

Background

High suction pressure compression unit of 5000 PSI, speed of 1000 RPM, 3550 HP, 10 MMSCFD flow rate.

Currently, it's a brand new equipment in its import crates (9 packages) been kept in a warehouse. It arrived in July 2015 for a project, but the project was cancelled. The compressor unit was never used or installed, having undergone a preservation maintenance in 2019.

Motor Caterpillar G3612 LE
Compressor Ariel JGD/6



This picture is for reference purpose, of a similar twin unit that was installed in an Offshore Oil Platform

Unit Identification

Motor

Driver Information

Type: Nat. Gas
 Mfg: Caterpillar
 Model: G3612 LE
 RPM: 1000.0

Compresor

Ariel JGD/6
 Stroke: 5.50 in
 Class: JGD

Frame:

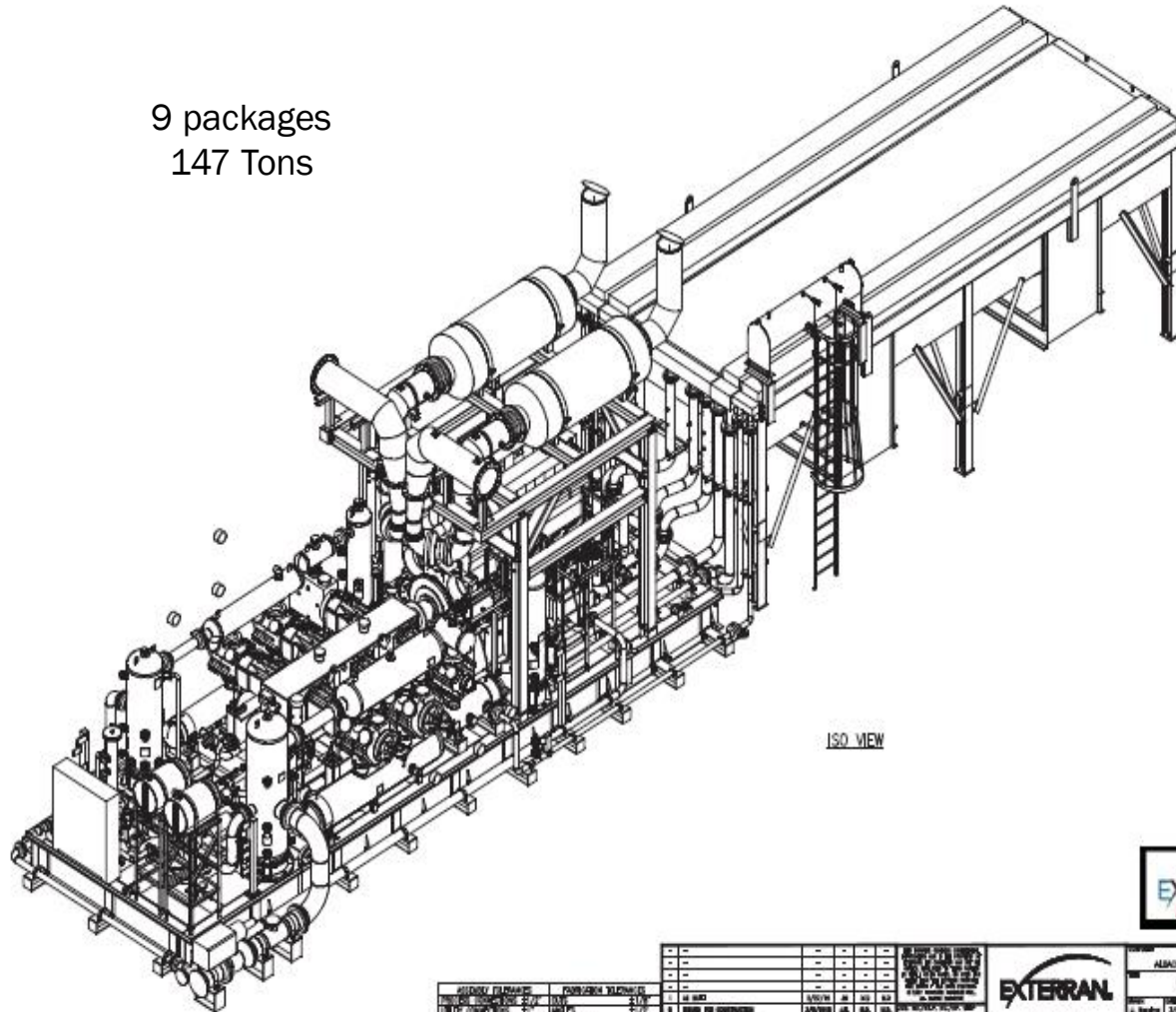
Number of Throws: 6
 Rated Power: 6210.0 BHP
 Frame Friction Power: 57.00 BHP
 Cyl Friction Factor: 0.95
 Guide Type: Separate

