Supply/fabrication and installation of porta cabin required for MCC for electrical panels of crude oil storage pumps at Bhaskar-1as per technical specifications given below.

Tentative overall dimensions of the porta cabin may be considered as 40'x20'. Rate to be quoted on per sq. ft. basis to take care of size variation as per detailed engineering.

TECHNICAL SPECIFICATION OF PORTA CABIN FOR MCC

Sr. No.	Description	Technical Specifications		
i	Base	Base structure made of MS I-Beam ISMB150		
ii	Base Frame	Periphery:	Hot Rolled Mild steel I-Beam ISMB 150	
		Internals	Hot Rolled MS I-Beam ISMB125 and MS SHS 50x50x2 mm	on width@ 2' C-C distance
			Hot Rolled MS I-Beam ISMB125	on length@ 4' C-C distance
iii	Top Frame	Periphery:	Hot Rolled MS SHS 50x50x2 mm	
		Internals	Hot rolled MS SHS 40x40x1.2 mm and RHS 40x20x1.2 mm	
iv	Corner Pillar	Customized profile fabricated from 4 mm mild steel sheet with support members at intervals		
v	Wall	75 mm fire retardant PUF sandwich panel (0.6 mm PPGI sheet on both sides)		
vi	Roof	PPGI sheet of 0.6 mm thickness. (75 mm fire retardant PUF sandwich panel (0.6 mm PPGI sheet on both sides) + secondary roof with truss & purlin		
vii	Flooring	6 mm MS Chequered plate + 3 mm rubber sheet		
viii	Internal Frame	As per sl.no.ii above		
ix	Insulation	75 mm Rockwool (100 kg / cubic mtr)		
x	Internal Panelling	10 mm thick Fire Retardant Plywood & finished with fire retardant paint		
xi	Lifting Point	Not any		
xii	Main Entry Door	Size of the door is 6.5 ft height x 3 ft width. Doors will be of external opening, external weather shades are provided. Door frame and outer finish will be fabricated from suitably profiled MS sheets and inner finish will have ACP sheet with all premium quality accessories.		
xiii	Material entry door	Suitable size for entry of Panels, to be finalized by Contractor during detailed engineering, based on MCC size, and future use.		
xiv	Windows	3 no Powder coated Aluminum window of size 3'x3' with 4 mm thick plain glass. Safety grill made of MS and weather shades will be provided for windows.		

xv	Electrical System	All wiring (concealed) suitable for 250V, 50 Hz and single-phase AC power supply will be provided in compliance with ISI standards. It will have 3 LED light, 2 Rotary grilled cabin fan, 1 LSB, 4 switch and socket board 6A, AC points 15A, and 1 bulk Head, All the switch boards, switches and sockets will be of modular type for giving good finish to the interiors. These are minimum requirements and may be augmented to meet operational requirements, during detailed engineering.
xvi	Painting	One coat of Epoxy primer will be applied followed by 02 coats of contrasting epoxy paint on top and bottom peripheries, corner post and wall surface from outside. Window grill will be painted by enamel paint. The client will be consulted with regards to paint shade.
		Internally, red oxide primer will be applied on all M. S. structure.
xvii	MCT Block	Supply and installation of MCT Block for Instrumentation and Electrical cables and proper sealing as per industry practice is part of this item.
xviii	Civil works	Civil works like foundation, pathway/ approach, etc. are not part of this item and shall be paid separately in other civil works as per measurement.

	DATA SHEET FOR SELF ACTUATED PRESSURE CONTROL VALVES	
DOC. NO. : EJB-2026-02-030-INS-IDS-001A	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATA SHEET FOR SELF ACTUATED PRESSURE CONTROL VALVES

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

				DATA SHEET FOR SELF ACTUATED PRESSURE CONTROL VALVES								
DOCUMENT NO.:		**EJB-2026-02-030-INS-IDS-001A**							**CLIENT: SUN PETROCHEMICALS PVT LTD**			
PROJECT NO. :		**EJB-2026-02-030**							**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**			
UNITS:-		**FLOW :**	**LIQUIDS-**	**m3/hr**		**GAS-Nm3/hr**				**STEAM-**		**PRESS.: Kg/cm2g**
GENERAL	1	Tag No.							AS PER CV REFERANCE TABLE			
	2	Quantity							AS PER CV REFERANCE TABLE			
	3	Line No.							AS PER CV REFERANCE TABLE			
	4	Line Size and SCH							AS PER CV REFERANCE TABLE			
	5	Service							AS PER CV REFERANCE TABLE			
	6	Fluid							AS PER CV REFERANCE TABLE			
	7	P&ID No.							AS PER CV REFERANCE TABLE			
	8	Valve Spec Required							Required			
VALVE	9	Size:		Body		Port			AS PER CV REFRANCE TABLE		VTA	
	10	End Connection				Rating			Flanged		600#	
	11	Body Material							ASTM A105			
	12	Trim Material							SS316			
	13	Set Point Kg/cm2g							HOLD			
	14	IMPULSE CONNECTION INT. EXT.							Internal			
	15	Connetion Size if External							NA			
	16	Type of regulator							Direct Operated			
	17a	Material of Diaphragm							SS316			
	17B	Spring Material							Inconel 750			
	18	No. of Ports							Single			
	19	Bonnet: Finned / Extended							Manufacturer Standard			
ACCESSORIES	20	Lubricator		Isolation Valve					-		-	
	21	Packing or Seals							-			
	22	Guides							-			
	23	Pressure Indicator							-			
	24	Relief valve							-			
	25	Spring Range							-			
SERVICE CONDITIONS	26	Regulation Upstream / DownStream							Downstream Regulation			
	27	Inlet Pressure		MIN.	NOR.	MAX.				72 kg/cm2g		
	28	Outlet Pressure		MIN.	NOR.	MAX.				72 kg/cm2g		
	29	Inlet Temperature				° C			7-45			
	30	Design Temperature				° C			150			
	31	Density @ FLOW TEMP. Kg/m3				Mol. Wt			815			
	32	Viscosity @ FLOW TEMP.				cP			3-30			
	33	Flow:		MIN.	NOR.	MAX.			-	200 M3/HR		-
	34	DP Shutoff							-			
	35	Critical Pressure				Critical Temperature		(kg/cm2(g), OC)	21.4		NA	
	36	Cp/Cv		Compressibility Factor					-		-	
OTHERS	37	Cv	CALCULATED			SELECTED			VTA		VTA	
	38	Noise Level							<85dBA			
	39	Make				Model No.			VTA		VTA	

NOTES:-

1. VTA-Vendor to Advice, TBC-To Be Confirmed, NA-Not Applicable.

HOLD:-

1.Valve size.

2.Valve set point.

REFERANCE TABLE - CONTROL VALVE								
Sr.No.	**TAG NO.**	**Oprating Flow m3/hr**	**SERVICE DESCRIPTION**	**P&ID. NO.**	**LINE DETAILS**	**LINE SIZE AND SCH**	**PROCESS FLUID**	**REMARKS**
1	BPCV-P102E	200	STABILIZED CRUDE OIL DISCHAGE LINE PRESSURE CONTOL VALVE	EJB-2026-02-030-PRO-DWG-002_R0	10"-PL-D7A-00256-IH	10" SCH 80	Crude oil, liquid	
2	FCV-P102E	HOLD	STABILIZED CRUDE OIL RECIRCULATION FLOW CONTOL VALVE	EJB-2026-02-030-PRO-DWG-002_R0	4"-PL-D7A-00255-IH	4" SCH 80	Crude oil, liquid	

	DATA SHEET FOR ORIFICE PLATE & FLANGES & RESTRICTION ORIFICE	
DOC. NO. : EJB-2026-02-030-INS-IDS-001B	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATA SHEET FOR
ORIFICE PLATE & FLANGES & RESTRICTION ORIFICE

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

sun Petrochemicals	**DATA SHEET FOR** **ORIFICE PLATE & FLANGES & RESTRICTION ORIFICE**	NAVITERA

DOCUMENT NO.:	**EJB-2026-02-030-INS-IDS-001B**	**CLIENT: SUN PETROCHEMICALS PVT LTD**	
PROJECT :	**EJB-2026-02-030**	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	

UNITS:- **FLOW :** **LIQUIDS-** m3/hr **'GAS-** Sm3/hr **STEAM-** **PRESS.:** Kg/cm2g **TEMP.:** deg C

ORIFICE PLATE WITH ASSEMBLY [X] **ORIFICE PLATE ONLY** [ ]

