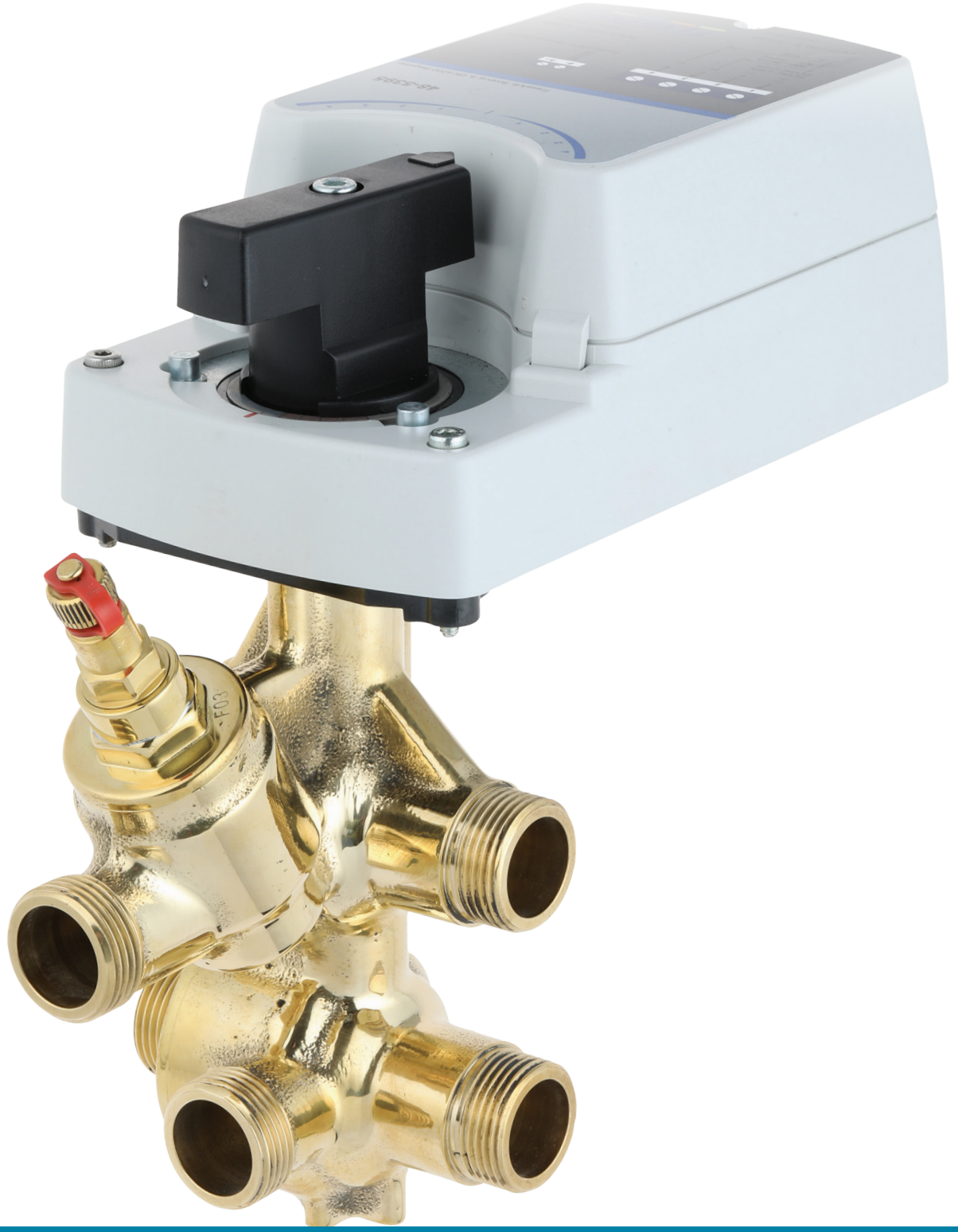
