

TRCA 12 H - 12 - CR - P - L1

TWIN RAIL® Carriage Assembly

TRCA - Plate with SLBO, SLBOH, DLBO or DLBOH

Nominal Bearing Diameter

| | |
|---------------------------------|-----------------------------|
| 8 - 0.500 inch diameter | 20 - 1.250 inch dia. |
| 10 - 0.625 inch diameter | 24 - 1.500 inch dia. |
| 12 - 0.750 inch diameter | 32 - 2.000 inch dia. |
| 16 - 1.000 inch diameter | |

Load Capacity

- Standard
- H** - High Capacity

Carriage Plate Length

| | |
|-----------------------|-----------------------|
| 6 - 6 inches | 18 - 18 inches |
| 8 - 8 inches | 24 - 24 inches |
| 12 - 12 inches | 30 - 30 inches |

Bearing Options

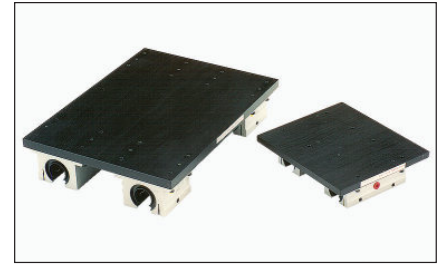
- Standard
- CR** - Corrosion Resistance

Carriage Plate Mounting

- No Holes
- P** - Pre-Machined Mounting Holes

Bearing Lock

- None
- Lx** - Hand Wheel Locks (x = number of locks - 1, 2, 3 or 4)



Specifications: **TRCA** TWIN RAIL® Carriage Assembly

| Bearing Housing Type & Finish | Aluminum 6061-T6 Pillow Block, Clear Anodized | | | | | | | | | | | | | | | | |
|--|---|------------------------------------|--------------------------------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|-----------------|-------|-----------------|-------|-----------------|
| Bearing Seals | Internal Wiper Seals on Both Ends | | | | | | | | | | | | | | | | |
| Corrosion Resistance | Corrosion Resistant linear bushings and stainless steel mounting hardware | | | | | | | | | | | | | | | | |
| Hand Wheel Locks | Optional Aluminum Shaft Clamping Blocks (see page 39) | | | | | | | | | | | | | | | | |
| Carriage Plate Type & Finish | Machined Aluminum 6061-T6 Plate, Black Anodized | | | | | | | | | | | | | | | | |
| Bearing Alignment on Plate | +/- 0.001", Pillow Blocks Doweled to Carriage Plate | | | | | | | | | | | | | | | | |
| Carriage Plate Machining | Optional Pre-Machined Mounting Holes (see page 38) | | | | | | | | | | | | | | | | |
| Operating Temperature | 0° F to + 185° F | | | | | | | | | | | | | | | | |
| Maximum Speed | 9.8 ft/second (3m/sec) | | | | | | | | | | | | | | | | |
| Matching Shaft Assembly | TRSA series (see pages 62 - 69) | | | | | | | | | | | | | | | | |
| Diameter Tolerance | <table border="1"> <thead> <tr> <th>Nominal Shaft Diameter (inches)</th> <th>Shaft Diameter Tolerance (inches)</th> </tr> </thead> <tbody> <tr> <td>0.500</td> <td>.4995 / .4990</td> </tr> <tr> <td>0.625</td> <td>.6245 / .6240</td> </tr> <tr> <td>0.750</td> <td>.7495 / .7490</td> </tr> <tr> <td>1.000</td> <td>.9995 / .9990</td> </tr> <tr> <td>1.250</td> <td>1.2495 / 1.2490</td> </tr> <tr> <td>1.500</td> <td>1.4994 / 1.4989</td> </tr> <tr> <td>2.000</td> <td>1.9994 / 1.9987</td> </tr> </tbody> </table> | Nominal Shaft Diameter (inches) | Shaft Diameter Tolerance (inches) | 0.500 | .4995 / .4990 | 0.625 | .6245 / .6240 | 0.750 | .7495 / .7490 | 1.000 | .9995 / .9990 | 1.250 | 1.2495 / 1.2490 | 1.500 | 1.4994 / 1.4989 | 2.000 | 1.9994 / 1.9987 |
| Nominal Shaft Diameter (inches) | Shaft Diameter Tolerance (inches) | | | | | | | | | | | | | | | | |
| 0.500 | .4995 / .4990 | | | | | | | | | | | | | | | | |
| 0.625 | .6245 / .6240 | | | | | | | | | | | | | | | | |
| 0.750 | .7495 / .7490 | | | | | | | | | | | | | | | | |
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| 1.500 | 1.4994 / 1.4989 | | | | | | | | | | | | | | | | |
| 2.000 | 1.9994 / 1.9987 | | | | | | | | | | | | | | | | |

