

IN THE NAME OF GOD



BRACO Wheel & Brake shop
Equipment

BRACO Engineering Design Company:

BRACO has started its activities with the aim of implementing technical and engineering projects in the field of designing, manufacturing and equipping the wheel and brake workshop under a new name which has been operating for more than a decade. This company has been able to provide many of the up-to-date and required aeronautical technologies by conducting comprehensive studies and examining the available technological knowledge in the world's well-known countries and be of great help to this industry through the localization, commitment and full support of effective processes involved in the optimal and appropriate use of advanced technologies.

The following list is among the principles which are in line with the provision of technical and engineering services and have always been considered by the manufacturing sectors of the industry:

- Using appropriate methods in the production process
- Optimized and practical design of the equipment
- Precision in construction and compliance with the required standards
- Making use of the best materials based on the up-to-date science of metallurgy
- Training and after-sale services
- Supplying spare parts and periodic services

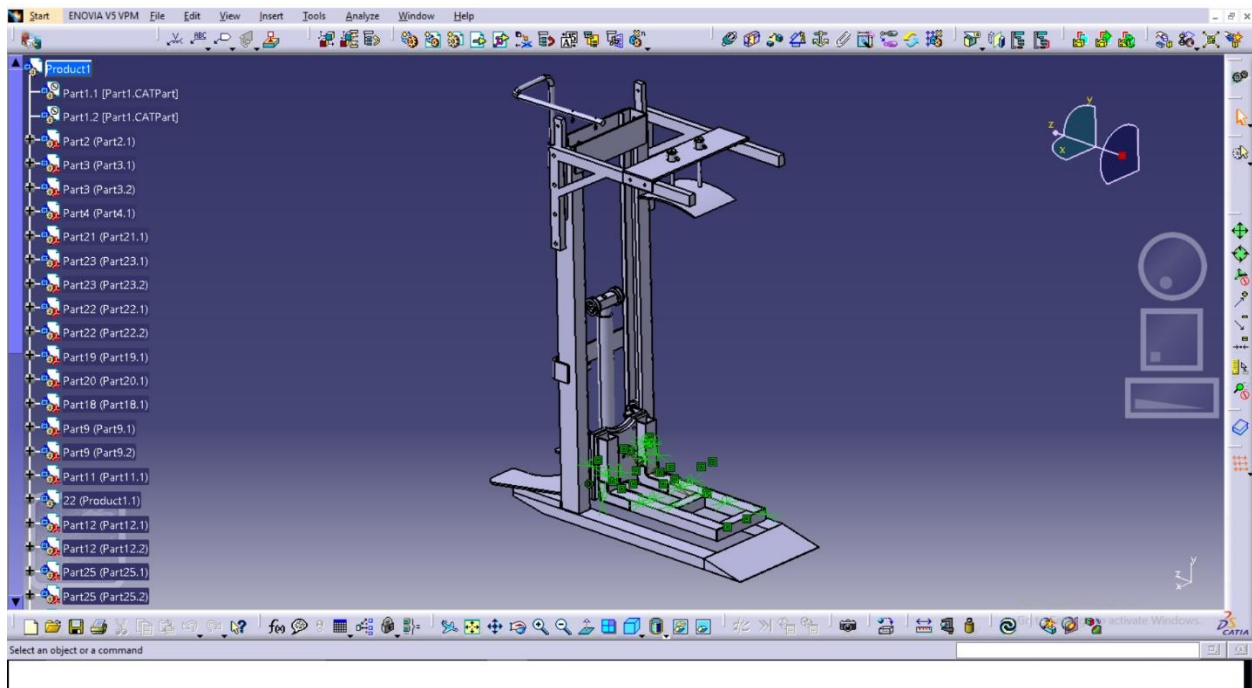
It is hoped that this collection, though small, can clearly illustrate the activities of this group and provide an appropriate chapter in creating a scientific and practical link in various fields of industry.

YOU WILL NOT LOSE WITH US ...

