

COMPRESSOR DEFINITION

Designation	EXP160CE-4
Nominal Voltage/Frequency	220-240V/50Hz
Engineering Number	1136000033

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic Reciprocating			
2 Refrigerant	R600a			
3 Nominal voltage and frequency	220-240/50		[V / Hz]	
4 Application type	LBP			
4.1 Evaporating temperature range	-35 ~ -15		[°C]	
5 Motor type	RSIR			
6 Starting torque	LST			
7 Expantion device	.Capillary Tube			
8 Compressor cooling	Minimum Starting Voltage (ABS 0.4Mpa)		Operating voltage range	
	50 Hz	60 Hz	50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	≤185V	-	187V~254V	-
8.2 LBP (43°C Ambient temperature)	≤185V	-	187V~254V	-
8.3 HBP (32°C Ambient temperature)	-	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-	-
9 Maximum condensing temperature				
9.1 Operating	65		[°C]	
9.2 Peak	70		[°C]	
10 Maximum winding temperature	130		[°C]	
11 Noise (ASHRAE LBP)	≤42		dB(A)	
12 Vibration	≤0.65		m/s ²	

B - MECHANICAL DATA

1 Commercial designation	1/4-	[hp]
2 Displacement	10.09	[cm ³]
2.1 Bore	28	[mm]
2.2 Stroke	8.2	[mm]
3 Lubricant charge	160	[ml]
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	mineral oil/ISO 10	
4 Weight (with oil charge)	6.5	[kg]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240V/50Hz/Single Phase	
2 Starting device type	PTC	
2.1 Starting device	QP2-15	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	DRB21N61A1	
6 Start winding resistance	19.1	[Ωat 25°C] +/- 8%
7 Run winding resistance	16.6	[Ω at 25°C] +/- 8%

8 LRA - Locked rotor amperage (50 Hz)	7.0	[A] - Measured according to UL 984
9 FLA - Full load amperage LBP (50 Hz)	1.4	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	-	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Static		Evaporating temperature Condensing temperature		-23.3°C 54.4°C	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
580	154.7	170	131	0.95	1784.3	4.43	1.18	1.3

E - PERFORMANCE – CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		Condensing temperature 35°C				
Evaporating temperature	Cooling capacity +/- 5%			Input power +/- 5%	Electric current +/- 5%	Mass flow +/- 5%	Efficiency EER & COP +/- 7%		
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	342.3	86.3	100.3	84.3	0.83	1059	4.06	1.02	1.19
-30	449.6	113.3	131.8	93.9	0.85	1392.9	4.79	1.21	1.40
-25	580.6	146.3	170.2	104.7	0.87	1800.2	5.55	1.40	1.63
-20	743.4	187.4	217.9	116.6	0.89	2313.2	6.38	1.61	1.87
-15	933.5	235.3	273.6	128.6	0.93	2903.3	7.26	1.83	2.13
-10	1154.6	291.0	338.4	141.9	0.96	3599.6	8.13	2.05	2.38

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		Condensing temperature 45°C				
Evaporating temperature	Cooling capacity +/- 5%			Input power +/- 5%	Electric current +/- 5%	Mass flow +/- 5%	Efficiency EER & COP +/- 7%		
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	305.5	77.0	89.5	85.5	0.83	961	3.57	0.90	1.05
-30	420.0	105.9	123.1	98.6	0.85	1325.3	4.26	1.07	1.25
-25	547.4	138.0	160.4	111.3	0.88	1726.9	4.92	1.24	1.44
-20	702.4	177.0	205.9	125.1	0.92	2219.3	5.62	1.42	1.65
-15	887.7	223.7	260.2	139.9	0.96	2807.9	6.34	1.60	1.86
-10	1100.1	277.3	322.4	155.2	1.00	3485.9	7.09	1.79	2.08

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			Condensing temperature 55°C				
Evaporating temperature	Cooling capacity +/- 5%			Input power +/- 5%	Electric current +/- 5%	Mass flow +/- 5%	Efficiency EER & COP +/- 7%		
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	267.2	67.3	78.3	85.0	0.83	841.5	3.14	0.79	0.92
-30	378.4	95.4	110.9	99.9	0.86	1193.8	3.79	0.95	1.11
-25	517.8	130.5	151.7	116.6	0.89	1630.4	4.44	1.12	1.30
-20	667.7	168.3	195.7	132.5	0.93	2108.1	5.04	1.27	1.48
-15	847.6	213.6	248.4	150.0	0.99	2680.7	5.65	1.42	1.66
-10	1058.4	266.8	310.2	168.8	1.05	3354.3	6.27	1.58	1.84

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			Condensing temperature 65°C				
Evaporating temperature	Cooling capacity +/- 5%			Input power +/- 5%	Electric current +/- 5%	Mass flow +/- 5%	Efficiency EER & COP +/- 7%		
°C	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	236.9	59.7	69.4	84.5	0.83	742.7	2.80	0.71	0.82
-30	335.1	84.5	98.2	99.7	0.85	1055.3	3.36	0.85	0.99
-25	463.7	116.9	135.9	117.8	0.89	1462.9	3.94	0.99	1.15
-20	623.0	157.0	182.6	137.8	0.95	1971.7	4.52	1.14	1.32
-15	800.6	201.8	234.6	158.5	1.01	2533.5	5.05	1.27	1.48
-10	1001.7	252.5	293.6	180.5	1.09	3177.6	5.55	1.40	1.63

E - EXTERNAL CHARACTERISTICS

1 Base plate	70X170	
2 Tray holder	Yes	
3 Connectors		
3.1 SUCTION	φ 6.42- φ 6.62	[mm]
3.1.1 Material	Copper	
3.1.2 Shape	slanted	
3.2 DISCHARGE	Φ 4.9- φ 5.0	[mm]
3.2.1 Material	Copper	
3.2.2 Shape	slanted	
3.3 PROCESS	φ 6.42- φ 6.62	[mm]
3.3.1 Material	Copper	
3.3.2 Shape	slanted	
3.4 Connector sealing	-	