

# Precision Mini Power Slides-Built-in Cylinder

MPS SERIES

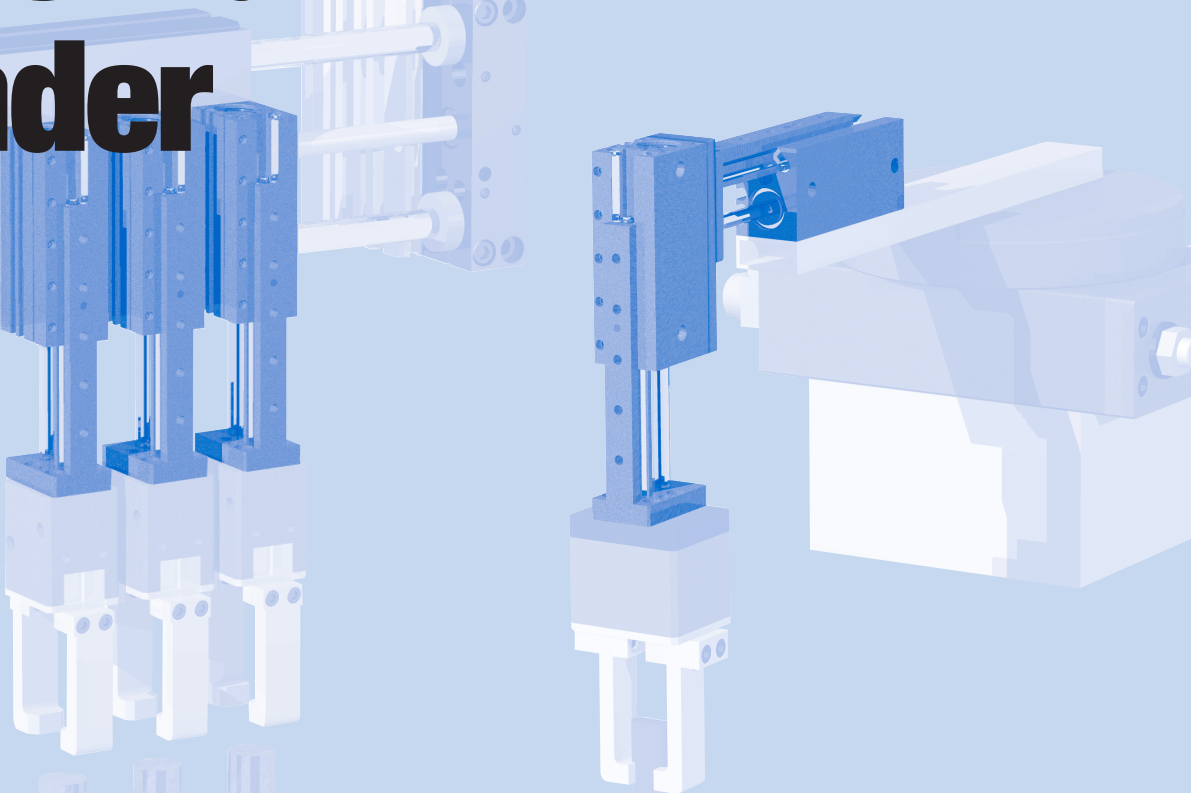
4.126

**• Precision applications:**

Preloaded Dual-“V” roller bearings eliminate side play for excellent part position repeatability. Linear accuracy is within .0001" per inch of travel.

**• Small parts handling:**

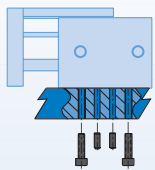
The small size of this slide allows it's use in tight spaces. Payload can be attached to either the tooling plate or the slide rail.



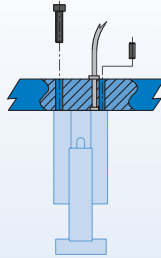
## Mounting Information:

**Slides can be mounted & operated in any orientation.**

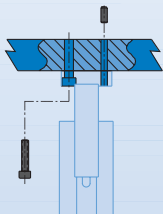
**Warning!** Protect bearings from falling debris.



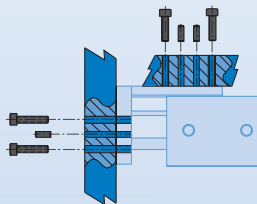
Body mounts on bottom or end with screws and locates with slip fit dowel pin holes for accuracy.



Body can be manifold end mounted.



Payload mounts to tooling plate from behind using counter bores for screws and slip fit dowel pins for location.



Payload can also mount to the tool plate from the front or to the slide with tapped holes for screws and slip fit dowel pins for location.

## Technical Specifications:

**Pneumatic Specifications**

Pressure Operating Range  
Cylinder Type  
Dynamic Seals  
Valve Required to Operate

<b>Imperial</b>	<b>Metric</b>
20-100 psi	1.5-7 bar
<b>Double Acting</b>	
<b>Internally Lubricated Buna-N</b>	
<b>4-way, 2-position</b>	

**Air Quality Requirements**

Air Filtration	40 Micron or Better
Air Lubrication	Not Necessary*
Air Humidity	Low Moisture Content (dry)

**Temperature Operating Range**

Buna-N Seals (standard)	-30°~180° F	-35°~80° C
Viton® Seals (optional)	-20°~250° F	-30°~120° C

**Maintenance Specifications<sup>†</sup>**

Expected Life	
Normal Application	5 million cycles
w/ Preventative Maintenance	10+ million cycles*
Field Repairable	Yes
Seal Repair Kits Available	Yes

**Application Restrictions**

- Dirty or gritty environments
- Machining operations generating chips
- Environments with loose particulate

\*Addition of lubrication will greatly increase service life  
† See Maintenance Section

# Product Features

**One Piece Body**  
One piece aluminum body

**Quality Components**  
The body and slide are hard-coat anodized 6061 with Teflon® impregnation

**Adjustable Stops**  
Adjustable stops for both extend and retract positions

**Access Hole**  
For adjusting extend stop screw

**Misalignment Coupling**  
Misalignment coupling on piston rod minimizes seal wear

**Self Lubricating Seals**  
Self lubricating dynamic seals (Buna-N only)

**Built-in Sensor Magnet**  
Built-in magnet for use with hall effect position sensing

**Dowel Holes**  
Slip fit dowel pin holes in body bottom & back, and on tooling plate and on the slide

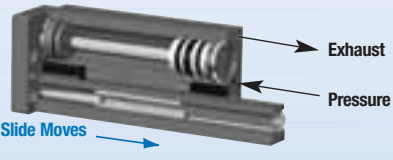
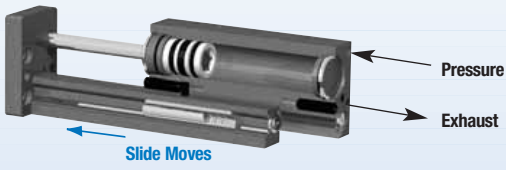
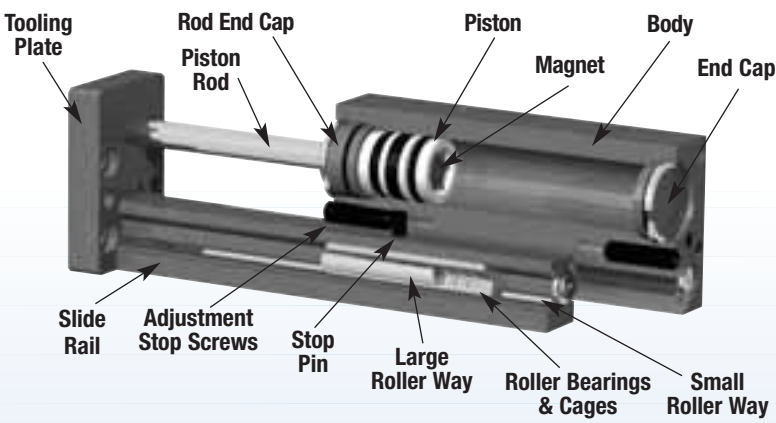
**Pre-Loaded Bearings**  
Bearings are preloaded for maximum support and zero side play

**Patented Dual-"V" Roller Bearings**  
"Dual-V" roller bearings provide low friction rolling motion

**Sensors**  
Reads position of slide (Sold Separately-See "How to Order" Section for more info)

**Air Ports**  
Air ports on side and back

## Operating Principle



- A double acting piston slides inside the body when pressure is applied.
- The piston is coupled to the tooling plate with the piston rod.
- The tooling plate is connected to the slide rail which is guided in the body by preloaded roller bearings.
- The stop pin in the slide stops the slide rail and tooling plate against the position adjustable stop screws.

