This simplified tensioning method should be used for installation and maintenance tensioning of the belt when the important technical data is unavailable and the optimum tension cannot be calculated. This method requires only knowledge of the small pulley diameter and the belt section and construction. The gauges themselves may be used to set tensions also when the technical data is known and the optimum tension can be calculated.

**TENSIONING GAUGES – INSTRUCTIONS FOR USE**

1. Select the gauge appropriate to the belt section and construction being tensioned. See notes below the simplified tensioning table.
2. Figure 2 shows three ways to hold the gauges so that pressure is applied to the black pad only.
3. Position the gauge on one of the belts on the drive in the middle of an accessible span length. Take care to ensure that the gauge is only in contact with one of the belts, and that the indicator is pushed down into the gauge body. Align the gauge so that its body is parallel with the sides of the belt.
4. Push slowly and firmly on the black pad. When a CLICK is heard and/or felt, stop immediately and remove the gauge carefully to avoid disturbing the indicator arm.
5. Read the gauge to judge the tension as follows.
6. Turn the gauge sideways to ascertain the exact point where the top surface of the black indicator crosses the scale.
7. Mark this point mentally or with a thumbnail and turn the gauge to read the scale.
8. Check the tension found against the simplified tensioning table. Tighten or slacken the belt, if necessary.

**Simplified Tensioning Table**

To use this table belt construction (standard wrapped or S-TX raw edge, molded caged), and the diameter of the smallest pulley on the drive should be known. Note also that the belt tension is higher or lower depending on whether the belt is on first installation or whether it is being re-tensioned.

**Example**

1. V-Belt section
2. Smallest pulley diameter on drive 3.15”
3. Static tension – initial installation 55 lbs
4. Static tension – re-tension 45 lbs

**Tensioning Gauges**

- **Optikrik 0**: Range: 15 – 35 lbs
- **Optikrik I**: Range: 30 – 150 lbs
- **Optikrik II**: Range: 100 – 300 lbs
- **Optikrik III**: Range: 300 – 700 lbs

The static tension values shown are calculated for maximum power transmission capability per belt and should be applied only when accurate drive data is not available.

**Calculation Limitations**

- **Wedge belts**: belt speed $v = 985 \text{ to } 8265 \text{ feet/min}$
- **Classical belts**: belt speed $v = 985 \text{ to } 5905 \text{ feet/min}$

---

**BELT SECTION**

<table>
<thead>
<tr>
<th>BELT SECTION</th>
<th>DIAMETER OF THE SMALLEST PULLEY (INCH)</th>
<th>STATIC TENSION (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INSTALL TENSION</td>
<td>RETENSION</td>
</tr>
<tr>
<td></td>
<td>STANDARD (WRAPPED)</td>
<td>SUPER X-POWER M=S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Belt Section</th>
<th>Diameter of the Smallest Pulley</th>
<th>Static Tension (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Install Tension</td>
<td>Retension</td>
</tr>
<tr>
<td></td>
<td>Standard (Wrapped)</td>
<td>Super X-Power M=S</td>
</tr>
</tbody>
</table>

- **SPZ**: ≤ 2.80 45 35 55 45
- **3V**: > 2.80 ≤ 3.65 80 55 70 55
- **XPA**: > 3.65 ≤ 5.00 110 90 135 100
- **SPB**: > 5.00 *
- **5V**: > 2.80 ≤ 3.95 90 70 110 90
- **5PX**: > 3.95 ≤ 5.50 150 110 220 180
- **SPC**: > 5.50 ≤ 8.00 *
- **XPC**: > 8.00 *

* Tension values for these sheaves must be calculated.