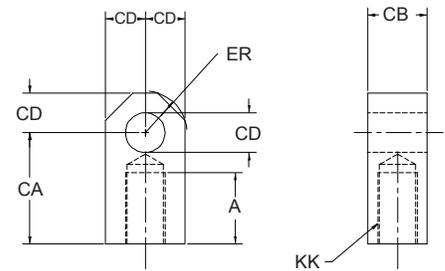


CAST IRON ROD EYE

PART NO.	A	CA	CB	CD	ER	KK	FITS ROD END
DRE-97-03	3/4"	1 1/2"	3/4"	1/2"	5/8"	1/2 - 20	A4 ROD ENDS
DRE-97-03A	3/4"	1 1/2"	3/4"	1/2"	5/8"	7/16 - 20	A1 ROD ENDS
DRE-97-065	1 1/8"	2 1/16"	1 1/4"	3/4"	7/8"	3/4 - 16	B1 ROD ENDS
DRE-97-12	1 5/8"	2 13/16"	1 1/2"	1"	1 3/16"	1 - 14	C1 & B3 ROD ENDS
DRE-97-16	2"	3 7/16"	2"	1 3/8"	1 9/16"	1 1/4 - 12	D1 & C4 ROD ENDS

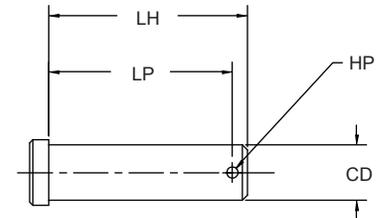
CAST IRON ROD EYE



CLEVIS PINS

PART NO.	CD	HP	LH	LP	USE WITH
DCP-96-03	1/2"	5/32"	2"	1 27/32"	DRC-92-03 or DRC-92-03A
DCP-96-065	3/4"	5/32"	2 3/4"	2 19/32"	DRC-92-065
DCP-96-12	1"	5/32"	3 1/2"	3 9/32"	DRC-92-12
DCP-96-16	1 3/8"	1/4"	5"	4 1/2"	DRC-92-16

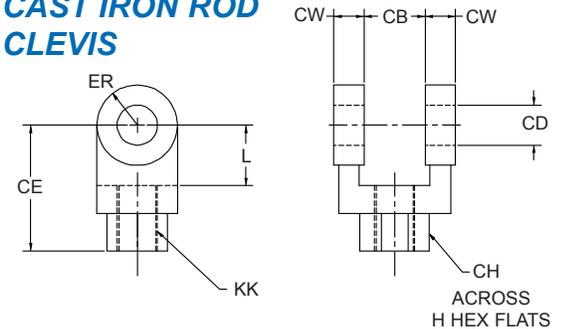
CLEVIS PIN



CAST IRON ROD CLEVIS

PART NO.	CB	CD	CE	CH	CW	ER	KK	L	FITS ROD END
DRC-92-03	.765"	1/2"	1 1/2"	1"	1/2"	1/2"	1/2 - 20	3/4"	A4 ROD ENDS
DRC-92-03A	.765"	1/2"	1 1/2"	1"	1/2"	1/2"	7/16 - 20	3/4"	A1 ROD ENDS
DRC-92-065	1.265"	3/4"	2 3/8"	1 1/4"	5/8"	3/4"	3/4 - 16	1 1/4"	B1 ROD ENDS
DRC-92-12	1.515"	1"	3 1/8"	1 1/2"	3/4"	1"	1 - 14	1 1/2"	C1 & B3 ROD ENDS
DRC-92-16	2.032"	1 3/8"	4 1/8"	2"	1"	1 3/8"	1 1/4 - 12	2"	D1 & C4 ROD ENDS

