

**Features**

**Dowel Pin Holes**  
 Slip fit dowels located in gripper body and jaws.

**Body**  
 One piece anodized aluminum body

**Overize Body**  
 Wide body and long stroke design allow for gripping of large, heavy parts.

**Contaminant Tolerance**  
 Sealed design resists internal contamination.

**Optional Proximity Sensors**  
 Read position of jaw. (Sold separately)

**Double Piston Design**  
 Double piston design provides maximum grip force to size ratio

**Seals**  
 Self lubricating dynamic seals (Nitrile only)

**Superior Jaw Support**  
 Each jaw is supported by two shafts and four self lubricating, oil impregnated bronze bushings for maximum loading.

**Double Rod Seals**  
 Double rod seals for longer life.

**Operation**

Operating Characteristic ..... Double acting, double piston, rack and pinion  
 Gripping Force @ 100 PSI ..... 45 - 450 lbs  
 Stroke Range ..... 0.75 to 4.5 inches  
 Operating Pressure Range ..... 40 - 100 PSI (3 - 7 bar)

**Mounting**

Gripper mounts using tapped holes and slip fit dowel pin holes.

Jaw design allows for simplified mounting of fingers.

Custom finger tooling mounts using tapped holes and precise tolerancing of fingers.

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**P5G-HPW-250M-NS-V**

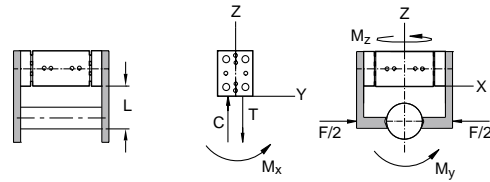
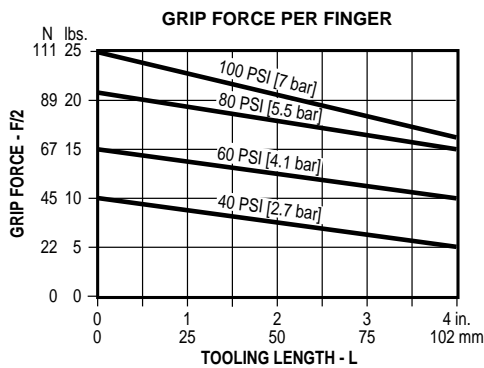


Total Grip Force (100 psi @ 1 in)	45 lbs	200 N
Stroke	0.75 in	19.1 mm
Weight	0.66 lbs	0.30 kg
Bore Size	0.625 in	15.9 mm
Cylinder Volume	0.230 in <sup>3</sup>	3.8 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

