

R-FT SERIES

Gear pump - Heat transfer fluid

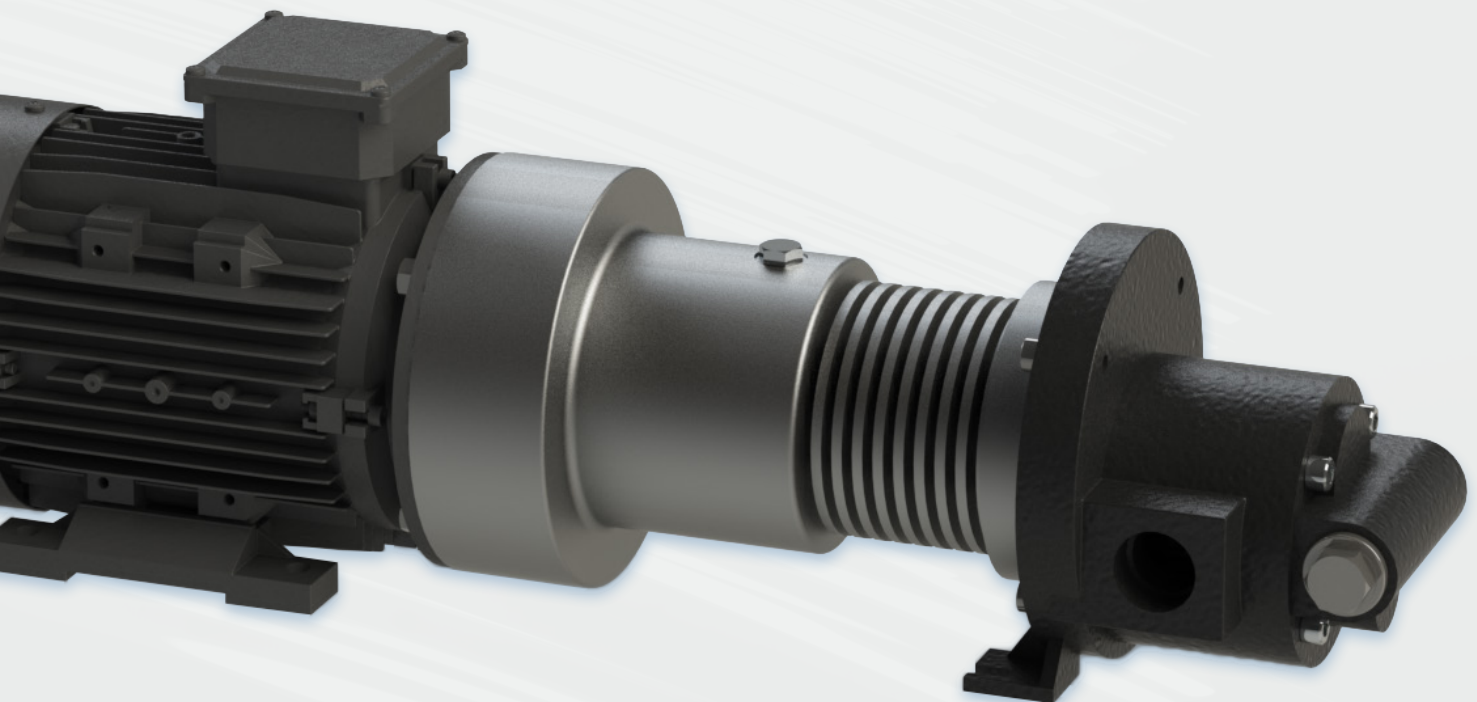
SPECIFICATIONS

DESIGN

SPARE PARTS

DIMENSIONS

PERFORMANCE CURVES



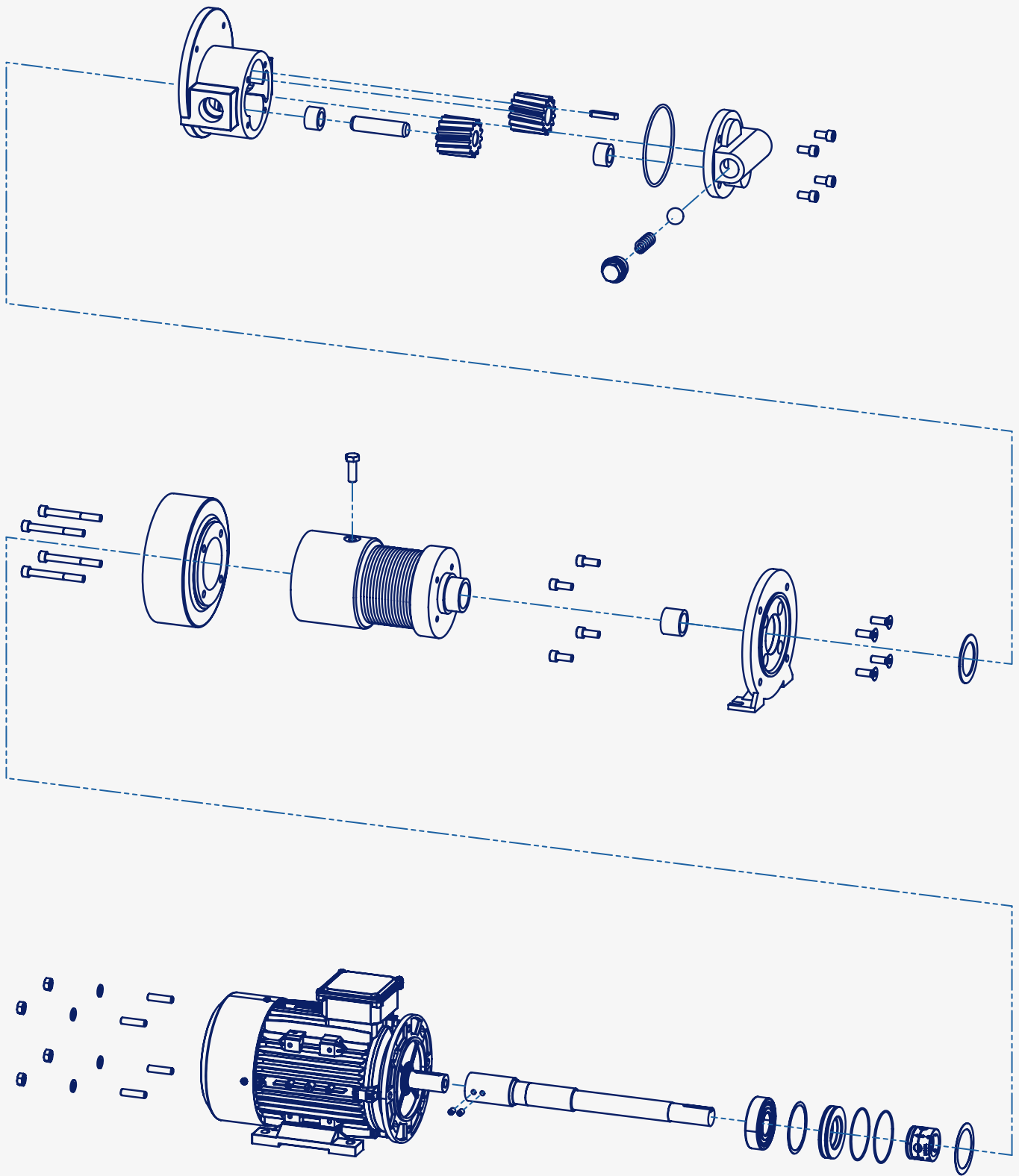


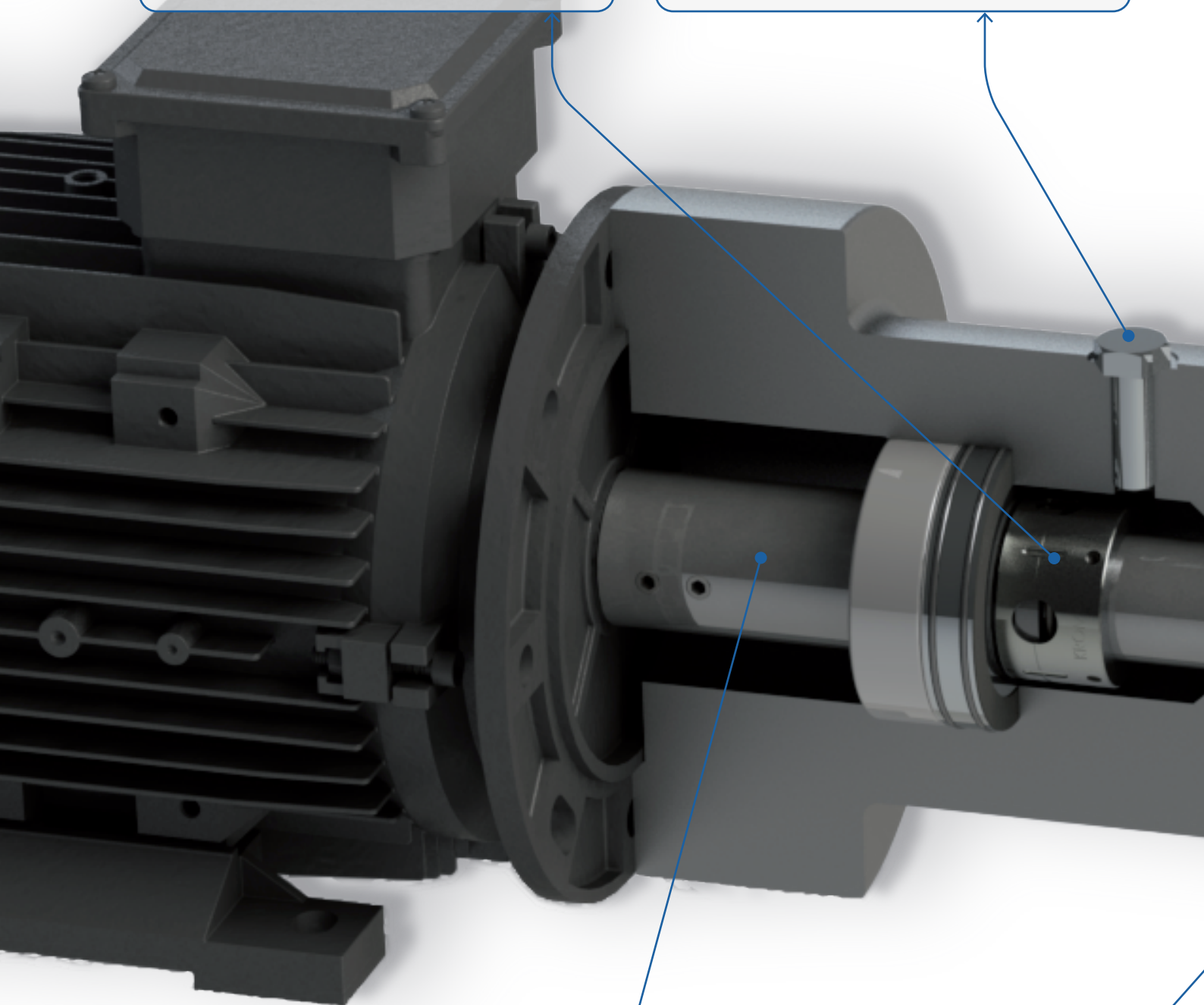
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NV-2 type mechanical seal (EN12756) with independent direction of rotation. Cylindrical spring and dragging by means of set screws. Robust and adaptable design.

