

# Heat Interface Units

for decentralised water heating in district heating systems



# HERZ Heat Interface Units

**High-quality decentralised water heaters with heating connection, for drinking water hygiene and temperature reliability.**



HERZ HEAT INTERFACE UNITS (HIU)

With heat exchanger for system isolation and heating circulation pump for low temperature heating zone.

The conventional and hitherto most common method of hot water processing is by using a hot water storage tank. This type of device warms up the water long before it is used, and stores or “saves” it in a hot condition. The inevitable loss of heat incurred (depending on the temperature) in this process necessitates a regular reheating.

The disadvantages of this method of preparing hot water are sufficiently well known.

By the use of constructive measures or by changing the method used, the intention is to prevent the occurrence of legionella at the earliest point in this process. All these measures are aimed at avoiding the “saving” of hot water over a time period, in order to prevent the propagation of the legionella.

This type of device, which does not require any storage potential in its function, is known by the general hea-

ding of a “continuous water heater”.

In order to achieve the level of comfort, which is common today as well as demanded by the consumer, and to ensure it at all times and in every operating condition, a high degree of both technical effort and know-how is required. Furthermore, in order to enable the optimal functioning expected of the devices, it is necessary to adapt the primary characteristics, under which the devices are operated. The further technological development of this type of device over the various generations is clearly recognisable and has culminated in the HERZ HIU.

The HERZ HIUs make use of the continuous flow principle described here, thus avoiding all the disadvantages of storing the hot water mentioned above. In addition, they take up the technical features of district and local heating and are optimised for functionality under these conditions. For this reason, they are considered to be a key innovation with regard to high-efficiency energy use, energy saving and, subsequently, environmental protection. In contrast to the hot water storage method, the HIU only starts working when hot water is required, i.e. “drawn off”.

The **HERZ 4008** series of HIUs are heat interface units for heating and decentralised hot water supply. They are designed and optimised for operation in district and local heating grids. They are extremely efficient despite their

compact design. Their area of application is focussed on single-family households (e.g. two adults, 2 children) in closed apartments on a multi-storey residential basis - particularly for the common case of subsequent district heating supply.

The devices are also ideally suited for use in new buildings and single-family houses.

Depending on the potential of the primary supplier, HERZ HIUs have sufficient power for every application to be able to meet the normal comfort expectations of the consumers.

The users’ key criterion of quality in the practical use of these types of devices is the rate of flow of hot water supplied per unit time (minute). Furthermore, the hot water has to be of the temperature required or preset to, and also be maintained at that temperature for the whole time it is drawn-off.

Provided that all the criteria projected by the energy supplier / district heating supplier are met, the rate of flow of domestic hot water achieved by HERZ HIUs is a remarkable 15 litres at a constant 50°C. Taken together with the lowest pressure drop, these industry-leading values are optimally adapted to the single-family household described here.

HERZ HIUs therefore ensure both a constant temperature and volume of hot water - even in the case of different drawing procedures or at se-

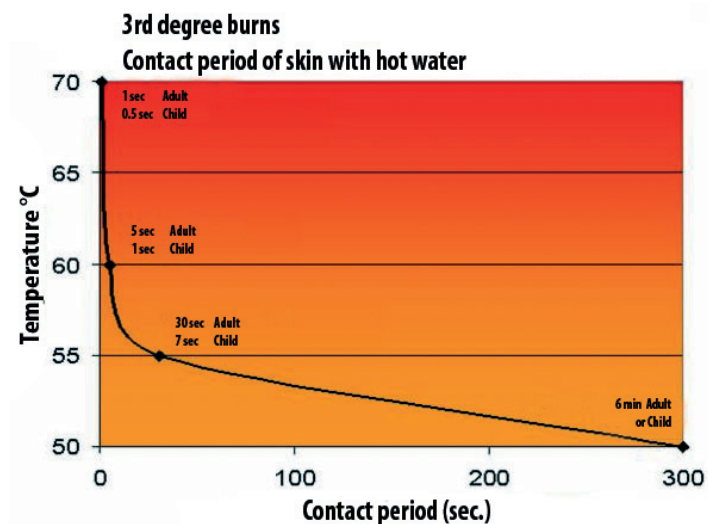
veral drawing intervals. The heat output produced by the devices is also an unusually high 7 - 19 kW.