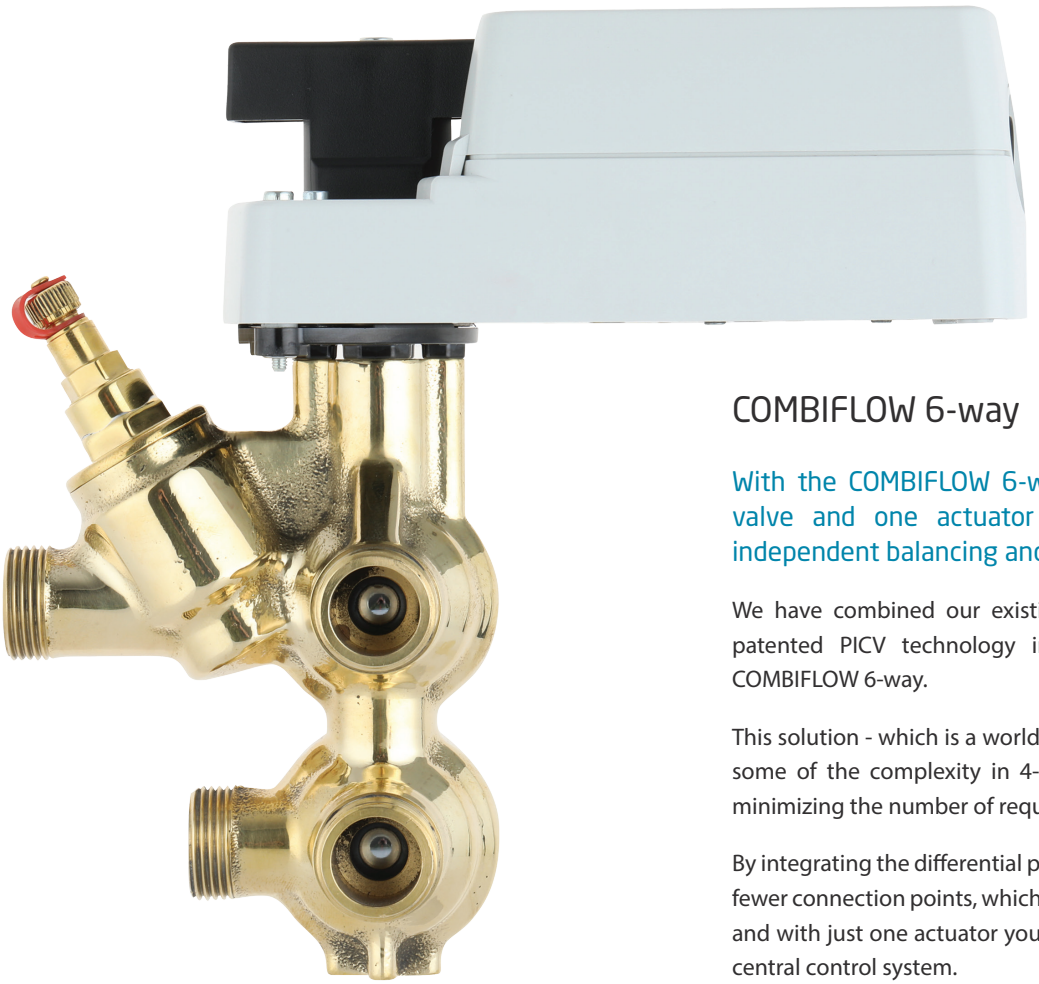


