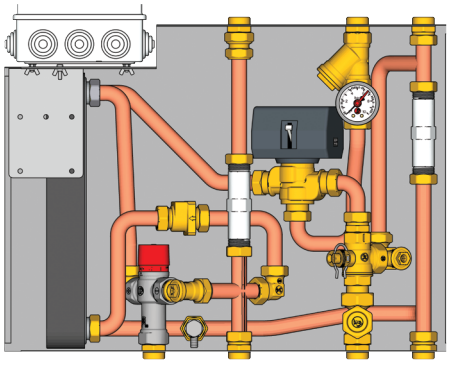
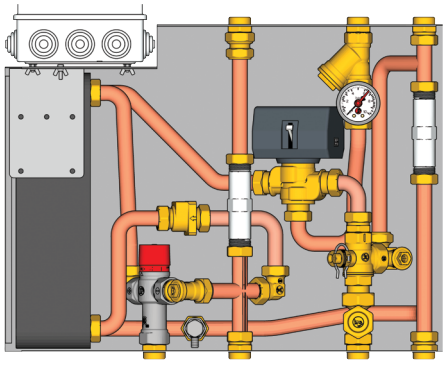


GE556Y301



GE556Y302

Figure 1

Description

The GE556 user satellites are the ideal metering solution in condominium systems with the centralised production of heating water and zone-based distribution, where there is a need to produce sanitary hot water locally (in each individual apartment). With the aid of the satellites, a delivery pipe and a return pipe distribute energy for heating both rooms and sanitary water; in addition to this, there is just one pipe for the cold sanitary water.
This avoids the need to install pipes for sanitary hot water distribution and the relative recirculation.

Versions and product codes

Product code	Main functions	Exchanger power
GE556Y301	**Priority valve**	**44 kW**
GE556Y302	**Priority valve**	**58 kW**
GE556Y303	thermostatic command and dynamic balancing	58 kW
GE556Y314	softened water management	44 kW

Tabella 1 – Satelliti GE556, in grassetto i satelliti trattati in questa scheda tecnica

Technical data

Primary circuit

- Max. working temperature: 90 °C
- Max. working pressure: 16 bar (10 bar with plastic spacer)
- Nominal flow rate on primary circuit: 1000 l/h

Heating circuit

- Max. heating power: can be adjusted via the flow rate adjustment lockshield valve

Sanitary hot water production

- Power for sanitary hot water production with inlet 75 °C, flow rate 1000 l/h on the primary line and ΔT = 35 °C on the secondary line (50 °C -15 °C):
  44 kW for GE556Y301
  58 kW for GE556Y302
- Corresponding sanitary hot water flow rate:
  18 l/min for GE556Y301
  24 l/min for GE556Y302
- Min. hot water withdrawal: 2,5 l/min

Priority valve

- Power voltage/frequency: 230 Vac / 50 Hz
- Total absorbed electric power: 6 VA
- Hydraulic switchover time: 6 seconds

Main features

- Connections: 3/4".
- Primary side: filter with stainless steel basket and housing for delivery temperature probe.
- Sanitary hot water production: flow switch, priority valve, thermostatic mixer for temperature adjustment, and instantaneous heat exchanger.
- Heating side: adjustment lockshield valve and 3-way zone valve motorizable.
- Box with terminal board for electric connections.
- Suitable for insertion in a template (external or flush-mounting).
- Suitable for installation of thermal energy meter and sanitary water meter, via the plastic spacers.

The versions GE556Y301 and GE556Y302 implement the following functions:

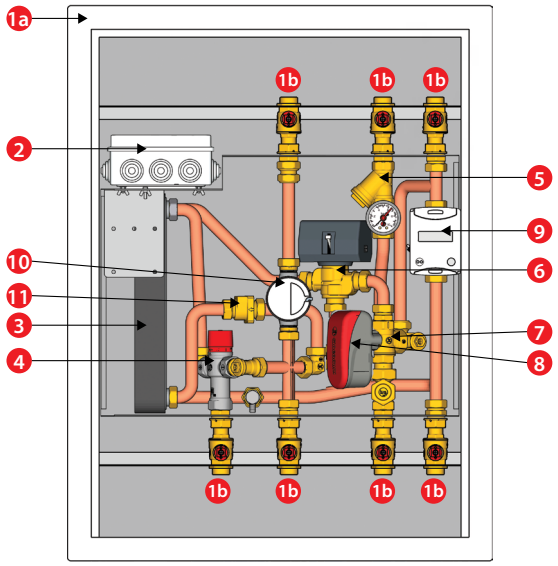
- ON-OFF control of the heating system.
- Instantaneous production of sanitary hot water via a motorised priority valve and integrated plate heat exchanger.
- Mixing of sanitary water for sending to the users.
- Direct measurement of the heat energy consumption for heating and sanitary hot water production.
- Direct measurement of the consumption of sanitary cold water.

The satellite components are fitted on a sheet metal frame that can be inserted in the appropriate template for worksite installation. Available in an external version (GE551Y072) or a flush-mounting one (GE551Y073).
On the heating delivery unit there is a filter, a manometer, a balancing lockshield valve and a motorizable 3-way zone valve. On the return unit there is a plastic spacer for inserting the thermal energy meter.
The insulated stainless steel plate exchanger produces sanitary hot water in combination with the motorised priority valve that is activated by the sanitary circuit flow switch.
The thermostatic mixer allows you to adjust the temperature of the sanitary water sent to users, within a range of 38÷60 °C.
The difference between the two versions lies in the power of the heat exchanger: 44 kW for the GE556Y301 satellite; 58 kW for the GE556Y302 satellite.

Factory adjustments

- Thermostatic mixer: position 3 (49 °C).
- Cold side lockshield valve on thermostatic mixer: 3/4 turn opening.
- Heating lockshield valve: fully open.
- Primary bypass lockshield valve: fully open.

Components



Legend	
1a	Template for installation on a worksite - external or flush-mounting (optional)
1b	Valves included with the template, for satellite-template connection (optional)
2	Box with terminal board for electric connections
3	Insulated exchanger
4	Thermostatic mixer
5	Y-filter
6	Motorised priority valve
7	3-way zone valve, motorizable
8	Actuator for 3-way zone valve (optional)
9	Thermal energy meter
10	Cold sanitary water meter (optional)
11	Flow switch

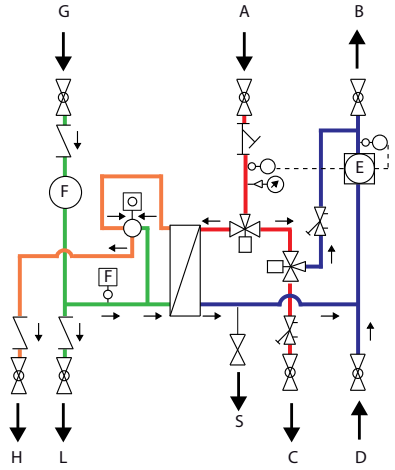
Figure 2 - GE556Y301 satellite with optional accessories

Optional accessories

- Thermal energy meter, GE552 series (fig.2-9).
- Sanitary water meter, GE552-2 series (fig.2-10).
- Template for external or flush-mounting installation, GE551-2 series (fig.2-1a, 1b).
- Actuator for zone valve, K270 series (fig.2-8).
- Components for data centralisation via M-Bus (GE552-4 series) or via Wireless M-Bus (GE552-W series).

NB:
- Within the satellite there is an adjustment lockshield valve for balancing the heating circuits.
No device is envisaged for balancing HSW production circuits: if necessary, you can fit one on the distribution system side.
- If there is no sanitary water meter, the cold sanitary water inlet in the satellite can be set from below (inlet L in figure 3, with the connection G closed and no check valve).

Operation



Legend	
A) Primary delivery **B)** Primary return **C)** Heating system delivery **D)** Heating system return	**G)** Sanitary cold water inlet **H)** Mixed sanitary hot water outlet **L)** Sanitary cold water outlet **S)** Drainage

	3-way zone valve Priority valve		Temperature probe
	Thermostatic mixer	F	Flow switch
	Shut-off valve		Filter
	Drain cock	E	Thermal energy meter (optional)
	Balancing lockshield valve	F	Sanitary water meter (optional)
	Heat exchanger		Non-return valve (optional)
	Manometer		

Figure 3 – Operation diagram

The inputs from the boiler room are from above, while the outputs to the home are from below. The first unit at the top left (**G**) relates to sanitary water; the water meter (**F**) measures the total flow rate. Cold sanitary water emerges from the second pipe at the bottom left (**L**); the first (**H**) feeds out hot sanitary water, mixed by means of a thermostatic mixer.
The "hot" heating fluid from the centralised utility room enters from above, via the second pipe from the left (**A**); after passing through a filter, its temperature and pressure (analogue manometer) are measured. Then there is the priority valve that, commanded by the hot sanitary water flow switch, deviates the heating fluid (heating side) towards the plate exchanger. When there is no hot sanitary water request, the heating fluid (heating side) passes through the priority valve and then meets the 3-way zone heating valve (that may also be 2-way if the bypass with adjustment lockshield valve is closed). The adjustment lockshield valve downstream from the zone heating valve regulates the flow rate in heating mode. On the return line towards the central unit there is a thermal energy meter (**E**) with built-in temperature probe.

