

High velocity Burner - HGO 5000

Hamedsoft

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HIGH VELOCITY GAS/LIGHT OIL BURNER HGO 5000, WIDE STABILITY LIMITS & TURNDOWN INPUTS FROM 5 UP TO 10 MILLION Kcal/hr



High velocity Burner HGO 5000 - Hamedsoft
Engineering Group
<http://hamedsoft.ir>
+9821 5520 0812
+9821 5521 6819

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High Velocity Dual Fuel Burner HGO 5000

WIDE STABILITY LIMITS & TURNDOWN - INPUTS FROM 5 MILLION Kcal/hr



A HGO Burner is true high velocity results from exceptionally high Kcal/hr input rates relative to its reduced tile discharge area .

HGO is particularly applicable to aluminum melters, ladle heaters, soaking pits, rotary kilns and dryers: any installation where high velocity entrainment, penetration, and recirculation can benefit temperature uniformity and thermal efficiency. But the most important characteristic of these burners is producing high velocity hot air that is suitable for sintering .

Velocities ranging from 150 to 225 meter per second drive heat into a furnace load, creating tremendous momentum while entraining and recirculating 7-10 cubic feet of furnace gases for every cubic foot of burner product .

The reduced tile discharge opening also protects burner internals from radiant heat and from melting furnace splash. HGO is suitable for furnace temperatures up to 1320 °C. They can be used with preheated air up to 300 °C .

Burner tile installation should be made in accordance with HAMEDSOFT engineering Group drawings . A gas pilot is referred. Torch lighting is not recommended because of high tile pressures .

The 4000 HGO Burner is designed for clean fuel gases or light oil. And the 2000 HG is designed only for gaseous fuels.

ATOMIZING AIR REQUIREMENTS

High tile pressures create the superior velocities of HGO burners; these pressures also create an atomizing air requirement of 150 mbar (at the burner) when burning oil, to realize at least 70 mbar drop across the atomizer at high fire. But when gas is burning, atomizing air pressure can be the same as main air pressure.

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Total air capacities m³/hr

- 100 mbar main
- 150 mbar automizing air at burner
- Burning on stoichiometric ratio 5500
- Not Burning on stoichiometric ratio 6500

Main Air Capacities m³/hr

- Natural Gas - From 510 to 5470
- Oil - From 510 to 5370

Flame Length

- between 2.1 m to 3.2 m

LOW NOX

High velocity burners were developed by HAMEDSOFT engineering group in the early 1997 and accelerated many industrial heating processes. High discharge velocity does more than increase heat transfer, it also circulates furnace gases creating uniform furnace temperatures and it reduces the pollutants known as NOX.

HGO reduces NOX by drawing furnace gases into the flame, which has much the same effect as vitiated combustion air. For such a large burner, HG(O) produces surprisingly low NOX numbers without the complexities of FGR (furnace gas recirculation) or staged air combustion. If your NOX requirements are very stringent, HGO's NOX levels can be further reduced by using FGR.

NOX levels are a function of more than just the burner. NOX can change with furnace temperature, fuel type, combustion air temperature, burner firing rate, and other factors.