GENERAL	1	Tag No.			AS PER REFERANCE TABLE	
	2	Quantity			AS PER REFERANCE TABLE	
	3	Line No.			AS PER REFERANCE TABLE	
	4	Line Size			AS PER REFERANCE TABLE	
	5	Service			AS PER REFERANCE TABLE	
	6	P&ID No.			AS PER REFERANCE TABLE	
	7	Design Standard			ISO 5167 or ASME MFC-3M	
GENERAL	8	Differential Range		mmH2O	STD	
	9	Meter Maximum		Sm3/hr	60	
PLATE	10	Material			SS316 with NACE	
	11	Thickness 'W'		mm	VTA	
	12	BETA (b)= d/D			VTA	
	13	Bore Dia "d"		mm	VTA	
	14	Vent	Drain		N/A	N/A
	15	Carrier Ring	Material		N/A	N/A
	16	Plate Holder material			N/A	
	17	Type			Concentric square edged	
ORIFICE FITTING	18	Material			SS316 with NACE	
	19	Size & Rating			4" & 300#, Weld neck	
	20	Connection	Upstream Side	Downside stream	Sch 40	
	21	Line ID	O.D.	mm	102.26	114.3
	22	Gasket thickness		mm	VTA	
	23	Stud bolt Material			VTA	
	24	Nut Material			VTA	
	25	Design Standard			ANSI B 16.36	
	26	Tap Location			STD	
	27	Type			Flange Tap	
	28	Lubricants			N/A	
SERVICE CONDITIONS	29	Fluid and State			Crude oil, liquid	
	30	Flow	Min	Max Sm3/hr	HOLD	HOLD
	31	Flow Normal		Sm3/hr	60	
	32	Inlet Pressure	Design Pressure		7.2	45
	33	Inlet Temperature	° C	Design Temperature ° C	7-45	150
	34	Allowable DP		Kg/cm2	0.5	
	35	Critical Pressure	Critical Temperature		N/A	N/A
	36	Oper. Dnesity		Kg/m³	815	
	37	Steam SP. WT.		Kg/m³	N/A	
	38	Vapour Pressure		Kg/cm2A	0.97	
	39	Molecular Weight			NA	
	40	Ration of Specific heats		Cp/cv	NA	
	41	Operating Viscosity		cP	3-30	
	42	Compressibility Factor			1	
	43	Gas Specific Gravity			NA	
	44	Pipe Reynolds Number			VTA	
	45	CO2 Content	Partial Pressure		3.2 MOL%	NA
OTHERS	46	IBR Certification			N/A	
	47	Straight Length	US	DS	VTA	VTA
	48	Straight Length Pipe Material			CS-NACE	
	49	Make			VTA	

NOTES : N/A - NOT APPLICABLE; VTA - VENDOR TO ADVICE;

HOLDS:

REFERANCE TABLE - ORIFICE PLATE							
Sr.No.	**Tag No.**	**Line No.**	**Line Size**	**Service**	**P&ID No.**	**PROCESS FLUID**	**Qty**
1	FE-P201	4"-PL-B7A-00263	4"	TANK BOTTOM RECYCLE TO WELL FUILD OIL INTERCHANGER	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

	DATASHEET FOR MASS FLOW TRANSMITTER	
DOC. NO. : EJB-2026-02-030-INS-IDS-001C	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATASHEET FOR
MASS FLOW TRANSMITTER

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

sun Petrochemicals	**DATASHEET FOR MASS FLOW TRANSMITTER**	NAVITERA
DOC NO : EJB-2026-02-030-INS-IDS-001C	**CLIENT : SUN PETROCHEMICAL PVT LTD**	
PROJECT NO : EJB-2026-02-030	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	

GENERAL	1	FUNCTION	TRANSMIT & INDICATE	25	METERING CASE & FLANGE MOC	SS316
	2	TYPE	TWO WIRE ELECTRONIC - SMART WITH HART PROTOCOL	26	INTEGRAL INDICATOR	LCD / DIGITAL, WITH ENG UNITS
				27	SPAN & ZERO ADJ.	REQD, FIELD SETTABLE
	3	MEASUREMENT FUNCTION	FLOW MEASUREMENT	28	CABLE ENTRY	1/2" NPT(F)
	4	MEASURING METHOD/TYPE	AS PER REFERANCE TABLE	29	PROCESS CONN. HP /LP	VTS / 600# FLANGE
ELEMENT	5	TUBE MATERIAL	SS 304	30	DRAIN/VENT MATERIAL	SS 316
	6	LINER MATERIAL	TEFLON/PTFE SLEEVE	31	TAG PLATE	SS
	7	ELECTRODE TYPE	*	32	DIAPHRAGM MATERIAL	SS316L
	8	ELECTRODE MATL.	*		**OPTIONS :**	
	9	METER CASING	MANUFACTURER STANDARD	33	MOUNTING BRACKET & ACC.	UNIVERSAL TYPE
	10	ACCURACY	*			MOUNTING OF SS 304
	11	GROUNDING, TYPE & MATL.	*	34	3-WAY VALVE MANIFOLD	NA
	12	ENCLOSURE CLASS	WEATHERPROOF TO IP-65,EX(ia)			
	13	POWER SUPPLY	230 V AC			
	14	SELECTED SIZE	*	35	CERTIFICATES	INTRINSICALLY SAFE TO EX ia / Ex d
TRANSMITTER	15	OUTPUT SIGNAL	4 - 20 mA DC			PESO /DGMS APPROVED
	16	PERMISSIBLE LOAD	600 ohms			
	17	TRANSMITTER POWER SUPPLY	24 V DC, 2 WIRE		**PURCHASE:**	
	18	ACCURACY	0.075% OF SPAN	36	MANUFACTURER	VTA
	19	RANGEABILITY	100:1 OR BETTER	37	TRANSMITTER MODEL	VTA
	20	OVER RANGE PROTECTION	150% OF SPAN RANGE OR HIGHER	38	SENSOR MODEL	VTA
	21	MOUNTING	PANEL MOUNTED / WALL MOUNTED	39	SERIAL NO	VTA
	22	AREA CLASSIFICATION	Zone 1,2, Ex'd' II A / II B,T3			
	23	ENCLOSURE CLASS	WEATHERPROOF TO IP-65,EX(ia),Exd			
	24	ENCLOSURE MATERIAL	CAST AL WITH PU PAINT or SS			

NOTE: * VENDOR TO SPECIFY / CONFIRM

REFERANCE TABLE FOR FT																
Sr.No.	Tag No.	Line No.	Line Size	TEMP °C.		PR. Kg/cm2		CALIBRATED RANGE	MAXIMUM FLOW	DES.PRE	DES. TEMP	MEASURING METHOD/TYPE	MEASURING ELEMENT	Service	P&ID No.	PROCESS FLUID	qty
				nor	max	nor	max	kg/hr	m3/hr	Kg/cm2(g)	°C						
1	FT-P102E/1	10"-PL-D7A-00256-IH	10"	20	45	28	72		400	95	150	CORIOLIS TYPE	-	STABILIZED CRUDE OIL DISCHAGE LINE FLOW	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, Liquid	1
1	FT-P102E/2	4"-PL-D7A-00255-IH	4"	20	45	28	72		HOLD	95	150	CAPACITANCE	DIAPHRAGM	STABILIZED CRUDE OIL DISCHAGE LINE FLOW	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, Liquid	1

	DATA SHEET FOR **LEVEL INDICATOR TRANSMITTER**	
DOC. NO. : EJB-2026-02-030-INS-IDS-001D	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATA SHEET FOR
LEVEL INDICATOR TRANSMITTER

