

where the world turns for couplings

Lovejoy[®]

ROSTA

In This Section:

- SE-B and PT Series
- Chain Sprockets and Pulley Idlers
- AB and Brackets
- Motorbases



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ROSTA

Safety Warning

When using Lovejoy products, you must follow these instructions and take the following precautions. Failure to do so may cause the power transmission product to break and parts to be thrown with sufficient force to cause severe injury or death.

Refer to this Lovejoy Catalog for proper selection, sizing, horsepower, torque range, and speed range of power transmission products, including elastomeric elements for couplings. Follow the installation instructions included with the product, and in the individual product catalogs for proper installation of power transmission products. Do not exceed catalog ratings.

Do not use any of these power transmission products for elevators, man lifts, or other devices that carry people. If the power transmission product fails, the lift device could fall resulting in severe injury or death.

For all power transmission products, you must install suitable guards in accordance with OSHA and American Society of Mechanical Engineers Standards. Do not start power transmission product before suitable guards are in place. Failure to properly guard these products may result in severe injury or death from personnel contacting moving parts or from parts being thrown from assembly in the event the power transmission product fails.

If you have any questions, contact the Lovejoy Engineering Department at 1-630-852-0500.

where the world turns for couplings



ROSTA

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Elastomeric Elements – Building Blocks for Design

Lovejoy ROSTA offers a complete line of multi-purpose elastomeric elements that can solve most types of tensioning, suspension, and vibration absorption problems in all fields of mechanical engineering.

Lovejoy ROSTA products are based upon a unique design which uses four elastomeric elements inside the base of a tensioner, suspension unit, oscillating unit or anti-vibration dampener. These elements transfer oscillations while simultaneously dampening vibration, shock, and noise.

Features

- No lubrication required
- Maintenance-free operation
- Self-adjusting convenience
- Protective finish for long life
- Customized solutions for tensioning, dampening, unit support and mounting

A Superior Alternative

Replace your obsolete springs, dampeners, and bearings with ROSTA elements and combine the best features of those alternatives without the aggravation of maintenance or the expense of periodic replacement.

For example, using ROSTA elements instead of springs provides considerable lateral stability not often found in coil-spring designs. They can support tensile, compressive, and shear stresses and offer torsion angles up to $\pm 30^\circ$. They also effectively prevent the transference of vibration and noise through the floor or base to other equipment.

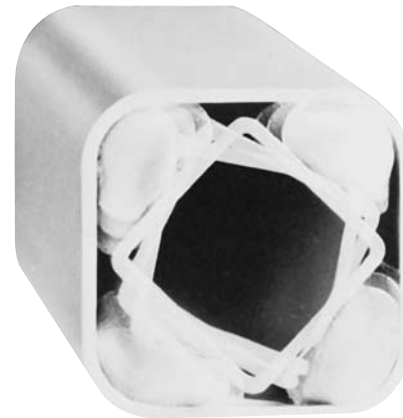
Our unconventional dampeners can be used in more applications due to their compact and simple design. The dampening effect, caused by molecular friction (hysteresis), lies within the ideal range of 15° to 25° . The rubber suspension ensures a long life for belts, idlers, and other drive components.

In addition, ROSTA elements are better than ball, needle and plain bearings when used for oscillation motion, especially under high-frequency revolutions. Conventional bearings will have a drastically reduced wear life due to inadequate lubrication on these applications - but ROSTA elements require no lubrication.

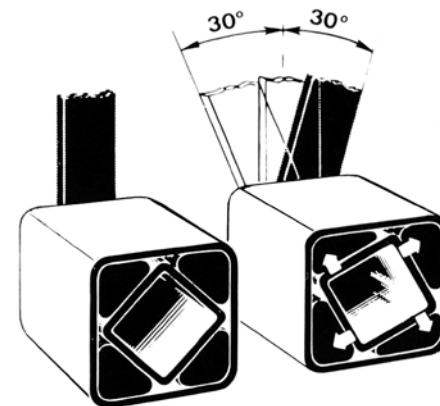
Self-Adjusting and Maintenance-Free Operation

The Lovejoy ROSTA rubber spring-type design permits automatic self-adjustment of belts and chains to compensate for normal stretching. Taut chains and belts mean longer life with less maintenance. Self-adjustment also protects against momentary shocks and sudden impacts.

All Lovejoy ROSTA elements are also maintenance-free. They are unaffected by mud, dirt, water, and sunlight withstanding temperatures from -40° to 180° F (-40° to 80° C). Since ROSTA elements have no metal-to-metal contact, there are no parts to wear out and no lubrication is needed. Count on less maintenance, and then count the savings!




For a complete listing of elements, please request "The Blue Ones from ROSTA":
 UPC 68514470964



Customized Solutions

Whether your application requires a device to push, pull, press, tension, dampen vibration, support, or mount, there is a Lovejoy ROSTA elastomeric element ready to serve you. Choose from a wide range of standard sizes and styles. They may be used singly or in combination with other elements to form compound units. Designing a new system? Talk to a Lovejoy Representative or Lovejoy Application Engineering for recommendations.

R

 **WARNING**

You must refer to page R-2 (Page 410) for Important Safety Instructions and Precautions for the selection and use of these products. Failure to follow the instructions and precautions can result in severe injury or death.

ROSTA Elastomeric Elements

Problem Solving Products

Tensioners

A full range of designs for belt/chain tensioning needs, including sizes which can exert 1,124 lbs of force. Tensioners are available for applications where the temperature environment is up to 250° F. Stainless steel, as well as Neoprene elastomers, are available for complete oil resistance.

Sprocket / Idler Accessories

Lovejoy stocks single and double strand sprockets in the most popular ANSI chain sizes. These steel sprockets come with a permanently lubricated bearing for quiet operation and are also available in hardened steel. Three sizes of belt idlers are also available for use with the ROSTA tensioners.

Motorbases

One of the newest additions to the ROSTA family, using a large element as a swivel or pivot mount for the electric motor V-belt drive. It provides not only the proper initial belt tension and a self-adjusting motion to accommodate belt stretch, but also the ability to dampen harmful vibrations or shock loads.

Oscillating Mounts

The Lovejoy ROSTA oscillating mounting units are designed for the support or suspension of vibratory conveyors, screens, feeder apparatus, or other equipment actuated by an eccentric drive or oscillator. The oscillating mountings work as rubber springs to assist in transmitting amplitudes to oscillating equipment with a directional rotary rocking motion. The spring characteristic of the mountings increases in amplitude while preventing excessive and uncontrolled oscillation of the vibrating system. Due to the mountings' unique design, neither shear nor bending stresses occur at the support points, assuring long life.

