DESIGNED FOR HEAT ACCUMULATION IN HEATING SYSTEMS

TECHNICAL DESCRIPTION

The storage tank is engineered to accumulate thermal energy from various sources, including solar collectors via the lower heat exchanger.

MATERIAL

The tank is constructed from S235JR (DIN 1.0038) carbon structural steel. The external coating provides enhanced resistance to mechanical impacts and aggressive environments.

HEAT EXCHANGERS

Lower Heat Exchanger (External Heating Circuit): Manufactured from C22 (DIN 1.0402) carbon steel.

WARRANTY

5 years

THERMAL INSULATION

PL/PVC – 100 mm polyester insulation encased in zippered PVC fabric

PU/PVC – 90 mm flexible polyurethane foam insulation encased in PVC fabric secured with straps.

PL/ABS – 100 mm polyester insulation encased in ABS plastic with plastic latches

PS/ABS – 100 mm high-efficiency rigid graphite-expanded polystyrene insulation encased in ABS plastic. Premium-class insulation, fully compliant with **ErP 2009/125/EC Directive** requirements

CUSTOM DRAW

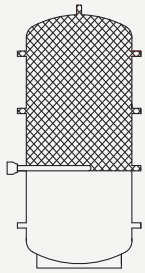
Design and production of water heaters tailored to customer specifications are available, including modifications to dimensions, connection configurations, and heat exchanger parameters.

Tank		Heat Exchanger for the External Heating Circuit	
P	T	P	T
3 bar	95°C	6 bar	95°C

Model	V tank, l	Heat exchanger of the external heating circuit		Energy efficiency class of insulation*
		S coil 1, m²	V coil 1, l	
400	413	1,5	10	B
500	483	1,5	10	B
750	773	1,5	10	C
1000	1008	1,8	15,5	C
1500	1449	2,3	19,5	C
2000	2158	2,3	19,5	C

*Energy efficiency class specified for PS/ABS insulation

ACCESSORIES

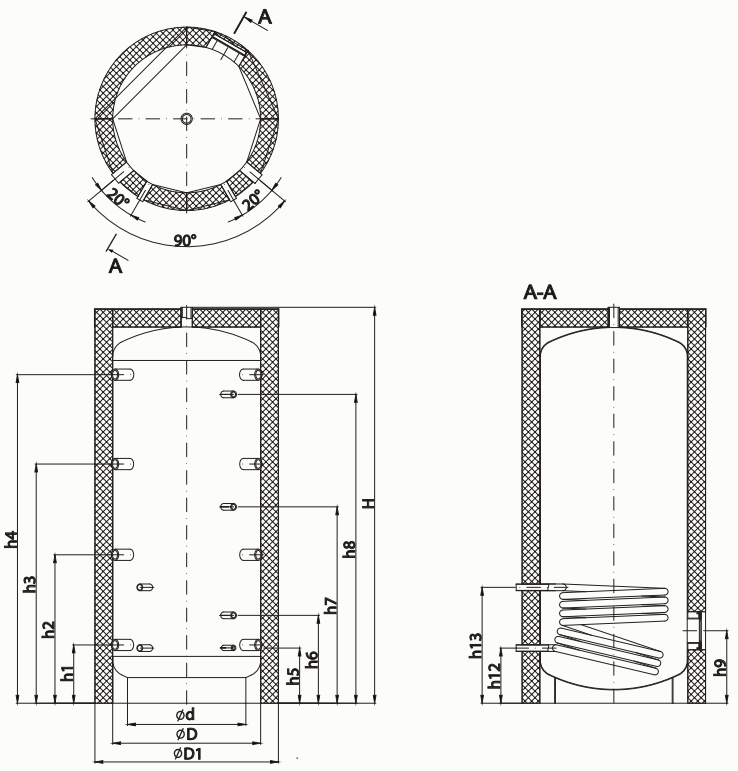


Electric heat elements

Model	Heating zone volume, liters	2 kW	3 kW	4,5 kW	6 kW	7,5 kW	9 kW	12 kW	15 kW
		1~220		3~400					
		Heating time for ΔT=20°, minutes							
400	212	148	98	66	49	39	33	-	-
500	309	215	144	96	72	57	48	-	-
750	500	348	232	155	116	93	77	58	-
1000	650	453	302	201	151	121	101	75	60
1500	926	645	430	287	215	172	143	108	86
2000	1370	954	636	424	318	255	212	159	127

