Transmission technology

Pushbelt

PRODUCT BENEFITS
- High efficiency
- No interruption of tractive force by shifting
- Highly suitable for combination with hybrid powertrains
- Compact packaging, light weight
- Easily scaled to power requirements
- High power density and optimal NVH properties (noise, vibration, harshness)
- Proven quality thanks to high maturity level
Transmission technology

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Pushbelt

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proven quality

The pushbelt has been produced in high volumes since 1985 and is of tried-and-proven design.

versatile usage

The pushbelt is available for all segments (value to high-feature).

**TASK**
The pushbelt is a core element of any continuously variable transmission. In such a CVT, it transmits the engine output to the drive axle.

**FUNCTION**
The transmission ratio is continuously variable as the pushbelt rotates between two pulleys consisting of two conical sheaves located on the input and output shaft. These pairs of conical sheaves adjust the running radius of the pushbelt according to speed and torque. This results in an optimal ratio of demanded torque and engine speed at all times. Accordingly, the engine permanently operates under optimal operating conditions. Fuel consumption and CO₂ emissions are reduced. The pushbelt is made up of hundreds of individual, specially designed steel elements, which are stringed together along two high-alloy steel ring packs. By the number of rings in the packs and the width of the steel elements, the pushbelt can be adjusted to the power demand.

**TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Element width/number of rings</th>
<th>CVT torque range (Nm)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 100 200 300 400 500</td>
</tr>
<tr>
<td>24/6</td>
<td>&lt;150</td>
</tr>
<tr>
<td>24/9</td>
<td>150–200</td>
</tr>
<tr>
<td>24/12</td>
<td>200–250</td>
</tr>
<tr>
<td>30/10</td>
<td>250–350</td>
</tr>
<tr>
<td>30/12</td>
<td>350–400</td>
</tr>
<tr>
<td>28/12</td>
<td>&gt;400</td>
</tr>
</tbody>
</table>

*Exact load and speed limits depend on the application

Input from engine
Output to wheels
Secondary pulley
Primary pulley
Pushbelt