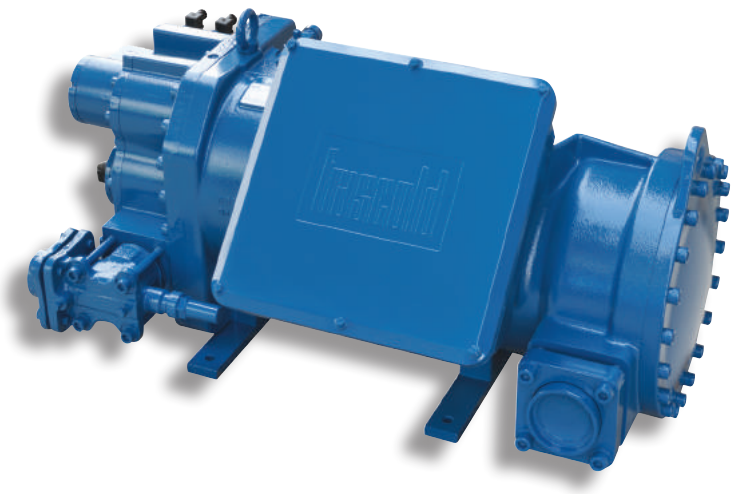
Frascold®

RTS-NR

Semi-hermetic screw compressors

for refrigeration

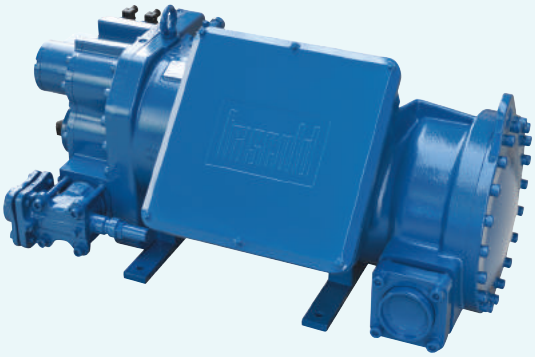


v3

FCAT250_02_EN
Product Selection Catalogue

Catalogue index

Introduction



The compressors of the RTS and NR series have been developed for universal applications in medium to low temperature refrigeration systems, and are adapted for operating in parallel multi-compressor systems. They cover a refrigeration capacity range of up to 634 kW and are available in 34 different models, with volumetric capacity at 50 Hz from 120 to 538 m³/h. Designed to function continuously for long periods without stoppages and without intensive maintenance operations, they guarantee a superior coefficient of performance to competing products and implement technical solutions dedicated to a reduction of noise and pulsations. Accurate planning, production entirely “made in Italy” and quality control methods guarantee excellent performance and reliability. The screw unit is completely designed by Frascold and is of the double screw type, with male and female helicoidal rotors having an innovative profile. The rotors are designed to guarantee elevated performance under all operational conditions (pressure, temperature and speed of the refrigerant) which might be encountered in the related fields of operation. The part-winding, high performance, electric motor is optimized for the various refrigerants.
Thermal protection is guaranteed by the PTC sensors integrated with the coils. The motor is cooled by the refrigerant flow passing from the suction valve through the compressor body in passages with wide exchange surfaces and reduced pressure drops. The efficiency is high, even at partial loads. Operation is designed for use with an economizer and with a frequency converter. Robustly constructed with large diameter bearings sized to support the radial forces, suitable for refrigeration applications and designed for demanding applications and of long duration (average life 50,000 hours). The internal circuitry is designed to favour evaporation of any liquid present in the aspirated refrigerant, and to guarantee passage areas for the flow of refrigerant with reduced load losses. An elevated volumetric efficiency of the compressor is guaranteed thanks to the calibrated management of the dynamic film of fluid between the screws.

Performance Certification *ASERCOM*

CERTIFIED PRODUCT ASERCOM

Frascold is a member of *ASERCOM*, the Association which ensures the accuracy and reliability of its compressors and that has set out the procedure for measuring the performance of compressors and their certification process. The certification of compressors certifies and guarantees that the published performance matches the performance measured with reference to European standard EN12900.
The compressors with certified performance are marked with the Certified Product logo.
Additional information on www.asercom.org.

Product selection software FSS3

The FSS3 product selection software, fast and easy to use, allows the user to calculate the capacity in the various operational areas, and to access all technical information on Frascold compressors. If you have questions on the use of the software, please contact the customer service department by e-mail or telephone. You may also send your comments and suggestions for improving the FSS3 programme; we are always be pleased to receive your feed-back. Download the “setup.exe” file to your computer, launch it and follow the installation instructions. A link to the selection software will be created on your desktop to facilitate start-up.

Data related to the capacities of the compressors

The data for compressors with R134a (GWP=1430), R404A (GWP=3922), R507A (GWP=3985), R448A (GWP=1386), R449A (GWP=1397), R22 (GWP=1810) and R290 (GWP=3) refrigerants are contained in this brochure. Data relating to other refrigerants is available on request. The capacities are indicated in accordance with European Standard EN12900 and under operation at 50 Hz. To calculate the capacities under different conditions and at 60 Hz, use the Frascold Selection Software.

Operational limits

Functioning of the compressor is possible within the applications envelope; pay attention to the indications for the various areas of the envelope.
The limits refer to operation of the compressor at full load and with a power supply frequency of 50 Hz.
The envelopes published in this catalogue must be considered as general representations of the entire range of compressors.
Check the data sheets of every individual compressor model on the Frascold Selection Software.

Motor version

To allow for better performance of the compressor with the various applications, three different versions of electric motor are proposed:

- Version 1: Optimised for applications at medium to high temperature of evaporation, with the more common refrigerants.
- Version 2: Optimised for applications at low temperature of evaporation with the more common refrigerants.
- Version 3: Optimised for applications at medium to high temperature of evaporation, with R134a refrigerants.

Safety

Frascold compressors are built in accordance with European and American Safety Standards (UL). They may only be used if installed with systems in compliance with their operational instructions conforming with current applicable regulations. For the related Standards, refer to the Manufacturer's Declaration, obtainable on request or available on www.frascold.it, in the download section. These may be placed into service only by skilled personnel, suitably informed with regard to the manufacturer's declaration and capable of understanding and applying the contents of the installation manual supplied with the compressor or available on www.frascold.it.

Application with frequency changer

All the compressors are designedfor use with inverter technology and are suitable for operating within frequency range (30÷70 hz). In some conditions of use, a restriction on the range of frequency might apply. In particular, the upper frequency is dependent on the maximum operational current (MRA). For performance data at the various frequencies and the maximum limits under each condition, see Frascold selection software.

How to calculate the maximum possible frequency of the compressors under specific operational conditions
Within the limits of use of each specific compressor and refrigerant for each work point, there is a maximum frequency not to be exceeded, which can be calculated using the following formula:

$$f(Max) = \frac{MRA \times 50\ Hz}{Ie}$$

f(Max) = maximum possible frequency [Hz]
MRA = maximum operational current [A]
Ie = current absorbed at the work point at 50 Hz [A]

How to calculate the corresponding refrigeration capacity
The refrigeration capacity may be determined as a function of the frequency using the following formula:

$$Q_0\ (f) = \frac{factual \times Q_{0\ 50\ Hz}}{50\ Hz}$$

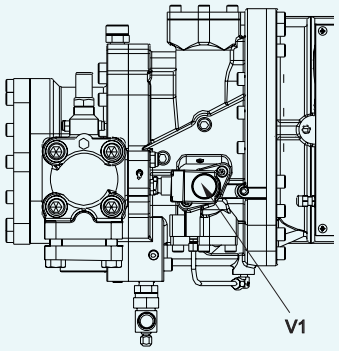
Q_0 (f) = refrigeration capacity at the chosen working frequency [W]
factual = actual frequency applied to the compressor [Hz]
$Q_{0\ 50\ Hz}$ = refrigeration capacity at 50 Hz [W]

Capacity control

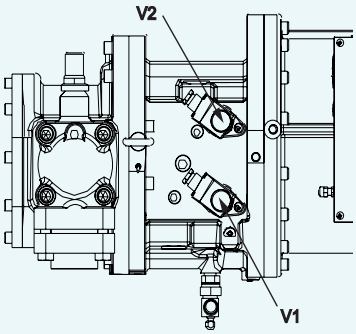
Under conditions of reduced thermal load, the compressor is capable of bringing the system to be cooled to the design temperature in a shorter time. In such a case, it is necessary to verify if the increased number of compressor start-ups (which derives from the shorter period of cooling) is compatible with the maximum that the compressor can support. The device used to control capacity, thus reducing the cooling capacity of the compressor, makes it possible to compensate this situation and prevent the efficiency of the entire cooling system from being compromised.
Checking the capacity requires the following functioning modes:

- Series RTS: in two steps (75-100%).
- Series NR: in three steps (50-75-100%).

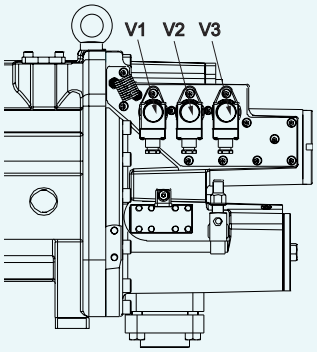
The step system for the NRH/L6 series allows for obtaining a further partialisation step which corresponds with 25% of the refrigeration capacity available and is used exclusively as an unloaded start.
The capacity check is carried out by the operation of three solenoids. The control sequence of the solenoids and the operational diagram are set out below.



RTSH/L 120 - 150



NRH/L 2 - 3 - 4 - 5



NRH/L 6

Solenoid activation diagram

Model series	Capacity control ①			Start / Stop ②
	At full load 100%	1. Step (75%)	2. Step (50%)	
RTSH/L 120 - 150	V1 = ●	V1 = ○	-	-
NRH/L 2 - 3 - 4 - 5	V1 = ● V2 = ●	V1 = ● V2 = ○	V1 = ○ V2 = ○	-
NRH/L 6	V1 = ● V2 = ○ V3 = ○	V1 = ● V2 = ○ V3 = ●	V1 = ● V2 = ● V3 = ○	V1 = ○ V2 = ○ V3 = ○

① The effective capacity of the stages depends on the operating conditions.
② The Start / Stop step can only be used during the start-up and stopping phases.
○ Coil de-energized
● Coil energized

Compressor protection devices

All the compressors are supplied complete with an INT69 FRY electronic protection module connected to a chain of PTC thermistors inserted into the electric motor, and a thermistor sensor positioned on the discharge temperature control output. In addition to monitoring the temperature of the electric motor and the output, through correct functioning of the chain of thermistors, the module checks for:

- The presence and the balancing of the phases.
- the start-up direction of rotation.

Lubricating oil

The selection of the type of oil depends on its properties, the operational conditions, the refrigerant used and the system's operational conditions. Oils different from those indicated below could be used. Particular applications might require different viscosities/types of oil; for such applications, contact Frascold.

Type of oil Frascold	Alternative oil	Base	Viscosity at 40°C in cSt	Refrigerant	Application
170POE	Emakarate RL170H o equivalent	POE	170	R134a / R404a / R507A R407C / R407A / R407F	LT/MT/HT
150POE	CP 4214-150 o equivalent	POE	150	R22	MT
100AB	Lunaria SK100, Zerice S100 o equivalent	AB	100	R22	LT/MT

POE: Polyester
AB: Alkylbenzene
LT: Low temperature
MT: Medium temperature
HT: High temperature

General information

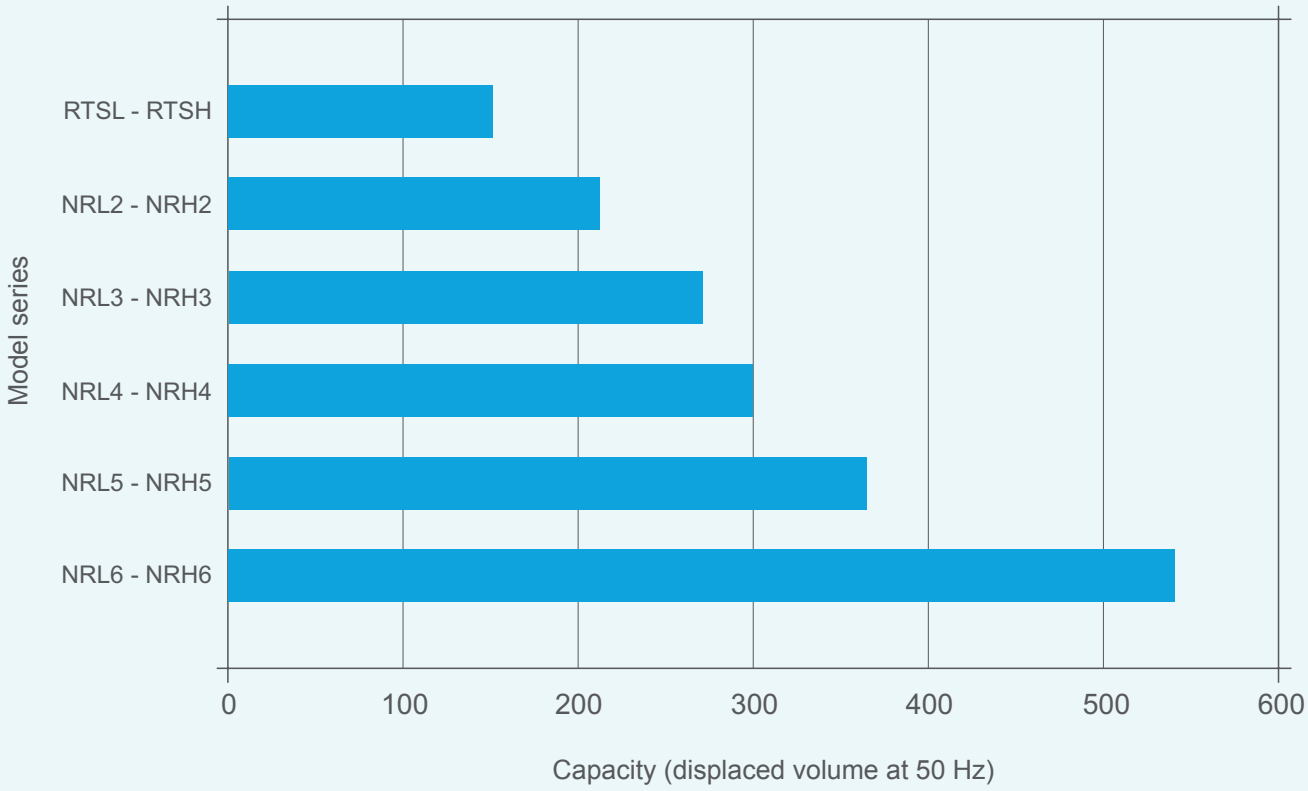
 The data and information contained in the brochure were determined based on our current capabilities and do not exempt the user from his duty to check the suitability of the products with respect to the intended application. Frascold reserves the right to change the content of the brochure in view of normal innovations and updates deemed necessary.

