

# Hyperchill Industrial Process Chiller

## Technical Data

Model ICE		076	090	116	150	183	230	310	360
Cooling capacity <sup>1</sup>	kW	76.0	90.2	115.5	149.2	182.3	228	309	360
Compressor abs. power <sup>1</sup>	kW	15.4	20.3	24.9	30.8	40.1	51.4	65	82
SEPR <sup>3</sup>		5.39	4.97	5.08	5.35	5.04	4.80	5.51	4.57
Power supply	V/ph/Hz	400/3/50 no neutral							
Protection index		54							
Refrigerant		R407C							

## Compressors

Type		Hermetic scroll							
Compressors/circuits		2/2				4/2			
Max abs. power - 1 comp.	kW	11.1	13.7	16.8	11.1	13.7	16.8	23.3	28.7

## Axial Fans

Quantity		3			2		3	4	
Max abs. power - 1 fan	kW	0.78	0.78	0.78	2	2	2	2	2
Air flow	m <sup>3</sup> /h	25500	25000	26400	47000	46000	66000	88000	88000

## Centrifugal Fans

Quantity		3			3			N.A.	
Max abs. power - 1 fan	kW	1.5	1.5	1.5	3	3	3		
Air flow	m <sup>3</sup> /h	25500	25000	26400	47000	46000	66000		
Head pressure	Pa	100	100	100	180	180	130		

## Water Cooled Version

Condenser water flow	m <sup>3</sup> /h	11.1	11.5	16.6	19.2	31.0	33.0	N.A.	
Condensers connections	in	1¼"	1¼"	1¼"	1 ¼"	1¼"	1½"		

## Pump P30

Max abs. power	kW	2.5	2.7	2.7	4.5	4.5	4.5	8.4	8.4
Water flow (nom/max) <sup>1</sup>	m <sup>3</sup> /h	13/31	15/27	20/27	25/50	30/50	39/50	53/90	62/90
Head pressure (nom/min) <sup>1</sup>	m H <sub>2</sub> O	23/13	28/16	25/16	34/20	32/20	26/20	26/19	23/19

## Weights & Dimensions

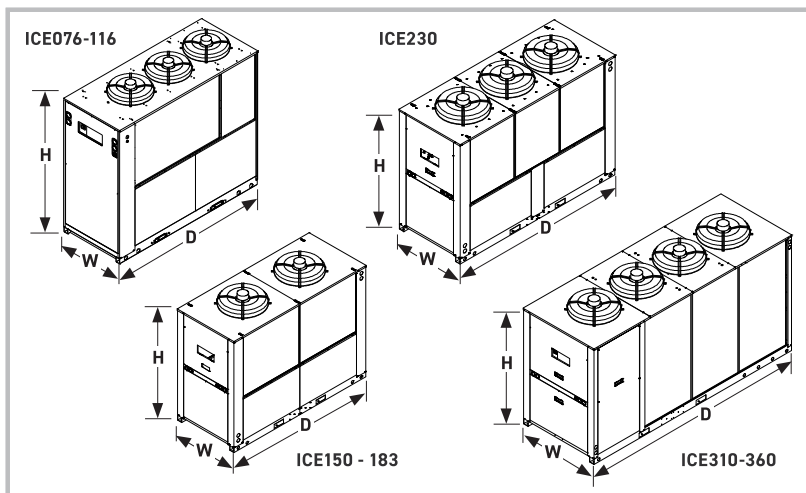
Width	mm	898	898	898	1287	1287	1287	1500	1500
Depth	mm	2200	2200	2200	3000	3000	3260	4200	4200
Height	mm	1984	1984	1984	2298	2298	2298	2240	2240
Connections in/out	in	2"	2"	2"	2½"	2½"	2½"	4"	4"
Tank capacity	l	500	500	500	1000	1000	1000	400	400
Weight (axial)	kg	800	900	1000	1500	1800	2100	2900	3100
Weight (centrif.)	kg	950	1050	1150	1700	2000	2300	N.A.	
Weight (water cooled)	kg	800	900	1000	1500	1800	2100		

## Noise level

Sound pressure (axial) <sup>2</sup>	dB(A)	58	58	58	62	62	64	65	65
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- 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) Referred to axial fan version in free field conditions at a distance of 10 m from unit, measured on condenser side, 1m from ground.
- 3) Value calculated in accordance with the European regulation (EU) 2016/2281 with regards to Ecodesign requirements for high temperature process chillers.

