

### THE ACCUMULATION TANKS ATTACK® AK/AS, HR/HRS, TUV/TUVS, S/SS







WWW.ATTACK.SK



### **CONTENTS**

1. General information
2. Description of device
2.1. Type
2.2. Thermal insulation
2.3. Specification
3. Technical data and dimensions
4. Operation
5. Installation
5.1. Connection to the heat source
5.2. Connection of the electrical heating bodies
6. Putting into the operation
7. Maintenance
8. Disposal

### THE ATTACK ACCUMULATION TANKS

The ATTACK, s.r.o. company is the largest manufacturer of the accumulation tanks in Slovakia with the widest offer of these items.

### 1. GENERAL INFORMATION

This instruction manual is an inseparable and important part of the product. Read the instructions given in this manual carefully, as they contain important information about safety, installation, usage and maintenance. Keep this manual to be eventually used in future. This appliance is constructed for accumulation and subsequent distribution of the heat energy from the heat sources as well as for preparation of the D.H.W.

It is forbidden to use this appliance for other purposes than given above (e.g. as a D.H.W. tank), except of the tanks with a built-in D.H.W. tank. Producer takes no responsibility for damages caused by unsuitable or incorrect usage.

Before starting the work on device or its maintenance, disconnect the electrical power inlet. If there are any marks of fault on the appliance, stop the operation and call a service technician.

### 2. DESCRIPTION OF DEVICE

The tanks serve for accumulation and subsequent distribution of the heat energy from solid fuel boilers, heat pumps, electric boilers, etc. The accumulation tanks ATTACK AS, HRS, TUVS and SS are accessorized with an extra exchanger for a heat source with separated circuit (e.g. for solar system). The accumulation tanks ATTACK HR, HRS, TUV, TUVS are equipped with a built-in system for D.H.W. preparation.

### **2.1. TYPES**

The **AK** and **AS** line of the accumulation tanks with the volume up to 5.000 l and option to install the electrical heating body.

The **HR** and **HRS** line of the accumulation tanks with the volume up to 2.000 l and a built-in D.H.W. tank and option to install the electrical heating body.

The **TUV** and **TUVS** line of the accumulation tanks with the volume up to 2.000 l, a built-in instantaneous D.H.W. warming through a copper exchanger and option to install the electrical heating body.

The **S** and **SS** is a line of a stratified storage tanks with the volume up to 2.000 l and option to install the electrical heating body.

### 2.2. THERMAL INSULATION

The accumulation tanks are delivered with the removable polyurethane insulation of 100 mm thickness with a leatherette cover.

### 2.3. SPECIFICATION

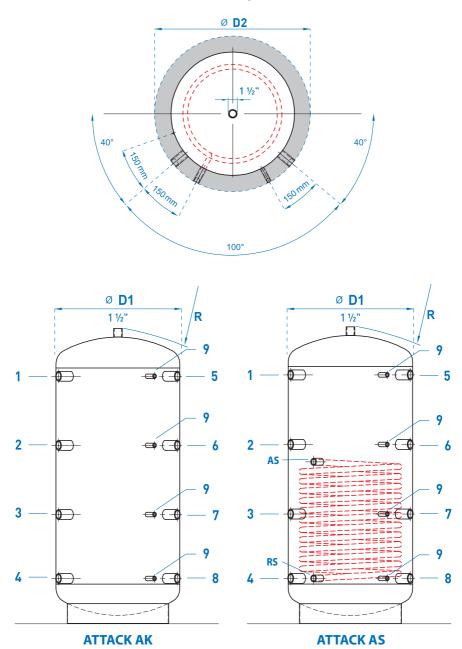
Max. operating pressure in the accumulation tank:	3 bar
Max. operating temperature in the accumulation tank:	95°C
Operating pressure in a solar exchanger:	9 bar
Max. operating pressure in the D.H.W. tank:	6 bar

