Conter

Metering, heating/cooling lines and hot and cold domestic water lines

DESCRIPTION

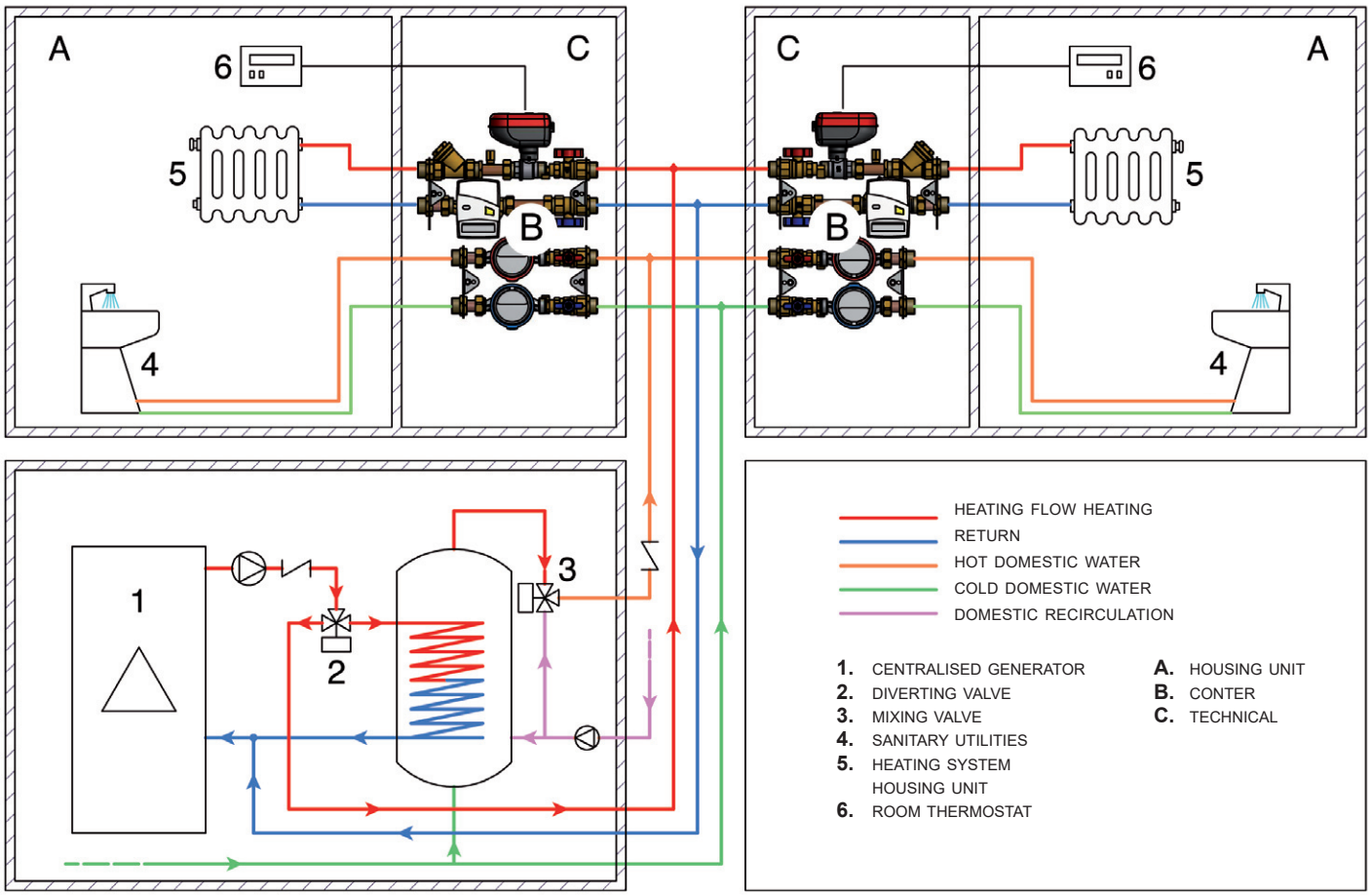
CONTER is a satellite module for **direct metering and management of heating/cooling systems with centralised domestic hot water production.**

CONTER can be equipped with one or more lines for domestic hot and cold water metering with or without localised recirculation system. It is also available with the control unit for low-temperature heating/cooling systems.Installation can be wall-mounted in a technical compartment or inside a sheet metal containment box.

CONTER is supplied with replacement water meter stub pieces. After flushing the system, the meters can be installed.

- **Self contained**
- **Allocation of expenses according to actual consumption**
- **Total security**
- **Energy saving**
- **Compact Size**
- **Can be installed with inlets from the right or left**

EXAMPLE OF USE



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VERSIONS AND CODE COMPOSITION

QK | **1** | **S** | **J** | **A**

SERIES

QK = Conter

DIAMETER AND VALVE

0 = DN15 2-way
1 = DN15 By-pass
3 = DN20 2-way
4 = DN20 By-pass

INSULATION

H = non-insulated power line
S = insulated power line

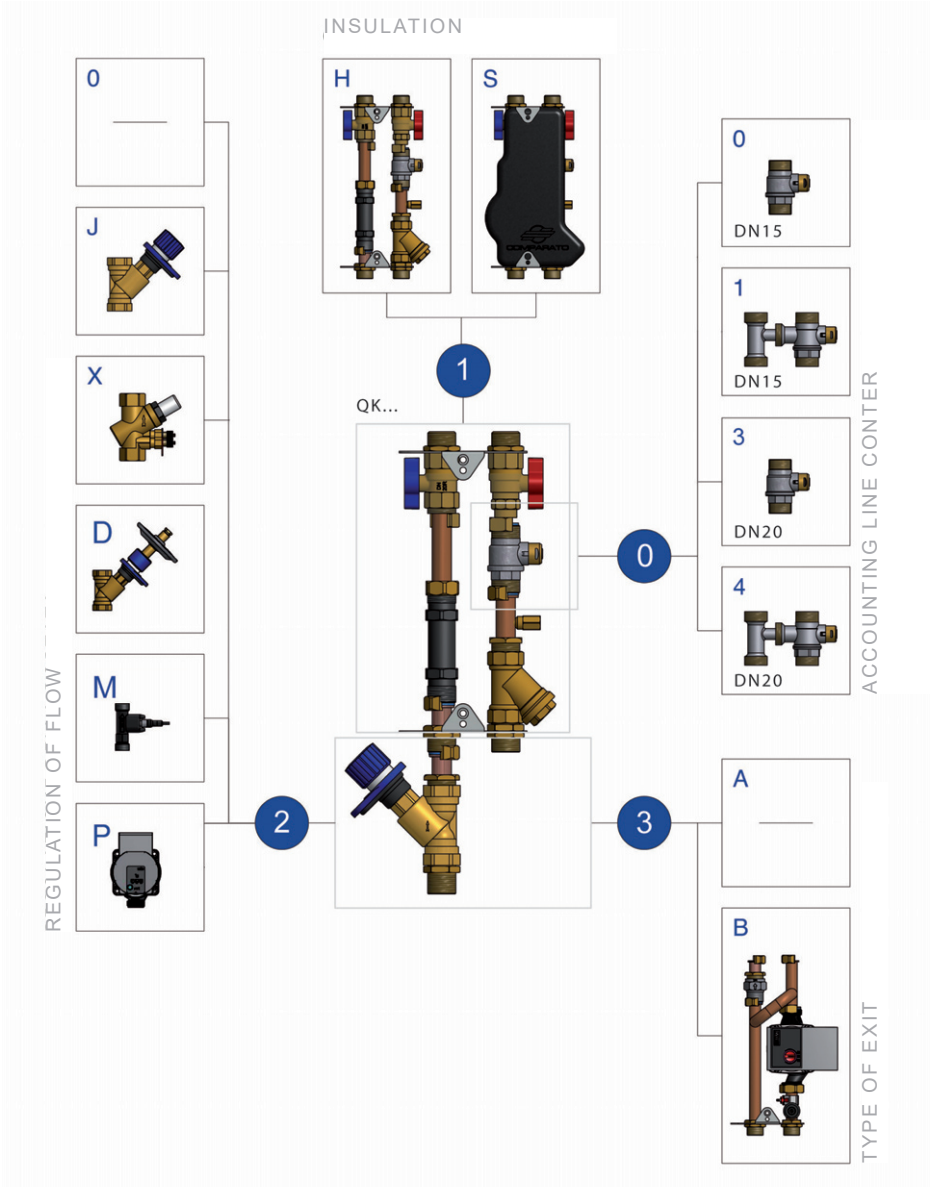
TEMPERATURE-CONTROLLED OUTPUT

A = not required
B = present
(Implies **QK0** or **QK3** and **P** in the flow control)

