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Snowman Group reserves the right to change its products without notice in advance.
The technical parameters shall be subject to order contract or technical appendix of the contract.

RefComp

Screw Compressor

SRC-S Series Semi-hermetic Compact Screw Compressor



Commercial
Screw
Advanced
Technology

Originated from Italy,
advanced screw & reciprocating
compressor technologies.

Global Service Hotline
400-109-6660



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Structural Diagram of SRC-S Series Semi-hermetic Compact Compressor

The SRC-S series compressor features a compact design with an internal oil separator. Its discharge displacement range is 118~1100m³/h (@2960rpm), with a rated power range of 30~390HP. It is suitable for refrigerants such as R407C, R404A, and R507A, with a total of 18 models. Widely used in special air conditioning, refrigeration, and process cooling applications, the series boasts corresponding configurations for different applications such as heat pumps and water chiller units.

Rotor

- RefComp independently designs asymmetric screw rotor profiles to optimize the compression process.
- Strong rotor rigidity, high efficiency, reduced airflow pulsation and operational noise, stable operation, reaching a high level among similar products.



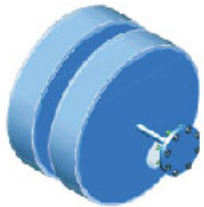
Safety Valve

- The machine is equipped with an internal safety valve, connecting high and low-pressure sides, ensuring safe and reliable operation.
- High specification design requirements, reliable sealing, and sensitive action.



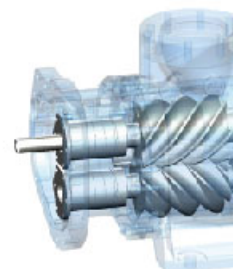
Built-in Oil Separator

- The integrated design of oil separator and compressor ensures high oil separating efficiency with compact compressor structure and good lubrication.



Bearing

- Combination of multiple bearings guarantee high load capacity, high wear resistance, low noise and extend service life.
- High wear resistance rolling component and specialized linear raceway render a lifespan of 40,000 hours.



Motor Protection

- Equipped with INT 69 SNY motor protection module and 6 series-connected PTC thermistor.
- Dynamic monitoring and tracking of system information, offering predictable alerts and safety protection.



Shut-off Valve

- Internal discharge check valve features low resistance, effectively preventing refrigerant backflow during shutdown.
- Suction and discharge shut-off valves can be rotated offering convenient installment and compact, flexible design.



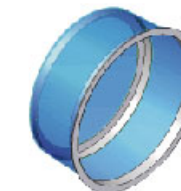
Motor

- Partial winding or Y-Δ starting, low starting current, available with variable frequency motors for vector control.
- Special materials that are compatible with R404A, R507A, R290, R410A, and other refrigerants.
- Special structure design and spatial layout together with the refrigerant gas flowing from the suction cut-off valve to the screw suction side effectively cool the motor.



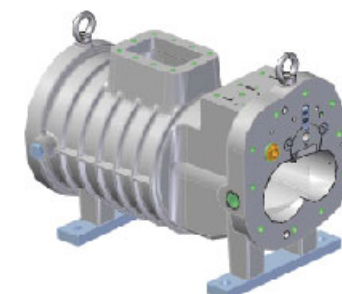
Suction Filter

- The internal delicate filter effectively filters impurities from the refrigerant and protects the motor.
- Located at the utmost end of the machine with compact structure and easy replacement.



Compressor Frame

- High strength casting mental, low pressure drop intake design ensure effective cooling of the motor.
- The central straight-through airway reduces the losses along the way with minimum discharge loss and low energy consumption.
- Highly integrated design of filter, valve, temperature sensor and other components offers compact structure and effectively promotes the reliable operation of the equipment.



Model Naming

Compressor		SRC	-S	-113	H	-L	4
		SRC	-S	-985	W	-Y	Z

Category	
SRC	Semi-hermetic Compressor

Series	
S	S Series Screw Compressor
113	Specification Code
985	

Built-in Volume Ratio Vi	
H	Vi=3.2
S	Vi=2.6 (S is omitted)
W	Vi=2.2 (for water-cooled compressors only)
HS	Vi=3.2-2.6 (Adjustable) (SRC-S-785_985)
SW	Vi=2.6-2.2 (Adjustable) (SRC-S-785_985)

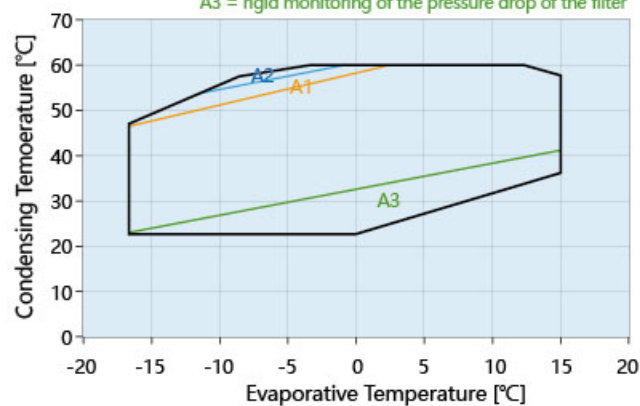
Electrical Accessories	
L	220V AC
M	110V AC
Y	24V AC