Thermostatic mixer

- Complying with A.S.S.E. 1017
- Adjustment precision ± 1°C (adjustment in table 4)

Position	1	2	3	4	5
Mixing temperature [°C]	38	43,5	49	54,5	60

Table 2 – Thermostatic mixer adjustment

Sanitary hot water production

Sanitary			Flow rate [l/h] and temperature of primary outlet (sanitary 15-50 °C)			
l/min	l/h	kW	75 °C	70 °C	65 °C	60 °C
12	720	29,5	580 (31 °C)	700 (33,8 °C)	880 (36,3 °C)	1330 (40,9 °C)
15	900	37	780 (34,2 °C)	960 (36,9 °C)	1260 (39,8 °C)	-
17	1020	41,5	920 (35,8 °C)	1140 (38,4 °C)	1540 (41,6 °C)	-
18	1080	44	1000 (36,6 °C)	1240 (39,3 °C)	1700 (42,6 °C)	-
19	1140	46,5	1070 (37,4 °C)	1340 (40 °C)	-	-
20	1200	49	1150 (38,1 °C)	1450 (40,8 °C)	-	-

Table 3 – Power and flow rate data for primary circuit and sanitary water production for GE556Y301

Sanitary			Flow rate [l/h] and temperature of primary outlet (sanitary 15-50 °C)				
l/min	l/h	kW	75 °C	70 °C	65 °C	60 °C	57 °C
12	720	29,5	460 (20 °C)	525 (21,4 °C)	610 (23,5 °C)	760 (26,7 °C)	920 (29,5 °C)
15	900	37	590 (21,2 °C)	675 (23 °C)	800 (25,3 °C)	1000 (28,5 °C)	1240 (31,5 °C)
17	1020	41,5	680 (22,1 °C)	775 (23,8 °C)	925 (26,2 °C)	1180 (29,7 °C)	1480 (32,8 °C)
18	1080	44	725 (22,4 °C)	830 (24,2 °C)	1000 (26,9 °C)	1275 (30,2 °C)	1620 (33,5 °C)
19	1140	46,5	770 (22,8 °C)	885 (24,7 °C)	1060 (27,2 °C)	1380 (30,9 °C)	1750 (34,1 °C)
20	1200	49	815 (23,2 °C)	940 (25,1 °C)	1130 (27,7 °C)	1480 (31,5 °C)	1880 (34,6 °C)
24	1430	58,5	1000 (24,6 °C)	1160 (26,7 °C)	1420 (29,5 °C)	1880 (33,3 °C)	-

Table 4 – Power and flow rate data for primary circuit and sanitary water production for GE556Y302

Hydraulic characteristics

Heating function

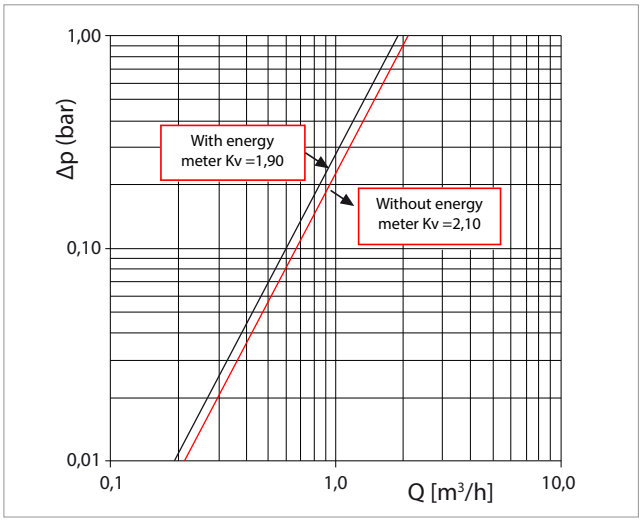


Figure 4 – Heating function – primary side

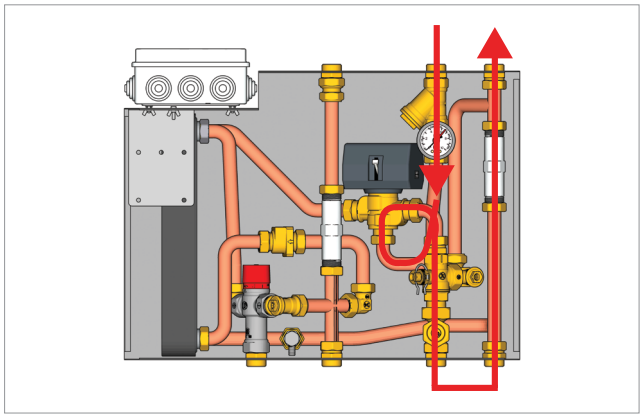


Figure 5 – Heating function – primary side

NB:
The instantaneous flow rate can be verified by means of the energy meter, thereby allowing you to adjust the lockshield valve for the heating function.

Sanitary hot water function

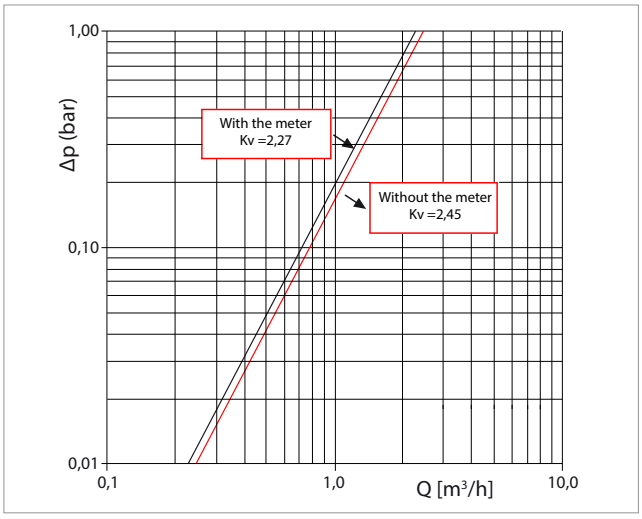


Figure 6 – Sanitary hot water function – primary side

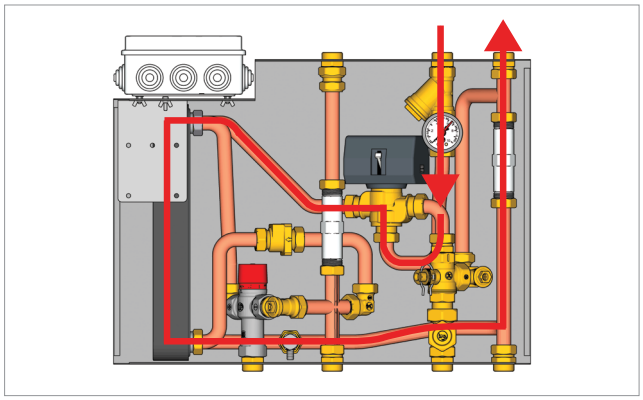


Figure 7 – Sanitary hot water function – primary side

NB:
For the sanitary hot water function too, you can use the energy meter to check the instantaneous flow rate.
No adjustment devices are envisaged for the hot sanitary water function, but you can fit devices on the satellite if necessary.

