



Model: EMT50HDP
Code: 513306041

embraco POWER IN.
CHANGE ON

Type:	On-off
Voltage [V] / Frequency [Hz] / Phases	220-240 V 50 Hz 1 ~
Refrigerant:	R-134a
Application:	L/M/HBP

Motor type:	
Starting torque:	LST
HP:	
Displacement:	4.5 cm ³

OPERATING CONDITION : ARI HBP

Evaporation Temp.	7.2 °C	Return Temp.	18.3 °C	Superheating	11.1 K
Condensing Temp.	54.4 °C	Liquid Temp.	54.4 °C	Subcooling	0.0 K

Cooling capacity	Power consumption	Mass flow rate	Efficiency
415.00 W	218.23 W	11.11 kg/h	1.90 W/W

APPLICATION

Evaporating temperature range:	-35 to 15 °C
Permanent operating temperature (peak) :	60 (70) °C
Expansion device:	Capillary tube
Cooling type:	Static
Air Flow	--
Maximum motor temperature:	130 °C

ELECTRICAL DATA

Start winding resistance at 25°C (77°F):	32.78 Ω +/- 8%	Run winding resistance at 25°C (77°F):	18.2 Ω +/- 8%
FLA - full load amperage L/MBP [A] 50 Hz / 60 Hz:	1.8 / -	LRA (A) 50 Hz / 60 Hz:	5.4 / -
		FLA - full load amperage HBP [A] 50 Hz / 60 Hz:	2.05 / -

MECHANICAL DATA

Bore:	21 mm	Stroke:	6.5 mm
		Displacement:	4.5 cm ³

OTHER INFORMATION

Weight:	7.51 kg	Oil charge:	180 ml
Lubricant type:	Polyolester ISO22	Nitrogen charge:	Yes

EXTERNAL SETTINGS

-	Shape	Material	Diameter [mm]
Suction connector	Slanted 42° up + 45° to Back	Copper	6.10
Discharge connector	Slanted parallel BP+24°to Back	Copper	4.94
Process connector	Slanted 45° up + 45° to Back	Copper	6.10
Base plate:	European Standard EUEM	Tray holder:	Yes

PERFORMANCES AT STANDARD CHECK-POINTS

Checkpoint	Cooling capacity	Power consumption	Gas flow rate	Cooling Efficiency	Heating capacity +/-	Heating Efficiency
	+/-5%	+/-5%	+/-5%	+/- 7%	5% *	+/- 7%
	W	W	kg/h	W/W	W	W/W
ARI HBP	415.00	218.23	11.11	1.90	507.68	2.33
ARI LBP	97.65	140.13	2.56	0.70	138.61	0.99
ARI MBP	247.84	167.61	6.64	1.48	318.27	1.90
ASHRAE CBP	267.64	173.51	5.83	1.54	344.16	1.98
ASHRAE HBP 32	527.39	218.23	10.50	2.42	621.25	2.85
ASHRAE HBP 46	469.36	218.23	10.39	2.15	563.42	2.58
ASHRAE LBP 32	91.04	157.37	1.77	0.58	124.36	0.79
CECOMAF HBP	390.43	212.17	9.59	1.84	482.68	2.27
CECOMAF LBP	45.05	173.43	1.07	0.26	66.14	0.38
EN12900 HBP**	418.76	202.78	9.76	2.07	504.57	2.49
EN12900 LBP**	10.64	195.17	0.22	0.05	15.20	0.08
EN12900 MBP**	241.17	155.21	5.27	1.55	306.04	1.97

* Calculations performed considering isentropic compression and a housing loss of 10%. This is an estimated heat amount discarded in the discharge pipe and the condenser combined.

CONDENSING TEMP. 35 °C

(SUBCOOLING : 0 K, RETURN TEMP.: 32 °C)

Evaporating temperature °C	Cooling capacity	Power consumption	Gas flow rate	Cooling Efficiency	Heating capacity +/-	Heating Efficiency
	+/-5%	+/-5%	+/-5%	+/- 7%	5% *	+/- 7%
	W	W	kg/h	W/W	W	W/W
-35.00	46.70	150.24	0.92	0.31	64.84	0.43
-30.00	95.28	122.21	1.89	0.78	128.35	1.05
-25.00	134.08	121.07	2.66	1.11	175.46	1.45
-20.00	172.96	127.90	3.44	1.35	220.12	1.72
-15.00	217.38	136.90	4.34	1.59	269.36	1.97
-10.00	270.70	146.49	5.42	1.85	326.91	2.23
-5.00	335.25	156.32	6.74	2.14	394.99	2.53
0.00	412.93	166.27	8.35	2.48	475.12	2.86
5.00	505.57	176.18	10.28	2.87	568.62	3.23
10.00	615.07	185.74	12.60	3.31	676.84	3.64
15.00	743.62	194.53	15.36	3.82	801.36	4.12

CONDENSING TEMP. 45 °C

(SUBCOOLING : 0 K, RETURN TEMP.: 32 °C)

Evaporating temperature °C	Cooling capacity	Power consumption	Gas flow rate	Cooling Efficiency	Heating capacity +/-	Heating Efficiency
	+/-5%	+/-5%	+/-5%	+/- 7%	5% *	+/- 7%
	W	W	kg/h	W/W	W	W/W
-35.00	-44.25	272.88	-0.95	-0.16	-65.08	-0.24
-30.00	46.96	161.56	1.01	0.29	66.90	0.41
-25.00	104.66	133.99	2.26	0.78	144.62	1.08
-20.00	149.62	134.30	3.24	1.11	200.74	1.49
-15.00	193.02	143.43	4.20	1.35	251.72	1.75
-10.00	241.17	155.21	5.27	1.55	306.04	1.97
-5.00	297.93	167.79	6.54	1.78	368.26	2.19
0.00	365.95	180.63	8.07	2.03	441.04	2.44
5.00	447.34	193.41	9.94	2.31	526.15	2.72
10.00	544.03	205.75	12.18	2.64	625.06	3.04
15.00	658.05	217.10	14.87	3.03	739.22	3.40

CONDENSING TEMP. 55 °C

(SUBCOOLING : 0 K, RETURN TEMP.: 32 °C)

Evaporating temperature °C	Cooling capacity	Power consumption	Gas flow rate	Cooling Efficiency	Heating capacity +/-	Heating Efficiency
	+/-5%	+/-5%	+/-5%	+/- 7%	5% *	+/- 7%
	W	W	kg/h	W/W	W	W/W
-35.00	-242.02	605.45	-5.75	-0.40	-379.68	-0.63
-30.00	-58.92	277.44	-1.40	-0.21	-89.37	-0.32
-25.00	45.05	173.43	1.07	0.26	66.14	0.38
-20.00	111.34	149.06	2.66	0.75	158.45	1.06
-15.00	162.12	152.15	3.89	1.07	223.86	1.47
-10.00	209.62	164.32	5.05	1.28	281.13	1.71
-5.00	260.86	179.46	6.32	1.45	340.15	1.90
0.00	320.15	195.63	7.81	1.64	406.30	2.08
5.00	390.43	212.17	9.59	1.84	482.68	2.27
10.00	473.97	228.67	11.74	2.07	571.35	2.50
15.00	572.80	244.57	14.34	2.34	673.88	2.76

