

SPECIFICATIONS OF COMPRESSOR

Model No: C-SBS120H38A

Output : 3.5 HP



Temporary

Panasonic Appliances Compressor (Dalian) Co.,Ltd.

19/Jul/19

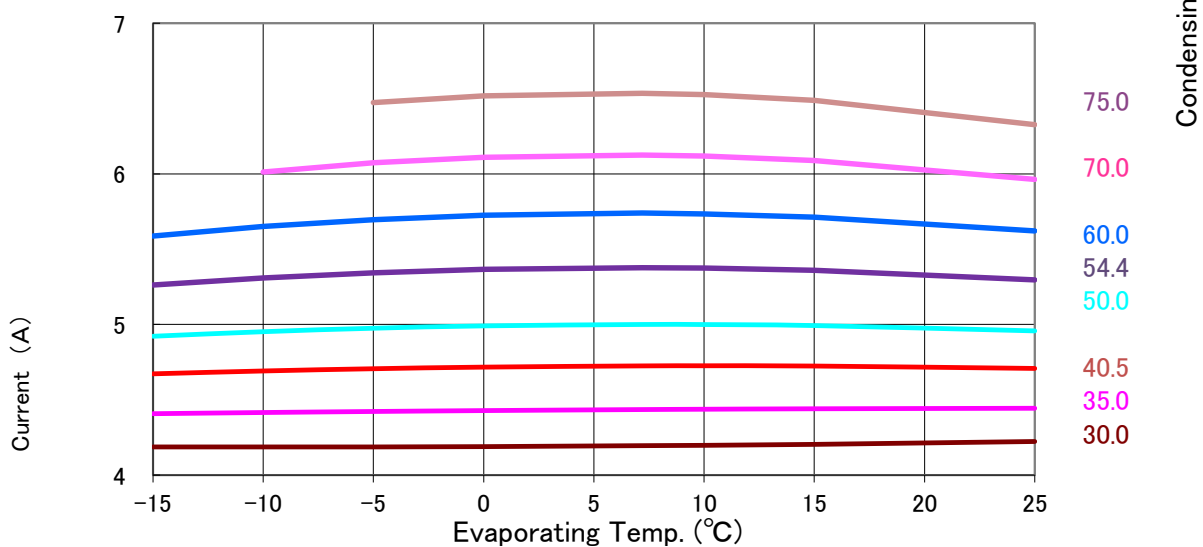
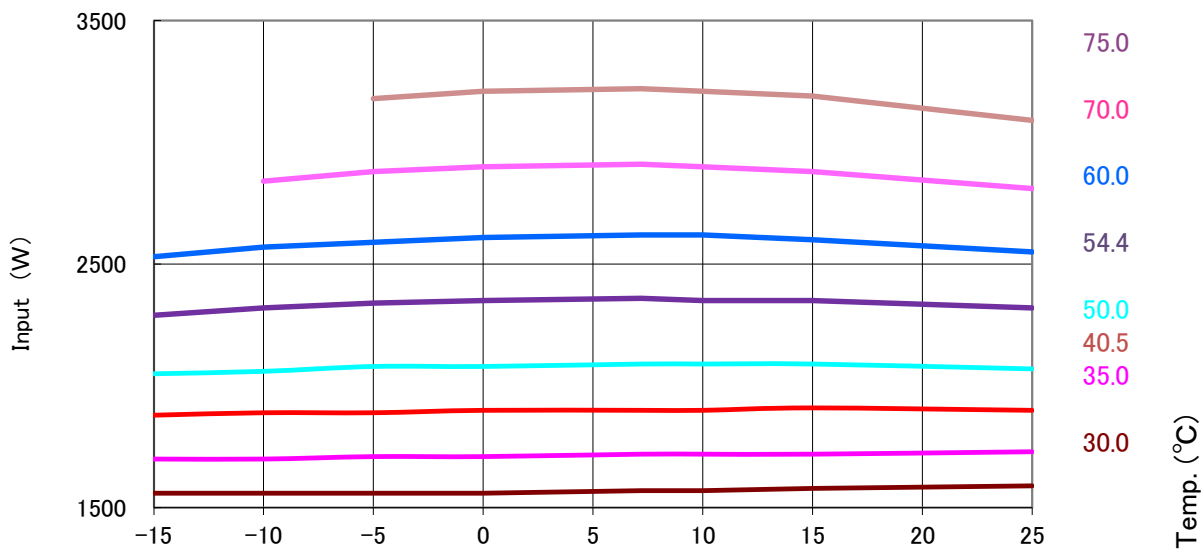
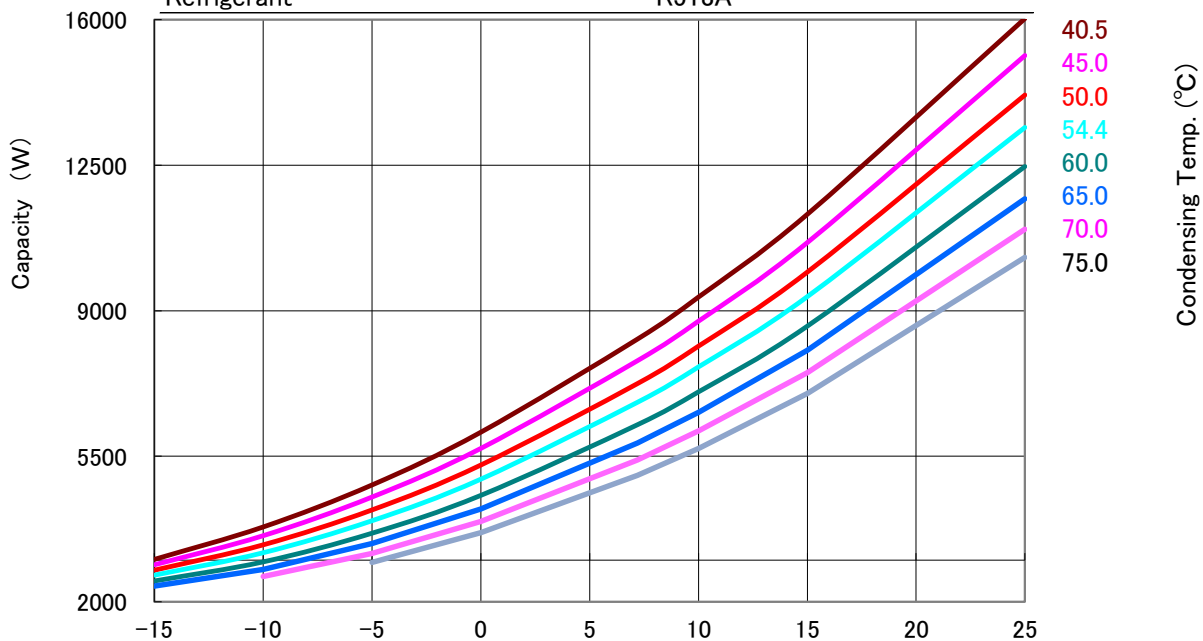
GENERAL SPECIFICATIONS