Primary by-pass

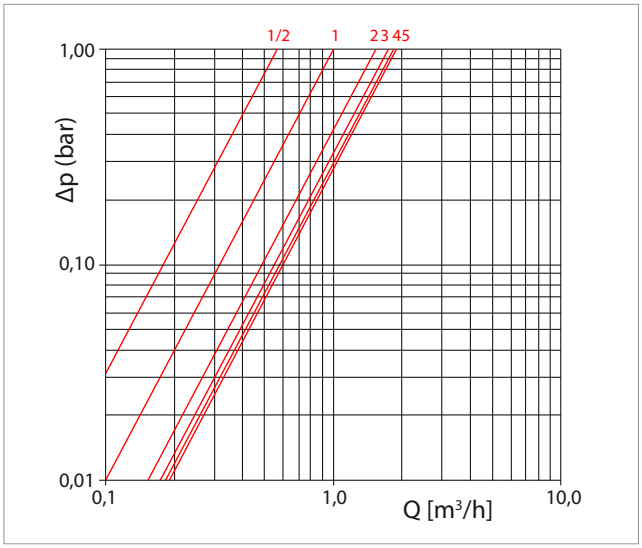


Figure 8 – Primary by-pass, depending on bypass lockshield valve adjustment

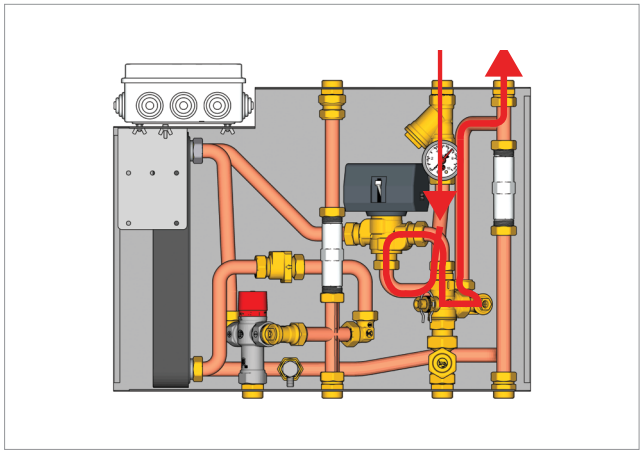


Figure 9 – Primary by-pass

By-pass lockshield regulation	0	1/2	1	2	3	4	5
Kv	0	0,57	1,00	1,55	1,75	1,86	1,92

Table 5 – By-pass lockshield valve adjustment

Sanitary cold water

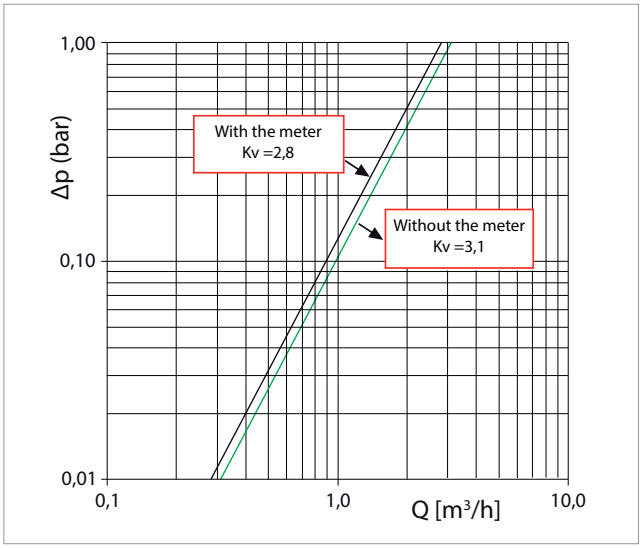


Figure 10 – Sanitary cold water (SCW)

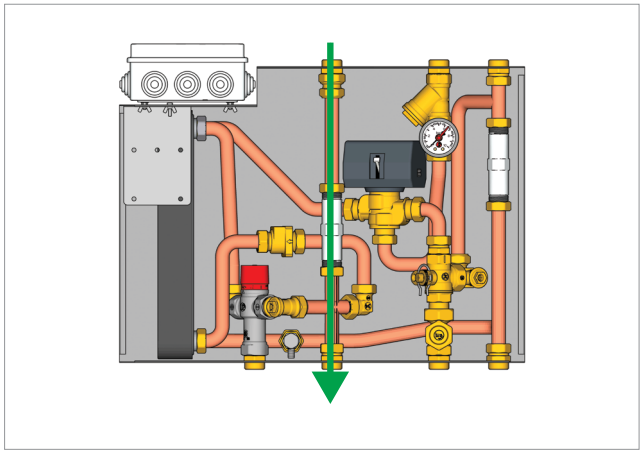


Figure 11 – Sanitary cold water (SCW)

NB:
Hydraulic characteristic of the check valve (to be ordered separately):
Kv = 4,3 (see figure 14).

Sanitary hot water

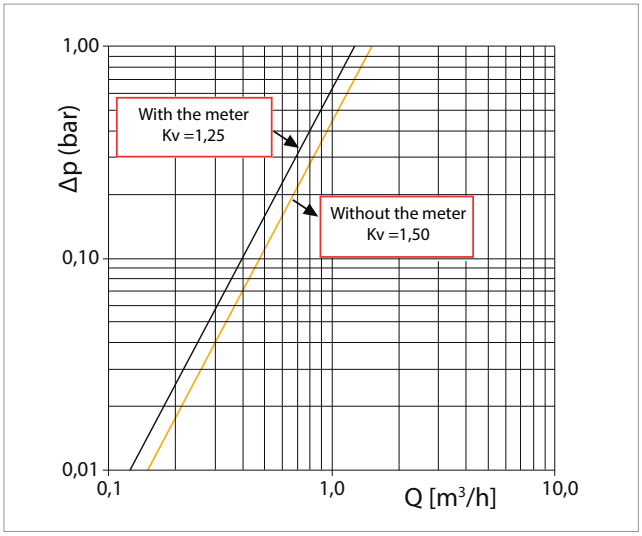


Figure 12 – Sanitary hot water (SHW)

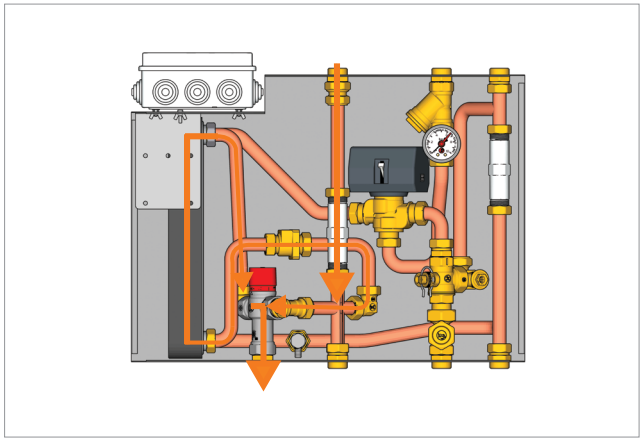


Figure 13 – Sanitary hot water (SHW)

NB:
Hydraulic characteristic of the check valve (to be ordered separately):
Kv = 4,3 (see figure 14).

Check valve on sanitary water (optional)

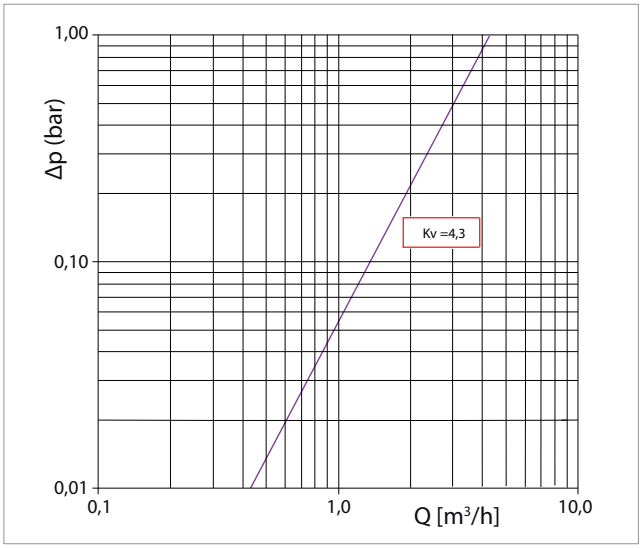
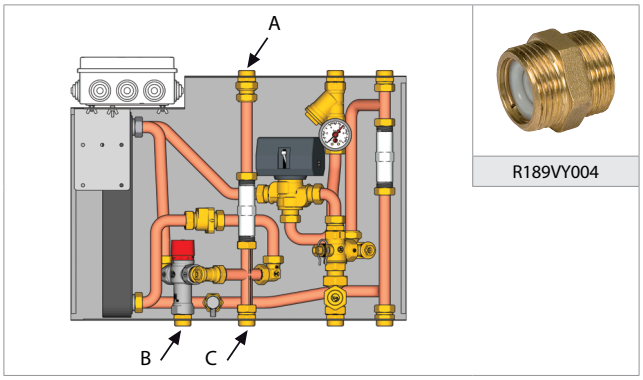


Figure 14 – Check valve, code R189VY004

Installing the check valve on the sanitary water circuit (optional)



R189VY004

Figure 15 – Positioning the sanitary water check valves (optional)

The R189VY004 sanitary water check valve is integrated in a nipple (R189V series). To install the non-return valve on the satellite, replace the original nipple A and/or B and/or C (figure 15) with the R189VY004 nipple fitted with a check valve. Be sure to respect the flow directions (the flows are from the top downwards - see figure 3).

Installation

Satellite installation usually requires the use of a template for worksite installation of the versions:

- **GE551Y072:** (external)
- **GE551Y073:** (flush-mounting)

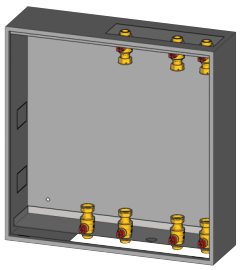
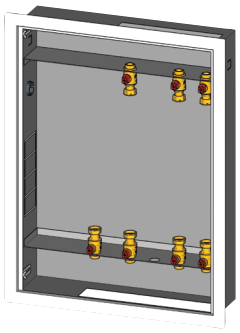
GE551Y072 (external)	GE551Y073 (flush-mounting)
	

Figure 16

1) Installing the template.
You are advised to install only the template on the worksite (fig.16), to avoid damaging the meters and so that you can subsequently rinse out the systems and perform the pressure tests.

