

Hyperchill

Industrial Process Chillers for Precision Cooling



Extremely compact and easy to use, Hyperchill ensures an accurate control of water temperature.

Each model is designed for safe and reliable operation in the most varied working conditions, thanks to the modern technical solutions used and the availability of a wide range of accessories and options. Each individual Hyperchill unit is extensively tested to guarantee efficient operation and reliability in all working conditions.



Process cooling applications:

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

Philosophy

Parker Hiross specialises in cooling, purification, and separation technologies, where compressed air and gas purity, product quality, technological excellence and global support are paramount. We design and manufacture compressed air treatment products and cooling equipment for many key industries where ease of integration, low cost of ownership and energy saving can make the difference. Parker Hiross has been supplying industry with high efficiency products with low lifetime costs and reduced CO₂ emissions since 1964. Our philosophy 'to stand out from the crowd' is our credo, encouraging our employees to achieve continuous improvement and satisfy customer expectations.



Contact Information:

Parker Hiross S.p.A. - Strada Zona Industriale 4
S. Angelo di Piove PD - Italy
Tel: +39 049 9712 217 - Fax: +39 049 9701 911
Email: info@parker.com
www.dh-hiross.com



Product Features:

Complete solution, easy to install and manage

- Hydraulic circuit: water tank, immersed evaporator, pump with bypass provide a compact and easy to install solution
- Electronic controllers with proprietary software provide access to all the parameters of the units and allow special management for any specific need
- Available with remote monitoring
- Completely configurable with many options and kits to fit many industrial applications needs
- Condenser filters
- Independent condensing plenum
- Full access and easy service design

High reliability and back-up eliminate downtime

- Large water tanks allow minimum compressor cycling and precise temperature control
- Double independent fridge circuits (from ICE076)
- 2 compressors from ICE076 and 4 compressors from ICE150 with automatic rotation
- Double stand-by water pumps available
- Maximum ambient temperature up to 45°C

Lowest energy consumption in the market

- Oversized condensers and evaporators
- Use of compliant scroll compressors (from ICE022)



ENGINEERING YOUR SUCCESS.

Water and refrigerant manometers permit full control of the working conditions.

Microprocessors: allow complete control of the unit parameters. Proprietary software from ICE015 onwards allows a wide range of programming and remote monitoring options.

Compliant scroll compressors: (from ICE022 onwards) with less moving parts and compliant technology provide excellent efficiency, high reliability, and very low noise levels.

Air cooled with axial fans: suitable for outdoor installation, no need for protection.

Water pump (standard 3bar): different head-pressures available to meet the requirements of specific applications. Configurable as a twin-system for 100% back-up.



Mesh filters: (from ICE010 onward) condenser protection from dirt and contamination, reduces maintenance costs and the risk of downtime.

Evaporator: located inside the water tank - reduces the overall dimensions, increases the efficiency and improves temperature control.

Water by-pass: protects the pump and supplies constant flow to the evaporator avoiding alarms and freezing.

Water tank: generously dimensioned to guarantee high reliability and improved temperature control.

Versions:

- **Air cooled** with centrifugal fans (ICE 015-230): ideal for installation in enclosed environments. Can be ducted for air venting or heat recovery.
- **Water cooled** (ICE 015-230 alternative to the air cooled versions): Shell&tube condensers with pressostatic valves.

- **Low ambient** temperature (from ICE007 onwards): additional condensing control for continuous operation in cold ambients (negative temperature). Available for air cooled, axial fan units.
- **Low water** temperature (from ICE007 onwards): for negative water temperature control, down to -10 °C. (Low

ambient temperature option recommended).

- **Precision control** (ICE 015-ICE230): for precise water temperature control ($\pm 0,5$ °C)
- **Non ferrous** (from ICE007 onwards): stainless steel tank, pump, and hydraulic components.
- **Bioenergy:** epoxy coating on all exposed copper as protection against aggressive environments.
- **Special and multiple pumps:** higher (P50-5bar) or lower (P15-1,5bar) head pressure available to suit different hydraulic circuits. Double stand-by pump for high reliability.
- **Antifreeze** heating (from ICE007 onwards): avoids freezing when the unit is switched off and glycol is not used.



Options:

- **Water fill kits:** pressurized, automatic or ambient manual kits, for water filling in any installation.
- **Remote control kits:** base version for remote ON/OFF and general alarm monitoring.

Advanced version for complete remote unit management.

- **Wheels** (ICE005 - ICE010): for ease of transport.
- **Water filters** for circuit cleanliness and machinery protection.



