

Aqua1

Industrial & Commercial CO₂ Heat Pump



TECHNICAL DATA

TECHNICAL DATA		OPERATING RANGE		
Machine type	Aqua1	Parameter	Min	Max
Refrigerant	CO ₂ (R744)	Inlet temp — hot side	30 °C	55 °C
No. of circuits	1	Outlet temp — hot side	35 °C	90 °C
Dry weight	740,7 kg	Inlet temp — cold side	-2 °C	20 °C
CO ₂ charge	30 - 40 kg ¹	Outlet temp — cold side	-7 °C	15 °C
Footprint L × W × H	1470 × 698 × 1925 mm			
Power supply	400 V / 3~ / 50 Hz			
Fuse size	50 A			

PERFORMANCE DATA · 50 Hz

#	GC In °C	GC Out °C	EVAP In °C	EVAP Out °C	Heating kW	Cooling kW	COP
1	32	50	12	7	29	22	3.79
2	32	50	7,5	2,5	27	19	3.42
3	32	50	20	15	33	26	4.25
4	35	55	10	5	27	19	3.24
5	40	70	12	7	25	16	2.74
6	40	70	5	0	23	15	2.58
7	40	70	20	15	28	19	3.16
8	40	70	-1,5	-7	19	11	2.20
9	50	60	12	7	22	14	2.49
10	50	60	5	0	20	11	2.17

¹ CO₂ refrigerant charge depends on operating conditions. Units supplied with 5 kg CO₂ overpressure for factory testing.

PRODUCT DESCRIPTION

Frame & Housing

Galvanised sheet metal, painted. Panels open fully for complete access to all internal components.

Compressor

1× Bitzer semi-hermetic reciprocating compressor. Thermal protection, crankcase heater, optical oil level indicator, IQ-module envelope protection.

Plate Heat Exchangers

Stainless steel, insulated against condensate. Rated for high pressure and high outlet temperatures. Temperature probes for antifreeze protection and capacity control.

Controller

10" touch display with TeqControl software. Water temperature control, frost protection, high-pressure pre-alarm, remote ON/OFF, summer/winter mode.

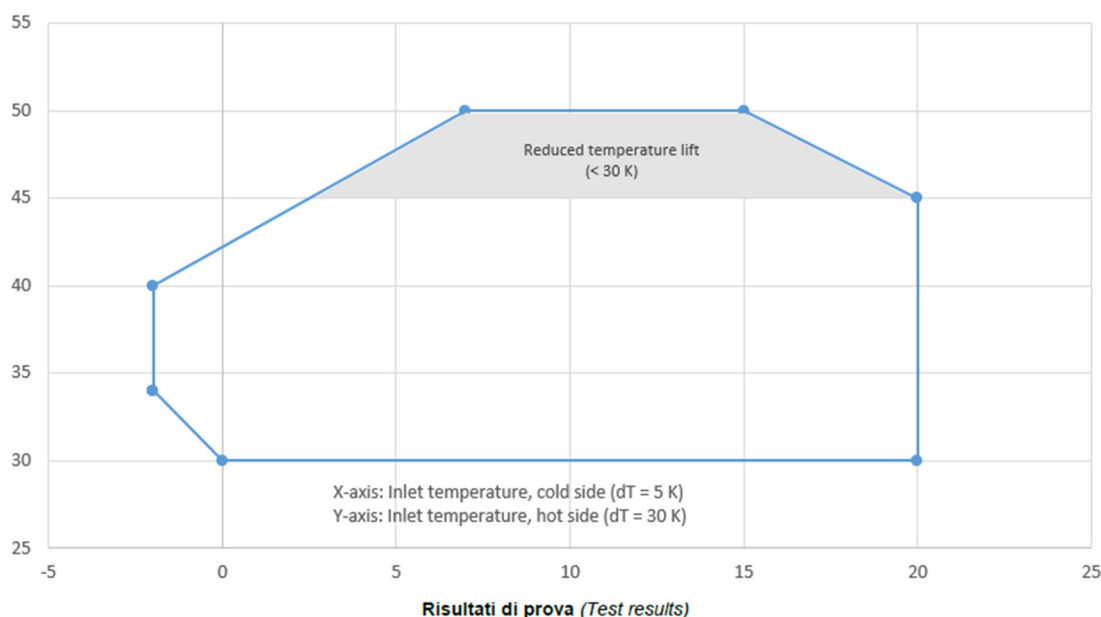
Remote Monitoring

Integrated 5G monitoring via Carel Boss Micro. Supports Modbus RTU, Modbus TCP/IP, BACnet IP.

Safety Devices

High/low pressure switches, safety valves, antifreeze sensors, flow switches, compressor thermal overload protection, optical oil level indicator.

Envelope



Livello di potenza sonora ponderato A (A-weighted sound power level)

L_{wA}^1

79,4

±3,2 dBA²

Livello di pressione sonora superficiale calcolata temporale medio, $\overline{L_{pA}}$ calcolato correggendo il livello di pressione sonora-temporale medio ($\overline{L'_{pA}(S)}$) per il rumore di fondo (K_1) e per l'influenza dell'ambiente di prova (K_2)
(surface time-averaged sound pressure level, $\overline{L_{pA}}$ calculated by correcting the mean time-averaged sound pressure level ($\overline{L'_{pA}(S)}$) for background noise (K_1) and for influence of the test environment (K_2))

$\overline{L_{pA}}$

63,0

dBA

Livello di pressione sonora temporale medio sulla superficie di misura del rumore di fondo
(time averaged sound pressure level over the measurement surface of the background noise)

$\overline{L_{pA}(B)}$

20,2

dBA

¹ Il livello di potenza sonora è stato ottenuto in piena conformità con i requisiti della norma.
The sound power level has been obtained in full compliance with the requirements of the standards.

² L'incertezza di misura è espressa come incertezza estesa, ottenuta moltiplicando l'incertezza tipo per il fattore di copertura k corrispondente ad un livello di fiducia del 95%. Tale fattore k equivale a 2.
The measurement uncertainty has been estimated as expanded uncertainty, obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of 95%. This factor k is equal to 2.

