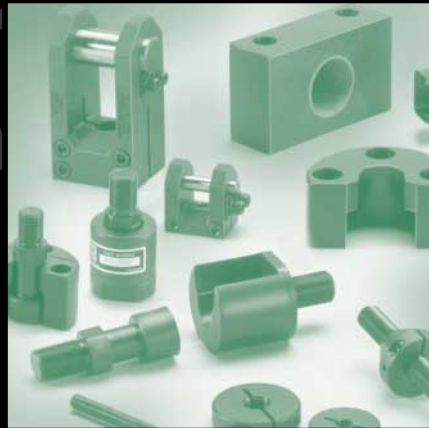




E&ESP



Linear/Rotary Motion Devices



Material Handling



Cylinder Accessories



Machine Tool Components

Standard Products

English & Metric

Design Manual

Linear/Rotary Motion Devices

How Rota-Shaft Works	A-2
Harmonic Cam Track, Clamping Forces	A-3, A-4
Custom Options, Switches, Sensors	A-5
Non-Powered Rota-Shaft Clamps	A-6, A-7
Mini Non-Powered Rota-Shaft Clamps	A-8, A-9
Non-Powered Rota-Shaft Clamps for J.I.C. Flange Mount Cylinder	A-10, A-11
Powered Rota-Shaft Clamps w/Cylinders	A-12 – A-19
Powered Locking Rota-Shaft (LRS) w/Cylinders	A-20 – A-23
Internal Rota-Shaft for Air or Hydraulic Powered Cylinders	A-24, A-25
Internal Powered Double Rod End Rota-Shaft	A-26, A-27
Mini-Powered Rota-Shafts/1.12" Bore	A-30, A-31
Double Rod End Mini-Powered Rota-Shafts/1.12" Bore.	A-32, A-33
New Threaded Body Rota-Shaft for Hydraulic Applications.	A-34, A-35
Low Profile Rota-Shaft	A-38, A-39
Optional Mounting Styles - NFPA or J.I.C..	A-41
Rota-Shaft Accessories, Parts	A-42, A-43
Rotary Lock	A-44, A-45

Material Handling

Rollers	B-2 – B-11
"No Ding" Conveyor Rolls	B-12
Tires - Urethane Face	B-14
Bumpers	B-15 – B-17
Unidure Cushion	B-18

Cylinder Accessories

Cylinder Clevis	C-2 – C-4
Trunnion Block	C-5
Self-Aligning Couplers	C-6, C-7
Couplers	C-8, C-9
Adapters	C-10, C-11
Switch Rods & Switch Dogs	C-12, C-13
Switch Assemblies	C-13
Switch Brackets	C-14 – C-18
Adjustable Switch Brackets	C-19 – C-21
Metric Conversion Table	C-22

Machine Tool Components

Coaxial Leveling and Anchoring	D-2
Leveling Jacks	D-2, D-3
Leveling Screws/Screw-Mounts	D-4
Swing Bolts	D-5
Micro Adjustment Dials	D-6 – D-9
Adjusting Screws	D-10
Fixture Pins	D-11
Tolerance Data & Standard Specifications	D-12
Head Type Fixture Pin w/Snap Ring	D-13
Clevis Pins	D-14
Headless Fixture Pin w/Retainer	D-15
Headless Fixture Pin w/Double Retainer	D-16
Headless Fixture Pin w/Double Snap Ring	D-17
Headless Fixture Pin w/Set Screw	D-18
Headless Fixture Pin w/Double Set Screw	D-19
Headless Fixture Pin w/Double Cotter Pin	D-20
Head Type Fixture Pin w/Set Screw Flat & Whistle Notch	D-21
Head Type Fixture Pin w/Retainer	D-22
Fixture Pin Retainers (Inch)	D-23

Linear/Rotary Motion

Material Handling

Cylinder Accessories

Machine Components

Machine Tool Components (Continued)

Register Pins	D-25, D-26
VEE Transfer Bar Guide Rolls/Load Ratings & Note Referring to Specials	D-27 – D-29
Square Transfer Bar Guide Rolls	D-30
Radius Transfer Bar Guide Rolls/Load Ratings & Note Referring to Specials	D-31 – D-33
Fixture Keys	D-34
Adjusting Blocks	D-35, D-36
Rest Pads	D-37 – D-39, D-55
Locating and Positioning Blocks	D-40
Grippers and Swivots	D-41 – D-54
Limit Switch Actuators/Actuator Parts/Application	D-56, D-57

Metric Components

Metric Non-Powered Rota-Shaft Clamps	E-2 – E-3
Metric Non-Powered Rota-Shaft Clamps for I.S.O. Flange Mount Cylinder L/R	E-4
Metric Non-Powered Rota-Shaft Clamps for I.S.O. Flange Mount Cylinder R/L	E-5
Metric Air Powered Rota-Shaft Clamps with Cylinders L/R	E-6
Metric Hydraulic Powered Rota-Shaft Clamps with Cylinder L/R	E-7
Metric Air Powered Rota-Shaft Clamps with Cylinders R/L	E-8
Metric Hydraulic Powered Rota-Shaft Clamps with Cylinder R/L	E-9
Metric Air Powered Internal Rota-Shaft	E-10
Metric Air Powered Internal Rota Shaft with Double Rod End	E-11
Metric Hydraulic Powered Internal Rota-Shaft	E-12
Metric Hydraulic Powered Internal Rota-Shaft with Double Rod End	E-13
Metric Threaded Body Rota-Shaft for Hydraulic Applications	E-14
Metric Low Profile Rota-Shaft	E-15
Metric Round Molded Bumpers	E-18
Metric Cylinder Clevis	E-20
Metric Trunnion Block	E-21
Metric Self-Aligning Couplers	E-22, E-23
Metric Couplers	E-24 – E-27
Metric Adapters	E-28
Metric Switch Dogs	E-29
Metric Switch Rods	E-29
Metric Switch Assemblies	E-29
Adjustable Proximity Switch Brackets	E-30, E31
Switch Bracket for Metric Hydraulic Cylinders	E-32, E-33
Switch Bracket for Metric Air Cylinders	E-34 – E-36
Metric Leveling Jacks	E-38, E-39
Metric Swing Bolts	E-40
Metric “L” Mount Micro Adjustment Dial	E-41
Metric Round Mount Micro Adjustment Dial	E-41
Metric Micro Adjustment Dial Side Mount	E-42
Metric Micro Adjustment Dial New Britain	E-42
Metric Micro Adjustment Dial “R” Mount	E-43
Metric Micro Adjustment Dial “T” Mount	E-43
Metric Fixture Pins	E-44
Metric Fixture Pins Head Type w/Snap Ring	E-45
Metric Clevis Pins	E-46
Metric Headless Fixture Pin w/Retainer	E-47
Metric Headless Fixture Pin w/Double Retainer	E-48
Metric Headless Fixture Pin w/Double Snap Ring	E-49
Metric Set Screw Fixture Pin	E-50
Metric Set Screw Fixture Pin w/Double Flat	E-51
Metric Headless Fixture Pin w/Double Cotter Pin	E-52
Metric Head Type Fixture Pin w/Set Screw Flat & Whistle Notch	E-53
Metric Head Type Fixture Pin w/Retainer	E-54
Metric Retainers	E-55
Metric Rest Pads	E-56 – E-58
Metric Locating, Positioning Blocks & Fixture Keys	E-59
Metric Grippers and Swivots	E-60 – E-67
Metric Round Rest Pads	E-67

E&E Special Products

Terms and Conditions of Sale



E&E Quality Policy

E&E manufactures and supplies only quality products. If for some reason you have a problem with one of our items, please call us.

Application Assistance

E&E maintains a complete engineering and technical service department to work with customers. Please feel free to call upon their knowledge and experience to help you..or fill in the attached postcard to have a factory salesman, in your area, call upon you.

Engineering Changes

Product improvement is a continuing evolution at E&E, and specifications and engineering data are subject to change. If information is critical to your design, it is suggested that you contact the E&E Engineering Department to determine current information.

Return Of Product

Authority for return of product, whether under warranty or otherwise, must be obtained from E&E. Such authority shall be granted for each reasonable request. Unless such authority has been granted, shipment will be refused. All product returned should include reference to all pertinent order information including order number and part number. Cost for placing product in a salable condition will be charged to Buyer. Only product which has been invoiced to the Purchaser within one (1) year of his request for return of same, will be considered for return. Product accepted for return is subject to a re-stocking charge of 20% of the billing invoice, plus all transportation charges incurred by E&E .

Cancellation And Termination

Any order placed with E&E can be cancelled by the Buyer only upon payment of reasonable cancellation charges which shall take into account expenses already incurred, and commitments made, by E&E.

Payment Terms

Terms to customers of satisfactory credit are Net 30 Days from date of invoice. To avoid delay in filling orders, Purchasers without previous experience with E&E should include credit information or references with their first order, or remit cash.

Shipping Terms

All accounts will be F.O.B. Shipping Point and shipped lowest cost transportation, as determined by E&E.

Damage Claims

All claims for breakage and damage, whether concealed or obvious, must be made to the Carrier by the Buyer as soon as possible after receipt of the shipment. E&E will be glad to render the Buyer reasonable assistance in the securing of adjustment for such damage claims.

Price Change

Prices shown in any E&E literature are subject to change without notice and are not to be construed as a definite quotation or offer to sell by E&E. Such literature is maintained only as a source of general information; and any prices shown therein are subject to confirmation with a specific purchase.

Taxes

The Buyer shall pay or reimburse Seller for all sales, use, excise or similar taxes.

Warranty

Seller warrants products manufactured by it to be free from defects in materials and workmanship for a period of one (1) year from date of shipment to Purchaser. If, within this period, any such products shall be proved to Seller's reasonable satisfaction, to be so defective, they shall be repaired or replaced at Seller's option. This warranty shall not apply to (A) products not manufactured by Seller, (B) products which have been repaired or altered by other than the Seller so as, in its judgement, to affect same adversely, (C) products which have been subjected to negligence, accident or damage by circumstances beyond Seller's control, or to improper installation or storage, or to other than normal use with respect to products not manufactured by Seller. Warranties do not cover reimbursement for transportation, removal, installation, or other expenses which may be incurred in connection with repair or replacement.

Standards

For years, E&E Special Products has produced a wide range of both standard and custom accessories to complement a host of J.I.C. and industry Standard cylinders. If you use cylinders, regardless of their origin, chances are you will have to attach them to a driven member.

E&E offers a variety of off-the-shelf components to accomplish this..and more. The following are our standard accessories and attachments. Should you require custom designed accessories, we can make or modify them to your specifications:

Cylinder Clevis

- Switch Brackets
- Adjustable Brackets
- Couplers & Adapters
- Switch Dogs & Rods

Specials

E&E will make to order or modify any item which is similar to our standard component parts. Prints or sketches must be furnished with a request for quote.

How To Order

Please list the part number (item code) and the quantity of the items required. No other description is necessary.

LINEAR/ROTARY MOTION DEVICES



Rota-Shaft clamps are engineered to provide a controlled combination of rotary/linear motion in machine tool clamping and fixturing. In applications requiring this compound motion, Rota-Shaft gives you the flexibility of a variety of motions with one clamp – which means one specifically-designed clamp can be used in many different applications with the proven engineering, price, and off-the-shelf availability of a standard component.

HOW ROTA-SHAFT WORKS

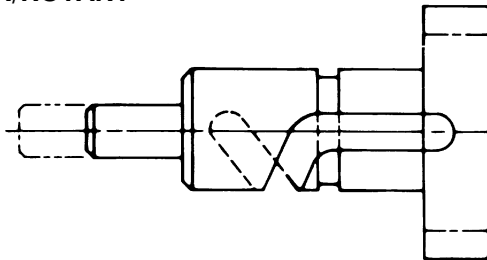
Rota-Shaft consists essentially of four parts: a rod, a housing with cam track, a hardened pin and bushing, and in powered models, a mounting adaptor plate. The parts can be assembled in a variety of ways to provide specific combinations of linear and rotary motion.

Changing straight travel distance or amount of rotation requires altering the stroke of the cylinder. This can be achieved by placing a spacer between the cylinder head block and the Rota-Shaft mounting plate.

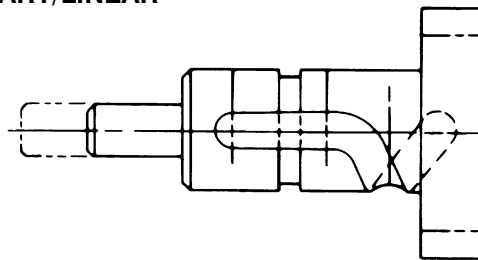


Rota-Shaft motion is controlled by the pin and bushing moving through a harmonically-machined cam track in the bushing. By changing the relative position of the pin and bushing at the beginning and end of the stroke, you change both the straight travel distance and amount of rotation.

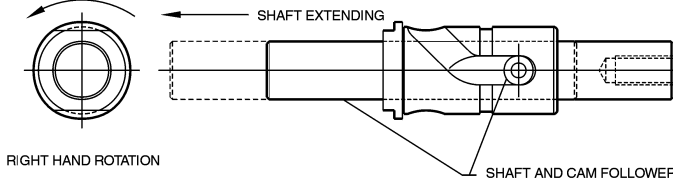
LINEAR/ROTARY



ROTARY/LINEAR



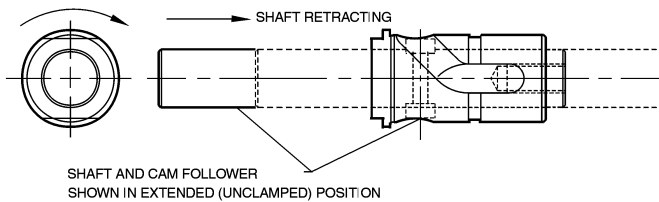
RIGHT HAND ROTATION
THE SHAFT WILL TURN COUNTER-CLOCKWISE
AS IT EXTENDS (UNCLAMPS)
WHEN LOOKING DOWN AT THE BLANK ROD END,



Linear/Rotary

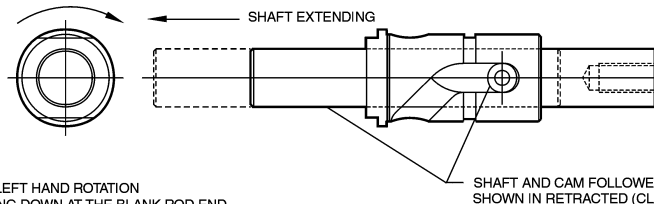
Rotary/Linear

WHEN LOOKING DOWN AT THE BLANK ROD END,
THE SHAFT WILL TURN CLOCKWISE
AS IT RETRACTS (CLAMPS)

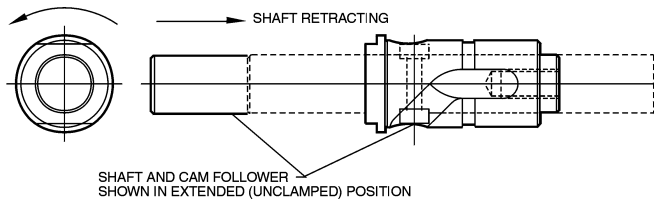


SHOWN IN RETRACTED (CLAMPED) POSITION

LEFT HAND ROTATION
WHEN LOOKING DOWN AT THE BLANK ROD END,
THE SHAFT WILL TURN CLOCKWISE
AS IT EXTENDS (UNCLAMPS)

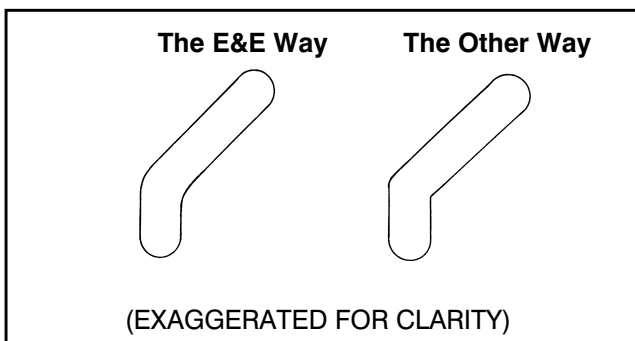


LEFT HAND ROTATION
WHEN LOOKING DOWN AT THE BLANK ROD END,
THE SHAFT WILL TURN COUNTER-CLOCKWISE
AS IT RETRACTS (CLAMPS)



ROTATION

Right Hand Rotation – the direction in which the clamping details rotate when traveling through the rotational portion of the cam track into the straight travel, clamping section.



HARMONICALLY-GENERATED CAM TRACK

The cam tracks machined into all Rota-Shafts are controlled by a precision, 4-axis, CNC-generated helix. This minimizes clearances between the hardened steel bushing and the cam track and eliminates the chance of an imperfect fit. It also ensures a smooth, impact-free transition from linear to rotary motion.

The geometrics involved in generating a perfect harmonic path require the calculation and plotting of the radial transition of each bushing to prevent flat spots on cam surfaces. To determine specific degrees of shaft rotation, this factor must be included. E&E engineers will gladly assist you with this calculation.

Clamping Forces/ Typical Travel Patterns



CLAMPING FORCES

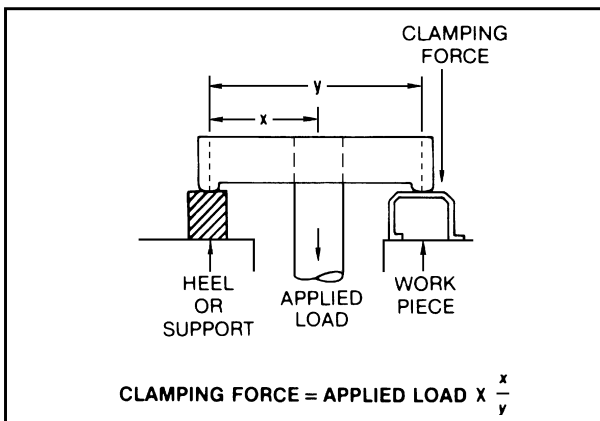
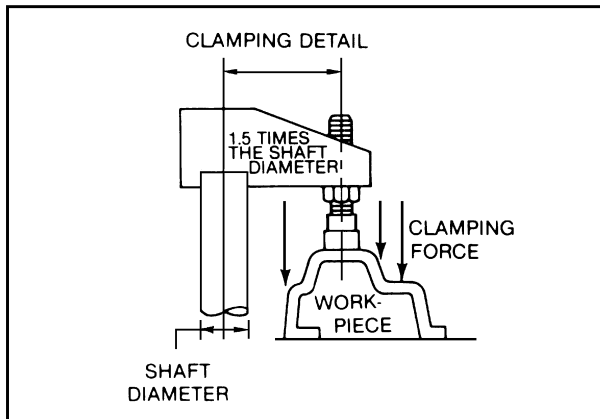
In heeled clamping applications, the applied load is limited only by mechanical connections and the driven member.

To assist in the sizing and selection of Rota-Shafts the following maximum Clamping Forces have been calculated.

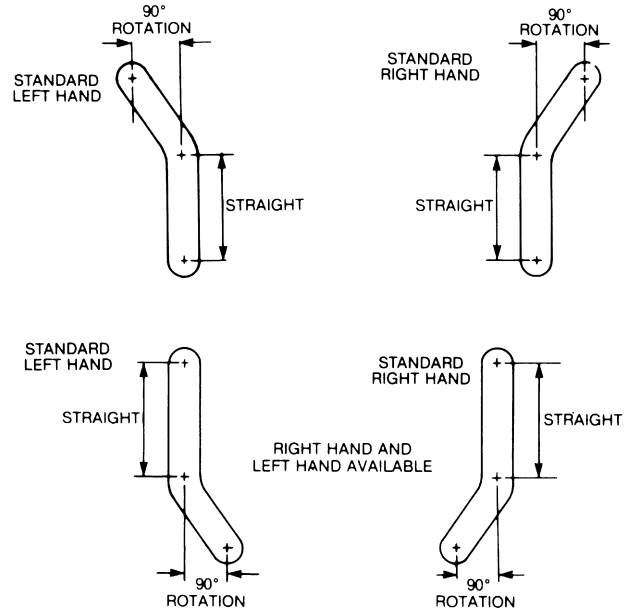
These values are based on a clamping detail offset 1.5 times the shaft diameter.

To calculate maximum recommended loads for applications requiring longer clamping details, divide the appropriate maximum load value shown below by the length of the clamping detail, e.g., a 5" long clamping detail used with a 1-1/8" diameter shaft would have a maximum recommended load of 1092 lbs.

$$\frac{3250}{5 \div (1.5 \times 1.12)}$$

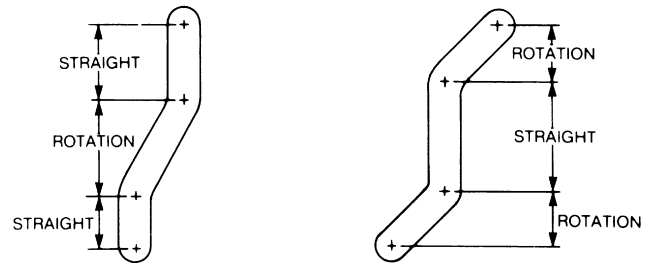


TYPICAL TRAVELS



ALSO AVAILABLE ON REQUEST

Or, choose any of our clamp configurations and lay in your own requirements for travel and rotation. Our Engineering and Technical Service Department will be glad to assist in designing the best clamp for your application, and should be consulted to insure your requirements are attainable.



CYLINDER BORE	CLAMPING FORCE		
	PRESSURE (PSIG)		
	80 PUSH/PULL	100 PUSH/PULL	200 PUSH/PULL
1-1/2	142/117	177/146	354/292
2.0	252/228	314/284	628/568
2-1/2	393/368	491/460	982/920
3-1/4	664/601	830/751	1,660/1,502

SHAFT DIAMETER	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/2"	2"
MAXIMUM LOAD	250	475	1000	1450	1600	2550	3250	5750	9950

Custom Options, Switches and Sensors



JUST A FEW OF THE THOUSANDS OF CUSTOM-DESIGNED ROTA-SHAFTS WE'VE MADE FOR OTHERS IN BOTH POWERED AND NON-POWERED MODELS

Linear/Rotary Motion



CYLINDER SENSOR - PROBE LENGTH CHART

BORE	CLAMP ROD DIA.	STROKE TO GO	SPACER HEIGHT	PROBE LENGTH
1-1/2	3/4	7/16	.690	1.250
	CAP	3/16	.470	1.250
2	3/4	7/16	.581	1.250
	1-1/8	7/16	.690	1.250
	CAP	3/16	1.050	2.062
2-1/2	3/4	1/2	.297	1.250
	1-1/8	1/2	.422	1.250
	CAP	3/16	.781	2.062
3-1/4	1-1/8	3/4	.859	2.062
	CAP	25/64	.547	2.062

CYLINDER SENSORS/SWITCHES

Should the Rota-Shaft model you are considering not be standardly available machined for switches, please consult the factory for available options. Cylinders may be provided to accept commonly used switches. Switches and spacers are not included unless specified. Stroke to Go is considered standard.

CAM TRACK COVER

To keep chips out of cam track when Rota-Shaft is mounted in an exposed position.

CLAMPING FINGERS

E&E can custom-fabricate clamping details to fit your application requirements.

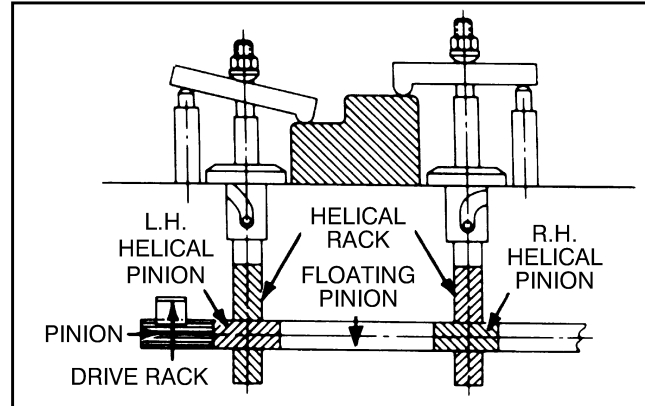


Non-Powered Rota-Shaft Clamps



A wide selection of standard sizes with $\frac{3}{4}$ ", 1", 1 1/2", and 2" dia. shaft to accommodate light-or heavy-duty clamping applications. 90° right- or left-hand standard.

EQUALIZING HEELED CLAMPS FOR NON-POWERED ROTA-SHAFTS



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housings
- Precision cam roller, hardened and ground
- High alloy machineable steel shafts
- Housing groove provides 360° access for easy lubrication
- Tapped holes in shafts provide easy attachment to cylinders or other means of actuation
- Opposite shaft end is blank for easy customer modification
- Milled flats provide easy and economical mounting using standardly available components
- Wide variety of standard sizes for virtually limitless range of applications – from small irregulars to large uneven workpieces
- Black oxide finish
- Right hand and left hand rotation are both standard

APPLICATION

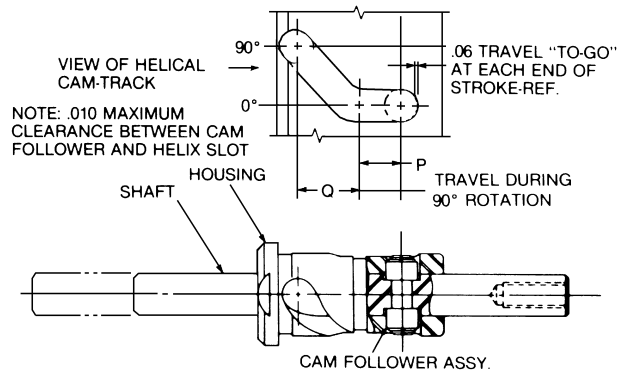
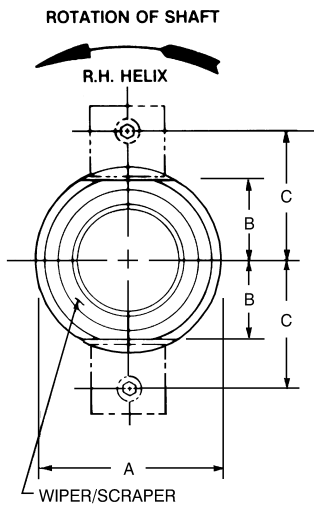
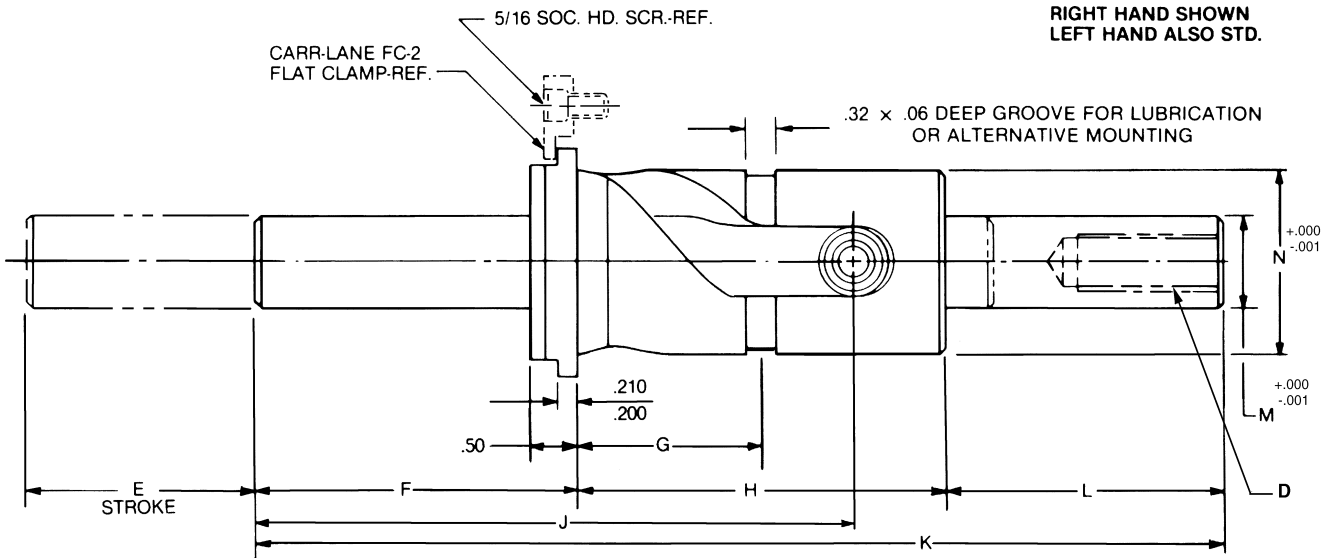
Typically used in pull to clamp situations where a variety of actuation methods can be implemented.



Non-Powered Rota-Shaft Clamps



Linear/Rotary Motion



click on box to download CAD file

2DWG	3DWG	STP	CAD FILE NAME	PART NUMBER	DIMENSIONS														
					A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
			E75206	E75206 R/L	2.00	.75	1.406	7/16-20 TAP 1.00 DEEP	2.12	2.50	1.50	3.12	5.00	8.00	2.38	.750 DIA.	1.499 DIA.	1.00	1.12
			E11500	E11500 R/L	2.50	1.06	1.718	5/8-18 TAP 1.50 DEEP	2.50	3.50	2.00	4.00	6.50	10.50	3.00	1.000 DIA.	1.999 DIA.	1.00	1.50
			E14207	E14207 R/L	2.50	1.06	1.718	3/4-16 TAP 1.50 DEEP	2.50	3.50	2.00	4.00	6.50	10.50	3.00	1.500 DIA.	2.249 DIA.	1.00	1.50
			E2000	E2000 R/L	3.50	1.56	2.218	1-14 TAP 2.00 DEEP	3.00	3.50	2.25	4.50	7.00	11.50	3.50	2.000 DIA.	2.999 DIA.	1.12	1.88

CAD Directory
Linear-Rotary\Nonpower

Mini Non Powered Rota Shaft Clamps



A wide selection of standard sizes with 3/8", 1/2", 5/8" dia. shafts to accommodate light-duty clamping applications. 90° right- or left-hand standard.

DESIGN FEATURES

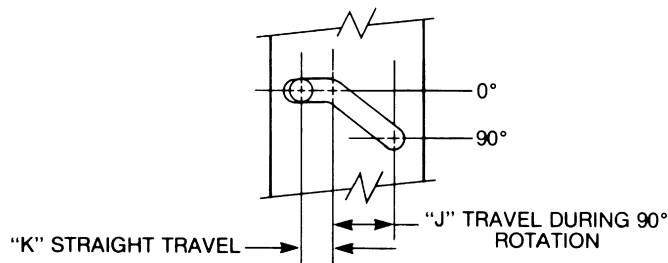
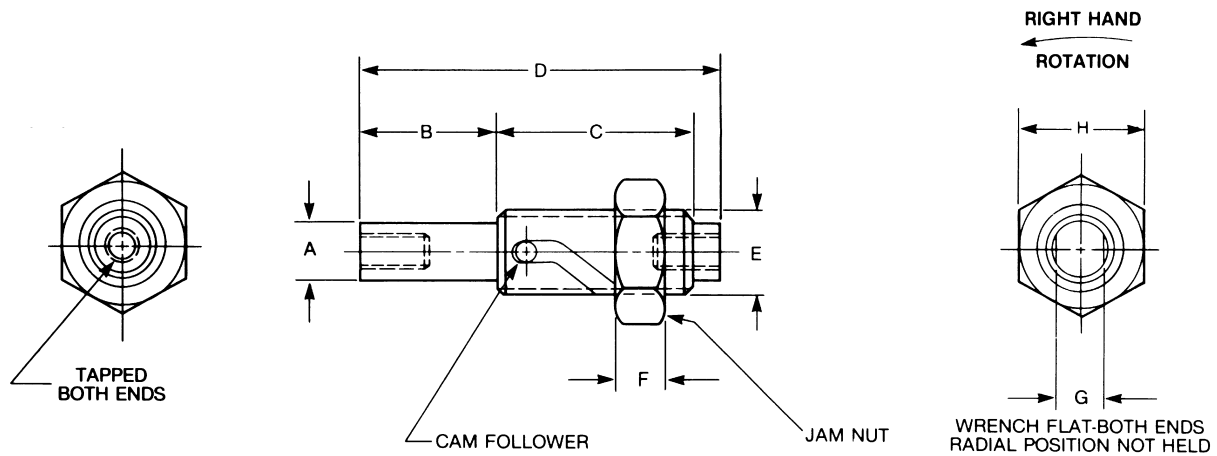
- Fully-threaded body housing for easy set-up
- Hardened housing
- Precision machined cam track
- Precision cam follower, hardened and ground
- High alloy machineable steel shaft
- Lock nut provided
- Black oxide finish
- Right hand & left hand rotation are both standard

APPLICATION

Ideally suited for applications with small parts, limited accessibility. Can be actuated by plungers, cylinders, or various other linear actuation devices. Typically used for positioning, minimal holding in limited spaces.

Mini Non Powered Rota Shaft Clamps

Linear/Rotary Motion



VIEW OF HELICAL CAM TRACK

RIGHT HAND SHOWN, LEFT HAND ALSO STANDARD

Click on box to download CAD File			CAD FILE NAME	PART NUMBER	TAP BOTH ENDS	DIMENSIONS									
						A	B	C	D	E	F	G	H	J	K
2DWG	3DWG	STP	E12510	E12510 (R/L)	1/4-28 .50 DP	.371 ±.001	1.00	1.50	2.75	5/8-18 THD.	.38	.31	.94	.63	.25
2DWG	3DWG	STP	E12610	E12610 (R/L)	5/16-24 .62 DP	.496 ±.001	1.25	1.75	3.25	3/4-16 THD.	.44	.43	1.12	.63	.50
2DWG	3DWG	STP	E12710	E12710 (R/L)	3/8-24 1.00 DP	.621 ±.001	1.50	2.00	3.75	1-14 THD.	.56	.56	1.50	.63	.62

Non Powered Rota Shaft Clamps For J.I.C. Flange Mount Cylinder

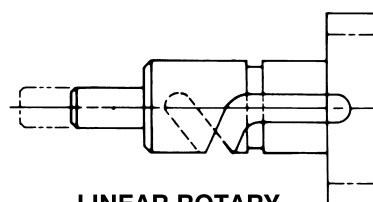
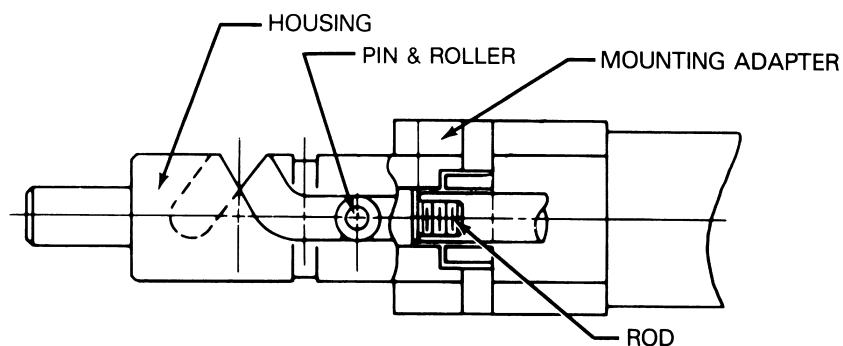


MOST VERSATILE CLAMP ON THE MARKET

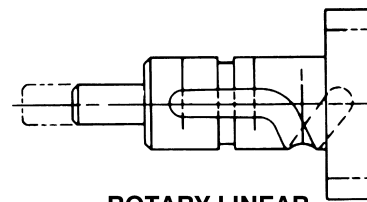
- ❑ Mounts to standard J.I.C. flange mount cylinder
- ❑ One standard clamp will accommodate a wide range of applications with varying degrees of rotation, up to 180°, simply by altering cylinder stroke
- ❑ Clamping rod is independent of cylinder rod

DESIGN FEATURES

- ❑ Precision machined cam track
- ❑ Housing hardened and ground
- ❑ Precision cam roller hardened and ground
- ❑ High alloy machineable steel shaft
- ❑ Housing groove provides 360° access for easy lubrication
- ❑ Threaded shaft provides for easy attachment
- ❑ Opposite shaft end blank for easy customer modification
- ❑ Black oxide finish



LINEAR ROTARY
MODELS: EP-750
EP-112

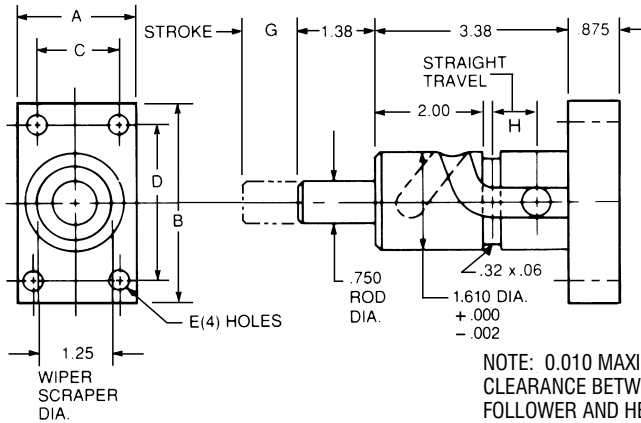


ROTARY LINEAR
MODELS: EP-057
EP-211

Non Powered Rota Shaft Clamps For J.I.C. Flange Mount Cylinder



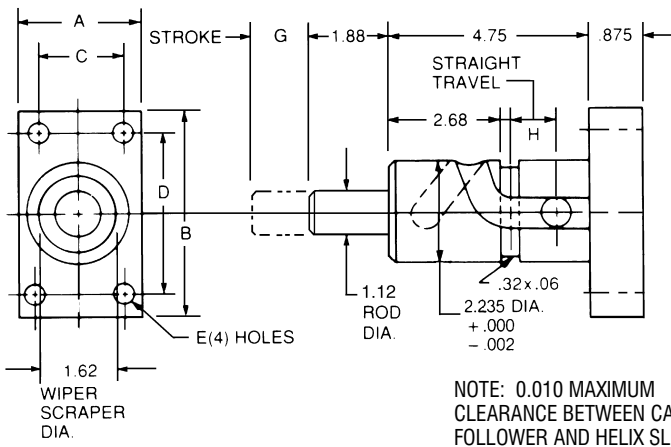
Linear/Rotary Motion



EP-750 & EP-057 SERIES

(LINEAR/ROTARY SHOWN)

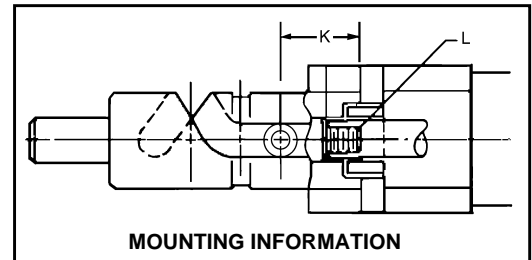
This series is available with 0° to 180° rotation, determined by cylinder stroke or rod travel. Linear/Rotary or Rotary/Linear standard.



EP-112 & EP-211 SERIES

(LINEAR/ROTARY SHOWN)

This series is available with 0° to 180° rotation, determined by cylinder stroke or rod travel. Linear/Rotary or Rotary/Linear standard.



			CAD FILE NAME	PART NUMBER	CYLINDER BORE (IN.)	DIMENSIONS								
						A	B	C	D	E	G	H	K	L
2DWG	3DWG	STP	EP75015	EP-750-15 (R/L)	1-1/2	2.0	3.38	1.43	2.75	.32	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP75020	EP-750-20 (R/L)	2.0	2.50	4.12	1.84	3.38	.38	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP75025	EP-750-25 (R/L)	2-1/2	3.0	4.62	2.19	3.88	.38	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP11225	EP-112-25 (R/L)	2-1/2	3.0	4.62	2.19	3.88	.38	*	*	1.810	3/4-16
2DWG	3DWG	STP	EP11232	EP-112-32 (R/L)	3-1/4	3.75	5.50	2.76	4.68	.44	*	*	1.810	3/4-16
2DWG	3DWG	STP	EP05715	EP-057-15 (R/L)	1-1/2	2.0	3.38	1.43	2.75	.32	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP05720	EP-057-20 (R/L)	2.0	2.50	4.12	1.84	3.38	.38	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP05725	EP-057-25 (R/L)	2-1/2	3.0	4.62	2.19	3.88	.38	*	*	1.370	7/16-20
2DWG	3DWG	STP	EP21125	EP-211-25 (R/L)	2-1/2	3.0	4.62	2.19	3.88	.38	*	*	1.810	3/4-16
2DWG	3DWG	STP	EP21132	EP-211-32 (R/L)	3-1/4	3.75	5.50	2.76	4.68	.44	*	*	1.810	3/4-16

* REFER TO COMPARABLE UNIT WITH CYLINDER FOR CYLINDER STROKE/ROTATION/STRAIGHT TRAVEL RELATIONSHIP

ORDERING INFORMATION

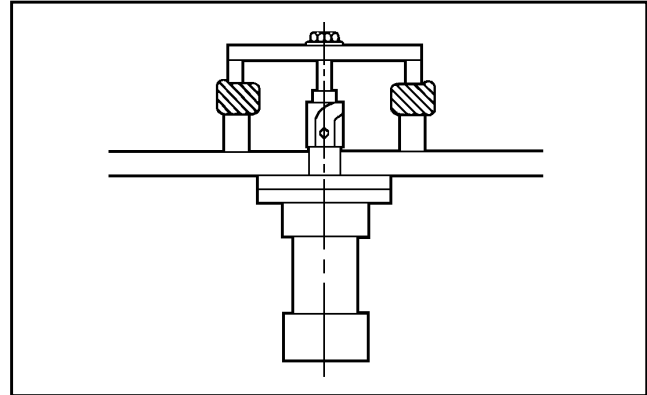
EP 750 15 (R/L)
 Powered Rota-Shaft Series Cylinder Bore Rotation
 R = Right
 L = Left

CAD Directory
 Linear-Rotary\Nonpower

Powered Rota-Shaft Clamps with Cylinders



A standard clamping package providing up to 165° right- or left-hand rotation, linear/rotary sequence. Independent 3/4" or 1 1/8" dia. shafts are powered by 1 1/2", 2", 2 1/2", or 3 1/4" bore standard J.I.C. cylinders.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- High alloy machineable steel shaft
- Housing groove provides 360° access for easy lubrication
- Shaft end is blank for easy customer modification
- Uses standard J.I.C. cylinders
- Variety of shaft diameters and bore sizes available
- Air or hydraulic versatility
- Additional rotations and strokes available; consult factory
- Various rotations available
- Available machined to accept standard proximity switches. For correct probe length see chart on page A5

APPLICATION

Typically used in pull-to-clamp situations where greater clamping forces are required.

ORDERING INFORMATION

EP	—	750	—	25	—	(A/H)	—	13	—	(R/L)	—	HP2	—	CP2	—	HS4	—	CS4
Powered Rota-Shaft		Series		2 1/2" Bore Cylinder		Cylinder A = Air ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches		Degrees of Rotation		Rotation R = Right L = Left		Head Port Position		Cap Port Position		Head Switch Position		Cap Switch Position

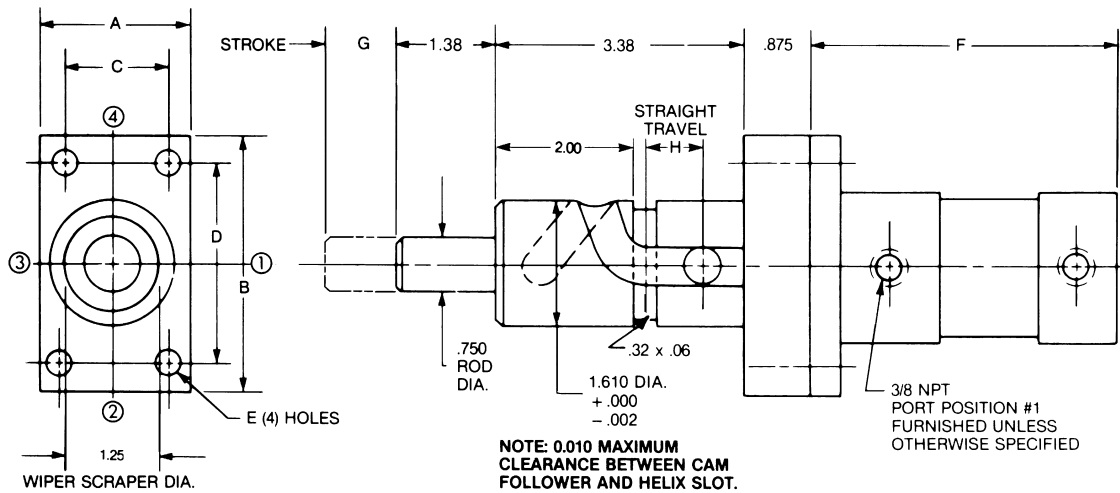
NOTE: When ordering units machined for switches please indicate port and switch locations. Switches and spacers not included. Stroke to Go considered standard. For units with SAE ports add -4804 at the end of the part number.

Powered Rota Shaft Clamps with Cylinders

Linear/Rotary



EP-750 SERIES (LINEAR/ROTARY)



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD

Linear/Rotary Motion

Click on box to
Download CAD File

CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS								
				A	B	C	D	E	F	G	H	
2DWG 3DWG STP EP750A1	EP-750-15-(A/H)-13- (R/L)	1-1/2	13°	2.0	3.38	1.43	2.75	.32	5.0	1.00	0.68	
2DWG 3DWG STP EP750A2	EP-750-15-(A/H)-50-(R/L)	1-1/2	50°	2.0	3.38	1.43	2.75	.32	5.25	1.25	0.68	
2DWG 3DWG STP EP750A3	EP-750-15-(A/H)-90-(R/L)	1-1/2	90°	2.0	3.38	1.43	2.75	.32	5.50	1.50	0.68	
2DWG 3DWG STP EP750A4	EP-750-15-(A/H)-130-(R/L)	1-1/2	130°	2.0	3.38	1.43	2.75	.32	5.75	1.75	0.68	
2DWG 3DWG STP EP750A5	EP-750-15-(A/H)-165-(R/L)	1-1/2	165°	2.0	3.38	1.43	2.75	.32	6.0	2.00	0.68	
2DWG 3DWG STP EP750A18	EP-750-15-(A/H)-180-(R/L)	1-1/2	180°	2.0	3.38	1.43	2.75	.32	6.09	2.09	0.68	
2DWG 3DWG STP EP750A6	EP-750-20-(A/H)-13-(R/L)	2.0	13°	2.50	4.12	1.84	3.38	.38	5.0	1.00	0.68	
2DWG 3DWG STP EP750A7	EP-750-20-(A/H)-50-(R/L)	2.0	50°	2.50	4.12	1.84	3.38	.38	5.25	1.25	0.68	
2DWG 3DWG STP EP750A8	EP-750-20-(A/H)-90-(R/L)	2.0	90°	2.50	4.12	1.84	3.38	.38	5.50	1.50	0.68	
2DWG 3DWG STP EP750A9	EP-750-20-(A/H)-130-(R/L)	2.0	130°	2.50	4.12	1.84	3.38	.38	5.75	1.75	0.68	
2DWG 3DWG STP EP750A10	EP-750-20-(A/H)-165-(R/L)	2.0	165°	2.50	4.12	1.84	3.38	.38	6.0	2.00	0.68	
2DWG 3DWG STP EP750A17	EP-750-20-(A/H)-180-(R/L)	2.0	180°	2.50	4.12	1.84	3.38	.38	6.09	2.09	0.68	
2DWG 3DWG STP EP750A11	EP-750-25-(A/H)-13-(R/L)	2-1/2	13°	3.0	4.62	2.19	3.88	.38	5.12	1.00	0.68	
2DWG 3DWG STP EP750A12	EP-750-25-(A/H)-50-(R/L)	2-1/2	50°	3.0	4.62	2.19	3.88	.38	5.37	1.25	0.68	
2DWG 3DWG STP EP750A13	EP-750-25-(A/H)-90-(R/L)	2-1/2	90°	3.0	4.62	2.19	3.88	.38	5.62	1.50	0.68	
2DWG 3DWG STP EP750A14	EP-750-25-(A/H)-130-(R/L)	2-1/2	130°	3.0	4.62	2.19	3.88	.38	5.87	1.75	0.68	
2DWG 3DWG STP EP750A15	EP-750-25-(A/H)-165-(R/L)	2-1/2	165°	3.0	4.62	2.19	3.88	.38	6.12	2.00	0.68	
2DWG 3DWG STP EP750A16	EP-750-25-(A/H)-180-(R/L)	2-1/2	180°	3.0	4.62	2.19	3.88	.38	6.22	2.09	0.68	

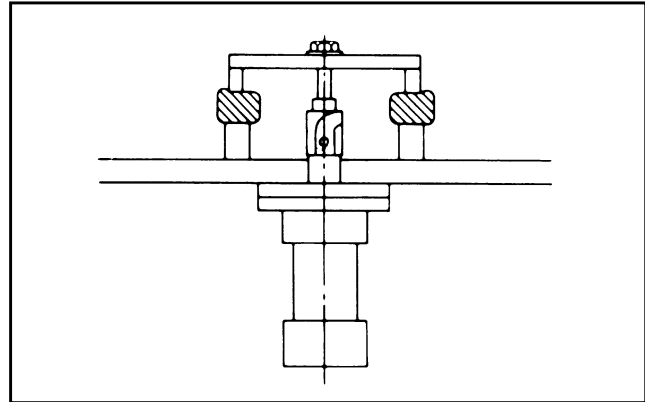
MAXIMUM RECOMMENDED OPERATING PRESSURE-200 PSI AIR ALL BORE SIZES 1 1/2" BORE=650 PSI HYD. 2" BORE=500 PSI HYD. 2 1/2" BORE=300 PSI HYD.

CAD Directory
Linear-Rotary\Power

Powered Rota-Shaft Clamps with Cylinders



A standard clamping package providing up to 180° right- or left-hand rotation, linear/rotary sequence. Independent 3/4" or 1 1/8" dia. shafts are powered by 1 1/2", 2", 2 1/2" or 3 1/4" bore standard J.I.C. cylinders.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- High alloy machineable steel shaft
- Housing groove provides 360° access for easy lubrication
- Shaft end is blank for easy customer modification
- Uses standard J.I.C. cylinders
- Variety of shaft diameters and bore sizes available
- Air or hydraulic versatility
- Additional rotations and strokes available; consult factory
- Various rotations available
- Available machined to accept standard proximity switches. For correct probe length see chart on page A5

APPLICATION

Typically used in pull-to-clamp situations where greater clamping forces are required.

ORDERING INFORMATION

EP	112	25	(A/H)	13	(R/L)	— HP2	— CP2	— HS4	— CS4
Powered Rota-Shaft	Series	2 1/2" Bore Cylinder	Cylinder A = Air ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches	Degrees of Rotation	Rotation R = Right L = Left	Head Port Position	Cap Port Position	Head Switch Position	Cap Switch Position

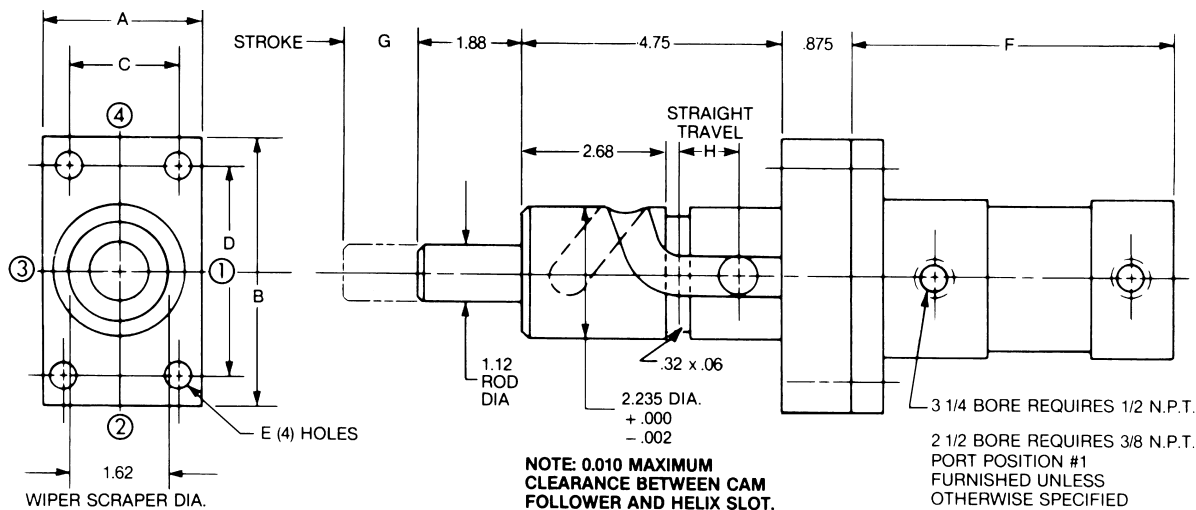
NOTE: When ordering units machined for switches please indicate port and switch locations. Switches and spacers not included. Stroke to Go considered standard.

Powered Rota Shaft Clamps with Cylinders

Linear/Rotary



EP-112 Series (LINEAR/ROTARY)



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD

Click box to
download CAD File

	CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS							
					A	B	C	D	E	F	G	H
2DWG 3DWG STP	EP112A1	EP-112-25-(A/H)-13-(R/L)	2-1/2	13°	3.0	4.62	2.19	3.88	.38	5.37	1.25	0.81
2DWG 3DWG STP	EP112A2	EP-112-25-(A/H)-40-(R/L)	2-1/2	40°	3.0	4.62	2.19	3.88	.38	5.62	1.50	0.81
2DWG 3DWG STP	EP112A3	EP-112-25-(A/H)-65-(R/L)	2-1/2	65°	3.0	4.62	2.19	3.88	.38	5.87	1.75	0.81
2DWG 3DWG STP	EP112A4	EP-112-25-(A/H)-90-(R/L)	2-1/2	90°	3.0	4.62	2.19	3.88	.38	6.12	2.00	0.81
2DWG 3DWG STP	EP112A5	EP-112-25-(A/H)-115-(R/L)	2-1/2	115°	3.0	4.62	2.19	3.88	.38	6.37	2.25	0.81
2DWG 3DWG STP	EP112A6	EP-112-25-(A/H)-140-(R/L)	2-1/2	140°	3.0	4.62	2.19	3.88	.38	6.62	2.50	0.81
2DWG 3DWG STP	EP112A7	EP-112-25-(A/H)-165-(R/L)	2-1/2	165°	3.0	4.62	2.19	3.88	.38	6.87	2.75	0.81
2DWG 3DWG STP	EP112A16	EP-112-25-(A/H)-180-(R/L)	2-1/2	180°	3.0	4.62	2.19	3.88	.38	7.00	2.87	0.81
2DWG 3DWG STP	EP112A8	EP-112-32-(A/H)-13-(R/L)	3-1/4	13°	3.75	5.50	2.76	4.68	.44	6.12	1.25	0.81
2DWG 3DWG STP	EP112A9	EP-112-32-(A/H)-40-(R/L)	3-1/4	40°	3.75	5.50	2.76	4.68	.44	6.37	1.50	0.81
2DWG 3DWG STP	EP112A10	EP-112-32-(A/H)-65-(R/L)	3-1/4	65°	3.75	5.50	2.76	4.68	.44	6.62	1.75	0.81
2DWG 3DWG STP	EP112A11	EP-112-32-(A/H)-90-(R/L)	3-1/4	90°	3.75	5.50	2.76	4.68	.44	6.87	2.00	0.81
2DWG 3DWG STP	EP112A12	EP-112-32-(A/H)-115-(R/L)	3-1/4	115°	3.75	5.50	2.76	4.68	.44	7.12	2.25	0.81
2DWG 3DWG STP	EP112A13	EP-112-32-(A/H)-140-(R/L)	3-1/4	140°	3.75	5.50	2.76	4.68	.44	7.37	2.50	0.81
2DWG 3DWG STP	EP112A14	EP-112-32-(A/H)-165-(R/L)	3-1/4	165°	3.75	5.50	2.76	4.68	.44	7.62	2.75	0.81
2DWG 3DWG STP	EP112A15	EP-112-32-(A/H)-180-(R/L)	3-1/4	180°	3.75	5.50	2.76	4.68	.44	7.75	2.87	0.81

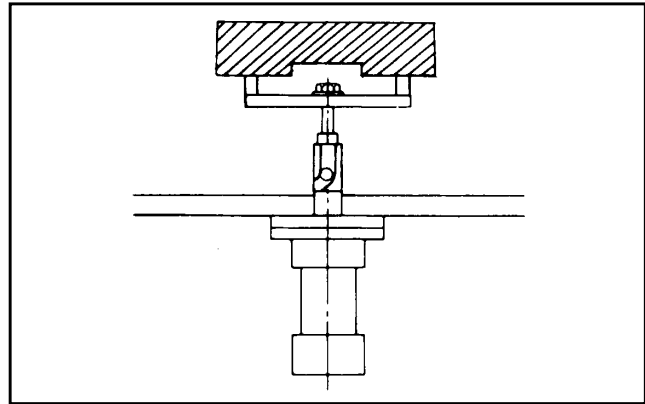
MAXIMUM RECOMMENDED OPERATING PRESSURE-200 PSI AIR ALL BORE SIZES, 2 1/2" BORE = 300 PSI HYD
3 1/4" BORE=650 PSI HYD

CAD Directory
Linear-Rotary\Power

Powered Rota-Shaft Clamps with Cylinders



A standard clamping package providing up to 90° right-or left-hand rotation, linear/rotary sequence. Independent 1 1/8" dia. shafts are powered by 2 1/2", or 3 1/4" bore standard J.I.C. cylinders.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- High alloy machineable steel shaft
- Housing groove provides 360° access for easy lubrication
- Shaft end is blank for easy customer modification
- Uses standard J.I.C. cylinders
- Variety of shaft diameters and bore sizes available
- Air or hydraulic versatility
- Additional rotations and strokes available; consult factory
- Various straight travel lengths available
- Available machined to accept standard proximity switches. For correct probe length see chart on page A5

APPLICATION

Typically used in pull-to-clamp situations where greater clamping forces are required.

ORDERING INFORMATION

EP — 057 — 25 — (A/H) — 90 — (R/L) — HP2 — CP2 — HS4 — CS4

Powered Rota-Shaft	Series	2 1/2" Bore Cylinder	Cylinder A = Air ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches	Degrees of Rotation	Rotation R = Right L = Left	Head Port Position	Cap Port Position	Head Switch Position	Cap Switch Position

NOTE: When ordering units machined for switches please indicate port and switch locations.

Switches and spacers not included. Stroke to Go considered standard.

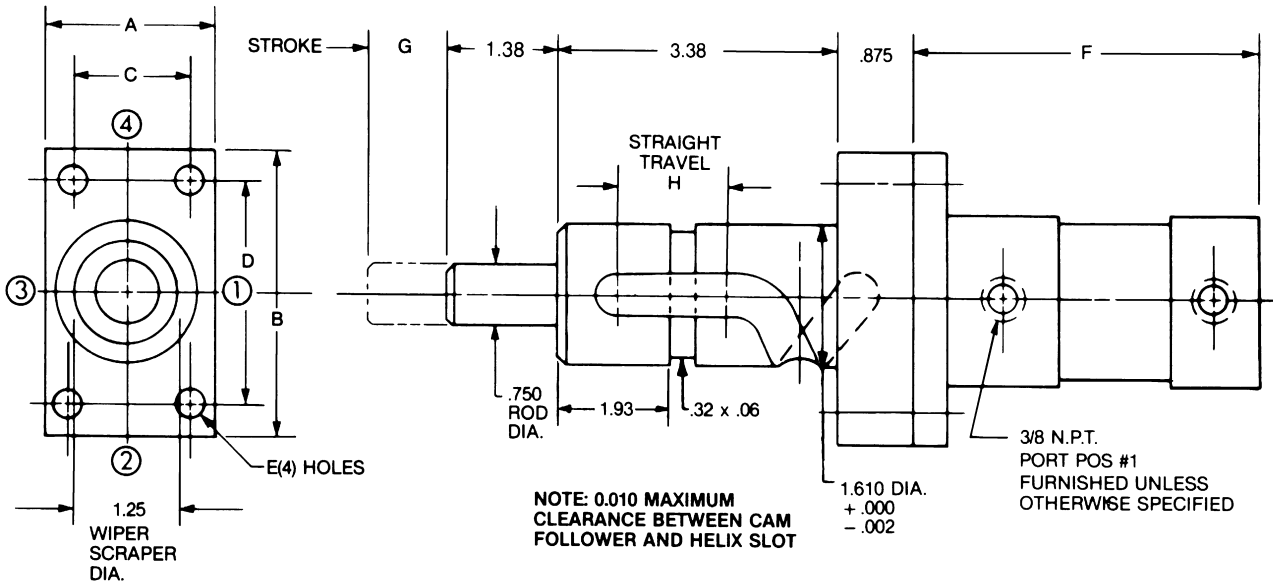
For units with SAE Ports add -4804 at the end of the part number.

Powered Rota Shaft Clamps with Cylinders

Rotary/Linear



EP-057 Series (ROTARY/LINEAR)



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD

Linear/ Rotary Motion

Click box to download CAD File

	CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS							
				A	B	C	D	E	F	G	H
.2DWG .3DWG .STP	EP057A1	EP-057-15-(A/H)-90-(R/L)-1-1/4	1-1/2	2.0	3.38	1.43	2.75	.32	5.25	1.25	0.43
.2DWG .3DWG .STP	EP057A2	EP-057-15-(A/H)-90-(R/L)-1-1/2	1-1/2	2.0	3.38	1.43	2.75	.32	5.50	1.50	0.68
.2DWG .3DWG .STP	EP057A3	EP-057-15-(A/H)-90-(R/L)-1-3/4	1-1/2	2.0	3.38	1.43	2.75	.32	5.75	1.75	0.93
.2DWG .3DWG .STP	EP057A4	EP-057-20-(A/H)-90-(R/L)-1-1/4	2.0	2.50	4.12	1.84	3.38	.38	5.25	1.25	0.43
.2DWG .3DWG .STP	EP057A5	EP-057-20-(A/H)-90-(R/L)-1-1/2	2.0	2.50	4.12	1.84	3.38	.38	5.50	1.50	0.68
.2DWG .3DWG .STP	EP057A6	EP-057-20-(A/H)-90-(R/L)-1-3/4	2.0	2.50	4.12	1.84	3.38	.38	5.75	1.75	0.93
.2DWG .3DWG .STP	EP057A7	EP-057-25-(A/H)-90-(R/L)-1-1/4	2-1/2	3.0	4.62	2.19	3.88	.38	5.25	1.25	0.43
.2DWG .3DWG .STP	EP057A8	EP-057-25-(A/H)-90-(R/L)-1-1/2	2-1/2	3.0	4.62	2.19	3.88	.38	5.50	1.50	0.68
.2DWG .3DWG .STP	EP057A9	EP-057-25-(A/H)-90-(R/L)-1-3/4	2-1/2	3.0	4.62	2.19	3.88	.38	5.75	1.75	0.93

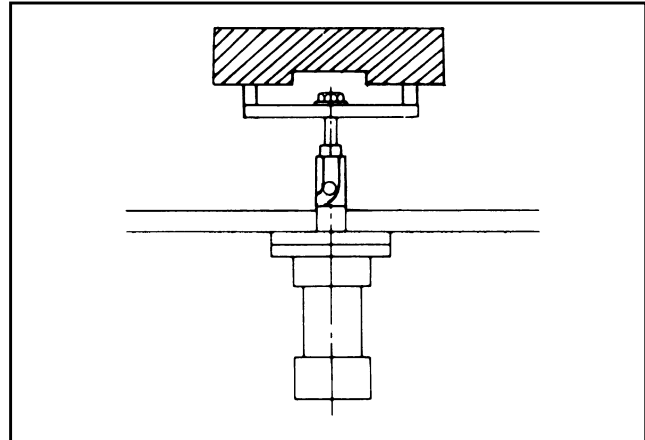
MAXIMUM RECOMMENDED OPERATING PRESSURE-200 PSI, AIR ALL BORE SIZES. 1 1/2" BORE=650 PSI HYD. 2" BORE =500 PSI HYD. 2 1/2" BORE =300 PSI HYD.

CAD Directory
Linear-Rotary\Power

Powered Rota-Shaft Clamps with Cylinders



A standard clamping package providing up to 90° right- or left-hand rotation, linear/rotary sequence. Independent 1 1/8" dia. shafts are powered by 2 1/2", or 3 1/4" bore standard J.I.C. cylinders.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- High alloy machineable steel shaft
- Housing groove provides 360° access for easy lubrication
- Shaft end is blank for easy customer modification
- Uses standard J.I.C. cylinders
- Variety of shaft diameters and bore sizes available
- Air or hydraulic versatility
- Additional rotations and strokes available; consult factory
- Various straight travel lengths available
- Available machined to accept standard proximity switches. For correct probe length see chart on page A5

APPLICATION

Typically used in push-to-clamp situations where greater clamping forces are required.

ORDERING INFORMATION

EP	211	25	(A/H)	90	(R/L)	— HP2 —	CP2	— HS4 —	CS4
Powered Rota-Shaft	Series	2 1/2" Bore Cylinder	Cylinder A = Air ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machine for Switches	Degrees of Rotation	Rotation R = Right L = Left	Head Port Position	Cap Port Position	Head Switch Position	Cap Switch Position

NOTE: When ordering units machined for switches please indicate port and switch locations. Switches and spacers not included. Stroke to Go considered standard.

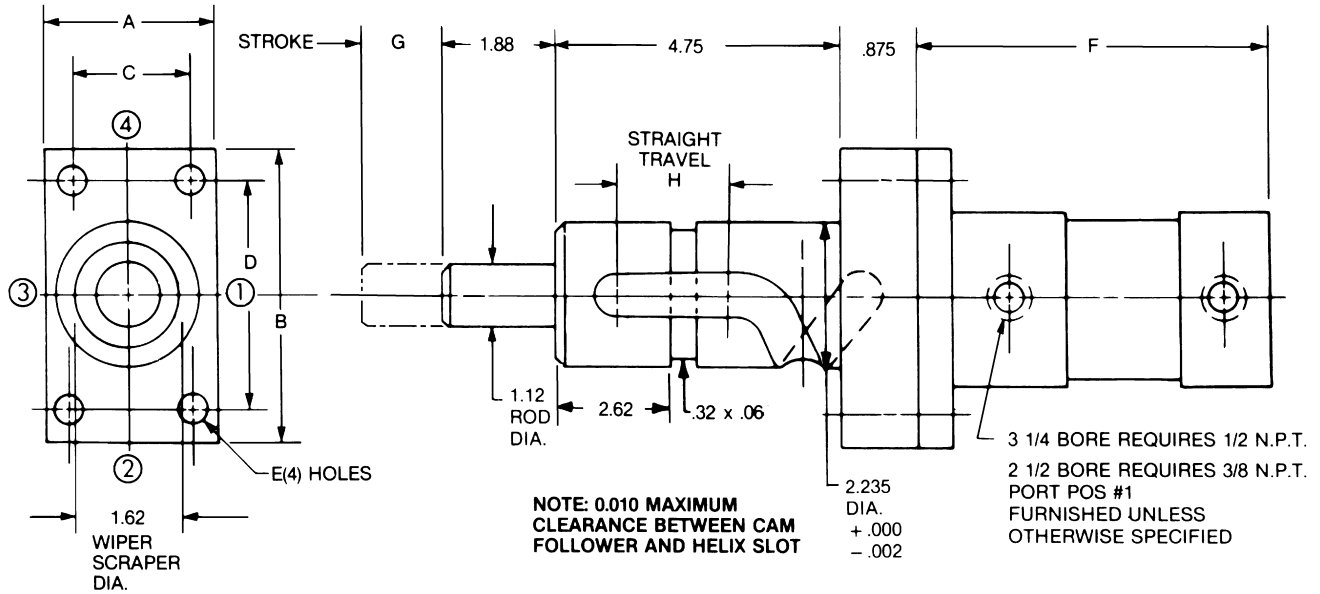
Powered Rota Shaft Clamps with Cylinders

Rotary/Linear



EP-211 Series (ROTARY/LINEAR)

Linear/Rotary Motion



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD

Click box to download CAD File

	CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS								
				A	B	C	D	E	F	G	H	
2DWG 3DWG STP	EP211A1	EP-211-25-(A/H)-90-(R/L)-1-1/2	2-1/2	3.0	4.62	2.19	3.88	.38	5.62	1.50	0.31	
2DWG 3DWG STP	EP211A2	EP-211-25-(A/H)-90-(R/L)-1-3/4	2-1/2	3.0	4.62	2.19	3.88	.38	5.87	1.75	0.56	
2DWG 3DWG STP	EP211A3	EP-211-25-(A/H)-90-(R/L)-2.0	2-1/2	3.0	4.62	2.19	3.88	.38	6.12	2.00	0.81	
2DWG 3DWG STP	EP211A4	EP-211-25-(A/H)-90-(R/L)-2-1/4	2-1/2	3.0	4.62	2.19	3.88	.38	6.37	2.25	1.06	
2DWG 3DWG STP	EP211A5	EP-211-32-(A/H)-90-(R/L)-1-1/2	3-1/4	3.75	5.50	2.76	4.68	.44	6.37	1.50	0.31	
2DWG 3DWG STP	EP211A6	EP-211-32-(A/H)-90-(R/L)-1-3/4	3-1/4	3.75	5.50	2.76	4.68	.44	6.62	1.75	0.56	
2DWG 3DWG STP	EP211A7	EP-211-32-(A/H)-90-(R/L)-2.0	3-1/4	3.75	5.50	2.76	4.68	.44	6.87	2.00	0.81	
2DWG 3DWG STP	EP211A8	EP-211-32-(A/H)-90-(R/L)-2-1/4	3-1/4	3.75	5.50	2.76	4.68	.44	7.12	2.25	1.06	

MAXIMUM RECOMMENDED OPERATING PRESSURE-200 PSI AIR ALL BORE SIZES.
2 1/2" BORE=300 PSI HYD. 3 1/4" BORE = 650 PSI HYD.

CAD Directory
Linear-Rotary\Power

Powered Locking Rota Shaft (LRS) with Cylinders



ROTATING CLAMP HAS POSITIVE LOCK

E&E has an innovative, patented machine tool component called the E&E Locking Rota-Shaft (LRS). The new LRS linear/rotary clamp features a positive locking wedge device, combined with standard adjustable shaft rotation up to 165°, packaged in a single clamping unit.

The LRS locking wedge feature provides an extra safety factor in compound-motion machine tool clamping and fixturing applications where risk of power failure is a consideration. The device consists of a wedge-shaped key mounted on a powered, cross cylinder shaft. When the shaft is activated, the key slides laterally into a specially-machined wedge slot near the base of the clamp's rotating vertical shaft. With the wedge securely seated in the slot, the shaft is prevented from movement in any direction, assuring positive work-holding at all times. Optional sensor mounting available. For sensing capability, consult factory.

GREAT FOR CLAMPING UNEVEN OR VARYING HEIGHT PARTS

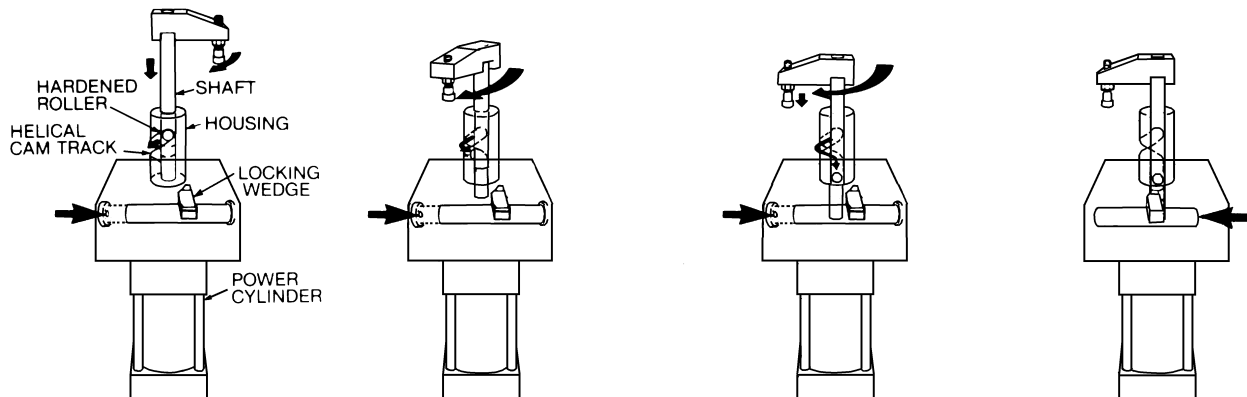
CLAMPING SEQUENCE

1. OPEN POSITION

2. ROTATING MOTION

3. CLAMPING MOTION

4. LOCKED POSITION



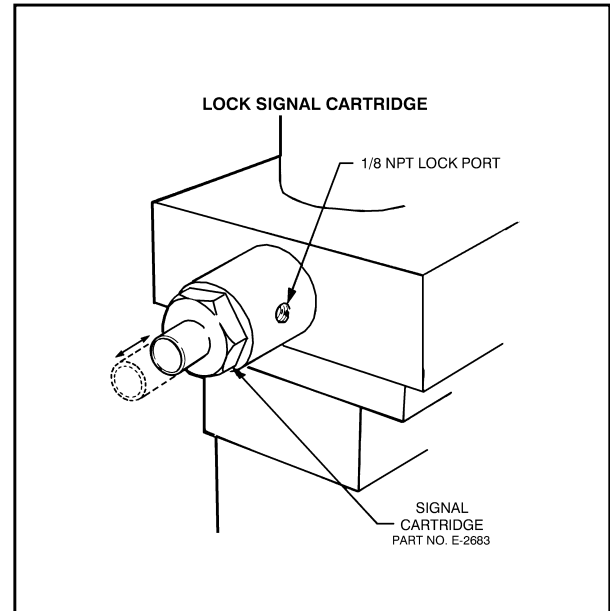
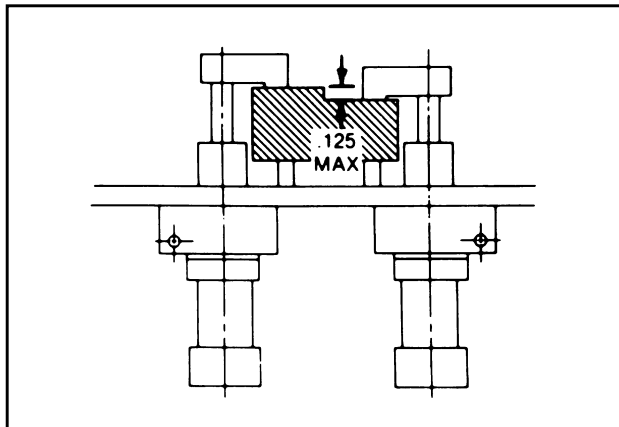
Powered Locking Rota Shaft (LRS) with Cylinders

Right and left-hand rotation units are both offered as standard, and all parts are changeable and easily replaceable. LRS units are also available for applications requiring linear travel only. Push-to-lock units available on special basis. Consult factory for each application.

0-165° right- or left-hand rotation. Locking wedge for positive work-holding. 3/4" or 1 1/8" dia. shaft. Standard J.I.C. 2 1/2" and 3 1/4" bore cylinders. Straight travel units available.

APPLICATION

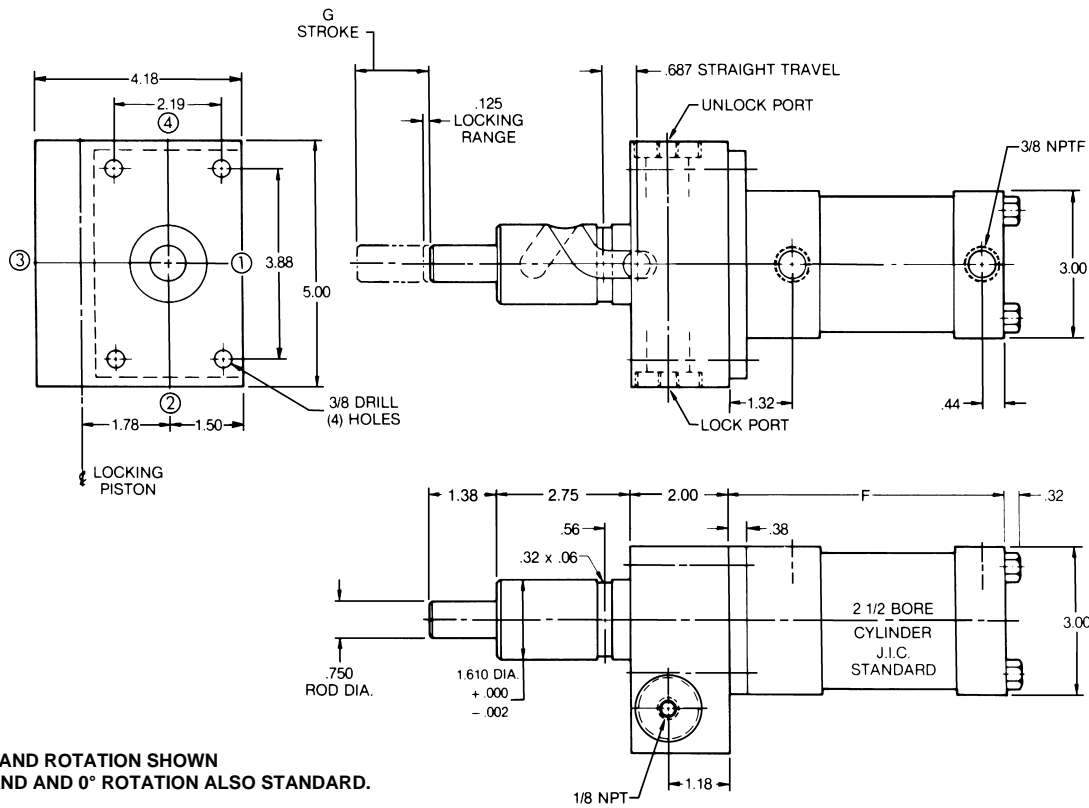
A locking range of 1/8" is provided to accommodate rough castings, forgings, or other workpieces with non-precise tolerances. So even in work-holding applications involving parts without machined surfaces, positive clamping is assured.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- High alloy machineable steel shaft
- Housing groove provides 360° access for easy lubrication
- Shaft end is blank for easy customer modification
- Uses standard J.I.C. cylinders
- Variety of shaft diameters and bore sizes available
- Air or hydraulic versatility
- Additional rotations and strokes available
- Various straight travel lengths available
- Available machined to accept standard proximity switches. For correct probe length see chart on page A5
- Optional signal cartridge for sensing lock and unlock positions; refer to illustration above

Powered Locking Rota Shaft (LRS) with Cylinders



RIGHT HAND ROTATION SHOWN
LEFT HAND AND 0° ROTATION ALSO STANDARD.

	2DWG	3DWG	STP	CAD FILE NAME	PART NUMBER	ROTATION	DIMENSIONS	
							F	G
	2DWG	3DWG	STP	LRS75-1	LRS-750-(A/H)-13-(R/L)	13°	5.12	1.00
	2DWG	3DWG	STP	LRS75-2	LRS-750-(A/H)-50-(R/L)	50°	5.37	1.250
	2DWG	3DWG	STP	LRS75-3	LRS-750-(A/H)-90-(R/L)	90°	5.62	1.500
	2DWG	3DWG	STP	LRS75-4	LRS-750-(A/H)-130-(R/L)	130°	5.87	1.750
	2DWG	3DWG	STP	LRS75-5	LRS-750-(A/H)-165-(R/L)	165°	6.12	2.00

MAXIMUM OPERATING PRESSURE - 200 PSI AIR - 300 PSI HYDRAULIC

ORDERING INFORMATION (WITH ROTATION)

LRS - 750 - (A/H) - 90 - (R/L) - HP2 - CP2 - HS4 - CS4

Powered Rota-Shaft Series Bore Cylinder A = Air/ CWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches Degrees of Rotation Rotation R = Right L = Left Head Port Position Cap Port Head Switch Cap Switch

ORDERING INFORMATION (WITHOUT ROTATION)

LRS - 750 - (A/H) - 0 - 2 - HP2 - CP2 - HS4 - CS4

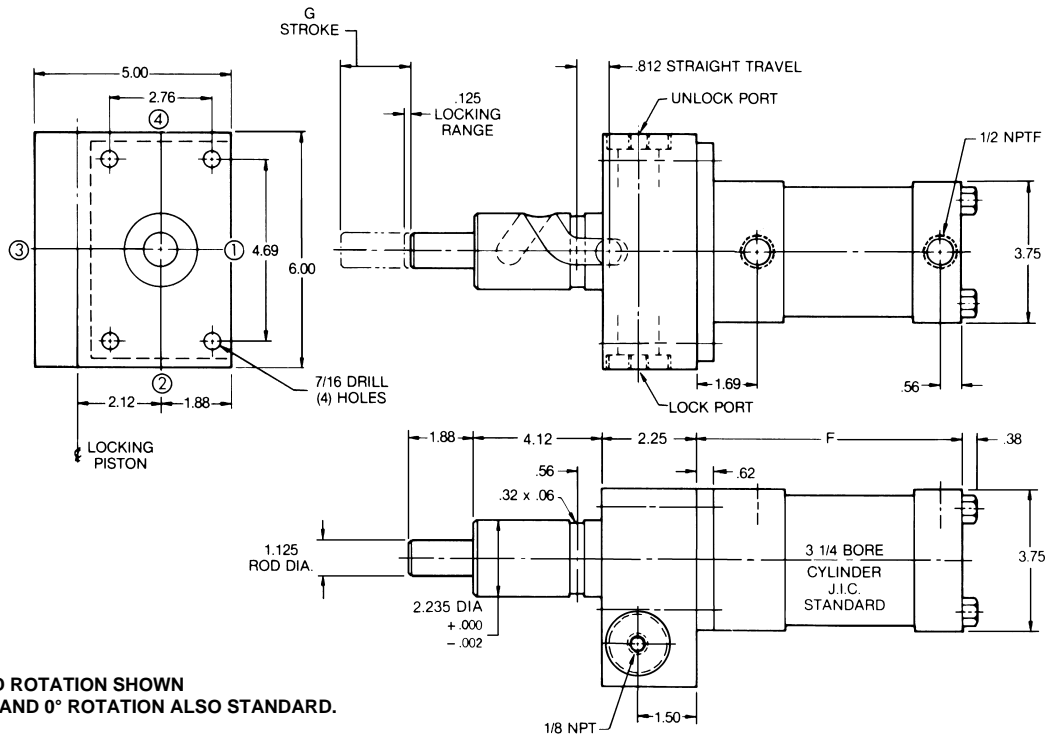
Powered Rota-Shaft Series Bore Cylinder A = Air/ ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches Degrees of Rotation Stroke Head Port Position Cap Port Position Head Switch Position Cap Switch Position H = Hydraulic HCWS = Hyd/ Machined for Switches

NOTE: When ordering units machined for switches please indicate port and switch locations. Switches and spacers not included. Stroke to Go considered standard.

NOTE: For applications requiring linear travel only, specify zero for rotation, followed by the required stroke.

CAD Directory
Linear-Rotary\Locking

Powered Locking Rota Shaft (LRS) with Cylinders



RIGHT HAND ROTATION SHOWN
LEFT HAND AND 0° ROTATION ALSO STANDARD.

Click box to download CAD File

2DWG	3DWG	STP	CAD FILE NAME	PART NUMBER	ROTATION	DIMENSIONS	
						F	G
2DWG	3DWG	STP	LR112-1	LRS-112-(A/H)-13-(R/L)	13°	6.12	1.250
2DWG	3DWG	STP	LR112-2	LRS-112-(A/H)-40-(R/L)	40°	6.37	1.500
2DWG	3DWG	STP	LR112-3	LRS-112-(A/H)-65-(R/L)	65°	6.62	1.750
2DWG	3DWG	STP	LR112-4	LRS-112-(A/H)-90-(R/L)	90°	6.87	2.000
2DWG	3DWG	STP	LR112-5	LRS-112-(A/H)-115-(R/L)	115°	7.12	2.250
2DWG	3DWG	STP	LR112-6	LRS-112-(A/H)-140-(R/L)	140°	7.37	2.500
2DWG	3DWG	STP	LR112-7	LRS-112-(A/H)-165-(R/L)	165°	7.62	2.750

MAXIMUM OPERATING PRESSURE - 200 PSI AIR - 300 PSI HYDRAULIC

ORDERING INFORMATION

(WITH ROTATION)

LRS - 112 - (A/H) - 90 - (R/L) - HP2 - CP2 - HS4 - CS4

Powered Rota-Shaft	Series Bore	Cylinder A = Air CWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches	Degrees of Rotation	Rotation R = Right L = Left	Head Port Position	Cap Port Position	Head Switch Position	Cap Switch Position
--------------------	-------------	--	---------------------	--------------------------------	--------------------	-------------------	----------------------	---------------------

H = Hydraulic
HCWS = Hyd/
Machined for
Switches

ORDERING INFORMATION

(WITHOUT ROTATION)

LRS - 112 - (A/H) - 0 - 2 - HP2 - CP2 - HS4 - CS4

Powered Rota-Shaft	Series Bore	Cylinder A = Air ACWS = Air/ Machined for Switches H = Hydraulic HCWS = Hyd/ Machined for Switches	Degrees of Rotation	Stroke	Head Port Position	Cap Port Position	Head Switch Position	Cap Switch Position
--------------------	-------------	---	---------------------	--------	--------------------	-------------------	----------------------	---------------------

H = Hydraulic
HCWS = Hyd/
Machined for
Switches

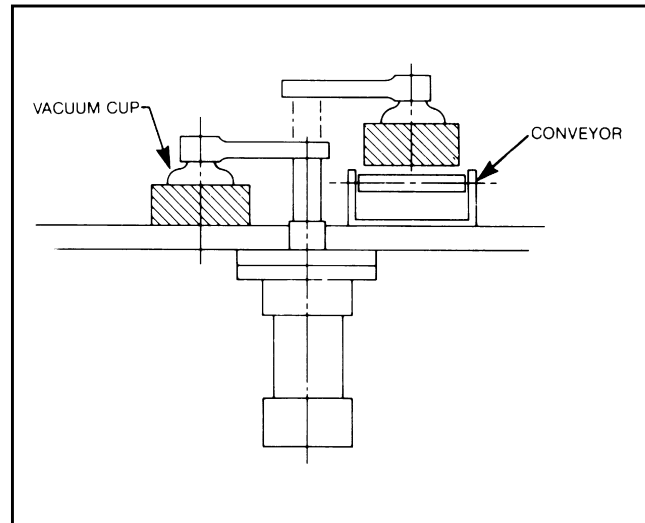
NOTE: When ordering units machined for switches please indicate port and switch locations. Switches and spacers not included. Stroke to Go considered standard.

NOTE: For applications requiring linear travel only, specify zero for rotation, followed by the required stroke.

Internal Rota Shaft for Air or Hydraulic Powered Cylinders



A full range of standard 1 1/2" to 3 1/4" bore J.I.C. double rod end cylinders incorporating the exclusive E&E helix within the cylinder to provide 90° right- or left-hand shaft rotation.



INTERNAL BODY ROTA-SHAFT

DESIGN FEATURES

- Unit totally self-contained prevent contaminants from entering helix
- Additional rotational, straight travel and bores available on special order basis
- Entire clamp is designed around a standard J.I.C. cylinder configuration
- Air or hydraulic available
- Rod sizes are 5/8" or 1" as needed
- Equipped with standard threaded end for ease of mounting clamping details

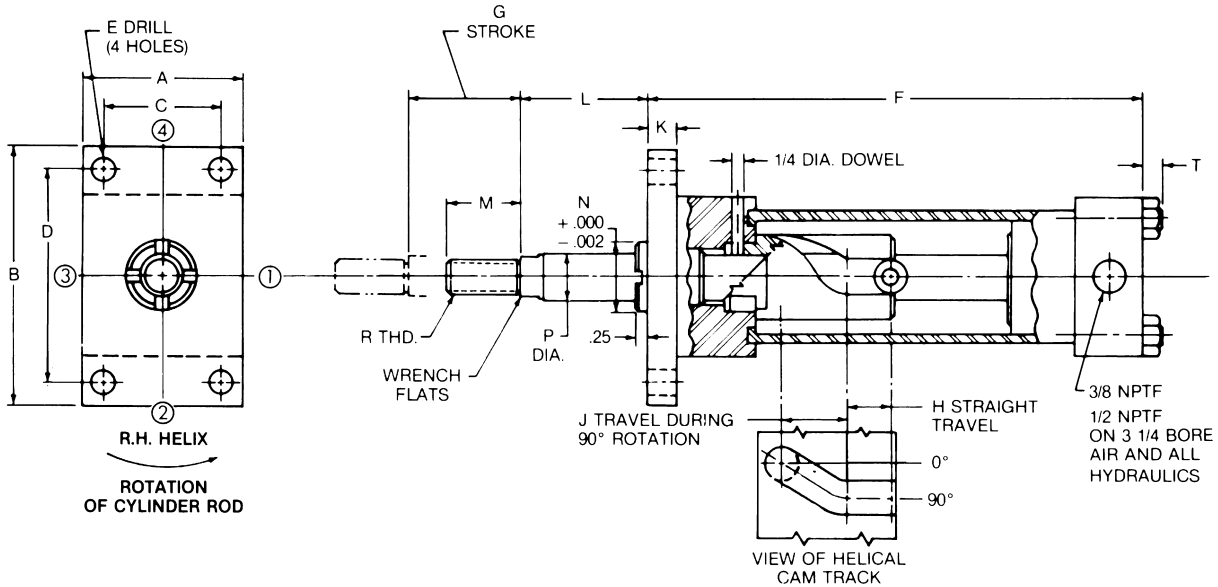
APPLICATION

Typically used in pull-to-clip situations where greater clamping forces are required. Also can be used in parts transfer applications.

Internal Rota Shaft for Air or Hydraulic Powered Cylinders



Linear/Rotary Motion



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD.

Click box to download CAD

AIR POWERED																					
2DWG	3DWG	STP	CAD FILE NAME	PART NUMBER	CYL. BORE DIAMETER	DIMENSIONS															
						A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T
			E58151	E58151-(R/L)	1-1/2	2.00	3.38	1.43	2.75	.32	8.12	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	.25
			E58201	E58201-(R/L)	2.0	2.50	4.12	1.84	3.38	.38	8.12	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	.32
			E58251	E58251-(R/L)	2-1/2	3.00	4.62	2.19	3.88	.38	8.25	1.81	1.00	.81	.38	2.62	1.25	1.124	.625	7/16-20	.32
			E11326	E11326-(R/L)	3-1/4	3.75	5.50	2.76	4.69	.44	10.47	2.50	1.00	1.50	.62	3.25	1.62	1.499	1.00	3/4-16	.38

MAXIMUM RECOMMENDED OPERATING PRESSURE – 250 PSI AIR – 500 PSI HYDRAULIC
 MAXIMUM VELOCITY – 120 IN./MIN.

Click box to download CAD

HYDRAULIC POWERED																					
2DWG	3DWG	STP	CAD FILE NAME	PART NUMBER	CYL. BORE DIAMETER	DIMENSIONS															
						A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T
			E48151	E48151-(R/L)	1-1/2	2.50	4.25	1.63	3.44	.44	9.12	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	.38
			E10201	E10201-(R/L)	2.0	3.00	5.12	2.05	4.12	.56	10.85	2.50	1.00	1.50	.62	2.82	1.62	1.499	1.00	3/4-16	.44
			E10251	E10251-(R/L)	2-1/2	3.50	5.62	2.55	4.62	.56	10.97	2.50	1.00	1.50	.62	2.82	1.62	1.499	1.00	3/4-16	.44

Ordering Information (Example)

E58151 - R/L - HP2 - CP2 - HS4 - CS4

right head cap head cap
 or port port switch switch
 left pos. pos. pos. pos.

MAXIMUM RECOMMENDED OPERATING PRESSURE-1500 PSI HYDRAULIC
 MAXIMUM VELOCITY – 120 IN./MIN.
 SPECIFY: -R (RIGHT-HAND) -L (LEFT-HAND)

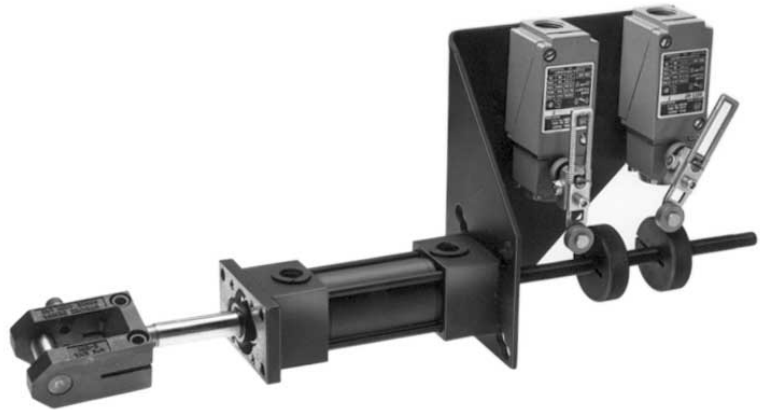
CAD Directory

Linear-Rotary\Internal

Internal Powered Double Rod End Rota-Shaft



A full range of standard 1 1/2" to 3 1/4" bore J.I.C. double rod end cylinders incorporating the exclusive E&E helix within the cylinder to provide 90° right- or left-hand shaft rotation.



DESIGN FEATURES

- Precision machined cam track
- Hardened housing
- Precision cam roller hardened and ground
- Standard J.I.C. cylinders
- Variety of bore sizes and shaft diameters available
- Offers air or hydraulic versatility
- Additional rotational, straight travel, and bores available on a special order basis
- Double rod end for switching capability
- Rods accept standard switch rods and dogs
- Extended tie rods for switch bracket mounting
- Equipped with standard threaded end for ease of mounting clamping details

APPLICATION

Typically used in pull-to-clamp situations where greater clamping forces are required and position sensing is required.

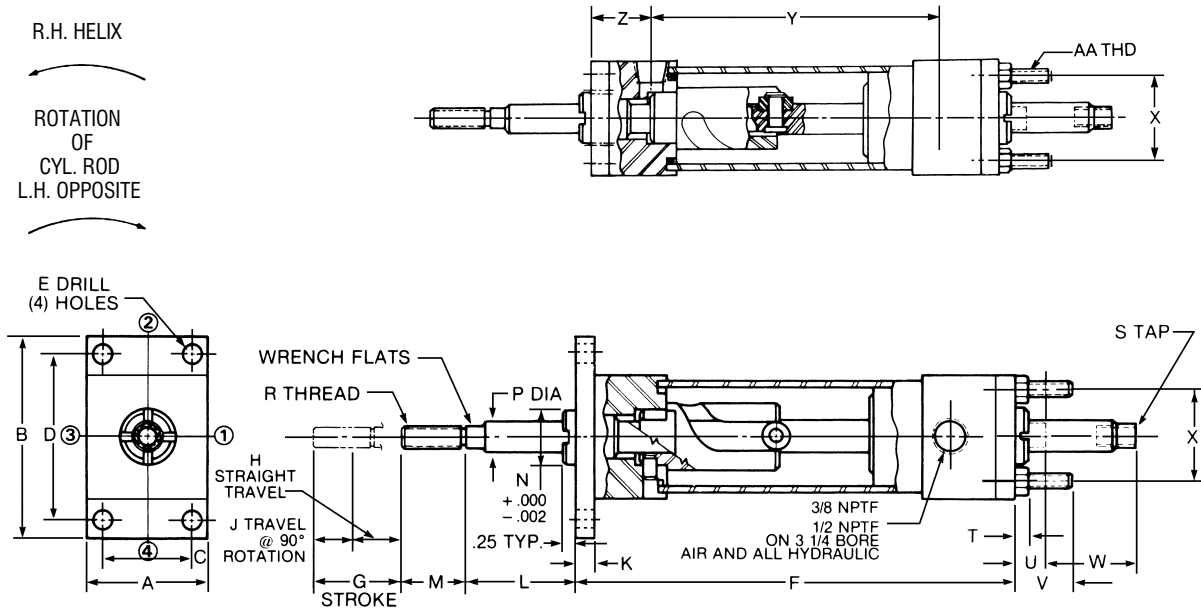
Internal Powered Double Rod End Rota-Shaft

NOTE: PORT POSITION 1
FURNISHED UNLESS
OTHERWISE SPECIFIED

R.H. HELIX



ROTATION
OF
CYL. ROD
L.H. OPPOSITE



RIGHT HAND ROTATION SHOWN, LEFT HAND ALSO STANDARD.

			AIR POWERED																										
			CAD FILE NAME	PART NUMBER	CYL. BORE	DIMENSIONS															S	T	U	V	W	X	Y	Z	AA
2DWG	3DWG	STP				A	B	C	D	E	F	G	H	J	K	L	M	N	P	R									
2DWG	3DWG	STP	E58151DE	E-58151-(R/L)-DE	1-1/2	2.00	3.38	1.43	2.75	5/16	9.00	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	7/16-20 .75 DP	.25	.62	1.00	1.81	1.43	6.38	1.32	1/4-20
2DWG	3DWG	STP	E58201DE	E-58201-(R/L)-DE	2.0	2.50	4.12	1.84	3.38	3/8	9.00	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	7/16-20 .75 DP	.31	.62	1.00	1.81	1.84	6.38	1.32	5/16-24
2DWG	3DWG	STP	E58251DE	E-58251-(R/L)-DE	2-1/2	3.00	4.62	2.19	3.88	3/8	9.12	1.81	1.00	.81	.38	2.62	1.25	1.124	.625	7/16-20	7/16-20 .75 DP	.31	.62	1.12	1.81	2.19	6.50	1.32	5/16-24
2DWG	3DWG	STP	E11326DE	E-11326-(R/L)-DE	3-1/4	3.75	5.50	2.76	4.69	7/16	11.59	2.50	1.00	1.50	.62	3.25	1.62	1.499	1.000	3/4-16	3/4-16 1.12 DP	.38	.75	1.38	2.50	2.76	8.24	1.69	3/8-24

MAXIMUM RECOMMENDED OPERATING PRESSURE – 250 PSI AIR – 500 PSI HYDRAULIC
MAXIMUM VELOCITY – 120 IN./MIN.

