

# Temperature Conditioning Unit

## for Water-Cooled Pressure Sensors

Type 2621F...

The temperature conditioning unit has a pressure control system for the cooling circuit, an electronic flow monitoring system and a standardized monitoring/alarm signalling system, and can be operated from a variety of wall power.

- For up to 10 sensors
- Cooling circuit with pressure regulation
- Electronic flow monitoring system
- Standardized monitoring/alarm signalling system

### Description

The new Kistler Type 2621F... system is used for temperature conditioning of water-cooled pressure sensors and ensures constant thermal conditions in the measuring element – irrespective of the varying operating conditions of the combustion engine. It ensures stable and reproducible measurements. It also avoids overheating of the sensor or excessive steam condensation on the sensor diaphragm when the engine is stopped.

The temperature conditioning unit consists of a refrigerating set, water hoses for forward flow and runback and distributor units. The sensor hoses are connected to the distributor through quick couplings. An optical flow indicator is integrated in the loop.

The temperature conditioning unit has an automatic monitor of temperature, pressure, flow and level. The signal output of the automatic monitor can be used for controlling an electrical alarm device.

With the Kistler temperature conditioning unit the sensors are supplied with the optimal water quantity at the adequate pressure. According to our experience, the heat flow of a cooled sensor is about 200 ... 400 W, depending on the engine.

### Application

Water-cooled cylinder pressure sensors are used for precision measurements where minimum long term drift is required and when a suitable mounting space is available in the engine.

Cooling adapters are mainly used for cooling piezoresistive absolute pressure sensors in intake and exhaust manifolds. The temperature conditioning unit should be mounted on the engine test bench and the distributor as close as possible to the engine.



### Technical Data

Cooling water reservoir	l	≈6
Flow per sensor	l/min	0,3 ... 0,5
Flow control	l/min	<0,1
Water pressure	bar	1,5 ±0,2
Operating temperature range	°C	10 ... 40
Thermostat range of control	°C	50 ±3
Heating capacity	W	800
Cooling capacity	W	>2 200
Connecting hose to distributor		
Diameter	mm	10/8
Length	m	≤5
Connecting hose for sensors (Type 1203Csp)		
Diameter	mm	4/3
Length	m	≤2
Sensor connections		10
Power supply		2P +E
Voltage, switchable		
Type 2621F...	VAC (%)	230 (-22, +15)
Type 2621FY26	VAC (%)	115 (-22, +15)
Power consumption	VA	<1 100
Fuse (slow)		
Type 2621F...	A	8 (230 V)
Type 2621FY26	A	16 (115 V)
Dimensions		
Width x Height x Depth	mm	200x759x696
Weight total (without cooling water)	kg	≈50

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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## Dimensions

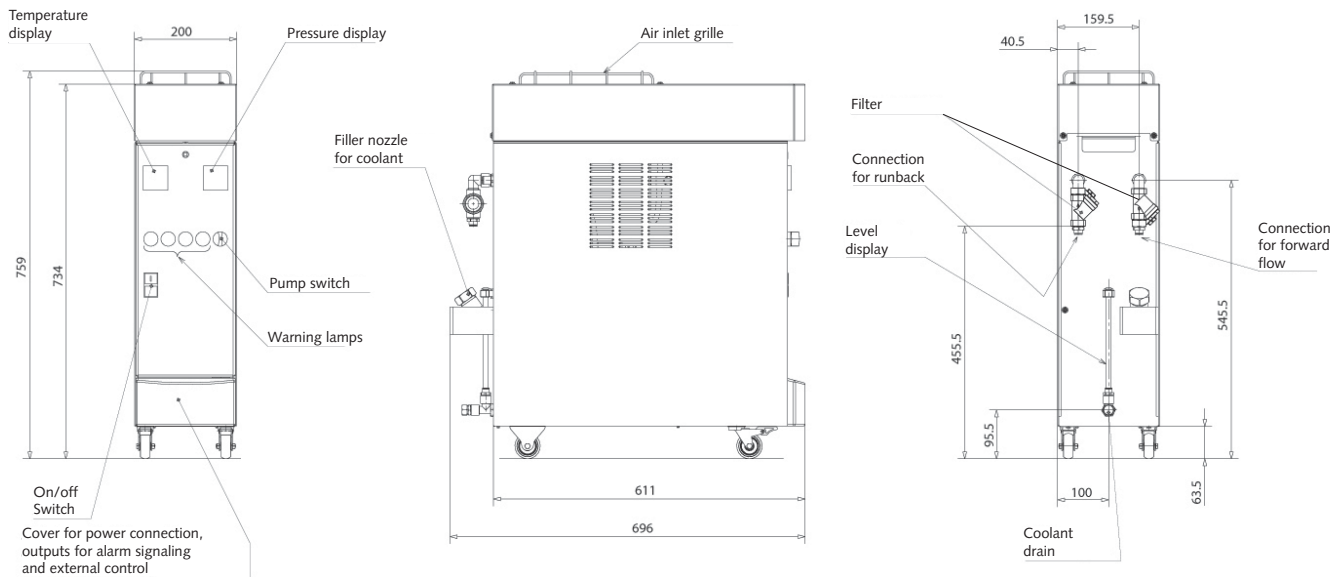


Fig. 1: Temperature Conditioning Unit Type 2621F...

## Application

For water-cooled piezoelectric and piezoresistive pressure sensors as well as cooling- and cooling switching adapters from Kistler.

## Mounting

The two distributors are to be fixed, each with 2 screws M4, as close as possible to the engine but not more than 2 m above the refrigerating set stands.

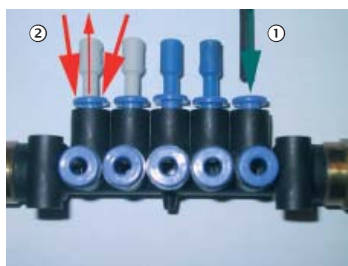


Fig. 2: Distributors complete

1. Installation of hose or blanking plug
2. Removal of hose or blanking plug

## Alarm

The temperature conditioning unit has an output for external monitoring of temperature, pressure, flow and water level. If the cooling liquid level drops below the upper limit, an alarm signal is generated, while the cooling system continues working normally. If the cooling liquid level drops below the lower limit, the cooling system shuts off automatically.

## Accessories Included

- 2 x 5 m Polamyde hose  $\varnothing 10 \times 7$
- 2 Distributors complete
- Screwdriver
- 1 Power supply cable 2 m

## Optional Accessories

- FPM hose black  $\varnothing 4 \times 3$  for sensors and cooling adapters

## Type

1203Csp

## Ordering Code

Temperature conditioning unit for Water-Cooled Pressure Sensors

- With fuse for 230 VAC
- With fuse for 115 VAC

## Type

2621F

2621FY26