CHEMICAL

PETROCHEMICAL

REFRIGERATION

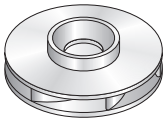
ENERGY

Product overview
HERMETIC-Pumpen GmbH

LEDERLE Hermetic

CONTENTS

CENTRIFUGAL PUMPS



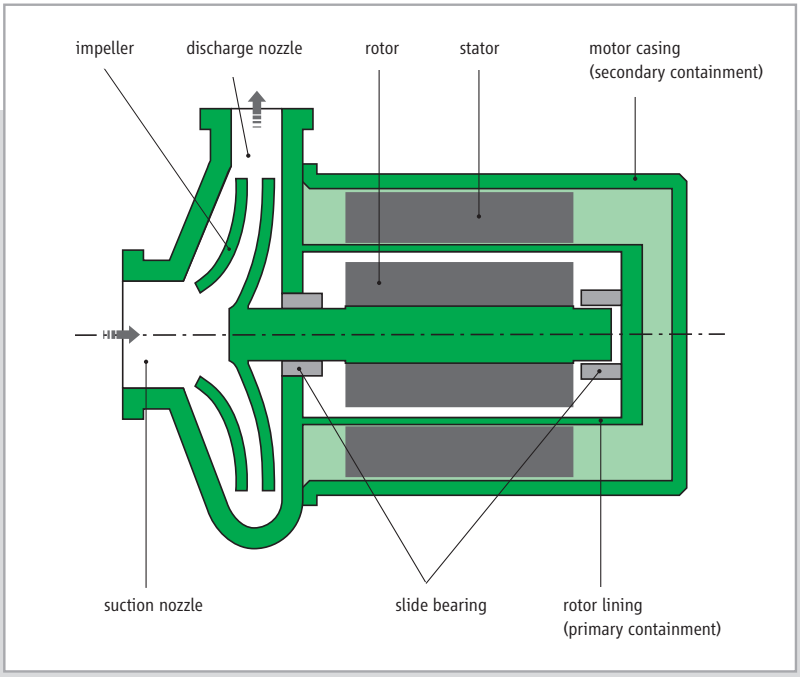
MONITORING SYSTEMS

VACUUM PUMPS AND SYSTEMS

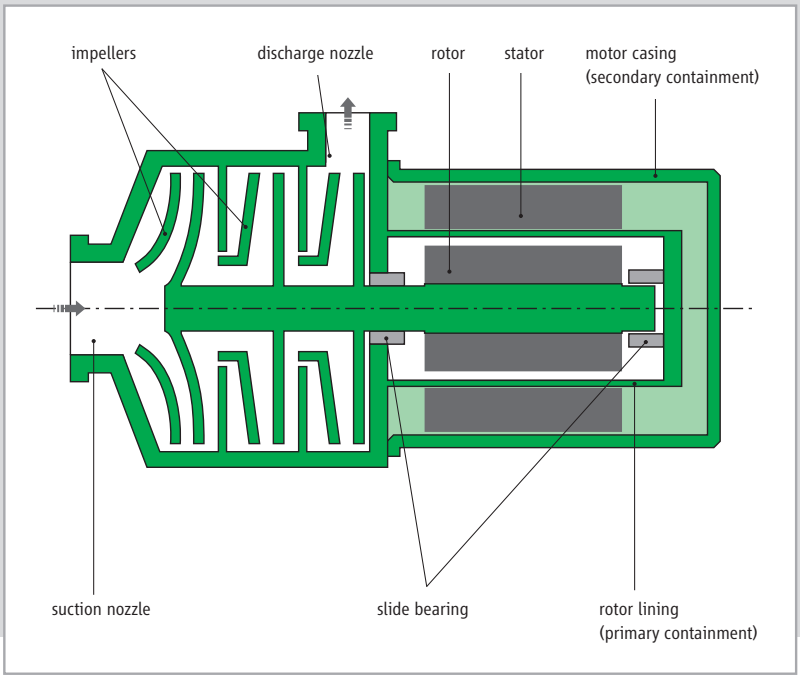
POSITIVE DISPLACEMENT PUMPS

SCHEMATIC DIAGRAM OF CANNED MOTOR PUMPS

single-stage canned motor pump

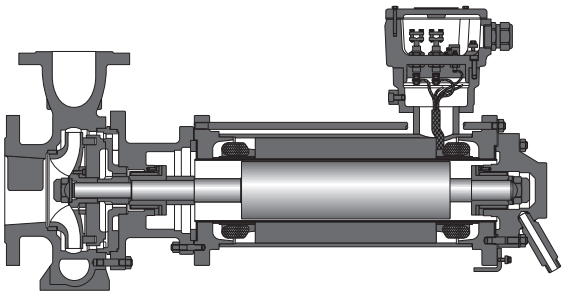


multistage canned motor pump



Type CN

Chemical | Petrochemical | Refrigeration | Energy

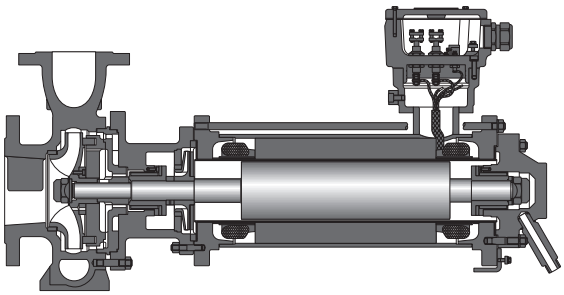


- Normal-suction design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 1600 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CNF

Chemical | Petrochemical | Refrigeration | Energy

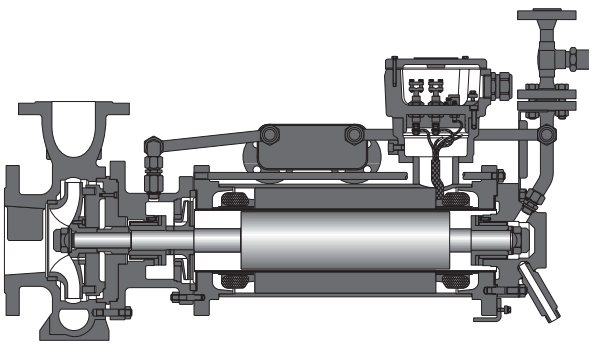


- Normal-suction design
- Liquefied gas design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 1600 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CNKp

Chemical | Petrochemical | Refrigeration | Energy

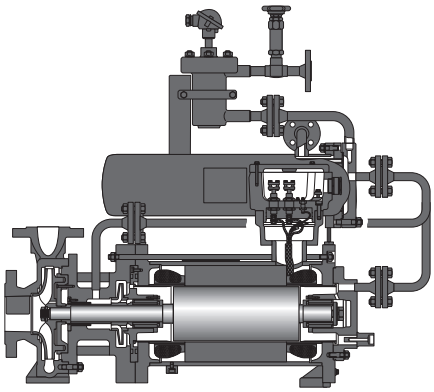


- Normal-suction design
- High-temperature design with plate heat exchanger
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 1600 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +400 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CNKr

Chemical | Petrochemical | Refrigeration | Energy

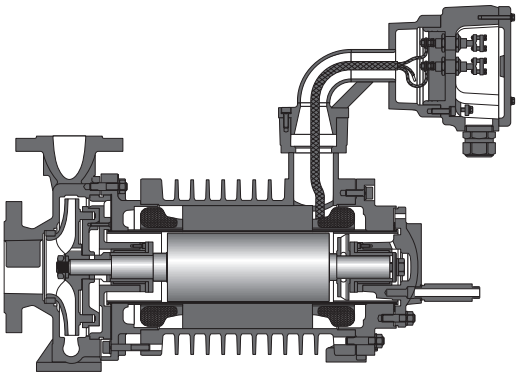


- Normal-suction design
- High-temperature design with tubular cooler
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 1600 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +400 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CN and CNF

Chemical | Petrochemical | Refrigeration | Energy

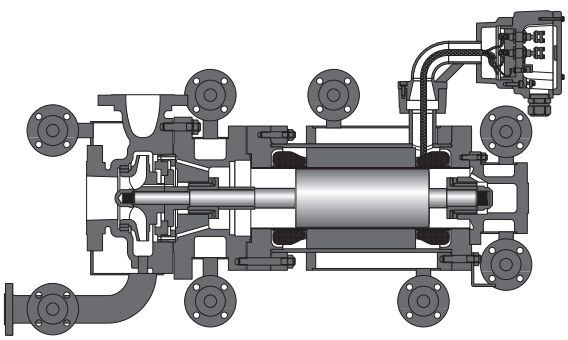


- Normal-suction design
- High-temperature design without external cooler
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T3 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 300 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CN and CNF