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

		DATA SHEET FOR LEVEL INDICATOR TRANSMITTER									
DOCUMENT NO.:	EJB-2026-02-030-INS-IDS-001D					**CLIENT: SUN PETROCHEMICAL PVT LTD**					
PROJECT :	EJB-2026-02-030					**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**					
GENERAL	1	Tag Number				LIT-P202					
	2	Service				PUMP HOUSE DRAIN PIT DT-101 LEVEL					
	3	P&ID No.				EJB-2026-02-030-PRO-DWG-002_R0					
	4	Design Pressure Kg/cm²-G		Min.	Max.	ATM					
	5	Design Temperature °C		Min.	Max.	7	150				
	6	Haz.Area Class.				Zone 1,2, Ex'd' II A / II B,T3					
	7	Ex-Certification				EEX ia IntrinsicSafe					
PROCESS CONDITIONS	8	Upper Fluid Name	Fluid State	Fluid Phase		Crude Oil, Liquid	Liquid	Liqud			
	9	Lower Fluid Name	Fluid State			Crude Oil, Liquid	Liquid				
	10					Min.	Nor.	Max.			
	11	Pressure		Kg/cm²-G		ATM					
	12	Temperature		°C		7 - 150					
	13	Upper Fluid Density Nor.		kg/m³		815					
	14	Upper Fluid Viscosity Nor.		cP		3 - 30					
	15	Upper Fluid[Liq] Corrosive		Dielec. Const.		YES					
	16	Lower Fluid Density Nor.		kg/m³		815					
	17	Lower Fluid Viscosity Nor.		cP		3 - 30					
	18	Lower Fluid [Liq] Corrosive		Dielec. Const.		YES	-				
	19	Foaming		Wave		Non - foaming	-				
	20	[Slurry / Solid] Weight % of Water				NA					
	21	[Solid] Repose Angle		Prtcl. Size		NA	NA				
	22	Solid Character				NA					
	23	Interface/Top Level Measurement				NA					
TRANSMITTER	26	Nozzle Height mm				300					
	27	Instrument Range mm		Min.	Max.	1300					
	28	Level Measuring Range mm		Min.	Max.	100	1300				
	29	Calibration Range mm		Min.	Max.	0	1500				
	30	Accuracy	Response Time			± 2mm	< 6 Sec at damping value 2s				
	31	Housing Material	Flange Material			Polyurethane Painted Aluminium	SS316 / SS 316L				
	32	Connection Size	Rating			VTS	300#, ASME B16.5				
	33	Facing	Finish			RF	125AARH				
	34	Power Supply	Output Signal			Foundation Fieldbus	FF				
	35	Ingress Protection				IP67					
	36	Frequency	Electrical Connection			26.5 GHz	1/2" NPT(F)				
	37	SIL Requirement				NA					
PROBE	38	Type	Sensor Length mm			Non-Contact type Radar	176 mm				
	39	Material	Resolution			SS316/316L	± 1 mm				
	40	Antenna Extension Piece	Dead Band Botto	mDead Band Top		NA	NA	Antenna height + 200mm			
OPTIONS	41	Stilling Well	Supply by			Required	Vessel Vendor				
	42	Size	Sch.			VTA	VTA				
	43	Ext. Chamber	Supply by			NA	NA				
	44	Chamber Size and Sch.	C-C Distance mm			NA	NA				
	45	Chamber Conn. Size	Rating	Facing	Finish	NA	NA	NA	NA		
	46	Ext. Chamber/ Cage Material				NA					
	47	Vent Conn. Size	Drain Conn. Size			NA	NA				
	48	Nozzle Orientation				Top					
	49	Integral Indicator				Integral LCD Display					
	50	Remote Indicator	Remote Inidcator Tag No.			NA	NA				
	51	Remote Indicator Range		Min.	Max.	NA	NA				
	52	Remote Indicator Extension Length				NA					
	53	Mounting Brackets				NA					
	54	Lighting Protection	Surge Protection			NA	NA				
	55	NACE Requirement	PWHT Requirement			NA	Not Required				
VESSEL	56	Equipment No.	Piping Class			PIT DT-101	B7A				
	57	Outer Dlameter	Internal Diameter			1m x 1m x 1.3 M DEPTH					
PURCHASE	58	Manufacturer				VTA					
	59	Model				VTA					
	60	Requisition No.				VTA					
NOTES:											

	DATASHEET FOR MOTOR OPERATED VALVES	
DOC. NO. : EJB-2026-02-030-INS-IDS-001E	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATASHEET FOR
MOTOR OPERATED VALVES

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

				DATASHEET FOR MOTOR OPERATED VALVES	
DOC. NO : EJB-2026-02-030-INS-IDS-001E				**CLIENT NAME : SUN PETROCHEMICAL PVT LTD**	
PROJECT NO : EJB-2026-02-030				**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	
NO.	**CONTENTS**				
1	Tag no.			As Per Table	
2	P&ID no.			As Per Table	
3	Location / Line no.			As Per Table	
4	Quantity			As Per Table	
5	Line size		mm	As Per Table	
6	Fluid service			As Per Table	
7	Fluid phase		S/L/V/M	L	
8	Fluid Composition			-	
9	Temperature		°C	As Per Table	
10	Density		kg/m3	As Per Table	
11	Viscosity		cP	As Per Table	
12	Vapor pressure		kg/cm2a	As Per Table	
13	Critical pressure		kg/cm2g	As Per Table	
14	MW			-	
15	Cp/Cv			-	
16	Z factor			-	
17	Flash %			-	
18	Sup. heat		°C	-	
19	Flowrate	Min.	kg/hr	54	
		Nor.	kg/hr	200	
		Max.	kg/hr	320	
20	Pressure	Inlet	kg/cm2g	As Per Table	
		Shut Off	kg/cm2g	As Per Table	
21	ΔP	Min. flow	kg/cm2	-	
		Nor. flow	kg/cm2	0.05	
		Max. flow	kg/cm2	0.075	
22	Design	Pressure	kg/cm2g	As Per Table	
		Temp.	°C	As Per Table	
23	MOC Pipe / Body / Internals			CS / CS / SS	
24	Fail position			Stay Put	
25	Leakage class			V	
26	Area classification	Zone		Zone-1	
		Group		IIA / IIB	
		Class		T4	
NOTES				Fluid Code: EO & EO2- Export Oil	
				1. Hazardous area classification is preliminary, will be finalized later on.	
				2. MOV closing time 15sec. max.	
				3. Electric supply to be arranged from CPF	
				4. The MOV should able to withstand the Pump Shutoff Pressure	

REFERENCE MOV														
Sr.No.	Tag No.	Line No.	Line Size	Density kg/m3	Viscosity Cp	Vapor pressure kg/cm2a	Critical pressure kg/cm2	PRESSURE kg/cm2	DESIGN PRESSURE kg/cm2	DESIGN TEMP. Deg C	Service	P&ID No.	PROCESS FLUID	qty
1	MOV-P101E	10"-PL-B7A-00213-IH	10"	815	3-30	0.97	21.4	28.56	45	150	CRUDE OIL DISCHARGE LINE VALVE P-101E PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	MOV-P101F	10"-PL-B7A-00221-IH	10"	815	3-30	0.97	21.4	28.56	45	150	CRUDE OIL DISCHARGE LINE VALVE P-101F PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
3	MOV-P102E	8"-PL-D7A-00238-IH	8"	815	3-30	0.97	21.4	72	95	150	CRUDE OIL DISCHARGE LINE VALVE P-102E PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
4	MOV-P102F	8"-PL-D7A-00245-IH	8"	815	3-30	0.97	21.4	72	95	150	CRUDE OIL DISCHARGE LINE VALVE P-102F PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

FUTURE QTY														
1	MOV-P101G	10"-PL-B7A-00229-IH	10"	815	3-30	0.97	21.4	28.56	45	150	CRUDE OIL DISCHARGE LINE VALVE P-101G PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	MOV-P102G	8"-PL-D7A-00252-IH	8"	815	3-30	0.97	21.4	72	95	150	CRUDE OIL DISCHARGE LINE VALVE P-102G PUMP	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

	DATASHEET FOR ON/OFF VALVES	
DOC. NO. : EJB-2026-02-030-INS-IDS-001F	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATASHEET FOR
ON/OFF VALVES

