



SPECIFICATIONS OF COMPRESSOR

Model No: C-SBS120H38Q

Output : 3.5 HP



Temporary

DALIAN SANYO COMPRESSOR Co.,Ltd.

06-May-09

GENERAL SPECIFICATIONS

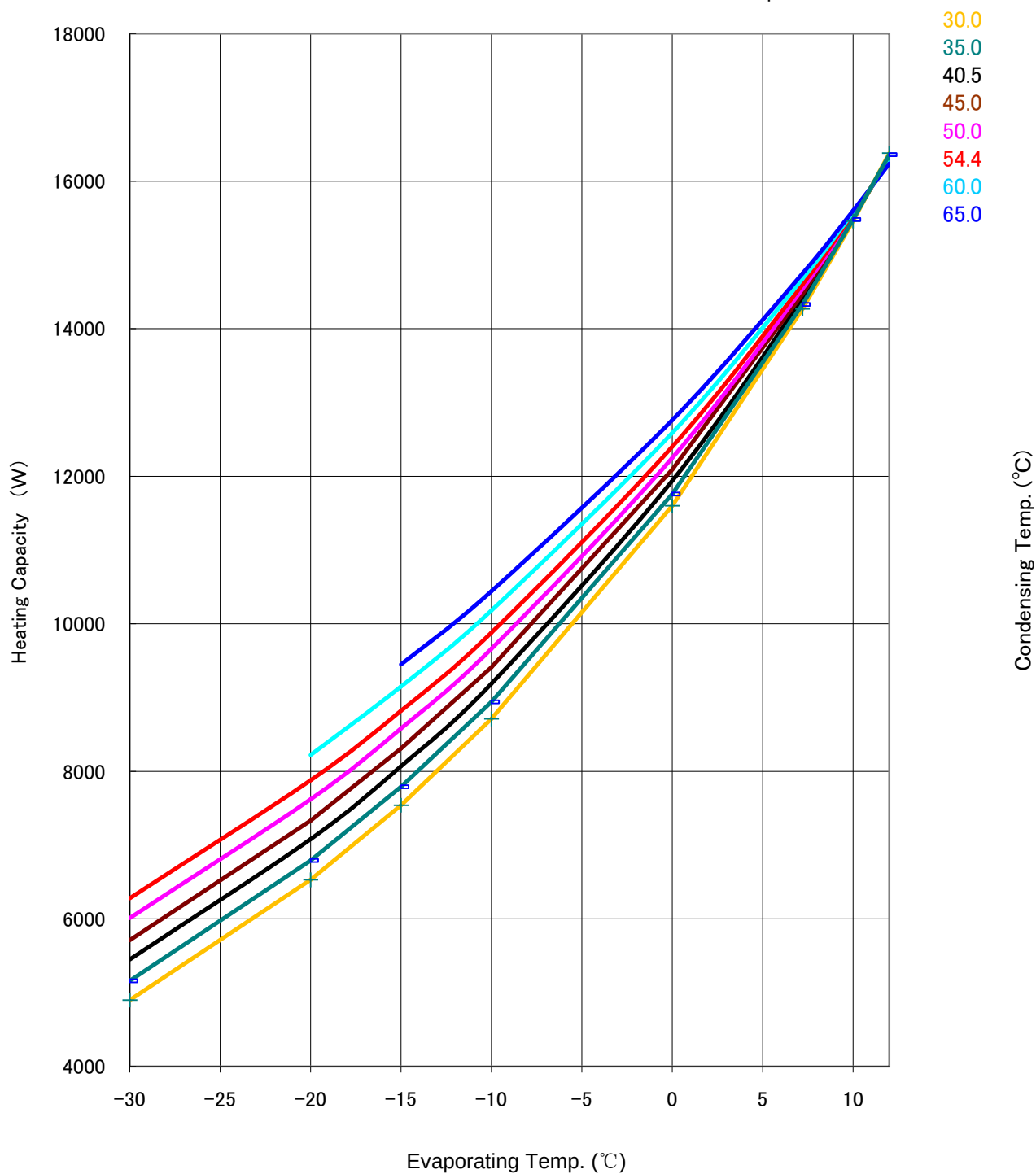
Model No:		C-SBS120H38Q
Application		
Evaporating Temp Range	(°C)	-30.0 ~ 15.0
Refrigerant	R407C	
Compressor Cooling	Gas Injection	
Rated Performance		
Heating Capacity	(W)	14600
Input	(W)	3600
Current	(A)	6.6
Revolution	(min ⁻¹)	2918
Sound Level	(dB(A))	
Rating Conditions		
Power Source	3-PH 50Hz 380V	
Evaporating Temp	(°C)	7.2
Condensing Temp	(°C)	54.4
Suction Gas Temp	(°C)	18.3
Liquid Temp	(°C)	50.4
Ambient Temp	(°C)	35
Test Conditions are Mid point.		
Measuring Point of Sound Level		
Distance from the Compressor	(m)	1.0
Compressor		
Design	Hermetic Scroll	
Displacement	(cm3)	55.7
Suction Line Connection	(Φ mm OD)	22.22
Discharge Line Connection	(Φ mm OD)	12.7
Oil	(ml)	1700 (FV68S)
Mass(Incl.Oil)	(kg)	42
Motor		
Type	3-PH Induction Motor(3IR)	
Pole	2	
Rated Power Source	3-PH 50Hz 380-415V	
Voltage Range	(V)	342~456
Starting Current	(A)	66

