CARBON TRUST | ACCREDITED SUPPLIER

ics cool energy

i-CHILLER

Reliable, low-maintenance process cooling

ENERGY EFFICIENT
PACKAGED AIR COOLED CHILLERS

Cooling capacity 1.25 - 230kW

Consultative approach with engineering expertise

Stock on-site for fast delivery

Full turn-key, energy efficient solutions from -40°C to 400°C

Planned Preventative Maintenance

Extended warranty up to 5 years

24/7 technical support

Hire solutions

Contingency plans

ics cool energy

WE MAKE IT WORK

As a complete temperature control solutions provider, ICS Cool Energy provide a holistic approach to every project, so you can benefit from precise, cost-effective and energy efficient solutions that are tailored to your operation – enabling you to reduce your operative and maintenance costs.

For over 30 years we've been providing process cooling, process heating, maintenance and hire solutions to manufacturers of all sizes, world-wide.

We're a privately owned, ISO, Eurovent and Carbon Trust accredited company with a £50m turnover and sites across Europe. Our wide network of engineers and 24/7 technical support enable us to provide a local service, with the reassurance that comes with a well-established partner.

CONTENTS

i-CHILLER

Fully packaged air-cooled i-Chiller range

With cooling capacities from 1.25kW up to 230kW, the i-Chiller range is designed specifically for manufacturing processes – providing control, reliability, reduced energy, manufacturing and maintenance costs.

Key benefits of the i-Chiller range include:

- Stock available immediately
- Fast customisation of standard models to suit your process
- Minimal footprint, plug & play – fully packaged unit including pump, tank, controller and pipework
- Combined large buffer tank with integral unique coil in-tank evaporator design, adapted for varying load and flow conditions whilst minimising pressure drops
- 1.25-4.8kW non-ferrous range for internal environments

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Built for reliability and longevity

- Blockage protection from coil in-tank evaporator design
- Internal water bypass to protect pumps against dead heading
- Efficient and durable with scroll compressors
- Protected by condenser air filters for reduced maintenance and improved life expectancy
- Premium components including phase monitor pressure switches, level sensors, crankcase heaters and an internal hydraulic bypass circuit which are all integral to the systems' core

Energy efficient

All i-Chillers are certified by Eurovent and individually tested on our factory test rig to achieve and assure quality in-line with ISO 9001 and 14001 standards. A complete check of the refrigerant charge, leakage controls and microprocessor are completed before every delivery which offers a long-term sustainable standard of reliability.

Site consultation

To find out how the i-Chiller can optimise your process cooling, talk to an experienced engineer today on 0800 774 7426.

THE PERFECT SOLUTION, WHATEVER YOUR APPLICATION

- Automotive
- Food & Beverage
- Chemical & Pharmaceutical
- Plastics, Rubber & Packaging
- Metal works
- Other Manufacturing
- Biomass
- Aerospace

i-CHILLER

RELIABLE, LOW-MAINTENANCE PROCESS COOLING

Eurovent Accredited & Eco-design Compliant

i-Chiller products are fully certified by Eurovent. ICS Cool Energy has obtained the Eurovent certification, adhering to the LCP programme. i-Chiller units are Eco-design compliant and provide reduced energy costs.

Complete Reliability

i-Chiller products are produced with performance in mind and with component safety considered at every stage, with phase monitoring, pressure switches, glycol/water level sensor, crankcase heaters and an internal hydraulic bypass circuit all integral to the system's core.

Factory Testing

All models are individually tested by ICS Cool Energy engineers to ensure quality assurance in line with ISO9001. A full check of the refrigerant charge, leakage controls and controller is completed before every delivery, ensuring a long-term, sustainable standard of reliability.

User-friendly digital Controls

In addition to leading energy efficiency and environmentally friendly refrigerants, the i-Chiller incorporates the latest technology with unique, easy to use digital control and remote control options.

Intelligent Engineering

ICS Cool Energy's i-Chiller range of units feature efficient hermetic scroll compressors which operate at low power level, saving energy throughout operation. Supporting this environmental stance, the units feature highly efficient finned coil evaporators.

