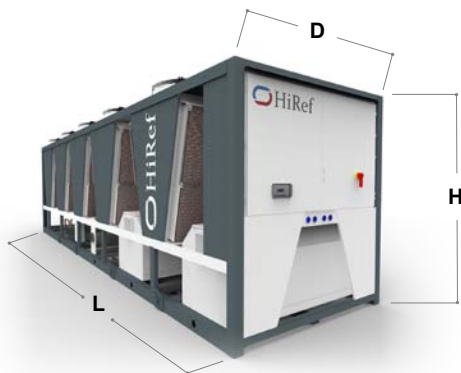


HCB - ChillBatic

CHILLERS
AIR CONDENSED,
WITH INVERTER DRIVEN SCREW
COMPRESSORS



VERSION C - COOLING ONLY	HCB	0381C	0401C	0421C	0451C	0481C	0531C	0581C	0621C	0661C	0721C	0801C	0831C	0901C	0971C	1041C	1101C	1161C	1231C	
Cooling Capacity @ 12/7°C ; 35°C (R134a)	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	
Total Power Input	kW	98.5	107.4	114.7	120.4	129.7	137.8	152.1	164.7	177.3	193.6	205.8	221.0	238.0	251.9	272.1	288.8	306.0	327.3	
EER (UNI 14511)		3.75	3.71	3.64	3.67	3.68	3.77	3.72	3.73	3.68	3.65	3.76	3.69	3.70	3.73	3.75	3.70	3.67	3.66	
Cooling Capacity @ 16/10°C ; 35°C	kW	407.1	436.7	456.9	484.4	523.2	568.6	618.2	672.7	713.3	771.3	843.5	889.0	961.2	1023.5	1113.8	1165.5	1226.1	1308.9	
Total Power Input	kW	102.3	111.2	118.8	124.3	134.4	142.2	156.8	170.4	183.7	199.7	211.7	227.6	245.2	259.1	281.3	298.8	316.5	338.2	
EER (UNI 14511)		3.98	3.93	3.85	3.90	3.89	4.00	3.94	3.95	3.88	3.86	3.98	3.91	3.92	3.95	3.96	3.90	3.87	3.87	
Eurovent efficiency class		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Water consumption (Madrid conditions)	m³/year	2868	2868	2868	2812	2812	3824	3749	3749	3749	4780	4687	4687	5737	5624	5624	5624	6693	6561	
Sound power level	dB (A)	93	93	93	96	97	97	96	97	97	97	98	98	98	98	99	99	100	100	
Sound power level - Low Noise version	dB (A)	88	88	88	91	92	92	91	92	92	92	93	93	93	93	94	94	95	95	
Dimensions [LxDxH]	mm	5755 x 2255 x 2650					7305 x 2255 x 2650					8855 x 2255 x 2650					10405 x 2255 x 2650			13000 x 2255 x 2650

FREE-COOLING VERSION	HCB	0311 F	0331 F	0361 F	0381 F	0421 F	0451 F	0481 F	0531 F	0581 F	0621 F	0661 F	0721 F
Cooling Capacity @ 12/7°C ; 35°C (R134a)	KW	299.8	316.0	342.0	362.1	402.0	423.7	445.4	478.7	517.8	553.6	589.1	654.1
Total Power Input	KW	78.7	84.2	91.0	97.6	106.6	112.9	119.2	127.8	135.8	146.0	160.5	172.8
EER (UNI 14511)		3.81	3.75	3.76	3.71	3.77	3.75	3.73	3.75	3.81	3.79	3.67	3.79
Total Free-Cooling Temperature	°C	-0.8	-1.1	0.0	-0.3	0.3	0.1	-0.2	0.4	0.0	0.4	0.1	-0.4
Cooling Capacity @ 16/10°C ; 35°C	KW	330.2	347.6	376.5	398.0	442.4	465.9	489.5	525.0	568.3	607.6	646.9	717.3
Total Power Input	KW	81.2	86.8	93.2	100.1	109.5	115.9	122.4	130.5	139.0	149.2	164.4	177.1
EER (UNI 14511)		4.07	4.00	4.04	3.98	4.04	4.02	4.00	4.02	4.09	4.07	3.93	4.05
Total Free-Cooling Temperature	°C	2.6	2.3	3.5	3.2	3.9	3.6	3.3	3.9	3.5	4.0	3.6	3.0
Cooling Capacity @26/20 °C; 35 °C	KW	441.7	462.7	502.7	528.8	591.4	621.0	650.6	694.7	754.1	806.1	858.7	948.2
Total Power Input	KW	92.7	98.5	103.8	112.2	122.3	130.0	137.7	144.2	154.0	164.6	182.3	197.1
EER (UNI 14511)		4.76	4.70	4.84	4.71	4.84	4.78	4.72	4.82	4.90	4.90	4.71	4.81
Total Free-Cooling Temperature	°C	10.4	10.0	11.7	11.3	12.1	11.8	11.4	12.3	11.7	12.3	11.9	11.1
Water consumption (Madrid conditions)	m³/year	2666	2666	3554	3554	4443	4443	4443	5332	5332	6220	6220	6220
Sound power level	dB (A)	93	93	94	94	95	95	95	97	98	98	98	98
Sound power level - Low Noise version	dB (A)	88	88	89	89	90	90	90	92	93	93	93	93
Dimensions [LxDxH]	mm	4900 x 2255 x 2650		6155 x 2255 x 2650		7405 x 2255 x 2650		8655 x 2255 x 2650		10700 x 2255 x 2650			

