



# LASER WHEEL PROFILOMETER

LPM-5 Series

- LASER BASED
- NON-CONTACT MEASUREMENT
- IN-SITU MEASUREMENT
- SUPPORTS HINDI
- SMS ALERTS
- HIGHLY ACCURATE
- TROPICALIZED



# LASER WHEEL PROFILOMETER

## LPM-5 Series

**PARAGON'S Laser Wheel Profiler Series LPM-5**, have been specifically designed to in-situ test all Rail Wheel Profiles directly on rolling stock without wheel set roll-out. Once placed in position, the Instrument is capable of generating the complete Wheel profile and is self supported by magnetic coupling. This can be used on Indian Railway Standard wheels as well as all Global Standard Wheels. Wheel profile measurements are fast and accurate using non-contact Laser scanning. The scanned data is transmitted to an Android Phone (Standard Version) or an Android Tablet (Advanced Version) via an in-built Bluetooth connection.

Laser Wheel Profilometer LPM-5 Series is capable of generating tread profile for analysis of wheel rolling surface , measuring wheel flange thickness , flange wear , root wear , flange height , tread wear , wheel flange slope , tread hollow , wheel rollover and wheel width. Deviations from pre-specified tolerances are highlighted and warning messages can be flashed to users or their supervisors through SMS facility. The measured data can be transferred to a PC to maintain a database of wheel measurements which are useful in analysing wheel life and other parameters.

**PARAGON'S Laser Wheel Profilometer** is available in two versions where the Scanning Module is common while the display and data acquisition devices are different.

**Version LPM-5A : The Advanced Version LPM-5A** of Laser Wheel Profilometer is supplied with a MIL Grade Ruggedized Tablet with pre-loaded software for data acquisition and analysis. The field calibration block is also a standard accessory.

**Version LPM-5B : The Standard Version LPM-5B** of Laser Wheel Profilometer comprises of an Android Phone with pre-loaded software for data acquisition and analysis. Also the field calibration block is not included with this version which has to be ordered separately.

SMS facility is provided in both versions to forward alert messages to the user/supervisor for quality check. Apart from the Display and data acquisition devices, both versions have common brief specifications.

A suitable neck sling is provided with the advanced model to safely hold the Tablet for hands free operation.



## BRIEF SPECIFICATIONS AND MEASUREMENT ACCURACIES

PARAMETER	RANGE	ACCURACY
Flange height	20-45 mm	± 0.1 mm.
Flange thickness	20-50 mm	± 0.1 mm.
Flange slope	1-15 mm	± 0.15 mm.
Root wear	0-20 mm	± 0.1 mm.
Tread wear	0-20 mm	± 0.1 mm.
Flange wear	0-20 mm	± 0.1 mm.
<i>Discreteness of indication</i> (all parameters)	± 0.01 mm.	
Profile measurement range	135 mm/185 mm (OPTIONAL).	
Absolute Accuracy of measurement of Laser Scanner	± 50 microns.	
Repeatability of measurement of Laser Scanner	± 50 microns.	
Overall System Measurement Accuracy All Parameters Except Slope	± 0.1 mm.	
Measurement time	Adaptive, depending on surface finish.	
Power supply (Laser Scanning Module)	Rechargeable battery 5400mAh.	
Display Interface	Android only, Windows on request.	
Languages supported	English and Hindi presently. More languages soon.	
Operating Temperature range	-20 - +50° C.	
Interface	Bluetooth.	
Battery Charging	Suitable Battery Chargers for Laser Scanning module and Mobile/Tablet included.	
SMS facility	Available on both models.	

## PACKAGE CONTENTS

The Laser Wheel Profilometer comes with the following :

Laser scanning module

Display Device                      Android Mobile with Standard Version LPM-5B OR Android Tablet with Advanced Version LPM-5A

Charging device                      Laser module 5 V.  
Phone/Tablet 5 V.

Packing case                          All parts are duly packed in a cushioned Polyestrene Box.

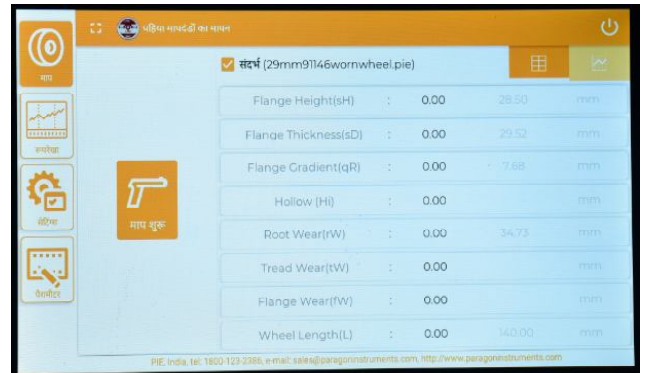
User's manual                          Included.  
Calibration Block                      Included with Advanced Version only.



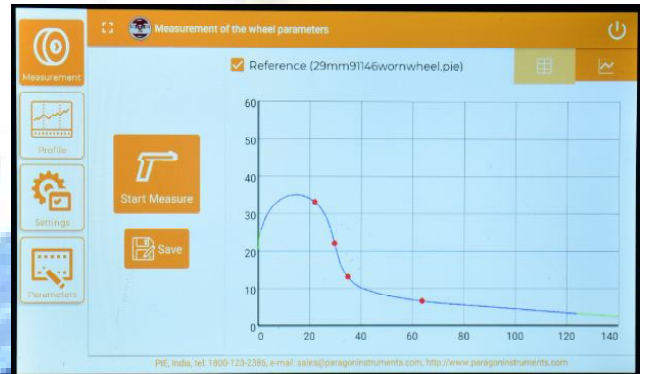
## MULTI LANGUAGE SUPPORT



क्र.सं.	व्हील नंबर	पट्टियाँ संख्या	गाड़ी संख्या	दिनांक	माप	संदर्भ
1	J	25	MS19	13-03-2021	sH	28.52 28.50 mm
2	J	02	MS19	13-03-2021	sD	29.51 29.52 mm
3	J	81	MS19	13-03-2021	qR	7.80 7.68 mm
4	J	80	MS19	13-03-2021	HL	0.00 mm
5	J	2	MS19	13-03-2021	rW	-0.04 mm
					tW	0.02 mm
					rW	-0.01 mm



संदर्भ (29mm91146wornwheel.pie)	मान	इकाई
Flange Height(sH)	0.00	28.50 mm
Flange Thickness(sD)	0.00	29.52 mm
Flange Gradient(qR)	0.00	7.68 mm
Hollow (HL)	0.00	mm
Root Wear(rW)	0.00	34.73 mm
Tread Wear(tW)	0.00	mm
Flange Wear(fW)	0.00	mm
Wheel Length(L)	0.00	140.00 mm



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**LUCKNOW**