

 <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>																				
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Revision	05																				

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

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REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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Equipment Data Sheet



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4	X	X	X	X	X	29						54						79					
5	X	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	
				Document No.	N-278-VD-6019-ME-DS-0011-01	
				Sheet No.	3 of 5	
				Rev.No	05	
				Item Tag No.	K-020	
CONTRACTOR / END USER		Integrated Methanol and Ammonia Plant		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				
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:	1x100%	
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 :	No piping and valves provided for outside package.	
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
26	POWER AT COUPLING	kW	11	Hz	50	ph
27	TYPE	non lubricated, single acting, vertical piston		Hz	50	ph
28				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
36						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 procedure (N-278-VD-6019-GN-PRC-0015-01)					
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	Integrated Methanol and Ammonia Plant	Item Tag No.	K-020
		Service	Compressed Instrument Air

		CONSTRUCTION		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)				
		CASING						
9	MODEL		TRZ 400					
10	WORKING PRESSURE 1ST/2ND STAGE	bar(g)	23.3/30	SKID CONNECTIONS				
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	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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47	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	EQUIPMENT NO.		KV-020-001		LOCATION :		INLET		LIQUID / AIR COOLED		AIR
2	NO. REQD		1		MFR / SUPPLIED BY:		Locati Impianti		WEIGHT:		69 kg
3	CAPACITY		Nm3/hr 35		MATERIAL :		SA106 Gr.B				
4	MAWP		bar(g) 12.5		MAIN IN/OUTLET		1" 300#				
5	HYDROSTATIC PRESSURE		bar(g) 16.25		VOLUME:		39 dm3				
6	CONNECTIONS		TG 1 1/2" 300#		TT 1 1/2" 300#		PSV 1" 300#		DRAIN		1/2" NPT
7	COMPRESSED AIR		Bar(g) 9.5 12.5		TEMP O D °C		46 75				

PULSTATION DAMPER 1ST STAGE DISCHARGE											
9	EQUIPMENT NO.		KV-020-002		LOCATION :		1ST STAGE DISCHARGE		LIQUID / AIR COOLED		AIR
10	NO. REQD		1		MFR / SUPPLIED BY:		Locati Impianti		WEIGHT:		62 kg
11	CAPACITY		Nm3/hr 35		MATERIAL :		SA106 Gr.B				
12	MAWP		bar(g) 30.5		MAIN IN/OUTLET		3/4" 600#				
13	HYDROSTATIC PRESSURE		bar(g) 39.65		VOLUME:		33 dm3				
14	CONNECTIONS		TG 1 1/2" 600#		TT 1 1/2" 600#		PSV 1" 600#		DRAIN		1/2" NPT
15	COMPRESSED AIR		Bar(g) 23.3 30.5		TEMP O D °C		157 175				

PULSTATION DAMPER 2nd STAGE SUCTION											
17	EQUIPMENT NO.		KV-020-003		LOCATION :		2nd STAGE SUCTION		LIQUID / AIR COOLED		AIR
18	NO. REQD		1		MFR / SUPPLIED BY:		Locati Impianti		WEIGHT:		64 kg
19	CAPACITY		Nm3/hr 35		MATERIAL :		SA106 Gr.B				
20	MAWP		bar(g) 39		MAIN IN/OUTLET		3/4" 600#				
21	HYDROSTATIC PRESSURE		bar(g) 50.7		VOLUME:		31 dm3				
22	CONNECTIONS		TG N/A		TT 1 1/2" 600#		PSV N/A		DRAIN		1/2" NPT
23	COMPRESSED AIR		Bar(g) 22.1 39.0		TEMP O D °C		60 157				

PULSTATION DAMPER 2nd STAGE DISCHARGE											
25	EQUIPMENT NO.		KV-020-004		LOCATION :		2nd STAGE DISCHARGE		LIQUID / AIR COOLED		AIR
26	NO. REQD		1		MFR / SUPPLIED BY:		Locati Impianti		WEIGHT:		72 kg
27	CAPACITY		Nm3/hr 35		MATERIAL :		SA106 Gr.B				
28	MAWP		bar(g) 39		MAIN IN/OUTLET		3/4" 600#				
29	HYDROSTATIC PRESSURE		bar(g) 50.7		VOLUME:		31 dm3				
30	CONNECTIONS		TG 1 1/2" 600#		TT 1 1/2" 600#		PSV 1" 600#		DRAIN		1/2" NPT
31	COMPRESSED AIR		Bar(g) 30.0 39.0		TEMP O D °C		116 135				

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