**U.S. Patent # 5,529,359**  
**Designed and manufactured in the USA**

### Style-MPS Miniature Slide

**Size 1M-1**

Style:	1-1	1-1M
Stroke:	0.5 in.	13 mm
Weight:	0.18 lbs.	0.08 Kg
Payload:	0.30 lbs.	0.14 Kg



See Page **4.128**

### Style-MPS Miniature Slide

**Size 1M-2**

Style:	1-2	1-2M
Stroke:	1.0 in.	25 mm
Weight:	0.22 lbs.	0.10 Kg
Payload:	0.70 lbs.	0.32 Kg

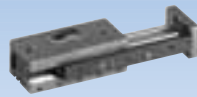


See Page **4.129**

### Style-MPS Miniature Slide

**Size 1M-3**

Style:	1-3	1-3M
Stroke:	1.5 in.	38 mm
Weight:	0.28 lbs.	0.13 Kg
Payload:	1.00 lbs.	0.45 Kg

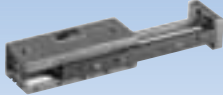


See Page **4.130**

### Style-MPS Miniature Slide

**Size 1M-4**

Style:	1-4	1-4M
Stroke:	2.0 in.	51 mm
Weight:	0.32 lbs.	0.14 Kg
Payload:	1.30 lbs.	0.59 Kg



See Page **4.131**

### Style-MPS Miniature Slide

**Size 2M-1**

Style:	2-1	2-1M
Stroke:	0.5 in.	13 mm
Weight:	0.26 lbs.	0.12 Kg
Payload:	0.50 lbs.	0.23 Kg



See Page **4.132**

### Style-MPS Miniature Slide

**Size 2M-2**

Style:	2-2	2-2M
Stroke:	1.0 in.	25 mm
Weight:	0.32 lbs.	0.14 Kg
Payload:	1.00 lbs.	0.45 Kg

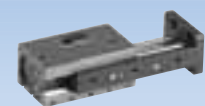


See Page **4.133**

### Style-MPS Miniature Slide

**Size 2M-3**

Style:	2-3	2-3M
Stroke:	1.5 in.	38 mm
Weight:	0.40 lbs.	0.18 Kg
Payload:	2.00 lbs.	0.91 Kg

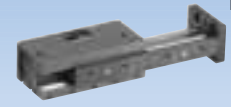


See Page **4.134**

### Style-MPS Miniature Slide

**Size 2M-4**

Style:	2-4	2-4M
Stroke:	2.0 in.	51 mm
Weight:	0.46 lbs.	0.21 Kg
Payload:	3.00 lbs.	1.36 Kg



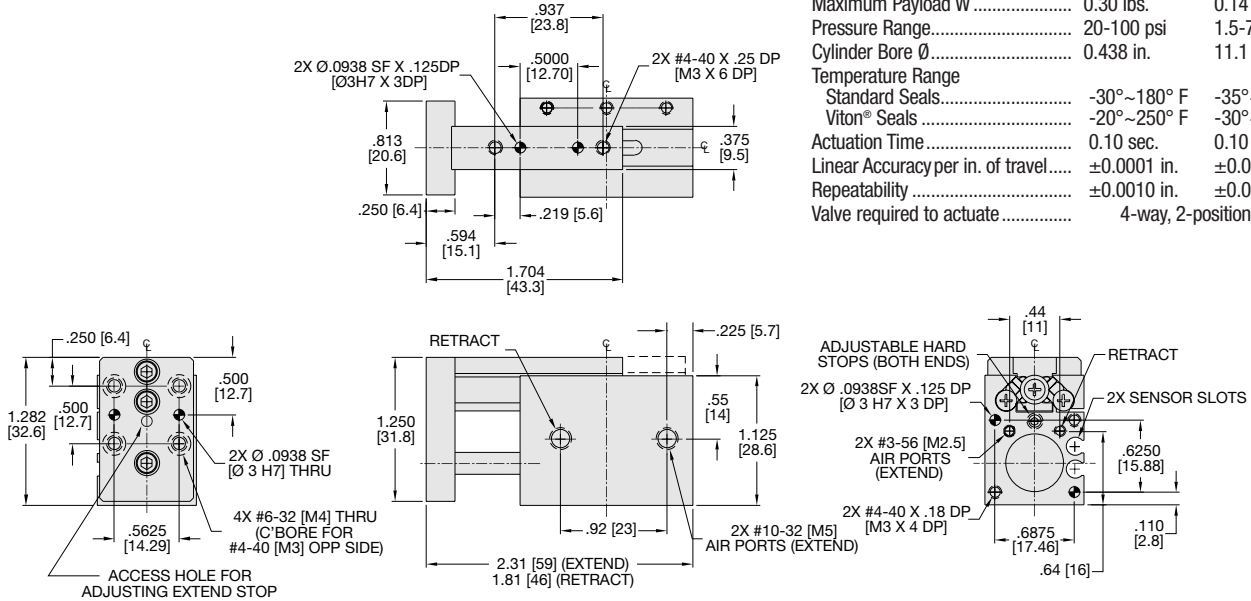
See Page **4.135**

**MPS SERIES**  
**4.127**

# PRECISION MINIATURE SLIDES MPS-1M-1 BUILT-IN CYLINDER, DUAL-"V" ROLLER BEARING



Specifications	MPS-1-1	MPS-1M-1
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	15 lbs.	67 N
Max. Stroke .....	0.5 in.	13 mm
Stroke Adjustability (Each End) .....	.12 in.	3 mm
Weight .....	0.18 lbs.	0.08 Kg
Maximum Payload <b>W</b> .....	0.30 lbs.	0.14 Kg
Pressure Range .....	20-100 psi	1.5-7 bar
Cylinder Bore $\varnothing$ .....	0.438 in.	11.1 mm
Temperature Range		
Standard Seals .....	-30°~180° F	-35°~80° C
Viton® Seals .....	-20°~250° F	-30°~120° C
Actuation Time .....	0.10 sec.	0.10 sec.
Linear Accuracy per in. of travel .....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate .....	4-way, 2-position	



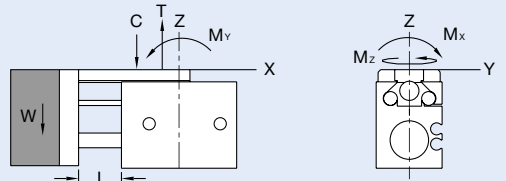
**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

	Dimensions are symmetrical about centerline		Third Angle Projection		All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
	Metric Threads Course Pitch	<b>Imperial in.</b>	<b>Metric [mm]</b>		
		0.00 = ±.01	[0.] = [±.25]		
		0.000 = ±.005	[0.0] = [±.13]		
		0.0000 = ±.0005	[0.00] = [±.013]		

MPS SERIES  
4.128

## Loading Information How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.



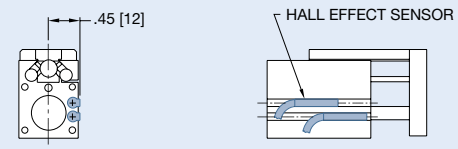
**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-1 M - 1 - V**

Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	25 lbs.	111 N	10 lbs.	44 N
Maximum Compressive <b>C</b>	25 lbs.	111 N	10 lbs.	44 N
Maximum Moment <b>M<sub>x</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Moment <b>M<sub>y</sub></b>	20 in.-lbs.	2.3 Nm	10 in.-lbs.	1.1 Nm
Maximum Moment <b>M<sub>z</sub></b>	20 in.-lbs.	2.3 Nm	10 in.-lbs.	1.1 Nm
Maximum Payload <b>W</b>			.30 lbs.	.14 Kg

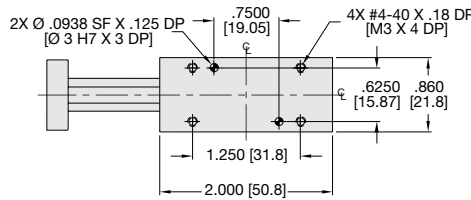
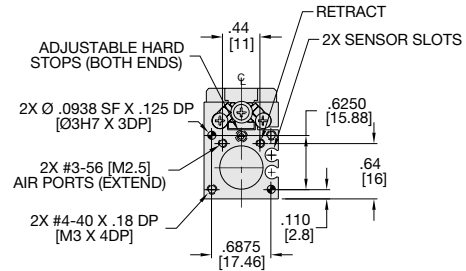
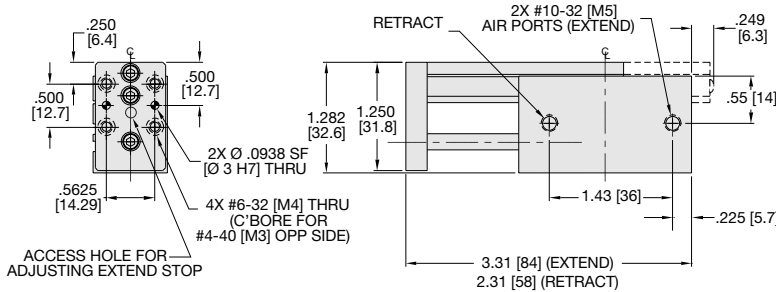
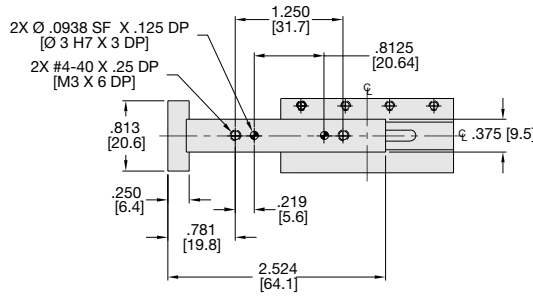
SENSOR ACCESSORIES	ORDER #	QTY/UNIT
4 mm NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
4 mm PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
PNEUMATIC ACCESSORIES		
#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-090</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-090V</b>	<b>1</b>

\*Sensor and cable sold separately.



# PRECISION MINIATURE SLIDES MPS-1M-2 BUILT-IN CYLINDER, DUAL-“V” ROLLER BEARING

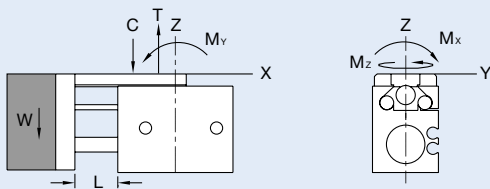
Specifications	MPS-1-2	MPS-1M-2
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	15 lbs.	67 N
Max Stroke.....	1.0 in.	25 mm
Stroke Adjustability (Each End) .....	.12 in.	3 mm
Weight.....	0.22 lbs.	0.10 Kg
Maximum Payload <b>W</b> .....	0.70 lbs.	0.32 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\emptyset$ .....	0.438 in.	11.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals .....	-20°~250° F	-30°~120° C
Actuation Time .....	0.11 sec.	0.11 sec.
Linear Accuracy Per In. of Travel ...	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate .....	4-way, 2-position	



**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	<b>Metric [mm]</b> [0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

## Loading Information



Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	35 lbs.	156 N	15 lbs.	67 N
Maximum Compressive <b>C</b>	35 lbs.	156 N	15 lbs.	67 N
Maximum Moment <b>M<sub>x</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Moment <b>M<sub>y</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Moment <b>M<sub>z</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Payload <b>W</b>			.70 lbs.	.32 Kg

## How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.

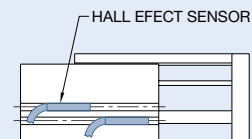
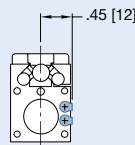
**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-1 M - 2 - V**

### SENSOR ACCESSORIES

	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
<b>PNEUMATIC ACCESSORIES</b>		
#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-090</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-09V</b>	<b>1</b>

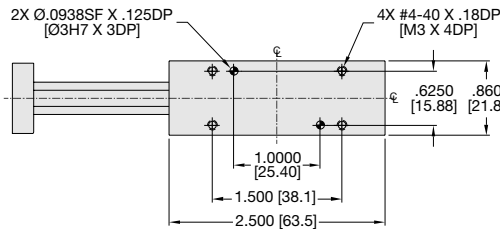
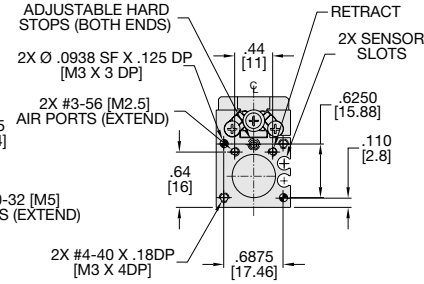
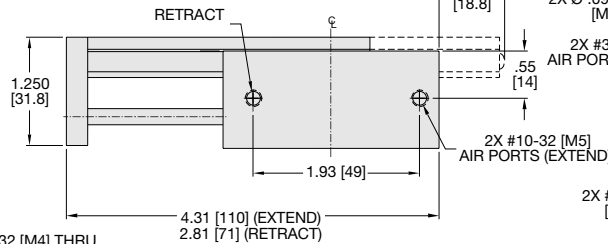
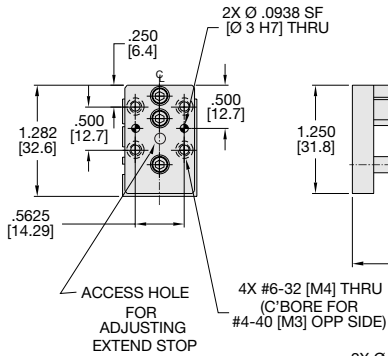
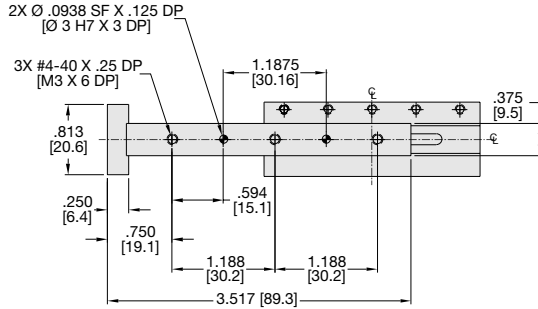
\*Sensor and cable sold separately.



