



NAMAVARAN BEHKOOSH

VISTA

Oil & Gas Industries, Pressure Vessels and Pipeline Equipments



INTRODUCTION

Vista Inc. is a leading company in the design and manufacture of pressure Vessel and pipeline equipments for the Oil & Gas, Petrochemical, Power plant and other process industries.

Vista manufacture Fix Equipment such as Quick Opening Closure, Pressure Vessels, Pig Launcher and Receiver Traps, different types of Separators, shell & tube Heat Exchangers, Air Cooled heat exchangers and Chemical Packages.

Vista provides a complete and engineered service package. Our skilled staff procedures a wide range of projects from conceptual design, to final product. We design and build package including, but not limited to: Simple Vessels, Pig Launcher & Receiver Trap Mobile Package and Separator Package. Our drafting team will work with you build a product to your exact specification.





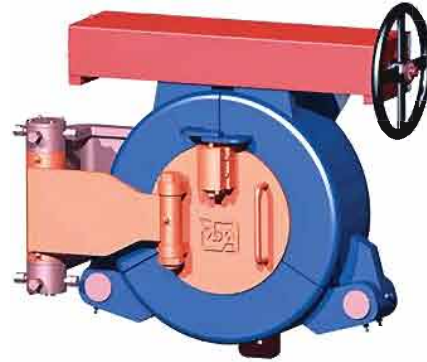
QUICK OPENING
CLOSURE®

Safe and Secure Sealing
Open or Close in Less Than 30 Seconds

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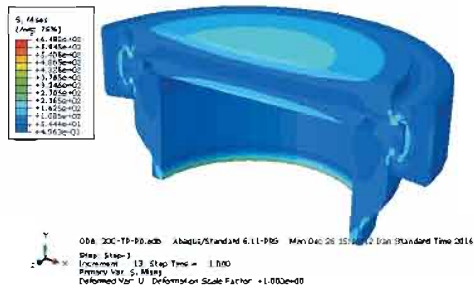
Description:

Vista, Inc.'s Clamp Ring Closures are quick-opening closures type, easily operated by one person. The closure is designed primarily for horizontal installation, meaning the door swings open on the horizontal axis. However, the closure can be installed on a vertical installation. In the latter case, a counterbalance can be provided to facilitate opening.

Pressure warning device – The Clamp Ring Closures are equipped with a pressure warning lock, in accordance with UG-35 of ASME Sect. VIII, Div. 1, to alert the operator to the existence of internal pressure prior to opening the closure.

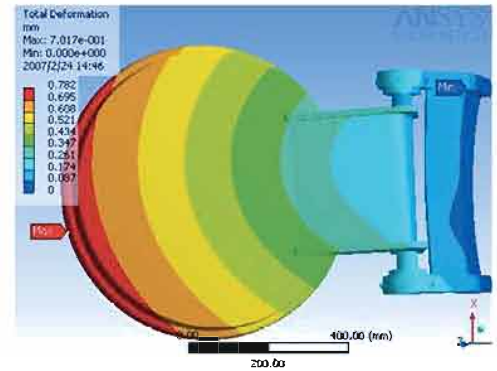
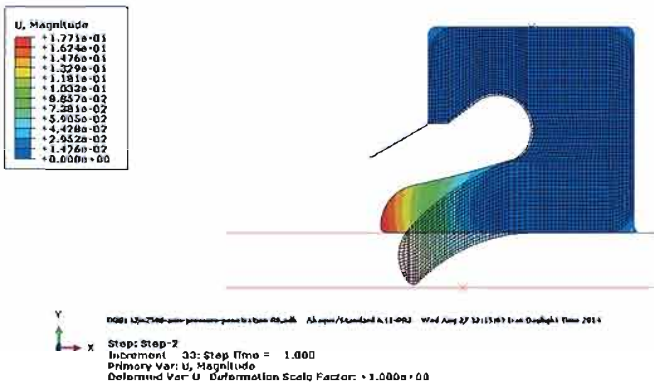
Technical Specification:

Size Range	6" to 100" Nominal diameter
Class Ratings	ASME #150 through to #2500
Design Specifications	ASME VIII Division 1 ASME VIII Division 2 PD 5500 / BS EN 13445
Closure Orientation	Horizontal or Vertical
Termination Design Specifications	ASME B31.3, B31.4, B31.8 Other International standards are available on request
Types of Connection	Butt Welded, Butt Welded with mitre for inclined/declined vessels or Flanged to clients requirements
Materials of Construction	ASTM A350 LF2 / ASME II SA350 LF2 ASTM A105 / ASME II SA105 ASTM A694 F42 to ASTM A694 F70 Grade 304L or 316L Stainless Steel Duplex Stainless Steel (UNS S31803)
Elastomeric Sealing	Nitrile, Viton and ED Resistant elastomers Other material options available on request
Standard Closure Finish	Removable rust preventative for client to finish paint after welding to vessel
Special Closure Finish	Electroless Nickel Plated Grade 316 Stainless Steel or Inconel 625 Weld Overlay
Accessories	The Vista's closure can be fitted with a all types of interlocks available on request. Horizontal Closures can be supplied with protective weather covers (Vertical closures are supplied with protective weather covers as standard)



NEW TECHNOLOGY TESTED

The Vista Quick Opening Closure has been fully tested under extreme high pressure for its performance. ABAQUS & ANSYS Finite Element Method Non-Linear Analysis All Vista Closures are computer designed. Special closures are analyzed using the latest ABAQUS & ANSYS Finite Element Package.



Unique Seal

The purpose designed servo acting double edged lip seal energizes at zero pressure. It is housed in the door face for protection and long life and is easily fitted without tools. The one piece moulding is available in a range of elastomers and at the highest pressure, incorporates a stainless steel spring to prevent extrusion and provides a full vacuum capability. The one piece seal design aids in function in both horizontal and vertical applications.

Vista's engineers are meeting the challenge of these ever changing industries by continuing to improve the performance of existing products and developing new products and equipment.

ORIFICE PLATE®

Description:

Vista, Inc.'s Orifice plates are widely used for flow measurement as they provide the simplest and the most economical means of flow detection. Orifice plates are available in the concentric type that the round opening (Bore) of the orifice plate is positioned concentrically with the center of the pipe and the opening edge (Bore edge) is available either in the concentric square edge type (Sharp, square edge type) or in the quadrant edge type (Round edge type). Orifice plates are also available in the eccentric type that the opening of the orifice is shifted from the center of the pipe. They also are available in the segmental type that the opening is a circular segment and the orifice is comparable to a partially opened gate valve

Specification:

Orifice bore type

Concentric square edged orifice

Quadrant edged orifice

Eccentric orifice

Segmental orifice

Flow calculation standards

ISO 5167-1 and 2 2003

AGA-3

ASME MFC-3M and 14M

JIS Z 8762

BS 1042

Flange ratings

JIS 10, 16, 20, 30, 40, and 63K

ANSI class 150, 300, 600, 900, 1,500 and 2,500 Lb

Pressure taps

Flange taps

Corner taps

Vena contract taps

1D and ½D (Radius) taps

Pipe taps (2½D and 8D)

Plate thickness

3, 6, 9 and 12 mm

Tab handle

Welded to orifice plate

Plate material

Standard : 304SS and 316L SS

Non-standard : Monel, Hastelloy C, Titanium and etc.

Drain and vent hole

Per ASME recommendations

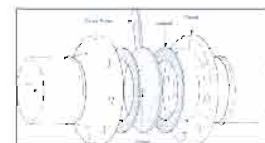
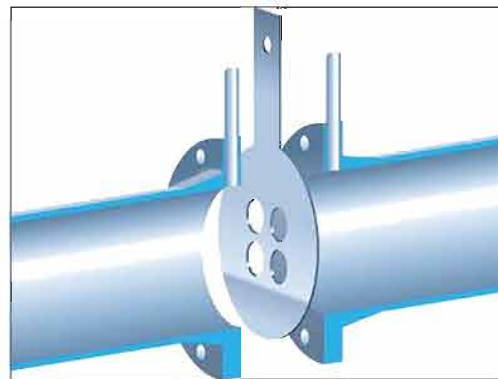
Not drilled for orifice bores smaller than 25.4 mm

