Comfort and efficiency in your home

Tenko

ready solution

BOILER ELECTRIC HEATING HOT WATER «TENKO»

Manual
Installation and operating

Type	Power												
	3	4,5	6	7,5	9	10,5	12	15	18	21	24	30	36
Tenko Mini	▢	▢											
Tenko КЕ	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢
Tenko СКЕ	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢
Tenko СПКЕ	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢
	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢	▢

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Boilers heating electric water heaters «TENKO» series
"MINI", "Econom", "Standard", "STANDARD A PLUS".

Due to the constant improvement of the design and technology of the product may deviate from the design of the product passport requirements not affecting the conditions operation.

Congratulations on the purchase of electric water heating apparatus «TENKO». This unit is a highly reliable product and complies with the European quality standards. It is easy to use, has a high consumer properties and will serve you for a long time. We hope that you will be satisfied with it work.

you are welcome, attentively Check out from data Guide!

at purchase heating electric water heating apparatus (Further - device) check the completeness and availability of the store and the date of sale of the stamp in the "Guide to the Use" (hereinafter - the Guidelines), coupon, correctness and completeness of the coupons Manuals.

Before proceeding to the installation and operation of the unit, please read this manual as correct installation, configuration and maintenance of devices will provide its long-term and safe operation.

SAVE THIS MANUAL FOR ALL WARRANTY. IN HIM LOSS YOU LOSE RIGHTS ON GUARANTEED REPAIRS DEVICES.

appointed products

1.1 Device intended for heating residential and production premises **with forced circulation of coolant** in a closed heating system and the automatic maintaining temperature mode. Device can used independently or in conjunction with devices operating on other fuels (gas, coal, diesel, wood, pallets, et al.).

1.2 internal excess pressure at closed system heating not must more than 2.4 atm (≈2,4 bar). Inlet pressure (at the pump) should be at least 0.1 atm (≈0,1 bar);

1.3 Possibility for mounting the device must have the following limiting climate options:

- temperature 1 to 40 ° FROM;
- atmospheric pressure from 84 to 107 kPa (630 to 800 mm Hg. v).;
- the relative humidity of the air in a room up to 80% at 25 ° FROM;

1.4 The device is not intended for use on the premises: wet, explosive, aggressive environment.

1.5 In time operating must regularly watch behind work device.

1.6 It can be used: as an independent unit, or in a combined heating (parallel or serial connection to gas or solid fuel boilers).

Rejected EXPLOITATION DEVICES ON OBJECTS WHERE MISSING PEOPLE, Observe his condition and Work.

1. technical characteristics

Table 1

Технические характеристики электрокотлов					
Voltage supply AT single-phase / three-phase network		220 (+5%, -10%) 50 Hz/ 380 (+5%, -10%) 50Hz			
Rated power, kW		3/4,5/6/7,5/9/10,5/12/15/ 18/21/24/30/36			
A type heater		TEN			
efficiency %		98			
maximum pressure at system Bar		3			
Regulation of the heating circuit, ℃		Плавное, 30°C ÷ 90°C (analog)			
Spigot connections, inch		¾ (possible modifications)			
Capacity heating tank (not less), dm ³		≤0.6			
Class protection		IP20			
Overall dimensions (not less), mm		"Mini"	"Econom"	"Standard"	"Standard +"
Length × width × depth		465×151×91 (490×165×106)	581×189×97 (629×193×112)	623×262×174 (635×262×186)	675×383×235 (800×420×260)*
Weight, kg not more		5	9	15	40
Heated volume (from hours before) m 2 / Max. displacement at system l *** Heat loss building from 60% before 10% Outdoor temp - (minus) 120C** **** Ceiling height - 2,75m**	**3** kW	15÷30 m²/20l	15÷35 m²/20l	15÷35 m²/20l	15÷35 m²/20l
	4,5 kW	20÷45 m²/30l	20÷50 m²/35l	20÷50 m²/35l	20÷50 m²/35l
	6 kW	-	28÷65 m²/40l	28÷65 m²/40l	28÷65 m²/40l
	7,5 kW	-	30÷80 m²/50l	30÷80 m²/50l	30÷80 m²/50l
	9 kW	-	35÷100 m²/60l	35÷100 m²/60l	35÷100 m²/60l
	10,5 kW	-	42÷110 m²/65l	42÷110 m²/65l	42÷110 m²/65l
	12 kW	-	48÷125 m²/70l	48÷125 m²/70l	48÷125 m²/70l
	15 kW	-	65÷160 m²/80l	65÷160 m²/80l	65÷160 m²/80l
	18 kW	-	-	-	80÷180 m²/95l
	21 kW	-	-	-	100÷210 m²/110l
	24 kW	-	-	-	120÷240 m²/125l
	39 kW	-	-	-	150÷300 m²/155l
	36 kW	-	-	-	180÷360 m²/185l

* Overall dimensions listed for boiler "Standard A plus" power 21-36 kW

2.1 Main characteristics of the device are shown in Table 1.

2.2 The heating of the coolant in the heating system is carried out by a tubular electric heater unit (hereinafter - TEN).

2.3 Using the thermostat (on the front panel) is carried out automatically maintain the desired temperature of the coolant in the heating system. The ability to use any liquid coolant (water, antifreeze, oil, and etc.);

2.4 Increased reliability and electrical safety;

2.5 Environmentally friendly, easy to install and operation;

2.6 Fire safety (no high connections and seals).

2.7 Low level noise.

3. Set of device:

3.1 Device electrical water heating - 1.

3.2 User's manual and warranty card - 1.

3.3 The package - 1.

.

Note: Auxiliary materials for mounting the device in the package are not included and must be purchased separately.

4. **Security requirements**.

4.1 Installation and connection of the device to the mains follow on specifications issued by the owner of the grid. The technical conditions must be provided with the safety instructions given in this section.

4.2 The design of the device is designed for connection to the mains with earthed neutral (TN-S system) with a frequency of 50 Hz single-phase voltage 220 (11, -22) AT or three-phase current strain 380 (19, -38) B (depending on modification).

4.3 Connecting the device to produce three solid wire when connected to 220V (L + N + PE) or five solid wire when connecting to the network 380 (3xL + N + PE). Wire size are shown in the table in paragraph 7

4.4 The enclosure must be grounded to a special (separate) PE conductor area section not less area section phase conductor (SAE 2009 n 1.7.126).

ATTENTION!

Never use a grounding metal plumbing, heating and gas networks! Checking the grounding integrity must be performed before each switching device work.

4.5 Condition ground is subject to mandatory periodic monitoring at least every six months (according p.2.7.9 PTEEP).

4.6 Electric heating system of the building must have a metallic bond with metal structures associated with ground.

4.7 The installation, electrical connection and maintenance personnel should carry out, having not less than III qualification group on electrical tolerance for electrical installations with voltage up to 1000 ÷ In. The work must carry a person familiar with the device device, the wiring diagram, applicable safety regulations operating

consumer electrical and technical maintenance rules for electrical consumers.

4.8 All work by inspection, prevention and repair must conducted Only after the trip circuit power.

4.9 After connecting the device to the heating and the electrical system should be carried out commissioning certified for such work organization, providing:

- validation of devices connected to the system heating;
- validation device to connect to power;
- launching device and its regulation work;
- user instruction on the rules operation.

5. It is forbidden to:

5.1 Do not use the coolant (water) from the heating system for household needs.

5.2 Do not turn on the device, not filled with water, when overlapped valves and devices to connect at freezing the coolant in the heating system.

5.3 Do not turn on the device without forced circulation of the coolant.

5.4 Do not leave the device unattended when it is operation.

5.5 It is forbidden to carry out installation and commissioning work on their own people do not have the appropriate authorization.

ATTENTION! If any of operation of the device, WARRANTY LIABILITIES NOT PROVIDED.

6. Design and principle work

6.1 Device is yourself steel storage tank, from spigots for supply and discharge of coolant. With the end of the tank heater is screwed on the thread. Device поставляетсявкомпактномкорпусе,вкоторомтакжевстроенасистемауправления. The device is equipped with screw terminal connection, a magnetic contactor (relay-starter, proximity switches or other switching devices, depending on the version), ON / OFF switch and thermostat heating stages with sensor.

6.2 The principle of operation of the device is heated by a heating element, which is located in the reservoir, the coolant (water) that enters the tank through the bottom outlet. The coolant is heated and out of the reservoir through the upper pipe to the heating system, circulating in a closed system, each time passing through the tank with TAN.

