



1755 La Costa Meadows Drive
 San Marcos, CA 92078 USA
 800-854-9959 / Fax 760-736-6250
 www.vortab.com

VORTAB

Flow Conditioners

V											
1	2	3	4	5	6	7	8	9	10	11	

Special Instructions

Box No. Code W or * Description ¹

INSTRUCTIONS: To order a Vortab, please fill-in each numbered box above with the appropriate code from the categories below. Once you have made all selections, contact a VORTAB Company Representative for price and delivery information. Contact the VORTAB Company on the availability of other options and special applications. Final acceptance of the part number is subject to the VORTAB's approval.

1. - 3. Model	Code
VIS Insertion Sleeve For use inside pipes or round ducts from 1 to 48 inches in diameter. Standard length is 3 inside diameters.	VIS
VMR Meter Run For connection to piping from 2 to 24 inches in diameter. Standard length is 7 nominal diameters. 2 inch size with flow element connection and flanged process connections are 8 nominal pipe diameters.	VMR
VSR Short Run For connection to piping from 2 to 24 inches in diameter. Standard length is 3 nominal diameters.	VSR
VEL 90° Long Radius Elbow For connection to piping from 1 to 36 inches in diameter.	VEL
Field Kit For assembly and installation inside round or square pipes or ducts from 36 to 96 inches in diameter or size	VFK

8. All Welded Material of Construction	Code
Carbon steel - For VIS Model with inside diameter greater than 4.51 inches. - For VMR or VSR Model with nominal pipe size 8 inches or larger. - For VEL and VFK Models, all pipe sizes.	1
316 Stainless steel - For all Models.	2
316 Stainless steel body with carbon steel flanges - For VMR and VSR Models only.	3
<i>Note: Codes 5 or 6 must be selected in Box 9. Codes 6 or 8 must be selected in Box 10 when a flow element is required.</i>	
Hastelloy C-276 - For VIS or VFK Models only.	4
Other ¹	*

10. Flow Element Connection	Code
For VIS, VSR, VEL and VFK Models None (Standard)	0
For VMR Model only 3/4 inch Female NPT	1
1 inch Female NPT	2
1-1/4 inch Female NPT	3
1-1/4 inch Male NPT (See Figure 5)	4
1-1/2 inch ANSI flange ³ (See Figure 4)	
150 lb. Stainless steel	5
150 lb. Carbon steel	6
300 lb. Stainless steel	7
300 lb. Carbon steel	8
Other ¹	*

4. - 7. Pipe or Duct Size								
Enter all dimensions in Inches. Dimensions must be rounded down to the nearest hundredth of an inch. Divide millimeters by 25.4 to convert to inches.								
For VIS Model In Boxes 4 through 7, enter the inside diameter from 00.87 inch to 48.00 inches.								
For VMR, VSR and VEL Models ² In Boxes 4 and 5, enter the nominal pipe size in inches. <i>For VMR and VSR</i> Carbon steel = 08 to 24 inches Stainless steel = 02 to 24 inches <i>For VEL</i> Carbon steel = 01 to 36 inches Stainless steel = 01 to 36 inches In Boxes 6 and 7, enter the pipe schedule code: <i>For VMR, VSR and VEL</i>								
<table border="1"> <thead> <tr> <th>Schedule</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>STD</td> <td>00</td> </tr> <tr> <td>10</td> <td>S1</td> </tr> <tr> <td>80</td> <td>S8</td> </tr> </tbody> </table>	Schedule	Code	STD	00	10	S1	80	S8
Schedule	Code							
STD	00							
10	S1							
80	S8							
For VFK Model In Boxes 4 and 5, enter the inside diameter (ID) or dimension from 36 to 96 inches In Boxes 6 and 7, enter the pipe geometry code:								
<table border="1"> <thead> <tr> <th>Pipe Geometry</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Round</td> <td>RD</td> </tr> <tr> <td>Square</td> <td>SQ</td> </tr> </tbody> </table>	Pipe Geometry	Code	Round	RD	Square	SQ		
Pipe Geometry	Code							
Round	RD							
Square	SQ							

9. Process Connection	Code
None (See Figure 1) - For VIS or VFK Models only.	0
Retaining wafer at inlet (See Figure 2) - For VIS Model only.	1
Retaining wafer at outlet - For VIS Model only.	2
Butt weld preparation (See Figures 4,7,9,10) - For VMR, VSR and VEL Models only.	3
Male NPT (See Figures 3 and 7) - For VMR, VSR and VEL Models only with 2 to 4 inch pipe sizes.	4
ANSI flanges ³ (See Figures 5, 6, 8) - For VMR, VSR and VEL Models only. Flange size is determined by the Codes selected in Boxes 4 and 5. Materials of construction are determined by the Codes selected in Box 8.	
150 lb	5
300 lb	6
Other ¹	*