Environmentally Friendly Innovation

The i-Chiller range utilises the most sustainable R410A refrigerant, with R134a gases used in smaller capacity models. The R410A refrigerant offers an improved carbon footprint, helping to lower the impact of each process, safeguarding both your business and the natural environment for the foreseeable future.

Full Turnkey Solution

We provide a consultative approach to every project. With our in-house design and modifications team, we can tailor the i-Chiller and mechanical pipework to meet your process needs.

Peace of Mind

The i-Chiller range is available with a market leading warranty up to 5 years in conjunction with a planned preventative maintenance programme – protecting your operation from breakdown and providing ongoing cost reduction.

DURABLE EVAPORATOR

The i-Chiller units feature highly efficient finned coil heat exchangers with copper pipes and aluminum fins. The coil in-tank evaporator is highly efficient, durable and offers reduced ambient heat gain and a stable temperature of the process fluid. This process fluid flows in contact with the finned surface which is cooled by the refrigerant inside the tubes, allowing the innovative i-Chiller to operate with high flow rates and lowered pressure drops for maximum reliability when working in heavily industrial applications.

Furthermore, there is no risk of the heat exchanger freezing thanks to a temperature sensor and control which allows the compressors to turn off in case of a fault.

PUMPS

The pumps which feature in the i-Chiller range are centrifugal with silicone-free seals and are available in two different configurations:

Pump P3 - nominal head pressure 3 bar, stainless steel water side mod: iC215-iC525 and cast iron mod: iC530-iC660.

Pump P5 - nominal head pressure 5 bar, stainless steel water side mod: iC215-iC416 and cast iron mod: iC520-iC660. Also available in the configuration with double pump P3 and P5 or P5 and P5 with automatic switching.

SCROLL COMPRESSORS

The compressors feature orbiting scrolls with two-pole electric motors which are mounted on anti-vibration rubber dampers offering protection against overheating, excessive currents and high temperature exhaust gases.

The axial/radial compliance combined with compact sizing of the rotating components and the absence of suction and discharge valves allows for reduced energy consumptions, lowered vibrations due to less moving parts and high resistance to liquid refrigerant returns.

ELECTRIC PANEL

The controller is electronically separated from the power section through the use of a transformer. The electronic section is fitted with main interlocked door which prevents access while the power supply is on. The electrical equipment is compliant with EN 60204-1 featuring an electrical panel compliant with EN 60529.

The i-Chiller is fully tested for electromagnetic compatibility in-line with EMC standards. A phase monitor also provides protection against phase loss and reversal.

CONDENSOR SECTION

The copper/aluminum air-cooled condenser coils are fitted on one side only which reduces space requirements and can work efficiently at high ambient temperatures of up to 46˚C. The chiller model iC303 and above feature an aluminum cleanable air filter as standard.

STRUCTURE

The i-Chiller range is manufactured using heavy duty galvanised carbon steel panels protected by an epoxy polyester coating (RAL 7035, base RAL 5013). The stability of the base allows easy and secure handling of the unit with a forklift.

MULTIPLE CIRCUITS

Units feature multiple circuits and two compressors which provide accurate control and durability. Models between iC640 and iC780 feature four compressors within two circuits which offer maximum energy efficiency levels at both full and partial loads as well as compressor rotation and unloading functions.

ANCILLARIES

Atmospheric Pressure Kit

The kit is installed at the back of the i-Chiller and features a generous water tank with an easy to read water level indicator, encased within a tough painted steel cabinet. The kit features a tap, making it easy to fill the water tank directly.

Pressurised Fill Kit

Ideal for pressurised hydraulic circuits (up to 6 barg). The kit provides components required for safety and ease of operation including a pressure reducer, water inlet valve, pressure gauge, automatic safety relief valve, auto air-vent and expansion tank.

Remote Control

Advanced remote controls featuring LED display for installation up to 150m away from the unit.

Remote X

Remote access connectivity to your i-Chiller, 24/7. You can monitor up to 4 chillers simultaneously, for convenience and improved control.

