

# 9450

Stainless Steel Wafer Metering Station



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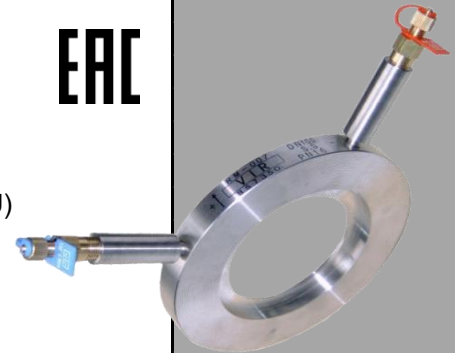
Stainless steel Wafer metering station  
For EN1092 PN16 flanges  
Design according to BS7350  
Tolerance on nominal  $K_{vs} \pm 5\%$  (test according to BS7350)  
TR CU 010 compliant

PN16  
Free of CE marking for  $DN \leq 300$  (cat. according to Art. 4.3 Dir. 2014/68/EU)

Working conditions

- Suitable for: water,  $-10^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$   
below  $0^{\circ}\text{C}$  only for water with added antifreeze fluids  
over  $100^{\circ}\text{C}$  only for water with added anti-boiling fluids
- Not suitable for: gases group 1 & 2, liquids group 1 (Dir. 2014/68/EU)

**EAC**



## PARTLIST

N.	Part	Material	Norm
1	Body	Stainless steel	AISI 316 <sup>1</sup>
2	Extension	Stainless steel	AISI 316 <sup>1</sup>
3	Test point	DZR Brass <sup>2</sup>	EN12164 CW602N

<sup>1</sup>AISI 304 for  $DN \geq 450$

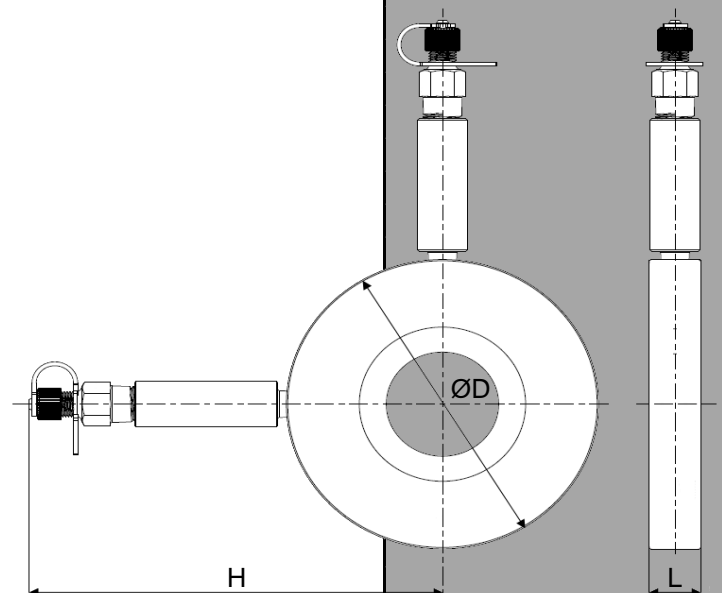
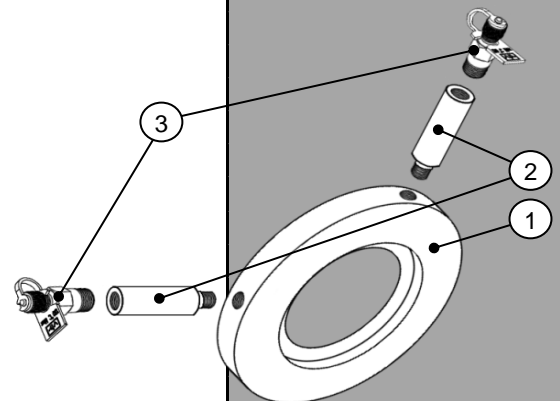
<sup>2</sup>Test points with EPDM gaskets and polypropylene ties