Filling/drainage plug of the mechanical seal housing. It must be covered with oil for proper lubrication and to avoid dry running of its components.

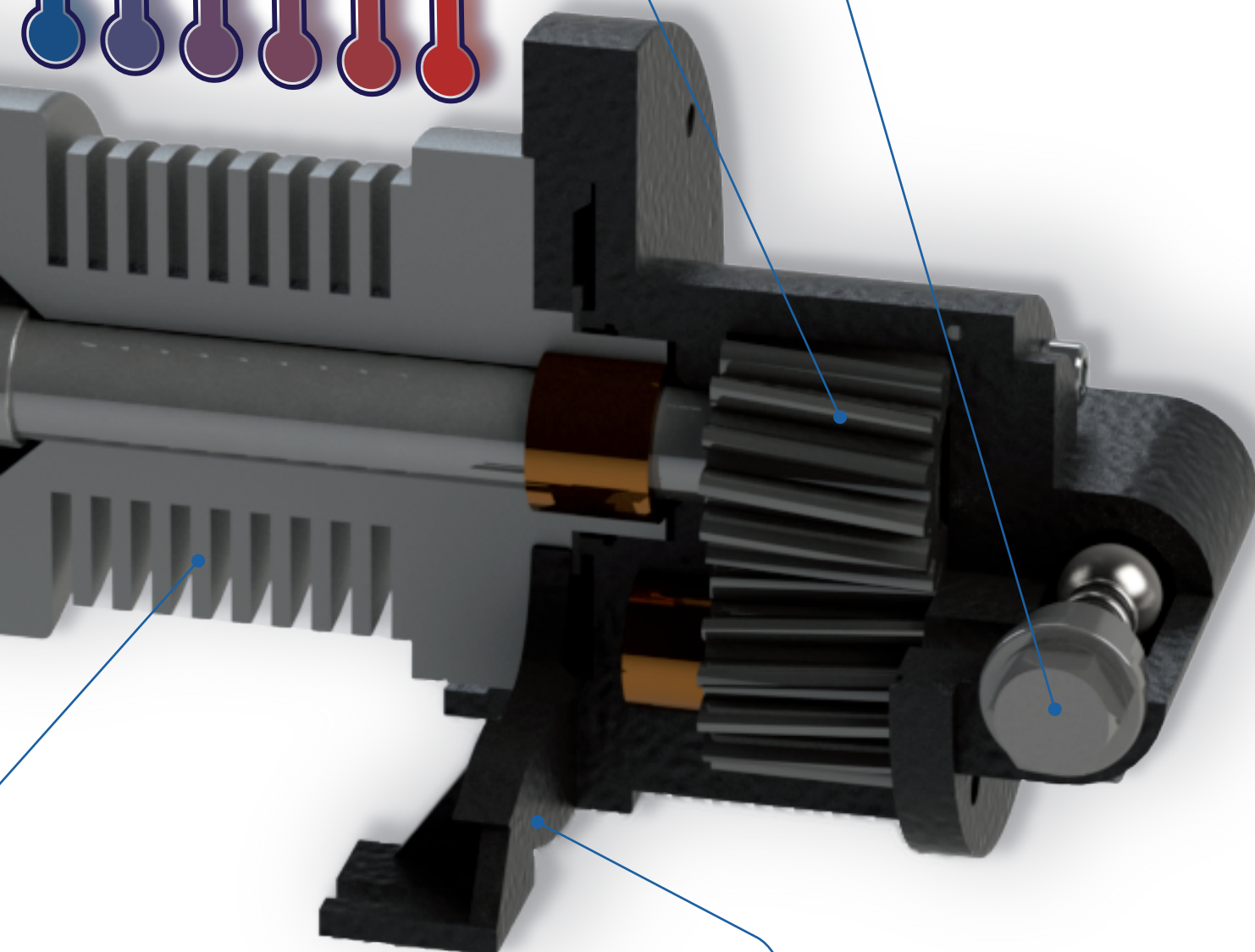
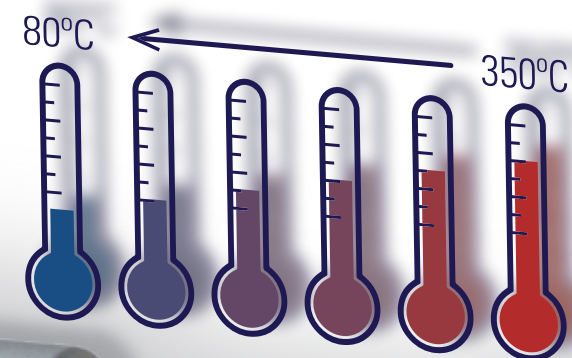


The unit is built in a monoblock execution, with the motor firmly coupled to the pump by using a rigid coupling and a flange.

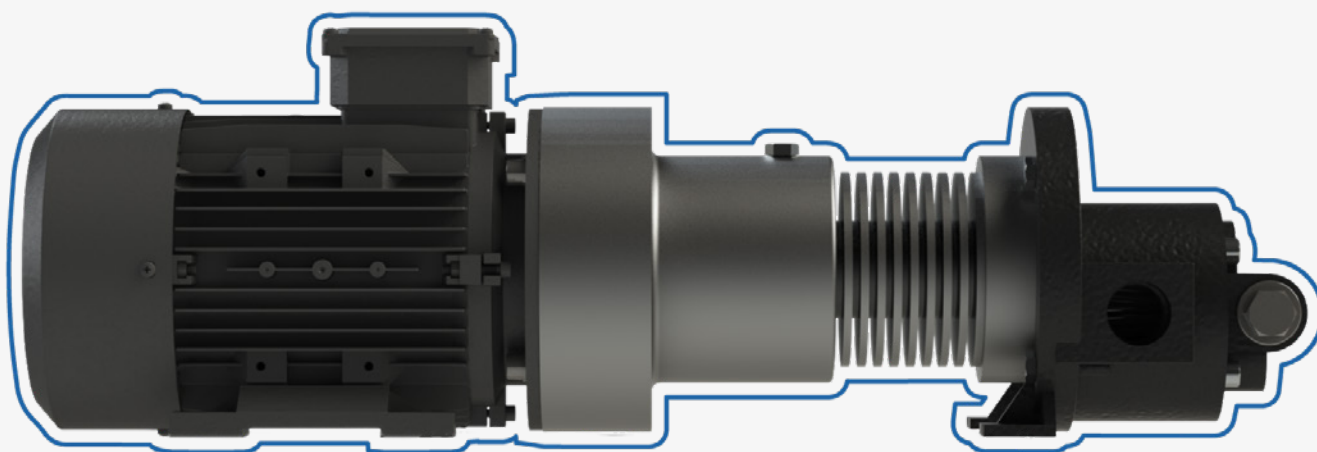
Finned heatsink casing to ensure temperature reduction in the area of the mechanical seal and bearings.

External helical gears, made of treated steel, that ensure an optimum and silent operation of the equipment.

Built-in overpressure safety valve located inside the pump front cover. It redirects the fluid back to the suction area.



Front support legs, integrated in the pump back cover, to ensure greater stability to the equipment and support the gear casing.



R-FT Series

The R-FT series is a set of external helical gear pumps, specially designed to work in high temperature transfer applications, up to 350°C. It is suitable for any thermal fluid application in the chemical, textile, food, automotive, pharmaceutical and wood industries.

The R-FT series, as usual in our range of gear pumps, is equipped with a built-in internal safety valve to avoid overpressure. In addition, it is a self-priming pump, which means that it does not require any priming process prior to the start-up of the unit.

