

## TUV INDIA PRIVATE LIMITED

## INSPECTION VISIT REPORT

IVR - 010102052820/4 - 14 - Rev. 00



<b>General:</b>						
<b>TUV India Control Or SAP Number:</b>		8117438510		<b>Branch:</b>		Vadodara
<b>Notification Name / Number:</b>		2020-165532 Dtd 28.12.2020		<b>Date(s) of Inspection:</b>		28.12.2020
<b>Project Name &amp; Location:</b>		City Gas distribution (CGD) Project at Hyderabad, Vijaywada and Kakinada.		<b>Inspection Location:</b>		M/s Mesura Nirmal Gas Control Pvt Ltd, Plot No: 39-40   Savli GIDC   Alindra   Vadodara - 391 775
<b>TUV India Client Name:</b>		M/s Mesura Nirmal Gas Control Pvt Ltd		<b>End User Name:</b>		M/s. Bhagyanagar Gas Limited
<b>DEC / PMC / EPC Name:</b> (If applicable)		M/s Mecon Limited		<b>DEC / PMC / EPC Asgmt. Number:</b> (If applicable)		Not Applicable
<b>Vendor Name &amp; Location:</b>		M/s Mesura Nirmal Gas Control Pvt Ltd, Plot No: 39-40   Savli GIDC   Alindra   Vadodara - 391 775		<b>P.O. Number:</b> (Client PO on Vendor)		FOA NO: BGL/C&P/MEC/PRJ/HVK/FOA-54/20/2020-21, DT:02.09.2020
<b>Sub Vendor Name &amp; Location:</b> (If applicable)		Not Applicable		<b>P.O. Number:</b> (If applicable - Vendor PO on Sub Vendor)		Not Applicable
<b>Stages Of Inspection:</b>						
<input type="checkbox"/> Kick Off / Pre Inspection Meeting		<input type="checkbox"/> Material Identification		<input type="checkbox"/> Interim Stages		
<input checked="" type="checkbox"/> Document Review		<input checked="" type="checkbox"/> Final Inspection		<input type="checkbox"/> Re-Inspection		
<b>Item Description:</b>						
<b>P.O. Item No.</b>	<b>Item Code</b>	<b>Item Description</b>	<b>UOM</b>	<b>P.O. Quantity</b>	<b>Offered Quantity</b>	<b>Acceptable Quantity</b>
1	Nil	DOMESTIC REGULATORS (group-A1) Pressure reduction of 40mbar to 160 mbar (g) inlet to 21mbar (g) outlet pressure with 2.5 SCHM actual maximum flow capacity of Domestic Regulator Sr. No.4Q20/18481 to 4Q20/19780	No.	a) 16000 b) 1214 c) 1741	1300	1300

<b>Reference Documents:</b>				
<b>Sr. No.</b>	<b>Document Name</b>	<b>Client Document Number</b>	<b>Vendor Document Number</b>	<b>Approval Status</b>
1)	PR / MR / ARM	Not Applicable	Not Applicable	Not Applicable
2)	QAP / ITP / QCP	01/20/23R8/E-025 REV.0 Dtd:12.10.2020	J00614/QAP/102. Rev.00, dated 12.10.2020	Approved By MECON LIMITED
3)	Drawing(s)	J00614/M&L/103, Rev.2, 15.10.2020	Nil	Retained For Reference By MECON LIMITED
4)	Procedure(s)	Not Applicable	Not Applicable	Not Applicable
5)	Datasheet(s)	J00614/PCV/103 Rev.1, dated 28.09.2020	Nil	Approved By MECON LIMITED
6)	Others (Specify)	Not Applicable	Not Applicable	Not Applicable
<b>Inspection Activities Carried Out :</b>				
<b>Stages Witnessed:</b>				

**Disclaimer:** This IVR shall not be considered as final acceptance of inspected item(s). The final acceptance will be given through Inspection Release Note.

The inspection by TUV India Pvt. Ltd., review of Test Certificates / Reports and issue of Inspection Visit Report does not relieve the Client / Supplier / Manufacturer / Stockiest from their responsibility towards the Client / End User to supply the genuine material / item(s) and document(s) in full compliance with applicable Order, Specification, Technical, Quality, Quantity, Warranty, Guarantee requirements. Supplier / Manufacturer / stockiest is wholly legally responsible for genuineness of the material / item(s) supplied and document(s) submitted. TUV India's responsibility is only limited to correctness of inspection results including review of the documents, within its agreed scope against written requirements and neither TUV India nor any of its group companies, associates or employees are in any way legally responsible for genuineness of the material / item(s) and document(s). If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to technical content in the calibration certificate.

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TUV India Pvt. Ltd. (TUV NORD GROUP) : (REGD. & HEAD OFFICE), 801, Raheja Plaza - I, LBS Marg, Ghatkopar (West), Mumbai - 400086, Maharashtra, India.

Tel: + 91 22 66477000, Email: [inspection@tuv-nord.com](mailto:inspection@tuv-nord.com), Website: [www.tuv-nord.com/in](http://www.tuv-nord.com/in).

Form No. : F / INSP / VR / 11 - R12; Revision Date: 14.03.2020

28/12/2020

TUV India Pvt. Ltd.

# TUV INDIA PRIVATE LIMITED

## INSPECTION VISIT REPORT

IVR - 010102052820/4 - 14 - Rev. 00



1)	ITP Sr. No. 1 Witness of functional test (i.e. Soundness test at internal pressure of 160 mbar, set pressure test, lock up pressure test & UPSO ( under pressure shut off) test on 13 nos. randomly selected samples from total lot of 1300 nos. regulators - found within acceptable specified limit in datasheet.
2)	ITP Sr. No. 4 Thread verified of loose nut of end connection on 13 nos. randomly selected samples from total lot of 1300 nos. regulators - found satisfactory
3)	ITP Sr. No. 6 1. Visual inspection carried out for surface finish, workmanship, Checking seal & construction on 13 nos. randomly selected samples from total lot of 1300 nos. regulators after completion of manufacturing activities on accessible surface only - no injurious surface defects were observed. 2. Dimension inspection carried out on 13 nos. randomly selected samples from total lot of 1300 nos. regulators - found to meet the specification and drawing requirement.
4)	ITP Sr. No. 7 Marking and labelling verified on 13 nos. randomly selected samples from total lot of 1300 nos. regulators - Found in order
5)	ITP Sr. No. 8 Protection and packing verified on 13 nos. randomly selected samples from total lot of 1300 nos. regulators - Found in order

### Documents Reviewed:

1)	ITP Sr. No. 2 & 3 Photocopy of chemical analyses test report for body, cover & brass part & adaptor spring material and Material test certificate for elastomer as provided by vendor- found to meet the data sheet / specification requirements.
2)	ITP Sr. No. 5 Review of type test report by FCRI for torsion test, bending test, accuracy class and lock-up class - found in order
3)	Certificate of compliance & internal reports- Found in order.
4)	'All measuring instruments/ equipment were verified for continued suitability for intended use, proper identification, calibration status, traceability to national standards & found satisfactory.

### Details of Equipment(s) / Instrument(s) used for measuring / testing during Inspection: (Refer Notes)

Sr. No.	Detail of Equipment(s) / Instrument(s)	Range	ID	Validity till Date	Calibration Certificate Number	NABL / OTHER CERT. BODIES / NABL Traceability	NON-NABL
						Please tick whichever is applicable See Note 1 & 2	See Note 3
1)	Digital calliper	0-300 mm	0062424	24.05.2021	CCS/8032/19-20, Dt: 25.05.2020	✓	-
2)	Taper thread plug gauge	---	Size:3/4-14 NPT/BAKER	10.06.2021	CGIL/2020/0609/E-010 Dt. 11.06.2020	✓	-
3)	Taper thread plug gauge	---	Size:1/2-14 NPT/BAKER	10.06.2021	CGIL/2020/0609/E-009 Dt. 11.06.2020	✓	-
4)	Vertical Manometer	0-500 mm WC	428/14-15	05.06.2021	CCS/172/19-20, Dated; 06.06.2020	✓	-
5)	Glass Tube Rotameter	0.3-3 NM3/HR	1808779	20.07.2021	IGCPL/RM/2007/05, Dated; 21.07.2020	-	✓
6)	Digital Pressure Transmitter	0-10000 mbar	C 40000006 14847	05.06.2021	CCS/174/19-20, Dated; 06.06.2020	✓	-

#### Notes:

- 1) Other Certifying bodies are: NPL-India, CIPM (International Committee for Weights & Measures), ILAC & APLAC MRA Signatories.
- 2) Visiting inspector to ensure continued suitability for intended use, periodic maintenance, proper identification and valid calibration records and traceability to known National / International standards of the measuring instrument(s) / testing equipment(s).
- 3) Non NABL: If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to technical content in the calibration certificate.
- 4) In lieu of table above inspectors may collect master list from manufacturer / vendor/ sub vendor with all above details clearly highlighting the details of instrument(s) / equipment(s) used during inspection.

