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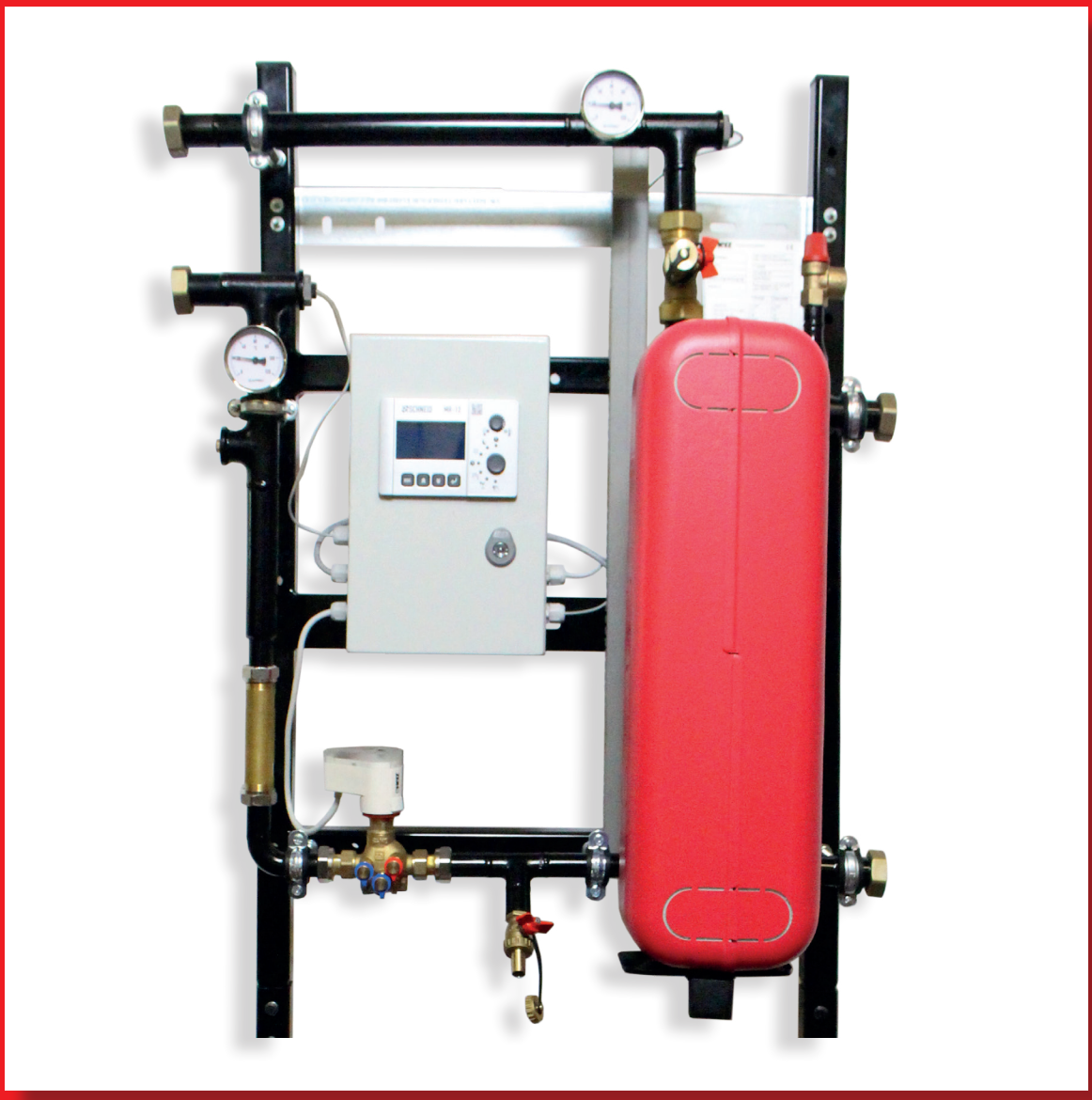
District Heating Substation compact

Heat and efficiency combined



Overview

HERZ District Heating Substations play a central role in the efficient distribution of heat in residential and industrial buildings. As the link between the district heating network and the consumers, the district heating transfer station transfers and measures the amount of heat supplied and enables integration into a remote monitoring and control system. Its benefits are of great importance both for the environment and for consumers.
The advantages of a district heating transfer station are numerous and not just limited to reduced greenhouse gas emissions. By distributing heat evenly, HERZ District Heating Substations contribute to the efficient use of energy. This serves to reduce energy consumption and the associated costs. The result: satisfied customers and a sustainable and efficient energy supply.

