Technical Datasheet

9/09/2020

Model: AE2425Z-FZ1C

Product Description

Type: Reciprocating Compressors
Application: LBP - Low Back Pressure
ProductDescription: R-404A
Voltage/Frequency: 220-240V ~ 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
ASHRAE	220V ~ 50HZ	2250	567	659	507	4.44	1.12	1.3	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)
ASHRAE	240V ~ 50HZ	2250	567	659	534	4.21	1.06	1.23	-23°C (-10°F)	54°C (130°F)	32°C (90°F)	32°C (90°F)	32°C (90°F)

General

Evaporating Temp. Range: -40°C to -10°C (-40°F to 14°F)
Motor Torque: High Start Torque (HST)
Compressor Cooling: Fan

Mechanical

Weight: 11
Weight Unit of Measure: KG
Displacement (cc): 12.01
Oil Type: Polyolester
Viscosity (cSt): 32
Oil Charge (cc): 386.65

Electrical

Voltage Range (50 Hz): 198-253
Voltage Range (60 Hz):
Locked Rotor Amps (LRA): 19.5
Rated Load Amps (RLA 50 Hz): 3.48
Rated Load Amps (RLA 60 Hz): 0
Max. Continuous Current (MCC in Amps): 0
Motor Resistance (Ohm) - Main: 3.66
Motor Resistance (Ohm) - Start: 15.78
MotorType: CSIR
Overload Type:
Relay Type:

Agency Approval

CCC Listed, CE Listed, GOST RUSSIA Listed, GOST UKRAINE Listed, VDE Listed

Tecumseh

Performance Data Sheet

AE2425Z-FZ1C

General

Model	AE2425Z-FZ1C	**Unit of Measure**	Celsius
Condition	ASHRAE (R-404A)	**Voltage/Frequency**	220V~50HZ
RETURN GAS	32.2°C (90°F) RETURN GAS	**MotorType**	CSIR

Performance Information

EVAP TEMP (°C)		Condensing Temperature (°C)						
		30	35	40	45	50	55	60
-40	Btu/h	1030	997	949	896			
	Watts (Power)	304	308	312	314			
	Amps	2.56	2.56	2.56	2.57			
	Lb/h	14.9	14.4	13.7	12.9			
-35	Btu/h	1450	1410	1360	1290	1230		
	Watts (Power)	345	352	358	363	366		
	Amps	2.69	2.69	2.70	2.71	2.72		
	Lb/h	20.9	20.4	19.6	18.7	17.8		
-30	Btu/h	1900	1860	1800	1740	1660	1580	1510
	Watts (Power)	387	396	405	413	420	426	431
	Amps	2.81	2.82	2.84	2.86	2.88	2.90	2.91
	Lb/h	27.6	27.0	26.2	25.2	24.1	22.9	21.8
-25	Btu/h	2410	2370	2310	2240	2150	2060	1970
	Watts (Power)	430	442	454	466	476	487	496
	Amps	2.94	2.97	3.00	3.03	3.07	3.10	3.13
	Lb/h	35.2	34.6	33.7	32.6	31.4	30.0	28.7
-23.3	Btu/h	2600	2560	2500	2420	2340	2240	2150
	Watts (Power)	446	459	472	484	497	509	520
	Amps	2.99	3.02	3.06	3.09	3.14	3.18	3.21
	Lb/h	38.1	37.5	36.6	35.4	34.1	32.7	31.3
-20	Btu/h	3000	2960	2890	2810	2720	2620	2510
	Watts (Power)	477	492	507	523	538	553	568
	Amps	3.09	3.13	3.18	3.23	3.28	3.34	3.39
	Lb/h	44.0	43.4	42.4	41.2	39.8	38.3	36.7
-15	Btu/h	3670	3630	3560	3470	3370	3260	3140
	Watts (Power)	528	547	566	586	606	626	646
	Amps	3.27	3.33	3.39	3.47	3.54	3.62	3.70
	Lb/h	54.2	53.6	52.5	51.2	49.7	48.0	46.2
-10	Btu/h	4440	4400	4330	4240	4130	4010	3880
	Watts (Power)	585	608	632	656	681	707	733
	Amps	3.48	3.56	3.65	3.75	3.86	3.96	4.07
	Lb/h	66.1	65.4	64.3	62.9	61.2	59.4	57.4

COEFFICIENTS	CAPACITY	POWER	CURRENT	MASS FLOW
C1	5.716875E+03	5.651239E+02	3.524714E+00	8.644365E+01
C2	2.058088E+02	1.081684E+01	3.080150E-02	3.293239E+00

C3	5.260695E+01	3.955832E+00	4.483140E-03	8.090162E-01
C4	2.850705E+00	1.549727E-01	7.878746E-04	4.820952E-02
C5	7.118065E-01	1.201560E-01	1.131815E-03	9.058365E-03
C6	-1.218899E+00	4.830968E-02	5.136714E-04	-1.923925E-02
C7	1.952301E-02	1.926449E-03	1.250967E-05	3.360002E-04
C8	1.766602E-03	1.707114E-03	1.616761E-05	1.051580E-05
C9	-1.033602E-02	1.349070E-03	3.594780E-06	-1.509062E-04
C10	5.680571E-03	-1.790070E-04	-2.885371E-06	9.266031E-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