Specifications

Materials

Pump casing	GG-25
Gears	Treated steel
Pump shaft	F-114
Heatsink casing	Ductile cast iron
Mechanical seal	NV-2 Type (EN 12756)
Motor flange	Ductile cast iron

Technical data

Motor	Three-phase according to IEC 60034-30 std.
Efficiency	- IE2 or IE3 for power > 1 HP - IE1 if the power < 1 HP - It can be supplied up to IE5.
Tension	- Three-phase 230/400 V $\pm$ 10% up to 5,5 HP - Three-phase 400/690 V $\pm$ 10% from 7,5 HP
Poles	4 or 6 depending on the model
Level of protection	IP55
Insulation	F class

Usage limits

Range of flow rates	From 220 up to 14000 l/h
Range of pressures	Up to 10 bar depending on the model
Max. Working pressure	12 bar
Range of temperatures	From -40°C up to 350°C

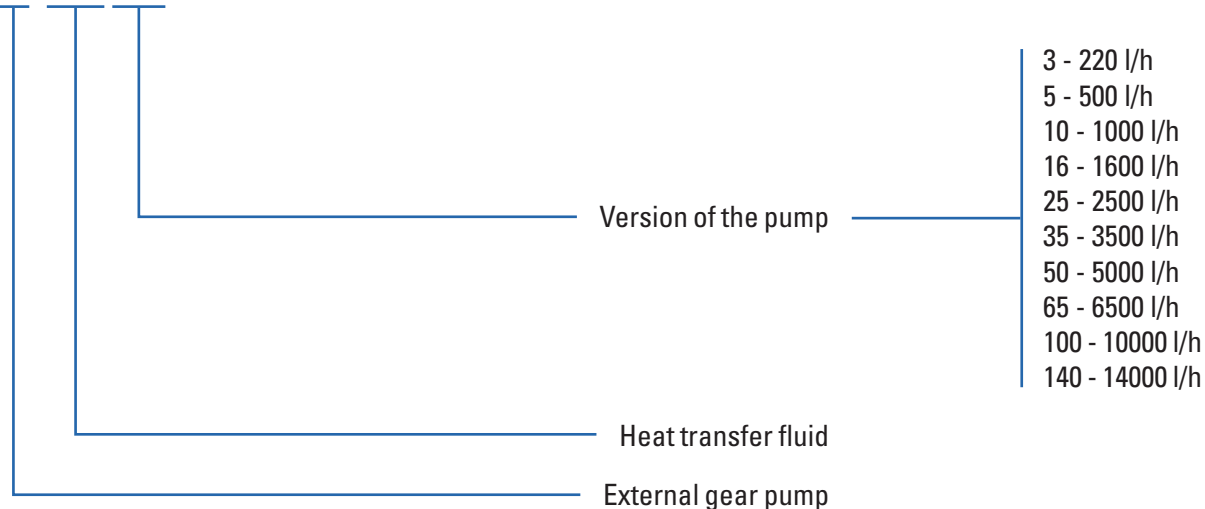
Connections

	Suction	Discharge
R-FT 3	3/8	3/8
R-FT 5	3/4	3/4
R-FT 10/16	1"	1"
R-FT 25/35/50/65	1" 1/4	1" 1/4
R-FT 100/140	DN65	DN65

Model characteristics

Model	Power		Tension	I	n	P _{MAX.}	Flow
	HP	kW	V	A	rpm	kg/cm ²	l/h
R-FT 3	0,5	0,37	230/400T	2,5/1,5	1450	10	220
R-FT 5	0,5	0,37	230/400T	2,5/1,5	1450	10	500
R-FT 10	1	0,75	230/400T	3,6/2,1	1450	10	1000
R-FT 16	1	0,75	230/400T	3,6/2,1	1450	6	1600
R-FT 25	2	1,5	230/400T	7,1/4,1	950	10	2500
R-FT-35	3	1,5	230/400T	8,8/5,1	1450	8	3500
R-FT 50	4	3	230/400T	12,3/7,1	1450	10	5000
R-FT 65	5,5	4	230/400T	16/9,3	1450	8	6500
R-FT 100	5,5	4	230/400T	16/9,3	950	10	10000
R-FT 140	7,5	5,5	400/690T	22,5/13	1450	7	14000

Nomenclature

R-FT 35

¡A revolutionary device for heat transfer fluid installations!

- High energy savings
- Facilitates the assembly of subcircuits



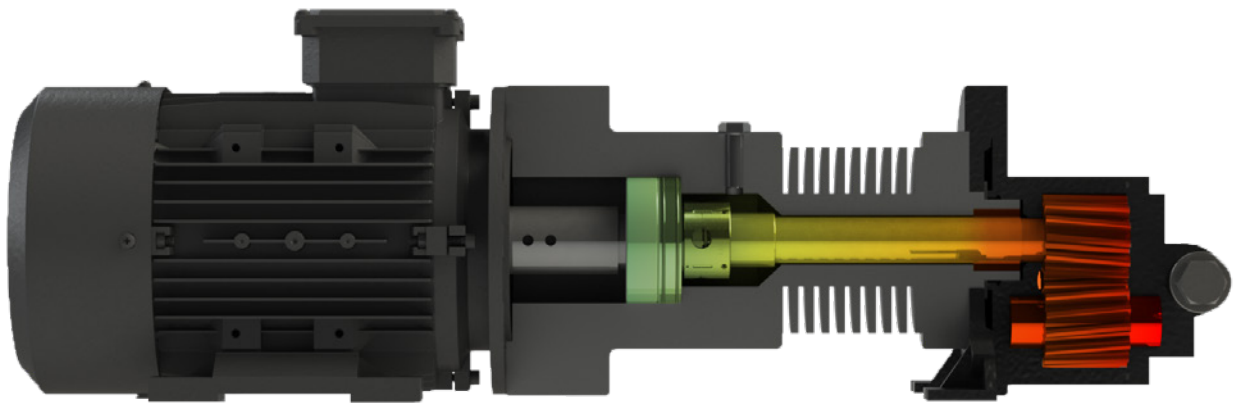


Design

Heat dissipation

The main feature of the R-FT Series is none other than its ability to work at high temperatures, up to 350°C. The operation of the pump has been rigorously tested at Bomba Elias and verified by thermography. Therefore we can state that, thanks to the design of the pump, the temperature of the working area is considerably reduced along the horizontal axis, ensuring an optimal condition of gaskets, bearings and the mechanical seal.

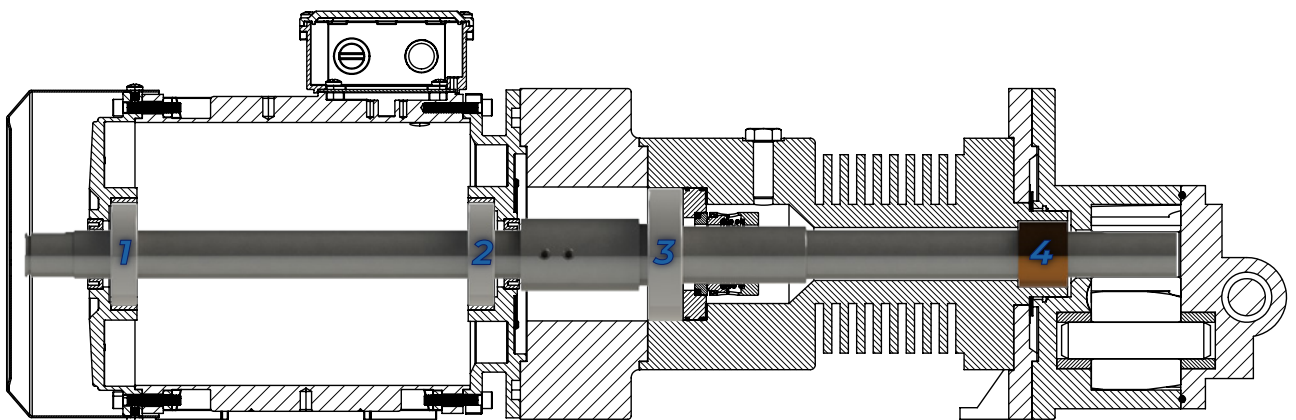
The heatsink casing allows to reduce the temperature of the heat-transfer fluid. It conducts the heat from the internal part, in contact with the fluid, to the external part, and finally releases the heat to another medium by convection.



Conception of the axis

The pump shaft is directly coupled to the end of the motor shaft by means of a rigid coupling, which ensures optimum alignment and allows a smooth and friction-free running.

The shaft is supported at up to four different points, consisting of three deep groove ball bearings and a front bearing that, apart from providing stability to the shaft, also serves as a restrictive ring. These supports, properly distributed along the unit, provide excellent stability, ensuring the correct operation of the pump and increasing the overall lifespan of the pump.



Sealing solution

NV-2 Type mechanical seal

Characteristics

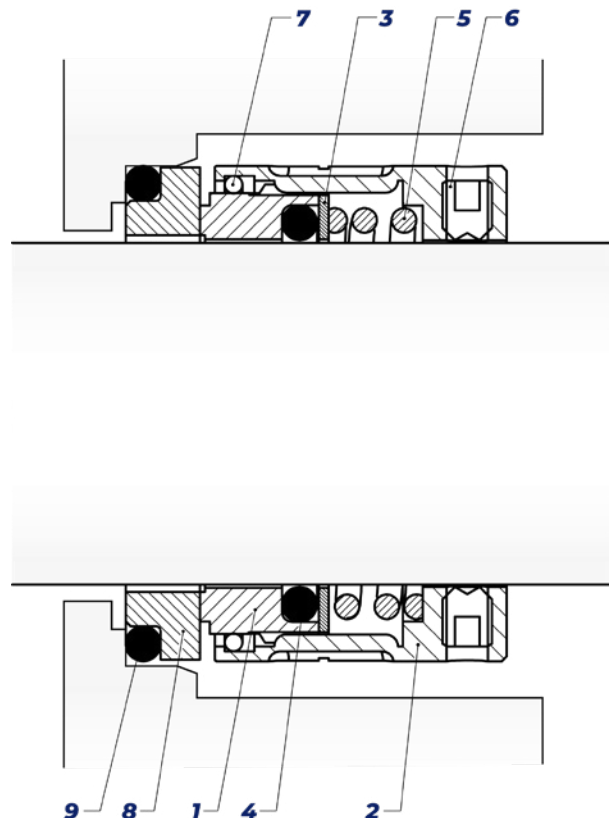
- Modular design. Its components are easily interchangeable and are manufactured in a wide variety of materials for specific applications.
- Reversible. It can rotate in both directions indistinctly.
- Friction faces in monolithic and semi-balanced construction.
- Robustness. The rotating part is fastened to the shaft using setscrews and the torque is transmitted through a solid, machined steel ring.
- Spring. The cylindrical spring design allows the seal to work with loaded liquids without blockage problems.
- Easy assembly. The seal incorporates an indicator to adjust it to the working dimension.
- Self-cleaning. The design of the seal avoids product accumulation on its surface.
- Dimensions according to EN 12756 standards.

Usage limits

- P (Pressure): Up to 16 bar depending on the PV factor.
- T (Temperature): -40°C to 200°C (depending on secondary seal material).
- vg (Speed): 20 m/s (10 m/s for U1U1).

