

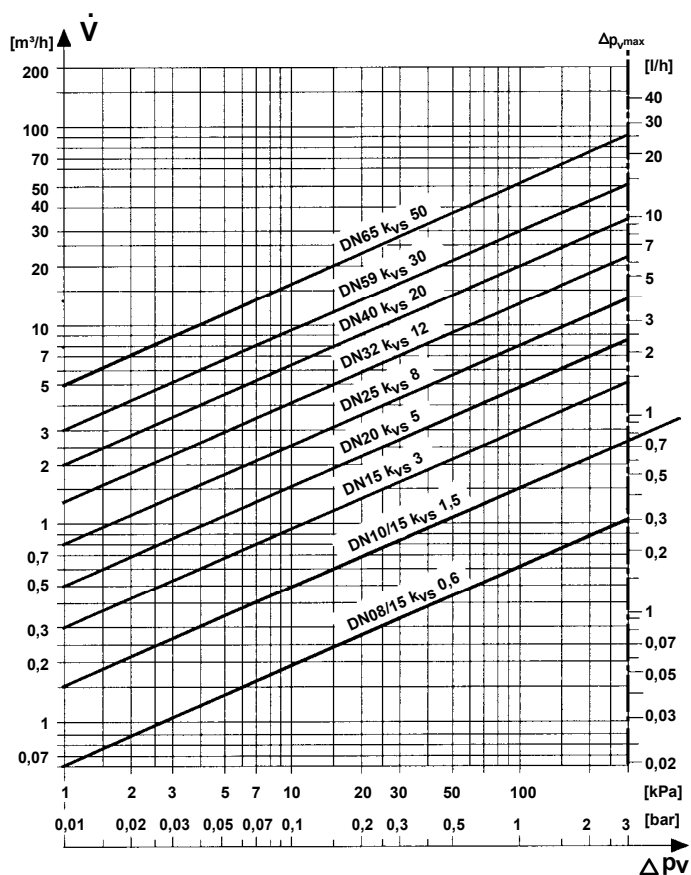
Guidance for Control Valves in HVAC Applications

General Guidance for the Use of Control Valves in HVAC Applications

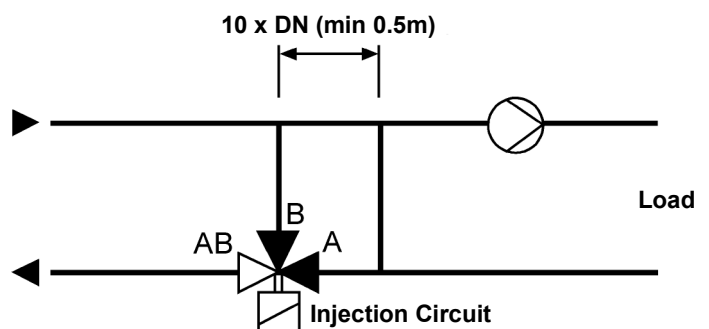
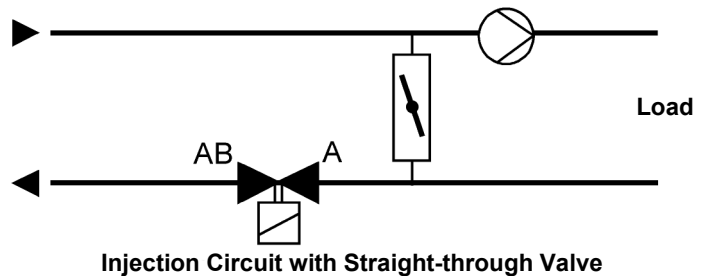
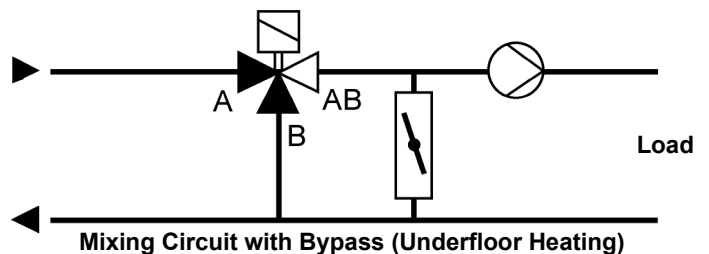
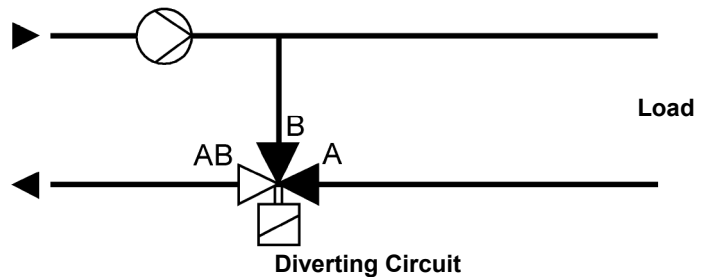
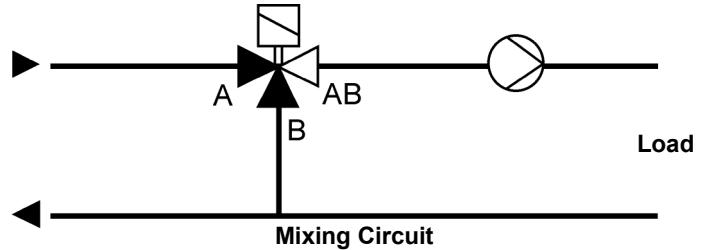
This information is intended as a general guide for the application of HVAC control valves. Please consult the manufacturers relevant data sheets for detailed specifications.

- Control valves must be suitable for the medium & operating pressure
- Modulating type control valves must not be used where tight shutoff is required
- Control valves can be manufactured with +/- 10% tolerance on the kvs value. They should not be used as a reference for balancing purposes
- "Mixing valves" have 2 inlets & 1 outlet
- "Diverting valves" have 1 inlet & 2 outlets
- Most manufacturers valves are "mixing valves" & when used in a diverting application must be placed in the return
- Most valves will work when installed in any position (see relevant manufacturers details), however they should be installed upright as far as possible. Installing valves upside down should be avoided as any water leakage will run into the electrical actuator & may result in damage
- Valves should be installed with sufficient room available for removing the actuator & complete valves for inspection purposes. In addition isolating valves & quick disconnect fittings should be installed to ease removal
- Water systems should be cleaned, flushed & treated in accordance with current good practice, as described, for example in the BSRIA Applications Guide AG 8/91 & AG 2/93
- For further relevant information, see CIBSE Guide B (Section 7)

Valve Sizing Chart



Typical Mixing Valve Applications



Hints on Sizing Control Valves

- The valve sizing chart is based on the Siemens Building Technologies magnetic valve, kvs/size may vary for other types & manufacturers
- Control valves should be sized relative to the pressure drop in the "variable flow part" of the circuit