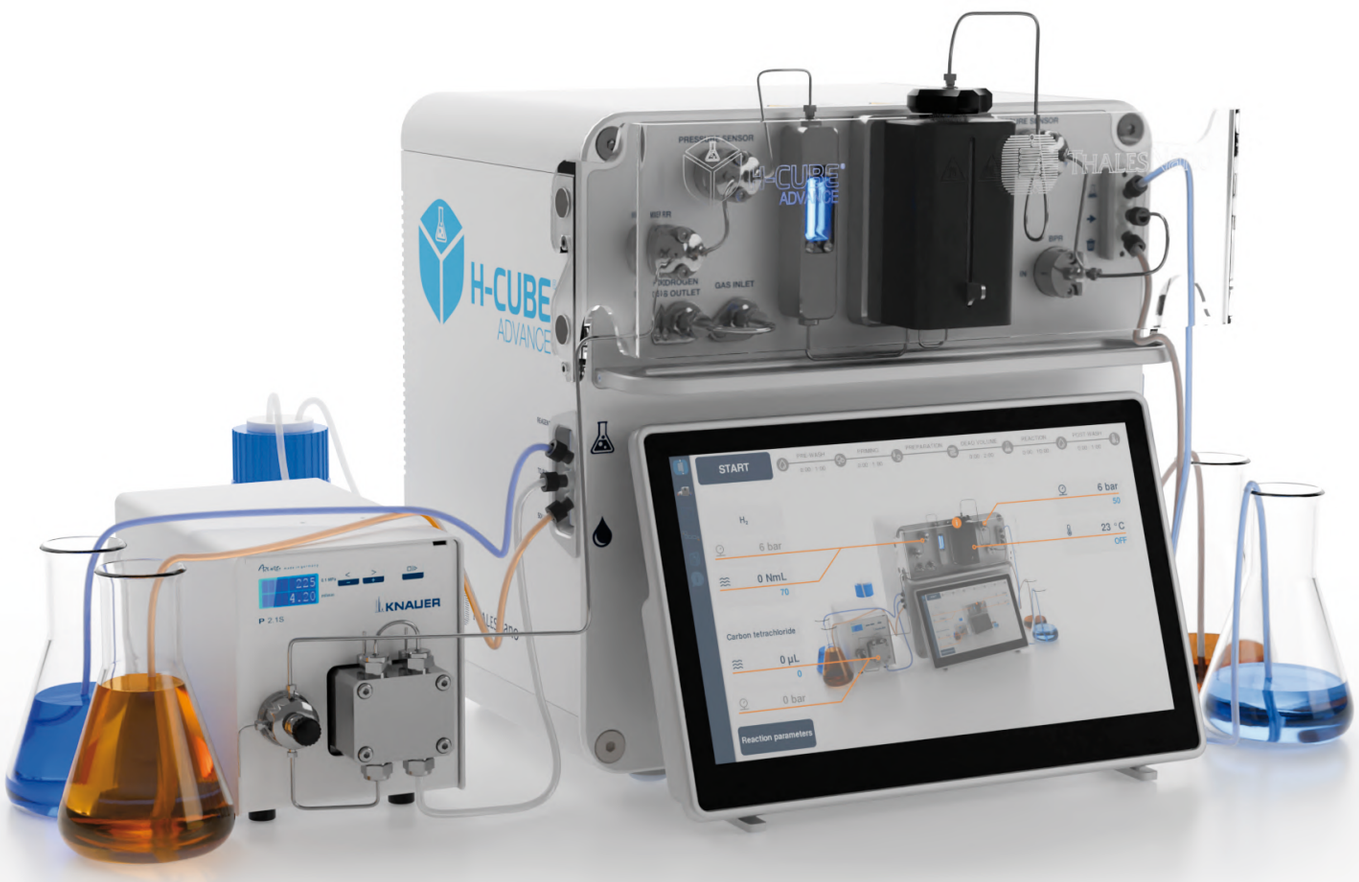
H-CUBE® ADVANCE

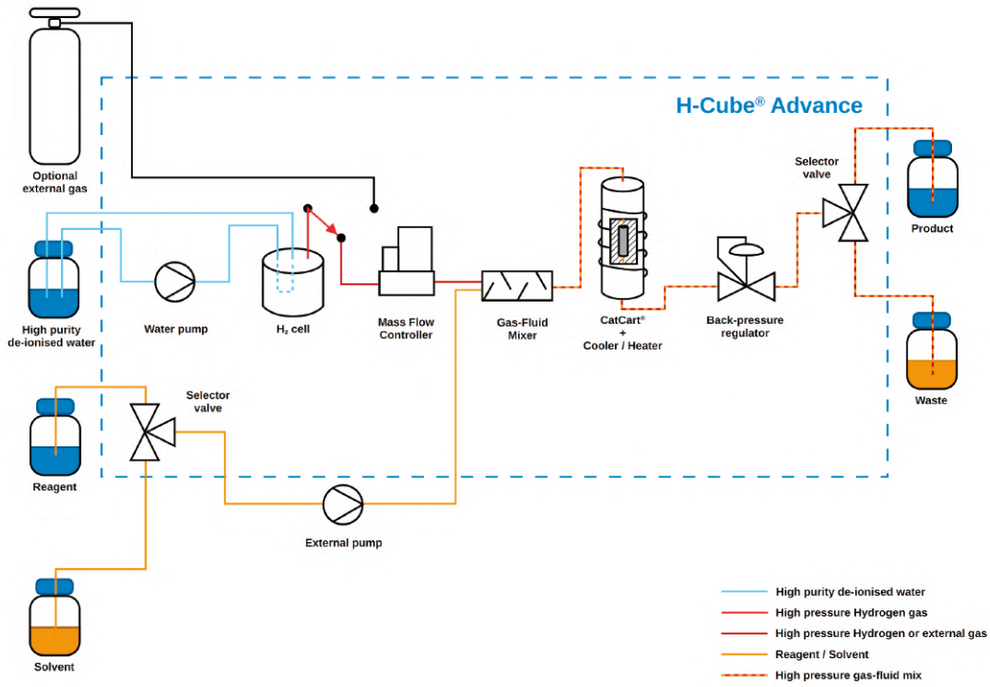
H-CUBE® ADVANCE: THE FUTURE OF SAFE AND EFFICIENT HYDROGENATIONS.