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PERFORMANCE CURVE

Code No.	C-SBS120H38Q
Power Source	3-PH 50Hz 380V
Condensing Temp.(°C)	30, 35, 40.5, 45, 50, 54.4, 60, 65
Suction Gas Superheat(K)	11.1
Sub Cooled(K)	4
Compressor Cooling	Gas Injection
Refrigerant	R407C

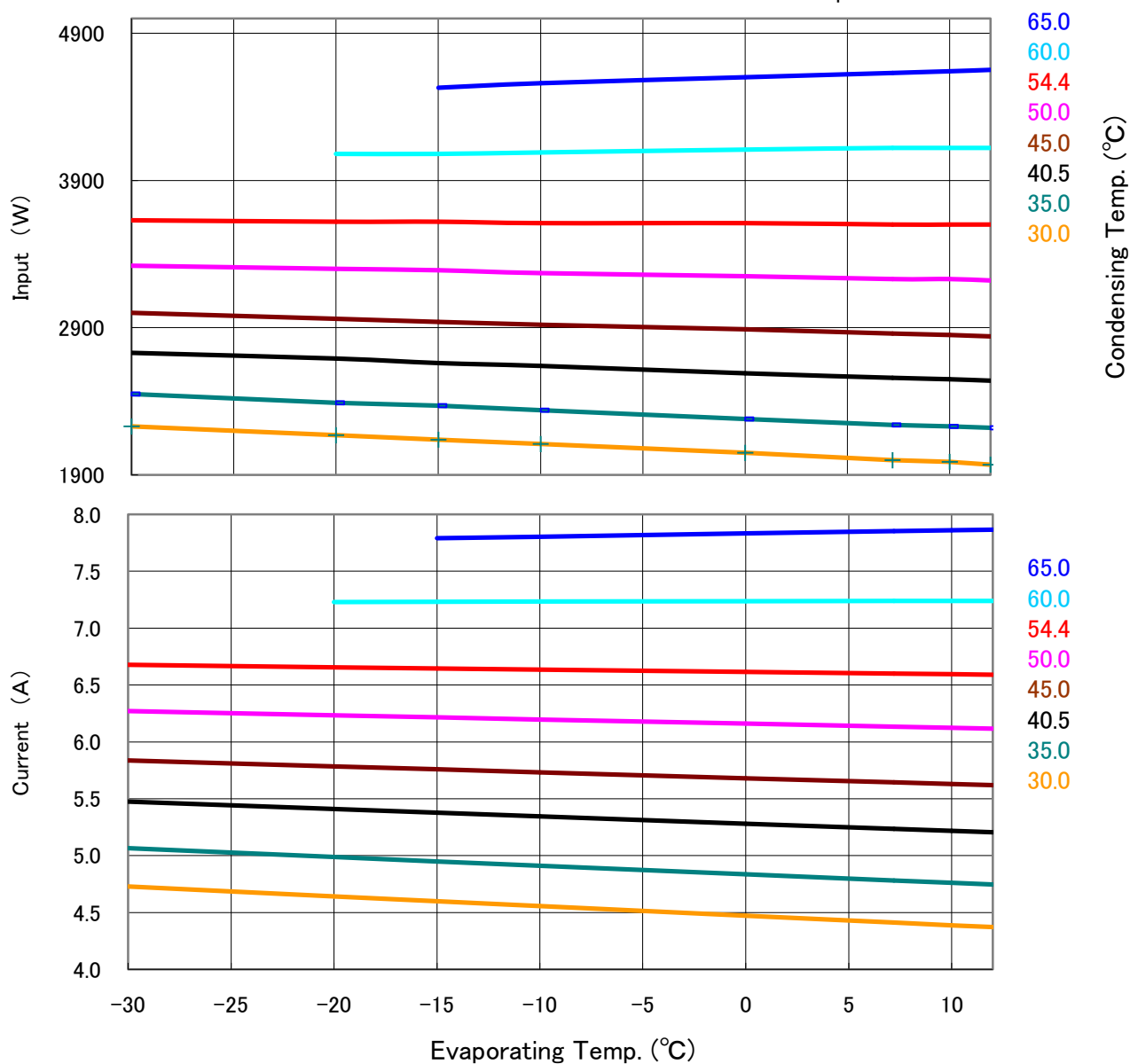
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PERFORMANCE DATA