As the manufacturer of process chillers delivering water at a design temperature of 15°C, Parker Hannifin Manufacturing s.r.l., Gas Separation and Filtration Division EMEA, declares that Parker chillers are exempt from Ecodesign EU regulation 2016/2281.



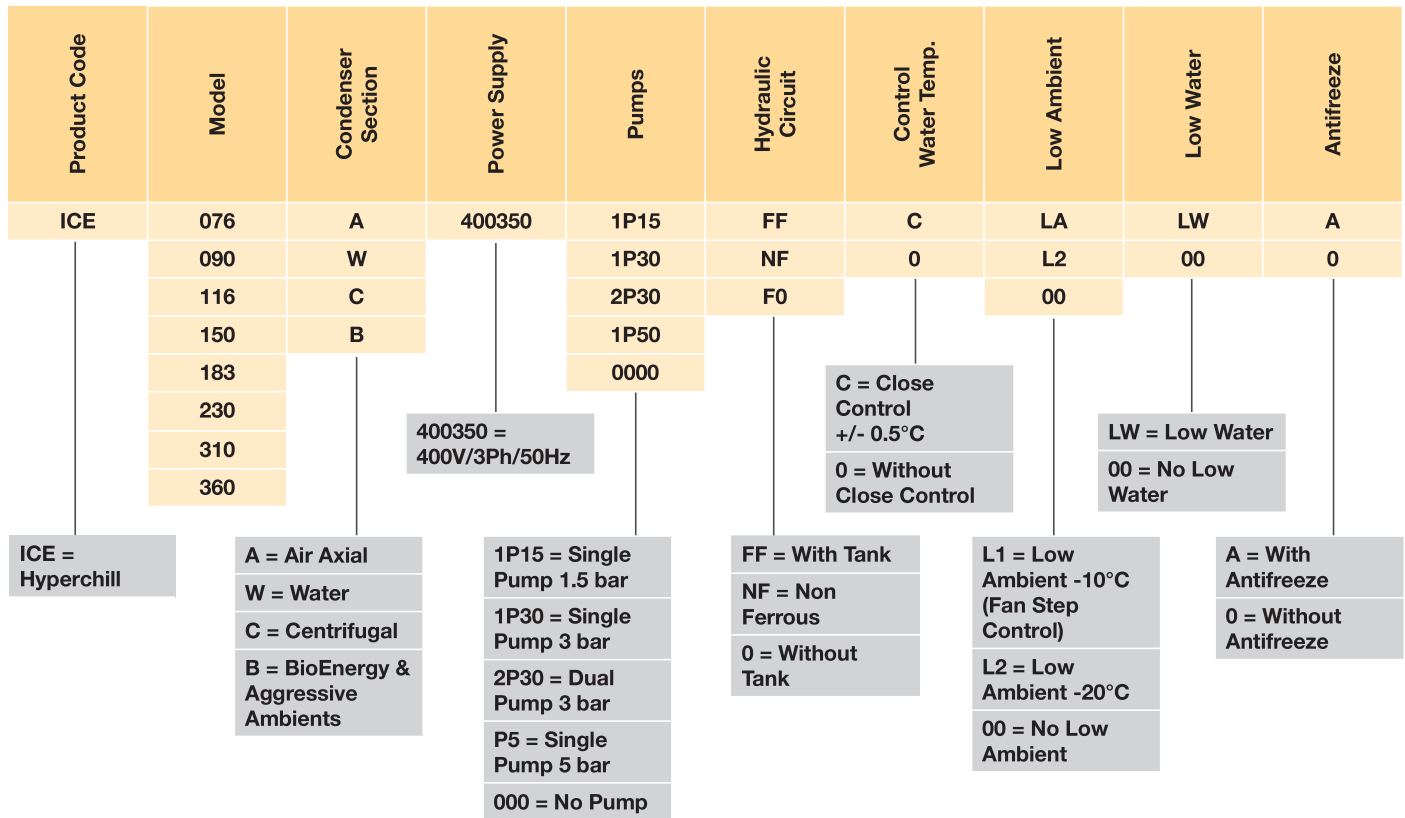
### Correction Factors

<b>A)</b>	<b>Ambient Temperature (Air Cooled Models)</b>	°C	5	10	15	20	25	30	35	40	45
	<b>Correction Factor (f1)</b>		1.05	1.05	1.05	1.05	1	0.95	0.89	0.83	0.77
<b>B)</b>	<b>Water Outlet Temperature</b>	°C	5	10	15	20	25				
	<b>Correction Factor (f2)</b>		0.72	0.86	1	1	1				
<b>C)</b>	<b>Glycol</b>	%	0	10	20	30	40	50			
	<b>Correction Factor (f3)</b>		1	0.99	0.98	0.97	0.96	0.94			
<b>D)</b>	<b>Condenser Water Inlet Temp. (Water Cooled Models)</b>	°C	20	25	30	35	40				
	<b>Correction Factor (f4)</b>		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 programme.

