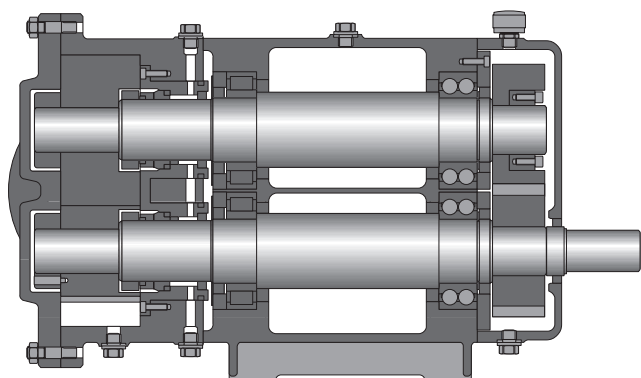


PRODUCT INFORMATION



Rotary lobe pumps

Series KRL / KRH / KRM

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Description

General

Rotary lobe pumps are built and marketed successfully for more than a century by LEADERLE-HERMETIC. Mode of operation, design and application have been constantly optimised and adapted to industry requirements.

Function

Rotary lobe pumps are positive displacement pumps that cover a wide range of applications.

The applications are in chemical, petrochemical, pharmaceutical, paint industries as well as general industry.

In rotary lobe pumps two lobes counterrotate, driven and synchronised by an external timing gear. This causes a steady flow from suction to discharge port. Through the operation no parts are in direct contact inside the hydraulics, the pump can tolerate dry running. The elaborate design of the lobes eliminates pulsation and enables low shear transfer of the fluid.

Rotary lobe pumps are self-priming and can be operated in either direction. If a safety valve is used, the direction of rotation is fixed.

Design

The pump series is designed so that wear parts can be changed without removing the pump out of the piping. Lubrication of shaft bearings (roller bearings) and synchronising gear is effected by oil bath.

The following lobe styles are applied:

- suitable for low to high viscosities
- gentle handling of fluid
- medium rotational speed
- low noise

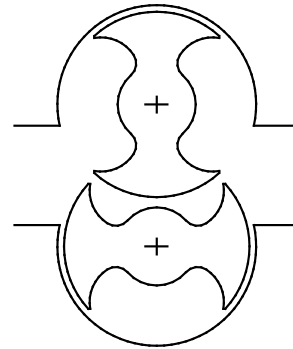
- suitable for low to high viscosities
- eliminates pulsations
- higher rotational speed
- low noise
- suitable for difficult suction

- suitable for high viscosities
- low to medium rotational speeds
- suitable for fluids with solids and fibrous particles

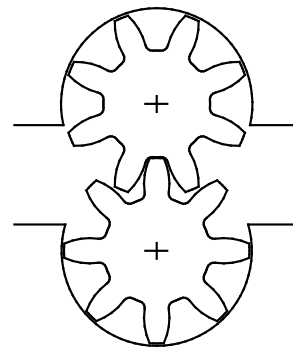
Double lobe and helical gear lobe are fully interchangeable.

The rotary lobe pump KRL is also available in execution for food industry.

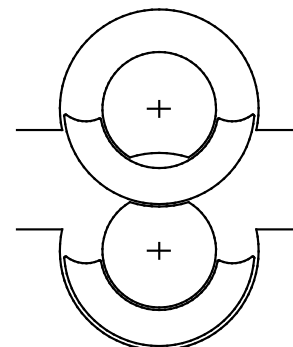
double lobe



helical gear lobe



single lobe



Application range

Capacity

The nominal capacity of positive displacement pumps is proportional to the rotational speed. HERMETIC produces pumps with a capacity up to 300 m³/h.

Temperature

Depending on the materials of construction and the fluid, temperatures up to 280°C can be handled. Heating or cooling of the pumps is controlled by heating or cooling jackets on the casing and covers.

Pressure

Depending on design rotary lobe pumps can handle differential pressures up to 30 bar. Special executions allow for higher differential pressures.

Viscosity

The pump series KRL / KRH / KRM are suitable for viscosities from 1 to 5.000.000 mPas.

Connections

Nominal size is related to pump size. The range is from DN 40 to DN 300 and pressure rating from PN 16 to PN 25. Special designs like ANSI dimensions are available on request.

The connection can be horizontal or vertical.

Shaft sealing

All sizes of the KRL / KRH / KRM series can be equipped with different kinds of shaft sealing. Available are single or double mechanical seals or packed glands. Special seals like cartridge seals are also available .

Environmental safety

The pumps are suitable for use on hazardous gases. Certifications for mechanical explosion protection according to European standard 94/9/EC (ATEX) Ⓢ II 2 G c T2 to T6 are available. The pump seals are also certified by TÜV Cert to comply with "TA-Luft".