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

DIMENSIONS AND CONNECTION



DESIGNATION

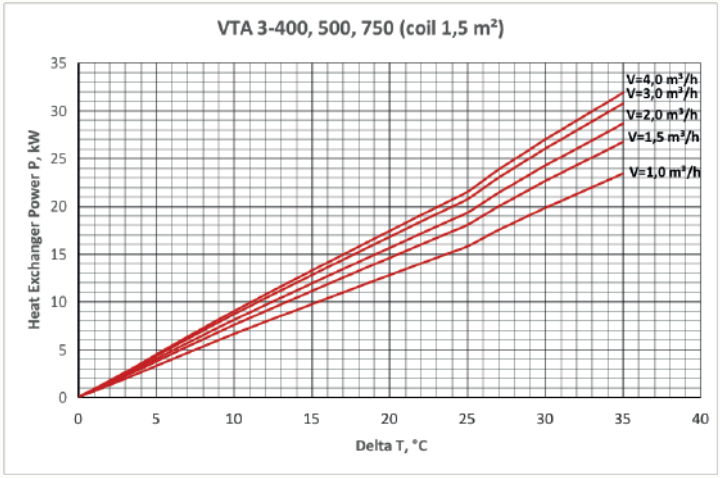
H, h1-h4	Connection of supply and return mains of heating circuits
h5	Technological connection
h6-h8	Connections for temperature sensors
h9	Flange, Ø120 mm
h12-h13	onnections for supply and return lines of the external heating circuit (Coil 1 - lower heat exchanger)

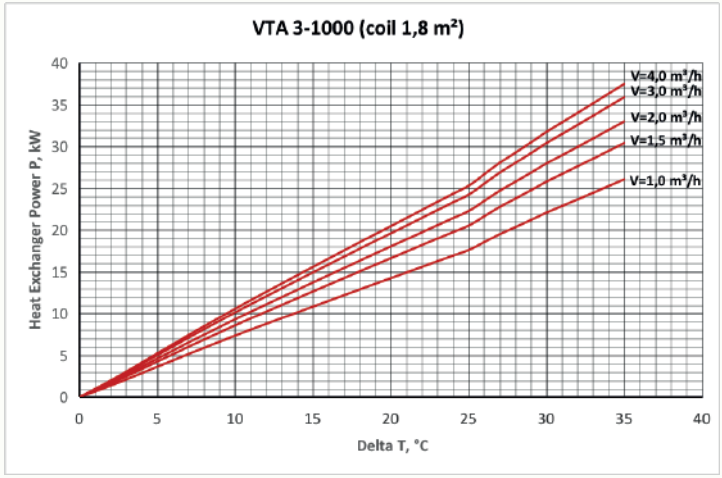
Model	Dimensions, mm				Connection sizes, mm										
	øD1	øD	ød	H	h1	h2	h3	h4	h5	h6	h7	h8	h9	h12	h13
400	800	600	450	1700	264	834	-	1406	249	414	-	1256	336	248	688
					1 1/2"				1/2"	3/4"				1"	
500	800	600	450	1995	264	741	1181	1634	249	414	964	1534	336	248	688
					1 1/2"				1/2"	3/4"				1"	
750	950	750	600	2010	295	752	1212	1665	280	445	995	1565	367	279	631
					1 1/2"				1/2"	3/4"				1"	
1000	1050	850	700	2060	323	780	1240	1693	308	473	1023	1593	395	311	661
					1 1/2"				1/2"	3/4"				1 1/4"	
1500	1200	1000	850	2150	368	825	1285	1738	353	518	1068	1638	440	356	706
					1 1/2"				1/2"	3/4"				1 1/4"	
2000	1400	1200	1000	2250	419	876	1336	1789	404	569	1119	1689	491	407	707
					1 1/2"				1/2"	3/4"				1 1/4"	

