

## FIG. ANVIL ABV-9900V SERIES

### Straight DZR Brass Automatic Balancing Valve

#### FEATURES

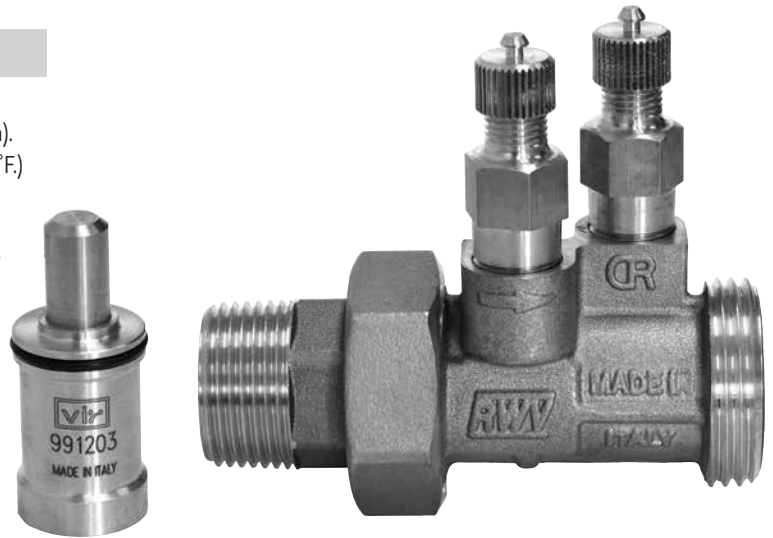
Threaded F/F (ASME B1.20.1 - NPT) or solder joint (ASME B16.22) union ends. Wide range of flows available (see cartridge section). 300 WOG (Maximum 300psi up to 160°F. Maximum 150psi at 260°F.)

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 3/4"L: 0.32GPM - 3.17GPM  
3/4" and 1" valves: 2.06GPM - 15.1 GPM  
1 1/4", 1 1/2", and 2" valves: 4.91GPM - 41.2GPM  
2"H and 2 1/2" valves: 25.4GPM - 105GPM
- Working ΔP depending on selected cartridge

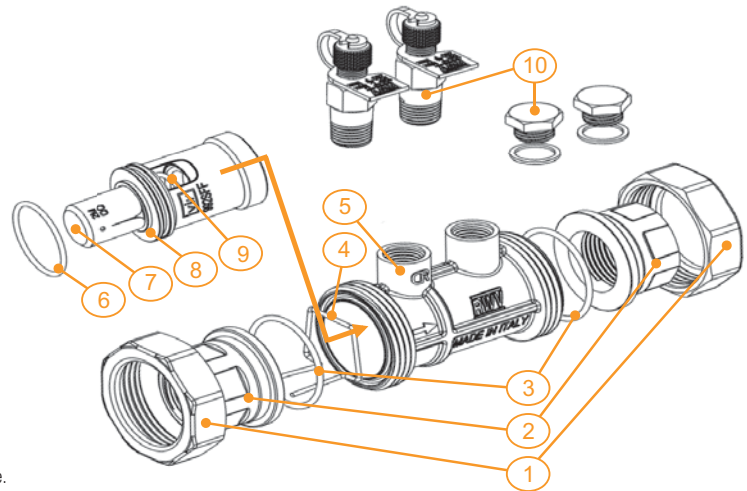


#### MATERIAL SPECIFICATIONS

1. UNION NUT: Brass ASTM B283 C37700
2. UNION<sup>1</sup>: 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 Brass<sup>2</sup> UNS C35330

<sup>1</sup>In two pieces for 3/4"-L and 2" F threaded version

<sup>2</sup>Plug with copper gaskets. Test points with EPDM Perox gaskets and polypropylene ties.



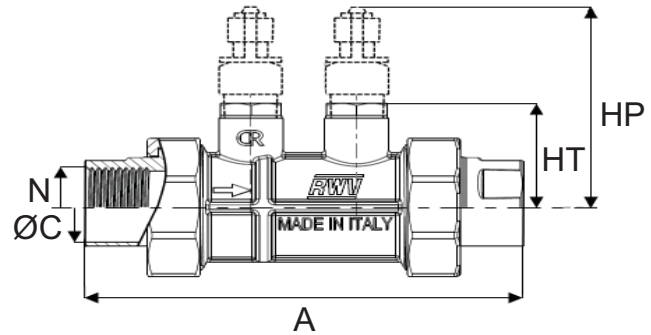
For additional information on Gruvlok bag and tag coil kit service, contact an Anvil Representative.

