

	LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT							
	Instrument Data Sheets							
	Document No. 17735-12							Page
	Project No. N278	Vendor Doc. VD	P.O. No. 6019	Department IN	Document Type DS	Serial No 0013	Revision 04	Page 1 of 31

Airpack B.V. - Air Compressor –

Integrated Methanol and Ammonia Plant

17735-COM Instrument Data Sheets (K020)

code-1
M. V

04	17-04-2024	Issued for Approval	L.K.	S.K.	J.J.
03	11-03-2024	Issued for Approval	L.K.	S.K.	J.J.
02	15-12-2023	Issued for Approval	L.K.	S.K.	J.J.
01	09-11-2023	Issued for Approval	T.T.	S.K.	J.J.
REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

This document has been produced by Contractor for LIDCO. It is confidential and cannot be disclosed to or used by any third party for any purpose without prior written consent.

	LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT						
	Instrument Data Sheets						
Document No. 17735-12							
Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision	Page
N278	VD	6019	IN	DS	0013	04	Page 2 of 31

LIST OF REVISED PAGES

Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05
1	X	X	X	X		26	X	X	X	X		51						76					
2	X	X	X	X		27		X	X	X		52						77					
3	X	X	X	X		28		X	X	X		53						78					
4	X	X	X	X		29		X	X	X		54						79					
5	X	X	X	X		30		X	X	X		55						80					
6	X	X	X	X		31		X	X	X		56						81					
7	X	X	X	X		32						57						82					
8	X	X	X	X		33						58						83					
9	X	X	X	X		34						59						84					
10	X	X	X	X		35						60						85					
11	X	X	X	X		36						61						86					
12	X	X	X	X		37						62						87					
13	X	X	X	X		38						63						88					
14	X	X	X	X		39						64						89					
15	X	X	X	X		40						65						90					
16	X	X	X	X		41						66						91					
17	X	X	X	X		42						67						92					
18	X	X	X	X		43						68						ATTACHMENT					
19	X	X	X	X		44						69						1					
20	X	X	X	X		45						70						2					
21	X	X	X	X		46						71						3					
22	X	X	X	X		47						72						4					
23	X	X	X	X		48						73						5					
24	X	X	X	X		49						74						6					
25	X	X	X	X		50						75						7					

INDEX			
No.	Device	Tag Number	Page
1	Pressure Gauge	320PG-8201	4
2	Pressure Gauge	320PG-8202	5
3	Pressure Gauge	320PG-8203	6
4	Pressure Gauge	320PG-8204	7
5	Pressure Transmitter	320PT-8201	8
6	Pressure Transmitter	320PT-8202	9
7	Pressure Transmitter	320PT-8203	10
8	Pressure Transmitter	320PT-8204	11
9	Temperature Transmitter	320TT-8201	12
10	Thermowell + Element	320TW-8201	13
11	Temperature Transmitter	320TT-8202	14
12	Thermowell + Element	320TW-8202	15
13	Temperature Transmitter	320TT-8203	16
14	Thermowell + Element	320TW-8203	17
15	Temperature Transmitter	320TT-8204	18
16	Thermowell + Element	320TW-8204	19
17	Temperature Transmitter	320TT-8205	20
18	Thermowell + Element	320TW-8205	21
19	Temperature Gauge	320TG-8206	22
20	Thermowell	320TW-8206	23
21	Temperature Gauge	320TG-8207	24
22	Thermowell	320TW-8207	25
23	Temperature Gauge	320TG-8208	26
24	Thermowell	320TW-8208	27
25	Temperature Gauge	320TG-8209	28
26	Thermowell	320TW-8209	29
27	Temperature Gauge	320TG-8210, 320TG-8211	30
28	Thermowell	320TW-8210, 320TW-8211	31
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			

Notes:

				INSTRUMENT DATASHEET Index 	شرکت توسعه کامپوت لوان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval		
03	LK	11-3-2024	For Approval		
02	LK	15-12-2023	For Approval		
01	TT	9-11-2023	For Approval		
Rev	Bv	Date	Description	Sheet	3 of 31
				Based on P&ID	Rev.08

GENERAL	1	Tag Number		320PG-8201	
	2	Service		Air pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Package inlet	
	5	Ingress Protection		IP65	
	6	Line number		1"-IA-320-01-D42-N	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	9,5 bar(g)	
	11	Temperature	Norm. Max.	46 °C	
	12	Design	Press. Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14				
	15				
	16				
GAUGE	17				
	18				
	19	Type		Bourdon tube	
	20	Range	Unit	0...16	bar(g)
	21	Mounting		Panel mounted, with front flange	
	22	Dial Size	Dial Color	100 mm	White surface, black numbers
	23	Case Material		SS316L	
	24	Ring Construction	Ring Material	Bayonet	SS316L
	25	Blow-Out Protection		Yes @ Back, including baffle wall	
	26	Lens Material		Shatterproof laminated safety glass	
	27	Pressure Element Material		SS316L	
	28	Socket Material		SS316L	
	29	Connection Size		1/2" NPT-M	
	30	Connection Location		Back-bottom	
	31	Movement Material		SS316L	
	32	Nominal Accuracy		±1,0 % of span	
	33	Gauge Filling		Glycerin	
	34	Over Range Protection		1,3 x full scale value	
35					
36					
37					
OPTIONS	38	Snubber	Material	N/A	N/A
	39	Gauge Savers	Material	N/A	N/A
	40	Manifold (Block & Bleed)		Yes (2-way manifolds)	
	41	Block valve (Hand ball valve)		Yes (3/4")	
	42	Tag plate		SS316, Plate with steel wire	
	43				
CERTIFICATES	44				
	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
PURCHASE	50				
	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
56					
57					

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET		 شرکت توسعه صنایع لایان Lavan Industry Development Company	
				Pressure Gauge			
04	LK	17-4-2024	For Approval	 Airpack Netherlands		Sheet 4 of 31	
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	IT	9-11-2023	For Approval				
Rev	By	Date	Description			Based on P&ID Rev.08	

