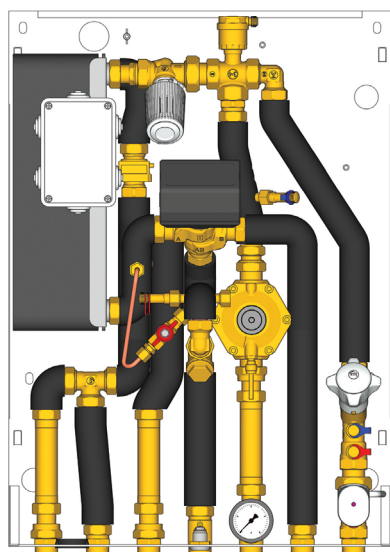


**HIGH-TEMPERATURE SATELLITES
WITH THERMOSTATIC CONTROL
GE556Y320-GE556Y321 (GE556-4 SERIES)**

GIACOMINI
WATER E-MOTION

**GE556Y320-321
(High temperature)**
Description

The user satellites GE556-4 versions, allows the metering of heat energy consumption for heating and the production of SHW (Sanitary Hot Water) in modern autonomous systems with centralised heat production (e.g. district heating). The management of the satellite is thermostatic. The adopted configurations is an innovative variante with the use of fast thermostatic actuators and a Differential Pressure Controller (DPC) on the primary side.

Versions and product codes

Product code	Connection	Type	Heating side power	SHW heat exchanger rated power	Template with valves
GE556Y320	3/4"	High temperature heating and SHW production	21 kW	56 kW	GE551Y075
GE556Y321				67 kW	

Completion codes

The following components can be installed on each satellite:

- Heat energy meter, GE552 series.
- Sanitary water meters, GE552-2 series.
- Template with 7 shut-off valves and 3/4" connections: code GE551Y075


Note.

Use energy meters approved in accordance with the standardized "flow disturbance elements" and provided for by the EN 1434 for null rectilinear section upstream and downstream of the meter, such as the GE552Y122.

Main features

- Thermostatic regulation to manage the SHW temperature.
- Heat exchanger for instantaneous SHW production.
- Flow switch for priority SHW production.
- Motorized three-way priority valve.
- Automatic air vent valve with hygroscopic cap, manometer and filter on the primary side.
- Safety valve with R473 electrical actuator, on the heating side.
- By-pass on the sanitary primary side, to maintain the heat exchanger hot.
- Differential pressure controller R206C on the primary side.
- Static balancing valve R206B.
- WRAS-certified components for the sanitary circuit.
- Brass spacers for inserting the meters.
- Painted sheet metal cabinet (RAL9010), with key locking.

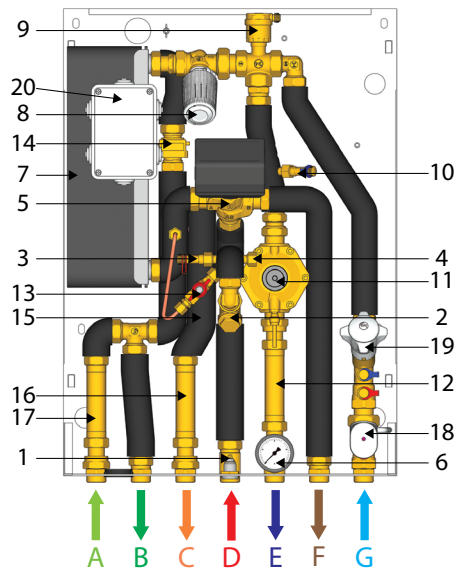
Technical data

- Max. working temperature: 90 °C
- Primary circuit max. working pressure: 10 bar
- Secondary SHW circuit max. working pressure: 10 bar


Warning.

Maximum operating differential pressure for the primary side = 2 bar (differential pressure controller)

- Temperature range of the secondary SHW circuit: SET POINT 50 °C
- Nominal flow rate on primary circuit: 1130 l/h @ 70 °C for 56 kW (GE556Y320)
1280 l/h @ 70 °C for 67 kW (GE556Y321)

Components

Legend

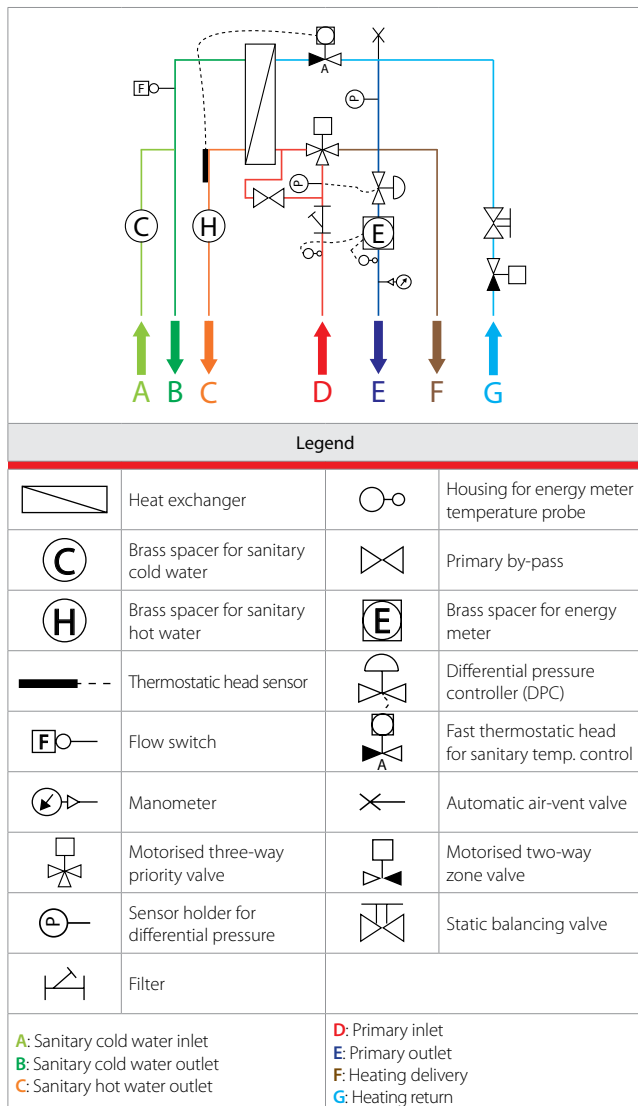
1	Housing for thermal energy meter temperature probe	Primary
2	Filter	
3	Sensor holder for differential pressure	
4	Probe for differential pressure controller	
5	Motorized three-way priority valve for SHW	
6	Manometer	
7	Heat exchanger for the sanitary hot water function	
8	Fast thermostatic head, for sanitary temperature control	
9	Automatic air vent valve	
10	Sensor holder for differential pressure	
11	Differential pressure controller (DPC)	SHW production
12	Brass spacer for energy meter	
13	Primary bypass	
14	Flow switch	Heating
15	Thermostatic head sensor	
16	Brass spacer for sanitary hot water	
17	Brass spacer for sanitary cold water	Others
18	Motorised 2-way zone valve for heating and electric safety	
19	Static balancing valve	
20	Electrical box	

A: Sanitary cold water inlet
B: Sanitary cold water outlet
C: Sanitary hot water outlet

D: Primary inlet
E: Primary outlet
F: Heating delivery
G: Heating return



Operation



Primary

Inlet (D) and return (E). The primary circuit is composed of a bypass, Y-filter, sensor holder for differential pressure, motorized three-way priority valve, automatic air vent valve, heat exchanger, manometer, minimum pressure switch, a fast thermostatic head for sanitary temperature control and a differential pressure controller (DPC). The energy meter can be installed in place of the brass spacer, fitting its temperature probe in the relative housing (**component n° 1**).

