



Sullair Water Chillers

Precision Chilled Water



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What are Water Chillers?

Water chillers are used for controlled cooling of products, mechanisms and machinery in a variety of industries. They remove heat from the process water and transfer it to air via a heat exchanger. Using the refrigeration cycle, Sullair Water Chillers are able to cool the water to below ambient temperature.

Why Choose a Sullair Water Chiller?

Sullair has been providing precision chilled water technology in Australia for over 30 years. Able to meet the demands for variety of applications, Sullair Water Chillers satisfy even the most stringent requirements.

The Sullair Water Chiller range offers either axial or centrifugal fans upto 82kW in power. They can be customized for all industrial and environmental conditions to ensure the most accurate control of water temperature.

Applications

- Laser Technology
- Extruders
- Surface Processing
- Welding Engineering
- Blow Mould Machines
- Printing Systems
- Coating Systems
- Chemicals and Pharmaceuticals
- Plastics Processing
- Thermoforming Machines
- Plasma Coating
- Medical Imaging
- Food & Beverage
- Injection Moulding
- Cutting Machine Tools
- Electroplating Baths
- Bioenergy
- Compressed Air

Precision Chilled Water Everytime...

Sullair Water Chillers provide a continuous supply of water at constant temperatures, regardless of load or ambient temperature changes. This secures industrial processes, reduces cost and improves productivity.



Champion Water Chillers combine advanced design solutions, such as energy saving scroll compressors and a sophisticated microprocessor, with unique features to meet the specific needs of industrial users including extreme flexibility towards the varying working conditions typically found in industry.

Features & Benefits

User Friendly Design

A unique design makes Sullair Water Chillers easy to use, access, position and repair. This makes them highly versatile and saves on downtime.

Features include:

- Removable tank & condenser
- Full frontal access for easy maintenance
- Compact & lightweight construction
- Compatible with pressurized closed circuits



Maximum Efficiency

Maximum efficiency can be achieved through the energy saving components to reduce power consumption.

Features include:

- Compliant scroll compressor (ICEP007 & above)
- Economic design
- Multiple compressors (ICEC076 & above)
- R407C refrigerant



Precision Control

Advanced onboard control unit helps to control the water temperature.

Features include:

- Low water velocity
- Adjustable programming (ICEP015 & above)
- Oversized water tanks
- Unique water outlet temperature control design



Reliable Operation

Sullair Water Chillers offer an all-in-one package capable of operating continuously in all conditions of varying applications. They can accept water inlet temperatures up to 30°C and can deliver outlet temperatures down to 0°C, capable of achieving as much as 15°C difference in temperatures.

Features include:

- Twin independent refrigeration circuits
- Water fouling safeguards
- Condenser pre-filter (ICEP007 & above)
- Extensively tested for quality assurance



Champion Water Chillers maximize productivity and minimize costs, as well as easing conformity to regulations on water quality. Champion Water Chillers are the perfect solution to industrial chilled water needs.