HERZ DISTRICT HEATING SUBSTATION

16 kW - 213 kW

the Heart of technology

5 JAHRE . 5 YEARS . 5 ANS . 5 JAAR GARANTIE

Benefits

- Compact design for wall-mounted or floor-standing installation
- Excellent insulation of heat exchanger and piping (optional)
- Optimized layout with good accessibility to components (for service and maintenance)
- Factory pressure-tested
- Developed and manufactured in the EU
- “Plug and heat” functionality: Saves on installation costs and time

Components for HERZ District Heating Substation 16 kW - 213 kW

The regulation

- for controlling the district heating substation;
- prepared for controlling a mixed heating circuit (3-point actuator, 230 V; sensor and actuator must be ordered separately);
- prepared for controlling an direct heating circuit (230 V; sensor must be ordered separately);

The combi valve **pressure independent control valve** ensures the dynamic maintenance of the pre-set flow rate and allows for the installation of a geared motor, optionally with a fail-safe function (accessory). This enhances safety and reliability in the event of a power failure by closing the valve.

The distance piece for the heat meter is installed in the return line.

Retrofit frame can be ordered as an accessory for HERZ district heating transfer stations.

The strainer with a drain valve is installed in the supply line on the primary side, preventing harmful foreign particles from entering the district heating transfer station. This also ensures the longevity of the components.

The pre-installed 3-bar **safety valve** ensures proper operation and provides overpressure relief, preventing damage to the components.

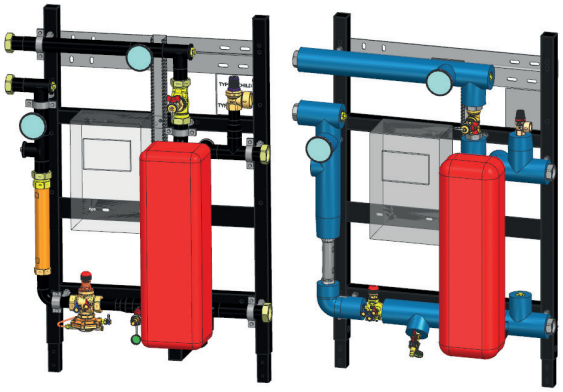
The stainless steel heat exchanger, insulated with rigid polyurethane foam, along with the corresponding piping, ensures low pressure losses on both the district heating side and the heating system side.

Models

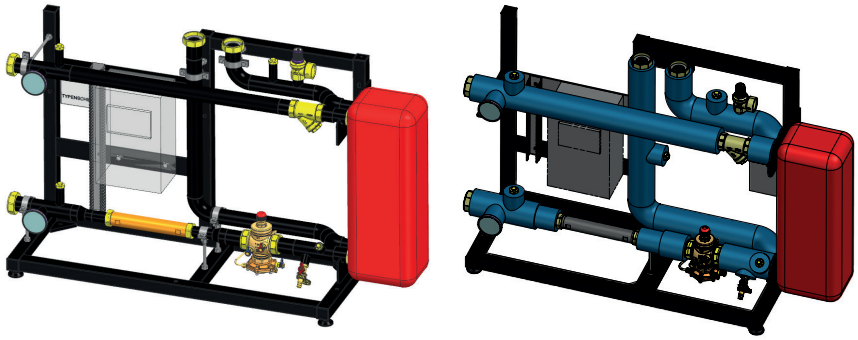
HERZ offers various models of district heating substations. The HERZ District Heating Substation stands out due to its particularly compact design. This model is ideally suited for supplying single- and multi-family homes, as well as commercial buildings, and is available in 13 different performance classes.

A generously sized stainless steel heat exchanger and the corresponding piping ensure low pressure losses on both the district heating and heating system sides. The temperature difference between the primary and secondary return lines is a maximum of 2 K during operation, as specified in the design tables.

On the district heating side, a HERZ combi valve with flow controller, together with a geared motor and control system, ensures energy-efficient operation. The pre-installed 3-bar safety valve on the heating side ensures proper function and provides overpressure protection. This prevents damage to the district heating transfer station and other components of the system.



