

TPA1413YXA

General

Model	TPA1413YXA	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-134a)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	32.2°C (90°F) RETURN GAS	MotorType	PTCS_CR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)					
		100	110	120	130	140
-40	Btu/h	530	488			
	Watts	133	133			
	Amps	1.43	1.44			
	Lb/h	6.56	6.05			
-35	Btu/h	622	581	537		
	Watts	144	145	144		
	Amps	1.53	1.53	1.52		
	Lb/h	7.72	7.21	6.66		
-30	Btu/h	740	699	655	600	
	Watts	158	159	158	155	
	Amps	1.64	1.65	1.64	1.62	
	Lb/h	9.19	8.68	8.13	7.45	
-25	Btu/h	884	842	796	740	670
	Watts	173	175	175	173	168
	Amps	1.77	1.78	1.78	1.77	1.73
	Lb/h	11.0	10.5	9.89	9.20	8.32
-20	Btu/h	1050	1010	960	903	830
	Watts	190	192	194	193	189
	Amps	1.90	1.93	1.94	1.93	1.90
	Lb/h	13.1	12.5	11.9	11.2	10.3
-15	Btu/h	1240	1200	1150	1090	1010
	Watts	207	211	214	214	212
	Amps	2.05	2.08	2.10	2.11	2.09
	Lb/h	15.5	14.9	14.3	13.5	12.6
-10	Btu/h	1460	1410	1350	1290	1210
	Watts	226	231	235	237	237
	Amps	2.20	2.25	2.28	2.30	2.30
	Lb/h	18.2	17.6	16.9	16.1	15.1
-5	Btu/h	1700	1640	1580	1510	1430
	Watts	245	251	257	261	263
	Amps	2.36	2.42	2.47	2.50	2.52
	Lb/h	21.2	20.5	19.8	18.9	17.9
0	Btu/h	1960	1900	1830	1760	1670
	Watts	264	272	279	285	290
	Amps	2.53	2.60	2.67	2.72	2.75

	Lb/h	24.5	23.8	22.9	22.0	20.9
5	Btu/h	2240	2170	2100	2020	1920
	Watts	282	292	302	310	317
	Amps	2.69	2.78	2.87	2.94	2.99
	Lb/h	28.1	27.3	26.3	25.3	24.1
10	Btu/h	2550	2470	2390	2300	2200
	Watts	301	312	324	335	345
	Amps	2.85	2.97	3.07	3.16	3.23
	Lb/h	32.0	31.0	30.0	28.9	27.6

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.758562E+03	2.911783E+02	2.034374E+00	4.708201E+01
C2	6.891923E+01	2.756490E+00	3.680034E-03	8.751359E-01
C3	-3.962560E+01	-2.380199E+00	-4.586099E-03	-4.967390E-01
C4	6.217682E-01	-4.175444E-02	-3.937263E-04	8.157826E-03
C5	-1.595508E-01	-1.157945E-02	2.370122E-04	-2.037191E-03
C6	3.166775E-01	3.132505E-02	1.597132E-04	3.967289E-03
C7	-7.854802E-04	-4.190293E-04	-2.846719E-06	-6.590244E-06
C8	-1.870491E-03	3.800314E-04	4.125491E-06	-2.406016E-05
C9	1.464231E-04	2.187232E-04	5.218772E-07	1.856488E-06
C10	-1.001915E-03	-1.028010E-04	-6.469397E-07	-1.254254E-05

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

TPA1413YXA

General

Model	TPA1413YXA	Unit of Measure	Fahrenheit
Condition	ASHRAE (R-513A)	Voltage/Frequency	115V ~ 60HZ
RETURN GAS	32.2°C (90°F) RETURN GAS	MotorType	PTCS_CR