# Hyperchill Industrial Process Chiller (50Hz)

## Part Number Breakdown / Product Key



## Versions

	ICE076	ICE090	ICE116	ICE150	ICE183	ICE230	ICE310	ICE360
Air Cooled with Axial Fans	•	•	•	•	•	•	•	•
Air Cooled with Centrifugal Fan For Air Channeling	•	•	•	•	•	•		
Water Cooled	•	•	•	•	•	•		

# Hyperchill Industrial Process Chiller (50Hz)

## Standard Part Numbers - Air Cooled with Axial Fans

Hyperchill Air Cooled with axial fans	
ICE076	ICE076A4003501P30FF000000
ICE090	ICE090A4003501P30FF000000
ICE116	ICE116A4003501P30FF000000
ICE150	ICE150A4003501P30FF000000
ICE183	ICE183A4003501P30FF000000
ICE230	ICE230A4003501P30FF000000
ICE310	ICE310A4003501P30F00LA000
ICE360	ICE360A4003501P30F00LA000

## Options & Standard Features - Air Cooled with Axial Fans

	ICE076	ICE090	ICE116	ICE150	ICE183	ICE230	ICE310	ICE360
Water tank	standard	standard	standard	standard	standard	standard	•	•
Without tank							standard	standard
P30 (3 bar pump)	standard	standard	standard	standard	standard	standard	•	•
No pump	•	•	•	•	•	•	standard	standard
P50 (5 bar pump)	•	•	•	•	•	•	•	•
P15 (1.5 bar pump)	•	•	•	•	•	•	on request	on request
Dual pump P30 (3 bar pump)	•	•	•	•	•	•	•	•
Close control (+/- 0.5°C)	•	•	•	•	•	•		
Low water -10°C	•	•	•	•	•	•	on request	on request
Low ambient -10°C with fan step control	•	•	•	•	•	•	standard	standard
Low ambient -20°C with fan speed control, crankcase heater and electrical panel heater	•	•	•	•	•	•	on request	on request
Antifreeze heating	•	•	•	•	•	•	on request	on request
BioEnergy & aggressive ambients protection	•	•	•	•	•	•	•	•
Non ferrous hydraulic circuit	•	•	•	•	•	•		
MODBUS	on request	on request	on request	on request	on request	on request	on request	on request

# Hyperchill Industrial Process Chiller (50Hz)

## Standard Part Numbers - Air Cooled with Centrifugal Fans

Hyperchill Air Cooled with centrifugal fans	
ICE076	ICE076C4003501P30FF000000
ICE090	ICE090C4003501P30FF000000
ICE116	ICE116C4003501P30FF000000
ICE150	ICE150C4003501P30FF000000
ICE183	ICE183C4003501P30FF000000
ICE230	ICE230C4003501P30FF000000

## Standard Part Numbers - Water Cooled

Hyperchill Water Cooled	
ICE076	ICE076W4003501P30FF000000
ICE090	ICE090W4003501P30FF000000
ICE116	ICE116W4003501P30FF000000
ICE150	ICE150W4003501P30FF000000
ICE183	ICE183W4003501P30FF000000
ICE230	ICE230W4003501P30FF000000

## Options & Standard Features - Air Cooled with Centrifugal Fans

	ICE076	ICE090	ICE116	ICE150	ICE183	ICE230
Water tank	standard	standard	standard	standard	standard	standard
P30 (3 bar pump)	standard	standard	standard	standard	standard	standard
No pump	•	•	•	•	•	•
P50 (5 bar pump)	•	•	•	•	•	•
P15 (1.5 bar pump)	•	•	•	•	•	•
Dual pump P30 (3 bar pump)	•	•	•	•	•	•
Close control (+/- 0.5°C)	•	•	•	•	•	•
Low water -10°C	•	•	•	•	•	•
Low ambient -10°C with fan step control	•	•	•	•	•	•
Antifreeze heating	•	•	•	•	•	•
Non ferrous hydraulic circuit	•	•	•	•	•	•