2) Rinsing out the system
You are advised to rinse out the system before installing the thermal energy meters.

3) Installing the satellite
After rinsing out the system, the satellite can be installed in the template and the energy meter can be assembled.

4) Testing the system
After making the installations, test the pressurised system.

Allowed installation

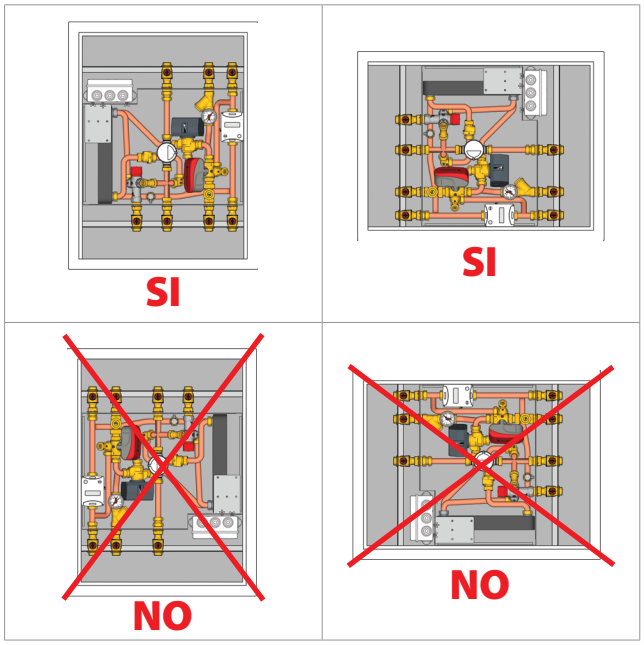


Figure 17

Electrical connections

Warning.
interventions on electrical components must only be carried out by qualified personnel. Ensure that the power supply is suspended while the connections are being carried out.

Nota.
The showed electric scheme is about the connections of GE552Y158, GE552Y159 thermal energy meters. In the case of installation of other energy meters refer to the instructions of the meters themselves.

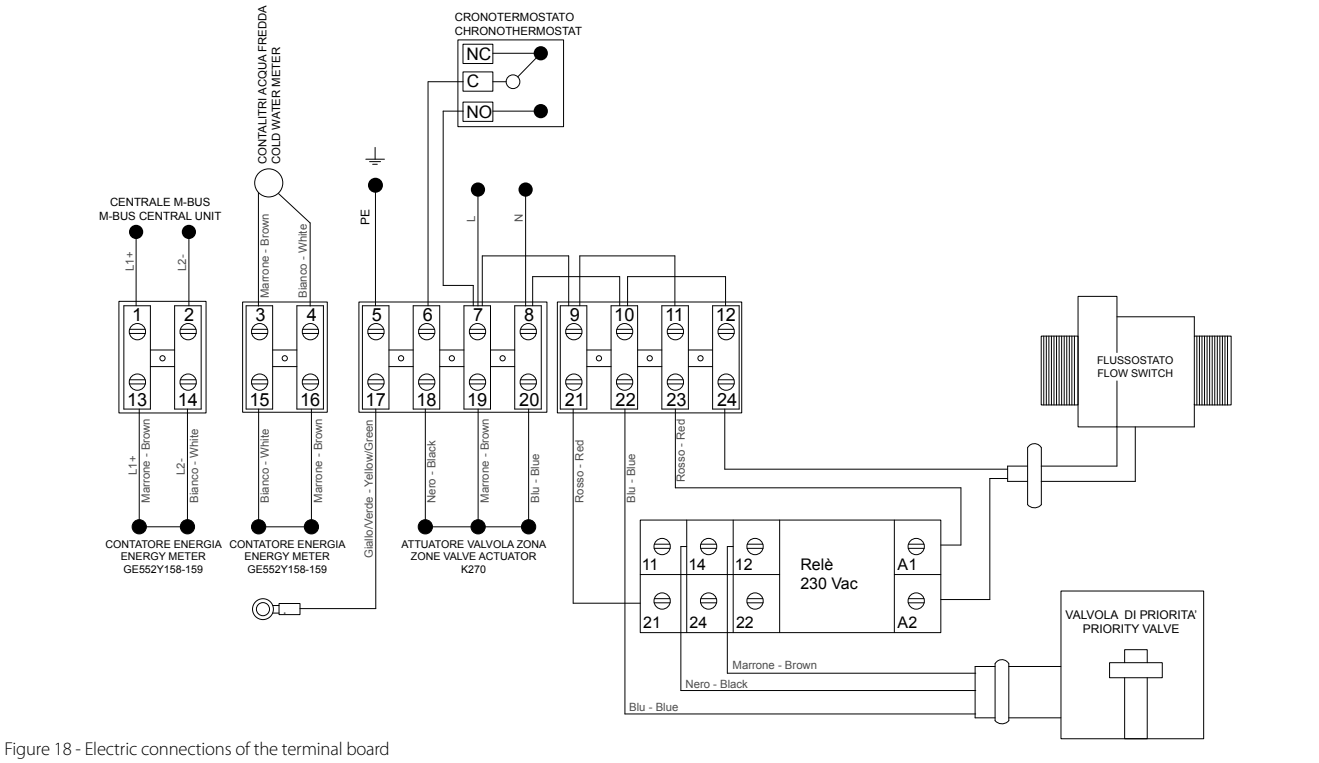
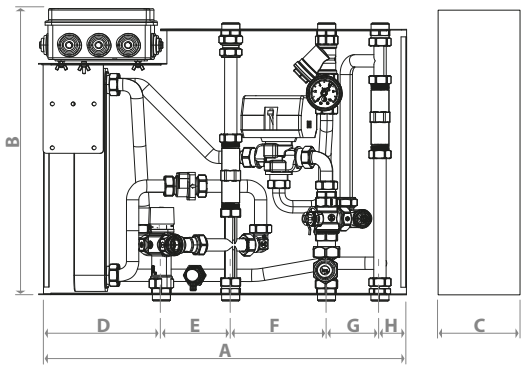


Figure 18 - Electric connections of the terminal board

Terminal	Function
1	Cable transmitting M-Bus data to the data concentrator: connection of wire L1+. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
2	Cable transmitting M-Bus data to the data concentrator: connection of wire L2-. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
3	Connection for M-Bus centralization of water meters
4	Connection for M-Bus centralization of water meters
5	Earth
6	Connection to the chronothermostat, to the common C terminal of the internal contact (cable section 0,5 mm^2)
7	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm^2) In parallel: connection to the chronothermostat, to the normally open NO terminal of the internal contact (cable section 0,5 mm^2)
8	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm^2)
9	-
10	-
11	-
12	-

Terminal	Function
13	Connection of L1+ brown wire of thermal energy meter
14	Connection of L2- white wire of thermal energy meter
15	Connection for M-Bus centralization of water meters
16	Connection for M-Bus centralization of water meters
17	Earth
18	Connection K270 zone valve actuator, black wire
19	Connection K270 zone valve actuator, brown wire
20	Connection K270 zone valve actuator, blue wire
21	Connection to relay, red wire, pos. 21
22	Connection to priority valve, blue wire
23	Connection to relay, red wire, pos. A1
24	Connection to flow switch

Dimensions



Product code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]
GE556Y301	540	390	155	190	100	140	80	30
GE556Y302								

Reference Standards

- UNI EN 1434
- Directive 2004/22/EC
- EN 60751
- EN 61107
- EN 13757
- A.S.S.E. 1017

Product specifications

GE556Y301

User satellite for centralised systems, for managing heating and sanitary hot water production. 3/4" connections. Primary side: filter with stainless steel basket and housing for delivery temperature probe. Sanitary hot water production: flow switch, priority valve, thermostatic mixer for temperature adjustment, and instantaneous heat exchanger with 44 kW power (with Primary: 75°C and 1 m^3/h flow rate. Secondary: ΔT = 50 °C -15 °C and 18 l/min flow rate). Heating side: adjustment lockshield valve and 3-way zone valve motorizable. Suitable for installation of thermal energy meter and sanitary water meter, via the plastic spacers (centre distance 110 mm). IP55 box with terminal board for electric connections. Suitable for insertion in a template. Max. working temperature 90 °C. Max. working pressure 16 bar (10 bar with plastic spacer). Frame dimensions 540x390x155 mm (LxHxD). The satellite can be completed by separately ordering: thermal energy meters of the GE552 series. Sanitary water meter, GE552-2 series. Template (with shut-off valves) in painted sheet metal (RAL9010) with lockable door and adjustable frame depth; external version code GE551Y072; internal version code GE551Y073. Actuator K270 for 3-way zone valve. Components for centralisation and remote control of consumption data via M-BUS (GE552-4 series), or components for centralisation and remote control of consumption data via Wireless M-BUS (GE552-W series).