EC Brushless Axial-Fans

The modern EC axial fans offer high pressure (max 150 Pa) and operate by a synchronous electric motor featuring permanent magnets and variable speed control. The innovative brush-less fan technology features reduced electrical consumption and an increase in both reliability and outright energy efficiency.

Certified Performance

Each and every i-Chiller unit is certified by Eurovent and adheres to the LCP programme. The i-Chiller is compliant with the 2018 Eco-design Directive legislation - future-proofing your operation.

Energy-efficient and environmentally friendly

- O-zone friendly R410A refrigerant provides a high level of performance thanks to its outstanding heat conductivity
- Hermetic scroll compressors offer high efficiency operation; the low absorbed power levels minimise waste energy and reduce energy costs
- Recyclable materials are used in manufacture to help reduce the carbon footprint
- All models are suitable for use with water, along with both ethylene and propylene glycol solutions of up to 30% concentration

Simple installation and easy maintenance

- Fully-packaged 'plug-in' solution which is suitable for both internal and external environments
- Standard hydraulic configuration includes a high-pressure process pump and generously sized storage tank both mounted integrally, along with a manual filling kit with atmospheric expansion tank mounted on the rear
- All components are housed within a compact frame, easily accessible to aid servicing and maintenance
- Maintenance is easy thanks to the layout of the hydraulic components, simple refrigerant circuit and numbering of electric cables

High quality components

- i-Chiller components are selected with reliability and performance in mind
- Advanced microprocessor controller equipped with digital display included
- Copper tube / aluminum finned condenser coils with axial condenser fans equipped with crescent-shaped blades as standard
- In addition, model IC303 and above are supplied with removable, washable condenser air filters designed for longevity and efficiency – even when installed within industrial environments

Extended operating limits

- The unique evaporator-in-tank configuration is designed specifically for process cooling
- The high-efficiency copper tube aluminum finned design allows a wide range of cooling fluid flow rates while always maintaining a low pressure drop, ensuring reliable operation even in the most demanding conditions
- Capable of accepting cooling fluid inlet temperatures of up to 35°C and outlet temperatures down to -10°C
- Operates within a varied range of ambient conditions, providing maximum flexibility
- The large volume of cooling fluid stored in the tank ensures that outlet temperatures are kept constant even when sudden variations in load are encountered
- The robust evaporator design ensures that dirt or other particles often found within industrial cooling systems do not cause blockages – preventing failure

Safety features

- Phase monitor (protecting against phase loss and phase reversal)
- High and low refrigerant pressure switches
- Refrigerant pressure gauges (model IC303 and above)
- Anti-freeze sensors
- Electronic tank level sensor with water conductivity function (protecting the unit in the event of the tank not being full)
- Compressor crankcase heaters
- Internal hydraulic bypass between the inlet and outlet connections (protecting the unit in the event of flow being incorrectly stopped)
- Mains electrical isolator
- Circuit breakers fitted to compressors, fans and pumps

i-CHILLER COMPACT

In addition to the above the i-Chiller Compact offers:

- Smaller cooling duties from 1.25-4.8kW
- All models boast an extremely compact footprint and a robust structure to aid mobility
- All models are designed for use with a single-phase electrical power supply
- Models IC02C-IC03C are also suitable for both 50 Hz and 60 Hz electrical power supplies
- A fully non-ferrous hydraulic circuit is included as standard for use in applications where cleanliness of the cooling fluid is paramount

Options and bespoke modifications

- An extensive range of accessories, kits and bespoke factory modifications are available, allowing each unit to match your specific requirements
- Various pump configurations are available, including run / standby options to provide added resilience, and larger pumps for applications requiring increased head pressure
- Model IC215 and above can be supplied with a pressurised auto-fill kit suitable for use within pressurised circuits (up to 6 bar g)
- Fully non-ferrous hydraulic circuit for use in applications where cleanliness of the cooling fluid is paramount
- Condenser fans capable of overcoming high head pressure, allowing exhaust air to be ducted away when installed internally
- Close control version allowing extremely precise regulation of the process fluid outlet temperature (±0.5°C)
- Low ambient temperature version ensuring normal operation in ambient conditions as low as -20°C
- High efficiency 'HE' versions include EC fans and oversized condenser coils, achieving energy efficiency class A
- Dual frequency 'DF' versions able to operate with both 50 Hz and 60 Hz electrical power supplies