Suspension Units

Lovejoy ROSTA rubber suspension units are versatile spring systems that combine the functions of a spring, dampener, and bearing in one unit. The rubber suspension units are torsion springs with a progressive spring characteristic. Intended to replace spring (oscillating) components, and designed to absorb or transmit oscillating motion. They can be used for angles of oscillation of +/-30° and a frequency range of 30-2,000 oscillations per minute.

Anti-Vibration Mounts

Lovejoy ROSTA anti-vibration mountings are suitable for compression, tension, and thrust in any mounting position including floor, wall or ceiling. Unlike steel springs, the rubber elements effectively dampen noise by absorbing energy which is then converted to heat by internal molecular friction.

There are two styles of anti-vibration mountings. One works as a low frequency dampener (4 to 11 Hz) for lever loading, utilizing a torsional or squeezing motion. The other works as a medium frequency damper (15 to 30 Hz) for pure tensile or pressure loading. These mountings are intended specifically for the isolation of both passive and active vibration, but can also effectively isolate noise.



Tensioners



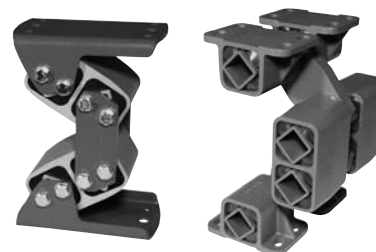
Motorbases



Suspension Units



Anti-Vibration Mounts



Oscillating Mounts

ROSTA Elastomeric Tensioners

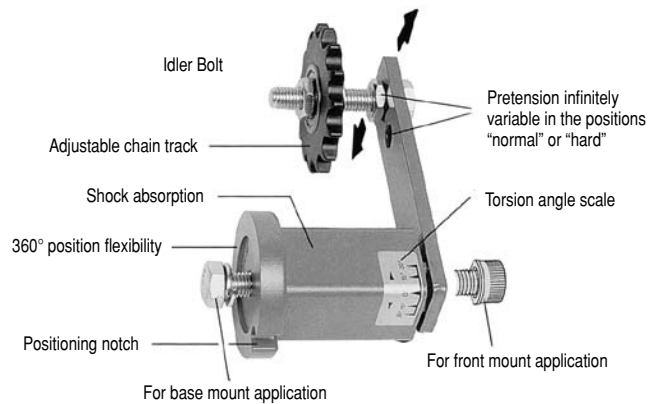
Extend Belt and Chain Life

Lovejoy ROSTA tensioners operate according to the ROSTA rubber torsion spring principle. Four natural rubber inserts inside the base isolate the tensioning arm, while providing continuous resistance to rotary forces applied to it. The tensioning arm is designed to deflect up to 30° either side of its neutral position.

The elastomeric Lovejoy ROSTA tensioner automatically accommodates the stretching of chains and belts through spring-like action which prevents uneven drive surges and power loss.

Features

- Extends belt and chain life by as much as 30%
- Eliminates slap and vibrations
- Minimizes wear on shaft and drive bearings
- Self adjusting, no periodic adjustments necessary
- Superior shock and vibration absorption in the drive due to elastomeric components
- Simple to mount with only one bolt required
- Maintenance-free needing no lubrication because there is no metal-to-metal contact
- Noise-free operation
- Multiple indoor and outdoor uses withstanding dirt, grime and temperatures from -40° to 180° F (-40° to 80° C)



The Lovejoy ROSTA tensioner is a universal product for use as an elastic spring device. Other applications beyond just belt and chain tensioning include pressing, cushioning, hold-down, guide rollers, belt scrapers, brake bars, cleaning brushes, limit stops, conveyor shock absorbers and much more. The actual idler sprocket, roller or pulley attached to the arm is not included. The Lovejoy ROSTA tensioner does include the idler bolt and nuts.

The arm has two holes which provide additional flexibility to generate two levels of force, "normal" and "hard," through the arm. Most applications will be best suited to use the tensioner with the idler sprocket or pulley attached to the "normal" hole. However, if space restrictions cause the use of a smaller tensioner body, the "hard" setting can be utilized for approximately 25% more force.

SE / SE-F / SE-G / SE-1 Series Tensioner Performance Data

| Size | F | | W | | F | | W | | F | | W | | Mounting Bolt Torque SE-Series in-lbs | Mounting Bolt Torque SE-F in-lbs |
|------------|---------------------|-----------|----------|------------|----------|-----------|----------|------------|-----------|-----------|--------------|------|---------------------------------------|----------------------------------|
| | Angle Of Pretension | | | | | | | | | | | | | |
| | 10° | | | | 20° | | | | 30° | | | | | |
| | Force | | Distance | | Force | | Distance | | Max Force | | Max Distance | | | |
| Normal lbs | Hard lbs | Normal in | Hard in | Normal lbs | Hard lbs | Normal in | Hard in | Normal lbs | Hard lbs | Normal in | Hard in | | | |
| SE-11 | 3.4 | 4.5 | 0.55 | 0.41 | 9.0 | 11.9 | 1.10 | 0.83 | 18.0 | 23.9 | 1.57 | 1.18 | 89 | N/A |
| SE-15 | 5.6 | 7.0 | 0.67 | 0.53 | 14.6 | 18.2 | 1.34 | 1.07 | 30.4 | 37.8 | 1.97 | 1.57 | 221 | 150 |
| SE-18 | 16.9 | 20.9 | 0.67 | 0.53 | 40.5 | 50.6 | 1.34 | 1.07 | 78.7 | 98.2 | 1.97 | 1.57 | 434 | 363 |
| SE-27 | 33.8 | 43.8 | 0.87 | 0.67 | 85.4 | 111.1 | 1.73 | 1.33 | 179.8 | 233.8 | 2.56 | 1.97 | 761 | 735 |
| SE-38 | 65.2 | 81.4 | 1.18 | 0.95 | 164.1 | 205.0 | 2.36 | 1.90 | 337.2 | 421.5 | 3.43 | 2.76 | 1,859 | 1,283 |
| SE-45 | 112.5 | 140.5 | 1.54 | 1.24 | 292.5 | 365.6 | 3.07 | 2.46 | 584.5 | 730.7 | 4.41 | 3.54 | 3,629 | 3,142 |
| SE-50 | 135.0 | 168.8 | 1.69 | 1.35 | 382.5 | 478.1 | 3.39 | 2.71 | 899.3 | 1,124.1 | 4.92 | 3.94 | 6,638 | 6,107 |

Note: ■ The optimum angle of pretension is 20°. At this angle the tensioner has maximum capability to absorb vibrations and shock loads, while maintaining enough arc of motion to automatically take-up belt or chain stretch.



