

**HP Reactor
Systems**

High Pressure Reactor Solutions

Configured For Your Chemistry

- | Hydrogenation
- | Polymerisation
- | Catalyst testing
- | Crystallisation
- | Organic Synthesis
- | Gas Fermentation
- | Bio Fuels



From
Bench Scale To Pilot Plant
Research To Manufacturing

Bench Scale Reactors

Standard Designs Up To 20 L



Metal alloy reactors rated to 100 bar/350 °C, with common cover plate up to 20 L. Floor standing or bench scale according to size.



Pressure glass vessel (6 to 12 bar) interchangeable with metal reactors, for volumes up to 1.5 L.



Metal and glass vessels on common stand to allow easy switching of applications with shared software and electronics.

Flexible Platform

Allowing interchangeability of metal reactors up to 20 L and with pressure and non-pressure glass reactors. Fully instrumented to suit all chemistries and with systems compatible with standard laboratory fume hoods.



Controlled Dosing

Of liquids and gases plus integration with process requirements and fully integrated into reactor platform.



Range Of Sensors/Probes

Fully integrated to allow process development and scale up, including calorimetry.



Pilot Plant Reactors

Custom Designs Up To 50 L



Metal alloy reactors with pressure/temperature ranges to suit any application including integration of multiple vessels.



Complete plant solutions to match process flow sheet with all necessary fittings and safety features included. Custom designs to suit standard and novel chemistries.

Explosion Proof (ATEX)

sensor and stirrers as well as compatible liquid and dosing pumps Control software located in separate area to suit electrical zoning.



Ease Of Use

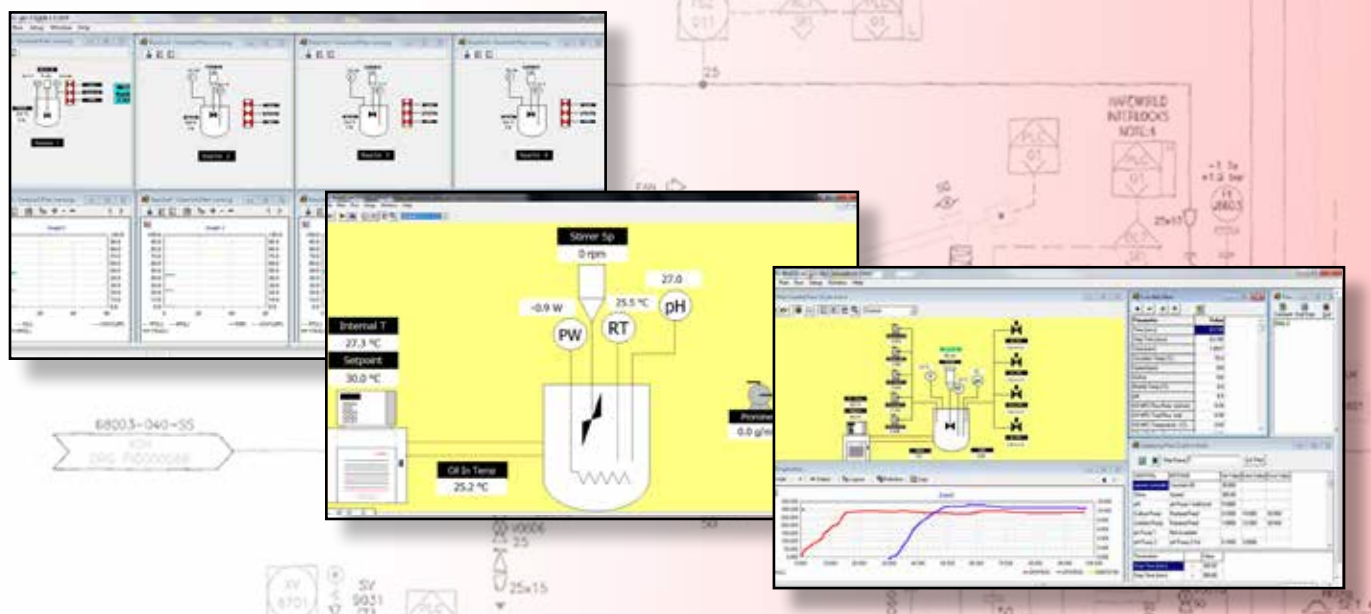
Necessary facilities for lifting (head or vessel to suit application), possibility of internal cleaning with CIP nozzles, choice of heating cooling solutions and agitation arrangements.



Data Logging And Control

Most systems supplied with computer control and data logging which includes:

- | Temperature Control
- | Pressure Control
- | Agitation control
- | Controlled addition of liquids and gases (volumetric or gravimetric basis)
- | Software interface and controls to reflect hardware installed and process specifics
- | Custom recipe design and editing to suit process. Save and re-run recipes or edit as necessary.
- | Real-time editing of controls and data viewing
- | Real-time graphical display of all variations, multiple graphs to allow detailed viewing
- | Hardware and software safety features to suit process operating conditions



About HEL

HEL is an international company that specialises in chemical reactors, bioreactors and related data/logging tools for process R&D in the pharmaceutical, fine chemical, biotechnology and petrochemical industries. Established in 1987 and with the clients worldwide our key strengths are:

Knowledgeable staff – highly qualified and experienced chemical engineers and chemists

Quality – underpinned by ISO9001 certification for over 16 years

Service – choice of service contracts backed by an established culture of unmatched client support

Range of products – both of-the-shelf and custom designs, manual and fully automated controls, low and high pressure/temperature applications, single and parallel/multi-vessel products

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