Type ESWH-...-1:

ECOTHERM water heaters with stainless steel storage tank and one heating coil

Design

Water heaters made of stainless steel with a welded in, heating coil with round profile for optimal performance, bath pickled, low maintenance, suitable for thermosiphon system, cleaning flange DN 200 for cleaning purpose or for the installation of an additional heat exchanger or electric screw-in heater, cold water supply at front.

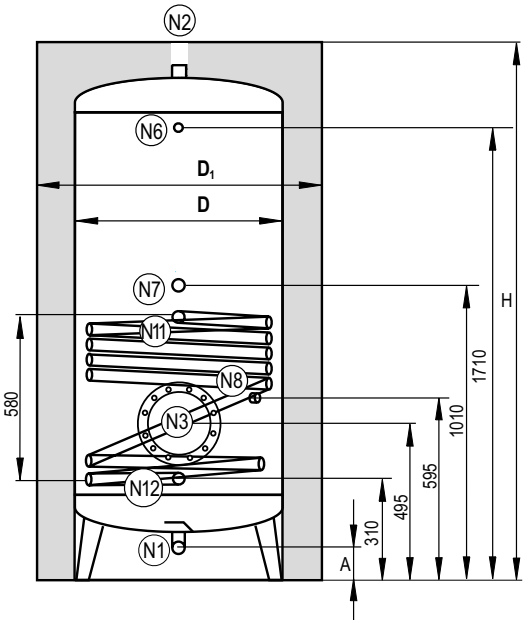
- Nearly 100% volume usage
- Suitable for thermosiphon system (without pump)
- Optimized hygiene

Accessories see pages 37–39

Fiber-fleece insulation

Storage insulation made of fiber-fleece with robust PP outer sheathing RAL7037, patented aluminum closure strip and self-fixing sleeve caps, quick and easy installation, insulation thickness 80 mm up to 1,000 liters and above 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).

Connections and installation heights (mm)



Type	Storage tank capacity (liters)	max. Operating pressure	Test pressure
Storage tank	200 - 540	10 bar	13 bar
Storage tank	800 - 1,000	6 bar	7.8 bar
Heat exchanger	-	10 bar	13 bar

Connection	Size	Sleeve position °	Description
N1 up to 540L	1" MT	180°	Cold water inlet / drain
N1 from 800L	6/4" MT	180°	Cold water inlet / drain
N2	6/4" FT	top	Hot water outlet
N3	DN 200	180°	Cleaning flange
N6	1/2" FT	180°	Thermometer
N7	6/4" FT	180°	Electric screw-in heater
N8	1/2" FT	135°	Temperature sensor
N11	1" MT	180°	Heat exchanger inlet
N12	1"MT	180°	Heat exchanger return

Storage tank type	Capacity litre	A mm	D mm	D_1 mm	H mm	Tilt height mm	Tank weight kg	Register surface HE1 m^2
ESWH-200-1	200	100	500	660	1,420	1,400	45	0.9
ESWH-300-1	300	100	500	660	1,920	1,900	55	0.9
ESWH-540-1	540	90	650	810	1,940	1,940	70	1.2
ESWH-800-1	800	80	790	1,000	1,960	1,950	115	1.8
ESWH-1000-1	1,000	70	890	1,110	1,985	1,950	135	1.8

ECOTHERM
HEAT TRANSFER SOLUTIONS

ESWH-...-1 Performance data - HE1

Hot water output at primary temperatures 80 ° → 60 ° C

Storage tank type	Domestic water 10°C → 45°C					Domestic water 10°C→ 60°C			
	kW	45°C l/h	primary m³/h	Pressure loss mbar	NL index	kW	60°C l/h	primary m³/h	Pressure loss mbar
ESWH-200-1	22.7	558	1.0	14	6	13.4	304	0.8	9
ESWH-300-1	22.7	558	1.0	14	7	13.4	304	0.8	9
ESWH-540-1	30.3	744	1.3	40	13	17.9	405	1.0	24
ESWH-800-1	45.4	1,116	2.0	144	22	26.8	608	1.5	81
ESWH-1000-1	45.4	1,116	2.0	144	25	26.8	608	1.5	81

NL = Performance index according to DIN 4708: primary 80°C ⟶ 60°C, domestic water 10°C ⟶ 45°C, storage volume heated up to 60°C.

Hot water output at primary temperatures 70 ° → 50 ° C

Storage tank type	Domestic water 10°C ⟶ 45°C					Domestic water 10°C ⟶ 60°C			
	kW	45°C l/h	primary m³/h	Pressure loss mbar	NL index	kW	60°C l/h	primary m³/h	Pressure loss mbar
ESWH-200-1	17.2	423	0.74	8	5	11.7	201	0.8	0.5
ESWH-300-1	17.2	423	0,74	8	6	11.7	201	0.8	0.5
ESWH-540-1	23.0	565	1.0	24	10	15.6	268	1.0	0.7
ESWH-800-1	34.5	847	1.5	81	18	23.4	402	1.5	1.0
ESWH-1000-1	34.5	847	1.5	81	21	23.4	402	1.5	1.0

NL = Performance index according to DIN 4708: primary 80°C ⟶ 60°C, domestic water 10°C ⟶ 45°C, storage volume heated up to 60°C.

Heat exchanger pressure loss ESWH-...-1

Storage tank type	Pressure loss in mbar at				Flow rate resistance factor (z)
	1 m³/h	1.5 m³/h	2 m³/h	3 m³/h	
ESWH-200-1	14	32	56	126	14
ESWH-300-1	14	32	56	126	14
ESWH-540-1	24	54	96	216	24
ESWH-800-1	36	81	144	324	36
ESWH-1000-1	36	81	144	324	36

Formula for calculating pressure loss

$$mbar = (m^3/h)^2 * z$$

mbar = pressure loss primary circuit
m³/h = flow rate
z = flow rate resistance factor

Sleeve position