### Conclusion (Acceptable / Not Acceptable / Acceptance subject to) :

Acceptable

### Pending Activities from this Visit:

**Disclaimer:** This IVR shall not be considered as final acceptance of inspected item(s). The final acceptance will be given through Inspection Release Note.  
The inspection by TUV India Pvt. Ltd., review of Test Certificates / Reports and issue of Inspection Visit Report does not relieve the Client / Supplier / Manufacturer / Stockiest from their responsibility towards the Client / End User to supply the genuine material / item(s) and document(s) in full compliance with applicable Order, Specification, Technical, Quality, Quantity, Warranty, Guarantee requirements. Supplier / Manufacturer / stockiest is wholly legally responsible for genuineness of the material / item(s) supplied and document(s) submitted. TUV India's responsibility is only limited to correctness of inspection results including review of the documents, within its agreed scope against written requirements and neither TUV India nor any of its group companies, associates or employees are in any way legally responsible for genuineness of the material / item(s) and document(s). If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to technical content in the calibration certificate.  
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Tel: + 91 22 66477000, Email: [inspection@tuv-india.com](mailto:inspection@tuv-india.com), Website: [www.tuv-india.com/in](http://www.tuv-india.com/in)

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28/12/2020  
TUV India

# TUV INDIA PRIVATE LIMITED

## INSPECTION VISIT REPORT

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None		
<b>Identification of Inspected Item(s):</b>		
Inspected items single soft stamped as "  " on sticker.		
<b>Areas of Concern:</b>		
None		
<b>Non Conformities raised / Discrepancies observed during Inspection</b> (If Any, Mention TUV India NCR Number):		
None.		
<b>Attachments:</b>		
<input checked="" type="checkbox"/> Inspection records – Total Page Nos.	14	<input checked="" type="checkbox"/> Master List of calibrated instruments / equipment 9
<input checked="" type="checkbox"/> Inspection Photos – Refer Page Nos.	Photography was prohibited inside Factory, Hence No Photographs Records available	<input checked="" type="checkbox"/> Others (Specify): None.
<b>Authorised Signatures:</b>		
<b>TUV India Inspector(s):</b>		<b>Vendor / Sub Vendor Representative: (If Applicable)</b>
<b>Name:</b> Mr. Virbhadrasingh Rathod		<b>Name:</b> Mr. Mukesh Mali - Mesura Nirmal
<b>Date:</b> 28-12-2020		
<b>Distribution List:</b> <input checked="" type="checkbox"/> TUV India Client / End User <input checked="" type="checkbox"/> TUV India Executing / Originating Branch <input checked="" type="checkbox"/> Vendor / Sub Vendor		
<b>Revision Number</b> (If Applicable) : 00 – Type Reason for revision here		
<b>This Document Supersedes IVR No. :</b> Mention Previous IVR Number.		
<b>Inspection Pictures:</b> Photography is prohibited in M/s Mesura Nirmal's Premises		


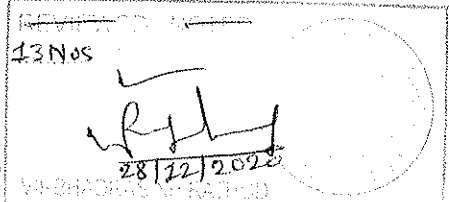
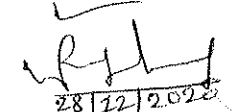
# Joint Inspection Report

Report No.: MN/614-9  
Date: 28.12.2020

Customer Name	M/s. Bhagyanagar Gas Limited.		
P.O. No:	BGL/C&P/MEC/PRJ/HVK/FOA-54/20/2020-21 DATED.02.09.2020		
Reference Document	J00614/PCV/103 R-1, J00614/QAP/102, R-0 dt.08.10.2020 and J00614/M&L/103 R-2		
Service: Natural Gas	Model No: M2.5	Job No: J00614	
Valve Sr. no:	4Q20/18481 TO 4Q20/19780	Total Quantity: 1300 Nos.	

Test Activity QAP point no.1, 4, 6, 7, 8.								
Sr. No	Valve Sr. No tested	Set Pressure at Inlet Pr. 40 mbar	Set Pressure at Inlet Pr. 160 mbar	Lock up at 160 mbar Inlet Pr.	UPSO 10-16mbar	L (92MM max)	H (116 MM max)	Soundness test at inlet pressure 165 mbar
1	4Q20/19460	22.2	20.2	27.0	12.0	90.8	114.4	No Leakage observed
2	4Q20/19213	21.4	19.5	23.6	13.5	90.8	114.5	
3	4Q20/19477	21.8	21.2	24.2	12.8	90.5	114.4	
4	4Q20/19192	21.3	21.0	26.5	14.0	90.6	114.4	
5	4Q20/19658	21.8	20.5	27.0	12.9	90.6	114.5	
6	4Q20/19691	22.5	21.0	26.5	13.0	90.6	114.5	
7	4Q20/19273	21.8	20.2	24.8	11.9	90.5	114.5	
8	4Q20/19177	21.6	20.9	25.5	14.0	90.5	114.3	
9	4Q20/18791	22.0	19.8	24.8	13.5	90.5	114.5	
10	4Q20/18673	22.0	19.3	25.0	12.8	90.5	114.4	
11	4Q20/18892	22.2	20.5	25.6	12.0	90.6	114.5	
12	4Q20/19780	21.9	20.2	24.8	13.0	90.5	114.5	
13	4Q20/19294	21.6	19.8	27.5	13.5	90.7	114.4	

Visual inspection test result:	Visually checking of surface finish, workmanship, checking seal & construction- found satisfactory. Marking and labelling - found satisfactory. Protection and Packing - found satisfactory
Test conducted and witnessed:	1) All above sampled domestic regulator are tested at inlet pressure of 40-160 mbar for set pressure, lock up and UPSO test and found satisfactory. 2) Inlet and outlet adaptor loose nut thread checked and found satisfactory.
Remark:	Lot accepted/ rejected/to be rejected.

<b>For MNGCPL:</b> Name: Mr. Mukesh Mali Signature:  Date: 28.12.2020	<b>For TUV:</b> Name:  Signature:  Date: 28.12.2020
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# Internal Inspection Report

Report No: MN/00614  
Date: 28.12.2020

Client: M/s.	M/s. Bhagyanagar Gas Limited.	
P.O. No:	BGL/C&P/MEC/PRJ/HVK/FOA-54/20/2020-21 DATED.02.09.2020	
Datasheet	J00614/PCV/103,REV-1	
QAP No:	J00614/QAP/102,REV-0 dt.08.10.2020	
Service: Natural Gas	Model No: M2.5	Job No: J00614
Valve Sr. no:	4Q20/18481 TO 4Q20/19780	Total Quantity: 1300Nos.

