

# SELECTION GUIDE

## Terminal Unit Zone Valve V200/V300 Series

A broad selection of inlet and outlet configurations and choice of sizes.

### 1 Select your valve body

- Female Thread
- Male Thread
- Solder
- Single Union
- Double Union

### 2 Select your cartridge type

- Choice of CV
- Hot and Chilled Water
- 50% Glycol
- Low Pressure Steam
- Pressure Balanced

### 3 Select your actuator

- Electric
- Pneumatic
- Thermoelectric
- Thermostatic
- Wireless
- Spring Return
- FLP Non Spring Return

Easily Selectable  
Easily Serviceable

Interchangeability  
as easy as 1-2-3

Install a Spartan valve body assembly and easily change the cartridge or actuator while the valve body remains “in-line”.

Servicing is so much quicker and easier... it's the ultimate green solution for piping installations.

This guide will help you select the right assembly for your needs.

**As easy as 1-2-3!**



**1/2" 3/4" 1"**

## 1 Select the valve body to best suit to your piping applications and choose from many connection types

Spartan Peripheral Devices 2 way V200 series and 3 way V300 series globe control valve bodies are available in a wide range of styles and connection types. These valve bodies are common to the complete line of Spartan Terminal Unit actuators (wireless, electric, electronic, pneumatic and thermostatic) and are easily

interchangeable with a thumb nut. The commercial application globe valve bodies utilize low zinc anti dezincification bronze.

All valve bodies are globe type rated ANSI 250 (PN 25).



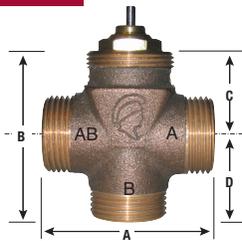
### General Specifications for all Valve Bodies

Body Material	Low zinc bronze, alloy C84400
Pressure Rating	ANSI 250 (400 PSI to 150°F (66°C), 250 PSI to 250° F (120°C))
Max. Test Pressure	1200 PSI (81 bar)
Max. Differential P	50 PSI (3.5 bar) can be exceeded but with possible water noise

Valve Stem	"Mirror – maker" burnished stainless steel stems
Rangeability	See Internal Cartridge Specification table, on page 4
Stem Travel	5/32" (4mm)
Stem Position	UP = valve open, DOWN = valve closed

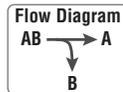
### V300 Series 3 way Control Valve Bodies

#### V320



**1/2" or 3/4", 3 Way Diverting Valve Body. Conical Unions on all 3 ports**

V320	A	B	C	D	Weight
	2.24 (56,90)	2.24 (56,90)	1.09 (27,69)	1.09 (27,69)	8.5oz (240g)

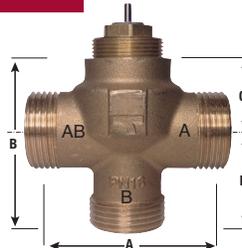


**Stem UP flow AB to A (default position),  
Stem DOWN flow AB to B**

**Select to include:**

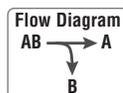
- V320-12N for 1/2" threaded unions
- V320-12S for 1/2" solder unions (for 5/8" copper pipe)
- V320-34N for 3/4" threaded unions
- V320-34S for 3/4" solder unions (for 7/8" copper pipe)
- Select CV from cartridge type ED

#### V345



**3/4" or 1", 3 Way Diverting Valve Body. Conical Unions on all 3 ports**

V345	A	B	C	D	Weight
	3.25 83	3.00 76	1.50 38	1.50 38	2.35lbs (1.07kgs)

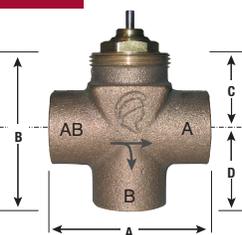


**Stem UP flow AB to A (default position),  
Stem DOWN flow AB to B**

**Select to include:**

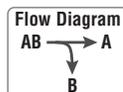
- V345-34N for 3/4" threaded unions
- V345-34S for 3/4" solder unions (for 7/8" copper pipe)
- V345-10N for 1" threaded unions
- V345-10S for 1" solder unions (for 1 1/8" copper pipe)
- Replacement cartridge V345PKG-5.5

