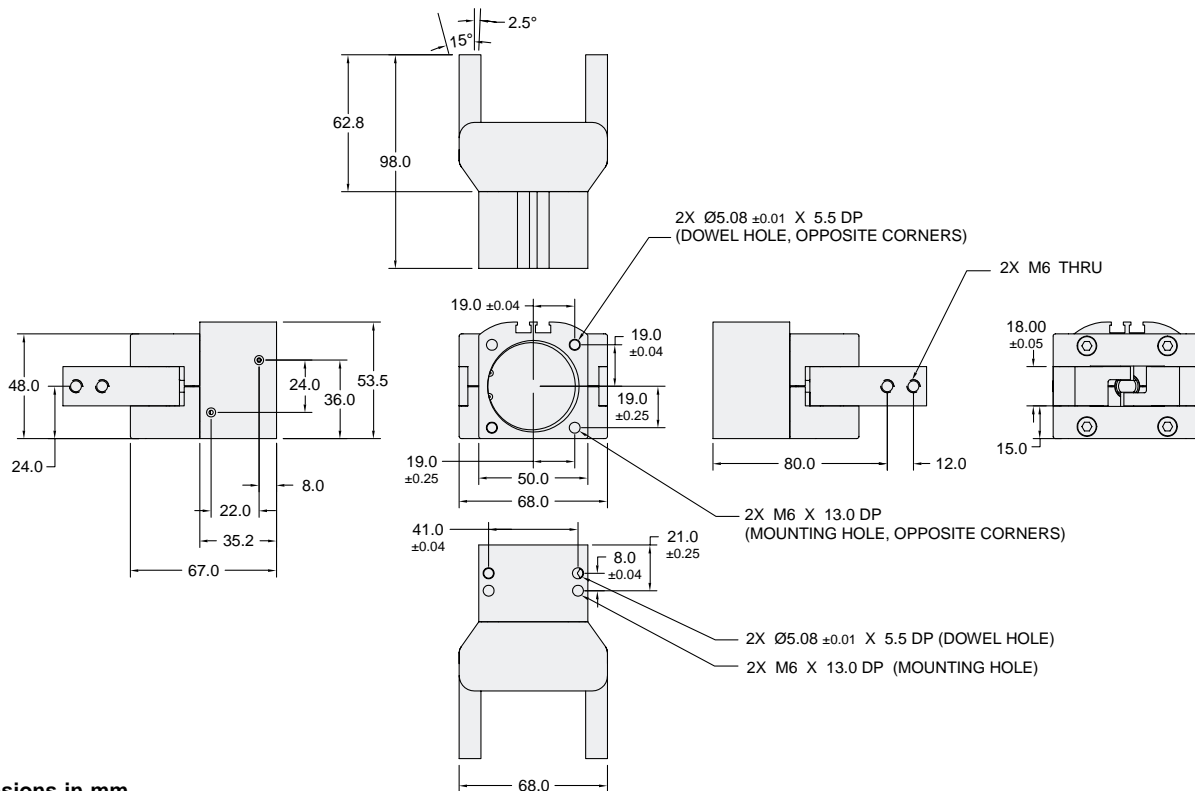
Loading Information



Maximum Loading Capacity

Load	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

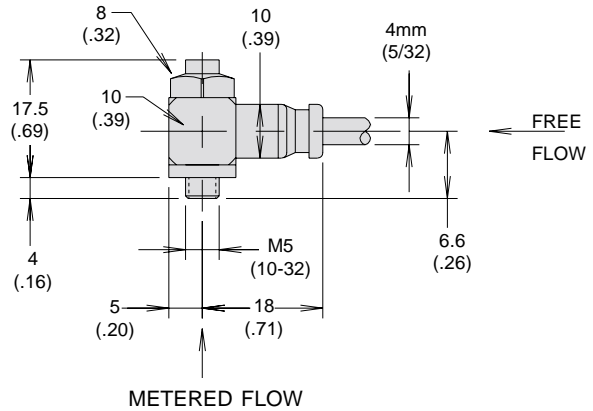
Dimensional Information



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.

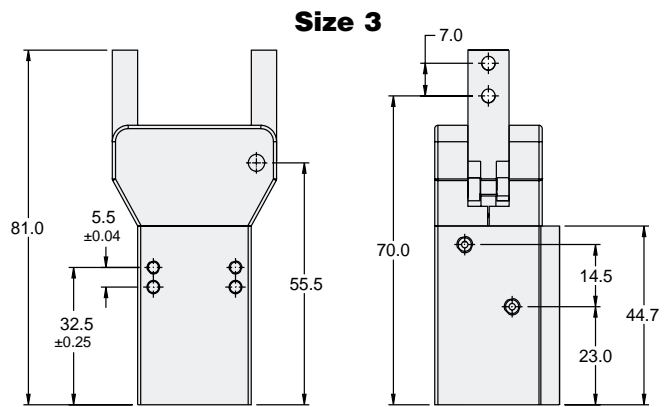


Spring Return (C)

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.

