

Submittal Data Information

Roth Differential Pressure By-pass Valve



Effective: September 2007

Supersedes:

Job: _____ Engineer: _____ Contractor: _____ Rep: _____

ITEM PART NO.	ITEM DESCRIPTION	MANUFACTURER
# Varies	Differential Pressure By-pass Valve	Roth



AVDO Automatic By-pass Valve

AVDO is a self-acting automatic by-pass control primarily used either to maintain minimum flow rates (e.g. through a low water content gas boiler) or to control the differential pressure in a central heating system and available in 3/4" (AVDO 20 – PN 2340052155) and 1" (AVDO 25 – PN 2340052156) sizes.

AVDO characteristics:

- Opens on rising differential pressure
- Provides by-pass control across a heating system
- Provides by-pass control across a circulating pump
- Operates without impulse tubes
- Can be supplied with NPT or solder tail pieces.

Technical Data:

- Setting range – 0.725 – 7.25 psi (0.05 – 0.5 bar)
- Max. differential pressure – 7.25 psi (0.5 bar)
- Operation pressure – 145 psi (10 bar)
- Max. flow temperature – 248°F (120°C)
- Max. leakage at closed valve – 0.22 gpm (0.05 m³/h)

Installation

The valve body must be mounted with flow in the direction of the raised arrow on the valve body.

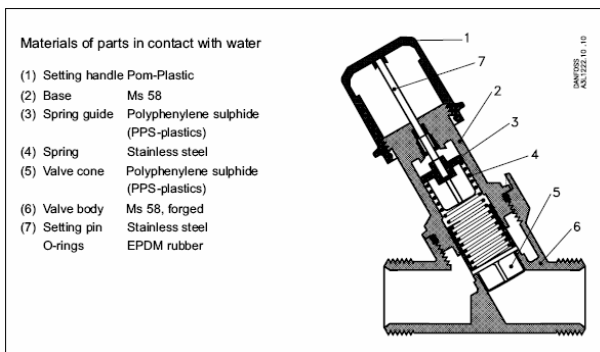
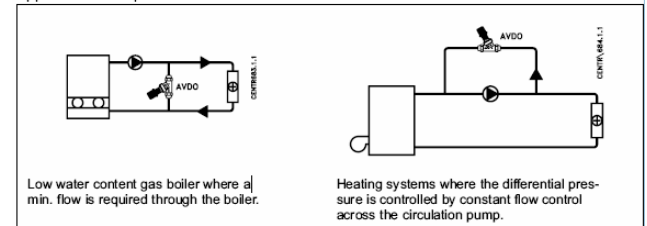
Setting Operation

The control is set by turning the adjustment knob. AVDO has a setting scale on which the opening pressure can be set according to the table to the right. The differential pressures stated for a given setting are indicative. The scale gives the differential pressure across the AVDO when it just begins to open. The factory setting is 0.2 bar.

0.1	-	1	=	1.45
0.2	-	2	=	2.90
0.3	-	3	=	4.35
0.4	-	4	=	5.8
0.5	-	5	=	7.25

bar mH₂O psi

Application Examples



Adjustment Procedure

This is a simple guide to the setting of the AVDO by-pass valve.

1. With the boiler/system cool, set the AVDO to max. (0.5 bar)
2. Switch heating system/boiler/pump on.
3. Reduce setting until AVDO is just open (by-pass valve starts to get hot).
4. Turn adjuster back (counter-clockwise) one revolution (ie. valve closes).
5. AVDO will automatically open when system flow reduces.
6. Setting can be lead seal locked.

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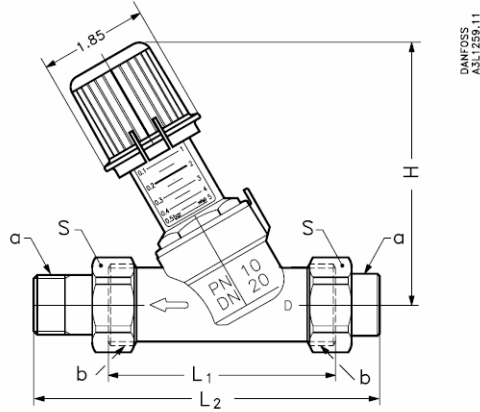
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Dimensions



DN	Type	Measure unit	L1	L2 Threaded	L2 Solder	H		S	a	b ISO 228/1
						min	max.			
15	AVDO 15	inch	3.44	5.94	4.76	3.50	4.45	1.18	1/2"	G 3/4 A
		mm	87	151	121	89	113	30		
20	AVDO 20	inch	3.66	6.49	5.39	3.55	4.49	1.46	3/4"	G 1 A
		mm	93	165	137	90	114	37		
25	AVDO 25	inch	4.17	7.00	-	3.74	4.69	4.69	1"	G 1 1/4 A
		mm	106	178	-	95	119	119		

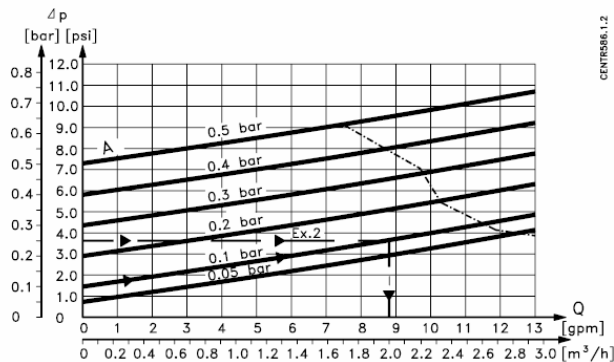
Capacity

A = set opening pressure

p = p for valve

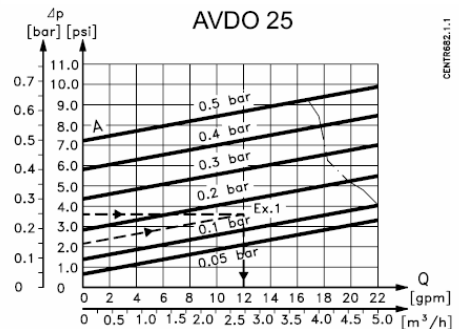
--- Upper limit graph for recommended application area with almost noiseless installation. Measurement conditions according to ISO 3743.

AVDO 20



CENTR686.1.2

AVDO 25



CENTR682.1.1

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