FLOW REGULATION

0 = not required
J = static balancing valve
X = dynamic balancing valve
D = differential pressure control valve - DPCV
M = electronic flow control - MODFLOW
P = electronic circulator

CONFIGURATION



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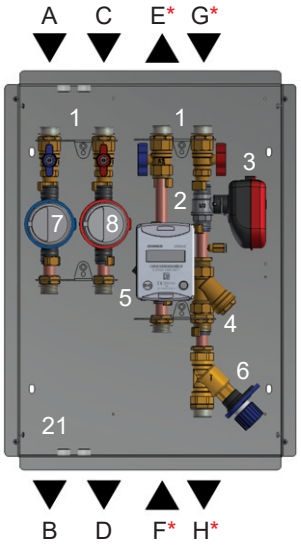
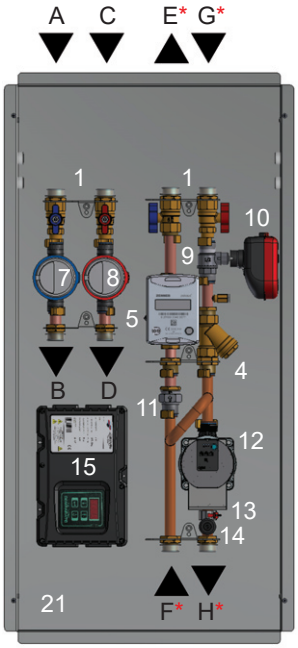
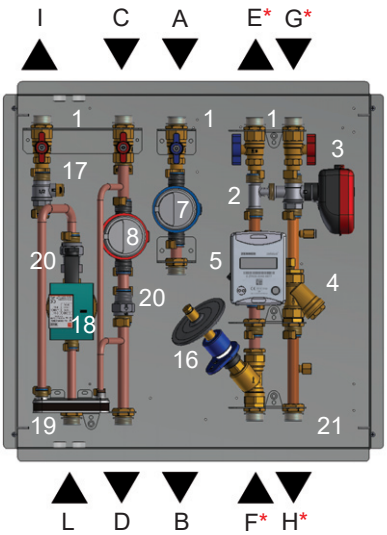
COMPONENTS AND FLOWS

A : Cold domestic water inlet
B : Cold domestic water outlet
C : Hot domestic water inlet
D : Hot domestic water outlet
E : Return to centralized system
F : Return from housing unit
G : Outlet from centralized system
H : Outlet to housing unit
I : Recirculation return to centralized system
L : Recirculation return from housing unit

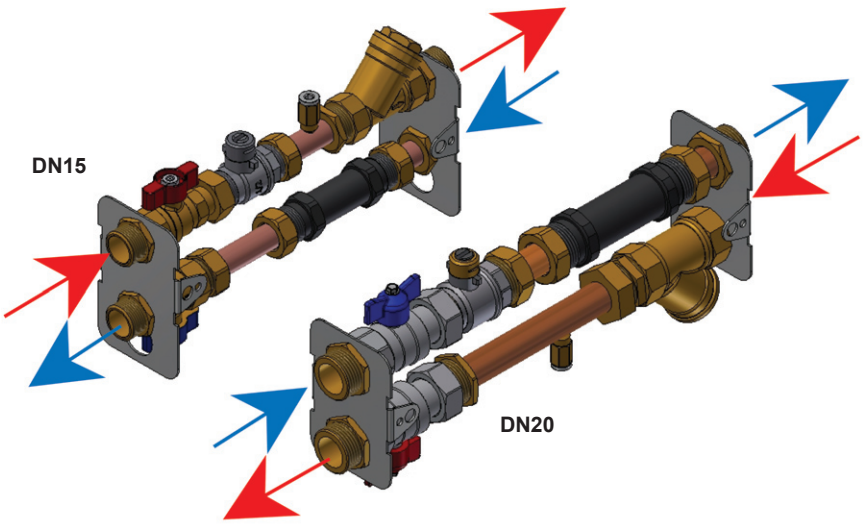
1 : Manual interception valves
2 : 2-way / bypass ball valve
3 : **SINTESI** ON/OFF actuator
4 : Y filter
5 : Energy meter (accessory)
6 : Static balancing valve (flow control option)
7 : Domestic cold water meter (accessory)
8 : Domestic hot water meter (accessory)
9 : 2-way control ball valve (temperature-controlled outlet option)
10 : **SINTESI** modulating actuator (temperature-controlled output option)
11 : Non-return valve (temperature-controlled outlet option)
12 : High-efficiency circulator (temperature-controlled outlet option)
13 : Temperature probe (temperature-controlled output option)
14 : Safety thermostat (temperature-controlled output option)
15 : Control unit (temperature-controlled output option)
16 : Differential Pressure Control Valve - DPCV (flow control option)
17 : Static flow control valve (localised recirculation system accessory)
18 : Domestic hot water recirculation pump (localised recirculation system accessory)
19 : Plated heat exchanger (localised recirculation system accessory)
20 : Non-return valve (localised recirculation system accessory)
21 : Galvanised sheet metal box (accessory)







* Flow and return energy lines DN15 - 3/4" and DN20 - 1" are reversed, see picture below.



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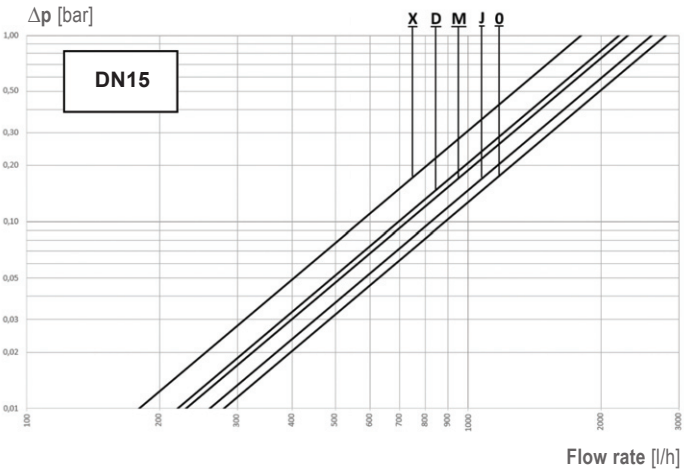
HYDRAULIC FEATURES

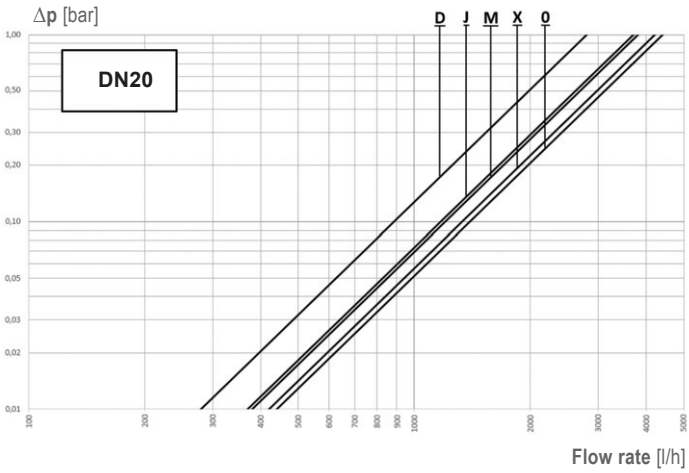
Zone valve open and meter installed.

DIRECT POWER LINE

	CODE			Kv value	OPEN By-pass Kv value
DN15 • 3/4"	QK0 H / QK1 S	0	A	2,8	- / 0,8 m³/h
	QK0 H / QK1 S	J	A	2,6	- / 0,8 m³/h
	QK0 H / QK1 S	X	A	1,8	- / 0,8 m³/h
	QK0 H / QK1 S	D	A	2,2	- / 0,8 m³/h
	QK0 H / QK1 S	M	A	2,3	- / 0,8 m³/h

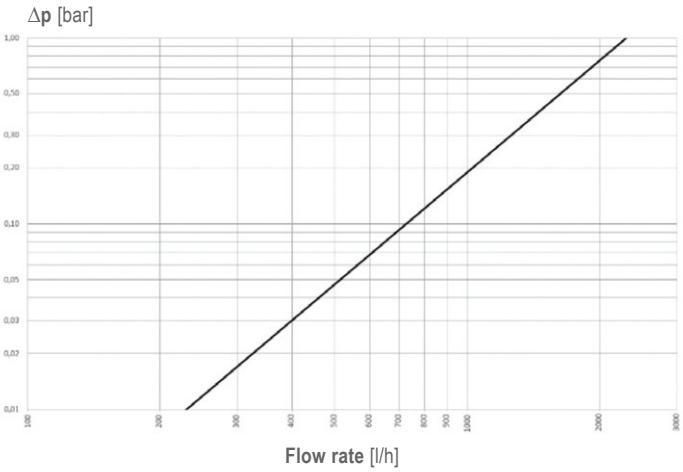
	CODE			Kv value	OPEN By-pass Kv value
DN20 • 1"	QK3 H / QK4 S	0	A	4,4	- / 1,9 m³/h
	QK3 H / QK4 S	J	A	3,7	- / 1,9 m³/h
	QK3 H / QK4 S	X	A	4,2	- / 1,9 m³/h
	QK3 H / QK4 S	D	A	2,8	- / 1,9 m³/h
	QK3 H / QK4 S	M	A	3,8	- / 1,9 m³/h

