

SATK 40

heat interface unit for use
with hot water cylinders



SATK 40 heat interface unit

Introduction

The SATK 40 heat interface unit is the latest 'intelligent' range of HIU from Altecnic.

The SATK 40 is the complete solution for apartment space heating and apartment stored hot water.

If it is required for both the HIU and hot water storage cylinder, complete with valves and piping, to be supplied as an integrated unit please refer to the Altecnic Procyll® leaflet for details.

Design

The single plate design hydraulically separates the domestic water from the space heating supplied directly from a central primary heat source.

The on-board electronic control unit ensures maximum efficiency and control but crucially also enables additional important features.

Similar to the SATK 20203 and SATK 20303, the SATK 40 can be set to modulate the heating flow circuit for greater efficiency and to compensate for changes in the external environment.

The unit has a fully lockable insulated cover, manufactured from expanded PPE fully insulating the unit and includes a sliding window to allow the tenant to access the integral heat meter (if installed).

Advantages of Incorporating a Hot Water Cylinder

A system with a hot water cylinder provides a secure source of domestic hot water should the primary supply from the central boiler plant be interrupted for a short period of time.

The hot water cylinder does not require instantaneous heat to raise the domestic hot water temperature but allows the volume of water in the cylinder to be heated over a short time period.

This enables the HIU to have a smaller output with a more constant demand from the centralised boiler plant.

Operation

Heating

The temperature setting operates on the principle of set point regulation and can be fixed within application limits.

Set Point - 25 to 75°C

Domestic Hot Water - DHW

The DHW function takes priority over the heating function controlled by the DHW priority flow switch (component 5).

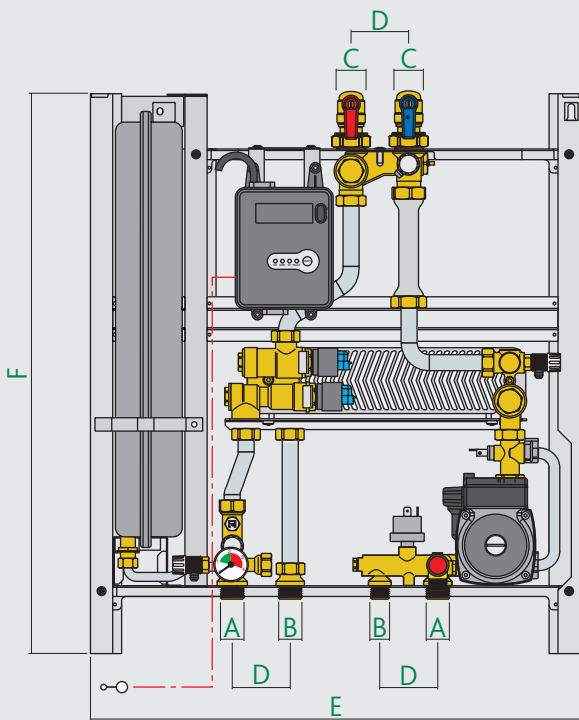
Set Point - DHW temperature 42 to 60°C

Heat exchanger capacity - up to 50 kW

Materials

Components:	brass BS EN12165 CW617N
Fitting pipes:	stainless steel
Frame:	RAL 9010 painted steel
Protective shell cover:	PPE
Heat exchanger:	brazed stainless steel

Dimensions



Connection	A	B	C
Thread	G $\frac{3}{4}$ B	G $\frac{3}{4}$ B	G1B

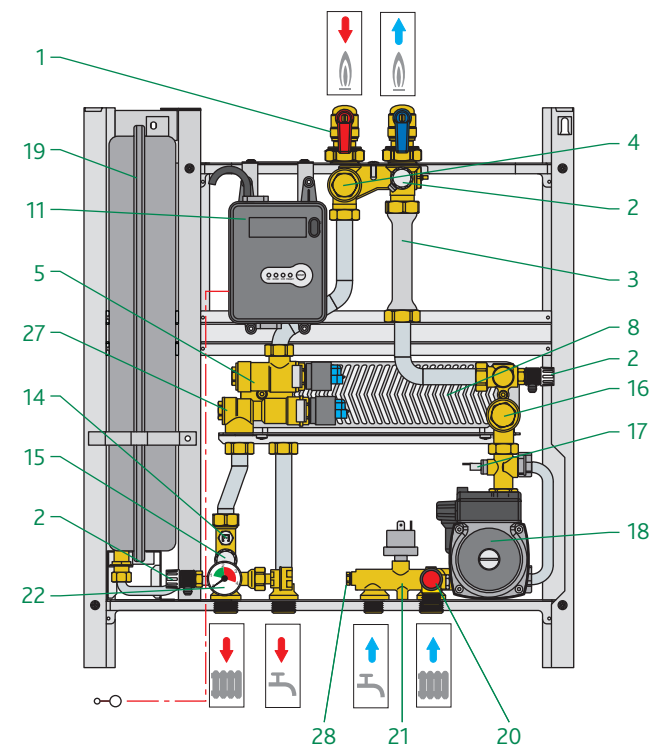
D	E	F	Depth inc. Cover	kg
65	550	630	265	

