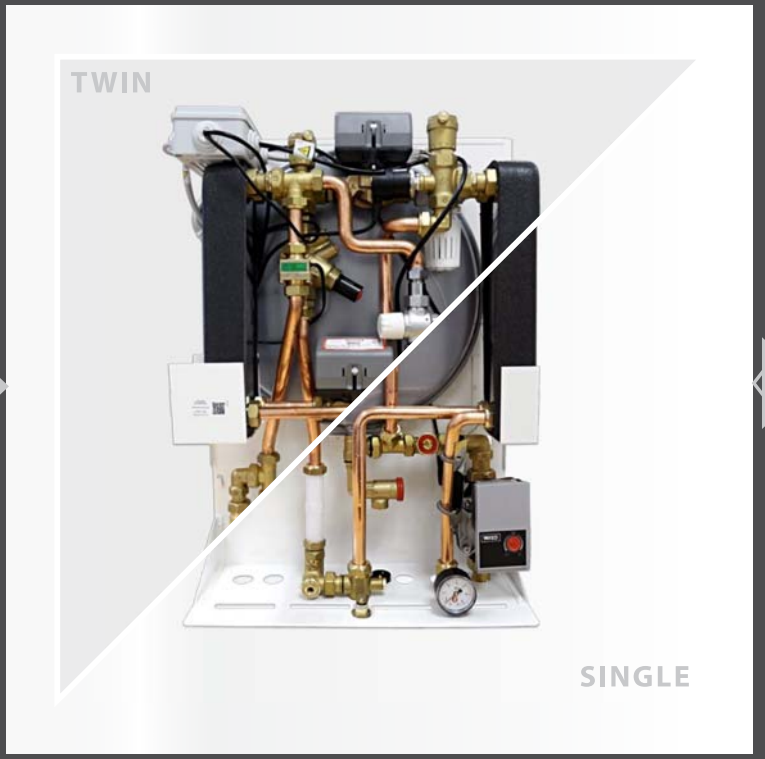
G5: OPERATIONS AND MAINTENANCE

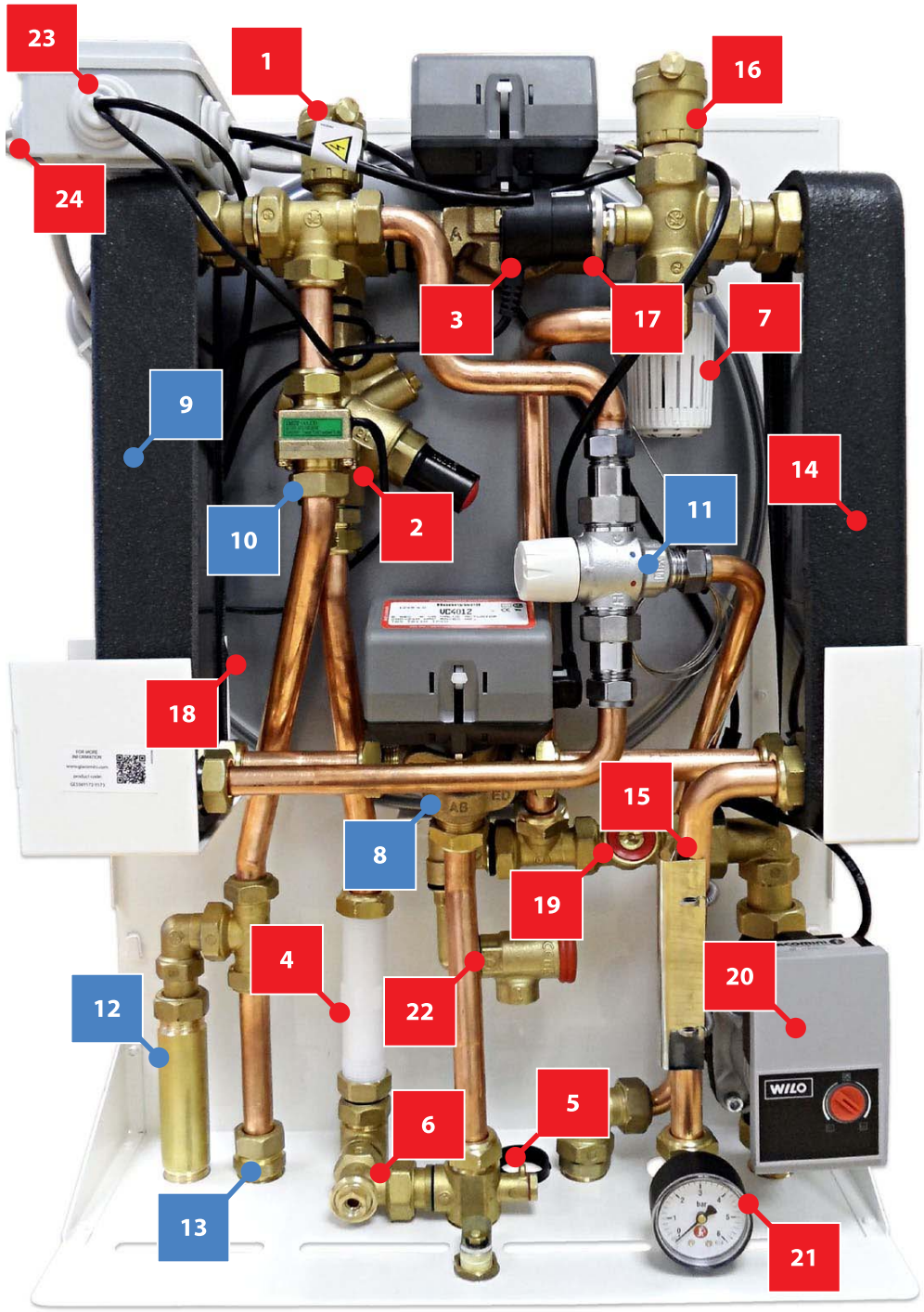


GIACOMINI
Heat it • Cool it • Control it

O&M CONTENT

COMPONENT KEY	
Components that feature in :	
	GE556Y 171 /172 /173
	GE556Y 172 /173

