

# ECLIPSE GT/NG-DI UNDERPORT GAS BURNER

## **Dual impulse underport design allows adjustment of flame length and luminosity**

Underport firing allows a high degree of flame coverage of the melt by using multiple burners mounted beneath the port sill, providing high thermal efficiency and easy access for adjustment and maintenance.

The Eclipse GT/NG Dual Impulse underport burner uses co-axial jets in which the center jet flow is adjustable by means of a calibrated metering valve attached to the burner. By altering the gas to the center jet, the thrust of the burner can be controlled, allowing the flame length to be varied by up to 30% without changing the nozzle and allowing easy optimization of the flame. This arrangement also increases the flame luminosity, providing greater heat transfer to the glass and lower NO<sub>x</sub>.

The Eclipse burner sealing ring eliminates cold induced air around the burner, increasing efficiency, minimizing NO<sub>x</sub> as well as prolonging nozzle and burner block life. The sealing ring has integral cooling using low pressure air. When used with this ring, the GT/NG burners do not require any compressed air for cooling.

## **Low NO<sub>x</sub> Underport Gas Firing System**



Use of the Eclipse Burner Support Bracket ensures accurate repeatable burner location, simple adjustment and quick removal of the burner, all of which are essential for an efficient underport burner system. (see Bulletin 1139C for additional information)

### **Features**

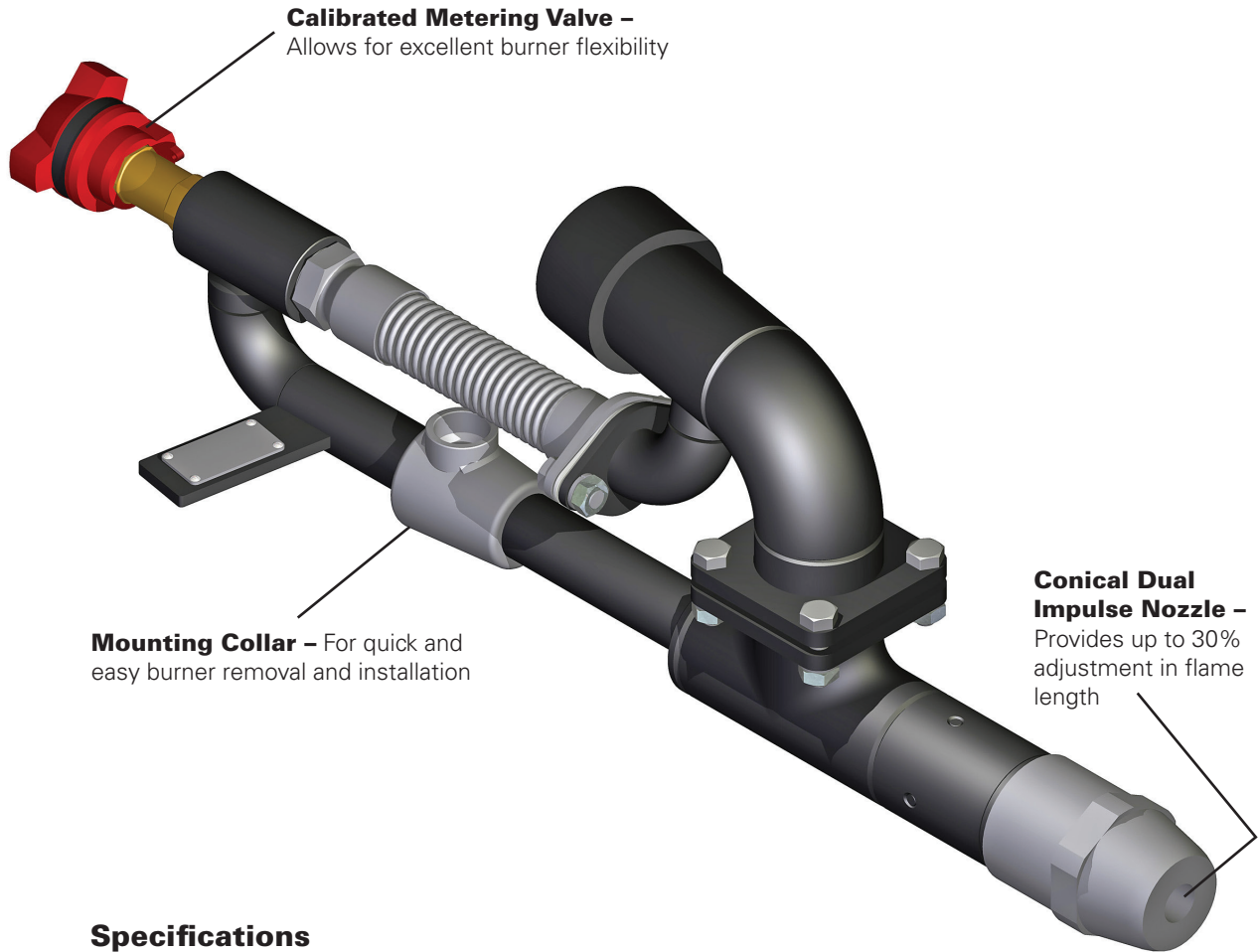
- Low NO<sub>x</sub>
- Adjustable flame length
- High luminosity
- Low maintenance
- Predictable and reproducible performance
- Burner sealing increases efficiency
- Simple, rapid and safe burner changing

### **Special Assistance**

Eclipse provides advice on furnace aerodynamics, port design and auxiliary equipment, as well as full supervision and commissioning services.

# GT/NG-DI Underport Gas Firing System

Dual impulse firing delivers optimum flame control and low NO<sub>x</sub>.



## Specifications

Burner capacity (Natural Gas) . . . . .	933 - 10370 kW (3.2 - 35.4 MMBtu/hr)
Gas pressure at burner* . . . . .	0.5 - 1.0 bar (7.25 - 14.5 PSIG)
Maximum flame length** . . . . .	13 meters (43 ft.)
Sealing ring air pressure . . . . .	75 mm w.c. (3" w.c.)
Sealing ring air quantity . . . . .	30 - 40 m <sup>3</sup> (n)/h (1060 - 1400 ft <sup>3</sup> /hr)
Gas connection . . . . .	GT/NG50-DI: 2" BSPT or NPT GT/NG80-DI: 2-1/2" BSPT or NPT
Nozzle and sealing ring material . . . . .	446 SST

\*Actual gas pressure required dependant on furnace width and gas flow.

\*\* Dependant on nozzle configuration.