

 <p>شرکت توسعه صنایع لوان Lavan Industry Development Company</p>	<p>LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT</p>						
	<p>Equipment Data Sheet</p>						
<p>Document No. 17735-11A</p>			<p>Page</p>				
<p>Project No.</p> <p>N278</p>	<p>Vendor Doc.</p> <p>VD</p>	<p>P.O. No.</p> <p>6019</p>	<p>Department</p> <p>ME</p>	<p>Document Type</p> <p>DS</p>	<p>Serial No</p> <p>0011</p>	<p>Revision</p> <p>04</p>	<p>Page 1 of 5</p>

**Airpack B.V. - Air Compressor –
Integrated Methanol and Ammonia Plant
17735-COM Equipment Data Sheet (K020)**

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Equipment Data Sheet

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3	X	X	X	X		28						53						78					
4	X	X	X	X		29						54						79					
5	X	X	X	X		30						55						80					
6	X					31						56						81					
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VENDOR		EQUIPMENT DATA SHEET		P.O. No.		LIDCO-PO-NEC-278-6019	
		Integrated Methanol and Ammonia Plant		Document No.		N-278-VD-6019-ME-DS-0011-01	
				Sheet No.		3 of 5	
				Rev.No		04	
				Item Tag No.		K-020	
CONTRACTOR / END USER				Service		Compressed Instrument Air	
1 VENDOR (COMPRESSOR) :				Airpack Netherlands B.V.		REFERENCE :	
2 TYPE / MODEL :		High Pressure Air Compressor		SERIAL NO. :		3000 MTPD MeOH/900 MTPD NH3 PROJECT	
3 SERVICE :		Compressed Air		OPERATION :		Duty	
4 QUANTITY :		1					
5 OPERATING CONDITIONS				PACKAGE SCOPE OF SUPPLY			
6 GAS HANDLED :		Instrument air		COMPRESSOR TYPE :		non lubricated, single acting, vertical piston	
7				DRIVER TYPE :		V-belt	
8				COUPLING / GUARD :		N/A	
9 INLET CONDITIONS				CONFIGURATION:			
10 PRESSURE OP		bar(g) 9,5		INTERCOOLING		Water cooled shell/tube KE-020-001	
11 PRESSURE DP		bar(g) 12,5		AFTERCOOLER		Water cooled shell/tube KE-020-002	
12 TEMPERATURE OT		°C 46		LUBE-OIL HEATER		Included, KH-020-001	
13 TEMPERATURE DT		°C 75		LUBE-OIL PUMP		Shaft driven	
14 FLOW RATE		Nm³/h 35		AIR COOLER		Motor driven fan KM-020-001	
15				CONTROL PANEL		Not included	
16				PANEL ON PACKAGE:		JB and pushbutton station on package	
17 DISCHARGE CONDITIONS				INTERCONNECTING PIPEWORK & VALVES :			
18 PRESSURE OP		bar(g) 30		ACOUSTIC ENCLOSURE		Not included	
19 PRESSURE DP		bar(g) 39		RECEIVER VESSELS		Not included	
20 TEMPERATURE OT		°C 60 max.					
21 TEMPERATURE DT		°C 75					
22 FLOW RATE		Nm³/h 35*					
23 *NNT during full capacity				UTILITY SUPPLIES			
24 COMP. PERFORMANCE				ELECTRICAL SUPPLY :			
25 SPEED		rpm 410		V 400		Hz 50	
26 POWER AT COUPLING		kW 11		V 230		Hz 50	
27 TYPE		non lubricated, single acting, vertical piston				ph 3	
28						ph 1	
29				COOLING MEDIUM : Water			
29 DRIVER PERFORMANCE				TEMPERATURE INTER COOLER		°C 36	
30 OPERATING SPEED		rpm 1467		TEMPERATURE AFTER COOLER		°C 46	
31 RATING		kW 15		PRESSURE CWS		bar(g) 4,50	
32 MANUFACTURER		SIEMENS		PRESSURE CWR		bar(g) 2,50	
33				WEIGHTS AND DIMENSIONS			
34				SKID DRY WEIGHT		kg 2700	
35				SKID OPERATIONAL WEIGHT		kg 2750	
36				SIZE		mm L X W X H 2500X1500X2110	
37 SITE CONDITIONS							
38 ELEVATION		m 0					
39 AMB. TEMPERATURE		°C 0 / 49					
40 AMB. PRESSURE		bar(a) 1,01					
41 AMBIENT AIR HUMIDITY		% 65 / 100					
42 LOCATION :		Iran, onshore					
