

ET-SERIES

NON-ROTATING VERTICAL / LIGHT DUTY HORIZONTAL LINEAR THRUSTER

DURA-THRUST ET Series of Linear Thrusting Devices provide a practical, low-cost, economy approach to automatic working positioning/holding. The ET series is designed for non-rotating vertical or light duty horizontal applications where the load capacity our LT series are not required, while still offering the quality construction and durability you've come to expect.

FEATURES

DURA-THRUST ET Series is externally powered by standard non-repairable air cylinders. The slide bearings are oil impregnated bronze bushings. Rods are pinned to the end blocks to assure positive location. Adjustable shaft mounted locking collars with nylon bumper pads allow easy setup and provide low noise level minimizing the clatter inherent in fast acting slide devices. Furthermore the entire ET series is sensor ready.

MOUNTING STYLES

DURA-THRUST ET Series units can be mounted and located in any plane with provided mounting holes and dowel pin holes. The main bodies contain both tapped holes and counterbored clearance holes for cap screws. The end blocks contain the same features for easy adaptations to additional work moving/holding devices or customer tooling.

The ET series of economy thrusters is perfect for simple applications such as part ejection, part stops, lifting tables, and clamps.

TECHNICAL SPECIFICATION

Pneumatic Specifications

Pressure Range
Cylinder Type
Dynamic Seals
Required Valves

ENGLISH

40-150 psi
Double Acting
Buna-N
4-way, 2 position

METRIC

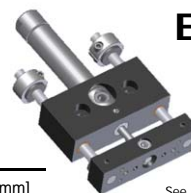
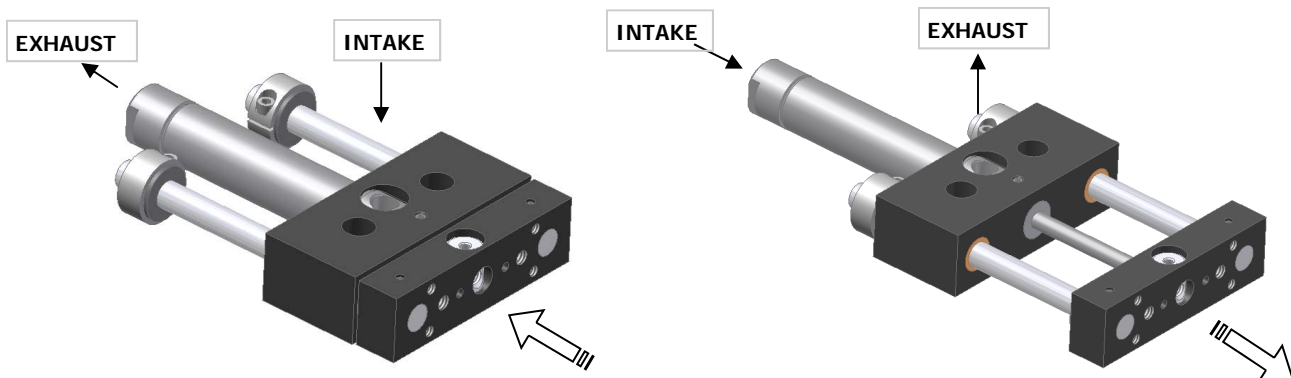
3-10.3 bar
Double Acting
Buna-N
4-way, 2 position

Temperature Range

Buna-N Seals (standard)
Viton Seals (-V option)

-30 to 180 F -35 to 80 C
-20 to 300 F -30 to 150 C

OPERATING PRINCIPLES

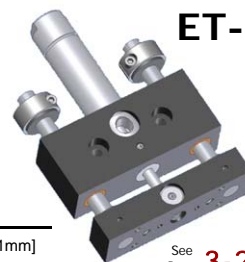


ET-1

SPECS

BORE DIA - 0.562" [14.3mm]
ROD DIA - 0.250" [6.4mm]

See Page **3-2.3**



ET-2

SPECS

BORE DIA - 0.750" [19.1mm]
ROD DIA - 0.375" [9.5mm]

See Page **3-2.4**

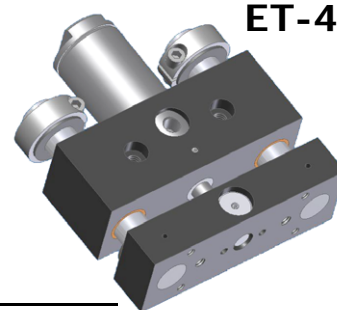


ET-3

SPECS

BORE DIA - 1.062" [27.0mm]
ROD DIA - 0.500" [12.7mm]