COMBIFLOW 6-way

Pressure Independent Control Valve for 4-pipe heating and cooling systems



WORLD'S 1st 6-way PICV

COMBIFLOW 6-way

With the COMBIFLOW 6-way solution, you need only one valve and one actuator to achieve complete pressure independent balancing and control

We have combined our existing 6-way valve technology with our patented PICV technology in one compact, all-in-one solution; COMBIFLOW 6-way.

This solution - which is a world's first - allows our customers to reduce some of the complexity in 4-pipe heating and cooling systems by minimizing the number of required valve components.

By integrating the differential pressure controller in the valve, you have fewer connection points, which minimizes potential leakage problems, and with just one actuator you only need one data point to the ship's central control system.

COMBIFLOW 6-way is designed to cover a wide flow range. This simplifies the selection process, since a limited product range can cover a wide variety of needs. In addition, an extremely high flow capability has made it possible to downsize the valve dimension, further contributing to the valve's compact design. A low flow version is also available.

The energy saving capabilities of our patented OPTIMA Compact will also be found in the new 6-way solution. Additionally, the COMBIFLOW 6-way has shown the lowest pressure loss known in the market, resulting in significant pump energy savings.

4-pipe systems include:

- Heating and cooling ceilings
- Decentralized ventilation units
- Fan coil systems
- Convection heating and cooling units

Pressure Independent Balancing and Control

Pressure independent balancing and control is an innovative, energy saving alternative to traditional hydronic balancing and control methods that use separate static balancing valves, differential pressure control valves and two port control valves.

A system with pressure independent balancing and control valves provides efficient and accurate flow limitation, differential pressure control and temperature control. This ensures that the design flow conditions are realised irrespective of pressure fluctuations in the system. Also at part load conditions the required flows are available in all terminal units.

A hydronic system designed and fitted with pressure independent balancing and control valves offers many advantages over traditionally designed, static systems.

These advantages include a simplified system design, ease of selection, system flexibility and a minimised commissioning process. The major benefit is the significant energy saving benefits that can be achieved through maximising Delta T and eliminating overflows in the system.

COMBIFLOW 6-way

Valve housing	DZR Brass, CW602N
Balls	DZR Brass, nickel plated
- Gasket	PTFE, Glass and carbon fiber reinforced
Pressure class	PN25
Max. differential pressure	400 kPa
Medium temperature range	0°C to 90°C

COMBIFLOW Multi Rotary Actuator

Protection class	IP 54
Supply	24V AC/DC +/- 10%
Frequency	50/60 Hz
Control signal	BACnet MS/TP (RS485) Modbus – RTU (RS485) 0-10 V & 4-20 mA
Actuating torque	5 Nm
Running time	45 s @ 90°
Ambient operating conditions	-20°C to 50°C

COMBIFLOW Analog Rotary Actuator

Protection class	IP 54
Supply	24V AC/DC +/- 20%
Frequency	50/60 Hz
Control signal	0-10 V
Actuating torque	5 Nm
Running time	150 s @ 90°
Ambient operating conditions	-32°C to 55°C