### 3. TECHNICAL DATA AND DIMENSIONS

Accumulation tanks <b>ATTACK AK, AS</b>	ge 4 – 5
Accumulation tanks ATTACK HR, HRS pa	ge 6 – 7
Accumulation tanks <b>ATTACK TUV, TUVS</b>	ge 8 – 9
Stratified accumulation tanks <b>ATTACK S, SS</b> page	10 – 11



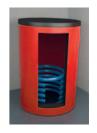
### **ACCUMULATION TANKS ATTACK AK, AS**



The accumulation tanks **ATTACK AK, AS** made from the quality steel serve for accumulation and subsequent distribution of the heat energy from the biomass boiler (e.g. **SLX, DPX, DP, PELLET 30 AUTOMATIC Plus, WOOD&PELLET**). The **ATTACK AS** model is accessorized with an extra exchanger to be connected to the solar system.

ATTACK AK: 9× socket G 1 ½", 4× socket G ½"

ATTACK AS: 9× socket G 1 ½", 4× socket G ½", 2× socket G 1" – solar circuit

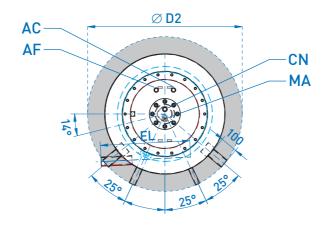


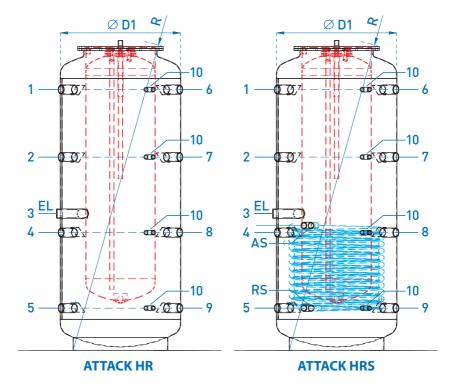
7 – Return connection – gas, oil and pellet boiler $1 \frac{1}{2}$ "
8 – Return connection – wood boiler 1 1/2"
9 – Sensor of solar system or heating½"
AS – Flow connection of solar system 1"
RS – Return connection of solar system 1"
D1 – Diameter without insulation
D2 – Diameter with insulation

						1	ank								e	Solar xchang	er	Ta	nk
Type	Position 1–5	Position 2—6	Position 3—7	Position 4—8	Position RS	Position A S	L – max. length of the electric heating body	$\varnothing$ D1 – Diameter without insulation	$\varnothing$ D2 – Diameter with insulation of 100 mm	Height	Height with insulation of 100 mm	R — Slope dimension without insulation	Max. operating pressure (bar)	Max. operating temperature (°C)	Area of exchanger (m²)	Volume of exchanger (I)	Max. operating pressure (bar)	Volume (I)	Weight (kg)
AK200K	925	705	455	205	-	-	550	500	700	1 140	1 190	1 157	3	95	-	-	-	204	46
AK300K	1 110	790	460	210	-	-	600	550	750	1 350	1 400	1 368	3	95	-	-	-	289	60
AK400K	1 120	815	515	210	-	-	700	650	850	1 380	1 430	1 402	3	95	-	-	-	405	73
AK500K	1 405	1 013	621	230	-	-	700	650	850	1660	1 710	1 678	3	95	-	-	-	488	81
AK800K	1 545	1 135	725	315	-	-	840	790	990	1840	1890	1864	3	95	-	-	-	732	109
AK1000K	1735	1 255	775	295	-	-	840	790	990	2 030	2 080	2 052	3	95	-	-	-	915	118
AK1500K	1 755	1 345	820	375	-	-	1 050	1 000	1 200	2 095	2 145	2 142	3	95	-	-	-	1449	201
AK2000K	1 955	1 409	862	315	-	-	1 150	1 100	1 300	2 310	2 360	2 353	3	95	-	-	-	1 980	235
AK2500K	2 005	1 465	915	375	-	-	1 250	1 200	1 400	2 387	2 437	2 438	3	95	-	-	-	2 435	271
AK3000K	2 205	1 600	985	375	-	-	1 300	1 250	1 450	2 596	2 6 4 6	2 643	3	95	-	-	-	2 915	363
AK4000K	2 385	1730	1 065	405	-	-	1 450	1 400	1 600	2 819	2 8 6 9	2 872	3	95	-	-	-	3 819	475
AK5000K	2 285	1 680	1 065	455	-	-	1 650	1 600	1 800	2 770	2 820	2 845	3	95	-	-	-	4 940	578
AS200K	925	705	455	205	205	545	550	500	700	1 140	1 190	1 157	3	95	0,9	6	10	198	63
AS300K	1 110	790	460	210	210	610	600	550	750	1 350	1 400	1 368	3	95	1,2	7,9	10	283	83
AS400K	1 120	815	515	210	210	610	700	650	850	1 380	1 430	1 402	3	95	1,5	10	10	388	103
AS500K	1 405	1 013	621	230	230	710	700	650	850	1660	1 710	1 678	3	95	1,8	11,9	10	474	118
AS800K	1545	1 135	725	315	315	725	840	790	990	1840	1890	1864	3	95	2,4	15,9	10	713	157
AS1000K	1735	1 255	775	295	295	860	840	790	990	2 030	2 080	2 052	3	95	3	19,8	10	891	172
AS1500K	1 755	1 3 4 5	820	375	375	895	1 050	1 000	1 200	2 095	2 145	2 142	3	95	3,6	23,7	10	1 420	265
AS2000K	1 955	1 409	862	315	315	843	1 150	1 100	1300	2 310	2 360	2 353	3	95	4,2	23,7	10	1 960	296
AS2500K	2 005	1 465	915	375	375	1095	1 250	1 200	1400	2 387	2 437	2 438	3	95	4,2	27,7	10	2 410	345
AS3000K	2 205	1600	985	375	375	1095	1300	1 250	1 450	2 596	2 646	2 643	3	95	4,2	27,7	10	2 890	446
AS4000K	2 385	1730	1 065	405	405	1 125	1 450	1 400	1600	2 8 1 9	2 869	2 872	3	95	5	33	10	3 779	568
AS5000K	2 285	1680	1 065	455	455	1 175	1650	1600	1800	2770	2 820	2 845	3	95	6	39,6	10	4 880	687



### **ACCUMULATION TANKS ATTACK HR, HRS**





The accumulation tanks **ATTACK HR, HRS** are made from the quality steel and serve for accumulation of the heating water as well as for preparation of the D.H.W. by an internal enameled exchanger. The **ATTACK HRS** model is accessorized with an extra exchanger to be connected to the solar system.

Tanks of this type have a built-in magnesium anode in the D.H.W. tank to increase resistance against corrosion. The manual de-aeration valve is installed in the upper part.

ATTACK HR: 9× socket G 1 1/2", 6× socket G 1/2"

ATTACK HRS: 9× socket G 1 ½", 6× socket G ½", 2× socket G 1" – solar circuit



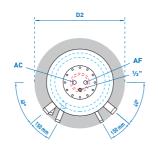
### **KEY FOR THE ACCUMULATION TANKS**

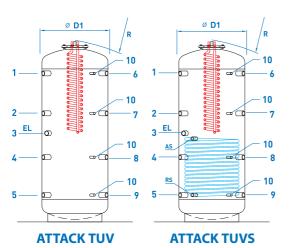
1 – Flow connection – boiler 1 ½"	10 – Sensor of solar system or heating½"
2 – Freely disposable	AS – Flow connection of solar system 1"
3 – Electrical heating coil (EL)	RS – Return connection of solar system 1"
4 – Freely disposable	D1 – Diameter without insulation
5 – Return connection – heating circuit 1 ½"	D2 – Diameter with insulation
6 – Flow connection – heating circuit (radiators) 1 1/2"	CN – Pump of the circulation tank 3/4"
7 – Flow connection – heating circuit (floor) 1 ½"	AF – Cold drinking water
8 – Return connection – gas, oil and pellet boiler 1 ½"	AC – Hot drinking water
9 – Return connection – wood boiler 1 ½"	MA – Magnesium anode

	Tank														Solar exchanger				nterna tank		Ta	nk	
Туре	Position 1—6	Position 2–7	Position 3	L-max. length of the el. heating body	Position 4—8	Position 5—9	Position RS	Position AS	Ø D1 – Diameter without insulation	Ø D2 – Diameter with insulation of 100 mm	Height	Height with insulation of 100 mm	R — Slope dimension without insulation	Max. operating temperature (°C)	Max. operating pressure (bar)	Area of exchanger (m²)	Volume of exchanger (I)	Max. operating pressure (bar)	Volume (I)	Max. operating temperature (°C)	Max. operating pressure (bar)	Volume (I)	Weight (kg)
HR600K	1 5 1 5	1 123	794	650	684	245	-	-	700	900	1754	1 854	1 841	95	3	-	-	-	160	95	6	445	157
HR800K	1545	1 135	846	735	725	315	-	-	790	990	1 806	1906	1898	95	3	-	-	-	160	95	6	553	157
HR1000K	1 735	1 255	1 036	735	775	295	-	-	790	990	1996	2 096	2 081	95	3	-	-	-	160	95	6	731	172
HR1250K	1 655	1 175	988	880	695	285	-	-	950	1 150	1948	2 048	2 064	95	3	-	-	-	160	95	6	1079	172
HR1500K	1755	1345	1 072	920	820	375	-	-	1 000	1 200	2 032	2 132	2 160	95	3	-	-	-	160	95	6	1 260	265
HR2000K	1 955	1408	1 314	1 000	862	315	-	-	1 100	1 300	2 274	2 374	2 390	95	3	-	-	-	160	95	6	1800	296
HRS600K	1 5 1 5	1 123	794	650	684	245	245	725	700	900	1754	1854	1 841	95	3	1,8	11,9	10	160	95	6	445	157
HRS800K	1 5 4 5	1 135	846	735	725	315	315	725	790	990	1 806	1906	1898	95	3	2,4	15,9	10	160	95	6	553	157
HRS1000K	1 735	1 255	1 036	735	775	295	295	860	790	990	1996	2 096	2 081	95	3	3	19,8	10	160	95	6	731	172
HRS1250K	1 655	1 175	988	880	695	285	285	850	950	1 150	1948	2 048	2 064	95	3	3	19,8	10	160	95	6	1079	172
HRS1500K	1755	1345	1 072	920	820	375	375	895	1 000	1 200	2 032	2 132	2 160	95	3	3,6	19,8	10	160	95	6	1 260	265
HRS2000K	1 955	1 408	1 314	1 000	862	315	315	843	1 100	1 300	2 274	2 374	2 390	95	3	4,2	23,7	10	160	95	6	1 800	296

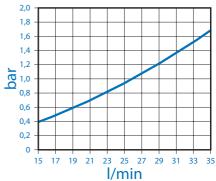


### **ACCUMULATION TANKS ATTACK TUV, TUVS**





### PRESSURE LOSSES OF THE D.H.W. EXCHANGER



### TECHNICAL PARAMETERS OF THE D.H.W. EXCHANGER

Material	Copper
Heated area	4,54 m²
Volume	4,2
Connection	3/4"
Max. operating pressure	10 bar

### DATA ABOUT THE OUTPUT WITH GAS, PELLET OR WOOD GASIFYING BOILER

Input temp.	Flow		∆t 15-45 °C		∆t 15–55 °C							
t℃	(l/h)	(I/min)	(l/h)	∆p (bar)	(l/min)	(l/h)	∆p (bar)	(kW)				
80°C	1 000	30	1 800	1,25	23	1354	0,8	63				
70°C	1 000	24	1 453	0,9	18	1 096	0,54	51				
60°C	1 000	14	814	0,38				28				

### DATA ABOUT THE OUTPUT WITH HEAT PUMP

Input temp.	Flow		∆t 15-45 °C		∆t 15–55 °C								
t℃	(l/h)	(I/min)	(l/h)	∆p (bar)	(l/min)	(l/h)	∆p (bar)	(kW)					
50°C	2 000	15	928	0,4	13	773	0,27	27					
50°C	3 000	24	1 444	0,92	20	1 191	0,62	42					

The accumulation tanks **ATTACK TUV, TUVS** are made from a quality steel and they serve for accumulation of the heating water as well as for the D.H.W. preparation in a water coil. The **ATTACK TUVS** model is accessorized with an extra exchanger for connection to the solar system.

**ATTACK TUV:**  $9 \times$  socket G 1 ½",  $5 \times$  socket G ½",  $2 \times$  socket G 1" – D.H.W. **ATTACK TUVS:**  $9 \times$  socket G 1 ½",  $5 \times$  socket G ½",  $2 \times$  socket G 1" – solar circuit,  $2 \times$  socket G 1" – D.H.W.



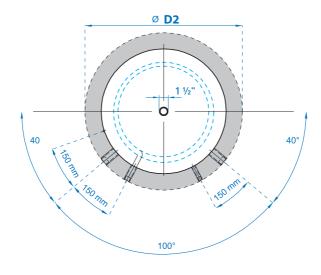
### **KEY FOR THE ACCUMULATION TANKS**

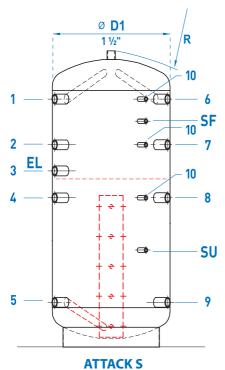
1 – Flow connection - boiler 1 ½"	9 – Return connection – wood boiler 1 1/2"
2 – Freely disposable	10 – Sensor of solar system or heating½"
3 – Electrical heating coil (EL)1½"	AS – Flow connection of solar system 1"
4 – Freely utilizable	RS – Return connection of solar system 1"
5 – Return connection – heating circuit 1 ½"	D1 – Diameter without insulation
6 – Flow connection – heating circuit (radiators) . 1 1/2"	D2 – Diameter with insulation
7 – Flow connection – heating circuit (floor) 1 ½"	AF – Cold drinking water 1"
8 – Return connection – gas, oil or pellet boiler . 1 ½"	AC – Domestic hot water 1"

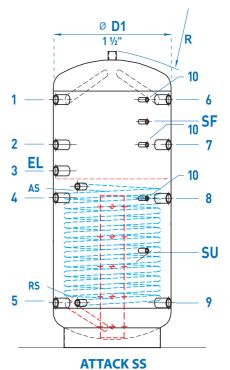
	Tank													So excha			Tank					
Туре	Position 1–6	Position 2—7	Position 3 (EL)	L — max. length of the electric heating body	Position 4—8	Position 5–9	Position RS	Position AS	Ø D1 – Diameter without insulation	Ø D2 – Diameter with insulation	Height	R – Slope dimension without insulation	Mini. installation height	Max. operating tempera- ture (°C)	Max. operating pressure (bar)	Area of exchanger (m²)	Volume of exchanger (I)	Max. operating pressure (bar)	Max.operatind tempera- ture (°C)	Area of D.H.W. exchanger (m²)	Volume (I)	Weight (kg)
TUV500K	1 405	1 013	771	600	621	230	-	-	650	850	1 631	1 717	1 831	95	3	-	-	-	-	4,54	474	157
TUV600K	1 515	1 123	794	650	684	245	-	-	700	900	1754	1 841	1954	95	3	-	-	-	-	4,54	605	157
TUV800K	1 5 4 5	1 135	846	735	725	315	-	-	790	990	1 806	1 898	2 006	95	3	-	-	-	-	4,54	713	157
TUV1000K	1735	1 255	1 036	735	775	295	-	-	790	990	1 996	2 081	2 196	95	3	-	-	-	-	4,54	891	172
TUV1250K	1 655	1 175	988	880	695	285	-	-	950	1 150	1948	2 064	2 148	95	3	-	-	-	-	4,54	1 239	172
TUV1500K	1 755	1 3 4 5	1 072	920	820	375	-	-	1 000	1 200	2 032	2 160	2 232	95	3	-	-	-	-	4,54	1 420	265
TUV2000K	1 955	1 408	1 314	1 000	862	315	-	-	1 100	1 300	2 274	2 390	2 474	95	3	-	-	-	-	4,54	1 960	296
TUVS500K	1 405	1 013	771	600	621	230	230	710	650	850	1 631	1 717	1 831	95	3	1,8	11,9	10	110	4,54	474	157
TUVS600K	1 515	1 123	794	650	684	245	245	725	700	900	1754	1 841	1954	95	3	1,8	11,9	10	110	4,54	605	157
TUVS800K	1 545	1 135	846	735	725	315	315	725	790	990	1 806	1 898	2 006	95	3	2,4	15,9	10	110	4,54	713	157
TUVS1000K	1735	1 255	1 036	735	775	295	295	860	790	990	1996	2 081	2 196	95	3	3	19,8	10	110	4,54	891	172
TUVS1250K	1 655	1 175	988	880	695	285	285	850	950	1 150	1948	2 064	2 148	95	3	3	19,8	10	110	4,54	1 239	172
TUVS1500K	1 755	1345	1 072	920	820	375	375	895	1 000	1 200	2 032	2 160	2 232	95	3	3,6	19,8	10	110	4,54	1 420	265
TUVS2000K	1 955	1 408	1 314	1 000	862	315	315	843	1 100	1 300	2 274	2 390	2 474	95	3	4,2	23,7	10	110	4,54	1 960	296



### STRATIFIED STORAGE TANKS ATTACK S, SS







**ATTACK S** – is based on the ATTACK AK type. Disk and stratified pipe installed in the exchanger enable creation of water layers according to the temperature. This construction ensures different temperature layers at the inlets and outlets.

**ATTACK SS** – is based on the ATTACK AS and the ATTACK S types. It is accessorized with an extra exchanger for connection to the solar circuit.

ATTACK S: 10× socket G 1 ½", 5× socket G ½"

**ATTACK SS:** 10× socket G 1 ½", 5× socket G ½", 2× socket G 1" – solar circuit



### **KEY FOR THE ACCUMULATION TANKS**

1 – Flow connection – boiler	1 ½"	9 – Return connection – wood boiler 1 ½"
2 – Freely disposable	1 ½"	10 – Sensor of solar system or heating½"
3 – Electrical heating coil (EL)	1 ½"	AS – Flow connection of solar system 1"
4 – Freely disposable	1 ½"	RS – Return connection of solar system 1"
5 – Return connection – heating circuit	1 ½"	SF – Upper solar sensor ½"
6 – Flow connection – heating circuit (radiators)	1 ½"	SU – Bottom solar sensor ½"
7 – Flow connection – heating circuit (floor).	1 ½"	D1 – Diameter without insulation
8 – Return connection, gas, oil or pellet boiler	1 ½"	D2 – Diameter with insulation

	Tank														Solar exchanger			Tank				
Тур	Position 1–6	Position 2–7	Position 3	L – max. length of the electric heating body	Position 4—8	Position 5–9	Position SU	Position SF	Position RS	Position AS	Ø D1 – Diameter without insulation	$\varnothing$ D2 – Diameter with insulation of 100 mm	Height	Height with insulation of 100 mm	R – Slope dimension without insulation	Max. operating temperature (°C)	Max. operating pressure (bar)	Area of exchanger (m²)	Volume of exchanger (I)	Max. operating pressure (bar)	Volume (I)	Weight (kg)
S500K	1 405	1 013	871	700	621	230	461	1 209	-	-	650	850	1 680	1730	1 698	95	3	-	-	-	488	81
S800K	1545	1 135	946	840	725	315	491	1 340	-	-	790	990	1842	1892	1 898	95	3	-	-	-	713	157
S1000K	1 735	1 255	1 036	840	775	295	577	1 495	-	-	790	990	2 031	2 082	2 081	95	3	-	-	-	891	172
S1250K	1 655	1 175	988	1 000	695	285	565	1 415	-	-	950	1 150	1 975	2 025	2 064	95	3	-	-	-	1 239	172
S1500K	1755	1345	1 072	1050	820	375	653	1 545	-	-	1 000	1 200	2 100	2 150	2 160	95	3	-	-	-	1 420	265
S2000K	1 955	1 408	1 314	1 150	862	315	685	1682	-	-	1 100	1 300	2 309	2 356	2 390	95	3	-	-	-	1960	296
SS500K	1 405	1 013	871	700	621	230	461	1 209	230	710	650	850	1680	1730	1 698	95	3	1,8	11,9	10	488	81
SS800K	1 5 4 5	1 135	946	840	725	315	491	1 340	315	725	790	990	1 842	1892	1898	95	3	2,4	15,9	10	713	157
SS1000K	1735	1 255	1 036	840	775	295	577	1 495	295	860	790	990	2 031	2 082	2 081	95	3	3	19,8	10	891	172
SS1250K	1655	1 175	988	1000	695	285	565	1 415	285	850	950	1 150	1 975	2 025	2064	95	3	3	19,8	10	1 239	172
SS1500K	1 755	1 345	1 072	1 050	820	375	653	1545	375	895	1000	1 200	2 100	2 150	2 160	95	3	3,6	23,7	10	1 420	265
SS2000K	1 955	1 408	1 314	1 150	862	315	685	1 682	315	665	1 100	1 300	2 309	2 356	2 390	95	3	4,2	27,7	10	1960	296



### 4. OPERATION

Tanks accumulate heat from the heating systems for domestic or industrial use. Different types of boilers and heating systems, renewable energy sources (heat pumps, sun collectors) or electricity can be used to heat the water in the accumulation tank.

Heat in the tank is accumulated either by flow of the heating liquid from the heat source or by flow of the heating liquid and the heat transfer (e.g. from solar system) through the tubular exchanger, or by warming by the electrical bodies installed inside the tank.

In the built-in D.H.W. tank or built-in instantaneous D.H.W. warming is the warmth accumulated from the water in the accumulation tank.

### 5. INSTALLATION

The installation must be in conformity with the valid regulation and it can be done only by a qualified specialist.

Faults caused by the incorrect installation, usage and operation cannot be considered as a warranty case.

### **5.1 CONNECTION TO THE HEAT SOURCE**

Place the accumulation tank on the ground, as close as possible to the heat source. Install the insulation. Connect the heating circuits to all inlets and outlets as it is given in the table in the chapter 3.

Mount the deaeration valve at the highest place of the system and insulate all the connection distributions

### 5.2 CONNECTION OF THE ELECTRICAL HEATING BODIES

The accumulation tank can be accessorized with the electrical heating bodies. The electrical heating bodies can be connected to the electricity mains directly (body with an own thermostat) or through the regulator of the whole heating system.

### 6. PUTTING INTO THE OPERATION

Fill the heating circuits with the appropriate liquids and deaerate the whole system. Check the tightness of all the joints and the pressure in the system.

Set the parameters of the regulation of the heating system as it is given in the documentation and recommended by the producer. Check the correct function of all control and regulation elements regularly.

Quality of the heating water significantly influences the lifetime of the heating systems. Unsuitable quality of water may cause problems like the corrosion of device and creation of the limescale, especially on the heat-exchange surfaces of device. Quality of the heating water depends on the quality of the water filled into the system by starting the operation and quality and amount of the water additionally filled into the system. Quality of the water additionally filled into the system is defined in the STN 07 7401.

To prepare the D.H.W. in a built-in tank or an instantaneous system, it is necessary to install the safety valve of 6 bar on the cold water inlet. It is also necessary to ensure the treatment of the D.H.W. against the limescale and dirts from the water distribution network.

