



BALANCING VALVE SOLUTIONS

RWV Hydronic Controls



951x series

Features Dezincification Resistant 9517 Fixed orifice for constant Cv and max. performance Fast & easy calibration Venturi insert for optimal accuracy ±3% PTFE seat guarantees positive shut-off function Integral Memory Stop Can be used as shut off without resetting position Wide range of flow available **Fixed orifice valve** Intended for HVAC & domestic water use provides greater efficiency than a variable orifice valve DZR brass construction - corrosion resistant 300WOG max. pressure 300psi at ambient conditions to 160°F 150psi max. pressure rating at 260°F FNPT, MNPT, Solder, EzPress and PEX connections available Available in Lead Free configurations **Models** 9517T-PP 9517 --- FNPT ends 9519 --- Solder ends LEAD 9517AB --- FNPT ends LEAD FREE FREE US 9519AB --- Solder ends LEAD FREE NSF/ANSI 61 & 372 9517T-xx ---- Union ends with tailpieces

x can be: union end connection	M: Male Tailpiece	F: Female 7	Tailpiece S :	Solder Tailpiece
	P: EzPress Tailpie	ce E: PEX F	1960 Tailpiec	е
x can be: union end Ball valve	BF : Female NPT	BS: Solder	BP: EzPress	BE: PEX F1960

Flow Range



* 1⁄2" - 2" for 9517 and 9519 U-1⁄2" - 1" for 9517T



www.mastewart.com

RWV Hydronic Controls[®]

Static Balancing Valves

9527AB

9529AB

ertified

952x series

Features

Variable orifice terminal balancing valve Globe design Can be used as shut off without resetting position Intended for HVAC & domestic water use

300WOG max. pressure 300psi at ambient conditions to 160°F 150psi maximum pressure rating at 260°F Threaded & Solder connections Lead Free standard Valve upstream and downstream test ports standard



9527AB --- Threaded connections LEAD FREE **9529AB** --- Solder connections LEAD FREE

Flow Range

0.49 GPM - 55.63 GPM

Size	1⁄2"	3/4"	1"	1-1/4"	1- ½"	2"
Flow range (GPM)	0.98-2.35	2.19-5.15	4.09-9.56	8.56-19.81	12.84-29.80	24.09-55.63



The 9520 series can be utilized together with Vaurien series of linear actuators for ON/OFF operation. The actuator can be easily mounted to the valve for direct interface with the building management system.









9907 series

Features

Automatically maintains desired flow rate Efficient "in-line" body design Interchangeable flow cartridges Stainless steel spring and piston Flow regulation accuracy ±5% Multiple connections Available with integral isolation ball valve for positive shut-off Valve upstream and downstream test ports standard

DZR brass construction - corrosion resistant 300WOG max. pressure 300psi at ambient conditions to 160°F 150psi maximum pressure rating at 260°F **FNPT**, **MNPT**, **Solder, EzPress** and **PEX** connections available Cartridge is DZR brass with stainless steel spring and piston

Models

9907T-xx ---- Union ends with tailpieces

x can be ----M: Male TailpieceF: Female TailpieceS: Solder TailpieceP: EzPress TailpieceE: PEXF: 1960 Tailpiece----BF: Female NPTBS: SolderBP: EzPressBE: PEX F1960

Flow Range

1⁄2" - 3⁄4"-L	0.32 GPM - 3.17 GPM
³ ⁄4" - 1-¹⁄4"L	2.06 GPM - 15.1 GPM
1-¼" - 2"	7.29 GPM - 41.2 GPM
2"-H	25.4 GPM - 154 GPM

9907T-FF



RWV Hydronic Controls®

Cartridges

Cartridges 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 identifying it.





Mini

Cartridge Code	Flow (GPM)	Range∆P (psi)
KRR99 1202 1880	0.32	2.2-25
KRR99 1203 1880	0.48	2.3-32
KRR99 1204 1880	0.63	2.3-32
KRR99 1205 1880	0.79	2.3-32
KRR99 1206 1880	0.95	2.3-32
KRR99 1207 1880	1.11	2.3-32
KRR99 1208 1880	1.27	2.3-32
KRR99 1209 1880	1.43	2.3-32
KRR99 1210 1880	1.59	2.3-32
KRR99 1211 1880	1.74	2.5-32
KRR99 1212 1880	1.90	2.5-32
KRR99 1213 1880	2.06	2.5-32
KRR99 1214 1880	2.22	2.5-32
KRR99 1215 1880	2.38	2.5-32
KRR99 1216 1880	2.54	2.5-32
KRR99 1218 1880	2.85	2.6-32
KRR99 1220 1880	3.17	2.8-32

