
GACO SARL

28, Rue Bencharif Madani

25000 BELLEVUE/CONSTANTINE - ALGERIE

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**Type: Hermetic scroll compressors****Producer: Danfoss-Maneurop****Series: SH****Model: SH120****Data****Model: SH120****Technical data**

Displacement [m ³ /h]:	20,3
Swept volume [cm ³ /rev]:	116,9
RPM [min ⁻¹]:	2900
Weight [kg]:	64
Oil charge [dm ³]:	3,3
Oil type:	160SZ
Maximum system test pressure low side / high side:	33/45
Maximum number of starts without softstart [1/h]:	12
Refrigerant charge limit [dm ³]:	7,9
Sound power [dB]:	72,5
Refrigerant:	R410A

Connections

	<u>milimeters</u>	<u>inches</u>
Suction connection with supplied sleeve:	35	1 3/8"
Discharge connection with supplied sleeve:	22	7/8"

R410A

Model: SH120**Capacity****Cooling capacity [W]**

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
20	12 492	15 499	19 065	23 258	28 147	33 799	40 284	-	-
25	11 777	14 723	18 196	22 266	27 000	32 466	38 733	45 869	-
30	11 048	13 918	17 285	21 217	25 782	31 048	37 083	43 956	51 734
35	10 306	13 087	16 333	20 113	24 494	29 545	35 335	41 930	49 400
40	-	12 231	15 342	18 955	23 138	27 961	33 490	39 794	46 941
45	-	11 352	14 313	17 745	21 717	26 296	31 550	37 549	44 359
50	-	-	13 248	16 485	20 230	24 552	29 518	35 196	41 655
55	-	-	-	15 177	18 681	22 731	27 394	32 737	38 831
60	-	-	-	-	17 071	20 835	25 180	30 175	35 888
65	-	-	-	-	-	18 864	22 878	27 510	32 829

Power input [W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
20	4 258	4 353	4 446	4 533	4 610	4 673	4 720	-	-
25	4 737	4 837	4 936	5 031	5 118	5 193	5 254	5 297	-
30	5 260	5 361	5 463	5 563	5 656	5 740	5 812	5 866	5 901
35	5 845	5 944	6 045	6 146	6 243	6 332	6 410	6 474	6 520
40	-	6 601	6 698	6 797	6 894	6 985	7 067	7 136	7 189
45	-	7 349	7 440	7 534	7 627	7 716	7 799	7 870	7 927
50	-	-	8 287	8 372	8 458	8 543	8 622	8 692	8 750
55	-	-	-	9 329	9 406	9 482	9 554	9 620	9 675
60	-	-	-	-	10 485	10 550	10 613	10 670	10 719
65	-	-	-	-	-	11 764	11 814	11 860	11 900

Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
20	11.33	11.37	11.42	11.46	11.51	11.56	11.60	-	-
25	11.78	11.84	11.89	11.95	12.01	12.07	12.13	12.18	-
30	12.29	12.35	12.42	12.49	12.56	12.63	12.69	12.75	12.81
35	12.87	12.95	13.02	13.10	13.18	13.26	13.33	13.40	13.46
40	-	13.64	13.72	13.81	13.90	13.98	14.06	14.13	14.20
45	-	14.45	14.54	14.64	14.73	14.82	14.91	14.99	15.06
50	-	-	15.51	15.61	15.71	15.80	15.89	15.98	16.05
55	-	-	-	16.75	16.85	16.95	17.04	17.13	17.21
60	-	-	-	-	18.19	18.29	18.38	18.47	18.55
65	-	-	-	-	-	19.84	19.94	20.02	20.10