#### V325



**1/2" or 3/4", 3 Way Diverting Valve Body. Direct Solder**

1/2" Valve	A	B	C	D	Weight
V325-12	2.24 (56,90)	2.21 (56,13)	1.09 (27,69)	1.12 (28,45)	8.1oz (230g)
3/4" Valve	A	B	C	D	
V325-34	2.24 (56,90)	3.32 (84,30)	1.09 (25,00)	2.23 (56,64)	8.5oz (240g)

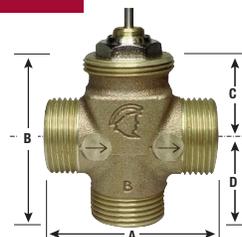


**Stem UP flow AB to A (default position),  
Stem DOWN flow AB to B**

**Select to include:**

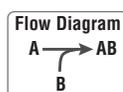
- V325-12S for 1/2" solder (for 5/8" (16mm) OD copper pipe)
- V325-34S for 3/4" solder (for 7/8" (22mm) OD copper pipe)
- Select CV from cartridge type ED

#### V321



**1/2" or 3/4", 3 Way Mixing Valve Body. Conical Unions on all 3 ports**

A	B	C	D	Weight
2.24 (56,90)	2.24 (56,90)	1.09 (27,69)	1.09 (27,69)	8.5oz (240g)



**Stem UP flow B to AB (default position),  
Stem DOWN flow A to AB**

**Select to include:**

- V321-12N for 1/2" threaded unions
- V321-12S for 1/2" solder unions (for 5/8" copper pipe)
- V321-34N for 3/4" threaded unions
- V321-34S for 3/4" solder unions (for 7/8" copper pipe)
- Select CV from cartridge type EX

3 WAY DIVERTING

3 WAY MIXING

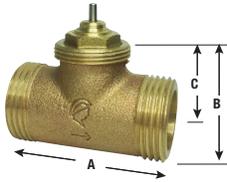
## V200 Series 2 way Globe Control Valve Bodies

All dimensions in inches (mm).  
Weight includes the internal cartridge.

2 WAY

### V240FLT

**Straight Flat Face Male NPT Union Connections on Both Ports, 1/2", 3/4" or 1"**



Part No.	Used with union nut	A	B	C	Weight
1/2" Valve V24020FLT	3/8" BSPP	2 1/4" (57,2)	1 5/8" (39,7)	1 1/8" (27,0)	8.5oz (240g)
3/4" Valve V24025FLT	1" BSPP	2 1/2" (63,5)	2 1/4" (54,0)	1 1/8" (36,5)	12.7oz (360g)
1" Valve V24032FLT	1 1/4" BSPP	3 1/2" (88,9)	2 3/4" (60,3)	1 1/2" (38,1)	33.2oz (940g)

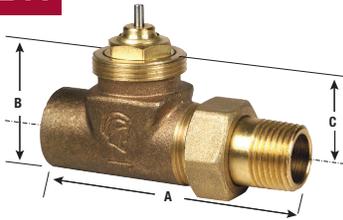
**Stem UP open (default position)**

**Select to include:**

- V24020-12N for 1/2" threaded unions
  - V24020-12S for 1/2" solder unions (for 5/8" copper pipe)
  - V24025-34N for 3/4" threaded unions
  - V24025-34S for 3/4" solder unions (for 7/8" copper pipe)
  - V24032-10N for 1" threaded unions
  - V24032-10S for 1" solder unions (for 1 1/8" copper pipe)
- Select CV from cartridge type EP, EB, EV or BC

