

**Feature**

DZR brass fixed orifice double regulating globe valve  
 Venturi insert  
 Positive shut-off with memory stop  
 Design according to BS7350  
 Tolerance on nominal Cvs  $\pm 3\%$  (test according to BS7350)  
 Multi-turn adjustment (four full turns minimum)  
 Union ends (ASME B1.20.1 - NPSM) for tailpiece connections  
 FNPT, MNPT, Solder, PEX (F1960) and Press tailpieces available

Meet BAA requirement

300WOG

Working conditions:

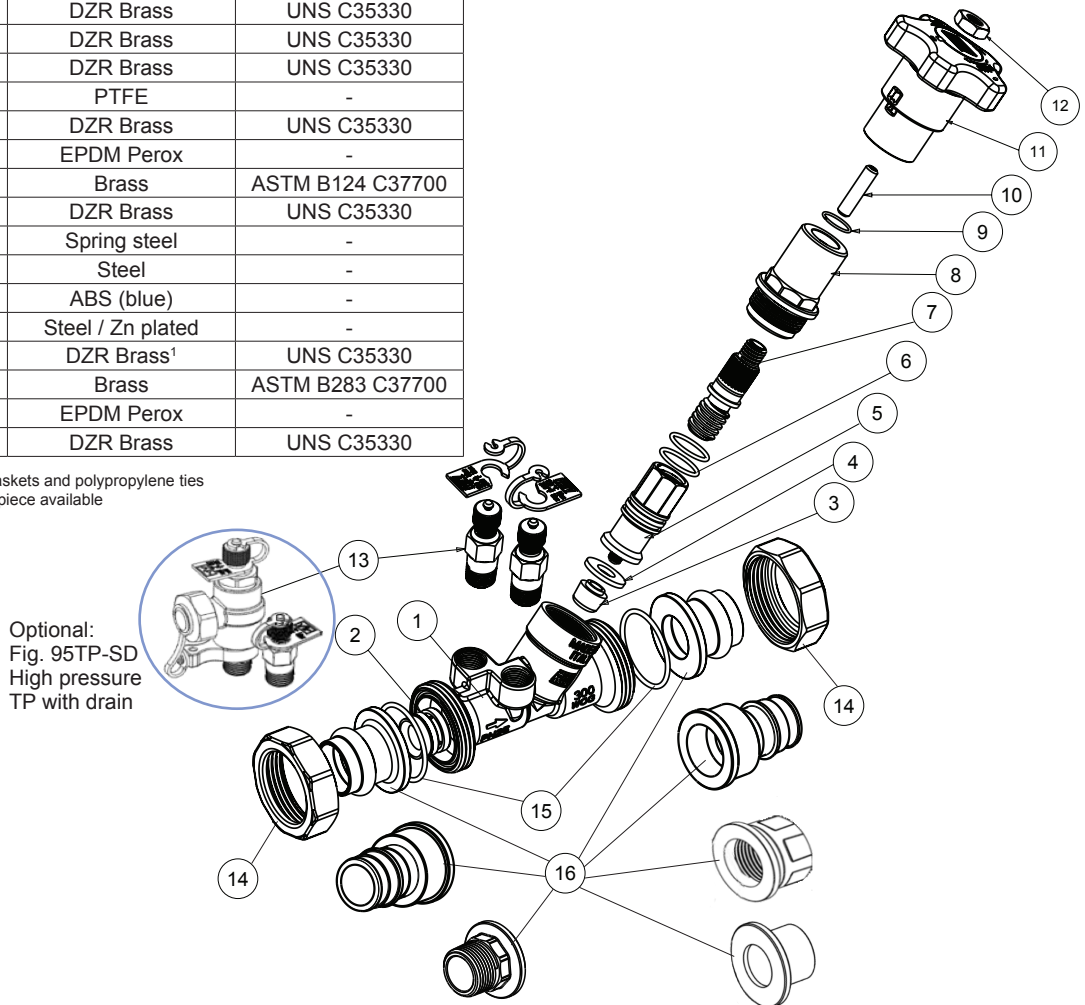
Water: from 15°F to 260°F  
 below 32°F only for water with added antifreezing fluids  
 over 212°F only for water with added anti-boiling fluids



