

Compact Cooling

P400 series chiller



Air - Water / Water - Water chiller

Stand alone. Good temperature stability. Reliable operation. Low noise and vibration levels. Low maintenance.

700 W - 2.4 KW cooling capacity. Flow rate: 0.5 - 17 l/min

Application include laser cooling, medical and laboratory equipment.

The refrigerant compressor cools a stainless steel coil located in the coolant water tank or evaporator plate. A temperature controller monitors the coolant water temperature and controls the refrigerant circuit. The coolant water circuit is designed for use with de-ionised water. The pump, selected to suit the application, pumps the coolant water reliably to the load (e. g. laser). The fine filter in the flow circuit and the flow sensor in the return circuit ensure trouble-free operation in the coolant water circuit. The heat is expelled via a fan or transferred to an existing water supply via a heat exchanger.

**robust - innovative technology - simple
over 5000 systems in the field**



Model overview P400 Series (standard)							
Cooling power (Watt)	20°Tw / 25°Tu	P410 Low level	P407	P410	P412	P415	P420
	20°Tw / 30°Tu	720	720	1000	1300	1620	2400
	20°Tw / 35°Tu	700	700	950	1200	1500	2300
	20°Tw / 40°Tu	680	680	900	1100	1400	2200
Temperature stability		"±-1K"	"±-0,1K"	"±-0,1K"	"±-0,1K"	"±-0,1K"	"±-0,1K"
	Control type	Compressor on/off		Hot gas bypass, PID			
Enclosure	Size (WxD) mm	Stand alone					
	HxWxD mm	735mm with rollers/380mm/ 580mm					
	Noise (db (A))	< 65	< 65	< 65	< 65	< 65	< 70
	Weight (approx.)	60	62	63	65	70	75
Application range - temperature							
	Standard coolant water outlet	10 - 30°C					
	Ambient temperature	5 - 40°C					
	Storage	0 - 70°C					
	Air quantity	1200 m3/h	1200 m3/h	1200 m3/h	1200 m3/h	1200 m3/h	1200 m3/h
	Air flow	suction via side panel; expulsion via rear panel					
Water circuit	Water filter (AVP,F20, 10 µm)	external					
	Water connections	2x1/4" ID	2 x 1/2" internal thread V4A sleeve				
	Tank volume (liter)	14	7,5	7,5	7,5	7,5	7,5
	Level display	Visual at side	Optical water level display on front panel				
Standard alarm interlocks							
	Alarm contacts (open circuit in alarm state) at 9pin SUB D (Interlock)						
Water circuit	Flow sensor	Flow switch	Flow turbine, set point adjustable				
	Default switching point (l/min)*	2	2,5	2,5	2,5	2,5	2,5
	Level monitoring	Two vertical float switches (Warning, Alarm)					
	Default high-low temperature alarm	15°C Low, 32°C High temperature alarm, contact at SUB D					
Refrigerant circuit	High pressure	18.5 bar, reset					
Power supply	Voltage	230 V +/- 10%					
	Current (A)	6,1	6,1	8	8,5	9	11
	Line frequency	50/60 Hz					
	Power connections	Harting	IEC 950 with line filter				
Pumping power (possible combination)	Model/ Type	See curves for choice of pump					
	PD1	X	X	X	X	X	X
	PD2		X	X	X	X	X
	T 201 (centrifugal immersed pump)	3l/min @ 3bar					
	Y 2051 (centrifugal)		X	X	X	X	X
	QY 1042 (centrifugal)		X	X	X	X	X
	CY4081 (centrifugal)		X	X	X	X	X

