HEATING AND ACCUMULATION OF WATER FOR DHW NEEDS

TECHNICAL DESCRIPTION

The water heater is designed to heat water using a lower coiled heat exchanger from various sources, as well as to accumulate and store it for domestic hot water needs. The tank's design includes a flanged inspection hatch with a cover, intended for periodic service maintenance of the tank. Above the heat exchanger, a fitting is provided for installing a tubular electric heater (TEN) .

Tank	
P	T
8 bar	95 °C
Coils	
P	T
10 bar	95 °C

MATERIAL

The tank is made of AISI 316L (DIN 1.4404) stainless steel, meeting the highest hygienic requirements.

HEAT EXCHANGERS

The heat exchangers are made of AISI 304L (DIN 1.4307) stainless steel.

WARRANTY

5 years

THERMAL INSULATION

PL/ABS – 50 mm polyester insulation in an ABS plastic casing with plastic latches

PS/ABS – high-efficiency rigid graphite polystyrene insulation in an ABS plastic casing. Premium-class insulation – complies with all requirements of the **ErP 2009/125/EC Directive**

Model	Tank volume, l	Lower coil		Energy efficiency class of insulation*
		S coil 1, m²	V coil 1, l	
120	124	0,51	2,7	A**/B
170	169	1,03	5,5	A**/C
200	214	1,03	5,5	A**/C
300	305	1,54	8,2	A**/C

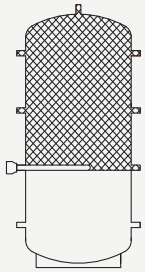
*Energy efficiency class specified for PS/ABS insulation

** For insulation thickness of 100 mm.

CUSTOM DRAW

Water heaters can be designed and manufactured according to customer requirements, allowing for modifications in dimensions and connection configurations.

ACCESSORIES

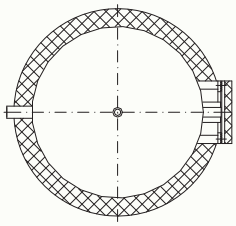


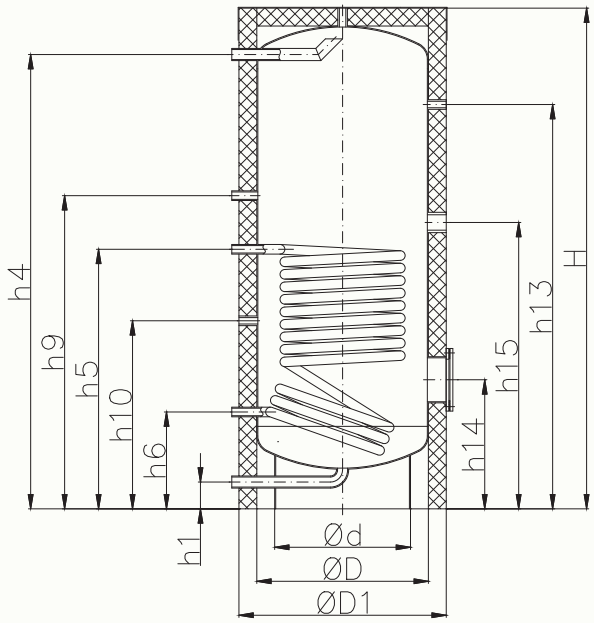
Electric heat elements

Model	Heating zone volume, liters	2 Kw	3 kW	4,5 kW
		1~220		3~400
		Heating time for ΔT=20°, minutes		
120	46	56	37	25
170	53	65	43	29
200	99	121	80	54
300	151	184	123	82

