



### Self-circulating fire tube boiler

The Osby Parca GTP has a cylindrical furnace and a tube equipped convection section where the flue gases pass in two strokes without turbulators.

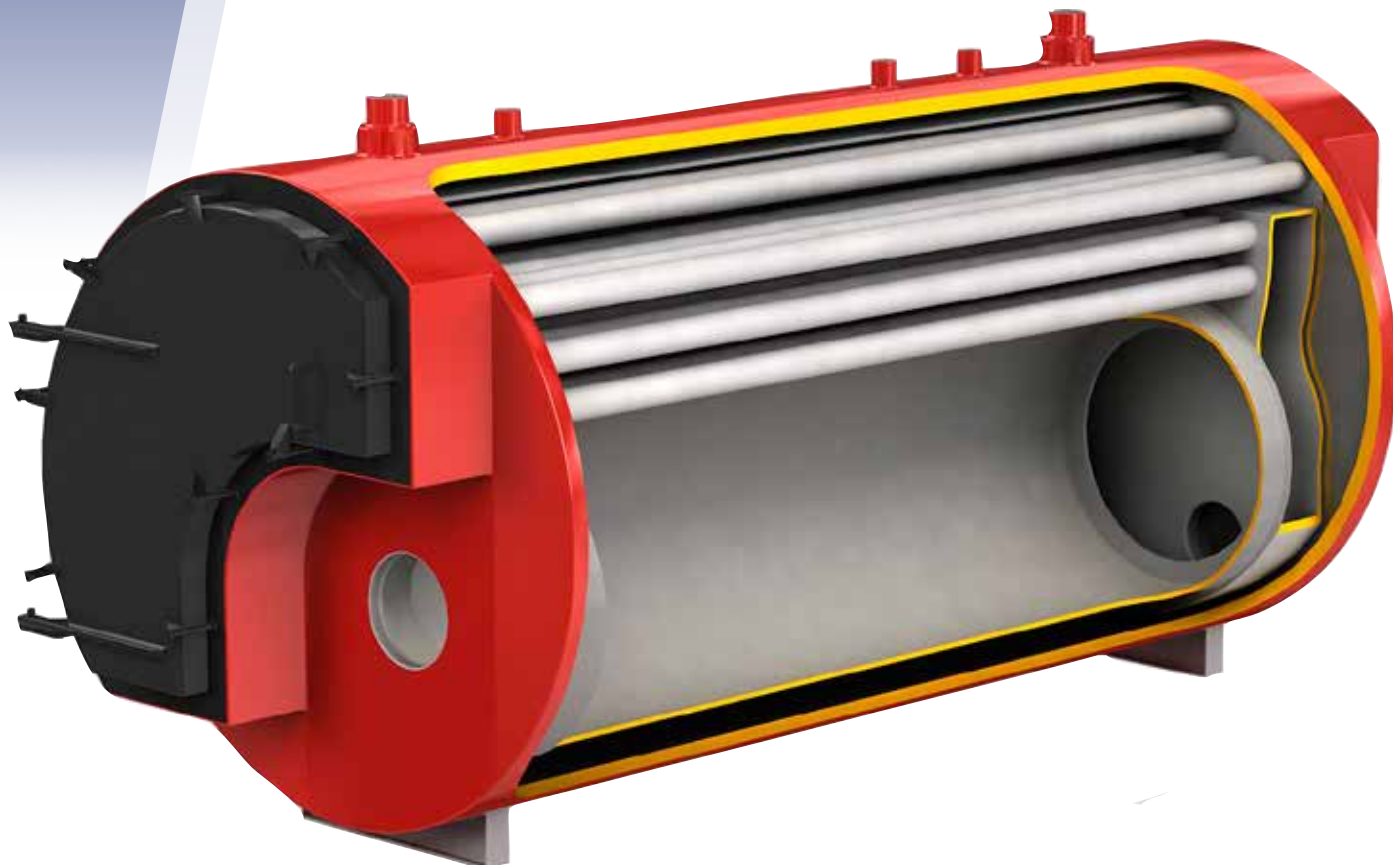
The boiler is of welded steel and the the furnace, the turning chamber and the convection tubes are completely water cooled. The boiler is self-circulating, this treat provides an even water temperature throughout the boiler.

This boiler is based on a very reliable design and is primarily intended for firing oil or gas but it can also be adapted for firing modern fuels like bio oil, pellets and wood chips.

Cleaning of the flue gas tubes is carried out from the front through a large insulated door. Cleaning during operation can be performed using for example steam or compressed air.

This boiler type is also available as a steam boiler, GTP-Å

Robust boiler based on reliable technique with high degree of efficiency.



