

i-CHILLER

PROCESS MAX 

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



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

228kW to 1303kW



THE MARKET LEADING i-CHILLER

THE SUSTAINABLE COOLING SOLUTION FOR INDUSTRY AND OUR PLANET

i-Chiller Process-e air-cooled process chillers are designed specifically for use in the most demanding industrial applications, to meet current and future needs.

- i-Chiller Process Max-e has been developed to satisfy the seasonal efficiency performances required by the ERP EcoDesign Regulation, minimising the environmental impact through the low GWP refrigerant R454b.
- i-Chiller Process Max-e has a fully packaged configuration and features an internal storage tank and pump as standard, offering a plug & play solution with worldwide acclaim. All internal components are accessible for easy maintenance, with advanced electronic controls (web server integrated).

- i-Chiller Process Max-e is hugely versatile, and its reliability, combined with extended operating limits for starting up and operating in the worst conditions, makes it suitable for every type of process.
- i-Chiller Process Max-e is the example of targeted design, essential to obtain a reduced management costs without excluding reliability and environmental protection.
- i-Chiller Process Max-e has acoustic configurations SHE and SSN with reduced sound levels.
- i-Chiller Process Max-e offers a wide choice of options and kits for easy installation.

SUITABLE FOR INDUSTRIES SUCH AS:

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



FEATURES

- Fully packaged (everything in one box)
- Over 30 years proven reliability
- More than 100,000 projects completed
- Suitable for outdoor installation

HIGH EFFICIENCY AXIAL FANS

Complete with protective grids and die-cast aluminium aerofoil blade profiles;

ELECTRICAL PANEL

- Electrical cabinet protection rating IP54
- Electronic microprocessor controller with touch screen user display

SCROLL COMPRESSORS

Equip with 4, 6 or 9 hermetic scroll compressors, always connected in tandem or trio in two or three refrigerant circuits

SHELL & TUBE EVAPORATOR

With a carbon stell shell and copper tubes

CENTRIFUGAL PUMP

3 bar as standard

GALVANISED CARBON STEEL STRUCTURE

Sturdy galvanised carbon steel structure with epoxy polyester powder coating.

R454B

- Refrigerant R454B with a GWP of 466.
- Seasonal efficiency compliant with the parameters required by the ErP regulation for SEPR HT (Tier 2 01/01/2021 - base version) and SEPR MT (Tier 2 02/07/2018 - low water temperature version, down to -10 °C);
- Crankcase heater compressor and phase-monitor
- Electronic expansion valve

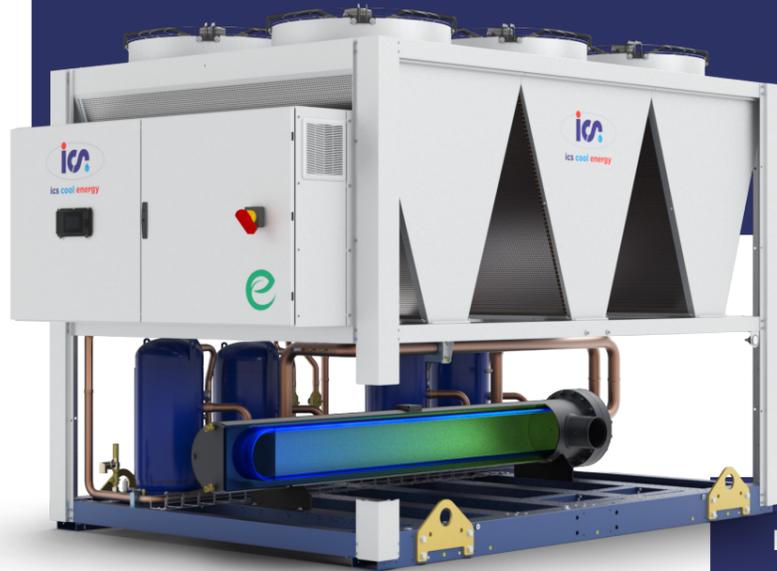
- "Victaulic" hydraulic connections kit (supplied for each unit)
- Refrigerant and oil charge
- Tests and checks performed in factory
- Modbus RS485 serial output for connections to supervision systems;
- Master/slave configuration manageable between 2 units.

