# **Series HIU 2**

Indirect heat interface unit for hygienic domestic hot water (DHW) generation and heat distribution

# **Technical Data Sheet**







## **Description**



## HIU 2 HK for unmixed heating circuits

For transferring heat from local or district heating networks to heating and domestic hot water (DHW) systems in single-family homes, apartment buildings, terraced housing or apartment blocks.

Direct connection to unmixed heating circuits such as radiators.

Indirect, hygienic domestic hot water generation by means of a plate heat exchanger (stainless steel or copper brazed).

Tap temperature freely adjustable between 20 and 70 °C, tap capacity 12, 17 or 22 L/min. Flow limiter is included. Includes a priority switch for domestic hot water generation. Integrated adapters for heat and cold water meters.

Ready-to-fit, space-saving design with clear arrangement of all valves.

Uniform, modular design of connections and accessories.

Part no.	DN	Model	Weight
10079852	20	Tap capacity 12 L/min, copper brazed	14.3 kg
10079891	20	Tap capacity 12 L/min, stainless steel brazed	14.3 kg
10078464	20	Tap capacity 17 L/min, copper brazed	15.0 kg
10079893	20	Tap capacity 17 L/min, stainless steel brazed	15.0 kg
10085285	20	Tap capacity 22 L/min, copper brazed	16.0 kg
10085286	20	Tap capacity 22 L/min, stainless steel brazed	16.0 kg
	10079852 10079891 10078464 10079893 10085285	10079852 20 10079891 20 10078464 20 10079893 20 10085285 20	10079852 20 Tap capacity 12 L/min, copper brazed 10079891 20 Tap capacity 12 L/min, stainless steel brazed 10078464 20 Tap capacity 17 L/min, copper brazed 10079893 20 Tap capacity 17 L/min, stainless steel brazed 10085285 20 Tap capacity 22 L/min, copper brazed



### HIU 2 HKM for mixed heating circuits

For transferring heat from local or district heating networks to heating and domestic hot water (DHW) systems in single-family homes, apartment buildings, terraced housing or apartment blocks.

Direct connection to mixed heating circuits such as a radiant panel heating system. Indirect, hygienic domestic hot water generation by means of a plate heat exchanger (stainless steel or copper brazed).

Tap temperature freely adjustable between 20 and 70 °C, tap capacity 12, 17 or 22 L/min. Flow limiter is included. Includes a priority switch for domestic hot water generation. Integrated adapters for heat and cold water meters.

Ready-to-fit, space-saving design with clear arrangement of all valves.

Uniform, modular design of connections and accessories.

Includes a domestic hot water and mixing unit with electronic fix-point control of the flow temperature.

Туре	Part no.	DN	Model	Weight
HIU2 HKM 12	10079851	20	Tap capacity 12 L/min, copper brazed	14.7 kg
HIU2 HKM 12	10079892	20	Tap capacity 12 L/min, stainless steel brazed	14.7 kg
HIU2 HKM 17	10078463	20	Tap capacity 17 L/min, copper brazed	15.4 kg
HIU2 HKM 17	10079894	20	Tap capacity 17 L/min, stainless steel brazed	15.9 kg
HIU2 HKM 22	10085287	20	Tap capacity 22 L/min, copper brazed	18.0 kg
HIU2 HKM 22	10085288	20	Tap capacity 22 L/min, stainless steel brazed	18.0 kg



# **Technical features**

Hydraulic data	HIU 2 HK / HIU 2 HKM		
Max. operating pressure	10 bar (PN 10)		
Max. ambient temperature	60°C		
Max. operating temperature	90°C		
Differential pressure (12 or 17 Lite	r) Preset: 200 mbar. Adjustable range: 100 - 300 mbar		
Differential pressure (22 Liter)	Preset: 250 mbar. Adjustable range: 100 - 300 mbar		
Media	Water or water with glycol as per VDI (Association of German Engineers) 2035 / ÖNORM (Austrian standard) 5195		
Actuator			
Power supply	230 V; +10 to -20 %; 50/60 Hz		
Power consumption in operation	2.5 W		
Power consumption at end positions	<1 W		
Actuating force	100 N		
IP rating	IP 54		
Ambient temperature	0 - 60 °C		
Dimensions width x height x de	epth		
HK	490 X 705 X 130 mm		
HKM	500 x 705 x 140 mm		
Weight			
	see product tables		
Pipework connections			
Transfer unit	1" and ¾" male thread, flat sealing		
Meter connections			
Hot water meter connection	110 mm G ¾"		
Cold water meter connection	110 mm G ¾"		
Materials			
Pipework	Stainless steel, d = 22 mm & d = 27 mm		
Fittings	Brass		
Seals	AFM34/2 and EPDM		
Plate heat exchanger	Stainless steel EN 1.4404/copper (brazed)   option: stainless steel/stainless steel (brazed) For further information on the media to be used please refer to the appropriate technical datast		
Circulating pump, actuator and other electrical components	For technical data please refer to the appropriate technical documentation.		

