





01 Heat Networks

Heat Networks

Efficient, reliable and compact, the next generation of SmartSat® intelligent heat interface units for central plant systems.

The drive to conserve finite fossil energy stores and reduce the carbon footprint of buildings to meet latest regulations, has pushed the modern building services engineer to create specific central plant designs.

This allows for the easy and efficient integration of renewable energy sources, such as CHP, solar, heat pumps etc. A central plant system needs to offer a reliable and efficient way of producing hot water, controlling the heating and metering of each individual flat, apartment or house. Altecnic's range of SmartSat® Heat Interface Units (HIUs), consumer modules and metering products, do just that.

The extensive range, includes products for systems with centralised domestic water storage, instantaneous apartment based domestic water generation and apartment based combined cylinders and exchange units.

The latest SmartSat[®] intelligent heat interface units, the SATK range, take apartment heat interface units to the next level. Utilising electronic control, it enables many significant features not found on other units, for example, modulating primary heating circuit flow temperatures on both direct and indirect heating versions, return temperature limitation, primary flow rate limitation, remote Modbus control, configurable preheat, remote unit isolation, via the internet and a safety pump bypass. Their compact size and insulated enclosure mean that they're easy to locate and extremely efficient.

Each SmartSat[®] HIU can be installed with a variety of energy meters, all MID approved and capable of communicating by MBus or radio for remote data collection and billing. Altecnic also offers an apartment control module and remote metering module intended for installation outside of the apartment and containing all the necessary meters, strainers and isolation equipment required to monitor and control individual apartments.



Altecnic can provide a CIBSE approved Continued Professional Development (CPD) seminar on District Heating.

For further information about our CPD's and other available training courses please contact us.



SATK32 INDIRECT WITH NETWORK PROTECTION AND INTEGRAL ROOM CONTROLLER

Technical Data

Maximum static working pressure:	16 bar - primary
	3 bar - secondary
Max primary differential pressure:	600kPa
Max. percentage of glycol:	30%
Min. differential pressure:	45 kPa
Maximum temperature:	90°C
Medium:	Water
Min flow rate to activate sensor:	1.5 ltr/min
Complete with configurable room control	ler/thermostat
Connections:	male thread BSP (G)





WRAS





Materials

Material	Grade
Painted steel	EN 12165 CW602N
Steel	
Steel	
	EPP 0.04 W/mK
Stainless steel	
	UPM3 15-70
	230 V -50 Hz
	Material Painted steel Steel Steel Stainless steel

Dimensions



Domestic hot water output SATK32105

DHW PHE performance chart - DHW 10 to 48°C



Primary Flow Temperature - °C

Ref no	Heating Temp. Range	DHW Output	Kg
ALT - SATK32103	25 — 75°C	50 kW	34
ALT - SATK32105	25 — 75°C	75 kW	35

Refno	Height	Width
ALT-SATK32103	630	490
ALT-SATK32105	630	490

SATK30 INDIRECT

Technical Data

Maximum static working pressure:	6 bar - primary
	3 bar - secondary
	10 bar - DHW
Maximum differential pressure:	165 kPa
Optionally available:	600 kPa
Min. differential pressure:	35 kPa
Maximum temperature:	85°C
Medium:	Water
Min flow rate to activiate DHW:	2.7 l/min
Connections:	male thread BSP (G)









SATK30103HE

Materials

Component	Material	Grade
Frame	Painted steel	EN 12165 CW602N
Front cover	EPP	0.04 W/mK
Expansion vessel	Steel	
Connecting pipework	Stainless steel	
Pump		UPM3 15 — 70
Electronic controller		230 V-50 Hz

Domestic hot water output





Ref No	Heat Temp. Range	DHW Capacity	Kg
ALT-SATK30103HE	25 — 75 °C	50 kW	25
ALT-SATK30105HE	25 — 75 °C	75 kW	27

Connection	А	В	С	D	E	F	Depth inc. Cover
Thread	3⁄4"	1⁄2"	1"	65	550	630	265



SATK22 INDIRECT

Technical Data

Max. percentage of glycol:		30%
Max. temperature:		85°C
Max. static working pressure	e: Primary	10 bar
	Secondary	10 bar
	Domestic hot water	10 bar
Max. differential pressure:		600kPa
Min. flow rate to activate do	mestic flow sensor:	1.5 l/min
Power supply:		230∨ (ac)±10% 50 Hz
Pump:		UPM3 15-70
Safety relief valve setting:		3 bar
Min differential pressure:		45kPa





