



TECHNICAL SPECIFICATIONS FOR DIFFERENTIAL PRESSURE GAUGE

Document No: GEL/TS/I&M/ DIFF-PRESSURE GAUGE/SPEC

REV. NO	Clause no.	REVISION DESCRIPTION	DATE OF ISSUE

Mat. Code	100012077	100012079	100012076
Short Text	GAUGE,DP,0-1BAR,2.5",1/4"NPT,300#,W/O,MN	GAUGE,DP,0-1BAR,4",1/4"NPT,300#,W/O,MNFL	GAUGE,DP,0-1BAR,4",1/4"NPT,150#,W/O,MNFL
Long Text	Supply of Differential Pressure Gauge confirming to IS 3624 / EN 837 with 300# Pressure Class and range of 0-1Bar with Dial size of 2.5" and end connection of 1/4"NPT without manifold valve	Supply of Differential Pressure Gauge confirming to IS 3624 / EN 837 with 300# Pressure Class and range of 0-1Bar with Dial size of 4" and end connection of 1/4"NPT without manifold valve	Supply of Differential Pressure Gauge confirming to IS 3624 / EN 837 with 150# Pressure Class and range of 0-1Bar with Dial size of 4" and end connection of 1/4"NPT without manifold valve
Make	Bidder to Specify	Bidder to Specify	Bidder to Specify
Model	Bidder to Specify	Bidder to Specify	Bidder to Specify
Standard	As per IS 3624	As per IS 3624	As per IS 3624
Dial Size	2.5"	4"	4"
Overpressure limit	130 % of the range (Bidirectional)	130 % of the range (Bidirectional)	130 % of the range (Bidirectional)
Colour	White (Non-rusted plastic with Black engraving)	White (Non-rusted plastic with Black engraving)	White (Non-rusted plastic with Black engraving)
Case Material	SS 304/SS 316	SS 304/SS 316	SS 304/SS 316
Bezel Ring	BAYONET/Rubber ring/Crimp type	BAYONET/Rubber ring/Crimp type	BAYONET/Rubber ring/Crimp type
Window Material	Shatterproof Glass	Shatterproof Glass	Shatterproof Glass
Enclosure	IP 65	IP 65	IP 65
Sensor	Piston Type	Piston Type	Piston Type
Pointer	Black Aluminium	Black Aluminium	Black Aluminium
Accuracy	± 2% OF FSD	± 2% OF FSD	± 2% OF FSD
Connection	¼" NPT(M)	¼" NPT(M)	¼" NPT(M)
Connection Location	Bottom/Side	Bottom/Side	Bottom/Side
Over-range protection	Vendor to furnish	Vendor to furnish	Vendor to furnish
Calibration	Required	Required	Required
Fluid	Natural Gas	Natural Gas	Natural Gas
Range	0 to 1 Bar	0 to 1 Bar	0 to 1 Bar
Design Pressure	49 barg	49 barg	19 barg

Notes:

1. The Vendor shall submit QAP and data sheet within 10 working days after getting contract/order (whichever is earlier) to GEL for their review and approval. Queries raised by GEL during review of QAP and Data Sheet, if any, shall be resolved by the vendor to the complete satisfaction of GEL within 7 working days from date of receipt of all queries. No extension in delivery schedule shall be provided in case of delay in completing the QAP, datasheet approval process as stated above for reasons directly attributable to the vendor. Decision taken by GEL in the regard shall be final and binding on the Vendor.
2. Manufacturer shall perform all tests as specified in GEL approved QAP and compliance report for the same shall be produced at the time of TPI inspection.
3. TPI in the scope of Bidder. Bidder shall perform inspection at their works and calibration certificates shall be furnished to Gujarat Energy Limited.
4. Technical clearance shall be provided by GEL based on TPI report based on which Vendor shall dispatch the materials.

Annexure-1 QAP (Vendor shall furnish compliance to below QAP)

#	Parameters	Characteristics	Acceptance Standard	Manufacturer's Testing		TPIA Scope of Testing – Witness/Review		Inspection Scope	
				Extent of Check	Records	Extent of Check	Records	Manufacturer	TPI
1	Visual	Dial Size	GEL Approved Data Sheet/IS 3624	100%	Compliance certificate by Manufacturer	As Per Annexure-A	Witness report	P	W
		Colour							
		Connection							
		Connection Location							
		Range							
2	Functional	Overpressure limit	GEL Approved Data Sheet / IS 3624	100%	Compliance certificate by Manufacturer	As Per Annexure-A	Witness report	P	W
		Accuracy							
		Over-range protection							
3	Material Test Certificate	Case Material	GEL Approved Data Sheet / IS 3624	100%	Compliance certificate by Manufacturer	As Per Annexure-A	Summary report	P	R
		Bezel Ring							
		Window Material							
		Sensor							
		Pointer							
4	Documents	Enclosure	Test Certificate	100%	Compliance certificate by Manufacturer	As Per Annexure-A	Summary report	P	R
		Calibration							
		Ingress Protection	GEL Approved Data Sheet			100%		-	R
		Manufacturer's records for internal inspection as per test requirements above	GEL Approved Data Sheet						

P: Perform

W: Witness

R: Review

Annexure A (reference standard: IS 2500)**SAMPLING PLAN (Single Sampling Plan with 1% AQL, Normal Inspection-Level 1 (As per IS 2500))**

Sl. No.	Batch Size	Sample Size	Acceptance Number	Rejection Number
1	2 to 8	2	0	1
2	9 to 15	2	0	1
3	16 to 25	3	0	1
4	26 to 50	5	0	1
5	51 to 90	5	0	1
6	91 to 150	8	0	1
7	151 to 280	13	0	1
8	281 to 500	20	0	1

Number of samples inspected will be equal to the sample size given by the plan. If the number of non-conforming product(s) is equal to acceptance number, the lot shall be considered acceptable. If the number of non-conforming product(s) is equal to or greater than the rejection number, then the whole lot will be retested for that particular parameter and rejected products will be replaced by conforming products.

Notes for TPIA

1. TPI Signed and stamped Document set shall include:
 - 1.1) IRN, Inspection report/Joint inspection report
 - 1.2) Summary sheet to include TPI observations and remarks (Accepted/Not accepted) for each line item in QAP
 - 1.3) Witness report providing details of Witness performed on the sample quantity.
 - 1.4) Compliance certificate by Manufacturer and Compliance certificate by TPI
2. All test certificates
3. TPI to Specify Total Offered Qty. in the lot and corresponding sample size Qty. (and serial nos.) in Summary Sheet.
4. TPIA shall issue Release Note on the basis of witness/review of all stages as per approved QAP.

