

Hyperchill Plus

Industrial Water Chillers for Precision Cooling



Extremely compact and easy to use, Hyperchill Plus is designed for safe and reliable operation in various working conditions while providing a precise and accurate control of the process fluid temperature. The availability of a wide range of accessories and options makes Hyperchill Plus a very flexible solution that fits the needs of all industrial applications.

Thanks to a non-ferrous hydraulic circuit, Hyperchill Plus ensures stable working conditions with maximum quality and cleanliness of the cooling fluid (water, water-glycol mixture, low viscosity fluids), improving the efficiency and productivity of the process and greatly reducing maintenance costs and plant downtime.

Each individual Hyperchill Plus unit is extensively tested to guarantee efficient operation and reliability in all environments.



Process cooling applications:

- Coating Systems
- Medical Imaging Systems
- Plastics Processing
- Thermoform Machines
- Plasma Coating
- Chemical & Pharmaceutical Processes
- Food & Beverage Industry
- Injection Molding
- Machine Tools
- Electroplating Baths
- Biogas & Natural Gas Treatment
- Compressed Air Treatment
- Laser Technology
- Extruders
- Surface Processing
- Welding Engineering
- Blow Mold Machines
- Flexographic Printing Systems



ENGINEERING YOUR SUCCESS.

Product Specification

Hyperchill Plus Water Range



Customer Benefits

- A differential pressure switch is installed to ensure the system shuts down in case of flow restriction.
- Because of its compact design the Hyperchill Plus provides a space saving and easy to install solution.
- HyperChill Plus includes a condenser pre-filter to reduce fouling.
- Reliable operation even in extreme ambient conditions. The standard units from ICEP007 allow maximum ambient temperatures up to 118 °F. The tropicalized units up to 127 °F.
- The non-ferrous hydraulic circuit maintains the quality of the coolant ensuring stable working conditions improving productivity and decreasing maintenance costs.

Product Features

- **Non ferrous hydraulic circuit:** non-ferrous water tank (stainless steel from ICEP005), stainless steel plate evaporator and non-ferrous pump to resist corrosion.
- **Pump and tank installed inside the chiller** provides a compact and easy to install solution; without pump and/or without tank solution available.
- **Electronic controllers with proprietary software** provide access to all the parameters of the units and allow special management for any specific need, with remote monitoring available.
- **Completely configurable** with many options and kits to fit the needs of industrial applications.
- **Independent condensing plenum** enables routine and special maintenance to be performed without stopping the system.
- **Standard design** for outdoor installations from ICEP007.
- **Designed with eyebolts** (till ICEP014) for easy handling.
- Unit structure and design guarantee **full internal access** for easy maintenance. ICEP020 and ICEP024 designed with **fan step control** in order to work in low ambient temperatures down to 14 °F.
- **Water and refrigerant manometers** permit full control of the working conditions.
- **RS485 card** available on all models (standard from ICEP007).
- **Low ambient speed-control** (optional) on fan-motor ensures constant performances at different temperatures, long lifetime of the fans and a reduction in absorbed power when ambient temperature is low.
- **PID software developed and tested** to give the highest temperature consistency even at variable loads
- **Water pump: (standard 3bar) different head-pressures** available to meet the requirements of specific applications.
- **Visual level Indicator:** designed for open circuit models.
- **UL approval** available for models from ICEP003 to ICEP024.
- **Large built-in water tank** that provides a large thermal mass / storage capacity thus reducing the number of refrigerant compressor stop/starts and short cycling thereby increasing the compressor and chiller lifetime and reducing the energy consumption.
- **Oversized condensers and evaporators** guarantee high performing heat exchange increasing Coefficient Of Performance.
- Use of **compliant scroll compressors** (from ICEP007) designed specifically for high efficiency and long life in industrial applications.