## Options & Standard Features - Water Cooled

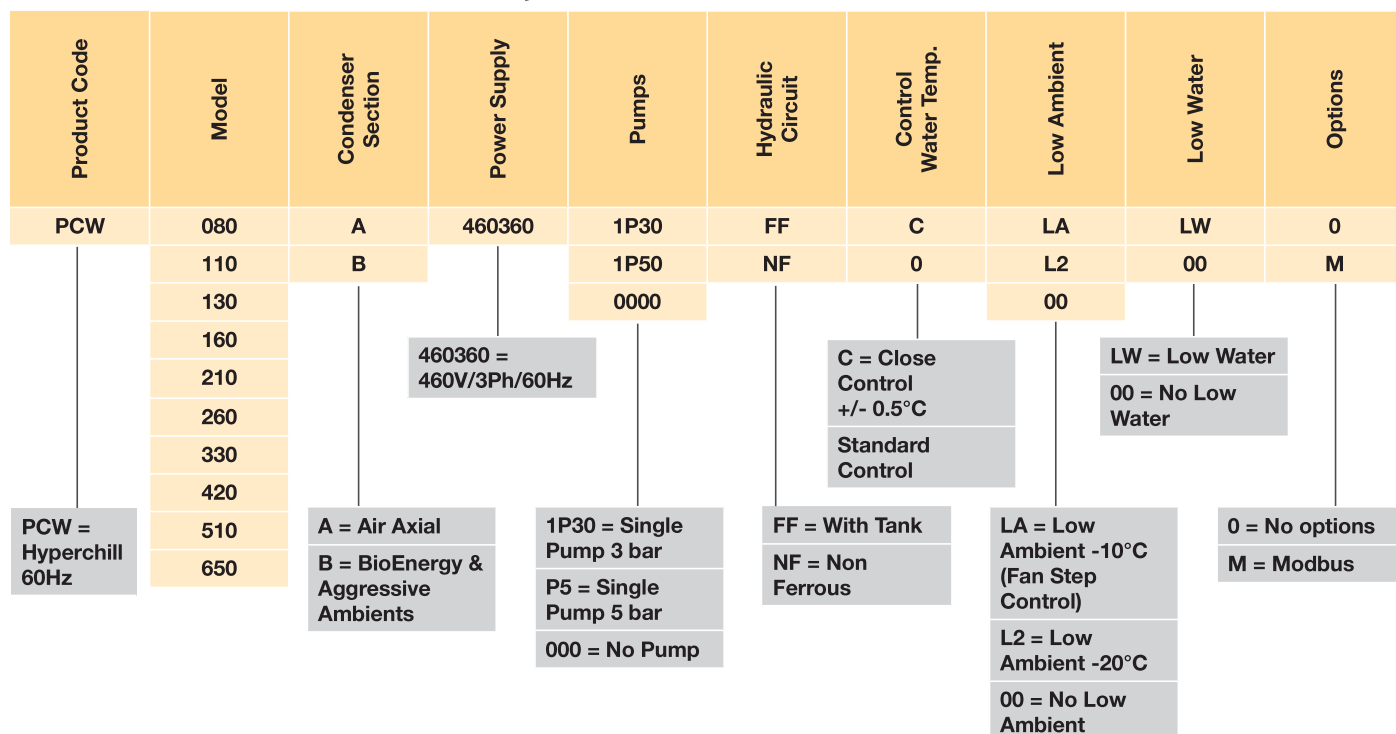
	ICE076	ICE090	ICE116	ICE150	ICE183	ICE230
Water tank	standard	standard	standard	standard	standard	standard
P30 (3 bar pump)	standard	standard	standard	standard	standard	standard
No pump	•	•	•	•	•	•
P50 (5 bar pump)	•	•	•	•	•	•
P15 (1.5 bar pump)	•	•	•	•	•	•
Dual pump P30 (3 bar pump)	•	•	•	•	•	•
Close control (+/- 0.5°C)	•	•	•	•	•	•
Low water -10°C	•	•	•	•	•	•
Low ambient -10°C with fan step control						
Antifreeze heating	•	•	•	•	•	•
Non ferrous hydraulic circuit	•	•	•	•	•	•

## Hyperchill Available Kits and Accessories

	ICE076 - ICE090 PCW080 - PCW330	ICE150 - ICE230 PCW420 - PCW650	ICE310	ICE360
Fill kit - ambient manual	398H785054	398H785053		
Fill kit - ambient automatic	398H785051	398H785052		
Fill kit - pressurised automatic with expansion tank	398H785055	398H785055		
Remote control - base	398H785010	398H785010	398H785010	398H785010
Remote control - advanced	398H785011	398H785011	398H785011	398H785011
Control panel cover	398H785089	398H785089	398H785089	398H785089
Manual external bypass	on request	on request		