GE556Y302

User satellite for centralised systems, for managing heating and sanitary hot water production. 3/4" connections. Primary side: filter with stainless steel basket and housing for delivery temperature probe. Sanitary hot water production: flow switch, priority valve, thermostatic mixer for temperature adjustment, and instantaneous heat exchanger with 58 kW power (with Primary: 75°C and 1 m^3/h flow rate. Secondary: ΔT = 50 °C -15 °C and 24 l/min flow rate). Heating side: adjustment lockshield valve and 3-way zone valve motorizable. Suitable for installation of thermal energy meter and sanitary water meter, via the plastic spacers (centre distance 110 mm). IP55 box with terminal board for electric connections. Suitable for insertion in a template. Max. working temperature 90 °C. Max. working pressure 16 bar (10 bar with plastic spacer). Frame dimensions 540x390x155 mm (LxHxD). The satellite can be completed by separately ordering: thermal energy meters of the GE552 series. Sanitary water meter, GE552-2 series. Template (with shut-off valves) in painted sheet metal (RAL9010) with lockable door and adjustable frame depth; external version code GE551Y072; internal version code GE551Y073. Actuator K270 for 3-way zone valve. Components for centralisation and remote control of consumption data via M-BUS (GE552-4 series), or components for centralisation and remote control of consumption data via Wireless M-BUS (GE552-W series).

Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☏ +39 0322 923372 🖷 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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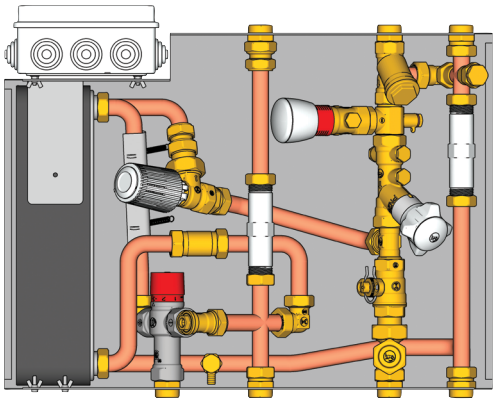
Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy



GE556Y303

Figure 1

Description

The GE556 user satellites are the ideal metering solution in condominium systems with the centralised production of heating water and zone-based distribution, where there is a need to produce sanitary hot water locally (in each individual apartment). With the aid of the satellites, a delivery pipe and a return pipe distribute energy for heating both rooms and sanitary water; in addition to this, there is just one pipe for the sanitary cold water. This avoids the need to install pipes for sanitary hot water distribution and the relative recirculation.

Versions and product codes

Product code	Main functions	Exchanger power
GE556Y301	Priority valve	44 kW
GE556Y302	Priority valve	58 kW
GE556Y303	**Thermostatic command and dynamic balancing**	**58 kW**
GE556Y314	Softened water management	44 kW

Table 1 – GE556 satellites (the ones in bold are those dealt with in this technical datasheet)

Technical data

- Max. working temperature: 90 °C
- Max. working pressure: 16 bar (10 bar with plastic spacer)

Main features

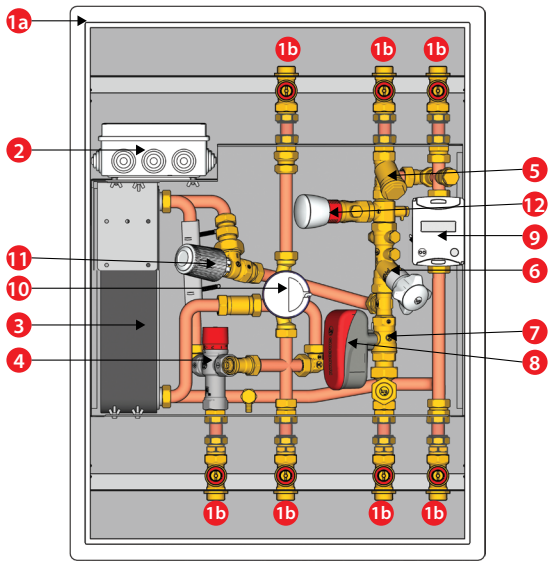
- Connections 3/4".
- Primary side: dynamic balancing via static balancing valve and differential pressure control valve; thermostatic valve (R462L series) for controlling the temperature and flow rate on the primary line for sanitary water production, stainless steel basket filter and housing for delivery temperature probe.
- Sanitary hot water production: thermostatic mixer for temperature adjustment, and instantaneous heat exchanger.
- Heating side: adjustment lockshield valve and 2-way zone valve motorizable.
- Cabinet with terminal board for electric connections.
- Suitable for insertion in a template (external or flush-mounting).
- Suitable for installation of heat energy meter and sanitary water litre-counter, via the plastic spacers.

Version GE556Y303 implements the following functions:
- ON-OFF control of the heating system.
- Instantaneous production of sanitary hot water via a thermostatic valve and integrated plate heat exchanger.
- Mixing of sanitary water for sending to the users.
- Direct measurement of the energy consumption for heating and sanitary hot water production.
- Direct measurement of the consumption of sanitary cold water.

The satellite components are fitted on a sheet metal frame that can be inserted in the appropriate template for worksite installation. Available in an external version (GE551Y072) or a flush-mounting one (GE551Y073).
On the heating delivery unit there is a filter, a pressure gauge, a balancing valve, a balancing lockshield valve and a 2-way zone valve motorizable.
On the return unit there is a plastic spacer for inserting the heat energy meter.
The GE556Y303 satellite has a particular way of producing sanitary hot water. The insulated stainless steel plate exchanger works alongside a thermostatic valve with remote bulb. Thanks to the thermostatic control of the water temperature and primary flow rate, operation is entirely mechanical; the lack of electric devices reduces the need for maintenance.
The thermostatic mixer allows you to adjust the temperature of the sanitary water sent to users, within a series of 38÷60 °C.

Factory adjustments
- Thermostatic mixer: position 4 (54,5 °C).
- Static balancing valve: fully open.
- Differential pressure control valve, R147N: 5 m H_2O
- Thermostatic mixer lockshield valve: 1/4 turn opening.
- R462L thermostatic head: 56 °C

Components



Legend	
1a	Template for installation on a worksite - external or flush-mounting (optional)
1b	Valves included with the template, for satellite-template connection (optional)
2	Cabinet with terminal board for electric connections
3	Insulated exchanger
4	Thermostatic mixer
5	Y-filter
6	Static balancing valve R206B
7	2-way zone valve, motorizable
8	Actuator for 2-way zone valve (optional)
9	Thermal energy meter (optional)
10	Sanitary cold water meter (optional)
11	Thermostatic valve with remote bulb, R462L
12	Differential pressure control valve, R147N

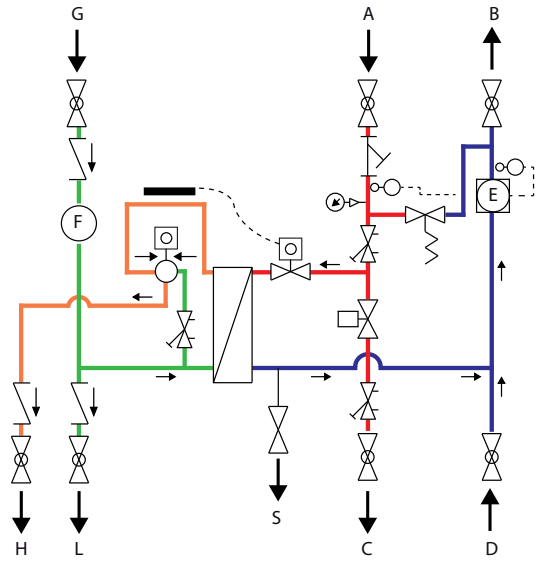
Figure 2 - GE556Y303 satellite with optional accessories

Optional accessories

- Thermal energy meter, GE552 series (fig.2-9).
- Sanitary water meter, GE552-2 series (fig.2-10).
- Template for external or flush-mounting installation, GE551-2 series (fig.2-1a, 1b).
- Actuator for zone valve, K270 series (24 V or 230 V) (fig.2-8).
- Components for data centralisation via M-Bus (GE552-4 series) or via Wireless M-Bus (GE552-W series).

Note.
- Within the satellite there is an adjustment lockshield valve for balancing the heating circuits. No device is envisaged for balancing SHW production circuits: if necessary, you can fit one on the distribution system side.
- If there is no sanitary water meter, the sanitary cold water inlet in the satellite can be set from below (inlet L in figure 3, with the connection G closed and no check valve).

