

Fact sheet

Thermo Clean®

Domestic water heating system for hospitals, sports centers, hotels as well as dwelling-houses



Application

ThermoClean® is a compact and effective system solution for legionella free domestic water heating. ThermoClean® is suitable for hospitals, sports centers, hotels and dwelling houses, where effectively prevent the development and growth of legionella is needed. The system is available in one type with separate reaction (-DL) These units are equipped with brazed plate heat exchangers.

Domestic hot water (DHW)

The ThermoClean® system uses the thermal disinfection method, whereby the reaction temperature inside the installation is kept at a constant temperature of 70 °C. It is dimensioned in such a way that the water is warranted to remain in the reaction area of the device for at least 5 minutes. The system is equipped with electronic controls for controlling of the charging temperature and the temperature in buffer storage tank.

Domestic hot water circulation

The ThermoClean® system is supplied with connection for DHW circulation including balancing valve and a nonreturn valve as a standard as well as circulation pump as an option.

Options

The ThermoClean®-DL systems can be combined with additional buffer storage tanks to provide the required capacity for peak consumption. The system can be also equipped with the over-tapping protection to prevent system cool-down during over tapping.

Construction

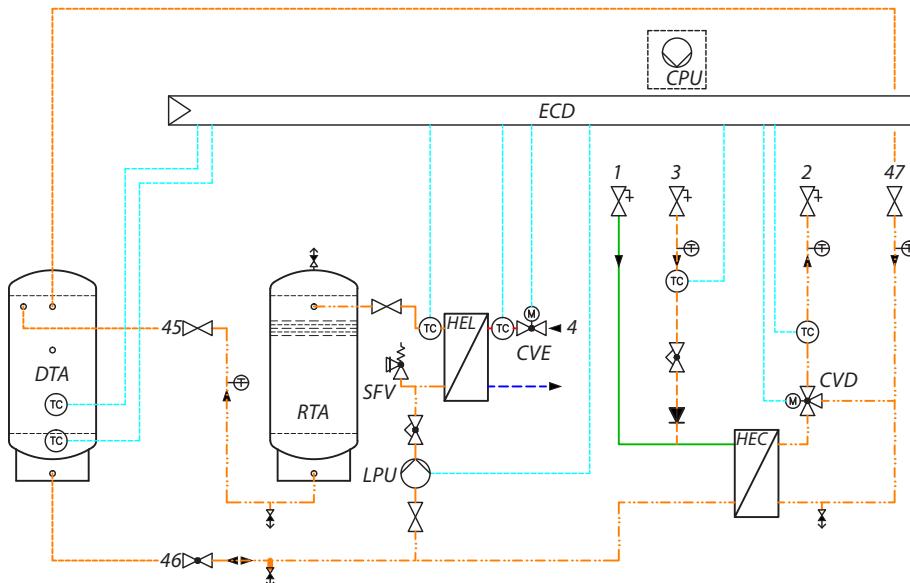
The combination and reaction storage tank, plate heat exchangers and piping are made of stainless steel. All pipe connections are made by welding. The charging and re-cooling unit is mounted on a separated common frame construction. After setup the unit should be connected with reaction (combination) storage tank.

FEATURES AND BENEFITS

- Domestic water heating system
- Electronic control of DHW temperature
- Max. capacity: 46-546/30-101 kW¹
- Reaction storage tank capacity: 200-1300/350-1000 l¹
- Reliable prevention of legionella bacteria
- Continuous thermal disinfection of DHW circulation
- Low operating cost
- Compact design and easy installation

1) ThermoClean®-DL

CIRCUIT DIAGRAM – EXAMPLE



RTA reaction tank/vessel
 HEL HEX charging/load
 HEC HEX cooling
 LPU charging pump/load
 CPU circulation pump (on site/by customer)
 SFV safety valve
 CVE control valve electrical
 ECD electronic controller DHW
 CVD control valve electrical domestic
 DTA domestic buffer tank (accessory)

- 1) domestic water cold
- 2) domestic water hot
- 3) circulation
- 4) heating supply
- 5) heating return
- 45) to domestic buffer tank (stainless steel) top
- 46) from domestic buffer tank (stainless steel) below
- 47) from domestic buffer tank (stainless steel) top

⊕ thermometer
 △ shut off device
 □ balancing valve
 ○ sensor (direct, cable/universal, surface)
 ▲ drain/air vent (on site/by customer)
 ▲ check valve
 ┴ sampling valve

Technical parameters:

Type -DL
 Nominal pressure: PN 16 (25)²
 DH supply temp.: T_{max} = 100 (150)² °C

2) Available on request

Options:

- Additional buffer storage tank

DHW: CAPACITY EXAMPLES

Type	Perfor-mance index NL ³	Con-nected load [kW]	Max. power for peak consump-tion [kW]	Circ. flow (max) [l/h]	Resistance			Dimensions			Weight [kg]	Connections				
					Heating water [kPa]	DHW (max) [kPa]	Circ. (max) [kPa]	H [mm]	W [mm]	D [mm]		1, 2	3	4, 5	45-47	
-DL	200	— ⁴	84 .. 46	140	1070 .. 1800	24	54	19	1730	1950	700	210	1 1/2"	1 1/4"	25/20	1 1/2"
	500	— ⁴	210 .. 114	350	2670 .. 4500	22	58	20	2090	2060	800	260	2 3/8"	1 3/4"	50/40	2 3/8"
	1000	— ⁴	420 .. 228	700	5330 .. 9000	29	65	27	2525	2570	1000	460	2 1/2"	2"	50/40	2 1/2"

3) Performance index NL acc. to DIN 4708

4) Dependent on the additional storage tank(s)

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