MOUNTING PROCEDURE – QD BUSHINGS

IMPORTANT – BE SURE TAPERED CONE SURFACES OF QD BUSHING AND INSIDE OF SHEAVE OR SPROCKET HUB ARE DRY AND FREE OF ALL FOREIGN SUBSTANCES SUCH AS PAINT, GREASE, OR DIRT.

STANDARD MOUNTING ASSEMBLY FOR QD SHEAVES AND SPROCKETS

1. Be sure the tapered cone surfaces of the bushing and the inside of the driven product are clean and free of anti-seize lubricants.
2. Slide QD bushing on shaft, flange end first. Assemble key.
3. Position QD bushing on shaft. Tighten set screw over key “hand tight” with standard Allen wrench only. Do not use excessive force.
4. Slide large end of sheave or sprocket taper bore into position over cone aligning drilled bolt holes in sheave or sprocket with tapped holes in flange of bushing. Assemble pull-up bolts and lock washers.

NOTE: Install M thru S bushings in the hub so that the two extra holes in the hub are located as far as possible from the bushing’s saw cut.
5. Tighten pull-up bolts alternately and evenly to tightness indicated in torque table on back. Do not use extensions on wrench handles. There should be a gap between the face of the sheave or sprocket hub and the flange of the QD bushing to insure a satisfactory cone grip and press fit. CAUTION: THIS GAP MUST NOT BE CLOSED.

DISMOUNTING

1. Remove pull-up bolts and screw them into TAPPED holes in sheave or sprocket and against flange of QD bushing to break cone grip.
2. Loosen set screw and slide QD bushing from shaft.

REVERSE Mounting Assembly

FOR QD SHEAVES AND SPROCKETS USING JA, SH, SD, SDS, SK, SF, E, F, AND J BUSHINGS

These bushings, as well as the sprockets and sheaves for them, are each drilled with six holes (three drilled and three tapped) to allow pull-up bolts to be inserted from either side. This enables variations of mounting characteristics to suit a particular installation.

1. Be sure the tapered cone surfaces of the bushing and the inside of the driven product are clean and free of anti-seize lubricants.
2. Assemble sheave or sprocket with bolts inserted (But not tightened) through DRILLED holes in bushing flange into TAPPED holes in sheave, sprocket, or other Martin QD part.
3. With key in shaft keyseat, slide assembly into approximate position on shaft with flange end of bushing away from bearing.
4. Position QD bushing on shaft by tightening set screw over key “hand tight” with standard Allen wrench only. Do not use excessive force.
5. Tighten pull-up bolts alternately and evenly to tightness indicated in torque table below. Do not use extensions on wrench handles. There should be a gap between the face of the sheave or sprocket hub and the flange of the QD bushing to insure a satisfactory cone grip and press fit. CAUTION: THIS GAP MUST NOT BE CLOSED.

CAUTION

WARNING: USE OF ANTI-SEIZE LUBRICANT ON TAPERED CONE SURFACES OR ON BOLT THREADS WHEN MOUNTING MAY RESULT IN DAMAGE TO SHEAVES AND SPROCKETS. THIS voidS ALL MANUFACTURER’S WARRANTIES.

BOLT TORQUE TABLE

<table>
<thead>
<tr>
<th>QD Bushing Size</th>
<th>Size of Cap Screw</th>
<th>Wrench Torque in./lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA</td>
<td>10 – 24</td>
<td>60</td>
</tr>
<tr>
<td>SH, SDS, SD</td>
<td>.25 – 20</td>
<td>108</td>
</tr>
<tr>
<td>SK</td>
<td>.3125 – 18</td>
<td>180</td>
</tr>
<tr>
<td>SF</td>
<td>.375 – 16</td>
<td>360</td>
</tr>
<tr>
<td>E</td>
<td>.5 – 13</td>
<td>720</td>
</tr>
<tr>
<td>F</td>
<td>.5625 – 12</td>
<td>900</td>
</tr>
<tr>
<td>J</td>
<td>.625 – 11</td>
<td>1620</td>
</tr>
<tr>
<td>M</td>
<td>.75 – 10</td>
<td>2700</td>
</tr>
<tr>
<td>N</td>
<td>.875 – 9</td>
<td>3600</td>
</tr>
<tr>
<td>P</td>
<td>1 – 8</td>
<td>5400</td>
</tr>
<tr>
<td>W</td>
<td>1.125 – 7</td>
<td>7200</td>
</tr>
<tr>
<td>S</td>
<td>1.125 – 7</td>
<td>9000</td>
</tr>
</tbody>
</table>

