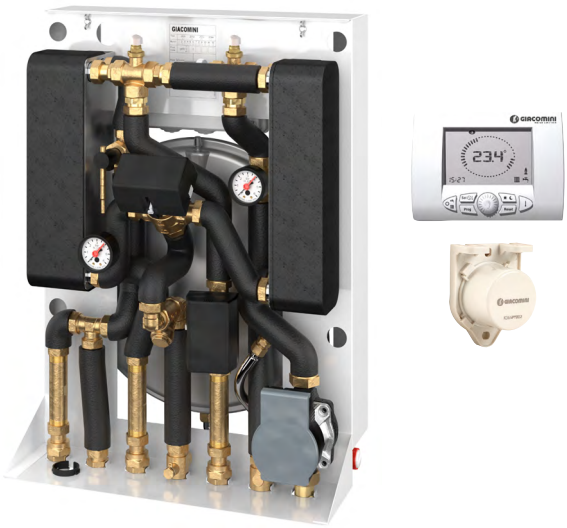
HEAT INTERFACE UNIT WITH ELECTRONIC REGULATION AND DOUBLE HEAT EXCHANGER GE556Y411-GE556Y412 GE556-6 SERIES



GE556Y411 / GE556Y412

Description

The **GE556Y411** and **GE556Y412** heat interface units (HIU) allow the metering of heat energy consumption for heating and the production of DHW (Domestic Hot Water) in modern autonomous systems with centralised heat production (e.g. district heating).

The configuration with **two heat exchangers in parallel** provides the following advantages:

- parallel and non-intermittent handling of the domestic hot water and heating functions;
- higher safety, the heating circuit is a sealed pressurised system should there be any leaks within property only a small amount of water will be discharged.

The **management** of the HIUs **parameters** is completely **electronic**. This allows significant energy savings, minimizing the flow demand from the primary side and reducing the return temperature.

The various parameters can be set via **remote control** which also performs the function of programmable chronothermostat.

Versions and product codes

Product code	Type	Heating side power	DHW heat exchanger rated power	Template with valves
GE556Y411	Heating and DHW production	24,5 kW	56 kW	GE551Y085 GE551Y086
GE556Y412	Heating and DHW production	24,5 kW	67 kW	GE551Y085 GE551Y086

Remote control and external temperature probe included with HIU

Completion codes

The following components can be installed on each HIUs:

- Thermal energy meter of the GE552 series
- Domestic water meters of the GE552-2 series
- Template with 7 shut-off valves and system connections Ø 22 mm: code GE551Y085
- Template with 7 shut-off valves and system connections 3/4": code GE551Y086

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

- Connections 3/4".
- Electronic thermoregulation with Set-point, to manage the DHW temperature and heating temperature.
- Remote control with chronothermostat function to manage the parameter (for single zone), with display.
- Multizone additional control by the free contact on the electronic board (additional thermostats to be ordered separately).
- External temperature probe for climatic compensation.
- Double heat exchangers in parallel configuration: heating and DHW production, with priority for DHW production.
- Flow switch for priority of DHW production.
- Expansion vessel, safety valve and high efficiency circulator (15/7), comply with ErP Directive (2009/125/EC).
- Motorized three-way priority valve on the delivery of the primary side.
- Motorized two-way modulating valve on the return of the primary side.
- Filter and manual air vent valve on the primary side.
- Safety pressure switch for low pressure on the primary side.
- Heat exchanger and fully insulated piping.
- Painted sheet metal cabinet (RAL9010), with key locking.

Technical data

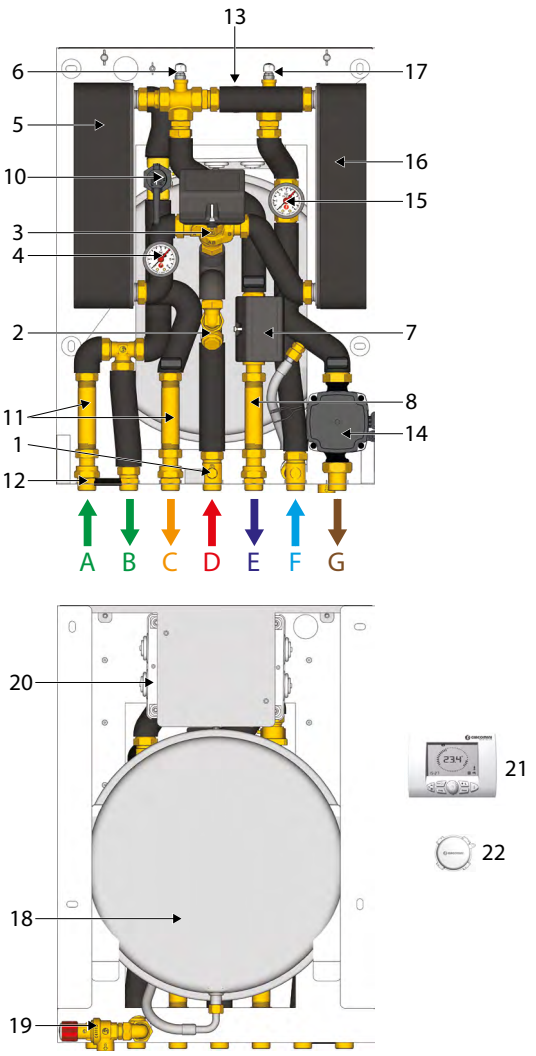
- Max. working temperature: 90 °C
- Max. working pressure: primary circuit: 10 bar
  DHW secondary circuit: 10 bar
  heating secondary circuit: 4,5 bar

Warning.
Max. working differential pressure for the primary side = 4 bar (priority valve)

- Temperature range of the secondary heating circuit:
  low temperature 25÷45 °C
  high temperature 25÷85 °C
- Temperature range of the secondary DHW circuit: 30÷60 °C (Set-Point 50 °C)
- Nominal flow rate on primary circuit: 850l/h @ 80 °C for 56 kW
  1030 l/h @ 80 °C for 67 kW

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).

Components



Legend		
1	Housing for energy meter temperature probe	PRIMARY
2	Filter	
3	Motorized three-way priority valve for DHW	
4	Pressure gauge 25 bar	
5	Heat exchanger for the domestic hot water function	
6	Manual air vent valve	
7	Motorized two-way modulating valve	
8	Brass spacer for thermal energy meter	
10	Flow switch	DHW PRODUCTION
11	Brass spacer for water meters	
12	Check valve	
13	Minimum pressure switch	HEATING
14	Circulator	
15	Pressure gauge 6 bar	
16	Heat exchanger for heating function	
17	Manual air vent valve	
18	Expansion vessel	
19	Safety valve setted at 4,5 bar	
20	Cabinet with electronic regulation unit	CHECKS
21	Remote control / chronothermostat with display	
22	External temperature probe	

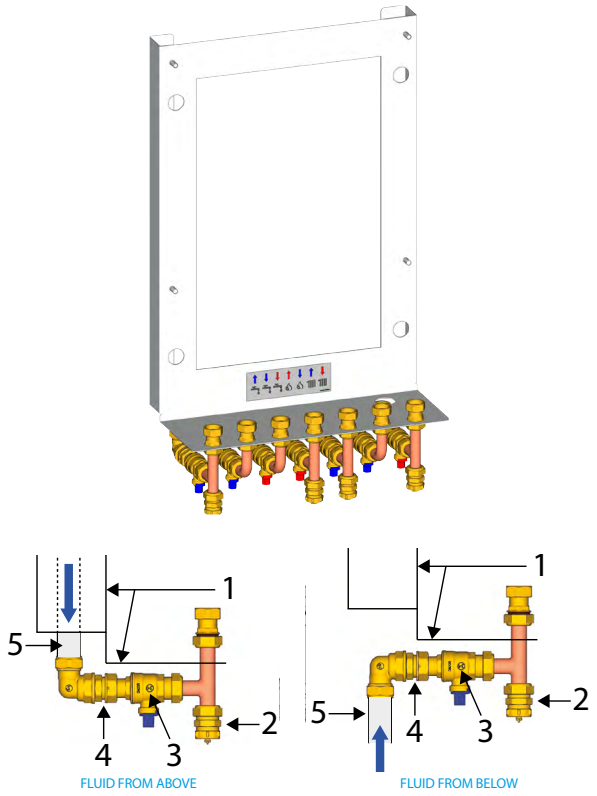
A: Domestic cold water inlet B: Domestic cold water outlet C: Domestic hot water outlet	D: Primary inlet E: Primary outlet F: Heating return G: Heating delivery

Optional components

The following components can be installed on each HIUs:

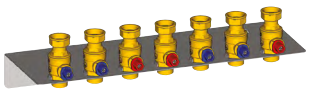
- Thermal energy meter: GE552 series
  The meter temperature probe must be installed in the special housing (Components - Ref. 1).
- Domestic water meter: GE552-2 series
- Template with 7 shut-off valves and system connections Ø 22 mm: code GE551Y085
- Template with 7 shut-off valves and system connections 3/4": code GE551Y086

GE551Y085 - Template with 7 valves (possibilty of connections from above)

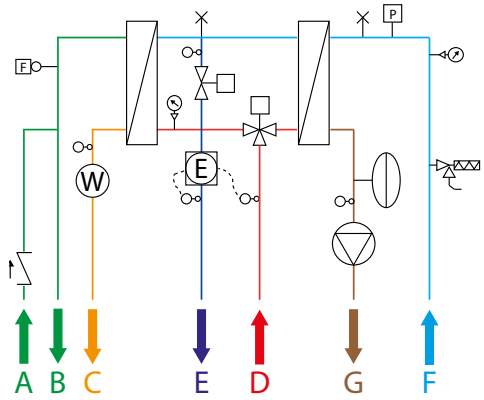


1) Metallic frame
2) Dirt separator
3) Shut-off ball valve to isolate the HIU
4) Joint that allows the connection from above and from below
5) System pipes, Ø 22 mm

GE551Y086 - Template with 7 valves (connections from below)



Operation



Legend			
	Heat exchanger		Manual air vent valve
W	Brass spacer for water meter	E	Brass spacer for thermal energy meter
	Motorized two-way modulating valve		Motorized three-way priority valve
	Temperature probe		Circulator
	Safety valve		Minimum pressure switch
	Expansion vessel		Pressure gauge
F	Flow switch		Check valve
A: Domestic cold water inlet B: Domestic cold water outlet C: Domestic hot water outlet		D: Primary inlet E: Primary outlet F: Heating return G: Heating delivery	

Primary (domestic hot water and heating)

Primary inlet (**D**) and outlet (**E**). The primary circuit consists of a filter, a three-way motorized priority valve, an manual air vent valve, a heat exchanger, a pressure gauge and a two-way motorized zone valve.

Energy Saving function: the two-way modulating valve controlled by the electronic management of the HIU, restricts the flow demand from the primary to the minimum necessary to obtain the preset Set-point temperature. The priority valve diverts the flow in the heat exchanger (if there is a request of DHW: DHW flow switch enabled) or in the heating system.

The thermal energy meter can be installed in place of the brass spacer, fitting its temperature probe in the relative housing (Components - Ref. 1).

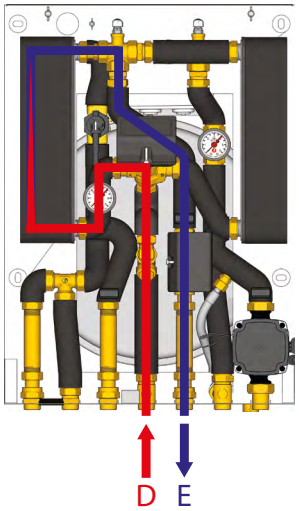


Fig. 1a - Primary DHW circuit

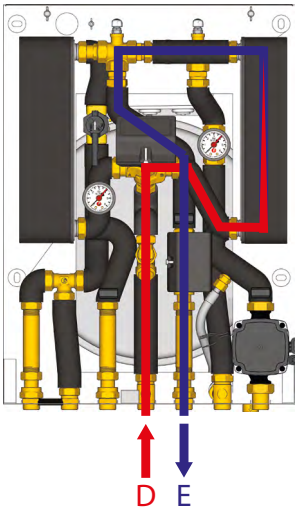


Fig. 1b - Primary heating circuit

Heating

Delivery (**G**) and return (**F**). The heating circuit consists of a heat exchanger, an manual air vent valve, a pressure gauge, a minimum pressure switch, a safety valve, an expansion vessel and a high-efficiency circulator (ErP 2009/125/EC).

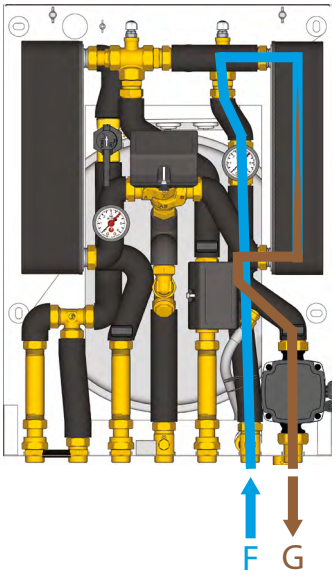


Fig. 2

Domestic hot water (DHW)

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

The DHW circuit consists of a flow switch, a check valve on the DCW inlet and two brass spacers for the introduction of the water meters.

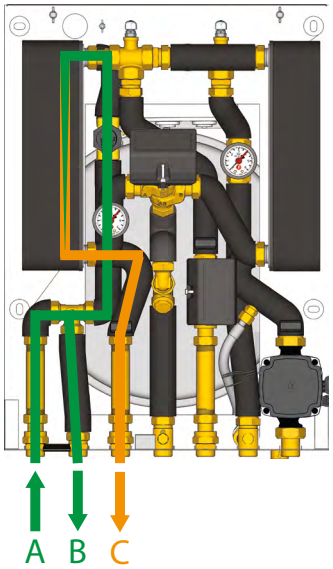


Fig. 3

Settings of the remote control/chronothermostat

Operation in mode: OFF, SUMMER, WINTER, HEATING ONLY

The selection of the operating mode is done by repeatedly pressing the button.

Off: "OFF" and the current time are shown on the display. Only the antifreeze function (if set) is enabled in this mode.
Any request for the DHW or heating mode operation is ignored.

Summer: the measured room temperature, the current time and the icon are displayed. The DHW, if set, and the antifreeze function are enabled in this mode.
Any request for the heating mode operation is ignored.

Winter: the display shows the measured room temperature, the time and the current day, the icons and the program set for the current day.
All DHW, heating and, if set, antifreeze functions are enabled in this mode.

Heating only: the display shows the measured room temperature, the time and the current day, the icon and the program set for the current day.
All heating and, if set, antifreeze functions are enabled in this mode.
Any request for the DHW mode operation is ignored.

