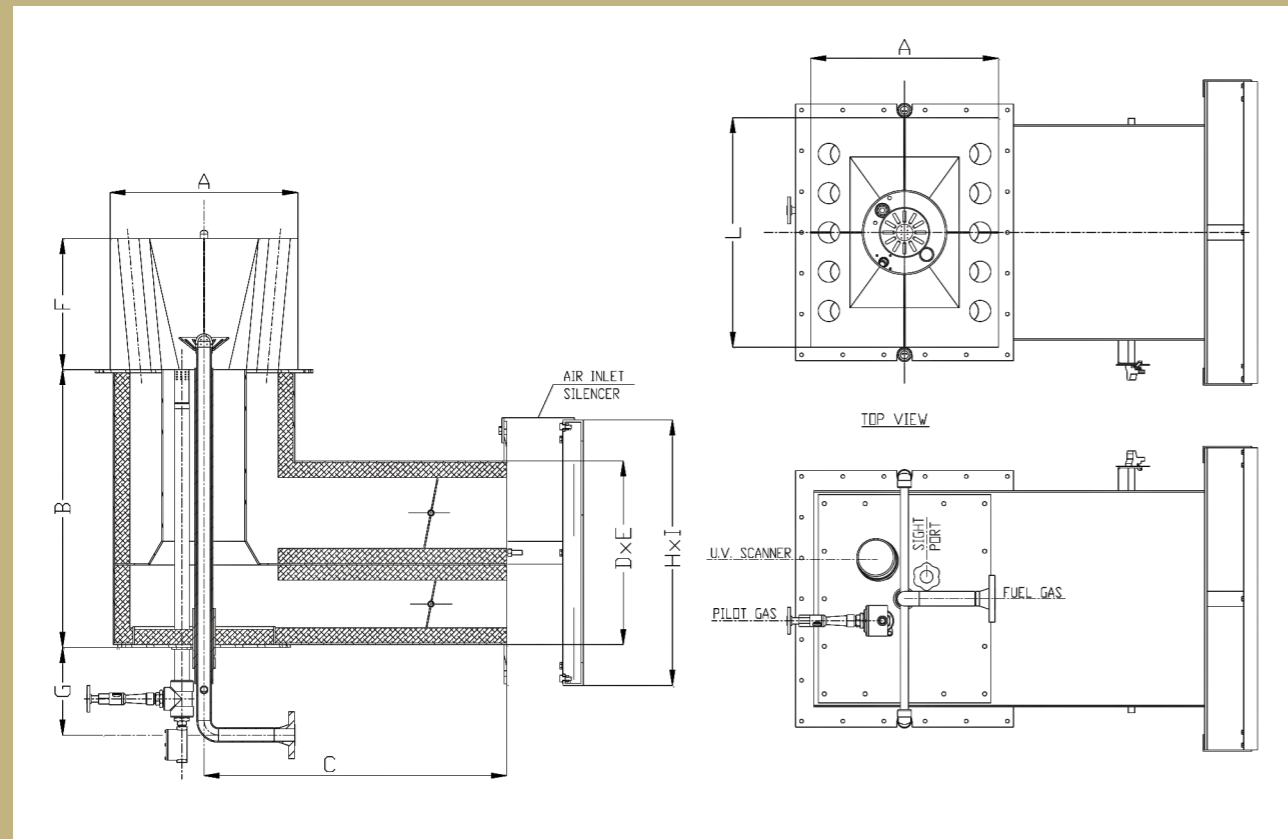