Sr. No.	Test Specification	Specification / Reference	Report No and Date	Result
1	Function Test	Factory set point, UPSO, Lock Up as per approved datasheet	Certificate of compliance No. 614-9/2020	Found Satisfactory
2	Body and Cover	Chemical Test Report	20091402/20-21 Dt.14.09.2020	Found Satisfactory
	Brass part		RMTC/0184/407 Dt. 18.05.2020	Found Satisfactory
	Adaptor		64,65,66,67 Dt. 01.11.2020	Found Satisfactory
	Spring		TC No. 20 DT.02.06.2020	Found Satisfactory
	Elastomer		0601 DT. 26.10.2020 0631 DT. 31.10.2020	Found Satisfactory
3	End connection	Thread verification	IR/614/9 Dt: 28.12.2020	Found Satisfactory
4	Torsion Test, Bending Test Accuracy Class and Lockup Class	Type test report by FCRI	TA 2161 1401 11 DT. 22.04.2014	Found Satisfactory
4	Inspection of Final Regulator	As per QAP	IR/614/9 Dt: 28.12.2020	Found Satisfactory
5	Marking and labelling	Should contain Manufacturer Trademark; Model no.; Set Pr. Range, Flow		Found Satisfactory
6	Protection & packaging of regulator	Each Regulator should be Packed in Individual Corrugated Box, 20 such regulator shall be kept in one mother box.		Found Satisfactory

## RESULTS

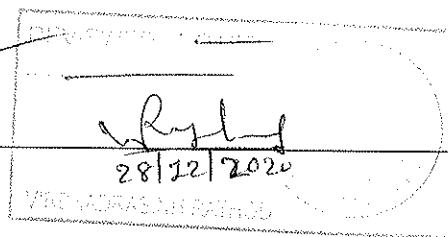
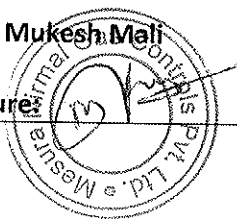
☒ CONFORM

☐ NO CONFORM

## Quality Department Report Validation:

Name: Mukesh Mali

Signature:



Customer  
Name**M/s. Bhagyanagar Gas Limited. D**  
2nd Floor, Parishram Bhavan ,  
TSIDC Building, Bashirbagh,  
Hyderabad – 500004.  
INDIA**Certificate No****614-9****2020****Customer Purchase order No:** BGL/C&P/MEC/PRJ/HVK/FOA-54/20/2020-21 DATED.02.09.2020**Job No:** J00614**Delivery note:** At Actual**Product code and Description:** M2.5, 21 mbar**Regulator Serial No:** 4Q20/18481 TO 4Q20/19780**Quantity (No's):** 1300Nos.

We certify that, subject to exceptions or concessions listed hereafter, the product detailed here were manufactured in accordance with the technical specifications of the contract, order or sub-order and that, all Inspection operations and test having been completed, the product comply in every respect with the relevant particular specifications, drawings and relevant standards and regulations in force.

*Information particular to the suppliers delivered  
Specify the reference of concession granted.*

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**Test Performed**

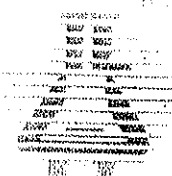
	Min	Max
Tests show that the products are conform to an inlet pressure range (mbar)	40	160
The Outlet pressure in accordance with the specification and range (mbar)	18.9	23.1
The outlet pressure is set at a flow measures	2.5 SCMH	
The under pressure shut off is between (mbar)	11	15
Leak test were performed and observed the following results	Confirms at 300 mbar	

**Date:** 28.12.2020**Name:** Mukesh Mali**Process and Head:** Quality-Engineer.**Signature:**

Mesura Nirmal Gas Control Pvt Ltd, Plot No: 39 &amp; 40, Savli GIDC, Alindra, Vadodra-391775, Gujarat, India

✓

*[Signature]*  
28/12/2020



(Government Approved Testing House)  
NABL Accredited Testing Lab for Chemical & Mechanical as per ISO/IEC 17025:2017

# TEST-WELL<sup>®</sup> LABORATORIES



This "TEST REPORT" is valid only if it is produced in Original  
Chemical: Spectral Analysis of Metallic Materials using Spectroscopy.  
Mechanical: Mechanical, IGC Practices & Metallographic Testing of Metallic Materials  
119/1/2 B Rarathia Shopping Center, Near Gauri Cinema, Highway Road, Odhav, Ahmedabad-382415  
Chem. (M) +91 8141870141 Email testwelllab@gmail.com, Mech. (M) +91 9512000166

Doc No: TWLS-11, Issue No.04, Issue date 01/09/2012

## TEST REPORT

Chemical Testing

Metals & Alloys

ULR-TC811520000001988F

Test Report No. TWLS/Chem. : 20091402/20-21

Your Ref. : Personally

Sample(s) received on Date : 14-09-2020.

Condition of sample(s) : Satisfactory

Issue Date : 14-09-2020

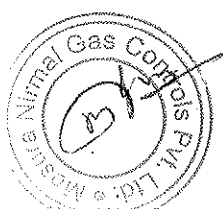
Date : 14-09-2020

Tested on Date : 14-09-2020

Issued to M/s Metal Tecnica.,  
1B/4322, Vatva GIDC, Phase-4, Ahmedabad.

1. Test sample(s) of : Cut piece of Part
2. Identification mark : No-T-20
3. Material Specification : EN 1706EN AC 46500
4. Method of analysis : Spectroscopy-OES
5. Test Method : ASTM E1251-2017a

	(%)	Std. Value
SILICON	10.230	8.00 - 11.0
COPPER	2.070	2.0 - 4.0
MANGANESE	0.284	0.55 Max
ZINC	0.642	3.00 Max
LEAD	0.317	0.35 Max
TIN	0.091	0.15 Max
ALUMINIUM	84.920	Reminder



End of the Report

Remarks: The above element(s) meet(s) the chemistry specification for EN 1706EN AC 46500

For TEST-WELL LABORATORIES,

Test performed by

Authorised Signatory

(Scientist)

B.B. Patel  
TM (Chem)

Z.A. Sayed  
(Scientist)

V.B. Patel  
(CEO)

ISSUED TO: M/s METAL TECNICA  
INVOICE NO: 197  
INVOICE DATE: 11/12/20  
INVOICE BY: J305 SET  
BODY & ACTUATOR

- NOTE:
1. The customer has to specify the material specification for the test sample(s) while submitting.
  2. This Test Report refers only to the sample(s) submitted by the customer.
  3. The test sample(s) will be disposed off immediately after testing unless written request is given prior to testing.
  4. Sample(s) is (are) drawn by the customer/third party.
  5. The Test Report is strictly confidential its use in publicity arbitration or as an evidence in any legal proceedings without the consent of the laboratory is strictly prohibited.

BLANKAT

## BHARAT PRECISION INDUSTRIES

Plot No.249-250, GIDC, Phase-II, Dared, Jamnagar, Gujarat, INDIA-361004  
Tel.No. : 0290-2290000

Tel.No. +91-288-2730130 | Fax No. +91-288-2730140 | Mo: +91-9723451492

Email: [info@bharatprecision.com](mailto:info@bharatprecision.com) Website: [www.bharatprecision.com](http://www.bharatprecision.com)



# TEST CERTIFICATE

Ref No. :- SMPL/51

Date : - 18.05.2020

Grade :- CuZn39Pb3

Rod Size :- ROUND 31.50/31.60MM

Customer Name :- Mesura Nirmal Gas Controls Pvt. Ltd.

T.C.No. :- RMTC/0184/407

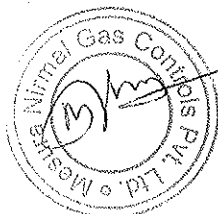
Heat No. :- 18M2051

Ch. No. :- 51.1

Quantity :- 1140.85 Kgs

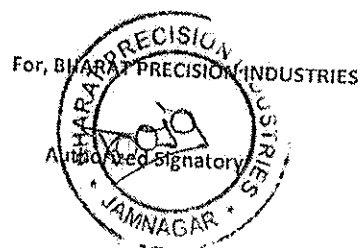
Drg. No. :- S03 D14 R0 3

We here by certify that above material confirm to following chemical composition

[illegible]

copy

28/12/2020







**ABHILASHA FORGING**

Plot no. 16, GIDC Phase-II, Dared, JAMNAGAR - 361 004

37 - TC / REV 00

**Chemical Analysis of Material**

**Certificate 3.1 EN-10204**

Customer Name : Mesura Nirmal Gas Con. Pvt. Ltd.

Date : 01/11/2020

Part Name/No. : 3/4" BSPT Adaptor For 1/2" Nut

Material : Brass IS319

Order No. : P 0000942, P0000955

Heat No. : 2C-170

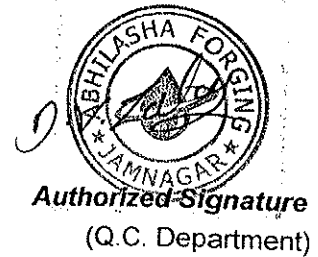
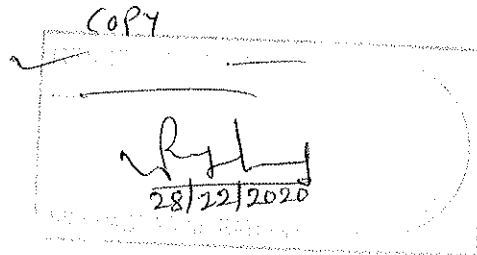
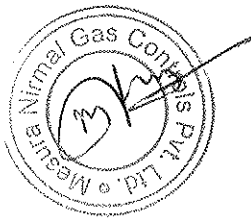
RMTC No. : 64

**Chemical Composition**

Sr. No.	Elements		Specification (%)	Observation (%)
01	Copper	(Cu)%	56.00% - 59.00%	57.550
02	Lead	(Pb) %	2.00% - 3.50%	2.940
03	Iron	(Fe) %	0.35% Max	0.230
04	Zinc	(Zn) %	Remainder	Remainder
05	Other Impurities %		0.70 Max	0.410

Result : OK

We here by certify that the material described above has been tested and complies with the terms of the order contract.