1 (Page 7)	Automatic air vent	026A0019P	PRIMARY
2 (Page 7)	Dynamic balancing valve	R206AY014	
3	Motorised heating 2 way zone valve	010ASP043	
4 (Page 5)	Spacer pipe for energy meter	029P33874	
5	Temperature probe housing for energy meter	029A08273	
6	Primary by-pass	010A0464P	
7 (Page 7)	Thermostatic head R462L for temperature control of heating	R462LX001	
8	Priority valve for domestic hot water function	010ASP042	
9 (Page 7)	Heat exchanger, domestic hot water function	077S00298	DHW PRODUCTION
10	Flow switch	077S00258	
11 (Page 7)	TMV2 & TMV3 thermostatic mixing valve	R156KX203	
12 (Page 5)	Spacer pipe for domestic water meter	029A01452A	
13	Check valve	029A0343P	
14 (Page 7)	Heat exchanger, heating function	077S00588	HEATING
15	Sensor of thermostatic head R462L	R465Y001	
16 (Page 7)	Automatic air vent	026A0019P	
17	Pressure switch	077S01718	
18	Expansion vessel	010S00278	
19	Ball valve for circulator maintenance	R611Y014	
20 (Page 10)	High effciency circulator	076S00218	
21	Pressure gauge	R225Y005	
22	Safety valve	R140RY103	
23 (Page 6)	Electric box	IP55	
24	External connection for thermostat		



The New Giacomini G5 Eco & Eco Plus

G5 Eco & Eco Plus: Introduction

Giacomini's G5 heat interface unit provides the central heating and domestic hot water to your home. There a three models avaliable: G5 Eco Single, G5 Eco Twin & G5 Eco Plus Twin.

The G5 Eco & Eco Plus Twin are the perfect solution for the new build market as they control both the DHW & CH without the need for a gas supply, flue, or hot water cylinder. The primary circuit supplies two heat exchangers within the unit that in turn supply the central heating system and generate instant domestic hot water. There are two twin versions available, 49 kW G5 Eco (GE556Y172) and 58kW Eco Plus (GE556Y173).

The G5 Single Plated Heat Interface Unit is ideal for the refurbishment and replacement market, offering direct Domestic Hot Water (DHW) to apartments where cylinder storage is preferred or where a cylinder is already in place. The DHW is generated within the heat exchanger, and then supplied in a sealed system that includes a pump, expansion vessel, 3 bar safety valve and low pressure switch, to an indirect hot water cylinder and heating system via a traditional Y or S plan system.

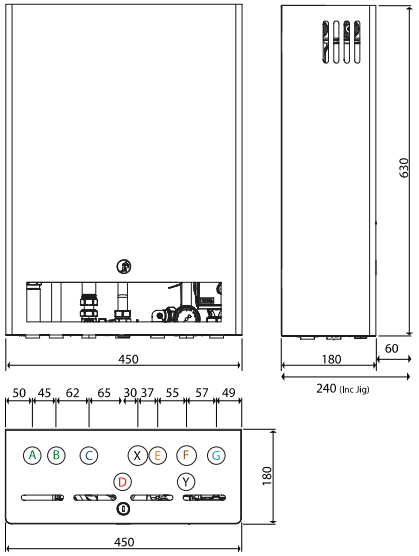
Energy is supplied to the heat interface unit from a main central boiler(s) located within the communal premises. The central boiler will provide heat to your unit for your domestic hot water and central heating.

Giacomini heat interface unit's are suitable to provide space heating via a radiator or underfloor heating system.

The following instructions are offered as a guide to the operation and maintenence of the G5 heat interface unit. All installation must be carried out by a qualified plumber/heating engineer and electrician in accordance with Building, Electrical and Water Regulations.

NOTE: Prior to installation the unit should be stored in an upright position in an area free from excessive dampness or humidity.

G5 Eco & Eco Plus: Dimensions



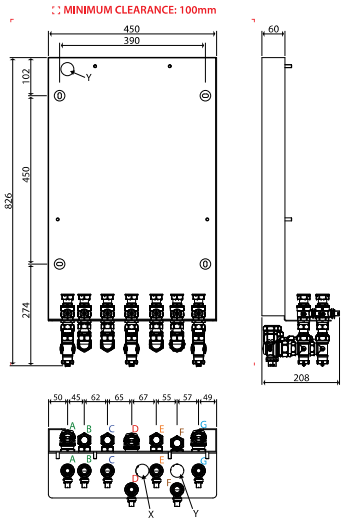
(Width) 450 mm
(Depth) 180 mm: EXC JIG. 240mm INC JIG.
(Height) 630 mm

[A] Cold Water inlet connection - 22mm Compression
[B] Cold Water outlet connection - 22mm Compression
[C] PRIMARY outlet connection - 22mm Compression
[D] PRIMARY inlet connection - 22mm Compression
[E] HOT WATER outlet connection - 22mm Compression
[F] HEATING outlet connection - 22mm Compression
[G] HEATING inlet connection - 22mm Compression

- Maximum working temperature of the primary circuit and secondary circuits (heating and domestic hot water): 90°C
- Maximum working pressure of the primary circuit and secondary DHW: 16 bar
- Maximum working pressure of the heating secondary circuit: 3 bar (safety valve setting)
- Nominal primary flow:
680 l/h @ 80 °C for 17,4 kW (GE556Y171)
975 l/h @ 80 °C for 49 kW (GE556Y172)
970 l/h @ 80 °C for 58 kW (GE556Y173)

G5 Eco & Eco Plus: Jig Bracket

The G5 heat interface unit is suitable for wall mounting and is supplied with a jig bracket. The G5 jig brackets GE551Y083 and GE551Y084 are used to allow the installer the ability to complete all system pipework (DHW & heating) without having the Heat Interface Unit in place.



Positioning of the jig bracket.