# PRECISION MINIATURE SLIDES MPS-1M-3 BUILT-IN CYLINDER, DUAL-"V" ROLLER BEARING



Specifications	MPS-1-3	MPS-1M-3
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	15 lbs.	67 N
Max Stroke.....	1.5 in.	38 mm
Stroke Adjustability (Each End) .....	.25 in.	6 mm
Weight.....	0.28 lbs.	0.13 Kg
Maximum Payload <b>W</b> .....	1.00 lbs.	0.45 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\emptyset$ .....	0.438 in.	11.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals.....	-20°~250° F	-30°~120° C
Actuation Time.....	0.13 sec.	0.13 sec.
Linear Accuracy Per In. of Travel....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate.....	4-way, 2-position	



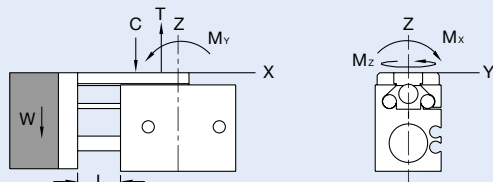
### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm)
Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	<b>Metric [mm]</b> [0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

MPS SERIES

4.130

## Loading Information



Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	50 lbs.	222 N	20 lbs.	89 N
Maximum Compressive <b>C</b>	50 lbs.	222 N	20 lbs.	89 N
Maximum Moment <b>M<sub>x</sub></b>	60 in.-lbs.	6.8 Nm	30 in.-lbs.	3.4 Nm
Maximum Moment <b>M<sub>y</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Moment <b>M<sub>z</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Payload <b>W</b>			1.0 lbs.	.45 Kg

## How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-1 M - 3 - V**

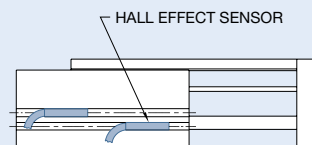
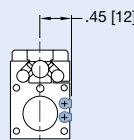
### SENSOR ACCESSORIES

	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

### PNEUMATIC ACCESSORIES

#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-090</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-090V</b>	<b>1</b>

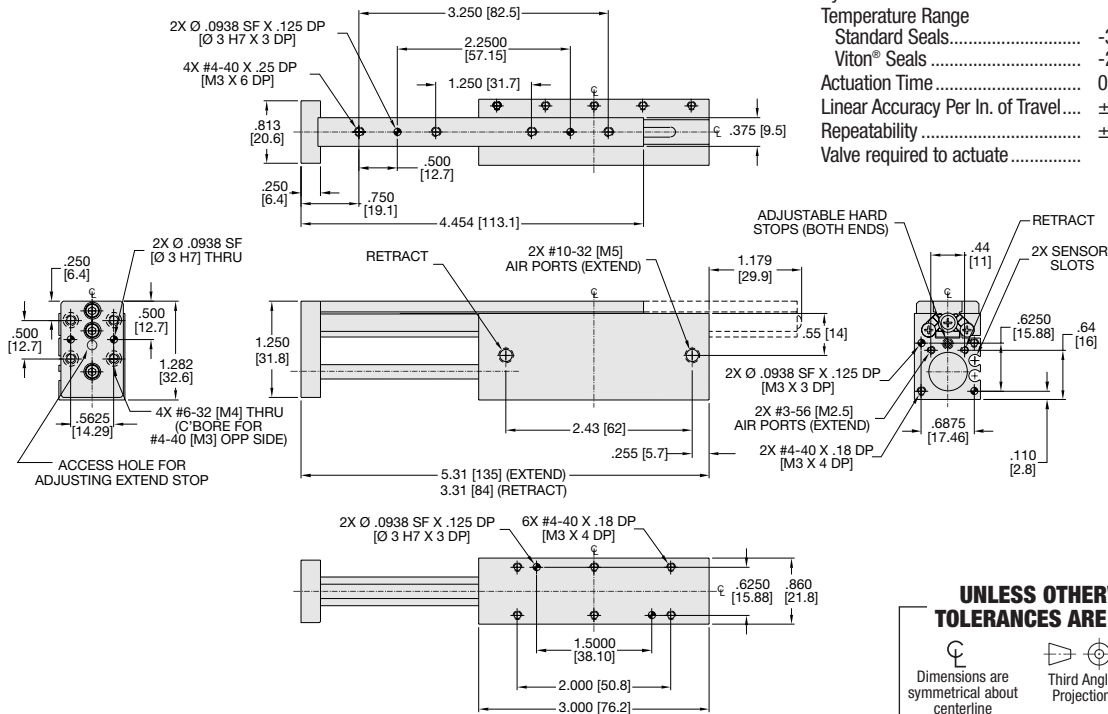
\*Sensor and cable sold separately.







For more information call us at: **1-800-ROBOHAND** or **203-261-5558** Fax: **203-452-7418** Visit us on the Internet at: [www.robohand.com](http://www.robohand.com)

[www.comoso.com](http://www.comoso.com)

Specifications	MPS-1-4	MPS-1M-4
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	15 lbs.	67 N
Max Stroke.....	2.0 in.	51 mm
Stroke Adjustability (Each End) .....	.25	6 mm
Weight.....	0.32 lbs.	0.14 Kg
Maximum Payload <b>W</b> .....	1.30 lbs.	0.59 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore Ø .....	0.438 in.	11.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals .....	-20°~250° F	-30°~120° C
Actuation Time .....	0.14 sec.	0.14 sec.
Linear Accuracy Per In. of Travel ....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate .....	4-way, 2-position	

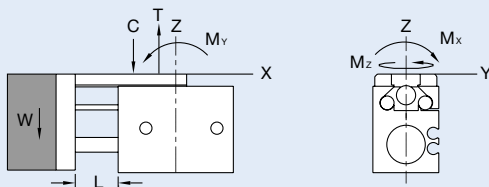


**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

		
Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
	<b>Imperial in.</b>	<b>Metric [mm]</b>
Metric Threads	0.00 = ±.01	0. = [±.25]
Course Pitch	0.000 = ±.005	[0.0] = [±.13]
	0.000 = ±.0005	[0.00] = [±.013]

MPS SERIES  
**4.131**

## Loading Information



Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	70 lbs.	311 N	25 lbs.	111 N
Maximum Compressive <b>C</b>	70 lbs.	311 N	25 lbs.	111 N
Maximum Moment <b>M<sub>x</sub></b>	80 in.-lbs.	9.0 Nm	40 in.-lbs.	4.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	50 in.-lbs.	5.7 Nm	25 in.-lbs.	2.8 Nm
Maximum Moment <b>M<sub>z</sub></b>	50 in.-lbs.	5.7 Nm	25 in.-lbs.	2.8 Nm
Maximum Payload <b>W</b>			1.3 lbs.	.59 Kg

## How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-1 M - 4 - V**

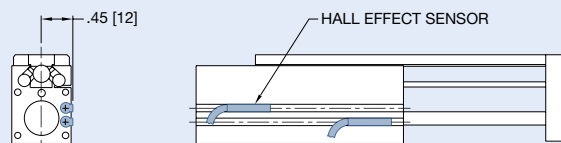
### SENSOR ACCESSORIES

	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

### PNEUMATIC ACCESSORIES

#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-090</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-09V</b>	<b>1</b>

\*Sensor and cable sold separately.

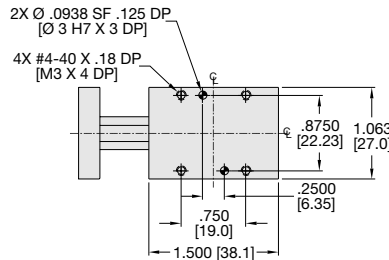
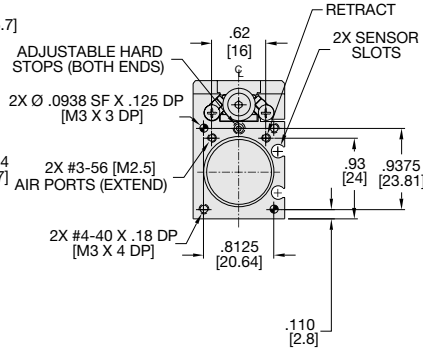
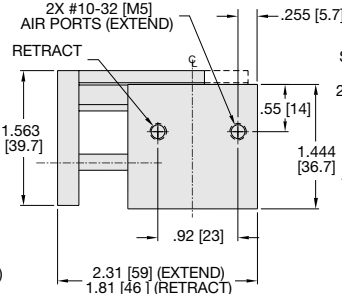
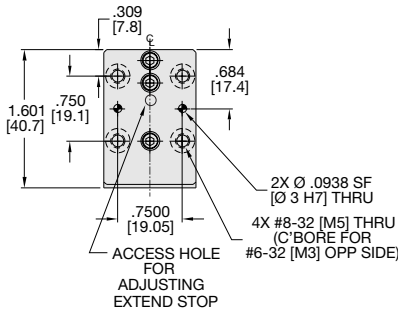
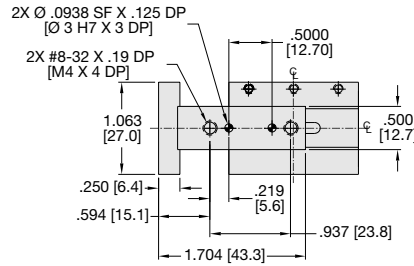


