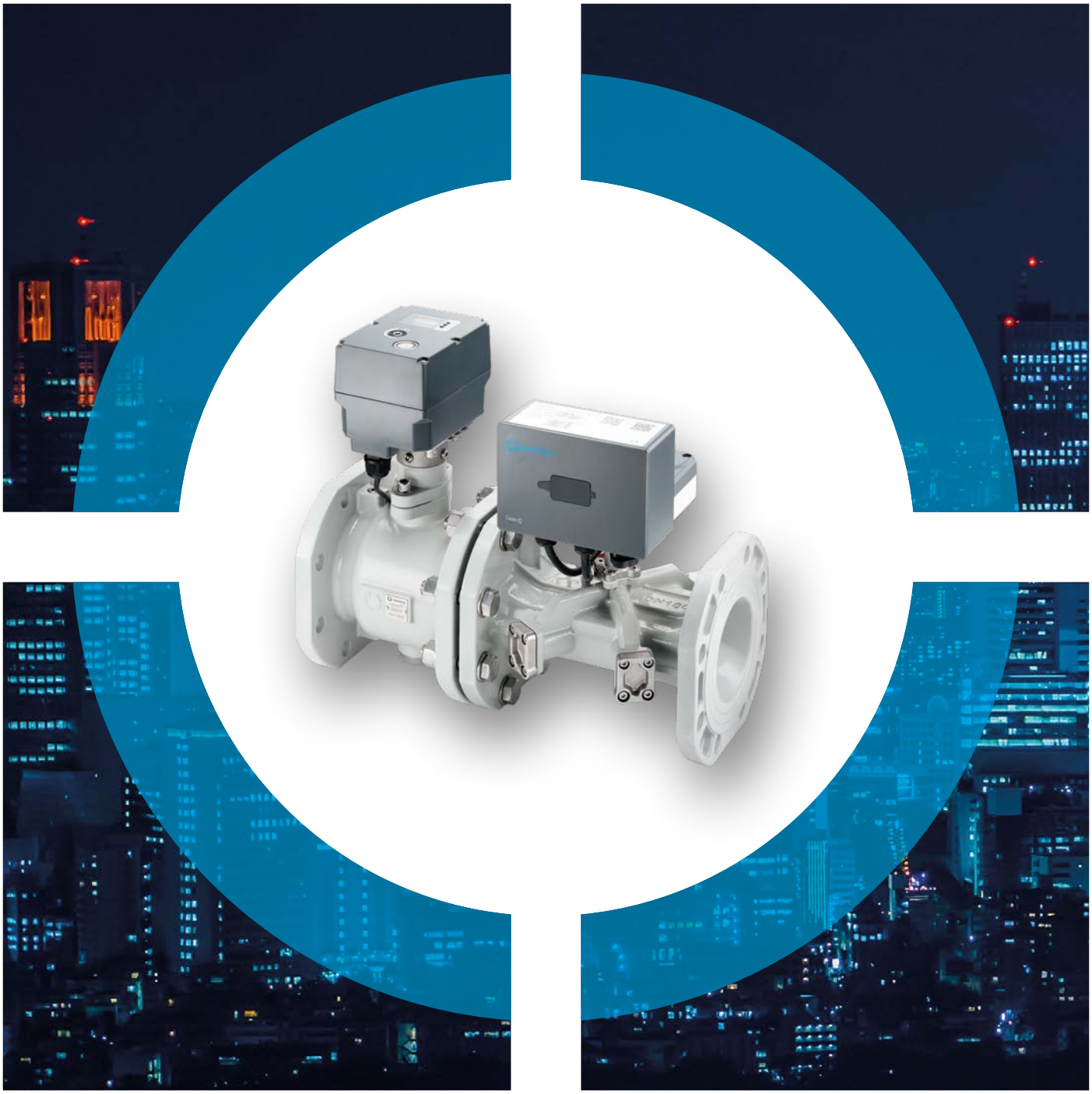
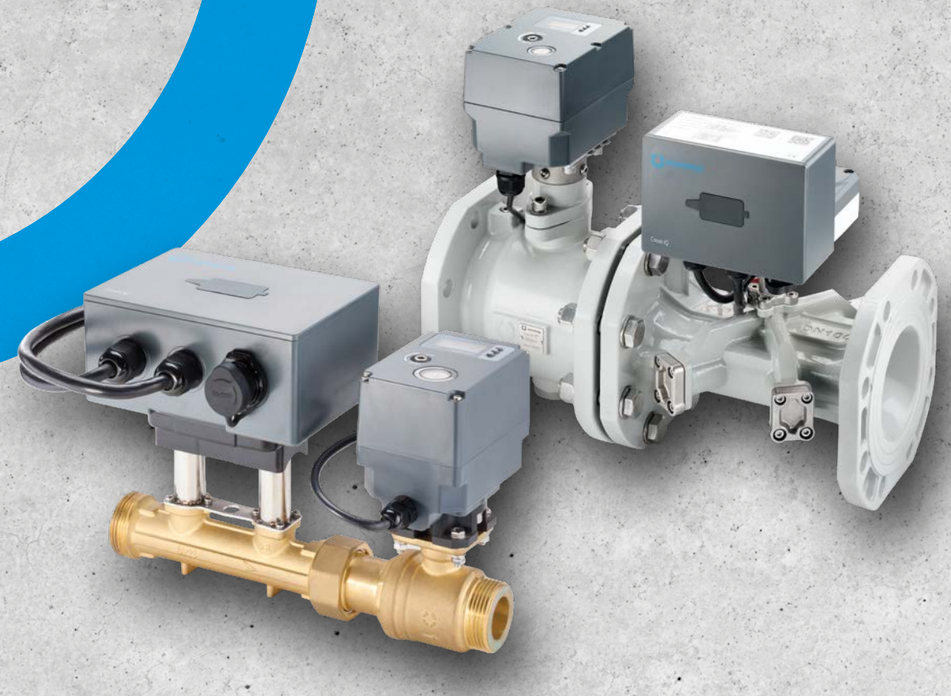


