### **INDUSTRIAL RANGE HOT WATER**

# TNOX.e (2500-6000)

**HOT WATER BOILER** Design pressure 6 bar Heat output from 2.5 to 6 MW





#### Standard equipment:

- pressure monitoring instrumentation, containing:
- large dial 3 way test valve manometer
- temperature monitoring instrumentation, containing:
- 0-120°C large scale thermometer
- INAIL approved regulating thermostat (100°C)
- high temperature, INAIL approved (100°C) manual reset safety thermostat
- PT1000 thermocouple
- purging unit containing:
- drain valve x 2
- male connection quick exhaust valve with manual lever
- boiler electric command panel, IP 55 electrical protection, composed of:
  - main switch
- burner switch
- condensate pump interrupt
- electronic thermostatic control with flow temperature display (on-off command and second stage burner)
- high pressure light and alarm reset button
- high temperature light and alarm reset button
- alarm reset button
- alarm siren

The boilers for export will be equipped with:

- high pressure pressure gage with manual reset
   the regulatory thermostat is not supplied

### **Main features**

Three pass, wet back boiler, suitable for liquid or gaseous fuel pressurized combustion, intended for heating systems with duties ranging between 2500 and 6000 kW and temperatures higher than 100 °C.

It also features heat exchange acceleration elements to ensure highest possible efficiency of it's category.

Designed for 110°C maximum temperature (available for 10 bar designed pressure) In compliance with EN 303 European norm and has a CE label according to 2009/142/CE Gas Directive.

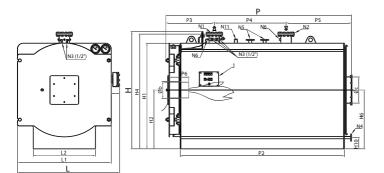
Some of the product's main features are related below:

- P265GH UNI EN 10028/2 and P275NH UNI EN 10028/3 quality steel boiler body welded and tested with approved methods
- horizontal, single pass flame combustion chamber, with possible corrugated
- wetback combustion, supported and connected to a tube of 500 mm diameter with manhole facility.
- Tube plates with drilled holes and then subsequently re-bored for smoke tube welded and expanded; the tube plate front the reverse chamber is completely flanged towards the combustion chamber, with butt welds rather than T-Butt
- plate containment with flanged PN 16 or PN 40 EN 1092-1 connections for equipment operation; equipped with man-hole, and head-hole, and lifting eye bolts.
- P235GH UNI EN 10216/2 smoke ducts, thickness 3.2mm, expanded and welded into the tube sheet, endowed with special turbulence inductors designed and dimensioned in order to ensure stated efficiency achievement.
- steel sheet front door, thermally insulated refractive materials with high aluminum content, mounted on adjustable hinges, easily opened by handwheel bolts without the need to remove the burner; equipped with light indicator for combustion control.
- insulated steel sheet posterior smoke box equipped with an easily opened door can be removed using equipped bolts using brass bolts in order to clean the smoke pipes; provided with cleaning door and chimney connection
- support built form carbon steel sections able to support the entire unit.
- embossed metal sheet upper walkway for accessories service, parts located above the boiler
- high density, mineral wool mattress, 80 mm thickness thermal insulation, with round embossed aluminum case.
- Accessories equipment needed for automatic operation with mechanical and hydraulic assembly for all equipment.
- Electrical wiring converging to a single centralized control panel, having silicone insulated wires inserted in PVC protective sheaths all subjected to final functionality test

For each product always indicate the code at the time of the order.

## **INDUSTRIAL RANGE**

HOT WATER TNOX.e



Legend:
N1 Boiler flow
N2 Boiler return
N3 Equipment connections
N4 System load/drain connect
N5 Safety valve connections
N6 Bulb sheath
N8 Control cover Equipment connections
System load/drain connection

