

Straight DZR Brass Automatic Balancing Valve Fig. Anvil ABV-9900V Series

Fig. 9907V
Mounted
Test Points

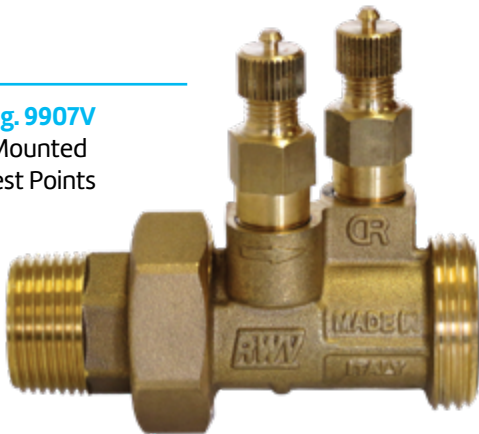


Fig. 9900V
Cartridge



Material Specifications

1. **Union Nut:** Brass ASTM B283 C37700
2. **Union¹:** DZR Brass UNS C35330
3. **Union O-Ring:** EPDM Perox
4. **Spring:** Stainless Steel AISI 302
5. **Body:** DZR Brass UNS C35330
6. **Cartridge O-Ring:** EPDM Perox
7. **Shaped Opening:** Stainless Steel
8. **Cartridge Body:** DZR Brass UNS C35330
9. **Cartridge Spring:** Stainless Steel AISI 302
10. **Test Point/Plug:** DZR Brass² UNS C35330

¹ In two pieces for ¾"-L and 2" threaded version
² Plug with copper gaskets. Test points with EPDM Perox gaskets and polypropylene ties.

Threaded F/F (ASME B1.20.1 – NPT) or solder joint (ASME B16.22) union ends. Wide range of flows available (see cartridge section). 300 WOG (Maximum 300psi up to 160°F. Maximum 150psi at 260°F.)

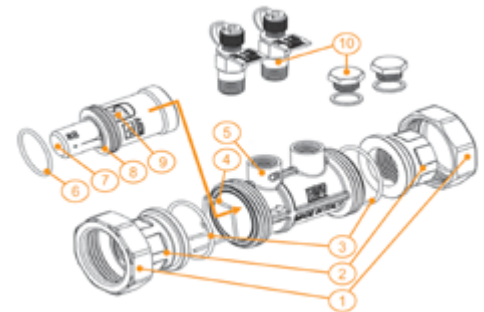
Available on following versions:

- ABV-T-9907 (NPT Union F/F Ends) with mounted test points
- ABV-S-9909 (CxC Union Ends) with mounted test points

Working Conditions:

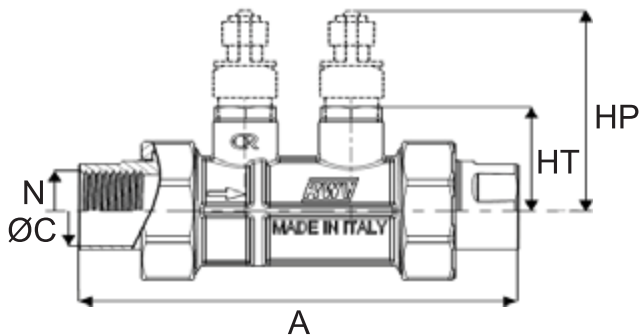
- **Water (15°F to 260°F)**
(Glycolic-Ethylene and glycolic-propylene mixtures up to 50% may be used.) below 32°F only for water with added anti-freezing fluids over 212°F only for water with added anti-boiling fluids
- **Flow Range**
Valves up to ¾"L: 0.32GPM – 3.17GPM
¾" and 1" valves: 2.06GPM – 15.1 GPM
1¼", 1½", and 2" valves: 4.91GPM – 41.2GPM
2"H and 2½" valves: 25.4GPM – 105GPM
- Working ΔP depending on selected cartridge

For additional information on Gruvlok bag and tag coil kit service, contact an ASC Engineered Solutions Representative.



PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

Straight DZR Brass Automatic Balancing Valve Fig. Anvil ABV-9900V Series



Straight DZR Brass Automatic Balancing Valve

Valve Size	N	ØC ¹	A ²	HT/HP	Cv ³	Approx. Wt. Each	
						Valve	Cartridge
In./mm	In./mm	In./mm	In./mm	In./mm	GPM	Lbs./Kg	Lbs./Kg
½	½	0.627-0.631	3.78/3.41	1.08/2.34	14	0.83/0.73	0.10
15	15	15.93-16.03	96.0/86.6	27.4/59.4	–	0.38/0.33	0.05
¾L	¾	0.877-0.881	4.65/3.96	1.08/2.34	14	0.99/0.76	0.10
20	20	22.28-22.38	118.1/100.6	27.4/59.4	–	0.45/0.34	0.05
¾	¾	0.877-0.881	4.47/4.51	1.34/2.60	21	1.16/1.03	0.21
20	20	22.28-22.38	113.5/114.6	34.0/66.0	–	0.53/0.47	0.10
1	1	1.128-1.131	4.72/4.74	1.34/2.60	27	1.45/1.21	0.21
25	25	28.65-28.73	119.9/120.0	34.0/66.0	–	0.66/0.55	0.10
1¼	1¼	1.378-1.381	6.27/6.82	1.61/2.87	97	2.78/3.17	0.56
32	32	35.00-35.08	159.3/173.2	40.9/72.9	–	1.26/1.44	0.25
1½	1½	1.628-1.632	6.27/7.06	1.61/2.87	97	3.34/3.18	0.56
40	40	41.35-41.45	159.3/179.3	40.9/72.9	–	1.52/1.44	0.25
2	2	2.128-2.132	8.20/7.56	1.61/2.87	94	4.55/3.28	0.56
50	50	54.05-54.15	208.3/192.0	40.9/72.9	–	2.06/1.49	0.25
2H	2	2.128-2.132	9.16/9.82	2.36/3.62	189	7.83/7.45	3.01
50	50	54.05-54.15	232.7/249.4	59.9/91.9	–	3.55/3.38	1.37
2½	2½	2.628-2.632	9.50/10.01	2.36/3.62	228	8.31/7.47	3.01
65	65	66.75-66.88	241.3/254.3	59.9/91.9	–	3.77/3.39	1.37

¹ Tolerance field

² Threaded ends / soldering ends

³ For valve body without cartridge

⁴ Threaded ends / soldering ends, ver. with test points +0.10lb



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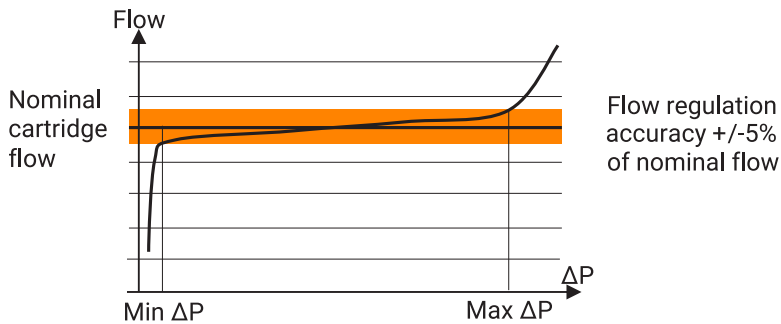
Straight DZR Brass Automatic Balancing Valve Fig. Anvil ABV-9900V Series

Cartridges

Cartridges are available in different ranges of working differential pressure. The minimum and maximum working ΔP therefore depends on the specific cartridge model.

A numeric code is marked on the cartridge body univocally identifying it (example for KRR992215.1880).

If installed, the test points allow to verify if the valve is actually working within the range suitable for the selected cartridge.



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Straight DZR Brass Automatic Balancing Valve Fig. Anvil ABV-9900V Series

Cartridges

MINI: for 1/2" and 3/4" L Valves

RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR991202.1880	0.32	2.2-25
KRR991203.1880	0.48	2.3-32
KRR991204.1880	0.63	2.3-32
KRR991205.1880	0.79	2.3-32
KRR991206.1880	0.95	2.3-32
KRR991207.1880	1.11	2.3-32
KRR991208.1880	1.27	2.3-32
KRR991209.1880	1.43	2.3-32
KRR991210.1880	1.59	2.3-32
KRR991211.1880	1.74	2.5-32
KRR991212.1880	1.90	2.5-32
KRR991213.1880	2.06	2.5-32
KRR991214.1880	2.22	2.5-32
KRR991215.1880	2.38	2.5-32
KRR991216.1880	2.54	2.5-32
KRR991218.1880	2.85	2.6-32
KRR991220.1880	3.17	2.8-32

SMALL : for 3/4" and 1" Valves Standard Range

RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR992213.1880	2.06	2.5-35
KRR992215.1880	2.38	2.5-35
KRR992217.1880	2.69	2.5-35
KRR992219.1880	3.01	2.5-35
KRR992221.1880	3.33	2.6-35
KRR992224.1880	3.80	2.6-35
KRR992227.1880	4.28	2.6-35
KRR992230.1880	4.76	2.6-35
KRR992233.1880	5.23	2.6-35
KRR992236.1880	5.71	2.6-35
KRR992240.1880	6.34	2.6-35
KRR992245.1880	7.13	2.8-35
KRR992250.1880	7.93	2.8-35
KRR992255.1880	8.72	3.0-35
KRR992260.1880	9.51	3.2-35
KRR992266.1880	10.5	3.5-35
KRR992272.1880	11.4	3.5-35