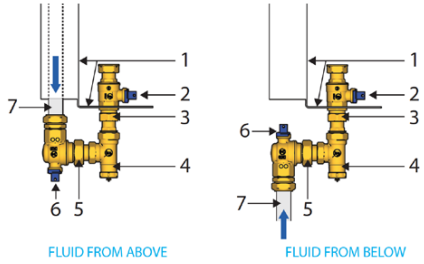
The jig bracket must be vertically mounted on the supporting wall. Although location is not critical, the following environmental factors should be considered:

- Ensure the supporting wall will sustain the weight of the unit when full of water. HIU weight (inc water): **Single -** 25 kg. **Twin -** 30 kg.
- Avoid placement where extreme hot or cold temperatures will be experienced.
- Avoid placement where excessive moisture will be experienced e.g. bathrooms.
- When fixing the jig bracket to the wall only use suitable fixings and ensure the bracket is level.
- All exposed pipe work should be insulated.
- Ensure the discharge pipework connected from the safety valve is directed to a safe and visible position for ease of observation.
- Please allow for access to the Heat Interface Unit's controls and components to permit servicing and maintenance of the system.
- Minimum clearance requirements: 100 mm.

Wall Fixing

1) Once you have ensured the jig bracket is suitably fixed and level the unit can be mounted.
2) Slide the two studs provided on the jig bracket through the slotted holes in the G5 heat interface unit back plate and secure loosely with the nuts provided.
3) Insert the washers and slide the G5 unit upwards until the washers come in contact with the isolation valves on the jig bracket. Now tighten the nuts.

G5 Eco & Eco Plus: Pipework



1	Metallic frame
2	Ball valve to isolate the unit
3	Filter
4	Dirt separator

5	Joint that allows the connection from above & below
6	Ball valve to allow the inspection of the filter
7	System pipes, Ø 22mm

Pipe fittings:
22mm compression fittings.

Pipe connections:
Connection available from above & below the unit.

Pipework insulation:
Giacomini's Heat Interface Units are supplied without pipe insulation. The installer must ensure all connections are sound and leak-free before proceeding to insulate the pipework.

It is recommended that the pipework is insulated.

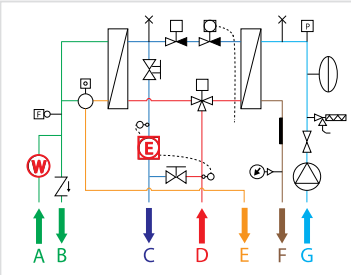
District heating flow and return pipes should be insulated to avoid stray heat losses in the apartment.

All pipes in unheated areas must be insulated in accordance with local and national regulations.

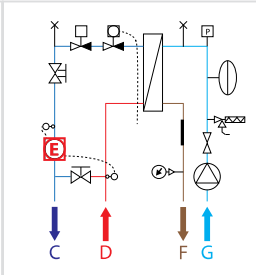
Metering Systems

G5 Eco & Eco Plus: Energy Meters

G5 Eco (GE556Y172) & Eco Plus Twin (GE556Y173)



G5 Eco Single (GE556Y171)



SCHEMATIC KEY

Heat exchanger		Dynamic balancing valve	
Flow switch	F	Motorized 2 way zone valve	
Automatic air vent		Spacer for energy meter	E
Pressure gauge		Temperature probe housing for energy meter	
TMV2 & TMV3 thermostatic mixing valve		Primary by-pass	
Spacer for domestic cold water meter		Priority valve	W
Sensor of thermostatic head R462L		Pressure switch	
Expansion vessel		Ball valve for circulator maintenance	
High efficiency pump		Thermostatic head R462L	
Check valve		Safety valve	

| A | COLD WATER INLET | B | COLD WATER OUTLET | C | PRIMARY OUTLET | D | PRIMARY INLET | E | HOT WATER OUTLET | F | HEATING OUTLET | G | HEATING INLET

The G5 is fitted with standard 110mm spacers to allow installation of optional cold water and energy meters.

There are three main methods to consider: **M-BUS, Pre-Payment and Wireless.**

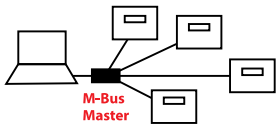
Please refer to the manufacturers instructions when installing your chosen meter.

MBUS

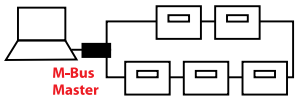
The energy units can be linked together using MBUS technology so that data from each unit is sent back (via hardwire) to a central point where it can be used to generate billing information.

M-BUS is the industry standard for data collection using 2 wires from each meter connected either in series (daisy chained meter to meter) or all individually connected back to a central point where they are all connected together.

Star
Each device is linked to a central M-BUS master via individual transmission lines. The devices can transmit to the central master either in sequence or simultaneously.



Daisy
The devices are connected in series along a common transmission line, this restricts the transfer of data to only one device at a time.



To install the M-BUS meter, replace the plastic/brass spacer. It is not necessary to use adaptors or other connecting components. After the installations test the system under pressure.

Ensure you comply with the flow directions indicated on the body of the meter and concerning the operating lay-out.

Ensure you comply with the rules concerning the use (installation, fastening, etc.), operation, recalibration and substitution of meters.

Refer to the manufacturers assembly instructions supplied with each meter.

These meters contain an integrated M-Bus communication interface so the device can be part of a network for data transmission. Standards concerning the installation of electronic devices must be respected.

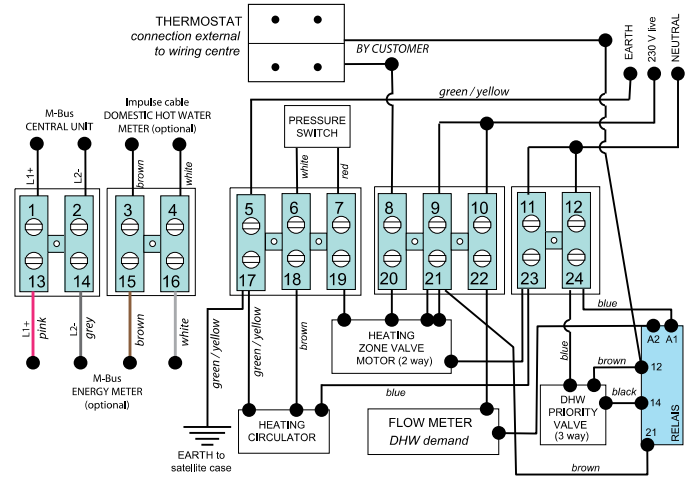
Domestic cold water meter (M-BUS)

