Valvoindustria Ing. Rizzio S.p.A.

Via Circonvallazione, 10
13018 Valduggia (VC), Italy
Tel: +39 0163 47891
Fax: +39 0163 47895
www.vironline.com

9450

Stainless Steel Wafer Metering Station

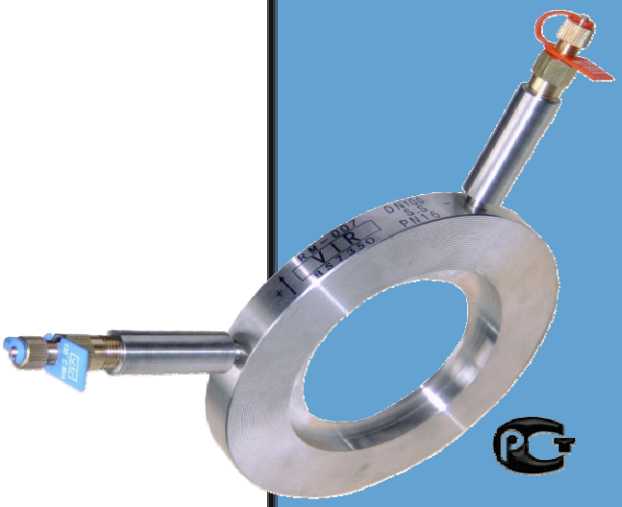
Description

Stainless steel wafer metering station
For EN1092 PN16 flanges
Design according to BS7350
Tolerance on nominal K_{vs} ±5% (test according to BS7350)
Gost compliant

PN16 (PN10 for DN≥350)

Working conditions:

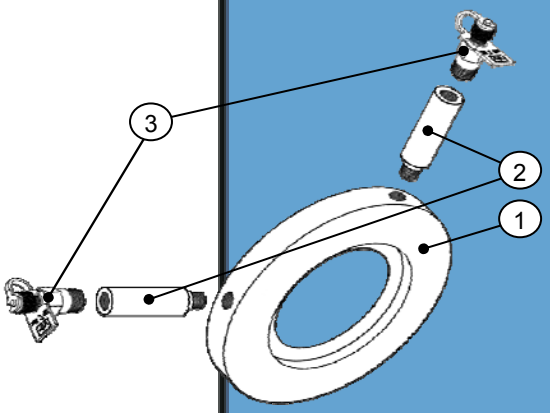
- Water: -10°C to +130°C
  below 0°C only for water with added antifreezing fluids
  over 100°C only for water with added anti-boiling fluids



Part List

N.	Part	Material	Norm
1	Body	Stainless steel	AISI 316[1]
2	Extension	Stainless steel	AISI 316[1]
3	Test point	DZR Brass[2]	EN12164 CW602N