UNIQUE SHELL AND TUBE EVAPORATOR

With a carbon steel shell and copper tubes, it has a single water circuit and a double refrigerant circuit to achieve the maximum efficiency also during the partial load functioning.

Advantages:

- Longer life when compared with plate exchangers
- Prevents blockages occurring with impurities found in process water
- Automatic air bleed valve and a drain valve for easy filling of water and drainage
- Anti-freeze function integrated into electronic controller



HIGH POWER PUMP

Overcomes larger process pressure drops

- Typical system process pressure drop: **2-3 bar**
- HVAC Chiller System: **1-1.5 bar**



OPTIONS

INTEGRATED BUFFER TANK

- Built-in carbon steel cold storage buffer tank

Advantages:

- Improves temperature stability of the chilled water to process
- Helps reduce overall plant footprint
- Reduces compressor starts

STANDBY PUMP



ECODESIGN COMPLIANT



INDIVIDUALLY FACTORY TESTED



3-BAR PUMP AS STANDARD



SPECIFICATION

ACOUSTIC CONFIGURATIONS

- HE - Basic acoustic configuration
- SHE - Low noise acoustic configuration
- SSN - Very low noise acoustic configuration

i-Chiller Process Max-e ASG2	065			075			090			105			115			140		
Versions	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN
Nominal cooling capacity (1) kW	228	219	208	260	246	236	305	285	269	371	353	339	415	390	374	487	451	432
Total absorbed power (1) kW	57	58	62	60	62	65	76	81	86	82	85	88	97	101	106	119	128	134
EER (2)	4,01	3,78	3,38	4,34	3,96	3,64	4,00	3,51	3,14	4,50	4,17	3,87	4,27	3,85	3,53	4,09	3,52	3,23
SEPR HT (3)	5,29	5,46	5,39	5,63	5,54	5,64	5,45	5,24	5,68	5,62	5,73	5,85	5,58	5,51	6,00	5,61	5,24	5,89
Power supply V/Ph/Hz	400 ± 10% / 3-PE / 50																	
Circuits / Compressors N°	2/4			2/4			2/4			2/4			2/4			2/4		
Sound power level (4) dB(A)	91,3	83,7	79,3	92,9	85,3	80,6	94,4	86,8	80,7	95,3	87,8	80,7	96,1	88,6	82,5	96,1	88,8	80,6
Sound pressure level (5) dB(A)	63,3	55,7	51,3	64,9	57,3	52,6	66,4	58,8	52,7	67,3	59,8	52,7	68,1	60,6	54,5	68,1	60,8	52,6
Width mm	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191
Depth mm	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091	3091
Height mm	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424
Installed weight kg	1626			1820			1850			2240			2317			2590		

i-Chiller Process Max-e ASG2	150			160			170			190			210			240		
Versions	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN
Nominal cooling capacity (1) kW	537	507	486	593	556	533	647	614	591	713	672	643	787	747	718	867	815	781
Total absorbed power (1) kW	120	125	130	129	136	142	137	141	146	159	167	174	167	173	179	188	198	207
EER (2)	4,49	4,06	3,74	4,61	4,10	3,76	4,71	4,34	4,04	4,49	4,03	3,71	4,71	4,31	4,01	4,61	4,11	3,78
SEPR HT (3)	5,88	5,69	6,16	5,89	6,21	6,14	5,82	5,76	6,27	5,76	6,11	6,14	5,95	5,80	6,29	6,05	5,80	6,34
Power supply V/Ph/Hz	400 ± 10% / 3-PE / 50																	
Circuits / Compressors N°	2/4			2/6			2/6			2/6			2/6			2/6		
Sound power level (4) dB(A)	97,1	89,8	81,9	94,8	87,5	81,8	95,6	88,2	82,8	96,8	89,4	82,8	98,1	90,8	83,7	99,5	92,2	83,7
Sound pressure level (5) dB(A)	69,1	61,8	53,9	66,8	59,5	53,8	67,6	60,2	54,8	68,8	61,4	54,8	70,1	62,8	55,7	71,5	64,2	55,7
Width mm	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191
Depth mm	4455	4455	4455	4455	4455	4455	5445	5445	5445	5445	5445	5445	6435	6435	6435	6435	6435	6435
Height mm	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424
Installed weight kg	3180			3249			3788			3994			4617			4667		

