

BNX







DESCRIPTION

Monobloc low-pressure reverse flame wet back steam boiler, suitable for liquid or gaseous fuels.







It is a brand-new boiler, designed to guarantee high-quality steam at low operating pressures and with high peak loads. It has the latest generation user interface equipped with notification and alarm systems, and with optimised dimensions for the installation in small-size heating plant rooms to facilitate routine inspection and maintenance operations.

FEATURES

-  **Design pressure: 0,98 o 0,5 bar**
-  **Heat output: 69,8 ÷ 2035 kW**
-  **Steam capacity: 100 ÷ 3000 kg/h**
-  **Efficiency: > 91,0 %**

For higher or lower pressures see our commercial department

ADVANTAGES

-  **New certification**
CE certification as a whole according to the PED Directive
-  **Reduced size**
Redesigned to optimise the dimensions for the installation in small-size heating plant rooms and to facilitate routine maintenance and inspection operations
-  **Reliability and durability**
Maximum reliability and durability guaranteed through design with low surface heat losses.
-  **High steam quality**
At high load the internal separator prevents the entrainment of water droplets to the steam outlet, the steam produced is then always of high quality having a very high dryness fraction.
-  **Simplified user interface**
Latest generation user interface provided with warning and alarm systems
-  **Consistant supply of high quality steam**
Thanks to the generously dimensioned steam chamber the boiler can meet the varying demand of the system including instantaneous peak demands

Low-pressure reverse flame steam boiler

MODELS

BNX 0.98 bar

Design pressure: 0,98 bar
Operating pressure: 0,2 - 0,9 bar
Heat output: 69,8 ÷ 2035 kW
Steam capacity: 100 ÷ 3000 kg/h
Efficiency: > 91,0 %

BNX 0.7 bar

Design pressure: 0,7 bar
Operating pressure: 0,2 - 0,65 bar
Heat output: 69,8 ÷ 2035 kW
Steam capacity: 100 ÷ 3000 kg/h
Efficiency: > 91,0 %

BBNX 0.5 bar

Design pressure: 0,5 bar
Operating pressure: 0,2 - 0,45 bar
Heat output: 69,8 ÷ 2035 kW
Steam capacity: 100 ÷ 3000 kg/h
Efficiency: > 91,0 %

The BNX product in the 0.7 bar version is destined to the Russian market.

AVAILABLE CERTIFICATIONS



RECOMMENDED TECHNOLOGIES

MAIN APPLICATIONS

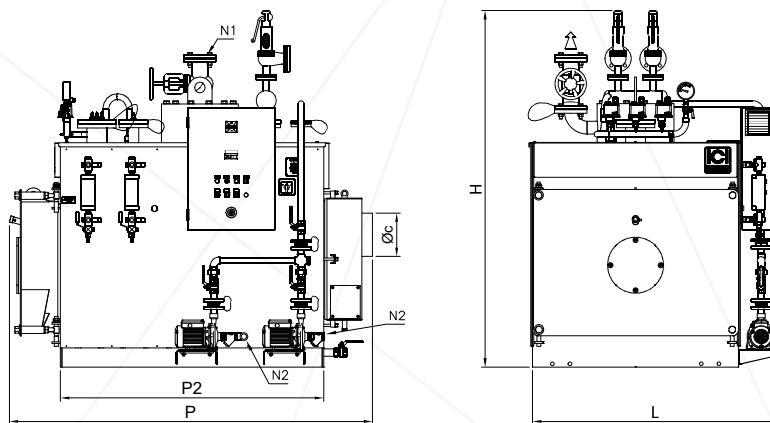
- + Tanning industry
- + Hospitals
- + Dairy Industry
- + Accommodation facilities
- + Distilleries
- + Chemical and pharmaceutical industries
- + Beer industry
- + Manufacturing industry
- + Wine farms

