COMPRESSOR DEFINITION

Designation	**EM 2C55CLT**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513304636**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	9.04	[cm³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO5	
4 Weight (with oil charge)	8.36	[kg] (18.43 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	MI.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(310)/4(300)	[µF(VAC minimum)]
5 Motor protection	AE64FS	
6 Start winding resistance	18.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	20.80	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.65	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**ASHRAE LBP-NOFAN** **Static**		Evaporating temperature (Condensing temperature	**-23.3°C (-9.94°F)** **54.4°C (129.92°F))**		
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]
519	131	152	84	0.45	1.63	6.22	1.57	1.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	303	76	89	56	0.31	0.95	5.41	1.36	1.59
-30	**(-22)**	416	105	122	65	0.36	1.30	6.41	1.62	1.88
-25	**(-13)**	541	136	159	74	0.40	1.70	7.35	1.85	2.15
-20	**(- 4)**	687	173	201	83	0.44	2.16	8.30	2.09	2.43
-15	**(+ 5)**	862	217	253	93	0.48	2.71	9.32	2.35	2.73
-10	**(+14)**	1075	271	315	102	0.52	3.39	10.48	2.64	3.07

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	278	70	81	56	0.32	0.87	4.95	1.25	1.45
-30	**(-22)**	387	98	113	66	0.37	1.21	5.81	1.46	1.70
-25	**(-13)**	508	128	149	77	0.42	1.59	6.60	1.66	1.93
-20	**(- 4)**	649	164	190	88	0.47	2.04	7.38	1.86	2.16
-15	**(+ 5)**	819	206	240	100	0.52	2.58	8.22	2.07	2.41
-10	**(+14)**	1027	259	301	112	0.57	3.24	9.18	2.31	2.69

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	250	63	73	56	0.32	0.78	4.49	1.13	1.32
-30	**(-22)**	355	90	104	67	0.38	1.11	5.26	1.33	1.54
-25	**(-13)**	472	119	138	79	0.43	1.48	5.95	1.50	1.74
-20	**(- 4)**	609	153	178	92	0.49	1.91	6.61	1.67	1.94
-15	**(+ 5)**	774	195	227	106	0.54	2.44	7.31	1.84	2.14
-10	**(+14)**	977	246	286	120	0.61	3.08	8.12	2.05	2.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32-NOFAN** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	218	55	64	54	0.31	0.68	4.04	1.02	1.18
-30	**(-22)**	321	81	94	67	0.37	1.01	4.77	1.20	1.40
-25	**(-13)**	434	109	127	80	0.43	1.36	5.39	1.36	1.58
-20	**(- 4)**	566	143	166	95	0.49	1.78	5.98	1.51	1.75
-15	**(+ 5)**	727	183	213	110	0.56	2.29	6.60	1.66	1.94
-10	**(+14)**	925	233	271	126	0.63	2.92	7.31	1.84	2.14

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42º up + 45° to Back		
3.2 DISCHARGE	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		