Model No:	C-SBS120H38A		
Application			
Evaporating Temp Range	(°C)	-15 ~ 25	
Refrigerant		R513A	
Compressor Cooling		Natural Cooling	
Rated Performance			
Capacity	(W)	6800/8470	
Input	(W)	2090/2570	
Current	(A)	4.5/ 4.5	
Revolution	(min ⁻¹)	2950 / 3450	
Sound Level	(dB(A))	62max / 67max	
Rating Conditions			
Power Source		3-PH 50Hz 380V / 60Hz 440V	
Evaporating Temp	(°C)	7.2	
Condensing Temp	(°C)	54.4	
Suction Gas Temp	(°C)	18.3	
Liquid Temp	(°C)	46.1	
Ambient Temp	(°C)	35.0	
Measuring Point of Sound Level			
Distance from the Compressor	(m)	1.0	
Compressor			
Design		Hermetic Scroll	
Displacement	(cm ³)	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)	35	
Motor			
Type		3-PH Induction Motor(3IR)	
Pole		2	
Rated Power Source		3-PH 50Hz 380-415V / 60Hz 440-460V	
Voltage Range	(V)	342 ~ 456 / 396 ~ 506	
Starting Current	(A)	-	

Panasonic Appliances Compressor (Dalian) Co.,Ltd.

