



ABOUT THE i-CHILLER RANGE

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

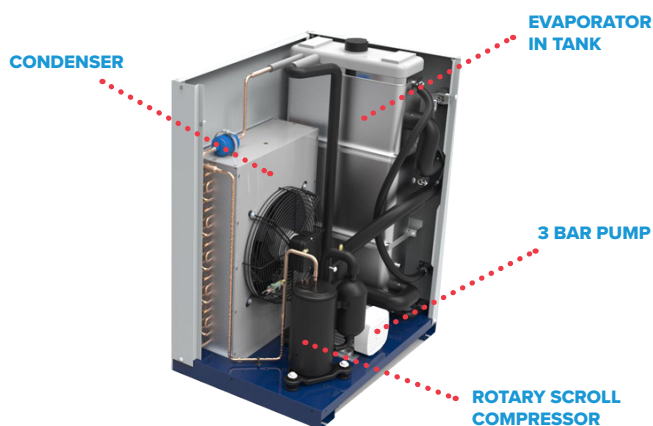
The unique evaporator is immersed within a generously sized storage tank. This design ensures safe and reliable operation even during large fluctuations in cooling demand – something often encountered within various industrial applications. Each unit comes with a 3-bar pump as standard with the option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

The i-Chiller Compact ranges from 1.7 to 4.7kW and provides process fluid temperatures from 0°C to 30°C. All units 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
- A fully non-ferrous hydraulic circuit includes integral 3-bar pump, drain valve, overflow, water pressure gauge & process connections
- Piston/Rotary compressor operating with R134a/R410a refrigerant
- Copper tube / aluminium fin condenser coils combined with axial condenser fans



RELIABILITY:

- Internal water bypass to protect pump against dead heading
- Galvanised, epoxy coated carbon steel structure
- Electrical panel protection rating: IP33

EASE OF OPERATION & MAINTENANCE:

- Removable panels
- Easy to use and externally visible advanced electronic controller
- Digital input for remote on/off control
- Volt-free contacts for remote general alarm (iC08C -iC10C)
- Mains isolator (iC08C -iC10C)
- Atmospheric Tank with easily accessible filling point



These models are compliant with ErP efficiency requirements for high temperature process chillers.

● = Standard / ○ = Optional

	iC03C	iC05C	iC08C	iC10C
Atmospheric fill & vent tank	●	●	●	●
Water pressure gauge	●	●	●	●
Remote on/off	●	●	●	●
Volt free alarm contact	-	-	●	●
Alarm signal	●	●	-	-
High pressure safety switch	-	-	●	●
Antifreeze protection	●	●	●	●
Outlet temperature indication	●	●	●	●
Condensing pressure fan switch	●	●	●	●
Tank level sensor	●	●	●	●
Alarm history	●	●	●	●
P5 High Pressure pump	-	○	○	○
Stainless Steel Panels	○	○	○	○
Dynamic Setpoint Control	○	○	○	○
Close Temperature Control +/- 0.5K	-	-	○	○
Anti-Floodback	○	○	○	○
Water filter	○	○	○	○
Tank Level Switch	-	-	○	○
Castors	○	○	○	○
Supply Temperature to -5°C	-	-	○	○
Industrial electrical connectors	-	-	○	○
Quick release connections	○	○	○	○
Manual bypass	○	○	○	○
Special Paint Colours	○	○	○	○
Pressure Relief Bypass	○	○	○	○

Loose Kits				
Water filter kit	○	○	○	○
Manual Bypass kit	○	○	○	○
Castor kit	○	○	○	○
Dynamic Setpoint kit	○	○	○	○

			iC03C	iC05C	iC08C	iC10C
	Cooling Capacity 50Hz/60Hz (1)	kW	1.72 / 1.92	2.64 / -	3.42 / -	4.53 / -
	Total absorbed power 50Hz/60Hz (1)	kW	0.504 / 0.492	0.835 / -	0.981 / -	1.19 / -
	EER 50Hz/60Hz (1)	-	3.41 / 3.90	3.16 / -	3.42 / -	3.79 / -
	Cooling Capacity 50Hz/60Hz (2)	kW	1.17 / 1.33	1.74 / -	2.29 / -	3.03 / -
	Total absorbed power 50Hz/60Hz (2)	kW	0.575 / 0.554	0.963 / -	1.15 / -	1.39 / -
	EER 50Hz/60Hz (2)	-	2.04 / 2.40	1.81 / -	1.99 / -	2.18 / -
	Min / max ambient temps. (3)	°C	+5/+45	+5/+45	+5/+45	+5/+45
	Min / max fluid supply temps.	°C	0/+30	0/+30	0/+30	0/+30
	Compressor					
	Cooling circuits	no.1	1			
	Compressors per circuit	no.1	1			
	Capacity control	%	0-100			
	SEPR HT (50Hz operation)	-	4.51	4.74	4.80	4.86
	Electrical power supply (4)					
	Power	V/Ph/Hz	230±10%/1-PE/50-60	230±10%/1-PE/50		
	Auxiliary	V/Ph/Hz	230/1/50			
	Max. absorbed power (50Hz / 60Hz)	kW	0.9 / 1.0	1.6	1.9	2.3
	Max. absorbed current (50Hz / 60Hz)	A	4.1 / 4.8	7.5	8.6	10.1
	Starting current	A	15.8 / 16.3	20.3	22	27.3
	Fan					
	Fans number	No.	1			
	Total airflow	m³/h	700	1,100	1,450	1,400
	Nominal power (per fan)	kW	0.05	0.09		
	Hydraulic group					
P3	Water flow rate (5)	m³/h	0.1/0.5	0.2/1.5		
	Available pump head pressure (50Hz operation) (6)	barg	3.6/1.3	3.6/1.4		
	Available pump head pressure (60Hz operation) (6)	barg	4.5/1.6	-		
	Nominal absorbed power	kW	0.18	0.37		
P5	Water flow rate (5)	m³/h	-	0.2 / 1.4		
	Available pump head pressure (6)	barg	-	5.0 / 0.3		
	Nominal absorbed power	kW	-	0.6		
	Tank volume	l	15		22	
	Water connections	BSP	½"			
	Sound levels (7)					
	Sound power (50Hz operation)	dB(A)	74.0 / 75.0	75.0		
	Sound power (60Hz operation)	dB(A)	46.0 / 47.0	47.0		
	Dimensions & installed weight					
	Length	mm	660			
	Width	mm	486			
	Height	mm	623		876	
	Weight	kg	68	71	95	98

(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) Protection class IP33

(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, operating at 50Hz for dual frequency models. 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.

Information requirements for high temperature process chillers - SEPR HT			
Model:	iC03C		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR	4,51	[-]
Anual electricity consumption	Q	1980,00	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	1,2	kW
Rated power input	D _A	0,49	kW
Rated energy efficiency ratio	EER _{DC,A}	2,49	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	1,4	kW
Declared power input	D _B	0,42	kW
Declared energy efficiency ratio	EER _{DC,B}	3,40	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	1,6	kW
Declared power input	D _C	0,36	kW
Declared energy efficiency ratio	EER _{DC,C}	4,47	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	1,8	kW
Declared power input	D _D	0,30	kW
Declared energy efficiency ratio	EER _{DC,D}	5,94	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C _{dc}	0,90	[-]
Type and GWP of the refrigerant	R134a	1430	kg CO2 eq (100 years)
Contact details	ICS Cool Energy Ltd - Stephenson Road, Calmore Industrial Estate Totton, Southampton SO40 3SA GB		
annex to manual			

Information requirements for high temperature process chillers - SEPR HT			
Model:	iC05C		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR	4,74	[-]
Anual electricity consumption	Q	2928,77	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	1,9	kW
Rated power input	D _A	0,72	kW
Rated energy efficiency ratio	EER _{DC,A}	2,61	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	2,2	kW
Declared power input	D _B	0,62	kW
Declared energy efficiency ratio	EER _{DC,B}	3,53	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	2,5	kW
Declared power input	D _C	0,53	kW
Declared energy efficiency ratio	EER _{DC,C}	4,66	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	2,9	kW
Declared power input	D _D	0,45	kW
Declared energy efficiency ratio	EER _{DC,D}	6,36	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C _{dc}	0,90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy Ltd - Stephenson Road, Calmore Industrial Estate Totton, Southampton SO40 3SA GB		
annex to manual			

Information requirements for high temperature process chillers - SEPR HT			
Model:	iC08C		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR	4,80	[-]
Anual electricity consumption	Q	3689,12	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	2,4	kW
Rated power input	D _A	0,93	kW
Rated energy efficiency ratio	EER _{DC,A}	2,59	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	2,8	kW
Declared power input	D _B	0,79	kW
Declared energy efficiency ratio	EER _{DC,B}	3,51	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	3,1	kW
Declared power input	D _C	0,67	kW
Declared energy efficiency ratio	EER _{DC,C}	4,69	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	3,7	kW
Declared power input	D _D	0,56	kW
Declared energy efficiency ratio	EER _{DC,D}	6,54	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C _{dc}	0,90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy Ltd - Stephenson Road, Calmore Industrial Estate Totton, Southampton SO40 3SA GB		
annex to manual			

Information requirements for high temperature process chillers - SEPR HT			
Model:	iC10C		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7,00	°C
Seasonal energy performance ratio	SEPR	4,86	[-]
Anual electricity consumption	Q	4719,59	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	3,1	kW
Rated power input	D _A	1,20	kW
Rated energy efficiency ratio	EER _{DC,A}	2,61	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	3,6	kW
Declared power input	D _B	1,01	kW
Declared energy efficiency ratio	EER _{DC,B}	3,55	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	4,0	kW
Declared power input	D _C	0,85	kW
Declared energy efficiency ratio	EER _{DC,C}	4,75	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	4,7	kW
Declared power input	D _D	0,71	kW
Declared energy efficiency ratio	EER _{DC,D}	6,60	[-]
Other items			
Capacity control	Fixed		
Degradation co-efficient chillers	C _{dc}	0,90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy Ltd - Stephenson Road, Calmore Industrial Estate Totton, Southampton SO40 3SA GB		
annex to manual			