

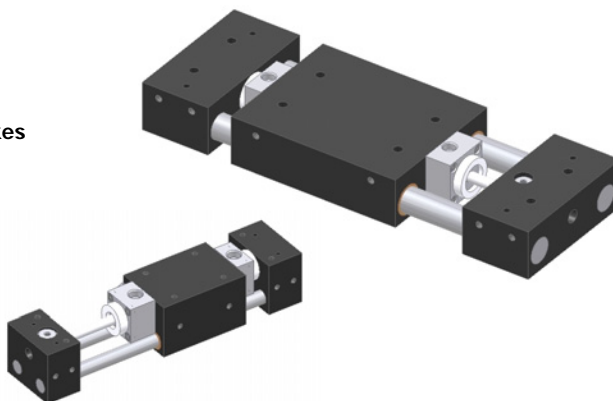
AIR SLIDES

AIR SERIES

STANDARD LINE

- Full range of sizes and strokes
- Internal Cylinder
- Build-in Flow Control
- Robust design
- Extremely Durable
- Fully field serviceable

See
Page **4-1.2**

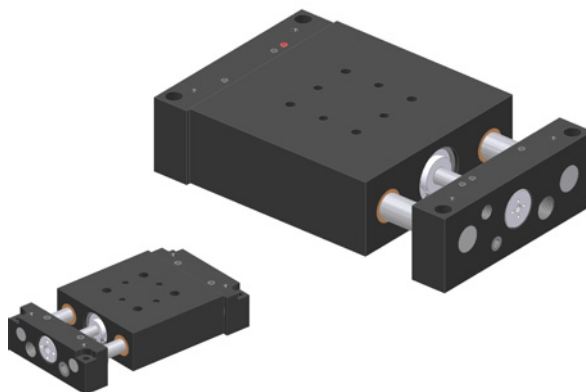


LS SERIES

AIR THRU ENDBLOCK

- Full range of sizes and strokes
- Internal Cylinder
- Precision Mounting
- Available Shock Absorbers
- Sensor Ready
- Extremely Durable
- Fully field serviceable

See
Page **4-1.14**

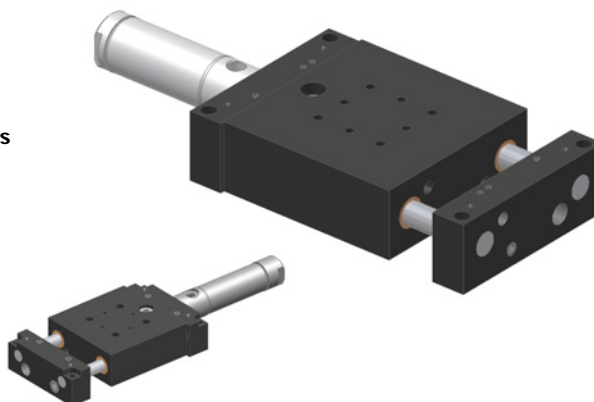


LSE SERIES

EXTERNAL CYLINDER

- Full range of sizes and strokes
- Replaceable Cylinder
- Precision Mounting
- Available Shock Absorbers
- Sensor Ready
- Extremely Durable
- Fully field serviceable

See
Page **4-1.28**





AIR-SERIES

DURA-SLIDE AIR Series of Pneumatic Linear Positioning Devices provide a practical, low-cost approach to automatic work positioning. The built-in air cylinder simplifies slide operation and eliminates the need for complex, expensive activating mechanisms. The unit is extremely compact requiring only minimal space for installation. The AIR Series is field proven with up to 160 million inches accumulated travel with negligible wear.

QUALITY CONSTRUCTION

DURA-SLIDE AIR Series maintains all rod bores parallel to the mounting surface within .002" per foot. The four slide bearings are oil impregnated bronze bushings, which eliminate the need for re-lubrication. Bronze bushings are utilized rather than linear ball bearings because bushings distribute the load over a larger surface area. This results in less wear on the slide rods. Both rods are pinned to the end blocks to assure positive location. Delrin bumper pads, located at each end of the stroke, contribute to a low noise level minimizing the clatter inherent in fast acting slide devices.

MOUNTING STYLES

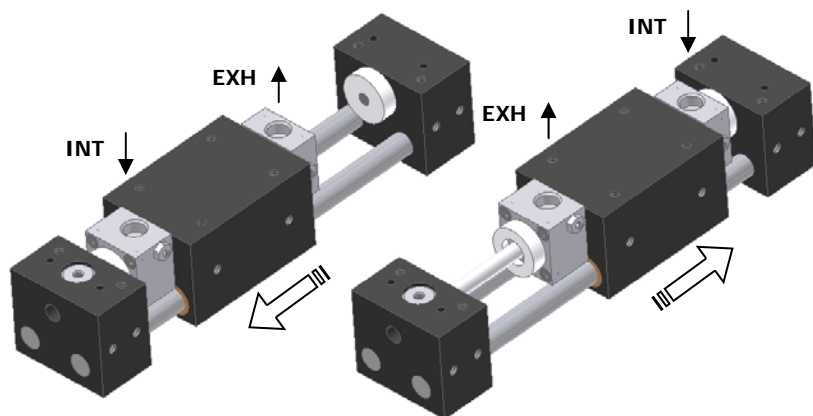
DURA-SLIDE AIR units can be mounted in any plane provided both end blocks are set on machined surfaces to prevent distortion. Either the main body or the end blocks function as the fixed supports. The center main body houses the air cylinder and is offset from the end blocks in two planes. This offset feature allows the end blocks to be mounted on the same plane surface without risers. Multiple mounting holes in all the sections provide mounting versatility. For example: with the use of a transition plate two center body sections can be joined at right angles to construct a cross-yoke or an inexpensive pick-and-place unit.

Use the AIR Series of Air-Powered Slides wherever you need durable and precise guided linear motion.

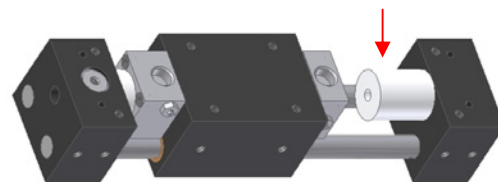
TECHNICAL SPECIFICATION

Pneumatic Specifications	ENGLISH	METRIC
Pressure Range	40-150 psi	3-10.3 bar
Travel Tolerance	+0.000" / - 0.015"	+0.00 / 0.40mm
Cylinder Type	Double Acting	
Dynamic Seals	Buna-N	
Required Valves	4-way, 2 position	
Maintenance	Field Repairable	
Temperature Range		
Buna-N Seals (standard)	-30 to 180 F	-35 to 80 C
Viton Seals (-V option)	-20 to 300 F	-30 to 150 C

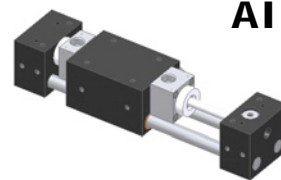
OPERATING PRINCIPLES



STROKE ADJUSTMENT



All **DURA-SLIDE AIR** series slides include an additional 1" [25.4mm] Delrin stop. This stop can be machined by user to create a specific, hard-stopped stroke. Hard stops provide highly repeatable and accurate stroke control. (Additional Bumpers can be ordered, see parts page for ordering information.)

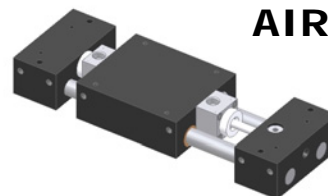


AIR-10

SPECS

BORE DIA - 0.750" [19.1mm]
ROD DIA - 0.375" [9.53mm]
STROKE - 0.5-4.0" [12.7-101.6mm]

See Page **4-1.4**

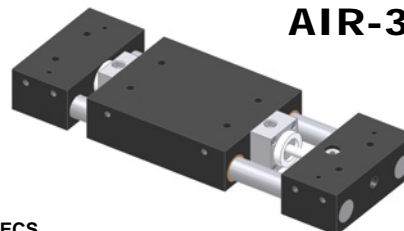


AIR-20

SPECS

BORE DIA - 0.750" [19.1mm]
ROD DIA - 0.500" [12.70mm]
STROKE - 0.5-6.0" [12.7-154.4mm]

See Page **4-1.6**

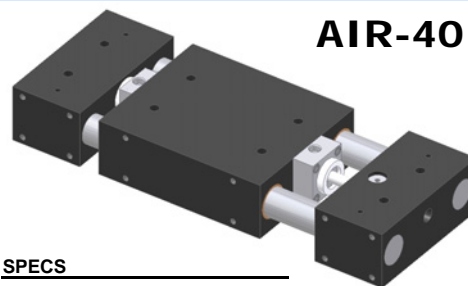


AIR-30

SPECS

BORE DIA - 1.000" [25.4mm]
ROD DIA - 0.750" [19.05mm]
STROKE - 0.5-8.0" [12.7-203.2mm]

See Page **4-1.8**



AIR-40

SPECS

BORE DIA - 1.125" [28.6mm]
ROD DIA - 1.000" [25.40mm]
STROKE - 0.5-10.0" [12.7-254.0mm]

See Page **4-1.10**



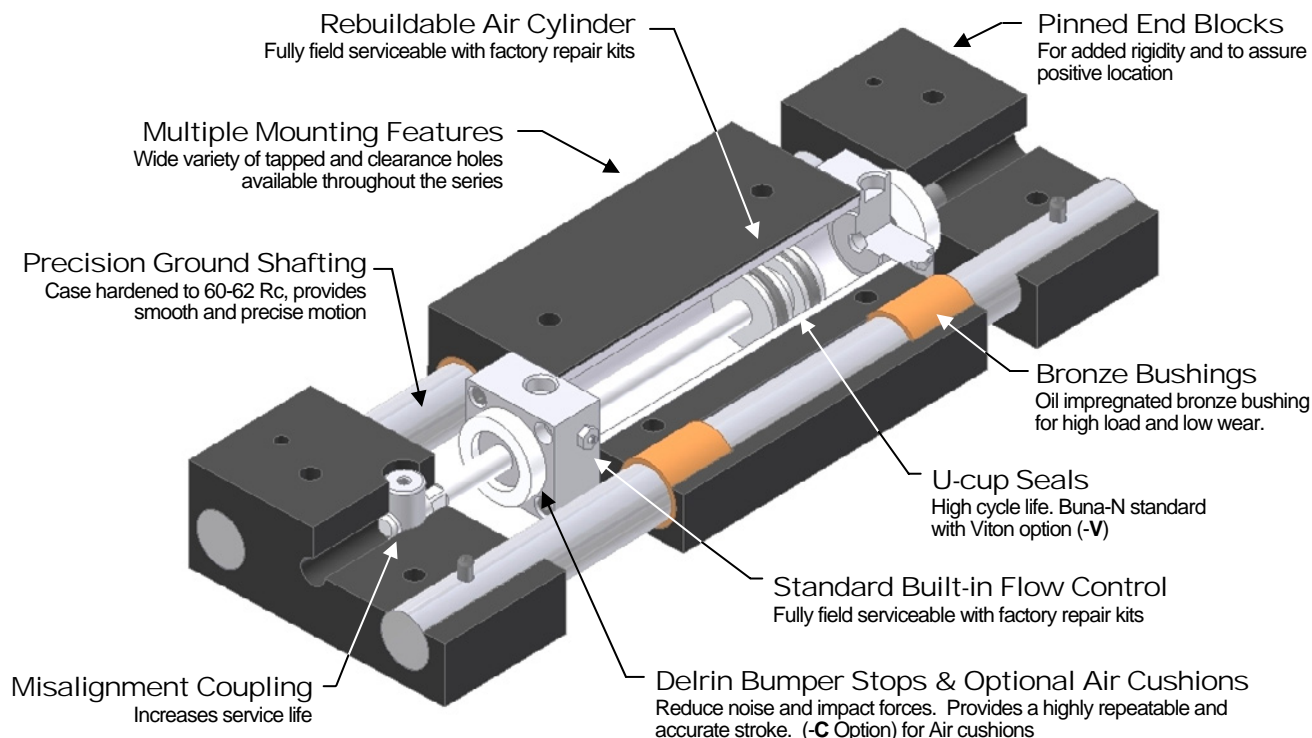
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DURA-SLIDE
AIR SLIDES

AIR-SERIES 

PRODUCT FEATURES

- Aircraft Grade Aluminum
Black Anodize Finish
- Simple and Highly Durable
Time tested, field approved design
- Compact Design
Internal cylinder reduces overall length



DESIGNED - MANUFACTURED - ASSEMBLED IN THE USA



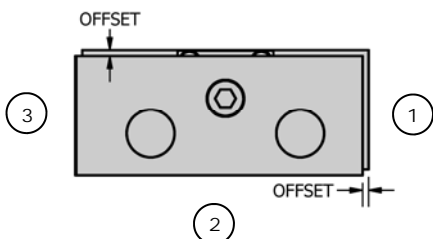
MOUNTING INFORMATION

Mounts and operates in any orientation

NO RISERS!

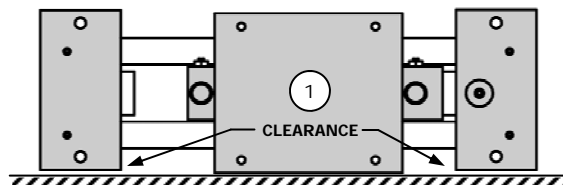
OFFSET BLOCK FEATURE

DURA-SLIDE AIR Series unique dual offset block feature allows for center and end mounting without the use of risers.



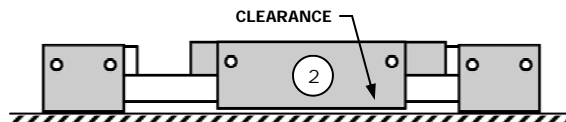
CENTER MOUNT (Cantilever slide)

- Mount on side
- Payload on End Blocks



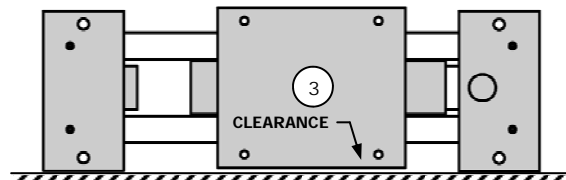
END MOUNT (Gantry / Base slide)

- Mount on bottom
- Payload on Main Body



END MOUNT (Gantry / Base slide)

- Mount on side
- Payload on Main Body





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DURA-SLIDE
AIR SLIDES

AIR-10

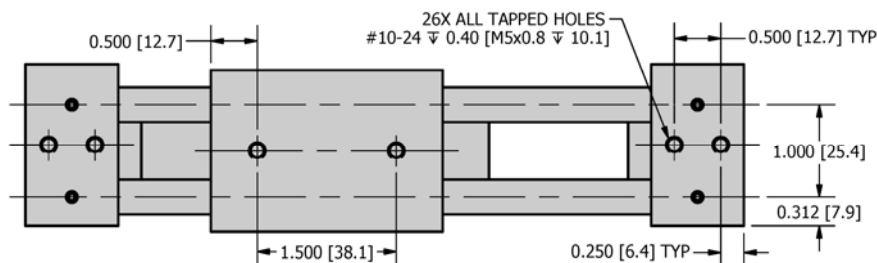
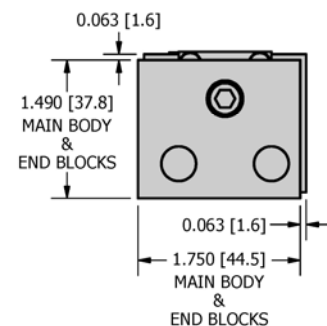
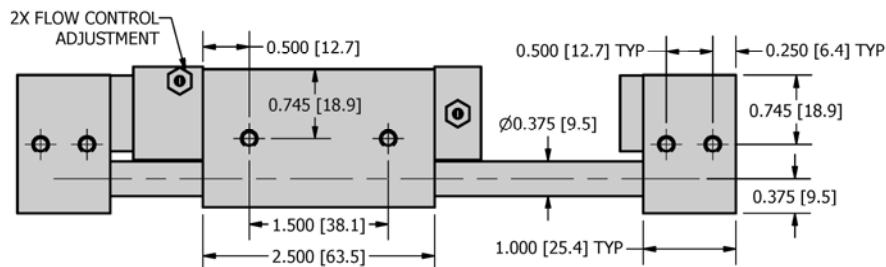
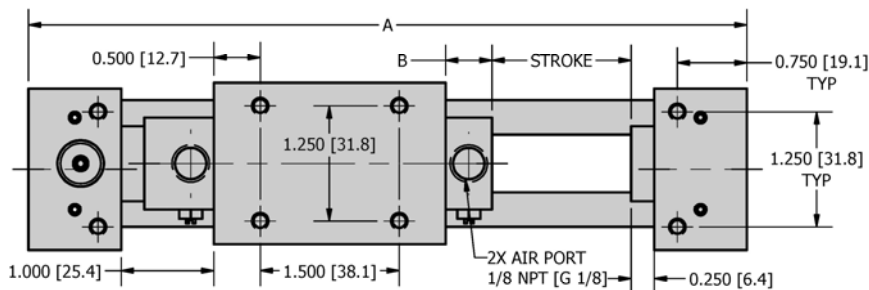
DIMENSIONAL DRAWING

SPECIFICATIONS

	AIR-10	MAIR-10
Maximum Stroke	4.00"	101.6 mm
Thrust Force @ 80 psi / 5.5 bar	35 lbf	157 N
Unit Displacement (per stroke)	0.44 in ³ /in	2.85 cm ³ /cm
Base Weight (no stroke)	1.7 lbs	0.75 kg
Additional weight per Stroke	0.15 lbs/in	2.7 g/mm
Cylinder Bore Diameter	0.750 in	19.1 mm
Piston Rod Diameter	0.250 in	6.35 mm
Shaft Diameter	0.375 in	9.53 mm

ADDITIONAL DIMENSIONS

STROKE		A		B	
in	mm	in	mm	in	mm
0.50	[12.7]	6.75	[171.5]	0.50	[12.7]
1.00	[25.4]	7.25	[184.2]	0.50	[12.7]
1.50	[38.1]	7.75	[196.9]	0.50	[12.7]
2.00	[50.8]	8.75	[222.3]	1.00	[25.4]
2.50	[63.5]	9.75	[247.7]	1.50	[38.1]
3.00	[76.2]	10.75	[273.1]	2.00	[50.8]
3.50	[88.9]	11.75	[298.5]	2.50	[63.5]
4.00	[101.6]	12.75	[323.9]	3.00	[76.2]



HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL STROKE AIR CUSHIONS
M **AIR-10** - **0.5** - **C** - **V**
 SEALS

SAMPLE ORDER: AIR-10-0.5

Ex) AIR-10 with 0.5" stroke

METRIC M

STROKE Inch: 0.5" - 4.0" @ 0.5" Increments

mm: 12.7mm - 101.6mm @ 12.7mm Increments

AIR CUSHIONS C - Air cushions (see Additional Information section)

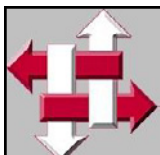
Not available on 0.5" [12.7mm] strokes

SEALS V - Viton (standard Buna - N)

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- MULTIPLE STATION DESIGNS
- OVERSIZED BODIES

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AIR SLIDES

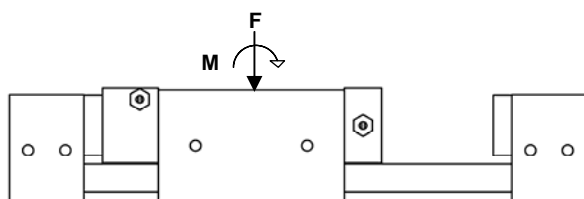
AIR-10

LOADING INFORMATION

LOADING

	AIR-10	M AIR-10
Max Static Load F	100 lbf	445 N
Max Dynamic Moment M	60 lbf-in	6.8 N-m
Max Payload W	SEE CHART	

For Vertical Motion use a factor of 1/2 on payload due to gravity

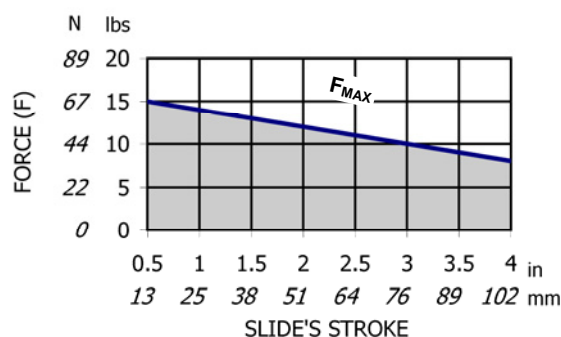


STATIC LOADING

Maximum Static Load should only be applied when slide has the front head against the endblock (position is shown above)

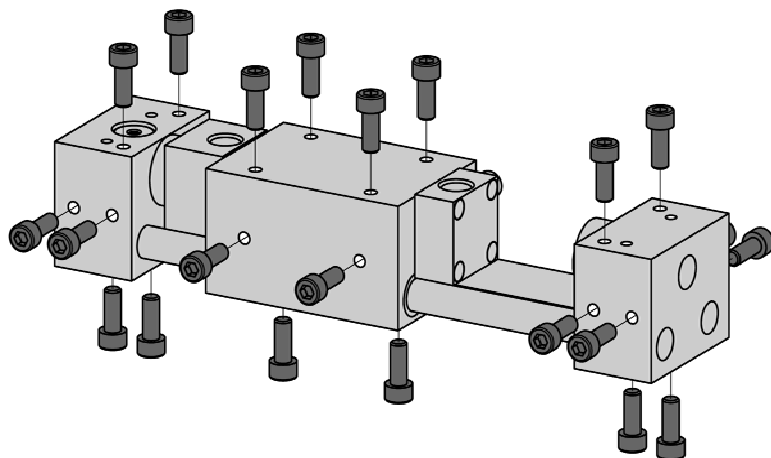
DYNAMIC LOADING

These are suggested Dynamic loads for smooth operation and normal life expectancy.



Flow controls recommended for nearly all applications
Use Air Cushions for high loads
Consult factory for Shock Absorbers for highest Loads

ADDITIONAL INFORMATION

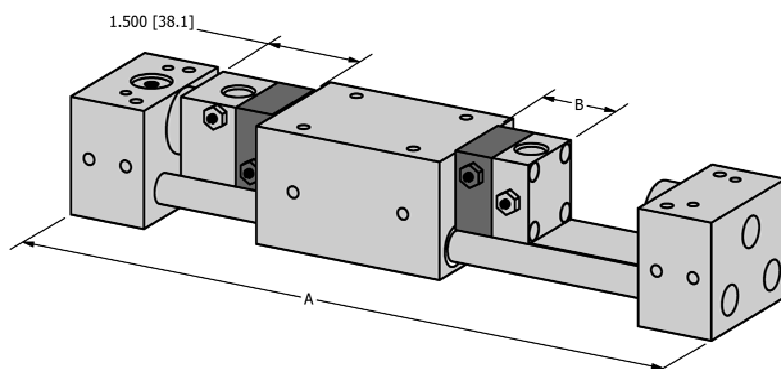


HIGHLY VERSATILE STANDARD MOUNTING FEATURES

24 Tapped holes on four sides (top, bottom, and both sides) allow for mounting the slide in many orientations and also provides mounting for customer tooling or payload.