GENERAL	1	Tag Number		320PG-8202	
	2	Service		Air pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Suction 2nd stage	
	5	Ingress Protection		IP65	
	6	Line number		3/4"-IA-320-05-D42-H	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	22,1 bar(g)	
	11	Temperature	Norm. Max.	60 °C	
	12	Design	Press. Temp.	39 bar(g)	157 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14				
	15				
	16				
GAUGE	17				
	19	Type		Bourdon tube	
	20	Range	Unit	0...40	bar(g)
	21	Mounting		Panel mounted, with front flange	
	22	Dial Size	Dial Color	100 mm	White surface, black numbers
	23	Case Material		SS316L	
	24	Ring Construction	Ring Material	Bayonet	SS316L
	25	Blow-Out Protection		Yes @ Back, including baffle wall	
	26	Lens Material		Shatterproof laminated safety glass	
	27	Pressure Element Material		SS316L	
	28	Socket Material		SS316L	
	29	Connection Size		1/2" NPT-M	
	30	Connection Location		Back-bottom	
	31	Movement Material		SS316L	
	32	Nominal Accuracy		±1,0 % of span	
	33	Gauge Filling		Silicone	
	34	Over Range Protection		1,3 x full scale value	
	OPTIONS	35			
36					
37					
38		Snubber	Material	N/A	N/A
39		Gauge Savers	Material	N/A	N/A
40		Manifold (Block & Bleed)		Yes (2-way manifolds)	
41		Block valve (Hand ball valve)		Yes (3/4")	
42		Tag plate		SS316, Plate with steel wire	
CERTIFICATES	43				
	44				
	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
	50				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET Pressure Gauge 			
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	IT	9-11-2023	For Approval				
Rev	By	Date	Description				

GENERAL	1	Tag Number		320PG-8203	
	2	Service		Gas pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Outlet package	
	5	Ingress Protection		IP65	
	6	Line number		3/4"-IA-320-09-D42-N	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	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				
	15				
	16				
GAUGE	17				
	18				
	19	Type		Bourdon tube	
	20	Range	Unit	0...60	bar(g)
	21	Mounting		Panel mounted, with front flange	
	22	Dial Size	Dial Color	100 mm	White surface, black numbers
	23	Case Material		SS316L	
	24	Ring Construction	Ring Material	Bayonet	SS316L
	25	Blow-Out Protection		Yes @ Back, including baffle wall	
	26	Lens Material		Shatterproof laminated safety glass	
	27	Pressure Element Material		SS316L	
	28	Socket Material		SS316L	
	29	Connection Size		1/2" NPT-M	
	30	Connection Location		Back-bottom	
	31	Movement Material		SS316L	
	32	Nominal Accuracy		±1,0 % of span	
	33	Gauge Filling		Silicone	
	34	Over Range Protection		1,3 x full scale value	
	35				
	OPTIONS	36			
37					
38		Snubber	Material	N/A	N/A
39		Gauge Savers	Material	N/A	N/A
40		Manifold (Block & Bleed)		Yes (2-way manifolds)	
41		Block valve (Hand ball valve)		Yes (3/4")	
42		Tag plate		SS316, Plate with steel wire	
43					
CERTIFICATES	44				
	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
	50				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET Pressure Gauge 			
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	IT	9-11-2023	For Approval				
Rev	By	Date	Description				

GENERAL	1	Tag Number		320PG-8204	
	2	Service		Liquid pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Cooling water inlet	
	5	Ingress Protection		IP65	
	6	Line number		3/4"-CWS-320-20-B24C-N	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Water	Liquid
	10	Pressure	Norm. Max.	4,5 bar(g)	
	11	Temperature	Norm. Max.	36 °C	
	12	Design	Press. Temp.	7 bar(g)	75 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14				
	15				
	16				
GAUGE	19	Type		Bourdon tube	
	20	Range	Unit	0...10	bar(g)
	21	Mounting		Panel mounted, with front flange	
	22	Dial Size	Dial Color	100 mm	White surface, black numbers
	23	Case Material		SS316L	
	24	Ring Construction	Ring Material	Bayonet	SS316L
	25	Blow-Out Protection		Yes @ Back, including baffle wall	
	26	Lens Material		Shatterproof laminated safety glass	
	27	Pressure Element Material		SS316L	
	28	Socket Material		SS316L	
	29	Connection Size		1/2" NPT-M	
	30	Connection Location		Back-bottom	
	31	Movement Material		SS316L	
	32	Nominal Accuracy		±1,0 % of span	
	33	Gauge Filling		Glycerine	
	34	Over Range Protection		1,3 x full scale value	
	35				
	OPTIONS	38	Snubber	Material	N/A
39		Gauge Savers	Material	N/A	N/A
40		Manifold (Block & Bleed)		Yes (2-way manifolds)	
41		Block valve (Hand ball valve)		Yes (3/4")	
42		Tag plate		SS316, Plate with steel wire	
43					
CERTIFICATES	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
	50				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET		 	
				Pressure Gauge			
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	IT	9-11-2023	For Approval				
Rev	By	Date	Description				

Sheet 7 of 31
 Based on P&ID Rev.08

GENERAL	1	Tag Number		320PT-8201	
	2	Service		Air pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Package inlet	
	5	Ingress Protection		IP65	
	6	Line number		1"-IA-320-01-D42-N	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	9,5 bar(g)	
	11	Temperature	Norm. Max.	46 °C	
	12	Design	Press. Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL L	7,5 bar(g)	
	15		H HH	12 bar(g)	
	16				
TRANSMITTER	19	Function		Field mounted	
	20	Element Type		Diaphragm	
	21	Element Material		SS316L	
	22	Housing Material		SS316L	
	23	Power Supply		24 VDC, 2-wire, loop powered	
	24	Process Conn.	Electric Conn.	½" NPTM	ISO M20 x 1,5
	25	Accuracy		± 0.1% of span	
	26	Calibrated Range	Unit	0...16	bar(g)
	27	Adjustable Range	Unit	VTA	bar(g)
	28	Allow. Press.	Allow. Temp.		
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4 - 20 mA	
	31	Sensor Fill Fluid		Glycerine	
	32				
	33				
OPTIONS	37	Integral Meter	Scale	Yes, LCD	bar(g)
	38	Lightning And Surge Protection		N/A	
	39	Mounting facilities		Bracket	
	40	Manifold (Block & Bleed)		Yes (2-way manifolds)	
	41	Housing ground connection		Yes, external (tightened with screws)	
	42	Cable Gland		Yes	
	43	Block valve (Hand ball valve)		Yes (3/4")	
	44	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
	50				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

