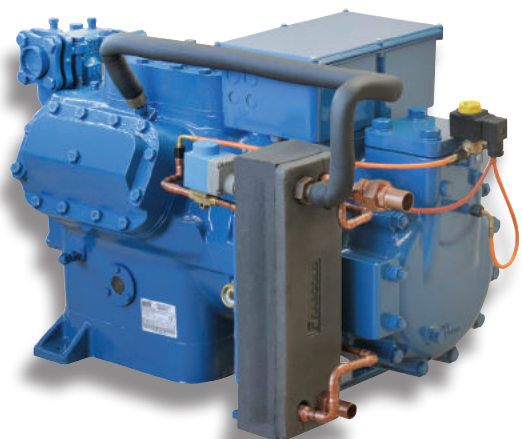
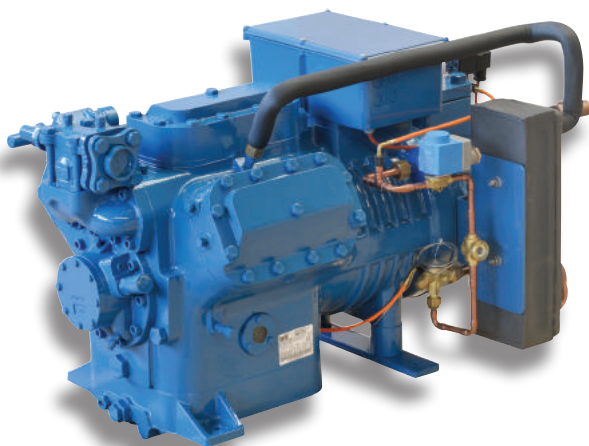


Frascold[®]

Two-stage semi-hermetic reciprocating compressors

Application at low temperature



Two stage semi-hermetics reciprocating compressors

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General information

Frascold produces a wide range of semi-hermetic reciprocating single- and two-stage compressors with displacement ranging from 4 to 240 m³/h at 50Hz and electrical ratings from 0.50 to 80 HP. Suitable for conventional HFC-based coolants, new low-GWP coolants, HFO, natural coolants.

The compressors are suitable for use in a wide range of retail and industrial cooling applications, process chillers and AC, heat pumps; in single, multi-compressor systems and cascade systems. A rich list of accessories multiplies their application versatility. All models can work with inverter.

The range stands out for its high efficiency and ensuing operating cost savings. The design also assures sturdiness, low noise and compact overall dimensions. The protection systems integrated in the compressors are among the most advanced on the market.

In addition to standard models, the range of compressors also includes ECOinside models optimised for use with R134a and R1234ze, ATEX construction AXH, AXY and AXE models, VS models with integrated inverter, SK2 and TK models for CO₂ applications in sub-critical and trans-critical cycle, two-stage models, Twin construction models. The performance of most models is ASERCOM certified, while the entire range is UL-certified.

Other certifications are available on request.



ASERCOM performance certification



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.

Further details on www.asercom.org.

FSS3 Product Selection Software

The FSS3 selection software, quick and easy to use, allows users to obtain the capacity in the various operating points and to access all the information on Frascold compressors.

If you have any questions on how to use software please contact customer service via e-mail or telephone. You can also send your comments and suggestions to improve the FSS3 program. Your feedback is always welcome.

Download the 'setup.exe' file on your computer, run it and follow the installation instructions. A program shortcut will be created on your desktop for easier start up.

Two stage semi-hermetics reciprocating compressors

Data on compressor capacity

This catalogue indicates the data for compressors with R404A, R507A and R22. Data relating to other coolants are available on request.

The capacities are indicated in accordance with European EN12900 standard and at 50Hz operation. To calculate capacity in other conditions and at 60 Hz use the FSS3 Selection Software.

Operating limits

Compressor operation is possible within the application diagram; pay attention to the indications for the various areas of the diagram. The limits refer to the operation of the compressor at full load and with a power supply frequency of 50 Hz.

The diagrams published in this catalogue are to be considered as a general diagram for the full range of compressors.

Check the diagram of every single compressor model on the Frascold Selection Software program.

Safety

Frascold compressors are constructed according to European and American (UL) safety standards. They may only be used if installed within systems complying with the operating instructions and conforming to the regulations in force. The relevant standards are listed in the Manufacturer's Declaration, available on request or on the www.frascold.it website in the certification section. The compressors will be put into service by experienced staff, suitably documented in relation to the manufacturer's declarations and able to understand and apply the instructions contained in the installation manual supplied with the compressor or available on www.frascold.it.

Protection of compressors with Diagnose technology

Frascold equips semi-hermetic reciprocating compressors with Diagnose technology, which enables a significant step forwards in the compressor protection system and adds new diagnostic and communication functions.

Increased protection

Frascold compressors are even more reliable. The Diagnose technology monitors conditions inside the system and stops the compressor in the event of incorrect functional parameters.

Lower costs

Quick identification of the cause of the malfunction. With the information saved on the Diagnose devices, technicians can quickly and accurately diagnose the past and present state of the cooling system, thereby allowing for quick and cost-effective intervention time with short downtime for the system.

More information

With the communication systems envisaged by Diagnose technology you can monitor and download the system's operating data in real time. This means that technicians can intervene by improving the efficiency and reliability of the system by diagnosing required maintenance in advance.

Two stage semi-hermetics reciprocating compressors

Safety device to control delivery temperature

The internal delivery temperature, in certain extreme conditions (such as loss of coolant or extremely high compression ratios), can reach values that can damage the compressor.

All models 2V and 2Z are fitted with a temperature probe that is connected to the electronic control module and stops the compressor if the delivery temperature exceeds the set safety limit.

Electronic safety device to control lubrication

Frascold compressors of the 2V and 2Z series are supplied with an electronic pressure switch of proven reliability to control lubrication. The device efficiently monitors the pressure changes of the lubrication system and stops the compressor in the event of insufficient oil flow. The pressure switch is installed directly on the compressor's oil pump and does not require additional fittings.

Lubricating oil

All compressors are supplied filled with oil with specific features for cooling fluids and having low carryover. Oil viscosity is suitable to assure perfect lubrication within the application limits of the compressors and are appropriate to their mechanics.

Accessories

Frascold has selected and developed a comprehensive range of accessories for its compressors, suitable to assure efficiency and reliability in all intended operating conditions.

General information

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Two stage semi-hermetics reciprocating compressors

Special features

The new two-stage compressors by Frascold, models 2V and 2Z, have been redesigned and re-engineered by eliminating external conduits for interstage circuitry and including an additional liquid injection system. These new features provide the following benefits:

Compact: thanks to the elimination of external conduits, the compressor features reduced dimensions. Plus, the absence of welding and pipes protects against refrigerant leaks and heat dissipation, which cause system inefficiency.

Liquid injection on the motor side: thanks to the exclusive Motor Cooling System, the motor is injected solely with the exact amount of fluid required to cool the motor. This system, only available on Frascold compressors, prevents the formation of ice on the motor by eliminating damage by oxidation, by condensate in the electrical box and liquid slugging.

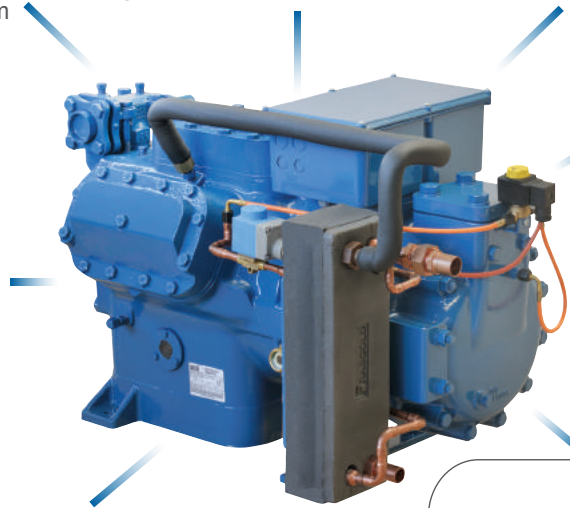
Increased efficiency thanks to the **dual liquid injection**, purposely designed to optimise the operation of the compressor to achieve maximum performance.

Injection of liquid in the second stage intake conduit: the amount of liquid injected is enough to optimise efficiency. The compressed gas and injected liquid mixing process is instantaneous and the liquid is not overheated as it does not go through the motor.

Sub-cooler kit: all models can be fitted with a pre-assembled sub-cooler that can be provided installed and connected by the manufacturer or supplied separately.

Reliable and sturdy: The new specially designed components make the compressor resistant to all operating conditions within its working range.

Quiet: the optimisation of the centre of gravity and the homogeneous distribution of weights ensure low vibrations and low noise.



Compressor control: there are three versions designed to control the oil pressure switch and protection and diagnostics system to be adapted to the different types of plants.

Control	Protection device			Differential Pressure Switch		Operating logic
	Frascold ICC Module	Kriwan INT69 Diagnose	Kriwan INT69TML Diagnose	Delta/P-II	INT250FR	
Standard Control	X			X		The Differential Oil Pressure Switch (supplied) communicates directly with the Central Control Panel (PCC) of the system. The ICC module sends alarm signals directly to the PCC
Diagnostic Control (optional)	X	X		X		The Differential Oil Pressure Switch (supplied) communicates directly with the Central Control Panel (PCC) of the system. The ICC module sends alarm signals to the INT69 module Diagnose (supplied as standard and to be installed on the electrical panel of the PCC) to allow for diagnostics on the compressor (alarm log, start-up sequences, etc.).
Direct Control (optional)	X		X		X	The Differential Oil Pressure Switch (provided as standard) communicates with the INT69TML Diagnose module (provided as standard and to be installed in the electrical panel of the PCC). The INT69ML Diagnose module performs full diagnostics of the compressor (alarms log, start-up sequences, etc.), by acquiring the alarm signals both from the ICC and the INT250 FR pressure switch.

Two stage semi-hermetics reciprocating compressors

Motor Cooling System

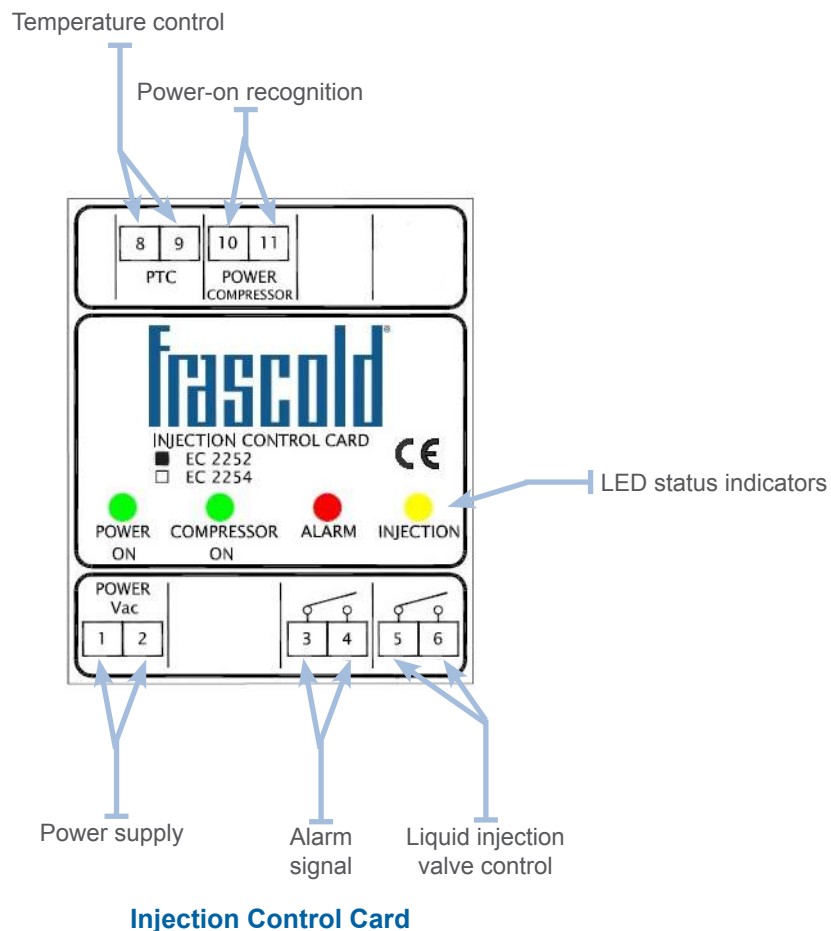
The Motor Cooling System is an exclusive feature by Frascold designed to activate a series of fundamental controls to optimise the functionality and efficiency of the two-stage compressors of the 2V and 2Z series.

The system includes the liquid injection control card, the Injection Control Card (ICC), the TA current detector, the AMS motor temperature sensors and the liquid injection valve.

Here are the features of the device:

- **Constant and accurate control of the motor temperature.** The system accurately and constantly checks the temperature via the AMS sensors located inside the windings. Indeed, the position of the sensors has been specifically designed to identify the most critical areas in terms of overheating, thereby allowing to protect the motor also during the critical start-up stage.
- **Efficient motor cooling.** The system identifies when the pre-alarm temperature threshold is reached and activates the injection of liquid in the motor according to optimised amounts and time.
- **Compressor reliability.** The controlled cooling of the motor prevents excessive cooling on neighbouring areas, eliminating the risk of frost and resulting oxidation, thereby preventing the formation of condensation in the electrical box of the compressor and the risk of a short circuit.
- **Prevention of burns on the motor.** The system identifies when the CRITICAL TEMPERATURE threshold has been reached and stops the compressor in the event of anomalous overheating.
- **Liquid injection monitoring.** Thanks to the TA device installed as standard, as well as injecting the liquid as required, the system can prevent this function when the compressor stops due to a malfunction of the compressor itself or due to external system management logics.

The ICC module is supplied as standard and already fully wired inside the electrical box.



