

SC5000a SemiChill Compact Recirculating Cooler

5 models for industrial applications, up to 10 kW cooling capacity, customizable

Recirculating Cooler for industrial applications (basic model, additional options for specific requirements available).

The SemiChill series offers powerful recirculating coolers. These units have been especially designed for applications in the semiconductor industry. Five models are available, with cooling capacities from 2.5 to 10 kW (air- or water-cooled). Working temperature ranges from +5 to +35 °C which can optionally be extended from -20 to +130 °C. Also available is a selection of powerful pumps. The units can be modified to provide heater capacities up to 5 kW. Selection between different electronic modules to conform to simple or high demands such as, for example flow rate and conductivity measurement, external temperature control or integration of the coolers via analogue signals, RS232, devicenet or ethernet. A large range of accessories and options including DI filters, microfilters, USB adapters, etc. is available.



Your advantages

- For the most demanding applications
- Space-saving, no lateral ventilation
- Handles and castor make relocation easy
- Industrial grade mains power switch and emergency cut-off
- Pressure gauge
- Liquid level indicator
- Front filling port
- Low noise level
- PID temperature control
- ATC3 3-point calibration
- Early warning system for low liquid level
- Warning and safety functions
- Modular design allows selection between different options
- Air cooled model

Technical Data


Order No.	9500050XXP3HXX
Model series	SemiChill
Category	Recirculating Coolers
Working temperature range (°C)	-20 ... +130
Temperature stability (°C)	±0.1
Setting / display resolution	0.1 °C
Integrated programmer	1x10 steps
Temperature Display	LED Option
Heating capacity (kW)	12.0 Option


Cooling capacity (Medium Ethanol)	°C 20 0 -10 kW 5 2.5 1.2
Pump capacity flow rate (l/min)	33
Pump capacity flow pressure (bar)	3.5 Standard 4.3 Option
Bath opening / bath depth (W x L / D cm)	Ø = 7 / - cm
Pump connections	NPT 3/4"
Barbed fittings diameter (inner dia. / mm)	3/4"
Filling volume liters	43 ... 60
Refrigerant stage 1	R452A
Filling volume refrigerant stage 1 (g)	1900
Global Warming Potential for R452A	2140
Carbon dioxide equivalent stage 1 (t)	4.066
External Pt100 sensor connection	integrated
Digital interface	RS232 Optional: Profibus
Ambient temperature	5...40 °C
Dimensions W x L x H (cm)	59 x 67 x 112
Weight (kg)	153
Sound pressure level (distance 1 m) max. (dBA)	71
Classification according to DIN12876-1	Classification III (FL)
Cooling of compressor	Air
Available voltage versions	400 V / 3 Ph. / 50 Hz 208-230 V / 60 Hz


Refrigerant specifications are valid for the 50 Hz version.

Characteristics


Display

 **Easy to read**
Large LED temperature display for actual value and setpoint (resolution 0.1 °C)


 **A perfect view**
Ample, easy to read VFD Comfort display for simultaneous display of 3 values, warning functions, high temperature cut-off, pump stages (resolution 0.01 °C)


 **Pump stage and liquid level**
Backlit indicator for selected pump stages and filling volume on Presto® PLUS, Magnum 91 & Forte HT

Operation


 **Time saving**
Comfortable and simple operation for setpoint adjustment


Temperature Control

 **Precise**
PID Temperature control with set control parameters, temperature stability ±0.02...±0.2 °C


 **Highest measuring accuracy**
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration


Refrigeration Technology


 **Consistent cooling capacity**
Easily removable venting grid for quick and easy cleaning


 **100 % Cooling capacity**
'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures


Technical Features

 **Clever pump system**
Reliable and consistent pump capacity, electronically adjustable pump stages


 **Control from the external application**
 External Pt100 sensor connection for precise measurement and control directly in the external application


 **Serial connection**
 RS232 interface for PC connection, e.g. for data communication and recording of measured values


 **Easy program control**
 Integrated programmer for the execution of time and temperature dependant profiles, 1 temperature profile with 10 steps max., with real time clock


 **Automatic control of operating time**
 Electronic countdown-timer function for timer-programmed unit shut-down, standby mode after programmed time expires

Warning & Safety Functions

 **Early warning system for low liquid level**
 Maximum safety for applications, optical and audible alarm, allows user to refill bath fluid before the unit shuts down

 **Early warning system for high/low temperature limits**
 Maximum safety for applications, optical and audible alarm, convertible to automated cut-off function

 **Enhanced protective functions**
 Maximum safety, adjustable high temperature cut-off or dry-running protection, additional display of setpoints permits easy and precise adjustments

 **For flammable bath fluids**
 Classification III (FL) according to DIN 12876-1