

FCC (Fluidized Cracking Catalyst) Reactor**Product Coding**
P31XXXXXX**Introduction**

FCC is a key conversion process used in modern oil refineries to upgrade heavy hydrocarbon fractions into lighter and more valuable products. After crude oil distillation, a significant portion of high boiling, high molecular weight residues remains.

FCC technology enables refineries to convert these heavy streams into high value fuels and petrochemical feed stocks such as:

- High octane gasoline
- Light olefins (propylene, ethylene)
- LPG
- Light cycle oil and diesel range products



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FCC Process in Action

1. Feed injection and vaporization

Heavy hydrocarbon feed is injected into the bottom section of the FCC riser, where it contacts hot regenerated catalyst. The immediate heat transfer vaporizes the feed and initiates cracking reactions.

2. Cracking reactions in the riser

The gas/solid mixture flows upward through the riser under controlled temperature and velocity.

Inside the riser:

- Long hydrocarbon chains break into lighter molecules
- Residence time is extremely short (2-5 seconds)
- Catalyst particles become coated with coke

Controlled hydrodynamics ensure optimal conversion and selectivity.

3. Catalyst/vapor separation

At the riser outlet:

- A termination device quickly disengages spent catalyst
- Reactor cyclones remove entrained catalyst fines

Rapid separation prevents over-cracking and protects downstream process units.

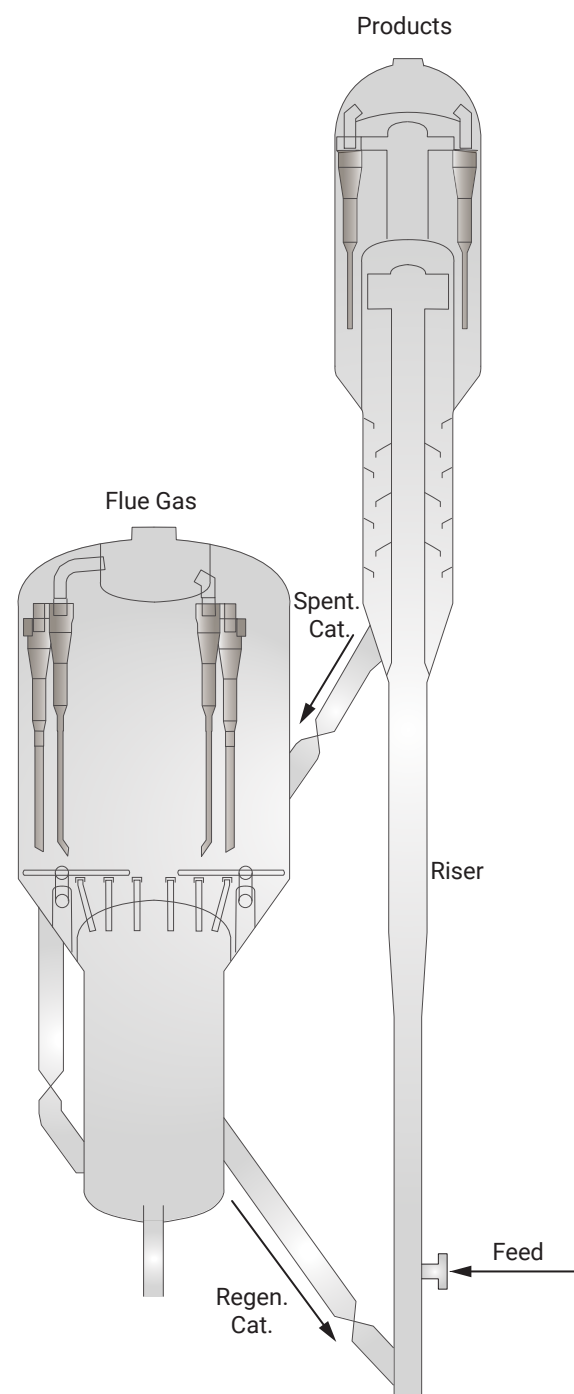
4. Catalyst regeneration

Spent catalyst flows into the regenerator, where coke is burned off using air.

