

 <p>شرکت توسعه صنایع لوان Lavan Industry Development Company</p>	<p><b>LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT</b></p>						
	<p><b>Equipment Data Sheet</b></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>06</p>	<p>Page 1 of 5</p>

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

Code 2  
M.Dalakeh

06	16-09-2024	Issued for Approval	S.K.	S.K.	J.J.
05	07-08-2024	Issued for Approval	S.K.	S.K.	J.J.
04	23-07-2024	Issued for Approval	S.K.	S.K.	J.J.
03	27-06-2024	Issued for Approval	S.K.	S.K.	J.J.
02	10-06-2024	Issued for Approval	S.K.	S.K.	J.J.
01	08-04-2024	Issued for Approval	S.K.	S.K.	J.J.
<b>REV.</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>DRAWN</b>	<b>CHECKED</b>	<b>APPROVED</b>

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Equipment Data Sheet

Document No. 17735-11A



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N278	VD	6019	ME	DS	0011	06

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4	X	X	X	X	X	X					54						79					
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6	X										56						81					
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VENDOR		EQUIPMENT DATA SHEET		P.O. No.		LIDCO-PO-NEC-278-6019	
		<b>Integrated Methanol and Ammonia Plant</b>		Document No.		N-278-VD-6019-ME-DS-0011-01	
				Sheet No.		3 of 5	
				Rev.No		06	
				Item Tag No.		K-020	
CONTRACTOR / END USER				Service		Compressed Instrument Air	
							
1	VENDOR (COMPRESSOR) :	Airpack Netherlands B.V.		REFERENCE :	17735-COM		
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					
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		
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		
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			
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	ph	1
28				COOLING MEDIUM : Water			
DRIVER PERFORMANCE				TEMPERATURE INTER COOLER °C			
30	OPERATING SPEED	rpm	1467	36			
31	RATING	kW	15	TEMPERATURE AFTER COOLER °C			
32	MANUFACTURER	SIEMENS		46			
33				PRESSURE CWS bar(g)			
34				4,50			
35				PRESSURE CWR bar(g)			
36				2,50			
				WEIGHTS AND DIMENSIONS			
34				SKID DRY WEIGHT	kg	2700	
35				SKID OPERATIONAL WEIGHT	kg	2750	
36				SIZE	mm	L X W X H	
36				2500X1500X2110			
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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	<b>EQUIPMENT DATA SHEET</b>	P.O. No.	LIDCO-PO-NEC-278-6019
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		Sheet No.	4 OF 5
		Rev.No	06
	<b>Integrated Methanol and Ammonia Plant</b>	Item Tag No.	K-020
		Service	Compressed Instrument Air

<b>CONSTRUCTION</b>								
<b>SPEEDS</b>			<b>INSTRUMENTATION</b>					
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)				
<b>CASING</b>								
9	MODEL		TRZ 400					
10	WORKING PRESSURE 1ST/2ND STAGE	bar(g)	23.3/30	<b>SKID CONNECTIONS</b>				
11	MAWP	bar(g)	30.5/39	NOZZLE	SIZE	RATING	FACING	POSITION
12	MAXIMUM OPERATING TEMP 1ST/2ND	°C	157/116	PACKAGE INLET	1"	#300	RF	TP-8201
13	NO. OF CYLINDERS		2	PACKAGE OUTLET	3/4"	#600	RF	TP-8202
14	SUCTION PRESSURE 1ST/2ND	bar(g)	9.5/22.1	WATER INLET	3/4"	#150	RF	TP-8203
15	DISCHARGE PRESSURE 1ST/2ND	bar(g)	23.3/30	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	<b>CONTROLS</b>				
25	TYPES OF VALVES		PLATE	CAPACITY CONTROL METHOD :		Compressor PCV		
26	V-BELT DIMENSION		SPC 2500	STOP/START ON PRESSURE SIGNALS		Yes from 300LP-820		
27	PULLEY DIAMETER MOTOR		SPC 160					
28	PULLEY DIAMETER COMPRESSOR		SPC 576					
29	RATIO		1485/410 = ratio 3.62					
30								
31								
<b>MATERIALS OF CONSTRUCTION</b>							<b>LUBRICATION</b>	
33	CYLINDER(S)	ASTM A 249 (TP 316L) / EN 1.4404		LUBE SYSTEM :		Oil sump		
34	CYLINDER LINER(S)	ASTM A 249 (TP 316L) / EN 1.4404		LUBE OIL PUMP DRIVE :		Shaft driven		
35	PISTON(S)	ASTM A 420 / EN 1.4021		SYSTEM OIL CAPACITY		Liter	18	
36	PISTON RINGS	PTFE compound		LUBE OIL HEATER		230V, 80 W		
37	WEAR BANDS	PTFE compound		HEATING CARTRIDGE		mm	l=180	
38	PISTON RODS(S) / MATERIAL YIELD:	AISI 422 / EN 1.2316 / 1010 N/mm <sup>2</sup>		CONNECTION OIL HEATER		G	1/2	
39	PISTON ROD HARDNESS (BASE MATL.)	125 - 160 HB Rc						
40	PISTON ROD COATING / HARDNESS	Plasma nitrided / 1000HV 1 Rc						
41	ROD PRESSURE RINGS	PTFE compound						
42	ROD PRESSURE PACKING CASE	ASTM A 249 (TP 316L) / EN 1.4404						
43	WIPER PACKING RINGS	PTFE compound						
44	MAIN JOURNAL BEARING, CRANKSHAFT	ASTM 80/60/03						
45	CONNECTING ROD BEARING, CRANKPIN	S152 / PbSb15Sn10						
46	CONN. ROD BUSHING, X-HD END	GC-SnBz12						
47	CROSSHEAD (X-HD) PIN BUSHING	GC-SnBz12						
48	CROSSHEAD PIN	AISI 430F / EN 1.4104						
49	CROSSHEAD	ASTM 60/40/18						
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51	<b>NOTES :</b>							
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<b>VENDOR</b> 	<b>EQUIPMENT DATA SHEET</b>			P.O. No.	LIDCO-PO-NEC-278-6019		
				Document No.	N-278-VD-6019-ME-DS-0011-01		
				Sheet No.	5 OF 5		
				Rev.No	06		
<b>CONTRACTOR / END USER</b> 	<b>Integrated Methanol and Ammonia Plant</b>			Item Tag No.	K-020		
				Service	Compressed Instrument Air		

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

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

<b>PULSTATION DAMPER 2nd STAGE SUCTION</b>						
18	EQUIPMENT NO.		<b>KV-020-003</b>	LOCATION :		<b>2nd STAGE SUCTION</b>
19	NO. REQD		<b>1</b>	MFR / SUPPLIED BY:		<b>Locati Impianti</b>
20	CAPACITY		Nm3/hr <b>35</b>	MATERIAL :		<b>SA106 Gr.B</b>
21	MAWP		bar(g) <b>39</b>	MAIN IN/OUTLET		<b>3/4" 600#</b>
22	HYDROSTATIC PRESSURE		bar(g) <b>50,7</b>	VOLUME:		<b>31 dm3</b>
23	CONNECTIONS		TG <b>N/A</b>	TT <b>1 1/2" 600#</b>	PSV <b>N/A</b>	DRAIN
24	COMPRESSED AIR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Bar(g) <b>22,1</b> <b>39,0</b>	TEMP <input type="checkbox"/> <input type="checkbox"/> °C	<b>60</b> <b>157</b>	<b>1/2" NPT</b>

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

Discrepancy with drawing.

33	<b>NOTES :</b>					
34	Paint system is specified in document: N-278-VD-6019-GN-PRC-0019-01					
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