Two stage semi-hermetics reciprocating compressors

Control and protection device

Kriwan INT69 ®Diagnose and INT69 TML ®Diagnose

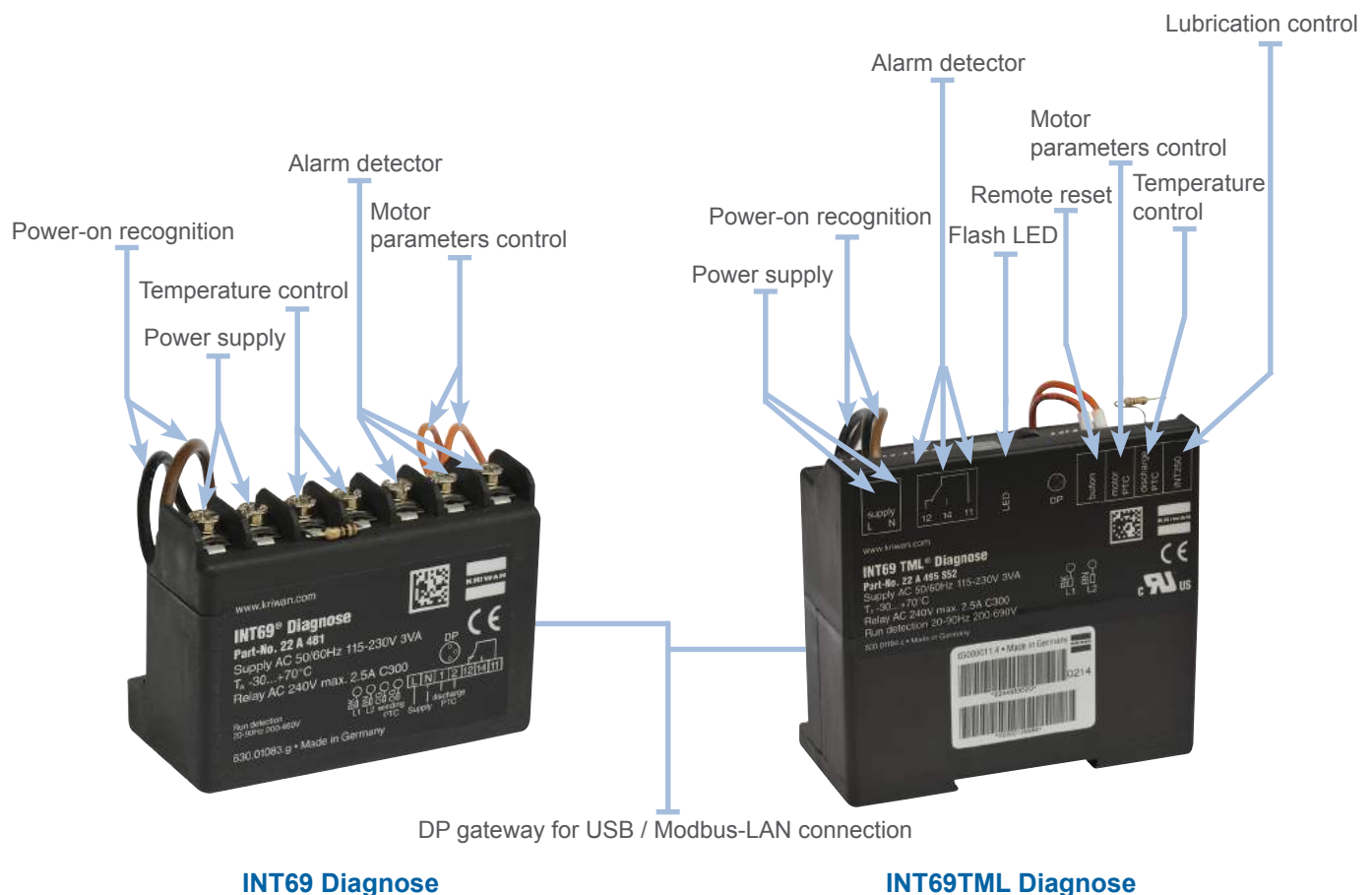
Kriwan Diagnose devices are a further development of compressors' protection units.

The Diagnose technology is not only limited to protecting the compressor, but also offers diagnosis and system optimisation features; providing detailed information to technicians in order to promptly diagnose any plant problems; it even makes it possible to prevent malfunctioning before it occurs thanks to data analysis. The additional protection features help extending the compressor's service life. Through this technology applied to compressors, users will benefit from enhanced reliability of the cooling system and from the reduction in running and maintenance costs.

Frascold was the first compressor manufacturer to adopt this innovative technology and today it is standard on all our compressors.

Advantages

- Guaranteed optimal operation throughout the compressor's entire life cycle
- Convenient and with straightforward operation
- Instantaneous diagnosis and precise problem-solving in case of error or fault
- Specifically adapted to the user's needs
- Intelligent monitoring of compressor operation
- It extends the operative life of cooling systems
- Improves compressor protection
- Reduces running and maintenance costs
- Automatic storage of operative data and errors in a memory
- Technical card with retrieval of stored data
- Display of compressor status through flash LED code
- Data download through USB connection
- Remote communication through Modbus-Gateway and LAN-Gateway protocol
- Also applicable to previously installed compressors



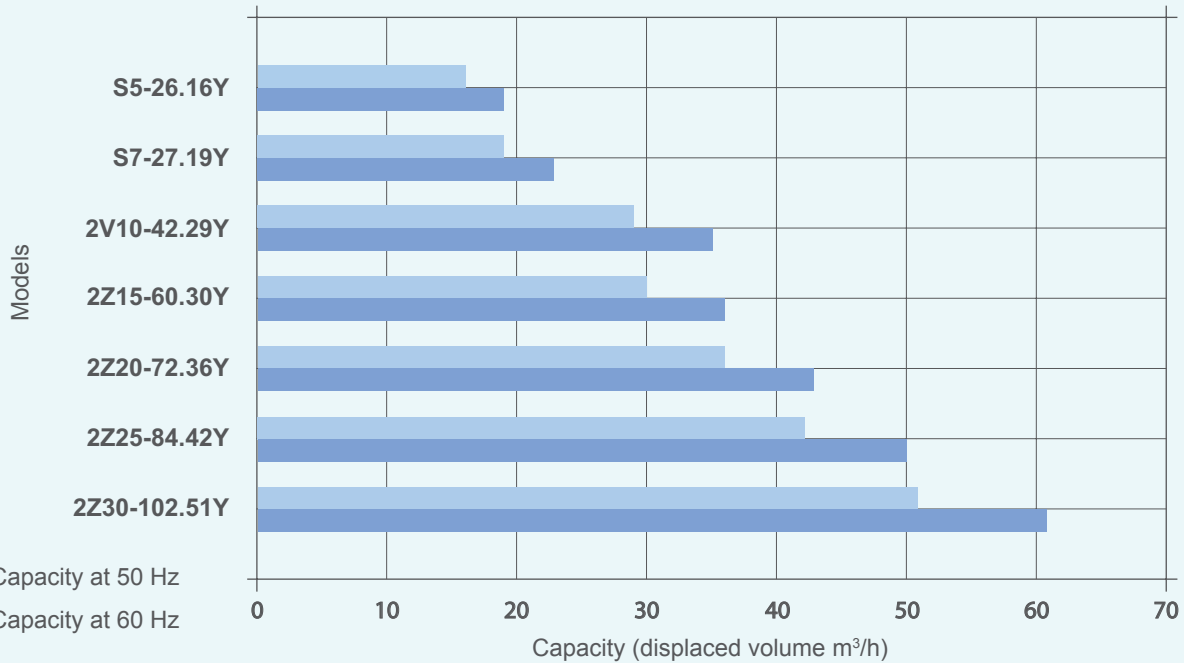
INT69 Diagnose and INT69TML Diagnose are intellectual property and trademarks ® of KRIWAN Industrie-Elektronik GmbH.

Two stage semi-hermetics reciprocating compressors

Range of models

Current program:

3 main series, 7 models with 7 capacity stages, from 16 to 51 m³/h (50 Hz)



Model names

2Z30-102.51Y

Model series
S - 2V - 2Z

Motor Size
from 5 to 30 HP

Type of oil
POE (others on request)

Capacity (displaced volume)
from 16 to 51 m³/h at 50Hz

Information plate

All the important information to identify the compressor is displayed on the plate. The date of production is contained in the serial number. The indication of the type of coolant is the installer's responsibility.

Capacity (displaced volume in m³/h)		Type 2Z30-102.51Y		Compressor model
Oil type: POE32		Nr. 3P001001		Serial number
Max. Operating Disch. Pressure bar 30		Max. Static Suct. Pressure bar 20,5		Maximum operating pressure
Label certifying the conformity with European safety requirements		EAC CE		Label certifying the conformity with European safety requirements
Bar code (Compressor identification number)		3~		Bar code (Compressor identification number)
Manufacturing		Frascold S.p.A. 2Z30 3AP001001 RESCALDINA ITALY		Manufacturing

Volt		Hz	MRA		LRA	
PWS	YY	Hz	PWS	YY	PWS	YY
380-420	380-420	50	53	53	132,6	224,4
440-480	440-480	60	53	53	132,6	224,4

Compressor identification number

Two stage semi-hermetics reciprocating compressors

Operating limits

Frascold two-stage compressors can be used with a wide range of coolants.

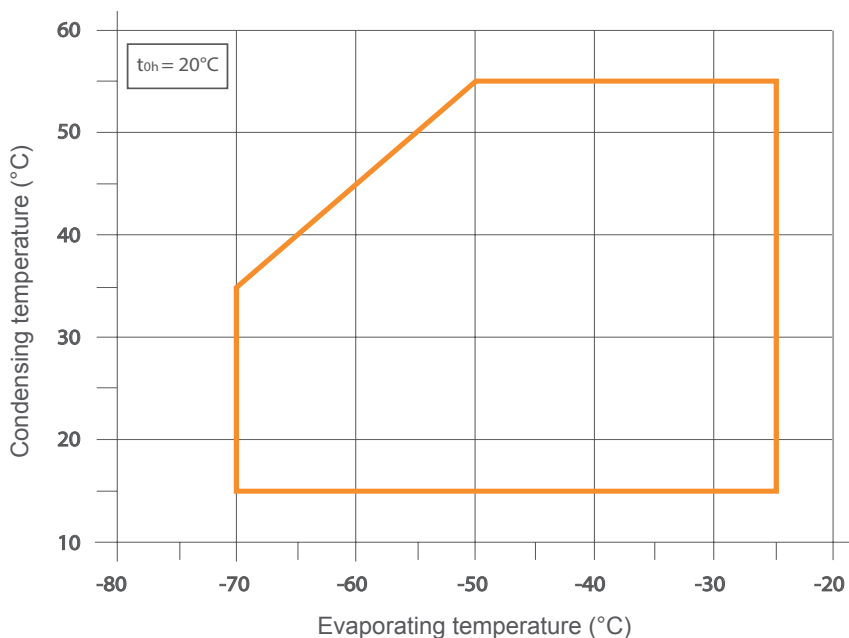
The compressor operates only within the application diagrams reported below.

For further details and to check the exact operating limits for each single compressor, please see the Frascold Selection Software available on our website.

R404A - R507

Standard application diagram

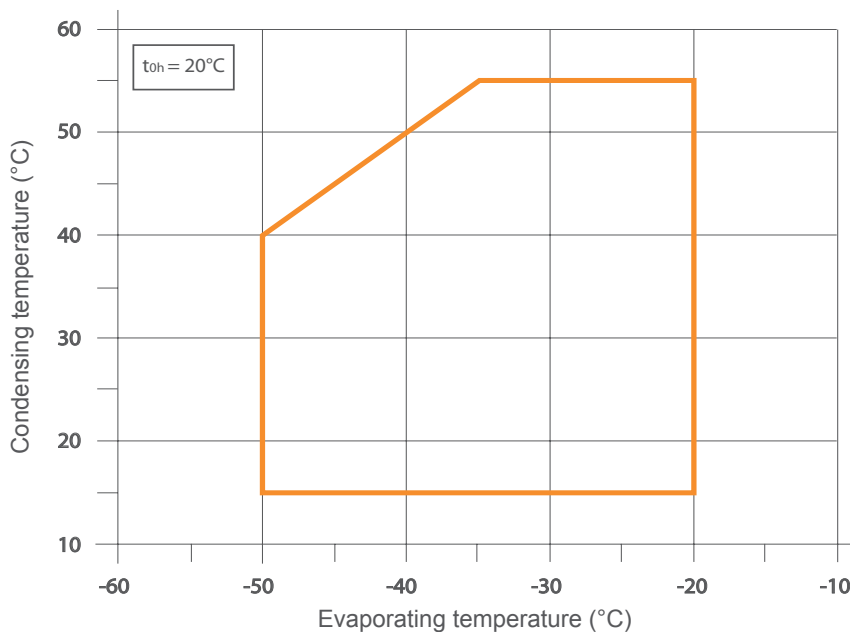
Check the diagram of every single compressor model on the Frascold Selection Software



R22

Standard application diagram

Check the diagram of every single compressor model on the Frascold Selection Software



Compressor at 100% capacity

t_{0h} Suction gas temperature = 20°C

Maximum allowed operating pressure

P_s HP (high pressure side) = 30 bar(a)

P_{ss} LP (low pressure side) = 20,5 bar(a)

Two stage semi-hermetics reciprocating compressors

Technical data

Model	no. of cylinders		Displaced volume at 50 Hz m ³ /h ②		Oil charge dm ³	Net weight kg	Electrical data				Line connections			
							Motor	Max operating current 400V A	Max absorbed current kW	Locked rotor current 400V A	Suction		Discharge	
	LP	HP	LP	HP	③	④					⑤	⑥	⑥	⑥
S5-26.16Y	2	2	25,2	16,4	2,9	120	⑧	14,0	8,3	35,5	1 ³ / ₈ "	35	7 ⁸ / ₁₆ "	22
S7-27.19Y	2	2	26,9	19,1	2,9	122	⑧	18,0	9,5	47,0	1 ³ / ₈ "	35	7 ⁸ / ₁₆ "	22
2V10-42.29Y	2	2	41,9	29,4	4,0	173	⑧	23,0	13,5	53,9	1 ³ / ₈ "	35	1 ¹ / ₈ "	28,6
2Z15-60.30Y	4	2	58,8	29,4	7,2	220	⑧	31,0	17,0	74,8	1 ⁵ / ₈ "	42	1 ³ / ₈ "	35
2Z20-72.36Y	4	2	70,8	35,4	7,2	225	⑧	37,0	20,9	107,0	1 ⁵ / ₈ "	42	1 ³ / ₈ "	35
2Z25-84.42Y	4	2	83,8	41,9	7,2	230	⑧	45,0	25,8	118,0	1 ⁵ / ₈ "	42	1 ³ / ₈ "	35
2Z30-102.51Y	4	2	102,9	51,5	7,2	239	⑧	53,0	30,9	133,0	2 ¹ / ₈ "	54	1 ³ / ₈ "	35

② Conversion factor for 60Hz = 1.2.

③ Oil charge POE 32 cSt. We always recommend using the heating element.

④ Net weight, including: valves, oil charge, rubber dampers.

⑤ ± 10% with reference to the average value of the voltage field. Other voltage values provided upon request.

⑥ The reported value refers to operation at 50Hz.

Operation at 60Hz multiply by 1.2. The max operating current remains unchanged.

The size of the contactors, cables and fuses must take into account the maximum operating temperature and the maximum power absorbed. AC3 category contactors.

⑦ Connections of weld-on valves.

⑧ 380V-420V // 3 / 50Hz

440V-480V // 3 / 60Hz

Two stage semi-hermetics reciprocating compressors

Standard supply

Frascold supplies its compressors equipped with components for standard intended use, as shown on the technical and operating sheets and instructions. Different accessories are available on request for other needs.

