

# DATASHEET

## Air Blown Flares Forced air type Smokeless flare Tips FAB Series



The FAB series flare is used for smokeless combustion applications, where the use of steam is not desired or available.

Smokeless combustion can be obtained even with heavy unsaturated hydrocarbon gases. There are two modes of air supply; the first is a co-axial supply of air with the main gas riser centrally positioned. The second is an outside separate air riser alongside the main gas riser. The gas is distributed in the tip to a series of vanes with characterized slots for even gas spread into the air stream.

The air is directed from the tip with a swirling action at high velocity and, with the even gas spread and turbulent air mixing at the tip outlet, efficient combustion is achieved. Secondary air is entrained by the turbulent discharge from the tip.

The swirling action of the flame produces a well formed flame with low luminosity, unaffected by wind and producing minimum downward radiation. This is achieved by supplying up to 50% of stoichiometric air from the low pressure fan.

### Design Characteristics

The gas riser and air riser can be run separately or co-axially to the tip allowing flexibility in the mechanical design of the stack. The fan can be part of the stack structure, mounted separately at the base or remotely.

The controls and ignition panel can be sited at the stack base or remotely as required.

Airoil Flaregas low gas consumption pilots can be used with the choice of electric, non-electric,

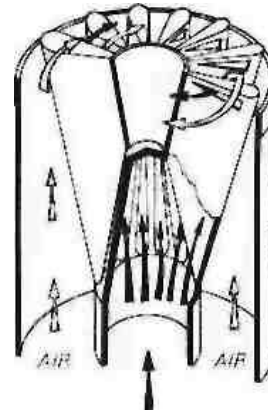
High Energy manual or automatic ignition systems.

The use of forced draught air maintains the air and gas risers and the flare tip at low temperature and eliminates the need for a refractory lining. The extremely stable upright flame, achieved by using forced draught air, minimizes ground level radiation and therefore, lower stacks can be used with safety. Furthermore, the short, well formed flame is less affected by cross winds and prevents flame lick. Liquid and/or gas seals can be accommodated into the flare system if required.



## Performance Features

Full capacity can be flared smokelessly with only part of the combustion air supplied by a fan at low pressure. The fan speed can be staged so that efficient use of electrical power is achieved. The fan speed can also be automatically controlled. As a result, efficient combustion is achieved without the use of expensive steam and with minimum noise, producing a flame of low luminosity which does not disturb the environment.



## Design Advantages

- Low operation costs
- No steam required
- 100% smokeless combustion
- Non-luminous, low noise combustion
- Two stage air blower to minimize running cost
- Low pressure air for smoke suppression
- Simple control system
- Low gas consumption pilots

## Specification

<b>Tip sizes:</b>	12 in dia. to 60 in dia.
<b>Gas connection</b>	12 in dia. To 60 in .dia. flanged.
<b>Air connection:</b>	Integral with gas riser or ducted separately to suit.
<b>No. of pilots:</b>	12 in. to 30 in. dia.: 3 pilots
<b>Pilots gas connections:</b>	1 in. dia. Flanged.
<b>Flame front connections:</b>	1 in. dia. 3000 union or 1 in. flange required.
<b>Pilot thermocouples:</b>	Cromel/Alumel if required terminate in a junction box
<b>Lifting lugs:</b>	Provided as standards

### Notes:

The FAB flare stack is individually designed for each installation.

The Fan rating is related to the gas being flared and to the rate of flaring

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