Range of models

The range of RTS-NR compressors involves a large range of models with capacities from 120 to 538 m³/h at 50 Hz.
In order to select the suitable model, use this catalogue, the Frascold selection software and the numerous publications available on www.frascold.it.

Current program:

6 main series, 34 models with 13 displacements from 120 to 538 m³/h (50 Hz)



Model name

NR L 3 - 70 - 240 Y

Series of models	RTS - NR
Application	L (low temperature) H (medium to high temperature)
Compressor size	2 - 3 - 4 - 5 - 6
Customization	Standard version
Capacity (displaced volume at 50Hz)	from 120 to 538 m³/h
Nominal power, electric motor	from 30 to 160 HP

Special characteristics

High efficiency: 80 years of experience and world wide applications have created line of compressors with an elevated COP over the whole range of operation, optimising the efficiency of the systems in which they are used.

Capacity control: The capacity control system allows to adjust the displacement with great precision, ensuring the real needs of the refrigeration plant.

Heightened flexibility: a wide range of versions available, a vast range of accessories offered and capability to operate with HFC / HFO blends / HCFC refrigerants.

Installation and access facilitated: Their intelligent design permits ease of putting into operation and makes management of maintenance simple.

Economiser: All the models are supplied with a port for economiser, liquid injection connection in order to supply greater refrigeration capacity to the system.

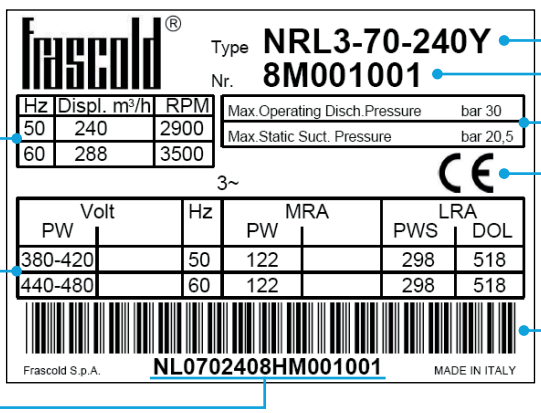
Noise level: Mechanical optimization of components and their fine machining ensures, under all conditions of use, low levels of noise and absence of vibrations.

Total reliability: The robust construction, precision machining, the high quality of components used and compliance with quality standards in the production plant, make this range of compressors capable of a long operational life, even under extreme conditions.

Lubrication circuit / oil injection: The fundamental function of lubrication is assured by accurately calibrated oil passages creating an optimal fluid dynamic lubrication film between the rotors and other mechanical components and also aiding cooling.

Information plate

All important information for the identification of the compressor is printed on the plate. The production date is incorporated within the series number. Indication of the type of refrigerant is under the responsibility of the installer.



Capacity (displaced volume at m^3/h)

Electrical data

Bar code (compressor serial number)

Compressor model

Series number

Maximum operational pressures

Conformity marking

Bar code (Compressor identification number)

Technical data

Model	Motor version	Displacement m³/h ③		Capacity control	Electrical data			Pipe connections				Weight kg
					Max power consumption kW	MRA A	LRA A	Suction		Discharge		
								inch	mm	inch	mm	
	① ②	50 Hz	60 Hz	④	⑤	⑥	⑦	⑧				⑨
RTSL-30-120Y	2	120	144	Step (100% - 75%)	34,8	51	201	2"⅛	54	1"⅝ *	42	175
RTSH-30-120Y	3				35,7	52	235	2"⅛	54	1"⅝ *	42	175
RTSH-40-120Y	1				55,2	85	266	2"⅛	54	1"⅝ *	42	180
RTSL-40-150Y	2	150	180		42,9	68	235	2"⅛	54	1"⅝ *	42	226
RTSH-40-150Y	3				36,7	61	266	2"⅛	54	1"⅝ *	42	226
RTSH-50-150Y	1				70,5	108	319	2"⅛	54	1"⅝ *	42	230
NRL2-50-186Y	2	186	223	Step (100% - 75% - 50%)	58,0	89	203	3"⅛ *	80	2"⅛	54	244
NRH2-50-186Y	3				43,6	71	256	3"⅛ *	80	2"⅛	54	244
NRH2-60-186Y	1				82,1	122	298	3"⅛ *	80	2"⅛	54	250
NRL2-60-210Y	2	210	252		70,9	108	256	3"⅛ *	80	2"⅛	54	290
NRH2-60-210Y	3				49,6	81	298	3"⅛ *	80	2"⅛	54	290
NRH2-70-210Y	1				87,3	140	373	3"⅛ *	80	2"⅛	54	298
NRL3-70-240Y	2	240	288		82,2	122	298	3"⅛ *	80	2"⅛	54	316
NRH3-70-240Y	3				59,3	97	373	3"⅛ *	80	2"⅛	54	316
NRH3-80-240Y	1				110,7	157	423	3"⅛ *	80	2"⅛	54	320
NRL3-80-270Y	2	270	324		94,8	140	373	3"⅛ *	80	2"⅛	54	317
NRH3-80-270Y	3				66,1	108	423	3"⅛ *	80	2"⅛	54	317
NRH3-90-270Y	1				120,6	177	401	3"⅛ *	80	2"⅛	54	325
NRL4-90-300Y	2	300	360		105,1	157	423	3"⅛ *	80	2"⅝ *	67	340
NRH4-90-300Y	3				73,5	119	401	3"⅛ *	80	2"⅝ *	67	340
NRH4-100-300Y	1				139,8	194	492	3"⅛ *	80	2"⅝ *	67	348
NRL5-100-360Y	2	360	432		121,4	177	401	3"⅛ *	80	2"⅝ *	67	344
NRH5-100-360Y	3				83,5	136	492	3"⅛ *	80	2"⅝ *	67	344
NRH5-120-360Y	1				149,7	230	559	3"⅛ *	80	2"⅝ *	67	353
NRH6-110-316Y	1	316	379		83,0	184	434	4"⅛	104	3"⅛ *	80	730
NRH6-110-372Y	3	372	446		83,0	184	434	4"⅛	104	3"⅛ *	80	731
NRH6-125-372Y	1				95,0	218	530	4"⅛	104	3"⅛ *	80	734
NRL6-125-428Y	2	428	514		93,0	198	530	4"⅛	104	3"⅛ *	80	735
NRH6-115-428Y	3				85,0	184	434	4"⅛	104	3"⅛ *	80	732
NRH6-140-428Y	1				105,0	245	587	4"⅛	104	3"⅛ *	80	742
NRH6-125-468Y	3	468	562		93,0	218	282	4"⅛	104	3"⅛ *	80	736
NRH6-160-468Y	1				120,0	530	729	4"⅛	104	3"⅛ *	80	749
NRL6-160-538Y	2	538	646		120,0	282	729	4"⅛	104	3"⅛ *	80	762
NRH6-140-538Y	3				105,0	245	587	4"⅛	104	3"⅛ *	80	749

① Motor size: see operating limits
② 400V± 10% / 3 / 50Hz // 460V± 10% / 3 / 60Hz // Part Winding (50-50) - Other voltages on request
③ 50 Hz = 2900 min^{-1}.
60 Hz = 3500 min^{-1}.
④ The effective partial load depends on operating conditions
⑤ Adjust the size of contactors, cables and fuses taking into consideration the maximum operating current
⑥ MRA = maximum operating current per connection PWS 400V
⑦ LRA = maximum start-up current (blocked rotor test) for connection PWS 400V
⑧ Valves with solder connections
⑨ Net weight of compressor (does not include the oil injection kit and other accessories)
* On request

State of supply

Frascold supplies its compressors complete with components sufficient to satisfy standard use, as indicated on the data sheets and technical instructions. For all other requirements, various accessories are available upon request.

Description	Model series					
	RTSL - RTSH	NRL2 - NRH2	NRL3 - NRH3	NRL4 - NRH4	NRL5 - NRH5	NRL6 - NRH6
PWS motor and sensors AMS/PTC	S	S	S	S	S	S
Electrical connections box Protection class	S IP56	S IP56	S IP56	S IP56	S IP56	S IP65
Control and protection device INT69FRY	S	S	S	S	S	S
Control, protection and diagnostic device	▲	▲	▲	▲	▲	▲
Unloaded start	S	S	S	S	S	S
Capacity control	S	S	S	S	S	S
Kit for DOL Start	▲	▲	▲	▲	▲	▲
Suction valve	S	S	S	S	S	▲
Discharge valve	S	S	S	S	S	S
Oil filter	S	S	S	S	S	S*
Oil flow switch	S	S	S	S	S	S*
Oil solenoid valve	S	S	S	S	S	S
Oil sight glass	S	S	S	S	S	S
Anti-vibration mounts	S	S	S	S	S	▲
Capacity control valve 230V/1/50-60 Hz	S	S	S	S	S	S
Capacity control solenoid valve (other voltage)	▲	▲	▲	▲	▲	▲
Oil Separator	▲	▲	▲	▲	▲	▲
Water cooled oil cooler	▲	▲	▲	▲	▲	▲
Air cooled oil cooler	▲	▲	▲	▲	▲	▲
Liquid injection kit	▲	▲	▲	▲	▲	▲
ECO connection kit	▲	▲	▲	▲	▲	▲
Oil Filter Clogging Differential Pressure Switch (Electronic)	▲	▲	▲	▲	▲	▲

S Standard
▲ Optional accessories
* Integrated with the compressor

Kriwan INT69 FRYL® Diagnose protection module (option)

All the compressors can be equipped with the new Kriwan INT69 FRYL® Diagnose (supplied as an accessory) protection module. The diagnostics system and the new protection functions which have been implemented improve the reliability and the useful life of the compressor. With the INT69 FRYL® Diagnose, each protection device listed hereafter has a dedicated connection port:

- Thermistor PTC (1, 2)
- Discharge temperature sensor (3, 4)
- Oil level check (5, 6)
- Oil filter clogging sensor (7, 8)
- Oil flowswitch (9, 10)

In the event of compressor malfunction, the device identifies and makes ready for use, the following protection options:

- Phase control
- Monitoring the number of start-ups
- Oil temperature check (and of discharge)
- Motor temperature check
- Oil level check
- Oil filter clogging check
- Oil flow check

In the event of compressor malfunction, the corresponding error is recorded and the device is capable of recording information on the on/off cycles and of supplying statistical data:

- Detailed list of the last 20 errors
- Statistics on the compressor start-ups
- Statistics on the operation times of the compressor and each accessory
- Statistics on the number of start-ups over the last 7 days
- Statistics on the maximum number of re-starts in an hour

The information recorded on the INT69 FRYL® Diagnose device can be downloaded using a serial USB interface cable (available as an accessory) connected to the Diagnose (DP) port and to a USB port on a computer. Alternatively, the download may be achieved using a DP-Modbus with a dedicated cable (both available as accessories). The Kriwan software for reading data may be downloaded directly and free of charge from the web-site.
In the event of substitution of a INT69 FRY with a INT69 FRYL® Diagnose, we can inform you that the only modifications to make to the electrical connections are the connection between the PTC of the motor at terminals 1 and 2, and the oil temperature sensor connector to terminals 3 and 4 of the INT69 FRYL® Diagnose.

INT69 FRYL® Diagnose

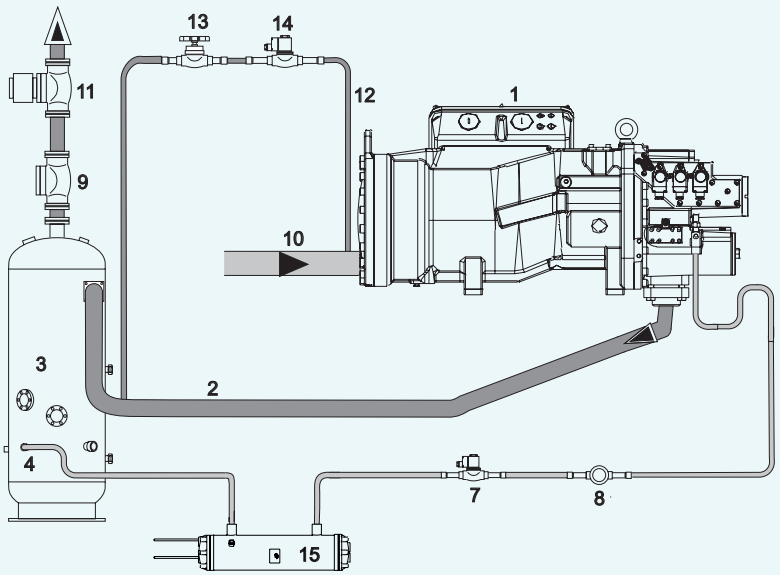
Oil injection kit

The standard oil injection kit includes:

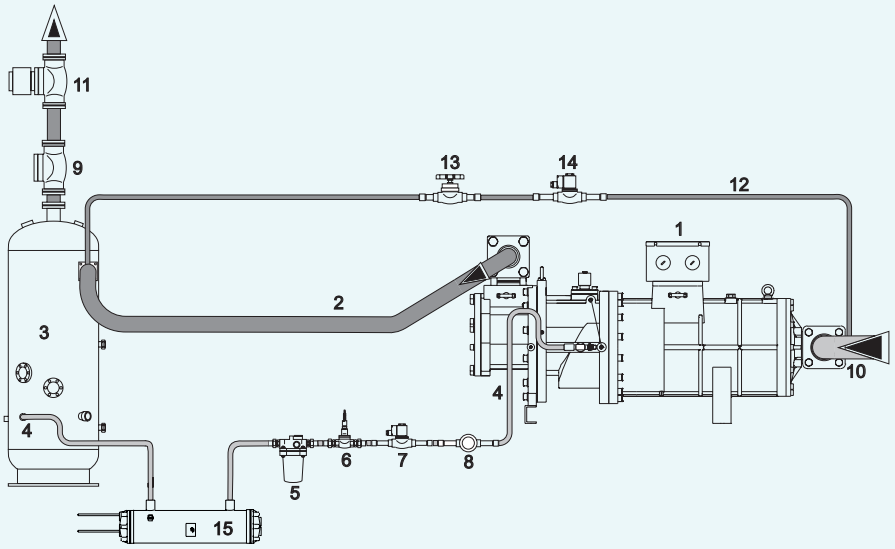
- Oil filter
- Flowswitch with electronic control module
- Solenoid valve
- Oil flow sight glass

In the NR_6 models, the flowswitch and the oil filter are integrated with the compressor.