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

		DATASHEET FOR ON/OFF VALVES			
DOC. NO : EJB-2026-02-030-INS-IDS-001F		CLIENT NAME : SUN PETROCHEMICAL PVT LTD			
PROJECT NO : EJB-2026-02-030		PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF			
GENERAL	1	Tag No.	P&ID No.	XV-P201	EJB-2026-02-030-PRO-DWG-002_R0
	2	Service		TANK BOTTOM RECYCLE TO WELL FUILD OIL INTERCHANGER	
	3	Line No.	Pipe Class	4"-PL-B7A-00263	300#
	4	Line Size	Schedule/Thickness	4"	40
	5	Pipe Material	Insulation	CS	-
	6	Fire Safe Design	Corrosion Allowance	Fire-Safe to API 6FA	3
	7	Hazardous Area Classification		Zone 1,2, Ex'd' II A / II B,T3	
	8	SIL		SIL2	
PROCESS CONDITIONS	9	Process Fluid		Crude oil, Liquid	
	10	Fluid Phase	Corrosive Compound	Liquid Phase	Yes
	11	Design press. Max	Design Temp. Min/Max	45	150
	12	Shutoff Pressure		HOLD	
	13	Operating Pressure - Max/Nor/Min		7.2	
	14	Operating Temperature - Max/Nor/Min		150	
BODY AND TRIM	15	Manufacturer	Model	VTA	VTA
	16	Design Code	Design	API 6D	
	17	Valve Type		Ball Valve (Floating Ball Valve)	
	18	Valve Size In / Out	End Connection	4"	Flanged, RF
	19	Flange Size, Rating, Facing & Finish		4" 300, RF	
	20	Body/Bonnet Material		ASTM A216 GR.WCB (NACE MR0175 / ISO 15156 Compliant)	
	21	Ball Material	Trunnion Material	ASTM A182 F316 SS	
	22	Seat Material	Stem Material	('VTA) RPTFE / PEEK (soft seat)	ASTM A182 F316 SS
	23	Seal / O-Ring Material		VTA	
	24	Seat Ring Material	Seat (Metal / Soft)	VTA (Refer General Note 2)	Soft
	25	Gasket Material		SP. WINDING + INNER RING: SS316,FILLER:GRAPHITE, CS OUTER RING	
	26	Studbolt / Nut material		ASTM A193 Gr.B7M / ASTM A194 Gr.2HM (NACE)	
	27	Leakage Class	Fugitive Emission	Class VI	VTA (BS EN ISO 15848 PART-1 & PART-2 WITH LEAKAGE CLASS 'BH')
	28	NACE Compliance		Yes, NACE MR-0175 / ISO 15156 (Latest)	
	29	Torque : Break/Run/End/Stem		VTA	
	30	Packing Material		VTA	
ACTUATOR	31	Manufacturer	Model	VTA	VTA
	32	Type	Piston Acting	Pneumatic	VTA
	33	Orientation	Fire Proofing	Top Mounted	-
	34	Failure Position	Max. Shutoff Diff. Pressure	Fail close	HOLD
	35	Max. / Min. Design Pneumatic Pressure		Survo Gas Pressure : 5.5 /7.0 /9.0 (16 DESIGN) barg	
	36	Normal Oper. Pneumatic Pressure		Servo Gas Pressure : barg VTA barg	
	37	Actuator Material	Torque Safety Factor	Carbon steel	
	38	Pneumatic Connection	Material	SS316	
			Size	1/4"	
	39	Start Torque - Open / Close		VTA	
	40	Run Torque - Open / Close		VTA	
	41	End Torque - Open / Close		VTA	
	42	Handwheel	Stroke Time (Open / Close)	Not Applicable	VTA
SOLENOID VALVE	43	Manufacturer	Model No.	Required/ VTA	Required/ VTA
	44	Direct or Pilot Operation		-	
	45	Type	Tag No.	3/2-Way	(VTA)
	46	Material	Coil Insulation	SS316	VTA
	47	Power Supply / Tolerance	Power Consumption	24 VDC	4 W (VTA)
	48	Reset	Action on Energisation	-	-
	49	Cable Entry	Certification	1/2 Inch NPT (F) X 1 Nos	-
LIMIT SWITCH	50	Manufacturer	Model	VTA	VTA
	51	Type	Tag No.	Proximity type, 316 SS material	
	52	Limit Switch Contact Rating	Quantity	SPDT, 24VDC, 0.5A rated, gold plated	2
	53	Cable Entry	Certification	1/2" NPTF (2 ENTRIES, 1 DUMMY)	1 EX'D' PLUG
ACCESSORIES	54	Regulator	Relief Valve	YES (316SS)	
	55	Local Position Indicator		Mechanical Position Indicator Required	
	56	Partial Stroke Testing	Accumulator	-	-
	57	Avail. Power Supply		N/A	
	58	Tubes and Fittings		VTA	
	59	Speed Controls		YES	
	60	Material Certification		VTS	
PURCHASE	61	Requisition No.			
	62	PO Reference	Serial No.	-	-

Notes:
1. Fugitive Emission Class:
2. SOV Certification: Ex d
3. Power Fail Position: Close
- Partial stroke device fail:
- Solenoid valves (2oo2): Yes
4. Bolt/Nut Material:

DATASHEET OF
DIFFERENTIAL PRESSURE TRANSMITTERS

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

sun Petrochemicals	**DATASHEET OF DIFFERENTIAL PRESSURE TRANSMITTERS**	NAVITERA

DOC. NO. : EJB-2026-02-030-INS-IDS-001G	**CLIENT: SUN PETROCHEMICAL PVT LTD**
PROJECT NO : EJB-2026-02-030	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**

UNITS: Flow Liquid - M3/HR. Gas - NM3/HR. Pressure - Kg/cm2 Temperature - ^{o}C Level/Length - M

1	Type	Capillary type diff press		**DIAPHRAGM SEAL**	
2	Mounting	Remote		Type	Capillary type diff press
3	Case Material	SS 316		Wetted Parts	SS316
4	Hazardous Area Class	Zone 1,2, Ex'd' II A / II B,T3		Other Material	Bleed ring/ SS316L
5	Enclosure Class	IP 65,Exd,Exia	12	Process Connection	2", 300#
6	Power Supply	Loop powered 24V		Capillary Material	SS316L
7	Cable Entry	1/2" NPT(F)		Armour Material	SS316
8	Accuracy	+/- 0.075% of FSD		Capillary Length	3m (each)
9	Repeatability	0.1'%		Flushing Filling Connection	N/A
10	Output	4-20mA HART		**OPTIONS**	
			13	a) Mounting Accessories	2" Pipe mount, SS material
	MEASURING UNIT			b) 5 - Valve Manifold	N/A
	Service	Refer Table		c) Weather Proof	Yes
	Pressure Element	Diaphragm		d) Output meter (Integral display)	Required
	Element Material	SS316L	14	**Purchase**	
11	Socket Material	SS 316L		Manufacturer	VTA
	Wetted Material	SS316L		Model Number	VTA
	Connection Location	Bottom			

Notes:

1.VTA-Vendor to Advice ; NA - Not Applicable ; TBA-To be Adviced

2. Instrument should be SMART type and HART capable

3. Vendor to provide instrument termination details.

4. Instrument shall be provide with SS316 tag plate.316SS name plate attached to instrument head with 316SS Screws.316SS tag plate attached with 316SS binding wire.Traffolyte tag label bolted to the instrument support.

5. Unused gland entry shall be fitted with 316SS Ex'd 'Certified Pllugs

6. Documents required : Calibration reports, IP rating certificate, IOM manual, spares list and Sectional drawings

7. For painting and protection to follow as per client specification

8. Instrument shall be suitable for installation intrinsic safe circuit.

9. FRP canopy shall be provided for instrument.

10.Bleed rings shall be provided with 1/2" NPTF connection and a 1/2" drain valve,plugged each on LP side and HP side.

REFERANCE FOR DPT														
Sr.No.	Tag No.	Line No.	Line Size	INSTRUMENT RANGE kg/cm2(g)	CALIBRATION RANGE kg/cm2(g)	DIFF.OPER. PRESS. kg/cm2(g)	OPER. TEMP Deg C	PRESSURE kg/cm2	DESIGN PRESSURE kg/cm2	DESIGN TEMP.	Service	P&ID No.	PROCESS FLUID	qty
1	DPT-P101E	12"-PL-B7A-00207-IH	10"	0-1.0	0-1.0	0.2	7-45	ATM	45	150	ACROSS P101E PUMP DRAIN LINE SS-P101E	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	DPT-P101F	12"-PL-B7A-00215-IH	10"	0-1.0	0-1.0	0.2	7-45	ATM	45	150	ACROSS P101F PUMP DRAIN LINE SS-P101F	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
3	DPT-P102E	10"-PL-D7A-00240-IH	6"	0-1.0	0-1.0	0.2	7-45	28.56	95	150	ACROSS P102E PUMP DRAIN LINE SS-P102E	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
4	DPT-P102F	10"-PL-D7A-00241-IH	6"	0-1.0	0-1.0	0.2	7-45	28.56	95	150	ACROSS P102F PUMP DRAIN LINE SS-P102F	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

FUTURE QTY														
1	DPT-P101G	12"-PL-B7A-00223-IH	10"	0-1.0	0-1.0	0.2	7-45	ATM	45	150	ACROSS P101G PUMP DRAIN LINE SS-P101G	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	DPT-P102G	10"-PL-D7A-00247-IH	6"	0-1.0	0-1.0	0.2	7-45	28.56	95	150	ACROSS P102G PUMP DRAIN LINE SS-P102G	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

DATASHEET FOR PRESSURE GAUGES

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

sun Petrochemicals	**DATASHEET FOR PRESSURE GAUGES**	NAVITERA
DOC. NO : EJB-2026-02-030-INS-IDS-001H	**CLIENT NAME : SUN PETROCHEMICAL PVT LTD**	
PROJECT NO : EJB-2026-02-030	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	

Pressure Gauges

1	Type	DIAPHRAGM SEAL TYPE	18	Accessories	VTA
2	Mounting	DIRECT, BOTTOM CONNECTION	19	Material certificate	Required.
3	Dial Size	150 mm	20	Diaphragm Material	SS 316
4	Dial Color	White with black engravings		Wetted Parts Material	
5	Case Material	SS 304	21	Flange Material	SS 316
6	Bezel Ring	BAYONET TYPE, SS 304			
7	Window Material	Shatterproof glass			
8	Enclosure	Weatherproof to IP-65	22	Filling fluid	Silicon oil
9	Pressure Element	Bourdon Tube	23	Over Range Protection	130% OF FSD
10	Element Material	SS 316	24	Blow Out Protection	Required at back side
11	Socket material	SS 316	25	Options	
12	Movement material	SS 304		a) Gauge saver	NA
13	Process Connections	1 INCH; 300# RF; ASME B16.5		b) Snubber	NA
14	Instrument Connection	1/2" NPT(M)		c) Syphon	NA
15	Connection Location	Bottom		d) Dampener	NA
16	Zero adjustment	Micrometer Pointer (External)		e)Bleed Rings	Required
17	Accuracy	±1% FS			

NOTES:-
1.All certificates and documentation required to satisfy the conditions of the certification shall be provided in the Hazardous Area Dossier.
2.Bleed rings shall be provided with 1/2" NPTF connection and a 1/2" drain valve plugged on one side.

