



J-W Power Company
EA-125-4

WEG 444T Frame or equal
Ariel JGP-2 8" & 4-1/8" & 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	20	4,500	80	191	94
2	25	4,500	80	221	104
3	30	4,500	80	252	115
4	35	4,500	80	281	124
5	40	4,500	80	283	122

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.

J-W Power Company guarantees Ariel 7.5.7.0 performance runs predicted flow at 90%.

Motor

Manufacturer	WEG (or equal)
Model	W21
Frame	444T
Rating	125 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	4
Number of Cylinders	1	1	1	1
Bore & Class	8.0" / 8" SP-HE	4.125"/4-3/8 SP-CE	3.00" / 3 SG-CE	1.25" / 1-3/4 SG-FS-HE
Action	HE	CE	CE	HE
MAWP	440 psi	1,265 psi	2,550 psi	6,100 psi
VVCP	Yes	No	No	No
Spacers	0	0	0	0

Coupling

Model	AMR-375
Coupling Guard	Carbon Steel

Cooler¹

Manufacturer / Model	Air-X-Hemphill / 42VVF or equal
Mounting	On Skid
Drive	3 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	100 °F
Elevation Design	2,000'
Gas Fouling Factor	0.002

Gas Section Design

Section	IC-1	IC-2	IC-3	AC
Temperature Out	126°F	120°F	124°F	119°F
MAWP	300 psi	645 psi	2000 psi	5000 psi

**Based on 0.65 Specific Gravity Gas*

Controls

Controller Manufacturer	Allen Bradley
Annunciator	Micrologix 1200 or equal / Panelview 300 micro
Power Source	Site Power
Mounted	On Skid

Pressure & Temperature Gauges

	Shutdown	Indicator	Location
High/Low Suct. Press. (First stage)	X	X	Local
High/Low Disch. Press. (each stage)	X	X	Local

Low Compressor Oil Pressure	X	X	Local
High Compressor Oil Temperature	X	X	Panel
High Disch. Gas Temp. (each cyl.)	X	X	Panel
Low Compressor Frame Oil Level	X	X	Local
High Compressor Vibration	X		Local
Compressor Lubricator No-Flow	X		Local

Motor Starters¹

Drive Motor Starter	125 HP Softstart WEG SSW070171T5SZ or equal
Prelube Motor Starter	2 HP across the line
Cooler Motor Starter	3 HP across the line
All starters shipped loose for customer to mount in non-hazardous area. Interconnect from panel to motor starters and motors in customers scope of supply.	

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

Vessels¹

Stage	Blowdown Tank	2 nd Suct	3 rd Suct	4 th Suct	Final
MAWP	300	500 psi	5000 psi	5000 psi	5000 psi
Type	Vertical Tank	Parker HN8	Parker J4	Parker J4	Parker J4
Qty	1	1	1	1	2

Process Relief Valves¹

Location	Suction	IC-1 Inlet	IC-2 Inlet	IC-3 Inlet	AC Inlet
Type	Mercer	Mercer	Mercer	Mercer	Mercer
Set Pressure (psig)	300 psi	300 psi	645 psi	2000 psi	5000 psi

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:	
	Main Unit
Length	13'
Width	7'-6"
Height	8'
Weight	30,000 lb

Schedule of Openings¹

Process Gas Suction	3" 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

Panel function test with J-W Power Company Checklist
Process and utility system leak test

Miscellaneous

1. 3rd party Torsional Analysis included
2. 3rd party pulsation study to meet API 618 Design Approach II, 4th edition included.
3. Customer responsible to provide clean dry air supply for valve operation.
4. No Start-up cost included in the quotation.
5. Compressor frame will either be new or rebuilt.

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