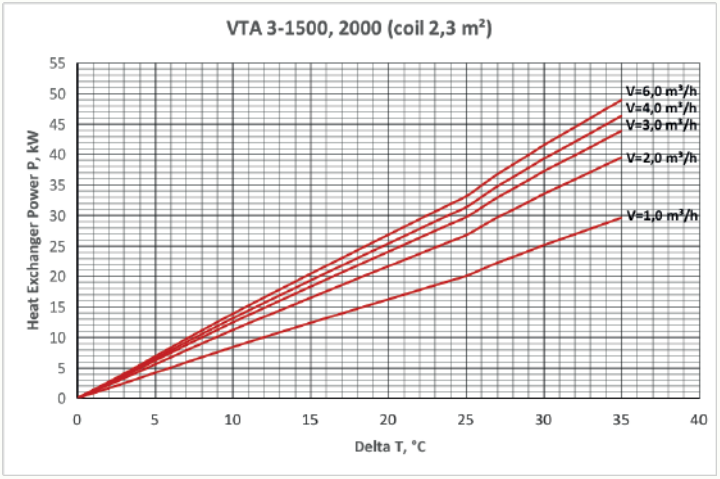
LOWER HEAT EXCHANGER CAPACITY

The capacity of the lower heat exchanger, P (kW), is presented as a function of the temperature difference, ΔT (°C), between the heat transfer fluid supply entering the heat exchanger and the average tank temperature in the lower heat exchanger zone, at a specific circulation rate of the heat transfer fluid, V (m³/h), within the exchanger

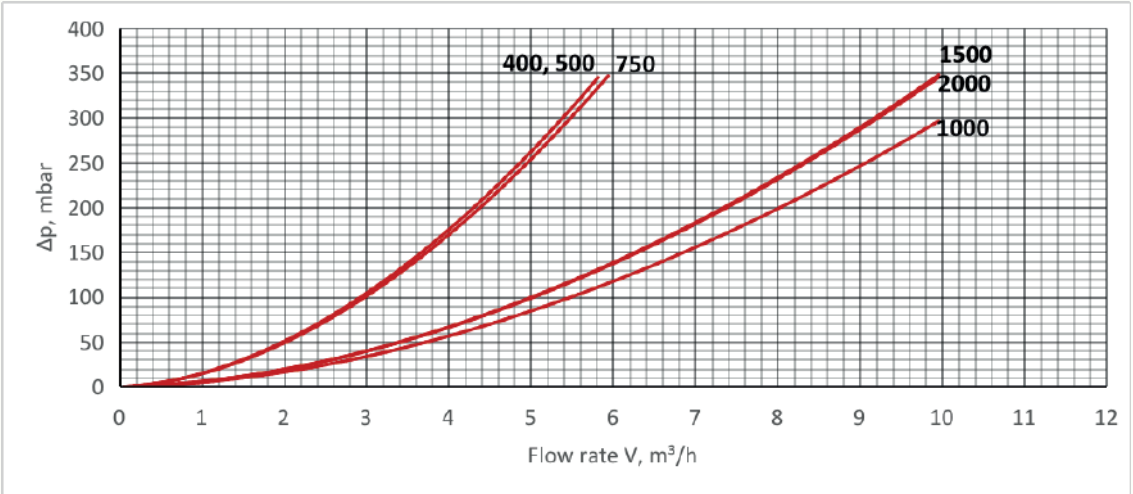
For example, consider a VTA 3-750 water heater tank where the average temperature in the lower heat exchanger zone is 40°C, and the heat transfer fluid flowing through the exchanger has a temperature of 70°C with a circulation rate of 2 m³/h. In this case, the temperature difference ΔT = 70 - 40 = 30°C, and the approximate capacity of the lower heat exchanger is 24 kW.