REFERANCE FOR PG													
Sr.No.	Tag No.	Line No.	Line Size	INSTRUMENT RANGE kg/cm2(g)	CALIBRATION RANGE kg/cm2(g)	OPER. PRESS. kg/cm2(g)	OPER. TEMP Deg C	DESIGN PRESSURE kg/cm2	DESIGN TEMP. Deg C	Service	P&ID No.	PROCESS FLUID	qty
1	PG-P101E	10"-PL-B7A-00213-IH	10"	0-50		28.56	7-45	45	150	DISCHAGE P101E PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	PG-P101F	10"-PL-B7A-00221-IH	10"	0-50		28.56	7-45	45	150	DISCHAGE P101F PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
3	PG-P102E	8"-PL-D7A-00238-IH	8"	0-100		72	7-45	95	150	DISCHAGE P102E PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
4	PG-P102F	8"-PL-D7A-00245-IH	8"	0-100		72	7-45	95	150	DISCHAGE P102F PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
5	PG-P201A	4"-PL-B7A-00263	4"	0-50		7.2	7-45	45	150	DISCHAGE P201A PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
6	PG-P201B	4"-PL-B7A-00265	4"	0-50		7.2	7-45	45	150	DISCHAGE P201B PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
7	PG-P202A	2"-PL-B7A-00267	2"	0-50		2.4	7-45	45	150	DISCHAGE P202A PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
8	PG-P202B	2"-PL-B7A-00269	2"	0-50		2.4	7-45	45	150	DISCHAGE P202B PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

FUTURE QTY													
1	PG-P101G	10"-PL-B7A-00229-IH	10"	0-50		28.56	7-45	45	150	DISCHAGE P101G PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1
2	PG-P102G	8"-PL-D7A-00252-IH	8"	0-100		72	7-45	95	150	DISCHAGE P102G PUMP PRESSURE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	1

	DATA SHEET FOR PRESSURE TRANSMITTER	
DOC. NO. : EJB-2026-02-030-INS-IDS-001I	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATA SHEET FOR
PRESSURE TRANSMITTER

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

sun Petrochemicals	**DATA SHEET FOR PRESSURE TRANSMITTER**	NAVITERA

DOCUMENT No.	**EJB-2026-02-030-INS-IDS-001I**	**CLIENT NAME : SUN PETROCHEMICAL PVT LTD**	
PROJECT:	**EJB-2026-02-030**	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	
UNITS:-	FLOW : LIQ:	GAS : STEAM:	PRESS.: $Kg/Cm^2(g)$ TEMP.: ^0C

	GENERAL		**MEASURING UNIT**		
1	Tag Number	AS PER REFERANCE TABLE	36	Service	AS PER REFERANCE TABLE
2	Service	AS PER REFERANCE TABLE	37	Element	Diaphragm
3	P&ID NO.	AS PER REFERANCE TABLE	38	Body Material	SS316
4	Line No.	AS PER REFERANCE TABLE	39	Element Material	SS316
5	Area Calssification	Zone 1,2, Ex'd' II A / II B,T3	40	Process Connection	1/2" NPTF
PROCESS CONDITIONS			**DIAPHRAGM SEAL**		
6	Fluid State	AS PER REFERANCE TABLE	42	Diaphgram Material	SS316
7	Pressure	AS PER REFERANCE TABLE	43	Other Parts	-
8	Temperature	AS PER REFERANCE TABLE	44	Process Connection	2"
9	Pressure	AS PER REFERANCE TABLE	45	Capillary Material	SS316
10	Design Pressure	AS PER REFERANCE TABLE	46	Armour Material	SS316
11	Design Temperature	AS PER REFERANCE TABLE	47	Capillary Length	6"
			48	Fill Fluid	VTA
TRANSMITTER				**OPTIONS**	
12	Type	Capacitve	49	Over range Protection	130% of range
13	Instrument Range	AS PER REFERANCE TABLE	50	Mounting Brackets	Required
14	Calibration Range	AS PER REFERANCE TABLE	51	Manifold	3 way 2 valve manifold
15	Function	VTA	52	Manifold Material	SS316
16	Housing Material	SS316	53	Manifold Make	VTA
17	Mounting	STD	54	Manifold Model	VTA
18	Enclousre	Aluminium	55	Indicator Scale	Kg/Cm2(g)
19	Output	2 wired, 4-20mA	56	Certification	REQUIRED
20	Power Supply	24Vdc loop powered.			
21	Air Supply	NA			
22	Cable Entry	STD			
23	Pneu. Connection	NA			
24	Accuracy	±0.1%.			
25	Integral Output Meter	Required			
26	Intrinsic Safety	Required			
27	Zero Adjustment	Required			
28	Span Adjustment	Required			
29	Plug for Spare Entry	STD			
30	Load Driving Capability	VTA			
31	Vent/ Drain Material	SS316			
32	Repeatability	±0.1%.			
33	HART communication	Latest Version Required			
34	Make	VTA			
35	Model	VTA			

REFERANCE FOR PT												
Sr.No.	**TAG NO.**	**SERVICE DESCRIPTION**	**PROCESS FLUID**	**P&ID. / F&G LAYOUT NO.**	**VESSEL / LINE / INSTRUMENT DETAILS**	**Line Size**	**INSTRUMENT RANGE kg/cm2(g)**	**CALIBRATION RANGE kg/cm2(g)**	**Pressure kg/cm2g**	**Temperature Deg C**	**Design Pressure kg/cm2g**	**Design Temperature Deg C**
1	PIT-P102/1	STABILIZED CRUDE OIL DISCHAGE LINE PRESSURE	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	10"-PL-D7A-00256-IH	10"	0-100		72	7-45	95	150
2	PIT-P102/2	STABILIZED CRUDE OIL DISCHAGE LINE PRESSURE	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	10"-PL-D7A-00256-IH	10"	0-100		72	7-45	95	150
3	PIT-P102/3	STABILIZED CRUDE OIL DISCHAGE LINE PRESSURE	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	10"-PL-D7A-00256-IH	10"	0-100		72	7-45	95	150
4	PIT-P101E/1	PRESSURE OF PUMP INLET HEDDER	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	14"-PL-B7A-00231-IH	14"	0-50		28.56	7-45	45	150
5	PIT-P101E/2	EXISITING BOOSTER PUMP DISCHARGE TO NEW TANK FARM	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	8"	0-50		28.56	7-45	45	150
6	PIT-P101E/3	EXISITING BOOSTER PUMP DISCHARGE TO NEW TANK FARM	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	8"	0-50		28.56	7-45	45	150
7	PIT-P101E/4	NEW BOOSTER PUMP DISCHARGE TO EXISITNG TANK FARM	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	8"	0-50		28.56	7-45	45	150
8	PIT-P101E/5	NEW BOOSTER PUMP DISCHARGE TO EXISITNG TANK FARM	Crude oil, liquid	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	8"	0-50		28.56	7-45	45	150