Chemical | Petrochemical | Refrigeration | Energy

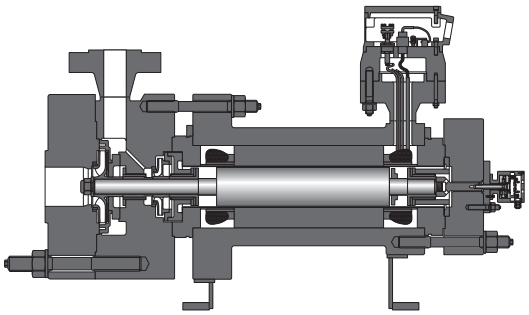


- Normal-suction design
- For liquids with completely high melting point in heatable design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T3 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 300 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type CNH and CNKH

Chemical | Petrochemical | Refrigeration | Energy

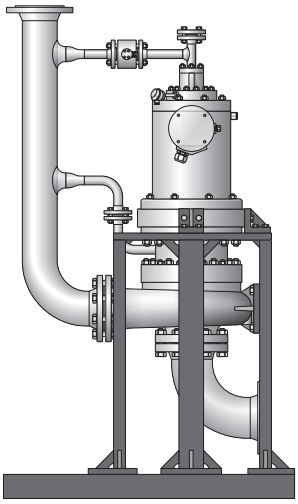


- Normal-suction design
- Design for high system pressures
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 180 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	up to PN 1200

Type CNFV

Chemical | Petrochemical | Refrigeration | Energy

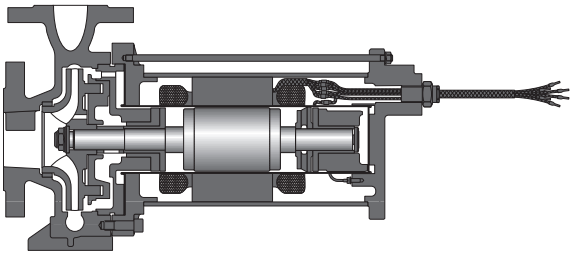


- Normal-suction design
- Design for pressure gases / liquefied gases
- In vertical installation
- Dimensions and performance curves in accordance with EN 22858; ISO 2858
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 180 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	up to PN 1200

Type CNF

Chemical | Petrochemical | Refrigeration | Energy

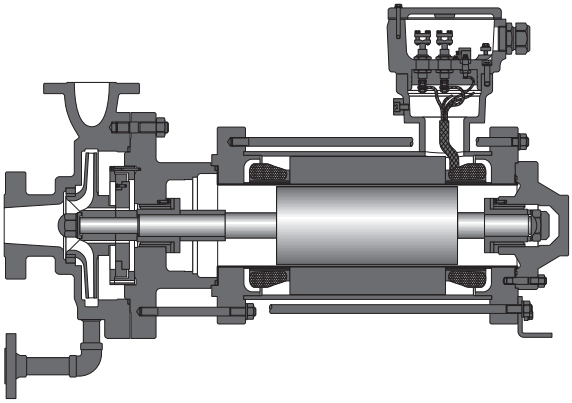


- Normal-suction design
- Refrigeration industry design
- Liquefied gas design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858

Capacity:	max. 80 m^3/h
Head:	max. 70 m
Rotating speed:	2800 to 3500 rpm
Operating temperature:	–50 °C to +30 °C
Viscosity:	max. 20 mm^2/s
Pressure ratings:	PN 25 and PN 40

Type CNP acc. to API 685

Chemical | Petrochemical | Refrigeration | Energy

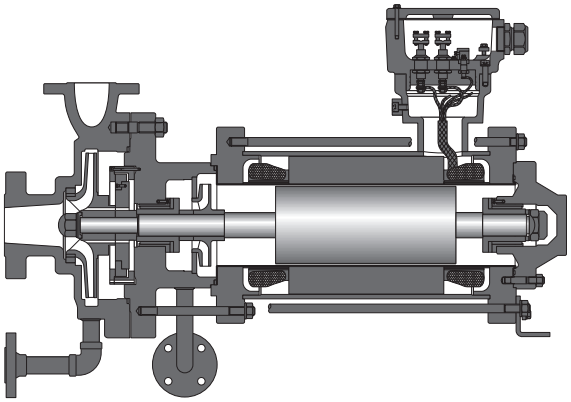


- Normal-suction design
- Single suction
- Centerline-mounted
- Process design
- Completely designed according to the API 685
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 1200 m^3/h
Head:	max. 240 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360°C
Viscosity:	max. 300 mm^2/s
Pressure rating:	PN 50

Type CNPF acc. to API 685

Chemical | Petrochemical | Refrigeration | Energy

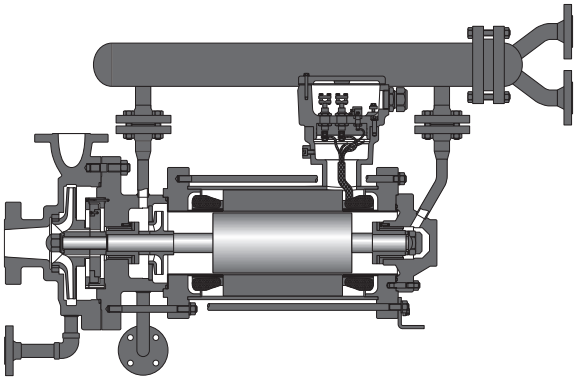


- Normal-suction design
- Liquefied gas design
- Single suction
- Centerline-mounted
- Process design
- Completely designed according to the API 685
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 1200 m^3/h
Head:	max. 240 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure rating:	PN 50

Type CNPKf acc. to API 685

Chemical | Petrochemical | Refrigeration | Energy

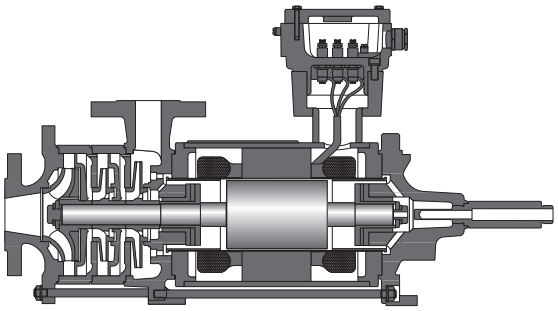


- Normal-suction design
- High-temperature design with tubular cooler
- Single suction
- Centerline-mounted
- Process design
- Completely designed according to the API 685
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 1200 m^3/h
Head:	max. 240 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–120 °C to +425 °C
Viscosity:	max. 300 mm^2/s
Pressure rating:	PN 50

Type CAM

Chemical | Petrochemical | Refrigeration | Energy

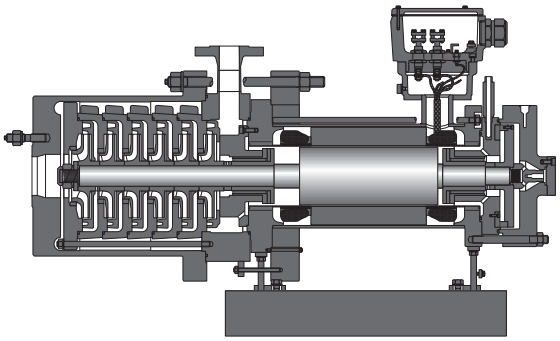


- Normal-suction design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1100 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–120 °C to +100 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAMT

Chemical | Petrochemical | Refrigeration | Energy

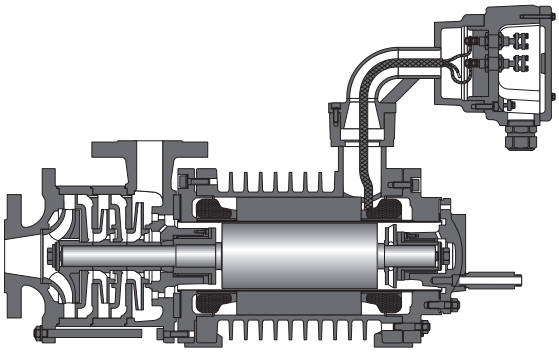


- Normal-suction design
- With pressure barrel for high system pressures
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1100 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–120 °C to +100 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	up to PN 500