43 AREA CLASSIFICATION		Safe area					
44 NOISE LIMITATION		dBA < 85 dB(A)					
45							
46 NOTES :							
47 Measured, during running, at more than one point around the package at 1m distance from skid edge. Measuring points are shown in the document FAT							
48 procedure (N-278-VD-6019-GN-PRC-0015-01)							
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		EQUIPMENT DATA SHEET		P.O. No.	LIDCO-PO-NEC-278-6019			
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				Rev.No	04			
		Integrated Methanol and Ammonia Plant		Item Tag No.	K-020			
				Service	Compressed Instrument Air			
CONSTRUCTION								
SPEEDS				INSTRUMENTATION				
3	MAXIMUM ALLOWABLE	RPM	410	REFER TO:				
4	ROTATION VIEWED FROM DRIVEN END		CW					
5				P&ID [N-278-VD-6019-PR-PID-0002-01]				
6				INSTRUMENT DATASHEET [N-278-VD-6019-IN-DS-0013-01]				
7				CONTROL VALVE DATASHEETS [N-278-VD-6019-IN-DS-0041]				
8				PSV DATASHEET [N-278-VD-6019-IN-DS-0039]				
9								
CASING				SKID CONNECTIONS				
11	MODEL		TRZ 400	NOZZLE	SIZE	RATING	FACING	POSITION
12	WORKING PRESSURE 1ST/2ND STAGE	bar(g)	23.3/30	PACKAGE INLET	1"	#300	RF	TP-8201
13	MAWP	bar(g)	30.5/39	PACKAGE OUTLET	3/4"	#600	RF	TP-8202
14	MAXIMUM OPERATING TEMP 1ST/2ND	°C	157/116	WATER INLET	3/4"	#150	RF	TP-8203
15	NO. OF CYLINDERS		2	WATER OUTLET	3/4"	#150	RF	TP-8204
16	CYLINDER BORE 1ST/2ND STAGE	M	0.055/0.035					
17	CYLINDER STROKE 1ST/2ND STAGE	M	0.13/0.13					
18	COOLING MEDIUM BLOCK/CYLINDERS		AIR-COOLED					
19	MATERIAL PISTON/VALVES		STAINLESS STEEL					
20	HYDROTEST PRESSURE CYLINDERS	bar(g)	58,5					
21	CYLINDERS COOLING		AIR COOLED					
22	BEARING TYPE		ANTI FRICTION					
23	BEARING BALL / ROLLER		ROLLER					
24	VALVE, INLET / DISCHARGE		CONCENTRIC VALVES					
				CONTROLS				
25	TYPES OF VALVES		PLATE	CAPACITY CONTROL METHOD :		Compressor PCV		
26	V-BELT DIMENSION		SPC160X2	STOP/START ON PRESSURE SIGNALS		Yes from 300LP-820		
27								
MATERIALS OF CONSTRUCTION				LUBRICATION				
29	CYLINDER(S)		ASTM A 249 (TP 316L) / EN 1.4404	LUBE SYSTEM :		Oil sump		
30	CYLINDER LINER(S)		ASTM A 249 (TP 316L) / EN 1.4404	LUBE OIL PUMP DRIVE :		Shaft driven		
31	PISTON(S)		ASTM A 420 / EN 1.4021	SYSTEM OIL CAPACITY		Liter	18	
32	PISTON RINGS		PTFE compound	LUBE OIL HEATER		230V, 80 W		
33	WEAR BANDS		PTFE compound	HEATING CARTRIDGE		mm	L=180	
34	PISTON RODS(S); / MATERIAL YIELD:		AISI 422 / EN 1.2316 / 1010 N/mm ²	CONNECTION OIL HEATER		G	1/2	
35	PISTON ROD HARDNESS (BASE MATL.)		125 - 160 HB Rc					
36	PISTON ROD COATING / HARDNESS		Plasma nitrided / 1000HV 1 Rc					
37	ROD PRESSURE RINGS		PTFE compound					
38	ROD PRESSURE PACKING CASE		ASTM A 249 (TP 316L) / EN 1.4404					
39	WIPER PACKING RINGS		PTFE compound					
40	MAIN JOURNAL BEARING, CRANKSHAFT		ASTM 80/60/03					
41	CONNECTING ROD BEARING, CRANKPIN		Si52 / PbSb15Sn10					
42	CONN. ROD BUSHING, X-HD END		GC-SnBz12					
43	CROSSHEAD (X-HD) PIN BUSHING		GC-SnBz12					
44	CROSSHEAD PIN		AISI 430F / EN 1.4104					
45	CROSSHEAD		ASTM 60/40/18					
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NOTES :								
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CONTRACTOR / END USER 	Integrated Methanol and Ammonia Plant		Item Tag No.	K-020
			Service	Compressed Instrument Air

