

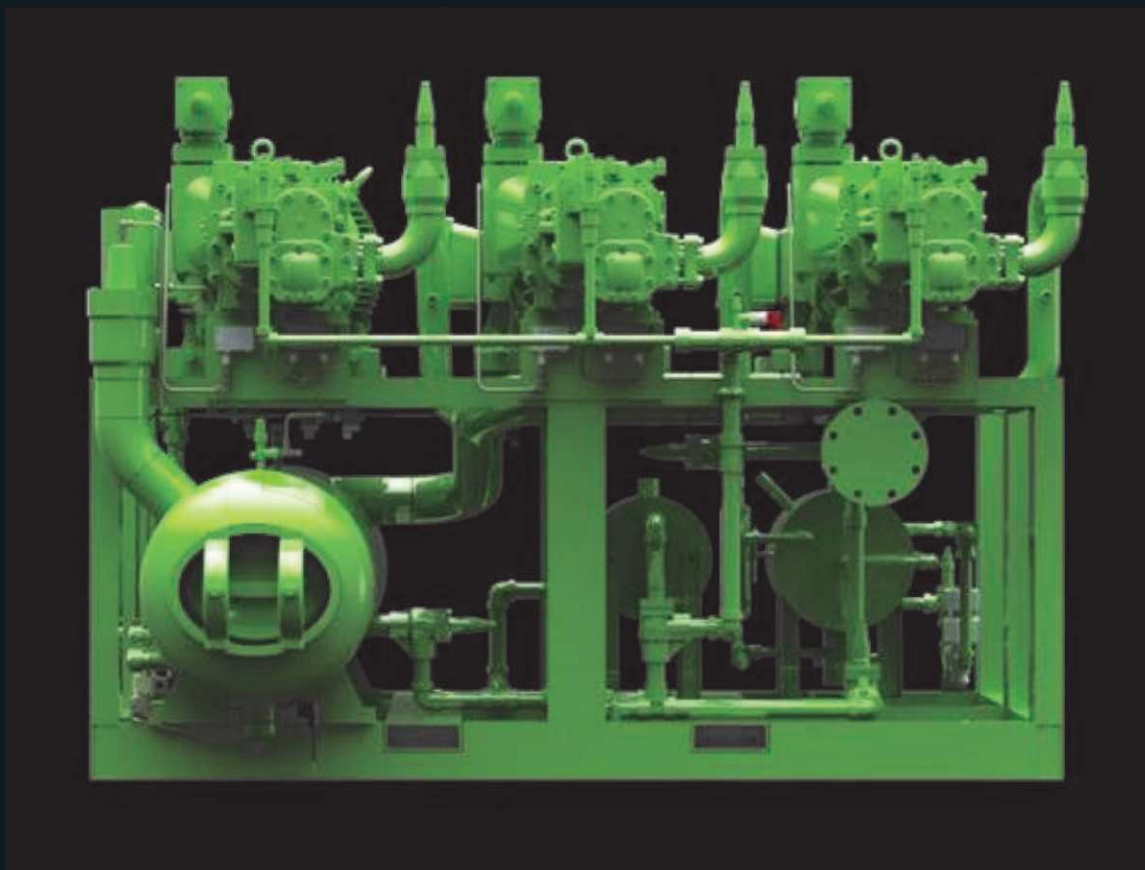
AMMONIA COMPRESSOR PACKS



ORIGINAL
MANUFACTURED EQUIPMENT

ACP

For Industrial
Applications



VP-200-1

TECHNICAL FEATURES (SCP)

Standard items

Compressors

- 2 or 3 high-efficiency profile twin rotor screws
- Speed range: 1450 RPM - 4000 RPM
- Max. pressure (LP/HP): 275 / 400 psi
- Slide valve capacity control (25-100%)
- Economizer port integrated into slide valve
- Integrated oil management system
- Automatic unloaded starts
- Tandem axial bearings: long life due to patented sealed bearing chamber and counter bearings
- Internal pressure relief valve

Motors

- NEMA premium efficiency C-face motors
- (1) TEFC/IP55 motor (Inverter rated for 20:1 constant torque) for "V" models only
- (1) or (2) or ODP/IP23 motors; (3) for "C" models
- Robust direct drive couplings and coupling housings

Variable Frequency Drive / Capacity control

- VFD on (1) compressor (CFW 11)
- Modulation from: 100% to 6%
- 1 or 2 compressors can be shut off
- Maximum efficiency at 33% and 66% compared to ANY equivalent unloading (50% for 2 compressor package)

Sensors/Switches

- Redundant pressure and temperature sensors on suction, discharge, liquid, and oil lines
- Mechanical discharge pressure cutout switches standard

Oil Separator

- BITZER 24" ASME horizontal separator
- Pressure rating: 300psi - higher ratings available
- 4 stages of separation
- 99.9% Efficient

Oil Cooling

- Compact Plate-in-Shell heat exchanger
- Fluid: NH3 (thermosyphon), water, glycol, propylene

Oil Management

- KDC valve included on separator to maintain differential pressure without need for oil pump (e.g. low ambient)
- All oil flows through 5 micron redundant system filter
- Filter can be replaced without downtime (bypass)
- Each compressor is equipped with a robust internal 25 micron filter (acts as secondary)
- Each compressor is equipped with internal stop valve, flow switch, and filter switch

Controller

- Modular setup - can control up to 3 packages (9 compressors)
- Redundant CPUs (automatic switchover in case of failure)
- Replicate display w/any web browser or direct to PC
- Open communication protocols for system integration
- Quick disconnect robust industrial cable harnesses
- Communicates with VFD via Modbus
- Programmable Logic: Compressor and VFD capacity control, dual target set points based on pressure or process temperature, data logging, pre-alarms warning of operation out of application limits, alarm, motor thermistor monitoring, motor current control, power monitoring, economizing control

Optional items

Variable frequency drive (VFD) ["V"]

- Choice of:
 - WEG CFW11: Nema 1/IP20 for 2-600HP
 - WEG EDP11 enclosed drive panel*: CFW11, circuit breaker with through door handle, fused 480V/120V CPT, internal fan, heat sink, run/fault lights, start/stop push buttons, Nema 12.

