Ground
Flares
Tailor made systems for reliable and safe operation under all circumstances

Europem is a leading supplier of Environmental Payback Projects. Our Technologies and Processes transform an environmental problem into a revenue stream for our clients.

Since its foundation, Europem has consistently been at the forefront of technological innovation and today we offer Best Available Technologies to provide sustainable, reliable, flexible and robust solutions for

- **Energy production** using industrial effluents, waste streams and by-products
  - Advanced multi-fuel/flexifuel low NOx burners
  - Thermal oxidisers and incinerators including redrox systems, High Intensity Incinerators, tailgas incinerators for SRU’s. Recuperative thermal oxidisers, Ledenox incinerators, fluidised bed and rotary kiln furnaces
  - Heat recovery boilers and heaters including flame tube boilers, water tube boilers, thermal oil heat exchangers, bath heaters and tube and shell heat exchangers
  - Direct fired heaters and boilers

- **Product recovery**
  - Vapour recovery units (VRU) using adsorption and/or condensation technology
  - Flare gas recovery (FGRU)
  - Sulphur recovery units (SRU) including main reactor burner, main thermal reactor and tail gas incinerator w/wo waste heat recovery boiler

- **Safety and environmental protection**
  - ATEX zone 0 vapour extraction and treatment systems
  - Flare systems including elevated flares, air, gas or steam assisted flares, ground flares, enclosed ground flares, temperature controlled ground flares
  - deNOx and flue gas cleaning systems

Our team has built and commissioned over 300 installations in more than 35 countries worldwide.

Europem maintains an Environmental, Health and Safety Management System in accordance with ISO 14001, OHSAS 18001 and VCA-p. Our quality assurance and control plan is ISO 9001-2008 certified.
Europem’s Ground Flares are suitable for thermal destruction of a wide range of waste gases. Enclosed ground flares are suitable for thermal destruction of a wide range of waste gases including rich and lean gas mixtures. Where the burners are housed in a cylindrical vessel resulting in the combustion process being out of sight and more controllable in comparison to elevated flares. Enclosed ground flares can also be designed with or without temperature control. With temperature control, a minimum residence time, at a specific combustion temperature can be set and guaranteed. Consequently, temperature controlled ground flares, also called combustors or thermal oxidisers, can meet the most stringent emission values. The emissions can be monitored with Continuous Emission Monitoring (CEMS) units.

**Temperature Controlled Enclosed Ground Flares**

**Features**
- Can be equipped with Europem’s proprietary Tulip Venturi Burner for the combustion of lean waste gases or with multiple burners designed for the flaring of large capacities (modulated flaring is possible)
- Operating at varying temperatures depending on the load of the ground flare
- Smokeless operation and high destruction efficiency by ensuring some turbulence around the flame and sufficient residence time at elevated temperatures
- Simple control system, because the combustion temperature is allowed to fluctuate
- Provisions for support fuel in cases of combustion of lean waste gases or cooling air in cases of rich waste gas combustion
- Can be supplied as natural draft or forced draft system
- Can be supplied with or without temperature control

**Advantages**
- No visible flame and reduced visibility of the installation due to lower stack heights
- Reduced noise levels
- Minimal heat radiation
- Possibility for emissions sampling
- High destruction efficiencies and smokeless operation

**Applications**
- Tank farms and ship loading terminals
- Chemical and petrochemical industries
- Food processing industry
- Waste management plants
Our ground flares meet the most stringent emission values

**Ground Flare Models**

- EP-MBGF  Multi Burner Ground Flare
- EP-EGF  Enclosed Ground Flare
- EP-TCGF  Temperature Controlled Ground Flare
- EP-BPF  Burn Pit Flare
- EP-NDC  Natural Draft Combustor
- EP-FDC  Forced Draft Combustor
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We reserve the right to implement technical modifications without prior notice.