PERFORMANCE CURVE

Code No.	C-SBS120H38A
Power Source	3-PH 50Hz 380-415V
Condensing Temp.(°C)	40.5、45、50、54.4、60、65、70、75
Super Heating (K)	11.1
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R513A



PERFORMANCE DATA

Code No.	C-SBS120H38A
Power Source	3-PH 50Hz 380-415V
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Super Heating (K)	11.1
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R513A

Capacity (W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	3,020	3,800	4,810	6,080	8,320	9,330	11,320	16,030
	45.0	2,890	3,590	4,520	5,690	7,800	8,750	10,640	15,140
	50.0	2,760	3,370	4,210	5,290	7,250	8,150	9,930	14,190
	54.4	2,640	3,180	3,950	4,950	6,800	7,650	9,340	13,410
	60.0	2,500	2,960	3,650	4,560	6,260	7,050	8,630	12,470
	65.0	2,380	2,780	3,400	4,230	5,820	6,560	8,050	11,690
	70.0		2,610	3,160	3,930	5,410	6,110	7,510	10,960
	75.0			2,950	3,660	5,040	5,690	7,010	10,280

Input (W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	1,560	1,560	1,560	1,560	1,570	1,570	1,580	1,590
	45.0	1,700	1,700	1,710	1,710	1,720	1,720	1,720	1,730
	50.0	1,880	1,890	1,890	1,900	1,900	1,900	1,910	1,900
	54.4	2,050	2,060	2,080	2,080	2,090	2,090	2,090	2,070
	60.0	2,290	2,320	2,340	2,350	2,360	2,350	2,350	2,320
	65.0	2,530	2,570	2,590	2,610	2,620	2,620	2,600	2,550
	70.0		2,840	2,880	2,900	2,910	2,900	2,880	2,810
	75.0			3,180	3,210	3,220	3,210	3,190	3,090

Current (A)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	45.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	50.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
	54.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	60.0	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.8
	65.0	5.1	5.1	5.2	5.2	5.2	5.2	5.2	5.1
	70.0		5.5	5.6	5.6	5.6	5.6	5.6	5.5
	75.0			6.0	6.0	6.0	6.0	6.0	5.8

Mass Flow(kg/H)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	82	100	121	148	196	219	266	393
	45.0	83	100	122	148	195	218	264	389
	50.0	83	101	122	148	195	217	262	385
	54.4	83	101	122	148	194	216	261	381
	60.0	84	101	122	147	193	215	259	377
	65.0	84	102	122	147	193	214	257	373
	70.0		102	123	147	192	213	255	369
	75.0			123	147	191	212	254	365

COP(W/W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	1.94	2.44	3.08	3.90	5.30	5.94	7.16	10.08
	45.0	1.70	2.11	2.64	3.33	4.53	5.09	6.19	8.75
	50.0	1.47	1.78	2.23	2.78	3.82	4.29	5.20	7.47
	54.4	1.29	1.54	1.90	2.38	3.25	3.66	4.47	6.48
	60.0	1.09	1.28	1.56	1.94	2.65	3.00	3.67	5.38
	65.0	0.94	1.08	1.31	1.62	2.22	2.50	3.10	4.58
	70.0		0.92	1.10	1.36	1.86	2.11	2.61	3.90
	75.0			0.93	1.14	1.57	1.77	2.20	3.33

Coefficients of Polynomial Formula

380V-50Hz	Capacity (W)	Input (W)	Current (A)	Mass Flow(kg/H)
C1	1.044129E+04	1.080150E+03	2.343128E+00	1.484046E+02
C2	4.882644E+02	1.593343E+00	-4.110473E-04	6.497396E+00
C3	-1.280766E+02	-7.496291E+00	1.473759E-02	-3.543200E-02
C4	5.705228E+00	4.523150E-01	6.879682E-04	1.455916E-01
C5	-6.252759E+00	-8.043677E-02	-4.993263E-05	-1.983036E-02
C6	5.007537E-01	4.779036E-01	4.555706E-04	2.897106E-04
C7	-3.931903E-04	-1.057834E-03	-6.398670E-07	1.656180E-03
C8	-2.058432E-02	-9.979099E-03	-1.579347E-05	-6.377525E-04
C9	2.539484E-02	1.451604E-03	1.895316E-06	4.644865E-05
C10	1.200765E-09	1.078428E-09	8.021361E-13	-1.272358E-10

Note: The polynomial coefficients subject to change without notice.

