

## Pune Zone

Sl No.	Lab Name	Details of Test Facilities
1	ARDE	• 1000 KGF Vibration Shaker
		• 35GHz Doppler Radar
		• 4000 KGF vibration shaker
		• Bump Testing
		• Combined Vibration & Temperature System
		• Environmental Stress Screening Chamber
		• Environmental Test Chamber
		• High Speed Video Camera
		• Paradrop Tower
		• Rain Drive Test Machine
		• Salt Spray Test Chamber
		• Shock Testing
		• Standard Drop Test Facility
		• Table Top Environmental Test Chamber
		• Table Top Environmental Test Chamber With Humidity
		• Tropical Test Chamber (diurnal)
		• Ultra Low Temperature Chamber
• Vertical Two Zone Thermal Shock Chamber		
• Walk-in type Tropical Test Chamber		
• X-Band Doppler Radar		
2	HEMRL	• Universal Testing Machine
		• 320 kV X-Ray System
		• 450 kV X-Ray System with Flat Panel Detector
		• 450 kV (Mini Focus) X-Ray System with Flat Panel Detector
		• 4-MeV LINAC X-Ray with DIS (Digital Imaging System) facility
		• 6-MeV LINAC X-Ray Facility
		• Computer Radiography System
		• Ultrasonic Flaw Detection System
		• Low Frequency Ultrasonic Flaw Detection System
		• Ultra Low Frequency Ultrasonic Flaw Detection System
		• Low Frequency Ultrasonic B-Scan System
		• Differential Scanning Calorimeter
		• Simultaneous Thermogravimetric Analyser
		• Dispersive Raman Spectrometer
		• Fourier Transform Spectrometer
• Vapour Pressure Osmometer		

	<ul style="list-style-type: none"> <li>• Rheometer</li> <li>• UV-VIS Spectrometer</li> <li>• Elemental Analyzer</li> <li>• Particle Size Analyser (Cilas 1064 L)</li> <li>• Vapour Pressure Osmometer</li> <li>• Karl-Fischer Autotator</li> <li>• Liquid Density Meter (Anton paar DMA 4100 M)</li> <li>• Gas Pycnometer</li> <li>• Vacuum Stability Tester, (STABIL-21)</li> <li>• High Performance Liquid Chromatography</li> <li>• Ion Chromatography</li> <li>• Accelerated Solvent Extractor</li> <li>• Dispersive Raman Spectrometer</li> <li>• Scanning Electron Microscope with EDX</li> <li>• Thermogravimetric Analyser Coupled - Fourier Transform Infra Red Spectrophotometer</li> <li>• Pyrolyzer Gas Chromatograph -Mass Spectrometer</li> <li>• Atomic Absorption Spectrophotometer</li> <li>• Inductively Coupled Plasma- Atomic Emission Spectrometer thermo-Scientific iCAP 6300 Radial ICP Spectrometer</li> <li>• Gas Chromatograph</li> <li>• Bomb Calorimeter</li> <li>• Data Acquisition System for Static Firing of Rockets</li> <li>• Closed Vessel Testing Facility</li> <li>• Pressure time Measurement System</li> <li>• Dead Weight Tester</li> <li>• Four-Colour Optical Pyrometer</li> <li>• 2-Colour Optical Pyrometer</li> <li>• Facility for Thermo-chemical Characterization of High Energy Materials and Allied Materials</li> <li>• Dilatometer (Unitherm 1000 series)</li> <li>• Ablation rate Measurement Facility</li> <li>• High Temperature Black Body</li> <li>• Pressure step generator</li> <li>• ScopeCorder (DL850)</li> <li>• Portable Data Acquisition &amp; Processing System for VOD Measurement</li> <li>• IR Spectro-radiometer</li> <li>• Photometer</li> <li>• Static Electricity Detector / Monitor</li> <li>• Test Facility for Electrostatic Spark Sensitivity</li> </ul>
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		<ul style="list-style-type: none"> <li>• Assessment of Explosive Powders</li> <li>• Surface/Volume Resistivity Measurement</li> <li>• High Temperature Blackbody Source and Collimator</li> <li>• HV Pulse Generation and Measurement System</li> <li>• Digital High Speed Video (Color) System</li> <li>• Video Matrix System (VMS-3000)</li> </ul>
3	NMRL	<ul style="list-style-type: none"> <li>• 2 x 15 kW Fuel Cell test Station</li> <li>• 3kW Fuel Cell test Station</li> <li>• 100 kW Fuel Cell test Station</li> <li>• Abrasion tester for non-skid paint</li> <li>• Autolab Potentiostat</li> <li>• Automatic viscometer</li> <li>• Contact Angle Meter</li> <li>• D33 meter</li> <li>• Dynamic Mechanical Analyzer</li> <li>• Elastic Properties Analyzer</li> <li>• Electrically Heated High Temperature Furnace</li> <li>• Electrospinning</li> <li>• FEG-SEM</li> <li>• Fluorescence Spectrometer</li> <li>• Fourier Transform Infrared spectroscopy</li> <li>• Fourier Transform Infrared</li> <li>• HDT</li> <li>• High Performance Thin Layer Chromatography, Camag</li> <li>• High Temperature-Vacuum Inert Atmosphere Furnace</li> <li>• Holiday detector</li> <li>• Impact Testing Machine</li> <li>• Impedance Analyzer</li> <li>• Impedance Analyser</li> <li>• Inductively Coupled Plasma Optical Emission Spectrometer</li> <li>• Instron Electromechanical 250 kN Universal Testing Machine</li> <li>• Lloyed Tensile Testing Machine</li> <li>• Mercury Porosity meter</li> <li>• Moving Die Rheometer</li> <li>• Nano Particle Size Analyzer</li> <li>• Particle Size Analyser</li> <li>• Potentiostat</li> <li>• Potentiostat (AUTOLAB)</li> <li>• Potentiostat (GAMRY)</li> </ul>

