

ABOUT THE i-CHILLER MAX RANGE

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

The shell & tube evaporator, together with the generously sized storage tank 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 Max ranges from 230kW to 469kW providing process fluid at temperatures from -10°C to 20°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 Max 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 shell & tube heat exchanger
- Large integral storage tank installed on the outlet (cold) side of the heat exchanger
- Integral 3 bar pump installed downstream of the storage tank
- Hydraulic circuit includes automatic air bleed valve, expansion vessel, 3 bar g pressure relief valve, water level sensor & drain valve integral 3-bar pump, filling/drain valves, expansion tank, pressure relief valve & water pressure gauge
- Energy efficient scroll compressors operating on R410a refrigerant
- Copper tube / aluminium fin condenser coils combined with axial condenser fans

RELIABILITY:

- Phase monitor to protect the unit against phase loss & reversal
- Galvanised, epoxy coated carbon steel structure
- Electrical panel protection rating: IP54

EASY TO OPERATE:

Advanced controller with adaptive control functionality for accurate, stable temperature control

- Alarm with early indication of faults
- Detailed event logs
- Variable pump flow control capability & time band programming for holiday/shift scheduling
- Advanced controller
- Mains isolator



These models are compliant with ErP efficiency requirements for space cooling, medium & high temperature process chillers.

		AS T 110 HE	AS T 120 HE	AS T 130 HE	AS T 140 HE
Cooling Capacity (1)	kW	343	378	426	469
Total absorbed power (1)	kW	75.3	81.9	95.6	110
EER (1)	-	4.56	4.61	4.56	4.24
Cooling Capacity (2)	kW	248	273	308	339
Total absorbed power (2)	kW	81.2	89.3	104	119
EER (2)	-	3.05	3.06	2.97	2.85
Min / max ambient temps. (3)	°C	-5/+44 (-20/+50)			
Min / max fluid supply temps. (4)	°C	0/+20 (-10/+20)			
Compressors					
Cooling circuits	No.	2			
Compressors per circuit	No.	2			
Capacity control	%	0-25-50-75-100			
SEPR HT	-	5.00	5.02	5.09	5.08
SEER	-	4.00	4.09	4.13	4.07
Electrical power supply (5)					
Power	V/Ph/Hz	400/3/50			
Auxiliary	V/Ph/Hz	24-230/1/50			
Maximum absorbed power	kW	120	130	148	164
Maximum absorbed current	A	199	215	247	275
Starting current (AC fans/optional EC fans)	A	427 / 423	443 / 439	498 / 495	527 / 523
Fan(s)					
Fans number	No.	6			
Total airflow	m³/h	112,000	108,000	105,000	
Nominal power (per fan)	kW	1.62			
Hydraulic group					
Water flow rate (6)	m³/h	19.0 / 49.0	23.0 / 74.0	26.0 / 76.0	29.0 / 76.0
Available pump head pressure (7)	bar	3.7 / 2.9	3.7 / 1.9	4.9 / 2.8	4.8 / 2.8
Nominal absorbed power	kW	7.5	7.5	9.2	9.2
Tank volume	l	600			
Max working pressure	bar	3			
Water connections		DN125 stub			
Sound levels (8)					
Sound power	dB(A)	92.1	92.7		
Sound pressure	dB(A)	64.1	64.7		
Dimensions & installed weight					
Length	mm	4,595			
Width	mm	2,188			
Height	mm	2,150			
Weight	kg	2,618	2,694	2,796	2,832

- (1) Evaporator outlet / inlet temperatures +15°C/+20°C, external ambient temperature +25°C, total absorbed power includes compressor & fan(s)
(2) Evaporator outlet / inlet temperatures +7°C/+12°C, external ambient temperature +35°C, total absorbed power includes compressor & fan(s)
(3) Standard unit configuration operating with evaporator outlet / inlet temperatures +15/+20°C – extended operating range possible when optional EC fans & electronic expansion valves are included
(4) Standard unit configuration – extended operating range possible when optional EC fans & electronic expansion valves are included
(5) Protection class IP54
(6) Minimum / maximum water flow rates able to be accommodated by evaporator
(7) Available head pressure at outlet of unit at the minimum / maximum water flow rates
(8) 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.
SEER/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:	AS T 110 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7	°C
Seasonal energy performance ratio	SEPR HT	5,00	[-]
Annual electricity consumption	Q	363806	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	247,94	kW
Rated power input	D_A	81,25	kW
Rated energy efficiency ratio	$EER_{DC,A}$	3,05	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	230,59	kW
Declared power input	D_B	56,86	kW
Declared energy efficiency ratio	$EER_{DC,B}$	4,06	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	215,71	kW
Declared power input	D_C	43,05	kW
Declared energy efficiency ratio	$EER_{DC,C}$	5,01	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	198,35	kW
Declared power input	D_D	36,16	kW
Declared energy efficiency ratio	$EER_{DC,D}$	5,66	[-]
Other items			
Capacity control	Variable		
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 B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for medium temperature process chillers - SEPR MT