See Page **3-2.5**

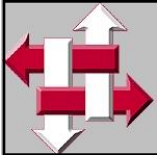


ET-4

SPECS

BORE DIA - 1.500" [38.1mm]
ROD DIA - 0.750" [19.1mm]

See Page **3-2.6**



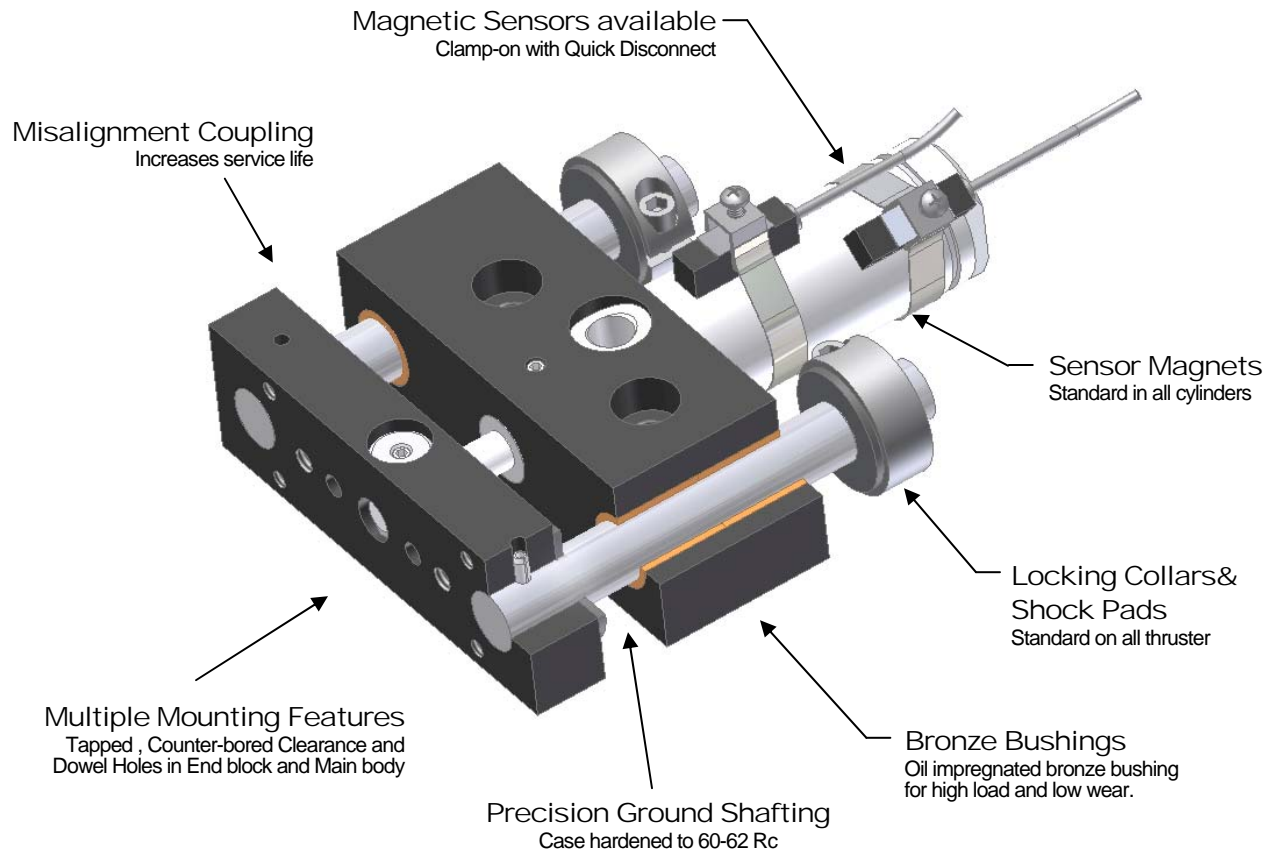
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DURA-THRUST
VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER

ET-SERIES

PRODUCT FEATURES

- Aircraft Grade Aluminum
Black Anodize Finish
- Precision Features - Low Cost
Sensor Ready and Precision Mounting
- All Units Sensor Ready
For use with Magnetic Sensors