DATA SHEET FOR
ORIFICE PLATE & FLANGES & RESTRICTION ORIFICE

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

		DATA SHEET FOR ORIFICE PLATE & FLANGES & RESTRICTION ORIFICE						
DOCUMENT NO.:		**EJB-2026-02-030-INS-IDS-001J**				**CLIENT: SUN PETROCHEMICALS PVT LTD**		
PROJECT :		**EJB-2026-02-030**				**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**		
UNITS:-		**FLOW : LIQUIDS-** m3/hr **GAS-** Sm3/hr			**STEAM-**	**PRESS.:** Kg/cm2g	**TEMP.:** deg C	
		ORIFICE PLATE WITH ASSEMBLY ☐				**ORIFICE PLATE ONLY** X		
GENERAL	1	Tag No.				AS PER REERANCE TABLE		
	2	Quantity				AS PER REERANCE TABLE		
	3	Line No.				AS PER REERANCE TABLE		
	4	Line Size				4"		
	5	Service				AS PER REERANCE TABLE		
	6	P&ID No.				AS PER REERANCE TABLE		
	7	Design Standard				ISO 5167 or ASME MFC-3M		
GENERAL	8	Differential Range			mmH2O	STD		
	9	Meter Maximum			Sm3/hr	HOLD		
PLATE	10	Material				SS316 with NACE		
	11	Thickness 'W'			mm	VTA		
	12	BETA (b)= d/D				VTA (Refer General Note section: 3)		
	13	Bore Dia "d"			mm	VTA		
	14	Vent		Drain		N/A	N/A	
	15	Carrier Ring		Material		N/A	N/A	
	16	Plate Holder material				N/A		
	17	Type				Concentric square edged		
ORIFICE FITTING	18	Material				SS316 with NACE		
	19	Size & Rating				4" & 300# weld neck		
	20	Connection	Upstream Side		Downside stream	STD		
	21	Line ID	O.D.		mm	114.3	108.2	
	22	Gasket thickness			mm	VTA		
	23	Stud bolt Material				VTA		
	24	Nut Material				VTA		
	25	Design Standard				ANSI B 16.36		
	26	Tap Location				STD		
	27	Type				Flange Tap		
	28	Lubricants				N/A		
SERVICE CONDITIONS	29	Fluid and State				Crude oil, liquid		
	30	Flow	Min	Max	Sm3/hr	HOLD	HOLD	
	31	Flow Normal			Sm3/hr	AS PER REERANCE TABLE		
	32	Inlet Pressure		Design Pressure		AS PER REERANCE TABLE		
	33	Inlet Temperature ° C		Design Temperature ° C		AS PER REERANCE TABLE		
	34	Allowable DP			Kg/cm2	0.5		
	35	Critical Pressure	Critical Temperature			N/A	N/A	
	36	Oper. Dnesity			Kg/m³	815		
	37	Steam SP. WT.			Kg/m³	N/A		
	38	Vapour Pressure			Kg/cm2A	0.97		
	39	Molecular Weight				NA		
	40	Ration of Specific heats			Cp/cv	NA		
	41	Operating Viscosity			cP	3-30		
	42	Compressibility Factor				NA		
	43	Gas Specific Gravity				NA		
	44	Pipe Reynolds Number				VTA		
	45	CO2 Content		Partial Pressure		NA	NA	
OTHERS	46	IBR Certification				N/A		
	47	Straight Length		US	DS	VTA	VTA	
	48	Straight Length Pipe Material				CS		
	49	Make				VTA		

NOTES : N/A - NOT APPLICABLE; VTA - VENDOR TO ADVICE;

HOLDS:

Referance for RO												
Sr.No.	Tag No.	Line No.	Line Size	Service	P&ID No.	PROCESS FLUID	Flow Normal m3/hr	Inlet Pressure Kg/cm2	Design Pressure Kg/cm2	Inlet Temperature ° C	Design Temperature ° C	qty
1	RO-P101E	4"-PL-B7A-00214-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	66	28.56	45	7-45	150	1
2	RO-P101F	4"-PL-B7A-00222-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	66	28.56	45	7-45	150	1
3	RO-P102E	4"-PL-D7A-00239-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	54	72	95	7-45	150	1
4	RO-P102F	4"-PL-D7A-00246-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	54	72	95	7-45	150	1

FUTURE QTY												
1	RO-P101G	4"-PL-B7A-00230-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	66	28.56	45	7-45	150	1
2	RO-P102G	4"-PL-D7A-00253-IH	4"	CRUDE OIL RECIRCULATION BYPASS LINE	EJB-2026-02-030-PRO-DWG-002_R0	Crude oil, liquid	54	72	95	7-45	150	1

DATASHEET FOR TEMPERATURE TRANSMITTER

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

			DATASHEET FOR TEMPERATURE TRANSMITTER				
DOC NO : EJB-2026-02-030-INS-IDS-001K			**CLIENT : SUN PETROCHEMICALS PVT LTD**				
PROJECT NO : EJB-2026-02-030			**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**				
			1	2	3	4	
GENERAL	1	TAG NUMBER	TE-P101E / TIT-P101E	TE-P101F / TIT-P101F	TE-P101G / TIT-P101G	TE-P102E / TIT-P102E	
	2	SERVICE	P101E PUMP SUCTION LINE TEMP	P101F PUMP SUCTION LINE TEMP	P101G PUMP SUCTION LINE TEMP	OIL EXPORT LINE	
	3	QUANTITY	1	1	1 (FUTURE)	1	
	4	P & I D NO.	EJB-2026-02-030-PRO-DWG-002_R0	EJB-2026-02-030-PRO-DWG-002_R0	EJB-2026-02-030-PRO-DWG-002_R0	EJB-2026-02-030-PRO-DWG-002_R0	
	5	AREA CLASSIFICATION	Zone1, 2 IIA, IIB, T4	Zone1, 2 IIA, IIB, T4	Zone1, 2 IIA, IIB, T4	Zone1, 2 IIA, IIB, T4	
	6	LINE NO.	12"-PL-B7A-00207-IH	12"-PL-B7A-00215-IH	12"-PL-B7A-00223-IH	10"-PL-D7A-00256-IH	
	7	LINE SIZE / SCH.	10"	10"	10"	10"	
SERVICE	8	FLUID / STATE	CRUDE OIL/LIQUID	CRUDE OIL/LIQUID	CRUDE OIL/LIQUID	CRUDE OIL/LIQUID	
	9	PRESS. Min. / Nor. / Max1. / Max2. Barg	ATM	ATM	ATM	28.56	
	10	TEMP. Min. / Nor. / Max.1. / Max2. ^{0}C	7-45	7-45	7-45	7-45	
	11	FLOW. Min. / Nor. / Max.1. / Max2. m3/hr	200	200	200	200	
	12	FLUID VELOCITY m/s	0.77	0.77	0.77	1.885	
	13	LIQUID DENSITY kg/m3	815	815	815	815	
	14	VISCOSITY (DYNAMIC) Cp	3-30	3-30	3-30	3-30	
	15	DESIGN PRESSURE Barg	45	45	45	45	
	16	DESIGN TEMPERATURE ^{0}C	150	150	150	150	
ELEMENT	17	TYPE	RTD,PT-100	RTD,PT-100	RTD,PT-100	RTD,PT-100	
	18	CALIBRATION STANDARD	IEC 60751	IEC 60751	IEC 60751	IEC 60751	
	19	ELEMENT TYPE	DUPLEX-3 WIRED	DUPLEX-3 WIRED	DUPLEX-3 WIRED	DUPLEX-3 WIRED	
	20	GROUNDED /UNGROUNDED	-	-	-	-	
	21	SHEATH OD / MATERIAL	6mm/SS316	6mm/SS316	6mm/SS316	6mm/SS316	
	22	ENCLOSURE MATERIAL	DIA CAST ALUMINIUM	DIA CAST ALUMINIUM	DIA CAST ALUMINIUM	DIA CAST ALUMINIUM	
	23	ENCLOSURE CLASS	WP TO IP65,Ex d	WP TO IP65,Ex d	WP TO IP65,Ex d	WP TO IP65,Ex d	
	24	INSULATION	MAGNESIUM OXIDE	MAGNESIUM OXIDE	MAGNESIUM OXIDE	MAGNESIUM OXIDE	
	25	CABLE ENTRY	NOTE-4	NOTE-4	NOTE-4	NOTE-4	
THERMOWELL	26	TYPE	-	-	-	-	
	27	MATERIAL OF CONSTRUCTION	-	-	-	-	
	28	PROCESS CONNECTION	-	-	-	-	
	29	BULB CONNECTION	-	-	-	-	
	30	BORE DIAMETER mm	-	-	-	-	
	31	INSERTION (U) / EXT. (T) LENGTH mm	-	-	-	-	
TRANSMITTER	32	TYPE	ELECTRONIC - SMART WITH	ELECTRONIC - SMART WITH	ELECTRONIC - SMART WITH	ELECTRONIC - SMART WITH	
			HART PROTOCOL	HART PROTOCOL	HART PROTOCOL	HART PROTOCOL	
	33	CALIBRATED RANGE	0-70 °C	0-70 °C	0-70 °C	0-70 °C	
	34	OUTPUT	4 - 20 mA DC	4 - 20 mA DC	4 - 20 mA DC	4 - 20 mA DC	
	35	PERMISSABLE LOAD	600 ohms At 24VDC	600 ohms At 24VDC	600 ohms At 24VDC	600 ohms At 24VDC	
	36	POWER SUPPLY	24 V DC, 2 WIRE	24 V DC, 2 WIRE	24 V DC, 2 WIRE	24 V DC, 2 WIRE	
	37	INTEGRAL INDICATOR	DIGITAL,LCD	DIGITAL,LCD	DIGITAL,LCD	DIGITAL,LCD	
	38	INDICATION ENGG UNIT	°C	°C	°C	°C	
	39	ACCURACY	> THAN +/- 0.15% OF SPAN	> THAN +/- 0.15% OF SPAN	> THAN +/- 0.15% OF SPAN	> THAN +/- 0.15% OF SPAN	
	40	STABILITY	+/- 0.25% OF URL FOR 1 YR	+/- 0.25% OF URL FOR 1 YR	+/- 0.25% OF URL FOR 1 YR	+/- 0.25% OF URL FOR 1 YR	
	41	ENCLOSURE CLASS	WEATHERPROOF TO IP-65,	WEATHERPROOF TO IP-65,	WEATHERPROOF TO IP-65,	WEATHERPROOF TO IP-65,	
	42		INTR. SAFE TO Ex (ia),Exd	INTR. SAFE TO Ex (ia),Exd	INTR. SAFE TO Ex (ia),Exd	INTR. SAFE TO Ex (ia),Exd	
	43	ENCLOSURE MATERIAL	DIE CAST ALUMINIUM	DIE CAST ALUMINIUM	DIE CAST ALUMINIUM	DIE CAST ALUMINIUM	
	44	ENCLOSURE TYPE	DUAL-COMPARTMENT	DUAL-COMPARTMENT	DUAL-COMPARTMENT	DUAL-COMPARTMENT	
	45	SPAN & ZERO ADJ	REQD.,EXTERNALLY	REQD.,EXTERNALLY	REQD.,EXTERNALLY	REQD.,EXTERNALLY	
	46	MOUNTING TYPE	2"PIPE,YOKE SUPPORT	2"PIPE,YOKE SUPPORT	2"PIPE,YOKE SUPPORT	2"PIPE,YOKE SUPPORT	
OPTIONS	47	LIGHTNING ARRESTOR/PROTECTION	-	-	-	-	
	48	MOUNTING BRACKETS	REQD,SS316	REQD,SS316	REQD,SS316	REQD,SS316	
	49	CALIBRATION DATA SHEET	-	-	-	-	
PURCHASE	50	MANUFACTURER	VTA	VTA	VTA	VTA	
	51	MODEL NO	VTA	VTA	VTA	VTA	

