



**AARUPADAI VEEDU
INSTITUTE OF TECHNOLOGY**
OMR, PAIYANOUR, CHENNAI - 603104



**VINAYAKA MISSION'S
RESEARCH FOUNDATION**
(Deemed to be University under section 3 of the UGC Act 1956)



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BOSCH

RESEARCH CENTRE FOR BOSCH

AUTOMOTIVE RESEARCH



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- Bosch Limited, the German automaker, announced on collaboration with AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY, it has launched a training centre in Chennai.
- The joint certification center is located inside the premises of AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY.
- The Center has been equipped with Bosch Equipment, such as, Test Bench, Auto Electrical Test Bench, Diagnostic Scanner and A/C recovery, Evacuation and Recycling Machine.
- The training center will provide joint certification programs to students of AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY, technicians and service personnel alike. On an average 100 training programs will be conducted every year.
- Bosch has been providing training services to thousands of technicians, service personnel, and lately, educational institutions for over a decade. Training courses from the Group offer knowledge of the evolving technologies, and at the same time provide hands-on experience with the latest equipment.

AUTO ELECTRICAL TEST BENCH



Bosch Auto Electrical Test Bench 1 Phase

Bosch introduces the latest, user-friendly, hi-tech Auto Electrical Test Bench that enables easy, fast and accurate testing of a wide range of alternators and starter motors. This highly compact test bench can be operated at two speeds, ensuring thorough testing at both, higher and lower speeds. The test bench is extremely easy to operate and is an ideal addition to any workshop.

Features

- Table top model.
- Fitted with digital ammeter/voltmeter for easy reading.
- Maximum capacity of alternators that can be tested.
75 amps at 12V
70 amps at 24V
- Provision for checking and testing alternators at 2 speeds
Large V/poly - V groove pulley for high speeds
Small V - pulley for low speeds.
- Starter free spin testing directly from battery.
- Alternator loading through four rotary switches.
- Starter short-circuit test facility available.
- Battery Charging facility available during the alternator testing process.
- Vehicle simulation of battery charging through alternator.
- Provided with 12V battery supply for testing a wide range of electrical components like horns, bulbs, relays child parts of starters and alternators

Technical Specifications

<i>Parameter</i>	<i>Value</i>
Instrumentation	Alternator output current - Digital Panel meter 0-100 Amps DC Alternator output current - Digital Panel meter 0-100 V DC
Drive	220V single phase, 2HP, 1440 RPM induction motor Protected with circuit breakers
field Supply	12V/24V fixed

Protection	Circuit breakers incase of sudden surges in voltage Fuses provided for protection of rectifiers, battery etc
Power Requirements	220V single phase, 15 Amperes
Vice	Heavy duty, fast mounting for alternators and starters
Dimensions	650 (l) x 725 (b) x 550 (h) mm
Weight	Approx. 85 kgs

ENGINE SCANNER - BOSCH KTS 560



KTS 590 - The latest technology in KTS series from Bosch an expert diagnostic control unit, provides safe and convenient tests, each time, every time. A user-friendly device, this unit is extremely easy to install and handle. Moreover, as it can be wirelessly connected to your workshop PC, KTS 590 enables absolute freedom of mobility. It is suitable for both diesel and petrol vehicles.

Features

- Multi-brand car's ECU Diagnostic Scanner
- Controller diagnosis to read and erase error memories, display actual values, initiate actuators and other controller specific functions
- Supports top-end diagnosis software solution with guided trouble shooting instructions
- Hardware inbuilt with dual channel multimeter and oscilloscope function for diagnosis
- Comes with standard accessories like mounting bracket and carry case

Technical Specifications

<i>Parameter</i>	<i>Value</i>
Connectivity	Bluetooth wireless & USB Cable
Bluetooth Signal Range	Workshop Environment 30 meter
Multimetr Function	Voltage, resistance, current (additional current probe required to measure the current value)
Oscilloscope Function	To determine measurement value and testing the controller diagnosis interface



Operating System for ESI Software Installation	Support MS Windows XP, Vista, Windows 7, Windows 8, Windows 10
Accuracy	1% of measured value
Weight	Approx. 500 g
Model Number	KTS 590

AIR CONDITIONING SERVICE



The fully automatic service unit for safe, efficient and economical air-conditioning maintenance ACS 651 is a fully automatic unit that enables garages to perform simple and low-cost servicing of air-conditioning systems in vehicles. It performs a wide range of functions, including refrigerant extraction and recycling, used oil drainage, evacuation and leak testing, fresh oil and UV dye injection, as well as precise refrigerant feeding. It has a quick start function and a fully-integrated vehicle database.

