

VIADRUS

STORAGE TANKS

AkuCOMFORT 500 L

AkuCOMFORT 750 L

AkuCOMFORT 1000 L

AkuCOMFORT 1500 L

AkuCOMFORT 2000 L

OPERATING AND INSTALLATION MANUAL

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1. Description of the tank

The storage tanks AkuCOMFORT serve for the accumulation of heat in the water volume. According to the required volume of the stored energy is necessary to select the appropriate size of storage tank. The tanks are used for following applications:

- equipments with heat pumps where they allow an economical heat pump operation independently on the actual need for heat
- solar equipments where the an excess of thermal energy obtained from sunlight is stored and is available at the time of a lack of sunshine
- solid fuel boilers where thanks to the storage tanks a continuous and efficient boiler operation is ensured during a slow combustion
- cogeneration units where the waste heat produced in the process of electricity generation is stored and is ready for use during the peaks in heat consumption
- heating and cooling systems for covering and securing the peaks in consumption

Storage tanks AkuCOMFORT operate on the principle of storing in layers and they act as heat accumulators. Both in terms of time and hydraulics the storage tank can separate the heat production and consumption thanks to which the optimal adaptation of production and consumption is possible.

Thus various possibilities and variants of connection are offered.

Of course this principle of functioning can be transferred to the water cooling systems.

The tank is equipped with a heat exchanger for heating the HWS.

2. Assembly

- the tanks are placed on a flat floor or a steel structure. When deciding on the layout it is necessary to ensure the access to the valves and their servicing. The tank must be in the vertical position.
- Tanks are made of steel quality S235JRG2
- Internal surface treatment: no paint
- External surface treatment: a primer
- Maximum working overpressure: 0,3 MPa
- Maximum operating temperature: 95 ° C
- 100 mm foam insulation with a PVC foil (normally the tank is delivered with insulation already mounted).

The connection of storage tanks must be carried out in accordance with project documentation elaborated by a specialized firm.

! In case of a supplementary installation of the tank into the system it is important to verify the size of the expansion tank.

3. Putting into operation

After the assembly completion the leakage test is carried out. All joints connecting the storage tank with the heating system are checked for tightness. Then the whole system is rinsed and filled with heating medium. The heating medium must be secured against the corrosive effects by adding the corrosion inhibitor. The manufacturer recommends inhibitor CORTEC Vp CI - 649 BD. The inner tank volume is not designed for hot water storage and its heating. After this activity the tank is ready for operation.

4. Operation a maintenance

The operation of the tank does not require any special activities on the part of the user.

It is recommended to check the integrity of the insulation and carry out the leakage test of all connections once every year. Possible leaks must be removed in order to prevent the loss of water in the heating system and the tank shell is protected against an unnecessary burden caused by corrosion.

The inhibitor has to be refilled every 12 months.

5. Instructions for product disposal after its service life expiration

VIADRUS a.s. is a contractual partner of the firm EKO-KOM a.s., its client number being F00120649. Packages are in compliance to ČSN EN 13427.

Because the product is constructed of common materials its individual parts are recommended to be disposed through a firm dealing with waste collection and disposal.

The heater wrapping should be disposed of in following way:

- plastic foil, cardboard cover and the wooden pallet into the common waste
- metal strap for strapping – through a firm dealing with waste collection and disposal
- wooden base, is designated for a single usage and no longer can be used as a product. Its disposal is subject to Act. 477/ 2001 Sb. a 185/2001 Coll.as amended.

In case that the product has lost its serviceability you can take advantage of product “take back service” (if this is established); in case that the originator has declared that it is a scrap it must be handled according to the valid legislation of relevant country.

6. Conditions of guarantee

In case of compliance with paragraphs 2, 3 and 4 of this manual the warranty period of 24 months from the date of putting Into Operation will apply to the storage tanks.

The manufacturer for the validity of his guarantee requires:

- To inspect storage tanks regularly once a year. Only an authorized service organization is qualified to exercise the inspections.
- To document all records on carried out guarantee and after-guarantee repairs and annual inspections in an annex to this manual guarantee certificate.

Every fault must be notified immediately after having been discovered and always in writing.

In case of an infringement of above instructions the guarantees provided by the manufacturer will not be recognized.