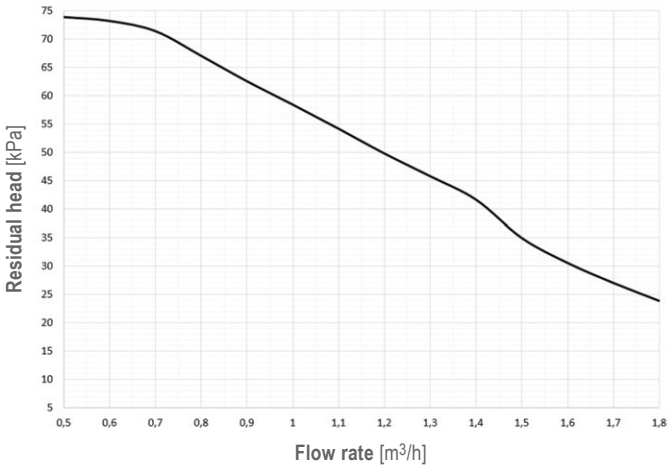




TEMPERATURE - CONTROLLED POWER LINE

	CODE			Kv value
DN15 3/4"	QK0 H / S	P	B	2,3 m³/h





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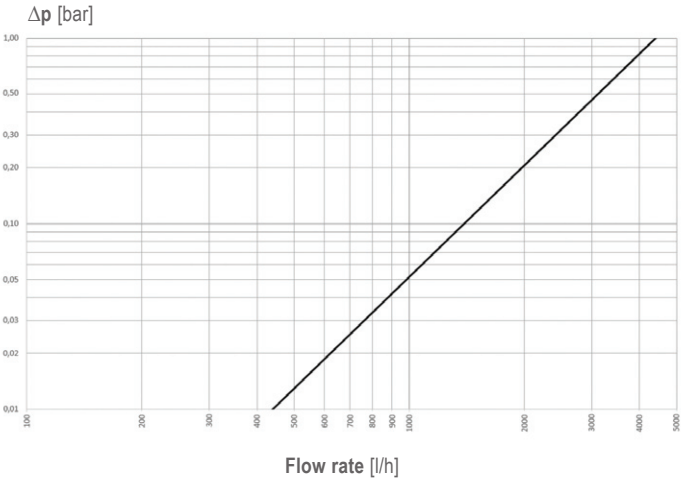
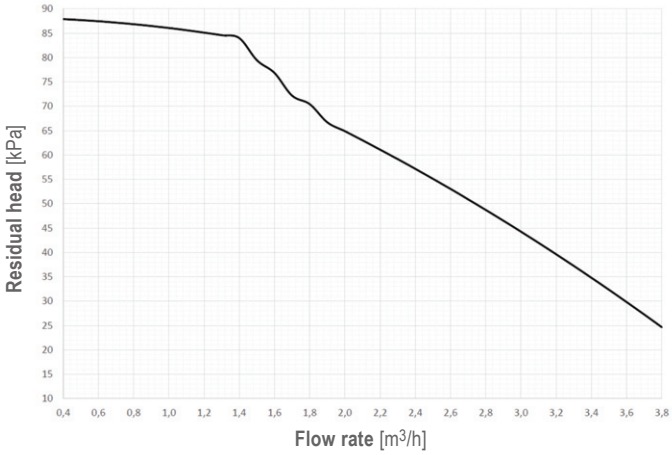
	CODE			Kv value
DN20 1"	QK3 H/S	P	B	4,4 m³/h





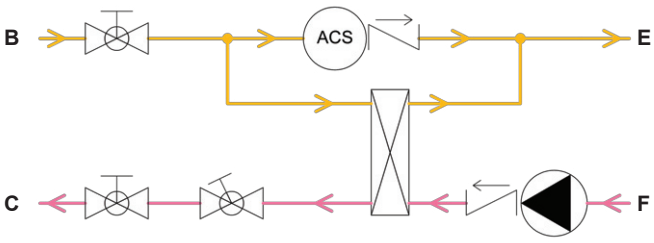
DHW AND **DCW** LINES

	CODE	Kv value
DN15 3/4"	KCACST KCAFST KCAT	1,7 m³/h

	CODE	Kv value
DN20 1"	KCACST1 KCAFST1 KCAT1	2,3 m³/h

DHW LINES WITH **LOCALISED RECYCLING • code KRIC0**

	Kv value	Residual flow
DHW line (**B** - **E**)	1,7 m³/h	-
PRIMARY recirculation (**B** - **C**)	0,16 m³/h	-
SECONDARY recirculation (**F** - **E**)	-	0,9 m.c.a @ 40 l/h



Conter

HEATING / COOLING FUNCTIONS

- 2-way or bypass motorised ball valve body with SINTESI actuator
- Energy meter replacement stub piece
- Insulation (optional)
- Flow regulation and balancing system (optional)
- Flow temperature control (optional)

DCW, DHW and LOCALISED RECYCLING FUNCTIONS

- Replacement stub piece for DCW and DHW meter
- DHW recirculation system with pump and plated heat exchanger

TECHNICAL FEATURES

HEATING / COOLING LINE	
Type of fluid	non-glycol water - VDI 2035 (*1*)
Maximum / minimum temperature	90°C / 5°C
Maximum operating pressure	6 bar (*2*)
DOMESTIC AND RECIRCULATION LINES	
Type of fluid	water (*3*)
Maximum temperature	Hot water 90°C Cold water 30°C
Maximum operating pressure	6 bar (*2*)
PIPE-LINES	
Material	copper
Size	Ø 18 mm / Ø 22 mm
METER REPLACEMENT STUB PIECE	
Material	PA 66 (*4*) - GF
Size	DN15 - G3/4"x 110mm DN20 - G1" x 130mm
HYDRAULIC CONNECTIONS	
Material	brass
Size	G3/4"M / G1" M ISO 228/1
SUPPORT BRACKETS	
Material	galvanized metal sheet 15/10
INSULATION • optional	
Shell-type	cross-linked polyethylene foam closed-cell
Pipelines	elastomer foam with base rubber thickness 6mm
Components	cross-linked closed-cell polyethylene
USE	
Installation	indoor
Ambient temperature	5 ÷ 55 °C
Ambient humidity	25 ÷ 85%

1 For glycol solutions please contact the Technical Department.

2 For higher pressures, please contact the Technical Department.

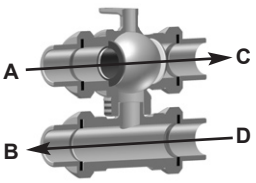
3 For water hardness above 15 French degrees the use of a water softener is recommended.

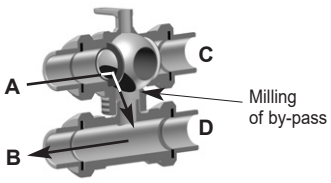
4 The nozzle must be replaced with the meter before commissioning.

BY-PASS BALL VALVE • optional

QK**1**.... / QK**4**....

OPEN valve	CLOSED valve





A : Outlet from centralized system
B : Return to centralized system
C : Outlet to housing unit
D : Return from housing unit

STATIC BALANCING VALVE • optional

Type	manual with double adjustment
DN15 • Kvs	6,4 m³/h
DN20 • Kvs	6,8 m³/h

DYNAMIC BALANCING VALVE • optional

Type	automatic flow rate adjustment	
DN15	Minimum Δp	0,3 bar
	Minimum Δp	4 bar
	Minimum flow	0,406 m³/h
	Maximum flow	1,27 m³/h
DN20	Minimum Δp	0,17 bar
	Minimum Δp	4 bar
	Minimum flow	0,535 m³/h
	Maximum flow	5,830 m³/h

DIFFERENTIAL PRESSURE CONTROL VALVE (DPCV) • optional

Type	automatic Δp regulation	
DN15 • DN20	Δp massimo	2 bar
	Δp pre-setting range	0,1...0,3 bar

ELECTRONIC FLOW RATE CONTROL (MODFLOW) • optional

Tipo	regolazione elettronica della portata	
Control valve	2-way ball	
DN15	minimum flow rate	0,10 m³/h
	maximum flow rate	1,92 m³/h
DN20	minimum flow rate	0,21 m³/h
	maximum flow rate	3,00 m³/h

