

# HBank-SG02-0050-Q Hydrogen Storage System

## 50 Liter Capacity

◇ Safe ◇ Highly Portable ◇ Rechargeable ◇ High Purity

The HBank-SG02-0050-Q is a 50 Liter capacity hydrogen storage system based on the latest achievements in AB<sub>5</sub>-type solid metal hydride technology as well as on unique alloy loading techniques. It allows for the storage and release of high purity hydrogen at ambient temperatures and at designed pressure range from 1.5 up to 10 atm (-20-140psi) with very constant gas flow: 95% of stored gas can be released within the designed maximum flow rate at constant temperature.



HB-SG02-0050-Q

Unlike high-pressure hydrogen cylinders, the HBank hydrogen is chemically bonded with the metal hydride alloy. In the eventuality of a system leak, it would take hours before the HBank would fully release its contents, providing a safe and durable hydrogen supply.

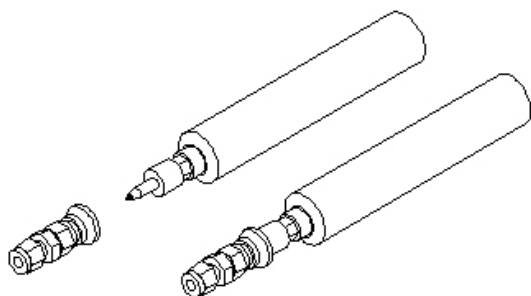
When used properly, the HBank system can provide several thousand charge/discharge cycles without any essential changes in working technical characteristics.

The HBank SG02-0050-Q has a 50 liter capacity and is capable of supplying high purity hydrogen (over 99.9999%) even when charged with only 99.99% purity hydrogen. This makes HB-SG02-0050-Q an ideal pure hydrogen source for GC-FIDs, Fuel Cell systems, as well as for many other gas purity-sensitive systems.

## Specifications

Parameter	HB-SG02-0050-Q
Hydrogen Storage Capacity	<b>50 Liters</b>
Raw Hydrogen Input Purity	≥99%
Charge Temperature	0 ~ 40°C
Recommended minimum recharge pressure	2.5-3.0Mpa (>350psi)
Recharge time @ 25°C	30 Minutes
(Recharge time in cold water bath, <20°C)	(15 Minutes)
Hydrogen Discharge Purity	99.99 ~ 99.9999%
Hydrogen Discharge Pressure	≥0.2 MPa @20°C (30psi)
Hydrogen Discharge Flow Rate	≥0.5L/min. @20°C
Operating Temperature Range	0~60°C
Heat Exchange Method	Air Convection
Valve Type	1/4" Swagelok Quick Connect ( SS316 )
Dimension ( W x L )	30mm OD×240mm L ( 1.2" OD x 9.5"L)
Total Weight	650g (1.5lb.)

# Features



- The HBank system is based on patented AB<sub>5</sub> alloy technology with a hydrogen absorption capacity of 1.65 wt%. The unique composition and special production technology of the alloy allows the system to operate over 5000 cycles.
- The bodies of HBank canisters are produced with high-grade low carbon 321SS stainless steel, which ensures the system's necessary strength and prevents oxidation-related negative effects.
- The HBank system's complete stainless steel construction permits the increase of the designed maximum gas flow rate (for stable operation with natural heat exchange) if a hot water bath is used.

## Expected Output Levels\*

Volume	Usage/ min.	Continuous time
50 Liters	÷80ml	≈ 625min. ( 10 hrs. )
50 Liters	÷60ml	≈ 833min ( 13 hrs. )
50 Liters	÷40ml	≈ 1,250min ( 20hrs. )
50 Liters	÷20ml	≈ 2,500min ( 41hrs. )
50 Liters	÷10ml	≈ 5,000min. ( 83hrs./ 3.4 days )

\* Output levels based on maximum output pressure reduction via instrumentation-based gas regulator.

## Applications

- Pure Hydrogen Source For:
  - Portable Gas Chromatography Systems
  - Fuel Cell (Uninterruptible Power Supply, Cell Phone, Notebook, Cars, Toys ...)
  - Other Precision Testing Instruments

#HB-SG02-0050-Q, H-Bank 50 Liter Hydrogen Storage System
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<b>\$1,250.00</b>
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