GENERAL	1	Tag Number		320PT-8202	
	2	Service		Air pressure	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		2nd stage suction	
	5	Ingress Protection		IP65	
	6	Line number		3/4"-IA-320-05-D42-H	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	22,1 bar(g)	
	11	Temperature	Norm. Max.	60 °C	
	12	Design	Press. Temp.	39 bar(g)	157 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL L	15,5 bar(g)	19 bar(g)
	15		H HH		
	16				
	17				
TRANSMITTER	19	Function		Field mounted	
	20	Element Type		Diaphragm	
	21	Element Material		SS316L	
	22	Housing Material		SS316L	
	23	Power Supply		24 VDC, 2-wire, loop powered	
	24	Process Conn.	Electric Conn.	½" NPTM	ISO M20 x 1,5
	25	Accuracy		± 0.1% of span	
	26	Calibrated Range	Unit	0...60	bar(g)
	27	Adjustable Range	Unit	VTA	bar(g)
	28	Allow. Press.	Allow. Temp.		
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4 - 20 mA	
	31	Sensor Fill Fluid		Silicone oil	
	32				
	33				
OPTIONS	37	Integral Meter	Scale	Yes, LCD	bar(g)
	38	Lightning And Surge Protection		N/A	
	39	Mounting facilities		Bracket	
	40	Manifold (Block & Bleed)		Yes (2-way manifolds)	
	41	Housing ground connection		Yes, external (tightened with screws)	
	42	Cable Gland		Yes	
	43	Block valve (Hand ball valve)		Yes (3/4")	
	44	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET Pressure Transmitter 	شرکت توسعه صنایع لافان  Lavan Industry Development Company	 9 of 31
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Bv	Date	Description		Sheet	Based on P&ID
						Rev.08

GENERAL	1	Tag Number			320PT-8203	
	2	Service			Air pressure	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Package outlet	
	5	Ingress Protection			IP65	
	6	Line number			3/4"-IA-320-10-D42-N	
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.		60 °C
	12	Design	Press.	Temp.	39 bar(g)	116 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14	Setpoint	LL	L		25 bar(g)
	H		HH		34 bar(g)	
	16					
17						
18						
TRANSMITTER	19	Function			Field mounted	
	20	Element Type			Diaphragm	
	21	Element Material			SS316L	
	22	Housing Material			SS316L	
	23	Power Supply			24 VDC, 2-wire, loop powered	
	24	Process Conn.	Electric Conn.		½" NPTM	ISO M20 x 1,5
	25	Accuracy			± 0.1% of span	
	26	Calibrated Range		Unit	0...60	bar(g)
	27	Adjustable Range		Unit	VTA	bar(g)
	28	Allow. Press.	Allow. Temp.			
	29	Communication Protocol			Smart , HART	
	30	Output Signal			4 - 20 mA	
	31	Sensor Fill Fluid			Silicone oil	
	32					
	33					
34						
35						
36						
OPTIONS	37	Integral Meter	Scale		Yes, LCD	bar(g)
	38	Lightning And Surge Protection			N/A	
	39	Mounting facilities			Bracket	
	40	Manifold (Block & Bleed)			Yes (2-way manifolds)	
	41	Housing ground connection			Yes, external (tightened with screws)	
	42	Cable Gland			Yes	
	43	Block valve (Hand ball valve)			Yes (3/4")	
	44	Tag plate			SS316, Plate with steel wire	
CERTIFICATES	45	Calibration certificate			Yes	
	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
	50					
PURCHASE	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

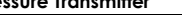
The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

					INSTRUMENT DATASHEET	شرکت توسعه صنعت لوات Lavan Industry Development Company 
					Pressure Transmitter	
						
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			Sheet 10 of 31
Rev	Bv	Date	Description			Based on P&ID Rev.08

GENERAL	1	Tag Number			320PT-8204	
	2	Service			Liquid Pressure	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Oil system	
	5	Ingress Protection			IP65	
	6	Line number			Oil pump	
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Oil	Liquid
	10	Pressure	Norm.	Max.	1,7 bar(g)	2 bar(g)
	11	Temperature	Norm.	Max.		70 °C
	12	Design	Press.	Temp.	2,5 bar(g)	85 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14	Setpoint	LL	L	1 bar(g)	
	H		HH			
	16					
17						
18						
TRANSMITTER	19	Function			Field mounted	
	20	Element Type			Diaphragm	
	21	Element Material			SS316L	
	22	Housing Material			SS316L	
	23	Power Supply			24 VDC, 2-wire, loop powered	
	24	Process Conn.	Electric Conn.		½" NPTM	ISO M20 x 1,5
	25	Accuracy			± 0.1% of span	
	26	Calibrated Range		Unit	-1...5	bar(g)
	27	Adjustable Range		Unit	VTA	bar(g)
	28	Allow. Press.	Allow. Temp.			
	29	Communication Protocol			Smart , HART	
	30	Output Signal			4 - 20 mA	
	31	Sensor Fill Fluid			Glycerin	
	32					
	33					
34						
35						
36						
OPTIONS	37	Integral Meter	Scale		Yes, LCD	bar(g)
	38	Lightning And Surge Protection			N/A	
	39	Mounting facilities			Bracket	
	40	Manifold (Block & Bleed)			Yes (2-way manifolds lockable)	
	41	Housing ground connection			Yes, external (tightened with screws)	
	42	Cable Gland			Yes	
	43	Block valve (Hand ball valve)			Yes (3/4")	
	44	Tag plate			SS316, Plate with steel wire	
CERTIFICATES	45	Calibration certificate			Yes	
	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
PURCHASE	50					
	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

The manifold material should be 316 Stainless Steel 2-valve complete of oval flanges with mounting bolts, gasket, etc

