



J-W Power Company
EGDS-250 & EA-100-3

EGDS-250

WEG Electric Motor or equal
Gardner-Denver SSQ

Package Application

The compressor package is designed for optimum performance at the following operating conditions:

Case	Suction Pressure (psig)	Discharge Pressure (psig)	Suction Temperature (°F)	%Turn Valve	Capacity (MMSCFD)	Required Horsepower
1	2	235	80	100%	0.763	230.9

*Specific Gravity = 0.61; Elevation = 5,500'; Ambient Air = 105°F

Package operating conditions are *not* limited to the condition described above. Variations in package flow capacity due to site conditions, including specific gravity, elevation, gas temperatures, etc., should be expected, consult the J-W Power Company Applications Department with actual conditions for site ratings. J-W Power Company guarantees RotoSize Version 4.40 performance runs up to 85% on flow. Performance runs are calculated with 2 psi drop from package flange to compressor frame suction flange and 5 psi drop from compressor frame discharge flange to reciprocating compressor inlet flange.

Motor

Manufacturer	WEG (or equal)
Rating	200 HP @ 1,800 RPM
Poles	4
Voltage	460 VAC 3 PH 60 HZ
Insulation	F
Service Factor	1.15

Compressor

Manufacturer / Model	Gardner-Denver SSQG99C
Type	Oil flooded rotary screw
Maximum HP	240 HP
Maximum/Minimum RPM	2,695 / 616
VI	4.61
Maximum Suction	50 psig
Maximum Discharge	250 psig
Turn Valve Capacity Control	Included, manual control
Oil Pump	Included

Coupling¹

Model

Ringfeder

Covered by carbon steel safety guard

EA-100-3

WEG 405T Frame or equal

Ariel JGP-2 3-5/8" & 3" & 1-1/4" x 3.0" Stroke

Package Application

The compressor package is designed for optimum performance at the following operating conditions:

Case	Suction Pressure (psig)	Discharge Pressure (psig)	Suction Temperature (°F)	Capacity (scfm)	Required Horsepower
1	75	4,500	80	178	67
2	100	4,500	80	240	83
3	125	4,500	80	303	97
4	150	4,500	80	333	100
5	175	4,500	80	349	100
6	200	4,500	80	365	100
7	225	4,500	80	380	100
8	250 *	4,500	80	341	88
9	275 *	4,500	80	378	94
10	300 *	4,500	80	417	99

Specific Gravity = 0.61; Elevation = 2,000'; Ambient Air = 100°F

Package operating conditions are *not* limited to those described above. Variations in package flow capacity due to site conditions, including elevation, gas temperatures, gas composition, etc., should be expected, consult the J-W Power Company Applications Department with actual conditions for site ratings.

*1st stage cylinder single acted crank-ended

J-W Power Company guarantees Ariel 7.6.0.1 performance runs predicted flow at 90%.

Motor

Manufacturer

WEG (or equal)

Frame

405T

Rating

100 HP @ 1,800 RPM

Poles

4

Voltage

460 VAC 3 PH 60 HZ

Insulation

F

Service Factor

1.15

Compressor

Manufacturer / Model

Ariel/JGP-2

Type

Reciprocating

Maximum HP

170

Maximum/Minimum RPM

1,800 / 900

Maximum Rod Load Tension

6,000 lbs

Maximum Rod Load Compression

7,000 lbs

Maximum Total Rod Load

12,000 lbs

Number of Throws

2

Stroke

3"

Rod	1-1/8"		
<i>Cylinders</i>			
Stage	1	2	3
Number of Cylinders	1	1	1
Bore & Class	3.625" / 3-5/8" JG	3.00" / 3 SG-CE	1.25" / 1-3/4 SG-FS-HE
Action	CE	CE	HE
MAWP	1,270 psi	3,000 psi	6,100 psi
VVCP	Yes	No	No
Spacers	4	0	0

Coupling¹

Model	AMR-250
Coupling Guard	Aluminum

Cooler¹

Manufacturer / Model	Air-X-Hemphill / 72VVI or equal
Mounting	On Skid
Drive	7.5 HP TEFC electric motor
ASME Code Stamp	All process gas sections
National Board Registered	All process gas sections
Header Material	SA516-70N
Tube Material	SA214/SA179
Louvers	No
Ambient Air Design	105 °F
Elevation Design	5,500'
Gas Fouling Factor	0.002

Gas Section Design

Section	Screw AC	IC-1	IC-2	AC
Temperature Out	130°F	130°F	130°F	130°F
MAWP	250 psi	1,270 psi	3,000 psi	5,000 psi

**Based on 0.61 Specific Gravity Gas*

Auxiliary Section Design

Section	Screw CLO	Recip. CLO
Temperature Out (°F)	180	180
MAWP	215	150

Controls

Controller Manufacturer
Annunciator

Murphy
2 Allen Bradley Micrologix 1400 or equal / 1 Red Lion 5.7-
inch Color Touchscreen G306A000