Oil circuit diagram for NR_6



Oil circuit diagram for all other models



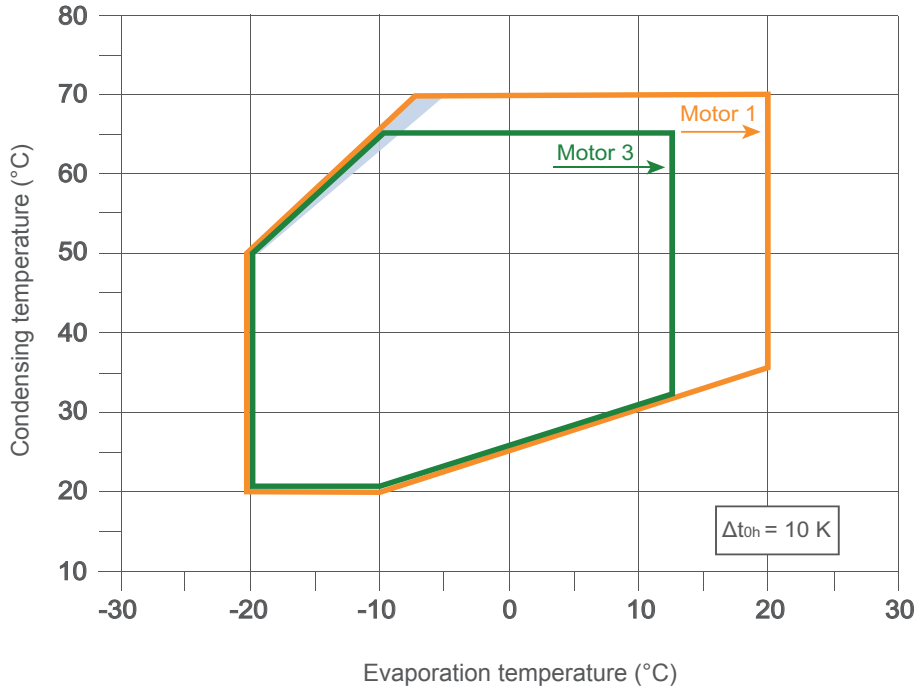
1	Compressor
2	Discharge line
3	Remote oil separator with thermostat, resistance and level detector
4	Oil return line to the compressor
5	Oil filter
6	Oil flowswitch
7	Solenoid valve
8	Oil sight glass
9	Check valve
10	Suction line
11	Discharge pressure regulation valve
12	External equalization line
13	Shut off valve
14	Solenoid valves
15	Oil cooler

Operating limits

Functioning of the compressor is possible within the applications envelope; pay attention to the different zones.

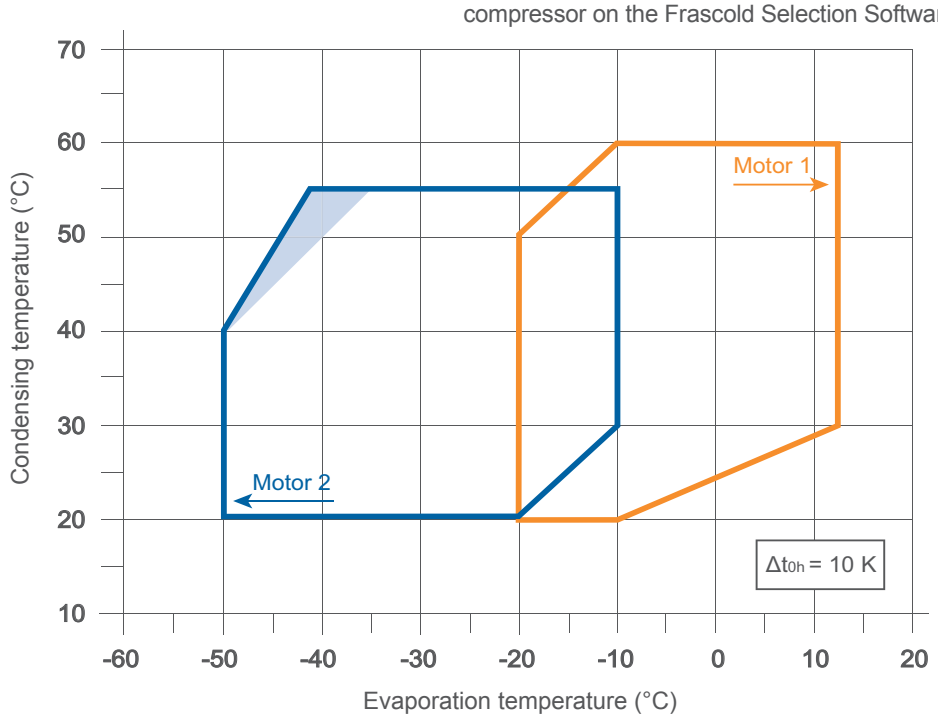
R134a

Standard application envelope
Motor size 1 - 3
Verify the envelope for every individual model of compressor on the Frascold Selection Software program



R22

Standard application envelope
Motor size 1 - 2
Verify the envelope for every individual model of compressor on the Frascold Selection Software program



Compressor at 100% capacity

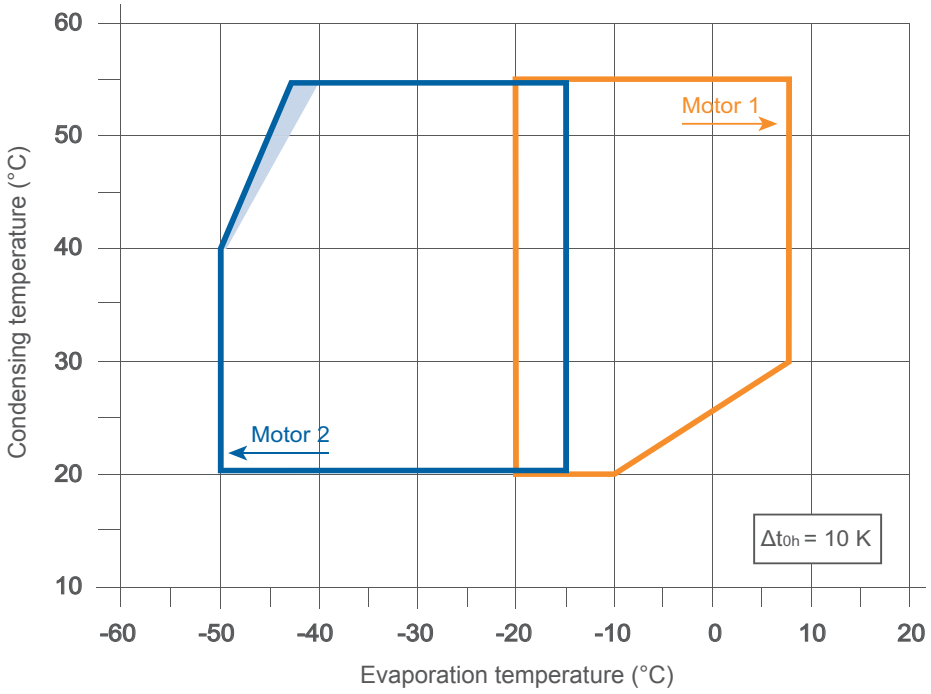
Δtoh Overheating = 10K
For operation in this zone, ask Frascold

Operating limits

Functioning of the compressor is possible within the applications envelope; pay attention to the different zones.

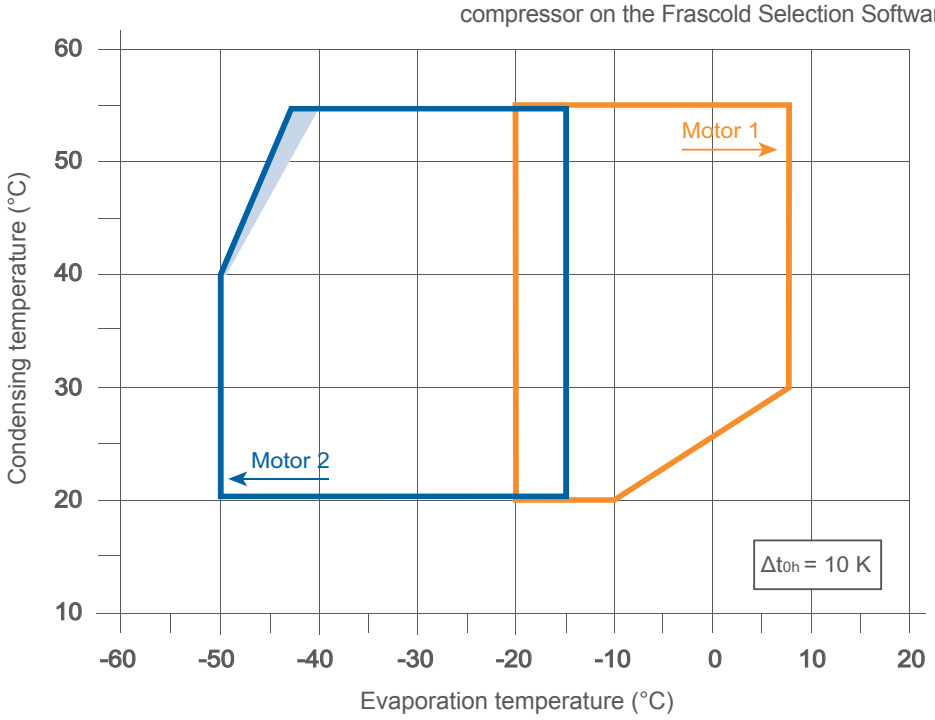
R404A - R507A

Standard application envelope
Motor size 1 - 2
Verify the envelope for every individual model of compressor on the Frascold Selection Software program



R448A - R449A

Standard application envelope
Motor size 1 - 2
Verify the envelope for every individual model of compressor on the Frascold Selection Software program



Compressor at 100% capacity

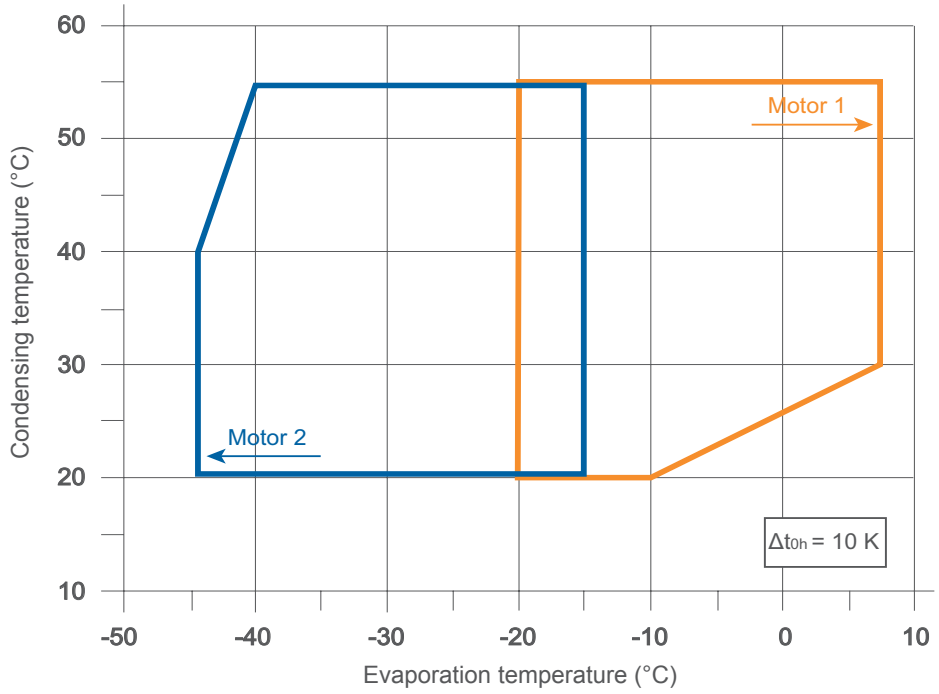
Δtoh Overheating = 10K
For operation in this zone, ask Frascold

Operating limits

Functioning of the compressor is possible within the applications envelope; pay attention to the different zones. For the operational limits of every individual compressor, consult the Frascold Selection Software programme (see page 15).

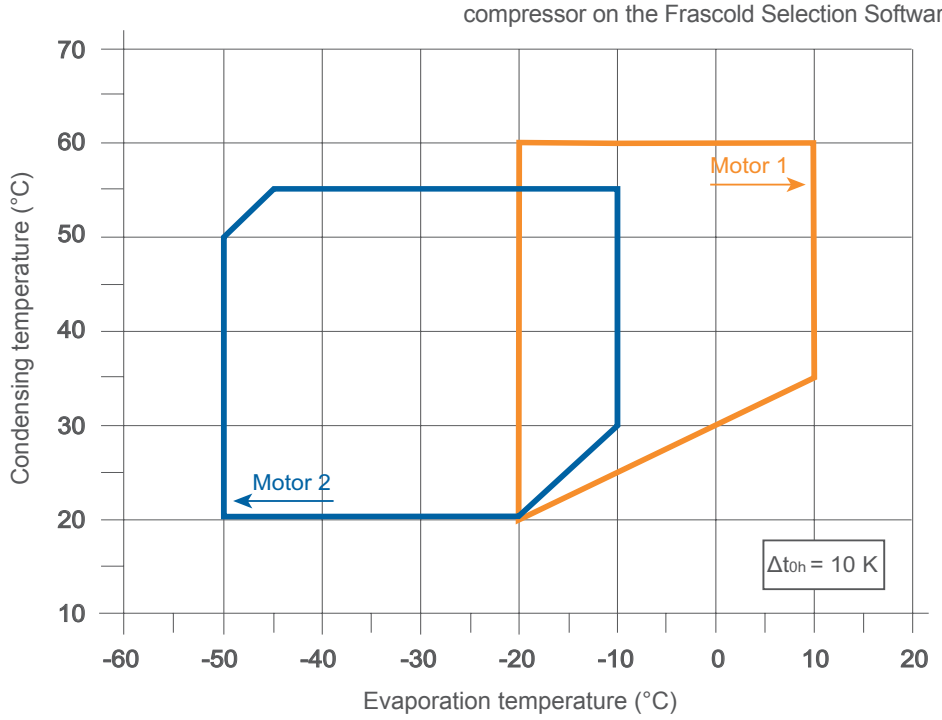
R407F - R407A

Standard application envelope
Motor size 1 - 2
Verify the envelope for every individual model of compressor on the Frascold Selection Software program



R290

Standard application envelope
Motor size 1 - 2
Verify the envelope for every individual model of compressor on the Frascold Selection Software program