Specifications subject to change without notice

Dimensions & Specifications: TRCA TWIN RAIL® Carriage Assembly

| Model Number | Nom. Shaft Dia. (inches) | Dyn. Load Cap. (lbs) | Dimensions (inches) | | | | | | | | | | | | | Assembly Weight (lbs) |
|--------------|--------------------------|----------------------|---------------------|----------|------|------|------|------|------|-----|-------|-------|-------------------------------|-------------------------------|-------------------------------|-----------------------|
| | | | A | B | C | D | E | F | G | H | J | K | d _r ⁽²⁾ | d ₁ ⁽³⁾ | d ₂ ⁽⁴⁾ | |
| | | | +/- .005 | +/- .005 | | | | | | | | | | | | |
| TRCA8-6 | 0.500 | 920 | 6.00 | 5.50 | 1.25 | 0.75 | 0.68 | 1.12 | 2.00 | .25 | 3.50 | 0.375 | 1.062 | 3.00 | 1.90 | 2.4 |
| TRCA8-12 | 0.500 | 920 | 12.00 | 5.50 | 0.25 | 0.75 | 0.68 | 1.12 | 2.00 | .25 | 11.50 | 0.375 | 1.062 | 3.00 | 10.00 | 4.6 |
| TRCA8-18 | 0.500 | 920 | 18.00 | 5.50 | 0.25 | 0.75 | 0.68 | 1.12 | 2.00 | .25 | 17.50 | 0.375 | 1.062 | 3.00 | 16.00 | 5.9 |
| TRCA10-6 | 0.625 | 1,520 | 6.00 | 6.75 | 1.00 | 0.93 | 0.87 | 1.43 | 2.50 | .25 | 4.00 | 0.375 | 1.250 | 3.75 | 2.15 | 3.5 |
| TRCA10-12 | 0.625 | 1,520 | 12.00 | 6.75 | 0.25 | 0.93 | 0.87 | 1.43 | 2.50 | .25 | 11.50 | 0.375 | 1.250 | 3.75 | 9.75 | 6.0 |
| TRCA10-18 | 0.625 | 1,520 | 18.00 | 6.75 | 0.25 | 0.93 | 0.87 | 1.43 | 2.50 | .25 | 17.50 | 0.375 | 1.250 | 3.75 | 15.75 | 7.7 |
| TRCA12-6 | 0.750 | 1,880 | 6.00 | 7.75 | 0.75 | 1.00 | 0.93 | 1.56 | 2.75 | .25 | 4.50 | 0.500 | 1.437 | 4.50 | 2.50 | 4.8 |
| TRCA12H-6 | | 4,520 | | | | | | | | | | | | | | |
| TRCA12-12 | 0.750 | 1,880 | 12.00 | 7.75 | 0.25 | 1.00 | 0.93 | 1.56 | 2.75 | .25 | 11.49 | 0.500 | 1.437 | 4.50 | 9.62 | 8.2 |
| TRCA12H-12 | | 4,520 | | | | | | | | | | | | | | |
| TRCA12-18 | 0.750 | 1,880 | 18.00 | 7.75 | 0.25 | 1.00 | 0.93 | 1.56 | 2.75 | .25 | 17.49 | 0.500 | 1.437 | 4.50 | 15.62 | 10.7 |
| TRCA12H-18 | | 4,520 | | | | | | | | | | | | | | |
| TRCA16-6 | 1.000 | 3,280 | 6.00 | 9.00 | 0.00 | 1.25 | 1.18 | 2.00 | 3.25 | .25 | 6.00 | 0.500 | 1.687 | 5.25 | 3.25 | 7.2 |
| TRCA16H-6 | | 7,600 | | | | | | | | | | | | | | |
| TRCA16-12 | 1.000 | 3,280 | 12.00 | 9.00 | 0.25 | 1.25 | 1.18 | 2.00 | 3.25 | .25 | 11.49 | 0.500 | 1.687 | 5.25 | 8.87 | 11.0 |
