

# Do it right: Acvatix valves and actuators



Fast and easy planning, installation and commissioning



## Acvatix hydronics. Everything under control.



- Extensive product range
- Custom-designed to meet your individual requirements
- Fast and reliable installation and commissioning
- Sophisticated installation concept
- Consistent, proven quality regardless of the production location
- Extremely long lifetime
- Reliable
- End-to-end system availability
- Sustainable protection of investment thanks to unique backward compatibility
- Simple replacement of valves and actuators
- Used in millions of successful installations

Valuable tool: HIT Portal <u>www.siemens.com/hit</u>



## Acvatix valves and actuators: The right solution for your hydronic project

#### **Intelligent Valves**



#### **PICVs**



#### **Globe valves**



#### **Control ball valves**



Energy consumption

Energy

**Energy** 

generation

distribution

Heating groups

Air handling units

**Radiators Chilled ceilings** Heated & chilled ceilings **VAV** Fan coil units Zone control

Heating groups Air handling units

District heating

Floor heating **Radiators** Chilled ceilings

VAV Fan coil units **Zone control** 

Domestic hot water **Heating groups** Air handling units

**District heating Boiler plants** Chiller plants

Chilled ceilings **Heated & chilled ceilings** VAV Fan coil units

Domestic hot water Heating groups Air handling units

Zone control

**Bold** = recommendations from Siemens for maximum performance in every area of application



# Acvatix valves and actuators: The right solution for your hydronic project

#### **Magnetic valves**



Energy distribution

**Energy** generation

Domestic hot water Heating groups Air handling units

District heating Boiler plants Chiller plants

#### **Rotary valves**



Domestic hot water Heating groups

Boiler plants
Chiller plants
Cooling towers

#### **Refrigerant valves**



Chiller plants

**Bold** = recommendations from Siemens for maximum performance in every area of application



# Intelligent Valve: Makes it a snap!



# Intelligent Valve: Makes it a snap

#### **Intelligent Valves**

- Are self-optimizing dynamic valve with cloud connection
- Consist of control valve with high-resolution actuator, controller box, ultrasonic flow sensor and two paired temperature sensors
- Optimize energy consumption and therefore increase energy efficiency
- Reduce operating costs
- Make planning, installation, commissioning and operation a snap!
- Are the ultimate solution for heating groups and air handling units





# Intelligent Valve: Makes it a snap



> Intelligent Valve Internet

- Less effort and significant time savings
- Quick and easy adjustment to new requirements
- Fewer sources of error and fewer errors
- Simple, flexible, flawless installation
- Quick and easy parameterization and testing
- Analysis with verifiable hydronic balancing and energy-efficient operation
- Full transparency over the valve settings
- Maximum efficiency with minimal effort
- Operation always as efficient as on the day of commissioning
- High comfort, low energy costs
- Troubleshooting via remote access
- Easy plant expansion and changes in building use





# PICVs: Hydronics made easy



# PICVs: Hydronics made easy

#### **PICVs**

- Are pressure-independent combi valves for regulating the volumetric flow
- Have differential pressure controllers for shielding pressure fluctuations in the hydronic network
- Contain a presetting scale to set the desired maximum volumetric flow
- Record pressure measuring points for differential pressure measurement
- All combined in one valve body





# PICVs: Hydronics made easy



Comparison with standard control valves

- Simple, flexible planning and implementation
- Easy commissioning
- Cost and energy-efficient
- Simple dimensioning
- Presetting for maximum volumetric flow
- Full stroke for all presettings
- Minimum  $\Delta p_{min}$
- Combination of control valve and differential pressure controller in one PICV
  - simplifies installation and hydronic balancing
  - ensures optimum supply
- Ideal for plant expansion owing to independent pressure regulation
- Precise temperature control
- Suitable for energy-efficient, variable-flow path HVAC systems with demand and speed-controlled pumps



# PICVs: Hydronics made easy

#### **Success story**

A luxury hotel in Romania with more than 400 guestrooms and six restaurants uses in excess of 2,000 pressure-independent Acvatix PICVs. The PICVs are used in fan coil units and chilled ceilings. The potential energy savings is more than 25 percent.