N8 Control cover N11 Minimum level probe connection

| Characteristics | Code     | Nominal | Flow    | 100%<br>efficiency | Hydraulic     | Total<br>volume  | Flue gas      | F      | Total       |        |        |
|-----------------|----------|---------|---------|--------------------|---------------|------------------|---------------|--------|-------------|--------|--------|
|                 | product  | Power   | Thermal | (ref. C.O.P.)      | pressure drop | H <sub>2</sub> O | pressure drop | Gas    | Diesel fuel | Nafta  | weight |
| Model           |          | kW      | kW      | %                  | mbar          | lt               | mbar          | Nm3/h  | kg/h        | kg/h   | kg     |
| TNOX.e 2500     | 83472511 | 2500    | 2626    | 95,2               | 38            | 4.496            | 12,0          | 268,81 | 221,37      | 232,78 | 6.300  |
| TNOX.e 3000     | 83473011 | 3000    | 3151    | 95,2               | 55            | 5.746            | 14,0          | 322,62 | 265,69      | 279,38 | 6.950  |
| TNOX.e 3500     | 83473511 | 3500    | 3676    | 95,2               | 75            | 6.441            | 13,0          | 376,43 | 310,00      | 325,98 | 8.200  |
| TNOX.e 4000     | 83474011 | 4100    | 4307    | 95,2               | 42            | 7.335            | 15,0          | 440,95 | 363,14      | 381,86 | 8.970  |
| TNOX.e 5000     | 83475011 | 5000    | 5252    | 95,2               | 63            | 9.088            | 14,0          | 537,74 | 442,84      | 465,67 | 11.280 |
| TNOX.e 6000     | 83476011 | 6000    | 6303    | 95,2               | 91            | 10.066           | 16,0          | 645,24 | 531,37      | 558,76 | 12.160 |

| Dimensions  | Н    | H1   | H2   | H4   | H6   | H10 | L    | L1   | L2   | Р    | P2   | P3   | P4   | P5   | P6      | Øb  | Øc  | N1    | N2    | N1/N2 | N3        | N4    | N5    | N6    | N8    | N11   |
|-------------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|---------|-----|-----|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| Model       | mm   | mm   | mm   | mm   | mm   | mm  | mm   | mm   | mm   | mm   | mm   | mm   | mm   | mm   | mm      | mm  | mm  | DN/in | DN/in | PN    | DN/in     | DN/in | DN/in | DN/in | DN/in | DN/in |
| TNOX.e 2500 | 2460 | 2210 | 1230 | 2400 | 1230 | 125 | 2135 | 1960 | 1300 | 3872 | 3430 | 1005 | 1500 | 1367 | 300-400 | 400 | 550 | 200   | 200   | 16    | 1/2"-3/4" | 40    | 50    | 1/2"  | 3/4"  | 1/2"  |
| TNOX.e 3000 | 2460 | 2210 | 1230 | 2400 | 1230 | 125 | 2135 | 1960 | 1300 | 4372 | 3930 | 1005 | 2000 | 1367 | 300-400 | 400 | 550 | 200   | 200   | 16    | 1/2"-3/4" | 40    | 50    | 1/2"  | 3/4"  | 1/2"  |
| TNOX.e 3500 | 2700 | 2420 | 1335 | 2610 | 1335 | 125 | 2345 | 2170 | 1400 | 4372 | 3930 | 1006 | 2000 | 1367 | 300-400 | 450 | 600 | 200   | 200   | 16    | 1/2"-3/4" | 40    | 50    | 1/2"  | 3/4"  | 1/2"  |
| TNOX.e 4000 | 2700 | 2420 | 1335 | 2615 | 1335 | 125 | 2345 | 2170 | 1400 | 4872 | 4430 | 1255 | 2200 | 1417 | 300-400 | 450 | 600 | 250   | 250   | 16    | 1/2"-3/4" | 40    | 65    | 1/2"  | 3/4"  | 1/2"  |
| TNOX.e 5000 | 2820 | 2570 | 1410 | 2765 | 1410 | 125 | 2495 | 2320 | 1600 | 5382 | 4930 | 1257 | 2700 | 1425 | 300-400 | 450 | 700 | 250   | 250   | 16    | 1/2"-3/4" | 40    | 65    | 1/2"  | 3/4"  | 1/2"  |
| TNOX.e 6000 | 2820 | 2570 | 1410 | 2765 | 1410 | 125 | 2495 | 2320 | 1600 | 5882 | 5430 | 1257 | 3200 | 1425 | 300-400 | 450 | 700 | 250   | 250   | 16    | 1/2"-3/4" | 40    | 65    | 1/2"  | 3/4"  | 1/2"  |

For higher pressures see our commercial department.