# PRECISION MINIATURE SLIDES MPS-2M-1 BUILT-IN CYLINDER, DUAL-"V" ROLLER BEARING



## Specifications

	MPS-2-1	MPS-2M-1
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	44 lbs.	196 N
Max Stroke.....	0.5 in.	13 mm
Stroke Adjustability (Each End) .....	.12 in.	3 mm
Weight.....	0.26 lbs.	0.12 Kg
Maximum Payload <b>W</b> .....	0.50 lbs.	0.23 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\emptyset$ .....	0.750 in.	19.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals .....	-20°~250° F	-30°~120° C
Actuation Time .....	0.12 sec.	0.12 sec.
Linear Accuracy Per In. of Travel....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate .....	4-way, 2-position	



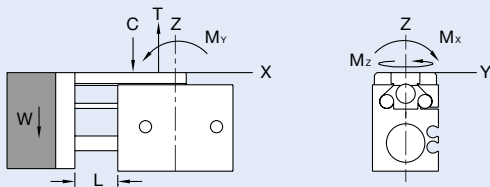
**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

Dimensions are symmetrical about centerline	Third Angle Projection	All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
Metric Threads Course Pitch	<b>Imperial in.</b> 0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	<b>Metric [mm]</b> [0.] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

MPS SERIES

4.132

## Loading Information



### Loading Capacity

	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	25 lbs.	111 N	10 lbs.	44 N
Maximum Compressive <b>C</b>	25 lbs.	111 N	10 lbs.	44 N
Maximum Moment <b>M<sub>x</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Moment <b>M<sub>y</sub></b>	20 in.-lbs.	2.3 Nm	10 in.-lbs.	1.1 Nm
Maximum Moment <b>M<sub>z</sub></b>	20 in.-lbs.	2.3 Nm	10 in.-lbs.	1.1 Nm
Maximum Payload <b>W</b>			.50 lbs.	.23 Kg

## How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-2 M - 1 - V**

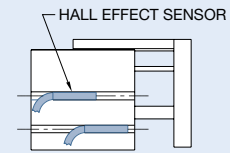
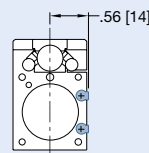
### SENSOR ACCESSORIES

	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

### PNEUMATIC ACCESSORIES

#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-091</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-091V</b>	<b>1</b>

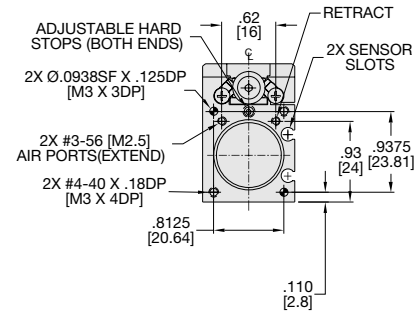
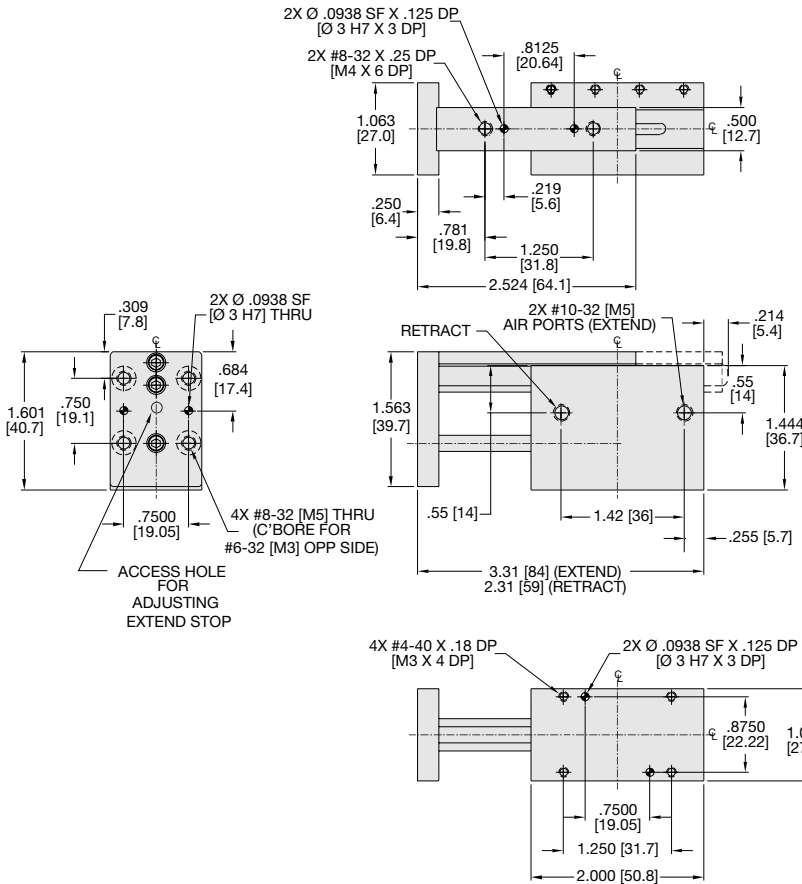
\*Sensor and cable sold separately.







For more information call us at: **1-800-ROBOHAND** or **203-261-5558** Fax: **203-452-7418** Visit us on the Internet at: [www.robohand.com](http://www.robohand.com)

[www.comoso.com](http://www.comoso.com)

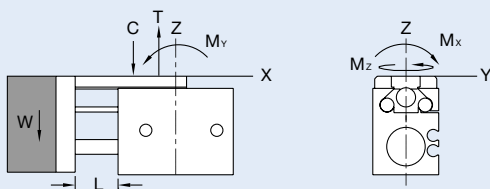
Specifications	MPS-2-2	MPS-2M-2
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	44 lbs.	196 N
Max Stroke.....	1.0 in.	25 mm
Stroke Adjustability (Each End) .....	.12 in.	3 mm
Weight.....	0.32 lbs.	0.14 Kg
Maximum Payload <b>W</b> .....	1.00 lbs.	0.45 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\varnothing$ .....	0.750 in.	19.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals.....	-20°~250° F	-30°~120° C
Actuation Time .....	0.16 sec.	0.16 sec.
Linear Accuracy Per In. of Travel....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate.....	4-way, 2-position	



### UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

	Dimensions are symmetrical about centerline		Third Angle Projection		All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
	Metric Threads Course Pitch	<b>Imperial in.</b>	<b>Metric [mm]</b>		
		0.00 = ±.01	[0.] = [±.25]		
		0.000 = ±.005	[0.0] = [±.13]		
		0.0000 = ±.0005	[0.00] = [±.013]		

## Loading Information



### Loading Capacity

	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	35 lbs.	156 N	15 lbs.	67 N
Maximum Compressive <b>C</b>	35 lbs.	156 N	15 lbs.	67 N
Maximum Moment <b>M<sub>x</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Moment <b>M<sub>y</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Moment <b>M<sub>z</sub></b>	30 in.-lbs.	3.4 Nm	15 in.-lbs.	1.7 Nm
Maximum Payload <b>W</b>			1.0 lbs.	.45 Kg

## How to Order: (Order Accessories separately from Basic Model)

**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL    METRIC    VITON® SEALS**

**MPS-2 M - 2 - V**

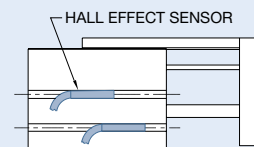
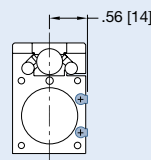
### SENSOR ACCESSORIES

	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>

### PNEUMATIC ACCESSORIES

#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-091</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-091V</b>	<b>1</b>

\*Sensor and cable sold separately.

