



# BRAKE SYSTEM.

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### INTRODUCTION

Educational unit of all the components of the Air Brake system.

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

#### Dimensions & Weight

150 Cm x 75 Cm x 120 Cm

200 Kg

#### Electric Supply

1 Phase , 220 Volts / 50 Hertz

### GENERAL FEATURES OF THE UNIT

- The device is mounted to a metal chassis that is electrostatic painted and mounted on 4 wheels for easily mobility inside the laboratory.
- The device has sections that indicates the internal construction of the air braking system.
- Sections are colored for easily observation of their components.
- Internal lighting of the section for easily observation of the internal construction.
- Some sections are supplied with internal lighting to easily observe the components.
- Detailed colored diagram indicating the connection of components and their operation.

### SCOPE OF DELIVERY

- Metal Chassis that is electrostatically painted and mounted on 4 wheels.
- Colored sections to train the students on the internal construction of the components.
- Detailed colored diagram indicating the connection of components and their operation.

### ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit



- INTRODUCTION** Educational unit of all the components of the disk and drum.
- GENERAL FEATURES OF THE UNIT**

  - The device has sections that indicate the internal construction of the disk and drum.
  - Sections indicate the operation of the brakes inside the disk and entry and exit of the oil.
  - Sections are colored for easily observation of their components.
  - The device is fitted to an iron painted box with a plastic handle for easily mobility inside the laboratory.
  - Detailed colored diagram that is printed on the unit and indicating the internal construction of the disc and the drum.
- SCOPE OF DELIVERY**

  - Painted iron chassis with a plastic handle for the device to be fitted to.
  - Colored sections to train the students on the internal construction of the components.
  - Cut away in the disk and the drum.
- SUPPLIED WITH THE UNIT** Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.
- ACCESSORIES**

<ul style="list-style-type: none"> <li>AUT-15102</li> <li>AUT-15109</li> <li>AUT-15110</li> <li>AUT-15111</li> </ul>	<ul style="list-style-type: none"> <li>Cover for the equipment</li> <li>Labels for the Laboratory</li> <li>Basic Tool Kit</li> <li>Advanced Tool Kit</li> </ul>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #f4a460;">Dimensions &amp; Weight</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">80 Cm x 40 Cm x 60 Cm</td> </tr> <tr> <td style="text-align: center;">15 Kg</td> </tr> </tbody> </table>	Dimensions & Weight	80 Cm x 40 Cm x 60 Cm	15 Kg
Dimensions & Weight					
80 Cm x 40 Cm x 60 Cm					
15 Kg					



### INTRODUCTION

Educational unit to train students and technicians on the ABS module

### GENERAL FEATURES OF THE UNIT

- The device has colored sections that enable the students observe the components.
- Sections indicate the operation of the ABS module.
- Sections indicate the oil motor inside the ABS module.
- Sections indicate the location of different valves.
- Sections indicate the entry and exit of units and the electronic control unit as well.
- The device is fitted to a painted iron box with a plastic handle for easily mobility inside the laboratory.
- Detailed & Colored Diagram that is printed on the device indicating the internal construction of the ABS module and its components.

### SCOPE OF DELIVERY

- The device is fitted in a painted iron chassis with a plastic handle
- Colored sections of the components for easily observation of their parts.
- Cut away in the ABS module.
- Detailed diagram of the components of the ABS module.

### ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15103 Touch Screen
- AUT-15104 Screen Holder fitted on the device
- AUT-15108 Fault diagnosis equipment

- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit

### Dimensions & Weight

80 Cm x 100 Cm x 100 Cm

150 Kg

### Electric Supply

1 Phase , 220 Volts / 50 Hertz

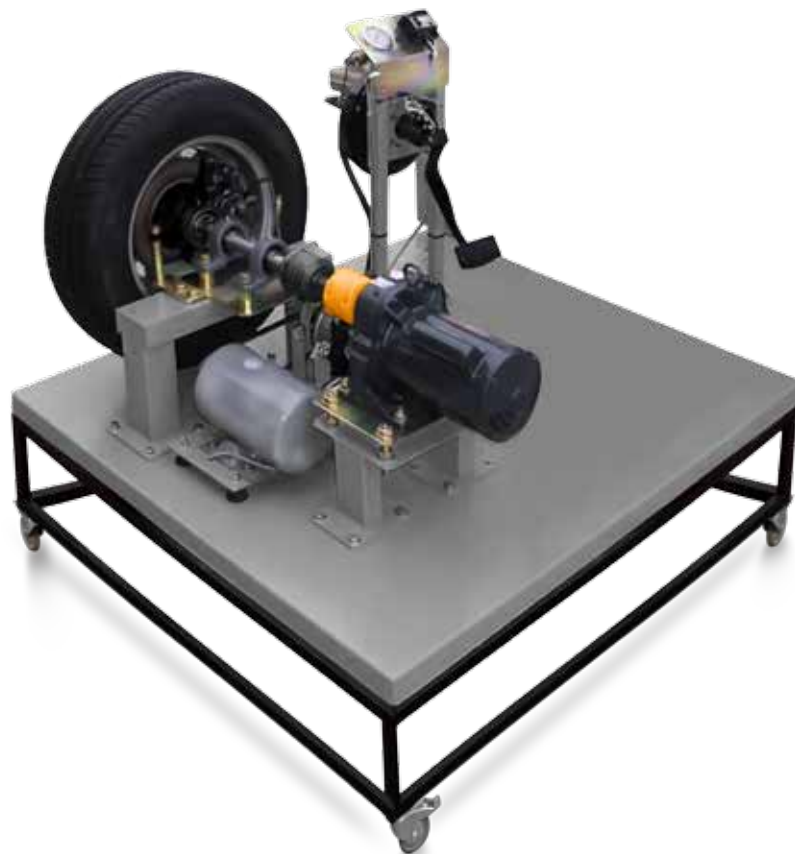
### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### E - CONTENT

AUT 14106-101

E-Content for Braking System



### INTRODUCTION

Educational unit to train students and technicians on the theory of operation of wheel drum brakes with hand brake [Manual Operation].

### GENERAL FEATURES OF THE UNIT

- The device is designed in a vertical position for easily observation of the components while working.
- The device consists of 4 full brake drums including the oil linkages, tubes, brake tank and master.
- The device is supplied with a brake pedal to test the system.
- The device is supplied with hand brakes to test the system operation.
- Each wheel could be operated at a time through its own connected handle.
- The device is provided with pressure gauges to measure the pressure at each wheel and at the brake master as well.
- The device is being fitted to an electrostatically painted iron chassis that is mounted on 4 wheels for easily mobility inside the laboratory
- Detailed and colored diagram for oil path, pressure and the connection of brakes.

### E - CONTENT

AUT 14106-101 E-Content for Braking System

### ACCESSORIES

AUT-15102 Cover for the equipment

AUT-15103 Touch Screen

AUT-15104 Screen Holder fitted on the device

AUT-15108 Fault diagnosis equipment

AUT-15109

AUT-15110

AUT-15111

Labels for the Laboratory

Basic Tool Kit

Advanced Tool Kit

### SCOPE OF DELIVERY

- The device is being fitted to an electrostatically painted iron chassis that is mounted on 4 wheels for easily mobility inside the laboratory.
- Training system on the theory of operation of brakes.
- Pressure gauges at different points.
- Colored and detailed diagram for the system.

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### Dimensions & Weight

180 Cm x 70 Cm x 150 Cm

200 Kg



### INTRODUCTION

Educational unit to train students and technicians on the theory of operation of wheel drum brakes with hand brake [Electrical Operation].

### SCOPE OF DELIVERY

- The device is being fitted to an electrostatically painted iron chassis that is mounted on 4 wheels for easily mobility inside the laboratory.
- Training system on the theory of operation of brakes.
- Pressure gauges at different points.
- Colored and detailed diagram for the connections of oil and brakes.

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### Dimensions & Weight

180 Cm x 70 Cm x 150 Cm

200 Kg

### E - CONTENT

AUT 14106-201  
E-Content for ABS (Anti-Lock Braking System)

### ACCESSORIES

AUT-15102	Cover for the equipment	AUT-15109	Labels for the Laboratory
AUT-15103	Touch Screen	AUT-15110	Basic Tool Kit
AUT-15104	Screen Holder fitted on the device	AUT-15111	Advanced Tool Kit
AUT-15108	Fault diagnosis equipment		

### GENERAL FEATURES OF THE UNIT

- The device is designed in a vertical position for easily observation of the components while working.
- The device consists of 4 full brake drums including the oil linkages, tubes, brake tank and master.
- The device is supplied with a brake pedal to test the system.
- The device is supplied with hand brakes to test the system operation.
- Each wheel could be operated at a time through its own connected handle.
- The device is provided with pressure gauges to measure the pressure at each wheel and at the brake master as well.
- The device is being fitted to an electrostatically painted iron chassis that is mounted on 4 wheels for easily mobility inside the laboratory.
- Detailed and colored diagram for oil path, pressure and the connection of brakes.
- The device could run the wheels and do the electric control of speed using two techniques;
  - First: The student can run the 4 wheels at the same speed through an electric motor that is linked to the 4 wheels. Speed is controlled and could be read on the meter that is attached to the device.
  - Second: The student can control the speed of each wheel at a time and read the speed on the related meter through an electric motor that is linked to each single wheel.