*Thermal performance quoted with a centrifugal pump NPY 2051 4l/min at 4 bar

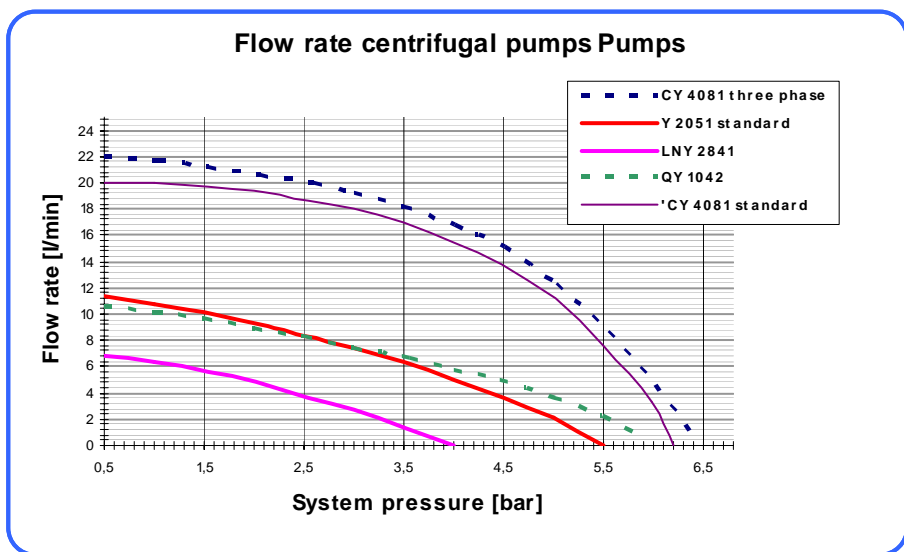
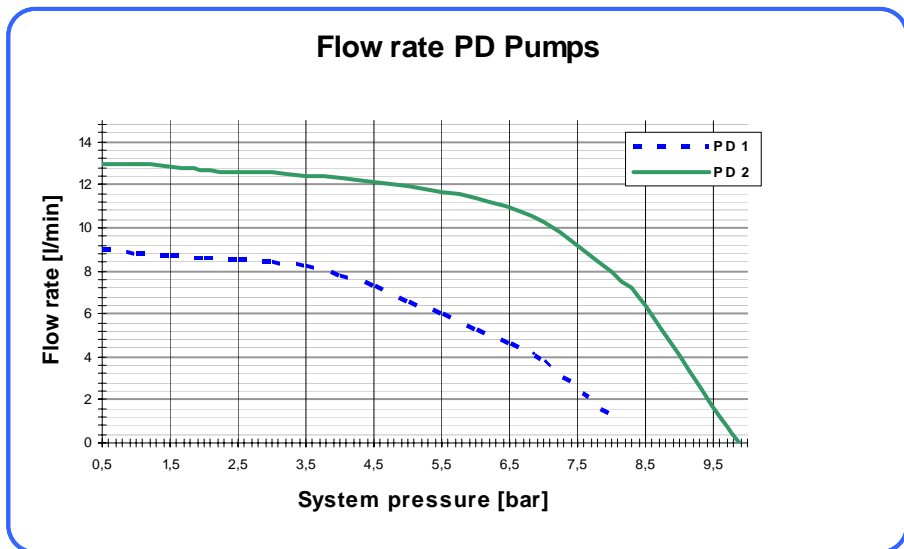
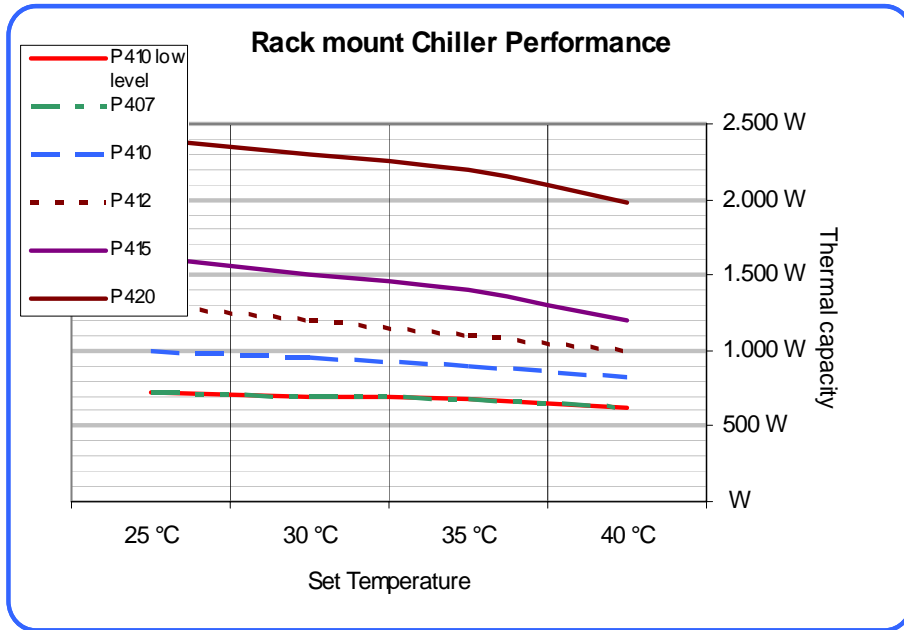
Standard equipment