Operation



Legend

A) Primary delivery **B)** Primary return **C)** Heating system delivery **D)** Heating system return	**G)** Sanitary cold water inlet **H)** Mixed sanitary hot water outlet **L)** Sanitary cold water outlet **S)** Drainage

	2-way zone valve		Temperature probe
	Thermostatic mixer		Thermostatic valve with remote bulb, R462L
	Shut-off valve		Filter
	Drain tap	E	Thermal energy meter (optional)
	Balancing lockshield valve/ Static balancing valve	F	Sanitary water meter (optional)
	Heat exchanger		Check valve (optional)
	Pressure gauge		Differential pressure control valve

Figure 3 – Operating flow

The operating flow is shown in figure 3.
The inputs from the boiler room are from above, while the outputs to the home are from below.
The first unit at the top left relates to sanitary water; the water meter (**F**) measures the total flow rate. sanitary cold water emerges from the second pipe at the bottom left; the first feeds out sanitary hot water, mixed by means of a thermostatic mixer.
The "hot" heating fluid from the centralised utility room enters from above, via the second pipe from the left; after a filter, there is the housing for the energy meter temperature probe. This is followed by a differential pressure control valve between the delivery and the primary return.
Together with the balancing valve, this valve implements the **dynamic balancing characteristic** described in figure 4.
The balancing valve allows the static adjustment of the flow rate to the apartment. The differential bypass valve allows dynamic balancing in addition to static: if the flow rate to the apartment exceeds the threshold value of the differential pressure valve, the latter opens the bypass to automatically re-balance the flow rate.

Downstream from the balancing valve there are - **in parallel** - the circuits for heating and sanitary hot water production which can therefore operate simultaneously, guaranteeing **greater comfort** compared with systems that interrupt the heating function to give priority to sanitary water production.
Heating: on the heating side there is a zone valve and an adjustment lockshield valve. The zone valve can be commanded by a K270 actuator (to be ordered separately) that is activated by a thermostat command. The adjustment lockshield valve regulates the primary flow rate part destined for heating, given that the flow rate needed for sanitary hot water production is usually greater than that for heating.
Sanitary hot water production: a thermostatic valve with remote bulb on the exchanger outlet minimises the primary flow rate while sanitary hot water is being produced.
Thermal energy metering: on the return to the central unit there is a connection point for housing an energy meter; the thermal energy meter (**E**) calculates energy consumption for heating and sanitary hot water production. The delivery probe of the energy meter must be installed in the housing on the delivery unit. The meter return temperature probe is integrated in the energy meter body.

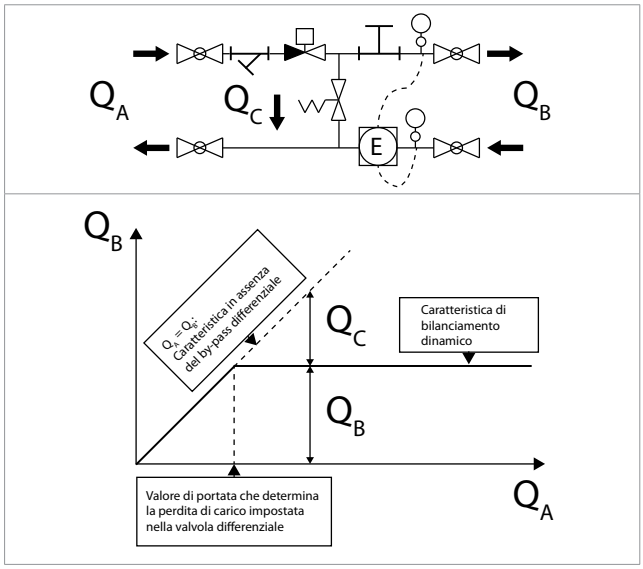


Figure 4 – Operating characteristic of the dynamic balancing

Technical data - Heating and sanitary hot water

Primary circuit

- Max. temperature: 90 °C
- Max. working pressure 16 bar (10 bar with plastic spacer)
- Max. primary flow rate: 1500 l/h (1000 l/h for sanitary hot water production alone)

Sanitary hot water production

- Power for sanitary hot water production 58 kW with inlet 75 °C, flow rate 1000 l/h on the primary line and ΔT = 35 °C on the secondary line (50 °C - 15 °C)
- Corresponding sanitary hot water flow rate: 24 l/min
- Min. hot water withdrawal: 2,5 l/min

Thermostatic mixer

- Complying with A.S.S.E. 1017
- Adjustment precision ± 1 °C (adjustment in table 2)

Position	1	2	3	4	5
Mixing temperature	38 °C	43,5 °C	49 °C	54,5 °C	60 °C

Table 2 – Thermostatic mixer adjustment

Sanitary hot water production

Sanitary			Flow rate [l/h] and temperature on primary outlet (sanitary water 15-50 °C)				
l/min	l/h	kW	75 °C	70 °C	65 °C	60 °C	57 °C
12	720	29,2	460 (20 °C)	525 (21,4 °C)	610 (23,5 °C)	760 (26,7 °C)	920 (29,5 °C)
15	900	36,5	590 (21,2 °C)	675 (23 °C)	800 (25,3 °C)	1000 (28,5 °C)	1240 (31,5 °C)
17	1020	41,4	680 (22,1 °C)	775 (23,8 °C)	925 (26,2 °C)	1180 (29,7 °C)	1480 (32,8 °C)
18	1080	44,1	725 (22,4 °C)	830 (24,2 °C)	1000 (26,9 °C)	1275 (30,2 °C)	1620 (33,5 °C)
19	1140	46,3	770 (22,8 °C)	885 (24,7 °C)	1060 (27,2 °C)	1380 (30,9 °C)	1750 (34,1 °C)
20	1200	48,7	815 (23,2 °C)	940 (25,1 °C)	1130 (27,7 °C)	1480 (31,5 °C)	1880 (34,6 °C)
24	1430	58,4	1000 (24,6 °C)	1160 (26,7 °C)	1420 (29,5 °C)	1880 (33,3 °C)	

Table 3 – Power and flow rate data for primary circuit and sanitary water production

Hydraulic characteristics

Heating function

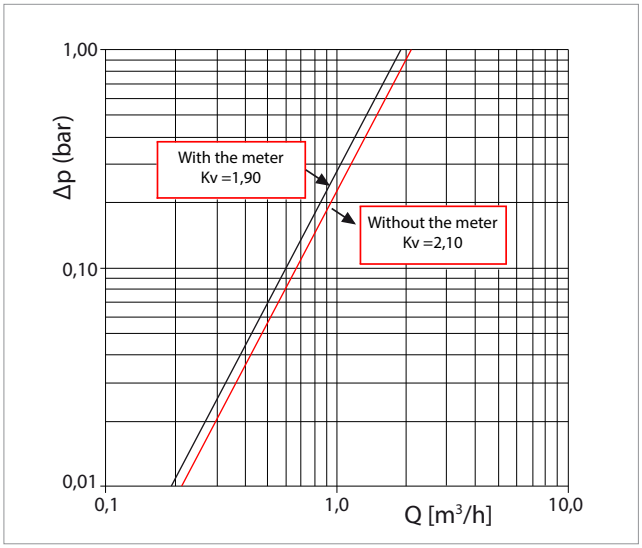


Figure 5 – Heating function – primary side

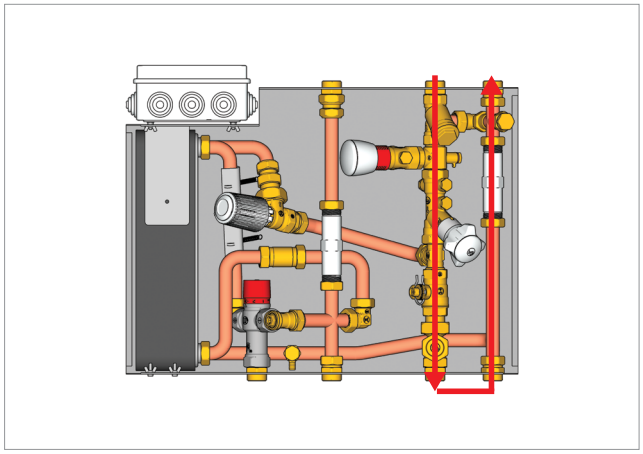


Figure 6 – Heating function – primary side

Note.
The instantaneous flow rate can be verified by means of the energy meter, thereby allowing you to adjust the lockshield valve for the heating function.