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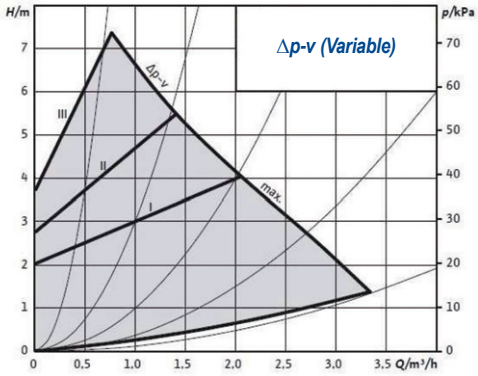
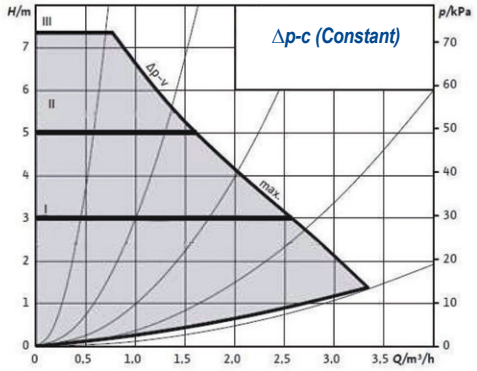
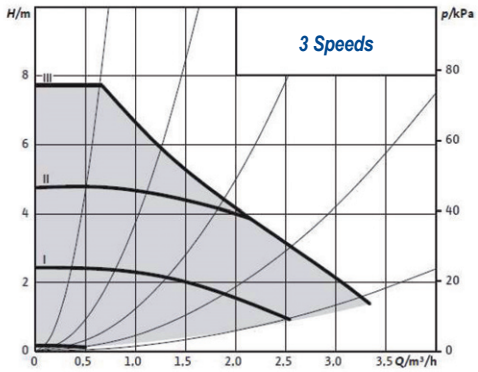
ELECTRONIC PUMP • optional

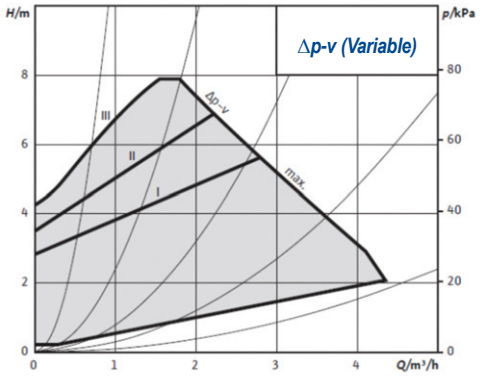
DN15

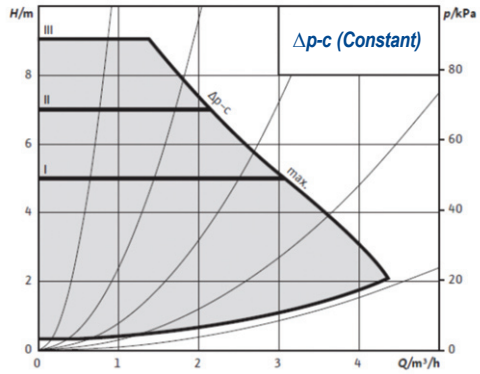


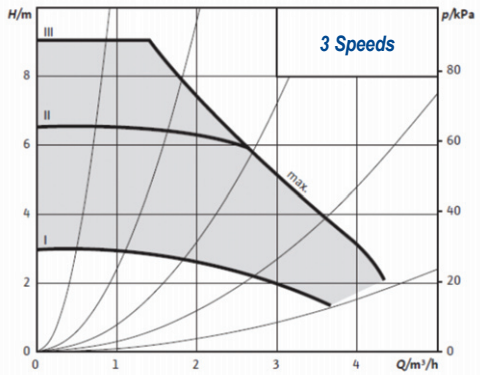




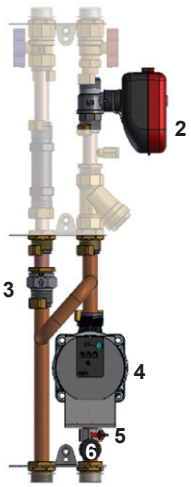
DN20







TEMPERATURE CONTROLLED OUTPUT • optional



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Modbus

The option includes the installation of a complete kit for regulating the flow temperature to the **radiant heating / cooling** system. It consists of an electronic circulator, a temperature probe, a safety thermostat, a valve non-return valves, piping and hydraulic support for the connection to the metering module and a climate control unit that controls the SINTESI unit modulating 2-way valve.

The control unit is equipped with a MODBUS RTU interface, and it is possible to change all operating parameters, send commands and receive operating status information using the MODBUS RTU interface. Control units are suitable for connection to modern building management systems (BMS).

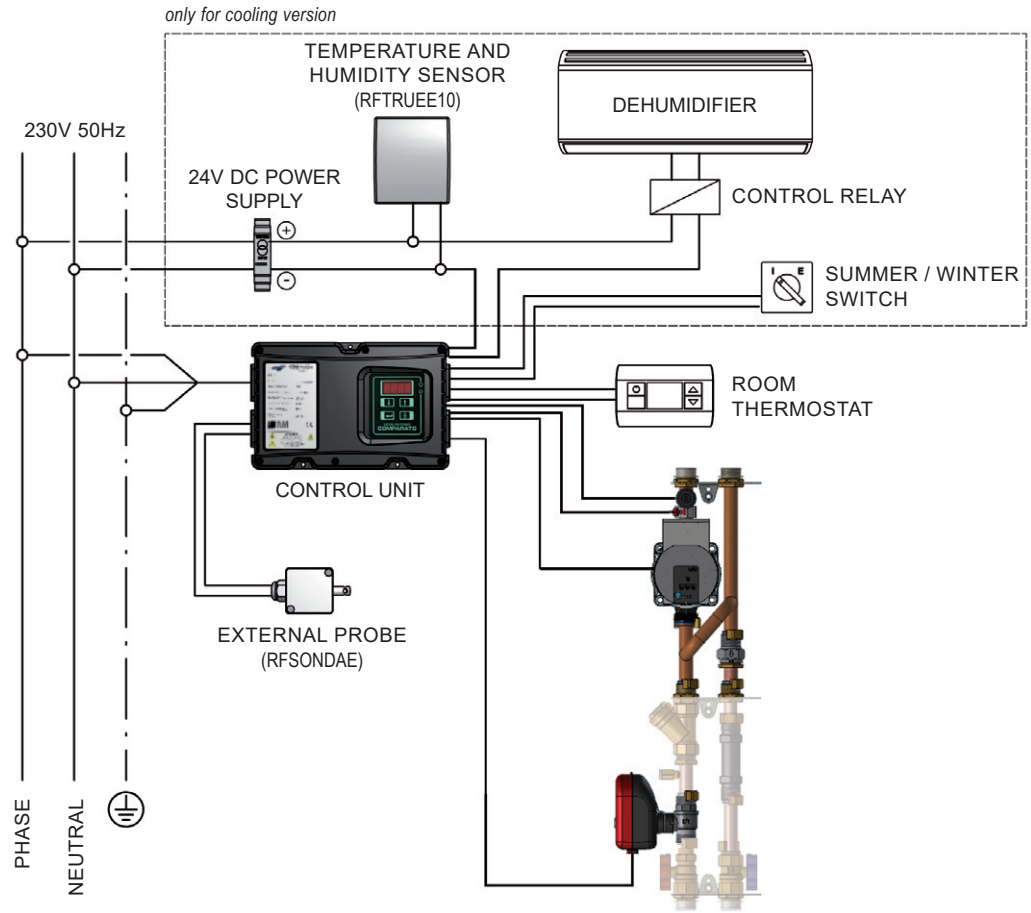
1 : Control unit
2 : 2-way modulating valve
3 : Check valve
4 : Circulator
5 : Temperature probe
6 : Safety thermostat

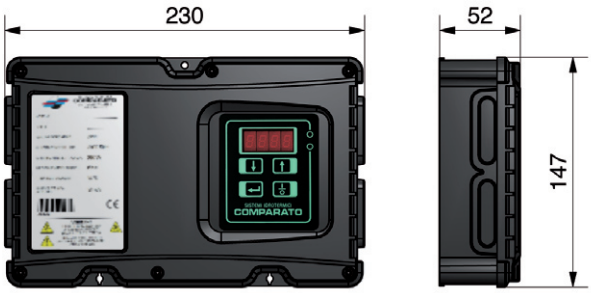
The electronic control unit, equipped with an actuator and flow temperature probe, regulates and controls heating and/or cooling systems with radiant floor, wall or ceiling panels. After installation, the type of operation can be selected by activating or deactivating the various functions:

Fixed-point adjustment	The heating setpoint temperature is set via keypad and display. When activated by the room thermostat, the control system keeps the flow temperature constant at the setpoint value.
Sliding control (climate function)	The setpoint temperature is automatically calculated by the software based on the outside temperature detected by the outside temperature probe (accessory) according to programmable climate curves.
Summer / winter switching	The summer/winter function modifies the control logic of the valve during the transition from summertime (cooling) to wintertime (heating)
System management	The control unit receives the activation command from the room thermostat (not included). The pump starts and the electronic system, which operates by means of PID algorithm, controls the outlet temperature according set values. When the room thermostat sends the signal to interrupt the energy supply to the system, the controller stops the pump, stops the regulation and closes the 2-way valve with shut-off function.
Anti-condensation function (cooling)	During summer cooling, the anti-condensation function calculates the dew temperature of the heated room using a temperature probe and a relative humidity probe (accessory). The dew temperature represents the temperature below which the humidity in the environment condenses. The control unit regulates the flow temperature of the fluid to the radiant panel system, keeping it always higher than the dew point temperature in order to avoid condensation on the floor. Furthermore, if the difference between the flow temperature and the dew point temperature is within a certain range, the controller activates the digital output which allows the dehumidifier to be switched on (lowering the humidity decreases the dew point temperature and allows the climate function to “keep away” from the condensation threshold on the floor during cooling).
Electronic security	It is possible to set the limit temperature for heating. When this value is exceeded, the mixer goes into 'safety' mode: it stops the circulator and closes the 2-way valve. The display shows a warning message and the system only resumes normal operation when the temperature is within normal operating limits.

Electromechanical safety: the pump power supply passes through a safety thermostat which interrupts it when the fluid temperature exceeds 55°C.

CONTROL UNIT CONNECTION DIAGRAM





The control electronics are supplied in a plastic box with holes for installation in combination with the modulating actuator.

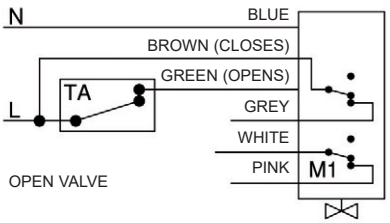
ACCESSORIES

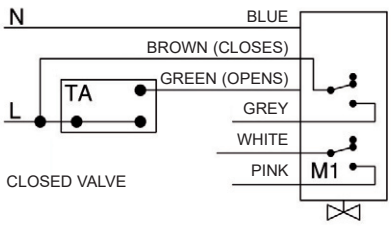
ACTUATOR TO BE COMBINED WITH ZONE VALVE

Code SR2221U - **SINTESI** actuator 230V 50Hz, 2 points with auxiliary opening contact for zone valve
Code SR2421U - **SINTESI** actuator 24V 50Hz, 2 points with auxiliary opening contact for zone valve

TECHNICAL FEATURES	
Electric control	2 points
Power supply	230V 50/60 Hz 24V 50/60 Hz
Operating times (90° rotation)	45 seconds
Pickup torque	8 Nm
Input power	3,9 VA
Opening Micro-auxiliary	1A resistive
Operational room temperature	-10°C ÷ +50°C
Degree protection	IP54
Degree insulation	double insulation
Maintenance	none
Certification	CE

WIRING DIAGRAM

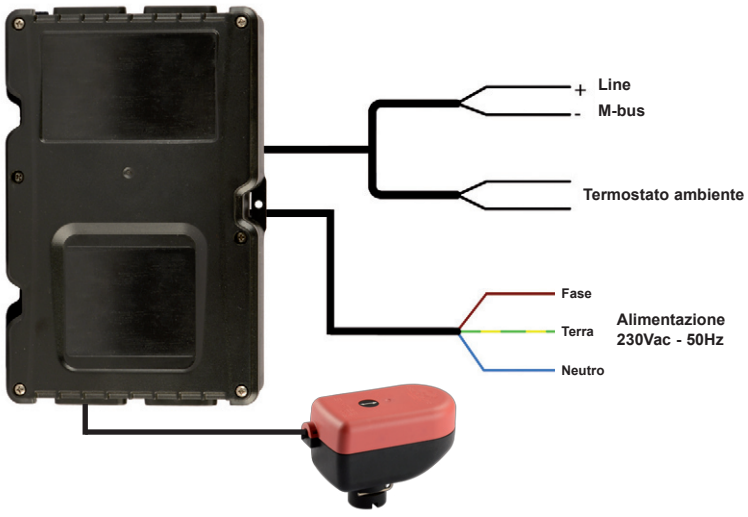




BLUE wire: neutral
BROWN wire: fixed phase
GREEN wire: opening phase
GREY wire: outlet phase with open valve
TA: room thermostat
M1: extra microswitch free in opening position

Supplying power by means of a phase only across the brown wire causes the valve to close (electrical automatic closing); supplying power across the green wire, too, causes the valve to open.

Code CGQKHT - **SINTESI** actuator 230V 50Hz with electromechanical control board for zone valve



Power supply

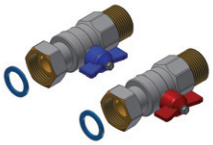
If the **CONTER** module is installed in communal areas (e.g. stairwells) and supplied with 230V from the line of a block of flats, a dangerous condition arises when connecting the wires to the thermostat inside the flat, as a non-owned high-voltage line is brought into the flat.

This generates an unsafe condition if a worker interrupts the power supply to the flat, acting on the thermomagnetic circuit breakers provided, and trips the thermostat in the belief that no voltage is present. The electromechanical safety board allows to “enter” the flat at low voltage for connection to the room thermostat.

Termostato ambiente

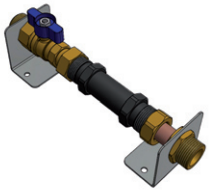
The device must be equipped with clean contacts.

ADDITIONAL SHUT-OFF VALVES



Code KIVMG34 - pair of additional shut-off ball valves (supplied loose) Ø3/4"
Code KIVMG01 - pair of additional shut-off ball valves (supplied loose) Ø1"

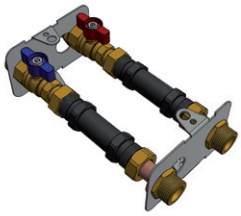
DOMESTIC WATER AND RECIRCULATION LINES



- galvanised steel support brackets
- manual interception valve
- meter replacement stub piece
- hydraulic connections in accordance with ISO 228/1

Code KCACST - DHW line with meter replacement stub piece G3/4 "x110mm - DN15 G3/4 "M
Code KCAFST - DCW line with meter replacement stub piece G3/4 "x110mm - DN15 G3/4 "M

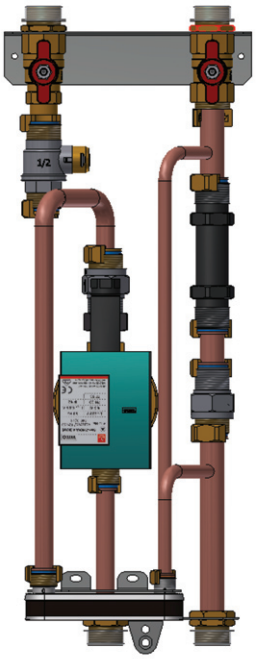
Code KCACST1 - DHW line with meter replacement stub piece G1 "x130mm - DN20 G1 "M
Code KCAFST1 - DCW line with meter replacement stub piece G1 "x130mm - DN20 G1 "M



- galvanised steel support brackets
- manual interception valve
- replacement DCW and DHW meter stub piece
- hydraulic connections in accordance with ISO 228/1

Code KCAT - DHW and DCW line with meter replacement stub pieces G3/4 "x110mm - DN15 G3/4 "M
Code KCAT1 - DHW and DCW line with meter replacement stub pieces G1 "x130mm - DN20 G1 "M

LOCALISED DHW RECIRCULATION



In centralised systems with direct energy and DHW metering, the standard requires that hot water delivery times must be kept below 30 seconds by bringing the DHW recirculation line into the flat if necessary.

CONTER RICIRCOLO is the functional, reliable and safe solution that solves the problem of correct domestic hot water metering: the system creates a localised recirculation sing for each individual flat that is independent of the centralised recirculation network.

The flow rate on the flat recirculation is ensured by a very low-consumption pump and temperature maintenance is guaranteed by the plate heat exchanger that transfers heat directly from the main domestic hot water distribution ring.

