The **Greenstar** HIU Series

KE and E Overview Guide

BESA Registered

Meet the next generation **Heat Interface Unit (HIU)**

Designed with the future in mind

The new Greenstar HIU is part of a market-leading range of innovative energy-saving heating and hot water solutions from Bosch Thermotechnology Ltd.

The Greenstar HIU provides domestic hot water and space heating to properties that are serviced from district heating or centralised boiler plants, and is fully compatible with the Bosch Commercial and Industrial product range.

Designed to meet the latest and future market requirements, the new Greenstar HIU includes a top-of-the-range appliance that offers 21 litres per minute flow rate and incorporates components such as a differential pressure reducing valve.

- **Innovative design**
- **User-feedback**
- **Accurate control**
- **Bosch quality**

BESA
BUILDING ENGINEERING SERVICES ASSOCIATION

Manufactured in the UK

The Greenstar HIU

Call our design team: 0330 123 3004

District heating on any scale

Small and large scale solutions

The Greenstar HIU is perfect for both small and large scale district heating solutions. This includes flats and other multi-residential accommodation, as well as buildings that use uneconomical electric heating, or have individual gas appliances in each property.

A centralised heating concept allows investors to take full advantage of a low carbon heat source or a modular/hybrid configuration with high efficiency condensing boilers.

The Greenstar HIU is also compatible with Bosch Commercial and Industrial products for both new and existing multi-purpose and multi-residential buildings, as well as large estates that include commercial units.

Custom solutions...

from Europe's market leader in heating and hot water systems.

District Heating Design Team

Turn to page 11 to learn about how our team can design the complete system for your new build, retrofit or deep renovation heat network.

All the properties contractors look for

- Separate first fix rail pipe work jig
- Top and bottom connections with optional pre-made pipe work kit
- Insulation as standard
- Pre-set adjustable ERP pump with inbuilt pump kick
- Flushing bypass and security fixings available as accessory
- Inbuilt filter and DHW temperature limiter
- Mbus meter connection point
- In built pre-payment function – no need for external valves
- Keyless filling link available as an accessory
- Easy to install with in-line compression fittings, or with 3/4”MBSP fittings on the district connections, and can be installed in a small area
- Weighs 33kg*
- A DHW valve prioritises the temperature at the DHW heat exchanger for maximum comfort
- Controlled water temperature in the heat exchanger reduces the risk of limescale formation
- Supplied with or without heat meter to suit specific requirements
- At our training academy, we can test your specific design parameters against our HIUs, while demonstrating its performance
- Bosch employed and trained engineers providing national coverage
- Quick on-site engineer response time
- Contact centre open 364 days a year.

*Without cover and first fix rail.

Email enquiry: commercial.industrial@uk.bosch.com

Delivering for investors

- The automatic control of the return temperature maintains the district heating scheme requirement for low return temperatures
- High differential pressure tolerance of 800mbar (without DPCV) and up to 4000mbar (with DPVC)
- Adjustable secondary flow temperatures for low temperature heating
- Maximum heating and DHW temperatures set by the commissioning engineer
- Low return temperature in the primary circuit maximises efficiency in the system, saving energy
- Internal insulation standard on all models
- Models with heat meters for measurement of heat energy used in individual properties.

All models are insulated with EPP on the front and rear of the appliance.

Simple adjustment and setting of DHW and CH which can be fixed at commissioning or controlled by a compatible controller.

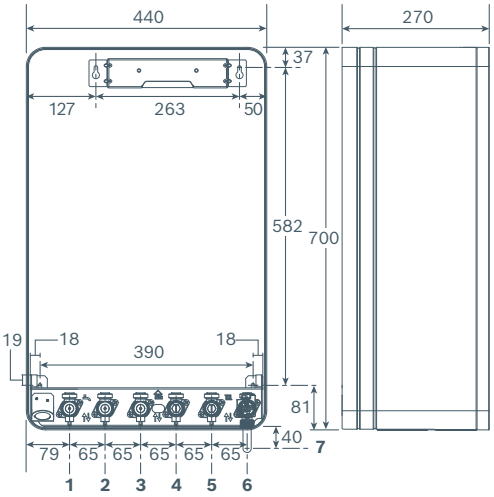
Heat meter.

