

### Features:

- Machined from MTC1 composite
- Compressive strength of 50,000 psi
- Dimensionally stable in water-based fluids
- Low friction
- Easy to install



### MATERIAL

The 847 Series Guide Band is made from MTC1, a thermoset polyester resin reinforced with a synthetic fabric.

| Material                                | Code |
|---|------|
| Polyester Resin Fabric (shown in photo) | MTC1 |

### OPERATING PARAMETERS

| Temperature               | MTC1                  |            |
|---------------------------|-----------------------|------------|
|                           | °C                    | °F         |
| hydraulic oil             | -40...+120            | -40...+248 |
| water oil emulsions (HFA) | +5...+60              | +41...+140 |
| water-glycol fluids (HFC) | -40...+60             | -40...+140 |
| polyol esters (HFD)       | -40...+100            | -40...+140 |
| water                     | +5...+60              | +41...+140 |
| max speed (FPM)           | 1 m/s (3.3 ft/sec)    |            |
| load                      | <50 n/mm (<7,250 psi) |            |

**Note:** For other materials or fluids please contact our engineering department.

### DESCRIPTION

The 847 Series is a low-friction guide band made from MTC1, a high-compressive strength composite. This guide band is substantially stronger than nylon-based materials and offers considerably lower water absorption. This new composite provides more accurate piston and rod guidance inside the cylinder under widely varying load conditions. Reduced bushing deformation allows the seals and wipers to perform at maximum efficiency, while minimizing the risk of scoring and abrasion.

### PRODUCT BENEFITS

- Easily manufactured to accommodate oversized conditions during rework
- Very accurate and precise guidance of the cylinder components
- Withstands very high side loads during operation
- Maximizes efficiency of the dynamic seals
- Wide temperature range

### APPLICATIONS

The 847 Series Guide Band is the ideal solutions where high side loads and deflections are present.

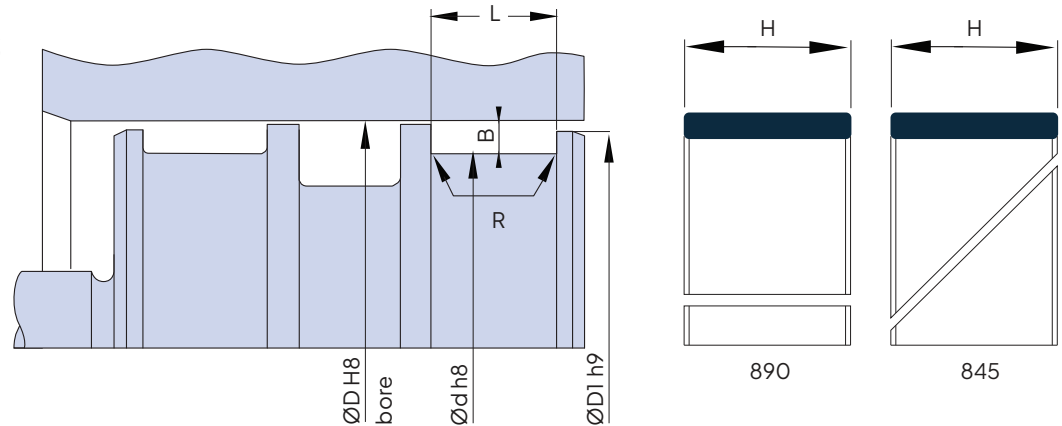
Typical applications include:

- Leg jack cylinders
- Base lift cylinders
- Tip jack cylinders
- Face ram cylinders
- Tailgate tensioning cylinders



Above: Installation Drawing

## DESIGN GUIDELINES



## METRIC SERIES

| Piston Guide Bands (Metric)    |          |            |          |          |          |                       |            |
|--------------------------------|----------|------------|----------|----------|----------|-----------------------|------------|
| Groove Dimensions & Tolerances |          |            |          |          |          | Guide Band Dimensions |            |
|                                | Nominal  | L          | Ød (rod) | ØD       | ØD1*     | section (cs)          | height (H) |
| Series 1                       | 1.5x5.6  | 5.60+0.20  | tol H8   | D-3.0 h8 | D-1.0 h9 | 1.42±0.03             | 5.30±0.10  |
| Series 2                       | 1.5x9.7  | 9.70+0.20  | tol H8   | D-3.0 h8 | D-1.0 h9 | 1.42±0.03             | 9.40±0.10  |
| Series 3                       | 1.5x15.0 | 15.00+0.20 | tol H8   | D-3.0 h8 | D-1.0 h9 | 1.42±0.03             | 14.70±0.10 |
| Series 4                       | 2.5x5.6  | 5.60+0.20  | tol H8   | D-5.0 h8 | D-1.6 h9 | 2.42±0.03             | 5.30±0.10  |
| Series 5                       | 2.5x9.7  | 9.70+0.20  | tol H8   | D-5.0 h8 | D-1.6 h9 | 2.42±0.03             | 9.40±0.10  |
| Series 6                       | 2.5x15.0 | 15.00+0.20 | tol H8   | D-5.0 h8 | D-1.6 h9 | 2.42±0.03             | 14.70±0.10 |
| Series 7                       | 2.5x20.0 | 20.00+0.20 | tol H8   | D-5.0 h8 | D-1.6 h9 | 2.42±0.03             | 19.65±0.15 |
| Series 8                       | 2.5x25.0 | 25.00+0.20 | tol H8   | D-5.0 h8 | D-1.6 h9 | 2.42±0.03             | 24.65±0.15 |
| Series 9                       | 4.0x25.0 | 25.00+0.20 | tol H8   | D-8.0 h8 | D-2.3 h9 | 3.92±0.03             | 24.65±0.15 |
| Series 10                      | 4.0x30.0 | 30.00+0.20 | tol H8   | D-8.0 h8 | D-2.3 h9 | 3.92±0.03             | 29.60±0.20 |

## INCH SERIES

| Piston Guide Bands (Inch)      |             |             |          |         |         |                       |             |
|--------------------------------|-------------|-------------|----------|---------|---------|-----------------------|-------------|
| Groove Dimensions & Tolerances |             |             |          |         |         | Guide Band Dimensions |             |
|                                | Nominal     | L           | Ød (rod) | ØD      | ØD1*    | section (cs)          | height (H)  |
| Series 1                       | 1/16 x 1/4  | 0.260+0.010 | tol H8   | D-0.127 | D-0.040 | 0.061±0.001           | 0.250±0.004 |
| Series 2                       | 1/16 x 3/8  | 0.385+0.010 | tol H8   | D-0.127 | D-0.040 | 0.061±0.001           | 0.375±0.004 |
| Series 3                       | 1/8 x 1/4   | 0.260+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 0.250±0.004 |
| Series 4                       | 1/8 x 3/8   | 0.385+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 0.375±0.004 |
| Series 5                       | 1/8 x 1/2   | 0.510+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 0.500±0.004 |
| Series 6                       | 1/8 x 3/4   | 0.760+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 0.750±0.004 |
| Series 7                       | 1/8 x 1     | 1.010+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 1.000±0.004 |
| Series 8                       | 1/8 x 1-1/4 | 1.260+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 1.250±0.004 |
| Series 9                       | 1/8 x 1-1/2 | 1.510+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 1.500±0.004 |
| Series 10                      | 1/8 x 2     | 2.010+0.010 | tol H8   | D-0.252 | D-0.063 | 0.123±0.001           | 2.000±0.004 |

\*Note: If guide band is used adjacent to a primary seal, Ød1 & ØD1 are superseded by the primary seal extrusion gap diameter guidelines.