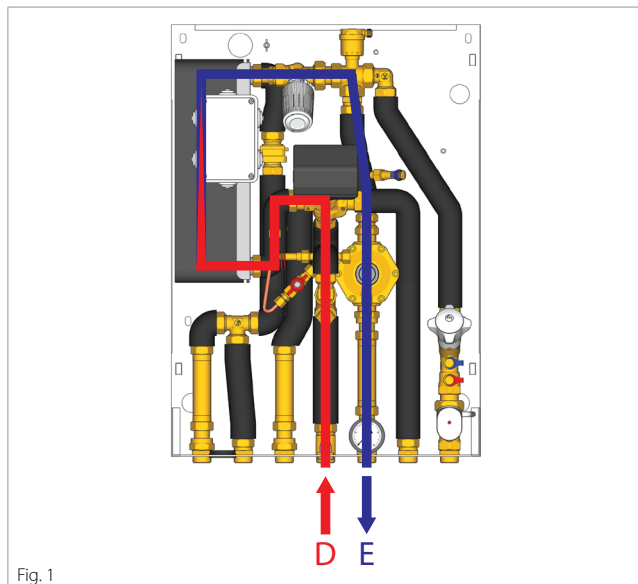


Fig. 1

Heating

Delivery (F) and return (G). The heating circuit is composed of a zone valve with thermal and electric safety function and static balancing valve.

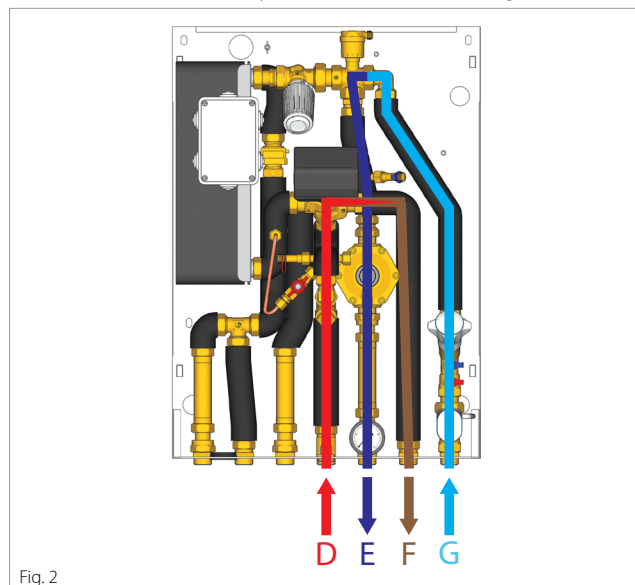


Fig. 2

Sanitary hot water

Cold water inlet (A), cold water outlet (B) and hot water outlet (C).

The SHW circuit is composed of a flow switch, heat exchanger and brass spacers for the introduction of the cold and hot water meters.

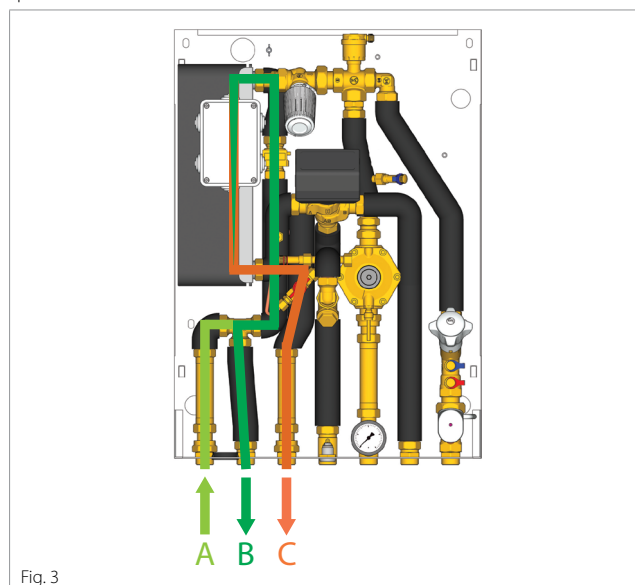


Fig. 3



Operating data


Note.

Operating data valid with R206C differential pressure controller set to 50 kPa.

Heating

Nominal flow rate high temperature heating circuit:

540 l/h @ ΔT 15 °C (65-50 °C) for 9,5 kW

1200 l/h @ ΔT 15 °C (65-50 °C) for 21 kW

410 l/h @ ΔT 20 °C (70-50 °C) for 9,5 kW

910 l/h @ ΔT 20 °C (70-50 °C) for 21 kW

SHW production

Sanitary hot water GE556Y320			Flow rate [l/h] Primary outlet temperature (SHW 10-50 °C)	
l/min	l/h	kW	70 °C	65 °C
12	720	33,6	620 l/h (23 °C)	730 l/h (25 °C)
15	900	42	800 l/h (24 °C)	940 l/h (26 °C)
17	1020	47,6	940 l/h (26 °C)	1090 l/h (27 °C)
20	1200	56	1130 l/h (27 °C)	-

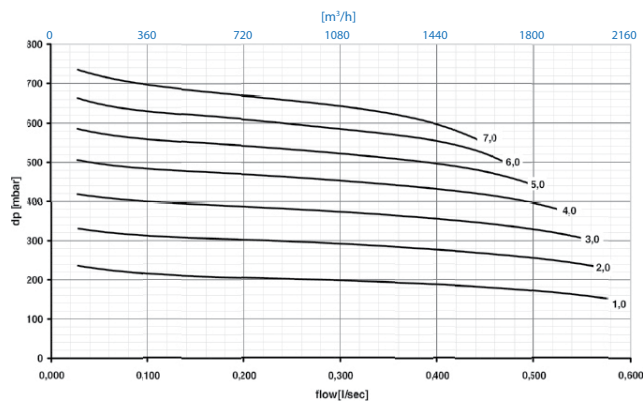
Data of the primary circuit for SHW production 10-50 °C

Sanitary hot water GE556Y321			Flow rate [l/h] Primary outlet temperature (SHW 10-50 °C)	
l/min	l/h	kW	70 °C	65 °C
12	720	33,5	580 l/h (20 °C)	670 l/h (22 °C)
15	900	42	750 l/h (22 °C)	880 l/h (24 °C)
17	1020	47,5	880 l/h (23,5 °C)	1020 l/h (25 °C)
20	1200	56	1050 l/h (24,2 °C)	1230 l/h (26 °C)
22	1320	61,5	1160 l/h (24,6 °C)	-
24	1440	67	1280 l/h (25 °C)	-

Data of the primary circuit for SHW production 10-50 °C

Components details

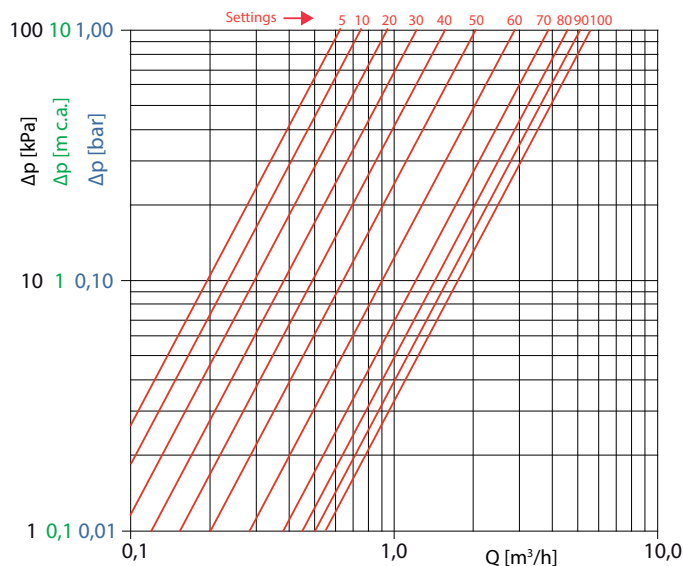
Differential pressure controller R206CY004