Clock and temperature setting

Depending on the operating mode selected (OFF / SUMMER / WINTER / HEATING ONLY) by pressing the button SET, the clock and the temperature of the boiler can be set.
The value is displayed for a time equal to the display settings time delay and is identified by its flashing icon. Press key SET to pass to the next value and turn the knob + − to modify the value.

Clock: press key SET until the icon and the time value start to flash .
Turn the knob + − to select the desired time.
Press the knob + − to pass to the minutes.
The minutes start flashing: turn the knob + − to select the desired minutes. Press the knob + − to pass to the day of the week.
The days of the week start flashing: turn the knob + − to select the desired day.
Press the knob + − to confirm the value entered.

Day Set point: press key SET until the icon and the day set point value start to flash .
Turn the knob + − to select the desired value.

Night Set point: press key SET until the icon and the night set point value start to flash .
Turn the knob + − to select the desired value.

Heating Set point: press key SET until the icon and the heating set point value start to flash .
Turn the knob + − to select the desired value.

DHW Set point: press key SET until the icon and the DHW set point value start to flash .
Turn the knob + − to select the desired value.

Kd: this setting is only available if the remote control is configured as the modulator with the use of the external probe (P04 = 2 or 3).
Press key SET until the icon kd and the relative value start to flash.
Turn the knob + − to select the desired value.

Note.
For the other operating modes of the remote control, refer to the corresponding instruction sheet.

Preheating Function

The preheating function has the purpose of keeping the domestic water heat exchanger hot so as to shorten the initial adjustment time required to reach the setpoint temperature, thus providing greater comfort.
The function can be enabled/disabled by setting the t12 parameter via remote control.
When enabled, during the stand-by stage in SUMMER or WINTER mode, the function continuously monitors the domestic water probe and when the corresponding temperature falls below the DHW setpoint differential threshold of -8°C, a domestic water cycle is forced on with power supplied at 30% until the DHW temperature reaches the adjustment value of the function corresponding to the DHW setpoint -2°C. There is a time limit of 2 minutes for the function to reach this value.
If the DHW temperature fails to reach the setpoint threshold value after this time, the function is interrupted and inhibited for a period of 30 minutes.

Warning.
When the DHW preheating function is enabled, plan to install a compensation device (e.g., expansion vessel/water hammer damper).

Screed Heating Function

The screed heating function facilitates the installation of low-temperature floor systems.
It is supported in the WINTER and HEAT ONLY operating modes.
The function is enabled/disabled by setting the t13 parameter via remote control.
Once activated, it forces a request for operation in heating mode at a setpoint established by the t14 parameter, for a fixed time interval of 72 hours.
Subsequently, a new setpoint will be forcibly set with the value defined by the t15 parameter, for a time interval corresponding to the value established by the t16 parameter, expressed in days.

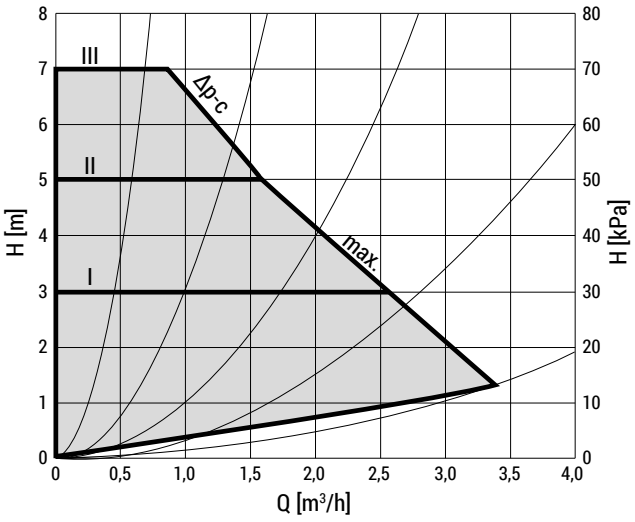
Remote Control Functions

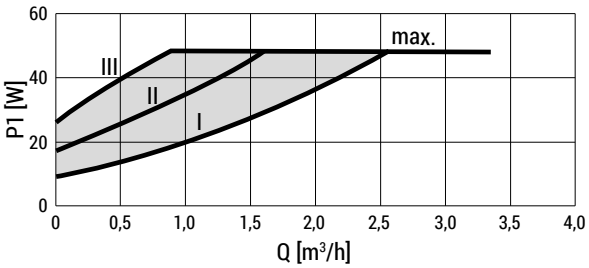
Parameter	Range	Description	Default configuration	Settings
t00	0/1	Heat exchanger configuration	0	0=single, 1=double
t01	0/1	Heating range	1	0=Standard, 1=Reduced
t02	0/1	dr. group configuration	0	0=combined, 1=domestic water only
t03	0/120	Mixing valve time	12	seconds
t04	0/30	KD for OTC	30	
t05	0/1	Enabling of H2O pressure switch	1	0=enabled, 1=disabled
t06	0/240	CH anticycle timming	30	seconds
t07	0/1	OVT type DHW	0	0=fixed, 1=correlated to the Setpoint
t08	0/1	OVT type CH	0	0=fixed, 1=correlated to the Setpoint
t09	0/1	Enabling safety valve	1	Screed heating timing final phase
t10	0/60	DHW rq probe configuration	0	0=Contact, 1=fluxmeter
t11	0/1	Disabling TA remotely	0	Screed heating timing final phase
t12	0/1	Enabling preheating	0	0=disabled, 1=enabled
t13	0/1	Enabling screed heating	0	0=disabled, 1=enabled
t14	25/34	Screed heating starting temperature 72 hours	25	°C
t15	35/45	Screed heating ending temperature	45	°C
t16	4/10	Screed heating timing final phase	4	days

Note.
To enable parameter programming, please refer to the remote-control manual.

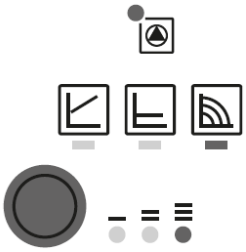
Circulator features

Constant differential pressure Δp-c (I, II, III) [RECOMMENDED]





Setting the control mode



The LED selection of control modes and corresponding pump curves takes place in clockwise succession.

• Press the operating button briefly (approx. 1 second).

➔ LEDs display the set control mode and pump curve.

Air venting

• Fill and vent the system correctly.

If the pump does not vent automatically:

• Activate the pump venting function via the operating button: press and hold for 3 seconds, then release.

➔ The pump venting function is initiated and lasts 10 minutes.

➔ The top and bottom LED rows flash in turn at 1 second intervals.

• To cancel, press and hold the operating button for 3 seconds.

After venting, the LED display shows the previously set values of the pump.

Fault signals

• The fault signal LED indicates a fault.

• The pump switches off (depending on the fault) and attempts a cyclical restart.

LED	Faults	Causes	Remedy
Lights up red	Blocking	Rotor blocked	Activate manual restart or acontact customer service
	Contacting/winding	Winding defective	
Flashing red	Under/overvoltage	Power supply too low/high on mains side	Check mains voltage and operating conditions, and request customer service
	Excessive module temperature	Module interior too warm	
	Short-circuit	Motor current too high	
Flashes red/ green	Generator operation	Water is flowing through the pump hydraulics, but there is no mains voltage at the pump	Check the mains voltage, water quantity/pressure and the ambient conditions
	Dry run	Air in the pump	
	Overload	Sluggish motor, pump is operated outside of its specifications (e.g. high module temperature). The speed is lower than during normal operation	

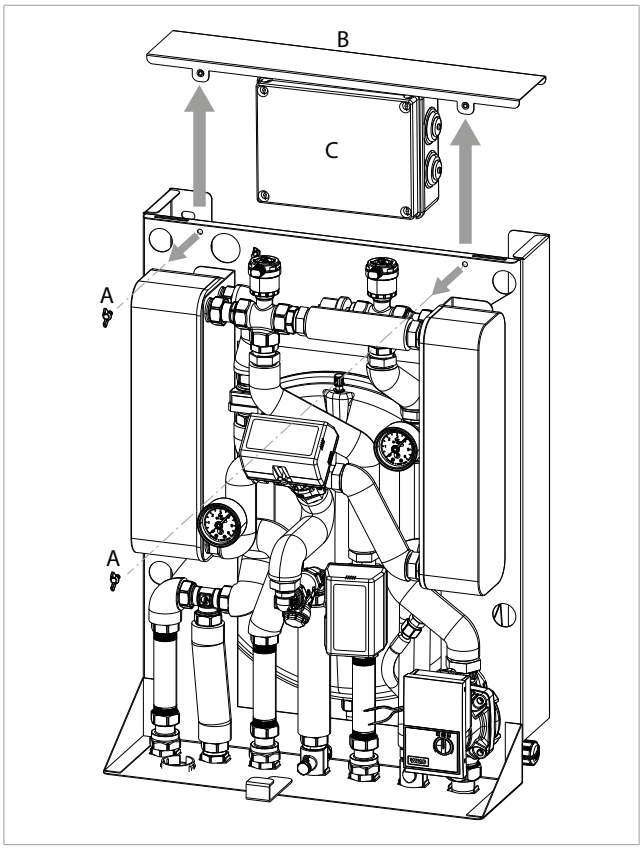
Electrical connection

Electrical cabinet

On the back of the HIU there is an IP55 electric box containing the electronic control board.

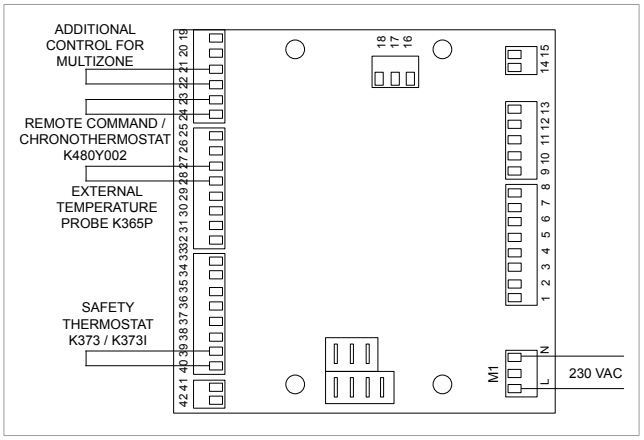
To access the electric cabinet unscrew the two screws (Ref. A) to release the metal bracket (Ref. B) on which the electric cabinet is housed.

Then pull out the metal bracket by pulling it up.



Electronic board

- The HIU is powered electrically by connecting the 230 V mains supply to the three-pin terminal board M1 of the electronic board.
- The remote control /chronothermostat (K480Y002) is connected to terminals 23-24 of the electronic board.
- The external temperature probe (K365PY002) is connected to terminals 27-28 of the electronic board.
- The optional safety thermostat (K373/K373I), is connected to terminals 39-40 of the electronic board.
- Multizone additional control to terminals 21-22 on the electronic board (additional thermostats to be ordered separately).



Electric technical data

- Electronic board power supply of the satellite: 230 V
- Supply voltage frequency: 50÷60 Hz
- Ambient operating temperature: -20÷60 °C
- Ambient storage temperature: -20÷80 °C
- Humidity: max 90 % @ 40° C non-condensing
- Maximum absorption: 7 VA
- Maximum length of external probe cable: 30 m
- Maximum length of remote control cable: 30 m

M-Bus

To connect the M-Bus data transfer cable to the concentrator, refer to the datasheet of the thermal energy meter used.

Protection and safety systems

Warning.
Risk of burns and electric shock. The HIU must only be accessed by skilled personnel, authorised by the building administrator.

It is important that the HIUs are accessed only by skilled personnel authorised by the building administrator: the box is locked. As optional is possible to install a K373/K373I safaty thermostat to prevent the high temperature on the heating side.

Checks and Maintenance

Warning.
Installation must be carried out by skilled personnel, authorised by the building administrator.
Respect the regulations regarding the use (installation, fixing, etc.), operation, recalibration and replacement of the meters. Refer also to the assembly instructions provided with the meter.

Warning. Before connecting the template to the HIU, remove the lock nuts from the threaded connections.

Heating circuit pressure

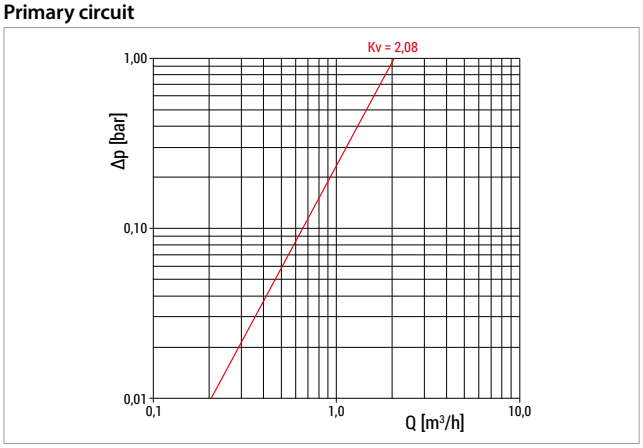
Regularly check the pressure in the heating circuit by means of the pressure gauge: the pressure value must be kept above 1 bar (values lower than this may cause cavitation, damaging the circulator). There is a pressure switch with a 0,8 bar setting to protect the circulator.

Warning.
The HIU will turn off and the display on the remote control signals an error E71 if the pressure is less than 0,8 bar.
Fill the system again to restart the satellite.

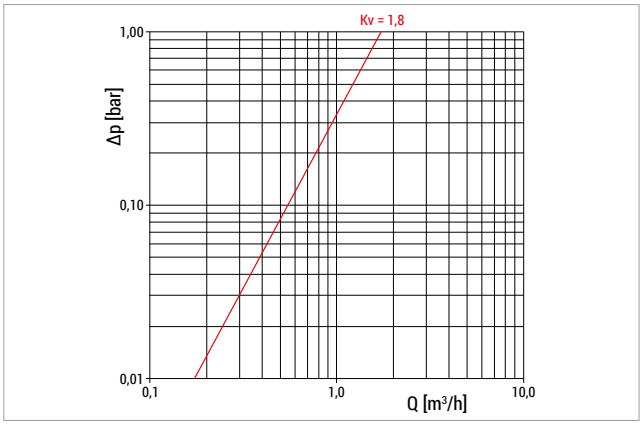
You must set up a filling system for heating - i.e. a connection from the domestic water circuit to the heating circuit, with a suitable backflow preventer. Attention: risk of burns.