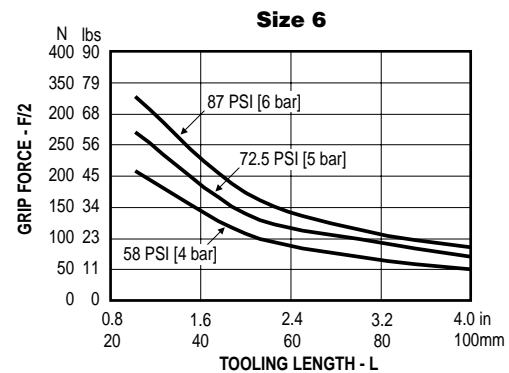
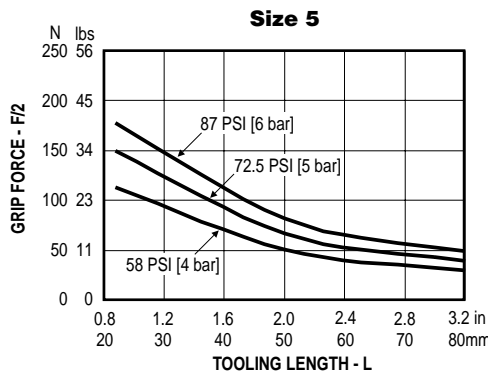
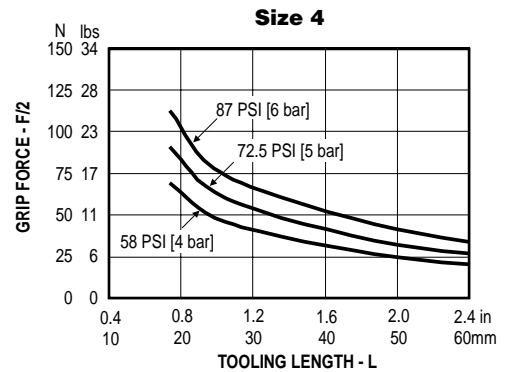
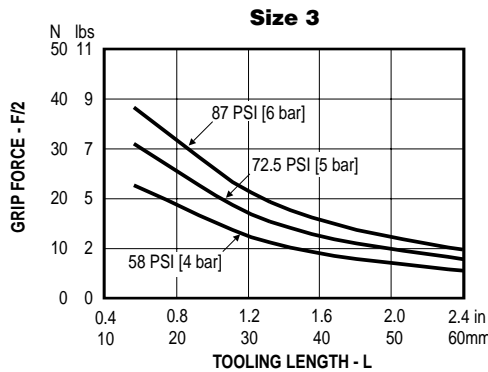
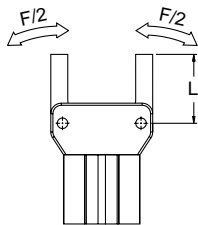
Dimensions

Spring return will increase body length on the **Size 3 models only**. See drawing at right.



Gripping Force

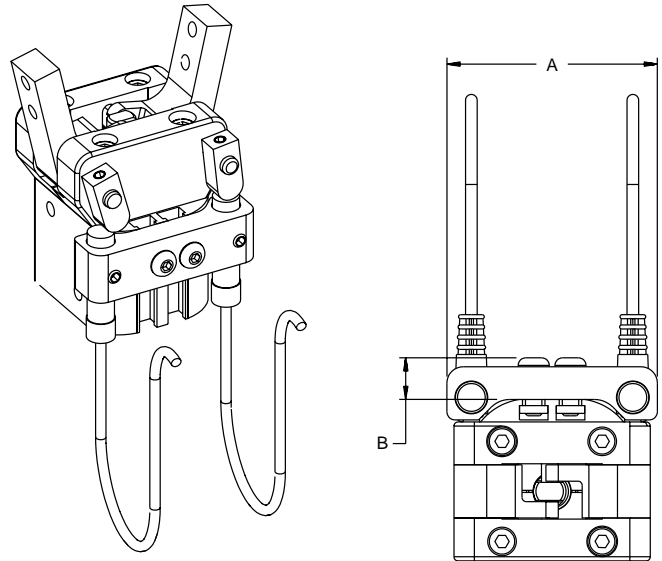
Total grip force (F) is defined as the sum of the forces applied by both jaws. Distance (L) is the distance from the pivot of the gripper to the center of the contact on the workpiece.



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).



Dimensions
(mm)

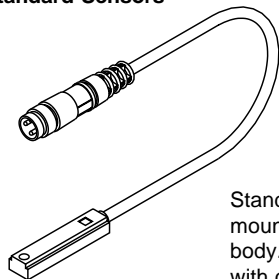
Size	A	B
3	42	10.3
4	51.5	10.2
5	59	10.2
6	66	10.2

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.

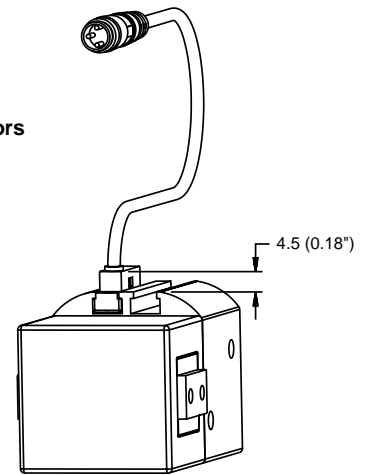
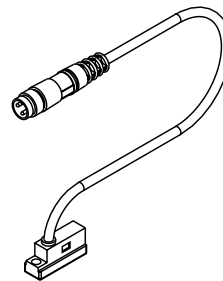
See Sensors section for specifications.

Standard Sensors



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

Short Sensors

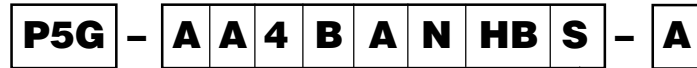


Fluorocarbon Seals (V)

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



Global Pneumatic Grippers

P5G

Series

A – Automation

Type

A – 30° Angular

Size

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

Ports

B – M5 Female
 3 – Prestolok Flow Control 4mm (5/32") tube diameter

Function

A – Standard

Spring Option

C – Spring Return
 N – No Spring

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-AA3	PSK-P5GAA3	PSK-P5GAA3-F
P5G-AA4	PSK-P5GAA4	PSK-P5GAA4-F
P5G-AA5	PSK-P5GAA5	PSK-P5GAA5-F
P5G-AA6	PSK-P5GAA6	PSK-P5GAA6-F