In spite of their extremely compact design, HERZ HIUs offer all the possibilities for optional and subsequent installation of diverse calibrated cold and/or hot water meters as well as heat meters for the heating circuit, in order to comply with the regulations / requirements of the regional supplier or legislation.

Furthermore, HERZ HIUs have a unique installation system, patented by HERZ, which saves the installer the often complicated and time-consuming calibration and adjustment measures required on existing (pre-) installations. Thanks to their sophisticated design, HERZ HIUs therefore guarantee a fast and straightforward assembly process.

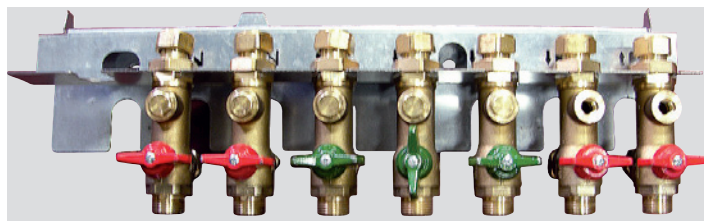
Assembly and connection errors are for the most part excluded on account of the simple-to-understand and permanently visible connection designations. In addition, maintenance and servicing are trouble-free and can be carried out in the shortest time possible.

It goes without saying that HERZ HIUs are optimised for all types of assembly, and are available in surface-mounted and flush-mounted versions. In compliance with the EN 1111 standard, all **HERZ 4008** series catalogue model HIUs include a fixed positioned HERZ drinking water mixing valve, allowing for a maximum limit of the water temperature (max. 50 degrees C) as well as scalding protection.



## ACCESSORIES FOR HERZ HIUS

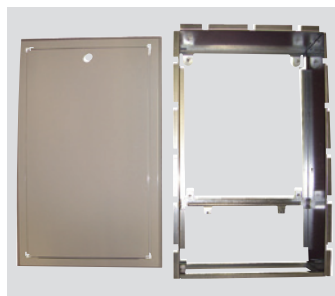
### HERZ pre-assembly console for DELUXE HIU



(Order No.: 1 4008 04) consisting of mounting bracket with boreholes, complete with shut-off ball valve for heating, cold and hot water, wall or floor connection option, connection to HIU via plug-in system with forced positioning and with pipe side screw connections, incl. fixing material.

### HERZ flush-mounted housing for HIU

(Order No.: 1 4008 06)

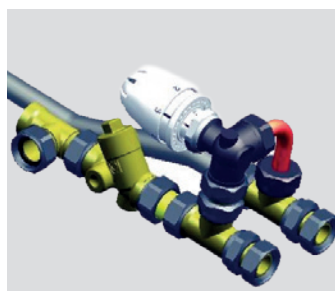


### HERZ cover for HIU

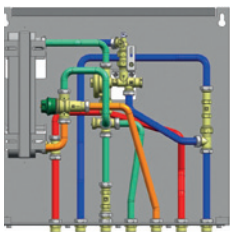
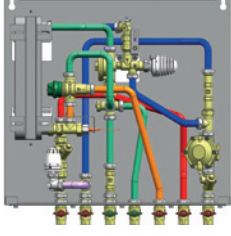
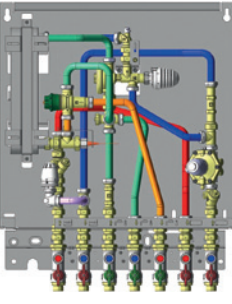
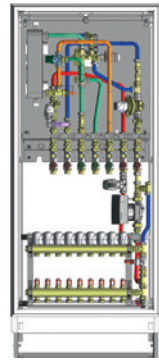
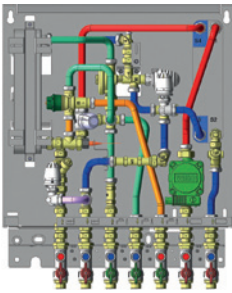
(Order No.: 1 4008 08) made of sheet steel - white powder coated (RAL 9003).