Wall-mounted:
16 kW / 32 kW / 47 kW / 63 kW / 78 kW



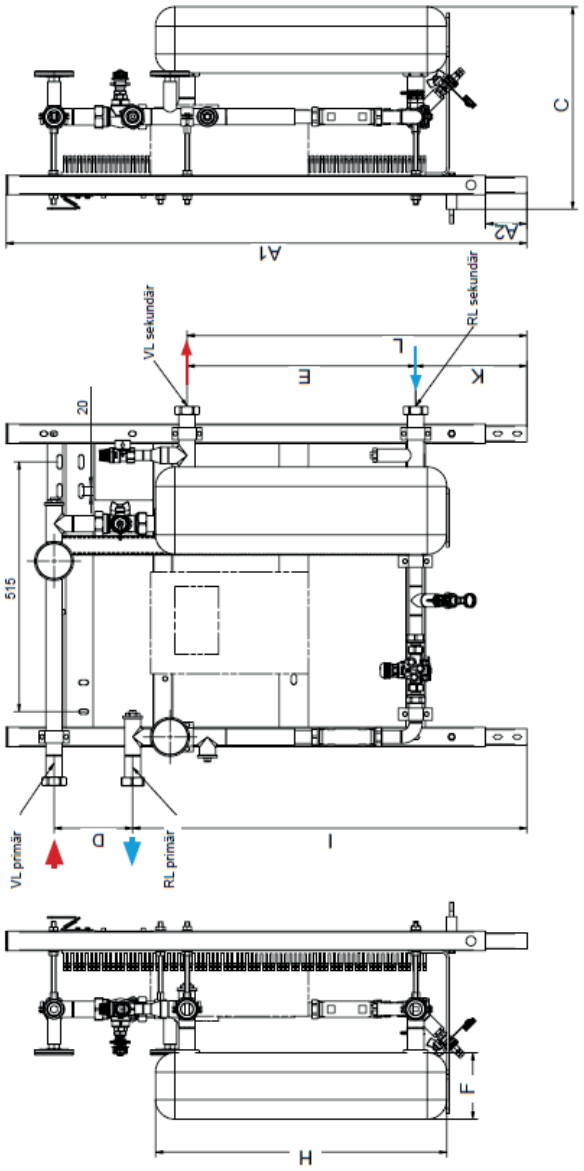
Standing:
93 kW / 108 kW / 122 kW / 135 kW / 148 kW / 172 kW / 194 kW / 213 kW

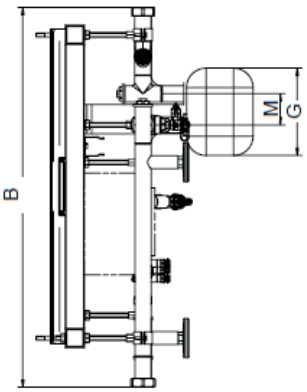
Technical data

Max. operating temperature primary:	100 °C
Max. operating temperature secondary:	90 °C
Max. operating pressure primary:	16 bar
Max. operating pressure secondary (sealed):	3 bar
Max. pressure loss on the primary side of the heat exchanger:	15 kPa
Max. pressure loss on the secondary side of the heat exchanger:	15 kPa
Max. temperature difference between secondary return and primary return (return gradient):	2 K
Electrical connection:	230 V AC

Order number	Output					PICV	Heat meter		Pipes	Union nut	
	60/32-45/30 °C	70/32-50/30 °C	80/32-60/30 °C	85/52-70/50 °C	90/52-75/50 °C	Dimension	Fitting	Union nut	Dimension	Primary	Secondary
	kW					DN	mm	„	DN	„	
D **H409** 01	11	15	14	16	14	15	130	1	25	1 ¼	1 ¼
D **H409** 02	23	31	40	32	36	20	130	1	25	1 ¼	1 ¼
D **H409** 03	34	46	67	47	56	20HF	190	1	25	1 ¼	1 ¼
D **H409** 04	46	61	93	63	75	25	190	1	32	1 ½	1 ½
D **H409** 05	57	76	116	78	94	25	260	1 ¼	32	1 ½	1 ½
D **H409** 06	68	91	137	93	113	32	260	1 ¼	40	2	2
D **H409** 07	78	105	159	108	131	32	260	1 ¼	40	2	2
D **H409** 08	89	119	179	122	149	32	260	1 ¼	40	2	2
D **H409** 09	98	132	199	135	166	32	260	1 ¼	50	2 ½	2
D **H409** 10	108	145	219	148	182	40	300	2	50	2 ½	2
D **H409** 11	126	168	254	172	215	40	300	2	50	2 ½	2
D **H409** 12	142	190	287	194	243	40	300	2	50	2 ½	2
D **H409** 13	156	209	316	213	267	50	300	2	50	2 ½	2