				INSTRUMENT DATASHEET Pressure Transmitter 	شرکت توسعه صنایع لایان  Lavan Industry Development Company
04	LK	17-4-2024	For Approval		
03	LK	11-3-2024	For Approval		
02	LK	15-12-2023	For Approval		
01	TT	9-11-2023	For Approval		
Rev	Bv	Date	Description		Sheet 11 of 31
					Based on P&ID Rev.08

GENERAL	1	Tag Number		320TT-8201	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		1st stage suction	
	5	Ingress Protection		IP65	
	6	Line number		Dampener KV-020-001	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	9,5 bar(g)	
	11	Temperature	Norm. Max.	46 °C	
	12	Design	Press. Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL	L	40 °C
	15		H	HH	
	16			50 °C	
TRANSMITTER	17	Function		Field mounted with remote element	
	18	Transmitter Type		Temperature	
	19	RTD Types Supported		N/A	
	20	Thermocouples Types Supported		Yes, TC type 'K'	
	21	MV Type Supported		N/A	
	22	Cold Junction Compensation		Internal compensation	
	23	Housing Material		SS 316	
	24	Power supply		24 VDC, 2 wire, loop powered	
	25	Electric Conn.		ISO M20 x 1,5	
	26	Accuracy		± 0.1% of span	
	27	Calibrated Range	Unit	0...100	°C
	28	Burn-out Protection/Loss of Input		Overrange	
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4-20 mA	
	31	Adjustable Range		Yes	
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
OPTIONS	42	Integral Meter	Scale	Yes, LCD	°C
	43	Lightning And Surge Protection		N/A	
	44	Mounting facilities		Bracket	
	45	Housing ground connection		Yes, external (tightened with screws)	
	46	Cable Gland		Yes	
	47	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	48	Calibration certificate		Yes	
	49				
	50				
	51				
	52				
PURCHASE	53	Manufacturer		According to approved vendor list	
	54	Model		VTA	
	55				
	56				
	57				

Notes:

					INSTRUMENT DATASHEET Temperature Transmitter	شرکت توسعه صنایع لایوان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			Sheet 12 of 31 Based on P&ID Rev.08
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Bv	Date	Description			

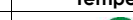
GENERAL	1	Thermowell Tag Number			320TW-8201	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Air inlet	
	5	Line number			Dampener KV-020-001	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	9,5 bar(g)	
	11	Temperature	Norm.	Max.	46 °C	
	12	Design	Press.	Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2" flange, RF 300#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			TBD	
	24	Bore Diameter			6,6 mm	
	25	U-length			200 mm	
	26					
ELEMENT	30	Element Tag Number			320TE-8201	
	31	Construction			Sensor with lead wire, transition and relief spring	
	32	Type Of Element			Type 'K'	
	33	Accuracy Class			Class 1	
	34	Outside Diameter Sensor			6 mm	
	35	Connection			3/4" NPT	
	36	Element Length			To fit in Thermowell	
	37	Type Of Cable			Armoured	
OPTIONS	38	Cable Length			5 m	
	39	Sheat Material			SS 316	
	40					
	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46					
	47					
	48					
	49	3.1 Material certificate			Yes	
CALCULATIONS	50	Calibration certificate			Yes	
	51					
	52					
	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET		شرکت توسعه صنایع لایوان Lavan Industry Development Company 
					Thermowell + Element		
							
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	TT	9-11-2023	For Approval				
Rev	Bv	Date	Description				Sheet 13 of 31
							Based on P&ID Rev.08

GENERAL	1	Tag Number		320TT-8202	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		1st stage discharge	
	5	Ingress Protection		IP65	
	6	Line number		Dampener KV-020-002	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	23,3 bar(g)	
	11	Temperature	Norm. Max.	157 °C	
	12	Design	Press. Temp.	30,5 bar(g)	175 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL	L	145 °C
	15		H	HH	
	16				
TRANSMITTER	17	Function		Field mounted with remote element	
	18	Transmitter Type		Temperature	
	19	RTD Types Supported		N/A	
	20	Thermocouples Types Supported		Yes, TC type 'K'	
	21	MV Type Supported		N/A	
	22	Cold Junction Compensation		Internal compensation	
	23	Housing Material		SS 316	
	24	Power supply		24 VDC, 2 wire, loop powered	
	25	Electric Conn.		ISO M20 x 1,5	
	26	Accuracy		± 0.1% of span	
	27	Calibrated Range	Unit	0...250	°C
	28	Burn-out Protection/Loss of Input		Overrange	
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4-20 mA	
	31	Adjustable Range		Yes	
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
OPTIONS	42	Integral Meter	Scale	Yes, LCD	°C
	43	Lightning And Surge Protection		N/A	
	44	Mounting facilities		Bracket	
	45	Housing ground connection		Yes, external (tightened with screws)	
	46	Cable Gland		Yes	
	47	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	48	Calibration certificate		Yes	
	49				
	50				
	51				
	52				
PURCHASE	53	Manufacturer		According to approved vendor list	
	54	Model		VTA	
	55				
	56				
	57				

Notes:

					INSTRUMENT DATASHEET Temperature Transmitter	شرکت توسعه صنایع لایوان Lavan Industry Development Company Sheet 14 of 31	 Based on P&ID Rev.08
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	TT	9-11-2023	For Approval				
Rev	Bv	Date	Description				

GENERAL	1	Thermowell Tag Number			320TW-8202	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			1st stage discharge	
	5	Line number			Dampener KV-020-002	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	23,3 bar(g)	
	11	Temperature	Norm.	Max.	157 °C	
	12	Design	Press.	Temp.	30,5 bar(g)	175 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2 flange, RF 600#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			6,6 mm	
	25	U-length			240 mm	
	26					
ELEMENT	30	Element Tag Number			320TE-8202	
	31	Construction			Sensor with lead wire, transition and relief spring	
	32	Type Of Element			Type 'K'	
	33	Accuracy Class			Class 1	
	34	Outside Diameter Sensor			6 mm	
	35	Connection			3/4" NPT	
	36	Element Length			To fit in Thermowell	
	37	Type Of Cable			Armoured	
OPTIONS	38	Cable Length			5 m	
	39	Sheat Material			SS 316	
	40					
	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46					
	47					
	48					
	49	3.1 Material certificate			Yes	
CALCULATIONS	50	Calibration certificate			Yes	
	51					
	52					
	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET	شركة لوان للصناعات والخدمات Lavan Industry Development Company 	
					Thermowell + Element		
							
