

How to proceed with the installation:

- (1) Locate an optimum position on the pipe, which has to be in good condition (no rust)
- (2) Clean and dust the pipe surface.
- (3) Apply adequate coupler on the spot where the trasducers have to be installed and leave no gap between the pipe surface and the trasducers.

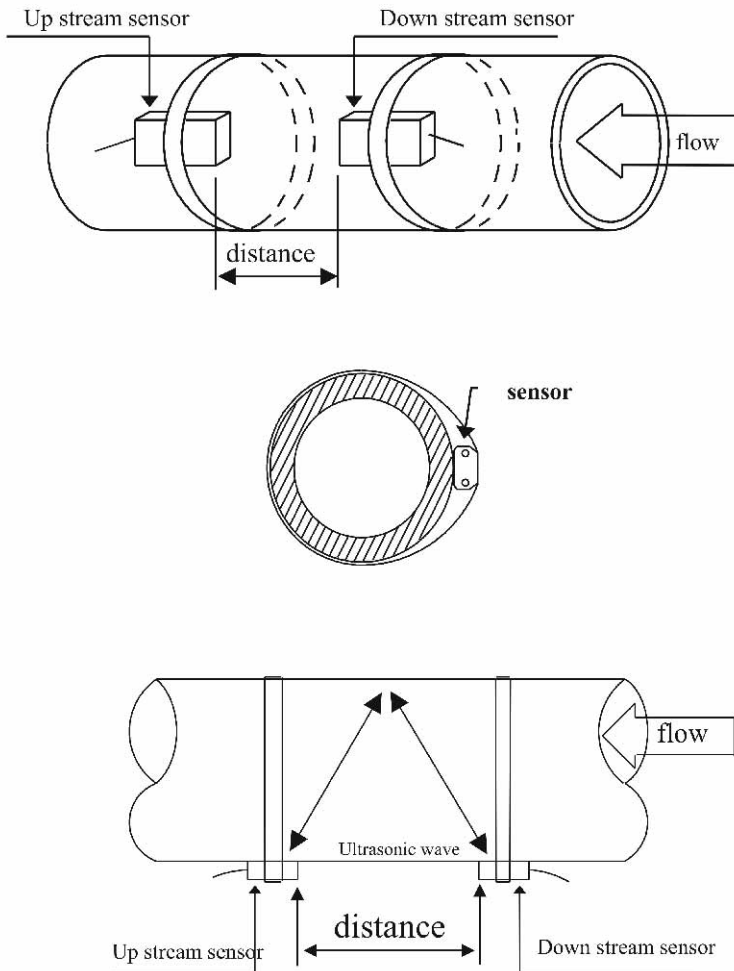
To avoid gas bubbles (gas fase) inside the upper part of the pipe, the trasducers should be installed horizontally by the side of the pipe.

3.3 Trasducers spacing

The spacing value shown in menu M25 refers to inner distance between the two trasducers. The actual trasducers spacing should be as close as possible to the spacing value. (see figures on next page).

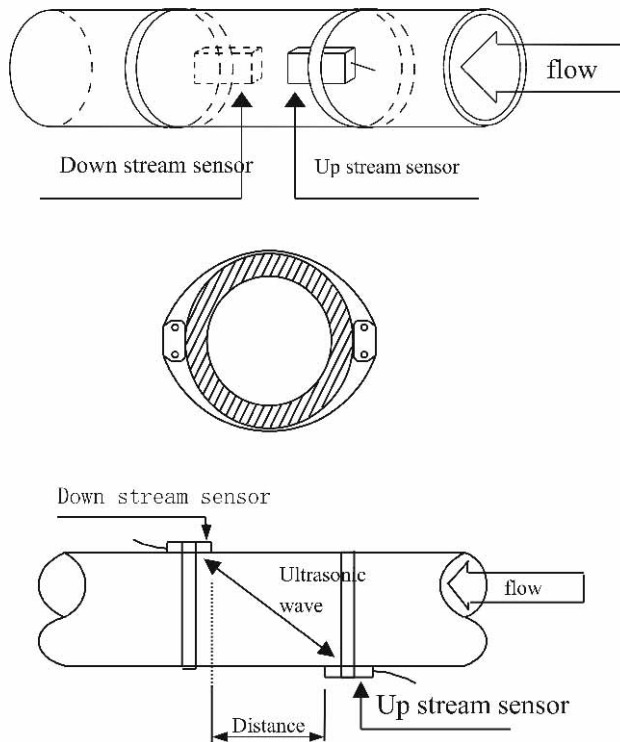
3.4 V method installation

It is the most common used method for pipe with inner diameters ranging from 20 to 300 millimeters.