Retrofit with device standby module for type PROJECT Order No.: 1 4008 18) - additional components for upgrading the PROJECT HIU, consisting of strainer, thermostatic valve with return flow temperature limiter and pipe fittings.

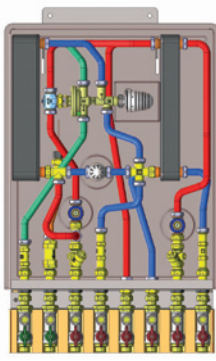
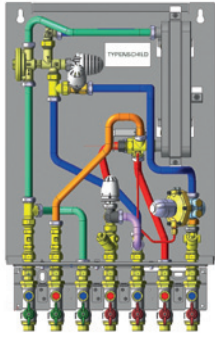
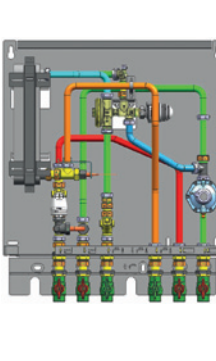
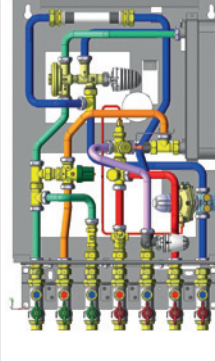
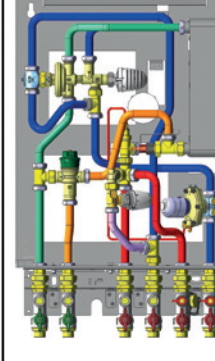
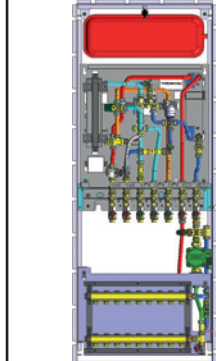


# HERZ Heat Interface Units

Type	Project	Standard	DeLuxe	Deluxe FBH * „Oberösterreich“	Deluxe Indirect
Order Number	1 4008 21	1 4008 23	1 4008 25	1 4018 23-42	1 4008 26
ILLUSTRATIONS					
<b>Accessories</b>					
Pre-assembly console	-	-	●	●	●
Summer bypass optional	●	-	-	-	-
Adaptor for Heat meter	●	●	●	●	●
Adaptor for cold water meter	●	●	●	●	●
Adaptor for hot water meter	-	-	-	-	-
Flush-mounted housing	●	●	●	●	●
Cover	●	●	●	-	●
Hot water priority	-	○	○	○	○
<b>Technical data:</b>					
Width (mm)	600	600	600	646	646
Height (mm)	570	640	750	1498	858
Depth (mm)	150	150	150	150	175
Differential pressure regulation	-	23kPa fix positioned	23kPa fix w. zone valve	-	-
Return flow temperature limited heating	-	-	-	-	-
Tap output	15 l/min	15 l/min	15 l/min	15 l/min	15 l/min
Hot water temperature	50°C	50°C	50°C	50°C	50°C
Minimum water quality	pH= 7-9	pH= 7-9	pH= 7-9	pH= 7-9	pH= 7-9
Thermostatic mixing valve TMV-2	●	●	●	●	●
Minimum cold water pressure	2,8 bar	2,8 bar	2,8 bar	2,8 bar	2,8 bar
Minimum primary system differential pressure	40 kPa	40 kPa	40 kPa	40 kPa	40 kPa
Minimum secondary system differential pressure	25 kPa	25 kPa	25 kPa	25 kPa	25 kPa
Heat output at 60°C VL-temperature	10 kW	10 kW	10 kW	10 kW	10 kW
Temperature difference for tap operation	40 °K	40 °K	40 °K	40 °K	40 °K