### CODES OF THE UNITS

Training Unit to control the speed of the 4 wheels altogether through a single electric motor  
Training unit to control the speed of each wheel at a time through the electric motor that is linked to each



### INTRODUCTION

Educational device that simulates the ABS control

### SCOPE OF DELIVERY

- ABS control simulator.
- Program on a touch screen to simulate different scenarios.
- Pressure gauges at wheels and brakes.

#### Dimensions & Weight

200 Cm x 100 Cm x 120 Cm

600 Kg

#### Electric Supply

3 Phase , 380 Volts / 50 Hertz

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### ACCESSORIES

AUT-15102 Cover for the equipment

AUT-15103 Touch Screen

AUT-15104 Screen Holder fitted on the device

AUT-15108 Fault diagnosis equipment

AUT-15109

AUT-15110

AUT-15111

### GENERAL FEATURES OF THE UNIT

- The device is designed in the shape of one real and complete vehicle with a seat for the student and electronic panel in the front that is provided with a computer screen to control all functions.
- The program is supplied with many tests and many scenarios that explain the operation of the ABS control.
- The device is supplied with pressure gauges that represent the oil pressure at different points.
- Many videos are available that indicate the scenarios upon which the device could operate for the student to anticipate what will happen by pressing the brakes.
- The program enables the manual control manner, the state in which the student can select the speed for each wheel and the pressure type that affects each wheel at a time.
- The device is supplied with a complete brake system of 4 wheels, each wheel is connected to an electric motor through which the speed of that wheel could be controlled apart from other wheels.
- The device has all the related brake and oil linkages as well as the ABS module.

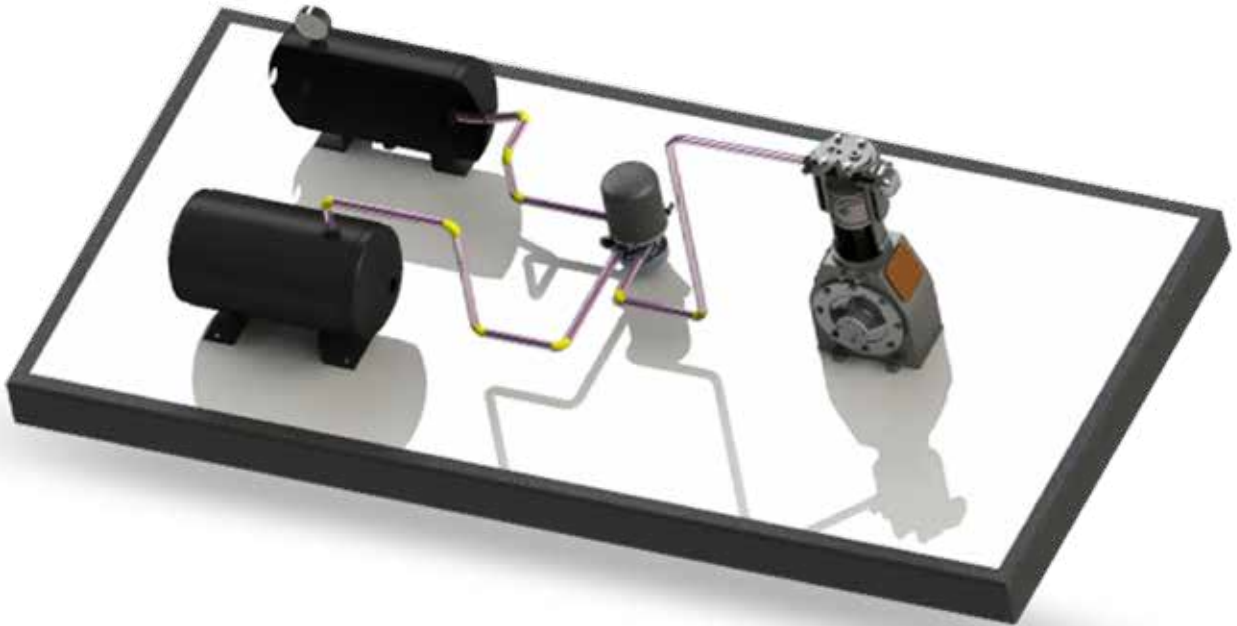
### E - CONTENT

AUT 14106-201 E-Content for ABS (Anti-Lock Braking System)

Labels for the Laboratory

Basic Tool Kit

Advanced Tool Kit



## INTRODUCTION

Educational device that simulates the ABS control

## GENERAL FEATURES OF THE UNIT

- The device is an ABS function simulator that is supplied with oil and hoses.
- The device is supplied with 4 meters representing the wheels of the vehicle.
- The device is supplied with the electronic control unit that is required to simulate what happens when pressing the brake pedal at high speeds.
- The device is supplied with the speed sensors that exist in every vehicle.
- The speed at which the vehicle runs could be controlled and the ABS function could be tested at both high and low speeds.
- The device is fitted to an iron chassis to put the brake pedal in the proper place to be pressed while conducting the experiment.
- The device is supplied with a small screen to display the vehicle speed and braking state, valves state and the motor of the ABS.
- The student can control the speed by increasing and decreasing it through the control unit.