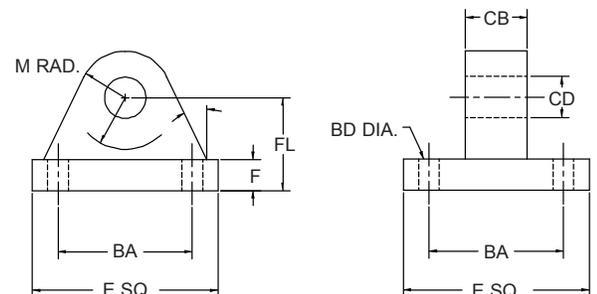
CAST IRON ROD CLEVIS



CAST IRON EYE BRACKET FITS MP-1 or MP-2

PART NO.	BA	BD	CB	CD	E	F	FL	LR	M
DEB-89-03A	1 5/8"	13/32"	3/4"	1/2"	2 1/2"	3/8"	1 1/8"	3/4"	1/2"
DEB-89-065A	2 9/16"	17/32"	1 1/4"	3/4"	3 1/2"	5/8"	1 7/8"	1 1/4"	3/4"
DEB-89-12A	3 1/4"	21/32"	1 1/2"	1"	4 1/2"	3/4"	2 1/4"	1 1/2"	1"

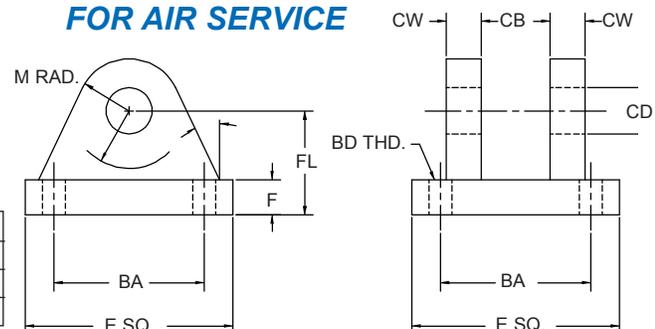
CAST IRON EYE BRACKET FOR AIR SERVICE



CAST IRON CLEVIS BRACKET FITS MP-4 MOUNT

PART NO.	BA	BD	CB	CD	CW	E	F	FL	LR	M
DCB-91-03A	1 5/8"	3/8"	.765"	1/2"	1/2"	2 1/2"	3/8"	1 1/8"	1/2"	1/2"
DCB-91-065A	2 9/16"	1/2"	1.265"	3/4"	5/8"	3 1/2"	5/8"	1 7/8"	1 1/16"	3/4"
DCB-91-12A	3 1/4"	5/8"	1.515"	1"	3/4"	4 1/2"	3/4"	2 1/4"	1 1/4"	1"

CAST IRON CLEVIS BRACKET FOR AIR SERVICE



DURAMASTER CYLINDERS

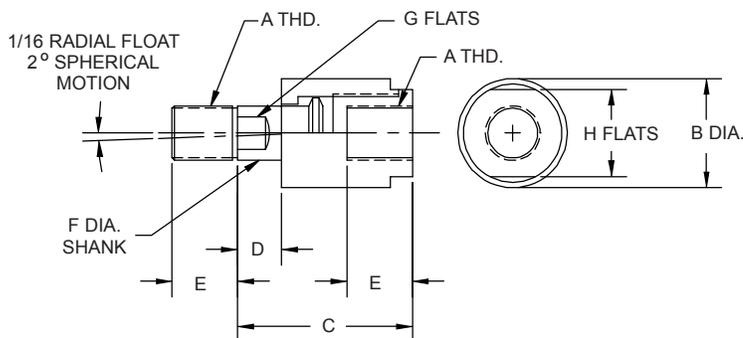


TECHNICAL INFORMATION:

Working Temperature	Min. -5°C Max. 90°C
Operating Time	On 2 ms Off .1 ms
Life Expectancy at full load	10 ⁶ Cycles
Repeatability	.001 inch
Vibration Resistance	5 to 1000 Hz
Shock Resistance	30g @ 11ms
Minimum Magnetic Field to actuate	85 Gauss
Maximum Switch Current	1 AMP

VOLTAGE RATING:

Reed Switch: 240 V Max AC or DC
Hall Effect: 5-24 V DC



LINEAR ALIGNMENT COUPLERS

PART NO.	A	B	C	D	E	F	G	H	MAX. PULL AT YIELD
DAC-.250	1/4 - 28	7/8"	1 1/4"	1/4"	5/8"	5/16"	3/16"	3/4"	6,000
DAC-.312	5/16 - 24	7/8"	1 1/4"	1/4"	5/8"	5/16"	3/16"	3/4"	6,800
DAC-.375	3/8 - 24	7/8"	1 1/4"	1/4"	5/8"	5/16"	3/16"	3/4"	8,300
DAC-.437	7/16 - 20	1 1/4"	2"	1/2"	3/4"	5/8"	1/2"	1"	10,000
DAC-.500	1/2 - 20	1 1/4"	2"	1/2"	3/4"	5/8"	1/2"	1"	14,000
DAC-.625	5/8 - 18	1 1/4"	2"	1/2"	3/4"	5/8"	1/2"	1"	19,000
DAC-.750	3/4 - 16	1 3/4"	2 5/16"	1/2"	1 1/8"	31/32"	13/16"	1 1/2"	34,000
DAC-.875	7/8 - 14	1 3/4"	2 5/16"	1/2"	1 1/8"	31/32"	13/16"	1 1/2"	39,000
DAC-1.000	1 - 14	2 1/2"	2 15/16"	1/2"	1 5/8"	1 3/8"	1 5/32"	2 1/4"	64,000
DAC-1.250	1 1/4 - 12	2 1/2"	2 15/16"	1/2"	1 5/8"	1 3/8"	1 5/32"	2 1/4"	78,000

MAGNETIC REED SWITCHES

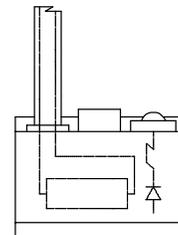
Fully Adjustable Position Sensing & Input

MAGNETIC REED SWITCHES

Duramaster's Reed and Hall Effect switches provide fully adjustable position sensing and input for many types of sequences and programmable controllers. Both Switches have a high degree of sensitivity with low EMI/RFI susceptibility and incorporate internal surge suppression for extended life expectancy.

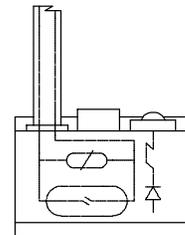
A magnetic disk coupled to the piston triggers the externally mounted switch. A built-in indicator light allows ease of testing as well as locating the switch on the cylinder. DO NOT USE an incandescent light bulb as high in-rush may damage the switch. Also, use the switch to indicate the end of the physical stroke. Do not rely on the switch alone to stop the cylinder travel.

The comprehensive design of the cylinder barrel thickness and mass of magnet, coupled with low profile switch provides sensitivity, dependability, repeatability and desired response time.



DRS-1031

Hall Effect & Light (magnetic resonance)
5-24 VDC
Normally Open, Sourcing



DRS-1004

Reed Switch, MOV & Light.
5-240 VAC/VDC
Normally Open.
(.005 Amp Minimum)

DRS-1032

Sinking

ALIGNMENT COUPLERS



STOP-TUBE CYLINDER SELECTION

Rod Selection

The stroke length is determined by what distance the cylinder must move a load. However, a cylinder of a particular bore size may not have a piston rod with adequate strength for the application. The two variables which determine if a piston rod has adequate strength are (1) the stroke length and (2) the mounting style used.

If it is determined that a particular bore size will not provide adequate piston strength for the stroke length and mounting style used, there are two methods that can be used to ensure adequate piston rod strength.

1. Specify a cylinder of a larger bore size which has a larger piston rod.
2. Specify an oversize piston rod for the bore size cylinder already selected.

To determine if the piston rod of a cylinder with a particular bore size has adequate strength for the application, follow the procedures below:

1. From the STROKE FACTOR CHART determine the necessary "stroke factor", based upon mounting configuration and rod end connection.
2. Using the "stroke factor" calculate the value of "L".
L = Actual Stroke length (inches) x stroke factor.