6.3 "Network" LED lights up when connecting devices to the network (and in the absence of an emergency). But the heat will turn on only when you select the heating mode, described Further.

6.4 On the front panel there are toggle on / off the heating stages. When the at least one toggle switch, LED lights "Heat." Thus one of the steps included heating.

- In a series of boilers "Mini" there is only one three-position toggle switch toggle switch When the "Step 1" will work mode ½ power, and when the toggle switch "Stage 2" -. Full mode power.
- AT series boilers "Economy" and "Standard" there are two toggle switch "stage 1" and "Stage 2". When the toggle switch "Step 1" will work 1/3 power mode when you turn the toggle switch "Level 2" mode will run 2/3 power, and at inclusion toggle switches "stage 1" and "stage 2 ' at the same time, will work full mode power.
- In a series of boilers "Standard Plus" has three toggle switches with illumination ("Stage 1", "Level 2" and "Step 3", respectively). When one of the three toggle mode will run 1/3 of the power at the same time you turn on Two toggle switches - Mode 2/3 power, and when turned on simultaneously all three toggle switches, the boiler will run in full mode power.

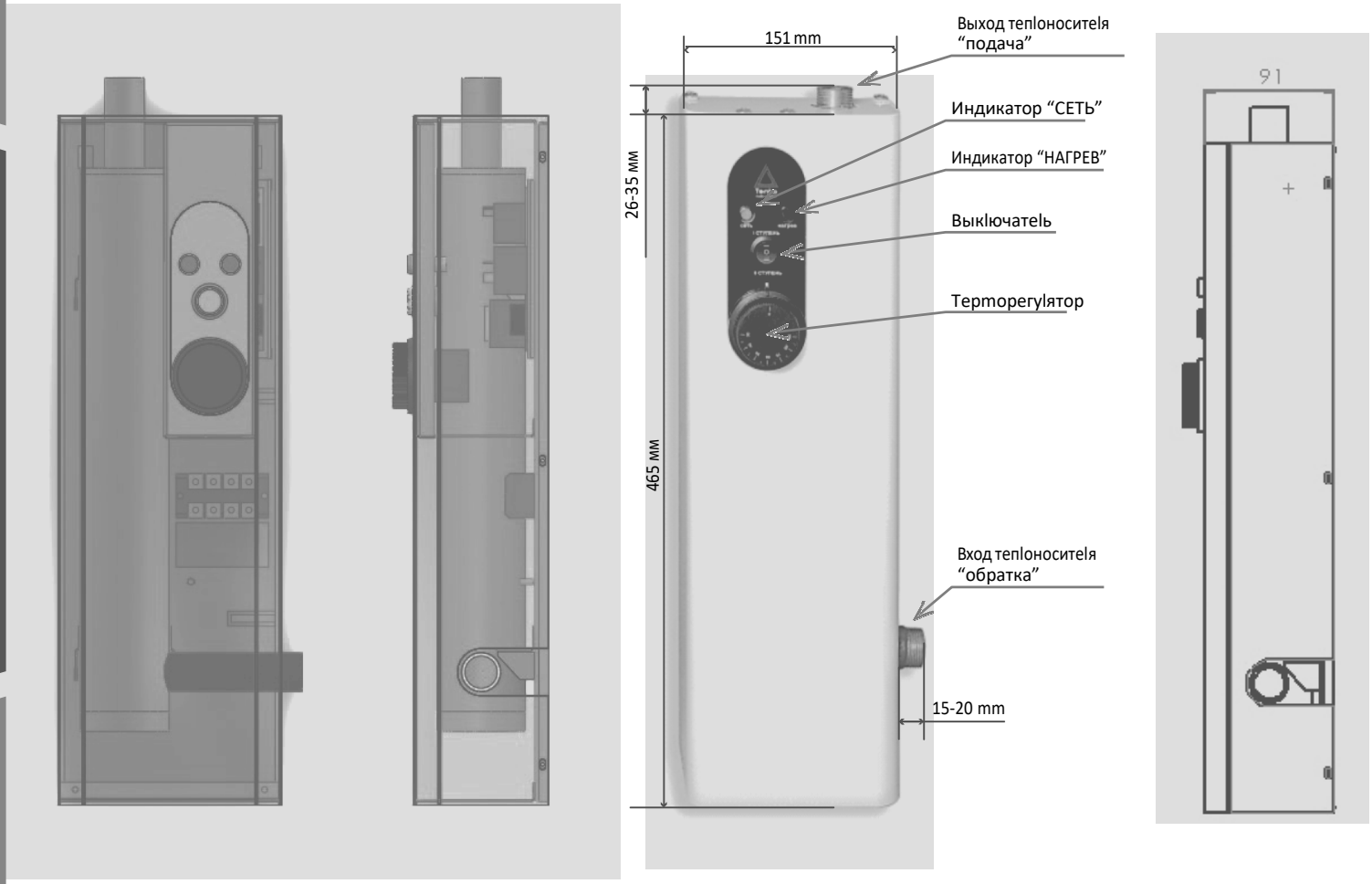
6.5 Use the thermostat knob is set coolant temperature. The temperature of the coolant is maintained automatically, with a deviation of ± 4 ° C. When the coolant has reached a predetermined temperature, the heating stops and the LED indicator "Heat" extinguished.

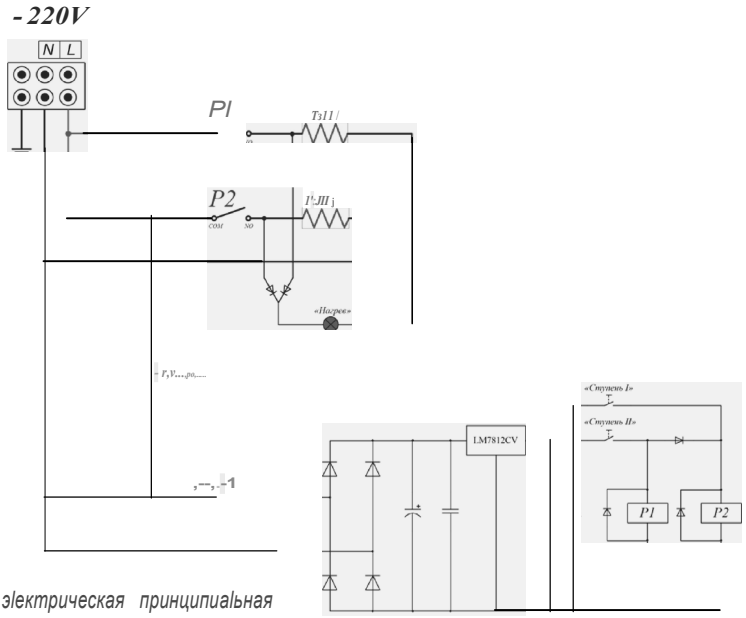
6.6 In thermal heating tank violation mode (coolant temperature reaches 90 ± 3 ^{o}S) thermal protection thermostat is activated, which disconnects the device and thus further heating. In this LED indicator "Net" extinguished. at appearance emergency the situation must be disconnected from the device and prior to subsequent use of the device, find the cause of the accident and to eliminate her.

6.7 To connect additional sensors or connect other optional devices using "dry contact", there is special connection terminals ("Room thermostat"), the default closed bridge. When you connect an additional control, the jumper must be remove.

6.8 All models of the series "Standard" and "Standard Plus" equipped with a built-in circulation pump. In a series of "mini" and "LOW" the circulation pump is not included, but its presence in the system ALWAYS.

