



 **ardenz**

**Solid Fuel Boilers
up to 3 MW**

pages 2-3

KUM

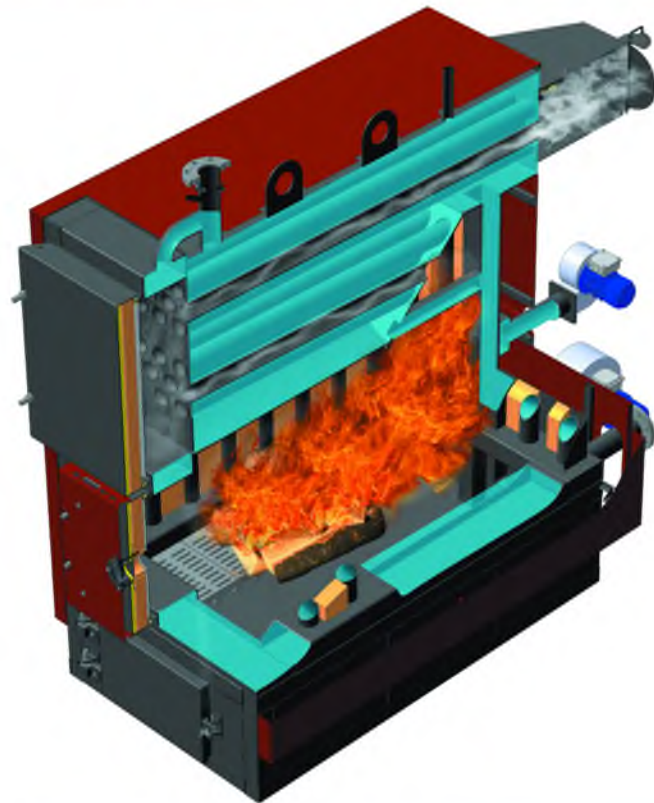
**Modular Boiler
Plants**

pages 4-5

 **NAVI**

**Gas Boilers
up to 6 MW**

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Key advantages of the boilers:

1. Steel used is up to 16 mm
2. Increased heating surface area of the boiler
3. Furnace with semi-lining
4. Boiler control panel with logical control unit
5. Fuel: fuel wood and briquettes
Backup fuel: coal

Manual Solid Fuel Water Heating Boiler

(three-course, steel, with lined furnace, drum, shell-type).

Configuration of boilers T100-T1250

Flow-forced fan, boiler unit control unit, boiler casing (mounted on the boiler), fire tool, operational documentation (ticket, certificate, instruction manual).

Additional configuration

Extended boiler control unit (together with additional configuration), induced-draft fan, cyclone or cyclone-economizer.

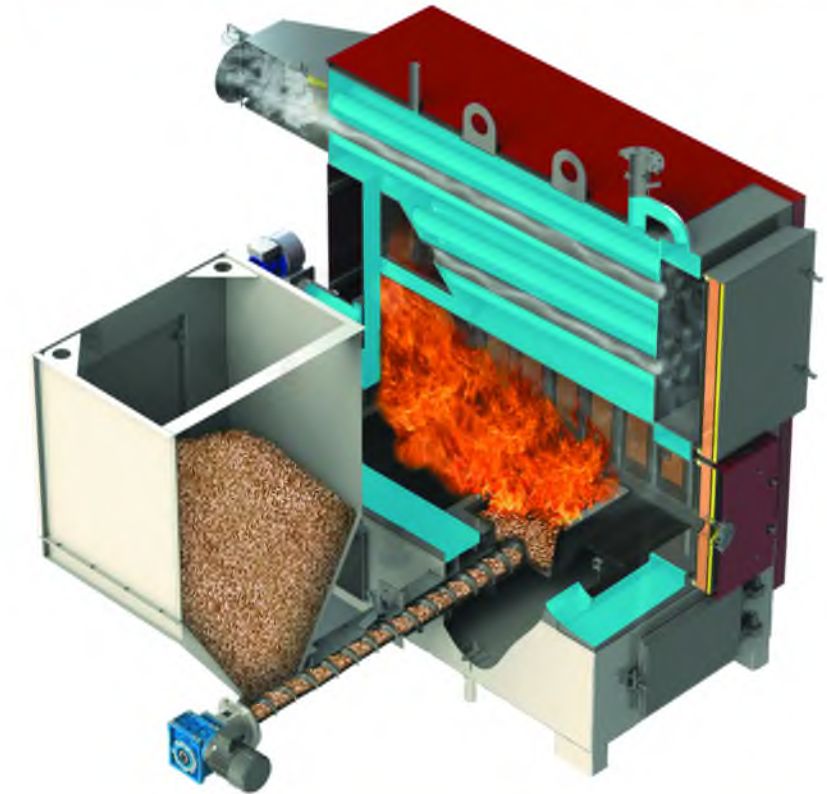
SPECIFICATIONS

| Boiler Model | T-100 | T-150 | T-200 | T-250 | T-300 | T-400 |
|---|---|--------|--------|---------|---------|---------|
| Boiler type | Water heating, drum, shell-type, three-course, manual fuel supply | | | | | |
| Rated heat output, kW | 98 | 150 | 200 | 250 | 300 | 400 |
| Power control range, kW | 45-110 | 65-165 | 90-220 | 110-275 | 135-330 | 180-440 |
| Efficiency, % | 85 | | | | | |
| Total dimensions, mm | | | | | | |
| Length | 2060 | 2300 | 2505 | 2405 | 2805 | 2805 |
| Width | 1030 | 1030 | 1030 | 1190 | 1190 | 1190 |
| Height | 1904 | 2150 | 1904 | 2362 | 2362 | 2362 |
| Boiler weight (without water), kg, not more | 1600 | 1770 | 1950 | 1850 | 2470 | 2500 |

| Boiler Model | T-500 | T-600 | T-700 | T-800 | T-1000 |
|---|---|---------|---------|---------|---------|
| Boiler type | Water heating, drum, shell-type, three-course, manual fuel supply | | | | |
| Rated heat output, kW | 500 | 600 | 700 | 800 | 1000 |
| Power control range, kW | 200-530 | 240-640 | 280-750 | 320-850 | 400-950 |
| Efficiency, % | 85 | | | | |
| Total dimensions, mm | | | | | |
| Length | 2795 | 2795 | 2795 | 2795 | 3535 |
| Width | 1500 | 1500 | 1500 | 1500 | 1860 |
| Height | 2638 | 2638 | 2708 | 2708 | 3241 |
| Boiler weight (without water), kg, not more | 2930 | 3000 | 3200 | 3260 | 5910 |

Key advantages of the boilers:

1. Steel used is up to 16 mm
2. Increased heating surface area of the boiler
3. Furnace with semi-lining
4. Boiler control panel with logical control unit and frequency relay
5. Fuel: fuel pellets, agro pellets, hog fuel, biofuel.
Backup fuel: fuel wood and briquettes



Solid Fuel Water Heating Boiler with Mechanical Stoker

(three-course, steel, with lined furnace, drum, shell-type).

Configuration of boilers TM100-TM3000

Fuel supply tank assembly, flow-forced fan, boiler unit control unit, boiler casing (mounted on the boiler), fire tool, operational documentation (ticket, certificate, instruction manual).

Additional configuration

Extended boiler control unit (together with additional configuration), induced-draft fan, cyclone or cyclone-economizer.

SPECIFICATIONS

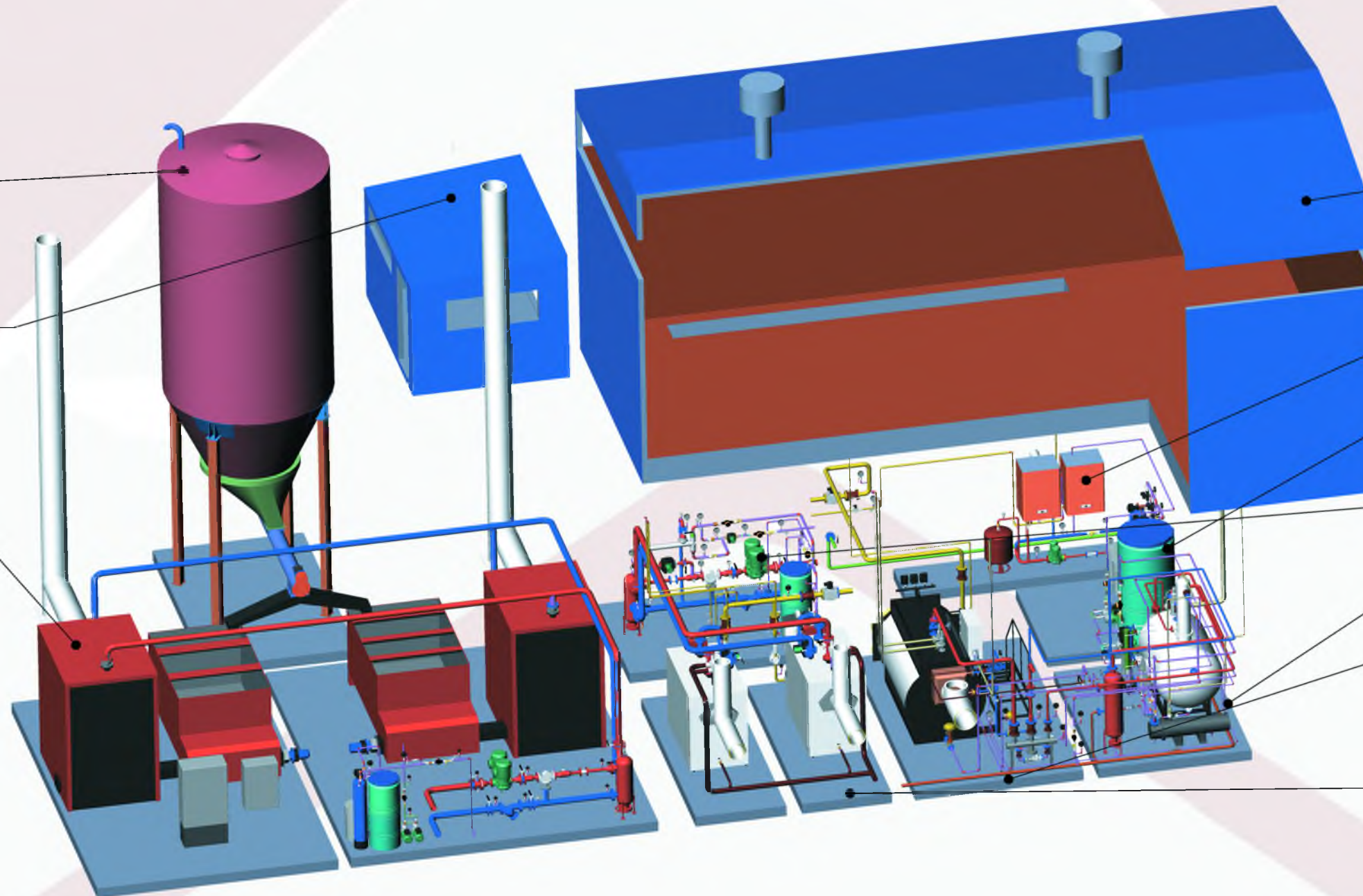
| Boiler Model | TM-100 | TM-150 | TM-200 | TM-250 | TM-300 | TM-400 |
|---|--|--------|--------|---------|---------|---------|
| Boiler type | Water heating, drum, shell-type, three-course, mechanical stoker | | | | | |
| Rated heat output, kW | 98 | 150 | 200 | 250 | 300 | 400 |
| Power control range, kW | 45-110 | 65-165 | 90-220 | 110-275 | 135-330 | 180-440 |
| Efficiency, % | 85 | | | | | |
| Total dimensions, mm | | | | | | |
| Length | 2060 | 2300 | 2505 | 2405 | 2805 | 2805 |
| Width | 1030 | 1030 | 1030 | 1190 | 1190 | 1190 |
| Height | 1904 | 2150 | 1904 | 2362 | 2362 | 2362 |
| Boiler weight (without water), kg, not more | 2000 | 2170 | 2350 | 2250 | 2870 | 2900 |

| Boiler Model | TM-500 | TM-600 | TM-700 | TM-800 | TM-1000 |
|---|--|---------|---------|---------|---------|
| Boiler type | Water heating, drum, shell-type, three-course, mechanical stoker | | | | |
| Rated heat output, kW | 500 | 600 | 700 | 800 | 1000 |
| Power control range, kW | 200-530 | 240-640 | 280-750 | 320-850 | 400-950 |
| Efficiency, % | 85 | | | | |
| Total dimensions, mm | | | | | |
| Length | 2795 | 2795 | 2795 | 2795 | 3535 |
| Width | 1500 | 1500 | 1500 | 1500 | 1860 |
| Height | 2638 | 2638 | 2708 | 2708 | 3241 |
| Boiler weight (without water), kg, not more | 3330 | 3400 | 3600 | 3660 | 6310 |

Fuel supply
module

Operating staff
module

Solid fuel-fired
water heating
module



Boiler plant
building module

Module of hinged
hot water boilers
Water purifying
module

Pump module with
hot-water supply
Deaerating
module

Steam module

Module of floor
hot water heaters

Modular Boiler Plants

consist of separate functional ready-to-operate modules, which are necessary for boiler operation. The combination of various modules allows to obtain boilers with necessary thermal power and steam output depending on the customer's needs.

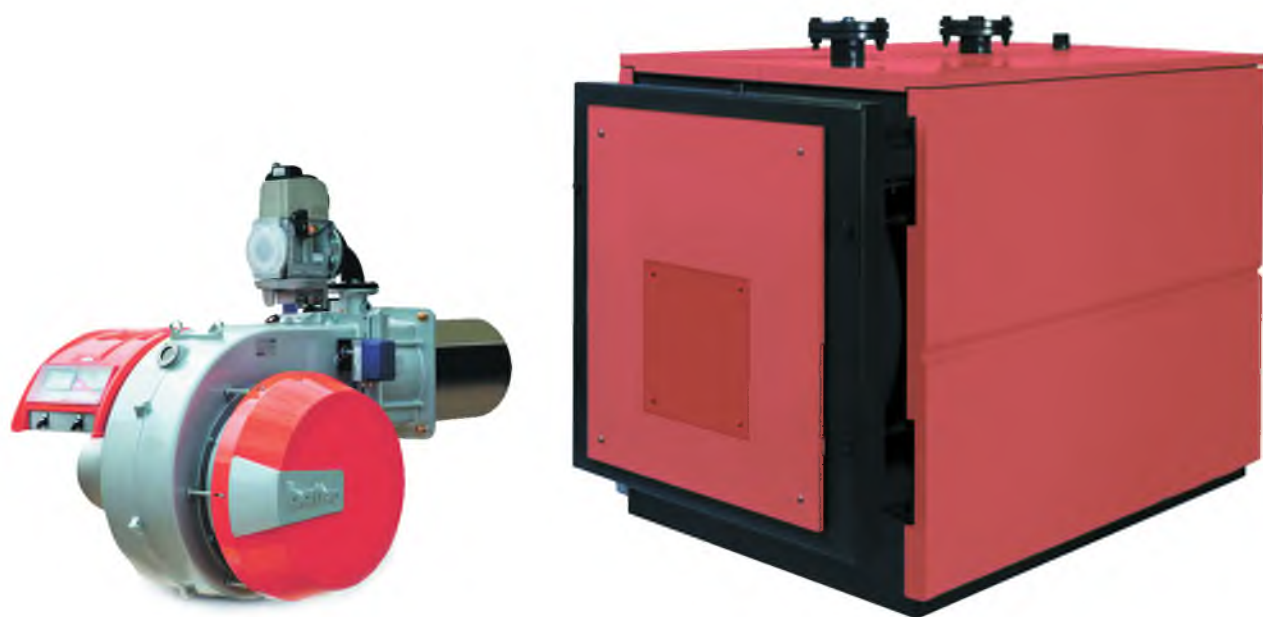
Types of the modular boiler plants:

- water heating, steam, and combined boiler plants
- solid fuel, gas, diesel, oil-burning, and combined boiler plants

Based on their function the modules are divided into

- generating modules (steam and water heating modules)
- processmodules
- auxiliarymodules

Boiler Plant Modules are mounted on special frames, which can be transported and installed in pre-engineered metal building constructed of profiled sheeting with flame-retardant heater or in other buildings designed for boiler plant installation. Modules may be supplied as a part of a boiler plant as well as separately for replacement of the aged piece of equipment with a new one in the existing boiler plants.



Steel water heating boiler unit with reverse flame in the furnace

This boiler unit is operating on liquid and gaseous fuel. It has furnace under pressure to produce hot water. Combustion chamber has a complete cooling option and dimensions, which provide low combustion rate. It is supplied in a ready-to-operate state with the Baltur burner (EU, Italy).

Boiler's efficiency is 92 %, 6 bar. Service life is 20 years.

The economizer (supplied to order) produced from stainless steel increases efficiency up to 97 % by recovery of residual heat from stack effluents.

The boiler is supplied in three main parts:

- boiler body
- boiler casing
- Baltur burner

boiler unit control unit (is supplied on request).

KEY MODELS SPECIFICATIONS

| Model | Navi 350 | Navi 525 | Navi 1050 | Navi 1250 | Navi 1480 |
|-------------------------|---|----------|-----------|-----------|-----------|
| Boiler type | Steel floor-standing water heating boiler | | | | |
| Power control range, kW | 350 | 525 | 1060 | 1250 | 1480 |
| Rated heat output, kW | 228-350 | 341-525 | 689-1060 | 813-1250 | 962-1480 |
| Efficiency, % | 92 | 92 | 92 | 92 | 92 |
| Total dimensions, mm | | | | | |
| Length | 1546 | 1838 | 2420 | 2420 | 2722 |
| Width | 950 | 1060 | 1450 | 1450 | 1530 |
| Height | 1100 | 1250 | 1580 | 1580 | 1730 |
| Boiler weight, kg | 480 | 860 | 1580 | 2250 | 2650 |

Structural features:

1. Microprocessor control
2. Electronic ignition and flamestate control
3. Digital display
4. Self-diagnostic test
5. Gas output pressure control
6. Flame modulation
7. Antifreezing function
8. Seizure defense of the circulation pump
9. Cascade operation option
10. Remote control of heat generator parameters
11. Remote control option of the heat generator operation
12. Application of water-cooled burner with low CO₂ and NO_x
13. Easy and convenient mounting, front face service accessibility



No restrictions for minimum temperature of the main return line fluid cooler

Navi 100 BC (98 kW, Efficiency 93 %)

Navi is designed to supply heat to household, domestic and industrial facilities. It is installed at conventional refuse-fired plants, transportable and roof boiler plants, built-in and attached boiler plants as well as furnaces.

Heat generators are equipped with burners running on low pressure natural gas as per GOST 5542 and meet tight CO₂ and NO_x emission standards with forced blow out of combustion products into the boiler flue.

Heat generators are produced in two modifications: "Navi" BC and "Navi" HC. "Navi" BC modification has a light replaceable decorative facing and is designed for indoor installation. "Navi" HC modification is mounted inside a steel housing, which has heat insulation and is designed for outdoor installation.

SPECIFICATIONS

| Feature | Measuring unit | NAVI-50 | NAVI-100 |
|--|----------------|---------|----------|
| Rated heat output | kBT | 50 | 98 |
| Efficiency, not less | % | 93 | 93 |
| Fluid cooler temperature control range | °C | 40-85 | 40-85 |
| Total dimensions, mm | mm | | |
| Length | | 850 | 850 |
| Width | | 680 | 680 |
| Height | | 470 | 470 |
| Boiler weight, not more than | kg | 60 | 76 |



BZKU today

Our enterprise - ALC "Brovary Municipal Equipment Plant" (BZKU) – was established 87 years ago. As of today, it manufactures heating equipment under the trademark TM Ardenz, Navi, KUM.

BZKU production meets contemporary energy saving requirements. The plant was awarded for the development of the energy saving products.

The main office of BZKU is located at: Kiev oblast, Brovary, 42 Starotroitska Street.

**Official
distributor
of BZKU
production:**