# Hyperchill Industrial Water Chiller (60Hz UL)

## Part Number Breakdown / Product Key



## Standard Part Numbers - Air Cooled with Axial Fans

Hyperchill Air Cooled with axial fans	
PCW080	PCW080A4603601P30FF000000
PCW110	PCW110A4603601P30FF000000
PCW130	PCW130A4603601P30FF000000
PCW160	PCW160A4603601P30FF000000
PCW210	PCW210A4603601P30FF000000
PCW260	PCW260A4603601P30FF000000
PCW330	PCW330A4603601P30FF000000
PCW420	PCW420A4603601P30FF000000
PCW510	PCW510A4603601P30FF000000
PCW650	PCW650A4603601P30FF000000

## Options & Standard Features - Air Cooled with Axial Fans

	PCW080	PCW110	PCW130	PCW160	PCW210	PCW260	PCW330	PCW420	PCW510	PCW650
Water tank	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
P30 (3 bar pump)	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard
No pump	•	•	•	•	•	•	•	•	•	•
P50 (5 bar pump)	•	•	•	•	•	•	•	•	•	•
P15 (1.5 bar pump)	•	•	•	•	•	•	•	•	•	•
Close control (+/- 0.5°C)	•	•	•	•	•	•	•	•	•	•
Low water -10°C	•	•	•	•	•	•	•	•	•	•
Low ambient -10°C with fan step control	•	•	•	•	•	•	•	•	•	•
Low ambient -20°C with fan speed control, crankcase heater and electrical panel heater	•	•	•	•	•	•	•	•	•	•
BioEnergy & aggressive ambients protection	•	•	•	•	•	•	•	•	•	•
Non ferrous hydraulic circuit	•	•	•	•	•	•	•	•	•	•
MODBUS	•	•	•	•	•	•	•	•	•	•

# Hyperchill Laser Industrial Process Chiller

## Technical Data

Model HLS		076	090	116
Cooling capacity <sup>1</sup>	kW	76.0	90.2	115.5
Compressor abs. power <sup>1</sup>	kW	15.4	20.3	24.9
Cooling capacity <sup>2</sup>	kW	67.1	79.9	103.3
Compressor abs. power <sup>2</sup>	kW	18.7	24.2	29.9
Power supply	V/ph/Hz	400/3/50 no neutral		
Protection index		54		
Refrigerant		R407C		

## Compressors

Type	Hermetic scroll			
Compressors/circuits	2/2			
Max abs. power <sup>1</sup> comp.	kW	11.1	13.7	16.8

## Axial fans

Quantity	n°	3		
Max abs. power <sup>1</sup> fan	kW	0.78	0.78	0.78
Air flow	m <sup>3</sup> /h	25500	25000	26400

- 1) At water inlet/outlet temperature = 20/15°C, glycol 0 %, ambient temperature 25°C.
- 2) At water inlet/outlet temperature = 25/20°C, glycol 0 %, ambient temperature 35°C.
- 3) Referred to free field conditions at a distance of 10m from unit, measured on condenser side, 1m from ground.

As the manufacturer of process chillers delivering water at a design temperature of 15°C, Parker Hannifin Manufacturing s.r.l., Gas Separation and Filtration Division EMEA, declares that Parker chillers are exempt from Ecodesign EU regulation 2016/2281.

## Correction Factors

<b>A)</b>	<b>Ambient Temperature</b>	°C	5	10	15	20	25	30	35	40	45
	<b>Correction Factor (f1)</b>		1.05	1.05	1.05	1.05	1	0.95	0.89	0.83	0.77
<b>B)</b>	<b>Water Outlet Temperature</b>	°C	5	10	15	20	25				
	<b>Correction Factor (f2)</b>		0.72	0.88	1	1	1				
<b>C)</b>	<b>Glycol (by weight)</b>	%	0	10	20	30					
	<b>Correction Factor (f3)</b>		1	0.99	0.98	0.97					

To obtain the required cooling capacity multiply the value at nominal conditions by the above correction factors (i.e. cooling capacity = Pxf1xf2xf3, where P is the cooling capacity at conditions (1)). Hyperchill Laser, in its standard configuration, can operate up to ambient temperatures of max 48 °C for ICEP models, 45°C for HLS models 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