Hardness of water cannot excess 5 mval / l. Warranty does not relate to the blockage of the tank or the flow copper exchanger by a limescale.

### 7. MAINTENANCE

To clean the external parts of the tank you need a wet cloth and a suitable detergent. Never use abrasive cleaners, diluents, petroleum-based cleaners, etc.

Check the tightness of joints on the flange of the HR, HRS tank at least once a year, eventually fix the nuts. If there is untightness even after fixing the nuts, replace the sealing under the flange.

Maintenance of the accumulation tank HR, HRS concerns test and replacement of the anode rod. The magnesium anode adjusts the electric potential inside the tank to the value preventing corrosion of the tank. Theoretical life-time of the anode takes 2 years of operation, but it changes according to the callosity and the chemical composition of water at the place, where the tank is used. It is recommended to make a test every 6 months and in the case of need, to replace the anode rod. This additional protection element should be considered as important.

### Procedure of replacement of the anode rod:

- Discharge approximately 1/3 of the water in the tank
   Procedure: close the valve at the water inlet into the tank,
   open the valve of hot water on the mixing tap,
   open the discharge valve of the tank.
- 2. Undo the upper cover of the accumulation tank.
- 3. Use a suitable tool to screw the anode out.
- 4. Install a new anode and mount the dismantled parts back.
- 5. Fill the tank with water, pressurize it and check the tightness.

### The anode must be replaced only by a specialized service company!

### 8. DISPOSAL

Packaging must be disposed following the valid prescriptions.

After expiration of the lifetime it is necessary to dispose the product in conformity with the legal prescriptions.



Annual test no. 1

Annual test no. 3

### SPECIFICATION OF THE ANNUAL CHECKS OF THE ACCUMULATION TANKS

(performed by the authorized service)

### 1. CHECK OF THE STATE OF THE TANK

The accumulation tank does not need a maintenance indeed, it is only necessary to make a check of the pressure and tightness of all the joints. In case of the water leakage from the tank or leakage of the liquid from the heating circuits, stop the operation of device and seal the joints to ensure the stated operating conditions.

### 2. CLEANING AND MAINTENANCE OF THE TANK

To clean the external parts, use a wet cloth and a suitable detergent. Never use abrasive cleaners, diluents, petroleum-based cleaners, etc.

It is not necessary to clean the internal side of the tank, because it is connected to the closed heating circuit with a permanent filling.

### 3. ELECTRICAL HEATING BODIES (IF THEY ARE CONNECTED)

If there are electrical heating bodies installed in the tank, it is necessary to make a check of the function of thermostats, state of the contacts and fixation of the screws of all terminals.

Annual test no. 2

Annual test no. 4

# Date: Stamp and signature of the service technician: Stamp and signature of the service technician:

## Date: Stamp and signature of the service technician: Date: Stamp and signature of the service technician:

### **NOTES:**



ATTACK, s.r.o.

Dielenská Kružná 5020

Dielenská Kružná 5020

Fax: +421 43 4003 116

Tel: +421 43 4003 103

Fax: +421 43 4003 116

Tel: +421 43 4003 103

Fax: +421 43 4003 116

Tel: +421 43 4003 103

Web: www.attack.sk







Výrobca ATTACK, s.r.o. si vyhradzuje právo technických zmien výrobkov bez predchádzajúceho upozornenia. • ATTACK, s.r.o. producer reserves the right to change technical parameters and dimensions of boilers without previous warning. • Der Hersteller ATTACK, s.r.o. behält sich das Recht der technischen Veräderungen an Produkten ohne eine vorige Warnung. • Изготовитель ATTACK, s.r.o. оставляет за собой право изменения технических параметров и размеров котла без предыдующего предупреждения. • Le producteur ATTACK, s.r.o. réserve le droit des modifications techniques sans l'avertissement précédent. • Productor ATTACK, s.r.o. reserva el derecho de cambios técnicos sin advertencia anterior.