Description	Compressor series		
	S	2V	2Z
Semi-hermetic compressor, 4/6 cylinders with integrated part-winding start-up electric motor 380-420V / 3 / 50 440-480V / 3 / 60 Electrical motor with PTC sensor	S	S	S
Electrical connections box	S	S	S
Discharge temperature probe	S	S	S
High and low pressure safety valves	S	S	S
Intake and compression valves	S	S	S
Oil charge POE 32 cSt	S	S	S
Protective nitrogen charge	S	S	S
Oil level visual indicator	S	S	S
Oil heating resistance	▲	▲	▲
Rubber vibration dampers	S	S	S
Electronic oil level switch	n.a.	▲	▲
Electronic oil level regulator	▲	▲	▲
Sub-cooler	▲	▲	▲
Injection Control Card	n.a.	S	S
INT69 Diagnose control and protection device (only with Diagnostic Control)	S	■	■
INT69 TML Diagnose control and protection device (only with Direct Control)	n.a.	●	●
Electronic differential pressure switch to control lubrication Delta P-II (only with Standard Control and Diagnostic Control)	n.a.	S	S
Electronic differential pressure switch to control lubrication INT250FR (only with Direct Control)	n.a.	S	S
Modbus application	▲	▲	▲

- S Standard
- ▲ Optional accessory
- Only with Diagnostic Control
- Only with Direct Control

Two stage semi-hermetics reciprocating compressors

Performance R404A - R507A [50 Hz] with liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]									
			-25	-30	-35	-40	-45	-50	-55	-60	-65	-70
S5-26.16Y	30	Qo	12109	10168	8438	6913	5585	4444	3478	2674	2017	1488
		Pe	6,0	5,52	5,03	4,54	4,06	3,59	3,14	2,71	2,32	1,96
	35	Qo	11868	9976	8290	6804	5508	4391	3441	2642	1978	1429
		Pe	6,51	5,93	5,36	4,8	4,26	3,75	3,26	2,81	2,4	2,03
	40	Qo	11627	9781	8138	6688	5423	4329	3393	2598	1925	
		Pe	7,04	6,36	5,71	5,08	4,49	3,92	3,4	2,92	2,5	
	45	Qo	11391	9588	7984	6569	5333	4261	3337	2543		
		Pe	7,58	6,82	6,08	5,38	4,73	4,12	3,56	3,06		
	50	Qo	11172	9405	7836	6452	5242	4188	3274			
		Pe	8,16	7,31	6,49	5,72	5,0	4,34	3,75			
	55	Qo		9247	7705	6347	5157	4118				
		Pe		7,86	6,95	6,11	5,33	4,62				
S7-27.19Y	30	Qo	13050	10954	9085	7436	6001	4768	3725	2860	2155	1592
		Pe	6,55	6,05	5,53	5,0	4,47	3,94	3,43	2,96	2,52	2,13
	35	Qo	12804	10755	8929	7319	5916	4709	3683	2825	2115	1535
		Pe	7,09	6,5	5,89	5,29	4,7	4,12	3,58	3,07	2,61	2,21
	40	Qo	12557	10554	8770	7198	5826	4643	3634	2782	2067	
		Pe	7,64	6,95	6,27	5,6	4,94	4,32	3,73	3,2	2,72	
	45	Qo	12314	10353	8608	7071	5731	4572	3579	2732		
		Pe	8,21	7,44	6,67	5,93	5,21	4,54	3,91	3,34		
	50	Qo	12084	10158	8448	6944	5631	4495	3516			
		Pe	8,84	7,96	7,11	6,29	5,51	4,78	4,11			
	55	Qo	11882	9982	8300	6822	5534	4416				
		Pe	9,54	8,56	7,62	6,71	5,87	5,08				
2V10-42-29Y	30	Qo	18763	15836	13216	10896	8865	7111	5620	4373	3350	2528
		Pe	9,84	9,05	8,25	7,46	6,68	5,92	5,19	4,51	3,87	3,29
	35	Qo	18411	15562	13012	10753	8772	7057	5590	4351	3318	2465
		Pe	10,72	9,78	8,86	7,95	7,08	6,24	5,45	4,72	4,06	3,46
	40	Qo	18066	15292	12809	10608	8676	6997	5551	4318	3271	
		Pe	11,63	10,55	9,49	8,48	7,51	6,59	5,74	4,97	4,28	
	45	Qo	17733	15028	12608	10462	8576	6930	5503	4270		
		Pe	12,59	11,36	10,17	9,04	7,97	6,98	6,07	5,25		
	50	Qo		14779	12415	10318	8472	6855	5442			
		Pe		12,23	10,91	9,66	8,5	7,43	6,45			
	55	Qo		14561	12242	10186	8372	6776				
		Pe		13,21	11,75	10,38	9,11	7,95				
2Z15-60.30Y	30	Qo	25786	21746	18132	14934	12138	9727	7678	5968	4567	3444
		Pe	13,19	12,17	11,11	10,04	8,97	7,93	6,92	5,97	5,1	4,32
	35	Qo	25295	21365	17849	14737	12012	9653	7639	5939	4524	3357
		Pe	14,33	13,12	11,89	10,67	9,48	8,34	7,26	6,25	5,34	4,54
	40	Qo	24806	20980	17558	14528	11870	9562	7578	5885	4450	
		Pe	15,51	14,1	12,71	11,34	10,03	8,79	7,63	6,57	5,62	
	45	Qo	24329	20599	17266	14312	11718	9456	7497	5806		
		Pe	16,74	15,14	13,57	12,06	10,63	9,28	8,04	6,92		
	50	Qo		20240	16985	14101	11563	9341	7401			
		Pe		16,25	14,51	12,85	11,29	9,84	8,51			
	55	Qo			16743	13916	11423	9230				
		Pe			15,58	13,76	12,06	10,49				
2Z20-72.36Y	30	Qo	31405	26470	22057	18154	14743	11803	9310	7231	5534	4178
		Pe	15,69	14,5	13,31	12,11	10,93	9,76	8,61	7,5	6,43	5,41
	35	Qo	30833	26025	21725	17920	14591	11713	9258	7193	5478	4071
		Pe	17,06	15,64	14,23	12,86	11,52	10,23	9,0	7,83	6,73	5,7
	40	Qo	30271	25582	21390	17680	14429	11610	9190	7133	5396	
		Pe	18,47	16,81	15,2	13,65	12,17	10,76	9,44	8,21	7,08	
	45	Qo	29726	25147	21056	17435	14257	11492	9103	7048		
		Pe	19,95	18,05	16,23	14,51	12,88	11,36	9,95	8,66		
	50	Qo		24734	20733	17191	14079	11361	8995			
		Pe		19,39	17,37	15,46	13,68	12,04	10,54			
	55	Qo			20445	16967	13906	11222				
		Pe			18,67	16,58	14,64	12,87				
2Z25-84.42Y	30	Qo	37070	31252	26050	21449	17428	13962	11019	8563	6553	4940
		Pe	18,44	16,99	15,52	14,02	12,54	11,09	9,69	8,36	7,14	6,04
	35	Qo	36404	30731	25659	21172	17245	13851	10954	8514	6485	4814
		Pe	20,05	18,34	16,62	14,92	13,26	11,67	10,16	8,76	7,48	6,36
	40	Qo	35748	30211	25264	20886	17050	13725	10870	8442	6388	
		Pe	21,71	19,73	17,78	15,88	14,05	12,31	10,69	9,21	7,89	
	45	Qo	35112	29701	24870	20594	16844	13582	10764	8341		
		Pe	23,45	21,2	19,01	16,9	14,9	13,03	11,3	9,73		
	50	Qo	34520	29217	24488	20304	16631	13424	10635			
		Pe	25,32	22,79	20,36	18,04	15,86	13,83	11,99			
	55	Qo		28796	24147	20037	16424	13260				
		Pe		24,59	21,89	19,35	16,97	14,79				
2Z30-102.51Y	30	Qo	46243	38811	32206	26402	21364	17052	13416	10399	7937	5957
		Pe	23,18	21,27	19,34	17,4	15,48	13,62	11,83	10,14	8,57	7,15
	35	Qo	45530	38251	31784	26102	21167	16932	13345	10344	7858	5807
		Pe	25,36	23,06	20,77	18,54	16,38	14,32	12,39	10,61	9,01	7,59
	40	Qo	44826	37688	31353	25787	20950	16791	13250	10261	7745	
		Pe	27,62	24,92	22,29	19,76	17,36	15,12	13,05	11,18	9,53	
	45	Qo	44148	37136	30919	25461	20716	16627	13129	10146		
		Pe	29,99	26,89	23,91	21,09	18,44	16,0	13,8	11,83		
	50	Qo		36617	30501	25137	20474	16446	12982			
		Pe		29,02	25,68	22,55	19,66	17,02	14,66			
	55	Qo			30138	24844	20243	16261				
		Pe			27,71	24,25	21,09	18,23				

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 50Hz. For operation at 60HZ see page 14.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Two stage semi-hermetics reciprocating compressors

Performance R404A - R507A [50 Hz] without liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]									
			-25	-30	-35	-40	-45	-50	-55	-60	-65	-70
			S5-26.16Y	30	Qo	9648	7923	6433	5157	4077	3176	2433
Pe	5,28	4,81			4,35	3,9	3,47	3,06	2,67	2,31	1,97	1,67
35	Qo	9085		7464	6065	4867	3854	3006	2304	1731	1268	897
	Pe	5,62		5,07	4,54	4,04	3,56	3,12	2,71	2,33	2,0	1,71
40	Qo	8510		6993	5684	4566	3619	2824	2165	1621	1175	
	Pe	5,94		5,31	4,72	4,16	3,65	3,17	2,74	2,36	2,03	
45	Qo	7922		6509	5292	4253	3373	2633	2015	1501		
	Pe	6,23		5,53	4,88	4,28	3,72	3,22	2,78	2,39		
50	Qo	7322		6014	4890	3930	3117	2432	1857			
	Pe	6,5		5,74	5,03	4,38	3,79	3,27	2,81			
55	Qo	6712		5509	4477	3598	2853	2223				
	Pe	6,74		5,92	5,15	4,46	3,85	3,3				
S7-27.19Y	30	Qo	10397	8536	6925	5547	4381	3407	2606	1959	1445	1046
		Pe	5,77	5,29	4,81	4,32	3,84	3,38	2,93	2,52	2,15	1,82
	35	Qo	9801	8047	6532	5236	4139	3223	2467	1851	1356	964
		Pe	6,12	5,57	5,01	4,47	3,95	3,45	2,98	2,56	2,18	1,86
	40	Qo	9190	7545	6126	4913	3888	3029	2318	1736	1262	
		Pe	6,45	5,82	5,2	4,61	4,04	3,52	3,03	2,59	2,22	
	45	Qo	8563	7028	5706	4578	3624	2825	2161	1613		
		Pe	6,75	6,05	5,38	4,74	4,13	3,57	3,07	2,63		
	50	Qo	7920	6495	5272	4230	3349	2611	1994			
		Pe	7,04	6,27	5,54	4,85	4,21	3,63	3,11			
	55	Qo	7259	5947	4823	3868	3061	2384				
		Pe	7,29	6,46	5,68	4,95	4,27	3,67				
2V10-42-29Y	30	Qo	14948	12340	10075	8127	6472	5082	3931	2995	2247	1661
		Pe	8,72	7,95	7,2	6,46	5,76	5,08	4,44	3,84	3,3	2,8
	35	Qo	14094	11644	9519	7692	6138	4830	3743	2851	2128	1547
		Pe	9,33	8,44	7,57	6,75	5,96	5,23	4,55	3,93	3,38	2,9
	40	Qo	13222	10932	8947	7242	5789	4565	3541	2694	1996	
		Pe	9,92	8,9	7,93	7,02	6,17	5,38	4,67	4,03	3,48	
	45	Qo	12332	10202	8357	6773	5424	4282	3323	2521		
		Pe	10,49	9,35	8,28	7,28	6,36	5,53	4,78	4,14		
	50	Qo	11420	9450	7747	6285	5039	3981	3087			
		Pe	11,02	9,76	8,6	7,52	6,54	5,66	4,9			
	55	Qo	10484	8675	7114	5775	4632	3659				
		Pe	11,51	10,15	8,89	7,74	6,7	5,79				
2Z15-60.30Y	30	Qo	20543	16945	13822	11140	8861	6950	5371	4087	3063	2262
		Pe	11,65	10,66	9,66	8,67	7,71	6,78	5,89	5,07	4,32	3,66
	35	Qo	19364	15986	13057	10542	8404	6607	5115	3892	2901	2107
		Pe	12,43	11,27	10,13	9,02	7,96	6,96	6,02	5,18	4,42	3,78
	40	Qo	18155	14998	12265	9917	7920	6238	4834	3672	2715	
		Pe	13,16	11,84	10,57	9,35	8,2	7,13	6,16	5,29	4,54	
	45	Qo	16918	13984	11445	9266	7411	5844	4528	3427		
		Pe	13,85	12,38	10,98	9,65	8,42	7,29	6,28	5,4		
	50	Qo	15655	12942	10599	8590	6877	5425	4198			
		Pe	14,49	12,87	11,35	9,92	8,61	7,43	6,4			
	55	Qo	14366	11876	9730	7889	6320	4984				
		Pe	15,07	13,31	11,67	10,15	8,77	7,55				
2Z20-72.36Y	30	Qo	25021	20626	16814	13541	10763	8434	6513	4953	3711	2744
		Pe	13,82	12,67	11,54	10,45	9,39	8,36	7,36	6,41	5,49	4,61
	35	Qo	23604	19473	15893	12819	10209	8017	6200	4713	3513	2555
		Pe	14,74	13,38	12,09	10,85	9,67	8,56	7,51	6,53	5,61	4,78
	40	Qo	22155	18289	14941	12069	9628	7574	5863	4450	3292	
		Pe	15,61	14,06	12,6	11,22	9,94	8,75	7,66	6,66	5,77	
	45	Qo	20671	17071	13957	11288	9017	7102	5498	4161		
		Pe	16,42	14,69	13,07	11,57	10,19	8,94	7,81	6,81		
	50	Qo	19150	15816	12938	10472	8373	6598	5102			
		Pe	17,18	15,27	13,5	11,89	10,43	9,12	7,97			
	55	Qo	17588	14522	11881	9619	7694	6060				
		Pe	17,87	15,8	13,9	12,18	10,64	9,29				
2Z25-84.42Y	30	Qo	29534	24352	19858	15999	12723	9977	7708	5865	4395	3245
		Pe	16,23	14,83	13,43	12,06	10,72	9,43	8,21	7,07	6,02	5,09
	35	Qo	27868	22994	18770	15145	12066	9480	7336	5579	4159	3022
		Pe	17,3	15,68	14,09	12,55	11,07	9,69	8,39	7,22	6,17	5,26
	40	Qo	26164	21598	17647	14258	11377	8954	6934	5266	3898	
		Pe	18,33	16,48	14,7	13,01	11,41	9,93	8,59	7,38	6,34	
	45	Qo	24417	20162	16485	13333	10653	8393	6501	4924		
		Pe	19,29	17,23	15,28	13,44	11,73	10,17	8,77	7,55		
	50	Qo	22624	18682	15281	12368	9891	7797	6033			
		Pe	20,17	17,92	15,8	13,82	12,01	10,38	8,95			
	55	Qo	20783	17156	14032	11360	9087	7160				
		Pe	20,98	18,53	16,25	14,16	12,25	10,56				
2Z30-102.51Y	30	Qo	36842	30242	24551	19694	15597	12185	9385	7122	5323	3913
		Pe	20,42	18,58	16,76	14,98	13,25	11,59	10,03	8,56	7,22	6,01
	35	Qo	34854	28621	23251	18672	14810	11590	8937	6778	5039	3645
		Pe	21,93	19,75	17,63	15,61	13,69	11,9	10,24	8,74	7,41	6,27
	40	Qo	32808	26944	21900	17603	13979	10954	8453	6401	4726	
		Pe	23,38	20,87	18,47	16,22	14,13	12,21	10,48	8,95	7,65	
	45	Qo	30700	25209	20495	16484	13102	10275	7929	5989		
		Pe	24,76	21,92	19,27	16,8	14,54	12,51	10,72	9,18		
	50	Qo	28529	23414	19033	15312	12176	9552	7364			
		Pe	26,05	22,91	20,0	17,33	14,93	12,79	10,95			
	55	Qo	26291	21557	17513	14085	11199	8780				
		Pe	27,25	23,82	20,67	17,81	15,27	13,05				