ADJUSTABLE AIR CUSHIONS (-C OPTION)

Air Cushions provide for smooth deceleration at each end of stroke (extend and retract). When the cushions are activated the remaining volume in the cylinder must be exhausted past an adjustable needle which controls the amount of deceleration. See the chart for changes to slide dimensions



DIMENSIONS WITH AIR CUSHIONS STROKE

STROKE	A		B	
	in	mm	in	mm
0.50	[12.7]		Not Available	
1.00	[25.4]	8.25	[209.6]	1.00 [25.4]
1.50	[38.1]	8.75	[222.3]	1.00 [25.4]
2.00	[50.8]	9.75	[247.7]	1.50 [38.1]
2.50	[63.5]	10.75	[273.1]	2.00 [50.8]
3.00	[76.2]	11.75	[298.5]	2.50 [63.5]
3.50	[88.9]	12.75	[323.9]	3.00 [76.2]
4.00	[101.6]	13.75	[349.3]	3.50 [88.9]



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DURA-SLIDE
AIR SLIDES

AIR-20

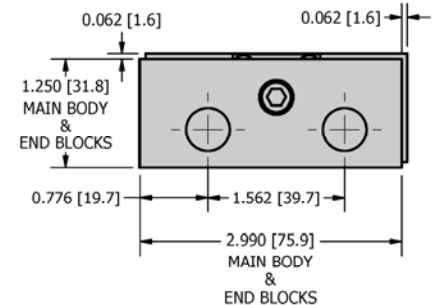
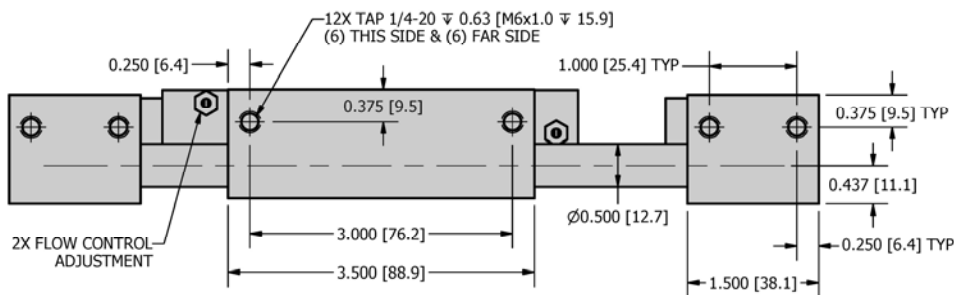
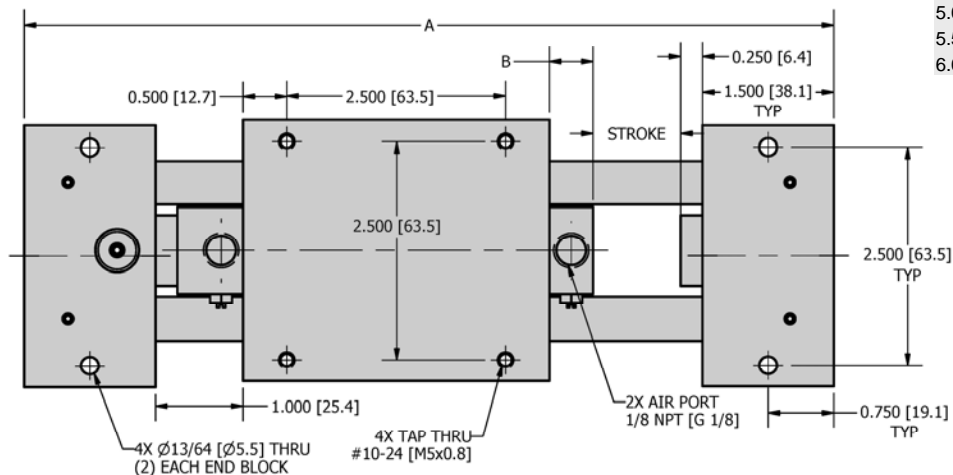
DIMENSIONAL DRAWING

SPECIFICATIONS

	AIR-20	MAIR-20
Maximum Stroke	6.00"	152.4 mm
Thrust Force @ 80 psi / 5.5 bar	35 lbf	157 N
Unit Displacement (per stroke)	0.44 in ³ /in	2.85 cm ³ /cm
Base Weight (no stroke)	3.2 lbs	1.46 kg
Additional weight per Stroke	0.17 lbs/in	3.0 g/mm
Cylinder Bore Diameter	0.750 in	19.1 mm
Piston Rod Diameter	0.250 in	6.35 mm
Shaft Diameter	0.500 in	12.70 mm

ADDITIONAL DIMENSIONS

STROKE		A		B	
in	mm	in	mm	in	mm
0.50	[12.7]	8.75	[222.3]	0.50	[12.7]
1.00	[25.4]	9.25	[235.0]	0.50	[12.7]
1.50	[38.1]	9.75	[247.7]	0.50	[12.7]
2.00	[50.8]	10.25	[260.4]	0.50	[12.7]
2.50	[63.5]	10.75	[273.1]	0.50	[12.7]
3.00	[76.2]	11.75	[298.5]	1.00	[25.4]
3.50	[88.9]	12.75	[323.9]	1.50	[38.1]
4.00	[101.6]	13.75	[349.3]	2.00	[50.8]
4.50	[114.3]	14.75	[374.7]	2.50	[63.5]
5.00	[127.0]	15.75	[400.1]	3.00	[76.2]
5.50	[139.7]	16.75	[425.5]	3.50	[88.9]
6.00	[152.4]	17.75	[450.9]	4.00	[101.6]



HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL STROKE AIR CUSHIONS
M **AIR-20** - **C** - **V**
 SEALS

SAMPLE ORDER: AIR-20-0.5

Ex) AIR-20 with 0.5" stroke

METRIC M

STROKE Inch: 0.5" - 6.0" @ 0.5" Increments

mm: 12.7mm - 152.4mm @ 12.7mm Increments

AIR CUSHIONS C - Air cushions (see Additional Information section)

Not available on 0.5" [12.7mm] strokes

SEALS V - Viton (standard Buna - N)

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- MULTIPLE STATION DESIGNS
- OVERSIZED BODIES

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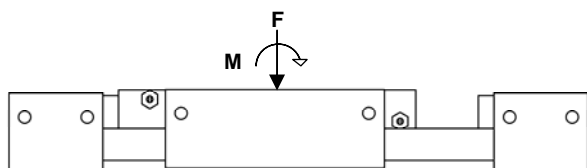
DURA-SLIDE
AIR SLIDES

AIR-20

LOADING INFORMATION

LOADING	AIR-20	M AIR-20
Max Static Load F	200 lbf	889 N
Max Dynamic Moment M	125 lbf-in	14.1 N-m
Max Payload W	SEE CHART	

For Vertical Motion use a factor of 1/2 on payload due to gravity

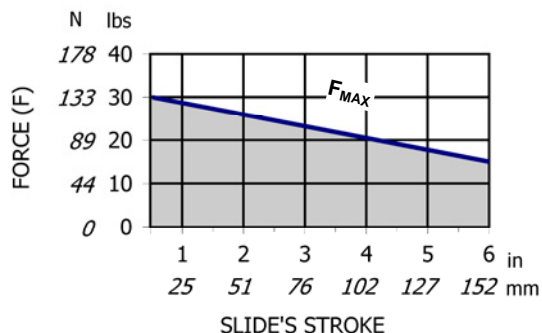


STATIC LOADING

Maximum Static Load should only be applied when slide has the front head against the endblock (position is shown above)

DYNAMIC LOADING

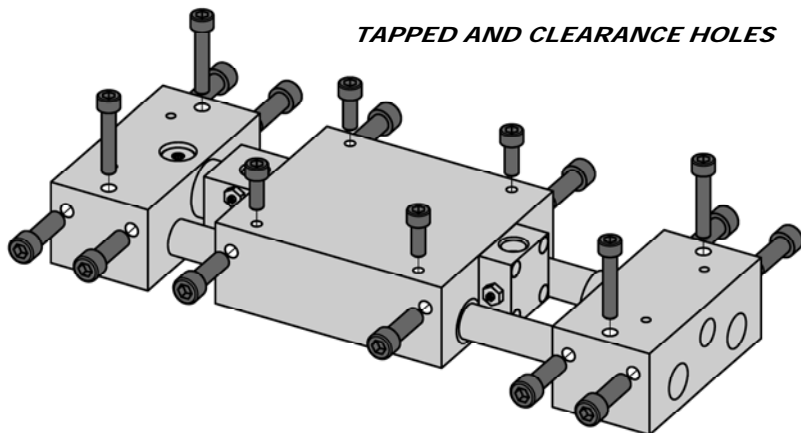
These are suggested Dynamic loads for smooth operation and normal life expectancy.



Flow controls recommended for nearly all applications
Use Air Cushions for high loads
Consult factory for Shock Absorbers for highest Loads

ADDITIONAL INFORMATION

TAPPED AND CLEARANCE HOLES

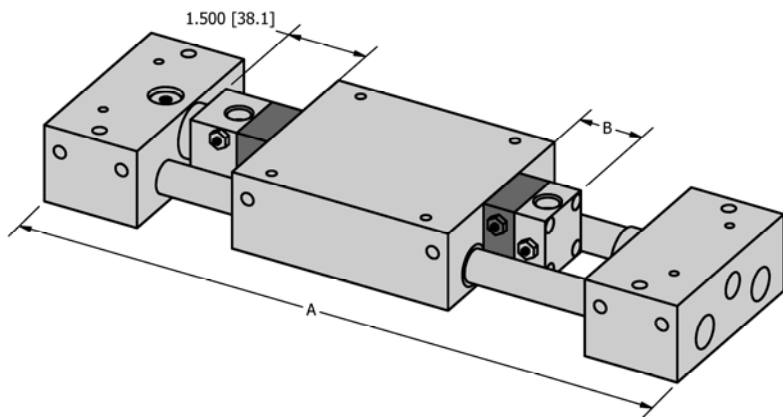


HIGHLY VERSATILE STANDARD MOUNTING FEATURES

End blocks contain 2 Tapped holes on both sides and 2 thru Clearance holes. The Main Body also contains 2 Tapped holes on both sides and 4 thru Tapped holes. These features allow for mounting the slide in many orientations and also provides mounting for customer tooling or payload.

ADJUSTABLE AIR CUSHIONS (-C OPTION)

Air Cushions provide for smooth deceleration at each end of stroke (extend and retract). When the cushions are activated the remaining volume in the cylinder must be exhausted past an adjustable needle which controls the amount of deceleration. See the chart for changes to slide dimensions



DIMENSIONS WITH AIR CUSHIONS

STROKE		A		B	
in	mm	in	mm	in	mm
0.50	[12.7]	Not Available			
1.00	[25.4]	10.25	[260.4]	1.00	[25.4]
1.50	[38.1]	10.75	[273.1]	1.00	[25.4]
2.00	[50.8]	11.25	[285.8]	1.00	[25.4]
2.50	[63.5]	11.75	[298.5]	1.00	[25.4]
3.00	[76.2]	12.75	[323.9]	1.50	[38.1]
3.50	[88.9]	13.75	[349.3]	2.00	[50.8]
4.00	[101.6]	14.75	[374.7]	2.50	[63.5]
4.50	[114.3]	15.75	[400.1]	3.00	[76.2]
5.00	[127.0]	16.75	[425.5]	3.50	[88.9]
5.50	[139.7]	17.75	[450.9]	4.00	[101.6]
6.00	[152.4]	18.75	[476.3]	4.50	[114.3]



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AIR SLIDES

AIR-30

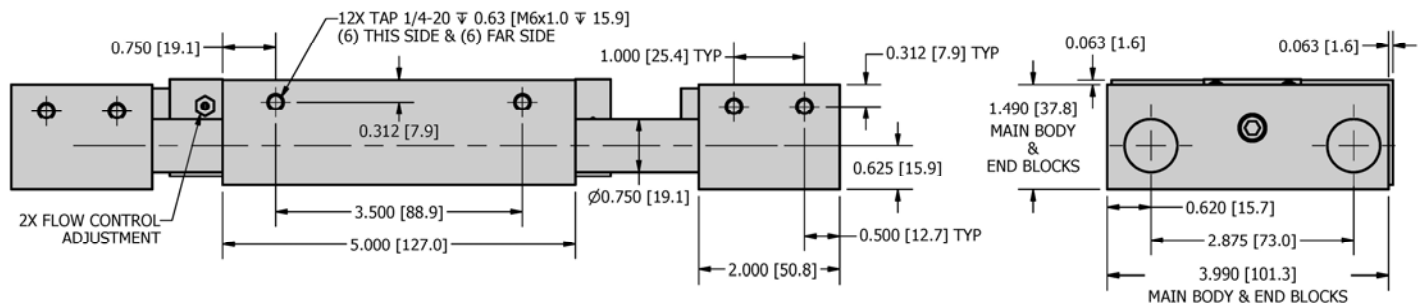
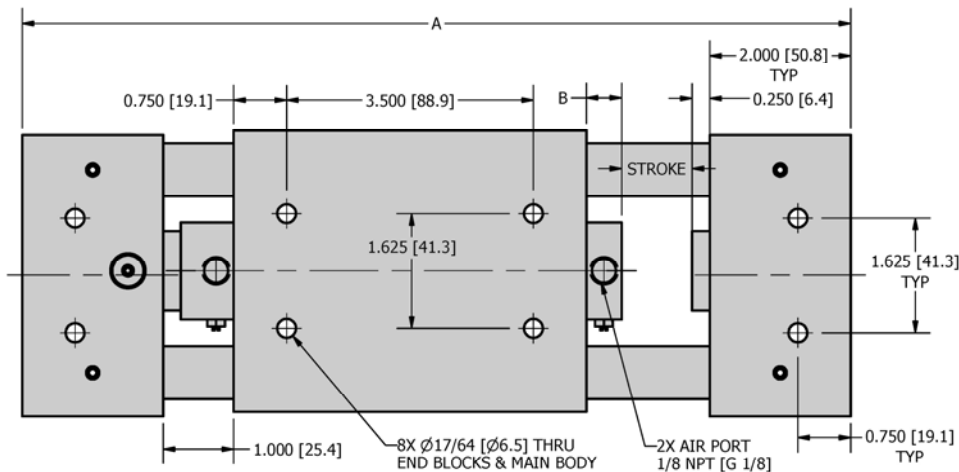
DIMENSIONAL DRAWING

SPECIFICATIONS

	AIR-30	MAIR-30
Maximum Stroke	8.00"	203.2 mm
Thrust Force @ 80 psi / 5.5 bar	63 lbf	280 N
Unit Displacement (per stroke)	0.79 in ³ /in	5.1 cm ³ /cm
Base Weight (no stroke)	7.6 lbs	3.43 kg
Additional weight per Stroke	0.26 lbs/in	4.6 g/mm
Cylinder Bore Diameter	1.000 in	25.4 mm
Piston Rod Diameter	0.312 in	7.93 mm
Shaft Diameter	0.750 in	19.05 mm

ADDITIONAL DIMENSIONS

STROKE		A		B	
in	mm	in	mm	in	mm
0.50	[12.7]	11.25	[285.8]	0.50	[12.7]
1.00	[25.4]	11.75	[298.5]	0.50	[12.7]
1.50	[38.1]	12.25	[311.2]	0.50	[12.7]
2.00	[50.8]	12.75	[323.9]	0.50	[12.7]
2.50	[63.5]	13.25	[336.6]	0.50	[12.7]
3.00	[76.2]	13.75	[349.3]	0.50	[12.7]
3.50	[88.9]	14.25	[362.0]	0.50	[12.7]
4.00	[101.6]	14.75	[374.7]	0.50	[12.7]
4.50	[114.3]	15.75	[400.1]	1.00	[25.4]
5.00	[127.0]	16.75	[425.5]	1.50	[38.1]
5.50	[139.7]	17.75	[450.9]	2.00	[50.8]
6.00	[152.4]	18.75	[476.3]	2.50	[63.5]
6.50	[165.1]	19.75	[501.7]	3.00	[76.2]
7.00	[177.8]	20.75	[527.1]	3.50	[88.9]
7.50	[190.5]	21.75	[552.5]	4.00	[101.6]
8.00	[203.2]	22.75	[577.9]	4.50	[114.3]



HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL STROKE AIR CUSHIONS
M **AIR-30** - **1.5** - **C** - **V**
 SEALS

SAMPLE ORDER: AIR-30-1.5-C

Ex) AIR-30 with 1.5" stroke and Air Cushions

METRIC M

STROKE Inch: 0.5" - 8.0" @ 0.5" Increments

mm: 12.7mm - 203.2mm @ 12.7mm Increments

AIR CUSHIONS C - Air cushions (see Additional Information section)

Not available on 0.5" [12.7mm] strokes

SEALS V - Viton (standard Buna - N)

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- MULTIPLE STATION DESIGNS
- OVERSIZED BODIES

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DURA-SLIDE
AIR SLIDES

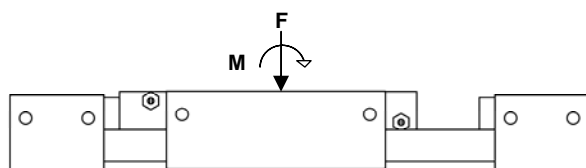
AIR-30

LOADING INFORMATION

LOADING

	AIR-30	M AIR-30
Max Static Load F	300 lbf	1334 N
Max Dynamic Moment M	500 lbf-in	56.5 N-m
Max Payload W	SEE CHART	

For Vertical Motion use a factor of 1/2 on payload due to gravity

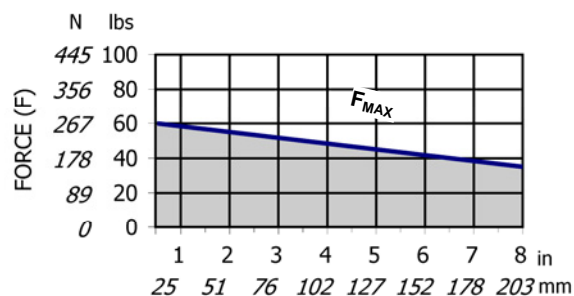


STATIC LOADING

Maximum Static Load should only be applied when slide has the front head against the endblock (position is shown above)

DYNAMIC LOADING

These are suggested Dynamic loads for smooth operation and normal life expectancy.



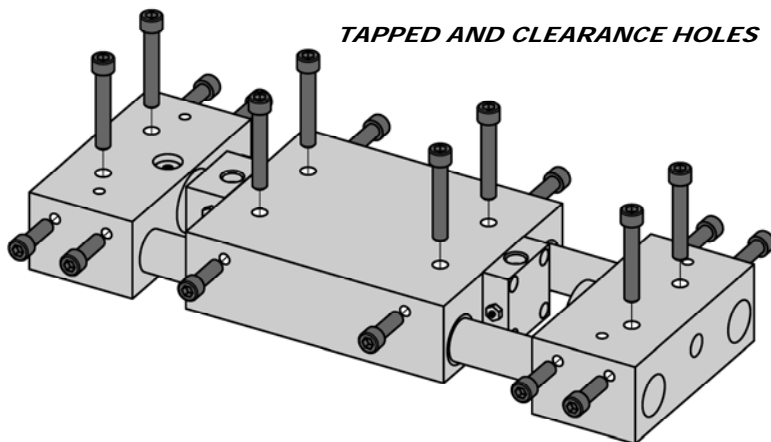
SLIDE'S STROKE



Flow controls recommended for nearly all applications
Use Air Cushions for high loads
Consult factory for Shock Absorbers for highest Loads

ADDITIONAL INFORMATION

TAPPED AND CLEARANCE HOLES

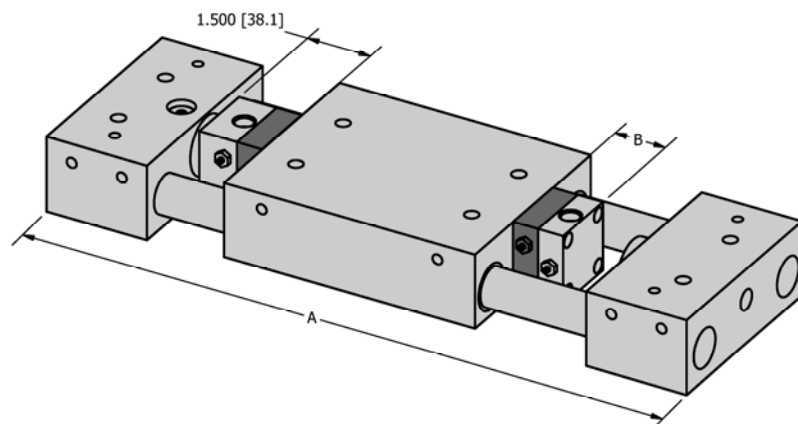


HIGHLY VERSATILE STANDARD MOUNTING FEATURES

End blocks contain 2 Tapped holes on both sides and 2 thru Clearance holes. The Main Body also contains 2 Tapped holes on both sides and 4 thru Clearance holes. These features allow for mounting the slide in many orientations and also provides mounting for customer tooling or payload.