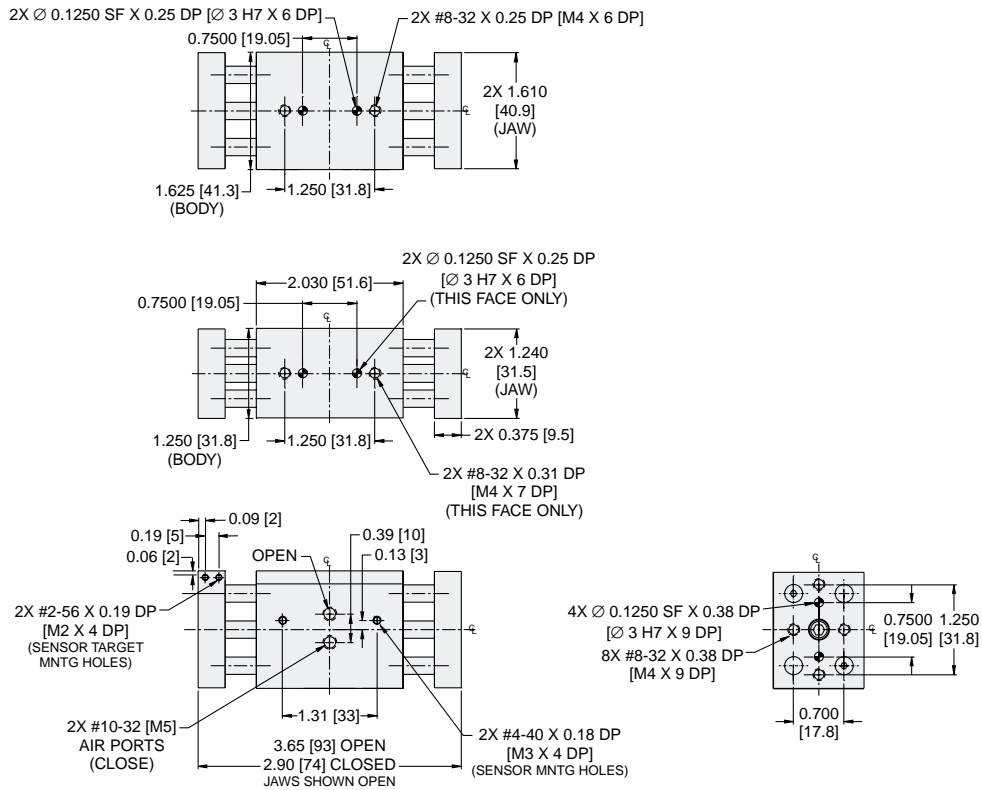
**Loading Information**



**Maximum Loading Capacity**

Load	Static		Dynamic	
	Value 1	Value 2	Value 1	Value 2
Axial Forces (C,T)	50 lbs	222 N	10 lbs	44 N
Moment (Mx)	100 in-lbs	11 Nm	20 in-lbs	2 Nm
Moment (My)	150 in-lbs	17 Nm	30 in-lbs	3 Nm
Moment (Mz)	100 in-lbs	11 Nm	20 in-lbs	2 Nm

**Dimensional Information**



Dimensions in inch [mm].

**P5G-HPW-375M1-NS-V**

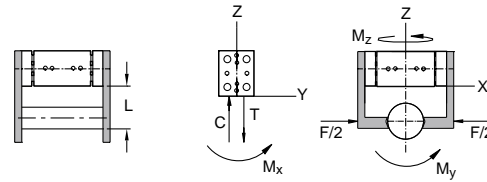
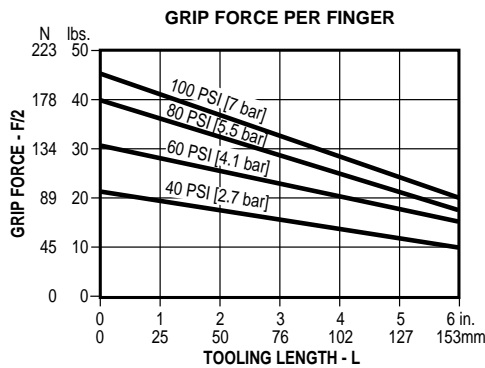


Total Grip Force (100 psi @ 1 in)	82 lbs	364 N
Stroke	1.00 in	25.4 mm
Weight	1.3 lbs	0.59 kg
Bore Size	0.875 in	22.2 mm
Cylinder Volume	0.600 in <sup>3</sup>	9.8 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

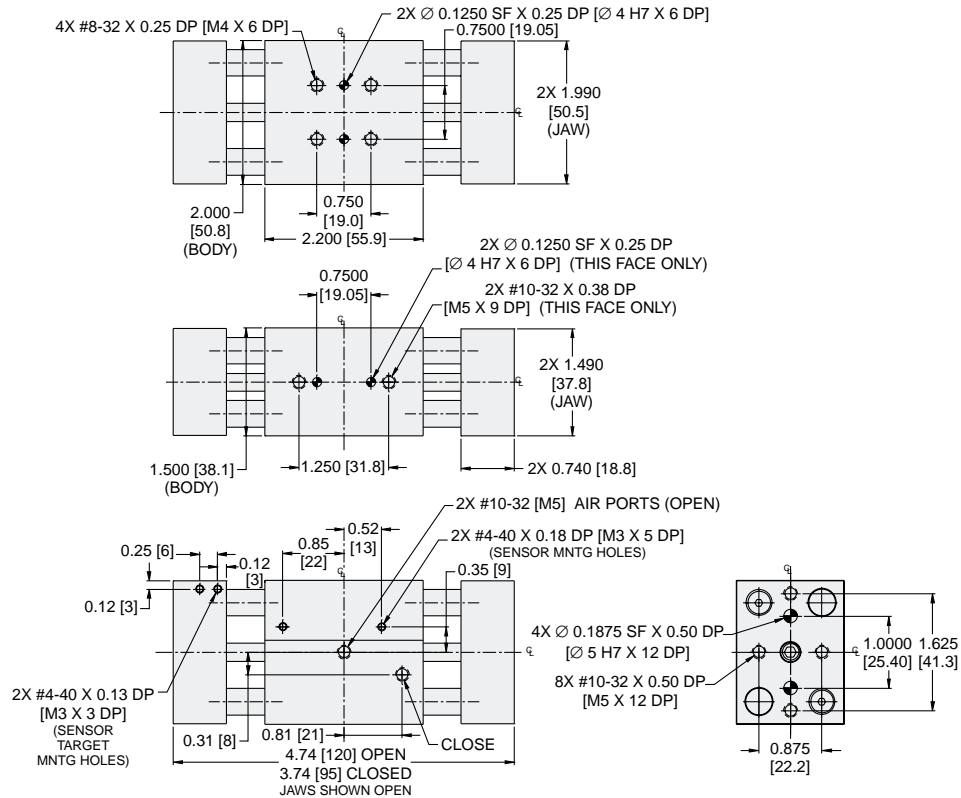
**Loading Information**



**Maximum Loading Capacity**

Load	Static		Dynamic	
	Value 1	Value 2	Value 3	Value 4
Axial Forces (C,T)	100 lbs	445 N	20 lbs	89 N
Moment (Mx)	175 in-lbs	20 Nm	35 in-lbs	4 Nm
Moment (My)	250 in-lbs	28 Nm	50 in-lbs	6 Nm
Moment (Mz)	175 in-lbs	20 Nm	35 in-lbs	4 Nm

**Dimensional Information**



Dimensions in inch [mm].