"Z-Arrangement"

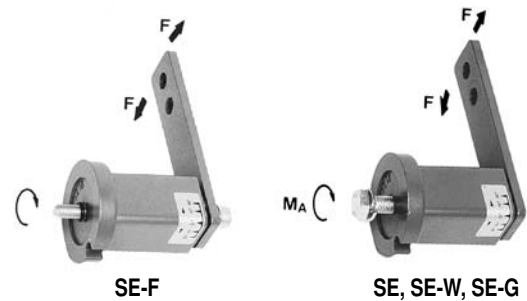
If chain tension sprockets/chain riders or tensioning rollers are mounted on the outside of the lever, the spacing "Z" should be as little as possible. The maximum tension F must not then exceed 50% = approximately 20° of pretension.

Tensioner Versions

In addition to standard SE series, Lovejoy offers four other versions of:

Front-Mount (SE-F)

For use on "blind" frame structures where the through-bolt design of the standard SE is not possible. The surface location must be drilled and must be tapped to accommodate the metric mounting bolt of the SE-F and must be tightened from the front. Ratings are the same as for the standard SE.



High Temperature (SE-W)

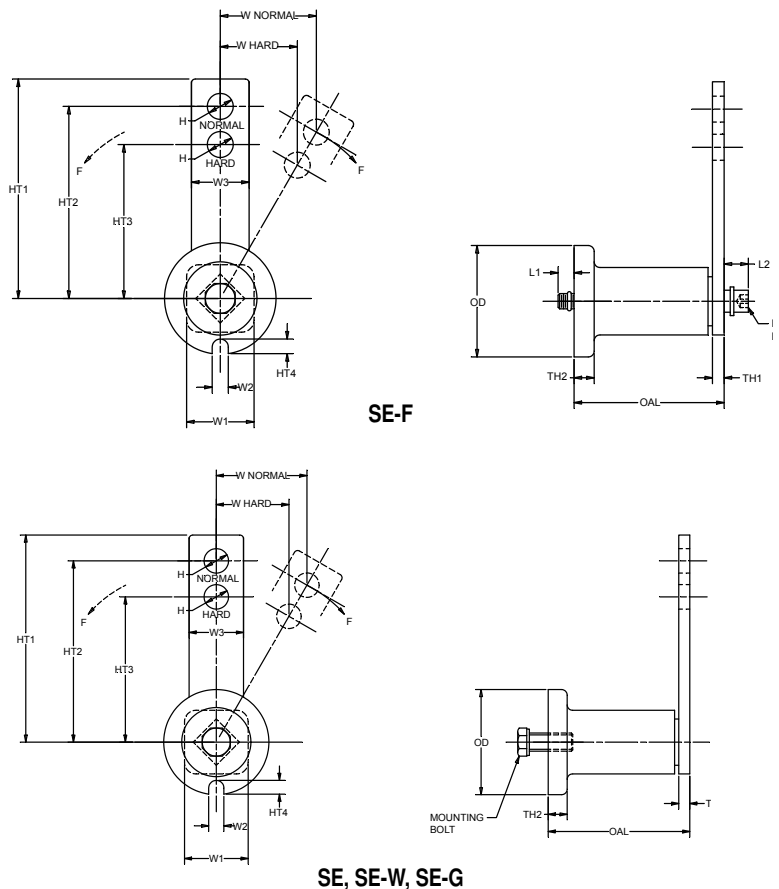
Designed with special heat resistant elastomeric rubber inserts, this version withstands temperatures from 180° to 250° F (80° to 121° C), such as ovens, dryers, cleaning equipment, and belt scrapers for hot materials. Since the composition of the rubber is significantly better for heat resistance, force values this tensioner type generates are 40% lower than the standard SE. The arm is marked with a red dot to note the SE-W tensioner.

Oil-Resistant (SE-G)

Uses a neoprene synthetic elastomer for use in oil bath applications or those with a heavy oil mist, and is zinc plated. Force ratings are the same as for the standard SE, except they are rated for temperatures from 0° to 220° F (-18° to 104° C).

Stainless Steel (SE-I)

For applications in food processing or pharmaceuticals where complete corrosion resistance is required. Standard rubber inserts are used along with stainless steel body components and mounting bolt; the mounting bolt is included but the idler bolt is not included with this design. The performance and dimensional characteristics correspond very closely to those of the standard sizes but vary from the chart below. Available in four sizes.



SE Series Tensioner Dimensional Data

| | H | HT1 | HT2 | HT3 | W3 | HT4 | W2 | W1 | L2 | L1 | OD | TH2 | TH1 | OAL | Mounting Bolt Size Std SE | Drill Hole Size for Std SE Mtg Bolt | Mounting Bolt Size SE-F | Idler Bolt Size | Weight |
|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------|-------------------------------------|-------------------------|------------------|--------|
| Size | in | in | in | in | in | in | in | in | in | in | in | in | in | in | mm | in | mm | in | lbs |
| SE-11 | 0.39 | 3.54 | 3.15 | 2.36 | 0.79 | 0.20 | 0.31 | 0.87 | N/A | N/A | 1.38 | 0.24 | 0.20 | 2.01 | M6 x 20 | 1/4 | N/A | 3/8 - 16 x 2 | 0.66 |
| SE-15 | 0.53 | 4.43 | 3.94 | 3.15 | 0.98 | 0.24 | 0.33 | 1.18 | 0.39 | 0.49 | 1.77 | 0.31 | 0.20 | 2.52 | M8 x 20 | 5/16 | M6 | 1/2 - 13 x 2 | 1.18 |
| SE-18 | 0.53 | 4.53 | 3.94 | 3.15 | 1.18 | 0.31 | 0.33 | 1.38 | 0.47 | 0.74 | 2.28 | 0.41 | 0.28 | 3.11 | M10 x 30 | 7/16 | M8 | 1/2 - 13 x 2-1/2 | 1.80 |
| SE-27 | 0.53 | 6.10 | 5.12 | 3.94 | 1.97 | 0.39 | 0.41 | 2.05 | 0.63 | 0.69 | 3.07 | 0.59 | 0.32 | 4.25 | M12 x 40 | 1/2 | M10 | 1/2 - 13 x 3-1/2 | 4.31 |
| SE-38 | 0.81 | 8.07 | 6.89 | 5.51 | 2.36 | 0.47 | 0.49 | 2.60 | 0.75 | 0.71 | 3.74 | 0.59 | 0.39 | 5.51 | M16 x 40 | 5/8 | M12 | 3/4 - 10 x 5 | 8.71 |
| SE-45 | 0.81 | 10.24 | 8.86 | 7.09 | 2.76 | 0.47 | 0.49 | 3.15 | 1.06 | 1.30 | 4.53 | 0.71 | 0.47 | 7.87 | M20 x 50 | 13/16 | M20 | 3/4 - 10 x 6 | 16.06 |
| SE-50 | 0.81 | 11.42 | 9.84 | 7.87 | 3.15 | 0.67 | 0.67 | 3.07 | 1.10 | 0.91 | 5.12 | 0.79 | 0.79 | 8.27 | M24 x 60 | 1 | M20 | 3/4 - 10 x 6 | 25.14 |

Note: ■ Standard units all come with one mounting bolt and one zinc-plated idler bolt and three nuts, except the SE-I tensioners which are supplied without idler hardware.