Under the cover
Greenstar HIU KE

Call our design team: 0330 123 3004

Dimensions and clearances

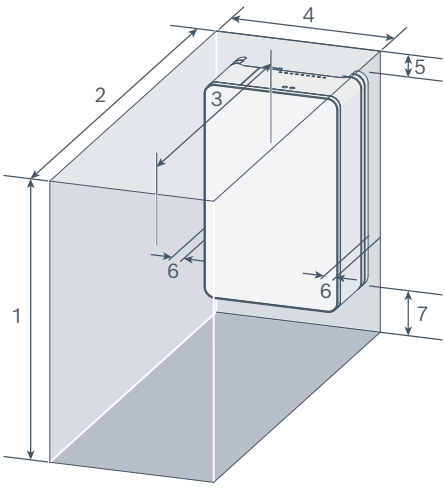
Dimensions and hydraulic connections



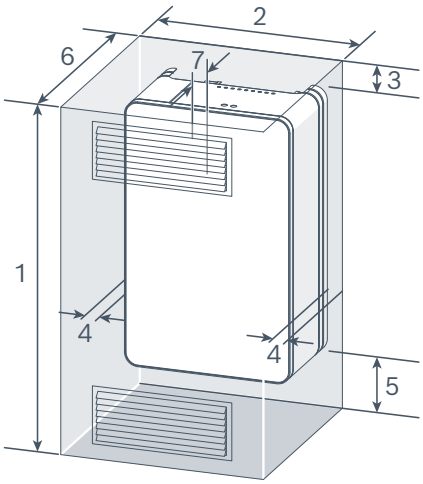
Key	Description	Connection (mm)
1	Cold mains inlet	22
2	Domestic Hot Water outlet	22
3	District heating supply	22
4	District heating return	22
5	Central heating flow	22
6	Central heating return	22
7	Pressure relief valve	15

Minimum installation and maintenance clearances

Key	Description	Dimensions (mm)
1	Overall clearance height	930
2	Overall clearance depth	870
3	In front of appliance	600
4	Overall clearance width	450
5	Above the appliance	30
6	Either side of appliance	5
7	Below the appliance	200