DESIGNED - MANUFACTURED - ASSEMBLED IN THE USA

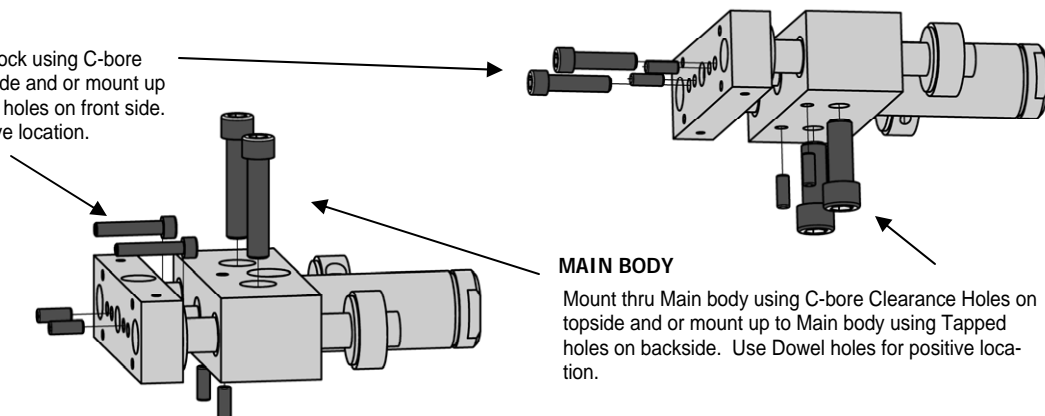


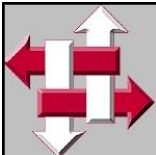
MOUNTING INFORMATION

Mounts and operates in any orientation

PAYLOAD

Mount Payload thru End block using C-bore Clearance Holes on backside and or mount up to End block using Tapped holes on front side. Use Dowel holes for positive location.





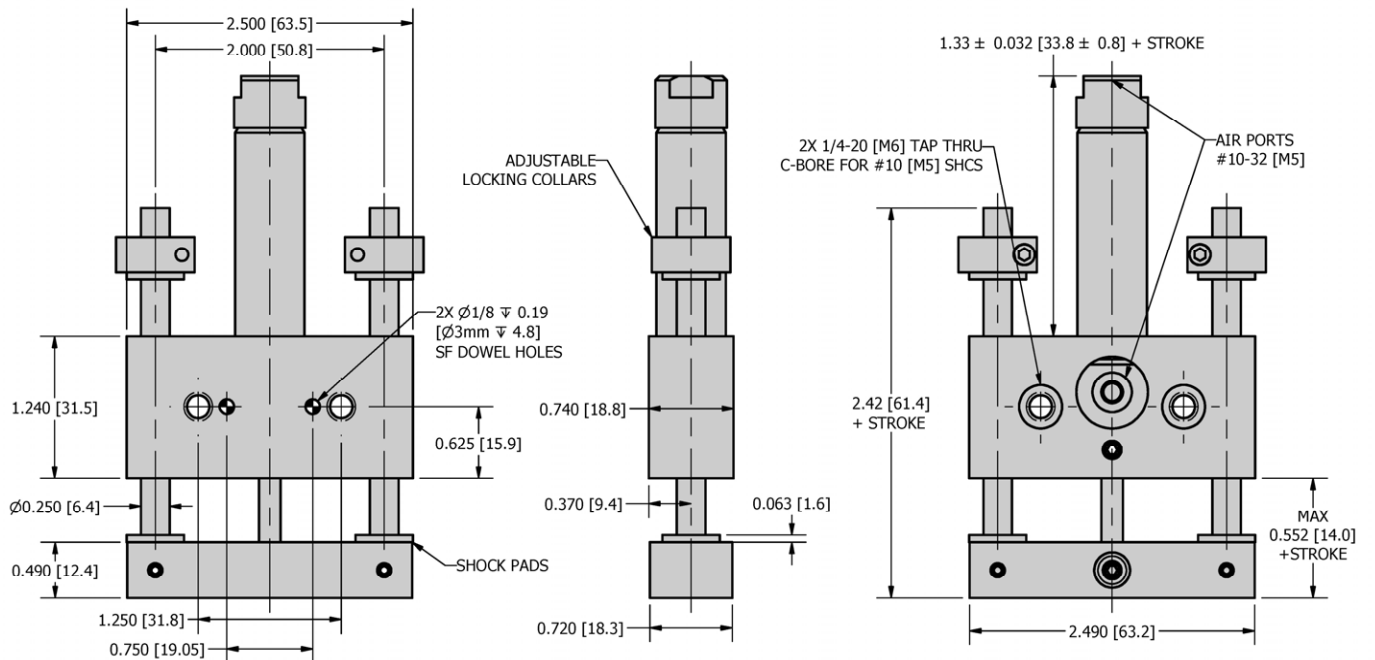
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DURA-THRUST

VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER

ET-1

DIMENSIONAL DRAWING



SPECIFICATIONS

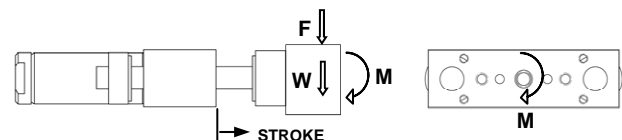
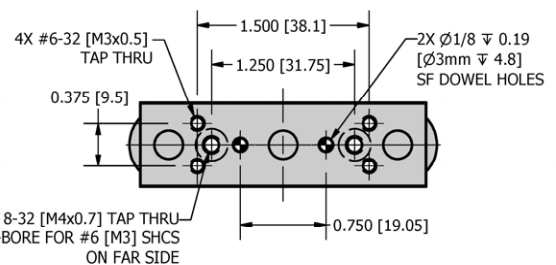
	ET-1	MET-1
Maximum Air Pressure	100 psi	6.9 bar
Thrust Force @ 80 psi / 5.5 bar	19.2 lbf	85.4 N
Unit Force Factor - Extend	0.24 lbf/psi	15.5 N/bar
Unit Force Factor - Retract	0.22 lbf/psi	14.2 N/bar
Base Weight	0.47 lb	0.21 kg
Additional Weight per Stroke	0.05 lb/in	0.85 g/mm
Cylinder Bore Diameter	0.562"	14.27 mm
Shaft Diameter	0.250"	6.35 mm

LOADING

	ET-1	MET-1
Typical Load (Force + Weight)*Stroke (F+W)*S	4 lbf-in	0.45 N-m
Max Moment M	4 lbf-in	0.45 N-m
Typical Dynamic Payload W	2 lbf	0.91 kg



Flow controls recommended for nearly all applications



HOW TO ORDER : BASIC UNIT

METRIC **BASIC MODEL** **STROKE** **SEALS**
M **ET-1** - - **V**

METRIC M

STROKE Inch: 1.0" - 4.0" in 0.5" increments
mm: 25.4 - 101.6 in 25.4mm increments

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: ET-1-2.0

Ex) ET-1 Thruster with 2 inch stroke

CUSTOM DESIGNS ALWAYS AVAILABLE
PLEASE CONTACT US FOR INFORMATION

ACCESSORIES (order separately)

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

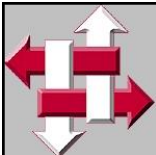
CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
CSK-R - Magnetic Sensor REED w/ quick disconnect Kit
* Sensors Kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

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

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length



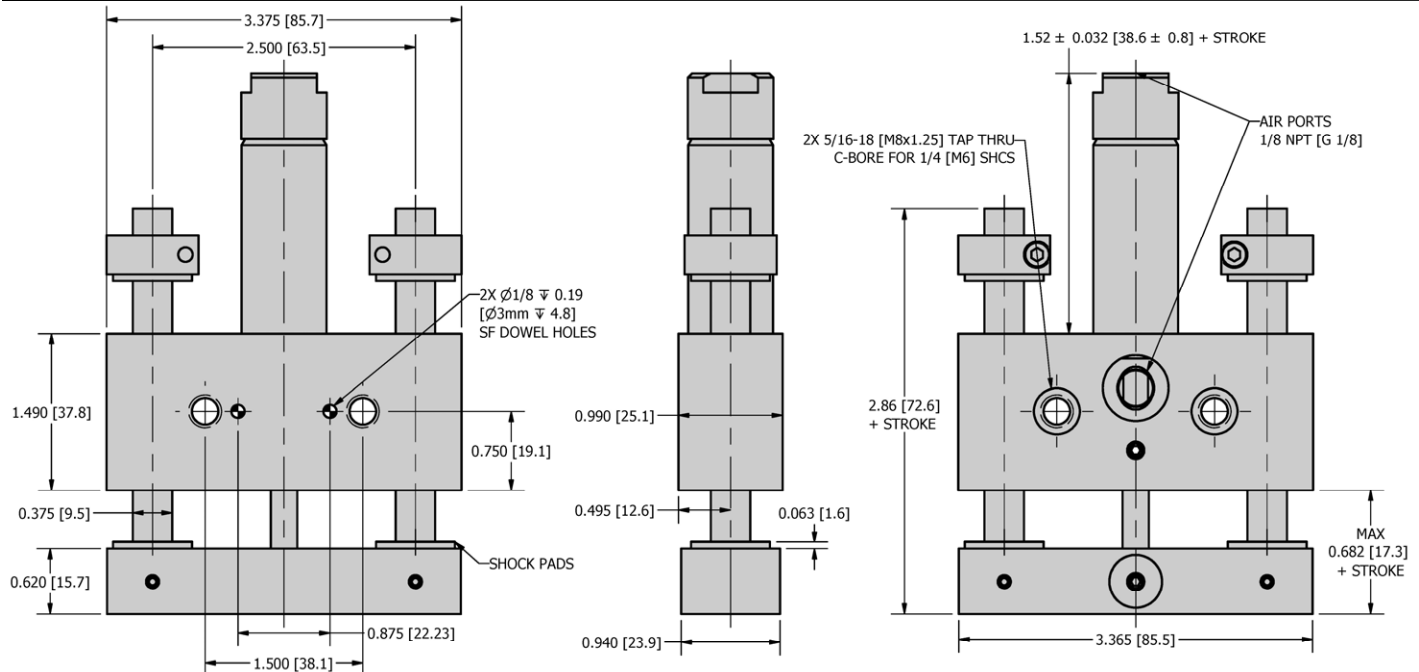
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DURA-THRUST

VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER

ET-2

DIMENSIONAL DRAWING

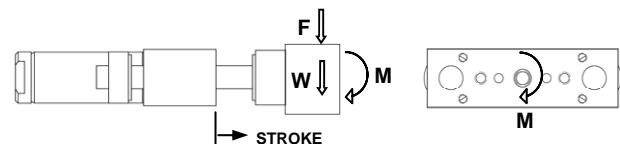
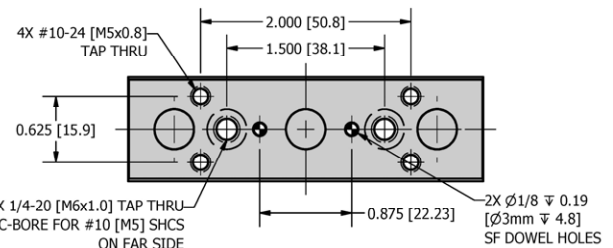


SPECIFICATIONS

	ET-2	MET-2
Maximum Air Pressure	100 psi	6.9 bar
Thrust Force @ 80 psi / 5.5 bar	35.2 lbf	156.8 N
Unit Force Factor - Extend	0.44 lbf/psi	28.4 N/bar
Unit Force Factor - Retract	0.39 lbf/psi	25.2 N/bar
Base Weight	1.05 lb	0.48 kg
Additional Weight per Stroke	0.09 lb/in	1.63 g/mm
Cylinder Bore Diameter	0.750"	19.05 mm
Shaft Diameter	0.375"	9.52 mm

LOADING

	ET-2	MET-2
Typical Load (Force + Weight)*Stroke (F+W)*S	6 lbf-in	0.68 N-m
Max Moment M	6 lbf-in	0.68 N-m
Typical Dynamic Payload W	5 lbf	2.3 kg

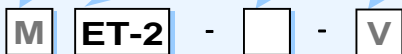


Flow controls recommended for nearly all applications

HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL STROKE SEALS



METRIC M

STROKE Inch: 1.0" - 8.0" @ 1.0" increments
mm: 25.4 - 203.2 @ 25.4mm increments

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: ET-2-1.0-V

Ex) ET-2 Thruster with 1 inch stroke and Viton seals

**CUSTOM DESIGNS ALWAYS AVAILABLE
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

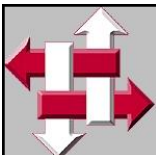
CS-P - Magnetic Sensor PNP w/ quick disconnect