M-BUS Wired Energy Meter

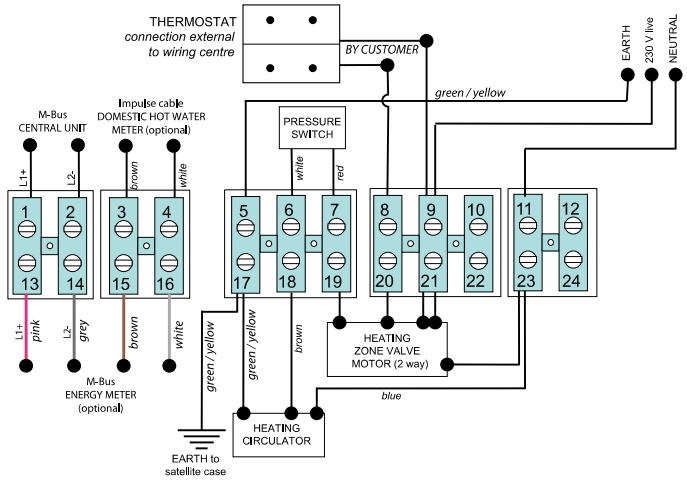
G5 Eco & Eco Plus: Wiring

The G5 heat interface unit is fitted with a pre-wired wiring centre for ease of installation.

ALL WIRING MUST BE IN ACCORDANCE WITH IEE & BUILDING REGULATIONS.



Electrical connections fo GE556Y172-173 Twin Heat Interface Units



Electrical connections fo GE556Y171 Single Heat Interface Units

- **Supply voltage for circulator:**
  230 V / 50 Hz.
- **Maximum electrical power for the HIU:**
  43 W (for GE556Y171)
  49 W (for GE556Y172, GE556Y173).
- **Electrical power for the circulator:**
  3÷45 W / 0,03÷0,44 A.

On the top left of the HIU there is an electrical box IP55 (Page. 2 - No 23) containing a relay for the priority valve controlled by means of the flow switch, and the terminals (Page. 2- No 24) for the electrical connections for the M-BUS (optional) devices and the control and supply of the circulator (Page. 2 - No 20).

Heating demand - thermostat connection

The heating demand should be given via the normally open contact of the thermostat (N.O. contact, see wiring diagram) to terminal n° 8; the common contact of the thermostat has to be connected to connection n° 12 on the relay. For the connection of the thermostat use a 2-conductor cable with 0,5 mm2 section. No polarity need be complied with for the connections.

M-Bus

For the connection of the M-Bus data transmission cable to the concentrator use terminals 1 (RED conductor L1+) and to terminal 2 (GREEN conductor L2-) of the terminal box, see wiring diagram.

Preparation

G5 Eco & Eco Plus:
G5 - Set Up

Domestic Hot Water

Cold inlet (Page.3-A), cold outlet (Page.3-B), hot outlet (Page.3-E). In place of the brass spacer (Page. 2 - N°12) a domestic water meter can be installed. A TMV2+TMV3 thermostatic mixing valve regulates the temperature of DHW (Domestic Hot Water).

Adjustments
Domestic hot water temperature

Adjust the temperature of the domestic hot water using the thermostatic mixing valve (Page. 2 - N°11).

Ensure that the valve is commissioned under normal system conditions. The valve must be commissioned to suit site conditions and the desired outlet temperature set by the installer.

- With normal supply conditions established and the hot and cold water supplies running, open the outlet and leave running.
- Remove the cap and release the locking nut from the temperature spindle.
- Using an 8 mm allen key rotate the temperature adjustment spindle anticlockwise to increase the mixed water temperature or clockwise to reduce the mixed water temperature - at all times ensuring the probe of the thermostat is under the flowing water.
- The use of a digital thermostat when setting the valve is recommended, once the desired outlet temperature is reached, re-fit the locking nut to the temperature spindle to prevent unauthorised adjustment of the valve and replace the cap on the valve body.

Heating

Heating inlet (Page.3-G) and outlet (Page.3-F). The circuit is simply composed of the heat exchanger and a circulator. As it deals with a closed circuit, the equipment is completed by: expansion vessel, safety valve, and pressure gauge. A filling loop system (supplied) should be fitted on the cold water and heating flow pipe.

Adjustments
Heating

Adjust the heating temperature using the thermostatic head (Page. 2 - N° 7):

Position	1	2	3	4	5
Temp (° c)	23	34	45	56	67

If you notice that the rating temperature of the heating is higher than the set value, the flow of the primary may be too high and the thermostatic head is not able to close.

To balance the heating production functions, you can adjust the dynamic balancing valve (Page. 2 - N° 2) but note that it also affects the DHW production. Finally, it is possible to change the heating power by modifying the circulator speed using the red knob (Page. 2 - N° 20).

Primary

Primary inlet (Page.3-D) and return (Page.3-C). The energy meter can be installed in place of the spacer (Page. 2 - N° 4) by installing the inlet temperature probe in the appropriate housing (Page. 2 - N° 5). For GE556Y171, the primary circuit operates only for the heating circuit; the primary circuit is composed of a dynamic balancing valve, an automatic air vent, a heat exchanger and a thermostatic valve with remote sensor that regulates the power for the heating circuit. The zone valve can control the heating by means of a thermostat (not supplied). For GE556Y172-173, the primary circuit is divided into two sides: one is for the heating handling (similar to the one described above), the other is for the production of DHW. If the DHW flow switch is activated (by a DHW request), the priority valve closes the heating side and gives power to the DHW production side.

Adjustments
Dynamic Balancing Valve

When setting up the balancing valve flow rate calculations need to be made.

It can be calibrated through a key (8 mm) that compensates the pressure differential by guaranteeing the flow rate constancy. A double indicator, having 1 to 5 scale and decimal decision from 1 to 9, permits precise flow rate regulations.

(Please refer to the following page for the complete regulation tables & flow rate charts.)