Cocon IQ

Digital Control Valves

oventrop

Hydronic balancing?
Digital control.



COCON IQ: THE SMART CONTROL VALVE FOR NETWORKED BUILDINGS

Our new **Cocon IQ** control valves are an intelligent networked valve solution that allows you to optimise the hydronic balancing of heating and cooling applications. The **Cocon IQ** combine an ultrasonic flow meter, temperature sensor and an actuator-controlled control valve. They are equipped with common protocols, such as Modbus. This means you can easily integrate them into the communication and control of networked buildings. The smart **Cocon IQ** valves provide you with valuable data and take energy efficiency to a new level.

Design of the Cocon IQ
Components

ACTUATOR

- Rotary actuator
- Modulating 0...10 V
- Position feedback to the controller
- Local access and manual override

CONTROLLER

- Actuator control
- Integration and communication with building automation systems
- Data collection
- Wiring

CONTROL VALVE

- Rotary action
- Defined flow rate
- Equal percentage or linear characteristic can be selected

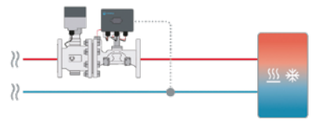
FLOW METER

- Ultrasonic principle
- Precise measurement of the flow rate
- Integrated temperature sensor

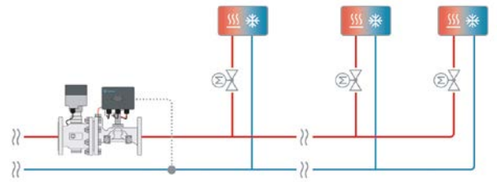
YOUR BENEFITS

+ Combination of control valve and sensors
+ ***Wide range of products*** up to DN 150
+ ***Robust*** design
+ Includes common ***protocols*** for integration into building automation systems
+ ***Sensors*** for flow rate, flow and return temperature:
  - Transmission of real-time data to the building automation system
  - Use of the data to control the control valve
+ High-flow ***control valve***
  - Very precise control, independent of the differential pressure
  - Various control strategies can be selected, based on flow rate, energy, temperature or a combination of these
+ ***Dedicated app*** for local commissioning, reading and diagnostics