Capacity Regulation	
4	4 step
Z	stepless

Application Range

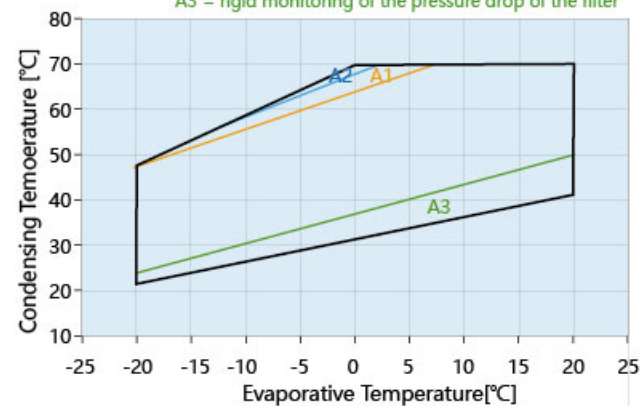
R407C

A1 = oil cooling or spray liquid
 A2 = oil cooler (for wind cooling or water cooling only)
 A3 = rigid monitoring of the pressure drop of the filter



R134A

A1 = oil cooling or spray liquid
 A2 = oil cooler (for wind cooling or water cooling only)
 A3 = rigid monitoring of the pressure drop of the filter



Technical Parameters

Model SRC-S(W)		113	133	163	183	213	255	285	305
Standard Motor Power	HP/kW	30/22	40/30	50/37	60/45	70/52	80/60	90/67	100/75
Displacement 50/60[Hz]	m³/h	118/142	150/180	175/210	205/246	237/284	286/343	318/382	341/409
Weight	kg	325	330	335	510	515	585	590	595
Oil Charge	dm³	6			7		10		
Electrical Heater		200W-230V-50/60Hz							
Discharge pipe inner diameter/pipe size	mm	42.2/1-5/8"			54.1/2-1/8"				
Suction pipe inner diameter/pipe size	mm	54.1/2-1/8"			67.0/2-5/8"		80.0/3-1/8"		
Liquid Injection coonection Ø	mm	10 (copper pipe)							
Economizer Connection Ø	mm	22							
Cooling Capacity Regulation **		100%, 75%, 50%, 25 % (stepless 100% - 25%)							
Protection Device		INT69 SNY							
Lubricating Oil		R22: S001							
Compressor Positioning Hole		4×Ø19							

Model SRC-S(W)		353	413	463	503	553	603	755	785	885	985
Standard Motor Power	HP/kW	120/90	140/105	160/120	180/135	200/150	220/164	220/164	240/179	270/201	300/224
Displacement 50/60[Hz]	m³/h	402/482	445/534	510/612	562/674	600/720	700/840	860/1030	910/1092	1000/1200	1100/1320
Weight	kg	730	740	775	1010	1030	1020	980	1400	1400	1400
Oil Charge	dm³	14		16	19		20	23	25		
Electrical Heater		275W-230V-50/60Hz									
Discharge pipe inner diameter/pipe size	mm	80.0/3-1/8"							105.5/4-1/8"		
Suction pipe inner diameter/pipe size	mm	92.5/3-5/8"			105.5/4-1/8"				134.8/Ø133		
Liquid Injection coonection Ø	mm	10 (copper pipe)									
Economizer ConnectionØ	mm	28			42		28	42			
Cooling Capacity Regulation **		100%, 75%, 50%, 25 % (stepless 100% - 25%)									
Protection Device		INT69 SNY									
Lubricating Oil		R22: S001, R407C、R404A、R507: S002									
Compressor Positioning Hole		4×Ø19									

(1) Voltage Deviation ±10%

Accessories Supply

Standard Configuration			
No.	Accessories	SRC-S/XS	SRC-S-W
1	refrigerant oil for R22 only : S001	√	√
2	compressor frame	√	√
3	discharge shut-off valve	√	√
4	check valve	√	√
5	suction side welding connection		√
6	6 suction shut-off valve (with the welding connection on the suction side)	√	
7	6 thermistors and electronic modules embedded in the motor winding group (monitoring motor and oil temperature, motor rotation direction, phase fault)	√	√
8	IP54 terminal box	√	√
9	400V ±10% -3-50Hz / 460V ±10% -3-60Hz motor (starting method can be referred to section SA-05 "Electrical Equipment")	√	√
10	electrical equipment 230V-1-50/60Hz √ √	√	√
11	nitrogen purging	√	√
12	rubber vibration damper	√	√
13	built-in safety valve	√	√
14	built-in oil separator (with flange)	√	√
15	oil sight glass	√	√
16	oil filter	√	√
17	oil heater	√	√
18	stepped or stepless energy control unit (SRC-XS series compressors only provide step energy control units)	√	√
19	volume control slide(Vi)	2.6	2.2
Optional Accessories on Clients' Demand:			
1	motor with special voltage	√	√
2	S series available built-in Vi (refer to SA06 "Model Naming" and "Technical Specifications")	H/HS	
3	electrical accessories with voltage different from standard one	√	√
4	POE oil : suitable for R407C, R404A and R502	√	
5	electrical module INT 69 SNY (monitor the temperature of motor and oil, rotation direction of motor, phase fault and alternative standard motor protection)	√	√
6	liquid injection connection	√	√
7	economizer connector with shut-off valve	√	√
8	direct on-line (D.O.L)	√	√
9	float or photoelectric oil level sensor	√	√
10	stepped or stepless capacity control conversion device	√	√
11	oil flow switch	√	√
12	external oil circuit connector (SRC-XS-040/050/060 and SRC-S-255/285/305/755 /885/985 (W) been equipped in the compressor)	√	√