Flow Rate Charts

G5 Eco & Eco Plus:
R206A regulation

R206AY014 dynamic balancing valve (3/4") - Δp: 30-400 kPa

l / sec	l / h	setting
0.113	406	1.0
0.119	427	1.1
0.125	449	1.2
0.131	470	1.3
0.137	492	1.4
0.143	513	1.5
0.149	535	1.6
0.155	556	1.7
0.161	578	1.8
0.167	599	1.9
0.172	621	2.0
0.178	642	2.1
0.184	664	2.2
0.190	685	2.3
0.196	707	2.4
0.202	728	2.5
0.208	750	2.6
0.214	771	2.7
0.220	793	2.8
0.226	814	2.9
0.232	836	3.0
0.238	857	3.1
0.244	879	3.2
0.250	900	3.3
0.256	922	3.4
0.262	943	3.5
0.268	965	3.6
0.274	987	3.7
0.280	1010	3.8
0.286	1030	3.9
0.292	1050	4.0
0.298	1070	4.1
0.304	1090	4.2
0.310	1120	4.3
0.316	1140	4.4
0.322	1160	4.5
0.328	1180	4.6
0.334	1200	4.7
0.340	1220	4.8
0.346	1240	4.9
0.352	1270	5.0

Domestic hot water production (G5 Eco Twin & Single)

DHW			Flow Rate (l/h) and Primary Outlet Temperature (DHW 10-50°C)				
l/ min	l/h	kW	80°C	75°C	70°C	65°C	60°C
12	720	29	580 (22.9°C)	580 (25°C)	690 (27.9°C)	865 (31.4°C)	1210 (36°C)
15	900	37	670 (25.7°C)	775 (28.1°C)	935 (31.1°C)	1200 (34.8°C)	
17	1020	41	785 (27.5°C)	920 (30.2°C)	1120 (33.2°C)	1480 (37.1°C)	
20	1200	49	975 (30.2°C)	1150 (32.9°C)	1430 (36.1°C)		

Primary circuit data for domestic hot water production.

Domestic hot water production (G5 Eco Plus Twin)

DHW			Flow Rate (l/h) and Primary Outlet Temperature (DHW 10-50°C)				
l/ min	l/h	kW	80°C	75°C	70°C	65°C	60°C
12	720	29	450 (15.4°C)	495 (16.9°C)	565 (18.7°C)	660 (21.3°C)	825 (24.9°C)
15	900	37	575 (16.8°C)	640 (18.3°C)	730 (20.4°C)	870 (23.3°C)	1105 (27.2°C)
17	1020	41	660 (17.7°C)	740 (19.4°C)	850 (21.6°C)	1010 (24.4°C)	1300 (28.5°C)
20	1200	49	790 (18.9°C)	890 (20.7°C)	1030 (21.3°C)	1050 (26.3°C)	
24	1430	58	970 (20.6°C)	1100 (22.6°C)	1280 (25.1°C)		

Primary circuit data for domestic hot water production.

Heating - Radiators (All models)

Heating - Radiators			Flow Rate (l/h) and Primary Outlet Temperature (radiators 65-55°C)		
circular speed	flow rate m3/h	power (kW)	80°C	75°C	70°C
Max	1.5	17.4	680 (67.8°C)	950 (59°C)	1750 (61°C)

Primary circuit data for radiators heating

Heating - Radiant Floors (All models)

Heating - Radiant Floor			Flow Rate (l/h) and Primary Outlet Temperature (radiant floor 45-39°C)			
circular speed	flow rate m3/h	power (kW)	75°C	70°C	65°C	60°C
Max	1.5	10.5		290 (40°C)	350 (40°C)	450 (40°C)

Primary circuit data for radiant floor heating.

Starting & Commissioning

TO BE COMPLETED BY QUALIFIED PLUMBERS/ HEATING ENGINEERS ONLY

Filling the system

- Ensure the central heating system is switched off to the apartment at the mains isolation switch.
- Isolate the HIU from the district heating system using the isolation valves. (7 valves: GE556Y172-3. 4 valves: GE556Y171).
- Flush out the distribution pipework throughout the building using the flushing bypass arrangement. Ensure that all drain valves on the unit are closed.
- Only when all the debris has been removed from the system should the drain valves be opened. Now check all joints for leaks.
- It is recommended during the commissioning phase that the strainer is checked and the filter is cleaned out as necessary. To do this, shut the isolation valves and drain down using service plugs and remove the filter access cap on the strainer.
- Ensure the pump isolation valves are open.
- Open up the isolation valves. (7 valves: GE556Y172-3. 4 valves: GE556Y171)
- Using the filling loop supplied, fill the heating system to 1.5 bar (as per the pressure gauge) under unit. Radiators etc. should be vented separately.
- Release all air from the vents and switch the pump to 'Auto Vent' mode. (Page 10)
- Test the operation of the safety valve by twisting the red cap this should release water and then stop.
- Once all air has been expelled from the system and the system pressure is up to 1.5 bar, switch on the central heating system at the isolation switch and manually override the heating and hot water system on the TP5000 controller (please refer to the TP5000 controller instructions).
- Bleed any air that has worked its way around the system.
- Switch off central heating and hot water manual override, the pump should stop and the valves close.

Commissioning

Depending on the size of the building there will be an element of diversification figured into the design.

As such the centralised plant and pumps are unlikely to be able to supply 100% of the heat load to all apartments at any one time.

Where extensive parts of the development are ready to be commissioned (especially in the depths of winter), this must be done with a controlled and phased approach to overcome the initial thermal inertia within the building.

- Adjust the dynamic balancing valve. Refer to the flow rate calculations and design data of the development, produced by the architect or mechanical engineer.
- Measure flow rate and temperature of water through primary circuits. This can be done using the energy meter **(please refer to the manufacturers instructions)** or by using flow measuring equipment. The flow rate through the primary is critical to the operation of the unit and all developments featuring these units will have a specified design flow rate calculated by the architect/mechanical engineers, if no data is available the required flow rate and temperature can be calculated using the tables on page 8.
- Measure the flow rate of water through the hot bath tap, this should be in the range 12-24 liters' per minute, again reference should be made to the development design schedule as to the design flow rate, flow through the tap can made by adjusting the hot water outlet valve. (See Outlet E: Page 5).
- Measure the temperature of the water at the hot kitchen sink tap (ensuring no external TMV's are restricting the temperature) adjust the hot water temperature using the internal TMV (Page 2, No 11).
- Ensure all central heating controls are calling for heat and check operation of pump (Page 2, No 20) and actuator head, the maximum temperature of the heating circuit can be controlled with the thermostatic head (Page 2, No 7).
- Set up the programmer times in line with the customer's requirements. Please refer to separate controller instructions for details.
- Leave all instruction manuals on site with the client.