i-Chiller Process Max-e ASG2	270			300			330			360		
Versions	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN
Nominal cooling capacity (1) kW	990	939	883	1093	1028	965	1216	1144	1071	1303	1232	1155
Total absorbed power (1) kW	214	224	242	235	251	273	269	284	306	290	303	325
EER (2)	4,62	4,19	3,65	4,64	4,10	3,53	4,52	4,03	3,50	4,49	4,07	3,55
SEPR HT (3)	6,02	6,48	6,25	6,18	6,51	6,30	5,90	5,94	6,13	6,04	5,82	6,25
Power supply V/Ph/Hz	400 ± 10% / 3-PE / 50											
Circuits / Compressors N°	2/6			2/6			3/9			3/9		
Sound power level (4) dB(A)	99,0	91,8	86,7	99,8	92,6	87,4	99,7	92,5	87,3	99,7	92,6	87,4
Sound pressure level (5) dB(A)	71,0	63,8	58,7	71,8	64,6	59,4	71,7	64,5	59,3	71,7	64,6	59,4
Width mm	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191	2191
Depth mm	7425	7425	7425	7425	7425	7425	8415	8415	8415	9405	9405	9405
Height mm	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513	2513
Installed weight kg	5467			5667			6467			6667		

Data declared according to UNI EN 14511:2018. All data refers to standard units without accessories/options which require an electrical feeding source and in nominal working conditions. The listed noise levels, weights and dimensions refer to base units with no options fitted.

(1) Data referred to nominal conditions, external ambient temperature 25 °C and evaporator water temperature IN/OUT 20/15 °C;

(2) Data referred to the full load functioning and nominal conditions, external ambient temperature 25 °C and evaporator water temperature IN/OUT 20/15 °C;

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

(4) Determined on the basis of measurements taken in accordance with the standard ISO 3744;

(5) Average value obtained in free field on a reflective surface at a distance of 10 m from the external side of the electrical panel of machine and at height of 1.6 m from the unit support base. Values with tolerance ± 2 dB. The sound levels refer to operation of the unit under full load in nominal conditions.