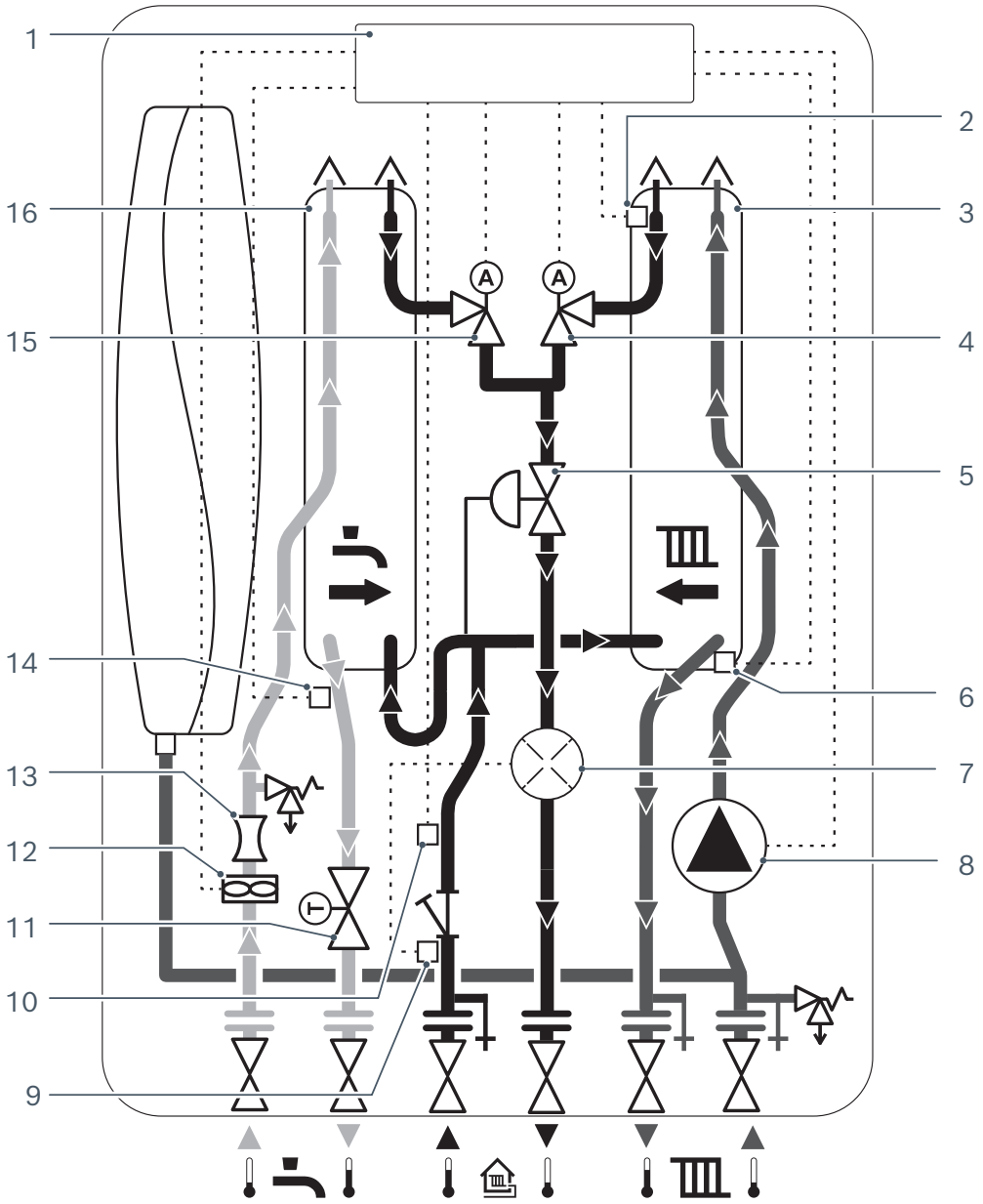


Minimum compartment clearances



Key	Description	Dimensions (mm)
1	Compartment height	930
2	Compartment width	450
3	Above the appliance	30
4	Either side of appliance	5
5	Below the appliance	200
6	Compartment depth	290
7	Appliance to removable door	20

Internal schematic



Key	Description
1	Control unit
2	Return sensor NTC (district heating)
3	Central heating plate heat exchanger
4	Central heating control valve
5	Differential pressure control valve (if fitted)
6	Flow sensor NTC (central heating)
7	Heat meter (if fitted)
8	Circulating pump
9	Heat meter flow sensor connection point
10	Supply sensor NTC (district heating)

Key	Description
11	Domestic Hot Water safety valve
12	Flow turbine
13	Flow regulator
14	Domestic Hot Water outlet sensor NTC
15	Domestic Hot Water control valve
16	Domestic Hot Water plate heat exchanger