Quality

HERMETIC rotary lobe pumps are state of the art and quality is compliant to design standards e.g. VDMA, DIN and EN standards. Our quality manual according to ISO 9001 supports the manufacturing process.

Material and performance range

Standard design

Casing and cover are made of 1.4581 or GGG 40. Shafts are made of 1.4462 or 1.4571. The bearing block is made of GGG 40.

Special design

The pump components can also be made of special materials, e. g. Hastelloy or 1.4539.

Performance range

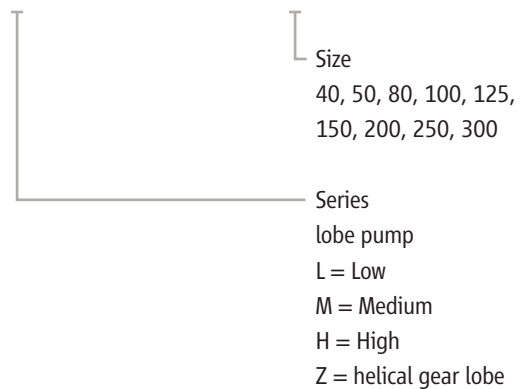
Flow [m ³ /h]:	1 to 300
Differential pressure [bar]:	max. 30
Viscosity [mPas]:	1 to 5.000.000
Temperature [°C]:	-20 to +280
Pressure rating [PN]:	16 / 25 (related to m.o.c.)

Sizes

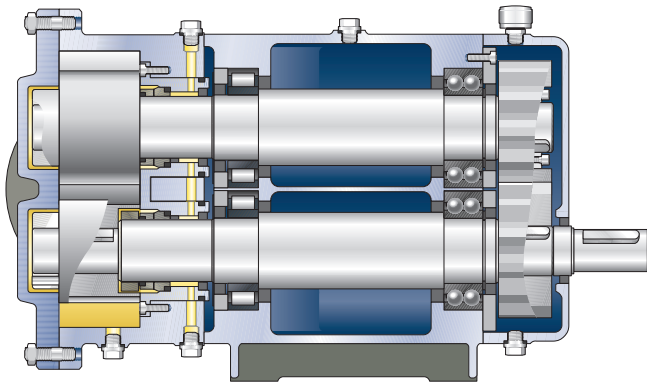
Pump Size:	Connections:
KRL 40	40 mm
KRL 50	50 mm
KRL 80	80 mm
KRL 100	100 mm
KRL / KRH 125	125 / 125 mm
KRL / KRH 150	150 / 150 mm
KRL / KRH / KRM 200	200 / 200 / 250 mm
KRM 250	300 mm
KRM 300	300 mm

Pump and hydraulic denomination

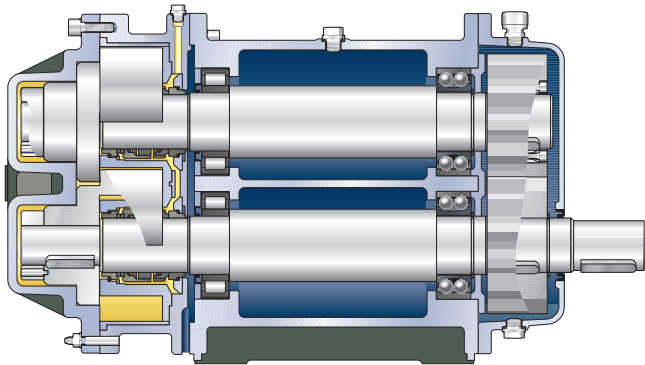
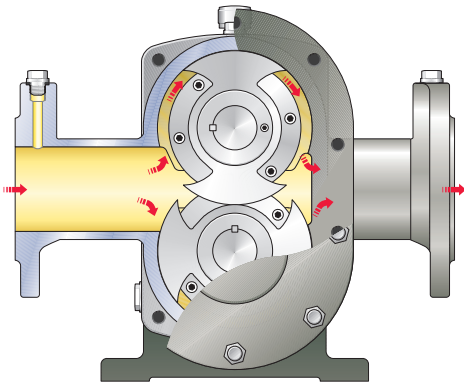
KRL / KRM / KRH / KRHZ 40 – 300



