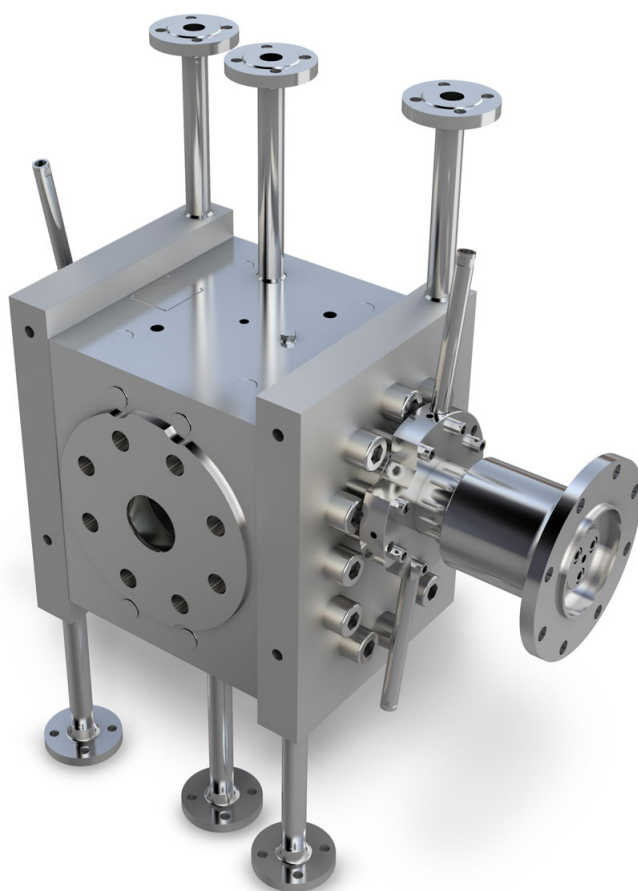


# thermorex<sup>®</sup> TR / TB - Generation 6

Booster pump for the polymer industry



**NEW!**

Polymer processes require pumps that gently process both high and low viscosity plastic melt through the system. Specifically designed, low compression teeth allow the thermorex<sup>®</sup> Generation 6 transfer, booster or metering gear pump to achieve both high pressure and low shear. The plastic melt is conveyed with a constant, precise flow even at high discharge pressures - and this also for low viscosity products, where former pump generations reached their limits. Additionally, their high efficiency and long service life will enhance the capacity of any given production plant.

## Your benefits as compared to the previous pump generation

- The improved volumetric efficiency makes it possible to operate at reduced rpm, shear rates, temperatures and narrower residence time distribution, as the back flow is reduced by about 50%.
- This has a positive impact on production rate, polymer quality and pump life time, while reducing energy consumption by as much as 5 to 10%
- Pressure fluctuations are reduced by up to a factor of 10 and all this in an even more compact housing.

This improvement has become possible only, due to completely re-designed shafts, bearings and housings as compared to the former pump generation.

# thermorex® TR / thermorex® TB - Generation 6

Booster pump for the polymer industry

## Typical pumping media

- Cellulose acetate
- Elastomers
- Epoxy resin
- Phenolic resin
- Polyacrylonitrile
- Polyamide
- Polycarbonate
- Polybutylene Terephthalate
- Polyethylene Terephthalate
- Polymethylmethacrylate
- Polypropylene
- Polystyrene (incl. ABS, EPS)
- Polysulphone
- Silicone
- SBR Latex
- And others

## Technical specifications:

<b>Housing, cover:</b>	Alloy- / Carbon Steel - other materials on request
<b>Gear shafts:</b>	Nitrided steel / tool steel
<b>Bearing:</b>	Tool steel / special materials
<b>Shaft seals:</b>	Viscoseal, vispac®, vislip®, double mechanical seal with barrier system
<b>Pump heating:</b>	Thermal oil or steam; design condition 25 bar / 350°C
<b>Installation:</b>	The thermorex® gear pump can be flanged into the line, or also directly to mixer, kneader or extruder
<b>Viscosity:</b>	Up to 20'000 Pas
<b>Temperature:</b>	Up to 350 °C
<b>Suction side:</b>	<ul style="list-style-type: none"> <li>■ thermorex® TR Pump with one seal (on drive side) Inlet pressure: up to 15 bar *</li> <li>■ thermorex® TB Pump with extended shaft (2 seals required) Inlet pressure: up to 100 bar *</li> </ul> <p>*depending on the sealing type</p>
<b>Options:</b>	<ul style="list-style-type: none"> <li>■ Flange connections: ANSI or DIN standards</li> <li>■ Electrical heating instead of thermal oil or steam</li> </ul>

	thermorex® GU		thermorex® EV		thermorex® EP	
<b>Δp</b>	up to 250 bar		up to 200 bar		up to 320 bar	
<b>Discharge pressure</b>	up to 350 bar		up to 300 bar		up to 350 bar	
<b>Pump size<sup>(1)</sup></b>	<b>Spec, volume [cm³/rev]</b>	<b>Capacity [m³/day]</b>	<b>Spec, volume [cm³/rev]</b>	<b>Capacity [m³/day]</b>	<b>Spec, volume [cm³/rev]</b>	<b>Capacity [m³/day]</b>
<b>40</b>	50	5-16	—	—	—	—
<b>50</b>	99	7-24	—	—	—	—
<b>63</b>	200	13-43	—	—	—	—
<b>80</b>	397	20-72	—	—	—	—
<b>100</b>	788	34-126	—	—	—	—
<b>125</b>	1,594	58-220	—	—	—	—
<b>160</b>	3,180	95-375	3,977	122-481	2,543	76-299
<b>200</b>	6,305	158-643	8,073	203-823	5,041	126-515
<b>224</b>	8,845	203-841	11,377	256-1,056	7,073	163-673
<b>250</b>	12,613	265-1,114	15,772	322-1,356	9,849	231-971
<b>280</b>	17,727	335-1,437	22,166	419-1,795	13,781	266-1,142
<b>320</b>	25,932	446-1,945	32,426	573-2,503	20,736	408-1,779
<b>360</b>	36,850	582-2,583	45,874	745-3,303	29,466	518-2,293

Remarks: Spare parts are not interchangeable anymore with earlier maag pump generations

Combination of maximum temperatures, maximum flow rates and maximum pressure is not simultaneously possible in all cases

The indicated flow capacity range and the maximum discharge pressure of the pump are strongly dependant on the characteristics of the medium to be pumped.

Please contact Maag Pump Systems for specific applications.

(1) Sizes 250 and bigger are available as of October 2013 upon request, while others are introduced into the market in the course of 2014