



PORTABLE RECIRCULATING WATER CHILLER CH SERIE



Water is one of the most precious resources. Still today water is commonly used as coolant in many laboratories, even if it is not a reliable element due to the varying ambient temperature.

Most water used as coolant is not recycled, leading to expensive lab costs. F-DBS offers a complete line of recirculation water chillers to match all laboratory needs.

Applications:

Atomic absorption
ICP-MS and ICP-OES
XRF
Electronic microscopy
Diffusion vacuum pumps
Sputter deposition systems

Axial or radial view ICP
Distillation
XRD
Laser applications
Rotary evaporators

Benefits and Savings

High energy efficiency

"Hot gas bypass" technology routes back the hot, uncondensed refrigerant through a reservoir coil thus eliminating on/off cycling of compressors and the addition of energy wasting heaters. This method combined with electronic temperature controller allows accurate temperature control, greater energy efficiency, and increased compressor lifetime.

Reduce operating cost

F-DBS recirculating chillers saves large amount of tap water, thereby reducing lab costs while saving precious resources of drinking water.

Improve Environmental conditions

All chillers utilize CFC-free R134A cryogen which is compatible with international environmental standards.

High performance and quiet operation

F-DBS chillers, ensure quiet operations and low water consumption while providing rapid and powerful cooling.

Very low Level of noise < 50dB

Standard Features

- Real time monitoring of water temperature
- Constant control of water flow-rate and pressure
- Steel stainless tank
- Easily accessible water filter
- Control of excess unit pressure
- High pressure peripheral pump
- Soundproofed compressor and pump
- Wide water temperature operating range
- Wide room temperature operating range

Synoptic of operation on LCD screen

- Display of water outlet temperature
- Status of the chiller : on/off
- Status of the pump : on /off

Synoptic of alarms on LCD screen

- Thermal alarm of the compressor
 - Low water level alarm in the tank
 - High and low alarm of the refrigerant fluid
- Allow to check and repair the breakdown very quickly and thus to reduce at maxi. the downtime.

RS232 / USB : to collect functioning data

CH series water recirculating chillers uses hot gas bypass temperature control method. Hot gas bypass routes the hot, uncondensed refrigerant back through a reservoir coil thus eliminating on/off cycling of compressor and the addition of energy-wasting heaters. This method combined with electronic controller, designed with the latest generation electronics featuring touch screen display, monitors the main system parameters in real time and allows accurate temperature control, greater energy efficiency, and increased compressor lifetime

The line of portable recirculation water chillers covers cooling capacities from 1050 watts to 3000 watts.

The high capacity stainless steel storage tank holds 18 litres of fluid. The flow-rate and water pressure control system ensure optimum delivery and prevent potential damage. It improves the precision of regulation and generates energy saving per effect of thermal mass.

The operating data can be read via RS232 / USB for certifying the system operating conditions in relation to the analytical data measured.

Precise control and stabilisation of water temperature, pressure, tank water level and electrical faults can be viewed by the operator at all times.

All chillers come with remote unit on/off control and audible/ visual alarm signals.

The design and the use of high quality components on the chillers ensure high productivity with very low noise.

Technical Specifications

| | MODEL CH10 | MODEL CH30 |
|---|--------------|--------------|
| Features | | |
| Temperature range | +4°C/+40°C | +4°C/+40°C |
| Temperature uniformity | +/- 0,1°C | +/- 0,1°C |
| Temperature control | PID | PID |
| Ambient operating temperature range | +5°C / +30°C | +5°C / +30°C |
| Cooling capacity | 1060watt | 3000watt |
| Peripheral pump | | |
| Head at zero flow | 9 BAR | 9 BAR |
| Flow-rate at zero head | 18 L/MIN | 18 L/MIN |
| Storage tank | | |
| Net capacity | 18 litres | 18 litres |
| Dimensions and weights | | |
| Width | 450mm | 450mm |
| Depth | 670mm | 670mm |
| Height | 650mm | 650mm |
| Weight | 48 kg | 56 kg |
| Electrical specifications at 50 HZ | | |
| Tolerance on rated voltage | +/- 10% | +/- 10% |
| Maximum current | 6 A | 10 A |