Model: SH120**Mass flow [kg/h]**

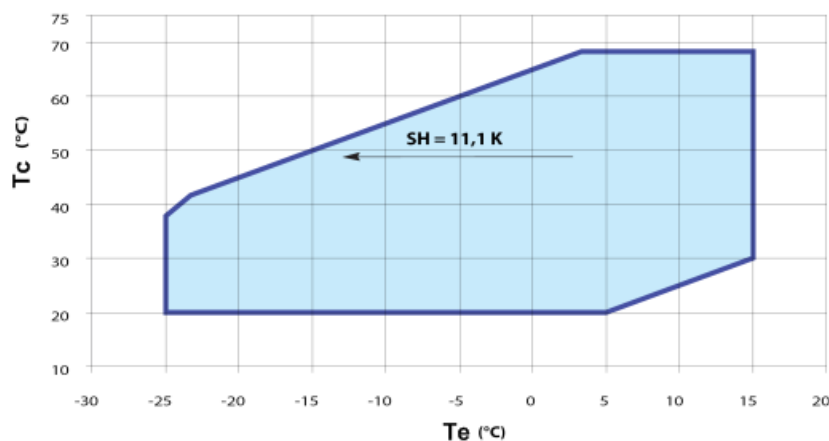
Capacity

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
20	218.67	270.29	329.71	398.15	476.82	566.94	669.73	-	-
25	215.33	267.42	327.27	396.08	475.07	565.45	668.45	785.28	-
30	211.39	263.83	323.97	393.02	472.19	562.71	665.79	782.65	914.49
35	206.88	259.54	319.84	388.99	468.23	558.75	661.78	778.53	910.22
40	-	254.56	314.89	384.03	463.19	553.58	656.43	772.94	904.35
45	-	248.92	309.15	378.14	457.09	547.23	649.76	765.92	896.90
50	-	-	302.65	371.35	449.96	539.71	641.80	757.46	887.90
55	-	-	-	363.68	441.83	531.05	632.57	747.61	877.36
60	-	-	-	-	432.70	521.28	622.09	736.37	865.32
65	-	-	-	-	-	510.40	610.38	723.77	851.78

C.O.P. [W/W]

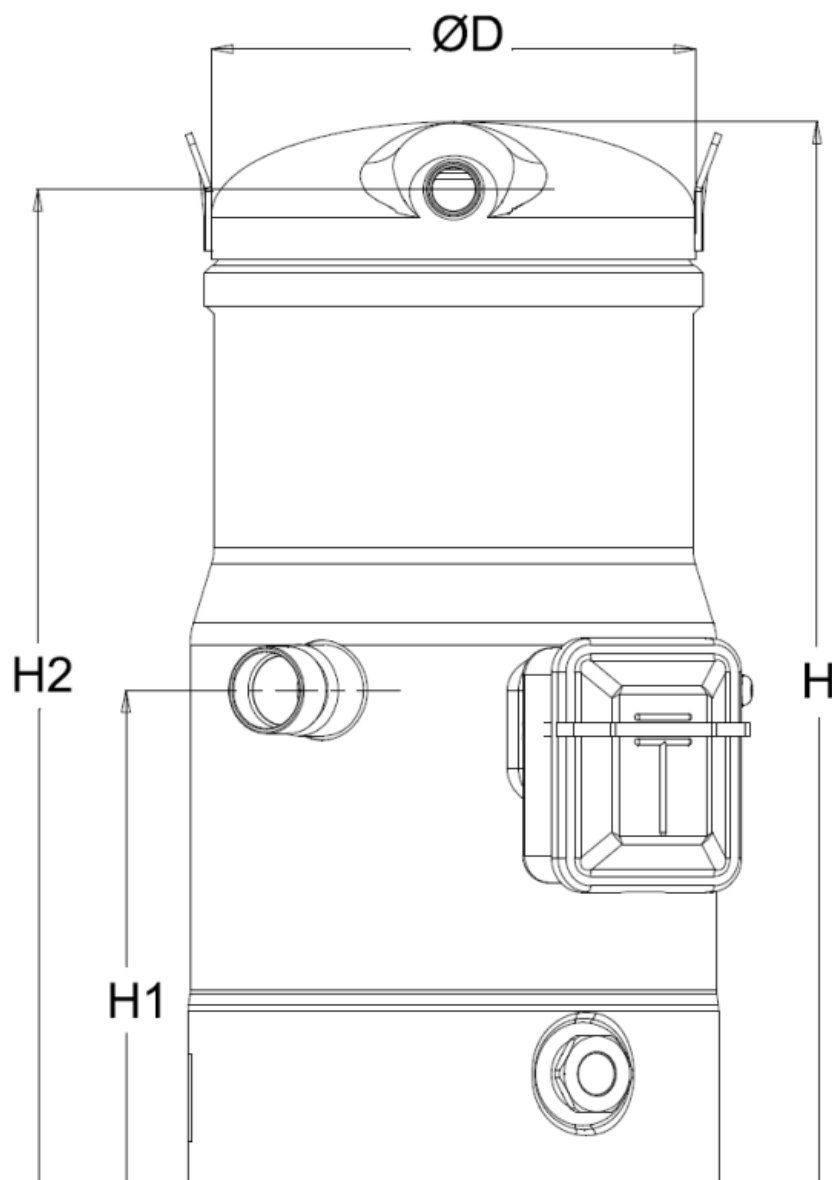
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15
20	2.93	3.56	4.29	5.13	6.11	7.23	8.53	-	-
25	2.49	3.04	3.69	4.43	5.28	6.25	7.37	8.66	-
30	2.10	2.60	3.16	3.81	4.56	5.41	6.38	7.49	8.77
35	1.76	2.20	2.70	3.27	3.92	4.67	5.51	6.48	7.58
40	-	1.85	2.29	2.79	3.36	4.00	4.74	5.58	6.53
45	-	1.54	1.92	2.36	2.85	3.41	4.05	4.77	5.60
50	-	-	1.60	1.97	2.39	2.87	3.42	4.05	4.76
55	-	-	-	1.63	1.99	2.40	2.87	3.40	4.01
60	-	-	-	-	1.63	1.97	2.37	2.83	3.35
65	-	-	-	-	-	1.60	1.94	2.32	2.76