| TRCA16H-12 | | 7,600 | | | | | | | | | | | | | | |
| TRCA16-18 | 1.000 | 3,280 | 18.00 | 9.00 | 0.25 | 1.25 | 1.18 | 2.00 | 3.25 | .25 | 17.49 | 0.500 | 1.687 | 5.25 | 14.87 | 14.0 |
| TRCA16H-18 | | 7,600 | | | | | | | | | | | | | | |
| TRCA16-24 | 1.000 | 3,280 | 24.00 | 9.00 | 0.25 | 1.25 | 1.18 | 2.00 | 3.25 | .25 | 23.49 | 0.500 | 1.687 | 5.25 | 20.87 | 16.9 |
| TRCA16H-24 | | 7,600 | | | | | | | | | | | | | | |
| TRCA20-8 | 1.250 | 4,840 | 8.00 | 10.50 | 0.25 | 1.62 | 1.50 | 2.56 | 4.00 | .25 | 7.50 | 0.750 | 2.250 | 6.00 | 3.90 | 16.0 |
| TRCA20H-8 | | 9,400 | | | | | | | | | | | | | | |
| TRCA20-12 | 1.250 | 4,840 | 12.00 | 10.50 | 0.25 | 1.62 | 1.50 | 2.56 | 4.00 | .25 | 11.49 | 0.750 | 2.250 | 6.00 | 8.12 | 16.4 |
| TRCA20H-12 | | 9,400 | | | | | | | | | | | | | | |
| TRCA20-18 | 1.250 | 4,840 | 18.00 | 10.50 | 0.25 | 1.62 | 1.50 | 2.56 | 4.00 | .25 | 17.49 | 0.750 | 2.250 | 6.00 | 14.12 | 21.6 |
| TRCA20H-18 | | 9,400 | | | | | | | | | | | | | | |
| TRCA20-24 | 1.250 | 4,840 | 24.00 | 10.50 | 0.25 | 1.62 | 1.50 | 2.56 | 4.00 | .25 | 23.49 | 0.750 | 2.250 | 6.00 | 20.12 | 26.8 |
| TRCA20H-24 | | 9,400 | | | | | | | | | | | | | | |
| TRCA24-12 | 1.500 | 6,080 | 12.00 | 12.00 | 1.50 | 1.87 | 1.75 | 2.93 | 4.75 | .31 | 9.00 | 1.000 | 2.750 | 6.62 | 5.00 | 30.0 |
| TRCA24H-12 | | 13,520 | | | | | | | | | | | | | | |
| TRCA24-18 | 1.500 | 6,080 | 18.00 | 12.00 | 0.25 | 1.87 | 1.75 | 2.93 | 4.75 | .31 | 17.50 | 1.000 | 2.750 | 6.62 | 13.75 | 40.2 |
| TRCA24H-18 | | 13,520 | | | | | | | | | | | | | | |
| TRCA24-24 | 1.500 | 6,080 | 24.00 | 12.00 | 0.25 | 1.87 | 1.75 | 2.93 | 4.75 | .31 | 23.50 | 1.000 | 2.750 | 6.62 | 19.75 | 48.1 |
| TRCA24H-24 | | 13,520 | | | | | | | | | | | | | | |
| TRCA24-30 | 1.500 | 6,080 | 30.00 | 12.00 | 0.25 | 1.87 | 1.75 | 2.93 | 4.75 | .31 | 29.50 | 1.000 | 2.750 | 6.62 | 25.75 | 56.0 |
| TRCA24H-30 | | 13,520 | | | | | | | | | | | | | | |
| TRCA32-18 | 2.000 | 9,640 | 18.00 | 14.00 | 0.25 | 2.43 | 2.25 | 3.62 | 6.00 | .37 | 17.50 | 1.250 | 3.375 | 7.25 | 12.75 | 61.7 |
| TRCA32-24 | 2.000 | 9,640 | 24.00 | 14.00 | 0.25 | 2.43 | 2.25 | 3.62 | 6.00 | .37 | 23.50 | 1.250 | 3.375 | 7.25 | 18.75 | 73.2 |
| TRCA32-30 | 2.000 | 9,640 | 30.00 | 14.00 | 0.25 | 2.43 | 2.25 | 3.62 | 6.00 | .37 | 29.50 | 1.250 | 3.375 | 7.25 | 24.75 | 84.8 |

