



# TPVPMP Multi Point Velocity Probe

The velocity probes with multiple holes along the length are designed to measure the average velocity pressure across air ducts providing an improved accuracy of measurement over the single point method. The velocity probes are suitable for use with TITAN range of differential Pressure Sensors or the TPAVPT/7 series of Velocity Transmitters as well as the TPAFVT/7 Air Volume Transmitters.

The TPMPVP velocity probes are available in six standard lengths and can be cut down to match the duct size.

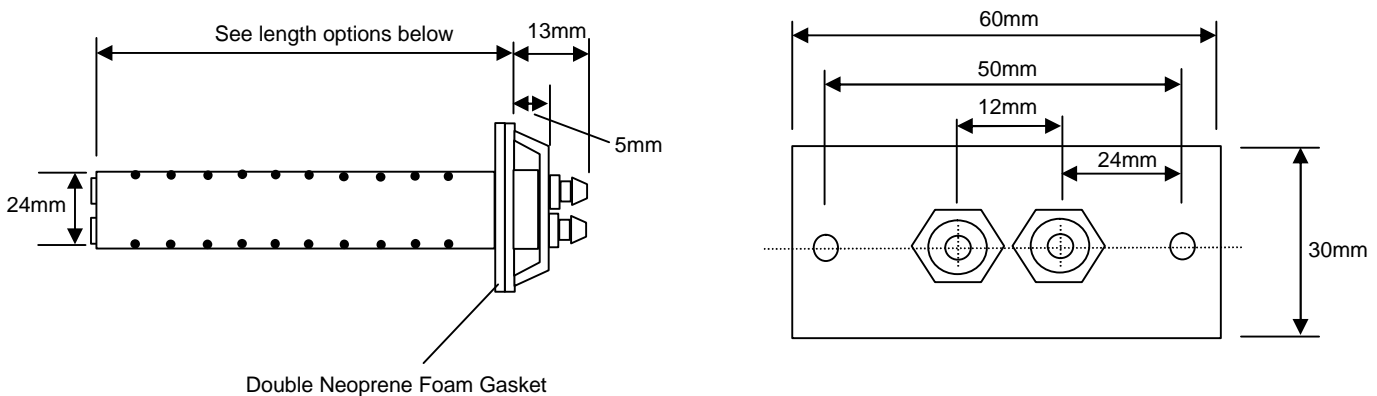
## SPECIFICATION

- > Extruded Flame Retardant PVC probe (UL94-VO)
- > Multipoint measurement
- > Brass Plated mounting flange
- > Brass and Chrome Plated 6 mm tube connectors
- > 6 Standard lengths
- > Foam Flange gasket
- > Flange Mounting

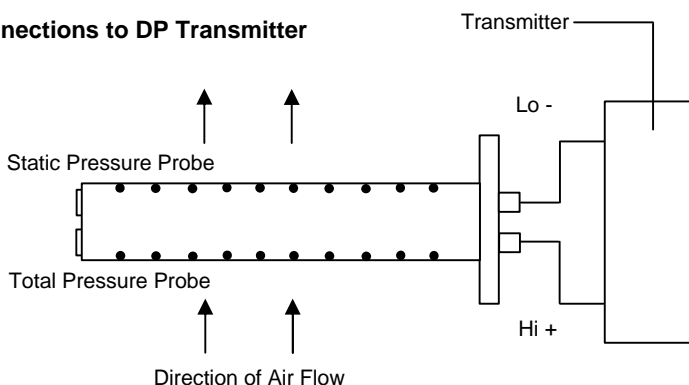
## Product Codes

Product Type	Length (mm)
TPMPVP/100	100
TPMPVP/200	200
TPMPVP/300	300
TPMPVP/400	400
TPMPVP/500	500
TPMPVP/600	600

## Dimensions



## Connections to DP Transmitter



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## Installation

The velocity probe should be mounted in the duct where it can measure the unrestricted air flow and at least 2 metres down stream from dampers, duct bends, Fans, filters, humidifiers, heating or cooling coils.

Avoid installation into systems with turbulent airflow

Ensure that the two end probe caps are fitted and not loose

Ensure that the probe is mounted with all the holes are inside the duct work and the mounting flange is providing a good airtight seal.