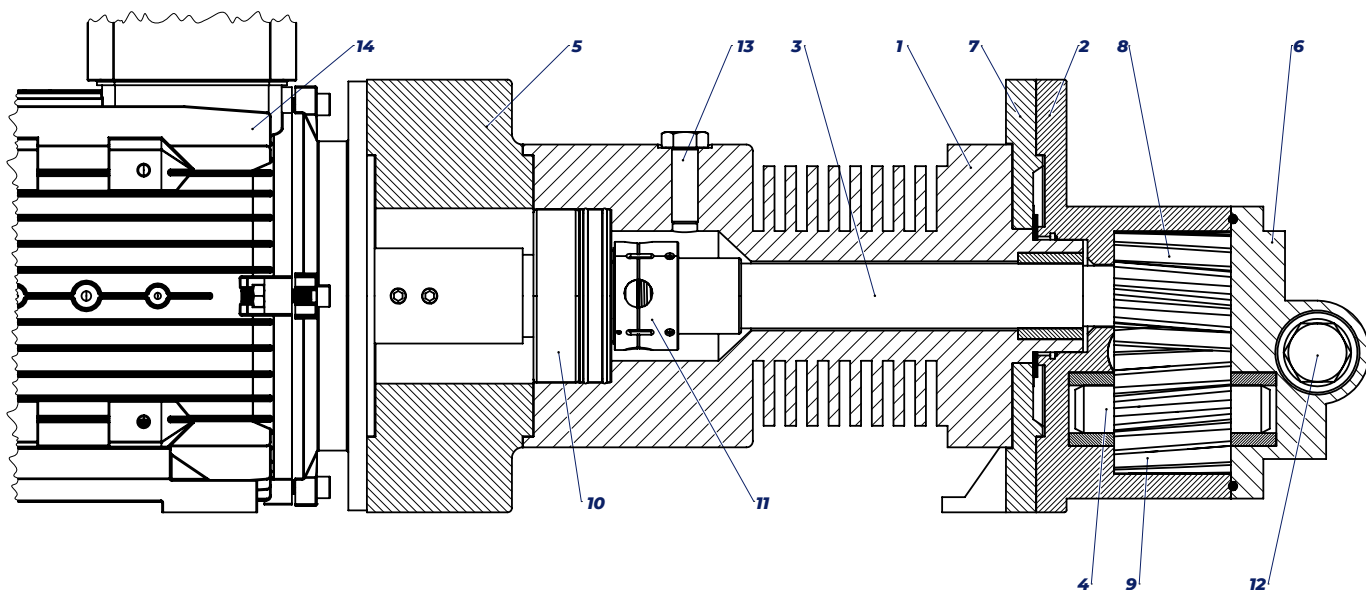
Components breakdown

REF	Designation	Material
1	Rotating ring	Carbon resin
2	Draging sleeve	CrNiMo-steel
3	Gasket	CrNiMo-steel
4	Shaft gasket	FPM (Viton)
5	Spring	CrNiMo-steel
6	Set screw kit	CrNiMo-steel
7	Safety ring	CrNiMo-steel
8	Stationary ring	Silicone carbide Q2
9	Stationary gasket	FPM (Viton)



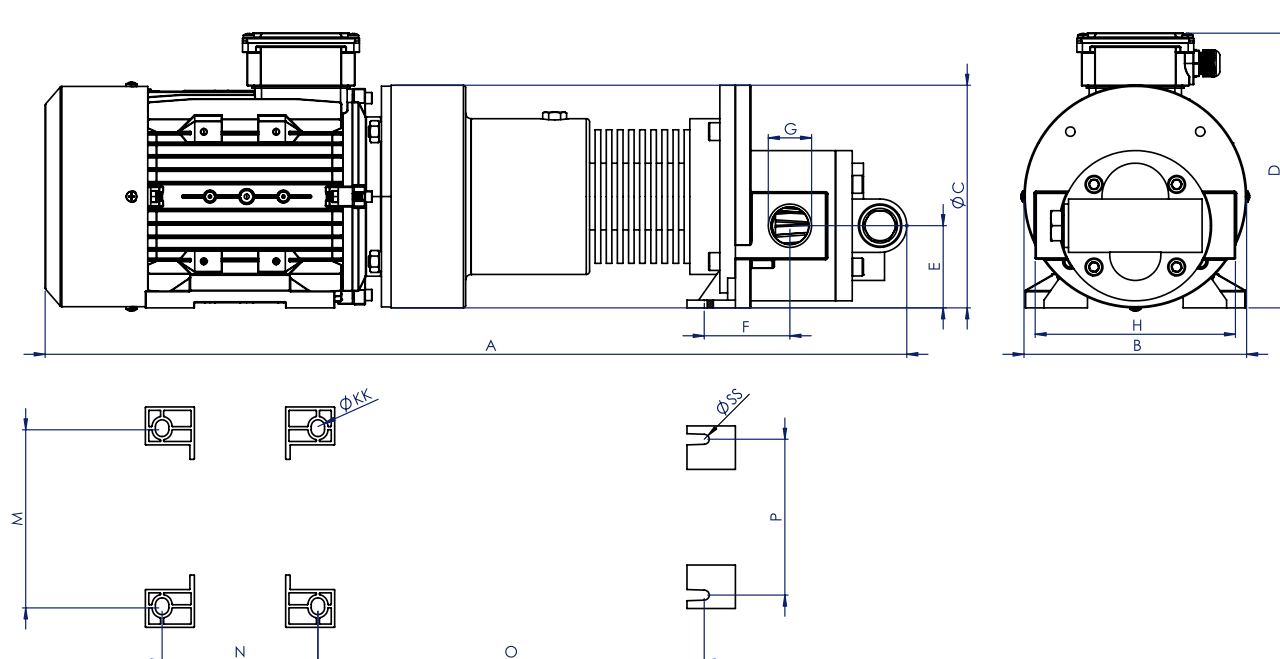


Components breakdown

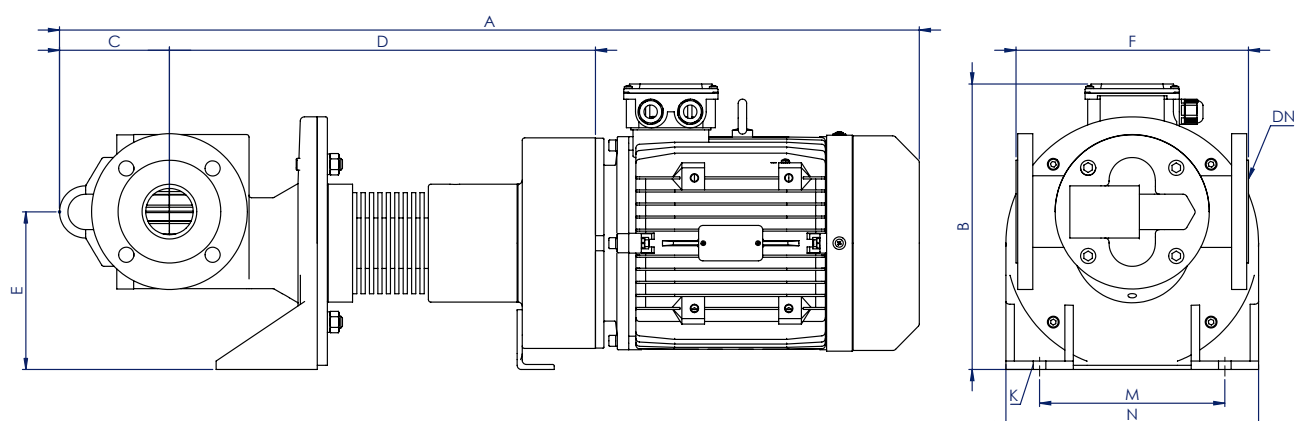


REF	Designation	REF	Designation
1	Finned heatsink casing	8	Driving shaft bearing
2	Gear casing	9	Driven shaft bearing
3	Drive shaft	10	Ball bearing
4	Driven shaft	11	Mechanical seal
5	Motor-pump flange	12	Safety valve
6	Front cover	13	Filling/draining plug
7	Gear casing back cover	14	Electric motor