Code KRIC0 - DHW line with localised recirculation system and replacement stub piece - DN15 G3/4 "M

MID COMPLIANCE

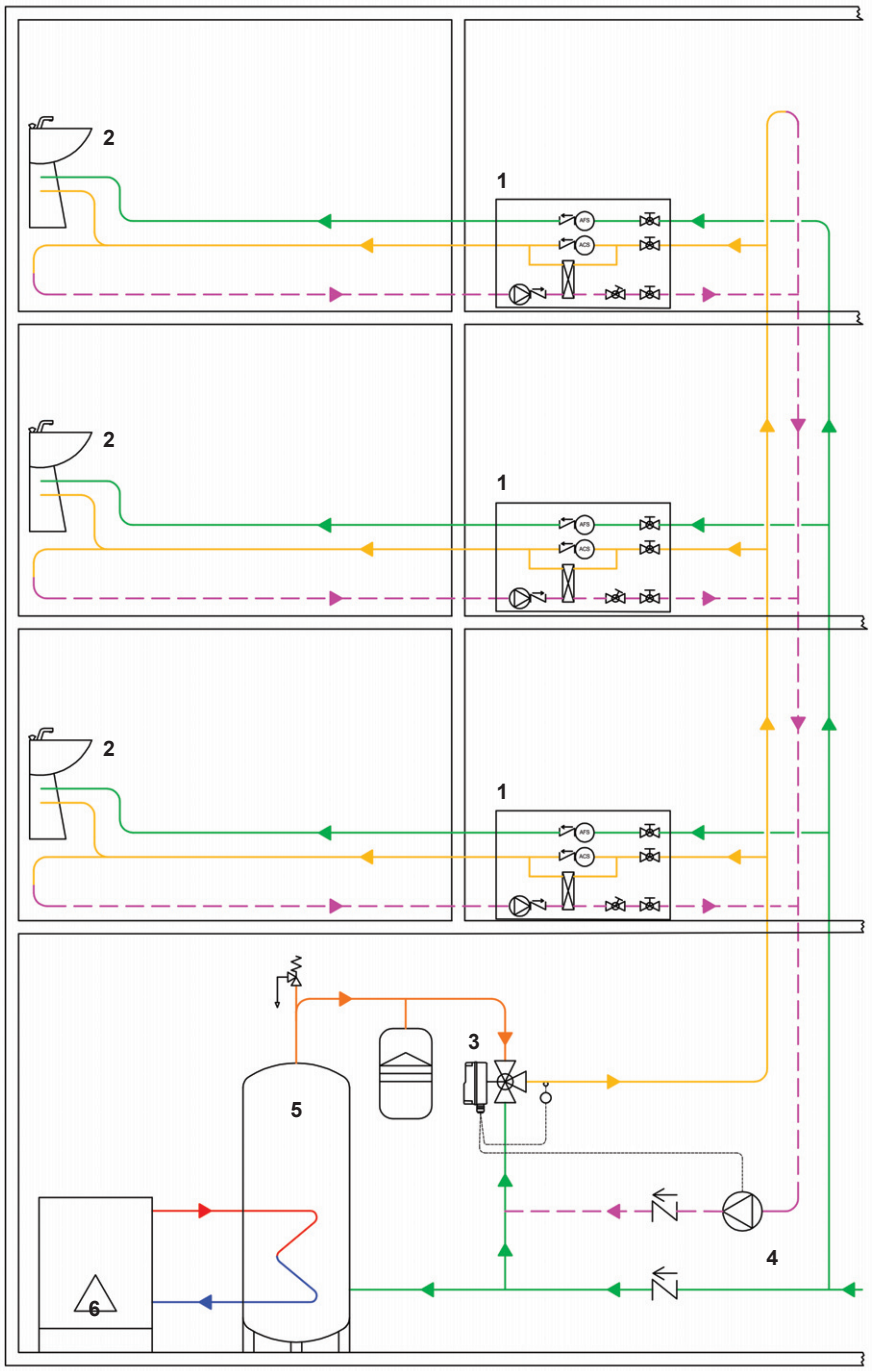
The domestic hot water volumetric meter only accounts for what is actually used by the individual housing unit in accordance with the MID directive..

HYGIENE AND SECURITY

Hot water withdrawn from the centralised circulation network, which enters the individual flat circulation ring, is no longer fed back into the common network.

EFFICIENCY AND ENERGY SAVING

The recirculation of each flat can be switched on and off freely, e.g. by means of a time programmer, with full management autonomy.



1 : CONTER RICIRCOLO
2 : Flat sanitary units
3 : DHW mixing valve
4 : Centralised recirculation pump
5 : Centralised DHW boiler
6 : Generator

Cold water
Hot water
Hot water recirculation

MID ENERGY METER

- heating / cooling
- n.3 pulse inputs
- long-life battery power supply (≥10 years)
- M-bus or Wireless M-bus interface
- PN16
- directive 2014/32/EU (MID) compliant

Code CFCENM34B - mechanical energy meter DN15 Qp=1.5 m^3/h M-bus reading
Code CFCENU34B - ultrasonic energy meter DN15 Qp=1.5 m^3/h M-bus reading
Code CFCENU34BW - ultrasonic energy meter DN15 Qp=1,5 m^3/h wireless M-bus reading

Code CFCENM01B - mechanical energy meter DN20 Qp=2.5 m^3/h M-bus reading
Code CFCENU01B - ultrasonic energy meter DN20 Qp=2.5 m^3/h M-bus reading
Code CFCENU01BW - ultrasonic energy meter DN20 Qp=2.5 m^3/h wireless M-bus reading

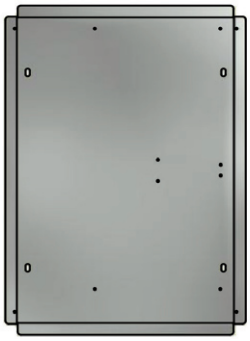
MID DOMESTIC WATER METER

- hot and cold domestic water
- single jet
- dry dial
- 7-roller register
- pulse output or M-bus
- PN16
- directive 2014/32/EU (MID) compliant

Code CFCAFSI15 - DCW volume meter DN15 Q3=2.5 m^3/h pulse output
Code CFCACSI15 - DHW volume meter DN15 Q3=2.5 m^3/h pulse output
Code RFCAFS15ZM - DCW volume meter DN15 Q3=2.5 m^3/h M-bus output
Code RFCACS15ZM - DCW volume meter DN15 Q3=2.5 m^3/h M-bus output

Code CFCAFSI20 - DCW volume meter DN20 Q3=4.0 m^3/h pulse output
Code CFCACSI20 - DHW volume meter DN20 Q3=4.0 m^3/h pulse output

SHEET METAL FLUSH-MOUNTED BOXES



- galvanized metal sheet 10/10
- temporary cover in black sheet metal

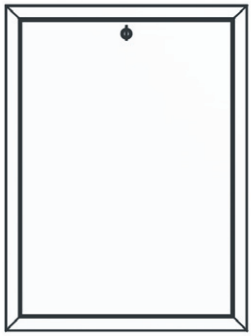
Code QSA - box size 550x390x110mm
Code QSB - box size 890x430x160mm
Code QSC - box size 550x550x150mm

Conter

		ENERGY LINE DN15						
		QK0H0A QK0S0A QK1H0A QK1S0A	QK0HJA QK0SJA QK1HJA QK1SJA	QK0HXA QK0SXA QK1HXA QK1S0XA	QK0HDA QK0SDA QK1HDA QK1SDA	QK0HMA QK0SMA QK1HMA QK1SMA	QK0HPA QK0SPA QK1HPA QK1SPA	QK0HPB QK0SPB QK1HPB QK1SPB
DOMESTIC LINES	KCAT / KCAT1	QSA	QSA	QSA	QSC	QSA	QSA	QSB
	KCAT / KCAT1 + KCACST / KCACST1 oppure KCAFST / KCAFST1	QSC	QSC	QSC	QSC	QSC	QSC	QSB
	KRIC0 oppure KCAFST / KCAFST1	QSC	QSC	QSC	QSC	QSC	QSC	please contact our Technical Office

		ENERGY LINE DN20						
		QK3H0A QK3S0A QK4H0A QK4S0A	QK3HJA QK3SJA QK4HJA QK4SJA	QK3HXA QK3SXA QK4HXA QK4S0XA	QK3HDA QK3SDA QK4HDA QK4SDA	QK3HMA QK3SMA QK4HMA QK4SMA	QK3HPA QK3SPA QK4HPA QK4SPA	QK3HPB QK3SPB QK4HPB QK4SPB
DOMESTIC LINES	KCAT / KCAT1	QSA	QSB	QSB	QSB	QSB	QSB	QSB
	KCAT / KCAT1 + KCACST / KCACST1 oppure KCAFST / KCAFST1	QSC	please contact our Technical Office					
	KRIC0 oppure KCAFST / KCAFST1	QSC						

FRAME AND DOORS



- powder coating
- colour white RAL 9010
- lock with customised key

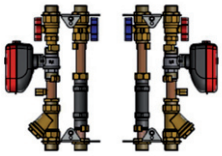
Code QSACS - frame and door with customised lock for QSA box
Code QSBCS - frame and door with customised lock for QSB box
Code QSCCS - frame and door with customised lock for QSC box

INSTALLATION

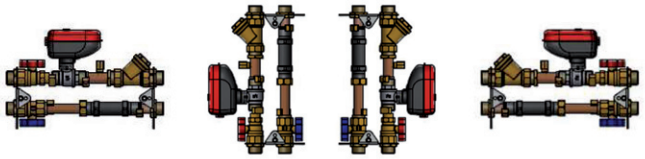
CONTER lines are designed for indoor installation in frost-protected rooms. When choosing the installation position, please refer to the following instructions:

- **WALL-HANGING:** inside technical compartments with access restricted to authorised personnel only. Secured with dowels (not included).
- **RECESSED:** inside a box suitable for wall recessing equipped with frame and door.

