

# MPS SERIES

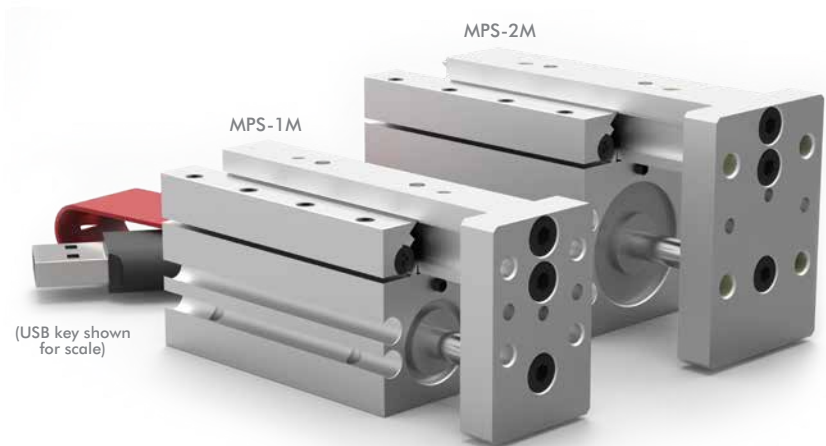
## Miniature Rail Thruster Slide | Features and Benefits | How To Order

### Features:

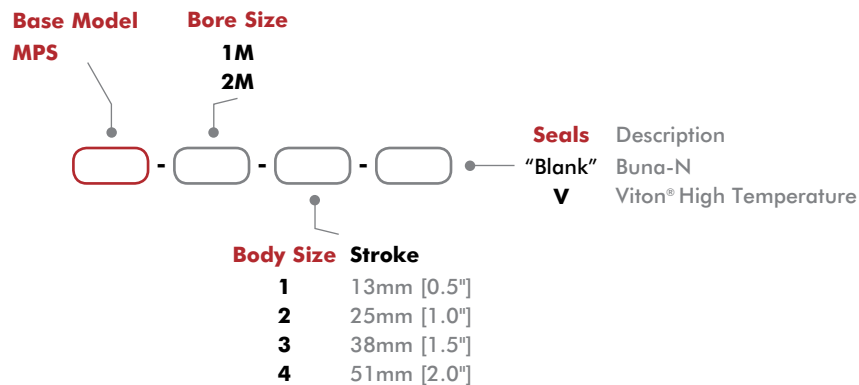
- Compact high reliability bearing design
- Excellent part position repeatability
- Zero side play with patented preloaded "Dual-V" roller bearings
- Adjustable extend/retract hard stops
- Two Position sensing with hall effect sensors
- Viton® seals for operation in high temperature environments

### Applications:

- Precision applications
- Small parts handling
- OEM packaging machines



## How To Order



## Accessories

Sensor Accessories	Model Numbers	Part Number	Qty/Unit
Magneto Resistive Sensor with Quick. Disconnect*	All Models	OHSN-006	1-2
Magneto Resistive Sensor with Quick. Disconnect*		OHSP-006	
Quick Disconnect 2 Meter Cable Length*		CABL-010	
Quick Disconnect 5 Meter Cable Length*		CABL-013	
Pneumatic Accessories	Model Numbers	Part Number	Qty/Unit
M5 Adjustable Flow Control	All Models	VLVF-008	1-2
M2.5 Barbed Fitting		PLFT-005	2
Seal Kit (Buna-N)	-1M	SLKT-090	1
Seal Kit (Viton®)	-1M	SLKT-090V	
Seal Kit (Buna-N)	-2M	SLKT-091	
Seal Kit (Viton®)	-2M	SLKT-091V	

\* Sensor and cable sold separately.