This restores catalyst activity while heating it to 650-720°C.

Regenerator cyclones recover catalyst particles from flue gas and maintain circulation efficiency.

The regenerated catalyst is returned to the riser, enabling a continuous and stable cracking process.



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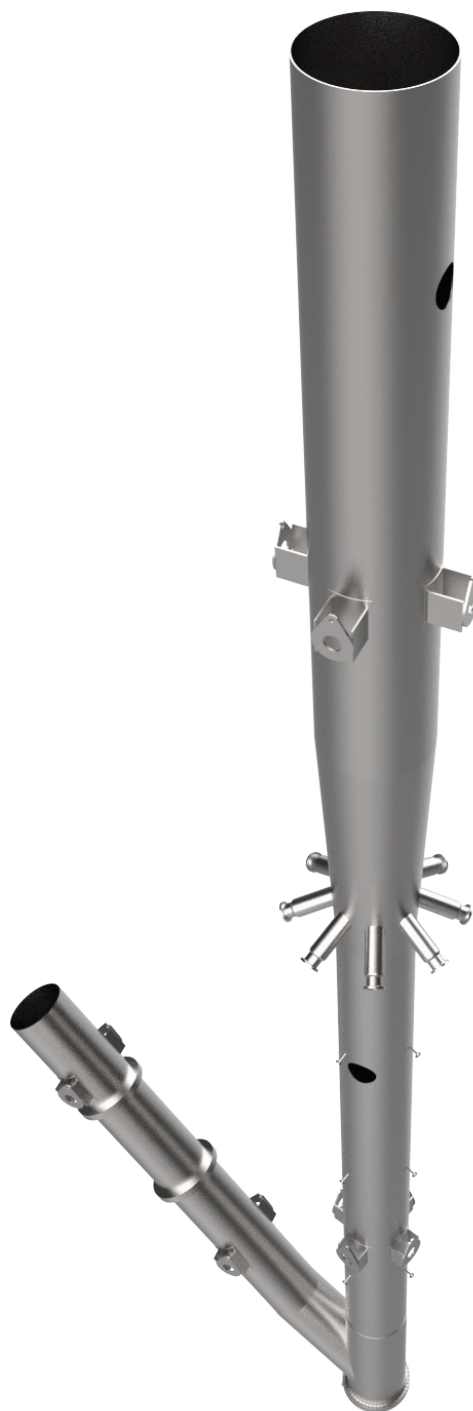
- Advanced mechanical engineering capability
- Well fabrication and certified welding processes
- High quality, erosion and heat resistant materials
- Proven operational reliability in FCC service
- Long term technical support and assistance

Euroslot Pars FCC Equipment

Euroslot Pars manufactures high performance components for FCC reactor and regenerator systems. All equipment is built to withstand extreme operating temperatures, catalyst erosion, and continuous thermal cycling while ensuring maximum reliability and long service life in refinery environments.

▪ FCC riser

Euroslot Pars FCC risers serve as the primary reaction zone of the cracking process and are engineered to deliver efficient feed catalyst mixing, uniform fluidization, and stable residence time. Constructed from high temperature alloys and protected with cast or tile type refractory linings, these risers offer outstanding erosion resistance and thermal stability. Their optimized internal geometry, precision-machined joints, and optional anti-coking configurations ensure low pressure drop, smooth operation, and consistent cracking performance.



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FCC (Fluidized Cracking Catalyst) Reactor**Product Coding**
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Euroslo Pars cyclones provide high efficiency separation in both reactor and regenerator vessels. They feature optimized vortex and barrel configurations for superior separation efficiency and reduced catalyst carryover. Built from wear resistant steels and furnished with durable refractory linings, these cyclones deliver dependable operation under severe thermal and mechanical loads while maintaining minimal pressure drop and long term structural integrity.

**▪ Cyclone hanger**

Euroslo Pars cyclone hangers are engineered to ensure stable support and precise alignment of cyclone assemblies inside FCC vessels. Manufactured from high strength, heat resistant alloys, these hangers accommodate thermal expansion, dynamic stresses, and high mechanical loads while maintaining secure, long lasting structural performance with minimal maintenance requirements.



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