# **Technical data: DHW generation**

Heat exchanger	DHW capacity	•	Temperature (primary)		Temperature (secondary)  Pressure drop		Flow	rate
		Supply	Return	DCW	DHW	primary	primary	secondary
26 plates	33 kW	65 °C	19 °C	9 °C	48 °C	20 kPa	11.2 L/min	12.0 L/min
36 plates	41 kW	65 °C	18 °C	11 °C	45 °C	20 kPa	13.4 L/min	17.1 L/min
60 plates	52 kW	65 °C	15 °C	11 °C	45 °C	25 kPa	14.0 L/min	22.0 L/min

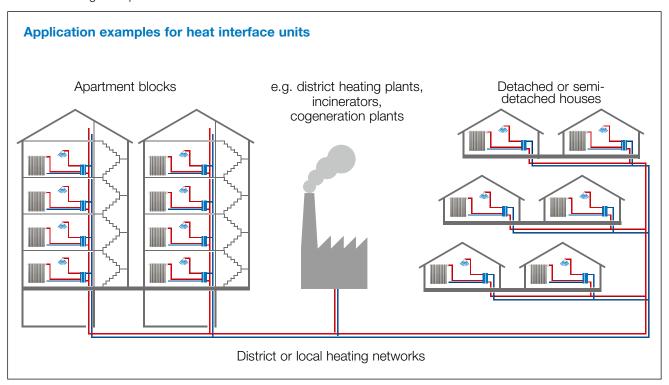
# **Technical data: heating**

Temperature difference	Heat output
10K	Q = 13 kW
20K	Q = 26 kW



## **Applications**

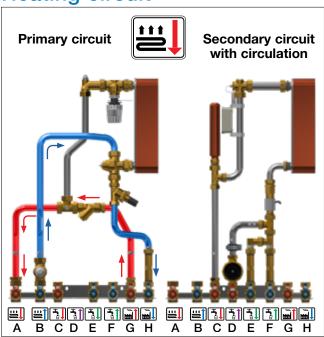
Ready-to-fit, compact heat interface unit for indirect, hygienic DHW generation with heat distribution in single-family homes, terraced housing and apartment blocks.



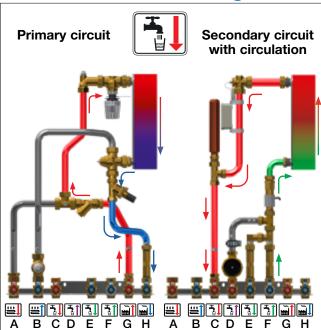
#### **Function**

The HIU 2 heat interface unit uses heat from local and district networks to operate the heating and to hygienically heat domestic water. The heating network circuit is kept separate from the heating and domestic water circuit by a heat exchanger. The HIU2 heat interface unit is designed in such a way that domestic hot water generation takes priority over the heating circuit. When water is being drawn from a tap, a flow switch activates an actuator which closes the heating line temporarily. This ensures that the required domestic water temperature (adjustable using the thermostatic valve) is quickly reached. A circulation bridge may be needed to quickly achieve the pre-set domestic hot water temperature in standby mode (heating off). The circulation bridge is to be provided by the customer.

# **Heating circuit**



# **Domestic water heating**

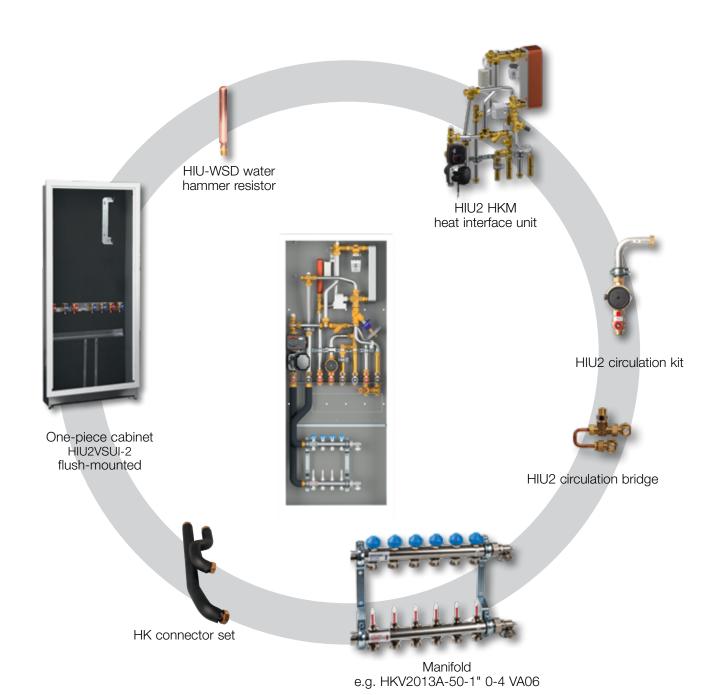




## **Product features**

- For heating and DHW generation
- Hot water priority circuit
- Differential pressure adjustable from 100 to 300 mbar
- Pre-assembled adapters for heat and cold water meters
- Mixing module (HKM only)
- Designed to be installed in a system cabinet (wall- or flush-mounted)
- All system connections with 1" and ¾" male thread, and flat sealing
- Adjustable tap temperature
- DHW tap capacity of 12, 17 or 22 L/min when heating the DHW from 10 to 45° C, with a primary flow temperature of 65° C and 200 mbar Δp (12 and 17 L) or 250 mbar Δp (22 L)
- Easy-to-control; compact and space-saving design
- Suitable for connection to manifolds
- Modular design

## **Typical configuration**





## **System components for extension**



# HIU 2 HK/HKM system cabinet

Includes a sturdy bracket for mounting the heat interface unit and a pre-installed connecting rail with ball valves for quick installation and easy removal at any time in the event of repair or exchange. Insulated in accordance with GEG (German Buildings Energy Act).

Тур	Model	Part no.	Weight
HIU2U	flush-mounted	10078499	13.8 kg
HIU2A	wall-mounted	10078486	15.6 kg



## One-piece cabinet

The stable housing made of galvanized sheet steel provides space for a HIU2 HKM home station in combination with heating circuit manifolds as well as all components and accessories. Consisting of body, front door, lock, stable bracket for hanging the home station, as well as a pre-mounted connection rail with shut-off set consisting of 7 ball valves. For quick removal of the home station at any time for replacement and repair work. The combination cabinet including door is insulated in conformity with the GEG (German Building Energy Law). Housing and front door painted white.