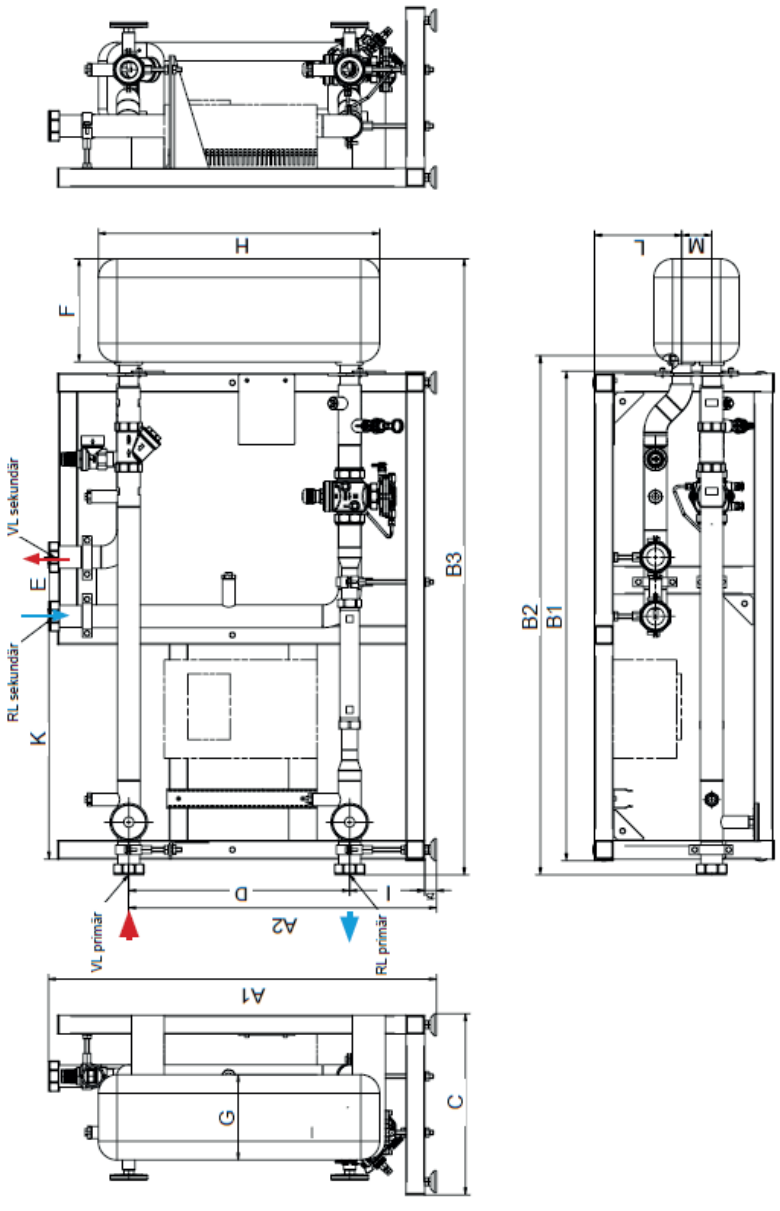
Dimensions, mm





Article number	A1	A2	B	C	D	E	F	G	H	I	K	L	M	Connec-tion VL/RL, primary	Connection VL/RL, se-condary	Overall length	Connection dimension
D **H409** 01	1073	85	783	381	162	471	137	180	600	812	229	700	64	1 ¼“	1 ¼“	130	G1“
D **H409** 02	1073	85	731	417	162	471	137	180	600	812	229	700	64	1 ¼“	1 ¼“	130	G1“
D **H409** 03	1073	85	731	454	162	471	175	182	600	812	229	700	64	1 ¼“	1 ¼“	190	G1“
D **H409** 04	1073	85	783	427	122	471	175	182	600	873	229	700	64	1 ½“	1 ½“	190	G1“
D **H409** 05	1073	85	783	471	124	471	220	182	600	871	229	700	64	1 ½“	1 ½“	260	G1 ¼“