CS-R - Magnetic Sensor REED w/ quick disconnect

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

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length



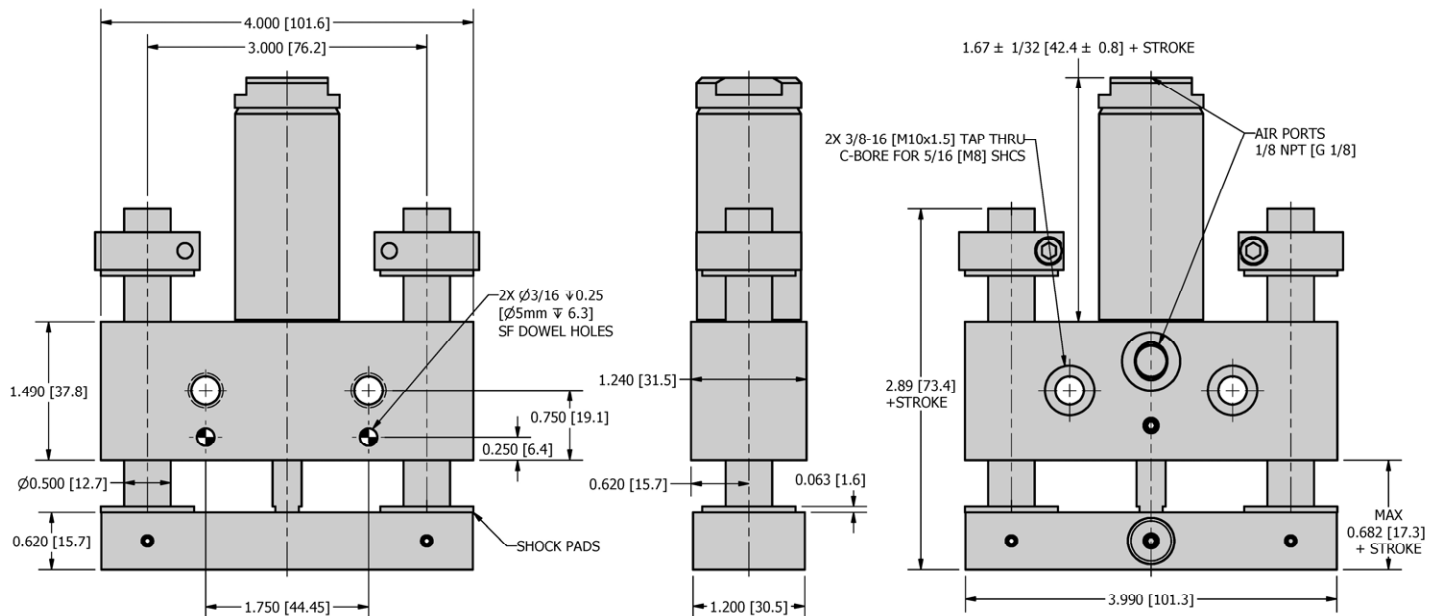
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DURA-THRUST

VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER

ET-3

DIMENSIONAL DRAWING



SPECIFICATIONS

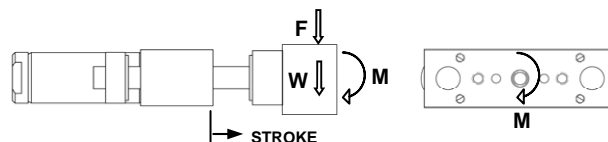
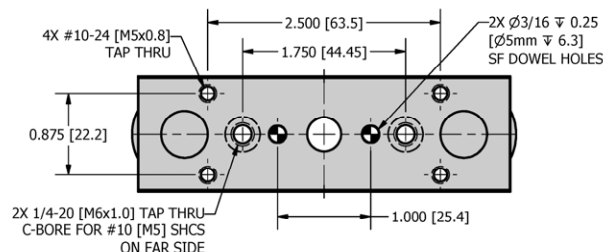
	ET-3	MET-3
Maximum Air Pressure	100 psi	6.9 bar
Thrust Force @ 80 psi / 5.5 bar	70.4 lbf	311.9 N
Unit Force Factor - Extend	0.88 lbf/psi	56.7 N/bar
Unit Force Factor - Retract	0.81 lbf/psi	52.3 N/bar
Base Weight	1.68 lb	0.76 kg
Additional Weight per Stroke	0.16 lb/in	2.9 g/mm
Cylinder Bore Diameter	1.062"	27 mm
Shaft Diameter	0.500"	12.7 mm

LOADING

	ET-3	MET-3
Typical Load (Force + Weight)*Stroke (F+W)*S	8 lbf-in	0.9 N-m
Max Moment M	8 lbf-in	0.9 N-m
Typical Dynamic Payload W	10 lbf	4.5 kg



Flow controls recommended for nearly all applications



HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC **BASIC MODEL** **STROKE** **SEALS**
M **ET-3** - **2.0** - **V**

METRIC M

STROKE Inch: 1.0" - 10.0" @ 1.0" increments
mm: 25.4 - 254.0 @ 25.4mm increments

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: ET-3-2.0-V

Ex) ET-3 Thruster with 2 inch stroke and Viton seals

CUSTOM DESIGNS ALWAYS AVAILABLE
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.

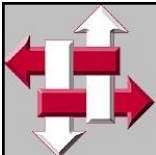
MAGNETIC SENSORS * (Cylinder clamp mounted)