[1]AISI 304 for DN≥450
[2]Test points with EPDM gaskets and polypropylene ties

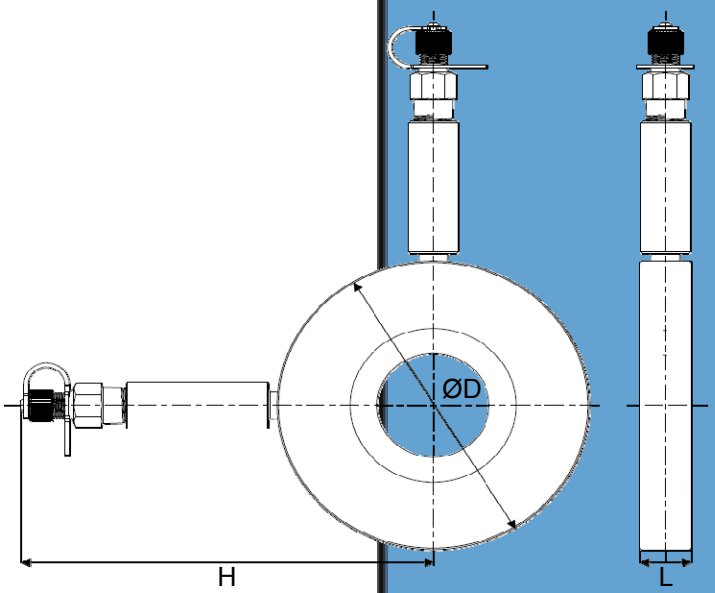


Dimensions

DN	H (mm)	L (mm)	ØD (mm)	Weight (g)	Flow (l/s)
020	122	18	63	564	0,138-0,325[1]
025	127	18	73	687	0,258-0,603[1]
032	132	18	84	822	0,54-1,25[1]
040	137	18	94	972	0,81-1,88[1]
050	145	18	109	1142	1,52-3,51[1]
065	154	18	127	1468	3,02-6,95[1]
080	162	18	143	1762	6,40-15,36[1]
100	172	18	163	1967	10,85-26,04[1]
125	187	18	193	2560	16,85-39,75[1]
150	200	18	219	2950	23,71-56,91[1]
200	227	18	274	4140	41,86-100,47[1]
250	255	18	330	5350	66,58-156,78[1]
300	283	18	385	6830	94,16-255,99[1]
350	313	21	445	11000	96-261
400	338	21	496	14000	117-320
450	368	21	556	17000	150-408
500	399	21	618	21000	186-506
600	458	25	735	35000	245-667

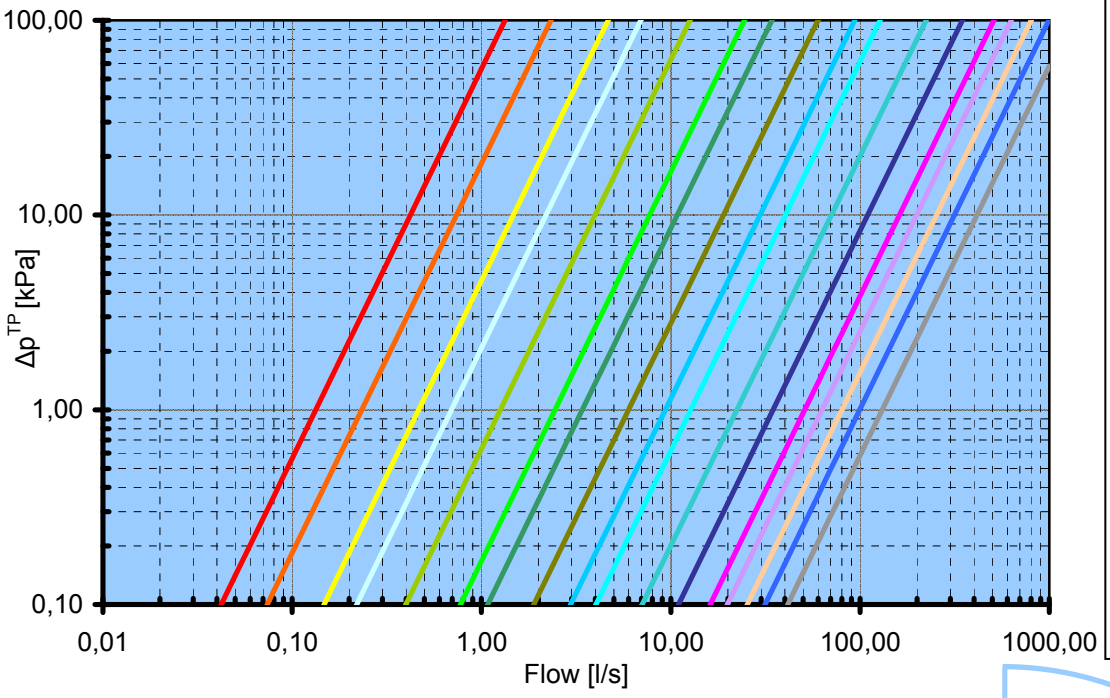
[1]Suggested flow range applicability (BS7350)

If used with measuring manometers different from those proposed by VIR please verify that sensibility of the measuring device is compatible with indicated minimum flow (see flow measurement paragraph)