ROSTA Tensioner Item Selection

SE Tensioner Selection Table¹

| Size | ANSI Chain Size | V-Belt ² Range Size | Flat Belt Width in |
|-------|-----------------|--------------------------------|--------------------|
| SE-11 | 25 S | A | — |
| SE-15 | 35 S, D, T | A, B, 3L | — |
| SE-18 | 35 S, D, T | B, C, 4L, 5L | 1 in, 2 in |
| | 40 S, D, T | | |
| | 41 S, D, T | | |
| SE-27 | 40 T | D, E | 2 in, 3 in, 4 in |
| | 41 T | | |
| | 50 S, D, T | | |
| | 60 S, D, T | | |
| SE-38 | 80 S, D, T | — | 4 in, 5 in |
| SE-45 | 80T | — | 5 in, 6 in |
| | 100 S, D, T | | |
| | 120 S, D, T | | |
| | 160 S, D, T | | |
| | 180 S, D | | |
| | 200 S, D | | |
| SE-50 | 160 T | — | — |
| | 180 T | | |
| | 200 T | | |
| | 240 S, D | | |

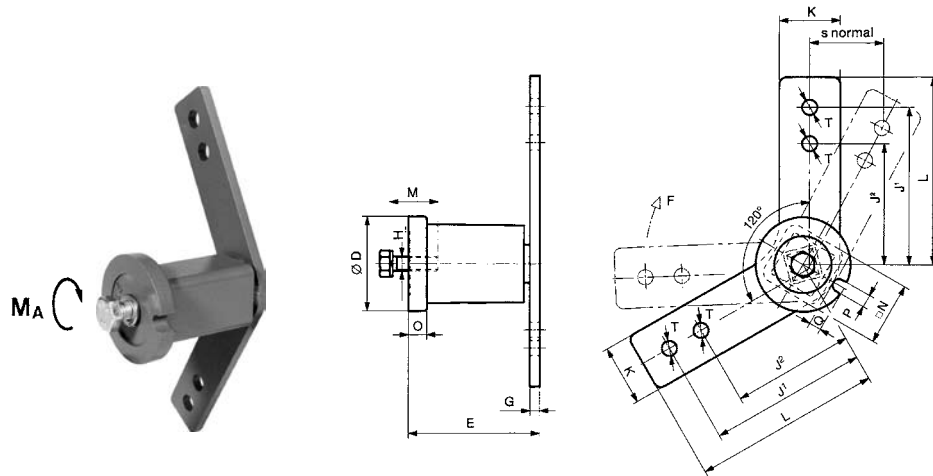
- Notes:
- 1 indicates: This data is based on the use at "normal" positions for all types except SE-W.
 - 2 indicates: Precise sizing for V-Belt applications is dependent on belt size, pulley diameter, HP/RPM, etc. and should be done with the help of Lovejoy Application Engineering.
 - S indicates: Single Strand.
 - D indicates: Double Strand.
 - T indicates: Triple Strand.

Tensioner UPC Number Selection Table

| Standard | | Neoprene | | High-Temp | | Front-Mount | | Stainless Steel | |
|----------|------------|----------|------------|-----------|------------|-------------|------------|-----------------|------------|
| Size | UPC Number | Size | UPC Number | Size | UPC Number | Size | UPC Number | Size | UPC Number |
| SE-11 | 17451 | SE-G11 | 26709 | — | — | — | — | — | — |
| SE-15 | 17452 | SE-G15 | 25597 | SE-W15 | 57517 | SE-F15 | 53273 | SE-I15 | 63014 |
| SE-18 | 17453 | SE-G18 | 17490 | SE-W18 | 53285 | SE-F18 | 53275 | SE-I18 | 63015 |
| SE-27 | 17454 | SE-G27 | 17491 | SE-W27 | 53287 | SE-F27 | 53277 | SE-I27 | 63016 |
| SE-38 | 17455 | SE-G38 | 17492 | SE-W38 | 53289 | SE-F38 | 53279 | SE-I40 | 63017 |
| SE-45 | 17456 | SE-G45 | 17493 | SE-W45 | 53291 | SE-F45 | 53281 | — | — |
| SE-50 | 53341 | SE-G50 | 63652 | SE-W50 | 57519 | SE-F50 | 53283 | — | — |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

SE-B Tensioner



SE-B Dimensional Data

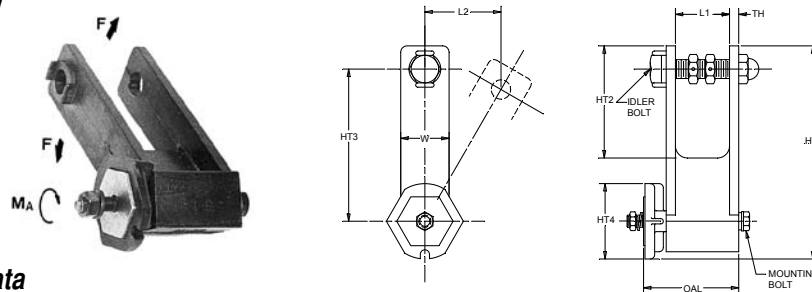
| Size | UPC Number | M in | H Mounting Bolt Size mm | D in | O in | G in | E in | K in | T in | L in | J1 in | J2 in | P in | Q in | N in |
|---------|------------|---------|-------------------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|
| SE-B-18 | 63729 | 1.18 | M10 | 2.28 | 0.41 | 0.28 | 3.11 | 1.18 | 0.41 | 4.53 | 3.94 | 3.15 | 0.33 | 0.31 | 1.38 |
| SE-B-27 | 63730 | 1.57 | M12 | 3.07 | 0.59 | 0.31 | 4.25 | 1.97 | 0.49 | 6.10 | 5.12 | 3.94 | 0.41 | 0.39 | 2.05 |

SE-B Performance Data

| Size | F Max Force* in-lbs | s Max Distance in | Torque MA ft-lbs | Weight lbs |
|---------|---------------------------|-------------------------|------------------------|---------------|
| SE-B-18 | 39.33 | 1.97 | 36.14 | 1.65 |
| SE-B-27 | 89.89 | 2.56 | 63.43 | 4.63 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown. Note: ■ * indicates: F max. in position "hard" approx. 25% higher.

