The TEP extrusion gear pump is a reliable positive displacement pump for thermoplastics.

It is used to build melt pressure in extrusion lines. The melt pump can be used to maintain a consistent pressure at the die or to compensate for pressure loss and fluctuation of a filtration system.

Benefits:
- Advanced bearing technology
- Energy efficient insulated housing
- Integrated pressure and temperature sensor bores
- Highly reliable operation

Options:
- Nitriding steel or stainless steel design
- Oil, steam or electrical heating
- Special coatings for abrasive/corrosive applications
- Assembly unit including drive, cart and controls
- Hazardous area design
**Functional Principle:**
The melt pump is equipped with two helical gears and one of them is driven by a motor unit. The extruder fills the gears from the suction side and the rotating gears displace the polymer to the discharge side. As the gears turn a precise amount of polymer is metered and by adjusting the gear rotation speed the throughput rate can be adjusted. The gear rotation speed is controlled and kept within a tolerance of less than 1%. The pump bearings are designed to use the polymer for self-lubrication.

The polymer is guided through the bearing and flows back into the main flow. For shear sensitive polymers however, the polymer is discharged and is not guided back into the main flow.

**Design Features:**
- Inlet pressure: min. 5 bar/max. 120 bar
- Differential pressure: max. 250 bar
- Operating temperature: up to 300°C
- Viscosity: 300 - 20,000 Pas

**Applications:**
- Underwater pelletizing
- Compounding
- Sheet/Film
- Profile/Pipe

### Extrusion Gear Pump TEP

Data based on: Polyolefin’s, Viscosity: 1,000 - 2,800 Pas at 10s⁻¹

<table>
<thead>
<tr>
<th>Model</th>
<th>Specific Volume</th>
<th>Throughput Rate</th>
<th>Heating Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEP 36</td>
<td>25.5 cm³/rev</td>
<td>30 - 130 kg/h</td>
<td>1.3 kW</td>
</tr>
<tr>
<td>TEP 45</td>
<td>45 cm³/rev</td>
<td>40 - 220 kg/h</td>
<td>3.2 kW</td>
</tr>
<tr>
<td>TEP 56</td>
<td>90 cm³/rev</td>
<td>80 - 400 kg/h</td>
<td>3.2 kW</td>
</tr>
<tr>
<td>TEP 70</td>
<td>176 cm³/rev</td>
<td>140 - 700 kg/h</td>
<td>5.0 kW</td>
</tr>
<tr>
<td>TEP 90</td>
<td>364 cm³/rev</td>
<td>270 - 1,300 kg/h</td>
<td>12.0 kW</td>
</tr>
<tr>
<td>TEP 110</td>
<td>706 cm³/rev</td>
<td>350 - 2,300 kg/h</td>
<td>16.0 kW</td>
</tr>
</tbody>
</table>

Further models upon request.