Footnotes:

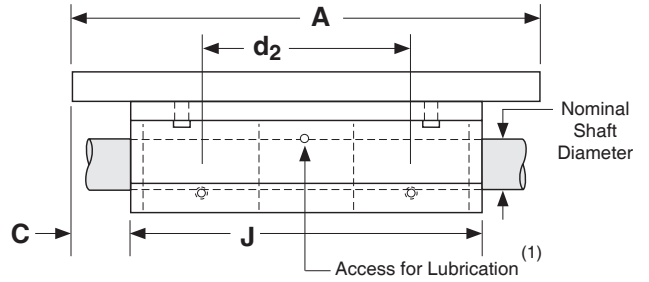
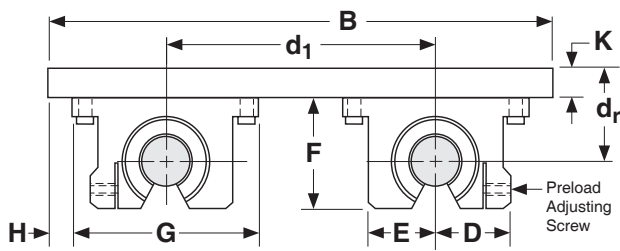
- (1) Rating based upon 2 million inches of travel with the load forces being applied downward on the linear bearing, while in a horizontal application, and based upon 1060 steel shafting (Rockwell 60C). The actual load rating, and life, is dependent upon factors detailed on pages 6 to 13.
- (2) This value is the center distance of the bearing to the top of the carriage plate surface (d_r).
- (3) This value is the center to center distance (spread) between the rails (d₁).
- (4) This value is the center to center distance (spacing) of the bearings on a single shaft (d₂).

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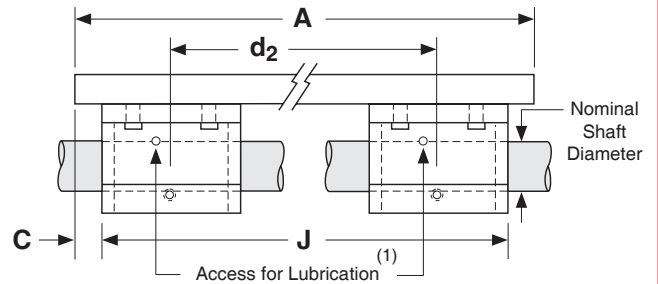
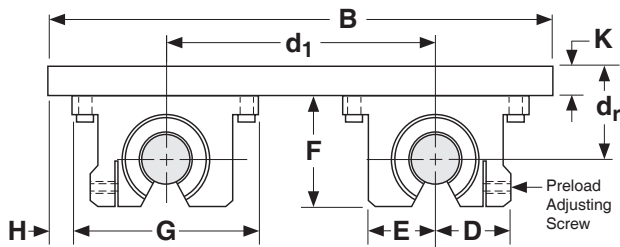
Dimensions

