



BOILTE BASE

**ENLARGED THREE-PASS COMBUSTION
CHAMBER – MINIMUM NO_x EMISSIONS**

POWER: 350–1250 kW

TEMPERATURE: up to 115°C

PRESSURE: 5 bar



Boilte Base

FUEL: GAS / DIESEL / HEAVY FUEL OIL / HEATING OIL / WASTE OIL

The ideal solution for environmentally friendly and cost-efficient heat.

For modern businesses, equipment efficiency is directly linked to its environmental impact and total cost of ownership. Low-temperature three-pass boilers Boilte Base are a series where these principles are embedded in the design. Available in six sizes with outputs from 350 to 1250 kW, they provide reliable heat for heating and domestic hot water systems with minimal environmental impact and budget strain.

The key advantage: Environmental friendliness without extra cost. NOx reduction is achieved not through expensive flue gas cleaning systems, but through smart engineering – an enlarged three-pass combustion chamber.

The core feature of Base: it is a ready-to-use, certified solution that meets stringent quality, safety, and environmental standards straight "out of the box." Choosing a low-temperature heating boiler Boilte Base means striking the right balance between power, environmental responsibility, and reasonable investment.

Fuel flexibility: Operation on gaseous fuels (natural gas, LPG) or light liquid fuels (diesel, heating oil) with the option of fitting a burner from leading global brands.

Key advantages (6 reasons to choose Base)

1. Environmental safety – the enlarged three-pass combustion chamber reduces thermal NOx formation without expensive cleaning systems. Meets the strictest environmental standards.
2. High efficiency >93% – three consecutive passes of flue gases ensure nearly complete heat transfer. Every percentage point of efficiency cuts fuel costs.
3. Easy maintenance – swing-out chambers open to the left or right. All main connections are routed to the top and rear for easy installation and service access.
4. Low-temperature operation – heats the heat transfer fluid up to 115°C. Ideal for modern heating systems and domestic hot water applications.
5. Monolithic construction – welded joints with a structure identical to the base metal.

6. Turbulation in the third pass – special turbulators enhance heat exchange, lowering flue gas exit temperature and further improving efficiency.

Engineering excellence: strength you can verify.

The claimed performance would be impossible without an uncompromising approach to manufacturing quality.

- Atomic-level quality control. For us, welds are not just joints – they are zones of controlled structural transformation. We create a structure in them identical to the base metal, ensuring uniform load distribution and eliminating weak points. Precise selection of welding materials guarantees identical expansion coefficients, eliminating local stress concentrations during thermal cycling.
- Documented quality assurance. Every critical weld is validated using radiography and ultrasonic testing. You receive not just a boiler, but a complete set of non-destructive testing reports – objective proof of its reliability and safety for inspection authorities and acceptance committees.
- Designed for real-world conditions. The choice of compatible materials and welding modes ensures resistance to thermal cycling (start-stop operation), extending service life under variable loads. The boiler is designed for intensive duty with frequent on-off cycles.
- Gas-tight design. The thick-metal construction, operating under positive pressure, guarantees tightness, safety, and complete fuel combustion. No air infiltration means higher efficiency and lower noise levels.

Fields of application

- Car service centres and workshops. Reliable heat for service bays, wash bays, and waiting areas. Low emissions are critical for city-centre locations.
- Medium-sized production shops. Heating of work areas, maintaining temperature for technological processes.
- Warehouses and logistics centres. Maintaining storage temperatures – especially critical for temperature-sensitive goods.
- Sports and social facilities. Schools, kindergartens, swimming pools, gyms – where environmental and safety standards are highest.

- Shopping centres. Cost-effective, environmentally friendly heating of large public areas.
- Office and administrative buildings. Space heating, DHW for sanitary zones. Low noise and emissions.
- Enterprises in environmentally sensitive areas. Facilities near residential zones, water protection areas, or nature reserves.

Additional Engineering Solutions and Options

- The Base design accounts for condensate formation in the flue gas passages during low return water temperatures. Optimised third-pass geometry and flue gas velocity maintain tube wall temperatures above the dew point, preventing sulphuric acid corrosion and extending the service life of the chimney and heat exchanger by 30–40% without additional anti-corrosion coatings.
- Thanks to its increased water volume and optimised circulation layout, the Base boiler operates stably under sudden flow fluctuations (e.g., zone valve operation or heating circuit switching). This eliminates water hammer and local overheating, reduces pump wear, and extends pump overhaul intervals to 25 000 hours.
- The Base boiler is structurally prepared for operation with underfloor heating, fan coil units, and other low-temperature circuits (40–60°C). When equipped with an economiser or bypass, it can

operate continuously with low return water temperatures without degrading efficiency. This enables seamless integration into modern energy-efficient buildings without compromising reliability or service life.

Why choose Boilte Base?

- Lifetime warranty on the boiler heat exchanger and main load-bearing components – an unconditional manufacturer's obligation, legally confirmed and fully binding.
- Full certification package – GOST, TR EAEU, EN, and optionally ASME, PED upon request. Ensures trouble-free commissioning and acceptance by any regulatory authority.
- Environmental safety as a standard – minimum NOx emissions achieved through design, without expensive cleaning systems. Compliant with strict environmental norms "out of the box."
- Fuel flexibility – capability to operate on gas or liquid fuels with burners from leading global brands.
- Engineering support at every stage – selection, site supervision, commissioning, start-up, staff training, and ongoing service support.
- Factory-direct pricing – optimised logistics and no intermediaries mean no hidden markups. You pay only for the equipment, not for unnecessary distribution layers.

Technical specifications

Model, Base	Power, kW**	Efficiency, %	Boiler resistance, mbar	Water volume, L	Flue gas flow, m ³ /h	Gas consumption, m ³ /h	H, mm	B, mm	L, mm	Dry weight, kg
350	350	93,31	3,9	670	512	43,9	1654	985	1794	1083
450	450	93,41	4,6	760	606	54,69	1654	985	1914	1269
600	600	93,71	2,4	910	834	65,47	1854	1085	2084	1744
800	800	93,32	2,8	950	951	77,03	1854	1085	2484	2056
1000	1000	93,22	4	1260	1396	88,58	2084	1185	2304	2261
1250	1250	93,21	4,7	1510	1560	109,38	2084	1185	2704	2624

****Power:** The values shown correspond to operation on methane (natural gas). When using diesel fuel or heavy fuel oil (mazut), a power adjustment (reduction) may be required in accordance with design standards and fuel-specific calculations.

Boilte reserves the right to modify dimensions and design without prior notice.

Dimensional tolerance: ±0.1–0.2% for all Boilte equipment.

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engineered trust