Ensure that the probe is mounted with the arrow pointing in the direction of the airflow

Ensure that the tube connections for the Hi and Lo ports are matched on the measuring transmitter

## Calculations

To calculate the Air Velocity use the table or the equation

$$\text{Air Velocity} = \sqrt{\frac{2x \text{ Velocity Pressure}}{1.2}}$$

## Air Velocity VS Differential Pressure Chart

		Velocity (m/s)									
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Velocity (m/s)	0	0.00	0.01	0.02	0.05	0.10	0.15	0.22	0.29	0.38	0.49
	1	0.60	0.73	0.86	1.01	1.18	1.35	1.54	1.74	1.94	2.17
	2	2.40	2.65	2.90	3.17	3.46	3.75	4.06	4.37	4.70	5.05
	3	5.40	5.77	6.14	6.53	6.94	7.35	7.78	8.21	8.66	9.13
	4	9.60	10.09	10.58	11.09	11.62	12.15	12.70	13.25	13.82	14.41
	5	15.00	15.61	16.22	16.85	17.50	18.15	18.82	19.49	20.18	20.89
	6	21.60	22.33	23.06	23.81	24.58	25.35	26.14	26.93	27.74	28.57
	7	29.40	30.25	31.10	31.97	32.86	33.75	34.66	35.57	36.50	37.45
	8	38.40	39.37	40.34	41.33	42.34	43.35	44.38	45.41	46.46	47.53
	9	48.60	49.69	50.78	51.89	53.02	54.15	55.30	56.45	57.62	58.81
	10	60.00	61.21	62.42	63.65	64.90	<b>66.15</b>	67.42	68.69	69.98	71.29
	11	72.60	73.93	75.26	76.61	77.98	79.35	80.74	82.13	83.54	84.97
	12	86.40	87.85	89.30	90.77	92.26	93.75	95.26	96.77	98.30	99.85
	13	101.40	102.97	104.54	106.13	107.74	109.35	110.98	112.61	114.26	115.93
	14	117.60	119.29	120.98	122.69	124.42	126.15	127.90	129.65	131.42	133.21
	15	135.00	136.81	138.62	140.45	142.30	144.15	146.02	147.89	149.78	151.69
	16	153.60	155.53	157.46	159.41	161.38	163.35	165.34	167.33	169.34	171.37
	17	173.40	175.45	177.50	179.57	181.66	183.75	185.86	187.97	190.10	192.25
	18	194.40	196.57	198.74	200.93	203.14	205.35	207.58	209.81	212.06	214.33
	19	216.60	218.89	221.18	223.49	225.82	228.15	230.50	232.85	235.22	237.61
	20	240.00	242.41	244.82	247.25	249.70	252.15	254.62	257.09	259.58	262.09
	21	264.60	267.13	269.66	272.21	274.78	277.35	279.94	282.53	285.14	287.77
	22	290.40	293.05	295.70	298.37	301.06	303.75	306.46	309.17	311.90	314.65
	23	317.40	320.17	322.94	325.73	328.54	331.35	334.18	337.01	339.86	342.73
	24	345.60	348.49	351.38	354.29	357.22	360.15	363.10	366.05	369.02	372.01
	25	375.00	378.01	381.02	384.05	387.10	390.15	393.22	396.29	399.38	402.49
	26	405.60	408.73	411.86	415.01	418.18	421.35	424.54	427.73	430.94	434.17
	27	437.40	440.65	443.90	447.17	450.46	453.75	457.06	460.37	463.70	467.05
	28	470.40	473.77	477.14	480.53	483.94	487.35	490.78	494.21	497.66	501.13
	29	504.60	508.09	511.58	515.09	518.62	522.15	525.70	529.25	532.82	536.41
	30	540.00	543.61	547.22	550.85	554.50	558.15	561.82	565.49	569.18	572.89

The left hand column (velocity, in 1m/s increments) and the top row (velocity, in 0.1m/s increments), read across and down to find the corresponding differential pressure.

**Example:** For max air velocity at 10.5m/s – Read across from the left to 0-5m/s and down from the top to 10m/s. Where the column and row meet gives a differential pressure of 66.15 Pa.

Therefore a differential pressure sensor, with a range of 0-100 Pa would be ideal.