

## Indoor monobloc unit

### MCW 5 - 39 kW



Rotary compressor



Scroll compressor



R-407 C refrigerant



Cooling only



Cooling / Heating

#### PLUS

- ✓ Ease of installation and compact dimensions
- ✓ Scroll compressor
- ✓ Built-in hydronic units
- ✓ Vast range of available accessories
- ✓ Access to the tax incentives provided for energy retrofitting

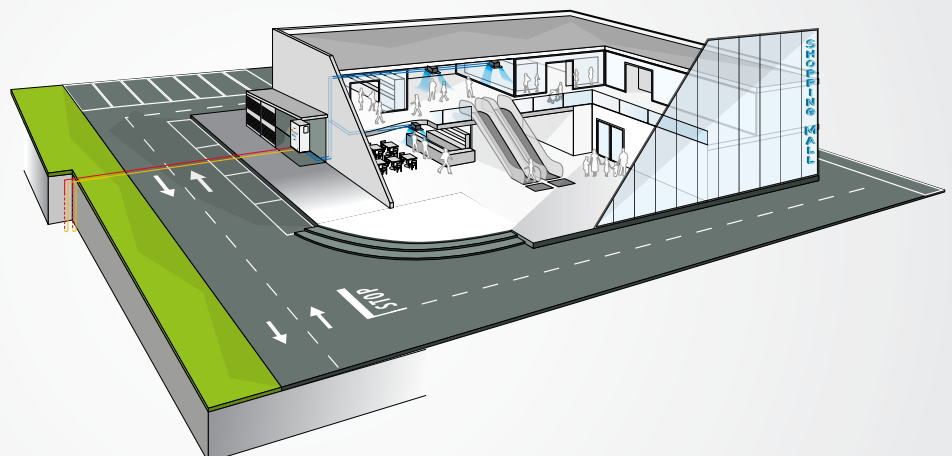
#### Compact single circuit units

MCW chillers and heat pumps are designed for residential and light-duty commercial environments, and in some cases for industrial applications, process industries and geothermal energy. The entire range is built with a structure and base made of galvanised sheet panelling in epoxy-polyester paint finish, RAL7035, and there is the possibility of choosing an efficient sound absorbing material which, together with the adoption of scroll type compressors, ensure that the units are exceptionally silent and compact.

With an attractive design, a small footprint, the possibility to fit the units with a hydraulic kit complete with circulation pump, expansion tank and buffer tank, means that the machines can even be installed in environments not involved in residential applications.

The design philosophy has favoured the development of units having a reduced height with water connections placed on the upper part, which reduce installation time and costs and the need for technical space.

The MCW series offers a wide range of configurations in terms of accessories available and consists of a large number of sizes, including several single-phase models, each available as a low noise version, in order to fully respond to all system requirements. Only top quality products are used for the cooling, hydraulic and electric systems guaranteeing high technical level of the MCW chillers in terms of efficiency, reliability and reduced noise levels.



The possibility to dissipate into the aquifer or soil using probes, maintains the original performance of the MCW unit during the entire period of use.



## MAIN COMPONENTS

### Structure

The structure is in galvanised steel sheet, which is resistant to corrosive agents. Closed equipment compartments are accessible on three sides thanks to easily removable panels with internal soundproofing insulation.

### Compressor

Hermetic scroll compressor powered by a single or three-phase asynchronous motor. It is fixed to the base with rubber vibration dampers.

### Heat exchangers

Brazed-welded plate condenser and evaporator in AISI 316 austenitic stainless steel, specifically developed to maximise heat exchange coefficients between water and refrigerant.



### Microprocessor control

The microprocessor control has complete management of the MCW units and, because it is highly customisable, it allows to adapt and improve its functioning in every application.

### Hydraulic kit

It consists of a centrifugal circulating pump powered by an asynchronous electric motor capable of providing a suitable available head under operating conditions. Also included are an expansion tank and an automatic filling tap.

## CONFIGURATION

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Fields▶	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MCW039HS		1	0	C	2	0	0	0	0	M	0	G	0	0	0	0

To verify the compatibility of the options, use the selection software or the price list.