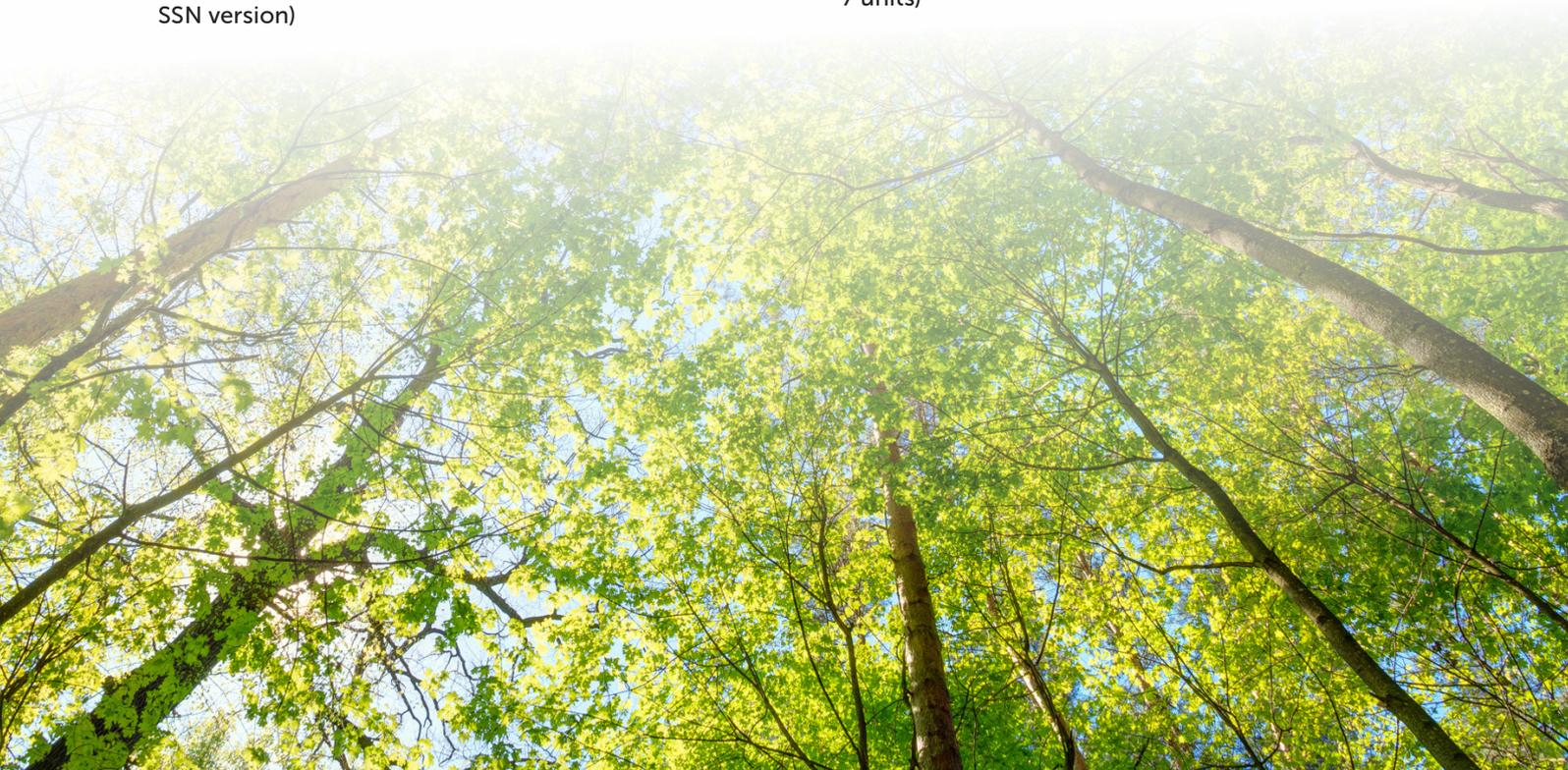
OPTIONS

- MWT version (down to -10 °C outlet water temperature)
- Low ambient temperature option (down to -20 °C);
- Stainless steel shell & tube evaporator;
- Single or twin water pump with low or medium head pressure
- Water accumulation tank
- Anti-freeze protection heaters for heat exchangers, pump/s and water accumulation tank (if included)
- IN/OUT compressors valves
- Soundproof jacket or housing for compressors (for HE configuration)
- High efficiency EC brushless fans (base option for SSN version)

- Total heat recovery
- Protection coating for condenser coils, suitable for installation in aggressive environments
- Microchannel condenser coils
- Metallic mesh filters for condenser coils protection
- Soft starters to reduce by 20% the unit's starting current

KITS

- Antivibration mountings
- Replicated remote user display
- Supervision system xWEB300D PRO
- Modularity kit (master/slave configuration from 3 to 7 units)



ics cool energy

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

Date: 07/23

Ref:i-Chiller Process Max-e_2023

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 or www.tranetechnologies.com.



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