

Product Instructions

Diverting Valve

Applications

Three-Way Diverting Valves can be used for temperature control in many heating and snowmelting applications.

Features

- Includes solder tailpieces (1-1/4" and 1-1/2" models use same valve body with different tailpieces)
- Pre-installed high limit kit
- Compatible with most Viega actuators (Three Position - 18 003, Two Position - 18 005, and non-electric models - 16 101, 16 102, 16 104, 16 105, 16 115)

Specifications

Materials:
Bronze valve body
Brass and corrosion-resistant steel internal components

EPDM rubber seals

Actuator threads: M30 x 1.0

Max working temp.: 242°F (120°C)

Max working pressure: 145 psi (10 bar)

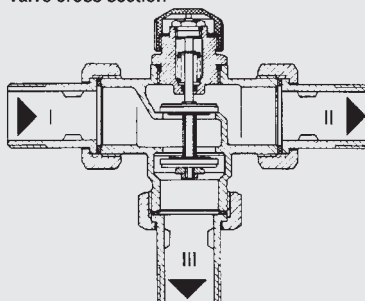
Max differential pressure (tight shut-off on both end positions of valve discs)

3/4"	10.9 psi (75 kPa)
1"	7.3 psi (50 kPa)
1-1/4"	2.9 psi (20 kPa)
1-1/2"	2.9 psi (20 kPa)

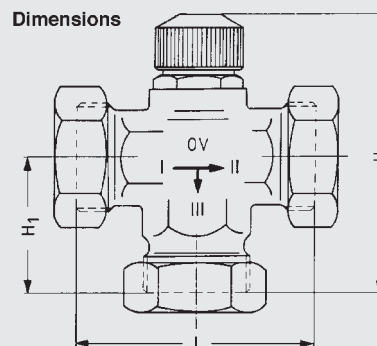
Operations

Diverting Valves have one entry port and two exit ports (see diagram to the right). Depending upon the position of the valve stem, flow is diverted from one exit port to the other.

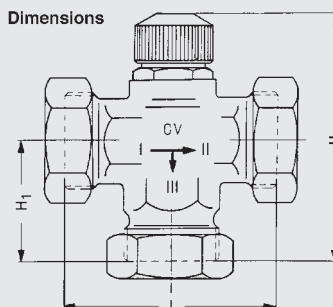
Valve cross section



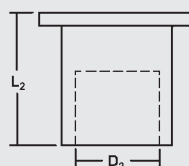
Dimensions



Dimensions



Size	Stock Code	L (in)	H (in)	H1 (in)
3/4"	20 001	3.15	3.94	1.85
1"	20 002	3.54	4.06	1.97
1-1/4"	20 003	4.53	4.65	2.52
1-1/2"	20 041	4.53	4.65	2.52



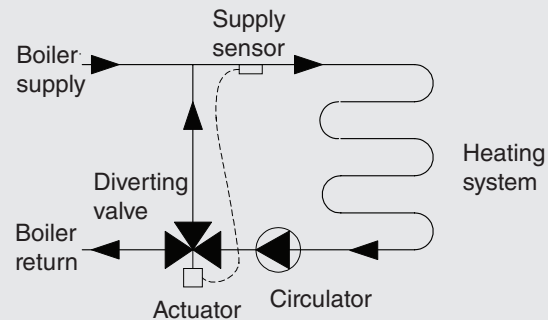
Size	D2 (in)	L2 (in)
3/4"	0.875	0.91
1"	1.125	1.18
1-1/4"	1.375	1.57
1-1/2"	1.625	1.26

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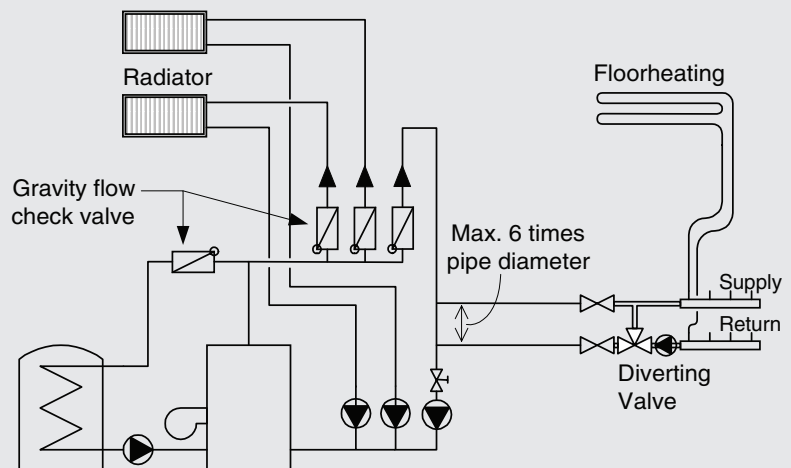
Diverting Valve