Operating data for GE556Y411

Primary circuit



Primary circuit for DHW production, modulating valve all open (see fig.1)



Primary circuit for heating, modulating valve all open (see fig.2)

Heating

Low temperature heating (Δt 35-30 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	8,2	80	150	30
			75	170	30
			70	175	30
			65	210	31
			60	260	32

Low temperature heating (Δt 45-40 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	8,2	80	175	40
			75	210	41
			70	250	42
			65	310	42
			60	400	42

High temperature heating (Δt 60-45 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	24,5	80	750	48
			75	800	48
			70	1100	49
			65	1350	49

High temperature heating (Δt 70-55 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	24,5	80	1100	58
			75	1350	59

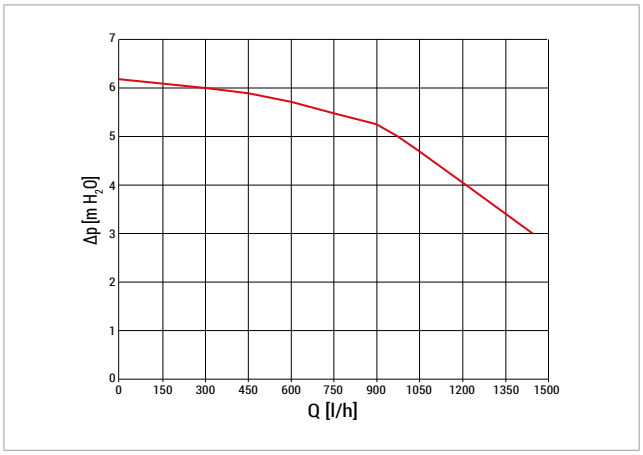
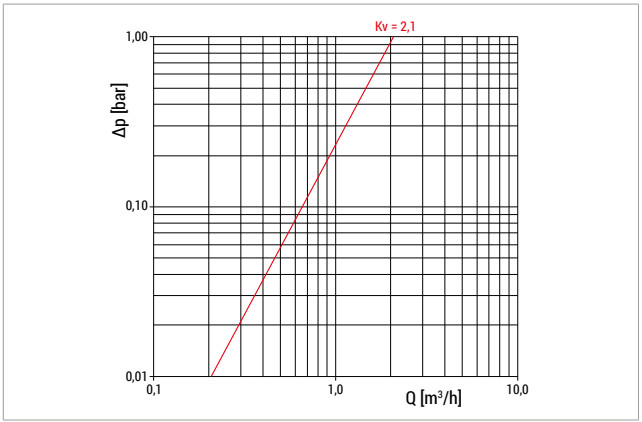


Diagram of the heating circulator - Circulator at Δp constant (see fig.2)

DHW production

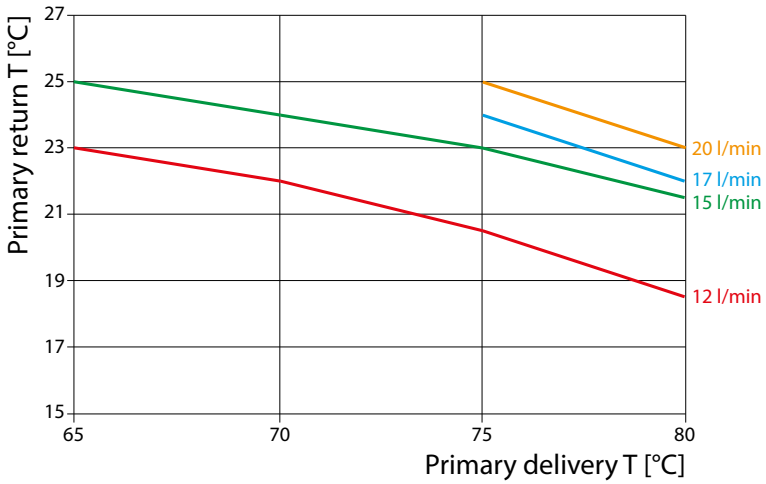
Domestic hot water (Δt 10-50 °C)			Primary circuit working conditions		
Flow rate [l/min]	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
12	720	33	**80**	470	18,5
			75	540	21,5
			70	610	22,0
			65	700	23,0
15	900	42	**80**	610	20,5
			75	700	23,0
			70	800	24,0
			65	910	25,0
17	1020	47,5	**80**	710	22,0
			75	810	24,0
20	1200	56	**80**	850	23,0
			75	970	25,0



Hydraulic data for domestic water circuit (see fig.3)

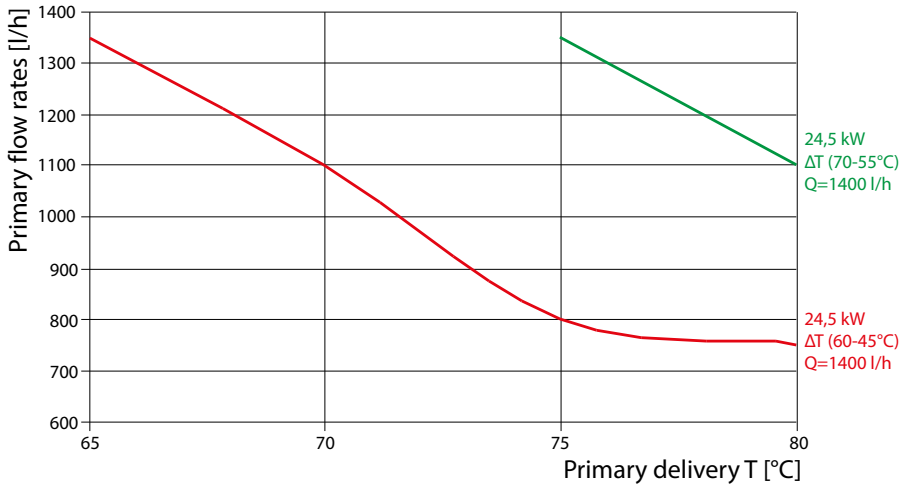
Energy saving features for GE556Y411

Low return temperatures of the primary in DHW operation

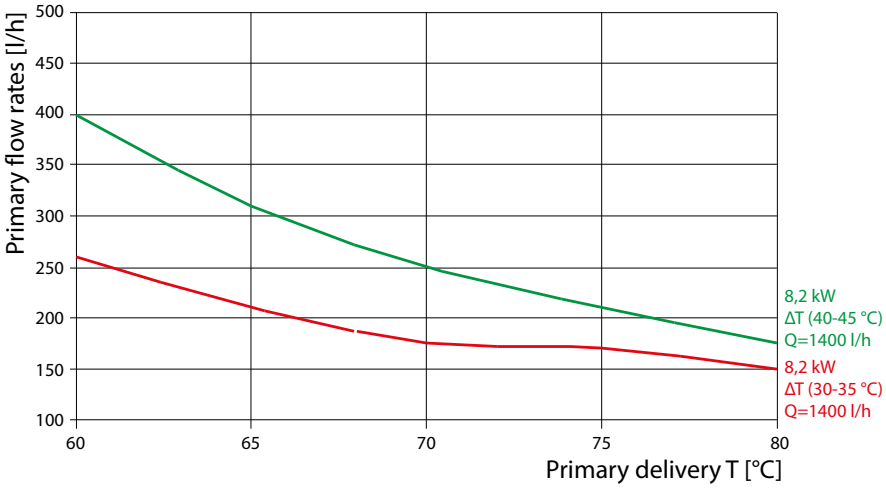


Reduced flow rates requests to the primary, in heating operation

High temperature:

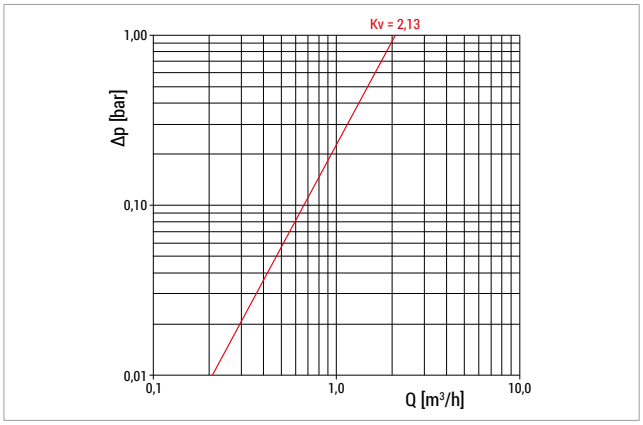


Low temperature:

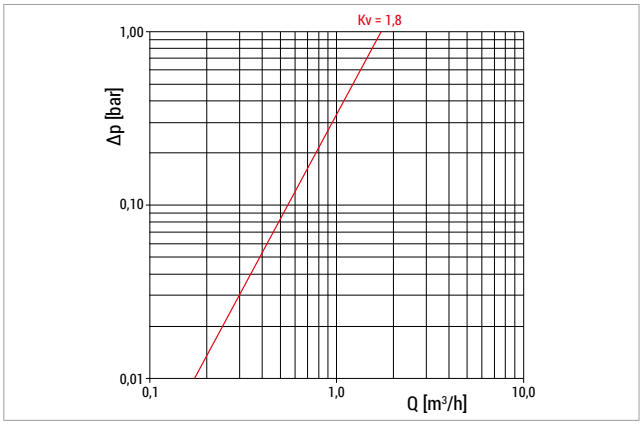


Operating data for GE556Y412

Primary circuit



Primary circuit for DHW production, modulating valve all open (see fig.1)



Primary circuit for heating, modulating valve all open (see fig.2)

Heating

Low temperature heating (Δt 35-30 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	8,2	**80**	150	30
			75	170	30
			70	175	30
			65	210	31
			60	260	32

Low temperature heating (Δt 45-40 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	8,2	**80**	175	40
			75	210	41
			70	250	42
			65	310	42
			60	400	42

High temperature heating (Δt 60-45 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	24,5	**80**	750	48
			75	800	48
			70	1100	49
			65	1350	49

High temperature heating (Δt 70-55 °C)			Primary circuit working conditions		
Circulator speed	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
Max.	1400	24,5	**80**	1100	58
			75	1350	59

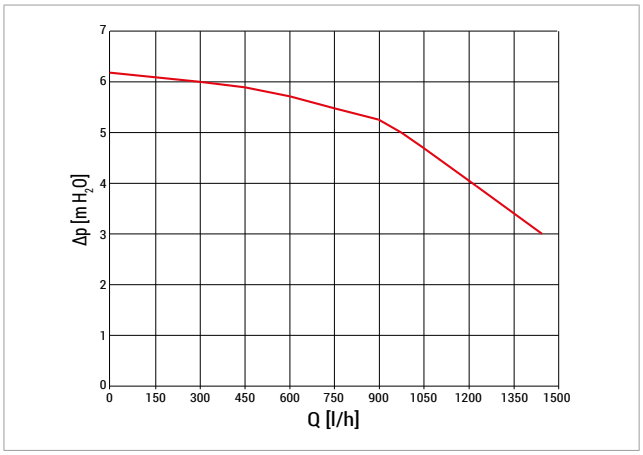
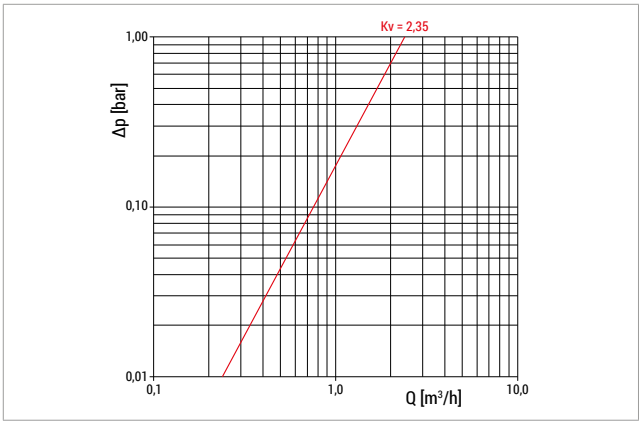


Diagram of the heating circulator - Circulator at Δp constant (see fig.2)

DHW production

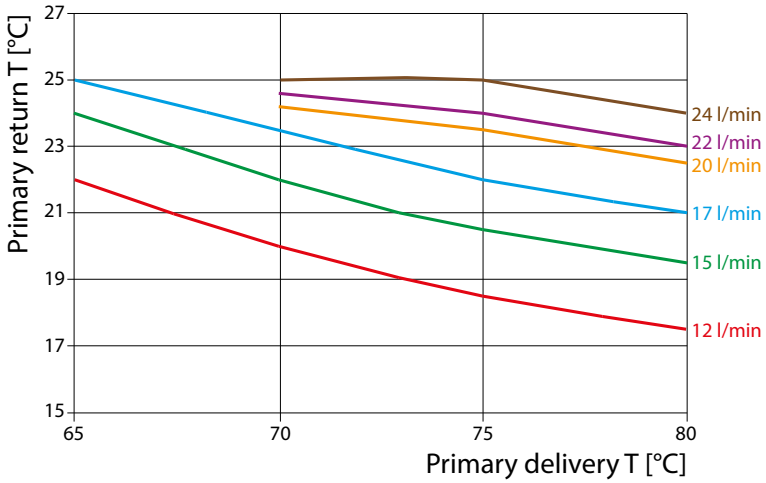
Domestic hot water (Δt 10-50 °C)			Primary circuit working conditions		
Flow rate [l/min]	Flow rate [l/h]	Power [kW]	Inlet T [° C]	Flow rate [l/h]	Outlet T [° C]
12	720	33	**80**	465	17,5
			75	510	18,5
			70	580	20,0
			65	670	22,0
15	900	42	**80**	595	19,5
			75	660	20,5
			70	750	22,0
			65	880	24,0
17	1020	47,5	**80**	700	21,0
			75	770	22,0
			70	880	23,5
			65	1020	25,5
20	1200	56	**80**	840	22,5
			75	940	23,5
			70	1050	24,2
22	1320	61,5	**80**	950	23,0
			75	1040	24,0
			70	1160	24,6
24	1440	67	**80**	1030	24,0
			75	1150	25,0
			70	1280	25,0



Hydraulic data for domestic water circuit (see fig.3)