			HYDRAULIC POWERED																										
			CAD FILE NAME	PART NUMBER	CYL. BORE	DIMENSIONS															S	T	U	V	W	X	Y	Z	AA
2DWG	3DWG	STP				A	B	C	D	E	F	G	H	J	K	L	M	N	P	R									
2DWG	3DWG	STP	E48151DE	E-48151-(R/L)-DE	1-1/2	2.50	4.25	1.63	3.44	7/16	9.75	1.81	1.00	.81	.38	2.25	1.25	1.124	.625	7/16-20	7/16-20 .75 DP	.38	.62	1.00	1.81	1.63	7.00	1.37	3/8-24
2DWG	3DWG	STP	E10201DE	E-10201-(R/L)-DE	2.0	3.00	5.12	2.05	4.12	9/16	11.72	2.50	1.00	1.50	.62	2.82	1.62	1.499	1.000	3/4-16	3/4-16 1.12 DP	.44	.75	1.12	2.50	2.05	8.48	1.62	1/2-20
2DWG	3DWG	STP	E10251DE	E-10251-(R/L)-DE	2-1/2	3.50	5.62	2.55	4.62	9/16	11.84	2.50	1.00	1.50	.62	2.82	1.62	1.499	1.000	3/4-16	3/4-16 1.12 DP	.44	.75	1.38	2.50	2.55	8.60	1.62	1/2-20

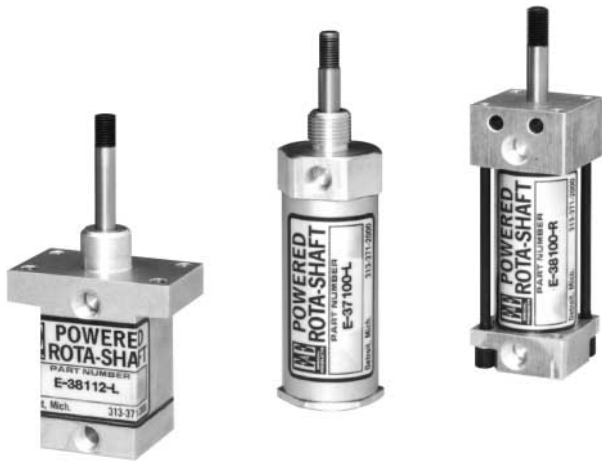
Ordering Information (Example)

E - 58151 - R/L - DE - HP2 - CP2 - HS4 - CS4
 head cap head cap
 port port switch switch
 pos. pos. pos. pos.

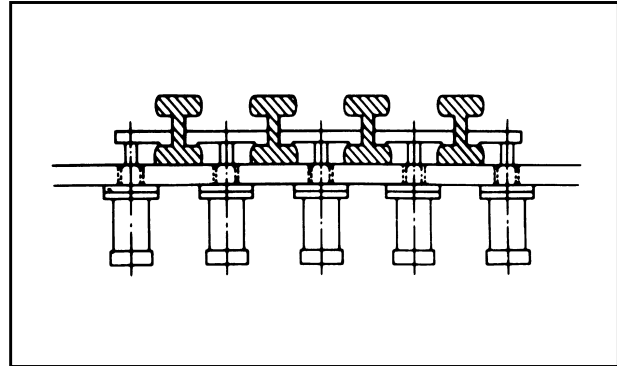
MAXIMUM RECOMMENDED OPERATING PRESSURE – 1500 PSI HYDRAULIC
MAXIMUM VELOCITY – 120 IN./MIN.

SPECIFY: -R (RIGHT-HAND)
-L (LEFT-HAND)

Mini Powered Rota Shafts/1.12" Bore



An economical solution to light-duty clamping or material handling applications. Units feature a standard 1 1/8" bore cylinder, 90 right- or left-hand rotation, a range of mounting options with threaded shafts for ease of attaching clamping details.



DESIGN FEATURES

- Precision machined cam track
- Hardened and ground housing
- Precision cam follower hardened and ground
- Available in a variety of mounting styles
- Aluminum body
- Stainless steel rod

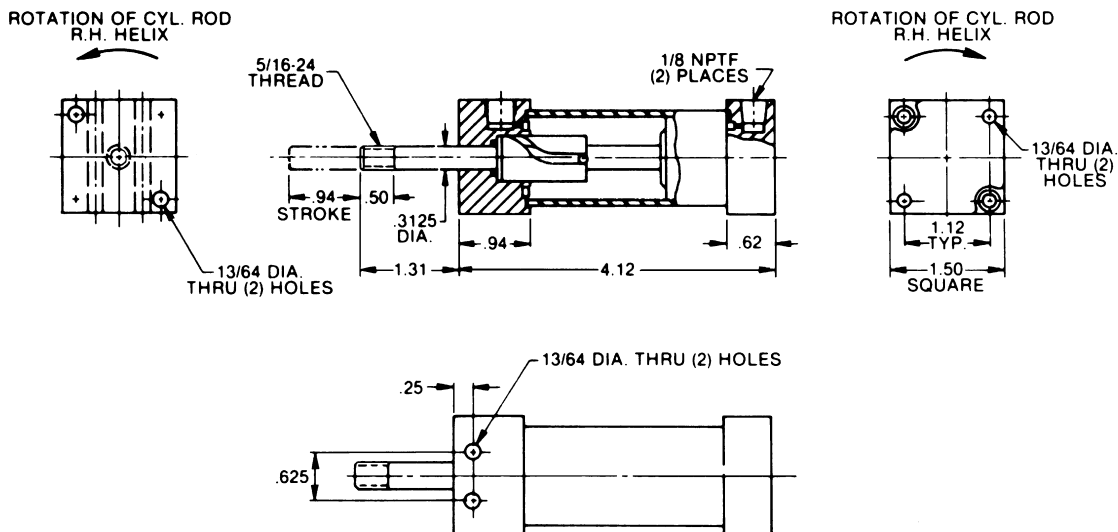
APPLICATION

Typically used in pull-to-clamp situations where less clamping force is required.

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name = E38100

Part No. E-38100-R, E-38100-L



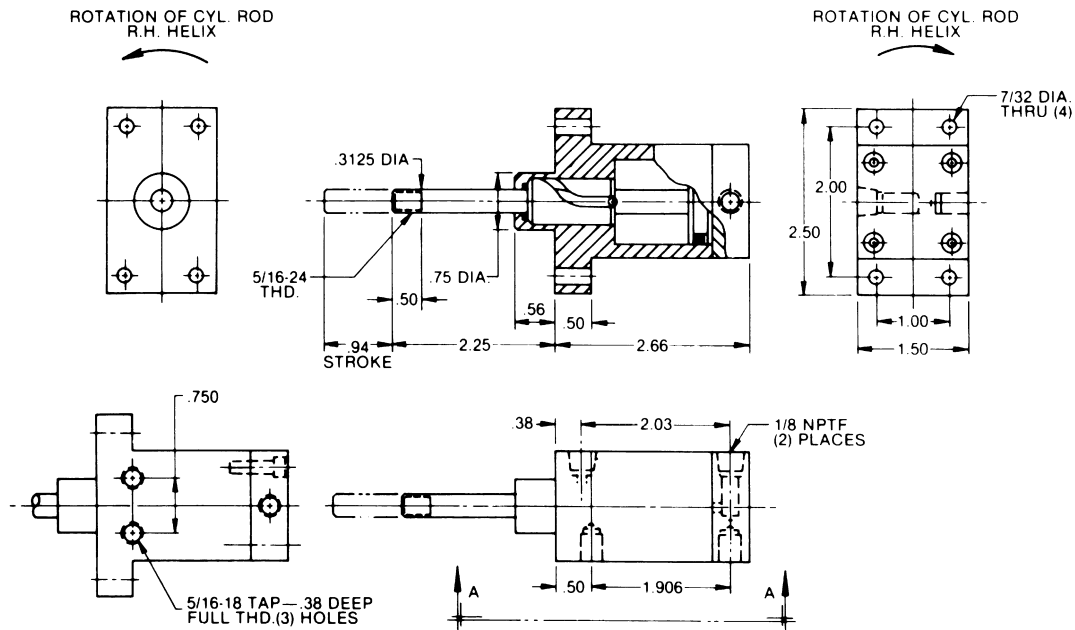
RIGHT HAND SHOWN, LEFT HAND ALSO STANDARD

Mini Powered Rota Shafts/1.12" Bore

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name=E38112

Part No. E-38112-R, E-38112-L

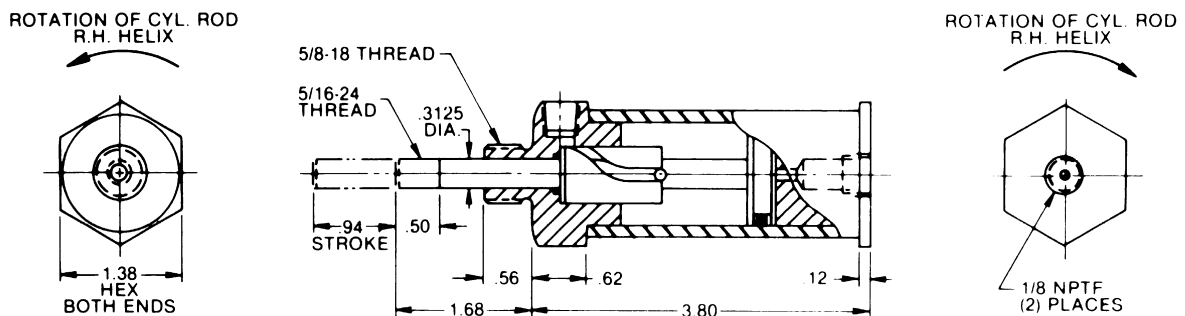


RIGHT HAND SHOWN, LEFT HAND ALSO STANDARD

CAD Directory
Linear-Rotary/Internal

CAD File Name=E37100

Part No. E-37100-R, E-37100-L



RIGHT HAND SHOWN, LEFT HAND ALSO STANDARD

TRAVEL FOR ALL UNITS SHOWN

- .35 Straight
- .59 During 90°
- .94 Total

CLAMPING FORCE AT MAXIMUM

100 P.S.I. 100 Push 92 Pull

CAD Directory
Linear-Rotary/Internal

Linear/Rotary Motion



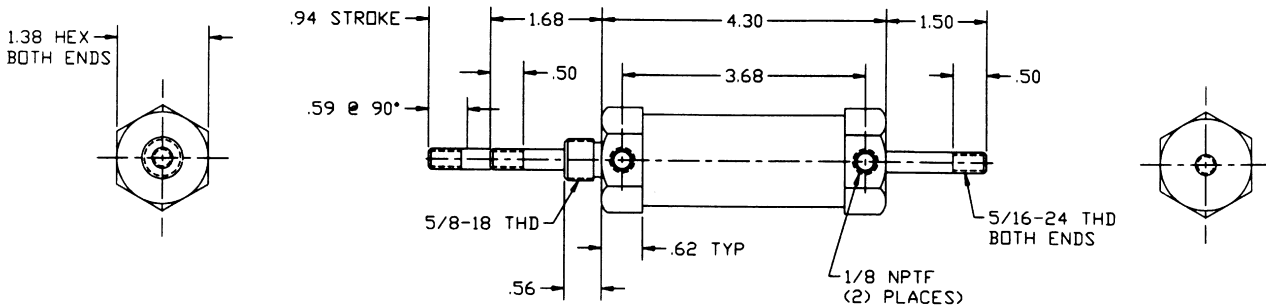
Double Rod End Mini-Powered Rota Shafts 1.12" Bore

E&ESP

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name = E37100DE

Part No. E-37100-R/L-DE

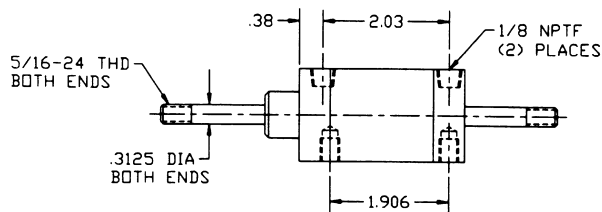


CAD Directory

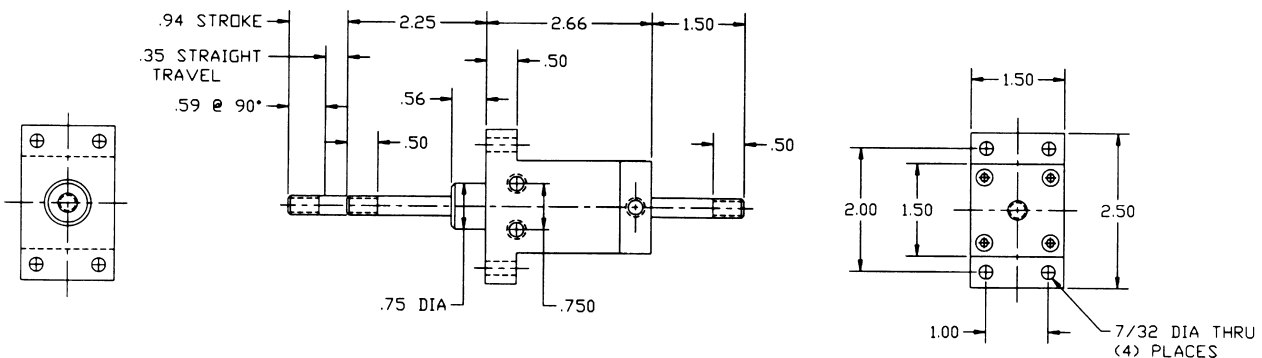
Linear-Rotary/Internal

CAD File Name = E38112DE

Part No. E-38112-R/L-DE



(T) Top View



CAD Directory

Linear-Rotary/Internal

Double Rod End Mini-Powered Rota Shafts 1.12" Bore

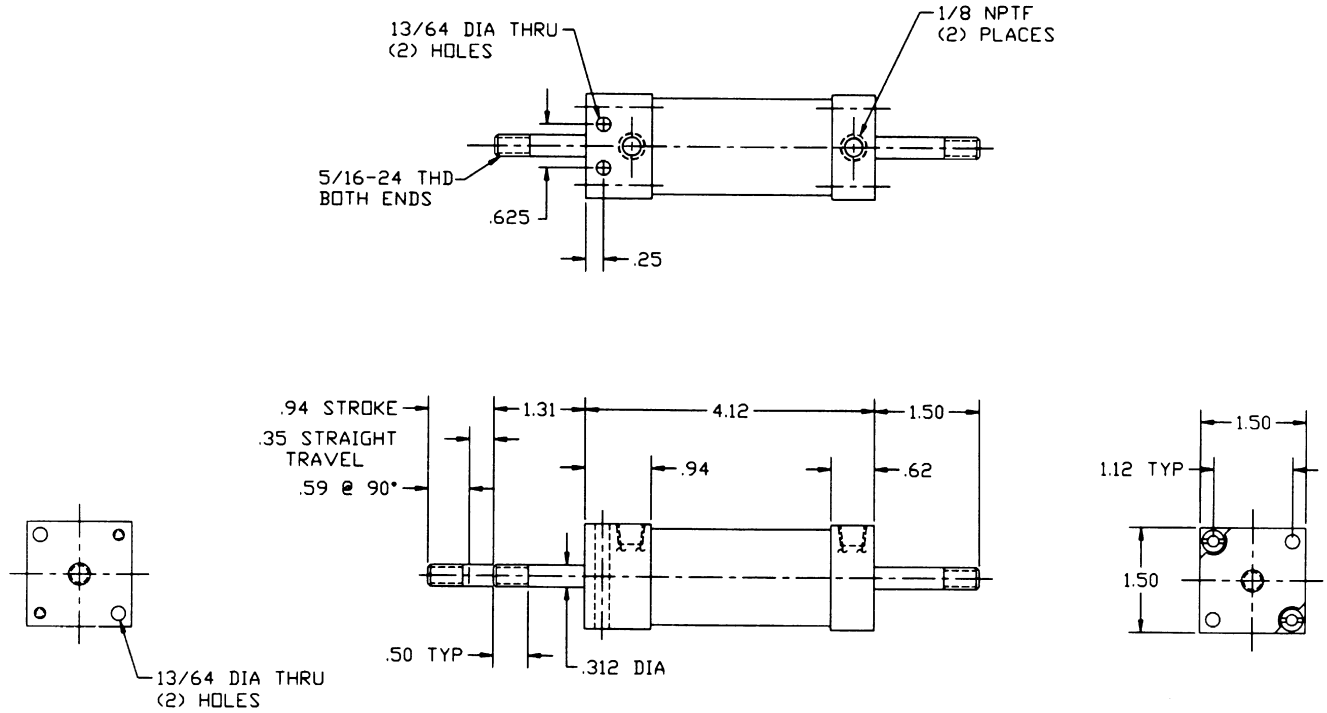


Click to download CAD File (STP) Format. 2dwg & 3dwg visit eandesp.com

CAD File Name=E38100DE

Part No. E-38100-R/L-DE

Linear/Rotary Motion



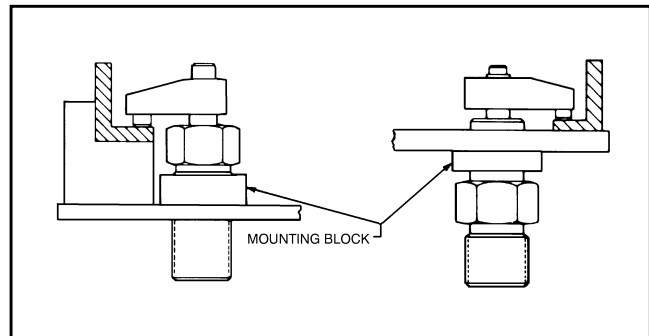
New Threaded Body Rota-Shaft for Hydraulic Applications



An unusually compact high pressure hydraulic clamp for use with auxiliary power sources or intensifiers. 90° right- or left-hand rotation standard. Clamping finger included.

MODEL: E78138 has a maximum of 1800 psi.
Clamping force is equal to $.884 \times \text{psi}$.

MODEL: E91678 has a maximum of 2100 psi.
Clamping force is equal to $.353 \times \text{psi}$.



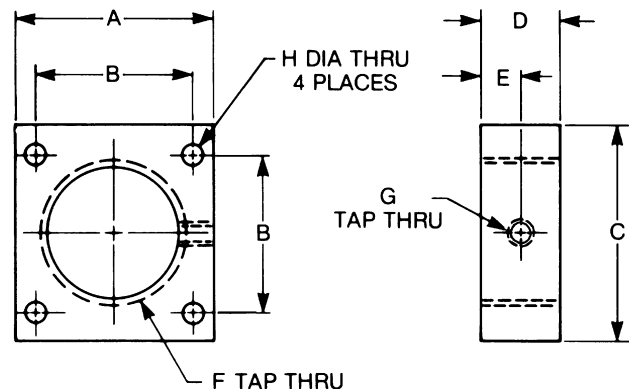
DESIGN FEATURES

- ❑ Generates higher pressures in limited space
- ❑ Available with spring return or double-acting
- ❑ Threaded body for ease of installation
- ❑ Built with both right- and left-hand rotation for easy conversion
- ❑ Hardened alloy steel shaft
- ❑ Straight pipe threads furnished as standard; NPT available with furnished adaptor

APPLICATION

Typically used in pull-type clamping situations where greater forces are required in confined or tight area.

MOUNTING BLOCK FOR THREADED BODY



CAD FILE NAME	PART NUMBER	DIMENSIONS								
		A	B	C	D	E	F	G	H	
E-91678-MT	E-91678-MT	2.00	1.562	2.00	.50	.25	1-3/8-18	#10-32	7/32	
E-78138-MT	E-78138-MT	2.75	2.125	2.75	1.00	.50	1-7/8-16	1/4-20	9/32	

CAD Directory
Linear-Rotary\THDBody

New Threaded Body Rota Shaft for Hydraulic Applications

High Pressure



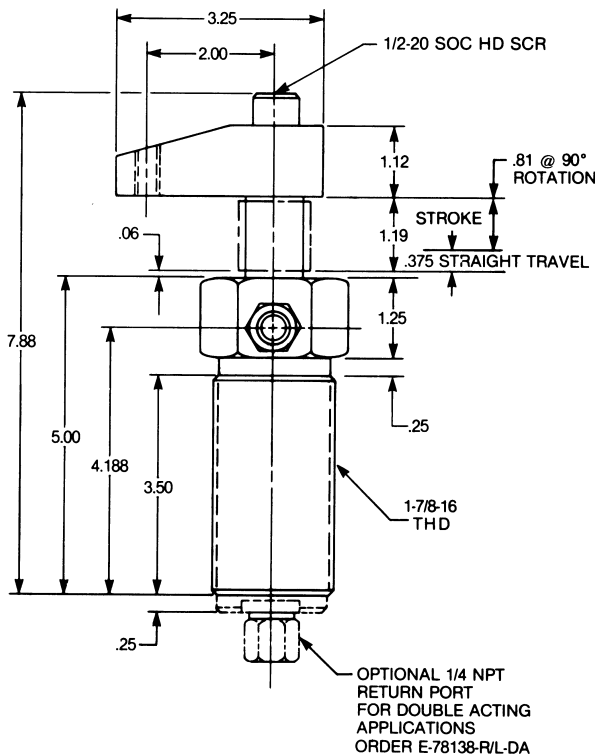
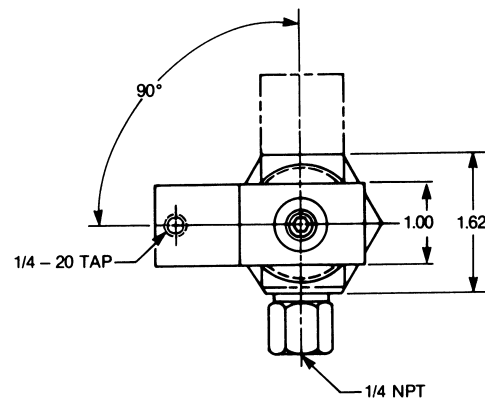
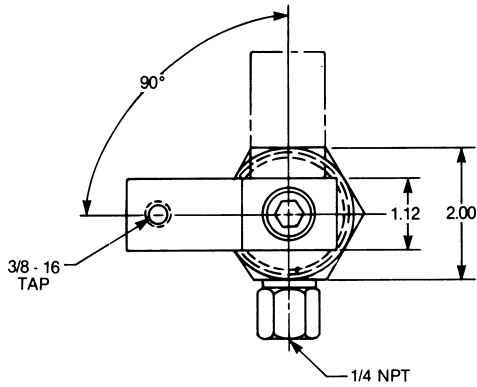
Click to download CAD File (STP Format) 2dwdg & 3dwdg visit eandesp.com

CAD File Name = E78138DA (DOUBLE ACTING)
E78138 (SINGLE ACTING)

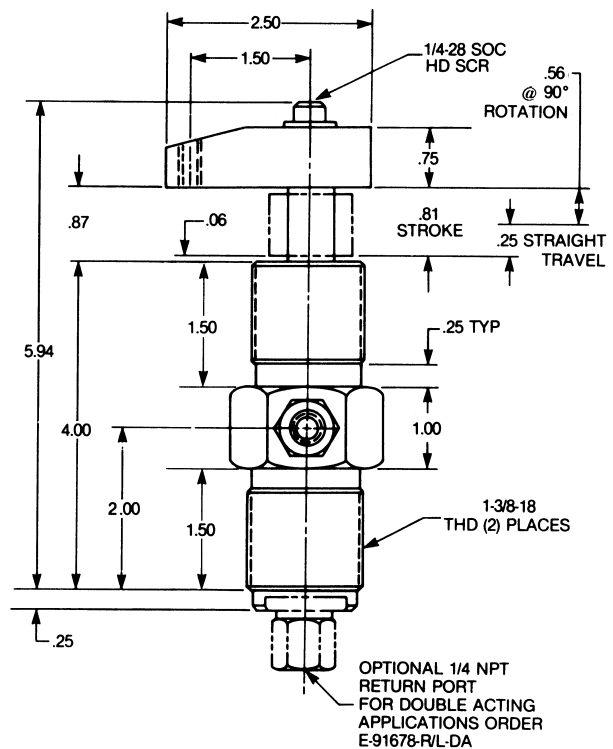
Part No. E-78138-R/L (SINGLE ACTING)
E-78138-R/L-DA (DOUBLE ACTING)

CAD File Name = E91678DA (DOUBLE ACTING)
E91678 (SINGLE ACTING)

Part No. E-91678-R/L (SINGLE ACTING)
E-91678-R/L-DA (DOUBLE ACTING)



7/8 ROD DIA
1-3/8 BORE DIA



9/16 ROD DIA
7/8 BORE DIA

CAD Directory
Linear-Rotary\THDBody

Low Profile Rota-Shaft



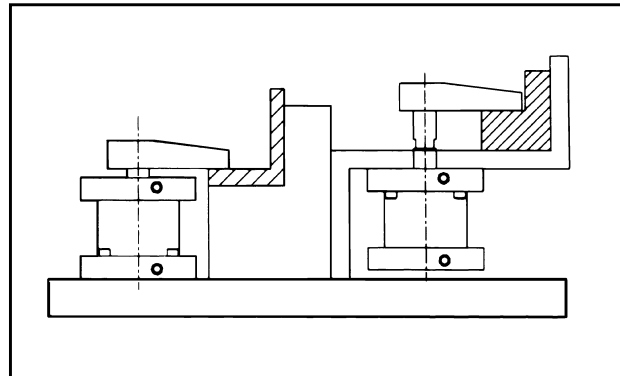
A unique large bore clamp with 90° right- or left-hand swing standard offered in 3 1/4" and 2 1/2" bore sizes.

DESIGN FEATURES

- Unit is totally self-contained to prevent contaminants from entering helix
- Additional rotational, straight travel and bores available on special order basis
- Versatile mounting holes
- Equipped with threaded rod end
- Light weight aluminum construction
- Air Powered

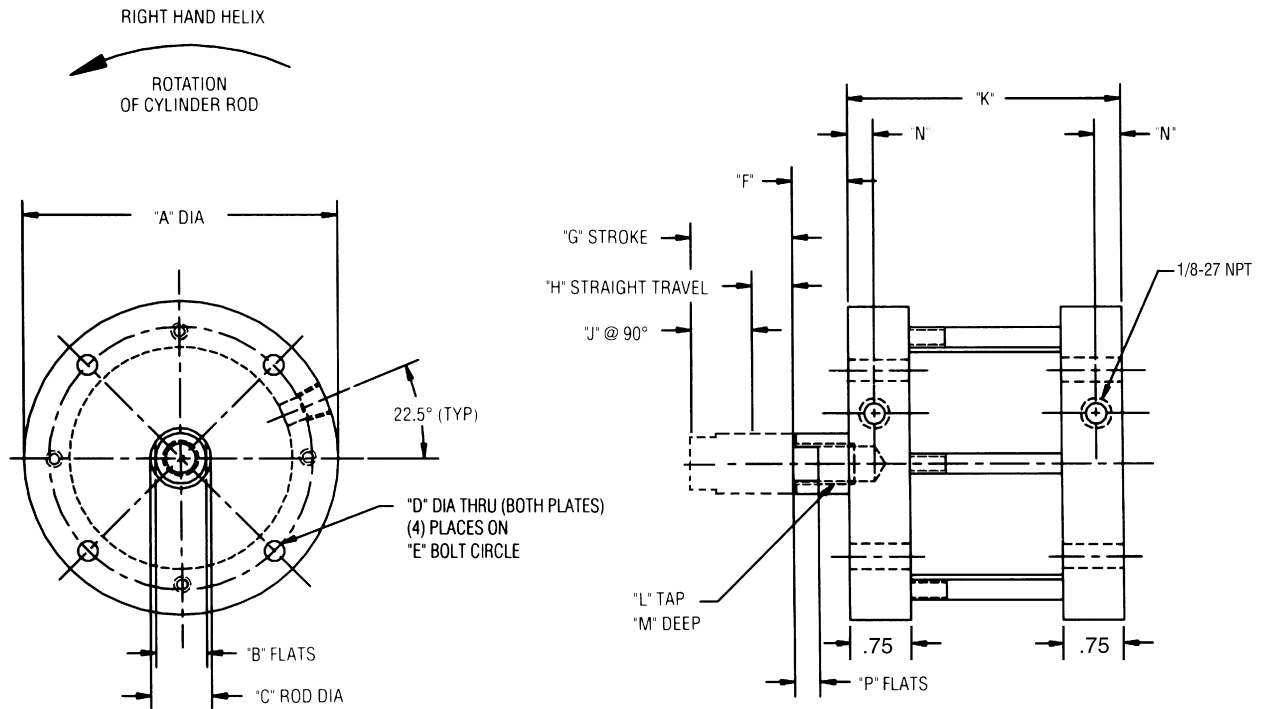
APPLICATION

Typically used when length is a problem. These clamps offer large bores in a low profile configuration.



Low Profile Rota-Shaft

100 PSI MAXIMUM



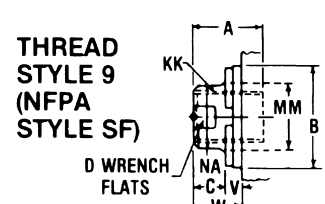
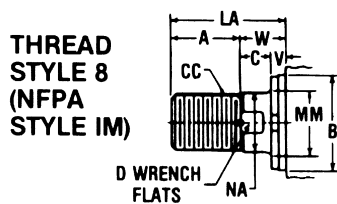
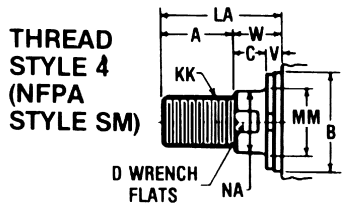
Linear/Rotary Motion

Click to download CAD File

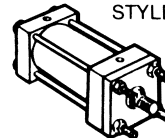
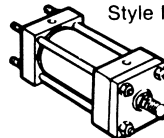
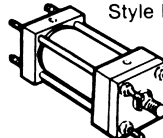
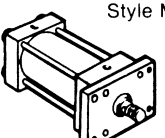
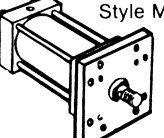
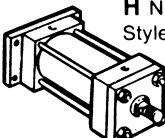
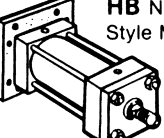
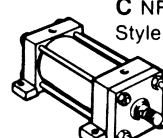
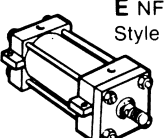
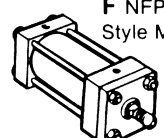
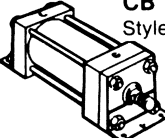
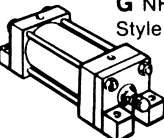
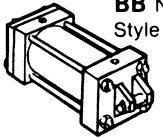
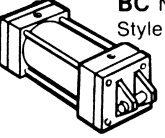
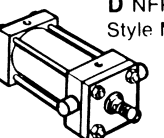
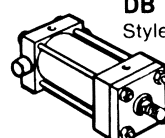
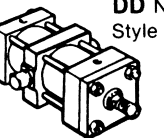
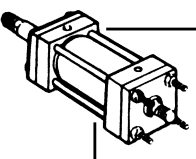
			CAD FILE NAME	PART NO.	BORE DIA	A	B	C	D	E	F	G	H	J	K	L	M	N	P
2DWG	3DWG	STP	E34212	E34212-(R/L)	2.50	3.875	.625	.750	9/32	3.25	5/8	1.25	.50	.75 @ 90°	3.38	7/16-20	.62	.31	.31
2DWG	3DWG	STP	E10314	E10314-(R/L)	3.25	4.750	.875	1.000	21/64	4.12	3/4	1.75	.75	1.00 @ 90°	3.88	5/8-18	.94	.31	.34

**OPTIONAL MOUNTING STYLES IN NFPA OR J.I.C. STANDARDS
AVAILABLE IN SOME ROTA-SHAFT MODELS.
CONSULT E&E FOR INDIVIDUAL APPLICATION DETAILS**

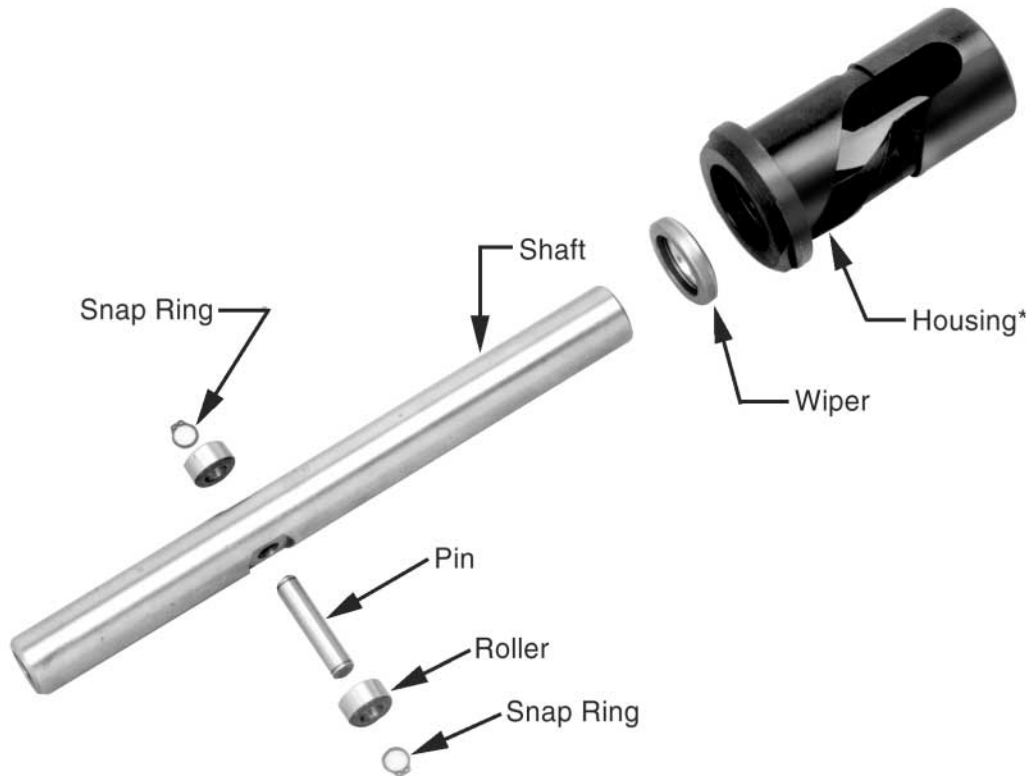
ROD END OPTIONS



OPTIONAL MOUNTING STYLES

<p>TB NFPA Style MX3</p>  <p>Tie Rods Extended Head End, Style TB.</p>	<p>TC NFPA Style MX2</p>  <p>Tie Rods Extended Cap End, Style TC.</p>	<p>TD NFPA Style MX1</p>  <p>Tie Rods Extended Both Ends, Style TD.</p>	<p>J NFPA Style MF1</p>  <p>Head Rectangular Flange, Style J.</p>	<p>JB NFPA Style MF5</p>  <p>Head Square Flange, Style JB.</p>
<p>H NFPA Style MF2</p>  <p>Cap Rectangular Flange, Style H.</p>	<p>HB NFPA Style MF6</p>  <p>Cap Square Flange, Style HB.</p>	<p>C NFPA Style MS2</p>  <p>Side Lug Style C.</p>	<p>E NFPA Style MS3</p>  <p>Centerline Lugs, Style E.</p>	<p>F NFPA Style MS4</p>  <p>Side Tapped Style F.</p>
<p>CB NFPA Style MS1</p>  <p>Side End Angles, Style CB.</p>	<p>G NFPA Style MS7</p>  <p>Side End Lugs, Style G.</p>	<p>BB NFPA Style MP1</p>  <p>Cap Fixed Clevis, Style BB.</p>	<p>BC NFPA Style MP2</p>  <p>Cap Detachable Clevis Style BC.</p>	<p>D NFPA Style MT1</p>  <p>Head Trunnion, Style D.</p>
<p>DB NFPA Style MT2</p>  <p>Cap Trunnion, Style DB.</p>	<p>DD NFPA Style MT4</p>  <p>Intermediate Fixed Trunnion Mounting, Style DD.</p>	<p>KTB</p>  <p>DOUBLE ROD CYLINDERS</p> <p>Most Of The Above Illustrated Mounting Styles Are Available In Double Rod Cylinders.</p>		

Rota-Shaft Accessories / Parts (Non-Powered)



PARTS LIST

E75206 SERIES

PART NUMBER	DESCRIPTION
E-75206-R/L-1	Housing (R or L)*
E-75206-2	Shaft
E-75206-3	Roller (2 required)
E-75206-4	Pin
E-75206-4A	Roller & Pin Assy. (consisting of 2 pcs. E75206-3, 1 pc. 75206-4, 2 pcs. 75206-6)
E-75206-5	Wiper Scraper
E-75206-6	Snap Ring

E11500 SERIES

PART NUMBER	DESCRIPTION
E-11500-R/L-1	Housing (R or L)*
E-11500-2	Shaft
E-11500-3	Roller (2 required)
E-11500-4	Pin
E-11500-4A	Roller & Pin Assy. (consisting of 2 pcs. E11500-3, 1 pc. 11500-4, 2 pcs. 11500-6)
E-11500-5	Wiper Scraper
E-11500-6	Snap Ring

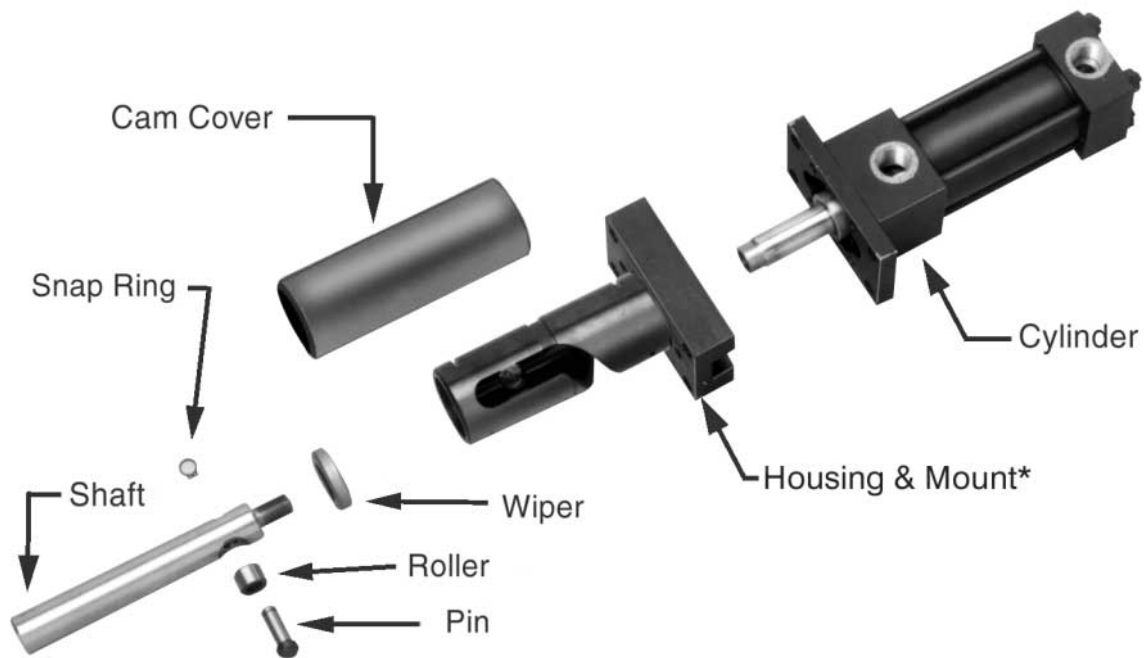
E14207 SERIES

PART NUMBER	DESCRIPTION
E-14207-R/L-1	Housing (R or L)*
E-14207-2	Shaft
E-14207-3	Roller
E-14207-4	Pin
E-14207-4A	Roller & Pin Assy. (consisting of 2 pcs. E14207-3, 1 pc. 14207-4, 2 pcs. 14207-6)
E-14207-5	Wiper Scraper
E-14207-6	Snap Ring

E2000 SERIES

PART NUMBER	DESCRIPTION
E-2000-R/L-1	Housing (R or L)*
E-2000-2	Shaft
E-2000-3	Roller (2 required)
E-2000-4	Pin
E-2000-4A	Roller & Pin Assy. (consisting of 2 pcs. E2000-3, 1 pc. 2000-4, 2 pcs. 2000-6)
E-2000-5	Wiper Scraper
E-2000-6	Snap Ring

* **NOTE:** MAKE SURE TO SPECIFY R OR L HAND HOUSING.



PARTS LIST

EP-750 & EP-057 SERIES

PART NUMBER	DESCRIPTION
EP-750-2	Shaft
# EP-750-15 R/L BH	Housing & Mount for 1 1/2" Bore A or H Cylinder (R or L)*
# EP-750-20 R/L BH	Housing & Mount for 2" Bore A or H Cylinder (R or L)*
# EP-750-25 R/L BH	Housing & Mount for 2 1/2" Bore A or H Cylinder (R or L)*
EP-750-4	Roller (1 required)
EP-750-4A	Roller Assembly (consisting of 1 pc. 750-4, 1 pc. 750-6, 1 Snap Ring)
EP-750-6	Pin
EP-750-7	Wiper
EP-750-8	Cam Track Cover
EP-750-9	Snap Ring

EP-112 & EP-211 SERIES

PART NUMBER	DESCRIPTION
EP-112-2	Shaft
# EP-112-25 R/L BH	Housing & Mount for 2 1/2" Bore A or H Cylinder (R or L)*
# EP-112-32 R/L BH	Housing & Mount for 3 1/4" Bore A or H Cylinder (R or L)*
EP-112-4	Roller (1 required)
EP-112-4A	Roller Assembly (consisting of 1 pc. 112-4, 1 pc. 112-6, 1 Snap Ring)
EP-112-6	Pin
EP-112-7	Wiper
EP-112-8	Cam Track Cover
EP-112-9	Snap Ring

NOTES

* MAKE SURE TO SPECIFY R OR L HAND HOUSING.

FOR ROTARY LINEAR MODELS USE EP-057 OR EP-211, SEE PAGE A-10.

NOTE: Replacement cylinders and cylinder parts will be quoted individually. Contact Special Products Division for prices when required.

Rotary Lock

▪ LOCKS SHAFT RIGIDLY

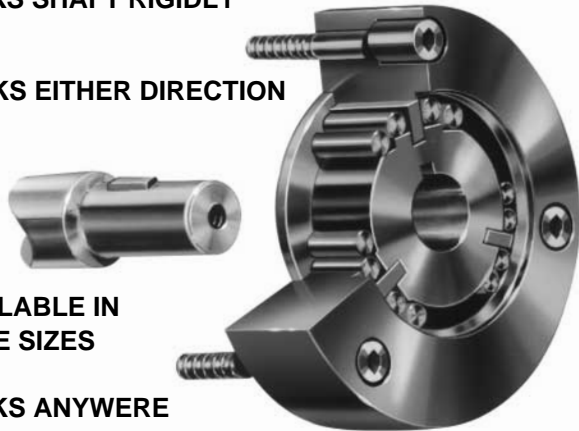
▪ LOCKS EITHER DIRECTION

▪ AVAILABLE IN FIVE SIZES

▪ LOCKS ANYWHERE IN 360°

▪ HARDENED STEEL CONSTRUCTION

▪ EASILY ADAPTABLE TO SPECIAL TOOLING MACHINES, FIXTURES

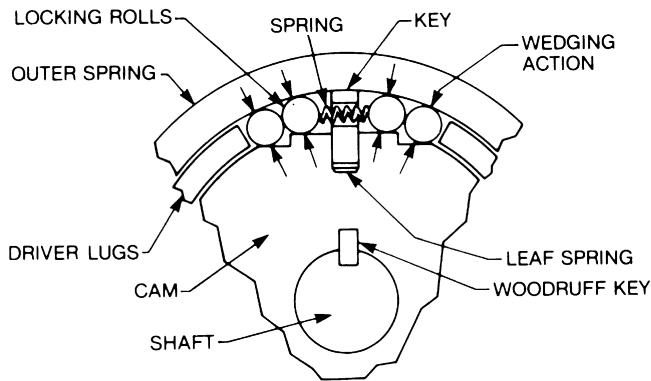


OPERATION

FOR POSITIVE ROTATIONAL POSITIONING/AUTOMATIC LOCKING OPERATION

E & E Rotary Locks rigidly lock any shaft in position without creeping, and are capable of holding tremendous torque loads. The basic functional feature of the E & E Rotary Lock is that a shaft to which it is attached is always in a locked condition, unable to turn in either direction unless actuated through the Rotary Lock.

The Rotary Lock can easily be unlocked and the shaft rotated to any new position by operating a hand lever or other mechanical means. Then it will automatically lock again when the hand lever is released.



HANDLE ORDERING INFO

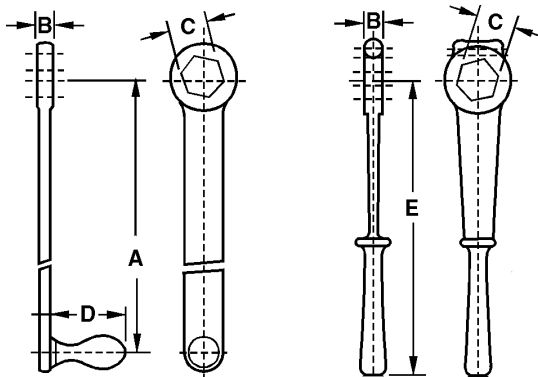
SPECIFY TYPE:

LNW = Lock, No Wrench
LPW = Lock, Plain Wrench
LCW = Lock, Clamp Wrench

EXAMPLE:

EE-581-LPW

5 ROTARY LOCK SIZES

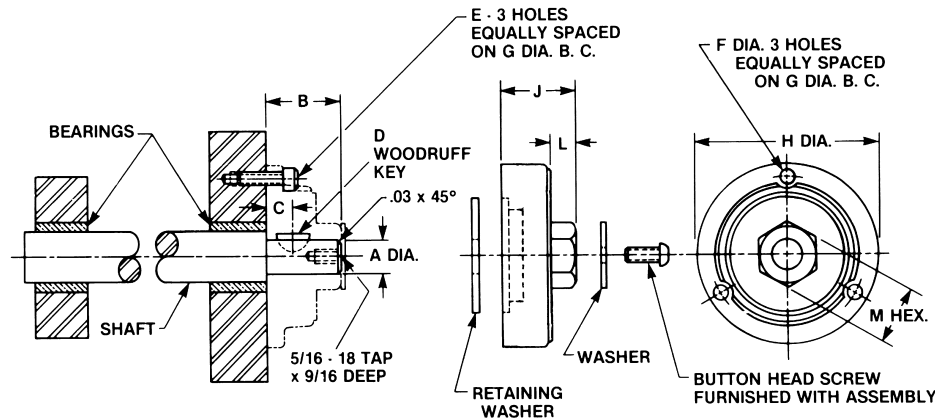


PLAIN WRENCH

CLAMP WRENCH

PART NUMBERS	A	B	C	D	E
EE581	6	15/32	1-5/64	2-3/8	8
EE681	6-3/4	9/16	1-9/32	3-1/4	10-1/2
EE781	8	21/32	1-15/32	3-1/4	12-1/2
EE881	9	3/4	1-21/32	4-1/8	14
EE1081	11-11/16	15/16	2-1/32	4-1/8	17

DIMENSIONAL & INSTALLATION DATA



Linear/Rotary Motion

Click to download CAD

CAD FILE NAME	PART NUMBER	MIN. SHAFT DIA.	DIMENSIONS										
			A	B	C	D	E	F	G	H	J	L	M
2dwg 3dwg STP	EE581	5/8	.6250 .6240	1-3/8	7/16	405	5/16-18	11/32	2-5/8	3-1/4	1-3/8	15/32	1-1/16
2dwg 3dwg STP	EE681	3/4	.7500 .7495	1-19/32	15/32	506	5/16-18	11/32	3-3/8	4	1-19/32	9/16	1-1/4
2dwg 3dwg STP	EE781	7/8	.8750 .8745	1-7/8	17/32	507	3/8-16	13/32	3-3/4	4-1/2	1-7/8	21/32	1-7/16
2dwg 3dwg STP	EE881	1	1.0000 .9995	1-31/32	17/32	607	3/8-16	13/32	4-1/2	5-1/4	1-31/32	3/4	1-5/8
2dwg 3dwg STP	EE1081	1-1/4	1.2500 1.2495	2-5/16	5/8	807	7/16-14	15/32	5-1/8	6	2-5/16	15/16	2

NOTES:

- Shaft material should be of a high-yield strength variety to take full advantage of locking potential of lock.
- Socket head cap screws recommended for mounting locks.
- Retaining washer and buttonhead screw furnished with each lock.
- Shaft must be supported by bearings suitable for application.
- Locks designed for slow-intermittent service.
- Locks may be actuated and fitted with handles. Also may be fitted with chain sprocket, for remote operation or a wide variety of mechanical arrangements.
- End thrust of shaft must be provided for by suitable means.
- 10 RPM max.
- Rotary lock holding force will exceed the torsional shear of the shaft it is mounted to. Based on the shaft being made of material with 100,000 PSI tensile strength and one woodruff key.

CAPACITIES

Rotary Lock Cat. No.	Woodruff Key Size	(1) Torque to shear one soft key Cat. No.	(2) Torque to shear one harden key	(3) (4) Torsional shear of high strength shaft	(3) (5) Torsional shear of medium strength shaft
581	5	110 ft. lbs.	242 ft. lbs.	1,393 ft. lbs.	905 ft. lbs.
681	8	200 ft. lbs.	441 ft. lbs.	2,415 ft. lbs.	1,569 ft. lbs.
781	10	242 ft. lbs.	613 ft. lbs.	3,836 ft. lbs.	2,493 ft. lbs.
881	11	382 ft. lbs.	829 ft. lbs.	5,737 ft. lbs.	3,729 ft. lbs.
1081	A	555 ft. lbs.	1,204 ft. lbs.	8,164 ft. lbs.	5,305 ft. lbs.

FOOTNOTES:

- Based on an unhardened key shear of 60,000 P.S.I.
- Based on a hardened key shear of 130,000 P.S.I.
- Based on one key in shaft
- Based on a shaft material to be 100,000 P.S.I. tensile
- Based on a shaft material to be 65,000 P.S.I. tensile

Harden key material: 8630 40/50 Rc
tensile= 175,000 P.S.I.
shear= 131,250 P.S.I.

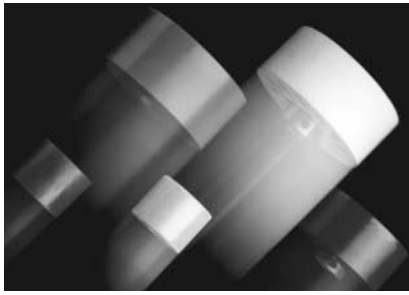
Note: Locks designed for rotation against load. NOT with load. Lock will chatter when rotating with load. Please check with our engineering department for proposed new applications.

MATERIAL HANDLING



Material Handling

Rollers



There are literally thousands of useful applications for E & E Rollers. They are used on: conveyors, belt idlers, shock cushioners, stamping die part guides and supports, carts, wagons; they are designed into machines and assembly operations anywhere you need part movement and protection.

Our rollers are molded from solid or sponge black neoprene, white nitrile, urethane, or DuraSoft material. You can order them in solid, self-cleaning finned, or our original "DuraSoft". All styles are offered in various sizes and durometers. A standard selection of four different mountings are available to meet almost any application requirement.

Whether your product is delicate & fragile or heavy & cumbersome, E & E's engineering and sales staff can help you determine the best roller and/or bumper for your particular application.

All items are available for immediate shipment from stock. Specials are quoted on request.

NEW URETHANE ROLLERS

Urethane rollers are more rugged and wear resistant than conventional rollers. They are heavy duty and resistant to harsh industrial environments. They are used in stamping plants, cardboard, paper, and sheet metal product manufacturing areas. Their long lasting capacity also makes them popular in postal handling and

other metal product assembly operations. The higher tensile strength of urethane makes them cut resistant. They can also be used as leading rollers on assembly and conveyor lines. Urethane rollers are available from stock in all the same mountings, durometers and sizes as neoprene.



MINI ROLLERS

They are only 1-1/2" in diameter and are useful in a wide range of applications, especially where extra space or clearance is needed.



NEW WHITE ROLLERS

Non-Marring White Rollers are available in all standard sizes, durometers and mountings. They are ideal for applications where part protection and appearance is a concern.

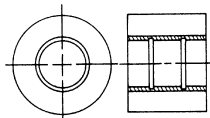


DURASOFT®

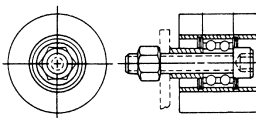
They are molded from a special elastomer with low durometer characteristics and high physical properties. DuraSoft Rollers are ideal for applications which require a gentle but firm touch.

All Rollers Are Available in Your Choice of Standard Mountings.

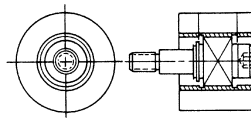
1. Roll Only (roll bonded to metal insert).
2. Complete (stud mounted free wheeling bearing)
3. "EBR" Brake Roll (one directional - clutch bearing)
4. "EX10" or "EX12" Shaft Drive (With 1" dia. or 1-1/4" dia. hub. Check catalog specifications)



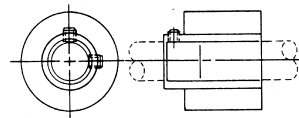
HARDWARE INCLUDED: Internal Metal Insert



Bearing Spacer, SHCS and Lock Nut



One Directional Pack and Stripper Bolt



"EX10" shown

Hub Drive and 2 Set Screw

BASE ELASTOMER	CHEMICAL NAME	ADVANTAGES	DISADVANTAGES	MAXIMUM SERVICE TEMPERATURE DEGREES F.	MINIMUM SERVICE TEMPERATURE DEGREES F.
NEOPRENE	CHLOROPRENE	Flame resistant. Weather resistant. Resists: gasoline, oil, ozone, high temp.	Affected by phosphate hydraulic fluids, aromatic hydrocarbons.	Continuous 200° Intermittent 250°	— 40°
URETHANE	DI-ISOCYANTE POLYURETHANE	Highest available abrasion resistance, strength & load bearing. High elongation, hardness. Resistance to ozone, oxygen.	Affected by ether, esters, acid, aromatics, alkalis. Performance is good, only with hardness.	Continuous 200° Intermittent 250°	— 65°
BUNA N (White Rollers)	NITRILE BUTADIENE	Resistant to gasoline, oil, alcohol, abrasion. Good physical properties.	Affected by degreaser solvents. Good physicals need reinforcement.	Continuous 175° Intermittent 225°	— 60°
DURASOFT®	POLY (1, 3, CYCLOPENTYLENE VINYLENE)	Excellent resilience, and tear resistance, good abrasion weather, H ₂ O and Ethylene Glycol resistance.	Affected by solvents, extreme high temperatures and gasoline.	Continuous 200° Intermittent 250°	— 60°

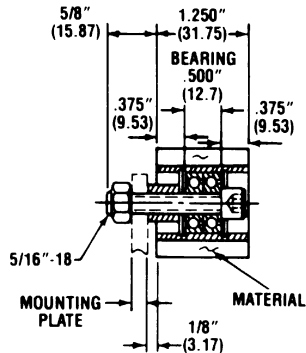
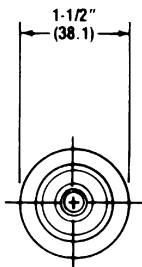
Urethane Colors

35 Durometer = Yellow / 60 Durometer = Blue/Green / 80 Durometer = Red / 95 Durometer = Orange

Rollers – Mini 1-1/2" Dia.



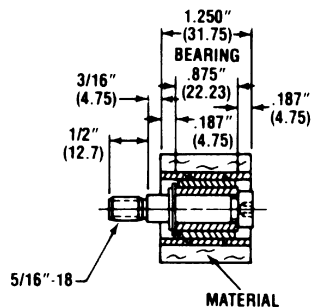
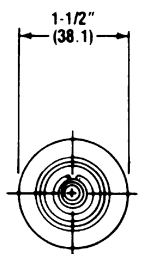
Mini rollers are only 1-1/2" in diameter. They're great wherever you need extra space or clearance. Mini rollers have unlimited design uses. They are available in a variety of mountings, styles and durometers.



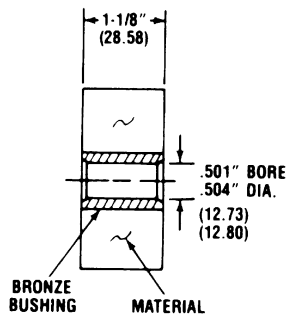
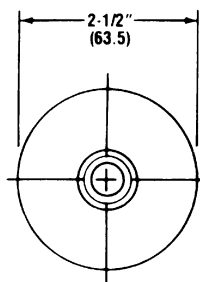
Click to download CAD File (STP Format) 2dwdg & 3dwdg visit eandespc.com

ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR215C	ERR-215-20 ()-C*	20	X	X	
	ERR-215-35 ()-C*	35	X	X	X
	ERR-215-60 ()-C*	60	X	X	X
	ERR-215-80 ()-C*	80	X	X	X
	ERR-215-95UR-C*	95			X

* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR215	EBR-215-20 ()-R/L	20	X	X	
	EBR-215-35 ()-R/L	35	X	X	X
	EBR-215-60 ()-R/L	60	X	X	X
	EBR-215-80 ()-R/L	80	X	X	X
	EBR-215-95UR-R/L	95			X



1/2" SHAFT MOUNT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR125	ERR-125-60 ()	60	X	X	
	ERR-125-80 ()	80			X

Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

Urethane Colors:

35 = Yellow / 60 = Blue/Green / 80 = Red / 95 = Orange

Rollers – Solid 2" Dia.



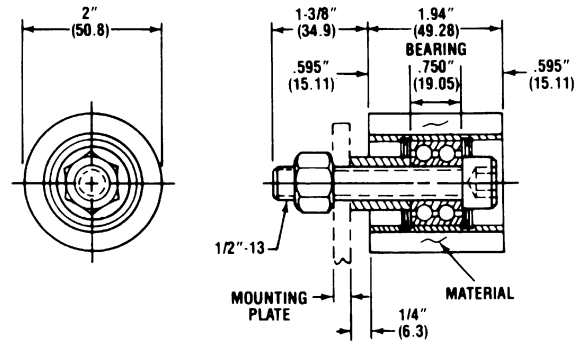
Solid rollers have a flat surface and come in sizes from 1-1/2" to 4" in diameter.



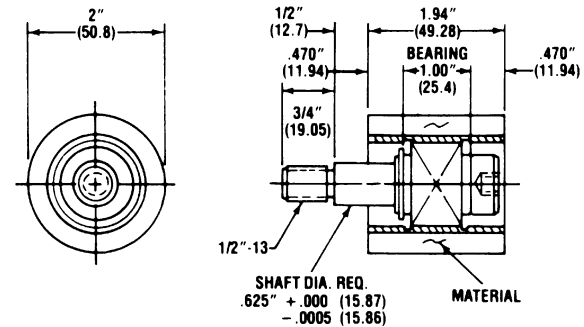
Click to download (STP Format) 2dwg & 3dwg visit eandesp.com

ROLL COMPLETE					
CAD FILE NAME	PART NO.	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR202RC	ERR-2020-20 ()-C*	20	X	X	
	ERR-2020-35 ()-C*	35	X	X	X
	ERR-2020-60 ()-C*	60	X	X	X
	ERR-2020-80 ()-C*	80	X	X	X
	ERR-2020-95UR-C*	95			X

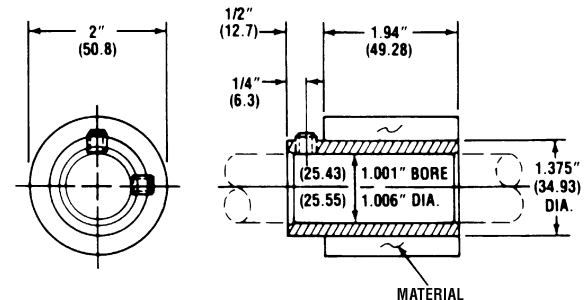
* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NO.	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR202	EBR-2020-20 ()-R/L	20	X	X	
	EBR-2020-35 ()-R/L	35	X	X	X
	EBR-2020-60 ()-R/L	60	X	X	X
	EBR-2020-80 ()-R/L	80	X	X	X
	EBR-2020-95UR-R/L	95			X



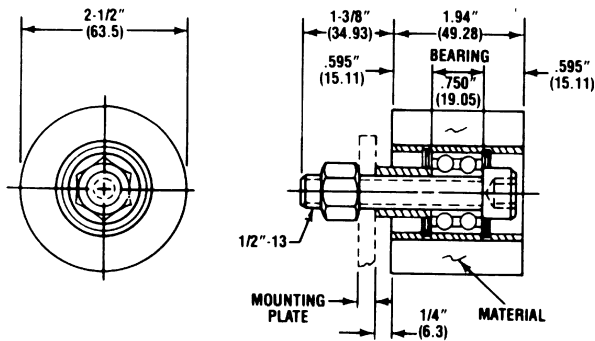
EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NO.	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR202E1	ERR-2020-20 ()-EX10	20	X	X	
	ERR-2020-35 ()-EX10	35	X	X	X
	ERR-2020-60 ()-EX10	60	X	X	X
	ERR-2020-80 ()-EX10	80	X	X	X
	ERR-2020-95UR-EX10	95			X



Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

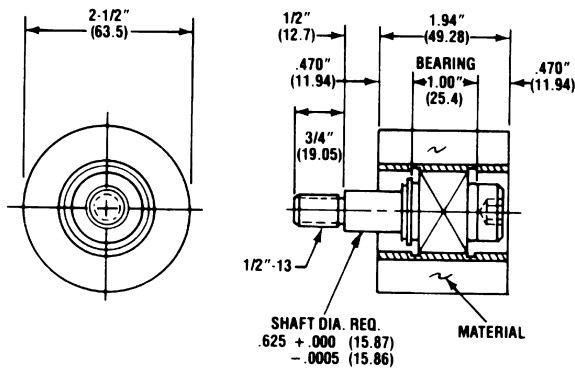
Rollers – Solid 2-1/2" Dia.

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

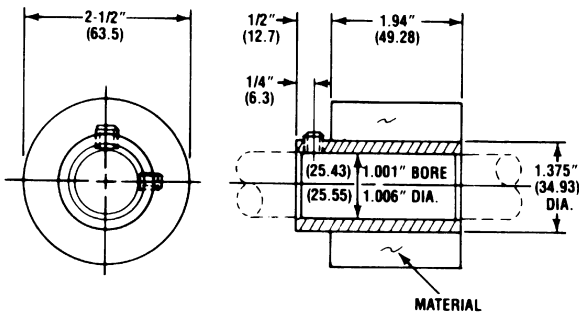


ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR502C	ERR-502-20 ()-C*	20	X	X	
	ERR-502-35 ()-C*	35	X	X	X
	ERR-502-60 ()-C*	60	X	X	X
	ERR-502-80 ()-C*	80	X	X	X
	ERR-502-95UR-C*	95			X

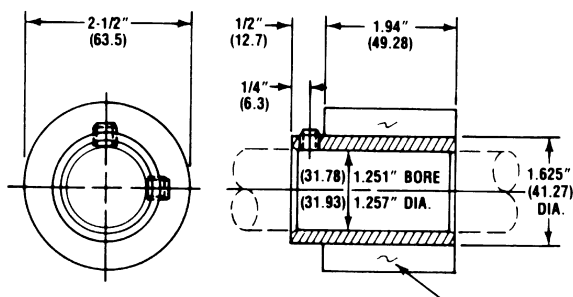
* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR502	EBR-502-20 ()-R/L	20	X	X	
	EBR-502-35 ()-R/L	35	X	X	X
	EBR-502-60 ()-R/L	60	X	X	X
	EBR-502-80 ()-R/L	80	X	X	X
	EBR-502-95UR-R/L	95			X



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR502E1	ERR-502-20 ()-EX10	20	X	X	
	ERR-502-35 ()-EX10	35	X	X	X
	ERR-502-60 ()-EX10	60	X	X	X
	ERR-502-80 ()-EX10	80	X	X	X
	ERR-502-95UR-EX10	95			X



EX12 (FOR 1-1/4" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR502E2	ERR-502-60 ()-EX12	60	X		X
	ERR-502-95UR-EX12	95			X
	ERR-502-80 ()-EX12	80			X

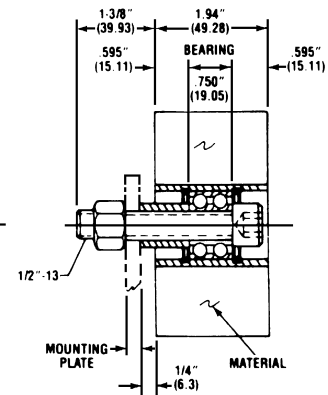
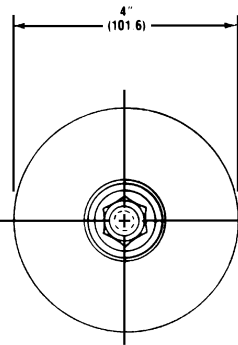
Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

Rollers – Solid 4" Dia.



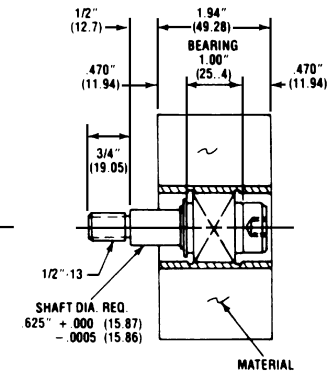
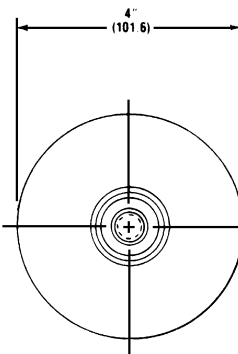
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR754C	ERR-754-20 ()-C*	20	X	X	
	ERR-754-35 ()-C*	35	X	X	X
	ERR-754-60 ()-C*	60	X	X	X
	ERR-754-80 ()-C*	80	X	X	X
	ERR-754-95UR-C*	95			X

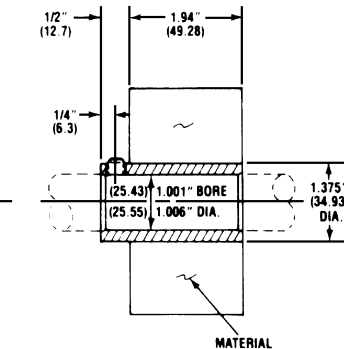
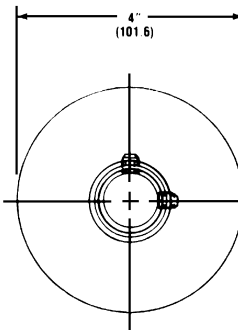


* Add "P" for precision bearing or add "PC" for sealed precision bearing option.

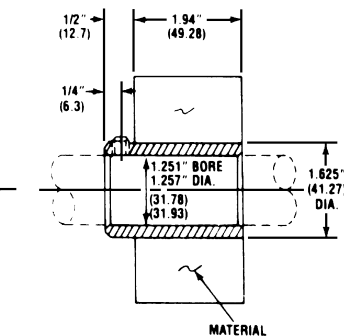
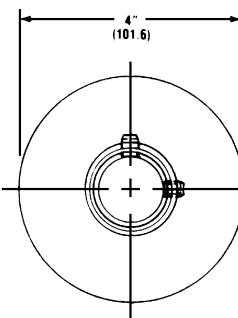
BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR754	EBR-754-20 ()-R/L	20	X	X	
	EBR-754-35 ()-R/L	35	X	X	X
	EBR-754-60 ()-R/L	60	X	X	X
	EBR-754-80 ()-R/L	80	X	X	X
	EBR-754-95UR-R/L	95			X



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR754E1	ERR-754-20 ()-EX10	20	X	X	
	ERR-754-35 ()-EX10	35	X	X	X
	ERR-754-60 ()-EX10	60	X	X	X
	ERR-754-80 ()-EX10	80	X	X	X
	ERR-754-95UR-EX10	95			X



EX12 (FOR 1-1/4" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR754E2	ERR-754-35 ()-EX12	35	X		
	ERR-754-60 ()-EX12	60	X	X	X
	ERR-754-80 ()-EX12	80			X



Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

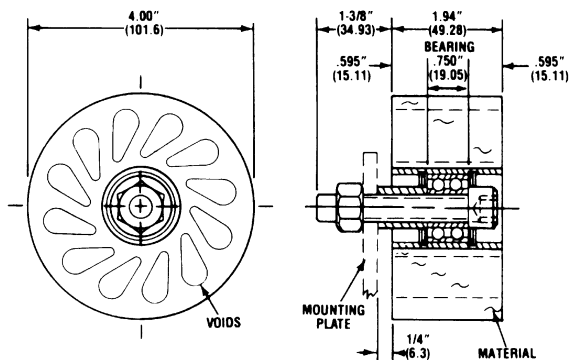
Rollers – Durasoft 4" Dia.



Hardworking Rollers with the Soft Touch

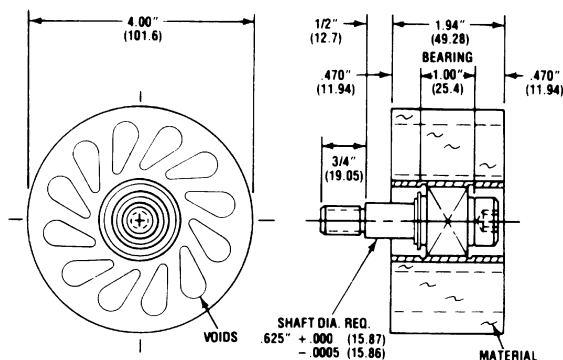
DuraSoft® rollers are compliant to the workpiece, yet durable enough to stand up to demanding production applications. They are molded from a special elastomer with low durometer characteristics and high physical properties. The unique shape of the holes also add to their soft but resilient nature. DuraSoft rollers are ideal for production and assembly applications which require a gentle but firm touch. Material handling uses include: bottling machinery, sheet metal product handling, car wash equipment, and robotic end effectors.

Click to download CAD file (STP Format) 2dwg & 3dwg visit eandesp.com

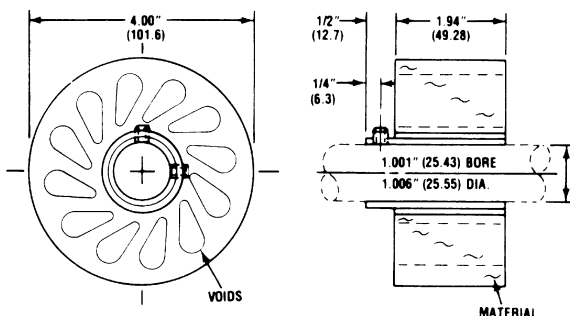


ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR754C	EDR-754-20 ()-C *	20	X	X	
	EDR-754-35 ()-C *	35	X	X	X
	EDR-754-60 ()-C *	60			X
	EDR-754-80 ()-C *	80			X

* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR754	EDR-754-20 ()-BR-R/L	20	X	X	
	EDR-754-35 ()-BR-R/L	35	X	X	X
	EDR-754-60 ()-BR-R/L	60			X
	EDR-754-80 ()-BR-R/L	80			X



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR754E1	EDR-754-20 ()-EX10	20	X	X	
	EDR-754-35 ()-EX10	35	X	X	X
	EDR-754-60 ()-EX10	60			X
	EDR-754-80 ()-EX10	80			X

Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

Rollers – Finned 1-1/2" – 2-1/2" Dia.

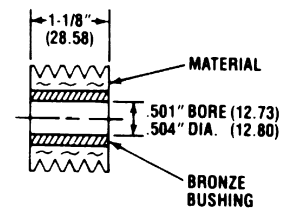


The unique finned design provides longer wear, a soft touch for optimum parts protection, and self cleaning characteristics, especially in harsh industrial environments.

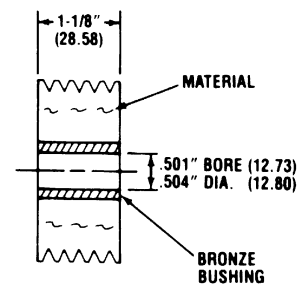
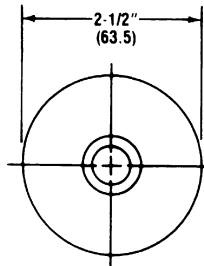


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

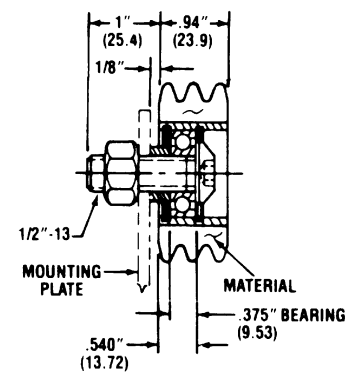
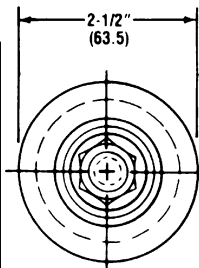
FINNED					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR1252F	ERR-125-2F-60 ()	60	X	X	



FINNED					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR125F	ERR-125-F-60 ()	60	X	X	

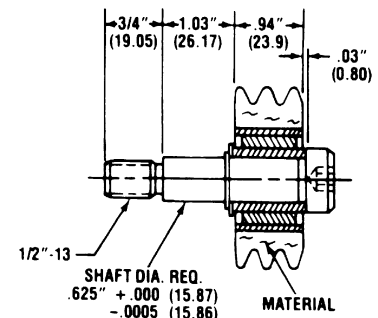
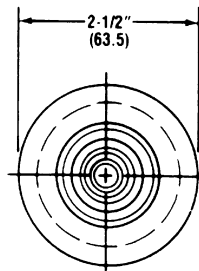


ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR2596C	ERR-9250-20 ()-C*	20	X	X	
	ERR-9250-35 ()-C*	35	X	X	X
	ERR-9250-60 ()-C*	60	X		



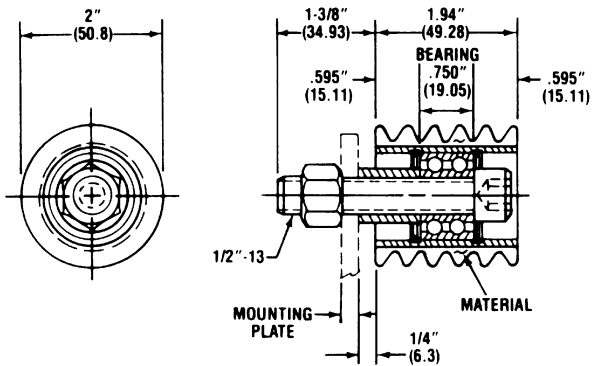
* Add "P" for precision bearing or add "PC" for sealed precision bearing option.

BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR2596	EBR-9250-20 ()-R/L	20	X	X	
	EBR-9250-35 ()-R/L	35	X	X	X
	EBR-9250-60 ()-R/L	60	X		



Note: () is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

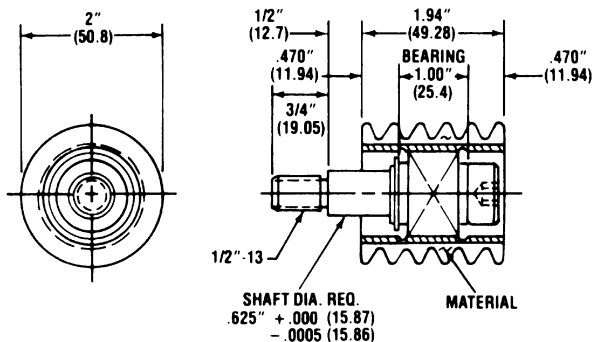
Rollers – Finned 2" Dia.



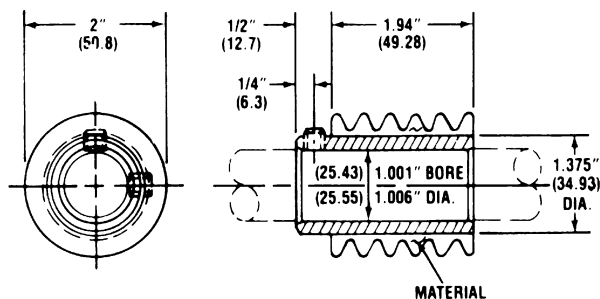
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesps.com

COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR2502C	ERR-250-2-20 ()-C*	20	X	X	
	ERR-250-2-35 ()-C*	35	X	X	X

* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR2502	EBR-250-2-20 ()-R/L	20	X	X	
	EBR-250-2-35 ()-R/L	35	X	X	X



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR2502E	ERR-250-2-20 ()-EX10	20	X	X	
	ERR-250-2-35 ()-EX10	35	X	X	X

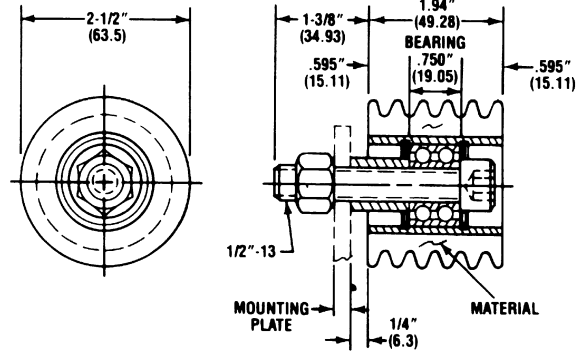
Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

Rollers – Finned 2-1/2" Dia.

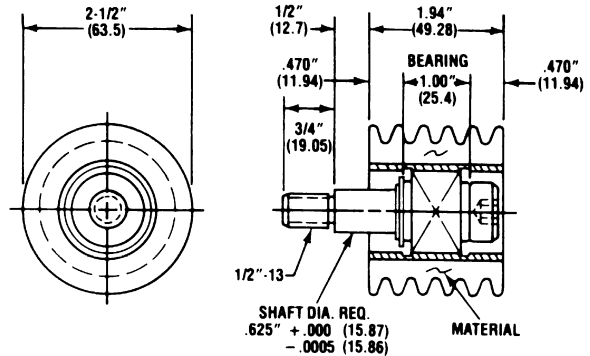
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR250C	ERR-250-20 ()-C*	20	X	X	
	ERR-250-35 ()-C*	35	X	X	X
	ERR-250-60 ()-C*	60	X		

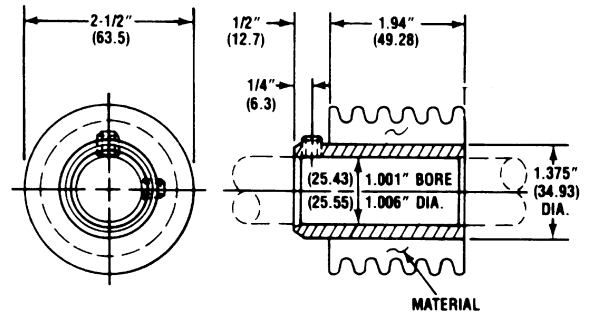
* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



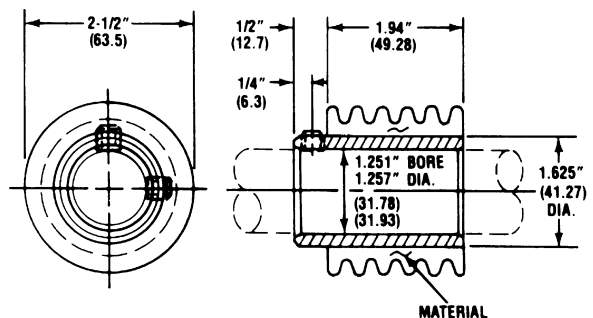
BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR250	EBR-250-20 ()-R/L	20	X	X	
	EBR-250-35 ()-R/L	35	X	X	X
	EBR-250-60 ()-R/L	60	X		



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR250E1	ERR-250-20 ()-EX10	20	X	X	
	ERR-250-35 ()-EX10	35	X	X	X
	ERR-250-60 ()-EX10	60	X	X	X

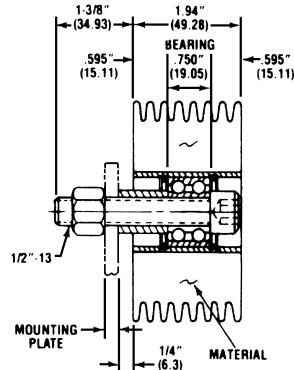
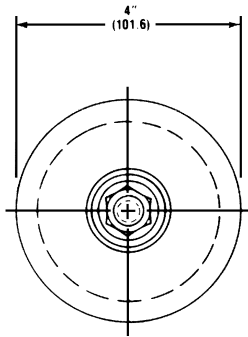


EX12 (FOR 1-1/4" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR250E2	ERR-250-35 ()-EX12	35	X		



Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

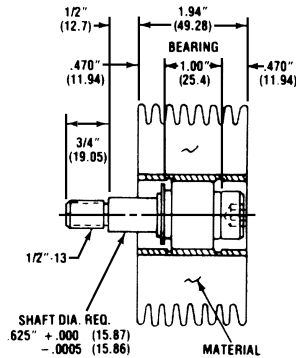
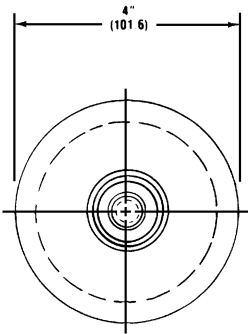
Rollers – Finned 4" Dia.



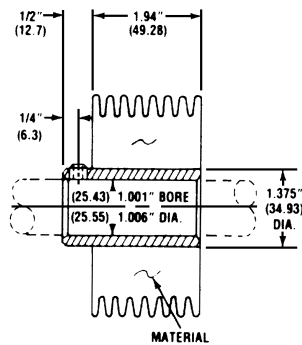
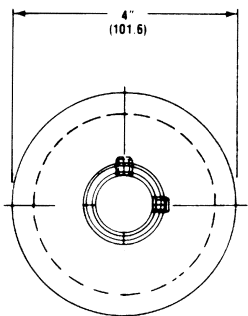
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

ROLL COMPLETE					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR667C	ERR-667-35 ()-C*	35	X	X	X
	ERR-667-60 ()-C*	60	X	X	X

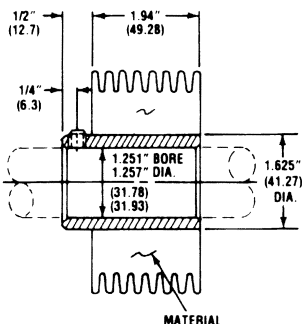
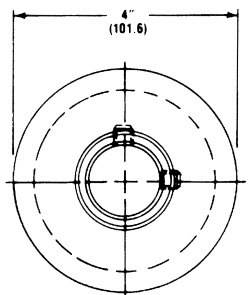
* Add "P" for precision bearing or add "PC" for sealed precision bearing option.



BRAKE ROLL RIGHT/LEFT					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
EBR667	EBR-667-35 ()-R/L	35	X	X	X
	EBR-667-60 ()-R/L	60	X	X	X



EX10 (FOR 1" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR667E1	ERR-667-35 ()-EX10	35	X	X	X
	ERR-667-60 ()-EX10	60	X	X	X



EX12 (FOR 1-1/4" SHAFT DRIVE)					
CAD FILE NAME	PART NUMBER	DUROMETER	MATERIAL AVAILABLE		
			(STD)	(W)	(UR)
ERR667E2	ERR-667-35 ()-EX12	35	X		X
	ERR-667-60 ()-EX12	60			X

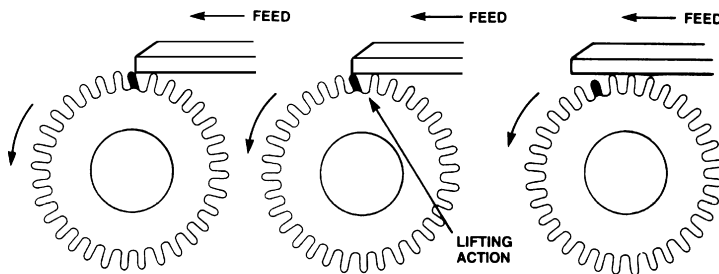
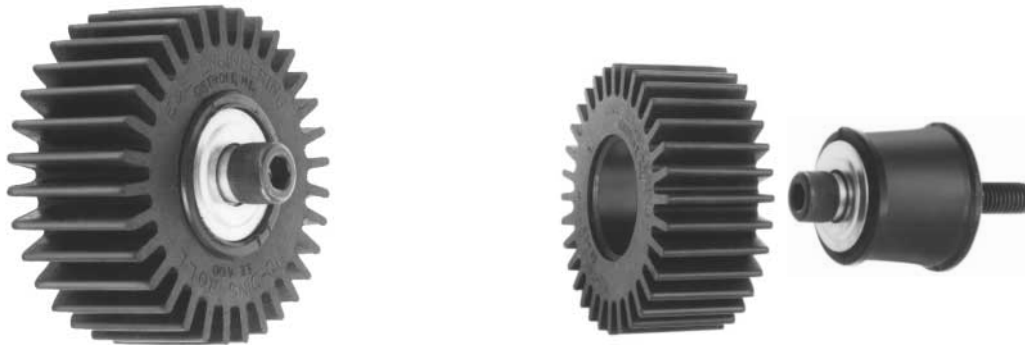
Note: () Is the material to be specified to complete part number. When ordering, indicate your material selection into the part number after the durometer. Indicate nothing for black (STD), "W" for white or "UR" for urethane.

“No Ding” Conveyor Rolls

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name E400

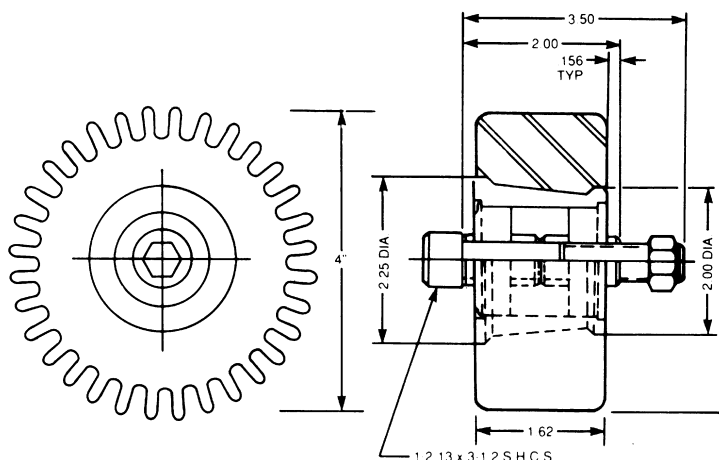
PART No. E400



- Protect Your Products
- Last Longer Than Conventional Rolls
- Reduce Maintenance Costs

These fingers flex on impact, and the following finger gently lifts the leading edge of incoming stock or parts. The combination of tough elastomer and flexible finger design makes “No-Ding” rolls exceptionally durable, substantially extending roll life in many applications.

“No-Ding” conveyor rolls combine gentle, mar-free handling of parts and stock with excellent durability and reduced maintenance costs. The secret is in the exclusive design that replaces conventional rolls with a molded elastomeric element that has thirty-two tough, resilient fingers around its periphery.



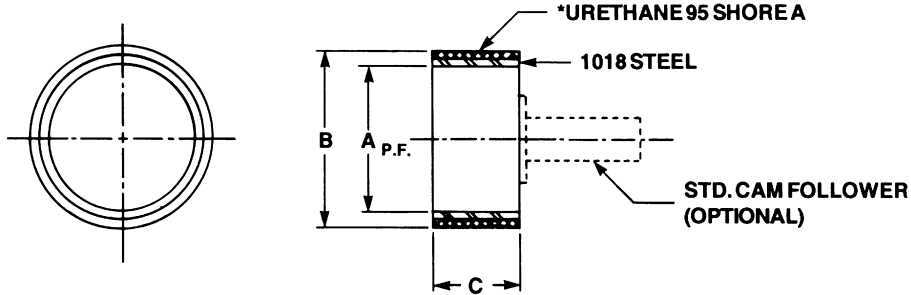
When they do wear out, the “No-Ding” design permits economical replacement of the wheel while the hub and bearing assembly remains mounted on your equipment. This exclusive feature minimizes the long-term operating cost of “No-Ding” Rolls, making them the most economical choice available today for high-production part and stock handling.

PART NO. E400 - Complete

Tires – Urethane Face



E&E urethane tires are used to protect and silence cam followers in applications where metal to metal contact is objectionable. The resilient tires cushion impact and reduce wear, extending follower life. They also prevent marring of finished surfaces. E&E urethane tires are available in a variety of sizes to press-fit over standard cam followers.



Click to download CAD File (3dwg) 2dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	NOMINAL FOLLOWER SIZE A	A _{P.F.}	B	C
EUN-CF	EUN-CF-110	1/2	.500	.75	.38
	EUN-CF-111	9/16	.562	.81	.38
	EUN-CF-112	5/8	.625	.88	.44
	EUN-CF-113	11/16	.687	1.00	.44
	EUN-CF-114	3/4	.750	1.12	.50
	EUN-CF-115	7/8	.875	1.25	.50
	EUN-CF-116	1	1.000	1.38	.62
	EUN-CF-117	1-1/8	1.125	1.50	.62
	EUN-CF-118	1-1/4	1.250	1.62	.75
	EUN-CF-119	1-3/8	1.375	1.75	.75
	EUN-CF-120	1-1/2	1.500	1.88	.88
	EUN-CF-121	1-5/8	1.625	2.00	.88
	EUN-CF-122	1-3/4	1.750	2.12	1.00
	EUN-CF-123	1-7/8	1.875	2.25	1.00
	EUN-CF-124	2	2.00	2.50	1.25
	EUN-CF-125	2-1/4	2.250	2.75	1.25
	EUN-CF-126	2-1/2	2.500	3.00	1.50
	EUN-CF-127	2-3/4	2.750	3.25	1.50
EUN-CF-128	3	3.000	3.50	1.75	
EUN-CF-129	3-1/4	3.250	3.75	1.75	
EUN-CF-130	3-1/2	3.500	4.00	2.00	
EUN-CF-131	4	4.00	4.50	2.25	

Note:

1. Rolls not furnished with follower.
2. To order complete with follower, add "C" to Part Number. (Example EUN-CF-110-C)
- *3. Other sizes and materials are available through special order.

CAD Directory

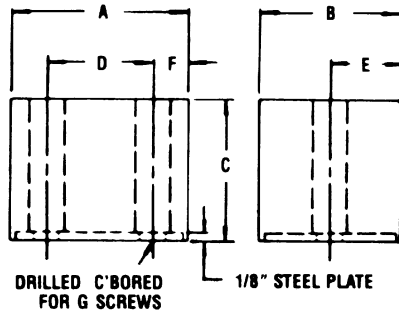
MATL-Handling\Rollers

Bumpers – Rectangular and Square



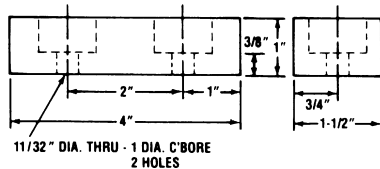
You can order bumpers in the sizes shown below directly from stock. They are 80 durometer, available bonded to 1/8" steel plate or neoprene only. Mounting holes are drilled and counter bored or tapped for mounting.

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

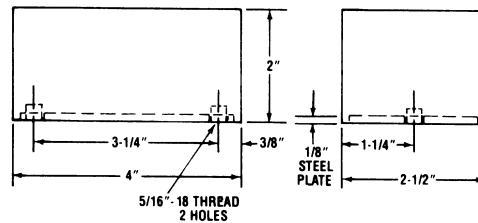


BUMPERS W/DRILLED & COUNTERBORED HOLES										
CAD FILE NAME	NEOPRENE PART NUMBER	URETHANE PART NUMBER	A	B	C	D	E	F	G	NUMBER OF HOLES
ERB1175	ERB-1175	ERB-1175-UR	1-3/4	1	3/4	1	1/2	3/8	1/4	2
ERB1175	*ERB-1175-35		1-3/4	1	3/4	1	1/2	3/8	1/4	2
ERB2025C	ERB-2025-C	ERB-2025-C-UR	2-1/2	2	2	1-1/2	1	1/2	5/16	2
ERB2025	ERB-2025	ERB-2025-UR	2-1/2	2	2					
ERB7525	ERB-7525	ERB-7525-UR	2-1/2	5/8	5/8	1-1/2	5/16	1/2	1/4	2
ERB7575	ERB-7575	ERB-7575-UR	3/4	3/4	5/8		3/8	3/8	1/4	1

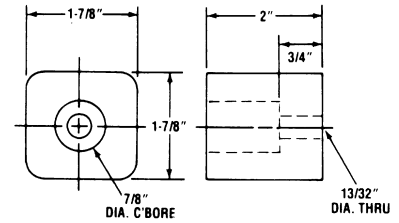
Neoprene 80 Durometer *ERB-1175-35=35 Durometer
Urethane 80 Durometer



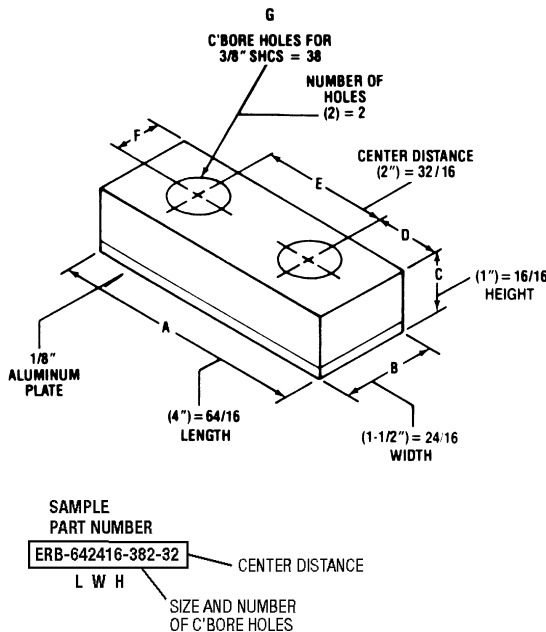
ERB-1540 60 Durometer Neoprene



ERB-2540-T 80 Durometer Neoprene



ERB-2020-C 80 Durometer Neoprene



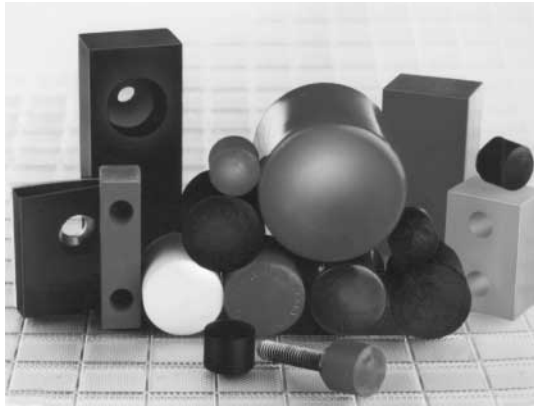
SAMPLE PART NUMBER
ERB-642416-382-32
L W H
CENTER DISTANCE
SIZE AND NUMBER OF C'BORE HOLES

STANDARD NEOPRENE CUT BUMPERS WITH ALUMINUM BACK										
CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	NUMBER OF HOLES	
ERB24161	ERB-241612-142	1-1/2	1	3/4	3/8	3/4	1/2	1/4	2	
ERB28162	ERB-281628-142	1-3/4	1	1-3/4	3/8	1	1/2	1/4	2	
ERB48162	ERB-481628-382	3	1	1-3/4	5/8	1-3/4	1/2	3/8	2	
ERB48241	ERB-482416-5162	3	1-1/2	1	1/2	2	3/4	5/16	2	
ERB64161	ERB-641612-142	4	1	3/4	1-1/2	1	1/2	1/4	2	

CUSTOM CUT BUMPERS

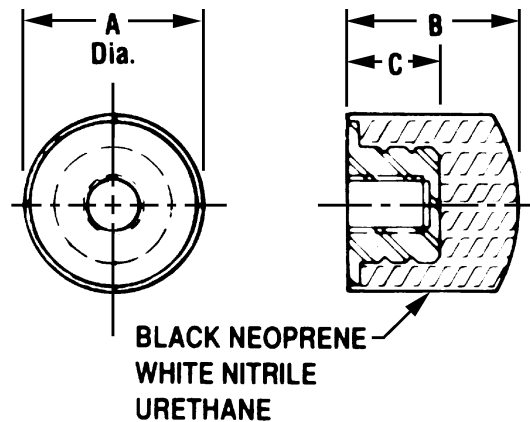
Cut bumpers in neoprene or urethane are available in your dimensions. Various durometers optional, aluminum back, and a choice of drilled, tapped or counter bored holes give you unlimited design choices. To order, specify length – width – height – hole size – center distance – backing – durometer and type. Refer to drawing and sample part number for example. We provide fast turnaround time on large or small quantities.

Bumpers – Round with Female Threads – 3/4" - 2-1/4" Dia.



Rugged black neoprene, white nitrile or urethane bumpers are bonded to solid steel cores and are used to guard, stop, align, position or protect parts through each step of manufacturing. Bumpers are shipped from stock and are available in many standard sizes and shapes.

Molded Round Bumpers with Female Thread



Click to download CAD File (STP Format) 2dwdg & 3dwdg visit eandesp.com

CAD FILE NAME	NEOPRENE BUMPER NUMBER	WHITE BUMPER NUMBER	URETHANE BUMPER NUMBER	DIA. A	LENGTH B	C	FEMALE THREAD
ERB516	ERB-516-024	—	ERB-516-024UR	3/4	5/8	3/8	10-24 x 1/4
	ERB-516-032	—	ERB-516-032UR	3/4	5/8	3/8	10-32 x 1/4
	ERB-516-120	—	ERB-516-120UR	3/4	5/8	3/8	1/4-20 x 1/4
	ERB-516-128	—	ERB-516-128UR	3/4	5/8	3/8	1/4-28 x 1/4
	ERB-516-45*	—	ERB-516-60-UR*	3/4	5/8	3/8	5/16 - 18 x 1/4
	ERB-516-70	ERB-516-70W	ERB-516-80-UR	3/4	5/8	3/8	5/16 - 18 x 1/4
	ERB-516-524	—	ERB-516-524UR	3/4	5/8	3/8	5/16-24 x 1/4
ERB3-8	ERB-3	ERB-3W	ERB-3-UR	1-1/4	1-1/4	3/4	3/8 - 16 x 1/2
	ERB-4	ERB-4W	ERB-4-UR	1-1/4	1-1/4	3/4	3/8 - 24 x 1/2
	ERB-5	ERB-5W	ERB-5-UR	1-1/4	1-1/4	3/4	1/2 - 13 x 1/2
	ERB-6	ERB-6W	ERB-6-UR	1-1/4	1-1/4	3/4	1/2 - 20 x 1/2
	ERB-7	ERB-7W	ERB-7-UR	1-1/4	1-1/4	3/4	7/16 - 20 x 1/2
	ERB-8	ERB-8W	ERB-8-UR	1-1/4	1-1/4	3/4	5/8 - 18 x 1/2
ERB9-10	ERB-9	ERB-9W	ERB-9-UR	1-3/4	1-5/8	7/8	5/8 - 11 x 5/8
	ERB-10	ERB-10W	ERB-10-UR	1-3/4	1-5/8	7/8	5/8 - 18 x 5/8
ERB12-14	ERB-12	ERB-12W	ERB-12-UR	2-1/4	2-1/4	1-3/8	3/4 - 10 x 1
	ERB-13	ERB-13W	ERB-13-UR	2-1/4	2-1/4	1-3/8	3/4 - 16 x 1
	ERB-14	ERB-14-W	ERB-14-UR	2-1/4	2-1/4	1-3/8	1 - 8 x 1

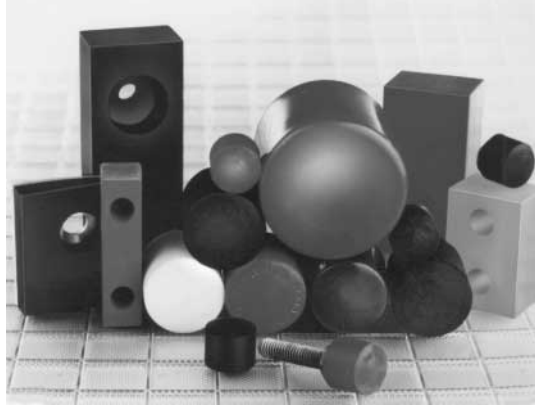
Black Neoprene 40-45 Durometer
White Nitrile 40-45 Durometer
Urethane 80-90 Durometer

* 516 Bumpers are 70 Neoprene & 80 Urethane
except 516-45 is 45 Durometer Neoprene and
516-60 UR is 60 Durometer Urethane.

