



**Ludan
Engineering**



**LUKOIL
OIL COMPANY**



LUDAN GROUP
global experience, local approach

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Petroleum products unloading

PRESSURE GAUGE DATA SHEET

Project Phase: DTDE

Project No.: 1217PJ

Client: S.C. PETROTEL - LUKOIL S.A.

Site Location: Ploiesti, Prahova, Romania

LUDAN Engineering S.R.L.

MASTER

Discipline: INSTRUMENTATION

Name: Manea D. Semnatura:

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0	01.11.2017	First Issue
1	19.12.2017	Second Issue
2	19.03.2018	Third Issue
3	16.04.2018	According to client's comment

Lucrari de proiectare pentru rampa CF descarcare produse grele

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GENERAL NOTES

1. Stainless steel tag plate with the minimum information: tag no, manufacturer, serial & model no, accuracy class, maximum overpressure, wetted, parts material, degree of protection.
2. Pressure gauge shall be suitable for pressures of 1.3 x maximum stated design pressure.
3. Vendor provide complete assembly: pressure gauge+manifold, pressure gauge+siphon or pressure gauge+direct threaded diaphragm seal, depend on case.
4. Full safety pattern fitted with shatterproof safety glass.
5. Diaphragm seal shall be provided with 1/2" NPT(F) connection for each instrument 1/2" NPT(M) and 1/2" NPT(M) for process connection.
6. Documentation & certification required:
 - Material certificate according EN 10204-3.1.
 - PED 97/23/EC certificate.
 - CE Marking; CE Declaration of Conformity.
 - Calibration certificate.
 - Maintenance manual in romanian and english.
 - Documentation shall be in romanian and english.

ABBREVIATIONS

G.N. = General Notes
N/A = Not Applicable



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-901	1217PJ-UE114-000-001-SH.02
	2	Service		LOCAL PRESS.INDIC. 02-P100A DISCHARGE	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		PR-02-012-250-RPA7A-EP	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		HEAVY OIL (NOTE1)	L
	7	Pressure Max.	Operating	8	5 bar(g)
	8	Temp. Maximum	Operating	130	90 °C
	9	Dens. Operating	Visc. Operating	1016 kg/m³	114 cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM ✓	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	30	Pointer		SS MICROMETER ADJUSTEMENT	
31	Nominal Accuracy		CLASS 1.0		
DIAPHRAGM SEAL	32	Type		DIRECT THREADED DIAPHRAGM SEAL	
	33	Process Connection		1/2" NPT(M)	
	34	Diaphragm Material		316(L) SS	
	35	Fill Fluid	Max. Temp.	SILICON OIL	
	36	Capillary Model		N/A	
	37	Capillary Length	Material	N/A	
	38	Flushing Connection		N/A	
	39	Top Housing Material		316(L) SS	
	40	Bottom Housing Material		316(L) SS	
	41	Connection To Gauge		1/2" NPT(F)	
OPTIONS	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		N/A	
	45	Syphon	Material	N/A	
	46	Connection		N/A	
	47	Snubber	Material	N/A	
	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
PURCHASE	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			

NOTES:
H2S CONCENTRATION: 0.2 - 3.5 %m/m



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-902	1217PJ-UE114-000-001-SH.02
	2	Service		LOCAL PRESS.INDIC. 02-P100R DISCHARGE	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		PR-02-013-250-RPA7A-EP	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		HEAVY OIL (NOTE1)	L
	7	Pressure Max.	Operating	8	5 bar(g)
	8	Temp. Maximum	Operating	130	90 °C
	9	Dens. Operating	Visc. Operating	1016 kg/m³	114 cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM J	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		DIRECT THREADED DIAPHRAGM SEAL	
33		Process Connection		1/2" NPT(M)	
34		Diaphragm Material		316(L) SS	
35		Fill Fluid	Max. Temp.	SILICON OIL	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		316(L) SS	
OPTIONS	40	Bottom Housing Material		316(L) SS	
	41	Connection To Gauge		1/2" NPT(F)	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		N/A	
	45	Syphon	Material	N/A	
	46	Connection		N/A	
PURCHASE	47	Snubber	Material	N/A	
	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			