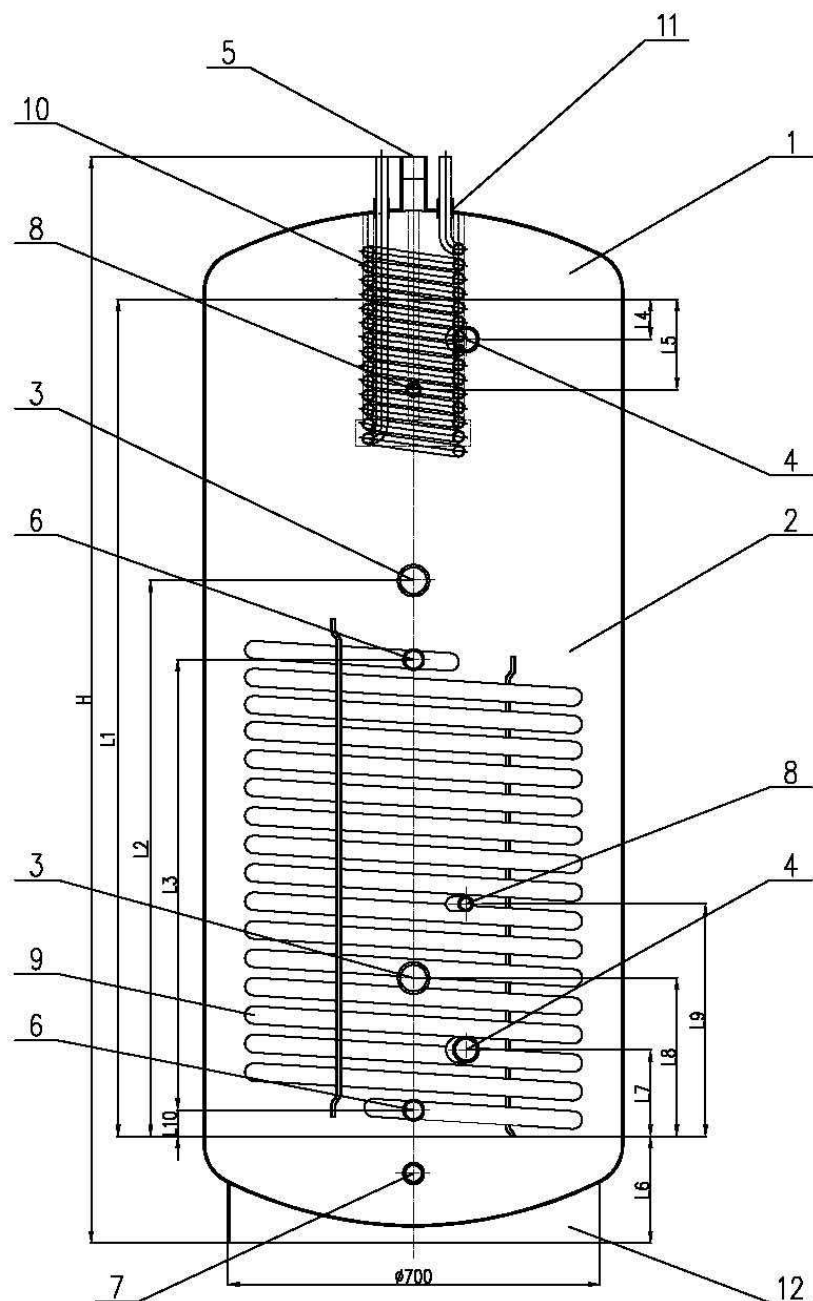
The guarantee does not apply to:

- faults caused by improper assembly and improper attendance of the product and faults caused by improper maintenance;
- product damage arisen from transport or other mechanical damage;
- the faults caused by an unsuitable way of storing;
- faults caused by failure to observe instructions stated in this manual.

The manufacturer reserves the right of alterations made within the product innovation that needn't be included in this manual

7. Transport

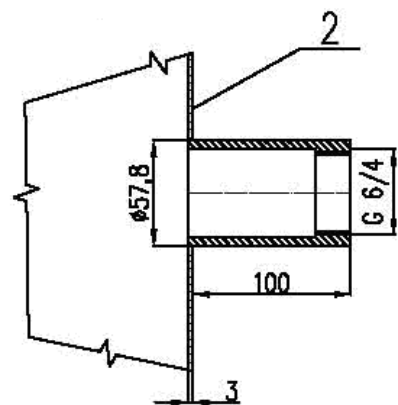
The tank must be firmly anchored in the vertical position to prevent its tilting during transport



