

VEHICLE MAINTENANCE LAB



(As Per Anna University 2013 New Syllabus)



Micro Mech Instruments

Authorized Distributor of



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CYLINDER COMPRESSION PRESSURE GAUGE

Cylinder compression pressure gauge is used to measure cylinder pressure in petrol/diesel engine

Specification of that product

- * Adapters for a wide number of vehicles (spark plug types/depths)
- * Kit includes 2 rubber cones ends for quick check (no need to thread into head)
- * 3" Gauge has dual color scale with 0-300 PSI, 0-20 kPa
- * Fittings: M10, M12, M14, M18 (Male, With "O" Ring)
- * Includes 14mm and 18mm spark plug adapters



VACUUM GAUGE

Vacuum Gauge is a device for measuring pressures below atmospheric pressure in the receiver of an air pump, in steam condensers and the like.

Specification of that product

- * Model : VG - 150 - GF/CBM/PM
- * Type : Dry
- * Dial Size: 1.50
- * Dial Range : 0 to 1 bar
- * Case : Black ABS/Stainless Steel
- * Bourdon Tube: Phosphor Bronze
- * Movement and Connection : Brass
- * Shock Protection : 0.5 mm Restrictor Orifice
- * Accuracy : ASME B 40.1 Grade B (+ - 3 - 2 - 3%) of span



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SPARK PLUG CLEANER AND TESTER

In this tester is used to clean the spark plug and then test.

Specification of that product

Make: AUTONICS

Description	Unit	Data
Model		Royal Tx
Working Pressure	Kgf/cm ²	5 - 12Tx
Spark Plug used		M10, M12, M14, M18
Input Voltage	V	220
Electronic Vibrator Voltage	V	220/12
Ignition Coil	V/KV	12/12
Overall Dimension L x W x H	Mm	350x265 x 280



TACHOMETER

Tachometer is used to measure the speed.

Specification of that product

- * Make : Systems
- * Range of RPM : As Required (i.e. 60 - 50,000)
- * Type of Display : 5 Digits, 7 Segment bright red LED
- * Circuit : Exclusive one chip of micro controller LSI - Circuit
- * Resolution : 0.1 up to 999.9 rpm, 1 above 1000 rpm
- * Accuracy : \pm (0.05% 1 digit)
- * Range Select : Automation



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WHEEL ALIGNMENT APPARATUS

Wheel alignment apparatus is part of standard automobile maintenance that consists of adjusting the angles of the wheels.

Specification of that product

Make : Manatec

Model : R Pac Premium (6×6)

- * Four compact measuring heads
- * 6 CMOS cameras and 6 inclinometers
- * Camera / Caster / Thrust Angle
- * Front Setback / Thrust Angle
- * Spoiler Program for all 4 wheels
- * Wheel Rim Size 12" – 24"
- * Excess Toe Warning
- * Four point run out compression in single rotation
- * Data Manager Software
- * TFT Monitor



Note: Mason Work at Customer Scope, We are Provide Pit Diagram.

TYRE REMOVER

A tire changer is a machine used to help tire technicians dismount and mount tires with automobile wheels.

Specification of that product

Make : Manatec

Model : TC - XL - 40

- * Suitable for car and LCV Tyres
- * Wheel Rim Size 10" – 21"
- * Pneumatically operated twin cylinder for firm clamping
- * Four jaw self centering chuck
- * Alloy wheel plastic protector



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HEAD LIGHT ALIGNMENT GAUGE

Head light Alignment Gauge is used to align the Head light in required angle.

Specification of that product

Make: ELGI / Reputed

Column height	1413 mm
Lens diameter	200 mm
Lens Type	Glass
Leveling of HBT	Optical Visor with 3 wheels on top
Optical box shape	Rectangular (Metallic)
Rear Panel	Adjustable with calibrated wheel
Lux Meter	Analog or Digital
Indication Available	Lux valves at 25 m
Dimension (H×B×L)	1535×630×630 mm
Weight	30 kg
Measuring Range	Min - 240 mm, max - 1280 mm
Power Supply	9V battery for digital type only
Accuracy (Analog)	± 10%
Accuracy (Digital)	± 15% (15 - 32 Lux) ± 10% (32 - 64 Lux) ± 5% (64 - 240 Lux)



CYLINDER RE-BORING MACHINE

Cylinder Re-boring Machine is used to foir-boring or re-boring the cylinders of internal combustion engines.