### V241

**Straight Female NPT Port In & NPT Male Union Out, 1/2", 3/4" or 1"**



	A	B	C	Weight
1/2" Valve V241-12	3.34 (84,84)	1.76 (44,70)	1.09 (27,69)	10.6oz (240g)
3/4" Valve V241-34	3.90 (99,06)	2.20 (55,88)	1.09 (27,69)	12.7oz (360g)
1" Valve V241-10	5.44 (138,00)	2.50 (63,50)	1.24 (31,50)	35.3oz (1000g)

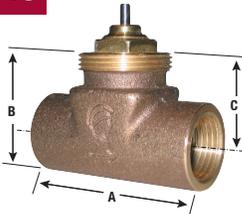
**Stem UP open (default position)**

**Select to include:**

- V241-12N for 1/2" threaded union
  - V241-34N for 3/4" threaded union
  - V241-10N for 1" threaded union
- Select CV from cartridge type EP, EB, EV or BC

### V243

**Straight Female NPT Ports In and Out, 1/2", 3/4" or 1"**



	A	B	C	Weight
1/2" Valve V243-12	2.29 (58,17)	1.60 (40,64)	1.09 (27,69)	8.5oz (240g)
3/4" Valve V243-34	2.70 (68,58)	2.20 (55,88)	1.09 (27,69)	12.7oz (360g)
1" Valve V243-10	3.88 (98,50)	2.84 (71,10)	1.80 (45,70)	33.2oz (940g)

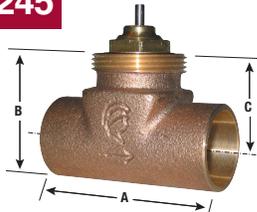
**Stem UP open (default position)**

**Select to include:**

- V243-12N 1/2" Valve Body
  - V243-34N 3/4" Valve Body
  - V243-10N 1" Valve Body
- Select CV from cartridge type EP, EB, EV or BC

### V245

**Straight Direct Solder Connections, 1/2" or 3/4"**



	A	B	C	Weight
1/2" Valve (16mm) V245-12	2.24 (56,90)	1.60 (40,64)	1.09 (27,69)	7.8oz (220g)
3/4" Valve (22mm) V245-34	2.29 (58,17)	1.60 (40,64)	1.09 (27,69)	8.1oz (230g)

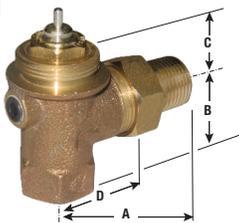
**Stem UP open (default position)**

**Select to include:**

- V245-12S 1/2" Valve Body (for 5/8" copper pipe)
  - V245-34S 3/4" Valve Body (for 7/8" copper pipe)
- Select CV from cartridge type EP, EB, EV or BC

### V261

**Angle Female NPT In & Male NPT Union Out, 1/2", 3/4" or 1"**



	A	B	C	D	Weight
1/2" Valve V261-12	2.25 (58,00)	1.13 (28,00)	1.13 (29,00)	1.25 (32,00)	7.8oz (221g)
3/4" Valve V261-34	2.68 (67,00)	1.13 (30,00)	0.75 (19,00)	1.138 (36,00)	8.1oz (230g)
1" Valve V261-10	3.15 (80,00)	1.50 (38,00)	2.37 (60,00)	1.65 (42,00)	32.5 (921g)

**Stem UP open (default position)**

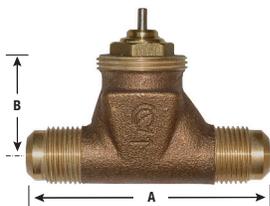
**Select to include:**

- V261-12N for 1/2" Valve Size
  - V261-34N for 3/4" Valve Size
  - V261-10N for 1" Valve Size
- Select CV from cartridge type EP, EB, EV or BC

### V246-12F

**1/2", Flared Male SAE 45° union**

**Selection :**  
V246-12F for 1/2" union

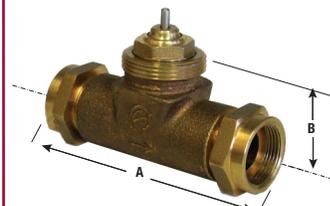


A	B	Weight
3.125 (79,00)	1.32 (33,53)	7.8oz (220g)