Bumpers – Round with Male Threads – 3/4" - 1-1/2" Dia.



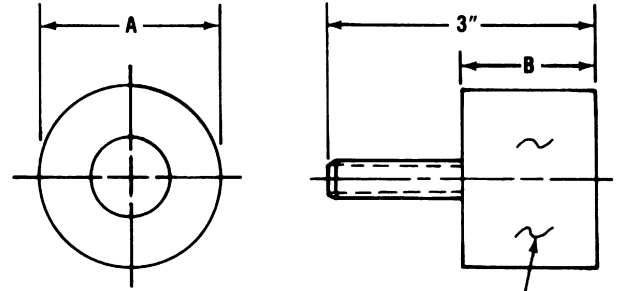
E&ESP



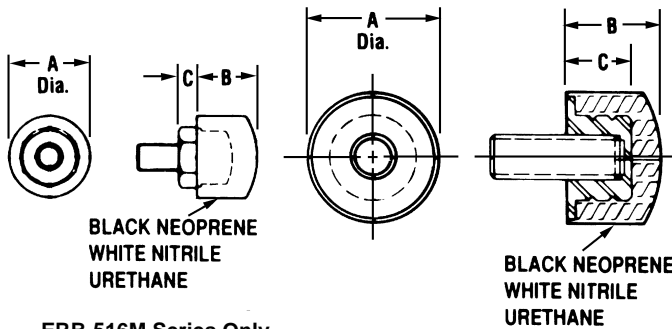
Rugged black neoprene, white nitrile or urethane bumpers are bonded to solid steel cores and are used to guard, stop, align, position or protect parts through each step of manufacturing. Bumpers are shipped from stock and are available in many standard sizes and shapes.

Molded Round Bumpers with Male Thread and Hex Shoulder

Molded Round Bumpers with Male Thread



NEOPRENE-60 DURO.



ERB-516M Series Only

CAD FILE NAME	BUMPER NO.	DIA. A	LENGTH B	MALE THREAD
ERB2015M	ERB-2015M-24	2	1-1/2	3/8 - 16 x 1-1/2

Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	NEOPRENE BUMPER NUMBER	WHITE BUMPER NUMBER	URETHANE BUMPER NUMBER	DIA. A	LENGTH B	C	MALE THREAD
ERB-516-10	ERB-516-024M-8	—	ERB-516-024URM-8	3/4	5/8	3/16	10-24 x 1/2
	ERB-516-024M-20	—	ERB-516-024URM-20	3/4	5/8	3/16	10-24 x 1-1/4
	ERB-516-032M-8	—	ERB-516-032URM-8	3/4	5/8	3/16	10-32 x 1/2
	ERB-516-032M-20	—	ERB-516-032URM-20	3/4	5/8	3/16	10-32 x 1-1/4
ERB-516-25	ERB-516-120M-8	—	ERB-516-120URM-8	3/4	5/8	3/16	1/4-20 x 1/2
	ERB-516-120M-20	—	ERB-516-120URM-20	3/4	5/8	3/16	1/4-20 x 1-1/4
	ERB-516-128M-8	—	ERB-516-128URM-8	3/4	5/8	3/16	1/4-28 x 1/2
	ERB-516-128M-20	—	ERB-516-128URM-20	3/4	5/8	3/16	1/4-28 x 1-1/4
ERB-516-31	ERB-516M-8	ERB-516WM-8	ERB-516URM-8	3/4	5/8	3/16	5/16 - 18 x 1/2
	ERB-516M-20	ERB-516WM-20	ERB-516URM-20	3/4	5/8	3/16	5/16 - 18 x 1-1/4
	ERB-516-524M-8	—	ERB-516-524URM-8	3/4	5/8	3/16	5/16-24 x 1/2
	ERB-516-524M-20	—	ERB-516-524URM-20	3/4	5/8	3/16	5/16-24 x 1-1/4
ERB3M-38	ERB-3M-10	ERB-3WM-10	ERB-3URM-10	1-1/4	1-1/4	3/4	3/8 - 16 x 5/8
	ERB-3M-20	ERB-3WM-20	ERB-3URM-20	1-1/4	1-1/4	3/4	3/8 - 16 x 1-1/4
ERB8M-62	ERB-8M-16	ERB-8WM-16	ERB-8URM-16	1-1/4	1-1/4	3/4	5/8 - 18 x 1
ERB14M-50	ERB-14M-13	ERB-14WM-13	ERB-14URM-13	1-1/4	1-1/4	3/4	1/2 - 13 x 3/4
ERB15M-38	ERB-15M-12	—	ERB-15URM-12	1-1/2	13/16	3/8	3/8 - 16 x 3/4

Black Neoprene 40-45 Durometer
White Nitrile 40-45 Durometer
Urethane 80-90 Durometer

* 516 Bumpers are 70 Neoprene & 80 Urethane

CAD Directory
MATL-Handling\Bumper

Unidure Cushion

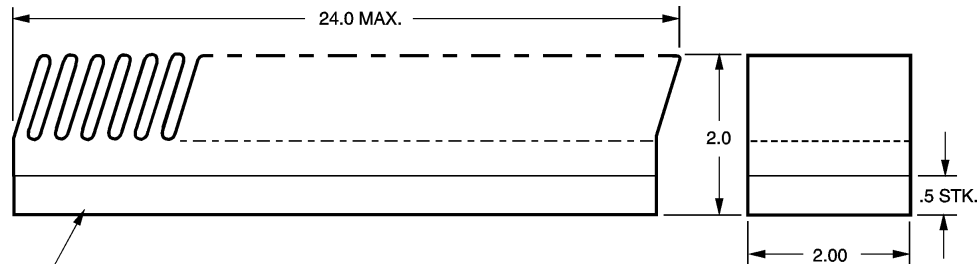


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

EUN-CU



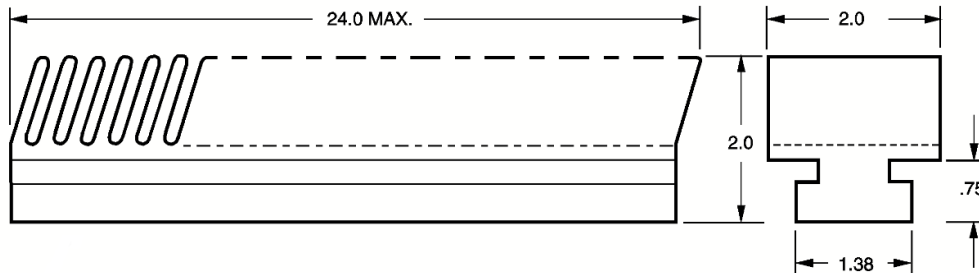
Screw or Weld Down Style



UNIDURE CUSHION
UNCU-100 (X LENGTH)
COLOR ORANGE (OR SPECIFY OPTION)
DURO 70/80A (OR SPECIFY OPTION)

EUNCU-100 —
LENGTH

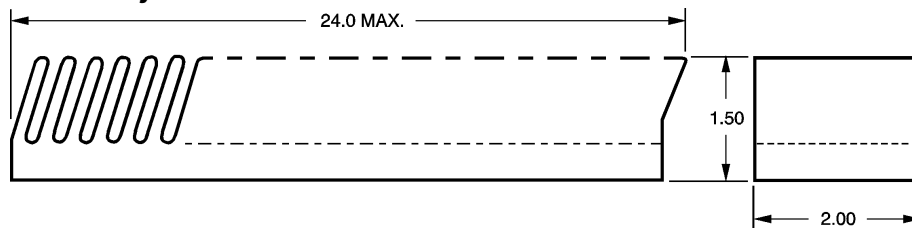
Unistrut® Insert Style



UNIDURE CUSHION
UNCU-200 (X LENGTH)
COLOR ORANGE (OR SPECIFY OPTION)
DURO 70/80A (OR SPECIFY OPTION)

EUNCU-200 —
LENGTH

Nail Glue Screw Down Style

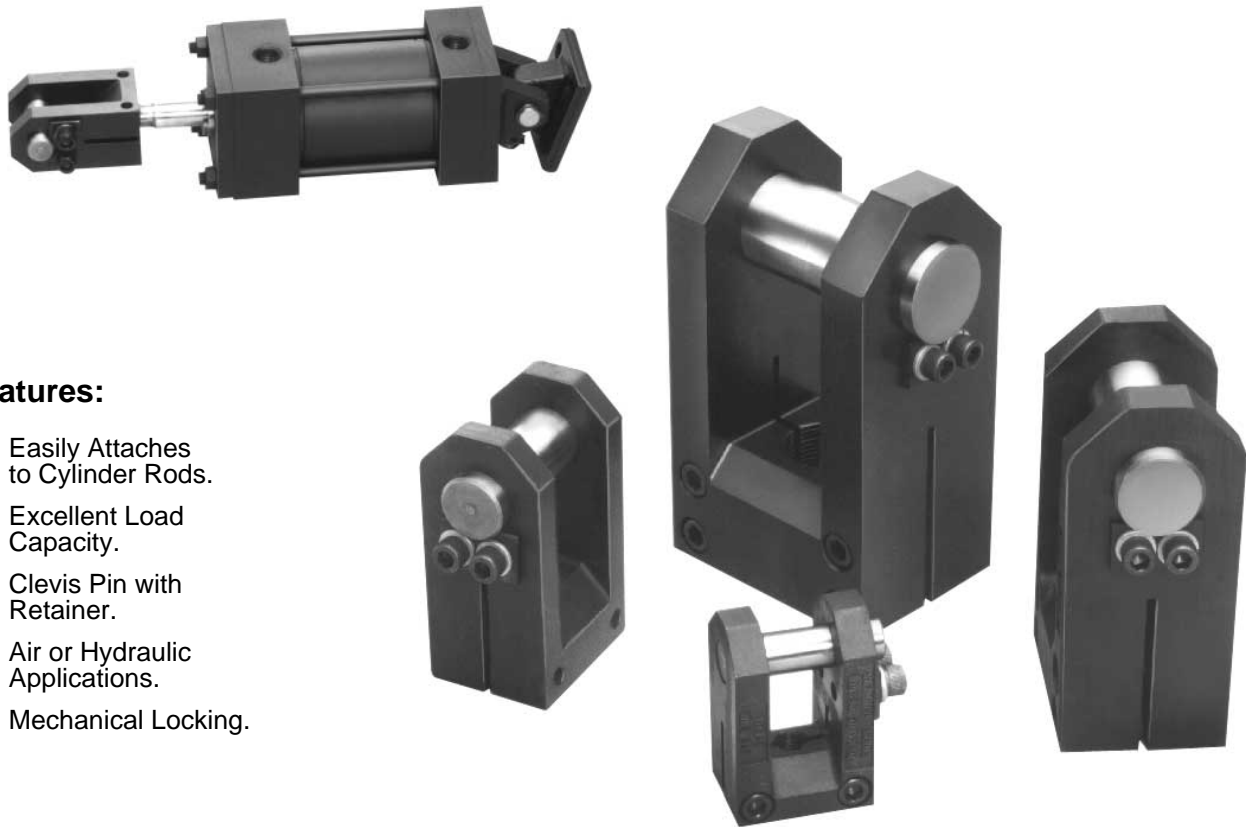


UNIDURE CUSHION
UNCU-300 (X LENGTH)
COLOR ORANGE (OR SPECIFY OPTION)
DURO 70/80A (OR SPECIFY OPTION)

EUNCU-300 —
LENGTH

CYLINDER ACCESSORIES

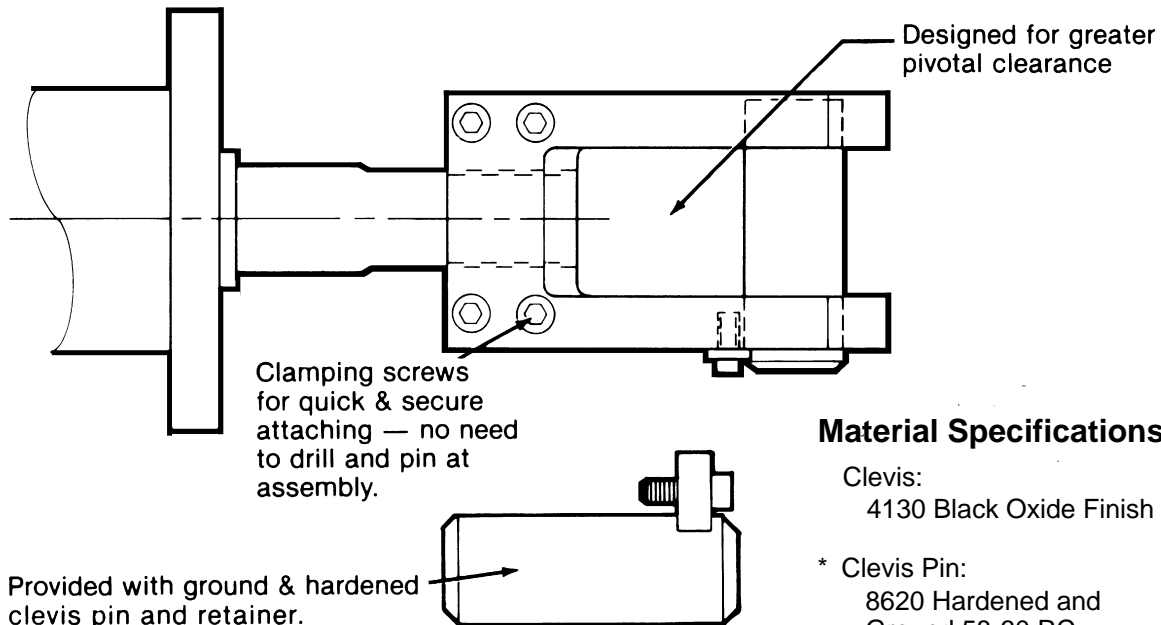




Features:

- ❑ Easily Attaches to Cylinder Rods.
- ❑ Excellent Load Capacity.
- ❑ Clevis Pin with Retainer.
- ❑ Air or Hydraulic Applications.
- ❑ Mechanical Locking.

Design Features



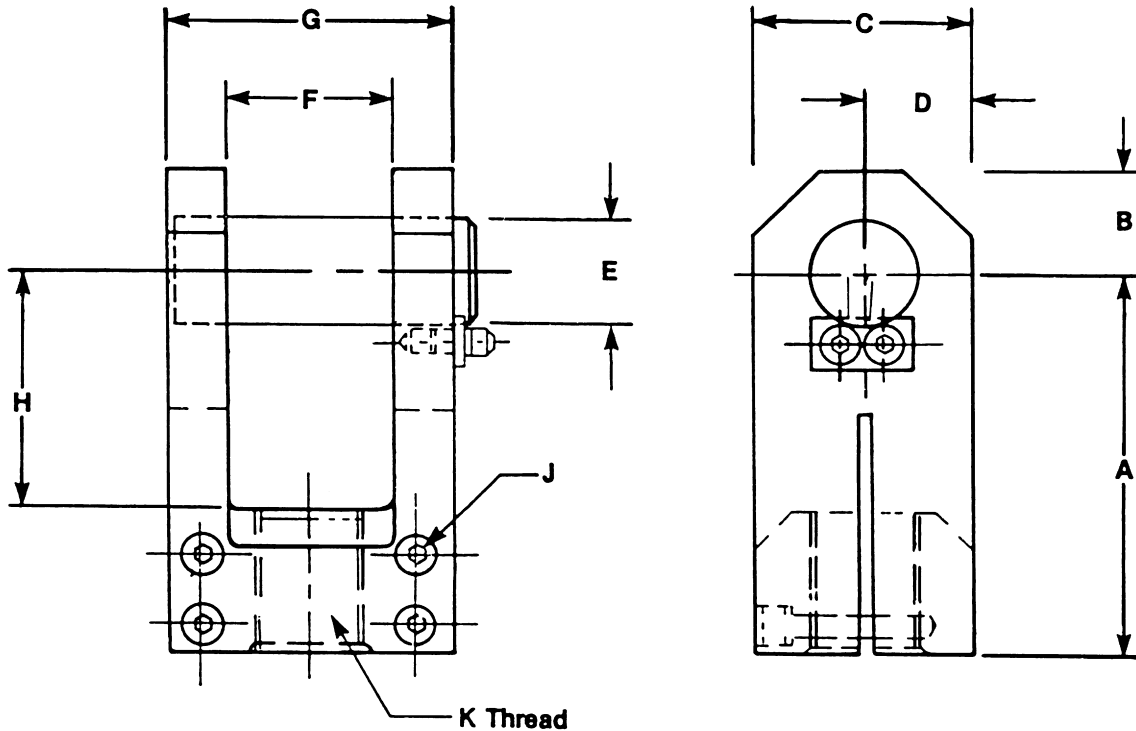
Material Specifications:

Clevis:
4130 Black Oxide Finish

* Clevis Pin:
8620 Hardened and
Ground 58-60 RC
.001 Below Nominal
Dimension + .0000/- .0005

* Available with pipe tap.
Refer to page D15 for dimensions.

Cylinder Clevis



Click to download
CAD File

			DIMENSIONS										
CAD FILE NAME			PART NUMBER	A	B	C	D	E [#]	F	G	H	J	K
2DWG	3DWG	STP	E-1570 E-1390*	2.30	.70	1.50	.75	.625	1.00	2.00	1.50	5/16 x 3/4 2 SCREWS	7/16-20
2DWG	3DWG	STP	E-1571 E-1571 E-1391*	2.30	.70	1.50	.75	.625	1.00	2.00	1.50	5/16 x 3/4 2 SCREWS	1/2-20
2DWG	3DWG	STP	E-1572 E-1572 E-1389*	3.30	1.00	2.00	1.00	1.000	1.50	2.50	2.00	3/8 x 1-1/4 2 SCREWS	3/4-16
2DWG	3DWG	STP	E-1573 E-1573 E-1392*	3.30	1.00	2.00	1.00	1.000	1.50	2.50	2.00	3/8 x 1-1/4 2 SCREWS	7/8-14
2DWG	3DWG	STP	E-1574 E-1574 E-1388*	4.40	1.25	2.50	1.25	1.250	1.80	3.00	2.70	3/8 x 1-1/2 4 SCREWS	1-14
2DWG	3DWG	STP	E-1575 E-1575 E-1393*	4.40	1.25	2.50	1.25	1.250	1.80	3.00	2.70	3/8 x 1-1/4 4 SCREWS	1-1/4 -12
2DWG	3DWG	STP	E-1576 E-1576 E-1394*	5.40	1.50	3.00	1.50	1.500	2.30	4.00	3.40	3/8 x 1-1/2 4 SCREWS	1-1/2 -12
2DWG	3DWG	STP	E-1577 E-1577 E-1395*	6.00	1.75	3.50	1.75	1.750	2.50	4.50	3.80	3/8 x 2.00 4 SCREWS	1-3/4 - 12
2DWG	3DWG	STP	E-1578 E-1578 E-1396*	7.40	2.00	4.00	2.00	2.000	3.30	6.00	4.50	3/8 x 2-1/4 6 SCREWS	2-1/4 - 12

* With Bearing Thrust Washers

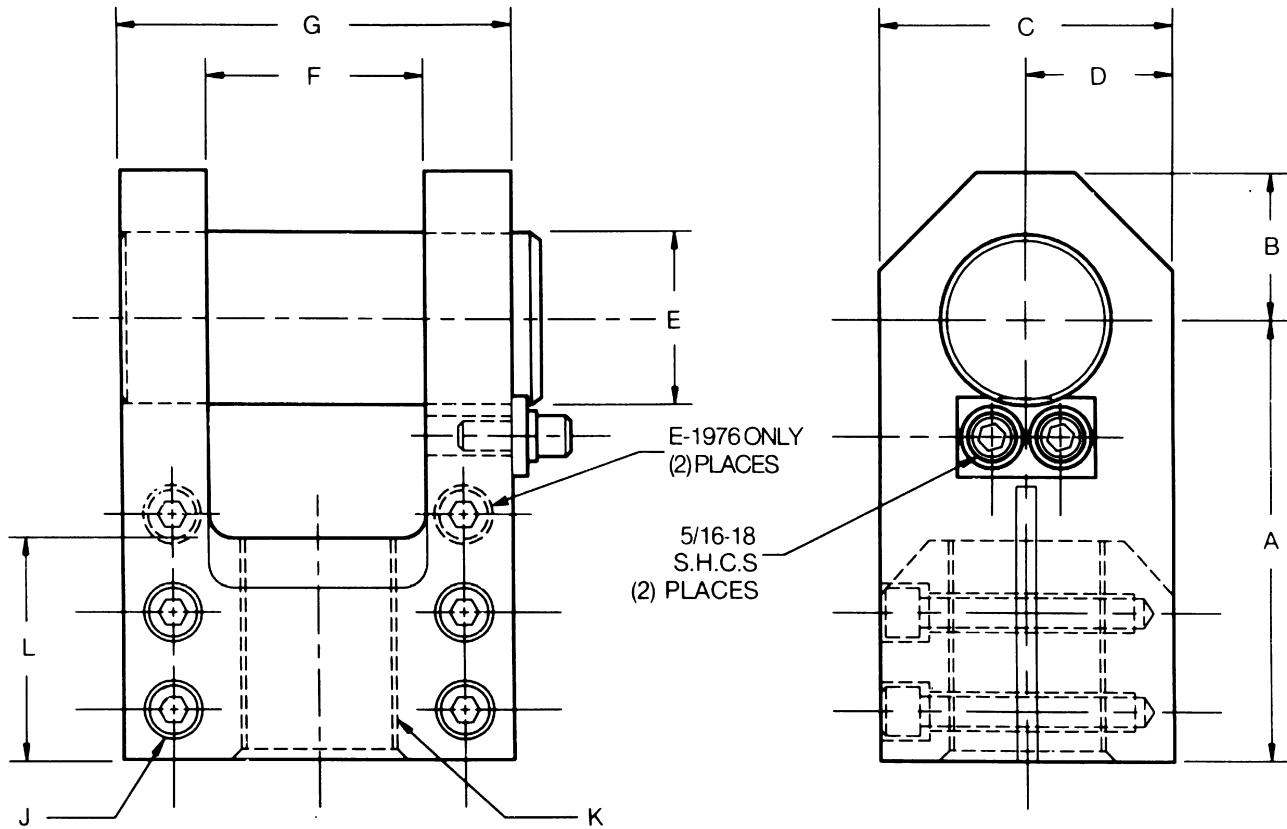
#Clevis pins are furnished and ground .001 below nominal "E" dimension +.0000/- .0005.

Note: Add "PT" after part number when pipe tap is desired, i.e.: E1970-PT.

SAFE LOAD IN POUNDS								
E1570	E1571	E1572	E1573	E1574	E1575	E1576	E1577	E1578
7,950	7,950	10,250	10,250	16,000	16,000	27,000	36,000	56,000

CAD Directory
Cylinder-ACC\Clevis

Cylinder Clevis



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D	E#	F	G	J	K	L
E-1970	E-1970	1.50	.70	1.50	.75	.500	1.00	2.00	5/16 x 1 2 SCREWS	7/16 - 20	.75
E-1971	E-1971	2.375	1.00	2.00	1.00	.750	1.50	2.50	3/8 x 1-1/4 2 SCREWS	3/4 - 16	1.12
E-1972	E-1972	3.125	1.25	2.50	1.25	1.000	1.75	3.00	3/8 x 1-3/4 4 SCREWS	1 - 14	1.62
E-1973	E-1973	4.125	1.25	2.50	1.25	1.375	1.75	3.00	3/8 x 1-3/4 4 SCREWS	1-1/4 - 12	2.00
E-1974	E-1974	4.50	1.50	3.00	1.50	1.750	2.25	4.00	3/8 x 1-3/4 4 SCREWS	1-1/2 - 12	2.25
E-1975	E-1975	5.50	1.75	3.50	1.75	2.000	2.50	4.50	3/8 x 2-3/4 4 SCREWS	1-7/8 - 12	3.00
E-1976	E-1976	6.50	2.00	4.00	2.00	2.500	3.25	6.00	3/8 x 3-1/4 6 SCREWS	2-1/4 - 12	3.50

With bushings and thrust washers add -B to part number. Example (E-1970-B)

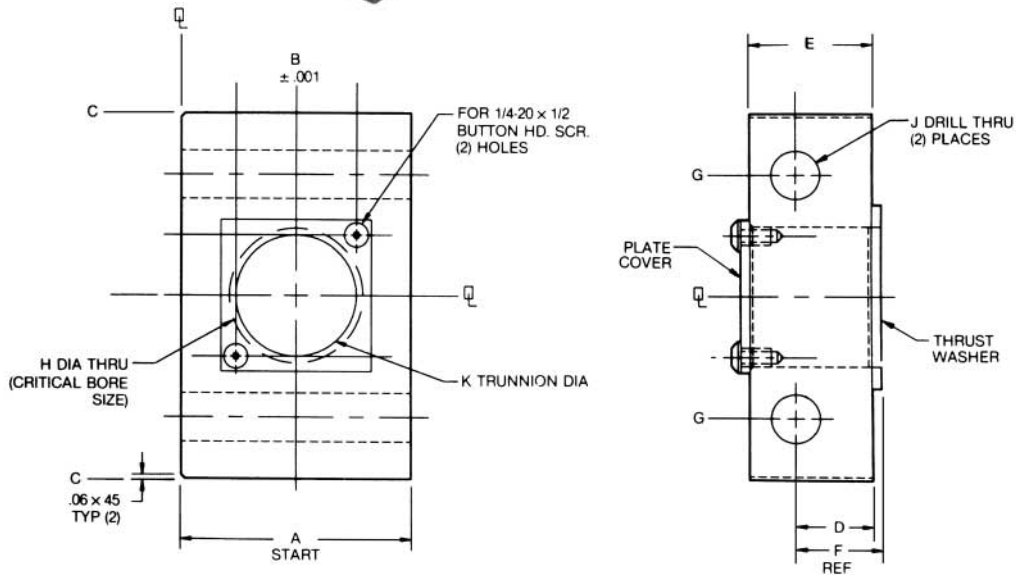
#Clevis pins are furnished and ground .001 below nominal "E" dimension +.0000/- .0005.

Note: Add "PT" after part number when pipe tap is desired, i.e.: E1970-PT.

Trunnion Block

NOTE:

Trunnions are provided with Dixon CJ Bearings, a non-metallic bearing that excels under high loads and provides dry lubrication with high reliability.



Click to download CAD

CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	H	J	K
2DWG 3DWG STP E1501M-P	E1501	2.60	1.300	1.999	.625	1.00	.750	1.500	1.2495/1.2500	13/32	1.000
2DWG 3DWG STP E1502M-P	E1502	2.60	1.300	1.999	.875	1.50	1.000	1.500	1.6245/1.6250	9/16	1.375
2DWG 3DWG STP E1503M-P	E1503	3.40	1.700	2.499	1.000	1.75	1.125	1.750	1.9995/2.0000	11/16	1.750
2DWG 3DWG STP E1504M-P	E1504	3.80	1.900	2.999	1.250	2.00	1.375	2.000	2.2495/2.2505	13/16	2.000
2DWG 3DWG STP E1505M-P	E1505	3.40	1.700	2.499	1.000	1.75	1.125	1.750	1.9995/2.0000	11/16	1.500

ORDERING INFORMATION: PLEASE SPECIFY WHICH CYLINDER WILL BE USED WITH THE TRUNNION BLOCK BY ADDING A LETTER DESIGNATION AFTER THE PART NO.

EXAMPLE: E-1501-P (FOR USE WITH CYLINDERS WITH A RADIUS WHERE THE TRUNNION MEETS THE CYLINDER).

E-1501-M (FOR USE WITH CYLINDERS WITH AN UNDERCUT WHERE THE TRUNNION MEETS THE CYLINDER).

CAD Directory
Cylinder-ACC\Trunnion

Cylinder Accessories

Self-Aligning Couplers

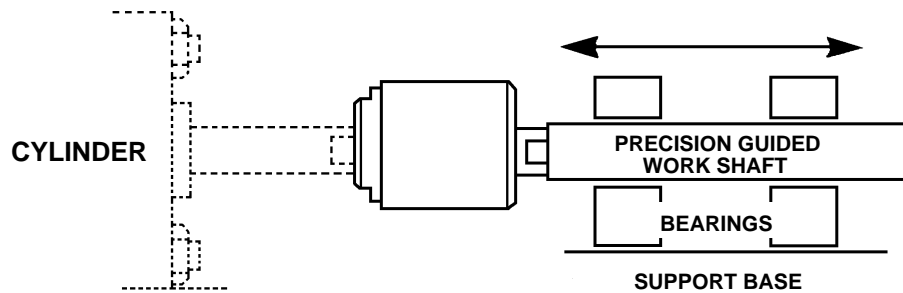


Features:

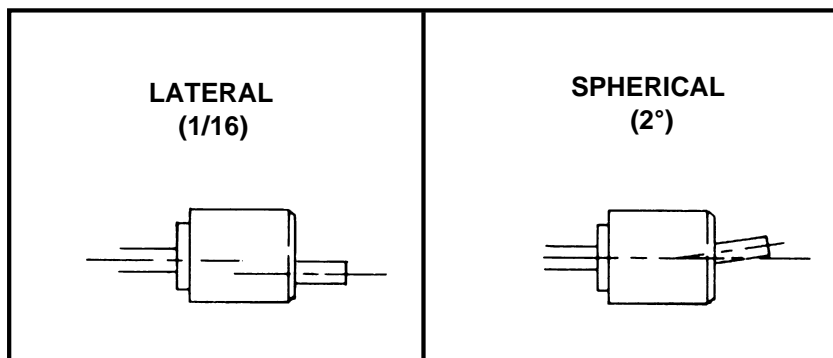
- ❑ Eliminates expensive precision machining for mounting fixed or rigid guide in cylinder for slide applications.
- ❑ Increases cylinder efficiency by eliminating friction caused by misalignment.
- ❑ Compensates for 2° angular error and 1/16 lateral misalignment on push and pull stroke.
- ❑ Greater reliability—reduces cylinder and component wear.
- ❑ Simplifies alignment problems in the field.



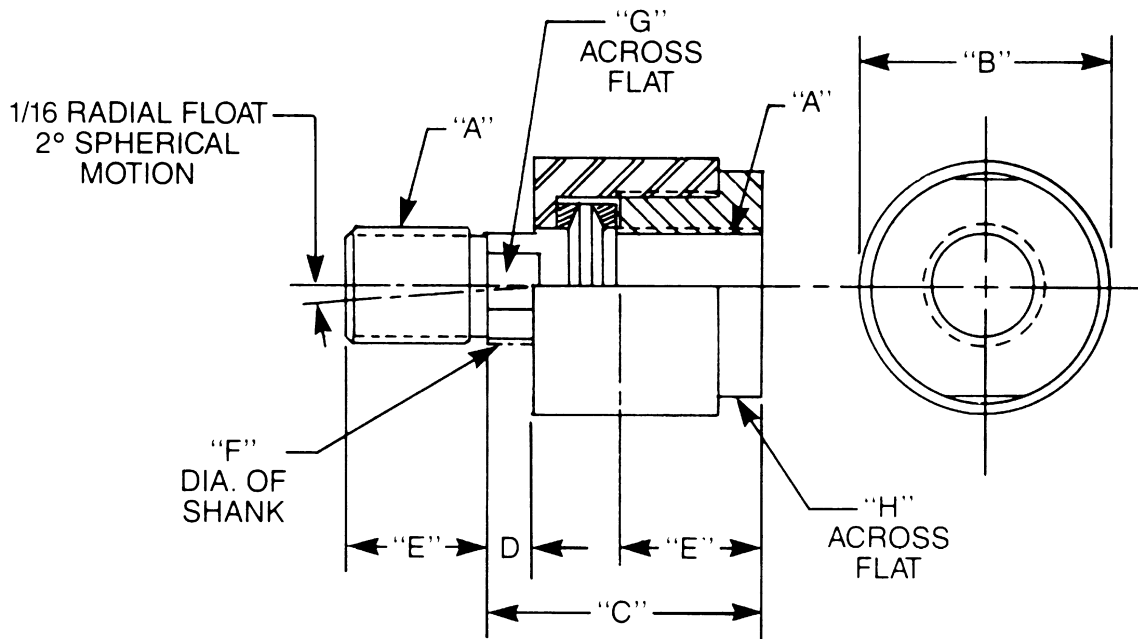
SELF-ALIGNING



(VIEWS EXAGGERATED TO SHOW ALIGNMENT FEATURES)



Self-Aligning Couplers



Click to download CAD

CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	H	MAX. PULL AT YIELD
2DWG 3DWG STP	AC250 EAC-250-F	1/4 - 28	7/8	1-1/4	1/4	5/8	5/16	3/16	13/16	4,000
2DWG 3DWG STP	AC312 EAC-312-F	5/16 - 24	7/8	1-1/4	1/4	5/8	5/16	1/4	13/16	4,000
2DWG 3DWG STP	AC375 EAC-375-F	3/8 - 24	7/8	1-1/4	1/4	5/8	3/8	5/16	13/16	5,000
2DWG 3DWG STP	AC375C EAC-375-C	3/8 - 16	7/8	1-1/4	1/4	5/8	3/8	5/16	13/16	5,000
2DWG 3DWG STP	AC437 EAC-437-F	7/16 - 20	1-1/4	2	1/2	3/4	5/8	9/16	1-1/8	10,000
2DWG 3DWG STP	AC500 EAC-500-F	1/2 - 20	1-1/4	2	1/2	3/4	5/8	9/16	1-1/8	14,000
2DWG 3DWG STP	AC500C EAC-500-C	1/2 - 13	1-1/4	2	1/2	3/4	5/8	9/16	1-1/8	14,000
2DWG 3DWG STP	AC625 EAC-625-F	5/8 - 18	1-1/4	2	1/2	3/4	5/8	1/2	1-1/8	14,000
2DWG 3DWG STP	AC750 EAC-750-F	3/4 - 16	1-3/4	2-5/16	5/16	1-1/8	31/32	7/8	1-1/2	34,000
2DWG 3DWG STP	AC750C EAC-750-C	3/4 - 10	1-3/4	2-5/16	5/16	1-1/8	31/32	7/8	1-1/2	34,000
2DWG 3DWG STP	AC875 EAC-875-F	7/8 - 14	1-3/4	2-5/16	5/16	1-1/8	31/32	7/8	1-1/2	34,000
2DWG 3DWG STP	AC1000 EAC-1000-F	1 - 14	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-1/4	2-1/4	64,000
2DWG 3DWG STP	AC1000C EAC-1000-C	1 - 8	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-1/4	2-1/4	64,000
2DWG 3DWG STP	AC1250 EAC-1250-F	1-1/4 - 12	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-1/4	2-1/4	64,000
2DWG 3DWG STP	AC1375 EAC-1375-F	1-3/8 - 12	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-1/4	2-1/4	64,000
2DWG 3DWG STP	AC1500 EAC-1500-F	1-1/2 - 12	3-1/4	4-3/8	13/16	2-1/4	1-3/4	1-1/2	3	120,000
2DWG 3DWG STP	AC1750 EAC-1750-F	1-3/4 - 12	3-1/4	4-3/8	13/16	2-1/4	1-3/4	1-1/2	3	120,000
2DWG 3DWG STP	AC1875 EAC-1875-F	1-7/8 - 12	3-3/4	5-7/16	11/16	3	2-1/4	1-7/8	3-1/2	240,000
2DWG 3DWG STP	AC2000 EAC-2000-F	2 - 12	3-3/4	5-7/16	11/16	3	2-1/4	1-7/8	3-1/2	240,000

STAINLESS STEEL AVAILABLE IN SOME SIZES.

EXAMPLE: EACS-250-F THROUGH EACS-1000-C

CAD Directory
Cylinder-ACC\Couplers

Cylinder Accessories

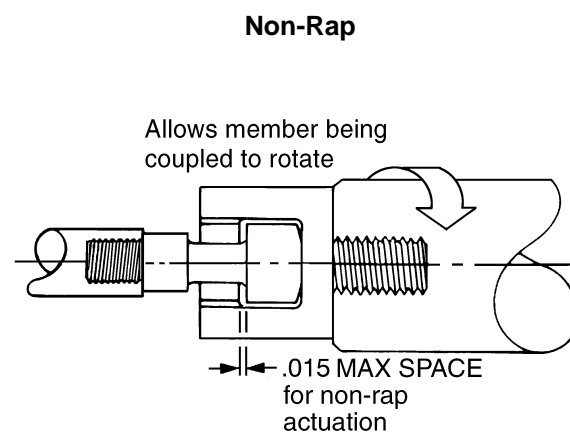
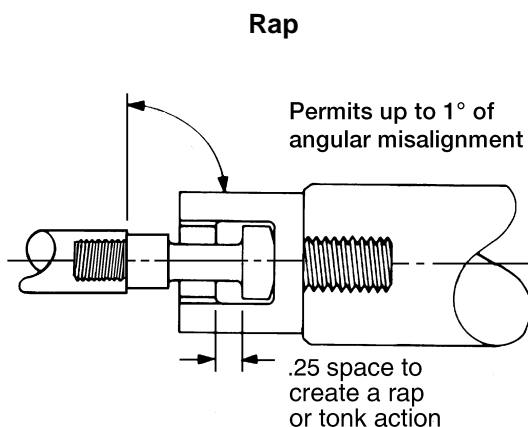


Features:

- 4140 Material
- Choice of Types
- Variety of Sizes
- Male or Female Threads
- Corresponding Adapters
- Black Oxide Finish
- Metric Sizes Available Upon Request



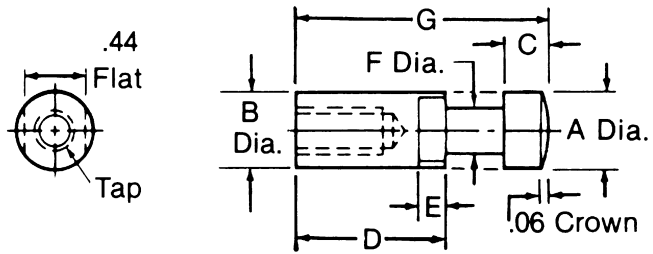
Types



E&E Couplers are designed for use with our standard Adapters or comparable details. They are offered in thread sizes common to a range of standard cylinders, and are available with metric threads upon request. Rod ends compensate for angular misalignment and allow the coupled member to rotate in both Rap and Non-Rap applications.



Mini Couplers

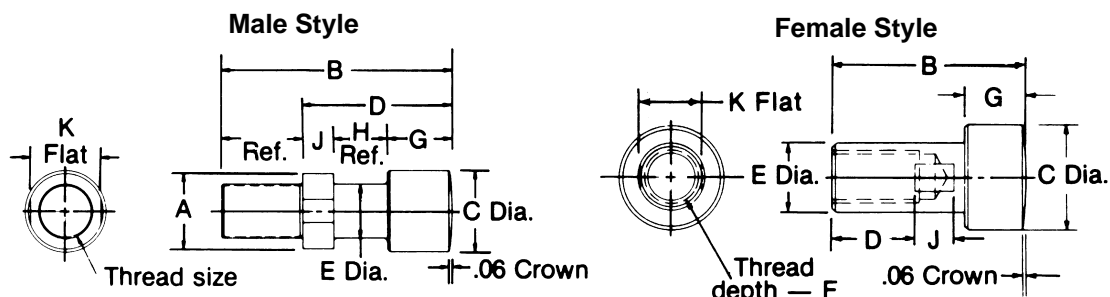


MINI SERIES

CAD FILE NAME	PART NUMBER	TYPE	A	B	C	D	E	F	TAP SIZE	G
E182	E182	RAP	.50	.50	.18	.81	.15	.18	1/4 - 28 x .38 DEEP	1.43
E183	E183	NON-RAP	.50	.50	.32	.81	.15	.18	1/4 - 28 x .38 DEEP	1.43
E184	E184	RAP	.50	.50	.18	.81	.15	.18	5/16 - 24 x .38 DEEP	1.43
E185	E185	NON-RAP	.50	.50	.32	.81	.15	.18	5/16 - 24 x .38 DEEP	1.43
E186	E186	RAP	.50	.50	.18	.81	.15	.18	3/8 - 24 x .56 DEEP	1.43
E187	E187	NON-RAP	.50	.50	.32	.81	.15	.18	3/8 - 24 x .56 DEEP	1.43

Note: The above mini couplers are for use with Adapter #E188. (See Page #C11) CAD Files are .STP Format. For 2DWG & 3DWG, please visit eandesp.com

Couplers



CAD FILE NAME	PART NUMBER	DIMENSIONS											
		TYPE	THREAD	A	B	C	D	E	F	G	H	J	K
E154	E154	RAP	7/16 - 20 MALE	.62	2.38	.88	1.75	.44	.63	.44	.82	.50	.50
E155	E155	NON-RAP	7/16 - 20 MALE	.62	2.38	.88	1.75	.44	.63	.68	.57	.50	.50
E156	E156	RAP	3/4 - 16 MALE	1.00	3.38	1.25	2.38	.75	1.00	.75	1.13	.50	.88
E157	E157	NON-RAP	3/4 - 16 MALE	1.00	3.38	1.25	2.38	.75	1.00	1.00	.89	.50	.88
E158	E158	RAP	1 - 14 MALE	1.38	4.25	1.50	2.75	1.00	1.50	.88	1.26	.62	1.25
E159	E159	NON-RAP	1 - 14 MALE	1.38	4.25	1.50	2.75	1.00	1.50	1.12	1.01	.62	1.25
E160	E160	RAP	7/16 - 20 FEMALE	—	2.38	1.25	.93	.75	1.00	.75	—	.56	.62
E161	E161	NON-RAP	7/16 - 20 FEMALE	—	2.62	1.25	.93	.75	1.00	1.00	—	.56	.62
E162	E162	RAP	3/4 - 16 FEMALE	—	2.75	1.50	1.18	1.00	1.25	.88	—	.56	.88
E163	E163	NON-RAP	3/4 - 16 FEMALE	—	3.00	1.50	1.18	1.00	1.25	1.12	—	.56	.88
E164	E164	NON-RAP	1 - 14 FEMALE	—	4.25	2.12	1.88	1.38	1.75	1.25	—	.56	1.25
E165	E165	NON-RAP	1-1/4 - 12 FEMALE	—	4.75	2.50	2.50	1.75	2.12	1.38	—	.56	1.50

Material: SAE 4140 Hardness: Rockwell "C" 40-44 Finish: Black Oxide

CAD Files are .STP Format. For 2DWG & 3DWG, please visit eandesp.com

CAD Directory
Cylinder-ACC\Couplers

Cylinder Accessories



Features:

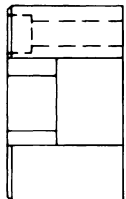
- ❑ 4140 Material
- ❑ Choice of Mounting Styles
- ❑ Black Oxide Finish
- ❑ Variety of Sizes
- ❑ Corresponding Couplers
- ❑ Metric Sizes Available Upon Request



Selecting Corresponding Cylinder Couplers

Screw Mount

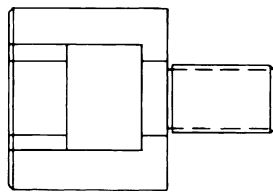
For rigid mounting with 3 socket head cap screws



Adapter

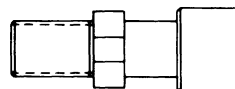
Thread Mount

Drill and tap driven member to accommodate



Male Thread

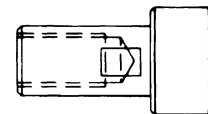
Comes in Rap and Non-Rap See couplers preceding



Coupler

Female Thread

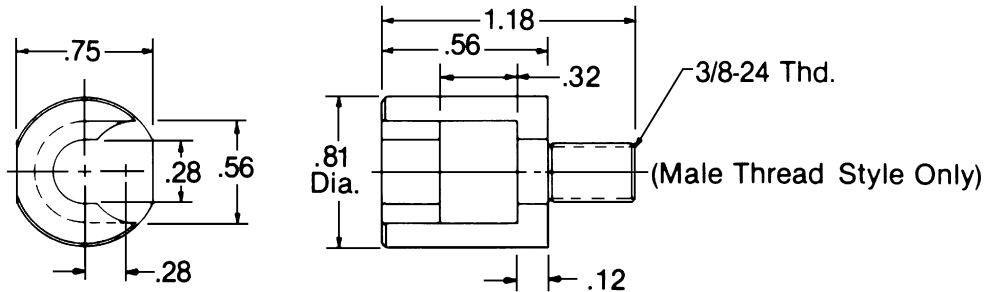
Comes in Rap and Non-Rap



SCREW MOUNT		THREAD MOUNT		MALE THREAD		FEMALE THREAD	
PART NO.				RAP	NON-RAP	RAP	NON-RAP
E148	OR	E151	USE WITH	E154	E155	—	—
E149	OR	E152	USE WITH	E156	E157	E160	E161
E150	OR	E153	USE WITH	E158	E159	E162	E163
E175	—	—	USE WITH	—	—	—	E165

Adapters

CAD File Name = E188
Part No. E188

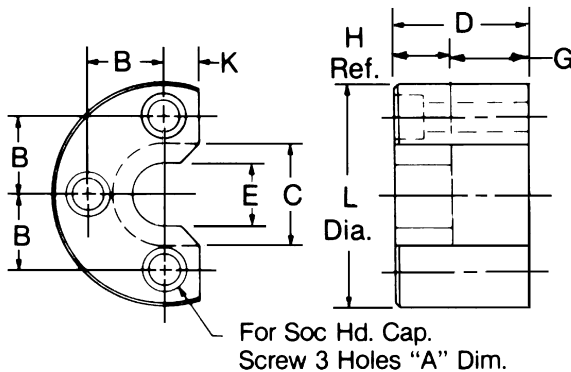


Mini-Thread Mount Adapter

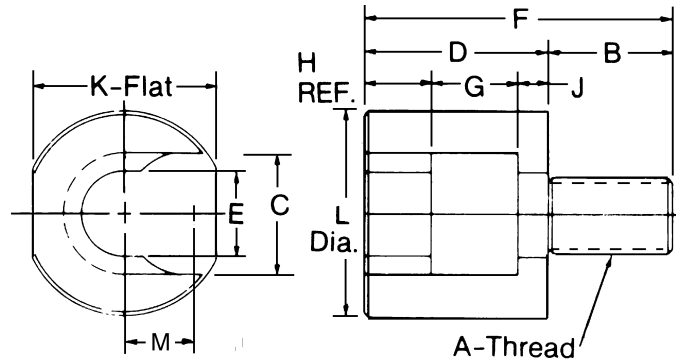
CAD Directory
 Cylinder-ACC\Adapters

Types

Screw Mount



Male Thread Mount



Click to download CAD

2DWG	3DWG	STP	CAD FILE NAME	MOUNT STYLE	PART NUMBER	DIMENSIONS											
						A	B	C	D	E	F	G	H	J	K	L	M
2DWG	3DWG	STP	E148	SCREW	E148	5/16	.75	.93	1.12	.50	—	.68	.43	—	.38	2.18	—
2DWG	3DWG	STP	E149	SCREW	E149	3/8	1.00	1.31	1.75	.81	—	1.00	.75	—	.44	2.93	—
2DWG	3DWG	STP	E150	SCREW	E150	1/2	1.19	1.56	2.00	1.06	—	1.12	.88	—	.56	3.44	—
2DWG	3DWG	STP	E175	SCREW	E175	3/4	2.00	2.56	2.50	1.81	—	1.38	1.12	—	.81	5.75	—
2DWG	3DWG	STP	E151	THREAD	E151	7/16 - 20	.75	.93	1.50	.53	2.25	.68	.44	.37	1.31	1.44	.47
2DWG	3DWG	STP	E152	THREAD	E152	3/4 - 16	1.12	1.31	2.12	.81	3.25	1.00	.75	.37	1.75	1.93	.66
2DWG	3DWG	STP	E153	THREAD	E153	1 - 14	1.62	1.56	2.38	1.09	4.00	1.12	.88	.37	2.38	2.68	.78

Add -5788 to the end of the part number for stainless steel. (Example E-148-5788).

CAD Directory
 Cylinder-ACC\Adapters



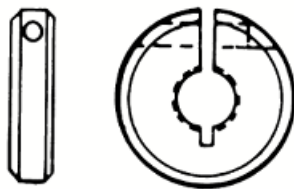
Features:

- Round or Tapered Switch Dogs
- Variety of Sizes
- Split Design Clamping Screw Provided
- Black Oxide Finish
- Metric Sizes Available Upon Request

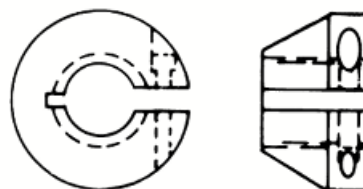


Types

Round



Tapered

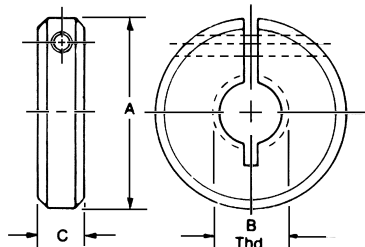


Both round and tapered E&E switch dogs are slotted and include a socket head capscrew to provide flexibility in positioning and locking the dogs in place on the threaded rod. This feature allows repeated changes in positioning without damage to the rod's threads. The grasping action of the thread itself holds the dog securely in place and eliminates the need for set screws or other destructive devices.



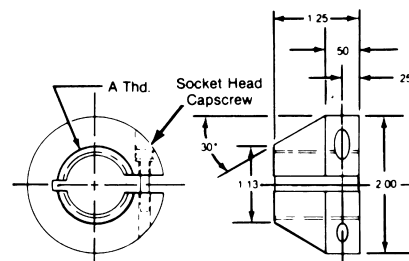
Switch Dogs

Click to download CAD Files (STP format). For 2dwg & 3dwg visit eandesp.com



Round

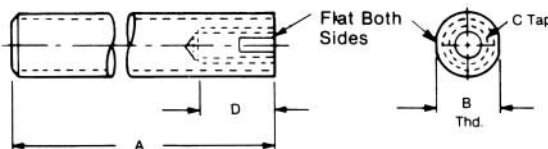
CAD FILE NAME	E069	E070	E071	E072	E073	E074	E075
PART NUMBER	E069	E070	E071	E072	E073	E074	E075
A DIA.	2.00	2.00	2.00	2.50	2.50	2.50	1.00
B THD.	7/16 - 20	1/2 - 20	5/8 - 18	3/4 - 16	1 - 14	1-1/2 - 12	5/16 - 24
C WIDTH	.62	.62	.62	.62	.62	.62	.38



Tapered

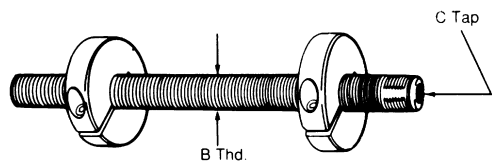
CAD FILE NAME	E093	E094	E095
PART NUMBER	E093	E094	E095
A	7/16 - 20	3/4 - 16	1 - 14

Switch Rods



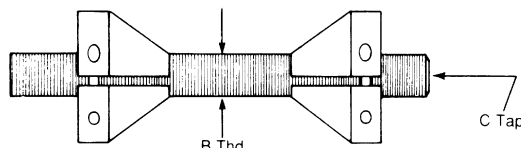
CAD FILE NAME	E078-6	E079-6	E080-6	E081-6	E082-6	E083-6	E084-6
PART NUMBER	E078	E079	E080	E081	E082	E083	E084
A	AVAILABLE IN 6", 8", 10", & 12" LENGTHS						
B THD.	5/16 - 24	7/16 - 20	1/2 - 20	5/8 - 18	3/4 - 16	1 - 14	1-1/2 - 12
C TAP	—	5/16 - 24	5/16 - 24	3/8 - 24	7/16 - 20	5/8 - 18	1 - 14
D	—	.63	.63	.75	.88	1.25	1.75
D TAP DEPTH	—	.63	.63	.75	.88	1.25	1.75

Switch Assemblies



With Conventional Switch Dogs

CAD FILE NAME	E999-6	E000-6	E003-6	E004-6	E005-6	E006-6	E007-6
PART NUMBER	E999	E000	E003	E004	E005	E006	E007
ROD LENGTH	AVAILABLE IN 6", 8", 10", & 12" LENGTHS						
B THD	5/16 - 24	7/16 - 20	1/2 - 20	5/8 - 18	3/4 - 16	1 - 14	1-1/2 - 12
C TAP		5/16 - 24	5/16 - 24	3/8 - 24	7/16 - 20	5/8 - 14	1 - 14



With Single Tapered Switch Dog (Slotted Mount)

CAD FILE NAME	E993-6	E994-6	E995-6
PART NUMBER	E993	E994	E995
ROD LENGTH	AVAILABLE IN 6", 8", 10", & 12" LENGTHS		
B THD.	7/16 - 20	3/4 - 16	1 - 14
C TAP	5/16 - 24	7/16 - 20	5/8 - 18

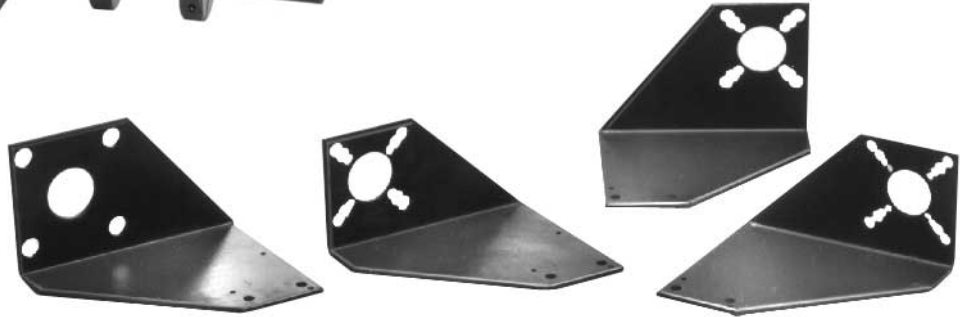
CAD Directory The shortest standard component is given.
 Cylinder-ACC\Dogsrods You may "stretch" the unit to the desired length.

CAD Files are .STP format.
 2DWG and 3DWG are available at eandesp.com



Features:

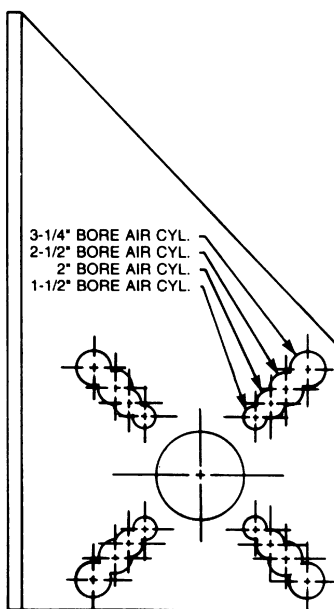
- ❑ Fits Air or Hydraulic J.I.C. Cylinders
- ❑ Accommodate Variety of Bore Sizes
- ❑ Pre-drilled for Mounting Most Standard Limit Switches
- ❑ Block Oxide Finish
- ❑ Right Hand or Left Hand Mounts



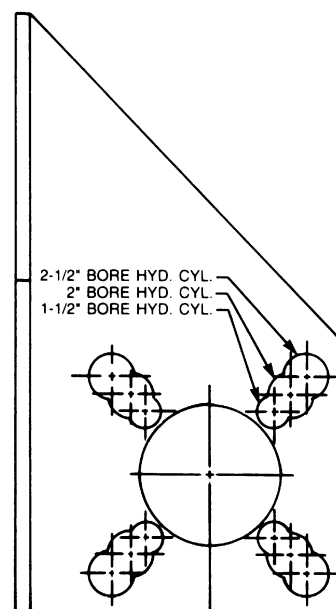
Caution: Due to the numerous Cylinder Switch manufacturers, we recommend that you verify all mounting dimensions prior to ordering Switch Brackets.

Types

Air Cylinder Mount



Hydraulic Cylinder Mount



NOTE: TO FACILITATE MOUNTING OF THE SWITCH BRACKET TO THE CYLINDER, THE CYLINDER MUST BE PROVIDED WITH EXTENDED TIE RODS.



E&ESP

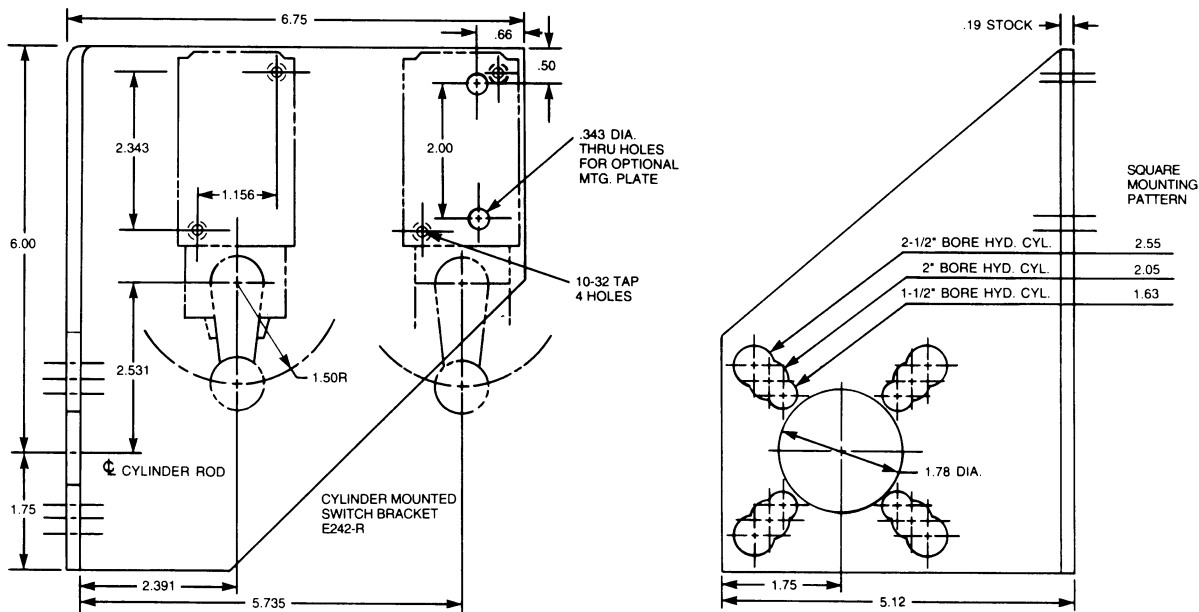
Switch Brackets

For Heavy-Duty J.I.C. Hydraulic Cylinders Allowing Plug-In Limit Switches

Click to download STP CAD File. 2dwg & 3dmg visit eandesp.com

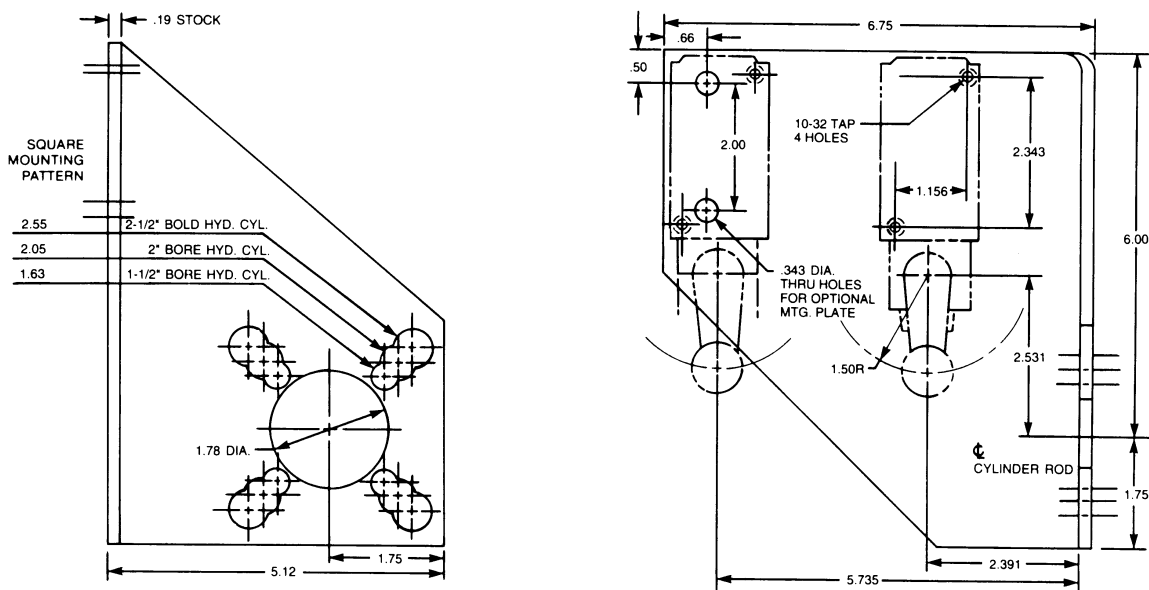
CAD File Name E242-R

Part No. E242-R



CAD File Name E242-L

Part No. E242-L



Cylinder Accessories

CAD Directory
Cylinder-ACC\SWBrack



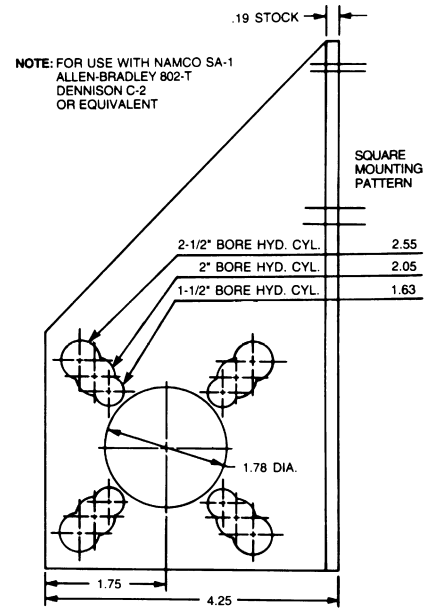
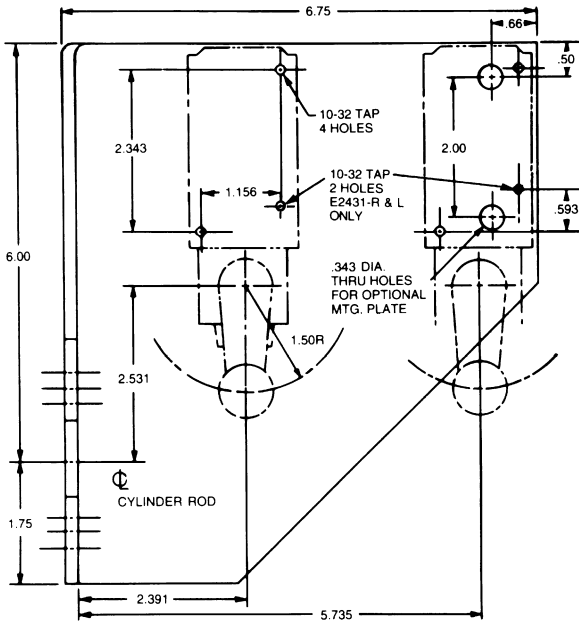
Switch Brackets

For Heavy-Duty J.I.C. Hydraulic Cylinders

Click to download STP CAD File. 2dwg & 3dwg please visit eandesp.com

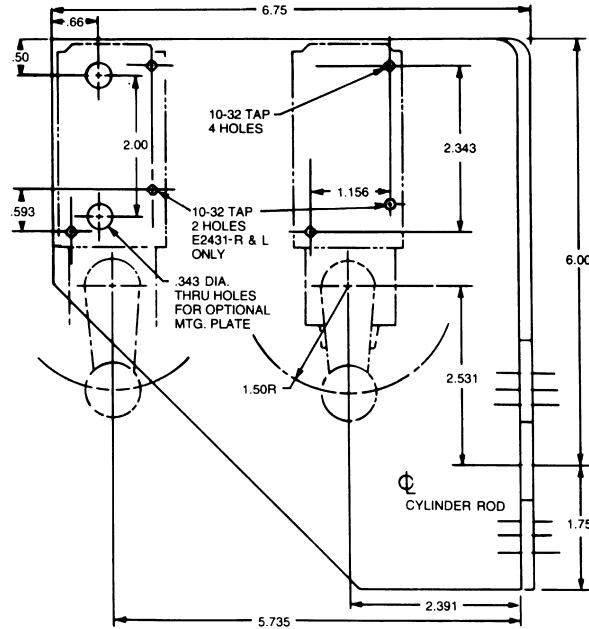
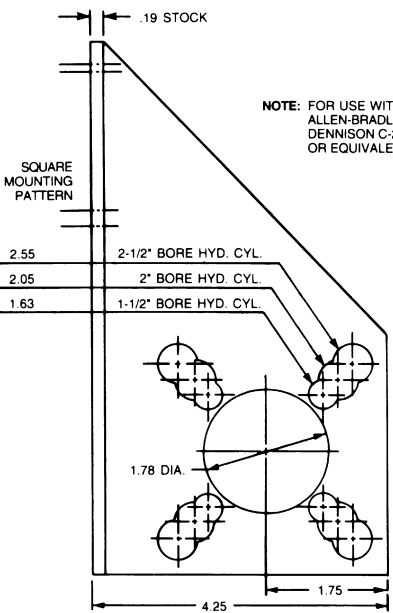
CAD File Name E243-R, E2431-R

Part No. E243-R, E2431-R



CAD File Name E243-L, E2431-L

Part No. E243-L, E2431-L





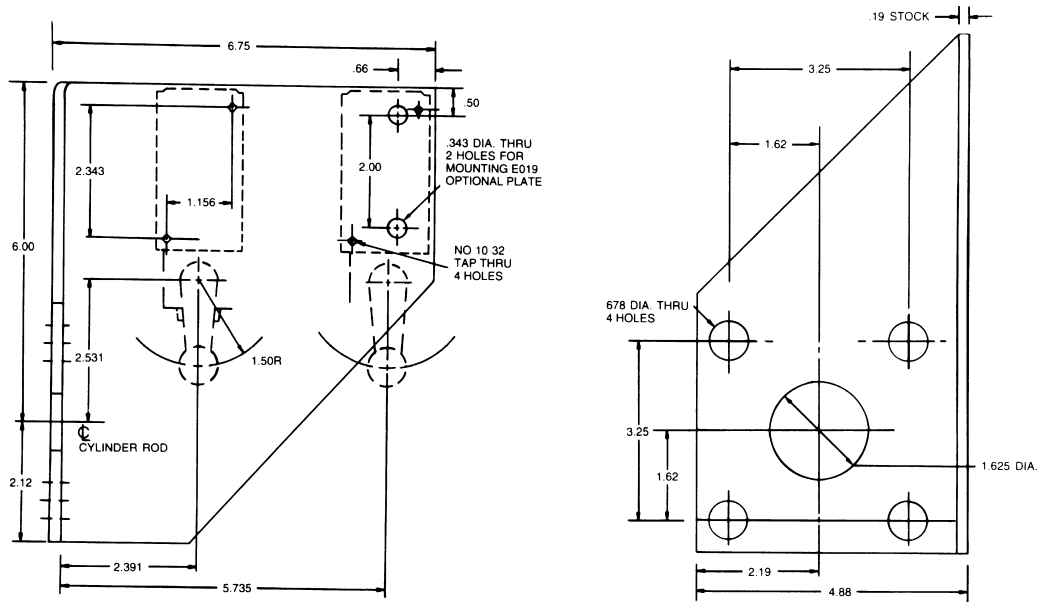
Switch Brackets

For Heavy-Duty J.I.C. Hydraulic 3-1/4" Bore Cylinders

Click to download STP CAD file. 2dwg & 3dwg visit eandesp.com

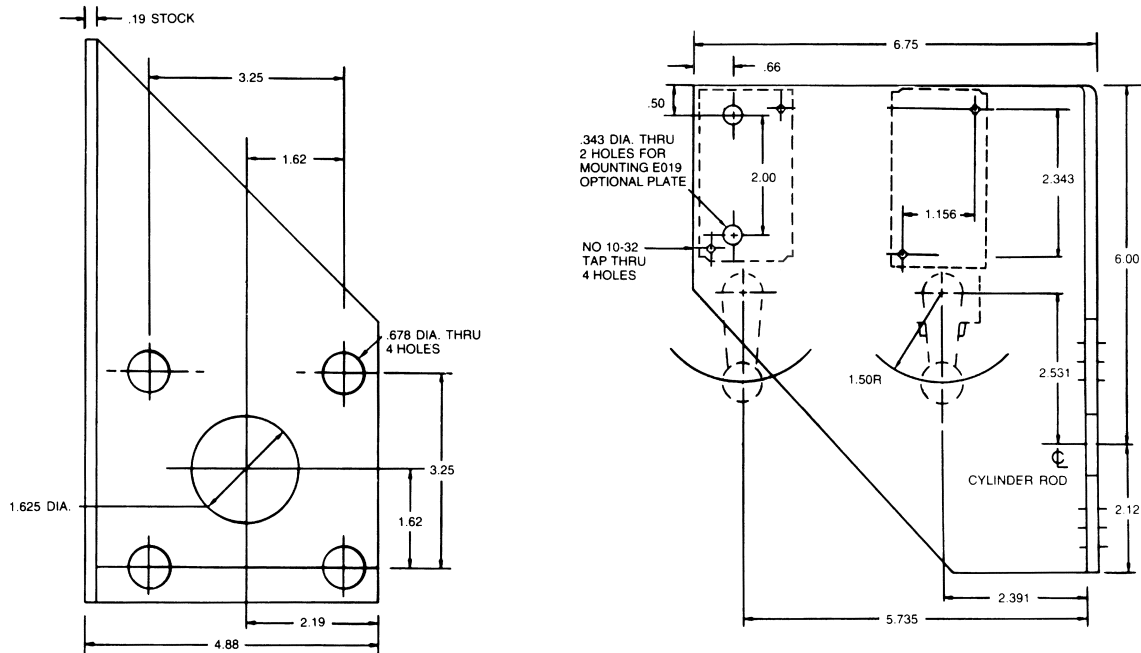
CAD File Name E245-R

Part No. E245-R



CAD File Name E245-L

Part No. E245-L

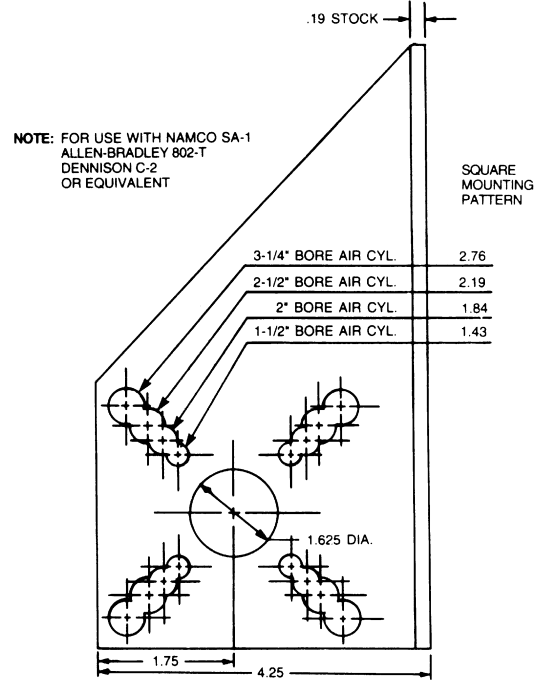
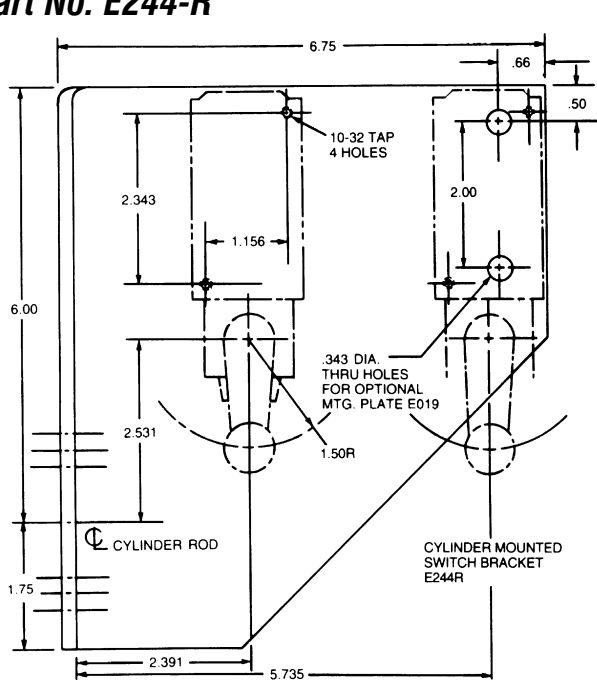




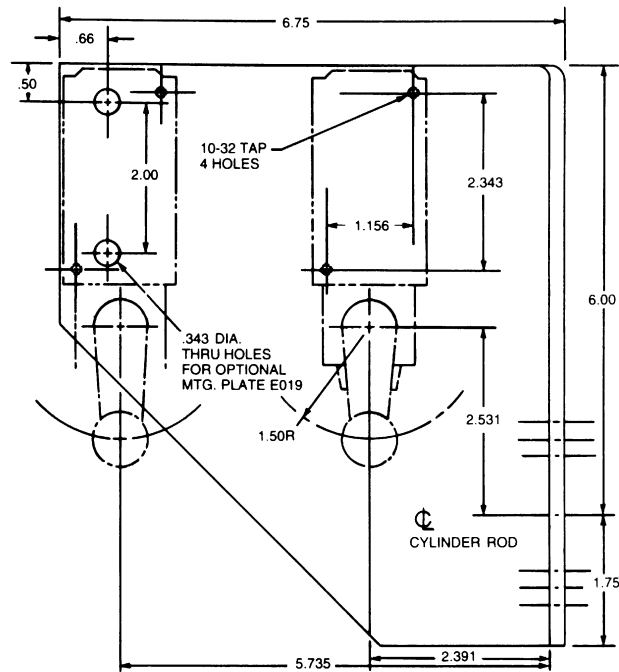
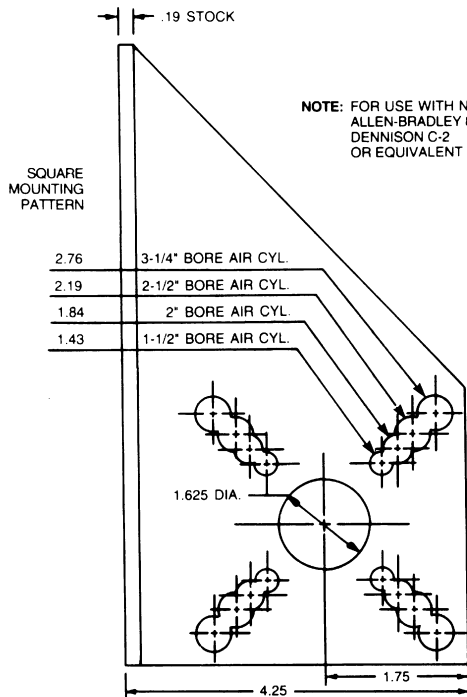
Switch Brackets

For Air or Medium-Duty J.I.C. Hydraulic Cylinders
Click to download STP CAD file. 2dwg & 3dwg visit eandesp.com

CAD File Name E244-R
Part No. E244-R



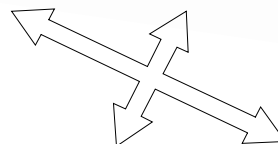
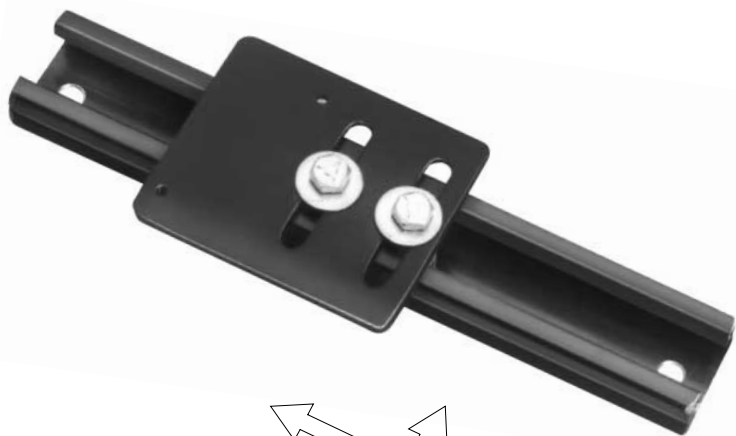
CAD File Name E244-L
Part No. E244-L





Adjustable Switch Brackets

Click to download STP CAD file.
2dwg & 3dwg visit eandesp.com



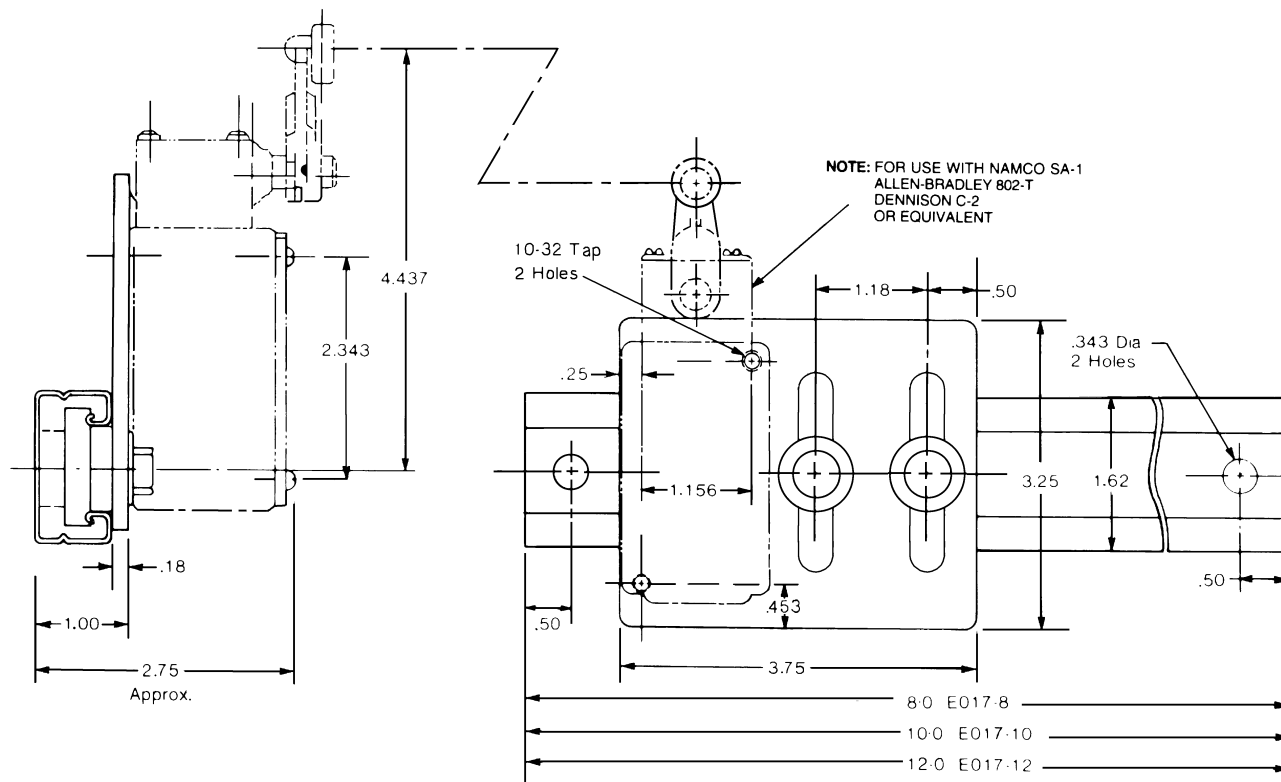
ADJUSTABLE
2 AXIS

Features:

- ❑ Variety of Channel Length
- ❑ Mounting Plate
- ❑ All Hardware for Positioning
- ❑ Special Lengths Available from Stock

CAD File Name E017

Part No. E017-8, E017-10, E017-12



“Stretch”
The shortest standard component is given. You may “Stretch” the unit to the desired length.

CAD Directory
Cylinder-ACC\SWBrack

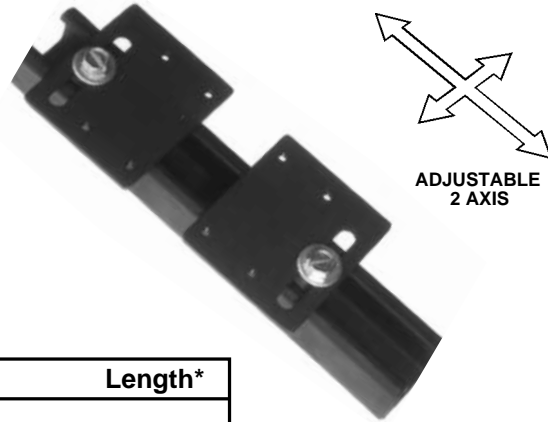
Cylinder Accessories

Adjustable Proximity Switch Brackets



Features:

- ❑ Adjustable Two Axis
 - ❑ Variety of Channel Lengths
 - ❑ Special Lengths Available from Stock
 - ❑ Accommodates Most Standard Proximity Switches
- Note: Check Mounting Dimensions of Proximity Switch Prior to Ordering
- ❑ May Be Mounted to a Standard Cylinder Bracket



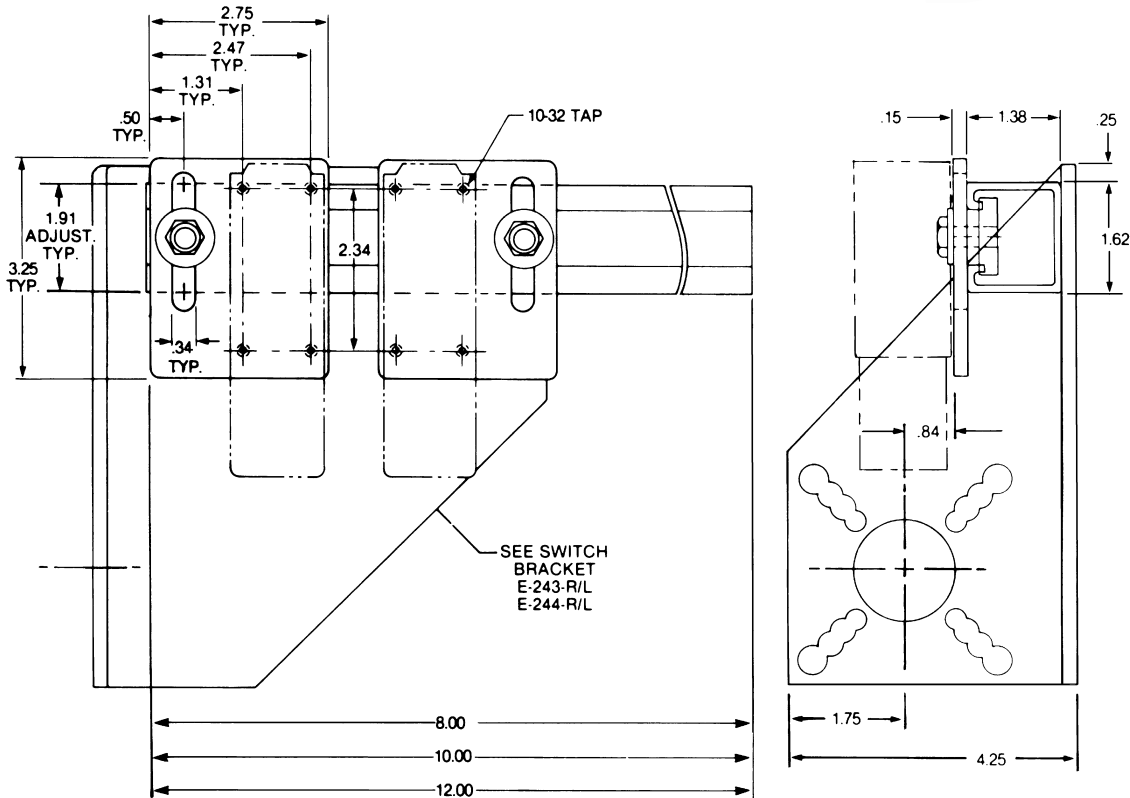
ADJUSTABLE
2 AXIS



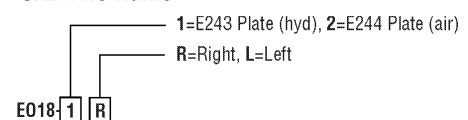
Ordering Information

Part Number	Description	Length*
E018	Adjustable Proximity Switch Bracket (Includes 2 Plates, Hardware and Channel)	8-10-12
E018-D/1	(1) Plate and Hardware Only	—
E018-D/2	Channel Only	8-10-12
E018-243-R/L	Mounted to a Hydraulic Cylinder Mount Bracket	8-10-12
E018-244-R/L	Mounted to an Air Cylinder Mount Bracket	8-10-12

*Specify Length on All Channels



CAD File Name



“Stretch”

The shortest standard component is given. You may “Stretch” the unit to the desired length.

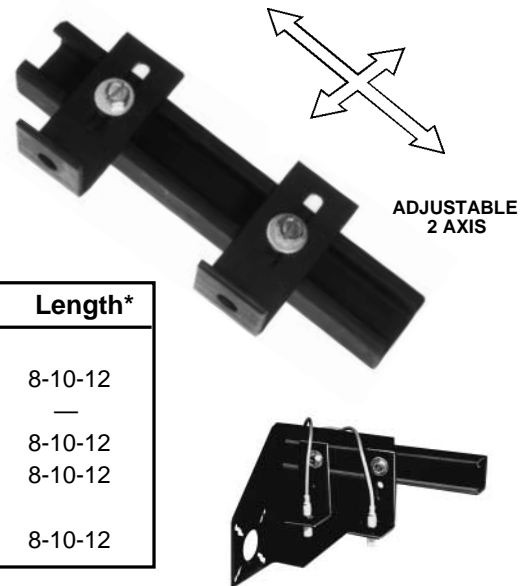
CAD Directory
Cylinder-ACC\SWBrack

Adjustable Threaded Proximity Switch Brackets



Features:

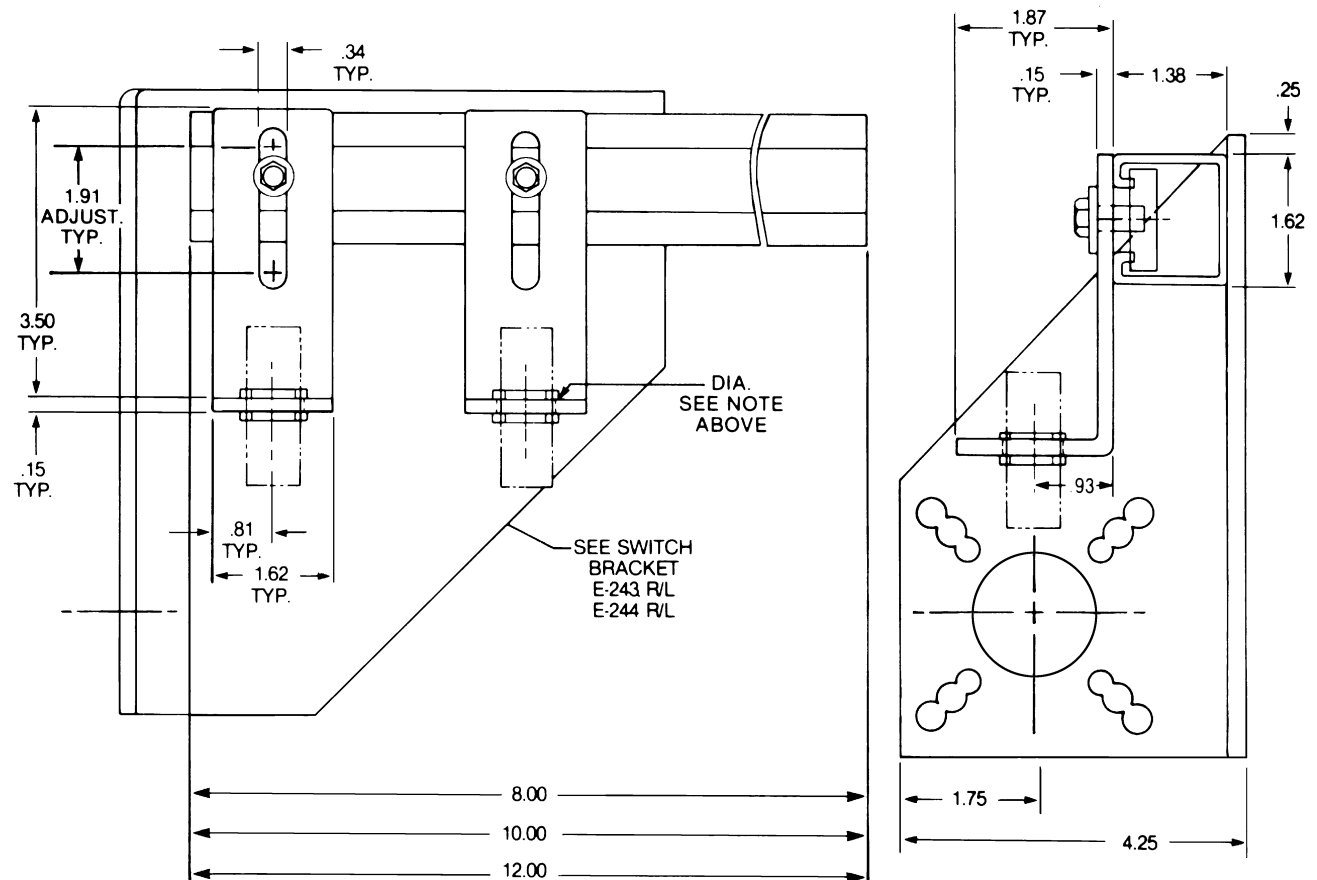
- Adjustable Two Axis
- Variety of Channel Lengths
- Special Lengths Available from Stock
- Provided with 1/2" Pilot Hole
- May Be Mounted to a Standard Cylinder Bracket



Ordering Information

Part Number	Description	Length*
E019	Adjustable Threaded Proximity Switch Bracket (Includes 2 Angle Plates, Hardware and Channel)	8-10-12
E019-D/1	(1) Angle Plate and Hardware Only	—
E019-D/2	Channel Only	8-10-12
E019-243-R/L	Mounted to a Hydraulic Cylinder Mount Bracket	8-10-12
E019-244-R/L	Mounted to an Air Cylinder Mount Bracket	8-10-12

*Specify Length on All Channels



Cylinder Accessories

CAD Directory
Cylinder-ACC\SWBrack

“Stretch”
The shortest standard component is given. You may “Stretch” the unit to the desired length.

CAD File Name

1=E243 Plate (hyd), 2=E244 Plate (air)
R=Right, L=Left
E019-1 R

Metric Conversion Table



INCHES		MM	INCHES		MM	INCHES		MM	INCHES		MM
FRACT.	DEC.		FRACT.	DEC.		FRACT.	DEC.		FRACT.	DEC.	
	.00004	.001		.13780	3.5	19/32	.59375	15.0812		1.57480	40
	.00039	.01	9/64	.14063	3.5719		.600	15.24		1.65354	42
	.00079	.02		.150	3.810	39/64	.60938	15.4781	1-3/4	1.750	44.45
	.001	.025	5/32	.15625	3.9688		.61024	15.5		1.77170	45
	.00118	.03		.15748	4	5/8	.6250	15.875		1.88976	48
	.00157	.04	11/64	.17188	4.3656		.62992	16		1.96850	50
	.00197	.05		.1750	4.445	41/64	.64063	16.2719	2	2.000	50.8
	.002	.051		.17717	4.5		.64961	16.5		2.04724	52
	.00236	.06	3/16	.18750	4.7625		.650	16.51		2.16540	55
	.00276	.07		.19685	5	21/32	.65625	16.6688		2.20472	56
	.003	.0762		.20	5.08		.66929	17	2-1/4	2.250	57.15
	.00315	.08	13/64	.20313	5.1594	43/64	.67188	17.0656		2.36220	60
	.00354	.09		.21654	5.5	11/16	.68750	17.4625	2-1/2	2.500	63.5
	.00394	.1	7/32	.21875	5.5562		.68898	17.5		2.51968	64
	.004	.1016		.2250	5.715		.700	17.78	2-3/4	2.750	69.85
	.005	.1270	15/64	.23438	5.9531	45/64	.70313	17.8594		2.83464	72
	.006	.1524		.23622	6		.70866	18		2.95280	75
	.007	.1778	1/4	.250	6.35	23/32	.71875	18.2562	3	3.000	76.2
	.00787	.2		.25591	6.5		.72835	18.5		3.14960	80
	.008	.2032	17/64	.26563	6.7469	47/64	.73438	18.6531	3-1/2	3.500	88.9
	.009	.2286		.275	6.985		.74803	19		3.54330	90
	.00984	.25		.27559	7	3/4	.750	19.050		3.9370	100
	.01	.254	9/32	.28125	7.1438	49/64	.76563	19.4469	4	4.000	101.6
1/64	.01181	.3		.29528	7.5		.76772	19.5		4.33070	110
	.01563	.3969	19/64	.29688	7.5406	25/32	.78125	19.8438	4-1/2	4.500	114.3
	.01575	.4		.30	7.62		.78740	20		4.72440	120
	.01969	.5	5/16	.3125	7.9375	51/64	.79688	20.2406	5	5.000	127
	.02	.508		.31496	8		.800	20.320		5.51180	140
	.02362	.6	21/64	.32813	8.3344		.80709	20.5		5.90550	150
	.025	.635		.33465	8.5	13/16	.81250	20.6375	6	6.000	152.4
	.02756	.7	11/32	.34375	8.7312		.82677	21		6.29920	160
	.0295	.75		.350	8.89	53/64	.82813	21.0344		7.08660	180
	.03	.762		.35433	9	27/32	.84375	21.4312		7.8740	200
1/32	.03125	.7938	23/64	.35938	9.1281		.84646	21.5	8	8.000	203.2
	.0315	.8		.37402	9.5		.850	21.590		8.66140	220
	.03543	.9	3/8	.375	9.525	55/64	.85938	21.8281		9.44880	240
	.03937	1	25/64	.39063	9.9219		.86614	22		9.84250	250
	.04	1.016		.39370	10	7/8	.875	22.225	10	10.000	254
3/64	.04687	1.191		.400	10.16		.88583	22.5		10.23620	260
	.04724	1.2	13/32	.40625	10.3188	57/64	.89063	22.6219		11.02360	280
	.05	1.27		.41339	10.5		.900	22.860		11.8110	300
	.05512	1.4	27/64	.42188	10.7156		.90551	23	1 Foot	12.000	304.8
	.05906	1.5		.43307	11	29/32	.90625	23.0188		12.59840	320
	.06	1.524	7/16	.43750	11.1125	59/64	.92188	23.4156		13.38580	340
1/16	.06250	1.5875		.450	11.430		.92520	23.5		13.77950	350
	.06299	1.6		.45276	11.5	15/16	.93750	23.8125		14.17320	360
	.06693	1.7	29/64	.45313	11.5094		.94488	24		14.96060	380
	.07	1.778	15/32	.46875	11.9062		.950	24.130		15.7480	400
	.07087	1.8		.47244	12	61/64	.95313	24.2094	16	16.000	406.4
	.075	1.905	31/64	.48438	12.3031		.96457	24.5		17.71650	450
5/64	.07813	1.9844		.49213	12.5	31/32	.96875	24.6062		19.6850	500
	.07874	2	1/2	.50	12.7		.98425	25	20	20.000	508
	.08	2.032		.51181	13	63/64	.98438	25.0031		23.6220	600
	.08661	2.2	33/64	.51563	13.0969	1	1.00000	25.4	2 Feet	24.000	609.6
	.09	2.286	17/32	.53125	13.4938		1.06299	27	3 Feet	36.000	914.4
	.09055	2.3		.53150	13.5		1.10240	28		39.370	1 Meter
3/32	.09375	2.3812	35/64	.54688	13.8906		1.18110	30	4 Feet	48.000	1,219.2
	.09843	2.5		.550	13.970	1-1/4	1.250	31.75	5 Feet	60.000	1,524
	.1	2.54		.55118	14		1.29921	33	6 Feet	72.000	1,828.8
	.10236	2.6	9/16	.56250	14.2875		1.3780	35		78.740	2 Meters
7/64	.10937	2.7781		.57087	14.5		1.41732	36	8 Feet	96.000	2,438.4
	.11811	3	37/64	.57813	14.6844	1-1/2	1.500	38.1		118.110	3 Meters
1/8	.1250	3.175		.59055	15		1.53543	39		196.850	5 Meters

Inch – Millimeter Equivalents

To convert to Millimeters, multiply Inches x 25.4

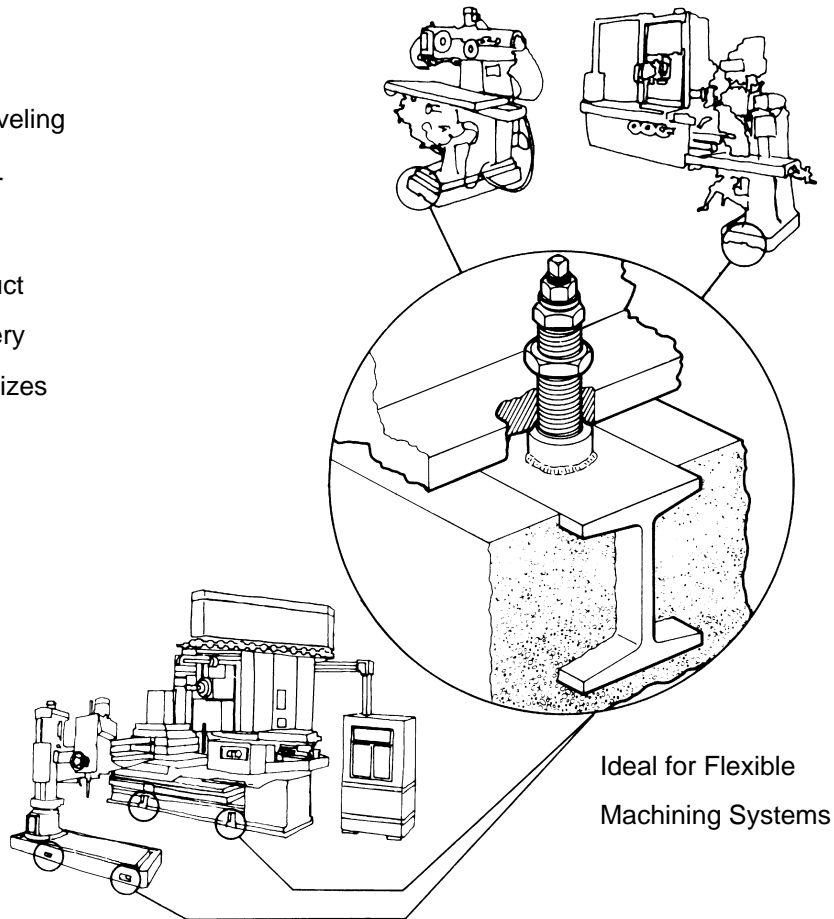
To convert to Inches, multiply Millimeters x 0.039370

MACHINE TOOL COMPONENTS



Features:

- Single Point Leveling and Hold Down Through Center
- Adjustable
- Standard Product
- Off-Shelf Delivery
- Full Range of Sizes

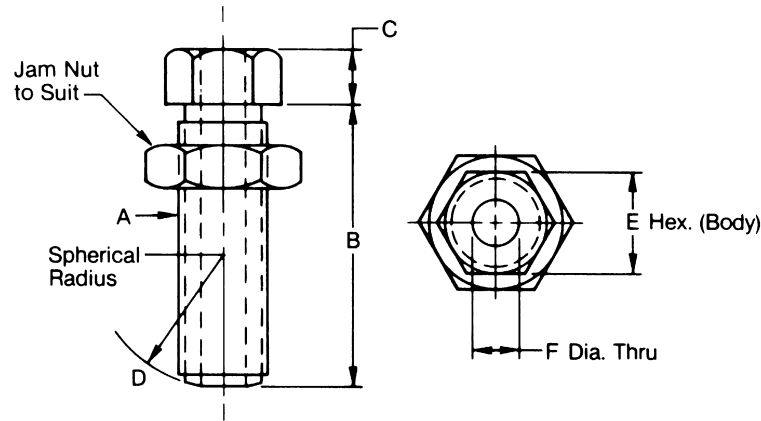


Coaxial Leveling and Anchoring for:

- | | |
|--|--|
| <input type="checkbox"/> Mills | <input type="checkbox"/> Broaches |
| <input type="checkbox"/> Lathes | <input type="checkbox"/> Fixtures |
| <input type="checkbox"/> Transfer Lines | <input type="checkbox"/> Screw Machines |
| <input type="checkbox"/> Machining Centers | <input type="checkbox"/> Assembly Machines |
| <input type="checkbox"/> Boring Mills | <input type="checkbox"/> Stamping Presses |
| <input type="checkbox"/> Grinders | <input type="checkbox"/> Drill Presses |

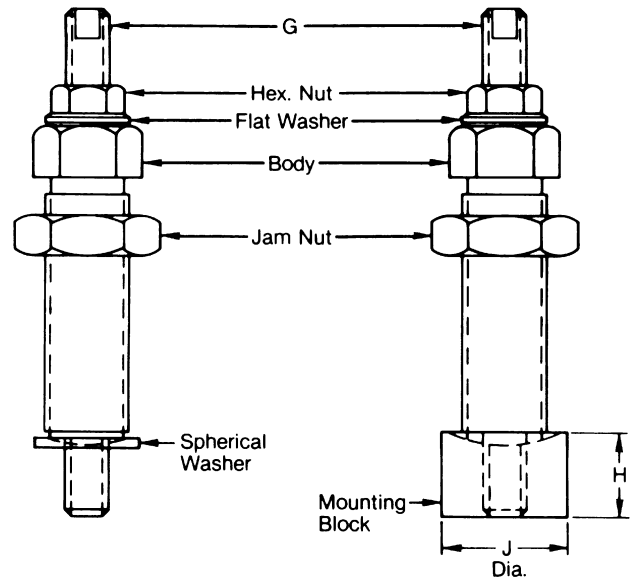


Leveling Jacks



CAD FILE NAME	PART NUMBER	DESCRIPTION	A	B	C	D	E	F
LJ7502	ELJ-7502	BODY AND JAM NUT ONLY	3/4 - 16	2 - 1/8	1/2	1 - 1/2	1 - 1/8	13/32
LJ1003	ELJ-1003		1 - 14	3 - 3/16	5/8	1 - 1/2	1 - 1/8	9/16
LJ1123	ELJ-1123		1 - 1/8 - 12	3 - 5/8	5/8	1 - 1/2	1 - 5/8	9/16
LJ1125	ELJ-1125		1 - 1/8 - 12	5 - 3/8	5/8	1 - 1/2	1 - 5/8	9/16
LJ1503	ELJ-1503		1 - 1/2 - 12	3 - 5/8	5/8	2 - 1/4	1 - 5/8	7/8
LJ1505	ELJ-1505		1 - 1/2 - 12	5 - 3/8	5/8	2 - 1/4	1 - 5/8	7/8

Click to download CAD files (STP format)
2dwg & 3dwg visit eandesp.com

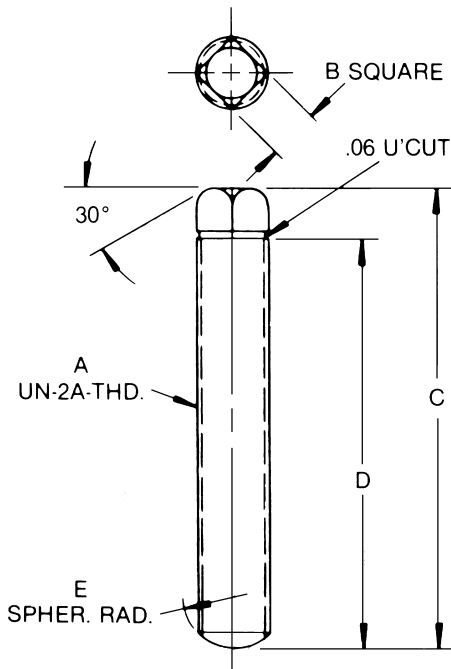


CAD FILE NAME	PART NUMBER	DESCRIPTION	G	CAD FILE NAME	PART NUMBER	DESCRIPTION	H	J
LJ7502A	ELJ-7502-A	BODY JAM NUT STUD HEX NUT FLAT WASHER SPHERICAL WASHER	3/8 - 16 x 4-1/4	LJ7502M	ELJ-7502-AM	BODY JAM NUT STUD HEX NUT FLAT WASHER MOUNTING BLOCK	3/4	1-1/2
LJ1003A	ELJ-1003-A		1/2 - 13 x 7	LJ1003M	ELJ-1003-AM		1	1-1/2
LJ1123A	ELJ-1123-A		1/2 - 13 x 7-1/2	LJ1123M	ELJ-1123-AM		1-1/4	2-1/2
LJ1125A	ELJ-1125-A		1/2 - 13 x 8-1/2	LJ1125M	ELJ-1125-AM		1-1/4	2-1/2
LJ1503A	ELJ-1503-A		3/4 - 10 x 7-1/2	LJ1503M	ELJ-1503-AM		1-1/4	2-1/2
LJ1505A	ELJ-1505-A		3/4 - 10 x 9	LJ1505M	ELJ-1505-AM		1-1/4	2-1/2

Click to download CAD files (STP format)
2dwg & 3dwg visit eandesp.com

CAD Directory
Mach-Tool\LevJack

Leveling Screws

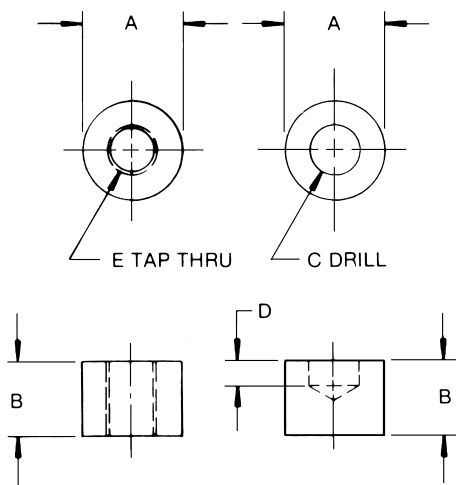


CAD FILE NAME	PART NUMBER	A	B	C	D	E
E45001	E45001	3/4-10	.53	7.57	7.00	—
E45002	E45002	1-8	.71	7.75	7.00	—
E45003	E45003	1-1/4-12	.88	7.94	7.00	—
E45004	E45004	1-1/2-12	1.06	8.12	7.00	—
E45005	E45005	3/4-10	.53	7.06	6.50	.56
E45006	E45006	1-8	.71	7.25	6.50	.75
E45007	E45007	1-1/4-12	.88	7.44	6.50	.94
E45008	E45008	1-1/2-12	1.06	7.62	6.50	1.12

Click to download CAD files (STP format).
2dwg & 3dwg visit eandesp.com

LEVELING SCREW
MAT'L MFG. STD.
HEAT TREAT
ROCK "C" 48-52

Leveling Screw-Mounts



CAD FILE NAME	PART NUMBER	A	B	C	D	E
E45011	E45011	2-1/2	1.50	7/8	1/4	—
E45012	E45012	2-1/2	1.50	1-1/8	1/4	—
E45013	E45013	3	1.50	1-3/8	1/4	—
E45014	E45014	3-1/2	1.50	1-5/8	1/4	—
E45015	E45015	2-1/2	1.50	—	—	3/4 - 10
E45016	E45016	2-1/2	1.50	—	—	1 - 8
E45017	E45017	3	1.50	—	—	1-1/4 - 12
E45018	E45018	3-1/2	1.50	—	—	1-1/2 - 12

Click to download CAD files (STP format)
2dwg & 3dwg visit eandesp.com

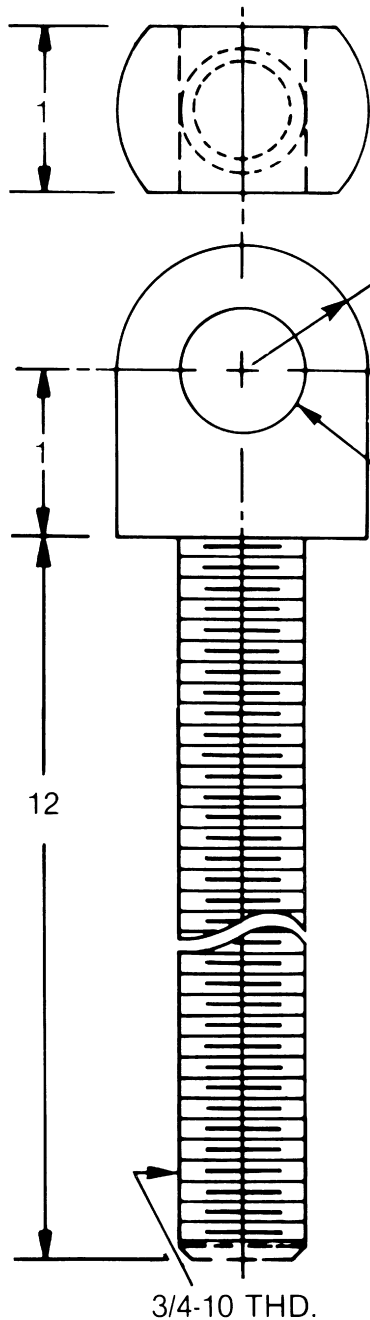
- | | |
|--------|--------|
| E45015 | E45011 |
| E45016 | E45012 |
| E45017 | E45013 |
| E45018 | E45014 |

CAD Directory
Mach-Tool\LevScrew

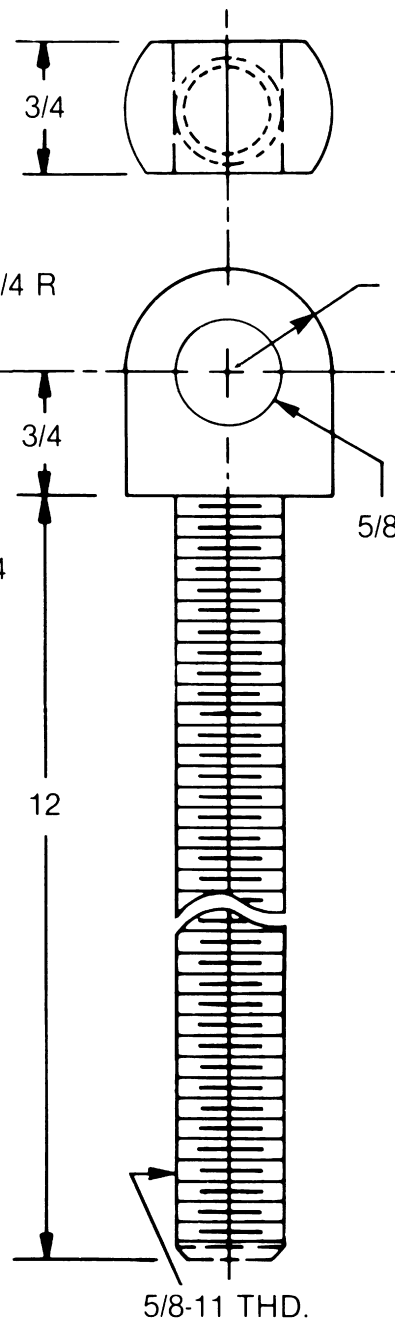
Swing Bolts

Click to download CAD files (STP format)
2dwg & 3dwg visit eandesp.com

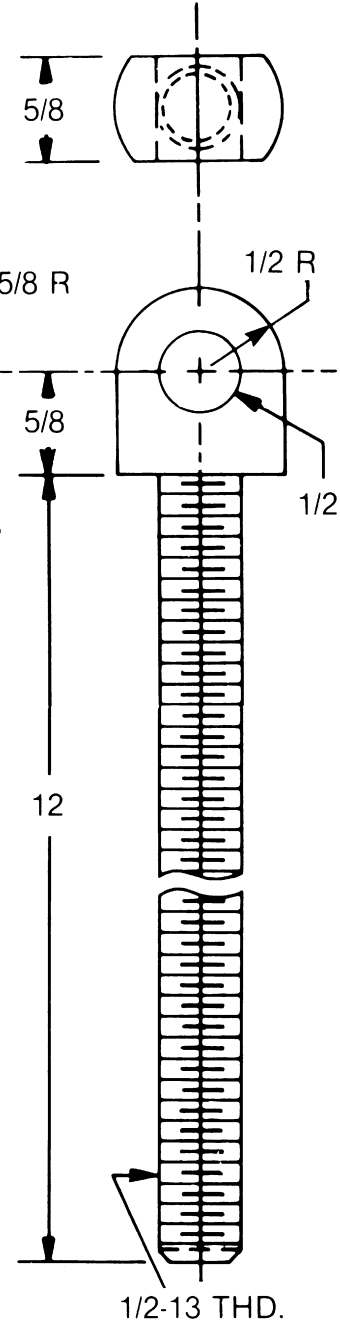
Cad File Name E634
Part Number E634



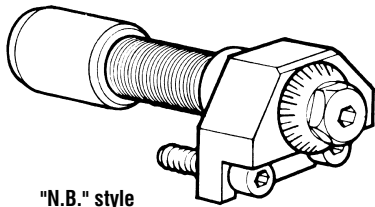
Cad File Name E658
Part Number E658



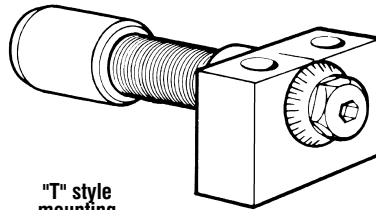
Cad File Name E612
Part Number E612



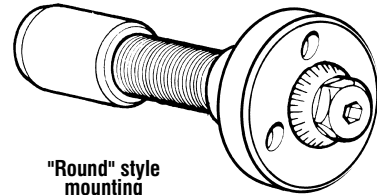
E&E Micro Adjustment Dials



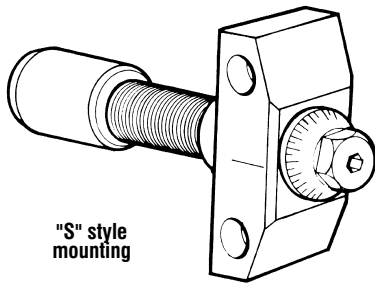
"N.B." style mounting



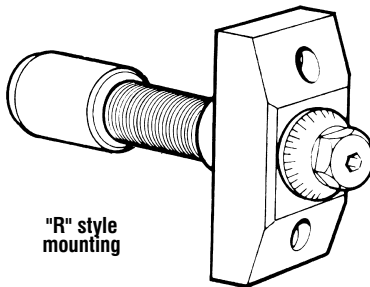
"T" style mounting



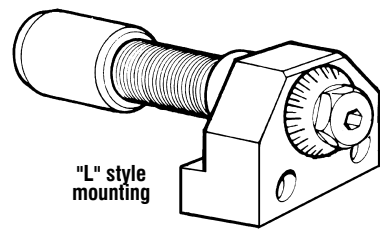
"Round" style mounting



"S" style mounting



"R" style mounting



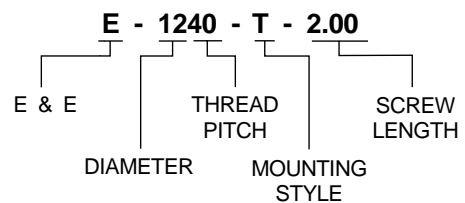
"L" style mounting

E&E Micro Adjustment Dials

E&E Special Products offers a series of Micro Adjustment Dials for precision adjustment of cutting tools, boring bars, tool blocks, V-blocks, end stops and other machine components. A calibrated dial mounted on the tool block is graduated in .0005 increments. Rotating the dial advances or retracts a precision screw that positions the tool with micrometer accuracy. Hand setting is eliminated.

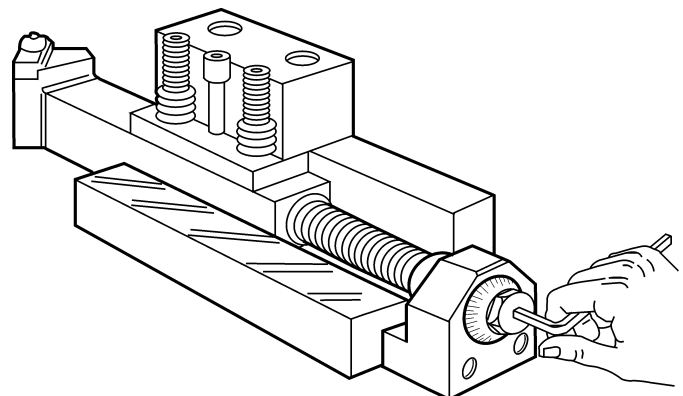
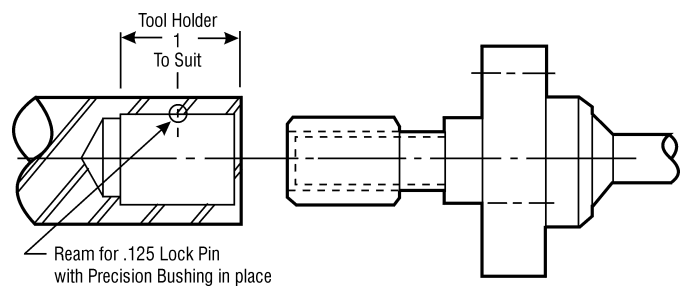
ORDERING INFORMATION

Select Mounting Style and Thread Dimensions



Micro Adjustment Dial Features:

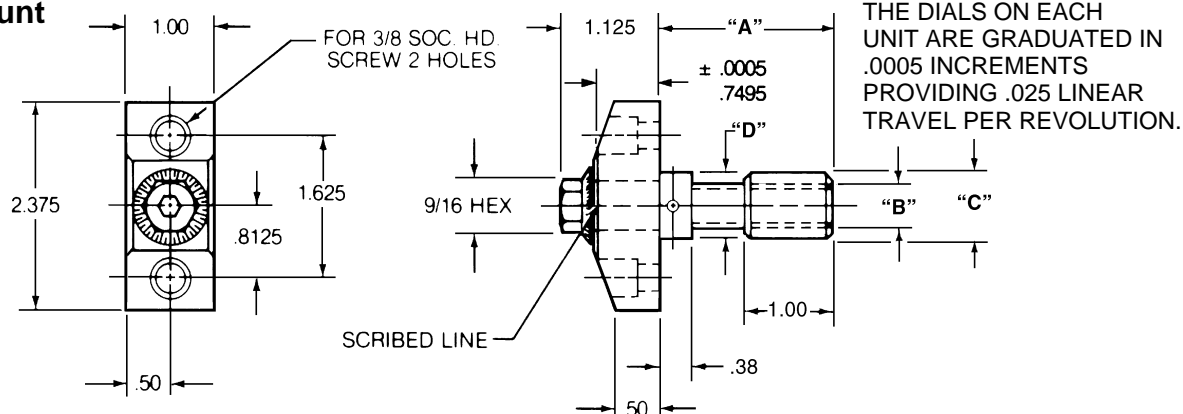
- Reference calibrations permit quick, accurate adjustment of tools or stops to within tenths setting.
- Backlash is minimized due to fine pitch micrometer threaded screw fitted to precision bushings.
- Available in 6 mounting styles adaptable to virtually any tooling.
- Eliminates the need for costly, quick-change, pre-set tooling.
- Two micrometer thread sizes available: 3/8-40 and 1/2-40.





Micro Adjustment Dial

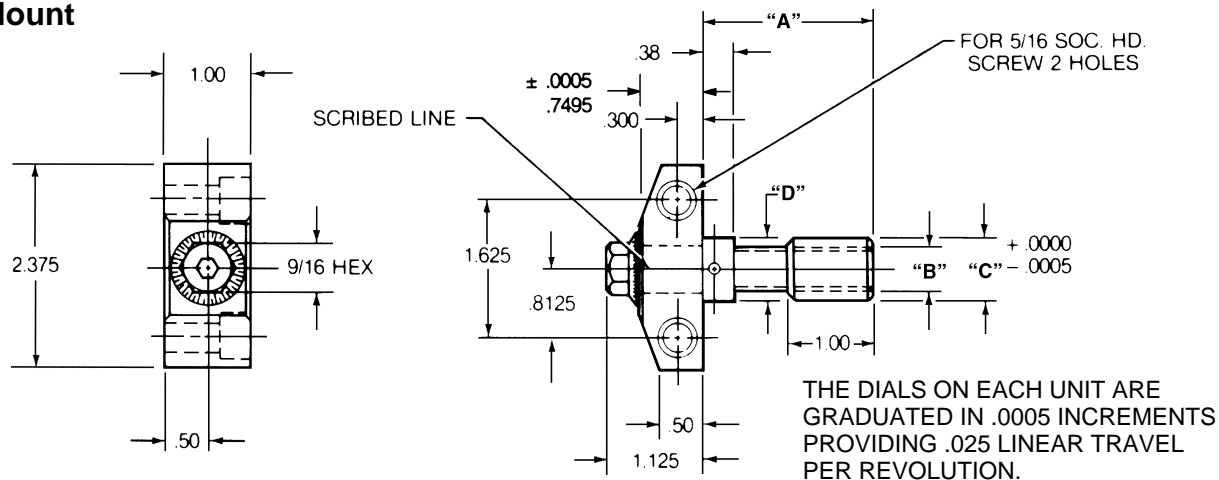
"R" Mount



Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D
E1240R2	E1240-R-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-R-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-R-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840R2	E3840-R-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-R-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-R-4.72	4.72	3/8 - 40 L.H.	.6245	.609

"S" Mount



CAD FILE NAME	PART NUMBER	A	B	C	D
E1240S2	E1240-S-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-S-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-S-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840S2	E3840-S-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-S-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-S-4.72	4.72	3/8 - 40 L.H.	.6245	.609

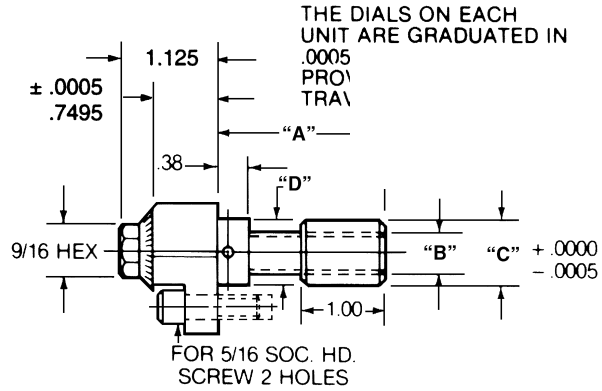
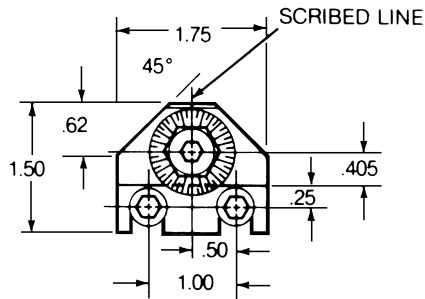
Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD Directory
Mach-Tool\MicroAdj

"Stretch"
The shortest standard component is given. You may "Stretch" the unit to the desired length.

Micro Adjustment Dial

“N.B.” Mount

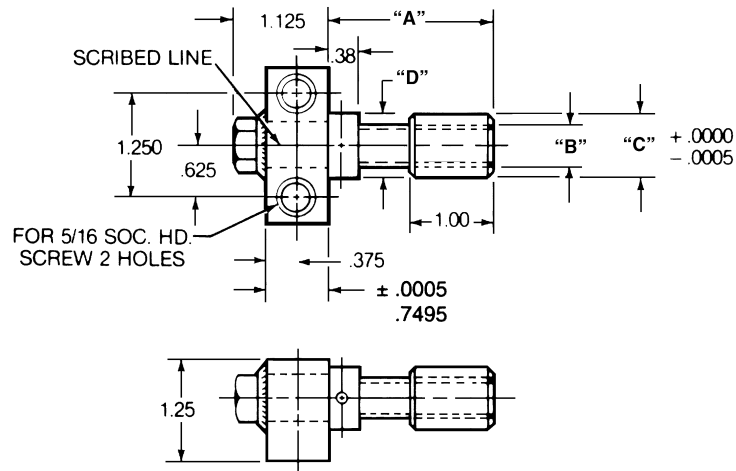
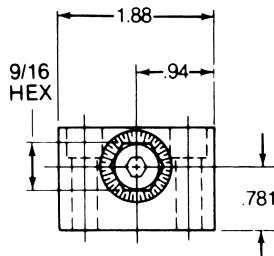


Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D
E1240N2	E1240-NB-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-NB-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-NB-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840N2	E3840-NB-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-NB-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-NB-4.72	4.72	3/8 - 40 L.H.	.6245	.609

“T” Mount

THE DIALS ON EACH UNIT ARE GRADUATED IN .0005 INCREMENTS PROVIDING .025 LINEAR TRAVEL PER REVOLUTION.



Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D
E1240T2	E1240-T-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-T-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-T-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840T2	E3840-T-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-T-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-T-4.72	4.72	3/8 - 40 L.H.	.6245	.609

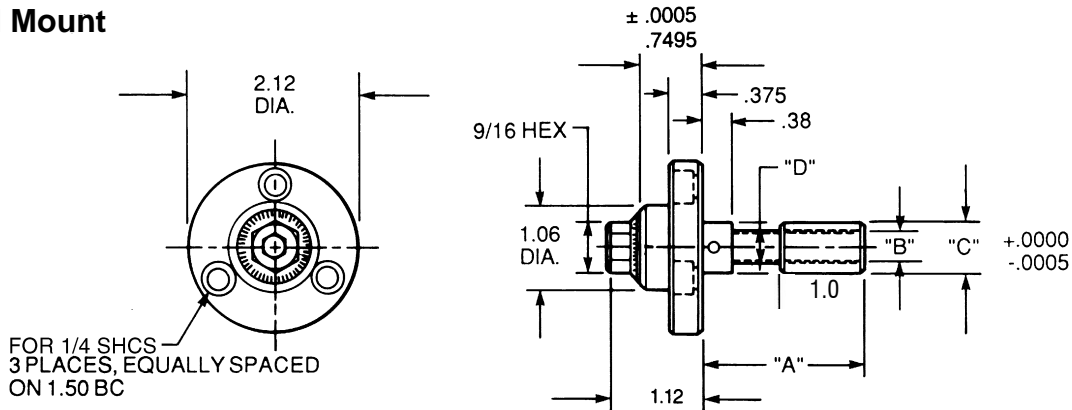
“Stretch”

The shortest standard component is given. You may “Stretch” the unit to the desired length.



Micro Adjustment Dial

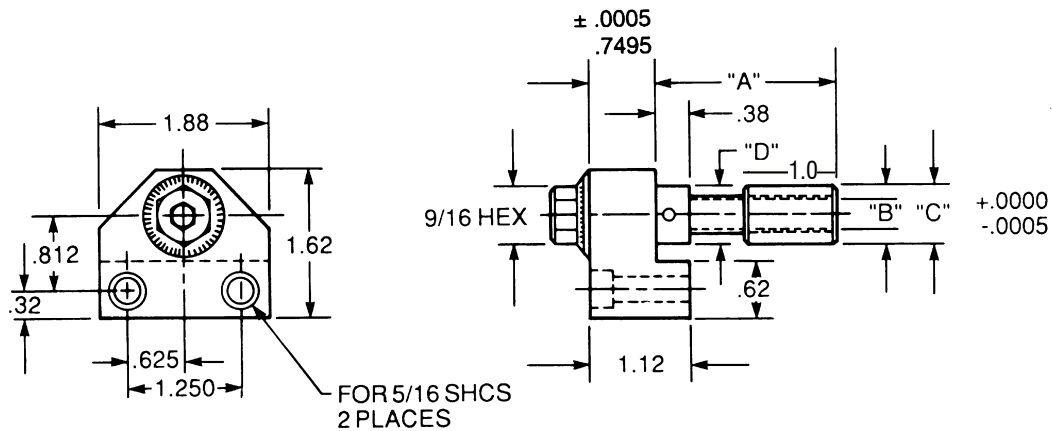
Round Mount



Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D
E1240RD2	E1240-RD-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-RD-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-RD-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840RD2	E3840-RD-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-RD-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-RD-4.72	4.72	3/8 - 40 L.H.	.6245	.609

"L" Mount

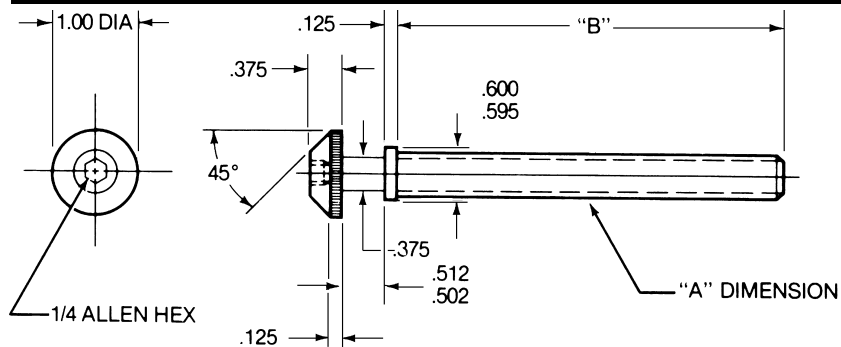


Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D
E1240L2	E1240-L-2.00	2.00	1/2 - 40 L.H.	.7495	.734
	E1240-L-3.00	3.00	1/2 - 40 L.H.	.7495	.734
	E1240-L-4.72	4.72	1/2 - 40 L.H.	.7495	.734
E3840L2	E3840-L-2.00	2.00	3/8 - 40 L.H.	.6245	.609
	E3840-L-3.00	3.00	3/8 - 40 L.H.	.6245	.609
	E3840-L-4.72	4.72	3/8 - 40 L.H.	.6245	.609



Adjusting Screws



HEAT TREAT AND FINISH TO BE EQUIVALENT TO SAE GRADE 8 STANDARDS.

Click to download CAD file. 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B THD. LENGTH
E3820SC	E3820-1.00	3/8 - 20	1.00
	E3820-2.00	3/8 - 20	2.00
	E3820-3.00	3/8 - 20	3.00
	E3820-4.00	3/8 - 20	4.00
	E3820-5.00	3/8 - 20	5.00
	E3820-6.00	3/8 - 20	6.00
	E3820-7.00	3/8 - 20	7.00
	E3820-8.00	3/8 - 20	8.00
	E3820-9.00	3/8 - 20	9.00
	E3820-10.00	3/8 - 20	10.00
	E3820-11.00	3/8 - 20	11.00
	E3820-12.00	3/8 - 20	12.00

CAD FILE NAME	PART NUMBER	A	B THD. LENGTH
E1220SC	E1220-1.00	1/2 - 20	1.00
	E1220-2.00	1/2 - 20	2.00
	E1220-3.00	1/2 - 20	3.00
	E1220-4.00	1/2 - 20	4.00
	E1220-5.00	1/2 - 20	5.00
	E1220-6.00	1/2 - 20	6.00
	E1220-7.00	1/2 - 20	7.00
	E1220-8.00	1/2 - 20	8.00
	E1220-9.00	1/2 - 20	9.00
	E1220-10.00	1/2 - 20	10.00
	E1220-11.00	1/2 - 20	11.00
	E1220-12.00	1/2 - 20	12.00

“Stretch”

The shortest standard component is given. You may “Stretch” the unit to the desired length.

FIXTURE PINS



Tolerance Data & Standard Specifications



MATERIAL	TOLERANCE	HEAT TREAT
HARDENED & GROUND 8620	PIN DIA = .001 BELOW NOMINAL +.0000 -.0005	1/2 DIA OR LESS R"C" 50-52 .025-.035 DEEP 9/16 DIA AND UP R"C" 58-60 .035-.045 DEEP
STAINLESS 300 SERIES	UP TO 5/16" DIA EXCL. +.000/-0.001 5/16" — 1/2" DIA EXCL. +.000/-0.0015 1/2" DIA — 1" DIA EXCL. +.000/-0.002 1" DIA — 1-1/2" DIA EXCL. +.000/-0.0025 1-1/2" DIA — 4" DIA INCL. +.000/-0.003	N/A
MILD STEEL 8620	UP TO 1-1/2" DIA INCL. +.000 -.002 OVER 1-1/2" DIA — 2-1/2" DIA INCL. +.000 -.003 OVER 2-1/2" DIA — 4" DIA INCL. +.000 -.004	N/A
PREHARDENED A311 G & P	UP TO 1-1/2" DIA INCL. +.000 -.001 1-9/16" DIA — 2-7/16" DIA INCL. +.0000 -.0015 2-1/2" DIA — 3" DIA INCL. +.000 -.002 3-1/16" DIA — 4" DIA INCL. +.000 -.003	R" C" 22-30

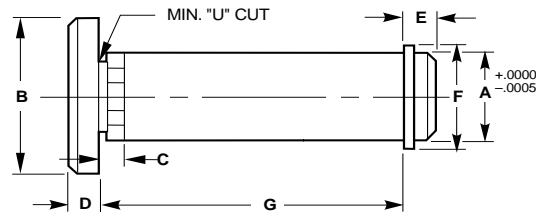
ALL E & E FIXTURES AND CLEVIS PINS ARE MADE TO THE FOLLOWING SPECIFICATIONS:

LENGTH = NOMINAL +.025

KNURL = NOMINAL +.007

LUBE OPTIONS = NOT AVAILABLE ON 1/4" AND 5/16" DIA PINS. 3/8" - 9/16" DIA PINS ARE FURNISHED WITH A 1/4-28-TAPPED HOLE. 3/8" - 9/16" DIA PINS CAN ONLY BE TAPPED ON THE END OPPOSITE THE RETAINER GROOVE. FOR PINS 5/8" DIA OR LARGER A 1/8 NPT IS FURNISHED.

Head Type Fixture Pin with Snap Ring



HEAD TYPE FIXTURE PIN WITH SNAP RING

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION								
CAD FILE NAME	PIN DIA.	A	B	C	D	E	F	*G 1/4" INCR
KSFIXTPIN	1/4	.249	.375	.25	.125	.125	.54	1"-2"
	3/8	.374	.500	.25	.125	.130	.68	1"-3"
	1/2	.499	.625	.25	.125	.139	.82	1"-3"
	5/8	.624	.750	.25	.156	.165	.96	1"-3"
	3/4	.749	.937	.25	.156	.180	1.14	1"-4"
	7/8	.874	1.063	.25	.156	.256	1.32	1"-4"
	1	.999	1.187	.25	.187	.256	1.53	1 1/2"-5"
	1 1/8	1.124	1.375	.25	.187	.256	1.55	1 1/2"-5"
	1 1/4	1.249	1.437	.25	.250	.256	1.69	2"-6"
	1 3/8	1.374	1.625	.25	.250	.256	1.80	2"-6"
	1 1/2	1.499	1.750	.25	.250	.256	1.99	2"-6"

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS
AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF
REQUIRED

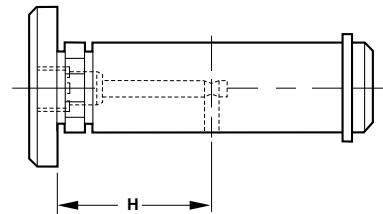
LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

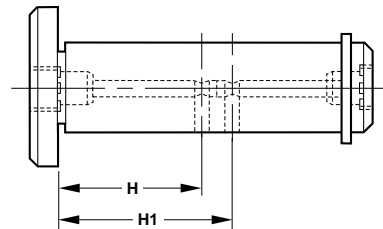
Type	Description
S	HARDENED AND GROUND, SMOOTH
SS	STAINLESS, SMOOTH
SU	MILD STEEL, SMOOTH
SP	PREHARDENED, SMOOTH
K	HARDENED AND GROUND, KNURLED
KS	STAINLESS, KNURLED
KU	MILD STEEL, KNURLED
KP	PREHARDENED, KNURLED

CAD Directory
Mach-Tool\FixtPin

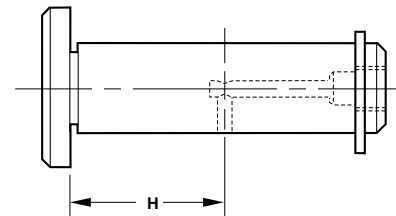
PIPE TAP LUBE OPTION



PIPE TAP LUBE OPTION = PT 2



PIPE TAP LUBE OPTION = RPT



ORDERING INFORMATION

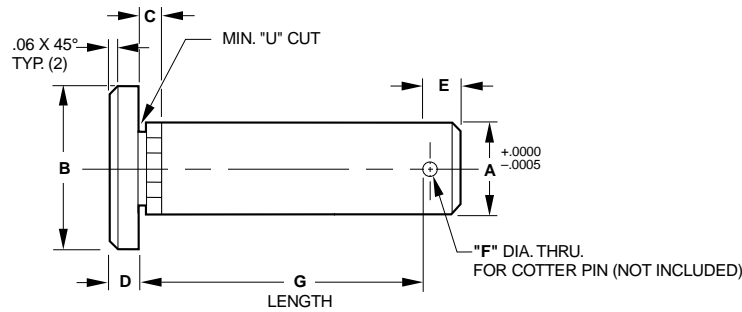
Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim —
"H1" Dim

Example: 34-212-S-PT

ALL PIN DIMENSIONS ARE GIVEN AS
FRACTIONS. 34 = 3/4, 212 = 2-1/2

"Stretch"

The shortest standard
component is given. You may
"Stretch" the unit to the desired length.



HEAD TYPE FIXTURE PIN WITH COTTER PIN HOLE

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION								
CAD FILE NAME	PIN DIA.	A	B	C	D	E	F	*G 1/4" INCR
KSCLEVPIN	1/4	.249	.375	.25	.125	.190	.093	1"-2"
	3/8	.374	.500	.25	.125	.190	.093	1"-3"
	1/2	.499	.625	.25	.125	.190	.093	1"-3"
	5/8	.624	.750	.25	.156	.250	.125	1"-3"
	3/4	.749	.937	.25	.156	.250	.125	1"-4"
	7/8	.874	1.063	.25	.156	.250	.125	1"-4"
	1	.999	1.187	.25	.187	.250	.125	1 1/2"-5"
	1 1/8	1.124	1.375	.25	.187	.310	.190	1 1/2"-5"
	1 1/4	1.249	1.437	.25	.250	.310	.190	2"-6"
	1 3/8	1.374	1.625	.25	.250	.375	.250	2"-6"
	1 1/2	1.499	1.750	.25	.250	.375	.250	2"-6"

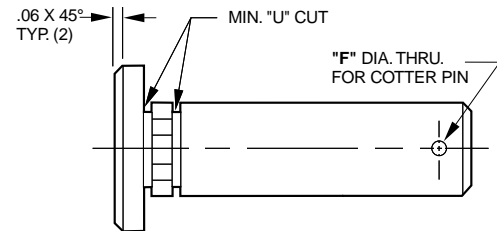
*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS
AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

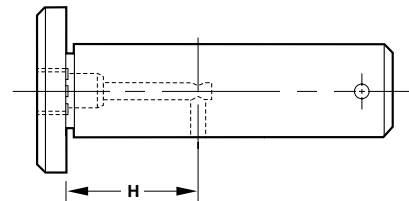
LUBE OPTION:

ADD "PT", AFTER PIN TYPE

HEAD TYPE COTTER PIN SHAFT WITH KNURL



PIPE TAP LUBE OPTION = PT



ORDERING INFORMATION

Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim

Example: 12-314-SCP-PT-34

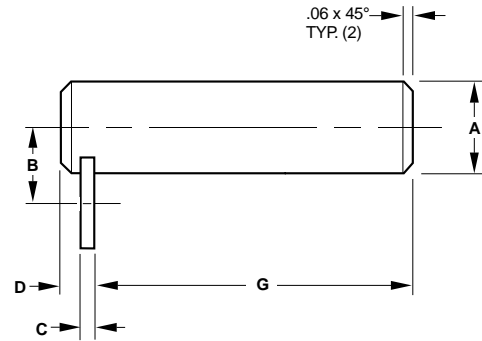
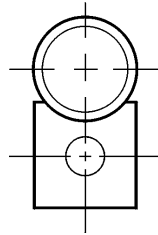
ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 12 = 1/2, 314 = 3-1/4, 34 = 3/4

Type	Description
SC	HARDENED AND GROUND, SMOOTH COTTER
SCS	STAINLESS, SMOOTH, COTTER
SCU	MILD STEEL, SMOOTH, COTTER
SCP	PREHARDENED, SMOOTH, COTTER
KC	HARDENED AND GROUND, KNURLED, COTTER
KCS	STAINLESS, KNURLED, COTTER
KCU	MILD STEEL, KNURLED, COTTER
KCP	PREHARDENED, KNURLED, COTTER

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Headless Fixture Pin with Retainer



HEADLESS FIXTURE PIN WITH RETAINER

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION						
CAD FILE NAME	PIN DIA.	*A	B	C	D	*G 1/4" INCR
HRFIXTPIN	1/4	.250	.375	.12	.25	1"-2"
	5/16	.312	.406	.12	.25	1"-3"
	3/8	.375	.437	.12	.25	1"-3"
	7/16	.438	.469	.12	.25	1"-3"
	1/2	.500	.500	.12	.25	1"-3"
	9/16	.562	.531	.12	.25	1"-3"
	5/8	.625	.562	.12	.25	1"-3"
	11/16	.688	.594	.12	.25	1"-4"
	3/4	.750	.625	.12	.25	1"-4"
	13/16	.812	.656	.12	.25	1"-4"
	7/8	.875	.688	.12	.25	1"-4"
	15/16	.938	.719	.12	.25	1 1/2"-5"
	1	1.000	.750	.12	.25	1 1/2"-5"
	1-1/8	1.125	.813	.25	.50	1 1/2"-5"
	1-1/4	1.250	.875	.25	.50	2"-6"
	1-3/8	1.375	.938	.25	.50	2"-6"
	1-1/2	1.500	1.000	.25	.50	2"-6"
	1-3/4	1.750	1.125	.25	.50	3"-8"
	2	2.000	1.250	.25	.50	3"-8"
	2-1/4	2.250	1.375	.25	.50	3"-8"
2-1/2	2.500	1.500	.25	.50	4"-12"	
3	3.000	1.875	.25	.50	4"-12"	
3-1/2	3.500	2.125	.25	.50	6"-14"	
4	4.000	2.375	.25	.50	6"-14"	

*A = FOR TOLERANCE INFORMATION SEE PAGE D-12

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS

AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" "PT2" OR "RPT" AFTER PIN TYPE

*RETAINER OPTION:

RETAINER #E-2R SUPPLIED ON 1/4" - 1" DIA PINS.

RETAINER #13-RD SUPPLIED ON 1-1/8"-1-3/4" DIA PINS,

RETAINER #7-RD SUPPLIED ON 2"-2-1/2" DIA PINS

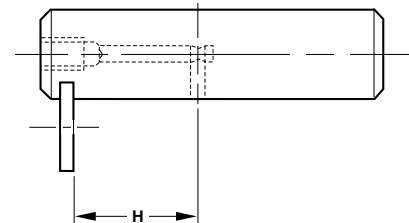
RETAINER #8-RD SUPPLIED ON 3"-4" DIA PINS UNLESS

OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN

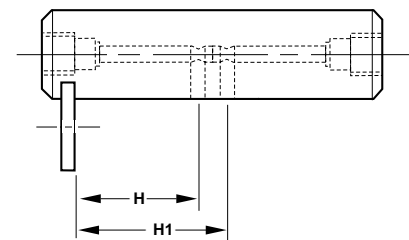
STANDARD RETAINER IS REQUIRED.

SEE PGE D-23 FOR ADDITIONAL RETAINER OPTIONS.

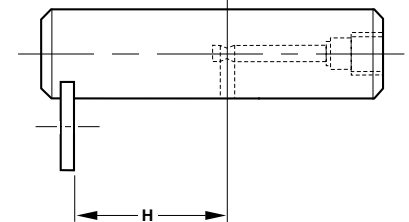
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



Type

Description

HR	HARDENED AND GROUND
HRS	STAINLESS
HRU	MILD STEEL
HRP	PREHARDENED, GROUND AND POLISHED

ORDERING INFORMATION

Specify: Pin Dia — Length — Type — Lube Option — "H" Dim — "H1" Dim — *Retainer

Example: 12-212-HR-PT-E1-RD

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 12 = 1/2, 212 = 2-1/2

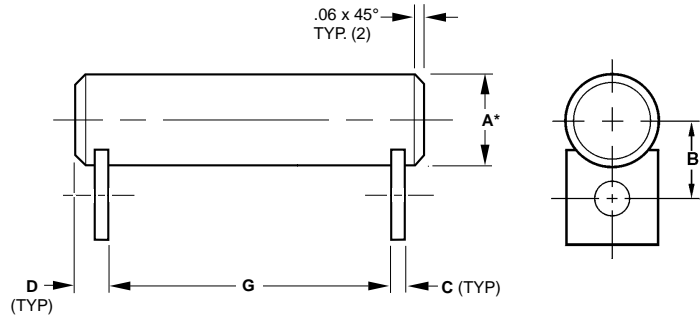
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Headless Fixture Pin with Double Retainer



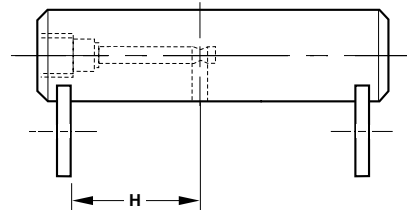
HEADLESS FIXTURE PIN WITH DOUBLE RETAINER



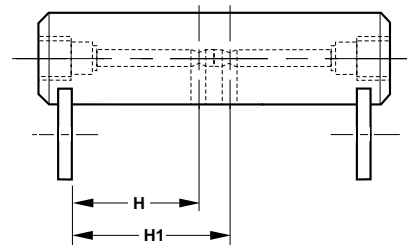
Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION						
CAD FILE NAME	PIN DIA.	*A	B	C	D	*G 1/4" INCR
HDRFIXTPIN	1/4	.250	.375	.12	.25	1"-2"
	5/16	.312	.406	.12	.25	1"-3"
	3/8	.375	.437	.12	.25	1"-3"
	7/16	.438	.469	.12	.25	1"-3"
	1/2	.500	.500	.12	.25	1"-3"
	9/16	.562	.531	.12	.25	1"-3"
	5/8	.625	.562	.12	.25	1"-3"
	11/16	.688	.594	.12	.25	1"-4"
	3/4	.750	.625	.12	.25	1"-4"
	13/16	.812	.656	.12	.25	1"-4"
	7/8	.875	.688	.12	.25	1"-4"
	15/16	.938	.719	.12	.25	1-1/2"-5"
	1	1.000	.750	.12	.25	1-1/2"-5"
	1-1/8	1.125	.813	.25	.50	1-1/2"-5"
	1-1/4	1.250	.875	.25	.50	2"-6"
	1-3/8	1.375	.938	.25	.50	2"-6"
	1-1/2	1.500	1.000	.25	.50	2"-6"
	1-3/4	1.750	1.125	.25	.50	3"-8"
	2	2.000	1.250	.25	.50	3"-8"
	2-1/4	2.250	1.375	.25	.50	3"-8"
2-1/2	2.500	1.500	.25	.50	4"-12"	
3	3.000	1.875	.25	.50	4"-12"	
3-1/2	3.500	2.125	.25	.50	6"-14"	
4	4.000	2.375	.25	.50	6"-14"	

PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



ORDERING INFORMATION

Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim —
"H1" Dim — *Retainer Option

Example: 34-3-HDR-PT2-114-134

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 34 = 3/4, 3 = 3, 114 = 1-1/4
134 = 1-3/4

Type	Description
HDR	HARDENED AND GROUND
HDRS	STAINLESS
HDRU	MILD STEEL
HDRP	PREHARDENED, GROUND AND POLISHED

"Stretch"

The shortest standard component is given.
You may "Stretch" the unit to the desired length.

*A = FOR TOLERANCE INFORMATION SEE PAGE D-12

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS
AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" OR "PT2" AFTER PIN TYPE

*RETAINER OPTION:

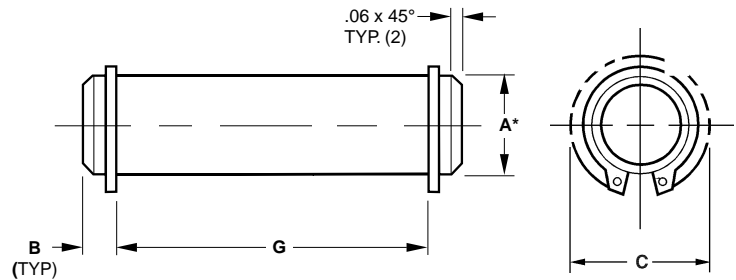
RETAINER #E-2R SUPPLIED ON 1/4" - 1" DIA PINS.
RETAINER #13-RD SUPPLIED ON 1-1/8"-1-3/4" DIA PINS,
RETAINER #7-RD SUPPLIED ON 2"-2-1/2" DIA PINS
RETAINER #8-RD SUPPLIED ON 3"-4" DIA PINS UNLESS
OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN
STANDARD RETAINER IS REQUIRED.
SEE PGE D-23 FOR ADDITIONAL RETAINER OPTIONS.

CAD Directory
Mach-Tool\FixtPin

Headless Fixture Pin with Double Snap Ring



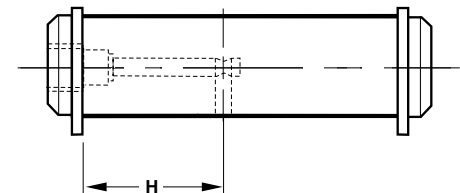
HEADLESS FIXTURE PIN WITH DOUBLE SNAP RING



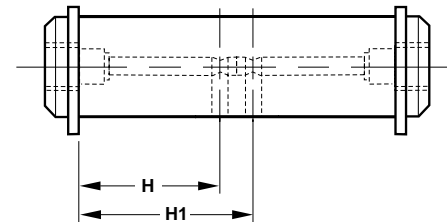
Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION					
CAD FILE NAME	PIN DIA.	A	B	C	*G 1/4" INCR
SXFIXTPIN	1/4	.250	.125	.54	1"-2"
	3/8	.375	.130	.68	1"-3"
	1/2	.500	.139	.82	1"-3"
	5/8	.625	.165	.96	1"-3"
	3/4	.750	.180	1.14	1"-4"
	7/8	.875	.256	1.32	1"-4"
	1	1.000	.256	1.53	1-1/2"-5"
	1-1/8	1.125	.256	1.55	1-1/2"-5"
	1-1/4	1.250	.256	1.69	2"-6"
	1-3/8	1.375	.256	1.80	2"-6"
	1-1/2	1.500	.256	1.99	2"-6"
	1-3/4	1.750	.256	2.21	3"-8"
	2	2.000	.256	2.44	3"-8"
	2-1/4	2.250	.281	2.87	3"-8"
2-1/2	2.500	.296	3.12	4"-12"	

PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



*A = FOR TOLERANCE DATA SEE PAGE D-12

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" OR "PT2" AFTER PIN TYPE

Type	Description
SX	HARDENED AND GROUND, DOUBLE SNAP RING
SXS	STAINLESS, DOUBLE SNAP RING
SXU	MILD STEEL, DOUBLE SNAP RING
SXP	PREHARDENED, GROUND AND POLISHED, DOUBLE SNAP RING

CAD Directory
Mach-Tool\FPin

ORDERING INFORMATION

Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim —
"H1" Dim

Example: 38-114-SXP-PT

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 38 = 3/8, 114 = 1-1/4

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

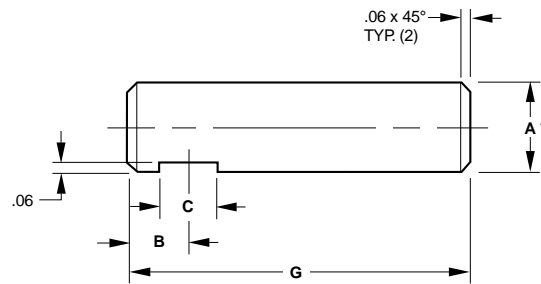
Headless Fixture Pin with Set Screw



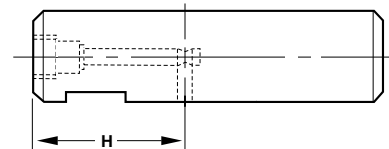
SET SCREW FIXTURE PIN

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

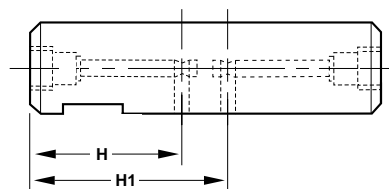
DIMENSIONAL INFORMATION					
CAD FILE NAME	PIN DIA.	*A	B	C	*G 1/4" INCR
HSFIXTPIN	1/4	.250	*	.250	1"-2"
	5/16	.312	*	.250	1"-3"
	3/8	.375	*	.375	1"-3"
	7/16	.438	*	.375	1"-3"
	1/2	.500	*	.375	1"-3"
	9/16	.562	*	.375	1"-3"
	5/8	.625	*	.500	1"-3"
	11/16	.688	*	.500	1"-4"
	3/4	.750	*	.500	1"-4"
	13/16	.812	*	.500	1"-4"
	7/8	.875	*	.500	1"-4"
	15/16	.938	*	.500	1 1/2"-5"
	1	1.000	*	.500	1 1/2"-5"
	1-1/8	1.125	*	.500	1 1/2"-5"
	1-1/4	1.250	*	.500	2"-6"
	1-3/8	1.375	*	.500	2"-6"
	1-1/2	1.500	*	.500	2"-6"
	1-3/4	1.750	*	.500	3"-8"
	2	2.000	*	.500	3"-8"
	2-1/4	2.250	*	.500	3"-8"
2-1/2	2.500	*	.500	4"-12"	
3	3.000	*	.500	4"-12"	
3-1/2	3.500	*	.500	6"-14"	
4	4.000	*	.500	6"-14"	



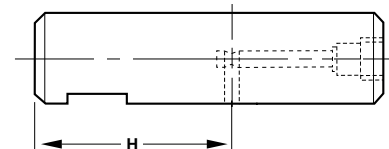
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



ORDERING INFORMATION

Specify: Pin Dia — Length — Type —
Lube Option — "B" Dim —
"H" Dim — "H1" Dim

Example: 12-212-HS-PT-12-134

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 12 = 1/2, 212 = 2-1/2, 12 = 1/2, 134 = 1-3/4

Type	Description
HS	HARDENED AND GROUND
HSS	STAINLESS
HSU	MILD STEEL
HSP	PREHARDENED, GROUND AND POLISHED

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

*A = FOR TOLERANCE INFORMATION SEE PAGE D-12

*B = SPECIFY LOCATION

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS

AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

Headless Fixture Pin with Double Set Screw



SET SCREW FIXTURE PIN W/DOUBLE FLAT

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION						
CAD FILE NAME	PIN DIA.	*A	B	C	D	*G 1/4" INCR
HDSFIXTPIN	1/4	.250	*	.250	*	1"-2"
	5/16	.312	*	.250	*	1"-3"
	3/8	.375	*	.375	*	1"-3"
	7/16	.438	*	.375	*	1"-3"
	1/2	.500	*	.375	*	1"-3"
	9/16	.562	*	.375	*	1"-3"
	5/8	.625	*	.500	*	1"-3"
	11/16	.688	*	.500	*	1"-4"
	3/4	.750	*	.500	*	1"-4"
	13/16	.812	*	.500	*	1"-4"
	7/8	.875	*	.500	*	1"-4"
	15/16	.938	*	.500	*	1-1/2"-5"
	1	1.000	*	.500	*	1-1/2"-5"
	1-1/8	1.125	*	.500	*	1-1/2"-5"
	1-1/4	1.250	*	.500	*	2"-6"
	1-3/8	1.375	*	.500	*	2"-6"
	1-1/2	1.500	*	.500	*	2"-6"
	1-3/4	1.750	*	.500	*	3"-8"
	2	2.000	*	.500	*	3"-8"
	2-1/4	2.250	*	.500	*	3"-8"
	2-1/2	2.500	*	.500	*	4"-12"
	3	3.000	*	.500	*	4"-12"
	3-1/2	3.500	*	.500	*	6"-14"
	4	4.000	*	.500	*	6"-14"

*A = FOR TOLERANCE DATA SEE PAGE D-12

*B = SPECIFY LOCATION AFTER PIN TYPE

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

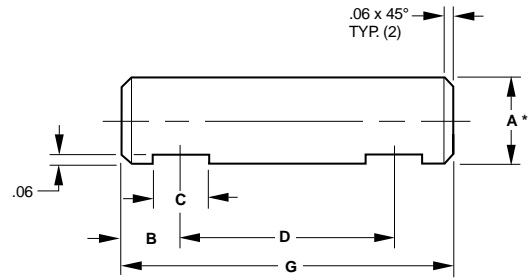
*D = SPECIFY DISTANCE BETWEEN CENTER LINE OF FLATS

H = LOCATION OF CROSSHOLE

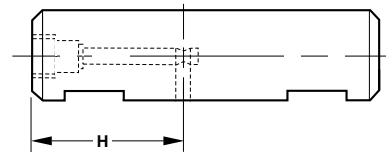
H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

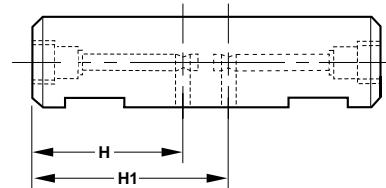
ADD "PT" OR "PT2" AFTER PIN TYPE



PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



Type	Description
HDS	HARDENED AND GROUND
HDSS	STAINLESS
HDSU	MILD STEEL
HDSP	PREHARDENED, GROUND AND POLISHED

ORDERING INFORMATION

Specify: Pin Dia — Length — Type —
Lube Option — "B" Dim — "D" Dim —
"H" Dim — "H1" Dim

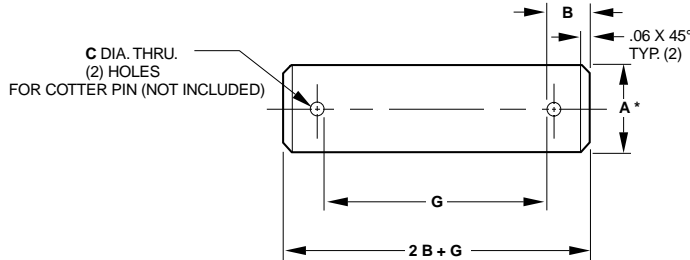
Example: 112-312-HDS-PT-1-112-2

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 112 = 1-1/2, 312 = 3-1/2, 1 = 1, 112 = 1-1/2, 2 = 2

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Headless Fixture Pin with Double Cotter Pin



HEADLESS FIXTURE PIN WITH DOUBLE COTTER PIN HOLES

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION					
CAD FILE NAME	PIN DIA.	*A	B	C	*G 1/4" INCR
HDCFIXTPIN	1/4	.250	.188	.093	1"-2"
	5/16	.312	.188	.125	1"-3"
	3/8	.375	.250	.125	1"-3"
	7/16	.438	.250	.125	1"-3"
	1/2	.500	.250	.125	1"-3"
	9/16	.562	.250	.125	1"-3"
	5/8	.625	.250	.125	1"-3"
	11/16	.688	.250	.125	1"-4"
	3/4	.750	.250	.156	1"-4"
	13/16	.812	.250	.156	1"-4"
	7/8	.875	.250	.156	1"-4"
	15/16	.938	.250	.156	1-1/2"-5"
	1	1.000	.250	.156	1-1/2"-5"
	1-1/8	1.125	.375	.187	1-1/2"-5"
	1-1/4	1.250	.375	.187	2"-6"
	1-3/8	1.375	.375	.187	2"-6"
	1-1/2	1.500	.375	.187	2"-6"
	1-3/4	1.750	.375	.187	3"-8"
	2	2.000	.375	.187	3"-8"
	2-1/4	2.250	.375	.187	3"-8"
2-1/2	2.500	.375	.187	4"-12"	
3	3.000	.500	.250	4"-12"	

*A = FOR TOLERANCE DATA SEE PAGE D-12

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

Type	Description
HDC	HARDENED AND GROUND
HDCS	STAINLESS
HDCU	MILD STEEL
HDCP	PREHARDENED, GROUND AND POLISHED

CAD Directory
Mach-Tool\FixtPin

ORDERING INFORMATION

Specify: Pin Dia. — Length — Type

Example: 58-114-HDCP

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 58= 5/8, 114 = 1-1/4

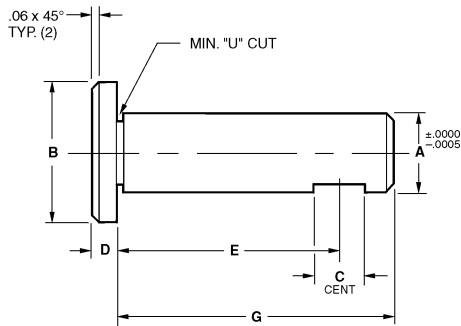
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

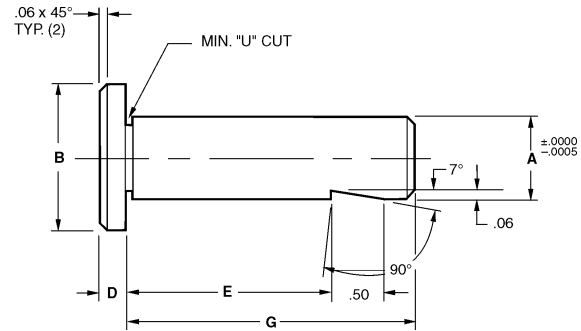
Head Type Fixture Pin with Set Screw Flat & Whistle Notch



HEAD TYPE SHAFT WITH SET SCREW FLAT "SF"



HEAD TYPE SHAFT WITH WHISTLE NOTCH "SW"



HEAD TYPE FIXTURE PIN WITH SET SCREW FLAT OR WHISTLE NOTCH

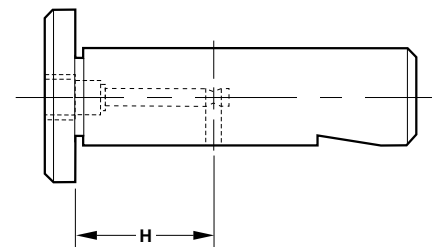
Click to download CAD file (STP format) 2dwdg & 3dwdg visit eandesp.com

DIMENSIONAL INFORMATION						
CAD FILE NAME	PIN DIA	A	B	C	D	*G 1/4" INCR
SFFIXTPIN OR SWFIXTPIN	1/4	.249	.375	.250	.125	1"-2"
	3/8	.374	.500	.375	.125	1"-3"
	1/2	.499	.625	.375	.125	1"-3"
	5/8	.624	.750	.500	.156	1"-3"
	3/4	.749	.937	.500	.156	1"-4"
	7/8	.874	1.063	.500	.156	1"-4"
	1	.999	1.187	.500	.187	1-1/2"-5"
	1 1/8	1.124	1.375	.500	.187	1-1/2"-5"
	1 1/4	1.249	1.437	.500	.250	2"-6"
	1 3/8	1.374	1.625	.500	.250	2"-6"
	1 1/2	1.499	1.750	.500	.250	2"-6"

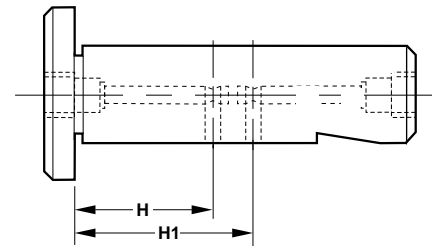
E = LOCATION OF FLAT OR WHISTLE NOTCH
***G** = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST
H = 1/2 G UNLESS OTHERWISE SPECIFIED
H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED
LUBE OPTION:
 ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

Type	Description
SF	HARDENED AND GROUND, SET SCREW
SFS	STAINLESS, SET SCREW
SFU	MILD STEEL, SET SCREW
SFP	PREHARDENED, SET SCREW
SW	HARDENED AND GROUND, WHISTLE NOTCH
SWS	STAINLESS, WHISTLE NOTCH
SWU	MILD STEEL, WHISTLE NOTCH
SWP	PREHARDENED, WHISTLE NOTCH

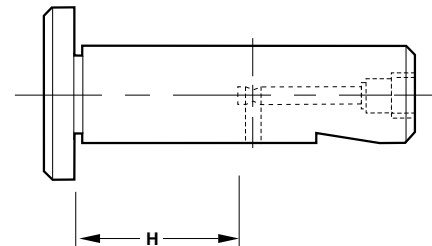
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



ORDERING INFORMATION

Specify: Pin Dia. — Length — Type — Lube Option — "E" Dim — "H" Dim — "H1" Dim

Example: 34-212-SWP-PT-2

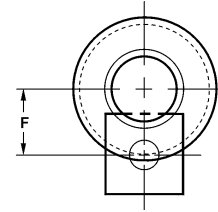
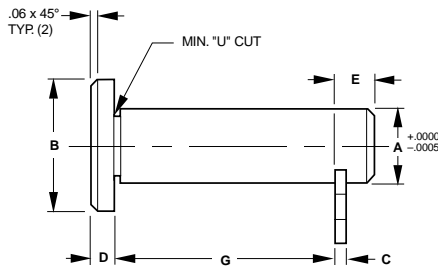
ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 34= 3/4, 212 = 2-1/2, 2 = 2

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

CAD Directory
Mach-Tool\FixtPin

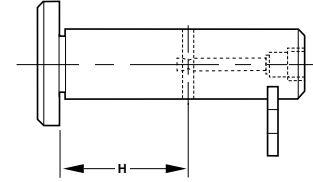
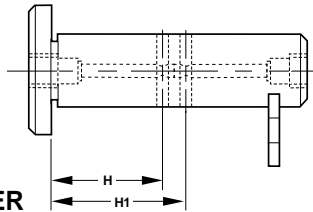
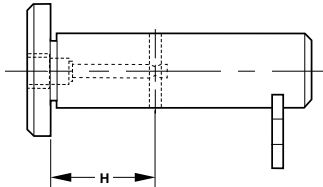
Head Type Fixture Pin with Retainer



PIPE TAP LUBE OPTION = PT

PIPE TAP LUBE OPTION = PT2

PIPE TAP LUBE OPTION = RPT



HEAD TYPE FIXTURE PIN WITH RETAINER

Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION								
CAD FILE NAME	PIN DIA.	A	B	C	D	E	F	*G 1/4" INCR
SRFIXTPIN	1/4	.249	.375	.125	.125	.25	.375	1"-2"
	3/8	.374	.500	.125	.125	.25	.437	1"-3"
	1/2	.499	.625	.125	.125	.25	.500	1"-3"
	5/8	.624	.750	.125	.156	.25	.562	1"-3"
	3/4	.749	.937	.125	.156	.25	.625	1"-4"
	7/8	.874	1.063	.125	.156	.25	.688	1"-4"
	1	.999	1.187	.125	.187	.25	.750	1-1/2"-5"
	1 1/8	1.124	1.375	.250	.187	.38	.813	1-1/2"-5"
	1 1/4	1.249	1.437	.250	.250	.38	.875	2"-6"
	1 3/8	1.374	1.625	.250	.250	.38	.938	2"-6"
1 1/2	1.499	1.750	.250	.250	.38	1.000	2"-6"	

*G = LENGTH IN 1/4" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST
 H = 1/2 G UNLESS OTHERWISE SPECIFIED
 H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED
LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

RETAINER OPTION:

RETAINER #E-2R SUPPLIED ON 1/4"-1" DIA PINS.
 RETAINER #13-RD SUPPLIED ON 1-1/8" - 1-1/2" DIA PINS UNLESS OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN STANDARD RETAINER IS REQUIRED.
 SEE PAGE D-23 FOR ADDITIONAL RETAINER OPTIONS.

ORDERING INFORMATION

Specify: Pin Dia. — Length — Type — Lube Option — "H" DIM — "H1" Dim — *Retainer Option

Example: 34-212-SR-PT

ALL PIN DIMENSIONS ARE GIVEN AS FRACTIONS. 34= 3/4, 212 = 2-1/2

Type	Description
SR	HARDENED AND GROUND, SMOOTH, RETAINER
SRS	STAINLESS, SMOOTH, RETAINER
SRU	MILD STEEL, SMOOTH, RETAINER
SRP	PREHARDENED, SMOOTH, RETAINER

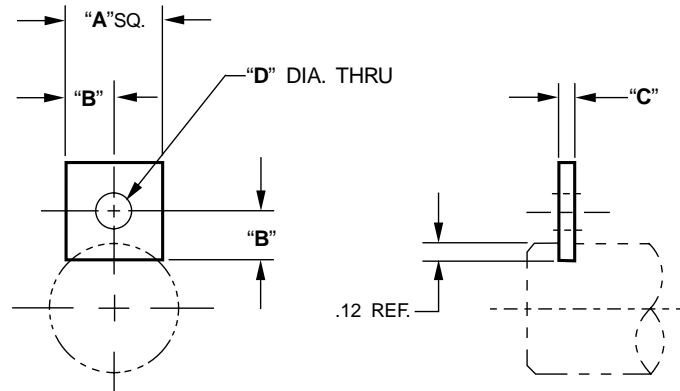
CAD Directory
 Mach-Tool\FixtPin

"Stretch"
 The shortest standard component is given. You may "Stretch" the unit to the desired length.

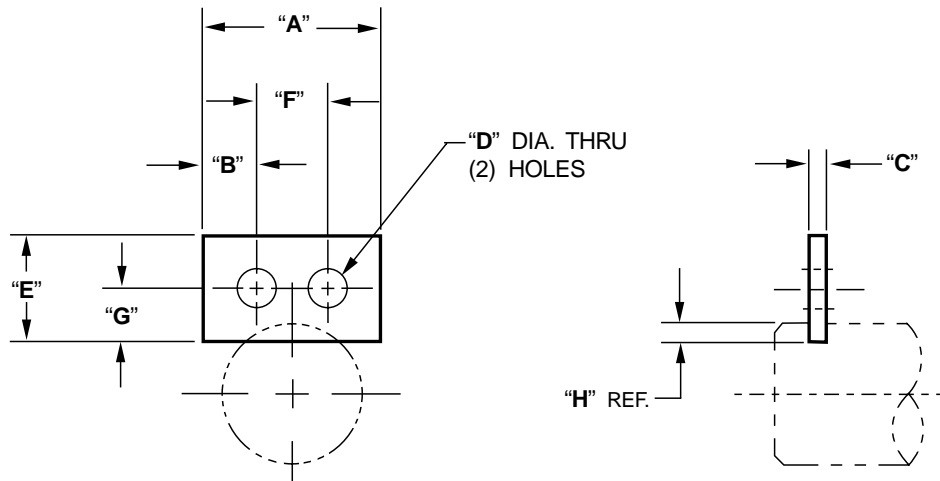


Fixture Pin Retainers (Inch)

E&ESP



CAD FILE NAME	RETAINER NUMBER	"A" DIM	"B" DIM	"C" DIM	"D" DIM
E-RET	E1-R	.62	.31	.12	9/32
	E2-R	.75	.38	.12	9/32
	E3-R	1.00	.50	.12	9/32
	E4-R	.75	.38	.25	9/32
	E5-R	.75	.38	.12	11/32
	E6-R	.75	.38	.25	11/32
	E7-R	1.00	.50	.25	11/32
	E8-R	1.00	.50	.25	13/32
	E9-R	1.25	.62	.25	13/32
	E10-R	1.50	.75	.25	17/32



Click to download CAD file (STP format) 2dwdg & 3dwdg visit eandesp.com

CAD FILE NAME	RETAINER NUMBER	"A" DIM	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM
E-RET	E1-RD	1.25	.25	.12	9/32	.62	.75	.31	.12
	E2-RD	1.25	.38	.12	9/32	.75	.50	.38	.12
	E3-RD	1.50	.50	.12	9/32	1.00	.50	.50	.12
	E4-RD	1.25	.38	.25	9/32	.75	.50	.38	.12
	E5-RD	1.25	.32	.12	11/32	.75	.62	.38	.12
	E6-RD	1.50	.38	.12	11/32	.75	.75	.38	.12
	E7-RD	1.50	.38	.25	11/32	1.00	.75	.50	.25
	E8-RD	2.00	.44	.25	11/32	1.25	1.12	.62	.25
	E9-RD	1.75	.50	.25	13/32	1.00	.75	.50	.12
	E10-RD	2.00	.62	.25	13/32	1.25	.75	.62	.12
	E11-RD	2.50	.50	.25	13/32	1.50	1.50	1.00	.38
	E12-RD	2.50	.75	.25	17/32	1.50	1.00	.75	.12
	E13-RD	1.25	.32	.25	11/32	.75	.62	.38	.12

CAD Directory
Mach-Tool\FixtPin

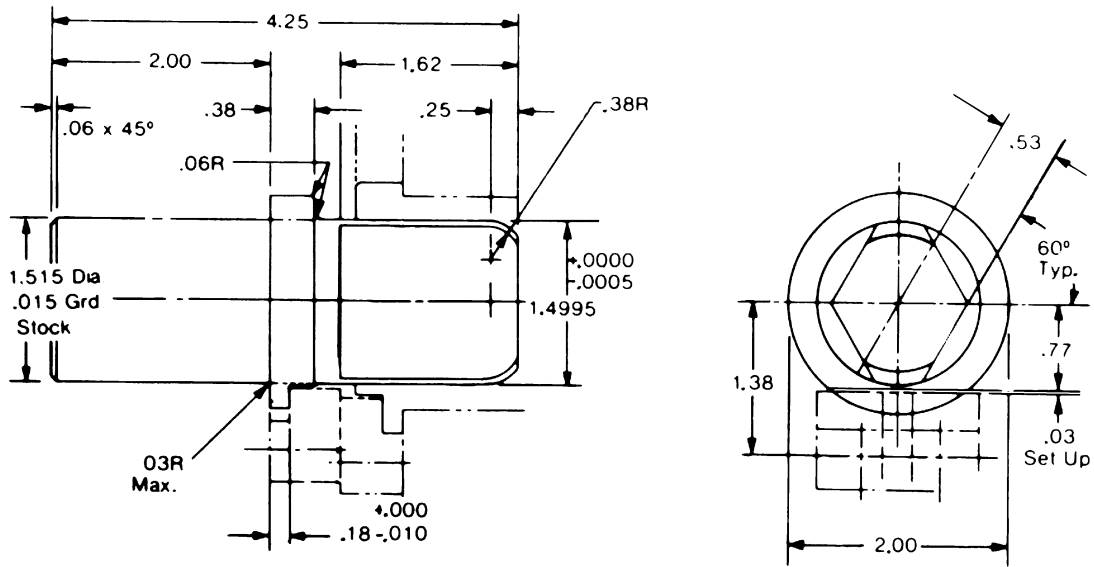
Machine Tool Components

Register Pins

Click to download CAD files (STP format) 2dwdg & 3dwdg visit eandesp.com

CAD File Name E325

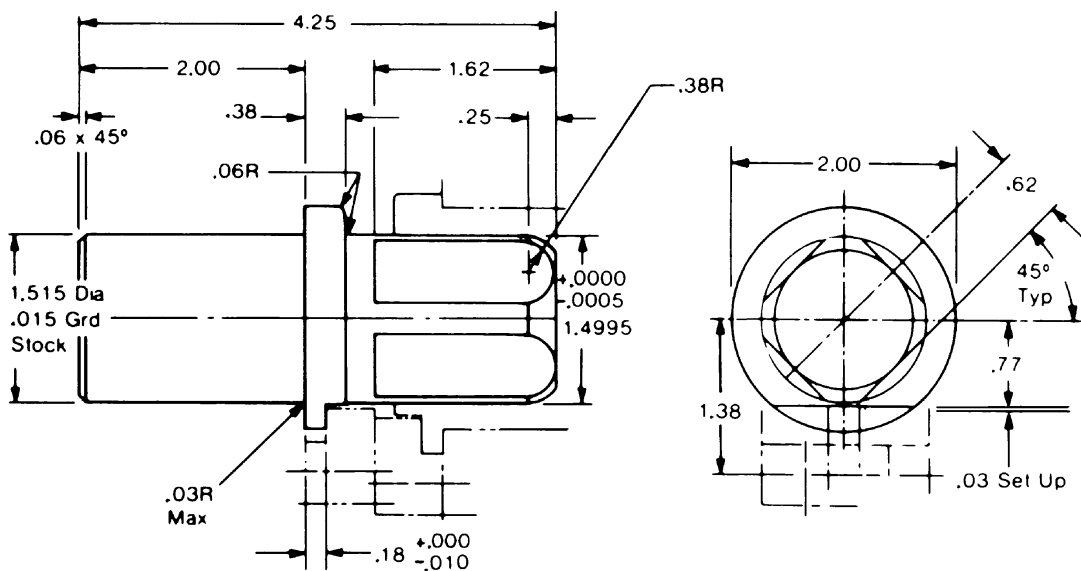
Part No. E-325



NOTE: For Use With E&E Bushing Clamp E036.

CAD File Name E326

Part No. E-326



NOTE: For Use With E&E Bushing Clamp E036.

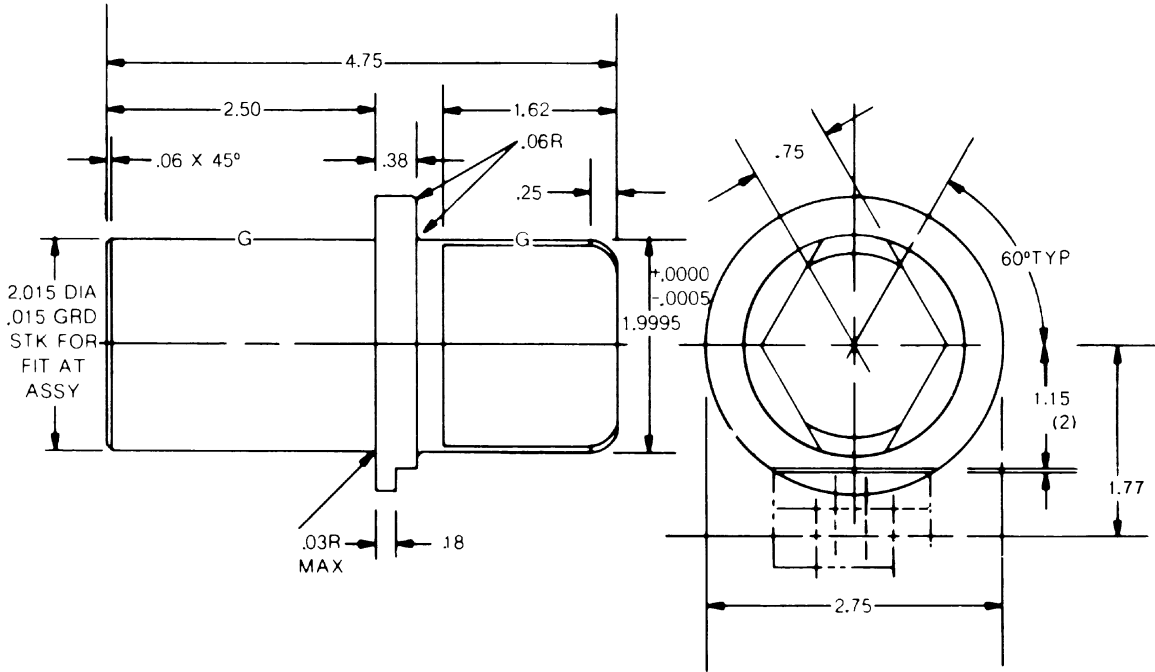
Register Pins



Click to download CAD file (STP format). 2dwg & 3dwg visit eandesp.com

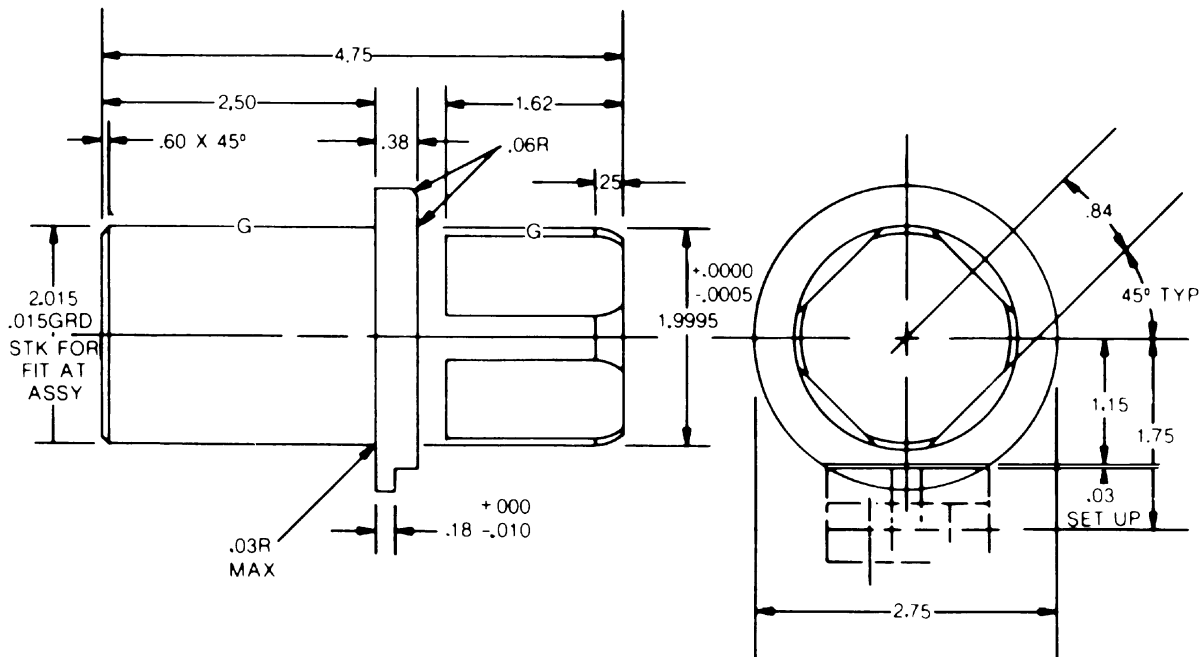
CAD File Name E329

Part No. E-329



CAD File Name E330

Part No. E-330



CAD Directory
Mach-Tool\RegPin

Load Rating of Transfer Bar Guide Rollers

PART NUMBER	DYNAMIC LOAD	STATIC LOAD
E145	12,300 Lbs.	13,600
E853	12,300 Lbs.	13,600
E351	4,860 Lbs.	5,240
E353	7,770 Lbs.	8,000
E355	11,000 Lbs.	11,300
E357	12,300 Lbs.	13,600
E359	12,300 Lbs.	13,600

Special Transfer Bar Guide Rolls

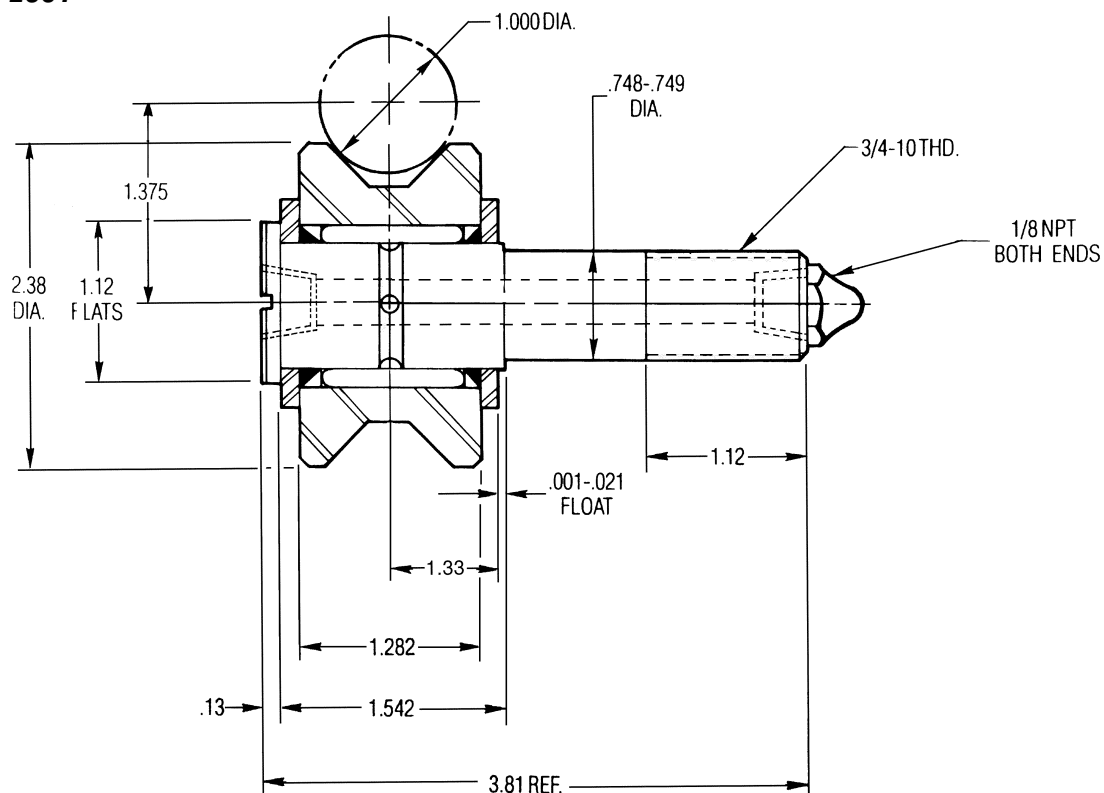
If our standard Transfer Bar Guide Rolls don't meet your needs, we can provide custom rolls to your specifications. Send us your print or a sketch with a request for quotation. If you need engineering or technical assistance, please call us directly.

VEE Transfer Bar Guide Roll

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

CAD File Name E351

Part No. E351



CAD Directory
Mach-Tool\TransBar

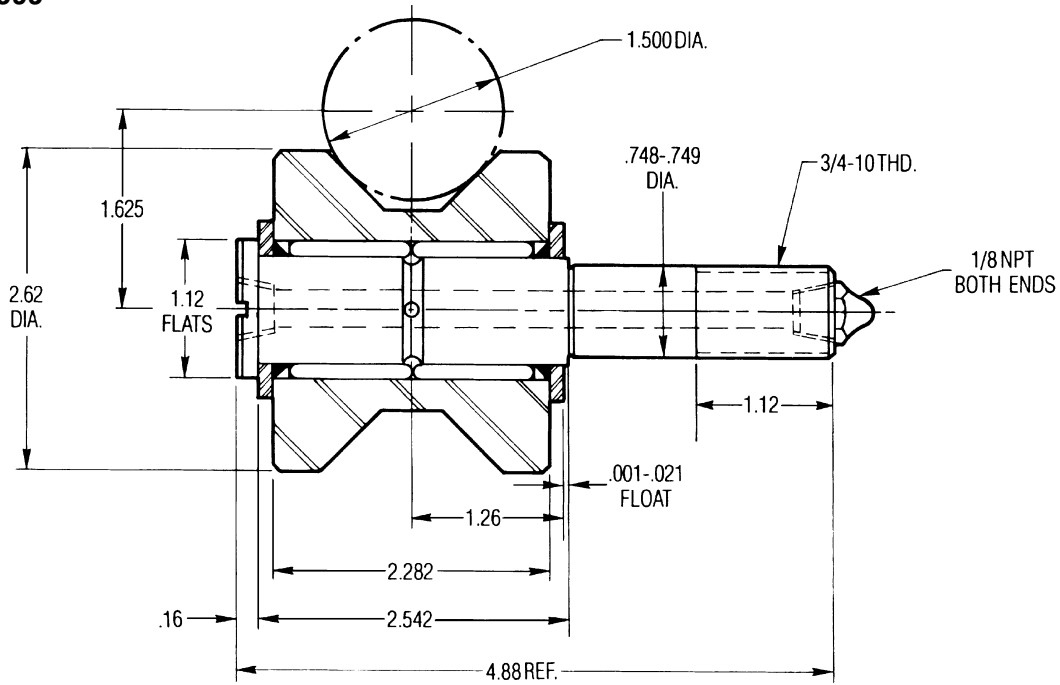
VEE Transfer Bar Guide Rolls



Click to download CAD files (STP format). 2dwg & 3dwg visit eandesp.com

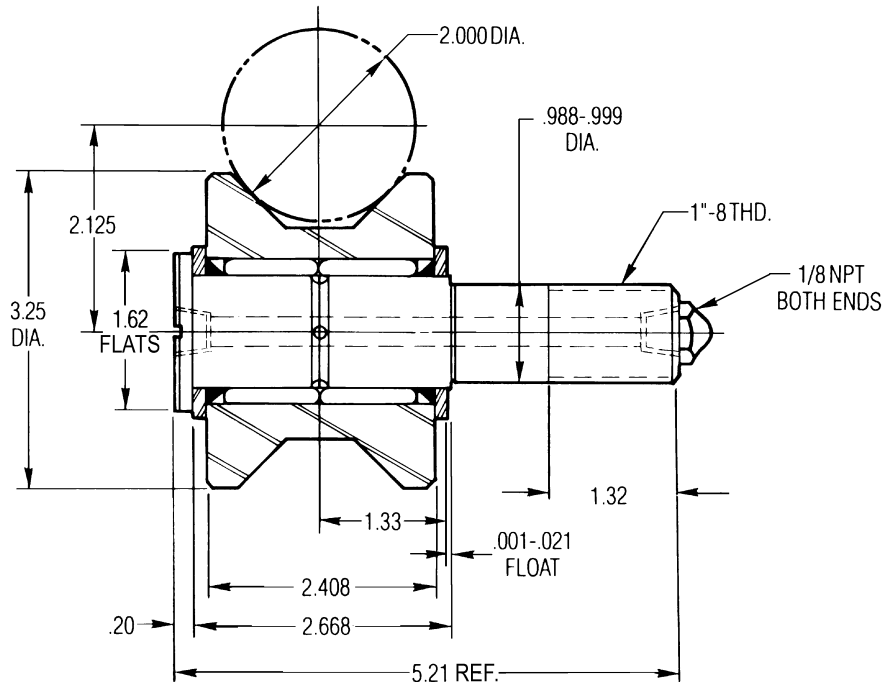
CAD File Name E353

Part No. E353



CAD File Name E355

Part No. E355



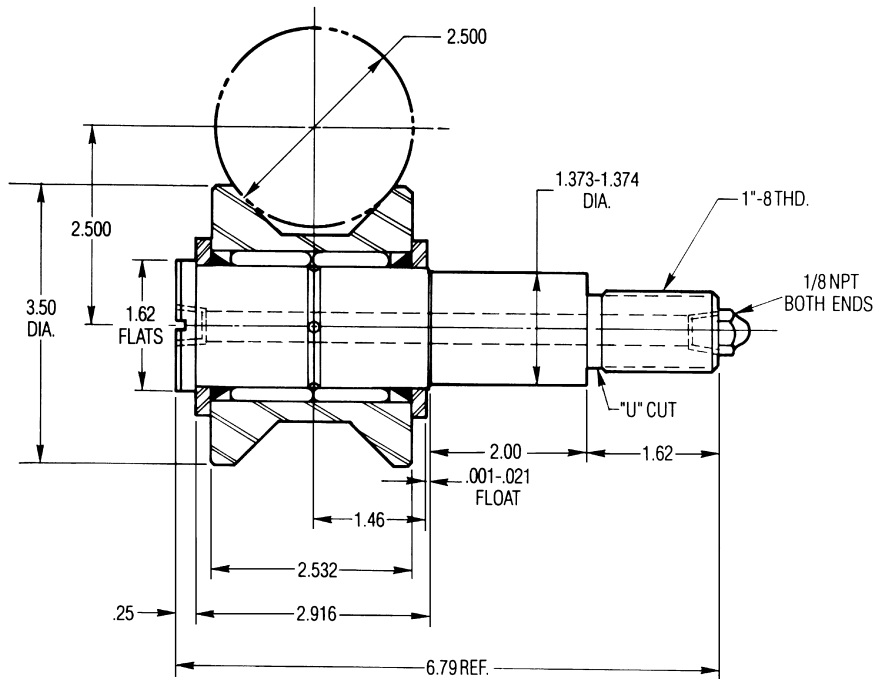
CAD Directory
Mach-Tool\TransBar

VEE Transfer Bar Guide Rolls

Click to download CAD file (STP format), 2dwdg & 3dwdg visit eandesp.com

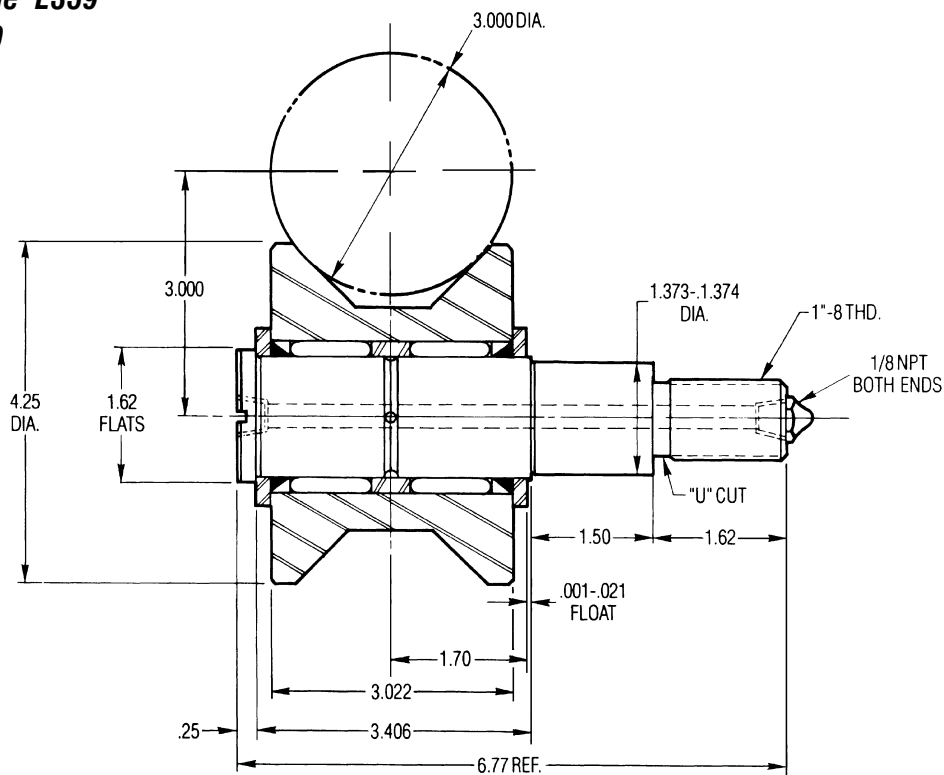
CAD File Name E357

Part No. E357



CAD File Name E359

Part No. E359



CAD Directory
Mach-Tool\TransBar

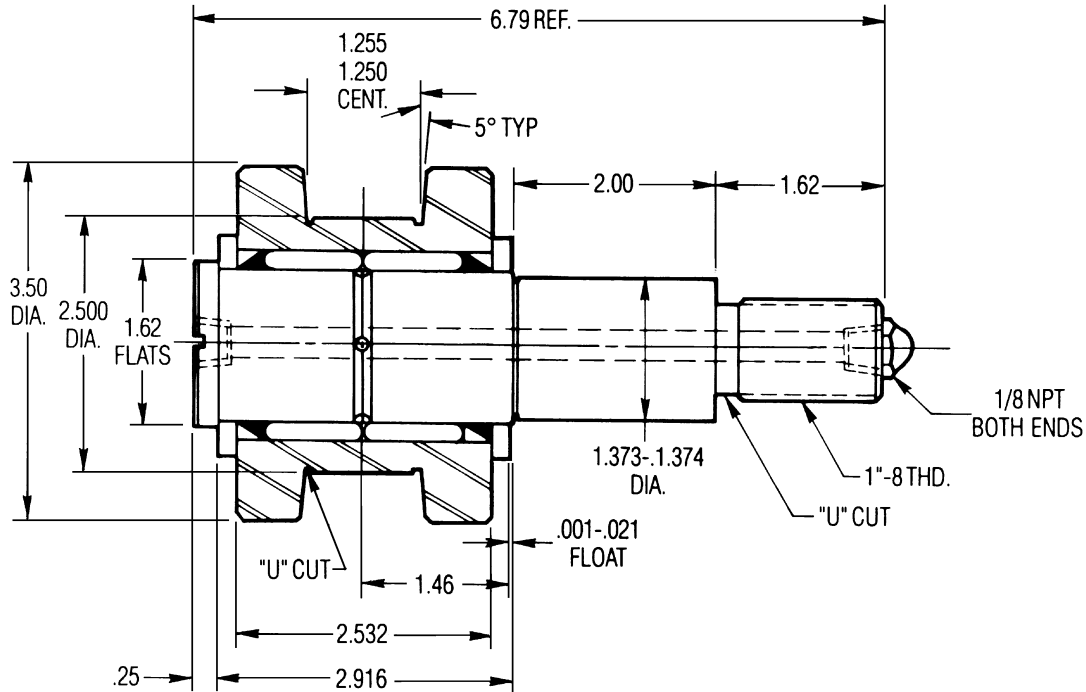
Square Transfer Bar Guide Rolls



Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

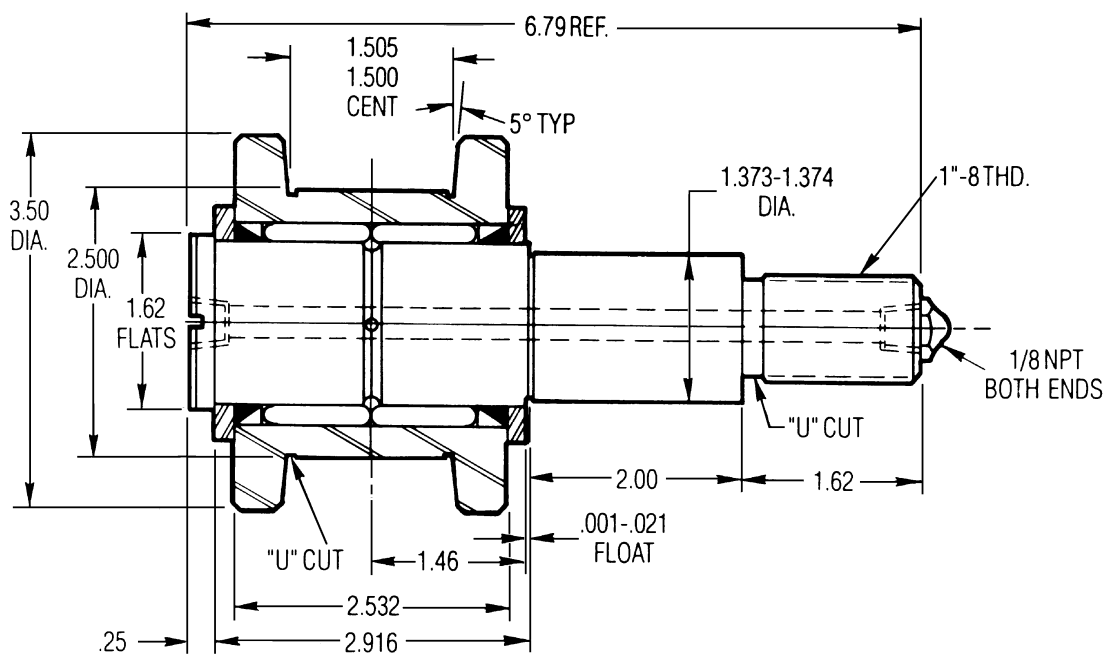
CAD File Name E145

Part No. E145 (bar size 1.250)



CAD File Name E853

Part No. E853 (bar size 1.500)



CAD Directory
Mach-Tool\TransBar

Load Rating of Transfer Bar Guide Rollers

PART NUMBER	DYNAMIC LOAD	STATIC LOAD
E351R	4,860 Lbs.	5,240
E353R	7,770 Lbs.	8,000
E355R	11,000 Lbs.	11,300
E357R	12,300 Lbs.	13,600
E359R	12,300 Lbs.	13,600

Special Transfer Bar Guide Rolls

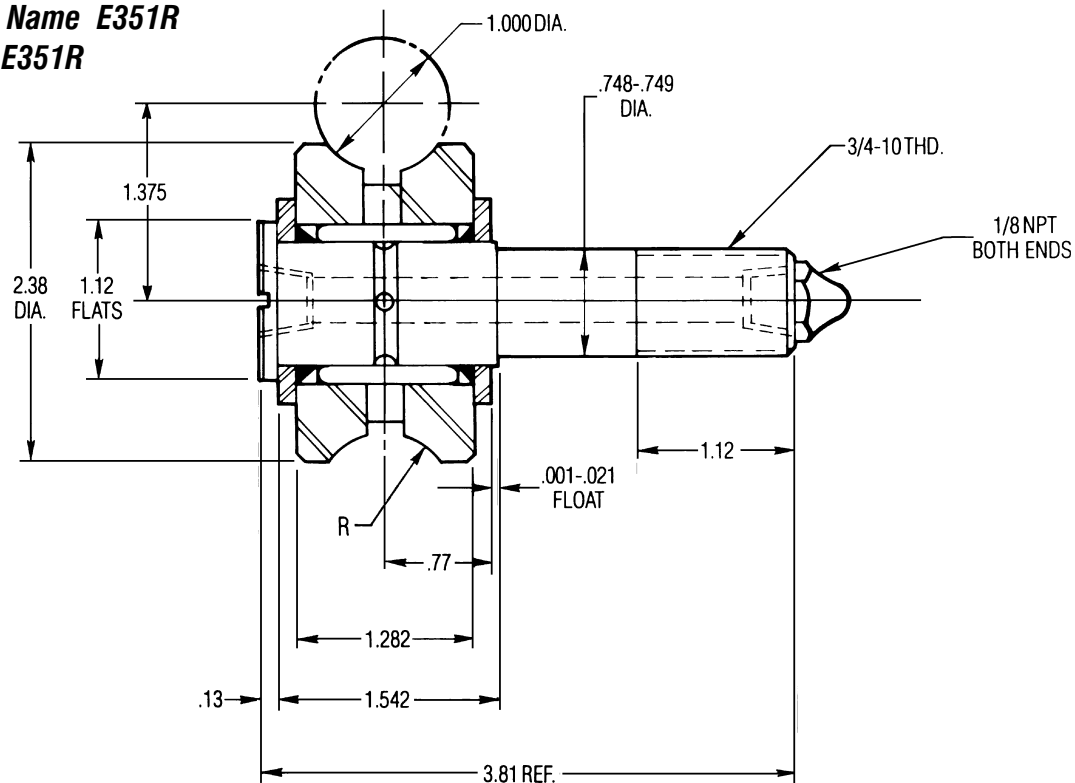
If our standard Transfer Bar Guide Rolls don't meet your needs, we can provide custom rolls to your specifications. Send us your print or a sketch with a request for quotation. If you need engineering or technical assistance, please call us directly.