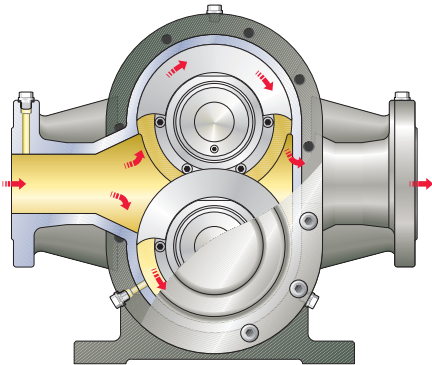
Functional principle



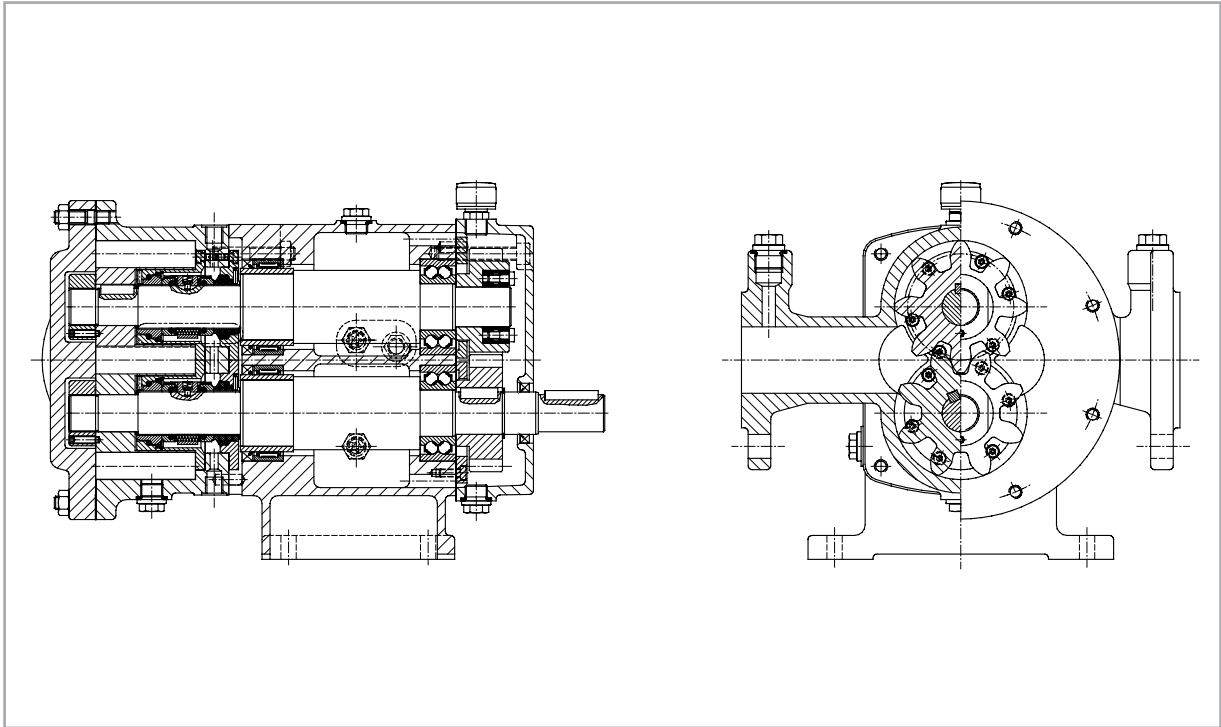
KRL



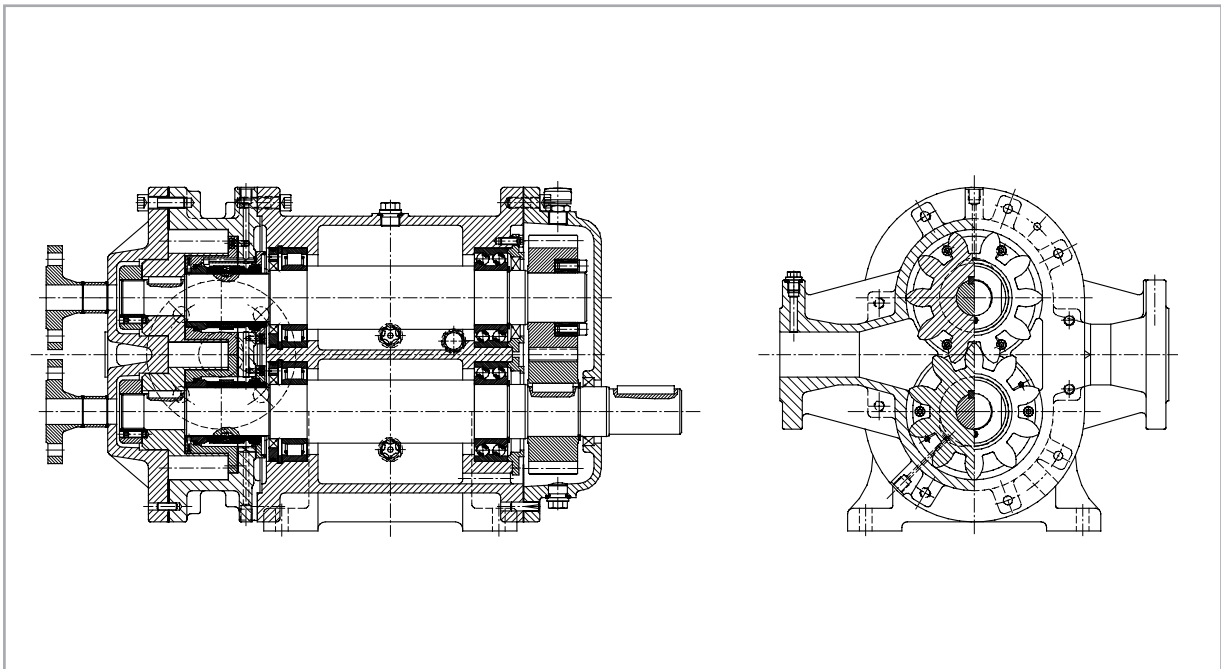
KRH



Cut view of KRL pump with double mechanical seal

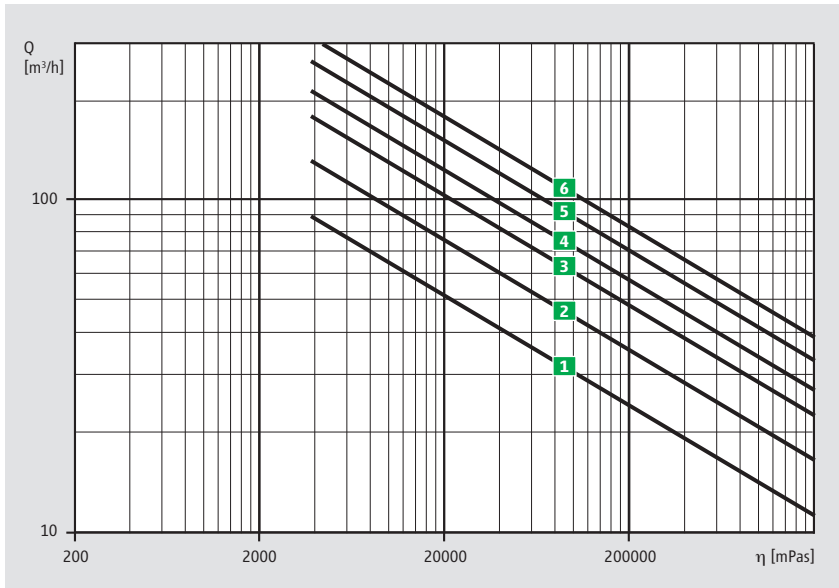


Cut view of KRH pump with double mechanical seal



Performance curve

