Airpack B.V. - Air Compressor –

Integrated Methanol and Ammonia Plant

17735-COM Control Valve Data Sheets (K020)

General Comment:
1- Any changes in next revision to be marked with revision mark.
2- If any comments is not applicable please send reply sheet.
3- Compatibility with project requireme e, and next comments are just for hint.
4- Compatibility with other vendor docu d instrument is vendor responsibility and scope.
5- Tag plate supply is scope of vendor and should added to data sheet as one of items.
6- all Tag name in all document should be same format. no needs "-" after prefix 320. example correct format is 320PCV-0170, ...
7- For all instrument and accessories, catalogue(including order code) should be submitted .
8- This document will be checked after finalizing PID document.
9- Manufacturer, Model, order code for all instrument should be finalized and specified, Also relevant catalogs and order code should be submitted.
Important Note: Next revision of instrument data sheet shall be submitted after PID finalization

To be revised based on document content

SIL & HAZOP study Consequences, shall be implemented in this document.

code-2
M. Vakili

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
01	09-11-2023	Issued for Approval	T.T.	S.K.	J.J.

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15						**40**						**65**						**90**					
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19						**44**						**69**						**1**					
20						**45**						**70**						**2**					
21						**46**						**71**						**3**					
22						**47**						**72**						**4**					
23						**48**						**73**						**5**					
24						**49**						**74**						**6**					
25						**50**						**75**						**7**					

All "-"(After320) should be deleted in all of Tags.

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54			
55			

only 320PCV-8201 is instrument valve. other vale is related to piping valve and should be removed from this document.

Notes:

GENERAL	1	Tag Number				320-V-8201	
	2	Service				Hand Ball valve	
	3	P&ID No.				17735-03	
	4	Location				Compressor Air Inlet	
	5						
	6						
	7						
PROCESS CONDITIONS	8	Fluid	State			Air	Dry Gas
	9	Pressure	Norm.	Max.		9,5 bar(g)	
	10	Temperature	Norm.	Max.		46 °C	
	11	Design	Press.	Temp.		12,5 bar(g)	65 °C
	12	Ambient Temp.	Min.	Max.		0 °C	49 °C
	13	Oper. Flow				35 Nm³/hr	
	14						
	15						
BODY	16	Body Type				Ball valve, wafer type	
	17	Body Size	Bore			1"	Full bore
	18	Guiding	No. Of Ports			-	2
	19	Conn. Type	End Conn. Rat.			RF	300#
	20	Body Material				SS316	
	21	Packing Material				PTFE	
	22	Bonnet Type				Screwed	
	23	Trim	Form			Floating ball	
	24		Seat Mat.			PTFE	
	25		Ball Mat.	Shaft Mat.		SS 316	SS316
	26	Actuation	Material			Lever handle	SS316
	27	Threaded connections if applicable				Metric	
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						
	41						
	42						
	43						
OPTIONS	44					Fire safe design (acc. API 607)	
	45						
	46						
CERTIFICATES	47	3.1 Material certificate				Yes	
	48	Hydrotest certificate				Yes	
	49						
	50						
	51						
PURCHASE	52	Manufacturer				According to approved vendor list	
	53	Model				Supplier to advise	
	54						
	55						
	56						
	57						

75°C

NOTES :

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Hand Ball Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 3 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