Speed Ratings:

Rated Piston Speed @ RPM: 1100.0 FPM
 Maximum Speed: 1200.00 RPM
 Minimum Speed: 600.00 RPM

EQUIPMENT	NAME & MODEL		SERIAL NO.
COMPRESSOR	Ariel JGD/6		F-49355
CYLINDERS	THROW 1	6.750	C-174625
	THROW 2	4.625	C-174626
	THROW 3	17.875	C-174627
	THROW 4	9.625	C-174628
	THROW 5	17.875	C-174629
	THROW 6	9.625	C-174630
MOTOR/ENGINE	Caterpillar 3612		BKE00756
COOLER	AXC 144-2Z		14084201
CONTROL PANEL	Murphy		
FILTER	ProStar		FF-187

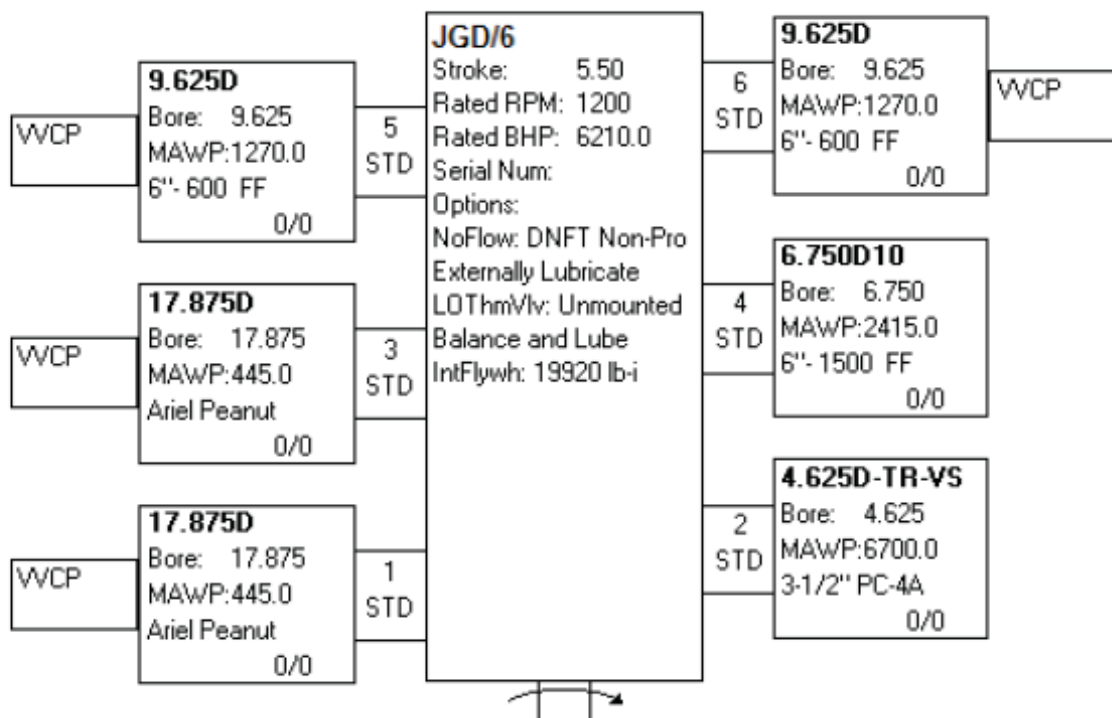
9 packages
 147 Tons



REV	DATE	DESCRIPTION	BY	CHKD	APP'D
1	10/10/18	ISSUED FOR CONSTRUCTION	...	...	...
2	11/14/18	REVISION	...	...	...
3	12/11/18	REVISION	...	...	...
4	01/15/19	REVISION	...	...	...
5	02/12/19	REVISION	...	...	...
6	03/19/19	REVISION	...	...	...
7	04/16/19	REVISION	...	...	...
8	05/13/19	REVISION	...	...	...
9	06/10/19	REVISION	...	...	...
10	07/07/19	REVISION	...	...	...
11	08/04/19	REVISION	...	...	...
12	09/01/19	REVISION	...	...	...
13	09/28/19	REVISION	...	...	...
14	10/25/19	REVISION	...	...	...
15	11/22/19	REVISION	...	...	...
16	12/19/19	REVISION	...	...	...
17	01/16/20	REVISION	...	...	...
18	02/13/20	REVISION	...	...	...
19	03/10/20	REVISION	...	...	...
20	04/07/20	REVISION	...	...	...
21	05/04/20	REVISION	...	...	...
22	06/01/20	REVISION	...	...	...
23	06/28/20	REVISION	...	...	...
24	07/25/20	REVISION	...	...	...
25	08/22/20	REVISION	...	...	...
26	09/19/20	REVISION	...	...	...
27	10/16/20	REVISION	...	...	...
28	11/13/20	REVISION	...	...	...
29	12/10/20	REVISION	...	...	...
30	01/07/21	REVISION	...	...	...
31	02/04/21	REVISION	...	...	...
32	03/03/21	REVISION	...	...	...
33	04/01/21	REVISION	...	...	...
34	04/29/21	REVISION	...	...	...
35	05/27/21	REVISION	...	...	...
36	06/24/21	REVISION	...	...	...
37	07/22/21	REVISION	...	...	...
38	08/19/21	REVISION	...	...	...