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Brass EN 12165 CW617N
Stainless steel
RAL 9010 sprayed steel
Brazed stainless steel
EPP 0.04 W/mK

Code	Heating Temp. Range	DHW Output
SATK22103	25 — 45°C	50 kW
SATK22105	25 — 45°C	60 kW
SATK22203	45 — 75°C	50 kW
SATK22205	45 — 75°C	60 kW
SATK22303	Max 90°C	50 kW
SATK22305	Max 90°C	60 kW
SATK22403*	Max 90°C	50 kW
SATK22405*	Max 90°C	60 kW

(*) with primary pump









SATK60 INDIRECT

Technical Data

Max. percentage of glycol:	30%
Maximum temperature:	85°C
Maximum static working pressure:	16 bar - primary
	3 bar - secondary
	10 bar - DHW
Nom. heating exchanger capacity:	15 kW
Nom. DHW exchanger capacity:	50 kW
Max differential pressure:	90kPa
Min. differntial pressure:	35 kPa
Electrical supply:	230 V (ac) ±10% 50 Hz
Pump:	UPM3 15-70
Safety relief valve setting:	3 bar
Expansion vessel:	7 l
Mounting bracket:	order 794960 (depth 120 mm)
Min flow rate to activate DHW:	2.7 l/min
Connections:	male thread BSP (G)



Dimensions

Materials

Component	Material	Grade
Frame:	Painted steel	RAL9010
Components	Brass	EN12165 CW617N
Connecting pipework	Steel	RAL 9010
Heat exchanger	Brazed stainless steel	

Domestic hot water output

SATK50 - SATK60 series domestic hot water performance table DHW 10—48°C, maximum differential pressure 30 kPa





Ref No	A	В	С	D	E	F	G	н	I	Kg
ALT-SATK60103	3⁄4"	59	65	79	232	570	590	625	890	22



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SATK20 DIRECT

Technical Data

Max. percentage of glycol:	30%
Maximum temperature:	85°C
Maximum static working pressure:	10 bar - primary
	10 bar - secondary
Nom. DHW exchanger capacity:	50 kW
Maximum differential pressure:	90 kPa
Electrical supply:	230 V ac ,50 Hz
Pump:	UPM3 15-70
Min flow to activiate DHW:	2.7 l/min
Min differential pressure:	35 kPa
Connections:	male thread BSP (G)

Materials

Component	Material	Grade
Components	Brass	BS EN 12165 CW617N
Pipes	Steel	
Frame	Painted steel	RAL 9010
Protective shell	EPP	0.04 W/mK
Heat exchanger	Copper brazed Stainless steel	

SATK20103, 20203 and 20403 DHW performance chart



Domestic water circuit flow rate — m³/h





ALT-SATK20303





Ref no	A	В	с	D	E	F	Depth inc. Cover	Kg
ALT-SATK20103 HE	3⁄4"	1/2"	1"	65	450	550	265	15 — 19

Ref No	Description
ALT-SATK20103 HE	Low temperature w/secondary DPCV (UFH)
ALT-SATK20203HE	Medium temperature w/secondary DPCV (Radiators)
ALT-SATK20303	High temperature w/secondary DPCV (Radiators)
ALT-SATK20403HE	High temperature, pumped w/secondary DPCV (Radiators)

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SATK50 DIRECT - RECESS MOUNTED HIU

Technical Data

Max. percentage of glycol:	30%
Maximum temperature:	85°C
Maximum static working pressure:	10 bar - primary
	10 bar - secondary
Nom. DHW exchanger capacity:	50 kW
DHW circuit max. flow rate:	20 l/min
Min. flow to activate domestic flow meter:	2.7 l/min ±0.3
Max. differential pressure:	90 kPa
Electrical supply:	230 V (ac) ±10% 50 Hz
Pump:	UPM3 15-70
Mounting bracket:	Order 794950
Connections:	male thread BSP (G)



Dimensions

Materials

Component	Material	Grade
Frame	Painted steel	RAL 9010
Components	Brass	EN12165 CW617N
Connecting pipework	Steel	
Heat exchanger	Brazed stainless steel	







Ref No	Description			
ALT-SATK50103HE	Low temperature (UFH)			
ALT-SATK50203HE	Medium temperature (Radiators)			
ALT-SATK50303	High temperature (Radiators)			