Model:	AS T 110 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Brine		
Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR MT	2.66	[-]
Annual electricity consumption	Q	324943	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	117.82	kW
Rated power input	D _A	71.26	kW
Rated energy efficiency ratio	EER _A	1.65	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	109.58	kW
Declared power input	D _B	49.62	kW
Declared energy efficiency ratio	EER _B	2.21	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	102.51	kW
Declared power input	D _C	36.92	kW
Declared energy efficiency ratio	EER _C	2.78	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	94.26	kW
Declared power input	D _D	33.86	kW
Declared energy efficiency ratio	EER _D	2.78	[-]
Other items			
Capacity control	Variable		
Degradation co-efficient chillers	C _c	0.90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for comfort chillers - SEER

Model:	AS T 110 HE
Air-to-water chillers:	YES
Water-to-water chillers:	NO
Compressor-induced vapour compression:	YES
Absorption process:	NO
Compressor electrical operation:	YES
Operation with compressor's internal combustion motor:	NO

Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated cooling capacity	P rated, C	247,9	kW	Seasonal energy efficiency of room cooling	$\eta_{s,c}$	156,9	%
				Seasonal performance coefficient	SEER	4,00	-
Tj = +35 °C	Pdc	247,9	kW	Tj = +35 °C	EERd	3,1	-
Tj = +30 °C	Pdc	165,2	kW	Tj = +30 °C	EERd	3,8	-
Tj = +25 °C	Pdc	116,5	kW	Tj = +25 °C	EERd	4,4	-
Tj = +20 °C	Pdc	94,8	kW	Tj = +20 °C	EERd	5,0	-
Degradation coefficient	Cdc	0,9	-				

Energy consumption in modes other than active mode

OFF mode	P OFF	0,354	kW	Casing heating mode	P CK	0,354	kW
Thermostat OFF mode	P TO	0,956	kW	Standby mode	P SB	0,044	kW

Other elements

Capacity control devices	Fixed/Variable	Variable		For air-to-water room chillers: measured air flow outdoors	-	112000	m ³ /h
Sound power level, outdoors	LWA	92,1	dB(A)	For water-to-water room chillers: rated water flow outdoor heat exchanger	-	-	m ³ /h
Refrigerant type and GWP	R410A	2088	kg CO ₂ eq (100 years)				
Used standard rated conditions:	application at low temperature with variable output						
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel						

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Information requirements for high temperature process chillers - SEPR HT

Model:	AS T 120 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7	°C
Seasonal energy performance ratio	SEPR HT	5,02	[-]
Annual electricity consumption	Q	399474	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	273,36	kW
Rated power input	D_A	89,33	kW
Rated energy efficiency ratio	$EER_{DC,A}$	3,06	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	254,22	kW
Declared power input	D_B	62,38	kW
Declared energy efficiency ratio	$EER_{DC,B}$	4,08	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	237,82	kW
Declared power input	D_C	47,61	kW
Declared energy efficiency ratio	$EER_{DC,C}$	4,99	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	218,68	kW
Declared power input	D_D	39,44	kW
Declared energy efficiency ratio	$EER_{DC,D}$	5,54	[-]
Other items			
Capacity control	Variable		
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 B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for medium temperature process chillers - SEPR MT

Model:	AS T 120 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Brine		
Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR MT	2.80	[-]
Annual electricity consumption	Q	361993	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	138.32	kW
Rated power input	D _A	79.14	kW
Rated energy efficiency ratio	EER _A	1.75	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	128.64	kW
Declared power input	D _B	54.53	kW
Declared energy efficiency ratio	EER _B	2.36	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	120.34	kW
Declared power input	D _C	41.36	kW
Declared energy efficiency ratio	EER _C	2.91	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	110.66	kW
Declared power input	D _D	37.73	kW
Declared energy efficiency ratio	EER _D	2.93	[-]
Other items			
Capacity control	Variable		
Degradation co-efficient chillers	C _c	0.90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for comfort chillers - SEER