Installation

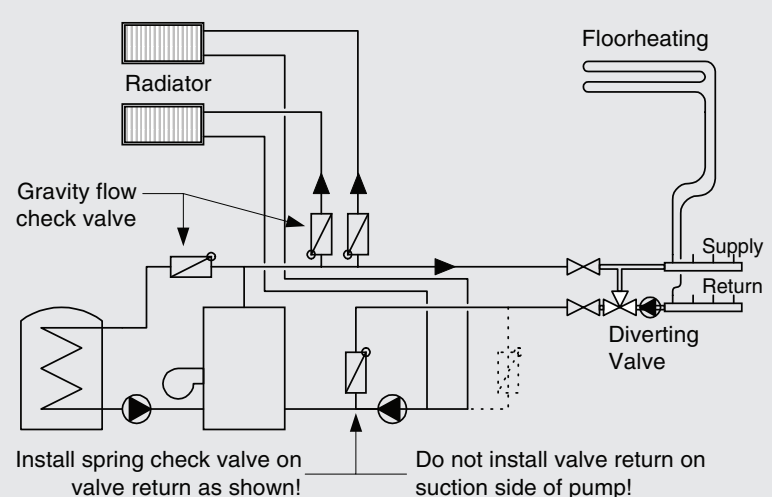
When used as a temperature control valve for radiant or other hydronic heating systems, the diverting valve should be installed in the return line to the boiler (see diagram at right). Exclusive patented design.



Piping a Diverting Valve with Multiple Zone Baseboard or Radiators, Circulators on System Return



Piping a Diverting Valve with Multiple Zone Baseboard or Radiators, Single Circulator on System Return



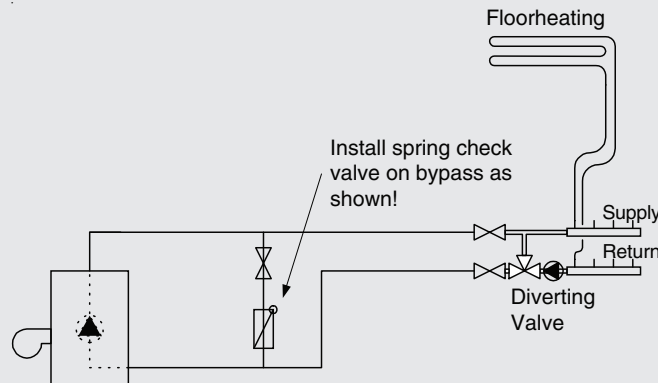
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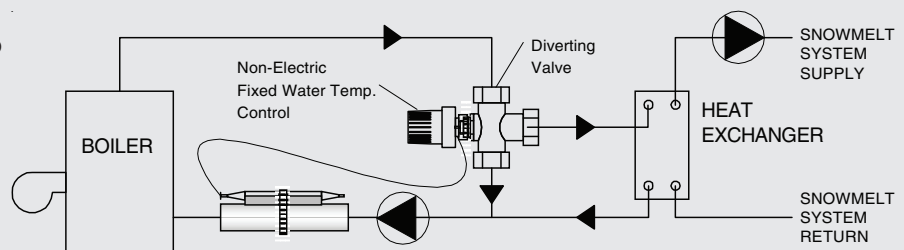
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Diverting Valve