Specifications

Sullair Water Chillers ICEP003 - ICEP024

Model ICEP		ICEP003	ICEP005	ICEP007	ICEP010	ICEP014	ICEP020	ICEP024
Cooling capacity ¹	kW	3,3	5,2	7,8	10,8	14,6	20,3	23,6
Compressor abs. power ¹	kW	1,3	1,4	1,7	2,5	3,2	4,4	5,4
Cooling capacity ²	kW	2,3	3,7	5,8	7,9	10,6	14,6	17,2
Compressor abs. power ²	kW	1,2	1,3	1,8	2,7	2,8	4,3	5,8
Power supply	V/ph/Hz	230/1/50			400/3/50			
Protection index		33			54			
Refrigerant		R407c						
Compressor								
Type		hermetic pistons			scroll			
Compressors / circuit		1/1						
Max.abs. power ¹ compressor	kW	1,3	1,5	2,4	3,8	4,4	5,7	6,6
Axial fans								
Quantity	n.º	1	1	1	1	1	2	2
Max. abs. power ¹ fan	kW	0,12	0,12	0,3	0,3	0,4	0,4	0,4
Air flow	m ³ /h	1295	1295	3437	3437	4337	6878	6159
Water cooled version								
Condenser water flow	m ³ /h	N.A			1,5	2,1	2,5	
Condenser connections	in	N.A			3/4"	3/4"	3/4"	
Pump P30								
Max.abs.power	kW	0,4	0,4	0,9	0,9	1,0	1,3	1,3
Water flow (nom. / max) ¹	m ³ /h	0,6 / 1,9	0,9 / 1,9	1,3 / 4,8	1,8 / 4,8	2,5 / 6	3,4 / 9,6	4,9 / 9,6
Head pressure (nom. / max) ¹	m H ₂ O	33/5	26 / 5	30 / 12,8	29 / 12,8	29 / 21	29 / 17,3	28 / 17,3
Water flow (nom. / max) ²	m ³ /h	0,4 / 1,9	0,8 / 1,9	1,0 / 4,8	1,3 / 4,8	1,8 / 6	2,5 / 9,6	2,9 / 9,6
Head pressure (nom. / max) ²	m H ₂ O	32 / 5	27 / 5	32 / 12,8	30 / 12,8	31 / 21	30 / 17,3	29 / 17,3
Dimensions and weight								
Width	mm	755	755	756	756	756	756	756
Depth	mm	535	535	806	806	806	1206	1206
Height	mm	801	801	1405	1405	1405	1405	1405
Connections in/out	in	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"
Tank capacity	l	15	22,5	65	65	65	100	100
Weight (axial)	kg	80	85	160	165	175	220	230
Weight (water cooled)	kg	n/a	n/a	n/a	n/a	175	220	230
Noise level								
Sound pressure (axial) ³	dB(A)	52	52	53	53	50	50	50

- At water in/out temperature 20/15 °C, glycol 0 %, either 25 °C ambient temperature (air-cooled models) or 25 °C condenser water inlet temperature with 35 °C condensing temperature (water-cooled models).
- At water in/out temperature 12/7 °C, glycol 0 %, 32 °C ambient temperature (air-cooled models).
- Referred to axial fan version in free field conditions at a distance of 10 m from unit, measured on condenser side, 1 m from ground.