Type CAM

Chemical | Petrochemical | Refrigeration | Energy

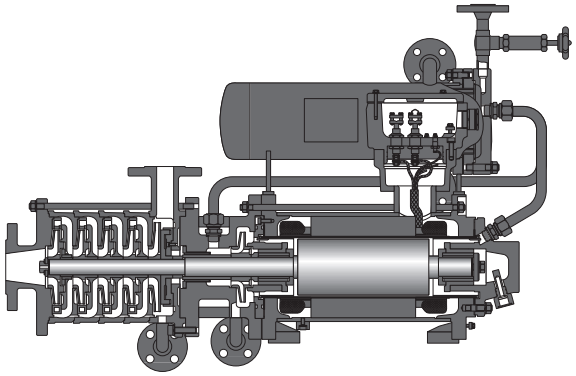


- Normal-suction design
- High-temperature design without external cooling
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T3 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1100 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–100 °C to +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAMKr

Chemical | Petrochemical | Refrigeration | Energy

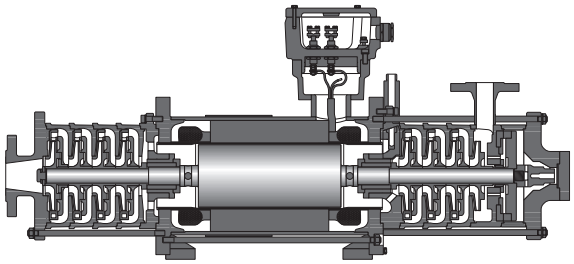


- Normal-suction design
- High-temperature design with tubular cooler
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1100 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +400 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAM-Tandem

Chemical | Petrochemical | Refrigeration | Energy

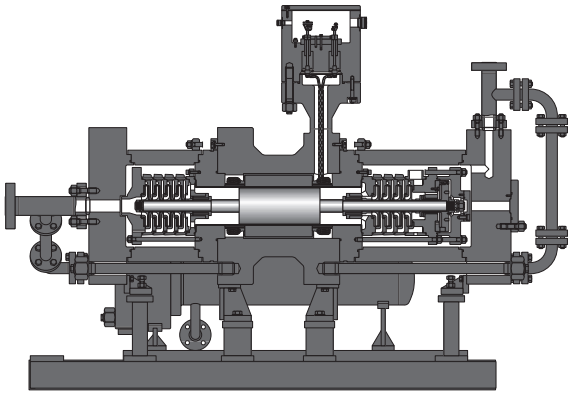


- Normal-suction design
- Tandem design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1200 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–120 °C to +100 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAMH-Tandem

Chemical | Petrochemical | Refrigeration | Energy

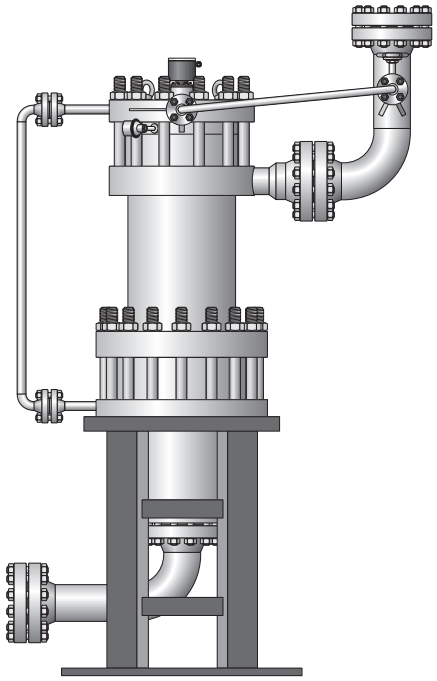


- Normal-suction design
- Tandem design
- With pressure barrel for high system pressures
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1200 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–120 °C to +100 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	up to PN 500

Type CAMTV

Chemical | Petrochemical | Refrigeration | Energy

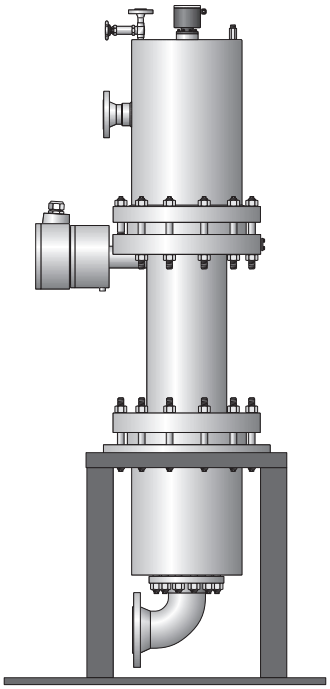


- Normal-suction design
- Design for pressure gases / liquefied gases
- In vertical installation
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1100 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +360 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAMTV-Tandem

Chemical | Petrochemical | Refrigeration | Energy

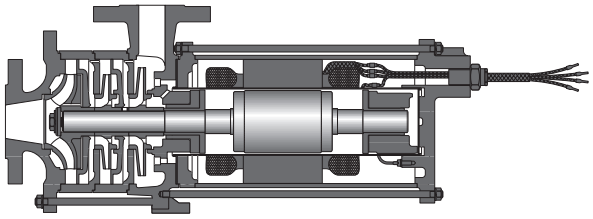


- Normal-suction design
- Tandem design
- Design for pressure gases / liquefied gases
- In vertical installation
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1200 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	–120 °C to +100 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CAM

Chemical | Petrochemical | Refrigeration | Energy

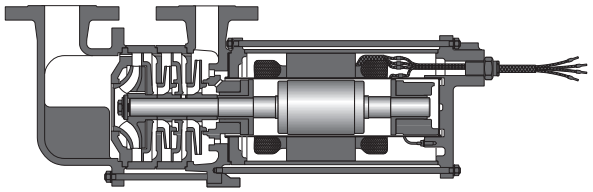


- Normal-suction design
- Refrigeration industry design

Capacity:	max. 40 m^3/h
Head:	max. 180 m
Rotating speed:	2800 to 3500 rpm
Operating temperature:	–50 °C to +30 °C
Viscosity:	max. 20 mm^2/s
Pressure ratings:	PN 25 and PN 40

Type CAMR

Chemical | Petrochemical | Refrigeration | Energy

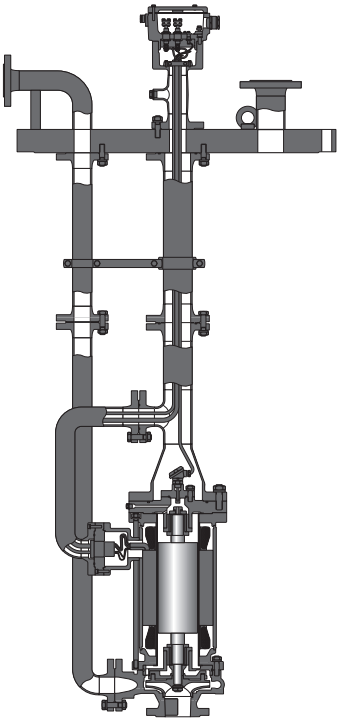


- Normal-suction design
- Refrigeration industry design

Capacity:	max. 12,5 m^3/h
Head:	max. 100 m
Rotating speed:	2800 to 3500 rpm
Operating temperature:	–50 °C to +30 °C
Viscosity:	max. 20 mm^2/s
Pressure ratings:	PN 25 and PN 40

Type TCN

Chemical | Petrochemical | Refrigeration | Energy

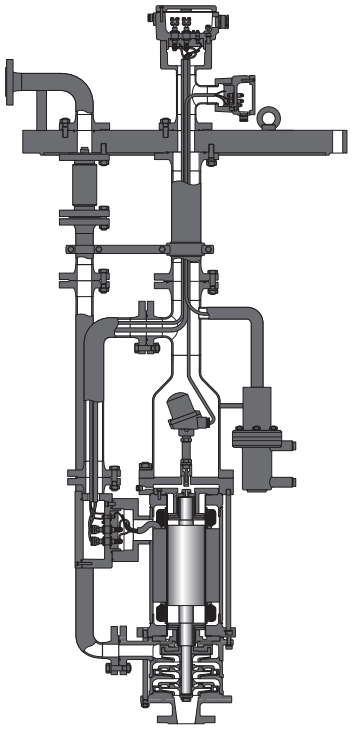


- Single-stage
- Normal-suction design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 1600 m^3/h
Head:	max. 150 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +250 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type TCAM