¾″ 1″ 1¼″-L

Small (Standard Pressure Range)

Cartridge Code	Flow (GPM)	Range∆P (psi)
KRR99 2213 1880	2.06	2.5-35
KRR99 2215 1880	2.38	2.5-35
KRR99 2217 1880	2.69	2.5-35
KRR99 2219 1880	3.01	2.5-35
KRR99 2221 1880	3.33	2.6-35
KRR99 2224 1880	3.80	2.6-35
KRR99 2227 1880	4.28	2.6-35
KRR99 2230 1880	4.76	2.6-35
KRR99 2233 1880	5.23	2.6-35
KRR99 2236 1880	5.71	2.6-35
KRR99 2240 1880	6.34	2.6-35
KRR99 2245 1880	7.13	2.8-35
KRR99 2250 1880	7.93	2.8-35
KRR99 2255 1880	8.72	3.0-35
KRR99 2260 1880	9.51	3.2-35
KRR99 2266 1880	10.5	3.5-35
KRR99 2272 1880	11.4	3.5-35

1/2 " 3/4" 1" 11/4"-L

Small (High Pressure Range)

Cartridge Code	Flow (GPM)	Range∆P (psi)
KRR99 2318 1880	2.85	4.2-64
KRR99 2320 1880	3.17	4.6-64
KRR99 2323 1880	3.65	4.8-64
KRR99 2327 1880	3.96	4.8-64
KRR99 2329 1880	4.60	4.8-64
KRR99 2332 1880	5.07	4.8-64
KRR99 2336 1880	5.71	4.8-64
KRR99 2340 1880	6.34	4.8-64
KRR99 2345 1880	7.13	4.8-64
KRR99 2350 1880	7.93	4.8-64
KRR99 2355 1880	8.72	4.9-64
KRR99 2361 1880	9.67	5.2-64
KRR99 2368 1880	10.8	5.2-64
KRR99 2375 1880	11.9	5.2-64
KRR99 2380 1880	12.7	5.2-64
KRR99 2386 1880	13.6	5.8-64
KRR99 2395 1880	15.1	5.8-64

1¼″ 1½″ 2″

Medium (Standard Pressure Range)

Cartridge Code	Flow (GPM)	Range∆P (psi)
KRR99 4246 1880	7.29	2.0-33
KRR99 4250 1880	7.93	2.0-33
KRR99 4255 1880	8.72	2.0-33
KRR99 4258 1880	9.19	2.0-33
KRR99 4262 1880	9.83	2.0-33
KRR99 4267 1880	10.6	2.2-33
KRR99 4274 1880	11.7	2.2-33
KRR99 4283 1880	13.2	2.2-33
KRR99 4290 1880	14.3	2.2-33
KRR99 4297 1880	15.4	2.2-33
KRR99 4210 1880	16.6	2.2-33
KRR99 4212 1880	19.0	2.2-33
KRR99 4213 1880	20.6	2.3-33
KRR99 4214 1880	22.8	2.5-33
KRR99 4216 1880	24.7	2.5-33
KRR99 4217 1880	26.6	2.6-33
KRR99 4218 1880	28.5	2.8-33
KRR99 4220 1880	31.1	2.8-33

1¼″ 1½" 2"

Medium (High Pressure Range)

	Cartridge Code	Flow (GPM)	Range∆P (psi)
ĺ	KRR99 4362 1880	9.83	3.9-61
	KRR99 4368 1880	10.8	3.9-61
	KRR99 4374 1880	11.7	3.9-61
	KRR99 4379 1880	12.5	3.9-61
	KRR99 4383 1880	13.2	3.9-61
	KRR99 4391 1880	14.4	4.1-61
	KRR99 4310 1880	15.9	4.1-61
	KRR99 4311 1880	17.6	4.1-61
	KRR99 4312 1880	19.0	4.2-61
	KRR99 4313 1880	20.6	4.2-61
	KRR99 4314 1880	22.0	4.2-61
	KRR99 4316 1880	26.0	4.4-61
	KRR99 4318 1880	27.7	4.5-61
	KRR99 4319 1880	30.1	4.5-61
	KRR99 4321 1880	32.7	4.6-61
	KRR99 4322 1880	35.4	4.9-61
	KRR99 4324 1880	38.0	5.1-61
	KRR99 4326 1880	41.2	5.5-61



