Low-noise
The use of polyamide drive heads results in very quiet running.

Lateral loading
The tube ends are rounded, thereby allowing materials to be easily moved on from the side. Axial forces are removed through ball bearings and seals.

Robust construction
An axial fixation of the bearing assembly (bearing housing, ball bearing, seal) on the non-drive side can be accomplished in several ways. For the design with steel tube, the bearing assembly is pressed into the tube and then flanged. For the design with PVC tube, it is fitted with a groove inside the tube in which the press-in edge of the bearing housing engages. For the designs with PolyVee and round belt, the drive bearing assembly is also pressed into the tube and then flanged.

Modular construction
With a permanently installed bearing housing for a tube diameter of 50 and 60 mm, insertable polyamide drive heads, such as sprocket, toothed belt and flat belt heads, are interchangeable and can also be exchanged with friction heads. Numerous drive versions are available with flat, PolyVee, round or toothed belts as well as chains.

Round belt drive head
With the round belt drive head, the drive section is separated from the conveying section, so that materials cannot be shifted due to batching belts. Since the drive head has a higher friction because of grooves in the metal tube, the result is a higher conveyance of the round belts. If the round belts should slip because of the application, then the wear of the belts on a round belt drive head is higher.

PolyVee drive head
The nine grooves of the drive head allow the use of 2-rib, 3-rib or 4-rib PolyVee belts. Compared with a round belt, the use of a 2-rib belt allows transferring approximately twice the torque.

Technical data

<table>
<thead>
<tr>
<th>General technical data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
<td>1700</td>
</tr>
<tr>
<td>Max. load capacity</td>
<td>2000 N</td>
</tr>
<tr>
<td>Max. conveyor speed</td>
<td>2.0 m/sec (0.5 m/sec with chain)</td>
</tr>
<tr>
<td>Temperature range</td>
<td>–28 to +40 °C (rollers with toothed belt drive –5 to +40 °C)</td>
</tr>
<tr>
<td></td>
<td>For rollers with PolyVee or round belt drive head in freezer area, oiled ball bearings are recommended.</td>
</tr>
<tr>
<td></td>
<td>PVC tube: With increased ambient temperature (from +30 °C) and high continuous static load over hours, a permanent deformation of the rollers cannot be ruled out.</td>
</tr>
<tr>
<td></td>
<td>Minimum temperature: –5 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube</td>
<td>Zinc-plated steel, stainless steel, aluminum</td>
</tr>
<tr>
<td>PVC</td>
<td>RAL7030 (stone grey)</td>
</tr>
<tr>
<td></td>
<td>RAL9015 (sky blue)</td>
</tr>
<tr>
<td>Shaft</td>
<td>Uncoated steel, zinc-plated steel, stainless steel; tapered shaft shuttle: Polyamide (antistatic design)</td>
</tr>
<tr>
<td>Bearing housing</td>
<td>Polyamide, RAL9005 (jet black)</td>
</tr>
<tr>
<td></td>
<td>Polyamide, RAL9005 (jet black); sprockets also in uncoated steel (the sprocket heads including tube are zinc-plated after welding them on)</td>
</tr>
<tr>
<td>Seal</td>
<td>Polypropylene and polyamide on drive side each in RAL1021 (rape yellow)</td>
</tr>
<tr>
<td>Bearing version</td>
<td>Precision steel ball bearing 6002 2RZ, precision stainless steel ball bearing 6002 2RZ, bearing play each C3</td>
</tr>
</tbody>
</table>
Design versions

**Tube sleeves**
- PVC sleeve (page 31)
- PU sleeve (page 33)
- Lagging (page 34)

**Anti-static version**
(<10^10 Ω) Standard design for rollers with grooves or tube sleeves, not for PVC tube

**Special tube surface treatment**
- Carbonitriding
- Chrome-plating

**Lubrication options for ball-bearing**
- Greased for an ambient temperature from –5 to +40 °C (standard)
- Oiled for an ambient temperature from –28 to +20 °C

**Shafts**
The following are available in addition to the variants listed in the load capacity tables:
- With spring on both sides
- With variable length
- Different design of both shaft ends

**Tube**
The following are available in addition to the variants listed in the load capacity tables:
- With flanges welded on

**Drives**
The following are available in addition to the variants listed in the load capacity tables:
- The drive heads for round, PolyVee and toothed belt can be designed with an additional fixation for temperature-sensitive applications (freezer applications). This fixation is located inside the roller and creates a form-fit torque transfer between tube and drive head. Hence, damages to materials or collecting adhesive tape at the outside of interfering corners is being avoided.

**Noise reduction**
For tube with Ø 50 mm

Load capacities of series 3500 with screw-connected installation

The load capacity table refers to a temperature range of +5 to +40 °C. The maximum static load at –28 °C to –6 °C measures 350 N.

Valid for the following shaft designs: female thread or male thread.