**ABHILASHA FORGING**

Plot no. 16, GIDC Phase-II, Dared, JAMNAGAR - 361 004

37 - TC / REV 00

**Chemical Analysis of Material****Certificate 3.1 EN-10204**

Customer Name : Mesura Nirmal Gas Con. Pvt. Ltd.

Date : 01/11/2020

Part Name/No. : 1/2" Nut for 3/4" BSPT Adaptor

Material : Brass IS319

Order No. : P 0000942, P0000955

Heat No. : 2C - 173

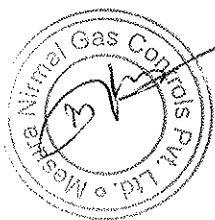
RMTC No. : 65

**Chemical Composition**

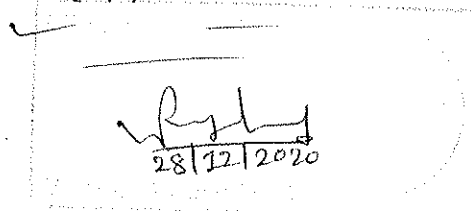
Sr. No.	Elements		Specification (%)	Observation (%)
01	Copper	(Cu)%	56.00% - 59.00%	57.670
02	Lead	(Pb) %	2.00% - 3.50%	2.100
03	Iron	(Fe) %	0.35% Max	0.220
04	Zinc	(Zn) %	Remainder	Remainder
05	Other Impurities %		0.70 Max	0.460

Result : OK

We here by certify that the material described above has been tested and complies with the terms of the order contract.



COPY

**Authorized Signature**  
(Q.C. Department)



**ABHILASHA FORGING**

Plot no. 16, GIDC Phase-II, Dared, JAMNAGAR - 361 004

37 - TC / REV 00

**Chemical Analysis of Material**  
**Certificate 3.1 EN-10204**

Customer Name : Mesura Nirmal Gas Con. Pvt. Ltd.

Date : 01/11/2020

Part Name/No. : 3/4" BSPT Adaptor For 3/4" Nut

Material : Brass IS319

Order No. : P 0000942, P0000955

Heat No. : 2D-33

RMTC No. : 66

**Chemical Composition**

Sr. No.	Elements		Specification (%)	Observation (%)
01	Copper	(Cu)%	56.00% - 59.00%	57.850
02	Lead	(Pb) %	2.00% - 3.50%	2.120
03	Iron	(Fe) %	0.35% Max	0.270
04	Zinc	(Zn) %	Remainder	Remainder
05	Other Impurities %		0.70 Max	0.480

Result : OK

We hereby certify that the material described above has been tested and complies with the terms of the order contract.



colt  
✓  
28/12/2020



**Authorized Signature**  
(Q.C. Department)



# ABHILASHA FORGING

Plot no. 16, GIDC Phase-II, Dared, JAMNAGAR - 361 004

37 - TC / REV 00

## Chemical Analysis of Material

Certificate 3.1 EN-10204

Customer Name : Mesura Nirmal Gas Con. Pvt. Ltd.

Date : 01/11/2020

Part Name/No. : 3/4" Nut for 3/4" BSPT Adaptor

Material : Brass IS319

Order No. : P 0000942, P0000955

Heat No. : 2D-14

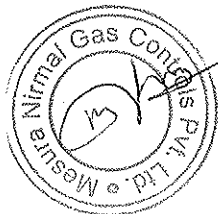
RMTC No. : 67

## Chemical Composition

Sr. No.	Elements		Specification (%)	Observation (%)
01	Copper	(Cu)%	56.00% - 59.00%	57.230
02	Lead	(Pb) %	2.00% - 3.50%	3.060
03	Iron	(Fe) %	0.35% Max	0.260
04	Zinc	(Zn) %	Remainder	Remainder
05	Other Impurities %		0.70 Max	0.590

Result : OK

We here by certify that the material described above has been tested and complies with the terms of the order contract.



Copy  
28/12/2020



Authorized Signature  
(Q.C. Department)

0225

# SHREE PRAKASH SPRING

Machine Parts - Job Works - Die - Wire & Strip Spring Manufacturers.

Address : 986/33/C-D, GIDC, Daimond Park, Makarpura, Baroda - 390 010

Ph. No. 0265 - 2640569 E-mail : spewspring@yahoo.com

## Test Certificate

T C No. 20

Date : 02.06.2020

Customer : Mesura Nirmal Gas Controls P. Ltd.

Cust. Or.No. Verbal

Quantity : 15490 Nos.

Description : Comp.Spring

Drg.No. A4D3419 / M1095

Material Size : 1.00mm

Material Specification: SS 304

Compression Spring

Heat Treatment Applied : 300 °C Temp. at 30 Minutes

Identification Markings :

Associated Documents : SPS/TI0560/2021 & 28.07.2020

Special Requirements :

Mechanical Inspection Procedure & Findings are as follows :

### As Specified

Unique No.	1
W.D.	1.00mm
OD mm	18.30mm
ID mm	16.30mm
T Coils	10
F Length	44.00mm

### Chemical Analysis

(Actual Figures From Mill Certificates )

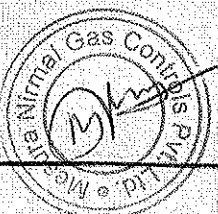
C	0.098	Mo	
Si	0.45	Cu	
Mn	0.87	Fe	
Cr	17.08	Al	
V		Ti	
Ni	8.08	Co	
S	0.006	P	0.036

Mat : S S 304

### As Tested

Spring No.	WD mm	OD mm	ID mm	T Coils	F Length	Load at per N/mm
1	1.00	18.20	16.20	10.1	44.00	0.20
2	1.00	18.40	16.40	10.1	44.00	0.20
3	1.00	18.20	16.40	10.1	44.00	0.20
4	1.00	18.30	16.20	10.1	44.20	0.20
5	1.00	18.20	16.30	10.1	44.30	0.20

This document certifies that the whole of the supplies detailed hereon have been inspected, tested & found to conform in all respects with the contract conditions.



copy

28/12/2020

For Shree Prakash Spring

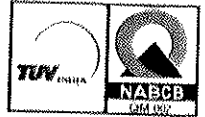
Authorised Signatory



# AFC Elastomers Technology Pvt. Ltd.

Technovative sealing solutions provider.

Manufacturer of Rubber Components



Regd. Office & Works at : Plot No. 8, Savli - Manjusar GIDC Estate, Tal. Savli, Dist. Vadodara, Manjusar - 391776. Gujarat State, INDIA.  
Tel. : +91 96388 05999 CIN : U74999GJ2007PTC100724 E-mail : info@afcelastomers.com Visit us : www.afcelastomers.com

Customer MESURA NIRMAL GAS CONTROLS PVT LTD  
INVOICE NO. 1372

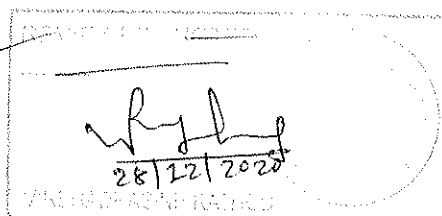
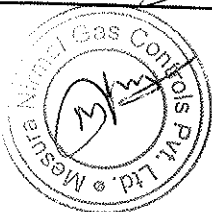
M.T.C No. 0601  
DT 26.10.2020

Sr No.	Component	Drawing No.	Quantity
1	SEAL	A4D3412	5000
<b>Rubber material specification as per EN549 for hardness range H3 (60 to 90 hardness) &amp; B2 Class (temperature range -20° to 80° C)</b>			
No.	TEST	SPECIFICATION	OBSERVATION
1	Material	NITRILE RUBBER	NITRILE RUBBER
2	Hardness (IRHD)	60 ± 5	62°
3	Tensile Strength (Mpa)	7 Min.	16.4
4	Elongation at break (%)	125 Min.	360
5	<b>Compression Set</b> At High Temperature 100 ± 1° C / 168 Hrs (%) At Low Temperature -20 ± 1° C / 72 Hrs (%)	40 Max. 50 Max.	15 16
6	<b>Resistance to Ageing test 100°C/168 Hrs</b> Change in Hardness (IRHD) Change in Tensile strength (%) Change in Elongation (%)	±10 Max. -40 Max. -40 Max.	+5 -18 -22
7	<b>Resistance to Gas Immersion in N-Pentane</b> at 23±2° C / 72 Hrs. and drying at 40±2° C / 168 Hrs Change in Mass after immersion (%) Change in Mass after drying (%)	+ 10 / -5 Max. + 5 / -8 Max.	+4 +4
8	<b>Resistance to Lubricants Immersion in Oil No. 2</b> @ 80±1° C / 168 Hrs Change in Hardness (IRHD) Change in Mass (%)	± 10 Max. +15 / -10 Max	+4 -3
9	<b>Ozone Resistance</b> (50 ± 5 pphm / 30±2° C / 20 % Elongation / 24 Hrs)	No Cracks	No Cracks

Remark:- Observed ok as per standard.