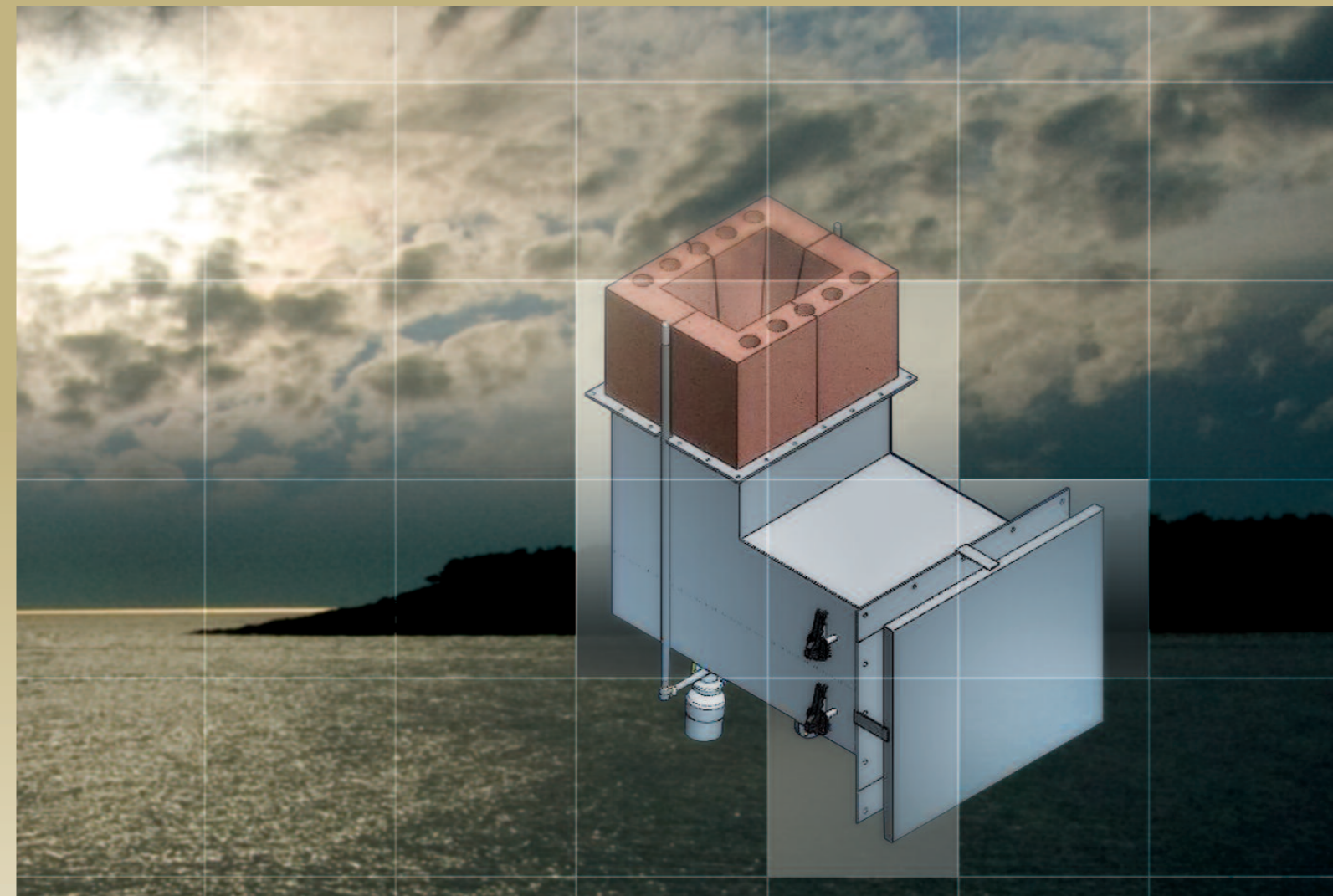