Notes	1	* - Vendor to advise details (VTA), TBA - To be advised, N/A - Not applicable	
	2	Instrument shall be provide with SS316 tag plate.316SS name plate attached to instrument head with 316SS Screws.316SS tag plate attached with 316SS binding wire.Traffolyte tag label bolted to the instrument support.	
	3	The instrument shall be mounted in GRP shade and suitalbe for outdoor installation.	
	4	2 Nos of 1/2 NPTF cable entries. Double compression cable gland and 1/2" NPT EX-d Plug shall be supplied.	
	5	Wake frequency calculation shall be performed and necessary report shall be submitted by vendor on respective thermowells.	

	DATASHEET FOR TEMPERATURE GAUGES	
DOC. NO. : EJB-2026-02-030-INS-IDS-001L	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATASHEET FOR
TEMPERATURE GAUGES

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

			DATASHEET FOR TEMPERATURE GAUGES		
DOC NO : EJB-2026-02-030-INS-IDS-001L			**CLIENT : SUN PETROCHEMICALS PVT LTD**		
PROJECT NO : EJB-2026-02-030			**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**		
			1	**2**	**3**
GENERAL	1	TAG NUMBER	TG-P101E / TW-P101E	TG-P101F / TW-P101F	TG-P101G / TW-P101G
	2	SERVICE	P101E PUMP SUCTION LINE TEMP	P101F PUMP SUCTION LINE TEMP	P101G PUMP SUCTION LINE TEMP
	3	QUANTITY	1	1	1 (FUTURE)
	4	P & I D NO.	EJB-2026-02-030-PRO-DWG-002_R0	EJB-2026-02-030-PRO-DWG-002_R0	EJB-2026-02-030-PRO-DWG-002_R0
	5	AREA CLASSIFICATION	Zone1, 2 IIA, IIB, T4	Zone1, 2 IIA, IIB, T4	Zone1, 2 IIA, IIB, T4
	6	LINE NO.	12"-PL-B7A-00207-IH	12"-PL-B7A-00215-IH	12"-PL-B7A-00223-IH
	7	LINE SIZE & SCH.	10" / SCH 40	10" / SCH 40	10" / SCH 40
SERVICE	8	FLUID / STATE	CRUDE OIL/LIQUID	CRUDE OIL/LIQUID	CRUDE OIL/LIQUID
	9	PRESS. Min. / Nor. / Max1. / Max2. Barg	ATM	ATM	ATM
	10	TEMP. Min. / Nor. / Max.1. / Max2. ^{0}C	7-45	7-45	7-45
	11	FLOW. Min. / Nor. / Max.1. / Max2. m3/hr	200	200	200
	12	FLUID VELOCITY m/s	0.77	0.77	0.77
	13	DENSITY kg/m^3	815	815	815
	14	VISCOSITY (DYNAMIC) Cp	3-30	3-30	3-30
	15	DESIGN PRESSURE Barg	45	45	45
	16	DESIGN TEMPERATURE ^{0}C	150	150	150
SENSOR	17	TYPE	ADJUSTABLE UNION	ADJUSTABLE UNION	ADJUSTABLE UNION
	18	MATERIAL	SS 316 *	SS 316 *	SS 316 *
	19	STEM DIA	10 MM TO SUIT WELL	10 MM TO SUIT WELL	10 MM TO SUIT WELL
	20	THERMOWELL CONNECTION	1/2" NPT (F)	1/2" NPT (F)	1/2" NPT (F)
THERMOWELL	21	TYPE	-	-	-
	22	MATERIAL OF CONSTRUCTION	DRILLED BAR STOCK	DRILLED BAR STOCK	DRILLED BAR STOCK
	23	PROCESS CONNECTION	40MM FLANGED	40MM FLANGED	40MM FLANGED
	24	BULB CONNECTION	1/2" NPT (F)	1/2" NPT (F)	1/2" NPT (F)
	25	BORE DIAMETER mm	VTA	VTA	VTA
	26	INSERTION (U) / EXT. (T) LENGTH mm	VTA	VTA	VTA
TEMPERATURE GAUGE	27	TYPE	BIMETALLIC, ALL ANGLE TYP.	BIMETALLIC, ALL ANGLE TYP.	BIMETALLIC, ALL ANGLE TYP.
	28	CALIBRATED RANGE	-	-	-
	29	MOUNTING	LOCAL	LOCAL	LOCAL
	30	DIAL SIZE	6"	6"	6"
	31	COLOR	WHT. WITH BLK. INSCRIPTION	WHT. WITH BLK. INSCRIPTION	WHT. WITH BLK. INSCRIPTION
	32	INDICATION SCALE	°C	°C	°C
	33	OVER RANGE PROTECTION	125% OF RANGE	125% OF RANGE	125% OF RANGE
	34	ENCLOSURE CLASS	WP TO IP 65	WP TO IP 65	WP TO IP 65
	35	CASE MATERIAL	SS 304	SS 304	SS 304
	36	WINDOW MATERIAL	SHATTER PROOF GLASS	SHATTER PROOF GLASS	SHATTER PROOF GLASS
	37	CONNECTION LOCATION	BACK, EVERY ANGLE TYPE	BACK, EVERY ANGLE TYPE	BACK, EVERY ANGLE TYPE
	38	ZERO ADJUSTMENT	REQ,EXTERNALLY	REQ,EXTERNALLY	REQ,EXTERNALLY
	39	ACCURACY	± 1 % FSD	± 1 % FSD	± 1 % FSD
	40	PROCESS CONNECTION SIZE	40MM FLANGED	40MM FLANGED	40MM FLANGED
	41	GAUGE CONN.	1/2" NPT (F)	1/2" NPT (F)	1/2" NPT (F)
	42	POINTER	ALUMINUM, BLACK	ALUMINUM, BLACK	ALUMINUM, BLACK
	43	POINTER STOPPER	TO BE REQUIRED	TO BE REQUIRED	TO BE REQUIRED
OPTIONS	44	CALIBRATION DATA SHEET	REQUIRED	REQUIRED	REQUIRED
	45	SS TG PLATE	REQUIRED	REQUIRED	REQUIRED
PURCHASE	46	MANUFACTURER	VTA	VTA	VTA
	47	MODEL NO	VTA	VTA	VTA

Notes

1. * - Vendor to advise details (VTA), TBA - To be advised, N/A - Not applicable
2. Wake frequency calculation shall be performed on thermowells,in case of failure of calculation thermowells should be replaced and Calculations shall be submitted.