Note: 1. "√ " indicates provided
2. If optional accessories are needed, please note when ordering.

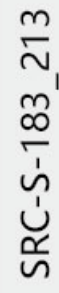
SRC-S Performance Parameters

Model	R404A/R507A					
	Te = 25°C.Tcond = 75°C			Te = 35°C.Tcond = 70°C		
	Q ₀ [kW]	Pa [kW]	COP	Q ₀ [kW]	Pa [kW]	COP
SRC-S(H)-113	98.1	38.2	2.57	149.1	36.3	4.1
SRC-S(H)-133	128.8	48.9	2.63	195.7	46.5	4.21
SRC-S(H)-163	151.8	57	2.66	230.7	54.2	4.25
SRC-S(H)-183	181.6	66.8	2.72	276	63.6	4.34
SRC-S(H)-213	216.4	77.2	2.8	328.9	73.5	4.48
SRC-S(H)-255	240.7	85.7	2.81	365.8	81.5	4.49
SRC-S(H)-285	274.1	95.5	2.87	416.7	90.8	4.59
SRC-S(H)-305	297	102.3	2.9	451.4	97.4	4.63
SRC-S(H)-353	353.6	120.7	2.93	537.5	114.8	4.68
SRC-S(H)-413	381.7	130.2	2.93	580.3	123.9	4.68
SRC-S(H)-463	441.9	149.3	2.96	671.7	142	4.73
SRC-S(H)-503	479	161.9	2.96	728	154.1	4.72
SRC-S(H)-553	516.6	172.9	2.99	785.1	164.5	4.77
SRC-S(H)-603	608.7	201.7	3.02	925.2	191.9	4.82
SRC-S(H)-755	673.4	244	2.76	1023.5	232.2	4.41
SRC-S(H)-785	799.6	258.2	3.1	1215.4	245.7	4.95
SRC-S(H)-885	887.5	283.7	3.13	1349	270	5
SRC-S(H)-985	985.9	312.1	3.16	1498.6	297	5.05

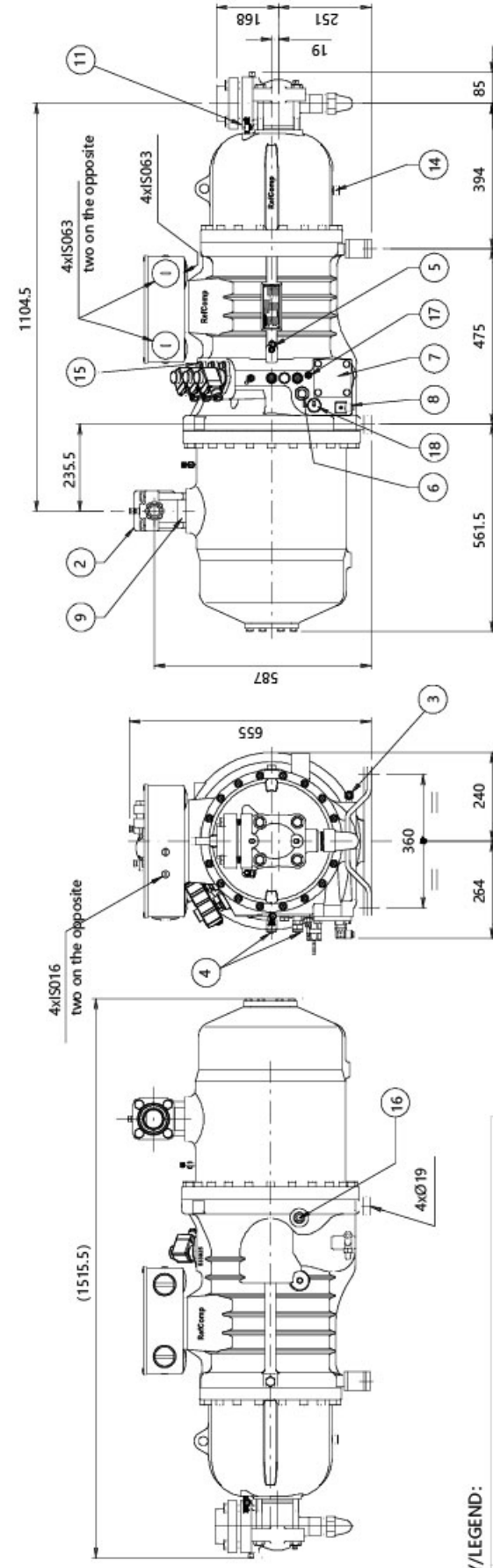
	R404A/R507A					
	Te = -5°C.Tcond = 35°C			Te = 0°C.Tcond = 30°C		
	Q ₀ [kW]	Pa [kW]	COP	Q ₀ [kW]	Pa [kW]	COP
SRC-S-113	102.1	28.2	3.62	134.4	26.5	5.07
SRC-S-133	129.8	35.5	3.66	170.9	33.4	5.12
SRC-S-163	140.5	37.5	3.74	181.5	34.7	5.23
SRC-S-183	163.1	43.6	3.75	210.7	40.3	5.23
SRC-S-213	188.6	49.9	3.78	243.6	46.1	5.29
SRC-S-255	231.6	60.2	3.85	299.2	55.6	5.38
SRC-S-285	257.7	66.8	3.86	332.9	61.7	5.39
SRC-S-305	279	72.5	3.85	360.3	67	5.38
SRC-S-353	332.7	85.2	3.9	429.7	78.7	5.46
SRC-S-413	371.7	94.4	3.94	480.1	87.2	5.51
SRC-S-463	414.2	105.3	3.93	538.4	100.5	5.36
SRC-S-503	456.4	116.1	3.93	593.3	110.8	5.36
SRC-S-553	487.2	123.9	3.93	633.4	118.3	5.36
SRC-S-603	591.7	154.1	3.84	743.7	149.7	4.97
SRC-S-755	708.5	188.7	3.75	928.2	177.2	5.24
SRC-S-785	734.4	193.6	3.79	962.3	181.9	5.29
SRC-S-885	807.1	212.8	3.79	1057.4	199.9	5.29
SRC-S-985	887.9	234	3.79	1163.3	219.8	5.29

KEY / LEGENDA

Q₀ = Cooling Capacity [kW] - Pa = Input Power[kW] - Te = Evaporative Temperature[°C, DEW]. Tc = Condensing Temperature[°C, DEW] - Sub Cooling5K - Superheat 10K/1K.Product improvement and performance parameters shall be subject to the selection software of RefComp.

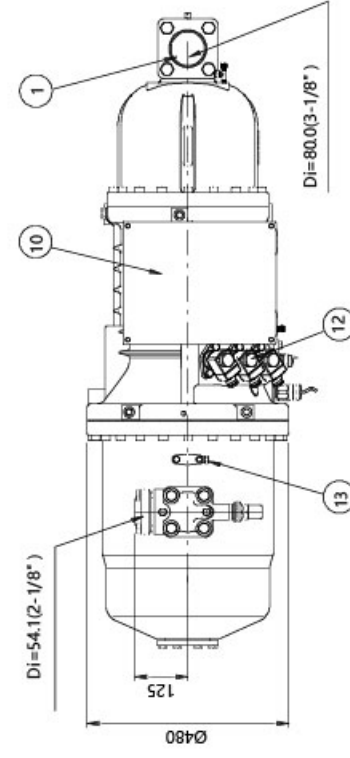


SRC-S-285_305

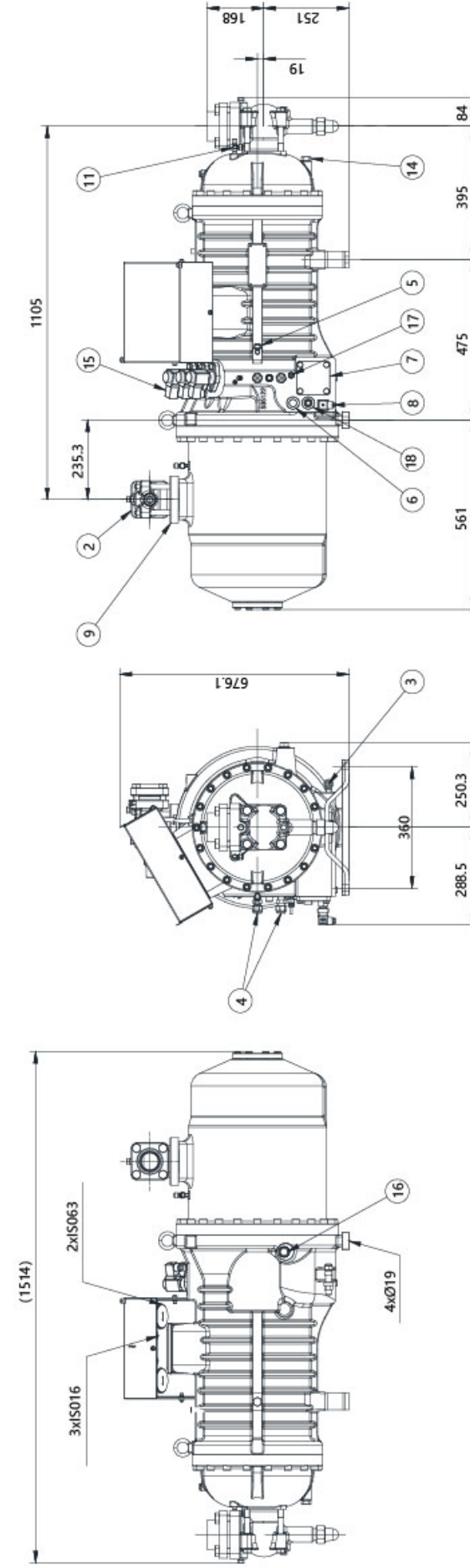


KEY/LEGEND:

1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charge/oil drain valve 3/8" SAE-FLARE
4	oil cooler connection 5/8" SAE-FLARE(optional)
5	oil pressure connection 1/4" SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4" SAE-FLARE
12	cooling capacity regulation solenoid valve
13	high-pressure connection 1/4" SAE-FLARE
14	oil drain (low-pressure side) 1/4" -18NPT
15	solenoid valve connection (stepped to stepless)
16	liquid injection connection 010(economize connection 022(optional))
17	oil temperature sensor 1/8"NPT
18	oil level switch (optional)

