

CNG



## HYPERCOMP CNG COMPRESSOR (3W815)



- ◆ Dedicated natural gas compressor design
- ◆ W-Type arrangement utilizing gas load balancing
- ◆ Efficient even in high ambient temperatures
- ◆ Low vibration, requiring no specific foundations
- ◆ Longer service intervals due to reduced wear
- ◆ Low energy consumption due to high inertia
- ◆ Simple site installation
- ◆ Minimum space requirement



**HYPERCOMP**  
*High Pressure Compressors*  
Islamabad, Pakistan

[www.hypercomp.com.pk](http://www.hypercomp.com.pk)

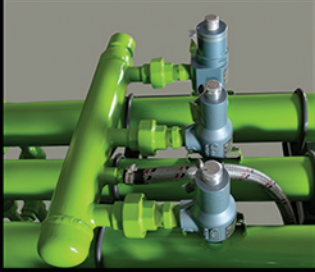
## Core Features



Pulsation dampners at each stage for extended valve life and condensate collection.



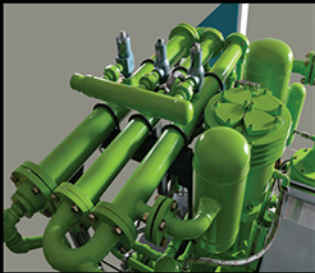
Built-in suction filter housing.



High quality, high flow relief valves for sure safety.



Very low vibration due to dynamically balanced rotating parts.



Specifically designed heat exchangers for high ambient conditions.



Depressurizing condensate (Blowdown) drain valves at each stage to make restart easy.



"Point to point" lubrication to significantly reduce wear on valves & rings while minimizing oil losses in the gas stream.



Full flow filtered pressurized lubrication.



Carbon Filled Teflon rings for low friction and long life for cylinder liners.



High quality valves from world's renowned manufacturers.



World's proven "Wika" contact gauges for safe operations.



Star Delta Electric Control Panel with following option:

1. Relay based.
2. Mirco processor based.
3. PLC based.

## Standards & Approvals:

### 1. Overall Design:

- a) American Petroleum Institute standard (API) 618
- b) Pakistan CNG Rules 1992

### 2. Heat Exchanger's Design:

TEMA Class R, ASME Section VIII Div. I

### 3. Welding & Fabrication of Heat Exchangers, Piping and Pressure Vessels:

ASME Section VIII, IX and B31.3

Hypercomp runs a fully enclosed test facility by simulating CNG station's conditions. Every compressor sold is fully performance and safety function tested on natural gas with Independent International 3rd party certification.

## Technical Specifications

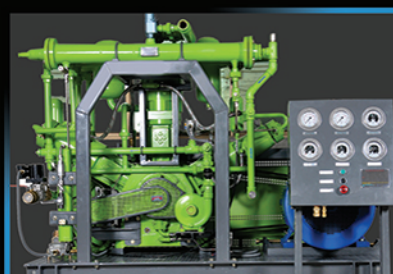
Compressor configuration	W- 60°
No. of cylinders	03 No.
No. of stages	03 No.
Compressor design	Single throw, cross head design, atmospheric crankcase, water cooled
Gas inlet pressure range	From 08-500 Psig
Gas discharge pressure	3625 Psig
Gas discharge capacity	225-700 m <sup>3</sup> /hr ± 5% (at 30°C)
Compressor speed	795-900 RPM
Piston stroke	127 mm
Mean piston speed	3.36 m/s @ 795 RPM 3.81 m/s @ 900 RPM
Cylinder cooling	Water
Inter stage gas cooling	Water
Cooling system	Cooling tower (70RT min.) Closed circuit optional
Electric motor size	55-75KW
Oil capacity (Crankcase)	13 Liters
Oil capacity (Lubricator)	1.5 Liters
Ambient temperature	Up to 50°C

## Dimensions

Overall dimensions(LXWXH)	2135 X 1190 X 1730 (mm)
Weight (without motor)	Approx. 1750Kg
Overall weight	Approx.2400Kg

