

Easidew Sampler

Self-Contained Sampling System

A low-cost, self-contained sampling system, with filtration and flow control, for measurement of either pressure or atmospheric dew points.



Highlights

- Universal configuration for atmospheric or line pressure dew point measurements
- Integral particulate filter
- Metering valve for flow control
- Single block design for faster measurement response
- Gas pressure to 1 MPa (10 barg) with a high pressure option to 21 MPa (210 barg) available

Applications

- Compressed air dryers
- Plastic molding
- Ozone generators
- Medical gases
- Pneumatics
- Breathing air
- Welding gases

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Technical Specifications

Gas Flow Rate	1 to 5 l/min
Operating Pressure	1 MPa (10 barg) with a high pressure option to 21 MPa (210 barg) available
Particulate Filter	99.5 % removal of 0.3 µm
Gas Connections	Quick Connect fittings for 6mm O/D plastic tubing or ¼" Swagelok tube fittings (PTFE or FEP recommended)
Sample Tube	Supplied with 0.5m pig-tail vent tube, to prevent back-diffusion
Vacuum Rating	Standard push fittings are not vacuum rated
Materials of Construction	<p>Block and Cap: 316 stainless steel</p> <p>Flow Control Block: Aluminium</p> <p>Couplings: Nickel plated brass</p>
Sensor Port	5/8" UNF to support all Michell Instruments' impedance sensors/transmitters
Environmental	IP66 (NEMA 4)
Operating Temperature	-40 to +60°C (or as determined by sensor specification)
Storage Temperature	-40 to +70°C, 0-95 %RH non-condensing
Weight	1.1 kg or 1.3 kg when sensor installed

Order Code

Item	Description
EA2-SAM	Easidew Sampler (SS block with filter cartridge (0.3 µm), inlet/outlet push fittings, m-valve & PTFE vent tube, 6mm (0.24 in) For atmospheric or pressure dp measurements (10 barg max). Complete with mounting bracket)

Background

The Easidew Sampler is a general purpose sampling system that allows easy measurement of the dew point in many compressed air and industrial gas applications.

The Easidew Sampler provides all the necessary components to allow a sample of gas under test to be conditioned for measurement either at atmospheric or full line pressure; the two most commonly demanded sampling conditions. Easidew Sampler provides flow and pressure regulation as well as an in-line particulate filter, and housing the sensor, all in a single monolithic block assembly. The system is provided with a multi-directional mounting bracket for easy mounting on a panel, post, or pipe brace.

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Fast Response and High Integrity

Easidew Sampler is manufactured from a single, machined stainless steel block. This reduces the number of pipe joints required to get a sample to the sensor under test and also reduces internal volume and surface area. As a result, the sampling system has a faster response and higher integrity than similar systems built from discreet components. The integrated particulate filter provides further protection against solid contamination.

System Description

Easidew Sampler comprises the following key components:

- Connection Ports
- Filter
- Flow Control Valve

Connection Ports

The entry and exit pipe connections are of a quick connect, push fit type and can accept plastic (P.T.F.E., F.E.P.) 6 mm O/D pipe. A 0.5 metre length of P.T.F.E. is supplied which should be used as a pig-tail from the outlet port, whether measuring in either the atmospheric or pressure mode.

Filter

A 99.5 % 0.3 micron particulate filter cartridge is fitted downstream of the gas inlet port, accessible via a filter cap with O-ring seal. Other filter cartridge ratings can be supplied to customer order.

Flow Control Valve

A flow control valve is supplied factory fitted to the outlet port. This valve is designed to set the optimum gas flow of between 1 and 5 litres per minute through the sensor sampling block. Easy Installation and Operation

Pressure Dew Point Measurements

The Easidew Sampler is factory assembled to make dew-point measurements at full line pressure. This is achieved by controlling the gas flow at the outlet port. The maximum operating pressure for the Easidew Sampler is 1 MPa (10 Barg) with a high pressure option to 21 MPa (210 Barg) available.

If desired, the block can be easily reconfigured to make atmospheric dew point measurements by transferring the flow control valve to the inlet port. Simply swap positions of the flow control valve and the gas pipe connection coupling fitted at the inlet port. In this configuration, the flow valve regulates the gas pressure down to atmospheric before it reaches the sensor.

Mounting

The mounting of the Easidew Sampler is non-position critical. A mounting bracket is factory fitted. This bracket is easily removed and repositioned to provide a combination of mounting profiles. Alternatively the user may wish to directly mount the Easidew Sampler without the use of the bracket; for this purpose two M6 x 5 mm deep mounting fixings, pitch at 20 mm, are machined directly into the block.