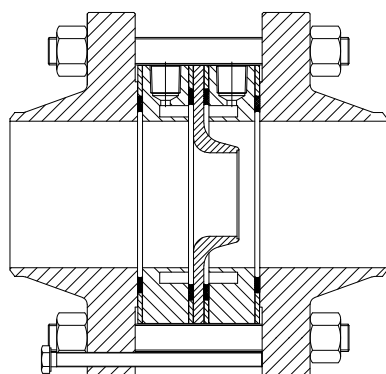


# FLOW NOZZLE FN Series



## DESCRIPTION

The non sharp edge profile is preferable in more abrasive fluids and at higher temperatures, such as water or vapour. The Flow Nozzles have a rounded inlet profile and a narrow cylindrical linear section.

With the same size, they allow measurement for higher flow rates than orifice plate. The ISO 5167 std, provides three types: the "ISA 1932 Nozzle", the "Long Radius Nozzle" and the "Venturi Nozzle".

## FEATURES

- Complete production control fully integrated inside the company and highly competent local suppliers.
- Qualified welders and welding procedures compliant with ASME IX and EN ISO 15614.
- Completely customizable on client's needs thanks to the support of our technical and sales departments.
- Over 60 years company experience with instruments installed in the entire world.
- Long working life ensured by high quality materials.

PROS	CONS
Suitable for a wide range of fluids, gases and vapours	Higher cost than orifice plate
Suitable for abrasive fluids and high temperatures	Limitation in ND sizes
Suitable for high flow rates	
Suitable for a wide range of Reynolds numbers	

## APPLICATIONS

- Oil & Gas plants, Refineries
- Chemical and petrochemical plants
- WATER / GAS treatment and distribution
- Power generation

## TYPICAL PERFORMANCES

- Range:  $1 \div 4$  ( $1 \div 5$ )
- Max. Pressure and Temperature, allowed by used materials
- Accuracy:  $\pm 1 - 2\%$  of F.S.. With Calibration:  $\pm 0.25\%$  of F.S.
- Repeatability:  $\pm 0.1\%$

## ACCESSORIES ON REQUEST

- Nipples and Valves, Fittings, Condensing pots
- Manifold and Differential Pressure Transmitter
- Spare parts (Type ISA 1932)
- Calibration for nozzle inserted in the pipe



## TECHNICAL SPECIFICATIONS

USE	Liquids, Gases, Vapors	
DIMENSIONS	Type ISA 1932	ND 2" ÷ 20" / DN 50 ÷ 500 – between flanges (usually)
	Type Long Radius	ND 2" ÷ 24" / DN 50 ÷ 600 – inserted in the pipe
DESIGN	Flow calculation and construction	According to ISO-5167-3, ASME MFC-3M
	Pressure Taps Option	Type ISA 1932: Corner Taps Type Long Radius: D / D/2
OPTIONS	Variants or extensions can be adapted to project requirements	
ARRANGEMENTS	with Flange ANSI B16.5 / API 6B – 6BX	
	with Flange EN-1092-1 / UNI 2223 / DIN	
RATING	ANSI/ASME - 150, 300, 600, 1500, 2500	
	EN-PN - 10, 16, 25, 40, 63, 100	
PROCESS CONNECTION	Type ISA 1932	Flow Element side: <ul style="list-style-type: none"> <li>ANSI/ASME - RF, FF, RTJ with sealing surfaces AARH 125 ÷ 250, 63</li> <li>EN-PN - Type 11 with sealing surfaces Type A, B1 and B2</li> </ul> Pipe side: <ul style="list-style-type: none"> <li>ANSI/ASME - WN</li> <li>EN-PN - Type 11 with sealing surfaces Type A, B1 and B2</li> </ul> EN-PN - Type 01, 11, 12 with sealing surface Type A, B1 and B2
	Type Long Radius inserted in the pipe	ANSI/ASME - RF, FF, RTJ with sealing surfaces AARH 125 ÷ 250, 63, or BW EN-PN - Type 11 with sealing surfaces Type A, B1 or B2, or BW
INSTRUMENT CONNECTION	Pressure Taps type: NPT-F / SW / PE / BW / Flanged	
OTHER OPTIONS	Our technical and commercial departments are available to discuss any variation or customization not mentioned in this catalogue	

## MATERIALS

GENERAL	As per project specifications, however mainly according to ANSI/ASME/AISI code or according to EN/UNI/DIN codes. Certificates with requirements like NACE MR-0175 e MR-0103 /ISO 15156, Dual grade, and PED. Others to be evaluated on request.
NOZZLE Type ISA 1932	Supplied with Nozzle, Flanges, Bolt & Nuts, Gaskets, Jack Screw Nozzle: mainly in Stainless Steel, or Alloy Steel Flanges: Carbon Steel, Low Carbon Steel, Alloy Steel, Stainless Steel Others: according to project specification
NOZZLE Type Long Radius	Supplied with Nozzle, Calibrated pipe section,, Flange (if any), half coupling, pins Nozzle: mainly in Stainless Steel, or Alloy Steel Flanges and pipe section: Carbon Steel, Low Carbon Steel, Alloy Steel, Stainless Steel
VENTURI NOZZLE	Supplied with Nozzle, body, Flanges Nozzle: mainly in Stainless Steel, or Alloy Steel Flanges and body: Carbon Steel, Low Carbon Steel, Alloy Steel, Stainless Steel
OPTION	Type ISA 1932, can be supplied with only the nozzle element, which can be installed on the line Flanges, incorporating the pressure taps necessary for the measurement.



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