Also available with 60 Hz power supply

ITALIAN
COOLING
SOLUTIONS

HiRef

CHILLERS
AIR CONDENSED, WITH INVERTER DRIVEN SCREW COMPRESSORS

HCB - ChillBatic

ADIABATIC COOLING
TECHNOLOGY



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407 - 1309 kW



HCB - ChillBatic

CHILLERS

AIR CONDENSED, WITH INVERTER DRIVEN SCREW COMPRESSORS

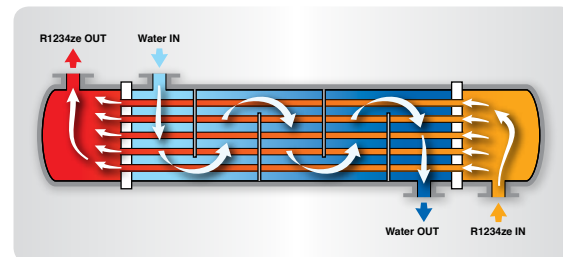
HCB ChillBatic with adiabatic technology represent the new standard of air condensed chillers designed for high energy efficiency and environmentally friendly processes. The low environmental impact is obtained thanks to new HFO refrigerants with low GWP (Global Warming Potential), whilst the high efficiency/footprint ratios are achieved with special V-shaped design of the finned coils and their dimension, the largest in the market. The Free-Cooling version, whose heat exchangers are twice as big as the market average, provides high performance in the Free-Cooling operating mode. The special **adiabatic technology** additionally offers the highest efficiency both at design and partial load conditions, thanks to a reduction of the effective temperature at the heat exchangers' inlet. The high thermodynamic efficiency comes together with easy maintainability and accessibility of the compressors installed in the HiRail® extractable module, which reduces the emitted noise.

INVERTER-DRIVEN SCREW COMPRESSORS



Excellent capacity modulation and high efficiency at partial loads.

NEW HEAT EXCHANGE CONCEPT



The single pass shell and tube evaporator makes it possible to achieve excellent thermodynamic efficiency values thanks to the complete countercurrent in the heat exchange.

SILENT AND EASY TO ACCESS: HI-RAIL®



The compressor hoods drastically reduce the noise emissions thanks to soundproofing materials. The compressors are also **removable** by means of sliders: this means that all maintenance operations are considerably easier. They can also be lifted up with a crane, using lifting hoods.

- » Refrigerant R1234ze
Also available with refrigerant R134a
- » Also available in Standard and Compact version
- » Capacity modulation
with sliding valve,
with inverter on both compressors,
or with inverter on one compressor only.
- » EC fans
- » Electronically-controlled expansion valve
- » HI-NODE® supervision
- » Monitoring and limiting of the maximum power input



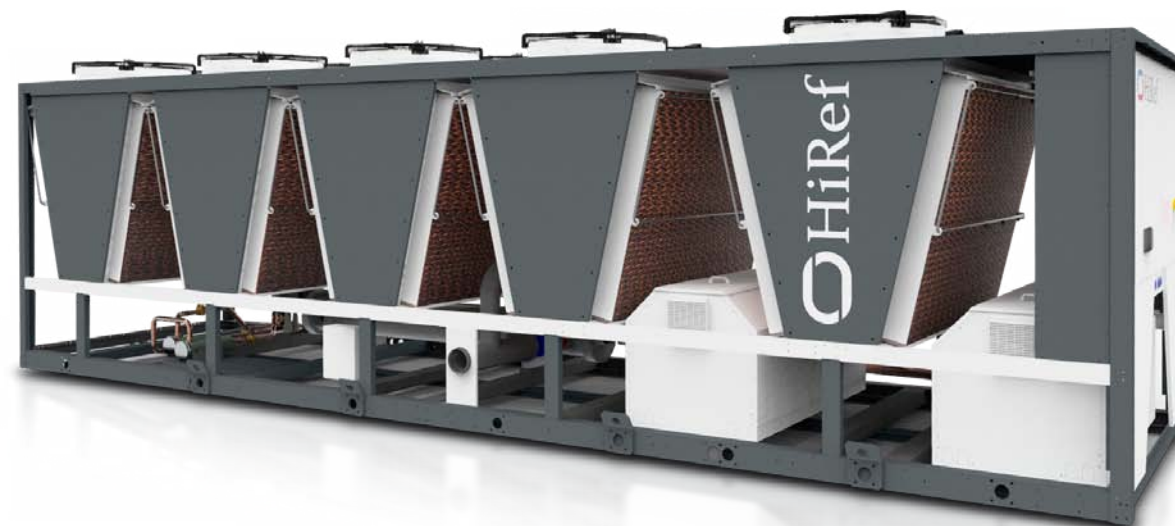
MODULARITY AND EFFICIENCY

The configuration with "V"-type and deep modular condensing coils allows large exchange surfaces and consequently high thermal efficiency in relation to the unit footprint. The Free-Cooling version features exchangers sized so as to get a Total Free-Cooling Temperature (TFT) of 10 °C*.

* Data Center conditions with chilled water 19/25°C

NEW REFRIGERANT R1234ze

The **HCB** range of air-to-water chillers uses the new HFO refrigerant with low GWP ($GWP_{R1234ze} = 6$) with a view to Green Technology.
(Also available with refrigerant R134a).



ADIABATIC HUMIDIFICATION SYSTEM

The adiabatic humidification system on the **HCB** series is made with special panels installed before the dissipation coils and equipped with nozzles that uniformly humidify the adiabatic panels.

This system is based on the thermodynamic process called **adiabatic cooling**: the air, passing through the wet panels, releases heating capacity to the water, absorbing a certain quantity of vapour. As a result, the air temperature at the panels' outlet is reduced.

The air flowing through the condensing coil is colder and leads both to higher efficiencies and a higher cooling capacity. The total annual energy saving is more than 35% compared to a standard chiller of same dimensions (Data Center conditions in Bruxelles with chilled water at 20/25°C).