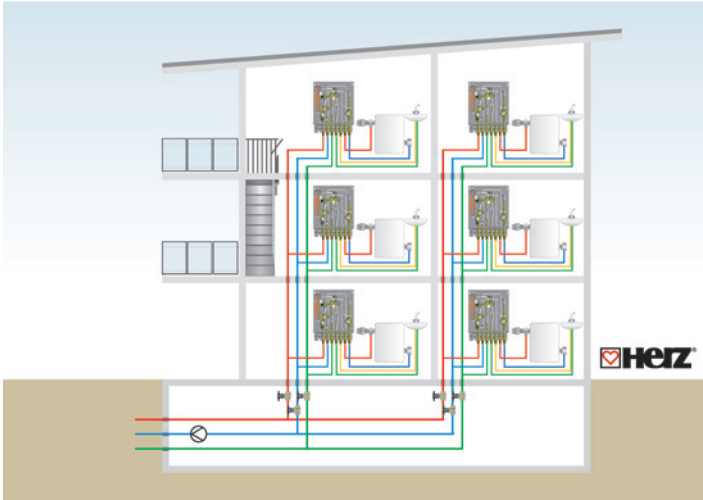
HERZ HIU are suitable for installation in central heating systems, in buildings with decentral warm water supply. All HERZ components are manufactured in the European Union and comply with the highest quality standards.

\* Consisting of 1 4008 25, 1 4008 04, 1 4018 22, DELUXE FBH distributor and DELUXE underfloor heating flush mounted box. More exact information appears from the delivery program and data sheet.

Deluxe Cool	GSWB „Salzburg“	ITPS „München“	BURGENLAND	FWW „Wien“	Indirect Expansion
1 4008 65	1 4008 33	1 4008 73	1 4008 35	1 4008 30	1 4008 49
					
●	●	●	●	●	●
-	-	-	-	-	-
●	●	●	●	●	●
●	●	●	●	●	-
-	●	-	-	-	-
-	●	●	●	●	●
-	●	●	●	●	-
●	-	-	○	●	○
545	500	646	500	500	646
790	800	858	958	800	1740
175	150	150	150	150	150
2 zone valves	23kPa fix w. zone valve	23kPa fix w. zone valve	23kPa fix w. zone valve	13kPa fix w. zone valve	-
-	●	-	-	-	-
12 l/min	15 l/min	15 l/min	15 l/min	15 l/min	15 l/min
50°C	50°C	50°C	50°C	52°C	50°C
pH= 7-9	pH= 7-9	pH= 7-9	pH= 7-9	pH= 7-9	pH= 7-9
-	-	-	●	●	●
2,8 bar	2,8 bar	2,8 bar	2,8 bar	2,8 bar	2,8 bar
40 kPa	40 kPa	40 kPa	40 kPa	40 kPa	40 kPa
25 kPa	25 kPa	25 kPa	25 kPa	25 kPa	25 kPa
10 kW	10 kW	10 kW	10 kW	10 kW	10 kW
40 °K	40 °K	40 °K	40 °K	40 °K	40 °K

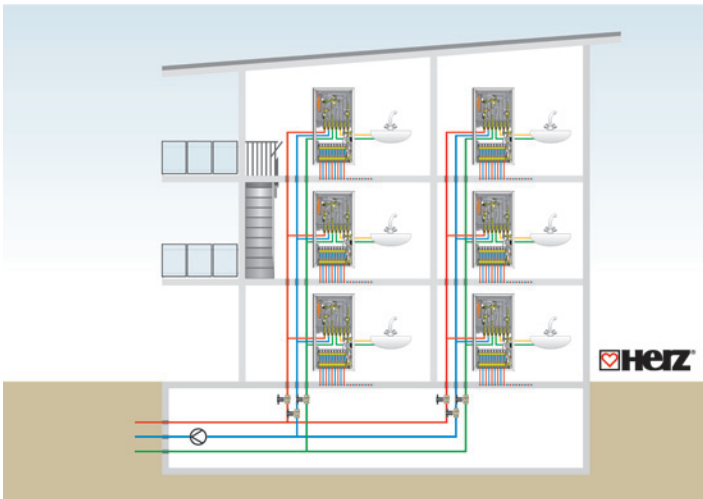
This brochure is to be used as a guideline only. We reserve the right to make changes in the event of technical advancements. The illustrations are understood to be symbolic representations and may therefore vary visually from the actual products. Any colour variations are dependent upon the printing technology used. Products may also vary according to the country. We reserve the right to make changes to technical specifications and functions. Its contents are recommendations from HERZ Armaturen Ges.m.b.H and are without any obligation. Content without assuming any obligation. Please contact your nearest branch of HERZ with any questions.

