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

Order Information Sheet (OIS)

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

4. - 7. Pipe or Duct Size

		•		
4	5		6	7

Enter all dimensions in Inches. Dimensions must be rounded down to the nearest hundreth 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.

For VMR and VSR
Carbon steel = 08 to 24 inches
Stainless steel = 02 to 24 inches

For VEL
Carbon steel = 01 to 36 inches
Stainless steel = 01 to 36 inches

In Boxes 6 and 7, enter the pipe schedule code:

For VMR, VSR and VEL

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:

Pipe Geometry	Code
Round	RD
Square	SQ

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. *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.*	3
Hastelloy C-276 - For VIS or VFK Models only.	4
Other [1]	*

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 t0 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]	*

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]	*

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

1. 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.
2. 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.
3. All flanges are raised face and phonographic serrated. VMR and VSR Models use slip-on flanges. VEL Model uses welding neck flanges.
4. Stainless steel tag must not exceed 5 lines with 18 characters per line.

© Copyright 2006 VORTAB Company. All rights reserved.
Subject to change without notice. Order Information Sheet effective 12/15/2004

Doc. No. 01SA011428F

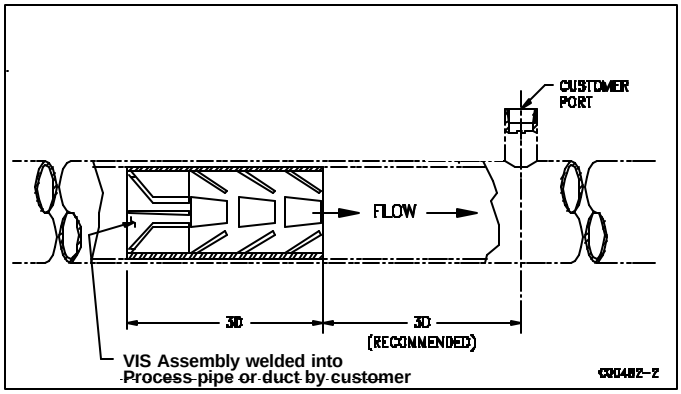


Figure 1. VIS without Retaining Wafer

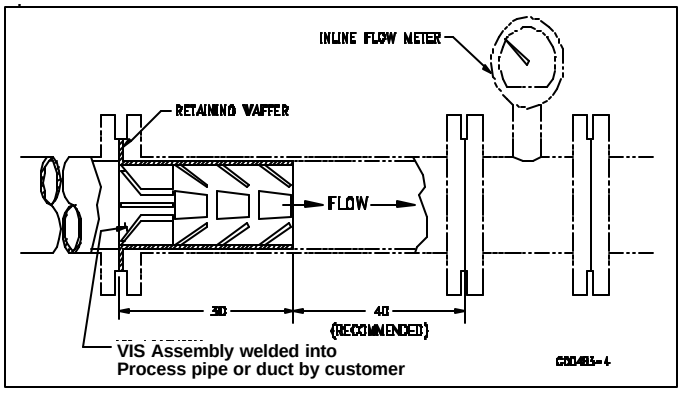


Figure 2. VIS with Retaining Wafer at Inlet

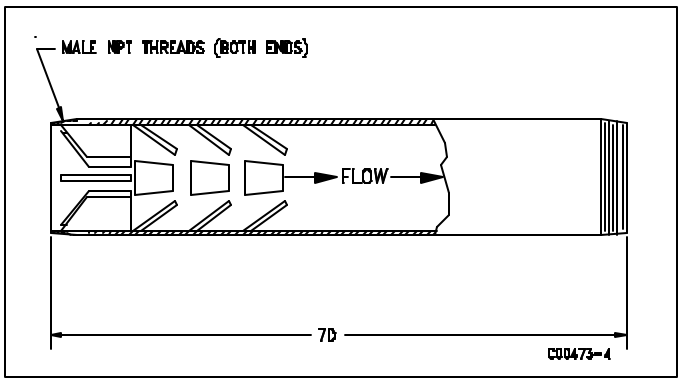


Figure 3. VMR with Male NPT Process Connections and No Flow Element Connection

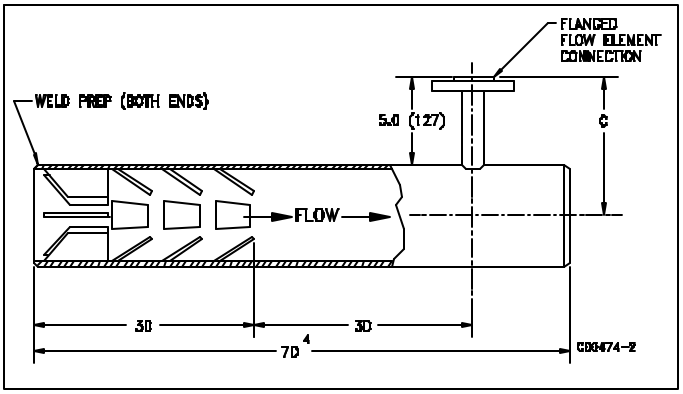


Figure 4. VMR with Butt Weld Preparation Process Connections and Flanged Flow Element Connection

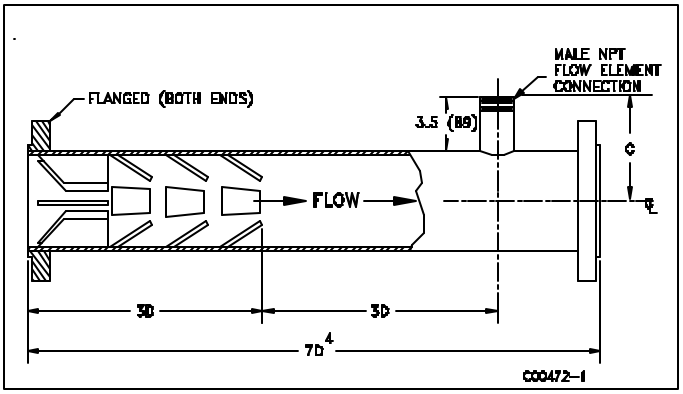


Figure 5. VMR with Flanged Process Connections and Male NPT Flow Element Connection

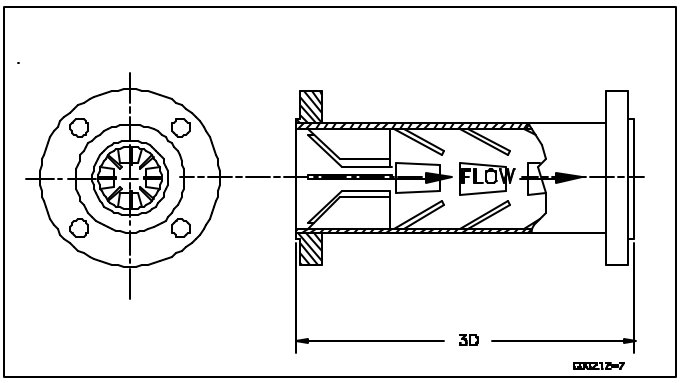


Figure 6. VSR with Flanged Process Connections

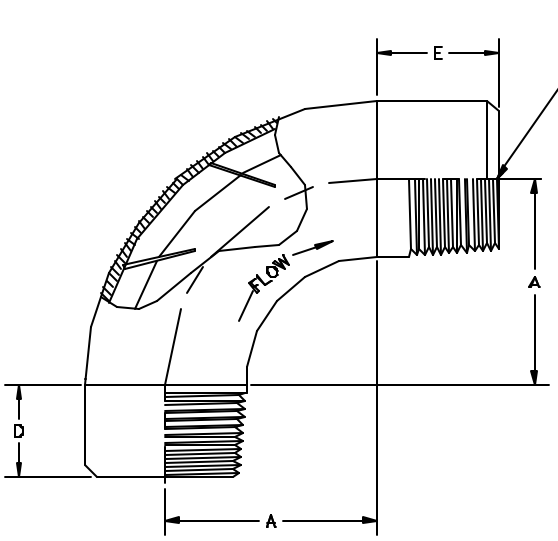
Table A: Flow Element Connections

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"	1" - 6" [25 - 152]	4.7" [119]	1" - 6" [25 - 152]	6.9" [175]	4.69" [119]	6.19" [157]
3"		5.8" [147]		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

1. "D" equals the nominal pipe size or diameter and "xD" equals the pipe length in terms of the equivalent number of nominal pipe diameters.
2. "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.
3. U-length calculations do not include the additional length required for special flow element connections such as ball valves, extended nozzles, etc.
4. 2 inch sizes with a flow element connection and flanged process connections require 8 nominal pipe diameters in length.

