



INTEGRATED FLOW SOLUTIONS

**\$ DO THE MATH! \$**

## **INDUSTRY PROVEN!** Coke Particulate Filtration Package

The FC Series filtration package is designed to filter particulate from the heavy coker gas oil before entering the catalytic cracker. This effectively extends the life of the catalyst and reduces catalyst regeneration cycles.

### ● **Longer Catalyst Life** \$

- Reduced coke contamination of the catalyst

### ● **Lower Operating Costs** \$

- Reduced down time for catalyst regeneration

### ● **Flexibility**

- Patented Filtration Pack efficiently filters sponge, shot or needle coke particulate

### ● **Longevity** \$

- Extended filtration surface area requires fewer backflush cycles

### ● **Back-flush** \$

- The FC series filtration package has a low volume back flush requirement

### ● **Pressure Containment**

- ASME Section VIII, Division 1 code stamped pressure vessel

### ● **Inspection Friendly**

- Pad-less nozzle design allows straight forward nozzle weld inspection

### ● **Depressurization Safety**

- Rodable vent connection to ensure complete depressureization

### ● **Closure**

- Through bolted closure combines safety with ease of maintenance

### ● **Maintainability** \$

- Filter pack mounted to top closure for easy replacement

### ● **Low Pressure Drop** \$

- Channeled outside-in flow has a low clean and dirty pressure drop at maximum flow

### ● **Functional Vessel**

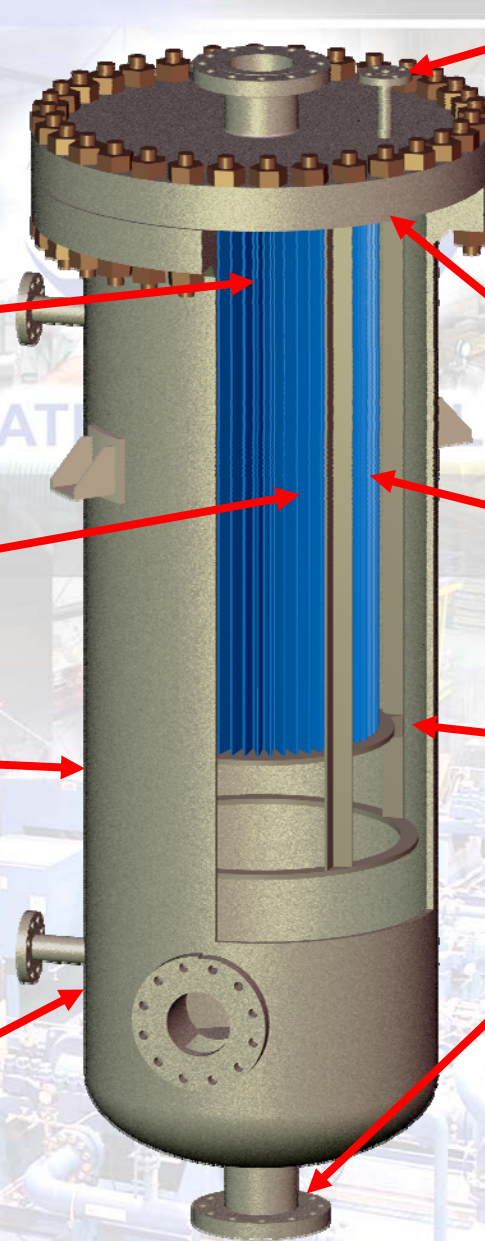
- Vessel to filter pack clearance strategically designed to evenly distribute the process flow

### ● **Large Blowdown**

- Large blowdown opening to maximize particulate removal

### ● **Customization**

- Designed and build to process specifics for the required flows and micron retainage



**Reduced Down Time and Lower Maintenance Cost**



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## About IFS

**Integrated Flow Solutions (IFS)**, formerly Flowtronex International, specializes in the design and manufacture of prefabricated modular systems for a variety of industries. Founded in 1979 as an outgrowth of the pump distribution business, IFS began serving the oil and gas market, then expanded into turf grass (Flowtronex/PSI), power and general industrial. In 2002, Flowtronex/PSI and the brand, "Flowtronex" was sold to ITT. IFS was born.