11. Identification Tag ⁴	Code
None (VIS Models Only)	0
For VMR, VSR and VEL Models only Adhesive label	1
Adhesive label and stainless steel tag	2
Other ¹	*

Notes

- Describe the desired pipe schedule, material of construction, process connection, flow element connection, or identification tag. Contact the VORTAB Company for availability, pricing, and delivery.
- The VMR, VSR and VEL Models use standard wall thickness pipe (STD). For pipe sizes from 2 to 10 inches, STD pipe is equivalent to schedule 40 or 40S pipe. For pipe sizes from 12 to 36 inches, STD pipe has a 0.375 inch [9.5 mm] wall thickness.
- All flanges are raised face and phonographic serrated. VMR and VSR Models use slip-on flanges. VEL Model uses welding neck flanges.
- Stainless steel tag must not exceed 5 lines with 18 characters per line.

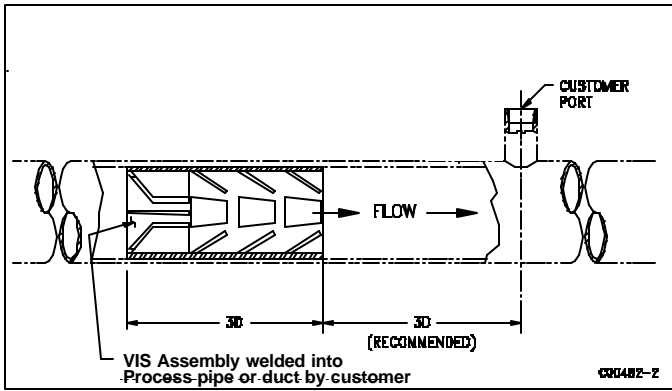


Figure 1. VIS without Retaining Wafer

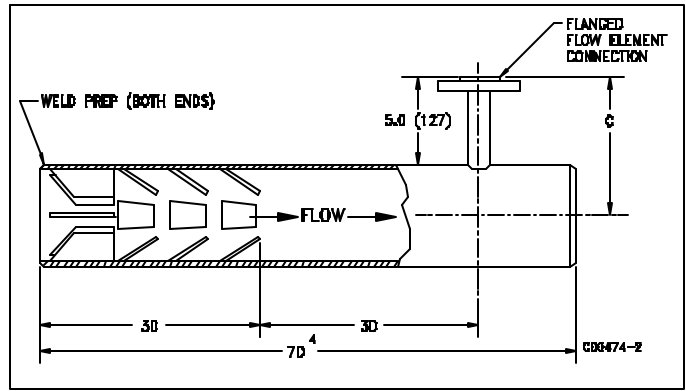


Figure 4. VMR with Butt Weld Preparation Process Connections and Flanged Flow Element Connection

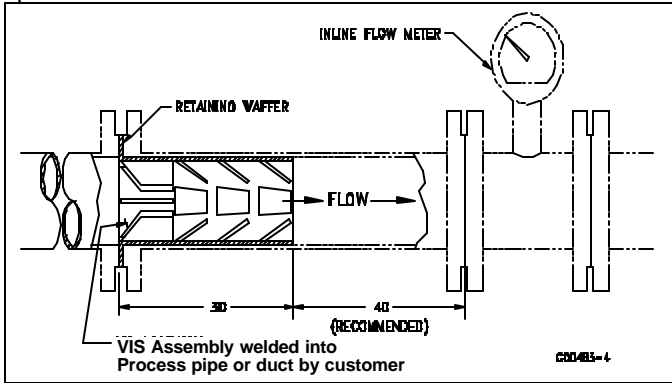


Figure 2. VIS with Retaining Wafer at Inlet

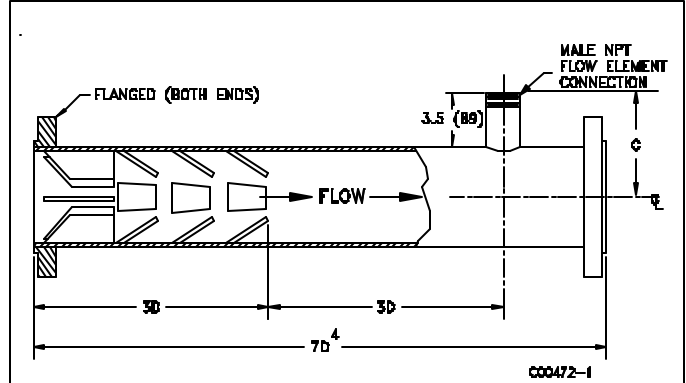


Figure 5. VMR with Flanged Process Connections and Male NPT Flow Element Connection