### AVAILABLE VERSIONS

#### Cooling only versions

**MCW...CS** Standard execution  
**MCW...CL** Low noise execution

#### Versions with reversible heat pump

**MCW...HS** Standard execution  
**MCW...HL** Low noise execution

### CONFIGURATION OPTIONS

#### 1 - REFRIGERANT - POWER SUPPLY

- 0 R407C - 230/1/50
- 1 R407C - 400/3/50 + N
- 2 R407C - 400/3/50 with 230V transformer for the auxiliary circuits

#### 2 - CONTROL MICROPROCESSOR + THROTTLE VALVE

- 0 Base + traditional expansion valve
- A Base + electronic expansion valve

#### 3 - CONDENSATION CONTROL

- 0 Absent
- C Modulating with adjustment of water flow rate installed on the unit

#### 4 - PUMP AND TANK

- 0 Absent
- 1 Pump only
- 2 Pump + Tank

#### 5 - REMOTE COMMUNICATION

- 0 Absent
- 2 RS485

#### 6 - COOLING ACCESSORIES

- 0 Absent
- M Pressure gauges

#### 7 - COMPRESSOR OPTION

- 0 Absent

#### 8 - WATER CONDENSER

- 0 Up-rated condenser for tower/dry cooler installation

#### 9 - REMOTE CONTROL BOARD

- 0 Absent
- S Simplified remote control panel
- M Base microprocessor control

#### 10 - PACKING - NET PRICE

- 0 Standard
- 1 Wooden crate
- 2 Wooden case

#### 11 - VIBRATION DAMPERS

- 0 Absent
- G Base rubber vibration dampers

#### 12 - ACCESSORIES

- 0 No accessories

#### 13 - DRY COOLER / REMOTE CONDENSER

- 0 Absent
- A Dry cooler
- B Dry cooler with condensation control (only if field "3" = "0")

#### 14 - DRY COOLER / REMOTE CONDENSER

- 0 Absent
- 1 Standard version: horizontal air flow
- 2 Standard version: vertical air flow
- 3 Low-noise version: horizontal air flow
- 4 Low-noise version: vertical air flow

#### 15 - EXECUTION

- 0 Standard
- S Special

## MWC rated technical data

MCW - CS / CL		005	005 M	007	007 M	010	010 M	012
Power supply	V - ph - Hz	400 - 3N - 50	230 - 1 - 50	400 - 3N - 50	230 - 1 - 50	400 - 3N - 50	230 - 1 - 50	400 - 3N - 50
Cooling capacity (1) (E)	kW	5,31	5,42	6,71	6,76	9,54	9,51	11,7
Power input (1) (E)	kW	1,50	1,51	2,00	2,04	2,64	2,69	3,24
EER (1) (E)		3,54	3,59	3,36	3,31	3,61	3,54	3,61
ESEER (E)		3,41	3,41	3,31	3,26	3,53	3,46	3,57
Eurovent efficiency class		E	E	F	F	E	E	E
Water flow rate user side (1)	l/h	921	940	1163	1172	1651	1646	2025
Pressure drop, user side (1) (E)	kPa	26	27	29	29	26	25	29
Water flow rate source side (1)	l/h	1156	1178	1476	1491	2070	2072	2534
Pressure drop, source side (1) (E)	kPa	29	29	43	43	36	36	50
Available pressure head - standard pump (1)	kPa	78	77	69	68	60	60	124
Maximum current absorption	A	4	12	5	15	7	23	10
Startup current	A	24	47	32	61	46	100	50
No. of compressors / circuits		1/1	1/1	1/1	1/1	1/1	1/1	1/1
Buffer tank volume	dm <sup>3</sup>	47	47	47	47	47	47	92
Transport weight unit with pump and tank	kg	138	138	141	141	143	143	168
Operating weight unit with pump and full tank	kg	167	167	168	168	175	175	230
MCW CS: Sound power level (2) (E)	dB(A)	55	55	55	55	59	59	61
MCW CL: Sound power level (2) (E)	dB(A)	53	53	53	53	57	57	59

MCW - CS / CL		015	018	020	022	027	031	039
Power supply	V - ph - Hz	400 - 3N - 50						
Cooling capacity (1) (E)	kW	14,4	17,0	19,4	21,0	25,9	29,9	36,9
Power input (1) (E)	kW	3,84	4,56	5,01	5,62	7,10	8,28	10,2
EER (1) (E)		3,75	3,73	3,87	3,74	3,65	3,61	3,62
ESEER (E)		3,64	3,70	3,79	3,69	3,58	3,59	3,61
Eurovent efficiency class		E	E	D	E	E	E	E
Water flow rate user side (1)	l/h	2490	2946	3351	3627	4475	5160	6377
Pressure drop, user side (1) (E)	kPa	26	28	25	27	24	27	26
Water flow rate source side (1)	l/h	3107	3672	4156	4527	5622	6490	8030
Pressure drop, source side (1) (E)	kPa	29	43	36	43	36	50	50
Available pressure head - standard pump (1)	kPa	113	92	135	125	106	82	129
Maximum current absorption	A	13	14	16	17	20	29	32
Startup current	A	66	74	101	98	130	130	135
No. of compressors / circuits		1/1	1/1	1/1	1/1	1/1	1/1	1/1
Buffer tank volume	dm <sup>3</sup>	92	92	92	92	92	92	92
Transport weight unit with pump and tank	kg	171	175	217	253	260	269	283
Operating weight unit with pump and full tank	kg	269	282	289	296	306	317	334
MCW CS: Sound power level (2) (E)	dB(A)	61	61	61	62	62	65	65
MCW CL: Sound power level (2) (E)	dB(A)	59	59	60	60	60	63	63