Wheel Lifter:

➤ Features and capability of the device

This device has the ability to put the wheel of the airplane on an appropriate and fixed height so that the operator won't have any problems opening and closing the nuts and bolts of the wheel and be at a suitable condition for the operator considering the ergonomics. This device has a strong steel structure, a 2.2 kW engine, a 16-liter pump and also suitable electrical valves and tools which can produce pressure up to 250 bars. The device has some huge proper hangers for placing the tools and balancers.



➤ Technical definition and the procedure:

First, the wheel is placed upwardly on the steel lifter; then, with the “up” button the lift bed moves upward with a suitable speed ($V= 5 \text{ m/s}$) using the hydraulic force. Of course, the height of the lifter is adjusted to the operator's height. The arm of the lifter is made of steel in order to hold and push the wheel.

The wheel is bound between the platform and the arm of the lifter. After placing the wheel in the right place and fixing it, the operator sets about unfastening and fastening the nuts and bolts; after that, the rings are separated and the operator presses the “Down” button to guide the wheel downward with a suitable speed ($V= 6\text{m/s}$). To assemble the wheel, the operator will follow the

same procedure i.e. he will put the wheel on the device bed and then presses the “Up” button to move the lifter bed upward with hydraulic power. After placing the wheel at an appropriate height, the operator starts to assemble the wheel by fastening the nuts and bolts and after finishing the process and preparing the wheel, he presses the “Down” button and guides the wheel downward.

➤ The device potentials

This device can be produced and offered in two types 1. Portable with four wheels, two of which are driving and the other two moving and 2. Static (fixed). The ring gatherer can also be placed on the device. This device can withstand a 500 kg weight and can be applied for both the small and the big wheel of the airplane with a diameter of 400-1600 mm and a width of 100-600 mm.



➤ The technical features of the device

➤ Dimensions of the device:

- Length: 2000 mm
- Width: 1000 mm
- Height: 2400 mm
- Weight: 450 kg
- Electrical system: 220 V
- Hydraulic system: with Behran 68 oil and a tank capacity of 40 liters

❖ Bearing Lubrication Machin:

Features and capabilities of the device: This device is used for the ease of ball bearings' lubrication; it has suitable dimensions to be used easily by the operator and by using air pressure removes the old and used lubricant and injects the new lubricant into the ball bearings. The device has a 100mm pneumatic cylinder which controls the speed at the two ends of the cylinder with the standard flow control placed on the top and bottom of the cylinder.

➤ Technical definition and the procedure:

First, the operator puts the bearing on the device aluminum plate and then he tightens the polymer adaptor on the cylinder. After that, he pushes the emergency button with one hand and the “Down” button with the other hand; as the pneumatic cylinder comes down, the act of fixing the bearing between the aluminum plate and the cylinder adaptor is done.

Then, by pressing the foot pedal and through the wind power the act of grease injection begins and the grease is injected with a ten-bar pressure between the bearing's lines and first cleans the bearing and then fills the empty space with the clean grease; finally the operator pulls the bearing out of its place by raising the “Up” lever and puts it on the suitable place.

For the safety of the device an emergency 2/4 pneumatic switch is used; the operator first pushes the emergency button with one hand (his left hand) and stimulates the up and down lever with the other hand (his right hand). This device has no diameter and bearing height limitation.



➤ Device potentials:

This device has different adaptors for various bearings. The grease tank also has different sizes (dimensions) which could be improved based on the order.

➤ Technical features of the device

➤ Device dimensions

- Length: 800 mm

- Width: 800 mm

- Height: 1500 mm

- Weight: 65 kg

- The electrical system: 220 AC

- The pneumatic system: 10 bar air pressure

The capacity of the grease tank is 13 kg.

❖ Nose Wheel Bead Breaker

Features and capabilities of the device

This device is used for separating the small wheel of the airplane from its ring and it's really user-friendly. The device has a 125 mm pneumatic cylinder with standard flow controls which are located on the top and bottom of the cylinder to control the speed at the two ends of the cylinder.

➤ Technical definition and the procedure:

First, the operator guides the turntable (rotary) table of the device, which is placed on the main structure through a two-way LM guide, outward and then puts the wheel on the turntable table and after that the turntable table and the wheel are placed in their position under the main pneumatic cylinder with a mild force.