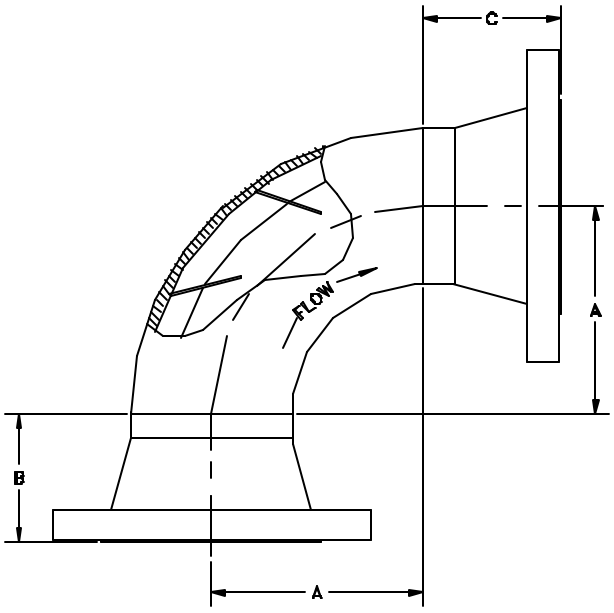
© Copyright 2006 VORTAB Company. All rights reserved.
Subject to change without notice. Order Information Sheet effective 12/15/2004



PIPE SIZE	"A" DIM.	"D" DIM.		"E" DIM.	
		WELD PREP	NPT	WELD PREP	NPT
1"	1.50	0.50	1.13	0.75	1.13
1.25"	1.88	0.63	1.13	0.93	1.13
1.5"	2.25	0.75	1.25	1.13	1.25
2"	3.00	1.00	1.25	1.50	1.50
2.5"	3.75	1.25	1.75	1.88	1.88
3"	4.50	1.50	2.00	2.25	2.25

PIPE SIZE	"A" DIM.	"D" DIM.	"E" DIM.
3.5"	5.25	1.75	2.63
4"	6.00	2.00	3.00
5"	7.50	2.50	3.75
6"	9.00	3.00	4.50
8"	12.00	4.00	6.00
10"	15.00	5.00	7.50
12"	18.00	6.00	9.00
14"	21.00	7.00	10.50
16"	24.00	8.00	12.00
18"	27.00	9.00	13.50
20"	30.00	10.00	15.00
24"	36.00	12.00	18.00
30"	45.00	15.00	22.50
36"	54.00	18.00	27.00

Figure 7. VEL with MNPT or Weld Prepraration Process Connections



PIPE SIZE	"A" DIM.	WELD NECK FLANGE SIZE					
		150#		300#		600#	
		"B" DIM.	"C" DIM.	"B" DIM.	"C" DIM.	"B" DIM.	"C" DIM.
1"	1.50	2.19	2.19	2.44	2.44	2.69	2.69
1.25"	1.88	2.25	2.25	2.56	2.56	2.88	2.88
1.5"	2.25	2.44	2.44	2.69	2.69	3.00	3.00
2"	3.00	2.50	2.50	2.75	2.75	3.13	3.13
2.5"	3.75	2.75	2.75	3.00	3.00	3.38	3.38
3"	4.50	2.75	2.75	3.12	3.12	3.50	3.50
3.5"	5.25	2.81	2.81	3.19	3.19	3.63	3.63
4"	6.00	3.00	3.00	3.38	3.38	4.25	4.25
5"	7.50	3.50	3.50	3.88	3.88	4.75	4.75
6"	9.00	3.50	4.50	3.88	3.88	4.88	4.88
8"	12.00	4.00	6.00	4.38	6.00	5.50	5.50
10"	15.00	4.00	7.50	4.62	7.50	6.25	6.25
12"	18.00	4.50	9.00	5.12	9.00	6.38	9.00
14"	21.00	5.00	10.50	5.62	10.50	6.75	10.50
16"	24.00	8.00	12.00	5.75	12.00	7.25	12.00
18"	27.00	9.00	13.50	9.00	13.50	7.50	13.50
20"	30.00	10.00	15.00	10.00	15.00	7.75	15.00
24"	36.00	12.00	18.00	12.00	18.00	12.00	18.00
30"	45.00	15.00	22.50	15.00	22.50	15.00	22.50
36"	54.00	18.00	27.00	18.00	27.00	18.00	27.00