Тур	Model	Circuits	Part no.	Weight
HIU2VSUI-2	flush-mounted	max. 6	10085022	24.7 kg
HIU2VSUI-3	flush-mounted	max. 9	10088325	28.6 kg
HIU2VSUI-4	flush-mounted	max. 12	10085023	33.2 kg
HIU2VSAI-2	wall-mounted	max. 6	10085020	26.5 kg
HIU2VSAI-4	wall-mounted	max. 12	10085021	35.8 kg



# **HIU 2 thermally insulated system cabinets**

Options for wall or flush mounting, suitable for all HIU 2 HK/HKM heat interface units. Includes a pre-installed connecting rail and ball valves for connecting to the system and a sturdy bracket for mounting the heat interface unit to the connecting rail and easy connection to the system. Insulated in accordance with GEG (German Buildings Energy Act). regulations.



Pre-installed connector block with ball valves



Connections to the underside of the housing





Α	Heating circuit supply outlet
В	Heating circuit return inlet
С	Drinking hot water outlet
D	Drinking water circulation inlet

Ε	Cold drinking water outlet
F	Cold drinking water inlet
G	Supply boiler circuit inlet flow
Н	Return boiler circuit outlet



## Hydraulic components and heating circuit manifolds



#### Water hammer resistor HIU-WSD

For optional installation in the HIU 2 heating interface units. Reduces pressure peaks in the drinking water network caused by fast-closing taps (domestic appliances, single-lever taps).

Threaded connection ¾", operating pressure max. 10.0 bar, temperature range: 0-80 °C.

Тур	Part no.	Weight
HIU-WSD	10079166	0.3 kg



## HIU2 circulation bridge

For optional installation in the heat interface unit series HIU2 in the primary supply. The circulation bridge prevents the primary heating flow from cooling down during longer periods of heating standstill, e.g. in summer mode, and thus enables the set domestic hot water temperature to be reached quickly. Setting range of the bypass valve 40-60 °C.

Тур	Part no.	Weight
Zirkulationsbrücke	10070000	0.00 kg
HIU2	10079903	0.83 kg



#### Connector set HKM

Insulated pipework set for easy connection of the heat interface unit series HIU2 HKM to a Watts circuit heating manifold for supplying a panel heating system. The HKM-HT connection set also offers the option of connecting a high-temperature circuit (e.g. bathroom radiators).

Тур		Part no.	Weight
Anschlussset HKM		10078465	0.80 kg
Anschlussset HKM-HT	with connection for high-tempe- rature circuit	10079905	0.94 kg
Anschlussset ¾"	T-piece for high-temperature circuit	10080314	0.18 kg



### HIU2 circulation kit

For optional retrofitting of the heat interface unit series HIU2 with a domestic hot water circulation pump with control thermostat. Consisting of: DHW circulation pump with control thermostat, stainless steel pipe bend, shut-off ball valve, fixing, backflow preventer.

Тур		Part no.	Weight
HIU2- Zirkulationsset	with control thermostat	10080335	1.55 kg





# Heating Circuit HKV2013A VA

Stainless steel round pipe manifold. Flat-sealing male thread on both sides. Low installation depth. Connection nipple G %" with Eurocone. Pressure tested. The manifold can be adapted to the individual requirements on-site by using the modular accessories. Heating circuit connection %" M with Eurocone. Supply branch on the top. Ready-to-mount with brackets. EN1264 Compliant. End sets KFE90 enclosed.

SUPPLY (bottom): Flowmeter 0 - 4 L/min with low pressure drop and shut-off function. RETURN (top): Control and shut-off valve with adaption M30 x 1.5 (closing point: 11.8 mm).

Тур		Part no.	Weight
HKV2013A-50-1" 0-4 VA02	2 Heating circuits	10081934	1.84 kg
HKV2013A-50-1" 0-4 VA03	3 Heating circuits	10081935	2.14 kg
HKV2013A-50-1" 0-4 VA04	4 Heating circuits	10081936	2.54 kg
HKV2013A-50-1" 0-4 VA05	5 Heating circuits	10081937	2.84 kg
HKV2013A-50-1" 0-4 VA06	6 Heating circuits	10081938	3.25 kg
HKV2013A-50-1" 0-4 VA07	7 Heating circuits	10081939	3.70 kg
HKV2013A-50-1" 0-4 VA08	8 Heating circuits	10081940	4.00 kg
HKV2013A-50-1" 0-4 VA09	9 Heating circuits	10081941	4.26 kg
HKV2013A-50-1" 0-4 VA10	10 Heating circuits	10081942	4.66 kg
HKV2013A-50-1" 0-4 VA11	11 Heating circuits	10081943	5.01 kg
HKV2013A-50-1" 0-4 VA12	12 Heating circuits	10081944	5.42 kg



# Stainless Steel Manifold with automatic flow control HKV2013A-AFC

Stainless steel round pipe heating circuit manifold according to EN 1264-4. Flat sealing connections 1" M. Low installation depth. Connection nipple G 34" with Eurocone, 50 mm distance. End set KFE90.

SUPPLY (bottom): Flowmeter with low pressure drop and shut-off function.

RETURN (return): Control and shut-off valve with adaption M30  $\times$  1.5 with setting range: 30 to 300 L/h.