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

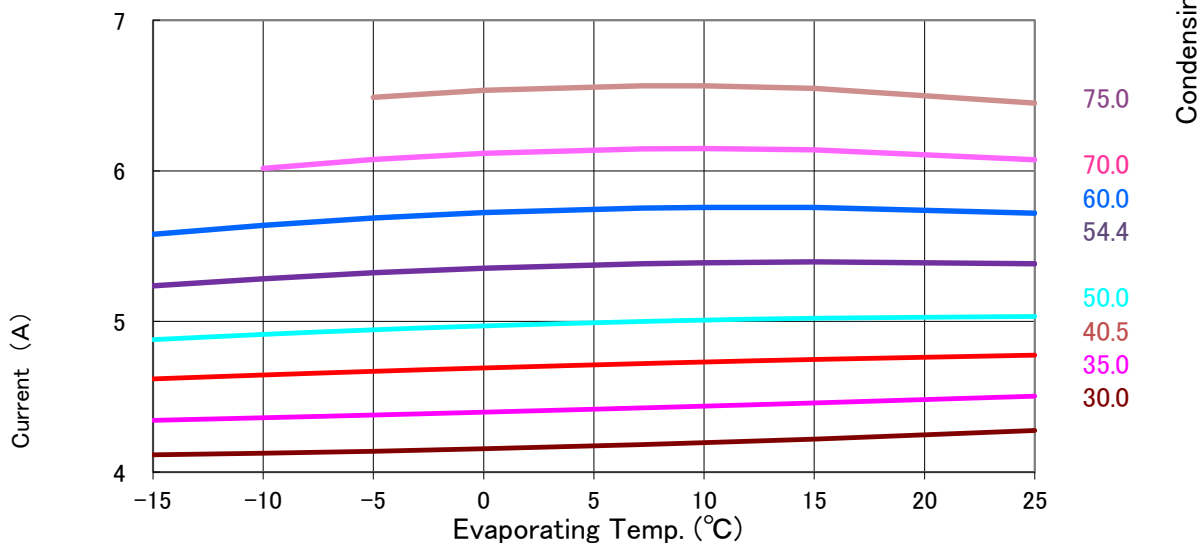
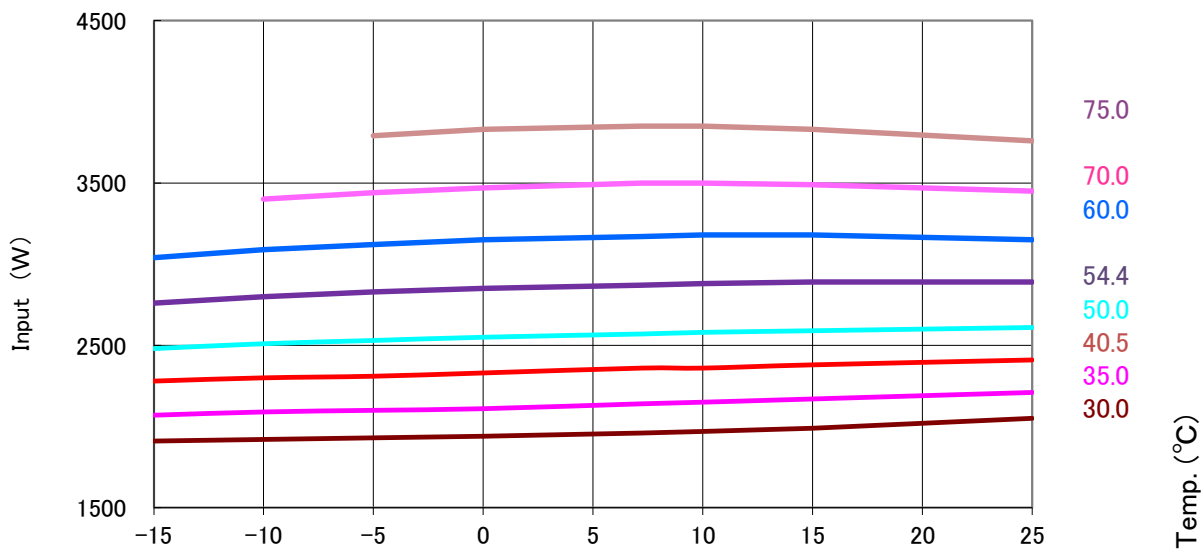
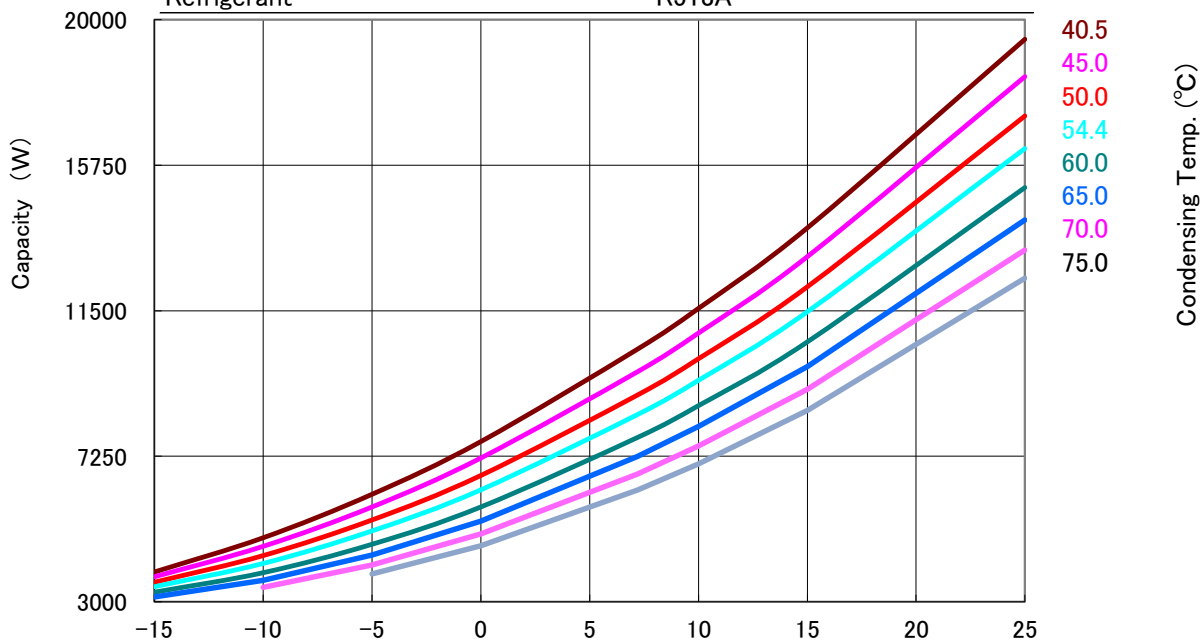
X—CAPACITY(W) OR POWER(W) OR CURRENT(A)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

