



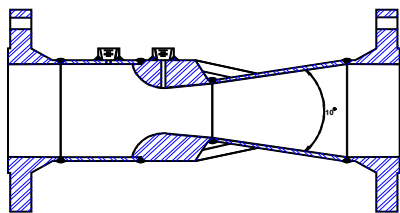
*Quality Products & Sales Inc*  
*Orifice Metering Division*

PO Box 7

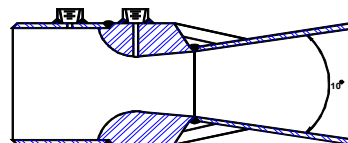
Broken Arrow Ok 74013

Local #(918) 251-0115 \* Watts #(800) 444-4634 \* Fax #(918) 455-1982

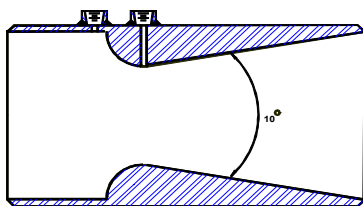
## LOW LOSS VENTURIS



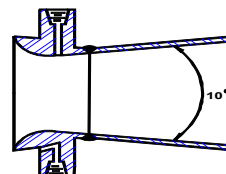
**FLANGED LOW LOSS VENTURI**



**WELD-IN LOW LOSS VENTURI**



**WELD-IN LOW LOSS BAR VENTURI**



**INSERT LOW LOSS VENTURI**

PIPE SIZE	PIPE INSIDE DIAMETER	BETA RATIO	THROAT DIAMETER	ESTIMATED VENTURI LENGTH (INCHES)	RECOMMENDED UPSTREAM PIPE LENGTH (INCHES)	RECOMMENDED DOWNSTREAM PIPE LENGTH (INCHES)	STANDARD PRESSURE TAP	(12) POINT WEIGHT CALIBRATED ACCURACY	UNCALIBRATED ACCURACY
	<b>NOTE #1</b>			<b>NOTE #2</b>		<b>NOTE #3</b>			
<b>2</b>	<b>2.067</b>	.50 .60 .75	1.034 +/- .0005 1.240 +/- .0006 1.550 +/- .0007	14.0 12-5/8 10-3/4	12-1/2 14-1/2 20-3/4	9-1/2 9-1/2 9-1/2	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>2-1/2</b>	<b>2.469</b>	.50 .60 .75	1.235 +/- .0006 1.481 +/- .0007 1.851 +/- .0009	16-1/16 14-9/16 12-1/4	15.0 17-1/2 24-3/4	11-1/4 11-1/4 11-1/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>3</b>	<b>3.068</b>	.50 .60 .75	1.534 +/- .0007 1.841 +/- .0009 2.301 +/- .001	18-1/2 16-5/8 13-3/4	18-1/2 21-1/2 30-3/4	14 14 14	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>4</b>	<b>4.026</b>	.50 .60 .75	2.013 +/- .001 2.415 +/- .0012 3.019 +/- .0015	23.0 20-1/2 16-3/4	24-1/4 28-1/4 40-1/2	18-1/4 18-1/4 18-1/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>6</b>	<b>6.065</b>	.50 .60 .75	3.032 +/- .0015 3.639 +/- .0017 4.548 +/- .0022	26-3/8 28-9/16 22-15/16	36-1/2 42-1/2 60-3/4	27-1/2 27-1/2 27-1/2	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>8</b>	<b>7.981</b>	.50 .60 .75	3.990 +/- .0018 4.788 +/- .0023 5.985 +/- .0028	41-1/4 36-1/4 28-13/16	48.0 56.0 80.0	36.0 36.0 36.0	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>10</b>	<b>10.020</b>	.50 .60 .75	5.010 +/- .0025 6.012 +/- .0030 7.515 +/- .0037	49-9/16 43-3/8 34.0	60-1/4 70-1/4 100-1/4	45-1/4 45-1/4 45-1/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>12</b>	<b>12.000</b>	.50 .60 .75	6.000 +/- .0030 7.200 +/- .0036 9.000 +/- .0045	58-3/4 51-1/4 40-1/16	72.0 84.0 120.0	54.0 54.0 54.0	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
<b>14</b>	<b>13.250</b>	.50 .60 .75	6.625 +/- .0033 7.950 +/- .0039 9.937 +/- .0049	64-7/8 56-5/8 44-1/4	79-1/2 92-3/4 132-1/2	59-3/4 59-3/4 59-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4" OF 1%



