

- \* Centrifuge is calibrated by Shakti Scientific Co. with the Digital Thermometer which is calibrated by Sadbhav Calibration.
- \* All traceability certificates are attached with it.
- \* KINDLY Go through certificates.

Register Office :  
212, Sakar Complex,  
Sanstha-Vasahat, Dandiabazar,  
Raopura, Vadodara-390001, Guj.

E : info@shaktiscientific.in  
Ph : +91 265 -2712565 / 2412756  
M.: 87587 411 85 / 96386 39 393

## CALIBRATION CERTIFICATE

CUSTOMER. **Pulsepath Clinical Laboratory**  
1st Floor, 23, Aroma Complex Soma  
Talav Road, Dabhoi Road, Vadodara

CERTIFICATE NO: 080

DESCRIPTION OF ITEM: Lab Centrifuge "Remi" CERTIFICATE DATE: 17/09/2020

MODEL NO: C854/6

SR.NO: ZEFN- 19115

RANGE: 3500RPM

### DETAILS OF EQUIPMENT USED FOR CALIBRATION:

SR.NO	DESCRIPTION	CERTIFIED BY	CERTIFICAT NO.	VALIDITY
1	DIGITAL TECHOMETER	SADBHAV CALIBRATION	N/0311A/07/2020	27/07/2021

### OBSERVATIONS

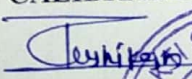
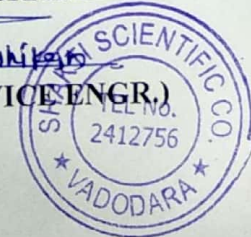
#### R.P.M.CALIBRATION:

POINT	INSTRUMENT TIMER DISPLAYED	CALIBRATED TECHO METER READING	ERROR OBSERVED	ACCEPTD ERROR	RESULT
1	1000RPM	980 RPM	- 20RPM	+/-100RPM	PASS
2	1500RPM	1495 RPM	- 05RPM	+/-100RPM	PASS
3	2000RPM	1986 RPM	- 14RPM	+/-100RPM	PASS
4.	3500RPM	3492RPM	-08RPM	+/-100RPM	PASS

1. Calibration done with Roto—6x15ml-----
2. Calibration Traceable to national Standards
3. Result is related only to the item calibrated
4. Maximum tolerance permissible RPM2%FSD

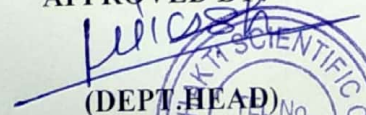
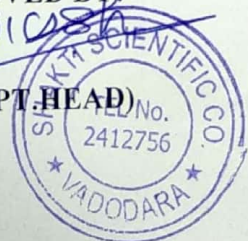
REMARKS: Overall deviation is within specified tolerance. Accepted  
NEXT CALIBRATION DUE: 16/09/2021

CALIBRATED BY:

  
(SERVICE ENGR.)  




APPROVED BY:

  
(DEPT. HEAD)  


Corporate Office: LF-17, 4th Floor, Lotus Aura-1, Sama-Savli Road, Vemali, Vadodara-390008, Gujarat, INDIA.



### Certificate of Calibration

Page 1

Certificate No.: **N/0311A/07/2020** (ULR-CC21182000003476F) Date of Performance of Calibration: **27-07-2020**  
 Calibration At: LABORATORY User Specified Due Date: **27-07-2021**  
 Date of Issue of Calibration Certificate: **29-07-2020**

#### Customer Details

Calibrated For: **Shakti Scientific Co** Division : --  
 LF-16, 4th Floor, Lotus Aura-1, Sama-Savli Road, Vadodara - 390008.  
 Reference: Challan No: 266, Dated: 25/07/2020 Location : --

#### Device Under Calibration

Date of Receipt: 25-07-2020 Conditions on Receipt: Satisfactory  
 Description: Tachometer Digital (Non-Contact) Make/Model: Lutron/DT2234C  
 Size/Range: 5 to 99999RPM Least Count: 0.1RPM upto 999.9 RPM & 1RPM above it  
 Identification: -- Sr No.: L165478  
 Accuracy Class of DUC: Not Specified