**P5G-HPW-500M1-NS-V**

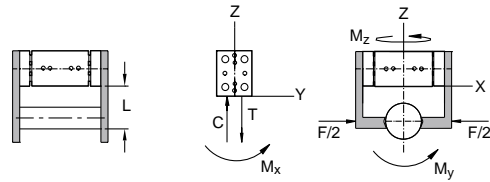
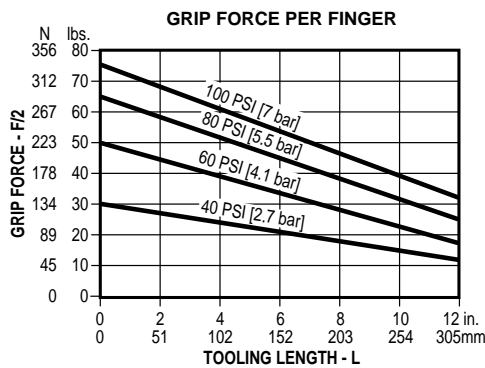


Total Grip Force (100 psi @ 1 in)	142 lbs	631 N
Stroke	1.50 in	38.1 mm
Weight	3.0 lbs	1.4 kg
Bore Size	1.250 in	31.8 mm
Cylinder Volume	1.800 in <sup>3</sup>	29.5 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

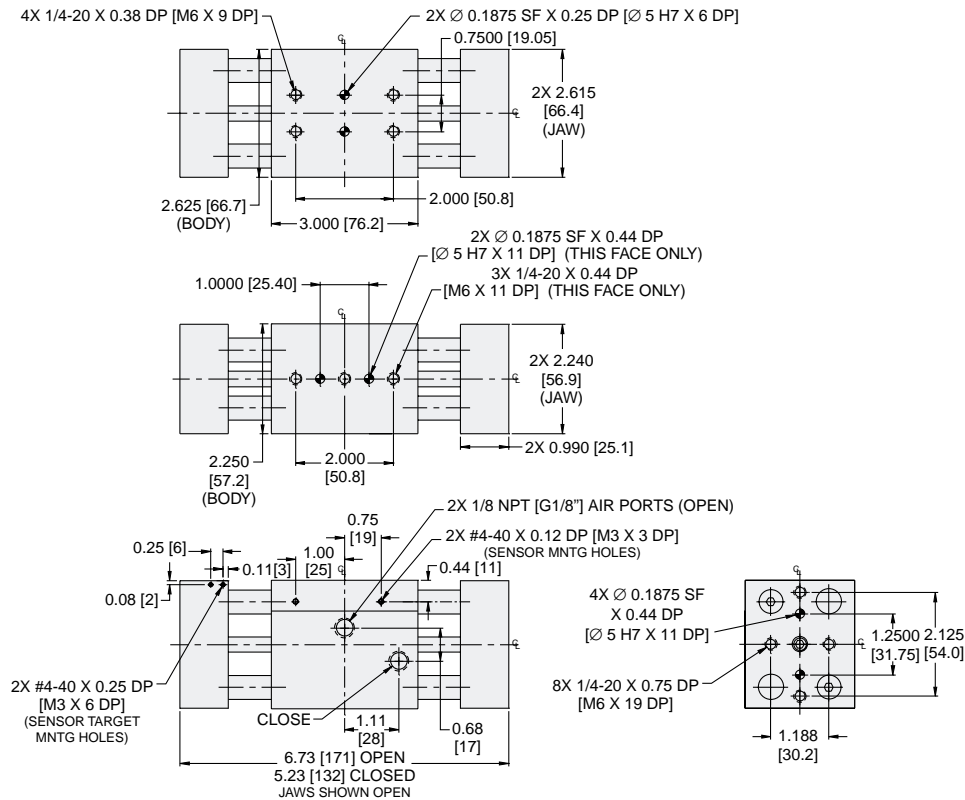
**Loading Information**



**Maximum Loading Capacity**

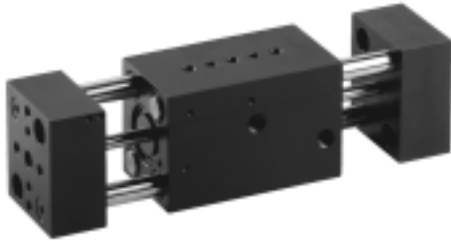
Load	Static		Dynamic	
	Value 1	Value 2	Value 1	Value 2
Axial Forces (C,T)	500 lbs	2224 N	50 lbs	222 N
Moment (Mx)	500 in-lbs	57 Nm	50 in-lbs	6 Nm
Moment (My)	750 in-lbs	85 Nm	75 in-lbs	8 Nm
Moment (Mz)	500 in-lbs	57 Nm	50 in-lbs	6 Nm