Radius Transfer Bar Guide Roll

Click to download CAD file (STP format) 2dwg & 3 dwg visit eandesp.com

CAD File Name E351R

Part No. E351R



CAD Directory
Mach-Tool\TransBar

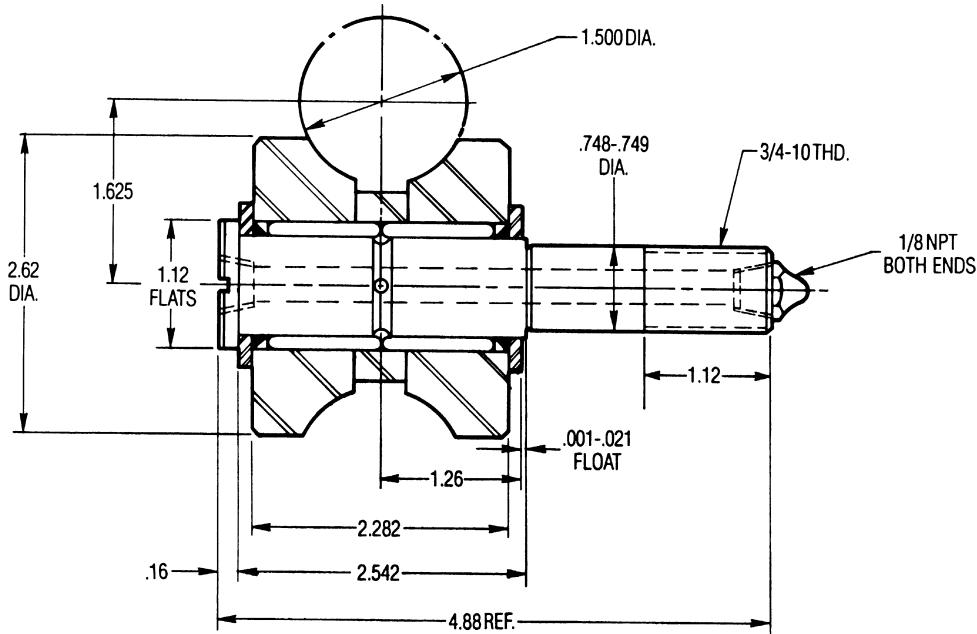


Radius Transfer Bar Guide Rolls

Click to download CAD file (STP format) 2dwg & 3dwg visit eandesp.com

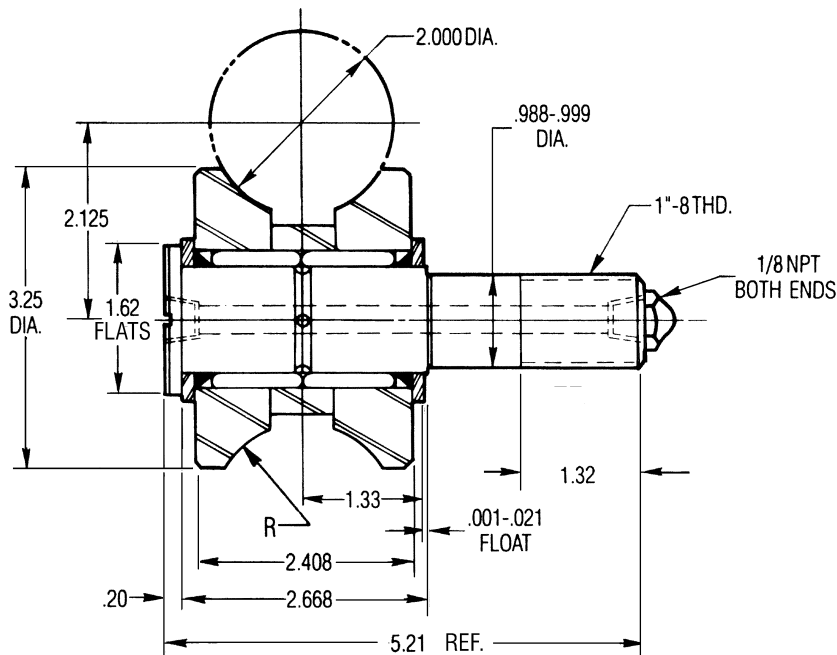
CAD File Name E353R

Part No. E353R



CAD File Name E355R

Part No. E355R

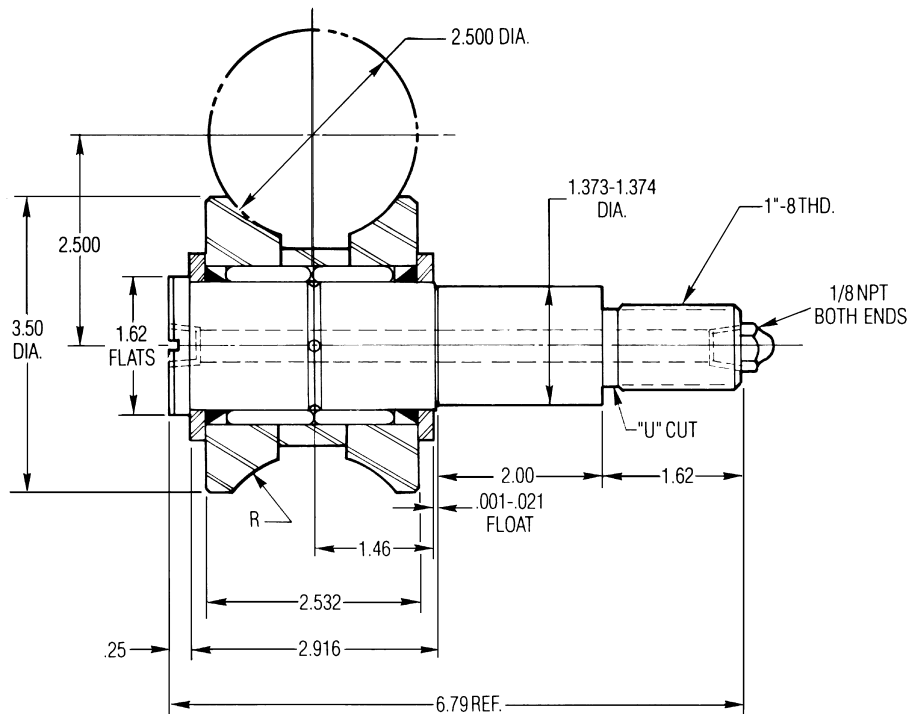


Radius Transfer Bar Guide Rolls

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com.

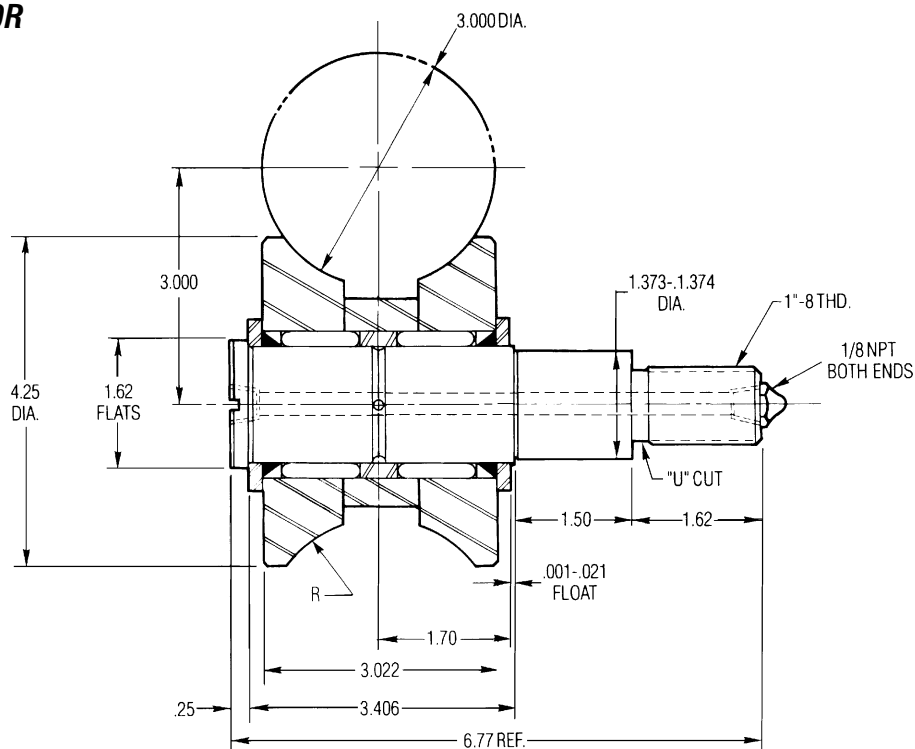
CAD File Name E357R

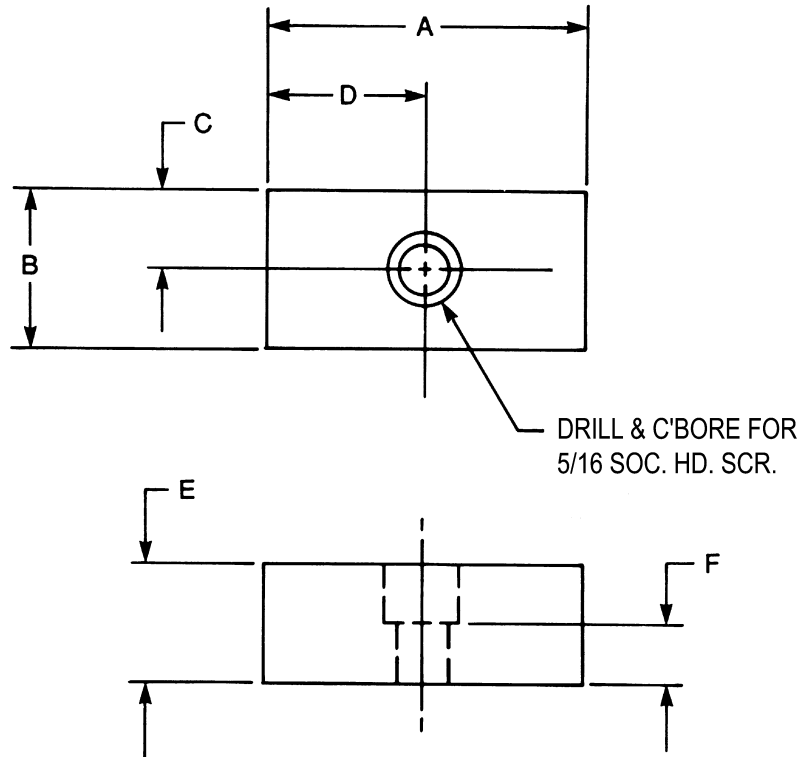
Part No. E357R



CAD File Name E359R

Part No. E359R





Click to download CAD File (STP Format) for 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D	E	F
E-428	E428	2.00	1.003 1.000	.500	1.00	.75	.38
	E428-2562	2.00	.999 .998	.500	1.00	.75	.38
	E428-4946	2.00	1.008/ 1.010	.500	1.00	.75	.38
E-429	E429	2.00	1.003 1.000	.500	1.00	.50	.12
	E429-2562	2.00	.999 .998	.500	1.00	.50	.12
	E429-4946	2.00	1.008/ 1.010	.500	1.00	.50	.12
E-430	E430	3.00	1.003 1.000	.500	1.50	.75	.38
	E430-2562	3.00	.999 .998	.500	1.50	.75	.38
	E430-4946	3.00	1.008/ 1.010	.500	1.50	.75	.38
E-431	E431	3.00	1.003 1.000	.500	1.50	1.00	.62
	E431-2562	3.00	.999 .998	.500	1.50	1.00	.62
	E431-4946	3.00	1.008/ 1.010	.500	1.50	1.00	.62

Material: Case Hardened Steel

Adjusting Blocks

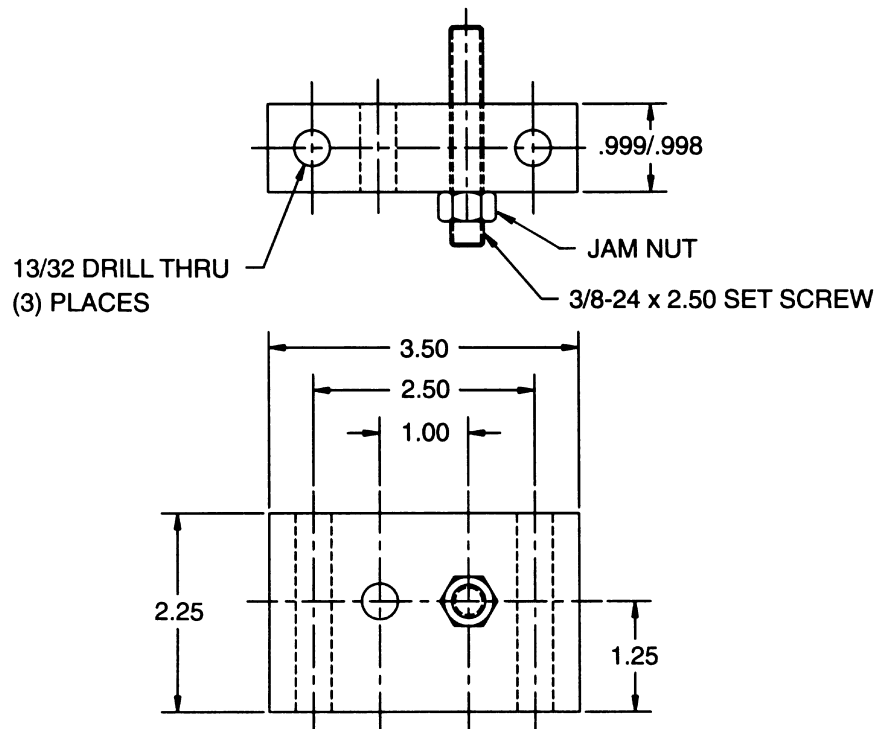
DESIGN FEATURES

- Rugged Steel Construction
- Ground Width for Keying to Machine Base
- Adjust and Hold Down from One Unit
- Use Several Units for Multi Axis Adjustment
- Special Versions Available

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name E3006

Part No. E-3006



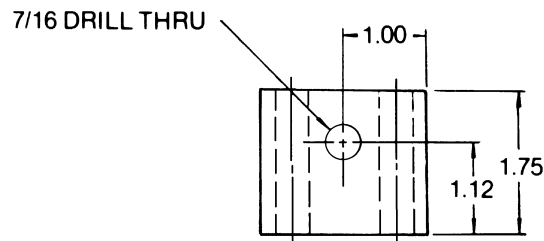
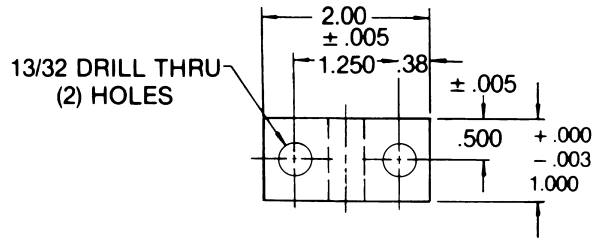
Adjusting Blocks



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name E425

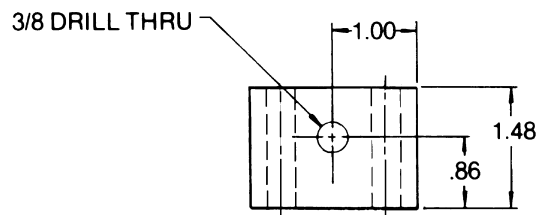
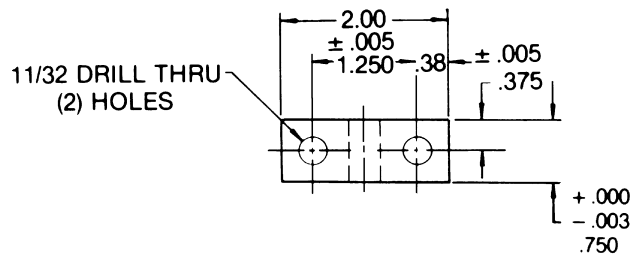
Part No. E425



FINISH: BLACK OXIDE

CAD File Name E426

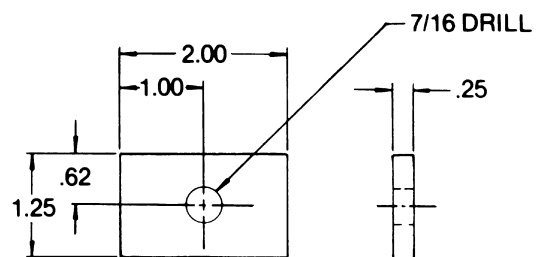
Part No. E426



FINISH: BLACK OXIDE

CAD File Name E427

Part No. E427 Spacer



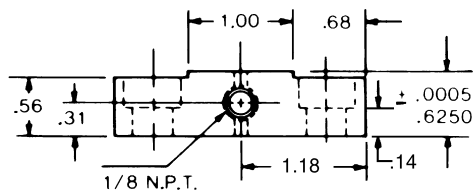
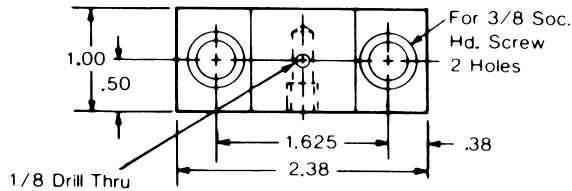
Rest Pads



Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

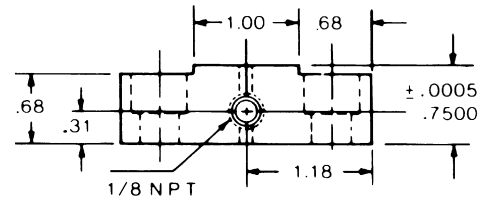
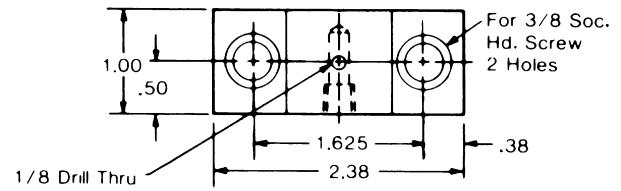
CAD File Name E001

Part No. E008 w/o air, E001 w/air



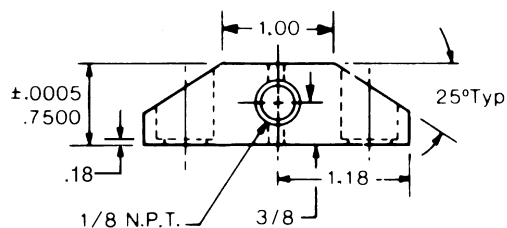
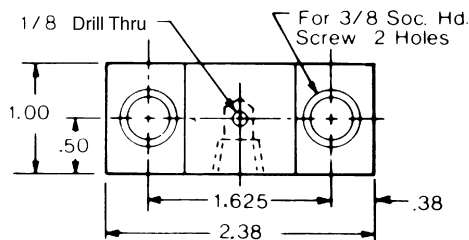
CAD File Name E002

Part No. E021 w/o air, E002 w/air



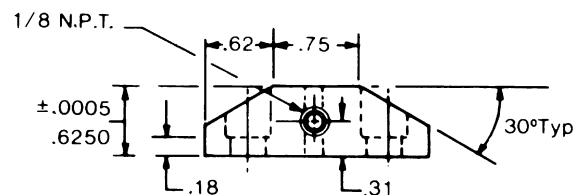
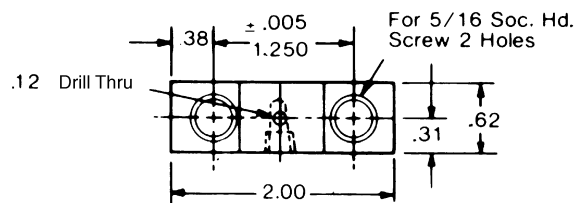
CAD File Name E035

Part No. E042 w/o air, E035 w/air



CAD File Name E040

Part No. E015 w/o air, E040 w/air



CAD Directory
Mach-Tool\RestPad

Machine Tool Components

Rest Pads

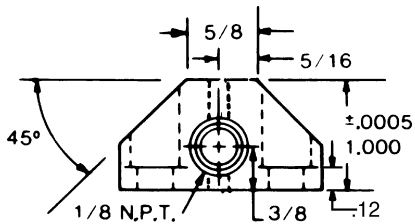
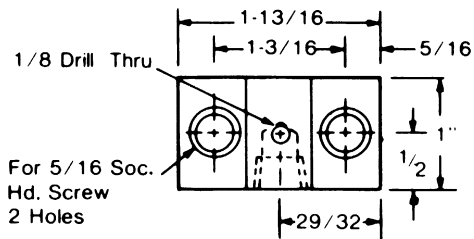


E&ESP

Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

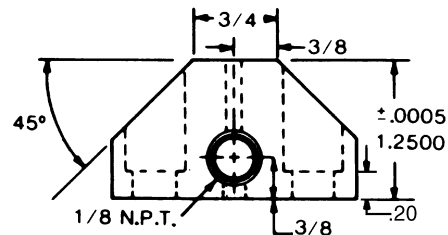
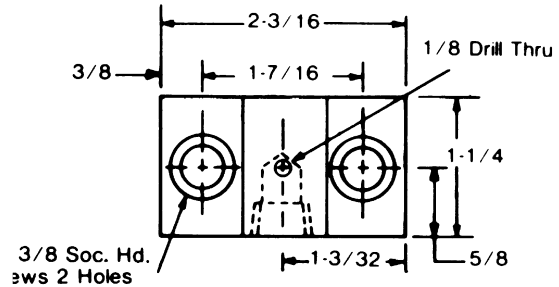
CAD File Name E032

Part No. E032 w/air, E043 w/o air



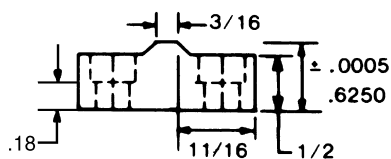
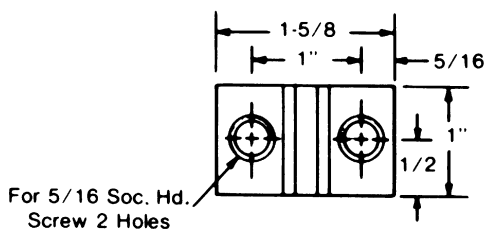
CAD File Name E033

Part No. E033 w/air, E044 w/o air



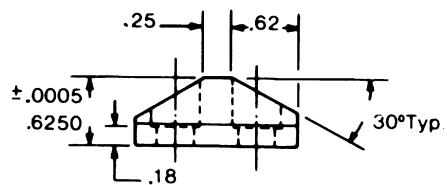
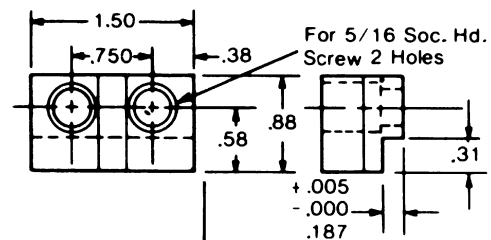
CAD File Name E034

Part No. E034



CAD File Name E036

Part No. E036



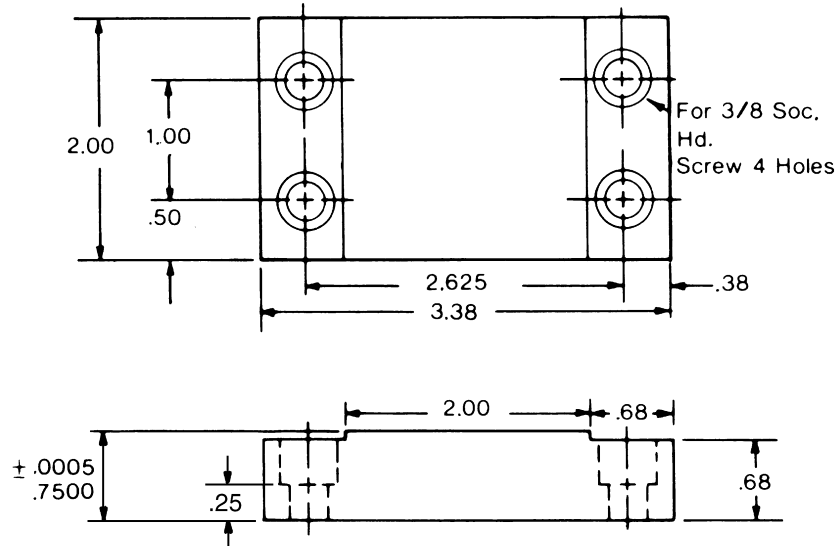
Rest Pads

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com



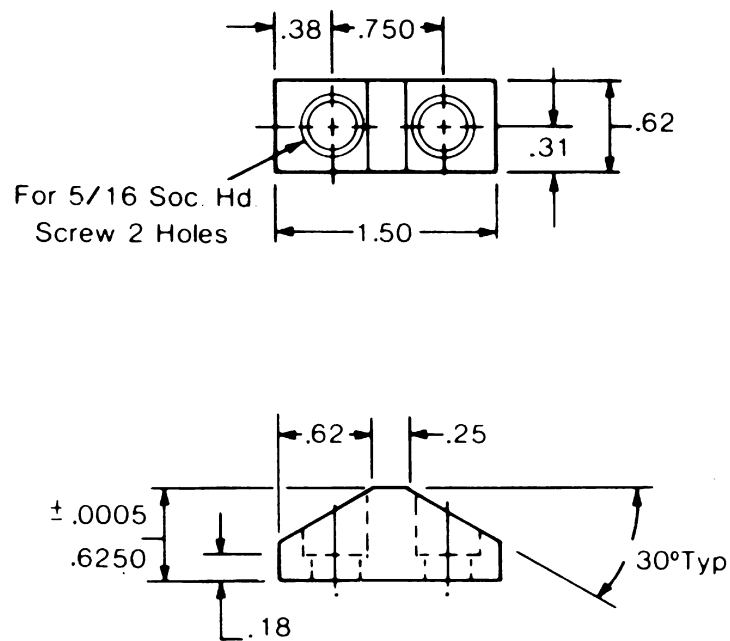
CAD File Name E022

Part No. E022



CAD File Name E041

Part No. E041

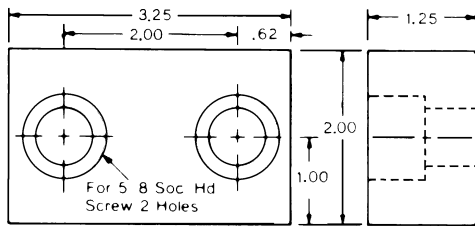


Locating & Positioning Blocks

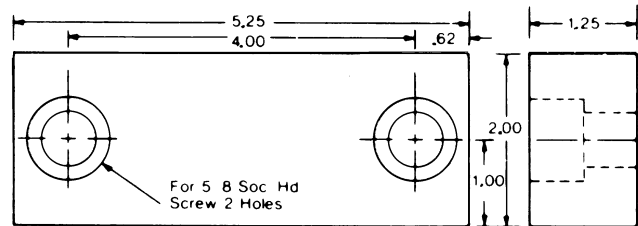


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

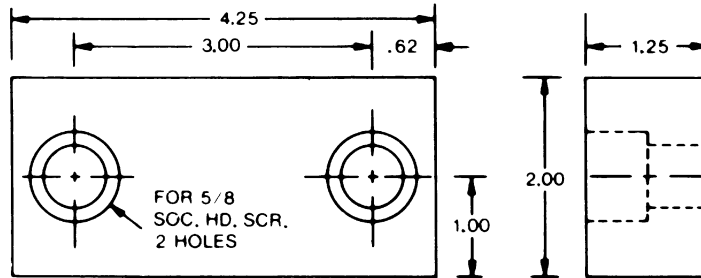
CAD File Name E049
Part No. E049



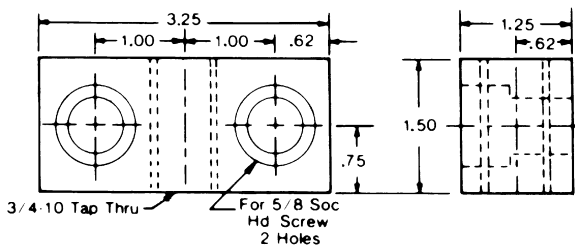
CAD File Name E050
Part No. E050



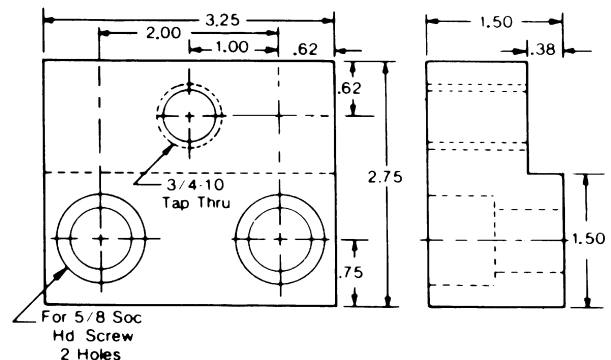
CAD File Name E051
Part No. E051



CAD File Name E052
Part No. E052



CAD File Name E053
Part No. E053



CAD Directory
Mach-Tool\LocBlk

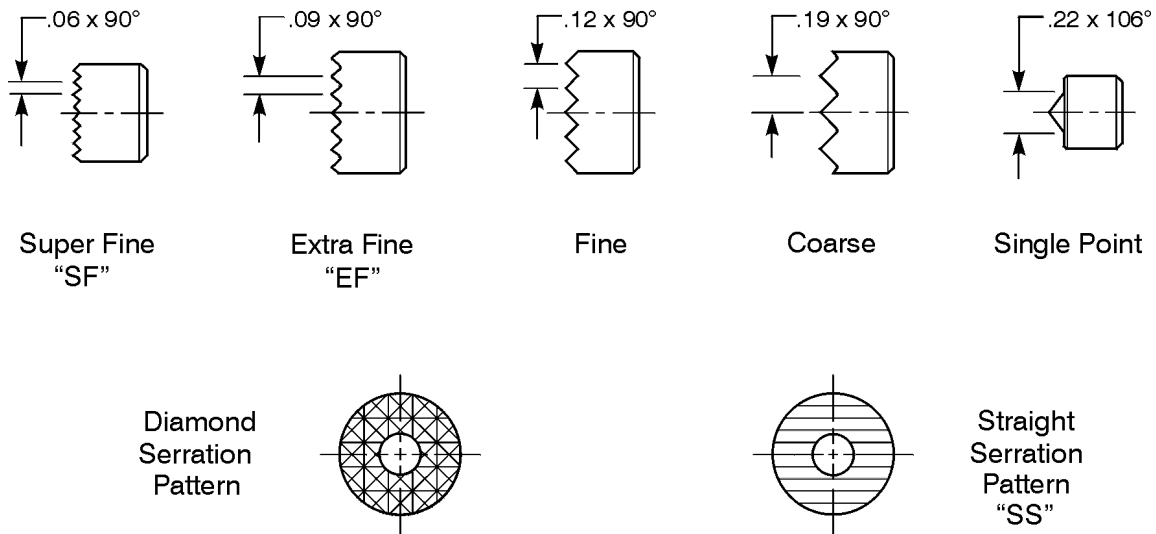
Gripper Ordering Information



HOW TO ORDER

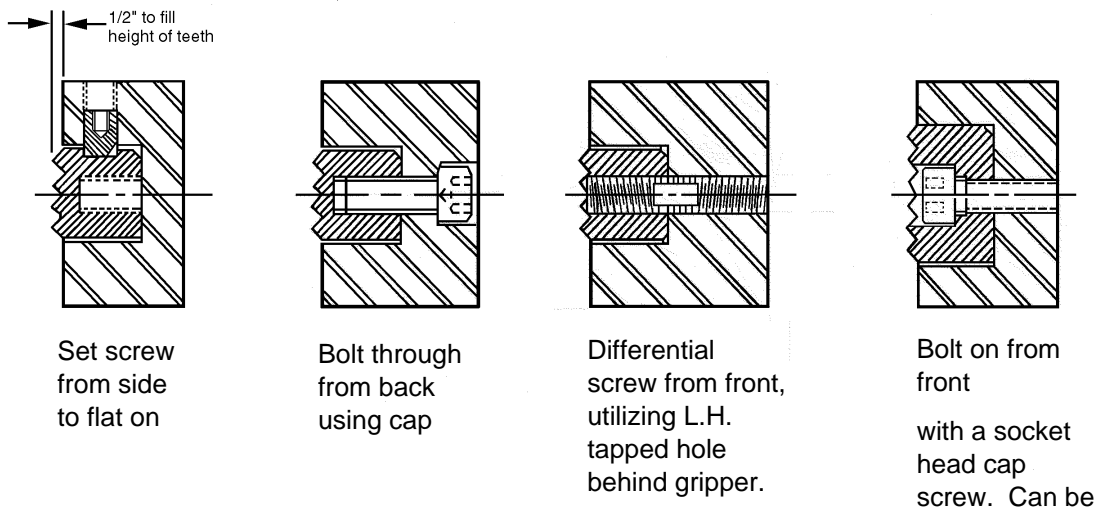
This is the largest line of workholding Grippers, Ball-Units, and Rest Pads anywhere. Although the line is extensive, finding the right workholding accessory for your application is easy. Grippers come in hardened tool steel or carbide with super-fine, extra-fine, fine, coarse and single point tooth patterns. Ball-Unit assemblies will accept replaceable Grippers in any style, or Rest Pads in steel or delrin. Popular mounting methods are shown below. Ordering information is provided throughout the catalog.

TOOTH PITCHES AVAILABLE



Serrations come in a choice of a two-way diamond pattern or a straight serration "SS" pattern. Types of patterns and pitches must be designated within each part number. See tables for available selection.

TYPICAL METHODS OF INSTALLING E & E GRIPPERS



Grippers "EHS" High Speed Tool Steel



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

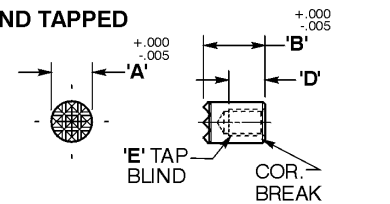
EHS-ROUND DESIGN-BLIND TAPPED							
CAD FILE NAME	PART NUMBER	A DIA.	B	C	D	E	TOOTH PATTERN
EHS20EF	EHS-20*	1/4 DIA	3/8	-	3/16	#8-32	EX-FINE/SUPER-FINE
	EHS-205*	1/4 DIA	1/2	-	5/16	#8-32	EX-FINE/SUPER-FINE
EHS30EF	EHS-30*	5/16	3/8	-	3/16	#8-32	EX-FINE/SUPER-FINE
	EHS-305*	5/16	1/2	-	5/16	#8-32	EX-FINE/SUPER-FINE
EHS40BL	EHS-40BL*	3/8	3/8	-	3/16	#10-32	EX-FINE/SUPER-FINE
EHS-ROUND DESIGN-DIAMOND SERRATIONS							
EHS40EF	EHS-40*	3/8 DIA	3/8	11/64	3/16	#10-32	EX-FINE/SUPER-FINE/FINE
EHS405EF	EHS-405*	3/8 DIA	1/2	15/64	3/16	#10-32	EX-FINE/SUPER-FINE
EHS50F	EHS-50*	1/2 DIA	3/8	11/64	3/16	#10-32	FINE/EX-FINE/SUPER-FINE
EHS51	EHS-51	1/2 DIA	1/2	15/64	3/16	#10-32	COARSE
EHS52F	EHS-52*	1/2 DIA	1/2	KEYWAY	-	#10-32	FINE/EX-FINE
EHS51	EHS-53*	1/2 DIA	1/2	15/64	3/16	#10-32	FINE/EX-FINE/SUPER-FINE
EHS54F	EHS-54*	1/2 DIA	.651	19/64	3/16	#10-32	FINE/EX-FINE
EHS63	EHS-62*	5/8 DIA	3/8	11/64	3/16	1/4-28	FINE/EX-FINE
	EHS-63	5/8 DIA	3/8	11/64	3/16	1/4-28	COARSE
EHS635	EHS-625*	5/8 DIA	112	15/64	3/16	1/4-28	FINE/EX-FINE
	EHS-635	5/8 DIA	112	15/64	3/16	1/4-28	COARSE
EHS76	EHS-75*	3/4 DIA	318	11/64	3/16	1/4-28	FINE/EX-FINE
	EHS-76	1/4 DIA	3/8	11/64	3/16	1/4-28	COARSE
EHS765	EHS-755*	3/4 DIA	1/2	15/64	3/16	1/4-28	FINE/EX-FINE
	EHS-765	3/4 DIA	1/2	15/64	3/16	1/4-28	COARSE
EHS81	EHS-81	1 DIA	318	11/64	3/16	1/4-28	COARSE
	EHS-82*	1 DIA	3/8	11/64	3/16	1/4-28	FINE/EX-FINE
EHS815	EHS-815	1 DIA	1/2	15/64	3/16	1/4-28	COARSE
	EHS-825*	1 DIA	15/16	1/2	3/16	1/4-28	FINE/EX-FINE
EHS-ROUND DESIGN-SINGLE POINT							
EHS201	EHS-20-1	1/4	3/8	5/64	1/8	#8-32	SINGLE POINT
	EHS-205-1	1/4	1/2	5/64	1/4	#8-32	SINGLE POINT
EHS301	EHS-30-1	5/16	3/8	5/64	1/8	#8-32	SINGLE POINT
	EHS-305-1	5/16	1/2	5/64	1/4	#8-32	SINGLE POINT
EHS401	EHS-40-1	3/8	3/8	5/64	1/8	#10-32	SINGLE POINT
	EHS-405-1	3/8	1/2	5/64	1/4	#10-32	SINGLE POINT
EHS501	EHS-50-1	1/2	3/8	5/64	1/8	#10-32	SINGLE POINT
	EHS-53-1	1/2	1/2	5/64	1/4	#10-32	SINGLE POINT
EHS-ROUND DESIGN-STRAIGHT SERRATIONS							
EHS40SSEF	EHS-40-SS*	3/8	3/8	11/64	3/16	#10-32	EX/FINE/SUPER-FINE
EHS405SSEF	EHS-405-SS*	3/8	1/2	15/64	3/16	#10-32	EX/FINE/SUPER-FINE
EHS50SSF	EHS-50-SS*	1/2	3/8	11/64	3/16	#10-32	FINE/EX-FINE/SUPER-FINE
	EHS-51-SS	1/2	1/2	15/64	3/16	#10-32	COARSE
EHS51SS	EHS-53-SS*	1/2	1/2	15/64	3/16	#10-32	FINE/EX-FINE/SUPER-FINE
	EHS-62-SS*	5/8	3/8	11/64	3/16	1/4-28	FINE/EX-FINE
EHS63SS	EHS-63-SS	5/8	3/8	11/64	3/16	1/4-28	COARSE
	EHS-625-SS*	5/8	1/2	15/64	3/16	1/4-28	FINE/EX-FINE
EHS635SS	EHS-635-SS	5/8	1/2	15/64	3/16	1/4-28	COARSE
	EHS-75-SS*	3/4	3/8	11/64	3/16	1/4-28	FINE/EX-FINE
EHS76SS	EHS-76-SS	3/4	3/8	11/64	3/16	1/4-28	COARSE
	EHS-755-SS*	3/4	1/2	15/64	3/16	1/4-28	FINE/EX-FINE
EHS765SS	EHS-765-SS	3/4	1/2	15/64	3/16	1/4-28	COARSE
	EHS-81-SS	1	3/8	11/64	3/16	1/4-28	COARSE
EHS81SS	EHS-82-SS*	1	3/8	11/64	3/16	1/4-28	FINE/EX-FINE
	EHS-815-SS	1	1/2	15/64	3/16	1/4-28	COARSE
EHS815SS	EHS-825-SS*	1	1/2	15/64	3/16	1/4-28	FINE/EX-FINE

* Optional tooth patterns are available, specify "SF" for Super-Fine, "EF" for Extra Fine. Fine tooth patterns will be shipped unless noted otherwise. Specials quoted on request.

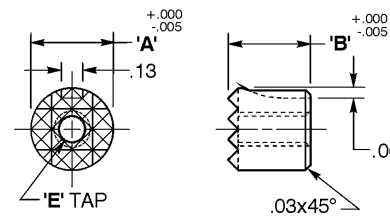
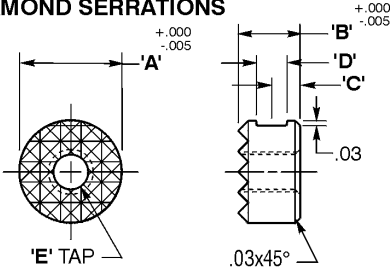
.06 x 90 = SUPER-FINE .09 x 90 = EXTRA-FINE .12 x 90 = FINE
 .19 x 90 = COARSE .22 x 106 = SINGLE POINT



BLIND TAPPED

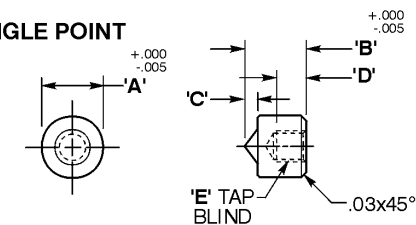


ROUND DESIGN DIAMOND SERRATIONS

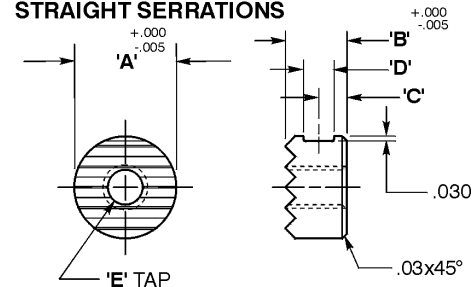


Keyway in Part
 NO. EHS-52 & EHS-52EF Only.

SINGLE POINT



ROUND DESIGN STRAIGHT SERRATIONS



CAD Directory

Mach-Tool\Grippers

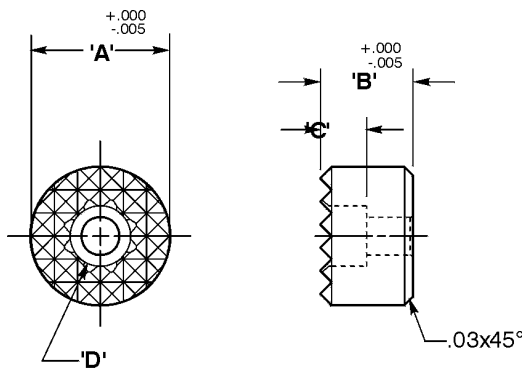
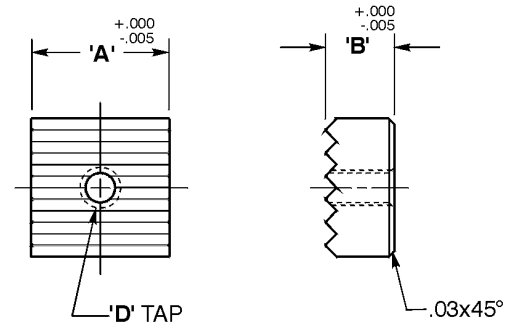
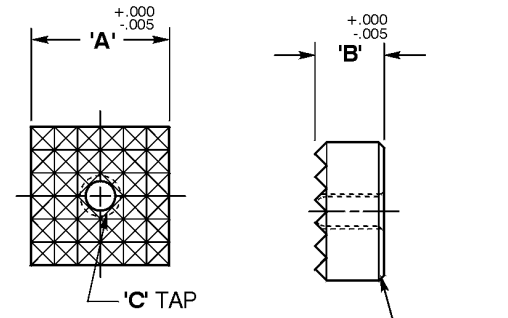
Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Grippers "EHS" High Speed Tool Steel

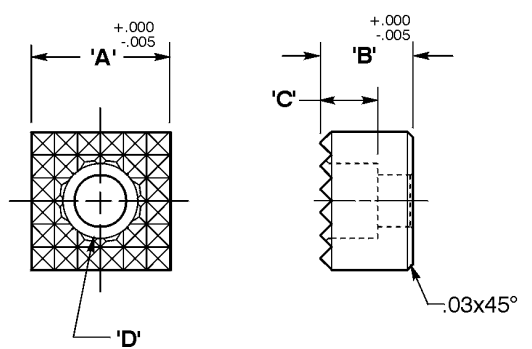


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

EHS-SQUARE DESIGN						
CAD FILE NAME	PART NUMBER	A SQUARE	B	C	D	TOOTH PATTERN
EHS90	EHS-90*	3/8	3/8	#10-32	-	EX-FINE/SUPER-FINE
	EHS-905*	3/8	1/2	#10-32	-	EX-FINE/SUPER-FINE
EHS96	EHS-95*	1/2	3/8	#10-32	-	FINE/EX-FINE/SUPER-FINE
	EHS-955*	1/2	1/2	#10-32	-	FINE/EX-FINE/SUPER-FINE
	EHS-96	1/2	3/8	#10-32	-	COARSE
EHS963	EHS-965	1/2	1/2	#10-32	-	COARSE
	EHS-962*	5/8	3/8	#10-32	-	FINE/EX-FINE
	EHS-963	5/8	3/8	#10-32	-	COARSE
EHS98	EHS-9625*	5/8	1/2	#10-32	-	FINE/EX-FINE
	EHS-9635	5/8	1/2	#10-32	-	COARSE
	EHS-97*	3/4	3/8	#10-32	-	FINE/EX-FINE
EHS98	EHS-98	3/4	3/8	#10-32	-	COARSE
	EHS-975*	3/4	1/2	#10-32	-	FINE/EX-FINE
	EHS-985	3/4	1/2	#10-32	-	COARSE
EHS102	EHS-101	1	3/8	1/4-28	-	FINE/EX-FINE
	EHS-102	1	3/8	1/4-28	-	COARSE
	EHS-105*	1	1/2	1/4-28	-	FINE/EX-FINE
EHS-106*	1	1/2	1/4-28	-	COARSE	
EHS-SQUARE DESIGN-STRAIGHT SERRATIONS						
EHS90SS	EHS-90-SS*	3/8	3/8	#10-32	-	EX-FINE/SUPER-FINE
	EHS-905-SS*	3/8	1/2	#10-32	-	EX-FINE/SUPER-FINE
EHS96SS	EHS-95-SS*	1/2	3/8	#10-32	-	FINE/EX-FINE/SUPER-FINE
	EHS-955-SS*	1/2	1/2	#10-32	-	FINE/EX-FINE/SUPER-FINE
	EHS-96-SS	1/2	3/8	#10-32	-	COARSE
HS963SS	EHS-965-SS	1/2	1/2	#10-32	-	COARSE
	EHS-962-SS*	5/8	3/8	#10-32	-	FINE/EX-FINE
	EHS-9625-SS*	5/8	1/2	#10-32	-	FINE/EX-FINE
EHS98SS	EHS-963-SS	5/8	3/8	#10-32	-	COARSE
	EHS-9635-SS*	5/8	1/2	#10-32	-	COARSE
	EHS-97-SS*	3/4	3/8	#10-32	-	FINE/EX-FINE
EHS98SS	EHS-975-SS*	3/4	1/2	#10-32	-	FINE/EX-FINE
	EHS-98-SS	3/4	3/8	#10-32	-	COARSE
	EHS-985-SS	3/4	1/2	#10-32	-	COARSE
EHS102SS	EHS-101-SS*	1	3/8	1/4-28	-	FINE/EX-FINE
	EHS-102-SS	1	3/8	1/4-28	-	COARSE
	EHS-105-SS*	1	1/2	1/4-28	-	FINE/EX-FINE
EHS-106-SS	1	1/2	1/4-28	-	COARSE	



EHS-ROUND-"C"-BORE DESIGN						
CAD FILE NAME	PART NUMBER	A DIA	B	C	D	TOOTH PATTERN
EHS50C	EHS-50-C*	1/2	3/8	7/32	#8 SHCS	FINE/EX-FINE/SUPER-FINE
	EHS-53-C*	1/2	1/2	7/32	#8 SHCS	FINE/EX-FINE/SUPER-FINE
EHS62C	EHS-62-C*	5/8	3/8	7/32	#8 SHCS	FINE/EX-FINE
	EHS-625-C*	5/8	1/2	7/32	#8 SHCS	FINE/EX-FINE
EHS76C	EHS-75-C*	3/4	3/8	1/4	#10 SHCS	FINE/EX-FINE
	EHS-755-C*	3/4	1/2	1/4	#10 SHCS	FINE/EX-FINE
	EHS-76-C	3/4	3/8	1/4	#10 SHCS	COARSE
EHS81C	EHS-765-C	3/4	1/2	5/16	#10 SHCS	COARSE
EHS81C	EHS-81-C	1	1/2	5/16	1/4 SHCS	COARSE
EHS82C	EHS-82-C*	1	1/2	5/16	1/4 SHCS	FINE/EX-FINE
EHS-SQUARE-"C"-BORE DESIGN						
CAD FILE NAME	PART NUMBER	A SQUARE	B	C	D C'BORE	TOOTH PATTERN
EHS92CF	EHS-92-C*	1/2	3/8	1/4	#10 SHCS	FINE/EX-FINE/SUPER-FINE
	EHS-95-C*	1/2	1/2	1/4	#10 SHCS	FINE/EX-FINE/SUPER-FINE
EHS963C	EHS-962-C*	5/8	3/8	1/4	#10 SHCS	FINE/EX-FINE
	EHS-9625-C*	5/8	1/2	1/4	#10 SHCS	FINE/EX-FINE
	EHS-963-C*	5/8	3/8	1/4	#10 SHCS	COARSE
EHS98C	EHS-9635-C*	5/8	1/2	1/4	#10 SHCS	COARSE
	EHS-97-C*	3/4	1/2	5/16	1/4 SHCS	FINE/EX-FINE
EHS102C	EHS-98-C	3/4	1/2	5/16	1/4 SHCS	COARSE
	EHS-101-C*	1	1/2	5/16	1/4 SHCS	FINE/EX-FINE
EHS-102-C	1	1/2	5/16	1/4 SHCS	COARSE	



* Optional tooth patterns are available, specify "SF" for Super-Fine, "EF" for Extra Fine. Fine tooth patterns will be shipped unless noted otherwise. Specials quoted on request.

.06 x 90 = SUPER-FINE .09 x 90 = EXTRA-FINE .12 x 90 = FINE .19 x 90 = COARSE

CAD Directory
Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Machine Tool Components

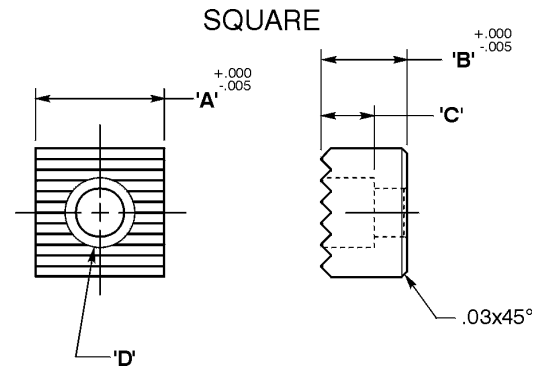
Grippers "EHS" High Speed Tool Steel



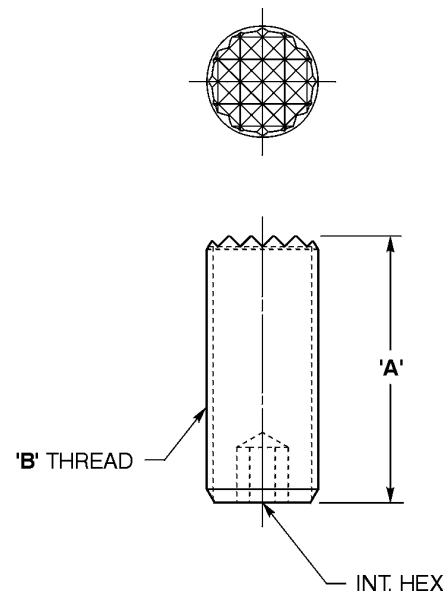
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

EHS-SQUARE-"C"-BORE DESIGN-STRAIGHT SERRATIONS							
CAD FILE NAME	PART NUMBER	A DIA.	B	C	D	TOOTH	PATTERN
EHS92CSS	EHS-92-C-SS*	1/2	3/8	1/4	#10 SHCS	FINE/EX-FINE/SUPER-FINE	
	EHS-95-C-SS*	1/2	1/2	1/4	#10 SHCS	FINE/EX-FINE/SUPER-FINE	
EHS963CSS	EHS-962-C-SS*	5/8	3/8	1/4	#10 SHCS	FINE/EX-FINE	
	EHS-9625-C-SS*	5/8	1/2	1/4	#10 SHCS	FINE/EX-FINE	
	EHS-963-C-SS	5/8	3/8	1/4	#10 SHCS	COARSE	
EHS98CSS	EHS-9635-C-SS	5/8	1/2	1/4	#10 SHCS	COARSE	
	EHS-97-C-SS*	3/4	1/2	5/16	1/4 SHCS	FINE/EX-FINE	
EHS102CSS	EHS-98-C-SS	3/4	1/2	5/16	1/4 SHCS	COARSE	
	EHS-101-C-SS*	1	1/2	5/16	1/4 SHCS	FINE/EX-FINE	
	EHS-102-C-SS	1	1/2	5/16	1/4 SHCS	COARSE	

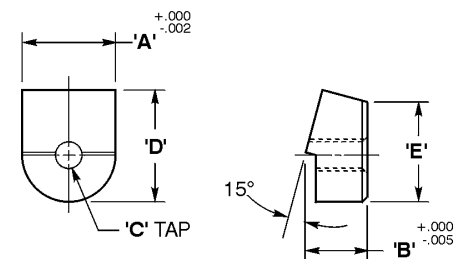
* Optional tooth patterns are available, specify "SF" for Super-Fine, "EF" for Extra-Fine to the end of the part number.



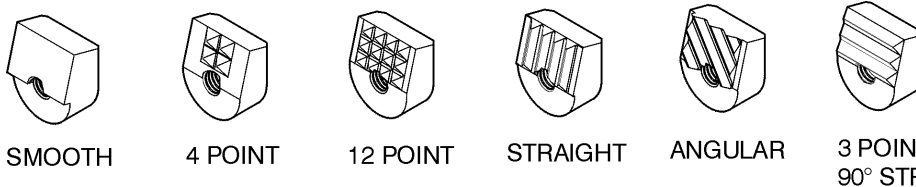
EHS-ADJUSTABLE					
CAD FILE NAME	PART NUMBER	A	B	INT HEX	TOOTH PATTERN
EHS0230	EHS-0230	1/2	3/8-24	1/8	EX-FINE
	EHS-0231	1	3/8-24	1/8	EX-FINE
	EHS-0235	1 1/2	3/8-24	1/8	EX-FINE
	EHS-0370	1/2	3/8-16	1/8	EX-FINE
	EHS-0371	1	3/8-16	1/8	EX-FINE
	EHS-0375	1 1/2	3/8-16	1/8	EX-FINE
EHS0240	EHS-0240	1	1/2-20	3/16	FINE
	EHS-0500	1 1/2	1/2-20	3/16	FINE
	EHS-0510	1	1/2-13	3/16	FINE
	EHS-0515	1 1/2	1/2-13	3/16	FINE
EHS06201	EHS-0620x1	1	5/8-18	1/4	FINE
	EHS-0620	1 1/2	5/8-18	1/4	FINE
	EHS-0625x1	1	5/8-11	1/4	FINE
	EHS-0625	1 1/2	5/8-11	1/4	FINE
EHS07501	EHS-0750x1	1	3/4-16	5/16	FINE
	EHS-0750	1 1/2	3/4-16	5/16	FINE
	EHS-0755x1	1	3/4-10	5/16	FINE
	EHS-0755	1 1/2	3/4-10	5/16	FINE



EHS-ANGLE GRIP							
CAD FILE NAME	PART NUMBER	A	B	C	D	E	TOOTH PATTERN
EHS110	EHS-110	9/16	3/8	#10-32	.65	.60	SMOOTH
EHS1274	EHS-127-4	9/16	3/8	#10-32	.65	.60	4-POINT Hex
EHS12712	EHS-127-12	9/16	3/8	#10-32	.65	.60	FINE
EHS1284	EHS-128-4	3/4	1/2	1/4-28	.88	.81	4-POINT
EHS12822	EHS-128-22	3/4	1/2	1/4-28	.88	.81	FINE
EHS1583	EHS-158-3	3/4	1/2	1/4-28	.88	.81	3 POINT/90 STRAIGHT
EHS1304	EHS-130-4	9/16	3/8	#10-32	.65	.60	STRAIGHT
EHS1455	EHS-145-5	9/16	3/8	#10-32	.65	.60	ANGULAR
EHS1503	EHS-150-3	9/16	3/8	#10-32	.65	.60	3 POINT/90 STRAIGHT
EHS11010MM	EHS-110-10MM	.394	3/8	#10-32	.65	.60	SMOOTH
EHS127410MM	EHS-127-4-10MM	.394	3/8	#10-32	.65	.60	4-POINT
EHS130410MM	EHS-130-4-10MM	.394	3/8	#10-32	.65	.60	STRAIGHT
EHS145510MM	EHS-145-5-10MM	.394	3/8	#10-32	.65	.60	ANGULAR



EHS-110 SHOWN



CAD Directory

Mach-Tool\Grippers

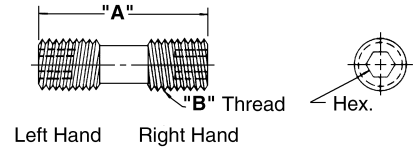
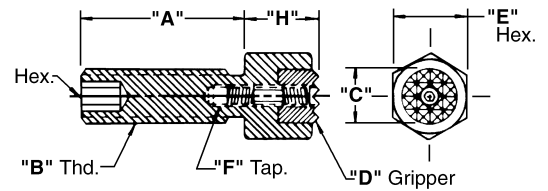
Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Grippers "EAJH" Adjustagrip™



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A DIA.	B THD	C BORE	D GRIPPER	E HEX	F INT. TAP	G INT. HEX	H HEAD HT
EHS0230	EAJH-0230	1/2	3/8-24	3/8	EHS-40	9/16	#10-32 LH	3/16	1/2
	EAJH-0231	1	3/8-24	3/8	EHS-40	9/16	#10-32 LH	1/8	1/2
	EAJH-0231x1 1/2	1 1/2	3/8-24	3/8	EHS-40	9/16	#10-32 LH	1/8	1/2
	EAJH-0370	1/2	3/8-16	3/8	EHS-40	9/16	#10-32 LH	3/16	1/2
	EAJH-0375	1	3/8-16	3/8	EHS-40	9/16	#10-32 LH	1/8	1/2
EHS0240	EAJH-0375x1 1/2	1 1/2	3/8-16	3/8	EHS-40	9/16	#10-32 LH	1/8	1/2
	EAJH-0240	1	1/2-20	1/2	EHS-50	11/16	#10-32 LH	3/16	5/8
	EAJH-0500	1 1/2	1/2-20	1/2	EHS-50	11/16	#10-32 LH	3/16	5/8
	EAJH-0510	1	1/2-13	1/2	EHS-50	11/16	#10-32 LH	3/16	5/8
EHS06201	EAJH-0515	1 1/2	1/2-13	1/2	EHS-50	11/16	#10-32 LH	3/16	5/8
	EAJH-0620x1	1	5/8-18	5/8	EHS-62	13/16	1/4-28 LH	1/4	5/8
	EAJH-0620x2	2	5/8-18	5/8	EHS-62	13/16	1/4-28 LH	1/4	5/8
	EAJH-0625x1	1	5/8-11	5/8	EHS-62	13/16	1/4-28 LH	1/4	5/8
EHS07501	EAJH-0625x2	2	5/8-11	5/8	EHS-62	13/16	1/4-28 LH	1/4	5/8
	EAJH-0750x1	1	3/4-16	3/4	EHS-75	15/16	1/4-28 LH	5/16	5/8
	EAJH-0750x2 1/2	2 1/2	3/4-16	3/4	EHS-75	15/16	1/4-28 LH	5/16	5/8
	EAJH-0755x1	1	3/4-10	3/4	EHS-75	15/16	1/4-28 LH	5/16	5/8
	EAJH-0755x2 1/2	2 1/2	3/4-10	3/4	EHS-75	15/16	1/4-28 LH	5/16	5/8



DIFFERENTIAL SCREW			
PART NUMBER	A	B THD	C HEX
EDS-1032	.590	#10-32	3/32
EDS-2528	.625	1/4-28	1/8

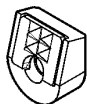
All Adjustagrips come with differential screws. Grippers must be purchased separately, note column "D" above.

Grippers "ECT" Carbide Tipped

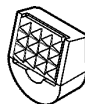
ECT-ROUND								
CAD FILE NAME	PART NUMBER	A DIA	B	C	D	E	F TAP	TOOTH PATTERN
ECT830	ECT-830	3/8	3/8	11/64	3/16	5/16	#10-32	EX-FINE
ECT8304	ECT-830-4	3/8	3/8	11/64	3/16	5/16	#10-32	4-POINT
ECT835	ECT-835	3/8	1/2	15/64	3/16	5/16	#10-32	EX-FINE
ECT8354	ECT-835-4	3/8	1/2	15/64	3/16	5/16	#10-32	4-POINT
ECT840	ECT-840*	1/2	1/2	15/64	3/16	3/8	#10-32	FINE/EX-FINE
ECT8404	ECT-840-4	1/2	1/2	15/64	3/16	3/8	#10-32	4-POINT
ECT841	ECT-841*	1/2	3/8	11/64	3/16	3/8	#10-32	FINE/EX-FINE
ECT8414	ECT-841-4	1/2	3/8	11/64	3/16	3/8	#10-32	4-POINT
ECT842	ECT-842*	1/2	.651	19/64	3/16	3/8	#10-32	FINE/EX-FINE
ECT8424	ECT-842-4	1/2	.651	19/64	3/16	3/8	#10-32	4-POINT
ECT844	ECT-844*	1/2	1/2	KEYWAY	-	3/8	#10-32	FINE/EX-FINE
ECT8444	ECT-844-4	1/2	1/2	KEYWAY	-	3/8	#10-32	4-POINT
ECT850	ECT-850*	5/8	3/8	11/64	3/16	1/2	1/4-28	FINE/EX-FINE
ECT855	ECT-855*	5/8	1/2	15/64	3/16	1/2	1/4-28	FINE/EX-FINE
ECT860	ECT-860*	3/4	3/8	11/64	3/16	5/8	1/4-28	FINE/EX-FINE
ECT862	ECT-862*	3/4	1/2	15/64	3/16	5/8	1/4-28	FINE/EX-FINE
ECT865	ECT-865*	1	3/8	11/64	3/16	3/4	1/4-28	FINE/EX-FINE
ECT071	ECT-071*	5/8	5/8	KEYWAY	-	1/2	1/4-28	FINE/EX-FINE
ECT0714	ECT-071-4	5/8	5/8	KEYWAY	-	1/2	1/4-28	4-POINT
ECT-SQUARE								
ECT870	ECT-870	1/2	3/8	-	-	13/32	#10-32	FINE/EX-FINE
ECT875	ECT-875	1/2	1/2	-	-	13/32	#10-32	FINE/EX-FINE

*Optional tooth patterns available, must add "EF" for Extra-Fine to end of part number, otherwise gripper will be supplied with Fine tooth pattern.

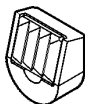
ECT-ANGLE GRIP						
CAD FILE NAME	PART NUMBER	A	B	C	D	TOOTH PATTERN
ECT1274	ECT-127-4	9/16	3/8	#10-32	15/32	4-POINT
ECT12712	ECT-127-12	9/16	3/8	#10-32	15/32	FINE
ECT1304	ECT-130-4	9/16	3/8	#10-32	15/32	STRAIGHT
ECT1455	ECT-145-5	9/16	3/8	#10-32	15/32	ANGULAR



4 POINT



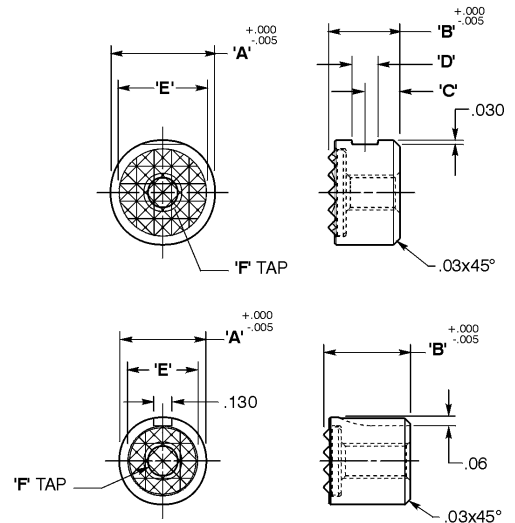
12 POINT



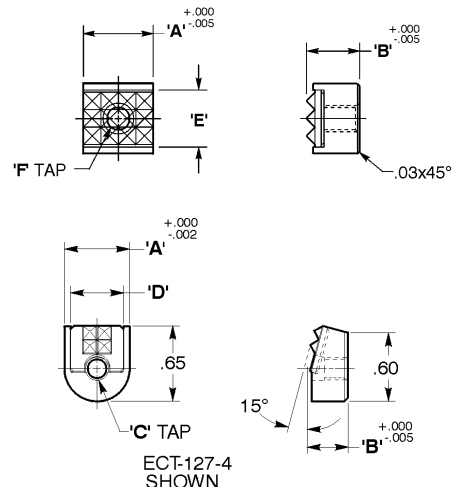
STRAIGHT



ANGULAR



KEYWAY



CAD Directory

Mach-Tool/Grippers

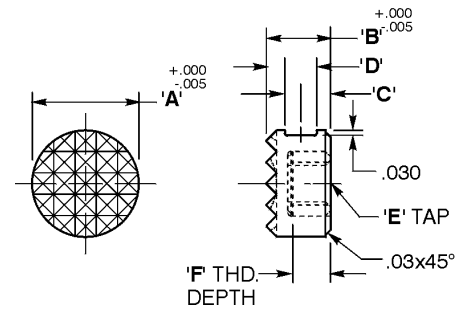
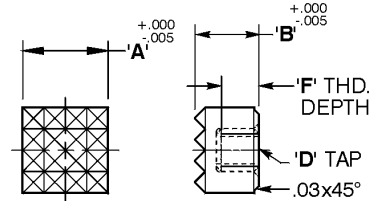
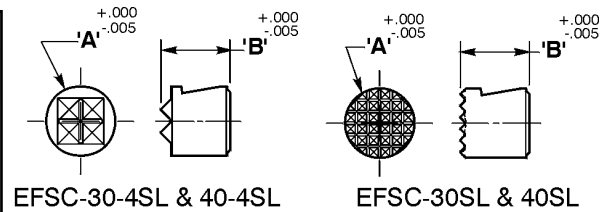
Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Grippers "EFSC" Solid Carbide

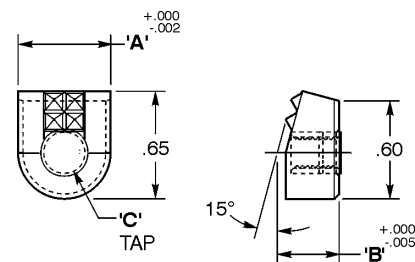


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

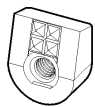
EFSC-ROUND								
CAD FILE NAME	PART NUMBER	A	B	C	D	E	F TAP	TOOTH PATTERN
EFSC30SL	EFSC-30-SL	5/16	3/8	-	-	-	-	EX-FINE
EFSC304SL	EFSC-30-4-SL	5/16	3/8	-	-	-	-	4-POINT
EFSC40SL	EFSC-40-SL	3/8	3/8	-	-	-	-	EX-FINE
EFSC404SL	EFSC-40-4-SL	3/8	3/8	-	-	-	-	4-POINT
EFSC841	EFSC-841	1/2	3/8	11/64	3/16	#10-32	3/16	FINE
EFSC8444	EFSC-844-4	1/2	1/2	15/64	3/16	#10-32	5/16	4-POINT
EFSC844	EFSC-844	1/2	1/2	15/64	3/16	#10-32	5/16	FINE
EFSC844SL	EFSC-844-SL	1/2	1/2	15/64	3/16	-	-	FINE
EFSC0704	EFSC-070-4	1/2	1/2	-	KEYWAY	#10-32	5/16	4-POINT
EFSC070	EFSC-070	1/2	1/2	-	KEYWAY	#10-32	5/16	FINE
EFSC850	EFSC-850	5/8	3/8	11/64	3/16	1/4-28	3/16	FINE
EFSC860	EFSC-860	3/4	3/8	11/64	3/16	1/4-28	3/16	FINE
EFSC-SQUARE								
EFSC870	EFSC-870	1/2	3/8	-	#10-32	-	3/16	FINE
EFSC875	EFSC-875	1/2	1/2	-	#10-32	-	5/16	FINE



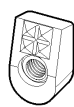
EFSC-ANGLE GRIP						
CAD FILE NAME	PART NUMBER	A	B	C	TOOTH PATTERN	
EFSC1274	EFSC-127-4	9/16	3/8	#10-32	4-POINT	
EFSC127410MM	EFSC-127-4-10MM	.394	3/8	#10-32	4-POINT	
EFSC12710	EFSC-127-10	9/16	3/8	#10-32	FINE	
EFSC1304	EFSC-130-4	9/16	3/8	#10-32	STRAIGHT	
EFSC130210MM	EFSC-130-2-10MM	.394	3/8	#10-32	STRAIGHT	
EFSC1455	EFSC-145-5	9/16	3/8	#10-32	STRAIGHT	



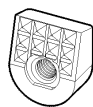
EFSC-127-4 SHOWN



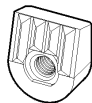
4 POINT



4 POINT
10 MM



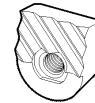
10 POINT



4 POINT
STRAIGHT



2 POINT
10 MM
STRAIGHT



5 POINT
ANGULAR

CAD Directory

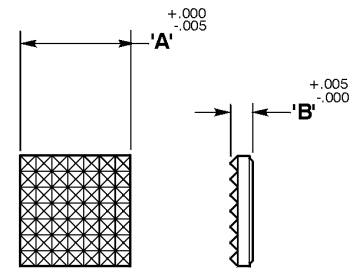
Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

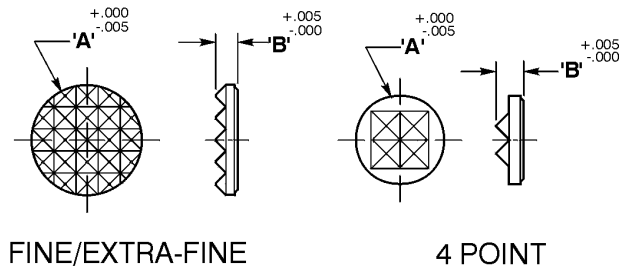
Solid Carbide Pads

Click to download CAD File (STP) Format. 2dwg & 3dwg visit eandesp.com

ECS-SQUARE				
CAD FILE NAME	PART NUMBER	A	B	TOOTH PATTERN
ECS3	ECS-3*	3/8	1/8	FINE/EX-FINE
ECS4	ECS-4*	1/2	1/8	FINE/EX-FINE
ECS5EF	ECS-5EF	5/8	1/8	EX-FINE
ECS6EF	ECS-6EF	3/4	5/32	EX-FINE
ECS8EF	ECS-8EF	1	5/32	EX-FINE
ECC-ROUND				
CAD FILE NAME	PART NUMBER	A DIA	B	TOOTH PATTERN
ECC1	ECC-1	1/4	1/8	EX-FINE/SUP FINE
ECC2	ECC-2*	5/16	1/8	FINE/EX-FINE
ECC24	ECC-2-4	5/16	1/8	4-POINT
ECC3	ECC-3*	3/8	1/8	FINE/EX-FINE
ECC34	ECC-3-4	3/8	1/8	4-POINT
ECC437	ECC-437*	7/16	1/8	FINE/EX-FINE
ECC4374	ECC-437-4	7/16	5/32	4-POINT
ECC4	ECC-4*	1/2	1/8	FINE/EX-FINE
ECC44	ECC-4-4	1/2	5/32	4-POINT
ECC5	ECC-5*	5/8	1/8	FINE/EX-FINE
ECC6	ECC-6*	3/4	1/8	FINE/EX-FINE
ECC8EF	ECC-8EF	1	5/32	EX-FINE



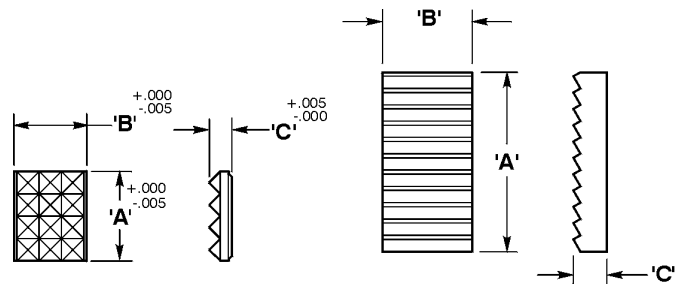
SQUARE



FINE/EXTRA-FINE

4 POINT

ECR-RECTANGULAR					
CAD FILE NAME	PART NUMBER	A	B	C	TOOTH PATTERN
ECR2EF	ECR-2EF	3/8	1/4	1/8	EX-FINE
ECR870	ECR-870*	1/2	13/32	1/8	FINE/EX-FINE
ECR1274	ECR-127-4	29/64	13/32	1/8	4-POINT
ECR12712	ECR-127-12	29/64	13/32	1/8	FINE
ECR1304	ECR-130-4	29/64	13/32	1/8	STRAIGHT
ECR1455	ECR-145-5	29/64	13/32	1/8	ANGULAR
ECR4EF	ECR-4EF	1	1/2	3/16	EX/FINE
ECR4	ECR-4	1	1/2	3/16	SAW TOOTH
ECR6	ECR-6	1 1/2	3/4	1/4	SAW TOOTH



SAW TOOTH
ECR-4 & ECR-6
ONLY

*Optional tooth patterns available, must add "SF" for Super-Fine or "EF" for Extra Fine to end of part number. Refer to page D-41.

CAD Directory

Mach-Tool\Grippers

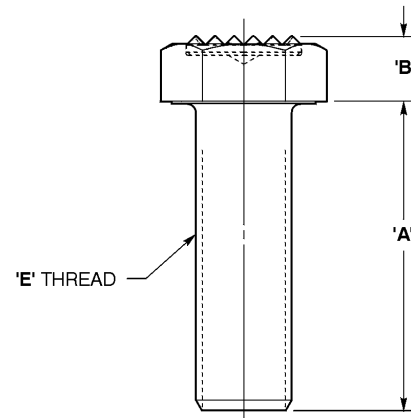
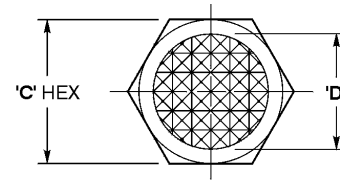
Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Grippers "ECTH" and "EAG" Adjustable



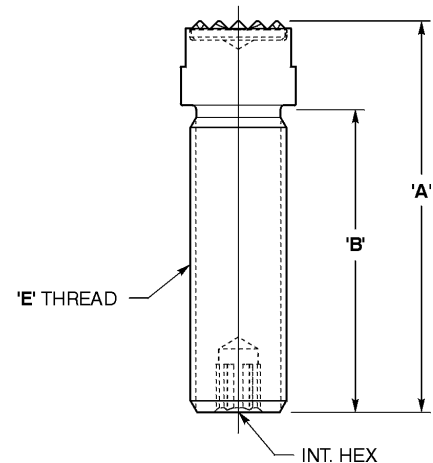
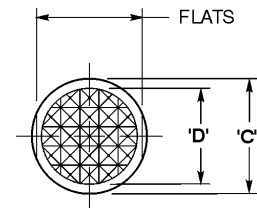
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

"ECTH" CARBIDE TIPPED ADJUSTABLE							
CAD FILE NAME	PART NUMBER	A	B	C HEX	D	E-THD.	TOOTH PATTERN
ECTH0200	ECTH-0200	1/2	13/64	7/16	5/16	1/4-20	EX-FINE
	ECTH-0250	1	13/64	7/16	5/16	1/4-20	EX-FINE
	ECTH-0250x1 1/2	1 1/2	13/64	7/16	5/16	1/4-20	EX-FINE
	ECTH-0280	1/2	13/64	7/16	5/16	1/4-28	EX-FINE
	ECTH-0281	1	13/64	7/16	5/16	1/4-28	EX-FINE
ECTH0310F	ECTH-0281x1 1/2	1 1/2	13/64	7/16	5/16	1/4-28	EX-FINE
	ECTH-0310*	1/2	1/4	1/2	3/8	5/16-18	FINE/EX-FINE
	ECTH-0312*	1	1/4	1/2	3/8	5/16-18	FINE/EX-FINE
	ECTH-0312x1 1/2*	1 1/2	1/4	1/2	3/8	5/16-18	FINE/EX-FINE
	ECTH-0320*	1/2	1/4	1/2	3/8	5/16-24	FINE/EX-FINE
ECTH0230F	ECTH-0321*	1	1/4	1/2	3/8	5/16-24	FINE/EX-FINE
	ECTH-0321x1 1/2*	1 1/2	1/4	1/2	3/8	5/16-24	FINE/EX-FINE
	ECTH-0230*	1/2	9/32	9/16	1/2	3/8-24	FINE/EX-FINE
	ECTH-0231*	1	9/32	9/16	1/2	3/8-24	FINE/EX-FINE
	ECTH-0231x1 1/2*	1 1/2	9/32	9/16	1/2	3/8-24	FINE/EX-FINE
ECTH0240F	ECTH-0370*	1/2	9/32	9/16	1/2	3/8-16	FINE/EX-FINE
	ECTH-0375*	1	9/32	9/16	1/2	3/8-16	FINE/EX-FINE
	ECTH-0375x1 1/2*	1 1/2	9/32	9/16	1/2	3/8-16	FINE/EX-FINE
	ECTH-0240*	1	23/64	3/4	5/8	1/2-20	FINE/EX-FINE
ECTH0620F	ECTH-0500*	1 1/2	23/64	3/4	5/8	1/2-20	FINE/EX-FINE
	ECTH-0510*	1	23/64	3/4	5/8	1/2-13	FINE/EX-FINE
	ECTH-0515*	1 1/2	23/64	3/4	5/8	1/2-13	FINE/EX-FINE
ECTH0750EF	ECTH-0620*	1	7/16	15/16	3/4	5/8-18	FINE/EX-FINE
	ECTH-0620x2	2	7/16	15/16	3/4	5/8-18	FINE/EX-FINE
	ECTH-0625*	1	7/16	15/16	3/4	5/8-11	1FINE/EX-FINE
ECTH0755EF	ECTH-0625x2*	2	7/16	15/16	3/4	5/8-11	FINE/EX-FINE
	ECTH-0750EF	1	1/2	1 1/8	1	3/4-16	EX-FINE
	ECTH-0750x2 1/2 EF	2 1/2	1/2	1 1/8	1	3/4-16	EX-FINE
	ECTH-0755EF	1	1/2	1 1/8	1	3/4-10	EX-FINE
	ECTH-0755x2 1/2 EF	2 1/2	1/2	1 1/8	1	3/4-10	EX-FINE



"EAG" CARBIDE TIPPED ADJUSTABLE									
CAD FILE NAME	PART NUMBER	A	B	C	D	E	INT HEX	TOOTH	PATTERN
EAG0230F	EAG-0230*	15/16	9/16	1/2	3/8	3/8-24	1/8	FINE/EX-FINE	
	EAG-0231*	1 3/8	1	1/2	3/8	3/8-24	1/8	FINE/EX-FINE	
	EAG-0231x1 1/2*	1 7/8	1 1/2	1/2	3/8	3/8-24	1/8	FINE/EX-FINE	
	EAG-0370*	15/16	9/16	1/2	3/8	3/8-16	1/8	FINE/EX-FINE	
	EAG-0375*	1 3/8	1	1/2	3/8	3/8-16	1/8	FINE/EX-FINE	
EAG0240F	EAG-0375x1 1/2*	1 7/8	1 1/2	1/2	3/8	3/8-16	1/8	FINE/EX-FINE	
	EAG-0240*	1 3/8	7/8	5/8	1/2	1/2-20	3/16	FINE/EX-FINE	
	EAG-0500*	2 1/16	1 1/2	5/8	1/2	1/2-20	3/16	FINE/EX-FINE	
	EAG-0510*	1 3/8	7/8	5/8	1/2	1/2-13	3/16	FINE/EX-FINE	
EAG06201F	EAG-0515*	2 1/16	1 1/2	5/8	1/2	1/2-13	3/16	FINE/EX-FINE	
	EAG-0620x1*	1 9/16	1	3/4	5/8	5/8-18	1/4	FINE/EX-FINE	
	EAG-0620x2*	2 9/16	2	3/4	5/8	5/8-18	1/4	FINE/EX-FINE	
EAG07501F	EAG-0625x1*	1 9/16	1	3/4	5/8	5/8-11	1/4	FINE/EX-FINE	
	EAG-0625x2*	2 9/16	2	3/4	5/8	5/8-11	1/4	FINE/EX-FINE	
	EAG-0750x1*	1 9/16	1	7/8	3/4	3/4-16	5/16	FINE/EX-FINE	
	EAG-0750x2 1/2*	3 1/6	2 1/2	7/8	3/4	3/4-16	5/16	FINE/EX-FINE	
	EAG-0755x1*	1 9/16	1	7/8	3/4	3/4-10	5/16	FINE/EX-FINE	
	EAG-0755x2 1/2*	2 1/2	3 1/6	7/8	3/4	3/4-10	5/16	FINE/EX-FINE	

* Optional tooth patterns available, specify "EF" for Extra-Fine. Fine tooth pattern will be shipped unless otherwise noted.

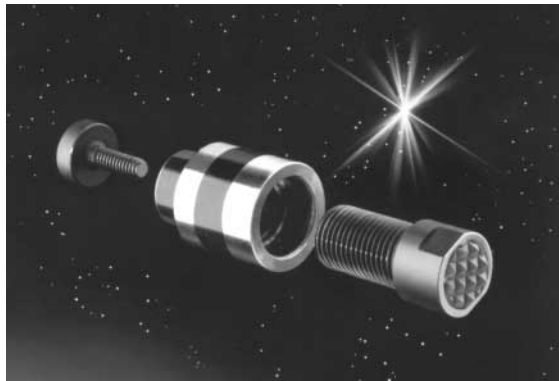


CAD Directory

Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Grippers "EACG" Accugrip



Accugrip advances your workholding capabilities. It easily adapts to rest pads, swivel clamps, hob drivers, and chucking clamp points. Accugrip reduces downtime, lowers maintenance costs, and eliminates the need for circle grinding.

The Accugrip system uses a replaceable Adjustable Gripper and locking screw for precise and positive chuck gripping. It compensates for worn out chucks. For quick changeovers, have a pre-set backup unit ready for immediate replacement.



Accugrip Components

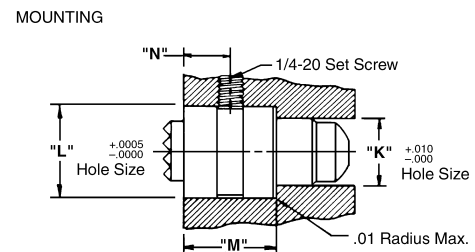
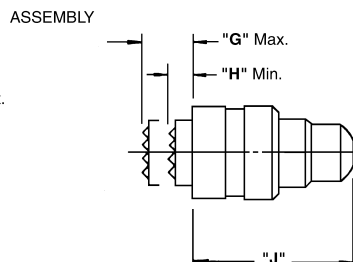
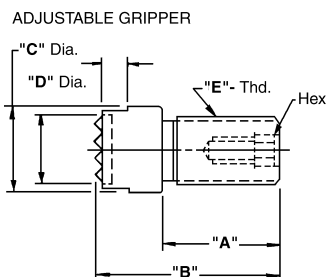
1. Lock Screw maintains gripper adjustment.
2. Housing mounts flush in chuck jaw against a permanent shoulder.
3. Replaceable, Adjustable Gripper.

Complete Accugrip Assembly – replaceable Adjustable Grippers available with flat or serrated tips.

Click to download CAD File (STP) Format. 2dwg & 3dwg visit eandesp.com

	COMPLETE ASSEMBLY	ADJUSTABLE GRIPPER	HOUSING	LOCK SCREW
CAD FILE NAME	PART NUMBER	PART NUMBER	PART NUMBER	PART NUMBER
EAG230S	EACG-0230-S 3/8* THD.SERR. TIP	EACG-0230-1S 3/8* THD.SERR. TIP	EACG-0230-2	EACG-0230-3
EAG230F	EACG-0230-F 3/8* THD.SMTH. TIP	EACG-0230-1F 3/8* THD.SMTH. TIP		
EAG240S	EACG-0240-S 1/2* THD.SERR. TIP	EACG-0240-1S 1/2* THD.SERR. TIP	EACG-0240-2	EACG-0240-3
EAG240F	EACG-0240-F 1/2* THD.SMTH. TIP	EACG-0240-1F 1/2* THD.SMTH. TIP		

PART NUMBER	ADJUSTABLE GRIPPER									MOUNTING			
	A	B	C	D	E-THD.	F	G MAX.	H MIN.	J	K	L	M	N
EACG-0230-S	17/32	15/16	.499	3/8	3/8-24	5/32	9/32	5/32	1	1/2	.625	11/16	13/32
EACG-0240-S	7/8	1-3/8	.624	1/2	1/2-20	1/4	5/16	3/16	1-9/16	21/32	.875	7/8	7/16



Specials quoted on request

CAD Directory
Mach-Tool\Grippers

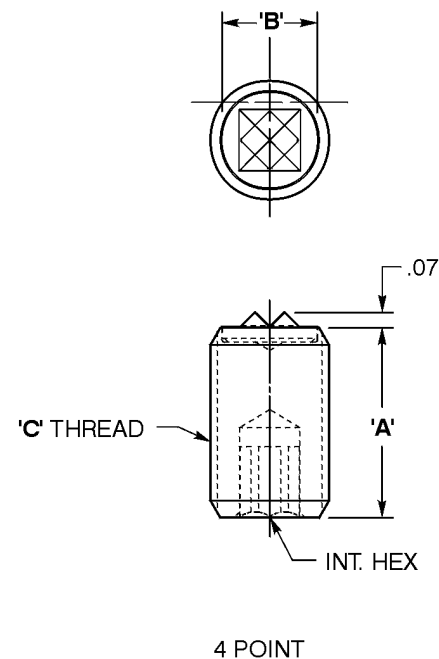
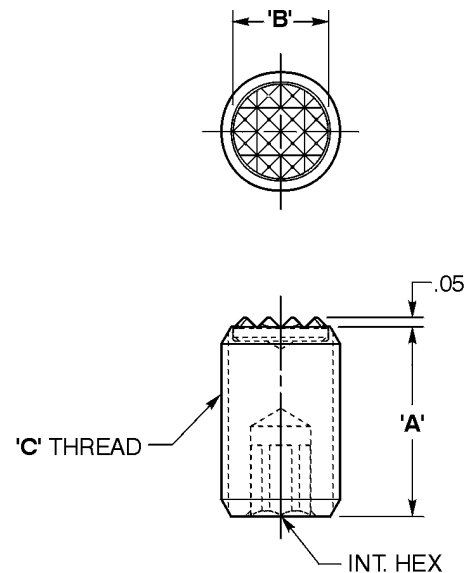
Machine Tool Components

Grippers "EPG" Adjustable



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

"EPG" CARBIDE TIPPED ADJUSTABLE						
CAD FILE NAME	PART NUMBER	A	B	C	INT HEX	TOOTH PATTERN
EPG0230	EPG-0230	1/2	1/4	3/8-24	3/16	EX-FINE
	EPG-0231	1	1/4	3/8-24	3/16	EX-FINE
	EPG-0231x1½	1 1/2	1/4	3/8-24	3/16	EX-FINE
	EPG-0231x2	2	1/4	3/8-24	3/16	EX-FINE
	EPG-0231x3	3	1/4	3/8-24	3/16	EX-FINE
	EPG-0370	1/2	1/4	3/8-16	3/16	EX-FINE
	EPG-0375	1	1/4	3/8-16	3/16	EX-FINE
	EPG-0375x2	2	1/4	3/8-16	3/16	EX-FINE
EPG-0375x3	3	1/4	3/8-16	3/16	EX-FINE	
EPG0503	EPG-0503*	3/4	3/8	1/2-20	1/4	FINE/EX-FINE
EPG05034	EPG-0503-4	3/4	3/8	1/2-20	1/4	4-POINT
EPG0503	EPG-0500*	1	3/8	1/2-20	1/4	FINE/EX-FINE
EPG05034	EPG-500-4	1	3/8	1/2-20	1/4	4-POINT
EPG0503	EPG-0500x2*	2	3/8	1/2-20	1/4	FINE/EX-FINE
EPG05034	EPG-0500x2-4	2	3/8	1/2-20	1/4	4-POINT
EPG0503	EPG-0500x3*	3	3/8	1/2-20	1/4	FINE/EX-FINE
EPG05034	EPG-0500x3-4	3	3/8	1/2-20	1/4	4-POINT
EPG0503	EPG-0510*	1	3/8	1/2-13	1/4	FINE/EX-FINE
EPG05034	EPG-0510-4	1	3/8	1/2-13	1/4	4-POINT
EPG0503	EPG-0510x2*	2	3/8	1/2-13	1/4	FINE/EX-FINE
EPG05034	EPG-0510x2-4	2	3/8	1/2-13	1/4	4-POINT
EPG0503	EPG-0510x3*	3	3/8	1/2-13	1/4	FINE/EX-FINE
EPG05034	EPG-0510-3-4	3	3/8	1/2-13	1/4	4-POINT
EPG0503	EPG-0513*	3/4	3/8	1/2-13	1/4	FINE/EX-FINE
EPG05034	EPG-0513-4	3/4	3/8	1/2-13	1/4	4-POINT
EPG0620F	EPG-0620*	1	1/2	5/8-18	5/16	FINE/EX-FINE
EPG06204	EPG-0620-4	1	1/2	5/8-18	5/16	4-POINT
EPG0620F	EPG-0620x1¼*	1 3/4	1/2	5/8-18	5/16	FINE/EX-FINE
EPG06204	EPG-0620x1¼-4	1 3/4	1/2	5/8-18	5/16	4-POINT
EPG0620F	EPG-0620x2*	2	1/2	5/8-18	5/16	FINE/EX-FINE
EPG06204	EPG-0620x2-4	2	1/2	5/8-18	5/16	4-POINT
EPG0620F	EPG-0620x3*	3	1/2	5/8-18	5/16	FINE/EX-FINE
EPG06204	EPG-0620x3-4	3	1/2	5/8-18	5/16	4-POINT
EPG0620F	EPG-0625*	1	7/16	5/8-11	5/16	FINE/EX-FINE
EPG06204	EPG-0625-4	1	7/16	5/8-11	5/16	4-POINT
EPG0620F	EPG-0625x2*	2	7/16	5/8-11	5/16	FINE/EX-FINE
EPG06204	EPG-0625x2-4	2	7/16	5/8-11	5/16	4-POINT
EPG0620F	EPG-0625x3*	2	7/16	5/8-11	5/16	FINE/EX-FINE
EPG06204	EPG-0625x3-4	3	7/16	5/8-11	5/16	4-POINT
EPG0750F	EPG-0750*	1	1/2	3/4-16	3/8	FINE/EX-FINE
EPG07504	EPG-0750-4	1	1/2	3/4-16	3/8	4-POINT
EPG0750F	EPG-0750x2*	2	1/2	3/4-16	3/8	FINE/EX-FINE
EPG07504	EPG-0750x2-4	2	1/2	3/4-16	3/8	4-POINT
EPG0750F	EPG-0750x3*	3	1/2	3/4-16	3/8	FINE/EX-FINE
EPG07504	EPG-0750x3-4	3	1/2	3/4-16	3/8	4-POINT
EPG0750F	EPG-0755*	1	1/2	3/4-16	3/8	FINE/EX-FINE
EPG07504	EPG-0755-4	1	1/2	3/4-10	3/8	4-POINT
EPG0750F	EPG-0755x2*	2	1/2	3/4-10	3/8	FINE/EX-FINE
EPG07504	EPG-0755x2-4	2	1/2	3/4-10	3/8	4-POINT
EPG0750F	EPG-0755x3*	3	1/2	3/4-10	3/8	FINE/EX-FINE
EPG07504	EPG-0755x3-4	3	1/2	3/4-10	3/8	4-POINT



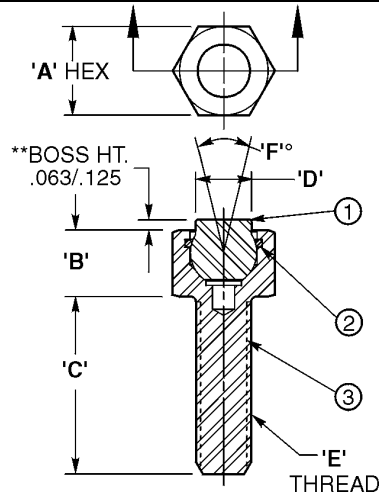
*Optional tooth patterns available, specify "EF" for Extra-Fine. Fine tooth pattern will be shipped unless otherwise noted.

