Timing Belt Conveyor with outer casing

- according to machinery directive 2006/42 EG, appendix II B
- adjustable brackets
- movable grip protection tunnel
**Timing Belt Conveyor**

The belt conveyor framework is constructed from the standard range of Paletti profiles. The conveyor belts are purchased to customer requirements.

The conveyors have a selection of drive units available to suit most needs. Power is transferred by a gearbox, the conveyor belt is tensioned by two return units.
Automated conveyor discharge system
**Belt Conveyor**

The belt conveyor framework is constructed from the standard range of Paletti profiles. Wood or aluminum sheet is used to support the conveyor belt. The conveyor belts are purchased to customer requirements.

The drive rollers are ground to a conical finish.

The conveyors have a selection of drive units available to suit most needs.

Power is transferred by a timing belt or by a drive chain. The conveyor belt is tensioned via two profile belt tensioners.

_Schichtholzplatte_ / wood or aluminum sheet

_Fördergurt_ / conveyor belt

_Superstructure of a belt conveyor._
### Motors, with gearbox TD

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST0002Z</td>
<td>Motor, with gearbox TD</td>
<td>90 W</td>
</tr>
<tr>
<td>ST0004Z</td>
<td>Motor, with gearbox TD</td>
<td>180 W</td>
</tr>
</tbody>
</table>

**Application:** Drive motor for conveyor systems.

**Technical Data:** 3 phase motor with gearbox

**Output:**
- 90 W (ST0002Z)
- 180 W (ST0004Z)

**Speed:** 1350 Upm

**Ratio:** $i = 50$, other ratio upon request

**Protection:** IP 44

**Torque:**
- ST0002Z: 13 Nm ($i = 50$)
- ST0004Z: 32 Nm ($i = 50$)

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### Conveyor Roller

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1000N</td>
<td>Conveyor Roller</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** Conveyor roller for conveyor systems.

**Material:** aluminum, anodized, with a ground conical finish

Price list is valid for conveyor rollers up to 300 mm. Prices for longer conveyor rollers on request.

**Supply:**
- 1x conveyor roller
- 1x fitting key 4 x 4 x 20, DIN 6885
- 1x compensating bearing
Return Roller

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1500N</td>
<td>Return Roller</td>
<td></td>
</tr>
<tr>
<td>ST2000N</td>
<td>Idler Roller</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** Return roller for conveyor systems.

**Material:** aluminum, natural anodized, with a conical finish

**Supply:**
- 1x return roller
- 2x compensating bearing

Price list is valid for conveyor rollers up to 300 mm. Prices for longer conveyor rollers upon request.

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Idler Roller

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST2000N</td>
<td>Idler Roller</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** Prevents the sagging of the conveyor belt.

**Material:** aluminum, natural anodized

**Supply:**
- 1x idler roller
- 2x grooved bearing
- 2x axle journal; steel, zinc-plated

**Acc.:**
- 2x SV2002V t-nut M8 / ball-type, slide-in

Price list is valid for conveyor rollers up to 300 mm. Prices for longer conveyor rollers on request.

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Conveyor Belt Tensioner

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST0500N</td>
<td>Conveyor Belt Tensioner</td>
<td>637 g</td>
</tr>
</tbody>
</table>

**Application:** For tensioning conveyor belts with fastening kit and profile cap.

**Material:**
- casing: aluminum, natural anodized
- pressure cap: steel, zinc-plated
- tensioning screw: steel, zinc-plated
- central fastener 40 G: steel, zinc-plated

**Technical Data:** horizontal adjustment: 0 - 29 mm
Belt Conveyor With Drum Motor

The belt conveyor framework is constructed from the standard range of Paletti profiles. Wood or aluminum sheet is used to support the conveyor belt. The conveyor belts are purchased to customer requirements. The drive rollers are ground to a conical finish.

A drum motor is used for the drive unit, so that power is transmitted directly to the conveyor belt which is tensioned by the non-powered return unit as well as by two idler rollers.
**Drive Unit Admittance DM**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST0610N</td>
<td>Drive Unit Admittance DM, left</td>
<td></td>
</tr>
<tr>
<td>ST0611N</td>
<td>Drive Unit Admittance DM, right</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** For admitting of the drum motor.

**Material:** aluminum, natural anodized

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**Return Unit DM**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST0600N</td>
<td>Return Unit DM</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** For the admittance of the return roller Ø 85.