Рис. 1. Внешний вид электрокотла Tenko «Мини»

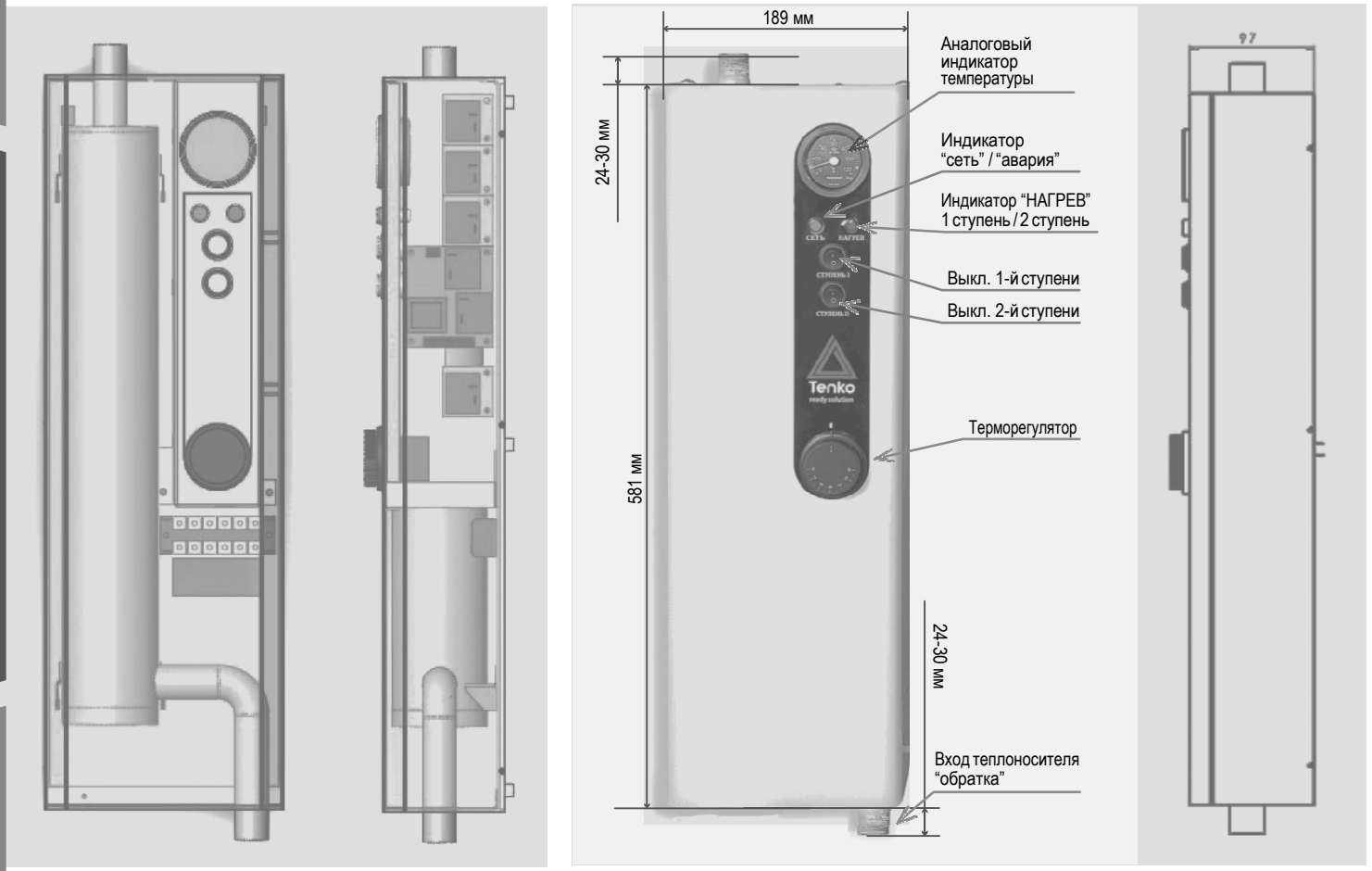




[хе11а электрическая принципиальная котла 71ини"

Напряжение питания котла - 2208
Напряжение питания тзнолJ - 2208

Рис. 2. Внешний вид электрокотла Tenko «Эконом»



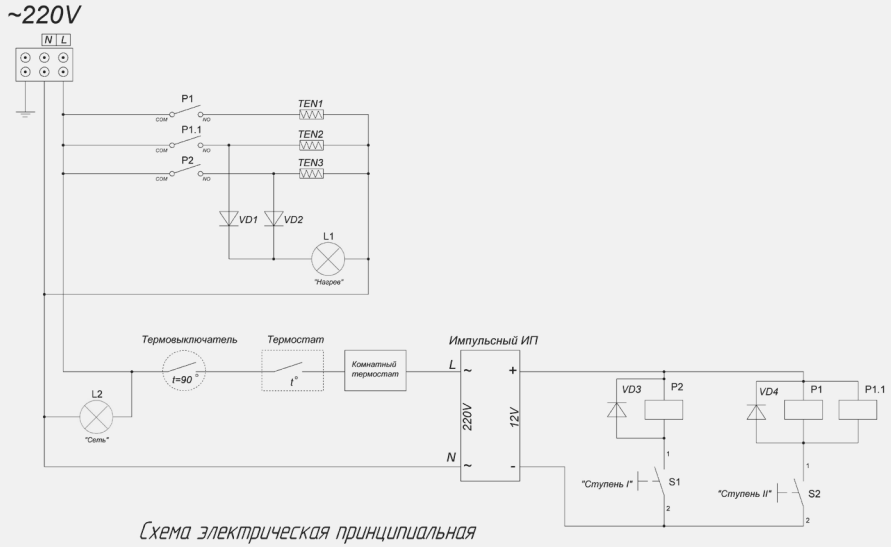


Схема электрическая принципиальная котла "Эконом"

Напряжение питания котла – 220В
Напряжение питания тэнов – 220В

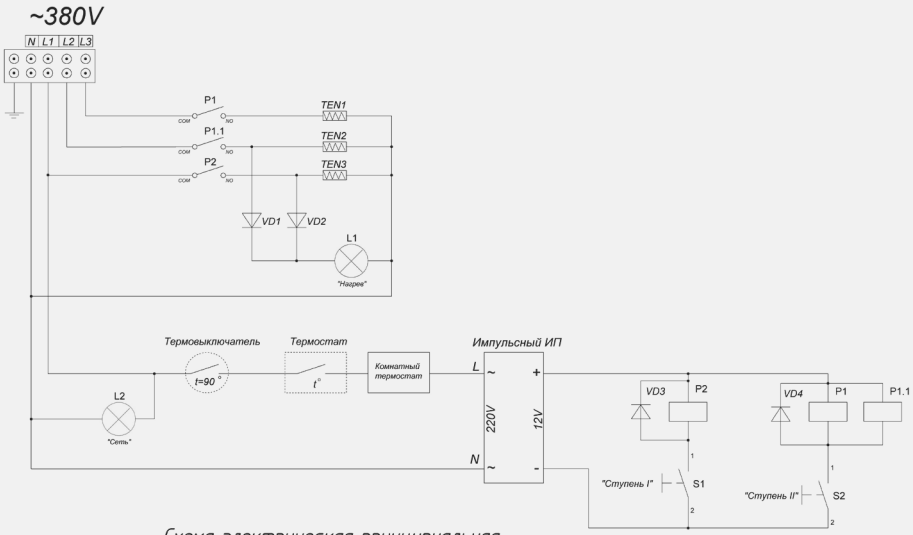


Схема электрическая принципиальная котла "Эконом"

Напряжение питания котла – 380В
Напряжение питания тэнов – 220В

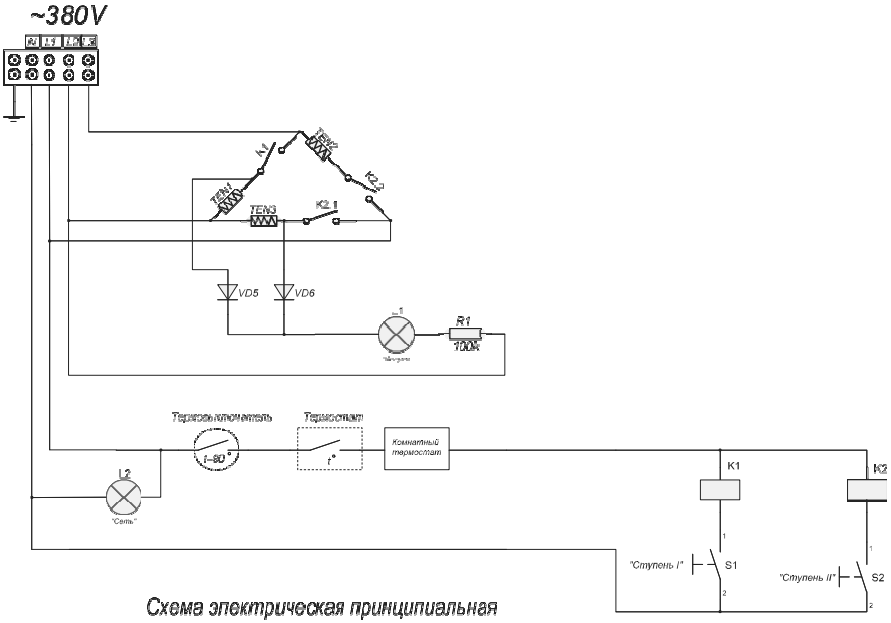
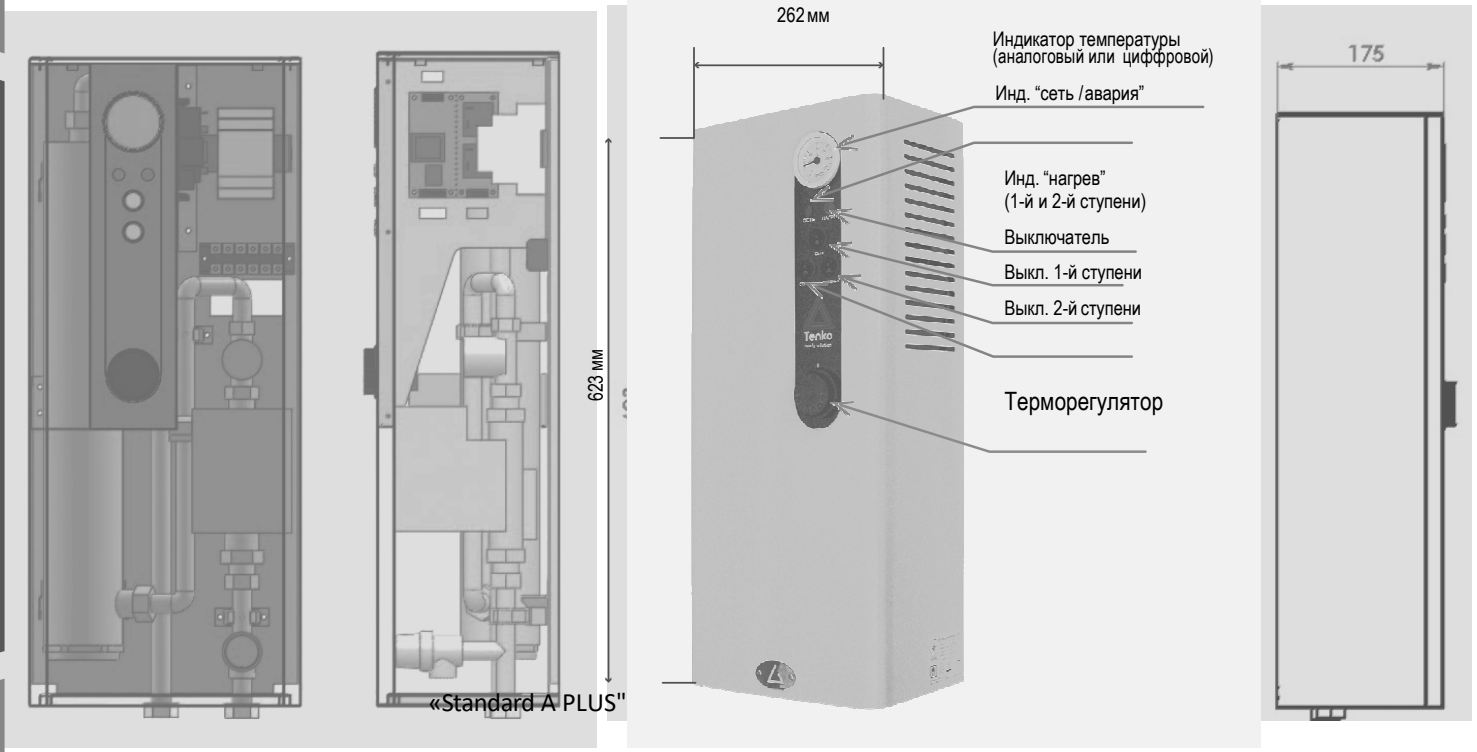


Схема электрическая принципиальная котла "Эконом"

Напряжение питания котла - 380В
Напряжение питания тэнов - 380В

Fig. 3. Appearance of the electric boiler Tenko

вид электрокотла Tenko «Стандарт»



~220V

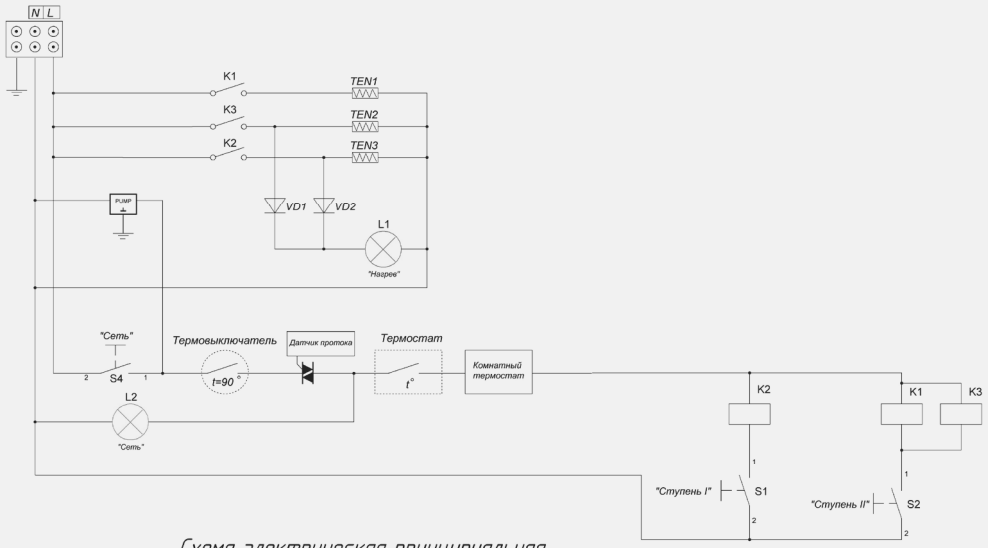


Схема электрическая принципиальная котла "Стандарт"

Напряжение питания котла – 220В
Напряжение питания тэнов – 220В

~380V

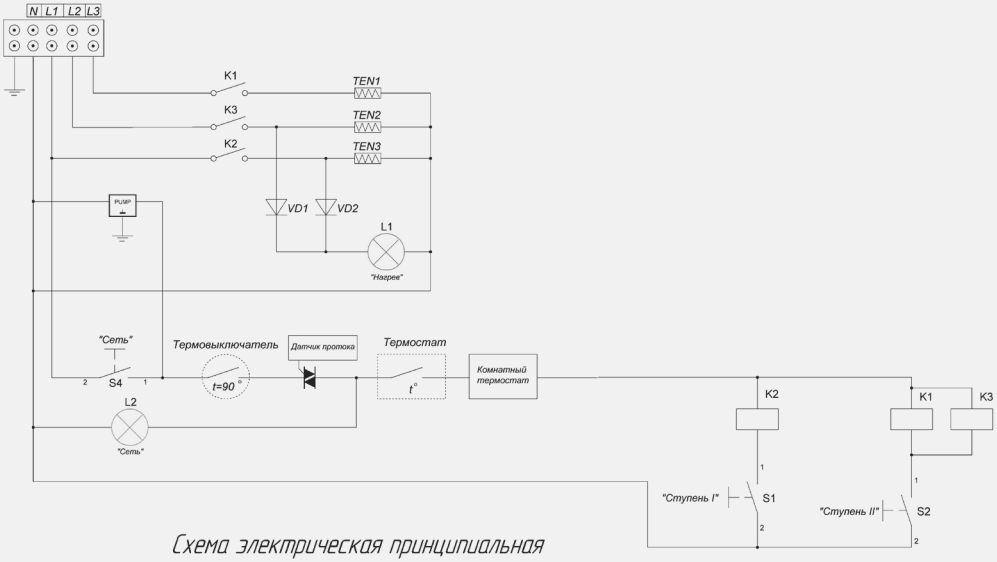
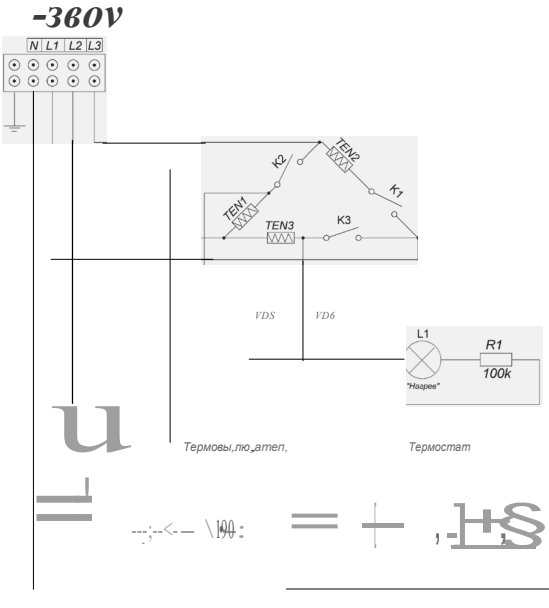