Sanitary hot water function

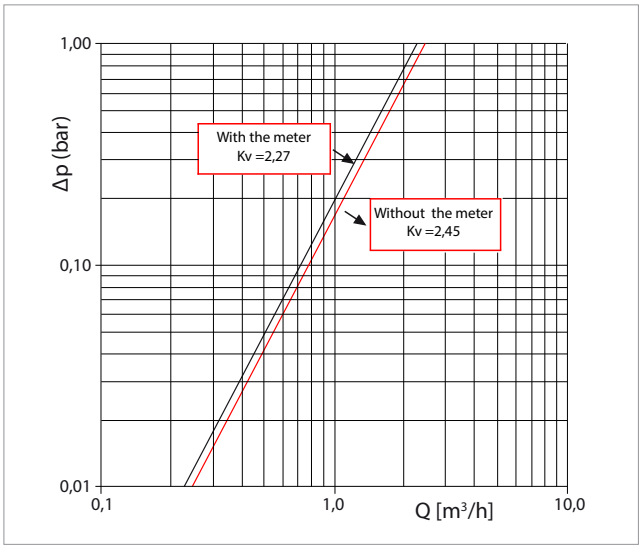


Figure 7 – Sanitary hot water function – primary side

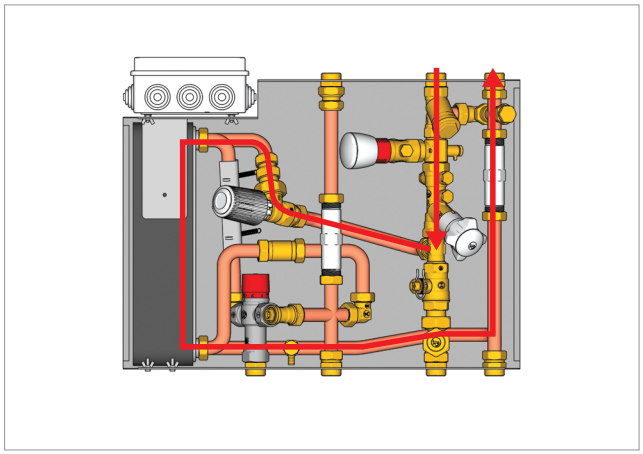


Figure 8 – Sanitary hot water function – primary side

Note.
For the sanitary hot water function too, you can use the energy meter to check the instantaneous flow rate. No adjustment devices are envisaged for the sanitary hot water function, but you can fit devices on the satellite if necessary.

Sanitary cold water

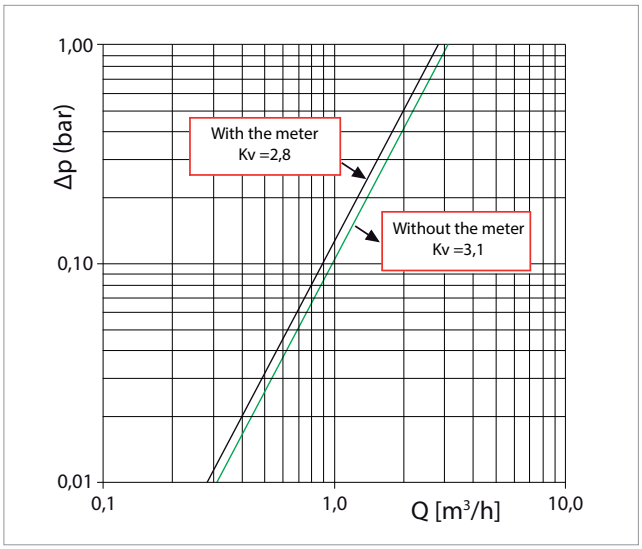


Figure 9 – Sanitary cold water (SCW)

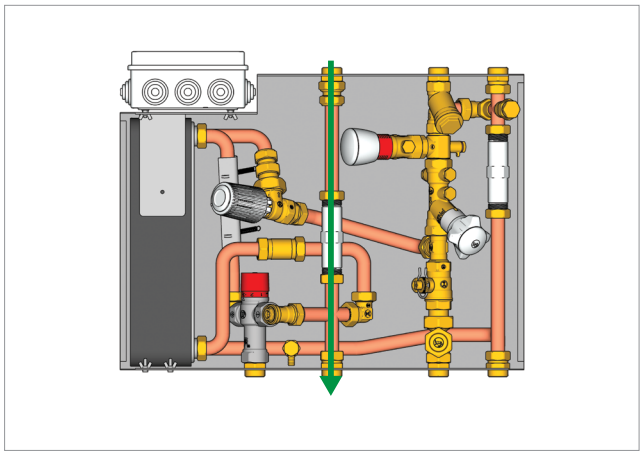


Figure 10 – Sanitary cold water (SCW)

Note.
Hydraulic characteristic of the check valve (to be ordered separately): Kv = 4,3 (see figure 13).

Sanitary hot water

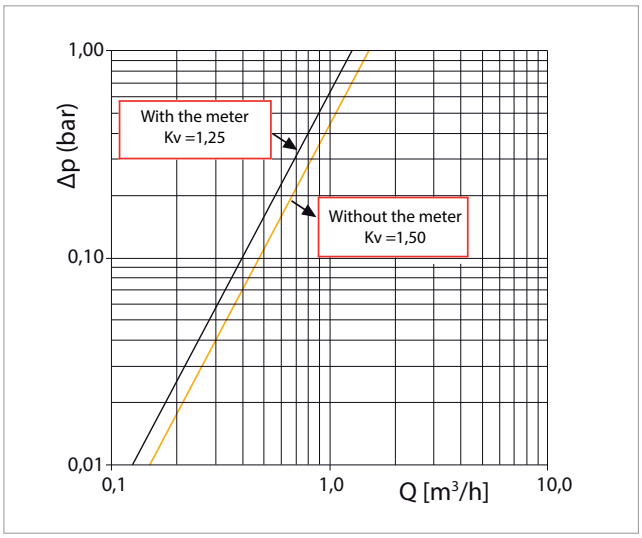


Figure 11 – Sanitary hot water (SHW)

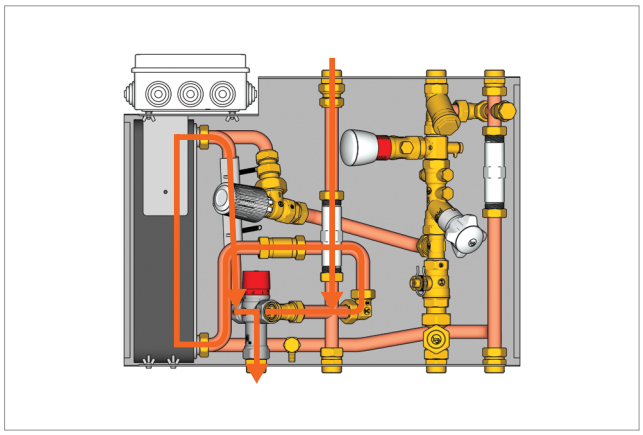


Figure 11 – Sanitary hot water (SHW)

Note.
Hydraulic characteristic of the check valve (to be ordered separately): Kv = 4,3 (see figure 13).

Installation

Satellite installation usually requires the use of a template for worksite installation of the versions:

- **GE551Y072:** (external)
- **GE551Y073**: (flush-mounting)

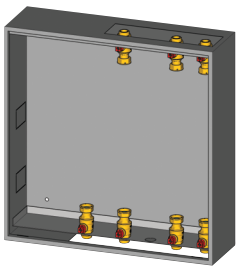
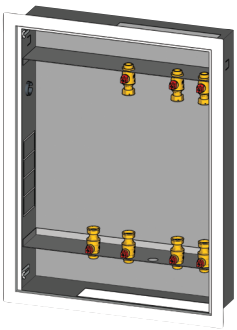
GE551Y072 - external	GE551Y073 - flush mounting
	

Figure 13

1) Installing the template

You are advised to install only the template on the worksite, to avoid damaging the meters and so that you can subsequently rinse out the systems and perform the pressure tests.

2) Wash the system

It's important to wash the system before installing the energy meters.

3) Installing the satellite

After have washed the system, the satellite can be installed into the template and can be mounted the thermal energy meter.

4) Testing the system

After making the installations, test the pressurised system.

Allowed installation

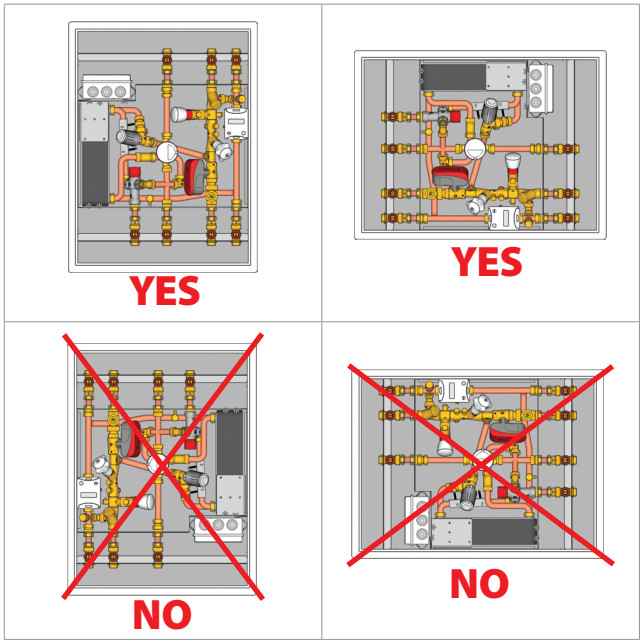


Figure 14 – Correct and incorrect assembly

Application example 1: use of a check valve for sanitary water (optional)

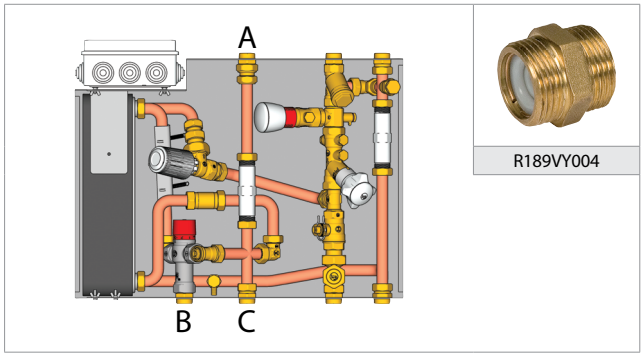


Figure 18 – Positioning the sanitary water check valves (optional)

The R189VY004 sanitary water check valve is integrated in a nipple (R189V series). To install the check valve on the satellite, replace the original nipple A and/or B and/or C (figure 15) with the R189VY004 nipple fitted with a check valve. Be sure to respect the flow directions (the flows are from the top downwards - see figure 3).