NOTES:
H2S CONCENTRATION: 0.2 - 3.5 %m/m



Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-903	1217PJ-UE114-000-001-SH.02
	2	Service		LOCAL PRESS.INDIC. 02-NP1A DISCHARGE	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		PR-02-017-200-RPA7A-LP	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		HEAVY OIL (NOTE1)	L
	7	Pressure Max.	Operating	25	16 bar(g)
	8	Temp. Maximum	Operating	170	120 °C
	9	Dens. Operating	Visc. Operating	1016 kg/m³	114 cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM /	
	14	Measuring Range		0 - 40	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	30	Pointer		SS MICROMETER ADJUSTEMENT	
DIAPHRAGM SEAL	31	Nominal Accuracy		CLASS 1.0	
	32	Type		DIRECT THREADED DIAPHRAGM SEAL	
	33	Process Connection		1/2" NPT(M)	
	34	Diaphragm Material		316(L) SS	
	35	Fill Fluid	Max. Temp.	SILICON OIL	
	36	Capillary Model		N/A	
	37	Capillary Length	Material	N/A	
	38	Flushing Connection		N/A	
	39	Top Housing Material		316(L) SS	
	40	Bottom Housing Material		316(L) SS	
	41	Connection To Gauge		1/2" NPT(F)	
	42	Removable Diaphragm		N/A	
OPTIONS	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		N/A	
	45	Syphon	Material	N/A	
	46	Connection		N/A	
	47	Snubber	Material	N/A	
	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
PURCHASE	51	Manufacturer			
	52	Model			

NOTES:
H2S CONCENTRATION: 0.2 - 3.5 %m/m



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-904	1217PJ-UE114-000-001-SH.02
	2	Service		LOCAL PRESS.INDIC. 02-NP1R DISCHARGE	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		PR-02-018-200-RPA7A-LP	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		HEAVY OIL (NOTE1)	L
	7	Pressure Max.	Operating	25	16 bar(g)
	8	Temp. Maximum	Operating	170	120 °C
	9	Dens. Operating	Visc. Operating	1016 kg/m³	114 cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM ,	
	14	Measuring Range		0 - 40	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		DIRECT THREADED DIAPHRAGM SEAL	
33		Process Connection		1/2" NPT(M)	
34		Diaphragm Material		316(L) SS	
35		Fill Fluid	Max. Temp.	SILICON OIL	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		316(L) SS	
OPTIONS	40	Bottom Housing Material		316(L) SS	
	41	Connection To Gauge		1/2" NPT(F)	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		N/A	
	45	Syphon	Material	N/A	
	46	Connection		N/A	
	47	Snubber	Material	N/A	
PURCHASE	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			

NOTES:
H2S CONCENTRATION: 0.2 - 3.5 %m/m

Design

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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-906	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK1	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-031-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating		kg/m³ cSt
	10	Vaccum/pressure @ Max.			
	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
GAUGE	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		N/A	
33		Process Connection		N/A	
34		Diaphragm Material		N/A	
35		Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		N/A	
OPTIONS	40	Bottom Housing Material		N/A	
	41	Connection To Gauge		N/A	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to manifold) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
PURCHASE	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-907	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK2	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-032-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating		kg/m³ cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		N/A	
33		Process Connection		N/A	
34		Diaphragm Material		N/A	
35		Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		N/A	
OPTIONS	40	Bottom Housing Material		N/A	
	41	Connection To Gauge		N/A	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
PURCHASE	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					

Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-908	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK3	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-033-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating		kg/m³ cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM /	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		N/A	
33		Process Connection		N/A	
34		Diaphragm Material		N/A	
35		Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		N/A	
OPTIONS	40	Bottom Housing Material		N/A	
	41	Connection To Gauge		N/A	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
PURCHASE	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-909	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK4	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-034-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating	kg/m³	cSt
	10	Vaccum/pressure @ Max.			
	11	Pulsation	Vibration		
GAUGE	12	Type		DIRECT READING	
	13	Mounting		STEM	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	30	Pointer		SS MICROMETER ADJUSTEMENT	
	31	Nominal Accuracy		CLASS 1.0	
	DIAPHRAGM SEAL	32	Type		N/A
33		Process Connection		N/A	
34		Diaphragm Material		N/A	
35		Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		N/A	
40		Bottom Housing Material		N/A	
41		Connection To Gauge		N/A	
42		Removable Diaphragm		N/A	
OPTIONS	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
PURCHASE	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-910	1217PJ-UE114-000-001-SH.01	
	2	Service		LOCAL PRESS.INDIC. ARM TANK5		
	3	Area Classification		ZONE2, EEx IIA T3		
	4	Line / Equipment		LPS-02-035-50-RPA15A-H		
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH	
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V	
	7	Pressure Max.	Operating	6	4 bar(g)	
	8	Temp. Maximum	Operating	165	152 °C	
	9	Dens. Operating	Visc. Operating		kg/m³ cSt	
	10	Vaccum/pressure @ Max.				
GAUGE	11	Pulsation	Vibration			
	12	Type		DIRECT READING		
	13	Mounting		STEM /		
	14	Measuring Range		0 - 10	bar(g)	
	15	Overpressure		1.3 x FSV		
	16	Fig. Inter. & Minor Graduation		MANUF. STD.		
	17	Dial Size		160 mm		
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING		
	19	Case Material	Protection	SS	IP65	
	20	Gasket		PTFE		
	21	Ring Construction & Material		BAYONET LOCK, SS		
	22	Blowout Protection		PTFE		
	23	Process Connection		1/2" NPT(M)		
	24	Connection Location		LOWER MOUNT		
	25	Lens Material		LAMINATED SAFETY GLASS		
	26	Pressure Element Type		BORDON		
	27	Pressure Element Material		316 SS		
	28	Movement Material		SS		
	DIAPHRAGM SEAL	29	Socket Material		SS	
		30	Pointer		SS MICROMETER ADJUSTEMENT	
31		Nominal Accuracy		CLASS 1.0		
32		Type		N/A		
33		Process Connection		N/A		
34		Diaphragm Material		N/A		
35		Fill Fluid	Max. Temp.	N/A		
36		Capillary Model		N/A		
37		Capillary Length	Material	N/A		
38		Flushing Connection		N/A		
OPTIONS	39	Top Housing Material		N/A		
	40	Bottom Housing Material		N/A		
	41	Connection To Gauge		N/A		
	42	Removable Diaphragm		N/A		
	43	Ingress Protection		IP 65		
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS		
	45	Syphon	Material	PIG STYLE	316(L) SS	
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)		
	47	Snubber	Material	N/A		
	48	Pulsation Damper		N/A		
PURCHASE	49	Calibration	Certification	G.N.6	ATEX	
	50	Stainless Steel Tag		G.N.1		
	51	Manufacturer				
	52	Model				
NOTES:						



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-911	1217PJ-UE114-000-001-SH.01	
	2	Service		LOCAL PRESS.INDIC. ARM TANK6		
	3	Area Classification		ZONE2, EEx IIA T3		
	4	Line / Equipment		LPS-02-036-50-RPA15A-H		
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH	
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V	
	7	Pressure Max.	Operating	6	4 bar(g)	
	8	Temp. Maximum	Operating	165	152 °C	
	9	Dens. Operating	Visc. Operating		kg/m³ cSt	
	10	Vaccum/pressure @ Max.				
GAUGE	11	Pulsation	Vibration			
	12	Type		DIRECT READING		
	13	Mounting		STEM '		
	14	Measuring Range		0 - 10	bar(g)	
	15	Overpressure		1.3 x FSV		
	16	Fig. Inter. & Minor Graduation		MANUF. STD.		
	17	Dial Size		160 mm		
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING		
	19	Case Material	Protection	SS	IP65	
	20	Gasket		PTFE		
	21	Ring Construction & Material		BAYONET LOCK, SS		
	22	Blowout Protection		PTFE		
	23	Process Connection		1/2" NPT(M)		
	24	Connection Location		LOWER MOUNT		
	25	Lens Material		LAMINATED SAFETY GLASS		
	26	Pressure Element Type		BORDON		
	27	Pressure Element Material		316 SS		
	28	Movement Material		SS		
	29	Socket Material		SS		
	30	Pointer		SS MICROMETER ADJUSTEMENT		
	31	Nominal Accuracy		CLASS 1.0		
	DIAPHRAGM SEAL	32	Type		N/A	
		33	Process Connection		N/A	
		34	Diaphragm Material		N/A	
		35	Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A		
37		Capillary Length	Material	N/A		
38		Flushing Connection		N/A		
39		Top Housing Material		N/A		
40		Bottom Housing Material		N/A		
41		Connection To Gauge		N/A		
42		Removable Diaphragm		N/A		
OPTIONS		43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS		
	45	Syphon	Material	PIG STYLE	316(L) SS	
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)		
	47	Snubber	Material	N/A		
	48	Pulsation Damper		N/A		
	49	Calibration	Certification	G.N.6	ATEX	
PURCHASE	50	Stainless Steel Tag		G.N.1		
	51	Manufacturer				
	52	Model				
NOTES:						



