



ABOUT THE i-CHILLER RANGE

The fully packaged, EcoDesign compliant, air-cooled i-Chiller range is designed specifically for reliable and efficient process cooling.

The unique evaporator is immersed within a generously sized storage tank. This design ensures safe and reliable operation even during large fluctuations in cooling demand – something often encountered within various industrial applications. Each unit comes with a 3-bar pump as standard with the option to customise with a 5-bar pump – allowing for demanding industrial applications.

The i-Chiller ranges from 7.2 to 210kW and provides process fluid at temperatures from -10°C to 30°C. All come with a comprehensive 3-year parts warranty as standard with an option to extend to 5 years. Ts & Cs apply.

i-Chiller units are held in-stock for fast delivery and can be customised quickly with various options and modifications to meet your unique requirements – saving you valuable budget and time.

ENERGY & PROCESS EFFICIENCY:

- High efficiency finned coil in-tank evaporator with copper tubes & aluminium fins allowing for variable flow rates
- Hydraulic circuit includes integral 3-bar pump, drain valve, overflow & water pressure gauge and process connections
- Scroll compressor(s) operating with R410a refrigerant
- Copper tube / aluminium fin condenser coils combined with axial condenser fans

RELIABILITY:

- Internal water bypass to protect pump against dead heading
- Phase monitor to protect the unit against phase loss & reversal
- Galvanised, epoxy coated carbon steel structure
- Electrical panel protection rating: IP44

EASE OF OPERATION & MAINTENANCE:

- Easy to use and externally visible advanced electronic controller
- Digital input for remote on/off control
- Volt-free contacts for remote general alarm signal
- Mains isolator
- Manual filling kit comprising atmospheric (open) expansion tank



These models are compliant with ErP efficiency requirements for high temperature process chillers. IC215 is also compliant with efficiency requirements for medium temperature process chillers.

● = Standard / ○ = Optional

	iC215	iC220
Atmospheric fill & vent tank	●	●
Remote on/off	●	●
Volt free alarm contact	●	●
Water pressure gauge	●	●
Low pressure safety switch	●	●
High pressure safety switch	●	●
Antifreeze protection	●	●
Outlet temperature indication	●	●
Condensing pressure fan switch	●	●
Tank level sensor	●	●
Alarm history	●	●
Non-ferrous fluid circuit	○	○
Pressurised non-ferrous fluid circuit	○	○
Close temperature control +/- 0.5K	○	○
Low ambient to -20°C	○	○
P5 High pressure pump	○	○
Run / standby pumps	○	○
Phase cut fan speed controller	○	○
Anti-Floodback	○	○
Water filter	○	○
Manual bypass	○	○
Pressure relief bypass	○	○
Compressor soft start	○	○
Condensers coil coating	○	○
Pre Heat inline heater	○	○
Trace heating for frost protection	○	○
Loose kits		
Manual bypass kit	○	○
Pressure relief bypass kit	○	○
Pressurisation kit	○	○
Advanced remote control kit	○	○
RS485 Modbus trend kit	○	○
Gateway Modbus trend kit	○	○
xWEB Supervisor kit	○	○
xWEB Supervisor kit with GPRS	○	○
Remote X	○	○
Master/Slave modularity kit	○	○
Glycol filling kit	○	○

