

COMPACT HYDROGEN PRESSURE REDUCING STATION WITH SAFETY SHUT OFF SERIES H100 & H200



INTRODUCTION

Series H100 & H200 are compact hydrogen pressure regulation station ideally designed for cylinder cascade / trolley or cylinder unloading. This standardized station is cost effective solution for applications where hydrogen gas at constant controlled pressure is desired for Hydrogenation process in the industries such as pharmaceutical, chemical, edible oil, aromatics, etc..

High accuracy in control of final outlet pressure supplied to process is guaranteed with two stage pressure reduction, despite varying inlet pressure as cylinder get emptied from full pressure of 200 Bar down to almost pressure required at outlet. The high pressure side components of the station are designed for operating pressure of 210 Bar (3000 Psi)

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FEATURES

•**Operating Safety** : Being a high pressure station two level safeties are incorporated at first stage regulator viz;

a) Safety shut off - In case of over pressure at first stage pressure regulating valve outlet, safety shut off valve, cuts gas supply.

b) Full capacity safety relief valve to safeguard the further equipments in case of malfunction of the regulator.

•**Full Utilization of Cylinders / Trolley** : Due to very low pressure drop technology adopted in design, hydrogen in gas is fully utilized. Thus system pays back by ensuring fast and maximum possible emptying of hydrogen cylinders, reducing batch time and reducing number of cylinders change over as compared to other means of hydrogen unloading.

•**Less Flange Joints**: Having a single flange joint at high pressure section, all other joints are welded construction thus eliminating the leakage possibilities.

•**Twin Stream Redundancy**: Where application is critical and redundancy is required, 2 units can be installed side by side, one working and other stand-by with fabricated common outlet end.

•**Compact Design**: The construction of station is compact having easy accessibility to all the components for operation and maintenance.

•**Easy Maintenance** : Need not to remove any component from the line for maintenance, making maintenance of all the components easy.

SPECIFICATIONS

Technical Specifications	H100 Series	H200 Series
Design Standard	ASME B31.3	ASME B31.3
Design Pressure Rating	ANSI B16.5 Class 1500# (inlet) x 300# or 150# (outlet screwed)	ANSI B16.5 Class 1500# (inlet) x 300# or 150# (outlet screwed)
Maximum Temperature	65°C	65°C
Line Size	15 NB	25 NB
Maximum Inlet Pressure	210 Bar	210 Bar
Outlet Pressure	1 to 22 Bar	1 to 22 Bar
Flow Capacity	30 Nm ³ / Hr Max. (for higher capacity please consult with Nirmal Team)	800 Nm ³ / Hr Max. (for higher capacity please consult with Nirmal Team)
Material of Construction	SS304 Valve Body, SS316 Internals, Tubing & Fitting : SS304 & SS316	SS304 Valve Body, SS316 Internals, Piping & Fitting : SS304 & SS316