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-912	1217PJ-UE114-000-001-SH.01	
	2	Service		LOCAL PRESS.INDIC. ARM TANK7		
	3	Area Classification		ZONE2, EEx IIA T3		
	4	Line / Equipment		LPS-02-037-50-RPA15A-H		
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH	
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V	
	7	Pressure Max.	Operating	6	4 bar(g)	
	8	Temp. Maximum	Operating	165	152 °C	
	9	Dens. Operating	Visc. Operating		kg/m³ cSt	
	10	Vaccum/pressure @ Max.				
GAUGE	11	Pulsation	Vibration			
	12	Type		DIRECT READING		
	13	Mounting		STEM		
	14	Measuring Range		0 - 10	bar(g)	
	15	Overpressure		1.3 x FSV		
	16	Fig. Inter. & Minor Graduation		MANUF. STD.		
	17	Dial Size		160 mm		
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING		
	19	Case Material	Protection	SS	IP65	
	20	Gasket		PTFE		
	21	Ring Construction & Material		BAYONET LOCK, SS		
	22	Blowout Protection		PTFE		
	23	Process Connection		1/2" NPT(M)		
	24	Connection Location		LOWER MOUNT		
	25	Lens Material		LAMINATED SAFETY GLASS		
	26	Pressure Element Type		BORDON		
	27	Pressure Element Material		316 SS		
	28	Movement Material		SS		
	DIAPHRAGM SEAL	29	Socket Material		SS	
		30	Pointer		SS MICROMETER ADJUSTEMENT	
31		Nominal Accuracy		CLASS 1.0		
32		Type		N/A		
33		Process Connection		N/A		
34		Diaphragm Material		N/A		
35		Fill Fluid	Max. Temp.	N/A		
36		Capillary Model		N/A		
37		Capillary Length	Material	N/A		
38		Flushing Connection		N/A		
OPTIONS	39	Top Housing Material		N/A		
	40	Bottom Housing Material		N/A		
	41	Connection To Gauge		N/A		
	42	Removable Diaphragm		N/A		
	43	Ingress Protection		IP 65		
	44	Manifold: Multiport valve w/ purge		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to siphon); 316(L) SS		
	45	Syphon	Material	PIG STYLE	316(L) SS	
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)		
	47	Snubber	Material	N/A		
	48	Pulsation Damper		N/A		
PURCHASE	49	Calibration	Certification	G.N.6	ATEX	
	50	Stainless Steel Tag		G.N.1		
	51	Manufacturer				
	52	Model				
NOTES:						



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-913	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK8	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-038-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating	kg/m³	cSt
	10	Vacuum/pressure @ Max.			
	11	Pulsation	Vibration		
GAUGE	12	Type		DIRECT READING	
	13	Mounting		STEM /	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	30	Pointer		SS MICROMETER ADJUSTEMENT	
	31	Nominal Accuracy		CLASS 1.0	
DIAPHRAGM SEAL	32	Type		N/A	
	33	Process Connection		N/A	
	34	Diaphragm Material		N/A	
	35	Fill Fluid	Max. Temp.	N/A	
	36	Capillary Model		N/A	
	37	Capillary Length	Material	N/A	
	38	Flushing Connection		N/A	
	39	Top Housing Material		N/A	
	40	Bottom Housing Material		N/A	
	41	Connection To Gauge		N/A	
42	Removable Diaphragm		N/A		
OPTIONS	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
PURCHASE	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					