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 50Hz. For operation at 60HZ see page 15.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Performance R404A - R507A [60 Hz] with liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]									
			-25	-30	-35	-40	-45	-50	-55	-60	-65	-70
S5-26.16Y	30	Qo	14531	12202	10126	8296	6702	5333	4174	3209	2420	1786
		Pe	7,21	6,62	6,03	5,44	4,87	4,31	3,77	3,26	2,78	2,35
	35	Qo	14241	11971	9948	8165	6609	5269	4129	3171	2374	1715
		Pe	7,82	7,12	6,43	5,76	5,12	4,5	3,91	3,37	2,88	2,44
	40	Qo	13952	11737	9765	8026	6507	5195	4072	3118	2310	
		Pe	8,44	7,64	6,85	6,1	5,38	4,71	4,08	3,51	3,0	
	45	Qo	13670	11506	9581	7883	6399	5113	4004	3051		
		Pe	9,1	8,18	7,3	6,46	5,67	4,94	4,27	3,67		
	50	Qo		11286	9403	7743	6290	5026	3929			
		Pe		8,77	7,79	6,86	6,0	5,21	4,5			
	55	Qo		11097	9246	7616	6188	4941				
		Pe		9,43	8,35	7,33	6,39	5,54				
S7-27.19Y	30	Qo	15661	13145	10902	8923	7201	5721	4471	3432	2586	1911
		Pe	7,86	7,26	6,64	6,0	5,36	4,73	4,12	3,55	3,02	2,55
	35	Qo	15364	12906	10715	8783	7099	5650	4420	3389	2538	1842
		Pe	8,5	7,79	7,07	6,35	5,64	4,95	4,29	3,68	3,13	2,65
	40	Qo	15068	12665	10524	8637	6991	5572	4361	3339	2481	
		Pe	9,16	8,35	7,53	6,72	5,93	5,18	4,48	3,84	3,26	
	45	Qo	14777	12423	10330	8486	6877	5486	4294	3278		
		Pe	9,86	8,93	8,01	7,11	6,25	5,44	4,69	4,01		
	50	Qo	14500	12190	10138	8333	6758	5394	4219			
		Pe	10,6	9,56	8,53	7,55	6,61	5,74	4,94			
	55	Qo	14258	11978	9960	8187	6640	5299				
		Pe	11,45	10,28	9,14	8,06	7,04	6,09				
2V10-42-29Y	30	Qo	22515	19003	15859	13075	10638	8534	6744	5248	4020	3034
		Pe	11,81	10,86	9,91	8,96	8,02	7,11	6,23	5,41	4,64	3,94
	35	Qo	22093	18675	15615	12904	10527	8468	6708	5221	3981	2958
		Pe	12,86	11,74	10,63	9,54	8,49	7,49	6,54	5,67	4,87	4,16
	40	Qo	21679	18350	15371	12730	10411	8396	6662	5181	3925	
		Pe	13,96	12,66	11,39	10,17	9,01	7,91	6,89	5,96	5,13	
	45	Qo	21280	18034	15130	12555	10291	8316	6603	5125		
		Pe	15,11	13,63	12,2	10,85	9,57	8,38	7,29	6,31		
	50	Qo		17734	14898	12382	10167	8226	6530			
		Pe		14,67	13,09	11,59	10,2	8,91	7,74			
	55	Qo			14691	12224	10047	8131				
		Pe			14,1	12,46	10,93	9,54				
2Z15-60.30Y	30	Qo	30943	26095	21758	17921	14566	11672	9214	7161	5481	4133
		Pe	15,83	14,6	13,33	12,05	10,77	9,52	8,31	7,17	6,12	5,18
	35	Qo	30354	25638	21419	17684	14414	11584	9166	7127	5429	4029
		Pe	17,2	15,74	14,27	12,81	11,38	10,01	8,71	7,5	6,41	5,45
	40	Qo	29767	25176	21070	17433	14244	11474	9093	7062	5340	
		Pe	18,61	16,92	15,25	13,61	12,04	10,54	9,15	7,88	6,75	
	45	Qo		24719	20719	17175	14061	11347	8996	6967		
		Pe		18,16	16,29	14,47	12,75	11,14	9,65	8,31		
	50	Qo		24288	20383	16921	13876	11209	8881			
		Pe		19,5	17,41	15,42	13,54	11,8	10,21			
	55	Qo			20092	16699	13707	11076				
		Pe			18,69	16,51	14,47	12,59				
2Z20-72.36Y	30	Qo	37686	31764	26469	21784	17691	14164	11171	8678	6641	5013
		Pe	18,82	17,4	15,97	14,54	13,11	11,71	10,33	9,0	7,72	6,5
	35	Qo	37000	31230	26070	21504	17509	14056	11110	8631	6574	4885
		Pe	20,47	18,76	17,08	15,43	13,83	12,28	10,8	9,39	8,07	6,84
	40	Qo	36325	30698	25668	21216	17315	13932	11029	8560	6475	
		Pe	22,16	20,17	18,24	16,38	14,6	12,92	11,33	9,85	8,49	
	45	Qo	35671	30176	25268	20922	17108	13790	10924	8458		
		Pe	23,94	21,66	19,48	17,41	15,45	13,63	11,94	10,39		
	50	Qo		29681	24880	20629	16895	13633	10794			
		Pe		23,27	20,84	18,55	16,42	14,45	12,65			
	55	Qo			24534	20360	16688	13467				
		Pe			22,41	19,89	17,57	15,44				
2Z25-84.42Y	30	Qo	44484	37502	31260	25738	20914	16754	13223	10276	7864	5928
		Pe	22,12	20,39	18,62	16,83	15,05	13,3	11,62	10,04	8,57	7,24
	35	Qo	43685	36877	30791	25406	20694	16621	13145	10217	7782	5777
		Pe	24,05	22,0	19,94	17,91	15,92	14,0	12,19	10,51	8,98	7,63
	40	Qo	42898	36254	30317	25063	20461	16470	13044	10130	7665	
		Pe	26,05	23,68	21,33	19,05	16,86	14,77	12,83	11,06	9,46	
	45	Qo	42135	35642	29844	24713	20213	16298	12917	10009		
		Pe	28,14	25,44	22,81	20,29	17,88	15,63	13,56	11,68		
	50	Qo		35061	29386	24365	19957	16109	12762			
		Pe		27,35	24,43	21,65	19,03	16,6	14,38			
	55	Qo		34556	28977	24045	19709	15912				
		Pe		29,51	26,27	23,22	20,37	17,75				
2Z30-102.51Y	30	Qo	55491	46573	38647	31682	25637	20462	16099	12479	9524	7149
		Pe	27,81	25,52	23,2	20,88	18,58	16,34	14,19	12,16	10,28	8,58
	35	Qo	54636	45901	38141	31323	25400	20319	16014	12413	9429	6969
		Pe	30,43	27,67	24,93	22,25	19,66	17,19	14,87	12,74	10,81	9,11
	40	Qo	53792	45226	37623	30945	25140	20149	15900	12313	9294	
		Pe	33,15	29,9	26,75	23,72	20,84	18,14	15,66	13,41	11,43	
	45	Qo		44563	37103	30554	24859	19953	15755	12175		
		Pe		32,27	28,69	25,3	22,13	19,21	16,55	14,2		
	50	Qo		43940	36601	30165	24568	19735	15578			
		Pe		34,82	30,82	27,06	23,59	20,43	17,6			
	55	Qo			36165	29813	24291	19513				
		Pe			33,25	29,1	25,3	21,88				

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 60Hz. For operation at 50HZ see page 12.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Performance R404A - R507A [60 Hz] without liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]									
			-25	-30	-35	-40	-45	-50	-55	-60	-65	-70
S5-26.16Y	30	Qo	11577	9508	7719	6188	4893	3811	2920	2198	1623	1173
		Pe	6,34	5,77	5,22	4,68	4,17	3,67	3,21	2,77	2,37	2,01
	35	Qo	10902	8957	7278	5841	4624	3607	2765	2078	1522	1076
		Pe	6,74	6,08	5,45	4,85	4,28	3,74	3,25	2,8	2,4	2,05
	40	Qo	10211	8391	6821	5479	4342	3389	2598	1945	1409	
		Pe	7,12	6,37	5,66	5,0	4,38	3,81	3,29	2,83	2,44	
	45	Qo	9506	7811	6351	5104	4047	3160	2418	1801		
		Pe	7,48	6,64	5,86	5,13	4,47	3,87	3,33	2,87		
	50	Qo	8786	7217	5868	4716	3741	2919	2229			
		Pe	7,8	6,88	6,03	5,26	4,55	3,92	3,37			
	55	Qo	8054	6611	5373	4318	3424	2668				
		Pe	8,09	7,1	6,19	5,36	4,61	3,96				
S7-27.19Y	30	Qo	12477	10243	8310	6656	5257	4088	3127	2351	1734	1255
		Pe	6,93	6,35	5,77	5,18	4,61	4,05	3,52	3,03	2,58	2,18
	35	Qo	11762	9657	7839	6283	4967	3867	2960	2221	1628	1156
		Pe	7,35	6,68	6,01	5,36	4,74	4,14	3,58	3,07	2,62	2,23
	40	Qo	11028	9054	7351	5896	4665	3635	2782	2083	1514	
		Pe	7,74	6,98	6,24	5,53	4,85	4,22	3,64	3,11	2,66	
	45	Qo	10276	8433	6847	5494	4349	3390	2593	1935		
		Pe	8,1	7,27	6,46	5,68	4,96	4,29	3,69	3,16		
	50	Qo	9503	7794	6326	5076	4019	3133	2393			
		Pe	8,44	7,52	6,65	5,82	5,05	4,35	3,73			
	55	Qo	8711	7136	5788	4641	3674	2861				
		Pe	8,75	7,76	6,81	5,94	5,13	4,4				
2V10-42-29Y	30	Qo	17938	14808	12090	9753	7766	6098	4718	3594	2696	1993
		Pe	10,46	9,54	8,64	7,76	6,91	6,1	5,33	4,61	3,96	3,36
	35	Qo	16912	13973	11423	9231	7366	5796	4492	3421	2553	1857
		Pe	11,2	10,12	9,09	8,1	7,16	6,28	5,46	4,72	4,06	3,48
	40	Qo	15867	13119	10737	8690	6947	5478	4250	3232	2395	
		Pe	11,91	10,68	9,52	8,42	7,4	6,46	5,6	4,84	4,18	
	45	Qo	14798	12242	10029	8128	6509	5139	3988	3025		
		Pe	12,58	11,22	9,93	8,73	7,63	6,63	5,74	4,97		
	50	Qo	13703	11340	9297	7542	6046	4777	3704			
		Pe	13,22	11,72	10,32	9,02	7,85	6,8	5,88			
	55	Qo	12580	10410	8537	6930	5558	4391				
		Pe	13,81	12,18	10,67	9,29	8,05	6,95				
2Z15-60.30Y	30	Qo	24652	20334	16587	13368	10633	8340	6445	4905	3676	2714
		Pe	13,98	12,79	11,59	10,41	9,25	8,13	7,07	6,08	5,19	4,39
	35	Qo	23237	19183	15669	12651	10085	7929	6138	4671	3482	2529
		Pe	14,91	13,52	12,15	10,82	9,55	8,35	7,23	6,21	5,31	4,54
	40	Qo	21786	17998	14717	11901	9505	7486	5801	4406	3258	
		Pe	15,8	14,21	12,68	11,22	9,84	8,56	7,39	6,35	5,45	
	45	Qo	20302	16780	13734	11119	8893	7012	5433	4113		
		Pe	16,63	14,86	13,17	11,58	10,1	8,75	7,54	6,48		
	50	Qo	18786	15531	12719	10308	8252	6510	5038			
		Pe	17,39	15,45	13,62	11,91	10,34	8,92	7,67			
	55	Qo	17239	14251	11675	9467	7584	5981				
		Pe	18,08	15,97	14,0	12,18	10,53	9,06				
2Z20-72.36Y	30	Qo	30025	24751	20177	16250	12915	10121	7815	5943	4454	3293
		Pe	16,58	15,2	13,85	12,54	11,26	10,03	8,83	7,69	6,59	5,54
	35	Qo	28325	23367	19071	15383	12251	9621	7440	5656	4216	3066
		Pe	17,69	16,06	14,5	13,02	11,6	10,27	9,01	7,83	6,74	5,73
	40	Qo	26586	21946	17930	14483	11554	9089	7035	5340	3951	
		Pe	18,73	16,87	15,12	13,47	11,93	10,5	9,19	8,0	6,92	
	45	Qo	24805	20485	16749	13545	10820	8522	6597	4993		
		Pe	19,71	17,62	15,68	13,89	12,23	10,73	9,38	8,18		
	50	Qo	22980	18979	15526	12566	10048	7918	6123			
		Pe	20,61	18,32	16,21	14,27	12,52	10,95	9,56			
	55	Qo	21105	17426	14257	11543	9232	7272				
		Pe	21,44	18,96	16,68	14,62	12,77	11,15				
2Z25-84.42Y	30	Qo	35441	29222	23830	19199	15267	11972	9250	7038	5274	3893
		Pe	19,47	17,79	16,12	14,47	12,86	11,32	9,85	8,48	7,23	6,11
	35	Qo	33442	27593	22525	18174	14479	11376	8803	6695	4991	3626
		Pe	20,77	18,81	16,9	15,06	13,29	11,62	10,07	8,66	7,4	6,32
	40	Qo	31396	25918	21177	17109	13653	10744	8321	6320	4677	
		Pe	21,99	19,78	17,64	15,61	13,7	11,92	10,3	8,86	7,61	
	45	Qo	29300	24195	19782	16000	12784	10072	7801	5908		
		Pe	23,14	20,68	18,33	16,12	14,08	12,2	10,53	9,06		
	50	Qo	27149	22419	18337	14842	11869	9356	7240			
		Pe	24,21	21,5	18,96	16,59	14,42	12,46	10,73			
	55	Qo	24940	20587	16839	13632	10904	8592				
		Pe	25,17	22,24	19,5	16,99	14,7	12,67				
2Z30-102.51Y	30	Qo	44210	36291	29461	23633	18716	14622	11262	8547	6388	4695
		Pe	24,51	22,3	20,11	17,97	15,9	13,91	12,03	10,27	8,66	7,21
	35	Qo	41825	34345	27902	22407	17772	13907	10725	8134	6047	4374
		Pe	26,32	23,7	21,16	18,73	16,43	14,28	12,29	10,49	8,89	7,52
	40	Qo	39370	32332	26280	21124	16775	13145	10143	7682	5671	
		Pe	28,06	25,04	22,17	19,47	16,95	14,65	12,57	10,74	9,18	
	45	Qo	36840	30251	24594	19781	15723	12330	9515	7187		
		Pe	29,71	26,31	23,12	20,16	17,45	15,01	12,86	11,02		
	50	Qo	34234	28097	22840	18375	14612	11462	8837			
		Pe	31,26	27,49	24,0	20,8	17,91	15,35	13,14			
	55	Qo	31549	25868	21016	16902	13439	10537				
		Pe	32,7	28,58	24,8	21,38	18,32	15,66				