Kv: 4,36

Differential pressure range setting: 25÷60 kPa

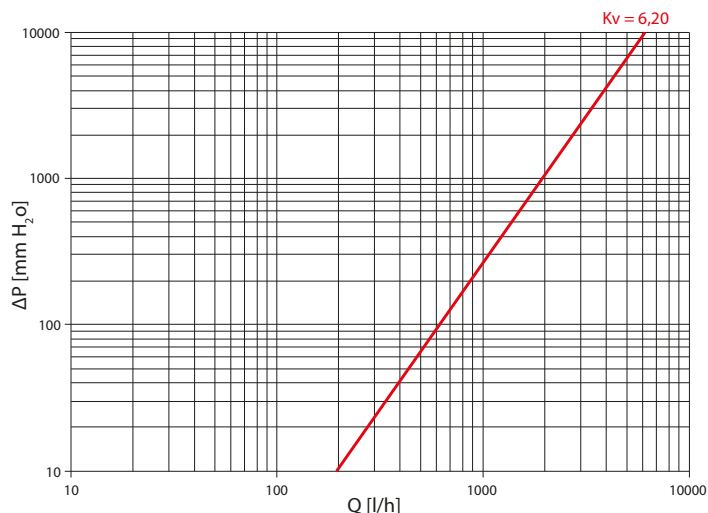
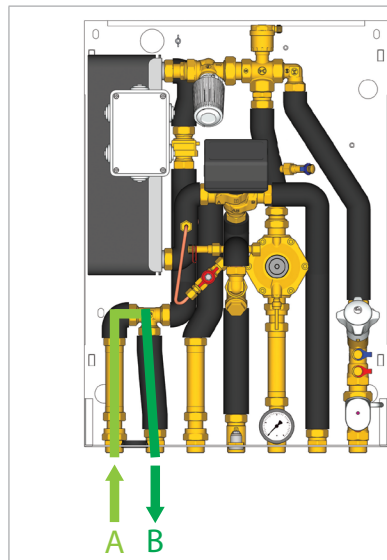
Static balancing valve R206BY004



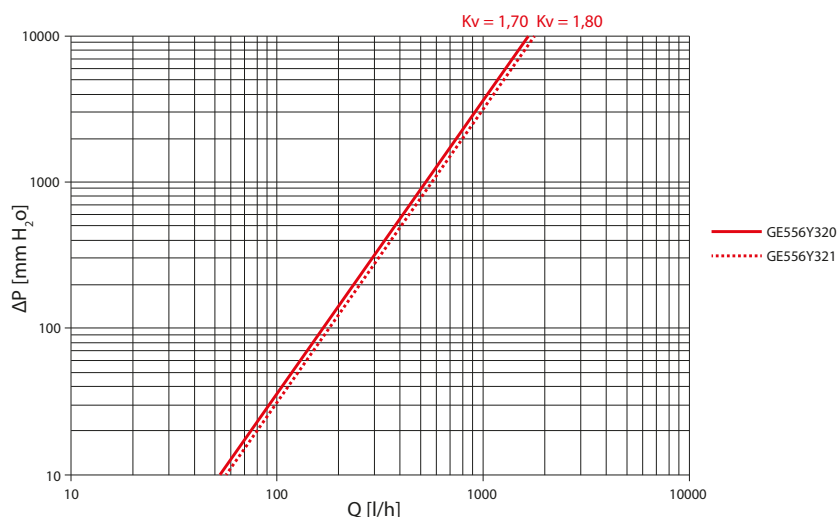
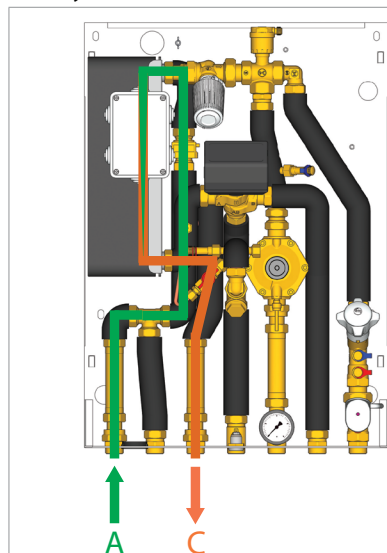
Setting	Kv
100	5,50
95	5,20
90	5,00
85	4,80
80	4,57
75	4,35
70	3,95
65	3,50
60	2,88
55	2,37
50	2,00
45	1,81
40	1,58
35	1,39
30	1,24
25	1,10
20	0,96
15	0,85
10	0,75
5	0,62

Hydraulic characteristics

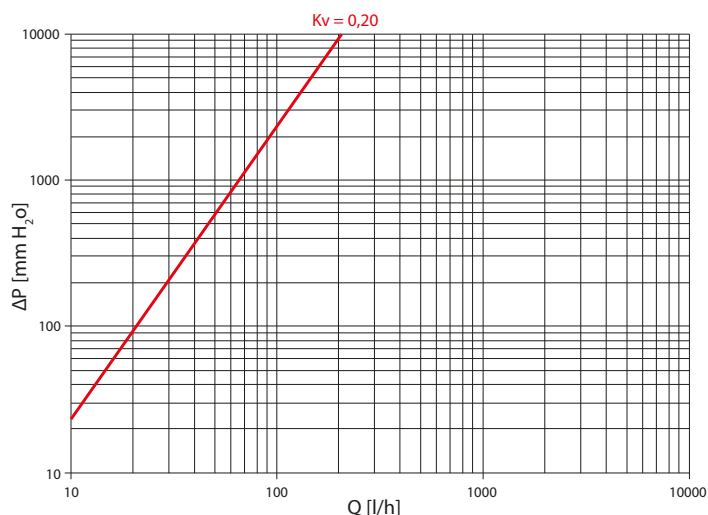
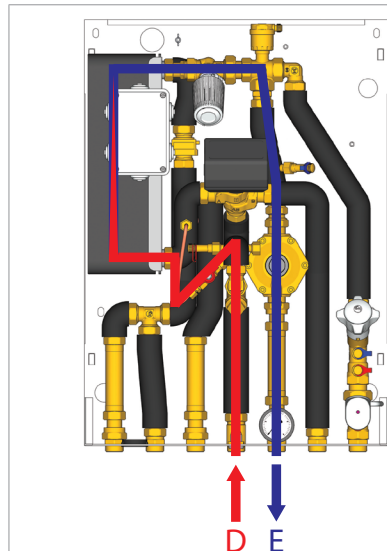
Sanitary cold water circuit