Dimensions table



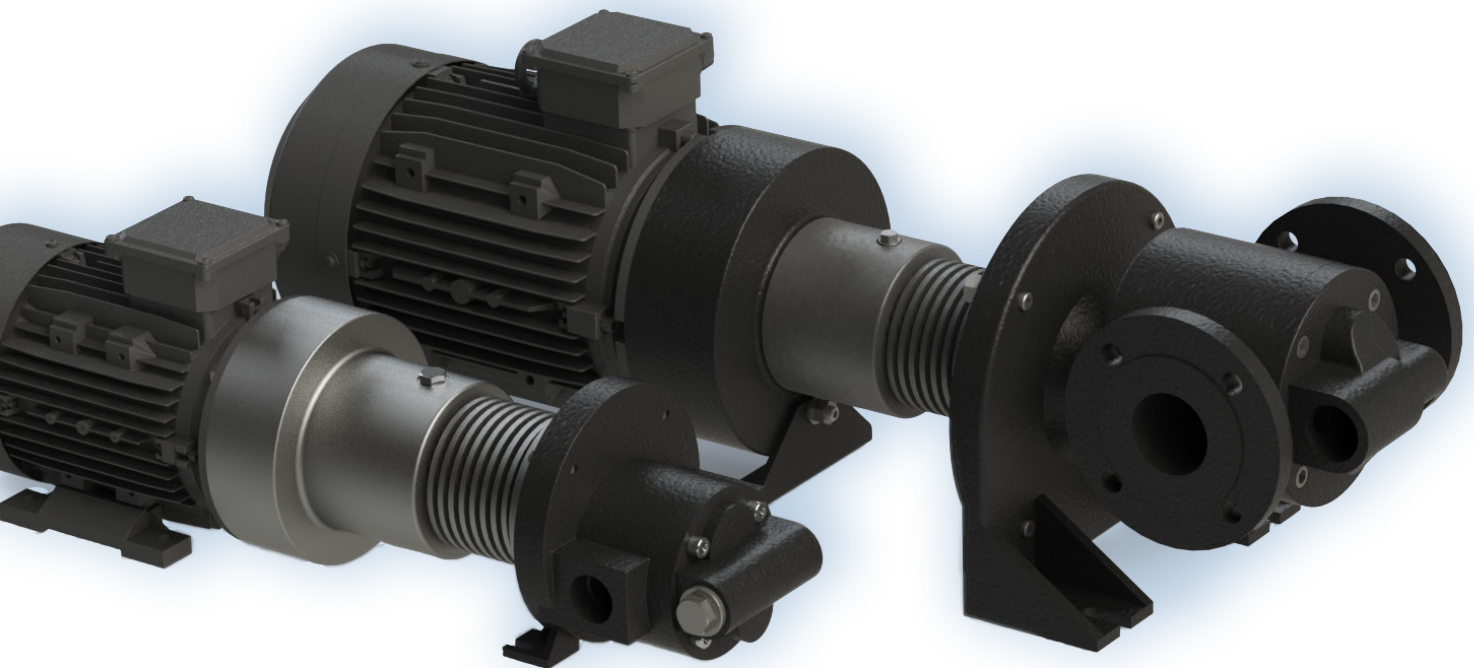
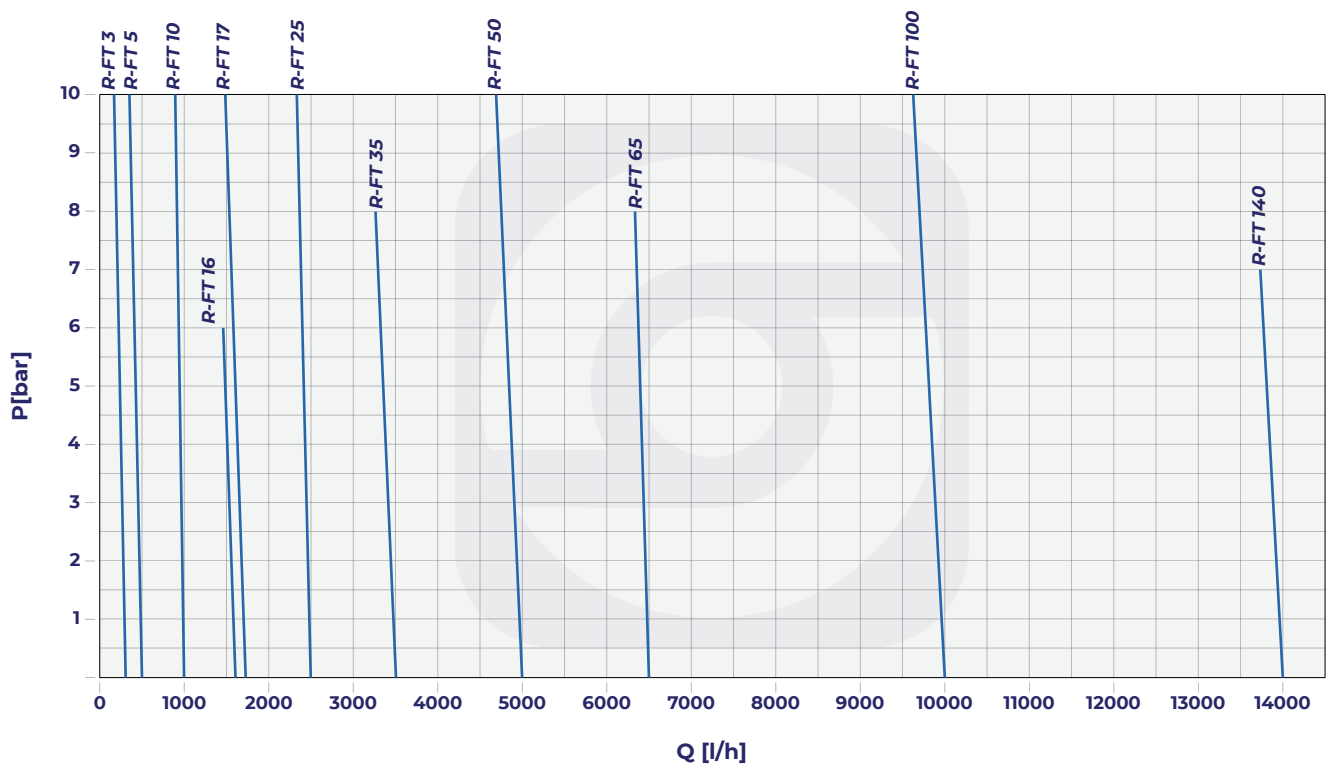
Model	Pump dimensions								Anchorage					
	A	B	C	D	E	F	G	H	M	N	O	P	KK	SS
R-FT 3	610	140	140	188	58	67	G 3/8	98	112	90	308	112	7	7
R-FT 5	610	140	140	188	58	67	G 3/4	98	112	90	308	112	7	7
R-FT 10	663	160	160	210	63,25	77	G 1"	120	125	100	317	125	10	9
R-FT 16	663	160	160	210	62,15	77	G 1"	120	125	100	317	125	10	9
R-FT 25	787	200	200	260	73,65	77	G 1" 1/4	180	160	140	341,7	140	12	9
R-FT 35	787	200	200	260	73,65	77	G 1" 1/4	180	160	140	341,7	140	12	9
R-FT 50	787	200	200	260	73,825	77	G 1" 1/4	180	160	140	341,7	140	12	9
R-FT 65	787	200	200	260	73,95	77	G 1" 1/4	180	160	140	341,7	140	12	9



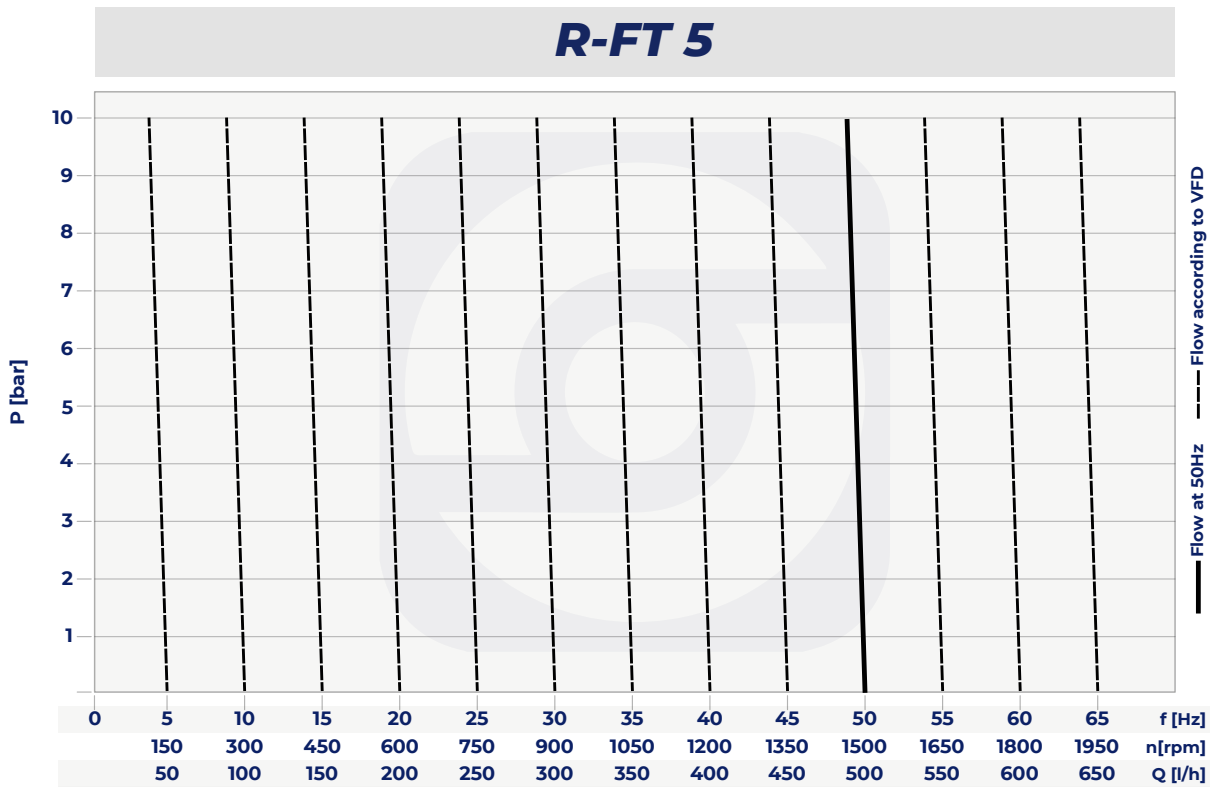
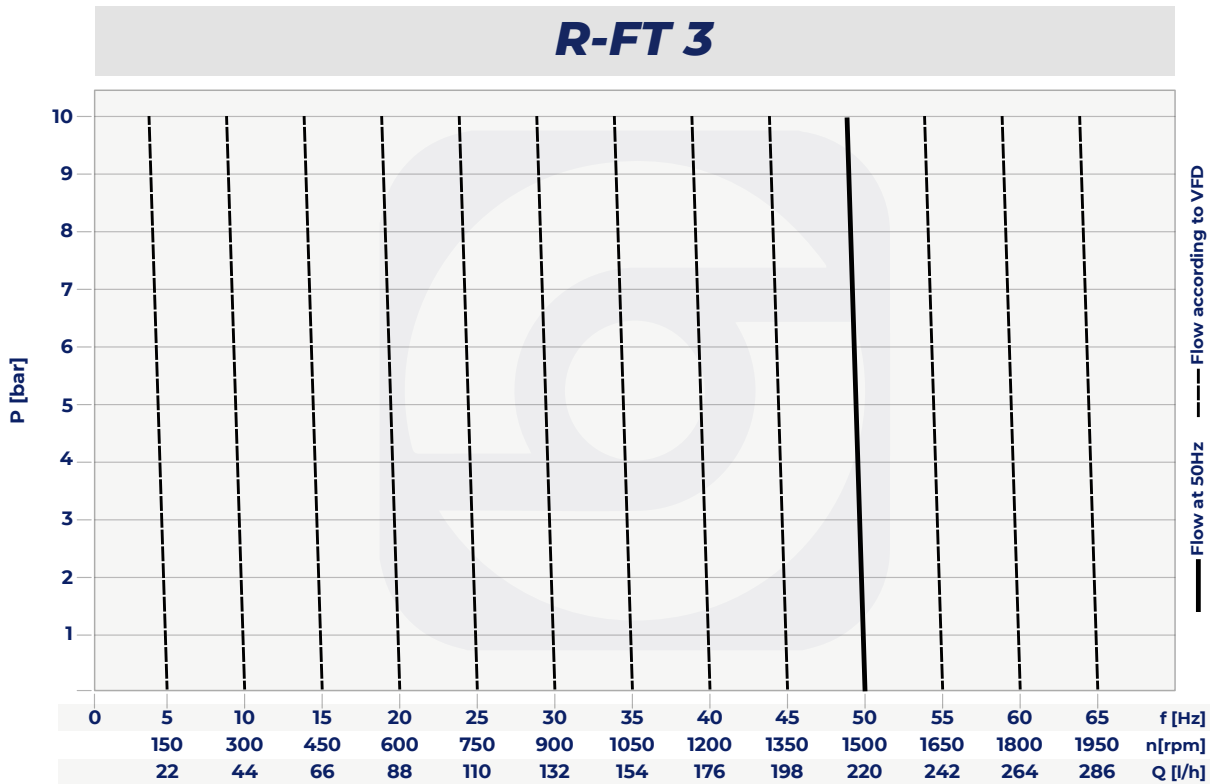
Model	Pump dimensions							Anchorage		
	A	B	C	D	E	F	DN	M	N	K
R-FT 100	1021	340	130,5	506	187,125	276	DN65	220	300	15
R-FT 140	1021	340	130,5	506	187,125	276	DN65	220	300	15



