



Type ESWH-...-2: ECOTHERM water heaters with stainless steel storage tank and two heating coils



Design

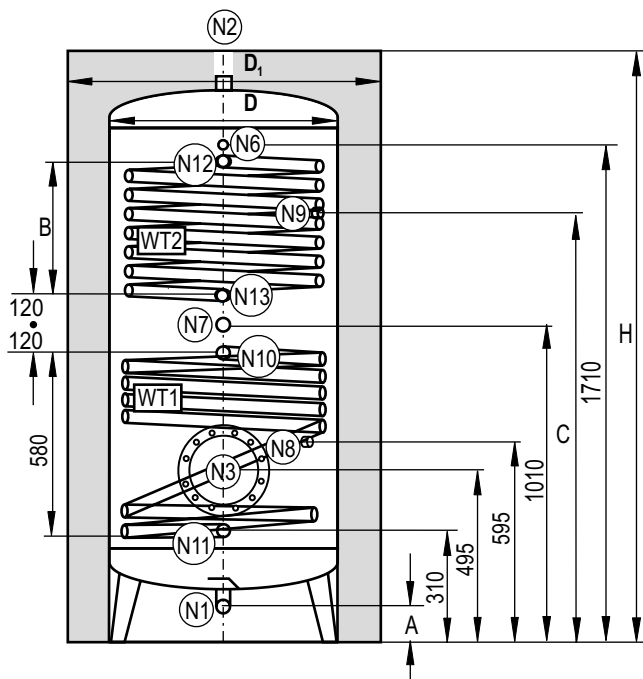
Water heaters made of stainless steel with two welded heating coils with round profile for optimal performance, bath pickled, low maintenance, suitable for thermosiphon system, cleaning flange DN 200 for cleaning purpose or for installation of an additional heat exchanger or electric screw-in heater,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

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

Fiber-fleece insulation

Storage tank 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	above	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 1
N9	1/2" FT	135°	Temperature sensor 2
N11	1" MT	180°	HE1 lower heat exchanger inlet
N12	1" MT	180°	HE1 lower heat exchanger return
N13	1" MT	180°	HE2 upper heat exchanger inlet
N14	1" MT	180°	HE2 upper heat exchanger return

Storage tank type	Capacity liters	A	B	C	D	D ₁	H	Tilt height	Storage tank weight kg	Register surface	
		mm	mm	mm	mm	mm	mm	mm		HE1 m ²	HE2 m ²
ESWH-300-2	300	100	390	1,340	500	660	1,920	1,900	55	0.9	0.6
ESWH-540-2	540	90	450	1,380	650	810	1,940	1,940	85	1.2	0.9
ESWH-800-2	800	80	450	1,380	790	1,000	1,960	1,950	130	1.8	1.2
ESWH-1000-2	1,000	70	450	1,380	890	1,110	1,985	1,950	150	1.8	1.2



Single operation / Parallel operation

The two heat exchangers can be used in **single operation** as well as in **parallel operation**.

Single operation: HE1 or HE2

ESWH-...-2 Performance data - HE 1 (only lower heat exchanger)

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-300-2	22.7	558	1.0	14	7	13.4	304	0.8	9
ESWH-540-2	30.3	744	1.3	40	13	17.9	405	1.0	24
ESWH-800-2	45.4	1,116	2.0	144	22	26.8	608	1.5	81
ESWH-1000-2	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.

ESWH-...-2 Performance data - HE 2 (only upper heat exchanger)

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-300-2	15.1	372	0.65	5	5	11.8	203	0.5	4
ESWH-540-2	22.7	558	1.0	14	10	13.4	304	0.8	9
ESWH-800-2	30.3	744	1.3	41	17	17.9	405	1.0	24
ESWH-1000-2	30.3	744	1.3	41	19	17.9	405	1.0	24

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.

Parallel operation: HE1 and HE2

Hot water output at parallel operation (both heat exchangers) at primary temperatures 80°C → 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-300-2	34	852	1.5	13	11	27	465	1.2	9
ESWH-540-2	48	1,193	2.0	38	19	38	650	1.6	24
ESWH-800-2	69	1,705	3.0	135	31	54	929	2.3	80
ESWH-1000-2	69	1,705	3.0	135	34	54	929	2.3	80

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.

Pressure loss (for formula used to calculate the pressure loss, see pages 7, 9 and 11)

Storage tank type	Pressure loss upper heat exchanger in mbar at				Flow rate resistance factor (z)	Pressure loss lower heat exchanger in mbar at				Flow rate resistance factor (z)
	1 m³/h	1.5 m³/h	2 m³/h	3 m³/h		1 m³/h	1.5 m³/h	2 m³/h	3 m³/h	
ESWH-300-2	14	32	56	126	14	10	23	40	90	10
ESWH-540-2	24	54	96	216	24	14	32	56	126	14
ESWH-800-2	36	81	144	324	36	24	54	96	216	24
ESWH-1000-2	36	81	144	324	36	24	54	96	216	24

Total pressure loss serial circuit = pressure loss lower HE + pressure loss upper HE