Prepared By: *[Signature]*

Approved By: *[Signature]*





**AFC Elastomers Technology Pvt. Ltd.**  
Technovative sealing solutions provider.  
Manufacturer of Rubber Components



Regd. Office & Works at : Plot No. 8, Savli - Manjusar GIDC Estate, Tal. Savli, Dist. Vadodara, Manjusar - 391776. Gujarat State, INDIA.  
Tel. : +91 96388 05999 CIN : U74999GJ2007PTC100724 E-mail : info@afcelastomers.com Visit us : www.afcelastomers.com

Customer MESURA NIRMAL GAS CONTROLS PVT LTD		M.T.C No. 0631	
INVOICE NO. 1426		DT 31.10.2020	
Sr No.	Component	Drawing No.	Quantity
1	DIAPHRAGM	A4D3413	4000
Rubber material specification as per EN549 for hardness range H2 (45 to 60 hardness) & B2 Class (temperature range -20° to 80° C)			
No.	TEST	SPECIFICATION	OBSERVATION
1	Material	NITRILE RUBBER	NITRILE RUBBER
2	Hardness (IRHD)	50 ± 5	52°
3	Tensile Strength (Mpa)	7 Min.	10.5
4	Elongation at break (%)	300 Min.	440
5	Compression Set At High Temperature 100 ± 1° C / 168 Hrs (%) At Low Temperature -20 ± 1° C / 72 Hrs (%)	25 Max. 50 Max.	16 36
6	Resistance to Ageing test 100°C / 168 Hrs Change in Hardness (IRHD) Change in Tensile strength (%) Change in Elongation (%)	± 08 Max. -15 Max. -25 Max.	+5 -10 -19
7	Resistance to Gas Immersion in N-Pentane at 23 ± 2° C / 72 Hrs. and drying at 40 ± 2° C / 168 Hrs Change in Mass after immersion (%) Change in Mass after drying (%)	+ 10 / -5 Max. + 5 / -10 Max.	+4 +3
8	Resistance to Lubricants Immersion in Oil No. 2 @ 80 ± 1° C / 168 Hrs Change in Hardness (IRHD) Change in Mass (%)	± 10 Max. +15 / -10 Max	+5 -4
9	Ozone Resistance (50 ± 5 pphm / 30 ± 2° C / 20 % Elongation / 24 Hrs)	No Cracks	No Cracks
Remark:- Observed ok as per standard.			
Prepared By.:		Approved By.:	



28/12/2020

# Internal Inspection Report

**Report No.:** IR/614/9  
**Date:** 28.12.2020

Client: M/s.	M/s. Bhagyanagar Gas Limited.	
P.O. No:	BGL/C&P/MEC/PRJ/HVK/FOA-54/20/2020-21 DATED.02.09.2020	
Datasheet	J00614/PCV/103,REV-1	
QAP No:	J00614/QAP/102,REV-0 dt.08.10.2020	
Service: Natural Gas	Model No: M2.5	Job No: J00614
Valve Sr. no:	4Q20/18481 TO 4Q20/19780	Total Quantity: 1300 Nos.

1. End connection- Thread connection of loose nut for all the adaptors are checked and found satisfactory.
2. Inspection of final regulator- Final assembly checked for dimension check, surface finish, workmanship, checking seal, construction and found satisfactory.
3. Marking and labelling as per approved QAP are checked and found satisfactory.
4. Protection and packing of valves are done as per approved QAP for all the regulators and found and found satisfactory.

*[Handwritten Signature]*  
28/12/2020

**RESULTS**

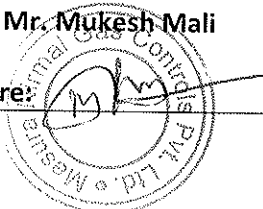
☒ **CONFORM**

☐ **NO CONFORM**

**Quality Department Report Validation by MNGCPL:**

**Name:** Mr. Mukesh Mali

**Signature:**





COMMERCIAL - IN - CONFIDENCE  
**FLUID CONTROL RESEARCH INSTITUTE, PALAKKAD**

An ISO 9001 Establishment  
(A Govt. of India R & D Organisation)  
Under Ministry of Heavy Industries & Public Enterprises  
KANJIKODE WEST, PALAKKAD - 678 623, KERALA, INDIA.

☎ 91-491-2566120, 2566206 ☎ 91-491-2566326 ✉ fcri@fcriindia.com 🌐 www.fcriindia.com

*Air Flow Laboratory*

एफ.सी.आर.आई.

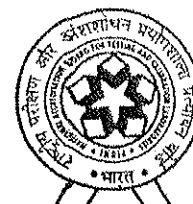


PAGE 1 OF 17 PAGES

**CERTIFICATE OF TESTING**

TESTING OF GAS REGULATOR  
FOR

M/s. MESURA NIRMAL GAS CONTROLS PVT. LTD.,  
VADODARA.



NABL T-0027

DATE OF RECEIPT	DURATION OF TEST	DATE OF ISSUE	REPORT NUMBER
27.01.2014	27.01.2014 to 27.03.2014	22.04.2014	TA 2161 1401 11

*[Signature]*  
APPROVED  
SIGNATORY

**SUMMARY**

SIVAPRAKASH K.G.  
Chief Research Engineer  
Fluid Control Research Institute  
Kanjikode West, Palakkad

Domestic gas regulators identified as M2.5 were tested at Air flow Laboratory of M/s. Fluid Control Research Institute, Palakkad, during 27.01.2014 to 27.03.2014 for M/s. MESURA NIRMAL GAS CONTROLS PVT. LTD, VADODARA. The specific tests carried out as per EN 88-1: 2011 are listed below. Summary of tests conducted and remarks are given below.

Sl. No.	Title	Ref. Standard/ Procedure	Remarks
1	Leak Tightness Test	EN 88-1:2011	Passed
2	Torsion & Bending	EN 88-1:2011	Passed
3	Rated Flow Rate Test	EN 88-1:2011	Passed
4	Pressure Regulator performance	EN 88-1:2011	Passed
5	Endurance Test	EN 88-1:2011	Passed
6	Lock-up Pressure test	EN 88-1:2011	Passed

Tested by

Report Prepared by

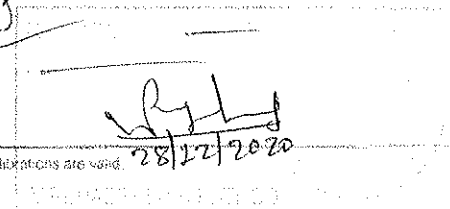
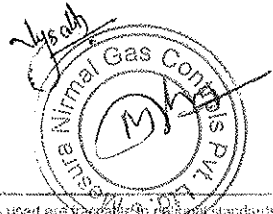
Report Checked by

1. Unnikrishnan .P .N

2. Vysakh. U

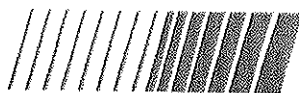
Vysakh. U

Unnikrishnan .P .N



All documents/ Reference flow meters used are traceable to national standards through reference standards and their calibrations are valid.  
Factory test / Calibration in no way implies that the product tested or equipment calibrated is approved by NABL.  
Results presented in this certificate relate only to the items mentioned & calibrated at FCRI.  
This certificate shall not be reproduced except in full without written approval of FCRI.  
The measurements are for a confidence probability not less than 95%, unless specified otherwise.