## Imported Parts Being Used

1	Bearings (Main, Big & Small End)	USA
2	Piston Pins	USA
3	Piston Rods, Rod Seals	USA
4	Compression & Rider Rings	USA
5	Compressor Valves 1st Stage	Hoerbiger, USA
6	Pressure Safety Valves	Mercer, USA
7	Explosion Proof Blow down Solenoid Valve	Burkert, France
8	Explosion Proof Pressure & Temperature Switch Gauges	Wika, Germany
9	Explosion Proof Electric Motor	Jiamusi, China
10	Explosion Proof Terminal Box	Feel, UK
11	Explosion Proof Inlet Solenoid Valve	ASCO, USA
12	Explosion Proof Water Flow Switch	Taiwan
13	Explosion Proof Electrical Cable Glands	Peppers, UK
14	Forced Feed Lubricator	Lincoln Industrial, USA
15	High Pressure NRV's	Parker, UK
16	Low Pressure Ball Valves & NRV's	Kitz, Japan
17	Oil Filter at Suction	Parker, UK
18	Final Filter at Discharge	Parker, UK
19	Gas Suction Filter	Donaldson, USA
20	Anti static Oil and Heat Resistant V-Belts	Gates, USA



## Materials Used

Crankcase	Gray Cast Iron BS Grade 260	Cast
Crankshaft	SG Iron BS 700/3	Cast
Connecting Rods	SG Iron BS 700/3	Cast
Piston Pins	AISI-8620	Forged
Cross Head Pistons & Cylinders	Gray Cast Iron BS Grade 260	Cast
Compression Cylinder 1st Stage	Gray Cast Iron BS Grade 260	Cast
Compression Cylinders 2nd & 3rd Stage	AISI-1045	Forged
Cylinder Liners	Gray Cast Iron BS Grade 260	Cast
Cylinder Head 1st Stage	Gray Cast Iron BS Grade 260	Cast
Cylinder Heads 2nd & 3rd Stage	AISI-1045	Forged
Compression Piston 1st Stage	Aluminum-8620	Extruded Bar
Compression Piston 2nd Stage	Aluminum-7075	Extruded Bar
Compression Piston 3rd Stage	AISI-4140	Bar Stock
Piston Rods	AISI-4140	Bar Stock
Valve Seats & Guards	Carbon Steel	Plate
Valve Plates	Stainless Steel AISI-304	Plate
Valve Springs	Stainless Steel AISI-304	Plate
Packing Cases	AISI-1045	Forged
Piston Rings, Rider Rings, Rod Seals	PTFE, PEEK	Bar Stock
Shell for Heat Exchangers	ASTM 106, Grade: B	Extruded Bar
Tubes & Tube Sheets for Heat Exchangers	AISI-304L	Extruded Bar

Hypercomp reserves the right to change any specification, parts material or origin at any time without prior information

At Hypercomp, a highly motivated team of qualified engineers and workers are courageously plunged in to the field of manufacturing of high pressure Air & Gas compressors in Pakistan for the first time.

For the last 20 years, our team has been involved with the compression technology. This long association and dedication provide us the opportunity to deeply study various designs, technology and the materials used in the manufacturing of the most successful and durable compressors of the world.

The journey started from the manufacturing of the key parts for the most popular makes of the compressor world. The proven quality of our parts and the response from the customers were highly encouraging.

In 2004, the company became confident enough to design and manufacture high pressure Natural Gas Compressor of 250 bars for CNG industry indigenously. Our firm commitment and continuous endeavor to bring home high pressure gas compression technology has been successful and after years of diligent work, Hypercomp produced Pakistan's first Natural Gas Compressor in 2008.



## Accreditations

### OGRA's Approval Letter



### ISO 9001:2008 Certificate





Roshnee CNG Station, Sadohki (Gujranwala)



Hybrid Fuel CNG Station, Jhelum



Mario CNG Station, Sara-e-Alamgir



Al-Riaz International CNG Station, Rawat (Islamabad)



Save CNG Station, Gujjar Khan

- ❖ 100% parts availability round the clock
- ❖ Minimum maintenance cost due to 3 stages
- ❖ Longer parts life due to low RPM and mean piston speed
- ❖ Accessible for easy and quick maintenance
- ❖ No special tooling required for any maintenance operation
- ❖ Fully equipped mobile workshop
- ❖ Experienced technical staff
- ❖ On site & in house training for operators



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