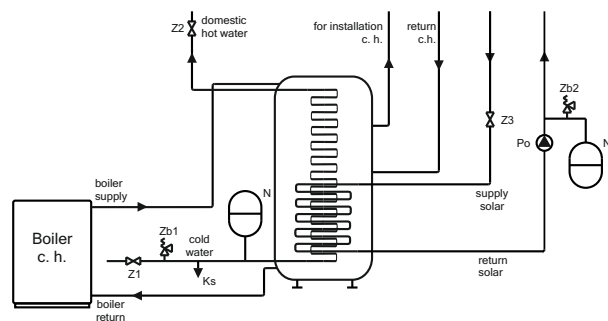


## ◆ HYDRAULIC CONNECTION



Zb1 - DHW safety valve  
Zb2 - safety valve of solar inst.  
Z1 - shut-off valve on cold water supply  
Z2 - shut-off valve on hot water return  
Z3 - shut-off valve on the medium supply  
Po - circulation pump  
N - expansion vessel  
Ks - drain plug

SUNEX<sup>®</sup>



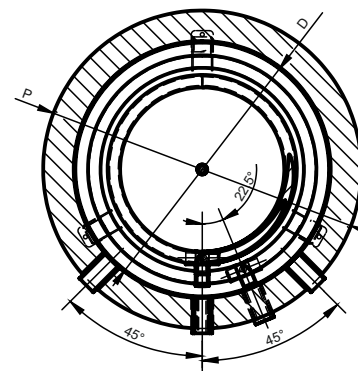
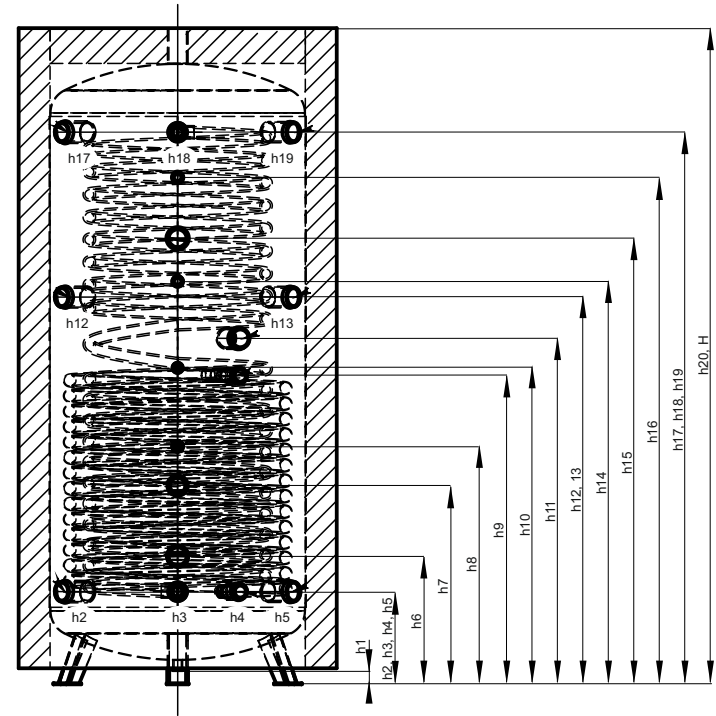
FISH S9 U Hygienic tank with 2 coils

# INSTRUCTION MANUAL

## Hygienic tanks



Read the instructions before starting the device. Pictures of products placed in the manual may differ from the appearance of products on sale.