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Refrigerant	R407C

Test Conditions are Mid point.

Heating Capacity (W)

		Evaporating Temp. (°C)							
		-30	-20	-15	-10	0	7.2	10	12
Condensing Temp. (°C)	30	4,900	6,530	7,540	8,710	11,600	14,270	15,460	16,380
	35	5,160	6,790	7,790	8,940	11,760	14,330	15,480	16,360
	40.5	5,450	7,080	8,070	9,190	11,940	14,410	15,500	16,330
	45.0	5,710	7,330	8,310	9,410	12,090	14,470	15,520	16,320
	50.0	6,010	7,620	8,580	9,660	12,250	14,540	15,540	16,300
	54.4	6,280	7,880	8,820	9,880	12,400	14,600	15,560	16,280
	60.0		8,220	9,150	10,180	12,590	14,680	15,580	16,260
	65.0			9,450	10,440	12,760	14,750	15,600	16,240

Input (W)

		Evaporating Temp. (°C)							
		-30	-20	-15	-10	0	7.2	10	12
Condensing Temp. (°C)	30	2,230	2,170	2,140	2,110	2,050	2,000	1,990	1,970
	35	2,450	2,390	2,370	2,340	2,280	2,240	2,230	2,220
	40.5	2,730	2,690	2,660	2,640	2,590	2,560	2,550	2,540
	45.0	3,000	2,960	2,940	2,920	2,890	2,860	2,850	2,840
	50.0	3,320	3,300	3,290	3,270	3,250	3,230	3,230	3,220
	54.4	3,630	3,620	3,620	3,610	3,610	3,600	3,600	3,600
	60.0		4,080	4,080	4,090	4,110	4,120	4,120	4,120
	65.0			4,530	4,560	4,600	4,630	4,640	4,650

Current (A)

		Evaporating Temp. (°C)							
		-30	-20	-15	-10	0	7.2	10	12
Condensing Temp. (°C)	30	4.7	4.6	4.6	4.6	4.5	4.4	4.4	4.4
	35	5.1	5.0	4.9	4.9	4.8	4.8	4.8	4.7
	40.5	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.2
	45.0	5.8	5.8	5.8	5.7	5.7	5.6	5.6	5.6
	50.0	6.3	6.2	6.2	6.2	6.2	6.1	6.1	6.1
	54.4	6.7	6.7	6.6	6.6	6.6	6.6	6.6	6.6
	60.0		7.2	7.2	7.2	7.2	7.2	7.2	7.2
	65.0			7.8	7.8	7.8	7.9	7.9	7.9

MassFlow(kg/h)

		Evaporating Temp. (°C)							
		-30	-20	-15	-10	0	7.2	10	12
Condensing Temp. (°C)	30	95.2	120.1	139.0	183.1	216.2	239.1	263.3	281.4
	35	96.4	120.6	139.0	182.0	214.6	237.1	260.9	278.8
	40.5	97.5	121.0	138.9	181.2	213.3	235.4	259.0	276.6
	45.0	98.6	121.4	138.8	180.2	211.8	233.6	256.8	274.3
	50.0	99.7	121.7	138.8	179.4	210.4	232.0	255.0	272.3
	54.4	101.1	122.2	138.7	178.2	208.7	230.0	252.6	269.7
	60.0		122.6	138.5	177.2	207.2	228.1	250.6	267.5
	65.0			138.4	176.5	206.2	227.0	249.3	266.2

