

SELF RECUPERATIVE AND RADIANT TUBE BURNERS

Tube Firing Burner

Designed to Fire Radiant and Immersion Tubes, the TFB when paired with the Bayonet Ultra Recuperator and E-Jector device can achieve significant efficiency and fuel savings and low emissions

Overview



Eclipse low emissions TFB burners are designed to fire radiant and immersion tubes with inputs from 300,000 to 2,000,000 Btu/hr. With a vigorous spinning action, the unique nozzle design creates an intense adjustable length flame. This long, spiraling flame results in cleaner combustion, efficient heat transfer and more precise, uniform tube temperatures. In addition, the flame scrubs the inside of the fire tubes to remove the gas film boundary layer and increase heat-transfer effectiveness with outstanding temperature uniformity. Not only do these factors contribute to longer tube life, they also ensure consistent uniform process heating.

Features & Benefits:

- Low NOx and low CO
- Low excess air capability for high efficiency
- Low air and gas pressure requirements
- High heat transfer at low noise levels
- Reliable ignition at a wide range of firing rates
- Can be fitted with Eclipse Bayonet-Ultra recuperators for maximum system efficiency

More Information:

- [Find spare parts in PartDetective for Tube Firing Burner](#)

Specifications

AIR & COMBUSTION AIR SPECIFICATIONS

Air Pressure Switch

- Required for safety; detects insufficient air pressure

STANDARDS & CERTIFICATIONS

Safety Standards

- NFPA 86 Compliant

COMBUSTION, FUEL & MIXING SUB-SYSTEMS

Recuperator Type

- Exhaust leg recuperator



OVERVIEW

Models

- TFB030, TFB075, TFB200

Burner Type

- Nozzle-mixing burner for tube firing applications

MAXIMUM/MINIMUM TEMPERATURE LIMITS

Maximum Furnace Temperature

- Up to 1850 deg F (application dependent)

COMBUSTION/FURNACE/CHAMBER TEMPERATURES

Maximum Combustion Air Temperature

- Up to 1000 deg F

ACTUATION, VALVE & MOTION CONTROL SPECIFICATIONS

Main Gas Shut-Off Valve Train

- Must comply with NFPA; minimum: two shut-off valves

IGNITION, FLAME & SUPERVISION SPECIFICATIONS

Ignition Type

- Direct Spark Ignition

Flame Monitoring

- Flame rod (TFB030 and TFB075), UV scanner (all models)

THERMAL, FLOW & PROCESS CHARACTERISTICS

Heating Type

- Indirect heating

FUEL, GAS & MEDIA SPECIFICATIONS

Fuel Type

- Natural Gas, Propane, Butane

COMBUSTION, MIXING & FUEL DYNAMICS

Fuel Gross Heating Values

- Natural Gas: 1,002 BTU/ft³, Propane: 2,572 BTU/ft³, Butane: 3,225 BTU/ft³

Combustion Principle

- Direct tube firing with controlled air/fuel mixing

PROCESSING & PERFORMANCE METRICS

Efficiency

- As low as 39% depending on furnace temperature (without Recuperator)
- Up to 71% depending on furnace temperature (with Recuperator)

CONTROL, LOGIC & FUNCTIONAL BEHAVIOR

Control Method

- Modulating control, High/Low control



Applications

- Radiant tube heating, immersion tube heating

Filters

▼ CATEGORY

☒ Spare Part

☒ Base Part

▼ TYPE

☒ Air Tube

☒ Gasket

☒ Nozzle

☒ Burner Kit

☒ Rear Cover

☒ Tube Firing Burner

☒ Flange

Search

Part Number	10001260-1
Description	EXT, SI, SPRK, SELF GNDG, 1300MM LG, 125MM IS
Category	Spare Part
Type	Spark Ignition Extension
	Order Online
Part Number	10034234
Description	PPST, 0.5 IN., NPT, STL SHL, ELECTROLYTICALL
Category	Spare Part
Type	Peepsight
	Order Online
Part Number	10053512-1
Description	KIT, LIT, TB FRNG BRNR, TFB030, ENG
Category	Spare Part
Type	Burner Kit
	Order Online
Part Number	10053512-2
Description	KIT, LIT, TB FRNG BRNR, TFB075, ENG
Category	Spare Part
Type	Burner Kit
	Order Online
Part Number	10053512-3
Description	KIT, LIT, TB FRNG BRNR, TFB200, ENG
Category	Spare Part
Type	Burner Kit
	Order Online
Part Number	101017271
Description	CVR, REAR, TFB030, TFB075, BLK, HT
Category	Spare Part
Type	Rear Cover
	Order Online



Part Number	101017345
Description	CVR, REAR, TFB200, BLK, HT
Category	Spare Part
Type	Rear Cover
	Order Online
Part Number	1030RBK
Description	1030, 1238 TOF REPLACEMENT BLOWER KIT
Category	Spare Part
Type	Replacement Blower Kit
	Order Online
Part Number	13229
Description	GSKT, BKPLT, 4.00 IN., X 3.44 IN., SQ, TFB 63
Category	Spare Part
Type	Gasket
	Order Online
Part Number	13230
Description	GSKT, FLG, SQ, 6.00 X 4.75 IN., TFB63
Category	Spare Part
Type	Gasket
	Order Online

Rows 10 ▾

Product Number



Please sign in to view part numbers available for purchase based on your account

Sign In

10001260-1
EXT,SI,SPRK,SELF GNDG,1300MM LG,125MM IS

10001260-1
EXT,SI,SPRK,SELF GNDG,1300MM LG,125MM IS

10034234
PPST,0.5 IN.,NPT,STL SHL,ELECTROLYTICALL

10034234
PPST,0.5 IN.,NPT,STL SHL,ELECTROLYTICALL

10053512-1
KIT,LIT,TB FRNG BRNR,TFB030,ENG

10053512-1
KIT,LIT,TB FRNG BRNR,TFB030,ENG

10053512-2
KIT,LIT,TB FRNG BRNR,TFB075,ENG

10053512-2
KIT,LIT,TB FRNG BRNR,TFB075,ENG

10053512-3
KIT,LIT,TB FRNG BRNR,TFB200,ENG



10053512-3

KIT,LIT,TB FRNG BRNR,TFB200,ENG

101017271

CVR,REAR,TFB030,TFB075,BLK,HT

101017271

CVR,REAR,TFB030,TFB075,BLK,HT

101017345

CVR,REAR,TFB200,BLK,HT

101017345

CVR,REAR,TFB200,BLK,HT

1030RBK

1030,1238 TOF REPLACEMENT BLOWER KIT

1030RBK

1030,1238 TOF REPLACEMENT BLOWER KIT

13229

GSKT,BKPLT,4.00 IN.,X 3.44 IN.,SQ,TFB 63

13229

GSKT,BKPLT,4.00 IN.,X 3.44 IN.,SQ,TFB 63

13230

GSKT,FLG,SQ,6.00 X 4.75 IN.,TFB63

13230

GSKT,FLG,SQ,6.00 X 4.75 IN.,TFB63