

AIR-COOLED CHILLERS

# POWERCIAT

ENERGY EFFICIENCY REACHES  
NEW LEVELS





# POWERCAT: ENERGY EFFICIENT MULTI-PURPOSE COOLING

The new **POWERCAT** range complies with the latest Ecodesign regulations, addressing environmental concerns and offering increased performance to better meet customer needs. Choose between the POWERCAT Standard, High Efficiency and Premium versions and four acoustic levels for noise-sensitive applications.

## 5 REASONS TO CHOOSE POWERCAT



**HIGH ENERGY EFFICIENCY**



**ENERGY SAVINGS**



**NOISE-REDUCTION TECHNOLOGIES**



**SIMPLICITY AS STANDARD**



**ADVANCED SYSTEM MANAGEMENT**



## POWERCAT: THE SOLUTION FOR EVERY MARKET NEED



OFFICES



ADMINISTRATION



HEALTHCARE



SHOPPING  
CENTRES



HOTELS





INDUSTRIES





## DELIVERING EXCELLENT ENERGY EFFICIENCY

POWERCIAT offers three efficiency versions: the Standard, High Efficiency and Premium versions. Available in 18 sizes from 270 to 1500 kW, the range offers air-conditioning solutions for all markets and industrial processes and meets the new European Ecodesign regulation requirements.

<p><b>Standard version</b></p>	<p><b>High Efficiency version</b></p> 	<p><b>Premium version</b></p> 
<p>SEPR up to 5.65</p>	<p>SEER up to 4.43 SEPR up to 6.17</p>	<p>SEER up to 4.54 SEPR up to 6.34</p>
<p>Equipped with fixed speed screw compressor and fixed speed fans. This version is optimized to meet the most economical requirements while answering the new <b>2018 Ecodesign regulation for process cooling applications.</b></p>	<p>Equipped with fixed speed screw compressor and <b>variable speed AC fans.</b> Economical solution which enhances seasonal energy efficiency while answering the new <b>2018 Ecodesign regulation for process and comfort cooling applications.</b></p>	<p>Equipped with fixed speed screw compressor and <b>EC fans technology</b> as standard. This version provides very economical operations and meets the new <b>2018 Ecodesign regulation for process and comfort cooling applications.</b></p>

## NEW SEASONAL PERFORMANCES METRICS

From January 2018, new energy efficiency requirements come into force with the latest European Ecodesign regulation for chillers.

EER full load efficiency belongs to the past. Now, and in the future, the focus is on seasonal efficiency. The Seasonal Energy Performance Ratio (SEPR) and the Seasonal Energy Efficiency Ratio (SEER) ensure precised evaluations of actual operations throughout the year, including seasonal variations in their measurements.





## ENERGY SAVINGS

We know that, today, our customers are using their installations for several different needs. This is the reason why POWERCIAT offers total heating recovery for sizes 808 to 3028 covering numerous applications and enabling our products to deliver substantial energy savings all year round.

With total heat recovery, heat can be reclaimed by the unit for use in hot water production, rather than dissipated through the condenser. Customers see a reduction in the energy consumption of their buildings, lowering their environmental footprint and reducing the need for a separate water heater.

The recovery of the total heating capacity supplied by the chiller enables the unit to produce free additional hot water up to 60°C. This option can be particularly beneficial for applications requiring a large quantity of heat recovery, such as:

- Hotels and leisure centres requiring large quantities of heating even in the summer, for use in sanitary hot water, kitchens, laundries, etc.
- Industrial applications requiring simultaneous heating and cooling.



## NOISE-REDUCTION TECHNOLOGIES FOR NOISE-SENSITIVE APPLICATIONS

Thanks to the noise-reduction technologies used in the new POWERCIAT range, you can guarantee a low noise level and no vibrations.

The range is equipped in standard with the latest generation of low noise fans. Variable speed fans as standard equipment on high efficiency and premium versions adapt the air flow of the unit and eliminate start-stop noise during part-load operation. For more acoustic comfort, three additional solutions can be offered for noise sensitive environment:

### LOW NOISE



**-4 to -6 dB(A)**

thanks to the compressor enclosure.

### XTRA LOW NOISE



**-7 to -10 dB(A)**

thanks to the compressor enclosure and low-speed fans.

### SUPER LOW NOISE



**-9 to -12 dB(A)**

thanks to the compressor enclosure and low-speed fans as well as enhanced sound insulation for the main sources of noise.



## SIMPLICITY RIGHT FROM THE START

The POWERCIAT range puts flexibility and simplicity at the forefront.

### Designed to answer all technical requirements

POWERCIAT range provides an all-in-one solution thanks to the integrated hydraulic module which contains all the water circuit components needed for the system to operate correctly. Hydraulic modules are available from sizes 808 to 1528 and can be equipped with a large choice of pumps:

- Single or twin with automatic switchover to the emergency pump.
- Fixed speed high or low pressure pump.