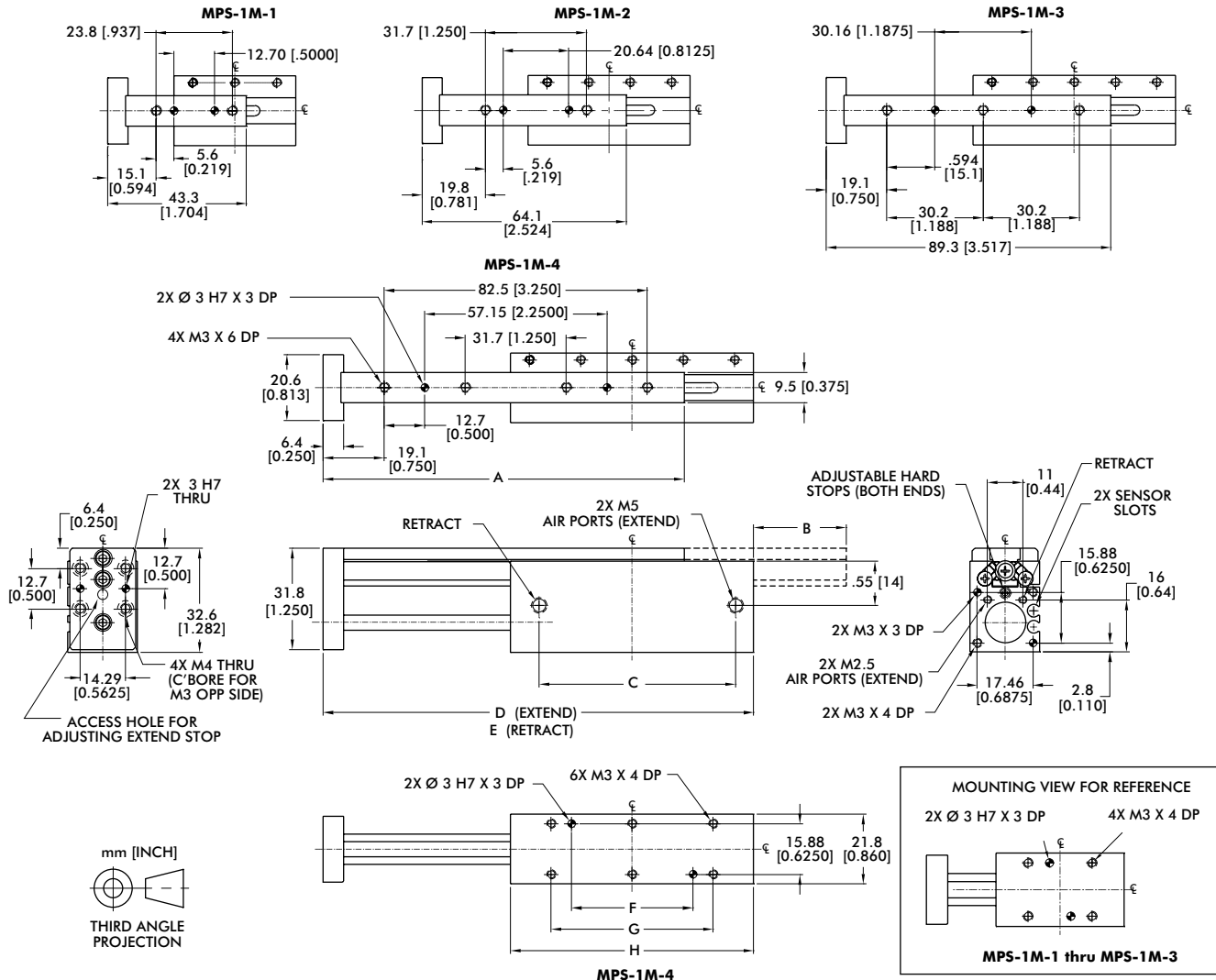
## Miniature Rail Thruster Slide | Technical Specifications

