The History
In the 1930's KBR was there for the initial development of the FCC process. Since designing and building the first FCC we have provided more than 120 grassroots unit designs worldwide.

Each year we engineer multiple revamps for all types of FCC configurations.

KBR continues to innovate and push the reaction system performance with designs that increase reliability, capacity and efficiency. New processing options maximize the economic return from the FCC, we have solutions for high propylene production, maximum diesel production, environmental issues, bio-feed and other non-traditional feed stocks.

KBR Fluidized Catalytic Cracking
KBR has an tremendous depth of knowledge to bring to your new, grassroots FCC. We designed some of the first VGO and Resid crackers and continue to provide new designs to get the last drop of value from your heavy feedstocks.

KBR's Orthoflow design has gone through several generations, but the basic configuration has remained the same. The Orthoflow arrangement has proven itself over the years to provide excellent reliability and operational performance.

In recent years, KBR has extended the catalytic cracker reaction system to increase propylene production using the Maxofin riser. We have used our knowledge of the reaction system to process non-traditional feedstocks, like naphtha and bio-feeds.

More than 70 years of proven experience
When you need increased capacity, better yields or more reliable operation, experience counts. KBR's suite of technology features will help you achieve your objectives:

- Increase conversion with ATOMAX™ feed injectors
- Reduce dry gas with Closed Cyclone Riser Termination
- Recover valuable product with DynaFlux™ Stripper baffles
- Improve regeneration with Self Aerating Spent Catalyst Distributor
- Improve gasoline yield and octane with Riser quench system
- Protect your expander with CycloFines™ Tertiary Separator System
- Reduce maintenance with advanced regeneration air distributor
- Limit emissions with low NOx Regenerator configuration
- Process cheaper feedstock with dense phase downflow Catalyst Cooler
- Better Regenerator performance with REGENMAX™ baffle system
The FCC Revamp - never dull

Each FCC revamp presents unique challenges. There are always multiple constraints and objectives and they are often mutually exclusive. KBR’s proven experience and technology features guarantee the most cost effective upgrade to your unit. Revamps prepared by KBR consistently deliver improved process performance, flexibility to process difficult feedstocks, increased capacity, improved yields and reduced power usage. Our designs can help with environmental compliance, reduce maintenance issues and extend run lengths.

ATOMAX injectors were developed after extensive lab testing and provide a very fine atomization of the feed. They have a low oil side pressure drop, produce a very evenly loaded flat fan spray. ATOMAX injectors often allow an increase in capacity and performance without requiring changes to the feed pumps or feed preheat system.

KBR designed Tertiary Separator Systems provide excellent power expander protection and can often be designed to meet stringent particulate emissions limits. We have retrofitted the CycloFines elements in many existing TSS vessels.

Installing KBR’s Self Aerating Spent Catalyst Distributor and making any other necessary changes creates a counter-current like mode of operation in the Regenerator. This has been proven to reduce NOx production, improve catalyst regeneration and reduce catalyst deactivation.

For more information visit us online at fcc.kbr.com