Afterward, the operator puts the jaws of the device in the correct position between the tire and the ring by pushing the right or left button of the device which are connected to the bolt and screw by the electromotor.

After being positioned in the right place, the operator pushes the "Down" button and guides the pneumatic cylinder downward to do the separation task; after releasing the button, the cylinder returns to its prior position due to its elastic repelling. After that, for reassurance, the operator turns the turntable table and repeats this action in several directions to complete the separation task.

After removing the tire from the ring, the turntable table is guided outward and the wheel is taken out for the next steps.



- The technical features of the device
- Device dimensions:

- Length: 1500 mm

- Width: 800 mm

- Height: 1300 mm

- Weight: 115 kg

- The electrical system: 220 AC

- The pneumatic system: 10 bar air pressure

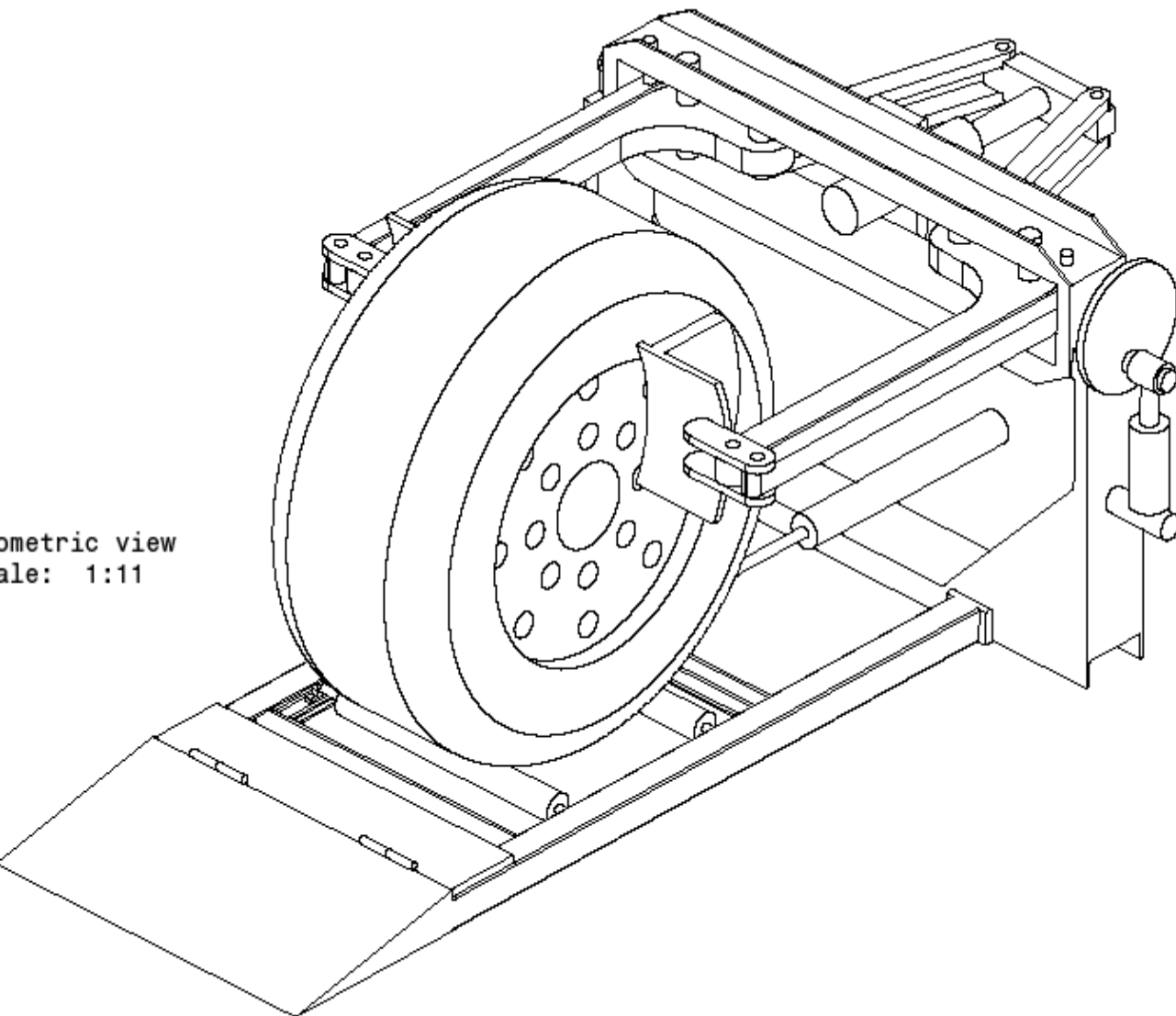
The maximum and minimum diameters of the wheel are 700 mm and 100 mm, respectively. Also, the useful width of the wheel is 100 mm.