**Material**

	Part	Material	Specification
1	Body	DZR Brass	UNS C35330
2	Venturi insert	DZR Brass	UNS C35330
3	Balancing cone	DZR Brass	UNS C35330
4	Gasket disc	PTFE	-
5	Shutter	DZR Brass	UNS C35330
6	Stem O-ring	EPDM Perox	-
7	Stem	Brass	ASTM B124 C37700
8	Bonnet	DZR Brass	UNS C35330
9	Stop spring ring	Spring steel	-
10	Screw	Steel	-
11	Handwheel	ABS (blue)	-
12	Nut	Steel / Zn plated	-
13	Test point	DZR Brass <sup>1</sup>	UNS C35330
14	Union nut	Brass	ASTM B283 C37700
15	Union O-ring	EPDM Perox	-
16	Tailpiece <sup>2</sup>	DZR Brass	UNS C35330

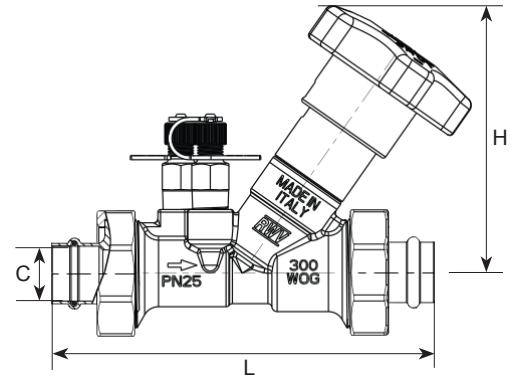
<sup>1</sup> Test points with EPDM Perox gaskets and polypropylene ties  
<sup>2</sup> Any possible combination of tailpiece available



Dimension, Weight

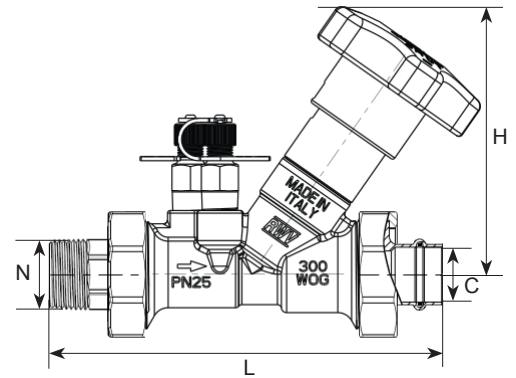
9517T-PP

Size	C	H	L	Weight	Flow range
	[in]	[in]	[in]	[lb]	[GPM]
U-1/2"	0.64	4.06	5.80	1.65	0.27-0.71
L-1/2"	0.64	4.06	5.80	1.65	0.49-1.17
1/2"	0.64	4.06	5.80	1.65	0.98-2.35 <sup>1</sup>
3/4"	0.89	4.06	6.00	1.95	2.19-5.15 <sup>1</sup>
1"	2.12	4.06	6.40	2.45	4.09-9.56 <sup>1</sup>



9517T-MP

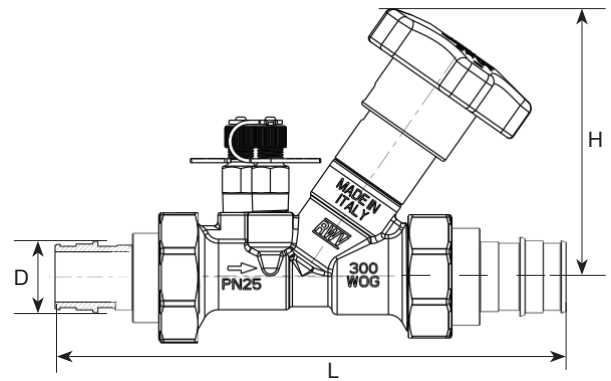
Size	N	C	H	L	Weight	Flow range
		[in]	[in]	[in]	[lb]	[GPM]
U-1/2"	1/2 - 14 NPT	0.64	4.06	5.84	1.66	0.27-0.71
L-1/2"	1/2 - 14 NPT	0.64	4.06	5.84	1.66	0.49-1.17
1/2"	1/2 - 14 NPT	0.64	4.06	5.84	1.66	0.98-2.35 <sup>1</sup>
3/4"	3/4 - 14 NPT	0.89	4.06	6.00	1.98	2.19-5.15 <sup>1</sup>
1"	1 - 11.5 NPT	2.12	4.06	6.65	2.48	4.09-9.56 <sup>1</sup>



\* Male tailpiece can be downsized. Call for availability.