Conditions in cooling mode only (CS/CL):

(1) Water temperature - user side 12 / 7°C, water temperature - dissipation side 30 / 35 °C (14511:2011)

(2) Sound power level measured according to UNI EN ISO 9614

(E) EUROVENT certified data

Conditions in heat pump mode only (HS/HL):

(1) Water temperature - user side 12 / 7°C, water temperature - dissipation side 30 / 35 °C (14511:2011)

(2) Water temperature - user side 40 / 45°C, water temperature - dissipation side 10 / 7 °C (14511:2011)

(3) Sound power level measured according to UNI EN ISO 9614

(E) EUROVENT certified data

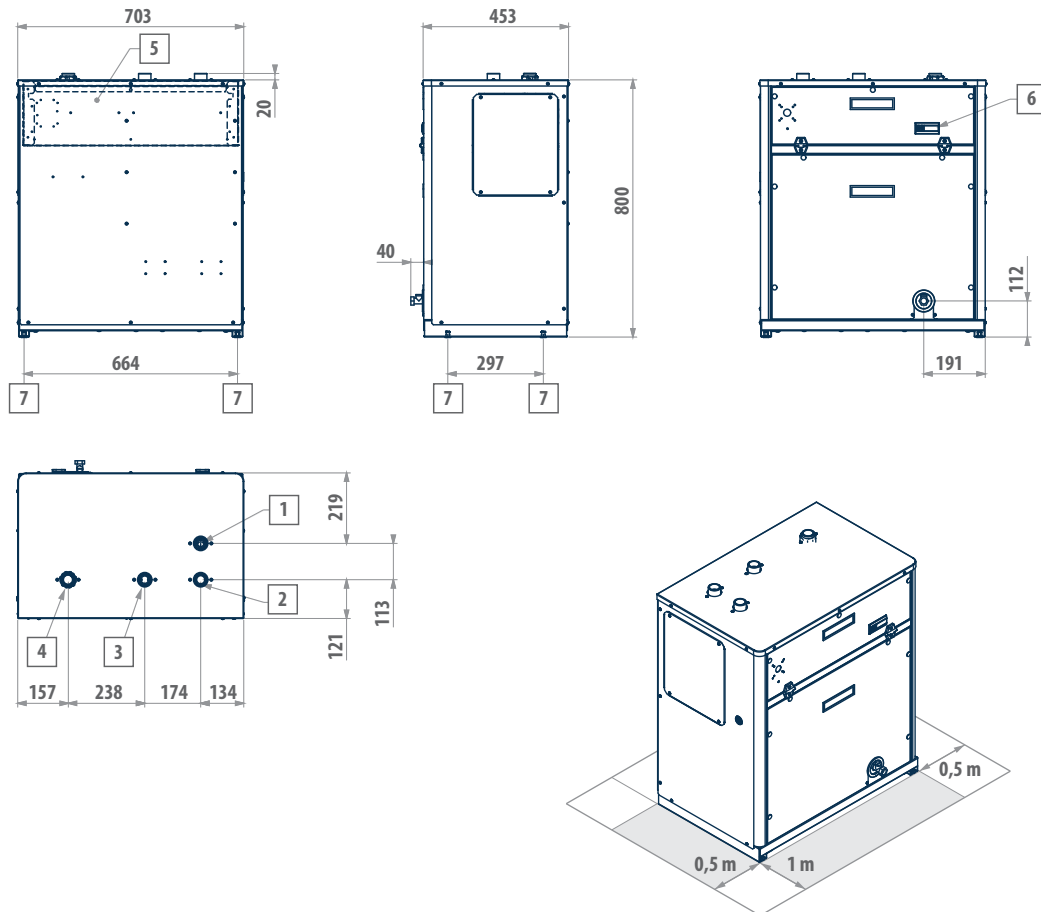

**MWC H rated technical data**

MCW - HS / HL		005 M	005	007 M	007	010 M	010	012
Power supply	V - ph - Hz	400-3N-50	230-1-50	400-3N-50	230-1-50	400-3N-50	230-1-50	400-3N-50
Cooling capacity (1) (E)	kW	4,97	5,14	6,28	6,26	8,99	8,95	10,9
Power input (1) (E)	kW	1,58	1,59	2,14	2,16	2,79	2,83	3,42
EER (1) (E)		3,15	3,23	2,93	2,90	3,22	3,16	3,19
ESEER (E)		3,26	3,24	3,11	3,03	3,36	3,28	3,36
Eurovent efficiency class		F	F	G	G	F	F	F
Water flow rate user side (1)	l/h	862	890	1088	1084	1555	1548	1885
Pressure drop, user side (1) (E)	kPa	23	24	25	25	22	22	25
Water flow rate source side (1)	l/h	1112	1142	1424	1425	2001	2001	2428
Pressure drop, source side (1) (E)	kPa	28	30	42	42	28	28	42
Available pressure head - standard pump (1)	kPa	91	92	84	85	78	79	148
Heating capacity (2) (E)	kW	5,35	5,50	6,91	7,08	9,62	9,86	11,9
Power input (2) (E)	kW	1,75	1,78	2,29	2,36	3,06	3,13	3,70
COP (2) (E)		3,06	3,09	3,02	3,00	3,14	3,15	3,22
Eurovent efficiency class		F	F	F	F	F	F	F
Water flow rate user side (2)	l/h	922	949	1189	1219	1661	1701	2059
Pressure drop, user side (2) (E)	kPa	20	21	30	32	20	21	31
Water flow rate source side (2)	l/h	1072	1108	1377	1409	1948	1995	2448
Pressure drop, source side (2) (E)	kPa	33	36	39	41	34	35	41
Available pressure head - standard pump (2)	kPa	81	82	75	75	67	67	130
Maximum current absorption	A	4	12	5	15	7	23	10
Startup current	A	24	47	32	61	46	100	50