ADJUSTABLE AIR CUSHIONS (-C OPTION)

Air Cushions provide for smooth deceleration at each end of stroke (extend and retract). When the cushions are activated the remaining volume in the cylinder must be exhausted past an adjustable needle which controls the amount of deceleration. See the chart for changes to slide dimensions



DIMENSIONS WITH AIR CUSHIONS

STROKE	A		B	
in	mm	in	mm	mm
0.50	[12.7]	Not Available		
1.00	[25.4]	12.75	[323.9]	1.00 [25.4]
1.50	[38.1]	13.25	[336.6]	1.00 [25.4]
2.00	[50.8]	13.75	[349.3]	1.00 [25.4]
2.50	[63.5]	14.25	[362.0]	1.00 [25.4]
3.00	[76.2]	14.75	[374.7]	1.00 [25.4]
3.50	[88.9]	15.25	[387.4]	1.00 [25.4]
4.00	[101.6]	15.75	[400.1]	1.00 [25.4]
4.50	[114.3]	16.75	[425.5]	1.50 [38.1]
5.00	[127.0]	17.75	[450.9]	2.00 [50.8]
5.50	[139.7]	18.75	[476.3]	2.50 [63.5]
6.00	[152.4]	19.75	[501.7]	3.00 [76.2]
6.50	[165.1]	20.75	[527.1]	3.50 [88.9]
7.00	[177.8]	21.75	[552.5]	4.00 [101.6]
7.50	[190.5]	22.75	[577.9]	4.50 [114.3]
8.00	[203.2]	23.75	[603.3]	5.00 [127.0]



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DURA-SLIDE
AIR SLIDES

AIR-40

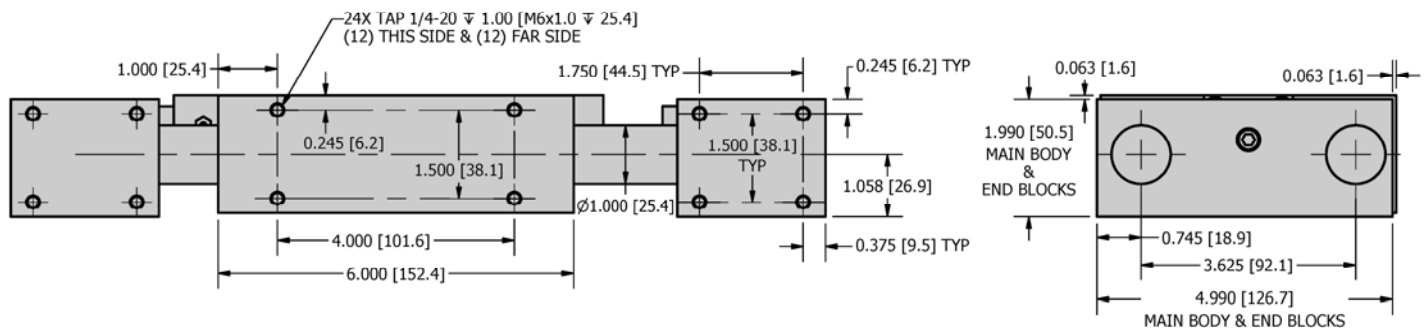
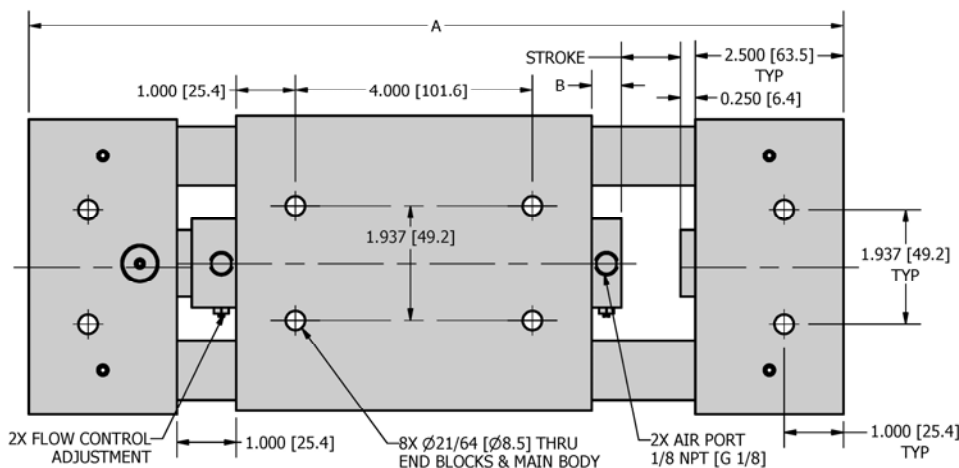
DIMENSIONAL DRAWING

SPECIFICATIONS

	AIR-40	MAIR-40
Maximum Stroke	10.00"	254.0 mm
Thrust Force @ 80 psi / 5.5 bar	80 lbf	354 N
Unit Displacement (per stroke)	0.99 in ³ /in	6.4 cm ³ /cm
Base Weight (no stroke)	11.9 lbs	5.38 kg
Additional weight per Stroke	1.07 lbs/in	19.1 g/mm
Cylinder Bore Diameter	1.125 in	28.6 mm
Piston Rod Diameter	0.375 in	9.53 mm
Shaft Diameter	1.000 in	25.40 mm

ADDITIONAL DIMENSIONS

STROKE		A		B	
in	mm	in	mm	in	mm
0.50	[12.7]	13.25	[336.6]	0.50	[12.7]
1.00	[25.4]	13.75	[349.3]	0.50	[12.7]
1.50	[38.1]	14.25	[362.0]	0.50	[12.7]
2.00	[50.8]	14.75	[374.7]	0.50	[12.7]
2.50	[63.5]	15.25	[387.4]	0.50	[12.7]
3.00	[76.2]	15.75	[400.1]	0.50	[12.7]
3.50	[88.9]	16.25	[412.8]	0.50	[12.7]
4.00	[101.6]	16.75	[425.5]	0.50	[12.7]
4.50	[114.3]	17.25	[438.2]	0.50	[12.7]
5.00	[127.0]	17.75	[450.9]	0.50	[12.7]
5.50	[139.7]	18.75	[476.3]	1.00	[25.4]
6.00	[152.4]	19.75	[501.7]	1.50	[38.1]
6.50	[165.1]	20.75	[527.1]	2.00	[50.8]
7.00	[177.8]	21.75	[552.5]	2.50	[63.5]
7.50	[190.5]	22.75	[577.9]	3.00	[76.2]
8.00	[203.2]	23.75	[603.3]	3.50	[88.9]
8.50	[215.9]	24.75	[628.7]	4.00	[101.6]
9.00	[228.6]	25.75	[654.1]	4.50	[114.3]
9.50	[241.3]	26.75	[679.5]	5.00	[127.0]
10.00	[254.0]	27.75	[704.9]	5.50	[139.7]



HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL STROKE AIR CUSHIONS
M **AIR-40** - **2.0** - **C** - **V**
 SEALS

SAMPLE ORDER: AIR-40-2.0-C

Ex) AIR-40 with 2.0" stroke and Air Cushions

METRIC M

STROKE Inch: 0.5" - 10.0" @ 0.5" Increments

mm: 12.7mm - 254.0mm @ 12.7mm Increments

AIR CUSHIONS C - Air cushions (see Additional Information section)

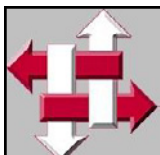
Not available on 0.5" [12.7mm] strokes

SEALS V - Viton (standard Buna - N)

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- MULTIPLE STATION DESIGNS
- OVERSIZED BODIES

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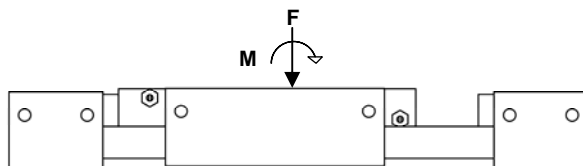
AIR-40

LOADING INFORMATION

LOADING

	AIR-40	M AIR-40
Max Static Load F	500 lbf	2223 N
Max Dynamic Moment M	800 lbf-in	90.3 N-m
Max Payload W	SEE CHART	

For Vertical Motion use a factor of 1/2 on payload due to gravity

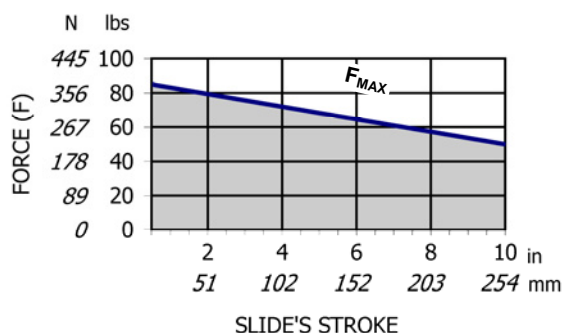


STATIC LOADING

Maximum Static Load should only be applied when slide has the front head against the endblock (position is shown above)

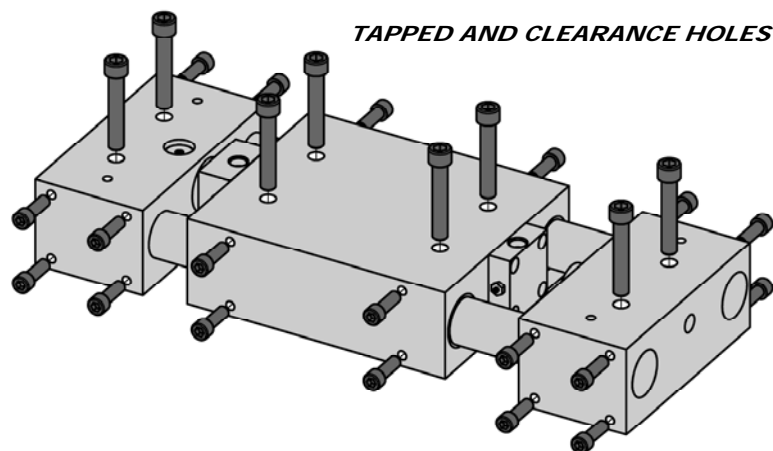
DYNAMIC LOADING

These are suggested Dynamic loads for smooth operation and normal life expectancy.



Flow controls recommended for nearly all applications
Use Air Cushions for high loads
Consult factory for Shock Absorbers for highest Loads

ADDITIONAL INFORMATION



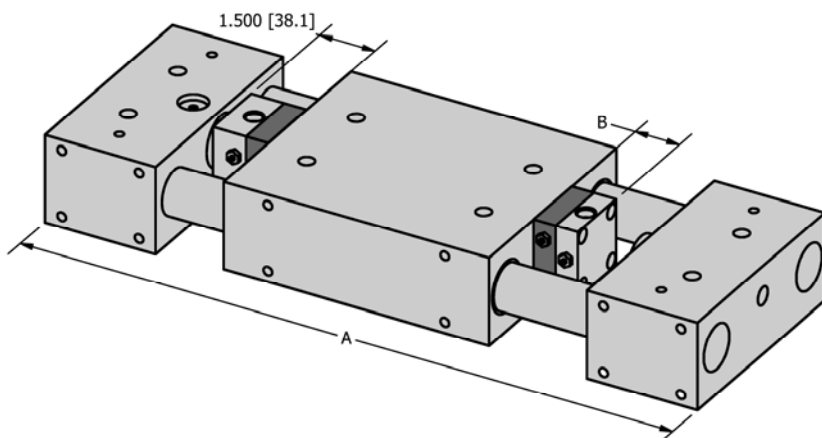
TAPPED AND CLEARANCE HOLES

HIGHLY VERSATILE STANDARD MOUNTING FEATURES

End blocks contain 4 Tapped holes on both sides and 2 thru Clearance holes. The Main Body also contains 4 Tapped holes on both sides and 4 thru Clearance holes. These features allow for mounting the slide in many orientations and also provides mounting for customer tooling or payload.

ADJUSTABLE AIR CUSHIONS (-C OPTION)

Air Cushions provide for smooth deceleration at each end of stroke (extend and retract). When the cushions are activated the remaining volume in the cylinder must be exhausted past an adjustable needle which controls the amount of deceleration. See the chart for changes to slide dimensions



DIMENSIONS WITH AIR CUSHIONS STROKE

Stroke	A		B	
	in	mm	in	mm
0.50	[12.7]		Not Available	
1.00	[25.4]	14.75	[374.7]	1.00 [25.4]
1.50	[38.1]	15.25	[387.4]	1.00 [25.4]
2.00	[50.8]	15.75	[400.1]	1.00 [25.4]
2.50	[63.5]	16.25	[412.8]	1.00 [25.4]
3.00	[76.2]	16.75	[425.5]	1.00 [25.4]
3.50	[88.9]	17.25	[438.2]	1.00 [25.4]
4.00	[101.6]	17.75	[450.9]	1.00 [25.4]
4.50	[114.3]	18.25	[463.6]	1.00 [25.4]
5.00	[127.0]	18.75	[476.3]	1.00 [25.4]
5.50	[139.7]	19.75	[501.7]	1.50 [38.1]
6.00	[152.4]	20.75	[527.1]	2.00 [50.8]
6.50	[165.1]	21.75	[552.5]	2.50 [63.5]
7.00	[177.8]	22.75	[577.9]	3.00 [76.2]
7.50	[190.5]	23.75	[603.3]	3.50 [88.9]
8.00	[203.2]	24.75	[628.7]	4.00 [101.6]
8.50	[215.9]	25.75	[654.1]	4.50 [114.3]
9.00	[228.6]	26.75	[679.5]	5.00 [127.0]
9.50	[241.3]	27.75	[704.9]	5.50 [139.7]
10.00	[254.0]	28.75	[730.3]	6.00 [152.4]

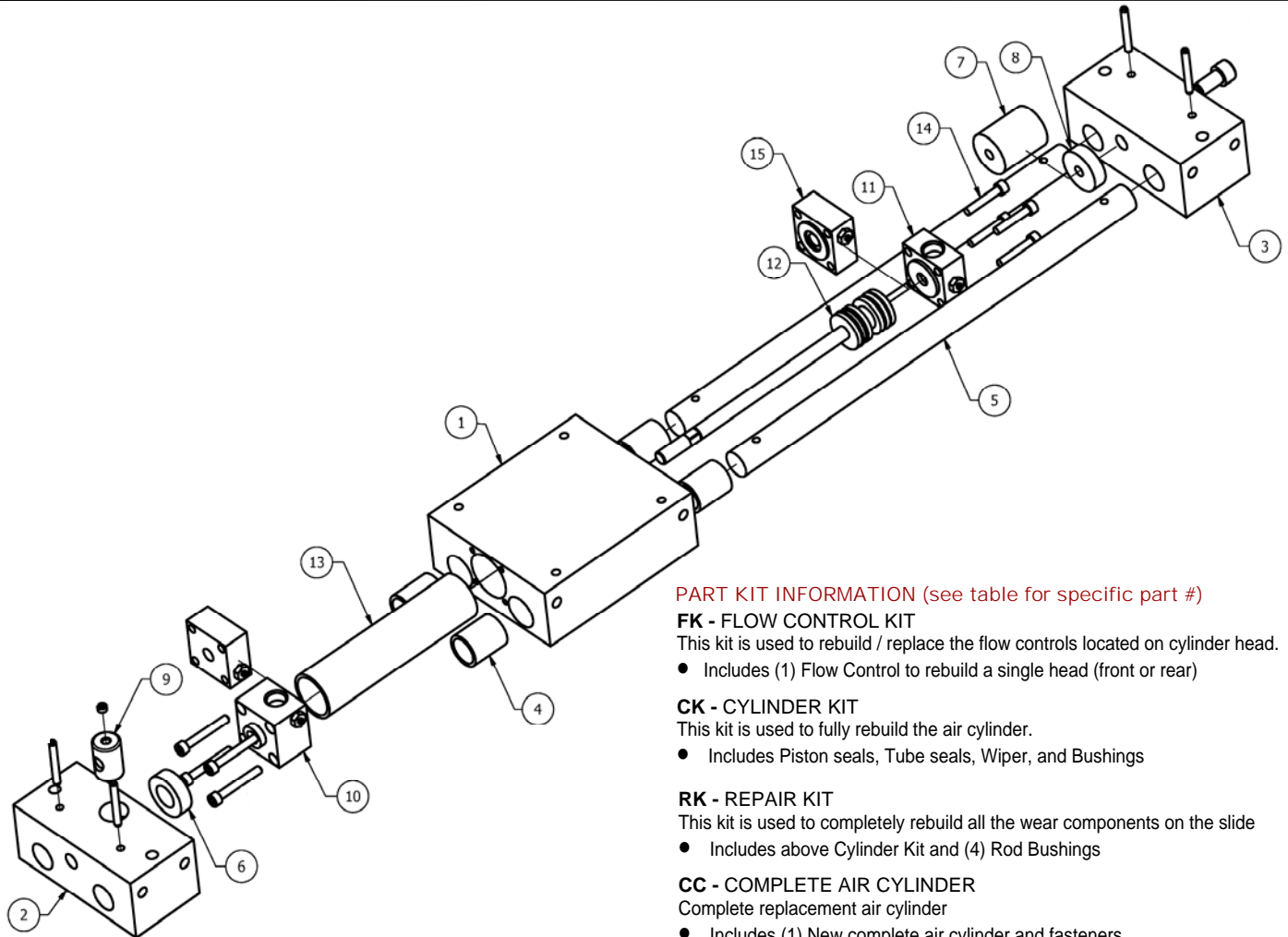


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DURA-SLIDE
AIR SLIDES

AIR-SERIES

EXPLODED VIEW



PART KIT INFORMATION (see table for specific part #)

FK - FLOW CONTROL KIT

This kit is used to rebuild / replace the flow controls located on cylinder head.

- Includes (1) Flow Control to rebuild a single head (front or rear)

CK - CYLINDER KIT

This kit is used to fully rebuild the air cylinder.

- Includes Piston seals, Tube seals, Wiper, and Bushings

RK - REPAIR KIT

This kit is used to completely rebuild all the wear components on the slide

- Includes above Cylinder Kit and (4) Rod Bushings

CC - COMPLETE AIR CYLINDER

Complete replacement air cylinder

- Includes (1) New complete air cylinder and fasteners

PARTS LIST

ITEM	REQ'D	NAME	AIR-10	AIR-20	AIR-30	AIR-40	OPTIONS
1	1	Main Body	AIR-101	AIR-201	AIR-301	AIR-401	
2	1	End Block	AIR-102	AIR-202	AIR-302	AIR-402	
3	1	Stop End Block	AIR-103	AIR-203	AIR-303	AIR-403	
4	4	Bushing *	AIR-104	AIR-204	AIR-304	AIR-404	
5	2	Rod	AIR-105	AIR-205	AIR-305	AIR-405	-S ¹ -C ²
6	1	Cylinder Stop *	AIR-106		AIR-306		
7	1	Additional Stop *	AIR-107		AIR-307		
8	1	Bumper *	AIR-108		AIR-308		
9	1	Connector *	AIR-109		AIR-309	AIR-409	
10	1	Front Head *	AVR-101		AVR-301	AVR-401	
11	1	Rear Head *	AVR-102		AVR-302	AVR-402	
12	1	Piston & Rod	AVR-103	AVR-203	AVR-303	AVR-403	-S ¹ -C ² -V ³
13	1	Tube	AVR-104	AVR-204	AVR-304	AVR-404	-S ¹
14	1	Screw Set	AVR-105	AVR-205	AVR-305	AVR-405	-S ¹ -C ²
15	2	Air Cushion *	AVR-106		AVR-306	AVR-406	
FK	2	Flow Control Kit *	AIR-10-FK		AIR-30-FK	AIR-40-FK	
CK	1	Cylinder Kit *	AIR-10-CK		AIR-30-CK	AIR-40-CK	-C ² -V ³
RK	1	Repair Kit *	AIR-10-RK	AIR-20-RK	AIR-30-RK	AIR-40-RK	-C ² -V ³
CC	1	Complete Cylinder	AIR-10-CC	AIR-20-CC	AIR-30-CC	AIR-40-CC	-S ¹ -C ² -V ³

METRIC

PART NUMBER



OPTIONS

SAMPLE ORDER: AIR-101

Ex) AIR-10 Main Body

OPTIONS (see product pages for information)

1 - S = Stroke

2 - C = Air Cushions

3 - V = Viton Seals

NOTES

* - Metric code not required



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TECH NOTES



LS-SERIES - AIR THRU RODS

DURA-SLIDE LS Series of Pneumatic Linear Positioning Devices provide a practical, low-cost approach to automatic work positioning. The built-in air cylinder simplifies slide operation and eliminates the need for complex, expensive activating mechanisms. The unit is extremely compact requiring only minimal space for installation.

QUALITY CONSTRUCTION

DURA-SLIDE LS Series maintains all rod bores parallel to the mounting surface within .002" per foot. The four slide bearings are oil impregnated bronze bushings, which eliminate the need for re-lubrication. Bronze bushings are utilized as standard, rather than linear ball bearings, because bushings distribute the load over a larger surface area. This results in less wear on the slide rods. Optional Linear ball bearings are available for low sliding friction applications. Both rods are pinned to the end blocks to assure positive location. Standard rubber bumper pads, located at each end of the stroke, contribute to a low noise level minimizing the clatter inherent in fast acting slide devices. All LS series slides are also Shock absorbers and Inductive sensor ready.

MOUNTING STYLES

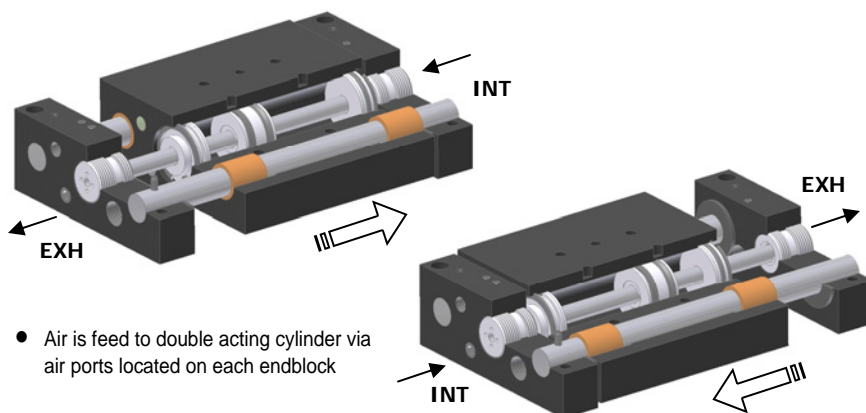
DURA-SLIDE LS units can be mounted in any plane provided both end blocks are set on machined surfaces to prevent distortion. Either the main body or the end blocks function as the fixed support. The main body houses the air cylinder and is offset from the end blocks. This offset feature allows the end blocks to be mounted on the same plane surface without risers. Multiple precision mounting features in the main body and endblocks provide positive location.

Use the LS Series of Air-Powered Slides wherever you need durable and precise guided linear motion.

TECHNICAL SPECIFICATION

Pneumatic Specifications	ENGLISH	METRIC
Pressure Range	40-150 psi	3-10.3 bar
Travel Tolerance	+0.005" / - 0.005"	+0.13 / -0.13mm
Cylinder Type	Double Acting	
Dynamic Seals	Buna-N	
Required Valves	4-way, 2 position	
Maintenance	Field Repairable	
Temperature Range		
Buna-N Seals (standard)	-30 to 180 F	-35 to 80 C
Viton Seals (-V option)	-20 to 300 F	-30 to 150 C

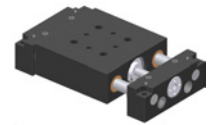
OPERATING PRINCIPLES



- Air is feed to double acting cylinder via air ports located on each endblock

SPECS

BORE DIA - 0.562" [14.2mm]
ROD DIA - 0.250" [6.35mm]
STROKE - 0.5-1.0"
[12.7-25.4mm]

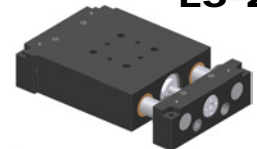


LS-1

See Page **4-1.16**

SPECS

BORE DIA - 0.625" [15.9mm]
ROD DIA - 0.375" [9.53mm]
STROKE - 0.5-1.5"
[12.7-38.1mm]

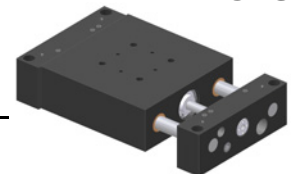


LS-2

See Page **4-1.18**

SPECS

BORE DIA - 0.750" [19.1mm]
ROD DIA - 0.375" [9.53mm]
STROKE - 1.0-2.0"
[25.4-50.8mm]

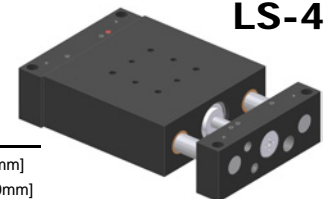


LS-3

See Page **4-1.20**

SPECS

BORE DIA - 1.000" [25.4mm]
ROD DIA - 0.500" [12.70mm]
STROKE - 1.0-2.5"
[25.4-63.5mm]

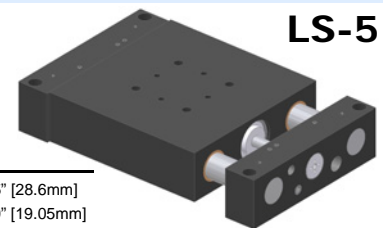


LS-4

See Page **4-1.22**

SPECS

BORE DIA - 1.125" [28.6mm]
ROD DIA - 0.750" [19.05mm]
STROKE - 1.0-3.0"
[25.4-76.2mm]

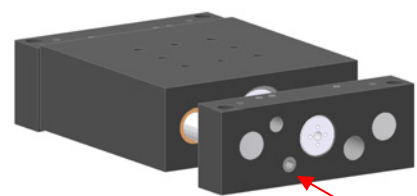


LS-5

See Page **4-1.24**

STROKE ADJUSTMENT

All **DURA-SLIDE LS** series slides include an adjustable hard stop on both sides of the stroke. The stop is lockable with a set screw. Hard stops provide highly repeatable and accurate stroke control.