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 60Hz. For operation at 50HZ see page 13.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Two stage semi-hermetics reciprocating compressors

Performance R22 [50 Hz] with liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]						
			-20	-25	-30	-35	-40	-45	-50
S5-26.16Y	30	Qo	13444	11021	8944	7184	5708	4481	3465
		Pe	5,32	4,95	4,56	4,14	3,72	3,29	2,88
	35	Qo	13152	10798	8781	7069	5631	4428	3421
		Pe	5,74	5,3	4,85	4,38	3,91	3,46	3,02
	40	Qo	12868	10579	8619	6954	5549	4367	3366
		Pe	6,13	5,63	5,11	4,59	4,08	3,59	3,14
	45	Qo	12590	10364	8457	6835	5462	4296	
		Pe	6,52	5,95	5,37	4,8	4,26	3,74	
	50	Qo	12318	10151	8295	6712	5366		
		Pe	6,94	6,3	5,67	5,05	4,47		
	55	Qo	12053	9941	8131	6584			
		Pe	7,43	6,72	6,03	5,37			
S7-27.19Y	30	Qo	14489	11868	9619	7713	6119	4800	3721
		Pe	5,81	5,43	5,0	4,55	4,08	3,61	3,16
	35	Qo	14193	11642	9453	7596	6037	4740	3666
		Pe	6,25	5,8	5,32	4,81	4,3	3,79	3,31
	40	Qo	13899	11418	9288	7478	5954	4676	3605
		Pe	6,65	6,14	5,6	5,04	4,49	3,94	3,43
	45	Qo	13606	11193	9121	7358	5867	4608	
		Pe	7,05	6,48	5,88	5,28	4,68	4,1	
	50	Qo	13314	10967	8952	7235	5775		
		Pe	7,49	6,85	6,2	5,55	4,91		
	55	Qo	13023	10741	8781	7107			
		Pe	8,0	7,3	6,6	5,9			
2V10-42-29Y	30	Qo	20775	17097	13930	11237	8974	7094	5546
		Pe	8,59	8,02	7,38	6,69	6,0	5,32	4,68
	35	Qo	20350	16779	13703	11083	8874	7026	5487
		Pe	9,31	8,63	7,89	7,13	6,36	5,62	4,93
	40	Qo	19935	16468	13482	10934	8776	6958	5424
		Pe	9,96	9,18	8,36	7,51	6,68	5,88	5,14
	45	Qo	19524	16160	13261	10782	8674	6883	
		Pe	10,62	9,74	8,83	7,91	7,01	6,15	
	50	Qo	19108	15845	13031	10620	8559		
		Pe	11,34	10,36	9,36	8,37	7,4		
	55	Qo	18682	15516	12785	10438			
		Pe	12,19	11,11	10,03	8,96			
2Z15-60.30Y	30	Qo	28533	23477	19118	15408	12294	9716	7610
		Pe	11,75	10,99	10,11	9,17	8,19	7,23	6,32
	35	Qo	27920	23023	18799	15197	12158	9623	7524
		Pe	12,71	11,8	10,8	9,75	8,68	7,64	6,67
	40	Qo	27325	22585	18492	14993	12027	9530	7431
		Pe	13,59	12,54	11,42	10,26	9,11	7,99	6,95
	45	Qo	26734	22148	18183	14783	11885	9420	
		Pe	14,46	13,28	12,05	10,79	9,55	8,36	
	50	Qo	26135	21698	17857	14552	11716		
		Pe	15,42	14,11	12,76	11,4	10,08		
	55	Qo	25513	21220	17498	14282			
		Pe	16,54	15,11	13,64	12,19			
2Z20-72.36Y	30	Qo	34719	28547	23237	18721	14930	11784	9198
		Pe	13,99	13,1	12,12	11,08	10,01	8,93	7,86
	35	Qo	34014	28021	22862	18470	14771	11681	9112
		Pe	15,13	14,04	12,91	11,74	10,57	9,4	8,28
	40	Qo	33334	27513	22501	18228	14615	11575	9016
		Pe	16,17	14,91	13,62	12,33	11,05	9,81	8,63
	45	Qo	32664	27010	22141	17981	14448	11451	
		Pe	17,23	15,79	14,35	12,93	11,55	10,24	
	50	Qo	31994	26501	21767	17714	14253		
		Pe	18,38	16,76	15,17	13,63	12,16		
	55	Qo	31310	25970	21364	17410			
		Pe	19,72	17,93	16,19	14,53			
2Z25-84.42Y	30	Qo	41005	33713	27444	22120	17650	13940	10884
		Pe	16,4	15,31	14,08	12,76	11,41	10,07	8,79
	35	Qo	40177	33092	27002	21822	17460	13816	10780
		Pe	17,74	16,45	15,04	13,58	12,09	10,64	9,28
	40	Qo	39374	32492	26575	21534	17273	13688	10662
		Pe	18,96	17,48	15,91	14,29	12,69	11,13	9,69
	45	Qo	38585	31899	26148	21241	17075	13540	
		Pe	20,2	18,53	16,79	15,03	13,3	11,65	
	50	Qo	37797	31301	25710	20928	16849		
		Pe	21,55	19,69	17,79	15,89	14,04		
	55	Qo	37000	30683	25244	20580			
		Pe	23,14	21,09	19,03	16,99			
2Z30-102.51Y	30	Qo	50955	41750	33867	27199	21627	17022	13244
		Pe	20,55	19,11	17,52	15,85	14,11	12,37	10,65
	35	Qo	50088	41098	33401	26885	21427	16892	13134
		Pe	22,39	20,62	18,77	16,87	14,97	13,1	11,3
	40	Qo	49226	40447	32932	26564	21215	16746	13003
		Pe	24,1	22,02	19,89	17,78	15,71	13,72	11,85
	45	Qo	48369	39795	32457	26233	20990	16581	
		Pe	25,84	23,44	21,05	18,72	16,48	14,38	
	50	Qo	47516	39141	31975	25892	20749		
		Pe	27,77	25,05	22,4	19,85	17,45		
	55	Qo	46671	38487	31487	25537			
		Pe	30,05	27,01	24,09	21,33			

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 50Hz. For operation at 60HZ see page 18.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Two stage semi-hermetics reciprocating compressors

Performance R22 [50 Hz] without liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]						
			-20	-25	-30	-35	-40	-45	-50
S5-26.16Y	30	Qo	11716	9451	7547	5966	4665	3604	2743
		Pe	4,91	4,55	4,17	3,78	3,39	3,0	2,62
	35	Qo	11195	9040	7230	5726	4486	3471	2638
		Pe	5,24	4,82	4,39	3,95	3,53	3,11	2,72
	40	Qo	10677	8629	6912	5483	4302	3329	2523
		Pe	5,52	5,05	4,57	4,09	3,63	3,2	2,79
	45	Qo	10161	8219	6591	5235	4111	3179	
		Pe	5,79	5,26	4,74	4,22	3,74	3,28	
	50	Qo	9645	7807	6266	4981	3912		
		Pe	6,08	5,5	4,93	4,38	3,86		
	55	Qo	9128	7392	5936	4720			
		Pe	6,41	5,77	5,16	4,58			
S7-27.19Y	30	Qo	12627	10177	8116	6405	5000	3861	2945
		Pe	5,36	5,0	4,59	4,17	3,73	3,3	2,88
	35	Qo	12081	9746	7784	6153	4810	3715	2827
		Pe	5,71	5,28	4,83	4,36	3,89	3,42	2,99
	40	Qo	11533	9313	7448	5897	4616	3565	2703
		Pe	5,99	5,52	5,02	4,51	4,0	3,52	3,06
	45	Qo	10981	8876	7108	5636	4417	3409	
		Pe	6,27	5,74	5,2	4,65	4,12	3,61	
	50	Qo	10424	8434	6763	5369	4211		
		Pe	6,56	5,98	5,4	4,82	4,26		
	55	Qo	9863	7986	6411	5095			
		Pe	6,9	6,28	5,66	5,06			
2V10-42-29Y	30	Qo	18105	14660	11754	9331	7333	5705	4390
		Pe	7,96	7,4	6,78	6,13	5,48	4,85	4,26
	35	Qo	17322	14046	11283	8977	7070	5507	4231
		Pe	8,53	7,87	7,18	6,46	5,75	5,07	4,44
	40	Qo	16541	13433	10812	8621	6805	5305	4067
		Pe	9,02	8,28	7,51	6,73	5,96	5,24	4,58
	45	Qo	15756	12815	10334	8258	6530	5093	
		Pe	9,49	8,67	7,83	6,99	6,17	5,41	
	50	Qo	14961	12185	9844	7881	6240		
		Pe	10,0	9,11	8,2	7,3	6,44		
	55	Qo	14149	11537	9334	7483			
		Pe	10,61	9,64	8,67	7,72			
2Z15-60.30Y	30	Qo	24867	20132	16132	12795	10047	7814	6024
		Pe	10,88	10,13	9,29	8,4	7,49	6,59	5,75
	35	Qo	23765	19274	15480	12309	9688	7543	5802
		Pe	11,64	10,77	9,83	8,84	7,85	6,9	6,0
	40	Qo	22673	18422	14830	11822	9325	7266	5571
		Pe	12,29	11,31	10,26	9,19	8,13	7,12	6,19
	45	Qo	21576	17564	14170	11323	8947	6971	
		Pe	12,92	11,82	10,68	9,53	8,41	7,35	
	50	Qo	20463	16686	13489	10799	8542		
		Pe	13,59	12,39	11,16	9,94	8,76		
	55	Qo	19322	15778	12774	10239			
		Pe	14,38	13,09	11,78	10,5			
2Z20-72.36Y	30	Qo	30258	24480	19607	15546	12201	9478	7281
		Pe	12,93	12,05	11,12	10,15	9,16	8,16	7,17
	35	Qo	28953	23458	18825	14960	11769	9156	7027
		Pe	13,82	12,78	11,72	10,64	9,56	8,5	7,47
	40	Qo	27658	22442	18045	14373	11331	8825	6760
		Pe	14,59	13,4	12,21	11,02	9,86	8,75	7,7
	45	Qo	26361	21420	17255	13772	10876	8473	
		Pe	15,34	14,0	12,68	11,4	10,17	9,01	
	50	Qo	25050	20380	16443	13146	10392		
		Pe	16,13	14,66	13,22	11,85	10,55		
	55	Qo	23712	19310	15598	12481			
		Pe	17,07	15,46	13,92	12,46			
2Z25-84.42Y	30	Qo	35736	28909	23158	18368	14424	11211	8615
		Pe	15,14	14,08	12,91	11,66	10,4	9,15	7,97
	35	Qo	34198	27704	22234	17675	13912	10829	8313
		Pe	16,19	14,96	13,64	12,27	10,9	9,57	8,33
	40	Qo	32670	26504	21312	16980	13393	10436	7994
		Pe	17,1	15,7	14,24	12,75	11,28	9,88	8,59
	45	Qo	31139	25297	20378	16269	12854	10019	
		Pe	17,97	16,42	14,82	13,22	11,66	10,19	
	50	Qo	29594	24071	19422	15531	12284		
		Pe	18,9	17,2	15,48	13,78	12,14		
	55	Qo	28022	22814	18430	14754			
		Pe	20,01	18,18	16,34	14,54			
2Z30-102.51Y	30	Qo	44407	35801	28577	22586	17674	13691	10484
		Pe	18,99	17,58	16,07	14,49	12,87	11,25	9,66
	35	Qo	42635	34406	27503	21776	17072	13240	10128
		Pe	20,47	18,78	17,03	15,26	13,5	11,79	10,15
	40	Qo	40845	32992	26410	20946	16449	12767	9749
		Pe	21,77	19,8	17,83	15,88	13,99	12,19	10,51
	45	Qo	39035	31558	25294	20093	15802	12269	
		Pe	23,04	20,81	18,62	16,49	14,47	12,6	
	50	Qo	37203	30100	24154	19214	15128		
		Pe	24,44	21,95	19,54	17,25	15,11		
	55	Qo	35346	28617	22988	18308			
		Pe	26,1	23,36	20,74	18,3			

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 50Hz. For operation at 60HZ see page 19.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Performance R22 [60 Hz] with liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]						
			-20	-25	-30	-35	-40	-45	-50
S5-26.16Y	30	Qo	16132	13225	10733	8621	6850	5377	4158
		Pe	6,39	5,94	5,47	4,97	4,46	3,95	3,46
	35	Qo	15783	12957	10537	8483	6757	5313	4105
		Pe	6,89	6,36	5,81	5,25	4,69	4,15	3,63
	40	Qo	15441	12695	10342	8344	6659	5240	4039
		Pe	7,36	6,75	6,13	5,51	4,9	4,31	3,76
	45	Qo	15108	12437	10148	8202	6554	5156	
		Pe	7,83	7,14	6,45	5,77	5,11	4,49	
	50	Qo	14782	12182	9953	8055	6440		
		Pe	8,33	7,56	6,8	6,06	5,36		
	55	Qo	14464	11929	9757	7901			
		Pe	8,91	8,06	7,23	6,44			
S7-27.19Y	30	Qo	17386	14241	11542	9256	7342	5760	4465
		Pe	6,97	6,52	6,01	5,46	4,9	4,33	3,79
	35	Qo	17032	13971	11344	9115	7245	5688	4399
		Pe	7,5	6,96	6,38	5,78	5,16	4,55	3,97
	40	Qo	16679	13701	11145	8974	7144	5612	4326
		Pe	7,98	7,37	6,72	6,05	5,38	4,73	4,12
	45	Qo	16328	13431	10945	8830	7040	5529	
		Pe	8,46	7,77	7,06	6,33	5,62	4,92	
	50	Qo	15977	13161	10743	8682	6931		
		Pe	8,99	8,22	7,44	6,66	5,9		
	55	Qo	15627	12889	10538	8529			
		Pe	9,6	8,76	7,92	7,08			
2V10-42-29Y	30	Qo	24930	20516	16716	13484	10769	8513	6656
		Pe	10,31	9,62	8,85	8,03	7,2	6,38	5,61
	35	Qo	24420	20134	16444	13300	10648	8431	6584
		Pe	11,17	10,35	9,47	8,55	7,63	6,74	5,91
	40	Qo	23922	19762	16179	13121	10532	8350	6509
		Pe	11,96	11,02	10,03	9,01	8,01	7,05	6,17
	45	Qo	23428	19391	15913	12939	10409	8260	
		Pe	12,75	11,69	10,59	9,49	8,41	7,38	
	50	Qo	22930	19013	15637	12744	10271		
		Pe	13,61	12,44	11,24	10,04	8,89		
	55	Qo	22418	18619	15342	12526			
		Pe	14,63	13,33	12,03	10,75			
2Z15-60.30Y	30	Qo	34240	28172	22942	18490	14753	11659	9132
		Pe	14,1	13,18	12,13	11,0	9,83	8,68	7,58
	35	Qo	33504	27628	22559	18236	14590	11548	9029
		Pe	15,26	14,17	12,96	11,7	10,42	9,17	8,0
	40	Qo	32790	27102	22191	17991	14433	11436	8917
		Pe	16,31	15,05	13,71	12,32	10,93	9,59	8,34
	45	Qo	32081	26577	21820	17740	14263	11305	
		Pe	17,36	15,94	14,46	12,94	11,45	10,03	
	50	Qo	31362	26037	21428	17463	14060		
		Pe	18,5	16,93	15,31	13,68	12,09		
	55	Qo		25464	20997	17138			
		Pe		18,13	16,37	14,63			
2Z20-72.36Y	30	Qo	41663	34257	27884	22466	17916	14141	11038
		Pe	16,79	15,72	14,54	13,3	12,01	10,72	9,43
	35	Qo	40817	33625	27434	22164	17725	14017	10935
		Pe	18,15	16,85	15,49	14,09	12,68	11,29	9,93
	40	Qo	40000	33015	27001	21874	17538	13890	10819
		Pe	19,41	17,89	16,34	14,79	13,26	11,77	10,36
	45	Qo	39197	32413	26569	21577	17337	13741	
		Pe	20,67	18,94	17,21	15,51	13,86	12,29	
	50	Qo	38393	31801	26121	21257	17104		
		Pe	22,05	20,12	18,21	16,36	14,59		
	55	Qo	37572	31164	25637	20892			
		Pe	23,67	21,52	19,43	17,44			
2Z25-84.42Y	30	Qo	49206	40455	32933	26544	21180	16728	13060
		Pe	19,68	18,37	16,9	15,32	13,69	12,08	10,55
	35	Qo	48212	39711	32403	26187	20952	16579	12935
		Pe	21,28	19,74	18,05	16,29	14,51	12,77	11,13
	40	Qo	47248	38990	31890	25841	20728	16425	12795
		Pe	22,76	20,98	19,09	17,15	15,22	13,36	11,62
	45	Qo	46301	38279	31378	25489	20490	16248	
		Pe	24,24	22,23	20,14	18,03	15,96	13,98	
	50	Qo	45357	37561	30852	25114	20218		
		Pe	25,86	23,63	21,34	19,07	16,85		
	55	Qo	44400	36820	30293	24696			
		Pe	27,77	25,31	22,83	20,39			
2Z30-102.51Y	30	Qo	61146	50100	40640	32639	25953	20427	15893
		Pe	24,66	22,93	21,03	19,01	16,94	14,84	12,78
	35	Qo	60106	49318	40082	32262	25712	20270	15761
		Pe	26,87	24,75	22,52	20,24	17,96	15,72	13,56
	40	Qo	59071	48537	39518	31877	25458	20095	15604
		Pe	28,92	26,42	23,87	21,33	18,85	16,46	14,22
	45	Qo	58042	47754	38948	31480	25188	19897	
		Pe	31,01	28,13	25,26	22,47	19,78	17,25	
	50	Qo	57019	46969	38370	31070	24899		
		Pe	33,33	30,07	26,88	23,82	20,94		
	55	Qo		46184	37784	30645			
		Pe		32,42	28,91	25,6			