Features

- Automatic recovery and recharge
- Automatic vacuuming and leak check
- Precise refrigerant recharge
- Top-up function
- Automatic thermodynamic-based purging
- Shock mount protection for load cell
- Integrated printer with multiple print option
- 360° service status indication, usable parking brake
- Integrated vehicle database
- Integrated standard flushing procedure
- Capable of servicing hybrid cars

Technical Specifications

<i>Parameter</i>	<i>Value</i>
Refrigerant	R134a
Operating mode	Manual & automatic
Automatic recovery restart	Yes
Programmable vacuum phase	Yes
Automatic AC system leak test	Yes
Oil discharge	Automatic with electronic scale
Oil injection	Automatic with electronic scale
UV dye injection	Automatic with electronic scale
Automatic refrigerant recharging	Yes
Accuracy	+/- 15 g
AC performance test	Yes
Maintenance	Prior message to user for vacuum pump oil and filter replacement
Printer	Multiple print option
Manometers	100 mm, Class 1
Service hoses	300 cm / SAE-J2196, 600 cm (optional)
Display	3.5" color display
Compressor	10.1 CC
Vacuum pump	132 l/min
Refrigerant tank capacity	22 L
Scale resolution	R134a 5 gm Oil, UV 1 gm
Conformity	CE / PED
Power supply	230 50/60 Hz

BATTERY CHARGER



Bosch understand the requirements of the market and provide the best range of Battery Chargers for 2-Wheeler. Our reliable and advanced products are best in features and are simple to operate. They are highly acknowledged by our clients for their superior functions and long sustainability. They are best in performance and are supplied at the minimum market price range

Features

- Advanced high frequency SMPS design charger with 80% typical efficiency.
- Constant voltage charging system to reduce charging time and enhance battery life.
- Parallel charging of different capacity batteries.
- Short circuit protection (output side) with auto recovery.
- Reverse Polarity protection (output side) with LED indication.

- Over voltage protection on the input side.
- Automatic thermal shutdown and recovery.
- Charging current setting based on battery capacity (2.5Ah - 9Ah).
- Light weight, compact and silent operation.

Technical Specifications

<i>Parameter Input</i>	<i>Value</i>
Nominal Voltage	230 V AC (Voltage range =170-270 V AC)
Frequency	50 Hz(Frequency range = 47-53 Hz)
Current	5A max
Output (per channel)	
Voltage	14.4 V ± 0.3 V (Charging mode) / 13.8 V ± 0.3 V (Standby mode)
Current	2 A/ 4 A max selectable
Net Weight	~4.5 kgs
Dimension of enclosure	(L x W x H mm) : 220 x 190 x 130

BOSCH BATTERY LOAD TESTER (BLT 301)



The compact and technologically advanced battery load tester from Bosch simplifies the process of diagnosing batteries. With easy-to-read LED indicators and accurate measurements, the Bosch Battery Load Tester is a must have tool for fast and efficient service. This equipment is used to test 12V Lead acid type automotive batteries. A 5 second test determines the condition of the battery and is indicated as “Good”, “Weak” or “Bad”. The battery load tester is also a versatile tool doubling as a voltmeter when used in a “No load” condition.

Features

- Test result in LED voltage capacity
- Visual indication (Good, Weak, Bad)
- Test data in front panel for quick reference
- Functioning as voltmeter at “No load” condition
- Regulator voltage testing during engine running at “No load” condition

- Testing of starter motor (cranking voltage test) at “No load” condition
- “Beep” sound indication for reverse polarity connection

Technical Specifications

<i>Parameter</i>	<i>Value</i>
Battery Type	12v Lead Acid Battery (AGM/GEL/Standard/Maintenance Free)
Voltage Supply	5.5V via the battery
Voltmeter	5.5 – 19.99V DC
CCA Range	200A to 900A according to SAE/EN 120A to 550A according to DIN/IEC 200A to 850A according to CCA JIS-CCA conversion table on back side of the tester
Testing Scope	Test battery condition and Voltage Battery Diagnosis (defective battery indicator) 12V Starter and alternator system Test
Testing Method	Load Free Test
Display	Four digit numeric display and 3 LED indicators
Cable	0.4 m with crocodile clamps
Dimension	295g, 197mmx98mmx40mm

BOSCH BATTERY TESTER (BAT 131)



Bosch is perfectly suitable for testing 6V and 12V starter batteries (lead-acid, gel and fleece batteries/AGM). The load-free test procedure provides fast, precise and reliable measurement results. The battery tester has a specially designed robust housing considering workshop requirements. The enhanced user interface enables simple and intuitive operation.

Features

- Load free test for 6V and 12V lead acid batteries.
- Test Range 100-2000 CCA.
- Display wrong polarity messages.
- Menu-guided intuitive operation, with results on large LCD screen.
- Stores up to 100 test reports in easily understandable excel format.
- USB port for report downloads and future software updates.
- 3M replaceable cable for flexible diagnosis.
- Testing possible in new/un-used/in-stock batteries.
- Starter and Alternator test.
- Integrated printer with latest feature for print option.

Benefits

- Easy-to-use robust housing; fast and accurate test results.
- Wide range of vehicle applications and testing norms.
- Maintain history of service records for future follow-up with customers.
- Various menu languages, “easy-to-understand” printouts for end customers.
- Updating of software is possible with USB port.

Technical Specifications

<i>Parameter</i>	<i>Value</i>
Display	Results Presented on large LCD
Battery nominal voltage	6 V / 12 V
Applications	Cars / commercial vehicles, motorcycles, marine sector
Battery types	Lead-acid, gel, AGM
Test standards	CCA, JIS, EN, DIN, SAE, IEC
Battery size (as per CCA)	100 – 2 000 A
Starting / charging system test	12 V / 24 V
Printer	Integrated Thermal Printer
Menu languages	24
Dimensions (W x H x D)	270 x 113 x 50 mm
Weight	0.7 kg
Operating temperature	0° – 40° C



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