Product Specification

Hyperchill Plus Water Range

Hyperchill Plus Water Range 60 Hz

Model ICEP		002	003	005	007	010	014	020	024
Cooling capacity ¹	BTU/h	4668	9336	13512	21783	29952	40454	56403	65738
Compressor abs.power ¹	KW	0.77	1.66	1.7	2.3	3.71	4.48	6.27	6.91
Power supply	V/ph/Hz	230/1/60			460/3/60				
Protection index		IP33			IP54				
Refrigerant		R407c							

Compressor

Type		hermetic pistons				scroll			
Compressors / circuit		1 / 1							
Max.abs.power 1 compressor	kW	0.8	1.4	1.6	2.5	3.9	4.5	5.8	6.7

Axial fans

Quantity	n.°	1	1	1	1	1	1	2	2
Max.abs.power 1 fan	kW	0.1	0.2	0.2	0.3	0.3	0.7	0.7	0.7
Air flow	scfm	278	838	838	2225	2225	2808	4453	3988

Water cooled version

Condenser water flow	gpm	N.A.			6.6	9.2	11		
Condenser connections	in	N.A.			3/4	3/4	3/4		

Pump P30

Max.abs.power	kW	0.5	0.5	0.5	0.6	0.6	1.1	1.1	0.8
Water flow ¹	gpm	1	2.1	3.1	4.8	6.6	9	12.5	14.6
Head pressure ¹	psi	46	45	44	55	51	67	61	44

Pump P50

Max.abs.power	kW	N.A.	0.8	0.8	0.8	0.8	1.1	1.1	1.5
Water flow ¹	gpm	N.A.	2.1	3.1	4.8	6.6	9	12.5	14.6
Head pressure ¹	psi	N.A.	88	86	84	78	88	81	87

Dimension and weight

Width	in	21	30	30	30	30	30	30	30
Depth	in	20	22	22	32	32	32	48	48
Height	in	22	32	32	56	56	56	56	56
Connections in/out ²	in	1/2	3/4	3/4	3/4	3/4	3/4	1	1
Tank capacity	gal	4	4	6	17	17	17	26	26
Weight (axial) ³	lb	89	177	188	353	364	386	485	507
Weight (water cooled) ³	lb	N.A.	N.A.	N.A.	N.A.	N.A.	386	485	507

Noise level

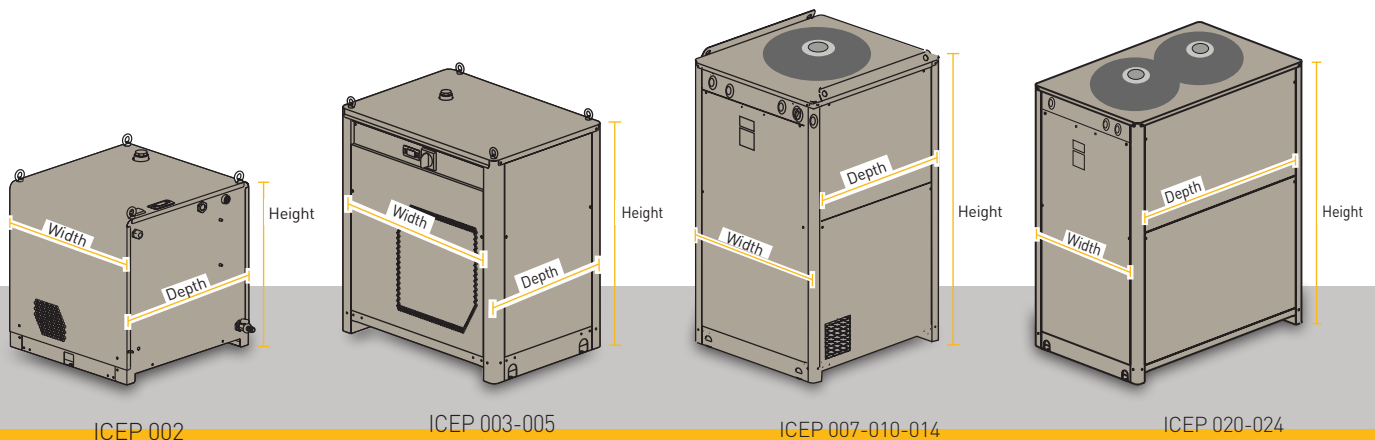
Sound pressure (axial) ⁴	dB(A)	52	52	52	53	53	50	50	50
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1) At water in/out temperature 55/45 °F, glycol 0 %, 95 °F ambient temperature at sea level (air-cooled models) or 95 °F condenser water inlet temperature with 113 °F condensing temperature (water-cooled models)