No. of compressors / circuits	Nr.	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Buffer tank volume	dm <sup>3</sup>	47	47	47	47	47	47	92
Transport weight unit with pump and tank	kg	141	141	144	144	147	147	173
Operating weight unit with pump and full tank	kg	176	176	178	178	181	181	235
MCW HS: Sound power level (3) (E)	dB(A)	55	55	55	55	59	59	61
MCW HL: Sound power level (3) (E)	dB(A)	53	53	53	53	57	57	59

MCW - HS / HL		015	018	020	022	027	031	039
Power supply	V - ph - Hz	400-3N-50						
Cooling capacity (1) (E)	kW	13,5	15,9	18,7	19,6	24,2	27,9	34,5
Power input (1) (E)	kW	4,06	4,78	5,31	5,96	7,53	8,82	10,9
EER (1) (E)		3,33	3,33	3,52	3,29	3,21	3,16	3,17
ESEER (E)		3,44	3,50	3,67	3,44	3,36	3,35	3,36
Eurovent efficiency class		F	F	E	F	F	F	F
Water flow rate user side (1)	l/h	2333	2752	3236	3384	4186	4813	5952
Pressure drop, user side (1) (E)	kPa	23	24	23	24	21	23	23
Water flow rate source side (1)	l/h	2987	3518	4092	4341	5407	6236	7718
Pressure drop, source side (1) (E)	kPa	28	41	35	41	35	48	48
Available pressure head - standard pump (1)	kPa	148	140	122	158	151	139	149
Heating capacity (2) (E)	kW	14,4	17,5	19,5	21,4	26,3	30,6	37,9
Power input (2) (E)	kW	4,43	5,16	5,71	6,46	8,19	9,49	11,6
COP (2) (E)		3,25	3,39	3,42	3,31	3,21	3,22	3,27
Eurovent efficiency class		E	E	E	E	F	F	E
Water flow rate user side (2)	l/h	2487	3019	3376	3695	4546	5280	6550
Pressure drop, user side (2) (E)	kPa	20	31	25	31	25	36	36
Water flow rate source side (2)	l/h	2950	3648	4083	4417	5353	6234	7773
Pressure drop, source side (2) (E)	kPa	35	40	35	38	33	37	36
Available pressure head - standard pump (2)	kPa	124	132	115	127	113	89	132
Maximum current absorption	A	13	14	16	17	20	29	32
Startup current	A	66	74	101	98	130	130	135
No. of compressors / circuits	Nr.	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Buffer tank volume	dm <sup>3</sup>	92	92	92	92	92	92	92
Transport weight unit with pump and tank	kg	175	182	225	259	271	286	297
Operating weight unit with pump and full tank	kg	270	289	292	295	307	322	348
MCW HS: Sound power level (3) (E)	dB(A)	61	61	61	62	62	65	65
MCW HL: Sound power level (3) (E)	dB(A)	59	59	60	60	60	63	63