(inches)

Available For:
 TRCA8-6, TRCA10-6, TRCA12-6,
 TRCA16-6, TRCA20-8, TRCA24-12



Available For:
 All other TRCA models,
 not shown above



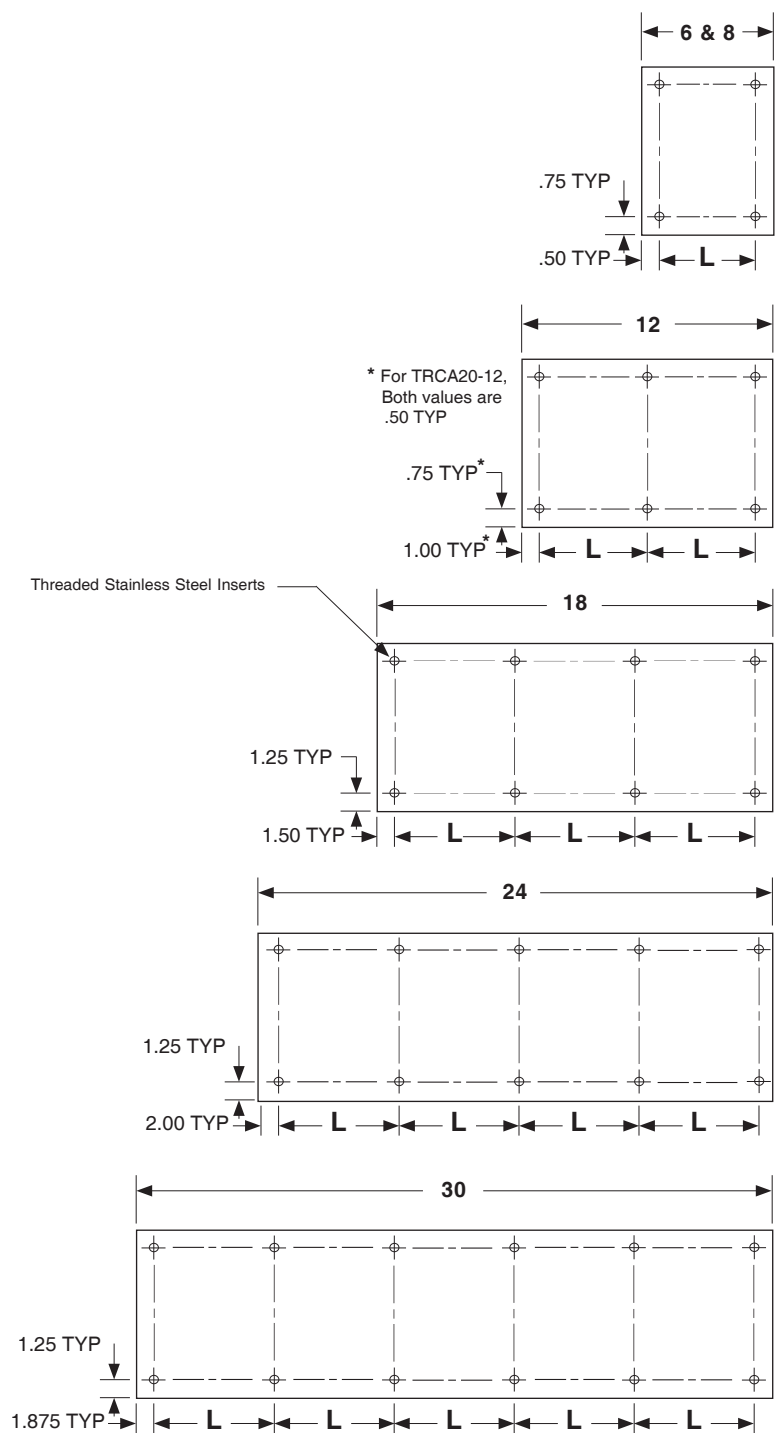
Footnotes:

(1) Size 0.500 has oil lubricant fitting. Sizes 0.625 and above have a 1/4-28 UNF straight thread access for lubrication.

