



# LABTEK

MECHANICAL ENGINEERING LAB EQUIPMENTS

AUTOMOBILE ENGINEERING LAB







**Sun LabTek Equipments (I) Pvt. Ltd.**  
(ISO : 9001 : 2008 Certified Company)



#### LABTEK COVERS THE FOLLOWING LABORATORY:

- STRENGTH OF MATERIAL LAB
- THERMAL ENGINEERING LAB
- FLUID MECHANICS LAB
- DYNAMICS OF MACHINE LAB
- HEAT TRANSFER LAB
- FLUID MACHINERY LAB
- REFRIGERATION AND AIR-CONDITIONING LAB
- AUTOMOBILE ENGINEERING LAB
- APPLIED MECHANICS LAB
- CAM LAB
- M & I LAB
- DATA ACQUISITION LAB
- MECHATRONICS LAB

*The company lays special emphasis on export of its products all over the world, hence has a correct knowhow of resending product and its instruction manual in printed and soft format accepted internationally.*

#### WELCOME TO LABTEK TECHNICAL CATALOG

Established in 1999, LabTek has built a solid reputation for manufacturing and marketing laboratory equipment with strong mechanical base required in universities, engineering colleges, polytechnics, vocational schools etc. LabTek has a selection of more than 500 mechanical engineering and 800 civil engineering equipments and test rigs. With customers spread across the globe, LabTek is regarded as premier supplier of reliable, high quality and competitively priced products. We provide Turnkey solution for establishing mechanical and civil engineering laboratory with state of the art technology and solution.

#### R & D & QUALITY ASSURANCE:

Our R & D Engineers work in close contacts with clients to produce user friendly products and manuals providing a fulfilling teaching and learning experience. Students can complete their assignments in single laboratory session. LabTek operates a continual product improvement process through ISO procedures and customer feedback to ensure that our product stays ahead of the competition and meets customer needs. Our product specifications are reviewed in line with worldwide curriculum to comply varied syllabus requirements and hence regularly updated and new products developed.

#### AFTER SALES SERVICE

Company responds to customer needs quickly and considers after sales service equally important to establish a culture of customer confidence. LabTek has established long term relationships with its clients. To expedite your order or to get any particular service, please send us an e-mail or fax with product details and your contact address along with mobile /landline numbers. Our Service Engineers will respond to you quickly through e-mail/phone. We also provide installation, commissioning and training service for any customers who require assistance.

**The largest established manufacturing, trading and export house of quality Technical Education Lab Equipments in INDIA**



**Corporate Office:** B-3A, Shiv Shakti Complex, East Vinod Nagar, Ist Floor, New Delhi-110091

**Tel:** 011-22732108/2109, Fax: 01122732109 Customer Care No.: +91-99999-84267

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**E-mail:** [labtekindia@gmail.com](mailto:labtekindia@gmail.com), **Website:** [www.labtekindia.com](http://www.labtekindia.com)

**Works:** 80-A, Rajendra Nagar Industrial Area, Sahibabad, Ghaziabad-210005, Uttar Pradesh (India)



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LAB & EQUIPMENTS NAME

AUTO MOBILE ENGINEERING LAB

- Cut Section Four Stroke Single Cylinder
- Cut Section Two Stroke Single Cylinder
- Cut Section Model of Steering Gear Box
- Cut Section Model of Steering Gear Box (working) with wheel and axle
- Cut Section Model Jeep with Stub Axle
- Cut Section Differential and Rear wheel
- Cut Section Model of Semi Floating Deferential and wheel Mechanism
- Cut Section Model of Mechanical Brake System
- Cut Section Model of Air Brake System
- Model of Air Brake System
- Cut Section Model of Hydraulic Brake Unit four Wheel Type
- Cut Section Model of Drum Brake Unit
- Cut Section Model of Disc Brake System
- Model of Hydraulic Braking System with vacuum Booster
- Cut Section Model of Disc Brake System Two Wheeler
- Valve Timing Diagram
- Port Timing Diagram

CERTIFICATE

Nr IN/10/100755

SUN LABTEK EQUIPMENTS INDIA PRIVATE LIMITED

B-3A, Shiv Shakti Complex, East Vinod Nagar, New Delhi-110091 (INDIA)

Scope

Manufacturing & Trading of Scientific Lab Testing Equipments.

