

HIGH VELOCITY DUAL FUEL BURNER

MODEL:
XHG(O)/(S,M,C,R)

BULLEETIN : 205

Page 1 of 4

HIGH VELOCITY GAS/LIGHT OIL BURNER



WIDE STABILITY LIMITS & TURNDOWN RATIO UP TO 4 MILLION kCal/hr

A XHG(O) Burners are a true high velocity results from exceptionally high kCal/hr input rates relative to its reduced tile discharge area.

XHG(O) are particularly applicable to aluminum melters, ladle heaters, soaking pits 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 225 meter per second drive heat into a furnace load, creating tremendous momentum while entraining and recirculating up to 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. XHG(O) are suitable for furnace temperatures up to 1300 °C. They can be used with preheated air up to 400 °C.

Burner tile installation should be made in accordance with SHOLEH SANAT drawings. A gas pilot is preferred. Torch lighting is not recommended because of high tile pressures.

The XHGO Burners are designed for clean fuel gases or light oil. XHG/S is same as HG burner with a SiC tip instead of refractory tile. Although these tips are more resistant to temperature shocks, they are fragile. XHGO/M are made with S.S tips respectively.

SHOLEH SANAT ENG. & MFG. Co.

MANUFACTURER OF BURNERS

FUEL CONVERSION OF BOILERS & FURNACES, DESIGN,CONSULTATION AND INSTALLATION

REV.02 of 25th June. 2023

HIGH VELOCITY DUAL FUEL BURNER

MODEL:
XHG(O)/(S,M,C,R)

BULLEETIN : 205

Page 2 of 4

Total Air Capacities (nm³/hr)
(70 mbar main and 100 mbar atomizing air at burner)

	Burning on stoichiometric ratio	Not burning
2000 XHGO	2000	3200
4000 XHGO	4000	6000

Main Air Capacities (nm³/hr)
- Burning on stoichiometric ratio -
(Main Air pressure at burner (mbar))

		1	4.5	18	40	70
2000 XHGO/S	Natural Gas & Oil	310	575	1200	1800	2400
	Natural Gas	510	1145	2010	2950	4360
4000 XHGO	Oil	510	1145	2320	3430	4250

* Excluding atomizing air, which adds 3~5% to main air

XHG(O) Burners Characteristics

2000 XHGO	Main air pressure (mbar)			
	For GAS		For OIL	
	18	70	18	70
	Flame length (m), Stoichiometric ratio			
	1.9		2.3	
	Excess air (%)			
	2500		4000	
<i>4000 XHGO</i>	<i>Main air pressure (mbar)</i>			
	For GAS		For OIL	
	18	70	18	70
	Flame length (m), Stoichiometric ratio			
	2.1	2.4	2.7	2.9
	Excess air (%)			
	2500	4000	225	1500

❖ This burner can be ordered as single fuel too.

SHOLEH SANAT ENG. & MFG. Co.

MANUFACTURER OF BURNERS

FUEL CONVERSION OF BOILERS & FURNACES, DESIGN,CONSULTATION AND INSTALLATION

REV.02 of 25th June. 2023

HIGH VELOCITY DUAL FUEL BURNER

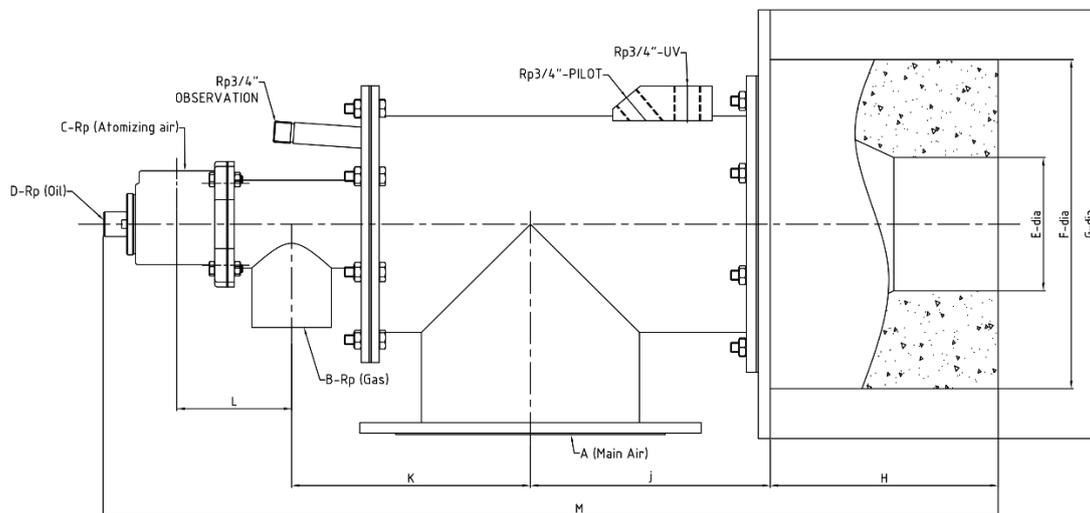
MODEL:
XHG(O)/(S,M,C,R)

BULLEETIN : 205

Page 3 of 4

Burner Model	Adjustable oil valve	Recommended pilot
2000 XHGO	ADOV-8	4MNG
4000 XHGO	ADOV-13	4MNG

XHGO DIMENSIONS:



Dimensions

Burner Model	A in	B in	C in	D in	E mm	F mm	G mm	H mm	J mm	K mm	L mm	M mm
2000HG	8	2	N/A	N/A	135	333	434	230	240	240	N/A	790
2000HGO	8	2	2	3/8	135	333	434	230	240	240	145	890
4000HG	12	3	N/A	N/A	178	460	560	297	532	265	N/A	1178
4000HGO	12	3	2 1/2	1/2	178	460	560	297	532	265	195	1372

SOLEH SANAT ENG. & MFG. Co.

MANUFACTURER OF BURNERS

FUEL CONVERSION OF BOILERS & FURNACES, DESIGN, CONSULTATION AND INSTALLATION

REV.02 of 25th June. 2023

HIGH VELOCITY DUAL FUEL BURNER

MODEL:
XHG(O)/(S,M,C,R)

BULLEETIN : 205

Page 4 of 4

LOW NOX

High velocity burners were developed by SHOLEH SANAT 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.

XHG(O) reduces NOx by drawing furnace gases into the flame (products of combustion recirculation). For such a large burner, XHG(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, XHG(O)'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.