Large

Cartridge Code	Flow Range∆P (GPM) (psi)
KRR99 6216 1880	25.4 2.0-33
KRR99 6218 1880	28.5 2.0-33
KRR99 6220 1880	31.7 2.0-33
KRR99 6222 1880	34.9 2.2-33
KRR99 6224 1880	38.0 2.2-33
KRR99 6227 1880	42.8 2.2-33
KRR99 6230 1880	47.6 2.3-33
KRR99 6233 1880	52.3 2.3-33
KRR99 6236 1880	57.1 2.3-33
KRR99 6240 1880	63.4 2.5-33
KRR99 6245 1880	71.3 2.5-33
KRR99 6250 1880	79.3 2.8-33
KRR99 6255 1890	87.2 2.8-33
KRR99 6260 1880	95.1 3.0-33
KRR99 6266 1880	105 3.0-33
KRR99 6273 1880	116 3.6-33
KRR99 6280 1880	127 4.1-33
KRR99 6288 1880	139 5.1-33
KRR99 6297 1880	154 5.8-33



RWV Hydronic Controls®



Presssure Independent Control Valves (PICV)

9707 series

Features

Pressure independent control valve (PICV) Threaded M/M for union ends (ASME B1.20.1 - NPSM) Max. ΔP working pressure 60psi 100% full stroke modulation, independent of valve setting M30x1.5 threads for linear actuator Available with integral isolation ball valve for positive shut-off Valve upstream and downstream test ports standard

DZR Brass Construction 300WOG **FNPT**, **MNPT**, **Solder, Ball Valve** tailpieces available

DZR Dezincification Resistant

Working conditions Water: 15°F - 260°F

below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids

May be used with Ethpropylene-glycolic mixtures up to 50%

Model 9707T --

Flow Range

0.12 GPM - 15.9 GPM, NPS 1/2 - 1 1/4"

End Connections:

- M Male NPT F - Female NPT
- **S** Solder
- P Press
- BF Ball Valve
- **DF -** Dali Valv





The 9707T can be utilized together with Vaurien series of linear actuators for ON/OFF or Modulating (0-10V) operations. The actuator can be easily mounted to the valve for direct interface with the building management system.



www.mastewart.com



9707T

DATEN

9707T-MM

Linear Actuators for Balancing Valves

Vaurien-M

Features

On /Off or Modulating, electromechanical linear actuator Suitable for RWV 9707 valve M30x1.5 threaded connection With 78in electric wire Enclosure protection IP54 Power supply 50Hz/60Hz, 24V AC/DC, power 1.5W Positional **"Feedback Signal"** Max stroke 0.236in, auto stroke detection Auto-zero self calibration Auto-stroke detection Stroke time 2sec/0.01in, thrust 29lbf CE compliant



0-10V control signal (adjustable for 0-5VDC, 5-10VDC, 2-10VDC, 0-20mA or 4-20mA) Linear charactreristic (adjustable for equal-percentage characteristic) Working ambient temperature: 32° to +122°F Working fluid temperature: 32° to +203°F

Vaurien-1 / Vaurien-2

Features

ON/OFF linear actuator with threaded connection Suitable for RWV 9520 series and RWV 9707R valves M30x1.5 threaded nut with fast connection (*) With 40in electric wire Enclosure protection IP54/NEMA3 Power supply 50Hz/60Hz Normally closed (NC) Working temperature: 32°F to +140°F

Model	Power supply	Thrust	Stroke	Travel Time
Vaurien 1	24VDC	22.5lbf	0.15in	≈3.5min
Vaurien 2	24VDC	28.1lbf	0.25in	≈4.5min



RWV Hydronic Controls[®]



Standard Kit Configuration

Coil Hook Up Kits

Examples, supplied with:

Balancing Valves:

CKS - 9517/9519 Static, Fixed Orifice (Venturi Insert)

CKA – 9907T-XX-XXXX Automatic

CKP – 9707T-XX Pressure Independent Control (PIC-V)

CKPC-9707T-XX-VM PIC-V & Vaurien-M (VM) Actuator

Accessories:

SSB Stainless Steel Braided Hoses (2)

92ST Strainer with Shut off, or 92UDT Union Ball Valve

92UTFM Union with Air Vent

92UMM Male Micro Union

* Additional components as required.* Vacuum sealed to corrugated

backing.