Operating conditions: superheating: 11.1 K, subcooling: 8.3 K

 t_c - Condensing temperature [°C] t_e - Evaporating temperature [°C]**Application range**

Model: SH120

Dimensions



Ø [mm]: 243

H [mm]: 540

H1 [mm]: 278

H2 [mm]: 509

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Image



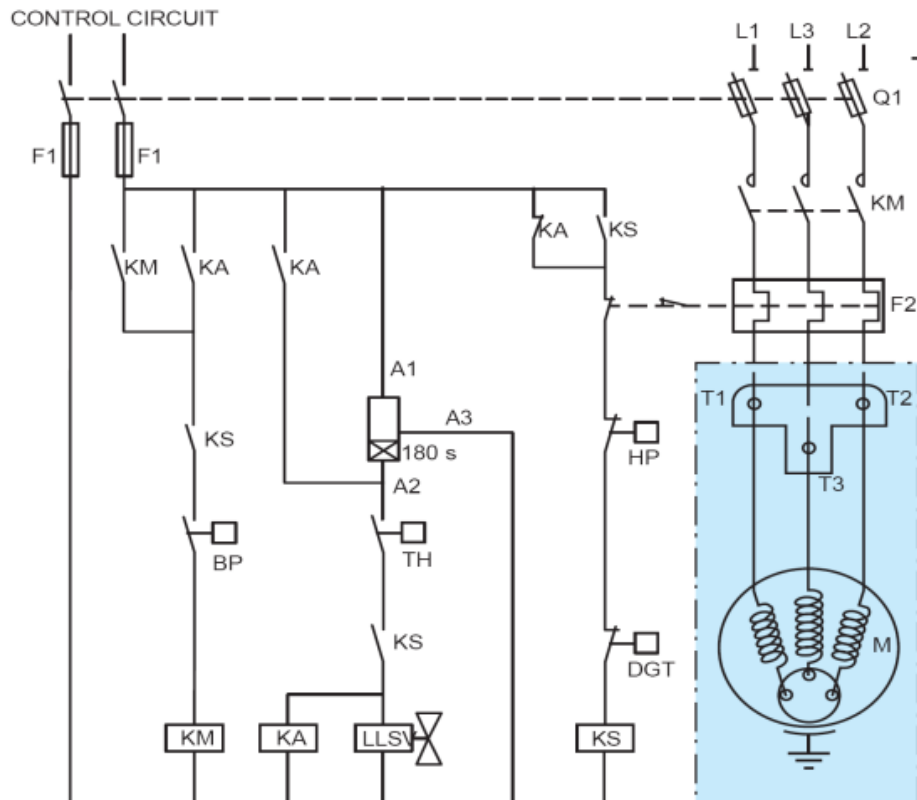
Model: SH120

Electrical

Single phase power supply

Motor voltage code: 4
 Power supply: 400V/3/50Hz
 Maximum Continuous Current (MCC) [A]: 21,1

Wiring diagram with pump-down cycle

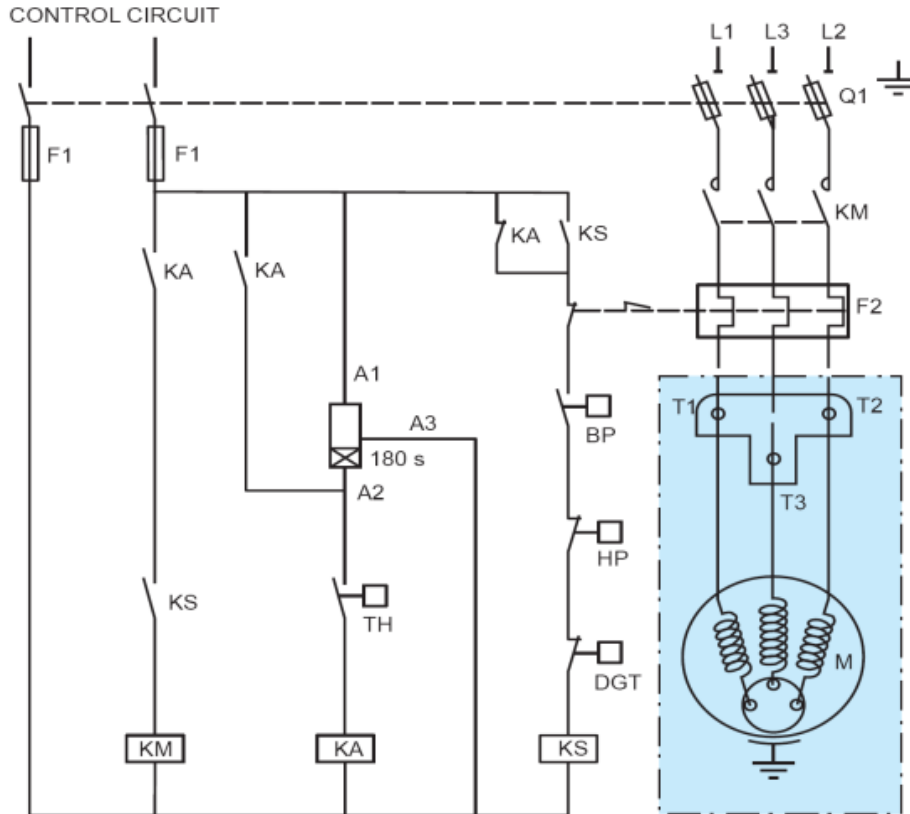


- TH: Control device
- 180 s: Optional short cycle timer (3min) 5 pts
- KA: Control relay
- LLSV: Liquid Line Solenoid valve
- KM: Compressor contactor
- KS: Safety lock out relay
- BP: Pump-down control and low pressure switch
- HP: High pressure safety switch
- Q1: Fused disconnect
- F1: Fuses / S: External overload protection
- F2: External overload protection
- M: Compressor's engine
- thM: Motor safety thermostat
- DGT: Discharge gas thermostat
- MPM: Motor Protection Module
- S: Thermistor chain

Model: SH120

Electrical

Wiring diagram without pump-down cycle



TH: Control device

180 s: Optional short cycle timer (3min) 5 pts

KA: Control relay

LLSV: Liquid Line Solenoid valve

KM: Compressor contactor

KS: Safety lock out relay

BP: Pump-down control and low pressure switch

HP: High pressure safety switch

Q1: Fused disconnect

F1: Fuses / S: External overload protection

F2: External overload protection

M: Compressor's engine

thM: Motor safety thermostat

DGT: Discharge gas thermostat

MPM: Motor Protection Module

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