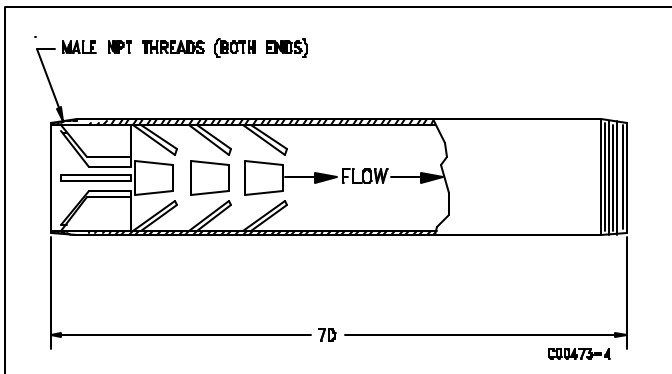


Figure 3. VMR with Male NPT Process Connections and No Flow Element Connection

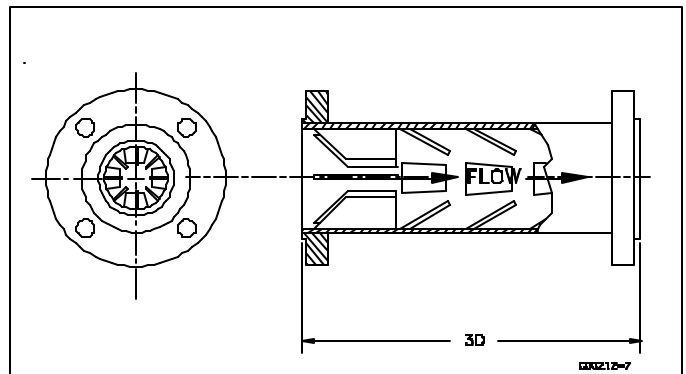


Figure 6. VSR with Flanged Process Connections

Table A: Flow Element Connections						
VMR Size	For FCI Flowmeters (U-Length) ³				All Other Instruments (C) ²	
	Threaded		Flanged		Threaded	Flanged
	ST Series	GF Series	ST Series	GF Series		
2"		4.7" [119]		6.9" [175]	4.69" [119]	6.19" [157]
3"	1" - 6" [25 - 152]	5.8" [147]	1" - 6" [25 - 152]	7.8" [198]	5.25" [133]	6.75" [171]
4"		6.3" [160]		8.3" [211]	5.75" [146]	7.25" [184]
6"	1" - 12" [25 - 305]	7.3" [185]	1" - 12" [25 - 305]	9.3" [236]	6.81" [173]	8.31" [211]
8"		8.3" [211]		10.3" [262]	7.81" [198]	9.31" [236]
10"		9.4" [239]		11.4" [290]	8.87" [225]	10.37" [264]
12"		10.4" [264]		12.4" [315]	9.87" [251]	11.37" [289]

Notes

- "D" equals the nominal pipe size or diameter and "xD" equals the pipe length in terms of the equivalent number of nominal pipe diameters.
- "C" is the distance from the flow element connection to the centerline of the VMR. Find the dimension of "C" in Table A and use to calculate the length of your insertion flowmeter in accordance with the flowmeter manufacturer's specified guidelines.
- U-length calculations do not include the additional length required for special flow element connections such as ball valves, extended nozzles, etc.
- 2 inch sizes with a flow element connection and flanged process connections require 8 nominal pipe diameters in length.

