



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4H-25.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	57888	47717	38909	31307	24775	19192	14449	10448
	Qu* [W]	57888	47717	38909	31307	24775	19192	14449	10448
	P [kW]	15,13	14,35	13,40	12,31	11,10	9,80	8,45	7,07
	I [A]	27,2	26,1	24,8	23,4	21,9	20,4	18,86	17,46
	Qc [W]	73017	62068	52309	43613	35873	28996	22902	17520
	COP [-]	3,83	3,33	2,90	2,54	2,23	1,96	1,71	1,48
	m [kg/h]	1454	1187	960	767	603	465	349	251
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	69,9	76,8	84,1	92,0	100,5	110,1	121,1	134,3
40°C	Q [W]	49364	40602	32996	26418	20757	15912	11792	8314
	Qu* [W]	49364	40602	32996	26418	20757	15912	11792	8314
	P [kW]	17,31	16,10	14,75	13,30	11,77	10,19	8,59	7,00
	I [A]	30,3	28,6	26,7	24,7	22,7	20,8	19,00	17,39
	Qc [W]	66670	56698	47747	39717	32526	26102	20382	15311
	COP [-]	2,85	2,52	2,24	1,99	1,76	1,56	1,37	1,19
	m [kg/h]	1397	1137	915	727	567	432	319	224
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	80,8	87,7	95,0	102,9	111,5	121,2	132,6	0
50°C	Q [W]	40984	33598	27172	21608	16820	12727	9253	6330
	Qu* [W]	40984	33598	27172	21608	16820	12727	9253	6330
	P [kW]	19,32	17,69	15,96	14,17	12,33	10,48	8,64	6,85
	I [A]	33,3	30,9	28,4	25,9	23,4	21,1	19,06	17,25
	Qc [W]	60302	51289	43137	35777	29150	23205	17895	13181
	COP [-]	2,12	1,90	1,70	1,53	1,36	1,21	1,07	0,92
	m [kg/h]	1344	1088	870	686	530	398	288	196,1
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	92,0	98,9	106,3	114,4	123,2	133,3	0	0

-- No calculation possible (see message in single point selection)

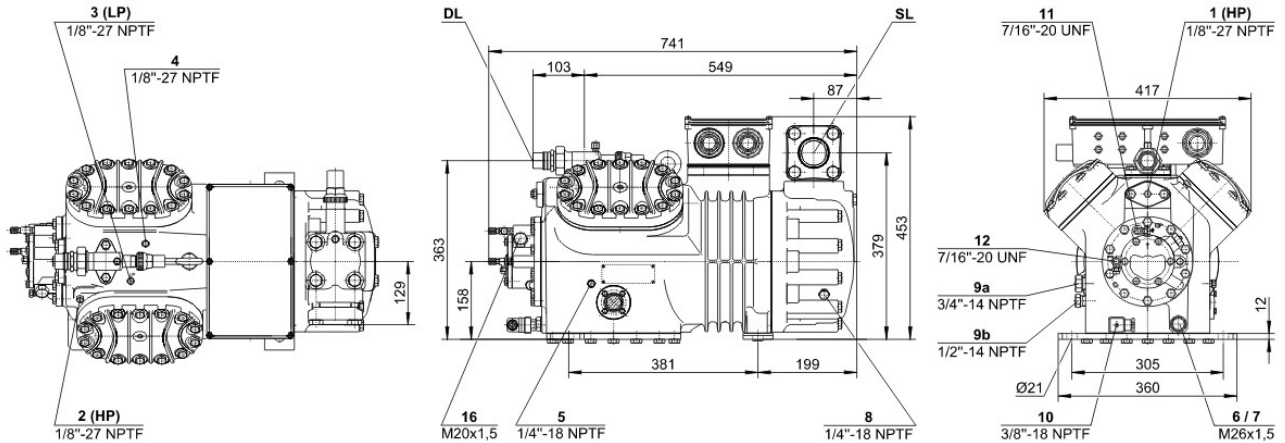
*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits 100% 4H-25.2



Technical Data: (4H-25.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	73,6 m ³ /h
Displacement (1750 RPM 60Hz)	88,83 m ³ /h
No. of cylinder x bore x stroke	4 x 70 mm x 55 mm
Weight	203 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	54 mm - 2 1/8"
Connection discharge line	28 mm - 1 1/8"
Connection cooling water	R 3/4"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	tc<55°C: BSE32 tc>55°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2 (Standard)
Oil type R290/R1270	SHC226E (Standard)

Motor data

Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	45.0 A
Winding ratio	50/50
Starting current (Rotor locked)	116.0 A Y / 193.0 A YY
Max. Power input	24,9 kW

Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,50 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)

Sound measurement

Sound power level (+5°C / 50°C)	77,5 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	78,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	(81,0) dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	69,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	70,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	(73,0) dB(A) @ 50Hz



Selection: Semi-hermetic Reciprocating Compressors

Input Values

Compressor model	(4G-20.2Y)	Suction gas temperature	20,00 °C
Mode	Refrigeration and Air conditioning	Operating mode	Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