Схема электрическая принципиальная котла "Стандарт"

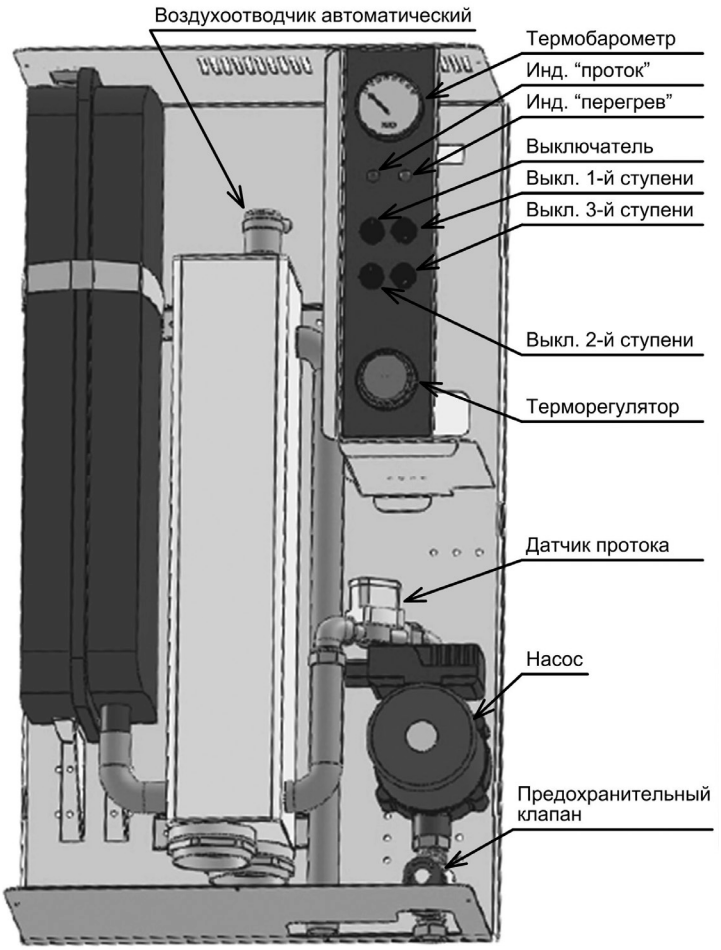
Напряжение питания котла – 380В
Напряжение питания тэнов – 220В

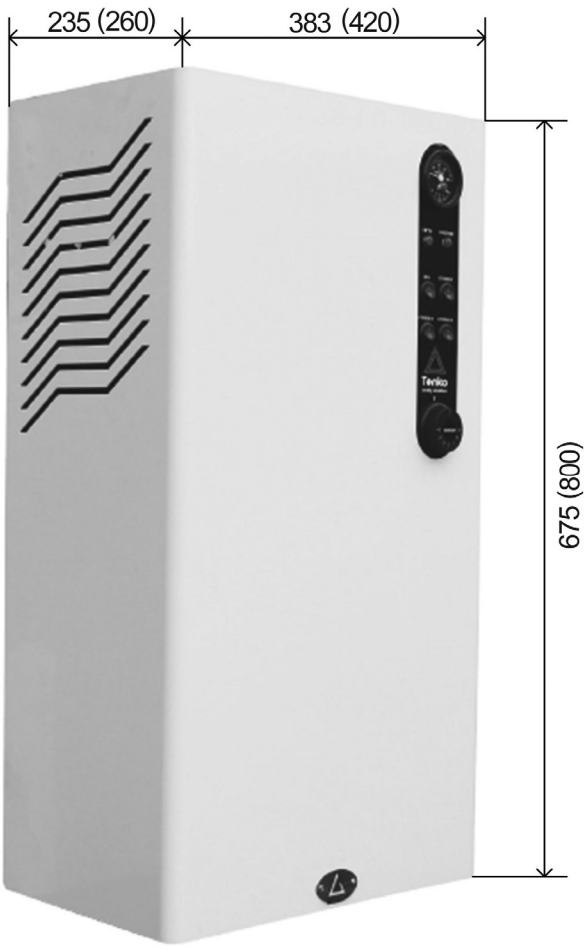


[xel'1a электрическая принципиальная котla Ттаноарт·.

Напряжение питания котla - 3808
Напряжение питания тзна6 - 3808

рис. 3. Внешний вид электрокотла Tenko «Стандарт ПЛЮС»





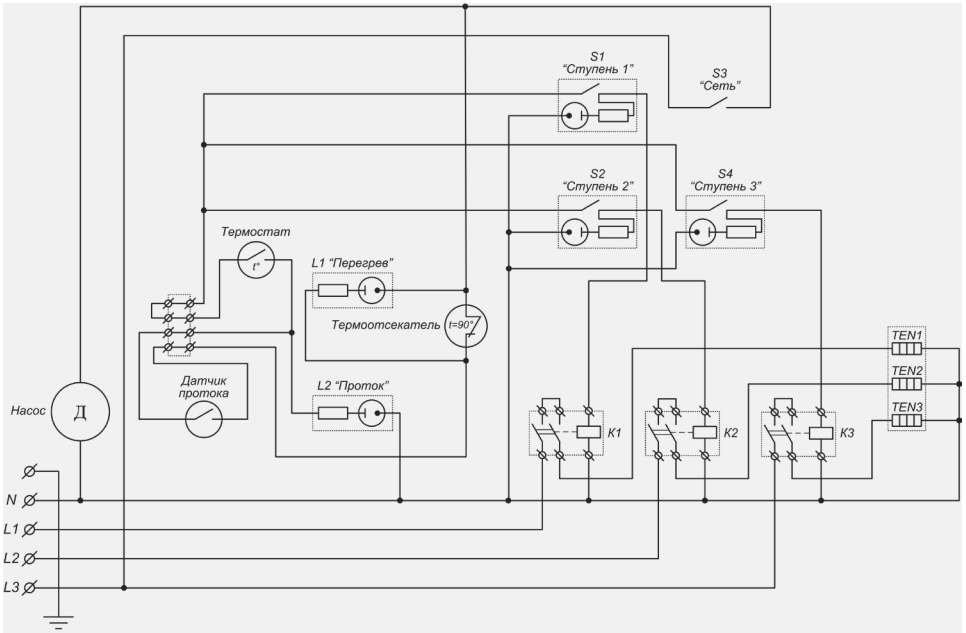


Схема электрическая принципиальная котла «Стандарт+»

Напряжение питания котла – 380
Напряжение питания тэнов – 220

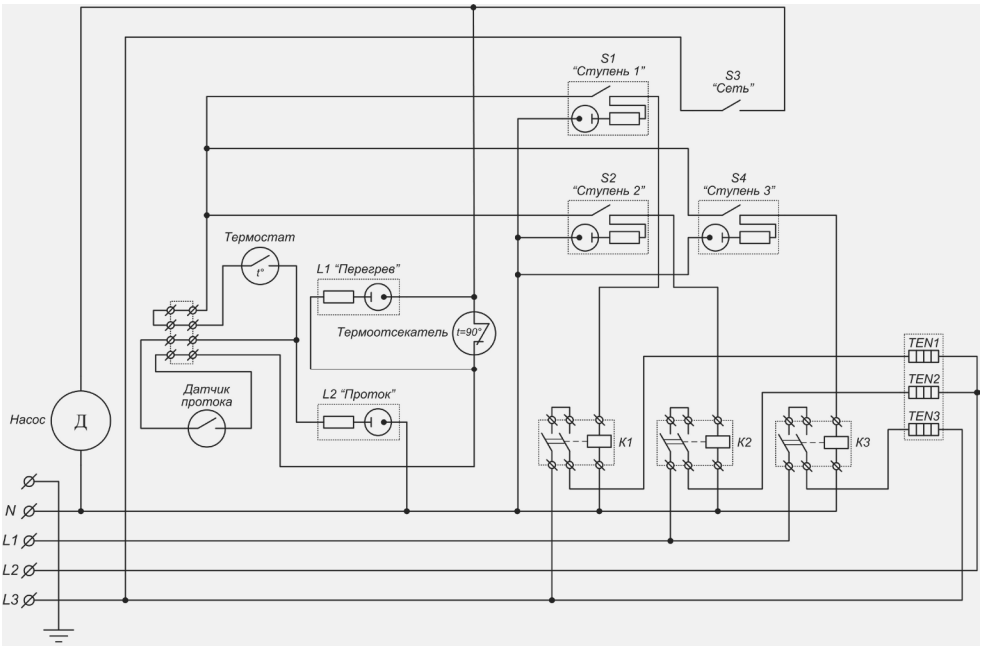


Схема электрическая принципиальная котла «Стандарт+»

Напряжение питания котла – 380
Напряжение питания тэнов – 380

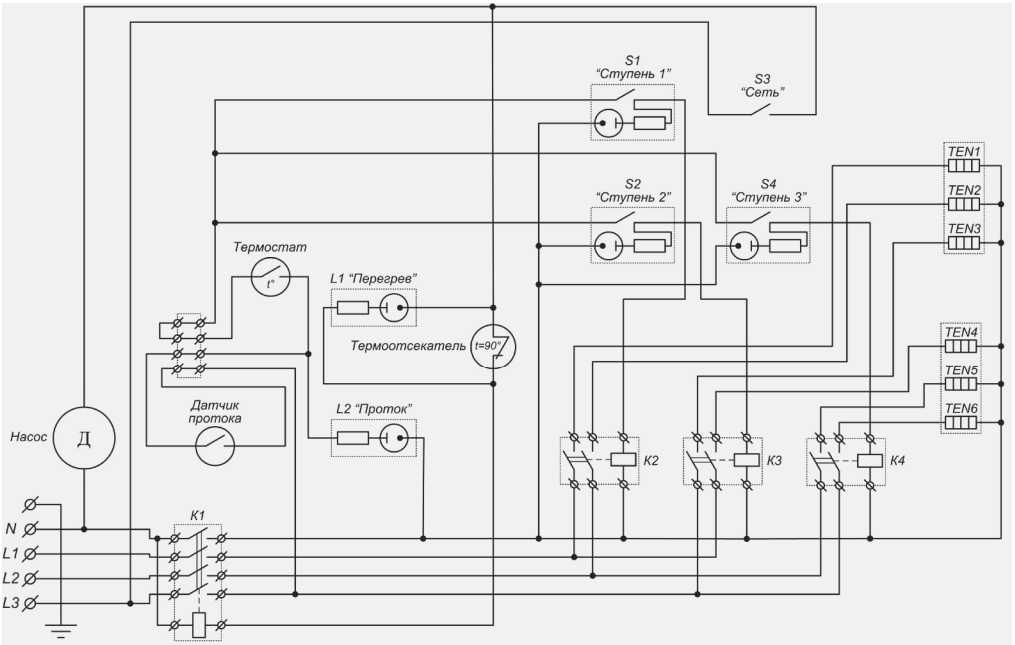


Схема электрическая принципиальная котла «Стандарт+»

Напряжение питания котла – 380
Напряжение питания тэнов – 220

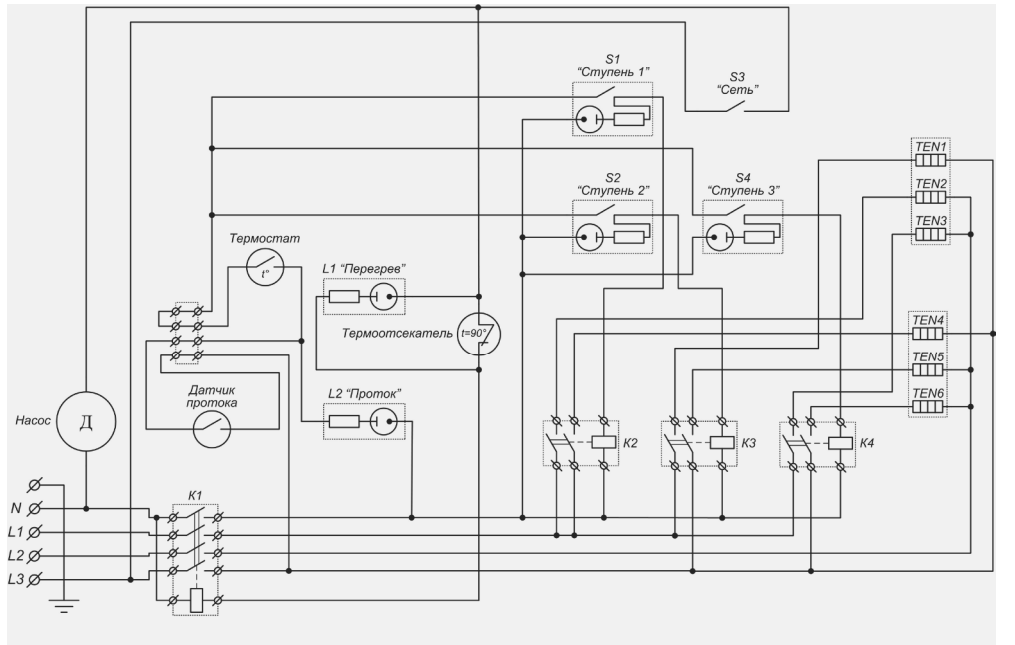


Схема электрическая принципиальная котла «Стандарт+»

Напряжение питания котла – 380
Напряжение питания тэнов – 380

7. Installation of Electric boilers

Thank you for buying an electric heater "Tenko"

Please You attentively study the section, correctly pro - lime connection to your hydraulic contour to the power supply system and the contour ground.

Do not trust the production of these works of random people, avoid - those unskilled independent action - it is dangerous!

Remember that without a mark in the "Guide" of the installer, you can lose the right to free warranty repairs!

To service the product for use by persons familiar with the present manual has an experience at operating industrial electrical water heating systems.

7.1. Extract product (at conditions of low temperature on street, installation of equipment not earlier than 6 hours, brings in a warm room).

The electric boiler is installed in areas that do not contain harmful acid vapors, explosive gases, conductive dust, with relative humidity less than 80% at 25 ° C. Installation of the water heater in the heating system must be carried out by specialists who have experience in plumbing works.

Electrical installation Wiring the heater must be carried out according to an agreed local authorities Gosenergonadzor project, by specialized organizations that have the right to perform the work in existing power grids and electrical installations at compulsory compliance requirements PUE, PTE and PTB.

7.2. Secure electric boiler:

- Loosen screws fixing front panel electric boiler;
- Carefully remove cover;
- When installing the electric boiler should be mounted on a wall anchors through the holes in the brackets on the rear wall, providing the necessary services for the distance to the side walls (not less than 250 mm from the side of the boiler) and the distance to the floor (not less than 525mm from the bottom of boiler).

7.3. at connection electric boiler at system heating, allowed installation on its inlet and outlet ball valves and other valves with flow area not less than ¾ .

strictly prohibited the inclusion of heating water heater with closed shut-off fixture.

the heating system must be installed a safety device against overpressure (safety valve), from pressure actuation of 0.3 MPa (3 kg / cm ² or 3Bar).

7.4. Connect power to appropriately terminals electric boiler using "saydingovy" input. Wire cross-section must correspond to the power acquired electric boiler.

The power of the electric boiler, kW	Mini	Economy / Standard / Standard A PLUS	
	Сечение, mm²		
	Power 220	Power 380	Power 220
3	1,5	1,5	1,5
4,5	2,5	1,5	2,5
6	-	2,5	4
7,5	-	2,5	6
9	-	4	6
10,5	-	4	-
12	-	6	-
15	-	10	-
18	-	10	-
21	-	10	-
24	-	10	-
30	-	16	-
36	-	16	-

8. Process of incorporation boilers at Heating systems.

8.1. When used as a self-heating equipment - it is necessary:

Connect the circulation pump to the power supply ~ 220V (not for electric). Install the circulation pump necessarily recommended in all heating systems, which improves coolant circulation and increase the efficiency of the entire system.

An example system is shown in Fig.8.

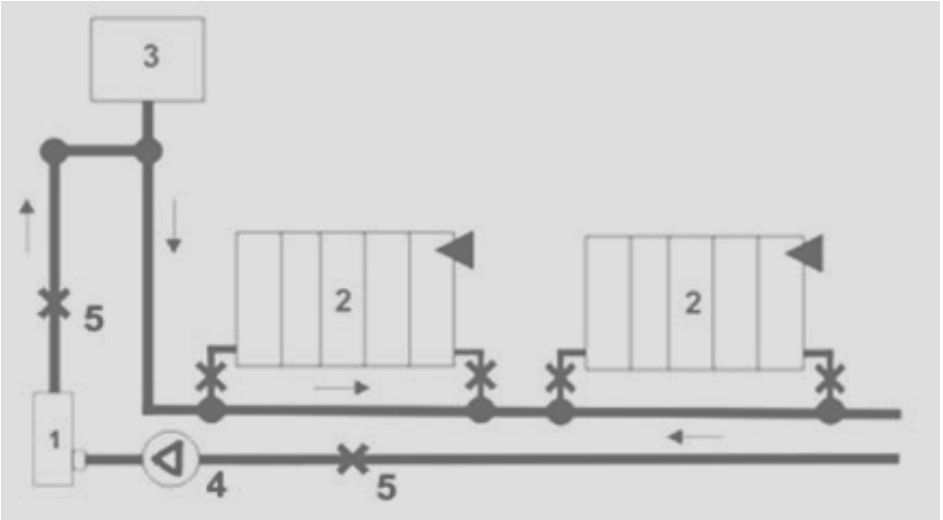


fig. 8. Driving a single-water heating systems from compulsory circulation

1. electric boiler
2. heating battery
3. Security and system expansion tank
4. circulating pump
5. shutoff valve

8.1.1. After installation of the heating system should be flushed, fill clean, free from solids and mineral oils, chemically neutral distilled water or a liquid for heating systems (maximum glycol content of 30%) and opresovat. Bleed the system and eliminate leakage.

The heating system as a heat carrier, other than water, can be used coolants such as ice-Argus Hatdip, Dixis or similar if the conditions for their application in systems heating, these at instructions. Using at heating other mediums do not It allowed.

8.1.2. Run the system for at least 40 minutes in the idle mode (for long and You are a sokih lines heating - not less 1.5 hours). Highly important lack of air pro- side inductor (bleeding made with a set at the top of the boiler bleed screw) and system (whether vibrations arrow manome- tra security system informs about the presence of air). System pressure is determined by the design units, but not more than **2.5** Bar.

8.1.3. After idle run disconnect circulating pump from network at ~ 220V.

8.1.4. After I connect the glands force power of the electric boiler, cable external control system (see. P 7), the circulation pump to the appropriate terminals.

Connection of the heater to the power supply through a circuit breaker rated at Hot Water - telya, cable or cable assembly through a residual current device (RCD), calc - tannoe rated current water heater. D - komenduemy residual current 30 mA .. Phase - ing wire should be connected according to the marking on the terminals of the input terminal and the neutral wire to the appropriate terminal block. when connected, check the tightness of all available contacts and connections The necessity - the bridge tighten**.**

8.1.5. Close the front cover (to avoid the risk of electric shock);

8.1.6. Switch on the electric boiler

The presence of the automatic control system - is necessary. depending on the acquired management systems, you reduce the cost of energy consumed electric boiler.

9. Technical service.

9.1. Repair and maintenance of recommended specialists that have required qualification. For purchase of spare parts formation schatsya service center the manufacturer;

9.2. Device Maintenance is carried out only after a power failure;

9.3. When using the device, you must at least once in a season verify a reliable fastening cables, wires, screw tightening compounds;

9.4. AT case replacement PETN heat-resistant Rubber gasket is replaced on new;

9.5. For work devices and knots system heating without damage as a result of metal corrosion, sludge and scale deposits, the coolant must meet the following requirements:

Total hardness less than $^{g\text{-}eq}/_{kg}$	20
Density at 20 ° C, g / cm ^{H}	1,0-1,15
Content of mechanical impurities	unacceptable
Suspended particles	unacceptable
Corrosive effect on metals, g / m ^{2} per day	no more 0.1
Foaming, foam stability, sec.	no more W
Acidity index (RN)	7.5-11.0
Alkalinity, see ^{3}	at least 10

10. Rules for storage.

10.1. Keep the device must be in compressed form in an enclosed space. The room temperature must be between 1 to 40 ° C and relative humidity of air of 80% at 25 ° C;

10.2. Do not store the device in hazardous areas and pomescheni- s aggressive environment;

10.3. The device transport closed transport means;

10.4. The temperature of the ambient air at transportation must be from -10 ° C to +50 ° C, relative humidity up to 80% at 25 ° FROM.

11. Possible problems.

problem	Possible problem	recommendations
Do not turn on	Absent voltage in network	Check availability network
	Damage to the wire supply	Reestablish wire power supply
	Error switch	replace the switch
	Faulty or load termorazmykatel	Replace termorazmykatel or wait for it to cool down
	No flow or flow sensor is faulty	Checking the presence of water in the system to check whether the pump is running, if necessary, to remove air from the system to adjust the probe
Bad heat	low voltage network	Refer to the electricity supplier
	The regulator in position for at least	Turn the knob clockwise direction
	Poor circulation in the system	Clean the filter or replace
	in air system	Remove the air from the system
	Heater Power does not correspond system	Replace heater or heater to the proper power (refer to the specialist)
No heating	The controller in the state "0" or defective	Turn the knob clockwise direction or replace
	Overheating of the coolant	Triggering termorazmykatel. Wait for cooling thermal shutoff, reduce T ? C thermostat
	Faulty heater or relay	Defective components replace
	Disable degree heat or the switch is faulty	Turn off the one (second) degree, replace switch
No indication	Defective lamps	Defective components replace

12. effective switching circuit of the electric boiler

12.1. C Significant savings in energy and the efficiency of heating the room can make the correct configuration of your heating system. We offer available from types of inclusion and Fast output on working mode electric boiler.

The following are effective strategies to incorporate the electric boiler, which in practice have proven their high efficiency, good momentum entering the operating mode. a.

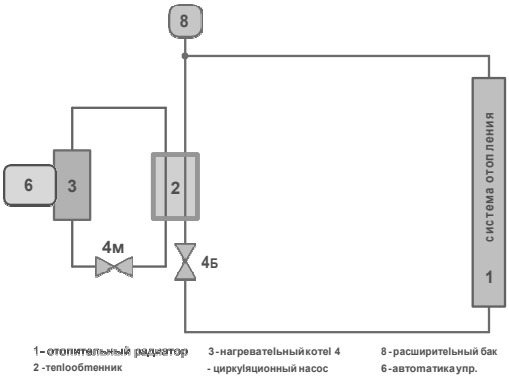
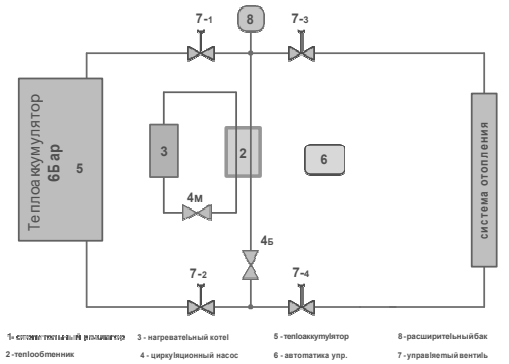


Fig.9. The circuit using the heat exchanger

High-performance scheme with the use of a heat exchanger. It allows you to rapidly enter the operating mode and reduce power consumption at the expense of small displacement in the small loop and return to a warmer coolant in the boiler.

The heat exchanger is calculated for each heating system but samostoyatel-. The contour of the electric boiler has a small volume of that allows you to work in a high-temperature mode (70 ^{0} C ÷ 90 ^{0} C), and hence enforcement (due to nonlinear thermal heating medium) is significantly reduced during operation of the boiler to reheat the coolant



When using multi-tariff electricity, be sure to use the heating system teploakkumu-trimmer.

When the tariff on low energy cue (night). The resulting thermal energy of you can accumulate. Boilers

"TENKO" due to the high dynamics of heating allow a short time to heat up the heat accumulator (if properly calculated) to a high temperature

.

Fig.10. The circuit using the calculated heat storage under high pressure (6 ÷ 10 bar). Pressure at storage tank corresponds to pressure at system.

12.2. Types of combined heating with gas and solid fuel boilers (*only for boilers "STANDARD"*).

To save energy (gas and electricity) used a combined heating.