Тур		Part no.	Gewicht
HKV2013A-50-1"-AFC VA02	2 Heating circuits	10084806	1.76 kg
HKV2013A-50-1"-AFC VA03	3 Heating circuits	10084807	2.10 kg
HKV2013A-50-1"-AFC VA04	4 Heating circuits	10084808	2.48 kg
HKV2013A-50-1"-AFC VA05	5 Heating circuits	10084809	2.78 kg
HKV2013A-50-1"-AFC VA06	6 Heating circuits	10084810	3.21 kg
HKV2013A-50-1"-AFC VA07	7 Heating circuits	10084811	3.47 kg
HKV2013A-50-1"-AFC VA08	8 Heating circuits	10084812	3.85 kg
HKV2013A-50-1"-AFC VA09	9 Heating circuits	10084813	4.20 kg
HKV2013A-50-1"-AFC VA10	10 Heating circuits	10084814	4.57 kg
HKV2013A-50-1"-AFC VA11	11 Heating circuits	10084815	4.90 kg
HKV2013A-50-1"-AFC VA12	12 Heating circuits	10084816	5.22 kg



## **Room temperature control components**



#### **Actuator 22CX**

Electrothermal OPEN/CLOSE actuator with position indicator. For regulating and shut-off valves with connection M30 x 1.5. Compatible with Watts heating circuit manifolds, thermostatic valves from the TV series, zone valves from the 2131, 3131 and 4131 series, etc. Max. stroke 3.5 mm / working stroke 2.5 mm. Stroke 3.5 mm / working stroke 2.5 mm. Power consumption 1.8 W. Cable length approx. 1 m. Protection class IP54.

Тур	Part no.		Weight
22CX230NC2	10029671	230V, NC,	0.17 kg
22CX230NA2	10029674	230V, NA,	0.17 kg



#### Bracket set for electrical controlers

for mounting electrical control distribution boxes in the system cabinets of the Watts heat interface unit series HIU2. Includes C-rails, top-hat rail and fixing material.

Тур	Part no.	Weight
Halterset	10082911	0.3 kg



# Vision® Wireless and Vision® Wired

Watts also offers a wide range of components for wireless and wired room temperature control: Vision® Wireless and Vision® Wired series.

More on our website!



https://www.watts.eu/en/products/eu/smart-home-and-controls

# Online tools for system configuration

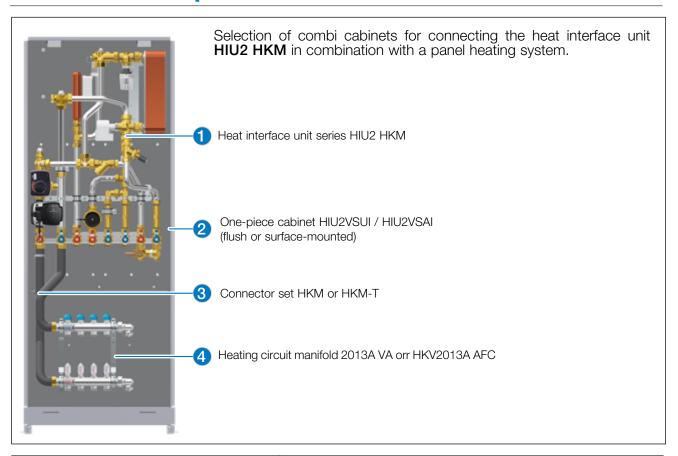
Do you need a quote for our heat interface unit series HIU2? With our online configurator, you can quickly put together a suitable HIU2 units including accessories and send the list directly to our specialist department.

https://www.watts.eu/de/hiu





# **Selection of one-piece cabinets**



Details of the circuit heating manifold		Details of th	e flush-mounted	one-piece cab	inet HIU2VSUI	
Number of heating circuits	Part no. HKV2013A VA	Part no. HKV2013A AFC	Frame width	Cabinet width	Part no.	Beschreibung
2	10081934	10084806				
3	10081935	10084807	600 mm			
4	10081936	10084808		550 mm	10085022	HIU2VSUI-2
5	10081937	10084809				
6	10081938	10084810				
7	10081939	10084811				
8	10081940	10084812	750 mm	700 mm	10085025	HIU2VSUI-3
9	10081941	10084813				
10	10081942	10084814				
11	10081943	10084815	900 mm	850 mm	10085023	HIU2VSUI-4
12	10081944	10084816				

Details of the circuit heating manifold		Details of the surface	e-mounted one-pied	e cabinet HIU2VSAI	
Number of heating circuits	Part no. HKV2013A VA	Part no. HKV2013A AFC	Cabinet width	Part no.	Description
2	10081934	10084806			
3	10081935	10084807			
4	10081936	10084808	600 mm	HIU2VSUAI-2	
5	10081937	10084809			
6	10081938	10084810			
7	10081939	10084811			
8	10081940	10084812			
9	10081941	10084813	900 mm	10085021	HIU2VSUAI-4
10	10081942	10084814	900 11111	10003021	11102 V 30A1-4
11	10081943	10084815			
12	10081944	10084816			



#### **Instant water heater DLE HIU2**



#### Instant water heater set DLE HIU2

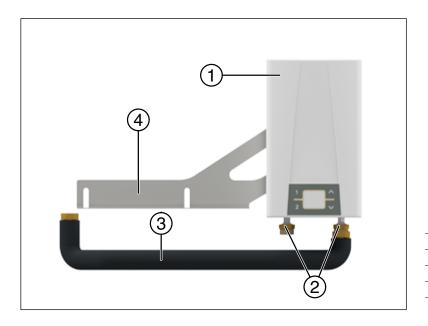
The DLE HIU2 instant water heater set is used for electronic reheating of drinking water in combination with the heat interface unit series HIU2 HK 12 litre and the HIU2VSAI-4 surface-mounted combination cabinet (900 mm) or the HIU2VSUI-4 flush-mounted combination cabinet (850 mm). Ideal for use with heat pumps as heat generators in conjunction with underfloor heating. Can also be used in local heating networks with low supply temperatures. Available in two power levels: 11-13.5 kW and 18-21 kW. The complete set includes an instant water heater, pre-insulated piping and mounting bracket.