COMBIFLOW Modbus Rotary Actuator

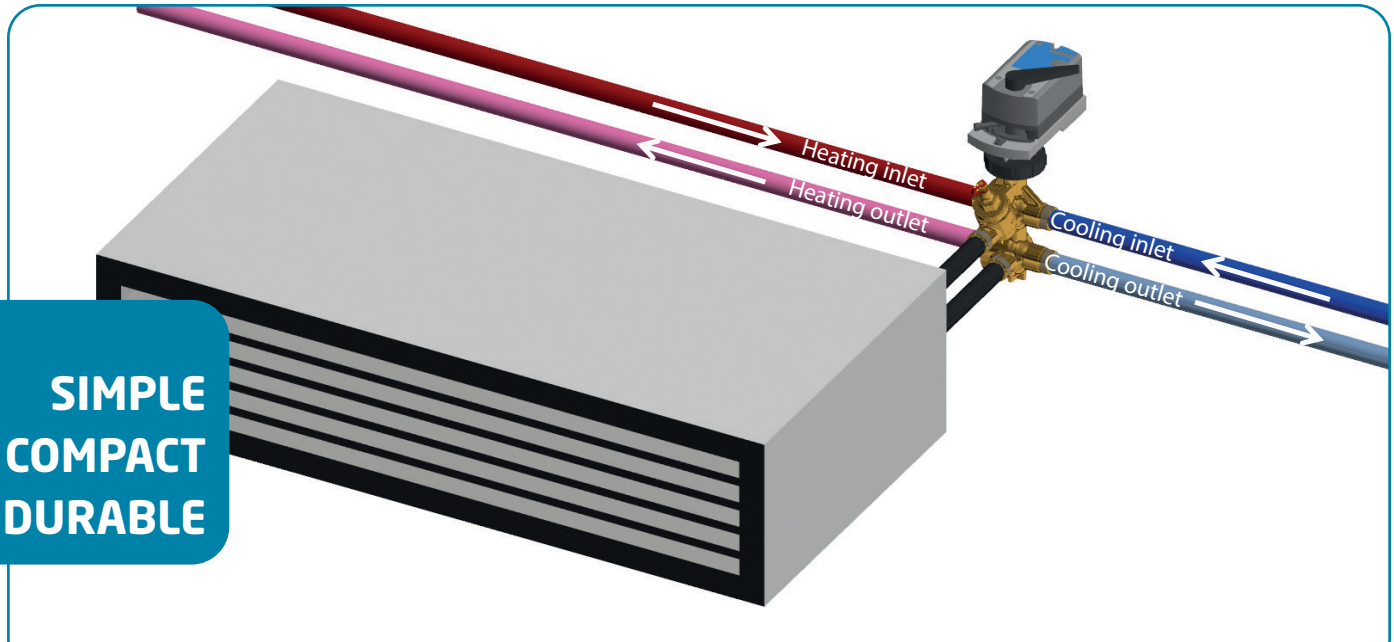
Protection class	IP 54 to EN 60529
Supply	24V AC
Frequency	50/60 Hz
Control signal	Modbus - RTU (RS485)
Actuating torque	10 Nm
Running time	150 s @ 90°
Ambient operating conditions	-32°C to 55°C

Function

The COMBIFLOW 6-way PICV controls both heating and cooling with only one single data point from the central control system, through a BACnet or Modbus signal.

Full modulation is provided at all times even with different design flows for heating and cooling.

The design flow rate for the cooling and heating system is set using the BACnet or Modbus or mechanical setting on the actuator.



SIMPLE
COMPACT
DURABLE

Patented 6-way PICV technology with integrated DP controller in the 6-way valve which is capable of switching between cooling and heating and with no need for a 2nd valve for pressure independent modulation

We create **VALUE** for our customers with this **STATE OF THE ART** design focusing on:

SIMPLICITY

Simple selection; only design flow and minimum pressure required

One valve ➔ Fewer connection points ➔ Minimizes potential leakage problems

Two sizes cover a wide flow range

Only one datapoint/cable to the central control system

Flushing ➔ Simple to remove the DP Controller to flush the system

Modbus and BACnet ➔ Remote flow setting via BMS

4-in-1 actuator ➔ BACnet, Modbus, 0-10V, 4-20mA

COMPACT DESIGN

Compact ➔ Significant space savings

Multi Rotary Actuator ➔ Lower height

High flow capability ➔ Allows for downsizing the valve dimension compared to major competitors

ENERGY SAVINGS

1st 6-way PICV in the world (Patent pending)

Patented 6-way PICV technology

Integrated DP controller in the 6-way valve ➔ Capable of swichting between cooling and heating ➔ No need for a 2nd valve

Lowest pressure loss known in the market ➔ Pump energy savings

DN15 low flow ➔ For heating systems with low flow requirements

DURABILITY

Stable system as pressure fluctuations are compensated by the integrated DP controller ➔ Longer Actuator Lifetime

Built-in pressure relief feature ➔ Ensures that the terminal unit does not break when the valve is in closed position

KNOWLEDGE

QUALITY

INNOVATION

MANUFACTURING EXCELLENCE

CUSTOMER FOCUS

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