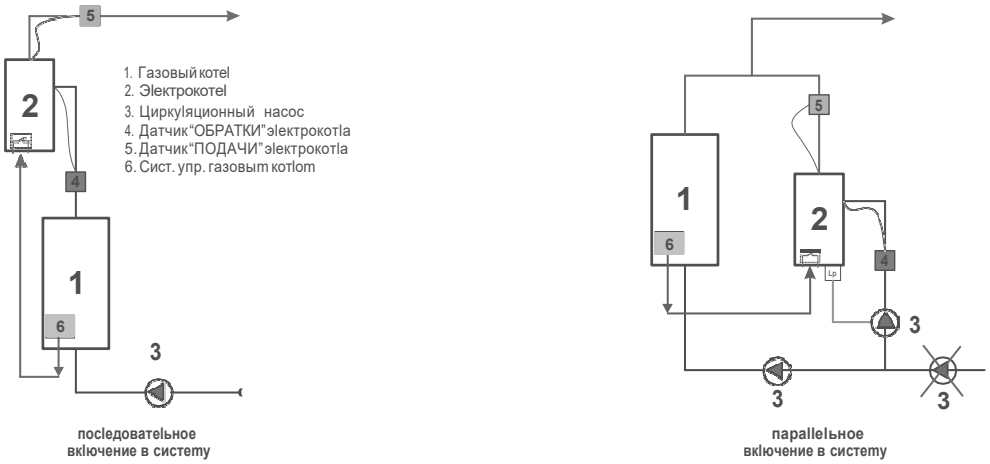


Fig 11. Combined heating. Wiring diagram of the electric boiler

12.3. Running on a "Quick Start"

All electric boilers (regardless of the type of heating) are started by covering all heating radiators at system behind except one. After Output included radiator before temperature 60 ^{0} C, gradually include the remaining radiators and controlled Rowan temperature conditions of the boiler (the coolant temperature at the "Tap" and the "Common Ratko"). But the most you will avoid multi day continuous operation of the boiler at the time of acceleration to a normal economy mode operation.

13. Warranty obligations.

The guarantee does not apply in the following cases:

- No passport to the device ("installation and operation")

- Absent mark at warranty coupon about sale devices and of pu - SKO-commissioning works

- No branded packaging on the device

- there are signs of self-repair, or replacement of components

- there are signs of the installation and operation of the device

13.1. Guarantees manufacturer on Heater (heating element of the electric boiler)

13.1.1. The manufacturer guarantees the normal operation of the electric boiler, provided observance of the rules of operation and storage.

13.1.2. Warranty time operating 24 months from the date of sale to the consumer.

13.1.3. The manufacturer shall, within the warranty period gratuitous correct defects products or replace it if defects not having Owing Corollary violations of rules for use by the buyer or its storage product. guarantee Tiina repairs It provides the manufacturer or his representative.

The warranty does not apply in the following cases:

-otlozheniyah to PETN or other deposits;

-on these kinds works as adjustment, cleaning and other care behind device set forth nye in the manual;

- Damage caused by freezing, pressurized and other similar reasons;
- corrosion damage, power surges, natural phenomena, and natural disasters, fire, animals, insects (especially cockroaches, ants, prusa- ki et al.), to enter the unit of foreign objects;
- failures caused by improper use of equipment or a technically poor service;
- due to the poor performance of the circulating pump;
- damage by unauthorized persons;
- defects due to incorrect wiring or unsuitable voltage and schaya etc .;
- the absence of a mark in the Manual commissioning works;

13.1.4. The manufacturer does not accept complaints about the quality of the work electrode trokotla and warranty repair in cases of non-compliance with the requirements of the present Passport or lack thereof, mechanical damage or traces of self-disassembly, repair or rework, natural disasters, fires, and when the boiler is operated in a room, where under construction or remont- nye work (dust and dirt can clog and damage the unit, cause an emergency.)

13.2. Guarantees manufacturer on basic automatic electric boiler

Warranty period of operation of the electric boiler automation - 12 months from the date of sale are not more than 2 years from the date of manufacture at the factory. During the lifetime of guarantee manufacturer produces free repair automation in the event of non-compliance of their technical requirements while respecting consumer Telem storage, connectivity, and operation.

Automation electric boiler is not subject to warranty in the following cases:

1. End of warranty period of storage or operation.
2. Conditions operating and electric circuit connection not match "Ruko- duction for installation and operation", published in this document.
3. Packaging unit does not match the published herein (the absence of sensors, adapters, electrical wiring is modified, the change in nomination la component products).
4. The product is footprints mechanical damage (breach of sealing, non- marketable, scorching with external power terminal side).
5. The presence of traces of moisture, foreign objects, dust, grya- communication within products (including insects).
6. Strike lightning, fire, flooding, lack of ventilation and other causes naho- Workers outside the control of the manufacturer.

The warranty does not cover circuit breaker and mechanical damage of the sensors.

13.3. Terms of the warranty service.

Guarantee the electric boiler is carried out by providing correctly filled warranty card and presentation of the check.

Attached below a guarantee subject to the conditions provided for giving the right to free warranty repair electric boiler, the components lying inappropriately quality.

warranty repairs which is attached to this coupon. In its absence or unreliability you can appeal at trading in organization or at representative CTBA manufacturer.

These in p.13.1 and 13.2 warranty period is calculated from the date of sale items. date sale of products indicated at warranty coupon and receipt of purchase, at the absence in the coupon or check the date of sale, warranty time calculated from moment manufacture of the product.

Product manufacture date indicated on the label with the technical parameters, different displacements on the body of the product.

Warranty periods in respect of electric boilers and their contents transferred to the consumer in return for electric boilers and components of inadequate quality, research tech at the last day of the warranty period, a replacement installed on electric boiler or an integral part.

13.4. Early termination of the warranty period.

The warranty period is terminated prior to the expiration of the paragraph 13.1 and 13.2 of the period, with the following. Circumstances:

- Violation of consumer installation, storage, transportation and operation of the product;
- Operation with faulty basic automation system and external control systems recommended by the manufacturer;
- Independent repair, dismantling, replacement composite parts, violating the performance of the product;
- Application of the product of mechanical damage;
- Inconsistency or operating conditions of electric parameters of existing norms and standards;
- Use of the product for the purposes for which it was not designed;
- Lack of housing on the product labels with serial number;
- The lack of security in the system of heating;

13.5. Additional services and information.

we recommend that you use the services of our service centers for the annual maintenance on the equipment with subsequent prolongation of the warranty period of one year.

Through our network of service centers you can buy spare parts and components for electric boiler, as well as to obtain the necessary technical advice. Addresses and phone numbers of the service centers you can learn on the phone in the main service center. Delivery of equipment to the service center by the owner equipment behind his account.

The decision on the guarantee or paid form of repair work in the adopted employee authorized service during the warranty period service.

Telephone main service center (057) 373-77-89

ГАРАНТИЙНЫЙ

(Заполняет производитель)

Аппарат TENKO-_____ заводской № _____

Дата выпуска _____ **Контролер**_____

(Подпись и (или) штамп)

(Заполняет продавец)

Продавец_____

Дата продажи_____ Материально ответственное лицо_____(_____)

(Число, месяц, год) (подпись) (фамилия и инициалы)

ТАЛОН М. П. (Название, адрес)

(Заполняет исполнитель пуско-наладочных работ)

Исполнитель _____

(Предприятие, организации, адрес)

Номер постановки на гарантийный учет _____

Адрес установки электрокотла_____

Дата окончания пуско-наладочных работ_____Подпись исполнителя _____ (_____)

(Число, месяц, год) (подпись) (фамилия и инициалы)

М. П.

Подпись потребителя, которая подтверждает выполнение пуско-наладочных работ _____(_____)

(подпись) (фамилия и инициалы)

ОТРЫВНОЙ ТАЛОН на ввод в эксплуатацию после ремонта

(Заполняет исполнитель)

Исполнитель _____
(Предприятие, организации, адрес)

Номер постановки на гарантийный учет _____

Причина ремонта, название комплектующего изделия, составной части _____

_____

_____

_____

Дата проведения ремонта_____ Подпись исполнителя ремонта _____ (_____)
(Число, месяц, год) (подпись) (фамилия и инициалы)

М. П.

Подпись потребителя, которая подтверждает выполнение работ по гарантийному ремонту _____

Корешок отрывного талона на гарантийный ремонт в течение _____ г. гарантийного срока эксплуатации.

Изъят _____ г. Исполнитель _____ (_____)
(подпись) (фамилия и инициалы)

(Заполняет исполнитель пуско-наладочных работ)

Исполнитель _____
(Предприятие, организации, адрес)

Номер постановки на гарантийный учет _____

Адрес установки электрокотла_____

Дата окончания пуско-наладочных работ_____Подпись исполнителя _____(_____)
(Число, месяц, год) (подпись) (фамилия и инициалы)

М. П.

Подпись потребителя, которая подтверждает выполнение пуско-наладочных работ _____(_____)
(подпись) (фамилия и инициалы)