#### Master Equipment Used for Calibration(Traceability:NABL Lab/NPL)

Sr No.	Items	Identification	Range	Traceability	Valid Upto
1	Digital Tachometer	DCNCT/SCS/67/12/2007	99999 RPM	IDEMI Certificate No.:CC/ECL/0907/19-20	16-08-2020

#### Calibration Parameters

Environmental Condition: Temperature:25 °C Humidity:54%RH  
 Procedural Reference: CP 403 based on S9086-Q5-STM-010/CH-491R1, Rev. 1, THE NAVAL SEA SYSTEMS COMMAND (SEA-03Z71).U.S

#### Mechanical Calibration

Results : Item is Calibrated in as found conditions without any adjustments

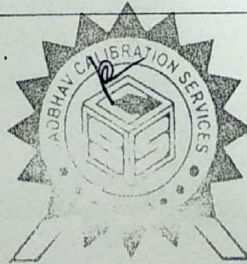
Standard Readings in RPM	DUC Reading in RPM	Deviation in RPM	(±) % Expanded Uncertainty
120.0	120.0	0.0	2.34
960.0	960.1	0.1	0.27
3840	3840	0	0.10
30720	30722	2	0.07

Expanded Uncertainty: ±As Per Result at 95.45% confidence level with coverage factor  $k=2$

Note: Identification with self adhesive stickers affixed on DUC/case with user specified due date.

--- END OF CERTIFICATE ---

Calibrated By  
 Dakshesh P Talpada  
 Calibration Engineer



Review and Authorised By  
  
 Binay B Bhuptani  
 QM

Note : 1. This Certificate refers only to the particular item(s) submitted for calibration. 2. This certificate shall not reproduced, except in full, unless written permission for the publication of approved abstract has been obtained from the Proprietor. Sadbhav Calibration Services, Vadodara.  
 3. The calibration results reported in this certificate are valid at the time of and under the stated condition of measurement.



(A Govt. of India Society)  
Ministry of Micro, Small & Medium Enterprises



NABL Accreditation Certificate Nos.  
CC-2287, TC-5538

# CALIBRATION CERTIFICATE

## **IDEMI**

INSTITUTE FOR DESIGN OF ELECTRICAL  
MEASURING INSTRUMENTS, MUMBAI

MSME - Technology Centre  
Mumbai

(A Govt. of India Society)  
Ministry of Micro, Small & Medium Enterprises  
Government of India

Eastern Express Highway,  
Chunabhatti, Sion P.O.,  
MUMBAI - 400 022.

Phone : (022) 2405 0301-4  
Fax : (022) - 2405 0016

Website : [www.idemi.org](http://www.idemi.org)

Download "IDEMI CALIBRATION SERVICES" App from Google Play Store & E-Book From website

FF - LAB - 13



**ACCREDITATIONS / RECOGNITIONS / CERTIFICATIONS / MEMBERSHIPS**

Govt. of India Institute under the Ministry of MSME	
Laboratories are Accredited by NABL as per ISO/IEC 17025	
Recognised by BIS, under Laboratory Recognition Scheme for Type Testing of Energy Meter.	
Certified by SGS, UK for ISO 9001 : 2015	
Member of National Conference of Standards laboratories International	
Member of Bureau of Indian Standards (BIS)	
Member of British Standard Institute, (BSI) United Kingdom	
Member of Society of EMC Engineers	
Member of Institute for Electrical & Electronic Mfg. Association (IEEMA) India.	
Member of Metrology Society of India.	
Member of Fluid Power Society	
Member of Indo - German Chamber of Commerce	
Undertakes the Testing and Calibration as per IEC Standards (International Electro Technical Commission)	
Undertakes the Testing for CE Marking	
Member of Indo - American Society	
Member of Tool & Gauge Manufacturing Association (TAGMA)	



वैद्युतिक मापन उपयंत्र अभिकल्प संस्थान, मुंबई

INSTITUTE FOR DESIGN OF ELECTRICAL  
MEASURING INSTRUMENTS, MUMBAI  
TECHNOLOGY CENTRE

भारत सरकार की सोसायटी  
सूक्ष्म लघु एवं मध्यम उद्यम मंत्रालय  
Government of India Society