			iC215	iC220	iC303	iC305	iC408	iC410	iC412
	Cooling capacity (1)	kW	7.15	8.48	13.6	19.9	30.7	39.5	48.9
	Total absorbed power (1)	kW	2.18	2.01	3.33	4.39	7.38	8.38	11.3
	EER (1)	-	3.28	4.22	4.08	4.53	4.16	4.71	4.33
	Cooling capacity (2)	kW	5.09	6.06	9.74	14.2	22.7	29.3	36.3
	Total absorbed power (2)	kW	2.46	2.52	3.87	5.18	8.39	9.71	12.9
	EER (2)	-	2.07	2.40	2.52	2.74	2.71	3.02	2.81
	Min / max ambient temps. (3)	°C	-5/+43	-5/+43	-5/+42	-5/+44	-5/+43	-5/+43	-5/+43
	Min / max fluid supply temps.	°C	-10/+30						
	COMPRESSOR								
	Cooling circuits	No.	1						
	Compressors per circuit	No.	1						
	Capacity control	%	0-100						
	ESEER	-	2.79	3.28	3.21	3.27	3.18	3.51	3.46
	ELECTRICAL POWER SUPPLY								
	Power	V/Ph/Hz	400/3-PE/50						
	Auxiliary	V/Ph/Hz	24-230/1/50						
	Protection class		IP44		IP54				
	FAN								
	Fans number	No.	1					2	
	Total airflow	m³/h	3,500	3,150	6,500	6,150	8,150	14,200	13,600
	Nominal power (per fan)	kW	0.203		0.48		0.71		
	HYDRAULIC GROUP								
	Water flow rate (4)	m³/h	1.8/4.8		1.8/6.0		3.6/9.6		7.2/18.0
P3	Available pump head pressure (5)	barg	2.9/2.0		3.0/2.1		2.8/1.7		
	Nominal absorbed power	kW	0.55		0.75		0.90		1.85
	Water flow rate (4)	m³/h	1.2/4.8		1.2/4.8		3.6/12.6		
P5	Available pump head pressure (5)	barg	5.2/3.6		5.2/3.6		5.2/3.9		
	Nominal absorbed power	kW	1.10		1.10		2.20		
	Tank volume	l	60		115		140	255	
	Max working pressure		6						
	Water connections	BSP	¾"		1"			1½"	
	SOUND LEVELS (6)								
	Sound power	dB(A)	80.4		81.1		81.6	82.1	
	Sound pressure	dB(A)	52.4		53.1		53.6	54.1	
	DIMENSIONS & INSTALLED WEIGHT								
	Length	mm	1,284		1,315		1,862		
	Width	mm	560		660		761		
	Height	mm	795		1,373		1,462		
	Weight	kg	206	210	324	347	464	642	656