**Dimensional Information**



Dimensions in inch [mm].

**P5G-HPW-500M2-NS-V**

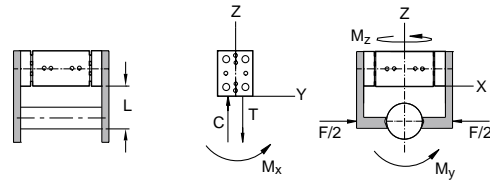
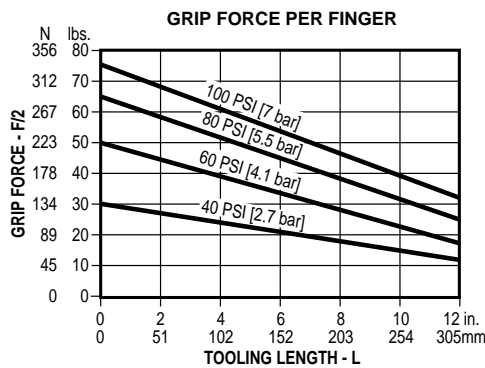


Total Grip Force (100 psi @ 1 in)	142 lbs	631 N
Stroke	2.50 in	63.5 mm
Weight	4.0 lbs	1.8 kg
Bore Size	1.250 in	31.8 mm
Cylinder Volume	3.000 in <sup>3</sup>	49.2 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

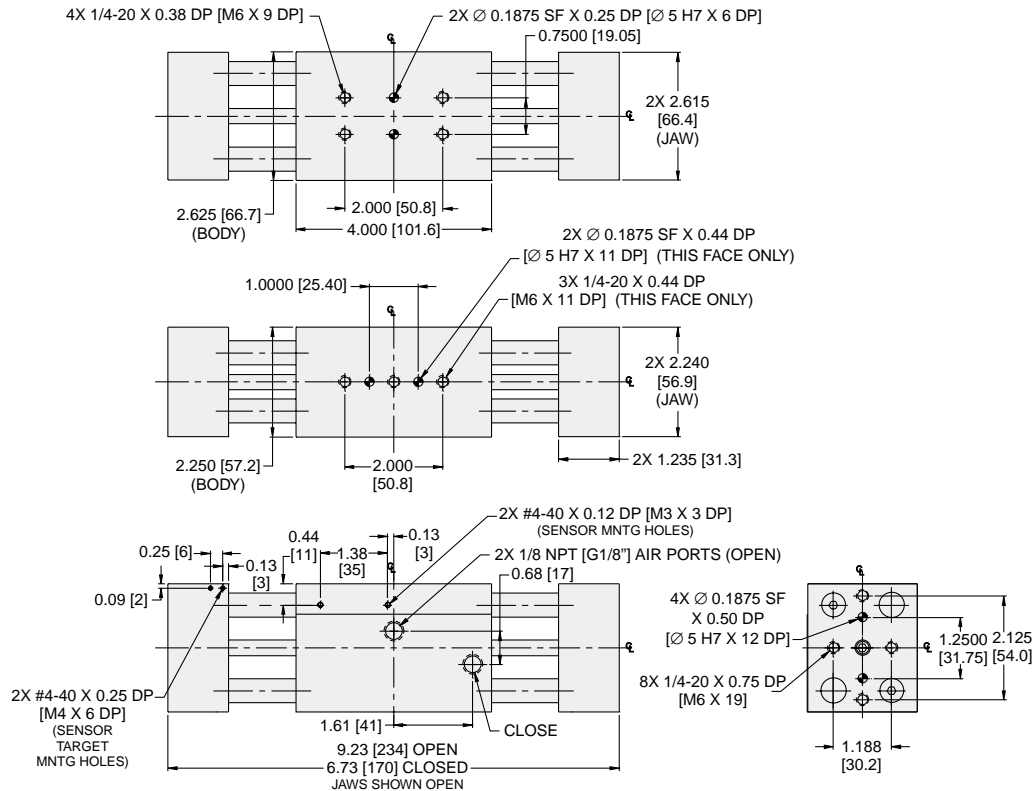
**Loading Information**



**Maximum Loading Capacity**

Load	Static		Dynamic	
	Value	Value	Value	Value
Axial Forces (C,T)	500 lbs	2224 N	50 lbs	222 N
Moment (Mx)	500 in-lbs	57 Nm	50 in-lbs	6 Nm
Moment (My)	750 in-lbs	85 Nm	75 in-lbs	8 Nm
Moment (Mz)	500 in-lbs	57 Nm	50 in-lbs	6 Nm

**Dimensional Information**



Dimensions in inch [mm].

**P5G-HPW-625M1-NS-V**

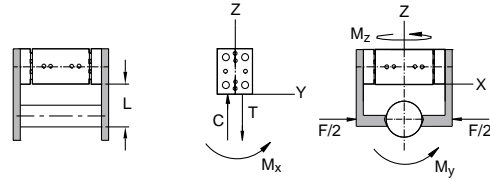
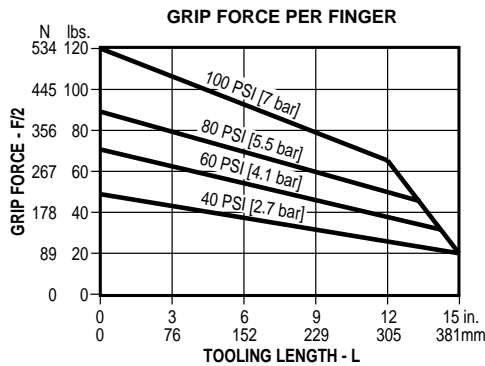


Total Grip Force (100 psi @ 1 in)	234 lbs	1040 N
Stroke	2.00 in	50.8 mm
Weight	6.5 lbs	3.0 kg
Bore Size	1.625 in	41.3 mm
Cylinder Volume	1.320 in <sup>3</sup>	21.6 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

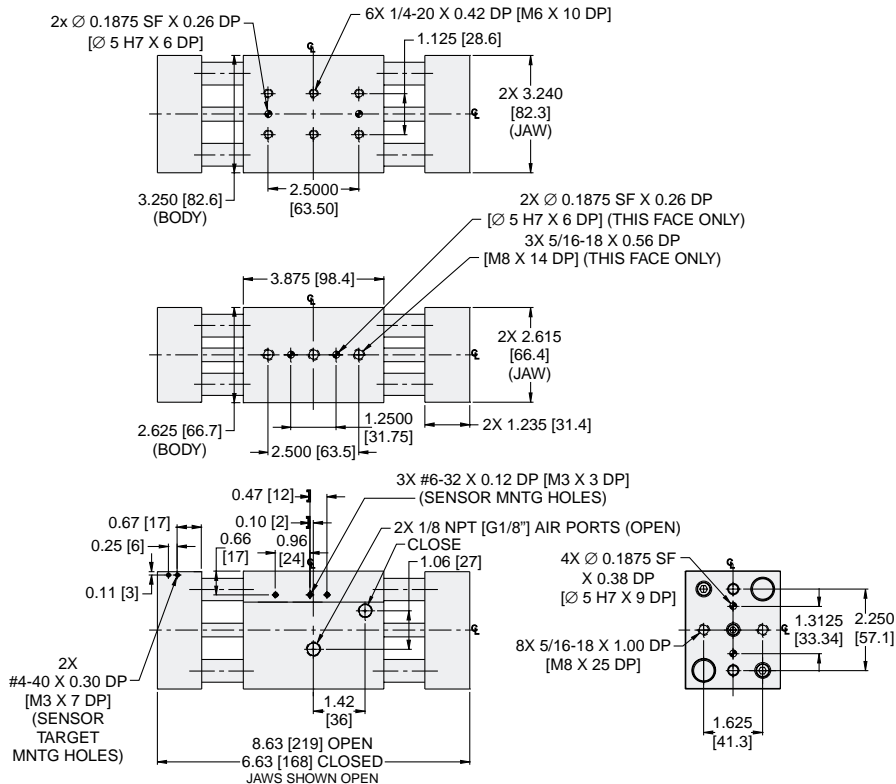
**Loading Information**



**Maximum Loading Capacity**

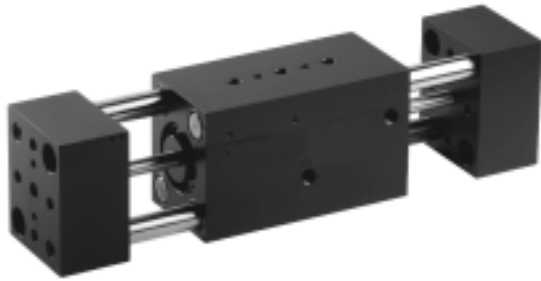
Load	Static		Dynamic	
	Axial Forces (C,T)	1200 lbs	5338 N	125 lbs
Moment (Mx)	1000 in-lbs	113 Nm	100 in-lbs	11 Nm
Moment (My)	1500 in-lbs	170 Nm	125 in-lbs	14 Nm
Moment (Mz)	1000 in-lbs	113 Nm	100 in-lbs	11 Nm

**Dimensional Information**



Dimensions in inch [mm].