**Material:** aluminum, natural anodized

**Supply:**
- 2x return unit
- 2x clamping block
- 2x cap head screw, DIN 912

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**Return Roller Ø 85**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1600N</td>
<td>Return Roller Ø 85</td>
<td></td>
</tr>
</tbody>
</table>

**Application:** Return roller for belt conveyor systems with drum motor.

**Material:** aluminum, natural anodized; with a conical finish

**Supply:**
- 1x return roller
- 2x compensating bearing, DIN 630
- 2x axle journal; steel, zinc-plated
Driven Roller Conveyor
For driven roller conveyors, Paletti produces a specific profile, which consists of four individual profiles that when clipped together add up to a complete roller conveyor profile.

Non-Driven Conveyor
With the wide range of Paletti standard systems, in conjunction with some additional systems, any conveyor or transport job can be accomplished.
## Conveyor Systems

### Roller Conveyor Profile, Fastening Sets, Protective Covers

**Roller Conveyor Profile**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP0801N</td>
<td>Roller Conveyor Profile, natural</td>
<td>4.11 kg/m</td>
</tr>
<tr>
<td></td>
<td>Roller Conveyor Support Profile, natural</td>
<td>2.33 kg/m</td>
</tr>
<tr>
<td></td>
<td>Roller Conveyor Wall Profile, natural</td>
<td>0.39 kg/m</td>
</tr>
<tr>
<td></td>
<td>Roller Conveyor Housing Profile, natural</td>
<td>0.66 kg/m</td>
</tr>
<tr>
<td></td>
<td>Roller Conveyor Cover Profile, natural</td>
<td>0.73 kg/m</td>
</tr>
</tbody>
</table>

**Application:** Powered roller conveyor.

**Material:** aluminum, natural anodized

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**Roller Fastening Sets**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST5010N</td>
<td>Roller Fastening Set 40</td>
<td>47 g</td>
</tr>
<tr>
<td>ST5012N</td>
<td>Roller Fastening Set 200</td>
<td>138 g</td>
</tr>
</tbody>
</table>

**Application:** The roller fastening set is used to fasten the load-bearing rollers onto the roller conveyor profile.

**Material:** aluminum, natural anodized

**Supply:** special t-nuts and screws

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**Roller Protective Covers**

<table>
<thead>
<tr>
<th>Part-No</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST5000N</td>
<td>Roller Protective Cover 80 / 50</td>
<td>14.4 g</td>
</tr>
<tr>
<td>ST5002N</td>
<td>Roller Protective Cover 80 / 150</td>
<td>118.5 g</td>
</tr>
</tbody>
</table>

**Application:** For the protection of the conveyor chain drive from dirt and dust.

**Material:** aluminum, natural anodized

**Supply:** One roller uses one left and one right cover.
The roller conveyor profile comprises of four separate profiles that when clipped together make one profile. The support profile forms the frame onto which all the other profiles are attached. Roller conveyors are quickly assembled using Paletti clip technology. They can also be quickly disassembled or changed even when they are part of a larger structure or machine installation.

The roller fixing profile is attached to support profile using screws and t-nuts. The roller fixing profile 40 is intended for one roller. Paletti also supplies the roller fixing profile in larger lengths to accommodate positions of rollers at customer specified distances. The cover profile closes the support and roller attachment profiles and protects operators from moving parts while inhibiting dirt accumulation.

The inside edge cover profile closes the chain drive and roller sprockets from conveyed products and also provides operator safety from moving parts. The profiles use the same clip technology as the other profiles. The protective cover set 80 / 50 consists of two short profiles 50 mm long. The protective cover set 80 / 150 consists of two longer profiles 150 mm long. Customer specific protective cover profiles are available on request.
System Components
The (driven) roller conveyor consists of the roller conveyor profile SP0801N, the roller protective cover (chain drive), conveyor housing and load-bearing roller with chain wheel. The processing speed averages $V_{\text{max}} = 1.2 \, \text{m/s}$.

Load-Bearing Capacity
The diagrams only apply to a static surface load, for a point loading at bearing locations, the surface loading values apply. For middle loading, the values taken have to be multiplied by 0.6.

The load-bearing capacity of the bearings used is 100 kg.

The bearing tolerances in the roller and axle must be added when calculating loadings.

Technical Details
The weight per meter of the used roller – Ø 50 x 1.5 wall thickness – averages 1.794 kg. The Ø 10 mm steel roller is made of 9S20K (steel) and is galvanically zinc-plated and has an internal thread M 6 x 10. The advantages of the used roller are high strength, temperature, and cleaning qualities. The material is also resistant to UV radiation, oil, grease, petrol and other chemicals.

Load-Bearing Roller User Conditions
There must always be a minimum of three axles per static load. For middle or two-point loading, the values have to be multiplied by a factor of 0.6.

The load-bearing capacity averages 100 kg per roller. The load bearing roller is provided with a chain wheel 1/2” x 5/16” for the fixed drive chain.