INTRODUCTORY

The new H-Cube® Advance is based on the well-known ThalesNano H-Cube® Pro. This compact, bench-top flow reactor, now has more advanced functions, a modern user interface, and many more enhanced features to help the user facilitate synthetic work in laboratories.

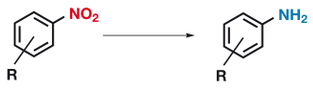


MAIN COMPONENTS



CHEMISTRY EXAMPLES

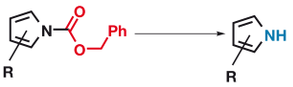
Nitro group reduction



Saturation of aromatic rings

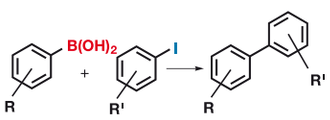
Nitrile group reduction

Deprotections



Double/triple bond reduction

Cross-Couplings



PRODUCT OVERVIEW

The H-Cube® Advance is an upgraded version of the original H-Cube® Pro, which, in addition to maintaining the basic functions of the original system, contains a number of improvements:

- Built-in MFC for the precise dosing of the produced hydrogen or the treatment of the external gases
- User-friendly interface, ergonomic design
- 3.0 (99.9%) produced hydrogen purity
- Compatibility with the THS ReAction software

HOW DOES IT WORK?

The H-Cube® Advance is mainly used for hydrogenation of many different starting material types, as well as catalyst screening. Additional supplied equipment, such as the HPLC pump, is used to introduce the reactant into the device, where the solution of reactant is mixed with the in-situ on-demand generated hydrogen.

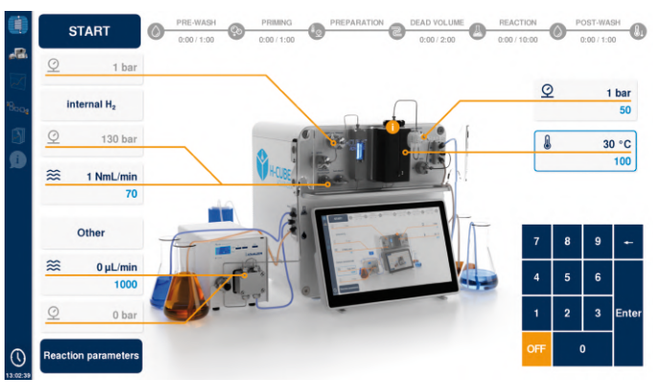
The pre-heated mixture is then transferred to a disposable catalyst cartridge (CatCart®) which is preloaded with the required solid catalyst.

The mixture is then passed through the solid phase and then collected in a flask. In most reactions the only work-up required is the evaporation of the solvent.

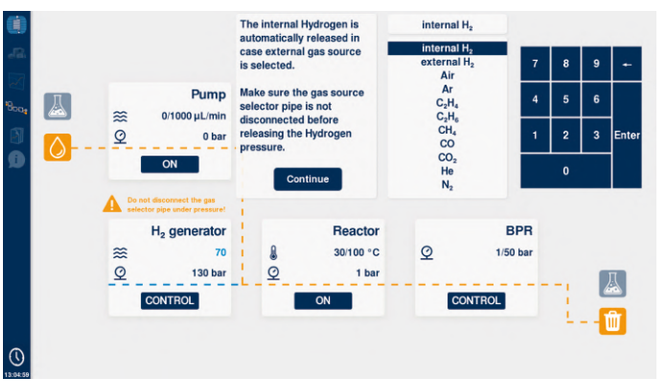
FEATURES

- New generation water electrolysis cell – single cell operation
- External gas inlet - easy to reach on the front, allows the introduction of other gases besides hydrogen
- External water reservoir – no problem with cleaning
- Water purifier cartridge with ion-exchange resin to maintain water quality – enhanced cell longevity
- Gas flow (internal H_2 or external) is controlled by mass flow controller
- Compatible with CatCarts® of sizes 30 mm and 70 mm
- Easy to use CatCart® holder with ergonomic fitting nut knob and lift lever
- In-line see-through quartz tube with status indicator to visualize the gas-liquid flow
- Improved system valve and mixer
- Compatible with the THS HPLC and Knauer pumps
- External 11.6” screen touch display user interface
- Remote control option via RS-232 and ThalesNano CAN bus
- ThalesNano ReAction software compatibility: The H-Cube® Advance can be a member of a large automated modular reactor system, with all parts connected to each other, and controlled by the THS ReAction software
- User friendly software with automated and manual mode

Automated Mode



Manual Mode



TECHNICAL SPECIFICATIONS

Solvent and reagent flow rate range	0.001-10 mL/min
Internal H_2 gas flow rate range	1-70 NmL/min
Gas types	Internal H_2 or external custom
Pressure range	Atmospheric to 100 bar
Reactor temperature range	5 – 150 °C (41 – 302 °F)
Dimensions (H x W x D)	330 x 320 x 330 mm (w/o display)
Display size	11.6”
Weight	18 kg
Mains range	110 – 240 V AC, 50/60 Hz, 500 W

For more information, please visit
www.thalesnano.com
linkedin.com/company/thalesnano-inc-/
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