Chemical | Petrochemical | Refrigeration | Energy

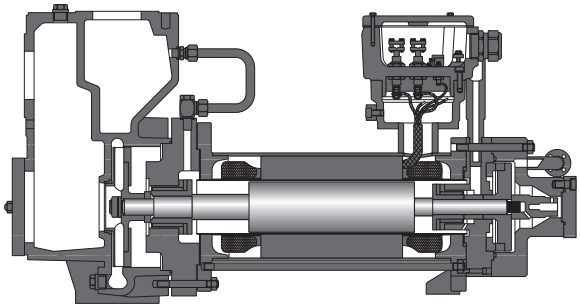


- Multistage
- Normal-suction design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX ⟨Ex⟩ II 2 G EEx de II C T1 to T6 / ⟨Ex⟩ II 2 G ck II C Tx

Capacity:	max. 350 m^3/h
Head:	max. 1200 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +250 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 to PN 100

Type CS

Chemical | Petrochemical | Refrigeration | Energy

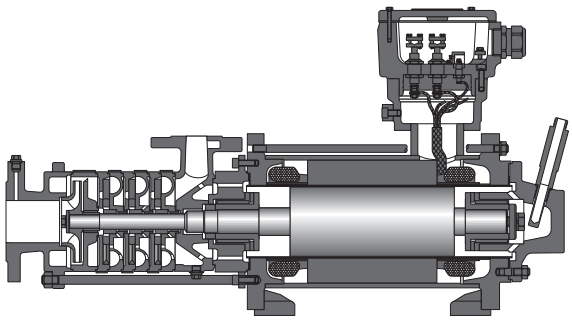


- Single-stage
- Self-priming design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 100 m^3/h
Head:	max. 85 m
Rotating speed:	2900 rpm
Operating temperature:	–30 °C to +90 °C
Viscosity:	max. 75 mm^2/s
Pressure rating:	PN 10

Type CS 32

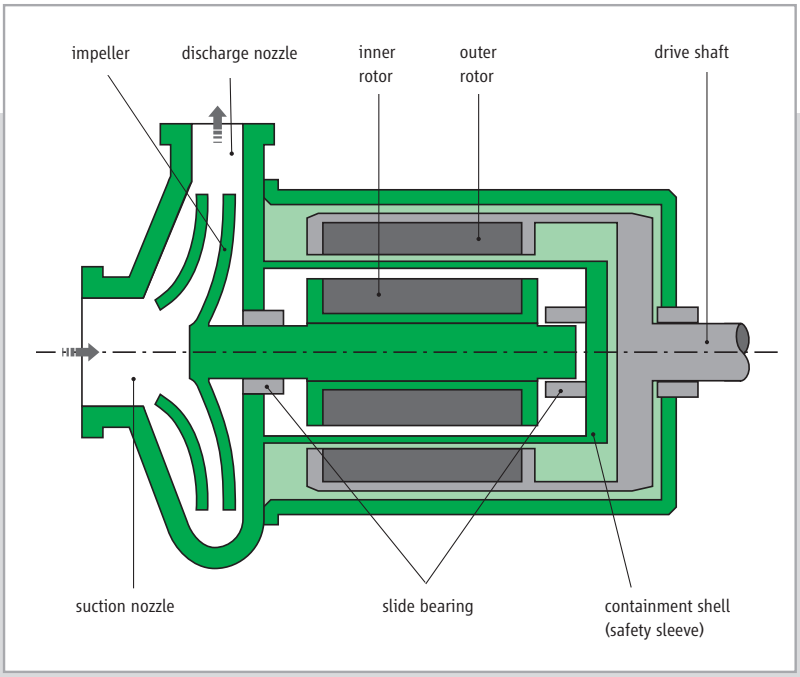
Chemical | Petrochemical | Refrigeration | Energy



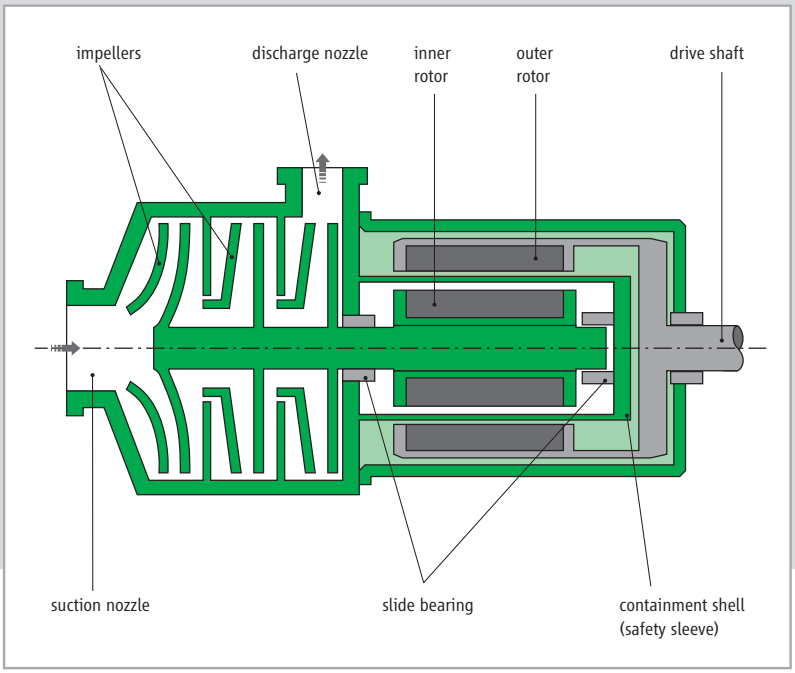
- Multistage
- Self-priming design
- Explosion protection as per EC-type examination certificate according to directives 94/9/EG ATEX Ⓔx II 2 G EEx de II C T1 to T6 / Ⓔx II 2 G ck II C Tx

Capacity:	max. 20 m^3/h
Head:	max. 110 m
Rotating speed:	1450 rpm
Operating temperature:	–40 °C to +240 °C
Viscosity:	max. 75 mm^2/s
Pressure ratings:	PN 16 to PN 40

SCHEMATIC DIAGRAM OF MAGNETICALLY COUPLED PUMPS



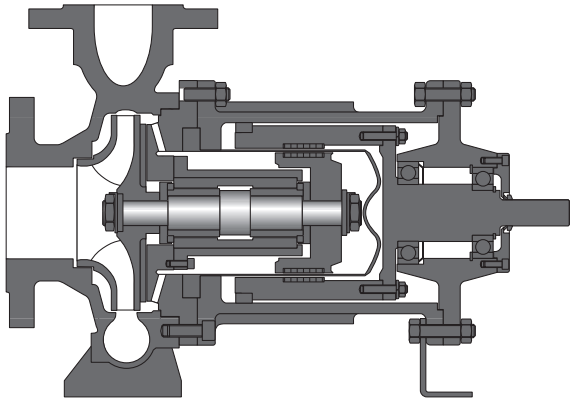
single-stage magnetically coupled pump



multistage magnetically coupled pump

Type MCN

Chemical | Petrochemical | Refrigeration | Energy

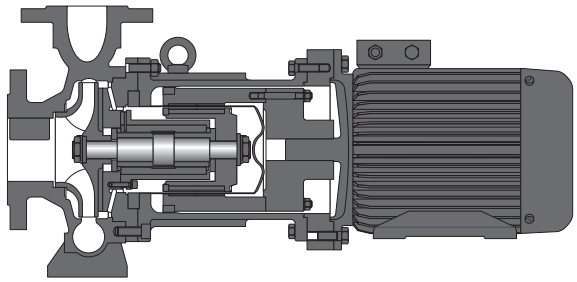


- Normal-suction design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858

Capacity:	max. 700 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +220 °C
Viscosity:	max. 100 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type MCN close-coupled