Servicing & Maintenance

WE RECOMMEND THAT THE SYSTEM IS CHECKED EACH YEAR BY SUITABLY QUALIFIED AND AUTHORISED PERSONNEL.

Check and empty filters.

The filters are accessed through the strainer service plug. To clean the filters you need to complete the following steps:

1) Isolate the power supply to the unit.

2) Using the isolation valves shut-off the water supply to the heating flow and return.

3) Drain the pipework using the service plug.

4) Remove the filters (Page 4, No 3) and rinse them clean under a cold water tap.

5) Place the filters back inside the strainers and refit the service plug.

6) Open up the heating isolation valves.

7) Finally turn the power back on.

Check the safety valve.

To ensure the safety is functioning correctly, rotate the handle and check the discharge by sight. Possible impurities on the seat can be eliminated through periodic bleeding.

1) Twist the red plastic cap anti-clockwise.

2) Water should discharge from the safety valve. **Warning!** Danger of burns. The water expelled may be hot.

3) Use the filling loop to top up the system as necessary.

Check the system pressure.

1) First you must ensure the apartments central heating system is cold.

2) Check the system pressure. This should be 1.5 bar (as per the pressure gauge).

3) Adjust to the correct pressure by topping up the system, using the filling loop as necessary.

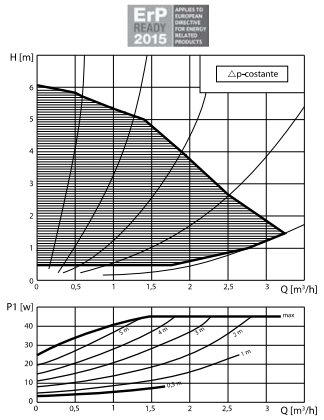
Check the circulator pump.

To ensure proper circulator function of the pump it is recommended that the yearly maintenance procedures below are completed.

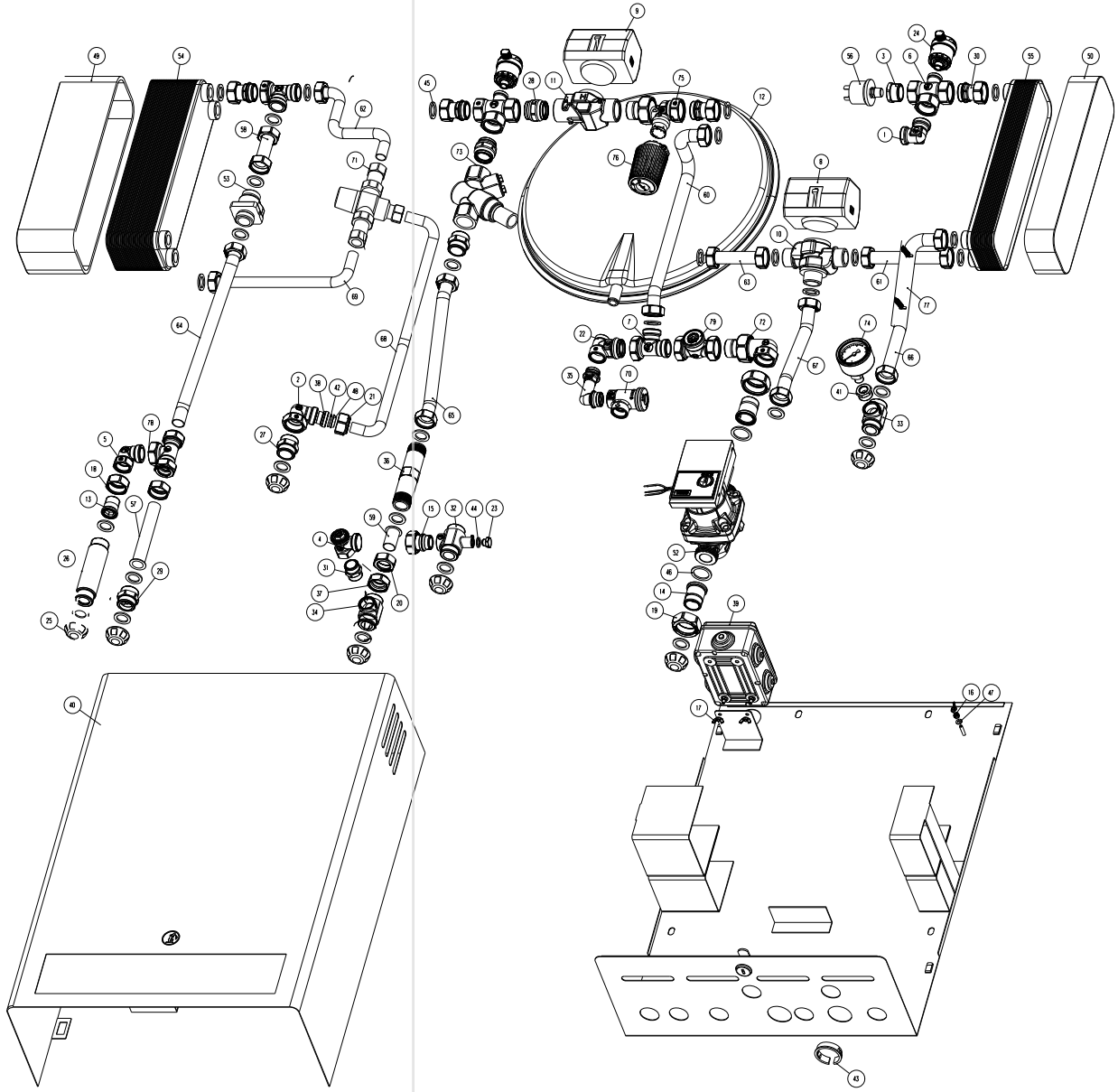
1) Switch the pump off and on to ensure the electric connection is free of faults.