GENERAL	1	Tag Number				320-V-8202	
	2	Service				Hand Ball valve	
	3	P&ID No.				17735-03	
	4	Location				Compressor Air Outlet	
	5						
	6						
	7						
PROCESS CONDITIONS	8	Fluid	State			Air	Dry Gas
	9	Pressure	Norm.	Max.		30 bar(g)	
	10	Temperature	Norm.	Max.			60 °C
	11	Design	Press.	Temp.		39 bar(g)	75 °C
	12	Ambient Temp.	Min.	Max.		0 °C	49 °C
	13	Oper. Flow				35 Nm³/hr	
	14						
	15						
BODY	16	Body Type				Ball valve, wafer type	
	17	Body Size	Bore			3/4"	Full bore
	18	Guiding	No. Of Ports			-	2
	19	Conn. Type	End Conn. Rat.			RF	300#
	20	Body Material				SS316	
	21	Packing Material				PTFE	
	22	Bonnet Type				Screwed	
	23	Trim	Form			Floating ball	
	24		Seat Mat.			PTFE	
	25		Ball Mat.	Shaft Mat.		SS 316	SS316
	26	Actuation	Material			Lever handle	SS316
	27	Threaded connections if applicable				Metric	
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						
	41						
	42						
	43						
OPTIONS	44					Fire safe design (acc. API 607)	
	45						
	46						
CERTIFICATES	47	3.1 Material certificate				Yes	
	48	Hydrotest certificate				Yes	
	49						
	50						
	51						
PURCHASE	52	Manufacturer				According to approved vendor list	
	53	Model				Supplier to advise	
	54						
	55						
	56						
	57						

NOTES :

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Hand Ball Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 4 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

GENERAL	1	Tag Number				320-V-8203	
	2	Service				Hand Ball valve	
	3	P&ID No.				17735-03	
	4	Location				Cooling Water Inlet	
	5						
	6						
	7						
PROCESS CONDITIONS	8	Fluid	State			Cooling Water	Liquid
	9	Pressure	Norm.	Max.		4,5 bar(g)	
	10	Temperature	Norm.	Max.		36 °C	
	11	Design	Press.	Temp.		7 bar(g)	65 °C
	12	Ambient Temp.	Min.	Max.		0 °C	49 °C
	13	Oper. Flow				1 Nm³/hr	
	14						
	15						
BODY	16	Body Type				Ball valve, wafer type	
	17	Body Size	Bore			3/4"	Full bore
	18	Guiding	No. Of Ports			-	2
	19	Conn. Type	End Conn. Rat.			RF	150#
	20	Body Material				Carbon steel ASTM A 216 Gr. WCB / A105	
	21	Packing Material				PTFE	
	22	Bonnet Type				Screwed	
	23	Trim	Form			Floating ball	
	24		Seat Mat.			PTFE	
	25		Ball Mat.	Shaft Mat.		SS 316	SS316
	26	Actuation	Material			Lever handle	CS
	27	Threaded connections if applicable				Metric	
	28						
	29						
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						
	41						
	42						
	43						
OPTIONS	44					Fire safe design (acc. API 607)	
	45						
	46						
CERTIFICATES	47	3.1 Material certificate				Yes	
	48	Hydrotest certificate				Yes	
	49						
	50						
	51						
PURCHASE	52	Manufacturer				According to approved vendor list	
	53	Model				Supplier to advise	
	54						
	55						
	56						
	57						

75°C

NOTES :

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Hand Ball Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 5 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

GENERAL	1	Tag Number			320-V-8204	
	2	Service			Hand Ball valve	
	3	P&ID No.			17735-03	
	4	Location			Cooling Water Outlet	
	5					
	6					
	7					
PROCESS CONDITIONS	8	Fluid	State		Cooling Water	Liquid
	9	Pressure	Norm.	Max.	5 bar(g)	
	10	Temperature	Norm.	Max.		46 °C
	11	Design	Press.	Temp.	7 bar(g)	65 °C
	12	Ambient Temp.	Min.	Max.	0 °C	49 °C
	13	Oper. Flow			1 Nm³/hr	
	14					
	15					
BODY	16	Body Type			Ball valve, wafer type	
	17	Body Size	Bore		3/4"	Full bore
	18	Guiding	No. Of Ports		-	2
	19	Conn. Type	End Conn. Rat.		RF	150#
	20	Body Material			Carbon steel ASTM A 216 Gr. WCB / A105	
	21	Packing Material			PTFE	
	22	Bonnet Type			Screwed	
	23	Trim	Form		Floating ball	
	24		Seat Mat.		PTFE	
	25		Ball Mat.	Shaft Mat.	SS 316	SS316
	26	Actuation	Material		Lever handle	CS
	27	Threaded connections if applicable			Metric	
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
OPTIONS	44				Fire safe design (acc. API 607)	
	45					
	46					
CERTIFICATES	47	3.1 Material certificate			Yes	
	48	Hydrotest certificate			Yes	
	49					
	50					
	51					
PURCHASE	52	Manufacturer			According to approved vendor list	
	53	Model			Supplier to advise	
	54					
	55					
	56					
	57					