Ministry of Micro, Small & Medium Enterprises



संदर्भ सं / Ref. No. : IDEMI/ECL/2/2019-2020

दिनांक :

Date : 06/09/2019

To,  
M/s. Sadbhav Calibration Services,  
Arihant Super Market, Extension Building,  
Opp. State Bank of India,  
Near Lalbaug Crossing, Manjalpur,  
**Vadodara, Gujarat - 390 011.**

Attn. : Mrs. Binal Bhuptani  
Mobile : 9328290172

विषय : अंशांकन प्रमाणपत्र

Sub : Calibration Certificate

Work Order No. : WO/ECL/0411/19-20 dated 14/08/2019

महोदय,

आपके उपकरणों अवयवों पर किये हुये अंशांकन प्रमाणपत्र संख्या CC/ECL/0907/19-20 आपको जानकारी के लिए पत्र के साथ भेज रहे हैं। यदि आपको अंशांकित मत्तों पर स्पष्टीकरण की कोई आवश्यकता हो तो, कृपया प्रमाणपत्र जानकारी करने वाले प्राधिकारी को हमारे संदर्भ संख्या और तारीख का उल्लेख करते हुए, प्रमाणपत्र प्राप्त होने पर चार सप्ताह के अन्दर सम्पर्क करें अथवा लिखें। हम इस पत्र के साथ फीड बैक फॉर्म भेज रहे हैं। कृपया उसे भरके प्रबंध निदेशक, आई डी ई एम आई को भेजें।

धन्यवाद!

भवदीय

प्रबंध निदेशक

संलग्न पत्रानुसार

Dear Sir,  
Calibration Certificate No. CC/ECL/0907/19-20 / on your instruments / components / equipment's are / is enclosed herewith for your information. If you need any clarification on calibration certificate, please write/contact to certificate issuing officer quoting our reference and date within four week the date of receipt of this certificate. We are also enclosing here with feed back form. Kindly fill up and send to the Managing Director of IDEMI.

Thank You

Yours faithfully

Encl. As above

MANAGING DIRECTOR



Swatantryaveer Tatya Tope Marg, Chunabhatti, Sion, P.O. Mumbai - 400 022(M. S.)

Phone: (022) 2405 0301/2/3/4

Fax: (022) 2405 0016

Website: www.idemi.org

FF-LAB-01





# CALIBRATION CERTIFICATE



Work Order No. : WO/ECL/0411/19-20  
Date : 14/08/2019  
ULR No. : CC228719100001927F  
Calibrated Item : Digital Tachometer

Certificate No. : **CC/ECL/0907/19-20**  
Date of Calibration : 17/08/2019  
Page No. : 1 of 2

Calibrated for : M/s. Sadbhav Calibration Services, Arihant Super Market, Extension Building, Opposite State Bank of India, Near Lalbaug Crossing, Manjalpur, Vadodara, Gujarat - 390 011.

Calibrated at : IDEMI, Mumbai.

Specification of device under calibration	Standard instruments used for calibration
Manufacturer : M/s. Indi Condition of Item on receipt : No visible damage Calibrated from 30 to 99999 RPM (Non- Contact Mode) Sr. No. : S12K0712123 Model : 6123 ID No. : DCNCT/SCS/67/12/2007 Accuracy : $\pm (0.05\% + 1 \text{ Digit})$	RPM Source with Digital Tachometer ID No. : IDEMI/ECL/TACHO/01 Calibration Validity up to 04/04/2020  All measurement results are traceable to the International system of units (SI), ensured by comparison, directly or indirectly with National or International standards through unbroken chain of calibration

**Ambient Conditions :**

Temperature : 26 °C

Relative Humidity : 62 %

Remarks : Please refer page 2 for Calibration Results.

- 1) Procedure of Calibration : Above mentioned item is calibrated as per operating procedure : OP-S&R -01
- 2) Reported Expanded Uncertainty is at Coverage Factor  $k=1.96$  & at 95 % Confidence Level.
- 3) Calibration Status : Sticker No. 880 indicating 'CAL STATUS' is affixed on instrument.
- 4) Our NABL Accreditation Certificate No. is CC - 2287, Valid up to 30/08/2020.
- 5) Next Calibration Due on : 16/08/2020.