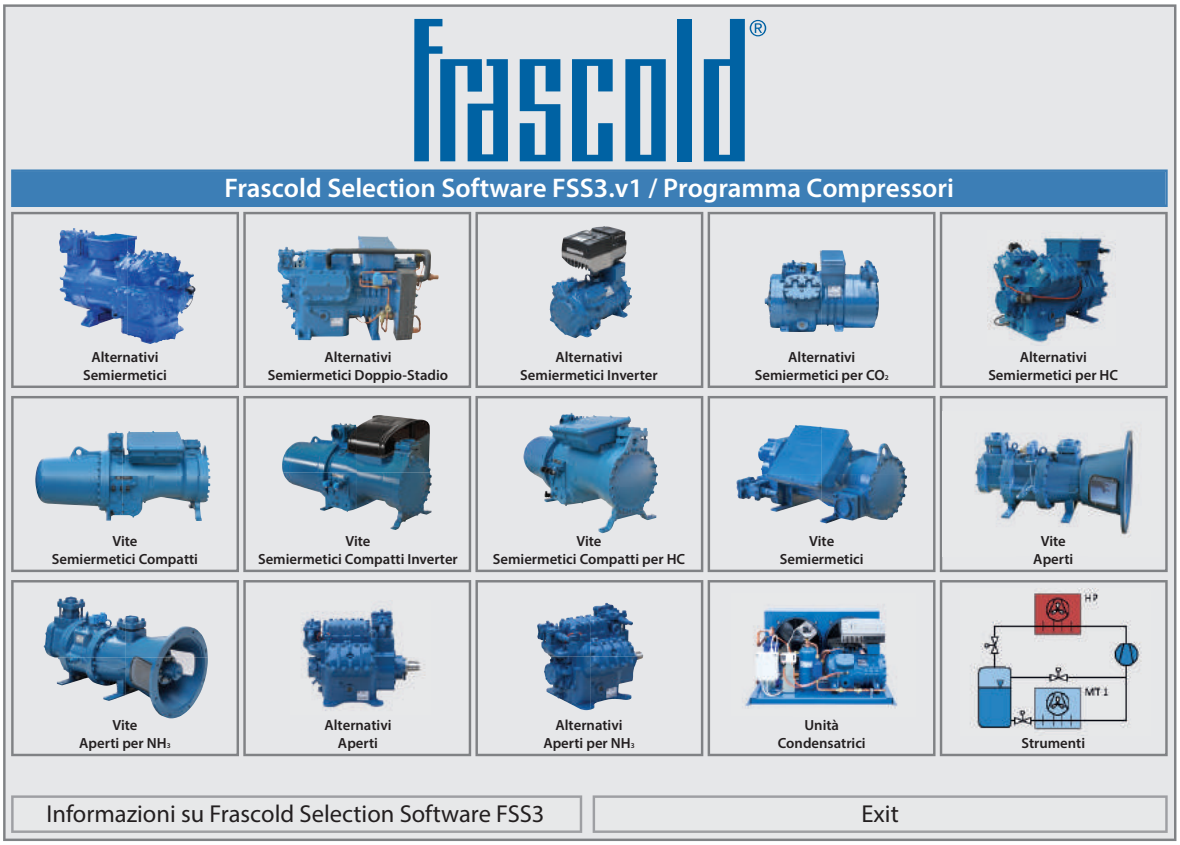


Compressor at 100% capacity

Δt_{oh} Overheating = 10K

Frascold Selection Software FSS3

Frascold has released the FSS3 selection software, the new software dedicated to the processes in refrigeration, air conditioning and heat pump applications.
The software has been developed by the Frascold technical research and development team on the back of many years of experience in the production of compressors and in their applications into a range of systems, from the simplest to the most complex. Using FSS3, calculations are made based on the requirements specified by the user, or on standard operating conditions (EN12900), for the selection of compressors and condensation units. FSS3 completely repaces the previous FSS2 software featuring new and important functions and applications. The software is presented with a new graphics interface and is an easy to use make precise calculations and flexible in a broad range of functions.



Main characteristics of FSS3

Simple to use and accurate in its calculations, makes available all the elements necessary for the selection of compressors and condensation units answering to the capacities and conditions of the project:

- Provides performance reports on all products
- Permits the exporting of reports in the various formats useful for printing and storage
- Displays the limits of use of all the compressors and condensing units with all approved refrigerants
- Indispensable for contractors and planners in the development and design of complex plant
- Can be configured according to the requirements of the user
- Supplies full support for recalculation of performance coefficients under conditions different from the EN12900 Standard
- Shows the characteristic technicalities of the products selected (Dimensional drawings, mechanical and electrical data, etc.)
- Pre-set for receiving notification every time the software is updated

The selection software is available on our web-site www.frascold.it under the Download section. Download the executable FSS3 file to your computer, run it and follow the installation instructions. A link to the selection software will be created on your desktop to simplify access to the software.

If you have questions regarding the software functions, please contact Frascold customer service by e-mail or telephone. You may also send your comments and suggestions to improve the FSS3 selection software; we are always pleased to receive your feed-back is always welcome.

Performance R134a [50 Hz]

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]								
				20	15	10	5	0	-5	-10	-15	-20
RTSH-30-120Y	3	30	Qo				84215	69299	56494	45613	36469	28875
			Pe				16,25	15,59	14,85	14,21	13,85	13,92
		40	Qo			91016	75286	61697	50064	40199	31915	25026
			Pe			19,54	18,82	17,99	17,20	16,64	16,48	16,90
		50	Qo			79481	65319	53143	42766	34002	26663	20563
			Pe			23,32	22,37	21,43	20,67	20,27	20,40	21,23
		60	Qo			66453	53944	43265	34229	26651		
			Pe			29,15	28,05	27,08	26,42	26,26		
RTSH-40-120Y	1	30	Qo			101249	84035	69119	56314	45433	36289	28695
			Pe			16,85	16,45	15,79	15,05	14,41	14,04	14,12
		40	Qo	129470	108895	90836	75106	61517	49884	40019	31735	24846
			Pe	20,11	20,16	19,74	19,02	18,18	17,40	16,84	16,68	17,10
		50	Qo	114332	95637	79301	65139	52963	42586	33822	26483	20383
			Pe	24,74	24,30	23,51	22,56	21,62	20,87	20,46	20,59	21,43
		60	Qo	97531	80800	66274	53764	43085	34049	26471		
			Pe	31,27	30,42	29,35	28,24	27,28	26,62	26,46		
RTSH-40-150Y	3	30	Qo				105741	86772	70509	56710	45132	35533
			Pe				18,75	17,95	17,04	16,42	16,49	17,67
		40	Qo			113949	93992	76765	62026	49532	39040	30309
			Pe			22,78	22,13	21,19	20,38	20,10	20,75	22,75
		50	Qo			99089	81212	65846	52750	41681	32396	24651
			Pe			27,14	26,19	25,20	24,57	24,71	26,02	28,90
		60	Qo			82995	67318	53934	42601	33076		
			Pe			32,52	31,36	30,39	30,03	30,66		
RTSH-50-150Y	1	30	Qo			127547	105629	86660	70397	56598	45020	35420
			Pe			19,42	19,13	18,33	17,42	16,80	16,87	18,05
		40	Qo	162914	136768	113837	93880	76653	61914	49420	38928	30196
			Pe	22,02	23,13	23,16	22,51	21,57	20,76	20,48	21,13	23,12
		50	Qo	143237	119608	98976	81099	65734	52638	41569	32283	24539
			Pe	27,66	28,02	27,52	26,57	25,58	24,95	25,09	26,40	29,28
		60	Qo	122088	101096	82883	67206	53822	42489	32964		
			Pe	34,18	33,85	32,90	31,74	30,77	30,40	31,04		
NRH2-50-186Y	3	30	Qo				129992	107073	87300	70516	56567	45297
			Pe				22,32	21,55	20,57	19,87	19,94	21,27
		40	Qo			140374	116091	94947	76784	61450	48787	38641
			Pe			27,93	27,04	25,83	24,79	24,40	25,17	27,58
		50	Qo			122068	99990	80888	64605	50987	39879	31126
			Pe			33,14	31,74	30,40	29,62	29,87	31,66	35,47
		60	Qo			102066	82460	65668	51533	39901		
			Pe			38,99	37,41	36,26	36,05	37,26		
NRH2-60-186Y	1	30	Qo			155963	129744	106825	87051	70268	56318	45048
			Pe			22,65	22,58	21,82	20,84	20,14	20,21	21,53
		40	Qo	198727	167702	140126	115843	94698	76536	61202	48539	38393
			Pe	27,05	28,27	28,19	27,30	26,09	25,05	24,67	25,44	27,85
		50	Qo	175525	147029	121820	99742	80639	64357	50739	39631	30877
			Pe	34,42	34,37	33,40	32,01	30,67	29,88	30,14	31,93	35,73
		60	Qo	150090	124392	101818	82212	65420	51285	39652		
			Pe	41,79	40,79	39,26	37,67	36,53	36,32	37,53		
NRH2-60-210Y	3	30	Qo				146610	120370	97877	78786	62748	49416
			Pe				24,75	23,80	22,64	21,79	21,79	23,16
		40	Qo			158541	130813	106894	86435	69091	54513	42354
			Pe			30,76	29,86	28,56	27,40	26,91	27,59	30,00
		50	Qo			138839	113844	92371	74072	58600	45608	34748
			Pe			36,87	35,53	34,13	33,22	33,31	34,93	38,62
		60	Qo			117612	95476	76575	60561	47087		
			Pe			44,14	42,60	41,35	40,92	41,84		
NRH2-70-210Y	1	30	Qo			176631	146296	120056	97564	78472	62434	49102
			Pe			25,28	25,07	24,12	22,95	22,11	22,11	23,48
		40	Qo	226496	190110	158227	130500	106580	86122	68777	54199	42041
			Pe	29,60	31,06	31,08	30,17	28,88	27,72	27,22	27,91	30,31
		50	Qo	200467	167388	138525	113531	92058	73759	58286	45294	34434
			Pe	37,63	37,96	37,19	35,84	34,45	33,53	33,62	35,25	38,93
		60	Qo	172662	143016	117298	95162	76261	60247	46773		
			Pe	46,34	45,78	44,46	42,91	41,66	41,23	42,16		
NRH3-70-240Y	3	30	Qo				170415	140371	114603	92720	74334	59055
			Pe				29,13	27,20	25,45	24,50	25,03	27,67
		40	Qo			183787	152115	124781	101397	81572	64919	51047
			Pe			35,88	34,38	32,66	31,36	31,14	32,64	36,51
		50	Qo			161021	132524	108039	87177	69550	54768	42442
			Pe			43,04	41,44	39,87	38,97	39,41	41,83	46,86
		60	Qo			136572	111388	89891	71692	56400		
			Pe			52,40	50,63	49,15	48,60	49,64		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R134a [50 Hz]

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]								
				20	15	10	5	0	-5	-10	-15	-20
NRH3-80-240Y	1	30	Qo			204758	170050	140007	114238	92355	73969	58690
			Pe			30,95	29,50	27,57	25,81	24,87	25,40	28,04
		40	Qo	261336	219821	183422	151750	124417	101032	81208	64554	50682
			Pe	35,98	36,88	36,25	34,75	33,03	31,73	31,51	33,01	36,88
		50	Qo	231243	193554	160656	132159	107674	86813	69185	54403	42077
			Pe	44,13	44,40	43,41	41,81	40,24	39,34	39,78	42,20	47,23
		60	Qo	199190	165466	136207	111023	89526	71327	56036		
			Pe	54,58	54,18	52,77	51,00	49,51	48,97	50,01		
NRH3-80-270Y	3	30	Qo				191462	157566	128506	103839	83118	65900
			Pe				32,47	31,01	29,35	28,20	28,29	30,34
		40	Qo			206825	171031	140153	113749	91373	72580	56926
			Pe			40,16	38,95	37,24	35,74	35,19	36,30	39,79
		50	Qo			181349	149089	121383	97786	77853	61140	47202
			Pe			48,47	46,77	44,98	43,84	44,06	46,36	51,47
		60	Qo			153948	125375	100992	80354	63017		
			Pe			58,57	56,54	54,86	54,24	55,41		
NRH3-90-270Y	1	30	Qo			230136	190958	157062	128003	103335	82615	65397
			Pe			33,57	33,03	31,57	29,90	28,75	28,84	30,89
		40	Qo	294442	247478	206321	170527	139650	113245	90869	72076	56422
			Pe	38,76	40,71	40,72	39,50	37,79	36,30	35,75	36,86	40,35
		50	Qo	260804	218103	180845	148585	120879	97282	77350	60636	46698
			Pe	49,33	49,94	49,03	47,32	45,54	44,39	44,61	46,92	52,02
		60	Qo	224938	186652	153444	124871	100488	79851	62513		
			Pe	61,34	60,78	59,13	57,10	55,42	54,80	55,97		
NRH4-90-300Y	3	30	Qo				211381	174089	142128	115006	92232	73316
			Pe				36,67	35,06	33,23	31,93	31,98	34,13
		40	Qo			228324	188911	154928	125884	101288	80649	63476
			Pe			45,02	43,71	41,83	40,18	39,54	40,69	44,43
		50	Qo			200280	164742	134243	108292	86398	68068	52813
			Pe			54,15	52,28	50,32	49,04	49,25	51,71	57,22
		60	Qo			170125	138638	111799	89115	70097		
			Pe			65,40	63,17	61,32	60,61	61,85		
NRH4-100-300Y	1	30	Qo			254121	210970	173640	141642	114483	91672	72718
			Pe			37,78	37,20	35,60	33,76	32,47	32,51	34,67
		40	Qo	325156	273359	227975	188512	154479	125385	100740	80051	62828
			Pe	43,38	45,53	45,56	44,24	42,36	40,71	40,07	41,23	44,97
		50	Qo	288236	241085	199955	164355	133794	107781	85824	67433	52116
			Pe	54,99	55,67	54,68	52,81	50,85	49,58	49,78	52,24	57,75
		60	Qo	248855	206526	169826	138264	111350	88592	69499		
			Pe	68,35	67,74	65,93	63,71	61,85	61,15	62,38		
NRH5-100-360Y	3	30	Qo				255954	210695	171935	139075	111516	88660
			Pe				40,90	40,18	38,91	37,63	36,83	37,03
		40	Qo			276644	228816	187594	152379	122573	97576	76789
			Pe			51,48	50,40	48,73	47,00	45,70	45,36	46,49
		50	Qo			242722	199635	162663	131205	104665	82441	63936
			Pe			62,38	60,39	58,28	56,57	55,78	56,41	58,97
		60	Qo			206178	168044	135533	108045	84982		
			Pe			74,63	72,24	70,20	69,03	69,24		
NRH5-120-360Y	1	30	Qo			307713	255355	210096	171336	138476	110918	88062
			Pe			41,14	41,47	40,75	39,49	38,20	37,41	37,61
		40	Qo	393917	331079	276045	228217	186995	151781	121974	96977	76191
			Pe	50,42	52,04	52,06	50,98	49,31	47,57	46,28	45,94	47,07
		50	Qo	349036	291924	242124	199037	162064	130607	104066	81843	63337
			Pe	64,54	64,31	62,95	60,96	58,86	57,15	56,36	56,98	59,55
		60	Qo	301110	249934	205579	167446	134934	107446	84383		
			Pe	79,00	77,44	75,21	72,82	70,78	69,61	69,82		
NRH6-110-316Y	1	30	Qo			303320	249763	202964	162578	128255	99649	76413
			Pe			47,30	45,04	43,14	41,49	39,95	38,40	36,71
		40	Qo	392570	329143	272819	223252	180093	142997	111614	85599	64603
			Pe	59,61	56,50	53,92	51,74	49,83	48,08	46,35	44,52	42,46
		50	Qo	347150	288840	237283	192133	153041	119662	91647	68649	50321
			Pe	68,95	66,01	63,51	61,32	59,31	57,37	55,35	53,15	50,63
		60	Qo	298656	245890	199527	159221	124624	95388	71168		
			Pe	80,91	78,04	75,53	73,23	71,03	68,79	66,41		
NRH6-110-372Y	3	30	Qo			337408	279426	229388	186440	149723	118381	91558
			Pe			49,21	47,50	45,96	44,58	43,38	42,34	41,47
		40	Qo	438516	367148	304922	250983	204473	164535	130313	100951	75591
			Pe	62,26	60,03	57,96	56,07	54,35	52,80	51,43	50,23	49,21
		50	Qo	389750	324161	267199	218007	175729	139506	108484	81805	58612
			Pe	73,58	71,21	69,02	67,00	65,17	63,51	62,03	60,74	59,62
		60	Qo	335105	276000	225006	181266	143923	112121	85002		
			Pe	88,02	85,58	83,32	81,25	79,36	77,65	76,13		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R134a [50 Hz]

