Capacity Range:
1,000 Btu/Hr to 160,000 Btu/Hr

Selas Duradiant® Furnace Wall Burners

The basic line of Duradiant furnace wall burners is comprised of two types designed for use above and below 2000°F (1093°C) – with each type manufactured in a high and low capacity range. All parts exposed to furnace temperature are ceramic in the high temperature burners; the low temperature burners employ alloy tip-holder components. Selas Duradiant furnace burners satisfy a wide range of furnace wall thicknesses for straight or cylindrical wall requirements, either with or without a lighting hole.

How It Works

Superior Heat Uniformity

Selas Duradiant burners are cup-shaped, ceramic, precision combustion tools which radiate heat to work pieces intimately, without flame impingement.

Fast, controlled heating of a wide variety of materials is accomplished by the use of radiant heat. And controlled heating results in improved product quality and fewer rejects. Without flame impingement, they can be placed close to work pieces to heat them directly and uniformly, allowing for more compact structures.

Applications:

- Annealing Furnaces
- Sintering Furnaces
- Rotary Forge Furnaces
- Tundish Preheaters
- Nonferrous Melting Furnaces
- Ceramic Kilns

Operating Principles

Air/gas mixture enters the burner tube and lows to the burner tip. After the mixture passes through the tip's threaded refractory orifices, it is distributed radially and burns within the refractory cup in a petal-shaped formation. The interior contour of the cup has been formed so that its surface is always washed by hot combustion products, regardless of operating rates.

Because the refractory cup surface is heated by high velocity combustion products at their highest temperature, it becomes incandescent. Combustion is always completed within the cup.

Radiant heat from Duradiant burners can be directed accurately and travels more rapidly than convected heat from hot gases.

Features	Benefits
High intensity heat without impingement	Improved quality of work
Modular, can be placed close together	More compact, efficient structures
Wide burner throttling ranges	Fine-tuned heat to the workpiece
Heats objects more rapidly	More cost efficient production
Radiant heat allows more flexibility	Proportioned heat where it's needed

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