## ◆ FISH S9 U - TECHNICAL SPECIFICATIONS

FISH S9 500 U

FISH S9 800 U

FISH S9 1000 U

FISH S9 1500 U

Series		500	800	1000	1500
Max. permissible temp. (tank/exchanger/DHW pipe)	°C	95/110/95	95/110/95	95/110/95	95/110/95
Max. permissible pressure (tank/exchanger/DHW pipe)	bar	3/6/6	3/6/6	3/6/6	3/6/6
Volume (exchanger/DHW pipe)	l	14,4/17	18,5/20,5	18,5/20,5	20,8/20,5
Surface (exchanger/DHW pipe)	m <sup>2</sup>	2,4/5	3/6,1	3/6,1	3,4/6,1
Insulation	mm	80	80	80	80
Diameter with insulation	mm	810	950	950	1160
Diameter without insulation	mm	650	790	790	1000
Device height	mm	1671	1748	1988	2055
Water drain	mm	36	20	20	20
Connection	mm	236	258	258	290
Domestic hot water pipe (inlet)	mm	236	258	258	290
Solar exchanger (return)	mm	236	258	258	290
Connection	mm	236	258	258	290
Connection	mm	326	348	368	400
Connection	mm	506	528	568	600
Sensor 1	mm	606	628	718	750
Solar exchanger (Supply)	mm	786	778	758	840
Sensor 2	mm	806	828	968	1000
Electric heater	mm	881	903	903	985
Connection	mm	986	1008	1208	1240
Connection	mm	986	1008	1208	1240
Sensor 3	mm	1026	1048	1248	1280
Connection	mm	1136	1158	1398	1430
Sensor 4	mm	1291	1313	1578	1610
Connection	mm	1406	1428	1678	1710
DHW pipe (outlet)	mm	1406	1428	1678	1710
Connection	mm	1406	1428	1678	1710
Venting	mm	1671	1748	1988	2055
<b>Connections</b>					
Water drain	Rp	1/2"	1/2"	1/2"	1/2"
Connection	Rp	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Sensor	Rp	1/2"	1/2"	1/2"	1/2"
Solar exchanger (inlet/outlet)	Rp	1" / 1"	1" / 1"	1" / 1"	1" / 1"
DHW pipe (inlet/outlet)	Rp	1 1/4" / 1 1/4"	1 1/4" / 1 1/4"	1 1/4" / 1 1/4"	1 1/4" / 1 1/4"
Electric heater	Rp	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Venting	mm	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Weight	kg	114	151	168	204

R - external thread, Rp - internal thread

## ◆ INTRODUCTION

Thank you for purchasing our device. We hope that it will contribute to the comfort of your home and reduce the expenses associated with the ever-increasing energy prices. This manual is designed to give you a thorough understanding of the installation, use and operation of the tank. Read the contents of this manual before installing and using the tank. Familiarization with this manual is in the interest of the customer and is one of the conditions for maintaining the warranty.

## ◆ TECHNICAL SPECIFICATIONS

The hygienic tank is one of the most modern devices designed to supply homes, rooms, hotels, and other facilities using individual boiler rooms with hot water. The tanks are made of high-quality steel. Inside there is a stainless steel coil for heating domestic water. The water heater is designed for vertical operation only. The water can be heated by a solid fuel boiler or by means of a spiral coiled heat exchanger (i.e., a large surface coil) connected to a heat pump or solar system. The hot water exchanger (stainless steel) and one spiral coil is shown in the drawing on page 7. The anti-corrosion protection of the tank is a special anti-corrosion paint. The heaters are insulated with a layer of Styrofoam and wool 80mm thick, which reduces heat loss to an absolute minimum.

Nominal capacities of the tanks:

- 500 dm<sup>3</sup>, 800 dm<sup>3</sup>, 1000 dm<sup>3</sup>, 1500 dm<sup>3</sup>,

Tank operating pressure + 3 bar  
Coil operating pressure + 6 bar  
DHW coil operating pressure + 6 bar

Maximum operating temperature of the tank + 95°C  
Maximum operating temperature of the coil + 110°C  
Maximum operating temperature of DHW coil + 95°C

## ◆ TANK INSTALLATION

### Montage

The tank can be connected to various heat sources, but it is important to remember not to exceed the permissible parameters in the above section. The procedure of connecting the tank should be entrusted to a specialized installation company. It is forbidden to use fittings and galvanized pipes to connect the hot water exchanger. It is possible to connect the tank correctly in many ways, depending on the heat source used or the user's needs. This is illustrated in detail in the hydraulic diagram on page 8.