Vadsar Bridge (West End),  
Nr. Petrol Pump., G.I.D.C., Vadsar Road,  
Baroda - 390 010. M.: 9712578788  
M.: 8866064026, 9033064026  
E-mail : info@actionengineers.com  
Website : www.actionengineers.com



**ACTION  
ENGINEERS**

NABL Accredited Laboratory



## CALIBRATION CERTIFICATE

CERTI. NO. : CCS/172/19-20

DATE : 08-06-2020

PAGE NO. : 1 OF 1

ULR NO. : CC-241920000003619F

CUSTOMER NAME & : MESURA NIRMAL GAS CONTROLS PVT. LTD. CONDITION OF INST. : VISUALLY FOUND  
ADDRESS : PLOT NO.: 39-40 ALINDRA, SAVLI G.I.D.C., GOOD  
INDL. ESTATE, DIST.: VADODARA  
INSTRUMENT CODE : Q-24-17 RECEIVED ON : 06-06-2020  
LOCATION : QL-01 CALIBRATED ON : 06-06-2020  
INSTRUMENT : ANALOG VERTICAL MANOMETER CALIBRATION DUE ON : 05-06-2021  
MAKE : CVG RANGE : 0-500 mmWC  
SR. NO. : 428/14-15 L.C : 1 mmWC

CALIBRATION CARRIED OUT AT	SITE
ENVIRONMENTAL CONDITIONS	TEMPERATURE : $25 \pm 5^{\circ}\text{C}$ HUMIDITY : $< 70\% \text{ RH}$
SOP NO.	15

STANDARD INSTRUMENTS USED FOR CALIBRATION TRACEABLE TO NATIONAL STANDARDS THROUGH NABL ACCREDITED LAB.

NAME OF INSTRUMENT	SR. NO. / ID NO.	RANGE / ACCURACY	TRACEABILITY REPORT NO.	CALI. DUE DATE
DIGITAL MANOMETER	38999131/206 AE/P/26	0-100 mbar $\pm 0.1 \text{ mbar} + 1.5\% \text{ rdg.}$	CS/19/LB/MP/427-01	15-11-2020

### MECHANICAL CALIBRATION : PRESSURE CALIBRATION RESULTS :

UUC	SMR		DEVIATION		EXPANDED UNCERTAINTY AT 95.45 % CL WITH $k=2$ ( $\pm$ in mmWC)
in mmWC	in mmWC		in mmWC		
	RISING	FALLING	RISING	FALLING	
000	00.0	00.0	0.00	0.00	53.165
100	98.7	98.5	+ 1.30	+ 1.50	
200	197.8	197.3	+ 2.20	+ 2.70	
300	298.8	298.2	+ 1.20	+ 1.80	
400	396.6	396.1	+ 3.40	+ 3.90	
500	496.7	496.7	+ 3.30	+ 3.30	

UUC : UNIT UNDER CALIBRATION, SMR : STANDARD METER READING

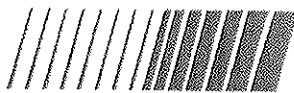
NOTE : 1) Calibration is carried out considering the SI unit of pressure  $1 \text{ mbar} = 10.2 \text{ mmWC}$ .

2) This Calibration Certificate is meant for scientific and industrial purpose only. However, if used for commercial trading, Additional recognition / approval shall be complied as required by Dept. of Legal Metrology, Regulatory Bodies, etc.

1. The results reported here are valid only at the time of and under stated conditions of measurements. 2. The results related only to the item (s) calibrated.  
3. This certificate shall not be reproduced except in full without written approval of the partner of laboratory.  
4. The suitability of the instrument for its required use is to be decided by user.

CALIBRATED BY	AUTHORIZED SIGNATORY	
	GM-QA & Tech. (PARESH UPADHYAYA)	

Vadsar Bridge (West End),  
Nr. Petrol Pump., G.I.D.C., Vadsar Road,  
Baroda - 390 010. M.: 9712578788  
M.: 8866064026, 9033064026  
E-mail : info@actionengineers.com  
Website : www.actionengineers.com



**ACTION  
ENGINEERS**

NABL Accredited Laboratory



## CALIBRATION CERTIFICATE

CERTI. NO. : CCS/174/19-20

DATE : 08-06-2020

PAGE NO. : 1 OF 1

ULR NO. : CC-241920000003621F

CUSTOMER NAME & : MESURA NIRMAL GAS CONTROLS PVT. LTD. CONDITION OF INST. : VISUALLY FOUND  
ADDRESS : PLOT NO.: 39-40 ALINDRA, SAVLI G.I.D.C., GOOD  
INDL. ESTATE, DIST.: VADODARA  
INSTRUMENT CODE : Q-24-22 RECEIVED ON : 06-06-2020  
LOCATION : QL-01 CALIBRATED ON : 06-06-2020  
INSTRUMENT : DIGITAL PRESSURE TRANSMITTER CALIBRATION DUE ON : 05-06-2021  
MAKE : HONEYWELL RANGE : 0-10000 mbar  
SR. NO. : C 4000000614847 L.C : 0.1 mbar

CALIBRATION CARRIED OUT AT	SITE	
ENVIRONMENTAL CONDITIONS	TEMPERATURE : 25 $\pm$ 5°C	HUMIDITY : < 70 % RH
SOP NO.	15	

STANDARD INSTRUMENTS USED FOR CALIBRATION TRACEABLE TO NATIONAL STANDARDS THROUGH NABL ACCREDITED LAB.

NAME OF INSTRUMENT	SR. NO. / ID NO.	RANGE / ACCURACY	TRACEABILITY REPORT NO.	CALI. DUE DATE
PRESSURE GAUGE	VEM-06009 AE/P/20	0-20 bar $\pm$ 0.25 % OF FSD	CCN/AE/52	10-10-2020


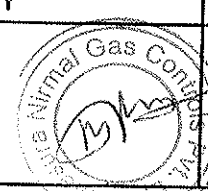
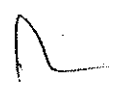
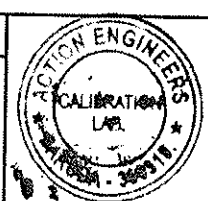
### MECHANICAL CALIBRATION : PRESSURE CALIBRATION RESULTS :

UUC	SMR		DEVIATION		EXPANDED UNCERTAINTY AT 95.45 % CL WITH k=2
in mbar	in mbar		in mbar		( $\pm$ in mbar )
	RISING	FALLING	RISING	FALLING	
0000	0000	0000	0.00	0.00	
2000	2005	1995	- 5.00	5.00	
4000	4030	4023	- 30.00	- 23.00	
6000	6040	6034	- 40.00	- 34.00	
8000	8045	8036	- 45.00	- 36.00	
10000	10050	10050	- 50.00	- 50.00	

UUC : UNIT UNDER CALIBRATION, SMR : STANDARD METER READING

NOTE : 1) Calibration is carried out considering the SI unit of pressure 1 bar = 1000 mbar  
2) This Calibration Certificate is meant for scientific and industrial purpose only. However, if used for commercial trading, Additional recognition / approval shall be complied as required by Dept. of Legal Metrology, Regulatory Bodies, etc.

- The results reported here are valid only at the time of and under stated conditions of measurements. 2. The results related only to the item (s) calibrated.
- This certificate shall not be reproduced except in full without written approval of the partner of laboratory.
- The suitability of the instrument for its required use is to be decided by user.

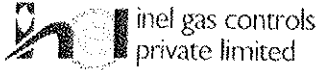
CALIBRATED BY	AUTHORIZED SIGNATORY	
 	 GM-QA & Tech. (PARESH UPADHYAYA)	

INEL GAS CONTROLS PRIVATE LIMITED, VADODARA

An ISO 9001:2015 Establishment

E-11 EPIP ZONE, G I D C ESTATE, MANJUSAR, TALUKA SAVLI, DIST: VADODARA – 391775

Contact: +91 265-2310416 / 2314932 | Email: info@inelindia.com | Website: www.inelindia.com



**CALIBRATION CERTIFICATE**  
**ROTA METER**  
*for*  
**M/S Mesura Nirmal Gas Controls Pvt Ltd**

PAGE 1 OF 3 PAGES

DATE OF RECEIPT	DATE OF CALIBRATION	DATE OF ISSUE	CALIBRATION DUE DATE	CERTIFICATE NUMBER
21-07-2020	21-07-2020	25-07-2020	20-07-2021	IGCPL/RM/2007/05

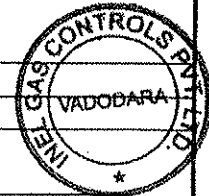
**SUMMARY**

Description of the Meter (UUC) :		
Meter Type	:	ROTA METER
End Connection Size	:	3/4" x 150#
Meter Size	:	-
Sl. No.	:	1808779 (Q-23-10)
Range	:	0.3 – 3 Nm <sup>3</sup> /Hr
Make	:	Scientific Devices
Laboratory	:	Air Flow Laboratory
Calibration Method	:	Comparison Method
Calibration Medium	:	Conditioned Air

**Environmental Conditions :**

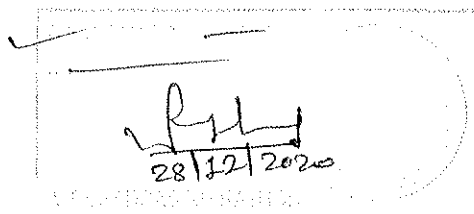
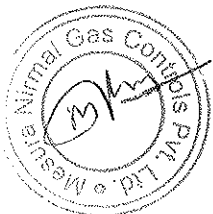
Temperature: 24.4 DegC

Humidity: 42% Rh



1			
2			

All the instruments/Reference Flow Meters used are Traceable to National Standards through reference standards and their calibration are valid.