	DATA SHEET FOR PRESSURE SAFETY VALVES	
DOC. NO. : EJB-2026-02-030-INS-IDS-001M	**CLIENT : SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. : EJB-2026-02-030	**PROJECT : NEW CRUDE OIL PUMP HOUSE AT CPF**	

DATA SHEET FOR
PRESSURE SAFETY VALVES

0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS
REV	**DATE**	**PURPOSE**	**BY**	**CHK.**	**APPR.**

		DATA SHEET FOR PRESSURE SAFETY VALVES			
DOCUMENT NO.	**EJB-2026-02-030-INS-IDS-001M**	**CLIENT NAME : SUN PETROCHEMICAL PVT LTD**			
PROJECT :	**EJB-2026-02-030**	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**			
UNITS:-	**FLOW : LIQUIDS -**		**STEAM -**		**PRESS. :**
GENERAL	1	Tag No.	PSV-P101E		
	2	Quantity	1 NO		
	3	Line No./Equip.No.	14"-PL-B7A-00231-IH		
	4	P &ID No.	EJB-2026-02-030-PRO-DWG-002_R0		
	5	Equip. Protected	-		
	6	Safety or Relief	Safety		
	7	Type	Full Nozzle, Full Lift		
BODY	8	Bonnet Type	Closed		
	9	CONV./BELLOWS/PILOT OPERATED	Conventional		
	10	Inlet Connection : SIZE & RATING	VTS / 600#		
	11	Outlet Connection : SIZE & RATING	VTS / 600#		
	12	Cap Over Adjusting Bolt	Screwed		
	13	Lifting Levers	Manufacturer Standard		
	14	Test Jig	NA		
	15				
MATERIAL	16	Body and Bonnet	ASTM A 105		
	17	Nozzle and Disc	SS316 / SS316L		
	18	Resilient Seat Seal	NA		
	19	Spring	Inconel-750		
	20	Bellows	NA		
	21	Bolts & Nuts	VTA		
OPTIONS	22	ASME UV Code Stamping	ASME Section VIII,Div.I, UV Stamp		
	23	PAINTING FOR C.S PARTS AS PER	Specification for Protective Coating No-2005		
BASIS	24	Code	API 520 & 526		
	25	Basis of Selection	Fire Case (Low molecular weight / Low specific heat ratio)		
	26				
SERVICE CONDITIONS	27	Fluid and State	Crude oil, Liquid		
	28	Corrosive Constituent	Yes		
	29	Required capacity Kg/hr	HOLD		
	30	Mol.Wt	Gas S.G. (MW/29)AT REL. TEMP.	NA	HOLD
	31	Oper. Pressure	REL. PRESSURE	28.56 kg/cm2 g	HOLD kg/cm2 g
	32	Oper. Temperature	REL. TEMP. °C	7-45	150
	33	Design pressure	DESIGN TEMP °C	45 kg/cm2 g	150
	34	Valve Discharge to		Drain Pit	
	35	Back Pressure Max		0.2 kg/cm2 g	
	36	Set Pressure		32 kg/cm2 g	
	37	Cold Bench test Pressure			
	38	% Over Pressure		HOLD	
	39	GAS COMPRESSIBILITY AT RP & RT		HOLD	
	40	RATIO OF SP. HEATS cP/Cv at RP/RT		HOLD	
	41	Liquid Density @ RT kg/m3		815	
	42	Liquid Viscosity @ RP & RT cP		3-30	
	43	Gas/Vap. Viscosity @ RP & RT cP		0.02	
	44	Mol. Vapour Fraction at RP/RT		1.00	
	45	Pipe Wall temperature °C		150	
	46	Wetted Surface Area m^2		-	
	47	Mass Vapour Fraction		HOLD	
	48	Overall Mass Density (KG/M3)		HOLD	
	49	Vapour Mass Density (KG/M3)		HOLD	
ORIFICE	50	Calculated Area in^2		VTA	
	51	Selected Area in^2		VTA	
	52	Orifice Designation		VTA	
	53	No. of Valves selected for Cap.		VTA	
	54	Total Area in^2		VTA	
	55	Rated Capacity Kg/hr		VTA	
OTHERS	56	I.B.R Certification		NA	
	57	Spring Range Psig		VTA	
	58	Make		VTA	
	59	Model No.		VTA	

NOTES :

1.VTA-Vendor To Advice ,TBC-To Be Confirmed,NA-Not Applicable

DATA SHEET FOR
SELF ACTING PRESSURE REGULATING VALVE

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	16.10.26	ISSUED FOR ENGINEERING	ST	RBP	VJS

sun Petrochemicals	**DATA SHEET FOR** **SELF ACTING PRESSURE REGULATING VALVE**	NAVITERA

DOCUMENT NO.:	**EJB-2026-02-030-INS-IDS-001N**	**CLIENT: SUN PETROCHEMICALS PVT LTD**	
PROJECT NO. :	**EJB-2026-02-030**	**PROJECT: NEW CRUDE OIL PUMP HOUSE AT CPF**	

	No.	Specification			No	Specification	
GENERAL	1	Tag No.	As per followup sheet	SERVICE CONDITON	39	Fluid	As per followup sheet
	2	P & ID Ref No.	As per followup sheet		40	Fluid State	As per followup sheet
	3	Line No./Equipment No.	As per followup sheet		41	Flow rate Max/Min (m3/hr)	As per followup sheet
	4	Line Size/ Schedule	As per followup sheet		42	Inlet Pressure Min/Max (kg/cm2g)	As per followup sheet
	5	Line/ Equipment Material	As per followup sheet		44	Set Pressure (kg/cm2g)	As per followup sheet
	6	Area Classification	Zone 1,2, Ex'd' II A / II B,T3		45	DP Pressure (kg/cm2g)	As per followup sheet
	7	Ingress Protection	W. P. IP 65		46	Max. Shut Off Pressure	As per followup sheet
	8				47	Operating Temperature (°C)	As per followup sheet
	9				48	Design Temperature	VTS
	10				49	Cv Calculated	By vendor
BODY & BONNET	11	Body Type	Plug/Globe		50	Cv Selected	VTS
	12	Body Size/ Connection	VTS		51	Molecular weight	-
	13	Body Material	A216 GR WCB		52	Sizing	As per API 2000/520
	14	Control (Upstream/ Downstream)	Down Stream		53	Accuracy	± 5% of set pressure
	15	End Connection	Flange		54	Specific Gravity	NA
	16	Flange Facing Finish	ASME B 16.5		55	Flash Point	NA
	17	Face to Face Standard	ASME B 16.10		56		
	18	Guide Bushing	SS 316		57		
	19	Gasket Material	GRAPHITE		58		
	20	Gland Packing	VTS	ACTUATOR	59	Type	Self Actuated
	21	Bolts material	ASTM 193 Gr B7		60	Actuator Sizing	130% of Rated torque
	22	Nuts	ASTM A194 Gr 2H		61	Pilot Valve Housing	VTS
	23				62	Housing	VTS
	24				63	Diaphragm Case	CS
	25				64	Diaphragm	Elastomer/VTS
TRIM	26	Trim	SS 316		65	Cap	CS
	27	Seat Material & Plug	SS 316		66	Spring	VTS/ Spring Steel
	28	Trim Form	VTS		67	Lock Nut	SS 316
	29	Stem MOC	SS 316		68	Spring Adjustable Screw	SS 316
	30	Hard Facing/Coating	Not Required		69	Spring Disc.	SS 316
	31	ANSI Leakage Class	Class VI		70	Spring range	VTS
	32				71		
	33			MAKE & MODEL	72	Make	VTS
	34				73	Model	VTS
	35				74	Tag Plate	SS 316
	36				75		
	37				76		
	38				77		

Notes:

1) Vendor to highlight deviation or to give list of deviation with offer if any, from the above specification along with technical reason for the same.

2) Vendor to submit the catalogue along with offer.

3) Vendor to submit the soft copy of Instrument installation/ Maintenance manual on ordering.

4) Vendor to Submit G.A. Drawings with BOM along with offer.

5) VTS - Vendor to Specify

REFERENCE FOR PRESSURE REGULATING VALVE																
Sr.No	Tag No	PID Ref No	Line No	Line MOC	Line size	Control (upstream / downstream)	Fluid	Flowrate (Nm3/hr)		Inlet pressure (kg/cm2)		Set Pressure (kg/cm2)	DP Pressure (kg/cm2)	Max Shutoff Pressure (kg/cm2)	Operating temperature (° C)		Remarks
								Min	max	Min	Max				Max	Min	
1	PRV-102E/1	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	CS	8"	Downstream	Crude oil, Liquid	0	200	-	28.56	1		28.56	45	7	
2	PRV-102E/2	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	CS	8"	Downstream	Crude oil, Liquid	0	200	-	28.56	1		28.56	45	7	
2	PRV-102E/3	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	CS	8"	Downstream	Crude oil, Liquid	0	200	-	28.56	1		28.56	45	7	
3	PRV-102E/4	EJB-2026-02-030-PRO-DWG-002_R0	16"-PL-B7A-00279	CS	8"	Downstream	Crude oil, Liquid	0	200	-	28.56	1		28.56	45	7	