Markings

Upstream side of tab handle stamped "Upstream" and with bore type and size, line size, tag number and flange rating

Special markings

Special marking may be furnished to meet special requirement



Orifice type	Fluid type					Nominal Line size normally used	
	Gas and vapor		Liquid				
	Clean	Dirty	Clean	Dirty	Viscous	JIS(mm)	ANSI(inch)
Concentric - Square edge	E	X	E	O	X	40~1,500	1 1/2~ 60
Concentric - Quadrant edge	X	X	E	O	E	40~250	1 1/2~ 10
Eccentric Square edge	O	O	O	E	X	100~350	4~14
Segmental-Square edge	O	O	O	E	X	100~350	4~14

PIG LAUNCHER & RECEIVER TRAP

Pipeline Equipment

PIG TRAP DESCRIPTION

Pipeline production and maintenance operations include the practice of inserting a mechanical plug (pig) or inflatable ball (sphere) into the pipeline line and allowing the production fluid to drive it from one end to the other.

The Pig Trap is the equipment purposely designed for performing this job. Traps are generally installed at the opposite ends of the pipeline, but they may be also mounted at intermediate stations, depending on service requirements. Trap Size Range:

Our common manufacturing range of pig traps spans from 4" to 64" line diameters, but traps of larger sizes can be designed and manufactured by FILTERS. Pressure range, from ANSI 150 to ANSI 2500. Any value of diameter, pressure and temperature can be calculated by our designers, in order to define the most appropriate barrel thickness. The barrel length is affected by the trap type (launching or receiving), by the pig type (ordinary, sphere, or inspection vehicle) and by the required launching sequence (single or multiple).

Design Codes:

Our pig traps are usually designed in accordance with the following internationally recognized codes: - ASME VIII DIV.1&2 -ASME/ANSI B31.4, 31.8, 31.3, for liquid and gas piping systems. We are however in a position to meet the requirements of any National Code or specification the customer may require. Pig Handling System:

On major line diameters, where the weight of the pig makes handling difficult, some mechanical devices can be used to carry out loading and unloading operations more easily and quickly. The most complete FILTERS system designed for this job includes:

- A Travelling Trolley for extracting and inserting the pig supporting cradle into and out of the trap, complete with runways and control winch.
- A Removable Bar to be mounted on the trolley head for pushing the pig along the cradle.
- A rotating Jib Crane, for lifting, positioning and lowering the pig outside the trap. The system can be either hand operated or motor controlled (electric, hydraulic or pneumatic powered).

The trap is resting on saddles of different height. Sloped traps are generally used for sphere operation, in order to use the gravity for rolling the spheres along the trap barrel.



PIG LAUNCHER & RECEIVER TRAP

Pipeline Equipment

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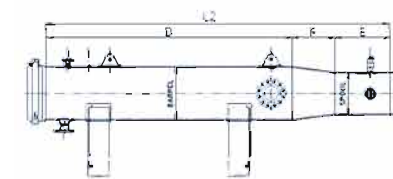
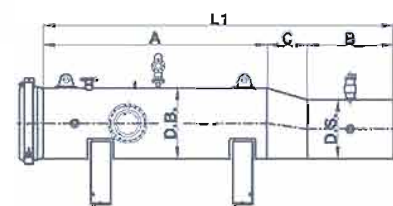
PIG LAUNCHER AND RECEIVER DIMENSIONS FOR OIL PIPELINE

