Technical Datasheet

2/25/2022

Model: HGA5512CXA

Product Description

Type: Rotary Compressors
Application: HBP/AC - Air Conditioning
ProductDescription: R-407C
Voltage/Frequency: 115V ~ 60Hz 100V ~ 50Hz
Version: N/A

Product Specifications

Performance

		Refrigeration Capacity			Input Power	(E) Efficiency							
Condition	Test Voltage	(R) Btu/h	(R) kcal/h	(R) W	(I) W	(E) Btu/Wh	(E) kcal/Wh	W/W	EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
EN12900	115V ~ 60HZ	10000	2520	2930	1026	9.75	2.46	2.86	5°C (41°F)	50°C (122°F)	32°C (90°F)	15°C (59°F)	50°C (122°F)
EN12900	100V ~ 50HZ	8065	2032	2363	827	9.75	2.46	2.86	5°C (41°F)	50°C (122°F)	32°C (90°F)	15°C (59°F)	50°C (122°F)

General

Evaporating Temp. Range: -15°C to 15°C (5°F to 59°F)
Motor Torque: Low Start Torque (LST)
Compressor Cooling: Fan

Mechanical

Weight: 12
Weight Unit of Measure: KG
Displacement (cc): 16.12
Oil Type: Synthetic Alkylate
Viscosity (cSt): 53
Oil Charge (cc): 290

Electrical

Voltage Range (50 Hz): 90-110
Voltage Range (60 Hz): 103-127
Locked Rotor Amps (LRA): 58
Rated Load Amps (RLA 50 Hz): 10.2
Rated Load Amps (RLA 60 Hz): 10.2
Max. Continuous Current (MCC in Amps): 0

Motor Resistance (Ohm) - Main:	.645
Motor Resistance (Ohm) - Start:	4.11
MotorType:	CSR
Overload Type:	
Relay Type:	

Agency Approval

CE Listed, UL Recognized

Tecumseh

Performance Data Sheet

HGA5512CXA

General

Model	HGA5512CXA	**Unit of Measure**	Celsius
Condition	EN12900(R-407C)	**Voltage/Frequency**	100V~50HZ
RETURN GAS		**MotorType**	CSR

Performance Information

EVAP TEMP (℃)		Condensing Temperature (℃)							
		30	35	40	45	50	55	60	65
-25	Watts (Capacity)	804	756						
	Watts (Power)	472	489						
	Amps	7.39	7.45						
-23.3	Watts (Capacity)	875	819	778					
	Watts (Power)	484	507	518					
	Amps	7.46	7.54	7.70					
-20	Watts (Capacity)	1030	962	901	859	848			
	Watts (Power)	505	535	557	566	558			
	Amps	7.59	7.71	7.90	8.16	8.50			
-15	Watts (Capacity)	1320	1230	1140	1060	1010	977		
	Watts (Power)	529	568	604	631	646	643		
	Amps	7.76	7.92	8.16	8.48	8.87	9.34		
-10	Watts (Capacity)	1650	1560	1450	1340	1240	1160	1110	
	Watts (Power)	545	590	637	679	714	735	740	
	Amps	7.89	8.11	8.40	8.76	9.20	9.72	10.3	
-6.7	Watts (Capacity)	1890	1800	1690	1560	1440	1330	1240	1190
	Watts (Power)	552	601	652	703	749	785	806	809
	Amps	7.96	8.20	8.53	8.93	9.40	9.96	10.6	11.3
-5	Watts (Capacity)	2030	1940	1820	1690	1550	1430	1320	1240
	Watts (Power)	555	605	659	713	764	807	837	849
	Amps	7.98	8.25	8.59	9.01	9.50	10.1	10.7	11.4
0	Watts (Capacity)	2440	2360	2240	2090	1930	1770	1610	1470
	Watts (Power)	563	613	672	736	800	861	913	952
	Amps	8.04	8.36	8.75	9.22	9.76	10.4	11.1	11.8
5	Watts (Capacity)	2890	2820	2710	2550	2370	2180	1980	1790
	Watts (Power)	571	618	679	749	824	899	971	1030
	Amps	8.06	8.43	8.87	9.39	9.98	10.7	11.4	12.2
7.2	Watts (Capacity)	3100	3040	2930	2770	2580	2380	2160	1950
	Watts (Power)	575	620	681	753	831	912	991	1060
	Amps	8.06	8.44	8.91	9.45	10.1	10.8	11.5	12.4
10	Watts (Capacity)	3370	3330	3220	3060	2870	2650	2420	2180
	Watts (Power)	580	622	682	755	838	925	1010	1100
	Amps	8.04	8.46	8.95	9.52	10.2	10.9	11.7	12.6
15	Watts (Capacity)	3880	3860	3770	3620	3420	3180	2920	2650
	Watts (Power)	594	628	684	757	845	941	1040	1140