2.5 bar(g)

75 °C

NOTES :

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Hand Ball Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 6 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

PCV or PV ? should be clarify . PCV do not receive electrical signals

GENERAL	1	Tag Number			320-PCV-8201	
	2	Service			Compressor bypass (recycle) valve	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Bypass	
	5					
	6					
	7					
PROCESS CONDITIONS	8	Fluid	State		Air	Dry Gas
	9	Pressure	Norm.	Max.	9,5 bar(g)	30 bar(g)
	10	Temperature	Norm.	Max.	46 °C	60 °C
	11	Design			9 bar(g)	75 °C
	12	Ambie			0 °C	49 °C
BODY	13	Type Of Body			Globe valve	
	14	Body Size			3/4" ANSI RF	
	15	Conn. Type	End Conn. Rat.		RF	300#
	16	Body Material			SS316	
	17	Packing Material			PTFE	
	18	Bonnet Type			Integral	
	19	Trim	Form		Disc	
	20		Seat Mat.		PTFE	
	21		Disc Mat.	Shaft Mat.	SS 316	SS316
	22	Required Seat Tightness			IV	
	23	Max. Allow. Sound Level (dBa)			85	
	24					
	25					
	26					
ACTUATOR	27	Positioner controller			neumatic (I/P)	
	28	Interface				
	29	Fail Position				
	30	Pneumatic Conn.			1/4" NPT-F	
	31	Instrument Supply Fluid			Instrument Air	
	32	Instrument Supply Fluid pressure			9,5 bar(g)	
	33	Position Monitor			Yes 24 VDC 4-20 mA Transmitter	
	34	Area Classification			Safe Area	
	35	Electric Connection			ISO M20 x 1,5	
	36	Cable Gland			e Area	
	37					
ACCESSORIES	38	Filter Regulator			Yes	
	39	Gauges			Yes, Stainles steel	
	40	Tubing, Fitting				
SERVICE	41	Flow Rate			35 Nm³/h	
	42	Pressure	Inlet	outlet	9,5 bar(g)	30 bar(g)
	43	Pressure drop			the manufacturer	
	44	Cv Selected			To be advised by the manufacturer	
	45	Required Cv				
	46					
	47					
	48					
CERTIFICATES	49	3.1 Material certificate			Yes	
	50	Hydrotest certificate			Yes	
	51	Leakage Class				
	52					
PURCHASE	53	Valve Manufacturer			According to approved vendor list	
	54	Valve Model			Supplier to advise	
	55	Actuator Manufacturer			According to approved vendor list	
	56	Actuator Model			Supplier to advise	
	57					

Line Number should be added

Area Classification should be added

30

Bonnet shall be bolted according to ASME B31.3 and material shall be the same as the body material.

Flange Face Finish should be mentioned

should be added,
- Characteristics
- Cage material

should be added,
Positioner material.
Enclosure Class .
MAnufacturer.

All Positioners must have the following capabilities;
- Modular design
- Auto tuning (software)
- Fail- Safe or Fail-Freeze output (Software)
- Operating panel LCD
- With supply/ output pressure gauge

positioner and actuator items should be separetely.

Instrument air supply will be available at Minimum 4 bar g, Normal 8 bar g, Maximun 10 bar g, air quality according to ANSI/ ISA-7.0.01 and design pressure at 12.5 bar g.

this signal should be mentioned in PID

PC Sizes will be finalized after the approval Instrument calculation sheet document.