130208

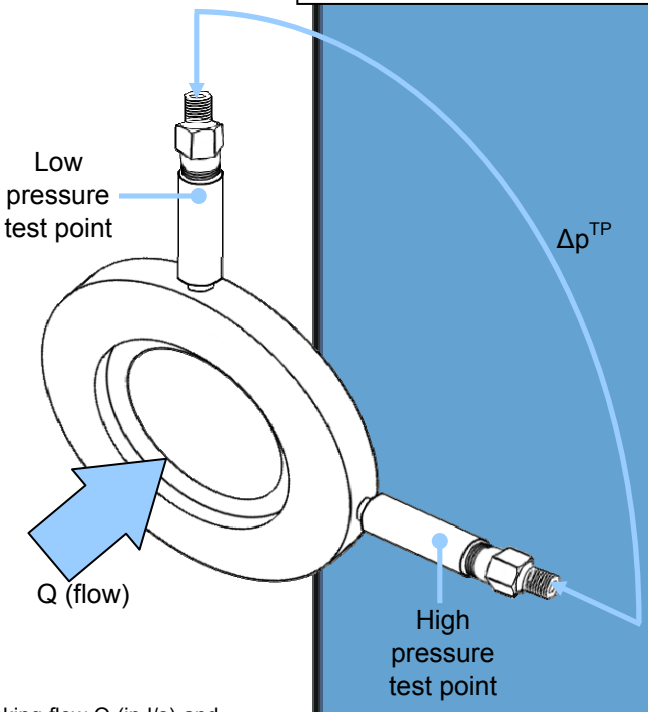
Flow Measurement



- DN20, K_{vs} 4,8
- DN25, K_{vs} 8,4
- DN32, K_{vs} 16,8
- DN40, K_{vs} 25,0
- DN50, K_{vs} 45,4
- DN65, K_{vs} 88,2
- DN80, K_{vs} 123,0
- DN100, K_{vs} 215,6
- DN125, K_{vs} 336,9
- DN150, K_{vs} 458,6
- DN200, K_{vs} 803,9
- DN250, K_{vs} 1249,0
- DN300, K_{vs} 1836,0 e DN350, K_{vs} 1849,0
- DN400, K_{vs} 2264,0
- DN450, K_{vs} 2886,0
- DN500, K_{vs} 3582,0
- DN600, K_{vs} 4716,0

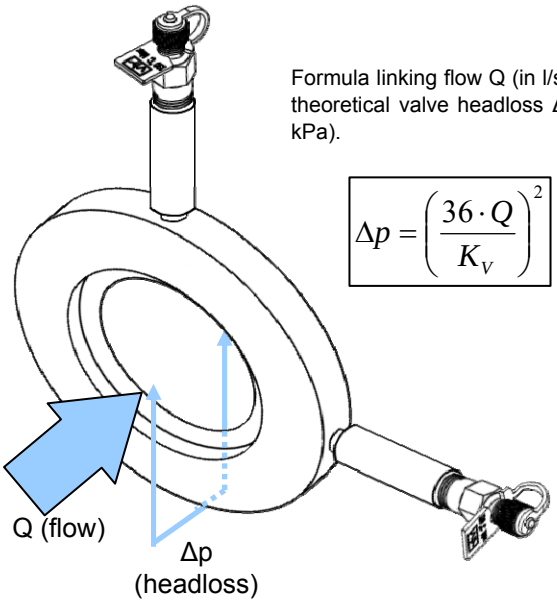
Formula linking flow Q (in l/s) and Δp measured at test points (in kPa).
Minimum flow that can be measured for each diameter may be calculated by using in the formula minimum Δp that can be measured by used manometer.
Valves are anyway designed for best performances when used on range previously suggested and as indicated by BS7350.

$$Q = \frac{K_{vs} \cdot \sqrt{\Delta p^{TP}}}{36}$$



Headloss calculation

DN	K_v (m^3/h)
020	6,2
025	11,5
032	23,6
040	36,0
050	71,3
065	151,7
080	226,3
100	368,7
125	565,9
150	779,7
200	1415,0
250	2160,0
300	3195,0
350	3217,0
400	3941,0
450	5025,0
500	6235,0
600	8212,0



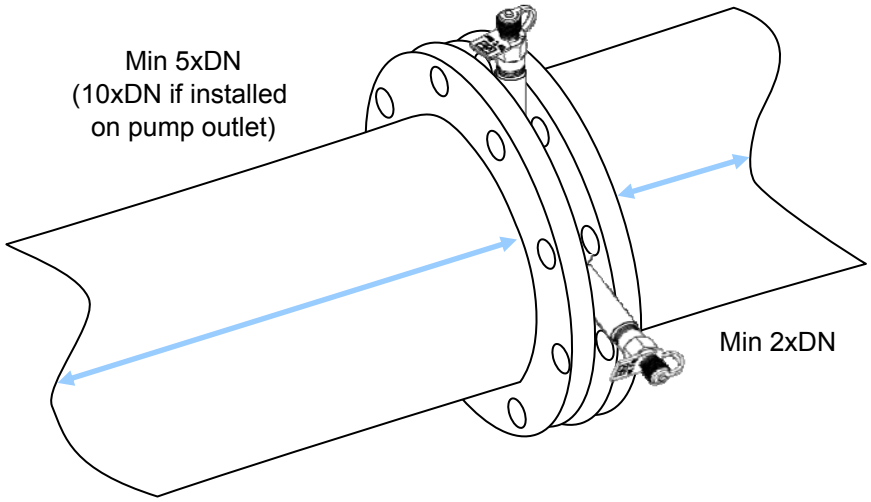
Formula linking flow Q (in l/s) and theoretical valve headloss Δp (in kPa).

