

Axial Flow-Quench Pipe and Mixing Tray**Introduction**

In multi bed reactors, a cooling phase is often required between catalyst beds. This is achieved by injecting quench gas through quench tubes, which can be either simple or complex to ensure better distribution of the gas. The quench gas mixes with vapor and liquid from the upper catalyst bed in a mixing chamber located below a collection tray. The tray collects the fluid and directs it into the chamber. Proper design of the nozzles, tray openings, and chamber dimensions. Considering residence time and flow characteristics is critical for efficient process performance. Euroslot Pars offers custom engineered designs with precise manufacturing tolerances and on-site technical support to ensure optimal installation and operation.

Applications

- Axial structured reactors
- Multi stage bed systems with temperature control requirements
- Absorption/adsorption columns
- High temperature reactors requiring controlled quench injection

**Features**

- **Custom engineering:** The application or detailed design as per specification
- **Strength:** Low deflection of the tray during operation
- **Manufacturing:** Tight manufacturing tolerances on panel flatness
- **Trial assembly at Euroslot Pars shop:** Standard control assessed by a report
- **Prevents hotspots and catalyst damage:** Protection of downstream catalyst beds from thermal stress and uneven loading