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	TT	9-11-2023	For Approval				
Rev	Bv	Date	Description			Sheet 15 of 31 Based on P&ID Rev.08	

GENERAL	1	Tag Number		320TT-8203	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		2nd stage suction	
	5	Ingress Protection		IP65	
	6	Line number		Dampener KV-020-003	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	22,1 bar(g)	
	11	Temperature	Norm. Max.	60 °C	
	12	Design	Press. Temp.	39,0 bar(g)	157 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL	L	
	15		H	HH	
	16			65 °C	70 °C
TRANSMITTER	17	Function		Field mounted with remote element	
	18	Transmitter Type		Temperature	
	19	RTD Types Supported		N/A	
	20	Thermocouples Types Supported		Yes, TC type 'K'	
	21	MV Type Supported		N/A	
	22	Cold Junction Compensation		Internal compensation	
	23	Housing Material		SS 316	
	24	Power supply		24 VDC, 2 wire, loop powered	
	25	Electric Conn.		ISO M20 x 1,5	
	26	Accuracy		± 0.1% of span	
	27	Calibrated Range	Unit	0...250	°C
	28	Burn-out Protection/Loss of Input		Overrange	
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4-20 mA	
	31	Adjustable Range		Yes	
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
OPTIONS	42	Integral Meter	Scale	Yes, LCD	°C
	43	Lightning And Surge Protection		N/A	
	44	Mounting facilities		Bracket	
	45	Housing ground connection		Yes, external (tightened with screws)	
	46	Cable Gland		Yes	
	47	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	48	Calibration certificate		Yes	
	49				
	50				
	51				
	52				
PURCHASE	53	Manufacturer		According to approved vendor list	
	54	Model		VTA	
	55				
	56				
	57				

Notes:

					INSTRUMENT DATASHEET Temperature Transmitter	شرکت توسعه صنایع لایوان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval			Sheet 16 of 31
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Bv	Date	Description			Based on P&ID Rev.08

GENERAL	1	Thermowell Tag Number			320TW-8203	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			2nd stage suction	
	5	Line number			Dampener KV-020-003	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	22,1 bar(g)	
	11	Temperature	Norm.	Max.	60 °C	
	12	Design	Press.	Temp.	39,0 bar(g)	157 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2 flange, RF 300#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			6,6 mm	
	25	U-length			240 mm	
	26					
ELEMENT	30	Element Tag Number			320TE-8203	
	31	Construction			Sensor with lead wire, transition and relief spring	
	32	Type Of Element			Type 'K'	
	33	Accuracy Class			Class 1	
	34	Outside Diameter Sensor			6 mm	
	35	Connection			3/4" NPT	
	36	Element Length			To fit in Thermowell	
	37	Type Of Cable			Armoured	
OPTIONS	38	Cable Length			5m	
	39	Sheat Material			SS 316	
	40					
	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46					
	47					
	48					
	49	3.1 Material certificate			Yes	
CALCULATIONS	50	Calibration certificate			Yes	
	51					
	52					
	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET		شرکت توسعه صنایع لایان Lavan Industry Development Company 
					Thermowell + Element		
							
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	TT	9-11-2023	For Approval				
Rev	By	Date	Description				Sheet 17 of 31
					Based on P&ID		Rev.08

GENERAL	1	Tag Number		320TT-8204	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Second stage discharge	
	5	Ingress Protection		IP65	
	6	Line number		Dampener KV-020-004	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	30 bar(g)	
	11	Temperature	Norm. Max.	116 °C	
	12	Design	Press. Temp.	39 bar(g)	135 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL	L	105 °C
	15		H	HH	
	16				
TRANSMITTER	17	Function		Field mounted with remote element	
	18	Transmitter Type		Temperature	
	19	RTD Types Supported		N/A	
	20	Thermocouples Types Supported		Yes, TC type 'K'	
	21	MV Type Supported		N/A	
	22	Cold Junction Compensation		Internal compensation	
	23	Housing Material		SS 316	
	24	Power supply		24 VDC, 2 wire, loop powered	
	25	Electric Conn.		ISO M20 x 1.5	
	26	Accuracy		± 0.1% of span	
	27	Calibrated Range	Unit	0...160	°C
	28	Burn-out Protection/Loss of Input		Overrange	
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4-20 mA	
	31	Adjustable Range		Yes	
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
OPTIONS	42	Integral Meter	Scale	Yes, LCD	°C
	43	Lightning And Surge Protection		N/A	
	44	Mounting facilities		Bracket	
	45	Housing ground connection		Yes, external (tightened with screws)	
	46	Cable Gland		Yes	
	47	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	48	Calibration certificate		Yes	
	49				
	50				
	51				
	52				
PURCHASE	53	Manufacturer		According to approved vendor list	
	54	Model		VTA	
	55				
	56				
	57				

Notes:

				INSTRUMENT DATASHEET Temperature Transmitter 	شرکت نوسین صنعت گازها Lavan Industry Development Company 	
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Rv	Date	Description		Sheet	18 of 31
					Based on P&ID	Rev.08

GENERAL	1	Thermowell Tag Number			320TW-8204	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Second stage discharge	
	5	Line number			Dampener KV-020-004	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.	116 °C	
	12	Design	Press.	Temp.	39 bar(g)	135 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2 flange, RF 600#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			6,6 mm	
	25	U-length			240 mm	
	26					
ELEMENT	30	Element Tag Number			320TE-8204	
	31	Construction			Sensor with lead wire, transition and relief spring	
	32	Type Of Element			Type 'K'	
	33	Accuracy Class			Class 1	
	34	Outside Diameter Sensor			6 mm	
	35	Connection			3/4" NPT	
	36	Element Length			To fit in Thermowell	
	37	Type Of Cable			Armoured	
OPTIONS	38	Cable Length			5m	
	39	Sheat Material			SS 316	
	40					
	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46					
	47					
	48					
	49	3.1 Material certificate			Yes	
CALCULATIONS	50	Calibration certificate			Yes	
	51					
	52					
	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