RECOMMENDED



ADMITTED



NOT ADMITTED

The line can be installed in any position except with the **SINTESI** motorised valve facing downwards.

Thanks to the special fixing brackets, installation can be made with entrances from the right or left.

WARNINGS

It is advisable to use flexible hydraulic connection in order to compensate for any thermal expansion and possible misalignment between the system connections.

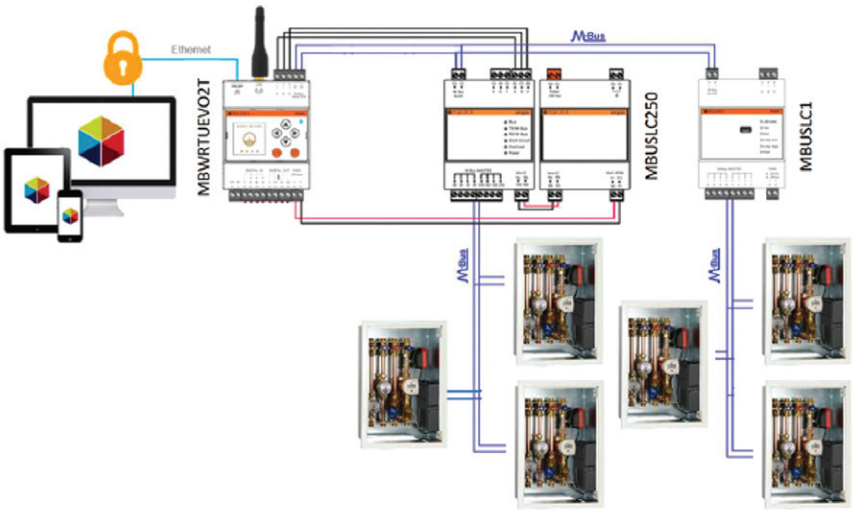
WARRANTY

The guarantee runs from the date of acceptance, if required, and is valid for 24 months. If testing is not required, the warranty starts from the date of purchase.

WIRED M-BUS DATA ACQUISITION SYSTEMS

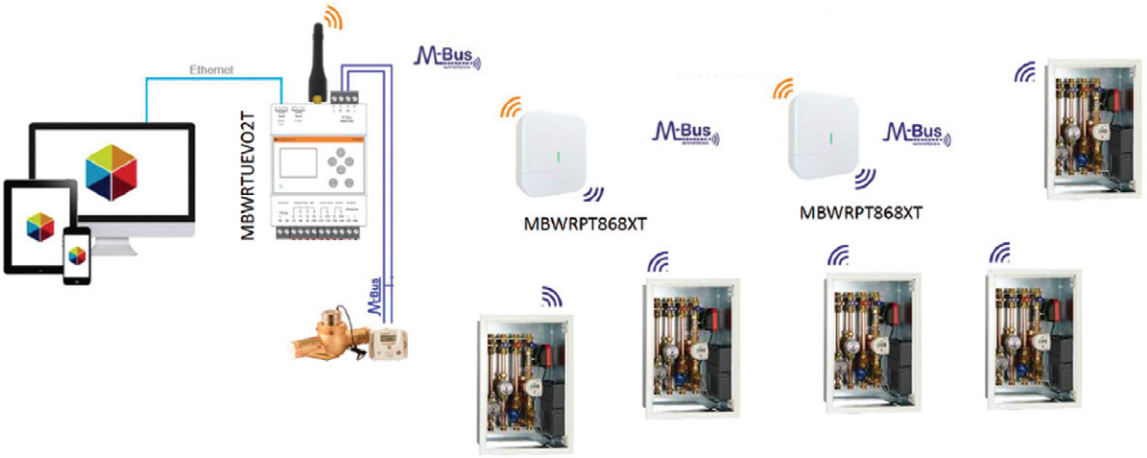
The wired M-Bus acquisition system enables the centralised reading of measuring devices (energy and domestic water meters) via a stable and reliable physical infrastructure. The devices are connected by cable to an M-Bus master, which interrogates the individual slaves (meters) cyclically, collecting consumption data. The acquired information is then transmitted to a central supervisory system for processing, archiving and analysis.

Data can be read locally via direct connection to the master (e.g. serial port or USB), or remotely via network interfaces (Ethernet, GSM) by integrating the system with monitoring software. This allows efficient, automated and real-time management of consumption.



WIRELESS M-BUS

The Wireless M-Bus acquisition system allows the remote reading of measuring devices (energy and domestic water meters) without the need for wiring, using radio communication according to the EN 13757 standard. The meters are equipped with radio modules that periodically transmit data to a concentrator or gateway, which collects the information and forwards it to the central supervisory system.

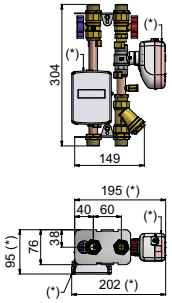


CERTIFICATIONS

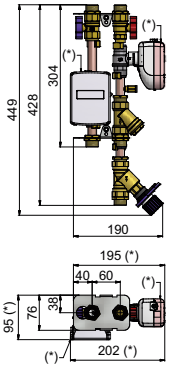
- **CE Machinery Directive**
  2006/42/CE.
- **CE Low Voltage Directive**
  2014/35/ue: 26/04/2014
- **CE Electromagnetic Compatibility Directive**
  2014/30/UE