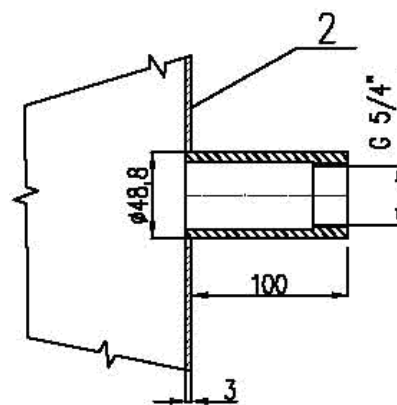
1. The bottom wall thickness 2.5 mm
2. Plate thickness. 3 mm
3. Welded-on piece G 6 / 4
4. Welded-on piece G 5 / 4
5. Welded-on piece G 5 / 4
6. Welded-on piece G 1"

7. Welded-on piece G 1"
8. Welded-on piece G 1/2"
9. Solar spiral steel Ø 28 x 3,2
10. heating spiral TV (Cu)
11. Tube kr. Ø 22 x 1,91
12. Circular base

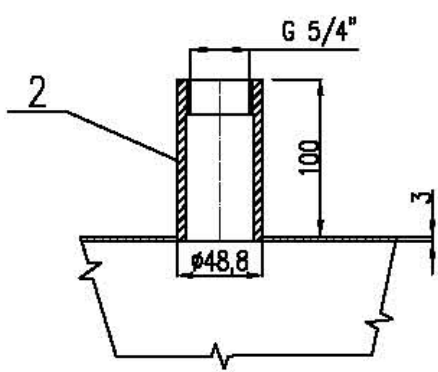
Welded-on piece – pos. 3



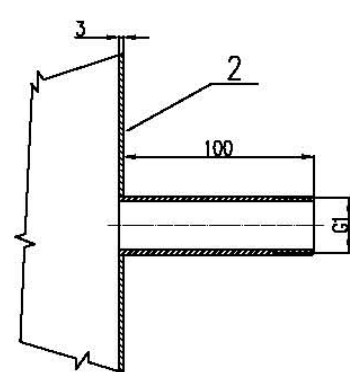
Welded-on piece – pos. 4



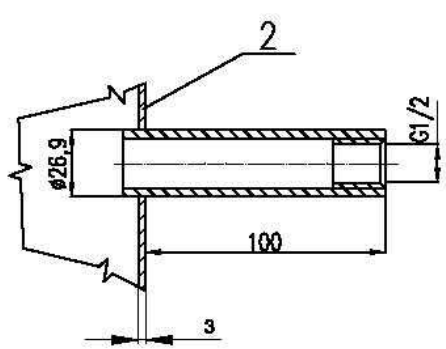
Welded-on piece – pos. 5



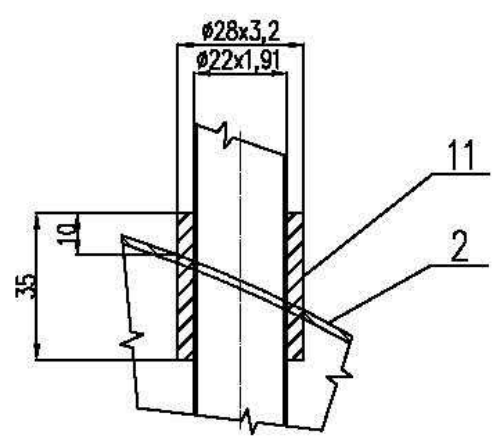
Welded-on piece – pos. 6 and 7



Welded-on piece – pos. 8



Welded-on piece – pos. 11



| Technical parameters | | Designation | AkuCOMFORT 500 L |
|---|------|----------------|------------------|
| Volume | | l | 500 |
| Maximum permissible temperature | | °C | 95 |
| Maximum allowable pressure | | MPa | 0,3 |
| Dimensions | | | |
| Height of connection for solar | L10 | mm | 50 |
| Height of connections for sensors or thermometers | L9 | mm | 440 |
| Height of boiler water connection | L8 | mm | 300 |
| Height of boiler water connection | L7 | mm | 165 |
| Height of bottom incl. base | L6 | mm | 190 |
| Height of connections for sensors or thermometers | L5 | mm | 170 |
| Height of boiler water connection | L4 | mm | 75 |
| Height of solar connection | L3 | mm | 800 |
| Height of boiler water connection | L2 | mm | 1049 |
| Height of the cylindrical part | L1 | mm | 1490 |
| Equipment height | H | mm | 1905 |
| Tank diameter (without insulation) | d | Ø | 600 |
| Diameter with insulation | D | Ø | 800 |
| Insulation made of hardened polyurethane foam | | mm | 100 |
| Upper spiral for TV , copper, with ribbing | | m ² | 2,37 |
| Lower steel spiral | | m ² | 2,5 |
| External cladding | skay | | |
| Weight without insulation (empty) | | kg | 145 |