Technical Specification

Medium:	water
Maximum percentage of glycol:	30%
Maximum medium temperature:	85°C
Maximum working pressure:	- primary circuit: 16 bar - secondary circuit: 3 bar
Nominal DHW exchanger capacity:	50 kW
Maximum recommended primary circuit flow rate:	1,2 m3/h
Maximum differential pressure on modulating valve:	Δp 0.9 bar
Power supply:	230 V (ac) \pm 10% 50Hz
Power consumption:	48 W
Protection class:	IP 40
Pump:	UPS2 15-60
Pump by-pass setting:	0.45 bar
Actuators:	stepper 24 V
Probes:	NTC 10 k Ω
Safety relief valve setting:	3 bar
Safety thermostat:	55°C \pm 3
Expansion vessel:	7.5 l
Pressure switch:	opening 0.4 bar - closing 0.8 bar
Min. incoming domestic water pressure	0.5 bar

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Components SATK 40103

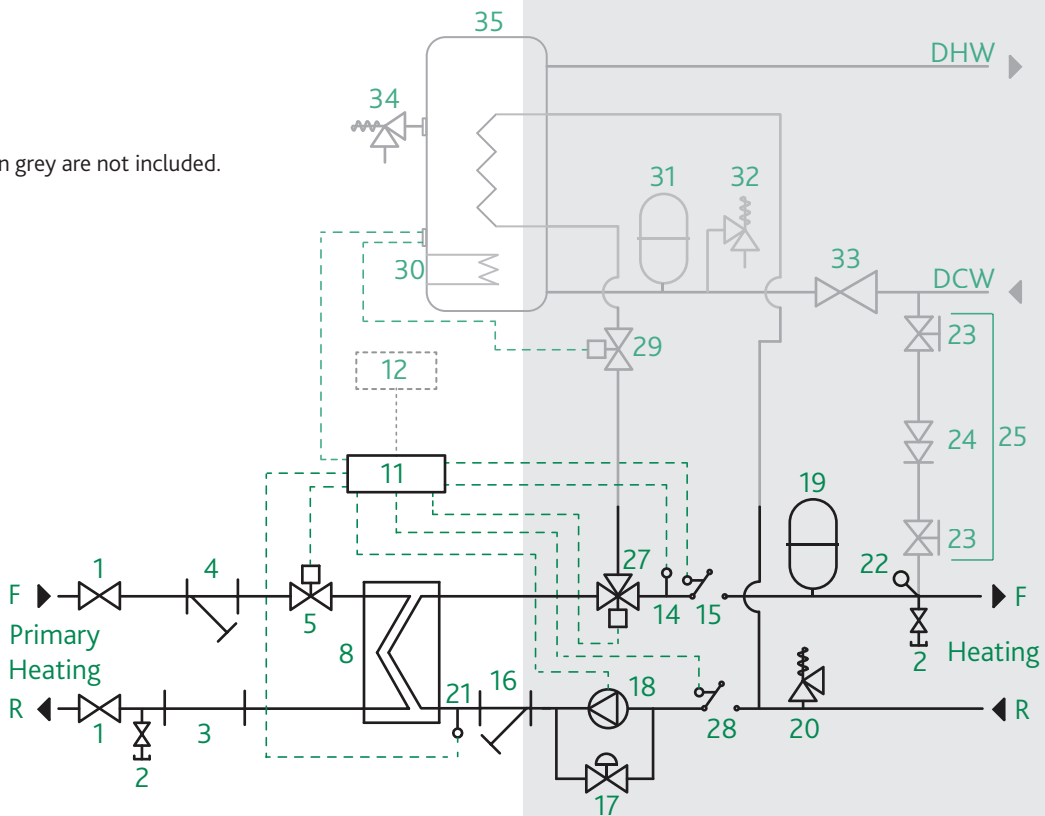


Components

Item	Component
1	Primary isolation valve
2	Drain cock
3	Heat meter spool piece - replaced by heat meter when fitted
4	Primary filter and heat meter probe pocket
5	Primary control valve
8	Plate heat exchanger (DHW + space heating)
11	Electronic control unit
12	Room controller (not supplied)
14	Heating flow temperature sensor
15	Temperature control stat
16	Strainer (heating circuit)
17	Pump safety bypass and DP switch
18	Pump
19	Expansion vessel
20	Safety relief valve - 3 bar
21	Heating return temperature sensor
22	Pressure gauge
23	Filling loop isolation valve*
24	Filling loop double check valve*
25	Filling loop*
27	Modulating three port diverting valve
28	Flow switch
*	Not shown on Components illustration

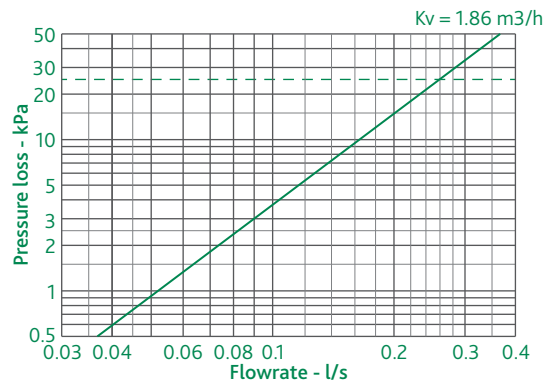
Schematic SATK 40103

NOTE: The items in grey are not included.