Mfr. & Model for air set should be mentioned.

Tubing, Fitting

Yes, stainless steel

Required Cv

Should be finalized and specified, relevant catalogs and order code should be submitted.

Leakage Class

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Pressure Control Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 7 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

GENERAL	1	Tag Number			320-CV-8201	
	2	Service			Check Valve	
	3	P&ID No.			17735-03	
	4	Location			Compressor Air Outlet	
	5					
	6					
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Dry Gas
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.		60 °C
	12	Design	Press.	Temp.	39 bar(g)	75 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14	Oper. Flow			35 Nm³/hr	
	15					
	16					
	17					
	18					
	19					
BODY	20	Type Of Body			Wafer type	
	21	Type Of valve			Plate type	
	21	Body Size			DN 20 (Process line = 3/4" ANSI 300# RF)	
	22	Body Material			SS316	
	23	Cracking Pressure			VTA	
	24	Inlet Connection	Outlet Conn.		RF	RF
	25	Inlet Rating	Outlet Rating		300#	300#
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
OPTIONS	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
	50					
	51					
PURCHASE	52	Manufacturer			According to approved vendor list	
	53	Model			Supplier to advise	
	54					
	55					
	56					

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Check Valve	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 8 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

The Tag No. of strainers should be shown on the PID.

GENERAL	1	Tag Number			320-ST-8201	
	2	Service			Y-strainer	
	3	P&ID No.			17735-03	
	4	Location			Compressor Air Inlet	
	5					
	6					
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Dry Gas
	10	Pressure	Norm.	Max.	9,5 bar(g)	
	11	Temperature	Norm.	Max.	46 °C	
	12	Design	Press.	Temp.	12,5 bar(g)	65 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14	Oper. Flow			35 Nm³/hr	
	15					
	16					
	17					
	18					
	19					
BODY	20	Type Of Body			Y-strainer	
	21	Connection			3/4" 300# RF	
	22	Body Material			SS 316	
	23	Mesh Material			SS 316	
	24	Mesh Size			0,5 mm (Supplier to advise)	
	25					
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
	46					
CERTIFICATES	47	3.1 Material certificate			Yes	
	48					
	49					
	50					
	51					
	52					
PURCHASE	53	Manufacturer			According to approved vendor list	
	54	Model			Supplier to advise	
	55					
	56					
	57					

75 °C

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Y-Strainer	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 9 of 10
Rev	By	Date	Description		Based on P&ID Rev.01

GENERAL	1	Tag Number			320-ST-8202	
	2	Service			Y-strainer	
	3	P&ID No.			17735-03	
	4	Location			Cooling Water Inlet	
	5					
	6					
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Cooling Water	Liquid
	10	Pressure	Norm.	Max.	4,5 bar(g)	
	11	Temperature	Norm.	Max.	36 °C	
	12	Design	Press.	Temp.	7 bar(g)	65 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14	Oper. Flow			1 Nm³/hr	
	15					
	16					
	17					
	18					
	19					
BODY	20	Type Of Body			Y-strainer	
	21	Connection			3/4" 150# RF	
	22	Body Material			Carbon steel	
	23	Mesh Material			SS 316	
	24	Mesh Size			0,5 mm (Supplier to advise)	
	25					
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
	46					
CERTIFICATES	47	3.1 Material certificate			Yes	
	48					
	49					
	50					
	51					
	52					
PURCHASE	53	Manufacturer			According to approved vendor list	
	54	Model			Supplier to advise	
	55					
	56					
	57					

75 °C

				VALVE DATASHEET	شرکت توسعه صنعت لاوان Lavan Industry Development Company
				Y-Strainer	
				Airpack Netherlands	
01	SK	9-11-2023	For Approval		Sheet 10 of 10
Rev	By	Date	Description		Based on P&ID Rev.01