| Technical parameters | | Designation | AkuCOMFORT 750 L |
|---|------|----------------|------------------|
| Volume | | l | 800 |
| Maximum permissible temperature | | °C | 95 |
| Maximum allowable pressure | | MPa | 0,3 |
| Dimensions | | | |
| Height of connection for solar | L10 | mm | 50 |
| Height of connections for sensors or thermometers | L9 | mm | 440 |
| Height of boiler water connection | L8 | mm | 300 |
| Height of boiler water connection | L7 | mm | 165 |
| Height of bottom incl. base | L6 | mm | 200 |
| Height of connections for sensors or thermometers | L5 | mm | 170 |
| Height of boiler water connection | L4 | mm | 75 |
| Height of solar connection | L3 | mm | 650 |
| Height of boiler water connection | L2 | mm | 850 |
| Height of the cylindrical part | L1 | mm | 1260 |
| Equipment height | H | mm | 1730 |
| Tank diameter (without insulation) | d | Ø | 790 |
| Diameter with insulation | D | Ø | 990 |
| Insulation made of hardened polyurethane foam | | mm | 100 |
| Upper spiral for TV, copper, with ribbing | | m ² | 2,37 |
| Lower steel spiral | | m ² | 3 |
| Exterior cladding | skay | | |
| Weight without insulation (empty) | | kg | 173 |

| Technical parameters | | Designation | AkuCOMFORT 1000 L |
|---|------|----------------|-------------------|
| Volume | | l | 1000 |
| Maximum permissible temperature | | °C | 95 |
| Maximum allowable pressure | | MPa | 0,3 |
| Dimensions | | | |
| Height of connection for solar | L10 | mm | 50 |
| Height of connections for sensors or thermometers | L9 | mm | 440 |
| Height of boiler water connection | L8 | mm | 300 |
| Height of boiler water connection | L7 | mm | 165 |
| Height of bottom incl. base | L6 | mm | 200 |
| Height of connections for sensors or thermometers | L5 | mm | 170 |
| Height of boiler water connection | L4 | mm | 75 |
| Height of solar connection | L3 | mm | 850 |
| Height of boiler water connection | L2 | mm | 1050 |
| Height of the cylindrical part | L1 | mm | 1580 |
| Equipment height | H | mm | 2050 |
| Tank diameter (without insulation) | d | Ø | 790 |
| Diameter with insulation | D | Ø | 990 |
| Isolation made of hardened polyurethane foam | | mm | 100 |
| Upper spiral for TV , copper, with ribbing | | m ² | 2,37 |
| Lower steel spiral | | m ² | 3,5 |
| Exterior cladding | skay | | |
| Weight without insulation (empty) | | kg | 205 |

| Technical parameters | | Designation | AkuCOMFORT 1500 L |
|---|------|----------------|-------------------|
| Volume | | l | 1500 |
| Maximum permissible temperature | | °C | 95 |
| Maximum allowable pressure | | MPa | 0,3 |
| Dimensions | | | |
| Height of connection for solar | L10 | mm | 50 |
| Height of connections for sensors or thermometers | L9 | mm | 600 |
| Height of boiler water connection | L8 | mm | 460 |
| Height of boiler water connection | L7 | mm | 250 |
| Height of bottom incl. base | L6 | mm | 330 |
| Height of connections for sensors or thermometers | L5 | mm | 200 |
| Height of boiler water connection | L4 | mm | 110 |
| Height of solar connection | L3 | mm | 900 |
| Height of boiler water connection | L2 | mm | 1150 |
| Height of the cylindrical part | L1 | mm | 1980 |
| Equipment height | H | mm | 2500 |
| Tank diameter (without insulation) | d | Ø | 1100 |
| Diameter with insulation | D | Ø | 1300 |
| Isolation from hardened polyurethane foam | | mm | 100 |
| Upper spiral for TV, copper, with ribbing | | m ² | 3,6 |
| Lower steel spiral | | m ² | 4 |
| Exterior cladding | skay | | |
| Weight without insulation (empty) | | kg | 275 |