Sanitary hot water circuit

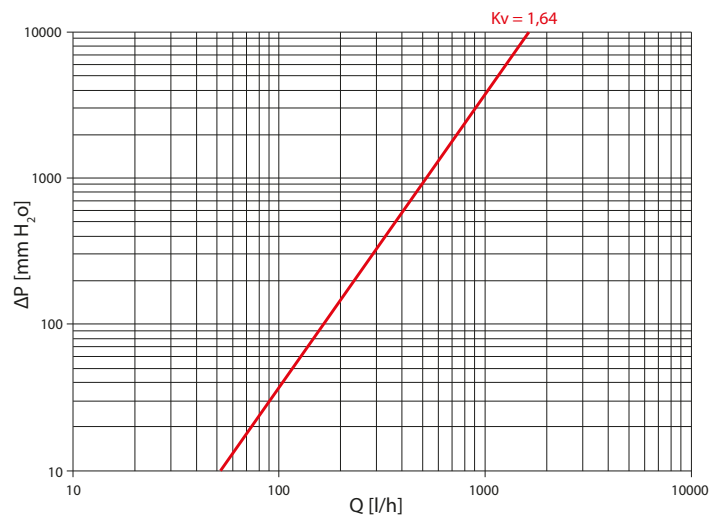
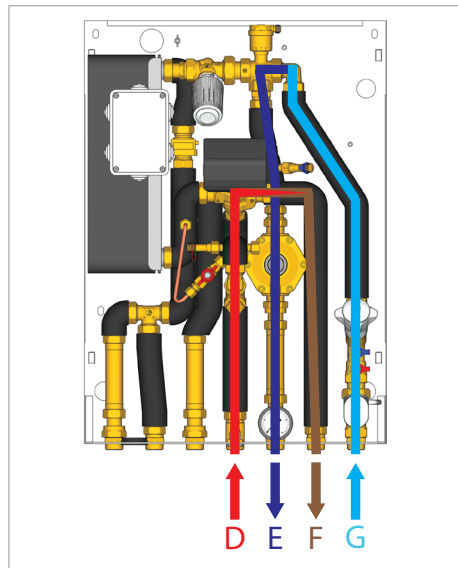


By-pass on primary sanitary circuit

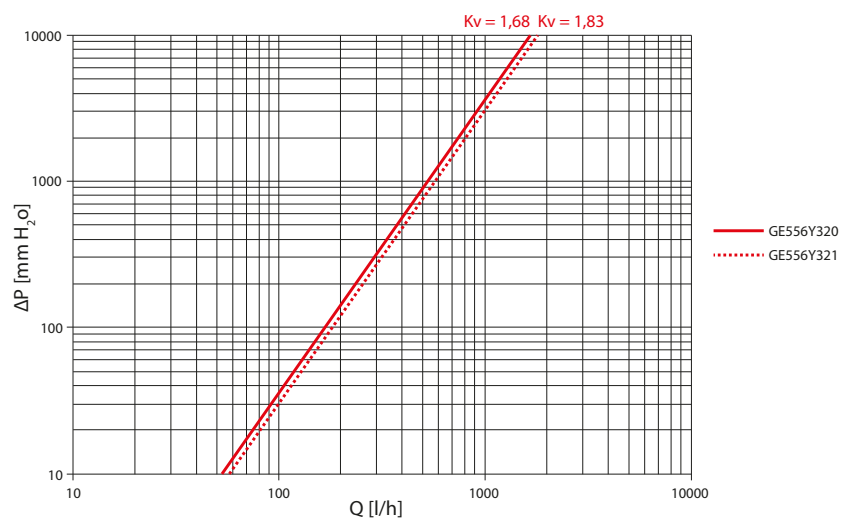
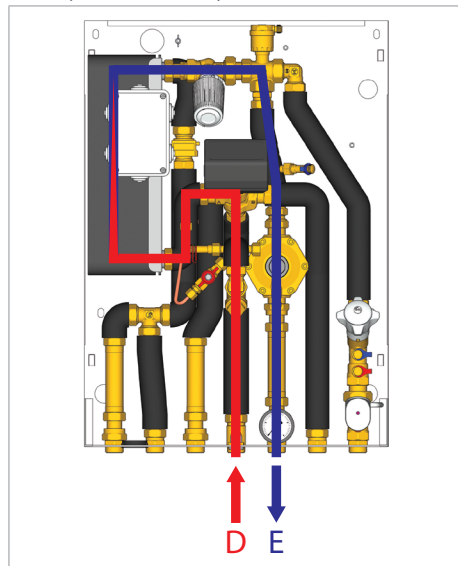




Primary circuit - heating side



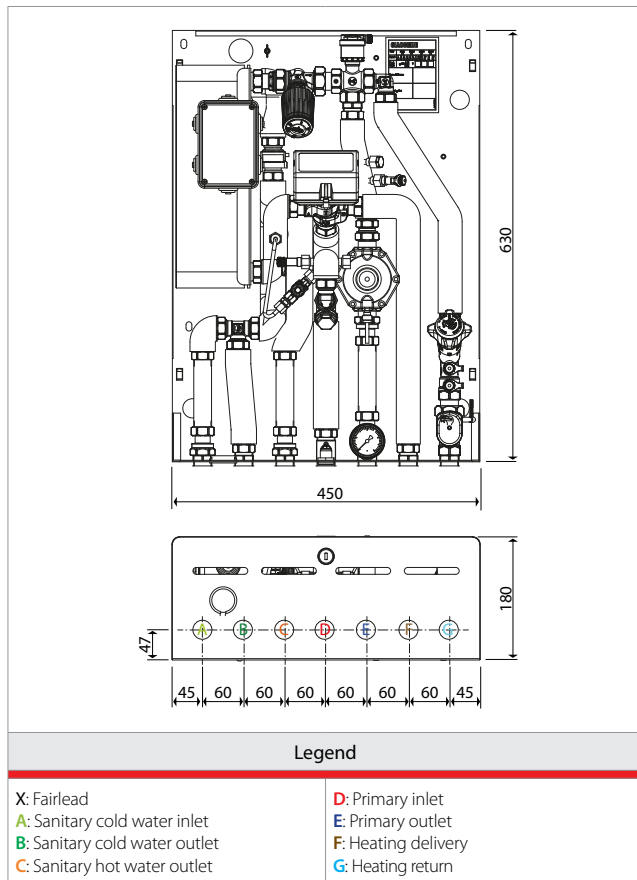
Primary circuit - sanitary side



**HIGH-TEMPERATURE SATELLITES
WITH THERMOSTATIC CONTROL
GE556Y320-GE556Y321 (GE556-4 SERIES)**

GIACOMINI
WATER E-MOTION


Dimensions



Dimensions in mm

Reference standards

- UNI EN 1434
- EN 60751
- EN 61107
- Measuring Instruments Directive 2004/22/EC (MID)
- ErP Directive 2009/22/EC

WRAS certifications

Components	Certificate number
Gaskets	1004515
Heat exchanger	1403059


Warning.

The satellite can be used in closed boiler rooms for operation with non-aggressive fluids (water, glycol-based water in compliance with VDI 2035/ÖNORM 5195).


Safety Warning

Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.


Package Disposal

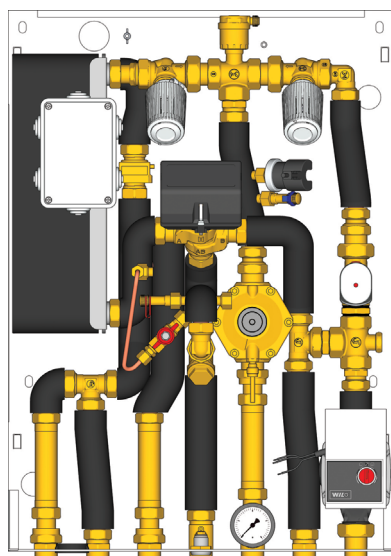
Carton boxes: paper recycling.
Plastic bags and bubble wrap: plastic recycling.


Product Disposal

Do not dispose of product as municipal waste at the end of its life cycle.
Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

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
This pamphlet is merely for information purposes. Giacomini S.p.A. retains the right to make modifications for technical or commercial reasons, without prior notice, to the items described in this pamphlet. The information described in this technical pamphlet does not exempt the user from following carefully the existing regulations and norms on good workmanship.
Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy

**LOW-TEMPERATURE SATELLITES
WITH THERMOSTATIC CONTROL
GE556Y322-GE556Y323 (GE556-4 SERIES)**

**GE556Y322-323
(Low temperature)**

Description

The user satellites GE556-4 versions, allows the metering of heat energy consumption for heating and the production of SHW (Sanitary Hot Water) in modern autonomous systems with centralised heat production (e.g. district heating). The management of the satellite is thermostatic. The adopted configurations is an innovative variante with the use of fast thermostatic actuators and a Differential Pressure Controller (DPC) on the primary side.

