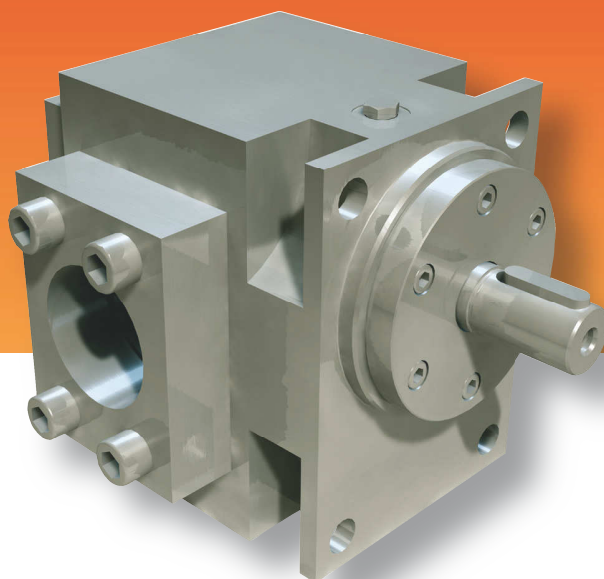


# cinox<sup>®</sup> therminox<sup>®</sup>



## A range of typical pumping media:

- Organic and inorganic chemicals
- Solvents
- Acids and alkalis
- Emulsions
- Sludges and condensates
- Prepolymers, oligomers and monomers
- Additives
- Resins
- Cellulose derivatives and pulps
- Silicones
- Waxes and paraffins
- Cosmetic products
- Pharmaceutical products
- Foodstuff extracts and flavourings
- Animal feeds
- Vegetable and animal oils and fats

## Highest resistance

Acids, alkalis, solvents and other aggressive substances in all conceivable forms are part of everyday life in the chemical processing industry. Precisely the environment in which Maag Pump Systems' tried and established gear pumps develop their full potential. cinox<sup>®</sup>/therminox<sup>®</sup> gear pumps are corrosion resistant and heatable **stainless steel conveying units** that satisfy the stringent quality requirements of today's chemical processing industry.

Thanks to the extensive range of components and materials of construction to choose from, Maag gear pumps can be configured to suit customers' specific requirements and are therefore far superior to standard pumps in terms of performance and reliability. Whether the applications involve highly pure, corrosive, viscous or very hot media, Maag Pump Systems holds the solution to meet every pumping challenge.

- Wide viscosity range
- Wide temperature range
- Wide pressure range
- High efficiencies due to tolerances being modified in line with applications
- Reliability
- Longevity
- Safety

**Technical specifications:**

- Housing:**
- Stainless steel
  - Hastelloy
- Gear shafts:**
- Stainless steel
  - Ferralium
  - Hastelloy
  - Ceramic
- Bearing\*:**
- Synthetic carbon
  - Stainless steel with carbon inserts
  - Hardened tool steel
  - Ceramic
  - NiAg
  - Bronze – CuAl
- Shaft seal:**
- Single or double mechanical seal
  - External mechanical seal
  - Interlock or heater connections available
  - Seal ring from a range of materials
  - Magnetic coupling with single or double containment shell
- Connections:** SAE, CETOP, DIN and ANSI flanges

\* Other materials and designs available

\*\* Higher flow rates upon request

**Application limits:**

- Viscosity:** 0,3 to 4,000,000 mPas
- Temperature:** -30 to 320 °C
- Suction pressure:** Vacuum to 65 bar
- Discharge pressure:** Vacuum to 200 bar
- Flow rate\*\*:** 0.1 to 2,400 l/min

**Accessories:**

- Stands, motor flanges and base plates
- Product connecting flanges
- Couplings
- Motors and gear reducers
- Frequency converters
- Shaft seal systems

**Options:**

- Electrical heating
- Heated seals
- Bi-directional rotation
- Special modifications for demanding applications

**Certificates:**

- ATEX certificate
- 3.1 certificate
- German Air Quality certificate (TA-Luft)
- Performance test certificates

**Theoretical pumping capacities:**

Pump size	Theoretical pumping capacities in l/min at 0 bar Δp				
	at 500 rpm	at 750 rpm	at 1,000 rpm	at 1,500 rpm	at 3,000 rpm
22/6	0.64	0.96	1.28	1.92	3.84
22/13	1.39	2.09	2.78	4.17	8.34
22/22	2.35	3.53	4.70	7.05	14.10
28/28	5.10	7.65	10.20	15.30	30.60
36/36	12.80	19.20	25.60	38.40	76.80
45/45	23.15	34.73	46.30	69.45	139.00
56/56	46.30	69.45	92.60	138.90	
70/70	88.00	132.00	176.00	264.00	
90/90	186.00	278.00	371.00	557.00	
110/110	358.00	537.00	716.00		
140/140	671.00	1,007.00	1,342.00		
180/180	1,606.00	2,408.00			

The operating limits are dependant upon the service conditions. Please contact Maag Pump Systems for specific applications.