## PRESTO W92tt

**Powerful Temperature Control Systems for demanding applications with a temperature range from -92 °C to +250 °C**

PRESTO W92 - Highly Dynamic Temperature Control Systems The PRESTO W92 Highly Dynamic Temperature Control Systems are amongst the most powerful units available. Their impressive power is harnessed by cutting-edge control technology. The W92 provides extraordinary heating, cooling, and pumping performance. But it also comes with the functions and features that make the new generation of PRESTO so unique.

### Your advantages

- Powerful circulating pumps, electronically adjustable in stages or by setting the pressure value Choose between a magnetically coupled centrifugal pump or a magnetically coupled gear pump for pressures up to 5.5 bar and virtually constant flow rate at any pressure
- Integrated 5.7" industrial color touchscreen displays all essential information and enables simple fingertip control
- Extensive warning, protection, and monitoring functions with detailed self-explanatory messages
- ICC cascade control for extraordinary precision, temperature stability ±0.05 °C … ±0.2 °C
- Ambient temperature range +5 °C to +40 °C
- Integrated programmer with real-time clock
- Filling level indicator and pump capacity displayed electronically
- Interface for SD memory card
- Connections for USB, Ethernet, RS232, and Alarm output
- Optional analog connections, RS485, Profibus DP, Modbus
- 2-stage water-cooled refrigeration system

### Technical Data

| Order No. | 9421922.TT | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Category | Temperature Control PRESTO | | | | | | | |
| Working temperature range (°C) | -92 ... +250 | | | | | | | |
| Temperature control | ICC | | | | | | | |
| Temperature stability (°C) | ±0.05 ... ±0.2 | | | | | | | |
| Setting / display resolution | 0.01 °C | | | | | | | |
| Temperature Display | TFT Touchscreen | | | | | | | |
| Heating capacity (kW) | 36 | | | | | | | |
| Cooling capacity (Medium Ethanol) | °C | 200 | 100 | 20 | 0 | -20 | -40 | -60 | -80 |
| | kW | 31 | 29 | 19 | 15.5 | 9.5 | 9 | 6.5 | 1.5 |
| Pump capacity flow rate (l/min) | 26 ... 80 | | | | | | | |
| Pump capacity flow pressure (bar) | 0.5 ... 3.0 | | | | | | | |
| Pump connections | M38x1.5 | | | | | | | |
| Refrigerant | R23, R404A | | | | | | | |
| External Pt100 sensor connection | integrated | | | | | | | |
| Digital interface | RS232, SD memory card, USB, Ethernet, Modbus, Alarm-out | | | | | | | |

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|---|---|
| | Optional: RS485, Profibus |
| Ambient temperature | 5 ... 40 °C |
| Dimensions W x L x H (cm) | 95 x 127 x 190 |
| Weight (kg) | 805 |
| Sound pressure level (distance 1 m) max. (dBA) | 74 |
| Viscosity max. (cSt) | 50 |
| Process volume min. (active heat exchanger volume) liters | 28 (16) |
| Internal usable expansion vol. (liters) | 40 |
| Classification according to DIN12876-1 | Classification III (FL) |
| Analog connection input / output | Optional |
| Cooling of compressor | 2-stage Water |
| Cooling water connection | G ¾" male with barbed fittings for tubing ½" ID |
| Cooling water consumption (l/min) | 16…43 |
| Cooling water differential pressure (bar) | 0.5 |
| Available voltage versions | 400V/3PNPE/50Hz<br>480V/3PPE/60Hz |

All data refers to the nominal voltage of 400 V, 3-phase, nominal frequency of 50 Hz and ambient temperature of +20 °C. Cooling capacity measured at max. pump stage. All pump data refers to a bath fluid with a specific density of 1 kg/dm³.

## Characteristics

### Display

**State-of-the-art display technology**
TFT Display for comfortable user guidance, colored display of measurement values, graphs and control options, user-defined views

### Operation

**Optimal ease of use**
Touch screen for direct operation via display

**Instructions inside**
Help menus and explanations in plain text for all control options, help messages and warning messages

**Multilingual user guidance**
Language selection for display of control options, notifications and warning messages via touchscreen

**Convenience for several users**
Administrator level for customizing instrument settings, user levels with limited permissions for fast and safe defined access, password protection, all levels adjustable

### Temperature Control

**For perfect results**
'Intelligent Cascade Control', automatic & self optimizing adjustment of PID control parameters, temperature stability ±0.01 °C ... <±0.2 °C

**Full control**
'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.

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

**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

**Energy saving cooling**
Proportional cooling control for automatic adjustment of cooling power or temporary switch-off of compressor as needed to save up to 90 % energy in comparison to unregulated cooling machines

### Technical Features

**Intelligent pump system**
Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity

**Communication via networks**
For the remote control of instruments via Ethernet networks, full access to all functions of the unit via a networkcapable PC

**Intelligent communication**
USB connection for data exchange (e.g. service data) or for wireless remote control via WirelessTEMP®

**Data exchange via SD-Card**
For data exchange (e.g. service data) via SD memory card

**Connections according to standard**
RS232/RS485 dual-interface for serial data transmission according to EIA-485 industry standard (2-wire bus technology), upgradable with Profibus DP

**Comfortable program control**
Integrated programmer for the execution of time and temperature dependant profiles, 8 temperature profiles with 60 steps max., with real time clock

**Quiet as a whisper**
Efficient components produce only a minimal sound decibel level

**Space-saving footprint**
All connections as well supply and exhaust air are located at the front or rear, no venting grids on the sides, units can be placed close to each other or the application

**Continuous operation up to +40 °C**
Robust temperature control instrument, continuous operation even at ambient temperatures of up to +40 °C

**Easy transport by one person**
Ergonomic design facilitates moving and positioning by one person

**Filling level at a glance**
Backlit indicator for selected pump stages and filling volume

## Warning & Safety Functions

**Early warning system for high/low temperature limits**
Maximum safety for applications, optical and audible signal when limits are exceeded.

**Duplicate safety**
Adjustable high temperature cut-off for internal tank and for integrated expansion vessel

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

**Quick support**
If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team

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