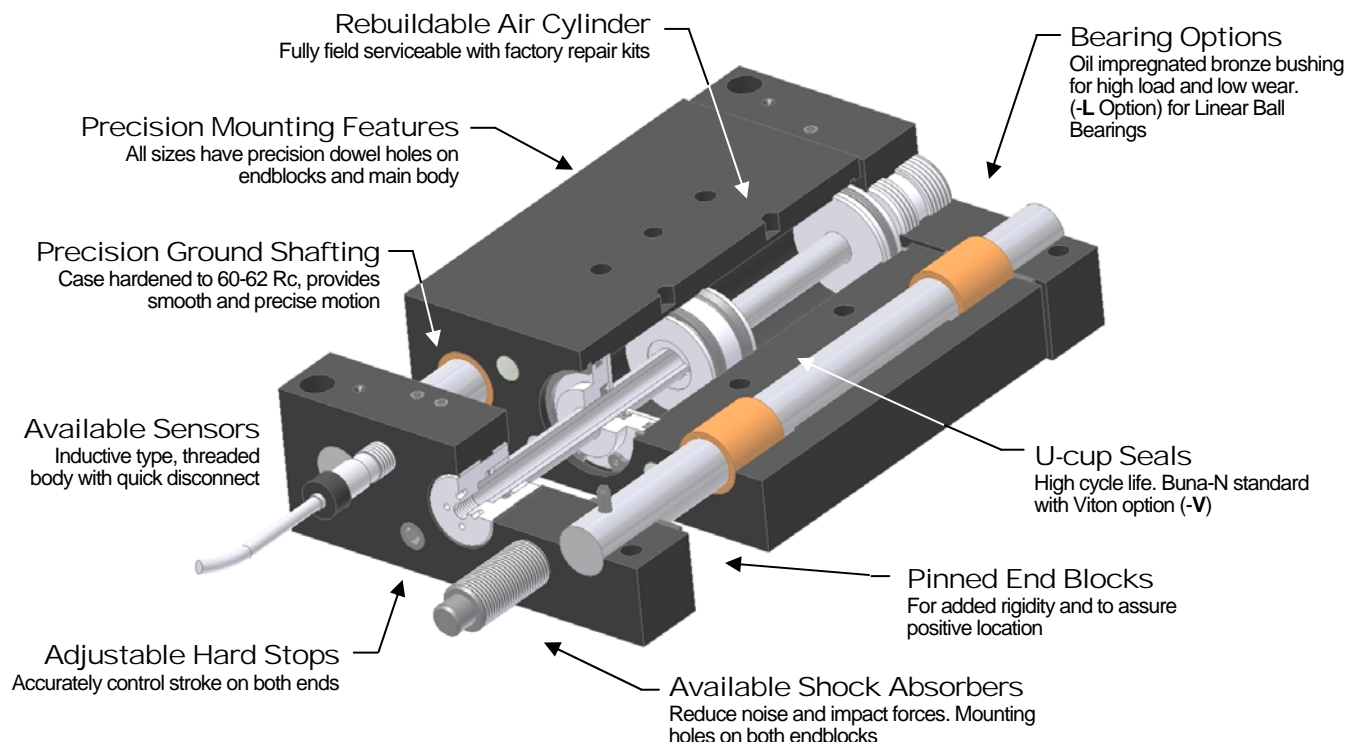
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DURA-SLIDE
AIR SLIDES

LS-SERIES

PRODUCT FEATURES

- Aircraft Grade Aluminum
Black Anodize Finish
- Simple and Highly Durable
Time tested, field approved design
- Compact Design
Internal cylinder reduces overall length



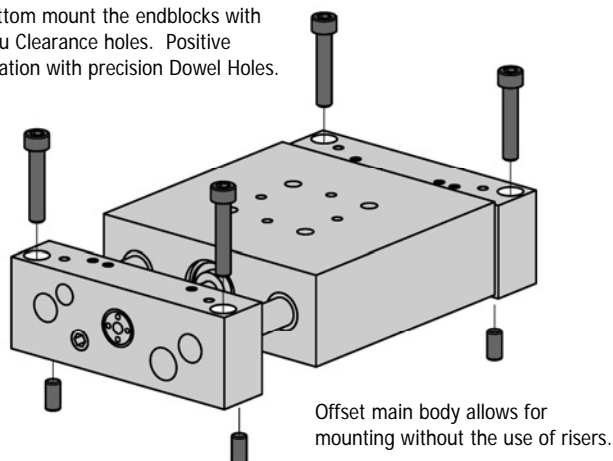
DESIGNED - MANUFACTURED - ASSEMBLED IN THE USA

MOUNTING INFORMATION

Mounts and operates in any orientation

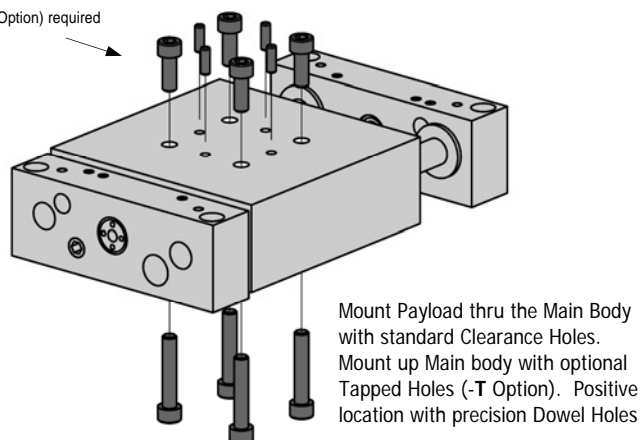
MAIN BODY

Bottom mount the endblocks with thru Clearance holes. Positive location with precision Dowel Holes.



PAYLOAD

(-T Option) required



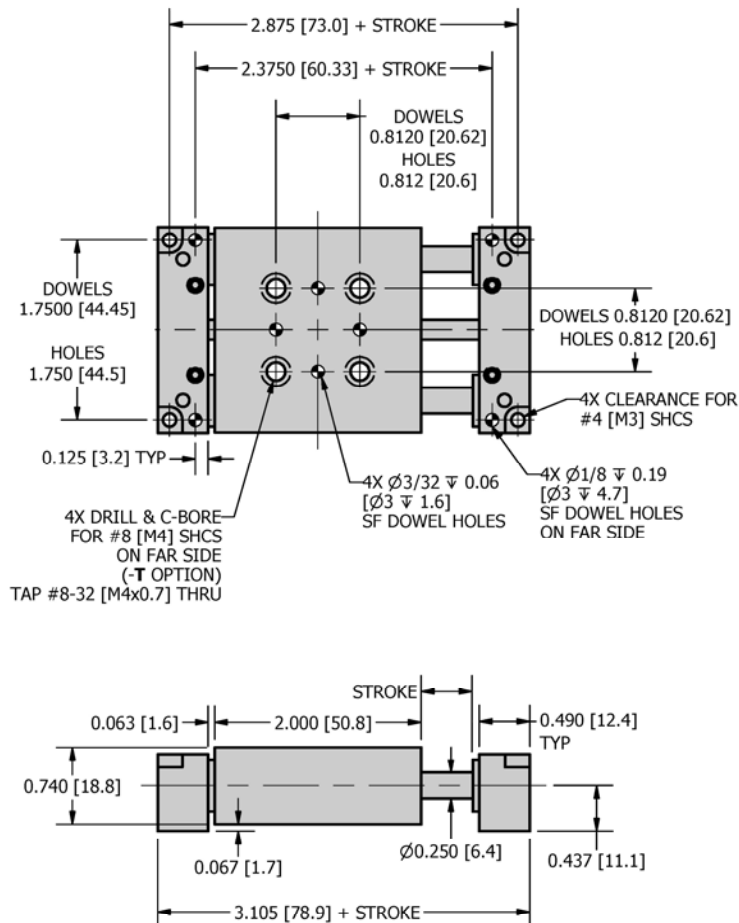


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DURA-SLIDE
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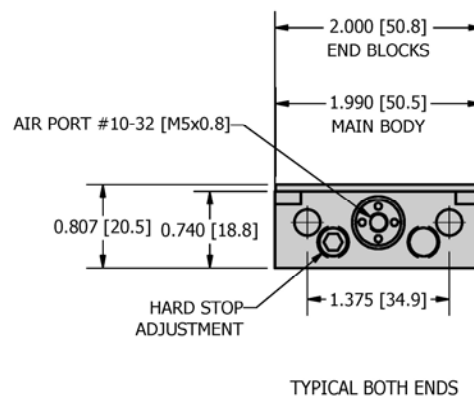
LS-1

DIMENSIONAL DRAWING



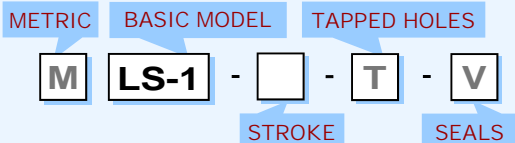
SPECIFICATIONS

	LS-1	MLS-1
Maximum Stroke	1.000 in	25.4 mm
Thrust Force @ 80 psi / 5.5 bar	17.6 lbf	78.4 N
Unit Displacement (per stroke)	0.22 in ³ /in	1.42 cm ³ /cm
Base Weight (no stroke)	0.43 lbs	0.20 kg
Additional weight per Stroke	0.03 lbs/in	0.5 g/mm
Cylinder Bore Diameter	0.562 in	14.3 mm
Piston Rod Diameter	0.187 in	4.7 mm
Shaft Diameter	0.250 in	6.35 mm



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)



METRIC M

STROKE Inch: 0.5" - 1.0" @ 0.5" Increments
mm: 12.7 mm - 25.4 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LS-1-2.0-T

Ex) LS-1 with 2.0" stroke and Tapped Body Holes

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit

ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - (1) Inductive Sensor NPN w/ quick disconnect

IS-M8-P - (1) Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-100 - Hydraulic Shock Absorber

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

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DURA-SLIDE
AIR SLIDES

LS-1

LOADING INFORMATION

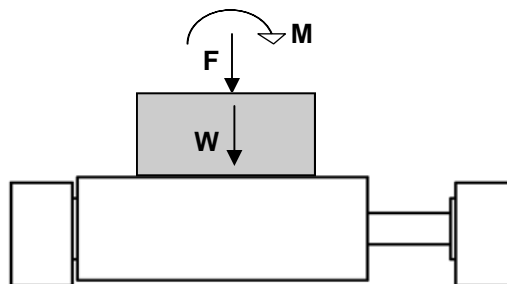
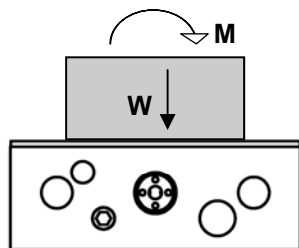
LOADING

	LS-1	MLS-1
Max Payload W (using Shock Absorbers)	3 lbs	1.4 kg
Max Applied Moment M	15 lbf-in	1.7 N-m
Max Applied Force F	10 lbf	44.5 N



Flow controls and shock absorbers are recommended for nearly all applications

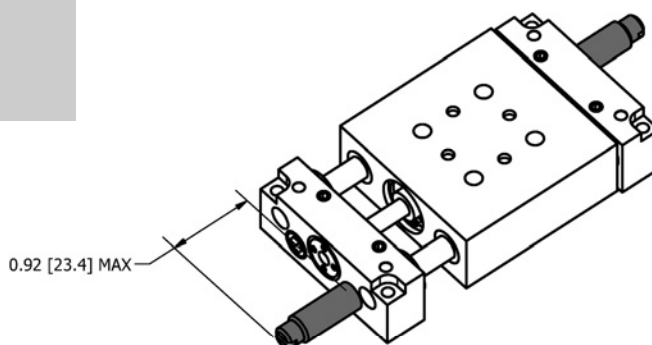
For Vertical Motion use a factor of 1/2 on payload due to gravity



ACCESSORY INFORMATION

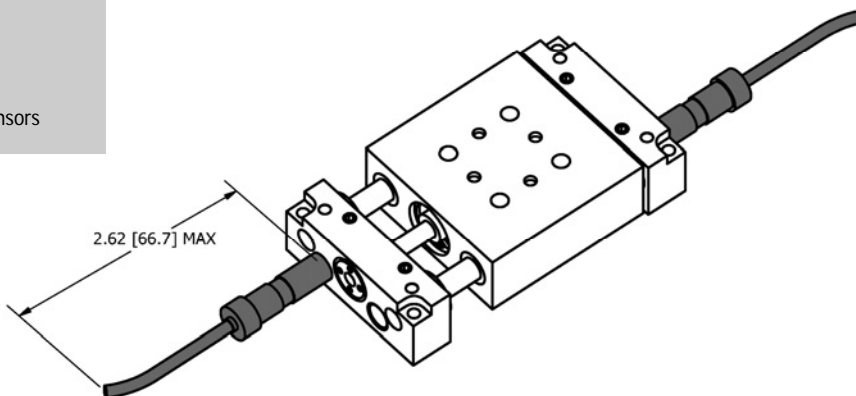
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



INDUCTIVE PROXIMITY SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available
- See Accessories section to order kits or individual sensors



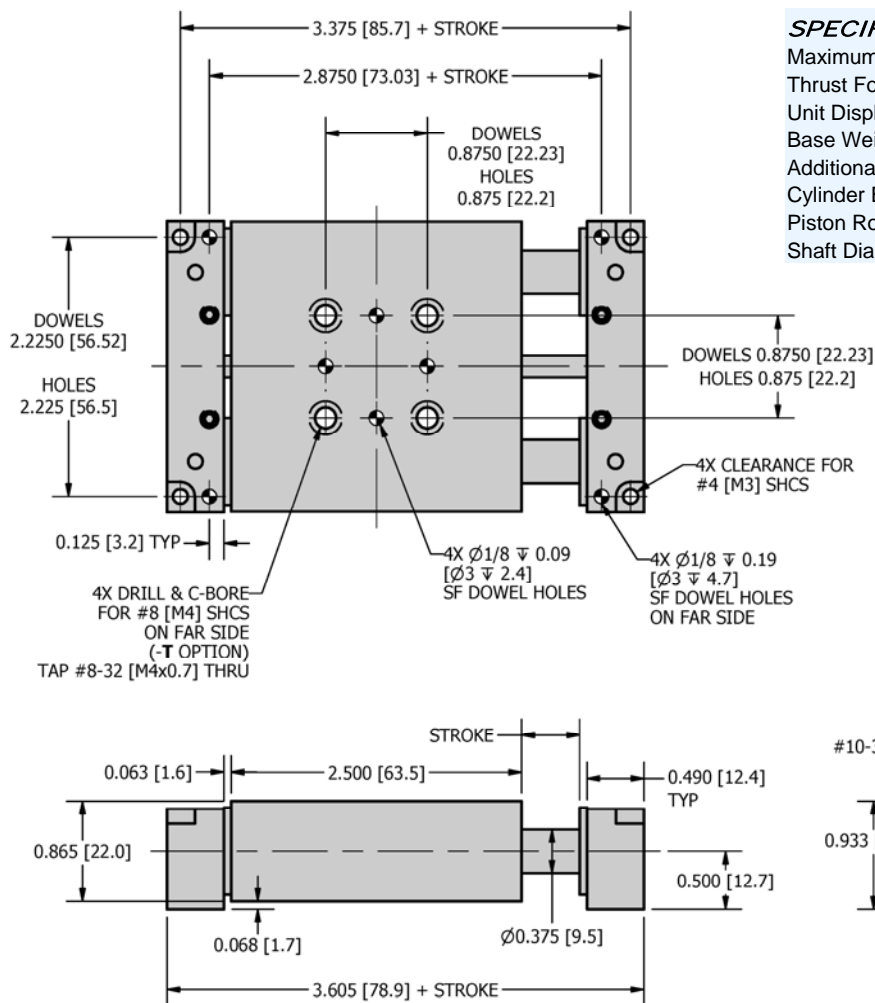


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DURA-SLIDE
AIR SLIDES

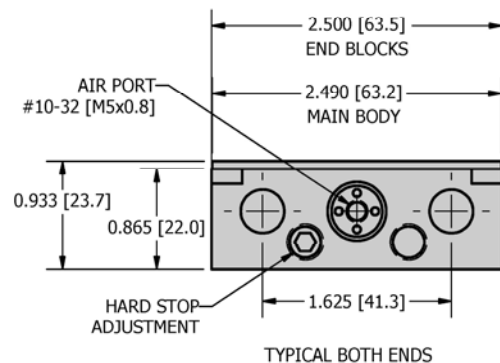
LS-2

DIMENSIONAL DRAWING



SPECIFICATIONS

	LS-2	MLS-2
Maximum Stroke	1.500 in	38.1 mm
Thrust Force @ 80 psi / 5.5 bar	22.3 lbf	99.3 N
Unit Displacement (per stroke)	0.28 in ³ /in	1.8 cm ³ /cm
Base Weight (no stroke)	0.88 lbs	0.40 kg
Additional weight per Stroke	0.06 lbs/in	1.1 g/mm
Cylinder Bore Diameter	0.625 in	15.9 mm
Piston Rod Diameter	0.187 in	4.8 mm
Shaft Diameter	0.375 in	9.53 mm



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES
M **LS-2** - **T** - **V**
 STROKE SEALS

METRIC M

STROKE Inch: 0.5" - 1.5" @ 0.5" Increments
 mm: 12.7 mm - 38.1 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: MLS-2-25.4

Ex) Metric LS-2 with 25.4mm stroke

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit

ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - (1) Inductive Sensor NPN w/ quick disconnect

IS-M8-P - (1) Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-100 - Hydraulic Shock Absorber

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER OR CUSTOM STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

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DURA-SLIDE
AIR SLIDES

LS-2

LOADING INFORMATION

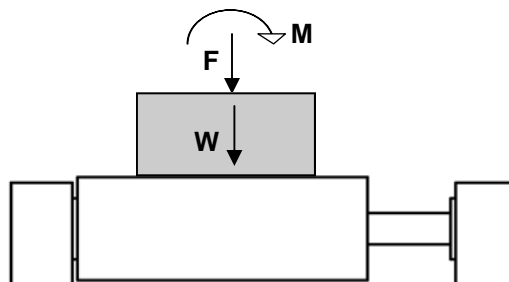
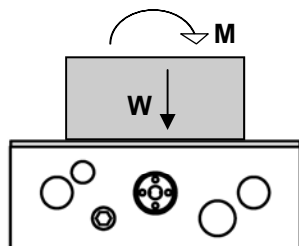
LOADING

	LS-2	MLS-2
Max Payload W (using Shock Absorbers)	10 lbs	4.5 kg
Max Applied Moment M	50 lbf-in	5.6 N-m
Max Applied Force F	20 lbf	88.9 N



Flow controls and shock absorbers are recommended for nearly all applications

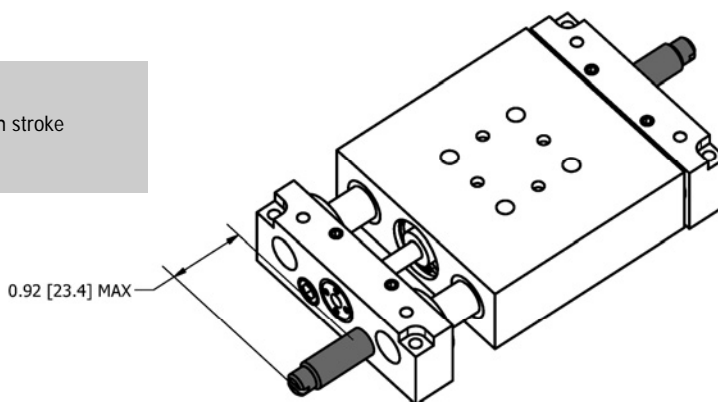
For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

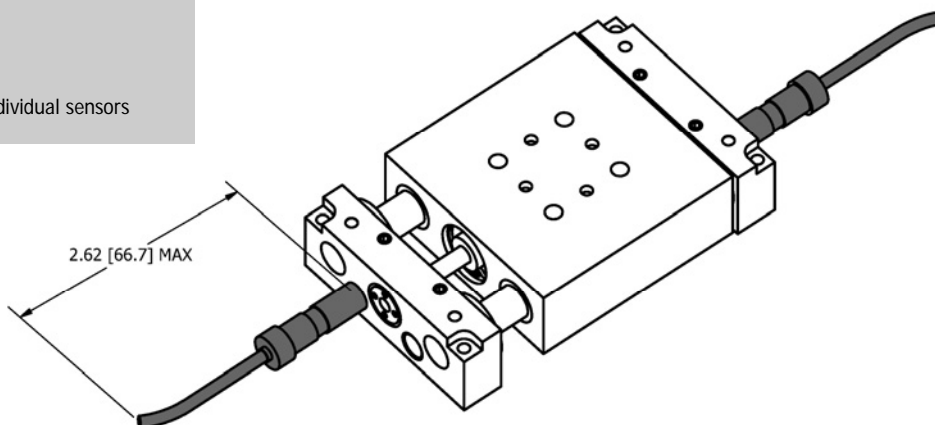
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



INDUCTIVE PROXIMITY SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available
- See Accessories section to order kits or individual sensors