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]								
				20	15	10	5	0	-5	-10	-15	-20
NRH6-125-372Y	1	30	Qo			337408	279426	229388	186440	149723	118381	91558
			Pe			48,72	47,03	45,50	44,14	42,95	41,92	41,06
		40	Qo	438516	367148	304922	250983	204473	164535	130313	100951	75591
			Pe	61,65	59,43	57,39	55,51	53,81	52,28	50,92	49,74	48,73
		50	Qo	389750	324161	267199	218007	175729	139506	108484	81805	58612
			Pe	72,85	70,50	68,33	66,34	64,52	62,88	61,42	60,14	59,03
		60	Qo	335105	276000	225006	181266	143923	112121	85002		
			Pe	87,15	84,73	82,50	80,44	78,57	76,88	75,38		
NRH6-115-428Y	3	30	Qo			375319	310462	254823	207500	167590	134193	106406
			Pe			55,83	53,33	51,28	49,59	48,17	46,91	45,72
		40	Qo	487835	408418	339306	279597	228391	184784	147876	116765	90548
			Pe	72,23	68,92	66,16	63,87	61,95	60,31	58,84	57,46	56,06
		50	Qo	433372	361088	298393	244387	198166	158830	125476	97204	73111
			Pe	84,31	81,35	78,86	76,76	74,94	73,32	71,78	70,25	68,62
		60	Qo	373337	308739	253015	205263	164581	130069	100823		
			Pe	99,79	97,16	94,93	92,99	91,25	89,62	88,00		
NRH6-140-428Y	1	30	Qo			375319	310462	254823	207500	167590	134193	106406
			Pe			55,33	52,85	50,83	49,15	47,74	46,49	45,31
		40	Qo	487835	408418	339306	279597	228391	184784	147876	116765	90548
			Pe	71,59	68,30	65,57	63,30	61,40	59,77	58,32	56,94	55,56
		50	Qo	433372	361088	298393	244387	198166	158830	125476	97204	73111
			Pe	83,55	80,62	78,16	76,08	74,27	72,66	71,14	69,63	68,01
		60	Qo	373337	308739	253015	205263	164581	130069	100823		
			Pe	98,90	96,30	94,08	92,16	90,43	88,82	87,21		
NRH6-125-468Y	3	30	Qo			409928	340105	279813	228104	184032	146649	115008
			Pe			68,43	63,18	59,12	56,05	53,75	52,04	50,70
		40	Qo	532678	446348	370968	305592	249272	201062	160012	125177	95609
			Pe	88,25	81,79	76,55	72,34	68,94	66,16	63,80	61,64	59,49
		50	Qo	476815	396466	326592	266248	214485	170356	132913	101210	74300
			Pe	98,39	93,30	89,06	85,47	82,33	79,44	76,60	73,59	70,22
		60	Qo	415335	341551	277768	223039	176417	136954	103703		
			Pe	114,05	109,91	106,26	102,89	99,61	96,20	92,47		
NRH6-160-468Y	1	30	Qo			409928	340105	279813	228104	184032	146649	115008
			Pe			68,43	63,18	59,12	56,05	53,75	52,04	50,70
		40	Qo	532678	446348	370968	305592	249272	201062	160012	125177	95609
			Pe	88,25	81,79	76,55	72,34	68,94	66,16	63,80	61,64	59,49
		50	Qo	476815	396466	326592	266248	214485	170356	132913	101210	74300
			Pe	98,39	93,30	89,06	85,47	82,33	79,44	76,60	73,59	70,22
		60	Qo	415335	341551	277768	223039	176417	136954	103703		
			Pe	114,05	109,91	106,26	102,89	99,61	96,20	92,47		
NRH6-140-538Y	3	30	Qo			500009	418128	344749	279755	223030	174458	133922
			Pe			82,58	75,53	69,90	65,42	61,82	58,85	56,23
		40	Qo	634763	539960	453787	376127	306865	245884	193068	148300	111464
			Pe	108,64	99,50	92,01	85,92	80,95	76,85	73,34	70,16	67,04
		50	Qo	566245	477857	397995	326542	263383	208399	161476	122497	91346
			Pe	120,54	112,50	105,84	100,27	95,55	91,39	87,54	83,74	79,70
		60	Qo	486630	406643	335076	271815	216743	169742	130698		
			Pe	138,52	131,17	124,90	119,44	114,52	109,89	105,28		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R404A - R507A [50 Hz] medium-high temperature

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]						
				7,5	5	0	-5	-10	-15	-20
RTSH-40-120Y	1	30	Qo	144601	132319	110186	91063	74669	60728	48960
			Pe	23,65	24,21	24,87	25,02	24,75	24,18	23,39
		40	Qo	122785	112051	92764	76157	61951	49866	39624
			Pe	32,43	32,43	32,11	31,42	30,45	29,31	28,09
		50	Qo	99761	90598	74207	60165	48194	38014	29348
			Pe	40,95	40,40	39,08	37,52	35,83	34,10	32,44
RTSH-50-150Y	1	30	Qo	185047	169300	140927	116421	95424	77583	62543
			Pe	27,73	28,56	29,59	29,90	29,63	28,93	27,94
		40	Qo	156807	143095	118462	97253	79114	63689	50624
			Pe	38,48	38,47	37,99	37,01	35,68	34,14	32,54
		50	Qo	127312	115658	94810	76944	61707	48743	37698
			Pe	48,43	47,68	45,89	43,84	41,65	39,49	37,49
NRH2-60-186Y	1	30	Qo	228233	208786	173751	143498	117586	95577	77031
			Pe	33,73	34,71	35,89	36,22	35,88	35,08	34,00
		40	Qo	193131	176232	145876	119743	97393	78387	62286
			Pe	46,04	46,01	45,40	44,25	42,75	41,08	39,45
		50	Qo	156589	142255	116609	94627	75871	59901	46277
			Pe	57,81	56,81	54,52	52,00	49,43	47,00	44,92
NRH2-70-210Y	1	30	Qo	258676	236662	197005	162756	133413	108474	87436
			Pe	37,03	38,05	39,32	39,71	39,40	38,57	37,40
		40	Qo	219245	200071	165634	135991	110640	89079	70805
			Pe	50,46	50,48	49,96	48,85	47,31	45,53	43,69
		50	Qo	178021	161721	132570	107599	86307	68191	52750
			Pe	63,21	62,28	60,07	57,54	54,88	52,25	49,83
NRH3-80-240Y	1	30	Qo	299113	273928	228551	189360	155789	127270	103238
			Pe	44,33	45,73	47,43	47,90	47,42	46,27	44,74
		40	Qo	253717	231822	192483	158610	129634	104991	84114
			Pe	61,68	61,56	60,60	58,91	56,78	54,48	52,31
		50	Qo	206477	187890	154627	126108	101766	81036	63351
			Pe	77,41	76,03	72,92	69,58	66,31	63,38	61,09
NRH3-90-270Y	1	30	Qo	337790	309324	258027	213711	175731	143444	116206
			Pe	50,45	51,90	53,71	54,27	53,83	52,63	50,92
		40	Qo	287186	262350	217724	179293	146413	118441	94733
			Pe	68,80	68,80	68,01	66,39	64,20	61,66	59,04
		50	Qo	233993	212854	175037	142628	114985	91465	71423
			Pe	85,78	84,46	81,36	77,86	74,19	70,61	67,37
NRH4-100-300Y	1	30	Qo	373882	342474	285864	236938	194981	159280	129121
			Pe	55,07	56,67	58,68	59,31	58,84	57,52	55,63
		40	Qo	318328	290877	241552	199068	162711	131766	105521
			Pe	75,60	75,56	74,64	72,82	70,37	67,56	64,65
		50	Qo	259758	236347	194470	158591	127996	101972	79804
			Pe	94,84	93,30	89,73	85,73	81,59	77,55	73,89
NRH5-120-360Y	1	30	Qo	448351	410341	341846	282662	231924	188768	152331
			Pe	64,21	66,03	68,30	69,00	68,41	66,83	64,56
		40	Qo	381245	348009	288297	236875	192880	155448	123714
			Pe	86,88	86,94	86,05	84,04	81,20	77,84	74,23
		50	Qo	310425	282073	231364	187926	150894	119405	92595
			Pe	109,33	107,72	103,83	99,28	94,37	89,39	84,63
NRH6-110-316Y	1	30	Qo	418467	383296	319611	264194	216318	175254	140274
			Pe	67,65	66,76	65,13	63,67	62,31	60,99	59,64
		40	Qo	358048	326640	270002	220993	178885	142950	112461
			Pe	81,46	80,42	78,50	76,75	75,11	73,50	71,87
		50	Qo	295347	267835	218508	176171	140096	109555	83820
			Pe	98,86	97,58	95,21	93,00	90,91	88,85	86,78
NRH6-125-372Y	1	30	Qo	489302	448524	374644	310310	254689	206950	166263
			Pe	80,78	79,64	77,51	75,54	73,70	71,94	70,21
		40	Qo	419633	383153	317327	260323	211309	169454	133926
			Pe	97,15	95,79	93,24	90,87	88,64	86,52	84,44
		50	Qo	345663	313810	256699	207685	165937	130625	100917
			Pe	117,54	115,89	112,78	109,87	107,12	104,49	101,94
NRH6-140-428Y	1	30	Qo	560407	513919	429701	356387	293047	238751	192568
			Pe	92,97	91,52	88,81	86,31	83,97	81,73	79,55
		40	Qo	479435	438303	364044	299682	244286	196925	156671
			Pe	111,48	109,75	106,49	103,46	100,62	97,92	95,29
		50	Qo	395470	359845	295843	240731	193577	153451	119425
			Pe	134,65	132,53	128,52	124,78	121,24	117,87	114,61
NRH6-160-468Y	1	30	Qo	612805	561970	469877	389708	320446	261073	210572
			Pe	101,67	100,08	97,11	94,38	91,82	89,37	86,98
		40	Qo	524263	479285	398082	327701	267125	215337	171320
			Pe	121,91	120,01	116,44	113,14	110,03	107,07	104,20
		50	Qo	432449	393492	323504	263238	211675	167798	130591
			Pe	147,24	144,92	140,54	136,44	132,58	128,89	125,32

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R404A - R507A [50 Hz] low temperature

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]							
				-15	-20	-25	-30	-35	-40	-45	-50
RTSL-30-120Y	2	30	Qo	64246	52025	41604	32801	25434	19323	14286	10143
			Pe	24,72	22,80	20,81	18,90	17,18	15,78	14,82	14,44
		40	Qo	53831	43222	34234	26686	20397	15185	10871	7272
			Pe	27,92	25,65	23,44	21,43	19,73	18,48	17,80	17,81
		50	Qo		34108	26642	20438	15316	11093		
			Pe		28,45	26,17	24,20	22,67	21,72		
RTSL-40-150Y	2	30	Qo	78888	64003	51312	40592	31624	24185	18056	13015
			Pe	30,92	28,49	26,06	23,73	21,62	19,84	18,51	17,75
		40	Qo	66743	53729	42699	33434	25712	19313	14015	9597
			Pe	34,62	31,75	29,04	26,60	24,56	23,02	22,11	21,94
		50	Qo	53991	42940	33666	25950	19569	14302		
			Pe	38,67	35,49	32,65	30,25	28,42	27,27		
NRL2-50-186Y	2	30	Qo	96650	78451	62926	49805	38820	29699	22173	15972
			Pe	38,07	35,09	32,07	29,17	26,55	24,35	22,76	21,91
		40	Qo	81697	65799	52320	40989	31537	23694	17190	11756
			Pe	42,65	39,10	35,73	32,69	30,14	28,24	27,16	27,04
		50	Qo	66027	52543	41222	31793	23987	17534		
			Pe	47,47	43,57	40,07	37,11	34,87	33,49		
NRL2-60-210Y	2	30	Qo	109784	89070	71409	56492	44010	33654	25114	18081
			Pe	43,61	40,19	36,67	33,27	30,19	27,64	25,81	24,92
		40	Qo	92781	74681	59347	46467	35733	26836	19467	13316
			Pe	48,81	44,82	40,95	37,42	34,42	32,16	30,85	30,70
		50	Qo	75021	59653	46760	36034	27164	19842		
			Pe	53,77	49,51	45,59	42,21	39,60	37,94		
NRL3-70-240Y	2	30	Qo	126241	102474	82212	65097	50775	38890	29087	21009
			Pe	51,11	47,30	43,39	39,60	36,15	33,28	31,20	30,14
		40	Qo	106731	85970	68380	53604	41287	31074	22609	15536
			Pe	57,02	52,51	48,17	44,22	40,88	38,38	36,94	36,78
		50	Qo	86248	68653	53894	41616	31464	23082		
			Pe	63,12	58,22	53,76	49,96	47,03	45,20		
NRL3-80-270Y	2	30	Qo	142480	115685	92837	73537	57387	43987	32939	23843
			Pe	58,06	53,75	49,34	45,06	41,18	37,93	35,58	34,36
		40	Qo	120514	97100	77258	60589	46693	35173	25629	17662
			Pe	64,79	59,72	54,84	50,40	46,66	43,85	42,23	42,04
		50	Qo	97512	77643	60971	47096	35619	26142		
			Pe	71,65	66,13	61,10	56,82	53,52	51,46		
NRL4-90-300Y	2	30	Qo	157209	127600	102369	81067	63249	48467	36275	26226
			Pe	65,16	60,38	55,47	50,71	46,39	42,78	40,16	38,82
		40	Qo	132999	107114	85193	66790	51456	38747	28214	19412
			Pe	72,41	66,82	61,42	56,50	52,33	49,19	47,37	47,13
		50	Qo	107641	85661	67233	51909	39242	28787		
			Pe	79,94	73,92	68,40	63,68	60,02	57,73		
NRL5-100-360Y	2	30	Qo	191046	155067	124407	98524	76877	58927	44130	31948
			Pe	74,57	68,82	62,92	57,21	52,01	47,66	44,47	42,79
		40	Qo	161687	130231	103590	81224	62591	47152	34364	23687
			Pe	83,40	76,71	70,24	64,35	59,35	55,58	53,37	53,04
		50	Qo	130906	104200	81807	63186	47796	35095		
			Pe	92,61	85,34	78,70	73,00	68,59	65,79		
NRL6-125-428Y	2	30	Qo	233475	188345	150221	118368	92052	70538	53093	38983
			Pe	85,12	78,59	72,69	67,53	63,19	59,77	57,37	56,09
		40	Qo	198646	158766	125340	97634	74913	56443	41491	29321
			Pe	94,35	87,82	81,93	76,78	72,47	69,10	66,75	65,52
		50	Qo	160368	126071	97677	74452	55661	40569		
			Pe	106,13	99,42	93,37	88,07	83,62	80,12		
NRL6-160-538Y	2	30	Qo	285358	230981	184836	146065	113812	87217	65424	47574
			Pe	101,31	95,23	90,08	85,68	81,85	78,40	75,14	71,89
		40	Qo	241429	193908	153874	120468	92832	70109	51441	35970
			Pe	116,48	110,48	105,30	100,76	96,66	92,82	89,06	85,19
		50	Qo	194231	153799	120108	92298	69513	50894		
			Pe	135,94	129,81	124,38	119,47	114,88	110,45		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R404A - R507A [50 Hz] low temperature with economiser