EA 23, Code

The Quality Management System is in accordance with

SS-EN ISO 9001:2008

Excluded requirement: None

Under the assumption that the quality system and its function is satisfactory at the surveillance and that A.g.R Certification Ltd.'s "Rules for certification" are upheld.

INDIA, 11/04/2011

Issued Date

A.g.R Certification Ltd.

INDIA, 10/04/2014

Expiry Date



A.g.R Certification Ltd.  
17 Hanover Square, Mayfair, London, W1S 1HU



99003, edition 3.4.5.1 Certificate 9981:2008

Certification Body  
No. 223



#### CUT SECTIONAL MODEL OF FOUR STROKE SINGLE CYLINDER ENGINE ASSEMBLY (HERO HONDA)

The engine and gearbox assembly, sectioning of maximum parts an accessories like Cylinder, Cylinder Head, Valve ports, Gear box, housing, Oil sump, etc will be carried out to show the internal constructional details such as Piston, Piston rings, Valves, cam, connecting rod ,etc. the model will be mounted on stand. The above model will be painted with Spl Duco painting, Electroplating of hardware will be carried out



#### CUT SECTION MODEL OF TWO STROKE SINGLE CYLINDER ENGINE (WORKING)

This model is made out of used BAJAJ engine, suitably sectioned to show the internal construction of the engine, gear box, clutch and rear wheel mechanism and the model is fitted on a sturdy iron frame. The complete internal details can be demonstrated by operating the kicker lever to show the working of the piston, sparks from the spark plugs can also be shown

#### CUT SECTION MODEL OF STEERING GEAR BOX (WORKING)

This model is made out of full size original parts, suitably sectioned and to demonstrate the working of Steering wheel worms, Steering arm, etc., is mounted on a sturdy iron frame.







### CUT SECTION MODEL OF STEERING GEAR BOX (WORKING) WITH WHEEL AND AXLE

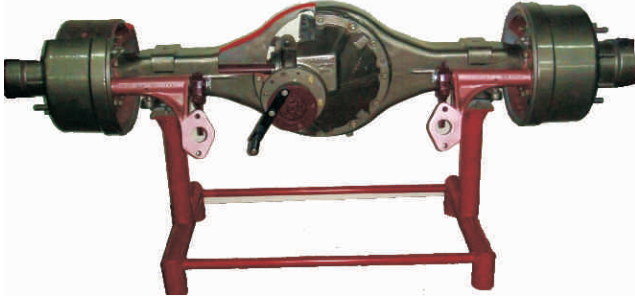
This model is made out of full size original parts, suitably sectioned and to demonstrate the working of Steering wheel worms, Steering arm, etc., The Arrangement of Wheels And Axle Connecting To steering system will be done so the movement of the wheels when rotating the steering wheels can be displayed . The model will be mounted on to a tubular frame, Suitable color imported painting will be carried out along with Miracle coating for the model will be done for extra gloss and shine. The painting will be carried out in such a way that different colors will be use for different components such as identification of sectioned area etc according to the colors code for easy identification of different systems and mechanisms. All the hardware's and gears will be suitably electroplated



### CUT SECTION MODEL OF STEERING OF JEEP WITH STUB AXLE

This model is made out of original used parts, will be suitably sectioned And Arranged to demonstrate the internal construction details showing the minute information such as steering gear box, bell assembly, tyre rod , linkages, stub axle etc., and working of the same can be show by steering the steering wheel provided, the model will be suitably painted and The entire model is mounted on a sturdy iron frame.

SL-8011



**Fully Floating Differential and Rear Wheel**

SL-8012



**Semi Floating Differential and Wheel**

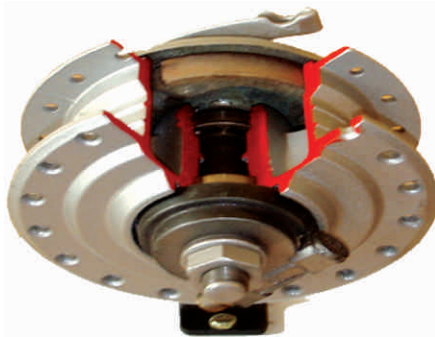
#### **CUT SECTION MODEL OF FULLY FLOATING DIFFERENTIAL AND REAR WHEEL MECHANISM (WORKING)**

This model is made out of original used heavy vehicle parts, suitably sectioned to show clearly the action of Differential gear box, such as pinion crown wheel in Differential and Brake drums in Rear axle, A Crank handle is provided to demonstrate the model. The model is mounted on a sturdy iron frame.

#### **CUT SECTION MODEL OF SEMI FLOATING DIFFERENTIAL AND WHEEL MECHANISM (WORKING)**

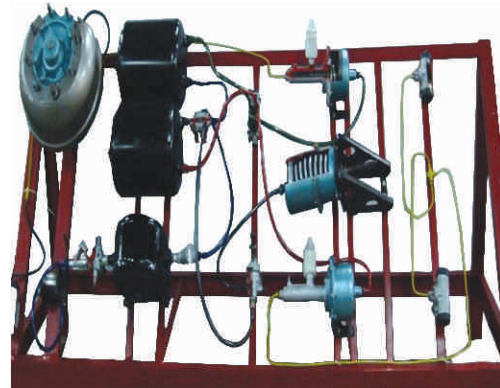
This model is made out of original used light vehicle, suitably sectioned to show the action of Differential gear box and Brake drums in Rear axle. A Crank handle is provided to demonstrate the model. The whole model is mounted on a sturdy iron frame.

SL-8013



**Model of Mechanical Brake System**

SL-8014



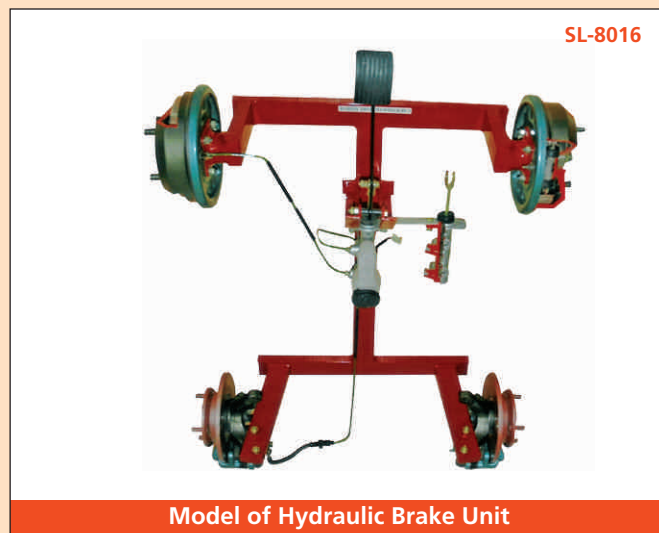
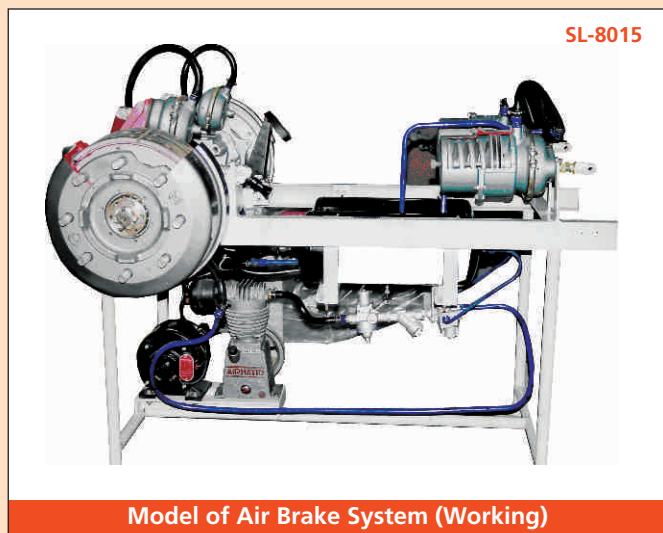
**Model of Air brake System**

#### **CUT SECTION MODEL OF MECHANICAL BRAKE SYSTEM (WORKING)**

This model is made out of original used parts such as Brake drum, Brake Shoes, Brake peddle, etc., suitably sectioned and mounted on a wooden base. By operating the Brake drum and applying the Brake pedal this model can be demonstrated.

#### **CUT SECTION MODEL OF AIR BRAKE SYSTEM (NON WORKING)**

The model is made out of Original parts such as Air compressor, Unloader valve, foot valve, Booster, Wheel assembly, air tank, control valve etc Suitably sectioned and mounted on a sturdy iron frame.

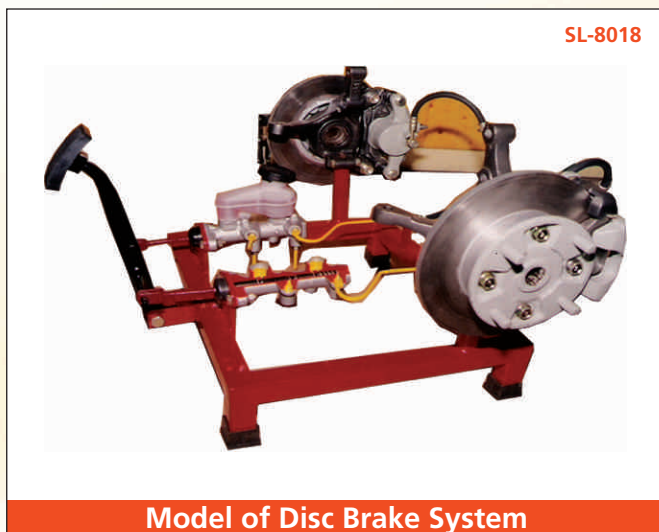
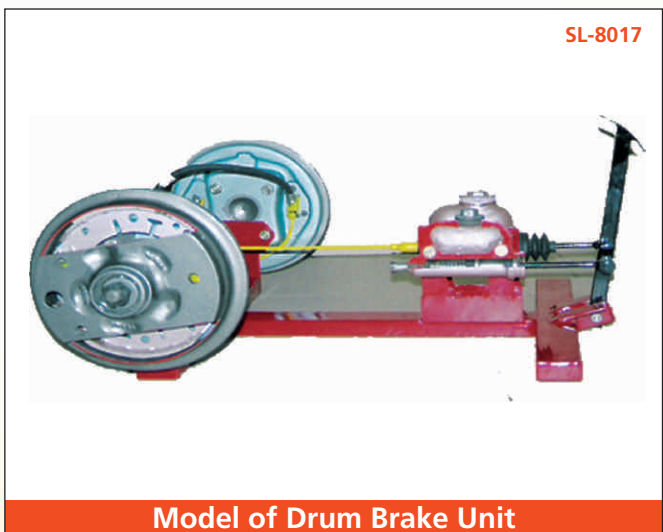


### MODEL OF AIR BRAKE SYSTEM (WORKING)

The model is made out of Original parts such as Air compressor, Unloader valve, foot valve, Booster, Wheel assembly, air tank, control valve etc The Brake system will be fitted with two front wheel assembly complete ( with out axle) and the drum will be suitably sectioned to show the working of the brake shoe. Other system will be mounted as it is and will be made to function ( foot brake, hand brake etc will be functional.)the entire system will be mounted on a sturdy iron frame. A F.H.P Single phase 220/230 V AC motor will be coupled to the compressor for generation of the air, which is used for the operation of the model.

### CUT SECTION MODEL OF HYDRAULIC BRAKE UNIT FOUR WHEEL TYPE (CUT SECTIONED AND WORKING WITH TWO DISC AND TWO DRUM BRAKES)

This model contain two disc brakes in the front and two drum brakes at the rear and it is made out of original parts such as two master cylinder Assembly (one sectioned and one working), wheel cylinder, Brake drum, Brake Shoes, calipers etc., suitably sectioned and mounted on a sturdy iron frame. By operating the lever provided, the working procedure of the model can be demonstrated.