			iC215	iC220
Cooling Capacity (1)	kW		7.31	8.35
Total absorbed power (1)	kW		2.01	2.21
EER (1)	-		3.64	3.78
Cooling Capacity (2)	kW		5.21	5.80
Total absorbed power (2)	kW		2.38	2.40
EER (2)	-		2.19	2.41
Min / max ambient temps. (3)	°C		-5/+46	-5/+43
Min / max fluid supply temps.	°C		-10/+30	-10/+30
Compressor				
Cooling circuits	No.		1	
Compressors per circuit	No.		1	
Capacity control	%		0-100	
SEPR HT	-		4.78	4.63
SEPR MT	-		2.59	N/A
Electrical power supply (4)				
Power	V/Ph/Hz		400/3-PE/50	
Auxiliary	V/Ph/Hz		24-230/1/50	
Maximum absorbed power	kW		3.8	3.95
Maximum absorbed current	A		6.53	6.94
Starting current	A		27.65	33.65
Fan				
Fans number	No.		1	
Total airflow	m ³ /h		3,350	3,150
Nominal power (per fan)	kW		0.135	
Hydraulic group				
P3	Water flow rate (5)	m ³ /h	1.8/4.8	
	Available pump head pressure (6)	barg	2.9/2.0	
	Nominal absorbed power	kW	0.55	
P5	Water flow rate (5)	m ³ /h	1.2/4.8	
	Available pump head pressure (6)	barg	5.2/3.6	
	Nominal absorbed power	kW	1.10	
Tank volume	l		60	
Max working pressure	barg		6	
Water connections	BSP		¾"	
Sound levels (7)				
Sound power	dB(A)		80.4	
Sound pressure	dB(A)		52.4	
Dimensions & installed weight				
Length	mm		1,284	
Width	mm		560	
Height	mm		795	
Weight	kg		206	210

(1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor & fan

(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor & fan

(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15°C/+20°C

(4) Protection class IP44

(5) Minimum / maximum water flow rates achievable by pump

(6) Available head pressure at outlet of unit at the minimum / maximum water flow rates

(7) 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.

Unless otherwise specified, the above data refers to unit configuration with standard axial fans & fitted with standard P3 pump.

Data declared according to UNI EN 14511-2013.

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

SEPR MT: Data declared in compliance with the European Regulation (EU) 2015/1095 with regard to ecodesign requirements for medium temperature & low temperature process chillers.

Information requirements for high temperature process chillers - SEPR HT

Model:	iC215		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR HT	4,78	[-]
Annual electricity consumption	Q	7850,27	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	5,1	kW
Rated power input	D_A	2,09	kW
Rated energy efficiency ratio	$EER_{DC,A}$	2,44	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	5,8	kW
Declared power input	D_B	1,69	kW
Declared energy efficiency ratio	$EER_{DC,B}$	3,43	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	6,4	kW
Declared power input	D_C	1,36	kW
Declared energy efficiency ratio	$EER_{DC,C}$	4,70	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	7,0	kW
Declared power input	D_D	1,09	kW
Declared energy efficiency ratio	$EER_{DC,D}$	6,38	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C_{dc}	0,90	[-]
Type and GWP of the refrigerant	R410A	2088,00	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		

annex to manual

Information requirements for high temperature process chillers - SEPR HT

Model:	iC220		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR HT	4,63	[-]
Annual electricity consumption	Q	9197,28	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	5,8	kW
Rated power input	D_A	2,40	kW
Rated energy efficiency ratio	$EER_{DC,A}$	2,41	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	6,6	kW
Declared power input	D_B	1,94	kW
Declared energy efficiency ratio	$EER_{DC,B}$	3,38	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	7,2	kW
Declared power input	D_C	1,57	kW
Declared energy efficiency ratio	$EER_{DC,C}$	4,61	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	7,8	kW
Declared power input	D_D	1,29	kW
Declared energy efficiency ratio	$EER_{DC,D}$	6,02	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C_{dc}	0,90	[-]
Type and GWP of the refrigerant	R410A	2088,00	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		

annex to manual

Information requirements for medium temperature process chillers - SEPR MT

Model:	iC215		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Brine		
Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR MT	2.59	[-]
Annual electricity consumption	Q	7513	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	2.65	kW
Rated power input	D_A	1.93	kW
Rated energy efficiency ratio	EER_A	1.37	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	3.03	kW
Declared power input	D_B	1.55	kW
Declared energy efficiency ratio	EER_B	1.95	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	3.34	kW
Declared power input	D_C	1.25	kW
Declared energy efficiency ratio	EER_C	2.66	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	3.52	kW
Declared power input	D_D	1.09	kW
Declared energy efficiency ratio	EER_D	3.23	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C_c	0,90	[-]
Type and GWP of the refrigerant	R410A	2088,00	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		

annex to manual