

# **FLOW METER ACCESSORIES**

**STRAIGHTENING VANES**

**RESTRICTION ORIFICE UNIONS**

**CONDENSATE CHAMBERS**



**TECH TUBE DIVISION**

ENERGY FLOW SYSTEMS, INC.

P.O. BOX 14127 • HOUSTON, TEXAS 77221-4127  
PHONE: (713) 741-8828 • FAX: (713) 747-7868

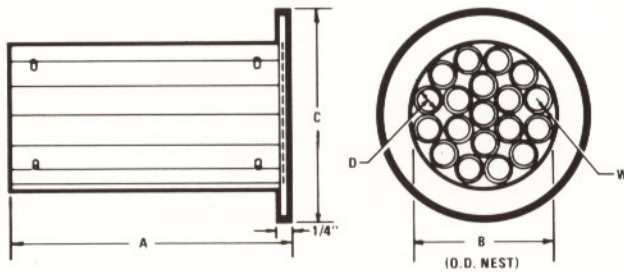
# STRAIGHTENING VANES

Straightening vanes are manufactured in a symmetrical nest of thin wall steel tubing beveled on each end. Tangent points on both ends are welded for maximum strength.

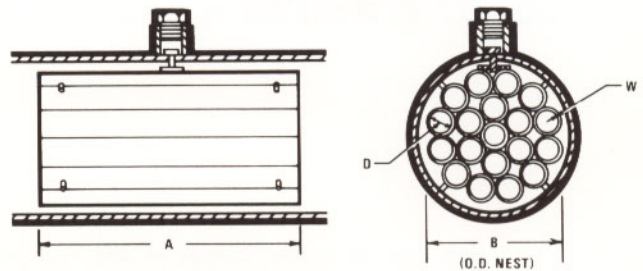
WHEN ORDERING SPECIFY: Flange or line type - size and pipe I.D.



FLANGE TYPE

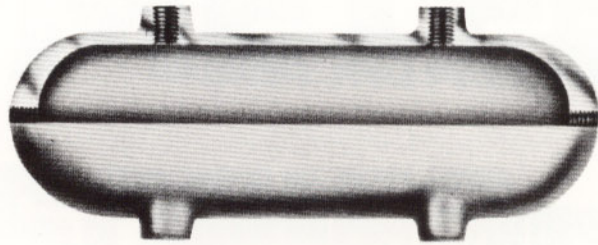
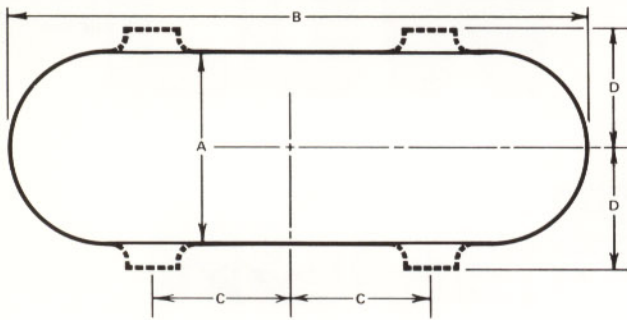


LINE TYPE



LINE SIZE	PIPE I.D.	A	B	C	D O.D.	W (BWG)	NO. TUBES	WEIGHT	
								LINE TYPE	FLANGE TYPE
2.	2.067	6	1.875	3-5/8	.625	16(.065)	7	2	2-1/2
3"	3.068	9	2.750	5	.625	18(.049)	13	3-1/2	4-1/2
4"	4.026	10	3.644	6-3/16	.750	18(.049)	19	6	8
6"	6.065	12	5.937	8-1/2	1.187	18(.049)	19	19	21
8"	7.981	16	7.906	10-5/8	1.625	16(.065)	19	38	35
10"	10.020	20	9.716	12-3/4	2.000	14(.083)	19	54	58
12"	12.000	24	11.538	15	2.375	14(.083)	19	78	83
14"	13.250	28	12.752	16-1/4	2.625	11(.120)	19	144	150
16"	15.250	32	14.574	18-1/2	3.000	11(.120)	19	178	185
18"	17.250	36	17.000	21	3.500	11(.120)	19	249	257
20"	19.250	40	18.218	23	3.750	11(.120)	19	296	306
24"	23.250	48	23.076	27-1/4	4.750	11(.120)	19	452	464

## TRAPS, CONDENSATE CHAMBERS AND SEAL POTS



All units are forged from ASTM A-106 Grade B seamless pipe providing uniform wall thickness and eliminating cold shuts or folds.