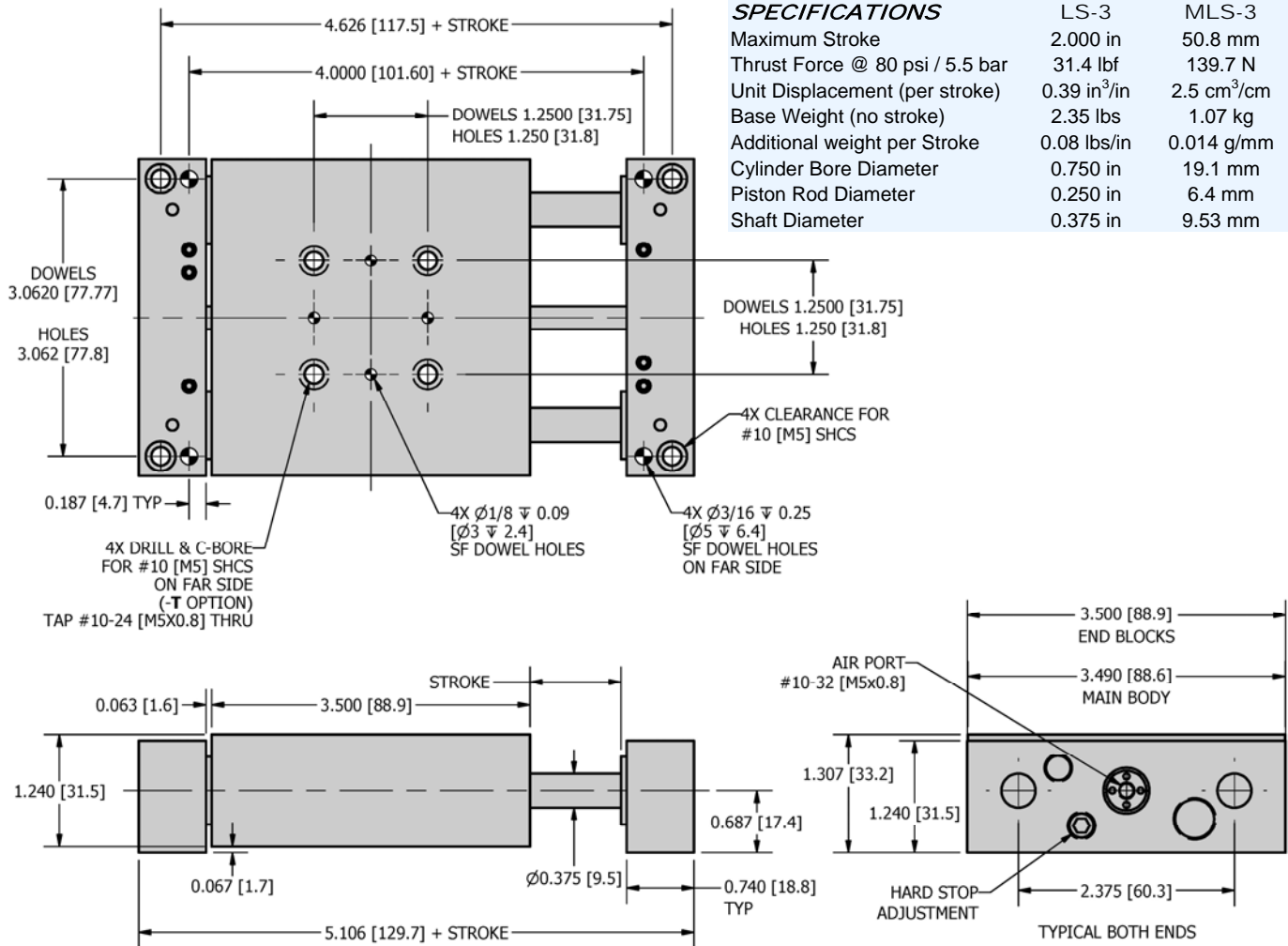


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AIR SLIDES

LS-3

DIMENSIONAL DRAWING



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES SEALS

M **LS-3** - **T** - **L** - **V**

STROKE BEARINGS

METRIC M

STROKE Inch: 1.0" - 2.0" @ 0.5" Increments
mm: 25.4 mm - 50.8 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

BEARINGS L - Linear Ball Bearings (Bushings Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LS-3-1.0-V

Ex) LS-3 with 1.0" stroke and Viton Seals

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit

ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - (1) Inductive Sensor NPN w/ quick disconnect

IS-M8-P - (1) Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

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LS-3

LOADING INFORMATION

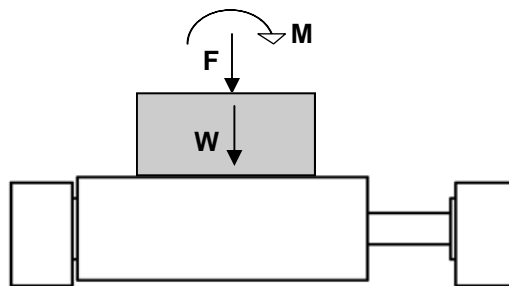
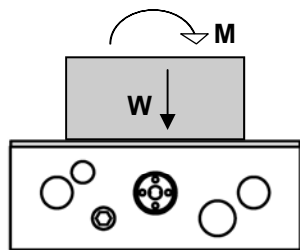
LOADING

	LS-3	MLS-3
Max Payload W (using Shock Absorbers)	15 lbs	6.8 kg
Max Applied Moment M	75 lbf-in	8.5 N-m
Max Applied Force F	25 lbf	111.1 N



Flow controls and shock absorbers are recommended for nearly all applications

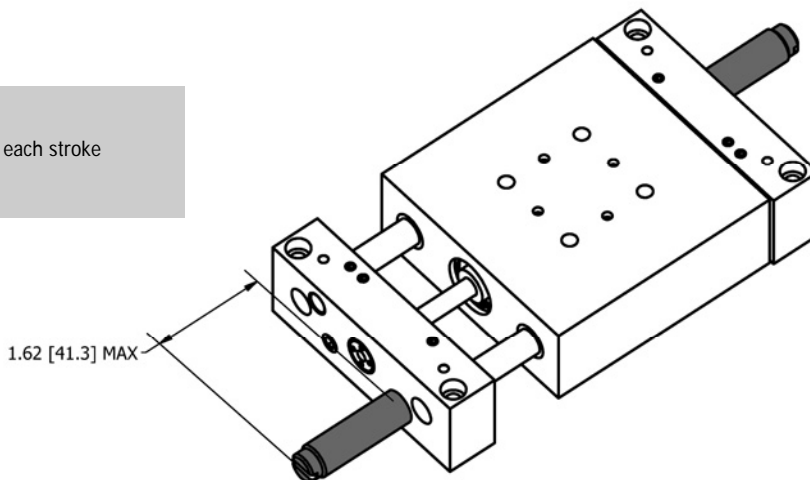
For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

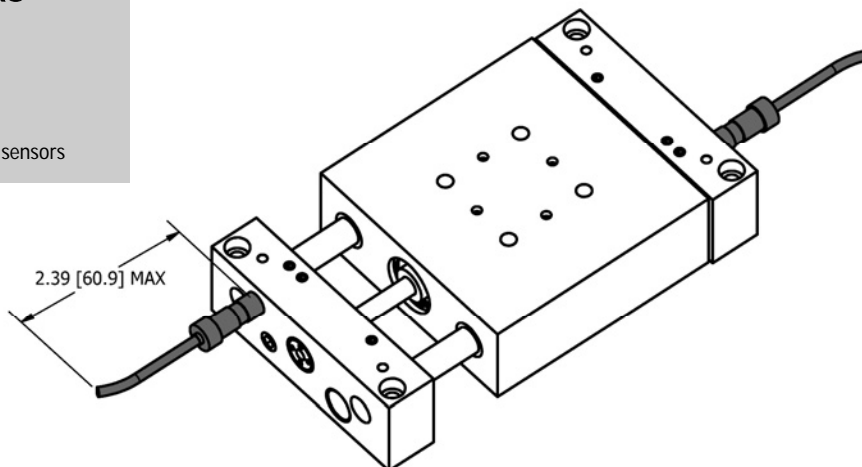
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



INDUCTIVE PROXIMITY SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available
- See Accessories section to order kits or individual sensors



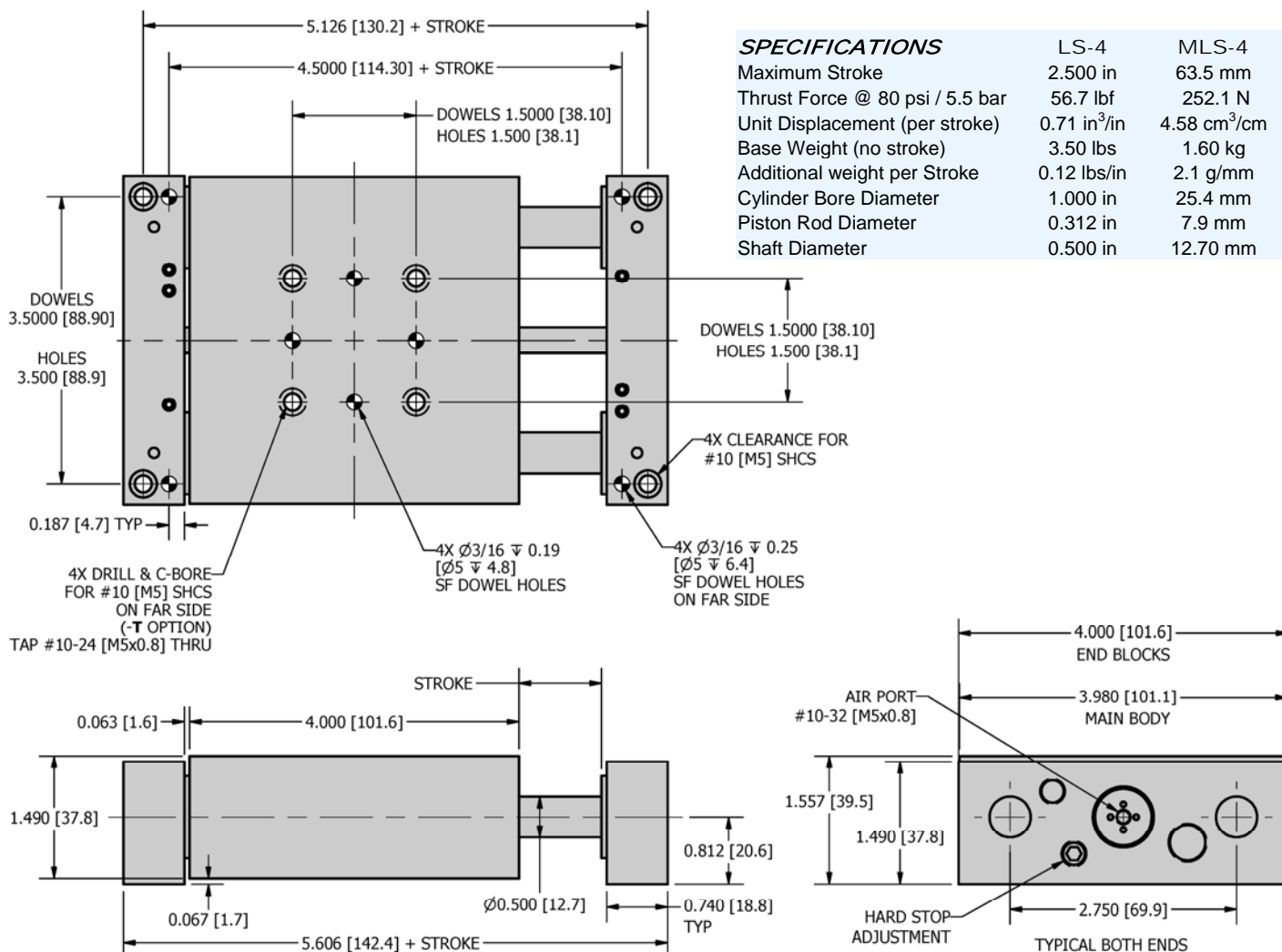


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AIR SLIDES

LS-4

DIMENSIONAL DRAWING



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES SEALS
M **LS-4** - **T** - **L** - **V**
 STROKE BEARINGS

METRIC M

STROKE Inch: 1.0" - 2.5" @ 0.5" Increments
 mm: 25.4 mm - 63.5 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

BEARINGS L - Linear Ball Bearings (Bushings Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LS-4-2.0-T

Ex) LS-4 with 2.0" stroke and Tapped Body Holes

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit

ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - (1) Inductive Sensor NPN w/ quick disconnect

IS-M8-P - (1) Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

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DURA-SLIDE
AIR SLIDES

LS-4

LOADING INFORMATION

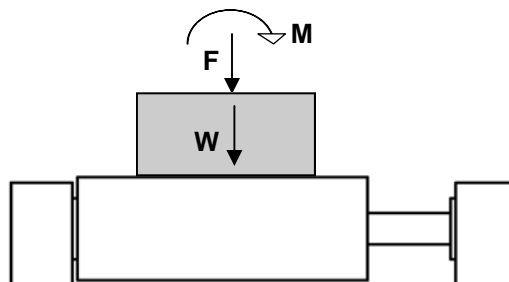
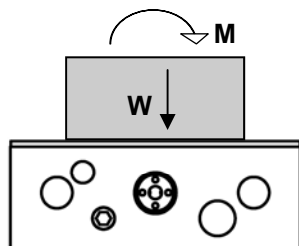
LOADING

	LS-4	MLS-4
Max Payload W (using Shock Absorbers)	30 lbs	13.6 kg
Max Applied Moment M	150 lbf-in	16.9 N-m
Max Applied Force F	40 lbf	177.8 N



Flow controls and shock absorbers are recommended for nearly all applications

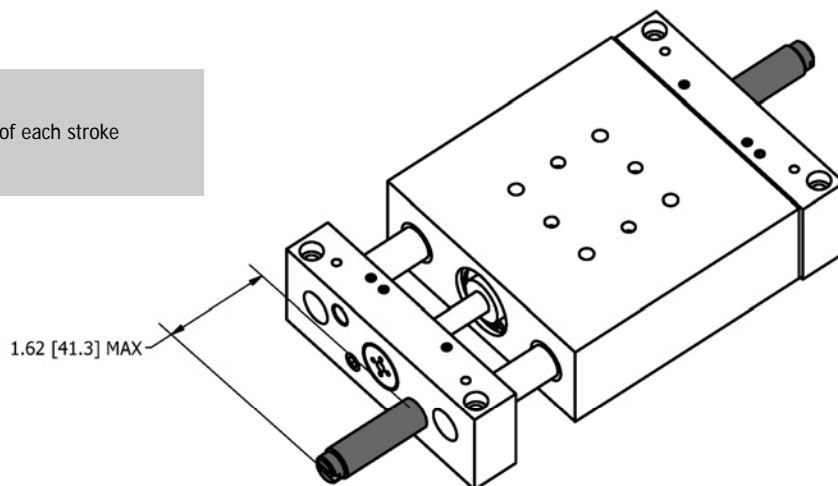
For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

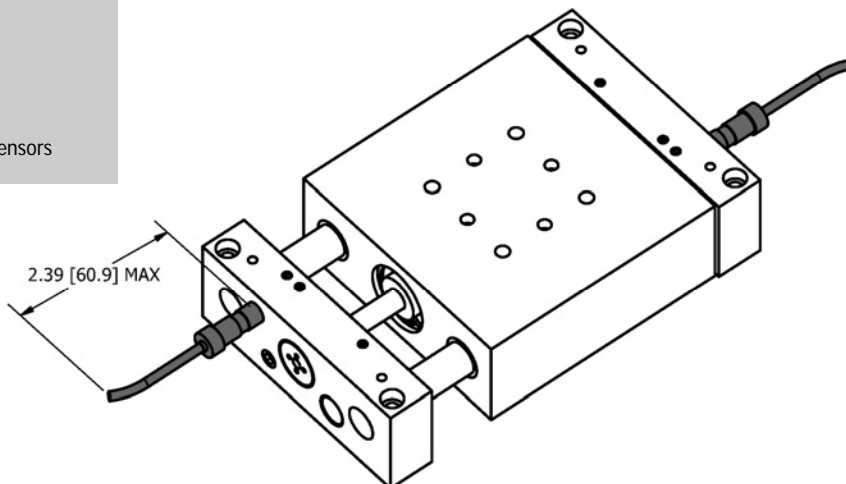
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



INDUCTIVE PROXIMITY SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available
- See Accessories section to order kits or individual sensors



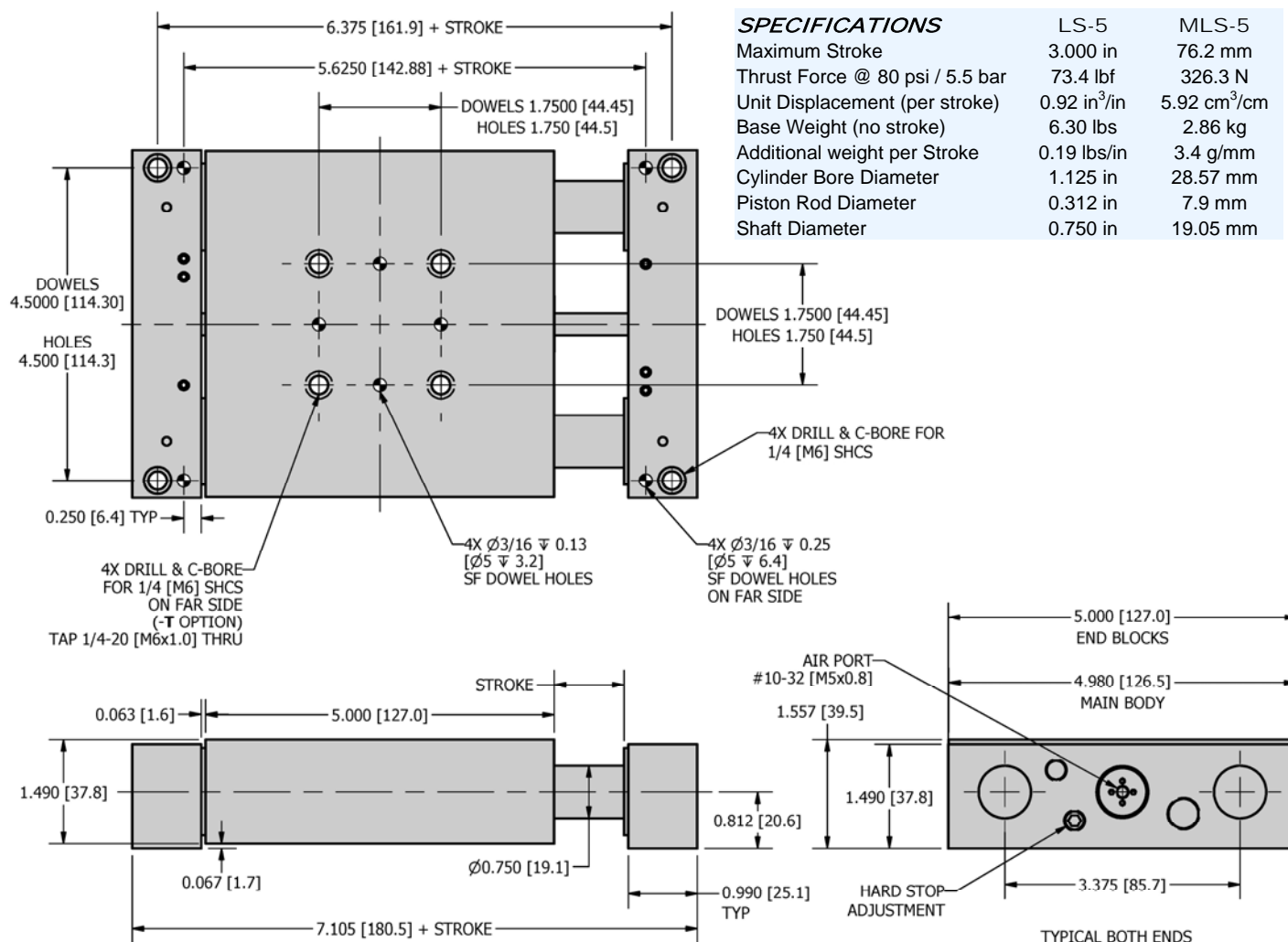


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AIR SLIDES

LS-5

DIMENSIONAL DRAWING



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES SEALS

M **LS-5** - **T** - **L** - **V**

STROKE BEARINGS

METRIC M

STROKE Inch: 1.0" - 3.0" @ 0.5" Increments
mm: 25.4 mm - 76.2 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

BEARINGS L - Linear Ball Bearings (Bushings Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LS-5-2.0

Ex) LS-5 with 2.0" stroke

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit

ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - (1) Inductive Sensor NPN w/ quick disconnect

IS-M8-P - (1) Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

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DURA-SLIDE
AIR SLIDES

LS-5

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

LS-5

50 lbs

MLS-5

22.7 kg

Max Applied Moment **M**

300 lbf-in

33.9 N-m

Max Applied Force **F**

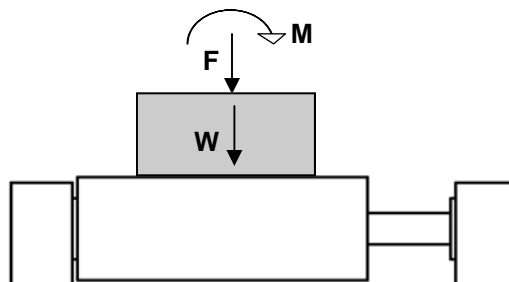
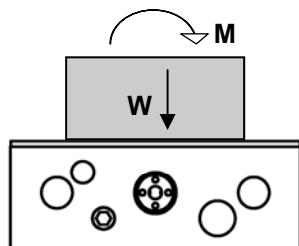
70 lbf

311.2 N



Flow controls and shock absorbers are recommended for nearly all applications

For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop

1.37 [34.8] MAX

INDUCTIVE PROXIMITY SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available
- See Accessories section to order kits or individual sensors

2.14 [54.3] MAX

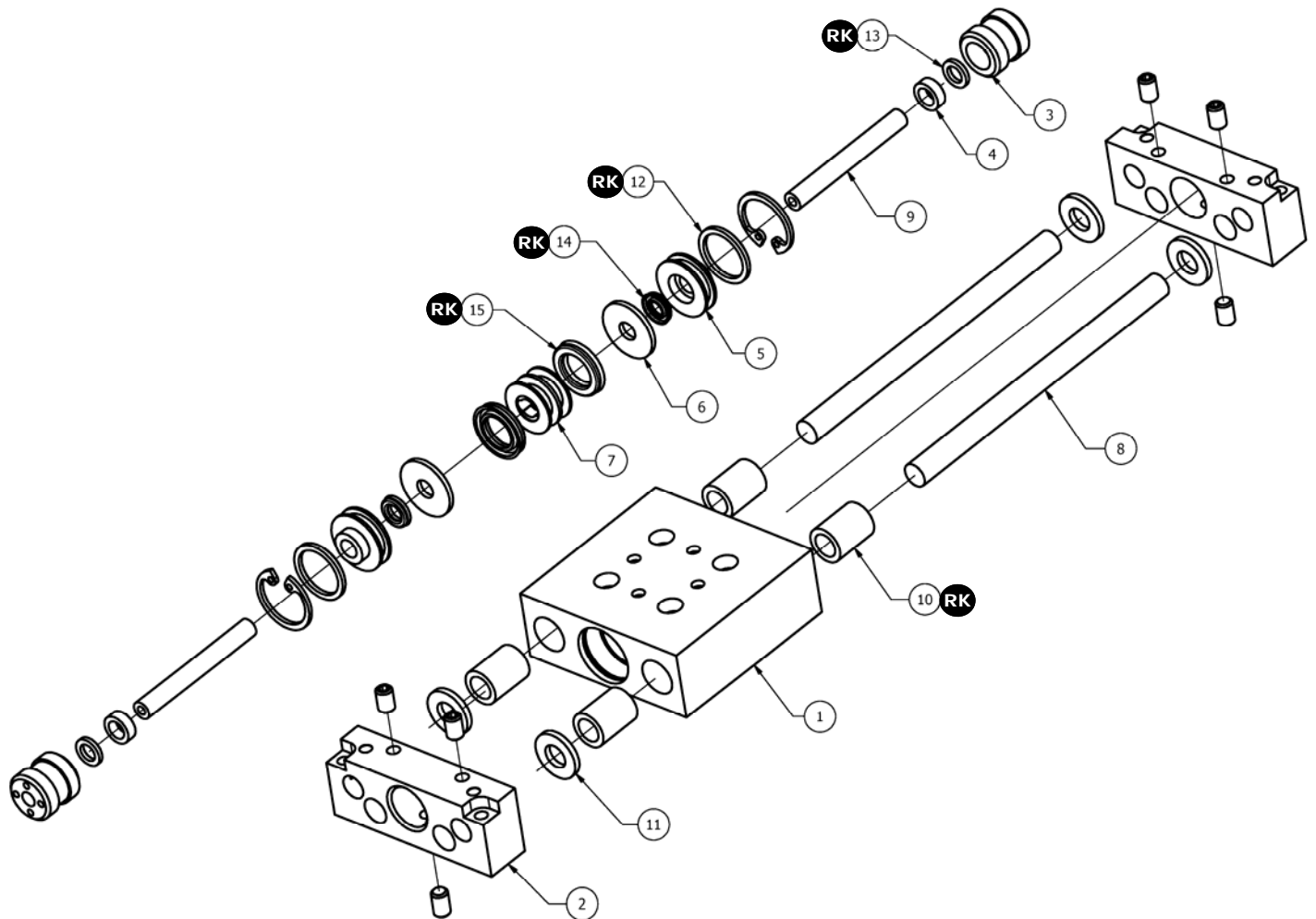


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DURA-SLIDE
AIR SLIDES

LS-SERIES 

EXPLODED VIEW



PARTS LIST

HOW TO ORDER PARTS

ITEM	REQ'D	NAME	LS-1	LS-2	LS-3	LS-4	LS-5	OPTIONS
1	1	Main Body	LS-101	LS-201	LS-301	LS-401	LS-501	-T ² -L ³
2	2	End Block	LS-102	LS-202	LS-302	LS-402	LS-502	
3	2	Air Port	LS-103		LS-303	LS-403		
4	2	Sleeve *	LS-104		LS-304			
5	2	Rod Cap *	LS-105	LS-205	LS-305	LS-405	LS-505	
6	2	Rod Cap Cover *	LS-106	LS-206				
7	1	Piston *	LS-107	LS-207	LS-307	LS-407	LS-507	
8	2	Rod	LS-108	LS-208	LS-308	LS-408	LS-508	-S ¹
9	2	Air Rod	LS-109	LS-209	LS-309	LS-409	LS-509	-S ¹
10	4	Rod Bushing *	LS-110	LS-210		LS-410	LS-510	-L ³
11	4	Shock Pad *	XSP-0250	XSP-0375		XSP-0500	XSP-0750	
12	2	Rod Cap Outer Seal *	ORG-014	ORG-015	ORG-017	ORG-021	ORG-023	-V ⁴
13	2	Air Port Seal *	ORG-008		ORG-010	ORG-011		-V ⁴
14	2	Rod Cap Inner Seal *	UCP-005		UCP-015	UCP-120		-V ⁴
15	2	Piston Seal *	UCP-125	UCP-130	UCP-145	UCP-245	UCP-255	-V ⁴
RK	1	Repair Kit * #	LS-1-RK	LS-2-RK	LS-3-RK	LS-4-RK	LS-5-RK	-L ³ -V ⁴

METRIC

PART NUMBER

M

-

OPTIONS

SAMPLE ORDER: LS-101

Ex) LS-1 Main Body

OPTIONS (see product pages for information)

1 - S = Stroke

2 - T = Tapped Holes

3 - L = Linear Ball Bearings

4 - V = Viton Seals

NOTES

* - Metric code not required

- Repair Kits include req'd qty of parts marked with RK



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TECH NOTES



LSE-SERIES - EXTERNAL CYLINDER

DURA-SLIDE LSE Series of Pneumatic Linear Positioning Devices provide a practical, low-cost approach to automatic work positioning. The external air cylinder simplifies slide operation and eliminates the need for complex, expensive activating mechanisms.