Specification of that product

- * Boring capacity 35 - 65 mm
- * Depth of boring 150 mm
- * Spindle RPM 300
- * Spindle feed 1 ¼
- * Electric Motor ½ H.P
- * Accessories
 - Equipment box 1 No
 - Micrometer tool 1 No
 - Lapping fixture 1 No
 - Lapping disc 1 No
 - Tool holder with With two cutter bits 1 set
 - Guide 3 sets
 - Clamping device 1 No
 - Allen key 1 No
 - Screw drivers 1 set

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VALVE GRINDING MACHINE

Valve grinding machine is used to renewing the valve face area by grinding on a special grinding machine.

Specification of that product

- * Valve stem capacity 6 to 25 mm
- * Grinding wheel size 5" × 1/2" × 5/8"
- * Butt grinding wheel 4" × 3/4" × 5/8"
- * Grinding wheel spindle 4000 rpm
- * Work head spindle 200 rpm
- * Power required 0.5 HP (200/220 V)
- * Net weight 100 kg
- * Standard Accessories
 - Collets 1/4" to 9/16" 2 No
 - Diamond dresser 1 No
 - C-spanner 1 No



VALVE LAPPING MACHINE

Valve Lapping Machine is a machine in which used to Lapping Process.

Specification of that product

- * Model : Auto lap - 1
- * Single Spindle Type Valve Lapping
- * Machine with Center distance of spindles
- * Adjustable complete with Electrical.

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CAM TESTER



Cam angle and rpm tester is used to set the opening and closing time using cam

CAR AC RECYCLING MACHINE

Display	: LCD
Type of refrigerant	: R124a
Operating Process	: Fully Automatic/Manual
Refrigerant scale resolution	: 10 gms
Oil scale resolution	: 5 gms
Filters	: 2 filters for humidity
Vacuum pump	: 170 liters/min.
Compressor	: 21 cc , High pressure
Refrigerant Bottles	: 40 liters , Refillable
Hoses	: 6 meters
Working temperature	: 11°C to 49°C.



TWO POST LIFT



Lifting Capacity	: 4 Ton
Overall Height	: 3620 mm
Bay Width	: 3500 mm
Inside Column	: 2886 mm
Load Distributer	: Front : Rear , 2:3
Lifting Time	: Less than 45 seconds
Drive Through Clearance	: 2640 mm
Maximum Lifting Height	: 1800 mm
Maximum Height	: 110 mm
Lifting arm adjustment	: Front Rear
Minimum Length	: 700 mm 927 mm
Maximum Length	: 900 mm 1317 mm
Power Supply	: 380V AC, 3 Phase ,50 Hz
Power	: 3HP

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WHEEL BALANCER



- * Suitable for Car and LCV wheels
- * Max. Wheel weight 65 kg.
- * Wheel Rim dia 10" - 24"
- * Two modes of measurement - Normal & Fine
- * Five modes of Alloy wheel functions
- * Unit conversion in "gms"/" ounces"
- * Position accuracy of $\pm 1^\circ$
- * Self calibration
- * Automatic distance input
- * Self checking on line error display
- * Quick change lock nut to ensure fast mounting & removal of wheels.
- * Mechanical Brake for Weight addition and wheel mounting
- * Automatic start with wheel guard closure
- * TFT Monitor /LED digital display

FUEL INJECTION CALIBRATION TEST BENCH WITH NOZZLE TESTER

Drive	: Belt
No. of cylinders	: Eight
Electric motor	: 5 H.P for main drive, 1 H.P for fuel supply pump
Tachometer	: Electronic automatic, 100-1200 shots per minute
Speed range	: 100-3000 RPM
Phasing	: High pressure phasing standard
Pressure gauges	: Two (for high pressure and fuel supply)
Speed control	: Fully controllable from front side
Color	: An color on request
Capability	: Inline ,rotary and distributor pumps
Gross weight	: 700 Kg approx



ENGINE ANALYZER



The Engine Analyzer Pro program by Performance Trends, Inc. is a software system to help professional engine builders, racers and engineers understand and predict many aspects of full power engine performance.

Specification of that Product

Make : Bosch, Model : KTS 525/540

Compact Solution for measurements at the vehicle

- * Multi-meter with digital and graphical display.
- * Engine Analyzer
- * Mobility for Variable use
- * Workshop - Friendly operating concept with dirt-repelling touch screen and function keys.
- * Clear display on eight-inch screen.
- * Ergonomic design, shockproof housing and lightweight.
- * Possibility for testing sensors and electrical components.