## DIMENSIONS

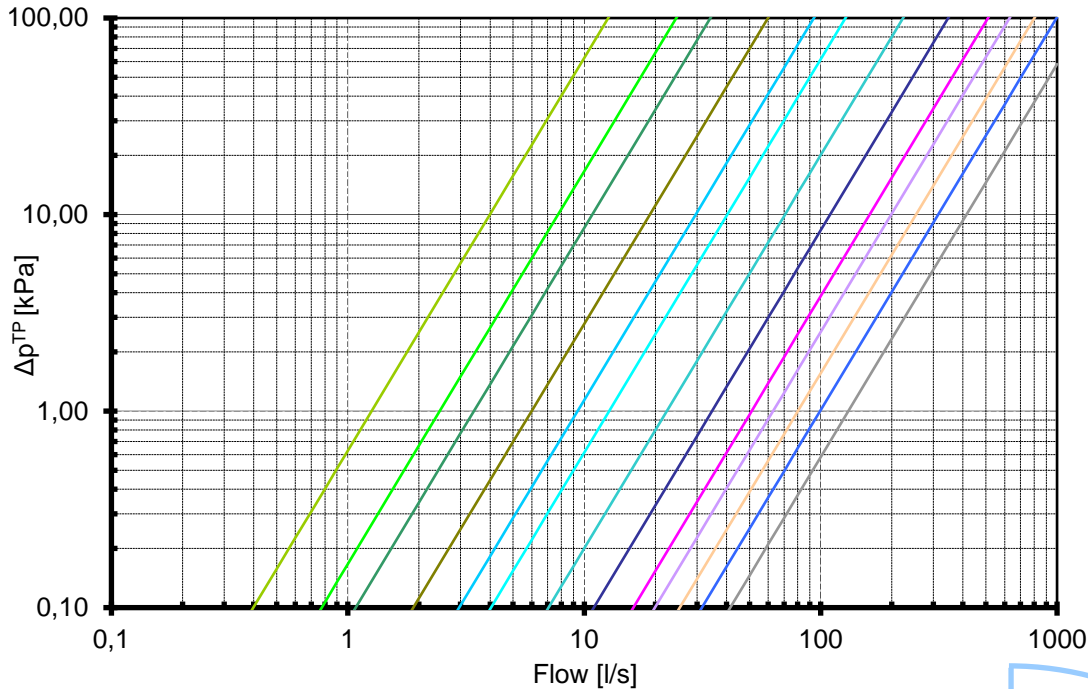
DN	H [mm]	L [mm]	ØD [mm]	Weight [g]	Flow [l/s]
050	145	18	109	1142	1,52-3,51 <sup>1</sup>
065	154	18	127	1468	3,02-6,95 <sup>1</sup>
080	162	18	143	1762	6,40-15,36 <sup>1</sup>
100	172	18	163	1967	10,85-26,04 <sup>1</sup>
125	187	18	193	2560	16,85-39,75 <sup>1</sup>
150	200	18	219	2950	23,71-56,91 <sup>1</sup>
200	227	18	274	4140	41,86-100,47 <sup>1</sup>
250	255	18	330	5350	66,58-156,78 <sup>1</sup>
300	283	18	385	6830	94,16-255,99 <sup>1</sup>
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

<sup>1</sup>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)