QUALITY CONSTRUCTION

DURA-SLIDE LSE Series maintains all rod bores parallel to the mounting surface within 0.002" per foot. The four slide bearings are oil impregnated bronze bushings, which eliminate the need for re-lubrication. Bronze bushings are utilized as standard, rather than linear ball bearings, because bushings distribute the load over a larger surface area. This results in less wear on the slide rods. Optional Linear ball bearings are available for low sliding friction applications. Both rods are pinned to the end blocks to assure positive location. Standard rubber bumper pads, located at each end of the stroke, contribute to a low noise level minimizing the clatter inherent in fast acting slide devices. All LSE series slides are also Shock absorbers and both Magnetic and Inductive Sensor ready.

MOUNTING STYLES

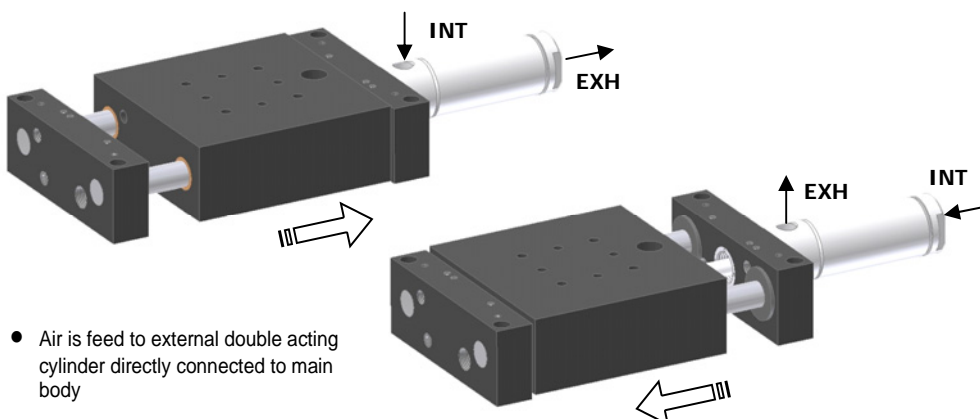
DURA-SLIDE LSE units can be mounted in any plane provided both end blocks are set on machined surfaces to prevent distortion. Either the main body or the end blocks function as the fixed support. The main body is offset from the end blocks. This offset feature allows the end blocks to be mounted on the same plane surface without risers. Multiple precision mounting features in the main body and endblocks provide positive location.

Use the LSE Series of Air-Powered Slides wherever you need durable and precise guided linear motion.

TECHNICAL SPECIFICATION

Pneumatic Specifications	ENGLISH	METRIC
Pressure Range	40-150 psi	3-10.3 bar
Travel Tolerance	+0.005" / - 0.005"	+0.13 / -0.13mm
Cylinder Type	Double Acting	
Dynamic Seals	Buna-N	
Required Valves	4-way, 2 position	
Maintenance	Field Repairable	
Temperature Range		
Buna-N Seals (standard)	-30 to 180 F	-35 to 80 C
Viton Seals (-V option)	-20 to 300 F	-30 to 150 C

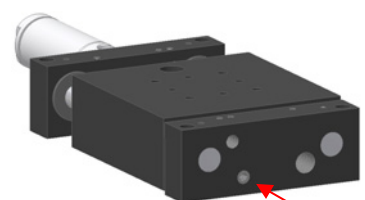
OPERATING PRINCIPLES



- Air is feed to external double acting cylinder directly connected to main body

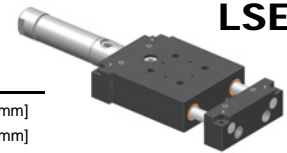
STROKE ADJUSTMENT

All **DURA-SLIDE LSE** series slides include an adjustable hard stop on both sides of the stroke. The stop is lockable with a set screw. Hard stops provide highly repeatable and accurate stroke control.



SPECS

BORE DIA - 0.562" [14.2mm]
ROD DIA - 0.250" [6.35mm]
STROKE - 0.5-6.0"
[12.7-152.4mm]

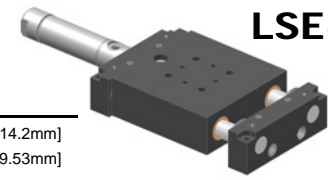


LSE-1

See Page **4-1.30**

SPECS

BORE DIA - 0.562" [14.2mm]
ROD DIA - 0.375" [9.53mm]
STROKE - 0.5-8.0"
[12.7-203.2mm]

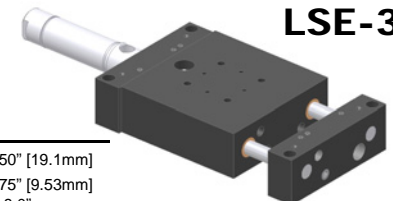


LSE-2

See Page **4-1.32**

SPECS

BORE DIA - 0.750" [19.1mm]
ROD DIA - 0.375" [9.53mm]
STROKE - 1.0-8.0"
[12.7-203.2mm]

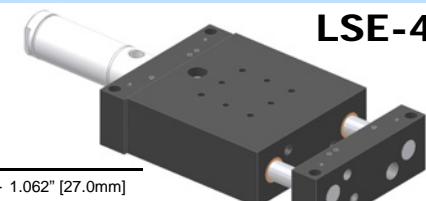


LSE-3

See Page **4-1.34**

SPECS

BORE DIA - 1.062" [27.0mm]
ROD DIA - 0.500" [12.70mm]
STROKE - 1.0-16.0"
[25.4-406.4mm]

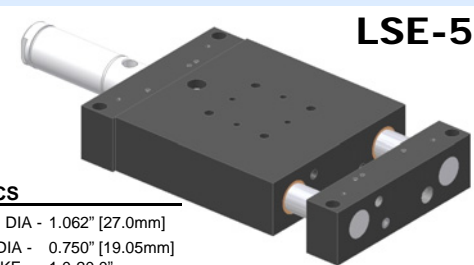


LSE-4

See Page **4-1.36**

SPECS

BORE DIA - 1.062" [27.0mm]
ROD DIA - 0.750" [19.05mm]
STROKE - 1.0-20.0"
[25.4-508.0mm]



LSE-5

See Page **4-1.38**



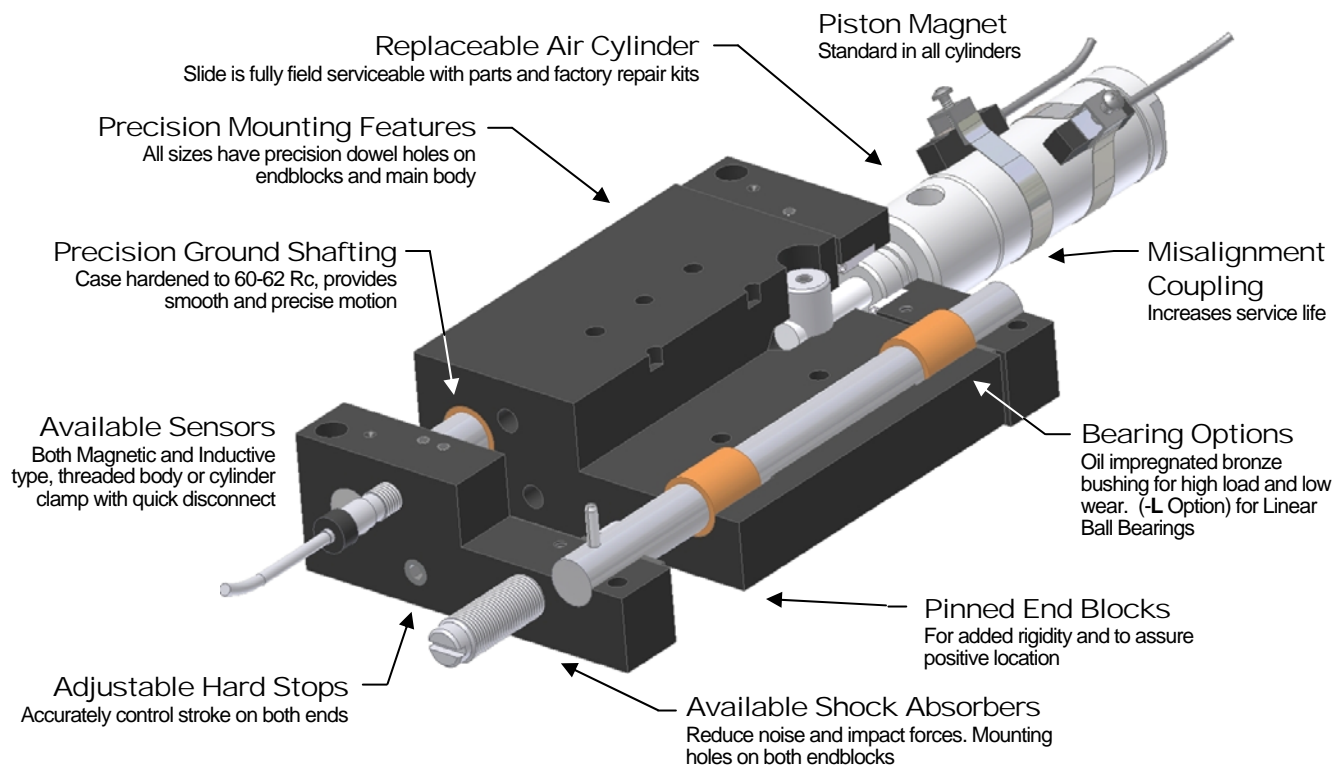
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DURA-SLIDE
AIR SLIDES

LSE-SERIES 

PRODUCT FEATURES

- Aircraft Grade Aluminum
Black Anodize Finish
- Simple and Highly Durable
Time tested, field approved design
- External Air Cylinder
Low maintenance field serviceable



DESIGNED - MANUFACTURED - ASSEMBLED IN THE USA

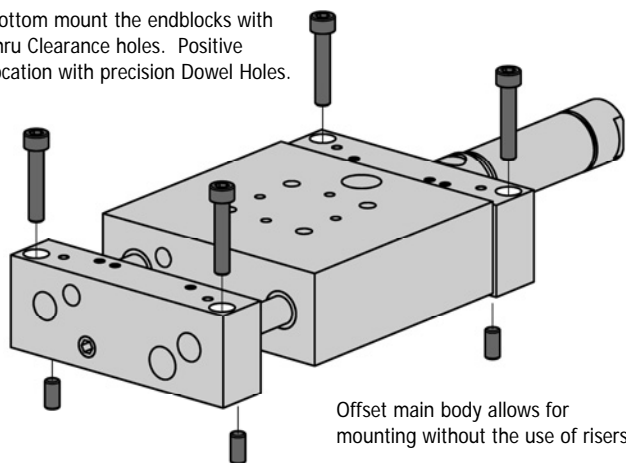


MOUNTING INFORMATION

Mounts and operates in any orientation

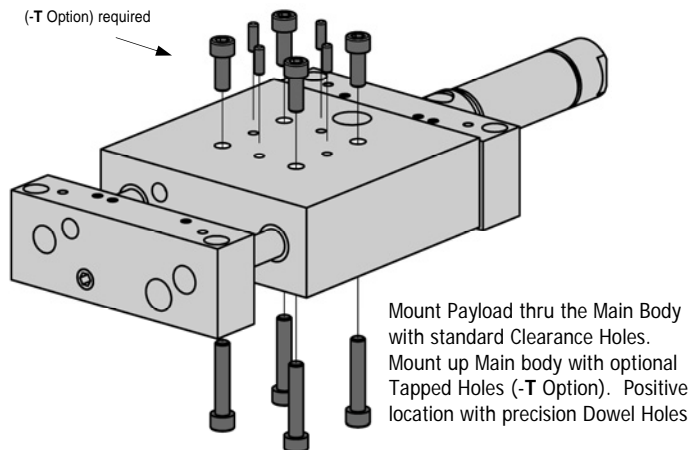
MAIN BODY

Bottom mount the endblocks with thru Clearance holes. Positive location with precision Dowel Holes.



PAYLOAD

(-T Option) required



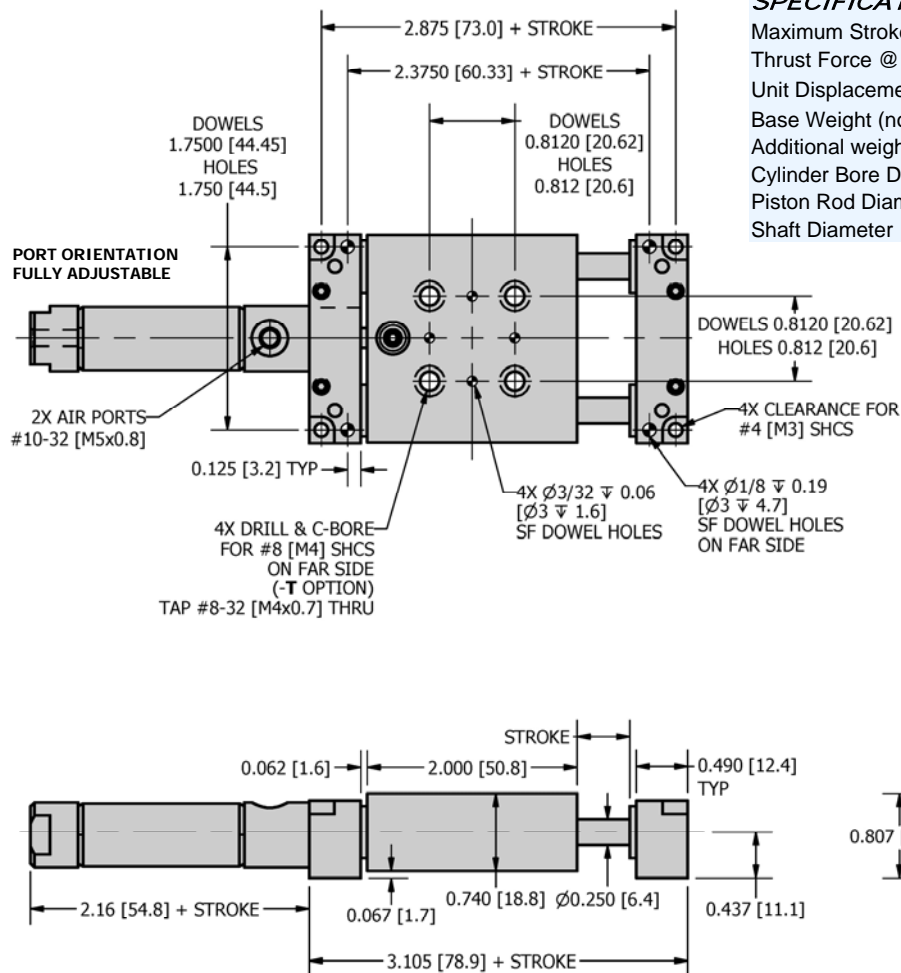


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DURA-SLIDE
AIR SLIDES

LSE-1

DIMENSIONAL DRAWING



SPECIFICATIONS

	LSE-1	MLSE-1
Maximum Stroke	6.000 in	152.4 mm
Thrust Force @ 80 psi / 5.5 bar	19.8 lbf	88.2 N
Unit Displacement (per stroke)	0.25 in ³ /in	1.60 cm ³ /cm
Base Weight (no stroke)	0.45 lbs	0.18 kg
Additional weight per Stroke	0.05 lbs/in	0.9 g/mm
Cylinder Bore Diameter	0.562 in	14.3 mm
Piston Rod Diameter	0.187 in	4.7 mm
Shaft Diameter	0.250 in	6.35 mm

HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES
M **LSE-1** - **T** - **V**
 STROKE SEALS

METRIC M

STROKE Inch: 0.5" - 6.0" @ 0.5" Increments
 mm: 12.7 mm - 152.4 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LSE-1-3.0-V

Ex) LSE-1 with 3.0" stroke and Viton Seals

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

PLEASE CONTACT US FOR INFORMATION

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
 CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
 CSK-R - Magnetic Sensor REED w/ quick disconnect Kit
 * sensors kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

MAGNETIC SENSORS * (Cylinder clamp mounted)

CS-N - Magnetic Sensor NPN w/ quick disconnect
 CS-P - Magnetic Sensor PNP w/ quick disconnect
 CS-R - Magnetic Sensor REED w/ quick disconnect
 * includes (1) sensors and (1) cylinder clamp

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit
 ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit
 * Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - Inductive Sensor NPN w/ quick disconnect
 IS-M8-P - Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-100 - Hydraulic Shock Absorber



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DURA-SLIDE
AIR SLIDES

LSE-1

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

LSE-1 MLSE-1

SEE CHART

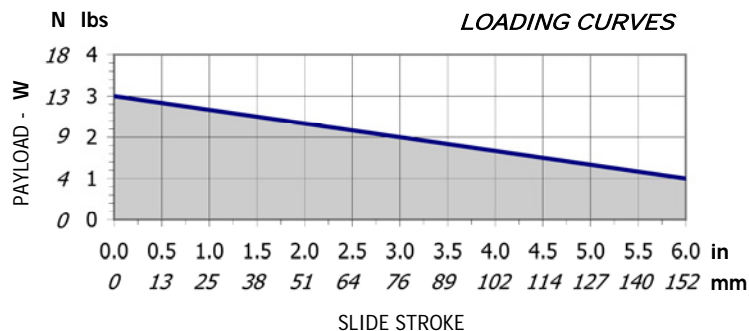
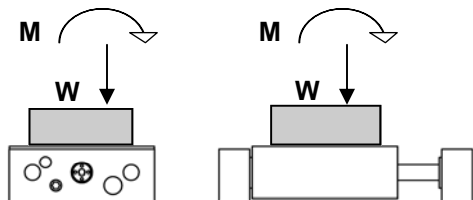
Max Applied Moment **M**

15 lbf-in 1.7 N-m

For Vertical Motion use a factor of 1/2 on payload due to gravity



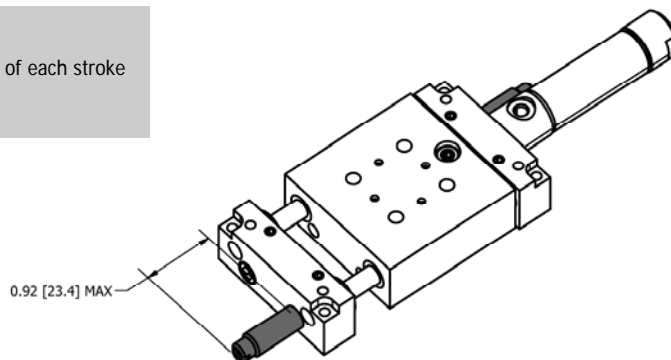
Flow controls recommended for nearly all applications
Use Shock Absorbers for high loads



ACCESSORY INFORMATION

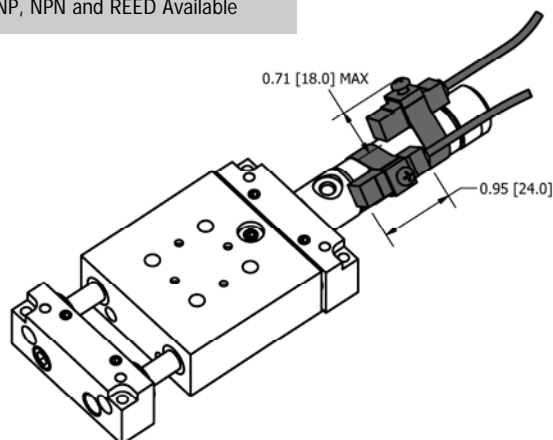
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