Design data GTP	
Output	0,75 - 12MW
Design pressure	6 or 16 bar
Design temperature	165 - 204 °C
Flue gas temperature	200 °C
Boiler efficiency	94%



Welded tubes according to Osby Parca standard with countersunk weldings

## Options

- Top floor
- Burner and fuel adaptations
- Modified boiler length or height
- Platform with ladder
- Additional connections

## Water temperature

The standard water temperature is max. 165 or 204 °C. The return water temperature is min. 60 °C at  $\Delta t$  of 30 °C at nominal output.

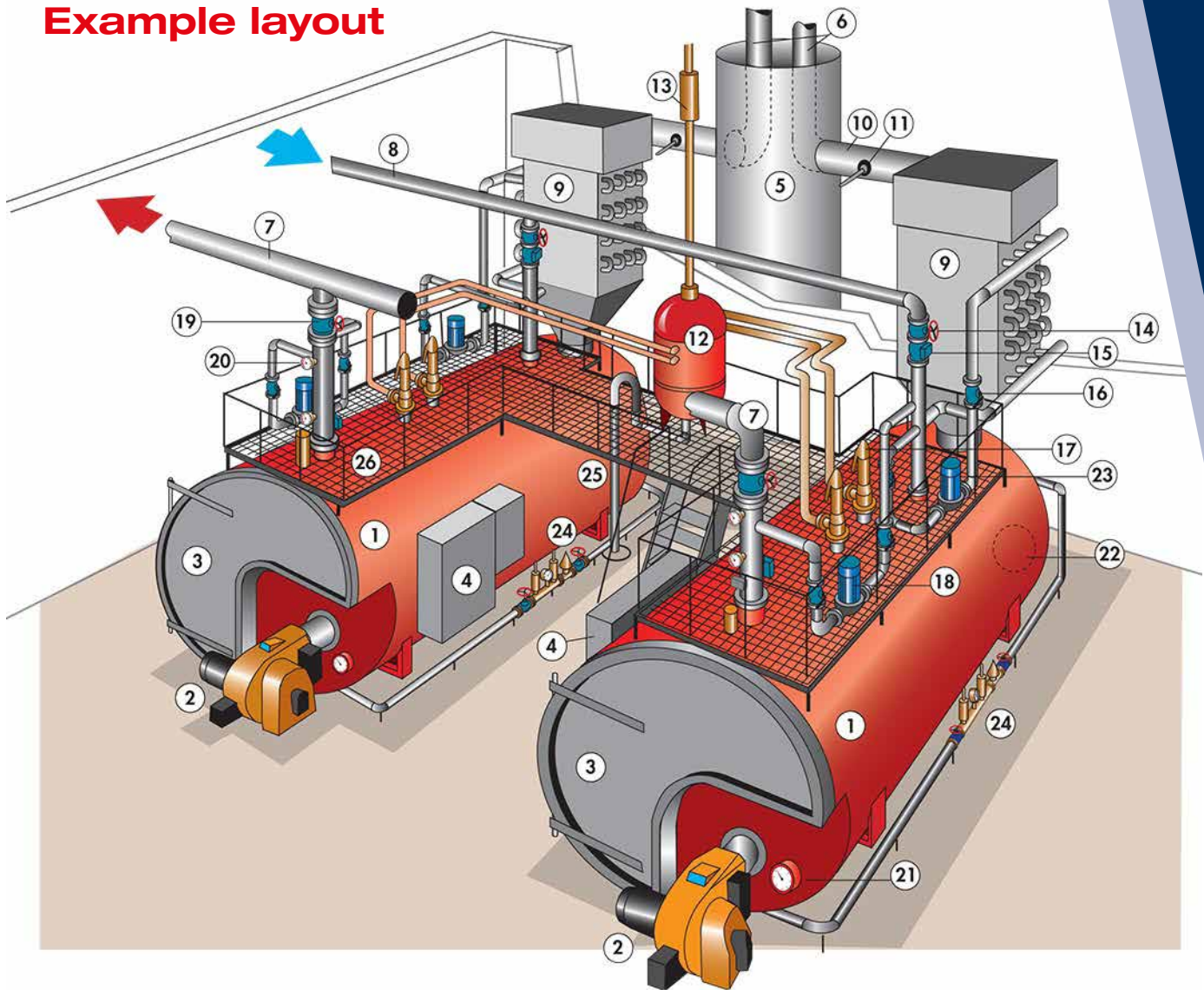
## Water flow

The boiler has a connection for a thermal flow switch. There is no demand for minimum flow if a thermal flow switch is installed. An electrical flow switch can also be used.