	Amps	7.99	8.45	9.00	9.62	10.3	11.1	11.9	12.9

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.550000E+03	7.040000E+02	7.740000E+00	
C2	2.630000E+01	2.090000E+01	-5.340000E-02	
C3	8.560000E+01	-2.340000E+01	-3.560000E-02	
C4	-1.960000E-01	3.500000E-01	-7.420000E-04	
C5	3.380000E+00	-1.170000E+00	2.030000E-03	
C6	-2.310000E+00	7.990000E-01	1.520000E-03	
C7	-7.180000E-03	3.230000E-03	0.000000E+00	
C8	2.900000E-02	-1.190000E-02	0.000000E+00	
C9	-4.530000E-02	1.740000E-02	0.000000E+00	
C10	1.500000E-02	-5.850000E-03	0.000000E+00	

Value = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3

Te = Evaporator Temperature
Tc = Condensing Temperature

Tecumseh

Performance Data Sheet

HGA5512CXA

General

Model	HGA5512CXA	**Unit of Measure**	Celsius
Condition	EN12900(R-407C)	**Voltage/Frequency**	115V~60HZ
RETURN GAS		**MotorType**	CSR

Performance Information

EVAP TEMP (°C)		Condensing Temperature (°C)							
		30	35	40	45	50	55	60	65
-25	Watts (Capacity)	994	931						
	Watts (Power)	578	598						
	Amps	7.97	8.04						
-23.3	Watts (Capacity)	1080	1010	955					
	Watts (Power)	594	620	632					
	Amps	8.05	8.14	8.30					
-20	Watts (Capacity)	1280	1190	1110	1050	1030			
	Watts (Power)	621	657	683	693	682			
	Amps	8.19	8.31	8.52	8.80	9.17			
-15	Watts (Capacity)	1630	1520	1410	1310	1230	1190		
	Watts (Power)	652	700	743	776	794	790		
	Amps	8.37	8.55	8.81	9.15	9.57	10.1		
-10	Watts (Capacity)	2040	1930	1790	1650	1530	1420	1350	
	Watts (Power)	673	729	786	839	881	907	913	
	Amps	8.51	8.74	9.06	9.45	9.93	10.5	11.1	
-6.7	Watts (Capacity)	2350	2230	2080	1930	1770	1630	1510	1440
	Watts (Power)	683	743	807	870	926	971	997	1000
	Amps	8.58	8.85	9.20	9.63	10.1	10.7	11.4	12.2
-5	Watts (Capacity)	2510	2400	2250	2080	1910	1750	1610	1520
	Watts (Power)	688	749	816	884	947	999	1040	1050
	Amps	8.61	8.90	9.27	9.72	10.3	10.9	11.6	12.3
0	Watts (Capacity)	3030	2920	2770	2580	2380	2170	1980	1800
	Watts (Power)	699	761	835	914	994	1070	1130	1180
	Amps	8.67	9.02	9.44	9.94	10.5	11.2	12.0	12.8
5	Watts (Capacity)	3590	3500	3350	3150	2930	2680	2430	2190
	Watts (Power)	710	769	845	933	1030	1120	1210	1290
	Amps	8.69	9.09	9.57	10.1	10.8	11.5	12.3	13.2
7.2	Watts (Capacity)	3850	3770	3620	3430	3190	2930	2660	2400
	Watts (Power)	716	772	849	938	1040	1140	1240	1330
	Amps	8.69	9.11	9.61	10.2	10.9	11.6	12.4	13.4
10	Watts (Capacity)	4180	4120	3980	3790	3550	3270	2980	2680
	Watts (Power)	724	776	852	943	1050	1160	1270	1370
	Amps	8.68	9.13	9.66	10.3	11.0	11.7	12.6	13.6
15	Watts (Capacity)	4810	4780	4670	4480	4230	3940	3610	3260
	Watts (Power)	743	785	856	948	1060	1180	1310	1430

	Amps	8.62	9.12	9.71	10.4	11.1	12.0	12.9	13.9

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	1.930000E+03	8.730000E+02	8.350000E+00	
C2	3.270000E+01	2.590000E+01	-5.760000E-02	
C3	1.060000E+02	-2.900000E+01	-3.840000E-02	
C4	-2.430000E-01	4.350000E-01	-8.000000E-04	
C5	4.190000E+00	-1.440000E+00	2.190000E-03	
C6	-2.870000E+00	9.910000E-01	1.640000E-03	
C7	-8.900000E-03	4.000000E-03	0.000000E+00	
C8	3.600000E-02	-1.480000E-02	0.000000E+00	
C9	-5.610000E-02	2.160000E-02	0.000000E+00	
C10	1.860000E-02	-7.250000E-03	0.000000E+00	

Value = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3

Te = Evaporator Temperature
Tc = Condensing Temperature