Check valve on sanitary water (optional)

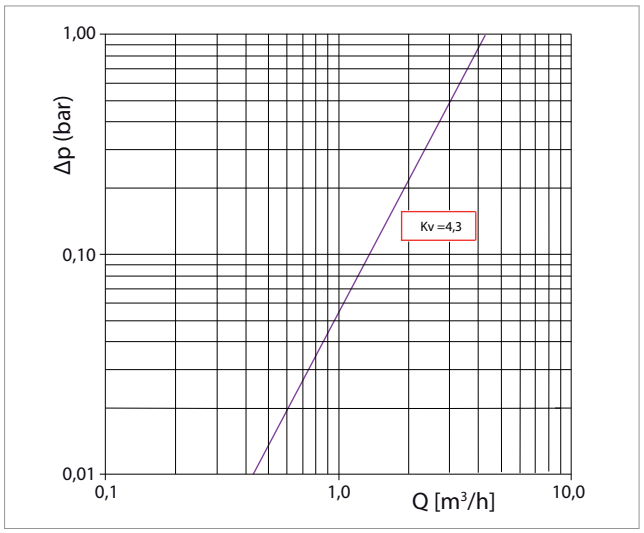


Figure 16 – Check valve, code R189VY004

Application example 2: priority management of sanitary water

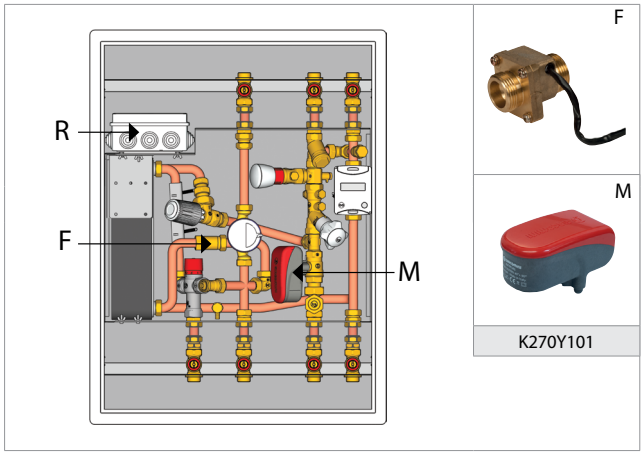
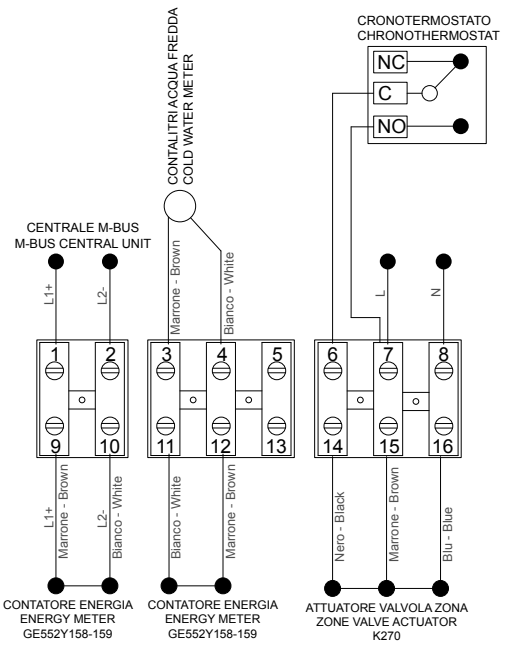


Figure 17 – Positioning of optional accessories for priority sanitary water management

The GE556Y303 satellite can house a flow switch (**F**) GE500Y311 for managing SHW production as a priority over the heating function, via the actuator of the zone valve (**M**) (K270 at 230 V). In this way, the flow rate - and hence the primary power request - is reduced. It should be noted that when the zone valve is closed and there is no SHW production request, the energy meter still gives a count equal to the dissipation in the satellite.

Electrical connection

Warning.
Interventions on electrical components must only be carried out by qualified personnel. Ensure that the power supply is suspended while the connections are being carried out.



Terminal	Function
1	Cable transmitting M-Bus data to the data concentrator: connection of wire L1+. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
2	Cable transmitting M-Bus data to the data concentrator: connection of wire L2-. Cable Ø 0,8 mm, twisted, 2-wire, non-shielded, with a maximum line capacity of 150 pF/m (16 o 18 AWG)
3	Connection for M-Bus centralization of water meters
4	Connection for M-Bus centralization of water meters
5	-
6	Connection to the chronothermostat, to the common C terminal of the internal contact (cable section 0,5 mm²)
7	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm²) In parallel: connection to the chronothermostat, to the normally open NO terminal of the internal contact (cable section 0,5 mm²)
8	Connection of power supply 24 V~ or 230 V~ (cable section 0,5 mm²)
9	Connection of L1+ brown wire of thermal energy meter
10	Connection of L2- white wire of thermal energy meter
11	Connection for M-Bus centralization of water meters
12	Connection for M-Bus centralization of water meters
13	-
14	Connection K270 zone valve actuator, black wire
15	Connection K270 zone valve actuator, brown wire
16	Connection K270 zone valve actuator, blue wire

Nota.
The showed electric scheme is about the connections of GE552Y158, GE552Y159 thermal energy meters. In the case of installation of other energy meters refer to the instructions of the meters themselves.

Electrical scheme if the flow switch is used

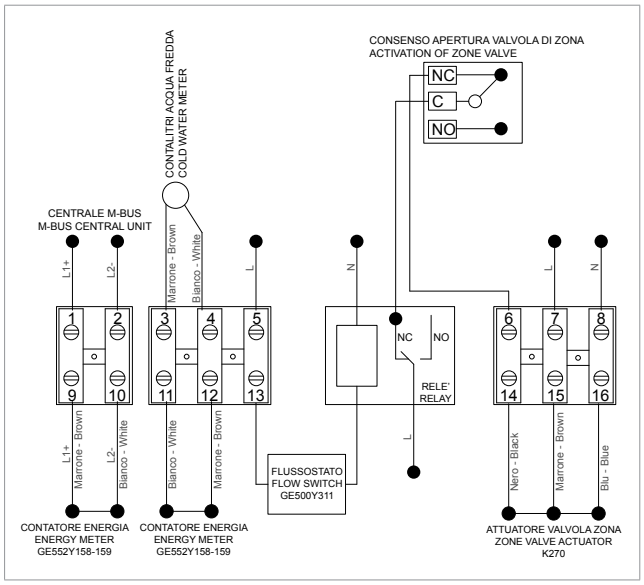
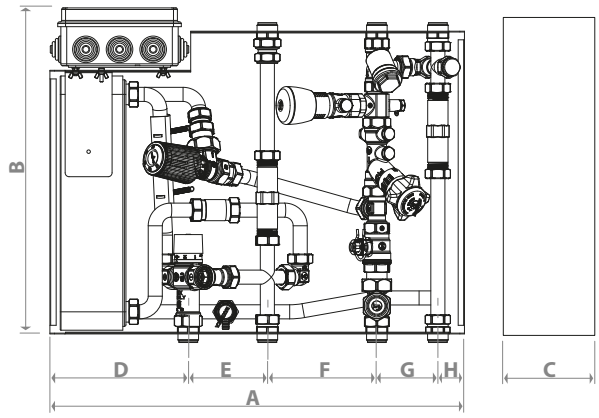


Figure 18 - Electric connections of the terminal board, with flow switch

Note.
Additional relay "R", not supplied by Giacomini

Dimensions



Product code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]
GE556Y303	530	428	160	177	101	140	78	34

Reference Standards

- UNI EN 1434
- Directive 2004/22/EC
- EN 60751
- EN 61107
- EN 13757
- A.S.S.E. 1017