

Vinci-Technologies Catalyst Testing Versatile unit respects very high level standards in terms of reliability, reproducibility, flexibility and safety. These units are particularly relevant for an extended range of catalytic reactions (heterogeneous or homogenous) occurring at conditions up to 550°C and 200 bars, both in gas or liquid phases and allow collecting industrially relevant and reliable data on catalyst performances, mainly: activity, selectivity to desired products, stability, response to inhibitors, response to poisons, effect of activation (reduction, sulfidation)

CTV – Applications & Processes

In order to answer its customer process development purposes, Vinci-Technologies offers computerized CTV to match client versatile needs. This equipment is relevant to be used in a large variety of industries (refining, petrochemicals ...) and allows to cover a wide range of applications like kinetic studies, process evaluation, process modelization, stability tests of catalysts or adsorbents ...

Almost all catalytic processes regarding crude oil refining (dehydrogenation, hydrogenation, hydrocracking, hydrotreatment, hydroformulation, oxidative decomposition, partial oxidation, isomerization ...) can be extensively evaluated with CTV.

CTV – Main features

Standard equipment includes : a gas feed section (HP H₂ and LP N₂), a liquid feed section (2 tanks, 1 pump), a reaction section (different sizes available, either fixed bed or CSTR), a liquid / gas separation section and a product recovery section

It is automatic in order to operate the unit in a continuous mode. Supervision software offers a user-friendly interface in order to control and monitor safely all process parameters



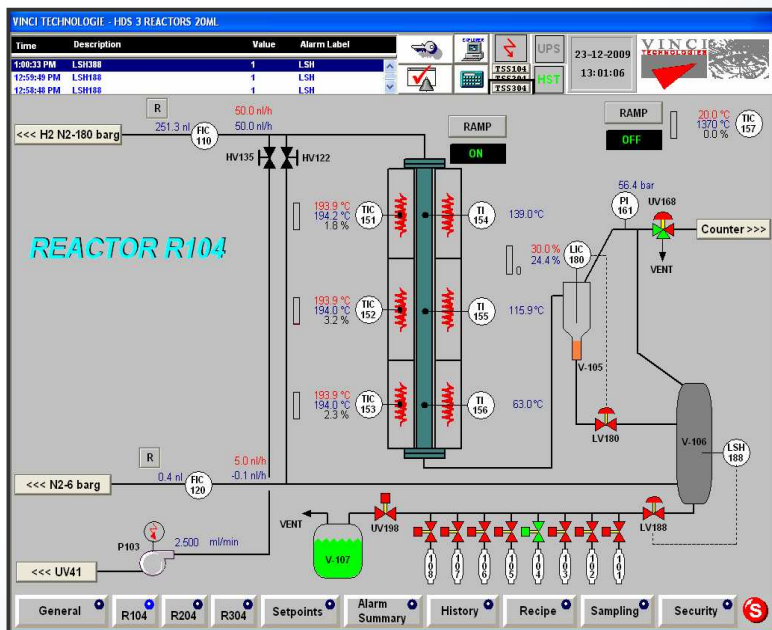
CTV – Options

In order to match as much as possible to the client request, CTV system is modular and a number of options are available to order to customized the system on a common and robust base :

- Air booster compressor skid (in order to fully use H2 bottle capacity)
- Heat tracing (to allow the equipment to treat heavy or viscous feeds until VGO for example)
- Second reactor in series (reactors in series to perform different reaction in reactor at same pressure)
- Inter reactor sampling system (to collect inter reactor liquid phase without disturbing continuous flow between first & second reactor)
- Nitrogen stripper
- Liquid automatic sampling
- Cooling system (for high pressure separator temperature control)

CTV – Characteristics

- System can be delivered on a turnkey basis
- Fixed bed reactor catalyst capacity : 10ml, 100ml, 200ml.
- CSTR reactor capacity : 0.5l, 1l, 2l
- Data export to spreadsheet and database
- Battery limits
 - Nitrogen: 1/4" OD max 7 bars
 - Hydrogen: 1/4" OD max 200 bars
- Utilities
 - Air instrument: air type fitting max 6 bars
 - Cooling water: 1/4" NPT
- Power (50 or 60 Hz, one or three phases)
- Dimensions
 - Height: 2m, Large: 1.4m, Depth: 0.8m



CTV – Advantages

Vinci-Technologies CTV design is the fruit of extensive world wide operation and major key points of the equipment are :

- Flexibility and number of options
- Fabrication quality
- User-friendly interface
- Full data recovery on Excel
- Proven and robust design
- Compact equipment
- Easy maintenance (quick connections)