## SCOPE OF DELIVERY

- ABS function simulator.
- Electronic screen indicating states of valves and speed.
- Pressure gauges to simulate the braking of wheels.

## ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit

## Dimensions & Weight

150 Cm x 100 Cm x 120 Cm

150 Kg

## Electric Supply

3 Phase , 380 Volts / 50 Hertz

## SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.





- INTRODUCTION** Educational device that simulates the Air Brakes and contains real components.
  
- GENERAL FEATURES OF THE UNIT**
  - The device completely works through a supply of compressed air.
  - All components are supplied with quick links to be connected to each other through air hoses.
  - Colored and detailed diagram of all the components that shows the connection method for the student to connect the system to have a complete air braking system.
  - The device is fitted to an electrostatically painted metal chassis to be easily mobile inside the laboratory.
  - The device is supplied with air compressor with its related protection circuits.
  
- SCOPE OF DELIVERY**
  - Simulator of Air Brakes that can be assembled and disassembled.
  - Electrostatic painted metal chassis on 4 wheels.
  - Air Compressor.
  
- SUPPLIED WITH THE UNIT** Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.
  
- ACCESSORIES**

<ul style="list-style-type: none"> <li>AUT-15102 Cover for the equipment</li> <li>AUT-15103 Touch Screen</li> <li>AUT-15104 Screen Holder fitted on the device</li> <li>AUT-15108 Fault diagnosis equipment</li> </ul>	<ul style="list-style-type: none"> <li>AUT-15109 Labels for the Laboratory</li> <li>AUT-15110 Basic Tool Kit</li> <li>AUT-15111 Advanced Tool Kit</li> </ul>
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- E - CONTENT** AUT 14106-301 E-Content for ABS (Anti-Lock Braking System)

**Dimensions & Weight**

200 Cm x 80 Cm x 200 Cm

400 Kg

**Electric Supply**

1 Phase , 220 Volts, 50 Hertz



### INTRODUCTION

Educational Cut away to train the students on the internal construction of air master and its operation.

### SCOPE OF DELIVERY

- Educational Cut away of an Air Master.
- Colored Sections for easily observation of the components.
- Iron box with a plastic handle for easily mobility inside the laboratory.

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit

### GENERAL FEATURES OF THE UNIT

- Sections are designed in different colors to easily distinguish the components of the system.
- Internal lighting for easily observation of the components.
- The device is fitted to an Iron box with a plastic handle to for the sake of easily mobility inside the laboratory.

#### Dimensions & Weight

80 Cm x 50 Cm x 80 Cm

20 Kg

#### Electric Supply

3 Phase , 380 Volts, 50 Hertz



### INTRODUCTION

Educational Cut away in the brake chamber to train the students on the internal construction of it and its operation.

### SCOPE OF DELIVERY

- Educational Cut away of a brake chamber.
- Colored Sections for easily observation of the components.
- Iron box with a plastic handle for easy mobility inside the laboratory.

### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

### ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit

### GENERAL FEATURES OF THE UNIT

- Sections are designed in different colors to easily distinguish the components of the system.
- Internal lighting for easily observation of the components.
- The device is fitted to an Iron box with a plastic handle to for the sake of easily mobility inside the laboratory.

#### Dimensions & Weight

80 Cm x 50 Cm x 80 Cm

20 Kg

#### Electric Supply

1 Phase , 220 Volts, 50 Hertz



#### INTRODUCTION

Educational Cut away in the brake pedal to train the students on the internal construction of it and its operation.

#### SCOPE OF DELIVERY

- Educational Cut away of a brake pedal.
- Colored Sections for easily observation of the components.
- Iron box with a plastic handle for easy mobility inside the laboratory.

#### SUPPLIED WITH THE UNIT

Operation Manual in both Arabic and English Language with a full and detailed explanation of the device and how to operate it.

#### ACCESSORIES

- AUT-15102 Cover for the equipment
- AUT-15109 Labels for the Laboratory
- AUT-15110 Basic Tool Kit
- AUT-15111 Advanced Tool Kit

#### GENERAL FEATURES OF THE UNIT

- Sections are designed in different colors to easily distinguish the components of the system.
- Internal lighting for easily observation of the components.
- The device is fitted to an Iron box with a plastic handle to for easy mobility inside the laboratory.

#### Dimensions & Weight

80 Cm x 50 Cm x 80 Cm

20 Kg

#### Electric Supply

1 Phase , 220 Volts, 50 Hertz