2) Check for any fault lights recorded on the pump. See table below.

3) Check the motor is spinning cleanly without obstruction; you can do this by simply listening to the pump whilst in motion.

Electronically controlled high-efficiency pump 15/6 (230 V)	Pump operating	
		Automatic constant pressure difference (recommended).
		Automatic variable pressure difference.
		Automatic air vent routine (10 min duration): the pump runs alternatively with high and low speeds to help air bubbles to collect and to go to the air vent in the installation.
	LED - errors	
green continuous		Normal running.
green flashing		Automatic operation for air elimination.
green/red flashing		Abnormal situation (pump functional but stopped): 1) Undervoltage or overvoltage 2) Wrong temperature (fluid or room temperature)
red flashing		Pump stopped (permanent error: the pump need a manual reset). It can be necessary to change the pump.
NO LED		No power supply: 1) Pump is not connected to power supply: check cable connection. 2) LED is damaged: check if pump is running. 3) Electronics are damaged: change pump.

GE556Y173 - Exploded Diagram



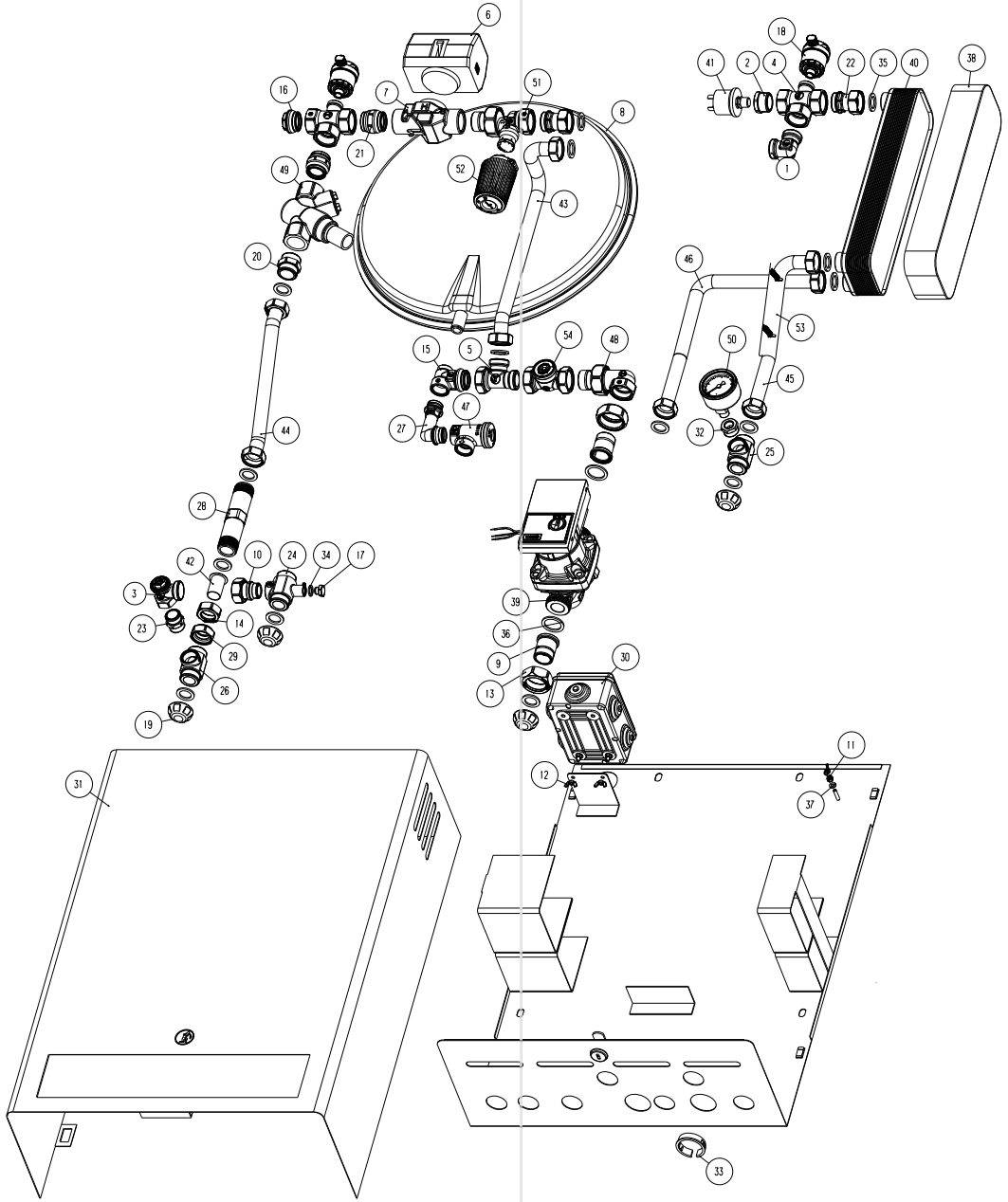
POS:	Product Code
26	029A0I452A
25	026P00034
24	026A0019P
23	023A0I232
22	023A0II2P
21	018A20063D
20	018A0I363
19	018A00043
18	018A00033
17	017S00768
16	017S00118
15	015A0I06Q
14	015A00633
13	015A00343
12	010S00278
11	010ASP043
10	010ASP042
9	010ASP041
8	010ASP040
7	010A34643
6	010A30413
5	010A30403
4	010A0464P
3	010A03882
2	010A0I543
1	010A00993

52	076S00218
51	063A00118
50	062P00988
49	062P00858
48	061A00062
47	059S00408
46	057F00928
45	057F00918
44	057F00098
43	053P00018
42	051G0II78
41	050A00042B
40	040S0I388
39	040P0059P
38	030AI564P
37	030AI5I9P
36	029P33874
35	029AI744P
34	029A08993
33	029A08353
32	029A08273
31	029A06012B
30	029A0442P
29	029A0343P
28	029A0250P
27	029A0I603

