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Red-White Valve Corp.

9900V series
 Straight DZR Brass Automatic
 Balancing Valve

Description

DZR Brass automatic balancing valve
 Threaded F/F (ASME B1.20.1 - NPT) or solder joint (ASME B16.22) union ends
 Wide range of flows available (see cartridges section)

Available on following versions:

- Fig. 9907V (NPT union F/F ends) and Fig. 9909V (CxC union ends) with mounted test points
- Fig. 9902V (NPT union F/F ends) and Fig. 9904V (CxC union ends) with threaded and plugged drains (1/4" ISO 7/1Rp) available on request

300WOG (max 300psi up to 160°F, max 150psi at 260°F)

Working conditions:

- Water: from 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 antifreezing fluids
 over 212°F only for water with added anti-boiling fluids
- Flow range from 0.32GPM to 3.17GPM for valves up to 3/4"-L
- Flow range from 2.06GPM to 15.1GPM for 3/4" and 1" valves
- Flow range from 4.91GPM to 41.2GPM for 1 1/4", 1 1/2" and 2" valves
- Flow range from 25.4GPM to 105GPM for 2"-H and 2 1/2" valves
- Working ΔP depending on selected cartridge

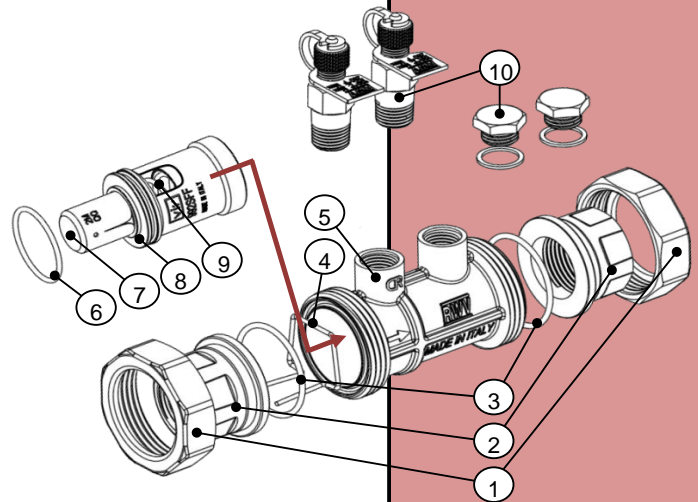


Part List

N.	Part	Material	Norm
1	Union nut	Brass	ASTM B283 C37700
2	Union ¹	DZR Brass	UNS C35330
3	Union O-ring	EPDM Perox	-
4	Spring	Stainless steel	AISI 302
5	Body	DZR Brass	UNS C35330
6	Cartridge OR	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 ²	UNS C35330

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

²Plug with copper gaskets, test points with EPDM Perox gaskets and polypropylene ties



Dimensions

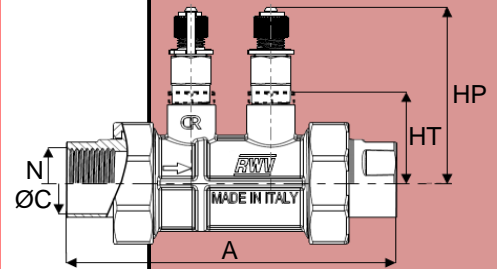
DN	N	ØC ¹ (in)	A ² (in)	HT/HP (in)	C _v ³ (GPM)	Val. wgt ⁴ (lb)	Cart. wgt (lb)
½"	½"	0.627-0.631	3.78/3.41	1.08/2.34	14	0.83/0.73	0.10
¾"-L	¾"	0.877-0.881	4.65/3.96	1.08/2.34	14	0.99/0.76	0.10
¾"	¾"	0.877-0.881	4.47/4.51	1.34/2.60	21	1.16/1.03	0.21
1"	1"	1.128-1.131	4.72/4.74	1.34/2.60	27	1.45/1.21	0.21
1¼"	1¼"	1.378-1.381	6.27/6.82	1.61/2.87	97	2.78/3.17	0.56
1½"	1½"	1.628-1.632	6.27/7.06	1.61/2.87	97	3.34/3.18	0.56
2"	2"	2.128-2.132	8.20/7.56	1.61/2.87	94	4.55/3.28	0.56
2"-H	2"	2.128-2.132	9.16/9.82	2.36/3.62	189	7.83/7.45	3.01
2½"	2½"	2.628-2.633	9.50/10.01	2.36/3.62	228	8.31/7.47	3.01