### V243-12I

**1/2", Flared Female SAE 45° union**

**Selection :**  
V243-12I for 1/2" union



A	B	Weight
3.125 (79,00)	1.32 (33,53)	12.7oz (360g)

Select CV from cartridge type EP, EB, EV or BC - see page 4. **Stem UP open (default position)**

**2** Select the valve cartridge type and CV value to best suit your application such as hot and chilled water, low pressure steam or high close-off pressures.

## Internal Cartridge Types - Field replaceable & interchangeable

All Spartan valve body assemblies are service/maintenance free with interchangeable internals (in the form of a replaceable cartridge) for specific applications with variations of equal percentage parabolic or linear characterized globe plungers. CV (KV) values can be changed without having to remove the valve from the line simply by changing the cartridge.

The internals are equipped with 1½ million cycles (3 million repositions), packings with burnished mirror finish stainless steel stems and micro machined accurate parabolic characterized plugs.

Compatible with Ethylene/Propylene Glycol.



### EP TYPE CARTRIDGE (for 2 way valve body)



Used for hot and chilled water.

Select from available CV's 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, Can be installed in all 2 way ½" valve bodies

Select from available CV's 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.5 Can be installed in all 2 way ¾" valve bodies



### EV TYPE CARTRIDGE (for 2 way valve body)



Used for low pressure up to 15PSI steam applications recognizable by nickel plated cap.

Select from available CV's 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, Can be installed in all 2 way ½" valve bodies

Select from available CV's 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.5 Can be installed in all 2 way ¾" valve bodies

Select from available CV's 6.4, 9.0 Can be installed in 2 way 1" valve bodies



### BC TYPE CARTRIDGE (for 2 way valve body)



Cage type cartridge used for low CV values.

Used for hot and chilled water.

Select from available CV's 0.15, 0.25, 0.50

Can be installed in all 2 way ½" valve bodies



For ½" & ¾" valve bodies

### EB TYPE CARTRIDGE (for 2 way valve body)



Balanced cartridge used for high close-off pressure applications (up to 100 psi) for hot and chilled water.

For 2 way ½" valve bodies select from

CV's 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5

For 2 way ¾" valve bodies select from

CV's 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.5



For 1" valve bodies

For 2 way 1" valve bodies select from

CV's CV's 6.0, 6.4, 8.0, 9.0

◆ The EB cartridge is recommended for use on certain spring return actuators. See note on page 5.



### ED TYPE CARTRIDGE (for 3 way valve body)



Used for 3 way diverting V320, V323, V325 valve bodies for hot and chilled water.

Select from available CV's 1.0, 2.0, 3.0

Can be installed in 3 way ½" and ¾" valve bodies



### EX TYPE CARTRIDGE (for 3 way valve body)



Used for 3 way mixing V321 valve bodies for hot and chilled water.