$$\Delta p = \left(\frac{36 \cdot Q}{K_V} \right)^2$$

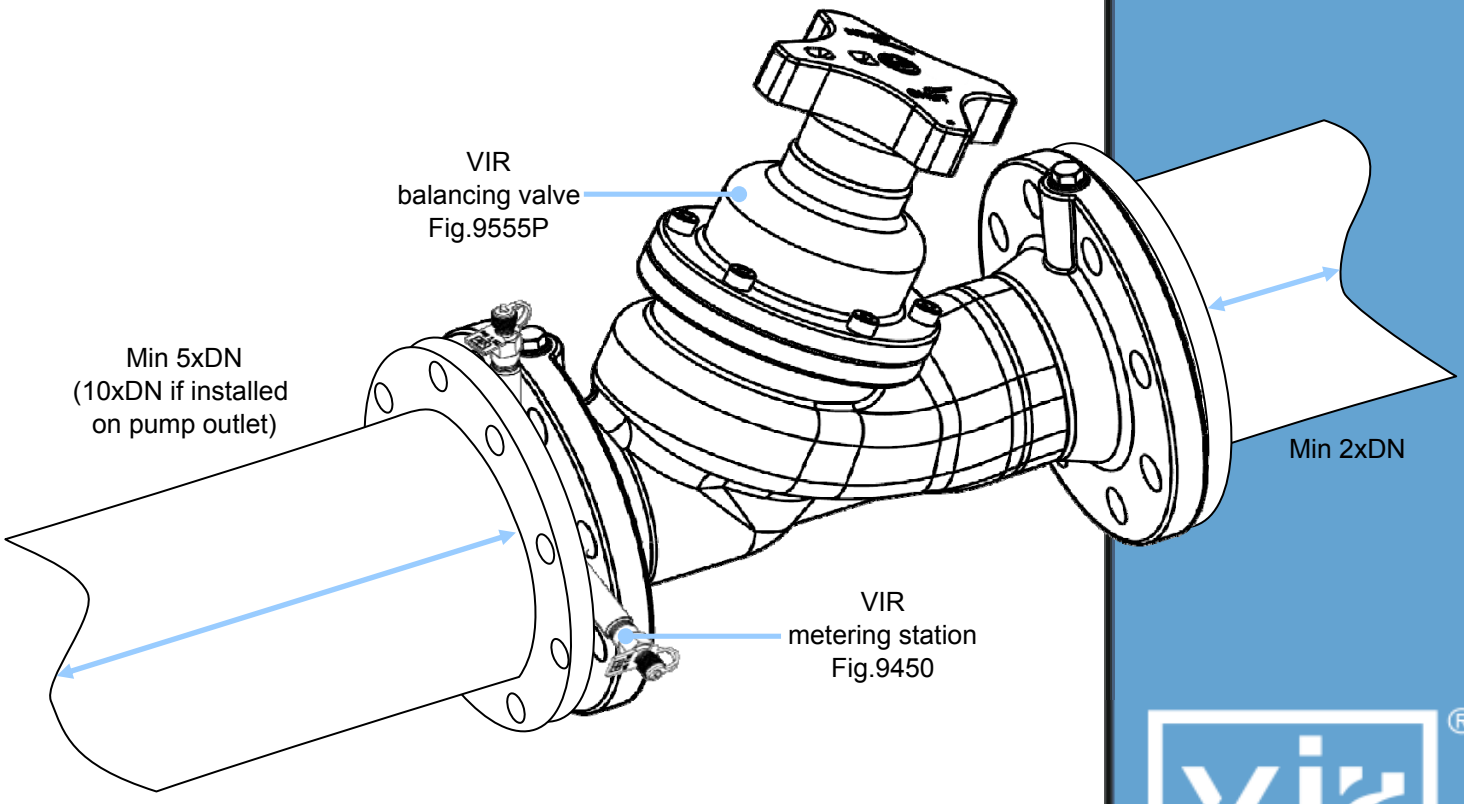
Via Circonvallazione, 10
13018 Valduggia (VC), Italy
Tel: +39 0163 47891
Fax: +39 0163 47895
www.vironline.com

Installation

To obtain the best performances valve must be installed on a pipe with its same nominal size preceded and followed by straight pipe lengths as per figure indications.



The metering station can be installed together with balancing valve of same DN (in example VIR Fig.9565P composed by metering station Fig.9450 + balancing valve Fig.9555P) according following configuration.



Via Circonvallazione, 10
13018 Valduggia (VC), Italy
Tel: +39 0163 47891
Fax: +39 0163 47895
www.vironline.com