Result

Q [W]	Cooling capacity	COP [-]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
30°C	Q [W]	67006	55421	45391	36740	29312	22968	17584	13048
	Qu* [W]	67006	55421	45391	36740	29312	22968	17584	13048
	P [kW]	18,21	17,11	15,88	14,54	13,11	11,61	10,08	8,52
	I [A]	30,6	28,8	26,9	24,9	22,8	20,7	18,61	16,69
	Qc [W]	85215	72532	61272	51279	42421	34582	27662	21570
	COP [-]	3,68	3,24	2,86	2,53	2,24	1,98	1,74	1,53
	m [kg/h]	1683	1379	1120	900	714	556	424	314
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	71,3	77,9	84,8	92,3	100,4	109,4	119,5	131,1
40°C	Q [W]	57151	47250	38644	31189	24759	19240	14528	10529
	Qu* [W]	57151	47250	38644	31189	24759	19240	14528	10529
	P [kW]	20,9	19,35	17,67	15,92	14,12	12,29	10,46	8,65
	I [A]	34,9	32,4	29,7	27,0	24,3	21,6	19,10	16,84
	Qc [W]	78079	66597	56313	47107	38875	31528	24986	19177
	COP [-]	2,73	2,44	2,19	1,96	1,75	1,57	1,39	1,22
	m [kg/h]	1618	1323	1072	858	677	523	393	284
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	82,6	89,2	96,2	103,7	111,9	121,0	131,5	0
50°C	Q [W]	--	38741	31632	25447	20087	15466	11500	8112
	Qu* [W]	--	38741	31632	25447	20087	15466	11500	8112
	P [kW]	--	21,2	19,14	17,00	14,86	12,72	10,63	8,59
	I [A]	--	35,4	32,0	28,7	25,4	22,2	19,32	16,77
	Qc [W]	--	59973	50770	42451	34945	28189	22125	16703
	COP [-]	--	1,82	1,65	1,50	1,35	1,22	1,08	0,94
	m [kg/h]	--	1254	1013	808	633	484	358	251
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	--	101,0	108,0	115,6	123,9	133,2	0	0

-- No calculation possible (see message in single point selection)

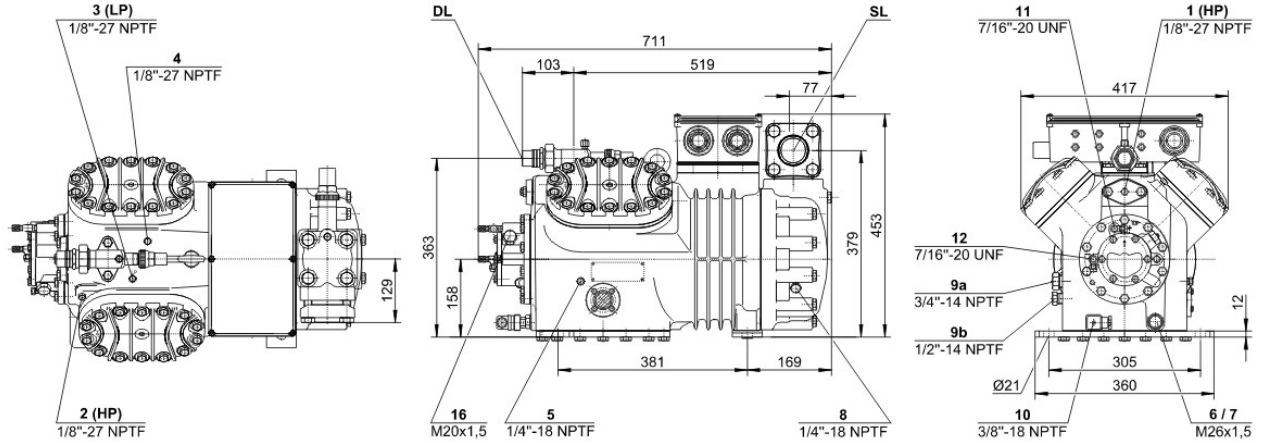
*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

Application Limits 100% 4G-20.2



Technical Data: (4G-20.2Y)

Dimensions and Connections



Technical Data

Technical Data

Displacement (1450 RPM 50Hz)	84,5 m ³ /h
Displacement (1750 RPM 60Hz)	101,98 m ³ /h
No. of cylinder x bore x stroke	4 x 75 mm x 55 mm
Weight	192 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	54 mm - 2 1/8"
Connection discharge line	28 mm - 1 1/8"
Connection cooling water	R 3/4"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	tc<55°C: BSE32 tc>55°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2 (Standard)
Oil type R290/R1270	SHC226E (Standard)

Motor data

Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	37.0 A
Winding ratio	50/50
Starting current (Rotor locked)	97.0 A Y / 158.0 A YY
Max. Power input	22,1 kW

Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,50 dm ³

Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
CIC System	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)

Sound measurement

Sound power level (-10°C / 45°C)	81,0 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	86,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	73,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	78,5 dB(A) @ 50Hz