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		Evaporating Temp. (°C)							
		-30	-20	-15	-10	0	7.2	10	12
Condensing Temp. (°C)	30	2.20	3.01	3.52	4.13	5.66	7.14	7.77	8.31
	35	2.11	2.84	3.29	3.82	5.16	6.40	6.94	7.37
	40.5	2.00	2.63	3.03	3.48	4.61	5.63	6.08	6.43
	45.0	1.90	2.48	2.83	3.22	4.18	5.06	5.45	5.75
	50.0	1.81	2.31	2.61	2.95	3.77	4.50	4.81	5.06
	54.4	1.73	2.18	2.44	2.74	3.43	4.06	4.32	4.52
	60.0		2.01	2.24	2.49	3.06	3.56	3.78	3.95
	65.0			2.09	2.29	2.77	3.19	3.36	3.49

Coefficients of Polynomial Formula

	Heating Capacity (W)	Input (W)	Current (A)	MassFlow (kg/h)
C1	1.082728E+04	1.453170E+03	3.003556E+00	2.360479E+02
C2	3.920646E+02	-2.837457E+00	-8.470396E-03	6.929407E+00
C3	2.477067E+01	-4.426806E+00	2.756756E-02	-7.555019E-01
C4	5.826763E+00	-8.447092E-03	7.994833E-06	3.318743E-03
C5	-1.762270E+00	-2.938840E-01	-1.411419E-04	-8.310962E-02
C6	7.055314E-02	8.097865E-01	7.148352E-04	4.985669E-03
C7	2.668766E-02	5.099385E-05	-9.252157E-08	-1.400290E-03
C8	-4.455882E-02	2.285141E-04	-1.874072E-07	-5.950565E-04
C9	-4.910998E-03	6.125197E-03	4.779484E-06	5.924018E-04
C10	4.747737E-08	6.898865E-08	1.163404E-10	-2.262064E-09

Note: The polynomial coefficients subject to change without notice.

$$X = C1 + C2*(S) + C3*D + C4*(S^2) + C5*(S*D) + C6*(D^2) + C7*(S^3) + C8*(D*S^2) + C9*(S*D^2) + C10*(D^3)$$

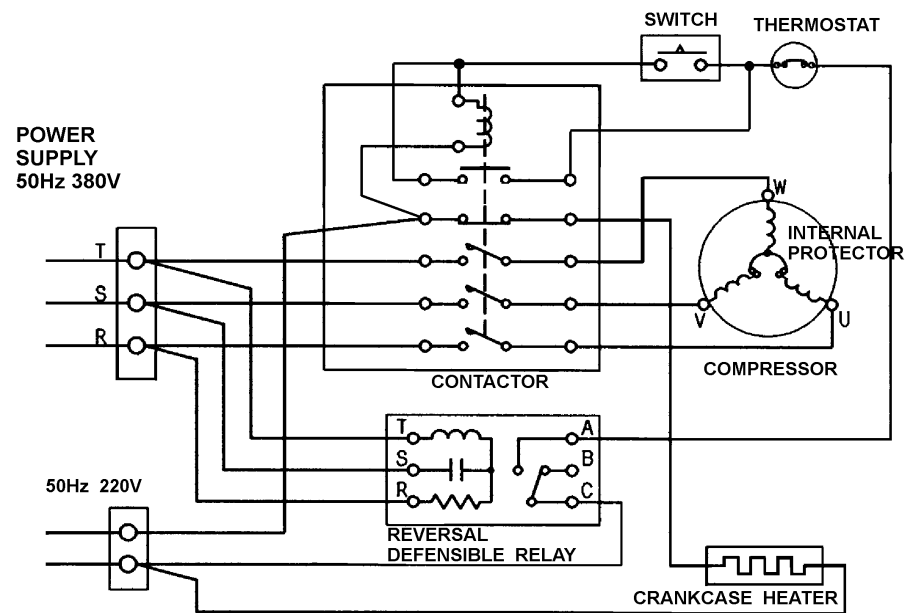
X—CAPACITY(W) OR POWER(W) OR CURRENT(A)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

WIRING DIAGRAM

C-SB Series 3 phase
2.6-4.5kw
European & Chinese
power supply
specifications
models



Operating Envelope

Suction Gas Superheat: 11.1K
Refrigerant: R407C

