

# i-CHILLER<sup>n</sup> COMPACT

**COMPLETE TEMPERATURE CONTROL SOLUTIONS  
FOR PROCESS & INDUSTRIAL APPLICATIONS**



**PLANET-FRIENDLY PROCESS COOLING RANGE  
FULLY PACKAGED AIR-COOLED CHILLERS  
WITH LOWEST AVAILABLE ODP/GWP**

1.7kW to 4.4kW



**R290**

# THE MARKET LEADING i-CHILLER

## THE NATURAL CHOICE FOR INDUSTRY AND OUR PLANET

Modern industries require technical solutions which ensure increased productivity, high precision, elevated product quality, reduced overall system costs and high environmental awareness.

- i-Chiller Compact-n liquid chillers are designed specifically for industry using the environmentally friendly natural refrigerant R290. The innovative evaporator-in-tank configuration offers unique benefits to industrial users, maintaining fail-safe operation in all applications and conditions.

- i-Chiller Compact-n is compact and easy to use and maintain; meticulous attention to every detail assures high reliability even in harsh environments, with minimum downtimes.
- Extended operating limits ensure i-Chiller Compact-n always operates under even the most adverse and deviating conditions, allowing optimum operation at all times.
- i-Chiller Compact-n: natural, ecological, industrial.

## SUITABLE FOR INDUSTRIES SUCH AS:

FOOD & BEVERAGE | PLASTICS | CHEMICAL & PHARMAECEUTICAL | METAL WORKS



EcoDesign  
Compliant

## BENEFITS

- Completely natural refrigerant R290, the most ecological solution.
- Unique evaporator mounted within the tank and designed for industry, ensuring reliable operation in even the most demanding industrial applications.
- Non-ferrous hydraulic circuit, allowing fluids aggressive to carbon steel to be treated and maintaining maximum quality and cleanliness of the process fluid.
- Reliable and robust: ICS Cool Energy chillers keep working whatever the conditions, for years on end.
- Extended operating limits: liquid outlet temperatures from 0 °C up to +30 °C, ambient temperatures from +5 °C up to +45 °C.
- All i-Chiller models are ErP SEPR HT Tier 2 compliant.
- Innovation which works: rotary compressors, microchannel condensers, microprocessor control technology.
- Simple installation and compact dimensions, the robust structure with eyebolts allows easy movement of the unit.
- Easy maintenance: a rational component layout, simple refrigerant circuit and fully numbered electrics simplify verifications and maintenance, which can even be performed with the unit running.

## UNIQUE EVAPORATOR-IN-TANK

ICS Cool Energy's evaporator is a breakthrough in industrial applications, offering notable benefits and ensuring utmost peace of mind in even the most adverse and varying conditions.

- **INTEGRATED** > Innovative evaporator mounted inside the tank: compact, increased tank size, stable liquid temperature.
- **INDUSTRIAL** > Wide fin spacing resists water fouling: industrial and impure liquids pose no problems.
- **INGENIOUS** > 0°C to +30 °C water outlet, delta T up to 10 °C.
- **INVINCIBLE** > Durable, long-lasting & dependable, many ICS Cool Energy units have been operating for well over 30 years.
- **INVALUABLE** > Non-ferrous liquid circuit allows operation under all conditions and in even the most demanding industries.
- **INTELLECTUAL** > Energy saving, low pressure drop, high water flows and minimal heat gain.