iC416	iC520	iC525	iC530	iC535	iC538	iC540	iC640	iC650	iC660	iC770	iC780
56.3	65.0	76.8	85.4	97.7	123	138	125	149	169	203	233
14.1	15.1	18.3	19.3	23.7	27.2	29.6	30.0	33.8	38.7	45.8	53.7
3.99	4.30	4.20	4.42	4.12	4.52	4.66	4.17	4.41	4.37	4.43	4.34
41.9	48.1	56.4	62.9	72.8	90.0	101	92.6	109	124	152	178
15.7	17.3	21.1	22.3	26.8	30.6	33.4	34.6	39.4	44.6	52.2	60.0
2.67	2.78	2.67	2.82	2.72	2.94	3.02	2.68	2.77	2.78	2.91	2.97
-5/+43	-5/+43	-5/+44	-5/+44	-5/+44	-5/+42	-5/+42	-5/+44	-5/+44	-5/+43	-5/+43	-5/+43
-10/+30											
1							2				
2											
0-50-100							0-25-50-75-100				
3.17	4.36	4.35	4.33	4.17	4.08	4.08	4.15	4.38	4.34	4.44	4.36
400/3-PE/50											
24-230/1/50											
IP54											
2			3				2			3	
13,600	16,200	16,000	22,200	21,600	37,000	35,000	45,800	44,400	42,800	63.900	61.100
0.71						1.90					
7.2/18.0			6.0/20.0			9.5/36.0				13.0/56.0	
2.8/2.3			3.6/2.6			3.6/2.4				3.4/2.5	
1.85			2.20			4.00				5.50	
3.6/12.6	6.0/21.6				12.0/42.0					30.0/72.0	
5.2/3.9	5.2/3.9				5.3/4.3					4.9/3.4	
2.20	4.00				7.50					9.20	
255	350				410		500			678	
6											
1½"	2"				2½"					3"	
82.9	84.3		86.0		88.4	89.7	89.5			90.2	90.7
54.9	56.3		58.0		60.4	61.7	61.5			62.2	62.7
1,862	2,250				2,793		3,299			3,545	
761	866				1,150		1,255			1,251	
1,462	2,054				2,090		2,119			2,151	
672	948	1,031	1,064	1,075	1,408	1,493	1,701	1,750	1,786	2,267	2,287

(1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor(s), fan(s) & pump
(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor(s), fan(s) & pump
(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15/+20°C
(4) Minimum / maximum water flow rates achievable by pump
(5) Available head pressure at outlet of unit at the minimum / maximum water flow rates
(6) Sound power determined on basis of measurements taken in accordance with ISO 3744. Sound pressure at 10m average value obtained in free field on a reflective surface at 10m distance from the side of the condenser coils & at a height of 1.6m from the unit support base. Values with tolerance ± 2dB. The sound levels refer to unit operation under full load in nominal conditions.
All of the above data refers to unit configuration with standard axial fans & fitted with standard P3 pump.
Data declared according to UNI EN 14511-2013.

I-CHILLER HIGH EFFICIENCY

			iC303 HE	iC305 HE	iC408 HE	iC410 HE	iC412 HE	iC520 HE	iC525 HE
	Cooling capacity (1)	kW	13.2	17.7	32.0	42.2	49.3	62.3	76.3
	Total absorbed power (1)	kW	2.96	3.76	6.82	8.77	10.8	13.5	16.1
	EER (1)	-	4.47	4.72	4.69	4.82	4.55	4.62	4.75
	Cooling capacity (2)	kW	10.1	13.6	23.7	31.5	36.4	46.3	56.8
	Total absorbed power (2)	kW	3.53	4.51	7.63	10.1	12.4	15.3	18.5
	EER (2)	-	2.86	3.56	3.11	3.12	2.93	3.03	3.07
	Min / max ambient temps. (3)	°C	-10/+46						
	Min / max fluid supply temps.	°C	-10/+30						
	COMPRESSOR								
	Cooling circuits	No.	1						
	Compressors per circuit	No.	1					2	
	Capacity control	%	0-100					0-50-100	
	ESEER	-	3.46	3.56	3.32	3.52	3.58	4.39	4.38
	ELECTRICAL POWER SUPPLY								
	Power	V/Ph/Hz	400/3-PE/50						
	Auxiliary	V/Ph/Hz	24-230/1/50						
	Protection class		IP54						
	FAN								
	Fans number	No.	1		2				3
	Total airflow	m³/h	6,200		14,200			15900	22,500
	Nominal power (per fan)	kW	0.59	0.66	1.00				
	HYDRAULIC GROUP								
	Water flow rate (4)	m³/h	1.8/6.0		3.6/9.6		7.2/18.0		
P3	Available pump head pressure (5)	barg	3.0/2.1		2.8/1.7		2.8/2.3		
	Nominal absorbed power	kW	0.75		0.90		1.85		
	Water flow rate (4)	m³/h	1.2/4.8		3.6/12.6			6.0/21.6	
P5	Available pump head pressure (5)	barg	5.2/3.6		5.2/3.9			5.2/3.9	
	Nominal absorbed power	kW	1.10		2.20			4.00	
	Tank volume	l	115		140	255		350	
	Max working pressure		6						
	Water connections	BSP	1"		1½"			2"	
	SOUND LEVELS (6)								
	Sound power	dB(A)	83.6		84.4	84.5		86.1	87.4
	Sound pressure	dB(A)	55.6		56.4	56.5		58.1	59.4
	DIMENSIONS & INSTALLED WEIGHT								
	Length	mm	1,315		1,862			2,250	
	Width	mm	660		761			866	
	Height	mm	1,415		1,462			2,078	
	Weight	kg	324	346	507	659		947	1,052