OVERALL SIZE • DN 15

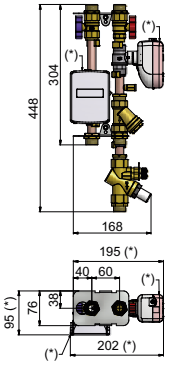
QK0H0A • QK0S0A



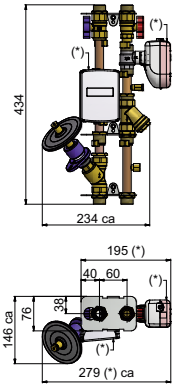
QK0HJA • QK0SJA



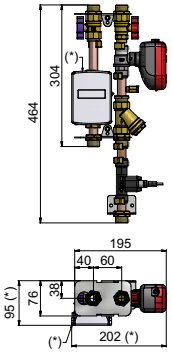
QK0HXA • QK0SXA



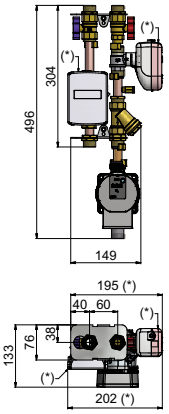
QK0HDA • QK0SDA



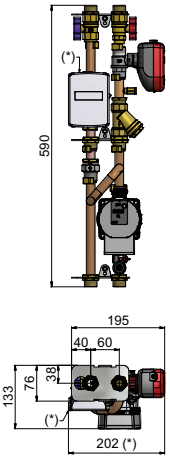
QK0HMA • QK0SMA



QK0HPA • QK0SPA

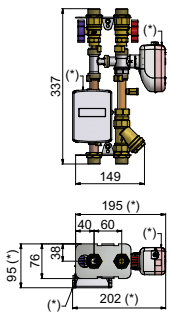


QK0HPB • QK0SPB

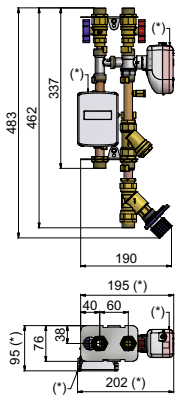


* *accessory*

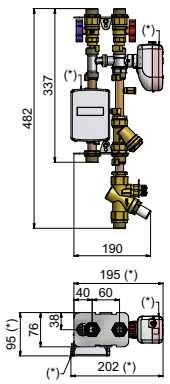
QK1H0A • QK1S0A



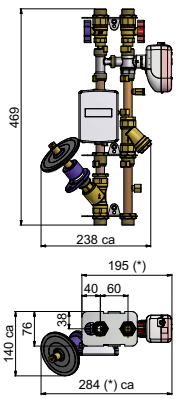
QK1HJA • QK1SJA



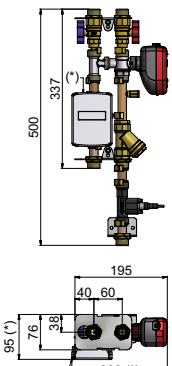
QK1HXA • QK1SXA



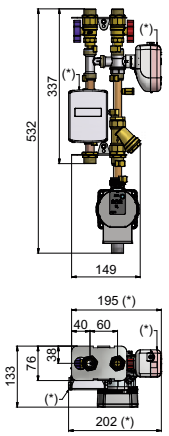
QK1HDA • QK1SDA



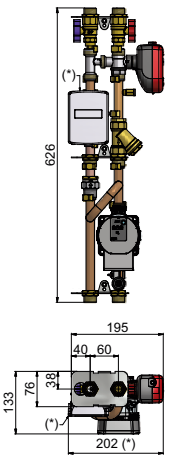
QK1HMA • QK1SMA



QK1HPA • QK1SPA



QK1HPB • QK1SPB

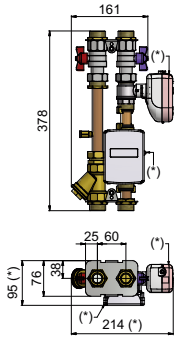


* *accessory*

Conter

OVERALL SIZE • DN 20

QK3H0A • QK3S0A



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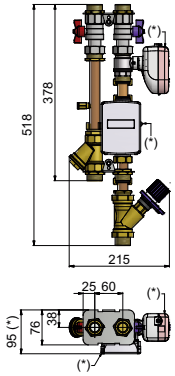
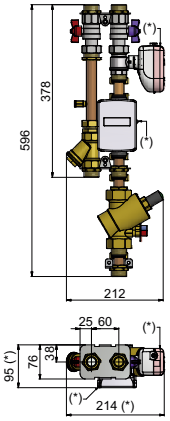
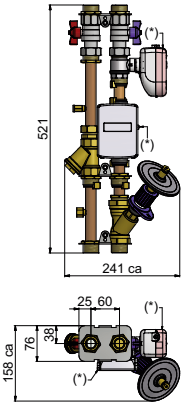


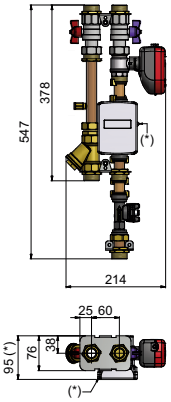
QK3HXA • QK3SXA



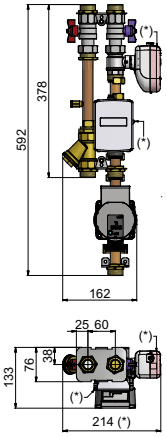
QK3HDA • QK3SDA



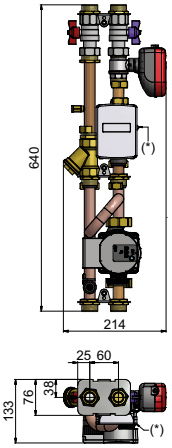
QK3HMA • QK3SMA



QK3HPA • QK3SPA

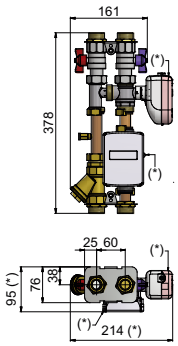


QK3HPB • QK3SPB

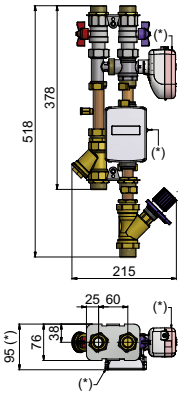


* *accessory*

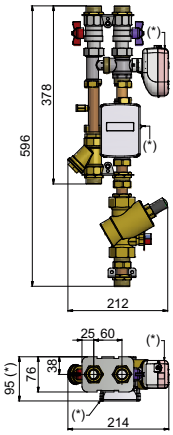
QK4H0A • QK4S0A



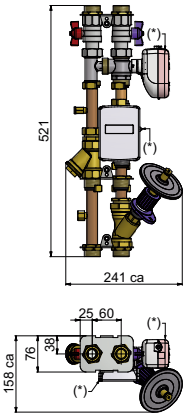
QK4HJA • QK4SJA



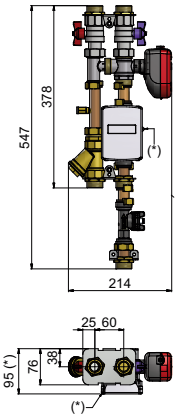
QK4HXA • QK4SXA



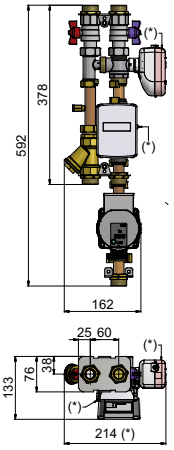
QK4HDA • QK4SDA



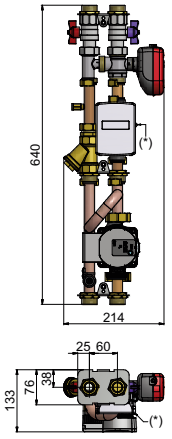
QK4HMA • QK4SMA



QK4HPA • QK4SPA



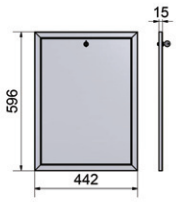
QK4HPB • QK4SPB



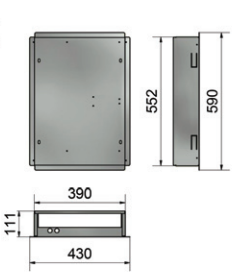
* *accessory*

OVERALL SIZE • Frames and doors

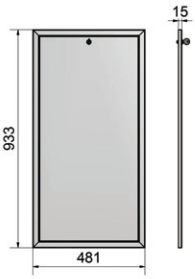
QSACS



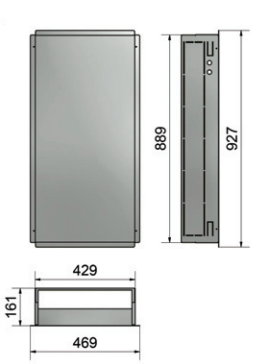
QSA



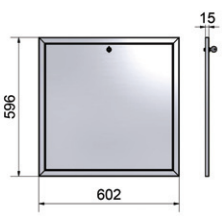
QSBCS



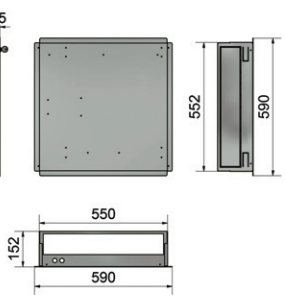
QSB



QSCCS



QSC



Conter

EXAMPLE OF SPECIFICATIONS

CONTER SATELLITE MODULE for direct metering and management of heating/cooling systems with centralised hot water production: • Pair of manual shut-off valves on the centralised side with red and blue handwheels • SINTESI by-pass ball valve on heating/cooling line • Replacement energy meter stub piece • Y filter • Static balancing valve • Energy line insulation • Galvanised steel brackets for wall mounting or containment box. Copper piping Ø18 mm, hydraulic connections G3/4 "M (ISO 228/1 standard). Maximum pressure 6 bar, maximum temperature 90°C. Size (HxWxD): 483x190x76 mm.

Brand: **COMPARATO** • Code: **QK1SJA**

CONTER CONTAINMENT BOX for flush-mounted installation in galvanised steel and temporary door. Size (HxWxD): 550x390x110 mm.

Brand: **COMPARATO** • Code: **QSA**

FRAME AND DOOR complete with customised lock, epoxy powder-coated RAL 9010.

Brand: **COMPARATO** • Code: **QSACS**

SINTESI ACTUATOR type ON/OFF 230V 50Hz 2-point control.

Brand: **COMPARATO** • Code: **SR2221U**

ENERGY COUNTER Heating and/or cooling M-bus, DN15, nominal flow rate Qp 1.5 m³/h, MID-approved. Size: DN15 - 3/4 "Mx110mm.

Brand: **COMPARATO** • Code: **CFCENM34B**

DHW AND DCW METERING LINES: • Pair of manual shut-off valves on the centralised side with red and blue handwheels • Galvanised steel brackets for wall or box fixing • Non-return valves • Replacement DHW and DCW stub pieces. Size (HxWxD): 244x156x111 mm.

Brand: **COMPARATO** • Code: **KCAT**

DHW VOLUMETRIC COUNTER pulsed (10 litres/pulse), DN15, permanent flow Q 2.5 m³/h, MID-certified.

Brand: **COMPARATO** • Code: **CFCACSI15**

DCW VOLUMETRIC COUNTER pulsed (10 litres/pulse), DN15, permanent flow Q 2.5 m³/h, MID-certified.

Brand: **COMPARATO** • Code: **CFCAFSI15**.

HYDROTHERMAL SYSTEMS
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