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 60Hz. For operation at 50HZ see page 16.

To calculate the performance in different operating points refer to the Frascold Selection Software.

All published data is subject to change.

■ This field requires limitation of the suction temperature.

Performance R22 [60 Hz] without liquid sub-cooling

Compressor	Cond. Temp. [°C]	Qo [W] = Cooling capacity Pe [kW] = Power consumption ①	Evaporating temperature [°C]						
			-20	-25	-30	-35	-40	-45	-50
S5-26.16Y	30	Qo	14059	11341	9057	7159	5598	4325	3291
		Pe	5.89	5.46	5.01	4.54	4.07	3.6	3.15
	35	Qo	13434	10847	8676	6871	5384	4165	3166
		Pe	6.29	5.78	5.27	4.75	4.23	3.73	3.26
	40	Qo	12812	10355	8294	6579	5163	3995	3028
		Pe	6.63	6.06	5.48	4.91	4.36	3.83	3.35
	45	Qo	12193	9863	7909	6282	4934	3815	
		Pe	6.95	6.31	5.68	5.07	4.48	3.93	
	50	Qo	11574	9368	7519	5977	4695		
		Pe	7.3	6.59	5.91	5.25	4.64		
	55	Qo	10954	8870	7123	5664			
		Pe	7.69	6.93	6.2	5.5			
S7-27.19Y	30	Qo	15152	12212	9740	7686	6000	4633	3534
		Pe	6.44	6.0	5.51	5.0	4.48	3.95	3.45
	35	Qo	14497	11696	9341	7383	5772	4459	3392
		Pe	6.85	6.34	5.79	5.23	4.66	4.11	3.58
	40	Qo	13839	11176	8938	7076	5539	4278	3243
		Pe	7.19	6.62	6.02	5.41	4.81	4.22	3.67
	45	Qo	13177	10651	8530	6763	5300	4091	
		Pe	7.52	6.89	6.24	5.58	4.94	4.33	
	50	Qo	12509	10121	8115	6443	5053		
		Pe	7.87	7.18	6.48	5.79	5.12		
	55	Qo	11835	9583	7693	6114			
		Pe	8.28	7.54	6.8	6.07			
2V10-42-29Y	30	Qo	21727	17593	14105	11197	8800	6847	5268
		Pe	9.55	8.87	8.14	7.36	6.58	5.82	5.11
	35	Qo	20787	16856	13540	10772	8484	6609	5077
		Pe	10.23	9.45	8.61	7.76	6.9	6.09	5.33
	40	Qo	19850	16120	12974	10346	8165	6366	4880
		Pe	10.82	9.94	9.01	8.08	7.16	6.29	5.5
	45	Qo	18908	15378	12401	9910	7836	6112	
		Pe	11.39	10.41	9.4	8.39	7.41	6.49	
	50	Qo	17953	14622	11812	9457	7488		
		Pe	12.0	10.93	9.84	8.76	7.73		
	55	Qo	16978	13844	11201	8980			
		Pe	12.73	11.57	10.4	9.26			
2Z15-60.30Y	30	Qo	29840	24158	19359	15354	12056	9377	7228
		Pe	13.05	12.16	11.15	10.08	8.99	7.91	6.9
	35	Qo	28519	23129	18576	14770	11625	9052	6962
		Pe	13.97	12.92	11.79	10.61	9.42	8.27	7.21
	40	Qo	27207	22107	17796	14186	11190	8719	6685
		Pe	14.75	13.57	12.31	11.03	9.76	8.54	7.43
	45	Qo	25891	21076	17005	13587	10737	8365	
		Pe	15.5	14.18	12.82	11.44	10.09	8.82	
	50	Qo	24556	20023	16187	12959	10251		
		Pe	16.3	14.87	13.39	11.93	10.51		
	55	Qo	23187	18933	15329	12287			
		Pe	17.26	15.71	14.14	12.6			
2Z20-72.36Y	30	Qo	36309	29376	23529	18655	14641	11373	8737
		Pe	15.51	14.47	13.35	12.18	10.99	9.79	8.6
	35	Qo	34744	28149	22590	17952	14123	10987	8432
		Pe	16.58	15.34	14.06	12.76	11.47	10.2	8.97
	40	Qo	33190	26930	21654	17248	13597	10590	8111
		Pe	17.51	16.09	14.65	13.23	11.84	10.5	9.24
	45	Qo	31634	25704	20706	16526	13052	10168	
		Pe	18.4	16.8	15.22	13.68	12.2	10.81	
	50	Qo	30060	24456	19732	15775	12470		
		Pe	19.36	17.59	15.87	14.22	12.66		
	55	Qo	28455	23172	18717	14978			
		Pe	20.49	18.56	16.7	14.95			
2Z25-84.42Y	30	Qo	42883	34691	27789	22041	17309	13454	10338
		Pe	18.17	16.9	15.49	14.0	12.48	10.98	9.57
	35	Qo	41038	33244	26681	21210	16694	12995	9975
		Pe	19.43	17.95	16.37	14.72	13.08	11.48	10.0
	40	Qo	39204	31804	25574	20375	16071	12523	9593
		Pe	20.52	18.85	17.09	15.3	13.54	11.86	10.3
	45	Qo	37367	30356	24454	19522	15425	12022	
		Pe	21.56	19.7	17.78	15.87	14.0	12.23	
	50	Qo	35513	28885	23306	18637	14741		
		Pe	22.68	20.65	18.58	16.54	14.57		
	55	Qo	33626	27377	22116	17705			
		Pe	24.01	21.81	19.61	17.45			
2Z30-102.51Y	30	Qo	53289	42961	34293	27103	21209	16429	12581
		Pe	22.79	21.1	19.29	17.39	15.45	13.5	11.59
	35	Qo	51162	41287	33004	26131	20487	15888	12154
		Pe	24.56	22.53	20.44	18.31	16.2	14.14	12.18
	40	Qo	49014	39591	31692	25135	19739	15321	11699
		Pe	26.12	23.76	21.39	19.05	16.78	14.62	12.61
	45	Qo	46843	37870	30353	24111	18962	14723	
		Pe	27.65	24.97	22.34	19.79	17.37	15.11	
	50	Qo	44644	36120	28985	23057	18153		
		Pe	29.33	26.33	23.44	20.7	18.14		
	55	Qo	42415	34340	27585	21969			
		Pe	31.32	28.03	24.89	21.96			

① Suction gas temperature 20°C without liquid sub-cooling.

The performance refers to European standard EN12900 and with operation at 60Hz. For operation at 50HZ see page 17.

To calculate the performance in different operating points refer to the Frascold Selection Software.

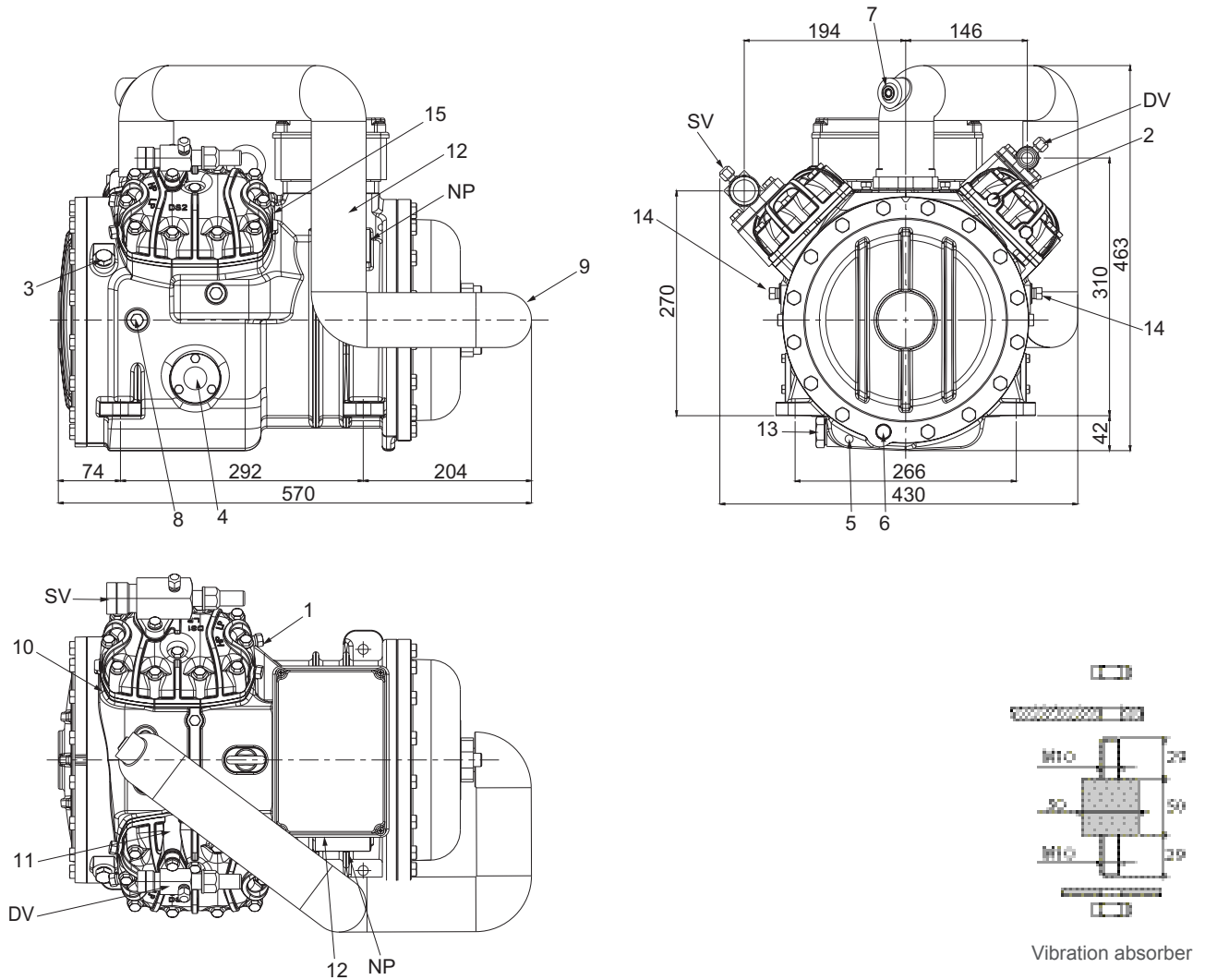
All published data is subject to change.

■ This field requires limitation of the suction temperature.