Figure 8. VEL with Flanged Process Connections

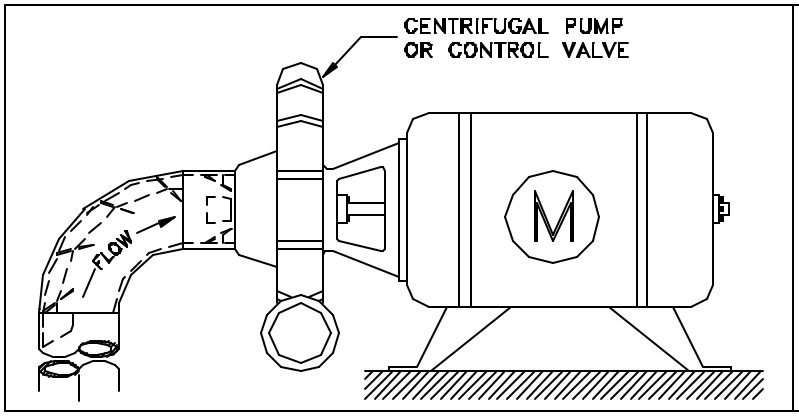


Figure 9. Typical Process Application

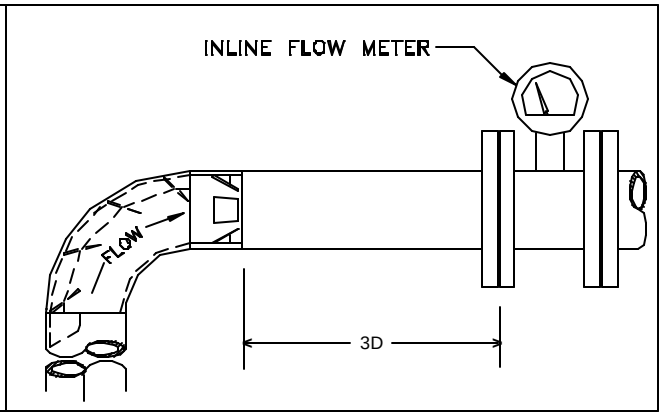


Figure 10. Typical Flowmeter Application

© Copyright 2006 VORTAB Company. All rights reserved.
Subject to change without notice. Order Information Sheet effective 12/15/2004

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

Application Data Sheet (ADS)

VORTAB

Flow Conditioners

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: _____

Pipe schedule: _____

Wall thickness: _____

Cross-section geometry:
❑ round ❑ square ❑ rectangle

Materials of construction: _____

Tag number: _____

Pipe orientation: ❑ horizontal ❑ vertical

Process connection: _____

Maximum pressure drop: _____

Other information: _____

PROCESS MEDIA

Media: _____

Composition: _____

State or phase: ❑ Liquid ❑ Slurry ❑ Gas ❑ Foam

Molecular weight: _____

Specific gravity or density: _____

Viscosity: _____

Operating conditions:

	Minimum	Nominal	Maximum	Units
Temperature	_____	_____	_____	____
Pressure	_____	_____	_____	____
Flow rate	_____	_____	_____	____

Other: _____

FLOWMETER SPECIFICATIONS

Manufacturer: _____

Principle of operation: _____

Flow element configuration: ❑ Insertion ❑ Inline

Model number: _____

Process connection: _____

Other information: _____

INSTALLATION DIAGRAMS

© Copyright 2006 VORTAB Company. All rights reserved.
Subject to change without notice. Order Information Sheet effective 12/15/2004