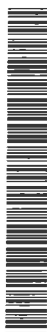
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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-915	1217PJ-UE114-000-001-SH.01
	2	Service		LOCAL PRESS.INDIC. ARM TANK	
	3	Area Classification		ZONE2, EEx IIA T3	
	4	Line / Equipment		LPS-02-082-50-RPA15A-H	
	5	Ambient temperature / Humidity		-26 ÷ 50 °C	66 ÷ 90 % RH
PROCESS CONDITIONS	6	Fluid & Phase		STEAM	V
	7	Pressure Max.	Operating	6	4 bar(g)
	8	Temp. Maximum	Operating	165	152 °C
	9	Dens. Operating	Visc. Operating		kg/m³ cSt
	10	Vaccum/pressure @ Max.			
GAUGE	11	Pulsation	Vibration		
	12	Type		DIRECT READING	
	13	Mounting		STEM	
	14	Measuring Range		0 - 10	bar(g)
	15	Overpressure		1.3 x FSV	
	16	Fig. Inter. & Minor Graduation		MANUF. STD.	
	17	Dial Size		160 mm	
	18	Dial Colour		WHITE ALUMINIUM WITH BLACK MARKING	
	19	Case Material	Protection	SS	IP65
	20	Gasket		PTFE	
	21	Ring Construction & Material		BAYONET LOCK, SS	
	22	Blowout Protection		PTFE	
	23	Process Connection		1/2" NPT(M)	
	24	Connection Location		LOWER MOUNT	
	25	Lens Material		LAMINATED SAFETY GLASS	
	26	Pressure Element Type		BORDON	
	27	Pressure Element Material		316 SS	
	28	Movement Material		SS	
	29	Socket Material		SS	
	DIAPHRAGM SEAL	30	Pointer		SS MICROMETER ADJUSTEMENT
31		Nominal Accuracy		CLASS 1.0	
32		Type		N/A	
33		Process Connection		N/A	
34		Diaphragm Material		N/A	
35		Fill Fluid	Max. Temp.	N/A	
36		Capillary Model		N/A	
37		Capillary Length	Material	N/A	
38		Flushing Connection		N/A	
39		Top Housing Material		N/A	
OPTIONS	40	Bottom Housing Material		N/A	
	41	Connection To Gauge		N/A	
	42	Removable Diaphragm		N/A	
	43	Ingress Protection		IP 65	
	44	Manifold: Multiport valve w/ purge		1/2"NPT(F)(to gauge)/1/2"NPT(M)(to siphon);316(L)SS	
	45	Syphon	Material	PIG STYLE	316(L) SS
	46	Connection		1/2" NPT(F) (to gauge) / 1/2" NPT(M) (to process)	
	47	Snubber	Material	N/A	
PURCHASE	48	Pulsation Damper		N/A	
	49	Calibration	Certification	G.N.6	ATEX
	50	Stainless Steel Tag		G.N.1	
	51	Manufacturer			
	52	Model			
NOTES:					



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Lucrari de proiectare pentru rampa CF descarcare produse grele

GENERAL	1	Tag Number	P & ID	02-PG-916	1217PJ-UE114-000-001-SH.01	
	2	Service	LOCAL PRESS.INDIC. NITROGEN			
	3	Area Classification	ZONE2, EEx IIA T3			
	4	Line / Equipment	NI-02-061-25-RPA2A1-NI			
	5	Ambient temperature / Humidity	-26 ÷ 50 °C	66 ÷ 90 % RH		
PROCESS CONDITIONS	6	Fluid & Phase	NITROGEN	G		
	7	Pressure Max.	Operating	6	3.5	bar(g)
	8	Temp. Maximum	Operating	25	15	°C
	9	Dens. Operating	Visc. Operating		kg/m³	cSt
	10	Vaccum/pressure @ Max.				
GAUGE	11	Pulsation	Vibration			
	12	Type	DIRECT READING			
	13	Mounting	STEM)			
	14	Measuring Range	0 - 10 bar(g)			
	15	Overpressure	1.3 x FSV			
	16	Fig. Inter. & Minor Graduation	MANUF. STD.			
	17	Dial Size	160 mm			
	18	Dial Colour	WHITE ALUMINIUM WITH BLACK MARKING			
	19	Case Material	Protection	SS	IP65	
	20	Gasket	PTFE			
	21	Ring Construction & Material	BAYONET LOCK, SS			
	22	Blowout Protection	PTFE			
	23	Process Connection	1/2" NPT(M)			
	24	Connection Location	LOWER MOUNT			
	25	Lens Material	LAMINATED SAFETY GLASS			
	26	Pressure Element Type	BORDON			
	27	Pressure Element Material	316 SS			
	28	Movement Material	SS			
	29	Socket Material	SS			
	30	Pointer	SS MICROMETER ADJUSTEMENT			
	31	Nominal Accuracy	CLASS 1.0			
	DIAPHRAGM SEAL	32	Type	N/A		
		33	Process Connection	N/A		
		34	Diaphragm Material	N/A		
		35	Fill Fluid	Max. Temp.	N/A	
36		Capillary Model	N/A			
37		Capillary Length	Material	N/A		
38		Flushing Connection	N/A			
39		Top Housing Material	N/A			
40		Bottom Housing Material	N/A			
41		Connection To Gauge	N/A			
42		Removable Diaphragm	N/A			
OPTIONS		43	Ingress Protection	IP 65		
	44	Manifold: Multiport valve w/ purge	1/2"NPT(F)(to gauge)/1/2"NPT(M)(to process);316(L)SS			
	45	Syphon	Material	N/A	N/A	
	46	Connection	N/A			
	47	Snubber	Material	N/A		
	48	Pulsation Damper	N/A			
	49	Calibration	Certification	G.N.6	ATEX	
	50	Stainless Steel Tag	G.N.1			
PURCHASE	51	Manufacturer				
	52	Model				
NOTES:						

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