

Windsor Gas Flares



Utilising waste gas in process heating or power generation (gas engine) is a preferred method of disposal, but it is sometimes impractical due to distance from a suitable site. Gas may also need a secondary method (stand by) of disposal or the need to be load balanced with other equipment. Burning gas in a Windsor gas flare can be an excellent option in these situations.

We offer solutions for destructing gas from most sources with a variety of designs available. Designs include fully enclosed flaring as well as semi-enclosed/shrouded flares (commonly known as candlestick flares).

Gas flares can be used to vent and burn off excess gas from landfills, waste water treatment plants and various other chemical or manufacturing processes.

Gas flaring solutions for most applications



Windsor Gas Flares offer a solution to venting gas from various sources.

A temporary flare may also be required for co-generation standby systems and during landfill construction.



Semi-enclosed / shrouded flare design

The Pre-Aerated flare is used where some flame visibility from the top of the flare is acceptable and where strict requirements on oxidation of the effluent do not apply.

It is capable of operating with up to 10:1 turndown and is ideal for start up applications where initial gas generation is low.

As gas generation grows, flare capacity is increased by changing the extraction fan speed and bringing on additional flares as required.

The burners are ignited with high tension spark igniters and gas pilots. Continuous flame monitoring and packaged control systems are included.

Windsor supply the completely pre-packaged skid mounted units including extraction fan, particulate filter, moisture pot, flash back arrestor safety valves and burner management panel.



Totally enclosed flame design

This design is an adaption of ThermoSystems highly successful thermal oxidizer range of which there are over 40 examples in Australia and New Zealand.

A totally enclosed flame design is used when there are specific conditions on permitted pollutants, open flames and destruction efficiencies. Test points are provided for performance monitoring.

These flares incorporate features and operating parameters for semi-enclosed/shrouded flare designs. Additional options include, flow monitoring, gas analysis and external communications.

Each system is custom designed to meet specific customer requirements.



Applications

- Landfills
- Waste water treatment plants
- Chemical plants
- Digestors
- Biogas venting



Features

We design and fabricate our gas flares to all required and applicable AS/NZ Standards. These include:

- NZ/AS 3814 gas appliance design
- NZS5601 gas installations
- NZS 3000 electrical regulations
- NZS 60079 electrical hazard locations
- NZS 4203 structural and seismic loading

These designs differ from European supplied flares.

Windsor flares come complete with controls and automation packages to suit the site.

These can be stand alone and self-managing or integrated with the sites overall systems.



Benefits

- Low-cost nuisance gas venting and flaring to remove harmful emissions from exhaust gases, our fully enclosed flares achieve destruction efficiencies up to 99.98%.
- Locally designed, built, and serviced in New Zealand. Commissioned by NZ registered engineers to suit specific site locations and conditions.
- Designed to suit client's exact requirements and includes remote computer support.
- Kit set design to minimize on site installation – generally only 1-2 days.
- We have service contracts in place with existing flare customers to ensure the gas flares are maintained in their optimal condition and performing to specification. As with most mechanical plant, routine service ensures reliable operation.
- Our flares are pre-assembled and electrically tested prior to dispatch in easy to transport modules.



Construction

Our packaged flares can be constructed from stainless steel or painted / galvanised mild steel materials depending on the application and customers budget.



Servicing



Windsor supports and services its equipment for life.

We design all products with service and maintenance in mind, e.g., Long service intervals, access and availability of spare parts.

We have a team of dedicated service personnel throughout the country to ensure quick and effective response and support.

Our planned servicing and maintenance contracts for your equipment can help avoid costly unplanned factory shutdowns due to critical equipment failure.



Other products and services

Air filtration

- Activated Carbon
- Air Conditioning Filters
- Bag Filters
- Clean Rooms
- Gas Filtration
- HEPA Filters
- Hospital filters
- Intake Filters
- Theatre Laminar Flow Systems

Air movement

- Blowers & Gas Boosters
- Dampers & Flow Control
- Fibreglass Fans
- Industrial Fans
- Process Fans
- Side Channel Blowers

Environmental control

- Bag & Cartridge Filters
- Cooling Towers
- Cyclones
- De-Humidifiers
- Dust Collectors
- Evaporative Cooling Systems
- Fluid Strainers
- Heat Exchangers
- Heat Recovery Systems
- Odour Control
- Scrubbers

Maintenance & Servicing

- All products

Measurement & instrumentation

- Flow & Pressure Instruments
- Hand held pressure measurement
- IR Temperature Instruments

Design & consulting services

- Specifically in relation to our expertise in air movement, filtration, humidity control, dust collection

Other Products

- Attenuation
- Energy Plants
- Heat Exchangers
- Kiln Drying
- Material Handling

Please contact our Wellington sales office for these products:

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