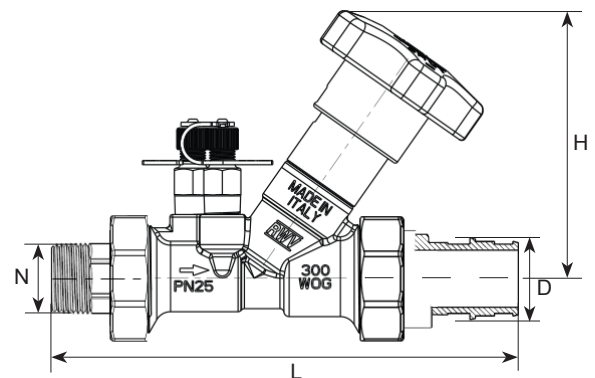
9517T-EE

Size	D	H	L	Weight	Flow range
		[in]	[in]	[lb]	[GPM]
U-1/2"	1/2" F1960	4.06	6.10	1.66	0.27-0.71
L-1/2"	1/2" F1960	4.06	6.10	1.66	0.49-1.17
1/2"	1/2" F1960	4.06	6.10	1.66	0.98-2.35 <sup>1</sup>
3/4"	3/4" F1960	4.06	6.80	1.98	2.19-5.15 <sup>1</sup>
1"	1" F1960	4.06	7.70	2.64	4.09-9.56 <sup>1</sup>



9517T-ME

Size	D	N	H	L	Weight	Flow range
			[in]	[in]	[lb]	[GPM]
U-1/2"	1/2" F1960	1/2 - 14 NPT	4.06	5.84	1.66	0.27-0.71
L-1/2"	1/2" F1960	1/2 - 14 NPT	4.06	5.84	1.66	0.49-1.17
1/2"	1/2" F1960	1/2 - 14 NPT	4.06	5.84	1.66	0.98-2.35 <sup>1</sup>
3/4"	3/4" F1960	3/4 - 14 NPT	4.06	6.00	1.98	2.19-5.15 <sup>1</sup>
1"	1" F1960	1 - 11.5 NPT	4.06	6.65	2.48	4.09-9.56 <sup>1</sup>



\* Male tailpiece can be downsized. Call for availability.

<sup>1</sup> Suggested flow range applicability (BS7350)

<sup>2</sup> Tolerance field

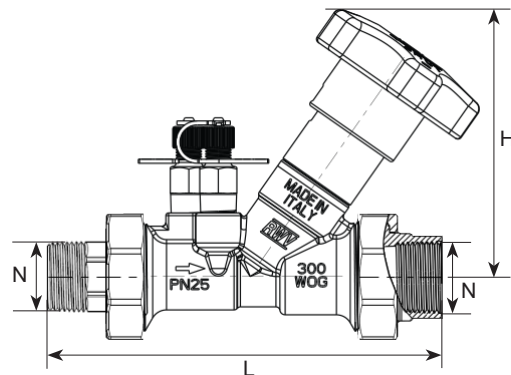
If using a measuring manometer different from those proposed by RWV please verify that sensibility of the measuring device is compatible with indicated minimum flow (see flow measurement paragraph)



### 9517T-MF

Size	N	H [in]	L [in]	Weight [lb]	Flow range [GPM]
U-1/2"	1/2 - 14 NPT	4.06	5.53	1.68	0.27-0.71
L-1/2"	1/2 - 14 NPT	4.06	5.53	1.68	0.49-1.17
1/2"	1/2 - 14 NPT	4.06	5.53	1.68	0.98-2.35 <sup>1</sup>
3/4"	3/4 - 14 NPT	4.06	5.75	2.03	2.19-5.15 <sup>1</sup>
1"	1 - 11.5 NPT	4.06	6.44	2.56	4.09-9.56 <sup>1</sup>