Performance Information

EVAP TEMP (°F)	Condensing Temperature (°F)							
		80	90	100	110	120	130	140
-40	Btu/h	639	586	542	500			
	Watts	134	137	139	139			
	Amps	1.52	1.54	1.55	1.56			
	Lb/h	8.89	8.15	7.53	6.94			
-35	Btu/h	733	681	637	595	549		
	Watts	146	149	151	152	150		
	Amps	1.62	1.64	1.66	1.66	1.65		
	Lb/h	10.2	9.47	8.86	8.28	7.64		
-30	Btu/h	855	802	758	716	670	614	
	Watts	160	163	165	166	165	162	
	Amps	1.73	1.76	1.78	1.79	1.78	1.76	
	Lb/h	11.9	11.2	10.6	9.97	9.33	8.55	
-25	Btu/h	1010	951	905	861	815	758	685
	Watts	175	178	181	183	183	181	175
	Amps	1.86	1.89	1.91	1.93	1.93	1.91	1.87
	Lb/h	14.0	13.3	12.6	12.0	11.4	10.6	9.55
-20	Btu/h	1180	1130	1080	1030	982	924	849
	Watts	191	195	198	201	202	201	198
	Amps	1.99	2.03	2.06	2.09	2.10	2.09	2.06
	Lb/h	16.5	15.7	15.0	14.4	13.7	12.9	11.8
-15	Btu/h	1390	1330	1270	1230	1170	1110	1030
	Watts	208	212	217	220	223	224	222
	Amps	2.13	2.18	2.22	2.26	2.28	2.28	2.26
	Lb/h	19.4	18.5	17.8	17.1	16.4	15.5	14.4
-10	Btu/h	1620	1550	1500	1440	1390	1320	1240
	Watts	225	230	236	241	245	248	248
	Amps	2.27	2.33	2.39	2.44	2.47	2.49	2.49
	Lb/h	22.6	21.7	20.9	20.2	19.4	18.5	17.3
-5	Btu/h	1870	1800	1740	1680	1620	1550	1460
	Watts	243	249	256	262	268	272	275
	Amps	2.41	2.49	2.56	2.62	2.67	2.71	2.72
	Lb/h	26.2	25.2	24.4	23.6	22.7	21.7	20.5
0	Btu/h	2150	2070	2010	1940	1880	1800	1710
	Watts	260	267	275	284	291	298	303
	Amps	2.55	2.65	2.73	2.82	2.89	2.94	2.97

	Lb/h	30.2	29.1	28.2	27.3	26.3	25.2	24.0
5	Btu/h	2460	2370	2300	2220	2150	2070	1970
	Watts	276	285	295	305	315	324	331
	Amps	2.69	2.80	2.91	3.01	3.10	3.18	3.23
	Lb/h	34.5	33.3	32.3	31.3	30.2	29.1	27.7
10	Btu/h	2780	2690	2610	2530	2450	2360	2250
	Watts	292	302	314	326	339	350	360
	Amps	2.82	2.96	3.09	3.21	3.32	3.42	3.50
	Lb/h	39.2	37.9	36.7	35.6	34.5	33.2	31.7

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	3.846475E+03	3.042027E+02	2.202434E+00	5.404214E+01
C2	7.053125E+01	2.879788E+00	3.984042E-03	1.004507E+00
C3	-4.055244E+01	-2.486665E+00	-4.964957E-03	-5.701719E-01
C4	6.363114E-01	-4.362212E-02	-4.262520E-04	9.363797E-03
C5	-1.632827E-01	-1.209740E-02	2.565918E-04	-2.338349E-03
C6	3.240846E-01	3.272622E-02	1.729071E-04	4.553773E-03
C7	-8.038526E-04	-4.377725E-04	-3.081886E-06	-7.564480E-06
C8	-1.914242E-03	3.970302E-04	4.466298E-06	-2.761697E-05
C9	1.498479E-04	2.285067E-04	5.649895E-07	2.130933E-06
C10	-1.025350E-03	-1.073993E-04	-7.003834E-07	-1.439670E-05

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

Model: TPA1413YXA

Product Description

Type:	Reciprocating Compressors
Application:	LBP - Low Back Pressure
Refrigerant:	R-134a/R-513A
Voltage/Frequency:	115V ~ 60Hz 100V ~ 50Hz
Version:	N/A



Product Specifications

Performance

Condition	Test Voltage	Refrigeration Capacity			Input Power (I) W	(E) Efficiency			EVAP TEMP	Condition	AMBIENT TEMP	RETURN GAS	LIQUID TEMP
		(R) Btu/h	(R) kcal/h	(R) W		(E) Btu/Wh	(E) kcal/Wh	W/W					
ASHRAE (R-513A)	115V ~ 60HZ	1320	333	387	248	5.33	1.34	1.56	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)
ASHRAE (R-134a)	115V ~ 60HZ	1230	310	361	226	5.44	1.37	1.6	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)

General

Evaporating Temp. Range:	-34.4°C to -12.2°C (-30°F to 10°F)
Motor Torque:	Low Start Torque (LST)
Compressor Cooling:	Fan

Mechanical

Weight:	30
Weight Unit of Measure:	LB
Displacement (cc):	10.86
Oil Type:	Polyolester
Viscosity (cSt):	32
Oil Charge (cc):	185

Electrical

Voltage Range (50 Hz):	90-110
Voltage Range (60 Hz):	103-127
Locked Rotor Amps (LRA):	20.5
Rated Load Amps (RLA 50 Hz):	0
Rated Load Amps (RLA 60 Hz):	2.19
Max. Continuous Current (MCC in Amps):	0

Motor Resistance (Ohm) - Main:	1.77
Motor Resistance (Ohm) - Start:	3.95
MotorType:	PTCS_CR
Overload Type:	
Relay Type:	

Agency Approval

cURus Recognized