

# Valve Selection Overview



Valves and actuators are the foundation of the BMS – helping to optimize energy use, and detect critical system conditions.



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# Smart starts at the foundation of the BMS

HVAC can account for up to 40% of energy costs in a building, so optimizing those operations is critical. The challenge starts at the foundation of the control system with specification of the right Schneider Electric valve to ensure maximum energy efficiency.

## Schneider Electric Valve Portfolio

### Zone Valves

Range of motorized, hydronic valves can start, stop or divert flow to provide individual room or area comfort control and energy savings. Valves are easy to install, deliver leak-proof operation and positive shut-off.

### Globe Valves

Allow water or steam to flow through the system as it opens or closes. Instead of pushing against the water, the balanced plug slices through it, greatly reducing the force required and achieving higher close-off pressures.

### Ball Valves

Delivers high performance and reliability, closing securely even after long periods when not in use. Their design is a good fit for shutoff applications that need an expanded Cv range, higher close-off, and accurate sizing.

### Butterfly Valves

Butterfly valve assemblies offer industry leading functionality that provides bubble tight shut off, minimum torque, and longer seat life. The resilient seat design eliminates the need for flange gaskets which simplifies maintenance and ultimately years of optimum performance.



Healthcare



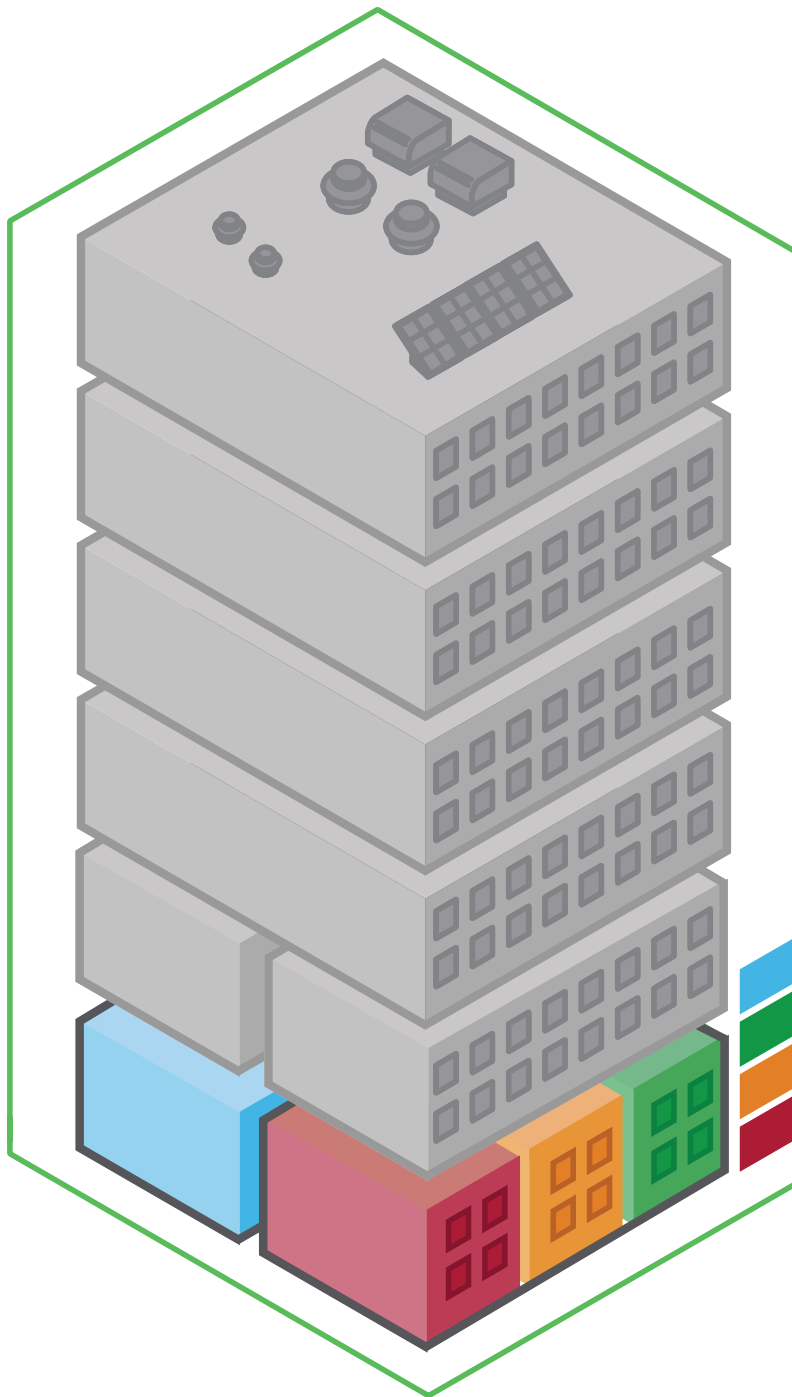
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## Valve selection overview

The breadth and depth of Schneider Electric's valve portfolio has provided reliable environmental control to customers for over 100 years. Find the right valve for your next project quickly and easily with this selection guide.