Select from available CV's 2.0, 3.0

Can be installed in 3 way ½" and ¾" valve bodies

## Internal Cartridge Specifications - each CV/KV is stamped on the face of the cartridge

Replaceable Cartridge Type	2 WAY				3 WAY	
	EP Type	EV Type	BC Type	EB Type	ED Type	EX Type
Valve seat	Integral bronze	Integral bronze	Bronze - replaceable	Integral bronze	Integral bronze	Integral bronze
Valve disc/plunger	EPDM / brass	Hi-temperature EPDM	Brass cage	EPDM / brass	EPDM / brass	EPDM / brass
Valve spring	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Valve stem	Burnished 303 Stainless Steel	(same as EP Type)	(same as EP Type)	(same as EP Type)	(same as EP Type)	(same as EP Type)
Packing	Double EPDM	Hi-temperature Double EPDM	Double EPDM	Double EPDM	Double EPDM	Double EPDM
Stroke	4mm	4mm	4mm	4mm	4mm	4mm
Tight close off	100 %	100 %	0.1% of Cv	100%	100%	100%
Steam rated	N / A	15 psi. (250°F / 120°C)	N / A	N / A	N / A	N / A
Water rated	(250°F / 120°C)	N / A	(250°F / 120°C)	(250°F / 120°C)	(250°F / 120°C)	(250°F / 120°C)
Glycol rated	To 50%	N / A	To 50%	To 50%	To 50%	To 50%
Cv Equal % - 4mm lift	0.5, 1.0, 1.5, 2.0, 2.5, 3.0	0.5, 1.0, 1.5, 2.0, 2.5, 3.0	0.15, 0.25, 0.50	0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 6.0, 8.0	N/A	N/A
Rangeability	100:1	100:1	100:1	100:1	-	-
Cv Linear - 4mm lift	2.2, 3.5, 4.5	2.2, 3.5, 4.5, 6.4, 9.0	N/A	2.2, 3.5, 4.5, 6.4, 9.0	1.0, 2.0, 3.0 Bottom port CV 2.0	2.0, 3.0

## 3 Select the valve actuator to best suit your control signal, voltage application, spring return or FLP requirements

### Terminal Unit Actuators

#### ELECTRIC - FAIL LAST POSITION - SYNCUBE ACTUATORS

MODEL	SIGNAL	VOLT	FEATURES
ME4140	Floating	24Vac	End of travel switch-off, complete shutdown *
ME4240	PWM	24Vac	Pulse Width Modulation 0.25-5.0 secs. Feedback 1-5 Vdc *
ME4340	Modulating	24Vac	Selectable 0-10Vdc, 2-10Vdc, 4-20mA. Feedback 1-5 Vdc *
ME4344	Modulating	24Vac	Selectable 0-5Vdc, 5-10Vdc. Feedback 1-5 Vdc *



Standard clear cover  
Optional white cover

**3 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

#### ELECTRIC - SPRING RETURN (FAIL SAFE) - POWERCUBE ACTUATORS

ME4430	ON-OFF	24Vac	N.O. (Normally open) *
ME4430S	ON-OFF	24Vac	N.O. (Normally open) with SPDT auxillary switch
ME4431	ON-OFF	110Vac	N.O. (Normally open)
ME4431S	ON-OFF	110Vac	N.O. (Normally open) with SPDT auxillary switch
ME4530	ON-OFF	24Vac	N.C. (Normally closed) *
ME4530S	ON-OFF	24Vac	N.C. (Normally closed) with SPDT auxillary switch
ME4531	ON-OFF	110Vac	N.C. (Normally closed)
ME4531S	ON-OFF	110Vac	N.C. (Normally closed)with SPDT auxillary switch
ME4640	Floating	24Vac	N.O. (Normally open) *
ME4740	PWM	24Vac	N.O. (Normally open), Pulse Width Modulation 0.25-5.0 secs. Feedback 1-5 Vdc *
ME4840	Modulating	24Vac	N.O. (Normally open), Selectable 0-10Vdc, 2-10Vdc, 4-20mA. Feedback 1-5 Vdc *
ME4844	Modulating	24Vac	N.O. (Normally open), Selectable 0-5Vdc, 5-10Vdc. Feedback 1-5 Vdc *
ME4940	Modulating	24Vac	N.C. (Normally closed), Selectable 0-10Vdc, 2-10Vdc, 4-20mA. Feedback 1-5 Vdc *
ME4944	Modulating	24Vac	N.C. (Normally closed), Selectable 0-5Vdc, 5-10Vdc. Feedback 1-5 Vdc *



**3 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

\* See individual actuator data sheets for additional cable options

#### WIRELESS ACTUATORS - many other Wireless Actuators available at [www.spartan-pd.com](http://www.spartan-pd.com)

ME8200	Modulating 24Vac FLP, operates on RF 433MHz
ME8300	Modulating 24Vac FLP, operates on EnOcean TCM320(c) Dolphin module, 902 MHz America, 868 MHz Europe