For alternative mounting of the electric heat element, a flange adapter is used

DIMENSIONS AND CONNECTION



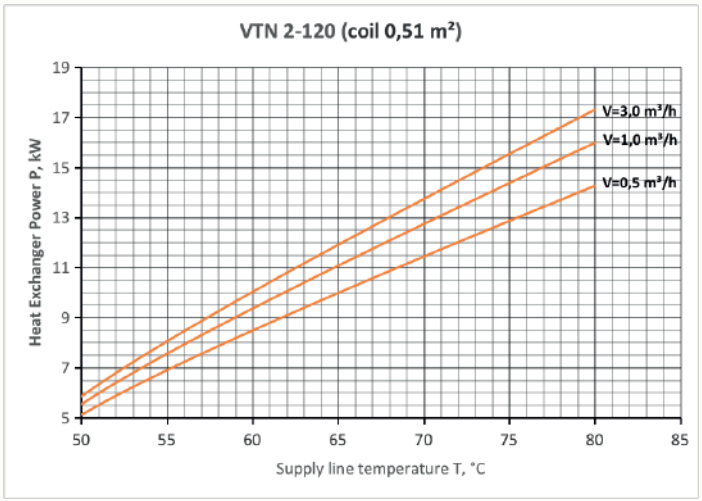


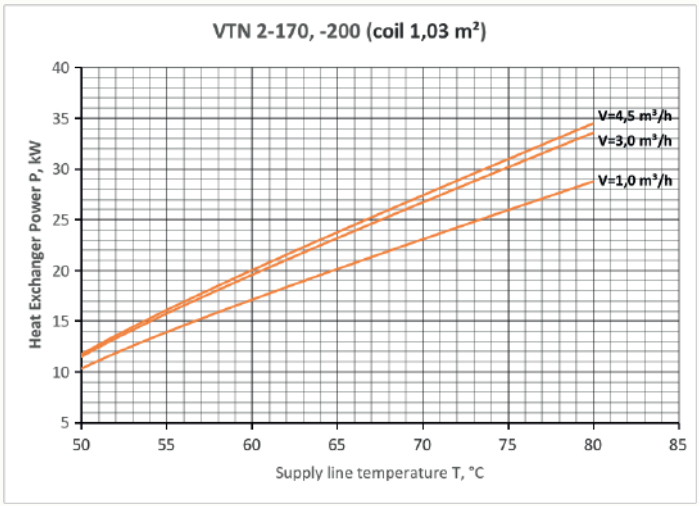
DESIGNATION	
H	Air vent
h1	Cold water supply, drainage
h4	Hot water outlet
h5-h6	Supply and return mains of the lower heat exchanger (Coil 1)
h9	Recirculation
h10-h13	Connections for control, regulation, and measuring equipment
h14	Flange, Ø115 мм
h15	Connection for electric heat element

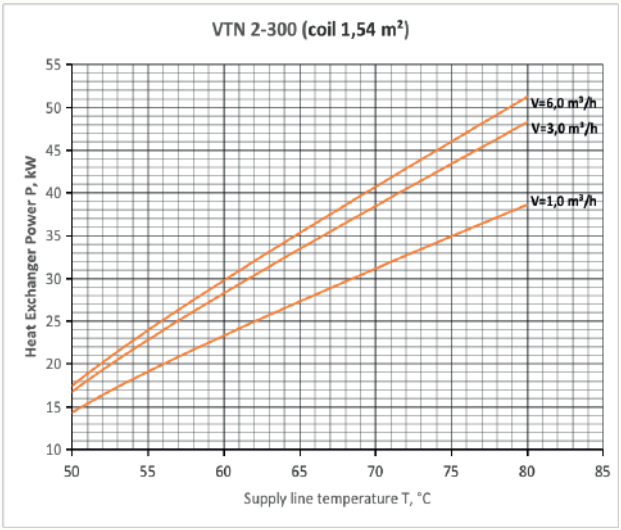
Model	Dimensions, mm				Connection sizes, mm								
	ØD1	ØD	Ød	H	h1	h4	h5	h6	h9	h10	h13	h14	h15
120	580	480	380	900	75	761	506	261	606	356	621	351	581
				1/2"	3/4"					1/2"			1 1/2"
170	580	480	380	1150	75	1011	716	261	816	566	871	351	791
				1/2"	3/4"					1/2"			1 1/2"
200	580	480	380	1410	75	1271	726	271	876	526	1131	361	801
				1/2"	1"		3/4"			1/2"			1 1/2"
300	580	480	380	1910	75	1771	936	271	1186	636	1631	361	1011
				1/2"	1"		3/4"			1/2"			1 1/2"

LOWER HEAT EXCHANGER POWER

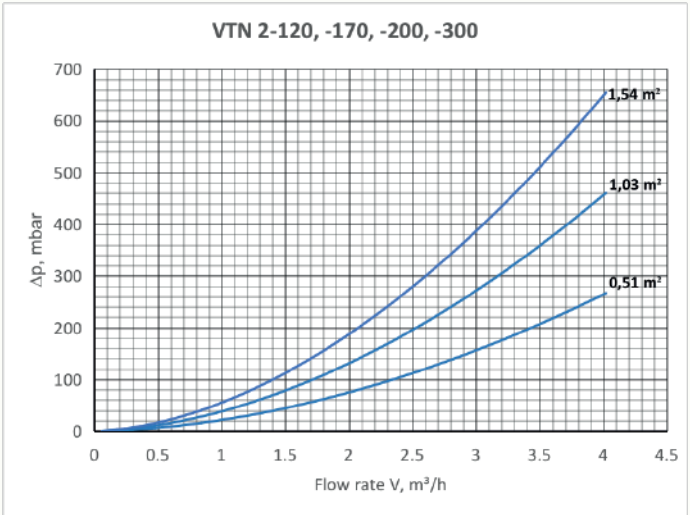
The power of the lower heat exchanger P, kW, is presented as dependent on the heat transfer fluid temperature T, °C, of the supply line to the heat exchanger at a specific circulation rate of the heat transfer fluid V, m³/h, in the latter.