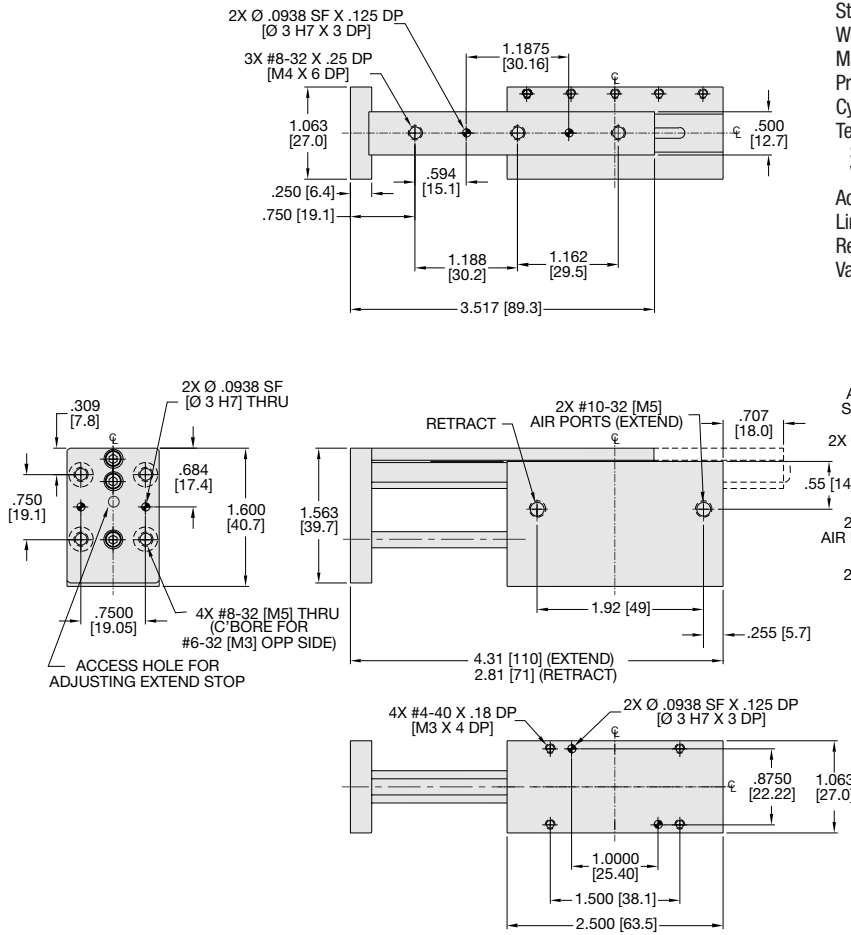




# PRECISION MINIATURE SLIDES MPS-2M-3 BUILT-IN CYLINDER, DUAL-"V" ROLLER BEARING



MPS SERIES  
4.134



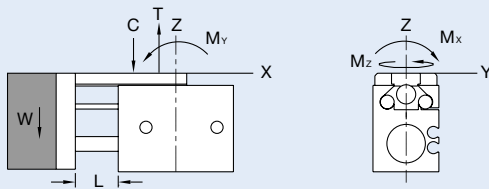
Specifications	MPS-2-3	MPS-2M-3
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	44 lbs.	196 N
Max Stroke.....	1.5 in.	38 mm
Stroke Adjustability (Each End) .....	.25 in.	6 mm
Weight.....	0.40 lbs.	0.18 Kg
Maximum Payload <b>W</b> .....	2.00 lbs.	0.91 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\varnothing$ .....	0.750 in.	19.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals .....	-20°~250° F	-30°~120° C
Actuation Time .....	0.19 sec.	0.19 sec.
Linear Accuracy Per In. of Travel....	±0.0001 in.	±0.003 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate.....	4-way, 2-position	

**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

	Dimensions are symmetrical about centerline		Third Angle Projection		All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or [±.013mm]
	Metric Threads Course Pitch	<b>Imperial in.</b>	<b>Metric [mm]</b>		
		0.00 = ±.01	[0.] = [±.25]		
		0.000 = ±.005	[0.0] = [±.13]		
		0.0000 = ±.0005	[0.00] = [±.013]		

## Loading Information

## How to Order: (Order Accessories separately from Basic Model)



**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL    METRIC    VITON® SEALS**

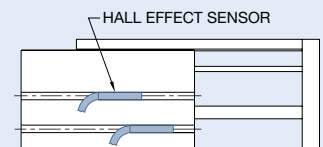
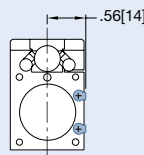
**MPS-2 M - 3 - V**

Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	50 lbs.	222 N	20 lbs.	89 N
Maximum Compressive <b>C</b>	50 lbs.	222 N	20 lbs.	89 N
Maximum Moment <b>M<sub>x</sub></b>	60 in.-lbs.	6.8 Nm	30 in.-lbs.	3.4 Nm
Maximum Moment <b>M<sub>y</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Moment <b>M<sub>z</sub></b>	40 in.-lbs.	4.5 Nm	20 in.-lbs.	2.3 Nm
Maximum Payload <b>W</b>			2.0 lbs.	.91 Kg

### SENSOR ACCESSORIES

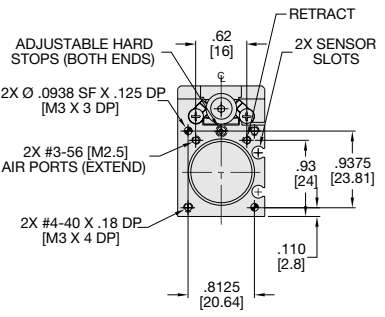
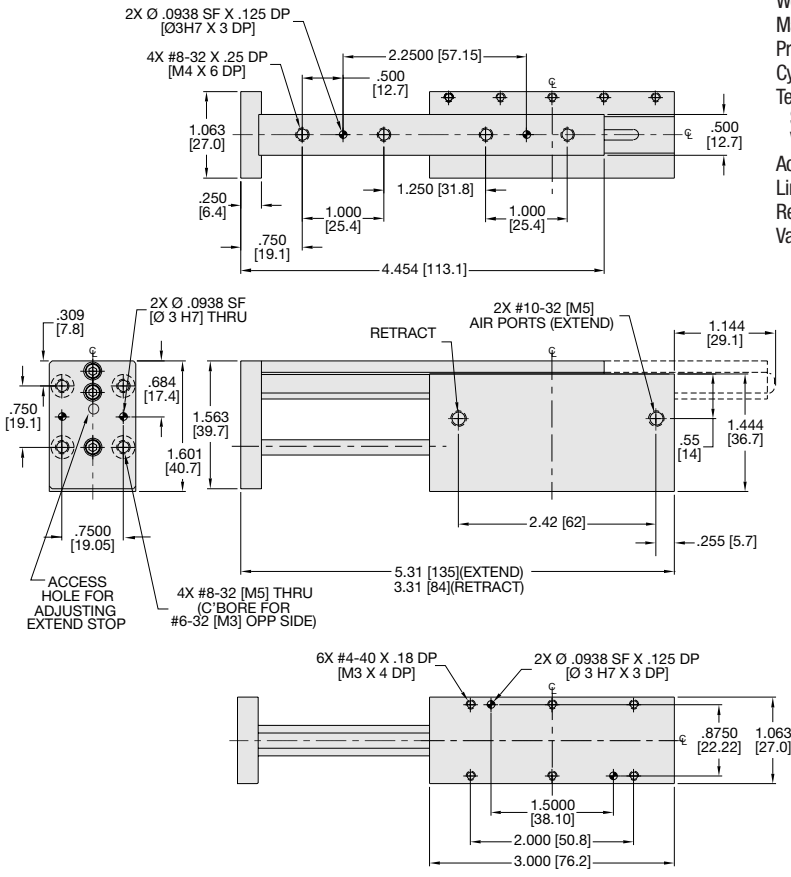
	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
<b>PNEUMATIC ACCESSORIES</b>		
#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-091</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-091V</b>	<b>1</b>

\*Sensor and cable sold separately.