iC530 HE	iC538 HE	iC640 HE	iC650 HE	iC770 HE	iC780 HE
83.6	115	121	149	191	225
17.4	24.4	26.2	31.2	38.8	47.6
4.82	4.32	4.60	4.77	4.92	4.72
61.9	86.8	89.4	110	144	171
20.1	27.8	29.8	36.1	44.6	53.8
3.08	3.12	3.00	3.05	3.23	3.17
-10/+46					
-10/+30					
1		2			
2		2			
0-50-100		0-25-50-75-100			
4.37	4.32	4.29	4.47	4.49	4.44
400/3-PE/50					
24-230/1/50					
IP54					
3	2			3	
22,500	37,400	42,400	41,600	62,700	60,900
1.00	1.95				
6.0/20.0	9.5/36.0			13.0/56.0	
3.6/2.6	3.6/2.4			3.4/2.5	
2.20	4.00			5.50	
6.0/21.6	12.0/42.0			30.0/72.0	
5.2/3.9	5.3/4.3			4.9/3.4	
4.00	7.50			9.20	
350	410	500		678	
6					
2"	2½"			3"	
88.4	90.5			90.2	90.7
60.4	62.5			62.2	62.7
2,250	2,793	3,299		3,545	
866	1,150	1,255		1,251	
2,078		2,107		2,154	
1,069	1,441	1,777	1,831	2,318	2,344

(1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor(s), fan(s) & pump
(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor(s), fan(s) & pump
(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15/+20°C
(4) Minimum / maximum water flow rates achievable by pump
(5) Available head pressure at outlet of unit at the minimum / maximum water flow rates
(6) Sound power determined on basis of measurements taken in accordance with ISO 3744. Sound pressure at 10m average value obtained in free field on a reflective surface at 10m distance from the side of the condenser coils & at a height of 1.6m from the unit support base. Values with tolerance ± 2dB. The sound levels refer to unit operation under full load in nominal conditions.
All of the above data refers to unit configuration with standard axial fans & fitted with standard P3 pump.
Data declared according to UNI EN