PRESSURE LOSSES OF THE LOWER HEAT EXCHANGER

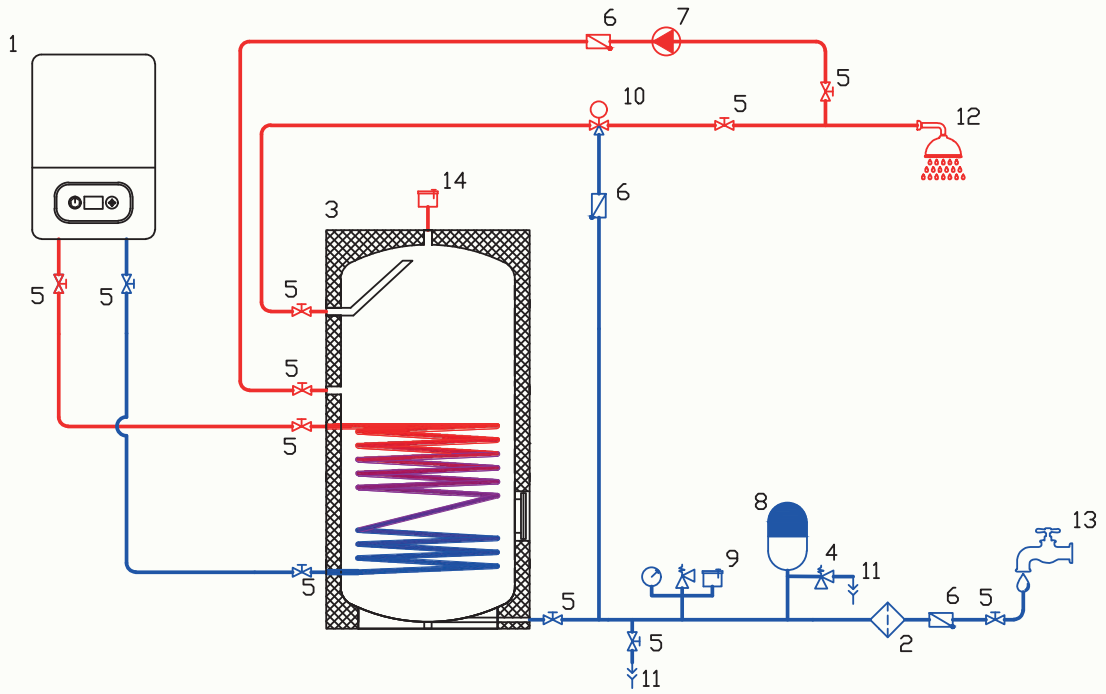


DHW OUTPUT (LOWER HEAT EXCHANGER)

Model	Area of the lower coil	Usable volume of the tank	Circulation of the heat transfer fluid in the lower coil	Power of the lower coil at the supply heat transfer fluid temperature T, under the condition of heating water in the tank from 10 to 45°C with its continuous consumption				Maximum DHW output at constant continuous load (heating DHW from 10 to 45°C) at the supply heat transfer fluid temperature T into the lower coil, with the heating source activated (lower coil only)				Maximum DHW output at 45°C with the tank heated to t, with the heating sources turned off			
	m²	l	m³/h	kW				l/h				l			
				T, °C				T, °C				t, °C			
				55	65	70	80	55	65	70	80	55	60	65	70
120	0,51	104	0,5	6,9	10,0	11,4	14,3	170	246	281	352	133	148	163	178
			1,0	7,5	11,1	12,7	16,0	185	273	313	394				
170	1,03	145	1,0	13,9	20,1	23,0	28,7	342	495	567	707	187	208	228	249
			3,0	15,7	23,1	26,7	33,5	387	569	658	825				
200	1,03	190	1,0	13,9	20,1	23,0	28,7	342	495	567	707	245	272	299	326
			3,0	15,7	23,1	26,7	33,5	387	569	658	825				
300	1,54	278	1,0	19,0	27,3	31,1	38,6	468	672	766	951	357	397	437	476
			3,0	22,8	33,4	38,4	48,2	562	823	946	1187				

EXAMPLE OF A SCHEMATIC DIAGRAM

The schematic diagram does not replace qualified installation:
during design, relevant standards and regulations must be followed.



DESIGNATION

1 Gas/electric boiler
2 Mesh filter
3 VTN 2 water heater
4 Safety valve
5 Ball valve
6 Check valve
7 Circulation pump
8 Expansion tank
9 Safety group
10 Three-way mixing valve
11 Drainage
12 Domestic hot water system
13 Water supply system
14 Air vent