Digital Differential Pressure Manometer / Clamshell

T650RWV



Features

Memory capacity up to 2,000 records Anti-freeze media correction Project measuring with the possibility of export and transfer projects via email AAA battery type Ergonomic device case Interface to sensor through smart device Dedicated app for iOS/Android Simple valve detection by valve image 24-bit pressure sensor IP65 cover

* Used with 951x Fixed Orifice Manual Balancing Valves enables flow rate reading in real time without the need of the charts







95INSL / 99INSL

Features

Polyethylene Foam Insulation Self-sealing wrap

Working temperature: -76°F - 200°F

Polyethylene / Elastomer, Foam type Insulation is recommended over Fibreglass type Insulation.







Iron Flange Static Balancing Valve / Metering Station

9574P

Features

Variable orifice cast iron balancing valve Precision Adjustable Handwheel Flat face flange ends to ANSI B16.10 Flanges drilled according to ASME B16.1 class 125 Acrylic painted surface Valve accuracy ±5% to nominal Cv value Threaded and capped test ports PT ports included with valves (not mounted)

Flow Range

24.09 GPM - 4057 GPM



Size	2"	2- ¹ / ₂ "	3"	4"	5"	6"	8"	10"	12"	14"	16"
Flow range	24.09 -	47.9 -	101 -	172 -	267 -	376 -	664 -	1055 -	1493 -	1521 -	1854 -
(GPM)	55.63	110	244	413	630	902	1593	2485	4057	4137	5072

9450A

Stainless steel wafer orifice plate For ANSI 125 or ANSI 150 flanges Design according to BS7350

The orifice plate can be installed together with the same size of 9574P.

9407

DZR Brass metering station FNPT x MNPT Design according to BS7350

Venturi insert for optimal accuracy +/- 3% (test according to BS7350)





RWV Hydronic Controls[®]



Iron Automatic Balancing Valva

9957W

Features

Ductile iron wafer automatic balancing valve For ASME B16.42 class 150 flanges Provided with eyebolt for DN≥4" Wide range of flows available (see cartridge section) Test points with extension included (not mounted) Class 150

Flow Range

25.4GPM to 154GPM for $2\frac{1}{2}$ " and 3" (single cartridge) Higher flows available with the multi cartridge system for DN≥4" Minimum working ΔP depending on cartridge configuration

٨

۸in. ۵

nominal

cartridge flow

Size	2- ¹ / ₂ "	3"	4"	5"	6"	8"	10"	12"
Flow range	25.4 -	25.4 -	25.4 -	25.4 -	25.4 -	25.4 -	25.4 -	25.4 -
(GPM)	154	154	308	462	616	1078	1540	2156

Cartridge Code	Flow (GPM)	Range∆P (psi)
KRR996216.1880	25.4	2.0-33
KRR996218.1880	28.5	2.0-33
KRR99 6220 .1880	31.7	2.0-33
KRR996222.1880	34.9	2.2-33
KRR99 6224 .1880	38.0	2.2-33
KRR996227.1880	42.8	2.2-33
KRR99 6230 .1880	47.6	2.3-33
KRR996233.1880	52.3	2.3-33
KRR99 6236 .1880	57.1	2.3-33
KRR996240.1880	63.4	2.5-33
KRR99 6245 .1880	71.3	2.5-33
KRR996250.1880	79.3	2.8-33
KRR99 6255 .1880	87.2	2.8-33
KRR996260.1880	95.1	3.0-33
KRR99 6266 .1880	105	3.0-33
KRR996273.1880	116	3.6-33
KRR99 6280 .1880	127	4.1-33
KRR996288.1880	139	5.1-33
KRR996297.1880	154	5.8-33
I		Flow







www.mastewart.com



ΔР

Valve accuracy +/- 5% to nominal flow

92UT

Features

DZR brass union body with manual air vent and test point Body:

End Connection available:

F- FNPT (ASME B1.20.1 - NPT)
M- MNPT (ASME B1.20.1 - NPT)
Solder (ASME B16.22)

P- PEX (ASME F1960)



92UTFF

92UTSS

RWV Hydronic Controls®

92UTSM

92UTFM

400WOG

Working conditions:

Water: from 15°F to 260°F below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids

92U





Bypass Valve / Union Ball Valve



92UDT / 92UDS / 92UDP

Features

DZR brass union ball valve with drain Blow-out proof stem Adjustable packing nut Full port Blow down valve with capped ³/₄" hose end One installed test point One additional tapped ¹/₄" port

600WOG @ 160°F

Working conditions: Water: from 15°F to 260°F below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids



RWV Hydronic Controls®

Models

92UBT & 92UDT --- Threaded end (ASME B1.20.1 - NPT) with union end FNPT tailpiece standard, MNPT, Solder, EzPress and PEX (F1960) options available
92UBS & 92UDS --- Solder end (ASME B16.22) with union end Solder tailpiece standard, FNPT, MNPT, EzPress and PEX (F1960) options available
92UBP & 92UDP --- EzPress end with union end EzPress tailpiece standard, FNPT, MNPT, Solder and PEX (F1960) options available



92ST / 92SS / 92SP

Features

DZR brass ball valve - wye strainer combination Blow-out proof stem Adjustable packing nut **Full port** Y pattern strainer Stainless steel screen (20 mesh) Blow down valve with ³/₄" hose end One installed test point One additional tapped ¹/₄" port



Working conditions: Water: from 15°F to 260°F below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids

Dezincification Resistant

92ST-BY / 92SS-BY / 92SP-BY

Features

DZR brass ball valve - wye strainer combination 1/2" port for bypass Blow-out proof stem Adjustable packing nut Full port Y pattern strainer Stainless steel screen (20 mesh)



92ST

92SS

92SP

400WOG @ 160°F

Working conditions: Water: from 15°F to 260°F below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids

Models

92ST & 92ST-BY `	Threaded end (ASME B1.20.1 - NPT) with union end
	FNPT tailpiece standard, MNPT tailpiece option available
92SS & 92SS-BY	Solder end (ASME B16.22) with union end
	Solder tailpiece standard, FNPT and MNPT tailpiece options available
92SP & 92SP-BY	EzPress end with union end
	EzPress tailpiece standard, FNPT and MNPT tailpiece options available





Combination Strainer / Hose / Tee / Air Vent

92SEC Standard Port

Features

DZR brass ball valve - wye strainer combination Blow-out proof stem Adjustable packing nut Regular port Y pattern strainer Stainless steel screen (20 mesh) Blow down valve with ³/₄" hose end One installed test point Two additional tapped ¹/₄" port





- PEX end (F1960)
- PEX Union End (F1960)

400WOG @ 160°F

Working conditions: Water: from 15°F to 260°F below 32°F only for water with added antifreezing fluids over 212°F only for water with added anti-boiling fluids

SSB "Flexible Hose Assemblies

Fire retardant,Stainless Steel Braid with EPDM Tube Maximum Temperature: **93c** Maximum Operating Pressure: **300 PSI**

Models

SSB-MM --- MNPT end x swivel MNPT end Sizes: 1/2" - 2" Standard Length's: 12", 18", 24" Additional length's available on request

600 WOG DZR Brass Ball Valves:



MAS B1F-LF-SS MAS B3-LF-DZR



Polyethylene / Elastomer, Foam type Insulation is recommended over Fibreglass type Insulation.



Features DZR brass tee

400WOG @ 160°F







Dynamic - Fixed Orifice



Head Office

12900–87th Avenue Surrey, British Columbia Canada V3W 3H9

Mail to: P.O. 258, Surrey, British Columbia Canada V3T 4W8

Phone: (604) 594-8431 Fax: (604) 594-4335

Toll Free North America: 1-800-594-8431

Ontario Branch

40 Pugsley Court Ajax, Ontario L1Z 0L8 Phone: (905) 683-7303 Fax: (905) 683-9108

Alberta Branch

Unit #4, 3006 – 51 Ave NW Edmonton, Alberta T6P 0E1 Phone: (780) 436-9051 Fax: (780) 435-0463 Toll Free in Alberta 1-800-232-7376

Quebec Branch

79H Brunswick Blvd. Dollard-des-Ormeaux, Que. H9B 2J5 Phone: (514) 421-6311 Fax: (514) 421-6323 3





Pic-V



Flanged



Actuators

Modulating Type with Feedback

A CANANA CANANA



On/Off

Automatic - Wafer Type



MAS-RWVHC_05_2024

WWN.R

Stewart