Domestic Water Circuit Flow Rate - m3/h

SATK40 INDIRECT - FOR USE WITH INDIRECT HOT WATER CYLINDERS

Technical Data

Max. percentage of glycol:	30%
Maximum temperature:	85°C
Maximum static working pressure:	16 bar - primary 3 bar- secondary
Primary differential pressure capability (Δp): Optionally available (Δp):	165 kPa 600 kPa
Min.differential pressure (Δp):	35 kPa
Nominal heat exchanger capacity:	15 kW
Power supply:	230 V (ac) ±10% 50 Hz
Pump:	UPM3 15 — 70
Safety relief valve setting:	3 bar
Expansion vessel:	7.0 l
Connections:	male thread BSP (G)



Component	Material	Grade
Components	Brass	BS EN12165 CW617N
Fitting pipes	Stainless steel	
Frame	Painted steel	RAL 9010
Protective shell cover	EPP	0.04 W/mK
Heat exchanger	Brazed stainless steel	





Ref No	A	В	С	D	Е	F	Depth inc. Cover	Kg
ALT-SATK40103HE	3⁄4"	3⁄4"	1"	65	550	630	265	24

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SATK102 DHW ONLY HIU

Technical Data

Max. static working pressure:	
Primary:	10 bar
Domestic hot water:	10 bar
Primary differential pressure capability:	90 kPa
Medium:	Water
Max. percentage of glycol:	30%
Maximum temperature:	85°C
Power supply:	230 V (ac)±10% 50 Hz
Pump:	UPM3 15 — 70 (SATK1020.HE)
Weight:	13 — 15 Kg
Min flow rate for DHW:	2.7 l/min
Connections:	male thread BSP (G)



Dimensions

Materials

Component	Material	Grade
Components	Brass	BS EN 12165 CW617N
Frame	Galvanised steel	RAL 9010
Connecting pipework	Stainless steel	
Cover	Steel	



Connection	Α	В	С	D	E	F	G	н	Т
Thread	3/4"	1"	230	350	252	476	139	70	188

Refno	Pump	DHW PHE kW
ALT-SATK10203HE	Y	40 kW
ALT-SATK10204HE	Y	70 kW
ALT-SATK10205HE	Y	80 kW
ALT-SATK10253	Ν	40 kW
ALT-SATK10254	N	70 kW
ALT-SATK10255	Ν	80 kW

PROCYL COMBINED HIU AND STORAGE CYLINDER

Technical Data

Medium:	water
Max. percentage of glycol:	30%
Maximum temperature:	85°C
Maximum static working pressure:	16 bar - primary 3 bar - secondary
Primary differential pressure capability (Δp):	165 kPa
Optionally available (Δp):	600 kPa
Nominal DHW exchanger capacity:	15 kW
Min.differential pressure (Δp):	35 kPa
Power supply:	230∨ (ac) ±10% 50 Hz
Pump:	UPM3 15 — 70
Safety relief valve setting:	3 bar
Expansion vessel:	7.0 l



Materials

Component	Material	Grade
Components	Proce	BS EN12165
Components	DI dSS	CW617N
Fitting pipes	Stainless steel	
Frame	painted steel	RAL 9010
Protective shell cover	EPP	0.04 w/mk
Heat exchanger	Brazed stainless steel	
Shroud	Painted steel	





Ref no	Cylinder Volume	F	Е	Depth	С	D
ProCyl90HE	90	1560	550	650	1"	65
ProCyl150HE	150	1910	550	650	1"	65
ProCyl200HE	200	2340	550	650	1"	65

APARTMENT CONTROL MODULE

Technical Data

Tenant distribution module		
For heating and indirect hot water cylinders		
Direct hydraulic connection with a common return		
Two Integral two port motorised valves and wiring centre		
Integral DPCV		
Integral isolation valves and strainer		
Optional landlord shut off valve		
Optional energy meter		
Dimensions (H x W x D) 600 x 400 x 185mm		



Dimensions





R	ef no	Description							
201-2001 Tenant interface module for heating and cylinder connection		А	В	С	D	Е	F	G	
ТВС		Landlord control pack	160	65	600	400	74	75.5	514

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TWO ZONE HEATING PACK FOR HIU MODELS WITH HEATING

Refno	Description	
202-1001	Flow manifold heating pack	
202-1002	Return manifold heating pack	0.5
202-1001	Zone 2 For, Zone 1 Flow, Zone 2	

DIGITAL PROGRAMMABLE ROOM CONTROLLERS

Ref no	Description		
501-0007	Digital programmable room thermostat - wired		
501-0006	Digital programmable room thermostat - wireless		