PULSTATION DAMPER INLET						
1						
2	EQUIPMENT NO.	KV-020-001	LOCATION :	INLET	LIQUID / AIR COOLED	AIR
3	NO. REQD	1	MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	
4	CAPACITY	Nm3/hr 35	MATERIAL :	SA106 Gr.B		
5	MAWP	bar(g) 12,5	MAIN IN/OUTLET	1" 300#		
6	HYDROSTATIC PRESSURE	bar(g) 16,25	VOLUME:	39 dm3		
7	CONNECTIONS	TG 1 1/2" 300#	TT 1 1/2" 300#	PSV 1" 300#	DRAIN	1/2" NPT
8	COMPRESSED AIR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bar(g) 9,5 12,5	TEMP <input type="checkbox"/> <input type="checkbox"/> °C	46 75	

PULSTATION DAMPER 1ST STAGE DISCHARGE						
9						
10	EQUIPMENT NO.	KV-020-002	LOCATION :	1ST STAGE DISCHARGE	LIQUID / AIR COOLED	AIR
11	NO. REQD	1	MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	
12	CAPACITY	Nm3/hr 35	MATERIAL :	SA106 Gr.B		
13	MAWP	bar(g) 30,5	MAIN IN/OUTLET	3/4" 600#		
14	HYDROSTATIC PRESSURE	bar(g) 39,65	VOLUME:	33 dm3		
15	CONNECTIONS	TG 1 1/2" 600#	TT 1 1/2" 600#	PSV 1" 600#	DRAIN	1/2" NPT
16	COMPRESSED AIR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bar(g) 23,3 30,5	TEMP <input type="checkbox"/> <input type="checkbox"/> °C	157 175	

PULSTATION DAMPER 2nd STAGE SUCTION						
17						
18	EQUIPMENT NO.	KV-020-003	LOCATION :	2nd STAGE SUCTION	LIQUID / AIR COOLED	AIR
19	NO. REQD	1	MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	64 kg
20	CAPACITY	Nm3/hr 35	MATERIAL :	SA106 Gr.B		
21	MAWP	bar(g) 39	MAIN IN/OUTLET	3/4" 600#		
22	HYDROSTATIC PRESSURE	bar(g) 50,7	VOLUME:	30 dm3		
23	CONNECTIONS	TG N/A	TT 1 1/2" 600#	PSV N/A	DRAIN	1/2" NPT
24	COMPRESSED AIR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bar(g) 22,1 39,0	TEMP <input type="checkbox"/> <input type="checkbox"/> °C	60 157	

PULSTATION DAMPER 2nd STAGE DISCHARGE						
25						
26	EQUIPMENT NO.	KV-020-004	LOCATION :	2nd STAGE DISCHARGE	LIQUID / AIR COOLED	AIR
27	NO. REQD	1	MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	72 kg
28	CAPACITY	Nm3/hr 35	MATERIAL :	SA106 Gr.B		
29	MAWP	bar(g) 39	MAIN IN/OUTLET	3/4" 600#		
30	HYDROSTATIC PRESSURE	bar(g) 50,7	VOLUME:	30 dm3		
31	CONNECTIONS	TG 1 1/2" 600#	TT 1 1/2" 600#	PSV 1" 600#	DRAIN	1/2" NPT
32	COMPRESSED AIR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bar(g) 30,0 39,0	TEMP <input type="checkbox"/> <input type="checkbox"/> °C	116 135	

NOTES :
 34 Paint system is specified in document: N-278-VD-6019-GN-PRC-0019-01
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