		<ul style="list-style-type: none"> <li>• Precihite Ultra</li> <li>• Pulse Multichannel Analyzer</li> <li>• Rotating Ring Disk Electrode with bipotentiostat</li> <li>• Rotational Rheometer</li> <li>• Scanning Probe Microscope</li> <li>• Scratch resistance Tester</li> <li>• Speed Extractor E-914</li> <li>• Surface Area Analyzer</li> <li>• Surface Tensio Meter</li> <li>• Taber abrasion tester</li> <li>• Thermo Gravimetric Analyzer</li> <li>• Three Frame Electromechanical Corrosion Fatigue (CF) Stress Corrosion (SCC) Slow Strain Rate Test (SSRT) System</li> <li>• Twin Bore Capillary Rheometer</li> <li>• Unit Cell (Fuel Cell) Test Facility</li> <li>• Universal Testing Machine</li> <li>• Weatherometer</li> <li>• X-RAY Diffractometer</li> <li>• X-ray Fluorescence Spectrometer</li> <li>• Zeta Potential Analyzer</li> </ul>
4	R&DE	<ul style="list-style-type: none"> <li>• Kinematic &amp; Dynamic test facility</li> <li>• Shock Test Facility</li> <li>• Aircraft Arrestor Gear Test Facility</li> <li>• Hydraulic Servo Valve Testing Facility</li> <li>• Mixed Signal Oscilloscope (Tektronics MSO 4104B)</li> <li>• Power Analyzer (Tektronix PA-4000)</li> <li>• Rheometer</li> <li>• Universal Testing Machine Make Biss</li> <li>• Universal Testing Machine Make MTS</li> <li>• Non Contact 3D-Surface Profiler</li> <li>• Environmental Scanning Electron Microscopy (EV-040)</li> <li>• Climatic Test Facility</li> <li>• High Temp/Damp Heat Tropical exposure test chamber</li> <li>• High Temp/Damp Heat Tropical exposure test chamber</li> <li>• Low Temp Test Chamber</li> </ul>
5	VRDE	<ul style="list-style-type: none"> <li>• 2/3 Wheeler Chassis Dynamometer - BS III</li> <li>• ABS Test Track</li> <li>• Automotive Bumper Test System</li> <li>• Automotive Door Hinges Test System</li> </ul>