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

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length



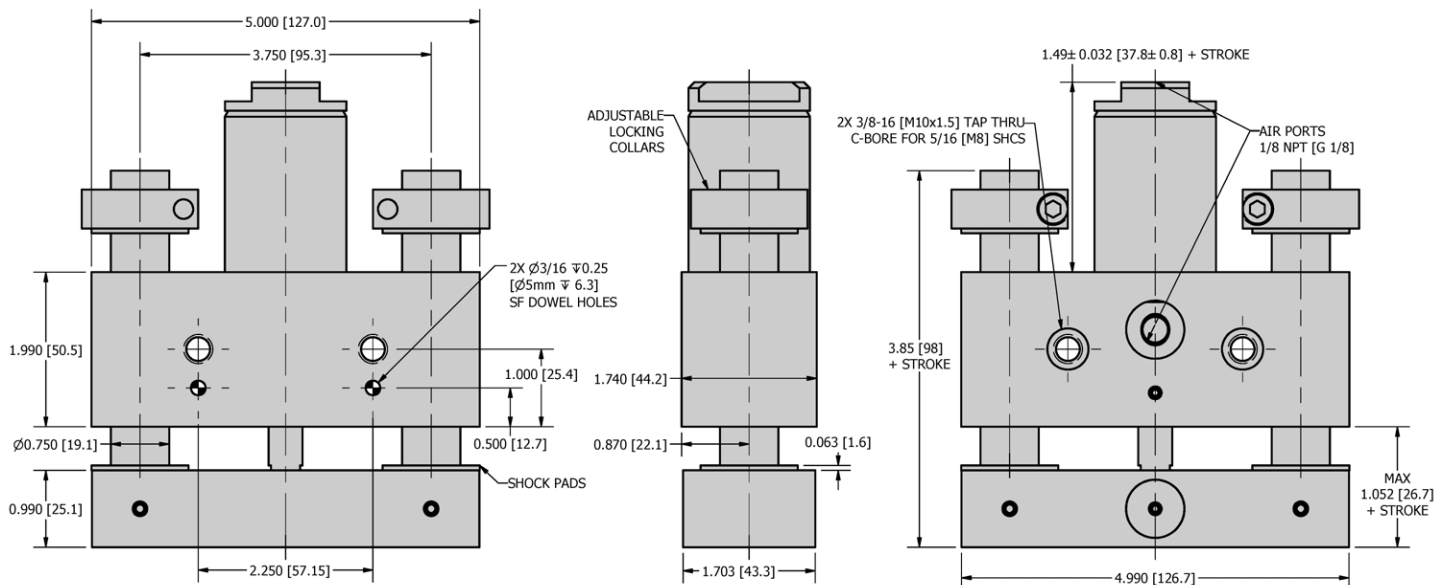
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DURA-THRUST

VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER

ET-4

DIMENSIONAL DRAWING



SPECIFICATIONS

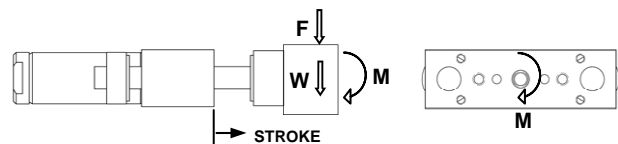
	ET-4	MET-4
Maximum Air Pressure	100 psi	6.9 bar
Thrust Force @ 80 psi / 5.5 bar	140.8 lbf	624.3 N
Unit Force Factor - Extend	1.76 lbf/psi	113.5 N/bar
Unit Force Factor - Retract	1.61 lbf/psi	103.9 N/bar
Base Weight	4.07 lb	1.85 kg
Additional Weight per Stroke	0.33 lb/in	5.92 g/mm
Cylinder Bore Diameter	1.500"	38.1 mm
Shaft Diameter	0.750"	19.05 mm

LOADING

	ET-4	MET-4
Typical Load (Force + Weight)*Stroke (F+W)*S	15 lbf-in	1.69 N-m
Max Moment M	15 lbf-in	1.69 N-m
Typical Dynamic Payload W	25 lbf	9.1 kg



Flow controls recommended for nearly all applications



HOW TO ORDER : BASIC UNIT

METRIC BASIC MODEL STROKE SEALS

M

ET-4

-

V

METRIC M

STROKE Inch: 1.0" - 12.0" @ 1.0" increments
mm: 25.4 - 304.8 @ 25.4mm increments

SEALS V - Viton (standard Buna - N)

SAMPLE ORDER: ET-4-1.0

(Ex) ET-4 Thruster with 1 inch stroke

**CUSTOM DESIGNS ALWAYS AVAILABLE
PLEASE CONTACT US FOR INFORMATION**

ACCESSORIES (order separately)

MAGNETIC SENSOR KITS * (Cylinder clamp mounted)

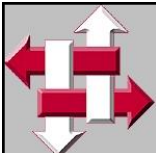
CSK-N - Magnetic Sensor NPN w/ quick disconnect Kit
CSK-P - Magnetic Sensor PNP w/ quick disconnect Kit
CSK-R - Magnetic Sensor REED w/ quick disconnect Kit
* Sensors Kits include (2) sensors and (2) cylinder clamps and (2) 5 meter cables.