Piping a Diverting Valve with a Circulator Installed in Boiler



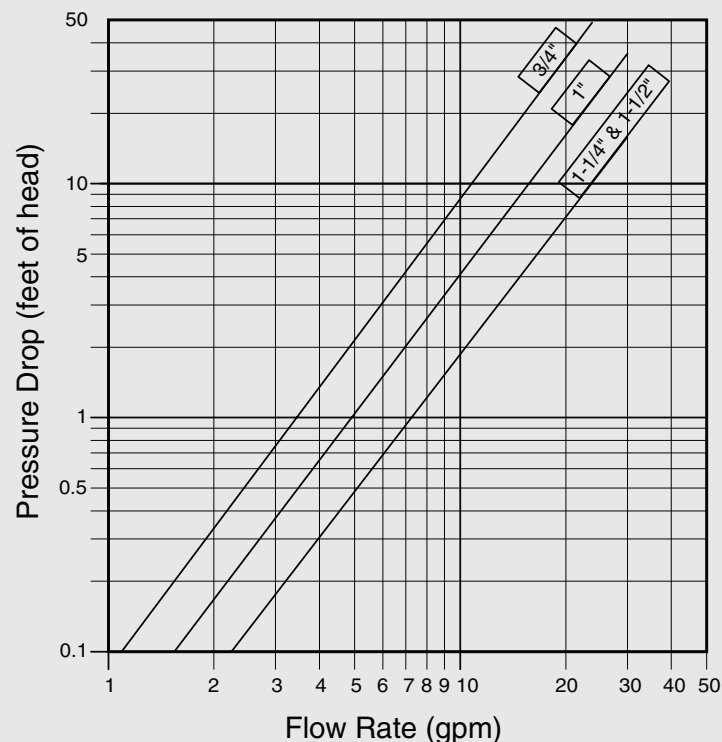
Diverting valves may also be used to control small snow melting systems as shown at right. For further details, refer to instructions with Viega Snow Melt controls.



Pressure Drop

Pressure drop values for Viega diverting valves may be determined from the chart at right (cv values are listed below). 1-1/4" and 1-1/2" models share the same valve body, so the pressure drop for these models is the same.

Valve Size	CV
3/4"	5.3
1"	7.6
1-1/4"	11.1
1-1/2"	11.1



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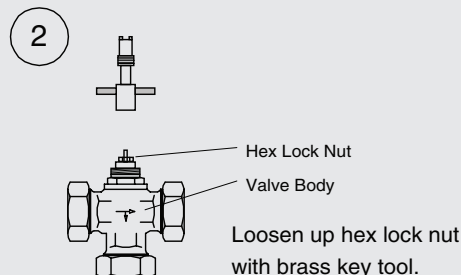
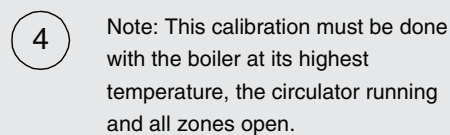
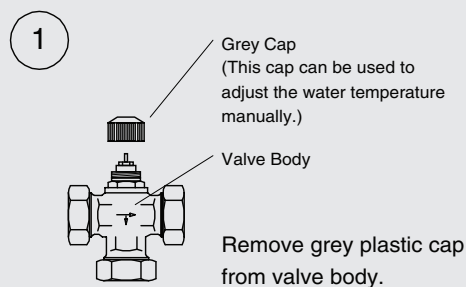
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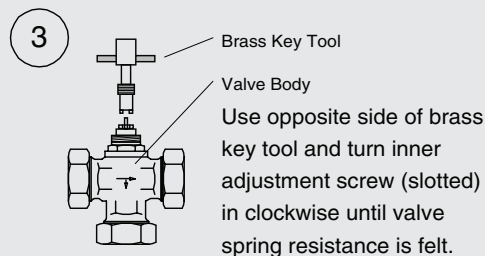
Installation

The Diverting Valve is provided with a pre-installed temperature High Limit Kit. This kit is installed into the 3-way valve to allow a maximum supply water temperature to be set.

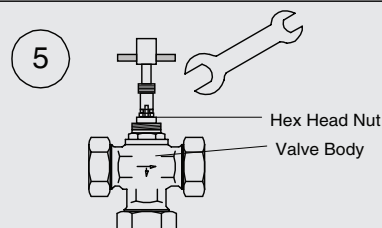
This kit must be unscrewed when purging the system and should then be set according to the instructions below.



Turn adjustment screw further clockwise until desired supply water temperature is obtained and count quarter turns for reference. This has to be done carefully and slowly because each quarter turn of the adjustment screw will result in approximately 15 °F temperature reduction. Wait until desired water temperature stays consistent.



To lower water temperature turn key clockwise; turn counterclockwise to raise it!



Tighten hex lock nut with wrench. Do not overtighten!

To secure high limit adjustment hold slotted adjustment screw with brass key, while tightening lock nut.