		<ul style="list-style-type: none"> <li>• Automotive Noise Test Track</li> </ul>
		<ul style="list-style-type: none"> <li>• AVL Eddy Current Dynamometer (Alpha-80) With EDACS, Gravimetric Fuel Flow meter</li> </ul>
		<ul style="list-style-type: none"> <li>• Belgian Pave Track</li> </ul>
		<ul style="list-style-type: none"> <li>• CE 101 Test Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• CE 102 Test Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• Chasis Twister Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Corrugated Track (50mm &amp; 100mm)</li> </ul>
		<ul style="list-style-type: none"> <li>• Cross Country Track</li> </ul>
		<ul style="list-style-type: none"> <li>• CS 101 Test Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• CS 109 Test Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• CS114, CS115,CS116</li> </ul>
		<ul style="list-style-type: none"> <li>• Customized Test Tracks for Mini UGV</li> </ul>
		<ul style="list-style-type: none"> <li>• Deep Wading Trough Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Digital Rockwell cum Superficial Hardness Tester</li> </ul>
		<ul style="list-style-type: none"> <li>• Driving rain chamber</li> </ul>
		<ul style="list-style-type: none"> <li>• Dry heat, Dry Cold &amp; Climatic test chamber</li> </ul>
		<ul style="list-style-type: none"> <li>• Dust Tunnel Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Eddy Current Dynamometer (AG 250) with computerized controller</li> </ul>
		<ul style="list-style-type: none"> <li>• Enhanced Steering Pad</li> </ul>
		<ul style="list-style-type: none"> <li>• ESD- Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• Frontal Impact Test</li> </ul>
		<ul style="list-style-type: none"> <li>• FUPD &amp; SUPD</li> </ul>
		<ul style="list-style-type: none"> <li>• Gradient Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Gradient Track For 'A' Vehicle</li> </ul>
		<ul style="list-style-type: none"> <li>• Heavy Duty Chassis Dynamometer - BS IV</li> </ul>
		<ul style="list-style-type: none"> <li>• High Speed Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Integrated Lightening Induced Transients Susceptibility Test System</li> </ul>
		<ul style="list-style-type: none"> <li>• Load Dump Generator, Voltage Dip Simulator, Electric Fast Transient</li> </ul>
		<ul style="list-style-type: none"> <li>• Long Wave Pitching Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Metallurgical Microscope with Image Analyser software</li> </ul>
		<ul style="list-style-type: none"> <li>• Mud Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Optical Emission Direct Reading Spectrometer</li> </ul>
		<ul style="list-style-type: none"> <li>• Ozone test chamber</li> </ul>
		<ul style="list-style-type: none"> <li>• Photometric Instrumentation package consist of Goniophotometer, Colorimeter, Luminance Meter , Illuminance Meter , Integrating Sphere and Reflex Reflector</li> </ul>
		<ul style="list-style-type: none"> <li>• Pot Hole Track</li> </ul>
		<ul style="list-style-type: none"> <li>• RE 101 Test Set up</li> </ul>

		<ul style="list-style-type: none"> <li>• RE 102 Test Set up (Antenna: Biconilog, Rod, Biconical, DRG Horn &amp; Horn)</li> </ul>
		<ul style="list-style-type: none"> <li>• RS 101 Test Set up</li> </ul>
		<ul style="list-style-type: none"> <li>• RS 103 Test Set up (Antennas: Biconical, V-Log, Horn)</li> </ul>
		<ul style="list-style-type: none"> <li>• Sand Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Sealed Housing Evaporative Determination</li> </ul>
		<ul style="list-style-type: none"> <li>• Semi Anechoic Chamber</li> </ul>
		<ul style="list-style-type: none"> <li>• Serpentine Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Shallow Water Trough Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Shielding Effectiveness Test set up</li> </ul>
		<ul style="list-style-type: none"> <li>• Side Slope Track For 'A' Vehicle</li> </ul>
		<ul style="list-style-type: none"> <li>• Step Climbing Facility For 'A' Vehicle</li> </ul>
		<ul style="list-style-type: none"> <li>• Straight Track</li> </ul>
		<ul style="list-style-type: none"> <li>• Straight Track For 'A' Vehicle</li> </ul>
		<ul style="list-style-type: none"> <li>• Thermal shock test chamber</li> </ul>
		<ul style="list-style-type: none"> <li>• Thrust Cradle</li> </ul>
		<ul style="list-style-type: none"> <li>• Vehicle Dynamics Test Track</li> </ul>