**HERZ HEATINTERFACE UNITS CAN ALSO BE EQUIPPED WITH A PRIORITY SETTING FOR HOT WATER TAP OPERATION AS AGAINST HEATING OPERATION**



**HEATING TEMPERATURE SYSTEM OF MORE THAN 70°C**

For applications with a heating temperature system of more than 70°C, HERZ always recommends the use of a thermostatic mixing valve to prevent the risk of scalding in any circumstances



**DEVICES WITH DIRECTLY CONNECTED PANEL HEATING DISTRIBUTORS**

As HERZ's latest product group of HIUs, devices with directly connected panel heating distributors and their own heating circulation pump are now available. Optionally with heat exchanger for system separation, as required by some energy suppliers. With HERZ panel heating distributors, the possibility exists to regulate the flow for each circuit, as well as for each individual room with actuator and room thermostat.

This additional function, activated by a control valve in conjunction with the patented HERZ pressure-temperature regulator, is only another element in the extensive range of features possible in decentralised water heaters operating on the continuous flow principle from HERZ.

Energy suppliers, property developers as well as installing companies have been convinced by the performance and sophisticated assembly concept of the wide range of individual solutions provided by HERZ HIUs. The practice-oriented assembly template, in particular, enables the installer time- and energy-saving workflows. In addition, the dispensing with any number of intermediate pieces or tubes, which would normally connect the device with the mounting profile shut-off ball valve, also saves material costs.

For the domestic heating connection, the zone valves installed in the device's heating return flow, together with integrated differential pressure regulator, create a compact physical unit, which is a considerable benefit both during commissioning and for maintenance purposes. In conjunction with, for example, preset HERZ TS-99-FV fine control valves on every radiator, the automatic hydraulic balancing for each housing unit is possible. For single-room control units, we recommend simple temperature adjusters or timers with time programs as well as reduced and pre-heating temperature time zones. The electrothermic actuators function as simple on/off drives, which - particularly in summer - simply switch the heating off.

For low return flow temperatures, we offer first of all return flow temperature controllers, which in conjunction with presettable control valves meet not only the comfort requirements of the consumers but also the operating regulations of the energy supplying companies.

All our HIUs are characterised by having a maximum depth of 150 mm. The requirements of property developers and energy suppliers for immediate detection of screw connection leakages are complied with by means of a specially designed collection tray for leakage water with front water outlet.

As with all HERZ products, the HIU components are exclusively manufactured in the European Union or Austria.

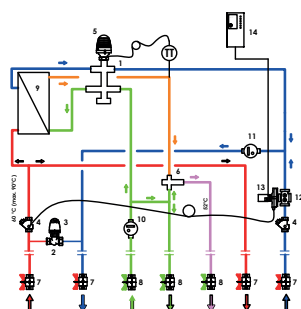
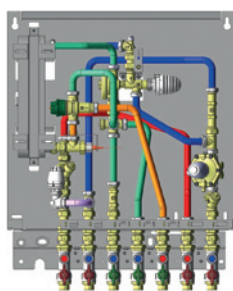
Our HIUs, which are customised to individual requirements, undergo acceptance tests in the HERZ laboratory in Vienna both by our own employees and the customer's experts before proceeding with series production. Practically every operating eventuality in the area of application of such devices can be simulated.

HERZ field personnel will provide expert on-site support with the proper dimensioning of the supply lines (including controller configuration of the differential pressure) as well as with the commissioning of HIUs. As with all components manufactured by HERZ itself, the approved customer protection cover will apply fully.

# Heat interface units

## Drinking water heating and heat distribution

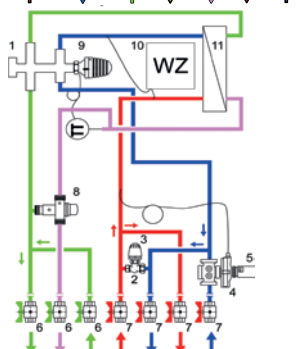
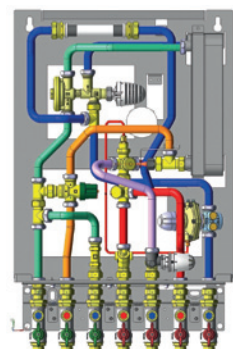
The control system consists of a heat exchanger with a HERZ regulator in the return flow, which, as a central unit in the HERZ HIU, enables the supply of hot water and the maintenance of a constant temperature. The differential pressure causes the diaphragm to open or close the flow of heating water and the cold water flow for the heat exchanger, while at the same time regulating the temperature of the hot water. A further key component of the HERZ HIU is the HERZ drinking water mixing valve, which (depending on the version used) mixes cold water and hot water to the temperature setting by means of a thermostat, thus preventing scalding from occurring when the water is drawn-off. The warm water is piped to the consumer via the HERZ ball valve.



