

## INDUSTRIAL RANGE

### HOT WATER

# TNOX.e EN (7000-17000)

## HOT WATER BOILER

*Design pressure 6 bar*

Heat output from 7 to 17 MW

EFFICIENCY



#### 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
- boiler drain unit containing:
  - purge shut-off valve at flow start
  - 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 generators for abroad will be equipped with:

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

#### Main features

Three pass, wetback, boiler suitable for liquid or gaseous fuel pressurized combustion, intended for heating systems or with power ranging between 7000 and 17000 kW and work temperatures between 60 and 100 °C.

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:

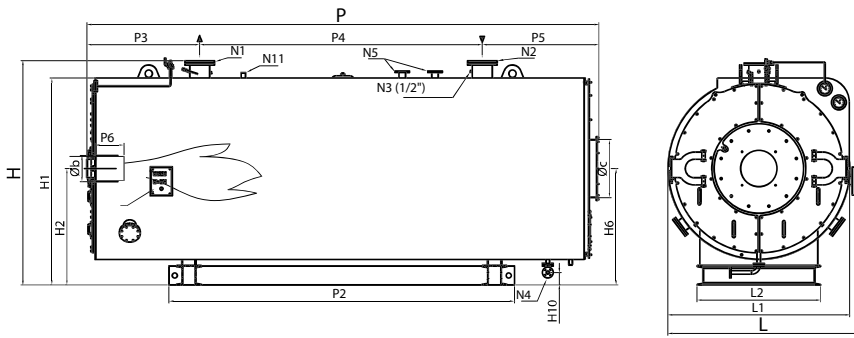
- P265GH UNI EN 10028/2 and P275NH UNI EN 10028/3 quality steel boiler body welded and tested with approved methods
- horizontal, single pass flame combustion chamber, with possible corrugated section.
- wetback combustion, supported and connected to a tube of 500 mm diameter with manhole facility.
- 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 welds.
- 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, without helical turbulators
- front smoke box made from steel sheet, thermally insulated with refractory materials with a high aluminum content, equipped with two flat separated doors, lined in ceramic fiber and rotating on a double-jointed hinges; complete with refractory cone and drilled plate for burner insertion
- rear smoke box made from steel sheet, thermally insulated with refractory materials with a high aluminum content equipped with two flat separated doors, equipped with cleaning hatch, chimney connection, buffer for access to the combustion chamber, light flame with guillotine closing
- support built from 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.

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### TNOX.e EN



**Legend:**

- N1 Boiler flow
- N2 Boiler return
- N3 Equipment connections
- N4 System load/drain connection
- N5 Safety valve connections
- N6 Regulating and safety thermostat connections
- N7 Security pressure gage connection (not supplied)
- N8 Control cover
- N11 Minimum level probe connection (not supplied)

Characteristics	Code product	Nominal Power kW	Flow Thermal kW	100% efficiency (ref. C.O.P.) %	Hydraulic pressure drop mbar	Total volume H <sub>2</sub> O lt	Flue gas pressure drop mbar	Fuel consumption			Total weight kg
								Gas Nm <sup>3</sup> /h	Diesel fuel kg/h	Nafta kg/h	
TNOX.e EN 7000	83477011	7000	7353	95,2	123	14950	15,0	753	620	652	15.400
TNOX.e EN 8000	83478011	8000	8403	95,2	78	16200	19,0	860	709	745	16.300
TNOX.e EN 9000	83479011	9000	9454	95,2	53	20200	14,0	968	797	838	24.940
TNOX.e EN 10000	83481011	10000	10504	95,2	66	21800	16,0	1075	886	931	25.400
TNOX.e EN 11000	83479511	11000	11555	95,2	79	21800	19,5	1183	974	1024	25.400
TNOX.e EN 12000	83481211	12000	12605	95,2	94	23800	19,5	1290	1063	1118	28.050
TNOX.e EN 13000	83481311	13000	13655	95,2	168	23800	22,0	1721	1417	1490	28.050
TNOX.e EN 14000	83481411	14000	14706	95,2	75	33000	18,0	1506	1240	1304	37.500
TNOX.e EN 15000	83481511	15000	15756	95,2	86	33000	20,0	1613	1328	1397	37.500
TNOX.e EN 16000	83481611	16000	16807	95,2	98	35100	23,0	1721	1417	1490	40.000
TNOX.e EN 17000	83481711	17000	17857	95,2	111	35100	25,0	1828	1506	1583	40.000

Dimensions	H	H1	H2	H6	H10	L	L1	L2	P	P2	P3	P4	P5	P6	Øb	Øc	N1	N2	N1/N2	N3	N4	N5	N6	N8	N11	N7
Model	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	DN/in
TNOX.e EN 7000	3050	2850	1600	1600	171	2700	2490	1700	7035	4750	1548	3885	1602	600-700	500	800	250	250	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 8000	3050	2850	1600	1600	171	2700	2490	1700	7535	5250	1548	4385	1602	600-700	500	800	300	300	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 9000	3400	3200	1730	2450	105	3140	2940	2000	7735	5400	1800	4135	1800	650-800	580	900	350	350	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 10000	3400	3200	1730	2450	105	3140	2940	2000	8235	5900	1800	4635	1800	650-800	580	900	350	350	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 11000	3400	3200	1730	2450	105	3140	2940	2000	8235	5900	1800	4635	1800	650-800	580	900	350	350	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 12000	3500	3276	1764	2530	128	3265	3065	2000	8183	5900	1673	4670	1840	650-800	580	1000	350	350	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 13000	3500	3276	1764	2530	128	3265	3065	2000	8183	5900	1673	4670	1840	650-800	580	1000	350	350	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 14000	3960	3700	1975	2840	200	3650	3450	2250	8820	6500	1706	5144	1970	600-700	740	1100	400	400	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 15000	3960	3700	1975	2840	200	3650	3450	2250	8820	6500	1706	5144	1970	600-700	740	1100	400	400	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 16000	3960	3700	1975	2840	200	3650	3450	2250	9320	7000	1706	5644	1970	600-700	740	1100	400	400	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"
TNOX.e EN 17000	3960	3700	1975	2840	200	3650	3450	2250	9320	7000	1706	5644	1970	600-700	740	1100	400	400	16	1/2"-3/4"	40	80	1/2"	3/4"	1/2"	1/2"