



LIDCO, Pars SEE Zone, Assaluyeh,  
Integrated Methanol and Ammonia  
Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT



Line List

Document No. 17735-61

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**Airpack B.V. - Air Compressor –  
Integrated Methanol and Ammonia Plant  
17735-COM Line List (K020)**

code-2  
M. Vakili

04	08-04-2024	Issued for Approval	S.K.	S.K.	J.J.
03	23-01-2024	Issued for Approval	T.T.	S.K.	J.J.
02	08-01-2024	Issued for Approval	S.K.	S.K.	J.J.
01	19-12-2023	Issued for Approval	S.K.	S.K.	J.J.
REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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3	X	X	X	X		28						53						78					
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for hydrotest, pressure shall be at least 1.5\*design pressure.  
otherwise, for Pneumatic test, pressure shall be 1.1\* design pressure.

Line no.	Line description	P&ID Number	Line size	Schedule	Ends Note 7	Pipe material Note-2	Flange as per ASME B16.5	Flange Material Note-2	Operating press. Max.	Design press.	Hydrotest pressure	Operating temp.	Design temp.	Insulation	Tie in Point	Paint system	Final colour	NDT
<b>P&amp;ID for High Pressure Air Compressor K020</b>																		
1"-IA-320-01-D42-N	Package inlet	N278-VD-6019-PR-PID-0002	1"	S-40S	BE	SS316L	300#	ASTM A182	9,5 bar(g)	12,5 bar(g)	16,25 bar(g)	46°C	75°C	Not Insulated	TP-8201	1	RAL-9006	10% RT welds, Leak test & Hydrotest with water
1"-IA-320-02-D42-N	1st stage suction	N278-VD-6019-PR-PID-0002	1"	S-40S	BE	SS316L	300#	ASTM A182	9,5 bar(g)	12,5 bar(g)	16,25 bar(g)	46°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-IA-320-03-F42-H	1st stage discharge	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	600#	ASTM A182	23,3 bar(g)	30,5 bar(g)	39,65 bar(g)	157°C	175°C	Personal protection	N/A	3	Metallic Gray	
3/4"-IA-320-04-F42-H	1st stage discharge	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	600#	ASTM A182	23,3 bar(g)	30,5 bar(g)	39,65 bar(g)	46°C	185°C	Personal protection	N/A	3	Metallic Gray	
3/4"-IA-320-05-D42-N	2nd stage suction	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	300#	ASTM A182	23,3 bar(g)	30,5 bar(g)	39,65 bar(g)	157°C	175°C	Not Insulated	N/A	3	RAL-9006	
3/4"-IA-320-06-F42-H	2nd stage discharge	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	600#	ASTM A182	22,1 bar(g)	39 bar(g)	50,7 bar(g)	60°C	175°C	Personal protection	N/A	3	Metallic Gray	
3/4"-IA-320-07-F42-H	2nd stage discharge	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	600#	ASTM A182	30 bar(g)	39 bar(g)	50,7 bar(g)	60°C	175°C	Personal protection	N/A	3	Metallic Gray	
4"-IA-320-08-D42-N	Package outlet	N278-VD-6019-PR-PID-0002	2"	S-40S	BE	SS316L	300#	ASTM A182	30 bar(g)	39 bar(g)	50,7 bar(g)	60°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-IA-320-09-D42-N	Package outlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	300#	ASTM A182	30 bar(g)	39 bar(g)	50,7 bar(g)	60°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-IA-320-10-D42-N	Package outlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	300#	ASTM A182	30 bar(g)	39 bar(g)	50,7 bar(g)	60°C	75°C	Not Insulated	TP-8202	1	RAL-9006	
3/4"-IA-320-11-D42-N	Bypass	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	SS316L	300#	ASTM A182	30 bar(g)	39 bar(g)	50,7 bar(g)	60°C	75°C	Not Insulated	N/A	1	RAL-9006	
<b>P&amp;ID for High Pressure Air Compressor K020 water system</b>																		
3/4"-CWS-320-20-B24C-N	Cooling water inlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	CS	150#	ASTM A 105	4,5 bar(g)	7 bar(g)	9,1 bar(g)	36°C	75°C	Not Insulated	TP-8203	1	RAL-9006	10% RT welds, Leak test & Hydrotest with water
3/4"-CWS-320-21-B24C-N	Cooling water inlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	CS	150#	ASTM A 105	4,5 bar(g)	7 bar(g)	9,1 bar(g)	36°C	75°C	Not Insulated	N/A	1	RAL-9006	
4"-CWR-320-22-B24C-N	Cooling water outlet	N278-VD-6019-PR-PID-0002	2"	S-10S	BE	CS	150#	ASTM A 105	5 bar(g)	7 bar(g)	9,1 bar(g)	46°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-CWS-320-23-B24C-N	Cooling water inlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	CS	150#	ASTM A 105	4,5 bar(g)	7 bar(g)	9,1 bar(g)	36°C	75°C	Not Insulated	N/A	1	RAL-9006	
4"-CWR-320-24-B24C-N	Cooling water outlet	N278-VD-6019-PR-PID-0002	2"	S-10S	BE	CS	150#	ASTM A 105	5 bar(g)	7 bar(g)	9,1 bar(g)	46°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-CWR-320-25-B24C-N	Cooling water outlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	CS	150#	ASTM A 105	5 bar(g)	7 bar(g)	9,1 bar(g)	46°C	75°C	Not Insulated	N/A	1	RAL-9006	
3/4"-CWR-320-26-B24C-N	Cooling water outlet	N278-VD-6019-PR-PID-0002	3/4"	S-40S	BE	CS	150#	ASTM A 105	5 bar(g)	7 bar(g)	9,1 bar(g)	46°C	75°C	Not Insulated	TP-8204	1	RAL-9006	

