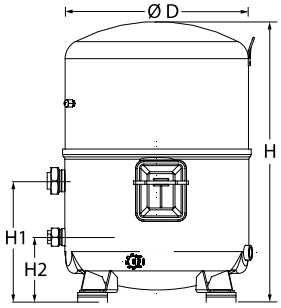
General Characteristics

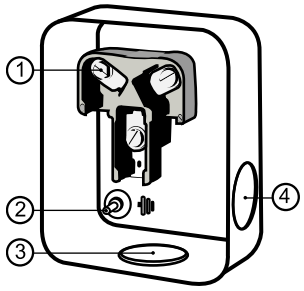
Model number (on compressor nameplate)		**MT160HW4EVE**
Code number for Singlepack*		MT160-4VI
Code number for Industrial pack**		MT160-4VM
Drawing number		8504011e
Suction and discharge connections		Rotolock
Suction connection		1-3/4 " Rotolock
Discharge connection		1-1/4 " Rotolock
Suction connection with supplied sleeve		1-1/8 " ODF
Discharge connection with supplied sleeve		3/4 " ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders	4	
Swept volume	271.55 cm3/rev	
Displacement @ Nominal speed	47.3 m3/h @ 2900 rpm - 57.0 m3/h @ 3500 rpm	
Net weight	67 kg	
Oil charge	3.9 litre, Mineral - 160P	
Maximum system test pressure Low Side / High side	25 bar(g) / 30 bar(g)	
Maximum differential test pressure	30 bar	
Maximum number of starts per hour	12	
Refrigerant charge limit	10 kg	
Approved refrigerants	R22, R417A-160PZ	

Dimensions



D=352 mm
H=540 mm
H1=233 mm
H2=125 mm
H3=- mm

Terminal box



IP54 (with cable gland)

1: Screw connectors 10-32 UNF x 9.5
2: Earth M4-12
3: Knock-out Ø 29 mm (1.14")
4: Knock-out Ø 25.5 mm (1.00")

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25ºC	1.19 Ω
Maximum Continuous Current (MCC)	36 A
Locked Rotor Amps (LRA)	130 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	50 Nm

Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers
Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only)
Initial oil charge
Installation instructions

Approvals : CE certified, UL certified (file SA6873), -

*Singlepack: Compressor in cardboard box

**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity in W									
30	11 251	14 817	19 154	24 366	30 559	37 837	46 308	56 076	67 247
35	10 093	13 513	17 657	22 632	28 541	35 491	43 586	52 931	63 633
40	9 025	12 269	16 193	20 902	26 500	33 091	40 782	49 676	59 880
45	8 058	11 098	14 774	19 188	24 446	30 651	37 908	46 322	55 999
50	-	10 011	13 410	17 502	22 391	28 182	34 977	42 883	52 002
55	-	-	12 113	15 855	20 348	25 696	32 001	39 369	47 902
60	-	-	-	14 258	18 327	23 204	28 991	35 792	43 711
65	-	-	-	-	16 340	20 718	25 959	32 164	39 438
Power input in W									
30	6 153	6 858	7 525	8 129	8 643	9 042	9 300	9 391	9 289
35	6 462	7 210	7 934	8 607	9 205	9 700	10 067	10 281	10 316
40	6 723	7 523	8 312	9 064	9 753	10 354	10 841	11 187	11 368
45	6 928	7 789	8 652	9 492	10 283	10 999	11 614	12 102	12 438
50	-	8 000	8 948	9 885	10 786	11 626	12 378	13 017	13 518
55	-	-	9 191	10 235	11 256	12 229	13 128	13 927	14 601
60	-	-	-	10 535	11 685	12 801	13 856	14 824	15 681
65	-	-	-	-	12 067	13 334	14 554	15 702	16 750
Current consumption in A									
30	12.97	13.71	14.46	15.16	15.77	16.26	16.58	16.69	16.54
35	13.32	14.11	14.92	15.72	16.45	17.08	17.56	17.85	17.90
40	13.60	14.46	15.37	16.27	17.14	17.92	18.58	19.06	19.34
45	13.82	14.77	15.78	16.81	17.83	18.78	19.63	20.33	20.84
50	-	15.01	16.14	17.32	18.50	19.64	20.70	21.63	22.39
55	-	-	16.45	17.78	19.15	20.49	21.77	22.95	23.97
60	-	-	-	18.20	19.76	21.32	22.84	24.28	25.59
65	-	-	-	-	20.32	22.11	23.89	25.61	27.22
Mass flow in kg/h									
30	246	321	409	512	633	774	935	1 120	1 331
35	229	303	391	494	614	754	914	1 098	1 308
40	213	286	373	474	593	731	890	1 072	1 279
45	199	270	355	454	571	706	863	1 042	1 246
50	-	256	338	434	547	679	832	1 008	1 208
55	-	-	321	413	523	650	799	970	1 165
60	-	-	-	392	497	619	762	928	1 118
65	-	-	-	-	470	586	723	882	1 066
Coefficient of performance (C.O.P.)									
30	1.83	2.16	2.55	3.00	3.54	4.18	4.98	5.97	7.24
35	1.56	1.87	2.23	2.63	3.10	3.66	4.33	5.15	6.17
40	1.34	1.63	1.95	2.31	2.72	3.20	3.76	4.44	5.27
45	1.16	1.42	1.71	2.02	2.38	2.79	3.26	3.83	4.50
50	-	1.25	1.50	1.77	2.08	2.42	2.83	3.29	3.85
55	-	-	1.32	1.55	1.81	2.10	2.44	2.83	3.28
60	-	-	-	1.35	1.57	1.81	2.09	2.41	2.79
65	-	-	-	-	1.35	1.55	1.78	2.05	2.35