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]							
				-15	-20	-25	-30	-35	-40	-45	-50
RTSL-30-120Y	2	30	Qo	79430	66481	55000	44906	36099	28465	21870	16157
			Pe	28,60	26,75	24,74	22,70	20,77	19,07	17,76	16,94
		40	Qo			50583	41077	32753	25475	19082	13378
			Pe			29,21	26,86	24,72	22,93	21,61	20,86
		50	Qo					29104	22231		
			Pe					29,51	27,63		
RTSL-40-150Y	2	30	Qo	97533	81787	67834	55573	44884	35628	27641	20732
			Pe	35,68	33,36	30,90	28,43	26,08	23,97	22,22	20,96
		40	Qo		76300	63091	51465	41288	32399	24601	17657
			Pe		39,20	36,23	33,41	30,85	28,69	27,02	25,95
		50	Qo				46853	37186	28663		
			Pe				39,92	37,15	34,90		
NRL2-50-186Y	2	30	Qo	119493	100249	83188	68186	55097	43750	33943	25442
			Pe	43,91	41,06	38,01	34,94	32,02	29,42	27,31	25,85
		40	Qo	111634	93441	77306	63095	50642	39749	30175	21628
			Pe	51,90	48,22	44,54	41,03	37,86	35,19	33,18	31,96
		50	Qo			70848	57403	45582	35139		
			Pe			52,88	48,96	45,56	42,84		
NRL2-60-210Y	2	30	Qo	135731	113818	94403	77341	62464	49576	38445	28801
			Pe	50,24	46,96	43,41	39,82	36,40	33,38	30,97	29,37
		40	Qo	126780	106055	87689	71527	57380	45020	34171	24497
			Pe	59,31	55,17	50,95	46,87	43,16	40,03	37,68	36,27
		50	Qo		97762	80367	65060	51619	39765		
			Pe		64,94	60,13	55,64	51,71	48,52		
NRL3-70-240Y	2	30	Qo	156077	130947	108684	89121	72066	57290	44527	33465
			Pe	58,74	55,09	51,15	47,14	43,32	39,92	37,18	35,32
		40	Qo	145842	122086	101036	82513	66299	52130	39686	28583
			Pe	69,10	64,43	59,69	55,13	50,98	47,49	44,86	43,28
		50	Qo		112511	92628	75139	59791	46258		
			Pe		75,99	70,52	65,47	61,06	57,51		
NRL3-80-270Y	2	30	Qo	176155	147829	122731	100677	81450	64798	50423	37979
			Pe	66,67	62,55	58,10	53,58	49,27	45,44	42,34	40,23
		40	Qo	164676	137892	114155	93265	74980	59006	44987	32494
			Pe	78,43	73,18	67,86	62,73	58,08	54,16	51,21	49,43
		50	Qo		127245	104791	85033	67686	52391		
			Pe		86,22	80,06	74,37	69,40	65,40		
NRL4-90-300Y	2	30	Qo	194364	163054	135331	110985	89770	71398	55531	41774
			Pe	74,65	70,08	65,13	60,10	55,31	51,05	47,62	45,28
		40	Qo	181736	152113	125879	102810	82629	65002	49525	35713
			Pe	87,47	81,67	75,78	70,09	64,92	60,55	57,26	55,26
		50	Qo		140385	115553	93723	74571	57690		
			Pe		96,08	89,30	83,02	77,53	73,08		
NRL5-100-360Y	2	30	Qo	236199	198153	164466	134885	109114	86806	67556	50889
			Pe	86,11	80,61	74,66	68,63	62,86	57,71	53,54	50,66
		40	Qo	220937	184940	153062	125029	100509	79102	60321	43579
			Pe	101,71	94,76	87,70	80,88	74,67	69,41	65,41	62,95
		50	Qo			140602	114084	90825	70333		
			Pe			104,13	96,55	89,90	84,50		
NRL6-125-428Y	2	30	Qo	288655	240678	198592	162053	130651	103912	81277	62094
			Pe	99,23	92,91	86,87	81,24	76,18	71,81	68,28	65,69
		40	Qo	271439	225463	185199	150288	120295	94689	72831	53944
			Pe	116,85	109,83	103,04	96,65	90,80	85,65	81,29	77,79
		50	Qo				134425	105770	81302		
			Pe				115,82	108,45	101,75		
NRL6-160-538Y	2	30	Qo	352801	295159	244353	199971	161535	128482	100153	75780
			Pe	118,55	112,79	107,52	102,61	97,91	93,29	88,58	83,61
		40	Qo	329899	275369	227360	185437	149070	117615	90297	66177
			Pe	143,82	137,37	131,23	125,27	119,37	113,38	107,10	100,24
		50	Qo		252053	206430	166647	132093	101993		
			Pe		169,60	161,72	153,86	145,89	137,59		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
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In this field, supplementary cooling is necessary.

Performance R22 [50 Hz] medium-high temperature

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]							
				12,5	10	5	0	-5	-10	-15	-20
RTSH-40-120Y	1	30	Qo	158919	146795	124696	105264	88258	73438	60565	49399
			Pe	28,47	27,86	26,43	24,89	23,42	22,21	21,45	21,33
		40	Qo	145508	134239	113722	95702	79939	66193	54224	43792
			Pe	32,08	31,41	29,92	28,40	27,06	26,07	25,63	25,92
		50	Qo	130078	119735	100945	84482	70107	57579	46658	37104
			Pe	38,27	37,41	35,63	33,93	32,49	31,51	31,16	31,66
RTSH-50-150Y	1	30	Qo	197123	182069	154592	130398	109217	90780	74817	61058
			Pe	29,00	29,24	29,09	28,31	27,18	25,95	24,89	24,26
		40	Qo	180316	166379	140976	118642	99108	82103	67359	54605
			Pe	36,02	35,66	34,53	33,04	31,47	30,08	29,12	28,87
		50	Qo	162840	150058	126805	106407	88595	73100	59651	47978
			Pe	44,87	44,11	42,36	40,53	38,89	37,69	37,21	37,70
NRH2-60-186Y	1	30	Qo	244093	225359	191225	161238	135040	112272	92576	75593
			Pe	36,23	36,19	35,57	34,43	33,05	31,67	30,56	29,98
		40	Qo	221858	204622	173255	145731	121692	100779	82633	66897
			Pe	42,90	42,49	41,27	39,73	38,11	36,69	35,72	35,45
		50	Qo	198341	182568	153899	128769	106819	87691	71027	56467
			Pe	52,45	51,63	49,73	47,67	45,73	44,16	43,22	43,18
NRH2-70-210Y	1	30	Qo	280822	258889	218897	183742	153032	126374	103375	83642
			Pe	38,86	39,32	39,44	38,71	37,39	35,72	33,94	32,31
		40	Qo	252086	232142	195825	163944	136106	111918	90987	72922
			Pe	49,05	48,75	47,54	45,74	43,59	41,34	39,24	37,53
		50	Qo	222976	205008	172344	143714	118724	96984	78099	61677
			Pe	59,44	58,55	56,35	53,80	51,15	48,66	46,56	45,12
NRH3-80-240Y	1	30	Qo	324275	299509	254298	214484	179629	149296	123049	100451
			Pe	53,40	52,20	49,37	46,26	43,24	40,65	38,86	38,22
		40	Qo	292452	269812	228547	192270	160545	132933	108999	88306
			Pe	59,52	58,34	55,63	52,74	50,01	47,81	46,50	46,43
		50	Qo	259265	238825	201652	169058	140608	115864	94389	75746
			Pe	72,58	71,02	67,62	64,13	60,89	58,27	56,63	56,33
NRH3-90-270Y	1	30	Qo	365744	337579	286180	240940	201357	166932	137166	111558
			Pe	57,23	56,56	54,56	51,99	49,22	46,61	44,53	43,35
		40	Qo	329993	304211	257230	215946	179857	148465	121269	97770
			Pe	66,68	65,62	62,99	59,99	56,98	54,33	52,40	51,58
		50	Qo	292343	269067	226752	189672	157326	129214	104837	83695
			Pe	80,97	79,35	75,76	71,99	68,42	65,40	63,31	62,52
NRH4-100-300Y	1	30	Qo	404726	373641	316916	266994	223322	185350	152527	124302
			Pe	62,01	61,17	58,83	55,93	52,87	50,04	47,85	46,70
		40	Qo	365580	337096	285198	239600	199751	165100	135097	109191
			Pe	72,53	71,27	68,23	64,83	61,48	58,57	56,50	55,67
		50	Qo	324617	298832	251957	210880	175051	143919	116933	93541
			Pe	88,59	86,71	82,57	78,29	74,25	70,87	68,53	67,64
NRH5-120-360Y	1	30	Qo	488019	450229	381275	320605	267561	221481	181706	147577
			Pe	69,87	69,46	67,66	64,92	61,73	58,57	55,90	54,22
		40	Qo	439434	404972	342188	287041	238870	197016	160820	129621
			Pe	82,61	81,39	78,24	74,55	70,81	67,49	65,07	64,03
		50	Qo	389678	358585	302053	252509	209294	171749	139212	111026
			Pe	101,68	99,41	94,47	89,39	84,65	80,73	78,10	77,25
NRH6-110-316Y	1	30	Qo	422165	400234	352293	301540	251121	204183	163875	133343
			Pe	65,67	63,78	60,32	57,31	54,74	52,61	50,93	49,69
		40	Qo	394527	370389	319438	267546	217859	173524	137689	113501
			Pe	74,68	73,14	70,27	67,66	65,31	63,23	61,41	59,86
		50	Qo	348302	323768	273428	224016	178681	140569	112828	98605
			Pe	87,92	86,49	83,70	81,00	78,38	75,85	73,41	71,05
NRH6-125-372Y	1	30	Qo	493535	467415	411588	353504	296199	242706	196059	159292
			Pe	77,57	75,53	71,74	68,31	65,22	62,46	60,02	57,86
		40	Qo	459759	432326	374907	316612	260475	209529	166809	135349
			Pe	89,59	87,94	84,75	81,69	78,74	75,88	73,11	70,39
		50	Qo	410517	383003	326457	270415	217910	171977	135649	111960
			Pe	106,38	104,85	101,73	98,51	95,16	91,68	88,04	84,23
NRH6-140-428Y	1	30	Qo	562732	533371	470542	405158	340728	280757	228754	188226
			Pe	84,40	82,96	80,09	77,28	74,57	72,00	69,60	67,41
		40	Qo	529423	498767	434350	368713	305366	247814	199565	164127
			Pe	98,97	97,93	95,69	93,24	90,62	87,88	85,04	82,16
		50	Qo	478547	447697	383892	320204	260140	207207	164914	136767
			Pe	119,86	118,78	116,23	113,22	109,77	105,93	101,74	97,23
NRH6-160-468Y	1	30	Qo	620010	585425	513783	441399	371342	306680	250480	205811
			Pe	92,30	90,71	87,58	84,51	81,54	78,73	76,10	73,71
		40	Qo	582028	546802	474580	402555	333794	271367	218340	177782
			Pe	108,22	107,09	104,63	101,96	99,10	96,10	93,00	89,84
		50	Qo	524241	489628	419337	350181	285227	227545	180201	146264
			Pe	131,07	129,88	127,10	123,80	120,04	115,84	111,25	106,32

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Performance R22 [50 Hz] low temperature

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]								
				-10	-15	-20	-25	-30	-35	-40	-45	-50
RTSL-30-120Y	2	30	Qo	75095	61922	50523	40735	32393	25334	19394	14409	10214
			Pe	23,08	21,63	20,03	18,38	16,82	15,44	14,39	13,77	13,70
		40	Qo	67086	55047	44657	35753	28172	21749	16319	11720	7787
			Pe	26,38	24,51	22,59	20,74	19,09	17,75	16,85	16,49	16,80
		50	Qo	58692	47834	38502	30531	23758	18018	13148		
			Pe	30,18	27,96	25,81	23,86	22,21	20,99	20,32		
RTSL-40-150Y	2	30	Qo	92064	76033	62166	50260	40117	31535	24314	18253	13153
			Pe	29,14	27,28	25,27	23,21	21,25	19,50	18,09	17,14	16,79
		40	Qo	83054	68293	55554	44637	35341	27466	20812	15177	10362
			Pe	32,96	30,55	28,15	25,88	23,87	22,25	21,13	20,65	20,93
		50	Qo	73536	60081	48508	38616	30206	23076	17025		
			Pe	37,86	34,99	32,30	29,91	27,95	26,54	25,82		
NRL2-50-186Y	2	30	Qo	112841	93234	76260	61679	49247	38724	29866	22433	16182
			Pe	35,64	33,40	30,94	28,42	26,01	23,87	22,16	21,06	20,71
		40	Qo	40,41	37,44	34,47	31,67	29,19	27,20	25,87	25,36	25,82
			Pe	101698	83668	68096	54740	43358	33708	25548	18636	12731
		50	Qo	89957	73544	59413	47322	37029	28292	20869		
			Pe	46,43	42,88	39,54	36,59	34,18	32,48	31,66		
NRL2-60-210Y	2	30	Qo	128194	105862	86548	69970	55847	43898	33843	25400	18289
			Pe	40,65	38,08	35,23	32,32	29,54	27,07	25,11	23,85	23,49
		40	Qo	115506	94964	77242	62057	49130	38179	28923	21082	14374
			Pe	46,15	42,78	39,37	36,13	33,24	30,91	29,31	28,65	29,12
		50	Qo	102214	83497	67400	53644	41947	32028	23606		
			Pe	52,62	48,66	44,90	41,53	38,75	36,75	35,73		
NRL3-70-240Y	2	30	Qo	147164	121596	99480	80498	64329	50654	39154	29507	21396
			Pe	46,32	43,47	40,29	37,02	33,87	31,08	28,87	27,46	27,08
		40	Qo	132619	109127	88858	71493	56712	44195	33623	24675	17033
			Pe	52,59	48,80	44,96	41,31	38,06	35,46	33,71	33,05	33,71
		50	Qo	117240	95894	77542	61864	48540	37252	27678		
			Pe	60,36	55,83	51,55	47,74	44,62	42,42	41,36		
NRL3-80-270Y	2	30	Qo	165919	137094	112161	90761	72532	57116	44152	33281	24142
			Pe	52,50	49,24	45,61	41,89	38,31	35,13	32,62	31,02	30,58
		40	Qo	149578	123080	100217	80629	63956	49838	37915	27827	19215
			Pe	59,61	55,32	50,98	46,86	43,19	40,24	38,26	37,51	38,23
		50	Qo	132386	108276	87543	69828	54771	42012	31191		
			Pe	68,28	63,19	58,36	54,06	50,53	48,03	46,81		
NRL4-90-300Y	2	30	Qo	183285	151443	123911	100289	80175	63167	48864	36864	26765
			Pe	57,83	54,24	50,23	46,09	42,10	38,56	35,75	33,97	33,49
		40	Qo	165310	136016	110753	89121	70716	55138	41984	30854	21345
			Pe	65,45	60,79	56,04	51,48	47,40	44,10	41,85	40,95	41,69
		50	Qo	146399	119720	96793	77216	60587	46505	34568		
			Pe	74,87	69,41	64,17	59,46	55,56	52,75	51,32		
NRL5-100-360Y	2	30	Qo	222508	183814	150357	121653	97213	76553	59186	44625	32386
			Pe	70,04	65,69	60,84	55,85	51,05	46,79	43,40	41,22	40,60
		40	Qo	200765	165151	134436	108134	85760	66826	50846	37336	25807
			Pe	79,35	73,70	67,96	62,48	57,60	53,64	50,97	49,90	50,80
		50	Qo	177834	145395	117517	93713	73498	56386	41890		
			Pe	90,90	84,23	77,87	72,17	67,46	64,09	62,40		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

