

## North American J/L Oxygen Burner with Lance

Bulletin 5013G

- Superior luminous flame heat transfer
- Exceptionally Low NO<sub>x</sub>
- Low Oxygen Pressure Requirement
- Simple Installation
- Simple low maintenance Operation

The 5013G produces exceptionally low NO<sub>x</sub> emissions. It is a combination of a special 5010N-J3 burner and a special 5030-L lance. The 5013G packages these two together to simplify operation, mounting, piping, and installation of the resulting low NO<sub>x</sub> oxygen burner.

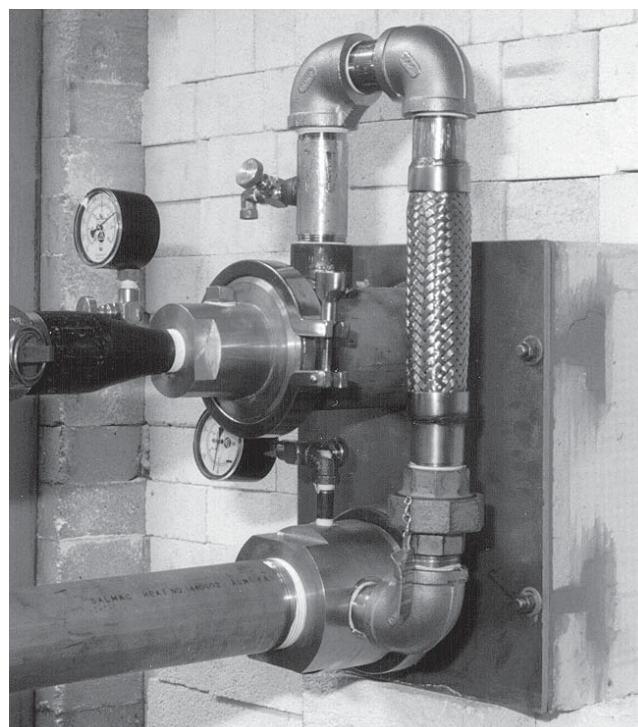
### OPERATION

40% of the theoretical oxygen is supplied to the burner while the remaining 60% oxygen is supplied to the lance. The result is a luminous flame with delayed mixing of fuel and oxygen for exceptionally low NO<sub>x</sub> production.

The fuel and oxygen tubes can be easily removed from the back of the burner for inspection.

### FLAME IGNITION and SUPERVISION

The burner has a rear connection that can accept a UV scanner. Contact North American for specific application information. If a flame supervision system is not used, the burner should only be operated when the chamber temperature has been verified to be above 1400 F. The 5013G does not have a pilot or spark ignition system.



5013G Mounted On A Laboratory Furnace

### APPLICATIONS

Glass melters, steel reheat furnaces, aluminum melters, and other high temperature furnaces can benefit from the 5013G's high quality heating and exceptionally low NO<sub>x</sub>.

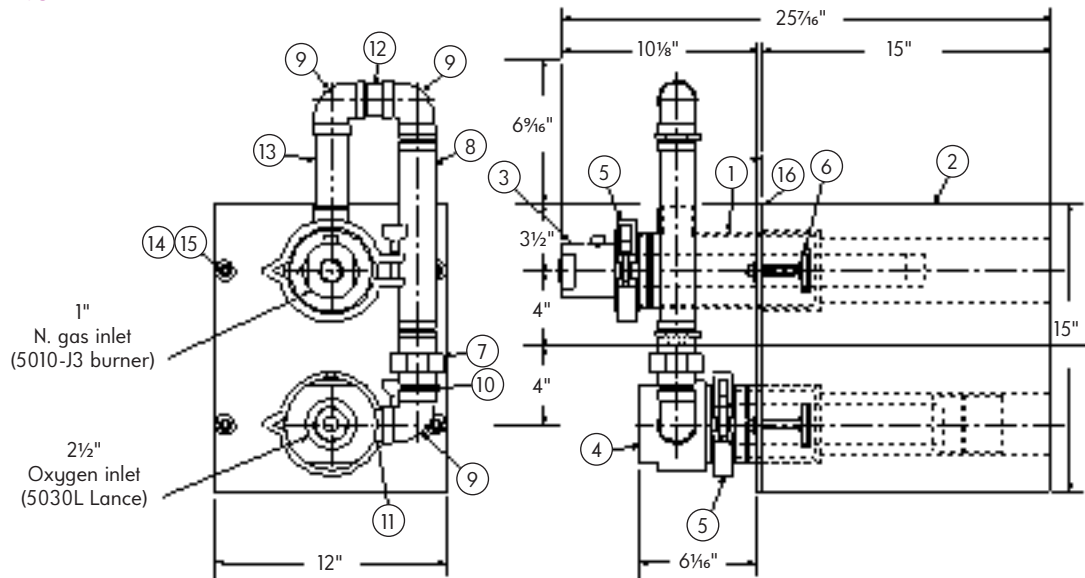
### ORDERING

Specify oxygen and natural gas flows in scfh. The 5013G burners' orifices are custom-sized to order.

### CAPACITIES

"J" Burner			"L" Lance		Total O <sub>2</sub> scfh	Flame length ft	Flame diameter ft (approximate)
O <sub>2</sub> scfh	Natural Gas scfh	Natural Gas osig	O <sub>2</sub> scfh	O <sub>2</sub> osig			
1600	2000	4.0	2400	4.8	4000	6	3
2400	3000	8.0	3600	10.4	6000	8	4
3200	4000	14.0	4800	17.6	8000	10	5
4000	5000	21.0	6000	25.6	10000	11.5	5
4800	6000	29.0	7200	36.8	12000	13	6

## DIMENSIONS



DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

## PARTS LIST

Item	Description	Quantity	Material	Part no.
1	Mounting plate	1	—	4-22965-1
2	Tile	1	Refractory	4-22951-1
3	"J" burner (special)	—	—	4-22935-1
4	"L" lance (special)	—	—	4 - 22957-1
5	Clamp	2	SST	R120-1175
6	Anchor	4	SST	4-22952-1
7	Orifice union	1	—	8699-2-C815
8	1/4" flex hose × 12" long	1	—	8773-2-HTT/12C
9	1/4" × 90° elbow	3	SST	R590-4571-S
10	1/4" × close nipple	1	304 SST	R590-6600-S
11	1/4" × 2" long nipple	1	304 SST	R590-6601-S
12	1/4" × 2 1/2" long nipple	1	304 SST	R590-6602-S
13	1/4" × 5" long nipple	1	304 SST	R590-6607-S
14	3/8-16 hex nut	4	Steel	R510-2259-C
15	3/8 flat washer	4	Steel	R970-7300
16	Joint compound	—	—	R110-7230-LB

North American offers "Total Process Solutions" for your combustion needs. Custom Oxygen Control Systems (Bulletin 8502) and MARC® III Oxy Combustion Controller (Bulletin 8198) are ideal compliments to the 5013G burner. Contact your local North American office for further information.

**WARNING:** All equipment and pipe used with oxygen must be made of suitable materials and properly cleaned for oxygen service. Operating personnel should be trained in safety procedures. Failure to do so could result in accidental injury or death. Contact your oxygen supplier and Fives North American Combustion, Inc. for information.

**WARNING:** Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.