Pump selection chart

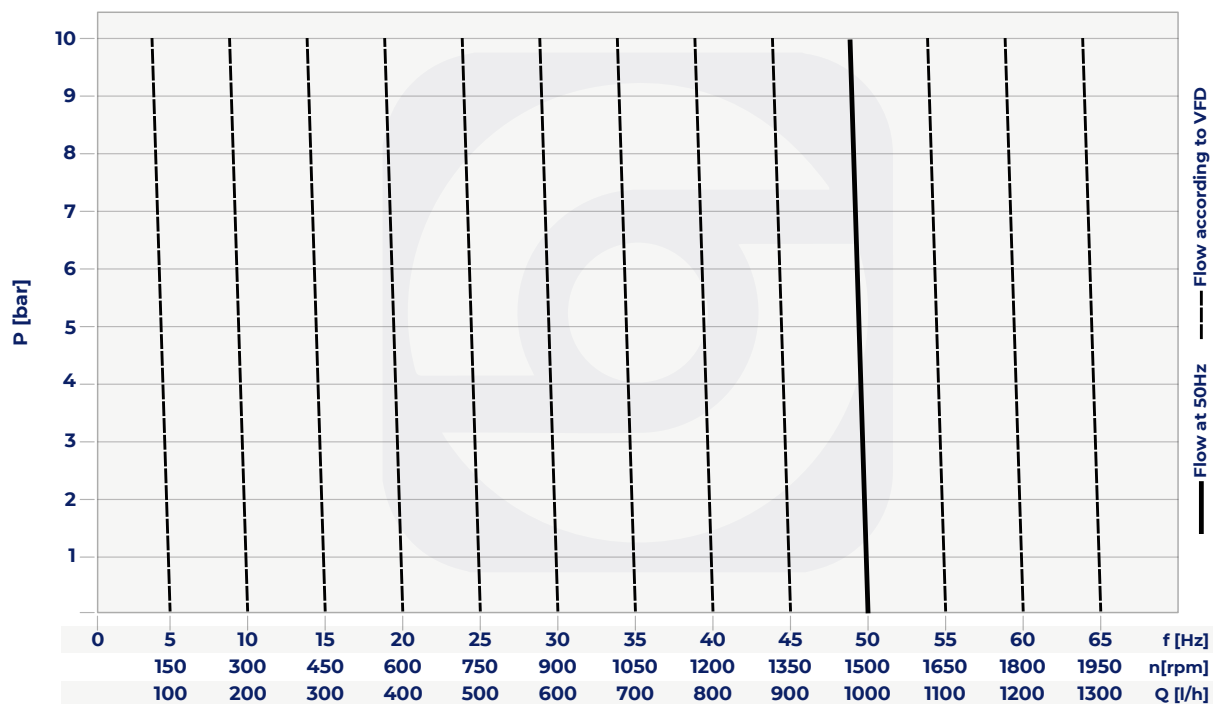


Pump performance curves

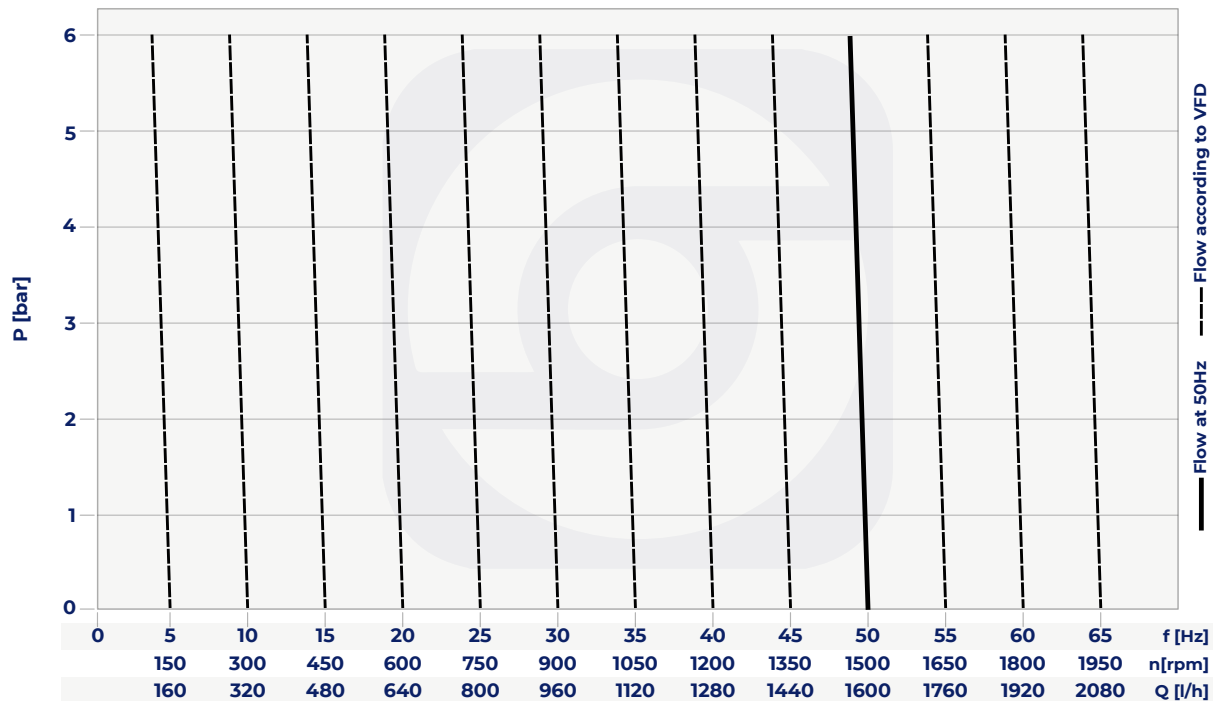


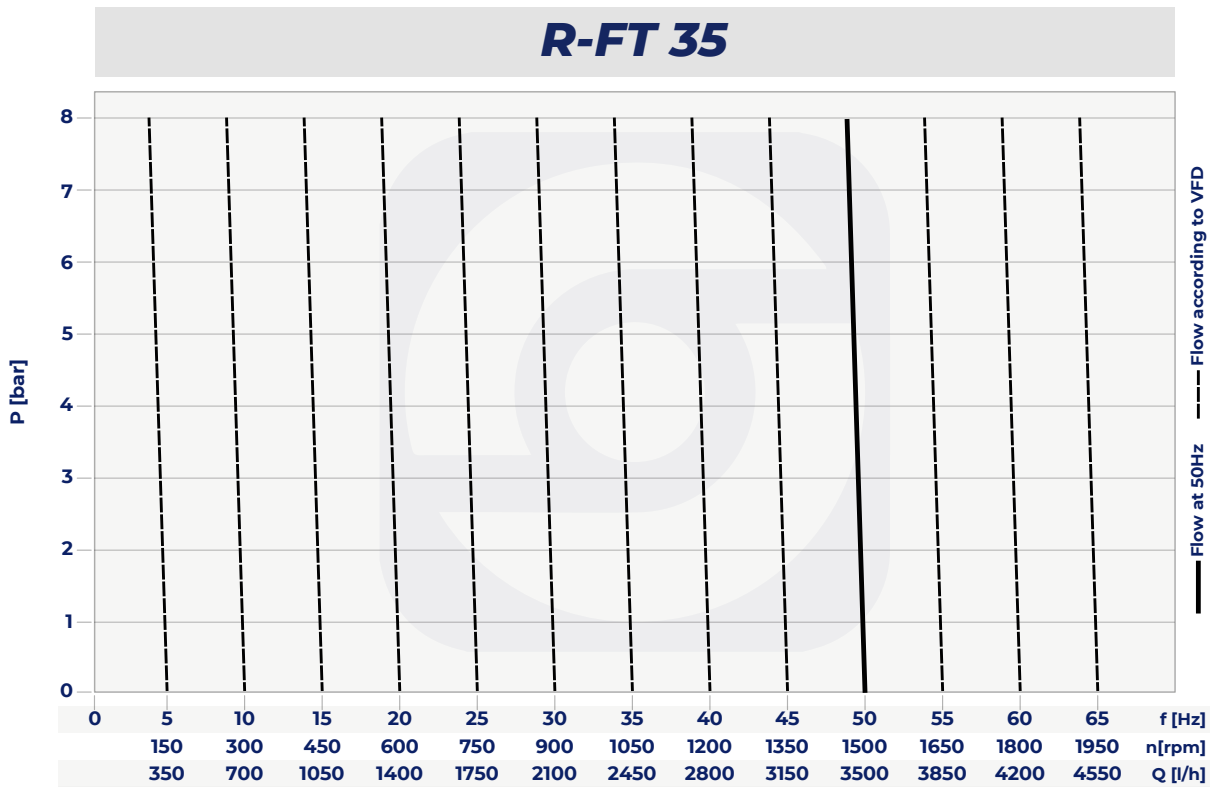
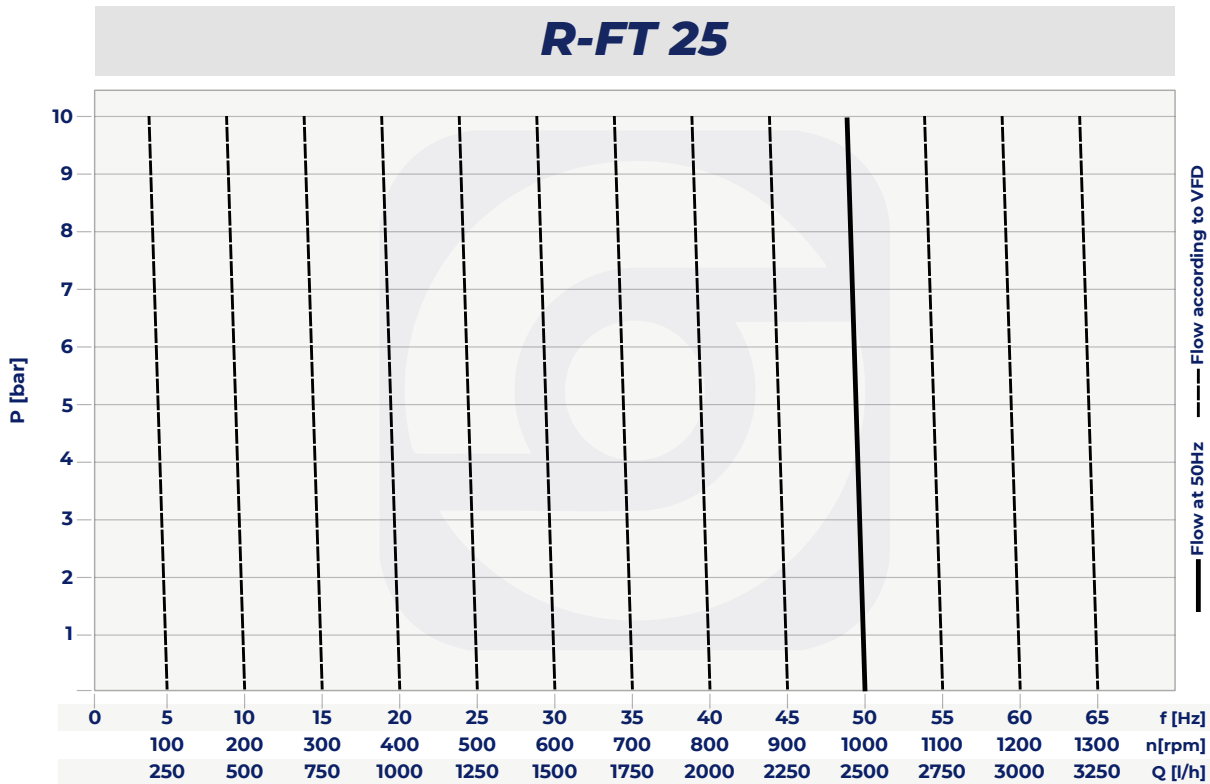