# PRECISION MINIATURE SLIDES MPS-2M-4 BUILT-IN CYLINDER, DUAL-"V" ROLLER BEARING

Specifications	MPS-2-4	MPS-2M-4
Thrust Force <b>F</b> @ 100 psi, 7 bar ...	44 lbs.	196 N
Max Stroke.....	2.0 in.	51 mm
Stroke Adjustability (Each End) .....	.25 in.	6 mm
Weight.....	0.46 lbs.	0.21 Kg
Maximum Payload <b>W</b> .....	3.00 lbs.	1.36 Kg
Pressure Range.....	20-100 psi	1.5-7 bar
Cylinder Bore $\varnothing$ .....	0.750 in.	19.1 mm
Temperature Range		
Standard Seals.....	-30°~180° F	-35°~80° C
Viton® Seals.....	-20°~250° F	-30°~120° C
Actuation Time .....	0.24 sec.	0.24 sec.
Linear Accuracy Per In. of Travel....	±0.0001 in.	±0.005 mm
Repeatability .....	±0.0010 in.	±0.03 mm
Valve required to actuate.....	4-way, 2-position	



**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

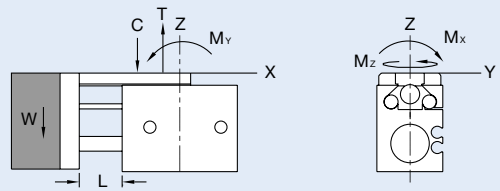

 Dimensions are symmetrical about centerline  
 Third Angle Projection  
 All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm)

Metric Threads	Imperial in.	Metric [mm]
Course Pitch	0.00 = ±.01	[0.] = [±.25]
	0.000 = ±.005	[0.0] = [±.13]
	0.0000 = ±.0005	[0.00] = [±.013]

MPS SERIES

**4.135**

## Loading Information



Loading Capacity	Static		Dynamic	
	Imperial	Metric	Imperial	Metric
Maximum Tensile <b>T</b>	70 lbs.	311 N	25 lbs.	111 N
Maximum Compressive <b>C</b>	70 lbs.	311 N	25 lbs.	111 N
Maximum Moment <b>M<sub>x</sub></b>	80 in.-lbs.	9.0 Nm	40 in.-lbs.	4.5 Nm
Maximum Moment <b>M<sub>y</sub></b>	50 in.-lbs.	5.7 Nm	25 in.-lbs.	2.8 Nm
Maximum Moment <b>M<sub>z</sub></b>	50 in.-lbs.	5.7 Nm	25 in.-lbs.	2.8 Nm
Maximum Payload <b>W</b>			3.0 lbs.	.6 Kg

## How to Order: (Order Accessories separately from Basic Model)

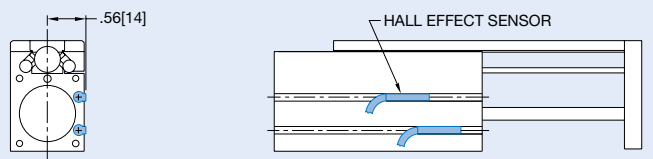
**WARNING:** Flow Controls recommended for most applications.

**BASIC MODEL**    **METRIC**    **VITON® SEALS**

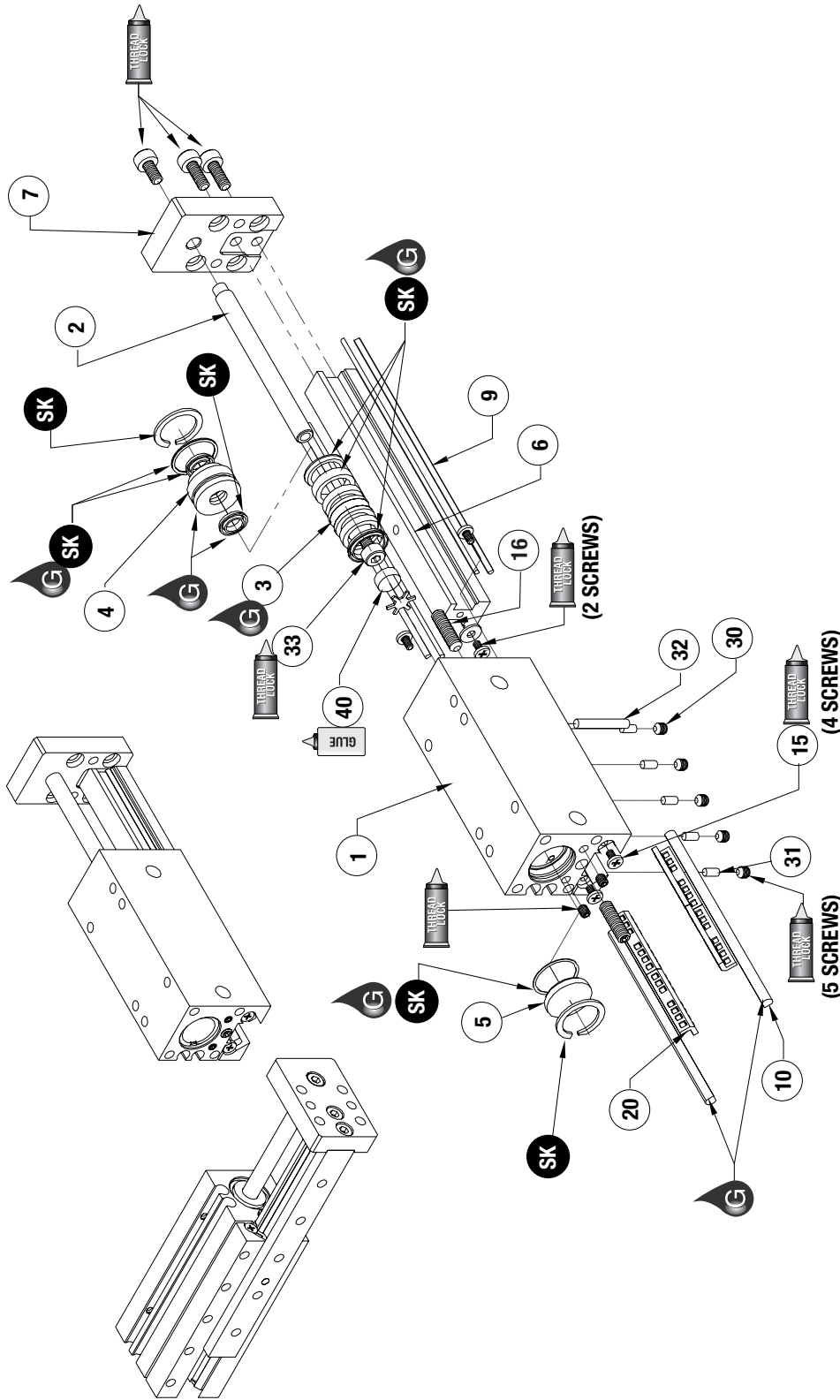
**MPS-2 M - 4 - V**

SENSOR ACCESSORIES	ORDER #	QTY/UNIT
NPN Hall Effect Sensor with Quick Disconnect*	<b>OHSN-006</b>	<b>1 or 2</b>
PNP Hall Effect Sensor with Quick Disconnect*	<b>OHSP-006</b>	<b>1 or 2</b>
Quick Disconnect 2M Cable Length*	<b>CABL-010</b>	<b>1 or 2</b>
Quick Disconnect 5M Cable Length*	<b>CABL-013</b>	<b>1 or 2</b>
PNEUMATIC ACCESSORIES		
#10-32 Adjustable Flow Control	<b>VLVF-007</b>	<b>1 or 2</b>
M5 Adjustable Flow Control	<b>VLVF-008</b>	<b>1 or 2</b>
#3-56 [M2.5] Barbed Fitting	<b>PLFT-005</b>	<b>2</b>
Standard Seal Repair Kit	<b>SLKT-091</b>	<b>1</b>
Viton® Seal Repair Kit	<b>SLKT-091V</b>	<b>1</b>

\*Sensor and cable sold separately.