Formula for calculating minimum flow

$$m^3 / h = \frac{\text{output (kW)}}{464}$$

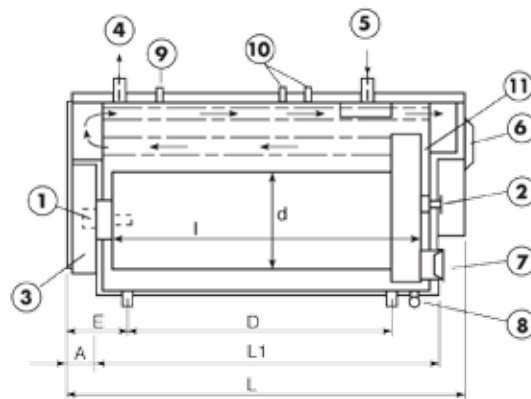

## Example layout



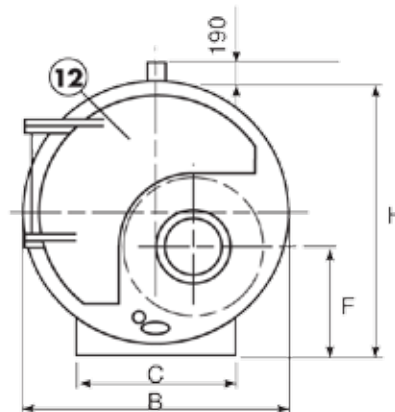
- |  |   |
|--|---|
| 1. Osby Parca GTP boiler               | 14. Return water shut down valve  |
| 2. Oil- or gas burner                  | 15. Motor throttle valve  |
| 3. Cleaning door for boiler tubes      | 16. Flue gas thermometer  |
| 4. Control cabinet                     | 17. Safety valve  |
| 5. Chimney                             | 18. Boiler internal circulation pump  |
| 6. Separate flue gas pipes             | 19. Flow water shut down valve  |
| 7. Common flow water pipe              | 20. Thermometer; operation, max., and regulation thermostat; pressure switch; dry boiling protection; flow switch |
| 8. Common return water pipe            | 21. Bottom thermometer  |
| 9. Economizer                          | 22. Furnace and turning chamber door  |
| 10. Flue gas pipe                      | 23. Internal circulation pump, economizer valves  |
| 11. Flue gas thermometer               | 24. Gas or oil pipe   |
| 12. Steam separator with drainage pipe | 25. Steam separator drainage pipe   |
| 13. Steam separator                    |   |

# Equipment and connections

1. Burner flange
2. Inspection glass
3. Multi layer isolated furnace door
4. Supply pipe connection
5. Return pipe connection
6. Exhaust connection
7. Cleaning hatch
8. Drainage conn. R 3/4" int.
9. Conn. 1/2" for thermal flowguard
10. Connection for safety valves
11. Water cooled rear end wall
12. Convection part access door, hanging left or right



Long side



Short side

Dimensions and Technical Data GTP

Output MW	Gas resistance $\Delta t$ Pa	Firing surface m <sup>2</sup>	Connection DN*	Furnace d mm*	Furnace l mm**	Gas volume* m <sup>3</sup>	Water volume m <sup>3</sup>	Weight (6 bar) tonne	Weight (16 bar) tonne	A mm	C mm	L1 mm	F mm	L mm	W mm	H mm
0.75	300	30	80	650	2875	1.9	2.8	4.0	4.5	220	1080	3465	780	3895	1590	1705
1	300	39	100	700	2900	2.3	3.3	4.5	5.0	230	1160	3490	810	3980	1660	1810
1.5	350	55	125	750	2950	2.9	4.0	5.0	6.5	280	1260	3540	850	4080	1800	1950
2	400	69	125	850	3125	3.7	4.8	6.0	7.0	290	1370	3715	905	4285	1910	2060
2.5	400	85	125	950	3150	4.6	5.3	6.5	8.5	310	1500	3740	965	4350	2070	2220
3	500	94	150	1000	3300	5.1	6.0	7.0	9.5	340	1560	3890	995	4500	2150	2300
4	700	115	150	1100	3875	6.8	7.5	10.5	11.5	360	1640	4465	1050	5125	2250	2400
5	750	140	150	1200	3910	8.2	8.5	11.5	14.0	360	1760	4500	1100	5210	2400	2550
6	750	170	150	1300	3965	9.9	10.0	14.5	16.5	390	1910	4555	1160	5315	2610	2760
7	750	203	150	1300	4705	11.8	13.0	15.5	19.0	430	1980	5355	1185	6185	2680	2830
8	750	230	150	1400	4700	13.6	14.0	16.5	21.0	470	2100	5355	1240	6230	2830	2980
10	750	291	200	1530	4750	16.9	17.5	18.5	25.5	510	2310	5400	1325	6390	3090	3240
12	850	329	200	1650	4875	20.0	20.0	25.0	33.0	530	2460	5435	1395	6555	3290	3440

Standard series - Flue gas temperature <200 °C

\* Standard dimension, can be modified depending on flow

\*\* Standard length, can be prolonged depending on burner's throw of flame

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