PRADEEP  
SHANTILAL  
GUJARATHI

Digitally signed by  
PRADEEP SHANTILAL  
GUJARATHI  
Date: 2019.09.06 14:56:33  
+05'30'

AUTHORISED SIGNATORY

**Note:**

1. This certificate refers only to the particular item(s), submitted for calibration. The certificate should not be reproduced except in full without the prior permission from the Managing Director, IDEMI, Mumbai - 400 022.
2. This is computer generated certificate and may not contain signature. Where send by email, this is signed with digital signature of authorized signatory, approved by NABL. For any queries, please quote work order number mentioned in this certificate



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INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS, MUMBAI

भारत सरकार की सोसायटी

सूक्ष्म लघु एवं मध्यम उद्यम मंत्रालय

Government of India Society

Ministry of Micro Small & medium Enterprises

स्वातंत्र्यवीर तात्या टोपे मार्ग, चुनाबट्टी, सायन, अकंधर मुंबई

Swatantryaveer Tatyta Tope Marg, Chunabhatti, Sion, P.O. Mumbai - 400 022

FF-LAB-03



वैद्युतिक मापन उपयंत्र अभिकल्प संस्थान, मुंबई ४०००२२  
INSTITUTE FOR DESIGN OF ELECTRICAL  
MEASURING INSTRUMENTS, MUMBAI - 400 022



## ELECTRICAL CALIBRATION LABORATORY

Instrument Sr. No. : S12K0712123  
Date of Calibration : 17/08/2019  
ULR No. : CC228719100001927F

Page No. : 2 of 2  
Certificate No. : CC/ECL/0907/19-20

Calibration Results :

### NON CONTACT MODE

Calibration Standard		Device Under Calibration		Error		Expanded Uncert. in RPM
Range	Reading	Range	Reading	Units	% of Rdg.	
Auto Range	RPM		RPM			
	29.998	5 RPM	30.1	0.102	0.34	1
	99.915	to	99.9	-0.015	-0.02	3
	500.19	99999 RPM	500.1	-0.09	-0.02	3
	999.98		999.9	-0.08	-0.01	3
	9999.8		9999	-0.8	-0.01	3
	29998		29994	-4	-0.01	6
	59998		59991	-7	-0.01	6
99899		99896	-3	-0.003	6	

Note : 1) Value mentioned above is mean of 5 readings.  
2) Above calibration is carried out as per customer's requirement.

\*\*\*End of Calibration Certificate\*\*\*



FF-INS-09



## OUR NABL & BIS ACCREDITATION STATUS



ACGRD. CERT. No. CC-2287, TC - 5538

IDEMI (MSME-Technology Centre) is a Government of India Society working under the Ministry of Micro, Small & Medium Enterprises (MSME) and Accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) for its facilities at Mumbai and on site in the following fields as per ISO/IEC 17025

SR. NO.	FIELD	NABL ACCREDITATION CERTIFICATE NUMBER
1	Electro Technical Calibration	CC-2287
2	Pressure Calibration	CC-2287
3	Mass & Volume Calibration	CC-2287
4	Dimensional Metrology	CC-2287
5	Fluid Flow Calibration	CC-2287
6	Thermal Calibration	CC-2287
7	Electrical Testing	TC-5538
8	EMI / EMC Testing	TC-5538
9	Monoblock Pump Testing	TC-5538
10	Electronics Testing	TC-5538
11	Energy Meter Testing	Recognised by BIS

### NOTE

1. This/These certificate(s) refer(s) only to the particular instrument(s) submitted for calibration.
2. This/These certificate(s) shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Managing Director of Institute for Design of Electrical Measuring Instruments, Mumbai.
3. The calibration results reported in the certificate(s) are valid at the time of and under the stated conditions of measurement.
4. IDEMI, Mumbai shall not be responsible for any change in calibration date and performance specification on account of malfunctioning of the standard / Instrument / Equipment due to any damage caused to it after handing over it to customer or his authorised representative & certificate has been issued.