Soft starter ["S"]

- Choice of:
 - WEG SSW07: IP20 for 17-85A, IP00 for 130-200A
 - WEG GPH2 combination soft starter*: SSW07, circuit breaker with through door disconnect, control power transformer, run/fault lights, start/stop push buttons, Nema 4/12.

Starter panel ["P"]

- NEMA 3R rated panel
- Variable frequency drive (CFW11) mounted**
- 1, 2 or 3 softstarters (SSW07) mounted**
- Main circuit breaker
- Power distribution block
- Individual circuit breakers
- Safety stop circuit
- Dual fan exhaust / cooling

Economiser

- Compact Plate-in-shell heat exchanger
- Fully integrated pulsing valve and liquid level controls
- Easy access connections

* cannot be selected with starter panel option ["P"]

** based on option selected

["X"] indicates model number designation

MODEL NUMBER DESIGNATION

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
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Model designation

ACP = Ammonia Compressor Pack

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Compressor model

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Application range

N = low temperature application

K = medium/high temperature application

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Number of compressors

2 = 2 compressor pack

3 = 3 compressor pack

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Capacity control method

V = VFD applied to lead compressor¹

C = standard capacity control compressor²

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Soft starter

S = soft starter³

Blank = no soft starter

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Economized operation

E = economizer installed

Blank = no economizer

A	C	P	-	8	5	6	1	K	-	3	V	S	E	P
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Starter panel

P = starter panel⁴

Blank = no starter panel

¹V - Package will come with a VFD shipped loose. VFD is parameterized and sized for the compressor #1 which can run up to 70Hz. Several VFD options are available. See "Optional Items" section on page 1.

²C - Standard capacity control. Up to three packages can be utilized in parallel with one master controller. In this scenario, only 1 VFD is required for one of the packages. The remaining package(s) will not include a VFD or main controller and the compressor/motor 1 will run only at 60Hz.

³S - Package will come with soft starters for all compressors (unless driven by a VFD). The soft starter will ship loose with the unit. Several soft starter options are available. See "Optional Items" section on page 1.

⁴P - Package will come with VFD (if "V" selected) and soft starter(s) installed and wired in a panel. The starter panel will ship loose with the unit. See "Optional Items" section on page 1 for description.

GENERAL COMPRESSOR/MOTOR COMBINATIONS

ACP Model	Motor 1 HP	Motor 2 HP	Motor 3 HP
ACP-8551K-3V	150	125	125
ACP-8561K-3V	150	125	125
ACP-8571K-3V	200	150	150
ACP-8581K-3V	200	150	150
ACP-8591K-3V	250	200	200
ACP-8551K-2V	150	125	
ACP-8561K-2V	150	125	
ACP-8571K-2V	200	150	
ACP-8581K-2V	200	150	
ACP-8591K-2V	250	200	
ACP-8571N-3V	150	125	125
ACP-8591N-3V	200	150	150
ACP-8571N-2V	150	125	
ACP-8591N-2V	200	150	
ACP-8551K-3C	125	125	125
ACP-8561K-3C	125	125	125
ACP-8571K-3C	150	150	150
ACP-8581K-3C	150	150	150
ACP-8591K-3C	200	200	200
ACP-8551K-2C	125	125	
ACP-8561K-2C	125	125	
ACP-8571K-2C	150	150	
ACP-8581K-2C	150	150	
ACP-8591K-2C	200	200	
ACP-8571N-3C	125	125	125
ACP-8591N-3C	150	150	150
ACP-8571N-2C	125	125	
ACP-8591N-2C	150	150	

ACP Model	Motor 1 HP	Motor 2 HP	Motor 3 HP
ACP-8551K-3VE	150	125	125
ACP-8561K-3VE	150	150	150
ACP-8571K-3VE	200	150	150
ACP-8581K-3VE	200	200	200
ACP-8591K-3VE	250	200	200
ACP-8551K-2VE	150	125	
ACP-8561K-2VE	150	150	
ACP-8571K-2VE	200	150	
ACP-8581K-2VE	200	200	
ACP-8591K-2VE	250	200	
ACP-8571N-3VE	150	125	125
ACP-8591N-3VE	200	150	150
ACP-8571N-2VE	150	125	
ACP-8591N-2VE	200	150	
ACP-8551K-3CE	125	125	125
ACP-8561K-3CE	150	150	150
ACP-8571K-3CE	150	150	150
ACP-8581K-3CE	200	200	200
ACP-8591K-3CE	200	200	200
ACP-8551K-2CE	125	125	
ACP-8561K-2CE	150	150	
ACP-8571K-2CE	150	150	
ACP-8581K-2CE	200	200	
ACP-8591K-2CE	200	200	
ACP-8571N-3CE	125	125	125
ACP-8591N-3CE	150	150	150
ACP-8571N-2CE	125	125	
ACP-8591N-2CE	150	150	

SCP PACKAGE DIMENSIONS

3 Compressor Pack

