BRECOflex CO., L.L.C.
High Precision Drive Components

The World Leader In Polyurethane Timing Belts

BRECOvacuum
Polyurethane Timing Belt
Overview

Products such as films, paper, glass or metal sheets require vacuum timing belts to effectively transport them. This type of timing belt and associated components are very specific to the application. Typically, it requires applications engineers working closely with customers to develop a system of properly sized timing belts with the appropriate arrangement of vacuum slots, and pulleys. BRECO vacuum make this process faster and easier.

The BRECO vacuum timing belt is manufactured using an extrusion process which results in a lower costing belt compared to systems that use a multi step process for adhering the slide rails and vacuum channels. The system is currently available in 50mm and 75mm wide AT10 pitch.

The picture above shows a specific design with grey backing and elongated, diagonal vacuum pockets. The center of the belt has a relief zone for punching vacuum holes. For flexibility in design, there is virtually no limitation on backing options. Contact applications engineering to determine best backing material and vacuum hole design for your timing belt application.
The BRECO vacuum system consists of timing belts and pulleys which combines the drive tracks, the vacuum channels and the required sealing bars. Having a coordinated component system insures perfect meshing and smooth operation.

### Open-Ended “M”

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widths (mm)</td>
</tr>
<tr>
<td>In between widths available</td>
</tr>
<tr>
<td>Lengths</td>
</tr>
<tr>
<td>Available Options</td>
</tr>
<tr>
<td>Tension Member Options</td>
</tr>
</tbody>
</table>

Note: Diameter of the suction hole is ≤ 4mm.

### Spliced and Welded “V”

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widths (mm)</td>
</tr>
<tr>
<td>In between widths available</td>
</tr>
<tr>
<td>Min. Joined Length (mm)</td>
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<tr>
<td>Available Options</td>
</tr>
<tr>
<td>Tension Member Options</td>
</tr>
</tbody>
</table>

Note: Diameter of the suction hole is ≤ 4mm.

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Section A-A

Scale: 1:1

75 AT10 VAC/7500 V PAZ PAR with a 3mm PU Gray Back Cover with Ø4.00mm holes located every 20.00mm centered on belt width and over a tooth with angled slots or pockets as shown above.
**BRECO vacuum AT10 M/V Specific Tooth Shear Strength**

<table>
<thead>
<tr>
<th>RPM n [min⁻¹]</th>
<th>FORCE FSPEC [N/cm]</th>
<th>RPM n [min⁻¹]</th>
<th>FORCE FSPEC [N/cm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>36.8</td>
<td>0</td>
<td>55.4</td>
</tr>
<tr>
<td>20</td>
<td>36.2</td>
<td>20</td>
<td>54.6</td>
</tr>
<tr>
<td>40</td>
<td>35.7</td>
<td>40</td>
<td>53.8</td>
</tr>
<tr>
<td>60</td>
<td>35.2</td>
<td>60</td>
<td>53.1</td>
</tr>
<tr>
<td>80</td>
<td>34.8</td>
<td>80</td>
<td>52.4</td>
</tr>
<tr>
<td>100</td>
<td>34.4</td>
<td>100</td>
<td>51.8</td>
</tr>
<tr>
<td>200</td>
<td>32.5</td>
<td>200</td>
<td>49.0</td>
</tr>
<tr>
<td>300</td>
<td>31.0</td>
<td>300</td>
<td>46.8</td>
</tr>
<tr>
<td>400</td>
<td>29.8</td>
<td>400</td>
<td>44.9</td>
</tr>
<tr>
<td>500</td>
<td>28.7</td>
<td>500</td>
<td>43.3</td>
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**BRECO vacuum AT10 Specifications**

<table>
<thead>
<tr>
<th>Construction</th>
<th>Tension member</th>
<th>Parameter</th>
<th>Belt Width (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-Ended “M”</td>
<td>Steel</td>
<td>Allowable Force $F_{Tm}$ [N]</td>
<td>2,500</td>
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<tr>
<td></td>
<td>VA</td>
<td>Spring Rate $C_{spec}$ [N]</td>
<td>1.25E6</td>
</tr>
<tr>
<td>Spliced and Welded “V”</td>
<td>VA/Steel</td>
<td>Belt Weight [kg/m]</td>
<td>.255</td>
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<tr>
<td></td>
<td>Steel</td>
<td>Allowable Force $F_{Tm}$ [N]</td>
<td>1,250</td>
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<tr>
<td></td>
<td>VA</td>
<td>Allowable Force $F_{Tm}$ [N]</td>
<td>930</td>
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<tr>
<td></td>
<td>VA/Steel</td>
<td>Belt Weight [kg/m]</td>
<td>.255</td>
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</table>

**BRECO vacuum AT10 Flexibility**

<table>
<thead>
<tr>
<th>Drive with back bending</th>
<th>Drive w/o back bending</th>
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</thead>
<tbody>
<tr>
<td>Tension Member</td>
<td>BRECO vacuum AT10 Tension Member</td>
</tr>
<tr>
<td>Zmin (# of teeth)</td>
<td>dmin (mm)(Ø)</td>
</tr>
<tr>
<td>Steel</td>
<td>38</td>
</tr>
<tr>
<td>VA</td>
<td>38</td>
</tr>
<tr>
<td>VA/Steel</td>
<td>47</td>
</tr>
</tbody>
</table>