

Fact sheet

ThermoDual®

Domestic hot water charging system for hospitals, hotels, restaurants, sport centres as well as industrial buildings and dwelling houses



Application

ThermoDual® is a compact and effective domestic hot water (DHW) charging system. It optimally combines the system of storage water heater and instantaneous water heating system. The ThermoDual® system is suitable for hospitals, hotels, restaurants, sport centres as well as industrial buildings and dwelling houses, where the constant DHW temperature even during peak consumption periods is needed. ThermoDual® can be supplied from local and district heating systems, low-temperature or condensing boilers, boiler systems as well as solar, process and waste heat systems. The system is available in two different types with integrated DHW storage tank and integrated brazed (-S) or gasketed (-GS) plate heat exchanger.

Domestic hot water (DHW)

The ThermoDual® system can be delivered with self-acting or electronic controller for controlling of the charging

temperature and the temperature in DHW storage tank. It ensures the constant DHW flow and temperature even during peak consumption periods. The system operates in three operation modes: a load low operation, a peak load operation and a charging operation (no consumption).

Domestic hot water circulation

ThermoDual® is supplied with connection for DHW circulation. The connection pipe of DHW circulation is placed directly on the storage tank or in the cold water side (between storage tank and heat exchanger).

Options

The system can be combined with a second or multiple DHW storage tanks for optimum tailoring to on-site conditions.

Construction

The DHW storage tank and plate heat exchanger are made of stainless steel. The ThermoDual® system is de-

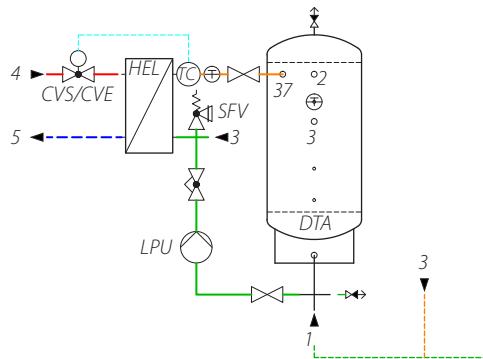
FEATURES AND BENEFITS

- DHW charging system
- Electronic or self - acting control of DHW temperature
- Performance index NL: 3 - 87 / 23 - 87¹
- Connected load: 22 - 150 / 60 - 150 kW¹
- Constant DHW temperature
- Compact design
- Easy installation

¹ ThermoDual®- S / - GS

livered as a set of DHW storage tank and charging unit with all required connection parts. The charging unit can be easily assembled with DHW storage tank through attached pre-mounted fitting set.

SCHALTSCEMA (BEISPIEL)



	<i>shut off device</i>	<i>DTA Domestic buffer tank</i>
	<i>balancing valve</i>	<i>HEL HEX charging / load</i>
	<i>sensor (direct, cable/universal, surface)</i>	<i>LPU Charging pump / load</i>
	<i>thermometer</i>	<i>SFV Safety valve</i>
	<i>drain/air vent (on site/by customer)</i>	<i>CVE Control valve electrical (accessory)</i>
		<i>CVS Control valve self-acting (accessory)</i>
Connections:		
1 Domestic water cold		

Connections:

- 1 Domestic water cold
- 2 Domestic water hot
- 3 Circulation (options)
- 4 Heating supply
- 5 Heating return
- 37 Domestic water load

Technical parameters:

Type – S	
Nominal pressure:	PN 25
DH supply temp.:	$T_{max} = 150 \text{ }^{\circ}\text{C}$
Type – GS	
Nominal pressure:	PN 3
DH supply temp.:	$T_{max} = 110 \text{ }^{\circ}\text{C}$

Options:

- Stainless steel DHW storage tank, series SE, capacity 100 ... 8000 liters
- DHW-adequate bronze or stainless steel charging pump
- Balancing valve
- Stainless steel sensor pockets
- Self-acting control valves as 2-way valve, 3-way mixing valve, or 3-way diverting valve, with thread or flange
- Control and safety thermostats, storage tank thermometer
- Additional storage tank

DHW: CAPACITY EXAMPLES

Type	DHW tem- peratures prim./sec. [°C]	Performance index NL ²	Con- nected load [kW]	DHW top delivery		Input W ³	Dimensions			Net weight [kg]	Connections			
				[l/10 min]	[l/h]		H [mm]	W [mm]	D [mm]		1, 2	3	4, 5	
-S	200-010	70->25/10->60	8	25	368	902	max. 87	1540	800	700	68	1½"	¾"	DN 20/25
	500-060		72	150	1294	4373		1765	1050	950	103	2"	1"	
	1000-060		87	150	1973	5051		2080	1150	1250	169	1½"	¾"	G 1¼"
	300-030		35	100	817	2864		1705	1375	975	150		1"	
-GS	500-020	65->35/10->60	30	60	925	2157		1765	1450	1100	173	1½"	1"	G 1¼"
	1000-050		87	150	1973	5051		2080	1570	1200	244			

2) Performance index NL acc. to DIN 4708 in relation to a storage tank water temperature of 60 °C.

3) Charging pump; A.C. 1 ~ 230 V / 50 Hz; thermal motor overload protection or motor protection by integrated thermo switch.