(- P) Pre-Machined Carriage Mounting Holes

All carriage assembly plates are available with a pre-determined number & location of mounting holes. These holes consist of stainless steel threaded inserts per the below chart. Custom mounting patterns are available upon request.

| Model Number | Carriage Length (inches) | L (inches) | Threaded Insert Size |
|--------------|-----------------------------|---------------|----------------------|
| TRCA8-6-P | 6.00 | 5.00 | #10-32 |
| TRCA8-12-P | 12.00 | 5.00 | #10-32 |
| TRCA8-18-P | 18.00 | 5.00 | #10-32 |
| TRCA10-6-P | 6.00 | 5.00 | #10-32 |
| TRCA10-12-P | 12.00 | 5.00 | #10-32 |
| TRCA10-18-P | 18.00 | 5.50 | #10-32 |
| TRCA12-6-P | 6.00 | 5.00 | 1/4-28 |
| TRCA12H-6-P | 6.00 | 5.00 | 1/4-28 |
| TRCA12-12-P | 12.00 | 5.00 | 1/4-28 |
| TRCA12H-12-P | 12.00 | 5.00 | 1/4-28 |
| TRCA12-18-P | 18.00 | 5.50 | 1/4-28 |
| TRCA12H-18-P | 18.00 | 5.50 | 1/4-28 |
| TRCA16-6-P | 6.00 | 5.00 | 5/16-24 |
| TRCA16H-6-P | 6.00 | 5.00 | 5/16-24 |
| TRCA16-12-P | 12.00 | 5.00 | 5/16-24 |
| TRCA16H-12-P | 12.00 | 5.00 | 5/16-24 |
| TRCA16-18-P | 18.00 | 5.00 | 5/16-24 |
| TRCA16H-18-P | 18.00 | 5.00 | 5/16-24 |
| TRCA16-24-P | 24.00 | 5.00 | 5/16-24 |
| TRCA16H-24-P | 24.00 | 5.00 | 5/16-24 |
| TRCA20-8-P | 8.00 | 7.00 | 3/8-24 |
| TRCA20H-8-P | 8.00 | 7.00 | 3/8-24 |
| TRCA20-12-P | 12.00 | 5.00 | 3/8-24 |
| TRCA20H-12-P | 12.00 | 5.00 | 3/8-24 |
| TRCA20-18-P | 18.00 | 5.00 | 3/8-24 |
| TRCA20H-18-P | 18.00 | 5.00 | 3/8-24 |
| TRCA20-24-P | 24.00 | 5.00 | 3/8-24 |
| TRCA20H-24-P | 24.00 | 5.00 | 3/8-24 |
| TRCA24-12-P | 12.00 | 5.00 | 3/8-24 |
| TRCA24H-12-P | 12.00 | 5.00 | 3/8-24 |
| TRCA24-18-P | 18.00 | 5.00 | 3/8-24 |
| TRCA24H-18-P | 18.00 | 5.00 | 3/8-24 |
| TRCA24-24-P | 24.00 | 5.00 | 3/8-24 |
| TRCA24H-24-P | 24.00 | 5.00 | 3/8-24 |
| TRCA24-30-P | 30.00 | 5.25 | 3/8-24 |
| TRCA24H-30-P | 30.00 | 5.25 | 3/8-24 |
| TRCA32-18-P | 18.00 | 5.00 | 1/2-20 |
| TRCA32-24-P | 24.00 | 5.00 | 1/2-20 |
| TRCA32-30-P | 30.00 | 5.25 | 1/2-20 |