PT Series – Light Duty



PT Series Dimensional Data

| Size | OAL in | HT1 in | HT4 in | HT3 in | W in | TH in | L1 in | HT2 in | Mounting Bolt Size mm / in | Drill Hole Size for Mtg Bolt in | Securing Torque for Mounting Bolt in-lbs | Idler Bolt Size in | Weight oz |
|-------|-----------|-----------|-----------|-----------|---------|----------|----------|-----------|-------------------------------|------------------------------------|---|-----------------------|--------------|
| PT-7 | 1.03 | 3.55 | 1.13 | 2.36 | 0.75 | 0.09 | 0.56 | 1.36 | M4 x 40mm | 0.17 | 25 | 1/4 - 20 x 1 | 1.5 |
| PT-11 | 2.03 | 4.41 | 1.56 | 3.15 | 1.00 | 0.18 | 1.13 | 1.84 | 1/4 - 20 x 2-3/4 in | 0.28 | 90 | 3/8 - 16 x 2 | 6.0 |

PT Series Performance Data

| Size | UPC Number | F | | L2 | | F | | L2 | | F | | L2 | |
|-------|------------|---------------------|------|-----|-----|-----|------|---------------|--|-----------------|--|---------------|--|
| | | Angle of Pretension | | | | | | | | F | | L2 | |
| | | 10° | | 20° | | 30° | | Max Force lbs | | Max Distance in | | Max Force lbs | |
| PT-7 | 24481 | 1 | 0.41 | 2 | 0.8 | 3 | 1.18 | | | | | | |
| PT-11 | 24416 | 3 | 0.55 | 9 | 1.1 | 18 | 1.60 | | | | | | |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

ROSTA Accessories

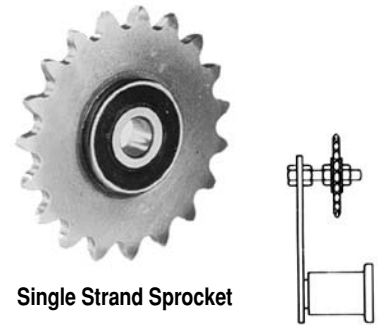
Chain Sprockets and Pulley Idlers

Lovejoy offers the following chain, V-belt, and flat belt idlers. Each is permanently lubricated and supported in ball bearings for long life. Types, sizes and dimensions are charted below. These can be used with any of the tensioners found in this catalog.

Note: ■ The idler bolt that comes with our PT & SE Series tensioners can be used with many standard brands of sprockets and pulleys.

Single Strand Sprocket UPC Number Selection Table

| UPC Number | Sprocket Number | ANSI Chain Size | Pitch in | Number of Teeth | Bore in | Length Thru Bore in |
|------------|-----------------|-----------------|----------|-----------------|---------|---------------------|
| 17458 | 25BB20 | 25 | 0.25 | 20 | 0.375 | 0.313 |
| 17459 | 35BB19 | 35 | 0.38 | 19 | 0.500 | 0.375 |
| 17460 | 40BB18 | 40 | 0.50 | 18 | 0.500 | 0.438 |
| 17461 | 41BB18 | 41 | 0.50 | 18 | 0.500 | 0.438 |
| 17462 | 50BB17 | 50 | 0.63 | 17 | 0.500 | 0.438 |
| 17463 | 60BB15 | 60 | 0.75 | 15 | 0.500 | 0.438 |
| 17464 | 80BB12 | 80 | 1.00 | 12 | 0.750 | 0.609 |
| 17465 | 100BB11 | 100 | 1.25 | 11 | 0.750 | 0.609 |
| 17466 | 120BB09 | 120 | 1.50 | 9 | 0.750 | 0.594 |

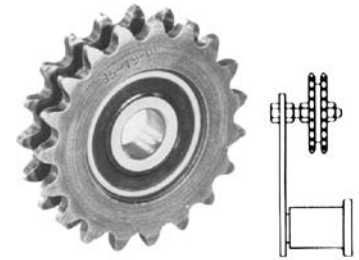


Single Strand Sprocket

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

Double Strand Sprocket UPC Number Selection Table

| UPC Number | Sprocket Number | ANSI Chain Size | Pitch in | Number of Teeth | Bore in | Length Thru Bore in |
|------------|----------------------|-----------------|----------|-----------------|---------|---------------------|
| 17467 | D35BB19 | 35-2 | 0.38 | 19 | 0.500 | 0.438 |
| 17468 | D40BB18 | 40-2 | 0.50 | 18 | 0.500 | 0.953 |
| 17469 | D50BB17 | 50-2 | 0.63 | 17 | 0.500 | 1.047 |
| 17470 | D60BB15 ¹ | 60-2 | 0.75 | 15 | 0.625 | 1.328 |
| 17471 | D80BB12 | 80-2 | 1.00 | 12 | 0.750 | 1.703 |



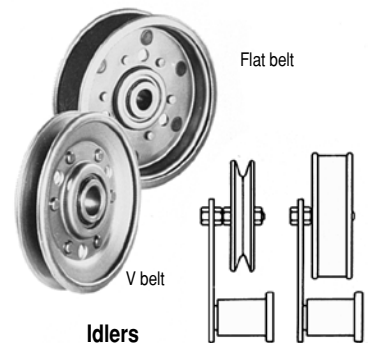
Double Strand Sprocket

Notes: ■ 1 indicates: Furnished with a bushing for use with SE27 idler bolt.
 ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

Flat Belt / Quiet Chain Idler UPC Number Selection Table

| UPC Number | Model Number | Overall Width in | Flat Surface Width in | Pulley OD in | Bore in | Length Thru Bore in |
|------------|--------------|------------------|-----------------------|--------------|---------|---------------------|
| 17472 | CB4 | 1.44 | 1 | 4.75 | 0.500 | 0.719 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.



Idlers

R

V-Belt Pulley Idler UPC Number Selection Table

| UPC Number | Pulley Number | Belt Size | Pitch in | Pulley OD in | Bore in | Length Thru Bore in |
|------------|---------------|-----------|----------|--------------|---------|---------------------|
| 17473 | A3 | A | 2.50 | 3.00 | 0.375 | 0.844 |
| 17474 | B5 | B-C | 3.75 | 5.06 | 0.500 | 0.719 |
| 17475 | B7 | B-C | 6.00 | 7.31 | 0.500 | 0.719 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

ROSTA Accessories

Chain Rider Set

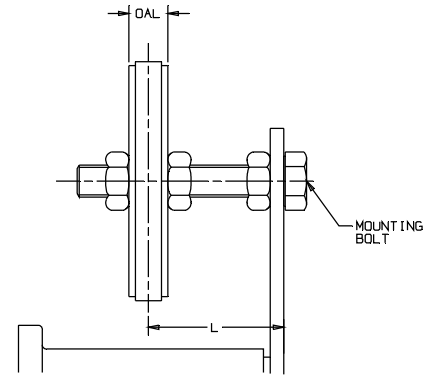
The ROSTA chain rider set, when assembled on the appropriate ROSTA tensioning element, is an economic alternative for tensioning chain drives. The high quality rider is constructed of friction resistant industrial plastic and allows the use of both rider sides. The maximum permissible chain speed is 4.92 ft/sec.