Versions and product codes

Product code	Connection	Type	Heating side power	SHW heat exchanger rated power	Template with valves
GE556Y322	3/4"	Low temperature heating and SHW production	10 kW	56 kW	GE551Y075
GE556Y323				67 kW	

Completion codes

The following components can be installed on each satellite:

- Heat energy meter, GE552 series.
- Sanitary hot water meter, GE552-2 series.
- Template with 7 shut-off valves and 3/4" connections: code GE551Y075


Note.

Use energy meters approved in accordance with the standardized "flow disturbance elements" and provided for by the EN 1434 for null rectilinear section upstream and downstream of the meter, such as the GE552Y122.

Main features

- Thermostatic regulation to manage the SHW and heating temperature.
- Heat exchanger for instantaneous SHW production.
- Flow switch for priority SHW production.
- Motorized three-way priority valve.
- Automatic air vent valve with hygroscopic cap, manometer and filter on the primary side.
- Safety pressure switch for low pressure on the primary side.
- Safety valve with R473 electrical actuator, on the heating side.
- By-pass on the sanitary primary side, to maintain the heat exchanger hot.
- Differential pressure controller on the primary side.
- Self-modulating circulator 15/6, centre distance 130 mm, complying with ErP directive 2009/125/CE.
- WRAS-certified components for the sanitary circuit.
- Brass spacers for inserting the meters.
- Painted sheet metal cabinet (RAL9010), with key locking.

Technical data

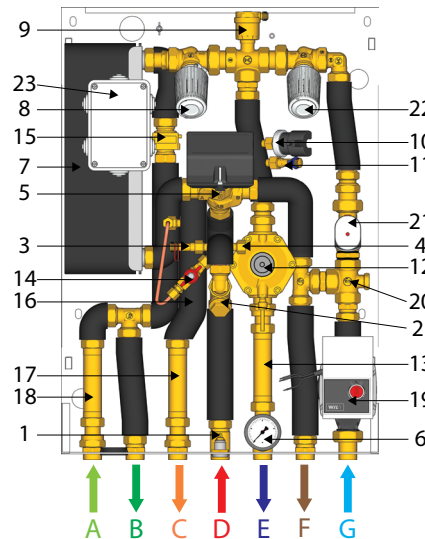
- Max. working temperature: 90 °C
- Primary circuit max. working pressure: 10 bar
- Secondary SHW circuit max. working pressure: 10 bar


Warning.

Maximum operating differential pressure for the primary side = 2 bar (differential pressure controller)

- Temperature range of the secondary heating circuit: 20÷70 °C
- Temperature range of the secondary SHW circuit: SET POINT 50 °C
- Nominal flow rate on primary circuit: 1070 l/h @ 70 °C for 56 kW (GE556Y322)
1280 l/h @ 70 °C for 67 kW (GE556Y323)

Components


Legend

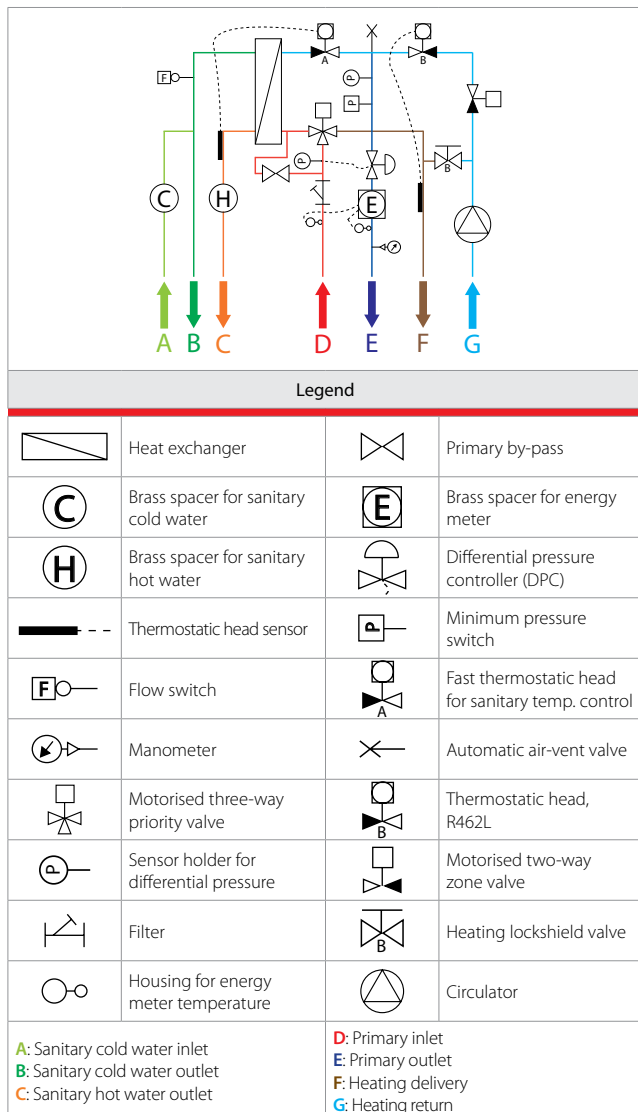
1	Housing for energy meter temperature probe	Primary
2	Filter	
3	Sensor holder for differential pressure	
4	Probe for differential pressure controller	
5	Motorized three-way priority valve for SHW	
6	Manometer	
7	Heat exchanger for the sanitary hot water function	
8	Fast thermostatic head, for sanitary temperature control	
9	Automatic air vent valve	
10	Minimum pressure switch	
11	Sensor holder for differential pressure	
12	Differential pressure controller (DPC)	
13	Brass spacer for energy meter	
14	Primary bypass	
15	Flow switch	SHW production
16	Thermostatic head sensor	
17	Brass spacer for sanitary hot water	
18	Brass spacer for sanitary cold water	Heating
19	Circulator	
20	Heating lockshield valve	
21	Motorised 2-way zone valve for heating and electric safety	Others
22	Thermostatic head R462L, for heating temperature controll	
23	Electrical box	

A: Sanitary cold water inlet
B: Sanitary cold water outlet
C: Sanitary hot water outlet

D: Primary inlet
E: Primary outlet
F: Heating delivery
G: Heating return



Operation



Primary

Inlet (D) and return (E). The primary circuit is composed of a bypass, Y-filter, sensor holder for differential pressure, motorized three-way priority valve, automatic air vent valve, heat exchanger, manometer, minimum pressure switch, a fast thermostatic head for sanitary temperature control and a differential pressure controller (DPC). The energy meter can be installed in place of the brass spacer, fitting its temperature probe in the relative housing (**component n° 1**).

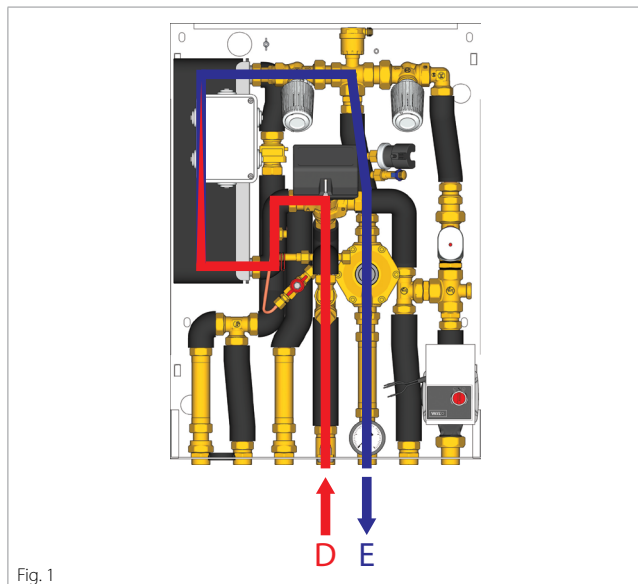


Fig. 1

Heating

Delivery (F) and return (G). The heating circuit is composed of an high-efficiency circulator, an adjustable bypass lockshield valve, a zone valve with thermal and electric safety function and a thermostatic head R462L for heating temperature control.

