

PRESTO W91ttx Process system

Best heating capacity combined with high cooling capacity – those are the key features of the W91 units. The units are just as ready for embedding into pilot plants as they are for use in material and component testing.

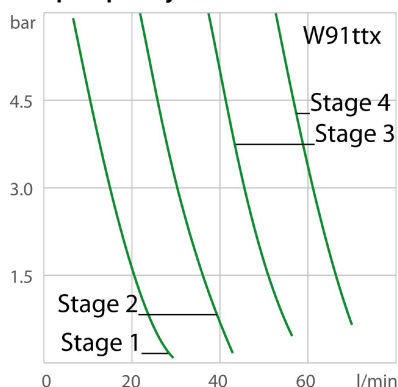
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions exceptionally fast. Permanent internal monitoring and self-lubricating pumps ensure a long life-time. In addition, numerous interfaces offer many remote control possibilities across networks or for integration into higher-level control systems.



Product features

- Cooling capacity up to 11 kW
- Temperature stability $\pm 0.05 \dots \pm 0.2^\circ\text{C}$
- Ambient temperature range $+5^\circ\text{C}$ to $+40^\circ\text{C}$
- Built-in 5.7" industrial color touchscreen
- Analog connections, RS485, Profibus DP (accessory)
- External Pt100 sensor connection
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Pump pressure up to 5.5 bar, max. flow rate 80 l/min

Pump capacity



Performance values

480V/3P(N)PE/60Hz (Without Plug)	
Heating capacity kW	36
Viscosity max. cSt	70
Pump capacity flow rate l/min	0 ... 70
Pump capacity flow pressure psi	1.5 ... 79.8
Power consumption A	45

Order No.	9421913.17.TT						
Cooling capacity (Ethanol)							
°C	20	0	-20	-40	-60	-80	-90
kW	12.2	12.1	11.9	11.4	8.6	2	0.4
* Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.							
Refrigerant stage 1				Refrigerant stage 2			
Refrigerant	R404A			Refrigerant	R23		
Filling weight g	4500			Filling weight g	1250		
Global Warming Potential for R404A	3922			Global Warming Potential for R23	14800		
Carbon dioxide equivalent t	17.649			Carbon dioxide equivalent t	18.5		

Technical data

Available voltage versions		Cooling	
Order No.	9 421 913.TT	Cooling of compressor	2-stage Water
Available voltage versions:		Cooling water temperature max. °C	35
9421913.07.TT	400V/3PNPE/50Hz (Without Plug) (R404A)	Cooling water pressure max. psi	87
9421913.S1.07.TT	400V/3PNPE/50Hz (Without Plug) (R449A)	Cooling water difference pressure psi	7.3
9421913.17.TT	480V/3P(N)PE/60Hz (Without Plug) (R404A)	Cooling water consumption l/min	16 ... 43
Other		Electronics	
Sound pressure level dbA	74	Interfaces	Alarm output, Ethernet, Modbus, Profibus optional, REG/EPROG optional, RS232, RS485 optional, SD memory card, Standby-Input optional, USB
Classification	Classification III (FL)	External pt100 sensor connection	integrated
IP Code	IP 21	2nd external Pt100 sensor connection	accessory
Pump type	Gear Pump	Integrated programmer	8x60 steps
Pump type Magnetically coupled	1	Temperature control	ICC
Dimensions and volumes		Absolute temperature calibration	3 Point Calibration
Internal usable expansion volume l	40	Temperature display	5.7" TFT Touchscreen
Minimal process volume l	28	Temperature setting	Touchscreen
Active heat exchanger volume l	16	Temperature values	
Weight lbs	1918	Setting the resolution of the temperature display °C	0.01
Cooling Water Connection in	G¾	Working temperature range °C	-91 ... +250
		Temperature stability °C	±0.05 ... ±0.2
		Ambient temperature °C	+5 ... +40

Dimensions in. (W x L x H)	37.4 x 50 x 74.8	Temperature display resolution °C	0.01
Pump connections	M38x1.5 male		

All Benefits

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Touch display. Perfect operation.
With the touch display, the user always has an overview of all values and functions. The intuitive and multilingual menu structure enables perfect control.



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



Intelligent temperature control.
Intelligent cascade control - automatic and self-optimizing adaptation of the PID control parameters with external stability of +/- 0.05 °C.
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Full control
'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.



Control of the external application
External Pt100 sensor connection for precise measurement and control directly in the external application
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Highest measuring accuracy
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration



Intelligent pump system
Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity
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Many interfaces.
Straight-forward remote control, data management, and integration into process structures. USB, Ethernet, RS232, SD card, and alarm off are permanently integrated. Further interfaces available as accessories.



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



Maximum safety.
Classification III according to DIN12876-1 enables safe operation, even with flammable fluids. Automatic switch-off in the event of high temperature or low liquid level.
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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
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Quick support
If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team



100% Checked.
100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



Quick start.
Individual JULABO consultation and comprehensive manuals at your disposal.



Satisfied customers.
11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.



Services 24/7.
Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at www.julabo.com.