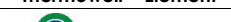
GENERAL	1	Tag Number		320TT-8205	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Package outlet	
	5	Ingress Protection		IP65	
	6	Line number		1 1/2"-IA-320-08-D42-N	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	30 bar(g)	
	11	Temperature	Norm. Max.	60°C	
	12	Design	Press. Temp.	39 bar(g)	116 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14	Setpoint	LL	L	
	15		H	HH	
	16			65	70
TRANSMITTER	17	Function		Field mounted with remote element	
	18	Transmitter Type		Temperature	
	19	RTD Types Supported		N/A	
	20	Thermocouples Types Supported		Yes, TC type 'K'	
	21	MV Type Supported		N/A	
	22	Cold Junction Compensation		Internal compensation	
	23	Housing Material		SS 316	
	24	Power supply		24 VDC, 2 wire, loop powered	
	25	Electric Conn.		ISO M20 x 1.5	
	26	Accuracy		± 0.1% of span	
	27	Calibrated Range	Unit	0...160	°C
	28	Burn-out Protection/Loss of Input		Overrange	
	29	Communication Protocol		Smart , HART	
	30	Output Signal		4-20 mA	
	31	Adjustable Range		Yes	
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
OPTIONS	42	Integral Meter	Scale	Yes, LCD	°C
	43	Lightning And Surge Protection		N/A	
	44	Mounting facilities		Bracket	
	45	Housing ground connection		Yes, external (tightened with screws)	
	46	Cable Gland		Yes	
	47	Tag plate		SS316, Plate with steel wire	
CERTIFICATES	48	Calibration certificate		Yes	
	49				
	50				
	51				
	52				
PURCHASE	53	Manufacturer		According to approved vendor list	
	54	Model		VTA	
	55				
	56				
	57				

Notes:

					INSTRUMENT DATASHEET Temperature Transmitter 	شرکت توسعه صنایع لافان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Bv	Date	Description		Sheet 20 of 31	
					Based on P&ID	Rev.08

GENERAL	1	Thermowell Tag Number			320TW-8205	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Package outlet	
	5	Line number			1 1/2"-IA-320-08-D42-N	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapour
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.	60 °C	
	12	Design	Press.	Temp.	39 bar(g)	116 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1" NPT	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			VTA	
	25	U-length			90 mm	
	26					
ELEMENT	30	Element Tag Number			320TE-8205	
	31	Construction			Sensor with lead wire, transition and relief spring	
	32	Type Of Element			Type 'K'	
	33	Accuracy Class			Class 1	
	34	Outside Diameter Sensor			6 mm	
	35	Connection			3/4" NPT	
	36	Element Length			To fit in Thermowell	
	37	Type Of Cable			Armoured	
OPTIONS	38	Cable Length			5m	
	39	Sheat Material			SS 316	
	40					
	41					
	42					
	43					
	44					
	45					
CERTIFICATES	46					
	47					
	48					
	49	3.1 Material certificate			Yes	
CALCULATIONS	50	Calibration certificate			Yes	
	51					
	52					
	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET	شرکت توسعه صنایع لوان Lavan Industry Development Company 
					Thermowell + Element	
						
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	By	Date	Description			Sheet 21 of 31
						Based on P&ID Rev.08

GENERAL	1	Tag Number			320TG-8206	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			1st stage suction	
	5	Ingress Protection			IP65	
	6	Line number			Dampener KV-020-001	
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	9,5 bar(g)	
	11	Temperature	Norm.	Max.	46 °C	
	12	Design	Press.	Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
	17					
GAUGE	18					
	19	Type			Bi-metallic	
	20	Range	Unit		0...100	°C
	21	Dial Size	Dial Color		100 mm	White surface, black numbers
	22	Case Material			SS316L	
	23	Stem Material			SS316L	
	24	Mounting			Locally mounted	
	25	Lens Material			Shatterproof laminated safety glass	
	26	Stem length	Stem Diameter		To fit in thermowell	6 mm
	27	External calibrator			No	
	28	Nominal Accuracy			±1.0% of full scale	
	29	Connection			3/4" NPT, to fit in thermowell	
	30	Liquid Filling			Glycerin	
	31	Tag plate			SS316, Plate with steel wire	
	32					
	33	FILLED SYSTEM	Compensation		-	
	34		Capillary Length		N/A	
	35		Capillary Material		N/A	
	36		Armor Material		N/A	
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	CERTIFICATES	45	Calibration certificate			Yes
46		3.1 Material certificate			Yes	
47						
48						
49						
50						
PURCHASE	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

				INSTRUMENT DATASHEET Temperature Gauge	شرکت توسعه صنعت لاوان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval		
03	LK	11-3-2024	For Approval		Sheet 22 of 31 Based on P&ID Rev.08
02	LK	15-12-2023	For Approval		
01	TT	9-11-2023	For Approval		
Rev	Bv	Date	Description		

GENERAL	1	Thermowell Tag Number			320TW-8206	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			1st stage suction	
	5	Line number			Dampener KV-020-001	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	9,5 bar(g)	
	11	Temperature	Norm.	Max.	46 °C	
	12	Design	Press.	Temp.	12,5 bar(g)	75 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	17					
	18					
	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2" flange, RF 300#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			VTA, to house 6mm element	
	25	U-length			200 mm	
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
OPTIONS	46					
	47					
	48					
CERTIFICATES	49	3.1 Material certificate			Yes	
	50					
	51					
	52					
CALCULATIONS	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

				INSTRUMENT DATASHEET		شرکت توسعه صنایع لایوان Lavan Industry Development Company 
				Thermowell		
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			Sheet 23 of 31
Rev	Bv	Date	Description			
				Based on P&ID		Rev.08