Chemical | Petrochemical | Refrigeration | Energy

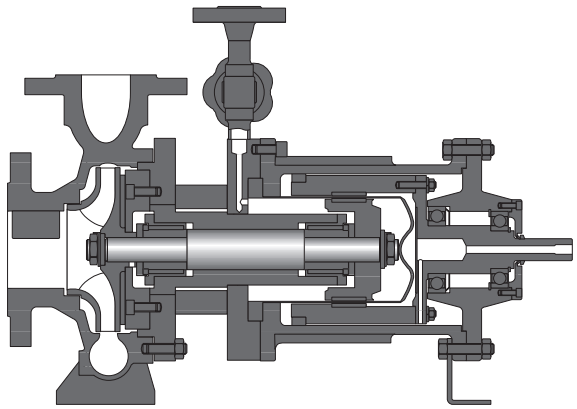


- Normal-suction design
- Close-coupled design
- Dimensions and performance curves in accordance with EN 22858; ISO 2858

Capacity:	max. 220 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +140 °C
Viscosity:	max. 100 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type MCNK

Chemical | Petrochemical | Refrigeration | Energy

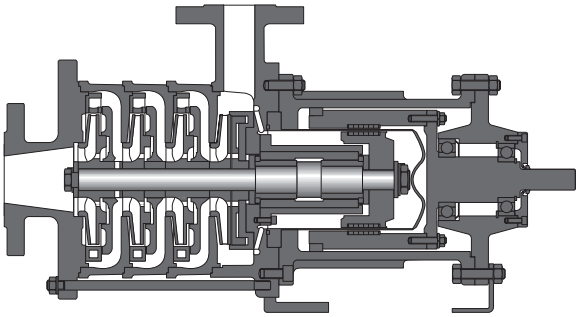


- Normal-suction design
- High-temperature design
- With external cooling
- Dimensions and performance curves in accordance with EN 22858; ISO 2858

Capacity:	max. 700 m^3/h
Head:	max. 220 m
Rotating speed:	1450 to 3500 rpm
Operating temperature:	max. +360 °C
Viscosity:	max. 100 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type MCAM

Chemical | Petrochemical | Refrigeration | Energy

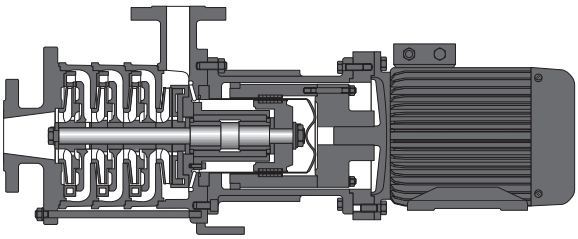


- Normal-suction design

Capacity:	max. 45 m^3/h
Head:	max. 270 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +220 °C
Viscosity:	max. 100 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type MCAM close-coupled

Chemical | Petrochemical | Refrigeration | Energy

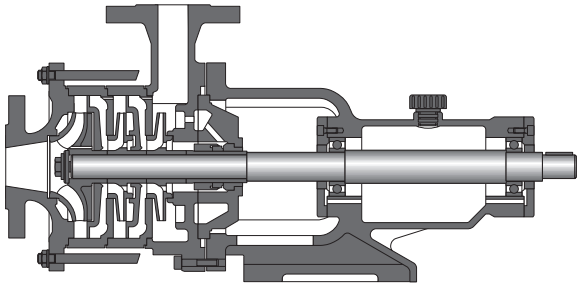


- Normal-suction design
- Close-coupled design

Capacity:	max. 45 m^3/h
Head:	max. 270 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +140 °C
Viscosity:	max. 100 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type HKL

Chemical | Petrochemical | Refrigeration | Energy

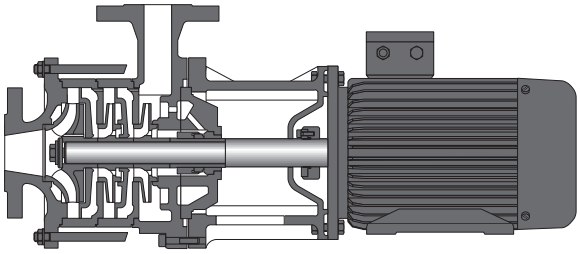


- Single- and multistage
- Normal-suction design
- Bearing bracket design
- Shaft seal by stuffing box packing or mechanical seal

Capacity:	max. 45 m^3/h
Head:	max. 270 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +350 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type HK

Chemical | Petrochemical | Refrigeration | Energy

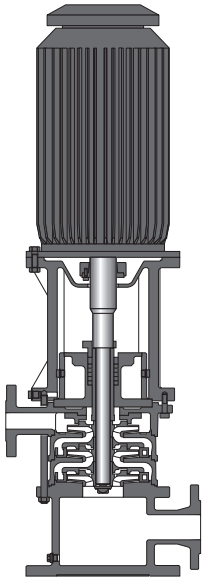


- Single- and multistage
- Normal-suction design
- Close-coupled design
- Shaft seal by stuffing box packing or mechanical seal

Capacity:	max. 45 m^3/h
Head:	max. 270 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +350 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type VHK

Chemical | Petrochemical | Refrigeration | Energy



- Single- and multistage
- Normal-suction design
- In vertical installation
- Close-coupled design
- Shaft seal by stuffing box packing or mechanical seal

Capacity:	max. 45 m^3/h
Head:	max. 270 m
Rotating speed:	2900 to 3500 rpm
Operating temperature:	max. +350 °C
Viscosity:	max. 300 mm^2/s
Pressure ratings:	PN 16 and PN 25

The most part of HERMETIC pumps are designed according to explosion protection requirements. The pumps comply with the requirements of the electrical as well as mechanical explosion protection.

Level monitoring

On condition that the rotor cavity as part of the process system is steadily filled with liquid, no explosive atmosphere may arise. In this case, no accepted explosion protection is required for the rotor cavity. If the operator is not able to guarantee for a steady filling, it is necessary to install level monitoring devices.

Temperature monitoring

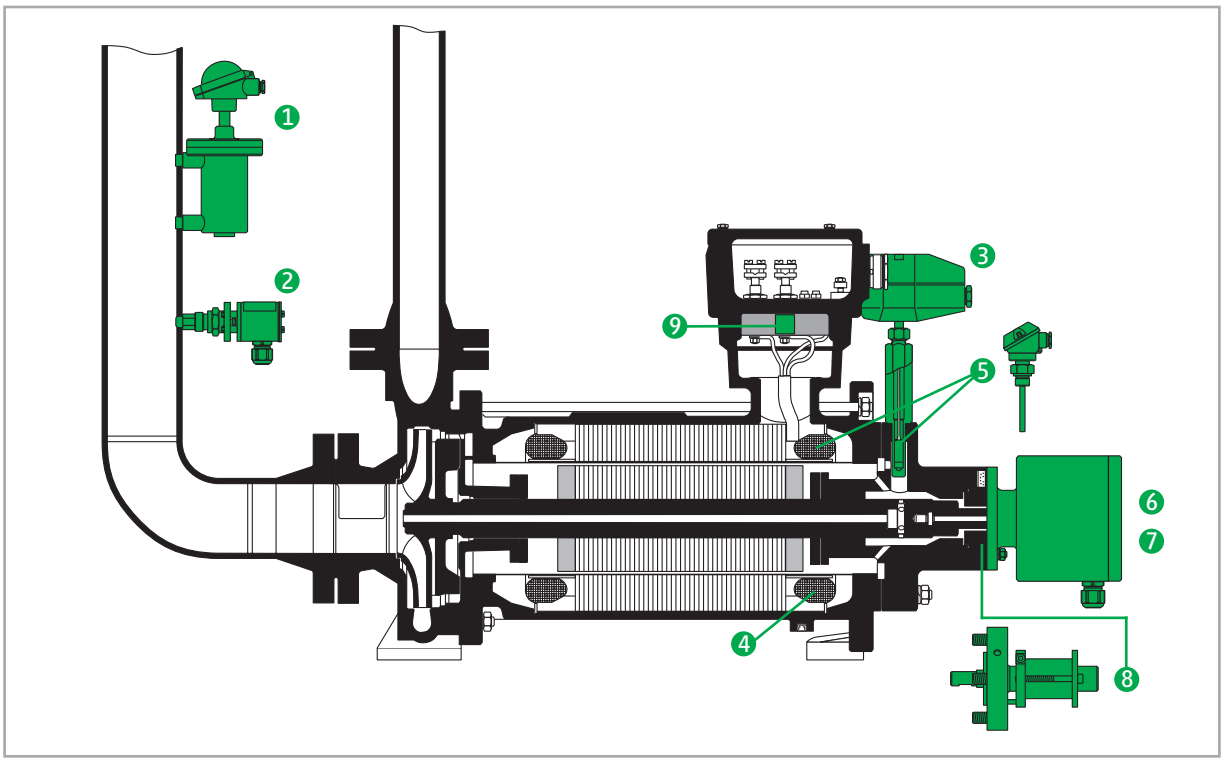
The observance of the temperature class and the maximum admissible surface temperature of the canned motor, respectively, is ensured via thermistor in the stator winding and/or via a measuring point on the bearing cover (liquid temperature). In case of magnetically coupled pumps the temperature is monitored on the containment shell.

Monitoring of rotor position and rotating direction

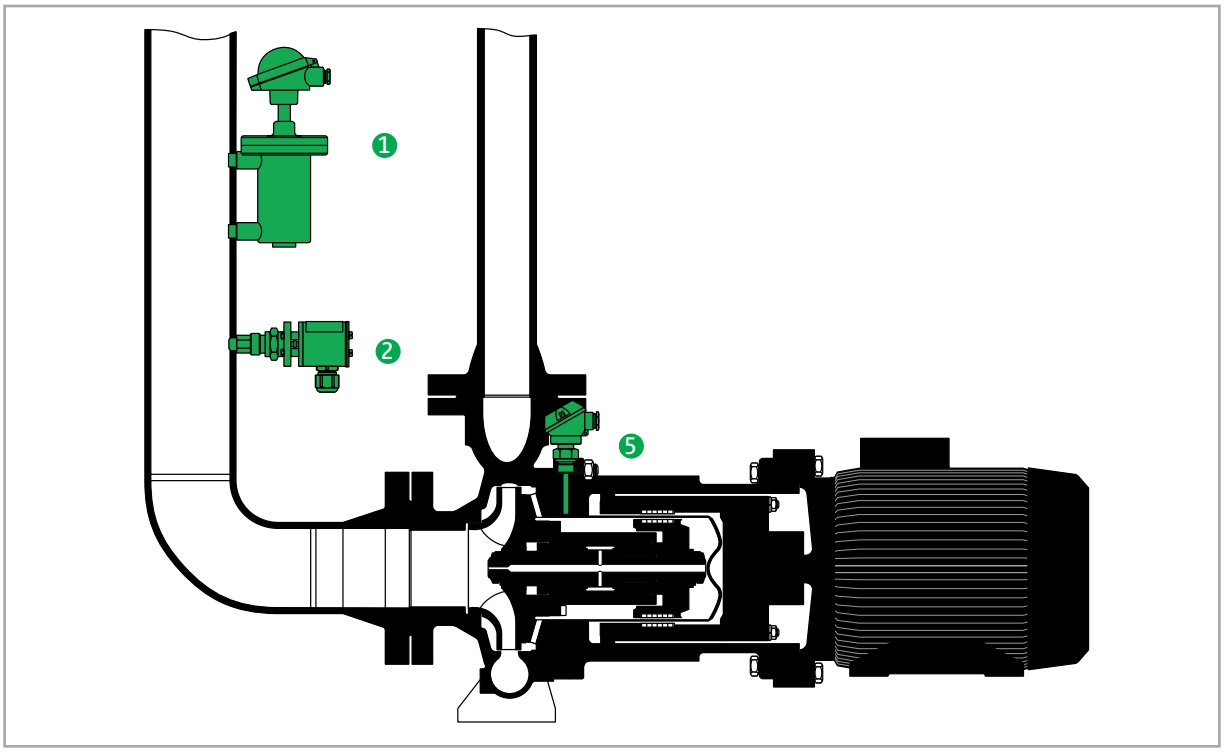
The axial thrust balancing is mainly influenced by the operating method of the pump, plant conditions and by various physical data of the liquid to be conveyed. For early detection of the source of errors, it is recommended to install a rotor-position-monitoring device as well as a direction of rotation monitor. This electronic protective gear monitors the axial shaft position of the rotor and / or its direction of rotation during operation in a hermetic and seal-less way. Together with the level and temperature monitoring, an effective and automatic early detection of failures may be achieved.

various monitoring devices			
1	Type N 30	LS	level
2	Type O 30	LS	
3	Type T 30	TS	temperature
4	Type KL 180	TS	
5	Type PT 100	TI	
6	Type ARM-2000 (4...20mA)	GI	rotor position / direction of rotation
7	Type AM-2000	GI	rotor position
8	Type MAP	GI	rotor position
9	Type ROM	GI	direction of rotation

Canned motor pumps

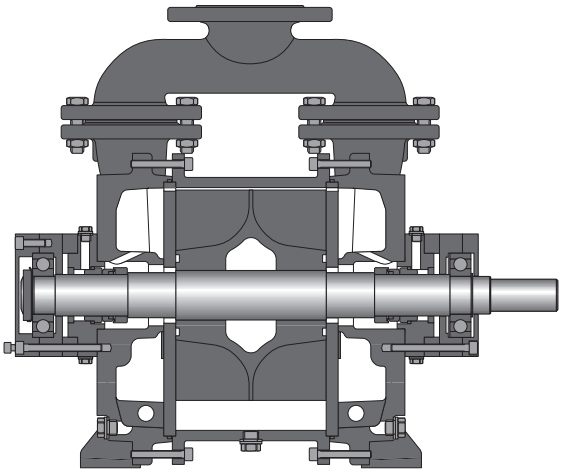


Magnetically coupled pumps



Type LVPG

Chemical | Petrochemical | Refrigeration | Energy

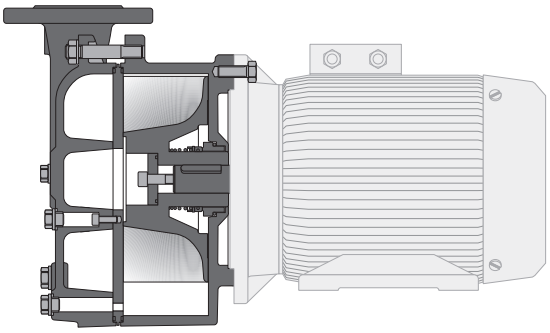


- Double suction design
- Shaft seal by mechanical seal

Suction capacity:	max. 1800 m³/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	700 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPS

Chemical | Petrochemical | Refrigeration | Energy

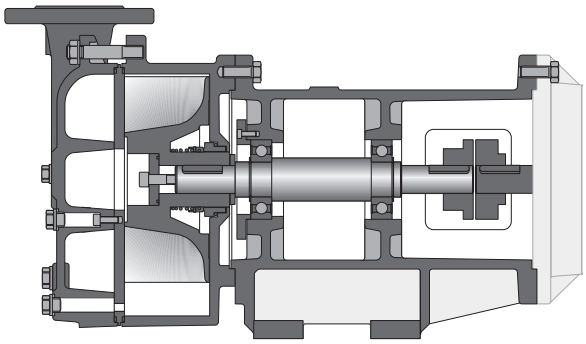


- Single suction design
- Shaft seal by mechanical seal

Suction capacity:	max. 250 m³/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1500 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPL

Chemical | Petrochemical | Refrigeration | Energy

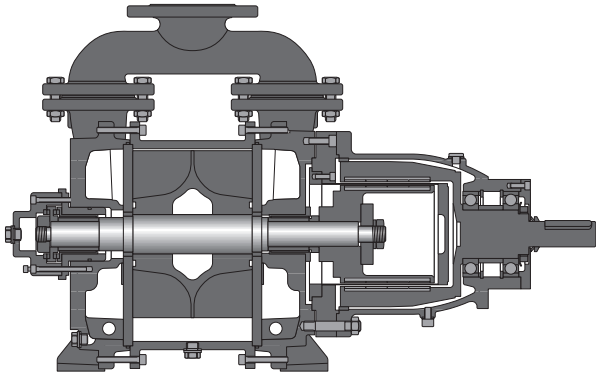


- Single suction design
- Shaft seal by mechanical seal

Suction capacity:	max. 450 m³/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1500 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPM

Chemical | Petrochemical | Refrigeration | Energy

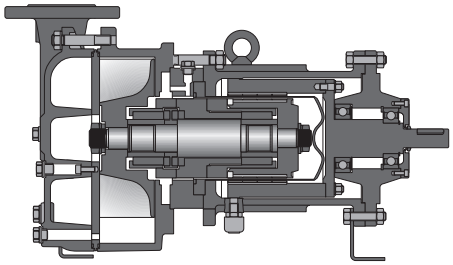


- Double suction design
- Shaft seal by magnetic coupling

Suction capacity:	max. 1800 m^3/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	700 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPML

Chemical | Petrochemical | Refrigeration | Energy

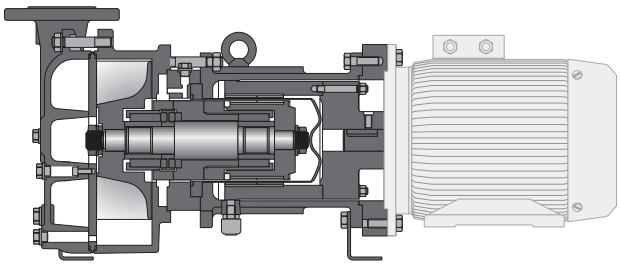


- Single suction design
- Shaft seal by magnetic coupling

Suction capacity:	max. 450 m^3/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1500 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPMB

Chemical | Petrochemical | Refrigeration | Energy

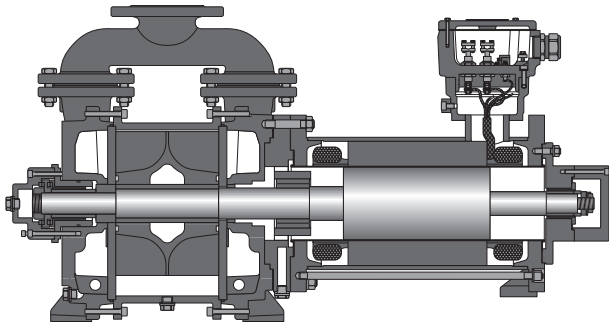


- Single suction design
- Shaft seal by magnetic coupling

Suction capacity:	max. 450 m^3/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1500 to 3500 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPH

Chemical | Petrochemical | Refrigeration | Energy

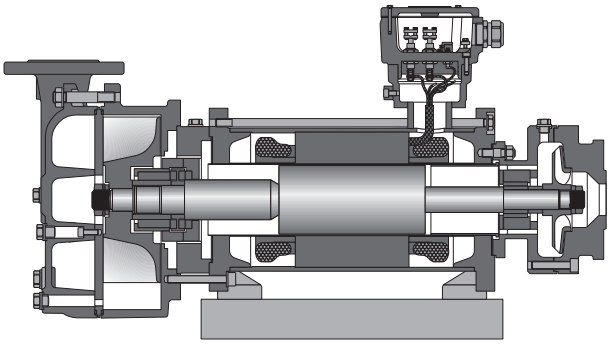


- Double suction design
- Shaft seal by canned motor

Suction capacity:	max. 1800 m^3/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1000 to 1800 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Type LVPH

Chemical | Petrochemical | Refrigeration | Energy

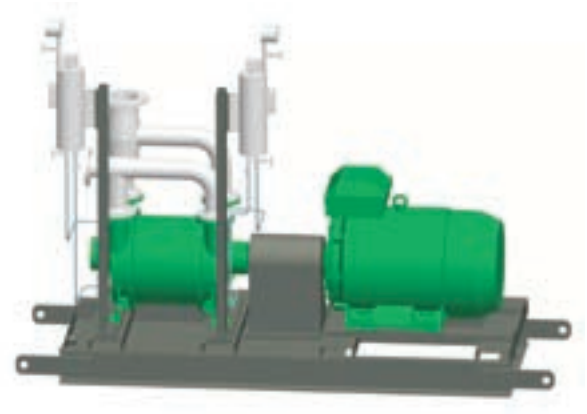


- Single suction design
- Shaft seal by canned motor

Suction capacity:	max. 450 m^3/h
Suction pressure:	min. 33 mbar (abs)
Rotating speed:	1450 to 3500 rpm
Operating temperature:	–20 °C to +100 °C
Pressure rating:	PN 10

Vacuum pump type LVPG 1800

Chemical | Petrochemical | Refrigeration | Energy

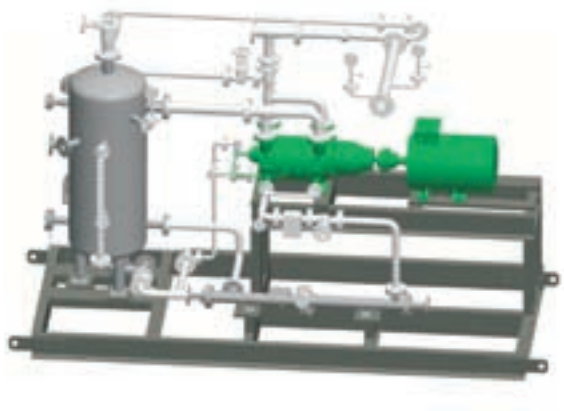


Liquid ring vacuum pump type LVPG 1800
with mechanical shaft seal, double-flow

- For suction of solvent vapours
- Suction temperature approx. 42 °C
- Pumping capacity 1674 m³/h at 147 mbar
- Compression to 1206 mbar

Vacuum package unit type ALVPM 800

Chemical | Petrochemical | Refrigeration | Energy



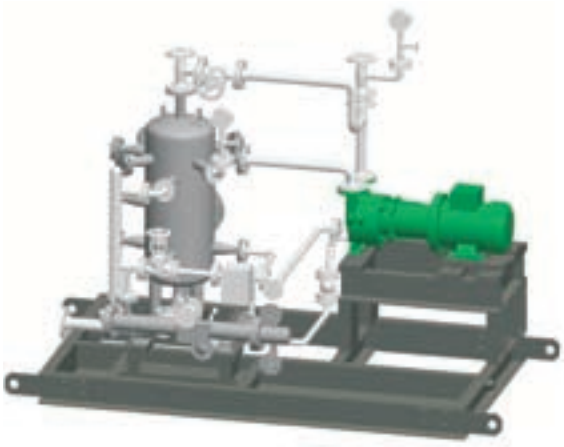
Liquid ring vacuum pump type LVPM 800
with magnetic coupling, double-flow

- For suction of a mixture of:
  air, nitrogen, epichlorohydrin and water vapour
- Suction temperature approx. 20 °C
- Pumping capacity 280 m³/h at 26 mbar
- Compression to 1113 mbar

Special features:
vacuum package unit with connected gas ejector

Vacuum package unit type ALVPMB 150

Chemical | Petrochemical | Refrigeration | Energy

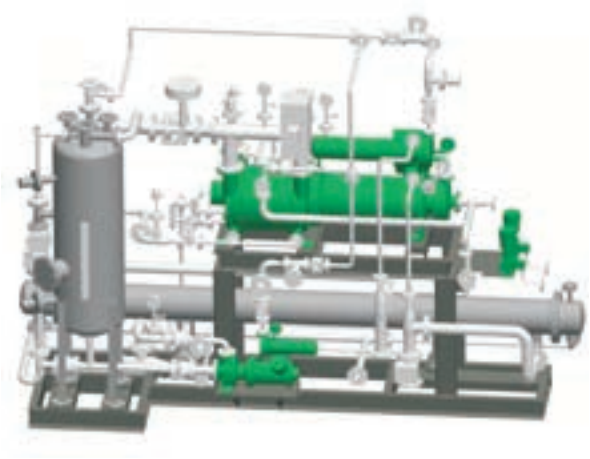


Liquid ring vacuum pump type LVPMB 150
with magnetic coupling, close-coupled, single-flow

- For suction of a mixture of:
  air, nitrogen, epichlorohydrin and water vapour
- Suction temperature approx. 25 °C
- Pumping capacity 81 m³/h at 106 mbar
- Compression to 1113 mbar

Vacuum package unit type ALVPH 1800

Chemical | Petrochemical | Refrigeration | Energy



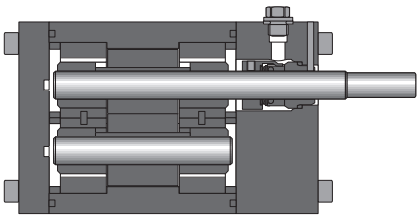
Liquid ring vacuum pump type LVPH 1800
with canned motor, double-flow