Тур	Power	Part no.	Weight
HIU2 DLE Modul 11-13,5	11-13,5 kW	10087538	3.33 kg
HIU2 DLE Modul 18-21	18-21 kW	10087773	3.33 kg

	DLE HIU	l2 11-13.5	DLE HI	U2 18-21	
Hydraulic data					
Max. operating pressure		10 bar	(PN 10)		
Max. permissible operating temperature		60	°C		
Media		drinkab	le water		
Electrical connection		3~ / PE 380	0415 V AC		
Instant water heater power	11 kW (16 A)	13.5 kW (19.5 A)	18 kW (26 A)	21 kW (30 A)	
Conductor cross-section, minimum	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4 mm²	4 mm <sup>2</sup>	
Primary flow temperature	38 °C	38 °C	38.5 °C	38 °C	
DHW, after instant water heater (at flow rate)	50 °C (10 L/min)	53 °C (10 L/min)	59 °C (10 L/min)	60 °C (10 L/min)	
Flow rate at mixed temperature 38 °C	14.3 L/min	15.4 L/min	17.5 L/min	17.9 L/min	
Flow rate at mixed temperature 42 °C	12.5 L/min	13.4 L/min	15.3 L/min	15.6 L/min	
Heating, flow rate	14 L/min	14 L/min	14 L/min	14 L/min	
Drinkable water temperature at PHE outlet, instant water heater inlet		35	°C		
Drinkable water temperature		10	°C		
Total power, PHE and instant water heater	27.9 kW	30.0 kW	34.2 kW	34.9 kW	
Connection to hot water	G ¾				
Nominal width	DN 15				
Dimensions					
Width x Height x Depth instant water heater, without accessory parts		177 x 312	x 107 mm		
Width x Height x Depth instant water heater, with accessory parts		557 x 389	x 109 mm		
Total weight					
With packaging		4.6	9 kg		
Without packaging	3.33 kg				
Materials					
Pipe		Stainless Ste	el Ø18x1 mm		
Mounting bracket		Steel,	1.0037		
Reducers, fittings		Brass, drinkable	water compliant		
Flat sealings	EPDM, drinkable water compliant				
Pipe insulation		NI	3R		
Other					
Instant water heater	see I	Important notes on	supplier document	tation	

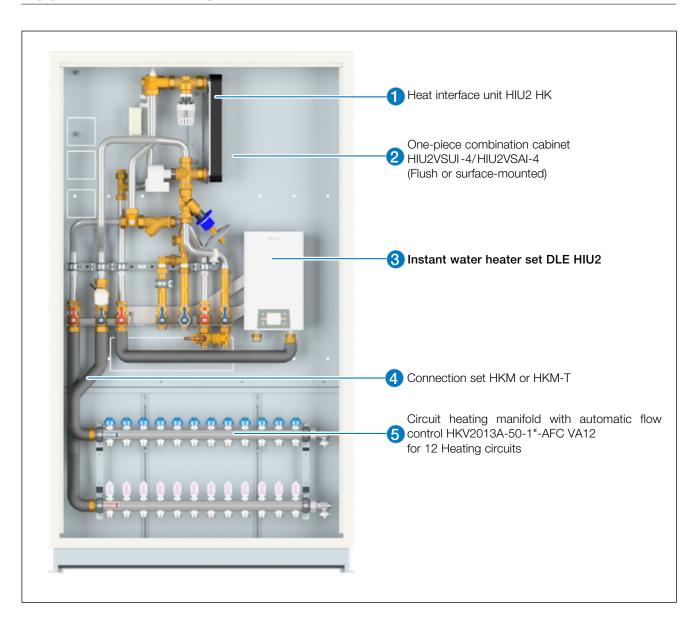


# **Component overview DLE HIU2**



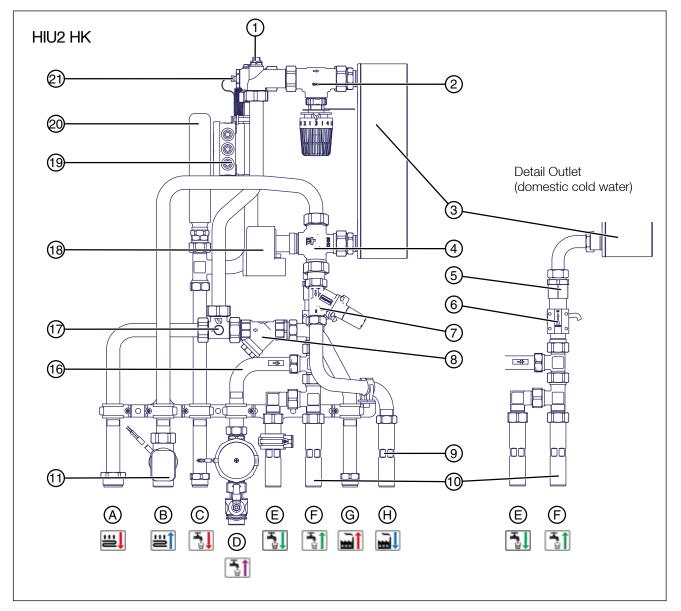
1	Instant water heater
2	Reducers, G 1/2 x G 3/4
3	Connection pipe
4	Mounting bracket