**MPS SERIES  
 MAINTENANCE  
 4.136**



Item	Qty	Name
01	1	Body
02	1	Shaft, Piston
03	1	Piston
04	1	Cap, End, Shaft Side
05	1	Cap, End
06	1	Slide
07	1	End Plate
09	4	Way, Small
10	2	Way, Large
15	4	Stop Screw
16	2	Adjustment Screws
20	2	S'sassy, Cage & Rollers
30	3	SSS, Cup Point
31	3	Dowel Pin
32	1	Dowel Pin
33	2	SHCS
40	1	Magnet

**NOTE:** Contact the Robohand Sales Department for a complete spare parts list with order numbers and prices.

### Assembly Procedure

- 1) Lubricate and install seals and preload screws
- 2) Attach shaft to piston
- 3) Install magnet and star retainer into piston.
- 4) Install cap and retaining ring into body.
- 5) Place cap over piston shaft and into body.
- 6) Press dowel pin into slide.
- 7) Place slide into body.
- 8) Install large ways and cages into body.
- 9) Install small ways into body between slide and cages.
- 10) Attach tooling plate to slide and piston shaft.
- 11) Adjust preload.








### Preload Adjustment Procedure

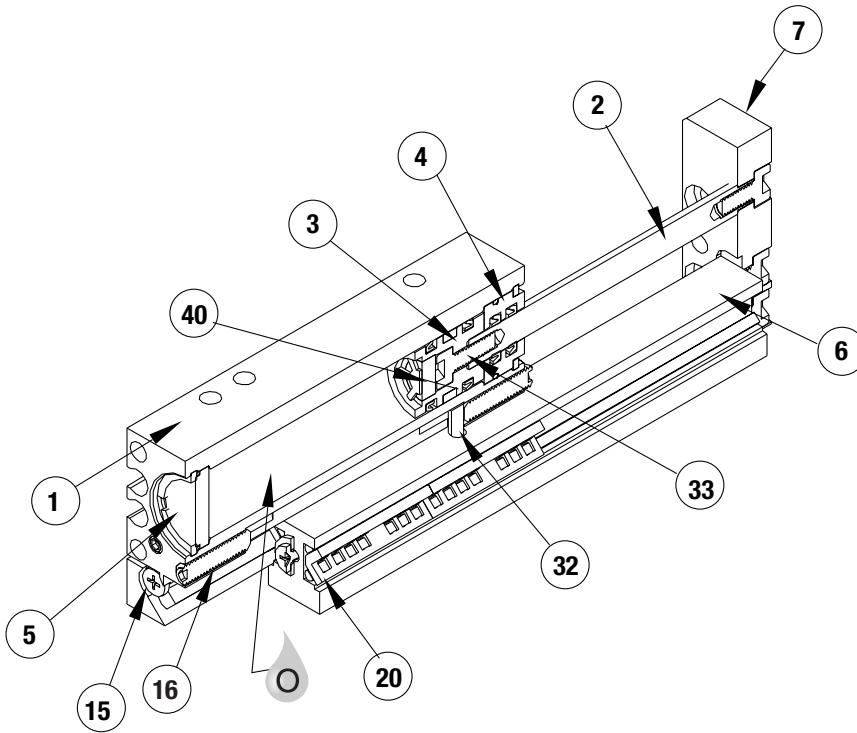
- 1) Tighten set screws (#30) so that there is no play in the slide.
- 2) Cycle the slide.
- 3) Re-adjust screws so that when you push on the cage, the slide moves freely. (the slide movement should not feel gritty.)

### Stroke Adjustment Procedure

- 1) Stroke can be adjusted by the set screw located above the cylinder bore on the piston rod side and cap side of the slide.
- 2) To reduce the stroke on retraction, tighten the set screw on the cap side.
- 3) To reduce the stroke on extension, tighten the set screw on the cylinder rod side. Note: stroke can only be reduced. It cannot be increased more than the value stated in the catalog.

**SK Seal Repair Kit Order #'s  
 See Product Data Sheets**

 SK Seal Kit Items	 THREAD LOCKER Thread Locker	 KRYTOX Krytox™ Lubricant	 O Lightweight Machine Oil	 G Teflon® Based Grease	 GLUE Super Bonder	 Third Angle Projection
---	---	--	---	---	---	---



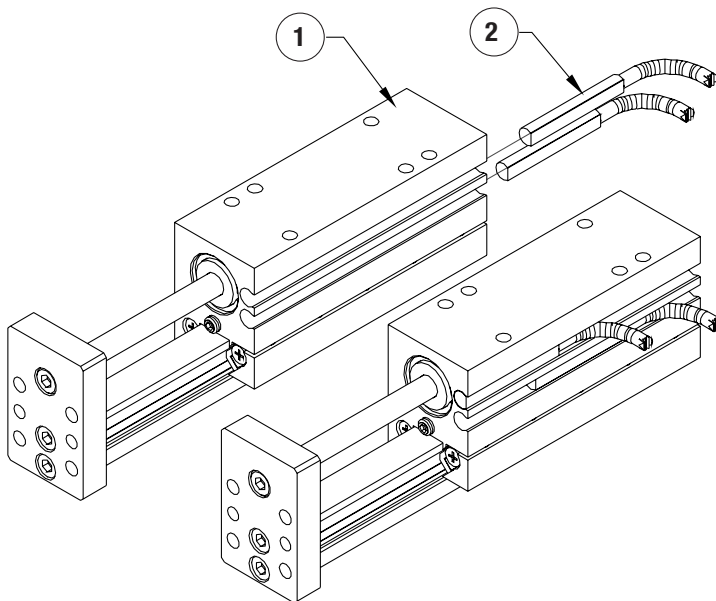
Item Qty	Name
01	1 Body
02	1 Shaft, Piston
03	1 Piston
04	1 Cap, End, Shaft Side
05	1 Cap, End
06	1 Slide
07	1 End Plate
09	4 Way, Small
10	2 Way, Large
15	4 Stop Screw
16	2 Adjustment Screws
20	2 S'assy, Cage & Rollers
30	3 SSS, Cup Point
31	3 Dowel Pin
32	1 Dowel Pin
33	2 SHCS
40	1 Magnet

**NOTE:** Contact the Robohand Sales Department for a complete spare parts list with order numbers and prices.

MPS SERIES MAINTENANCE

4.137

## Accessory Installation & Adjustment Instructions



Item Qty	Name
1	1 Body
2	2 Sensor

### Assembly Procedure

- 1) Install sensors in profile slots as shown,
- 2) Once adjusted for end stroke, lock in position with integrated set screws



Seal Kit Items



Thread Locker



Krytox™ Lubricant



Lightweight Machine Oil



Teflon® Based Grease



Super Bonder



Third Angle Projection