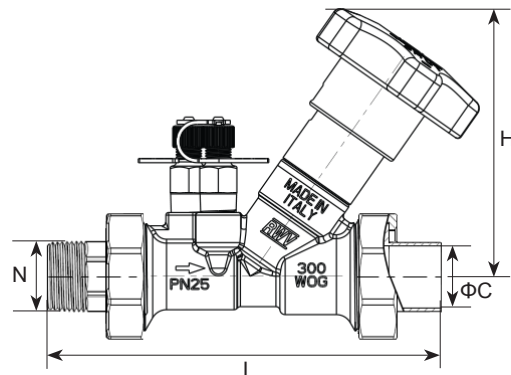
\* Male tailpiece can be downsized. Call for availability.



### 9517T-MS

Size	N	ΦC <sup>2</sup> [in]	H [in]	L [in]	Weight [lb]	Flow range [GPM]
U-1/2"	1/2 - 14 NPT	0.627-0.631	4.06	5.34	1.63	0.27-0.71
L-1/2"	1/2 - 14 NPT	0.627-0.631	4.06	5.34	1.63	0.49-1.17
1/2"	1/2 - 14 NPT	0.627-0.631	4.06	5.34	1.63	0.98-2.35 <sup>1</sup>
3/4"	3/4 - 14 NPT	0.877-0.881	4.06	5.78	1.94	2.19-5.15 <sup>1</sup>
1"	1 - 11.5 NPT	1.128-1.131	4.06	6.66	2.49	4.09-9.56 <sup>1</sup>

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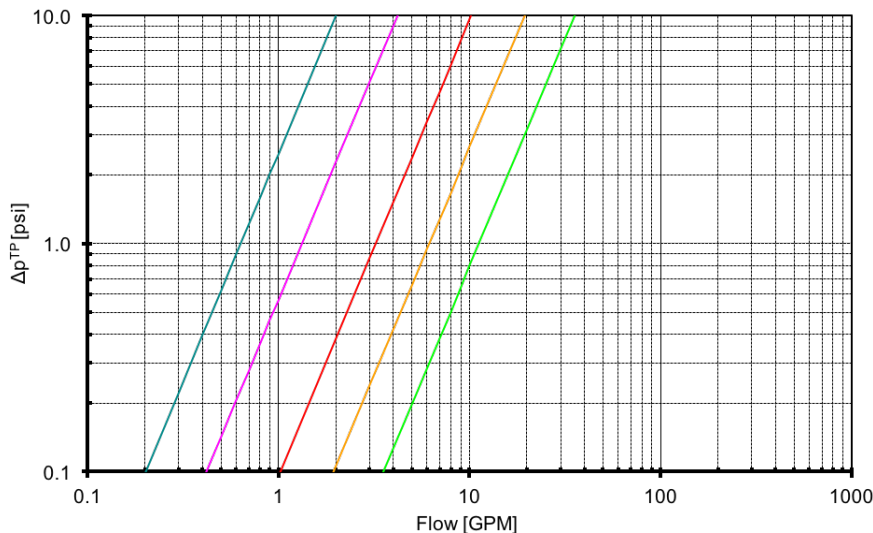


<sup>1</sup> Suggested flow range applicability (BS7350)

<sup>2</sup> Tolerance field

If using a measuring manometer different from those proposed by RWV please verify that sensibility of the measuring device is compatible with indicated minimum flow (see flow measurement paragraph)

### Flow Measurement



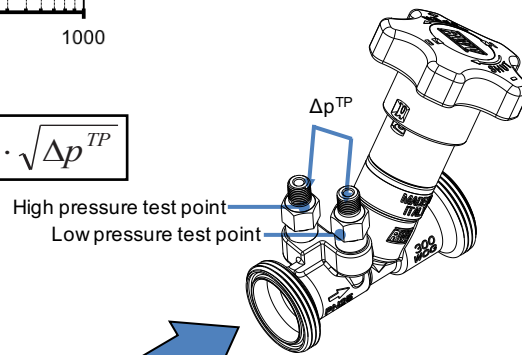
- U-1/2", C<sub>vs venturi</sub> 0,64
- L-1/2", C<sub>vs venturi</sub> 1,33
- 1/2", C<sub>vs venturi</sub> 3,24
- 3/4", C<sub>vs venturi</sub> 6,16
- 1", C<sub>vs venturi</sub> 11,24