**P5G-HPW-625M2-NS-V**

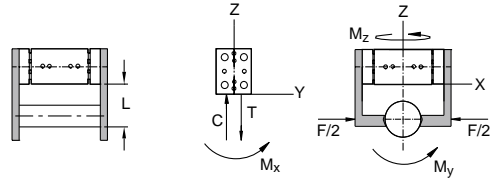
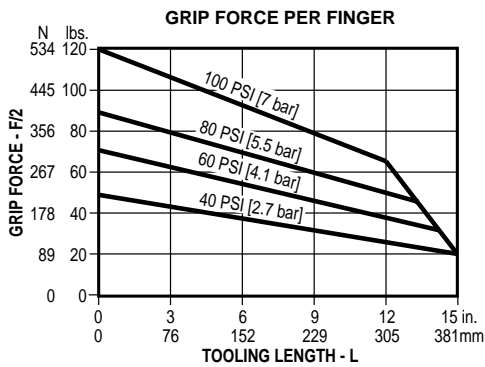


Total Grip Force (100 psi @ 1 in)	234 lbs	1040 N
Stroke	3.50 in	88.9 mm
Weight	7.8 lbs	3.6 kg
Bore Size	1.625 in	41.3 mm
Cylinder Volume	2.310 in <sup>3</sup>	37.9 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.**

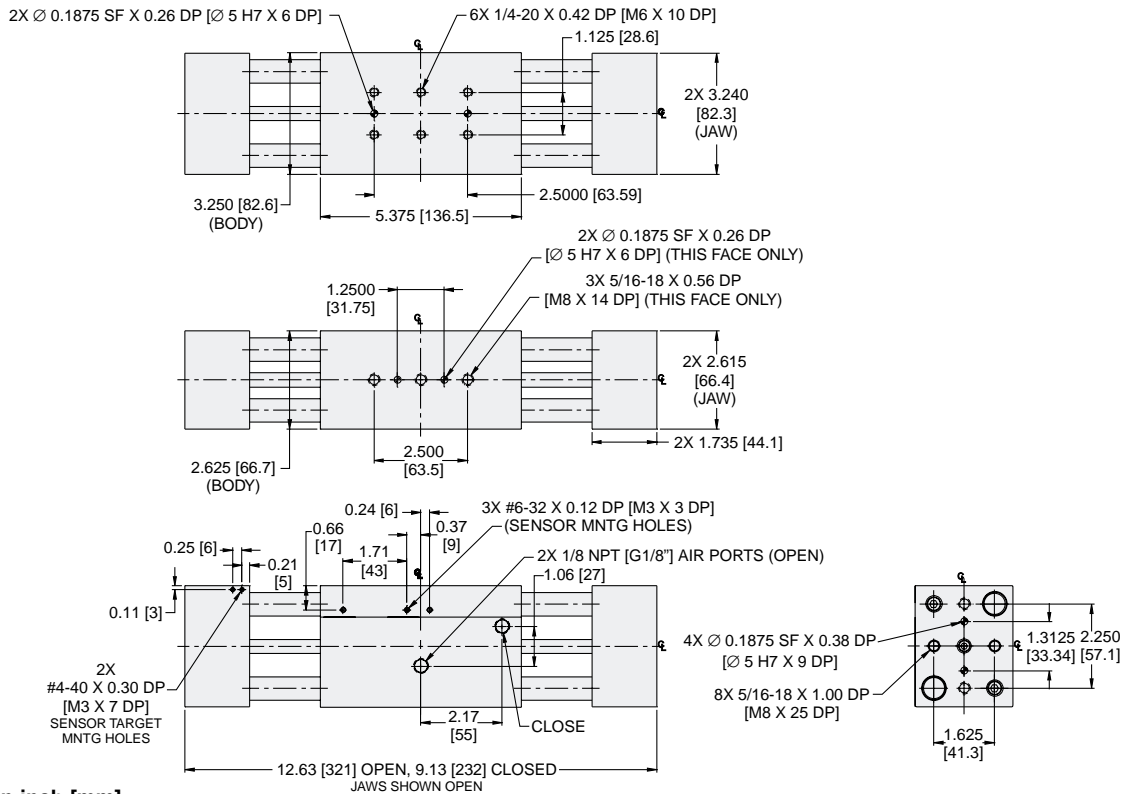
**Loading Information**



**Maximum Loading Capacity**

Load	Static		Dynamic	
Axial Forces (C,T)	1200 lbs	5338 N	125 lbs	556 N
Moment (Mx)	1000 in-lbs	113 Nm	100 in-lbs	11 Nm
Moment (My)	1500 in-lbs	170 Nm	125 in-lbs	14 Nm
Moment (Mz)	1000 in-lbs	113 Nm	100 in-lbs	11 Nm

**Dimensional Information**



Dimensions in inch [mm].