GENERAL	1	Tag Number			320TG-8207	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			1st stage discharge	
	5	Ingress Protection			IP65	
	6	Line number			Dampener KV-020-002	
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	23,3 bar(g)	
	11	Temperature	Norm.	Max.	157 °C	
	12	Design	Press.	Temp.	30,5 bar(g)	175 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
GAUGE	17					
	18					
	19	Type			Bi-metallic	
	20	Range	Unit		0...300	°C
	21	Dial Size	Dial Color		100 mm	White surface, black numbers
	22	Case Material			SS316L	
	23	Stem Material			SS316L	
	24	Mounting			Locally mounted	
	25	Lens Material			Shatterproof laminated safety glass	
	26	Stem length	Stem Diameter		To fit in thermowell	6 mm
	27	External Calibrator			No	
	28	Nominal Accuracy			±1.0% of full scale	
	29	Connection			3/4" NPT, to fit in thermowell	
	30	Liquid Filling			Glycerin	
	31	Tag plate			SS316, Plate with steel wire	
	32					
	33	FILLED SYSTEM	Compensation		-	
	34		Capillary Length		N/A	
	35		Capillary Material		N/A	
	36		Armor Material		N/A	
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
CERTIFICATES	45	Calibration certificate			Yes	
	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
	50					
PURCHASE	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

				INSTRUMENT DATASHEET Temperature Gauge 	شرکت توسعه صنایع لافان  Lavan Industry Development Company	Sheet 24 of 31 Based on P&ID Rev.08
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	Bv	Date	Description			

GENERAL	1	Thermowell Tag Number			320TW-8207	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			1st stage discharge	
	5	Line number			Dampener KV-020-002	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	23,3 bar(g)	
	11	Temperature	Norm.	Max.	157 °C	
	12	Design	Press.	Temp.	30,5 bar(g)	175 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	17					
	18					
	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2" flange, RF 600#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			VTA, to house 6mm element	
	25	U-length			240 mm	
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
OPTIONS	46					
	47					
	48					
CERTIFICATES	49	3.1 Material certificate			Yes	
	50					
	51					
	52					
CALCULATIONS	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET	شرکت توسعه صنایع لایان Lavan Industry Development Company 
					Thermowell	
						
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	By	Date	Description			Sheet 25 of 31 Based on P&ID Rev.08

GENERAL	1	Tag Number		320TG-8208	
	2	Service		Air temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		2nd stage discharge	
	5	Ingress Protection		IP65	
	6	Line number		Dampener KV-020-004	
	7	Area classification		Safe area	
	8				
PROCESS CONDITIONS	9	Fluid	State	Air	Vapor
	10	Pressure	Norm. Max.	30 bar(g)	
	11	Temperature	Norm. Max.	116 °C	
	12	Design	Press. Temp.	39 bar(g)	135 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14				
	15				
	16				
GAUGE	17				
	18				
	19	Type		Bi-metallic	
	20	Range	Unit	0...200	°C
	21	Dial Size	Dial Color	100 mm	White surface, black numbers
	22	Case Material		SS316L	
	23	Stem Material		SS316L	
	24	Mounting		Locally mounted	
	25	Lens Material		Shatterproof laminated safety glass	
	26	Stem length	Stem Diameter	To fit in thermowell	6 mm
	27	External Calibrator		No	
	28	Nominal Accuracy		±1.0% of full scale	
	29	Connection		3/4" NPT, to fit in thermowell	
	30	Liquid Filling		Glycerin	
	31	Tag plate		SS316, Plate with steel wire	
	32				
	33	FILLED SYSTEM	Compensation	-	
	34		Capillary Length	N/A	
	35		Capillary Material	N/A	
	36		Armor Material	N/A	
	37				
	38				
	39				
	40				
	41				
	42				
	43				
	44				
CERTIFICATES	45	Calibration certificate		Yes	
	46	3.1 Material certificate		Yes	
	47				
	48				
	49				
	50				
PURCHASE	51	Manufacturer		According to approved vendor list	
	52	Model		VTA	
	53				
	54				
	55				
	56				
	57				

NOTES :

				INSTRUMENT DATASHEET Temperature Gauge 	 Sheet 26 of 31 Based on P&ID Rev.08
04	LK	17-4-2024	For Approval		
03	LK	11-3-2024	For Approval		
02	LK	15-12-2023	For Approval		
01	IT	9-11-2023	For Approval		
Rev	By	Date	Description		

GENERAL	1	Thermowell Tag Number			320TW-8208	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			2nd stage discharge	
	5	Line number			Dampener KV-020-004	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.	116 °C	
	12	Design	Press.	Temp.	39 bar(g)	135 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	17					
	18					
	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1 1/2" flange, RF 600#	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			VTA, to house 6mm element	
	25	U-length			240 mm	
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
OPTIONS	46					
	47					
	48					
CERTIFICATES	49	3.1 Material certificate			Yes	
	50					
	51					
	52					
CALCULATIONS	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET		شرکت توسعه صنایع لایوان Lavan Industry Development Company	
					Thermowell			
								
04	LK	17-4-2024	For Approval					
03	LK	11-3-2024	For Approval					
02	LK	15-12-2023	For Approval					
01	TT	9-11-2023	For Approval				Sheet	27 of 31
Rev	By	Date	Description				Based on P&ID Rev.08	

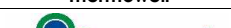
GENERAL	1	Tag Number			320TG-8209	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Package outlet	
	5	Ingress Protection			IP65	
	6	Line number			1 1/2"-IA-320-08-D42-N	
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.	60 °C	
	12	Design	Press.	Temp.	39 bar(g)	116 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
GAUGE	17					
	18					
	19	Type			Gas filled	
	20	Range	Unit		0...200	°C
	21	Dial Size	Dial Color		100 mm	White surface, black numbers
	22	Case Material			SS316L	
	23	Stem Material			SS316L	
	24	Mounting			Panel mounted, with front flange	
	25	Lens Material			Shatterproof laminated safety glass	
	26	Stem length	Stem Diameter		To fit in thermowell	6 mm
	27	External Calibrator			No	
	28	Nominal Accuracy			±1.0% of full scale	
	29	Connection Size			3/4" NPT, to fit in thermowell	
	30	Gauge Filling			Glycerin	
	31	Tag plate			SS316, Plate with steel wire	
	32					
	33	FILLED SYSTEM	Compensation		-	
	34		Capillary Length		5 m	
	35		Capillary Material		SS316	
	36		Armor Material		SS316	
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
CERTIFICATES	45	Calibration certificate			Yes	
	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
	50					
PURCHASE	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