Model:	AS T 120 HE
Air-to-water chillers:	YES
Water-to-water chillers:	NO
Compressor-induced vapour compression:	YES
Absorption process:	NO
Compressor electrical operation:	YES
Operation with compressor's internal combustion motor:	NO

Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated cooling capacity	P rated, C	273,4	kW	Seasonal energy efficiency of room cooling	$\eta_{s,c}$	160,7	%
				Seasonal performance coefficient	SEER	4,09	-
Tj = +35 °C	Pdc	273,4	kW	Tj = +35 °C	EERd	3,1	-
Tj = +30 °C	Pdc	202,3	kW	Tj = +30 °C	EERd	3,8	-
Tj = +25 °C	Pdc	128,5	kW	Tj = +25 °C	EERd	4,5	-
Tj = +20 °C	Pdc	94,2	kW	Tj = +20 °C	EERd	5,1	-
Degradation coefficient	Cdc	0,9	-				

Energy consumption in modes other than active mode

OFF mode	P OFF	0,380	kW	Casing heating mode	P CK	0,380	kW
Thermostat OFF mode	P TO	0,833	kW	Standby mode	P SB	0,044	kW

Other elements

Capacity control devices	Fixed/Variable	Variable		For air-to-water room chillers: measured air flow outdoors	-	108000	m ³ /h
Sound power level, outdoors	LWA	92,1	dB(A)	For water-to-water room chillers: rated water flow outdoor heat exchanger	-	-	m ³ /h
Refrigerant type and GWP	R410A	2088	kg CO ₂ eq (100 years)				
Used standard rated conditions:	application at low temperature with variable output						
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel						

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Information requirements for high temperature process chillers - SEPR HT

Model:	AS T 130 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7	°C
Seasonal energy performance ratio	SEPR HT	5,09	[-]
Annual electricity consumption	Q	444018	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	308,02	kW
Rated power input	D_A	103,65	kW
Rated energy efficiency ratio	$EER_{DC,A}$	2,97	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	286,46	kW
Declared power input	D_B	70,79	kW
Declared energy efficiency ratio	$EER_{DC,B}$	4,05	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	267,98	kW
Declared power input	D_C	53,52	kW
Declared energy efficiency ratio	$EER_{DC,C}$	5,01	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	246,42	kW
Declared power input	D_D	42,94	kW
Declared energy efficiency ratio	$EER_{DC,D}$	5,74	[-]
Other items			
Capacity control	Variable		
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 B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for medium temperature process chillers - SEPR HT

Model:	AS T 130 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Brine		
Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR MT	2.88	[-]
Annual electricity consumption	Q	397389	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	155.99	kW
Rated power input	D _A	91.35	kW
Rated energy efficiency ratio	EER _A	1.71	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	145.07	kW
Declared power input	D _B	61.54	kW
Declared energy efficiency ratio	EER _B	2.36	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	135.72	kW
Declared power input	D _C	45.56	kW
Declared energy efficiency ratio	EER _C	2.98	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	124.80	kW
Declared power input	D _D	40.77	kW
Declared energy efficiency ratio	EER _D	3.06	[-]
Other items			
Capacity control	Variable		
Degradation co-efficient chillers	C _c	0.90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for comfort chillers - SEER

Model:	AS T 130 HE
Air-to-water chillers:	YES
Water-to-water chillers:	NO
Compressor-induced vapour compression:	YES
Absorption process:	NO
Compressor electrical operation:	YES
Operation with compressor's internal combustion motor:	NO

Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated cooling capacity	P rated, C	308,0	kW	Seasonal energy efficiency of room cooling	$\eta_{s,c}$	162,3	%
				Seasonal performance coefficient	SEER	4,13	-
Tj = +35 °C	Pdc	308,0	kW	Tj = +35 °C	EERd	3,0	-
Tj = +30 °C	Pdc	209,5	kW	Tj = +30 °C	EERd	4,0	-
Tj = +25 °C	Pdc	144,8	kW	Tj = +25 °C	EERd	4,5	-
Tj = +20 °C	Pdc	119,8	kW	Tj = +20 °C	EERd	5,1	-
Degradation coefficient	Cdc	0,9	-				

Energy consumption in modes other than active mode

OFF mode	P OFF	0,380	kW	Casing heating mode	P CK	0,380	kW
Thermostat OFF mode	P TO	0,807	kW	Standby mode	P SB	0,044	kW

