

# DATASHEET



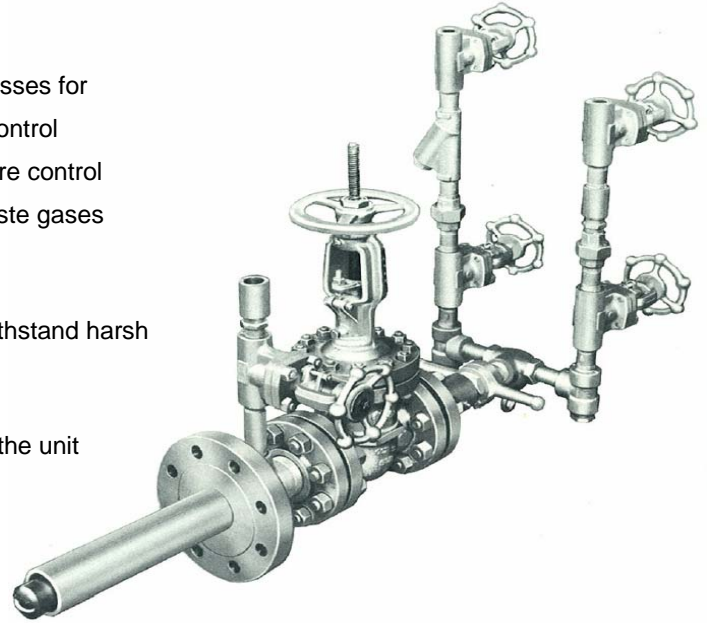
## Oil and Water Sprayers

### Applications

- ✚ Fluid Bed Catalytic Crackers and Chemical Processes for
  - catalyst regenerator temperature control
  - reactor feed and vapour temperature control
  - cooling and quenching exit and waste gases

### Design Requirements

- ✚ Robust high quality design and manufacture to withstand harsh environments
- ✚ Easy and safe removal of spray unit
- ✚ Correct spray pattern to allow accurate control of the unit

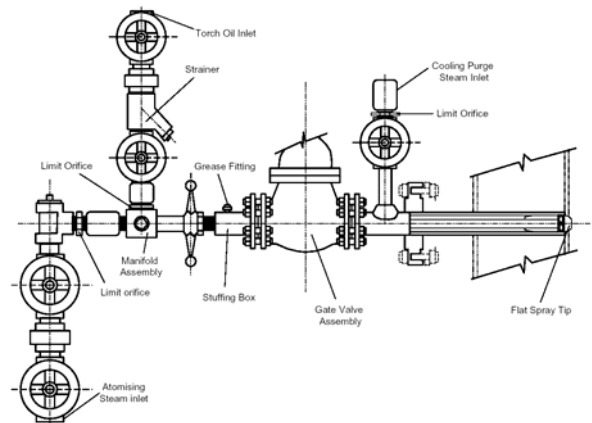


### Key Features

- ✚ Radial mounted through the vessel's shell
- ✚ Withdrawal gate valve assembly guards against pressure ejection and facilitates safe and easy removal of the unit for inspection and cleaning while the process continues
- ✚ Packing box and positioning gear assembly allows tip alignment and orientation to be maintained
- ✚ Purge steam inlet (Oil Unit) prevents catalysts chocking up the sprayer tubes and keeps the nozzle cool when not operational
- ✚ Flat spray patterns ensures the complete catalyst bed is covered uniformly over a wider operating temperature
- ✚ Use of special materials for atomiser construction providing greater resistance to high temperature and erosion by abrasive catalysts ensuring longer life.

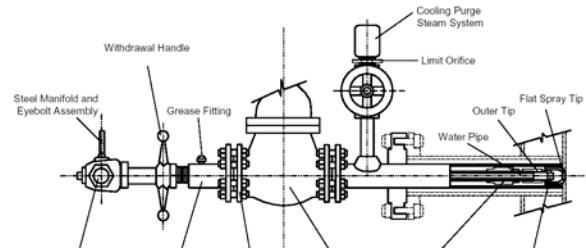
### Oil Sprayer

Uses the inside mixer or emulsion type atomiser and is supplied with a flat tip to fire uniformly into or above the catalyst bed. It may be used during cold start-up or for supplementing heat release during possible periods of coke formation. In some cases it can be used to control or reduce after burning

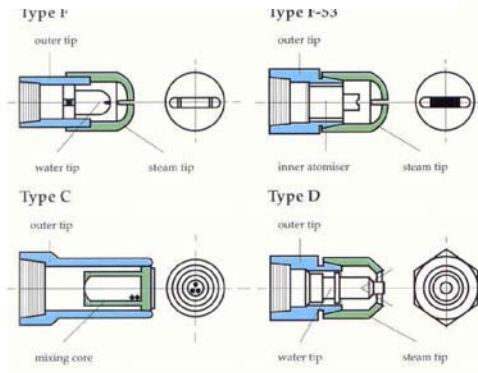


## Water Sprayer

The water sprayer is specifically designed to maintain a uniform spray pattern throughout the operating range and is of particular advantage where it is necessary to maintain the physical dimensions of the spray.



### Water Spray tip Option



**Type F**, a flat spray into or above the catalyst bed. Placed edgewise it will control the gas temperature at the entrance to the cyclone separator

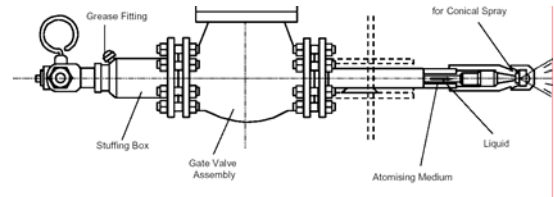
**Type 53**, a flat spray, especially suitable for a wide capacity turndown for higher water pressures. It maintains a uniform spray pattern throughout the operating range

**Type C**, a swirling conical spray pattern suitable for gas ducts

**Type D**, a finely atomised conical spray which is extensively used in controlling the temperature of fluid catalytic cracker

## Chemical Process Reactor Feed Sprayer

Used for reactor feed, vapour temperature control or cooling and quenching exit and waste gases. These sprayers use compressed air, steam or gas as atomising agent dependant upon the particular applications.



## Utilities



### **Water**

- Pressure - Maximum 13.8 barg (220psig) but not less than 5.2 barg (75 psig)
- Condition – free from oil condensate



### **Oil**

- Viscosity - less than 150 SSU at the sprayer



### **Atomising Steam**

- Pressure - Greater than 7.0 barg (100 psig)
- Quantity – approximately 10% by weight of oil or water to be atomised at maximum output

For further information on combustion equipment please contact the head office:

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