### The Company

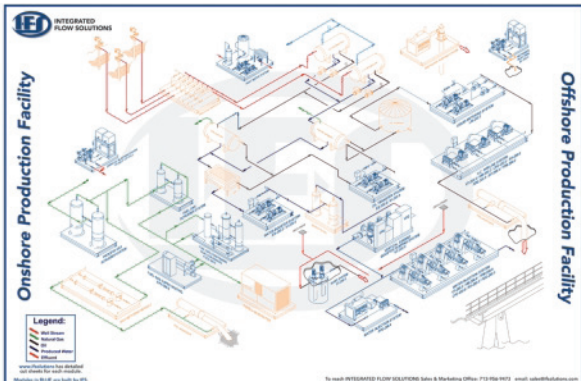


**Tyler, Texas:** With 100,000 square feet under roof, the seven acre facility has ten overhead cranes (including two 25 ton) and a 26 foot hook height.

IFS' strengths begin at the design/engineering phase and continue through start-up. Here is how.

### The Products

IFS' products serve the Oil & Gas, Power, Emissions, and General Industrial markets. IFS has designed unique industry "Site Maps" to communicate typical process flow and the products manufactured by IFS.



**Oil & Gas Site Map:** Outlines the typical process flow of an oil & gas production facility (IFS products shown in blue).

### Sales/Applications

IFS sales and applications staff reviews each customer inquiry in detail. In many cases, proposals provide alternate solutions to a customer's application incorporating IFS' knowledge and experience. Typical proposals also include similar project general arrangement drawings, process and instrument diagrams (p&id), and photos. Equipment installation lists are also available.



**IFS sales/applications staff** reviewing customer inquiry. Common industry standards and IFS past experience are common sources for improved customer solutions.

### Engineering/Design

IFS specializes in system design, engineering, component selection, and modular construction to meet various customer specifications and code requirements unique to each industry. Competent project management, engineering, and design are key to any successful project. IFS maintains each of these disciplines in-house to ensure projects are executed properly.



**IFS designer** using latest Autocad program to develop design of equipment modules.

## Automation

IFS knows that the proper integration of automation and controls with packaged mechanical equipment is important. IFS understands the process requirements to design and supply the best controls for the job. From microprocessors monitoring and controlling the simplest functions to PLC's incorporating control functions outside IFS supplied packaged equipment, automation is a large part of IFS' added value.



**IFS electrical and mechanical engineers** are experts in automation and controls design. Each project requires careful controls engineering to guarantee proper field operation and to ensure that the system will perform to specifications.

## Fabrication

IFS' fabrication and manufacturing are managed on a seven (7) acre facility with 100,000 square feet under roof. With ten (10) overhead cranes (2-25 ton with 26' hook height), extremely large modular systems can be accommodated. An indoor grit blast facility and indoor duplex paint booth ensure quality preparation and coating while maintaining scheduled shipments.



**One of Seven IFS Fabrication Bays.** Industry standards include vessels to ASME Section VIII, piping designed to ANSI B31.1/31.3 & fabricated to ASME Section IX, structural steel to AWS D1.1.

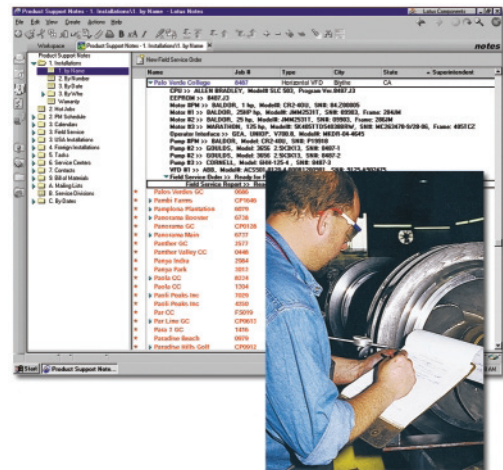
## Product Support

IFS realizes the importance of supplying customers with superior product support and timely field service after the sale. IFS combines in-house support with independent service providers to address the specific trouble area.



## Product Support Notes (PSN) Database

IFS maintains a Product Support Notes Database to ensure prompt accurate technical phone support. The documentation process begins the moment a customer order is received. Everything from customer specifications to shipping photos is maintained in the Product Support Notes Database.



**Product Support Notes (PSN)** — IFS maintains careful records on customer inquiries and service calls in a single database. This information helps establish a "history" for each project and aids Customer Service personnel in addressing any similar calls.



**Sales/Applications  
Engineering/Design  
Automation  
Fabrication  
Product Support**