**CALIBRATION CERTIFICATE**

CERTIFICATE NUMBER:

IGCPL/RM/2007/05

PAGE 2 of 3

**CALIBRATION DETAILS:**

**Job Card No** : CAL X 01

**Environment** : (25 ± 3) °C 40 to 60 Rh

**Calibration conditions** : Calibration Carried out at controlled Environment and all the results are based on standard Test Method and expressed for test meter inlet conditions.

**Calibration Method** : The Calibration is done using Comaprison Method with conditioned air as medium as per AFL Laboratory. The Reference/Master flow meters used are part of IGCPL facility and is kept at Downstream and Test Meter outlet let free to atmosphere.

**Calibration Report** : The Report of calibration are given in Table 1

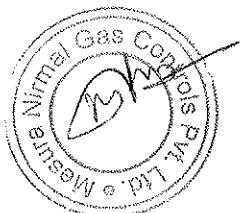
**Calibration Graph** : -

**Uncertainty** : -

**Traceability:**

Master Equipment Used	Reference record Certificate No.	Calibration Date
G4 Extended Thermal Meter	CA 8791907 310	31-07-2019
G25 Thermal Meter	CA 8791907 312	08-08-2019

All the instruments/Reference Flow Meters used are Traceable to National Standards through reference standards and their calibration are valid



*[Signature]*  
28/12/2020

**CALIBRATION CERTIFICATE**

CERTIFICATE NUMBER:

IGCPL/RM/2007/05

PAGE 3 of 3

**TABLE 1**

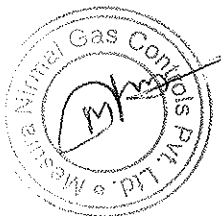
**CALIBRATION REPORT**

Range	0.3 – 3 Nm <sup>3</sup> /Hr	
Least Count	1	
Connection Size	3/4" x 150#	
Service	Air	
Calibration on	21-07-2020	
Due Date	20-07-2021	
Serial No.	1808779 (Q-23-10)	
Glass Tube Rotameter under calibration (Reading) (Nm <sup>3</sup> /Hr)	Master Flow Meter (Reading) (Nm <sup>3</sup> /Hr)	Error%
0	0	
0.3	0.3	0.0000
0.5	0.5	0.0000
1	1.01	-0.9901
1.5	1.51	-0.6623
2	2.039	-1.9127
2.5	2.51	-0.3984
3	3.06	-1.9608
<b>Master Meter Details</b>		
Type of Flow meter	Thermal Mass Flow Meter	
Make	MeterSIt	
Certificate No.	CA 8791907 312	
Calibrated by	FCRI	
Calibrated on	31-07-2019	

**Note :-**

1. This calibration certificate relates to the particular meter received for calibration.
2. Calibration carried out at laboratory premises.
3. Above results are valid at the time of and under the stated conditions of measurement.
4. We certify that the Instrument calibration is within desired accuracy of  $\pm 2\%$ .
5. The Working of Instrument is satisfactory.

All the instruments/Reference Flow Meters used are Traceable to National Standards through reference standards and their calibration are valid.



*[Signature]*  
28/12/2020

# Caliber Gauges & Instruments Laboratory

S.No. 14/1, Datta Digambar Colony, B, Old Warje Jakat Naka, Pune - 411052.

☎ : 9422311121, 7741832553, E-mail: caliberlab@yahoo.co.in Web: www.caliberlaboratory.co.in



Certificate No.: CC2656

PAGE 1 of 1

CERTIFICATE NO : CGIL/2020/0609/E-009

ULR : CC265620000004029F

## CALIBRATION CERTIFICATE

CALIBRATED FOR

Mesura Nirmal Gas Controls Pvt. Ltd.  
Plot No. 39-40, Savli GIDC, Alindra, Vadodara  
Vadodara

TYPE OF GAUGE

Taper Thread Plug Gauge

SIZE	Identification	Make	Mfg. Sr. No.
1/2-14 NPT	Q-19-01	BAKER	--

Challan No.	W. O. No.	Receipt Date	Calibration Date	Due Date (customer decided)	Issue Date
MNGCPL/GEN/122	0609/E	09/06/2020	11/06/2020	10-06-2021	11/06/2020

Standards / Equipment are traceable to the National Standard

Description	Identification No.	Certificate No.	Valid up to
Floating Carriage Micrometer	CGIL/EQP/01	CGIL/2019/0613/H-001	12/06/2021
A Set of Slip Gauge ( 88 Steel )	CGIL/STD/01	CGIL/2019/1022/D-001	21/10/2021
Cylindrical Setting Master (FCDM)	CGIL/STD/05	CGIL/2019/0816/C-002	25/09/2021
Thread Measuring Wire ( Two Wire )	CGIL/STD/06	CGIL/2019/1031/B-001	31/10/2021
Surface Plate ( 450 x 450 mm )	CGIL/STD/07	CGIL/2019/1031/A-001	31/10/2021

CALIBRATION PROCEDURE NO.

: CGIL-CP-14

REFERENCE STANDARD

: ASME B 1.20.5 / IS 554 / IS 8999

ENVIRONMENTAL CONDITION

: Temperature : 20.3°C

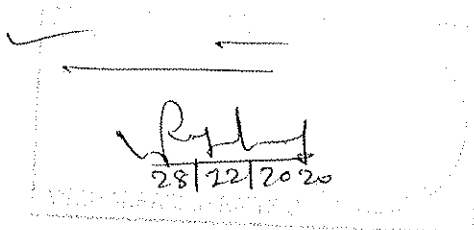
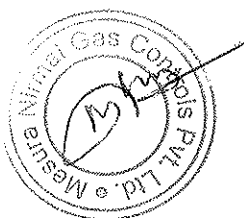
UNCERTAINTY OF MEASUREMENT

:  $\pm 5.7 \mu\text{m}$  ( At 95.45% Confidence Level i.e.  $k=2$  )

Mechanical Calibration: Dimension (Gauges)

## CALIBRATION RESULTS

Sr. No.	Parameter	Specified Dimension (in mm)	Observed Dimension (in mm)
1	Pitch Diameter at 2 Pitch Distance	19.486 $\pm$ 0.008	19.4933



Calibrated By

Technical Assistant  
Amol Gaikwad



Approved By

Quality Manager  
Bhagyashree Raskar

1. This certificate pertains only to the items calibrated at CGIL Laboratory.
2. This report should not be reproduced without a written permission of the laboratory.
3. The results reproduced in this certificate are valid under stated conditions at the time of calibration.

x-x-x-x-x- End of certificate -x-x-x-x-x-

CGILF : 7.8:01:00

# Caliber Gauges & Instruments Laboratory

S.No. 14/1, Datta Digambar Colony, B, Old Warje Jakat Naka, Pune - 411052.