### Designed for any application and environment

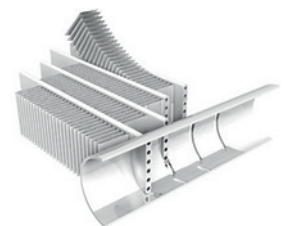
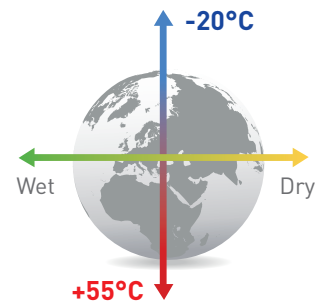
With an **extended operating outdoor temperature range from -20°C to 55°C**, POWERCIAT is adaptable to all climates, in all seasons.

POWERCIAT meets all the needs of the tertiary and industrial sectors, providing an **extended chilled water outlet temperature range of -15°C (with low-brine option) to 15°C**.

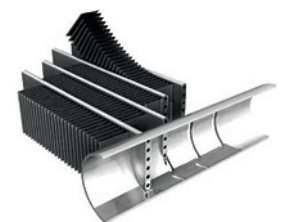
Suitable for use across Europe, Africa and the Middle East, it can adapt to all environments: the latest generation of micro-channel heat exchanger offers **greater corrosion resistance** when compared with the traditional copper/aluminium coil thanks to the all-aluminium design that eliminates the galvanic couples in the coil.

In addition, with two dedicated coating options for aggressive and corrosive environments, POWERCIAT operates smoothly even in the harshest environmental situations:

- Protect2 treatment is the ideal solution for moderately-corrosive urban environments, doubling resistance to corrosion. The coil is immersed in a bath to ensure 100% coverage and protection, as the aluminium surface undergoes a chemical change by a nano scale conversion process.
- For highly corrosive industrial and marine environments, the Protect4 treatment increases resistance to corrosion fourfold. The coil is e-coated in polymer epoxy and a top layer of anti-UV protection is applied.



PROTECT2  
CORROSION RESISTANCE X2



PROTECT4  
CORROSION RESISTANCE X4

# HIGH ENERGY EFFICIENCY

With the new POWERCIAT generation, three efficiency versions are available; the POWERCIAT Standard, High Efficiency and Premium Efficiency versions. Available in 18 sizes from 270 to 1500 kW, the range offers air-conditioning solutions for all markets and industrial processes.



## POWERCIAT LX ST / HE

Sizes	Performances						Sound power level				Dimensions mm			Weight kg
	Pf <sup>(1)</sup> kW	EER <sup>(1)</sup> kW/kW	EUROVENT energy class	SEER <sub>12/7</sub> kW/kW			Lw dB(A)				Lenght	Width	Height	Standard unit
				HE	ST	HE	Standard	Low Noise	Xtra Low Noise	Super Low Noise				
808	273	3,13	A	4,35	4,78	5,94	100	94	87	-	3604	2253	2297	3190
908	298	3,10	A	4,41	5,28	6,08	100	94	87	-	3604	2253	2297	2297
1008	325	3,09	B	4,38	5,55	6,17	100	95	87	-	3604	2253	2297	2297
1108	391	3,21	A	4,29	4,99	5,81	100	96	90	-	4798	2253	2297	2297
1358	442	3,08	B	4,14	5,35	5,76	102	96	91	89	4798	2253	2297	3899
1528	499	3,15	A	4,26	5,45	5,88	100	96	91	89	5992	2253	2297	4261
1858	612	3,13	A	4,10	5,22	5,67	102	98	93	91	7186	2253	2297	4962
2008	679	3,31	A	4,43	5,65	6,13	100	96	92	90	7186	2253	2297	5093
2158	723	3,08	B	4,11	5,14	5,55	103	98	93	91	7186	2253	2297	5376
2308	785	3,10	A	4,34	5,10	5,57	103	98	94	92	7186	2253	2297	5687
2528	841	3,24	A	4,33	5,39	5,83	101	98	93	91	8380	2253	2297	6072
2628	886	3,12	A	4,13	5,17	5,57	104	99	95	93	8380	2253	2297	6376
3028	976	3,09	B	4,10	5,09	5,55	103	98	94	92	9574	2253	2297	6827
3428	1144	3,27	A	4,28	5,42	5,77	104	98	94	93	11962	2253	2297	8070
3828	1247	3,23	A	4,42	5,49	5,74	103	98	94	93	11962	2253	2297	8211
4008	1326	3,16	A	4,12	5,40	5,62	105	101	99	97	11962	2253	2297	8790
4408	1433	3,06	B	4,15	5,46	5,55	105	99	95	94	11962	2253	2297	8867
4608	1485	3,10	A	4,10	5,13	5,38	105	99	96	95	13157	2253	2297	9181