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PIG LAUNCHER AND RECEIVER DIMENSIONS FOR GAS PIPELINE

A	B	C	D	E	F	G	H	VENT	DRAIN
6"	8"	2"	152	3000	1000	3000	3000	2"	2"
8"	10"	2"	178	3000	1000	3000	3000		
10"	12"	3"	203	3000	1000	3000	3000		
12"	16"	4"	356	3000	1000	3000	3000		
14"	18"	4"	381	3000	1000	3000	3000		
16"	20"	4"	508	3000	1000	3000	3000		
18"	24"	6"	508	3000	1500	3000	3000		
20"	24"	6"	508	3000	1500	3000	3000		
24"	30"	8"	610	3000	1500	3000	3000	4"	4"
26"	30"	8"	610	3000	1500	3000	3000		
28"	32"	10"	610	3000	1500	3000	3000		
30"	36"	10"	610	3000	1500	3000	3000		
32"	36"	10"	610	3000	1500	3000	3000		
36"	42"	12"	610	4000	2000	4000	4000		
42"	48"	12"	710	4000	2000	4000	4000		
48"	60"	16"	710	4000	2000	4000	4000		
52"	60"	16"	710	4000	2000	4000	4000		
56"	60"	16"	710	4000	2000	4000	4000		



ANCHOR FLANGE®

DESCRIPTION:

Vista, Inc.'s Anchor is designed for immobilization of high pressure pipe lines. Normally, it is a relatively simple matter to compensate for expansive movement of pipe caused by temperature changes and internal pressure. The designer calculates the amount of expansion (or contraction) to be expected and then provides expansion elements such as loops, offsets, bends, etc., to give the line sufficient flexibility to absorb the stresses that are created. In conjunction with this, there must be a suitable number of anchors installed to ensure proper functioning of the expansion element. But at pipeline river crossings, compressor stations, meter and valve settings, etc., the problem is complicated by the magnitude of the end forces resulting from the use of large diameter pipe and the difficulty of providing adequate anchorage. Anchor Flanges can address these problems.

The welding neck Anchor Flange overcomes the difficulties normally encountered in anchoring, for the pipe is always held immobile, there are no unnecessary stress raisers created because of filled welds on the O.D. of the pipe and the possibilities of underbead cracking are minimized since the assembly is Butt-welded. The Anchor Flange looks like a double-hubbed welding neck flange with no bolts. The hubs are of the straight-taper that permits the attachment of flange material to high yield line pipe without the use of transition pieces.

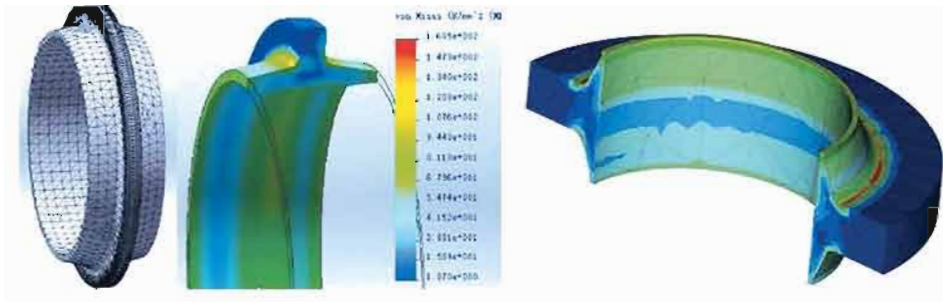
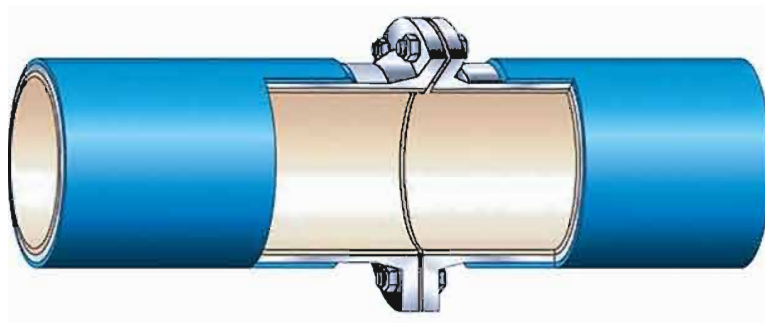
MATERIALS:

For economy, the Anchor is normally furnished in A105 with a minimum yield of 42,000 psi and additional thickness is provided at the welding end to compensate for high yield pipe. If required, the Anchor Flange can be furnished in higher yield materials such as A694 and A707. The hubs are butt-welded to the pipe at a point where the line is to be held immobile and the entire assembly is embedded in steel reinforced concrete. Thus, the forces that result from thermal changes and pressure loads in the pipe are transmitted to an external anchoring structure.