¹Tolerance field

³For valve body without cartridge

²Threaded ends / soldering ends

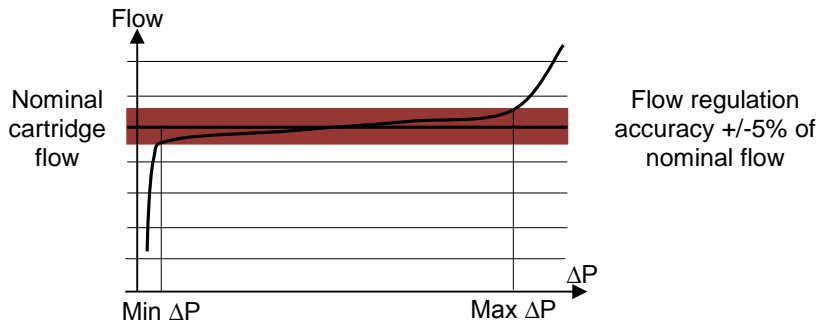
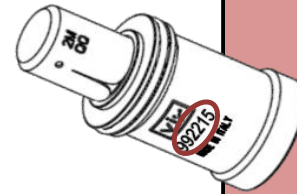
⁴Threaded ends / soldering ends, ver. with test points +0.10lb



Cartridges

Cartridges are available in different ranges of working differential pressure, the minimum and maximum working ΔP therefore depend 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.

MINI: for ½" and ¾"-L valves

RWV Code	Flow (GPM)	Range ΔP (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

RWV[®]

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SMALL: for 3/4" and 1" valves

Standard range

RWV Code	Flow (GPM)	Range Δ P (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

HP range

RWV Code	Flow (GPM)	Range Δ P (psi)
KRR992318.1880	2.85	4.2-64
KRR992320.1880	3.170	4.6-64
KRR992323.1880	3.7	4.8-64
KRR992327.1880	4.0	4.8-64
KRR992329.1880	4.6	4.8-64
KRR992332.1880	5.1	4.8-64
KRR992336.1880	5.7	4.8-64
KRR992340.1880	6.3	4.8-64
KRR992345.1880	7.1	4.8-64
KRR992350.1880	7.9	4.8-64
KRR992355.1880	8.7	4.9-64
KRR992361.1880	9.7	5.2-64
KRR992368.1880	10.8	5.2-64
KRR992375.1880	11.9	5.2-64
KRR992380.1880	12.7	5.2-64
KRR992386.1880	13.6	5.8-64
KRR992395.1880	15.1	5.8-64

MEDIUM: for 1 1/4", 1 1/2" and 2" valves

Standard range

RWV Code	Flow (GPM)	Range Δ P (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	10.6	2.2-33
KRR994274.1880	11.7	2.2-33
KRR994283.1880	13.2	2.2-33
KRR994290.1880	14.3	2.2-33
KRR994297.1880	15.4	2.2-33
KRR994210.1880	16.6	2.2-33
KRR994212.1880	19.0	2.2-33
KRR994213.1880	20.6	2.3-33
KRR994214.1880	22.8	2.5-33
KRR994216.1880	24.7	2.5-33
KRR994217.1880	26.6	2.6-33
KRR994218.1880	28.5	2.8-33
KRR994220.1880	31.1	2.8-33

HP range

RWV Code	Flow (GPM)	Range Δ P (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	10.8	3.9-61
KRR994374.1880	11.7	3.9-61
KRR994379.1880	12.5	3.9-61
KRR994383.1880	13.2	3.9-61
KRR994391.1880	14.4	4.1-61
KRR994310.1880	15.9	4.1-61
KRR994311.1880	17.6	4.1-61
KRR994312.1880	19.0	4.2-61
KRR994313.1880	20.6	4.2-61
KRR994314.1880	22.0	4.2-61
KRR994316.1880	26.0	4.4-61
KRR994318.1880	27.7	4.5-61
KRR994319.1880	30.1	4.5-61
KRR994321.1880	32.7	4.6-61
KRR994322.1880	35.4	4.9-61
KRR994324.1880	38.0	5.1-61
KRR994326.1880	41.2	5.5-61



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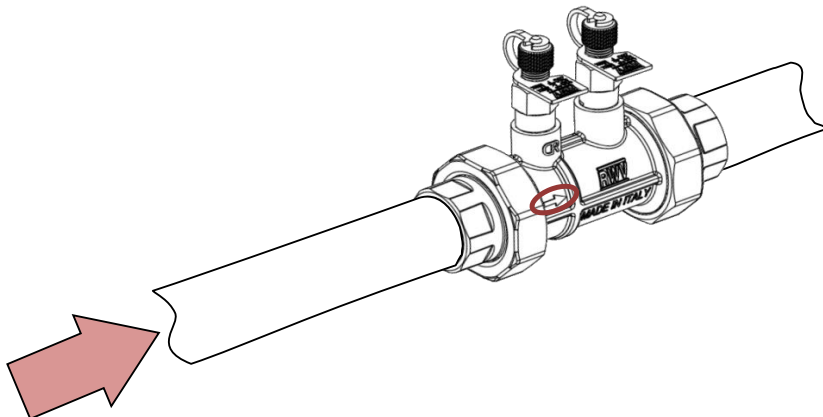
LARGE: for 2"-H and 2½" valves

RWV Code	Flow (GPM)	Range ΔP (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
KRR996255.1890	87.2	2.8-33
KRR996260.1880	95.1	3.0-33
KRR996266.1880	105	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 nominal size. Water quality should be according VDI 2035. Use at least one strainer for each installation.



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