Q = flow rate in GPM

Δp = differential pressure signal generated through pressure test points

Cv = flow coefficient

$$Q = C_{vs}^{venturi} \cdot \sqrt{\Delta p^{TP}}$$

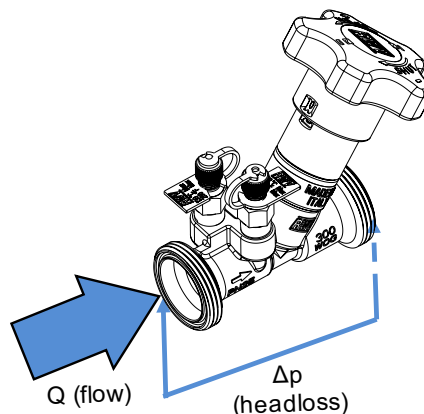


#### Headloss

Handwheel position	Cv (GPM/psi <sup>0.5</sup> )				
	U-1/2"	L-1/2"	1/2"	3/4"	1"
0.5	0.177	0.160	0.474	0.47	1.70
0.7	0.206	0.186	0.474	0.54	2.00
1.0	0.283	0.287	0.613	0.67	2.42
1.3	0.331	0.394	0.717	0.81	2.82
1.5	0.355	0.440	0.809	0.90	3.12
1.7	0.387	0.501	0.902	0.99	3.48
2.0	0.445	0.586	0.99	1.12	4.13
2.3	0.511	0.67	1.10	1.25	4.83
2.5	0.517	0.70	1.18	1.39	5.28
2.7	0.527	0.74	1.32	1.62	5.63
3.0	0.563	0.83	1.60	2.24	6.09
3.3	0.578	0.86	1.88	2.94	6.49
3.5	0.594	0.89	2.03	3.39	6.64
3.7	0.595	0.92	2.12	3.75	6.80
4.0	0.603	0.95	2.19	4.06	7.10
4.4	0.605	0.98	2.22	4.24	7.21

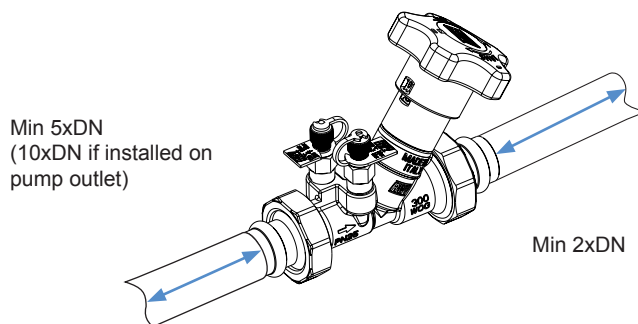
Formula linking flow Q (in GPM) and theoretical valve headloss Δp (in psi). Cv depends on handwheel position as indicated on table.