# FLOW MEASUREMENT



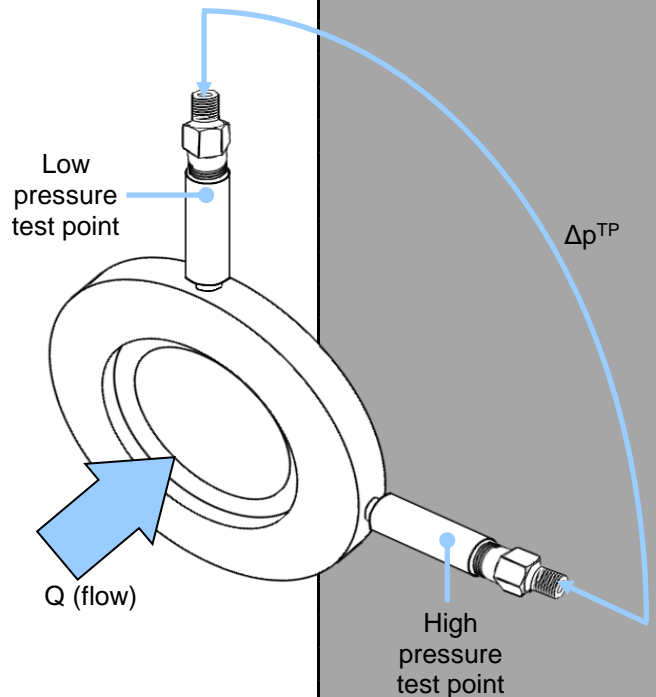
DN50,	$K_{vs}$ 45,4
DN65,	$K_{vs}$ 88,2
DN80,	$K_{vs}$ 123,0
DN100,	$K_{vs}$ 215,6
DN125,	$K_{vs}$ 336,9
DN150,	$K_{vs}$ 458,6
DN200,	$K_{vs}$ 803,9
DN250,	$K_{vs}$ 1249
DN300,	$K_{vs}$ 1836
e DN350,	$K_{vs}$ 1849
DN400,	$K_{vs}$ 2264
DN450,	$K_{vs}$ 2886
DN500,	$K_{vs}$ 3580
DN600,	$K_{vs}$ 4716

Formula linking flow Q (in l/s) and  $\Delta p$  measured at test points (in kPa).

Minimum flow that can be measured for each diameter may be calculated by using in the formula minimum  $\Delta p$  that can be measured by used manometer.

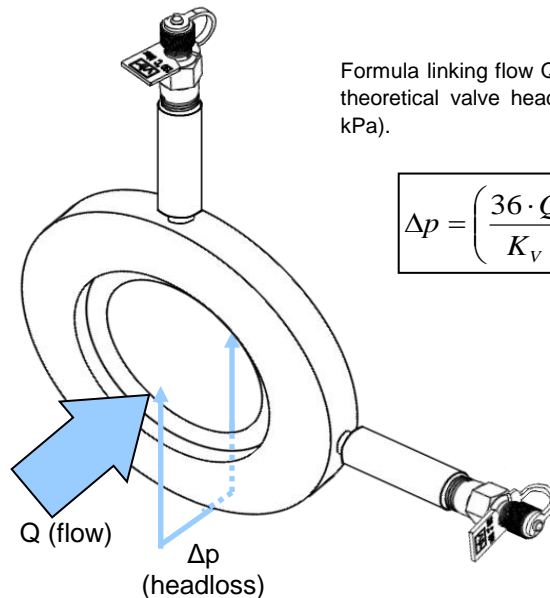
Valves are anyway designed for best performances when used on range previously suggested and as indicated by BS7350.

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



# HEADLOSS CALCULATION

DN	$K_v$ [m <sup>3</sup> /h]
050	71,3
065	151,7
080	226,3
100	368,7
125	565,9
150	779,7
200	1415
250	2160
300	3195
350	3217
400	3941
450	5025
500	6235
600	8212



Formula linking flow Q (in l/s) and theoretical valve headloss  $\Delta p$  (in kPa).

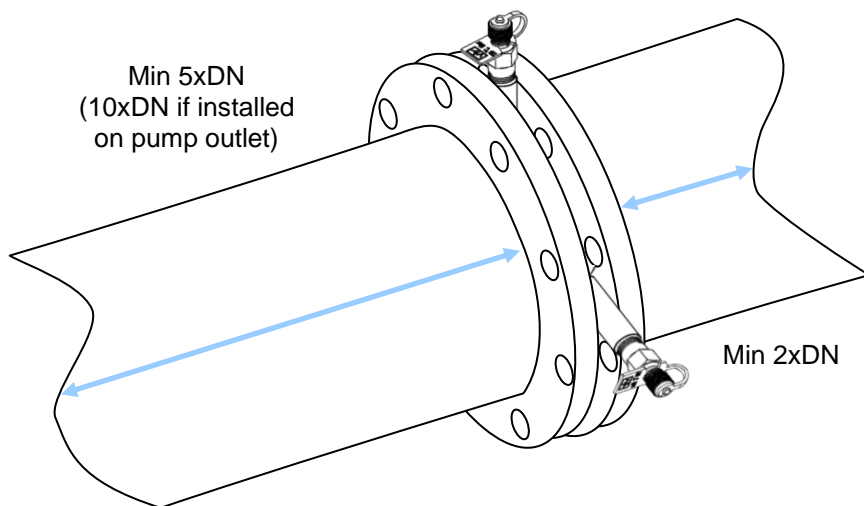
$$\Delta p = \left( \frac{36 \cdot Q}{K_v} \right)^2$$