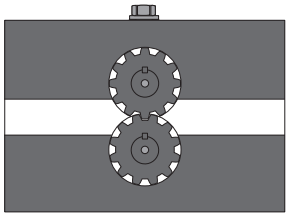
- For suction of nitrogen
- Suction temperature approx. 40 to 45 °C
- Pumping capacity 1007 m³/h at 30 mbar
- Compression to 1113 to 1120 mbar

Special features:
vacuum package unit with integrated canned motor pump type CNK and 2 metering pumps

Type LZ

Chemical | Petrochemical | Refrigeration | Energy



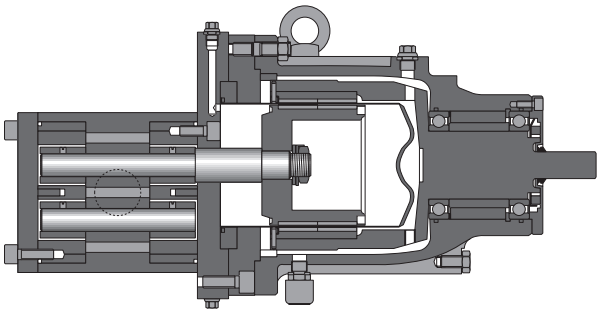


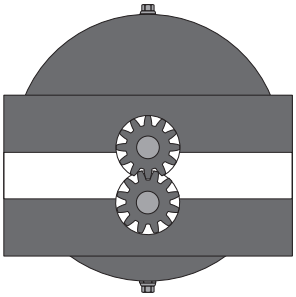
- Self-priming
- Shaft seal by stuffing box packing, single or double mechanical seal

Capacity:	0,5 to 120 m^3/h
Discharge pressure:	max. 100 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 °C to +250 °C
Viscosity:	0,3 to 5.000.000 mm^2/s
Pressure ratings:	PN 25 to PN 100

Type LZM

Chemical | Petrochemical | Refrigeration | Energy



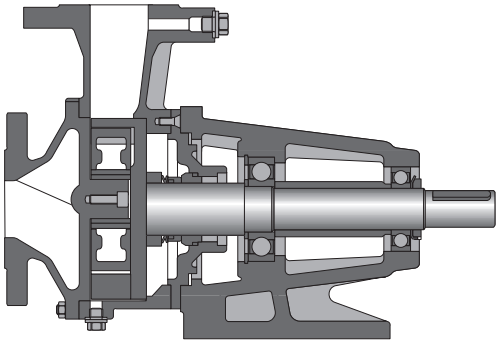


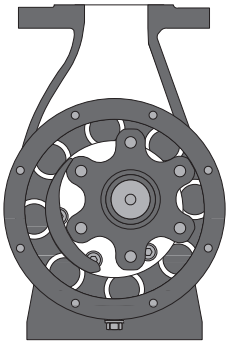
- Self-priming
- Shaft seal by magnetic coupling

Capacity:	0,5 to 120 m^3/h
Discharge pressure:	max. 100 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 °C to +250 °C
Viscosity:	0,3 to 6.000 mm^2/s
Pressure ratings:	PN 25 to PN 100

Type HP

Chemical | Petrochemical | Refrigeration | Energy



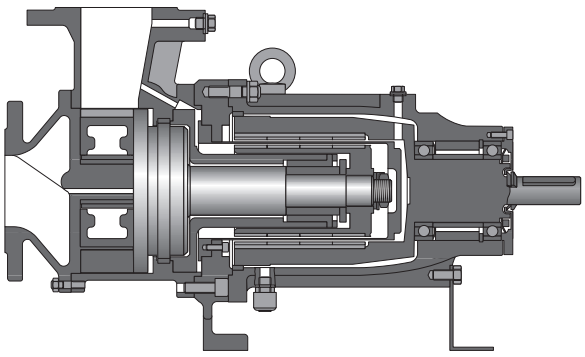


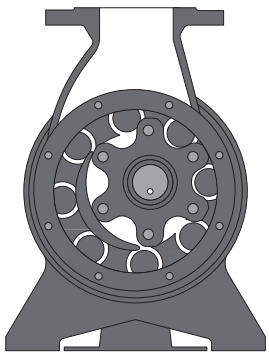
- Self-priming
- Shaft seal by stuffing box packing, single or double mechanical seal

Capacity:	1 to 60 m^3/h
Discharge pressure:	max. 12 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 C° to +200 °C
Viscosity:	1 to 1.000.000 mm^2/s
Pressure rating:	PN 16

Type MHP

Chemical | Petrochemical | Refrigeration | Energy



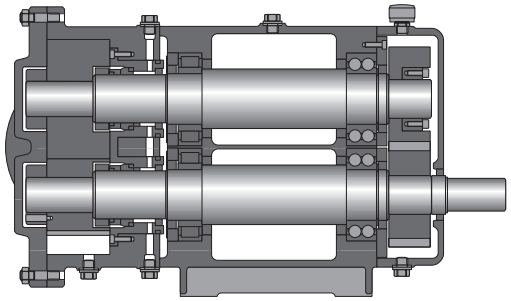


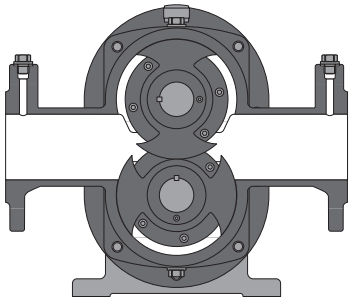
- Self-priming
- Shaft seal by magnetic coupling

Capacity:	1 to 60 m^3/h
Discharge pressure:	max. 12 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 °C to +200 °C
Viscosity:	1 to 5.000 mm^2/s
Pressure rating:	PN 16

Type KRL

Chemical | Petrochemical | Refrigeration | Energy



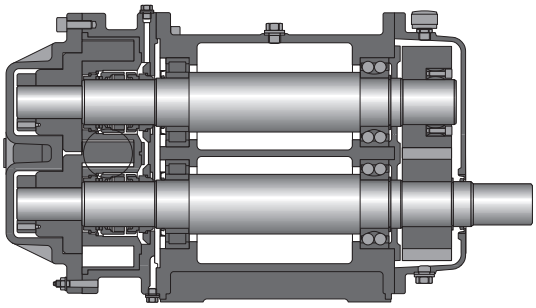


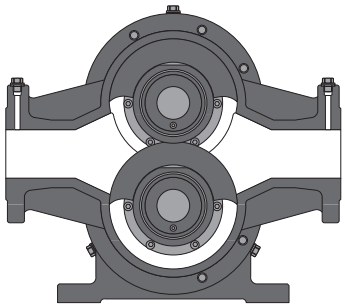
- Self-priming
- Shaft seal by stuffing box packing, single or double mechanical seal

Capacity:	1 to 300 m^3/h
Discharge pressure:	max. 100 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 °C to +280 °C
Viscosity:	1 to 5.000.000 mm^2/s
Pressure ratings:	PN 16 and PN 25

Type KRH

Chemical | Petrochemical | Refrigeration | Energy





- Self-priming
- Shaft seal by stuffing box packing, single or double mechanical seal

Capacity:	1 to 300 m^3/h
Discharge pressure:	max. 100 bar
Rotating speed:	max. 1450 rpm
Operating temperature:	–20 °C to +280 °C
Viscosity:	1 to 5.000.000 mm^2/s
Pressure ratings:	PN 16 and PN 25

Our products comply with:

- Explosion protection acc. to ATEX / UL / CQST / CSA
- VOC directive 1999/13/EC
- TA-Luft
- IPPC-directive
- CE
- RCCM, level 2
- Rosgortechnazdor

HERMETIC-Pumpen GmbH is certified acc. to:

- ISO 9001:2000
- GOST "R"
- ATEX 94/9/EG
- AD HP 0 / TRD 201
- DIN EN 729-2
- KTA 1401, QSP 4a

Convincing service.

Important features are readiness, mobility, flexibility, availability and reliability. We are anxious to ensure a pump operation at best availability and efficiency to our customers.

Installation and commissioning

- service effected on site by own service technicians

Spare part servicing

- prompt and longstanding availability
- customized assistance in spare part stockkeeping

Repair and overhauling

- professional repairs including test run executed by the parent factory
- or executed by one of our service stations worldwide

Maintenance and service agreement

- concepts individually worked out to increase the availability of your production facilities

Training and workshops

- extra qualification of your staff to ensure the course of your manufacture

LEDERLE Hermetic

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