Instromet News

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TURBINE GAS METER TYPE IFT

Highlights

SMALL INSTALLATION SIZE
MAX. CAPACITY 3000 m³/h
UP TO PN 100 / ANSI 600 FF
MAX. WORKING PRESSURE 100 BAR
INJECTION-LUBRICATED
CUSTOMIZED MEASUREMENT SOLUTION

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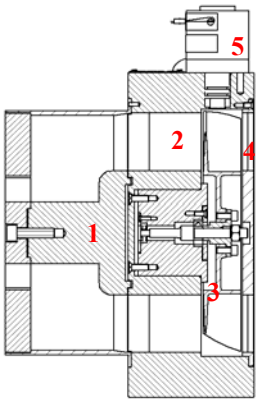
Instromet®

Description

Instromet has gathered its experience with high performance turbine gas meters over the last 35 years. In close co-operation with customers and meteorological institutes around the world there was a constant improvement of the performance and reliability of the instruments. This resulted in well-recognized high performance of the Instromet turbine gas meters and also led to the development of new types of turbine meters, designed for local markets or even customer specific.
The IFT (Instromet Flanged Turbine gas meter) is a good example of Instromet's ability to satisfy the requirements of a specific customer. The engineering goal was to develop a high pressure, high performance turbine gas meter with minimal installation length. The result is a high accuracy instrument with only a ½ D installation length. The integrated X4X® flow straighter enables to stay within 0,15% for all low and high perturbations as specified in ISO 9951.

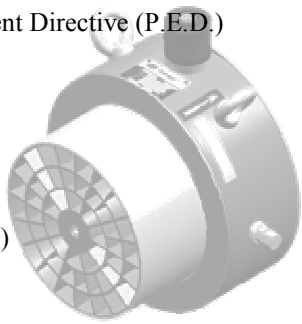
Operating principle



The metering mechanism consists of a turbine wheel, a flow straightener. A separate flow straightener who is held in position by a gasket and the meter itself performs the total meter function. The meter itself contains a build in flow straigthener. The separate and the build in flow straigthener together fulfil the function of killing swirl and flattening the flow profile. The rotation, the turbine wheel and thus the quantity of gas passing through it, to be indicated by a high frequency pulse sensor on the top of the blades. The flowing gas enters through a built-in conditioner(1) that conditions the flow profile and increases the gas velocity. The gas continues along the flow channel (2) and enters the turbine rotor. The turbine rotor blading (3) is designed to give complete guidance to the flowing gas and extract the maximum energy at low gas velocities. The turbine wheel's angular velocity is proportional to the average gas velocity flowing through the meter. The gas exits the turbine rotor trough a flow ring (4). The rotation of the turbine rotor is transmitted by a high frequency pick-up (5) to a pulse train proportional to the velocity of the turbine wheel.

Technical Specifications

Meter type	:	IFT
Design & construction	:	According to Pressure Equipment Directive (P.E.D.)
Straightener	:	Based on X4X®
Design pressure	:	100 bar
Design temperature range	:	-20ºC - +65ºC
Max. operating temperature	:	-10ºC - +50ºC
Accuracy	:	EEG (≤ 1% 20-100% Qmax.)
Repeatability	:	Better then ± 0.1%
Calibration	:	Instromet QA or NMi(NAKOV)
HF frequency sensor	:	Reprox® sensor
Lubrication system	:	Injection



Available :

Type	:	IFT 200-203
Size	:	∅ 200
Inlet size	:	≥ ∅ 203
Length	:	100 mm
Qmax.	:	3000 m³/h
Qmin.	:	150 m³/h
Pulses	:	± 919 **(Imp/m³)**

Other sizes on request

INSTROMET Products & Offices

Products

Rotary Flow Meters - Turbine Flow Meters - Ultrasonic Flow Meters - Flow Computers
Gas Chromatographs - Filters, Valves & Regulators - Calibration Equipment & Systems
Metering & Regulator Stations - Supervisory Systems & Software

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Information

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