



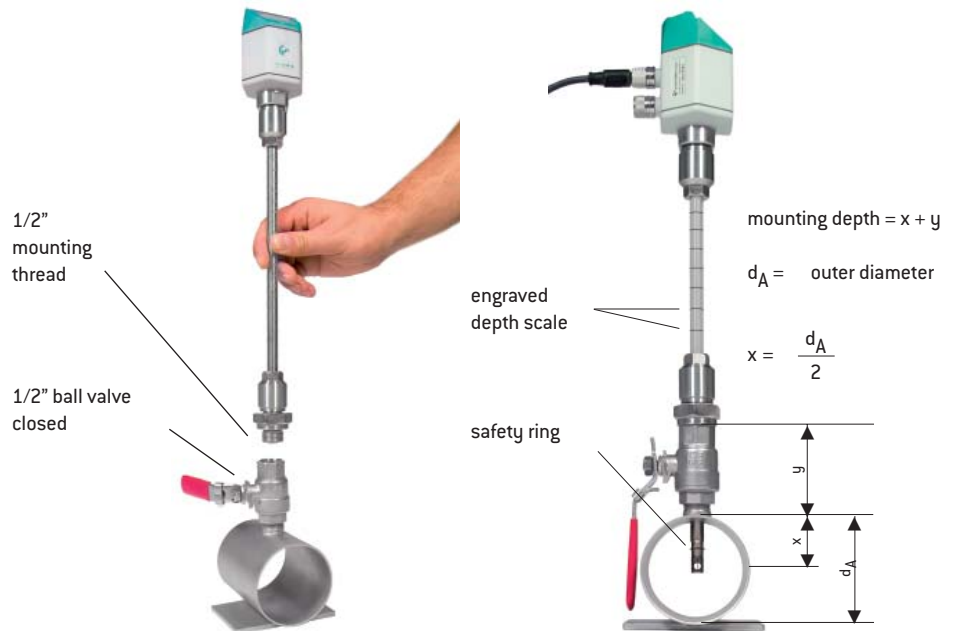
What are the advantages of the consumption measuring technology of CS Instruments?

1 Even under pressure, the consumption probe VA 400 is mounted by means of a standard 1/2" ball valve. During mounting and dismounting the safety ring avoids an uncontrolled ejection of the probe which may be caused by the operating pressure.

For the mounting into different pipe diameters VA 400 is available in the following probe lengths: 120, 160, 220, 300, 400 mm.

So the consumption probes are being mounted into existing pipelines with inner diameters of 1/2" upwards.

The exact positioning of the sensor in the middle of the pipe is granted by means of the engraved depth scale. The maximum mounting depth corresponds with the respective probe length. Example: VA 400 with probe length 220 mm has a maximum mounting depth of 220 mm.



2 If there is no suitable measuring site with a 1/2" ball valve present there are two simple possibilities to set up a measuring point:

A Weld on a 1/2" screw neck and screw on a 1/2" ball valve.

B Mount spot drilling collar incl. ball valve (see accessories).

By means of the drilling jig it is possible to drill under pressure through the 1/2" ball valve into the existing pipeline. The drilling chips are collected in a filter. Then the probe can be mounted as described under point A.



A Screw neck



B Spot drilling collar



Drilling under pressure

3 Due to the large measuring range of the probe even extreme requirements to the consumption measurement (high volume flow in small pipe diameters) can be met. The measuring range is depending on the pipe diameter - see table on the right hand side.

Inner diameter of pipe		VA 400 Standard [92.7 m/s]	VA 400 Max. [185.0 m/s]	VA 400 HighSpeed [224.0 m/s]	
Inch	mm	Meas. ranges from ... to	Meas. ranges from ... to	Meas. ranges from ... to	
1/2"	16.1	DN 15	2.5...760 l/min	3.5...1516 l/min	6.0...1836 l/min
3/4"	21.7	DN 20	0.3...89 m ³ /h	0.4...178 m ³ /h	0.7...215 m ³ /h
1"	27.3	DN 25	0.5...148 m ³ /h	0.6...295 m ³ /h	1.1...357 m ³ /h
1 1/4"	36.0	DN 32	0.9...280 m ³ /h	1.2...531 m ³ /h	2.5...644 m ³ /h
1 1/2"	41.8	DN 40	1.2...365 m ³ /h	1.5...728 m ³ /h	3.0...882 m ³ /h
2"	53.1	DN 50	2...600 m ³ /h	2.5...1198 m ³ /h	4.6...1450 m ³ /h
2 1/2"	71.1	DN 65	3.5...1096 m ³ /h	5...2187 m ³ /h	7...2648 m ³ /h
3"	84.9	DN 80	5...1570 m ³ /h	7...3133 m ³ /h	12...3794 m ³ /h
4"	110.0	DN 100	9...2645 m ³ /h	12...5279 m ³ /h	16...6391 m ³ /h
5"	133.7	DN 125	13...3912 m ³ /h	18...7808 m ³ /h	24...9453 m ³ /h
6"	159.3	DN 150	18...5560 m ³ /h	25...11097 m ³ /h	43...13436 m ³ /h
8"	200.0	DN 200	26...8786 m ³ /h	33...17533 m ³ /h	50...21230 m ³ /h
10"	250.0	DN 250	40...13744 m ³ /h	52...27429 m ³ /h	80...33211 m ³ /h
12"	300.0	DN 300	60...19815 m ³ /h	80...39544 m ³ /h	100...47881 m ³ /h