1. Remove pull-up bolts and screw them into TAPPED holes in bushing flange and against hub of sheave or sprocket to break cone grip.
2. Loosen set screw in bushing flange and slide QD bushing from shaft.
All Steel QD Bushings

★F = Length of Mating Bore  ★★★G = Gap Between QD Bushing and Mating Hub

### Bushings: “J” to “J” inclusive

<table>
<thead>
<tr>
<th>Bushing</th>
<th>A</th>
<th>B</th>
<th>D</th>
<th>E</th>
<th>★F</th>
<th>★★G</th>
<th>L</th>
<th>Cap Bolt Circle</th>
<th>Screws Required</th>
<th>Min.</th>
<th>Maximum</th>
<th>Average Weight (Approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-STL</td>
<td>.563</td>
<td>3.125</td>
<td>4.625</td>
<td>1.5</td>
<td>1.25</td>
<td>.125</td>
<td>2.063</td>
<td>3.875</td>
<td>3.375 × 2</td>
<td>.5</td>
<td>2.313</td>
<td>2.813</td>
</tr>
<tr>
<td>E-STL</td>
<td>.75</td>
<td>3.834</td>
<td>6</td>
<td>1.875</td>
<td>1.625</td>
<td>.125</td>
<td>2.625</td>
<td>5</td>
<td>3.5 × 2.75</td>
<td>.875</td>
<td>2.875</td>
<td>3.5</td>
</tr>
<tr>
<td>F-STL</td>
<td>.813</td>
<td>4.437</td>
<td>6.625</td>
<td>2.813</td>
<td>2.5</td>
<td>.188</td>
<td>3.625</td>
<td>5.625</td>
<td>3.563 × 3.625</td>
<td>1</td>
<td>3.313</td>
<td>4</td>
</tr>
<tr>
<td>J-STL</td>
<td>1</td>
<td>5.148</td>
<td>7.25</td>
<td>3.5</td>
<td>3.188</td>
<td>.188</td>
<td>4.5</td>
<td>6.25</td>
<td>3.625 × 4.5</td>
<td>1.438</td>
<td>3.75</td>
<td>4.5</td>
</tr>
<tr>
<td>M-STL</td>
<td>1.25</td>
<td>6.5</td>
<td>9</td>
<td>5.5</td>
<td>5.188</td>
<td>.188</td>
<td>6.75</td>
<td>7.875</td>
<td>4.75 × 6.75</td>
<td>2</td>
<td>4.75</td>
<td>5.5</td>
</tr>
<tr>
<td>N-STL</td>
<td>1.5</td>
<td>7</td>
<td>10</td>
<td>6.625</td>
<td>6.25</td>
<td>.438</td>
<td>8.125</td>
<td>8.5</td>
<td>4.875 × 8.5</td>
<td>2.5</td>
<td>5.125</td>
<td>5.875</td>
</tr>
</tbody>
</table>

- **Bores:**
  - SF-STL: 2.375 – 2.563
  - E-STL: 2.938
  - F-STL: 1 – 3.313
  - J-STL: 3.438
  - M-STL: 4.813
  - N-STL: 5.188

- **Keyways:**
  - SF-STL: .063
  - E-STL: .063
  - F-STL: .063
  - J-STL: .063
  - M-STL: .063
  - N-STL: .063

### Shallow Key Dimension — Standard

- **Bores:**
  - SF-STL: .25 × .031
  - E-STL: .25 × .063
  - F-STL: .25 × .063
  - J-STL: .25 × .063
  - M-STL: .25 × .063
  - N-STL: .25 × .063

- **Keyways:**
  - SF-STL: .25 × .156
  - E-STL: .25 × .188
  - F-STL: .25 × .188
  - J-STL: .25 × .281
  - M-STL: .25 × .313
  - N-STL: .25 × .438

- **Keysets:**
  - SF-STL: .75 × .125
  - E-STL: .875 × .063
  - F-STL: .875 × .063
  - J-STL: 1.25 × .25
  - M-STL: 1.75 × .25
  - N-STL: 1.75 × .25

### Shallow Key Dimension — Steel

- **Bores:**
  - SF-STL: .25 × .031
  - E-STL: .25 × .063
  - F-STL: .25 × .063
  - J-STL: .25 × .063
  - M-STL: .25 × .063
  - N-STL: .25 × .063

- **Keyways:**
  - SF-STL: .25 × .156
  - E-STL: .75 × .063
  - F-STL: .75 × .063
  - J-STL: 1.25 × .25
  - M-STL: 1.75 × .25
  - N-STL: 1.75 × .25

- **Keysets:**
  - SF-STL: .75 × .438
  - E-STL: 2 × .25
  - F-STL: 2 × .25
  - J-STL: 2 × .25
  - M-STL: 2 × .25
  - N-STL: 2 × .25

---

**Reborable QD bushings made of Stainless Steel are available in many sizes. Non stock sizes are available on MTO basis.**
### Standard QD Bushings

<table>
<thead>
<tr>
<th>Bushing</th>
<th>Dimensions (Inches)</th>
<th>Cap Screws Required</th>
<th>Stock Bore Range</th>
<th>Set Screw Size</th>
<th>Average Weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH</td>
<td>.438 1,671 2,688 .875 .813 1.313 2.25</td>
<td>3 – 25 × 1.375</td>
<td>5 1.375 1.688</td>
<td>25 – 20</td>
<td>1.0</td>
</tr>
<tr>
<td>SDS</td>
<td>.5 2.187 1.388 .875 .75 .125 1.375 2.688</td>
<td>3 – 25 × 1.375</td>
<td>.5 1.688 2</td>
<td>25 – 20</td>
<td>1.0</td>
</tr>
<tr>
<td>SD</td>
<td>.5 2.187 1.388 .938 .125 1.125 1.375 2.688</td>
<td>3 – 25 × 1.375</td>
<td>.5 1.688 1.938</td>
<td>25 – 20</td>
<td>1.5</td>
</tr>
<tr>
<td>SK</td>
<td>.563 2.812 3.875 1.375 .125 1.937 .313</td>
<td>3 – 313 × 2</td>
<td>.5 2.125 2.5</td>
<td>.313 – 18</td>
<td>2.0</td>
</tr>
<tr>
<td>SF</td>
<td>.563 3.125 4.625 1.5 1.25 1.563</td>
<td>2 3.875</td>
<td>3 – .375 × 2</td>
<td>.5 2.313 2.316</td>
<td>.313 – 18</td>
</tr>
<tr>
<td>E</td>
<td>.75 3.834 6 1.875 .625 1.25</td>
<td>2.625</td>
<td>5 3 – 5 × 1 5</td>
<td>.875 2.675 3.5</td>
<td>.375 – 16</td>
</tr>
<tr>
<td>F</td>
<td>.813 4.437 6.625 2.813 2.5 1.375</td>
<td>3.625 5.625</td>
<td>3 – .563 × 3.625</td>
<td>1 3.313 3.938</td>
<td>.5 – 13</td>
</tr>
<tr>
<td>J</td>
<td>1 5.148 7.25</td>
<td>3.5 3.188 188 4.5 6.25</td>
<td>3 – .625 × 4.5</td>
<td>1.438 3.75 4.5</td>
<td>.625 – 11</td>
</tr>
<tr>
<td>M</td>
<td>1.25 6.5 9</td>
<td>5 5.188 188 6.75</td>
<td>7.875 4.75 6.75</td>
<td>1.938</td>
<td>4.75 5.5</td>
</tr>
<tr>
<td>N</td>
<td>1.5 7 10.25 6.625 6.25</td>
<td>2.5 8.125 8.5</td>
<td>4 – .875 × 8.5</td>
<td>2.438 5.125 6</td>
<td>7.5 – 10</td>
</tr>
<tr>
<td>P</td>
<td>1.75 8.25 11.75 7.625 7.25</td>
<td>2.5 9.375</td>
<td>10</td>
<td>4 – 1 × 9.5</td>
<td>2.938 5.938 7</td>
</tr>
<tr>
<td>W</td>
<td>2 10.437</td>
<td>15 9.375 9</td>
<td>2.5 11.375 12.75</td>
<td>4 – 1.125 × 11.5</td>
<td>4 7.5</td>
</tr>
<tr>
<td>S</td>
<td>3.25 12.125 17.75 12.5</td>
<td>– .375 15.75</td>
<td>15</td>
<td>5 – 1.25 × 15.5</td>
<td>6 8.25</td>
</tr>
</tbody>
</table>

**NOTE:** Keystock provided for nonstandard keyways.

### Millimeter Bore

<table>
<thead>
<tr>
<th>Bushing</th>
<th>Bores MM</th>
<th>Key Stock Size w × t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH</td>
<td>24, 25, 28, 30 32, 35</td>
<td>8 x 7 10 x 8</td>
</tr>
<tr>
<td>SDS</td>
<td>24, 25, 28, 30 32, 35, 38</td>
<td>8 x 7 10 x 8</td>
</tr>
<tr>
<td>SD</td>
<td>24, 25, 28, 30 32, 35, 38</td>
<td>8 x 7 10 x 8</td>
</tr>
<tr>
<td>SK</td>
<td>24, 25, 28, 30 32, 35, 38</td>
<td>8 x 7 10 x 8</td>
</tr>
<tr>
<td>SF</td>
<td>40, 42 48, 50 48, 50</td>
<td>14 x 9 16 x 10</td>
</tr>
<tr>
<td>E</td>
<td>35, 38 40, 42 48, 50</td>
<td>10 x 8 12 x 8 14 x 9</td>
</tr>
<tr>
<td>F</td>
<td>35, 38 40, 42 48, 50</td>
<td>14 x 9 16 x 10</td>
</tr>
<tr>
<td>J</td>
<td>50 55 60, 65</td>
<td>14 x 9 16 x 10 18 x 11</td>
</tr>
</tbody>
</table>

**Important** — The metric system does not refer to keyseat or keyway dimensions as does the English system; instead, dimensions are given for the key itself which is rectangular in shape, not square as in the English system.