**3 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

#### THERMO-ELECTRIC ACTUATORS - SPRING RETURN (FAIL SAFE)

ME1607	ON/OFF or PWM	24Vac	N.O. (Normally open)
ME1707	ON/OFF or PWM	24Vac	N.C. (Normally closed)
ME1707S	ON/OFF or PWM	24Vac	N.C. (Normally closed) with SPDT aux. switch



**5 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

#### PNEUMATIC ACTUATORS

MP5100	On-Off Modulating	3-6#	N.O. Normally Open
MP5300	On-Off Modulating	7-11#	N.O. Normally Open
MP5400	On-Off Modulating	5-11#	N.O. Normally Open



**5 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

#### THERMOSTATIC ACTUATORS

OT1100	Valve mounted self-acting thermostatic actuator 40-80°F (6-26°C)
OT2100/2115	Remote bulb self-acting thermostatic actuator with 6.5/16.5ft capillary 40-80°F (6-26°C)
OT5100	Remote bulb wall-mounted self-acting thermostatic actuator with 6.5ft capillary 40-80°F (6-26°C)



**3 YEAR WARRANTY**  
SPARTAN PERIPHERAL DEVICES

### Terminal Unit Nomenclature



◆ The EB cartridge is recommended when using these actuators

Actuator Type: ME4340

Cv Value: Cv1.0

Cartridge Type: EP

Union Type - N = NPT, B = BSP, S = Solder

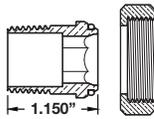
Valve Size: 1/2"

Valve Body Type - select from connection type

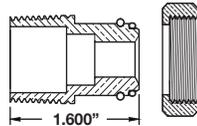
Valve Assembly Type - Select E for Electric, P for Pneumatic, or T for Thermostatic

## Terminal Unit Accessories

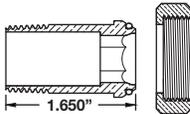
**1/2" Tapered Unions (includes nut and nipple) - used**  
with V240, V241-12, V261-12, V320-20, V321 Valve Bodies.  
Union nut fits on 3/4" BSPP threads



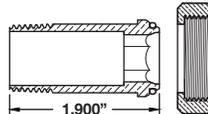
**AV6112** - 1/2" NPT Union,  
1" nominal length nipple



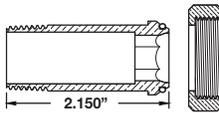
**AV6134** - 1/2" Union with 1 1/2" nominal  
length. Step up 3/4" NPT nipple



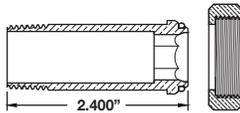
**AV6112D** - 1/2" NPT Union,  
1 1/2" nominal length nipple



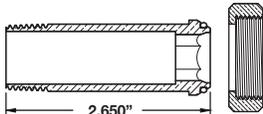
**AV6112E** - 1/2" NPT Union,  
1 3/4" nominal length nipple



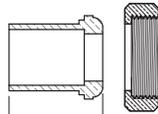
**AV6112F** - 1/2" NPT Union,  
2" nominal length nipple



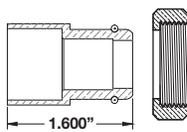
**AV6112G** - 1/2" NPT Union,  
2 1/4" nominal length nipple



**AV6112H** - 1/2" NPT Union  
2 1/2" nominal length nipple



**AV6312** - 1/2" solder union for 3/8"  
(16mm) OD copper pipe (for 1/2" valves)

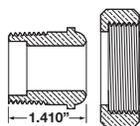


**AV6334** - 3/4" solder union step up  
for 3/8" (22mm) OD copper pipe  
(for 1/2" valves)

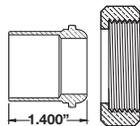


**AV199-13** - Pack of 10 "O" rings  
for 1/2" unions (3/4" BSPP thread)

**1" Tapered Unions (includes nut and nipple) -**  
used with V241-10, V261-10, V345-10 Valve Bodies  
Union nut fits on 1 1/4" BSPP threads