**P5G-HPW-750M-NS-V**

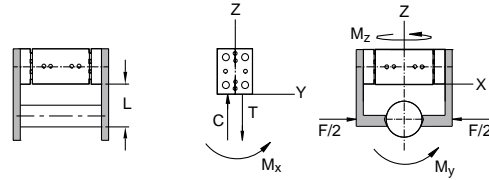
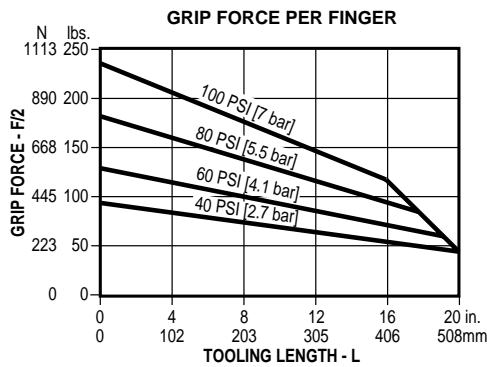


Total Grip Force (100 psi @ 1 in)	450 lbs	2001 N
Stroke	4.50 in	114.3 mm
Weight	14 lbs	6.4 kg
Bore Size	2.000 in	50.8 mm
Cylinder Volume	14.200 in <sup>3</sup>	232.7 cm <sup>3</sup>
Repeatability	± 0.001 in	± 0.03 mm
Temperature Range*	-30° to 180° F	-35° to 80° C
Pressure Range	40-100 psi	3-7 bar
Filtration 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.

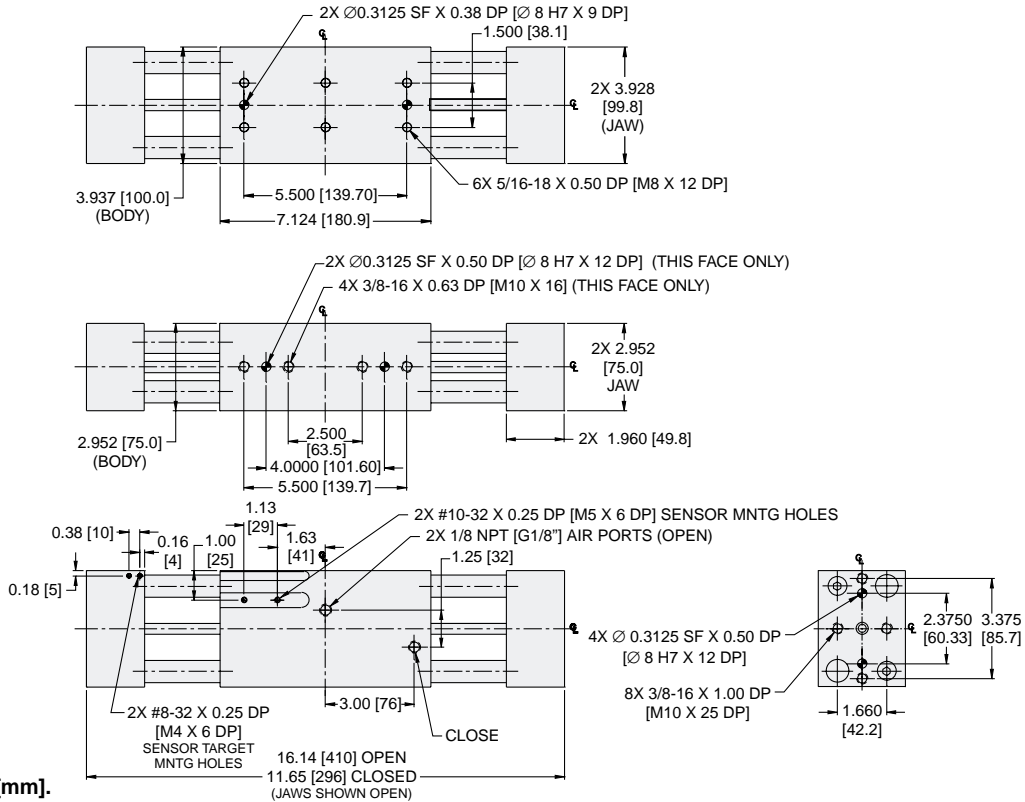
**Loading Information**



**Maximum Loading Capacity**

Load	Static		Dynamic	
	Value	Value	Value	Value
Axial Forces (C,T)	2500 lbs	11121 N	250 lbs	1112 N
Moment (Mx)	2000 in-lbs	226 Nm	200 in-lbs	22 Nm
Moment (My)	3000 in-lbs	339 Nm	250 in-lbs	28 Nm
Moment (Mz)	2000 in-lbs	226 Nm	200 in-lbs	22 Nm

**Dimensional Information**



Dimensions in inch [mm].