2) Female NPT adapters supplied

3) Weights are inclusive of pallet and refrigerant charge

4) Referred to axial fan version in free field conditions at a distance of 32.8 ft from unit, measured on condenser side, 3.28 ft from ground



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Correction factors

Ambient temperature	° F	41	50	59	68	77	86	95	104	113
(A) Correction factor		1.15	1.15	1.15	1.15	1.1	1.05	1	0.95	0.9
Water outlet temperature	° F	41	45		59		68		77	
(B) Correction factor		0.9	1		1.15		1.2		1.2	
Glycol (by weight)	%	0	10		20		30		40	
(C) Correction factor		1	0.99		0.98		0.97		0.96	
Condenser water inlet temp.	° F	20	25		30		95		104	
(D) Correction factor		1.15	1.1		1.05		1		0.95	

To obtain the required cooling capacity, multiply the value at nominal conditions by the above correction factors (i.e. cooling capacity = P x A x B x C x D, where P is the cooling capacity at the water outlet temperature of 45 °F). Hyperchill Plus, in its standard configuration, can operate up to ambient temperatures of max. 118 °F and min. 41 °F and water temperatures of max. 86 °F inlet and min. 33 °F outlet. The above correction factors are approximative: for a precise selection, always refer to the software selection program.

Options	ICEP002-W	ICEP003-W	ICEP005-W	ICEP007-W	ICEP010-W	ICEP014-W	ICEP020-W	ICEP024-W
No tank	✓	✓	✓	✓	✓	✓	✓	✓
No tank & no pump	✓	✓	✓	✓	✓	✓	✓	✓
No pump	✓	✓	✓	✓	✓	✓	✓	✓
P50		✓	✓	✓	✓	✓	✓	✓
P15				✓	✓	✓	✓	✓
Harting plug	✓	✓	✓	✓	✓	✓	✓	✓
Close control (+/-1°F)		✓	✓	✓	✓	✓	✓	✓
Low water				✓	✓	✓	✓	✓
Fan speed control				✓	✓	✓	✓	✓
Low ambient -4°F				✓	✓	✓	✓	✓
Anti-freeze heating				✓	✓	✓	✓	✓
BioEnergy				✓	✓	✓	✓	✓
Differential dynamic set point				✓	✓	✓	✓	✓
Tropicalization (127°F, without ambient fill kit)						✓	✓	✓
Siemens electrical components (with standard Parker controller)	on request							
Accessories	ICEP002-W	ICEP003-W	ICEP005-W	ICEP007-W	ICEP010-W	ICEP014-W	ICEP020-W	ICEP024-W
Wheels	✓	✓	✓	✓	✓	✓		
Non ferrous manual external bypass		✓	✓	✓	✓	✓	✓	✓
Remote control (base)	✓	✓	✓	✓	✓	✓	✓	✓
Remote control (advanced)				✓	✓	✓	✓	✓
Control panel cover				✓	✓	✓	✓	✓
Non ferrous pressurized automatic fill kit				✓	✓	✓	✓	✓
Ambient manual Fill kit				✓	✓	✓	✓	✓
Ambient automatic Fill kit				✓	✓	✓	✓	✓
Water filter	✓	✓	✓	✓	✓	✓	✓	✓
Versions	ICEP002-W	ICEP003-W	ICEP005-W	ICEP007-W	ICEP010-W	ICEP014-W	ICEP020-W	ICEP024-W
Open circuit	✓	✓	✓					
Closed circuit			✓	✓	✓	✓	✓	✓
Water cooled (plate condenser)						✓	✓	✓