Other elements

Capacity control devices	Fixed/Variable	Variable		For air-to-water room chillers: measured air flow outdoors	-	105000	m ³ /h
Sound power level, outdoors	LWA	92,8	dB(A)	For water-to-water room chillers: rated water flow outdoor heat exchanger	-	-	m ³ /h
Refrigerant type and GWP	R410A	2088	kg CO ₂ eq (100 years)				
Used standard rated conditions:	application at low temperature with variable output						
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel						

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Information requirements for high temperature process chillers - SEPR HT

Model:	AS T 140 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Water		
Item	Symbol	Value	Unit
Operating temperature	t	7	°C
Seasonal energy performance ratio	SEPR HT	5,08	[-]
Annual electricity consumption	Q	490769	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	339,38	kW
Rated power input	D_A	118,99	kW
Rated energy efficiency ratio	$EER_{DC,A}$	2,85	[-]
Parameters at rating point B			
Declared refrigeration capacity	P_B	315,63	kW
Declared power input	D_B	80,45	kW
Declared energy efficiency ratio	$EER_{DC,B}$	3,92	[-]
Parameters at rating point C			
Declared refrigeration capacity	P_C	295,26	kW
Declared power input	D_C	57,69	kW
Declared energy efficiency ratio	$EER_{DC,C}$	5,12	[-]
Parameters at rating point D			
Declared refrigeration capacity	P_D	271,51	kW
Declared power input	D_D	47,98	kW
Declared energy efficiency ratio	$EER_{DC,D}$	5,66	[-]
Other items			
Capacity control	Variable		
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 B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for medium temperature process chillers - SEPR MT

Model:	AS T 140 HE		
Type of condensing:	Air-cooled		
Refrigerant fluid:	Brine		
Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal energy performance ratio	SEPR MT	2.86	[-]
Annual electricity consumption	Q	441118	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P _A	171.79	kW
Rated power input	D _A	104.25	kW
Rated energy efficiency ratio	EER _A	1.65	[-]
Parameters at rating point B			
Declared refrigeration capacity	P _B	159.76	kW
Declared power input	D _B	69.29	kW
Declared energy efficiency ratio	EER _B	2.31	[-]
Parameters at rating point C			
Declared refrigeration capacity	P _C	149.46	kW
Declared power input	D _C	51.23	kW
Declared energy efficiency ratio	EER _C	2.92	[-]
Parameters at rating point D			
Declared refrigeration capacity	P _D	137.43	kW
Declared power input	D _D	44.43	kW
Declared energy efficiency ratio	EER _D	3.09	[-]
Other items			
Capacity control	Variable		
Degradation co-efficient chillers	C _c	0.90	[-]
Type and GWP of the refrigerant	R410A	2088	kg CO2 eq (100 years)
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel		
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Information requirements for comfort chillers - SEER

Model:	AS T 140 HE
Air-to-water chillers:	YES
Water-to-water chillers:	NO
Compressor-induced vapour compression:	YES
Absorption process:	NO
Compressor electrical operation:	YES
Operation with compressor's internal combustion motor:	NO

Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated cooling capacity	P rated, C	339,4	kW	Seasonal energy efficiency of room cooling	$\eta_{s,c}$	160,0	%
				Seasonal performance coefficient	SEER	4,07	-
Tj = +35 °C	Pdc	339,4	kW	Tj = +35 °C	EERd	2,9	-
Tj = +30 °C	Pdc	251,1	kW	Tj = +30 °C	EERd	3,7	-
Tj = +25 °C	Pdc	159,5	kW	Tj = +25 °C	EERd	4,5	-
Tj = +20 °C	Pdc	120,0	kW	Tj = +20 °C	EERd	5,1	-
Degradation coefficient	Cdc	0,9	-				

Energy consumption in modes other than active mode

OFF mode	P OFF	0,380	kW	Casing heating mode	P CK	0,380	kW
Thermostat OFF mode	P TO	0,911	kW	Standby mode	P SB	0,044	kW

Other elements

Capacity control devices	Fixed/Variable	Variable		For air-to-water room chillers: measured air flow outdoors	-	105000	m ³ /h
Sound power level, outdoors	LWA	92,8	dB(A)	For water-to-water room chillers: rated water flow outdoor heat exchanger	-	-	m ³ /h
Refrigerant type and GWP	R410A	2088	kg CO ₂ eq (100 years)				
Used standard rated conditions:	application at low temperature with variable output						
Contact details	ICS Cool Energy B.V. - Rotschotseweg 4, 5271 WX Sint - Michielsgestel						

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