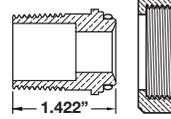


**AV6810** 1" NPT union,  
1 1/4" nominal length nipple

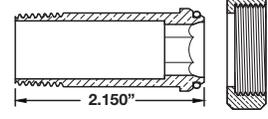


**AV6810S** 1" Solder union

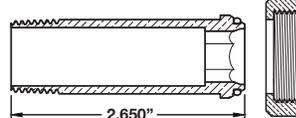
**3/4" Tapered Unions (includes nut and nipple) - used**  
with V241-34, V261-34, V345-34 Valve Bodies  
Union nut fits on 1" BSPP threads



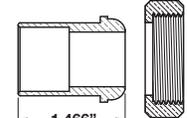
**AV6534** 3/4" NPT Union,  
1 1/4" nominal length nipple



**AV6534F** 3/4" NPT Union,  
2" nominal length nipple



**AV6534H** 3/4" NPT Union,  
2 1/2" nominal length nipple

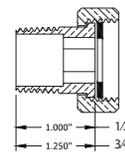


**AV6534S** 3/4" Solder Union



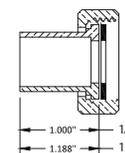
**AV199-08** Pack of 10 "O" rings  
for 3/4" union  
(1" BSPP thread)

### Flat Unions with washers



#### NPT thread

1/2" - **AV6112FLT** (for valve body V24020FLT)  
3/4" - **AV6534FLT** (for valve body V24025FLT)  
1" - **AV6810FLT** (for valve body V24032FLT)



#### Sweat

1/2" - **AV6312SFLT** (for valve body V24020FLT)  
3/4" - **AV6534SFLT** (for valve body V24025FLT)  
1" - **AV6810SFLT** (for valve body V24032FLT)

### Terminal Unit Accessories



**AVP20** (1/2", 3/4"), **AVP116** (1"). Cap plug to replace  
any valve cartridge when **pipe flushing**.



**AV199-03** (1/2", 3/4"), **AV199-14** (1") Pack of 10  
"O" rings for internal cartridges for valve bodies

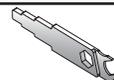


**OM1100P** Manual adjuster for all valve bodies  
Box of 10.



**AVK100** Union Selection Kit. Consisting of  
different size and length unions

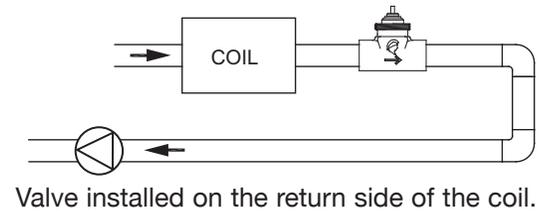
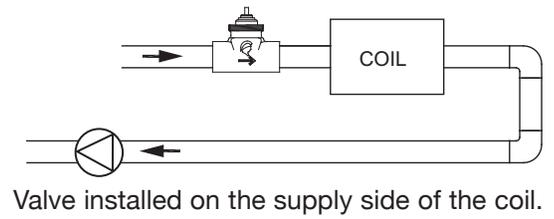
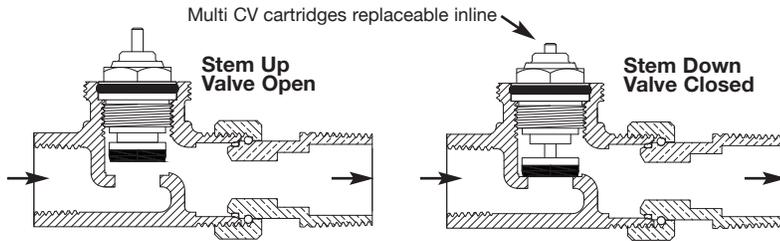
### Installation Tools