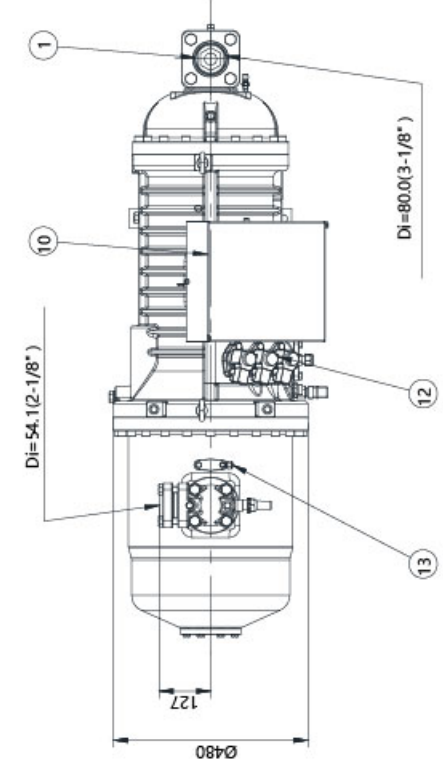


SRC-S-255_285_305W
SRC-S-255

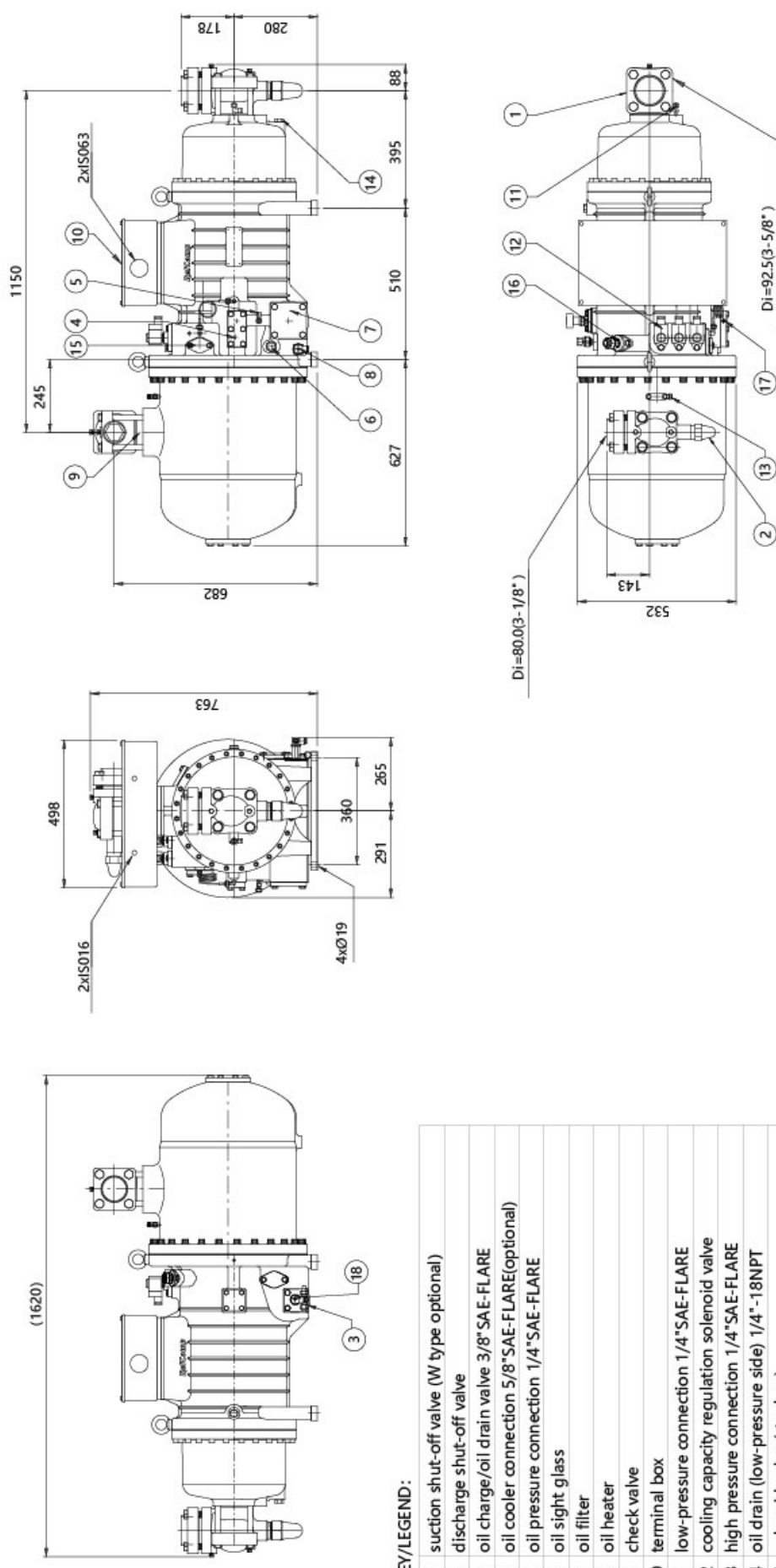


KEY/LEGEND:

KEY/LEGEND:	
1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charging/oil drain valve 3/8" SAE-FLARE
4	oil cooler connection 5/8" SAE-FLARE(optional)
5	oil pressure connection 1/4" SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4" SAE-FLARE
12	cooling capacity regulation solenoid valve
13	high pressure connection 1/4" SAE-FLARE
14	oil drain (low-pressure side) 1/4" -18NPT
15	solenoid valve connection (step to stepless)
16	liquid injection connect on Ø10/economizer connection Ø22(optional)
17	oil temperature sensor 1/8"NPT
18	oil level switch (optional)