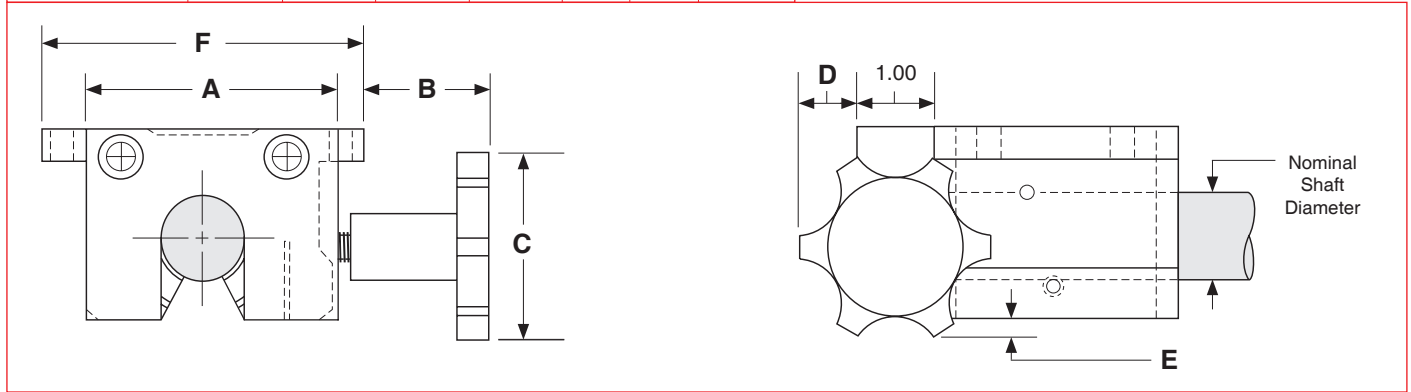


Options

(- L) Hand Wheel Lock

This option adds an aluminum clamping block to the end of a pillow block, which then provides for a manual lock of the bearing to the shaft. The threaded hand wheel shaft presses into a bronze insert which makes contact to provide a "pressure lock" to the shaft. The threaded steel screw will not back drive and does not make physical contact with the steel shaft (no steel to steel contact). The lock will be installed as shown below when ordered with a SLBC, SLBCH, SLBO, SLBOH, DLBC, DLBCH, DLBO, DLBOH, or TRCA series. Multiple locks can be installed onto a TRCA assembly.

| Nominal Shaft Diameter (inches) | Dimensions (inches) | | | | | | |
|---------------------------------|---------------------|------|------|------|------|--------|------|
| | A | B | C | D | E | | F |
| | | | | | open | closed | |
| 8 - 0.500 | 1.680 | 1.72 | 2.00 | 0.50 | .56 | .44 | 2.00 |
| 10 - 0.625 | 1.875 | 1.53 | 2.00 | 0.50 | .50 | .31 | 2.50 |
| 12 - 0.750 | 2.067 | 1.46 | 2.00 | 0.50 | .37 | .18 | 2.75 |
| 16 - 1.000 | 2.312 | 1.34 | 2.00 | 0.50 | .19 | --- | 3.25 |
| 20 - 1.250 | 3.125 | 1.66 | 2.50 | 0.75 | .17 | --- | 4.00 |
| 24 - 1.500 | 3.625 | 1.46 | 2.50 | 0.75 | .05 | --- | 4.75 |
| 32 - 2.000 | 4.600 | 1.45 | 2.50 | 0.75 | --- | --- | 6.00 |



Custom Carriage Sizes

Custom carriage sizes that need to be wider, or longer than shown in this catalog can be provided upon request. This will allow for larger rail and bearing spacing (d_1 & d_2 dimensions).

Custom Carriage Material & Finishes

The standard carriage material is aluminum with a black anodized finish. Aluminum plates can be finished in many different colors, while steel carriage plates can be provided with a black oxide finish. Many other custom alternatives for carriage plates are available.

Special Grease Options

Bearings can be supplied with special greases, or lubricants, in order to meet the environmental requirements of the application. Examples of operating environments which may require a special lubricant include: high or low temperature, clean rooms, vacuums and food grade applications.

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