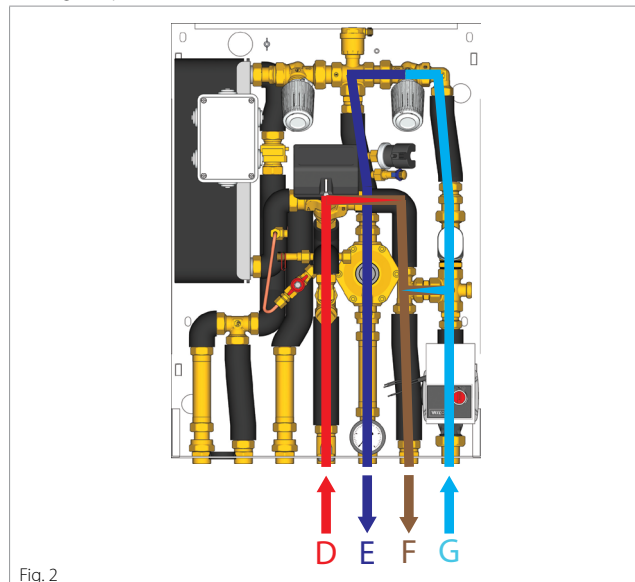


Fig. 2

Sanitary hot water

Cold water inlet (A), cold water outlet (B) and hot water outlet (C). The SHW circuit is composed of a flow switch, heat exchanger and brass spacers for the introduction of the cold and hot water meters.

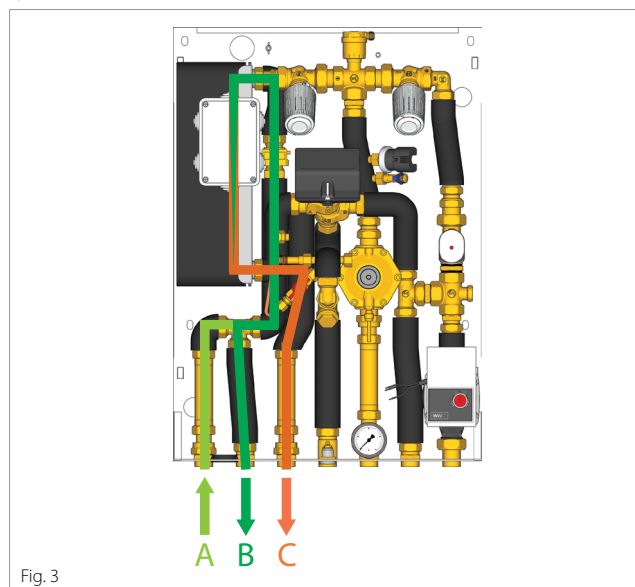


Fig. 3

**LOW-TEMPERATURE SATELLITES
WITH THERMOSTATIC CONTROL
GE556Y322-GE556Y323 (GE556-4 SERIES)**

GIACOMINI
WATER E-MOTION


Operating data



Note.
Operating data valid with R206C differential pressure controller set to 50 kPa.

Heating

Heating GE556Y322-GE556Y323			Flow rate [l/h] Primary outlet temperature (45-39 °C)	
Circulator speed	Flow rate [l/h]	Power [kW]	70 °C	65 °C
Max.	1200	10	280 l/h (39 °C)	340 l/h (39 °C)

Primary circuit data for delivery temperature 45-39 °C

Heating GE556Y322-GE556Y323			Flow rate [l/h] Primary outlet temperature (35-30 °C)	
Circulator speed	Flow rate [l/h]	Power [kW]	70 °C	65 °C
Max.	1500	8,8	190 l/h (30 °C)	215 l/h (30 °C)

Primary circuit data for delivery temperature 35-30 °C

SHW production

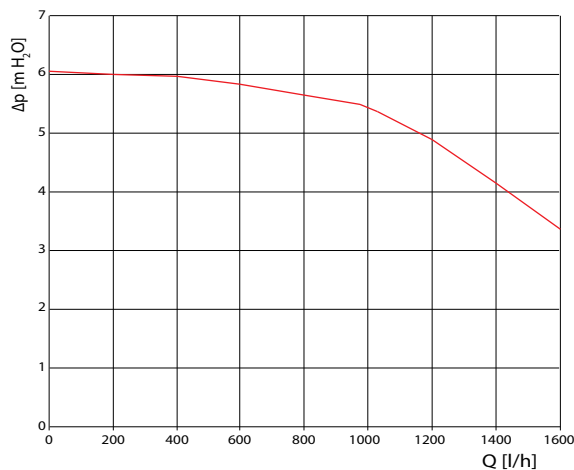
Sanitary hot water GE556Y322			Flow rate [l/h] Primary outlet temperature (SHW 10-50 °C)	
l/min	l/h	kW	70 °C	65 °C
12	720	33,6	620 l/h (23 °C)	730 l/h (25 °C)
15	900	42	800 l/h (24 °C)	940 l/h (26 °C)
17	1020	47,6	940 l/h (26 °C)	1090 l/h (27 °C)
20	1200	56	1130 l/h (27 °C)	-

Data of the primary circuit for SHW production 10-50 °C

Sanitary hot water GE556Y323			Flow rate [l/h] Primary outlet temperature (SHW 10-50 °C)	
l/min	l/h	kW	70 °C	65 °C
12	720	33,5	580 l/h (20 °C)	670 l/h (22 °C)
15	900	42	750 l/h (22 °C)	880 l/h (24 °C)
17	1020	47,5	880 l/h (23,5 °C)	1020 l/h (25 °C)
20	1200	56	1050 l/h (24,2 °C)	1230 l/h (26 °C)
22	1320	61,5	1160 l/h (24,6 °C)	-
24	1440	67	1280 l/h (25 °C)	-

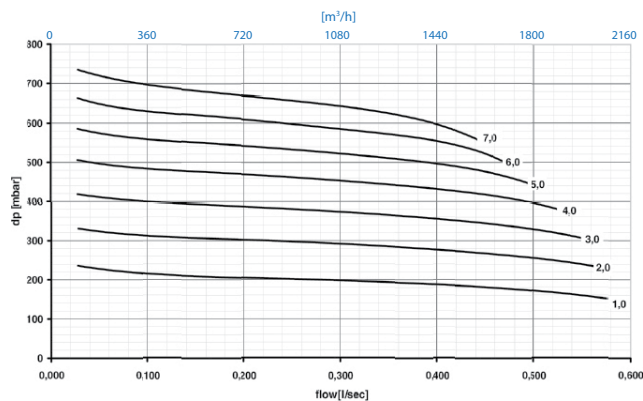
Data of the primary circuit for SHW production 10-50 °C