❖ Main Wheel Bead Breaker

➤ Features and capabilities of the device

This device is used to separate the small and big wheel of the airplane from their rings and is very user-friendly. This device can create a 250 bar hydraulic pressure with its 3kw electrical motor and its 28-liter pump.

The **bi-selonoid** speed-control valves and a standard block are designed by this company which has given a special beauty and efficiency to the unit due to not taking a lot of space.



➤ Technical definition and procedure

First, the operator puts the wheel on the device buggy between the two **rollicks**'. One of the rollicks is driving and the other is moving. The driving **rollick** is equipped with an electromotor or hydrau motor for moving (circulating) the wheel and the moving rollick is idler by the bearing.

After positioning the wheel on the rollicks, by pushing the black button the wheel is placed on its location by cylinder number 1. Then, the operator sets the "Up" and "Down" button through pushing them. The cylinder number 2 is responsible for locating the jaws of the device between the wheel and the ring.

After adjusting the suitable place of the wheel, the operator separates the wheel from the ring by pushing his foot against the open and close pedal of cylinder number 3.

After carrying out this stage, the operator pushes the return button to order the hydrau motor to turn; the hydrau motor will turn a few degrees by the 45-degree turners to separate the wheel from the ring in other points.

After the complete separation of the wheel, the operator pushes the forward button to guide the buggy outward and make the wheel ready to deliver.

➤ Potentials:

For turning the wheel we can either use a hydrau motor with small dimensions or turn the wheel manually between two rollick idlers.



➤ Technical features of the device

➤ Device dimensions

- Length: 2000 mm

- Width: 1500 mm

- Height: 1500 mm

- Weight: 450 kg
- Electrical system: 220 V
- Hydraulic system: Behran 68 oil, a 50-liter tank and a 120 bar work pressure.

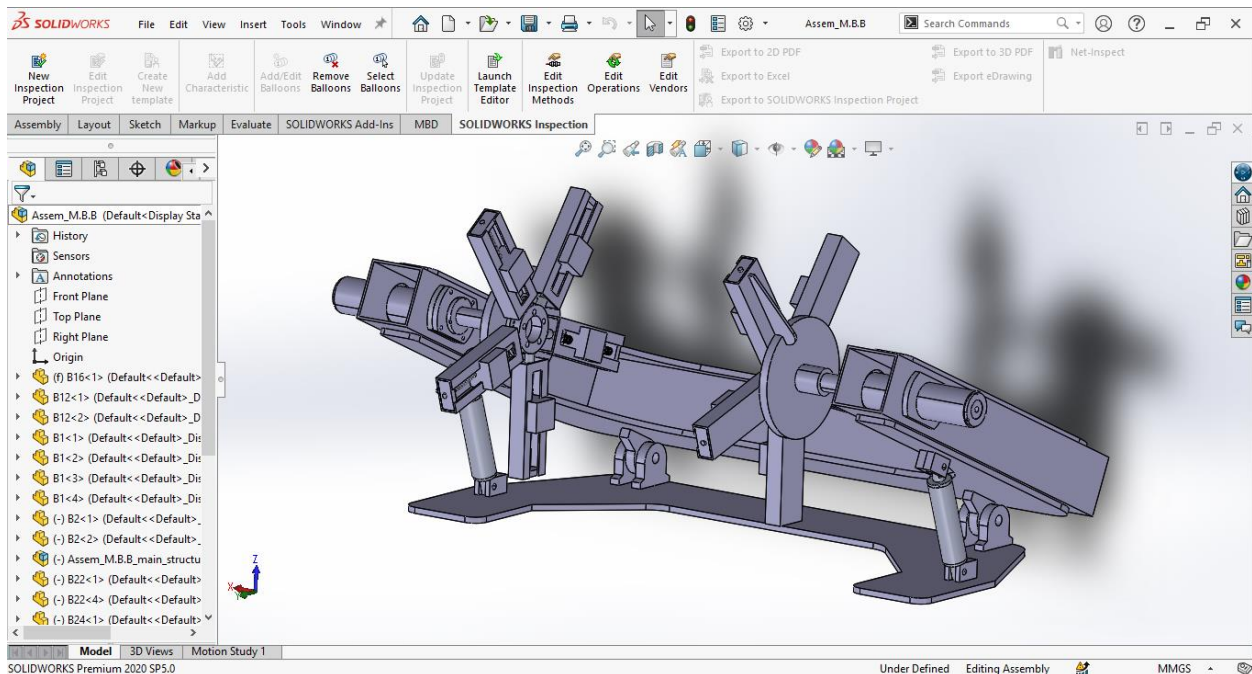
The maximum and minimum wheel diameters are 1400 mm and 250 mm, respectively