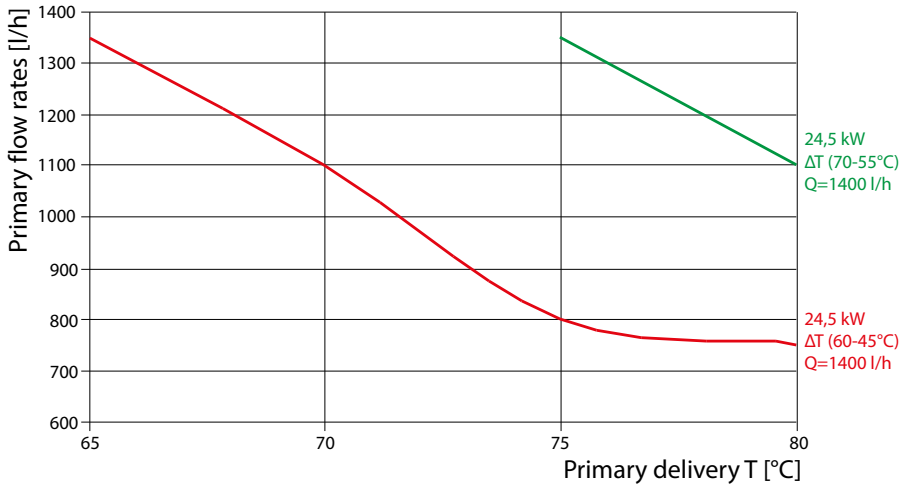
Energy saving features for GE556Y412

Low return temperatures of the primary in DHW operation

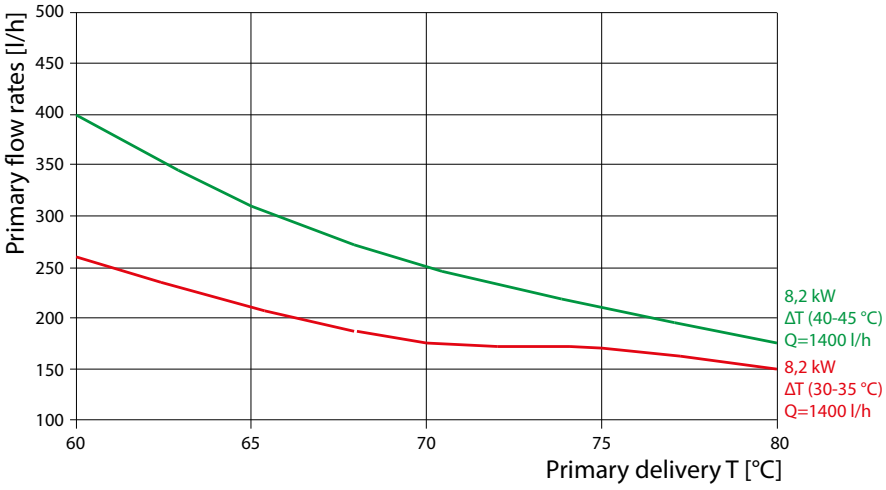


Reduced flow rates requests to the primary, in heating operation

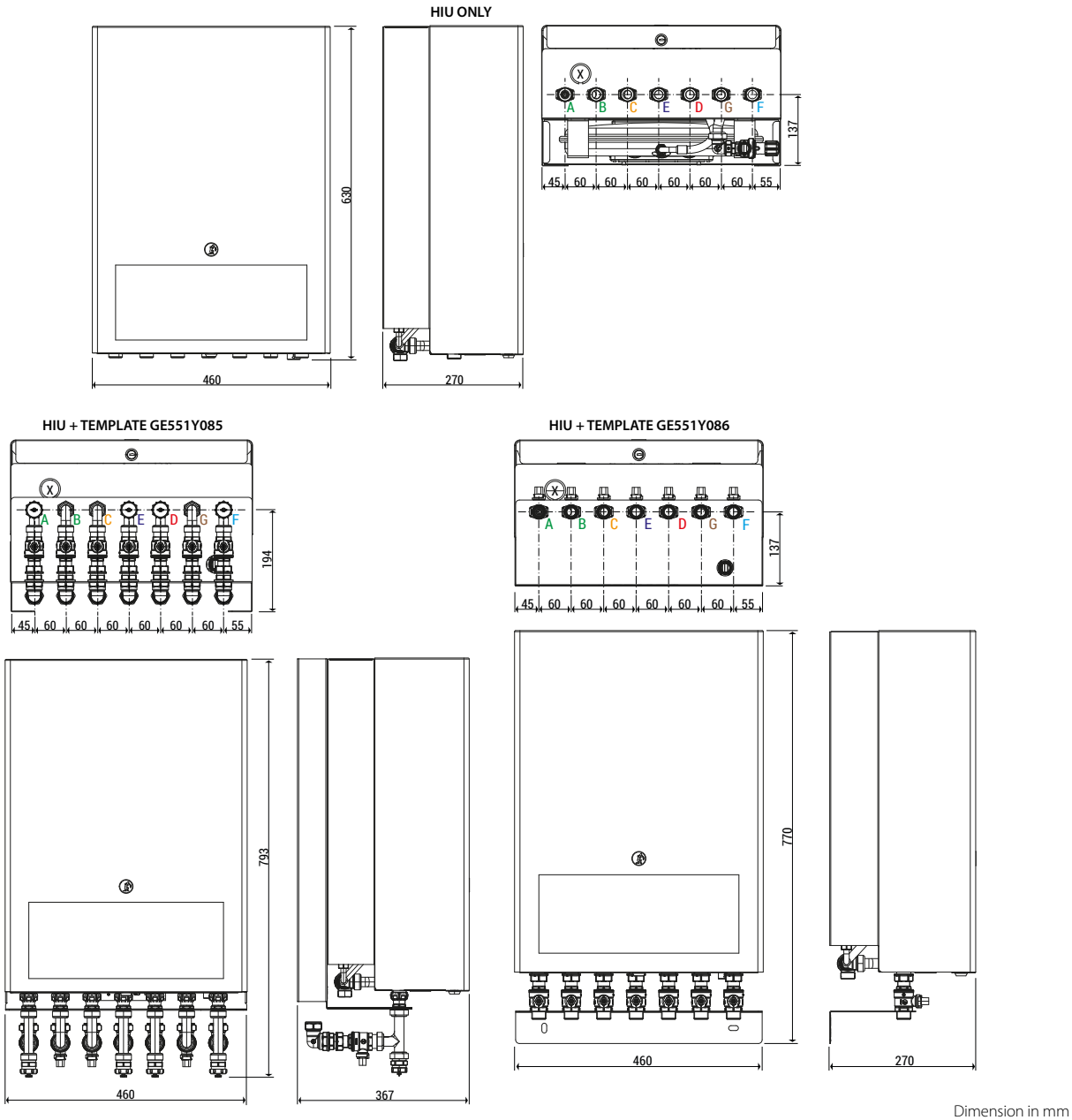
High temperature:



Low temperature:



Dimensions



Dimension in mm

Legend

X: hole for safety valve drain
A: Domestic cold water inlet
B: Domestic cold water outlet
C: Domestic hot water outlet
D: Primary inlet
E: Primary outlet
F: Heating return
G: Heating delivery

Reference Standards

- UNI EN 1434
- EN 60751
- EN 61107
- Measuring Instruments Directive 2014/32/EU (MID)
- ErP Directive 2009/22/EC

WRAS certifications

Ref. "Components"	Components	Certificate number
-	Gaskets	1509514
10	Flow switch	2111302
5, 15	Heat exchanger	1909083

IT

AVVERTENZE PER IL CORRETTO SMALTIMENTO DEL PRODOTTO

Questo prodotto rientra nel campo di applicazione della Direttiva 2012/19/UE riguardante la gestione dei rifiuti di apparecchiature elettriche ed elettroniche (RAEE).
L'apparecchio non deve essere eliminato con gli scarti domestici in quanto composto da diversi materiali che possono essere riciclati presso le strutture adeguate.
Informarsi attraverso l'autorità comunale per quanto riguarda l'ubicazione delle piattaforme ecologiche atte a ricevere il prodotto per lo smaltimento ed il suo successivo corretto riciclaggio. Si ricorda, inoltre, che a fronte di acquisto di apparecchio equivalente, il distributore è tenuto al ritiro gratuito del prodotto da smaltire.
Il prodotto non è potenzialmente pericoloso per la salute umana e l'ambiente, ma se abbandonato nell'ambiente impatta negativamente sull'ecosistema.
Leggere attentamente le istruzioni prima di utilizzare l'apparecchio per la prima volta. Si raccomanda di non usare assolutamente il prodotto per un uso diverso da quello a cui è stato destinato, essendoci pericolo di shock elettrico se usato impropriamente.

Il simbolo del bidone barrato, presente sull'etichetta posta sull'apparecchio, indica la rispondenza di tale prodotto alla normativa relativa ai rifiuti di apparecchiature elettriche ed elettroniche.
L'abbandono nell'ambiente dell'apparecchiatura o lo smaltimento abusivo della stessa sono puniti dalla legge.

EN

IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT

This product falls into the scope of the Directive 2012/19/EU concerning the management of Waste Electrical and Electronic Equipment (WEEE).
This product shall not be dispose in to the domestic waste as it is made of different materials that have to be recycled at the appropriate facilities.
Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling.
Furthermore, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge.
The product is not potentially dangerous for human health and the environment, but if abandoned in the environment can have negative impact on the environment. Read carefully the instructions before using the product for the first time. It is recommended that you do not use the product for any purpose rather than those for which it was intended, there being a danger of electric shock if used improperly.

The crossed-out wheeled dustbin symbol, on the label on the product, indicates the compliance of this product with the regulations regarding Waste Electrical and Electronic Equipment.
Abandonment in the environment or illegal disposal of the product is punishable by law.

FR

AVERTISSEMENTS POUR L'ÉLIMINATION CORRECTE DU PRODUIT

Ce produit entre dans le champ d'application de la directive 2012/19 / UE relative à la gestion des déchets équipements électriques et électroniques (DEEE).
L'appareil ne doit pas être jeté avec les ordures ménagères car il est fait de différents matériaux pouvant être recyclés dans des centres appropriés.
Renseignez-vous auprès de l'autorité locale concernant l'emplacement des plates-formes écologiques appropriées pour recevoir le produit pour sa destruction et son recyclage correct ultérieur. Il convient également de rappeler que, en cas d'achat d'un appareil équivalent, le distributeur est tenu de collecter le produit à détruire. Le produit n'est potentiellement pas dangereux pour la santé humaine et l'environnement, mais s'il est abandonné dans l'environnement, il a un impact négatif sur l'écosystème.
Lisez attentivement les instructions avant d'utiliser l'appareil pour la première fois.
Il est interdit d'utiliser le produit pour un usage différent de celui auquel il était destiné, il y a risque de choc électrique si utilisé incorrectement.

Le symbole de la poubelle barrée sur l'étiquette de l'appareil indique sa correspondance produit à la législation relative aux déchets d'équipements électriques et électroniques.
L'abandon dans l'environnement de l'équipement ou l'élimination illégale de l'équipement est punissable par la loi.

DE

WICHTIGE HINWEISE ZUR KORREKTEN ENTSORGUNG DES PRODUKTS

Dieses Produkt fällt in den Anwendungsbereich der Richtlinie 2012/19/EU über die Entsorgung von Elektro- und Elektronik - Altgeräten (WEEE).
Dieses Produkt darf nicht in den Hausmüll entsorgt werden, da es aus verschiedenen Materialien besteht, die in entsprechenden Einrichtungen recycelt werden müssen. Erkundigen sie sich bei ihrer Gemeinde nach dem Standort des nächsten Recyclinghofs bzw. der nächsten Annahmestelle, um das Produkt dem Recycling zuzuführen bzw. fachgerecht zu entsorgen. Darüber hinaus ist der Händler verpflichtet, das Produkt beim Kauf eines gleichwertigen Geräts kostenlos zu entsorgen. Das Produkt ist für die menschliche Gesundheit und die Umwelt potenziell nicht gefährlich. Diese können sich aber, falls sie in der Umwelt gelangen, negativ auf diese auswirken. Lesen Sie daher vor dem ersten Gebrauch des Produkts die Inbetriebnahme-, Bedienungs- und Entsorgungsanweisungen sorgfältig durch. Es wird empfohlen, dass Sie das Produkt nur für den vorgesehenen Zweck verwenden.
Bei unsachgemäßer Verwendung bzw. Fehlgebrauch besteht die Gefahr eines elektrischen Schlags.

Das Symbol der durchgestrichenen Mülltonne auf dem Etikett des Produkts weist auf die Konformität dieses Produkts zu den Vorschriften für Elektro- und Elektronik-Altgeräte hin. Das Ablagern in der Umwelt oder die illegale Entsorgung des Produkts ist strafbar.

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.

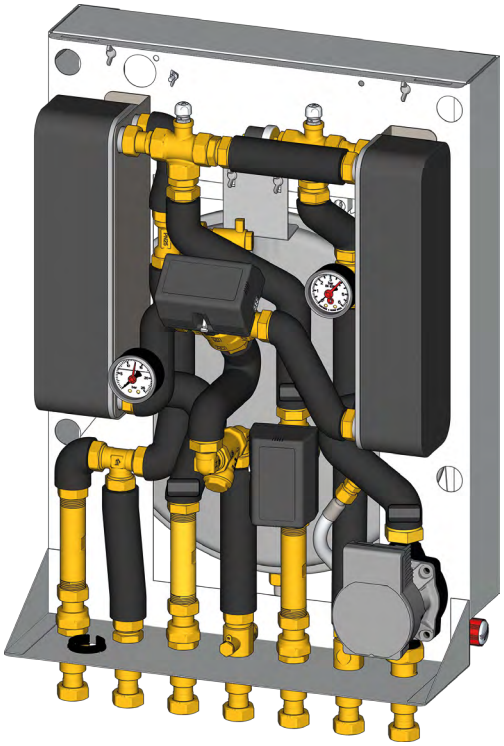
Additional information
For more information, go to www.giacomini.com or contact our technical assistance service: ☎ +39 0322 923372 🖷 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com

GE556-6

GE556Y413/416 heat interface unit with electronic regulation, double heat exchanger and adjustable tail pieces

Energy Management

Datasheet/Instruction
1062EN 05/2022
047U59118



The GE556Y413 and GE556Y416 heat interface units (HIU) allow the metering of heat energy consumption for heating and the production of DHW (Domestic Hot Water) in modern autonomous systems with centralised heat production (e.g. district heating).
The configuration with two heat exchangers in parallel provides the following advantages:
- parallel and non-intermittent handling of the domestic hot water and heating functions;
- higher safety, the heating circuit is a sealed pressurised system should there be any leaks within property only a small amount of water will be discharged.

The management of the HIUs parameters is completely electronic.
This allows significant energy savings, minimizing the flow demand from the primary circuit and reducing the return temperature.
The various parameters can be set via remote control which also performs the function of programmable chronothermostat.

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Versions and product codes

PRODUCT CODE	HIU TYPE	HEATING CIRCUIT POWER	DHW HEAT EXCHANGER NOMINAL POWER	TEMPLATE WITH VALVES
GE556Y413	Heating and DHW production	24,5 kW	56 kW	GE551Y135/GE551Y136
GE556Y416	Heating and DHW production	24,5 kW	67 kW	GE551Y135/GE551Y136

NOTE. Remote control and external temperature probe included with HIU

Completion codes

- GE552: thermal energy meter
- GE552-2: domestic water meters
- GE551Y135: template with shut-off valves and Ø 22 mm system connections
- GE551Y136: template with shut-off valves and 3/4"M system connections
- Data centralization components via M-Bus, GE552-4 series, or via Wireless M-Bus, GE552-W series

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.