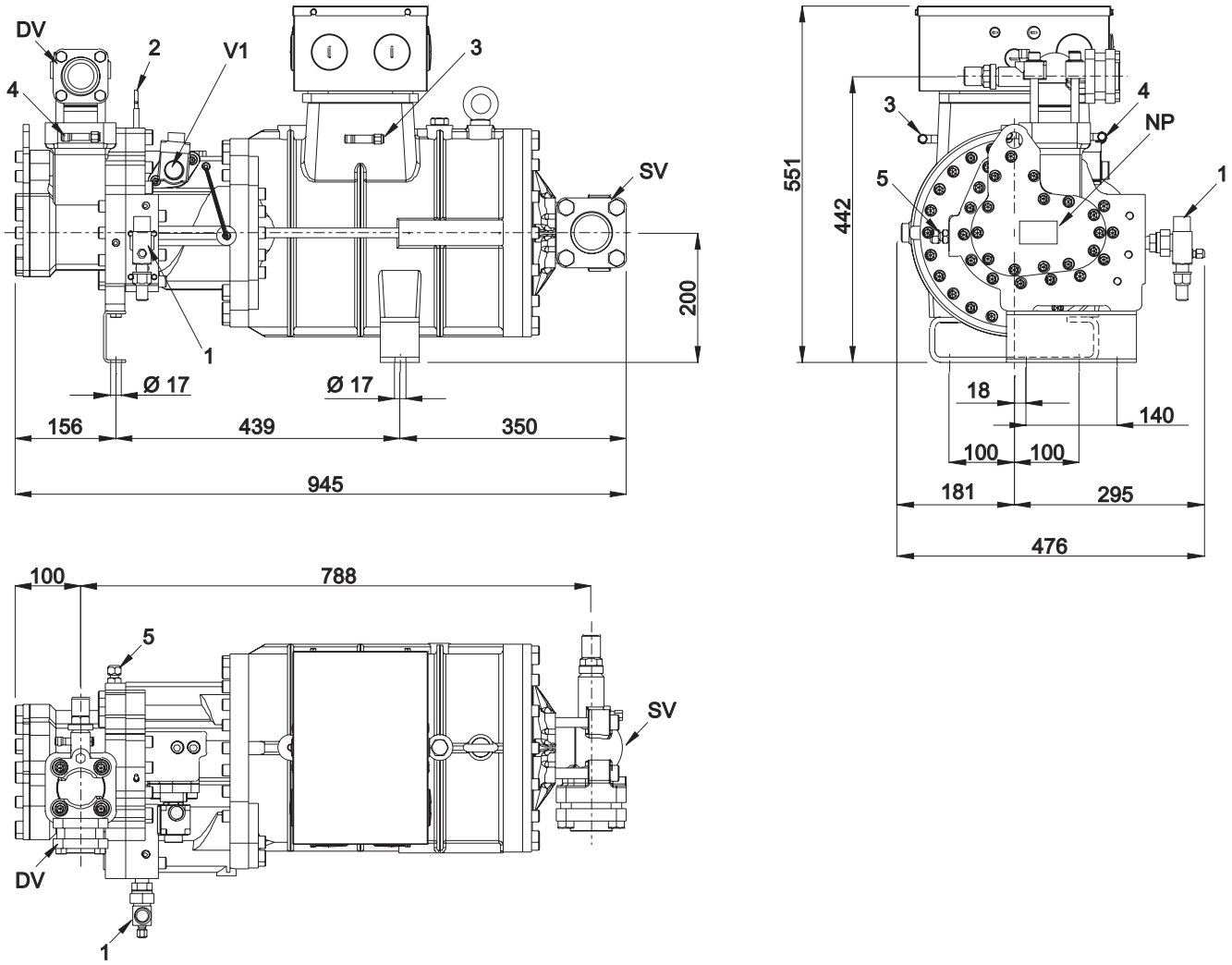
Performance R22 [50 Hz] low temperature with economiser

Compressor	Motor version	Cond. Temp. [°C]	Qo [Watt] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]								
				-10	-15	-20	-25	-30	-35	-40	-45	-50
RTSL-30-120Y	2	30	Qo	84062	70701	58863	48446	39344	31438	24600	18691	13556
			Pe	24,94	23,59	22,02	20,36	18,72	17,23	16,02	15,21	14,90
		40	Qo	79065	66310	55007	45053	36333	28721	22079	16254	11076
			Pe	29,31	27,44	25,47	23,50	21,68	20,11	18,92	18,24	18,16
		50	Qo			50690	41222	32913	25626	19208		
			Pe			29,75	27,53	25,56	23,96	22,84		
RTSL-40-150Y	2	30	Qo	103057	86814	72427	59775	48725	39133	30841	23678	17456
			Pe	31,43	29,69	27,72	25,65	23,61	21,73	20,14	18,97	18,34
		40	Qo	97884	82267	68430	56247	45579	36272	28157	21048	14737
			Pe	36,58	34,19	31,73	29,33	27,12	25,22	23,78	22,91	22,74
		50	Qo		77170	63864	52139	41846	32819	24872		
			Pe		40,18	37,26	34,56	32,21	30,34	29,08		
NRL2-50-186Y	2	30	Qo	126315	106454	88849	73355	59814	48053	37883	29099	21477
			Pe	38,44	36,35	33,95	31,41	28,91	26,61	24,68	23,29	22,61
		40	Qo	119856	100788	83879	68978	55918	44514	34565	25845	18107
			Pe	44,84	41,90	38,86	35,90	33,17	30,86	29,13	28,13	28,04
		50	Qo	112775	94462	78221	63893	51298	40238	30488		
			Pe	52,94	49,23	45,62	42,29	39,40	37,14	35,66		
NRL2-60-210Y	2	30	Qo	143501	120873	100835	83216	67830	54474	42928	32948	24273
			Pe	43,84	41,42	38,65	35,72	32,82	30,17	27,96	26,39	25,64
		40	Qo	136131	114396	95145	78199	63362	50419	39132	29236	20443
			Pe	51,19	47,84	44,35	40,92	37,75	35,05	33,00	31,80	31,62
		50	Qo	128142	107246	88737	72429	58111	45551	34486		
			Pe	60,02	55,87	51,79	47,99	44,67	42,03	40,25		
NRL3-70-240Y	2	30	Qo	164736	138837	115902	95737	78133	62858	49663	38276	28397
			Pe	49,98	47,31	44,21	40,92	37,65	34,66	32,16	30,40	29,60
		40	Qo	156300	131457	109454	90089	73140	58364	45489	34220	24226
			Pe	58,38	54,62	50,69	46,83	43,27	40,25	37,99	36,73	36,67
		50	Qo	146979	123170	102090	83527	67246	52980	40435		
			Pe	68,84	64,11	59,48	55,19	51,47	48,55	46,66		
NRL3-80-270Y	2	30	Qo	185730	156533	130676	107943	88095	70876	56003	43170	32041
			Pe	56,63	53,57	50,04	46,28	42,57	39,17	36,34	34,34	33,42
		40	Qo	176286	148265	123446	101601	82483	65816	51296	38591	27329
			Pe	66,13	61,88	57,44	53,08	49,06	45,64	43,09	41,66	41,57
		50	Qo	165967	139073	115257	94280	75877	59750	45566		
			Pe	77,86	72,54	67,32	62,47	58,26	54,94	52,78		
NRL4-90-300Y	2	30	Qo	205171	172916	144366	119275	97379	78386	61981	47818	35522
			Pe	62,39	59,03	55,12	50,95	46,82	43,02	39,87	37,65	36,64
		40	Qo	194828	163848	136424	112301	91201	72815	56802	42788	30359
			Pe	72,65	68,04	63,18	58,36	53,89	50,08	47,20	45,55	45,40
		50	Qo	183535	153772	127434	104254	83934	66140	50500		
			Pe	85,46	79,74	74,07	68,76	64,11	60,41	57,95		
NRL5-100-360Y	2	30	Qo	249076	209877	175177	144683	118072	94996	75072	57886	42982
			Pe	75,57	71,50	66,77	61,75	56,77	52,20	48,39	45,68	44,41
		40	Qo	236613	198945	165596	136261	110603	88250	68792	51777	36705
			Pe	88,10	82,51	76,63	70,83	65,47	60,89	57,44	55,47	55,28
		50	Qo	222943	186749	154718	126529	101821	80194	61197		
			Pe	103,77	96,78	89,89	83,45	77,83	73,38	70,42		

① Suction gas superheating 10K without liquid subcooling
The performance refers to European Standard EN12900 and with operation at 50Hz; conversion factor at 60Hz = 1.2.
For performance calculations at operating points, refer to Frascold Selection Software.
All data published is provisional and liable to variations.
In this field, supplementary cooling is necessary.

Dimensional drawings and connections

Models RTSH/L - 120 RTSH/L - 150

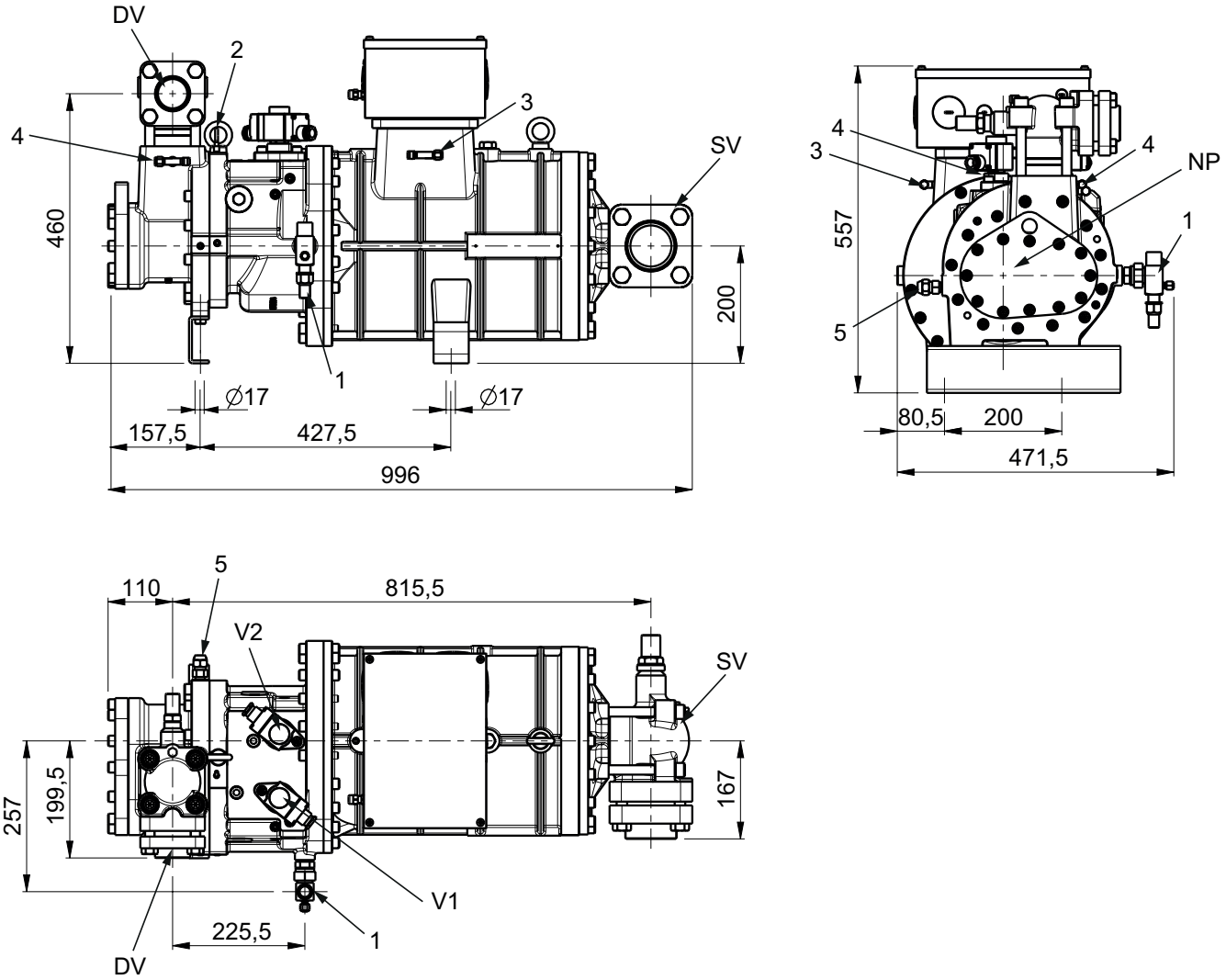


1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection	½" SAE
V1	Capacity control valve (step 1)	
SV	Suction valve	ø 2" ⅛ - 54,0 mm
DV	Discharge valve	ø 1" ⅝ * - 42,0 mm
NP	Information plate	