39	09/16/21	REVISION	...	...	...
40	10/13/21	REVISION	...	...	...
41	11/10/21	REVISION	...	...	...
42	12/08/21	REVISION	...	...	...
43	01/05/22	REVISION	...	...	...
44	02/02/22	REVISION	...	...	...
45	02/28/22	REVISION	...	...	...
46	03/26/22	REVISION	...	...	...
47	04/23/22	REVISION	...	...	...
48	05/20/22	REVISION	...	...	...
49	06/17/22	REVISION	...	...	...
50	07/14/22	REVISION	...	...	...
51	08/11/22	REVISION	...	...	...
52	09/08/22	REVISION	...	...	...
53	10/06/22	REVISION	...	...	...
54	11/03/22	REVISION	...	...	...
55	12/01/22	REVISION	...	...	...
56	12/29/22	REVISION	...	...	...
57	01/26/23	REVISION	...	...	...
58	02/23/23	REVISION	...	...	...
59	03/20/23	REVISION	...	...	...
60	04/17/23	REVISION	...	...	...
61	05/14/23	REVISION	...	...	...
62	06/11/23	REVISION	...	...	...
63	07/08/23	REVISION	...	...	...
64	08/05/23	REVISION	...	...	...
65	09/02/23	REVISION	...	...	...
66	09/29/23	REVISION	...	...	...
67	10/26/23	REVISION	...	...	...
68	11/23/23	REVISION	...	...	...
69	12/20/23	REVISION	...	...	...
70	12/17/23	REVISION	...	...	...
71	12/14/23	REVISION	...	...	...
72	12/11/23	REVISION	...	...	...
73	12/08/23	REVISION	...	...	...
74	12/05/23	REVISION	...	...	...
75	12/02/23	REVISION	...	...	...
76	11/29/23	REVISION	...	...	...
77	11/26/23	REVISION	...	...	...
78	11/23/23	REVISION	...	...	...
79	11/20/23	REVISION
80	11/17/23	REVISION
81	11/14/23	REVISION
82	11/11/23	REVISION
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84	11/05/23	REVISION
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91	10/14/23	REVISION
92	10/11/23	REVISION
93	10/08/23	REVISION
94	10/05/23	REVISION
95	10/02/23	REVISION	...	...	...
96	09/29/23	REVISION	...	...	...
97	09/26/23	REVISION	...	...	...
98	09/23/23	REVISION	...	...	...
99	09/20/23	REVISION	...	...	...
100	09/17/23	REVISION	...	...	...

