



thermorex⁶ TR/TB/TP/TO

Booster pump for the polymer industry



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^{®-x⁶} class 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 like prepolymers, 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

- **+ 25 %** more wear resistant
- **+ 10 %** better vol. efficiency
- **+ 30 %** better heat transfer in the bearings

- **- 12 %** less energy consumption
- **- 40 %** less temperature increase
- **- 50 %** less pulsation

thermorex⁶ TR/TB/TP/TO

Booster pump for the polymer industry

Technical specifications:	
Housing, cover:	Alloy- / Carbon Steel
Gear shafts:	Nitrided steel / tool steel
Bearings:	Tool steel / ALBr / special materials
Shaft seals:	Viscoseal, vispac®, double mechanical seal with barrier system
Pump heating:	Heated with oil: max. 350 °C, at max. 15 bar with saturated or superheated steam: max. 40 bar
Installation:	The thermorex ⁶ gear pump can be flanged into the line, or also directly to mixer, kneader or extruder
Flange connect:	ANSI or DIN standards
Viscosity:	Up to 20'000 Pas; up to 100 Pas for thermorex ⁶ TP; up to 60 Pas for thermorex ⁶ TO
Temperature:	To 350 °C
Suction side:	<ul style="list-style-type: none"> ■ thermorex⁶ TR Pump with one seal (on drive side) Inlet pressure: up to 15 bar ■ thermorex⁶ TB Pump with extended shaft (2 seals) Inlet pressure: up to 100 bar ■ thermorex⁶ TP Prepolymer transfer pump with one seal (drive side). Inlet pressure: up to 15 bar ■ thermorex⁶ TO Oligomer transfer pump with one seal (drive side). Inlet pressure: up to 10 bar

Pumping media

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

Options

- Defined tolerance classes
- Wired heating cartridge fully attached to connector
- Liquid heating with interconnection bores
- Pressure/temperature sensor bores in body
- Choice of materials for every application
- Cooling feature for shaft seals
- Special seal types

thermorex ⁶	GU	EV	EP
Discharge pressure (bar):	up to 350	up to 300	up to 400
Differential pressure (bar):	up to 250 *	up to 200 *	up to 320
Pump size:	63-280	125-280	
Spec. Volume (cm³/rev):	194-17,200	1,930-21,500	1,210-13,400

* 100 bar for thermorex⁶ TP and 40 bar for thermorex⁶ TO

thermorex ⁶ GU		
Pump size	Spec. Vol. (cm ³)	Capacity (m ³ /day)
63	194	8-30
80	385	16-60
100	764	33-122
125	1,550	57-216
160	3,080	92-363
200	6,110	153-623
224	8,570	197-816
250	12,200	256-1,076
280	17,200	325-1,394

thermorex ⁶ EV		
Pump size	Spec. Vol. (cm ³)	Capacity (m ³ /day)
125	1,930	71-275
160	3,850	119-469
200	7,820	197-799
224	11,000	248-1,023
250	15,300	312-1,314
280	21,500	407-1,744

thermorex ⁶ EP		
Pump size	Spec. Vol. (cm ³)	Capacity (m ³ /day)
125	1,210	44-170
160	2,460	74-291
200	4,890	122-498
224	6,860	158-653
250	9,550	224-942
280	13,400	259-1,112

Remarks: 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 AG for specific applications.

Accessories

- High-precision monitoring systems for pressure and temperature