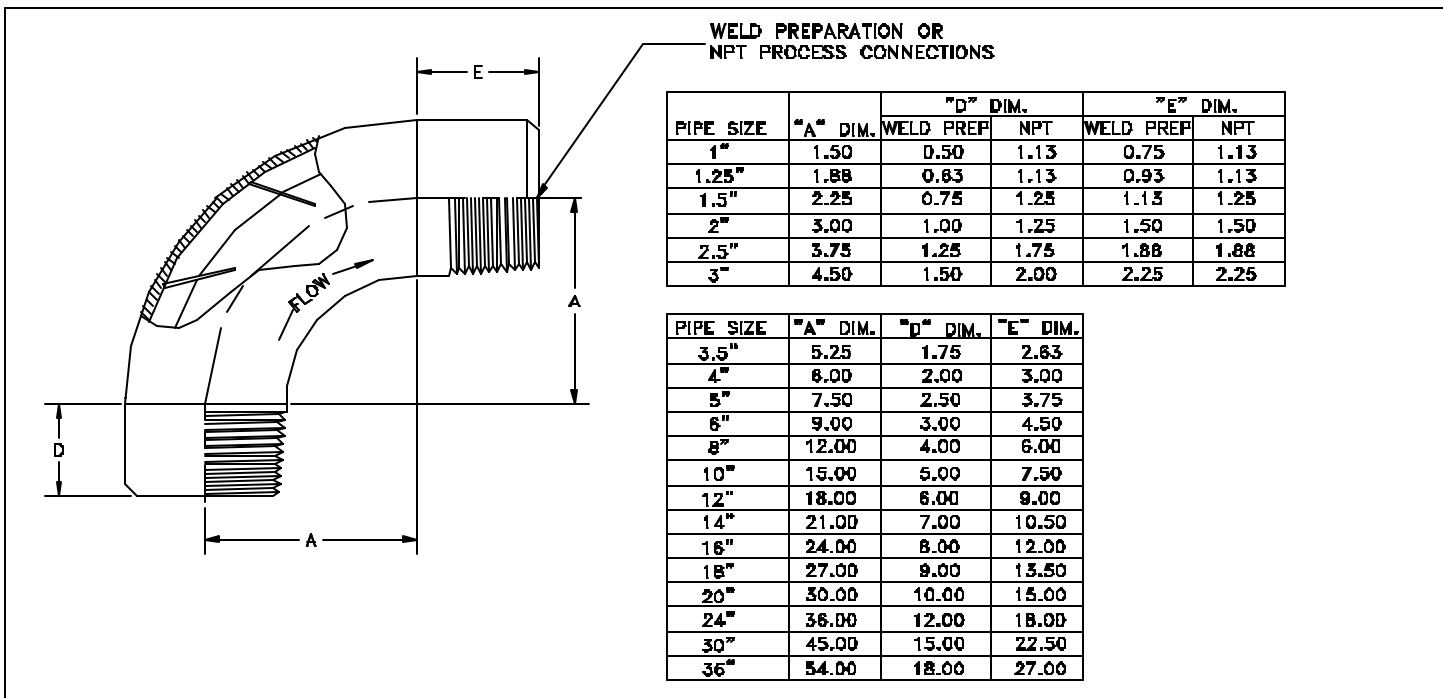


Figure 7. VEL with MNPT or Weld Preparation Process Connections

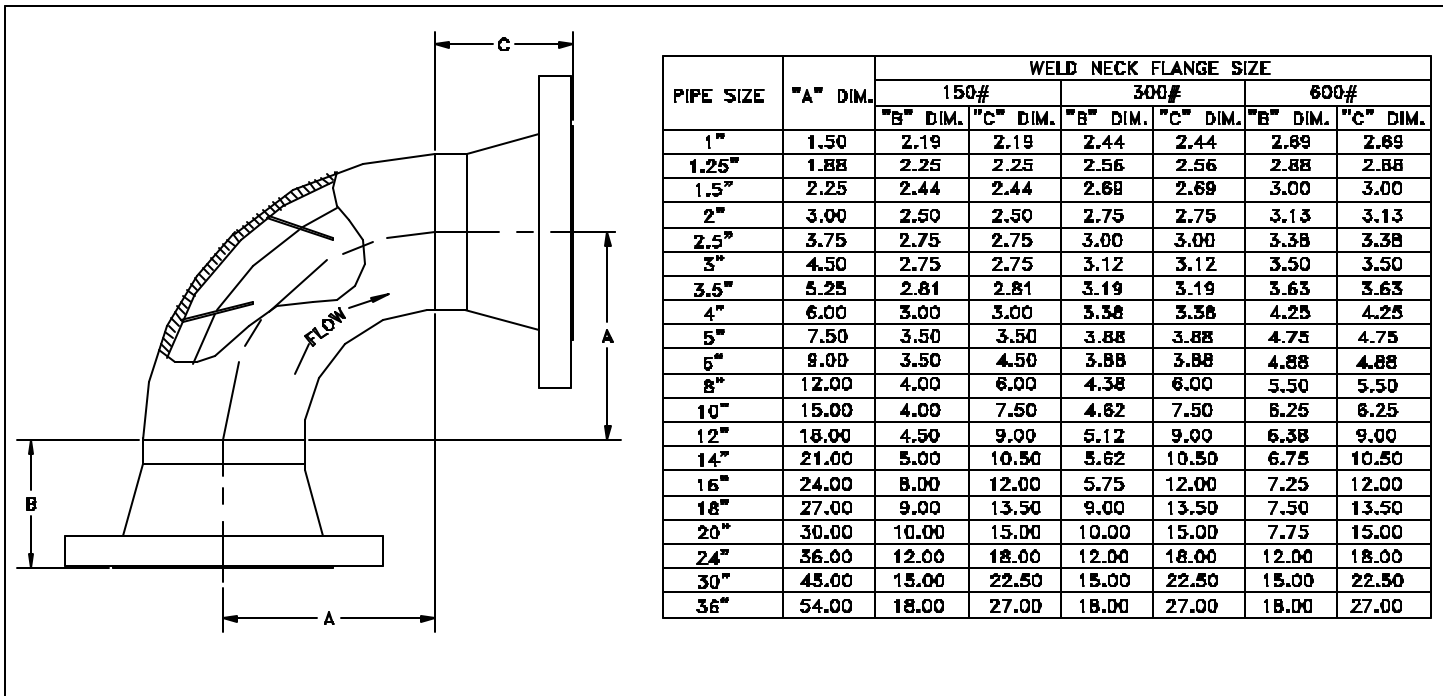


Figure 8. VEL with Flanged Process Connections

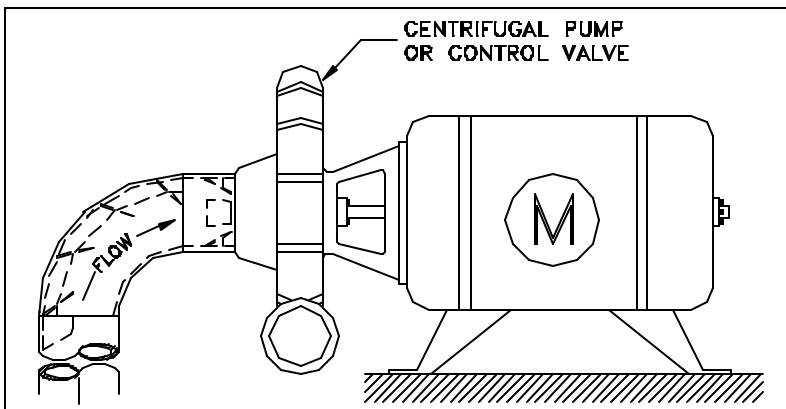


Figure 9. Typical Process Application

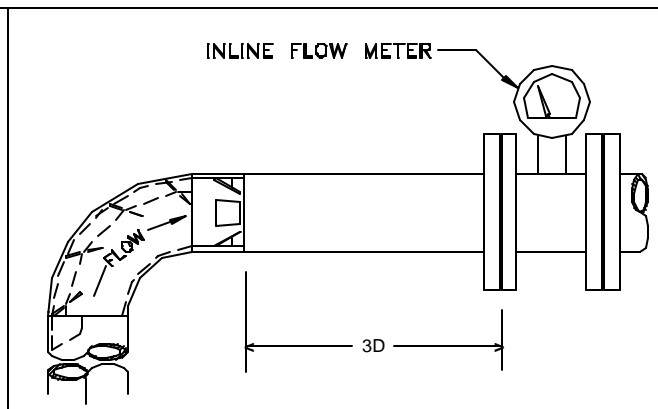


Figure 10. Typical Flowmeter Application



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CUSTOMER INFORMATION

Company Name:	Technical Contact:	Phone/Fax
Address 1:	Email:	
Address 2:	Purchasing Contact:	Phone/Fax
City, State, Zip Code:	Email:	

PROCESS PIPING

Pipe, tube or duct size: _____	Tag number: _____
Pipe schedule: _____	Pipe orientation: <input type="checkbox"/> horizontal <input type="checkbox"/> vertical
Wall thickness: _____	Process connection: _____
Cross-section geometry: <input type="checkbox"/> round <input type="checkbox"/> square <input type="checkbox"/> rectangle	Maximum pressure drop: _____
Materials of construction: _____	Other information: _____ _____

PROCESS MEDIA

Media: _____	Operating conditions:			
Composition: _____	Minimum	Nominal	Maximum	Units
State or phase: <input type="checkbox"/> Liquid <input type="checkbox"/> Slurry <input type="checkbox"/> Gas <input type="checkbox"/> Foam	Temperature	_____	_____	_____
Molecular weight: _____	Pressure	_____	_____	_____
Specific gravity or density: _____	Flow rate	_____	_____	_____
Viscosity: _____	Other:	_____		

FLOWMETER SPECIFICATIONS

Manufacturer: _____	Model number: _____
Principle of operation: _____	Process connection: _____
Flow element configuration: <input type="checkbox"/> Insertion <input type="checkbox"/> Inline	Other information: _____ _____

INSTALLATION DIAGRAMS