				INSTRUMENT DATASHEET Temperature Gauge 	شرکت نوسعه کنسولت لوان Lavan Industry Development Company 
04	LK	17-4-2024	For Approval		
03	LK	11-3-2024	For Approval		
02	LK	15-12-2023	For Approval		
01	TT	9-11-2023	For Approval		
Rev	By	Date	Description		Sheet 28 of 31
					Based on P&ID Rev.08

GENERAL	1	Thermowell Tag Number			320TW-8209	
	2	Service			Air temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Package outlet	
	5	Line number			1 1/2"-IA-320-08-D42-N	
	6	Area classification			Safe area	
	7					
	8					
PROCESS CONDITIONS	9	Fluid	State		Air	Vapor
	10	Pressure	Norm.	Max.	30 bar(g)	
	11	Temperature	Norm.	Max.	60 °C	
	12	Design	Press.	Temp.	39 bar(g)	116 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
THERMOWELL	17					
	18					
	19	Material			SS 316	
	20	Construction			Solid bar stock	
	21	Process Connection			1" NPT	
	22	Instrument Connection			3/4" NPT	
	23	Stem Diameter			VTA	
	24	Bore Diameter			VTA, to house 6mm element	
	25	U-length			90 mm	
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
	45					
OPTIONS	46					
	47					
	48					
CERTIFICATES	49	3.1 Material certificate			Yes	
	50					
	51					
	52					
CALCULATIONS	53	Wake frequency calculation			Yes	
	54					
	55					
	56					
	57					

NOTES :

					INSTRUMENT DATASHEET	شرکت نوسعه کنست لوانت Lavan Industry Development Company 
					Thermowell	
						
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			Sheet 29 of 31
Rev	By	Date	Description			Based on P&ID Rev.08

GENERAL	1	Tag Number			320TG-8210, 320TG-8211	
	2	Service			Water temperature	
	3	P&ID No.			N278-VD-6019-PR-PID-0002	
	4	Location			Cooling water outlet	
	5	Ingress Protection			IP65	
	6	Line number			1 1/2"-CWR-320-24-B24C-N	1 1/2"-CWR-320-22-B24C-N
	7	Area classification			Safe area	
	8					
PROCESS CONDITIONS	9	Fluid	State		Water	Liquid
	10	Pressure	Norm.	Max.	4,4 bar(g)	
	11	Temperature	Norm.	Max.	36 °C	46 °C
	12	Design	Press.	Temp.	7 bar(g)	75 °C
	13	Ambient Temp.	Min.	Max.	0 °C	49 °C
	14					
	15					
	16					
GAUGE	17					
	18					
	19	Type			Gas filled	
	20	Range	Unit		0...100	°C
	21	Dial Size	Dial Color		100 mm	White surface, black numbers
	22	Case Material			SS316L	
	23	Stem Material			SS316L	
	24	Mounting			Panel mounted, with front flange	
	25	Lens Material			Shatterproof laminated safety glass	
	26	Stem length	Stem Diameter		To fit in thermowell	6 mm
	27	External Calibrator			No	
	28	Nominal Accuracy			±1.0% of full scale	
	29	Connection Size			3/4" NPT, to fit in thermowell	
	30	Gauge Filling			Glycerin	
	31	Tag plate			SS316, Plate with steel wire	
	32					
	33	FILLED SYSTEM	Compensation		-	
	34		Capillary Length		5 m	
	35		Capillary Material		SS316	
	36		Armor Material		SS316	
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	44					
CERTIFICATES	45	Calibration certificate			Yes	
	46	3.1 Material certificate			Yes	
	47					
	48					
	49					
	50					
PURCHASE	51	Manufacturer			According to approved vendor list	
	52	Model			VTA	
	53					
	54					
	55					
	56					
	57					

NOTES :

				INSTRUMENT DATASHEET Temperature Gauge 	شرکت توسعه صنایع لایان  Lavan Industry Development Company	
04	LK	17-4-2024	For Approval			
03	LK	11-3-2024	For Approval			
02	LK	15-12-2023	For Approval			
01	TT	9-11-2023	For Approval			
Rev	By	Date	Description		Sheet 30 of 31	
					Based on P&ID	Rev.08

GENERAL	1	Thermowell Tag Number		320TW-8210, 320TW-8211	
	2	Service		Water temperature	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		Cooling water outlet	
	5	Line number		1 1/2"-CWR-320-24-B24C-N	1 1/2"-CWR-320-22-B24C-N
	6	Area classification		Safe area	
	7				
	8				
PROCESS CONDITIONS	9	Fluid	State	Water	Liquid
	10	Pressure	Norm. Max.	4,4 bar(g)	
	11	Temperature	Norm. Max.	36 °C	46 °C
	12	Design	Press. Temp.	7 bar(g)	75 °C
	13	Ambient Temp.	Min. Max.	0 °C	49 °C
	14				
	15				
	16				
THERMOWELL	19	Material		SS 316	
	20	Construction		Solid bar stock	
	21	Process Connection		1" NPT	
	22	Instrument Connection		3/4" NPT	
	23	Stem Diameter		VTA	
	24	Bore Diameter		VTA, to house 6mm element	
	25	U-length		90 mm	
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				
	41				
	42				
	43				
	44				
	45				
	OPTIONS	46			
47					
48					
CERTIFICATES	49	3.1 Material certificate		Yes	
	50				
	51				
	52				
CALCULATIONS	53	Wake frequency calculation		Yes	
	54				
	55				
	56				
	57				

NOTES :

					INSTRUMENT DATASHEET	شرکت توسعه صنایع لایان Lavan Industry Development Company 	
					Thermowell		
							
04	LK	17-4-2024	For Approval				
03	LK	11-3-2024	For Approval				
02	LK	15-12-2023	For Approval				
01	TT	9-11-2023	For Approval				
Rev	By	Date	Description			Sheet 31 of 31 Based on P&ID Rev.08	