TECHNICAL DATA

| Model | Heat output | Flow thermal | Steam capacity * | Volume level H2O | Total volume H2O | Flue gas pressure drop | Gas consump. | Diesel fuel consump. | Nafta consump. | Total weight |
|-------|-------------|--------------|------------------|------------------|------------------|------------------------|--------------|----------------------|----------------|--------------|
| BNX | kW | kW | kg/h | l | l | mbar | Nm3/h | kg/h | kg/h | kg |
| 100 | 69,8 | 77,4 | 100 | 146 | 198 | 0,7 | 7,9 | 6,5 | 6,9 | 650 |
| 150 | 105 | 115 | 150 | 250 | 410 | 1,5 | 11,9 | 9,8 | 10,3 | 830 |
| 350 | 233 | 256 | 350 | 515 | 805 | 3,5 | 26,4 | 21,8 | 22,9 | 1260 |
| 500 | 349 | 383 | 500 | 690 | 875 | 3,5 | 39,6 | 32,6 | 34,3 | 1480 |
| 700 | 465 | 511 | 700 | 800 | 995 | 5,0 | 52,9 | 43,5 | 45,8 | 1580 |
| 850 | 581 | 639 | 850 | 1100 | 1400 | 4,5 | 66,1 | 54,4 | 57,2 | 2180 |
| 1000 | 698 | 767 | 1000 | 1100 | 1400 | 6,0 | 79,3 | 65,3 | 68,7 | 2180 |
| 1400 | 897 | 985 | 1350 | 1560 | 2010 | 5,1 | 100,8 | 83,1 | 87,3 | 2730 |
| 1700 | 1163 | 1278 | 1700 | 1790 | 2280 | 7,0 | 132,3 | 108,9 | 114,5 | 2930 |
| 2000 | 1395 | 1533 | 2000 | 2050 | 3020 | 7,5 | 158,7 | 130,7 | 137,4 | 3830 |
| 2650 | 1744 | 1917 | 2650 | 3100 | 4240 | 6,5 | 198,3 | 163,3 | 171,8 | 5130 |
| 3000 | 2035 | 2236 | 3000 | 3100 | 4240 | 7,5 | 231,4 | 190,6 | 200,4 | 5130 |

* steam capacity with feed water at 80 ° C

* total weight referring to the single pump model, 0.98 bar



DIMENSIONS

| Model | H | L | P | P2 | ØC | N1 | N2 |
|-------|------|------|------|------|-----|-------|-------|
| BNX | mm | mm | mm | mm | mm | DN/in | DN/in |
| 100 | 1280 | 1000 | 1225 | 820 | 180 | 1"1/4 | 1" |
| 150 | 1723 | 1290 | 1720 | 1170 | 200 | 40 | 1" |
| 350 | 2000 | 1340 | 2060 | 1510 | 250 | 50 | 1" |
| 500 | 2042 | 1420 | 2085 | 1510 | 250 | 65 | 1" |
| 700 | 2108 | 1420 | 2335 | 1760 | 250 | 65 | 1" |
| 850 | 2409 | 1540 | 2625 | 2010 | 300 | 80 | 1" |
| 1000 | 2409 | 1540 | 2625 | 2010 | 300 | 80 | 1" |
| 1400 | 2325 | 1770 | 2625 | 2010 | 350 | 100 | 1" |
| 1700 | 2639 | 1750 | 2925 | 2310 | 350 | 100 | 1" |
| 2000 | 3009 | 1940 | 3160 | 2515 | 400 | 125 | 1" |
| 2650 | 2923 | 2080 | 3720 | 3015 | 450 | 150 | 1" |
| 3000 | 2923 | 2080 | 3720 | 3015 | 450 | 150 | 1" |

H is the value with spring safety valves; for boilers with balance safety valves the height is reduced by approximately 300 mm

STANDARD EQUIPMENT

Monitoring instrumentation, comprising:

Large dial 3 way test valve manometer
Limit pressure switch
Manual reset safety pressure switch
Regulation pressure switch (only for versions with 2 pumps)

Blow down system comprising:

Rapid discharge ball valve with manual lever

Automatic conductivity probe level control system comprising:

Pump start probe and pump shut-off probe
1st and 2nd alarm probes and low level burner lockout
Safety probe for maximum level

Boiler control panel, IP55 1/N ~ 230V 50 Hz

AVAILABLE CONDITIONS

Single feed water pump

Steam-side accessory unit including

Steam outlet/crown valve
balanced safety valve
Reflex level indicator gauge
Level indicator gauge drain and shut-off valve unit

Feed water delivery system containing:

1 Centrifugal pump for water at 90°C
1 feed water shut-off valve
1 pump suction filter
2 non-return valves

Twin feed pumps

Accessories on the steam side, including:

Steam outlet/crown valve
2 safety valves
2 Reflex level indicator gauges
2 indicator drain and shut-off valve units

Feed water delivery system containing:

2 centrifugal electric pumps suitable for water at 90°C
4 delivery shut-off valves
2 pump suction filters
3 non-return valves

PRODUCT CODES

| Model | 0,98 bar | | 0,7 bar |
|----------|----------|----------|----------|
| | 1 pump | 2 pumps | 2 pumps |
| BNX 100 | 86420100 | 86420104 | 86420106 |
| BNX 150 | 86420150 | 86420154 | 86420156 |
| BNX 350 | 86420350 | 86420354 | 86420356 |
| BNX 500 | 86420500 | 86420504 | 86420506 |
| BNX 700 | 86420700 | 86420704 | 86420706 |
| BNX 850 | 86420850 | 86420854 | 86420856 |
| BNX 1000 | 86421000 | 86421004 | 86421006 |
| BNX 1400 | 86421400 | 86421404 | 86421406 |
| BNX 1700 | 86421700 | 86421704 | 86421706 |
| BNX 2000 | 86422000 | 86422004 | 86422006 |
| BNX 2650 | 86422650 | 86422654 | 86422656 |
| BNX 3000 | 86423000 | 86423004 | 86423006 |

| Model | 0,5 bar | |
|-----------|----------|----------|
| | 1 pump | 2 pumps |
| BBNX 100 | 86430100 | 86430104 |
| BBNX 150 | 86430150 | 86430154 |
| BBNX 350 | 86430350 | 86430354 |
| BBNX 500 | 86430500 | 86430504 |
| BBNX 700 | 86430700 | 86430704 |
| BBNX 850 | 86430850 | 86430854 |
| BBNX 1000 | 86431000 | 86431004 |
| BBNX 1400 | 86431400 | 86431404 |
| BBNX 1700 | 86431700 | 86431704 |
| BBNX 2000 | 86432000 | 86432004 |
| BBNX 2650 | 86432650 | 86432654 |
| BBNX 3000 | 86433000 | 86433004 |

ACCESSORIES AVAILABLE FOR THE RANGE

| Code | Description | 1 Pump | | 2 Pumps | | |
|---------------------------|--|--------|------|---------|------|--------|
| | | BNX | BBNX | BNX | BBNX | BNX RU |
| See "Accessories" section | BNX automatic purging system | ■ | ■ | ■ | ■ | ■ |
| See "Accessories" section | Standby feed water pump | ■ | ■ | | | |
| 17090037 | Salinity control unit (pneumatic TDS) (starting from BNX 1400) | ■ | ■ | ■ | ■ | ■ |
| 17090035 | Salinity control unit (electric TDS) (starting from BNX 1400) | ■ | ■ | ■ | ■ | ■ |
| 17090051 | Salinity control unit (electric light TDS) (up to BNX 1000) | ■ | ■ | ■ | ■ | ■ |
| 38040100 | Sample cooler | ■ | ■ | ■ | ■ | ■ |
| 90060010 | High level safety kit | ■ | ■ | ■ | ■ | ■ |
| 90060073 | 2nd stage regulation pressure switch BNX 500-3000 | ■ | ■ | ■ | ■ | ■ |
| 86900067 | Global safety system GSS 72/1 (BNX 100-1000) | ■ | ■ | ■ | ■ | ■ |
| 86900073 | Safety system GSS 72/2X | ■ | ■ | ■ | ■ | ■ |
| QCTETERM | Eterm Easy manager panel | ■ | ■ | ■ | ■ | ■ |
| 90060078 | Cascade control panel for steam boilers | ■ | ■ | ■ | ■ | ■ |

COMPONENTS FOR HEATING PLANT ROOM COMPATIBLE WITH THE RANGE



ECXV
Vertical energy saver
Page 190



DEG
Atmospheric deaerator
Page 202



VRC
Feed water tank
Page 198



ADD
Feed water treatment unit for steam boilers
Page 206



VRC-V
Feed water tank
Page 200



BDV
Blowdown vessel
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