Technical data

- Max. working temperature: 90 °C
- Max. working pressure:
  - primary circuit: 10 bar
  - DHW secondary circuit: 10 bar
  - heating secondary circuit: 4,5 bar
- Temperature range of the secondary heating circuit:
  - low temperature: 25÷45 °C
  - high temperature: 25÷85 °C
- Temperature range of the secondary DHW circuit: 30÷60 °C (Set-Point 50 °C)
- Nominal flow rate on primary circuit:
  850 l/h @ 80 °C for 56 kW
  1030 l/h @ 80 °C for 67 kW

WARNING. Max. working differential pressure for the primary circuit = 4 bar (priority valve)

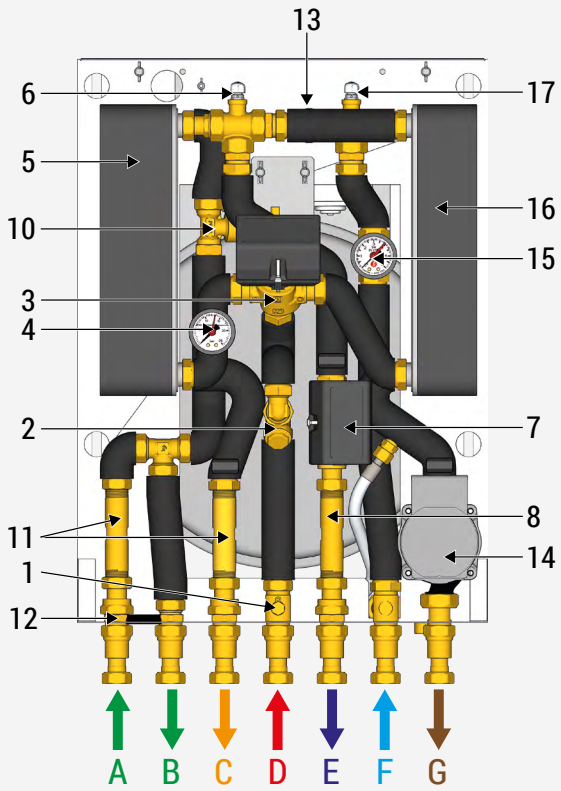
WARNING. The satellite can be used in closed boiler rooms for operation with non-aggressive fluids (water, glycol-based water in compliance with VDI 2035/ÖNORM 5195).

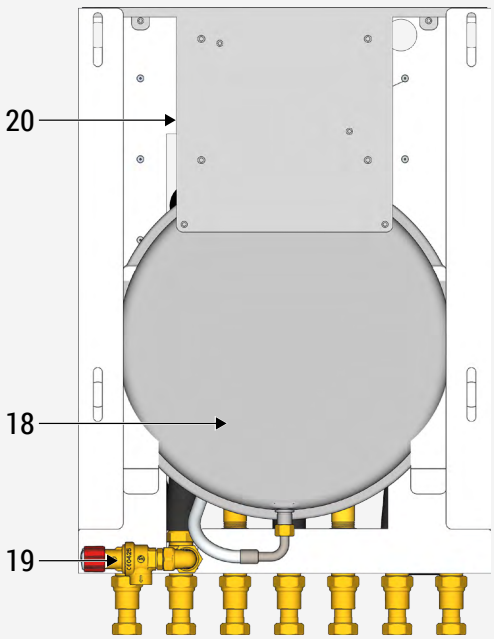
Main features

- G 3/4"F connections with adjustable tail pieces.
- Electronic thermoregulation with Set-point, to manage the DHW temperature and heating temperature.
- Remote control with chronothermostat function to manage the parameter (for single zone), with display.
- Multizone additional control by the free contact on the electronic board (additional thermostats to be ordered separately).
- External temperature probe for climatic compensation.
- Double heat exchangers in parallel configuration: heating and DHW production, with priority for DHW production.
- Flow switch for priority of DHW production.
- Expansion vessel, safety valve and high efficiency circulator (15/7), comply with ErP Directive (2009/125/EC).
- Motorized three-way priority valve on the delivery of the primary circuit.
- Motorized two-way modulating valve on the return of the primary circuit.
- Filter and manual air vent valve on the primary circuit.
- Safety pressure switch for low pressure on the primary circuit.
- Heat exchanger and fully insulated piping.
- Painted sheet metal cabinet (RAL9010), with key locking.

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Components





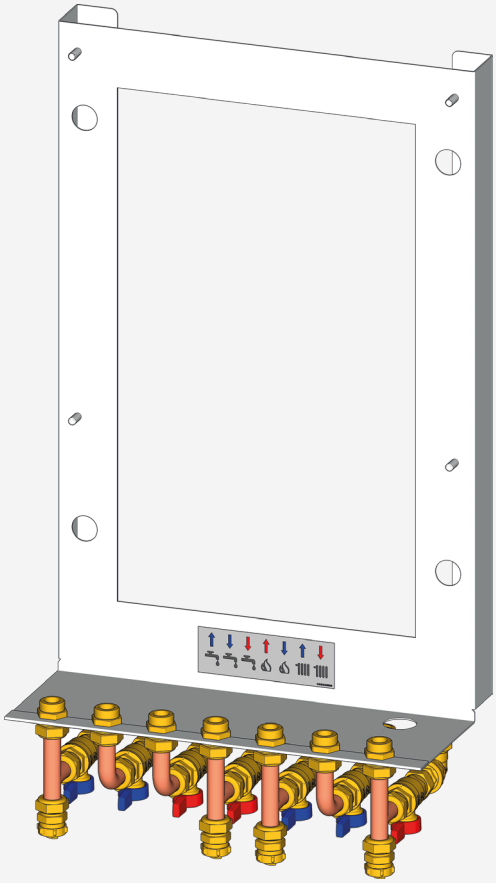
PRIMARY CIRCUIT	1	Housing for energy meter temperature probe
	2	Filter
	3	Housing for energy meter temperature probe
	4	Pressure gauge 25 bar
	5	Heat exchanger for the domestic hot water function
	6	Manual air vent valve
	7	Motorized two-way modulating valve
	8	Brass spacer for thermal energy meter
DHW PRODUCTION	10	Flow switch
	11	Brass spacer for water meters
	12	Check valve
HEATING	13	Minimum pressure switch
	14	Circulator
	15	Pressure gauge 6 bar
	16	Heat exchanger for heating function
	17	Manual air vent valve
	18	Expansion vessel
	19	Safety valve setted at 4,5 bar
OTHER COMPONENTS	20	Cabinet with electronic regulation unit
	21	Remote control / chronothermostat with display
	22	External temperature probe
HYDRAULIC CONNECTIONS	A	Domestic cold water inlet
	B	Domestic cold water outlet
	C	Domestic hot water outlet
	D	Primary inlet
	E	Primary outlet
	F	Heating return
	G	Heating delivery

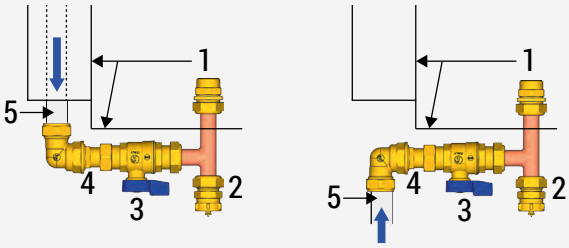
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Completion codes

- GE552: thermal energy meter. The meter temperature probe must be installed in the special housing (Components - Ref. 1).
- GE552-2: domestic water meters
- GE551Y135: template with shut-off valves and Ø 22 mm system connections
- GE551Y136: template with shut-off valves and 3/4"M system connections

GE551Y135
Template with 7 valves (possibilty of connections from above)



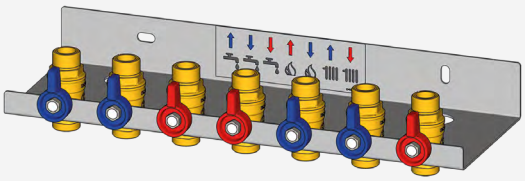


FLUID INLET FROM ABOVE

FLUID INLET FROM BELOW

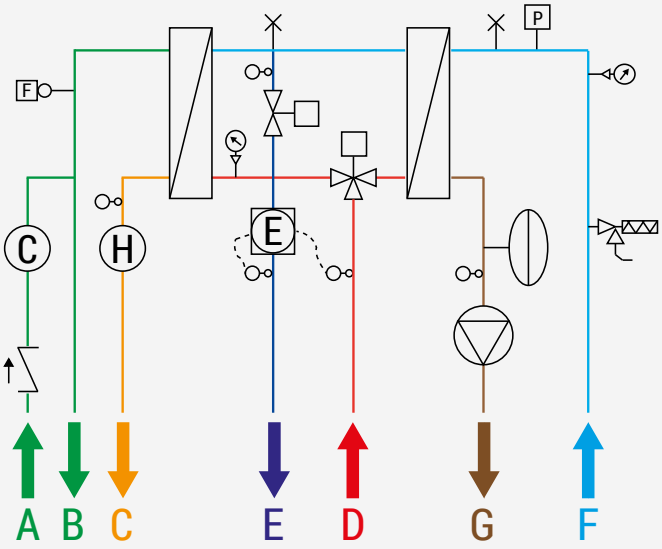
1) Metallic frame
2) Fitting for system charge and flushing
3) Shut-off ball valve to isolate the HIU
4) Joint that allows the connection from above and from below
5) System pipes, Ø 22 mm

GE551Y136
Template with 7 valves (connections from below)



Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

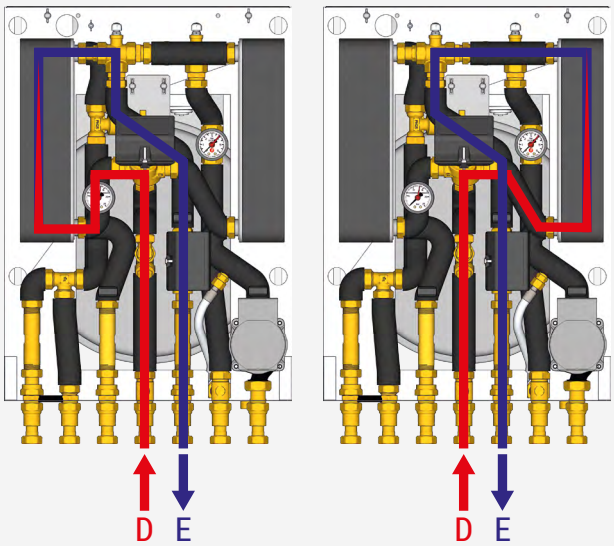
Operation



Motorized three-way priority valve	A Domestic cold water inlet
Motorized two-way modulating valve	B Domestic cold water outlet
Safety valve	C Domestic hot water outlet
Expansion vessel	D Primary inlet
Manual air vent valve	E Primary outlet
Circulator	F Heating return
Heat exchanger	G Heating delivery
Pressure gauge	
Minimum pressure switch	
Temperature probe	
Flow switch	
Check valve	
Brass spacer for thermal energy meter	
Brass spacer for domestic hot water	
Brass spacer for domestic cold water	

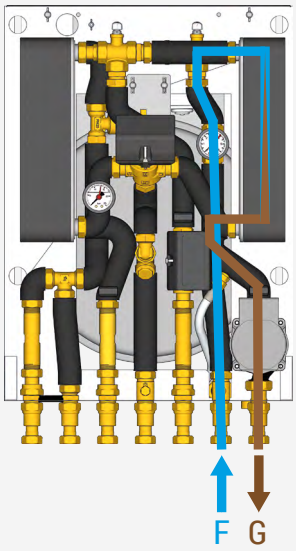
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Primary circuit



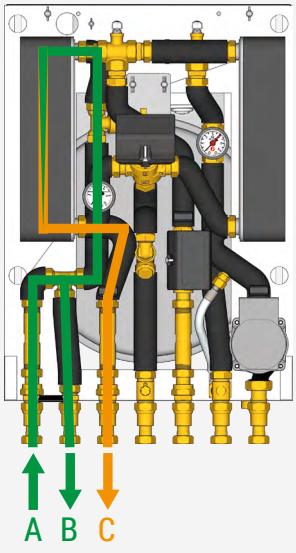
Primary inlet (D) and outlet (E). The primary circuit consists of a filter, a three-way motorized priority valve, an manual air vent valve, a heat exchanger, a pressure gauge and a two-way motorized zone valve.
Energy Saving function: the two-way modulating valve controlled by the electronic management of the HIU, restricts the flow demand from the primary to the minimum necessary to obtain the preset Set-Point temperature.
The priority valve diverts the flow in the heat exchanger (if there is a request of DHW: DHW flow switch enabled) or in the heating system.
The thermal energy meter can be installed in place of the brass spacer, fitting its temperature probe in the relative housing (Components - Ref. 1).

Secondary circuit: heating



Delivery (G) and return (F). The heating circuit consists of a heat exchanger, an manual air vent valve, a pressure gauge, a minimum pressure switch, a safety valve, an expansion vessel and a high-efficiency circulator (ErP 2009/125/EC).

Secondary circuit: DHW



Cold water inlet (A), cold water outlet (B) and hot water outlet (C).
The DHW circuit consists of a flow switch, a check valve on the DCW inlet and two brass spacers for the introduction of the water meters.

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Settings of the remote control/chronothermostat

Operation in mode: OFF, SUMMER, WINTER, HEATING ONLY

The selection of the operating mode is done by repeatedly pressing the button.

- **Off:** "OFF" and the current time are shown on the display. Only the antifreeze function (if set) is enabled in this mode. Any request for the DHW or heating mode operation is ignored.
- **Summer:** the measured room temperature, the current time and the icon are displayed. The DHW, if set, and the antifreeze function are enabled in this mode. Any request for the heating mode operation is ignored.
- **Winter:** the display shows the measured room temperature, the time and the current day, the icons and the program set for the current day. All DHW, heating and, if set, antifreeze functions are enabled in this mode.
- **Heating only:** the display shows the measured room temperature, the time and the current day, the icon and the program set for the current day. All heating and, if set, antifreeze functions are enabled in this mode. Any request for the DHW mode operation is ignored.

Impostazione orologio e temperature

Depending on the operating mode selected (OFF / SUMMER / WINTER / HEATING ONLY) by pressing the button SET, the clock and the temperature of the boiler can be set.
The value is displayed for a time equal to the display settings time delay and is identified by its flashing icon. Press key SET to pass to the next value and turn the knob + − to modify the value.

- **Clock:** press key SET until the icon and the time value start to flash.
  Turn the knob + − to select the desired time.
  Press the knob + − to pass to the minutes.
  The minutes start flashing: turn the knob + − to select the desired minutes. Press the knob + − to pass to the day of the week. The days of the week start flashing: turn the knob + − to select the desired day.
  Press the knob + − to confirm the value entered.
- **Day Set point:** press key SET until the icon and the day set point value start to flash.
  Turn the knob + − to select the desired value.
- **Night Set point:** press key SET until the icon and the night set point value start to flash.
  Turn the knob + − to select the desired value.
- **Heating Set point:** press key SET until the icon and the heating set point value start to flash.
  Turn the knob + − to select the desired value.
- **DHW Set point:** press key SET until the icon and the DHW set point value start to flash.
  Turn the knob + − to select the desired value.
- **Kd:** this setting is only available if the remote control is configured as the modulator with the use of the external probe (P04 = 2 or 3). Press key SET until the icon **kd** and the relative value start to flash.

