

TABLE 2 – FLOW METER COMPARISONS

	Sizes Available	Rangeability	Pressure Loss	Relative Cost	Upstream / Downstream Pipe Diameter Requirements			Type of Output
					β	Up (pipe Dia.)	Down (pipe Dia.)	
ORIFICE	> 1"	3:1 to 5:1	H	L	0.1	14	2.5	Square Root
					0.3	16	3	
					0.4	18	3.5	
					0.5	25.2	3.7	
					0.6	30.2	4	
					0.67	36	4.2	
					0.7	38.8	4.3	
					0.75	44.5	4.5	
					Upstream / Downstream straight run requirements are dependant on β , piping orientation, number of elbows, etc. (Adapted from ANSI / API 2530)			
FLOW NOZZLES & TUBES	>2"	4:1	H	M	4 up / 0 down			Square Root
VENTURI	>2"	4:1	L	H	6 up / 2 down			Square Root
PITOT TUBES	0.5" TO 72"	4:1	L	L	50 up / 3 down (upstream requirements may be less depending on vendor)			Square Root
WEDGE	> 0.5"	3:1	M	M	5 up / 10 down			Square Root
ELBOW	All	4:1	L	L	6 Up / 2 down			Square Root
MAGNETIC	> 1/16"	10:1 to 100:1	L	H	5 up / 2 down			Linear
TURBINE	1/4" to 24"	10:1 to 50:1	H	M	5 up/ 5 down			Linear for Reynolds numbers > 10,000
VORTEX SHEDDING	0.5" to 8"	15:1	L	M	10 up / 5 down			Linear @ High Reynolds numbers
FLUIDIC	1" to 4"	30:1	M	L				Linear @ High Reynolds numbers
TARGET	Up to 8"	3:1	L	L	5 up / 3.5 down			Square Root
TRANSIT TIME	3/8" up	40:1	L	M	10 up / 2 down			Linear
DOPPLER	1/4" up	10:1	L	M	38.8 up / 4.3 down (consult manufacturer)			Linear
MASS (Thermal)	1/8" to 10"	10:1	M	H	10 up / 10 down			Exponential
MASS (Coriolis)	1/16" to 10"	10:1	M	H	0 up / 0 down			Linear
WEIRS (Rectangular)	> 1"	75:1	H	*	-			Proportional to the measured

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						head to the 3/2 power
WEIRS (Trapezoidal)	> 1"	75:1	H	*	-	Proportional to the measured head to the 3/2 power
WEIRS (V-Notch)	> 1"	500:1	H	*	-	Proportional to the measured head to the 5/2 power
FLUMES (Parshall)	> 1"	75:1	L	*	-	Proportional to the measured head to the 3/2 power
POSITIVE DISPLACEMENT	Up to 12"	10:1	H	H	0 up / 0 down	Linear
VARIABLE AREA	Up to 3"	12:1	M	L		Linear or Logarithmic
*Dependant on physical size. Values given in this table are generic and should be confirmed with the particular manufacturer.						

8.0 RETENTION & DISTRIBUTION