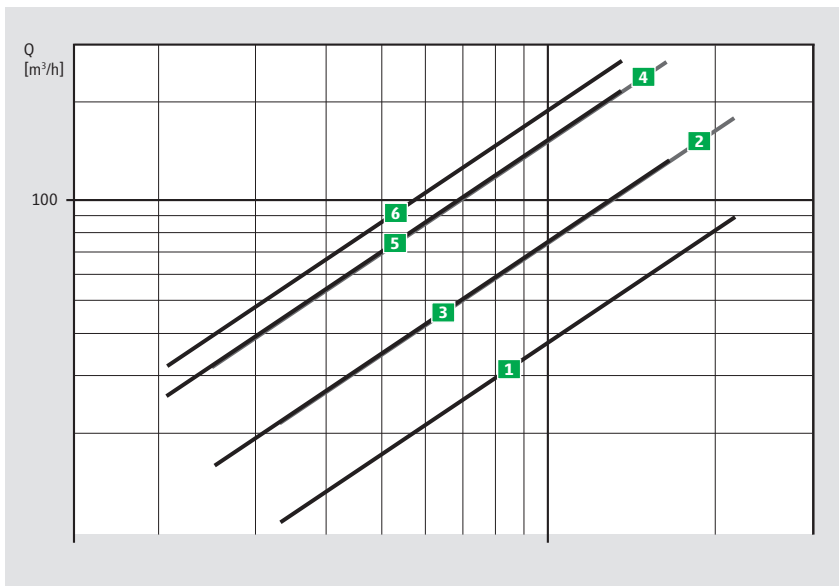
Capacity / Viscosity



Denomination to the performance curve

- 1 KRH 125
- 2 KRH 150
- 3 KRM 200
- 4 KRH 200
- 5 KRM 250
- 6 KRM 300

Capacity / Rotating speed



Denomination to the performance curve

- 1 KRH 125
- 2 KRM 200
- 3 KRH 150
- 4 KRM 250
- 5 KRH 200
- 6 KRM 300