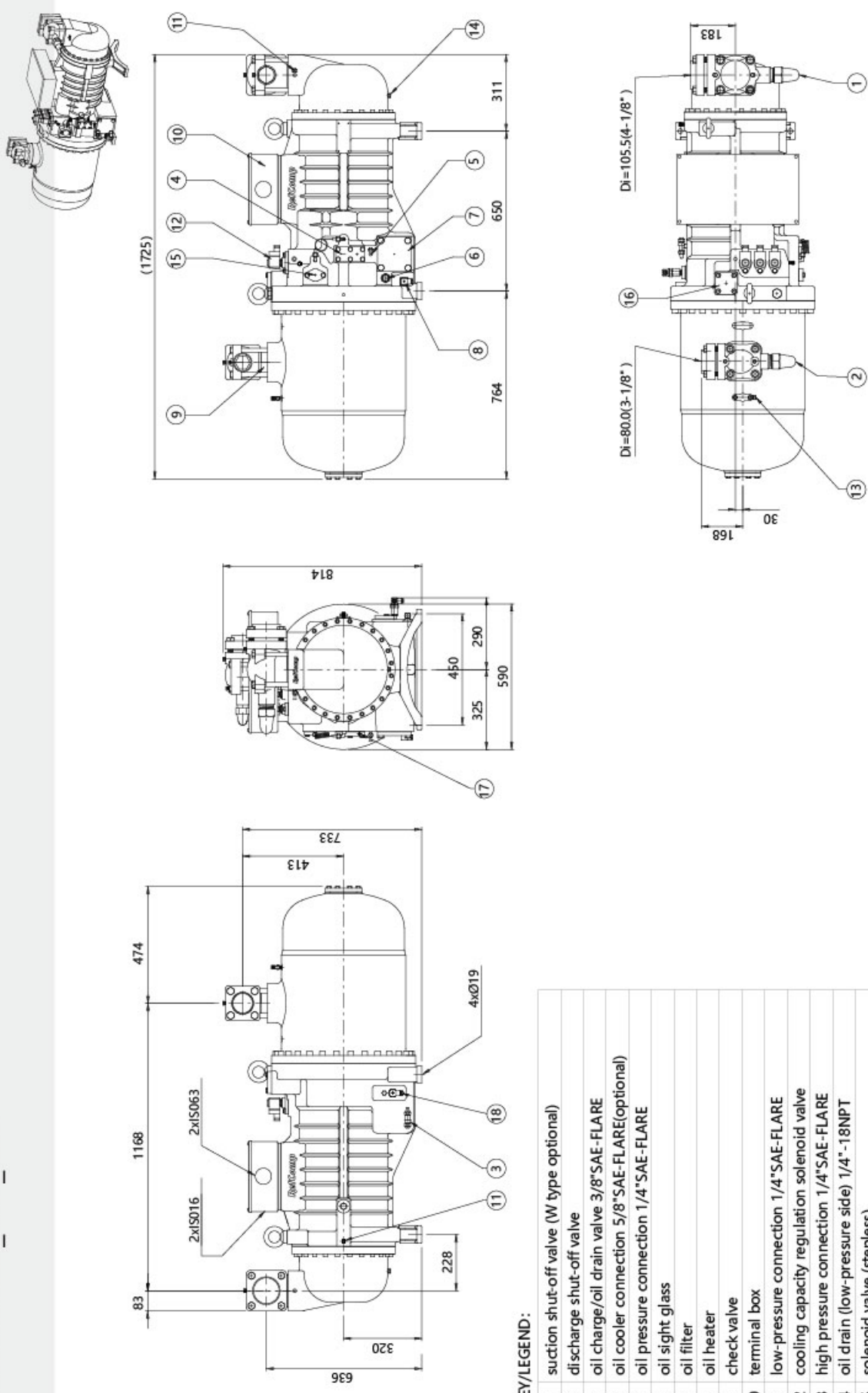


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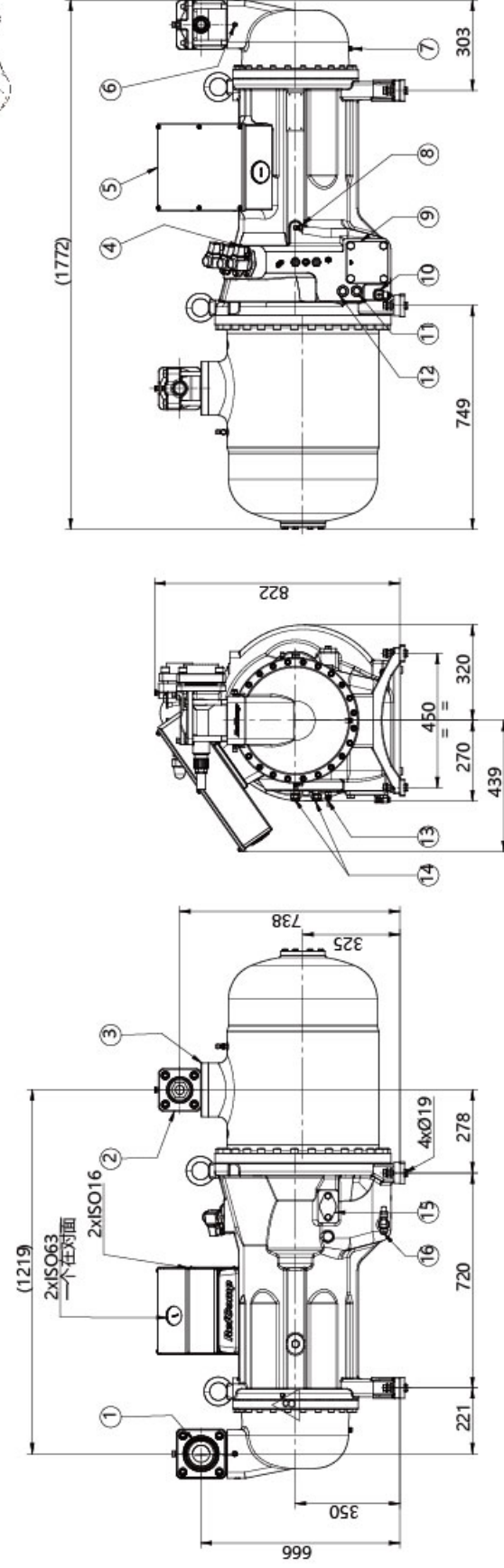
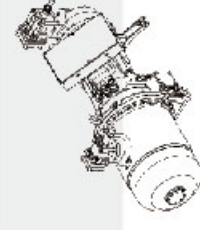
1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charge/oil drain valve 3/8"SAE-FLARE
4	oil cooler connection 5/8"SAE-FLARE(optional)
5	oil pressure connection 1/4"SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4"SAE-FLARE
12	cooling capacity regulation solenoid valve
13	high pressure connection 1/4"SAE-FLARE
14	oil drain (low-pressure side) 1/4"-18NPT
15	solenoid valve (stepless)
16	liquid injection connection Ø10/economizer connectionØ28(optional)
17	oil temperature sensor 1/8" NPT
18	oil level switch (optional)

SRC-S-503_553_603



1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charge/oil drain valve 3/8"SAE-FLARE
4	oil cooler connection 5/8"SAE-FLARE(optional)
5	oil pressure connection 1/4"SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4"SAE-FLARE
12	cooling capacity regulation solenoid valve
13	high pressure connection 1/4"SAE-FLARE
14	oil drain (low-pressure side) 1/4"-18NPT
15	solenoid valve (stepless)
16	liquid injection connection Ø10/economizer connectionØ28(optional)
17	oil temperature sensor 1/8" NPT
18	oil level switch (optional)