# **Application example DLE HIU2**





# **Components overview**

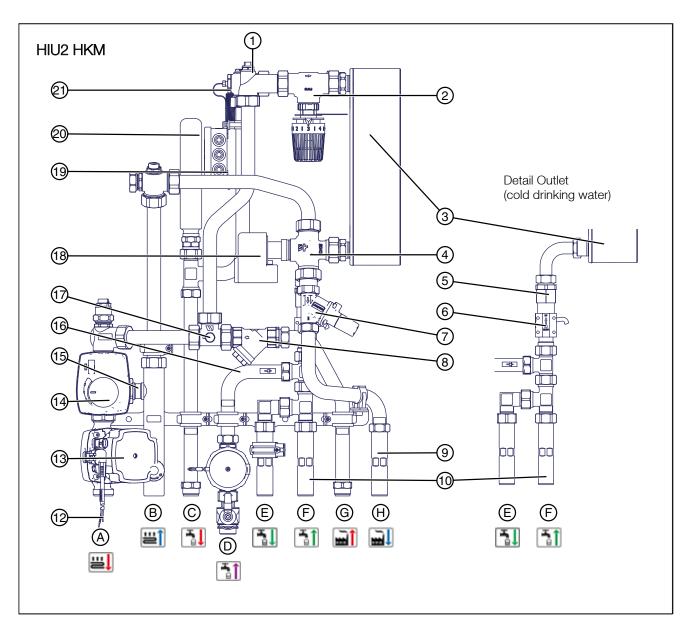


Α	Heating circuit supply outlet
В	Heating circuit return inlet
С	Drinking hot water outlet
D	Drinking water circulation inlet
Ε	Cold drinking water outlet
F	Cold drinking water inlet
G	Supply boiler circuit inlet flow
Н	Return boiler circuit outlet
1	Air vent valve
2	Thermostatic valve
3	Plate heat exchanger
4	Heating circuit/hot water switch valve
5	Flow limiter
6	Flow switch
7	Differential pressure regulator

8	Strainer
9	Heat meter adapter
10	Cold water meter adapter
11	Zone valve (heating circuit)
12	-
13	-
14	-
15	-
16	Circulation kit (optional)
17	Connection for flow temperature sensor of the heat meter (M10x1)
18	Actuator
19	Distribution box
20	Water hammer arrester (optional)
21	Temperature sensor cover

14



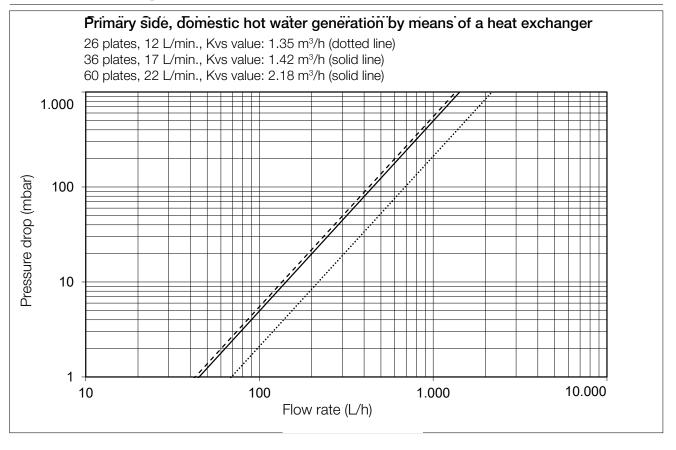


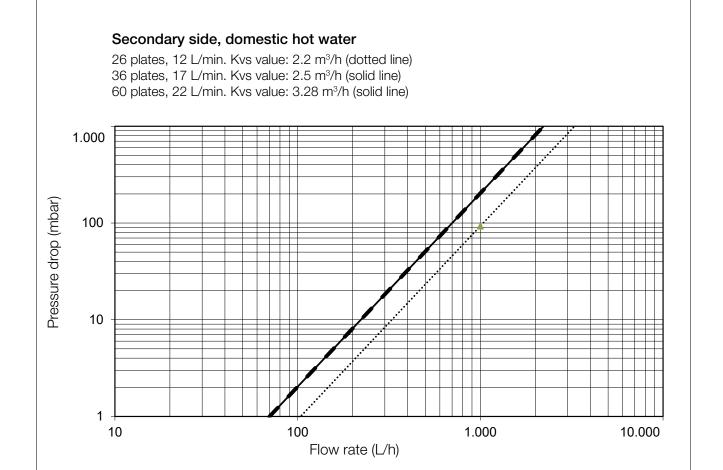
Α	Heating circuit supply outlet
В	Heating circuit return inlet
С	Drinking hot water outlet
D	Drinking water circulation inlet
Е	Cold drinking water outlet
F	Cold drinking water inlet
G	Supply boiler circuit inlet flow
Н	Return boiler circuit outlet
1	Air vent valve
2	Thermostatic valve
3	Plate heat exchanger
4	Heating circuit/hot water switch valve
5	Flow limiter
6	Flow switch
7	Differential pressure regulator

8	Strainer
9	Heat meter adapter
10	Cold water meter adapter
11	-
12	Bracket, spring and thermally conductive paste for contact sensor of actuator
13	Heating circuit pump
14	Actuator including controller
15	Gravity check valve
16	Circulation kit (optional)
17	Connection for flow temperature sensor of the heat meter (M10x1)
18	Actuator
19	Distribution box
20	Water hammer arrester (optional)
21	Temperature sensor cover
	·