Nominal performance at to = 5 °C, tc = 50 °C

Cooling capacity	34 977	W
Power input	12 378	W
Current consumption	20.70	A
Mass flow	832	kg/h
C.O.P.	2.83	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	80	dB(A)
With accoustic hood	74	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, ARI rating conditions

R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity in W									
30	11 949	15 724	20 310	25 818	32 355	40 034	48 962	59 251	71 010
35	10 758	14 390	18 787	24 060	30 319	37 672	46 230	56 103	67 401
40	9 658	13 117	17 296	22 305	28 254	35 253	43 411	52 838	63 644
45	8 663	11 919	15 849	20 565	26 174	32 788	40 515	49 467	59 751
50	-	10 807	14 459	18 850	24 091	30 289	37 557	46 002	55 736
55	-	-	13 138	17 175	22 016	27 770	34 547	42 457	51 610
60	-	-	-	15 552	19 963	25 243	31 500	38 844	47 385
65	-	-	-	-	17 945	22 719	28 426	35 174	43 075
Power input in W									
30	6 153	6 858	7 525	8 129	8 643	9 042	9 300	9 391	9 289
35	6 462	7 210	7 934	8 607	9 205	9 700	10 067	10 281	10 316
40	6 723	7 523	8 312	9 064	9 753	10 354	10 841	11 187	11 368
45	6 928	7 789	8 652	9 492	10 283	10 999	11 614	12 102	12 438
50	-	8 000	8 948	9 885	10 786	11 626	12 378	13 017	13 518
55	-	-	9 191	10 235	11 256	12 229	13 128	13 927	14 601
60	-	-	-	10 535	11 685	12 801	13 856	14 824	15 681
65	-	-	-	-	12 067	13 334	14 554	15 702	16 750
Current consumption in A									
30	12.97	13.71	14.46	15.16	15.77	16.26	16.58	16.69	16.54
35	13.32	14.11	14.92	15.72	16.45	17.08	17.56	17.85	17.90
40	13.60	14.46	15.37	16.27	17.14	17.92	18.58	19.06	19.34
45	13.82	14.77	15.78	16.81	17.83	18.78	19.63	20.33	20.84
50	-	15.01	16.14	17.32	18.50	19.64	20.70	21.63	22.39
55	-	-	16.45	17.78	19.15	20.49	21.77	22.95	23.97
60	-	-	-	18.20	19.76	21.32	22.84	24.28	25.59
65	-	-	-	-	20.32	22.11	23.89	25.61	27.22
Mass flow in kg/h									
30	245	319	407	510	630	769	930	1 114	1 323
35	227	301	389	491	611	750	909	1 092	1 300
40	212	285	371	472	590	727	885	1 066	1 272
45	198	269	353	452	568	703	858	1 036	1 239
50	-	255	336	432	544	676	828	1 002	1 201
55	-	-	319	411	520	647	794	964	1 158
60	-	-	-	390	494	616	758	923	1 111
65	-	-	-	-	467	583	719	877	1 060
Coefficient of performance (C.O.P.)									
30	1.94	2.29	2.70	3.18	3.74	4.43	5.26	6.31	7.64
35	1.66	2.00	2.37	2.80	3.29	3.88	4.59	5.46	6.53
40	1.44	1.74	2.08	2.46	2.90	3.40	4.00	4.72	5.60
45	1.25	1.53	1.83	2.17	2.55	2.98	3.49	4.09	4.80
50	-	1.35	1.62	1.91	2.23	2.61	3.03	3.53	4.12
55	-	-	1.43	1.68	1.96	2.27	2.63	3.05	3.53
60	-	-	-	1.48	1.71	1.97	2.27	2.62	3.02
65	-	-	-	-	1.49	1.70	1.95	2.24	2.57

Nominal performance at to = 7.2 °C, tc = 54.4 °C

Cooling capacity	38 273	W
Power input	13 396	W
Current consumption	22.16	A
Mass flow	871	kg/h
C.O.P.	2.86	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	80	dB(A)
With accoustic hood	74	dB(A)

Tolerance according EN12900