- Factory Tests (FAT) and Site Tests (SAT).-
- Drawings
- Documents such as calculation reports, operation curves of the motor compressor, dynamic analysis of the reciprocating compressor installed in a floating unit.
- List of parts.

Technical specifications



Ariel Frame Data Sheet

Model: JGD/6 Stroke: 5.50 in Class: (JGD)

Frame:		Weights:	
Number of Throws:	6	Avg. Weight without Cylinders:	22700.00 lbs
Rated Power:	6210.0 BHP	Maximum Recip:	830.30 lbs
Frame Friction Power:	57.00 BHP	Maximum Imbalance:	2.50 lbs
Cyl Friction Factor:	0.95	Crankshaft:	2650.00 lbs
Guide Type:	Separate	Connecting Rod:	165.50 lbs
		Pin Assembly:	55.70 lbs
		Stub Shaft:	5.30 lbs
Speed Ratings:			
Rated Piston Speed @ RPM:	1100.0 FPM		
Maximum Speed:	1200.00 RPM		
Minimum Speed:	600.00 RPM		
Minimum PRC Speed:	500.00 RPM		
Maximum Non-Lube Speed:	750.00 RPM		
Maximum Process Speed:	750.00 RPM		
Frame Dimensions:		Component Dimensions:	
Center Line Height:	22.00 in	Piston Rod Diameter:	2.500 in
Max. Overall Height:	37.00 in	Connecting Rod Center Distance:	17.000 in
Max. Overall Width with Cylinders:	185.00 in	Crankshaft Pin Diameter:	7.125 in
(Std Guide, widest dbl. Cyl, No HEH devices)		Crankshaft Journal Diameter:	7.125 in
Length:	159.00 in	Main Bearing Width:	4.188 in
Internal Gas Rod Loads:		Lubrication:	
Total:	114000 lbf	Oil Pump Flow Rate:	116.3 GPM
Compression:	60000 lbf	Oil Sump Capacity:	105.0 gal
Tension:	57000 lbf	Oil Heat Rejection:	177000.0 BTU/h
Single Acting Tension:	57000 lbf		
Material Specifications:		Ariel Spec	(Reference)
Crankcase:	Gray Iron	12G	(ASTM A48 Class 30)
Crosshead Guide:	Gray Iron	12G	(ASTM A48 Class 30)
Crankshaft:	Forged Alloy Steel	20N	(ASTM A668 Class M/AISI 4340)
Connecting Rod:	Forged Carbon Steel	18N	(ASTM A521 Class AC or CG/AISI 1045)
Main Bearing:	Tri-metal		(Tri-metal)
Thrust Bearing:	Bronze	11B	(SAE 64)
Connecting Rod Bearing:	Tri-metal		(Tri-metal)
Crosshead:	Ductile Iron	16D	(ASTM A536 Grade 65-45-12)
Crosshead Pin:	Alloy Steel		(AISI 8620)
Crosshead Pin Bushing:	Bronze	10B	(SAE 660)
Stress Bolts, standard:	Grade 8		(Grade 8)



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Thank you!

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