**AV08** Spud Tool for union nipple installation  
1/2", 3/4" and 1" valve bodies

## 2 way and 3 way Terminal Unit Piping Diagrams

### 2 WAY - V240, V241, V243, V245, V246, V261 VALVE BODIES - 1/2", 3/4" & 1" sizes



V240, V241, V243, V245, V246, V261, V246I

#### TERMINAL UNIT BODIES ARE NORMALLY OPEN

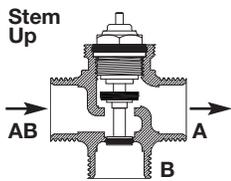
STEM UP: VALVE IS OPEN

STEM DOWN: VALVE IS CLOSE

When used in conjunction with direct acting actuators they become normally open valve assemblies.

When used in conjunction with reverse acting actuators they become normally closed valve assemblies.

The valve body must be installed in the direction indicated on the valve body cavity



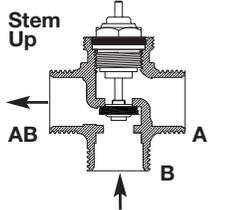
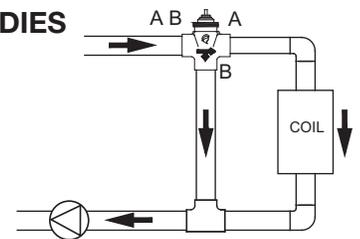
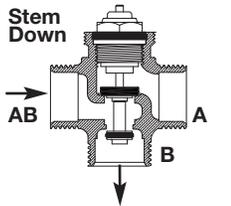
### 3 WAY - V320, V323, V325, V345 DIVERTING VALVE BODIES 1/2", 3/4" & 1"

The diverting valve body is installed on the supply side of the coil. The water diverts in the valve and mixes in the "T" the flow enters the common port AB

The side port A must be connected to the supply of the coil  
The bottom port B must be connected to the bypass around the coil.

STEM UP: FLOW AB-A

STEM DOWN: FLOW AB-B



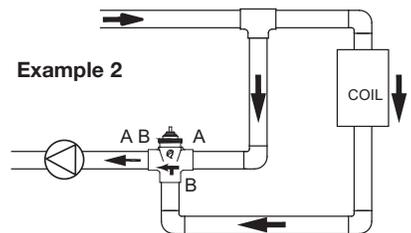
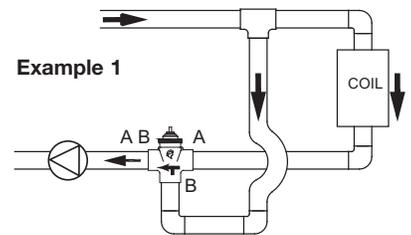
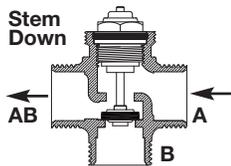
### 3 WAY - V321 MIXING VALVE BODY - 1/2" and 3/4"

The mixing valve body is installed on the return side of the coil. The water diverts in the "T" and mixes in the valve.

Piping example No1: The flow enters port A from the coil and port B from the bypass and exits from the common port AB

STEM UP: FLOW B-AB

STEM DOWN: FLOW A-AB



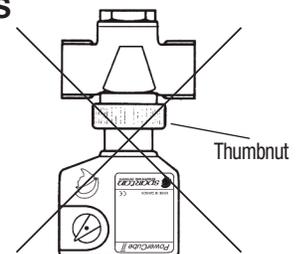
### SOLDER INSTRUCTIONS

If direct solder bodies are used, remove the stem packing cartridge before installation as the heat will damage the packing.

If solder unions are used, solder the unions without the sealing O-ring.

### IMPORTANT INSTALLATION NOTES

The complete valve assembly can be installed vertically or horizontally; it cannot be installed upside down. The Actuator mounting thumbnut is to be tightened by hand only, using tools may result in over-tightening.





# CONTROLS WITHOUT COMPROMISE

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