Specifications	Units	1M-1	1M-2	1M-3	1M-4
Thrust Force <b>F</b> @ 7 bar [100 psi]	N [lbs]	67 [15]			
Max. Stroke	mm [in]	13 [0.50]	25 [1.00]	38 [1.50]	51 [2.00]
Stroke Adjustability (each end)	mm [in]	3 [0.12]		6 [0.25]	
Weight	kg [lb]	0.08 [0.18]	0.10 [0.22]	0.13 [0.28]	0.14 [0.32]
Max. Payload <b>W</b>	kg [lb]	0.14 [0.30]	0.32 [0.70]	0.45 [1.00]	0.59 [1.30]
Pressure Range	bar [psi]	1.5-7 [20-100]			
Cylinder Bore $\varnothing$	mm [in]	11.1 [0.438]			
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]			
Temperature Range (Viton® seals)	°C [°F]	-30°~120° [-20°~250°]			
Actuation	sec	0.10	0.11	0.13	0.14
Linear Accuracy (per 25mm of travel)	mm [in]	±0.003 [±0.0001]			
Repeatability (-P option)	mm [in]	±0.03 [±0.010]			
Valve to Actuate Double Acting		4-way, 2-position			

Specifications	Units	2M-1	2M-2	2M-3	2M-4
Thrust Force <b>F</b> @ 7 bar [100 psi]	N [lbs]	196 [44]			
Max. Stroke	mm [in]	13 [0.50]	25 [1.00]	38 [1.50]	51 [2.00]
Stroke Adjustability (each end)	mm [in]	3 [0.12]		6 [0.25]	
Weight	kg [lb]	0.12 [0.26]	0.14 [0.32]	0.18 [0.40]	0.21 [0.46]
Max. Payload <b>W</b>	kg [lb]	0.23 [0.50]	0.45 [1.00]	0.91 [2.00]	1.36 [3.00]
Pressure Range	bar [psi]	1.5-7 [20-100]			
Cylinder Bore $\varnothing$	mm [in]	19.1 [0.750]			
Temperature Range (Buna-N seals)	°C [°F]	-35°~80° [-30°~180°]			
Temperature Range (Viton® seals)	°C [°F]	-30°~120° [-20°~250°]			
Actuation	sec	0.12	0.16	0.19	0.24
Linear Accuracy (per 25mm of travel)	mm [in]	±0.003 [±0.0001]			
Repeatability (-P option)	mm [in]	±0.03 [±0.010]			
Valve to Actuate Double Acting		4-way, 2-position			

# MPS-1M

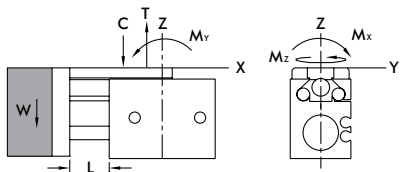
## Miniature Rail Thruster Slide | Dimensions and Technical Specifications



Model	A	B	C	D	E	F	G	H
MPS-1M-1	43.3 [1.704]	--	23 [0.92]	59 [2.31]	46 [1.81]	6.35 [0.2500]	19.1 [0.750]	38.1 [1.500]
MPS-1M-2	64.1 [2.524]	5.4 [0.211]	36 [1.43]	84 [3.31]	58 [2.31]	19.05 [0.7500]	31.8 [1.250]	50.8 [2.000]
MPS-1M-3	89.3 [3.517]	17.9 [0.704]	49 [1.93]	110 [4.31]	71 [2.81]	25.40 [1.0000]	38.1 [1.500]	63.5 [2.500]
MPS-1M-4	113.1 [4.454]	29.0 [1.141]	62 [2.43]	135 [5.31]	84 [3.31]	38.10 [1.5000]	50.8 [2.000]	76.2 [3.000]