Power Source
Mounted

Site Power
On Skid

Panel Inputs

	Action	Instrument Location	Display Location
Emergency Shutdown Loop	S	Panel	Panel
High/Low Suct. Press. (First stage)	A/S	Panel	Panel
High/Low Disch. Press. (each stage)	A/S	Panel	Panel
Low Compressor Oil Pressures	A/S	Local	Panel
High Compressor Oil Temperatures	A/S	Local	Panel
High Disch. Gas Temp. (each cyl.)	A/S/C	Local	Panel
Low Compressor Frame Oil Levels	S	Local	Local/Panel
High Compressor Vibration	S	Local	Local/Panel
Compressor Lubricator No-Flow	A/S	Local	Local/Panel
High Compressor Oil Filter Differential	A/S	Local	Panel
High Coalescing Filter Differential	A/S	Panel	Panel
High Suction Filter Differential	A/S	Panel	Panel
Captive Receiver Pressure	A/S/C	Panel	Panel
Dispenser Handle In Use	C	Remote	Panel
High Captive Receiver Level	S	Local	Panel
Main Motor Running	A/S	MCC	Panel
Cooler Motor Running	A/S	MCC	Panel
Prelube Pump Running	A/S	MCC	Panel
High Cooler Vibration	S	Local	Local/Panel
Soft Start Fault	S	MCC	Panel
Instrument Air Pressure	A/S	Panel	Panel
High/Low Direct Fill Pressure	A/S/C	Storage Skid	Panel
High/Low High Bank Pressure	A/S/C	Storage Skid	Panel
High/Low Medium Bank Pressure	A/S/C	Storage Skid	Panel
High/Low Low Bank Pressure	A/S/C	Storage Skid	Panel
Ambient Temperature	C	Local	Panel
Final Discharge Temperature	A/S/C	Local	Panel

A = Alarm / S = Shutdown / C = Control Point

Panel Outputs

	Device Location
Main Motor Run	MCC
Main Motor Starter Rest	MCC
Cooler Motor Run	MCC
Prelube Pump Run	MCC
Suction Valve	Compressor Skid
Filter Drain Valve	Compressor Skid
High Bank Valve	Storage Skid

Medium Bank Valve	Storage Skid
Low Bank Valve	Storage Skid
Unit Fault	MCC

Motor Starters¹

Drive Motor Starters	250 HP & 100 HP Softstarters
Prelube Motor Starter	1 HP across the line
Cooler Motor Starter	3 HP across the line

All starters and electrical panels located in non-hazardous area of skid

Process Piping¹

Process piping adheres to ASME B31.3 Random Normal Fluid Service X-Ray Requirements and piping is hydrostatically tested 1.5 times MAWP.
Piping will be A106-B Carbon Steel pipe and/or 316 seamless tubing.

Process Relief Valves¹

Location	Screw Disch.	Screw AC Inlet	Recip. Suction	Recip. IC-1 Inlet	Recip. IC-2 Inlet	Recip. AC Inlet
Type	Mercer	Mercer	Mercer	Mercer	Mercer	Mercer
Set Press. (psig)	250 psi	250 psi	1,270 psi	1,270 psi	3,000	5,000 psi

Vessels¹

Pressure vessels are ASME Section VIII coded and National Board Registered, and are hydrostatically tested 1.3 times MAWP

Stage	Screw Suction	Screw Oil/Gas	Recip. Bldn Tank	Recip. 2 nd Suction	Recip. 3 rd Suction	Recip. Final
MAWP	250	250	1,270 psi	5,000 psi	5000 psi	5000 psi
Type	Scrubber	Separator	Vertical Tank	Parker J4 or equal	Parker J4 or equal	Parker J4 or equal
Qty	1	1	1	1	1	2

Skid¹

Number of Main Runners	2
Compressor skid	Structural steel skid with drip rail and skid drain
Concrete	Throughout skid
Lifting Lug	Each Corner
Shipping Dimensions:	
Length	Main Unit 30'
Width	8'"
Height	8'
Weight	55,000 lb

Schedule of Openings¹

Process Gas Suction	6" 300# Flange
Process Gas Discharge	½" TBG (4 connection for priority filling)

Paint & Storage

Waterborne navy gray paint with a minimum thickness of 3 mils
Compressor Preserved with Nox-Rust to preserve for up to a one-year period

Testing

No-load run test
Panel function test with J-W Power Company Checklist
Process and utility system leak test

Miscellaneous

1. Electrical disconnects mounted in non-hazardous area
2. 3rd party Torsional Analysis for the screw compressor is not included.
3. 3rd party Torsional Analysis for the reciprocating compressor is included.
4. 3rd party pulsation study to meet API 618 Design Approach II, 4th edition **not** included.
5. No Start-up cost included in the quotation.
6. 5 HP air compressor mounted in non-hazardous area.

Documentation

Electronic CD copy of Unit Manual included, sections include technical data with Product Identification Control sheets, driver, driver accessories, coupling, compressor, cooler with U-1A sheets, pressure vessels with U-1A sheets, control panel, instruments, accessory, reference drawings Plan & Elevation Drawing, Process Flow Drawing, Oil Drawing, Control Panel Drawing included in Unit Manual
Quality Control Shop Traveler available up request