Chain Rider Set Dimensional Data

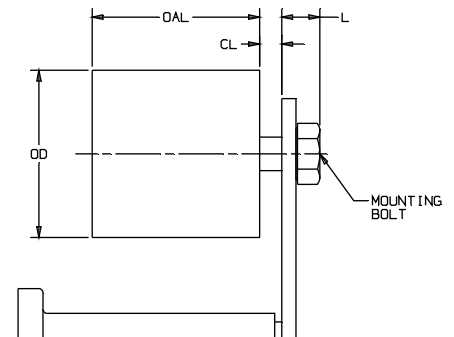
| UPC Number | Chain Rider Number | ANSI Chain Size | OAL | L | Idler Bolt Size |
|------------|--------------------|-----------------|-----|-------------|-----------------|
| | | | in | in | |
| 57726 | P3/8-8 | 41 | .40 | .75 - 1.34 | M8 x 45 |
| 53094 | P1/2-10 | 40 | .55 | .91 - 1.61 | M10 x 55 |
| 43499 | P5/8-10 | 50 | .65 | .95 - 1.54 | M10 x 55 |
| 43387 | P3/4-12 | 60 | .77 | 1.18 - 2.40 | M12 x 80 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.



Tensioning Rollers

The ROSTA roller, when installed on the proper SE unit, is an ideal belt tensioner. The roller is made of high quality industrial plastic material with two self-lubricating ball bearings.

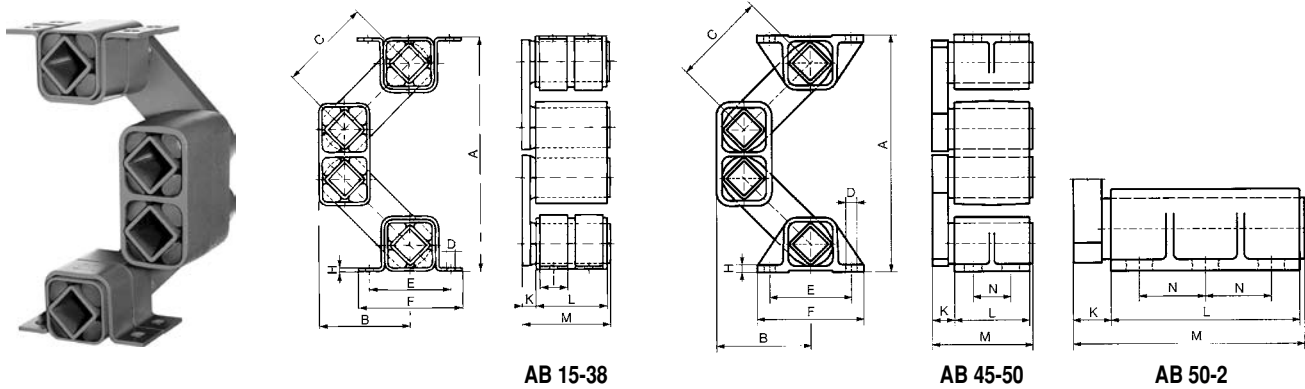


Tensioning Roller Dimensional Data

| UPC Number | Roller Idler Number | Tensioning Element Type | OAL | L | CL | OD | Idler Bolt Size | Max Speed |
|------------|---------------------|-------------------------|------|------|------|------|-----------------|-----------|
| | | | in | in | in | in | | mm |
| 63115 | R-11 | SE/SE-F-11 | 1.38 | 0.55 | 0.08 | 1.18 | M8 | 8,000 |
| 53028 | R-15/18 | SE/SE-F-15 OR 18 | 1.77 | 0.63 | 0.24 | 1.58 | M10 | 8,000 |
| 43023 | R-27 | SE/SE-F-27 | 2.36 | 0.67 | 0.32 | 2.36 | M12 | 6,000 |
| 57573 | R-38 | SE/SE-F-38 | 3.54 | 0.98 | 0.32 | 3.15 | M20 | 5,000 |
| 57574 | R-45/50 | SE/SE-F-45 OR 50 | 5.32 | 1.06 | 0.39 | 3.54 | M20 | 4,500 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

ROSTA Oscillating Mounting



AB Dimensional Data

| Size | UPC Number | Load G in-lbs | A | | B | | C | D | E | F | H | I | K | L | M | N | Weight lbs |
|---------|------------|------------------|-----------------|---------------------|-----------------|---------------------|------|-----------|------|------|------|------|------|------|------|------|---------------|
| | | | Un-loaded in | Loaded Max in | Un-loaded in | Loaded Max in | | | | | | | | | | | |
| AB-15 | 25206 | 11.24 - 35.97 | 6.50 | 4.72 | 2.76 | 3.50 | 3.15 | 0.28 | 1.97 | 2.56 | 0.08 | 0.98 | 0.39 | 1.57 | 2.05 | - | 1.48 |
| AB-18 | 25207 | 26.98 - 67.44 | 7.99 | 5.91 | 3.43 | 4.21 | 3.94 | 0.35 | 2.36 | 3.15 | 0.10 | 1.18 | 0.55 | 1.97 | 2.64 | - | 2.98 |
| AB-27 | 25208 | 56.20 - 179.85 | 9.06 | 6.69 | 3.70 | 4.49 | 3.94 | 0.43 | 3.15 | 4.13 | 0.12 | 1.38 | 0.67 | 2.36 | 3.15 | - | 5.84 |
| AB-38 | 25209 | 134.89 - 359.70 | 11.61 | 8.86 | 4.72 | 5.67 | 4.92 | 0.51 | 3.94 | 4.92 | 0.16 | 1.57 | 0.83 | 3.15 | 4.09 | - | 13.67 |
| AB-45 | 25210 | 269.77 - 674.43 | 13.90 | 10.75 | 5.55 | 6.69 | 5.51 | 0.51x0.79 | 4.53 | 5.71 | 0.31 | - | 1.10 | 3.94 | 5.20 | 2.56 | 25.35 |
| AB-50 | 25211 | 562.03 - 1348.86 | 14.96 | 11.02 | 5.91 | 7.09 | 5.91 | 0.67x1.06 | 5.12 | 6.69 | 0.47 | - | 1.38 | 4.72 | 6.30 | 2.36 | 42.15 |
| AB-50-2 | 63428 | 944.20 - 2248.10 | 14.96 | 11.02 | 5.91 | 7.09 | 5.91 | 0.67x1.06 | 5.12 | 6.69 | 0.47 | - | 1.57 | 7.87 | 9.65 | 2.76 | 66.14 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

AB Dynamic Spring Value Performance Data

| Size: | AB-15 | AB-27 | AB-38 | AB-45 | AB-50 | AB-50-2 |
|-------------|-------|-------|-------|-------|-------|---------|
| Cd lb/in | 57 | 229 | 343 | 571 | 1,085 | 1,827 |
| Vertical | 57 | 229 | 343 | 571 | 1,085 | 1,827 |
| Horizontal | 34 | 143 | 171 | 28 | 485 | 799 |

Note: ■ Cd indicates: Dynamic spring value in lb/in, in nominal load range at $n_g = 960$ RPM, sw 0.315 in.