Losses of pressure circulator curve



Components details

Differential pressure controller R206CY004

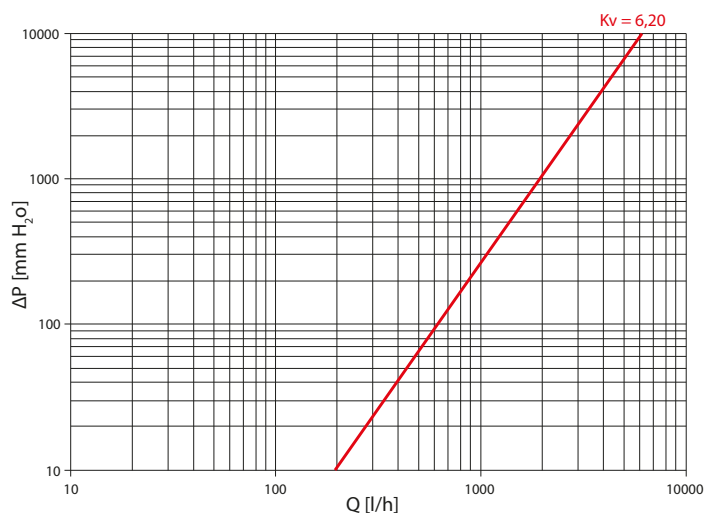
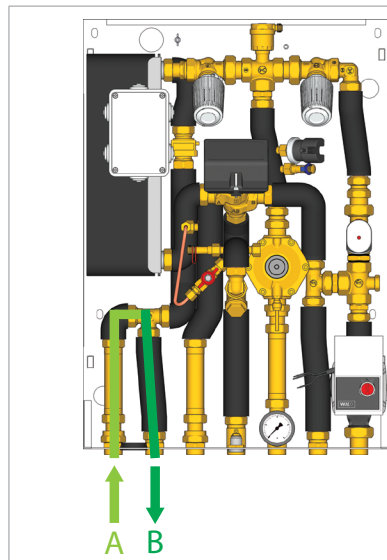


Kv: 4,36

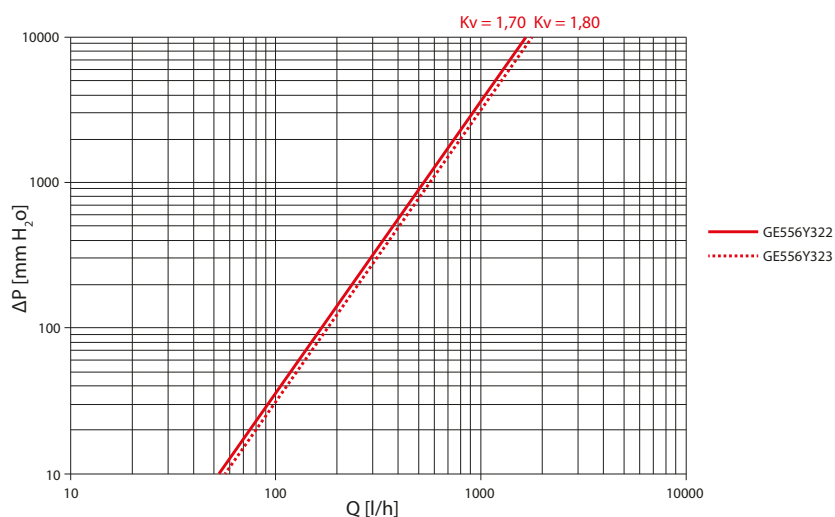
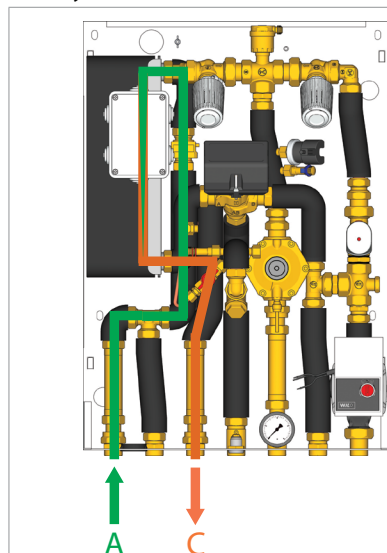
Differential pressure range setting: 25÷60 kPa

Hydraulic characteristics

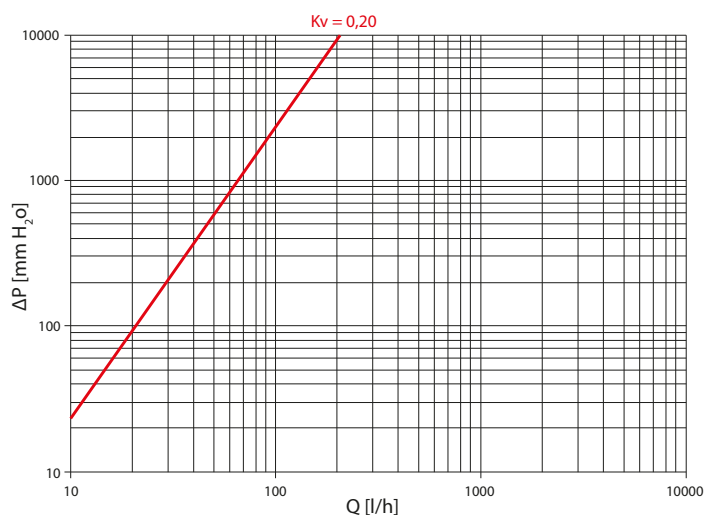
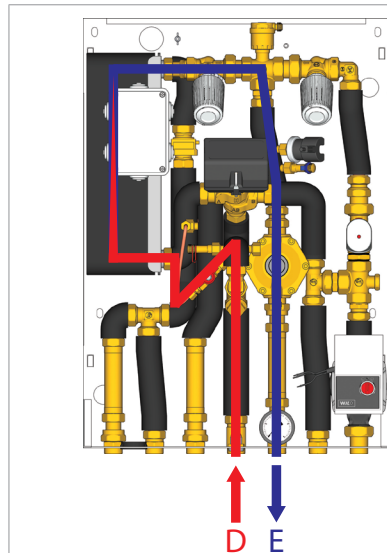
Sanitary cold water circuit



Sanitary hot water circuit

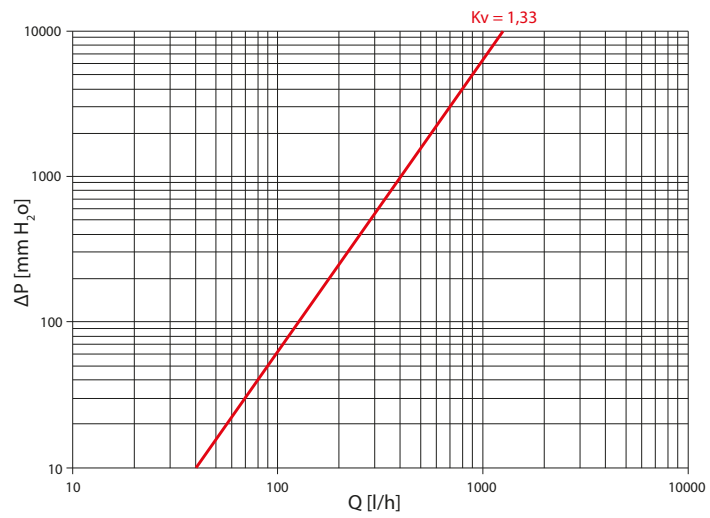
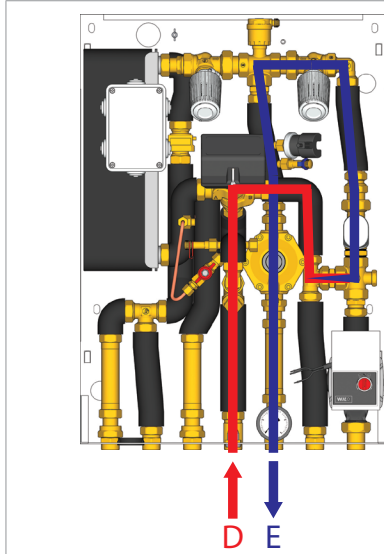