R-FT 10



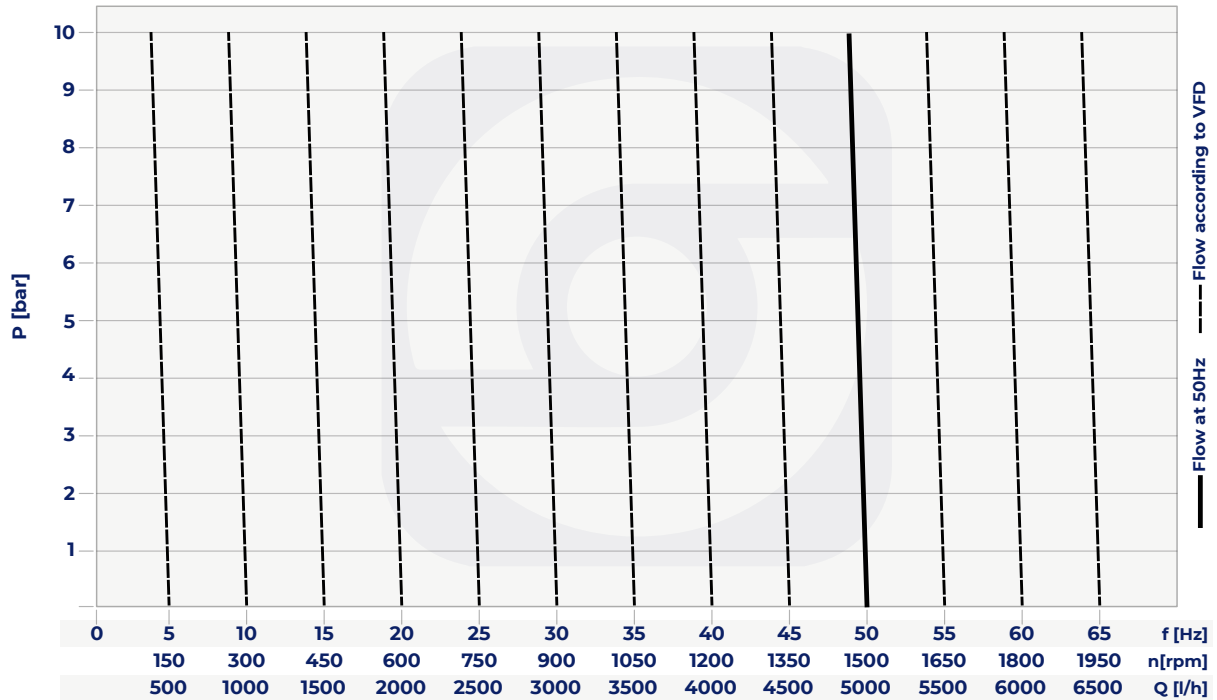
R-FT 16



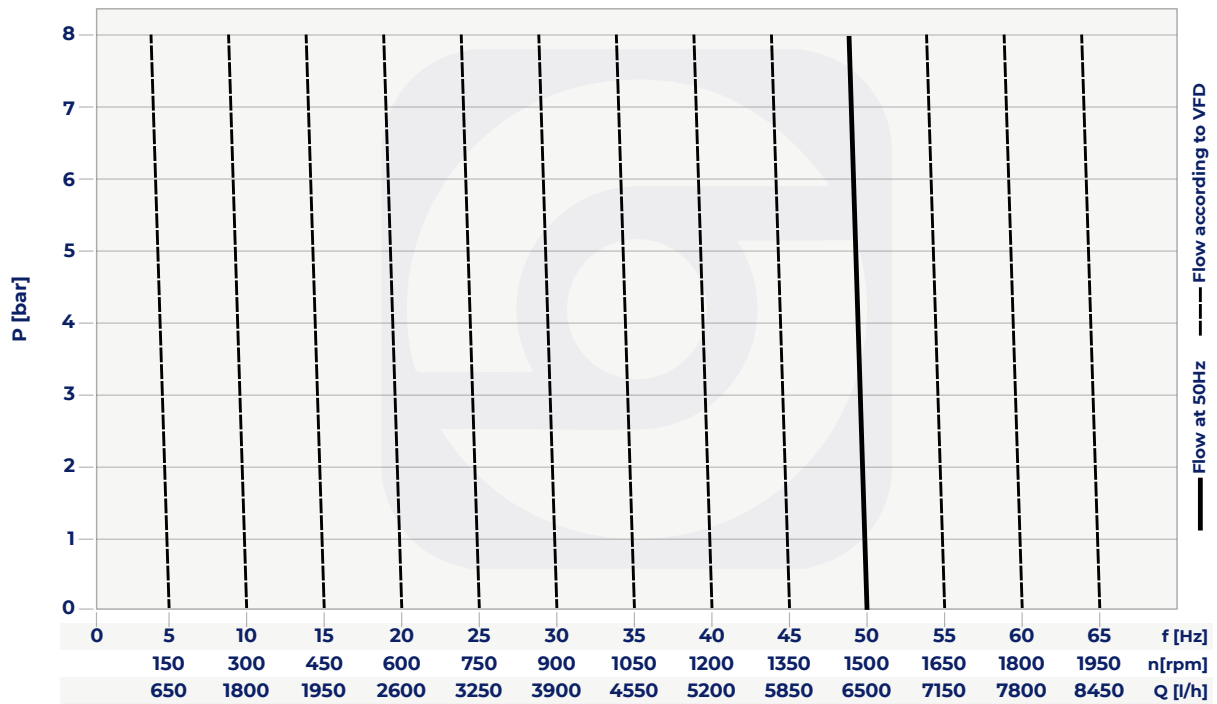


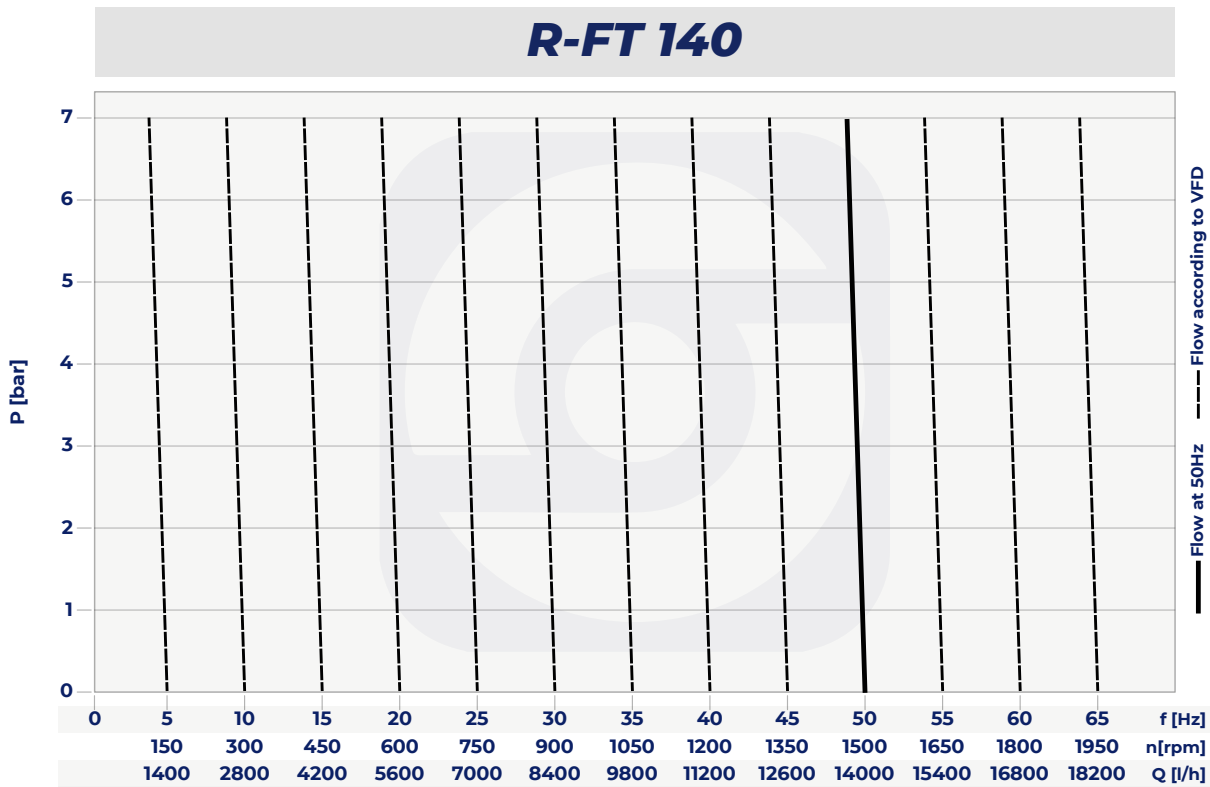
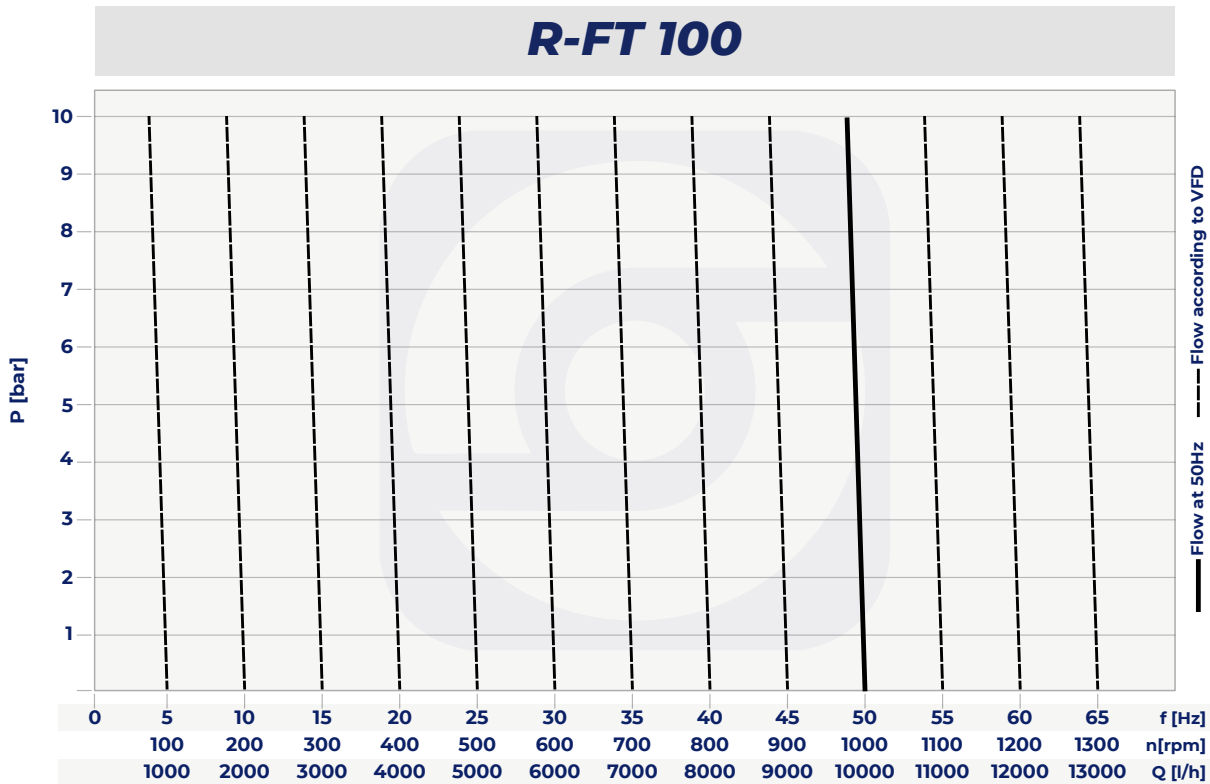


R-FT 50



R-FT 65

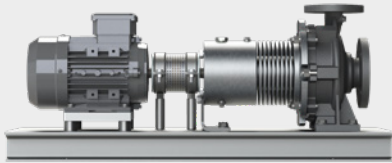




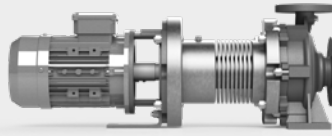


!We have all the solutions available for your HEAT TRANSFER fluid installation at your disposal!

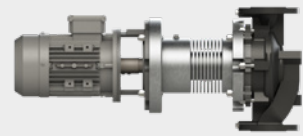
Main installation



AC-FT Series: EN733, on baseplate.
FT Series: EN22858, on baseplate.