**TO ORDER:**

- *Key Stock Size w × t*
- *Ex—24 mm = 0.94488"*

**Keystock provided for nonstandard keyways.**
QD Short Bushings

Inch Bore

<table>
<thead>
<tr>
<th>Bushing</th>
<th>Bore</th>
<th>Keyway</th>
<th>Weight lbs (approx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS</td>
<td>2.438</td>
<td>.625 × .313</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>2.938</td>
<td>.75 × .375</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>3.438</td>
<td>.875 × .438</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3.938</td>
<td>1 × .125</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>4.438</td>
<td>1 × .125</td>
<td>10</td>
</tr>
<tr>
<td>MS</td>
<td>3.438</td>
<td>.875 × .438</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>3.938</td>
<td>1 × .5</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>4.438</td>
<td>1 × .5</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>4.938</td>
<td>1.25 × .25</td>
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<tr>
<td></td>
<td>5.438</td>
<td>1.25 × .25</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>5.938</td>
<td>1.25 × .25</td>
<td>20</td>
</tr>
<tr>
<td>NS</td>
<td>3.938</td>
<td>1 × .5</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>4.438</td>
<td>1.25 × .625</td>
<td>43</td>
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<tr>
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<td>4.938</td>
<td>1.25 × .625</td>
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<td>5.438</td>
<td>1.25 × .25</td>
<td>37</td>
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<td>30</td>
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<td>62</td>
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<td></td>
<td>6.438</td>
<td>1.5 × .25</td>
<td>55</td>
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<td>6.5</td>
<td>1.5 × .25</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>6.938</td>
<td>1.75 × .125</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1.75 × .125</td>
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<td>WS</td>
<td>5.438</td>
<td>1.25 × .625</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>515/16</td>
<td>1.5 × .75</td>
<td>145</td>
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<td></td>
<td>6</td>
<td>1.5 × .75</td>
<td>144</td>
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<td>6.438</td>
<td>1.5 × .75</td>
<td>136</td>
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<td>1.5 × .75</td>
<td>135</td>
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<td>6.938</td>
<td>1.75 × .75</td>
<td>126</td>
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<td>7</td>
<td>1.75 × .75</td>
<td>125</td>
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<td>7.5</td>
<td>1.75 × .75</td>
<td>114</td>
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<tr>
<td></td>
<td>8</td>
<td>2 × .25</td>
<td>106</td>
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<tr>
<td></td>
<td>8.438</td>
<td>2 × .25</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>8.5</td>
<td>2 × .25</td>
<td>94</td>
</tr>
</tbody>
</table>

Millimeter Bore

Martin QD Short Bushings are suitable for use in belt conveyor applications wherever the short hubs of a conveyor pulley require the QD Short Bushing style.

<table>
<thead>
<tr>
<th>Bushing</th>
<th>Dimensions (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.19</td>
</tr>
<tr>
<td>MS</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>.875</td>
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<tr>
<td>NS</td>
<td>1.5</td>
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<tr>
<td></td>
<td>1 × 4 (4)</td>
</tr>
<tr>
<td>PS</td>
<td>1.75</td>
</tr>
<tr>
<td>WS</td>
<td>1.125 × 5 (4)</td>
</tr>
</tbody>
</table>

Cap Screws Required

Set Screw Size
QD and QD Short Weld-On Hubs

**QD Weld-On Hubs**

QD Weld-On Hubs are suitable for use in many applications, such as welding to plate steel sprockets. QD Weld-On Hubs are made of steel, drilled, tapped and taper bored for QD bushings.

QD Short Weld-On Hubs are designed for use in conveyor pulleys.

---

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Dimensions (Inches)</th>
<th>Type Drilling</th>
<th>Weight (lbs)</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D ⋆     L   B (nom)</td>
<td>P   L₁   BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JA-A</td>
<td>2.25    .563</td>
<td>1.37 —</td>
<td>1-21/32</td>
<td>1   0.4   STD or Reverse Mount</td>
</tr>
<tr>
<td>SH-A</td>
<td>3       .813</td>
<td>1.87 —</td>
<td>—</td>
<td>1   1.0   Only</td>
</tr>
<tr>
<td>SDS-A</td>
<td>3.5     .75</td>
<td>2.18 —</td>
<td>—</td>
<td>1   1.2   Only</td>
</tr>
<tr>
<td>SK-A</td>
<td>4.375   1.25</td>
<td>2.81 —</td>
<td>—</td>
<td>1   3.0   Only</td>
</tr>
<tr>
<td>SF-A</td>
<td>5       1.25</td>
<td>3.12 —</td>
<td>—</td>
<td>1   4.0   Only</td>
</tr>
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<td>E-A</td>
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⋆ Tolerance of D Dimension (or P dimension where applicable) JA-A Thru J-A = (+-.002) M-A Thru S-A = (+-.003)

⋆ Tolerance of P Dimension SFS-A Thru MS-A = (+-.006) NS-A Thru PS-A = (+-.005) WS-A Thru SS-A = (+-.006)