



The FLEXI HYCO





COMPACT HP HYDROGEN DELIVERY SYSTEM

- Compresses hydrogen from a low-pressure line or an optional, integrated electrolyser
- Delivers ultra pure H₂ at a set pressure up to 200 bar (2900 psi)

ROBUST AND PATENTED DESIGN

- Stores and releases hydrogen from a metal hydride bed
- Operates without moving parts: silently, vibrationless, safely, and without maintenance

PLUG & PLAY, EASY AND SAFE

- Easy manual operation, no time-consuming setup is required
- Avoids the use of high-pressure cylinders in your lab, greatly facilitating operations and increasing safety
- Safe by design with CE marking

PERFORMANCE	
Outlet pressure range	From 10 to 200 bar (145 to 2900 psi)
Operating gas	Hydrogen or deuterium
Gas Storage Capacity	Up to 90 NI or up to 180* NI
Maximum Outlet Flowrate	Up to 0.8 NI/min or up to 1.6* NI/min
Inlet pressure	10 bar
Gas inlet options	Electrolysers, low pressure gas line, high pressure cylinders stored outside
Electrolyser's technology**	Polymer Electrolyte Membrane (PEM) cell
Maximum electrolyser's output flow**	1.2 to 14.2 NI/min at 12 bar***
Electrolyser's water reservoir volume**	0.3 l to 1.1l***
Electrolyser's gas purity**	6.0 to 7.0***
GENERAL	
Gas connections	1/4 inch swagelock compression fitting
Size (W x D x H****)	483 x 481 x 133 mm 19 x 19 x 5.2 inch
Power supply	(110V, 10A -) 230V, 5A - 50/60Hz

* With the expansion module option

** With the hydrogen generator option

*** Depends on the selected model

**** The height is given for a single FLEXI HyCo, without Expansion module, Hydrogen generator or Manual pressure regulator. Contact us to know the exact height of your preferred configuration.

FLEXI HyCo is based on a proprietary Metal Hydrides Compressor technology. At low temperature, hydrogen atoms are absorbed in a metallic alloy. The equilibrium pressure at room temperature is less than 10 bar. On demand, the metal hydrides bed is heated up to increase the pressure to the set point.

A manual pressure regulator is used when a perfectly constant hydrogen pressure is required



Expansion modules (internal, maximum one per Flexi Hyco) are available for multiplying the storage capacity and maximum flow rate.

Multiple Flexi Hycos can also be combined in a single rack for even higher-duty systems.

A rackable hydrogen generator can be provided as an option. It uses a long-life Polymer Electrolyte Membrane (PEM) cell. Other inlet options are a low-pressure gas line, an outdoor high-pressure cylinder, or a third-party electrolyser.

Flexi HYCO can also operate with deuterium. It has the advantage of being able to reabsorb the deuterium used after an experiment if it has not been polluted by other gases or vapors. This allows the same gas to be reused several times, thus reducing costs.

Picture of FLEXI HYCO

THE FLEXI LINE - YOUR FLEXIBLE ACCESSORIES

Our range of accessories for the characterization of materials under a variety of conditions and across wide application ranges.



High Pressure Mass Spectrometer



FLEXI HP MS



High Pressure Hydrogen Delivery System



FLEXI HYCO



High Pressure Control System



FLEXI HP 200



Air Cooled Chiller



FLEXI CHILL

IN SITU MEASUREMENT

EXPERIMENT CONDITION CONTROL

FLEXI BALANCE



Mass Variation Measurement System



FLEXI WET



Wet Gas Generator



FLEXI HP 1000



High Pressure Control System



USER INTERFACE

FLEXI accessories have different levels of control and types of interface. This includes :

- Manual control and visual alarms
- Control panels with display screens
- Signals output for data export
- Software control from a PC or a laptop
- Combinations of two or more of the above

GRAVIMETRIC ANALYSIS
Designed to measure mass loss and uptakes, for solid-gas reactions. Can be coupled to furnaces, climate chambers and other instrumentation.

HUMIDITY
Can be coupled to any laboratory instruments or climate chambers for humidity control

EGA – EVOLVED GAS ANALYSIS
Combines with any system, even under pressure, to detect and identify gas evolution

CORROSIVE AND REACTIVE GASES
Able to run in various aggressive atmospheres

PRESSURE VACUUM
Operates under pressure and/or measures and controls pressure

TEMPERATURE
Controls temperature of industrial or laboratory systems



Switzerland – France – China – United States – India – Hong Kong
For contact details: www.setaramsolutions.com or setaram@kep-technologies.com

