Product data sheet

PRESTO L56w process system

Energy-efficient process systems down to -56 °C with natural refrigerant

The water-cooled PRESTO L56w can temperature control applications with high power requirements very quickly and efficiently. It has a very high cooling capacity of 55kW at 20 °C, offering large power reserves for demanding external applications across the entire working temperature range. This is particularly true at low temperatures, such as those required in the automotive sector or for reactor temperature control in the pharmaceutical industry. The PRESTO L56w process system uses natural, environmentally friendly refrigerant and was also developed with a focus on energy efficiency. In many application scenarios, this leads to significant operating cost savings and thus to a faster amortization of the acquisition costs. At the same time, the lower energy consumption makes a positive contribution to climate protection. Magnetically coupled centrifugal or gear pumps allow the user to optimally adjust the pump performance to the application, even over long distances and heights, as well as in pressure-sensitive applications. Operation is user-friendly and intuitive via the large 7" touch display or via integration into comprehensive control systems.

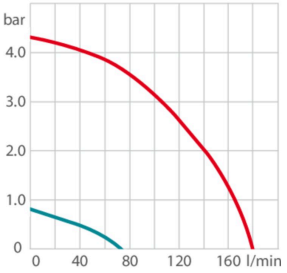
Water-glycol up to +150 °C

Connection of an expansion kit (accessorie) allows pressurized temperature control with water-glycol up to a working temperature of +150 °C.

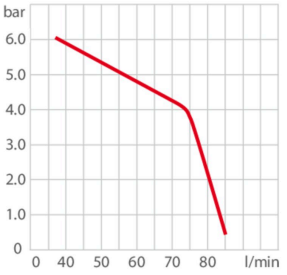
Product Features

- Large 7-inch touch display with intuitive menu navigation
- Rapid heating and cooling
- Wide working temperature ranges without changing fluids
- Climate-friendly thanks to natural refrigerant
- Wide range of interfaces as standard (additional interfaces available as option)
- Highly dynamic ICC temperature control, stability to ±0.05 °C

Pump capacity Medium: Water



Pump capacity Medium: Water / Glycol



Available options

Interfaces

CANOpen
Fieldbus interface according to CiA standard for cyclic and acyclic data transmission. Suitable for connection to higher-level controllers and decentralized automation concepts.

EtherCAT
Real-time Ethernet interface with very short cycle times. Enables deterministic communication and precise control tasks in demanding automation environments.

Profibus DP
Proven serial fieldbus interface for industrial use. Used for fast and hassle-free process data communication with PLC systems.

Profinet
Ethernet-based automation interface for real-time and standard communication. Supports flexible integration into modern Industry 4.0 networks.

OPC-UA
Platform-independent communication interface for standardized and secure data exchange. Ideal for visualization, control systems, and IT/OT integration.

Stakei
The Stakei output is a control output that can be adapted to solenoid valves with different tasks via the operating menu. The desired function is adjusted and activated in the operating menu.

Pump

Rotary pump 4.2 bar, 180 l/min
Rotary pump with 4.2 bar and 180 liters per minute

Gear pump 5.5 bar, 80 l/min
Gear pump with a maximum pump pressure of 5.5 bar at a flow rate of 80 liters per minute. With the optional gear pump, even media with high viscosity such as water glycol mixtures can be used at low temperatures down to -45°C.

Additional Options

Emergency stop category 0
Optional emergency stop function in accordance with Category 0 (EN ISO 13850) for immediate cancellation of the energy supply in case of danger. The unit is de-energized directly and without delay to ensure maximum safety in critical operating states.

Emergency stop category 1
Optional emergency stop function in accordance with Category 1 (EN ISO 13850) with controlled stop before shut-off of the power supply. Enables secure shutdown of plant processes when an immediate stop (Category 0) is not permissible or is critical for process reasons.

Gas warning sensor
Optional sensor for detecting flammable refrigerants. Enables early leak detection and activation of safety-related measures via the device control system.

Performance values

400V/3PPE/50Hz (Plug 63A CEE)	
Heating capacity kW	27
Viscosity max. cSt	100
Pump capacity flow pressure l/min	0 ... 180
Pump capacity pressure psi	1.5 ... 60.9
Power consumption A	63
Voltage Tolerance %	400V | ±10

Order number including voltage version (400V/3PPE/50Hz) 9423056.07

Cooling capacity 1 (Ethanol)

°C	20	0	-20	-30	-40
kW [1]	55	51	25	15	7.2

Cooling capacity 2 (Thermal HL60)

°C	20	0	-20	-30	-40
kW [1]	55	46	20	11.5	7

Cooling capacity 3 (Water Glycol 40:60)

°C	20	0	-20	-30	-40
kW [1]	55	50	19.5	9.4	4.7

Cooling capacity 4 (Water Glycol 40:60)

°C	20	0	-20	-30	-40
kW [1]	55	50	20	11	5.5

Note about natural refrigerants:
Temperature control units using natural refrigerants are often subject to regulatory requirements regarding the installation site, operation, transport or disposal of the units. If you have any questions, we will be happy to advise you.

Refrigerant stage 1	
Refrigerant	R1270
Filling weight g [2]	1300
Global Warming Potential for R1270	2
Carbon dioxide equivalent t	0.0026
Minimum room volume ft³	5756.3

[1] Cooling capacity 4 measured with gear pump.
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.

[2] Please observe the applicable transportation regulations.

Technical data

Available voltage versions	
Order No.	9423056
Available voltage versions:	
9423056.17	460V 3PPE 60Hz (Without Plug) (R1270)
9423056.07	400V 3PPE 50Hz (Plug 63A CEE) (R1270)

Cooling

Max. heat dissipated by unit into cooling water kW	94

Recommended cooling water properties

Cooling water temperature range °C	10 ... 15
Cooling water difference pressure psi	21.8 ... 87

Permissible cooling water properties

Cooling water temperature range °C	5 ... 35
Cooling water difference pressure psi	7.3 ... 87

Electronics

Interfaces	Alarm output optional, Ethernet, Modbus TCP/IP, Profibus optional, Profinet optional, REG/EPROG optional, RS232, RS485, Stakei optional, Standby-Input optional, USB
External pt100 sensor connection	integrated
Integrated programmer	8x60 steps
Temperature control	ICC
Absolute temperature calibration	10 Point Calibration
Temperature display	7" TFT Touchscreen

Dimensions and volumes

Internal usable expansion volume l	22
Minimal process volume l	11
Active heat exchanger volume l	10
Weight lbs	1329.4
Cooling Water Connection in	G¾
Total dimensions in. (W × L × H)	28 x 41.7 x 70.1
Pump connections	M38x1.5 male

Temperature values

Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-56 ... 250
Temperature stability °C	±0.05
Ambient temperature °C	5 ... 40
Temperature display resolution °C	0.01

Other	
Classification	Classification III (FL)
IP Code	IP 20
Pump type	Centrifugal Pump
Pump type Magnetically coupled	1
Sound pressure level dbA	69