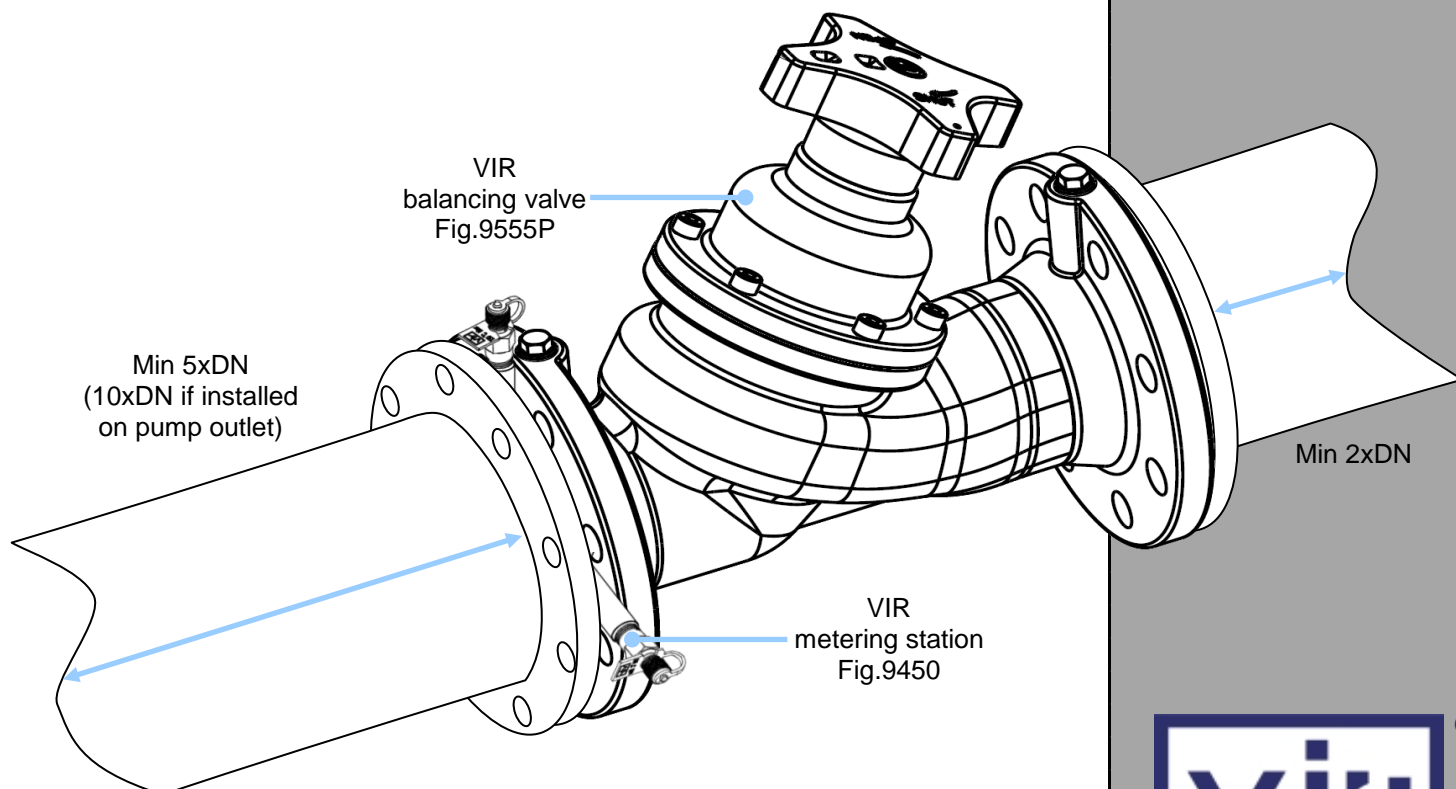
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# INSTALLATION

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.



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