Specifications

Sullair Water Chillers ICE029 - ICE360

Model ICE		ICE029	ICE039	ICE046	ICE057	ICE076	ICE090	ICE116	ICE150	ICE183	ICE230	ICE310	ICE360	
Cooling capacity ¹	kW	28,1	38,2	45,2	56,4	76,0	90,2	115,5	149,2	182,3	228	309	360	
Compressor abs. power ¹	kW	5,7	7,7	10,1	12,3	15,4	20,3	24,9	30,8	40,1	51,4	65	82	
Cooling capacity ²	kW	21,2	27,7	33,0	40,8	55,2	65,8	84,2	108	133	166	231	262	
Compressor abs. power ²	kW	6	8,2	10,3	13,1	16,4	21,1	26,2	32,5	41,3	54,6	65	85	
Power supply	V/ph/Hz	400/3/50 no neutral												
Protection index		54												
Refrigerant		R407C												
Compressors														
Type		Hermetic scroll												
Compressors/circuits		1/1				2/2				4/2				
Max abs. power - 1 comp.	kW	7,8	11,1	13,7	16,8	11,1	13,7	16,8	11,1	13,7	16,8	23,3	28,7	
Axial fans														
Quantity	n°	1	2	3				2	3	4				
Max abs. Power - 1 fan	kW	0,78	0,61	0,61	0,61	0,78	0,78	0,78	2	2	2	2	2	
Air flow	m ³ /h	9200	12400	12000	17400	25500	25000	26400	47000	46000	66000	88000	88000	
Centrifugal fans														
Quantity	N°	2				3				3			N.A.	
Max abs. Power - 1 fan	kW	1,1	1,1	1,1	1,1	1,5	1,5	1,5	3	3	3	N.A.		
Air flow	m ³ /h	9200	12400	12000	17400	25500	25000	26400	47000	46000	66000	N.A.		
Head pressure	Pa	200	180	160	200	100	100	100	180	180	130	N.A.		
Water cooled version														
Condenser water flow	m ³ /h	2,4	4,0	5,6	8,0	11,1	11,5	16,6	19,2	31,0	33,0	N.A.		
Condensers connections	in	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 1/2"	N.A.		
Pump P30														
Max abs.power	kW	1,3	1,3	2,3	2,3	2,5	2,7	2,7	4,5	4,5	4,5	8,4	8,4	
Water flow (nom/max) ¹	m ³ /h	4,8/9,6	6,6/9,6	7,8/18	9,7/18	13/31	15/27	20/27	25/50	30/50	39/50	53/90	62/90	
Head pressure (nom/min) ¹	m H ₂ O	27/17	24/17	28/22	27/22	23/13	28/16	25/16	34/20	32/20	26/20	26/19	23/19	
Water flow (nom/max) ²	m ³ /h	3,6/9,6	4,8/9,6	5,7/18	7,0/18	9,5/31	11/27	14/27	18/50	23/50	29/50	40/90	45/90	
Head pressure (nom/min) ²	m H ₂ O	28/17	27/17	28/22	28/22	23/13	32/16	30/16	36/20	35/20	32/20	37/19	35/19	
Dimensions and weight														
Width	mm	1650	1650	1650	2200	2200	2200	2200	3000	3000	3260	4200	4200	
Depth	mm	744	744	744	744	898	898	898	1287	1287	1287	1500	1500	
Height	mm	1358	1358	1358	1358	1984	1984	1984	2298	2298	2298	2240	2240	
Connections in/out	in	1 ½"	1 ½"	1 ½"	1 ½"	2"	2"	2"	2 ½"	2 ½"	2 ½"	4"	4"	
Tank capacity	l	180	180	250	300	500	500	500	1000	1000	1000	400	400	
Weight (axial)	kg	380	410	430	520	800	900	1000	1500	1800	2100	2900	3100	
Weight (centrif.)	kg	410	450	480	610	950	1050	1150	1700	2000	2300	N.A.		
Weight (water cooled)	kg	380	410	430	520	800	900	1000	1500	1800	2100	N.A.		
Noise level														
Sound pressure (axial) ³	dB(A)	53	52	52	56	58	58	58	62	62	64	65	65	

Correction factors

- At water in/out temperature = 20/15 °C, glycol 0 %, either 25 °C ambient temperature (air-cooled models) or 25 °C condenser water inlet temperature with 35 °C condensing temperature (water-cooled models).
- At water in/out temperature = 12/7 °C, glycol 0 %, 32 °C ambient temperature (air-cooled models).
- Referred to axial fan version in free field conditions at a distance of 10m from unit, measured on condenser side, 1m from ground.

	°C	5	10	15	20	25	30	35	40	45	N/A
A) Ambient temp. (air-cooled models) correction factor (f1)		1,05	1,05	1,05	1,05	1	0,95	0,89	0,83	0,77	N/A
B) Water outlet temperature correction factor (f2)		0,72		0,86		1		1		1	N/A
C) Glycol correction factor (f3)	%	0		10		20		30		40	50
		1		0,99		0,98		0,97		0,96	0,94
D) Condenser water inlet temp. (water-cooled models) correction factor (f4)		1,05		1		0,95		0,9		0,85	N/A

To obtain the required cooling capacity multiply the value at nominal conditions by the above correction factors (i.e. cooling capacity = Pxf1xf2xf3xf4, where P is the cooling capacity at conditions (1)). Sullair Water Chillers, in their standard configuration, can operate up to ambient temperatures of max 45 °C and min. 5 °C and water temperatures of max 30 °C inlet and min. 0 °C outlet. The above correction factors are approximative: for a precise selection or higher capacities, refer to Sullair's Sales Specialist.



“ WHEN
TIME IS
MONEY,
CHOOSE
SULLAIR. ”

Sullair Water Chillers secure industrial processes, reduce cost and improve productivity – and that’s money in the bank.