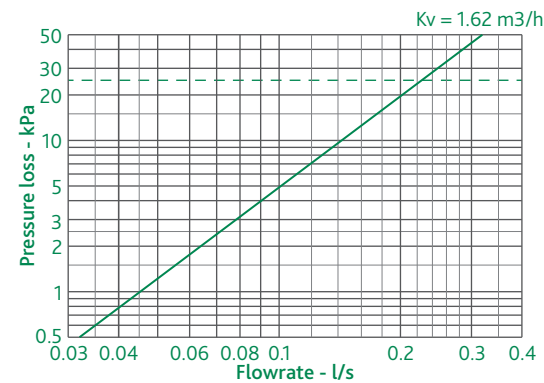


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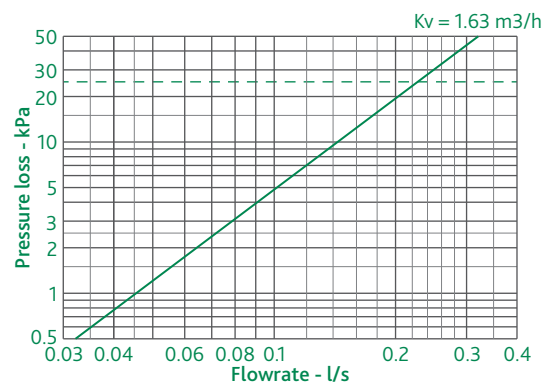
Hydraulic Characteristics
Heating - primary side



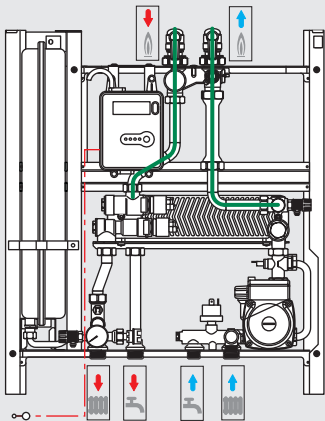
Hydraulic Characteristics
Heating - secondary side



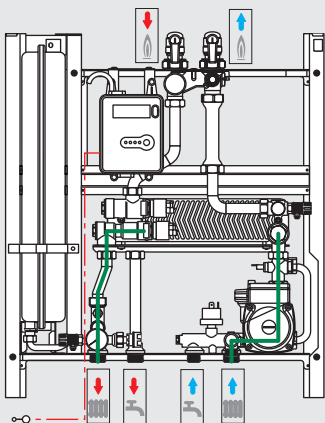
DHW - heat exchanger



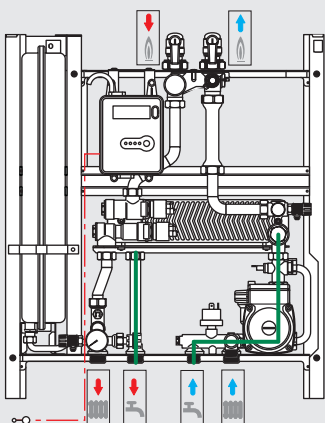
Flow Path
Heating - primary side



Flow Path
Heating - secondary side

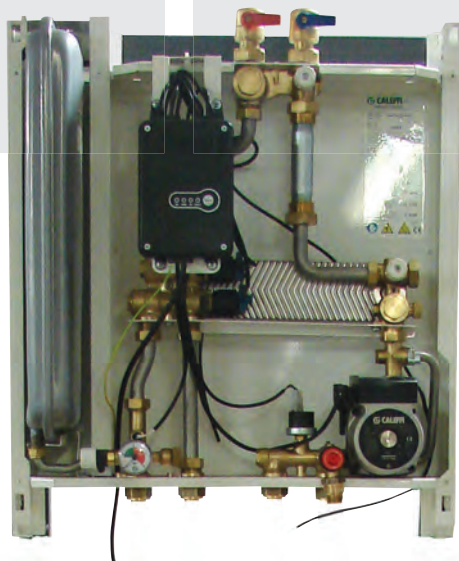


DHW - heat exchanger



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SATK40103



Key to Symbols



Primary circuit flow



Primary circuit return



Domestic hot water outlet



Domestic cold water inlet



Heating circuit flow



Heating circuit return

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AL 134 23-04-13

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