**T = Number of teeth**

### Tube material
- **Aluminum**
  - Ø Tube / thickness
  - Drive element
  - Ø Shaft [mm]
  - Maximum static load [N] for installation length [mm]
  - 200 400 600 800 1000 1200 1400
  - 63 x 3
  - Aluminum
  - PolyVee drive head 1/2", T14
  - 12
  - 1460 1060 850 840 830 820 810
  - PolyVee double sprocket head 1/2", T14
  - 12
  - 1040 850 840 830 820 810 800
  - PolyVee double sprocket head 1/2", T9 and T14
  - 12
  - 935 715 695 685 675 665 655
  - PolyVee double sprocket head 1/2", T9
  - 12
  - 1320 975 955 935 915 895 875
  - PolyVee double sprocket head 1/2", T14
  - 12
  - 1320 985 965 945 925 905 885
  - PolyVee double sprocket head 1/2", T14
  - 12

- **PVC**
  - Ø Tube / thickness
  - Drive element
  - Ø Shaft [mm]
  - Maximum static load [N] for installation length [mm]
  - 200 400 600 800 1000 1200 1400
  - 63 x 3
  - PVC
  - PolyVee drive head 1/2", T14
  - 12
  - 1160 875 850 830 810 790 770
  - PolyVee double sprocket head 1/2", T14
  - 12
  - 1040 850 830 810 790 770 750
  - PolyVee double sprocket head 1/2", T9 and T14
  - 12
  - 935 715 695 685 675 665 655
  - PolyVee double sprocket head 1/2", T9 and T14
  - 12
  - 1460 1060 850 840 830 820 810
  - PolyVee double sprocket head 1/2", T14
  - 12
  - 1320 975 955 935 915 895 875
  - PolyVee double sprocket head 1/2", T14
  - 12

### Load capacities of series 3500 with screw-connected installation

The load capacity table refers to a temperature range of +5 to +40 °C. The maximum static load at –28 °C to –6 °C measures 350 N.

Valid for the following shaft designs: female thread or male thread.

**Bearing:** 6002 2RZ.
Load capacities of series 3500 with loose installation

The load capacity table refers to a temperature range of +5 to +40 °C.

The maximum static load at −28 °C to −6 °C measures 350 N.

Bearing: 6002 2RZ.

## Dimensions

A sufficient axial play is already taken into account, so that the actual lane width between side profiles is required. The dimensions of the conveyor roller depend on the shaft version and the drive element.

Ordering dimensions for tube sleeves, e.g. PVC sleeves, see page 31, and for flanges see page 36.

**RL** = Reference length / ordering length

**EL** = Installation length, inside diameter between side profiles

**AGL** = Total length of shaft

**U** = Usable tube length: Length without bearing housing and for flanged metal tube without length of flanging

### Load capacities of series 3500 with loose installation

<table>
<thead>
<tr>
<th>Ø Tube [mm]</th>
<th>Tube material</th>
<th>Ø Shaft [mm]</th>
<th>Drive element</th>
<th>EL [mm]</th>
<th>AGL [mm]</th>
<th>U [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 x 1.5</td>
<td>Steel</td>
<td>12</td>
<td>PolyVee drive head</td>
<td>RL + 36</td>
<td>RL + 36</td>
<td>RL − 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14</td>
<td>PolyVee, round belt drive head</td>
<td>RL + 40</td>
<td>RL + 40</td>
<td>RL − 19</td>
</tr>
<tr>
<td>60 x 1.5</td>
<td>Steel</td>
<td>12</td>
<td>PolyVee drive head</td>
<td>RL + 36</td>
<td>RL + 36</td>
<td>RL − 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14</td>
<td>PolyVee, round belt drive head</td>
<td>RL + 40</td>
<td>RL + 40</td>
<td>RL − 19</td>
</tr>
</tbody>
</table>

**T** = Number of teeth
ROLLERS
SERIES 3500
Fixed drive conveyor roller

PolyVee drive head and female threaded shaft

- PolyVee belt see page 238
- PolyVee tensioning device see page 238
- PolyVee finger guard see page 239

Round belt drive head and tapered shaft-shuttle

Flat belt drive head and female threaded shaft

Toothed belt drive head (8 pitch and 18 teeth)
Interroll recommends a max. belt width of 12 mm and a poly chain GT gearing.

1/2" polymer sprocket head with 9 teeth

1/2" polymer sprocket head with 11 teeth

1/2" polymer sprocket head with 13 teeth

1/2" polymer sprocket head with 14 teeth
ROLLERS
SERIES 3500
Fixed drive conveyor roller

1/2” polymer double sprocket head with 14 teeth

3/8” polymer double sprocket head with 20 teeth

Welded 1/2” steel sprocket head with 14 teeth

Welded 1/2” steel double sprocket head with 14 teeth

Planning basics