- Power supply 3V 2x1.5AA alkaline
- LCD 3" display
- 1 potential-free changeover contact output: 8(2)A/250Va.c.
- ON/OFF operation with adjustable differential switch 0.2 2°c
- 5 pre-set programs + 1 free
- Temperature levels 3 + anti-freee
- Temperature adjustable by 0.5°c sets
- Consumption counter
- Minimum programming 30 minutes

- Temporary/permanent manual operation
- System irregularity signalling
- Interruption button for cleaning operations
- Telephone control input
- Intelligent operation
- SUM/WIN control
- Holiday program
- Pump activation program
- Temperature setting lock
- Dimensions (LxWxH) 120 x 27.6 x 82



HEAT NETWORK BYPASS ASSEMBLY

Refno	Description	
ТВА	Heat network bypass valve assembly, ¾", 10 — 60 kPa and automatic balancing valve (flow rate to be selected) inc' isolation	
ТВА	Heat network bypass valve assembly, 1 ¼" 10—60 kPa and automatic balancing valve (flow rate to be selected) inc' isolation	
ТВА	Heat network bypass valve assembly, ¾", 100 — 400 kPa and automatic balancing valve (flow rate to be selected) inc' isolation	



- Heat network bypass assembly
- Avoids wasted energy use and assists in holding low return temperatures
- Adjustable differential pressure bypass valve
- Autoflow, automatic balancing valve (flow rate to be selected)
- Including isolation valves
- Can be used on phased projects to ensure flexible bypass control







FIRST FIX MOUNTING RAIL FOR SATK32

Refno	Description	
789020	First fix mounting rail for SATK20	
789030	First fix mounting rail for SATK30 - SATK40	
789023	First fix mounting rail for SATK 32	

- First fix mounting rail for the SATK20, SATK30 and SATK32 HIU's
- Includes isolation valves and air vents
- Stainless steel pipework
- Makes all pipework bottom entry

'H' PATTERN FLUSHING BY-PASS

Ref no	Description	
789100	Primary flushing bypass to suit SATK20, SATK30 and SATK40	
789110	SATK 32 and SATK22	

- H' pattern flushing bypass
- Three-port valve to open or isolate the bypass
- For use with straight pattern isolation valves (included with HIU)

COLD WATER CONNECTION KIT

Ref no	Description	
794540	Cold water connection kit with water meter spacer piece.	

- Cold water meter pipework
- Integral isolation valves
- Water meter sold separately

HOT WATER RECIRCULATION AND COLD WATER KIT

Refno	Description	
794530	Hot water recirculation and cold water connection kit for DHW only HIU's. Second non-return valve to be installed upstream of the circulator.	
Combined cold water meter and betweeter resignalation connection		

- Combined cold water meter and hot water recirculation connection
- Integral isolation valves and check valve
- Water meter sold separately (see 'Metering')
- Suitable for DHW only HIU's

STRAIGHT PATTERN SECONDARY ISOLATION BALL VALVE SET









PLANT-ROOM BUFFER VESSELS

Ref no	Description	Capacity (litre)
HV1000Y	LTHW buffer vessel	1000
HV1500Y	LTHW buffer vessel	1500
HV2000Y	LTHW buffer vessel	2000
HV2500Y	LTHW buffer vessel	2500

1000 to 2500 litre vessels include insulation as standard

Ref no	Description	Capacity (litre)
HV3000Y	LTHW buffer vessel	3000
HV4000Y	LTHW buffer vessel	4000
HV5000Y	LTHW buffer vessel	5000

- For LTHW storage
- Maximum operating pressure 6 bar
- Maximum operating temperature 95°C
- Red, powder coated exterior

BUFFER VESSEL INSULATION

Ref no	Description
HVA3000A	3000 litre vessel insulation
HVA4000A	4000 litre vessel insulation
HVA5000A	5000 litre vessel insulation

- Thermal insulation to suit the buffer vessels
- 90mm thick, 'soft' PU insulation
- Includes white PUF foil coat

BUFFER VESSEL OPTIONS

Capacity (litre)	Vessel	Insulation Foam
300	ST300E	N/A
500	ST500E	N/A
800	ST800E	N/A
1000	ST1000E	N/A
1500	ST1500E	N/A
2000	ST2000E	N/A
3000	ST3000F	ST3000W
4000	ST4000F	ST4000W
5000	ST5000F	ST5000W