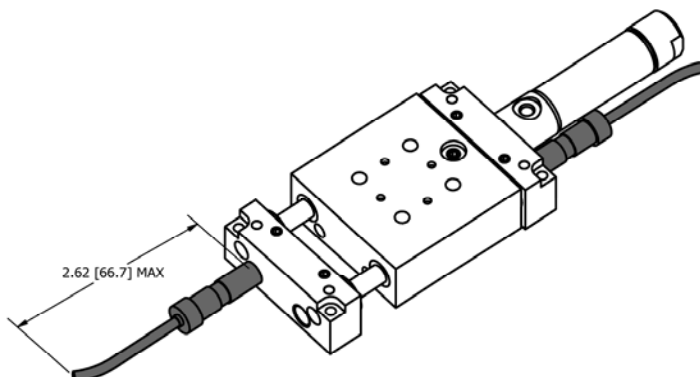
MAGNETIC SENSORS

- Clamps around external cylinder
- Threaded Quick Disconnect
- PNP, NPN and REED Available



INDUCTIVE SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available



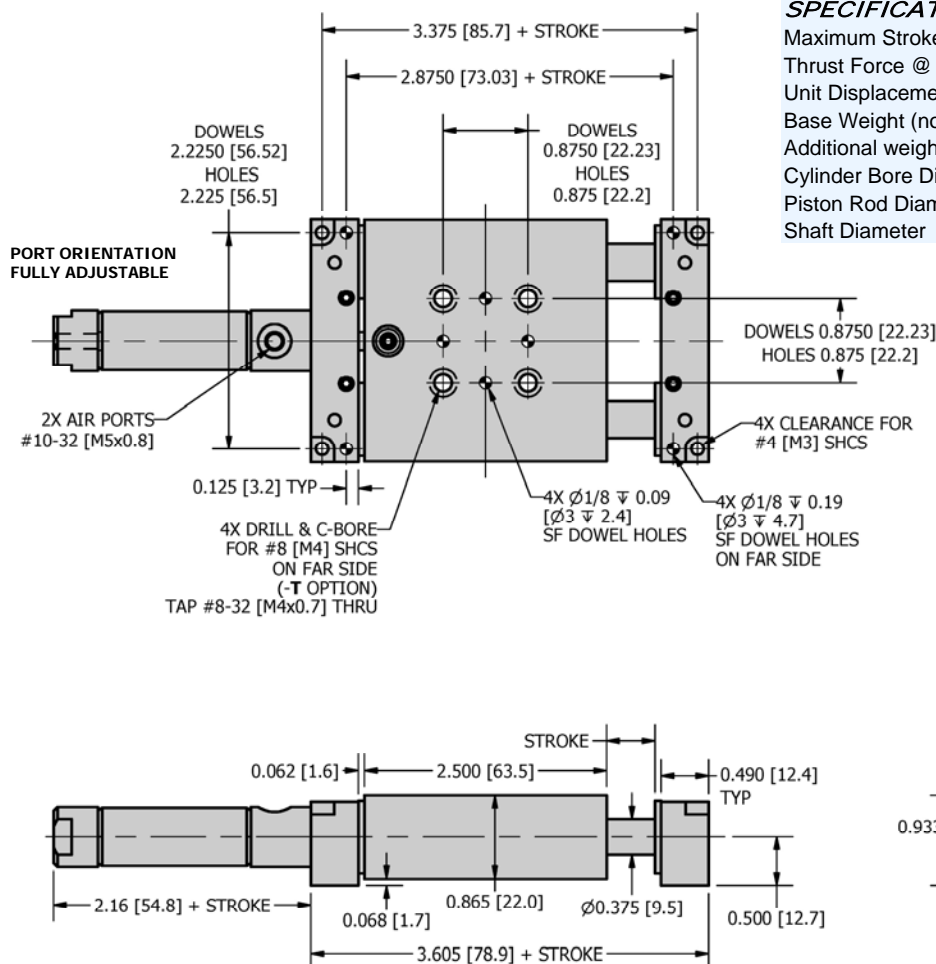


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DURA-SLIDE
AIR SLIDES

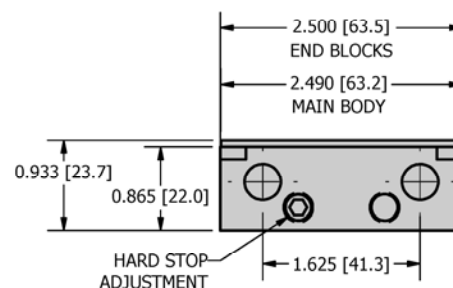
LSE-2

DIMENSIONAL DRAWING



SPECIFICATIONS

	LSE-2	M LSE-2
Maximum Stroke	8.000 in	203.2 mm
Thrust Force @ 80 psi / 5.5 bar	19.8 lbf	88.2 N
Unit Displacement (per stroke)	0.25 in ³ /in	1.60 cm ³ /cm
Base Weight (no stroke)	0.90 lbs	0.41 kg
Additional weight per Stroke	0.07 lbs/in	1.3 g/mm
Cylinder Bore Diameter	0.562 in	14.3 mm
Piston Rod Diameter	0.187 in	4.7 mm
Shaft Diameter	0.375 in	9.53 mm



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES
M **LSE-2** - **T** - **V**
 STROKE SEALS

METRIC M

STROKE Inch: 0.5" - 8.0" @ 0.5" Increments
 mm: 12.7 mm - 203.2 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: MLSE-2-12.7

Ex) Metric LSE-2 with 12.7mm stroke

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER OR CUSTOM STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

PLEASE CONTACT US FOR INFORMATION

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
 CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
 CSK-R - Magnetic Sensor REED w/ quick disconnect Kit
 * sensors kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

MAGNETIC SENSORS * (Cylinder clamp mounted)

CS-N - Magnetic Sensor NPN w/ quick disconnect
 CS-P - Magnetic Sensor PNP w/ quick disconnect
 CS-R - Magnetic Sensor REED w/ quick disconnect
 * includes (1) sensors and (1) cylinder clamp

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit
 ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit
 * Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - Inductive Sensor NPN w/ quick disconnect
 IS-M8-P - Inductive Sensor PNP w/ quick disconnect
 * Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-100 - Hydraulic Shock Absorber



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AIR SLIDES

LSE-2

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

LSE-2 MLSE-2

SEE CHART

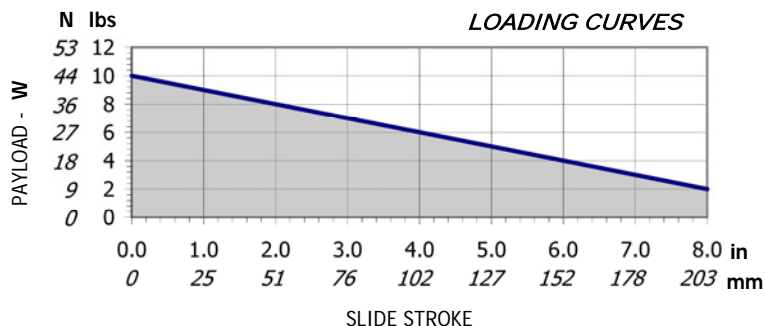
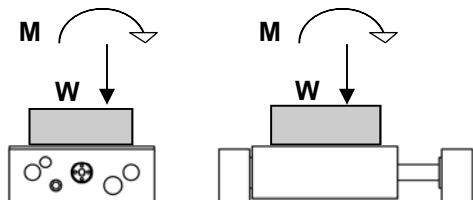
Max Applied Moment **M**

50 lbf-in 5.6 N-m



Flow controls recommended for nearly all applications
Use Shock Absorbers for high loads

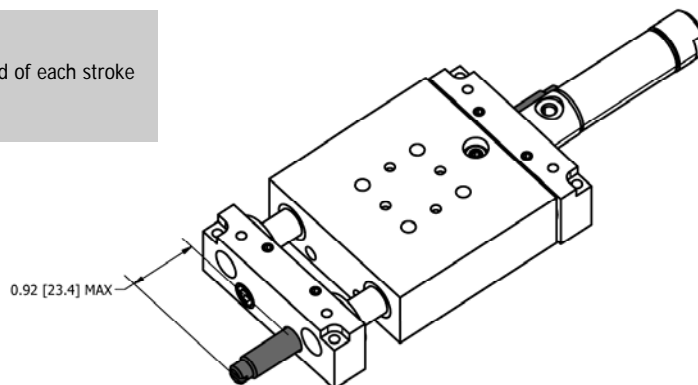
For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

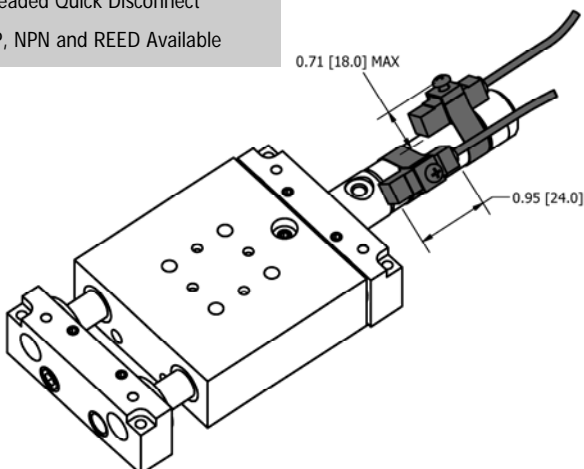
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



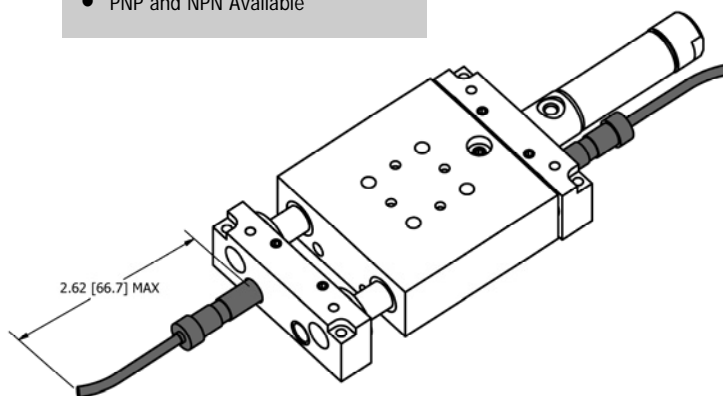
MAGNETIC SENSORS

- Clamps around external cylinder
- Threaded Quick Disconnect
- PNP, NPN and REED Available



INDUCTIVE SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available



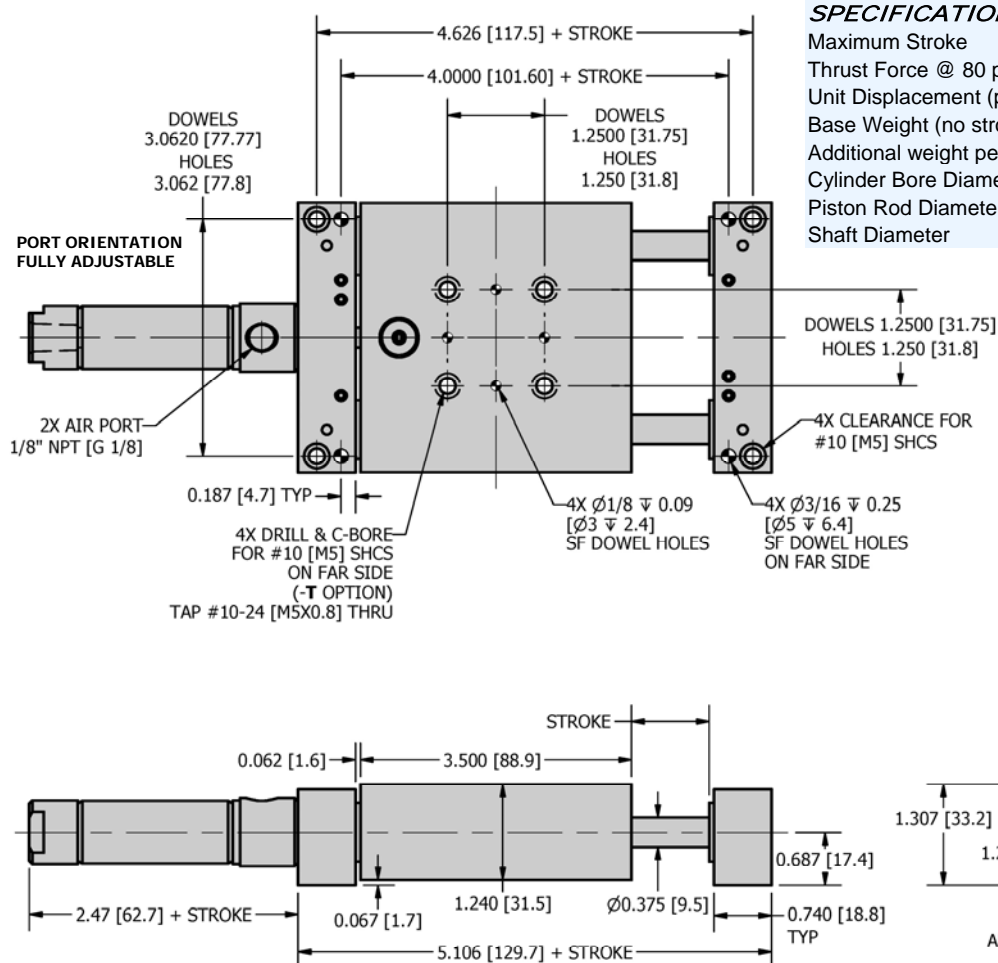


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LSE-3

DIMENSIONAL DRAWING



SPECIFICATIONS

	LSE-3	MLSE-3
Maximum Stroke	8.000 in	203.2 mm
Thrust Force @ 80 psi / 5.5 bar	35.3 lbf	157.1 N
Unit Displacement (per stroke)	0.44 in ³ /in	2.8 cm ³ /cm
Base Weight (no stroke)	2.35 lbs	1.07 kg
Additional weight per Stroke	0.08 lbs/in	0.014 g/mm
Cylinder Bore Diameter	0.750 in	19.1 mm
Piston Rod Diameter	0.250 in	6.4 mm
Shaft Diameter	0.375 in	9.53 mm

HOW TO ORDER : BASIC UNIT

METRIC **BASIC MODEL** **TAPPED HOLES** **SEALS**

M **LSE-3** - - **T** - **L** - **V**

STROKE **BEARINGS**

METRIC M
STROKE Inch: 1.0" - 8.0" @ 0.5" Increments
 mm: 25.4 mm - 203.2 mm @ 12.7mm Increments
TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)
BEARINGS L - Linear Ball Bearings (Bushings Standard)
SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LSE-3-1.0-V

Ex) LSE-3 with 1.0" stroke and Viton Seals

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

PLEASE CONTACT US FOR INFORMATION

ACCESSORIES (order separately)

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
 CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
 CSK-R - Magnetic Sensor REED w/ quick disconnect Kit
 * sensors kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

MAGNETIC SENSORS * (Cylinder clamp mounted)

CS-N - Magnetic Sensor NPN w/ quick disconnect
 CS-P - Magnetic Sensor PNP w/ quick disconnect
 CS-R - Magnetic Sensor REED w/ quick disconnect
 * includes (1) sensors and (1) cylinder clamp

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit
 ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit
 * Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - Inductive Sensor NPN w/ quick disconnect
 IS-M8-P - Inductive Sensor PNP w/ quick disconnect
 * Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber



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DURA-SLIDE
AIR SLIDES

LSE-3

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

LSE-3 MLSE-3

SEE CHART

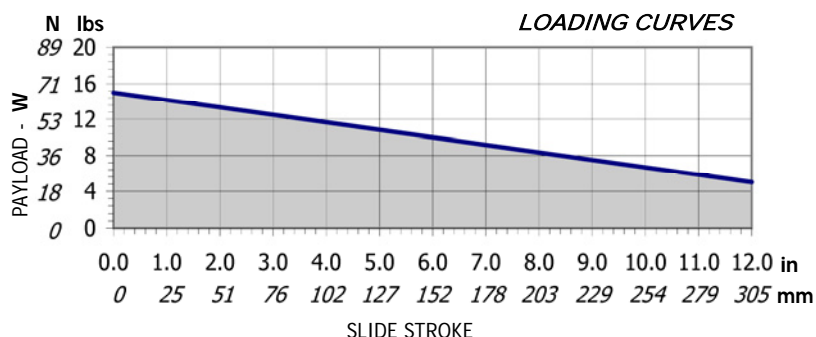
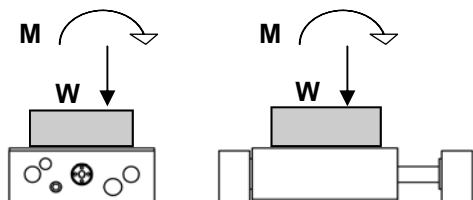
Max Applied Moment **M**

75 lbf-in 8.5 N-m



Flow controls recommended for nearly all applications
Use Shock Absorbers for high loads

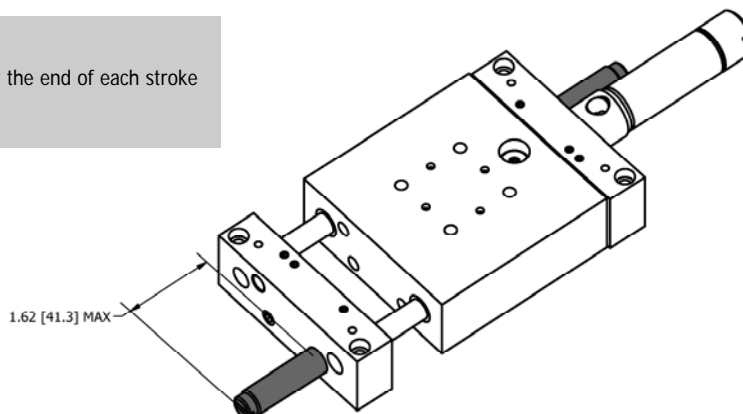
For Vertical Motion use a factor of 1/2 on payload due to gravity



ADDITIONAL INFORMATION

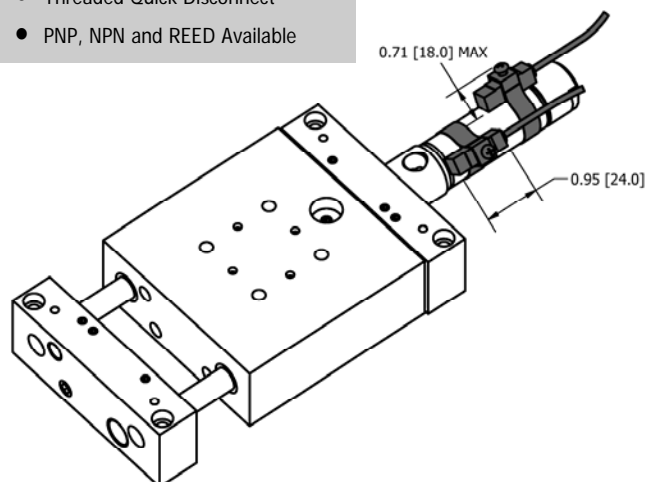
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



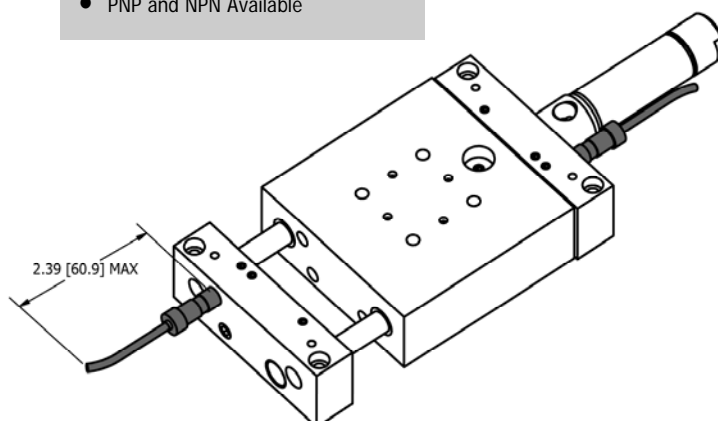
MAGNETIC SENSORS

- Clamps around external cylinder
- Threaded Quick Disconnect
- PNP, NPN and REED Available



INDUCTIVE SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available



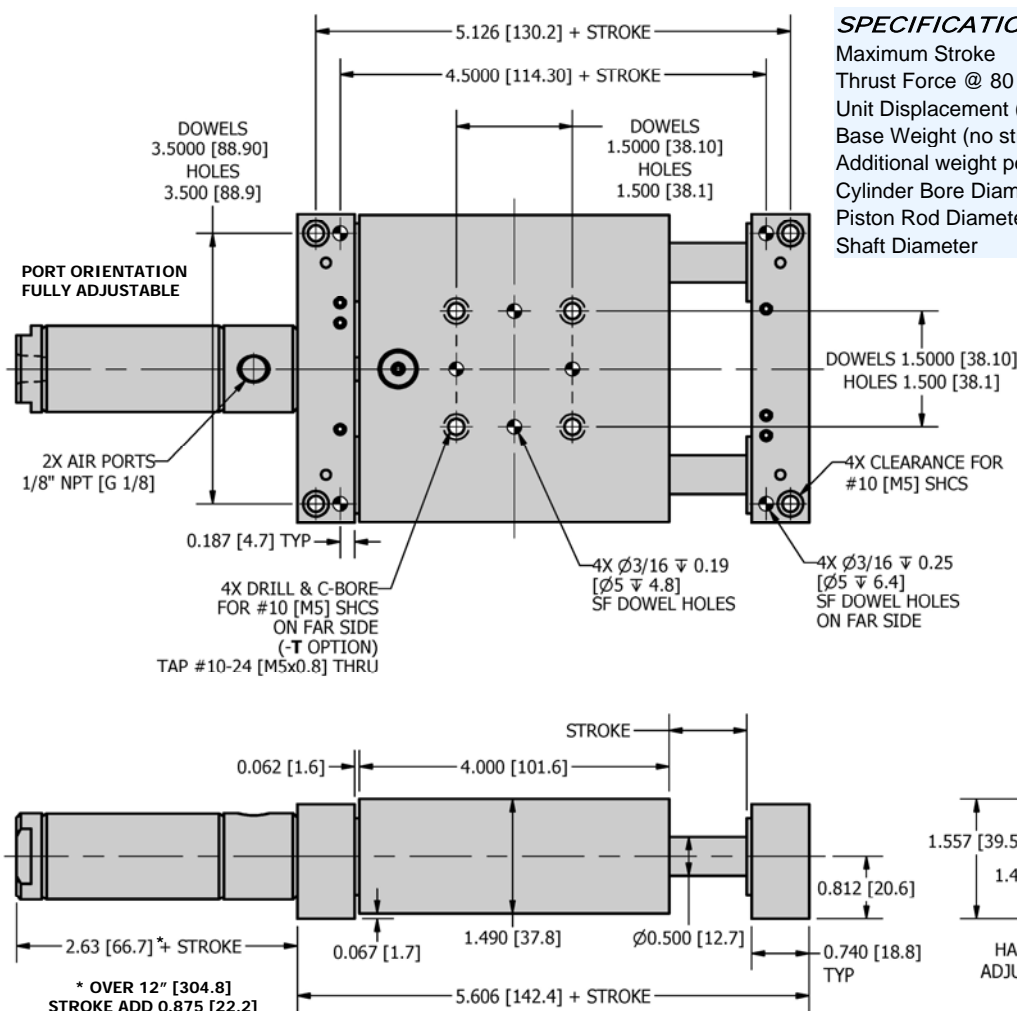


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LSE-4

DIMENSIONAL DRAWING



SPECIFICATIONS

	LSE-4	MLSE-4
Maximum Stroke	16.000 in	406.4 mm
Thrust Force @ 80 psi / 5.5 bar	70.9 lbf	315.0 N
Unit Displacement (per stroke)	0.89 in ³ /in	5.72 cm ³ /cm
Base Weight (no stroke)	3.75 lbs	1.70 kg
Additional weight per Stroke	0.15 lbs/in	2.7 g/mm
Cylinder Bore Diameter	1.062 in	27.0 mm
Piston Rod Diameter	0.312 in	7.9 mm
Shaft Diameter	0.500 in	12.70 mm

HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL TAPPED HOLES SEALS

M **LSE-4** - **T** - **L** - **V**

STROKE BEARINGS

METRIC M

STROKE Inch: 1.0" - 16.0" @ 0.5" Increments

mm: 25.4 mm - 406.4 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

BEARINGS L - Linear Ball Bearings (Bushings Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LSE-4-10.0-T

Ex) LSE-4 with 10.0" stroke and Tapped Body Holes

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

PLEASE CONTACT US FOR INFORMATION

ACCESSORIES (order separately)

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
CSK-R - Magnetic Sensor REED w/ quick disconnect Kit

* sensors kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

MAGNETIC SENSORS * (Cylinder clamp mounted)

CS-N - Magnetic Sensor NPN w/ quick disconnect
CS-P - Magnetic Sensor PNP w/ quick disconnect
CS-R - Magnetic Sensor REED w/ quick disconnect

* includes (1) sensors and (1) cylinder clamp

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit
ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - Inductive Sensor NPN w/ quick disconnect
IS-M8-P - Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber



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LSE-4

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

LSE-4 M LSE-4

SEE CHART

Max Applied Moment **M**

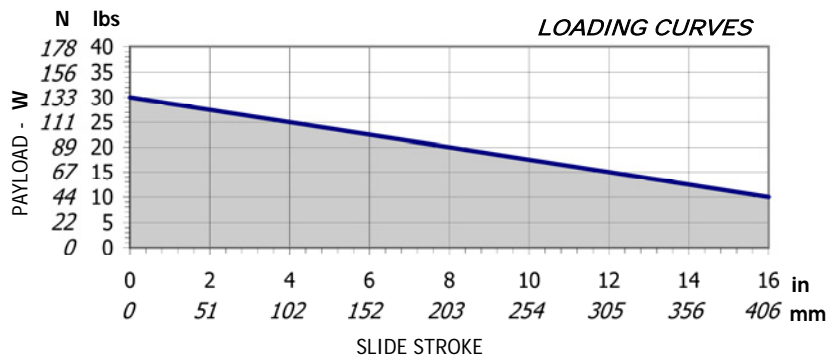
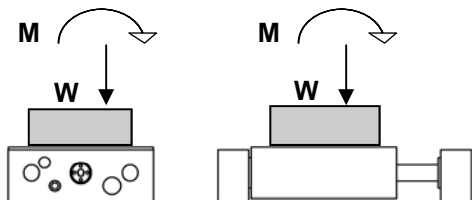
150 lbf-in

5.6 N-m

For Vertical Motion use a factor of 1/2 on payload due to gravity



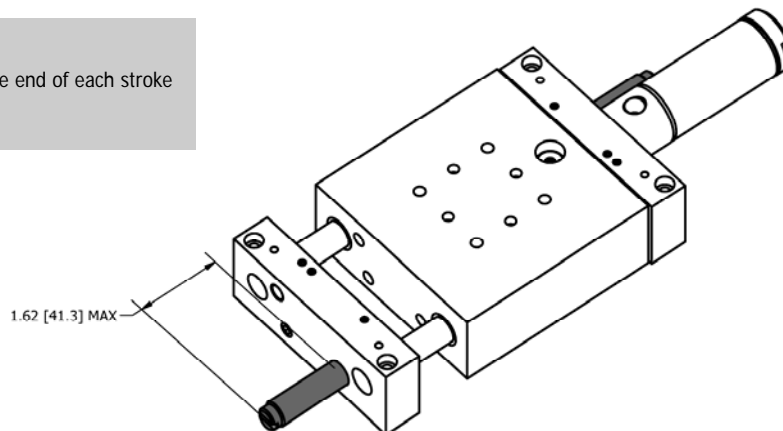
Flow controls recommended for nearly all applications
Use Shock Absorbers for high loads



ADDITIONAL INFORMATION

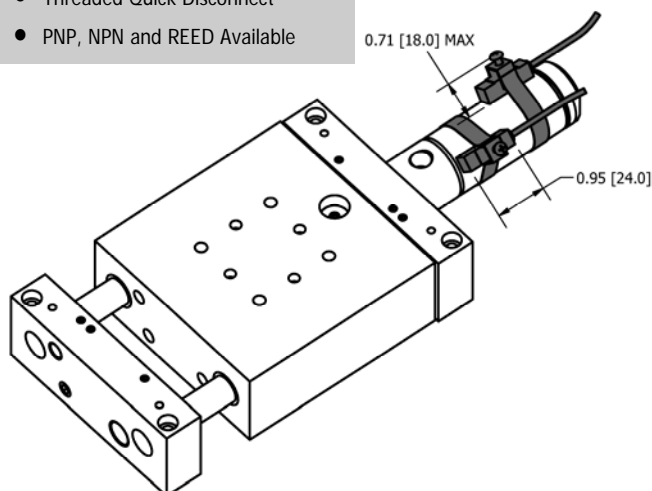
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



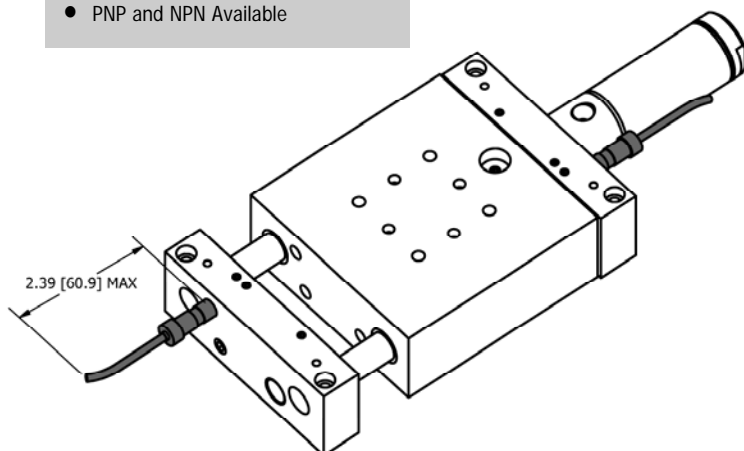
MAGNETIC SENSORS

- Clamps around external cylinder
- Threaded Quick Disconnect
- PNP, NPN and REED Available



INDUCTIVE SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available



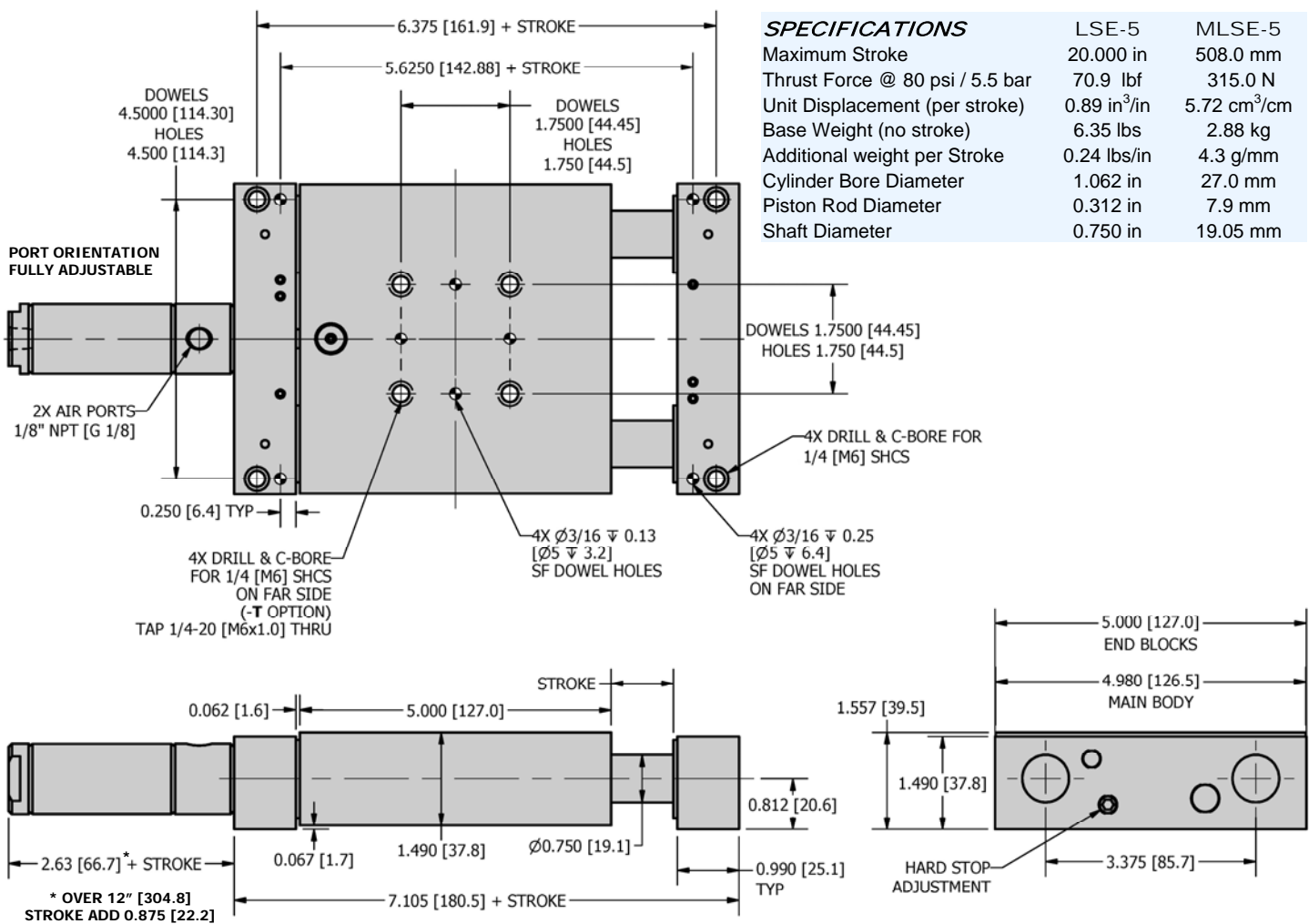


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DURA-SLIDE
AIR SLIDES

LSE-5

DIMENSIONAL DRAWING



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL TAPPED HOLES SEALS

M **LSE-5** - **T** - **L** - **V**

STROKE BEARINGS

METRIC M

STROKE Inch: 1.0" - 20.0" @ 0.5" Increments
mm: 25.4 mm - 508.0 mm @ 12.7mm Increments

TAPPED HOLES T - Tapped Holes in Body (Clearance Holes Standard)

BEARINGS L - Linear Ball Bearings (Bushings Standard)

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: LSE-5-20.0

Ex) LSE-5 with 20.0" stroke

CUSTOM DESIGNS ALWAYS AVAILABLE INCLUDING :

- LONGER STROKES
- CUSTOM MOUNTING
- OVERSIZED BODIES

PLEASE CONTACT US FOR INFORMATION

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
CSK-R - Magnetic Sensor REED w/ quick disconnect Kit

* sensors kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

MAGNETIC SENSORS * (Cylinder clamp mounted)

CS-N - Magnetic Sensor NPN w/ quick disconnect
CS-P - Magnetic Sensor PNP w/ quick disconnect
CS-R - Magnetic Sensor REED w/ quick disconnect

* includes (1) sensors and (1) cylinder clamp

INDUCTIVE SENSOR KITS *

ISK-M8-N - Inductive Sensor NPN w/ quick disconnect Kit
ISK-M8-P - Inductive Sensor PNP w/ quick disconnect Kit

* Sensor kits include (2) sensors (2) 5 meter quick disconnect cables

INDUCTIVE SENSORS *

IS-M8-N - Inductive Sensor NPN w/ quick disconnect
IS-M8-P - Inductive Sensor PNP w/ quick disconnect

* Includes (1) sensor

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

SHOCK ABSORBER

SHK-200 - Hydraulic Shock Absorber



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DURA-SLIDE
AIR SLIDES

LSE-5

LOADING INFORMATION

LOADING

Max Payload **W** (using Shock Absorbers)

Max Applied Moment **M**

LSE-5 MLSE-5

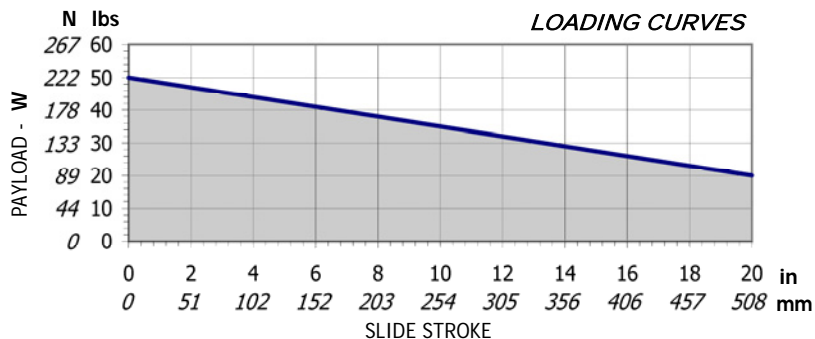
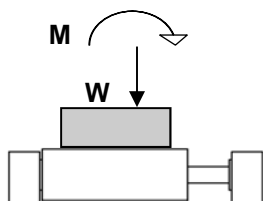
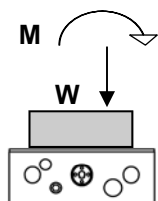
SEE CHART

300 lbf-in 33.9 N-m

For Vertical Motion use a factor of 1/2 on payload due to gravity



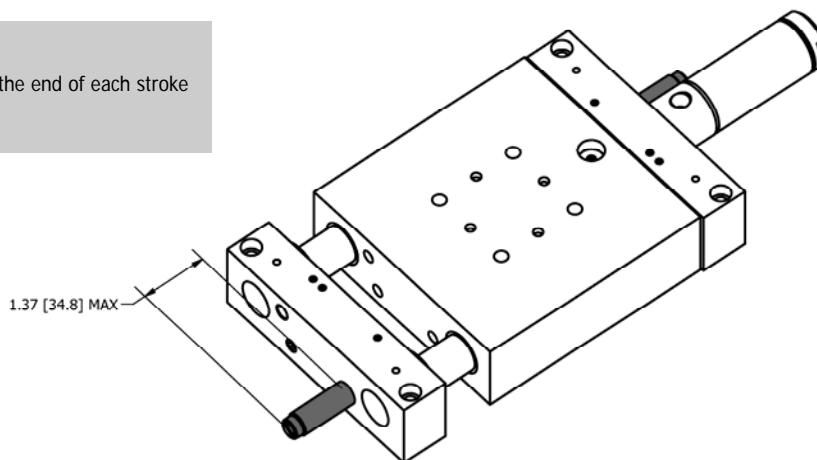
Flow controls recommended for nearly all applications
Use Shock Absorbers for high loads



ADDITIONAL INFORMATION

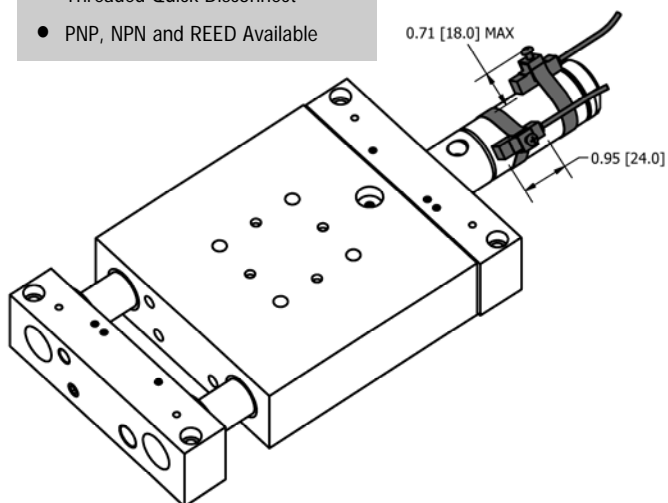
SHOCK ABSORBERS

- Provides smooth deceleration at the end of each stroke
- Built-in Hard Stop



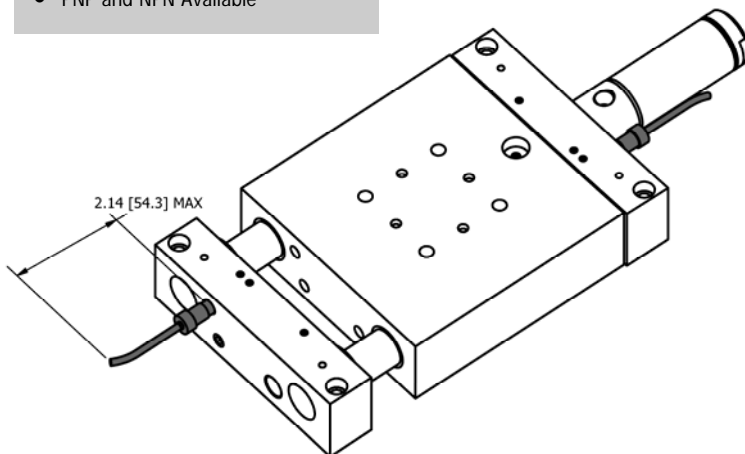
MAGNETIC SENSORS

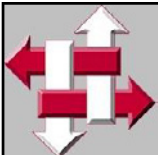
- Clamps around external cylinder
- Threaded Quick Disconnect
- PNP, NPN and REED Available



INDUCTIVE SENSORS

- M8x1.0 Threaded Body
- Threaded Quick Disconnect
- PNP and NPN Available



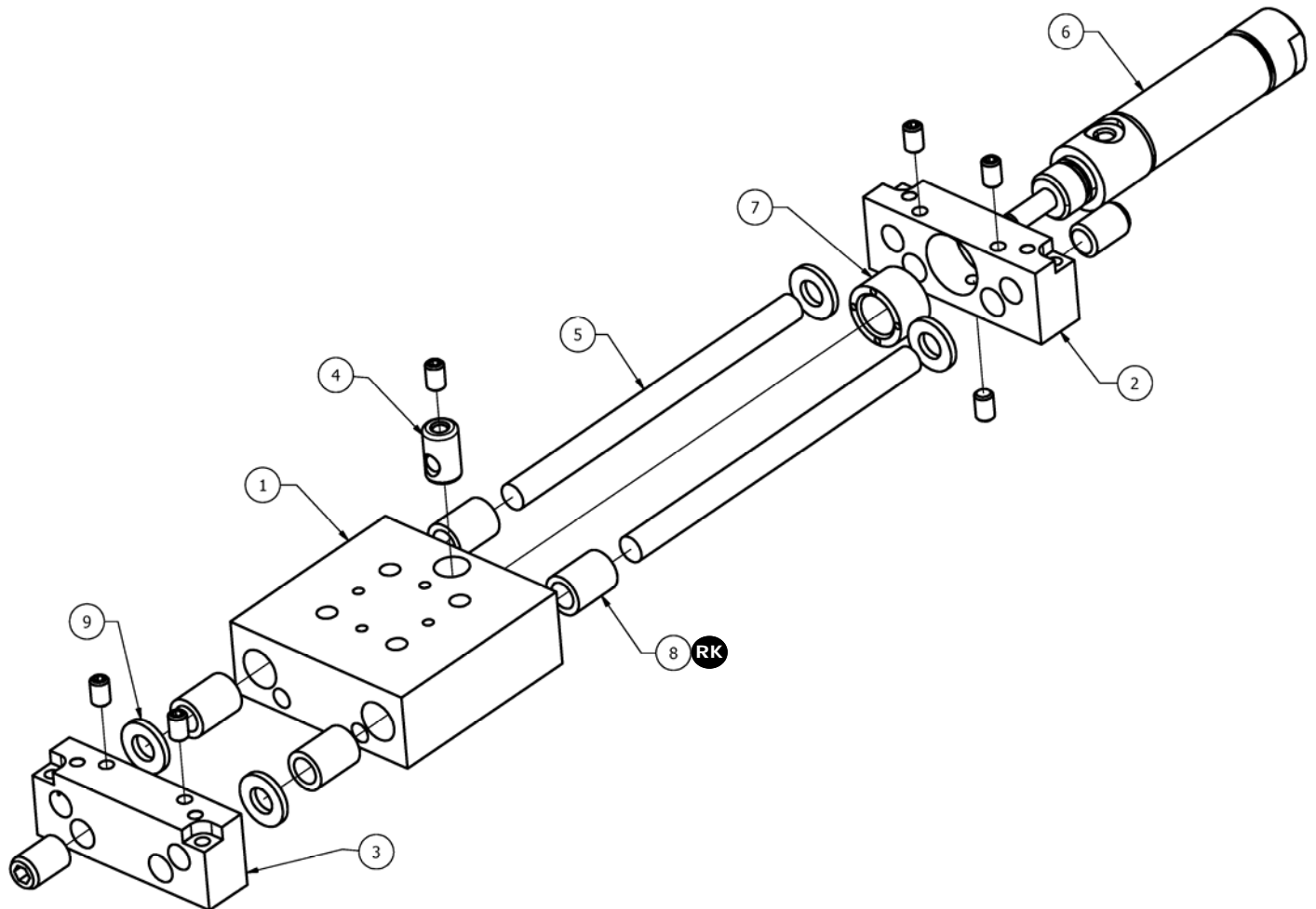


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DURA-SLIDE
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LSE-SERIES 

EXPLODED VIEW



PARTS LIST

HOW TO ORDER PARTS

ITEM	REQ'D	NAME	LSE-1	LSE-2	LSE-3	LSE-4	LSE-5	OPTIONS
1	1	Main Body	LSE-101	LSE-201	LSE-301	LSE-401	LSE-501	-T ² -L ³
2	1	Cylinder End Block	LSE-102	LSE-202	LSE-302	LSE-402	LSE-502	
3	1	Stop End Block	LSE-103	LSE-203	LSE-303	LSE-403	LSE-503	
4	1	Connector *	LSE-104		LSE-304	LSE-404		
5	2	Rod *	LSE-105	LSE-205	LSE-305	LSE-405	LSE-505	-S ¹
6	1	Air Cylinder	LSE-106	LSE-206	LSE-306	LSE-406	LSE-506	-S ¹ -V ⁴
7	1	Sleeve *	LSE-107		LSE-307		LSE-507	
8	4	Rod Bushing	LS-110	LS-210		LS-410	LS-510	-L ³
9	4	Shock Pad *	XSP-0250	XSP-0375		XSP-0500	XSP-0750	
RK	1	Repair Kit * #	LSE-1-RK	LSE-2-RK	LSE-3-RK	LSE-4-RK	LSE-5-RK	-L ³

METRIC

PART NUMBER

M

OPTIONS

SAMPLE ORDER: LSE-101

Ex) LSE-1 Main Body

OPTIONS (see product pages for information)

1 - S = Stroke

2 - T = Tapped Holes

3 - L = Linear Ball Bearings

4 - V = Viton Seals

NOTES

* - Metric code not required

- Repair Kits include req'd qty of parts marked with RK