



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

Inox gear pumps  
for chemical applications

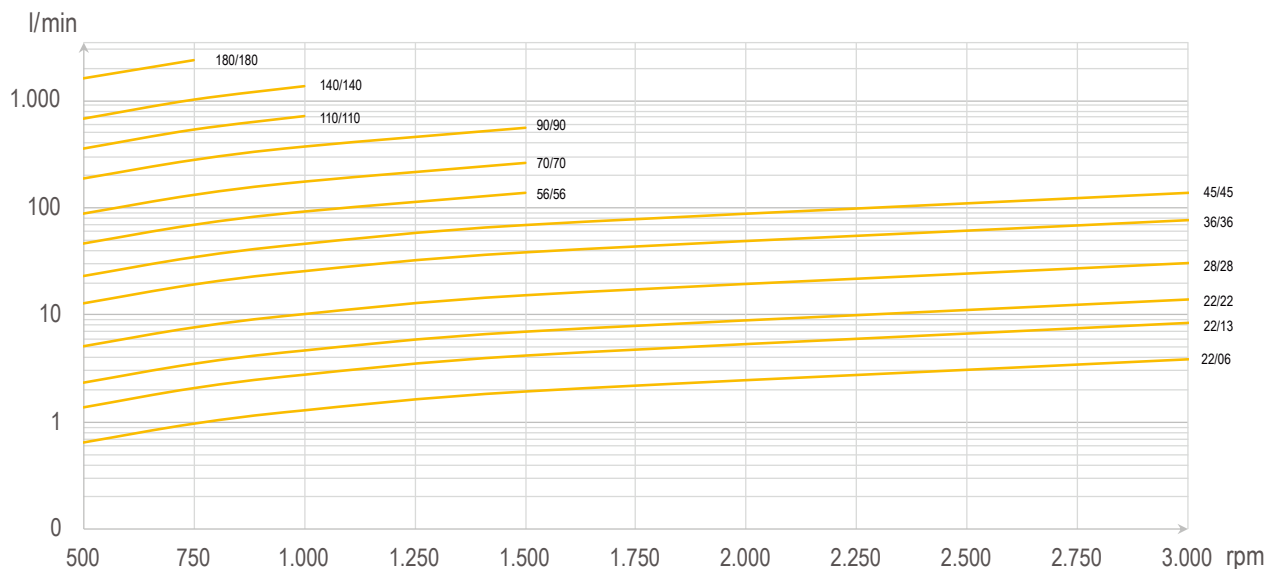


cinox<sup>®</sup> and therminox<sup>®</sup> gear pumps are corrosion resistant and heatable stainless steel conveying units that satisfy the stringent quality requirements of today's chemical processing industry. Whether the applications involve highly pure, corrosive, viscous or very hot media, MAAG pump systems hold the solution to meet every pumping challenge. cinox<sup>®</sup> and therminox<sup>®</sup> are especially suitable for medium-high flow rates.

### Your benefits

- Wide viscosity, temperature and pressure range
- High efficiencies due to tolerances being modified in line with applications
- Precise displacement volume
- Self-priming
- Corrosion-resistance
- Reliability and longevity
- Safety

## cinox® therminox® 22-180 flow rate @ 0 bar ΔP



### Application limits:

<b>Viscosity:</b>	0.3 to 4,000,000 mPas
<b>Temperature:</b>	-30 to 320 °C
<b>Suction pressure:</b>	Vacuum up to 65 bar
<b>Discharge pressure:</b>	Vacuum up to 200 bar
<b>Flow rate<sup>1)</sup>:</b>	0.1 to 2,400 l/min

### Technical specifications:

<b>Housing:</b>	<ul style="list-style-type: none"> <li>Stainless steel</li> <li>Hastelloy</li> </ul>	
<b>Gear shafts:</b>	<ul style="list-style-type: none"> <li>Stainless steel</li> <li>Ferralium</li> <li>Hastelloy</li> <li>Ceramic SSiC</li> <li>Technopolymer (upon request)</li> </ul>	
<b>Bearing<sup>2)</sup>:</b>	<ul style="list-style-type: none"> <li>Synthetic carbon</li> <li>Stainless steel with carbon inserts</li> <li>Ceramic SSiC, ZrO<sub>2</sub></li> <li>Tegodyn NiAg</li> <li>Bronze CuAl</li> <li>Hardened tool steel</li> </ul>	
<b>Shaft seal:</b>	<ul style="list-style-type: none"> <li>Single or double mechanical seal</li> <li>Single or double mechanical balanced seal</li> <li>Packing seal</li> <li>Sealing ring in a wide range of materials</li> <li>Sealing medium or heating medium connections available</li> <li>Magnetic coupling with single or double containment shell</li> </ul>	
<b>Connections:</b>	<ul style="list-style-type: none"> <li>SAE, CETOP, DIN and ANSI flanges</li> </ul>	
<b>Heating:</b>	<ul style="list-style-type: none"> <li>Electrical heating by cartridges optional for cinox®</li> <li>Integrated channels for heating/cooling by steam or liquids for therminox®</li> </ul>	

### A range of typical pumping media

- Organic and inorganic chemicals
- Solvents
- Acids and alkalis
- Emulsions
- Sludges and condensates
- Prepolymers, oligomers, and monomers (PAN)
- Additives
- Resins
- Cellulose derivatives and pulps
- Silicones
- Waxes and paraffins
- Cosmetic products
- Pharmaceutical products
- Food extracts and flavourings
- Gum base
- Vegetable/animal oils and fats
- Molten Sulfur

### Accessories

- Stands, motor flanges and base plates
- Product flange connections
- Couplings
- Motors and gear reducers
- Frequency converters
- Shaft seal systems (with buffer tanks)

### Certificates<sup>3)</sup>

- ATEX certificate
- 3.1 certificate
- German Air Quality certificate (TA-Luft)
- TR-CU (EAC) 010 - 012
- Performance test certificates

### Options

- Heated seals
- Bi-directional operation
- Special modifications for demanding applications

<sup>1)</sup> Higher flow rates upon request.

<sup>2)</sup> Other materials and designs available.

<sup>3)</sup> Other certificates and conformities upon request.