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

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length



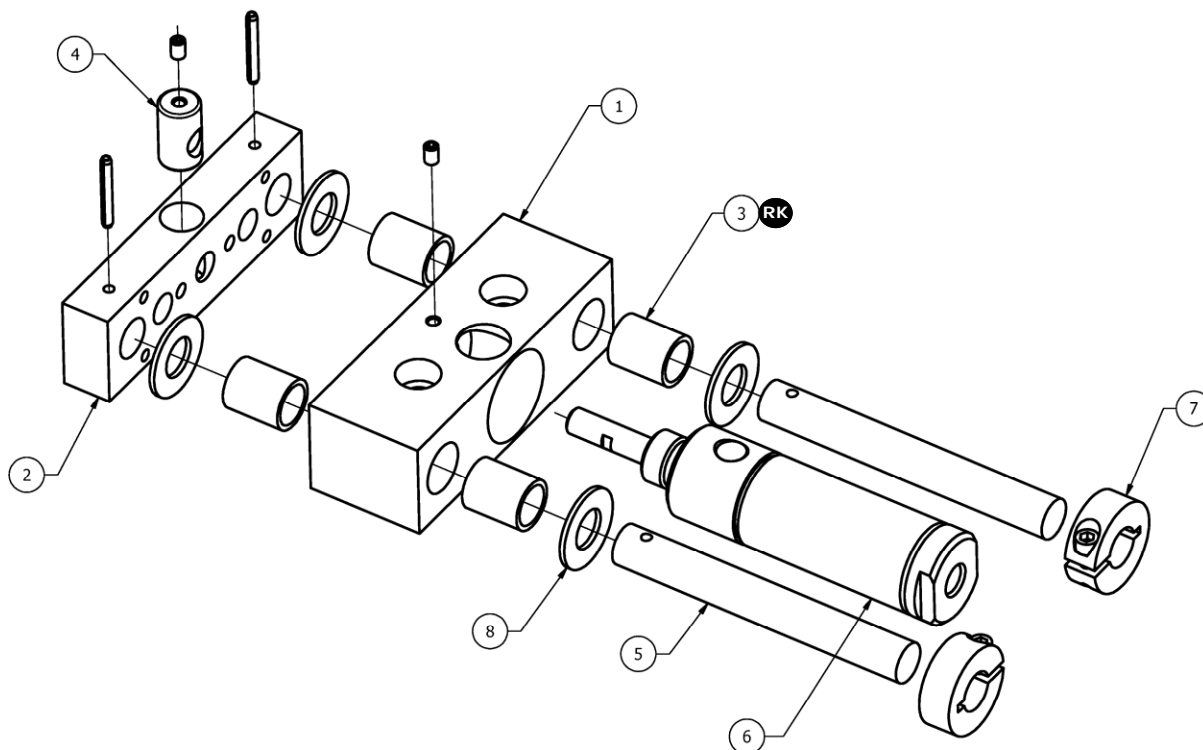
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DURA-THRUST
VERTICAL - LIGHT DUTY HORIZONTAL
LINEAR THRUSTER



ET-SERIES

EXPLODED VIEW



PARTS LIST

HOW TO ORDER PARTS

ITEM	REQ'D	NAME	ET-1	ET-2	ET-3	ET-4	OPTIONS
1	1	Main Body	ET-101	ET-201	ET-301	ET-401	
2	1	End Block	ET-102	ET-202	ET-302	ET-402	
3	4	Bushing *	ET-103	ET-203	ET-303	ET-403	
4	1	Connector	ET-104	ET-204	ET-304	ET-404	
5	2	Rod	ET-105	ET-205	ET-305	ET-405	-S ¹
6	1	Air Cylinder	ET-106	ET-206	ET-306	ET-406	-S ¹ -V ²
7	2	Locking Collar *	XLC-0250	XLC-0375	XLC-0500	XLC-0750	
8	4	Shock Pad *	XSP-0250	XSP-0375	XSP-0500	XSP-0750	
RK	1	Repair Kit **	ET-1-RK	ET-2-RK	ET-3-RK	ET-4-RK	

METRIC

PART NUMBER

M

-

OPTIONS

SAMPLE ORDER: ET-105-2.0

Ex) ET-1 Rod with 2 inch stroke

OPTIONS (see product pages for information)

¹ - S = Stroke

² - V = Viton Seals

NOTES

* - Metric code not required

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

FOR MORE INFORMATION CALL US AT 1-800-588-0174 OR 860-589-6364 FAX: 860-589-6235

VISIT US AT www.RIMFG.com

6/25/07

3-2.7