for NDT test, minimum requirements of "WELDING AND NDE" spec shall be followed as per below image

- Notes:
- 1.) pipe class will be followed for all component mentioned like, tem NPS, Rating, Schedule, Type, Specification Notes, NIPPLES, FITTINGS - threaded & Butt Welded, Caps, elbows, Tees, Couplings, Plug, Unions, Swaged Nipples, Boss, Blinds, spectacle blinds, GASKETS, bolts / Fasteners, valves, etc.
  - 2.) All Components in water system are CS material and will externally painted (except for the valves which will be carbon steel and externally painted)
  - 3.) Corrosion allowance = 0 mm. Corrosion allowance watersystem= 3,2mm
  - 4.) Design code = ASME B31.3
  - 5.) Stress Relieving = Not applicable
  - 6.) Welding Spec : N278-000-PI-JSS-1300-009
  - 7.) BE = Beveled Ends (for pipe)
  - 8.) Valve body material with ASTM A105 shall be supplied in Normalized condition

MATERIAL	ASME IX P Number	SERVICE	ANSI Class	EXTENT OF NDT (%) (7)(8)		
				RT (1)	MT (2) (6)	PT (2)
Carbon Steel	1 to 3	Atmospheric Lines	-	-	-	-
		Hydrogen (3)	150	10	10	-
			≥ 300	100	100	-
		Category D (4)	150	5	5	-
			150 - 300	10	10	-
		Normal Fluids (4)	≥ 600	100	100	-
150 - 300	20		20	-		
Category M (5)	≥ 600	100	100	-		
	Severe Cyclic (4)	All ratings	100	100	-	
Ferritic Alloy Steel	4 to 6	All Services	All ratings	100	100	-
Austenitic Alloy Steel Base Nickel Alloy	8 41 to 45	Atmospheric Lines	-	-	-	-
		Hydrogen (3)	150	20	-	20
			≥ 300	100	-	100
		Category D (4)	-	5	-	5
			150 - 300	20	-	20
		Normal Fluids (4)	≥ 600	100	-	100
150	20		-	20		
Category M (5)	≥ 300	100	-	100		
	Severe Cyclic (4)	All ratings	100	-	100	
Dissimilar materials	-	All Services	All ratings	100	-	100