(1) In accordance with EN 14511-2013 EUROVENT Chilled water = 12°C/7°C Outside air = 35°C

Pf = Cooling capacity

EER = Full load performance coefficient

SEER<sub>12/7</sub>-SEPR<sub>12/7</sub> = Seasonal performance coefficient in accordance with applicable Ecodesign regulation (EU) No 2016/2281



### POWERCIAT LX XE

Sizes	Performances					Sound power level			Dimensions mm			Weight kg
	Pf <sup>(1)</sup> kW	EER <sup>(1)</sup> kW/kW	EUROVENT energy class	SEER <sub>12/7</sub> kW/kW	SEPR <sub>12/7</sub> kW/kW	Lw dB(A)			Lenght	Width	Height	Standard unit
						Standard	Low Noise	Xtra Low Noise				
808	274	3,22	A	4,36	6,06	99	93	87	3604	2253	2297	3190
908	299	3,19	A	4,44	6,22	99	93	87	3604	2253	2297	3224
1008	327	3,15	A	4,43	6,34	99	94	87	3604	2253	2297	3245
1108	394	3,32	A	4,38	5,93	99	95	90	4798	2253	2297	3834
1358	444	3,13	A	4,24	5,88	101	95	91	4798	2253	2297	3899
1528	501	3,22	A	4,40	6,05	99	95	91	5992	2253	2297	4261
1858	615	3,23	A	4,12	5,81	101	97	93	7186	2253	2297	4962
2008	682	3,34	A	4,54	6,30	99	96	92	7186	2253	2297	5093
2158	727	3,17	A	4,21	5,68	103	97	94	7186	2253	2297	5376
2308	789	3,19	A	4,45	5,74	103	98	94	7186	2253	2297	5687
2528	845	3,32	A	4,53	5,96	101	97	94	8380	2253	2297	6072
2628	890	3,19	A	4,20	5,76	104	99	95	8380	2253	2297	6376
3028	980	3,20	A	4,14	5,65	102	98	94	9574	2253	2297	6827
3428	1150	3,36	A	4,49	5,93	103	98	94	11962	2253	2297	8070
3828	1253	3,30	A	4,51	5,91	102	98	94	11962	2253	2297	8211
4008	1333	3,22	A	4,21	5,73	104	100	99	11962	2253	2297	8790
4408	1440	3,12	A	4,25	5,67	104	99	95	11962	2253	2297	8867
4608	1493	3,19	A	4,10	5,49	104	99	96	13157	2253	2297	9181

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EQUIPMENTS	POWERCIAT RANGE
Disconnect safety switch	✓
Control circuit transformer	✓
Water flow controller	✓
Electronic expansion valve	✓
Multi language touch sensitive controller	✓
Modbus-jbus communication	✓
Webserver	✓
Low Noise, Xtra Low Noise	•
Super Low Noise <sup>(1)</sup>	• Sizes 1358 to 4608
60 Pa available pressure fans	•
Low temperature glycol water down to -12°C	• ST-HE version
Low temperature glycol water down -15°C	• XE version
Electrical panel protection (IP54, tropicalisation)	•
Protection grill	•
Total heat recovery	• Sizes 808 to 3028
Winter operation down to -20°C <sup>(2)</sup>	•
Compressor suction and discharge service valves	•
Hydraulic module (single or twin pump-High or Low Pressure)	• Sizes 808 to 1528
Evaporator with reversed water inlet/outlet	•
Exchanger flexible connection <sup>(3)</sup>	•
Anti-vibration mounts <sup>(3)</sup>	•
Lead / Lag operation	•
Lon-BACnet / IP communication	•
Power factor correction	• Sizes 808 to 3028
MCHE Protect2 / Protect 4 anti-corrosion protection	•
Adjustable set point via 4-20 mA signal <sup>(3)</sup>	•
Free cooling drycooler management <sup>(3)</sup>	•
CIAT M2M supervision 1 to 3 units <sup>(3)</sup>	•

✓ Standard equipment

• Option

(1) Available during 2018 for XE version

(2) Standard equipment for HE-XE versions

(3) Available during 2018



# CIAT AT YOUR SERVICE

At CIAT, our objective is to develop partnerships with you and provide high quality service throughout the lifecycle of your HVAC system. We understand your changing needs, and develop smart services and energy solutions that optimise energy performance and enable savings.

We provide the support you need to get the most out of your solution:

- Preventive and corrective service maintenance.
- On-site inspection by experts close at hand.
- Online parts shop.
- Dedicated hotline for off-site technical support.

We also offer you a comprehensive range of smart services:

- Consulting on energy performance upgrade.
- Advanced monitoring and plant system management solutions.
- Equipment and system modernization.

PRESENT  
IN  
OVER **50**  
countries  
OVER **80**  
years  
OF EXPERIENCE  
AVAILABLE  
**24/7**



[www.ciat.com](http://www.ciat.com)