

	<b>LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT</b>						
	<b>Equipment Data Sheet</b>						
	Document No. 17735-11A						Page
	Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision
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**Airpack B.V. - Air Compressor –  
Integrated Methanol and Ammonia Plant  
17735-COM Equipment Data Sheet (K020)**

code 2  
M.Dalakeh

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3	X	X	X	X	X	X	X				53						78					
4	X	X	X	X	X	X	X				54						79					
5	X	X	X	X	X	X	X				55						80					
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<b>VENDOR</b> 		<b>EQUIPMENT DATA SHEET</b>		P.O. No.                    LIDCO-PO-NEC-278-6019		
<b>CONTRACTOR / END USER</b> 				Document No.            N-278-VD-6019-ME-DS-0011-01		
				Sheet No.                 3 of 5		
				Rev.No                     07		
		<b>Integrated Methanol and Ammonia Plant</b>		Item Tag No.             K-020		
				Service                    Compressed Instrument Air		
1	<b>VENDOR (COMPRESSOR) :</b> Airpack Netherlands B.V.		<b>REFERENCE :</b> 17735-COM			
2	<b>TYPE / MODEL :</b> High Pressure Air Compressor		<b>SERIAL NO. :</b> 3000 MTPD MeOH/900 MTPD NH3 PROJECT			
3	<b>SERVICE :</b> Compressed Air		<b>OPERATION :</b> Duty			
4	<b>QUANTITY :</b> 1					
5	<b>OPERATING CONDITIONS</b>			<b>PACKAGE SCOPE OF SUPPLY</b>		
6	<b>GAS HANDLED :</b> Instrument air		<b>COMPRESSOR TYPE :</b>		non lubricated, single acting, vertical piston	
7						
8			<b>DRIVER TYPE :</b>		V-belt	
9	<b>INLET CONDITIONS</b>			<b>COUPLING / GUARD :</b>		
10	PRESSURE OP	bar(g)	<b>9,5</b>	<b>CONFIGURATION:</b>		1x100%
11	PRESSURE DP	bar(g)	<b>12,5</b>	<b>INTERCOOLING</b>		Water cooled shell/tube KE-020-001
12	TEMPERATURE OT	°C	<b>46</b>	<b>AFTERCOOLER</b>		Water cooled shell/tube KE-020-002
13	TEMPERATURE DT	°C	<b>75</b>	<b>LUBE-OIL HEATER</b>		Included, KH-020-001
14	FLOW RATE	Nm³/h	<b>35</b>	<b>LUBE-OIL PUMP</b>		Shaft driven
15				<b>AIR COOLER</b>		Motor driven fan KM-020-001
16				<b>CONTROL PANEL</b>		Not included
17	<b>DISCHARGE CONDITIONS</b>			<b>PANEL ON PACKAGE:</b>		
18	PRESSURE OP	bar(g)	<b>30</b>	<b>INTERCONNECTING PIPEWORK &amp; VALVES :</b>		
19	PRESSURE DP	bar(g)	<b>39</b>	No piping and valves provided for outside package.		
20	TEMPERATURE OT	°C	<b>60 max.</b>	<b>ACOUSTIC ENCLOSURE</b>		Not included
21	TEMPERATURE DT	°C	<b>75</b>	<b>RECEIVER VESSELS</b>		Not included
22	FLOW RATE	Nm³/h	<b>35*</b>			
23	*NNT during full capacity			<b>UTILITY SUPPLIES</b>		
24	<b>COMP. PERFORMANCE</b>			<b>ELECTRICAL SUPPLY :</b>		
25	SPEED	rpm	<b>410</b>	V	<b>400</b>	Hz
26	POWER AT COUPLING	kW	<b>11</b>	V	<b>230</b>	Hz
27	TYPE	non lubricated, single acting, vertical piston				ph
28						<b>3</b>
29	<b>DRIVER PERFORMANCE</b>			<b>COOLING MEDIUM :</b>		
30	OPERATING SPEED	rpm	<b>1467</b>	<b>TEMPERATURE INTER COOLER</b>		°C
31	RATING	kW	<b>15</b>	<b>TEMPERATURE AFTER COOLER</b>		°C
32	MANUFACTURER	<b>SIEMENS</b>		<b>PRESSURE CWS</b>		bar(g)
33				<b>PRESSURE CWR</b>		bar(g)
34				<b>WEIGHTS AND DIMENSIONS</b>		<b>2,50</b>
35				<b>SKID DRY WEIGHT</b>		kg
36				<b>SKID OPERATIONAL WEIGHT</b>		kg
37	<b>SITE CONDITIONS</b>			<b>SIZE</b>		
38	ELEVATION	m	<b>0</b>	mm	L X W X H	<b>2500X1500X2110</b>
39	AMB. TEMPERATURE	°C	<b>0 / 49</b>			
40	AMB. PRESSURE	bar(a)	<b>1,01</b>			
41	AMBIENT AIR HUMIDITY	%	<b>65 / 100</b>			
42	LOCATION :	<b>Iran, onshore</b>				
43	AREA CLASSIFICATION	<b>Safe area</b>				
44	NOISE LIMITATION	dBA	<b>&lt; 85 dB(A)</b>			
45						
46	<b>NOTES :</b>					
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			
CONTRACTOR / END USER 				Document No.	N-278-VD-6019-ME-DS-0011-01			
				Sheet No.	4 OF 5			
		Rev.No	07					
		Integrated Methanol and Ammonia Plant		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/mm²		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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<b>NOTES :</b>								
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VENDOR 	EQUIPMENT DATA SHEET			P.O. No.	LIDCO-PO-NEC-278-6019		
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CONTRACTOR / END USER 	Integrated Methanol and Ammonia Plant			Item Tag No.	K-020		
				Service	Compressed Instrument Air		

1	<b>PULSTATION DAMPER INLET</b>													
2	EQUIPMENT NO.	KV-020-001		LOCATION :	INLET	LIQUID / AIR COOLED	AIR							
3	NO. REQD	1		MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	69 kg							
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#							
8	COMPRESSED AIR	O	D	Bar(g)	9,5	12,5	TEMP	O	D	°C	46	75	DRAIN	1/2" NPT

9	<b>PULSTATION DAMPER 1ST STAGE DISCHARGE</b>													
10	EQUIPMENT NO.	KV-020-002		LOCATION :	1ST STAGE DISCHARGE	LIQUID / AIR COOLED	AIR							
11	NO. REQD	1		MFR / SUPPLIED BY:	Locati Impianti	WEIGHT:	62 kg							
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#							
16	COMPRESSED AIR	O	D	Bar(g)	23,3	30,5	TEMP	O	D	°C	157	175	DRAIN	1/2" NPT

17	<b>PULSTATION DAMPER 2nd STAGE SUCTION</b>													
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:	31 dm3									
23	CONNECTIONS	TG	N/A	TT	1 1/2" 600#	PSV	N/A							
24	COMPRESSED AIR	O	D	Bar(g)	22,1	39,0	TEMP	O	D	°C	60	157	DRAIN	1/2" NPT

25	<b>PULSTATION DAMPER 2nd STAGE DISCHARGE</b>													
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:	31 dm3									
31	CONNECTIONS	TG	1 1/2" 600#	TT	1 1/2" 600#	PSV	1" 600#							
32	COMPRESSED AIR	O	D	Bar(g)	30,0	39,0	TEMP	O	D	°C	116	135	DRAIN	1/2" NPT

33 **NOTES :**

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

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