## Pump P30

Max abs.power	kW	2.5	2.7	2.7
Water flow (nom/max) <sup>1</sup>	m <sup>3</sup> /h	13/31	15/27	20/27
Head pressure (nom/min) <sup>1</sup>	m H <sub>2</sub> O	23/13	28/16	25/16

## Pump P50

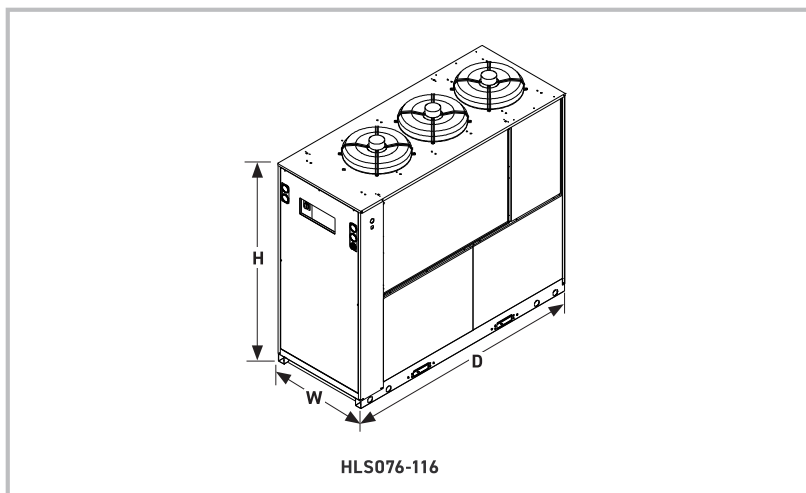
Max abs.power	kW	4.5	4.5	4.5
Water flow (nom/max) <sup>1</sup>	m <sup>3</sup> /h	13.1/27	15.5/27	19.8/27
Head pressure (nom/min) <sup>1</sup>	m H <sub>2</sub> O	30/18	28/18	25/18

## Weights & Dimensions

Width	mm	898	898	898
Depth	mm	2200	2200	2200
Height	mm	1984	1984	1984
Connections in/out	in	2"	2"	2"
Tank capacity	l	300	300	300
Weight (axial)	kg	750	870	960

## Noise level

Sound pressure (axial) <sup>3</sup>	dB(A)	58	58	58
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### Part Number Breakdown / Product Key

Product Code	Model	Condenser Section	Power Supply	Pumps	Hydraulic Circuit	Control Water Temp.	Low Ambient	Low Water	Antifreeze
HLS	076	A	400350	1P30	SS	C	LA	00	A
	090			1P50					0
	116			0000					

<p>HLS = Hyperchill Laser</p>	<p>A = Air Cooled</p>	<p>400350 = 400V/3Ph/50Hz</p> <p>1P30 = Single Pump 3 bar</p> <p>P5 = Single Pump 5 bar</p> <p>000 = No Pump</p>	<p>SS = Stainless Steel With Tank</p>	<p>C = Close Control +/- 0.5°C</p>	<p>LA = Low Ambient -10°C (Fan Step Control)</p>	<p>00 = No Low Water</p>	<p>A = Antifreeze</p> <p>0 = No Antifreeze</p>
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### Standard Part Numbers - Air Cooled with Axial Fans

Hyperchill Laser Air Cooled with axial fans, non ferrous hydraulic circuit, close control, low ambient temperature -10°C, manual fill kit.	
HLS076	HLS076A4003501P30SSCLA000
HLS090	HLS090A4003501P30SSCLA000
HLS116	HLS116A4003501P30SSCLA000

### Options & Standard Features - Air Cooled with Axial Fans

	HLS076	HLS090	HLS116
Close control (+/- 0.5°C)	standard	standard	standard
P30 (3 bar pump)	standard	standard	standard
Low ambient -10°C	standard	standard	standard
Stainless steel with tank	standard	standard	standard
Antifreeze heating	•	•	•
No pump	•	•	•
P50 (5 bar pump)	•	•	•

### Hyperchill Laser Available Kits and Accessories

	HLS076	HLS090	HLS116
Fill kit ambient manual	standard	standard	standard
Remote control base	398H785010	398H785010	398H785010
Closed circuit	398H785011	398H785011	398H785011
Control panel cover	398H785089	398H785089	398H785089
Hydraulic bypass	on request	on request	on request
Automatic check valves	on request	on request	on request