# Globe valves: Planning & installation in record time



# Globe valves: Planning and installation in record time

#### **Globe valves**

- For shutoff
- For flow rate adjustment and mixing
- Can be used in the widest range of areas
- Ideal for most HVAC applications





# Globe valves: Planning and installation in record time



- Product quality tested and proven in in-house laboratory
- High planning certainty and protection of investment
- Fast and simple installation
- Ultimate reliability even under the most difficult conditions (extremely high temperature, pressure)
- Long lifetime
- Easy-to-see operating status and position indicators facilitate troubleshooting during servicing
- Simple plant modernization
- Decade-long backward compatibility



# Globe valves: Planning and installation in record time

### **Success story**

A hospital in Austria with usable space of approx. 85,000 m<sup>2</sup> and more than 600 beds uses Acvatix valves in all building installation technologies (heating, cooling, steam generation and air conditioning). More than 1,000 globe valves are used in total throughout the entire building complex.





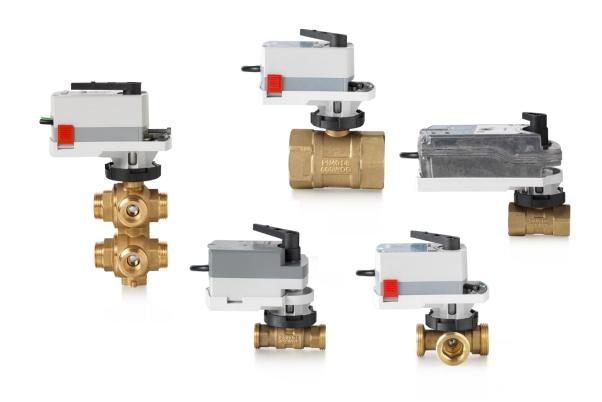
# Control ball valves: An excellent choice for your business



## Control ball valves: An excellent choice for your business

#### **Control ball valve**

- 2-, 3- or 6-port valve
- Internally or externally threaded
- Can be used flexibly
- Fulfills the strictest requirements in terms of control precision and energy efficiency





## Control ball valves: An excellent choice for your business



- Fast and faultless installation
- Constant and precise regulation in closed cycles
- 100% air bubble-tight
- Minimum friction losses
- Energy-saving
- Simple handling and assembly of actuator without the need for tools
- High efficiency
- Flexible selection of actuators and customer-specific adaptation



# Magnetic valves: Solid conditions through accurate control



# Magnetic valves: Solid conditions through accurate control



- Energy efficient
- Fast opening and closing in under two seconds with magnet technology
- Ultimately precise regulation drop by drop for optimum efficiency and stable regulation ratios
- Ideal for applications with the strictest requirements also in industrialrelated areas such as engine test stands





# Rotary valves: Reliable shutoff and mixing



# Rotary valves: Reliable shutoff and mixing



- Fast and simple valve actuator connection
- Large sizes for optimum volumetric flows
- Easy-to-see operating status and position indicators facilitate troubleshooting during servicing





# Rotary valves: Reliable shutoff and mixing

#### **Success story**

28 Acvatix butterfly valves and more than 230 Acvatix globe valves are used at the headquarters of an Australian bank with usable space of around 83,000 m<sup>2</sup>.





# Your building in Perfect Flow

Feel the perfect flow in your building. When your building is in Perfect Flow you may not see it, but whether it is a healthy indoor environment, a comfortable space or the most cost-efficient operation, the Perfect Flow makes your building smarter.



## Perfect Flow with field devices from Siemens

Valves & actuators

Room thermostats

Sensors

KNX room systems

Damper actuators

Variable speed drives

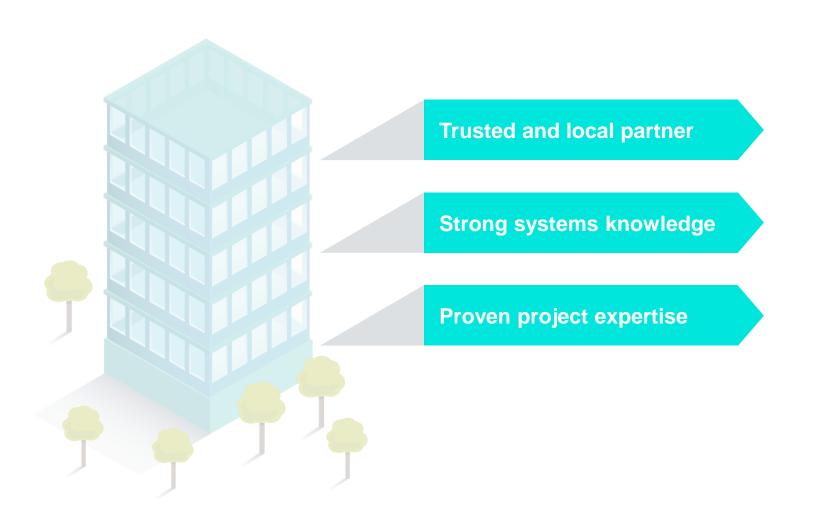
Meters







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