CAD Directory

Mach-Tool/Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Swivots-Hex Head Adjustable



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

REPLACEABLE BALL STYLE HEX HEAD DESIGN													
ASSEMBLIES								COMPONENTS					
CAD FILE NAME	PART NUMBER	A HEX	B HEAD	C THD LENGTH	D BOSS DIA	E THD	F DEGREE SWIVEL	BALL DIA	1 BALL	2 O-RING	3 HOUSING	AVAIL. TOOTH PATTERN	LOAD RATING
EBUH0124F or EUBUH0124S	EBUH-0124-(*)-**	3/8	1/4	1/2	5/32	#10-24	28°	3/16	EBUB-100-(*)-**	EBUR-100	EBUH-0124-H	SF	1176
	EBUH-0124x1-(*)-**	3/8	1/4	1	5/32	#10-24	28°	3/16	EBUB-100-(*)-**	EBUR-100	EBUH-0124-1-H	SF	1176
	EBUH-0132-(*)-**	3/8	1/4	1/2	5/32	#10-32	28°	3/16	EBUB-100-(*)-**	EBUR-100	EBUH-0132-H	SF	1176
	EBUH-0132x1-(*)-**	3/8	1/4	1	5/32	#10-32	28°	3/16	EBUB-100-(*)-**	EBUR-100	EBUH-0132-1-H	SF	1176
EBUH01250F or EUBUH0250S	EBUH-0250-(*)-**	7/16	5/16	1/2	1/4	1/4-20	24°	9/32	EBUB-200-(*)-**	EBUR-200	EBUH-0250-H	EF/SF	2441
	EBUH-0251-(*)-**	7/16	5/16	1	1/4	1/4-20	24°	9/32	EBUB-200-(*)-**	EBUR-200	EBUH-0251-H	EF/SF	2441
	EBUH-0251x1½-(*)-**	7/16	5/16	1 1/2	1/4	1/4-20	24°	9/32	EBUB-200-(*)-**	EBUR-200	EBUH-0251-1 ½-H	EF/SF	2441
	EBUH-0280-(*)-**	7/16	5/16	1/2	1/4	1/4-28	24°	9/32	EBUB-200-(*)-**	EBUR-200	EBUH-0280-H	EF/SF	2441
	EBUH-0281-(*)-**	7/16	5/16	1	1/4	1/4-28	24°	9/32	EBUB-200-(*)-**	EBUR-200	EBUH-0281-H	EF/SF	2441
	EBUH-0281x1½-(*)-**	7/16	5/16	1 1/2	1/4	1/4-28	24°	9/32	EBUB-200-(*)-**	EBUR-300	EBUH-0281-1 ½-H	EF/SF	2441
EBUH0313F or EUBUH0310S	EBUH-0310-(*)-**	1/2	3/8	1/2	5/16	5/16-18	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH-0310-H	EF/SF	2792
	EBUH-0312-(*)-**	1/2	3/8	1	5/16	5/16-18	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH-0312-H	EF/SF	2792
	EBUH-0312x1½-(*)-**	1/2	3/8	1 1/2	5/16	5/16-18	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH-0312-1 ½-H	EF/SF	2792
	EBUH-0320-(*)-**	1/2	3/8	1/2	5/16	5/16-24	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH-0320-H	EF/SF	2792
	EBUH-0321-(*)-**	1/2	3/8	1	5/16	5/16-24	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH0321-H	EF/SF	2792
	EBUH-0321x1½-(*)-**	1/2	3/8	1 1/2	5/16	5/16-24	32°	3/8	EBUB-300-(*)-**	EBUR-300	EBUH-0321-1 ½-H	EF/SF	2792
EBUH0230F or EUBUH0230S	EBUH-0230-(*)-**	5/8	1/2	1/2	3/8	3/8-24	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0230-H	EF/SF	3446
	EBUH-0231-(*)-**	5/8	1/2	1	3/8	3/8-24	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0231-H	EF/SF	3446
	EBUH-0231x1½-(*)-**	5/8	1/2	1 1/2	3/8	3/8-24	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0231-1 ½-H	EF/SF	3446
	EBUH-0370-(*)-**	5/8	1/2	1/2	3/8	3/8-16	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0370-H	EF/SF	3446
	EBUH-0375-(*)-**	5/8	1/2	1	3/8	3/8-16	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0375-H	EF/SF	3446
	EBUH-0375x1½-(*)-**	5/8	1/2	1 1/2	3/8	3/8-16	22°	1/2	EBUB-500-(*)-**	EBUR-500	EBUH-0375-1 ½-H	EF/SF	3446

*MUST SPECIFY STYLE OR BALL BY INDICATING "S" FOR SERRATED, "SF" FOR SUPER FINE SERRATIONS, "F" FOR FLAT OR "D" FOR DELRIN AND OPTION IF REQUIRED.

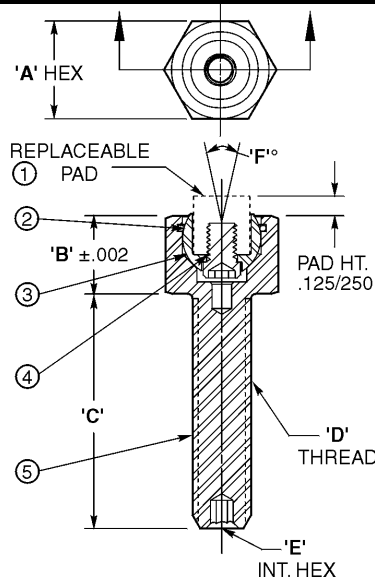
**SPECIFY "T" FOR "TALL" HEIGHT OPTION. LEAVE BLANK FOR STANDARD HEIGHT.

CAD Directory

Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Swivots-Hex Head Adjustable



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

REPLACEABLE PAD STYLE HEX HEAD DESIGN														
ASSEMBLIES									COMPONENTS					
CAD FILE NAME	PART NUMBER	A HEX	B HEAD HT	C THD LENGTH	D THD SIZE	E INT HEX	F DEGREE SWIVEL	BALL DIA	1" REPLACE PAD DIA	2 O-RING	3 BALL	4 LOCK SCREW	5 HOUSING	LOAD RATING
EBUH0230	EBUH-0230	5/8	1/2	1/2	3/8-24	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0230-H	3446
	EBUH-0231	5/8	1/2	1	3/8-24	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0231-H	3446
	EBUH-0231 x 1 1/2	5/8	1/2	1 1/2	3/8-24	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0231-1 1/2-H	3446
	EBUH-0370	5/8	1/2	1/2	3/8-16	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0370-H	3446
	EBUH-0375	5/8	1/2	1	3/8-16	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0375-H	3446
	EBUH-0375 x 1 1/2	5/8	1/2	1 1/2	3/8-16	1/8	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBUH-0375-1 1/2-H	3446
EBUH0240	EBUH-0240	13/16	5/8	1	1/2-20	3/16	24'	5/8	1/2	EBUR-600	EBUB-600	EBUS-600	EBUH-0240-H	7178
	EBUH-0500	13/16	5/8	1 1/2	1/2-20	3/16	24'	5/8	1/2	EBUR-600	EBUB-600	EBUS-600	EBUH-0500-H	7178
	EBUH-0510	13/16	5/8	1	1/2-13	3/16	24'	5/8	1/2	EBUR-600	EBUB-600	EBUS-600	EBUH-0510-H	5937
	EBUH-0515	13/16	5/8	1 1/2	1/2-13	3/16	24'	5/8	1/2	EBUR-600	EBUB-600	EBUS-600	EBUH-0515-H	5937
EBUH0620	EBUH-0620	15/16	11/16	1	5/8-18	1/4	22'	3/4	5/8	EBUR-700	EBUB-700	EBUS-700	EBUH-0620-H	11874
	EBUH-0620 x 2	15/16	11/16	2	5/8-18	1/4	22'	3/4	5/8	EBUR-700	EBUB-700	EBUS-700	EBUH-0620-2-H	11874
	EBUH-0625	15/16	11/16	1	5/8-18	1/4	22'	3/4	5/8	EBUR-700	EBUB-700	EBUS-700	EBUH-0625-H	9932
	EBUH-0625 x 2	15/16	11/16	2	5/8-18	1/4	22'	3/4	5/8	EBUR-700	EBUB-700	EBUS-700	EBUH-0625-2-H	9932
EBUH0750	EBUH-0750	1 1/8	3/4	1	3/4-16	5/16	20'	7/8	3/4	EBUR-800	EBUB-800	EBUS-800	EBUH-0750-H	13565
	EBUH-0750 x 2 1/2	1 1/8	3/4	2 1/2	3/4-16	5/16	20'	7/8	3/4	EBUR-800	EBUB-800	EBUS-800	EBUH-0750-2 1/2-H	13565
	EBUH-0755	1 1/8	3/4	1	3/4-10	5/16	20'	7/8	3/4	EBUR-800	EBUB-800	EBUS-800	EBUH-0755-H	14862
	EBUH-0755 x 2 1/2	1 1/8	3/4	2 1/2	3/4-10	5/16	20'	7/8	3/4	EBUR-800	EBUB-800	EBUS-800	EBUH-0755-2 1/2-H	14862
EBUH11142	EBUH-1114 x 2	1 1/2	7/8	2	1-14	3/8	22'	1 1/8	1	EBUR-1100	EBUB-1100	EBUS-1100	EBUH-1114-2-H	26234
	EBUH-1114 x 4	1 1/2	7/8	4	1-14	3/8	22'	1 1/8	1	EBUR-1100	EBUB-1100	EBUS-1100	EBUH-1114-4-H	26234
	EBUH-1108 x 2	1 1/2	7/8	2	1-8	3/8	22'	1 1/8	1	EBUR-1100	EBUB-1100	EBUS-1100	EBUH-1108-2-H	28158
	EBUH-1108 x 4	1 1/2	7/8	4	1-8	3/8	22'	1 1/8	1	EBUR-1100	EBUB-1100	EBUS-1100	EBUH-1108-4-H	28158

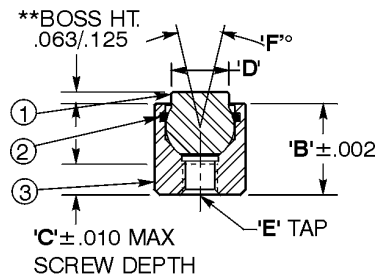
*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE D-42, D-45, D-46 OR D-55).

CAD Directory

Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

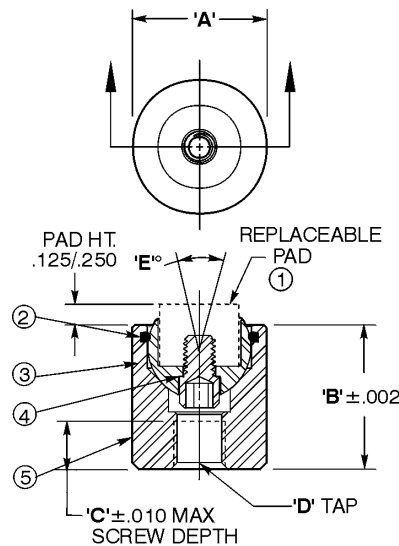
Swivots-Base Design



[Click to download CAD Files \(STP Format\)](#)

REPLACEABLE BALL STYLE													
ASSEMBLIES									COMPONENTS				
CAD FILE NAME	PART NUMBER	A DIA	B HEIGHT	C	D BOSS DIA	E TAP	F DEGREE SWIVEL	BALL DIA	1 BALL	2 O-RING	3 HOUSING	AVAIL TOOTH PATTERN	LOADHO RATING
EBBU100F or EBBU100S	EBBU-100-(*)-**	3/8	5/16	1/4	5/32	#4-40	28'	3/16	EBUB-100-(*)-**	EBBR-100	EBBU-100-H	SF	1835
	EBBU-105-(*)-**	3/8	7/16	5/16	5/32	#4-40	28'	3/16	EBUB-100-(*)-**	EBBR-100	EBBU-105-H	SF	1835
	EBBU-107-(*)-**	3/8	11/16	5/16	5/32	#4-40	28'	3/16	EBUB-100-(*)-**	EBBR-100	EBBU-107-H	SF	1835
EBBU200F or EBBU200S	EBBU-200-(*)-**	7/16	3/8	5/32	1/4	#8-32	28'	9/32	EBUB-200-(*)-**	EBBR-200	EBBU-200-H	EF/SF	3339
	EBBU-201-(*)-**	7/16	15/16	1/2	1/4	#8-32	28'	9/32	EBUB-201-(*)-**	EBBR-200	EBBU-201-H	EF/SF	3339
EBBU300F or EBBU300S	EBBU-300-(*)-**	1/2	1/2	5/32	5/16	#10-32	28'	3/8	EBUB-300-(*)-**	EBBR-300	EBBU-300-H	EF/SF	4697
	EBBU-301-(*)-**	1/2	1	5/8	5/16	#10-32	28'	3/8	EBUB-300-(*)-**	EBBR-300	EBBU-301-H	EF/SF	4697
EBBU500F or EBBU500S	EBBU-500-(*)-**	5/8	3/4	1/4	1/2	1/4-28	22'	1/2	EBUB-500-(*)-**	EBBR-500	EBBU-500-H	EF/SF	5849

*MUST SPECIFY STYLE OF BALL BY INDICATING "S" FOR SERRATED, "SF" FOR SUPER FINE SERRATIONS, "F" FOR FLAT OF "D" FOR DELRIN.
 **SPECIFY "T" FOR "TALL" HEIGHT OPTIONS. LEAVE BLANK FOR STANDARD HEIGHT.



[Click to download CAD Files \(STP Format\)](#)

REPLACEABLE PAD STYLE													
ASSEMBLIES									COMPONENTS				
CAD FILE NAME	PART NUMBER	A DIA	B HEIGHT	C	D TAP	E DEGREE SWIVEL	F BALL DIA	1* REPLACE PAD DIA	2 O-RING	3 BALL	4 LOCK SCREW	5 HOUSING	LOAD RATING
EBBU500	EBBU-500	5/8	3/4	.24	1/4-28	22'	1/2	3/8	EBUR-500	EBUB-500	EBUS-500	EBBU-500-H	5849
EBBU600	EBBU-600	13/16	7/8	.35	5/16-24	24'	5/8	1/2	EBUR-600	EBUB-600	EBUS-600	EBBU-600-H	10925
EBBU700	EBBU-700	15/16	7/8	.28	3/8-24	22'	3/4	5/8	EBUR-700	EBUB-700	EBUS-700	EBBU-700-H	13325
EBBU800	EBBU-800	1 1/8	15/16	.24	1/2-20	26'	7/8	3/4	EBUR-800	EBUB-800	EBUS-700	EBBU-800-H	18863
EBBU1100	EBBU-1100	1 1/2	1 1/4	.44	1/2-20	22'	1 1/8	1	EBUR-1100	EBUB-1100	EBUS-1100	EBBU-1100-H	34614

*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE D-42, D-45, D-46, D-55).

CAD Directory

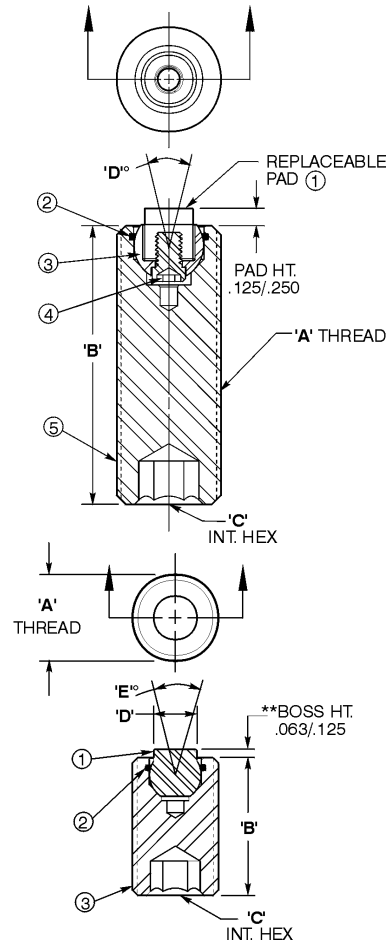
Mach-Tool\Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Swivots-Threaded Designs

Click to download CAD Files (STP Format)

REPLACEABLE PAD STYLE						
ASSEMBLIES						
CAD FILE NAME	PART NUMBER	A THREAD	B LENGTH	C INT HEX	D DEGREE SWIVEL	BALL DIA
ETBU0750	EBU-0750	3/4-16	1	3/8	22°	1/2
	EBU-0750x2	3/4-16	2	3/8	22°	1/2
	EBU-0750x3	3/4-16	3	3/8	22°	1/2
	EBU-0755	3/4-10	1	3/8	22°	1/2
	EBU-0755x2	3/4-10	2	3/8	22°	1/2
	EBU-0755x3	3/4-10	3	3/8	22°	1/2



COMPONENTS					
1" REPLACE PAD DIA	2 O-RING	3 BSLL	4 LOCK SCREW	5 HOUSING	LOAD RATING
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0750-H	8150
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0750x2-H	8150
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0750x2-H	8150
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0755-H	8150
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0755x2-H	8150
3/8	EBUR-500	EBUB-500	EBUS-500	ETBU-0755x3-H	8150
5/8	EBUR-700	EBUB-700	EBUS-700	ETBU-1114x2-H	17210
5/8	EBUR-700	EBUB-700	EBUS-700	ETBU-1114x3-H	17210
1/2	EBUR-600	EBUB-600	EBUS-600	ETBU-1108x2-H	14757
1/2	EBUR-600	EBUB-600	EBUS-600	ETBU-1108x3-H	14757

*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE D-42, D-45, D-46 OR D-55).

Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

REPLACEABLE BALL STYLE												
ASSEMBLIES							COMPONENTS					
CAD FILE NAME	PART NUMBER	A THREAD	B LENGTH	C INT HEX	D BOSS DIA.	E DEGREE SWIVEL	BALL DIA	1 BALL	2 O-RING	3 HOUSING	AVAIL TOOTH PATTERN	LOAD RATING
ETBU0230F or ETBU0230S	ETBU-0230-(*)-**	3/8-24	1/2	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0230-H	SF	1763
	ETBU-0231-(*)-**	3/8-24	1	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0231-H	SF	1763
	ETBU-0231x2-(*)-**	3/8-24	2	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0231x2-H	SF	1763
	ETBU-0231x3-(*)-**	3/8-24	3	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0231x3-H	SF	1763
	ETBU-0370-(*)-**	3/8-16	1/2	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0370-H	SF	1763
	ETBU-0375-(*)-**	3/8-16	1	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0375-H	SF	1763
	ETBU-0375x2-(*)-**	3/8-16	2	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0375x2-H	SF	1763
ETBU-0375x3-(*)-**	3/8-16	3	3/16	5/32	28°	3/16	EBUB-100-(*)-**	EBUR-100	ETBU-0375x3-H	SF	1763	
ETBU0503F or ETBU0503S	ETBU-0503-(*)-**	1/2-20	3/4	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0503-H	EF/SF	4527
	ETBU-0500-(*)-**	1/2-20	1	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0500-H	EF/SF	4527
	ETBU-0500-x2-(*)-**	1/2-20	2	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0500x2-H	EF/SF	4527
	ETBU-0500-x3-(*)-**	1/2-20	3	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0500x3-H	EF/SF	4527
	ETBU-0513-(*)-**	1/2-13	3/4	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0513-H	EF/SF	4527
	ETBU-0510-(*)-**	1/2-13	1	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0510-H	EF/SF	4527
	ETBU-0510-x2-(*)-**	1/2-13	2	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0510x2-H	EF/SF	4527
ETBU-0510-x3-(*)-**	1/2-13	3	1/4	1/4	26°	9/32	EBUB-200-(*)-**	EBUR-200	ETBU-0510x3-H	EF/SF	4527	
ETBU0620F or ETBU0620S	ETBU-0620-(*)-**	5/8-18	1	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0620-H	EF/SF	6131
	ETBU-0620-x2-(*)-**	5/8-18	2	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0620x2-H	EF/SF	6131
	ETBU-0620-x3-(*)-**	5/8-18	3	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0620x3-H	EF/SF	6131
	ETBU-0625-(*)-**	5/8-11	1	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0625-H	EF/SF	6131
	ETBU-0625-x2-(*)-**	5/8-11	2	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0625x2-H	EF/SF	6131
	ETBU-0625-x3-(*)-**	5/8-11	3	5/16	5/16	28°	3/8	EBUB-300-(*)-**	EBUR-300	ETBU-0625x3-H	EF/SF	6131
ETBU0750F or ETBU0750S	ETBU-0750-(*)-**	3/4-16	1	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0750-H	EF/SF	8150
	ETBU-0750x2-(*)-**	3/4-16	2	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0750x2-H	EF/SF	8150
	ETBU-0750x3-(*)-**	3/4-16	3	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0750x3-H	EF/SF	8150
	ETBU-0755-(*)-**	3/4-10	1	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0755-H	EF/SF	8150
	ETBU-0755x2-(*)-**	3/4-10	2	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0755x2-H	EF/SF	8150
	ETBU-0755x3-(*)-**	3/4-10	3	3/8	3/8	22°	1/2	EBUB-500-(*)-**	EBUR-500	ETBU-0755x3-H	EF/SF	8150

(*)Must specify style of ball for assemblies or replacement balls by indicating "S" for Serrated, "SF" for Super Fine Serrations, "F" for Flat or "D" for Delrin.

CAD Directory

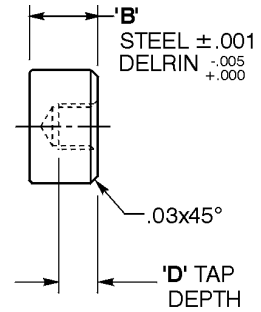
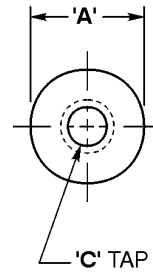
Mach-Tool/Grippers

Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

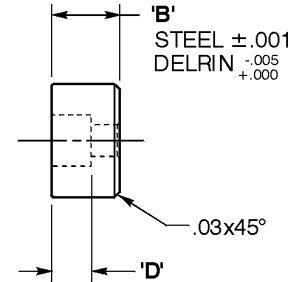
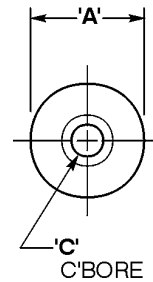
Rest Pads

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

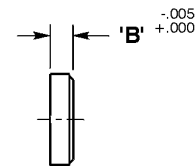
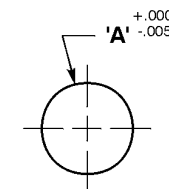
"ESRP" & "EDRP"-STEEL/DELTRIN-TAPPED						
CAD FILE NAME	STEEL PART NO.	DELTRIN PART NO.	A DIA	B	C TAP	D TAP DEPTH
ESRP30	ESRP-30	EDRP-30	5/16	3/8	#8-32	3/16
	ESRP-305	EDRP-305	5/16	1/2	#8-32	5/16
ESRP40	ESRP-40	EDRP-40	3/8	3/8	#10-32	3/16
	ESRP-405	EDRP-405	3/8	1/2	#10-32	5/16
ESRP50	ESRP-50	EDRP-50	1/2	3/8	#10-32	3/16
	ESRP-53	EDRP-53	1/2	1/2	#10-32	5/16
ESRP62	ESRP-62	EDRP-62	5/8	3/8	1/4-28	3/16
	ESRP-625	EDRP-625	5/8	1/2	1/4-28	5/16
ESRP75	ESRP-75	EDRP-75	3/4	3/8	1/4-28	3/16
	ESRP-755	EDRP-755	3/4	1/2	1/4-28	5/16
ESRP81	ESRP-81	EDRP-81	1	3/8	1/4-28	3/16
	ESRP-815	EDRP-815	1	1/2	1/4-28	5/16



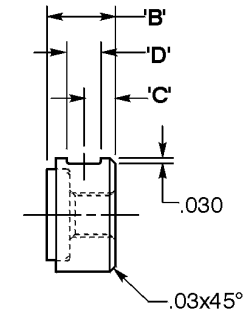
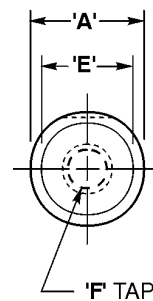
"ESRP" & "EDRP"-STEEL/DELTRIN-C'BORE						
CAD FILE NAME	STEEL PART NO.	DELTRIN PART NO.	A DIA	B	C C'BORE FOR	D C'BORE DEPTH
ESRP40C	ESRP-40-C	EDRP-40-C	3/8	3/8	#6 SHCS	3/16
	ESRP-405-C	EDRP-405-C	3/8	1/2	#6 SHCS	3/16
ESRP50C	ESRP-50-C	EDRP-50-C	1/2	3/8	#8 SHCS	7/32
	ESRP-53-C	EDRP-53-C	1/2	1/2	#8 SHCS	7/32
ESRP62C	ESRP-62-C	EDRP-62-C	5/8	3/8	#8 SHCS	7/32
	ESRP-625-C	EDRP-625-C	5/8	1/2	#8 SHCS	7/32
ESRP75C	ESRP-75-C	EDRP-75-C	3/4	3/8	#10 SHCS	1/4
	ESRP-755-C	EDRP-755-C	3/4	1/2	#10 SHCS	1/4
ESRP81C	ESRP-81-C	EDRP-81-C	1	3/8	1/4 SHCS	9/32
	ESRP-815-C	EDRP-815-C	1	1/2	1/4 SHCS	9/32



"ECC"-CARBIDE PADS			
CAD FILE NAME	PART NUMBER	A DIA	B
ECC1F	ECC-1F	1/4	1/8
ECC2F	ECC-2F	5/16	1/8
ECC3F	ECC-3F	3/8	1/8
ECC4F	ECC-4F	1/2	1/8
ECC5F	ECC-5F	5/8	1/8
ECC6F	ECC-6F	3/4	1/8



"ECRP"-CARBIDE TIPPED PADS							
CAD FILE NAME	PART NUMBER	A DIA	B	C	D	E	F TAP
ECRP40	ECRP-40	3/8	3/8	11/64	3/16	5/16	#10-32
ECRP405	ECRP-405	3/8	1/2	15/64	3/16	5/16	#10-32
ECRP50	ECRP-50	1/2	3/8	11/64	3/16	3/8	#10-32
ECRP53	ECRP-53	1/2	1/2	15/64	3/16	3/8	#10-32
ECRP62	ECRP-62	5/8	3/8	11/64	3/16	1/2	1/4-28
ECRP625	ECRP-625	5/8	1/2	15/64	3/16	1/2	1/4-28
ECRP75	ECRP-75	3/4	3/8	11/64	3/16	5/8	1/4-28
ECRP755	ECRP-755	3/4	1/2	15/64	3/16	5/8	1/4-28
ECRP81	ECRP-81	1	3/8	11/64	3/16	3/4	1/4-28

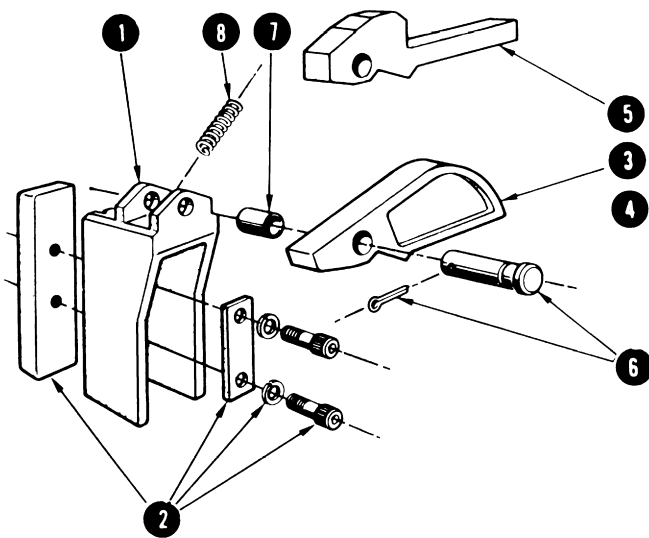


CAD Directory

Mach-Tool/Grippers

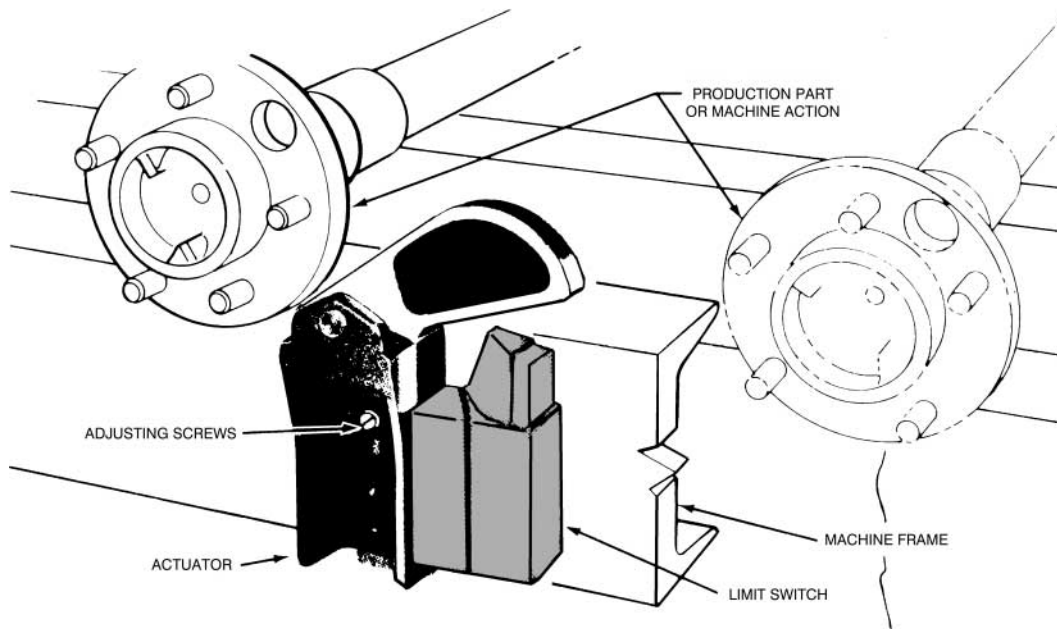
Note: The shortest standard components is given, you may "stretch" the unit to the desired length.

Actuator Parts



ITEM	PART NUMBER	DESCRIPTION
1	A5	BODY CASTING
2	A6	MOUNTING PLATE ASSEMBLY
3	50/51	15° ARM
4	59/60	30° ARM
5	53/54	SPECIAL ARM
6	A7	HEAVY DUTY HARDENED PIN ASSEMBLY
7	P-50-6	BUSHING
8	9-0808-11 (REG. 6#)	SPRING-FOR MODELS A-50, A-51, A-53 AND A-54
	9-0808-21 (H.D. 16#)	

Typical Application



Limit Switch Actuators

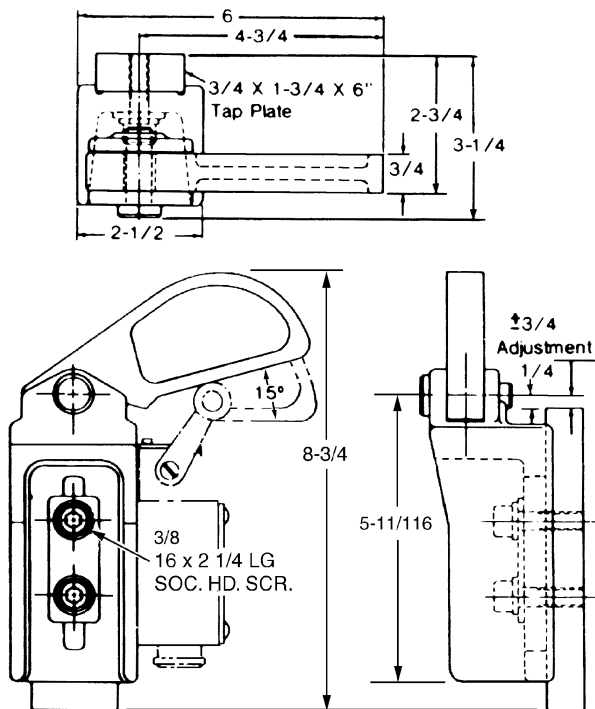


E&ESP

Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

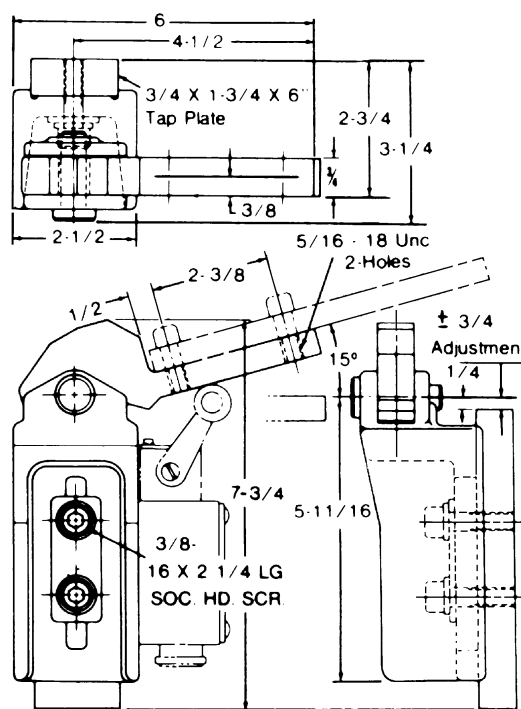
CAD File Name A-50, A-51

Part No. A50 R.H. (shown), A51 L.H.



CAD File Name A-53, A-54

Part No. A53 R.H. (shown), A54 L.H.



These actuators are stocked less mounting holes.

They accommodate most of the popular standard and plug-in machine tool or heavy duty limit switches.

SPECIAL ORDERS FOR LIMIT SWITCH MOUNTING HOLES

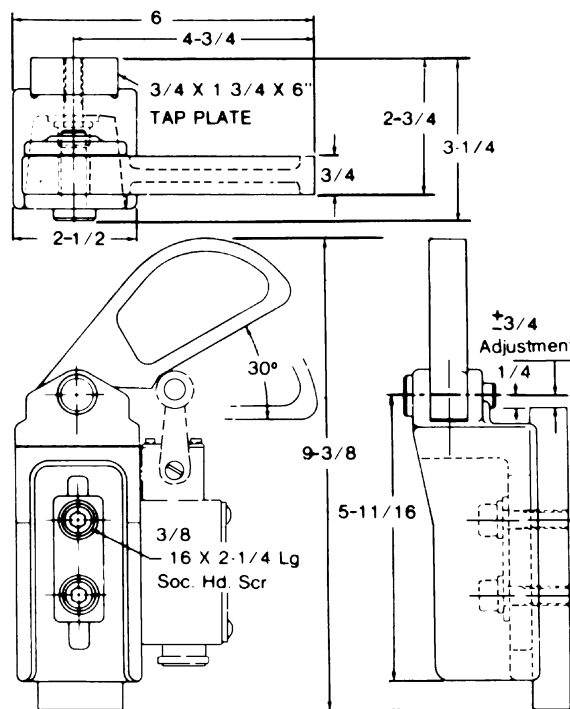
When ordering limit switch with mounting holes in actuator, the following descriptive limit switch information is required:

Make (Trade Name) Allen-Bradley
 Model or Type 802T-A1P
 Series C

Heat Treated Arms up to (Rc 56-58) Available.

CAD File Name A-59, A-60

Part No. A59 R.H. (shown), A60 L.H.



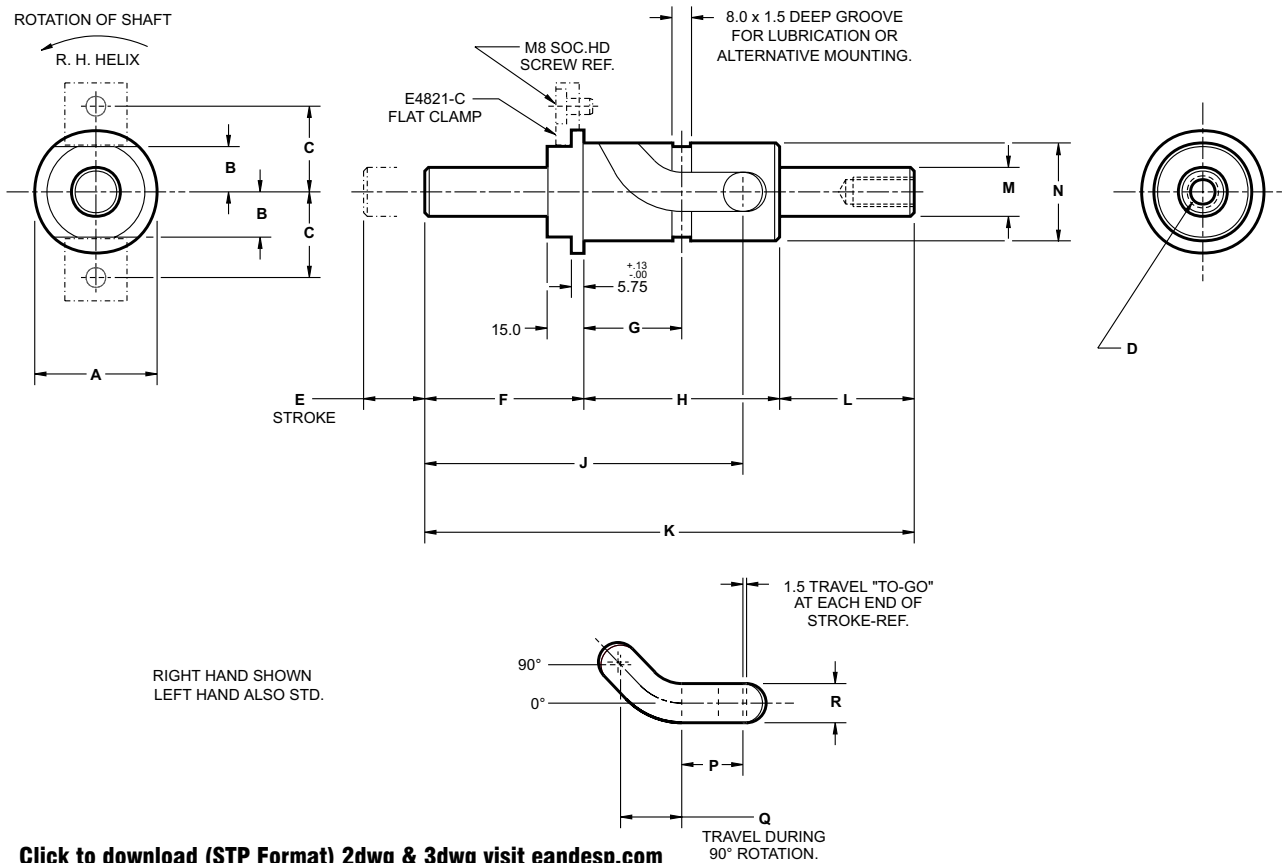
CAD Directory
 Mach-Tool\SwitchAct

Machine Tool Components

METRIC LINEAR ROTARY

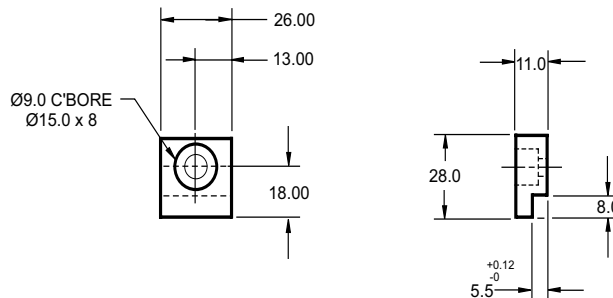


Metric Non - Powered Rota - Shaft Clamps



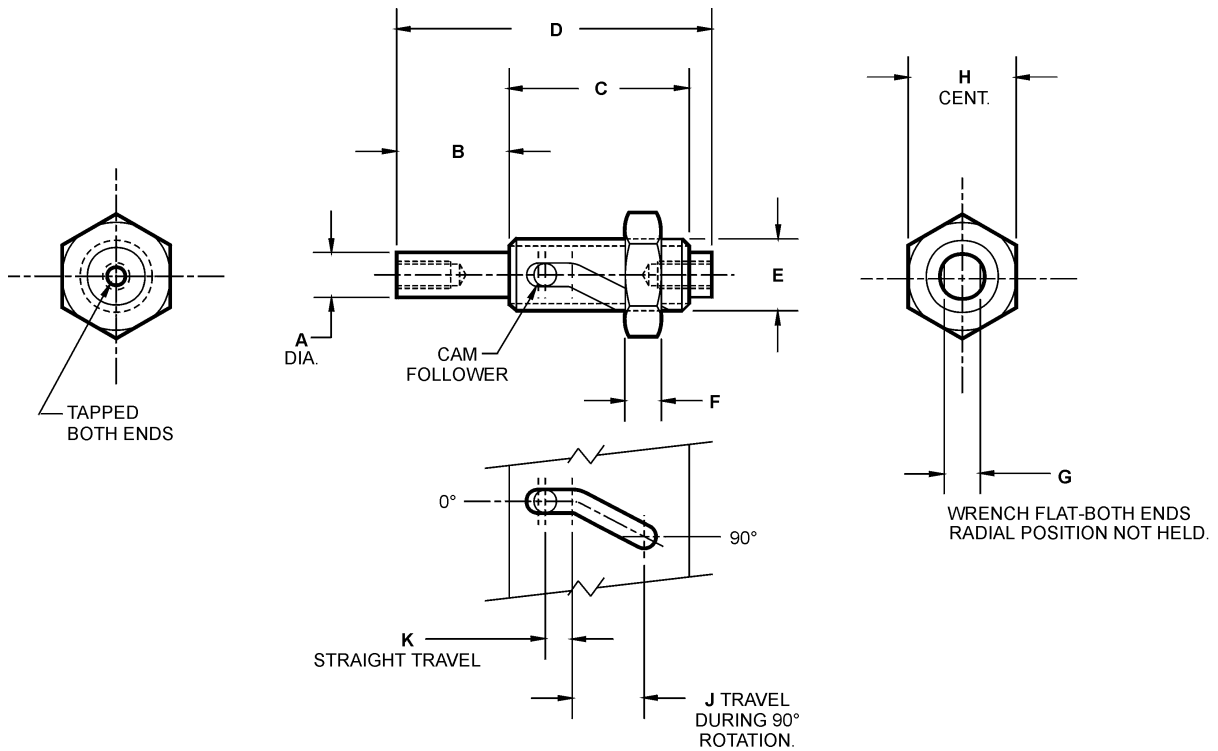
Click to download (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	DIMENSIONS															
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
EM20206	EM-20206-R/L	50.0	18.0	36	M12 x 1.25 TAP 25.0 DEEP	50.0	65.0	35.0	75.0	125.0	200.0	60.0	20.0 DIA.	40.0 DIA.	25.0	20.0	16.0
EM25206	EM-25206-R/L	65.0	25.0	43	M16 x 1.50 TAP 30.0 DEEP	60.0	80.0	50.0	100.0	160.0	250.0	70.0	25.0 DIA.	50.0 DIA.	30.0	30.0	20.0
EM35206	EM-35206-R/L	65.0	25.0	43	M20 x 1.50 TAP 30.0 DEEP	75.0	80.0	60.0	120.0	180.0	285.0	85.0	35.0 DIA.	55.0 DIA.	40.0	35.0	20.0
EM50206	EM-50206-R/L	90.0	38.0	56	M27 x 2.0 TAP 30.0 DEEP	85.0	80.0	65.0	125.0	185.0	300.0	95.0	50.0 DIA.	75.0 DIA.	40.0	45.0	20.0



Part No. E-4821-C

Metric Mini Non - Powered Rota - Shaft Clamps

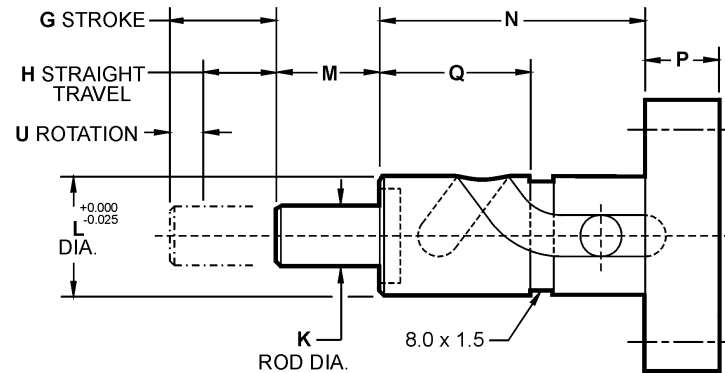
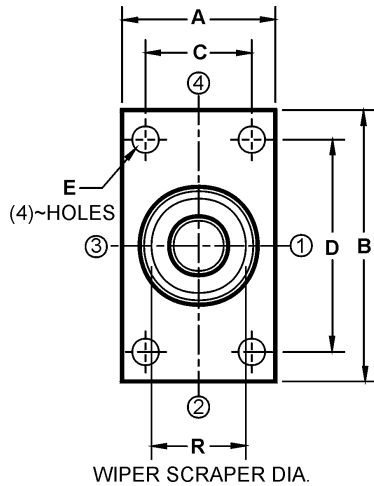


Metric

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	TAP BOTH ENDS	DIMENSIONS									
			A	B	C	D	E	F	G	H	J	K
EM1208	EM-1208-R/L	M4 x 0.7	7.90 ±0.03	25.0	40.0	70.0	M16 x 1.5	8.0	6.0	24.0	15.0	5.0
EM1210	EM-1210-R/L	M6 x 1.0	9.90 ±0.03	30.0	45.0	80.0	M20 x 1.5	10.0	8.0	30.0	15.0	10.0
EM1212	EM-1212-R/L	M8 x 1.25	11.90 ±0.03	40.0	50.0	100.0	M24 x 2.0	12.0	10.0	36.0	15.0	15.0

Metric Non - Powered Rota - Shaft Clamps for I.S.O. Flange Mount Cylinder Linear/Rotary



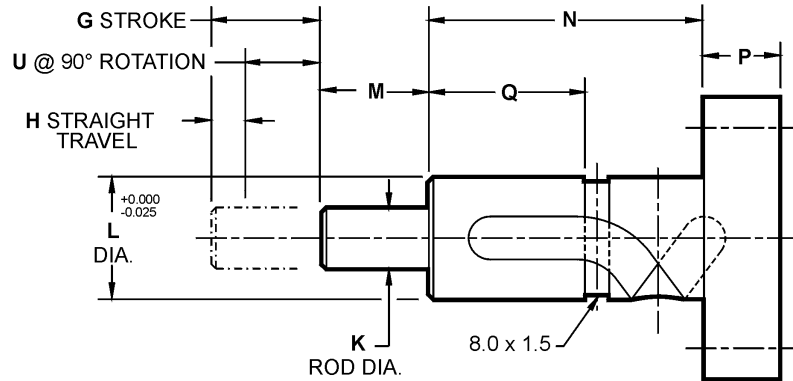
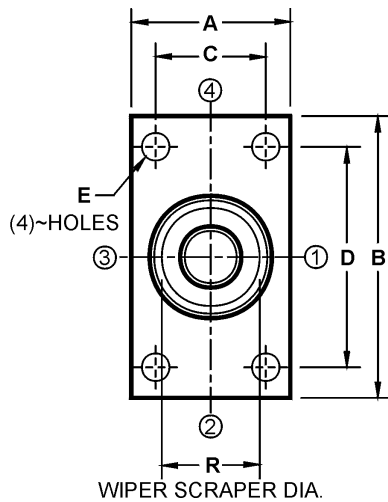
RIGHT HAND ROTATION SHOWN,
LEFT HAND ALSO STANDARD.

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS																
			A	B	C	D	E	G	H	K	L	M	N	P	Q	R	S	T	U (*SEE NOTE)
EM2040AT	EPM2040A-R/L	40 AIR	52.0	92.0	36.0	72.0	9.0	25.0 - 55.0	15.0	20.0	39.975	35.0	90.0	25.0	51.0	32.0	40.0	M10 x 1.25	10°-180°
EM2550AT	EPM2550A-R/L	50 AIR	63.5	113.0	45.0	90.0	9.0	20.0 - 60.0	10.0	25.0	44.975	35.0	100.0	30.0	56.0	37.0	45.0	M14 x 1.50	10°-180°
EM2563AT	EPM2563A-R/L	63 AIR	76.0	129.0	50.0	100.0	9.0	20.0 - 60.0	10.0	25.0	44.975	35.0	100.0	30.0	56.0	37.0	45.0	M14 x 1.50	10°-180°
EM3080AT	EPM3080A-R/L	80 AIR	95.5	153.0	63.0	126.0	12.0	25.0 - 80.0	15.0	30.0	49.975	50.0	135.0	35.0	71.0	42.0	70.0	M18 x 1.50	15°-180°
EM3010AT	EPM3010A-R/L	100 AIR	114.5	186.0	75.0	150.0	14.0	25.0 - 80.0	15.0	30.0	49.975	50.0	135.0	40.0	71.0	42.0	75.0	M18 x 1.50	15°-180°
EM2040HT	EPM2040H-R/L	40 HYD	63.0	110.0	41.0	87.0	11.0	25.0 - 55.0	15.0	20.0	39.975	35.0	85.0	35.0	51.0	32.0	45.0	M12 x 1.25	10°-180°
EM2550HT	EPM2550H-R/L	50 HYD	75.0	130.0	52.0	105.0	13.0	25.0 - 65.0	15.0	25.0	44.975	35.0	95.0	35.0	56.0	37.0	45.0	M16 x 1.50	10°-180°
EM3063HT	EPM3063H-R/L	63 HYD	90.0	150.0	65.0	125.0	13.0	25.0 - 80.0	15.0	30.0	49.975	50.0	137.0	35.0	71.0	42.0	72.0	M20 x 1.50	15°-180°

*NOTE: FOR ROTATION & TRAVEL INFO. SEE A SIMILAR UNIT WITH CYLINDER

Metric Non - Powered Rota - Shaft Clamps for I.S.O. Flange Mount Cylinder Rotary/Linear



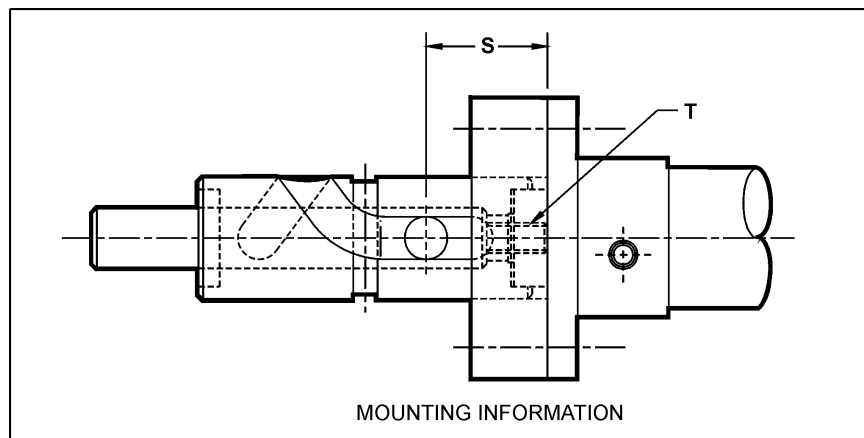
RIGHT HAND ROTATION SHOWN,
LEFT HAND ALSO STANDARD.

Metric

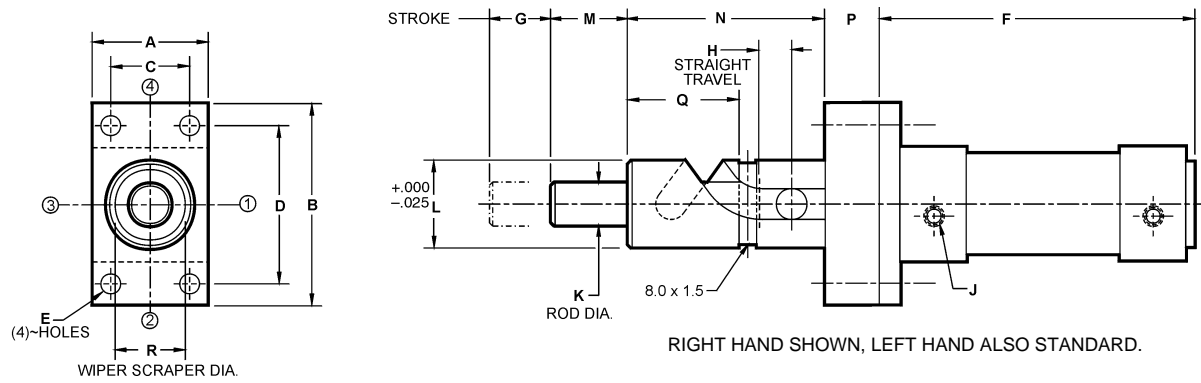
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS																
			A	B	C	D	E	G	H (*SEE NOTE)	K	L	M	N	P	Q	R	S	T	U
EM0240AT	EPM0240A-R/L	40 AIR	52.0	92.0	36.0	72.0	9.0	30.0 - 55.0	5.0 - 30.0	20.0	39.975	35.0	90.0	25.0	51.0	32.0	40.0	M10 x 1.25	25.0
EM5250AT	EPM5250A-R/L	50 AIR	63.5	113.0	45.0	90.0	9.0	35.0 - 60.0	5.0 - 30.0	25.0	44.975	35.0	100.0	30.0	56.0	37.0	45.0	M14 x 1.50	30.0
EM5263AT	EPM5263A-R/L	63 AIR	76.0	129.0	50.0	100.0	9.0	35.0 - 60.0	5.0 - 30.0	25.0	44.975	35.0	100.0	30.0	56.0	37.0	45.0	M14 x 1.50	30.0
EM0380AT	EPM0380A-R/L	80 AIR	95.5	153.0	63.0	126.0	12.0	40.0 - 50.0	5.0 - 15.0	30.0	49.975	50.0	135.0	35.0	71.0	42.0	70.0	M18 x 1.50	35.0
EM0310AT	EPM03100A-R/L	100 AIR	114.5	186.0	75.0	150.0	14.0	40.0 - 50.0	5.0 - 15.0	30.0	49.975	50.0	135.0	40.0	71.0	42.0	75.0	M18 x 1.50	35.0
EM0240HT	EPM0240H-R/L	40 HYD	63.0	110.0	41.0	87.0	11.0	30.0 - 55.0	5.0 - 30.0	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0	M12 x 1.25	25.0
EM5250HT	EPM5250H-R/L	50 HYD	75.0	130.0	52.0	105.0	13.0	35.0 - 60.0	5.0 - 30.0	25.0	44.975	40.0	95.0	35.0	56.0	37.0	30.0	M16 x 1.50	30.0
EM0363HT	EPM0363H-R/L	63 HYD	90.0	150.0	65.0	125.0	13.0	40.0 - 65.0	5.0 - 30.0	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0	M20 x 1.50	35.0

*NOTE: FOR ROTATION & TRAVEL INFO. SEE A SIMILAR UNIT WITH CYLINDER



Metric Air Powered Rota-Shaft Clamps with Cylinders Linear/Rotary

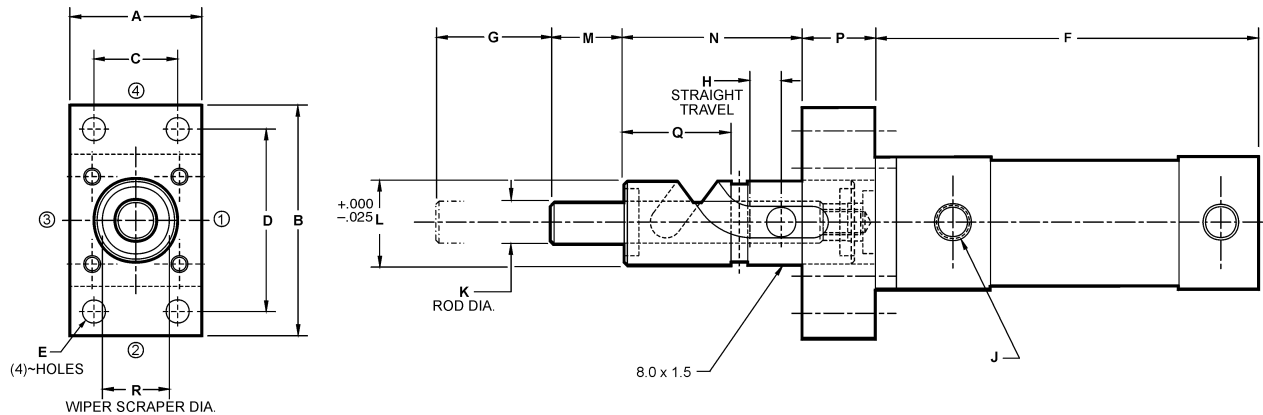


Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS																
				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	
EM20401	EPM-20-40-A-10-(R/L)	40	10°	52.0	92.0	36.0	72.0	9.0	144.0	25.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20402	EPM-20-40-A-30-(R/L)	40	30°	52.0	92.0	36.0	72.0	9.0	149.0	30.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20403	EPM-20-40-A-60-(R/L)	40	60°	52.0	92.0	36.0	72.0	9.0	154.0	35.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20404	EPM-20-40-A-90-(R/L)	40	90°	52.0	92.0	36.0	72.0	9.0	159.0	40.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20405	EPM-20-40-A-125-(R/L)	40	125°	52.0	92.0	36.0	72.0	9.0	164.0	45.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20406	EPM-20-40-A-150-(R/L)	40	150°	52.0	92.0	36.0	72.0	9.0	169.0	50.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM20407	EPM-20-40-A-180-(R/L)	40	180°	52.0	92.0	36.0	72.0	9.0	174.0	55.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	
EM25501	EPM-25-50-A-10-(R/L)	50	10°	63.5	113.0	45.0	90.0	9.0	142.0	20.0	10.0	1/4 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25502	EPM-25-50-A-45-(R/L)	50	45°	63.5	113.0	45.0	90.0	9.0	152.0	30.0	10.0	1/4 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25503	EPM-25-50-A-90-(R/L)	50	90°	63.5	113.0	45.0	90.0	9.0	162.0	40.0	10.0	1/4 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25504	EPM-25-50-A-135-(R/L)	50	135°	63.5	113.0	45.0	90.0	9.0	172.0	50.0	10.0	1/4 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25505	EPM-25-50-A-180-(R/L)	50	180°	63.5	113.0	45.0	90.0	9.0	182.0	60.0	10.0	1/4 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25631	EPM-25-63-A-10-(R/L)	63	10°	76.0	129.0	50.0	100.0	9.0	157.0	20.0	10.0	3/8 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25632	EPM-25-63-A-45-(R/L)	63	45°	76.0	129.0	50.0	100.0	9.0	167.0	30.0	10.0	3/8 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25633	EPM-25-63-A-90-(R/L)	63	90°	76.0	129.0	50.0	100.0	9.0	177.0	40.0	10.0	3/8 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25634	EPM-25-63-A-135-(R/L)	63	135°	76.0	129.0	50.0	100.0	9.0	187.0	50.0	10.0	3/8 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM25635	EPM-25-63-A-180-(R/L)	63	180°	76.0	129.0	50.0	100.0	9.0	197.0	60.0	10.0	3/8 BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	
EM30801	EPM-30-80-A-15-(R/L)	80	15°	95.5	153.0	63.0	126.0	12.0	173.0	25.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM30802	EPM-30-80-A-45-(R/L)	80	45°	95.5	153.0	63.0	126.0	12.0	183.0	35.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM30803	EPM-30-80-A-90-(R/L)	80	90°	95.5	153.0	63.0	126.0	12.0	198.0	50.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM30804	EPM-30-80-A-135-(R/L)	80	135°	95.5	153.0	63.0	126.0	12.0	213.0	65.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM30805	EPM-30-80-A-180-(R/L)	80	180°	95.5	153.0	63.0	126.0	12.0	228.0	80.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM301001	EPM-30-100-A-15-(R/L)	100	15°	114.5	186.0	75.0	150.0	14.0	183.0	25.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM301002	EPM-30-100-A-45-(R/L)	100	45°	114.5	186.0	75.0	150.0	14.0	193.0	35.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM301003	EPM-30-100-A-90-(R/L)	100	90°	114.5	186.0	75.0	150.0	14.0	208.0	50.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM301004	EPM-30-100-A-135-(R/L)	100	135°	114.5	186.0	75.0	150.0	14.0	223.0	65.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	
EM301005	EPM-30-100-A-180-(R/L)	100	180°	114.5	186.0	75.0	150.0	14.0	238.0	80.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	

ISO 6431 AIR CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 10 bar
MAX VELOCITY = 300 cm/min

Metric Hydraulic Powered Rota-Shaft Clamps with Cylinders Linear/Rotary



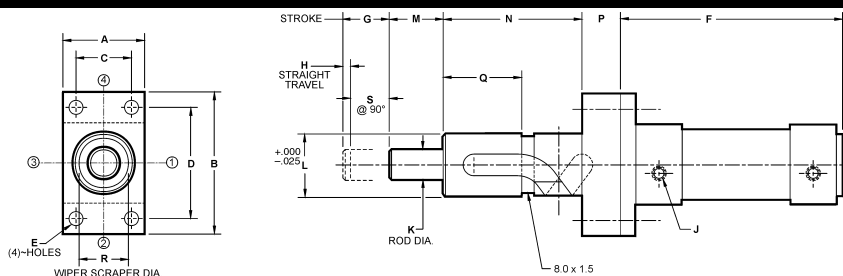
RIGHT HAND SHOWN, LEFT HAND ALSO STANDARD.

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS																
				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	
EMH20401	EPM-20-40-H-10-(R/L)	40	10°	63.0	110.0	41.0	87.0	11.0	153.0	25.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20402	EPM-20-40-H-30-(R/L)	40	30°	63.0	110.0	41.0	87.0	11.0	158.0	30.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20403	EPM-20-40-H-60-(R/L)	40	60°	63.0	110.0	41.0	87.0	11.0	163.0	35.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20404	EPM-20-40-H-90-(R/L)	40	90°	63.0	110.0	41.0	87.0	11.0	168.0	40.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20405	EPM-20-40-H-125-(R/L)	40	125°	63.0	110.0	41.0	87.0	11.0	173.0	45.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20406	EPM-20-40-H-150-(R/L)	40	150°	63.0	110.0	41.0	87.0	11.0	178.0	50.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH20407	EPM-20-40-H-180-(R/L)	40	180°	63.0	110.0	41.0	87.0	11.0	183.0	55.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	
EMH25501	EPM-25-50-H-10-(R/L)	50	10°	75.0	130.0	52.0	105.0	13.0	159.0	25.0	15.0	(1/2) BSP/G	25.0	44.975	35.0	95.0	35.0	56.0	37.0	
EMH25502	EPM-25-50-H-45-(R/L)	50	45°	75.0	130.0	52.0	105.0	13.0	169.0	35.0	15.0	(1/2) BSP/G	25.0	44.975	35.0	95.0	35.0	56.0	37.0	
EMH25503	EPM-25-50-H-90-(R/L)	50	90°	75.0	130.0	52.0	105.0	13.0	179.0	45.0	15.0	(1/2) BSP/G	25.0	44.975	35.0	95.0	35.0	56.0	37.0	
EMH25504	EPM-25-50-H-135-(R/L)	50	135°	75.0	130.0	52.0	105.0	13.0	189.0	55.0	15.0	(1/2) BSP/G	25.0	44.975	35.0	95.0	35.0	56.0	37.0	
EMH25505	EPM-25-50-H-180-(R/L)	50	180°	75.0	130.0	52.0	105.0	13.0	199.0	65.0	15.0	(1/2) BSP/G	25.0	44.975	35.0	95.0	35.0	56.0	37.0	
EMH30631	EPM-30-63-H-15-(R/L)	63	15°	90.0	150.0	65.0	125.0	13.0	161.0	25.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	
EMH30632	EPM-30-63-H-45-(R/L)	63	45°	90.0	150.0	65.0	125.0	13.0	171.0	35.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	
EMH30633	EPM-30-63-H-90-(R/L)	63	90°	90.0	150.0	65.0	125.0	13.0	186.0	50.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	
EMH30634	EPM-30-63-H-120-(R/L)	63	120°	90.0	150.0	65.0	125.0	13.0	196.0	60.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	
EMH30635	EPM-30-63-H-135-(R/L)	63	135°	90.0	150.0	65.0	125.0	13.0	206.0	70.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	

ISO 6020/2 HYDRAULIC CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 210 bar
MAX VELOCITY = 300 cm/min

Metric Air Powered Rota-Shaft Clamps with Cylinders Rotary/Linear



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS																
				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
EM02401	EPM-02-40-A-90-(R/L)-30	40	90°	52.0	92.0	36.0	72.0	9.0	149.0	30.0	5.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM02402	EPM-02-40-A-90-(R/L)-35	40	90°	52.0	92.0	36.0	72.0	9.0	154.0	35.0	10.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM02403	EPM-02-40-A-90-(R/L)-40	40	90°	52.0	92.0	36.0	72.0	9.0	159.0	40.0	15.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM02404	EPM-02-40-A-90-(R/L)-45	40	90°	52.0	92.0	36.0	72.0	9.0	164.0	45.0	20.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM02405	EPM-02-40-A-90-(R/L)-50	40	90°	52.0	92.0	36.0	72.0	9.0	169.0	50.0	25.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM02406	EPM-02-40-A-90-(R/L)-55	40	90°	52.0	92.0	36.0	72.0	9.0	174.0	55.0	30.0	(1/4) BSP/G	20.0	39.975	35.0	90.0	25.0	51.0	32.0	25.0
EM52501	EPM-52-50-A-90-(R/L)-35	50	90°	63.5	113.0	45.0	90.0	9.0	157.0	35.0	5.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52502	EPM-52-50-A-90-(R/L)-40	50	90°	63.5	113.0	45.0	90.0	9.0	162.0	40.0	10.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52503	EPM-52-50-A-90-(R/L)-45	50	90°	63.5	113.0	45.0	90.0	9.0	167.0	45.0	15.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52504	EPM-52-50-A-90-(R/L)-50	50	90°	63.5	113.0	45.0	90.0	9.0	172.0	50.0	20.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52505	EPM-52-50-A-90-(R/L)-55	50	90°	63.5	113.0	45.0	90.0	9.0	177.0	55.0	25.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52506	EPM-52-50-A-90-(R/L)-60	50	90°	63.5	113.0	45.0	90.0	9.0	182.0	60.0	30.0	(1/4) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52631	EPM-52-63-A-90-(R/L)-35	63	90°	76.0	129.0	50.0	100.0	9.0	172.0	35.0	5.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52632	EPM-52-63-A-90-(R/L)-40	63	90°	76.0	129.0	50.0	100.0	9.0	177.0	40.0	10.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52633	EPM-52-63-A-90-(R/L)-45	63	90°	76.0	129.0	50.0	100.0	9.0	182.0	45.0	15.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52634	EPM-52-63-A-90-(R/L)-50	63	90°	76.0	129.0	50.0	100.0	9.0	187.0	50.0	20.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52635	EPM-52-63-A-90-(R/L)-55	63	90°	76.0	129.0	50.0	100.0	9.0	192.0	55.0	25.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM52636	EPM-52-63-A-90-(R/L)-60	63	90°	76.0	129.0	50.0	100.0	9.0	197.0	60.0	30.0	(3/8) BSP/G	25.0	44.975	35.0	100.0	30.0	56.0	37.0	30.0
EM03801	EPM-03-80-A-90-(R/L)-40	80	90°	95.5	153.0	63.0	126.0	12.0	188.0	40.0	5.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03802	EPM-03-80-A-90-(R/L)-45	80	90°	95.5	153.0	63.0	126.0	12.0	193.0	45.0	10.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03803	EPM-03-80-A-90-(R/L)-50	80	90°	95.5	153.0	63.0	126.0	12.0	198.0	50.0	15.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03804	EPM-03-80-A-90-(R/L)-55	80	90°	95.5	153.0	63.0	126.0	12.0	203.0	55.0	20.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03805	EPM-03-80-A-90-(R/L)-60	80	80°	95.5	153.0	63.0	126.0	12.0	208.0	60.0	25.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03806	EPM-03-80-A-90-(R/L)-65	80	90°	95.5	153.0	63.0	126.0	12.0	213.0	65.0	30.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03807	EPM-03-80-A-90-(R/L)-70	80	90°	95.5	153.0	63.0	126.0	12.0	218.0	70.0	35.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM03808	EPM-03-80-A-90-(R/L)-75	80	90°	95.5	153.0	63.0	126.0	12.0	223.0	75.0	40.0	3/8 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031001	EPM-03-100-A-90-(R/L)-40	100	90°	114.5	186.0	75.0	150.0	14.0	198.0	40.0	5.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031002	EPM-03-100-A-90-(R/L)-45	100	90°	114.5	186.0	75.0	150.0	14.0	203.0	45.0	10.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031003	EPM-03-100-A-90-(R/L)-50	100	90°	114.5	186.0	75.0	150.0	14.0	208.0	50.0	15.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031004	EPM-03-100-A-90-(R/L)-55	100	90°	114.5	186.0	75.0	150.0	14.0	213.0	55.0	20.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031005	EPM-03-100-A-90-(R/L)-60	100	90°	114.5	186.0	75.0	150.0	14.0	218.0	60.0	25.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031006	EPM-03-100-A-90-(R/L)-65	100	90°	114.5	186.0	75.0	150.0	14.0	223.0	65.0	30.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031007	EPM-03-100-A-90-(R/L)-70	100	90°	114.5	186.0	75.0	150.0	14.0	228.0	70.0	35.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0
EM031008	EPM-03-100-A-90-(R/L)-75	100	90°	114.5	186.0	75.0	150.0	14.0	233.0	75.0	40.0	1/2 BSP/G	30.0	49.975	50.0	135.0	35.0	71.0	42.0	35.0

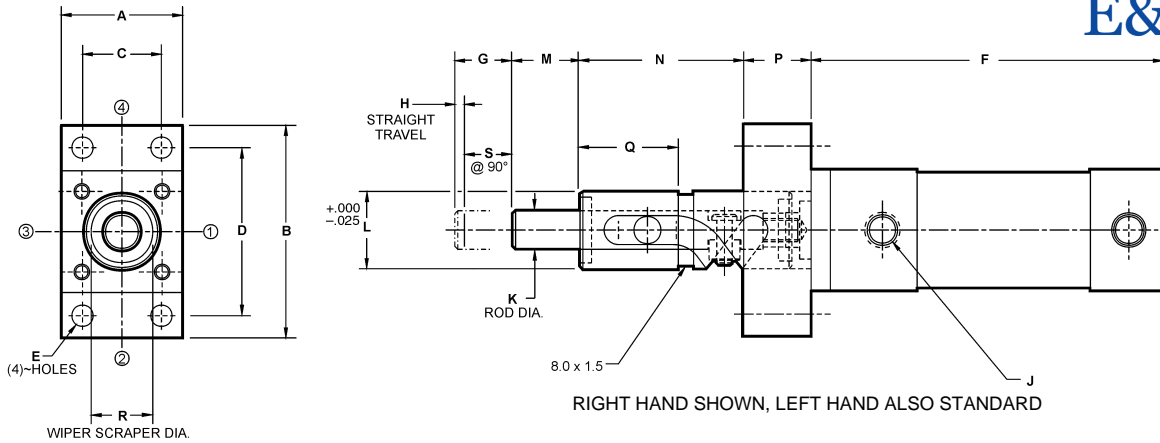
CAD Directory

ISO 6431 AIR CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 10 bar

MAX VELOCITY = 300 cm/min

Linear-Rotary\Met-Power

Metric Hydraulic Powered Rota-Shaft Clamps with Cylinders Rotary/Linear



Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

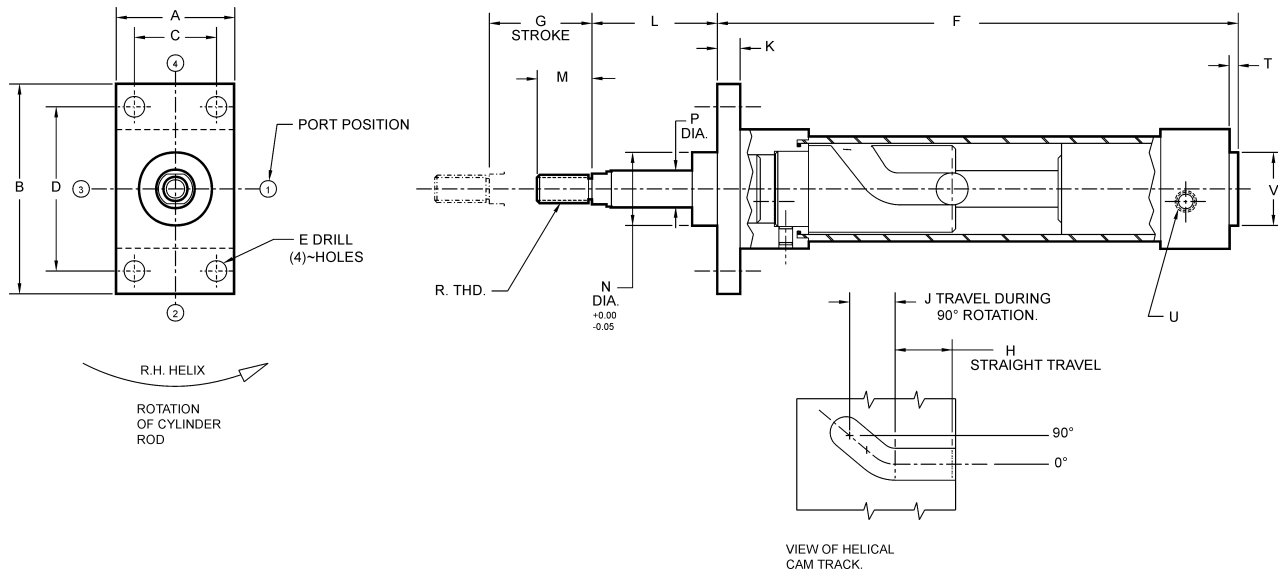
CAD FILE NAME	PART NUMBER	CYLINDER BORE	ROTATION	DIMENSIONS																
				A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
EMH02401	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	158.0	30.0	5.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH02402	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	163.0	35.0	10.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH02403	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	168.0	40.0	15.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH02404	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	173.0	45.0	20.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH02405	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	178.0	50.0	25.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH02406	EPM-02-40-H-90-(R/L)-30	40	90°	63.0	110.0	41.0	87.0	11.0	183.0	55.0	30.0	(3/8) BSP/G	20.0	39.975	35.0	85.0	35.0	51.0	32.0	25.0
EMH52501	EPM-52-50-H-90-(R/L)-35	50	90°	75.0	130.0	52.0	105.0	13.0	169.0	35.0	5.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH52502	EPM-52-50-H-90-(R/L)-40	50	90°	75.0	130.0	52.0	105.0	13.0	174.0	40.0	10.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH52503	EPM-52-50-H-90-(R/L)-45	50	90°	75.0	130.0	52.0	105.0	13.0	179.0	45.0	15.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH52504	EPM-52-50-H-90-(R/L)-50	50	90°	75.0	130.0	52.0	105.0	13.0	184.0	50.0	20.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH52505	EPM-52-50-H-90-(R/L)-55	50	90°	75.0	130.0	52.0	105.0	13.0	189.0	55.0	25.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH52506	EPM-52-50-H-90-(R/L)-60	50	90°	75.0	130.0	52.0	105.0	13.0	194.0	60.0	30.0	(1/2) BSP/G	25.0	44.975	40.0	90.0	35.0	56.0	37.0	30.0
EMH03631	EPM-03-63-H-90-(R/L)-40	63	90°	90.0	150.0	65.0	125.0	13.0	176.0	40.0	5.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0
EMH03632	EPM-03-63-H-90-(R/L)-45	63	90°	90.0	150.0	65.0	125.0	13.0	181.0	45.0	10.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0
EMH03633	EPM-03-63-H-90-(R/L)-50	63	90°	90.0	150.0	65.0	125.0	13.0	186.0	50.0	15.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0
EMH03634	EPM-03-63-H-90-(R/L)-55	63	90°	90.0	150.0	65.0	125.0	13.0	191.0	55.0	20.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0
EMH03635	EPM-03-63-H-90-(R/L)-60	63	90°	90.0	150.0	65.0	125.0	13.0	196.0	60.0	25.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0
EMH03636	EPM-03-63-H-90-(R/L)-65	63	90°	90.0	150.0	65.0	125.0	13.0	201.0	65.0	30.0	(1/2) BSP/G	30.0	49.975	50.0	137.0	35.0	71.0	42.0	35.0

ISO 6020/2 HYDRAULOC CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 210 bar
MAX VELOCITY = 300 cm/min

CAD Directory
Linear-Rotary\Met-Power

All dimensions are in mm

Metric Air Powered Internal Rota-Shaft

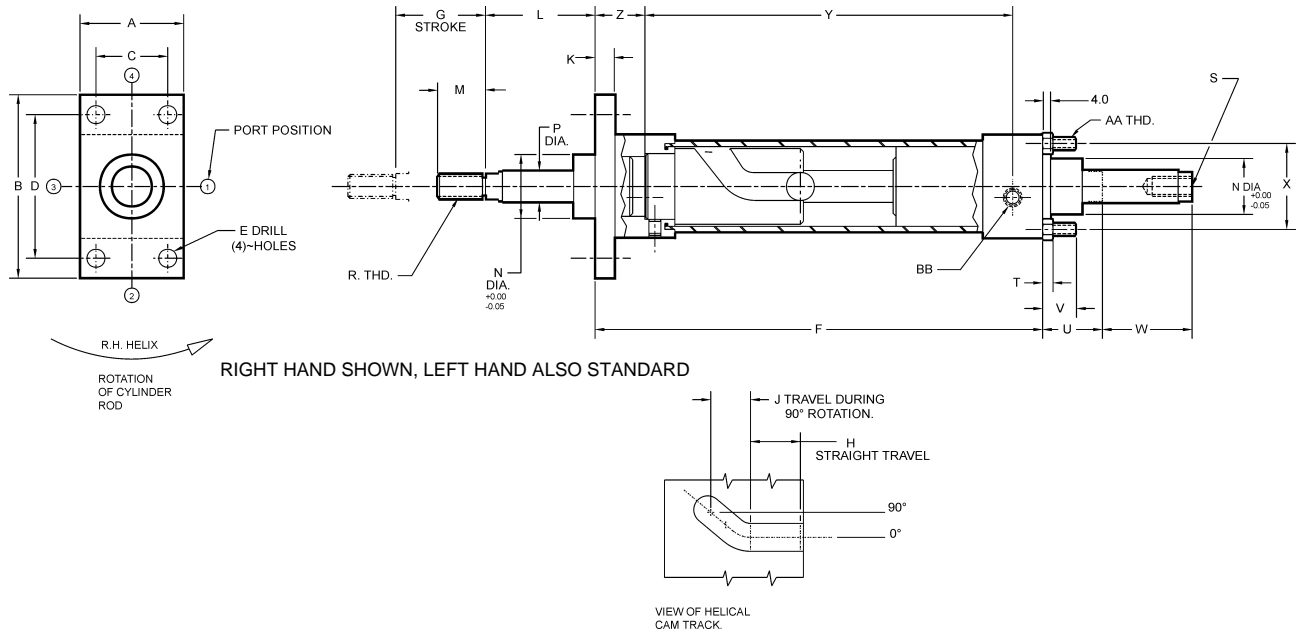


Click to download (STP Format) 2dwg & 3dwg visit eandesp.com

AIR POWERED																					
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS																		
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W
EM1640	EM16401-(R/L)	40	52.0	92.0	36.0	72.0	9.0	228.5	45.0	25.0	20.0	10.0	55.0	24.0	32.0	16.0	M12 x 1.25	4.0	(1/4) BSP/G	35.0	21.0
EM2050	EM20501-(R/L)	50	63.5	113.0	45.0	90.0	9.0	238.0	50.0	25.0	25.0	12.0	55.0	32.0	36.0	20.0	M16 x 1.50	4.0	(1/4) BSP/G	40.0	28.0
EM2063	EM20631-(R/L)	63	76.0	129.0	50.0	100.0	9.0	253.0	50.0	25.0	25.0	12.0	55.0	32.0	36.0	20.0	M16 x 1.50	4.0	(3/8) BSP/G	45.0	28.0
EM2580	EM25801-(R/L)	80	95.5	153.0	63.0	126.0	12.0	279.0	55.0	25.0	30.0	16.0	80.0	40.0	41.0	25.0	M20 x 1.50	4.0	(3/8) BSP/G	45.0	34.0

ISO 6431 AIR CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 10 bar
 MAX VELOCITY = 300 cm/min

Metric Air Powered Internal Rota-Shaft with Double Rod End



Metric

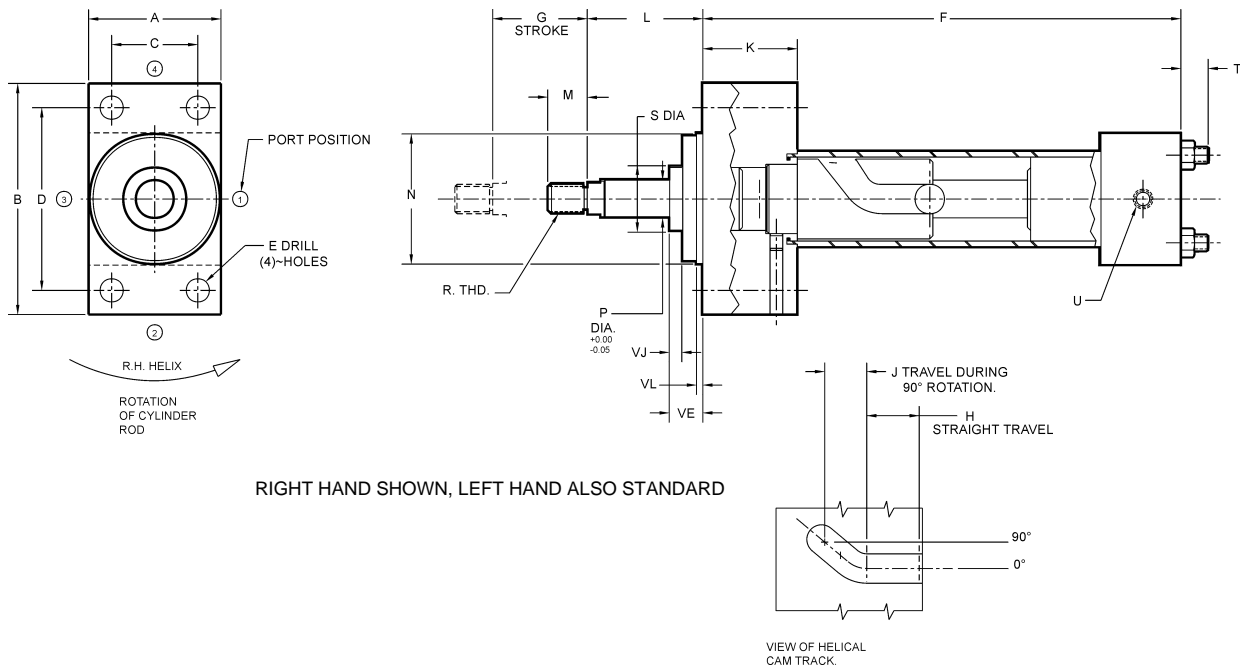
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

AIR POWERED																
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS													
			A	B	C	D	E	F	G	H	J	K	L	M	N	P
EM1640-DE	EM-16401-DE-(R/L)	40	52.0	92.0	36.0	72.0	9.0	224.5	45.0	25.0	20.0	10.0	55.0	24.0	32.0	16.0
EM2050-DE	EM-20501-DE-(R/L)	50	63.5	113.0	45.0	90.0	9.0	234.0	50.0	25.0	25.0	12.0	55.0	32.0	36.0	20.0
EM2063-DE	EM-20631-DE-(R/L)	63	76.0	129.0	50.0	100.0	9.0	249.0	50.0	25.0	25.0	12.0	55.0	32.0	36.0	20.0
EM2580-DE	EM-25801-DE-(R/L)	80	95.5	153.0	63.0	126.0	12.0	275.0	55.0	25.0	30.0	16.0	80.0	40.0	41.0	25.0

AIR POWERED																
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS													
			R	S	T	U	V	W	X	Y	Z	AA	BB	CC		
EM1640-DE	EM-16401-DE-(R/L)	40	M12 x 1.25	M10 x 1.25	5.0	30.0	17.0	45.0	38.0	184.5	25.0	M6 x 1.00	(1/4) BSP/G	21.0		
EM2050-DE	EM-20501-DE-(R/L)	50	M16 x 1.50	M14 x 1.50	6.5	37.0	23.0	50.0	46.5	188.0	29.0	M8 x 1.25	(1/4) BSP/G	28.0		
EM2063-DE	EM-20631-DE-(R/L)	63	M16 x 1.50	M14 x 1.50	6.5	37.0	23.0	50.0	56.5	205.0	28.0	M8 x 1.25	(3/8) BSP/G	28.0		
EM2580-DE	EM-25801-DE-(R/L)	80	M20 x 1.50	M18 x 1.50	8.0	46.0	28.0	55.0	72.0	227.0	32.0	M10 x 1.50	(3/8) BSP/G	34.0		

ISO 6431 AIR CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 10 bar
 MAX VELOCITY = 300 cm/min

Metric Hydraulic Powered Internal Rota-Shaft

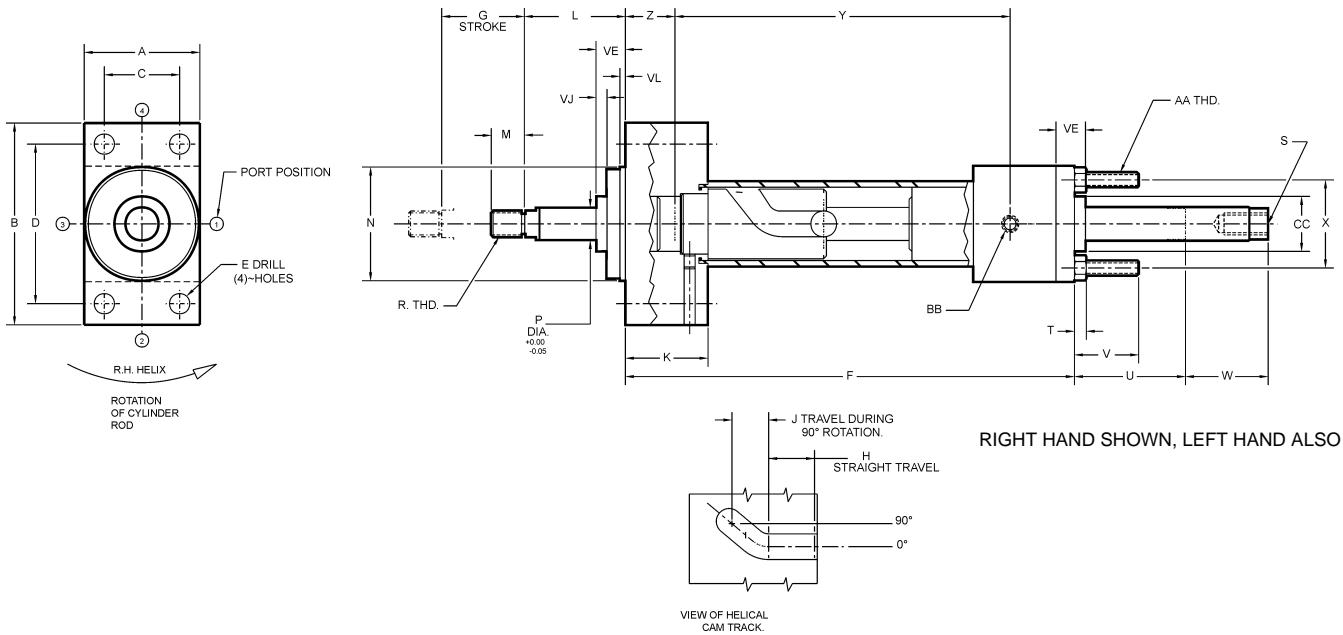


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

HYDRAULIC POWERED																							
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS																				
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	VE	VJ	VL
EMH1840H	EMH-18401-(R/L)	40	63.0	110.0	41.0	87.0	11.0	227.5	45.0	25.0	20.0	45.0	55.0	18.0	62.0	18.0	M14 x 1.50	30.0	13.0	(3/8) BSP/G	16.0	6.0	3.0
EMH2250H	EMH-22501-(R/L)	50	75.0	130.0	52.0	105.0	14.0	234.0	50.0	25.0	25.0	45.0	55.0	22.0	74.0	22.0	M16 x 1.50	34.0	17.0	(1/2) BSP/G	22.0	6.0	4.0
EMH2863H	EMH-28631-(R/L)	63	90.0	145.0	65.0	117.0	14.0	251.0	55.0	25.0	30.0	45.0	55.0	28.0	75.0	28.0	M20 x 1.50	42.0	17.0	(1/2) BSP/G	22.0	6.0	4.0

ISO 6020/2 HYDRAULIC CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 210 bar
 MAX VELOCITY = 300 cm/min

Metric Hydraulic Powered Internal Rota-Shaft with Double Rod End



Metric

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

HYDRAULIC POWERED																	
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS														
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
EMH1840-DE	EMH-18401-DE-(R/L)	40	63.0	110.0	41.0	87.0	11.0	244.5	45.0	25.0	20.0	45.0	55.0	18.0	62.0	18.0	M14 x 1.50
EMH2250-DE	EMH-22501-DE-(R/L)	50	75.0	130.0	52.0	105.0	14.0	257.0	50.0	25.0	25.0	45.0	55.0	22.0	74.0	22.0	M16 x 1.50
EMH2863-DE	EMH-28631-DE-(R/L)	63	90.0	145.0	65.0	117.0	14.0	274.0	55.0	25.0	30.0	45.0	55.0	28.0	75.0	28.0	M20 x 1.50

HYDRAULIC POWERED																
CAD FILE NAME	PART NUMBER	CYLINDER BORE	DIMENSIONS													
			S	T	U	V	W	X	Y	Z	VJ	VE	VL	AA	BB	CC
EMH1840-DE	EMH-18401-DE-(R/L)	40	M12 x 1.25	6.5	25.0	35.0	45.0	41.7	182.5	27.0	6.0	16.0	3.0	M6 X 1.00	(3/8) BSP/G	30.0
EMH2250-DE	EMH-22501-DE-(R/L)	50	M16 x 1.50	10.0	25.0	46.0	50.0	52.3	190.0	26.0	6.0	22.0	4.0	M8 X 1.25	(1/2) BSP/G	34.0
EMH2863-DE	EMH-28631-DE-(R/L)	63	M20 x 1.50	10.0	32.0	46.0	55.0	64.3	211.0	28.0	6.0	22.0	4.0	M8 X 1.25	(1/2) BSP/G	42.0

ISO 6020/2 HYDRAULIC CYLINDER, MAXIMUM RECOMMENDED OPERATING PRESSURE = 210 bar
MAX VELOCITY = 300 cm/min

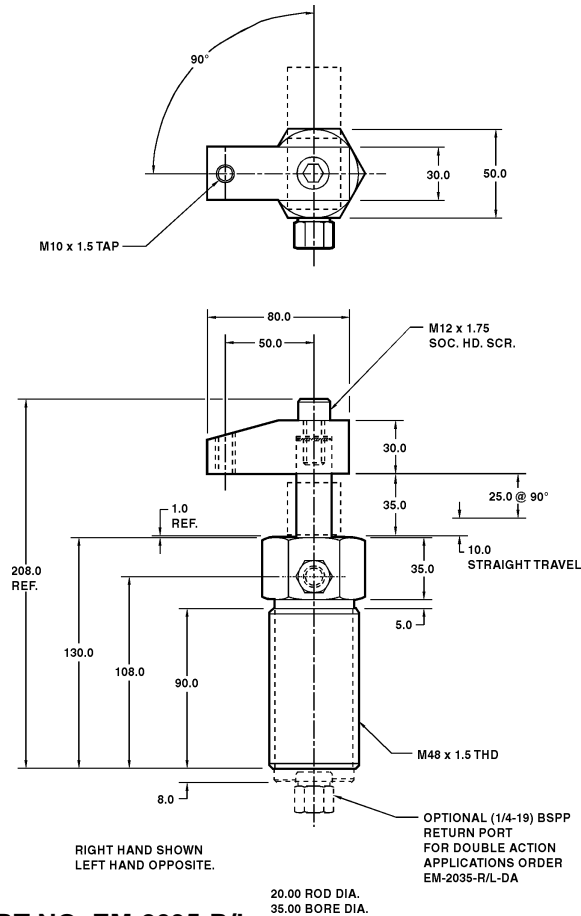
Metric Threaded Body Rota-Shaft for Hydraulic Applications



Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name = EM2035SA
PART No. EM-2035-R/L - (SINGLE ACTING)

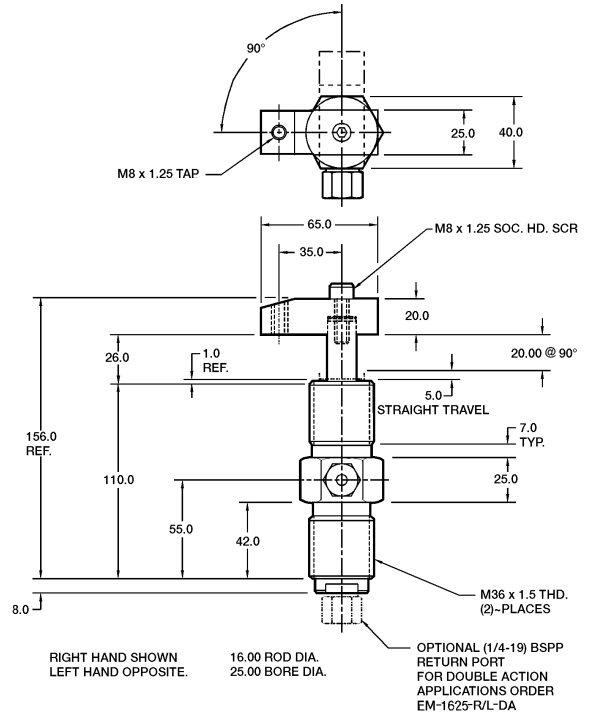
CAD File Name = EM2035DA
PART No. EM-2035-R/L-DA - (DOUBLE ACTING)



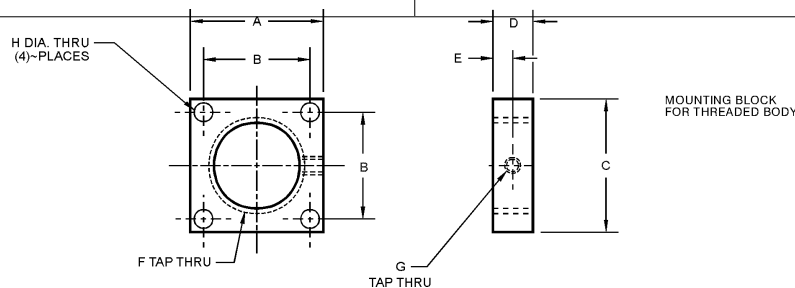
PART NO. EM-2035-R/L
MAXIMUM OPERATING PRESSURE = 124 bars

CAD File Name = EM1625SA
PART No. EM-1625-R/L - (SINGLE ACTING)

CAD File Name = EM1625DA
PART No. EM-1625-R/L-DA - (DOUBLE ACTING)



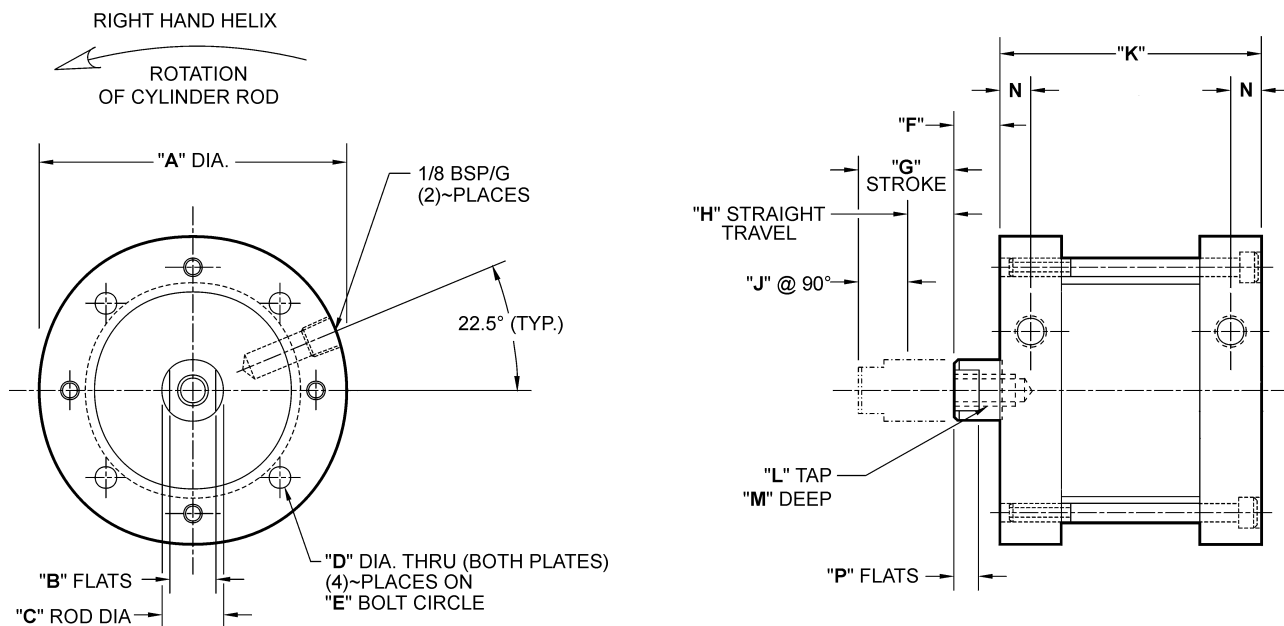
PART NO. EM-1625-R/L
MAXIMUM OPERATING PRESSURE = 144 bars



CAD FILE NAME	PART NUMBER	DIMENSIONS							
		A	B	C	D	E	F	G	H
EM1625MT	EM-1625-MT	50.0	40.0	50.0	15.0	7.5	M36 x 1.5	M6 x 1.0	7.0
EM2035MT	EM-2035-MT	70.0	55.0	70.0	25.0	12.5	M48 x 1.5	M8 x 1.25	9.0



Metric Low Profile Rota-Shaft



Metric

Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	DIMENSIONS													
		A	B	C	D	E	F	G	H	J	K	L	M	N	P
EM2063	EM2063-(R/L)	100.0	15.0	20.0	7.0	85.0	15.0	35.0	15.0	20.0 @ 90°	95.0	M10 x 1.5	20.0	10.0	8.0
EM2580	EM2580-(R/L)	120.0	20.0	25.0	9.0	105.0	20.0	40.0	15.0	25.0 @ 90°	100.0	M16 x 2.0	32.0	10.0	8.0

MAX OPERATING PRESSURE = 7 bars

METRIC MATERIAL HANDLING



Metric Round Molded Bumpers

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

FEMALE THREADS						
CAD FILE NAME	NEOPRENE BUMPER No.	URETHANE BUMPER No.	A DIA.	B HEIGHT	C	FEMALE THREAD
EM516	EMRB-5166	EMRB-5166-80UR	19MM	16MM	9MM	M6 x 1.0 x 7MM
	EMRB-5168	EMRB-5168-80UR	19MM	16MM	9MM	M8 x 1.25 x 7MM
EM3-8	EMRB-3	EMRB-3UR	32MM	32MM	19MM	M10 x 1.5 x 13MM
	EMRB-4	EMRB-4UR	32MM	32MM	19MM	M10 x 1.25 x 13MM
	EMRB-5	EMRB-5UR	32MM	32MM	19MM	M12 x 1.75 x 13MM
	EMRB-6	EMRB-6UR	32MM	32MM	19MM	M12 x 1.25 x 13MM
	EMRB-8	EMRB-8UR	32MM	32MM	19MM	M16 x 2.0 x 13MM
EM9	EMRB-9	EMRB-9UR	45MM	42MM	22.5MM	M16 x 2.0 x 16MM
EM12-14	EMRB-12	EMRB-12UR	57MM	57MM	35MM	M20 x 2.5 x 25MM
	EMRB-14	EMRB-14UR	57MM	57MM	35MM	M24 x 3.0 x 25MM

Materials: Neoprene 40-45 Durometer
Urethane 80-90 Durometer

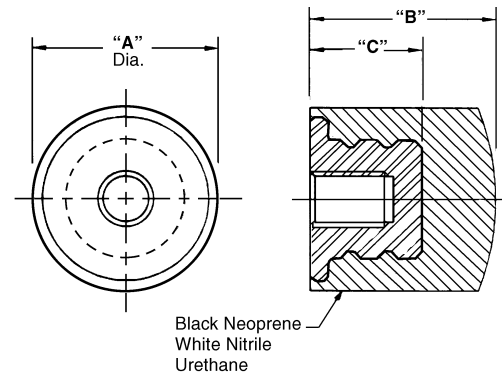
NOTE: Standard ERB-516 Neoprene bumpers - 70 Durometer

MALE THREADS						
CAD FILE NAME	NEOPRENE BUMPER No.	URETHANE BUMPER No.	A DIA.	B HEIGHT	C	MALE THREAD
EM516-6	EMRB-5166 x 15	EMRB-5166UR x 15	19MM	16MM	3.2MM	M6 x 1.0 x 15MM
	EMRB-5166 x 30	EMRB-5166UR x 30	19MM	16MM	3.2MM	M6 x 1.0 x 30MM
EM516-8	EMRB-5168 x 15	EMRB-5168UR x 15	19MM	16MM	4MM	M8 x 1.25 x 15MM
	EMRB-5168 x 30	EMRB-5168UR x 30	19MM	16MM	4MM	M8 x 1.25 x 30MM
EM3-10	EMRB-3 x 15	EMRB-3UR x 15	32MM	32MM	19MM	M10 x 1.5 x 15MM
	EMRB-3 x 30	EMRB-3UR x 30	32MM	32MM	19MM	M10 x 1.5 x 30MM
EM5-12	EMRB-5 x 15	EMRB-5UR x 15	32MM	32MM	19MM	M12 x 1.75 x 15MM
	EMRB-5 x 30	EMRB-5UR x 30	32MM	32MM	19MM	M12 x 1.75 x 30MM
EM8-16	EMRB-8 x 15	EMRB-8UR x 15	32MM	32MM	19MM	M16 x 2.0 x 15MM
	EMRB-8 x 30	EMRB-8UR x 30	32MM	32MM	19MM	M16 x 2.0 x 30MM
EM9-16	EMRB-9 x 15	EMRB-9UR x 15	45MM	42MM	22.5MM	M16 x 2.0 x 15MM
	EMRB-9 x 30	EMRB-9UR x 30	45MM	42MM	22.5MM	M16 x 2.0 x 30MM

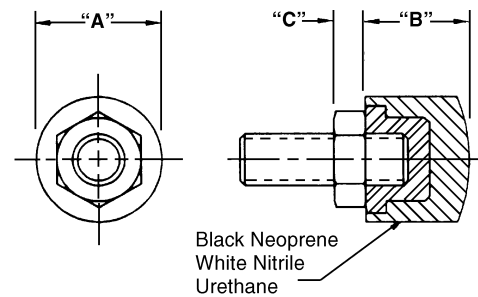
Materials: Neoprene 40-45 Durometer
Urethane 80-90 Durometer

NOTE: Standard ERB-516 Neoprene bumpers - 70 Durometer

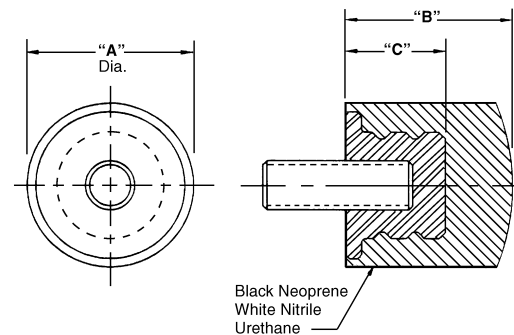
Molded Round Bumpers with Female Thread



Molded Round Bumpers with Male Thread and Hex Shoulder EMRB 516 SERIES



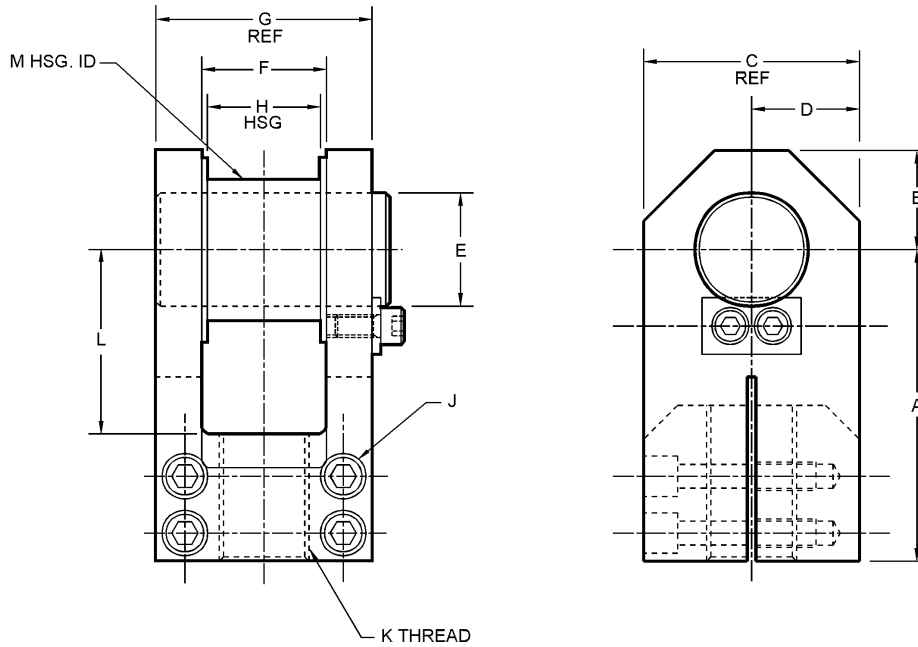
Molded Round Bumpers with Male Thread



METRIC CYLINDER ACCESSORIES



Metric Cylinder Clevis



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

All dimensions are in mm

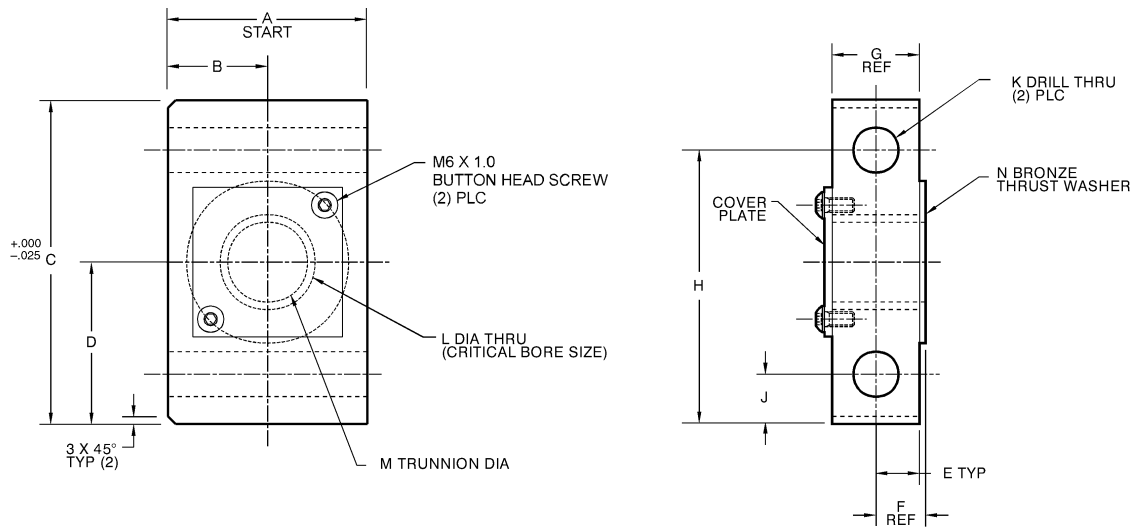
CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	H	J	K	L	M
E4711T	E-4711	60.0	20.0	45	22.2	20.0	24	51	20	M8 x 1.25 x 25 LG (2)	M10 x 1.25	35	30.013/30.000
	E-4711-A	60.0	20.0	45	22.2	20.0	24	51	20	M8 x 1.25 x 25 LG (2)	M10 x 1.5	35	30.013/30.000
E4712T	E-4712	60.0	20.0	45	22.2	20.0	24	51	20	M8 x 1.25 x 25 LG (2)	M12 x 1.25	35	30.013/30.000
	E-4712-A	60.0	20.0	45	22.2	20.0	24	51	20	M8 x 1.25 x 25 LG (2)	M14 x 1.5	35	30.013/30.000
	E-4712-B	60.0	20.0	45	22.2	20.0	24	51	20	M8 x 1.25 x 25 LG (2)	M12 x 1.75	35	30.013/30.000
E4713T	E-4713	85.0	25.0	51	25.4	25.0	34	63	30	M10 x 1.50 x 30 LG (2)	M16 x 1.5	45	35.013/35.000
E4713AT	E-4713-A	85.0	25.0	51	25.4	25.0	34	63	30	M10 x 1.50 x 30 LG (2)	M18 x 1.5	45	35.013/35.000
E4714T	E-4714	85.0	25.0	51	25.4	25.0	34	63	30	M10 x 1.50 x 30 LG (2)	M20 x 1.5	45	35.013/35.000
	E-4714-A	85.0	25.0	51	25.4	25.0	34	63	30	M10 x 1.50 x 30 LG (2)	M22 x 1.5	45	35.013/35.000
	E-4715-A	110.0	35.0	76	38.1	40.0	44	76	40	M10 x 1.50 x 45 LG (4)	M26 x 1.5	55	50.025/50.000
E4715T	E-4715	110.0	35.0	76	38.1	40.0	44	76	40	M10 x 1.50 x 45 LG (4)	M27 x 2.0	55	50.025/50.000
E4716AT	E-4716-A	110.0	35.0	76	38.1	40.0	44	76	40	M10 x 1.50 x 45 LG (4)	M30 x 1.5	55	50.025/50.000
	E-4716-B	110.0	35.0	76	38.1	40.0	44	76	40	M10 x 1.50 x 45 LG (4)	M30 x 2.0	55	50.025/50.000
E4716T	E-4716	110.0	35.0	76	38.1	40.0	44	76	40	M10 x 1.50 x 45 LG (4)	M33 x 2.0	55	50.025/50.000
E4717T	E-4717	135.0	40.0	76	38.1	40.0	54	102	50	M10 x 1.50 x 45 LG (4)	M36 x 2.0	60	50.025/50.000
	E-4717-A	135.0	40.0	76	38.1	40.0	54	102	50	M10 x 1.50 x 45 LG (4)	M36 x 1.5	60	50.025/50.000
E4718T	E-4718	150.0	50.0	89	44.4	50.0	64	115	60	M10 x 1.50 x 55 LG (4)	M42 x 2.0	80	60.025/60.000
	E-4718-A	150.0	50.0	89	44.4	50.0	64	115	60	M10 x 1.50 x 55 LG (4)	M45 x 1.5	80	60.025/60.000
E4719T	E-4719	150.0	50.0	89	44.4	50.0	64	115	60	M10 x 1.50 x 55 LG (4)	M48 x 2.0	80	60.025/60.000
	E-4719-A	150.0	50.0	89	44.4	50.0	64	115	60	M10 x 1.50 x 55 LG (4)	M56 x 2.0	80	60.025/60.000
E4720T	E-4720	190.0	50.0	102	50.8	50.0	84	152	80	M10 x 1.50 x 65 LG (6)	M64 x 3.0	85	60.025/60.000
	E-4720-A	190.0	50.0	102	50.8	50.0	84	152	80	M10 x 1.50 x 65 LG (6)	M64 x 2.0	85	60.025/60.000

Clevis is provided with Dixon CJ Bearings, a non-metallic bearing that excels under high loads and provides dry lubrication with high reliability.