### Pressure reducer

The tank can be installed with a direct connection to the water main. The pressure of this main should not exceed 6 bar, but the lower limit is 1 bar. If the pressure exceeds the upper limit of 6 bar, then a reducing valve must be used.

### Safety valve

It is essential that the system is fitted with a safety valve. The safety valve must be mounted directly in front of the tank on the cold water inlet pipe. No additional device (e.g. shut-off valve, water valve, etc.) may be installed between the safety valve and the tank. The safety valve allows water to flow out of the tank to the outside after an excessive increase of pressure in the heater - opening pressure 6bar. The safety valve should be installed in such a place so that easy access to it is possible and it is located near the heater. Attention should be paid that water flowing out of the safety valve can be hot, so it should be equipped with a drain pipe made of corrosion and heat resistant material and protected against freezing. In addition, during installation it must be ensured that the water does not endanger the safety of persons in the vicinity of the unit being installed and operated. Operation of the vessel without safety valves or with faulty safety valves is dangerous and poses a risk to human health and life.

### Draining the tank

The drain plug must be installed on the cold water supply pipe to the tank.

### Expansion vessel

It is necessary to install an expansion vessel on the cold water line.

The pre-pressure of the expansion vessel should be set below the system operating pressure (approx. 0.2bar) in accordance with the vessel's instructions, in order to ensure a free flow through the vessel.

Follow the relevant standards when selecting the expansion vessel.

### Tank tightness

It is necessary to check the tank and installation for leaks after filling.

### Start-up

Only after the tank has been filled with water can the coil be connected to the central heating system.

## ◆ OPERATING REMARKS

1. The buffer must be transported in a vertical position.
2. The buffer should be installed vertically on a durable, strong and leveled surface.
3. The devices should be stored indoors in a relatively dry place not exposed to direct water (such as rain) and sunlight.
4. Do not operate the buffer, without a working safety valve (the operation of the safety valve should be checked every 14 days by turning the cap to the right or left so that there is an outflow from the side discharge outlet to the outside. Then turn the cap in the opposite direction until it snaps into the previous position and press it against the valve body. If there is no outflow of water when the cap is turned, the valve is faulty. If after turning the cap and returning to the previous position set continuous leakage of water, the valve plug is contaminated and the valve should be flushed several times, opening the outflow by turning the cap. Attention: the possibility of hot water outflow. The manufacturer is not responsible for the malfunction of the safety valve caused by incorrect installation and installation errors.
5. Water intended for filling the heating system should not contain mechanical and organic impurities and should meet the requirements of PN-93/C04607. Failure to comply with the requirements for the quality of heating water may result in loss of warranty.  
Heating water should have the following parameters:
  - pH:  $8,0 \div 9,5$  ( $8,0 \div 8,5$  in installations with aluminum radiators)
  - total hardness:  $< 11,2$  °n
  - free oxygen content  $< 0,05$  mg/l
  - chloride content  $< 60$  mg/l
6. SUNEX S.A. reserves the right to make modifications to the design without prior notice to customers.

## ◆ MAINTENANCE

1. Safety fittings:  
To avoid possible overpressure, it is essential to check once a month that the safety fittings are functioning correctly.
2. Decalcification:  
In localities where the water contains calcium, it is recommended that the coil be decalcified once a year by a specialist to preserve the power of the hot water exchanger.
3. The housing can be cleaned with soapy water.

## ◆ FAULTS AND REMEDIES

No.	FAULT	REASON	REMOVAL METHOD
1	The safety valve does not open (also when trying to blow out).	Safety valve Baked.	Clean the valve or replace.
2	The safety valve is letting through.	1) Touch surface of the safety valve contaminated or damaged. 2) Too much water pressure in the network	1) Clean or reach the sealing surface of the safety valve. 2) Use a pressure regulator

## ◆ ENVIRONMENTAL PROTECTION

There are recyclable raw materials in used equipment that should be sent for processing. The components are easily disassembled. Thus, various components can be sorted and sent for recycling or disposal.