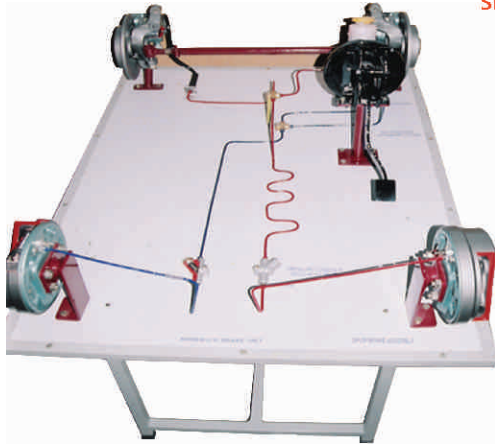
### CUT SECTION MODEL OF DRUM BRAKE UNIT (HYDRAULIC WORKING)

This model is made out of original parts such as Two Brake drum assembly, two master cylinder (one sectioned), wheel cylinders (one sectioned), Brake Shoes, etc., the model can be demonstrated by operating the lever provided.

### CUT SECTION MODEL OF DISC BRAKE SYSTEM (WOIKING)

The Model is made out of Original parts such as Two Brake disc, two Caliper assembly (one sectioned), two master cylinder (one sectioned) etc, the model is mounted on a sturdy iron frame and can be demonstrated by operating the lever provided.





SL-8019

Hydraulic Braking System with vacuum Booster



SL-8020

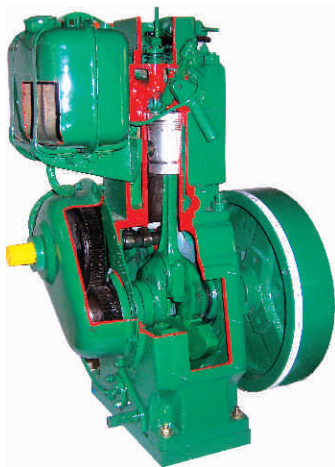
Model of Disc Brake System Two Wheeler

### MODEL OF HYDRAULIC BRAKING SYSTEM WITH VACUM BOOSTER (TATA INDICA)

The model will be made out of Used TATA Indica brake aggregates which will be suitably sectioned, Left Front disc and Left rear drum will be made working, using necessary hydraulic connection from the Master cylinder, By operating the brake pedal connected to the Master cylinder through booster, the functioning of disc and drum brake can be demonstrated. The aggregates on the other side will be suitably sectioned to show the internal details and will be kept dummy. All the aggregates will paint finished The entire setup will be mounted on a sturdy iron frame.

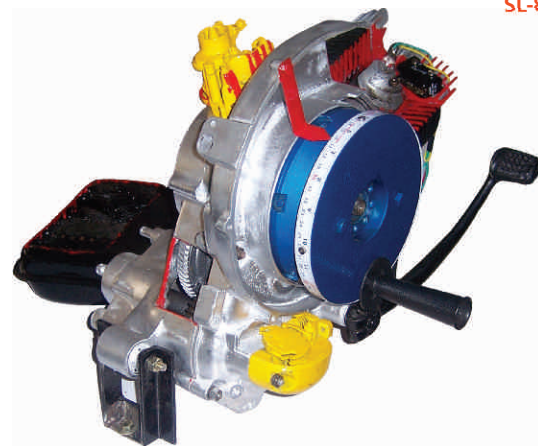
### CUT SECTION MODEL OF DISC BRAKE SYSTEM TWO WHEELER

This model is made out of original used parts, will be suitably sectioned And Arranged to demonstrate the internal construction details showing the minute information such as the disc brake assembly, master cylinder on the handle, its piping, front wheel assembly with disc, handle bar with cylinder and brake lever etc., and working of the same can be show by operating the brake lever, the model will be suitably painted and The entire model is mounted on a sturdy iron frame.



SL-8021

Valve Timing Diagram



SL-8022

Port Timing Diagram



## QUALITY POLICY

The Management and the staff of LabTek is committed to provide Educational training equipments and test & measurement products and services on par with international standards with and emphasis on cost effectiveness, customer satisfaction and market coverage. It is our endeavor to create a culture of total quality where continuous improvement of our products by increasing involvement of people through customer oriented, flexible, multiple job functions with emphasis on cost consciousness becomes a way of life.

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**E-mail:** labtekindia@gmail.com, **Website:** www.labtekindia.com

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