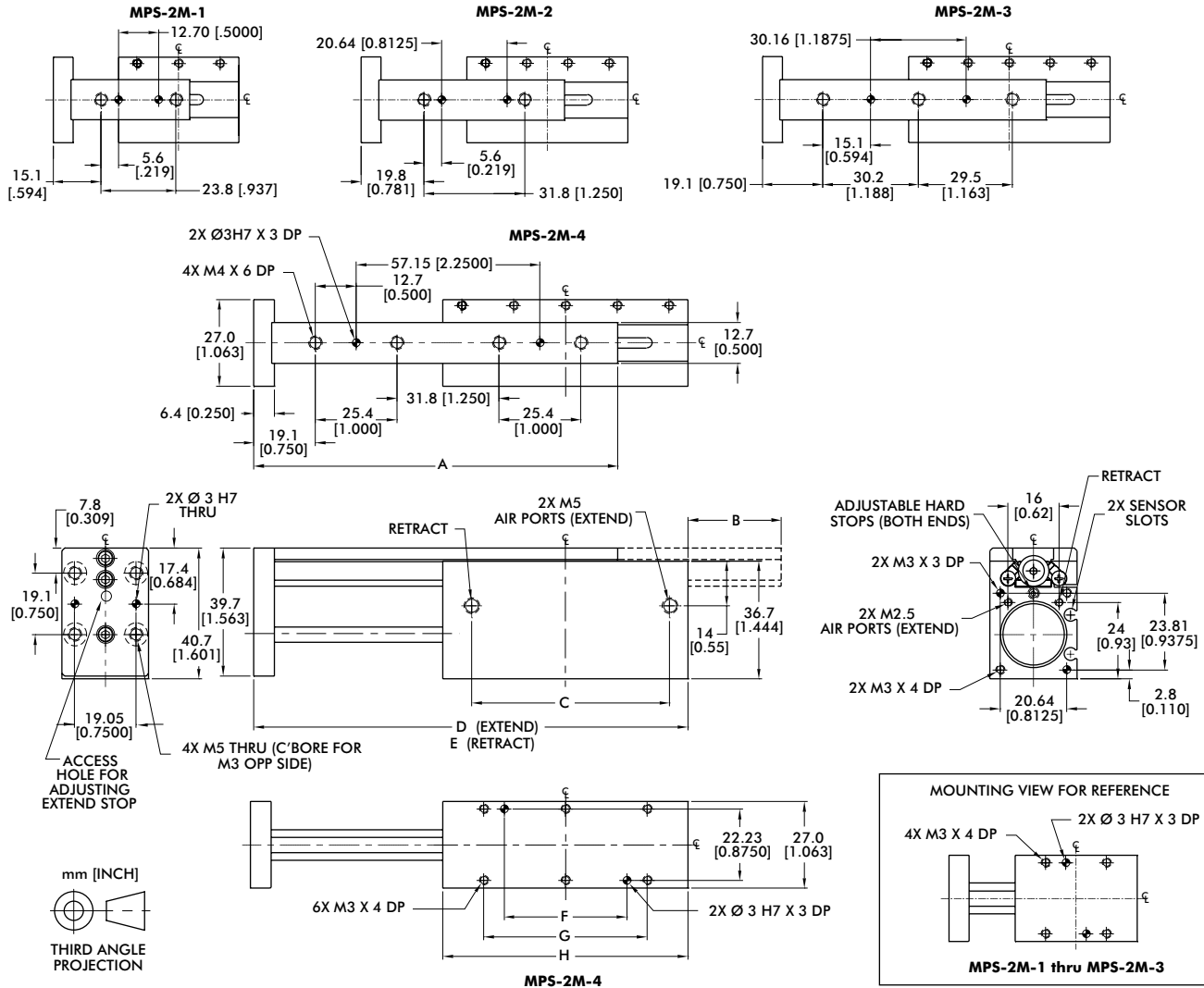
Dimensions in mm [in]

