

Nitrogen Compressor Package - Model HS-55G-OL



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認定 熱交換器、往復動式圧縮機、管類、弁類
機器 その他の附属機器類、複合機器

1. Product Overview

The Model HS-55G-OL is a horizontal balance-opposed reciprocating compressor unit with an oil-free design specifically engineered for nitrogen gas service.

Unlike Y-type configurations, this horizontal setup provides high stability for medium-pressure requirements with significantly easier maintenance. This unit is ideal for chemical industries, food processing, and nitrogen blanketing systems.

2. Technical Specifications

2.1 A. Operational Conditions

Parameter	Value	Unit
Handled Gas	Nitrogen (N ₂)	-
Molar Weight	28.01	g/mol
Capacity (Flow Rate)	250	Nm ³ /h
Suction Pressure	80	kPaA
Discharge Pressure	420	kPaG
Compression Ratio	Approx. 5.25	Total

2.1 B. Mechanical Data

Parameter	Value	Unit
Compressor Type	Reciprocating	-
Cylinder Configuration	Horizontal Balance- Opposed	-
Number of Stages	1	Stages
Lubrication Type	Oil-Free	Cylinder
Cooling Method	Water-Cooled	-
Motor Output	55	kW
Transmission System	V-Belt / Direct Drive	-

3. Key Design Features & Advantages

- **100% Oil-Free Gas Path:** Guarantees nitrogen gas purity without oil contamination.
- **Balance-Opposed Design:** Minimizes vibrations and reduces foundation load.
- **High Thermal Efficiency:** Optimized water-cooling for long valve life.
- **Ease of Maintenance:** Horizontal configuration allows easy access to internal components.

6. Project Reference

Asahi KASEI Chemicals Corp. (Singapore). Nitrogen Gas Compression for Chemical Synthesis. Proven reliable in continuous 24/7 operations.



Figure 1: HS-55G-OL

4. Applications

- **Petrochemical:** Pipeline purging and reactor systems.
- **Food & Beverage:** Oxygen removal for product freshness.
- **Polymer:** Inert gas for polymerization.
- **Tank Blanketing:** Oxidation prevention.

5. Scope of Supply

The standard package typically includes:

- HS Compressor Bare Block.
- 55 kW Main Driving Motor.
- Common Baseplate.
- Cooling system (Aftercooler).
- Local instrument panel.