Dimensions, mm



Article number	A1	A2	B1	B2	B3	C	D	E	F	G	H	I	K	L	M	Connec-tion VL/RL, primary	Connection VL/RL, se-condary	Overall length	Connection dimension
D **H409** 06	825	656	1.004	1.106	1.278	387	471	125	220	182	600	160	508	186	64	2“	2“	260	G1 1/4“
D **H409** 07	825	656	1.004	1.106	1.335	387	471	125	277	182	600	160	508	186	64	2“	2“	260	G1 1/4“
D **H409** 08	825	656	1.004	1.106	1.335	387	471	125	277	182	600	160	508	186	64	2“	2“	260	G1 1/4“
D **H409** 09	838	656	1.004	1.109	1.387	387	471	125	327	182	600	160	508	186	64	2 1/2“	2“	260	G1 1/4“
D **H409** 10	838	656	1.004	1.103	1.381	387	471	125	327	182	600	160	508	186	64	2 1/2“	2“	300	G2“
D **H409** 11	838	656	1.004	1.103	1.428	387	471	125	373	182	600	160	508	186	64	2 1/2“	2“	300	G2“
D **H409** 12	838	656	1.004	1.103	1.470	387	471	125	415	182	600	160	508	186	64	2 1/2“	2“	300	G2“
D **H409** 13	838	656	1.004	1.103	1.517	387	471	125	465	182	600	160	508	186	64	2 1/2“	2“	300	G2“

Accessories

Order number	Description	Image
D **H499** 30	**Control Unit „Schneid“:** • for controlling the district heating substation; • prepared for controlling a mixed heating circuit (3-point actuator, 230 V; sensor and actuator must be ordered separately); • prepared for controlling an direct heating circuit (230 V; sensor must be ordered separately); • expandable with the HK08 STANDARD heating circuit module or the MR12 AIN add-on board. Unit includes: MR12 control panel; MR12 basic terminal board AKP with 5 plug-in modules; HK08 STANDARD heating circuit module; CM12 communication base module; CM-MBM plug-in card module; CM-422 plug-in card module; MIDI housing with door (32.5 × 21 × 12 cm); outdoor sensor with plastic housing (D **H499** 11); 3 × immersion sensors, 2 m long (D **H499** 10); 6 × PG cable glands pre-installed in the housing (4 on the bottom, 2 on the right); fully wired.	
D **H499** 10	**PT1000 immersion sensor** Sleeve diameter 6 mm, nominal sensor length 6 x 50 mm, cable length 2 m; Protection class: IP65; Measuring range -50...+200 °C	
D **H499** 11	**PT1000 113 outdoor sensor, 3 x 66 x 50 mm** IEC/EN protection rating: IP65; IEC/EN protection class: III safety extra-low voltage (SELV); measuring range: -35...50 °C; max. ambient humidity 95% r.h., non-condensing; cable entry: cable gland with strain relief Ø 6...8 mm; electrical connection: plug-in spring-loaded terminal, max. 2.5 mm²	
D **H499** 12	**PT1000 contact sensor** Cable length: 2 m, protection class: IP54; measuring range: -30...+180°C	
1 **7708** 40	**HERZ geared motor 3-point** Adapter M 28 x 1.5 colour red integrated, 24 V, stroke distance max. 8.5 mm, max. actuation force 200 N, 24 V / AC / DC	
1 **7708** 41	**HERZ geared motor 3-point suitable for Control Unit „Schneid“** Adapter M 28 x 1.5 colour red integrated, 230 V, stroke distance max. 8.5 mm, max. actuation force 200 N, 230 V / AC	
1 **7708** 42	**HERZ geared motor DDC 0–10 V** Adapter M 28 x 1.5 colour red integrated, 24 V, stroke distance max. 8.5 mm, max. actuation force 200 N, 24 V / AC / DC, Steuersignal 0… 10 V / DC	
1 **7708** 46	**HERZ geared motor DDC 0–10 V** Adapter M 28 x 1.5 colour red integrated, 24 V, stroke distance max. 8.5 mm, max. actuation force 200 N. With valve port detection and feedback channel, 24 V / AC / DC, Steuersignal 0… 10 V / DC	
1 **7708** 47	**HERZ geared motor DDC 0–10 V fail safe** Adapter M 28 x 1.5 colour red integrated, 24 V AC/DC, stroke distance max. 8.5 mm, max. actuation force 200 N. With failsafe function, closes in case of power failure. With valve stroke detection and feedback channel.	
D **H409** 20	**Retrofit frame,** suitable for D **H409** 01, D **H409** 02, D **H409** 03, D **H409** 04, D **H409** 05, D **H410** 01, D **H410** 02, D **H410** 03, D **H410** 04, D **H410** 05	

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Herz Armaturen Ges.m.b.H.
Richard-Strauss-Strasse 22, Vienna, Austria
T: +43 1 616 26 31-0
E-Mail: office@herz.eu