## Loading Information



Model	Static	Model	Static
<b>MPS-1M-1</b>	Maximum Tensile <b>T</b> 111 N [25 lbs]	<b>MPS-1M-3</b>	Maximum Tensile <b>T</b> 222 N [50 lbs]
Maximum Compressive <b>C</b> 111 N [25 lbs]	Maximum Compressive <b>C</b> 222 N [50 lbs]	Maximum Compressive <b>C</b> 222 N [50 lbs]	Maximum Compressive <b>C</b> 222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b> 3.4 Nm [30 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 6.8 Nm [60 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 6.8 Nm [60 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b> 2.3 Nm [20 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 4.5 Nm [40 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 4.5 Nm [40 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 4.5 Nm [40 in-lbs]
Maximum Moment <b>M<sub>z</sub></b> 2.3 Nm [20 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 4.5 Nm [40 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 4.5 Nm [40 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 4.5 Nm [40 in-lbs]
<b>MPS-1M-2</b>	Maximum Tensile <b>T</b> 156 N [35 lbs]	<b>MPS-1M-4</b>	Maximum Tensile <b>T</b> 311 N [70 lbs]
Maximum Compressive <b>C</b> 156 N [35 lbs]	Maximum Compressive <b>C</b> 311 N [70 lbs]	Maximum Compressive <b>C</b> 311 N [70 lbs]	Maximum Compressive <b>C</b> 311 N [70 lbs]
Maximum Moment <b>M<sub>x</sub></b> 4.5 Nm [40 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 9.0 Nm [80 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 9.0 Nm [80 in-lbs]	Maximum Moment <b>M<sub>x</sub></b> 9.0 Nm [80 in-lbs]
Maximum Moment <b>M<sub>y</sub></b> 3.4 Nm [30 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 5.7 Nm [50 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 5.7 Nm [50 in-lbs]	Maximum Moment <b>M<sub>y</sub></b> 5.7 Nm [50 in-lbs]
Maximum Moment <b>M<sub>z</sub></b> 3.4 Nm [30 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 5.7 Nm [50 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 5.7 Nm [50 in-lbs]	Maximum Moment <b>M<sub>z</sub></b> 5.7 Nm [50 in-lbs]

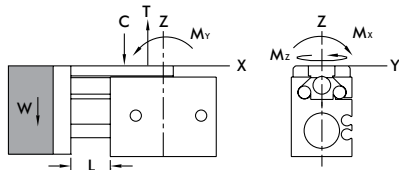
## Miniature Rail Thruster Slide | Dimensions and Technical Specifications



Model	A	B	C	D	E	F	G	H
MPS-2M-1	43.3 [1.704]	--	23 [0.92]	59 [2.31]	46 [1.81]	6.35 [0.2500]	19.1 [0.750]	38.1 [1.500]
MPS-2M-2	64.1 [2.524]	5.4 [0.211]	36 [1.43]	84 [3.31]	59 [2.31]	19.05 [0.7500]	31.7 [1.250]	50.8 [2.000]
MPS-2M-3	89.5 [3.524]	17.9 [0.704]	49 [1.92]	110 [4.31]	71 [2.81]	25.40 [1.0000]	38.1 [1.500]	63.5 [2.500]
MPS-2M-4	113.1 [4.454]	29.0 [1.141]	62 [2.42]	135 [5.31]	84 [3.31]	38.10 [1.5000]	50.8 [2.000]	76.2 [3.000]

Dimensions in mm [in]

### Loading Information



MPS-2M-1	Static
Maximum Tensile <b>T</b>	111 N [25 lbs]
Maximum Compressive <b>C</b>	111 N [25 lbs]
Maximum Moment <b>M<sub>x</sub></b>	3.4 Nm [30 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	2.3 Nm [20 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	2.3 Nm [20 in-lbs]

MPS-2M-3	Static
Maximum Tensile <b>T</b>	222 N [50 lbs]
Maximum Compressive <b>C</b>	222 N [50 lbs]
Maximum Moment <b>M<sub>x</sub></b>	6.8 Nm [60 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	4.5 Nm [40 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	4.5 Nm [40 in-lbs]

MPS-2M-2	Static
Maximum Tensile <b>T</b>	156 N [35 lbs]
Maximum Compressive <b>C</b>	156 N [35 lbs]
Maximum Moment <b>M<sub>x</sub></b>	4.5 Nm [40 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	3.4 Nm [30 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	3.4 Nm [30 in-lbs]

MPS-2M-4	Static
Maximum Tensile <b>T</b>	311 N [70 lbs]
Maximum Compressive <b>C</b>	311 N [70 lbs]
Maximum Moment <b>M<sub>x</sub></b>	9.0 Nm [80 in-lbs]
Maximum Moment <b>M<sub>y</sub></b>	5.7 Nm [50 in-lbs]
Maximum Moment <b>M<sub>z</sub></b>	5.7 Nm [50 in-lbs]