

FLOW NOZZLE - FNA

DESCRIPTION

Flow nozzles are used as flow elements for flow measurement of aggressive and non-aggressive gases, steam and liquids.

DESIGN

Flow nozzles have a round inlet section and a short cylindrical throat. Venturi nozzles having an outlet cone differ from the classical Venturi tube in terms of the contours, the cross-section is axisymmetric which is similar to the ISA 1932.

APPLICATIONS

- Oil & Gas
- Petrochemical Industries
- Power Generation

ADVANTAGES

Compared to orifice plates, nozzles are recommended for appliances which require low pressure losses. At similar flow values nozzles need less differential pressure which results in less permanent pressure loss. The rounded inlet profile is less susceptible to erosion in comparison to the sharp edge of an orifice plate. Hence, nozzles achieve higher service life times. Weld-in type are the recommended choice for high pressure and high temperature applications because they minimize leakage.

SIZES

All nominal sizes are available in accordance with relevant standards.
 Standard size 80mm to 400mm NB; larger sizes are available on request.

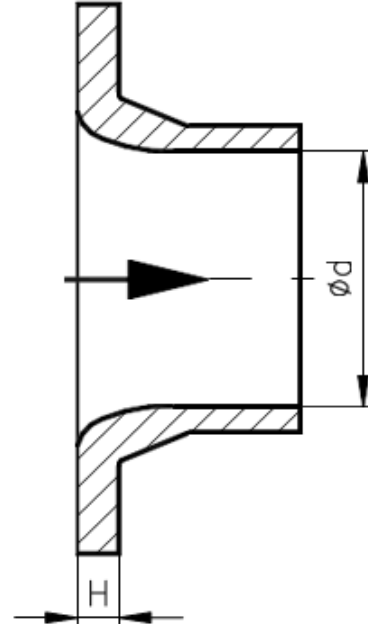
MATERIAL OF CONSTRUCTION

- Stainless Steel (standard)
- Hastelloy C276
- Monel 400
- Duplex
- Super Duplex

Others on request.

FLANGES

As per ANSI and for rating upto #2500 class.
 Stainelss Steel or Carbon Steel as standard.
 Other materials on request.



■ PRESSURE TAPS

Pressure taps will be designed according to customer requirements.
Typical tap designs are:

- Plain ends for fittings
- Butt weld ends
- Threaded ends
- Flanged ends

■ PLATE SEALING SURFACE

According to ASME B16.5:

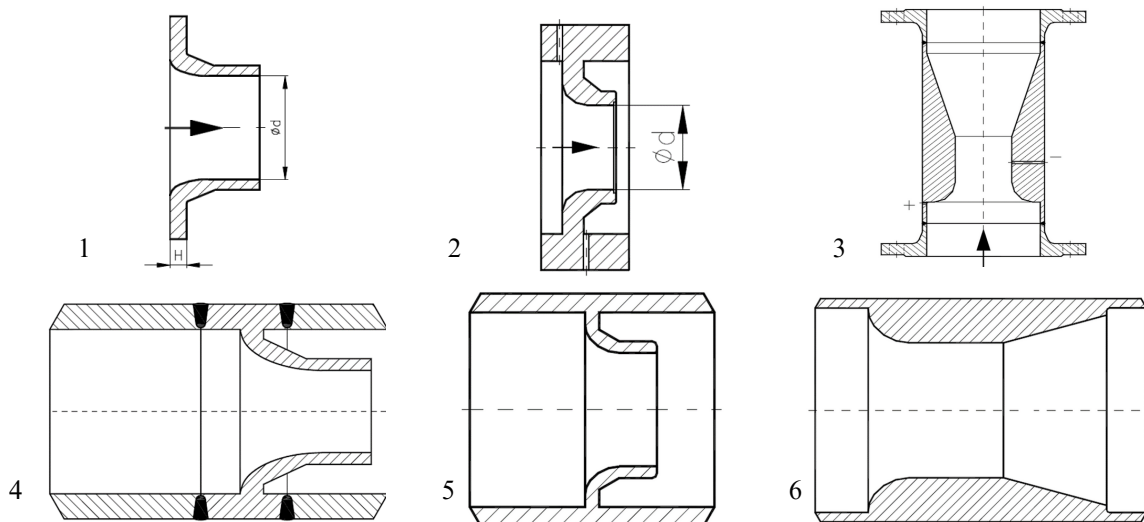
- Flat (RF and SF)
- Groove (small/large)
- Tongue (small/large)
- Male/female (small/large)
- RTJ male or female

or according to other flange standards specified by the customer.

■ TYPES OF CONSTRUCTION

- LONG RADIUS ASME (1)
- ISA 1932 (2)
- VENTURI NOZZLE (3)
- WELD-IN TYPE (4,5,6)

*Above Configurations can be offered with or without meter-run



■ ACCESSORIES

Pipe flanges, bolts/nuts, gaskets, spool pieces, instrument valves, condensate pots, manifolds, mounting accessories can be offered if requested.

■ NOTES

Installation can be in either horizontal or vertical orientation and can be mounted between flanges complying to ASME B1 16.5 / EN 1092-1 or other standard such as DIN, JIS or BS.