

FRE≈FLOW™

TEMPERATURE SENSOR

MODEL: TT-G2

VERSION 1.5

The FreeFlow Temperature Transducers are high precision devices for use with the FreeFlow range of pump monitoring instruments. They are manufactured by RIVENTA and calibrated as a matched pair.

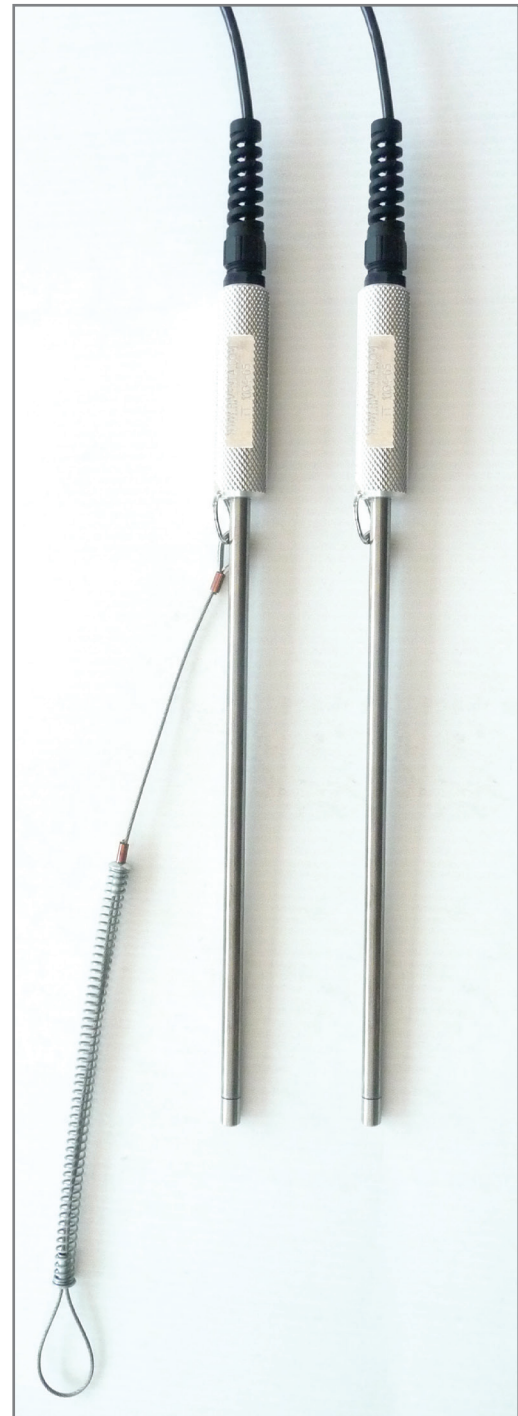
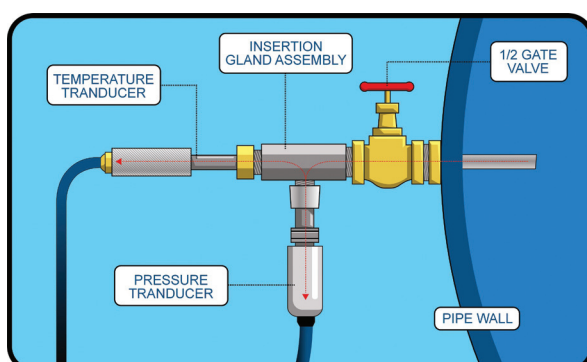
The Temperature transducer is inserted into both the suction and delivery pipework through the gland. The gland firmly tightened to prevent fluid leaking to atmosphere. Suction and discharge temperature is measured in order to attain a precision differential temperature (ΔT , mK) rise across the pump.

Each FreeFlow Instrument (FFI) is designed to connect 2 temperature transducers to sample pressure readings on the suction and delivery side of the pump. A cable length of 20 meters is fitted to each transducer as standard, so that the FreeFlow Instrument can be placed beside the pump under test and both suction and delivery tapings can be reached.

The outer diameter of each temperature transducer is 10mm and a standard length of 400mm. The probe construction is of stainless steel. The probes have an operating temperature range of between 0°C and 45°C.

Key Features

- Normal Fluid Operating Range 0 to 40°C
- Accuracy 1mk or better between 0 and 40°C
- Calibration Standard traceable to UKAS (United Kingdom Accreditation Service)
- Calibration Methodology compliant with ISO/IEC 17025
- Ultra-low drift
- 316 Stainless steel 400mm length standard sheath
- Glanded Cable at the head providing IP68 protection.
- Sheath diameter 10mm
- Insertion depth 50mm or 15% of pipe diameter
- Cable length 20m standard
- Response time within 0.1 seconds
- Standard insertion gland ½" BSP.



Technical Specification	
Burst pressure	100 bar.
Operating pressure	Vacuum to 20bar.
Environmental media	Fluids compatible with Stainless Steel. pH neutral +/- 2, no solids greater than 10mm.
Transduction principle	Integrated semiconductor electronics.
Common mode voltage	Typically + 5 Volts with respect to the -Ve supply at 10 Volts excitation.
Calibration Standard	Traceable to to UKAS (United Kingdom Accreditation Service)
Calibration Process Methodology	ISO/IEC 17025
Differential temperature accuracy (Probe set)	±0.0010°C
Differential temperature resolution	0.0001°C
Operating temperature range	0°C to +40°C
Tip ambient temperature	-10°C to +80°C
Safety Feature	Braided steel safety cable assembly to: i) Control probe insertion/removal ii) Ensure probe position is retained after installation. Tested to 200m head (Water) Recommended maximum direct insertion 120m.
IP Rating	IP68
Pressure effects	No changes due to pressure below 100bar
Vibration	No electronic reaction to normal vibration encountered in fluid systems. Temperature changes due to frictional heating, with fluid, through vibration.
Material	316 High Grade Stainless Steel
Weight	200g piece (400g set).
Cable Length:	20m Standard
Probe Length:	
Minimum	100mm
Maximum	500mm.
Standard	400mm
Diameter	10mm.

Riventa Contact Details

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Visit our website for further details www.riventa.com

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