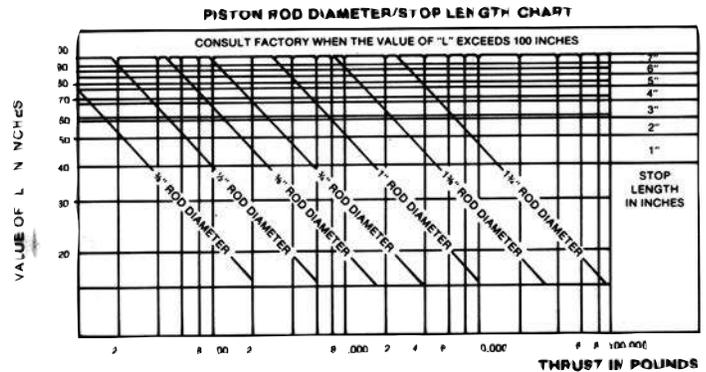
STROKE FACTOR TABLE

ROD END CONNECTION	CYLINDER RIGIDLY MOUNTED		CYLINDER PIVOT MOUNTED		
	L-MOUNTS SIDE TAPPED SIDE END LUGS	FRONT OR REAR FLANGE MOUNTED NUTS	FRONT MOUNTED TRUNNION	CENTER MOUNTED TRUNNION	CLEVIS EYE OR REAR MOUNTED TRUNNION
FIXED AND RIGIDLY GUIDED	0.50	0.50	N/A	N/A	N/A
PIVOTED AND RIGIDLY GUIDED	0.71	0.71	1.00	1.50	2.00
SUPPORTED NOT RIGIDLY GUIDED	1.00	1.00	N/A	N/A	N/A

3. If the cylinder being calculated will be ordered with longer than standard rod extension (see rod options), this extra length, in inches, must be added on to "L". L + rod extension.
4. Using the "thrust" value for the cylinder being calculate, from chart on page 3 and the value of "L", note the point of intersection of the lines projected from these two values. If the cylinder of a specific bore size has already been selected and the piston rod diameter is smaller than that indicated on the diagonal line, a cylinder with a large piston rod will be required. To get a large piston rod there are two choices:
 - (A) Select the next bore size cylinder which has the proper piston rod diameter.
 - (B) Order the selected cylinder with "oversize" rod.
5. If the value of "L" is 40 or above, then a stop tube is required, regardless of the piston rod diameter. For the cylinder to dimensionally accept the stop tube assembly, extra length (stop length) must be added to the cylinder. The proper stop length is determined from the dimension in the column on the right of the chart that corresponds to the "value of L". To order a cylinder with a stop tube, add this stop length to the stroke length in the model number.

NOTE: STANDARD STOP TUBE IS A DUAL PISTON DESIGN. MINIMUM STOP TUBE IS 2". CONSULT FACTORY FOR SHORTER STOP TUBE OPTIONS.

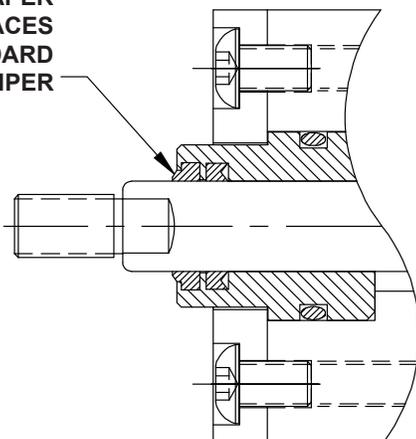
NOTE: STOP TUBES ARE AVAILABLE WITH CUSHIONS.



**METALLIC ROD
SCRAPER
REPLACES
STANDARD
ROD WIPER**

METALLIC ROD SCRAPER

When the cylinder must endure paint overspray, weld splatter or flyash, a scraper may be necessary.



DURAMASTER REBUILT KIT

CONTENTS:

- One - Rod Wiper
- Two - Cushion O'Rings
- Two - Tube Seals
- Two - Piston Seals
- One - Wear Ring
- One - Rod Seal
- One - Bushing
- One - Bushing O'Ring