I-CHILLER DUAL FREQUENCY

		iC215 DF	iC220 DF	iC303 DF	iC305 DF	iC408 DF	iC410 DF	iC410 DF	iC412 DF
Cooling Capacity **50Hz/60Hz** (1)	kW	7.15 / 8.62	8.48 / 10.1	13.6 / 16.3	19.9 / 23.3	30.7 / 36.1	39.5 / 45.9	48.8 / 56.8	56.1 / 65.3
Total absorbed power **50Hz/60Hz** (1)	kW	2.24 / 3.01	2.07 / 2.80	3.33 / 4.16	4.39 / 5.61	7.36 / 9.60	8.35 / 11.0	11.4 / 13.9	14.2 / 17.4
EER **50Hz/60Hz** (1)	-	3.19 / 2.87	4.09 / 3.62	4.08 / 3.92	4.53 / 4.15	4.17 / 3.76	4.74 / 4.16	4.29 / 4.10	3.94 / 3.76
Cooling Capacity **50Hz/60Hz** (2)	kW	5.09 / 6.11	6.06 / 7.23	9.74 / 11.7	14.2 / 16.7	22.7 / 26.6	29.3 / 33.9	36.2 / 42.3	41.8 / 48.9
Total absorbed power **50Hz/60Hz** (2)	kW	2.52 / 3.37	2.58 / 3.43	3.87 / 4.82	5.18 / 6.56	8.37 / 10.9	9.63 / 12.7	13.0 / 15.9	15.8 / 19.3
EER **50Hz/60Hz** (2)	-	2.02 / 1.81	2.35 / 2.11	2.52 / 2.43	2.74 / 2.54	2.71 / 2.44	3.03 / 2.66	2.80 / 2.66	2.65 / 2.54
Min / max ambient temps. **50Hz/60Hz** (3)	°C	-5/+43 / -5/+42	-5/+43 / -5/+42	-5/+42 / -5/+42	-5/+44 / -5/+42	-5/+43 / -5/+43	-5/+43 / -5/+42	-5/+43 / -5/+43	-5/+43 / -5/+43
Min / max fluid supply temps.	°C	-10/+30				-10/+30			
COMPRESSOR									
Cooling circuits	No.	1				1			
Compressors per circuit	No.	1				1			
Capacity control	%	0-100				0-100			
ESEER (**50Hz operation**)	-	2.79	3.28	3.21	3.27	3.18	3.51	3.46	3.17
ESEER (**60Hz operation**)	-	2.72	3.15	3.13	3.06	3.04	3.27	3.21	2.95
ELECTRICAL POWER SUPPLY									
Power	V/Ph/Hz	400/3-PE/50 460/3-PE/60				400/3-PE/50 460/3-PE/60			
Auxiliary	V/Ph/Hz	24-230 AC				24-230 AC			
Protection class		IP44		IP54		IP54			
FAN									
Fans number	No.	1				1	2		
Total airflow	m³/h	3,500	3,150	6,500	6,150	8,150	14,200	13,600	
Nominal power (per fan - **50Hz operation**)	kW	0.29		0.48		0.69			
Nominal power (per fan - **60Hz operation**)		0.45		0.76		1.03			
HYDRAULIC GROUP									
Water flow rate (4)	m³/h	1.8 / 4.8		1.8 / 6.0		3.6 / 9.6		7.2 / 18.0	
Available pump head pressure **(50Hz operation)** (5)	bar(g)	2.9 / 2.0		3.0 / 2.1		2.8 / 1.7		2.8 / 2.3	
Available pump head pressure **(60Hz operation)** (5)	bar(g)	4.4 / 2.8		4.4 / 2.8		4.3 / 2.9		3.4 / 2.5	
Nominal absorbed power **(50Hz operation)**	kW	0.55		0.75		1.10		1.85	
Nominal absorbed power **(60Hz operation)**	kW	1.10		1.10		2.20			
Tank volume	l	60		115		140	255		
Max working pressure	bar(g)	6				6			
Water connections	BSP	¾"		1"		1½"			
SOUND LEVELS (6)									
Sound power (**50Hz operation**)	dB(A)	80.4		81.1		81.6	82.1		83.0
Sound power (**60Hz operation**)	dB(A)	52.4		86.8		89.2			
Sound pressure (**50Hz operation**)	dB(A)	80.4		53.1		53.6	54.1		55.0
Sound pressure (**60Hz operation**)	dB(A)	52.4		58.8		61.2			
DIMENSIONS & INSTALLED WEIGHT									
Length	mm	1,284		1,315		1,862			
Width	mm	560		660		761			
Height	mm	795		1,373		1,437			
Weight	kg	211	215	336	355	470	632	647	671

(1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor, fan(s) & pump
(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor, fan(s) & pump
(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15/+20°C
(4) Minimum / maximum water flow rates achievable by pump
(5) Available head pressure at outlet of unit at the minimum / maximum water flow rates
(6) Sound power determined on basis of measurements taken in accordance with ISO 3744. Sound pressure at 10m average value obtained in free field on a reflective surface at 10m distance from the side of the condenser coils & at a height of 1.6m from the unit support base. Values with tolerance ± 2dB. The sound levels refer to unit operation under full load in nominal conditions.
All of the above data refers to unit configuration with standard axial fans & fitted with standard P3 pump. The above data is also based on 50Hz operation unless otherwise specified
Data declared according to UNI EN 14511-2013.