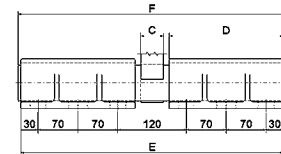
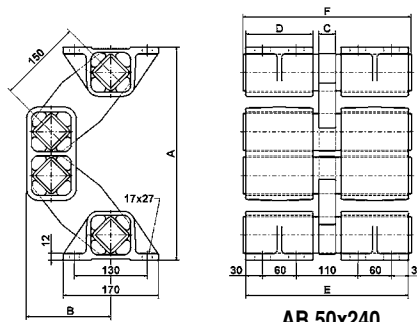
Brackets

Clamps for mounting oscillating elements type AB 15 through AB 38 must be ordered separately according to this list.

AB Brackets

| Size | UPC Number | AB Type | Quantity Per Unit |
|-------|------------|---------|-------------------|
| BR-15 | 25001 | AB 15 | 2 |
| BR-18 | 24840 | AB 18 | 2 |
| BR-27 | 25003 | AB 27 | 2 |
| BR-38 | 24004 | AB 38 | 4 |

Note: ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.



AB Twin Dimensional Data

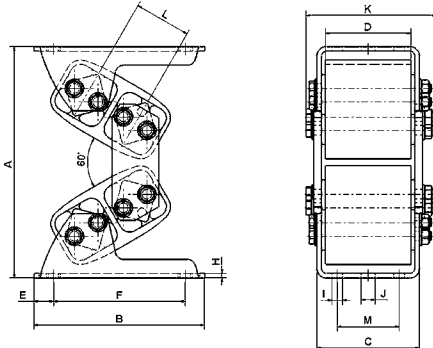
| Size | UPC Number | Load G in-lbs | A Un-loaded in | A Loaded Max in | B Un-loaded in | B Loaded Max in | C in | D in | E in | F in | Weight lbs |
|-----------|------------|-------------------|----------------------|--------------------------|----------------------|--------------------------|---------|---------|---------|---------|---------------|
| AB-50x240 | 63797 | 1124.06 - 2697.75 | 14.96 | 11.02 | 5.91 | 7.09 | 1.18 | 4.72 | 11.41 | 11.81 | 77.16 |
| AB-50x400 | 63798 | 1888.43 - 4496.25 | 14.96 | 11.02 | 5.91 | 7.09 | 1.57 | 7.87 | 18.11 | 18.50 | 119.05 |

AB Twin Dynamic Spring Value Performance Data

| Size: | AB 50x240 | AB 50x400 |
|------------|-----------|-----------|
| C_d | lb/in | lb/in |
| Vertical | 2,170 | 3,654 |
| Horizontal | 971 | 1,599 |

Note: ■ C_d indicates: Dynamic spring value in lb/in, in nominal load range at $n_e = 960$ RPM, sw 0.315 in.

The oscillating mountings type AB 50x240 and AB 50x400 can be combined with the AB 50 and AB 50-2 for varying loading conditions on the screen charging side and on the screen outlet side. The most economical screen support can be found in each case with the above-mentioned combination.



AB-D Dimensional Data

| Size | UPC Number | Load G in-lbs | A Un-loaded in | A Loaded Max in | B in | C in | D in | E in | F in | H in | I in | J in | K in | L in | M in | Weight lbs |
|-------------|------------|-------------------|----------------------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| AB-D-18 | 75676 | 112.41 - 269.77 | 5.39 | 4.61 | 4.53 | 2.40 | 1.97 | 0.49 | 3.54 | 0.12 | 0.35 | 0.35 | 2.91 | 1.22 | 1.18 | 2.87 |
| AB-D-27 | 63733 | 224.81 - 562.03 | 7.24 | 6.18 | 5.91 | 3.66 | 3.15 | 0.59 | 4.72 | 0.16 | 0.35 | 0.43 | 4.57 | 1.73 | 1.97 | 6.39 |
| AB-D-38 | 63734 | 449.63 - 899.25 | 9.61 | 8.23 | 7.28 | 4.65 | 3.94 | 0.69 | 5.91 | 0.20 | 0.43 | 0.53 | 5.79 | 2.36 | 2.76 | 16.54 |
| AB-D-45 | 75677 | 674.44 - 1348.88 | 11.73 | 9.92 | 8.66 | 5.20 | 4.33 | 0.98 | 6.69 | 0.24 | 0.53 | 0.71 | 6.61 | 2.87 | 3.15 | 25.35 |
| AB-D-50-120 | 63854 | 899.25 - 2023.31 | 12.95 | 10.94 | 9.25 | 5.59 | 4.72 | 0.98 | 7.28 | 0.24 | 0.53 | 0.71 | 6.54 | 3.07 | 3.54 | 48.50 |
| AB-D-50-160 | 63855 | 1798.50 - 2697.75 | 12.95 | 10.94 | 9.25 | 7.32 | 6.30 | 0.98 | 7.28 | 0.31 | 0.53 | 0.71 | 8.43 | 3.07 | 3.54 | 56.22 |
| AB-D-50-200 | 63856 | 2472.94 - 3597.00 | 12.95 | 10.94 | 9.25 | 8.90 | 7.87 | 0.98 | 7.28 | 0.31 | 0.53 | 0.71 | 10.24 | 3.07 | 3.54 | 63.94 |

The significantly shorter and compact lever arm connections (in the double rubber suspension unit) of the AB-D provides a far higher loading capacity than the AB type oscillating mountings. The linear cushioning produced under load ensures low natural frequency of approximately 3.5 Hz. At the oscillating machine frequency of approximately 16 Hz, the mounting provides an insulation efficiency of approximately 95%.

Note: ■ Maximum allowable stroke must be strictly observed.

AB-D Dynamic Spring Value Performance Data

| Size: | AB-D-18 | AB-D-27 | AB-D-38 | AB-D-45 | AB-D-50 |
|------------|---------|---------|---------|---------|---------|
| C_d | lb/in | lb/in | lb/in | lb/in | lb/in |
| Vertical | 143 | 314 | 485 | 799 | 1,542 |
| Horizontal | 114 | 200 | 228 | 399 | 685 |

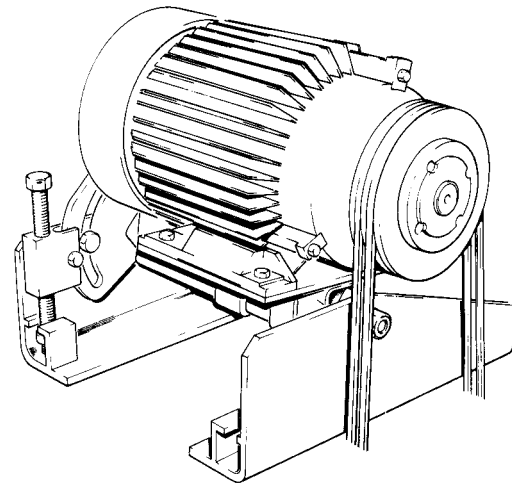
Note: ■ C_d indicates: Dynamic spring value in lb/in, in nominal load range at $n_e = 960$ RPM, sw 0.315 in.