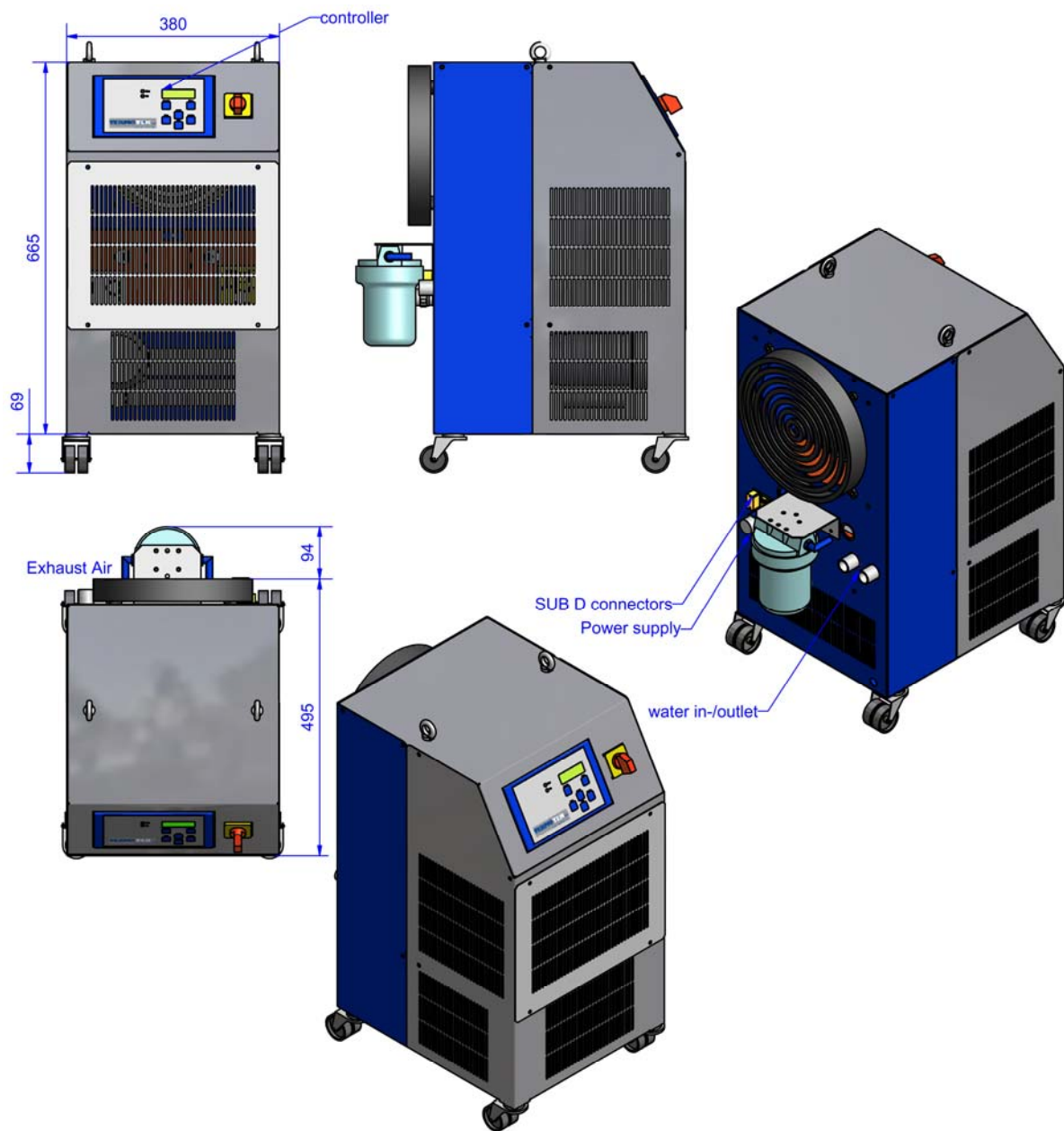
Designed for de-ionised water	Water level display
High temperature stability "±- 0.1K"	Fan speed control
Customised alarm dry contacts via 9 pole SUB D on rear panel	RS 232 interface 24VDC external start signal
Water filter externally or internally mounted, various grades (on request)	Remote start
Flow rate measuring & monitoring	50Hz/60Hz usable

Additional technical extras/options to standard chiller series P400

Conductivity measurement & monitoring:	Conductivity monitoring of the coolant water
Conductivity control:	Regulating the conductivity by set point (+/-1µS/cm)
DI-Cartridge:	Replaceable cartridge in water bypass (0.35l or 0.5l)
Ambient temperature sensor:	Ambient temperature measurement via PT100
Cooling power measurement:	Additional temperature sensor on return flow
Heating:	Start-up heating of the coolant water at low ambient temperatures (< 15°C); 500 Watt
Pressure measurement & monitoring:	Pressure sensor on chiller outlet
Water bypass for flow adjustment:	Adjustment of max pressure for flow adjustment
Second flow sensor:	Second flow sensor for additional water circuit
Air filter:	Air filter in side panel 140µm
Special voltages (up to P410):	100 - 115 - 208 - 230 VAC switchable
Other pumps available:	please contact Termotek product management
Customised design:	please contact Termotek product management







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