Flat flame natural draft burner



ITAS Flat Flame Natural Draft Burner mod. FF-NDG



burner main dimensions¹

Burner Size MW	DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	DIM I	DIM L
0,5	450	800	700	450	500	300	300	750	800	500
0,8	450	800	700	450	500	300	300	750	800	500
1,2	500	900	800	500	600	300	300	800	950	600
1,8	500	900	800	500	600	300	300	800	950	600
2,6	550	1000	900	550	650	350	300	900	1050	650
3,8	600	1000	1000	600	700	350	300	950	1150	700
5,7	600	1100	1000	600	700	400	300	950	1150	700

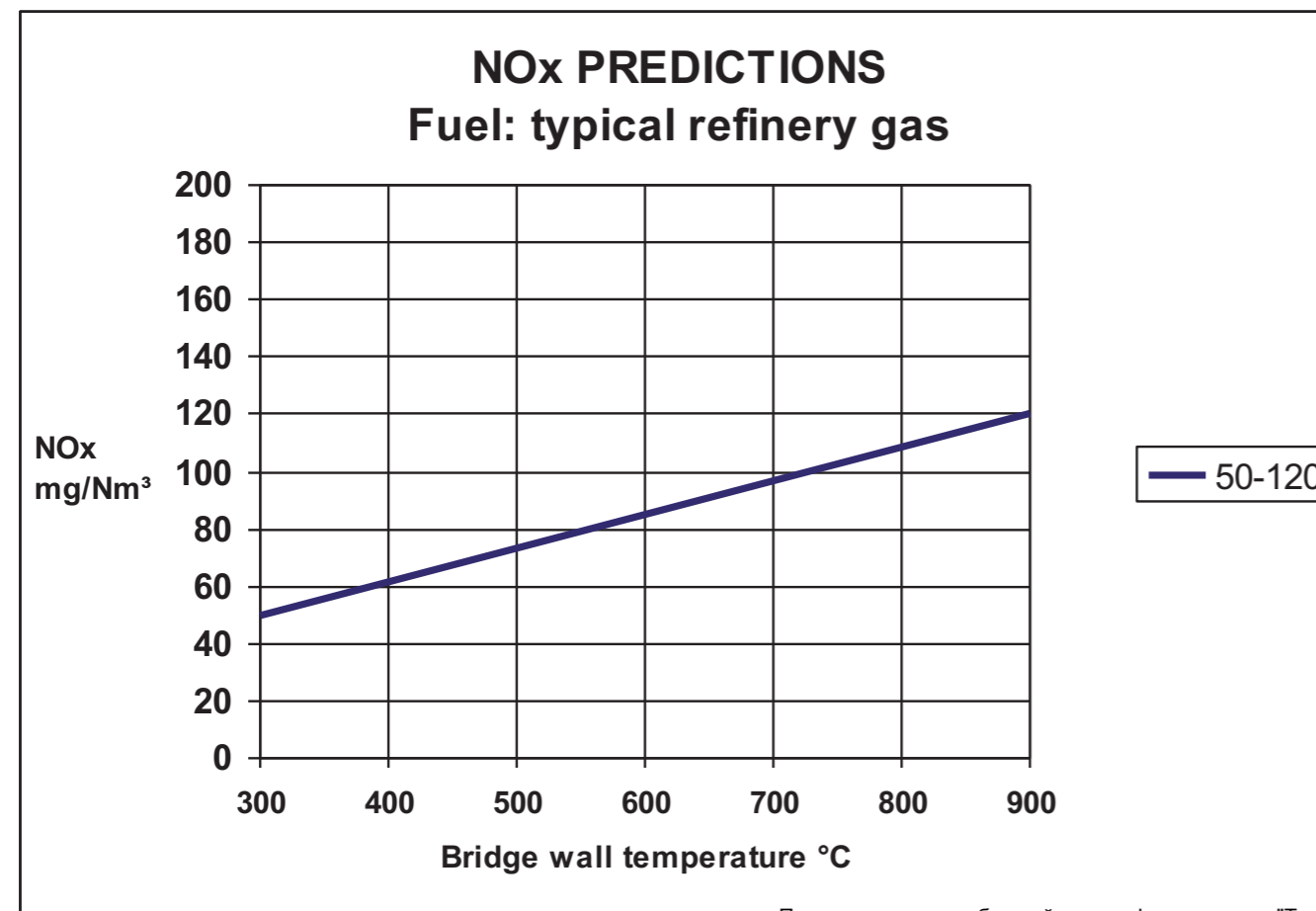
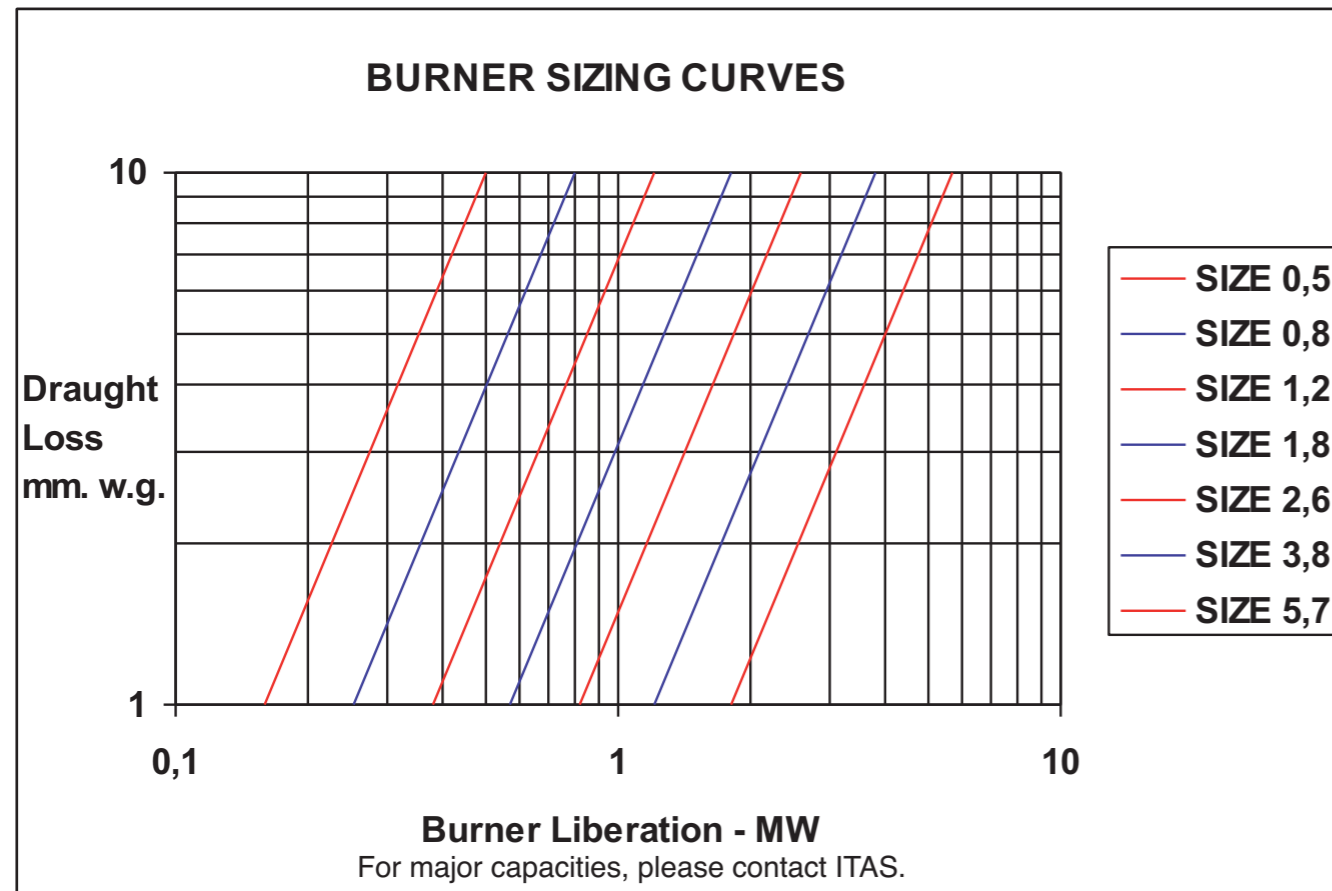
¹Dimensions in case of order can be changed to suit design data.