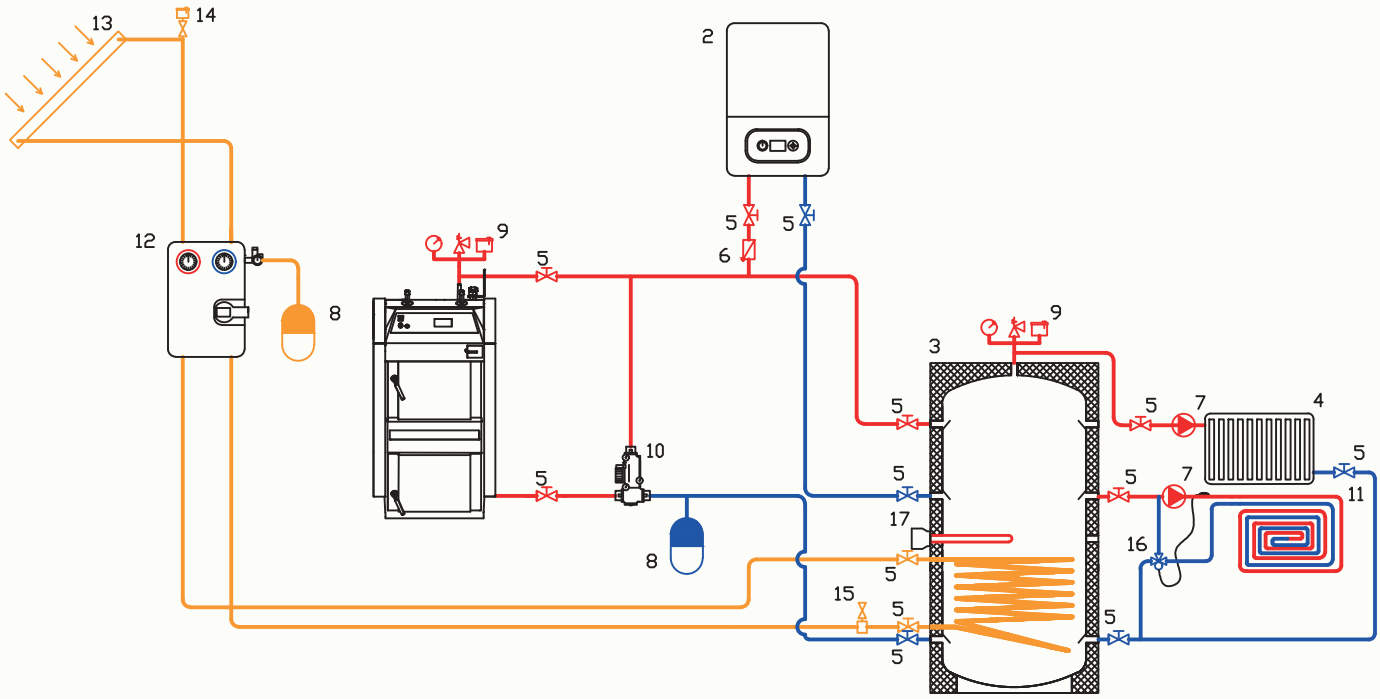


PRESSURE LOSSES OF THE LOWER HEAT EXCHANGER



EXAMPLE OF A SCHEMATIC DIAGRAM

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



DESIGNATION

1	Solid fuel boiler	7	Circulation pump	13	Solar collector (solar circuit)
2	Gas or electric boiler	8	Expansion tank	14	Air vent for the solar circuit
3	VTA 3 storage tank	9	Safety group	15	Automatic air vent for the solar circuit
4	Radiator heating circuit	10	Thermomixing device Laddomat	16	Three-way valve with remote sensor for the "warm floor" system
5	Ball valve	11	"Warm floor" heating circuit	17	Electric heat element
6	Check valve	12	Circulation pump		