

# Introduction of compact hydrogen refuelling equipment

**BHR-ST-350**



All-in-one  
System

Compact

Automatic  
operation &  
Remote control

Equipped with  
the highest  
level of safety  
specifications

# Model : BHR-ST-350

## Product appearance

- Size : 168cm(W) x 195cm(H) x 80cm(D)
- Monitor : 13inch Dual multi-touch monitor
- Material : SUS302, SCP
- Thickness : 6T(Explosion-proof zone)  
1.5T(General zone)
- Post processing : Powder painting
- Weight : under 500kg

## Safety Specifications

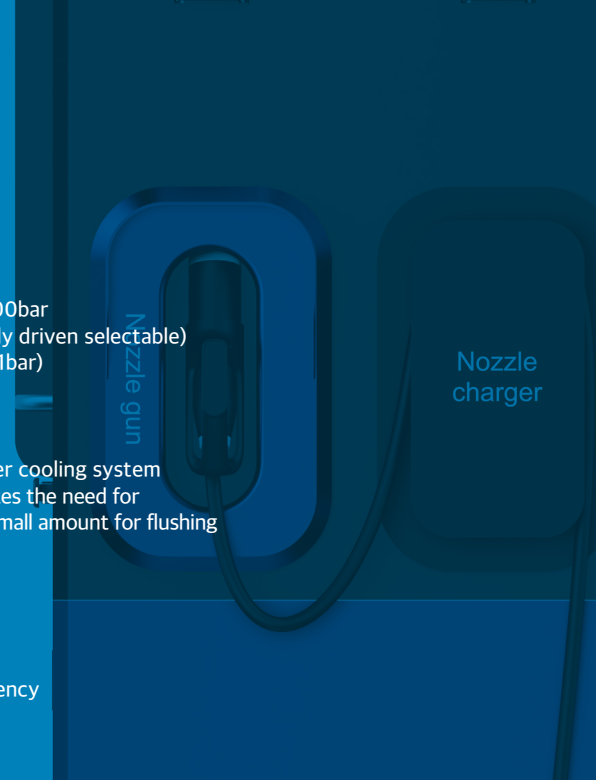
- Sensor : PSV, TPRD, Displacement  
Detection, Gas & Fire Detection,  
Pressure, Temperature
- Explosion-proof Certification :  
KOSHA KCs, IECEx certification, etc. (scheduled)

## Function

- Hydrogen Charging Pressure : 0bar ~ 400bar
- Charging Method : Air Driven (electrically driven selectable)
- Supply Gas : AIR (Over 5bar), N<sub>2</sub> (under 1bar)
- Charging Speed : Over 50Nlpm
- Power Consumption : Under 2kWh
- Power : 110VAC or 220VAC
- Cooling system : Double-tube type water cooling system
- Etc. : Electrically driven selection eliminates the need for nitrogen supply. Nitrogen needs a small amount for flushing

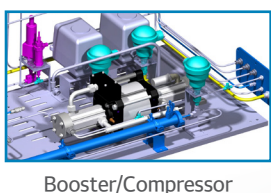
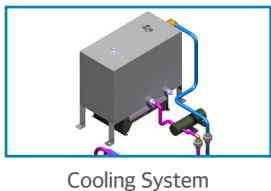
## Interface

- Apply touch-monitoring UI
- Provides remote monitoring and emergency control PC version software.



## Description

- Internal Cooling system is applied to charge even in high temperature external environments
- Controller, compressor, cooler and dispenser(charging part) are all-in-one for easy maintenance and easy installation
- Easy and intuitive UI application allows general users without hydraulic and pneumatic knowledge to use



[Hydrogen refuelling Equipment]

# Technical Specification

## Structure

- Controller, compressor, cooler, dispenser, etc. are all-in-one systems.
- Specially designed for loading on trucks and vehicle trailers.
- It can be installed and used not only as a mobile but also as an on-site fixation wherever it is indoors & outdoors.

## Function

- Compact size and lightweight for manual and automatic operation. (default automatic)
- It can be used in environments with high external temperatures and increases safety when charging by applying the internal cooling system.
- It is equipped with a dedicated SW with the optimal algorithm for charging TYPE3 and TYPE4 hydrogen containers, and fully automatic charging operation is possible through various sensor information.

## Safety

- BOP and control algorithms considering the characteristics of hydrogen containers (TYPE3, TYPE4) for mobility have been applied.
- Various sensors have been applied to predict and measure various situations such as pressure rise due to temperature rise, explosion, fire, etc., and prevent accidents when charging. We have secured stability by lowering the possibility of accidents.
- IEC and KOSHA Explosion-proof standards were applied to each area of hydrogen charging equipment to separate zones, and appropriate Explosion-proof grades and certified products were applied to each zone.



Pressure Explosion-proof structure has been applied (always maintained at least 50pa) to prevent gas from inflowing into the control box even if hydrogen gas leaks.

When charging hydrogen, it detects and controls changes in volume and temperature of containers in real time using infrared laser.

The high-pressure part is applied with a steel plate greater than 6mm to protect the user in the event of an accident.

# APPLICATION

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It is used as a charging device for various hydrogen applications that use hydrogen fuel cells.



HYDROGEN FUEL CELL BOAT



HYDROGEN FUEL CELL AIRCRAFT



HYDROGEN FUEL CELL BIKE



HYDROGEN FUEL CELL MOTORCYCLE



HYDROGEN FUEL CELL TRACTOR



HYDROGEN FUEL CELL FORKLIFT

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