$$\Delta p = \left( \frac{Q}{C_v} \right)^2$$

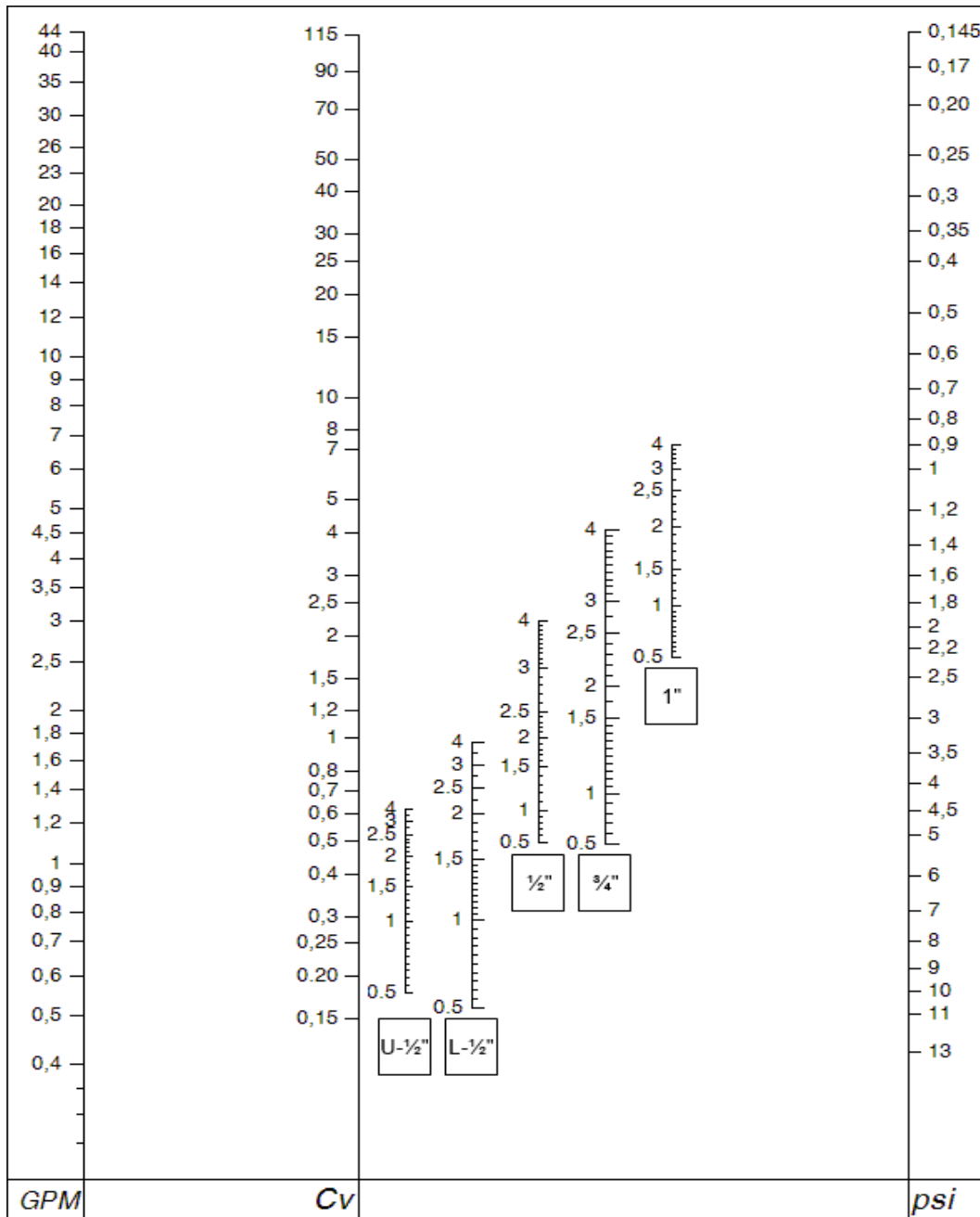


#### Installation

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.

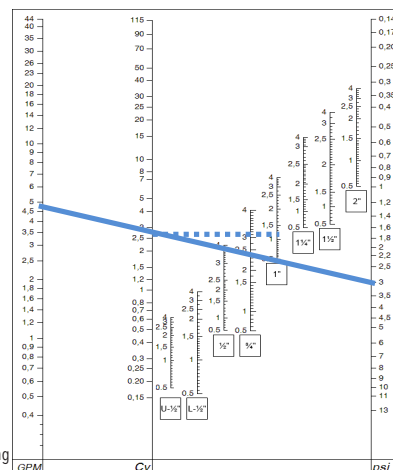


#### Presetting



Using the diagram above, it is possible to determine the presetting position of the valve with the given design flowrate and headloss:

- 1) draw a straight line joining design flowrate and design headloss;
- 2) determine design Cv value as intersection of drawn line and Cv axis;
- 3) draw a straight horizontal line from intersection previously identified and the specific valve size Axis;
- 4) intersection determines handwheel position to use for presetting.



In the example for a design flowrate of 5GPM and design  $\Delta p$  3psi handwheel position of 1.35 is determined for a 1 1/2" valve