Turn the knob + − to select the desired value.

NOTE. For the other operating modes of the remote control, refer to the corresponding instruction sheet.

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Preheating Function

The preheating function has the purpose of keeping the domestic water heat exchanger hot so as to shorten the initial adjustment time required to reach the setpoint temperature, thus providing greater comfort.
The function can be enabled/disabled by setting the t12 parameter via remote control.
When enabled, during the stand-by stage in SUMMER or WINTER mode, the function continuously monitors the domestic water probe and when the corresponding temperature falls below the DHW setpoint differential threshold of -8 °C, a domestic water cycle is forced on with power supplied at 30% until the DHW temperature reaches the adjustment value of the function corresponding to the DHW setpoint -2 °C. There is a time limit of 2 minutes for the function to reach this value.
If the DHW temperature fails to reach the setpoint threshold value after this time, the function is interrupted and inhibited for a period of 30 minutes.

⚠ **WARNING.** When the DHW preheating function is enabled, plan to install a compensation device (e.g., expansion vessel/water hammer damper).

Screed Heating Function

The screed heating function facilitates the installation of low-temperature floor systems.
It is supported in the WINTER and HEAT ONLY operating modes.
The function is enabled/disabled by setting the t13 parameter via remote control.
Once activated, it forces a request for operation in heating mode at a setpoint established by the t14 parameter, for a fixed time interval of 72 hours.
Subsequently, a new setpoint will be forcibly set with the value defined by the t15 parameter, for a time interval corresponding to the value established by the t16 parameter, expressed in days.

Remote control Function

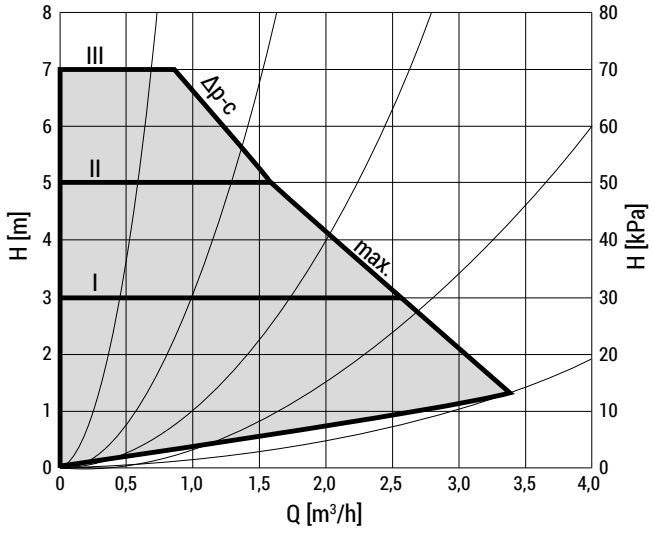
PARAMETER	RANGE	DESCRIPTION	DEFAULT CONFIGURATION	SETTINGS
t00	0/1	Heat exchanger configuration	0	0=single, 1=double
t01	0/1	Heating range	1	0=standard, 1=reduced
t02	0/1	dr. group configuration	0	0=combined, 1=domestic water only
t03	0/120	Mixing valve time	12	seconds
t04	0/30	KD for OTC	30	
t05	0/1	Enabling of H20 pressure switch	1	0=enabled, 1=disabled
t06	0/240	CH anticycle timming	30	seconds
t07	0/1	OVT type DHW	0	0=fixed, 1=correlated to the Setpoint
t08	0/1	OVT type CH	0	0=fixed, 1=correlated to the Setpoint
t09	0/1	Enabling safety valve	1	Screed heating timing final phase
t10	0/60	DHW rq probe configuration	0	0=contact, 1=fluxmeter
t11	0/1	Disabling TA remotely	0	Screed heating timing final phase
t12	0/1	Enabling preheating	0	0=disabled, 1=enabled
t13	0/1	Enabling screed heating	0	0=disabled, 1=enabled
t14	25/34	Screed heating starting temperature 72 hours	25	°C
t15	35/45	Screed heating ending temperature	45	°C
t16	4/10	Screed heating timing final phase	4	days

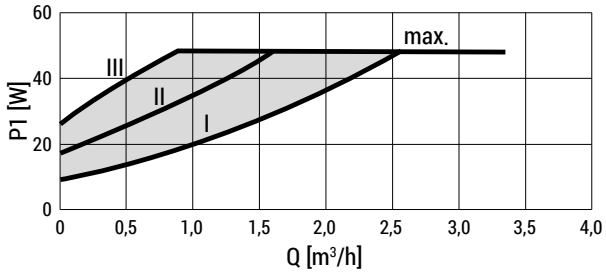
✎ **NOTE.** To enable parameter programming, please refer to the remote-control manual.

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

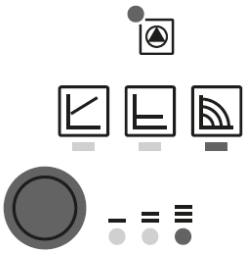
Circulator features

Constant differential pressure Δp-c (I, II, III) [RECOMMENDED]





Setting the control mode



The LED selection of control modes and corresponding pump curves takes place in clockwise succession.

• Press the operating button briefly (approx. 1 second).

➔ LEDs display the set control mode and pump curve.

Air venting

• Fill and vent the system correctly.

If the pump does not vent automatically:

• Activate the pump venting function via the operating button: press and hold for 3 seconds, then release.

➔ The pump venting function is initiated and lasts 10 minutes.

➔ The top and bottom LED rows flash in turn at 1 second intervals.

➔ To cancel, press and hold the operating button for 3 seconds.

• After venting, the LED display shows the previously set values of the pump.

Fault signals

• The fault signal LED indicates a fault.

• The pump switches off (depending on the fault) and attempts a cyclical restart.

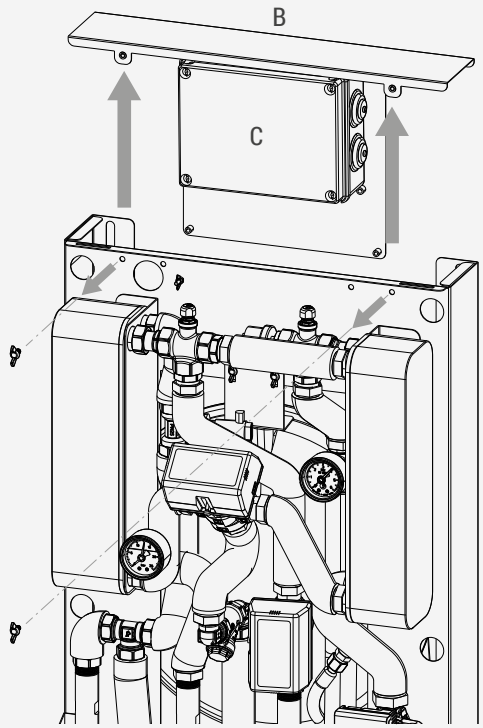
LED	FAULTS	CAUSES	REMEDY
Lights up red	Blocking	Rotor blocked	Activate manual restart or acontact customer service
	Contacting/winding	Winding defective	
Flashing red	Under/overvoltage	Power supply too low/high on mains side	Check mains voltage and operating conditions, and request customer service
	Excessive module temperature	Module interior too warm	
	Short-circuit	Motor current too high	
Flashing red/green	Generator operation	Water is flowing through the pump hydraulics, but there is no mains voltage at the pump	Check the mains voltage, water quantity/pressure and the ambient conditions
	Dry run	Air in the pump	
	Overload	Sluggish motor, pump is operated outside of its specifications (e.g. high module temperature). The speed is lower than during normal operation	

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Electrical connections

⚠ **WARNING.** Work on electrical components must be carried out by qualified personnel. Make sure that the power supply is disconnected when making connections.

Electrical cabinet



On the back of the HIU there is an IP55 electric box containing the electronic control board.
To access the electric cabinet (Ref. C) unscrew the two screws (Ref. A) to release the metal bracket (Ref. B) on which the electric cabinet is housed.
Then pull out the metal bracket by pulling it up.

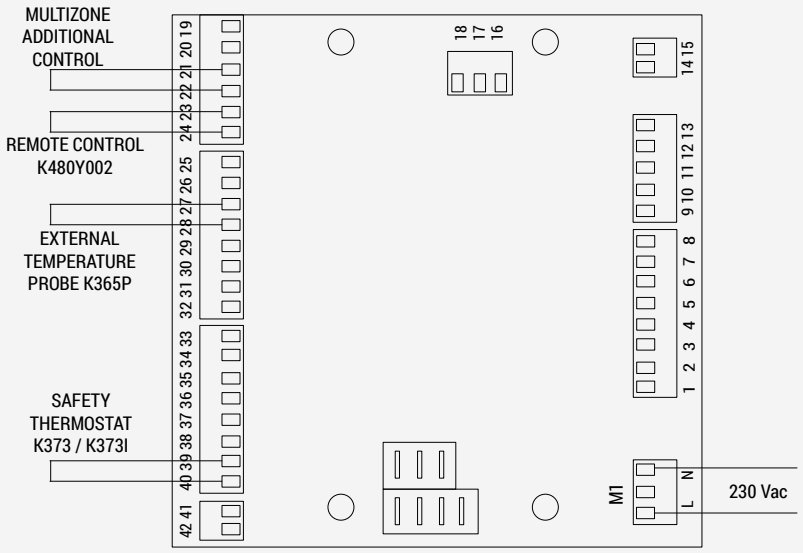
Electric technical data

- Electronic board power supply: 230 V
- Supply voltage frequency: 50÷60 Hz
- Ambient operating temperature: -20÷60 °C
- Ambient storage temperature: -20÷80 °C
- Humidity: max 90 % @ 40° C non-condensing
- Maximum absorption: 7 VA
- Maximum length of external probe cable: 30 m
- Maximum length of remote control cable: 30 m

M-Bus

To connect the M-Bus data transfer cable to the concentrator, refer to the datasheet of the thermal energy meter used.

Electronic board



- The HIU is powered electrically by connecting the 230 V mains supply to the three-pin terminal board M1 of the electronic board.
- The remote control /chronothermostat (K480Y002) is connected to terminals 23-24 of the electronic board.
- The external temperature probe (K365PY002) is connected to terminals 27-28 of the electronic board.
- The optional safety thermostat (K373/K373I), is connected to terminals 39-40 of the electronic board.
- Multizone additional control to terminals 21-22 on the electronic board (additional thermostats to be ordered separately).

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Protection and safety systems

It is important that the HIUs are accessed only by skilled personnel authorised by the building administrator: the box is locked. As optional is possible to install a K373/K373I safaty thermostat to prevent the high temperature on the heating circuit.

⚠ **WARNING.** Risk of burns and electric shock. The HIU must only be accessed by skilled personnel, authorised by the building administrator.

Installation, checks and maintenance

IMPORTANT WARNING. Vibrations during transport may loosen the connections. Check all flat-seat connections before start up and tighten if necessary.

⚠ **WARNING.** Risk of burns and electric shocks.
Installation must be carried out by qualified operators authorized by the building manager.
Refer to specific standards for use (installation, fixing, etc...), operation, recalibration and replacement of meters.
Also refer to the assembly instructions provided with each meter.

⚠ **WARNING.** Flush all pipes before installing the HIU on the template.

⚠ **WARNING.** Unused connections and ball valves must be closed with a cap.

⚠ **WARNING.** Upon installation, also include a filling circuit for the secondary system.

Heating circuit pressure

Periodically check the pressure value of heating circuit through the pressure gauge: it must be kept above 1 bar (pressure values lower than 1 bar may damage the circulator by cavitation).
A pressure switch set on 0,8 bar is included to protect the circulator.
Provide a filling system for the heating circuit, that is a connection with a proper disconnector between the domestic water and the heating circuits. Attention: Risk of burns.

⚠ **WARNING.** The HIU turns off automatically and the remote display shows the error E71 when the pressure is lower than 0,8 bar.
Fill up the system to turn the HIU back on.

Wall mounting of template

Mount the template on the wall using screw anchors fit for the type of wall and weight of the equipment, leaving a distance of at least 1000 mm between the template base and the ceiling.
The HIU can be installed at any height on the wall, however we recommend leaving a 1500 mm min. distance between the floor and the HIU cover base. Install the ball valves in the template holes and fit them with the special washers using a wrench.
Connect the system pipes to the template hydraulic connections.
Refer to the template label for proper installation of the pipes.

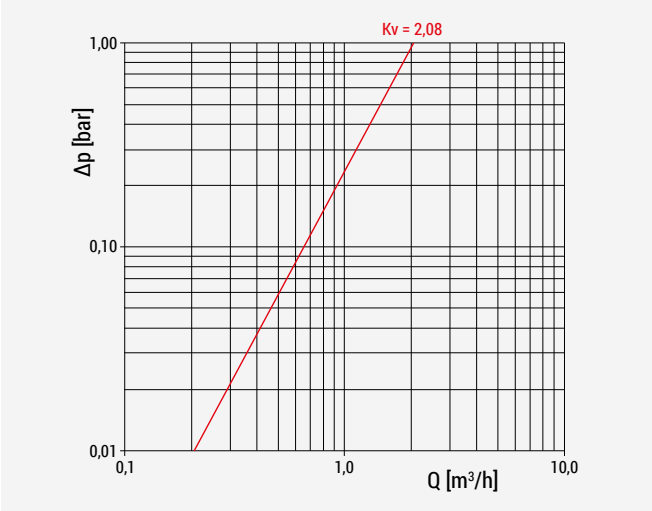
Installation of the HIU on template

For an easier installation, the HIU includes 3/4"F flat seat nuts with adjustable tail pieces (10 mm extension).
Before fitting the HIU on the template, extend every single adjustable tail piece up to its max. length.
Using a hard surface as reference, press all the adjustable tail pieces (previously extended to their max. length) at the same time to align them.
For installation with the GE551Y135 template, use the tie-rods on the template.
For installation with the GE551Y136 template, the user must measure the distance between the flat seat of the tail pieces and the fitting slots of the HIU and mark it on the wall, considering the position of the template ball valve flat seat and the thickness of the gasket.
Drill the wall in the positions previously measured.
Use screw anchors fit for the type of wall and weight of the equipment.
First insert the gaskets on the template and tighten gently by hand.
Complete the installation by tightening the HIU nuts on the template connections (max. torque 60 Nm) using a backup spanner.