SMALL: for 3/4" and 1" Valves HP Range

RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR992318.1880	2.85	4.2-64
KRR992320.1880	3.17	4.6-64
KRR992323.1880	3.65	4.8-64
KRR992327.1880	3.96	4.8-64
KRR992329.1880	4.60	4.8-64
KRR992332.1880	5.07	4.8-64
KRR992336.1880	5.71	4.8-64
KRR992340.1880	6.34	4.8-64
KRR992345.1880	7.13	4.8-64
KRR992350.1880	7.93	4.8-64
KRR992355.1880	8.72	4.9-64
KRR992361.1880	9.67	5.2-64
KRR992368.1880	10.80	5.2-64
KRR992375.1880	11.90	5.2-64
KRR992380.1880	12.70	5.2-64
KRR992386.1880	13.60	5.8-64
KRR992395.1880	15.10	5.8-64

MEDIUM: for 1 1/4", 1 1/2" and 2" Valves Standard Range

RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR994231.1880	4.91	1.9-33
KRR994234.1880	5.39	1.9-33
KRR994237.1880	5.86	1.9-33
KRR994240.1880	6.34	2.0-33
KRR994246.1880	7.29	2.0-33
KRR994250.1880	7.93	2.0-33
KRR994255.1880	8.72	2.0-33
KRR994258.1880	9.19	2.0-33
KRR994262.1880	9.83	2.0-33
KRR994267.1880	10.60	2.2-33
KRR994274.1880	11.70	2.2-33
KRR994283.1880	13.20	2.2-33
KRR994290.1880	14.30	2.2-33
KRR994297.1880	15.40	2.2-33
KRR994210.1880	16.60	2.2-33
KRR994212.1880	19.00	2.2-33
KRR994213.1880	20.60	2.3-33
KRR994214.1880	22.80	2.5-33
KRR994216.1880	24.70	2.5-33
KRR994217.1880	26.60	2.6-33
KRR994218.1880	28.50	2.8-33
KRR994220.1880	31.10	2.8-33

MEDIUM: for 1 1/4", 1 1/2" and 2" Valves HP Range

RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR994341.1880	6.50	3.8-61
KRR994346.1880	7.29	3.8-61
KRR994351.1880	8.08	3.8-61
KRR994355.1880	8.72	3.9-61
KRR994362.1880	9.83	3.9-61
KRR994368.1880	10.80	3.9-61
KRR994374.1880	11.70	3.9-61
KRR994379.1880	12.50	3.9-61
KRR994383.1880	13.20	3.9-61
KRR994391.1880	14.40	4.1-61
KRR994310.1880	15.90	4.1-61
KRR994311.1880	17.60	4.1-61
KRR994312.1880	19.00	4.2-61
KRR994313.1880	20.60	4.2-61
KRR994314.1880	22.00	4.2-61
KRR994316.1880	26.00	4.4-61
KRR994318.1880	27.70	4.5-61
KRR994319.1880	30.10	4.5-61
KRR994321.1880	32.70	4.6-61
KRR994322.1880	35.40	4.9-61
KRR994324.1880	38.00	5.1-61
KRR994326.1880	41.20	5.5-61

LARGE: for 2"H and 2 1/2"L Valves

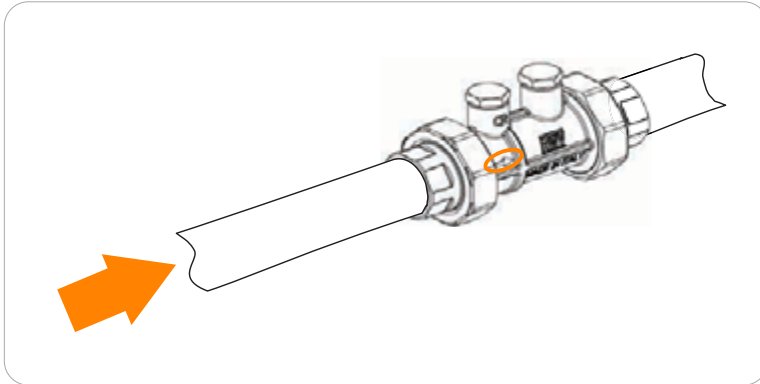
RWV Code	Flow	Range ΔP
	GPM	psi
-		
KRR996216.1880	25.4	2.0-33
KRR996218.1880	28.5	2.0-33
KRR996220.1880	31.7	2.0-33
KRR996222.1880	34.9	2.2-33
KRR996224.1880	38.0	2.2-33
KRR996227.1880	42.8	2.2-33
KRR996230.1880	47.6	2.3-33
KRR996233.1880	52.3	2.3-33
KRR996236.1880	57.1	2.3-33
KRR996240.1880	63.4	2.5-33
KRR996245.1880	71.3	2.5-33
KRR996250.1880	79.3	2.8-33
KRR996255.1880	87.2	2.8-33
KRR996260.1880	95.1	3.0-33
KRR996266.1880	105.0	3.0-33



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Installation

Install the valve so that the flow direction matches the direction of the arrow indicated on the body of the valve. Perform correct flushing of the plant before installing the cartridge.

In order to obtain the best correct flowrate regulation, the valves should be installed using pipes of its same normal size. Water quality should be according VDI 2035. Use at least one strainer for each installation.

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