PERFORMANCE CURVE

Code No.	C-SBS120H38A
Power Source	3-PH 60Hz 440-460V
Condensing Temp.(°C)	40.5、45、50、54.4、60、65、70、75
Super Heating (K)	11.1
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R513A



PERFORMANCE DATA

Code No.	C-SBS120H38A
Power Source	3-PH 60Hz 440-460V
Condensing Temp.(°C)	40.5、45、50、54.4、60、65、70、75
Super Heating (K)	11.1
Sub Cooled(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R513A

Capacity (W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	3,870	4,870	6,140	7,680	10,380	11,570	13,920	19,430
	45.0	3,730	4,620	5,770	7,200	9,720	10,850	13,080	18,340
	50.0	3,570	4,350	5,390	6,690	9,040	10,100	12,200	17,190
	54.4	3,440	4,120	5,070	6,270	8,470	9,470	11,470	16,240
	60.0	3,280	3,850	4,680	5,770	7,800	8,730	10,590	15,100
	65.0	3,140	3,630	4,370	5,360	7,240	8,120	9,870	14,150
	70.0		3,420	4,080	4,980	6,730	7,550	9,210	13,270
	75.0			3,810	4,640	6,260	7,030	8,590	12,450

Input (W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	1,910	1,920	1,930	1,940	1,960	1,970	1,990	2,050
	45.0	2,070	2,090	2,100	2,110	2,140	2,150	2,170	2,210
	50.0	2,280	2,300	2,310	2,330	2,360	2,360	2,380	2,410
	54.4	2,480	2,510	2,530	2,550	2,570	2,580	2,590	2,610
	60.0	2,760	2,800	2,830	2,850	2,870	2,880	2,890	2,890
	65.0	3,040	3,090	3,120	3,150	3,170	3,180	3,180	3,150
	70.0		3,400	3,440	3,470	3,500	3,500	3,490	3,450
	75.0			3,790	3,830	3,850	3,850	3,830	3,760

Current (A)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.8
	45.0	3.8	3.9	3.9	3.9	3.9	3.9	4.0	4.0
	50.0	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.3
	54.4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5
	60.0	4.7	4.8	4.8	4.9	4.9	4.9	4.9	4.9
	65.0	5.1	5.1	5.2	5.2	5.3	5.3	5.3	5.2
	70.0		5.5	5.6	5.6	5.6	5.6	5.6	5.6
	75.0			6.0	6.0	6.1	6.1	6.0	5.9

Mass Flow(kg/H)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	107	129	155	188	246	273	330	480
	45.0	105	127	154	187	246	274	332	486
	50.0	103	126	153	186	246	275	334	493
	54.4	102	124	152	185	246	275	336	499
	60.0	100	122	150	184	246	276	338	507
	65.0	98	121	148	183	246	276	340	514
	70.0		119	147	182	246	277	342	521
	75.0			146	180	246	277	344	528

COP(W/W)

		Evaporating Temp. (°C)							
		-15	-10	-5	0	7.2	10	15	25
Condensing Temp. (°C)	40.5	2.03	2.54	3.18	3.96	5.30	5.87	6.99	9.48
	45.0	1.80	2.21	2.75	3.41	4.54	5.05	6.03	8.30
	50.0	1.57	1.89	2.33	2.87	3.83	4.28	5.13	7.13
	54.4	1.39	1.64	2.00	2.46	3.30	3.67	4.43	6.22
	60.0	1.19	1.38	1.65	2.02	2.72	3.03	3.66	5.22
	65.0	1.03	1.17	1.40	1.70	2.28	2.55	3.10	4.49
	70.0		1.01	1.19	1.44	1.92	2.16	2.64	3.85
	75.0			1.01	1.21	1.63	1.83	2.24	3.31

Coefficients of Polynomial Formula

440V-60Hz	Capacity (W)	Input (W)	Current (A)	Mass Flow(kg/H)
C1	1.315391E+04	1.285104E+03	2.333753E+00	1.961169E+02
C2	6.005071E+02	-5.050907E-01	4.278546E-04	5.840481E+00
C3	-1.603845E+02	-4.604375E+00	1.301687E-02	-2.131223E-01
C4	5.927410E+00	4.504503E-01	5.763953E-04	9.483082E-02
C5	-7.827808E+00	7.619079E-02	5.873733E-05	3.030876E-02
C6	6.232624E-01	5.118639E-01	4.832952E-04	1.514785E-05
C7	-3.005441E-04	5.274244E-04	-2.004426E-07	2.130110E-03
C8	-1.273354E-02	-9.523153E-03	-1.251779E-05	1.043390E-03
C9	3.140666E-02	-3.771925E-06	4.028811E-07	-5.713929E-05
C10	5.351262E-09	-1.246796E-09	3.692315E-12	1.746927E-10

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