

Off-Gas Compressor Package - Model YD2-140GH-OL

QUALITY
MANAGEMENT SYSTEM
ISO 9001ENVIRONMENTAL
MANAGEMENT SYSTEM
ISO 14001KHK
CERTIFIED

高圧ガス設備
試験・製造認定事業所
経済産業大臣認定番号
MAB 133

認定 蒸気発生器・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 YD2-140GH-OL is a Y-type, multi-stage reciprocating compressor specifically designed for mixed "Off-Gas" recovery (CO_2 , H_2 , N_2 mixture).

The Y-type configuration offers excellent mechanical balance and reduced vibration, making it highly suitable for medium-to-large capacity applications where stability is paramount. Its oil-free design ensures that the recovered gas remains free from lubricant contamination, which is critical for downstream fertilizer or chemical processes.



Figure 1: YD2-140GH-OL

2. Technical Specifications

2.1 A. Operational Conditions

Parameter	Value	Unit
Handled Gas	Off Gas (CO_2 :59%, H_2 :31%)	-
Capacity (Mass Flow)	1,250	kg/h
Suction Pressure	6	kg/cm ² A
Discharge Pressure	15.03	kg/cm ² A

2.1 B. Mechanical Data

Parameter	Value	Unit
Compressor Type	Y-Type Reciprocating	-
Cylinder Configuration	Y-Shape / V-Shape	-
Number of Stages	3	Stages
Lubrication Type	Oil-Free	Cylinder
Cooling Method	Water-Cooled	-
Motor Output	110	kW

3. Key Design Features & Advantages

- Y-Type Configuration:** Provides superior dynamic balance compared to standard vertical types, reducing foundation load and vibration.
- 3-Stage Compression:** Optimized for efficiency in elevating pressure from medium to high levels while managing temperature rise.
- Oil-Free Gas Path:** Ensures high purity of the mixed gas, essential for fertilizer production processes.
- Robust Water Cooling:** Designed to effectively handle the heat of compression generated by mixed gases.

6. Project Reference

Karnaphuli Fertilizer Company Limited (KAFCO). Off Gas Compressor (CO_2 , H_2 , N_2 Mix). Successfully commissioned and operating.