I-CHILLER COMPACT

			iC02C	iC03C	iC05C	iC08C	iC10C
	Cooling Capacity **50Hz/60Hz** (1)	kW	1.33 / 1.49	1.73 / 1.93	2.73 / -	3.38 / -	4.71 / -
	Total absorbed power **50Hz/60Hz** (1)	kW	0.52 / 0.56	0.66 / 0.72	0.82 / -	1.01 / -	1.25 / -
	EER **50Hz/60Hz** (1)	-	2.56 / 2.69	2.63 / 2.69	3.33 / -	3.35 / -	3.76 / -
	Cooling Capacity **50Hz/60Hz** (2)	kW	0.88 / 1.00	1.18 / 1.33	1.89 / -	2.39 / -	3.30 / -
	Total absorbed power **50Hz/60Hz** (2)	kW	0.53 / 0.56	0.67 / 0.72	0.93 / -	1.13 / -	1.40 / -
	EER **50Hz/60Hz** (2)	-	1.67 / 1.78	1.76 / 1.83	2.03 / -	2.10 / -	2.35 / -
	Min / max ambient temps. (3)	°C	+5/+45				
	Min / max fluid supply temps.	°C	0/+30				
	COMPRESSOR						
	Cooling circuits	No.	1				
	Compressors per circuit	No.	1				
	Capacity control	%	0-100				
	ESEER (**50Hz operation**)	-	2.37	2.25	3.30	3.07	3.18
	ESEER (**60Hz operation**)	-	2.33	2.20	-	-	-
	ELECTRICAL POWER SUPPLY (4)						
	Power	V/Ph/Hz	230±10%/1-PE/50-60		230±10%/1-PE/50		
	Auxiliary	V/Ph/Hz	230 AC				
	Protection class		IP33				
	FAN						
	Fans number	No.	1				
	Total airflow	m³/h	650	700	1,100	1,450	1,400
	Nominal power (per fan)	kW	0.05		0.09		
	HYDRAULIC GROUP						
P3	Water flow rate (4)	m³/h	0.1/0.4		0.2/1.4		
P3	Available pump head pressure (**50Hz operation**) (5)	barg	3.6/1.8		3.6/1.3		
P3	Available pump head pressure (**60Hz operation**) (5)		4.5/2.3		-		
P3	Nominal absorbed power	kW	0.18		0.37		
P5	Water flow rate (4)	m³/h	-		0.3/3.0		
P5	Available pump head pressure (5)	barg	-		6.1/1.8		
P5	Nominal absorbed power	kW	-		0.6		
	Tank volume	l	15			22	
	Water connections	BSP	½"				
	SOUND LEVELS (6)						
	Sound power (**50Hz operation**)	dB(A)	74.0		75.0		
	Sound power (**60Hz operation**)		75.0		-		
	Sound pressure (**50Hz operation**)	dB(A)	46.0		47.0		
	Sound pressure (**60Hz operation**)	dB(A)	47.0		-		
	DIMENSIONS & INSTALLED WEIGHT						
	Length	mm	660				
	Width	mm	486				
	Height	mm	623			876	
	Weight	kg	75	77	78	96	100

(1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor, fan & pump
(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor, fan & pump
(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15°C/+20°C
(4) Minimum / maximum water flow rates achievable by pump
(5) Available head pressure at outlet of unit at the minimum / maximum water flow rates
(6) Sound power determined on basis of measurements taken in accordance with ISO 3744. Sound pressure at 10m average value obtained in free field on a reflective surface at 10m distance from the side of the condenser coils & at a height of 1.6m from the unit support base. Values with tolerance ± 2dB. The sound levels refer to unit operation under full load in nominal conditions.
All of the above data refers to unit configuration with standard axial fans & fitted with standard P3 pump. The above data is also based on 50Hz operation for dual frequency models unless otherwise specified.
Data declared according to UNI EN 14511-2013.

NEXT STEPS

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