| Technical parameters | | Designation | AkuCOMFORT 2000 L |
|---|------|----------------|-------------------|
| Volume | | l | 2000 |
| Maximum permissible temperature | | °C | 95 |
| Maximum allowable pressure | | MPa | 0,3 |
| Dimensions | | | |
| Height of connection for solar | L10 | mm | 50 |
| Height of connections for sensors or thermometers | L9 | mm | 600 |
| Height of boiler water connection | L8 | mm | 460 |
| Height of boiler water connection | L7 | mm | 250 |
| Height of bottom incl. base | L6 | mm | 330 |
| Height of connections for sensors or thermometers | L5 | mm | 200 |
| Height of boiler water connection | L4 | mm | 110 |
| Height of solar connection | L3 | mm | 900 |
| Height of boiler water connection | L2 | mm | 1150 |
| Height of the cylindrical part | L1 | mm | 1750 |
| Equipment height | H | mm | 2475 |
| Tank diameter (without insulation) | d | Ø | 1300 |
| Diameter with insulation | D | Ø | 1500 |
| Isolation from hardened polyurethane foam | | mm | 100 |
| Upper spiral for TV , copper, with ribbing | | m ² | 3,6 |
| Lower steel spiral | | m ² | 4,5 |
| Exterior cladding | skay | | |
| Weight without insulation (empty) | | kg | 310 |

Certificate of warranty and Certificate of quality and completeness of the storage tank:

AkuCOMFORT 500 L
AkuCOMFORT 750 L
AkuCOMFORT 1000 L
AkuCOMFORT 1500 L
AkuCOMFORT 2000 L

Serial number of the storage tank

User (surname, first name)

Address (street, city, zip code)

Phone / Fax

Overpressure in the inlet water pipe kPa

Conditions of the validity of the warranty:

- Installation of the storage tank must be carried out according to " Operating and installation manual for storage tanks" by a professional firm
- Putting Into operation must be carried out according to "Operating and installation manual for storage tanks" by a contractual service organization accredited by the manufacturer
- The faults must be removed by a contractual service organization accredited by the manufacturer

The completeness of the supplied storage tank is guaranteed by the seller

The certificate of warranty is void if not filled out.

The user confirms that:

- he has received the "Operating and Installation manual"
- he has been acquainted with the operation and maintenance of the storage tank

| | | |
|--------------------------|------------------------------------|----------------------------------|
| Production date | Stamp of the manufacturer | Checked by: (signature) |
|--------------------------|------------------------------------|----------------------------------|

| | | |
|-------------------------------|---|----------------------------|
| Date of installation | Installation company (stamp, signature) | Signature of user |
|-------------------------------|---|----------------------------|

| | | |
|---|---|----------------------------|
| Date of putting into operation | Contractual service organization (stamp, signature) | Signature of user |
|---|---|----------------------------|

Enclosure to the certificate of warranty for the customer- user

| Record of the carried out warranty and post warranty repairs and regular annual checks of the product | | | |
|---|----------------------|---|-----------------------|
| Date of record | Carried out activity | Contractual service organization (signature, stamp) | Signature of customer |
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| | | |
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| Production date | Stamp of the manufacturer | Checked by: (signature) |
|--------------------------|------------------------------------|----------------------------------|

| | | |
|-------------------------------|---|----------------------------|
| Date of installation | Installation company (stamp, signature) | Signature of user |
|-------------------------------|---|----------------------------|

| | | |
|---|---|----------------------------|
| Date of putting into operation | Contractual service organization (stamp, signature) | Signature of user |
|---|---|----------------------------|

Certificate of warranty and Certificate of quality and completeness of the storage tank:

AkuCOMFORT 500 L
AkuCOMFORT 750 L
AkuCOMFORT 1000 L
AkuCOMFORT 1500 L
AkuCOMFORT 2000 L

Serial number of the storage tank

User (surname, first name)

Address (street, city, zip code)

Phone / Fax

Overpressure in the inlet water pipe kPa

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- he has been acquainted with the operation and maintenance of the storage tank

| | | |
|--------------------------|------------------------------------|----------------------------------|
| Production date | Stamp of the manufacturer | Checked by: (signature) |
|--------------------------|------------------------------------|----------------------------------|

| | | |
|-------------------------------|---|----------------------------|
| Date of installation | Installation company (stamp, signature) | Signature of user |
|-------------------------------|---|----------------------------|

| | | |
|---|---|----------------------------|
| Date of putting into operation | Contractual service organization (stamp, signature) | Signature of user |
|---|---|----------------------------|

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