Technical data

Model ICE		003	005	007	010	015	022	029	039	046	057	076	090	116	150	183	230	310	360	
Cooling capacity ¹	kW	2,5	5,1	7,0	9,5	14,3	21,8	28,1	38,2	45,2	56,4	76,0	90,2	115,5	149,2	182,3	228	309	360	
Compressor abs. power ²	kW	0,7	1,4	2,0	2,3	3,4	5,2	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	1,7	3,7	5,0	6,7	10,0	15,4	21,2	27,7	33,0	40,8	55,2	66,8	84,2	108	133	166	231	262	
Compressor abs. power ²	kW	0,67	1,3	1,9	2,1	3,2	5,5	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	230/1/50			400/3/50 no neutral															
Protection index		33			44			54												
Refrigerant		R407C																		

Compressors

Type	hermetic pistons									hermetic scroll									
Compressors/circuits	1/1									2/2			4/2						
Max abs. power - 1 comp.	kW	0,7	1,5	1,8	3	2,9	6,9	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	0,12	0,12	0,1	0,1	0,61	0,61	0,78	0,61	0,61	0,61	0,78	0,78	0,78	2	2	2	2	2
Air flow	m³/h	2300	2300	4400	4100	7100	6800	9200	12400	12000	17400	25500	25000	26400	47000	46000	66000	88000	88000

Centrifugal fans

Quantity	N°	1			2			3			3			NA																									
Max abs. Power - 1 fan	kW	NA																																					
Air flow	m³/h	7100			6800			9200			12400			12000			17400			25500			25000			26400			47000			46000			66000			NA	
Head pressure	Pa	140			130			200			180			160			200			100			100			100			180			180			130			NA	

Water cooled version

Condenser water flow	m³/h	NA															NA										
Condensers connections	in	1"			1"			1 1/4"			1 1/4"			1 1/4"			1 1/4"			1 1/4"			1 1/2"			NA	

Pump P30

Max abs. power	kW	0,4	0,4	0,5	0,5	1,1	1,3	1,3	1,3	2,3	2,3	2,5	2,5	2,7	4,5	4,5	4,5	8,4	8,4
Water flow (nom/max) ¹	m³/h	0,43/2,4	0,88/2,4	1,2/3	1,6/3	2,3/6	3,7/9,6	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	36/5	29/5	36/8	30/8	29/21	28/17	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	m³/h	0,29/2,4	0,64/2,4	0,86/3	1,2/3	1,6/6	2,7/9,6	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	38/5	33/5	42/8	36/8	30/21	29/17	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	530	530	980	980	1090	1090	1650	1650	1650	2200	2200	2200	2200	3000	3000	3260	4200	4200	
Depth	mm	750	750	534	534	744	744	744	744	744	744	898	898	898	1287	1287	1287	1500	1500	
Height	mm	800	800	1228	1228	1358	1358	1358	1358	1358	1358	1984	1984	1984	2298	2298	2298	2240	2240	
Connections in/out	in	1"	1"	1"	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	4"	4"	
Tank capacity	l	25	25	45	45	120	120	180	180	250	300	500	500	500	1000	1000	1000	400	400	
Weight (axial)	kg	105	110	170	180	250	270	380	410	430	520	800	900	1000	1500	1800	2100	2900	3100	
Weight (centrif.)	kg	NA				280	300	410	450	480	610	950	1050	1150	1700	2000	2300	NA		
Weight (water cooled)	kg	NA				250	260	380	410	430	520	800	900	1000	1500	1800	2100	NA		

Noise level

Sound pressure (axial) ³	dB(A)	52	52	53	53	50	50	53	52	52	56	58	58	58	62	62	64	65	65
-------------------------------------	-------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

- 1) 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).
- 2) at water in/out temperature = 12/7°C, glycol 0%, 32°C ambient temperature (air-cooled models)
- 3) referred to axial fan version in free field conditions at a distance of 10m from unit, measured on condenser side, 1m from ground.

Correction factors

A) Ambient temp. (air-cooled models) correction factor (f1)	°C	5	10	15	20	25	30	35	40	45
		1,05	1,05	1,05	1,05	1	0,95	0,89	0,83	0,77
B) Water outlet temperature correction factor (f2)	°C	5	10	15	20	25				
		0,72	0,86	1	1	1				
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)	°C	20	25	30	35	40				
		1,05	1	0,95	0,9	0,85				

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)). Hyperchill, in its 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 always refer to the software selection program.

Parker Worldwide

AE – UAE, Dubai
Tel: +971 4 8127100
parker.me@parker.com

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe,
Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BR – Brazil, Cachoeirinha RS
Tel: +55 51 3470 9144

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CL – Chile, Santiago
Tel: +56 2 623 1216

CN – China, Shanghai
Tel: +86 21 2899 5000

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HK – Hong Kong
Tel: +852 2428 8008

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IN – India, Mumbai
Tel: +91 22 6513 7081-85

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

LV – Latvia, Riga
Tel: +371 6 745 2601
parker.latvia@parker.com

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NL – The Netherlands,
Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Ski
Tel: +47 64 91 10 00
parker.norway@parker.com

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SG – Singapore
Tel: +65 6887 6300

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TH – Thailand, Bangkok
Tel: +662 717 8140

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom,
Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

US – USA, Cleveland
Tel: +1 216 896 3000

VE – Venezuela, Caracas
Tel: +58 212 238 5422

ZA – South Africa,
Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

European Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, EE, ES, FI, FR, IE,
IL, IS, IT, LU, MT, NL, NO, PT, SE, SK, UK)

BULICE-00-EN