Email enquiry: commercial.industrial@uk.bosch.com

Technical data

General Information	Units	Greenstar HIU KE with Heat Meter	Greenstar HIU E with Heat Meter
Height	mm	700	700
Width	mm	440	440
Depth	mm	270	270
Total unit weight (lift weight)	kg	33	31
Packaged unit weight	kg	36	34
Maximum output to domestic hot water [1)]	kW	72.7	51.4
Output range to central heating	kW	1-15	1-15
Maximum flow temperature secondary heating	ºC	80	80
Maximum flow temperature DHW	ºC	60	60
District heating flow and return connections (compression)	mm	22	22
District heating flow and return connections (flat faced)	inch	3/4”MBSP	3/4”MBSP
Secondary heating flow and return connections (compression)	mm	22	22
Cold feed and DHW connections (compression)	mm	22	22
Pressure relief valve connection	mm	15	15
Maximum working pressure district heating side	bar	10	10
Pressure relief valve setting secondary heating side	bar	3	3
Maximum working pressure domestic hot water side	bar	10	10
pH value (district water supply), approximate		7-9	7-9
Expansion vessel	l	5	5
Expansion vessel charge	bar	0.75	0.75
District Temperature (80ºC)			
Primary flow rate	l/s	0.225	0.153
Primary return temperature	ºC	17.7	19.0
Primary pressure drop	kPa	20.0	11.5
DHW output (50°C)	kW	58.6	39.1
DHW flow rate (50°C)	l/min	21	15
District Temperature (70ºC)			
Primary flow rate	l/s	0.213	0.18
Primary return temperature	ºC	22.7	25
Primary pressure drop (including heat meter)	kPa	40.4	29.8
DHW output (50°C)	kW	41.3	33
DHW flow rate (50°C)	l/min	15	12
District Temperature (60ºC)			
Primary flow rate	l/s	0.248	0.2
Primary return temperature	°C	27.6	29.8
Primary pressure drop	kPa	54.6	36.4
DHW output (50°C)	kW	33	24.8
DHW flow rate (50°C)	l/min	12	9
Electrical			
Electrical power supply voltage	AC...V	230	230
Frequency	Hz	50	50
Maximum power consumption	W	41.3	41.3
Standby power consumption	W	3.1	3.1
Appliance protection rating	IP	40	40

1) Nominal output at 90°C primary and 60°C DHW.
2) Sized for up to 15kW radiator systems.

End users enjoy accurate control and responsive heating to achieve the desired comfort levels.

Additional features of the Greenstar HIU range

Greenstar HIU*		
• 15 litres/min flow rate	• Summer bypass as accessory	• 10 bar district heating pressure
• Electronically controlled internal valve	• Customer access to heat meter data	• Ability to run pipes behind unit
• Integral pressure balancing valve (DPCV) as accessory	• Ability to fit anti-tamper screws to the casing	• Modulating pump
• Ability to remotely isolate unit (with heat metering partner)	• Insulation on internal components	• System flushing valve as accessory

Greenstar E	**Greenstar KE**
Same features as KE ***with the addition of:***	Same features as E ***with the addition of:***
• Integral pressure balancing valve (DPCV) as standard	• 21 litres/min flow rate

All Greenstar HIU options are available in two versions, with or without a heat meter.

***Our E and KE model are BESA registered.**

District heating design services

Whether designing a new build, retrofit or deep renovation heat network, our expert consultants are here to help you fully design and configure the perfect system – from plant room to HIU and everything inbetween.

Speak to your local Bosch Commercial and Industrial contact to arrange a visit to our training academy. Here we can test specific design parameters against our HIUs, while demonstrating its performance for your specific project.

- Supporting designs in accordance with CIBSE CP1 2020
- Ensure minimal heat loss and low return temperatures
- Correct sizing of plant and network
- Layouts on 3D drawing (including plant room schematics/riser schematics)
- BIM level 2 covering entire product range
- System and product configuration
- Design and schematic reviews
- Dedicated Bosch consultant assigned to you
- District Heating CPD available.

For more information or to discuss a project, please call our design team on **0330 123 3004**, or email us at: **commercial.industrial@uk.bosch.com**

Did you know? You can also book a free design consultation at **bosch-industrial.co.uk/district-heating**

Useful contacts

Sales and Design Team
Tel: 0330 123 3004
Email: commercial.industrial@uk.bosch.com

Technical Helpline (Pre & Post Sales)
Tel: 0330 123 3366
Email: technical-advice@uk.bosch.com

Spare Parts
Tel: 0330 123 9779
Email: spares.mailbox@uk.bosch.com

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