ROSTA Tensioning Motorbase for Belt Drives

The ROSTA elastic tensioning Motorbase type MB utilizes a rubber suspension unit as a swivel mounting. This compensates continuously for all belt stretching, hopping, fluttering, and excessive pull when starting a drive. The standardized ROSTA tensioning Motorbase is the ideal tensioning solution for all belt drives from about 1.0 to 500 HP rating.

Belt drives, in particular V-belt drives with one or more belts, transmit the required torque to the driven equipment only if the belt tension is optimal. Consequently all such drives need a device for adjusting the motor position or a belt tensioner to compensate for normal belt stretch (with V-belts up to 5% or 6% of total length).

Failure to adjust the tension leads to serious loss of power in torque transmission, overheating of belts due to excessive slip, hopping or wobbling, screeching belts, excessive wear of the pulleys and eventually premature failure. Purely mechanical, rigid adjusting devices like motor slides with screw adjustment or belt tensioners with adjusting slots, are intended only for occasional compensation of the belt stretching. They do not provide continuous retensioning of the belts or reduction of the excessive starting torques when pulling heavy equipment into operation. They also need frequent adjustments and maintenance, which requires the drive be shut down. In contrast, the ROSTA Motorbase is the solution to all of these problems.



Features

- Provide maintenance-free operation
- Are self adjusting
- Handle shock loads
- Dampen vibration
- Extend belt life
- Prevent belt slippage for all multiple belt drives

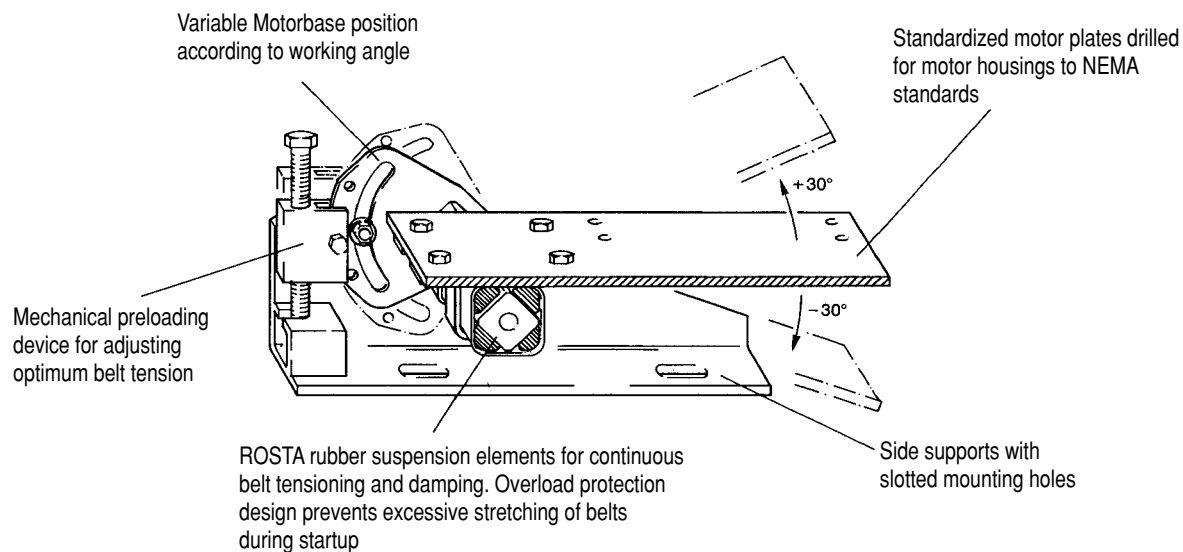


Illustration of Motorbase for 7½ to 75 HP Motors

Selecting the Correct Motorbase

The 12 standardized ROSTA tensioning Motorbases listed below are selected primarily according to the motor rating or motor frame size respectively. The columns give the motor data with NEMA standards and indicate the standard mounting holes in the Motorbase plates. Motorbase plates can be mounted to the element in two variations to allow for optimum performance depending on the orientation of driver and driven equipment. Motorbase plates that reference two motor frame sizes, e.g. 254T & 256T have six holes for mounting either motor type on the same plate.

Motorbases with Motor Plate Nema Standards

| Size | UPC Number | NEMA Frame Size | Motor HP @ 1,750 RPM RPM | Weight lbs |
|------------|------------|------------------------------------|--------------------------|------------|
| MB-27x80 | 63340 | 143/145T | 1 & 1.5 - 2 | 10 |
| MB-27x120 | 63342 | 182T | 2 - 3 | 14 |
| MB-27x200 | 63346 | 184T | 3 - 5 | 15 |
| MB-50x160 | 63018 | 213/215T | 7.5 - 10 | 86 |
| MB-50x200 | 63019 | 254/256T | 15 - 20 | 94 |
| MB-50x270 | 63020 | 284/286T | 25 - 30 | 108 |
| MB-70x400 | 63960 | 284/286T | 25 - 30 | 108 |
| MB-50x400 | 63021 | 324/ 326T | 40 - 50 | 124 |
| MB-70x400 | 63883 | 324/326T | 40 - 50 | 124 |
| MB-50x500 | 63022 | 364/365T | 60 - 75 | 144 |
| MB-70x400 | 63858 | 364T/365T | 60 - 75 | 144 |
| MB-70x400 | 63467 | 404T | 50 | 275 |
| MB-70x550 | 63489 | 405T | 60 - 100 | 350 |
| MB-70x550 | 63469 | 444T | 75 - 125 | 350 |
| MB-70x650 | 63471 | 445T | 100 - 150 | 435 |
| MB-100x750 | 63991 | 447/449T,504/505T, 584/586/587T | 125 - 500 | 1,215 |

Notes: ■ For Crusher/Primary Feeder applications, MB70 sizes have been added for frame sizes normally reserved for MB50 sizes. The larger element is required to allow for belt movement.
 ■ When referencing the Lovejoy UPC number in this table, include 685144 as a prefix to the number shown.

Belt Tensioning

The ROSTA tensioning Motorbase can tension the belt exactly according to the force recommended by the belt supplier using the mechanical pre-loading device.

