

# enelean

*We Measure*

## VORTEX FLOWMETERS



Flow



Pressure



Level



Temperature



Datalogger



Control and  
Automation

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## VORTEX FLOWMETER

Vortex flow meters operate under the vortex shedding principle which is inspired Karman's vortex Street principle, where an oscillating vortices occur when a fluid such as water flow past a bluff (as opposed to streamlined) body. The frequency that the vortices are shed depend on the size and shape of the body. This principle is the unique solution for volumetric and mass flow measurement of all types of industrial liquids, vapours and gases thanks to its no moving part design. Due to the integrated temperature and pressure sensors it performs accurate and reliable mass flow measurement. Well designed mechanical body provides the most effective results at high temperature and high pressure processes.

### Wafer Type Vortex Flowmeter



ETTRANS-V-S

### Flange Type Vortex Flowmeter



ETTRANS-V-F

### Remote Type Vortex Flowmeter



ETTRANS-V-R

### Technical Specifications

Pipe Sizes	DN15...DN300
Measuring Range	0,3...7 m/s Liquid 1...70 m/s Gas and Steam
Accuracy	±0,5% (Standard) ±0,2 % (Optional) (of M.V.) (with TURKAK Calibration)
Process Temperature	-50...+250°C (Standard) -100...+350°C (high temperature)
Process Pressure	Maximum 100 Bar (depend on the sizes)
Measured Material	Liquid, Gas, Steam
Power Supply	12...32 VDC
Output	Pulse (active/passive), RS485 MODBUS, 4...20 mA (optional HART)



TURKAK Accredited  
Calibration Opportunity



Made In Türkiye

## FLOW COMPUTER / CONTROLLER

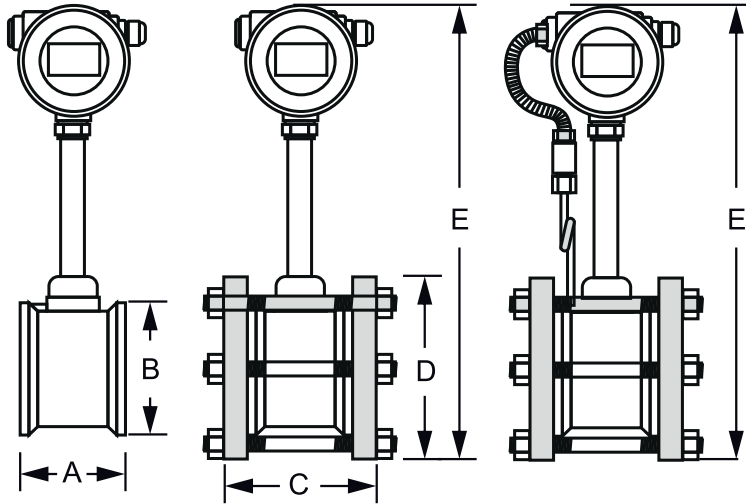
### Technical Specifications

Power Supply	85...265 VAC 50/60 Hz, 24 VDC
Input	0...10 mA, 4...20 mA, Pulse, Frequency, PT100
Output	RS485 MODBUS, 2 x SPDT Relay ( 250 V, 10 A)
Accuracy	± 0,2% (Under 1 m/s up to ± 1,5%)
Medium Temperature	-20...+55°C
Dimensions	160 mm x 80 mm x 100 mm (Flow Comp.) 72x72x90 mm (Flow Controller)
Protection Class	IP65

### Flow Computer / Controller

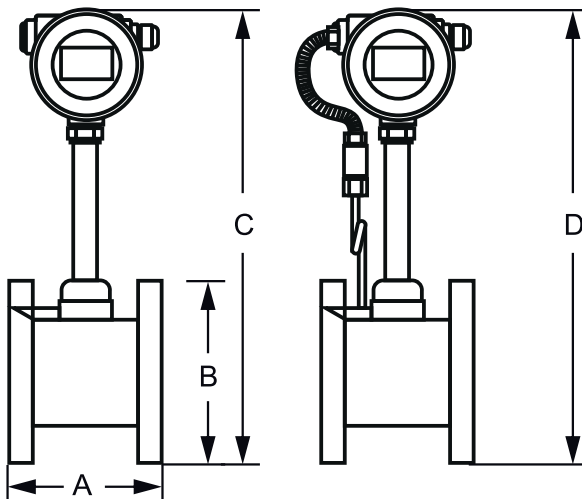


**SANWICH TYPE CONNECTION DIMENSIONS**



mm	A	B	C	D	E	F
15-20-25-32	68	54	96	100	440	470
40	82	78	110	140	460	490
50	85	87	110	145	490	520
65	84	105	112	165	510	540
80	88	120	116	176	540	570
100	91	140	120	200	560	590
125	92	168	126	230	580	610
150	96	194	130	265	600	630
200	101	248	140	320	630	660
250	114	300	160	370	660	690
300	128	350	170	445	690	720

