

DATA CENTER

INDUSTRIAL

SERVICES

# HCB

## AIR CONDENSED CHILLERS WITH INVERTER DRIVEN SCREW COMPRESSORS COOLING ONLY VERSION

369.7-1199.4 kW



 MULTI-PROTOCOL COMMUNICATION INTERFACE	 SCREW COMPRESSORS	 FAST RESTART	 AXIAL FANS
 CORROSION RESISTANT MATERIAL	 CLASS A	 INVERTER DRIVEN COMPRESSORS	 ADIABATIC COOLING
 LOW GWP REFRIGERANT	 SPRAY FLOODED SHELL AND TUBE		

HCB ChillBatic is the new range of air-condensed chillers, designed for energy-efficient, environment-friendly processes. Low environmental impact has been achieved by using **new HFO refrigerants** with low GWP (Global Warming Potential), while **higher efficiency/footprint ratios** are attained thanks to the special V-configuration of the heat exchange coils and their sizing, the largest among the chillers currently on the market. The adiabatic cooling technology also produces **the highest efficiency rates both at partial and at nominal loads** thanks to the lower temperature of the air entering the coils. High thermodynamic efficiency with low Total Equivalent Warming Impact (TEWI) is combined with a special focus on maintainability and **easy accessibility of the compressors contained in the removable HiRail module** which reduces noise emissions.

### New refrigerant R1234ze

HCB range air conditioned chillers use the **new HFO refrigerant with low GWP** (GWPR1234ze=6) as part of a wider Green Technology approach. (Also available in a version with R134a refrigerant).



### Inverter screw compressors

Inverter equipped with screw compressors combine the possibility of moving large volumes of refrigerant with **the guarantee of constant power modulation and high energy efficiency even at partial loads.**

- Refrigerant R1234ze and R515B
- Also available with R134a refrigerant
- Also available in Low-Noise silenced set-up with internal compartment lined with sound-absorbing material
- Capacity modulation: with slide valve or with inverters on both compressors or on one compressor only
- EC Fans
- Electronically controlled expansion valve
- HiNode Supervision
- Monitoring and limitation of the maximum absorbed power



**Low noise and accessibility: HI-RAIL**

The compressor hoods **dramatically reduce noise** thanks to the use of special sound-absorbing materials. On request, sliding rails allow them to be removed effortlessly, **making all maintenance tasks much easier**. The compressors can also be removed by hooking from above and lifting with a crane.

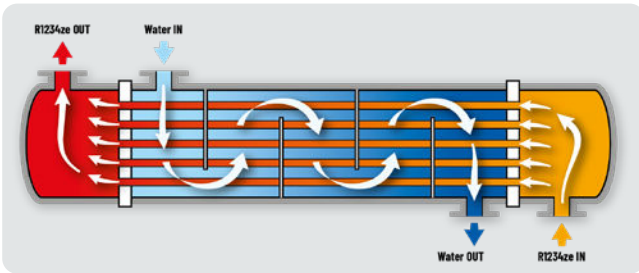
**Modular and efficient**

The configuration with very deep 'V' modular coils **provides an extensive heat exchange surface area and therefore excellent thermal efficiency in relation to the unit footprint**.



**Adiabatic humidification system**

Adiabatic humidification consists of a series of humidification panels placed before the dissipation coils and kept uniformly humidified. With this system, hot air passes through the humidified panels, comes into contact with the contained water and transforms it into water vapour: the outgoing air is therefore cooler and passes through the dissipation coils at a lower temperature, **increasing the efficiency of the thermodynamic cycle and the cooling capacity**. Considering average climatic conditions, the energy saving on an annual basis is more than **35%** compared to a conventional chiller with the same footprint.



**New concept of heat exchange: spray flooded shell and tube heat exchanger**

A spray flooded shell and tube construction guarantees **effectiveness and efficiency** thanks to the minimal approach temperature between refrigerant and water. It requires about **30% less refrigerant charge** compared to traditional flooded shell and tube configurations: a solution that **benefits the environment** and results in **costs savings**, in terms of both CapEx and OpEx.



HCB		0381C	0401C	0421C	0451C	0481C	0531C	0581C	0621C	0661C	0721C	0801C	0831C	0901C	0971C	1041C	1101C	1161C	1231C
<b>Cooling: User water values 12/7°C, 35°C outside air, 40% U.R.</b>																			
<b>Cooling capacity</b>	kW	369.7	398.5	417.3	442.2	477.9	519.2	565.1	614.8	652.2	705.6	773.6	815.5	880.5	938.5	1019.2	1067.7	1123.6	1199.4
<b>Total absorbed power</b>	kW	98.5	107.4	114.7	120.4	129.7	137.8	152.1	164.7	177.3	193.6	205.8	221	238	251.9	272.1	288.8	306	327.3
<b>EER</b>		3.75	3.71	3.64	3.67	3.68	3.77	3.72	3.73	3.68	3.65	3.76	3.69	3.7	3.73	3.75	3.7	3.67	3.66
<b>Sound power</b>	dB(A)	93	93	93	96	97	97	96	97	97	97	98	98	98	98	99	99	100	100
<b>Sound power [Low noise]</b>	dB(A)	88	88	88	91	92	92	91	92	92	92	93	93	93	93	94	94	95	95
<b>Dimensions [LxHxD]</b>	mm	5755x2652x2256					7405x2650x2256				8855x2650x2256				10700x2652x2256			13000x2652x2256	

Also available with 60 Hz power supply