E/P/B/FF-NDG/0112/0



Flat flame natural draft burner



ITAS low NOx flat flame natural draft burner mod. FF-NDG

Many industrial applications have strict restrictions on the shape, size, and consistency of the flames in the furnace chamber. The furnace chamber and burner flame in every process furnace are designed to provide for the efficient transfer of heat to the process load.

The rate of heat transfer to the process tubes must be limited to prevent overheating of the process tubes leading to the formation of carbon or coke inside the process tubes. As a result, there are generally strict specifications for the flame dimensions.

Typical specifications include maximum flame lengths and maximum flame widths. In some cases, there may even be some minimum flame dimensions specified.

The number, heat release, and layout of the burners in the furnace are designed to provide the proper heat transfer pattern. Controlling the air flow and distribution, the tile throat sizing and shape, and the tile exit configuration provides the most reliable method for flame shape control.

The proper flame pattern is generated by the combination of fuel injection pattern provided by the fuel injectors and the burner tile and flame holder that controls the air flow.

The injectors have fuel injection ports or orifices that introduce the main portion of the fuel into the air stream in a manner that generates the desired flame pattern or shape.

The number, size, and orientation of the ports are critical for determining the overall flame shape. In conjunction with the fuel injectors, the air stream must be shaped in an appropriate way by the airflow passages provided by the shape of the tile and flame holder. Some applications require a rectangular cross section.

This shape is often termed "flat flame". In flat-flame burners, the burner tile (or muffle block) is generally rectangular and the fuel is injected in a manner to produce a flame that is essentially rectangular or "flat", rather than round.

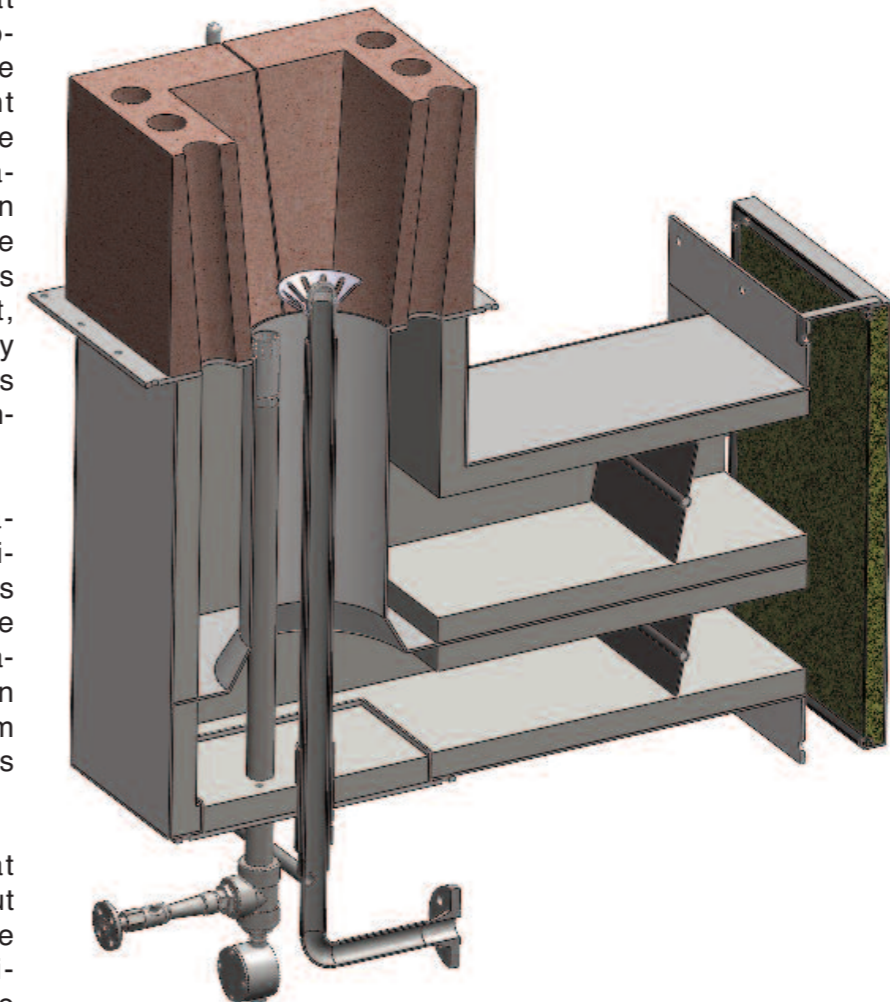
In many cases, these flat-flame burners are fired along a refractory wall or floor, to heat the wall so it can radiate to the process tubes.

Our standardised Flat Flame Burner sizes are available for a capacity between 0,5 and 6 MW.

The NOx development with this burner is below 120

mg/Nm³ in the flue gases with fuel gas firing, achieved with air staging combustion technology.

The natural draft burner model will be equipped with an air inlet muffler for noise reduction.



ITAS profile

ITAS S.p.a. is an engineering company designing and supplying, amongst many other products, burners and accessories for combustion system as well as entire turn-key combustion plants.