PROJECT INFORMATION	APPROVAL STAMP
<b>Project:</b>	<input type="checkbox"/> Approved
<b>Address:</b>	<input type="checkbox"/> Approved as noted
<b>Contractor:</b>	<input type="checkbox"/> Not approved
<b>Engineer:</b>	<b>Remarks:</b>
<b>Submittal Date:</b>	
<b>Notes 1:</b>	
<b>Notes 2:</b>	

## FIG. ANVIL ABV-9900V SERIES

Straight DZR Brass Automatic Balancing Valve

FIGURE ANVIL ABV-9900V SERIES STRAIGHT DZR BRASS AUTOMATIC BALANCING VALVE							
Valve Size	N	øC <sup>1</sup>	A <sup>2</sup>	HT/HP	Cv <sup>3</sup>	Approx. Wt. Each	
						Valve	Cartridge
In./mm	In./mm	In./mm	In./mm	In./mm	GPM	Lbs./Kg	Lbs./Kg
1/2	1/2	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
3/4L	3/4	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
3/4	3/4	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
1 1/4	1 1/4	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
1 1/2	1 1/2	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
2 1/2	2 1/2	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



<sup>1</sup> Tolerance field

<sup>2</sup> Threaded ends / soldering ends

<sup>3</sup> For valve body without cartridge

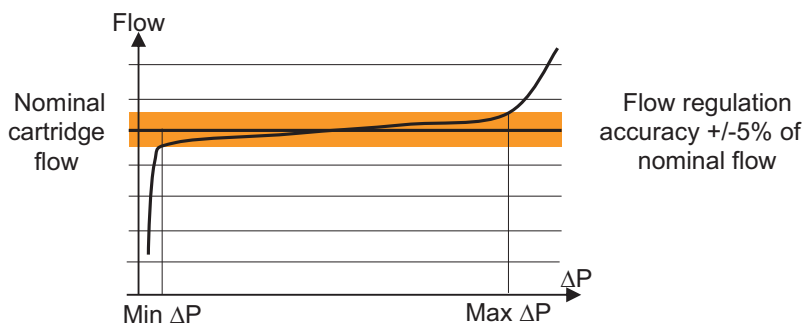
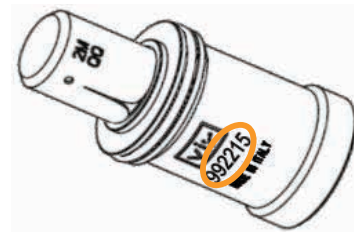
<sup>4</sup> Threaded ends / soldering ends, ver. with test points +0.10lb

### CARTRIDGES

Cartridges are available in different ranges of working differential pressure. The minimum and maximum working  $\Delta P$  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.



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

## FIG. ANVIL ABV-9900V SERIES

Straight DZR Brass Automatic Balancing Valve

### 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

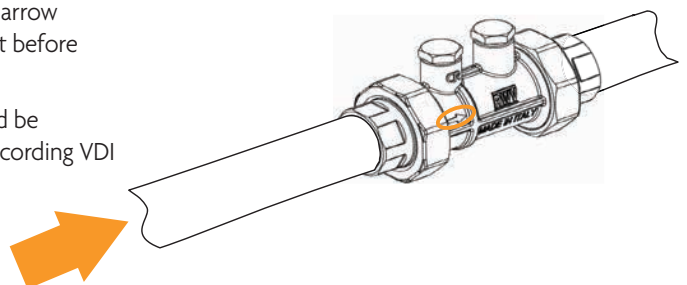
MEDIUM: for 1 1/4", 1 1/2" and 2" Valves HP Range		
RWV Code	Flow	Range ΔP
-	GPM	psi
KRR994341.1880	6.50	3.8-61
KRR994346.1880	7.29	3.8-61
KRR994351.1880	8.08	3.8-61
KRR994355.1880	8.72	3.9-61
KRR994362.1880	9.83	3.9-61
KRR994368.1880	10.80	3.9-61
KRR994374.1880	11.70	3.9-61
KRR994379.1880	12.50	3.9-61
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

### 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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