Bronze thrust washers are provided with stock for fit at assembly.

CAD Directory
Cylinder Acc/Met-Clevis

Metric Trunnion Block



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

All dimensions are in mm

CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N
E-4721T	E-4721	67	35	80	40.0	10.0	12.5	20.0	70	10	9	22.013/22.000	12	12 ID x 35 OD
E-4722T	E-4722	67	35	80	40.0	10.0	12.5	20.0	70	10	9	22.013/22.000	16	16 ID x 40 OD
E-4722AT	E-4722-A	67	35	80	40.0	10.0	12.5	20.0	70	10	9	25.013/25.000	18	18 ID x 45 OD
E-4723T	E-4723	67	35	80	40.0	10.0	12.5	20.0	70	10	11	30.013/30.000	20	20 ID x 45 OD
E-4724T	E-4724	67	35	100	50.0	12.5	15.0	25.0	85	15	14	35.013/35.000	25	25 ID x 50 OD
E-4725T	E-4725	80	40	130	65.0	17.5	20.0	35.0	110	20	18	38.013/38.000	32	32 ID x 60 OD
E-4725AT	E-4725-A	80	40	130	65.0	17.5	20.0	35.0	110	20	18	41.275/41.262	36	36 ID x 60 OD
E-4726T	E-4726	80	40	130	65.0	17.5	20.0	35.0	110	20	18	50.025/50.000	40	40 ID x 65 OD
E-4727T	E-4727	106	55	175	87.5	25.0	27.5	50.0	150	25	26	60.025/60.000	50	50 ID x 75 OD
E-4728T	E-4728	106	55	175	87.5	25.0	27.5	50.0	150	25	26	73.025/73.000	63	63 ID x 82.5 OD
E-4729T	E-4729-A	145	75	265	132.5	32.5	35.0	65.0	230	35	33	90.025/90.000	56	80 ID x 105 OD
E-4729T	E-4729	145	75	265	132.5	32.5	35.0	65.0	230	35	33	90.025/90.000	80	80 ID x 105 OD
E-4729T	E-4729-B	145	75	265	132.5	32.5	35.0	65.0	230	35	33	90.025/90.000	67	80 ID x 105 OD
E-4730T	E-4730	145	75	265	132.5	40.0	42.5	80.0	225	40	39	100.025/100.000	100	100 ID x 125 OD

NOTE:

Trunnions are provided with Dixon CJ Bearings, a non-metallic bearing that excels under high loads and provides dry lubrication with high reliability.

Metric Self-Aligning Couplers

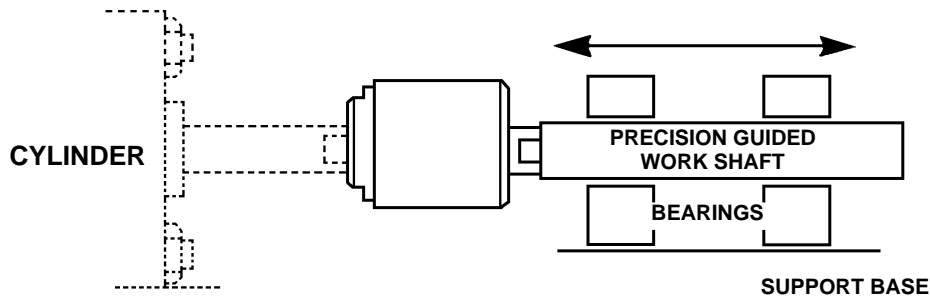


Features:

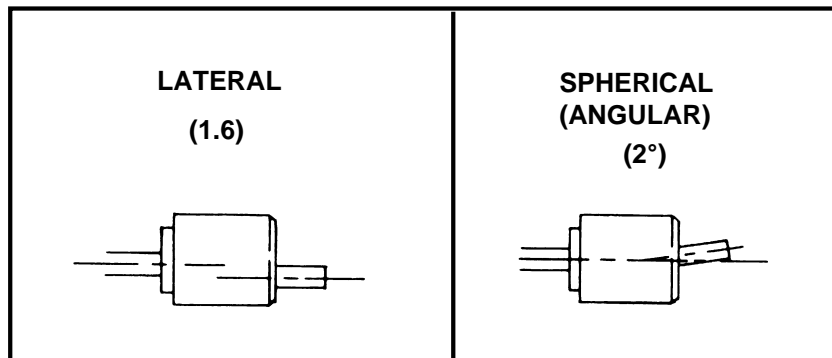
- ❑ Eliminates expensive precision machining for mounting fixed or rigid guide in cylinder for slide applications.
- ❑ Increases cylinder efficiency by eliminating friction causes by misalignment.
- ❑ Compensates for 2° angular error and x 1.6 lateral misalignment on push and pull stroke.
- ❑ Greater Reliability-Reduces cylinder and component wear.
- ❑ Simplifies alignment problems in the field.



SELF-ALIGNING

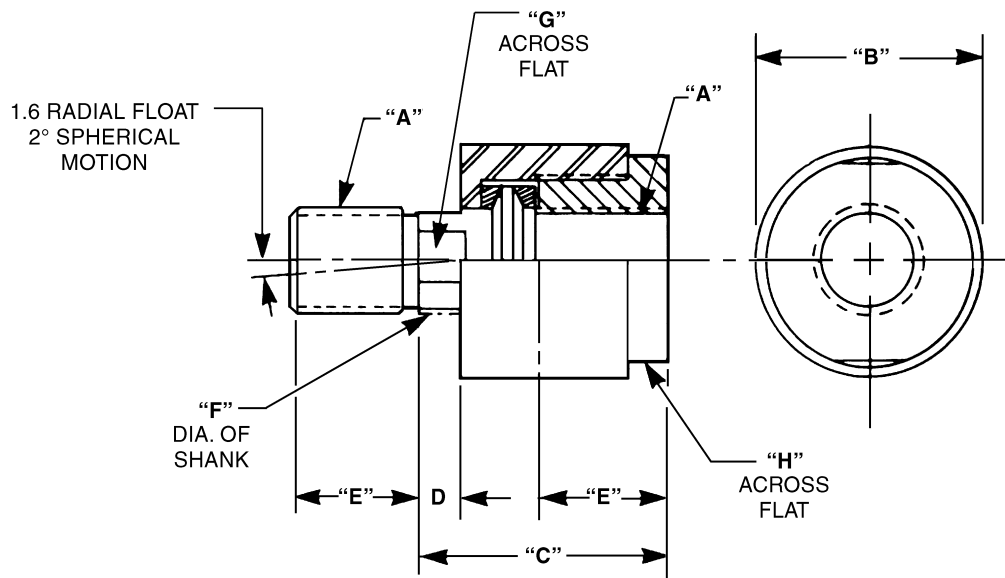


(VIEWS EXAGGERATED TO SHOW ALIGNMENT FEATURES)



All dimensions are in mm

Metric Self-Aligning Couplers



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	A	B	C	D	E	F	G	H
AC080M	EAC-080M	M8 x 1	31.7	50.8	12.7	20	15.8	14.2	29
AC100M	EAC-100M	M10 x 1.25	31.7	50.8	12.7	20	15.8	14.2	29
AC120M	EAC-120M	M10 X 1.50	31.7	50.8	12.7	20	15.8	14.2	29
AC140M	EAC-140M	M14 x 1.5	31.7	50.8	12.7	20	15.8	14.2	29
AC160M	EAC-160M	M16 x 1.5	44.4	59.4	8	28.5	24.5	22.2	38.1
AC180M	EAC-180M	M18 x 1.5	44.4	59.4	8	28.5	24.5	22.2	38.1
AC200M	EAC-200M	M20 x 1.5	44.4	59.4	8	28.5	24.5	22.2	38.1
AC220M	EAC-220M	M22 x 1.5	44.4	59.4	8	28.5	24.5	22.2	38.1
AC240M	EAC-240M	M24 x 2	63.5	73	11	41	35	32	57
AC260M	EAC-260M	M26 x 1.5	63.5	73	11	41	35	32	57
AC270M	EAC-270M	M27 x 2	63.5	73	11	41	35	32	57
AC300M	EAC-300M	M30 x 2	63.5	73	11	41	35	32	57
AC330M	EAC-330M	M33 x 2	63.5	73	11	41	35	32	57
AC360M	EAC-360M	M36 x 2	82.5	111	20.6	57	44.5	38	76
AC420M	EAC-420M	M42 x 2	82.5	111	20.6	57	44.5	38	76
	EAC-480M	M48 X 2	95.0	138.2	17.5	76.2	57.2	47.6	88.9

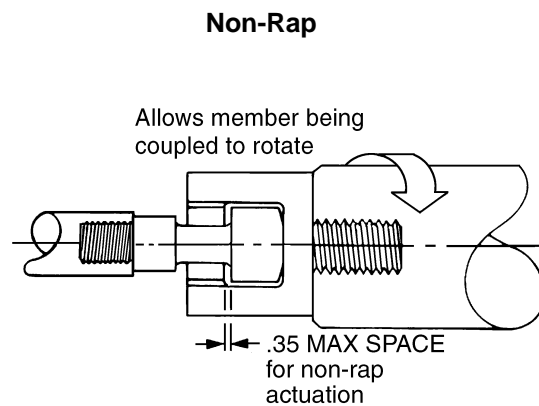
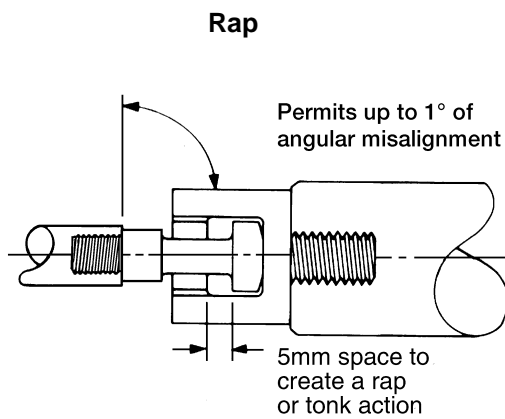


Features:

- 4140 Material
- Choice of Types
- Variety of Sizes
- Male or Female Threads
- Corresponding Adapters
- Black Oxide Finish



Types

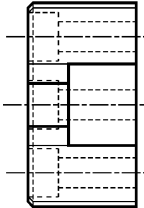


E&E Metric Couplers are designed for use with our standard metric Adapters or comparable details. They are offered in thread sizes common to a range of standard metric cylinders. Rod ends compensate for angular misalignment and allow coupled member to rotate in both Rap and Non-Rap applications.

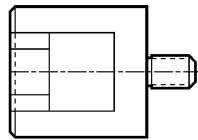
All dimensions are in mm

Metric Coupler Selection Chart

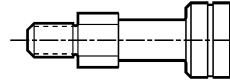
SCREW MOUNT



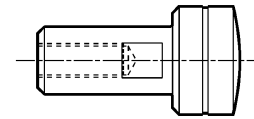
THREAD MOUNT



MALE THREAD

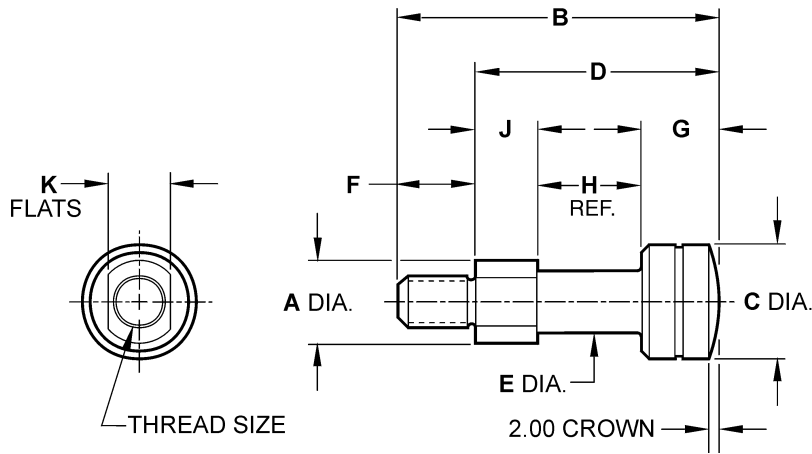


FEMALE THREAD



ADAPTER		COUPLER			
SCREW MOUNT	THREAD MOUNT	MALE THREAD		FEMALE THREAD	
		RAP	NON-RAP	RAP	NON-RAP
		EHM148	EHM151/EHM151A/EHM151B	EHM154/EHM154A/EHM154B	EHM155/EHM155A/EHM155B
EHM149	EHM152/EHM152A/EHM152B/EHM152C	EHM156/EHM156A/EHM156B/EHM156C	EHM157/EHM157A/EHM157B/EHM157C	EHM160/EHM160A/EHM160B	EHM161/EHM161A/EHM161B
EHM150	EHM153/EHM153A	EHM158/EHM158A/EHM158B	EHM159/EHM159A/EHM159B	EHM162/EHM162A	EHM163/EHM163A
EHM173	EHM174/EHM174A	EHM168/EHM168A	EHM167/EHM167A	EHM179/EHM179A	EHM164/EHM164A
EHM175	EHM176	EHM170	EHM169	EHM180/EHM180A	EHM165/EHM165A
EHM177	EHM178	EHM172	EHM171	EHM181	EHM166

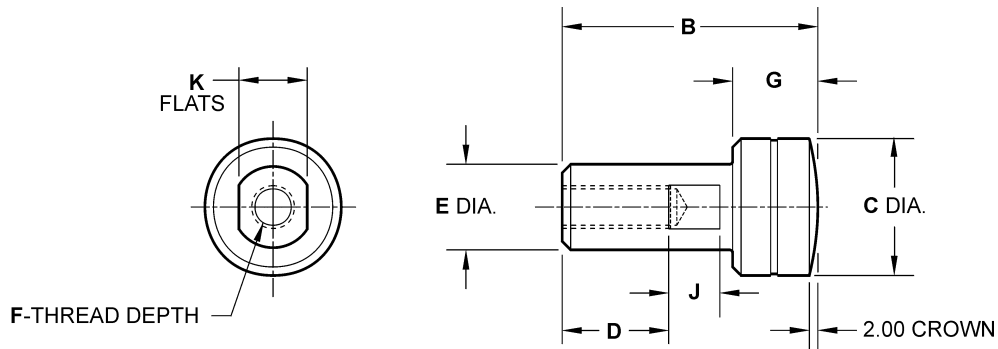
Metric Coupler (Male Thread)



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NUMBER	PART NUMBER	TYPE	THREAD	A	B	C	D	E	F	G	H	J	K
EHM154	EHM-154A	RAP	M10 x 1.25 MALE	16.0	62.0	22.0	47.0	12.0	15.0	15.00	20.0	12.0	12.0
EHM155	EHM-155A	NON-RAP	M10 x 1.25 MALE	16.0	62.0	22.0	47.0	12.0	15.0	19.80	15.2	12.0	12.0
EHM154	EHM-154	RAP	M10 x 1.5 MALE	16.0	62.0	22.0	47.0	12.0	15.0	15.00	20.0	12.0	12.0
EHM155	EHM-155	NON-RAP	M10 x 1.5 MALE	16.0	62.0	22.0	47.0	12.0	15.0	19.80	15.2	12.0	12.0
EHM154B	EHM-154B	RAP	M12 x 1.25 MALE	16.0	65.0	22.0	47.0	12.0	18.0	15.00	20.0	12.0	12.0
	EHM-154C	RAP	M12 x 1.25 MALE	16.0	65.0	22.0	47.0	12.0	18.0	15.00	20.0	12.0	12.0
EHM155B	EHM-155B	NON-RAP	M12 x 1.25 MALE	16.0	65.0	22.0	47.0	12.0	18.0	19.80	15.2	12.0	12.0
	EHM-155C	NON-RAP	M12 x 1.25 MALE	16.0	65.0	22.0	47.0	12.0	18.0	19.80	15.2	12.0	12.0
EHM156C	EHM-156C	RAP	M14 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	20.00	28.0	12.0	22.0
EHM157C	EHM-157C	NON-RAP	M14 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	24.80	23.2	12.0	22.0
EHM156A	EHM-156A	RAP	M16 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	20.00	28.0	12.0	22.0
	EHM-156D	RAP	M16 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	20.00	28.0	12.0	22.0
EHM157A	EHM-157A	NON-RAP	M16 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	24.80	23.2	12.0	22.0
	EHM-157D	NON-RAP	M16 x 1.5 MALE	25.0	80.0	32.0	60.0	20.0	20.0	24.80	23.2	12.0	22.0
EHM156B	EHM-156B	RAP	M18 x 1.5 MALE	25.0	85.0	32.0	60.0	20.0	25.0	20.00	28.0	12.0	22.0
EHM157B	EHM-157B	NON-RAP	M18 x 1.5 MALE	25.0	85.0	32.0	60.0	20.0	25.0	24.80	23.2	12.0	22.0
EHM156	EHM-156	RAP	M20 x 1.5 MALE	25.0	85.0	32.0	60.0	20.0	25.0	20.00	28.0	12.0	22.0
EHM157	EHM-157	NON-RAP	M20 x 1.5 MALE	25.0	85.0	32.0	60.0	20.0	25.0	24.80	23.2	12.0	22.0
EHM158B	EHM-158B	RAP	M24 x 2 MALE	32.0	105.0	40.0	70.0	25.0	35.0	25.00	30.0	15.0	28.0
EHM159B	EHM-159B	NON-RAP	M24 x 2 MALE	32.0	105.0	40.0	70.0	25.0	35.0	29.80	25.2	15.0	28.0
EHM158	EHM-158	RAP	M26 x 1.5 MALE	32.0	105.0	40.0	70.0	25.0	35.0	25.00	30.0	15.0	28.0
EHM159	EHM-159	NON-RAP	M26 x 1.5 MALE	32.0	105.0	40.0	70.0	25.0	35.0	29.80	25.2	15.0	28.0
EHM158A	EHM-158A	RAP	M27 x 2 MALE	32.0	105.0	40.0	70.0	25.0	35.0	25.00	30.0	15.0	28.0
EHM159A	EHM-159A	NON-RAP	M27 x 2 MALE	32.0	105.0	40.0	70.0	25.0	35.0	29.80	25.2	15.0	28.0
EHM168A	EHM-168A	RAP	M30 x 2 MALE	45.0	120.0	55.0	80.0	35.0	40.0	25.00	40.0	15.0	40.0
EHM167A	EHM-167A	NON-RAP	M30 x 2 MALE	45.0	120.0	55.0	80.0	35.0	40.0	29.80	35.2	15.0	40.0
EHM168	EHM-168	RAP	M33 x 2 MALE	45.0	125.0	55.0	80.0	35.0	45.0	25.00	40.0	15.0	40.0
EHM167	EHM-167	NON-RAP	M33 x 2 MALE	45.0	125.0	55.0	80.0	35.0	45.0	29.80	35.2	15.0	40.0
EHM170	EHM-170	RAP	M42 x 2 MALE	50.0	145.0	63.0	90.0	45.0	55.0	30.00	45.0	15.0	45.0
EHM169	EHM-169	NON-RAP	M42 x 2 MALE	50.0	145.0	63.0	90.0	45.0	55.0	34.80	40.2	15.0	45.0
EHM172	EHM-172	RAP	M48 x 2 MALE	60.0	155.0	70.0	95.0	50.0	60.0	35.00	45.0	15.0	55.0
EHM171	EHM-171	NON-RAP	M48 x 2 MALE	60.0	155.0	70.0	95.0	50.0	60.0	39.80	40.2	15.0	55.0

Metric Coupler (Female Thread)



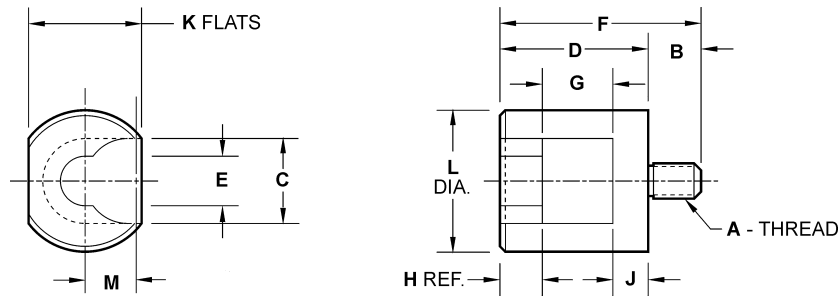
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NUMBER	PART NUMBER	TYPE	THREAD	B	C	D	E	F	G	J	K
EHM160	EHM-160A	RAP	M10 x 1.25 FEMALE	60.0	32.0	25.0	20.0	25.0	20.00	12.0	16.0
EHM161	EHM-161A	NON-RAP	M10 x 1.25 FEMALE	65.0	32.0	25.0	20.0	25.0	24.80	12.0	16.0
EHM160	EHM-160	RAP	M10 x 1.5 FEMALE	60.0	32.0	25.0	20.0	20.0	20.00	12.0	16.0
EHM161	EHM-161	NON-RAP	M10 x 1.5 FEMALE	65.0	32.0	25.0	20.0	25.0	24.80	12.0	16.0
EHM160B	EHM-160B	RAP	M12 x 1.25 FEMALE	60.0	32.0	25.0	20.0	25.0	20.00	12.0	16.0
EHM161B	EHM-161B	NON-RAP	M12 x 1.25 FEMALE	65.0	32.0	25.0	20.0	25.0	24.80	12.0	16.0
EHM162	EHM-162	RAP	M14 x 1.5 FEMALE	70.0	40.0	25.0	25.0	32.0	25.00	14.0	22.0
EHM163	EHM-163	NON-RAP	M14 x 1.5 FEMALE	75.0	40.0	25.0	25.0	32.0	29.80	14.0	22.0
EHM162A	EHM-162A	RAP	M16 x 1.5 FEMALE	70.0	40.0	25.0	25.0	32.0	25.00	14.0	22.0
	EHM-162B	RAP	M18 x 1.5 FEMALE	70.0	40.0	25.0	25.0	32.0	25.00	14.0	22.0
EHM163A	EHM-163A	NON-RAP	M16 x 1.5 FEMALE	75.0	40.0	25.0	25.0	32.0	29.80	14.0	22.0
	EHM-163B	NON-RAP	M18 x 1.5 FEMALE	75.0	40.0	25.0	25.0	32.0	29.80	14.0	22.0
EHM179A	EHM-179A	RAP	M20 x 1.5 FEMALE	100.0	55.0	45.0	35.0	40.0	25.00	15.0	32.0
EHM164A	EHM-164A	NON-RAP	M20 x 1.5 FEMALE	105.0	55.0	45.0	35.0	40.0	29.80	15.0	32.0
EHM179	EHM-179	RAP	M26 x 1.5 FEMALE	100.0	55.0	45.0	35.0	45.0	25.00	15.0	32.0
EHM164	EHM-164	NON-RAP	M26 x 1.5 FEMALE	105.0	55.0	45.0	35.0	45.0	29.80	15.0	32.0
EHM180A	EHM-180A	RAP	M27 x 2 FEMALE	115.0	63.0	65.0	45.0	55.0	30.00	14.0	38.0
EHM165A	EHM-165A	NON-RAP	M27 x 2 FEMALE	120.0	63.0	65.0	45.0	55.0	34.80	14.0	38.0
	EHM-165B	NON-RAP	M30 x 2 FEMALE	120.0	63.0	65.0	45.0	55.0	34.80	14.0	38.0
EHM180	EHM-180	RAP	M33 x 2 FEMALE	115.0	63.0	65.0	45.0	48.0	30.00	14.0	38.0
EHM165	EHM-165	NON-RAP	M33 x 2 FEMALE	120.0	63.0	65.0	45.0	48.0	34.80	14.0	38.0
EHM181	EHM-181	RAP	M36 x 2 FEMALE	125.0	70.0	70.0	50.0	75.0	35.00	14.0	45.0
EHM166	EHM-166	NON-RAP	M36 x 2 FEMALE	130.0	70.0	70.0	50.0	75.0	39.80	14.0	45.0

Metric Adapters



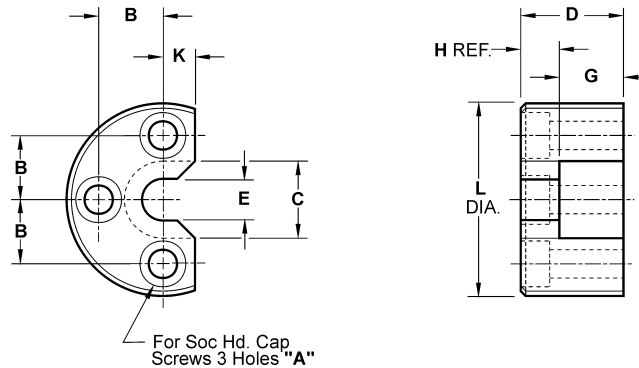
Thread Mount



Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NUMBER	PART NUMBER	MOUNT STYLE	A	B	C	D	E	F	G	H	J	K	L	M
EHM151	EHM-151A	THREAD	M10 x 1.25	15.0	24.0	42.0	14.0	57.0	20.0	12.0	10.0	32.0	40.0	17.0
EHM151	EHM-151	THREAD	M10 x 1.5	15.0	24.0	42.0	14.0	57.0	20.0	12.0	10.0	32.0	40.0	12.0
EHM151B	EHM-151B	THREAD	M12 x 1.25	18.0	24.0	42.0	14.0	60.0	20.0	12.0	10.0	32.0	40.0	12.0
EHM152C	EHM-152C	THREAD	M14 x 1.5	20.0	35.0	55.0	22.0	75.0	25.0	20.0	10.0	45.0	50.0	17.0
EHM152A	EHM-152A	THREAD	M16 x 1.5	20.0	35.0	55.0	22.0	75.0	25.0	20.0	10.0	45.0	50.0	17.0
EHM152B	EHM-152B	THREAD	M18 x 1.5	25.0	35.0	55.0	22.0	80.0	25.0	20.0	10.0	45.0	50.0	17.0
EHM152	EHM-152	THREAD	M20 x 1.5	25.0	35.0	55.0	22.0	80.0	25.0	20.0	10.0	45.0	50.0	17.0
EHM153A	EHM-153A	THREAD	M24 x 2	35.0	42.0	60.0	27.0	95.0	30.0	20.0	10.0	60.0	70.0	20.0
EHM153	EHM-153	THREAD	M27 x 2	35.0	42.0	60.0	27.0	95.0	30.0	20.0	10.0	60.0	70.0	20.0
EHM174A	EHM-174A	THREAD	M30 x 2	40.0	57.0	80.0	37.0	120.0	30.0	30.0	20.0	80.0	100.0	28.5
EHM174	EHM-174	THREAD	M33 x 2	45.0	57.0	80.0	37.0	125.0	30.0	30.0	20.0	80.0	100.0	28.5
EHM176	EHM-176	THREAD	M42 x 2	55.0	65.0	90.0	47.0	145.0	35.0	30.0	25.0	90.0	115.0	32.0
EHM178	EHM-178	THREAD	M48 x 2	60.0	72.0	95.0	52.0	155.0	40.0	30.0	25.0	100.0	125.0	35.0

Screw Mount

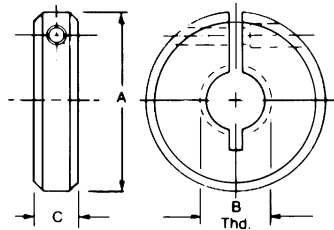


CAD FILE NUMBER	PART NUMBER	MOUNT STYLE	A	B	C	D	E	G	H	K	L
EHM148	EHM-148	SCREW	M8	20.0	24.0	32.0	14.0	20.0	12.0	10.0	60.0
EHM149	EHM-149	SCREW	M10	25.0	35.0	45.0	22.0	25.0	20.0	12.0	75.0
EHM150	EHM-150	SCREW	M12	30.0	42.0	50.0	27.0	30.0	20.0	15.0	90.0
EHM173	EHM-173	SCREW	M14	40.0	57.0	60.0	37.0	30.0	30.0	20.0	120.0
EHM175	EHM-175	SCREW	M20	50.0	65.0	65.0	47.0	35.0	30.0	20.0	150.0
EHM177	EHM-177	SCREW	M24	55.0	72.0	70.0	52.0	40.0	30.0	25.0	160.0

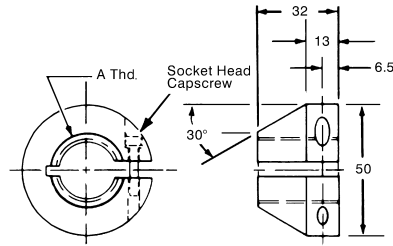
Metric Switch Dogs



Click to download CAD File (STP) Format. 2dwg & 3dwg visit eandesp.com



Round

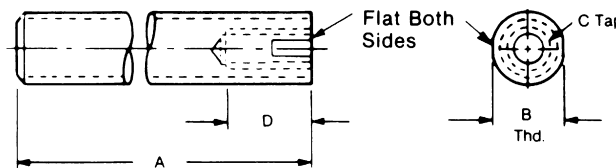


Tapered

CAD FILE NAME	EM093		EM094	EM095	EM095A
PART NUMBER	EM093	EM093A	EM094	EM095	EM095A
A THD	M10 x 1.5	M10 x 1.25	M20 x 1.5	M26 x 1.5	M27 x 2

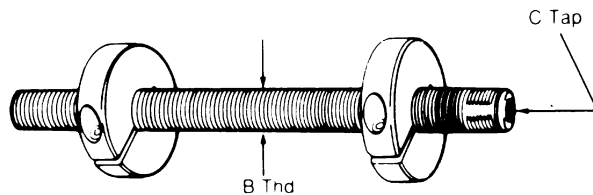
CAD FILE NAME	EM069		EM070		EM071	EM071A	EM072	EM073	EM073A	EM075
PART NUMBER	EM069	EM069A	EM070	EM070A	EM071	EM071A	EM072	EM073	EM073A	EM075
A DIA.	50	50	50	50	50	50	65	65	65	25
B THD.	M10 x 1.5	M10 x 1.25	M12 x 1.5	M12 x 1.25	M14 x 1.5	M16 x 1.5	M20 x 1.5	M26 x 1.5	M27 x 2	M8 x 1.25
C WIDTH	16	16	16	16	16	16	16	16	16	10

Metric Switch Rods

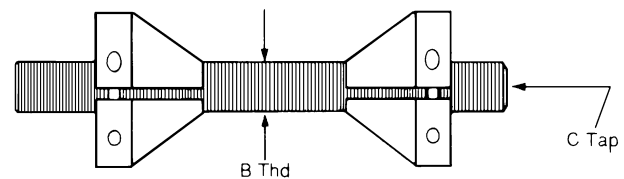


CAD FILE NAME	EM078	EM079		EM080		EM081		EM082	EM083	EM083A
PART NUMBER	EM078	EM079	EM079A	EM080	EM080A	EM081	EM081A	EM082	EM083	EM083A
A	150 - 200 - 250 - 300									
B THD.	M8 x 1.25	M10 x 1.5	M10 x 1.25	M12 x 1.5	M12 x 1.25	M14 x 1.5	M16 x 1.5	M20 x 1.5	M26 x 1.5	M27 x 2
C TAP	—	M5 x .8	M5 x .8	M5 x .8	M5 x .8	M6 x 1.0	M6 x 1.0	M8 x 1.25	M8 x 1.25	M8 x 1.25
D	—	16	16	19	19	22	22	22	31	31

Metric Switch Assemblies



With Conventional Switch Dogs



With Single Tapered Switch Dog (Slotted Mount)

CAD FILE NAME	EM993		EM994	EM995	EM995A
PART NUMBER	EM993	EM993A	EM994	EM995	EM995A
ROD LENGTH	150 - 200 - 250 - 300				
B. THD.	M10 x 1.5	M10 x 1.25	M20 x 1.5	M26 x 1.5	M27 x 2
C TAP	M5 x 0.8	M5 x 0.8	M8 x 1.25	M8 x 1.25	M8 x 1.25

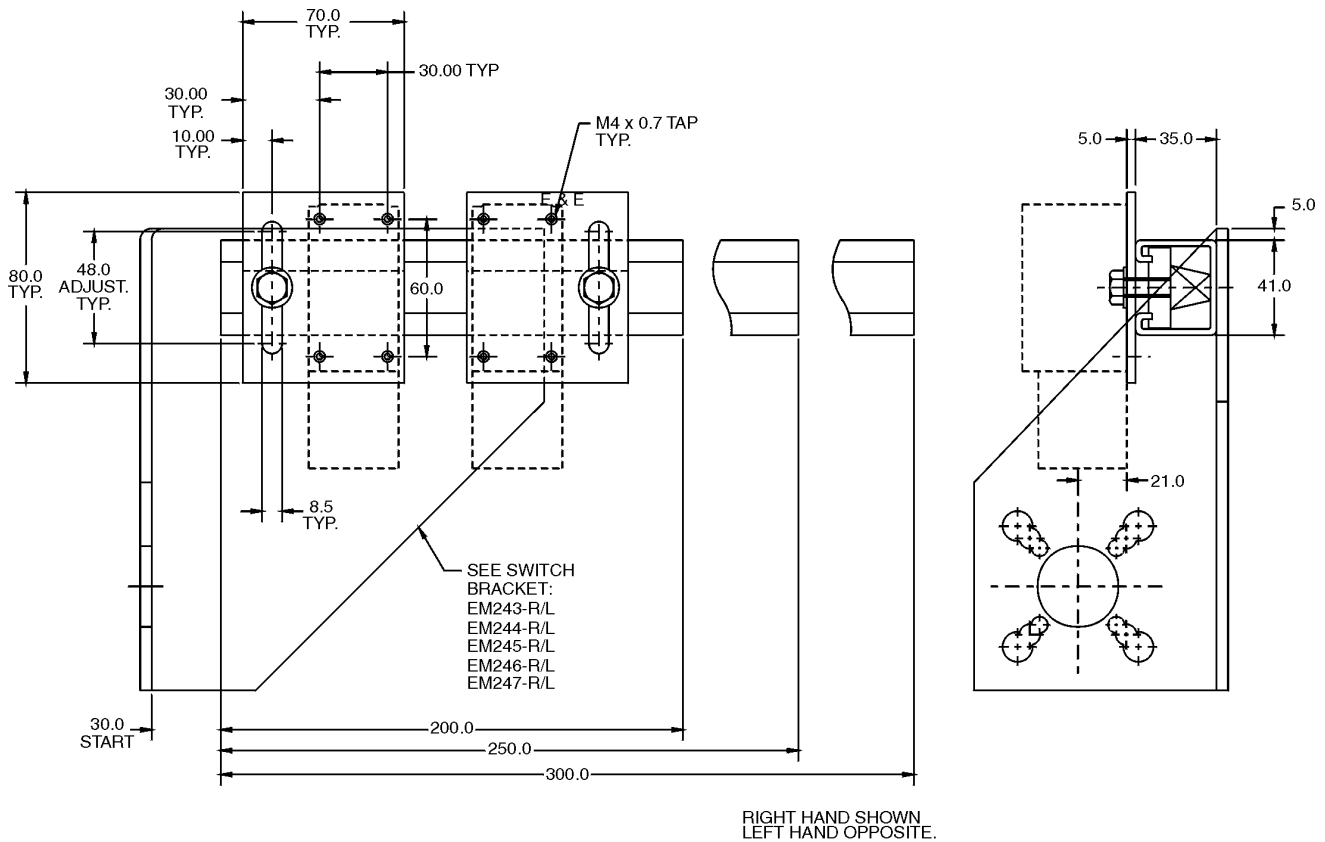
CAD FILE NAME	EM999	EM000		EM003		EM004	EM004A	EM005	EM006	EM006A
PART NUMBER	EM999	EM000	EM000A	EM003	EM003A	EM004	EM004A	EM005	EM006	EM006A
ROD LENGTH	150 - 200 - 250 - 300									
B THD.	M8 x 1.25	M10 x 1.5	M10 x 1.25	M12 x 1.5	M12 x 1.25	M14 x 1.5	M16 x 1.5	M20 x 1.5	M26 x 1.5	M27 x 2
C TAP	—	M5 x .8	M5 x .8	M5 x .8	M5 x .8	M6 x 1.0	M6 x 1.0	M8 x 1.25	M8 x 1.25	M8 x 1.25

CAD Directory
Cylinder-Acc\Met-DogsRods

“Stretch”
The shortest standard component is given. You may “Stretch” the unit to the desired length.

All dimensions are in mm

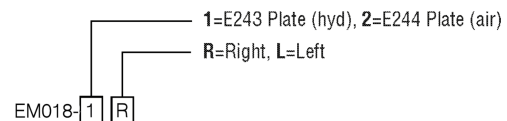
Adjustable Proximity Switch Brackets



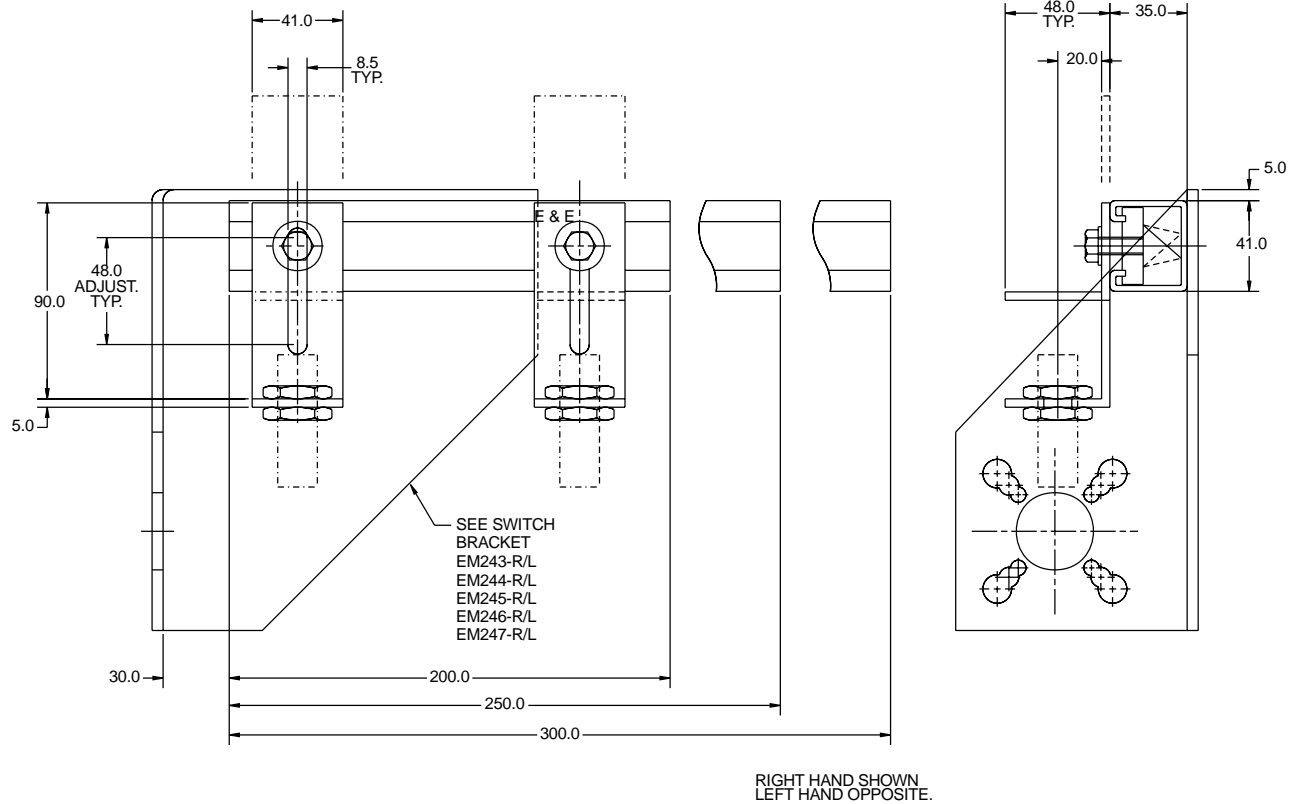
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

ORDERING INFORMATION			
CAD FILE NAME	PART NUMBER	DESCRIPTION	LENGTH
	EM018	ADJUSTABLE PROXIMITY SWITCH BRACKET (INCL. 2 PLATES, HARDWARE & CHANNEL)	200, 250, 300
	EM018-D/1	(1) PLATE & HARDWARE ONLY	—
	EM018-D/2	CHANNEL ONLY	200, 250, 300
EM0181R OR EM0181L	EM018-EM243-R/L	MOUNTED TO 32, 40 OR 50 BORE HYD CYL MOUNT BRACKET	200, 250, 300
EM0182R OR EM0182L	EM018-EM244-R/L	MOUNTED TO 32 OR 40 BORE AIR CYL MOUNT BRACKET	200, 250, 300
EM0183R OR EM0183L	EM018-EM245-R/L	MOUNTED TO 63, 80 OR 100 BORE HYD CYL MOUNT BRACKET	200, 250, 300
EM0184R OR EM0184L	EM018-EM246-R/L	MOUNTED TO 50, 63 OR 80 BORE AIR CYL MOUNT BRACKET	200, 250, 300
EM0185R OR EM0185L	EM018-EM247-R/L	MOUNTED TO 100 BORE AIR CYL MOUNT BRACKET	200, 250, 300

CAD File Name



Adjustable Proximity Switch Brackets



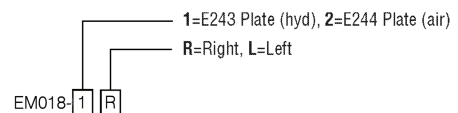
Metric

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

ORDERING INFORMATION			
CAD FILE NAME	PART NUMBER	DESCRIPTION	LENGTH
	EM019	ADJUSTABLE PROXIMITY SWITCH BRACKET (INCL. 2 PLATES, HARDWARE & CHANNEL)	200, 250, 300
	EM019-D/1	(1) PLATE & HARDWARE ONLY	—
	EM019-D/2	CHANNEL ONLY	200, 250, 300
EM0191R OR EM0191L	EM019-EM243-R/L	MOUNTED TO 32, 40 OR 50 BORE HYD CYL MOUNT BRACKET	200, 250, 300
EM0192R OR EM0192L	EM019-EM244-R/L	MOUNTED TO 32 OR 40 BORE AIR CYL MOUNT BRACKET	200, 250, 300
EM0193R OR EM0193L	EM019-EM245-R/L	MOUNTED TO 63, 80 OR 100 BORE HYD CYL MOUNT BRACKET	200, 250, 300
EM0194R OR EM0194L	EM019-EM246-R/L	MOUNTED TO 50, 63 OR 80 BORE AIR CYL MOUNT BRACKET	200, 250, 300
EM0195R OR EM0195L	EM019-EM247-R/L	MOUNTED TO 100 BORE AIR CYL MOUNT BRACKET	200, 250, 300

PROVIDED WITH CLEARANCE FOR 12 mm PROXIMITY SWITCH
(SWITCHES NOT INCLUDED)

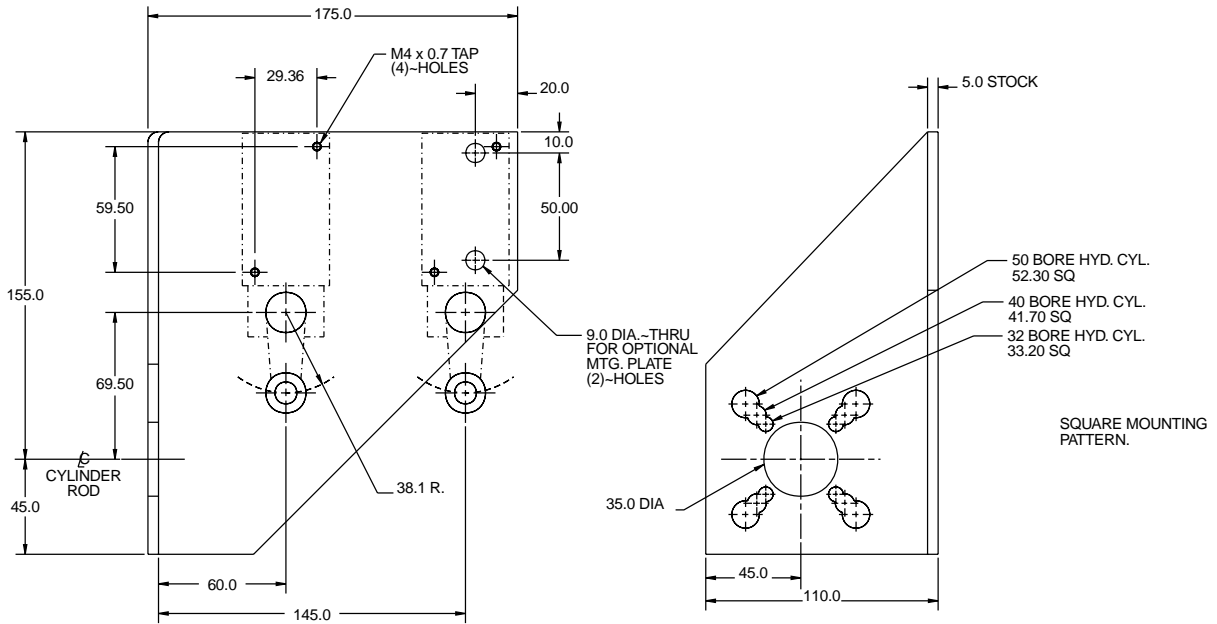
CAD File Name



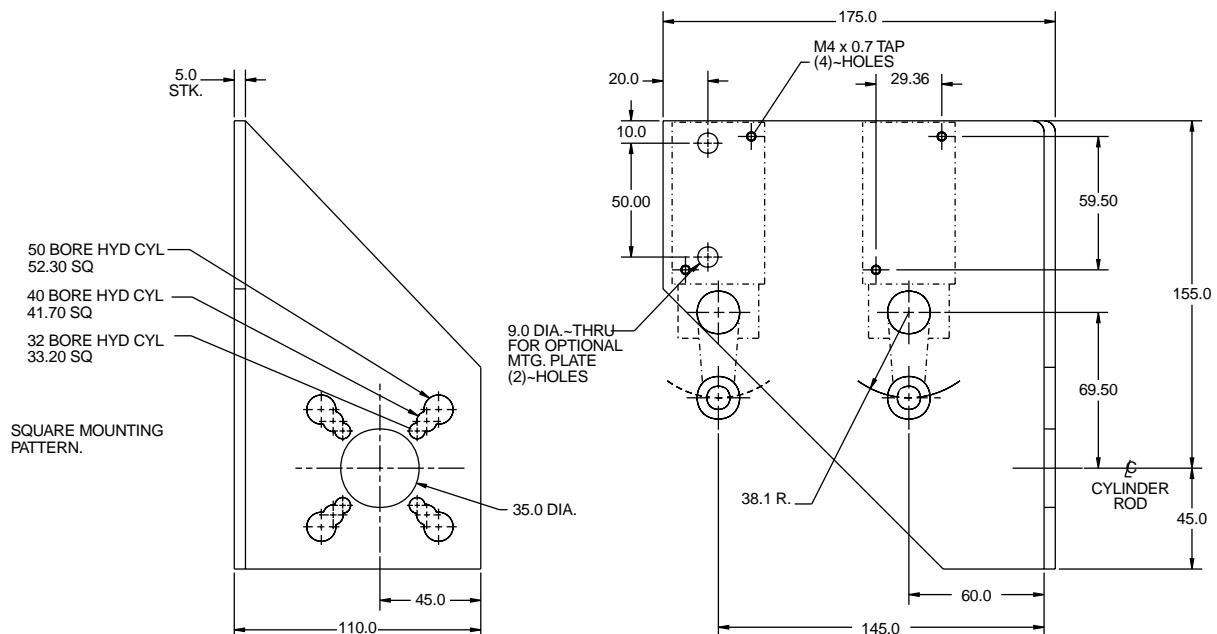
Switch Bracket for Metric Hydraulic Cylinders



CAD File Name EM243RT
PART No. EM243-R



CAD File Name EM243LT
PART No. EM243-L



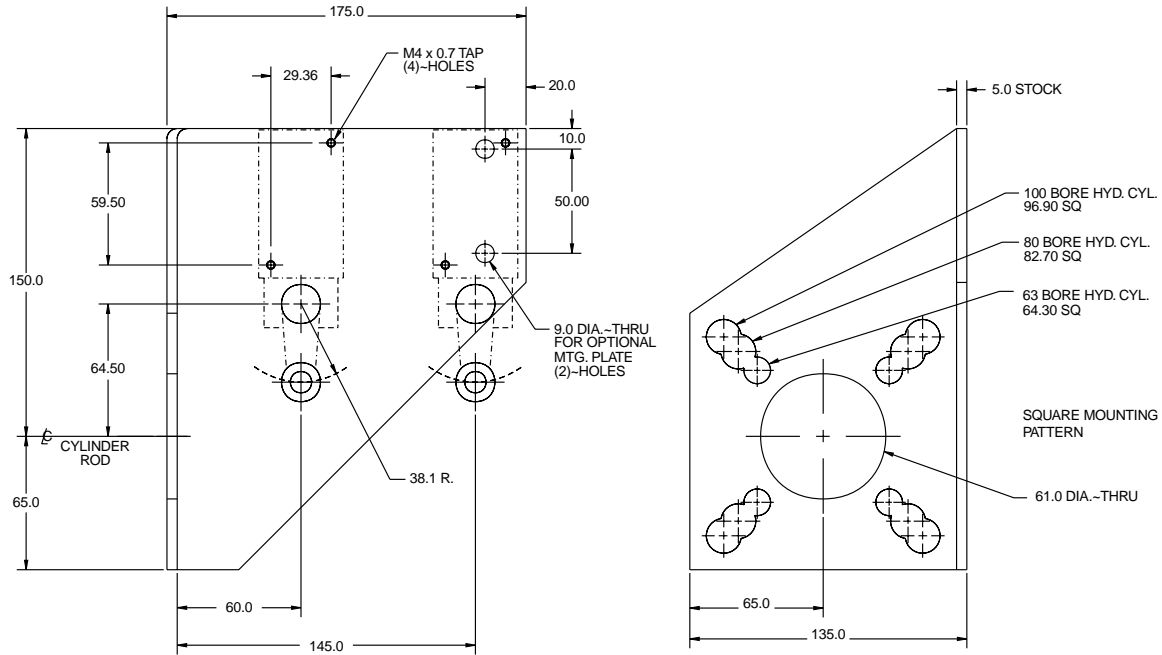
Switch Bracket for Metric Hydraulic Cylinders



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandespp.com

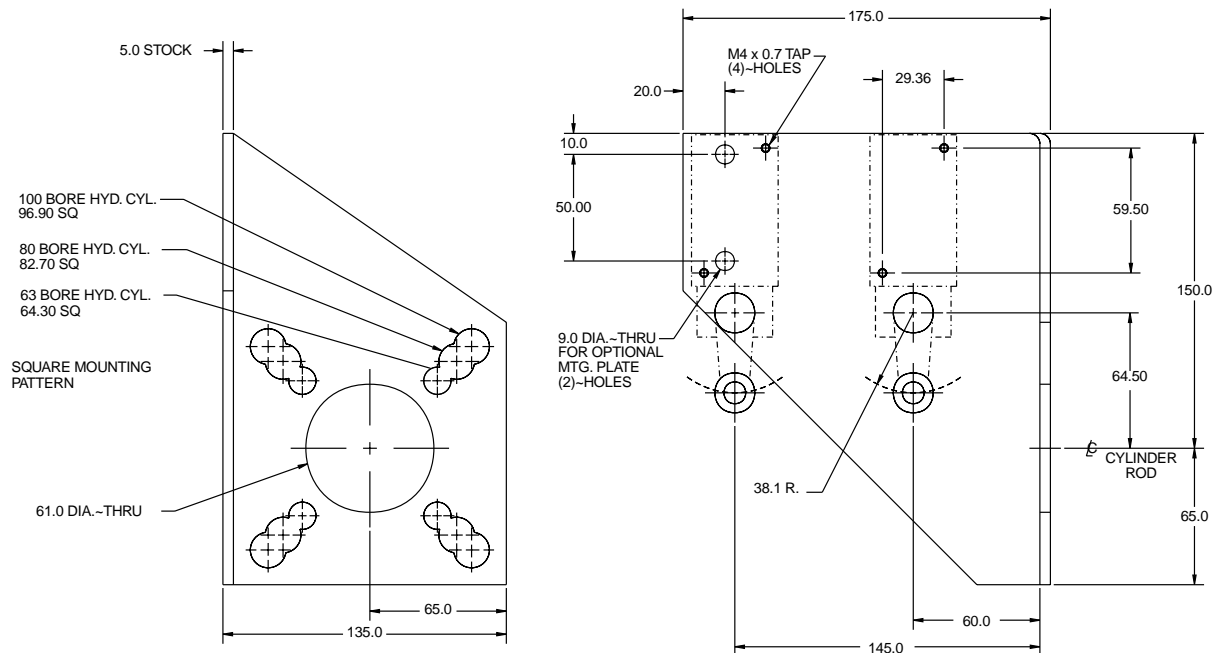
CAD File Name EM245RT

PART No. EM245-R



CAD File Name EM245LT

PART No. EM245-L



Switch Bracket for Metric Air Cylinders

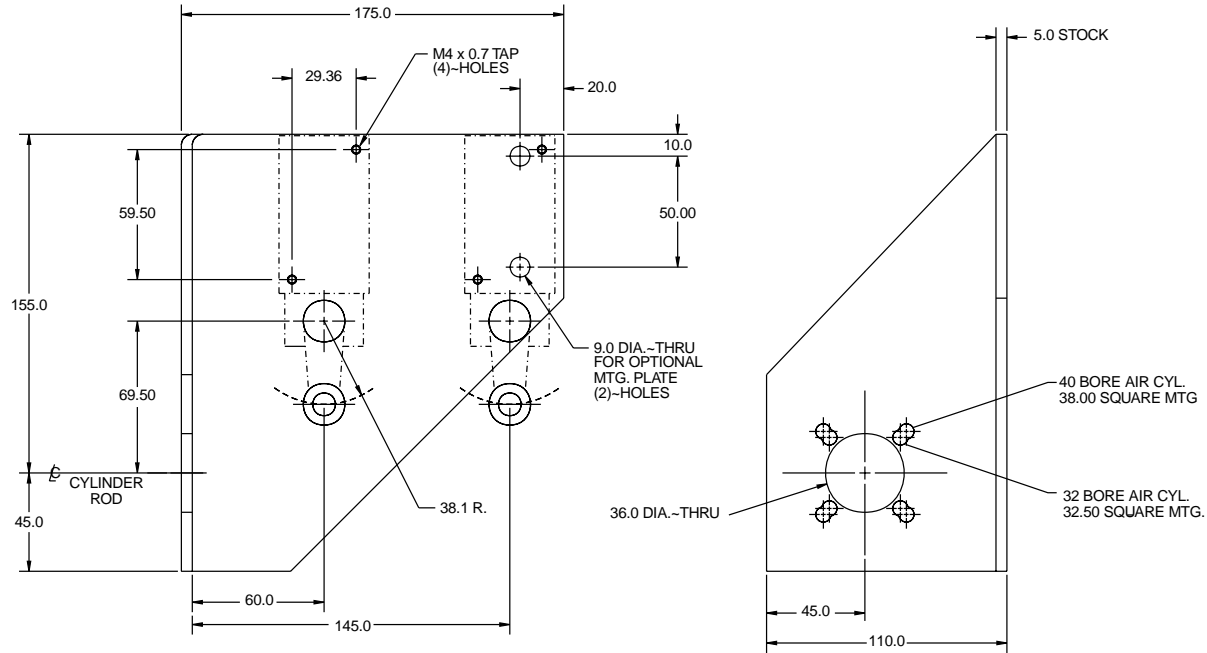


E&ESP

Click to download CAD Files (STP) Format. 2dwg & 3dwg visit eandesp.com

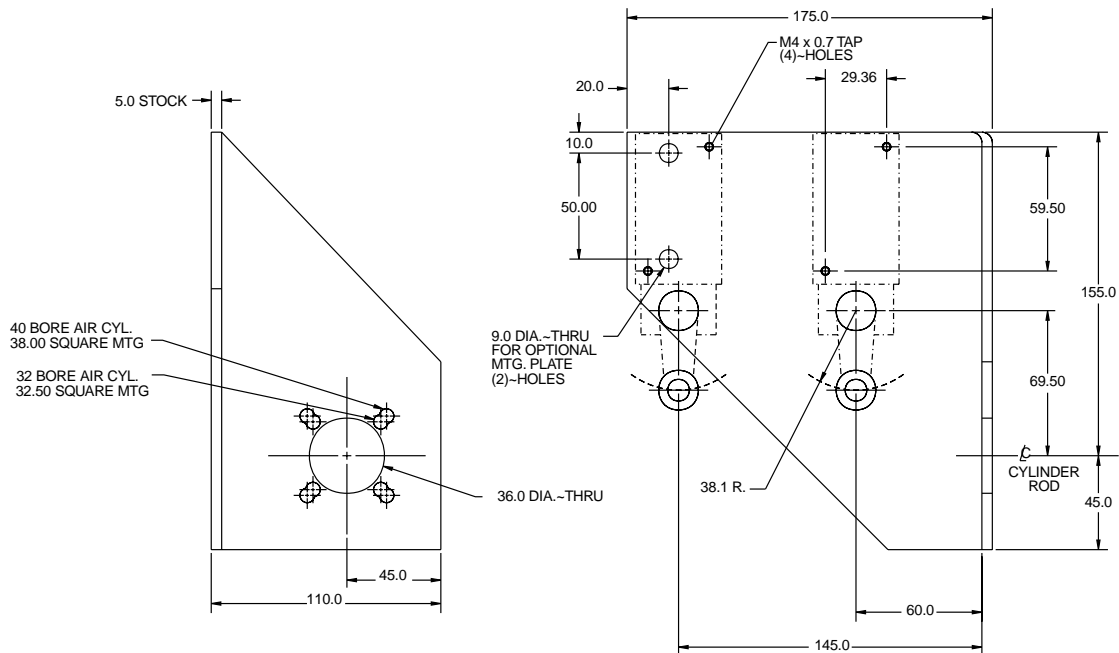
CAD File Name EM244RT

PART No. EM244-R



CAD File Name EM244LT

PART No. EM244-L



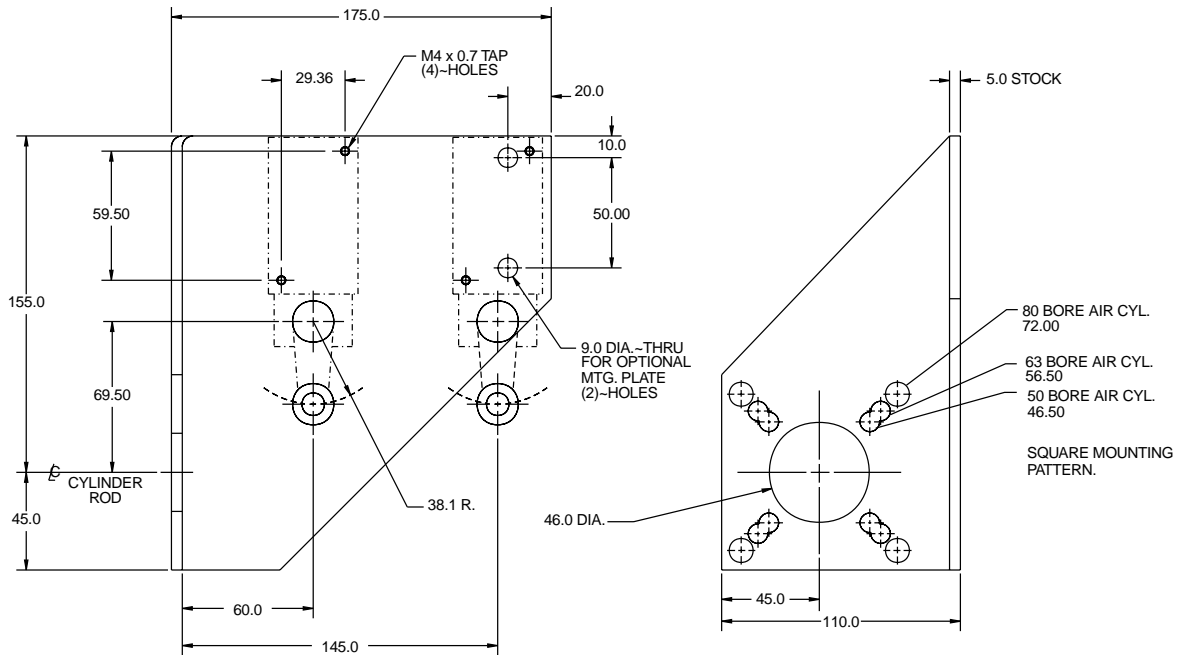
Switch Bracket for Metric Air Cylinders



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD File Name EM246RT

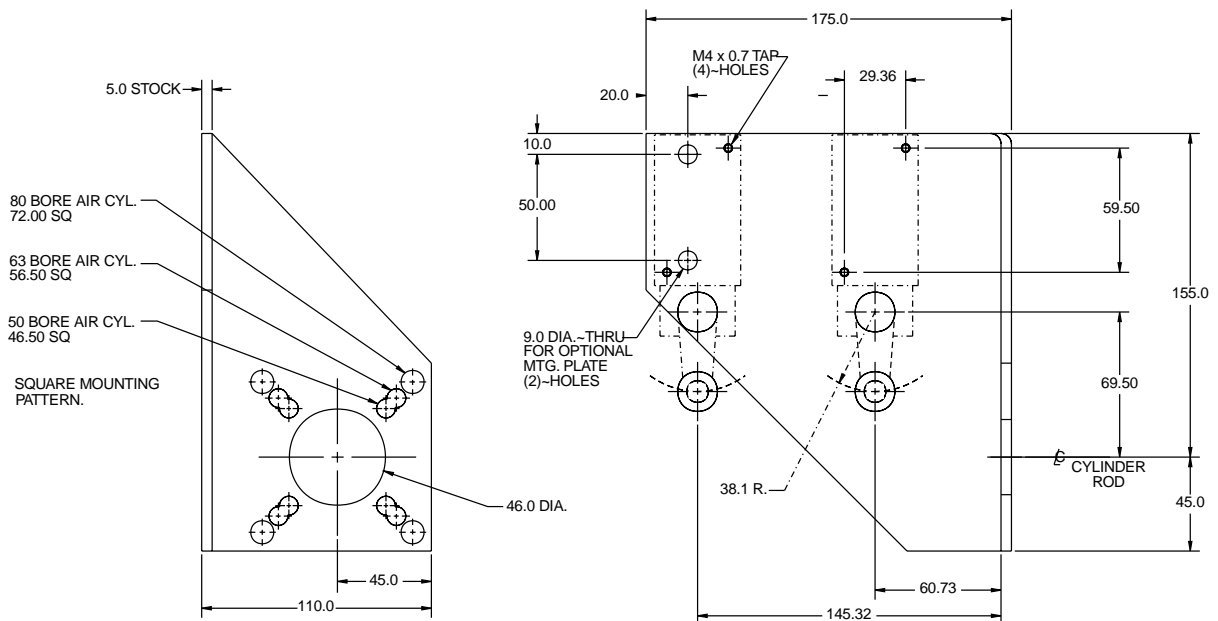
PART No. EM246-R



Metric

CAD File Name EM246LT

PART No. EM246-L



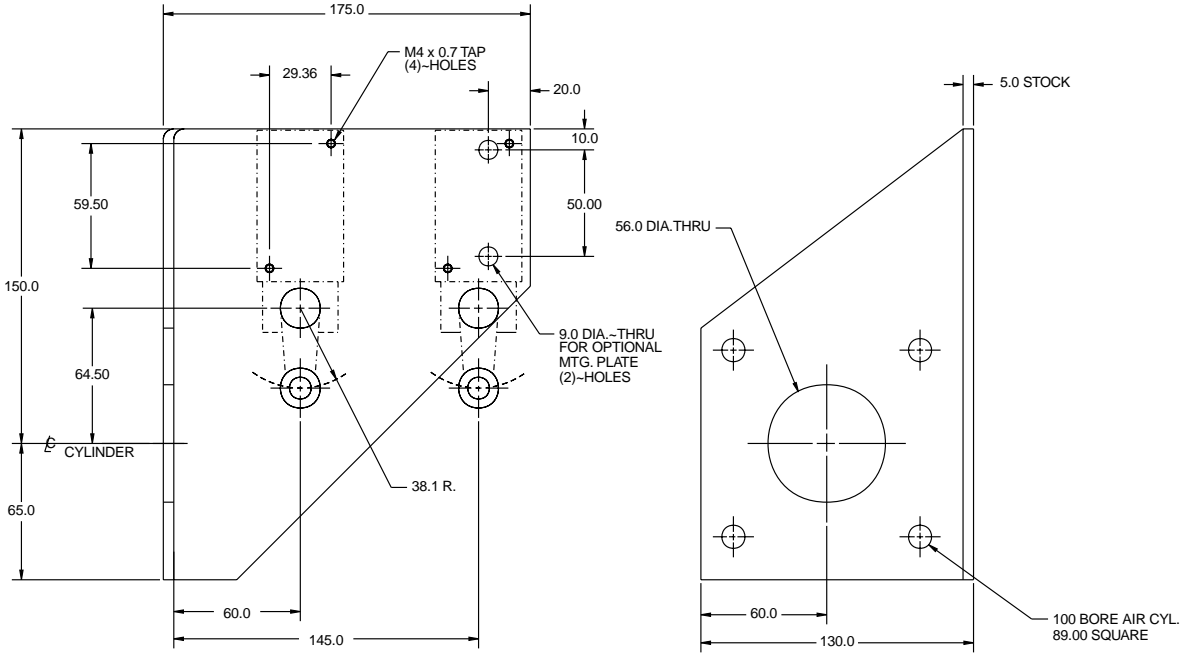
Switch Bracket for Metric Air Cylinders



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

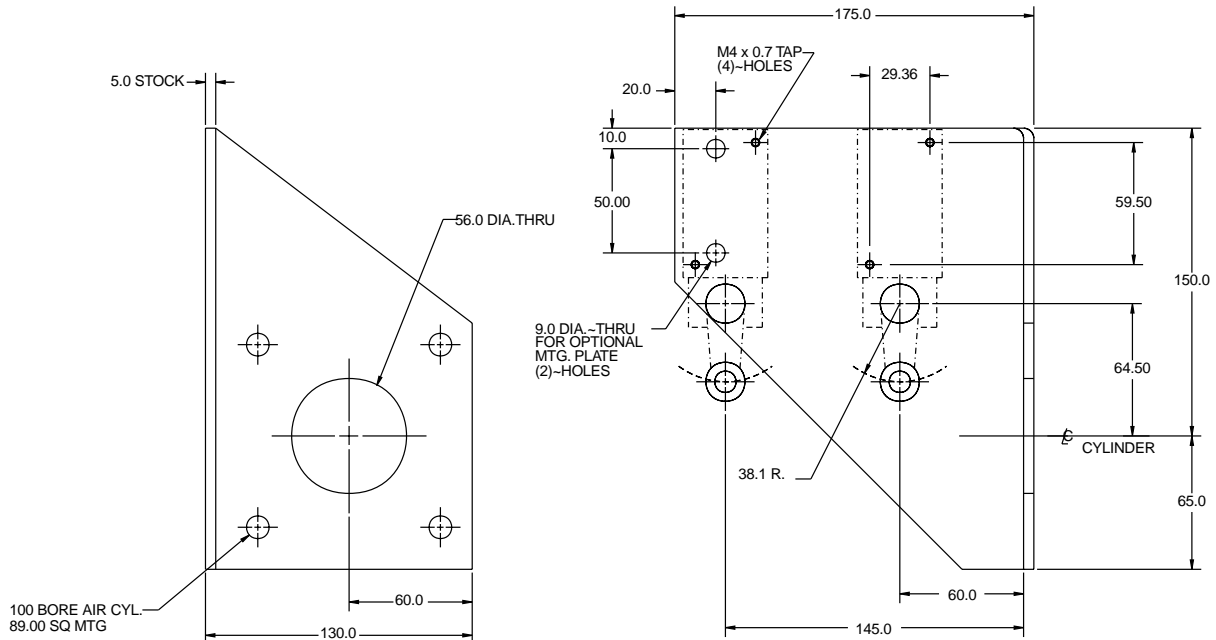
CAD File Name EM247RT

PART No. EM247-R



CAD File Name EM247LT

PART No. EM247-L



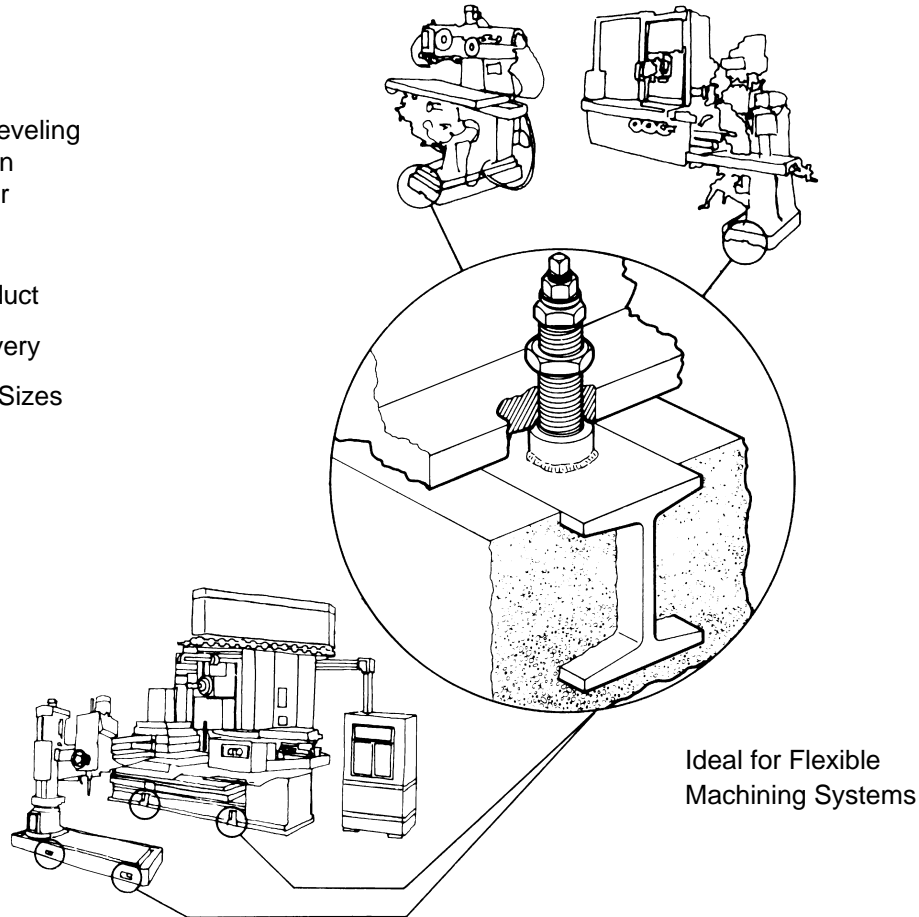
METRIC MACHINE TOOL COMPONENTS



Metric Leveling Jacks

Features:

- Single Point Leveling and Hold Down through Center
- Adjustable
- Standard Product
- Off-Shelf Delivery
- Full Range of Sizes



Coaxial Leveling and Anchoring for:

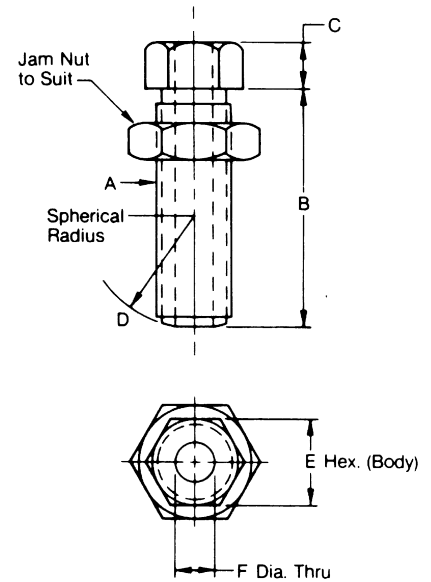
- Mills
- Lathes
- Transfer Lines
- Machining Center
- Boring Mills
- Grinders
- Broaches
- Fixtures
- Screw Machines
- Assembly Machines
- Stamping Presses
- Drill Presses



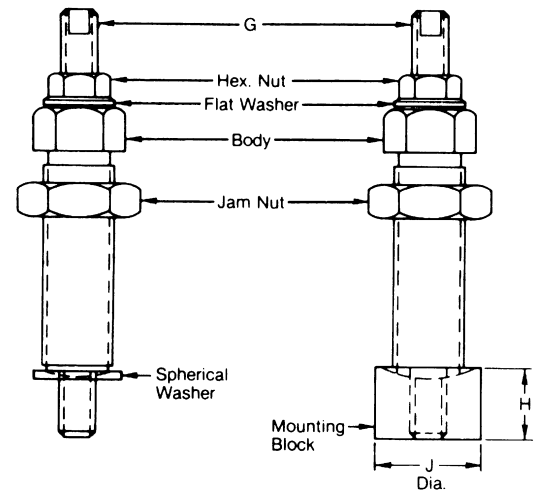
Metric Leveling Jacks

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	DESCRIPTION	A	B	C	D	E	F
2050	EMLJ-2050-F	BODY AND JAM NUT ONLY	M20 x 1.5	50	13	38	28.6	10.3
2050	EMLJ-2050-C		M20 x 2.5	50	13	38	28.6	10.3
2475	EMLJ-2475-F		M24 x 2	75	16	38	28.6	14.2
2475	EMLJ-2475-C		M24 x 3	75	16	38	28.6	14.2
3010	EMLJ-3010-F		M30 x 2	100	16	38	41.3	14.2
3010	EMLJ-3010-C		M30 x 3.5	100	16	38	41.3	14.2
3015	EMLJ-3015-F		M30 x 2	150	16	38	41.3	14.2
3015	EMLJ-3015-C		M30 x 3.5	150	16	38	41.3	14.2
3610	EMLJ-3610-F		M36 x 3	100	16	57	41.3	22.2
3610	EMLJ-3610-C		M36 x 4	100	16	57	41.3	22.2
3615	EMLJ-3615-F		M36 x 3	150	16	57	41.3	22.2
3615	EMLJ-3615-C		M36 x 4	150	16	57	41.3	22.2
3910	EMLJ-3910-F		M39 x 3	100	16	57	41.3	22.2
3910	EMLJ-3910-C		M39 x 4	100	16	57	41.3	22.2
3915	EMLJ-3915-F		M39 x 3	150	16	57	41.3	22.2
3915	EMLJ-3915-C		M39 x 4	150	16	57	41.3	22.2



CAD FILE NAME	PART NUMBER	DESCRIPTION	G
2050A	EMLJ-2050-FA	BODY JAM NUT STUD HEX NUT FLAT WASHER SPHERICAL WASHER	M8 x 1.25 x 100
2050A	EMLJ-2050-CA		M8 x 1.25 x 100
2475A	EMLJ-2475-FA		M12 x 1.75 x 140
2475A	EMLJ-2475-CA		M12 x 1.75 x 140
3010A	EMLJ-3010-FA		M12 x 1.75 x 180
3010A	EMLJ-3010-CA		M12 x 1.75 x 180
3015A	EMLJ-3015-FA		M12 x 1.75 x 230
3015A	EMLJ-3015-CA		M12 x 1.75 x 230
3610A	EMLJ-3610-FA		M20 x 2.5 x 180
3610A	EMLJ-3610-CA		M20 x 2.5 x 180
3615A	EMLJ-3615-FA		M20 x 2.5 x 230
3615A	EMLJ-3615-CA		M20 x 2.5 x 230
3910A	EMLJ-3910-FA		M20 x 2.5 x 180
3910A	EMLJ-3910-CA		M20 x 2.5 x 180
3915A	EMLJ-3915-FA		M20 x 2.5 x 230
3915A	EMLJ-3915-CA		M20 x 2.5 x 230



CAD FILE NAME	PART NUMBER	DESCRIPTION	H	J
2050AM	EMLJ-2050-FAM	BODY JAM NUT STUD HEX NUT FLAT WASHER MOUNTING BLOCK	19	38
2050AM	EMLJ-2050-CAM		19	38
2475AM	EMLJ-2475-FAM		25.4	38
2475AM	EMLJ-2475-CAM		25.4	38
3010AM	EMLJ-3010-FAM		31.8	63.5
3010AM	EMLJ-3010-CAM		31.8	63.5
3015AM	EMLJ-3015-FAM		31.8	63.5
3015AM	EMLJ-3015-CAM		31.8	63.5
3610AM	EMLJ-3610-FAM		31.8	63.5
3610AM	EMLJ-3610-CAM		31.8	63.5
3615AM	EMLJ-3615-FAM		31.8	63.5
3615AM	EMLJ-3615-CAM		31.8	63.5
3910AM	EMLJ-3910-FAM		31.8	63.5
3910AM	EMLJ-3910-CAM		31.8	63.5
3915AM	EMLJ-3915-FAM		31.8	63.5
3915AM	EMLJ-3915-CAM		31.8	63.5

Metric Swing Bolts



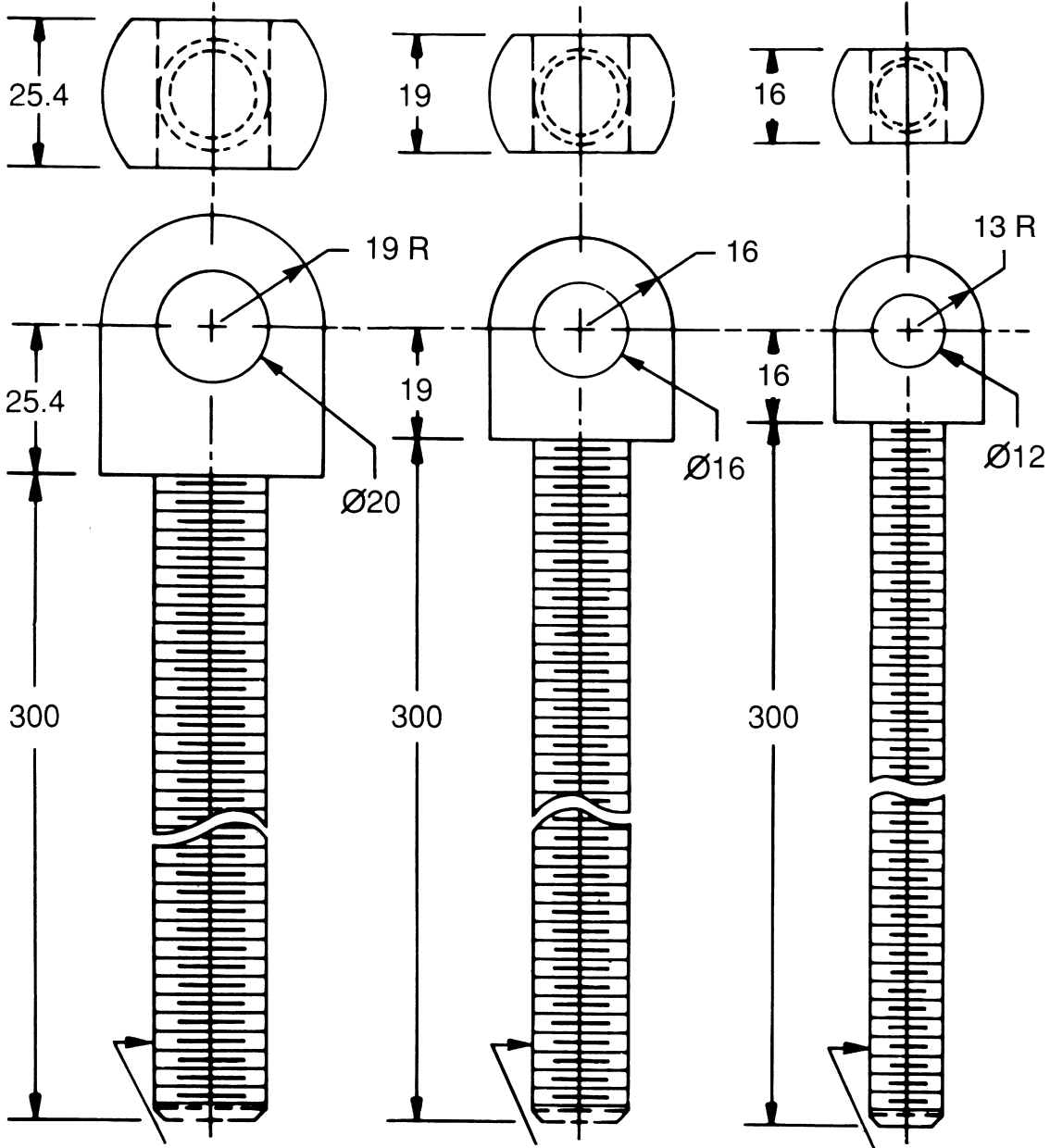
E&ESP

Click on CAD File to download (STP Format) 2dwg & 3dwg visit eandesp.com

Cad File Name EM620
Part Number EM620

Cad File Name EM616
Part Number EM616

Cad File Name EM612
Part Number EM612

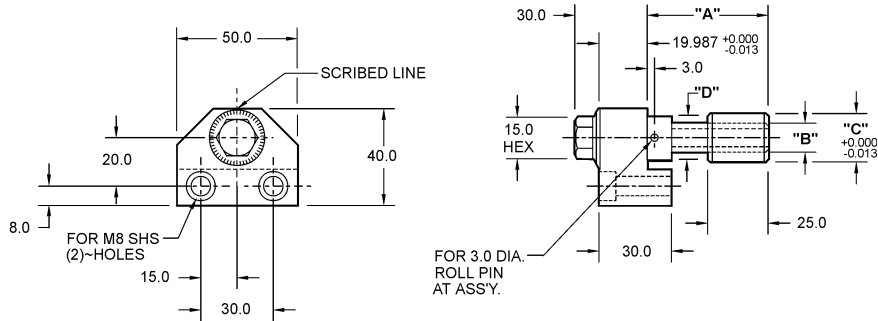


M20 x 2.5 THD.

M16 x 2.0 THD.

M12 x 1.75 THD.

Metric "L" Mount Micro Adjustment Dial

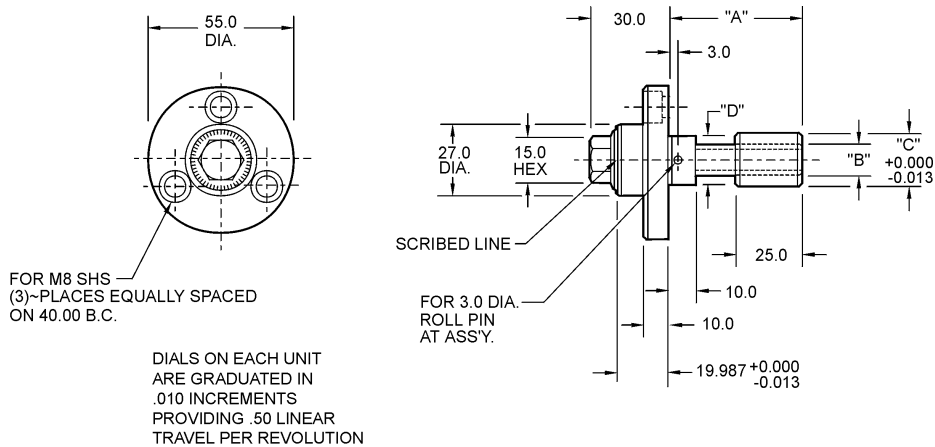


DIALS ON EACH UNIT ARE GRADUATED IN .010 INCREMENTS PROVIDING .50 LINEAR TRAVEL PER REVOLUTION

Click on CAD File to download (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205L	EM1205-L-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-L-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-L-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005L	EM1005-L-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-L-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-L-120.0	120.0	M10 x 0.5	15.987	15.50

Metric Round Mount Micro Adjustment Dial

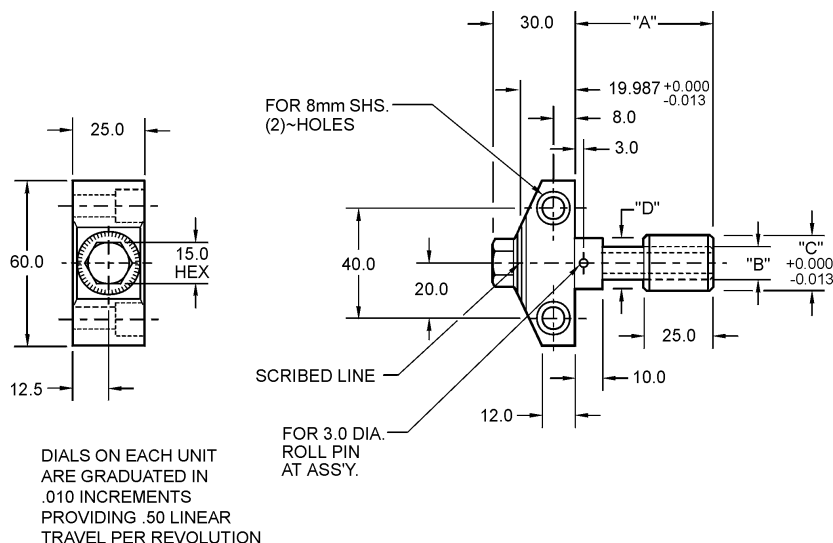


DIALS ON EACH UNIT ARE GRADUATED IN .010 INCREMENTS PROVIDING .50 LINEAR TRAVEL PER REVOLUTION

CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205RD	EM1205-RD-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-RD-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-RD-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005RD	EM1005-RD-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-RD-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-RD-120.0	120.0	M10 x 0.5	15.987	15.50

"Stretch"
The shortest standard component is given. You may "Stretch" the unit to the desired length.