CONTROL OF LARGE CONSUMERS



ZONE CONTROL



Learn more at cocon-iq.oventrop.com

Cocon IQ
Control strategies

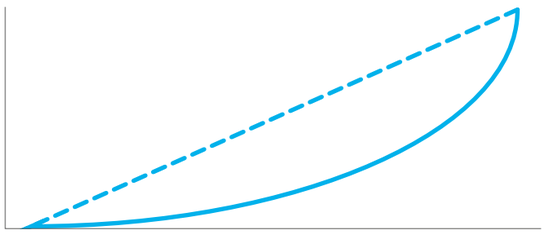
MODULATING CONTROL

+ Modulating control of the flow rate is achieved by using a 0...10V control signal.
+ The output data from the sensors are made available as real-time data for the building automation system.
+ The actual flow rate is ***dependant*** on the differential pressure.

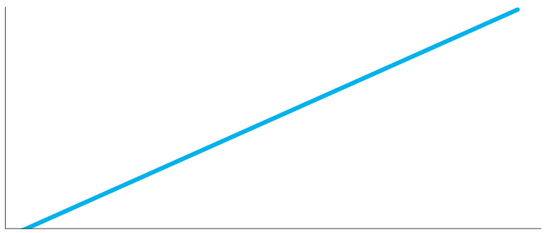
FLOW CONTROL

+ The flow is controlled by a setpoint that was programmed into the **Cocon IQ** based on the following control strategies.
+ Control strategies supported by **Cocon IQ**:
  - ***Flow rate:*** based on the flow data supplied by the volume measuring unit
  - ***Energy:*** based on the energy data calculated by the controller from the volume, flow and return temperature
  - ***Temperature differential:*** based on the temperature differential between the flow and return temperature calculated by the controller
  - ***Return temperature:*** based on the data supplied by the return temperature sensor
+ As well as a combination of the above control strategies, e.g. flow rate with return temperature limitation.
+ The actual flow rate is ***independent*** of the differential pressure.

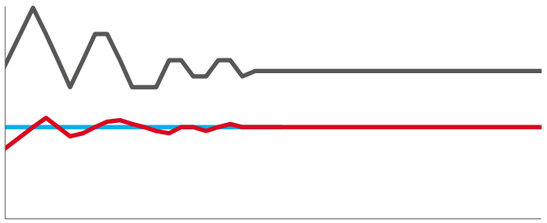
MODULATING CONTROL



FLOW CONTROL

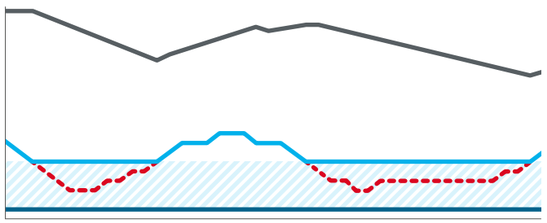


COMBINATION OF MODULATING OR FLOW CONTROL AND ΔT CONTROL



— Set temperature differential ΔT — Actual differential temperature ΔT
— Flow rate

ΔT CONTROL



Setpoint minimum differential temperature ΔT — Trend towards low ΔT
— Flow rate — Return temperature — Flow temperature

Product range

COCON IQ WITH EXTERNAL THREADS PN 25

Nominal size	Control range l/h	Item no.
DN 15	400 – 2100	1256228
DN 20	600 – 3200	1256233
DN 25	800 – 4200	1256236
DN 32	1500 – 7300	1256239
DN 40	2400 – 11800	1256242

COCON IQ WITH FLANGES PN 16

Nominal size	Control range l/h	Item no.
DN 50	3.8 – 19	1256645
DN 65	6 – 30	1256648
DN 80	7.7 – 40	1256651
DN 100	13.6 – 68	1256654
DN 125	21.8 – 109	1256657
DN 150	35 – 167	1256660

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Technical modifications reserved.

Room climate

Hydronics

Stations

Potable water

Oil

Smart Home,
Smart Building

Oventrop is the partner for efficient heating, cooling and clean potable water. The modular systems and services offer pioneering solutions which all HVAC experts use to work with – easily and flexibly – from planning to installation, from industry to trade. As a family business, Oventrop accompanies all its partners over many years – competently and personally..

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Wir regeln das. Seit 1851.

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