Zone Valves

Globe Valves

Ball Valves

Butterfly Valves

HVAC control devices help optimize a facility's energy use, and provide early detection of system status, potential problems and dangerous system conditions. When the valves and actuators aren't healthy, neither is the BMS.

Because HVAC can account for up to 40% of energy costs in a building, optimizing those operations is critical. It is also a challenge that starts at the foundation of the control system with specification of the right valve to ensure maximum energy efficiency. The breadth and depth of Schneider Electric's valve portfolio has provided reliable environmental control to customers for over 100 years. Find the right valve for your next project quickly and easily with this selection guide.

# Key applications

**Baseboard Heating** - a heating system that uses pipes through which steam or hot water circulates, near the base of the walls of a room.

**Fan Coil Units (FCUs)** – are simple device that combine a heating/cooling coil and a fan found in commercial buildings. Typically a fan coil unit is connected to pipework, and is used to control temperature in one or multiple spaces.

**Variable Air Volume Reheat** - systems that control zone temperature by varying the supply air volume instead of the air temperature. At full cooling the VAV damper is fully open supplying the specified maximum air flow rate. As the cooling load decreases, the damper closes until it reaches the specified minimum stop.

**Unit Ventilation** - metal cabinet that contains a heating coil, fan assembly, dampers, filter and controls. Unit ventilators are usually located on the outside wall of classrooms. Outdoor air is brought directly into the cabinet via an outside grille. The unit ventilator is designed to mix room air with outside air, heat the air if necessary, and deliver it to the classroom.

**Air Handling Units (AHUs)** - condition and circulate air in an HVAC system. Typically, an AHU includes a fan, heating and/or cooling elements, filtering chambers, sound attenuators, and dampers. It usually connects to a ductwork system that distributes the conditioned air. The air passing through the AHU is filtered and either heated or cooled.

**ByPass Loops** - An HVAC loop is used to model air and water distribution systems such as mechanical ventilation systems, hot and chilled water piped distribution systems and condenser water distribution systems. A loop is divided into two sub-loops, a **demand** sub-loop and a **supply** sub-loop. At its simplest, a sub-loop comprises an inlet connection (pipe or duct) which is connected in series via a number of components to an outlet connection. The inlet connection of each loop sub-loop connects with the outlet connection of the other loop sub-loop: The **demand** sub-loop is typically that section of a loop from which energy is **extracted** from a system and the **supply** sub-loop is that section of a loop to which energy is **supplied** by the system.

**Chilling/Cooling Towers** - The supply air, which is approximately 20° F cooler than the air in the conditioned space, leaves the cooling coil through the supply air fan, down to the ductwork and into the conditioned space. The cool supply air picks up heat in the conditioned space and the warmer air makes its way into the return air duct back to the air handling unit. The return air mixes with outside air and gives up its heat. The cooled supply air leaves the cooling coil and the air cycle repeats.

Each valve type is color coded. Locate and match that same color under the applications described on the left side of the page to select the best valve for the job.

## Zone Valves

Schneider Electric's Erie range of motorized, hydronic valves can start, stop or divert flow to provide individual room or area comfort control and energy savings. With proven performance and rugged dependability, these valves are easy to install, deliver leak-proof operation and positive shut-off.

## Ball Valves

Schneider Electric's ball valve offer delivers high performance and reliability, closing securely even after long periods when not in use. Their design is a good fit for shutoff applications that need an expanded Cv range, higher close-off, and accurate sizing.

## Globe Valves

Schneider Electric's comprehensive range of globe valves allow water or steam to flow through the system as it opens or closes, while the precision-contoured mating seat modulates flow to an ideal flow curve. Instead of pushing against the water, the balanced plug slices through it, greatly reducing the force required and achieving higher close-off pressures.

## Butterfly Valves

Schneider Electric's wide range of butterfly valve assemblies offer industry leading functionality that provides bubble tight shut off, minimum torque, and longer seat life. The resilient seat design eliminates the need for flange gaskets which simplifies maintenance and ultimately years of optimum performance.

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