## FEATURES

- **NATURAL** > R290 is a totally natural refrigerant.
- **ECOLOGICAL** > With a GWP of only 3 and an ODP of zero, R290 is one of the most ecological refrigerants and does not impact the environment.
- **EFFICIENT** > R290 offers a higher EER versus traditional alternatives, being pure it has no glide.
- **ECONOMICAL** > Applying R290 avoids carbon taxes and benefits from local national incentives.
- **SAFE & RELIABLE** > R290 is non toxic, with refrigerant charge in compliance with IEC 60335-2-89.
- **FUTURE PROOF** > R290 is exempt from HFC phase-out programs, consequently your chiller is future proof.
- Refrigerant fluid R290 (GWP=3, ODP=0). Due to R290 being classified as flammable (A3), a DSEAR (Dangerous Substances and Explosive Atmospheres Regulations 2002) Risk Assessment is required prior to siting and installation.
- Hermetic rotary compressors.
- High efficiency finned coil evaporator installed inside the storage tank, with copper tubes and aluminium fins.
- Polyethylene coolant storage tank fitted with drain valve, filling and overflow connections and a visual level indicator.
- Air-cooled aluminium microchannel condenser with protective coating and a removable metal mesh filter.
- Peripheral non-ferrous P3 pump (3 barg nominal available head pressure).
- Axial fan equipped with plastic material blades.
- Non ferrous atmospheric pressure hydraulic circuit with a 0-6 bar pressure gauge.
- Water by-pass for safe continuous operation.
- Hydraulic circuit compatible with glycol concentrations up to 30%.
- High pressure switch with automatic reset.
- Easy to use parametric microprocessor control.
- Lamination device: capillary tube.

## OPTIONS

- Peripheral non-ferrous P5 pump (5 bar nominal available head pressure).
- Hydraulic sectioning system (M08-M10).
- Industrial multipole connector (M08-M10).
- Stainless steel frame.

## KITS

- Hydraulic filter.
- Automatic hydraulic by-pass.
- Dynamic set point.
- Antivibration mounts.
- Wheels kit.

## SPECIFICATION

i-Chiller Compact-n		IC03n	IC05n	IC08n	IC10n
Nominal cooling capacity (1)	kW	1,19	1,83	2,21	2,98
Total absorbed power (1)	kW	0,43	0,66	0,81	1,10
EER (1)		2,81	2,77	2,72	2,72
Nominal cooling capacity (2)	kW	1,71	2,68	3,23	4,37
Total absorbed power (2)	kW	0,35	0,59	0,73	1,01
EER (2)		4,86	4,54	4,43	4,33
SEPR HT (3)		5,14	5,01	5,04	5,01
Power supply	V/Ph/Hz	230 ±10% / 1 - PE / 50			
Sound pressure level (4)	dB(A)	46	47	47	47
Width	mm	486	486	486	486
Depth	mm	660	660	660	660
Height	mm	622	622	872	872
Operating weight without pump	kg	63	65	91	94
Operating weight with P3 pump (option)	kg	68	71	97	100
Storage tank volume	l	15	15	22	22
Evaporator water connections	Rp	1/2"	1/2"	1/2"	1/2"

Data declared according to EN 14511:2018. All data are referred to standard units without accessories/options which require electrical supply, without pump and in nominal working conditions. The listed sound pressure levels are related to base unit with P3 pump option.

(1) Evaporator inlet/outlet water temperature 12/7 °C and external air temperature 35 °C. Total absorbed power of compressor and fan;

(2) Evaporator inlet/outlet water temperature 20/15 °C and external air temperature 25 °C. Total absorbed power of compressor and fan;

(3) Data declared in compliance with the European Regulation (EU) 2016/2281 with regards to EcoDesign requirements for cooling products and high temperature process chillers;

(4) Sound pressure level in free field at 10 m from unit condenser side and 1,6 m from ground.



**PROCESS TEMPERATURE CONTROL SPECIALISTS  
SALES. HIRE. SERVICE.**

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ICS Cool Energy are specialists in critical and process temperature control solutions to keep industry running. Since 1989, ICS Cool Energy have been providing technical solutions helping businesses meet compliance requirements, reduce their energy consumption, maintenance, and operative costs. ICS Cool Energy offer long term and temporary cooling and heating rental, along with equipment and systems purchase, maintenance and emergency breakdown support. ICS Cool Energy are a part of Trane Technologies, a global climate innovator. For more information, visit [www.icscoolenergy.com](http://www.icscoolenergy.com) or [www.tranetechnologies.com](http://www.tranetechnologies.com).



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