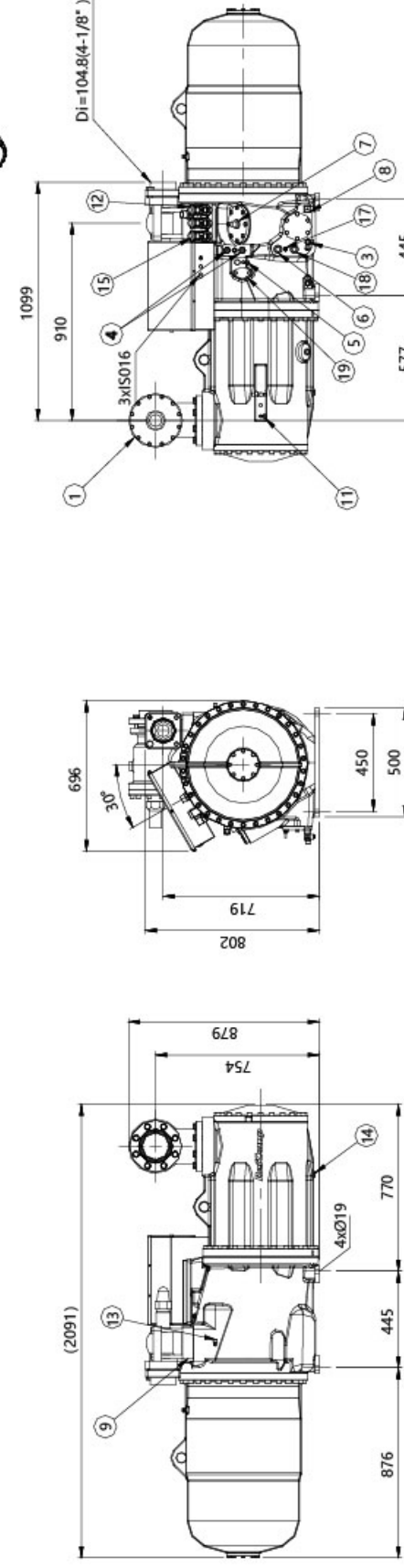
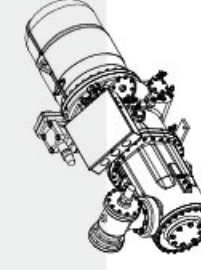
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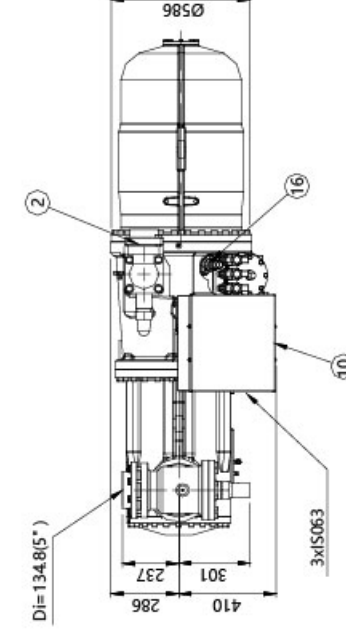
1	suction shut-off valve (SRC-S(W) type optional)
2	discharge shut-off valve
3	check valve
4	capacity regulation solenoid valve
5	terminal box
6	low-pressure connection 1/4"SAE-FLARE
7	oil drain (low-pressure side)
8	oil pressure connection 1/4"SAE-FLARE
9	oil filter
10	oil heater
11	oil level switch (optional)
12	oil sight glass
13	temperature sensor 1/8"NPT
14	oil cooler connection 5/8"SAE-FLARE(optional)
15	liquid injection connection Ø10/ economizer connection Ø28(optional)
16	oil charge/oil drain 3/8"SAE-FLARE
17	high-pressure connection 1/4"SAE-FLARE

SRC-S-785_885_985(Radial suction, standard)



KEY/LEGEND:

1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charge/oil drain valve 3/8"SAE-FLARE
4	oil cooler connection 5/8"SAE-FLARE
5	oil pressure connection 1/4"SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4"SAE-FLARE
12	cooling capacity regulation solenoid
13	high-pressure connection 1/4"SAE-FLARE
14	oil drain (low-pressure side)
15	solenoid valve (stepless)
16	liquid injection connection Ø10/ economizer connection Ø42(optional)
17	oil temperature sensor 1/8" NPT
18	oil level switch (optional)
19	VI control solenoid valve(optional)





KEY/LEGEND:	
1	suction shut-off valve (W type optional)
2	discharge shut-off valve
3	oil charge/oil drain valve 3/8"SAE-FLARE
4	oil cooler connection 5/8"SAE-FLARE
5	oil pressure connection 1/4"SAE-FLARE
6	oil sight glass
7	oil filter
8	oil heater
9	check valve
10	terminal box
11	low-pressure connection 1/4"SAE-FLARE
12	cooling capacity regulation solenoid
13	high-pressure connection 1/4"SAE-FLARE
14	oil drain (low-pressure side)
15	solenoid valve (stepless)
16	liquid injection connection Ø10/economizer connection Ø42(optional)
17	oil temperature sensor 1/8"NPT
18	oil level switch (optional)
19	V control solenoid valve(optional)