## Dimensional drawings

MCW 005 - 010



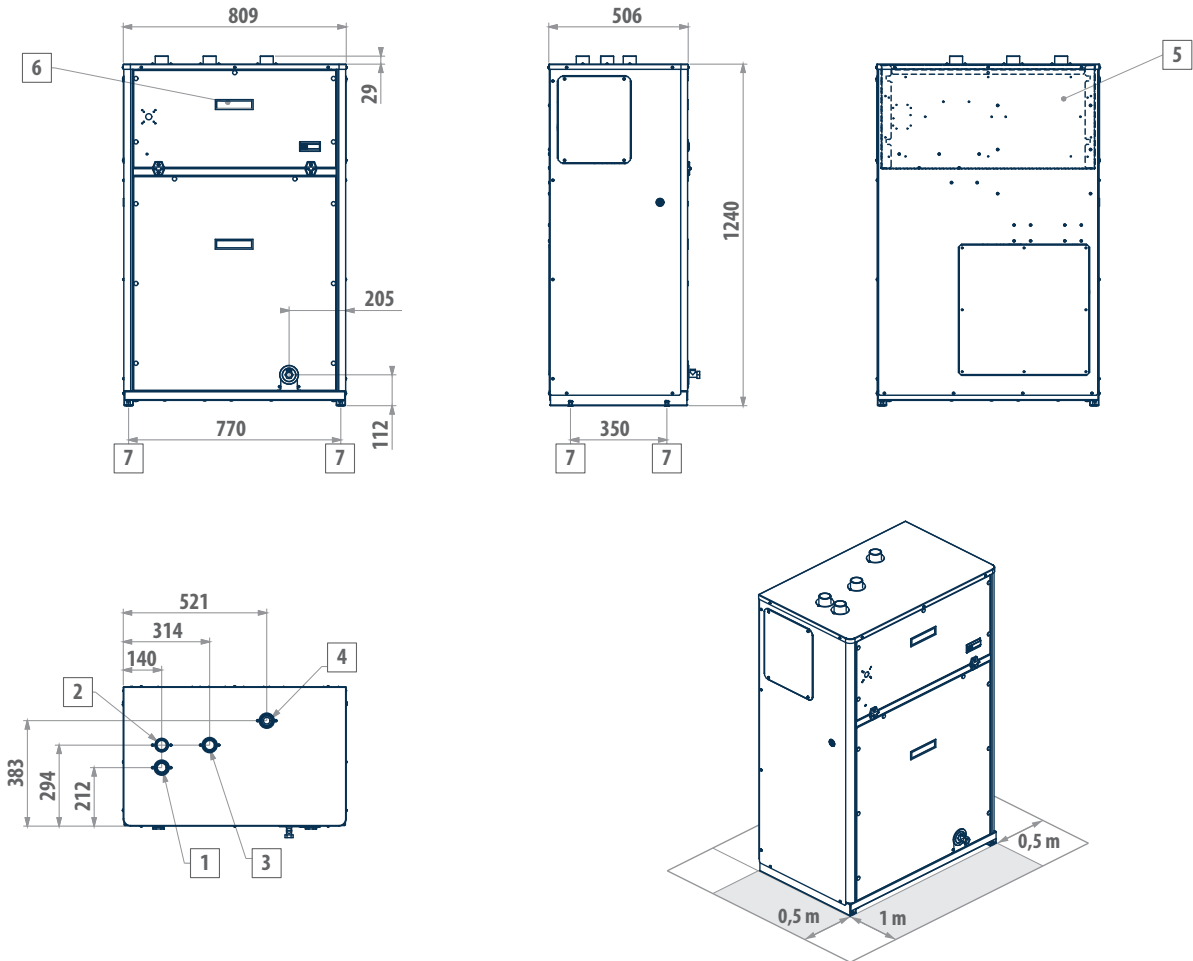
### LEGEND

1	Condenser water inlet (1 ¼" gas)
2	Condenser water outlet (1 ¼" gas)
3	Evaporator water inlet (1 ¼" gas)
4	Evaporator water outlet (1 ¼" gas)
5	Electric control board
6	Microprocessor control
7	Vibration dampers



Dimensional drawings

MCW 012 - 039



**LEGEND**

1	Condenser water inlet (1 ¼" gas)
2	Condenser water outlet (1 ¼" gas)
3	Evaporator water inlet (1 ¼" gas)
4	Evaporator water outlet (1 ¼" gas)
5	Electric control board
6	Microprocessor control
7	Vibration dampers