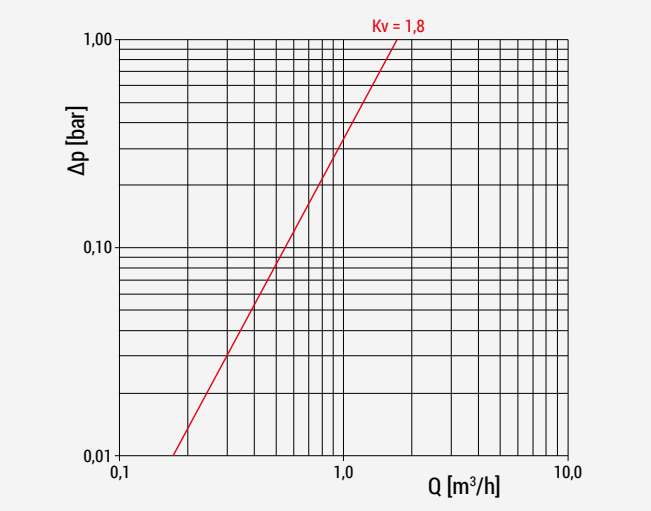
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

GE556Y413 operating data

Primary circuit



Primary circuit for DHW production, modulating valve fully open



Primary circuit for heating, modulating valve fully open

Secondary circuit for heating

LOW TEMPERATURE HEATING (Δt 35-30 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	8,2	**80**	150	30
			75	170	30
			70	175	30
			65	210	31
			60	260	32

LOW TEMPERATURE HEATING (Δt 45-40 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	8,2	**80**	175	40
			75	210	41
			70	250	42
			65	310	42
			60	400	42

HIGH TEMPERATURE HEATING (Δt 60-45 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	24,5	**80**	750	48
			75	800	48
			70	1100	49
			65	1350	49

HIGH TEMPERATURE HEATING (Δt 70-55 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	24,5	**80**	1100	58
			75	1350	59

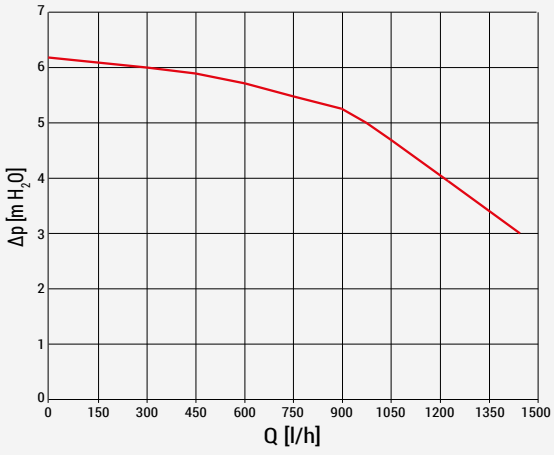
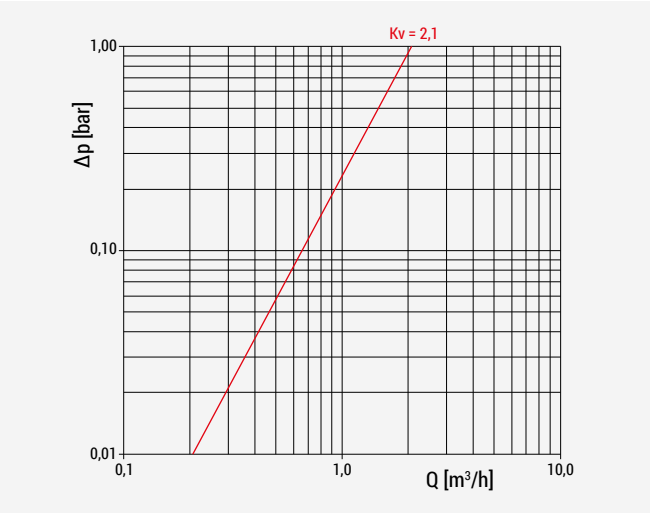


Diagram of the heating circulator - Circulator at constant Δp

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Secondary circuit for DHW production

DHW PRODUCTION (Δt 10-50 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
FLOW RATE [l/min]	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
12	720	33	80	470	18,5
			75	540	21,5
			70	610	22
			65	700	23
15	900	42	80	610	20,5
			75	700	23
			70	800	24
			65	910	25
17	1020	47,5	80	710	22
			75	810	24
20	1200	56	80	850	23
			75	970	25

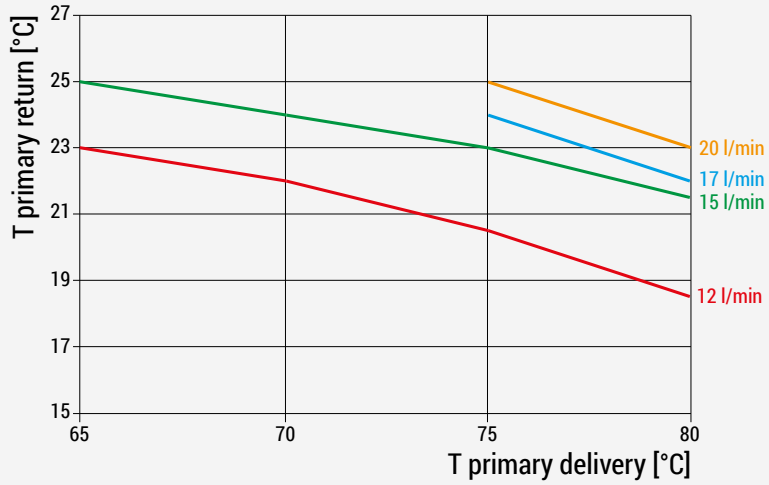


Hydraulic data for domestic water circuit

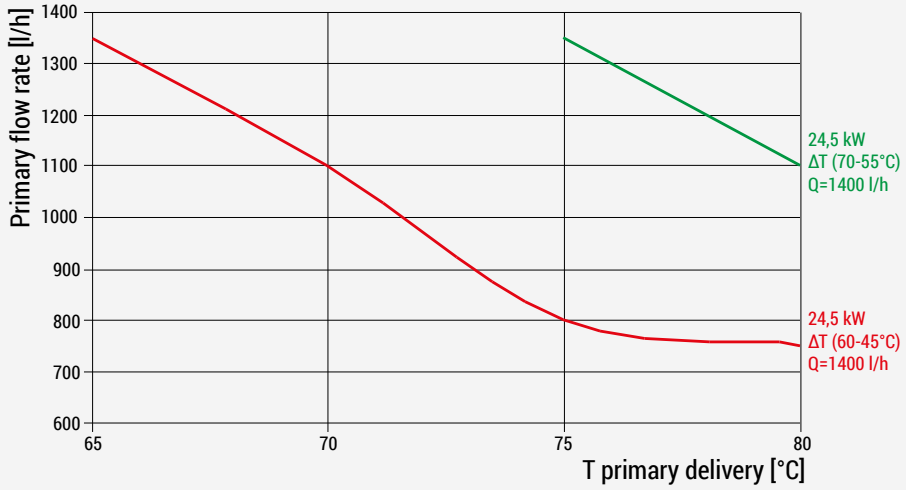
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

GE556Y413 energy saving features

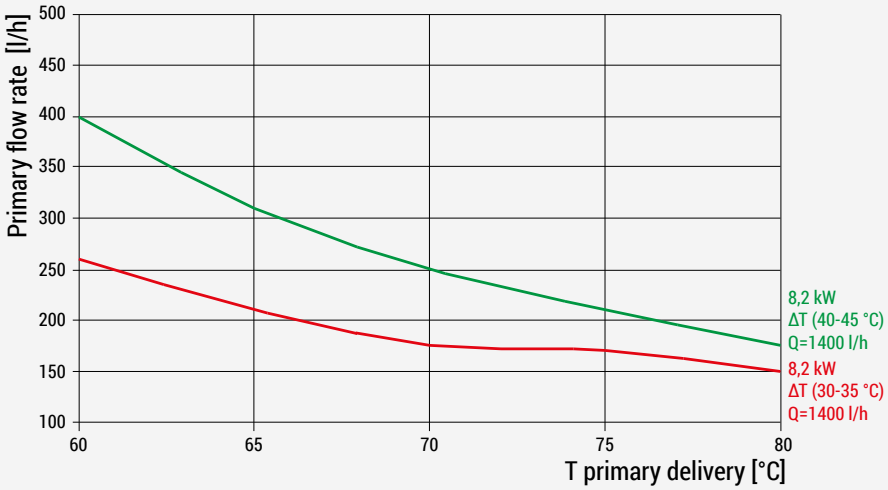
Low return temperatures of the primary in DHW operation



Reduced flow rates requests to the primary, in heating operation



High temperature

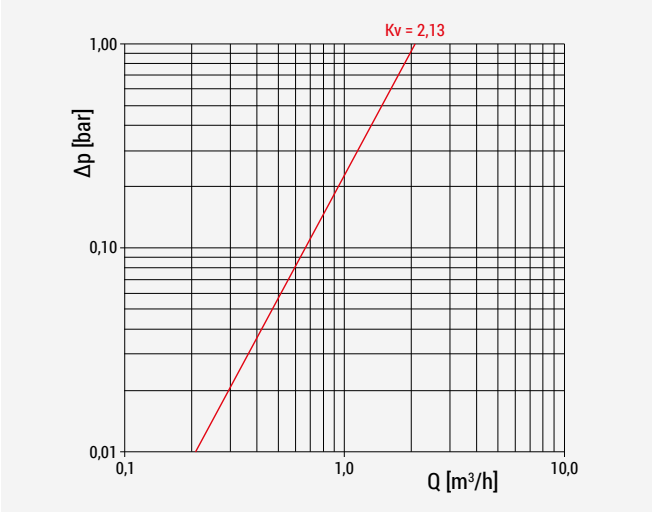


Low temperature

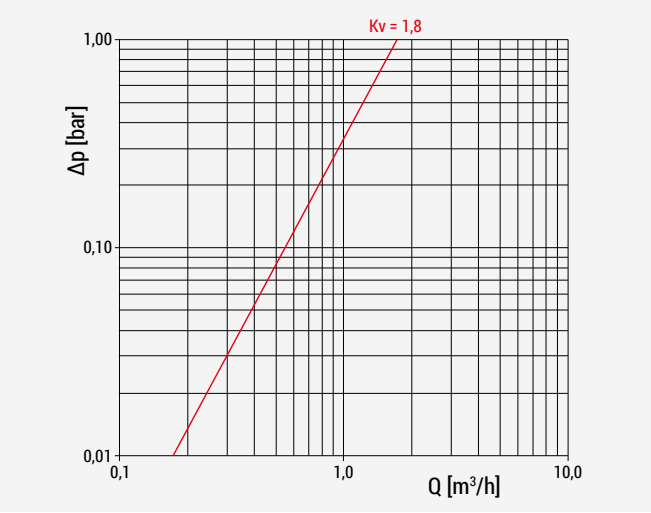
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

GE556Y416 operating data

Primary circuit



Primary circuit for DHW production, modulating valve fully open



Primary circuit for heating, modulating valve fully open

Secondary circuit for heating

LOW TEMPERATURE HEATING (Δt 35-30 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	8,2	**80**	150	30
			75	170	30
			70	175	30
			65	210	31
			60	260	32

LOW TEMPERATURE HEATING (Δt 45-40 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	8,2	**80**	175	40
			75	210	41
			70	250	42
			65	310	42
			60	400	42

HIGH TEMPERATURE HEATING (Δt 60-45 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	24,5	**80**	750	48
			75	800	48
			70	1100	49
			65	1350	49

HIGH TEMPERATURE HEATING (Δt 70-55 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
CIRCULATOR SPEED	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
MAX.	1400	24,5	**80**	1100	58
			75	1350	59

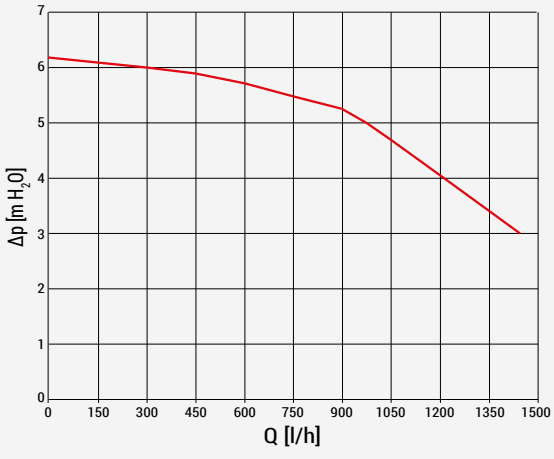
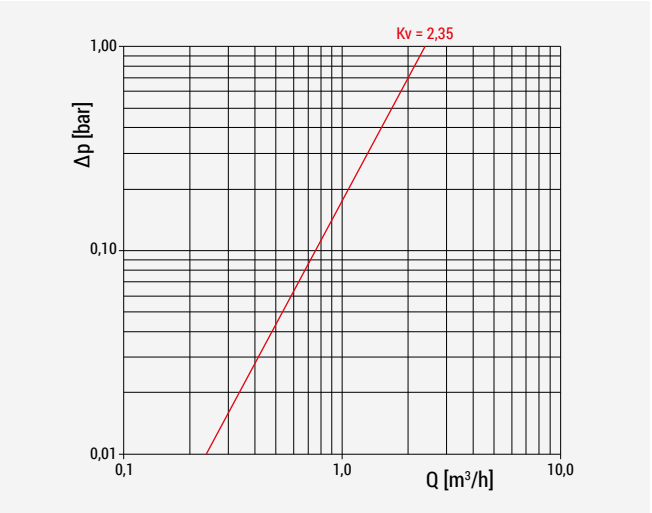


Diagram of the heating circulator - Circulator at constant Δp

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Secondary circuit for DHW production

DHW PRODUCTION (Δt 10-50 °C)			PRIMARY CIRCUIT WORKING CONDITIONS		
FLOW RATE [l/min]	FLOW RATE [l/h]	POWER [kW]	T INLET [°C]	FLOW RATE [l/h]	T OUTLET [°C]
12	720	33	80	465	17,5
			75	510	18,5
			70	580	20
			65	670	22
15	900	42	80	595	19,5
			75	660	20,5
			70	750	22
			65	880	24
17	1020	47,5	80	700	21
			75	770	22
			70	880	23,5
			65	1020	25,5
20	1200	56	80	840	22,5
			75	940	23,5
			70	1050	24,2
22	1320	61,5	80	950	23
			75	1040	24
			70	1160	24,6
24	1440	67	80	1030	24
			75	1150	25
			70	1280	25

