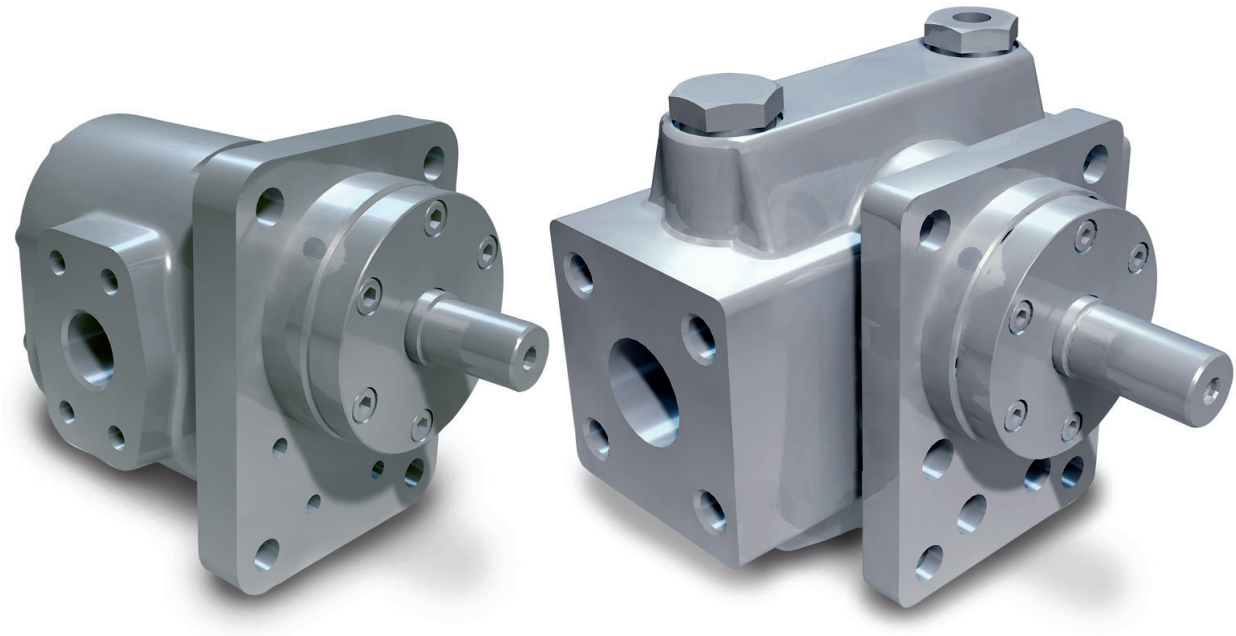
maag
a DOVER company

maag
pump
systems

refinex® refitherm®

Cast steel gear pumps for industrial / petrochemical processes



Chemical, refinery, and industrial plant applications are challenging. High process pressuresand high temperatures are commonplace in such environments. Precisely the environment in which Maag Pump Systems tried and established gear pumps develop their full potential. Thanks to the extensive range of components and materials of constructions 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.

Your benefits

- Wide viscosity, temperature, and pressure range
- High efficiencies (due to tolerances and small clearances being modified in line with applications)
- Precise displacement volume
- Self-priming
- Reliability and longevity

refinex® refitherm®

Heatable gear pumps for industrial processes

A range of typical pumping media

- Emulsions
- Sludges and condensates
- Additives
- Resins
- Cellulose derivatives and pulps
- Silicones
- Adhesives and hot-melt adhesives
- Paints and varnishes
- Waxes and paraffins
- Fertilizers
- Mineral oils and fats
- Fuels
- Petrochemical products

Technical specifications:

Housing:	Cast steel
Gear shafts:	■ Stainless steel ■ Nitrided steel (spur and helical) ■ Nitrided steel coated
Bearing[1]:	■ Steel/bronze ■ Sintered iron ■ Synthetic carbon ■ Steel with carbon inserts ■ Nitrided steel ■ Nitrided steel coated ■ Hardened tool steel ■ Bronze – CuAl
Shaft seal:	■ Lip seals and packing ■ Single or double mechanical seal ■ External mechanical seal ■ Interlock or heater connections available ■ Magnetic coupling with single or double containment shell
Connections:	SAE, CETOP, DIN, and ANSI flanges
Heating:	■ Electrical heating by catridges optional for refinex® ■ Integrated channels for heating / cooling by means of steam or liquids for refitherm®

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 350 bar
Flow rate[2]:	0.5 to 1,750 l/min

Options

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

Certificates[3]

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

Theoretical pumping capacities:

Model	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
RX	22/22	2.35	3.53	4.70	7.05	14.10
RX	28/28	5.10	7.65	10.20	15.30	30.60
RX/RT	36/36	12.80	19.20	25.60	38.40	76.80
RX/RT	45/45	23.15	34.73	46.30	69.45	139.00
RX/RT	56/56	46.30	69.45	92.60	138.90	–
RX/RT	70/70	88.00	132.00	176.00	264.00	–
RX/RT	90/90	186.00	278.00	371.00	557.00	–
RX/RT	110/110	358.00	537.00	716.00	–	–
RX/RT	140/140	671.00	1,007.00	1,342.00	–	–
RX	140/180	863.00	1,294.00	1,725.00	–	–

The limitation of use depends on the operating conditions. Please contact Maag Pump Systems for specific applications.

[1] Other materials and designs available.

[2] Higher flow rates upon request.

[3] Other certificates and conformities upon request.

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Global contacts, see **www.maag.com**
Contact us at **contact@maag.com**

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