Two stage semi-hermetics reciprocating compressors

Dimensionali drawings

Series **S**

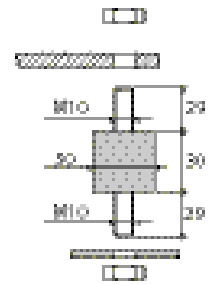
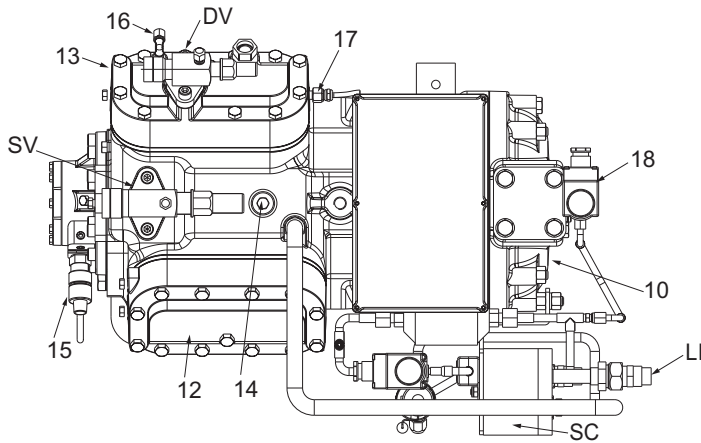
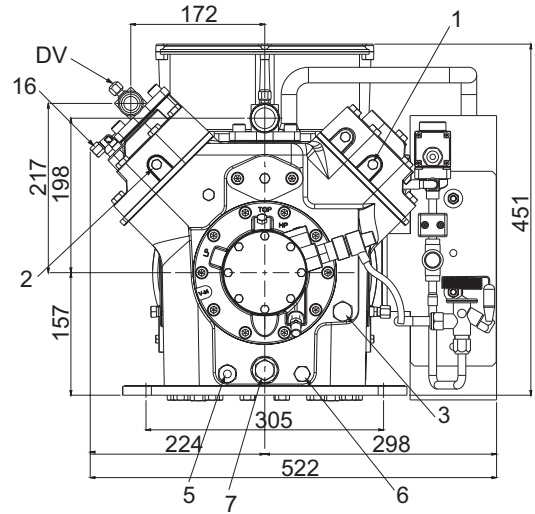
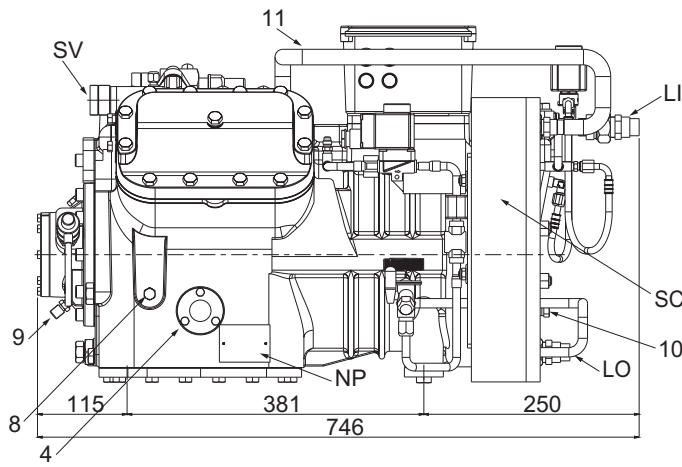


1	Low pressure plug	1/8" NPT
2	High pressure plug	1/8" NPT
3	Oil charge plug	1/4" GAS
4	Oil level sight glass	
5	Crankcase heater seat	
6	Oil drain plug	
7	Connection for liquid injection thermostatic valve	
8	Oil return plug	1/4" NPT
9	1st-2nd stage collector	
10	1st stage head	
11	2nd stage head	
12	Intermediate pressure coupling	1/4" NPT
13	Magnetic plug	
14	Coupling for the thermostatic valve equalisation line	1/4" NPT
28	Discharge gas temperature sensor	
SV	Suction valve	ODS 1" 3/8 35 mm
DV	Discharge valve	ODS 7/8" 22 mm
NP	Nameplate	

Two stage semi-hermetics reciprocating compressors

Dimensional drawings
With liquid sub-cooling

Series **2V**



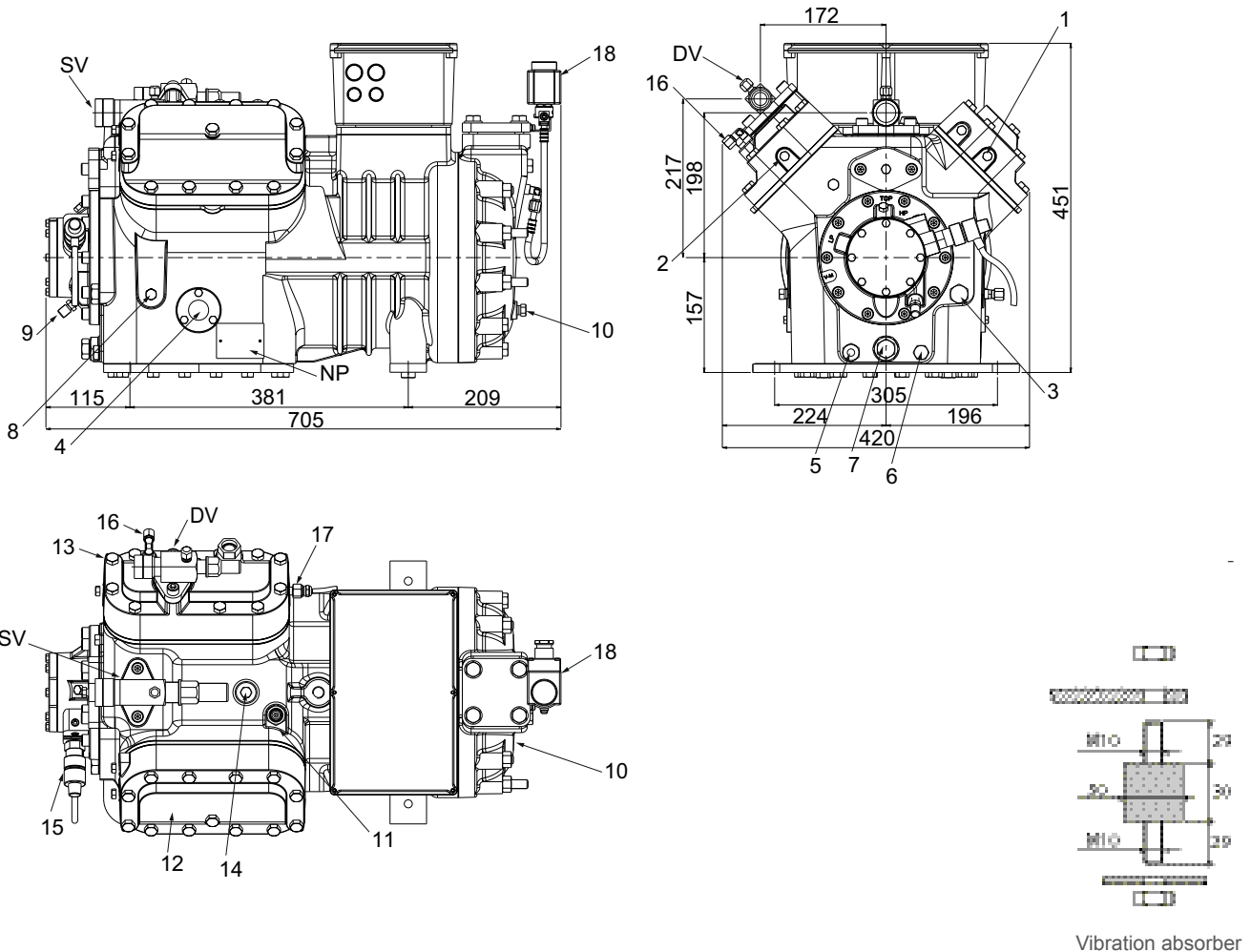
Vibration absorber

1	Low pressure plug	1/8" NPT
2	High pressure plug	1/8" NPT
3	Oil charge plug	3/8" GAS
4	Oil level sight glass	
5	Crankcase heater seat	
6	Oil drain plug	
7	Oil filter	
8	Oil low pressure plug	1/4" SAE
9	Oil high pressure plug	1/4" SAE
10	Oil return plug	1/4" NPT
11	1st-2nd stage liquid injection collector	
12	1st stage head	
13	2nd stage head	
14	Intermediate pressure coupling	1/4" NPT
15	Oil electronic pressure switch	
16	Coupling for the thermostatic valve equalisation line	1/4" SAE
17	Discharge gas temperature sensor	
18	Liquid injection valve	
SV	Suction valve	ODS 1 1/8" 35 mm
DV	Discharge valve	ODS 1 1/8" 28,6 mm
SC	Liquid sub-cooler	
LI	Sub-cooler liquid inlet	
LO	Sub-cooler liquid outlet	
NP	Nameplate	

Two stage semi-hermetics reciprocating compressors

Dimensional drawings
Without liquid sub-cooling

Series **2V**



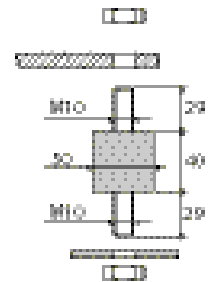
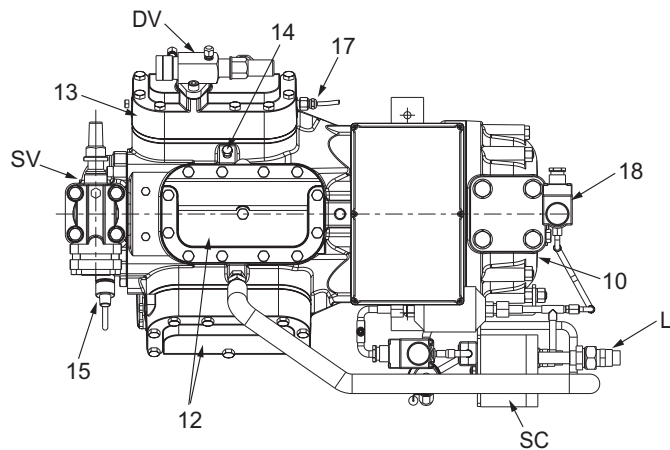
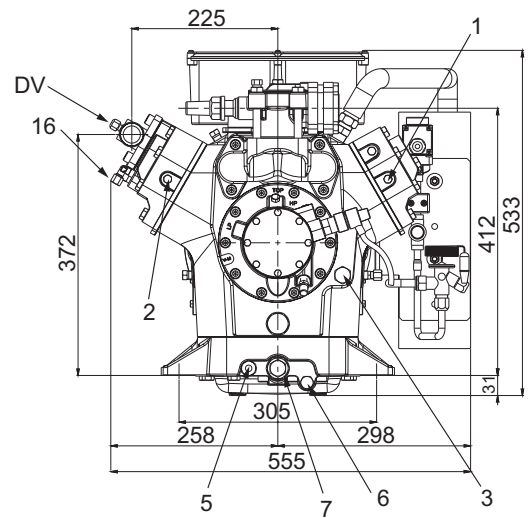
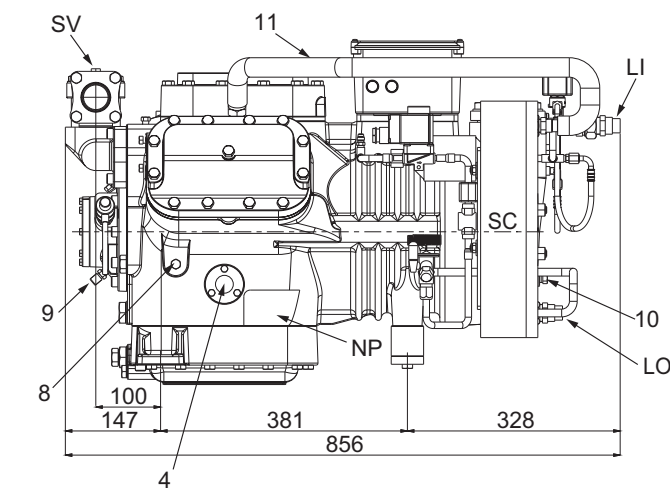
Vibration absorber

1	Low pressure plug	1/8" NPT
2	High pressure plug	1/8" NPT
3	Oil charge plug	3/8" GAS
4	Oil level sight glass	
5	Crankcase heater seat	
6	Oil drain plug	
7	Oil filter	
8	Oil low pressure plug	1/4" SAE
9	Oil high pressure plug	1/4" SAE
10	Oil return plug	1/4" NPT
11	1st-2nd stage liquid injection collector	3/8" SAE
12	1st stage head	
13	2nd stage head	
14	Intermediate pressure coupling	1/4" NPT
15	Oil electronic pressure switch	
16	Coupling for the thermostatic valve equalisation line	1/4" SAE
17	Discharge gas temperature sensor	
18	Liquid injection valve	
SV	Suction valve	ODS 1" 3/8 35 mm
DV	Discharge valve	ODS 1" 1/8 28,6 mm
NP	Nameplate	

Two stage semi-hermetics reciprocating compressors

Dimensional drawings With liquid sub-cooling

Series **2Z**



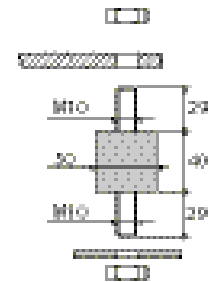
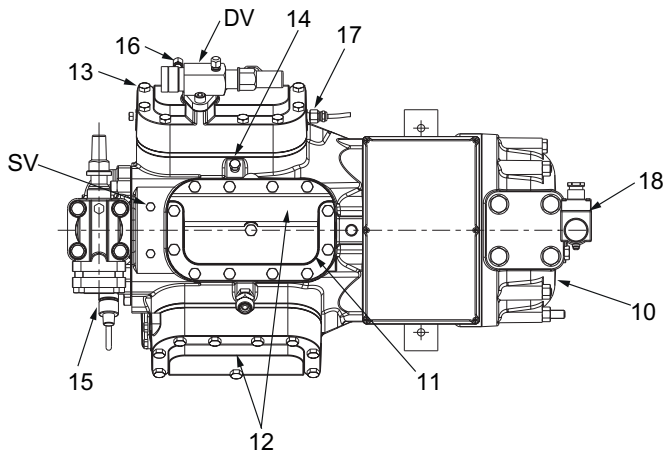
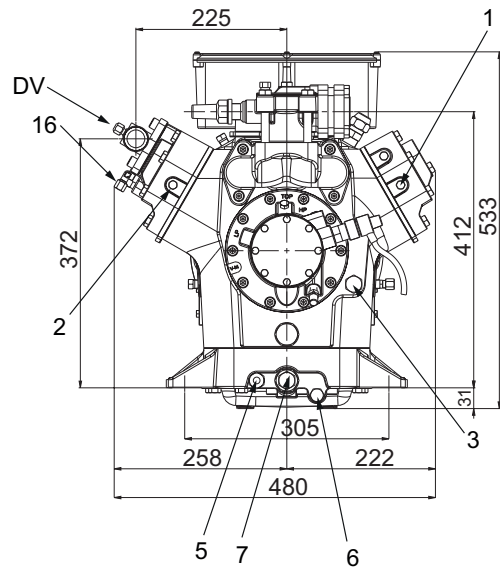
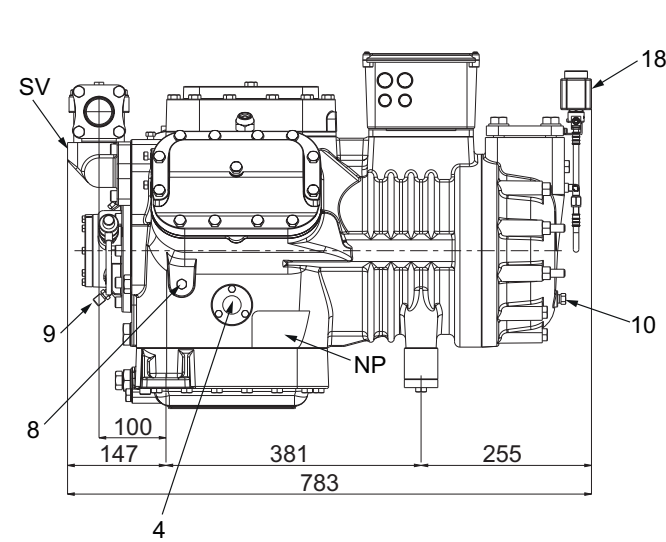
Vibration absorber

1	Low pressure plug	1/8" NPT
2	High pressure plug	1/8" NPT
3	Oil charge plug	3/8" GAS
4	Oil level sight glass	
5	Crankcase heater seat	
6	Oil drain plug	
7	Oil filter	
8	Oil low pressure plug	1/4" SAE
9	Oil high pressure plug	1/4" SAE
10	Oil return plug	1/4" NPT
11	1st-2nd stage liquid injection collector	
12	1st stage head	
13	2nd stage head	
14	Intermediate pressure coupling	1/4" NPT
15	Oil electronic pressure switch	
16	Coupling for the thermostatic valve equalisation line	1/4" SAE
17	Discharge gas temperature sensor	
18	Liquid injection valve	
SV	Suction valve 2Z15, 2Z20, 2Z25 models	ODS 1 1/8" 42 mm
SV	Suction valve 2Z30 model	ODS 1 1/8" 42 mm
DV	Discharge valve 2Z15, 2Z20, 2Z25 models	ODS 1 1/8" 35 mm
DV	Discharge valve 2Z30 model	ODS 2 1/8" 54 mm
SC	Liquid sub-cooler	
LI	Sub-cooler liquid inlet	
LO	Sub-cooler liquid outlet	
NP	Nameplate	