* On request

Dimensional drawings and connections

Models NRL2 NRH2

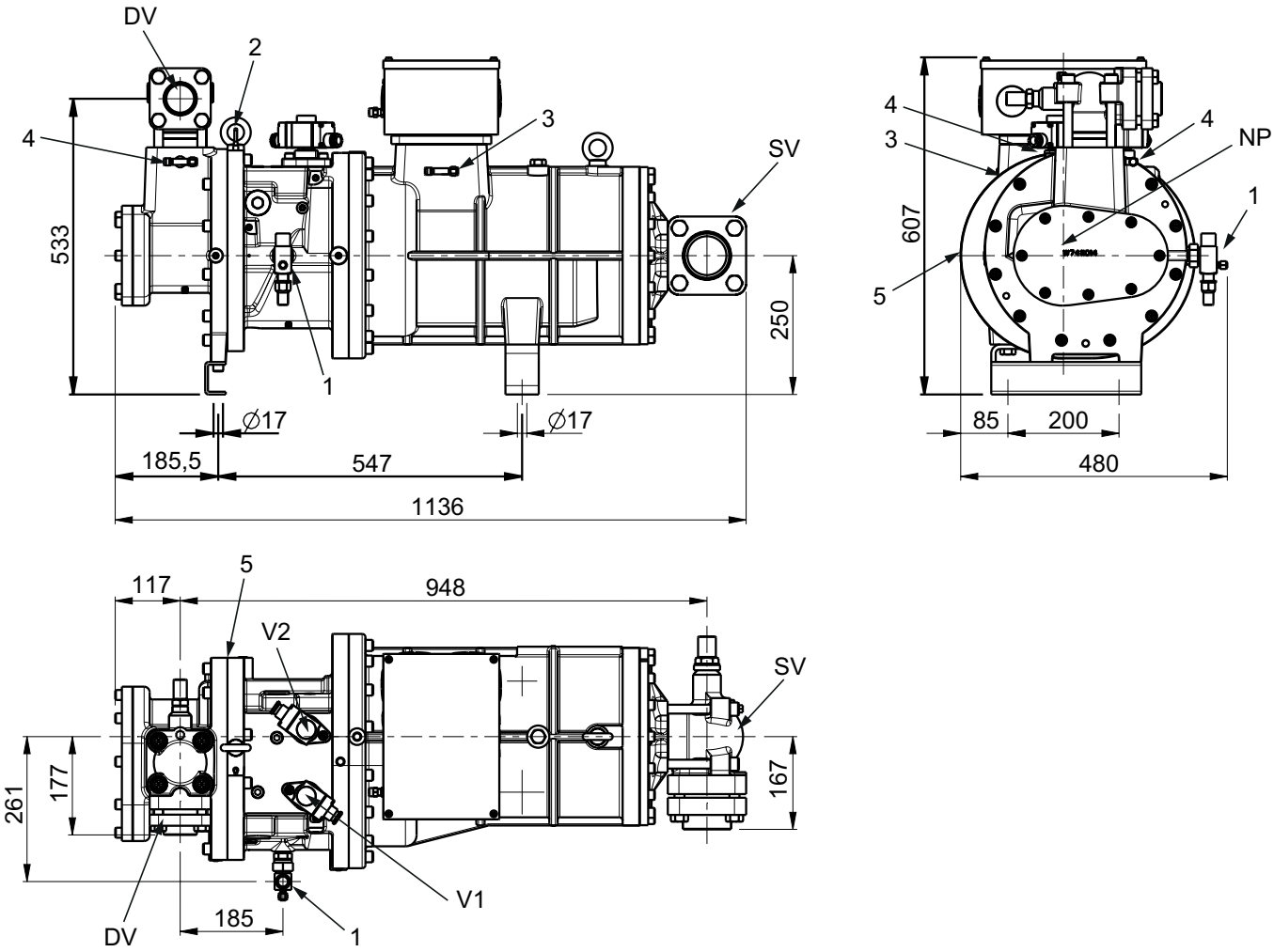


1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection	½" SAE
V1	Capacity control valve (step 1)	
V2	Capacity control valve (step 2)	
SV	Suction valve	ø 3" ⅛ * - 80 mm
DV	Discharge valve	ø 2" ⅛ - 54,0 mm
NP	Information plate	

* On request

Dimensional drawings and connections

Models NRL3 NRH3

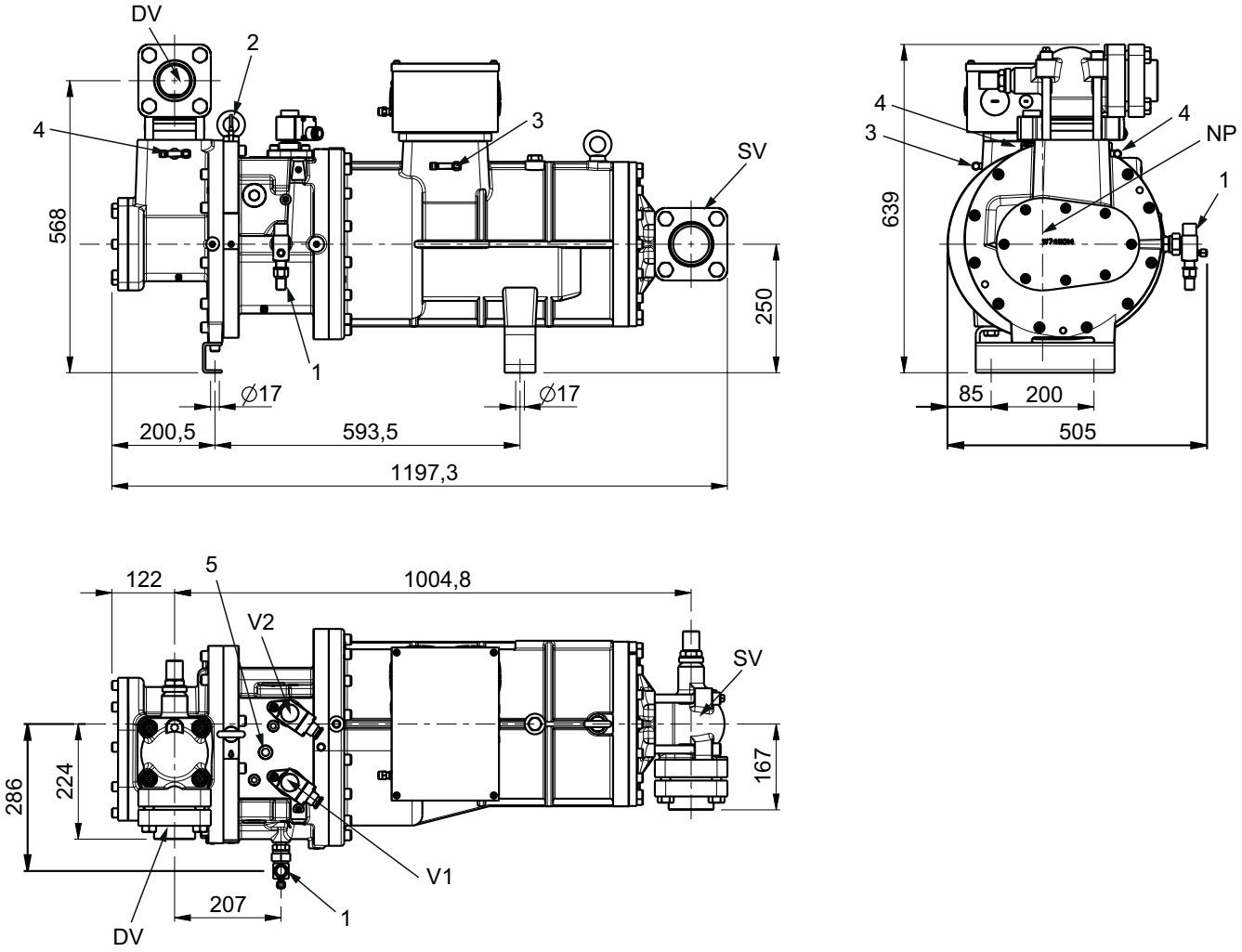


1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection	½" SAE
V1	Capacity control valve (step 1)	
V2	Capacity control valve (step 2)	
SV	Suction valve	ø 3" ⅛ * - 80 mm
DV	Discharge valve	ø 2" ⅛ - 54,0 mm
NP	Information plate	

* On request

Dimensional drawings and connections

Models NRL4 NRH4

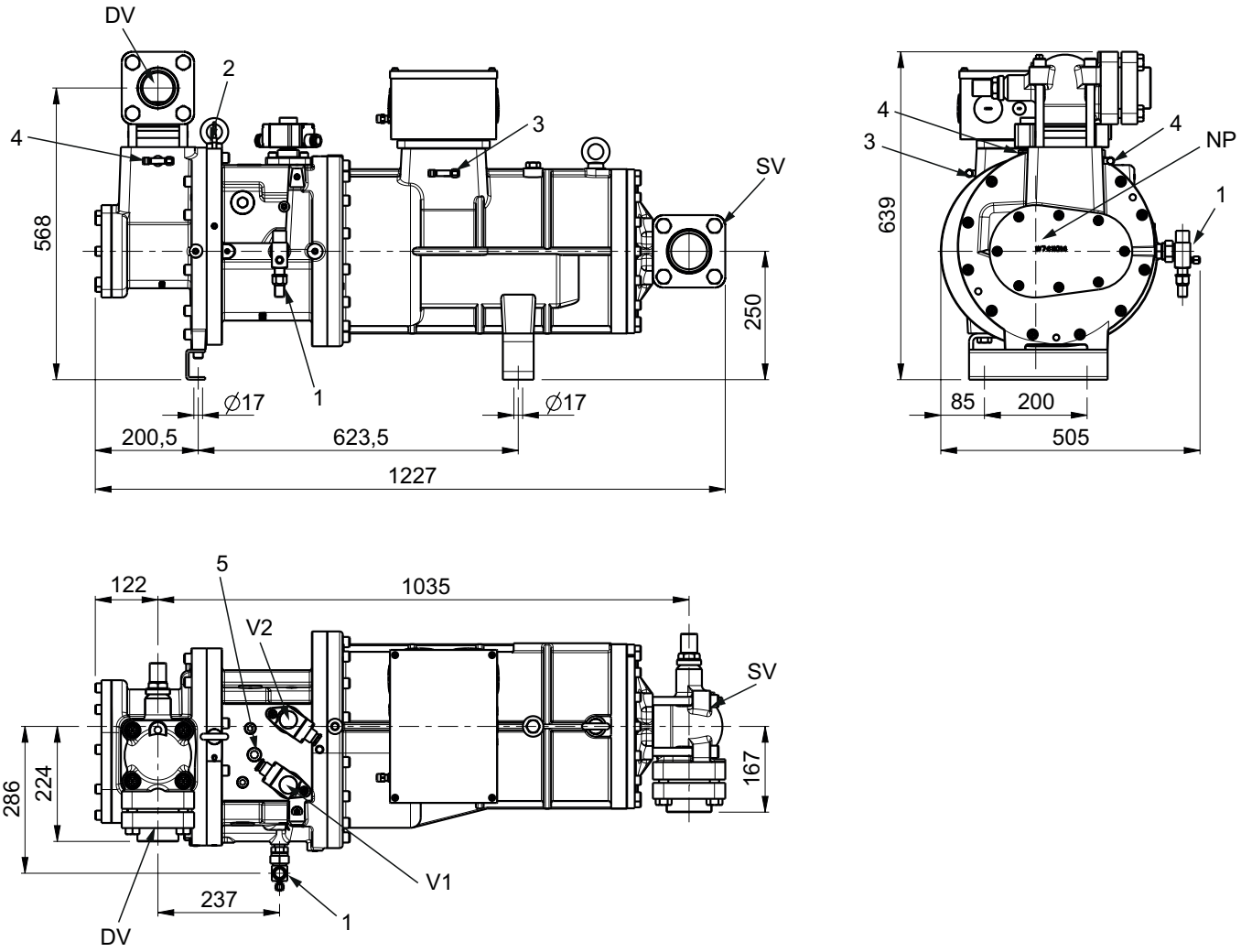


1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection	¾" SAE
V1	Capacity control valve (step 1)	
V2	Capacity control valve (step 2)	
SV	Suction valve	ø 3" ⅛ * - 80 mm
DV	Discharge valve	ø 2" ⅝ * - 67,0 mm
NP	Information plate	

* On request

Dimensional drawings and connections

Models NRL5 NRH5

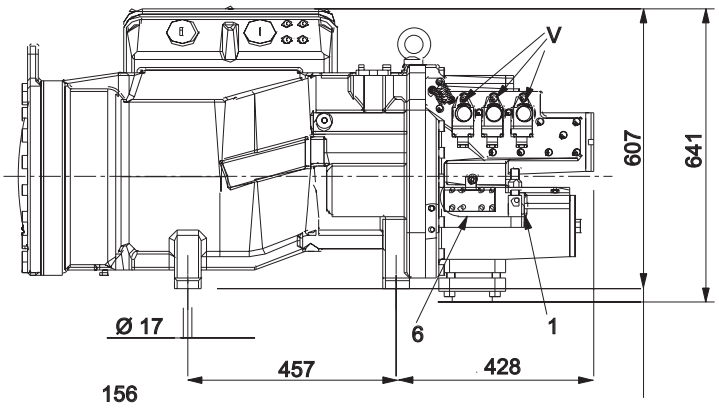


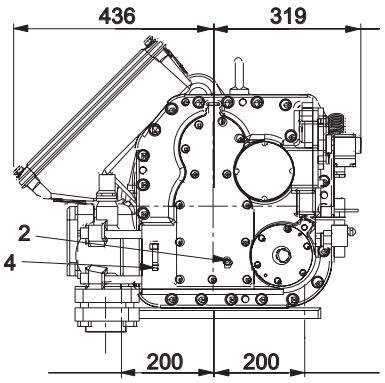
1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection	¾" SAE
V1	Capacity control valve (step 1)	
V2	Capacity control valve (step 2)	
SV	Suction valve	ø 3" ⅛ * - 80 mm
DV	Discharge valve	ø 2" ⅝ * - 67,0 mm
NP	Information plate	

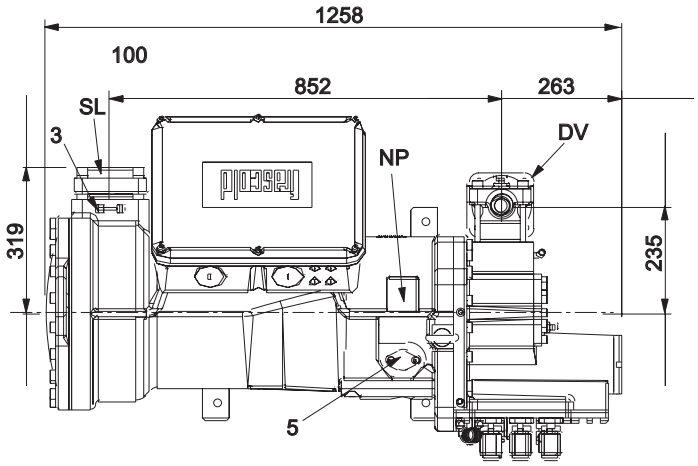
* On request

Dimensional drawings and connections

Models NRL6 NRH6







1	Oil return connection	
2	Discharge temperature sensor	
3	Low pressure connection	
4	High pressure connection	
5	Connection for ECO / liquid injection valve (option)	
6	Oil flowswitch	
V	Capacity control valve	
SV	Suction valve	ø 3” ⅛ * - 80 mm
DV	Discharge valve	ø 4” ⅛ - 104 mm
NP	Information plate	

* On request

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Headquarters and production

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