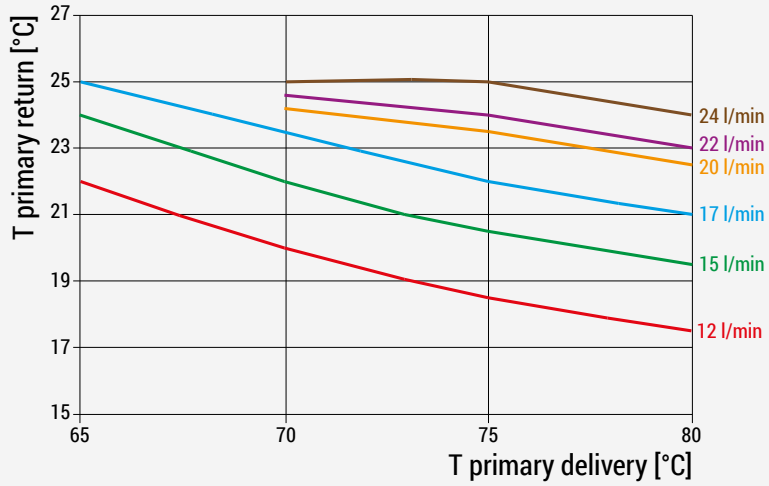


Hydraulic data for domestic water circuit

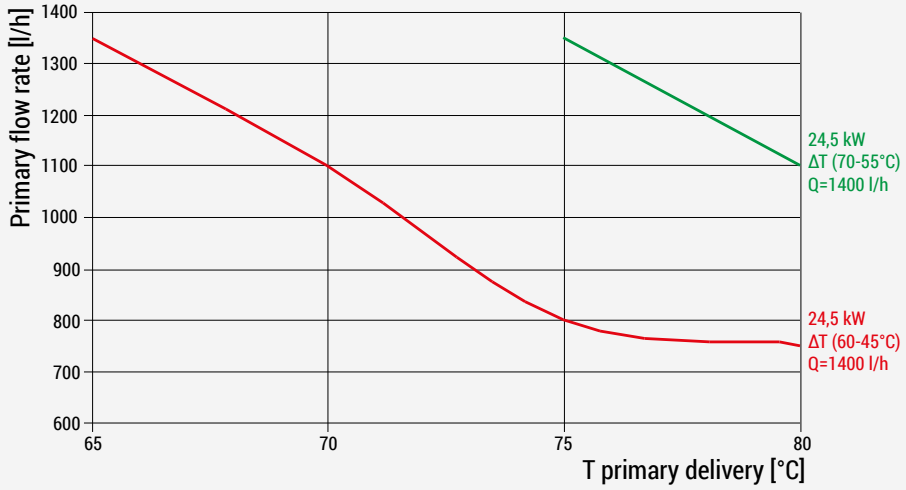
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

GE556Y416 energy saving features

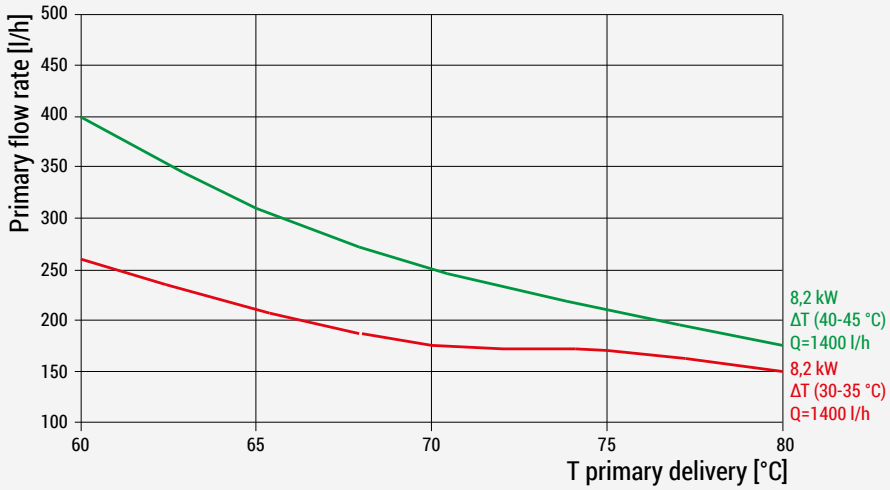
Low return temperatures of the primary in DHW operation



Reduced flow rates requests to the primary, in heating operation



High temperature

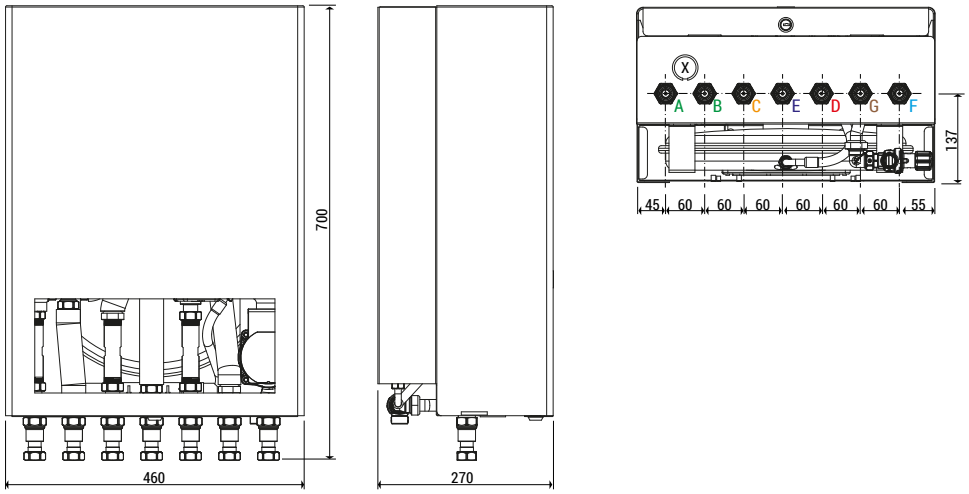


Low temperature

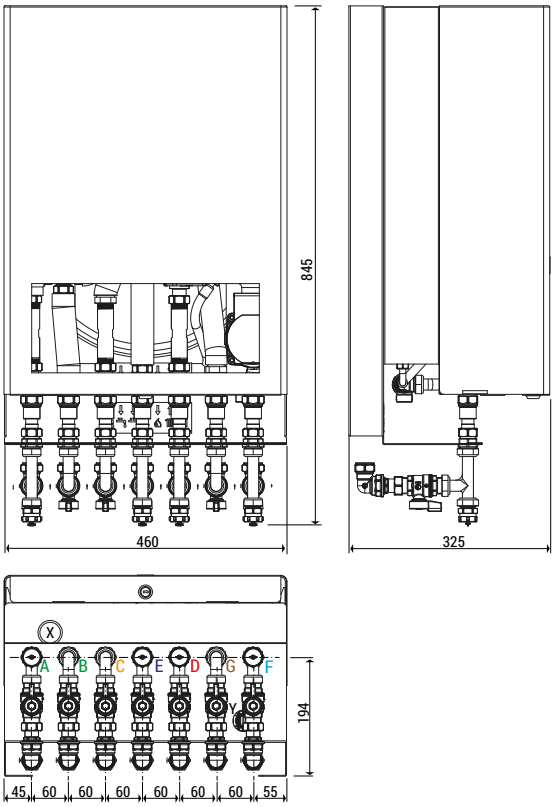
Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Dimensions

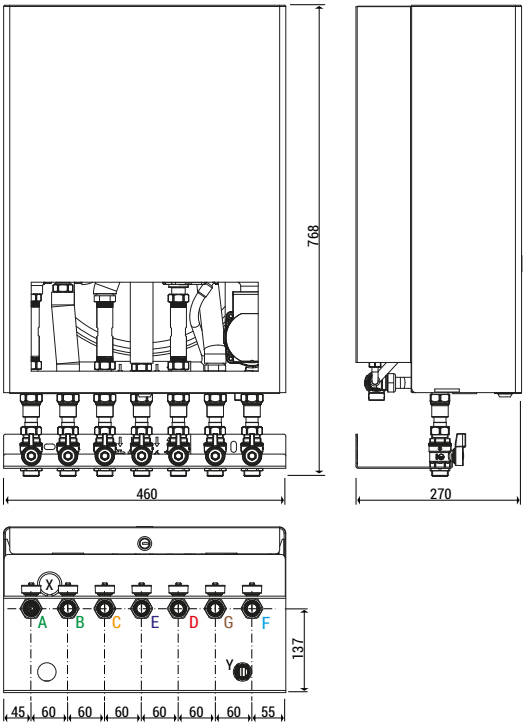
HIU ONLY



HIU + GE551Y135 TEMPLATE



HIU + GE551Y136 TEMPLATE



A	Domestic cold water inlet	F	Heating return
B	Domestic cold water outlet	G	Heating delivery
C	Domestic hot water outlet	X	Fairleads
D	Primary inlet	Y	Hole for safety valve drain
E	Primary outlet		

Dimensions in mm

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

Reference Standards

- UNI EN 1434
- EN 60751
- EN 61107
- Measuring Instruments Directive 2014/32/UE (MID)
- ErP Directive 2009/125/CE

WRAS certification

REF. IN "COMPONENTS" PARAGRAPH	COMPONENT	CERTIFICATE NUMBER
-	Gaskets	1509514
10	Flow switch	2111302
5, 16	Heat exchanger	1909083

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com

IT AVVERTENZE PER IL CORRETTO SMALTIMENTO DEL PRODOTTO

Questo prodotto rientra nel campo di applicazione della Direttiva 2012/19/UE riguardante la gestione dei rifiuti di apparecchiature elettriche ed elettroniche (RAEE).
L'apparecchio non deve essere eliminato con gli scarti domestici in quanto composto da diversi materiali che possono essere riciclati presso le strutture adeguate.
Informarsi attraverso l'autorità comunale per quanto riguarda l'ubicazione delle piattaforme ecologiche atte a ricevere il prodotto per lo smaltimento ed il suo successivo corretto riciclaggio.
Si ricorda, inoltre, che a fronte di acquisto di apparecchio equivalente, il distributore è tenuto al ritiro gratuito del prodotto da smaltire.
Il prodotto non è potenzialmente pericoloso per la salute umana e l'ambiente, ma se abbandonato nell'ambiente impatta negativamente sull'ecosistema.
Leggere attentamente le istruzioni prima di utilizzare l'apparecchio per la prima volta. Si raccomanda di non usare assolutamente il prodotto per un uso diverso da quello a cui è stato destinato, essendoci pericolo di shock elettrico se usato impropriamente.

Il simbolo del bidone barrato, presente sull'etichetta posta sull'apparecchio, indica la rispondenza di tale prodotto alla normativa relativa ai rifiuti di apparecchiature elettriche ed elettroniche.
L'abbandono nell'ambiente dell'apparecchiatura o lo smaltimento abusivo della stessa sono puniti dalla legge.

EN IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT

This product falls into the scope of the Directive 2012/19/EU concerning the management of Waste Electrical and Electronic Equipment (WEEE).
This product shall not be dispose in to the domestic waste as it is made of different materials that have to be recycled at the appropriate facilities.
Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling.
Furthermore, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge.
The product is not potentially dangerous for human health and the environment, but if abandoned in the environment can have negative impact on the environment. Read carefully the instructions before using the product for the first time. It is recommended that you do not use the product for any purpose rather than those for which it was intended, there being a danger of electric shock if used improperly.

The crossed-out wheeled dustbin symbol, on the label on the product, indicates the compliance of this product with the regulations regarding Waste Electrical and Electronic Equipment.
Abandonment in the environment or illegal disposal of the product is punishable by law.

FR AVERTISSEMENTS POUR L'ÉLIMINATION CORRECTE DU PRODUIT

Ce produit entre dans le champ d'application de la directive 2012/19 / UE relative à la gestion des déchets équipements électriques et électroniques (DEEE).
L'appareil ne doit pas être jeté avec les ordures ménagères car il est fait de différents matériaux pouvant être recyclés dans des centres appropriés.
Renseignez-vous auprès de l'autorité locale concernant l'emplacement des plates-formes écologiques appropriées pour recevoir le produit pour sa destruction et son recyclage correct ultérieur.
Il convient également de rappeler que, en cas d'achat d'un appareil équivalent, le distributeur est tenu de collecter le produit à détruire. Le produit n'est potentiellement pas dangereux pour la santé humaine et l'environnement, mais s'il est abandonné dans l'environnement, il a un impact négatif sur l'écosystème.
Lisez attentivement les instructions avant d'utiliser l'appareil pour la première fois.
Il est interdit d'utiliser le produit pour un usage différent de celui auquel il était destiné, il y a risque de choc électrique si utilisé incorrectement.

Le symbole de la poubelle barrée sur l'étiquette de l'appareil indique sa correspondance produit à la législation relative aux déchets d'équipements électriques et électroniques.
L'abandon dans l'environnement de l'équipement ou l'élimination illégale de l'équipement est punissable par la loi.

DE WICHTIGE HINWEISE ZUR KORREKTEN ENTSORGUNG DES PRODUKTS

Dieses Produkt fällt in den Anwendungsbereich der Richtlinie 2012/19/EU über die Entsorgung von Elektro- und Elektronik - Altgeräten (WEEE).
Dieses Produkt darf nicht in den Hausmüll entsorgt werden, da es aus verschiedenen Materialien besteht, die in entsprechenden Einrichtungen recycelt werden müssen.
Erkundigen sie sich bei ihrer Gemeinde nach dem Standort des nächsten Recyclinghofs bzw. der nächsten Annahmestelle, um das Produkt dem Recycling zuzuführen bzw. fachgerecht zu entsorgen.
Darüber hinaus ist der Händler verpflichtet, das Produkt beim Kauf eines gleichwertigen Geräts kostenlos zu entsorgen. Das Produkt ist für die menschliche Gesundheit und die Umwelt potenziell nicht gefährlich. Diese können sich aber, falls sie in der Umwelt gelangen, negativ auf diese auswirken. Lesen Sie daher vor dem ersten Gebrauch des Produkts die Inbetriebnahme-, Bedienungs- und Entsorgungsanweisungen sorgfältig durch. Es wird empfohlen, dass Sie das Produkt nur für den vorgesehenen Zweck verwenden.
Bei unsachgemäßer Verwendung bzw. Fehlgebrauch besteht die Gefahr eines elektrischen Schlags.

Das Symbol der durchgestrichenen Mülltonne auf dem Etikett des Produkts weist auf die Konformität dieses Produkts zu den Vorschriften für Elektro- und Elektronik-Altgeräte hin. Das Ablagern in der Umwelt oder die illegale Entsorgung des Produkts ist strafbar.

⚠ 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.

ℹ Additional information. For more information, go to giacomini.com or contact our technical assistance service. This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

🗑 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.

GIACOMINI
WATER E-MOTION

Giacomini S.p.A.
Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia
consulenza.prodotti@giacomini.com
+39 0322 923372 - giacomini.com