

HyCo

Metal Hydride Compressor for High Pressure H₂ Delivery in the Laboratory Environment



Increase the safety in your lab - get rid of the high pressure H₂ cylinders

What is HyCo

HyCo safely compresses hydrogen up to 198 bar (2872 psi)

HyCo purifies and delivers ultra pure H₂

HyCo is extremely safe and reliable

HyCo is plug-and-play - no time-consuming setup is required

HyCo operates without moving parts - thus, it operates silently and requires no maintenance

Specifications

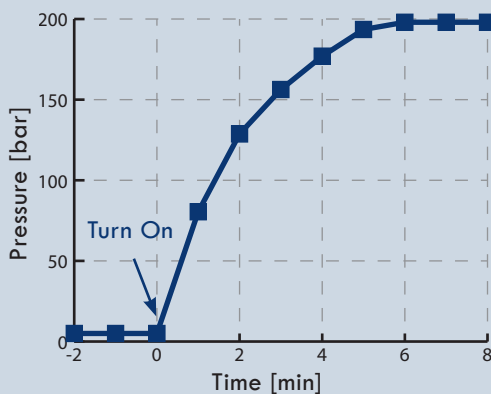
- Variable outlet pressure from 10 bar (145 psi) up to 198 bar (2872 psi)
- Up to 60 NL H₂ storage capacity
- Reaches 198 bar in less than 6 minutes
- Maximal outlet flow: 400 Nml/min
- Versatile refill options such as electrolyzers, low pressure hydrogen lines or high pressure cylinders stored externally
- Near ambient pressure in idle mode

Operating Principle

HyCo uses the thermodynamic properties of a selected metal alloy forming hydrides under favorable conditions

At low temperature, hydrogen atoms are absorbed in the metallic compound and located at the interstitial sites. The equilibrium pressure at room temperature is less than 5 bar.

On demand, the metal hydrides bed is heated up to increase the pressure up to 198 bar. Impurities are trapped in the metallic compound and ultra pure H₂ is supplied to the user.



Options

HyCo is available with several extension that expand its scope of application

- **Electrolyzer:** Connected to the electrolyzer the HyCo becomes a full pressurized hydrogen production unit. The hydrogen generator with long life PEM cell has a maximal output flow of 120 ml/min at 12 bar and a purity of 99.999%. It has an automatic water refill option.
- **Pressure controller:** The additional pressure controller ensures a hydrogen output with a perfectly constant pressure.



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