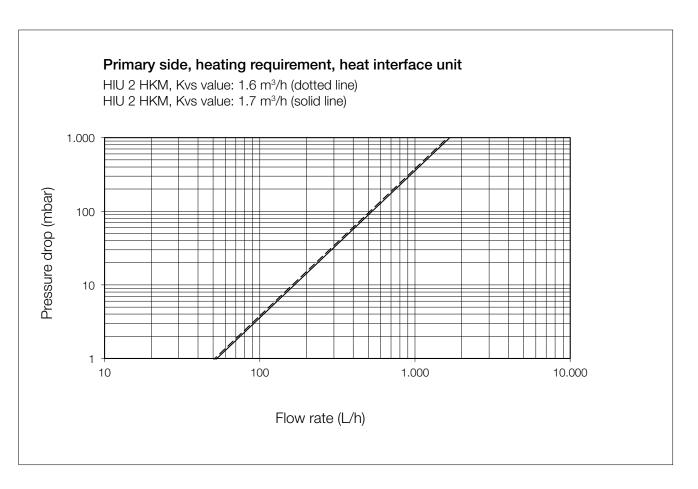


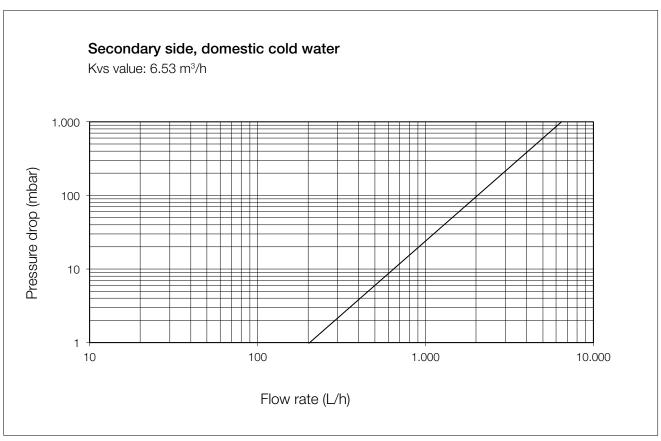
## Pressure drop for HIU2 HK/HKM





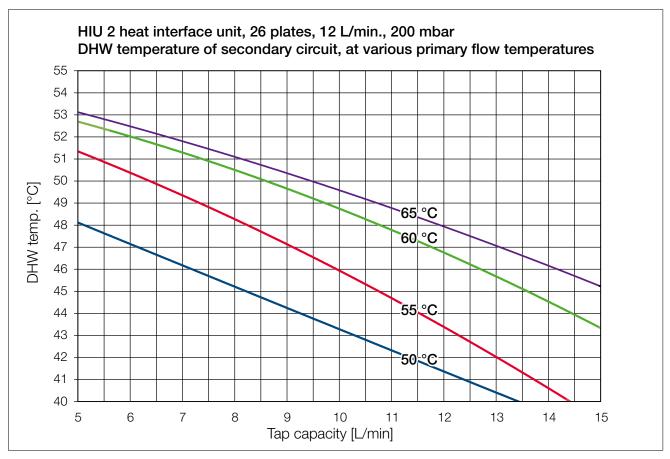


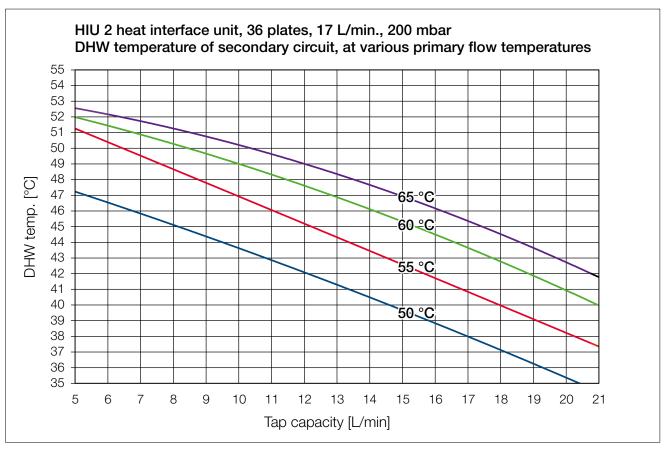




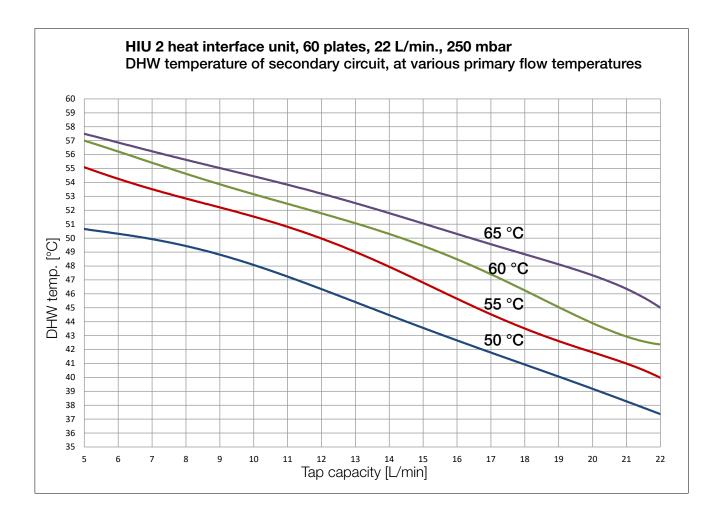


# **Performance characteristics for HIU2 HK/HKM**



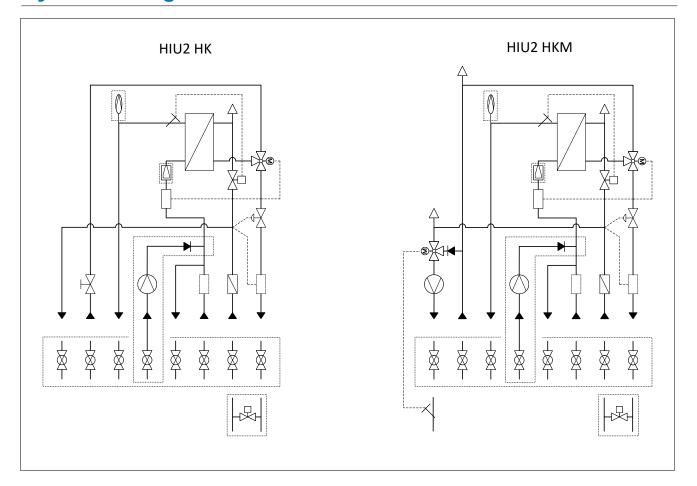








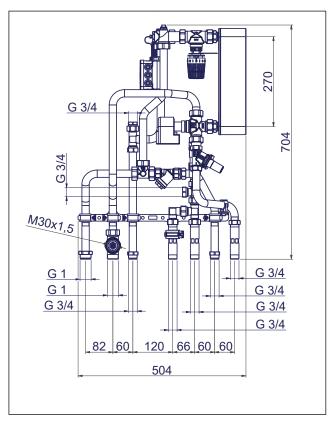
# **Hydraulic diagrams**



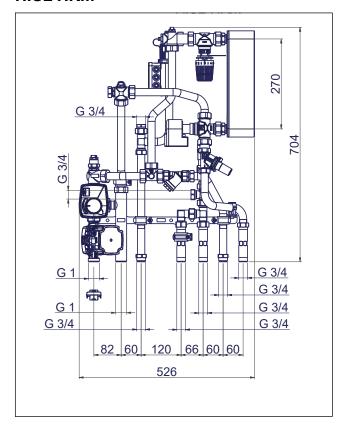


## **Dimensions**

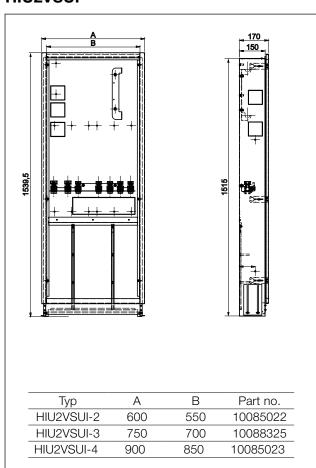
#### **HIU2 HK**



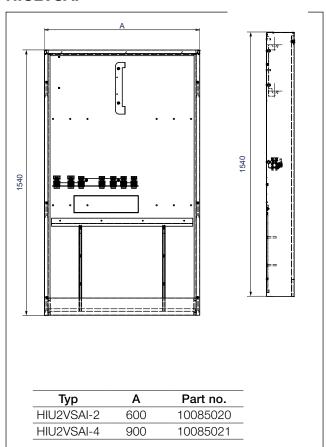
#### **HIU2 HKM**



#### HIU2VSUI

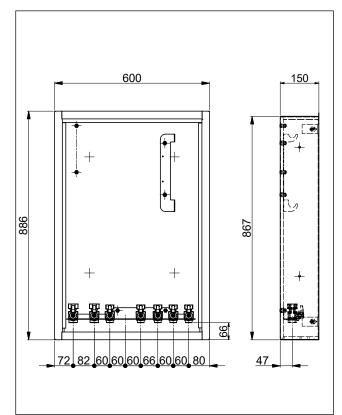


#### HIU2VSAI

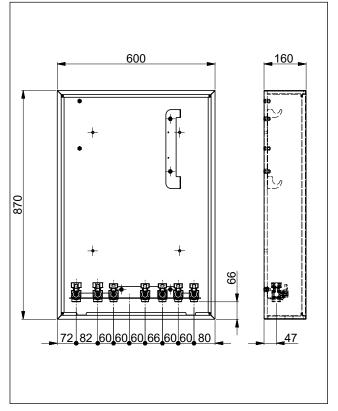


## **Dimensions**

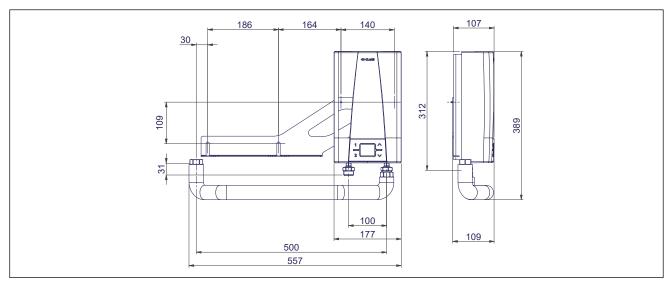
#### HIU2U



#### HIU2A



#### **DLE HIU2**



The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding. Watts Industries reserves the right to carry out any technical and design improvements to its products without prior notice.

Warranty: All sales and contracts for sale are expressly conditioned on the buyer's assent to Watts terms and conditions found on its website at www.watts.eu/en/gtc. Watts hereby objects to any term, different from or additional to Watts terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of Watts.



#### Watts Industries Deutschland GmbH

Godramsteiner Hauptstr. 167 • 76829 Landau • Deutschland Telefon: +49 6341 9656-0 • Fax: +49 6341 9656-560 E-Mail: WIDE@wattswater.com • www.watts.eu/de