FT M Series: EN733, monoblock,
variable speed.

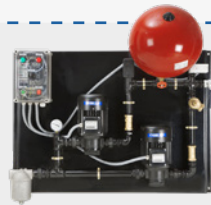


IAC-FT Series: EN733, monoblock,
In-Line.

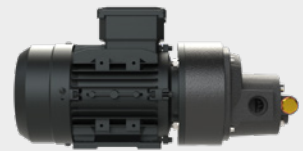
Subinstallations



R-FT Series: gear pump. Adjustable
flow. Energy savings.



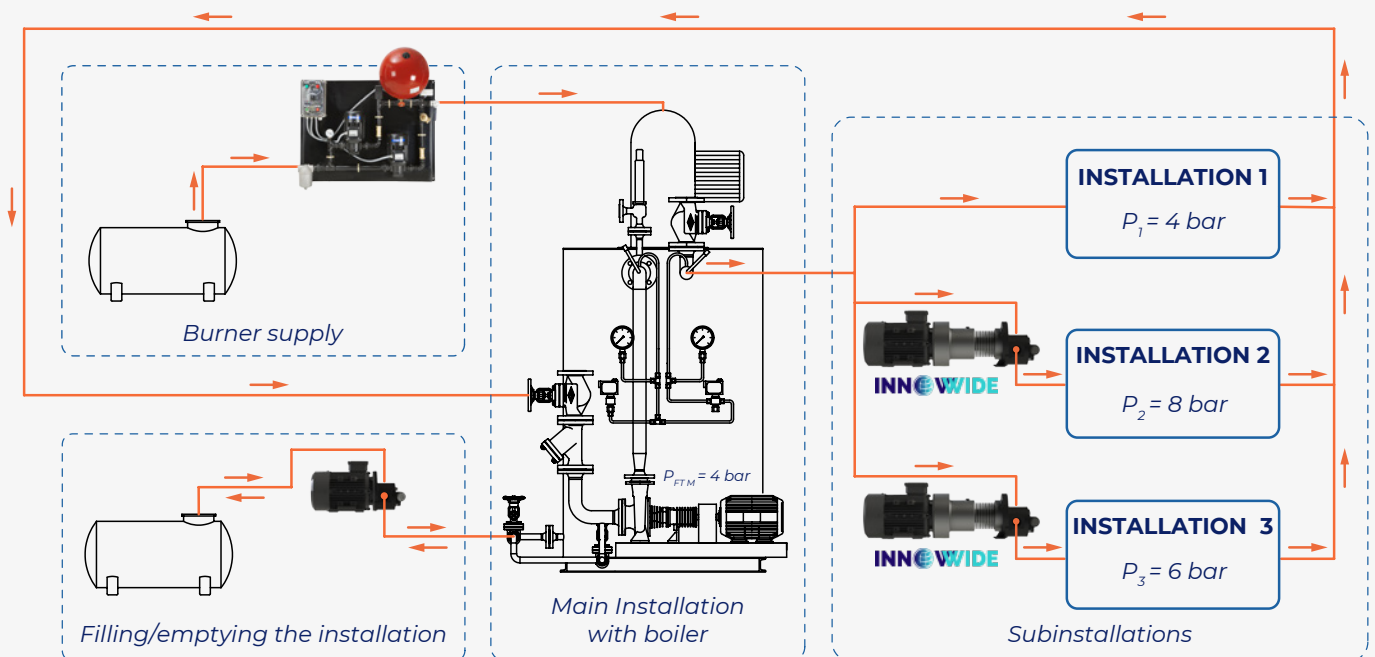
GPG/GPG-D Series: diesel pressure
booster sets.



R-U Series: Gear pump with standard
motor, self-priming and reversible.

Burner supply

Filling/draining of the installation





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