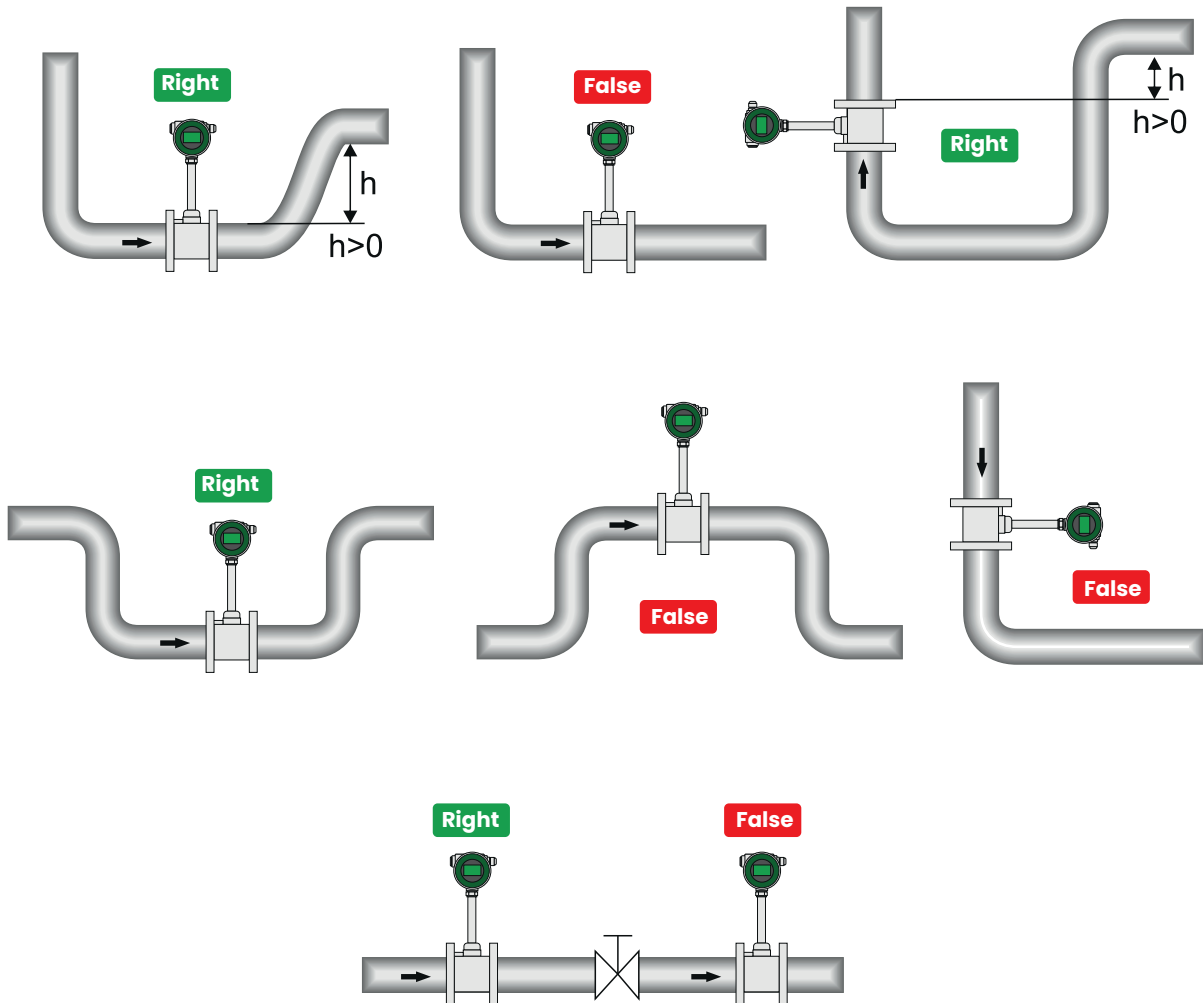
**FLANGED TYPE CONNECTION DIMENSIONS**



mm	A	B	C	D
15	170	95	430	460
20	170	105	430	460
25	170	115	440	470
32	170	132	450	480
40	160	150	480	510
50	160	160	480	510
65	160	180	530	560
80	180	195	530	560
100	180	215	550	580
125	180	245	560	590
150	180	280	590	620
200	200	340	620	680
250	200	405	710	740
300	350	460	750	780

## VORTEX FLOWMETER INSTALLATION CONDITIONS

For accurate and precise measurements in liquid fluids, avoid the formation of air bubbles in the pipe. Air bubbles in the line cause measurements to be taken.



