

## ENCLOSED FLARE THERMAL OXIDIZERS SEMI-ENCLOSED FLARE

# **ENCLOSED FLARE/ THERMAL OXIDIZERS**

CRA has expertise in Design and manufacturing of Enclosed Flare/ Thermal oxidizers. The EF series Enclosed FLare are versatile in design and suitable for total destruction of waste gas/vapors. These Systems are designed to meet local environmental norms and can also be customized as per CDM regulations.

Flares are operated on totally Automated, PLC/SCADA based systems and provision of Data Acquisition can also be made available. High Quality insulation lining is provided to give a long life of Flare.



#### **Why CRA Flares**

- Every product has to pass our regress testing before it is release for despatch
- Fully Customized & Cost effective Solutions as per Project requirements
- CDM compliance modular skid-mounted, easily containerized and transportable systems
- 20 years of wide experience with many working installations of various Flares
- Designed for long life and least maintenance
- Approved by leading Consultants & Govt. Bodies
- Total integrated system

#### **ENCLOSED FLARE**

CRA Biogas Enclosed Flare system incorporates the latest technology and features for your flaring needs to ensure optimal performance and quiet operation with no visible flame.

#### **THERMAL OXIDIZERS**

TOX is required for thermal destruction of the VOCs in the waste gases.

The TOX system employs the Burner Management System and continue to check Methane % in the system and maintains the outlet temperature.

	SPECIAL FEATURES	APPLICATIONS
Design Features	Turn down ratio more than 5:1 , Destruction Efficiency more than 99% , Operating temperatures as per requirements. Methane content 25% onwards	Landfills Sewage treatment plant
Operation	Automatic	WWTP, WTP, ETP Anaerobic lagoon
Capacity	50-50000 m3/hr. higher or lower capacity can be designed on request.	Petrochemicals, Refineries, OGS
Materials	Standard materials available as per the selection chart. Special materials available on request.	Chemical Industries etc

#### **BIOGAS SEMI-ENCLOSED FLARE (BS-EF)**

CRA has expertise in Semi-Enclosed Biogas Flare. It is an elevated Flare. Completely shroud to prevent flame blow off with partial or no visibility of the flame.

The shroud is SS enclosure to prevent any blow off and provides a flame to accommodate combustion zone. It is a self supported Flare System.

## Petrochemical/Biogas/ OGS/ Refineries/LFG Flare selection and ordering chart

Model	Gas Type	Flow Rate Nm3/Hr	MOC (Shell)	MOC (Valve & Piping)	Residence Time
Enclosed Flare- <b>EF</b> Thermal Oxidizer- <b>TO</b> Semi Enclosed Flare- <b>SE</b>	Biogas/LFG/CBM- <b>A</b> Natural Gas/ Petrochemical Gas- <b>B</b> VOCs- <b>C</b>	Up to 100- F1 Up to 250- F2 Up to 500- F3 Up to 750- F4 Up to 1000-F5 Up to 1500-F6 Higher on- FX request	Stainless Steel- <b>S</b> Carbon Steel- <b>C</b>	Stainless Steel- <b>S</b> Carbon Steel- <b>C</b>	0.3sec- <b>T1</b> 0.6sec- <b>T2</b> 1sec- <b>T3</b>
Example for Mod	<b>F2</b> − <b>F2</b> −	( )	C T2     MOC Residence & Piping) Time	] → EF-A-F2-S-C-T2	

## Products from

- CRA
- Gas Scrubbers Enclosed Flare/Thermal Oxidizers Incinerators Flame Arrestors Open Elevated Flares Biogas Upgrading
- LFG/Biogas to CNG (Natural Gas) Pressure Vacuum Relief Valves (PVRV) Biogas to Power Moisture Traps
- Gas Conditioners Gas Dehumidifier Digesters Gas Holders and etc.



## **Combustion Research Associates (CRA)**

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