### Metric Option (M)

The standard unit is manufactured with imperial mounting and porting. When this option is specified, the gripper incorporated metric threads and ports.

See dimensional drawings for details.

### Non-synchronous (NS)

The gripper fingers of this series are synchronized in nature. For applications where parts may be off center or randomly placed, the non-synchronous option can be utilized. With this option, both fingers operate independently of each other.

### Fluorocarbon Seals (V)

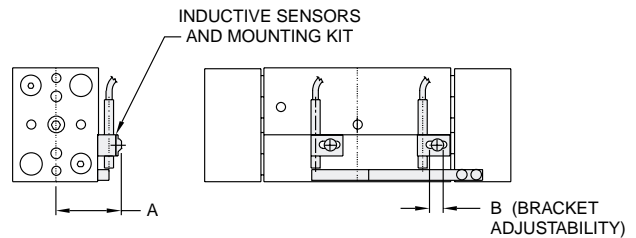
Standard nitrile seals should be used for general purpose applications with temperatures of -30° to 180°F (-35° to 80°C) Fluorocarbon seals are recommended for high temperature applications up to 250°F (120°C).

Seal Type	Temperature Range
Standard Buna-N	-30° to 180°F (-35° to 80°C)
Fluorocarbon	-20° to 250°F (-30° to 120°C)

### Proximity Sensors

Proximity Sensors provide feedback on the position of the gripper fingers by sensing the metal flag which is attached to the gripper jaw. The sensor bracket is adjustable to provide sensing along the stroke of the gripper finger.

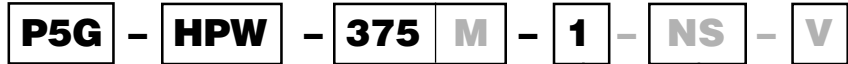
Order sensors, cables and brackets separately. See Sensor section for part numbers and sensor specifications.



### Dimensions

Model	A	B
	inch (mm)	inch (mm)
250	1.04 (26)	0.24 (6)
375	1.15 (29)	0.24 (6)
500	1.53 (39)	0.24 (6)
625	1.94 (49)	0.26 (7)
750	2.28 (58)	0.36 (9)

**Model Code and Ordering Information**



**Type**

P5G – Pneumatic Gripper

**Series**

HPW

**Size**

- 250 – 0.625 inch Bore
- 375 – 0.875 inch Bore
- 500 – 1.25 inch Bore
- 625 – 1.625 inch Bore
- 750 – 2.00 inch Bore

**Design**

- Omit – Imperial Design (Standard)
- M – Metric Design

**Stroke**

- Omit – Standard Stroke (not available for sizes 375, 500 or 625)
  - Size 250– 0.75 inch
  - Size 750 – 4.50 inches
- 1 – Short Stroke (not available for sizes 250 and 750)
  - Size 375 – 1.00 inch
  - Size 500 – 1.50 inches
  - Size 625 – 2.00 inches
- 2 – Long Stroke (not available for sizes 250 and 750)
  - Size 375 – 2.00 inches
  - Size 500 – 2.50 inches
  - Size 625 – 3.50 inches

**Synchronous**

- Omit – Synchronous (Standard)
- NS – Non-synchronous Fingers

**Seals**

- Omit – Nitrile Seals (Standard)
- V – Fluorocarbon Seals

**Seal Kits**

Size	Nitrile Seal Kit	Fluorocarbon Seal Kit
P5G-HPW-250	PSK-P5G-HPW-250	PSK-P5G-HPW-251V
P5G-HPW-375-1	PSK-P5G-HPW-375-1	PSK-P5G-HPW-375-1V
P5G-HPW-375-2	PSK-P5G-HPW-375-2	PSK-P5G-HPW-375-2V
P5G-HPW-500-1	PSK-P5G-HPW-500-1	PSK-P5G-HPW-500-1V
P5G-HPW-500-2	PSK-P5G-HPW-500-2	PSK-P5G-HPW-500-2V
P5G-HPW-625-1	PSK-P5G-HPW-625-1	PSK-P5G-HPW-625-1V
P5G-HPW-625-2	PSK-P5G-HPW-625-2	PSK-P5G-HPW-625-2V
P5G-HPW-750	PSK-P5G-HPW-750	PSK-P5G-HPW-751V