Pipe Connection Type	Straight Distance	
	Login	Exit
Concentric Heat Shrinkable Tube	15D	5D
Concentric Expanding Tube	35D	5D
90 ° Elbow	20D	5D
90 ° Double Elbow (Same Plane)	25D	5D
90 ° Double Elbow (Different Plane)	30D	5D
Valve (Full Open)	20D	5D
Valve (Half Open)	40D	5D

**TABLE OF FLOW CHANGES BY PRESSURE**

DN ( mm )	Debi	Measurable Flow Rates ( kg/h )								
		1 Bar	2 Bar	4 Bar	6 Bar	8 Bar	10 Bar	15 Bar	20 Bar	25 Bar
15	Min	2,2	3,2	5,1	7,1	8,9	10,8	15,5	20,2	25,0
	Max	54,5	79,6	128,4	176,3	223,7	270,8	388,2	505,9	624,5
20	Min	3,8	5,6	9,0	12,3	15,7	19,0	27,2	35,4	43,7
	Max	95,4	139,2	224,6	308,5	391,4	473,9	679,3	885,3	1092,9
25	Min	6,1	8,9	14,4	19,8	25,2	30,5	43,7	56,9	70,3
	Max	153,4	223,7	361,0	495,7	629,1	761,6	1091,8	1422,8	1756,5
32	Min	10,2	14,9	24,1	33,0	41,9	50,8	72,8	94,9	117,1
	Max	255,6	372,9	601,7	826,2	1048,4	1269,3	1819,7	2371,4	2927,5
40	Min	15,7	22,9	36,9	50,7	64,3	77,9	111,6	145,4	179,6
	Max	392,0	571,8	922,6	1266,9	1607,6	1946,3	2790,1	3636,1	4488,8
50	Min	23,9	34,8	56,2	77,1	97,9	118,5	169,8	221,3	273,2
	Max	596,5	870,1	1404,0	1927,8	2446,3	2961,8	4245,9	5533,2	6830,7
65	Min	49,1	71,6	115,5	158,6	201,3	243,7	349,4	455,3	562,1
	Max	1227,0	1789,9	2888,2	3965,8	5032,5	6092,8	8734,4	11382,6	14051,8
80	Min	61,4	89,5	144,4	198,3	251,6	304,6	436,7	569,1	702,6
	Max	1533,8	2237,4	3610,3	4957,3	6290,6	7616,0	10918,0	14228,2	17564,7
100	Min	95,4	139,2	224,6	308,5	391,4	473,9	679,3	885,3	1092,9
	Max	2385,8	3480,4	5616,0	7711,3	9785,3	11847,1	16983,5	22132,8	27322,9
125	Min	150,0	218,8	353,0	484,7	615,1	744,7	1067,5	1391,2	1717,4
	Max	3749,2	5469,3	8825,2	12117,8	15376,9	18616,8	26688,4	34780,1	42935,9
150	Min	204,5	298,3	481,4	661,0	838,7	1015,5	1455,7	1897,1	2342,0
	Max	5112,5	7458,1	12034,3	16524,2	20968,5	25386,6	36393,2	47427,4	58549,0
200	Min	374,9	546,9	882,5	1211,8	1537,7	1861,7	2668,8	3478,0	4293,6
	Max	9373,0	13673,2	22062,9	30294,4	38442,3	46542,0	66720,9	86950,3	107339,9
250	Min	599,9	875,1	1412,0	1938,8	2460,3	2978,7	4270,1	5564,8	6869,8
	Max	14996,8	21877,1	35300,6	48471,0	61507,7	74467,3	106753,4	139120,4	171743,8
300	Min	852,1	1243,0	2005,7	2754,0	3494,8	4231,1	6065,5	7904,6	9758,2
	Max	21302,2	31075,4	50142,9	68850,9	87368,9	105777,4	151638,4	197614,2	243954,2