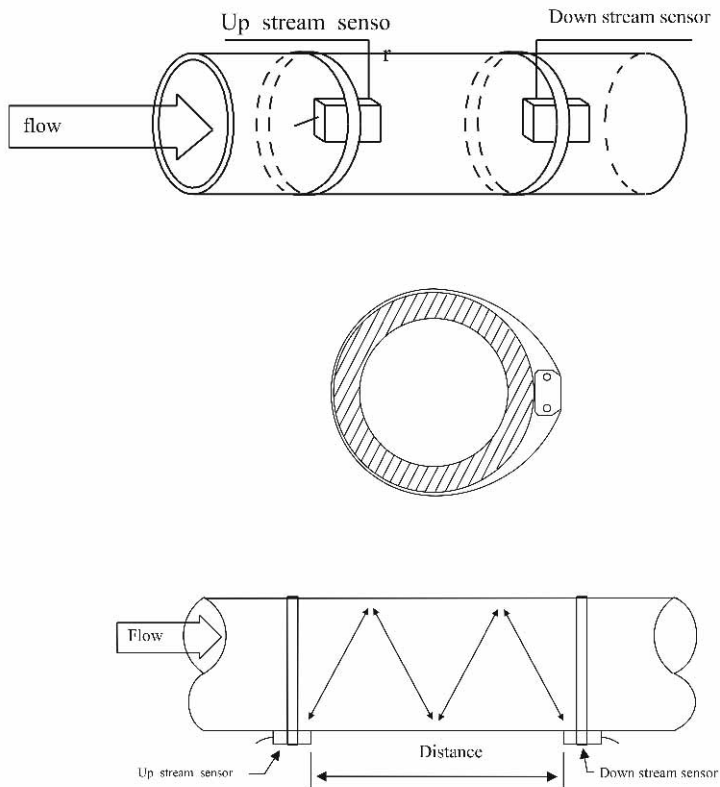
3.2.3 Z method installation

It is commonly used when the pipe diameter is between 300 and 500 millimeters.



3.2.4 W method installation

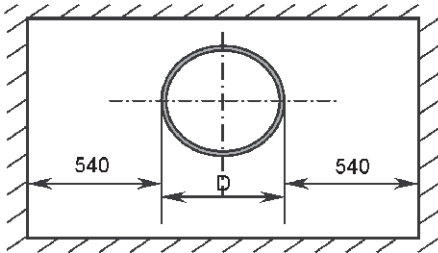
It is usually used on plastic pipes with a diameter from 10 to 100 millimeters.



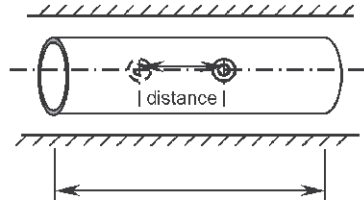
3.2.6 Insert sensor installation

Steps for a correct installation:

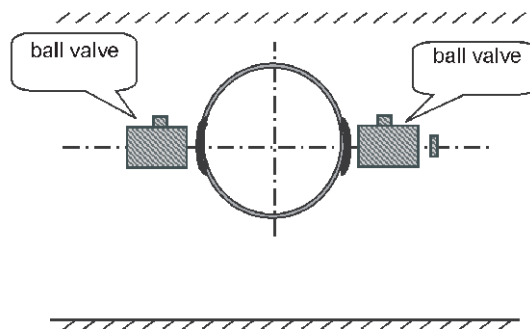
- 1- If the pipe is placed inside the wall, check that there's sufficient space for the mounting of the insertion sensor (min. distance between the wall and the pipe = 540mm)



Pipe length : $L > (D+100)$ mm



- 2- Procure a drilling tool
- 3- Enter pipe parameter (in menu M23 choose option 5. "insertion B sensor" - in menu M24 choose 1. "Z method" - in menu M25 input installation distance)
- 4- Choose the right position and calculate the distance
- 5- Install the ball valve



SGM-100F - Communication Protocol

7.4.3) N Prefix

The prefix N is a single byte IDN network prefix, not recommended in a new design. It is reserved only for the purpose of the compatibility with the former versions

Command Connector &

The & command connector can connect up to 6 basic commands to form a longer command so that it will make the programming much easier.

For example, assume that the measurement of an instrument with IDN=4321 are going to be returned, and (then) all the following 3 values— (1) flow rate (2) velocity (3)POS totalizer—will be returned simultaneously. The combined command would be W4321DQD&DV&DI+(CR), and the result would be:

+1.234567E+12m3/d(CR)

+3.1235926E+00m/s(CR)

+1234567E+0m3(CR)

7.5 Code for keypad

The codes for the keypad should be used when the instrument is connected with other terminals that operate the instrument by transmitting the 'M' command along with the keypad code. By this function, remote operation of this instrument can be realized, even via the Internet.

Key	Hexadecimal key code	Decimal key code	ASCII code		Hexadecimal key code	Decimal key code	ASCII code
0	30H	48	0		38H	56	8
1	31H	49	1		39H	57	9
2	32H	50	2		3AH	58	: