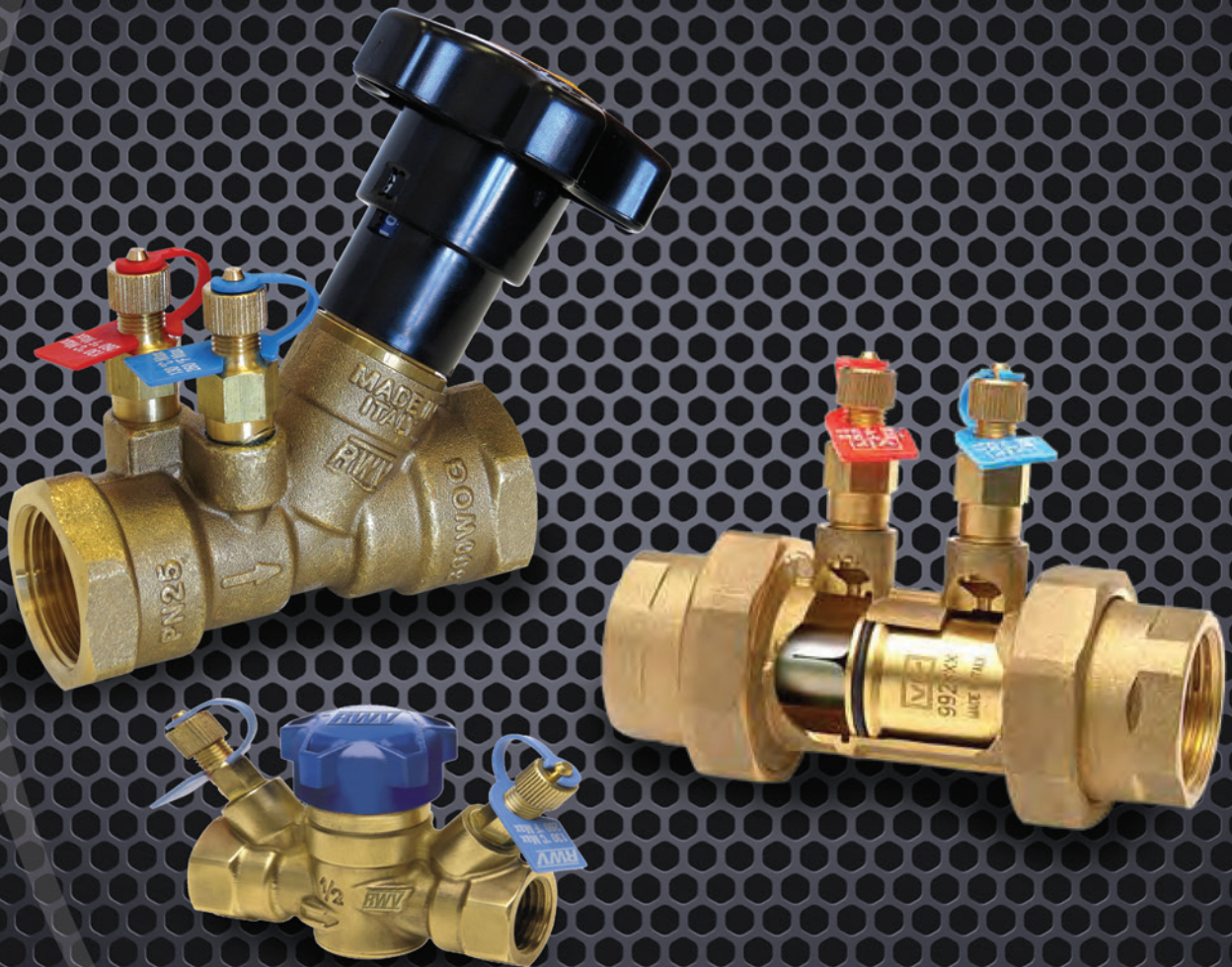




# Hydronic Solutions

[www.anvilintl.com](http://www.anvilintl.com)



**ANVIL**<sup>®</sup>  
INTERNATIONAL  
*Building Connections That Last*

**APRIL 2015**

For the most current product/pricing information on Anvil products, please visit our website at [www.anvilintl.com](http://www.anvilintl.com)



## Features

- Automatically maintains desired flow rate
- Efficient "in-line" body design
- Interchangeable flow cartridges
- Stainless steel spring and laser cut flow head for longer life and accuracy
- Integral isolation valve for positive shut-off
- Multiple connections
- DZR brass construction - corrosion resistant
- 300WOG maximum pressure
- 300psi at ambient conditions to 160°F
- 150psi maximum pressure rating at 260°F
- Thread & Solder connections
- Cartridge is DZR brass with stainless cone and spring

## Models

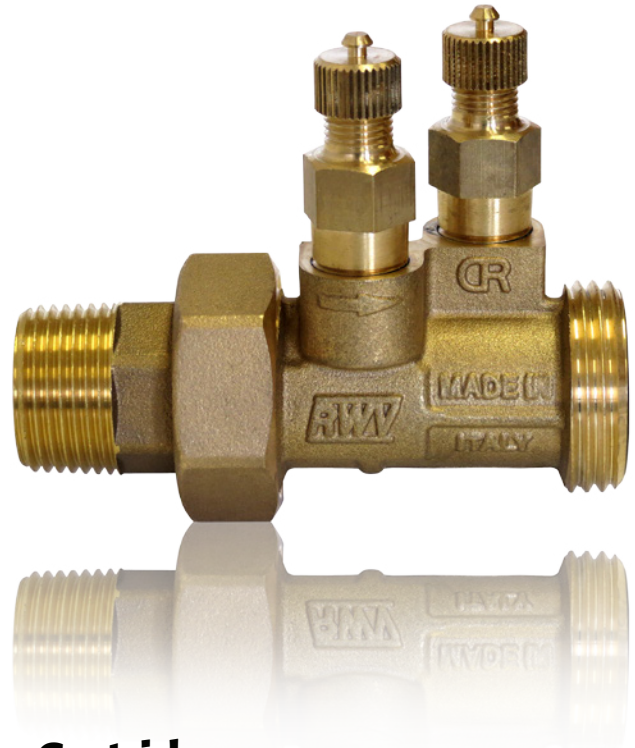
ABV-T-9907V - Female NPT union ends with mounted PT ports

ABV-S-9909V - Solder union ends with mounted PT ports

## Flow Range

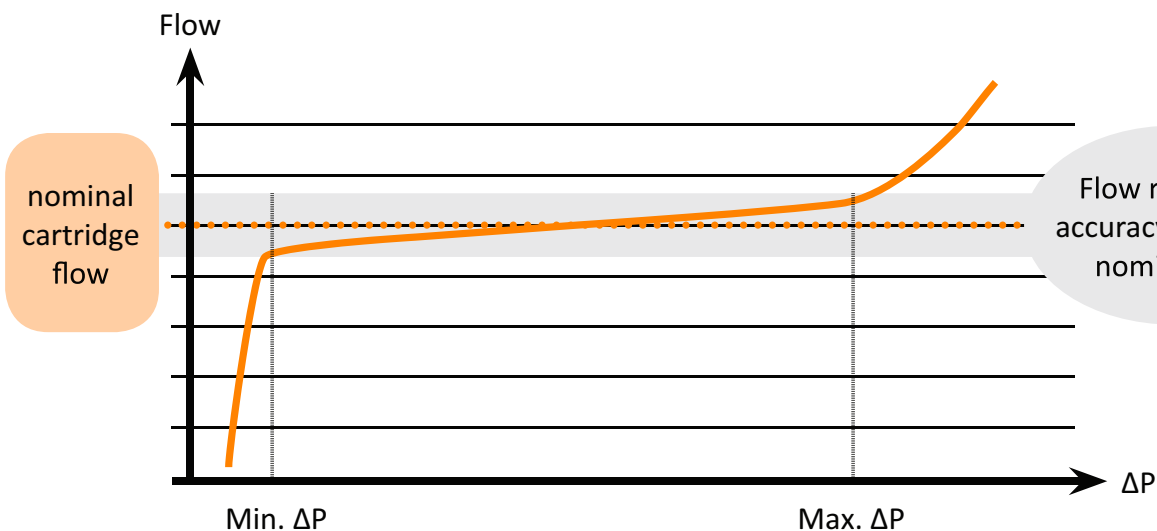
1/2" & 3/4"-L	0.32GPM to 3.17GPM (Low flow)
3/4" & 1"	2.06GPM to 15.1GPM
3/4" & 1"	4.91GPM to 41.2GPM
2"-H	25.4GPM to 105GPM

*\*Working  $\Delta P$  dependant on cartridge selection*



## Cartridges

Cartridges available in different ranges of working differential pressure, the minimum and maximum working  $\Delta P$  therefore depend on the specific cartridge model. A numeric code is marked on the cartridge body identifying it (example KRR992215.1880).



## 1/2" 3/4"-L

### Low Flow

RWV Code	Flow (GPM)	RangeΔP (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

## 3/4" 1"

### Standard Flow

RWV Code	Flow (GPM)	RangeΔP (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

## 3/4" 1"

### High Pressure

RWV Code	Flow (GPM)	RangeΔP (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	10.8	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

## 1 1/4" 1 1/2" 2"

### Standard Flow

RWV Code	Flow (GPM)	RangeΔP (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

## 1 1/4" 1 1/2" 2"

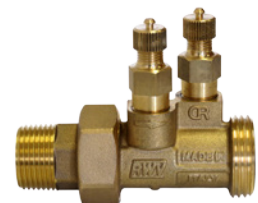
### High Pressure

RWV Code	Flow (GPM)	RangeΔP (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

## 2"-H

### Large

RWV Code	Flow (GPM)	RangeΔP (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



# MBV-9510 Series Fixed Orifice Static Balancing Valves

## Features

- Fixed orifice for constant Cv for max. performance
- Fast & easy calibration with manometer
- Double regulating for optimal accuracy  $\pm 3\%$
- Integral Memory Stop
- Can be used as shut off without resetting position
- Wide range of flow available (0.27 gpm - 56.63 gpm)
- Intended for HVAC & domestic water use
- DZR brass construction - corrosion resistant
- 300WOG maximum pressure
- 300psi at ambient conditions to 160°F
- 150psi maximum pressure rating at 260°F
- Thread & Solder connections
- Available in Lead Free configurations
- Upstream and downstream test ports standard



MBV-9510 (Above)  
MBV-9510AB (Right)

## Models

MBV-T-9517 - Thread Connections

MBV-S-9519 - Solder Connections

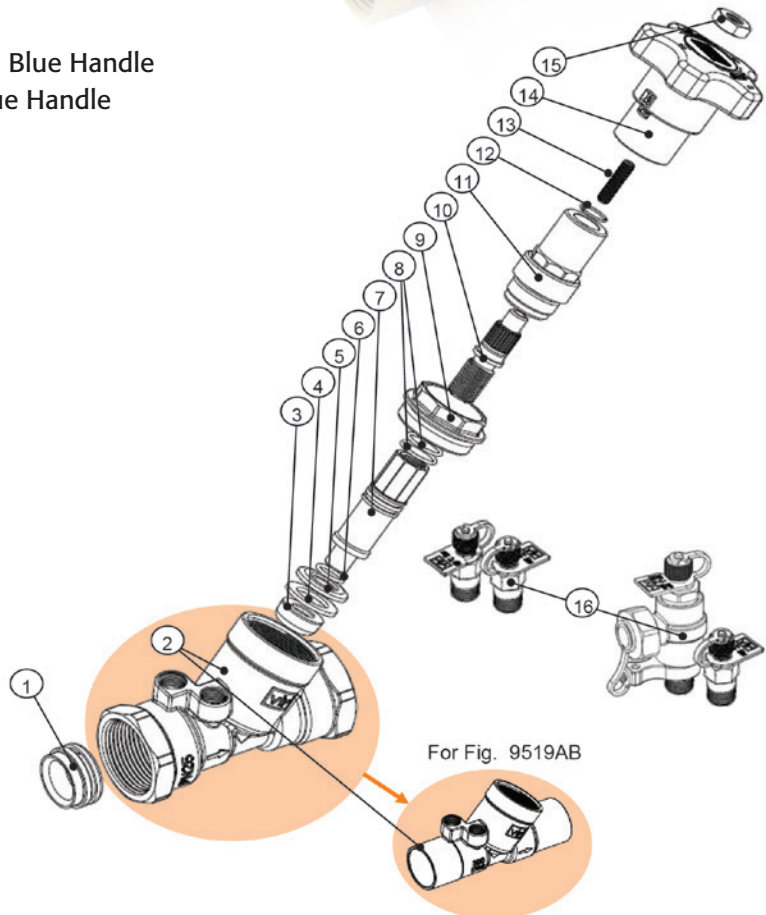
MBV-T-9517AB - Threaded connections, Lead Free — Blue Handle

MBV-S-9519AB - Solder connection, Lead Free — Blue Handle

## Flow Range

0.27 gpm - 56.63 gpm

Part	Material
1 Venturi insert	DZR Brass/Low Lead
2 Body	DZR Brass/Low Lead
3 Balancing con	DZR Brass/Low Lead
4 Gasket disc	PTFE
5 Disc	DZR Brass/Low Lead
6 Disc O-rin	EPDM Perox
7 Disc stem	DZR Brass/Low Lead
8 Stem O-ring	EPDM Perox
9 Union	DZR Brass/Low Lead
10 Stem	Brass
11 Bonnet	DZR Brass/Low Lead
12 Stop spring ring	Spring steel
13 Screw	Steel
14 Handwheel	ABS (blue)
15 Nut	Zinc plated steel
16 Test point	DZR Brass/Low Lead

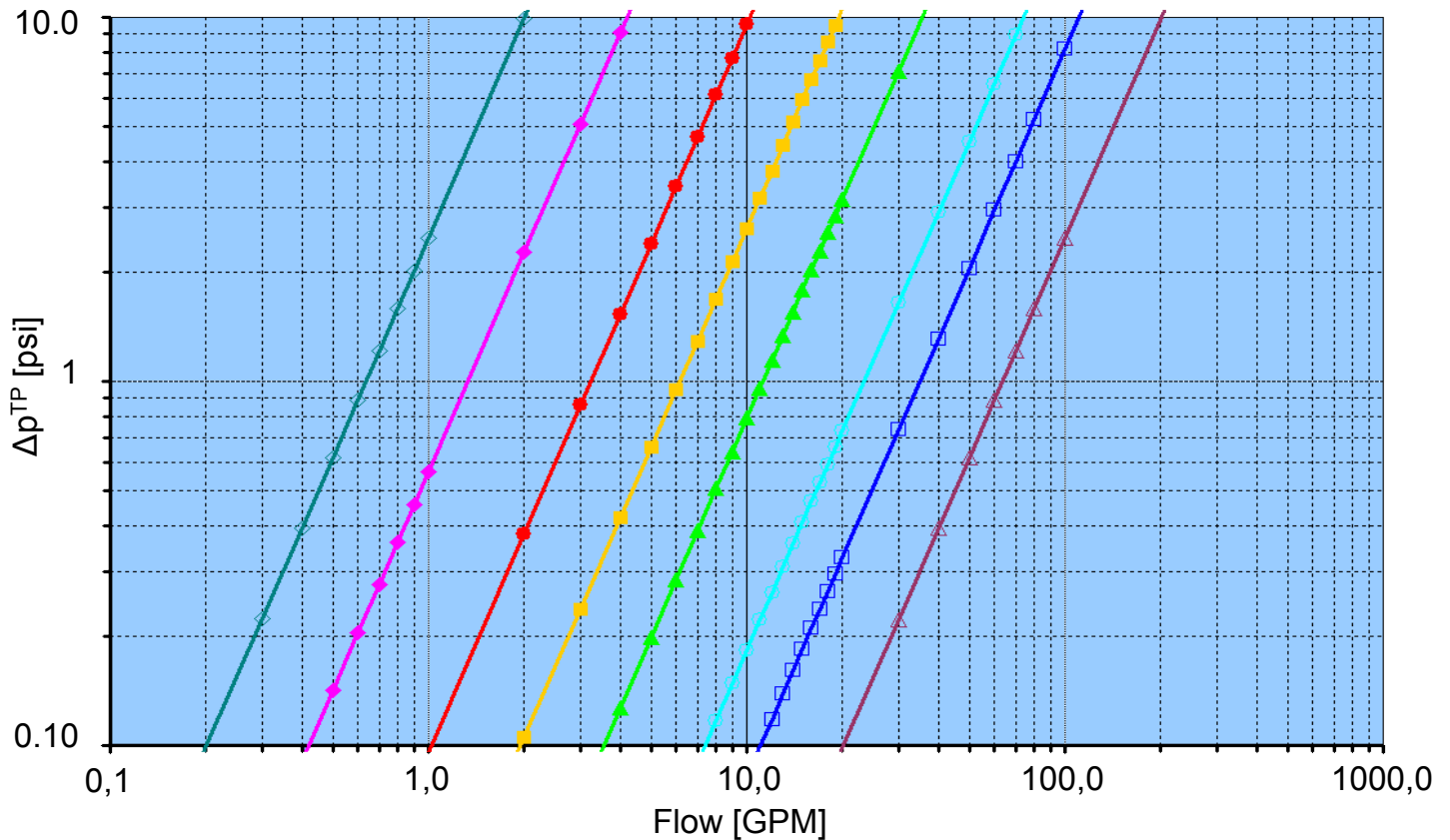


\*See spec sheet for Lead Free materials

Size	1/2" ULF	1/2" LF	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Flow range (GPM)	0.27 - 0.71	0.49 - 1.17	0.98 - 2.35	2.19 - 5.15	4.09 - 9.56	8.56 - 19.81	12.84 - 29.80	24.09 - 55.63

Min. Flow: Flow to generate a positive signal at the venturi  
Max. Flow: Flow to go through without noise or cavitation

1/2" ULF	Cv 0.64
1/2" LF	Cv 1.33
1/2"	Cv 3.24
3/4"	Cv 6.16
1"	Cv 11.24
1-1/4"	Cv 23.41
1-1/2"	Cv 34.95
2"	Cv 63.67

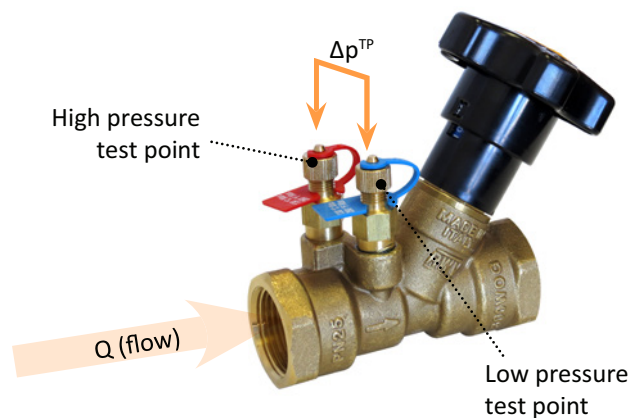


$$Q = C_v \cdot \sqrt{\Delta p^{TP}}$$

Q = flow rate in GPM

$\Delta p$  = differential pressure signal generated through the pressure test points

$C_v$  = flow coefficient





## Features

- Variable orifice terminal balancing valve
- Globe style valve for greater accuracy
- Can be used as shut off without resetting position
- Intended for HVAC & domestic water use
- DZR brass construction - corrosion resistant
- 300WOG maximum pressure
- 300psi at ambient conditions to 160°F
- 150psi maximum pressure rating at 260°F
- Thread & Solder connections
- Lead Free standard
- Upstream and downstream test ports standard

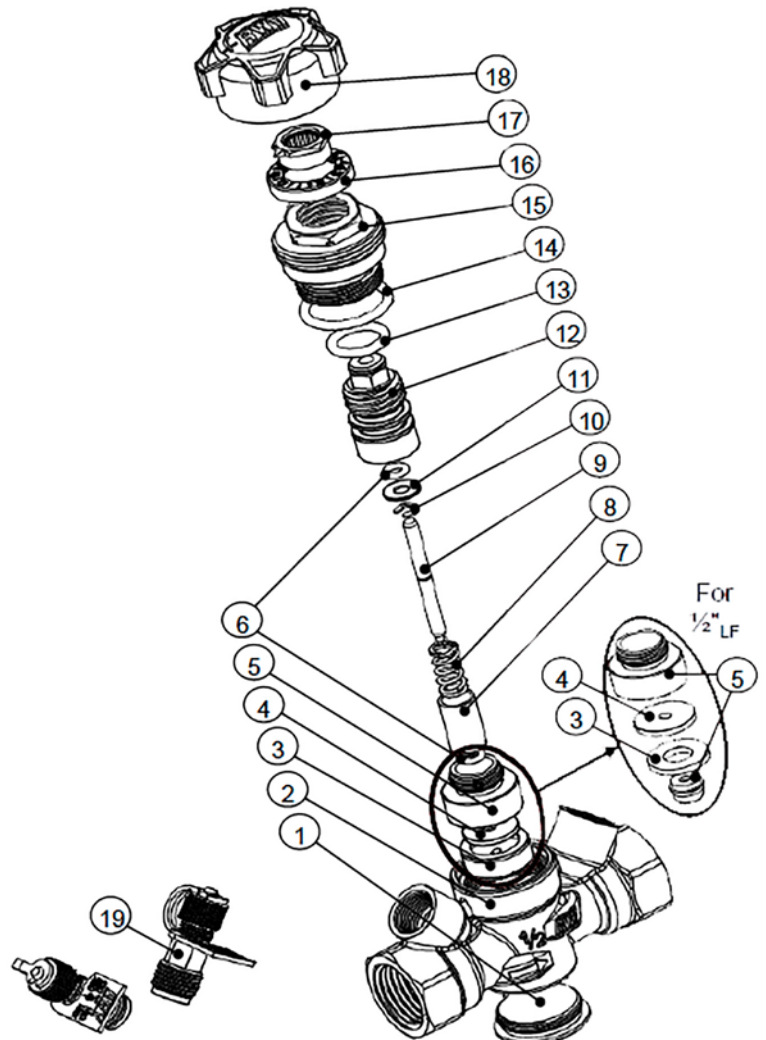
## Models

CSV-T-9527AB - Threaded connections LEAD FREE

CSV-S-9529AB - Solder connections LEAD FREE

## Flow Range

0.49 gpm - 9.56 gpm

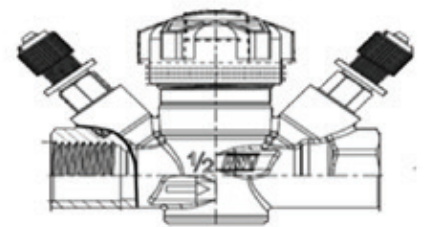
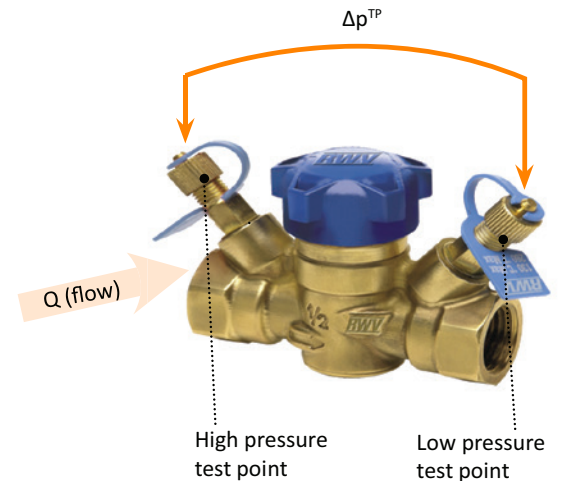


Part	Material
1 Plug	CW510L
2 Body	CW510L
3 Disc gasket	EPDM Perox
4 Gasket washer	CW510L
5 Disc	CW510L
6 Stem O-ring	EPDM Perox
7 Spring cartridge	Brass
8 Spring	Stainless steel
9 Disc stem	Stainless steel
10 Stop ring	Stainless steel
11 Washer	Brass
12 Stem	CW510L
13 Stem O-ring	EPDM Perox
14 Bonnet O-ring	EPDM Perox
15 Bonnet	CW510L
16 Graduated scale	Blue polypropylene
17 Reg. indicator	Orange polyamide
18 ON/OFF cap	Blue polyamide
19 Test point / plug	DZR brass

Regulating position	Cv (GPM/psi <sup>0.5</sup> )						
	L-1/2"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
0.5	0.127	0.578	0.798	1.538	2.324	2.486	4.416
1.0	0.173	0.879	1.237	2.405	4.058	4.451	6.960
1.5	0.220	1.098	1.584	3.121	5.376	6.474	9.283
2.0	0.254	1.260	1.896	3.665	6.081	7.757	10.47
2.5	0.289	1.399	2.197	4.162	6.844	8.682	11.91
3.0	0.335	1.514	2.451	4.509	7.561	9.677	12.95
3.5	0.382	1.607	2.671	4.844	8.116	10.47	14.22
4.0	0.428	1.699	2.856	5.226	8.786	11.46	15.49
4.5	0.486	1.769	3.017	5.491	9.191	12.14	16.53
5.0	0.543	1.838	3.179	5.723	9.896	12.95	17.69
5.5	0.601	1.884	3.306	5.942	10.27	13.41	18.61
6.0	0.659	1.931	3.422	6.127	10.96	13.99	19.42
6.5	0.717	1.965	3.526	6.312	11.45	14.34	20.23
7.0	0.775	2.000	3.619	6.555	12.14	14.80	21.04
7.5	0.832	2.035	3.700	6.740	12.60	15.26	21.85
8.0	0.879	2.058	3.792	6.937	12.95	15.72	22.66
8.5	0.925	2.081	3.873	7.087	13.30	16.07	23.47
9.0	0.960	2.104	3.942	7.145	13.76	16.76	24.16
9.5	0.994	2.116	4.012	7.283	14.34	17.34	24.97
10.0	-	-	-	-	-	-	25.55
10.5	-	-	-	-	-	-	26.24
11.0	-	-	-	-	-	-	26.59
11.5	-	-	-	-	-	-	27.17
12.0	-	-	-	-	-	-	27.40
12.5	-	-	-	-	-	-	27.86
13.0	-	-	-	-	-	-	28.09
13.5	-	-	-	-	-	-	28.79
14.0	-	-	-	-	-	-	29.13
14.5	-	-	-	-	-	-	29.83
15.0	-	-	-	-	-	-	30.17

$$Q = C_v \cdot \sqrt{\Delta p^{TP}}$$

$\Delta p$  measured at test points  
Cv depends on regulating position  
as indicated on table



Size	1/2" LF	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Flow range (GPM)	0.49-1.17	0.98-2.35	2.19-5.15	4.09-9.56	8.56-19.81	12.84-29.80	24.09-55.63

Min. Flow: Flow to generate a positive signal at the venturi

Max. Flow: Flow to go through without noise or cavitation

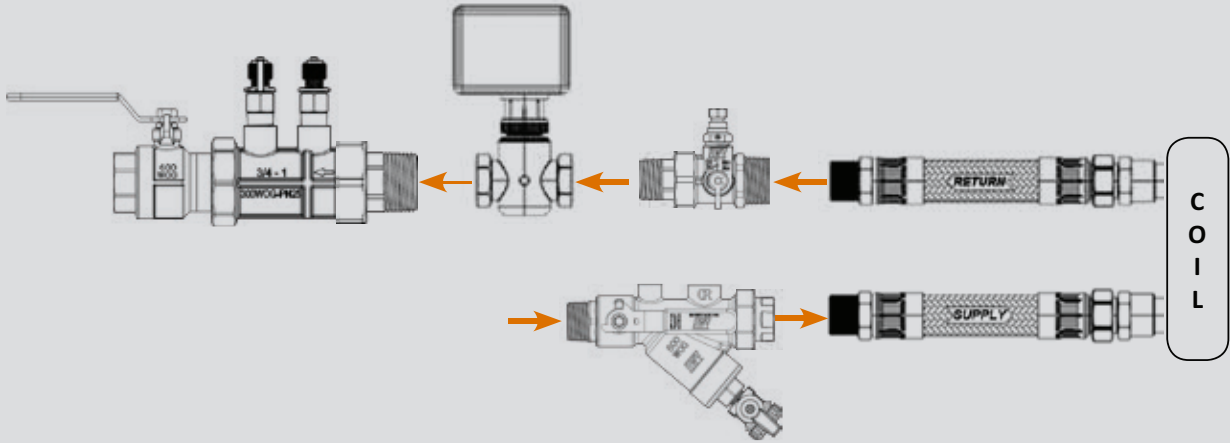
## Features

- Memory capacity up to 20,000 records
- Anti-freeze media correction
- Working with projects
- Project measuring with the possibility of printed balancing report
- Li-ion rechargeable battery with USB charger
- Mini USB PC interface
- Ergonomic device case
- QVGA RGB 2.2 inch, 240 x 320 pixel backlight display
- Memory capacity up to 1,200 valves
- Simple valve detection by valve image
- Programmable recording of measured values
- IP65 cover

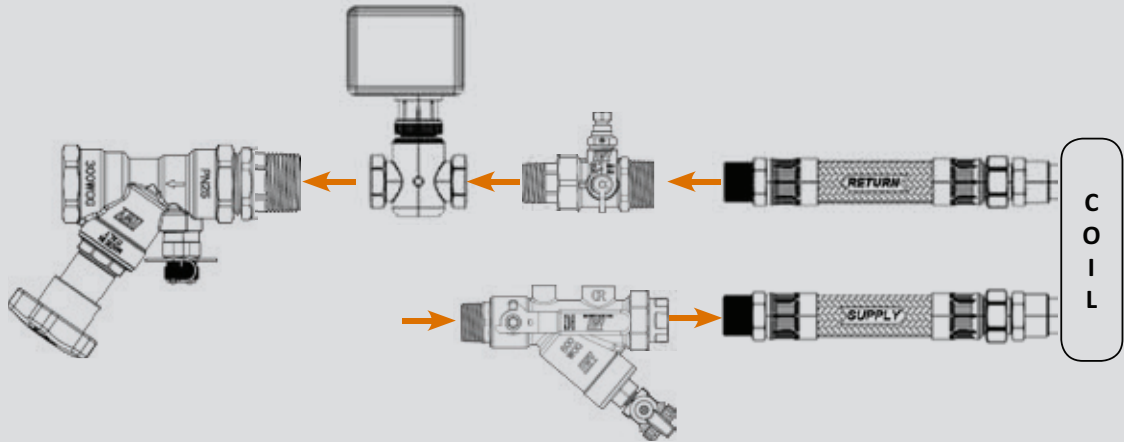




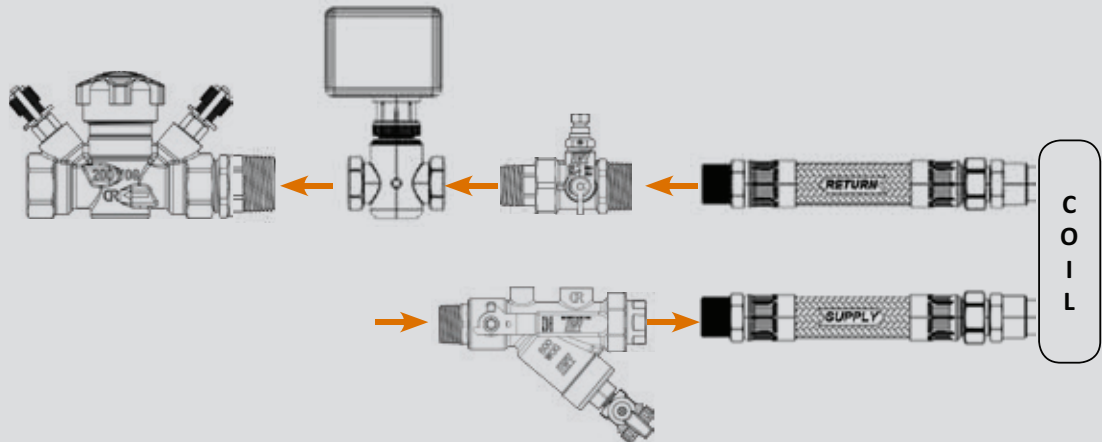
## Automatic 2-Way



## Manual 2-Way



## Circuit Setter 2-Way



*Multiple configurations available.*

*Product will be seal packed and labeled per the mechanical schedule provided.*

# BRANDS OF ANVIL INTERNATIONAL



Anvil product lines include malleable and cast iron fittings, unions and flanges; seamless and welded steel pipe nipples; steel pipe couplings; universal anvilets; forged steel fittings and unions; pipe hangers and supports; threaded rod; and engineered hangers.



The Gruvlok product line consists of couplings for grooved and plain-end fittings, butterfly valves and check valves; flanges; pump protection components; pipe grooving tools; as well as copper and stainless steel system components.



The SPF/Anvil product line includes a variety of internationally sourced products such as grooved couplings, fittings, cast iron, malleable iron and ductile iron threaded fittings, steel pipe nipples, as well as tee-lets.



Catawissa NACE and API approved wing unions for Standard Service are offered in non-pressure seal ends as well as threaded and butt weld, and are interchangeable with most leading union manufacturers. Fully traceable and available with complete mill certifications, Catawissa's oilfield wing union product line includes the standard ball-and-cone design plus our unique Figure 300 Flat Face design, where space and pipe line separation are a consideration.



Anvil EPS-Engineered Pipe Supports are products used to support piping systems under thermal, seismic, and other dynamic loading conditions. The product line encompasses variable spring hangers, constant supports, sway struts and snubbers as well as standard and special design clamps. Anvil EPS brings the highest quality products and innovative engineering solutions to common and uncommon piping system problems.



JB Smith is the leading manufacturer of oil country tubular fittings, swages and bull plugs – all meeting API specifications. Offering tubing nipples, casing nipples as well as a full line of traditional line pipe and oil country threads in every schedule, JB Smith is the resource for all your oilfield needs.



The Merit product line includes a variety of tee-lets and drop nipples for fire protection applications. Most Merit products are UL/ULC Listed, FM Approved, and rated from 175 to 300 psi.



Steel pipe nipples and steel pipe couplings are manufactured in accordance with the ASTM A733 Standard Specification for Welded and Seamless Carbon Steel and Stainless Steel Pipe Nipples. Steel pipe couplings are manufactured in accordance with the ASTM A865 Standard Specification for Threaded Couplings, Steel, Black or Zinc-Coated (Galvanized) Welded or Seamless, for Use in Steel Pipe Joints. API couplings are manufactured in accordance with the API Specification for line pipe.



Anvil-Strut products include a complete line of channel in stock lengths of 10 and 20 feet, with custom lengths available upon request. A variety of fittings and accessories are also offered. All products can be ordered in an assortment of finishes and material choices including SupR-Green™, Zinc Trivalent Chromium, pre-galvanized, hot-dipped galvanized, electro-galvanized, aluminum, plain, and stainless steel.



Founded in 1983, NAP is a manufacturer of fabrication equipment, including automatic welders, plasma cut-off equipment, hole cutting equipment, make-on machines and pipe threaders. NAP, innovators of pipe fabrication equipment.



**ANVIL<sup>®</sup>**  
**INTERNATIONAL**  
*Building Connections That Last*

Anvil International is building the most advanced Grooved Piping Resource in the industry. We seek to set a new standard in Product Performance, Customer Service, and Technical Support. Our Value Proposition is clear. The Gruvlok team will meet and surpass Industry Requirements in Manufacturing, Distribution, and Service in Support of Every Customer – Every Time.





## CORPORATE OFFICES

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Regional Distribution & Customer Service Center

7979 W. 183rd Street, Unit D, Tinley Park, IL 60477

Tel: 708-885-3000

Fax: 708-534-5441

Toll Free: 1-800-301-2701

### Southern Region

Regional Distribution & Customer Service Center

1401 Valley View Lane, Suite 150, Irving, TX 75061

Tel: 972-871-1206

Fax: 972-641-8946

Toll Free: 1-800-451-4414

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Customer Service Center

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BUILDING CONNECTIONS THAT LAST