Two stage semi-hermetics reciprocating compressors

Dimensionali drawings Without liquid sub-cooling

Series **2Z**

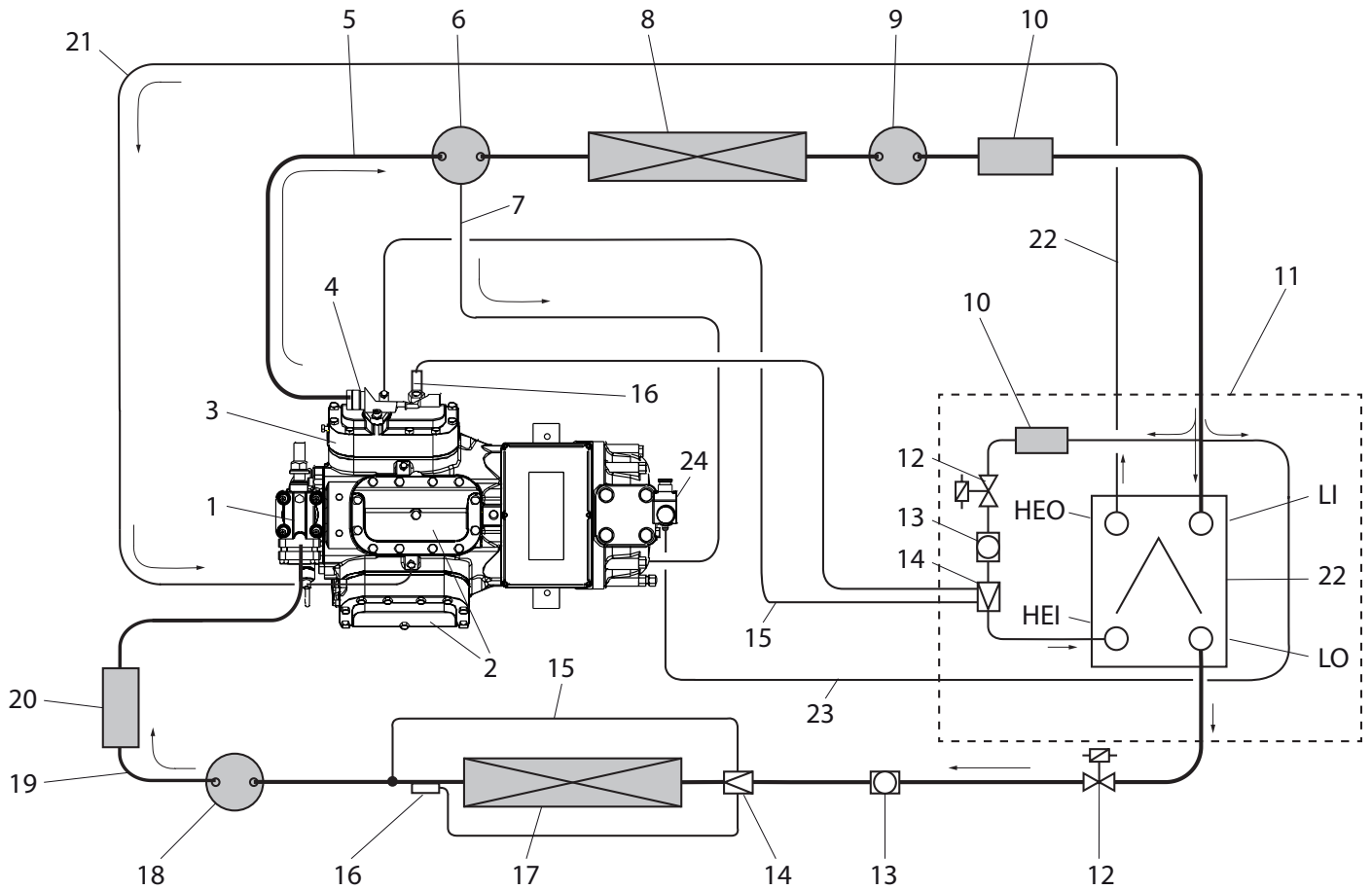


Vibration absorber

1	Low pressure plug	1/8" NPT
2	High pressure plug	1/8" NPT
3	Oil charge plug	3/8" GAS
4	Oil level sight glass	
5	Crankcase heater seat	
6	Oil drain plug	
7	Oil filter	
8	Oil low pressure plug	1/4" SAE
9	Oil high pressure plug	1/4" SAE
10	Oil return plug	1/4" NPT
11	1st-2nd stage liquid injection collector	5/8" SAE
12	1st stage head	
13	2nd stage head	
14	Intermediate pressure coupling	
15	Oil electronic pressure switch	1/4" NPT
16	Coupling for the thermostatic valve equalisation line	1/4" SAE
17	Discharge gas temperature sensor	
18	Liquid injection valve	
SV	Suction valve 2Z15, 2Z20, 2Z25 models	ODS 1 1/8" 42 mm
SV	Suction valve 2Z30 model	ODS 1 1/8" 42 mm
DV	Discharge valve 2Z15, 2Z20, 2Z25 models	ODS 1 1/8" 35 mm
DV	Discharge valve 2Z30 model	ODS 2 1/8" 54 mm
NP	Nameplate	

Two stage semi-hermetics reciprocating compressors

Cooling system diagram with liquid sub-cooling

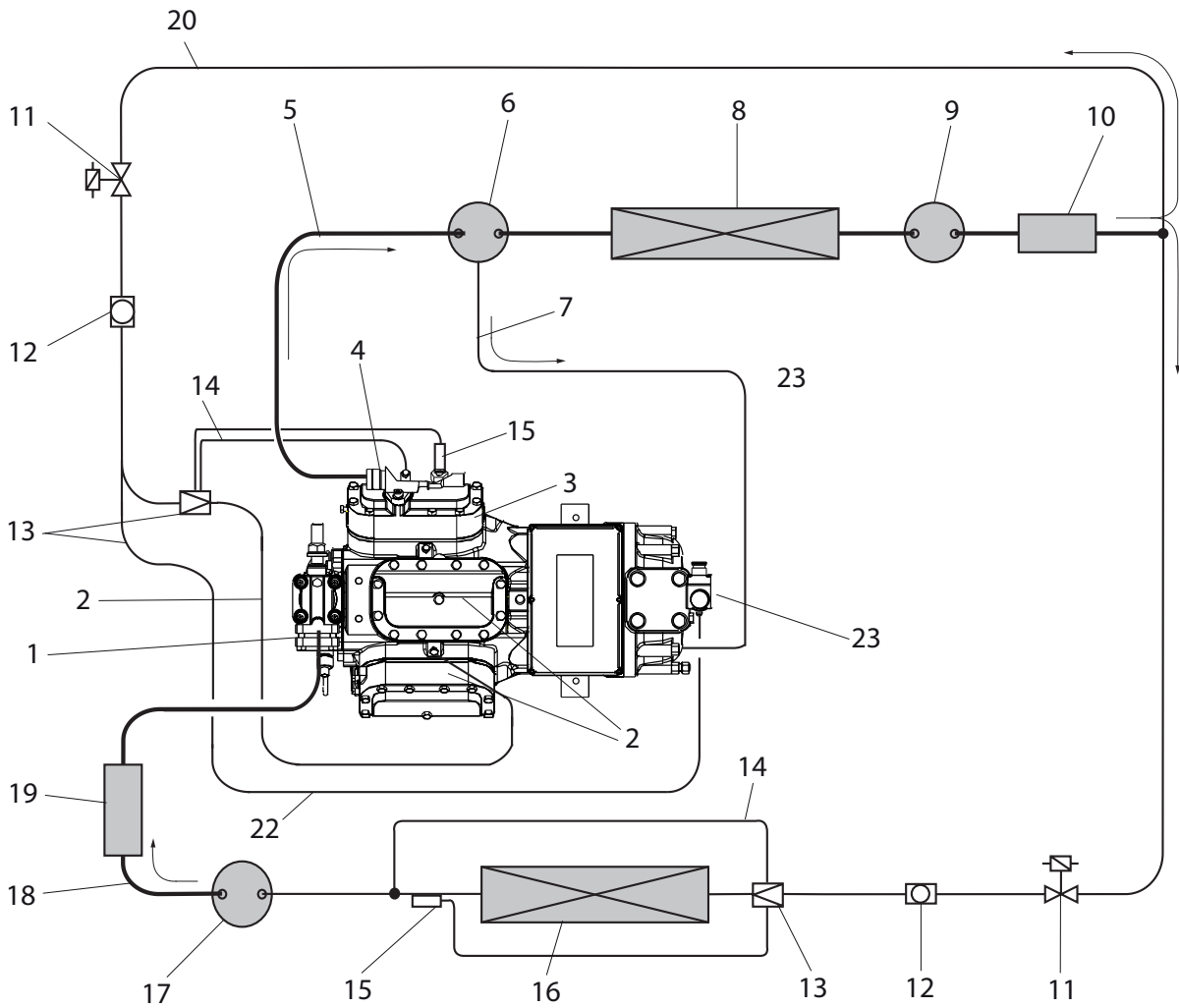


- ① Suction valve
- ② 1st stage compressor head
- ③ 2nd stage compressor head
- ④ Discharge valve
- ⑤ Discharge line
- ⑥ Oil separator
- ⑦ Compressor oil return line
- ⑧ Condenser
- ⑨ Liquid receiver
- ⑩ Dehydrating filter
- ⑪ Liquid sub-cooling kit
- ⑫ Solenoid valve
- ⑬ Liquid indicator
- ⑭ Thermostatic expansion valve

- ⑮ Thermostatic valve balance line
- ⑯ Thermostatic expansion valve bulb
- ⑰ Evaporator
- ⑱ Liquid separator
- ⑲ Suction line
- ⑳ Suction filter
- ㉑ Liquid injection line between 1st and 2nd stage
- ㉒ Liquid sub-cooling exchanger
- ㉓ Motor cooling liquid injection line
- ㉔ Motor cooling liquid injection valve
- LI Liquid inlet
- LO Liquid outlet
- HEI Exchanger inlet
- HEO Exchanger outlet

Two stage semi-hermetics reciprocating compressors

Cooling system diagram without liquid sub-cooling



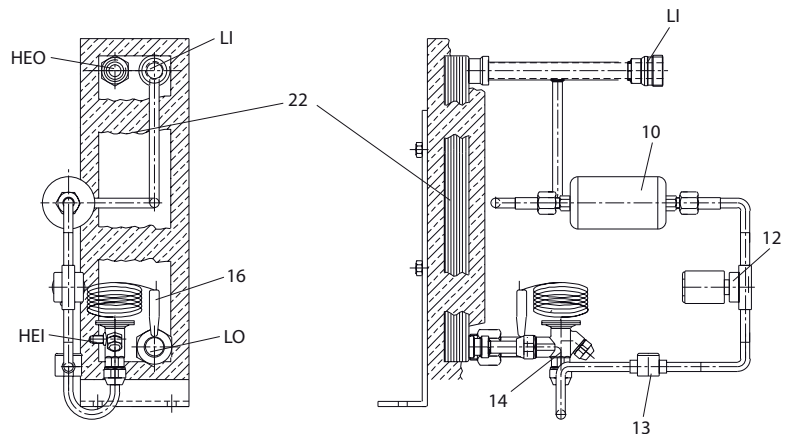
- | | |
|--------------------------------|---|
| ① Suction valve | ⑭ Thermostatic valve balance line |
| ② 1st stage compressor head | ⑮ Thermostatic expansion valve bulb |
| ③ 2nd stage compressor head | ⑯ Evaporator |
| ④ Discharge valve | ⑰ Liquid separator |
| ⑤ Discharge line | ⑱ Suction filter |
| ⑥ Oil separator | ⑲ Suction filter |
| ⑦ Compressor oil return line | ⑳ Injection liquid line |
| ⑧ Condenser | ㉑ Liquid injection line between 1st and 2nd stage |
| ⑨ Liquid receiver | ㉒ Motor cooling liquid injection line |
| ⑩ Dehydrating filter | ㉓ Motor cooling liquid injection valve |
| ⑪ Solenoid valve | |
| ⑫ Liquid indicator | |
| ⑬ Thermostatic expansion valve | |

Two stage semi-hermetics reciprocating compressors

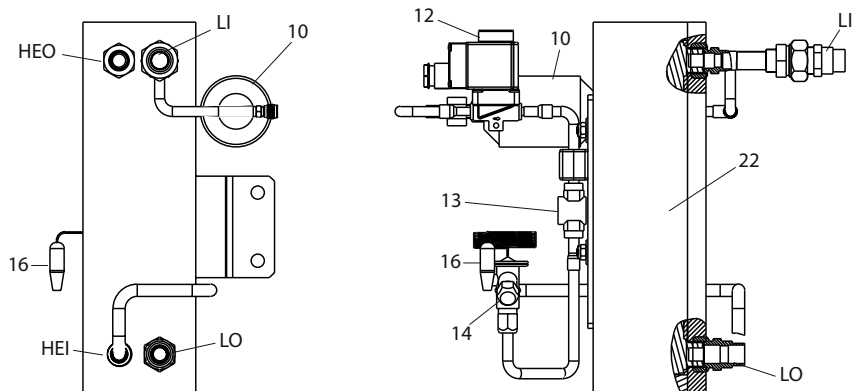
Liquid sub-cooling kit

Models	Code	Connections		
		LI Liquid inlet	LO Liquid outlet	HEO Exchanger outlet
R404a - R507 Refrigerant				
S5-26.16Y	T00SK300210	18 mm	18 mm	$\frac{3}{8}$ ODS
S7-27.19Y	T00SK300220	18 mm	18 mm	$\frac{3}{8}$ ODS
2V10-42.29Y	T00SK300330	18 mm	18 mm	$\frac{3}{8}$ ODS
2Z15-60.30Y	T00SK310325	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z20-72.36Y	T00SK310310	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z25-84.42Y	T00SK310310	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z30-102.51Y	T00SK310335	22 mm	18 mm	$\frac{5}{8}$ ODS
R22 Refrigerant				
S5-26.16Y	T00SK300110	18 mm	18 mm	$\frac{3}{8}$ ODS
S7-27.19Y	T00SK300110	18 mm	18 mm	$\frac{3}{8}$ ODS
2V10-42.29Y	T00SK305110	18 mm	18 mm	$\frac{3}{8}$ ODS
2Z15-60.30Y	T00SK310315	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z20-72.36Y	T00SK310315	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z25-84.42Y	T00SK310320	18 mm	18 mm	$\frac{5}{8}$ ODS
2Z30-102.51Y	T00SK310330	18 mm	18 mm	$\frac{5}{8}$ ODS

Series **S**



Series **2V-2Z**



10	Dehydrating filter
12	Solenoid valve
13	Liquid indicator
14	Thermostatic expansion valve
16	Thermostatic expansion valve bulb
22	Liquid sub-cooling
HEI	Exchanger inlet
HEO	Exchanger outlet
LI	Liquid inlet
LO	Liquid outlet



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