By-pass on primary sanitary circuit

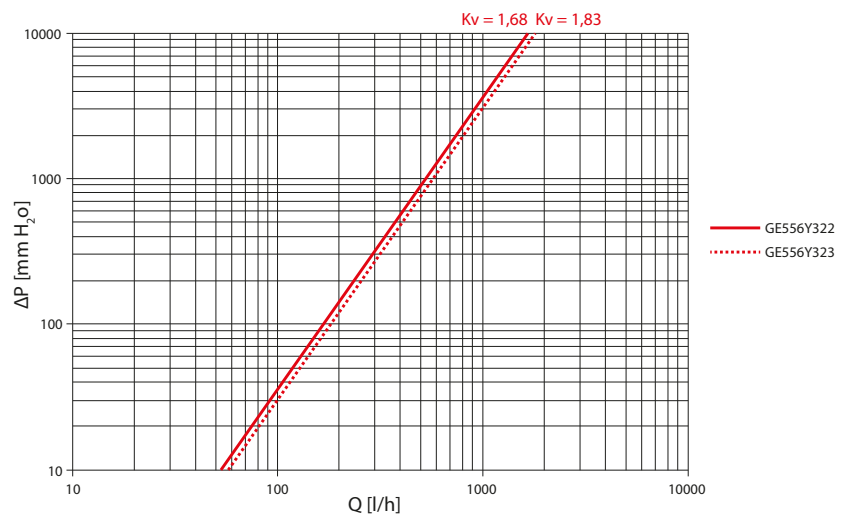
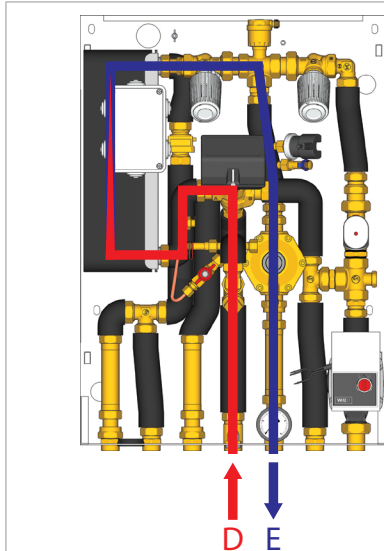




Primary circuit - heating side



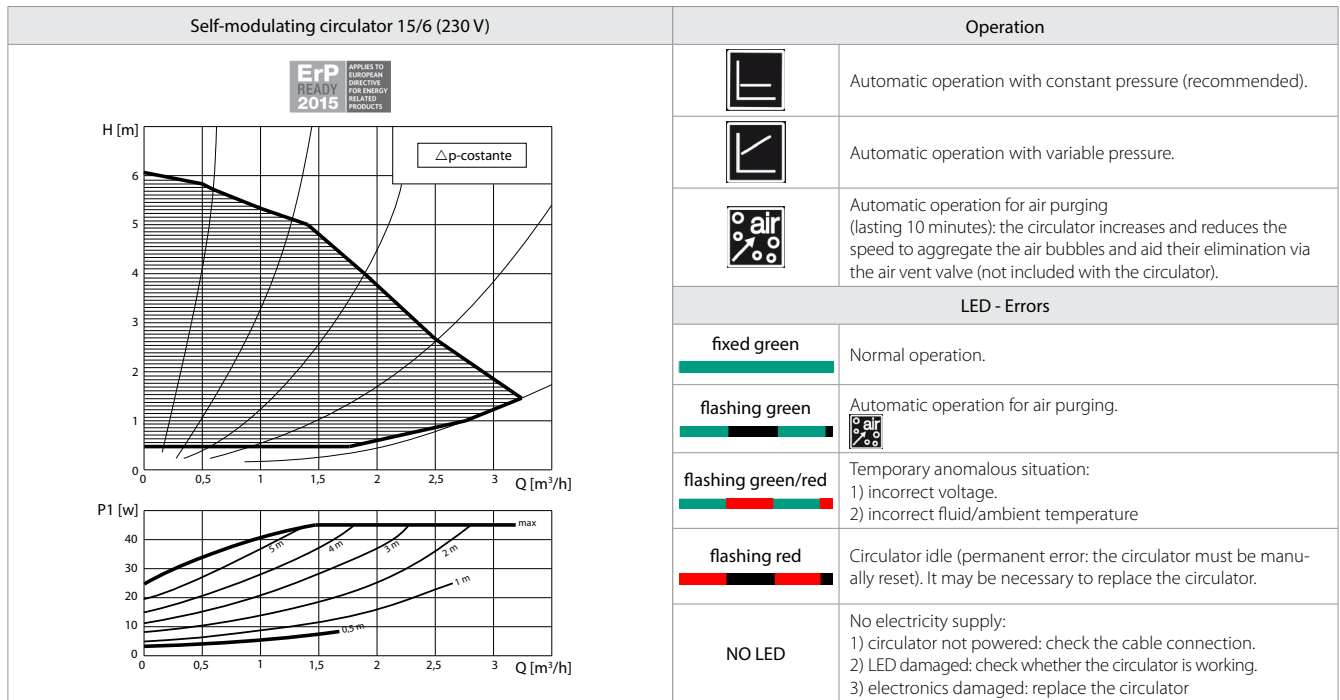
Primary circuit - sanitary side



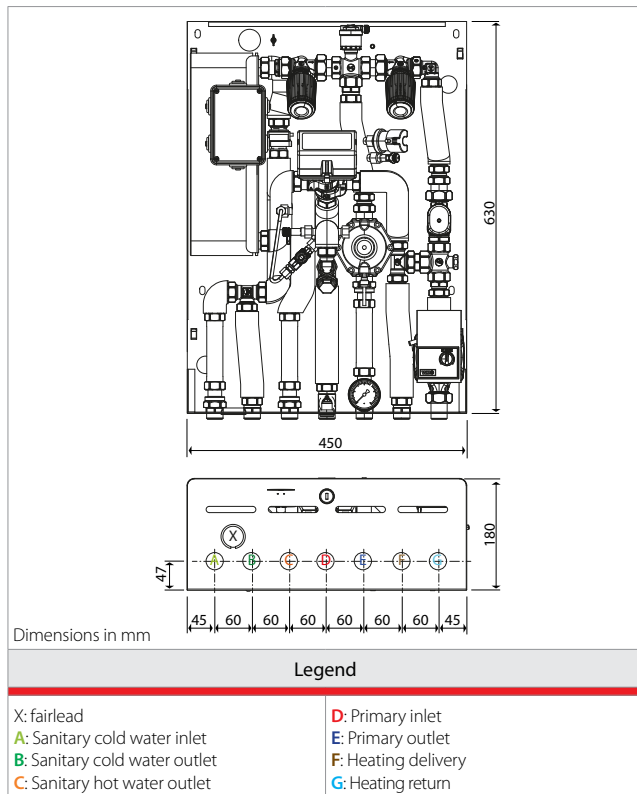
**LOW-TEMPERATURE SATELLITES
WITH THERMOSTATIC CONTROL
GE556Y322-GE556Y323 (GE556-4 SERIES)**

GIACOMINI
WATER E-MOTION


Circulator characteristics



Dimensions



Reference standards

- UNI EN 1434
- EN 60751
- EN 61107
- Measuring Instruments Directive 2004/22/EC (MID)
- ErP Directive 2009/22/EC

WRAS certifications

Components	Certificate number
Gaskets	1004515
Heat exchanger	1403059



Warning.

The satellite can be used in closed boiler rooms for operation with non-aggressive fluids (water, glycol-based water in compliance with VDI 2035/ÖNORM 5195).



Safety Warning

Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.



Package Disposal

Carton boxes: paper recycling.
Plastic bags and bubble wrap: plastic recycling.



Product Disposal

Do not dispose of product as municipal waste at the end of its life cycle.
Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.

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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