### DELUXE

Version with plate heat exchanger and stainless steel piping. Permanent hot water supply standby using temperature-regulated bypass circuit. Differential pressure regulator for the heating circuit fix positioned with zone valve and thermic actuator for room temperature regulation. Application as flush-mounted station or surface-mounted with cover.

Stat. Cold water pressure min 3.5 bar. Draw-off rate 15 l/min (10/50°C), max. operating pressure 10 bar, max. VL temperature 90°C.

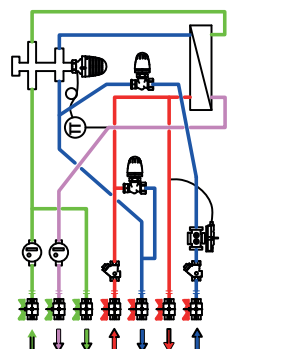
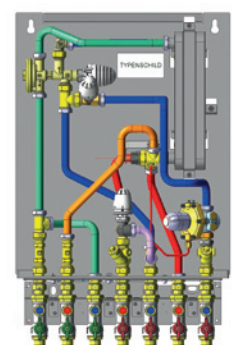


### BURGENLAND

Version with plate heat exchanger and stainless steel piping. Permanent hot water supply standby using temperature-regulated bypass circuit. Differential pressure regulator for the heating circuit fix positioned with zone valve and thermic actuator for room temperature regulation. Application as flush-mounted station or surface-mounted with cover.

Version compliant with BEGAS (Austrian energy supplier) specifications.

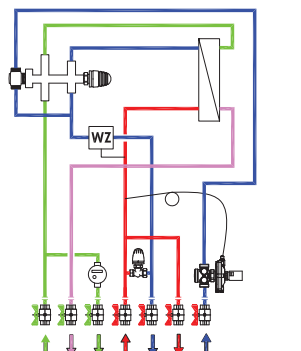
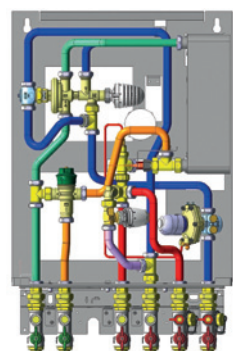
Stat. Cold water pressure min 3.5 bar. Draw-off rate 15 l/min (10/52°C), max. operating pressure 10 bar, max. VL temperature 90°C.



### GSWB „Salzburg“

Version with plate heat exchanger and stainless steel piping. Permanent hot water supply standby using temperature-regulated bypass circuit. Differential pressure regulator for the heating circuit fix positioned with zone valve and thermic actuator for room temperature regulation. Application as flush-mounted station or surface-mounted with cover. Additional return flow temperature limiter in the heat return flow, optional heat meter adaptor, hot water meter adaptor, collection tray to detect any leakages. Version compliant with the specifications of the Salzburg energy supply company.

Stat. Cold water pressure min 3.5 bar. Draw-off rate 15 l/min (10/50°C), max. operating pressure 10 bar, max. VL temperature 90°C.



### FWW „Wien“

Version with plate heat exchanger and stainless steel piping. Permanent hot water supply standby using temperature-regulated bypass circuit. Differential pressure regulator for the heating circuit fix positioned with zone valve and thermic actuator for room temperature regulation. Application as flush-mounted station or surface-mounted with cover. Additional collection tray to detect any leakages. Version compliant with the specifications of the Wien Energie - Fernwärme Wien energy supply company.

Stat. Cold water pressure min 3.5 bar. Draw-off rate 15 l/min (10/52°C), max. operating pressure 10 bar, max. VL temperature 90°C.



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