CUSTOM DESIGN:

Anchors are custom designed to provide the most economical dimensions for each special application. Stress calculations are performed as outlined in ASME Section VIII, Division I, Appendix 2. Shown in Figure 1, as an example, are typical dimensions for an Anchor Flange designed to match a 24" O.D. x .500 wall, API 5LX60 pipe, Type "B" construction, 1480 psi with a temperature differential of 90°F and a maximum concrete bearing stress of 1500 psi.

ANCHORFLANGE®



GRIT TRAP

Wellhead Equipment

DESCRIPTION

VISTA Industries offers several types of Grit Traps for gas industry, which is designed to international codes. The service is to trap the solid parts, running into the medium coming from the gas wells. Materials are selected to withstand the severe erosion. Often, to prevent the reduction of wall thickness, the internal body of the trap is hardened through a weld deposit like nickel or cobalt alloy. Grit Trap is equipped by a Quick Opening Closure connection to remove the separated solid parts.



STONE TRAP

Wellhead Equipment

DESCRIPTION

VISTA Industries offers several types of stone traps for oil industry, which is designed to international codes. The service is to trap the solid parts, running into the medium coming from the oil wells. Materials are selected to withstand the severe erosion. Often, to prevent the reduction of wall thickness, the internal body of the trap is hardened through a weld deposit like nickel or cobalt alloy. Stone Trap is equipped by a flanged connection to remove the separated solid parts.



PIG SIGNALER



Pig Signalers are one of the important gas and oil equipments, used on pipeline launchers and receivers to indicate that the pig has been launched or received.

The Vista's Intrusive Bi-directional Pig Signalers, made in different pressure classifications –ANSI Class 150 up to 1500 and designed for use at temperatures from -20°C to +200°C, available in a variety of models, as mentioned in the table below, meet all your needs from a pig detector like mechanical resetting, electrical auto resetting switches or mechanical and electrical signals in combination, stainless steel and corrosion resistant parts, easy operation, simple installation, minimum space requirement and multiple accessory flexibility.

Model options and codes for intrusive Pig Signaler are:

M = Mechanical Flag

E = Electrical Switch

F = Flange Mounting

W = Welded Base

V = Valve Model

X = Extension Model (state length)

Standard Models

M-W E-W ME-W

M-F E-F ME-F

M-W-X E-W-X ME-W-X

M-F-X E-F-X ME-F-X





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PRESSURE VESSELS (V400®)

Safe and Secure Sealing

Carbon steel and Stainless Steel Pressure Vessel

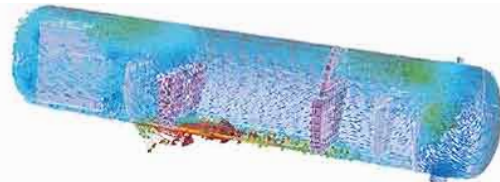
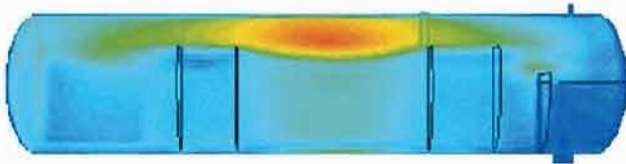
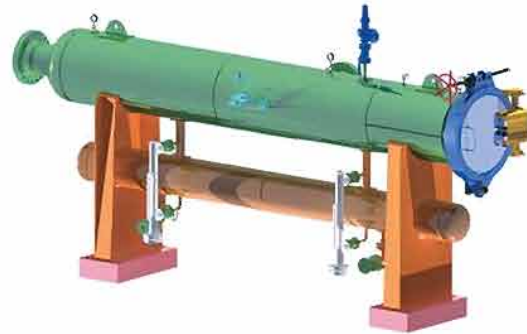
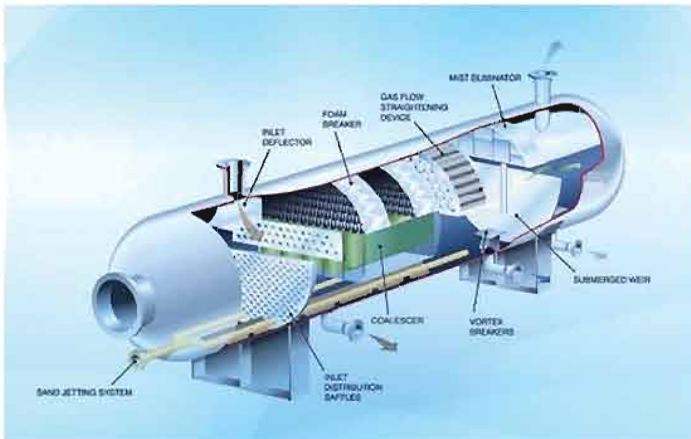
Description

