Test catalysts and feeds for Fluid Catalytic Cracking (FCC) under relevant process conditions but with laboratory scale budgets

hte’s downflow technology

- offers an entrained flow concept analogous to the commercial process.
- allows experiments at catalyst reactor residence times / contact times comparable to riser reactors.
- adjusts the same pressures as employed in commercial FCCUs.
- is capable of processing high severity protocols (high cat-to-oil ratio).
- covers size and operating expenditures in the range of laboratory methods.

YOUR BENEFITS

- Since catalyst and feed move in the direction of gravity back-mixing is low
- Entrained flow reactor as commercial FCCU
- Pressures typical for an FCCU or a riser can be adjusted
- Cost-efficient (operation, catalyst, feedstock)
- Fully automated lab system
- 5 crackings per 8 hour shift w/ optional increase to 18 crackings per day
- Mass balances 100 +/- 2 %
- Reproducible results matching well with circulating riser units
- Flexible and broad parameter range
- Variety of feedstocks possible: VGO, high resid VGO, light cut naphtha, biogenic feeds
- Feedstocks with CRC’s 0-10 % can be processed
**INFRASTRUCTURE REQUIREMENTS**

**Laboratory:**
- Typical footprint: 1.5m x 3.5m x 1.2m (WxHxD) plus room for GC and PC workplace (height depending on the length of the reactor)
- Only local fume hood exhaust necessary

**Gas Supply:**
- N₂: 10 barg/100 barg
- Synthetic air: 10 barg
- House air: 10 barg
- GC gases: H₂, He, N₂, Ar

**Power Supply:**
- 400 VAC/5kW, other voltages upon request

**APPEARANCE AND FOOTPRINT OF THE DOWNFLOW UNIT**
Delivered may differ from the unit displayed.