Female 1/4" NPT connections are provided on each end of catalog nos. 210-S & 210-X. All other catalog nos. have 1/2" connections. Additional connections shown are optional.

### WHEN ORDERING SPECIFY:

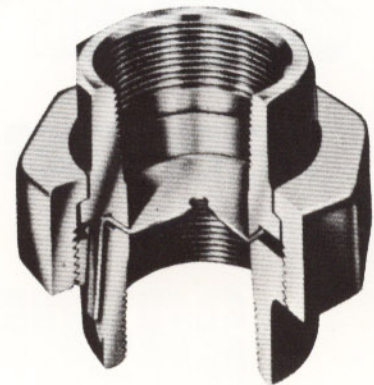
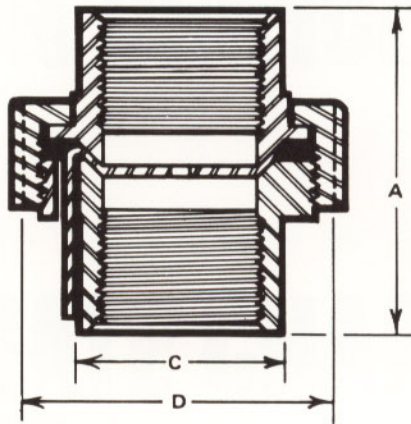
Catalog number and optional connections desired.

PART NO.	PIPE SCHEDULE	DIMENSIONS			
		A	B	C	D
210-S	40	2-3/8	10	2	2-5/16
210-X	80	2-3/8	10	2	2-5/16
311-S	40	3-1/2	11	2	2-7/8
311-X	80	3-1/2	11	2	2-7/8
311-XX	Double Extra Hvy	3-1/2	11	2	2-7/8
414-X	80	4-1/2	14	3	3-3/8
414-XX	Double Extra Hvy	4-1/2	14	3	3-3/8

## RESTRICTION ORIFICE UNIONS

- CARBON STEEL OR STAINLESS
- SCREWED OR SOCKET WELD

Orifice plates are one-piece stainless steel shaped to fit the contour of the union seat (ball to cone) eliminating the need for gaskets. Plates are tabbed to identify orifice size without breaking union.



### WHEN ORDERING SPECIFY:

Line size  
Carbon or stainless steel  
Screwed or socket weld  
Bore diameter

\*socket depth (approximately)

\*\*socket bore diameter

LINE SIZE	A	C	D	SOCKET WELD ONLY		WT. PER 100 (LBS.)
				E*	F**	
1/4"	1-3/4"	25/32"	1-3/8"	1/2"	.555"	40
3/8"	1-15/16"	15/16"	1-9/16"	19/32"	.690"	53
1/2"	2-3/32"	1-3/32"	1-13/16"	25/32"	.855"	73
3/4"	2-7/16"	1-3/8"	2-3/16"	27/32"	1.065"	125
1"	2-9/16"	1-21/32"	2-9/16"	1"	1.330"	177
1 1/4"	2-15/16"	2-1/32"	3-1/16"	1-3/32"	1.675"	267
1 1/2"	3-1/8"	2-5/16"	3-13/32"	1-3/32"	1.915"	337
2"	3-19/32"	2-27/32"	4-3/32"	1-3/16"	2.406"	530

**OTHER TECH TUBE**

**PRODUCTS INCLUDE**

**VENTURI TUBES**

**FLOW NOZZLES**

**ORIFICE PLATES**

**ORIFICE FLANGE UNIONS**

**METER TUBES**



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Represented By

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