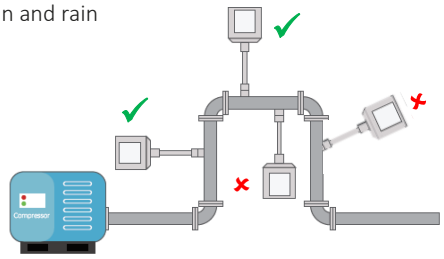
Pitot Tube Flow Meter – Installation Guide

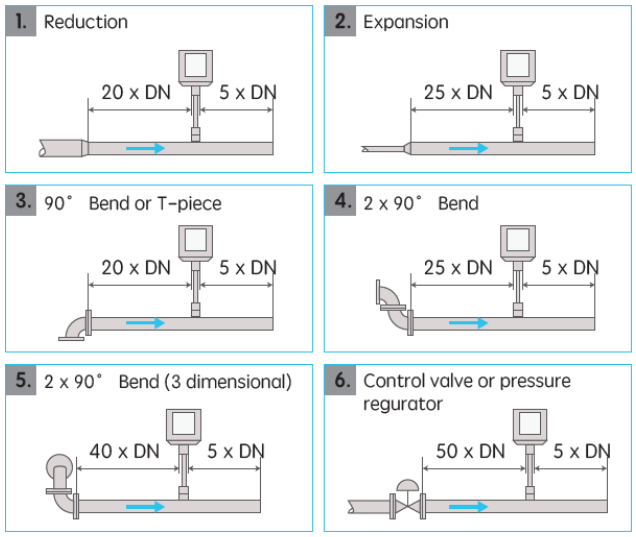
The velocity range for this meter is 5m/s to 300m/s. Due to the method of measurement, pitot tubes are affected by the minimum velocity. Below 5m/s, the flow reading will drop to 0.

1 Install vertically on a horizontal pipe

1.Sensor **must** be installed at 90° to the pipe
2.If the flow meter needs to be installed outdoors, protect it from sun and rain



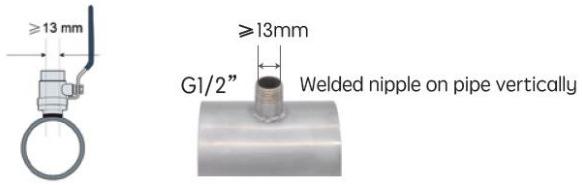
2 Install away from bends / changes in pipe size / obstructions



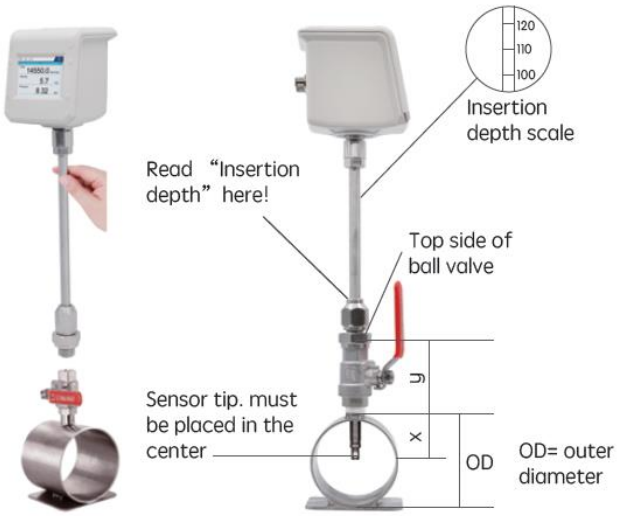
3 Insertion Requirements

To install the sensor, a ball valve and a nipple is needed

- The ball valve inner thread must be G1/2”
- The diameter of the hole must be≥13mm, otherwise the shaft can

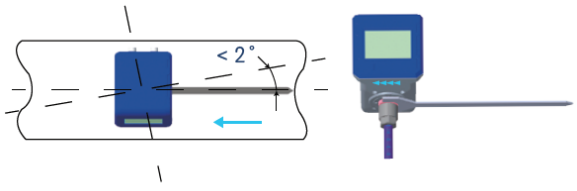


4 Install sensor tip in the centre of the pipe



Insertion depth = x + y = $\frac{OD}{2}$ + y

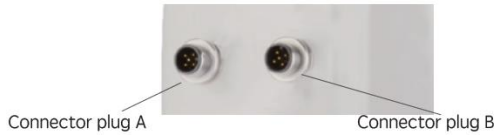
5 Maximum Angle Deviation of Installation



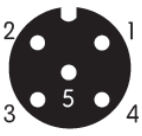
◀◀◀◀ Align flow sensor to the flow direction of the pipe

6 Electrical Connection

The flow sensor is equipped with two connector plugs “A” & “B”



7 Pin Assignment of M12 Connector

Connector A:		Connector B:
Pin1: RS485 D+ (A)		Pin1: 20mA+
Pin2: RS485 D– (B)		Pin2: 20mA–
Pin3: N/A		Pin3: Pulse
Pin4: V+		Pin4: Pulse
Pin5: V–		Pin5: N/A

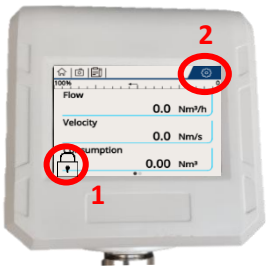
Please turn over .....

Pitot Tube Flow Meter – Quick Installation Guide

8 Pitot Tube Flow Meter Settings

Before you use the flow meter, you must set:

- Inner Pipe Diameter
- Unit of Measurement
- Gas Type
- Communication settings (RS485 or Analog)



Step 1 – Unlock the screen. Drag the padlock icon from the left to the right of the screen

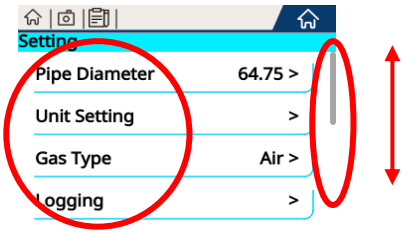
Step 2 – Press 'Settings' icon (on top right of screen).

Step 3 – Select "**Pipe Diameter**" and enter the inner pipe diameter measurement (in mm). Press the arrow button to save your settings and return to the previous screen

Step 4 – Select "**Unit Setting**" and select your units of measure. Press the arrow button to save your settings and return to the previous screen

Step 5 – Select "**Gas Type**" and select your gas type. Press the arrow button to save your settings and return to the previous screen.

Step 6 – Scroll down and select "**RS485 Setting**" and/or "**Analog Output**". Enter your Modus settings. Press the arrow button to save your settings and return to the previous screen.



Default Modbus Settings

Settings can be changed to suit system requirements.

Default Modbus RTU (RS485) Settings					
Address	**Baud Rate**	**Frame / Parity / Stop Bit**	**Response Time**	**Response Delay**	**Frame Spacing**
1	9600	8 / N / 1	1 Sec	0 Milliseconds	7 Characters

Modbus Registers						
Holding Register	**Address**	**Data Type**	**Byte Length**	**Description**	**Unit**	**Read/Write**
1	0	FLOAT	4	Flow	m^3/min, m^3/hr, CFM	Read
3	2	FLOAT	4	Velocity	m/sec or f/sec	Read
23	22	UNSIGNED INTEGER	4	Consumption/ Totaliser	m^3 or CF	Read
9	8	FLOAT	4	Temperature	°C or °F	Read

sales@compresediaralliance.com
www.compressedairalliance.com