79	R6IIY0I4
78	R569YI2I
77	R465Y00I
76	R462LX00I
75	R402X034
74	R225Y005
73	R206AY0I4
72	RI9Y004
71	RI56KX203
70	RI40RYI03
69	085A03078
68	085A03068
67	085A03058
66	085A03048
65	085A03038
64	085A03028
63	085A03018
62	085A03008
61	085A02998
60	085A02988
59	085A0III8
58	085A0I008
57	085A00508
56	077S0I718
55	077S00588
54	077S00298
53	077S00258

GE556Y171 - Exploded Diagram

POS:	Product Code
27	029AI744P
26	029A08993
25	029A08353
24	029A08273
23	029A06012B
22	029A0442P
21	029A0250P
20	029A0I603
19	026P00034
18	026A00I9P
17	023A0I232
16	023A0II3P
15	023A0II2P
14	0I8A0I363
13	0I8A00043
12	0I7S00768
11	0I7S00II8
10	0I5A0I06Q
9	0I5A00633
8	0I0S00278
7	0I0ASP043
6	0I0ASP04I
5	0I0A34643
4	0I0A3043I3
3	0I0A0464P
2	0I0A03882
I	0I0A00993



POS:	Product Code
54	R6IIY0I4
53	R465Y00I
52	R462LX00I
5I	R402X034
50	R225Y005
49	R206AY0I4
48	RI9Y004
47	RI40RYI03
46	085A03088
45	085A03048
44	085A03038
43	085A02988
42	085A0III8
4I	077S0I7I8
40	077S00588
39	076S0028
38	062P00988
37	059S00408
36	057I09798
35	057I09788
34	057F00098
33	053P0008
32	050A00042B
3I	040S0I388
30	040P0060P
29	030AI5I9P
28	029P33874

Fault Finding (Frequently Asked Questions)

NO HEATING OR HOT WATER	SOLUTION
• ISOLATION VALVES IN CLOSED POSITION.	• ENSURE ALL ISOLATION VALVES ARE OPEN.
• UNIT INCORRECTLY PIPED.	• ENSURE THE HEAT INTERFACE UNIT IS CORRECTLY PIPED. AS SHOWN ON PAGE 5.
• STRAINERS BLOCKED.	• REMOVE AND CLEAN FILTER.
• NO POWER TO PROGRAMMER / HEATING SYSTEM.	• CHECK POWER SUPPLY. • CHECK FUSE. • CHECK CIRCUIT BREAKER.
• ROOM THERMOSTAT SET INCORRECTLY • ROOM THERMOSTAT FAULTY • ROOM WIRED INCORRECTLY	• CHECK ROOM THERMOSTAT SETTINGS, WIRING, AND IS OPERATING CORRECTLY.
• ZONE VALVE SEIZED • ZONE VALVE FAULTY • ZONE VALVE WIRED INCORRECTLY	• CHECK ZONE VALVE WIRING. • CHECK THE ZONE VALVE IS OPERATING CORRECTLY. • CHECK THE ZONE VALVE AUXILIARY SWITCHES.
• CIRCULATOR PUMP SEIZED • CIRCULATOR PUMP FAULTY • CIRCULATOR PUMP WIRED INCORRECTLY	• CHECK THE CIRCULATOR PUMP FOR FAULT CODES. PLEASE REFERENCE THE TABLE ON PAGE 10. CHECK THE PUMP WIRING.

INSUFFICIENT HEAT	SOLUTION
• LOW HEATING FLOW TEMPERATURE	• CHECK THERMOSTATIC MIXING VALVE (TMV 2) TEMPERATURE SETTINGS. • CHECK HEAT METER TEMPERATURES.
• LOW DOMESTIC HOT WATER TEMPERATURE.	• USE ENERGY METER TO VERIFY FLOW RATE IN ACCORDANCE WITH DESIGN DATA. • CHECK AND CLEAN STRAINER. • CHECK AND CLEAN THE ISOLATION VALVES. • CHECK PIPE SIZING.
• NO DOMESTIC HEATING FLOW TO THE HEAT INTERFACE UNIT.	• CHECK THE STRAINER ISN'T BLOCKED - REMOVE AND CLEAN FILTER. • ENSURE ALL ISOLATION VALVES ARE FULLY OPEN. • CHECK OPERATION OF THE PUMP.

DATE: _____/_____/_____ **FLAT NUMBER:** _____
PROJECT: _____ **CONTRACTOR:** _____

PLEASE TICK EACH INDIVIDUAL TASK WHEN COMPLETE:

- ☐ Ensure all isolation valves are open.
- ☐ Using the filling loop supplied, fill the heating system to 1.5 bar (as per the pressure gauge).
- ☐ Release all air from the vents and switch the pump to 'Auto Vent' mode. (Page 10)
- ☐ Test the operation of the safety valve by twisting the red cap this should release water and then stop.
- ☐ Adjust the dynamic balancing valve. Refer to the flow rate calculations and design data of the development (produced by the architect or mechanical engineer).
- ☐ Measure flow rate and temperature of water through primary circuits. This can be done using the energy meter (please refer to the manufacturers instructions) or by using flow measuring equipment. The flow rate through the primary is critical to the operation of the unit and all developments featuring these units will have a specified design flow rate calculated by the architect/mechanical engineers, if no data is available the required flow rate and temperature can be calculated using the tables on page 8.
- ☐ Measure the flow rate of water through the hot bath tap, this should be in the range 12-24 liters' per minute, again reference should be made to the development design schedule as to the design flow rate, flow through the tap can made by adjusting the hot water outlet valve. (See Outlet E: Page 5).
- ☐ Measure the temperature of the water at the hot kitchen sink tap (ensuring no external TMV's are restricting the temperature) adjust the hot water temperature using the internal TMV (Page 2, N$_o$ 11).
- ☐ Ensure all central heating controls are calling for heat and check operation of pump (Page 2, N$_o$ 20) and actuator head, the maximum temperature of the heating circuit can be controlled with the thermostatic head (Page 2, N$_o$ 7).

INSTALLED BY:
NAME (PRINT): _____ **SIGNED:** _____

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PLEASE DO NOT HESITATE TO CONTACT US
WITH ANY QUESTIONS OR ENQUIRIES

GIACOMINI
Heat it • Cool it • Control it

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