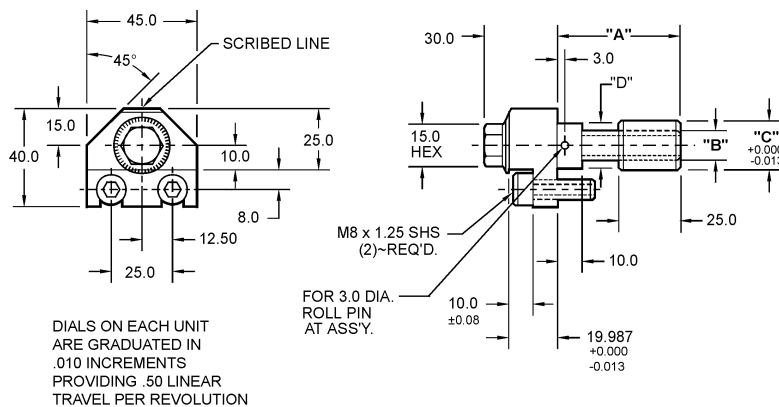
Metric Micro Adjustment Dial Side Mount



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205S	EM1205-S-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-S-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-S-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005S	EM1005-S-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-S-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-S-120.0	120.0	M10 x 0.5	15.987	15.50

Metric Mount Micro Adjustment Dial New Britain



CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205NB	EM1205-NB-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-NB-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-NB-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005NB	EM1005-NB-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-NB-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-NB-120.0	120.0	M10 x 0.5	15.987	15.50

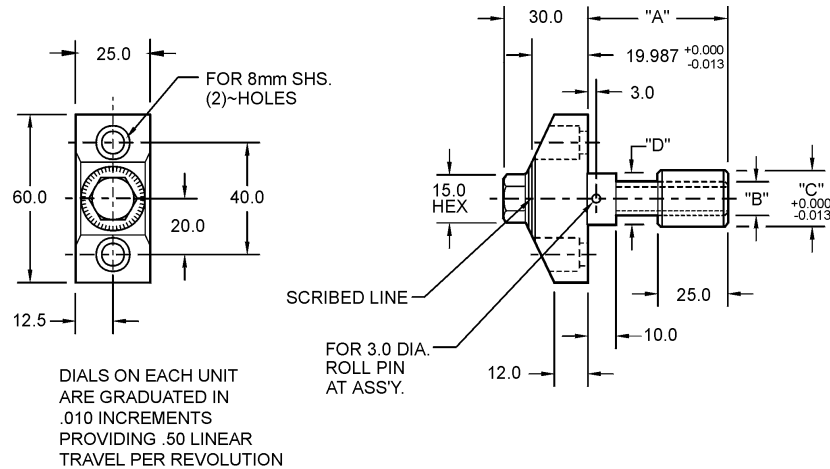
“Stretch”
The shortest standard component is given. You may “Stretch” the unit to the desired length.

Metric Micro Adjustment Dial "R" Mount



E&ESP

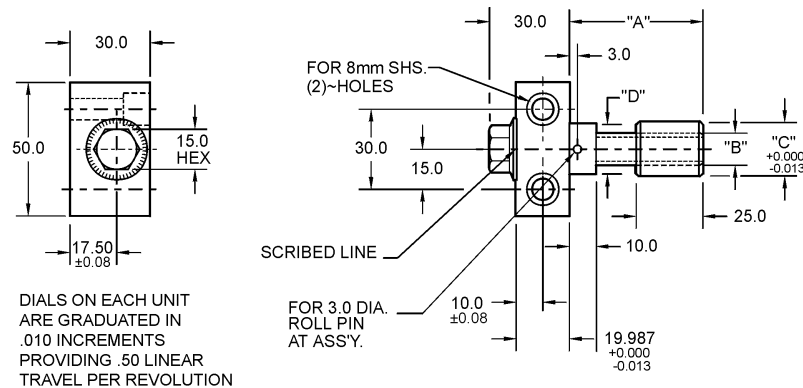
Metric



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205R	EM1205-R-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-R-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-R-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005R	EM1005-R-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-R-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-R-120.0	120.0	M10 x 0.5	15.987	15.50

Metric Micro Adjustment Dial "T" Mount



CAD FILE NAME	PART NUMBER	"A"	"B"	"C"	"D"
EM1205T	EM1205-T-50.0	50.0	M12 x 0.5	19.987	18.50
	EM1205-T-75.0	75.0	M12 x 0.5	19.987	18.50
	EM1205-T-120.0	120.0	M12 x 0.5	19.987	18.50
EM1005T	EM1005-T-50.0	50.0	M10 x 0.5	15.987	15.50
	EM1005-T-75.0	75.0	M10 x 0.5	15.987	15.50
	EM1005-T-120.0	120.0	M10 x 0.5	15.987	15.50

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.



METRIC TOLERANCE DATA & STANDARD SPECIFICATION

MATERIAL	TOLERANCE	HEAT TREAT
HARDENED & GROUND 8620	h9	12mm DIA OR LESS R "C" 50-52 .6 - .9 DEEP
STAINLESS 300 SERIES		N/A
MILD STEEL 8620		N/A
PREHARDENED A311 G & P		R "C" 22-30
		16mm DIA AND UP R "C" 58-60 .9 - 1.1 DEEP

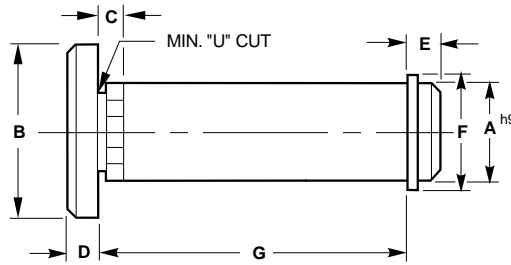
ALL E&E FIXTURE AND CLEVIS PINS ARE MADE TO THE FOLLOWING SPECIFICATIONS:

LENGTH = NOMINAL +.6

KNURL = NOMINAL +.2

LUBE OPTIONS = NOT AVAILABLE ON 6mm-8mm DIA PINS. 10mm-12mm DIA PINS ARE FURNISHED WITH A M6x1 TAPPED HOLE. 10mm DIA PINS CAN ONLY BE TAPPED ON THE END OPPOSITE THE RETAINER GROOVE. FOR PINS 16mm DIA OR LARGER A 1/8 BSPT IS FURNISHED.

Metric Head Type Fixture Pin w/Snap Ring



DIMENSIONAL INFORMATION							
CAD FILE NAME	A	B	C	D	E	F	*G 5mm INCR
MKSFIXTPIN	6.0	10.0	6.0	3.0	3.0	11.4	25-50
	8.0	11.0	6.0	3.0	3.0	13.2	25-50
	10.0	13.0	6.0	3.0	3.0	17.3	25-75
	12.0	16.0	6.0	3.0	4.0	20.8	25-75
	16.0	19.0	6.0	4.0	5.0	24.4	25-75
	20.0	24.0	6.0	4.0	6.0	29.0	25-100
	25.0	30.0	6.0	5.0	6.0	38.9	40-125
	30.0	36.0	6.0	5.0	5.0	42.4	40-125
	35.0	41.0	6.0	6.0	6.0	48.8	50-150
40.0	48.0	6.0	6.0	6.0	53.3	50-150	

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

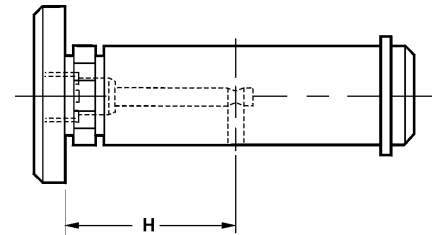
H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

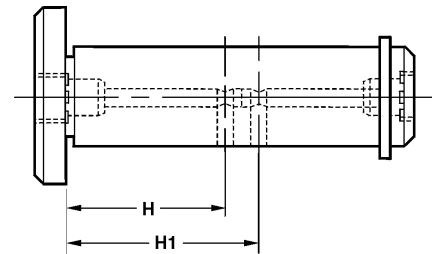
ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

Type	Description
MS	HARDENED AND GROUND, SMOOTH
MSS	STAINLESS, SMOOTH
MSU	MILD STEEL, SMOOTH
MSP	PREHARDENED, SMOOTH
MK	HARDENED AND GROUND, KNURLED
MKS	STAINLESS, KNURLED
MKU	MILD STEEL, KNURLED
MKP	PREHARDENED, KNURLED

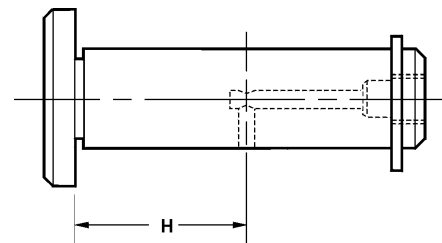
PIPE TAP LUBE OPTION PT



PIPE TAP LUBE OPTION = PT 2



PIPE TAP LUBE OPTION = RPT



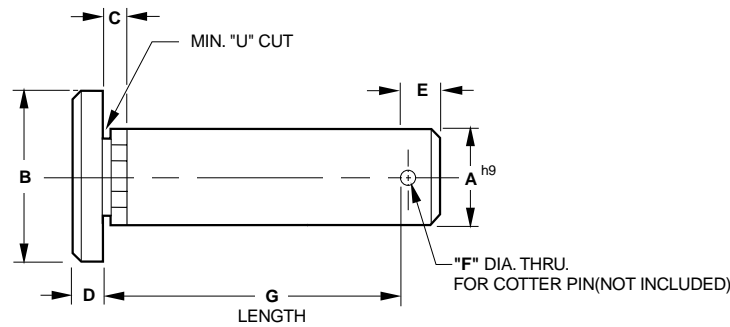
ORDERING INFORMATION:

Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim —
"H1" Dim

Example: 20-45-MS-PT

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.



HEAD TYPE FIXTURE PIN WITH COTTER PIN HOLE

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandes.com

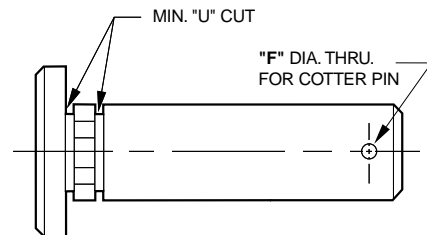
DIMENSIONAL INFORMATION							
CAD FILE NAME	A	B	C	D	E	F	*G 5mm INCR
MKSCLEVPIN	6.0	10.0	6.0	3.0	5.0	2.5	25-50
	8.0	11.0	6.0	3.0	5.0	2.5	25-50
	10.0	13.0	6.0	3.0	5.0	2.5	25-75
	12.0	16.0	6.0	3.0	6.0	3.0	25-75
	16.0	19.0	6.0	4.0	6.0	3.0	25-75
	20.0	24.0	6.0	4.0	6.0	3.0	25-100
	25.0	30.0	6.0	5.0	6.0	3.0	40-125
	30.0	36.0	6.0	5.0	8.0	5.0	40-125
	35.0	41.0	6.0	6.0	10.0	6.0	50-150
40.0	48.0	6.0	6.0	10.0	6.0	50-150	

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

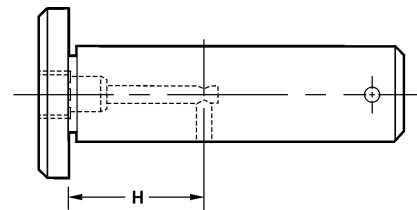
H = 1/2 G UNLESS OTHERWISE SPECIFIED

LUBE OPTION:

ADD "PT", AFTER PIN TYPE



PIPE TAP LUBE OPTION = PT



Type	Description
MSC	HARDENED AND GROUND, SMOOTH COTTER
MSCS	STAINLESS, SMOOTH, COTTER
MSCU	MILD STEEL, SMOOTH, COTTER
MSCP	PREHARDENED, SMOOTH, COTTER
MKC	HARDENED AND GROUND, KNURLED, COTTER
MKCS	STAINLESS, KNURLED, COTTER
MKCU	MILD STEEL, KNURLED, COTTER
MKCP	PREHARDENED, KNURLED, COTTER

ORDERING INFORMATION:

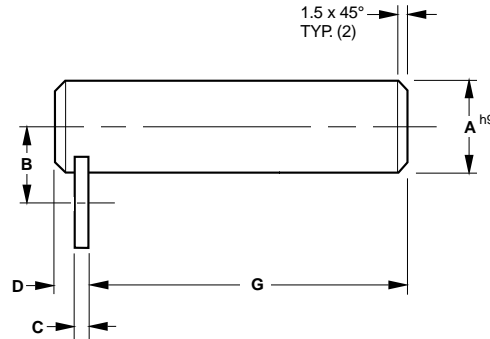
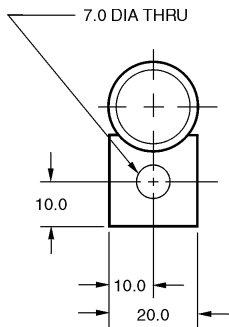
Specify: Pin Dia — Length — Type — Lube Option — "H" Dim

Example: 12-55-MKCP-PT

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Metric Headless Fixture Pin with Retainer



METRIC HEADLESS FIXTURE PIN WITH RETAINER

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION					
CAD FILE NAME	A	B	C	D	*G 5mm INCR
MHRFIXTPIN	6.0	10.0	3.0	6.0	25-50
	8.0	11.0	3.0	6.0	25-50
	10.0	12.0	3.0	6.0	25-75
	12.0	13.0	3.0	6.0	25-75
	16.0	15.0	3.0	6.0	25-75
	20.0	17.0	3.0	6.0	25-100
	25.0	19.5	3.0	6.0	40-125
	30.0	22.0	6.0	12.0	40-125
	35.0	24.5	6.0	12.0	50-150
	40.0	27.0	6.0	12.0	50-150
	45.0	29.5	6.0	12.0	75-200
	50.0	32.0	6.0	12.0	75-200
	60.0	37.0	6.0	12.0	75-200
	75.0	44.5	6.0	12.0	100-300
90.0	52.0	6.0	12.0	150-350	
100.0	57.0	6.0	12.0	150-350	

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" "PT2" OR "RPT" AFTER PIN TYPE

*RETAINER OPTION:

RETAINER #EM-1R SUPPLIED ON 6.0 – 25.0 DIA PINS AND #EM-2R SUPPLIED ON 30-100 DIA PINS UNLESS OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN STANDARD RETAINER IS REQUIRED. SEE PAGE E-55 FOR ADDITIONAL RETAINER OPTIONS.

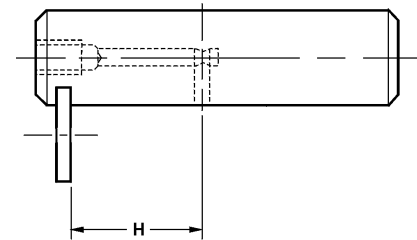
ORDERING INFORMATION:

Specify: Pin Dia — Length — Type — Lube Option —
— "H" Dim — "H1" Dim — *Retainer Option

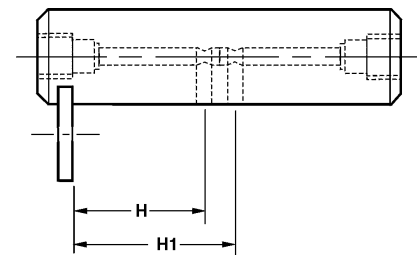
Example: 12-60-MHR-PT-EM-1RD

CAD Directory
Mach-Tool\Met-FixtPin

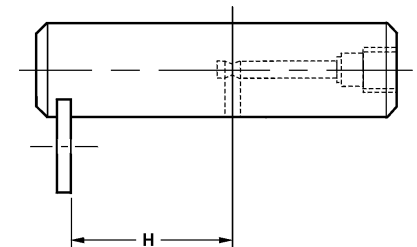
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



Type

MHR
MHRs
MHRU
MHRP

Description

HARDENED AND GROUND
STAINLESS
MILD STEEL
PREHARDENED, GROUND
AND POLISHED

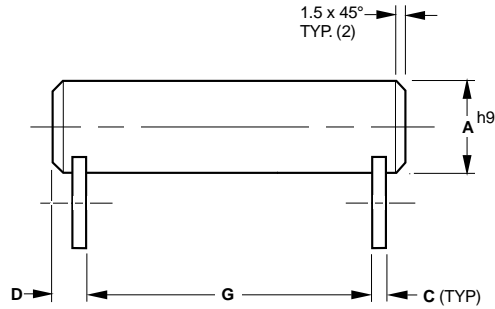
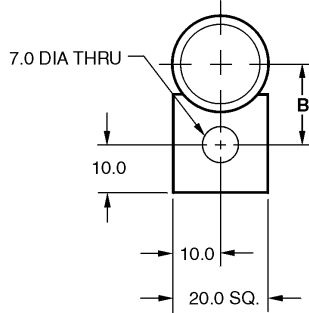
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Metric Headless Fixture Pin with Double Retainer



E&ESP

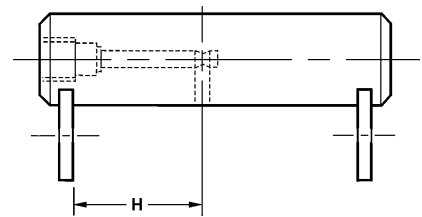


METRIC HEADLESS FIXTURE PIN WITH DOUBLE RETAINER

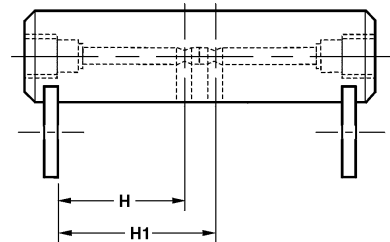
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION					
CAD FILE NAME	A	B	C	D	*G 5mm INCR
MHDRFIXTPIN	6.0	10.0	3.0	6.0	25-50
	8.0	11.0	3.0	6.0	25-50
	10.0	12.0	3.0	6.0	25-75
	12.0	13.0	3.0	6.0	25-75
	16.0	15.0	3.0	6.0	25-75
	20.0	17.0	3.0	6.0	25-100
	25.0	19.5	3.0	6.0	40-125
	30.0	22.0	6.0	12.0	40-125
	35.0	24.5	6.0	12.0	50-150
	40.0	27.0	6.0	12.0	50-150
	45.0	29.5	6.0	12.0	75-200
	50.0	32.0	6.0	12.0	75-200
	60.0	37.0	6.0	12.0	75-200
	75.0	44.5	6.0	12.0	100-300
90.0	52.0	6.0	12.0	150-350	
100.0	57.0	6.0	12.0	150-350	

PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



*G = LENGTH IN 5mm" INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" OR "PT2" AFTER PIN TYPE

*RETAINER OPTION:

RETAINER #EM-1R SUPPLIED ON 6-25 DIA PINS AND #EM-2R SUPPLIED ON 30-100 DIA PINS UNLESS OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN STANDARD RETAINER IS REQUIRED. SEE PAGE E-55 FOR ADDITIONAL RETAINER OPTIONS.

ORDERING INFORMATION

Specify: Pin Dia — Length — Type — Lube Option — "H" Dim — "H1" Dim — *Retainer Option

Example: 12-60-MHDR-PT-EM-IRD

Type

MHDR
MHDRS
MHDRU
MHDRP

Description

HARDENED AND GROUND, DOUBLE RETAINER
STAINLESS, DOUBLE RETAINER
MILD STEEL, DOUBLE RETAINER
PREHARDENED, GROUND AND POLISHED, DOUBLE RETAINER

CAD Directory
Mach-Tool\Met-FixtPin

"Stretch"

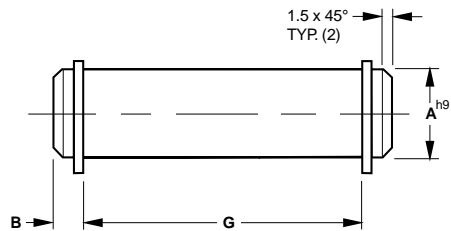
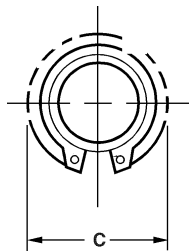
The shortest standard component is given. You may "Stretch" the unit to the desired length.

Metric Headless Fixture Pin with Double Snap Ring



E&ESP

Metric

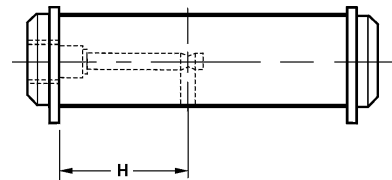


METRIC HEADLESS FIXTURE PIN WITH DOUBLE SNAP RING

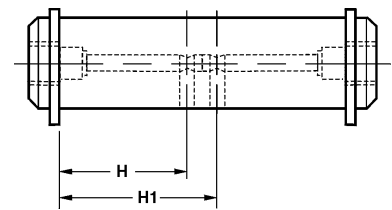
Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION				
CAD FILE NAME	A	B	C	*G 5mm INCR
MSXFIXTPIN	6.0	3.0	11.4	25-50
	8.0	3.0	13.2	25-50
	10.0	3.0	17.3	25-75
	12.0	4.0	20.8	25-75
	16.0	5.0	24.4	25-75
	20.0	6.0	29.0	25-100
	25.0	6.0	38.9	40-125
	30.0	5.0	42.4	40-125
	35.0	6.0	48.8	50-150
	40.0	6.0	53.3	50-150
	45.0	6.0	59.2	75-200
	50.0	6.0	64.5	75-200
60.0	8.0	76.5	75-200	

PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT" OR "PT2" AFTER PIN TYPE

Type	Description
MSX	HARDENED AND GROUND, DOUBLE SNAP RING
MSXS	STAINLESS, DOUBLE SNAP RING
MSXU	MILD STEEL, DOUBLE SNAP RING
MSXP	PREHARDENED, GROUND AND POLISHED, DOUBLE SNAP RING

ORDERING INFORMATION:

Specify: Pin Dia — Length — Type —
Lube Option — "H" Dim —
"H1" Dim

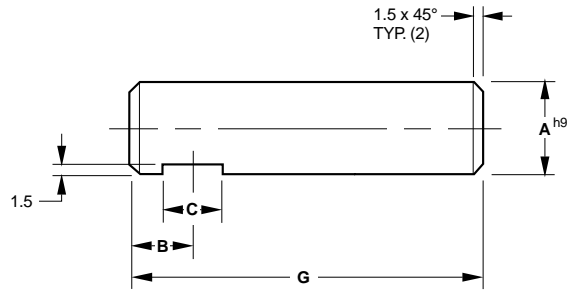
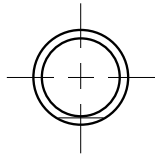
Example: 10-45-MSXP-PT2-15-30

CAD Directory
Mach-Tool\Met-FixtPin

"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Metric Set Screw Fixture Pin



METRIC SET SCREW FIXTURE PIN

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION				
CAD FILE NAME	A	B	C	*G 5mm INCR
MHSFIXTPIN	6.0	*	6.0	25-50
	8.0	*	10.0	25-50
	10.0	*	10.0	25-75
	12.0	*	10.0	25-75
	16.0	*	15.0	25-75
	20.0	*	15.0	25-100
	25.0	*	15.0	40-125
	30.0	*	15.0	40-125
	35.0	*	15.0	50-150
	40.0	*	15.0	50-150
	45.0	*	15.0	75-200
	50.0	*	15.0	75-200
	60.0	*	15.0	75-200
	75.0	*	15.0	100-300
90.0	*	15.0	150-350	
100.0	*	15.0	150-350	

*B = SPECIFY LOCATION

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

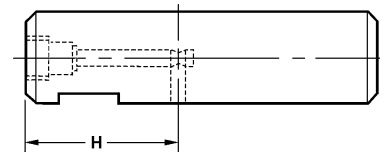
H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

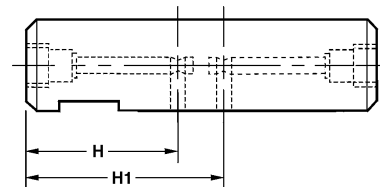
LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

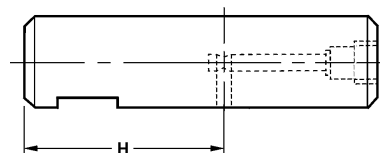
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



ORDERING INFORMATION:

Specify: Pin Dia — Length — Type — Lube Option — "B" Dim — "H" Dim — "H1" Dim

Example: 12-65-MHS-PT-10-25

Type

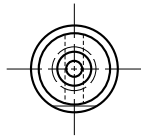
Description

MHS	HARDENED AND GROUND
MHSS	STAINLESS
MHSU	MILD STEEL
MHSP	PREHARDENED, GROUND AND POLISHED

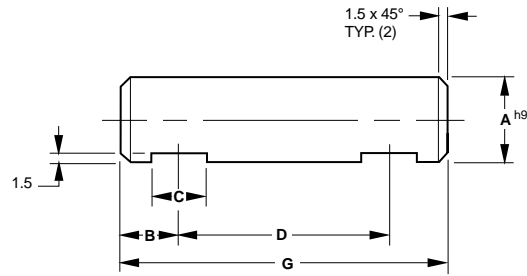
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

Metric Set Screw Fixture Pin with Double Flat



METRIC SET SCREW FIXTURE PIN WITH DOUBLE FLAT

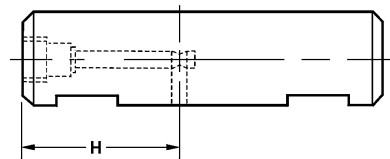


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

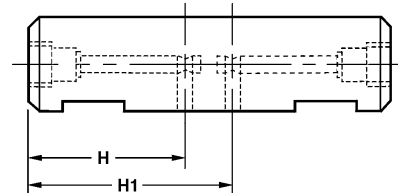
DIMENSIONAL INFORMATION					
CAD FILE NAME	A	B	C	D	*G 5mm INCR
MHDSFIXTPIN	6.0	*	6.0	*	25-50
	8.0	*	10.0	*	35-50
	10.0	*	10.0	*	35-75
	12.0	*	10.0	*	35-75
	16.0	*	15.0	*	45-75
	20.0	*	15.0	*	45-100
	25.0	*	15.0	*	45-125
	30.0	*	15.0	*	45-125
	35.0	*	15.0	*	50-150
	40.0	*	15.0	*	50-150
	45.0	*	15.0	*	75-200
	50.0	*	15.0	*	75-200
	60.0	*	15.0	*	75-200
	75.0	*	15.0	*	100-300
	90.0	*	15.0	*	150-350
100.0	*	15.0	*	150-350	

*B = SPECIFY LOCATION AFTER PIN TYPE
 *G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST
 *D = SPECIFY DISTANCE BETWEEN CENTER LINE OF FLATS
 H = LOCATION OF CROSSHOLE
 H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED
LUBE OPTION:
 ADD "PT" OR "PT2" AFTER PIN TYPE

PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



Type	Description
MHDS	HARDENED AND GROUND
MHDS	STAINLESS
MHDSU	MILD STEEL
MHDS	PREHARDENED, GROUND AND POLISHED

ORDERING INFORMATION:

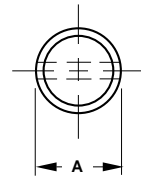
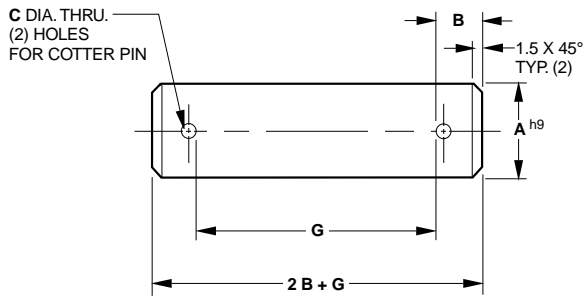
Specify: Pin Dia — Length — Type — Lube Option — "B" Dim — "D" Dim — "H" Dim — "H1" Dim

Example: 40-125-MHDS-PT-1-20-50

"Stretch"
 The shortest standard component is given. You may "Stretch" the unit to the desired length.



Metric Headless Fixture Pin with Double Cotter Pin



METRIC HEADLESS FIXTURE PIN WITH DOUBLE COTTER PIN

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION				
CAD FILE NAME	A	B	C	*G 5mm INCR
MHDCFIXTPIN	6.0	5.0	3.0	25-50
	8.0	5.0	3.0	25-50
	10.0	5.0	3.0	25-75
	12.0	6.0	3.7	25-75
	16.0	6.0	3.7	25-75
	20.0	6.0	4.5	25-100
	25.0	6.0	4.5	40-125
	30.0	8.0	5.0	40-125
	35.0	10.0	5.5	50-150
	40.0	10.0	6.8	50-150
	45.0	10.0	6.8	75-200
	50.0	10.0	8.5	75-200
	60.0	10.0	8.5	75-200
	70.0	13.0	10.5	100-300
	75.0	13.0	10.5	100-300

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

Type	Description
MHDC	HARDENED AND GROUND
MHDCS	STAINLESS
MHDCU	MILD STEEL
MHDCP	PREHARDENED, GROUND AND POLISHED

ORDERING INFORMATION:

Specify: Pin Dia. — Length — Type

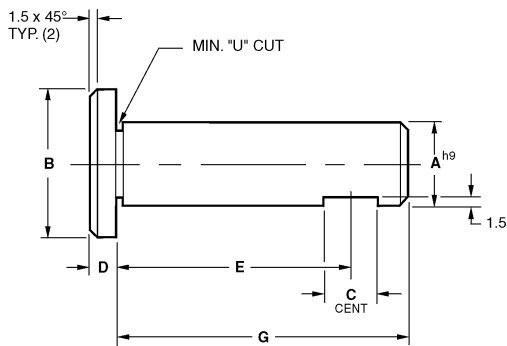
Example: 16-45-MHDCP

“Stretch”

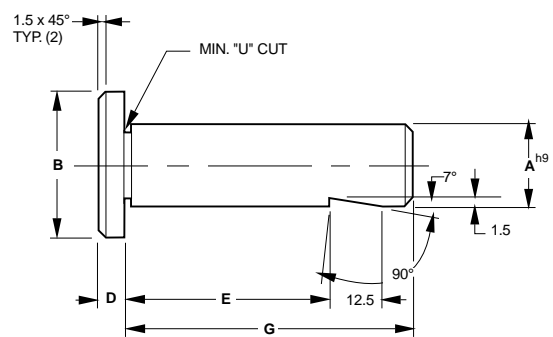
The shortest standard component is given. You may “Stretch” the unit to the desired length.

Metric Head Type Fixture Pin with Set Screw Flat & Whistle Notch

METRIC HEAD TYPE PIN WITH SET SCREW
FLAT "MSF"



METRIC HEAD TYPE PIN WITH
WHISTLE NOTCH "MSW"



METRIC HEAD TYPE FIXTURE PIN WITH SET SCREW
FLAT OR WHISTLE NOTCH

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION					
CAD FILE NAME	A	B	C	D	*G 5mm INCR
MSFFIXTPIN OR MSWFIXTPIN	6.0	10.0	6.0	3.0	25-50
	8.0	11.0	10.0	3.0	25-50
	10.0	13.0	10.0	3.0	25-75
	12.0	16.0	10.0	3.0	25-75
	16.0	19.0	15.0	4.0	25-75
	20.0	24.0	15.0	4.0	25-100
	25.0	30.0	15.0	5.0	40-125
	30.0	36.0	15.0	5.0	40-125
35.0	41.0	15.0	6.0	50-150	
40.0	48.0	15.0	6.0	50-150	

E = LOCATION OF FLAT OR WHISTLE NOTCH

***G** = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS
AVAILABLE UPON REQUEST

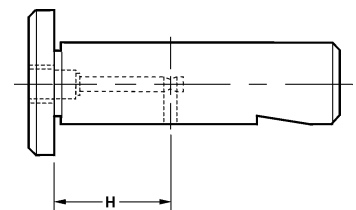
H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF
REQUIRED

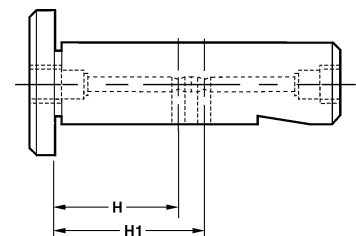
LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

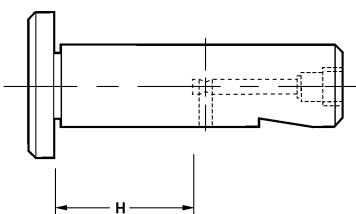
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



Type

Description

MSF	HARDENED AND GROUND, SET SCREW
MSFS	STAINLESS, SET SCREW
MSFU	MILD STEEL, SET SCREW
MSFP	PREHARDENED, SET SCREW
MSW	HARDENED AND GROUND, WHISTLE NOTCH
MSWS	STAINLESS, WHISTLE NOTCH
MSWU	MILD STEEL, WHISTLE NOTCH
MSWP	PREHARDENED, WHISTLE NOTCH

ORDERING INFORMATION:

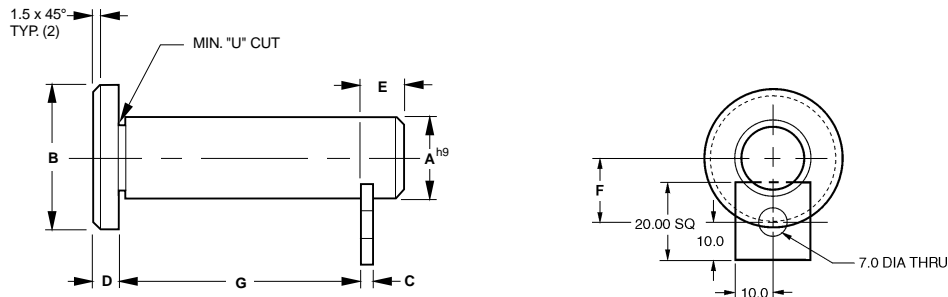
Specify: Pin Dia. — Length — Type —
Lube Option — "E" Dim —
"H" Dim — "H1" Dim

Example: 40-120-MSF-RPT-100-80-60

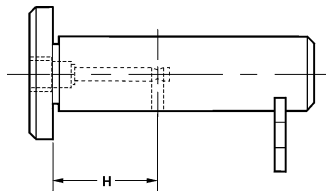
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.

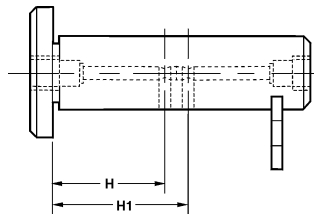
Metric Head Type Fixture Pin with Retainer



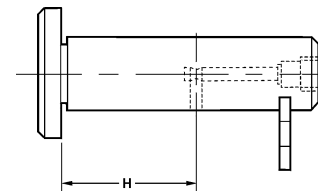
PIPE TAP LUBE OPTION = PT



PIPE TAP LUBE OPTION = PT2



PIPE TAP LUBE OPTION = RPT



METRIC HEAD TYPE FIXTURE PIN WITH RETAINER

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

DIMENSIONAL INFORMATION							
CAD FILE NAME	A	B	C	D	E	F	*G 5mm" INCR
MSRFXTPIN	6.0	10.0	3.0	3.0	6.0	10.0	25-50
	8.0	11.0	3.0	3.0	6.0	11.0	25-50
	10.0	13.0	3.0	3.0	6.0	12.0	25-75
	12.0	16.0	3.0	3.0	6.0	13.0	25-75
	16.0	19.0	3.0	4.0	6.0	15.0	25-75
	20.0	24.0	3.0	4.0	6.0	17.0	25-100
	25.0	30.0	3.0	5.0	6.0	19.5	40-125
	30.0	36.0	6.0	5.0	9.0	22.5	40-125
	35.0	41.0	6.0	6.0	9.0	24.5	50-150
	40.0	48.0	6.0	6.0	9.0	27.0	50-150

*G = LENGTH IN 5mm INCREMENTS, OTHER LENGTHS AVAILABLE UPON REQUEST

H = 1/2 G UNLESS OTHERWISE SPECIFIED

H1 = LOCATION OF ADDITIONAL CROSSHOLE IF REQUIRED

LUBE OPTION:

ADD "PT", "PT2" OR "RPT" AFTER PIN TYPE

*RETAINER OPTION:

RETAINER #EM-1R SUPPLIED ON 6-25 DIA PINS AND #EM-2R SUPPLIED ON 30-100 DIA PINS UNLESS OTHERWISE SPECIFIED. DO NOT SPECIFY WHEN STANDARD RETAINER IS REQUIRED. SEE PAGE E-55 FOR ADDITIONAL RETAINER OPTIONS.

ORDERING INFORMATION:

Specify: Pin Dia. — Length — Type — Lube Option — "H" Dim — "H1" Dim — *RETAINER OPTION

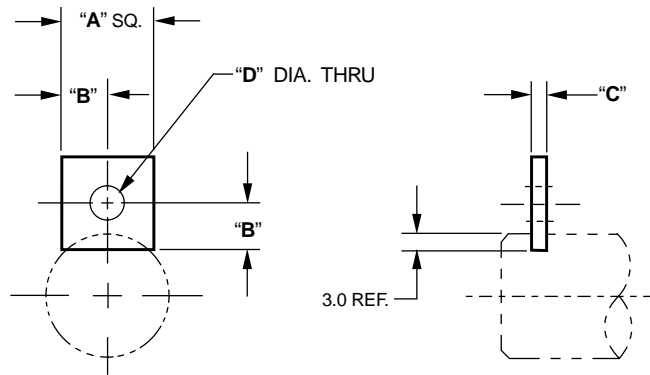
Example: 20-80-MSR-PT-EM-1RD

Type	Description
MSR	HARDENED AND GROUND, SMOOTH, RETAINER
MSRS	STAINLESS, SMOOTH, RETAINER
MSRU	MILD STEEL, SMOOTH, RETAINER
MSRP	PREHARDENED, SMOOTH, RETAINER

CAD Directory
Mach-Tool\Met-FixtPin

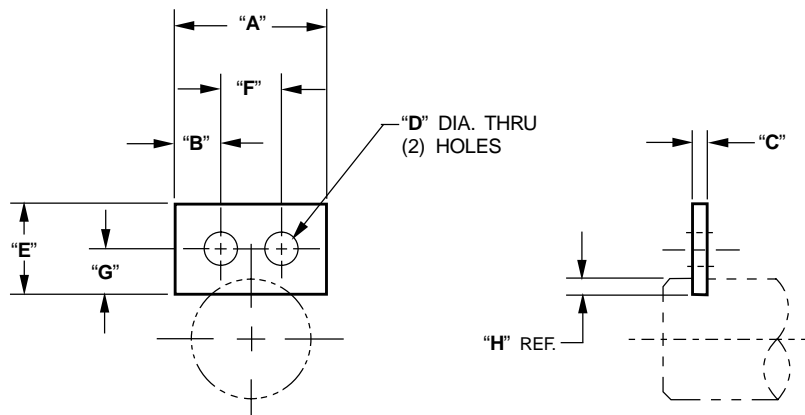
"Stretch"

The shortest standard component is given. You may "Stretch" the unit to the desired length.



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

CAD FILE NAME	RETAINER NUMBER	"A" DIM	"B" DIM	"C" DIM	"D" DIM
EM-RET	EM-1R	20.0	10.0	3	7.0
	EM-2R	20.0	10.0	6	7.0
	EM-3R	25.0	12.5	3	7.0
	EM-4R	25.0	12.5	6	11.0
	EM-5R	30.0	15.0	6	11.0



CAD FILE NAME	RETAINER NUMBER	"A" DIM	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" DIM	"G" DIM	"H" DIM
EM-RET	EM-1RD	30.0	7.5	3	7.0	20.0	15.0	10.0	3.0
	EM-2RD	30.0	7.5	6	7.0	20.0	15.0	10.0	3.0
	EM-3RD	40.0	12.5	3	7.0	25.0	15.0	12.5	3.0
	EM-4RD	45.0	12.5	6	11.0	25.0	20.0	12.5	3.0
	EM-5RD	50.0	15.0	6	11.0	30.0	20.0	15.0	3.0
	EM-6RD	65.0	20.0	6	13.0	40.0	25.0	20.0	3.0
	EM-7RD	30.0	7.5	3	9.0	20.0	15.0	10.0	3.0
	EM-8RD	50.0	10.0	6	9.0	30.0	30.0	15.0	6.0
	EM-9RD	65.0	12.5	6	11.0	40.0	40.0	20.0	10.0

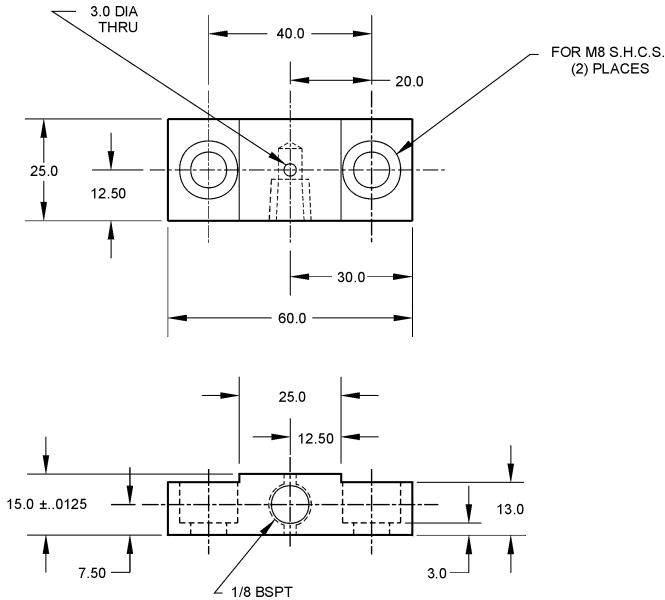
Metric Rest Pads



Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

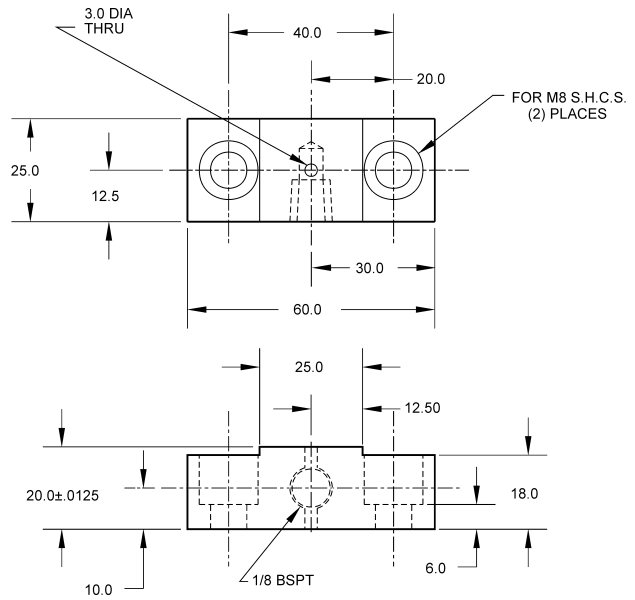
CAD File Name EHM001

Part No. EHM008, W/O AIR, EHM001 W/AIR



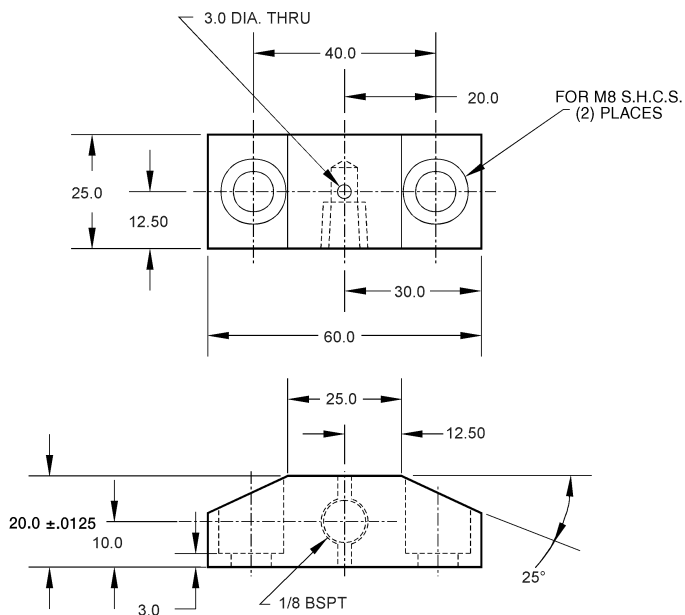
CAD File Name EHM002

Part No. EHM021, W/O AIR, EHM002 W/AIR



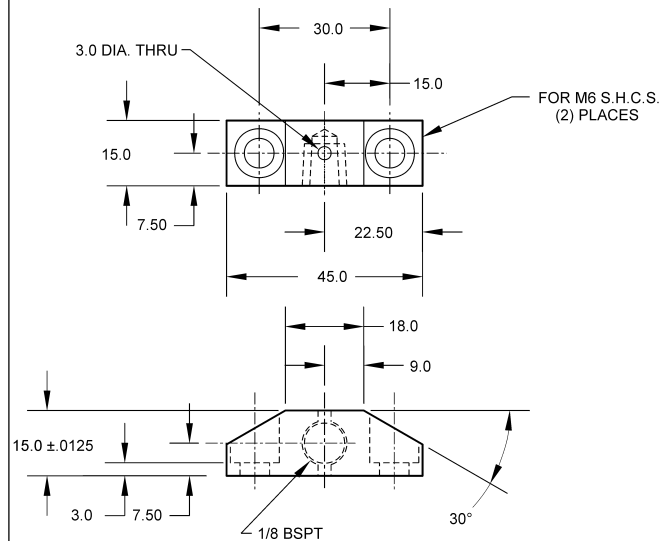
CAD File Name EHM035

Part No. EHM042, W/O AIR, EHM035 W/AIR



CAD File Name EHM040

Part No. EHM015, W/O AIR, EHM040 W/AIR



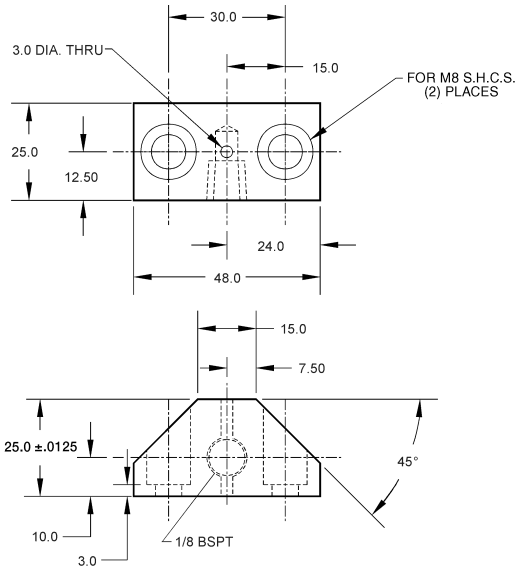
Metric Rest Pads



Click on CAD File to download (STP Format) 2dwg & 3dwg visit eandesp.com

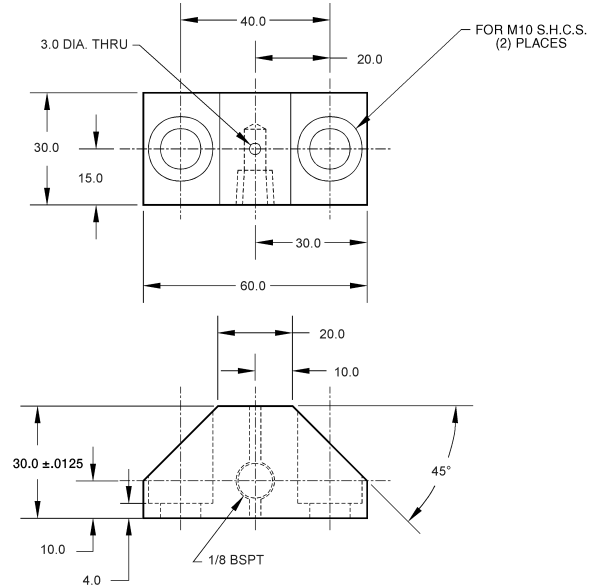
CAD File Name EHM032

Part No. EHM032, W/AIR, EHM043 W/O AIR



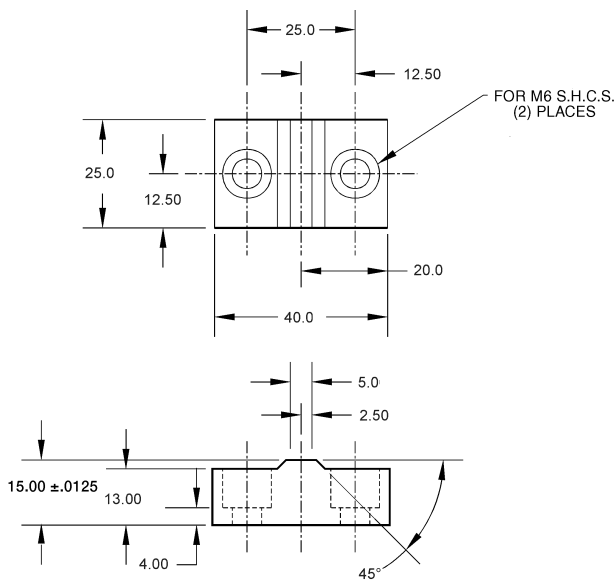
CAD File Name EHM033

Part No. EHM033, W/AIR, EHM044 W/O AIR



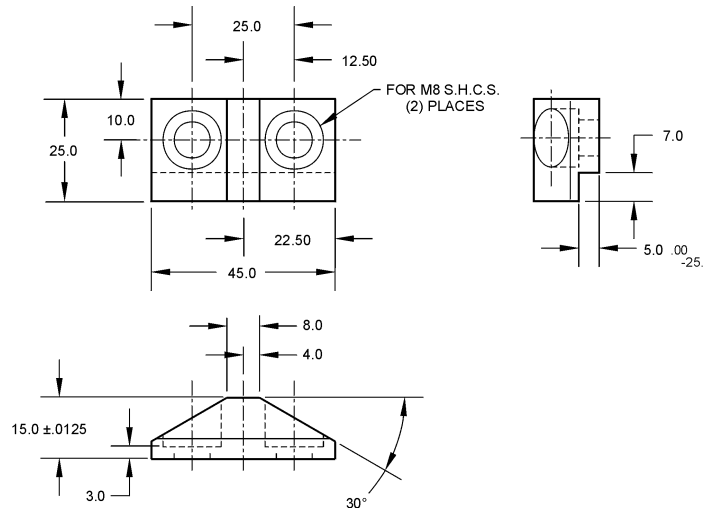
CAD File Name EHM034

Part No. EHM034



CAD File Name EHM036

Part No. EHM036



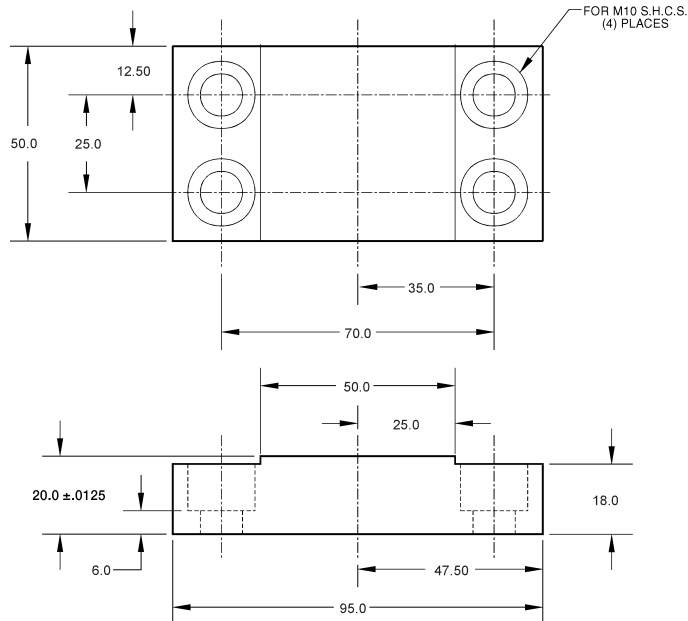
Metric Rest Pads

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com



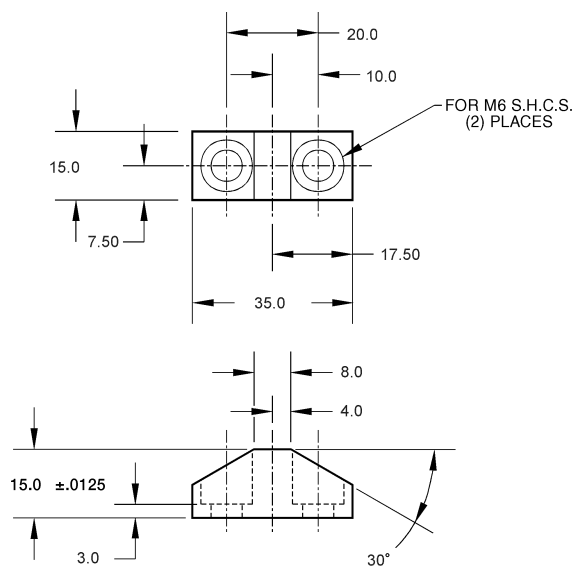
CAD File Name EHM022

Part No. EHM022



CAD File Name EHM041

Part No. EHM041

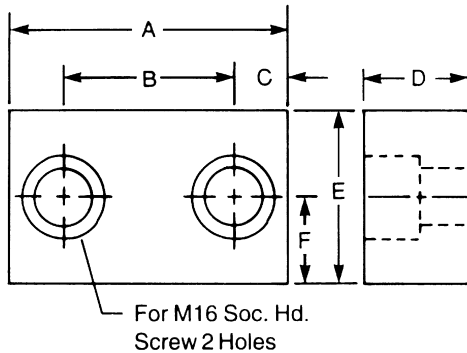


Metric Locating, Positioning Blocks & Fixture Keys

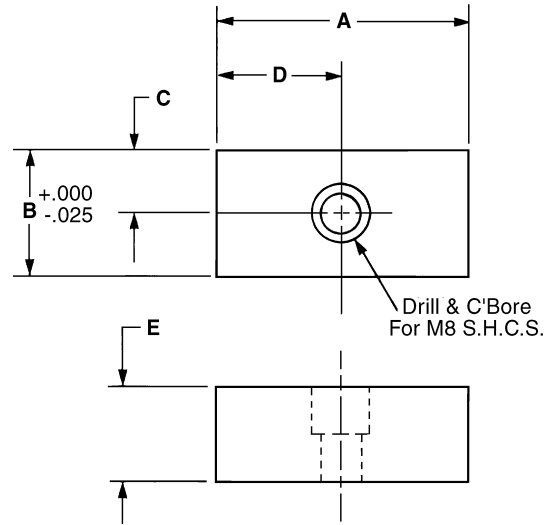


E&ESP

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

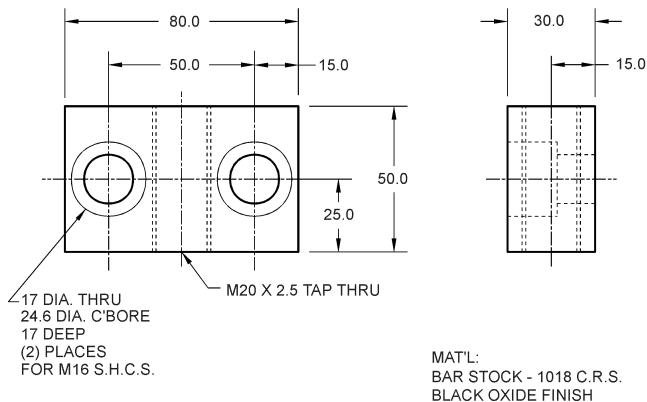


CAD FILE NAME	PART NUMBER	A	B	C	D	E	F
EHM049	EHM049	80.0	50.0	15.0	30.0	50.0	25.0
EHM050	EHM050	130.0	100.0	15.0	30.0	50.0	25.0
EHM051	EHM051	105.0	75.0	15.0	30.0	50.0	25.0

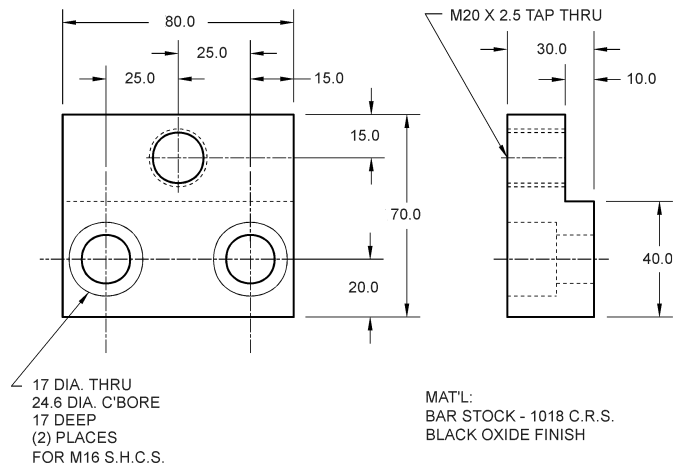


CAD FILE NAME	PART NUMBER	A	B	C	D	E
EM428	EM428	50	25	12.5	25.0	18
EM429	EM429	50	25	12.5	25.0	12
EM430	EM430	75	25	12.5	37.5	18
EM431	EM431	75	25	12.5	37.5	25

CAD File Name EHM052 Part No. EHM052



CAD File Name EHM053 Part No. EHM053



Metric Grippers "EMHS" High Speed Tool Steel

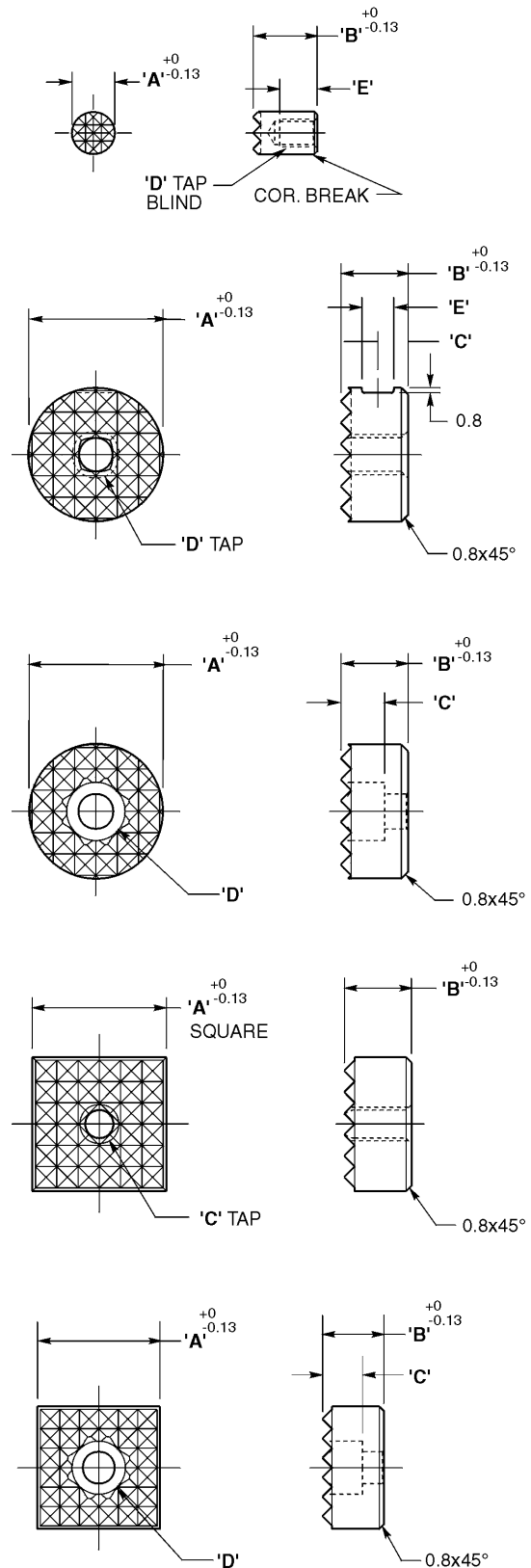


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

"EMHS" ROUND DESIGN							
CAD FILE NAME	PART NUMBER	A	B	C	D	E	TOOTH PATTERN
EMHS060	EMHS-060	6	10	-	M3 x 0.5	5	SUPER-FINE
	EMHS-062	6	12	-	M3 x 0.5	7	SUPER-FINE
EMHS080	EMHS-080	8	10	-	M4 x 0.7	5	SUPER-FINE
	EMHS-082	8	12	-	M4 x 0.7	7	SUPER-FINE
EMHS100	EMHS-100	10	10	4.5	M5 x 0.8	4.7	EX-FINE
	EMHS-102	10	12	6	M5 x 0.8	4.7	EX-FINE
EMHS120	EMHS-120	12	10	4.5	M5 x 0.8	4.7	FINE
	EMHS-122	12	12	6	M5 x 0.8	4.7	FINE
EMHS160	EMHS-160	16	10	4.5	M6 x 1.0	4.7	FINE
	EMHS-162	16	12	6	M6 x 1.0	4.7	FINE
EMHS200	EMHS-200	20	10	4.5	M6 x 1.0	4.7	FINE
	EMHS-202	20	12	6	M6 x 1.0	4.7	FINE
EMHS250	EMHS-250	25	10	4.5	M6 x 1.0	4.7	FINE
	EMHS-252	25	12	6	M6 x 1.0	4.7	FINE
"EMHS" ROUND DESIGN-C'BORE							
EMHS120C	EMHS-120-C	12	10	5.6	M4 SHCS	-	FINE
	EMHS-122-C	12	12	5.6	M4 SHCS	-	FINE
EMHS160C	EMHS-160-C	16	10	5.6	M4 SHCS	-	FINE
	EMHS-162-C	16	12	5.6	M4 SHCS	-	FINE
EMHS200C	EMHS-200-C	20	10	6.6	M5 SHCS	-	FINE
	EMHS-202-C	20	12	6.6	M5 SHCS	-	FINE
EMHS250C	EMHS-250-C	25	10	7.6	M6 SHCS	-	FINE
	EMHS-252-C	25	12	7.6	M6 SHCS	-	FINE

EMHS-SQUARE DESIGN					
CAD FILE NAME	PART NUMBER	A SQUARE	B	C	TOOTH PATTERN
EMHS9100	EMHS-9100	10	10	M5 x 0.8	EX-FINE
	EMHS-9102	10	12	M5 x 0.8	EX-FINE
EMHS9120	EMHS-9120	12	10	M5 x 0.8	FINE
	EMHS-9122	12	12	M5 x 0.8	FINE
EMHS9160	EMHS-9160	16	10	M6 x 1.0	FINE
	EMHS-9162	16	12	M6 x 1.0	FINE
EMHS9200	EMHS-9200	20	10	M5 x 0.8	FINE
	EMHS-9202	20	12	M5 x 0.8	FINE
EMHS9250	EMHS-9250	25	10	M6 x 1.0	FINE
	EMHS-9252	25	12	M6 x 1.0	FINE

EMHS-SQUARE-"C"-BORE DESIGN						
CAD FILE NAME	PART NUMBER	A SQUARE	B	C	D C'BORE	TOOTH PATTERN
EMHS9120C	EMHS-9120-C	12	10	5.6	M4 SHCS	FINE
	EMHS-9122-C	12	12	5.6	M4 SHCS	FINE
EMHS9160C	EMHS-9160-C	16	10	5.6	M4 SHCS	FINE
	EMHS-9160-C	16	12	5.6	M4 SHCS	FINE
EMHS9200C	EMHS-9200-C	20	10	6.6	M5 SHCS	FINE
	EMHS-9202-C	20	12	6.6	M5 SHCS	FINE
EMHS9250C	EMHS-9250-C	25	10	7.6	M6 SHCS	FINE
	EMHS-9252-C	25	12	7.6	M6 SHCS	FINE



CAD Directory
Mach-Tool\Met-Gripper

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

All dimensions are in mm

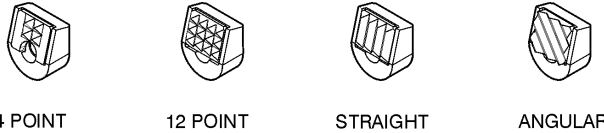
Metric Grippers "EMCT"-Carbide Tipped



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

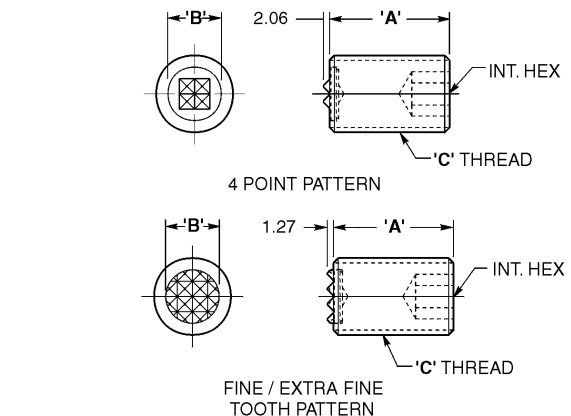
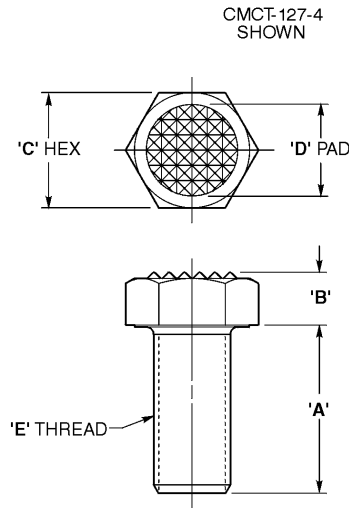
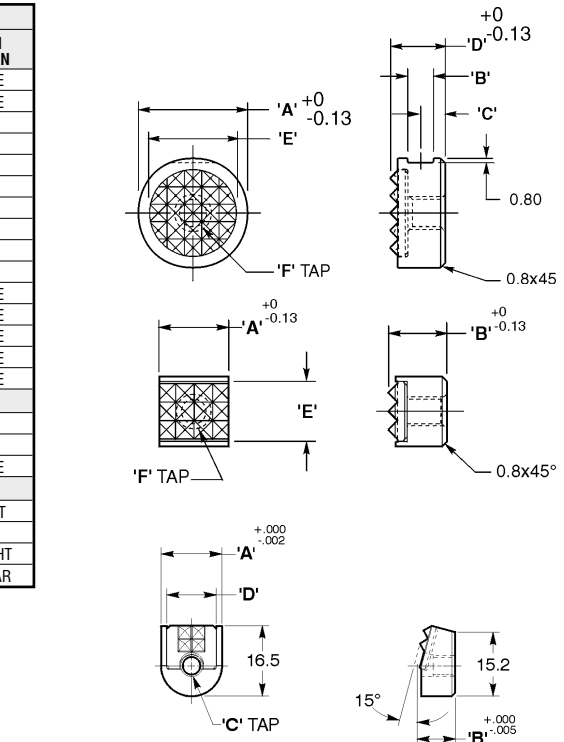
EMCT - ROUND								
CAD FILE NAME	PART NUMBER	A DIA	B	C	D	E	F TAP	TOOTH PATTERN
EMCT100	EMCT-100	10	10	4.5	4.75	7.9	M5 x 0.8	EX-FINE
EMCT102	EMCT-102	10	12	6	4.75	7.9	M5 x 0.8	EX-FINE
EMCT120	EMCT-120	12	10	4.5	4.75	9.5	M5 x 0.8	FINE
EMCT122	EMCT-122	12	12	6	4.75	9.5	M5 x 0.8	FINE
EMCT160	EMCT-160	16	10	4.5	4.75	12.7	M6 x 1.0	FINE
EMCT162	EMCT-162	16	12	6	4.75	12.7	M6 x 1.0	FINE
EMCT200	EMCT-200	20	10	4.5	4.75	15.9	M6 x 1.0	FINE
EMCT202	EMCT-202	20	12	6	4.75	15.9	M6 x 1.0	FINE
EMCT250	EMCT-250	25	10	4.5	4.75	19.0	M6 x 1.0	FINE
EMCT252	EMCT-252	25	12	6	4.75	19.0	M6 x 1.0	FINE
EMCT840EF	EMCT-840-EF	12.7	12.7	5.9	4.75	9.5	M6 x 1.0	EX-FINE
EMCT841EF	EMCT-841-EF	12.7	9.5	4.4	4.75	9.5	M6 x 1.0	EX-FINE
EMCT842EF	EMCT-842-EF	12.7	16.5	7.5	4.75	9.5	M6 x 1.0	EX-FINE
EMCT850EF	EMCT-850-EF	15.9	9.5	4.4	4.75	12.7	M6 x 1.0	EX-FINE
EMCT860EF	EMCT-860-EF	19.0	9.5	4.4	4.75	15.9	M6 x 1.0	EX-FINE
EMCT - SQUARE								
EMCT9120	EMCT-9120	12	10	-	-	10.3	M5 x 0.8	FINE
EMCT9122	EMCT-9122	12	12	-	-	10.3	M5 x 0.8	FINE
EMCT870EF	EMCT-870-EF	12.7	9.5	-	-	10.3	M6 x 1.0	EX-FINE
EMCT - ANGLE GRIP								
EMCT1274	EMCT-127-4	14.3	9.5	M5 x 0.8	11.9	-	-	4-POINT
EMCT12712	EMCT-127-12	14.3	9.5	M5 x 0.8	11.9	-	-	FINE
EMCT1304	EMCT-130-4	14.3	9.5	M5 x 0.8	11.9	-	-	STRAIGHT
EMCT1455	EMCT-145-5	14.3	9.5	M5 x 0.8	11.9	-	-	ANGULAR

*Optional tooth patterns available, must add "EF" for Extra-Fine to end of part number, otherwise gripper will be supplied with Fine tooth pattern.



"EMCTH" CARBIDE TIPPED ADJUSTABLE							
CAD FILE NAME	PART NUMBER	A	B	C HEX	D	E THD.	TOOTH PATTERN
EMCTH06102	EMCTH-06102	12	5	10	7.9	M6 x 1.0	EX-FINE
	EMCTH-06100	25	5	10	7.9	M8 x 1.0	EX-FINE
EMCTH08122	EMCTH-08122	12	6.4	13	9.5	M8 x 1.25	FINE
	EMCTH-08125	25	6.4	13	9.5	M8 x 1.25	FINE
	EMCTH-08125x35	35	6.4	13	9.5	M8 x 1.25	FINE
EMCTH10125	EMCTH-10125	25	7.5	17	12.7	M10 x 1.25	FINE
	EMCTH-10125x40	40	7.5	17	12.7	M10 x 1.25	FINE
EMCTH10152	EMCTH-10152	12	8.3	17	12.7	M10 x 1.50	FINE
	EMCTH-10150	25	8.3	17	12.7	M10 x 1.50	FINE
	EMCTH-10150x40	40	8.3	17	12.7	M10 x 1.50	FINE
EMCTH12175	EMCTH-12175	25	8.7	19	15.9	M12 x 1.75	FINE
	EMCTH-12175x40	40	8.7	19	15.9	M12 x 1.75	FINE
EMCTH16200	EMCTH-16200	35	11	24	19.0	M16 x 2.00	FINE
	EMCTH-16200x50	50	11	24	19.0	M16 x 2.00	FINE
EMCTH20250	EMCTH-20250	40	13.7	30	25.4	M20 x 2.50	EX-FINE
	EMCTH-20250x60	60	13.7	30	25.4	M20 x 2.50	EX-FINE

"EMPG" CARBIDE TIPPED ADJUSTABLE						
CAD FILE NAME	PART NUMBER	A	B	C	INT HEX	TOOTH PATTERN
EMPG10150	EMPG-10150	25	6.4	M10 x 1.50	5	EX-FINE
EMPG10150	EMPG-10150x50	50	6.4	M10 x 1.50	5	EX-FINE
EMPG121754	EMPG-12175-4	25	7.9	M12 x 1.75	6	4-POINT
EMPG12175	EMPG-12175	25	7.9	M12 x 1.75	6	EX-FINE
EMPG121754	EMPG-12175x50-4	50	7.9	M12 x 1.75	6	4-POINT
EMPG12175	EMPG-1217x50	50	7.9	M12 x 1.75	6	EX-FINE
EMPG162004	EMPG-16200-4	25	11.1	M16 x 2.00	8	4-POINT
EMPG16200	EMPG-16200	25	11.1	M16 x 2.00	8	FINE
EMPG162004	EMPG-16200x50-4	50	11.1	M16 x 2.00	8	4-POINT
EMPG16200	EMPG-16200x50	50	11.1	M16 x 2.00	8	FINE
EMPG202504	EMPG-20250-4	25	12.7	M20x 2.50	10	4-POINT
EMPG20250	EMPG-20250	25	12.7	M20x 2.50	10	FINE



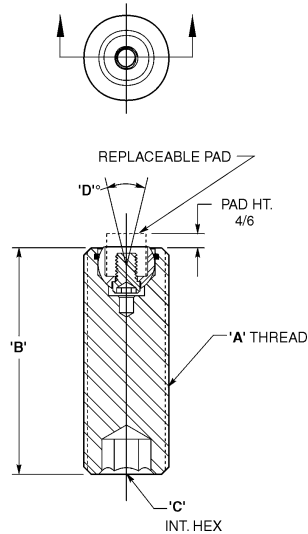
CAD Directory

Mach-Tool\Met-Gripper

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

All dimensions are in mm

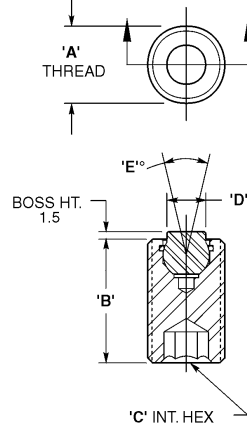
Metric Swivots-Threaded Design



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

REPLACEABLE PAD STYLE												
ASSEMBLIES							COMPONENTS					
CAD FILE NAME (see note below)	PART NUMBER	A THREAD	B LGTH	C INT HEX	D DEGREE SWIVEL	BALL DIA	1* REPLACE PAD DIA	2 O-RING	3 BALL	4 LOCK SCREW	5 HOUSING	LOAD RATING
EMTBU20030	EMTBU-20030	M20 x 2.5	30	10	42°	13	10	EMBUR-130	EMBUB-130	EMBUS-130	EMTBU-20030	8379
	EMTBU-20050	M20 x 2.5	50	10	28°	13	10	EMBUR-150	EMBUB-150	EMBUS-150	EMTBU-20050	8379
	EMTBU-20070	M20 x 2.5	70	8	28°	13	10	EMBUR-130	EMBUB-130	EMBUS-130	EMTBU-20070	8379
EMTBU24040	EMTBU-24040	M24 x 3.0	40	10	22°	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMTBU-24040	12233
	EMTBU-24080	M24 x 1.0	80	10	22°	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMTBU-24040	12233

*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE E-60, E-61 OR E-67).



REPLACEABLE BALL STYLE												
ASSEMBLIES							COMPONENTS					
CAD FILE NAME (see note below)	PART NUMBER	A THREAD	B LGTH	C INT HEX	D BOSS DIA	E DEGREE SWIVEL	BALL DIA	1 BALL	2 O-RING	3 HOUSING	AVAIL TOOTH PATTERN	LOAD RATING
EMTBU12025F or EMTBU12025S	EMTBU-12025*	M12 x 1.75	25	6	6	28°	7	EMBUB-070-(*)	EMBUR-070	EMTBU-12025-H	SF	3440
	EMTBU-12035*	M12 x 1.75	35	6	6	28°	7	EMBUB-070-(*)	EMBUR-070	EMTBU-12035-H	SF	3440
	EMTBU-12050*	M12 x 1.75	50	6	6	28°	7	EMBUB-070-(*)	EMBUR-070	EMTBU-12050-H	SF	3440
EMTBU16025F or EMTBU16025S	EMTBU-16025*	M16 x 2.0	25	8	8.5	24°	10	EMBUB-100-(*)	EMBUR-100	EMTBU-16025-H	EF/SF	5190
	EMTBU-16035*	M16 x 2.0	35	8	8.5	24°	10	EMBUB-100-(*)	EMBUR-100	EMTBU-16035-H	EF/SF	5190
	EMTBU-16050	M16 x 2.0	50	8	8.5	24°	10	EMBUB-100-(*)	EMBUR-100	EMTBU-16050-H	EF/SF	5190
EMTBU20030F or EMTBU20030S	EMTBU-20030	M20 x 2.5	25	10	10	42°	13	EMBUB-130-(*)	EMBUR-130	EMTBU-20030-H	EF/SF	8379
	EMTBU-20050	M20 x 2.5	35	10	10	42°	13	EMBUB-130-(*)	EMBUR-130	EMTBU-20050-H	EF/SF	8379
	EMTBU-20070	M20 x 2.5	50	8	10	42°	13	EMBUB-130-(*)	EMBUR-130	EMTBU-20070-H	EF/SF	8379

*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE E-60, E-61 OR E-67).

CAD Directory

Mach-Tool\Met-Gripper

All dimensions are in mm

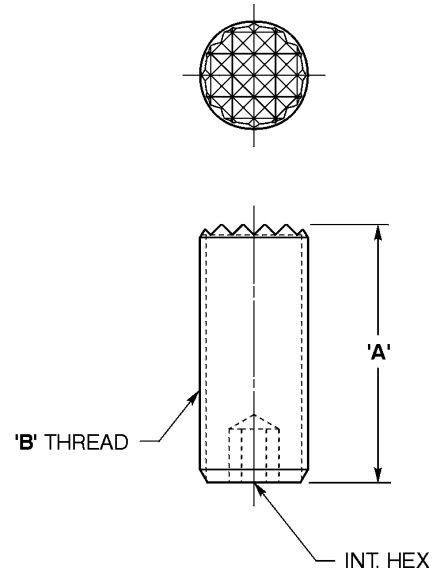
Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

Metric Grippers "EMHS" High Speed Tool Steel

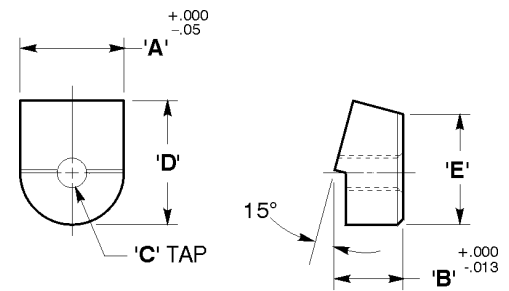


Click to download CAD Files (STP Format) 2dwg & 3dwg visit eandesp.com

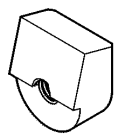
ENHS-ADJUSTABLE					
CAD FILE NAME	PART NUMBER	A	B	INT HEX	TOOTH PATTERN
EMHS1015040	EMHS-10150x40	40	M10 x 1.5	3	EX-FINE
EMHS1217525	EMHS-12175x25	25	M12 x 1.7	5	EX-FINE
EMHS1217540	EMHS-12175x40	40	M12 x 1.7	5	FINE
EMHS1620040	EMHS-16200x40	40	M16 x 2.0	6	FINE
EMHS2025040	EMHS-20250x40	40	M20 x 2.5	8	FINE



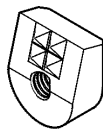
EMHS-ANGLE GRIP							
CAD FILE NAME	PART NUMBER	A	B	C	D	E	TOOTH PATTERN
EMHS1274	EMHS-127-4	14.3	9.5	M5 x 0.8	16.5	15.2	4-POINT
EMHS12712	EMHS-127-12	14.3	9.5	M5 x 0.8	16.5	15.2	FINE
EMHS1304	EMHS-130-4	14.3	9.5	M5 x 0.8	16.5	15.2	STRAIGHT
EMHS1455	EMHS-145-5	14.3	9.5	M5 x 0.8	16.5	15.2	ANGULAR
EMHS11010MM	EMHS-110-10MM	10.0	9.5	M5 x 0.8	16.5	15.2	SMOOTH
EMHS127410MM	EMHS-127-4-10MM	10.0	9.5	M5 x 0.8	16.5	15.2	4-POINT
EMHS130410MM	EMHS-130-4-10MM	10.0	9.5	M5 x 0.8	16.5	15.2	STRAIGHT
EMHS145510MM	EMHS-145-5-10MM	10.0	9.5	M5 x 0.8	16.5	15.2	ANGULAR



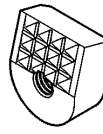
EMHS-110-10MM SHOWN



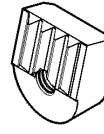
SMOOTH



4 POINT



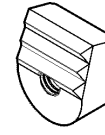
12 POINT



STRAIGHT



ANGULAR



3 POINT
90° STR

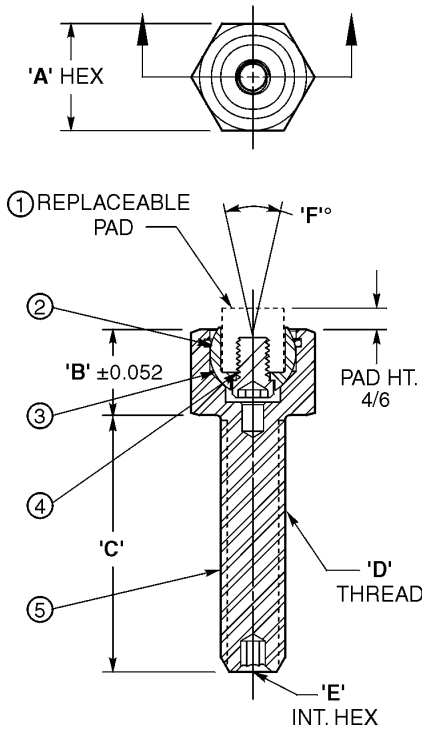
CAD Directory

Mach-Tool\Met-Gripper

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

All dimensions are in mm

Metric Swivots – Hex Head Adjustable – Pad Style



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

HEX HEAD ADJUSTABLE DESIGN-REPLACEABLE PAD STYLE														
ASSEMBLIES								COMPONENTS						
CAD FILE NAME (see note below)	PART NUMBER	A HEX	B HEAD HT	C THD LENGTH	D THD SIZE	E INT HEX	F DEGREE SWIVEL	BALL DIA	1 REPLACE PAD DIA	2 O-RING	3 BALL	4 LOCK SCREW	5 HOUSING	LOAD RATING LBS
EMBUH10015	EMBUH-10015	17	13	15	M10 x 1.5	3.0	42	13	10	EMBUR-130	EMBUB-100	EMBUS-130	EMBUH-10015-H	4194
	EMBUH-10030	17	13	30	M10 x 1.5	3.0	42	13	10	EMBUR-130	EMBUB-100	EMBUS-130	EMBUH-10030-H	4194
	EMBUH-10050	17	13	50	M10 x 1.5	3.0	42	13	10	EMBUR-130	EMBUB-100	EMBUS-130	EMBUH-10050-H	4194
EMBUH12020	EMBUH-12020	19	15	20	M12 x 1.75	5.0	22	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMBUH-12020-H	6627
	EMBUH-12040	19	15	40	M12 x 1.75	5.0	22	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMBUH-12040-H	6627
	EMBUH-12060	19	15	60	M12 x 1.75	5.0	22	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMBUH-12060-H	6627
EMBUH16025	EMBUH-16025	24	19	25	M16 x 2.0	6.0	22	20	16	EMBUR-200	EMBUB-200	EMBUS-200	EMBUH-16025-H	11193
	EMBUH-16050	24	19	25	M16 x 2.0	6.0	22	20	16	EMBUR-200	EMBUB-200	EMBUS-200	EMBUH-16050-H	11193
	EMBUH-16080	24	19	25	M16 x 2.0	6.0	22	20	16	EMBUR-200	EMBUB-200	EMBUS-200	EMBUH-16080-H	11193
EMBUH20030	EMBUH-20030	30	20	30	M20 x 2.5	8.0	20	23	20	EMBUR-230	EMBUB-230	EMBUS-230	EMBUH-20030-H	19136
	EMBUH-20060	30	20	30	M20 x 2.5	8.0	20	23	20	EMBUR-230	EMBUB-230	EMBUS-230	EMBUH-20060-H	19136
	EMBUH-20100	30	20	30	M20 x 2.5	8.0	20	23	20	EMBUR-230	EMBUB-230	EMBUS-230	EMBUH-20100-H	19136
EMBUH24040	EMBUH-24040	36	26	40	M24 x 3.0	10.0	20	28	25	EMBUR-280	EMBUB-280	EMBUS-280	EMBUH-24040-H	27239
	EMBUH-24100	36	26	40	M24 x 3.0	10.0	20	28	25	EMBUR-280	EMBUB-280	EMBUS-280	EMBUH-24100-H	27239

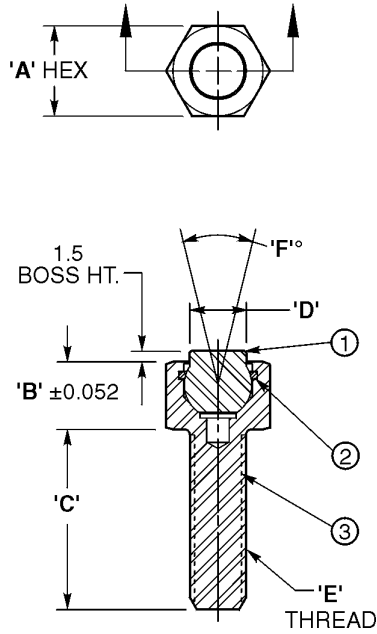
*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE E-60, E-61 OR E-67)

CAD Directory
Mach-Tool\Met-Gripper

All dimensions are in mm

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

Metric Swivots – Hex Head Adjustable – Ball Style



Metric

Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

HEX HEAD ADJUSTABLE DESIGN-REPLACEABLE BALL STYLE												
CAD FILE NAME (see note below)	PART NUMBER	ASSEMBLIES						COMPONENTS				
		A HEX	B HEAD HT	C THD LENGTH	D BOSS DIA	E THD	F DEGREE SWIVEL	BALL DIA	1 O-RING	2 BALL	3 HOUSING	LOAD RATING LBS.
EMBUH06012S or EMBUH0612F	EMBUH-06012-(*)	10	9.5	12	6	M6 x 1.0	20'	7	EMBUR-070	EMBUB-070-(*)	EMBUR-06012-H	2061
	EMBUH-06025-(*)	10	9.5	25	6	M6 x 1.0	20'	7	EMBUR-070	EMBUB-070-(*)	EMBUR-06025-H	2061
	EMBUH-06040-(*)	10	9.5	40	6	M6 x 1.0	20'	7	EMBUR-070	EMBUB-070-(*)	EMBUR-06040-H	2061
EMBUH08012S or EMBUH08012F	EMBUH-08012-(*)	13	13	12	8.5	M8 x 1.25	24'	10	EMBUR-100	EMBUB-100-(*)	EMBUR-08012-H	3450
	EMBUH-08025-(*)	13	13	25	8.5	M8 x 1.25	24'	10	EMBUR-100	EMBUB-100-(*)	EMBUR-08025-H	3450
	EMBUH-08040-(*)	13	13	40	8.5	M8 x 1.25	24'	10	EMBUR-100	EMBUB-100-(*)	EMBUR-08040-H	3450
EMBUH10015S or EMBUH10015F	EMBUH-10015-(*)	17	14.5	15	10	M10 x 1.5	42'	13	EMBUR-130	EMBUB-130-(*)	EMBUR-10015-H	4194
	EMBUH-10030-(*)	17	14.5	30	10	M10 x 1.5	42'	13	EMBUR-130	EMBUB-130-(*)	EMBUR-10030-H	4194
	EMBUH-10050-(*)	17	14.5	50	10	M10 x 1.5	42'	13	EMBUR-130	EMBUB-130-(*)	EMBUR-10050-H	4194

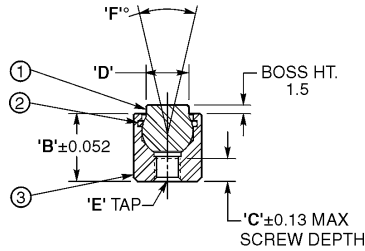
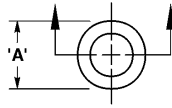
*MUST SPECIFY STYLE OF BALL BY INDICATING "S" FOR SERRATED, "F" FOR FLAT OR "D" FOR DELRIN

CAD Directory
Mach-Tool\Met-Gripper

All dimensions are in mm

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

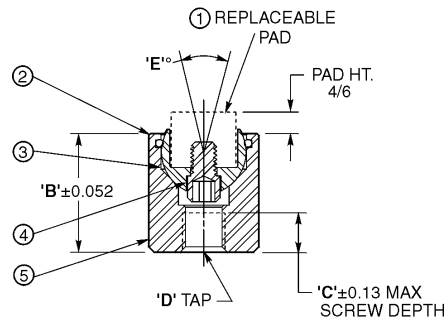
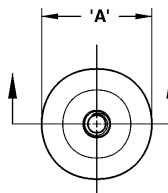
Metric Swivots-Base Design



Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

REPLACEABLE BALL STYLE														
ASSEMBLIES								COMPONENTS						
CAD FILE NAME	PART NUMBER	A DIA	B HGT	C	D BOSS DIA	E TAP	F DEGREE SWIVEL	BALL DIA	1 BALL	2 O-RING	3 HOUSING	AVAIL TOOTH PATTERN	LOAD RATING	
EMBBU1012F or EMBBU1012S	EMBBU-1012*	10	10.5	3.5	6	M4 x 0.7	28°	7	EMBUB-070-(*)	EMBUR-070	EMBBU-1012-H	SF	2585	
	EMBBU-1025*	10	23.5	9.0	6	M4 x 0.7	28°	7	EMBUB-070-(*)	EMBUR-070	EMBBU-1025-H	SF	2585	
EMBBU1316F or EMBBU1316S	EMBBU-1316*	13	14.5	6.5	8.5	M5 x 0.8	42°	10	EMBUB-100-(*)	EMBUR-100	EMBBU-1316-H	EF/SF	4452	
	EMBBU-1325*	13	23.5	9.0	8.5	M5 x 0.8	24°	10	EMBUB-100-(*)	EMBUR-100	EMBBU-1325-H	EF/SF	4452	
EMBBU1722F or EMBBU1722S	EMBBU-1722*	17	18.0	7.0	10.0	M6 x 1.0	42°	13	EMBUB-130-(*)	EMBUR-130	EMBBU-1722-H	EF/SF	6170	

*MUST SPECIFY STYLE OF BALL BY INDICATING "S" FOR SERRATED, "F" FOR FLAT OR "D" FOR DELRIN



REPLACEABLE PAD STYLE														
ASSEMBLIES							COMPONENTS							
CAD FILE NAME	PART NUMBER	A DIA	B HGT	C	D TAP	E DEGREE SWIVEL	BALL DIA	1* REPLACE PAD DIA	2 O-RING	3 BALL	4 LOCK SCREW	5 HOUSING	LOAD RATING	
EMBBU1722	EMBBU-1722	17	18	7.5	M6 x 1.0	42°	13	10	EMBUR-130	EMBUB-130	EMBUS-130	EMTBBU-1722-H	6170	
EMBBU1924	EMBBU-1924	19	20	8.5	M8 x 1.25	22°	15	12	EMBUR-150	EMBUB-150	EMBUS-150	EMTBBU-1922-H	8688	
EMBBU2428	EMBBU-2428	24	24	9	M10 x 1.5	22°	20	16	EMBUR-160	EMBUB-160	EMBUS-160	EMTBBU-2428-H	13122	
EMBBU3030	EMBBU-3030	30	26	8.5	M12 x 1.75	20°	23	20	EMBUR-200	EMBUB-200	EMBUS-200	EMTBBU-3030-H	21348	
EMBBU3636	EMBBU-3636	36	32	12	M12 x 1.75	20°	28	25	EMBUR-250	EMBUB-250	EMBUS-250	EMTBBU-3636-H	30558	

*MUST PURCHASE REPLACEABLE PAD SEPARATELY (REFER TO PAGE E-60, E-61 OR E-67)

CAD Directory

Mach-Tool\Met-Gripper

All dimensions are in mm

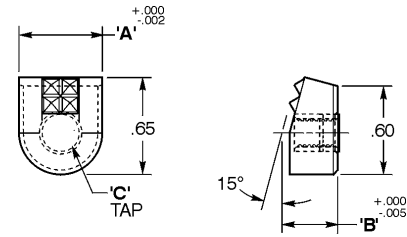
Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

Metric Grippers "EMFSC" Solid Carbide

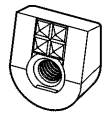


Click to download CAD File (STP Format) 2dwg & 3dwg visit eandesp.com

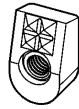
EMFSC-ANGLE GRIP					
CAD FILE NAME	PART NUMBER	A	B	C	TOOTH PATTERN
EMFSC1274	EMFSC-127-4	14.3	9.5	M5 x 0.8	4-POINT
EMFSC127410MM	EMFSC-127-4-10MM	10	9.5	M5 x 0.8	4-POINT
EMFSC12710	EMFSC-127-10	14.3	9.5	M5 x 0.8	FINE
EMFSC1304	EMFSC-130-4	14.3	9.5	M5 x 0.8	STRAIGHT
EMFSC130210MM	EMFSC-130-2-10MM	10	9.5	M5 x 0.8	STRAIGHT
EMFSC1455	EMFSC-145-5	14.3	9.5	M5 x 0.8	ANGULAR



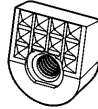
EMFSC-127-4 SHOWN



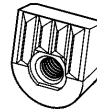
4 POINT



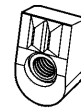
4 POINT
10 MM



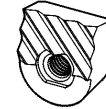
10 POINT



4 POINT
STRAIGHT



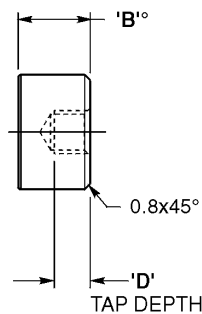
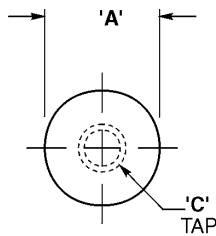
2 POINT
10 MM
STRAIGHT



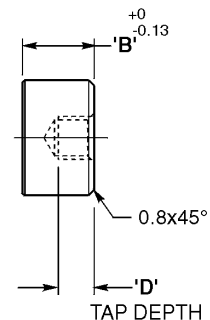
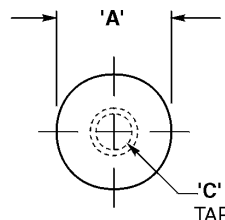
5 POINT
ANGULAR

Metric Rest Pads

"EMSRP" & "EMDRP" - STEEL/DELIN - TAPPED						
CAD FILE NAME (see note)	STEEL PART NUMBER	DELIN PART NUMBER	A DIA	B	C TAP	D TAP DEPTH
EMSRP100	EMSRP-100	EMDRP-100	10	10	M5 x 0.8	5.0
	EMSRP-102	EMDRP-102	10	12	M5 x 0.8	6.4
EMSRP120	EMSRP-120	EMDRP-120	12	10	M5 x 0.8	5.0
	EMSRP-122	EMDRP-122	12	12	M5 x 0.8	6.4
EMSRP160	EMSRP-160	EMDRP-160	16	10	M6 x 1.0	5.0
	EMSRP-162	EMDRP-162	16	12	M6 x 1.0	6.4
EMSRP200	EMSRP-200	EMDRP-200	20	10	M6 x 1.0	5.0
	EMSRP-202	EMDRP-202	20	12	M6 x 1.0	6.4
EMSRP250	EMSRP-250	EMDRP-250	25	10	M6 x 1.0	5.0
	EMSRP-252	EMDRP-252	25	12	M6 x 1.0	6.4



STEEL



DELIN

CAD Directory
Mach-Tool\Met-Gripper

Note: The shortest standard component is given, you may "stretch" the unit to the desired length.

All dimensions are in mm

Quality Machining Services

A Complete Offering Under One Roof

E&E Special Products offers an array of standard and specialized services to meet the following manufacturing requirements:

- Standard machine tool components
- Low-production machining
- Batch-production machining
- High-production machining
- Prototype machining
- Detail work

Since 1977 we've been providing industry with a variety of machining services via our in-house staff and our diverse external resources. We can meet virtually all of your manufacturing needs too, with an unparalleled dedication to quality and service. There's no need to look anywhere else!

Engineering

Our engineering division specializes in the design of products for the automotive, machine tool, aerospace, and appliance industries.

The experience we have accumulated in servicing this diverse client base is what makes E&E Special Products able to meet just about any of your machining requirements.

E&E maintains a complete engineering and technical support department to work with you on your projects. Please feel free to call upon our knowledge if you have any questions regarding your needs.

Services

Here are just a few of the services which we can provide for you:

- Heat treating
- Black oxidizing
- Plating
- Injection molding
- Investment casting
- Sand casting
- Gear shaping
- Deep hole drilling
- Grinding (all types)
- Rubber molding
- EDM
- Welding
- Tapping
- Laboratory testing
- Engineering
- Boring mill work
- Fabricating
- Jig boring/grinding
- Milling
- Drilling
- Turning
- Honing

Some of these services are out-sourced while others are provided via our own in-house capabilities. Our long association with an abundance of accomplished outsourcing professionals enables us to assemble the finest resources available in meeting specific requirements.

This means we can pass on competitive pricing, exceptional quality, and unsurpassed service to you - while you enjoy the convenience of obtaining all your manufacturing needs from a single source.

Your Partners In Production

Our capabilities can save you time and money. Our expertise includes:

Flexible services - We process jobs in nearly any type of material for clients in automotive, machine tool, aerospace, appliance industries and more. Our capabilities enable us to complete jobs in Metric or English measurements.

Large product line - With E&E you benefit from the integration of an existing standard product line. If we don't have your exact part, we can still save you money by altering one of our standard components instead of beginning a special build from ground level.

Dedication to quality - E&E is committed to offering the industry's highest-quality services. Your parts are crafted by our engineering and machining experts to the closest tolerances possible, because your satisfaction is our goal.

Less hassle - At E&E Special Products, you accomplish all your requirements in one stop. This means you benefit from:

- Fewer contacts, better communication
- Improved coordination
- Better timing
- Increased project control
- Consistent quality
- Less paperwork

Knowledgeable staff - Our qualified staff is comprised of sales, engineering, machining, purchasing, and clerical experts. We process orders quickly and efficiently, and our experience can help save you time and money. We are completely self-sufficient with our own in-house design, engineering, manufacturing, and quality control departments.

Please call for an updated machinery list