☎ : 9422311121, 7741832553, E-mail: caliberlab@yahoo.co.in Web: www.caliberlaboratory.co.in



Certificate No.: CC2656

ULR : CC265620000004.030E

PAGE 1 of 1

CERTIFICATE NO : CGIL/2020/0609/E-010

## CALIBRATION CERTIFICATE

**CALIBRATED FOR** : Mesura Nirmal Gas Controls Pvt. Ltd.  
Plot No. 39-40, Savli GIDC, Alindra, Vadodara  
Vadodara

**TYPE OF GAUGE** : Taper Thread Plug Gauge

SIZE	Identification	Make	Mfg. Sr. No.
3/4 - 14 NPT	Q-19-03 --	BAKER	--

Challan No.	W. O. No.	Receipt Date	Calibration Date	Due Date (customer decided)	Issue Date
MNGCPL/GEN/122	0609/E	09/06/2020	11/06/2020	10-06-2021	11/06/2020

Standards / Equipment are traceable to the National Standard

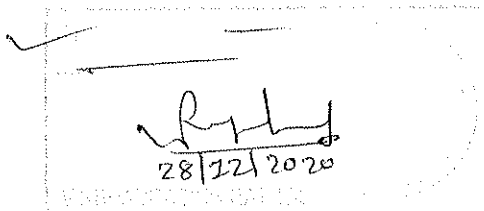
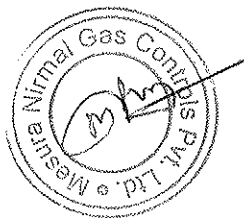
Description	Identification No.	Certificate No.	Valid up to
Floating Carriage Micrometer	CGIL/EQP/01	CGIL/2019/0613/H-001	12/06/2021
A Set of Slip Gauge ( 88 Steel )	CGIL/STD/01	CGIL/2019/1022/D-001	21/10/2021
Cylindrical Setting Master (FCDM)	CGIL/STD/05	CGIL/2019/0816/C-002	25/09/2021
Thread Measuring Wire ( Two Wire )	CGIL/STD/06	CGIL/2019/1031/B-001	31/10/2021
Surface Plate ( 450 x 450 mm )	CGIL/STD/07	CGIL/2019/1031/A-001	31/10/2021

**CALIBRATION PROCEDURE NO.** : CGIL-CP-14  
**REFERENCE STANDARD** : ASME B 1.20.5 / IS 554 / IS 8999  
**ENVIRONMENTAL CONDITION** : Temperature : 20.3°C  
**UNCERTAINTY OF MEASUREMENT** :  $\pm 5.7 \mu\text{m}$  ( At 95.45% Confidence Level i.e.  $k=2$  )

Mechanical Calibration: Dimension (Gauges)

## CALIBRATION RESULTS

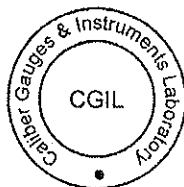
Sr. No.	Parameter	Specified Dimension (in mm)	Observed Dimension (in mm)
1	Pitch Diameter at 2 Pitch Distance	24.803 $\pm$ 0.008	24.8090



Calibrated By

Technical Assistant

Amol Gaikwad



Approved By

Quality Manager

Bhagyashree Raskar

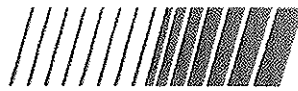
1. This certificate pertains only to the items calibrated at CGIL Laboratory.
2. This report should not be reproduced without a written permission of the laboratory.
3. The results reproduced in this certificate are valid under stated conditions at the time of calibration.

x-x-x-x-x- End of certificate -x-x-x-x-x-

CGILF :7.8:01:00



Vadsar Bridge (West End),  
Nr. Petrol Pump, G.I.D.C., Vadsar Road,  
Baroda - 390 010. M.: 9712578788  
M.: 8866064026, 9033064026  
E-mail : info@actionengineers.com  
Website : www.actionengineers.com



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ENGINEERS**  
NABL Accredited Laboratory



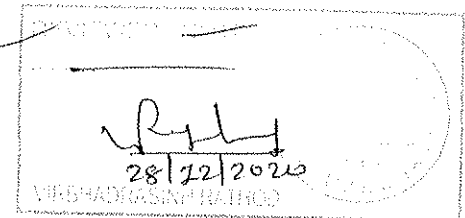
## CALIBRATION CERTIFICATE

CERTI. NO. : CCS/8032/19-20  
ULR NO. : CC-241920000002685F

DATE : 25-05-2020

PAGE NO. : 1 OF 2

CUSTOMER NAME : MESURA NIRMAL GAS CONTROLS PVT. LTD.  
ADDRESS : PLOT NO. : 39-40,  
SAVLI GIDC, ALINDRA.  
INSTRUMENT CODE : Q-15-01  
INSTRUMENT : DIGITAL CALIPER  
MAKE : MITUTOYO  
SERIES NO. : 500-754-10  
SR. NO. : 0062424  
RANGE : 0-300 mm  
LEAST COUNT : 0.01 mm  
CONDITION ON RECEIPT : VISUALLY FOUND GOOD  
RECEIVED ON : 22-05-2020  
CALIBRATED ON : 25-05-2020  
CALIBRATION DUE ON : 24-05-2021

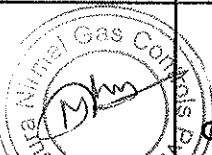
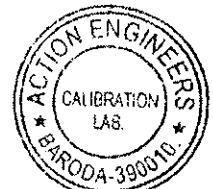


CALIBRATION CARRIED OUT AT	LAB
ENVIRONMENTAL CONDITIONS	TEMPERATURE : 20.1°C [ ± 0.5°C ] HUMIDITY : [ 50 ± 10 ] % RH
SOP. NO.	23

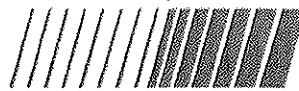
STANDARD INSTRUMENTS USED FOR CALIBRATION TRACEABLE TO NATIONAL STANDARDS  
THROUGH NABL ACCREDITED LAB.

NAME OF INSTRUMENT	SR. NO. / ID NO.	TRACEABILITY REPORT NO.	CALI. DUE DATE
SLIP GAUGE SET ( CARBIDE )	9815 AE/M/02	SG/18/0206	04-08-2020
STEEL CALIPER CHECKER	0985 AE/M/03	CC/18/3184	02-12-2020
DIGITAL OUTSIDE MICRO METER	25036960 AE/M/48	CCN/AE/77	13-03-2021

- The results reported here are valid only at the time of and under stated conditions of measurements.
- The results related only to the item(s) calibrated.
- This certificate shall not be reproduced except in full without written approval of the partner of laboratory.
- The suitability of the instrument for its required use is to be decided by user.

CALIBRATED BY	AUTHORIZED SIGNATORY	
 	 GM-QA & Tech. (PARESH UPADHYAYA)	

Vadsar Bridge (West End),  
Nr. Petrol Pump, G.I.D.C., Vadsar Road,  
Baroda - 390 010. M.: 9712578788  
M.: 8866064026, 9033064026  
E-mail : info@actionengineers.com  
Website : www.actionengineers.com



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## CALIBRATION CERTIFICATE

CERTI. NO. : CCS/8032/19-20

DATE : 25-05-2020

PAGE NO. : 2 OF 2

ULR NO. : CC-241920000002685F

**MECHANICAL CALIBRATION** : Dimension (Basic-Measuring Instrument, Gauges etc.)

### CALIBRATION RESULTS :

Standard Length in mm	50	100	200	300
Observed Error of UUC in $\mu\text{m}$ [ AFTER ZERO SETTING ]				
<b>External Measurement:</b>				
At Top of Jaws	00	00	- 10	- 10
At Centre of Jaws	00	00	- 10	- 10
At Bottom of Jaws	00	00	- 10	- 10
Average Error	00	00	- 10	- 10
<b>Internal Measurement:</b>				
Observed Error	00	00	00	+ 10
<b>Depth Measurement:</b>				
Observed Error	+ 10	+ 10	+ 10	+ 10

Parallelism of Measuring Faces of UUC		Error of UUC
		in $\mu\text{m}$
A	Parallelism of external measuring faces at 50 mm	00
B	Parallelism of external measuring faces at 100 mm	00
C	Parallelism of internal measuring faces at 20 mm	05

EXPANDED UNCERTAINTY OF MEASUREMENT :  $\pm 22$  MICRON  
( AT 95.45 % CONFIDENCE LEVEL,  $k=2$  )

UUC : UNIT UNDER CALIBRATION

*[Signature]*  
28/12/2020

- The results reported here are valid only at the time of and under stated conditions of measurements.
- The results related only to the item (s) calibrated.
- This certificate shall not be reproduced except in full without written approval of the partner of laboratory.
- The suitability of the instrument for its required use is to be decided by user.

CALIBRATED BY	AUTHORIZED SIGNATORY	ACTION ENGINEERS CALIBRATION LAB. BARODA-390010
<i>[Signature]</i> Nimesha Nirmal Gas Controls Pvt. Ltd.	<i>[Signature]</i> GM-QA & Tech. (PARESH UPADHYAYA)	