# Quality Products & Sales Inc

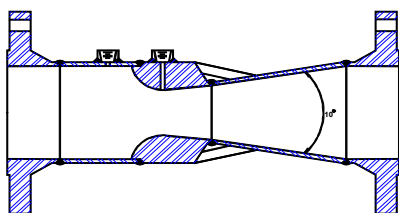
## Orifice Metering Division

PO Box 7

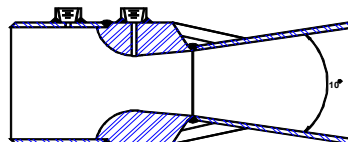
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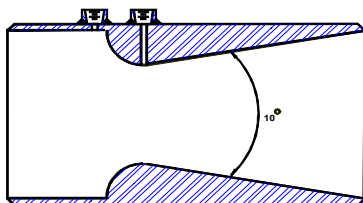
### LOW LOSS VENTURIS



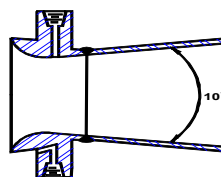
**FLANGED LOW LOSS VENTURI**



**WELD IN LOW LOSS VENTURI**



**LOW LOSS BAR VENTURI**



**INSERT LOW LOSS VENTURI**

PIPE SIZE	PIPE INSIDE DIAMETER	BETA RATIO	THROAT DIAMETER	ESTIMATED VENTURI LENGTH (INCHES)	RECOMMENDED UPSTREAM PIPE LENGTH (INCHES)	RECOMMENDED DOWNSTREAM PIPE LENGTH (INCHES)	STANDARD PRESSURE TAP	(12) POINT WEIGHT CALIBRATION ACCURACY	UNCALIBRATED ACCURACY
	<b>NOTE #1</b>			<b>NOTE #2</b>	<b>NOTE #3</b>				
16	15.250	.50	7.625 +/- .0033	73-1/16	91-1/2	68-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	9.150 +/- .0045	63-5/8	106-3/4	68-3/4		1/4 OF 1%	3/4 OF 1%
		.75	11.437 +/- .0057	49-3/8	152-1/2	68-3/4		1/4 OF 1%	3/4 OF 1%
18	17.250	.50	8.625 +/- .0043	82-3/8	103-1/2	77-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	10.350 +/- .0051	71-9/16	120-3/4	77-3/4		1/4 OF 1%	3/4 OF 1%
		.75	12.937 +/- .0064	55-1/2	172-1/2	77-3/4		1/4 OF 1%	3/4 OF 1%
20	19.250	.50	9.625 +/- .0048	90-7/8	115-1/2	86-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	11.550 +/- .0057	78-15-16	134-3/4	86-3/4		1/4 OF 1%	3/4 OF 1%
		.75	14.437 +/- .0072	61	192-1/2	86-3/4		1/4 OF 1%	3/4 OF 1%
24	23.250	.50	11.625 +/- .0058	107-15/16	139-1/2	104-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	13.950 +/- .0069	93-1/2	162-3/4	104-3/4		1/4 OF 1%	3/4 OF 1%
		.75	17.437 +/- .0087	71-7/8	232-1/2	104-3/4		1/4 OF 1%	3/4 OF 1%
30	29.250	.50	14.625 +/- .0073	131-3/8	175-1/2	131-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	17.550 +/- .0087	113-3/16	204-3/4	131-3/4		1/4 OF 1%	3/4 OF 1%
		.75	21.937 +/- .011	85-7/8	292-1/2	131-3/4		1/4 OF 1%	3/4 OF 1%
36	35.250	.50	17.625 +/- .0088	157-5/8	211-1/2	158-3/4	(2) 1/2" FNPT	1/4 OF 1%	3/4 OF 1%
		.60	21.150 +/- .010	135-11/16	246-3/4	158-3/4		1/4 OF 1%	3/4 OF 1%
		.75	26.437 +/- .013	102-7/8	352-1/2	158-3/4		1/4 OF 1%	3/4 OF 1%

**NOTE #1:** Other pipe schedules and beta ratios are standardly available.

**NOTE #2:** Estimated lengths are based 150# flanged Low Loss venturis.

**NOTE #3:** Recommended pipe lengths are based on ASME Fluid Metering 6th. Edition Fig. II-II-I

**MATERIALS:** Carbon Steel, Stainless Steel, Chromoly, Monel, Hastelloy, PVC, Fiberglass, Teflon, Cast Iron

*Other material available*

Fabrication Codes: ASME B31.1  
ASME B31.3

Calculations available using equations  
ASME MFC-3M  
ISO 5167

*Complete Meter Tubes Available*