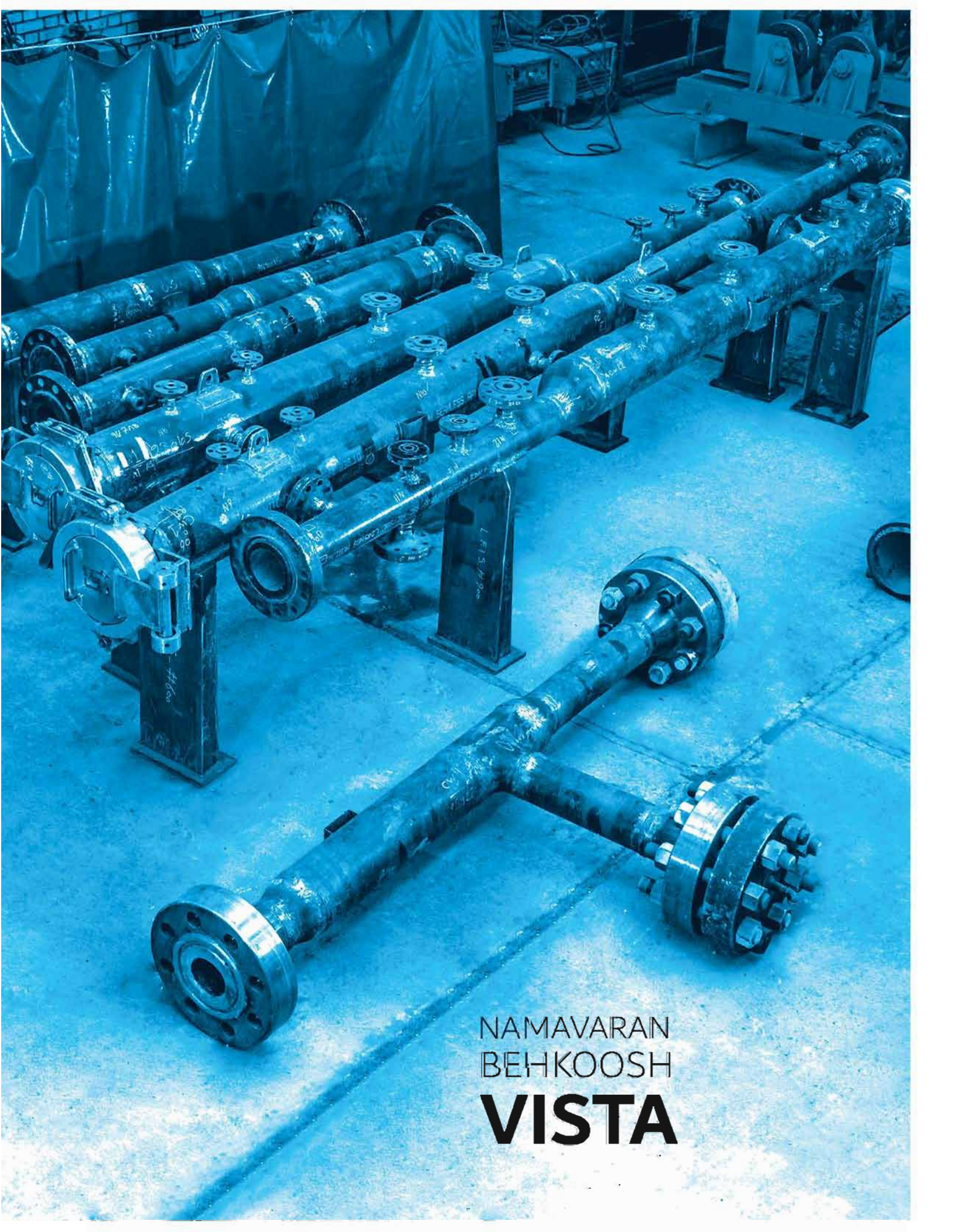
Vista Manufacturing is an industry authority in all types of pressure vessel construction, partnering with natural gas processors, oil refineries and petrochemical companies to construct safe, conforming vessels, columns and towers. Our high-performance oil and gas pressure vessel designs include:

- Knockout Drums
- Absorber vessels
- Packaged Vessel
- 2 phase separators
- 3 phase separators
- Slug catchers
- Filter Separator
- Towers
- Dry Gas Filter

Our pressure vessels can be constructed with a range of capacity, material and wall thickness options, and is certified in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII, Division 1. In addition, NRG's state-of-the-art facility operates under strict API, ISO and HSE guidelines, so our quality control processes ensure that each product operates efficiently, safely and durably.

We guarantee an unwavering commitment to high-caliber craftsmanship and fast turnaround, and our equipment is designed to be both affordable and built to last.





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VENTURI TUBES®

Description:

Vista, Inc.'s has designed its Classical Style Venturi Tubes to meet each customer's specific flow measurement needs with engineering that covers a wide range of applications. These maintenance-free tubes offer a constant degree of accuracy, a low susceptibility to erosion, high pressure recovery, and they can be installed at any angle from horizontal to vertical.

Design Condition:

Vista, Inc.'s manufactures venturi tubes in sizes ranging from 4" to 48" and larger. Customers can specify tubes for high and low pressures, volumes, and temperatures. Construction materials include carbon, alloy, and stainless steels.

Vista, Inc.'s can supply other materials on request for special applications. Throughout the manufacturing process, skilled machinists and welders proceed according to ASME approved procedure specifications with supporting procedure qualification records.

Vista, Inc.'s manufactures venturi tubes to an accuracy of $\pm 1.5\%$ uncalibrated and $\pm .25\%$ for a calibrated venturi tube and pipe section. Accuracy is contingent on proper installation and on beta Reynolds, Number limitation.

VERSATILITY:

Can be used in air, water, vapor, steam, gas, chemical, sludge and slurry applications.

Available in carbon, alloy and stainless steels as well as other materials, based on request and design suitability.

ECONOMY:

- Short upstream piping required.
- No moving parts, simple configuration, maintenance-free.
- Lower susceptibility to erosion than the square-edge orifice plate.
- Lighter than cast type; fabricated from plate, pipe and bar stock.
- Lower shipping costs.
- Lower installation costs.



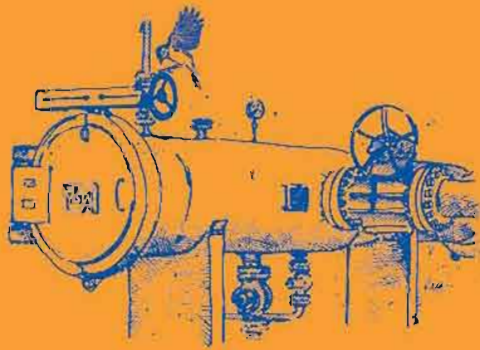
EFFICIENCY:

- High pressure recovery.
- Sustained accuracy.
- Wide range ability - will operate down to 200,000 pipe Reynolds number. Techno-Flow recommends laboratory flow calibrations below 200,000 pipe Reynolds number.
- High repeatability due to simple configurations and no moving parts. Accuracy is contingent on proper installation and on beta Reynolds Number limitation.

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To give your best
Is to receive the best...



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