❖ General Bead Breaker

➤ Features and capabilities of the device

This device is used for separating the tire from the ring for the big wheel of the airplane's big wheel. This device can produce a 250-bar hydraulic pressure with a 3kw electrical motor and a 30-liter pump.

The bi-solenoid speed control valves and a standard block are designed and manufactured by this company and the hydraumotors are well-suited for moving the jaws. This device has some guidance rulers which are installed on the jaws and the device index for better efficiency.



➤ Technical definition and procedure

First, the operator puts the wheel inside the device and then puts the jaws in a suitable upward position by pushing the “Up” and “Down” buttons. After that, by pressing the buttons on the chassis the jaws are opened and closed by the hydraumotor. The knob of the device on which the jaws and hydraumotor are placed is controlled and guided by the LM guide. After placing the wheel in the front of the device and locating the jaws on a proper position and being observed by the operator, he presses the front button on the chassis and then the knob moves toward the wheel

with a suitable speed and power and separates the tire from the ring. It should be added that below the front part of the jaw, a mechanism is designed by a spring and a polymer which puts the ring in the middle of the device and its appropriate position to do the separation properly. The front part of the jaw which is responsible for the exertion of power is made of aluminum so as not to hurt the airplane ring. After separating the tire from the ring, the operator presses the back button to gather the knob and guide the wheel outward.

➤ Potentials:

This device has the ability to automate through PLC. The device can change the size of the jaws with either the hydromotor or manually.



➤ The technical features of the device:

➤ Device dimensions:

- Length: 2500 mm

- Width: 1500 mm

- Height: 1500 mm

- Weight: 750 kg

- The electrical system: 220 V

- The hydraulic system: with Behran 68 oil, a 50-liter tank and a 120 bar working pressure

The maximum and minimum wheel diameters are 1450 mm and 350 mm, respectively.

❖ The General Bead Breaker and Wheel Lifter

➤ Features and capabilities of the device

This device is used for separating the tire from the ring of the big wheel of the airplane and its assembling and disassembling. This device has the ability to produce a 250 bar hydraulic pressure with a 3kw electrical motor and a 30-liter pump. The bi-solenoid speed control valves and a standard block were designed and manufactured by this company and the hydraumotors are efficient for moving the jaws. This device has some guidance rules for better efficiency installed on the device jaws. For some reassurance and security reasons, some accordion tables and standard rails are used. The rails are connected to the buggy through a time strap with a motor and certain gear guided and controlled by a PLC.

➤ Technical definition and procedure

First the operator puts the buggy on the A (out) status and then puts the wheel on the below accordion table. After that, he presses the “Up” button to put the wheel on a suitable height based on the index engraved on the buggy. Afterward, the operator presses the “Down” button on the chassis to guide the accordion table downward to keep the wheel tight. After this stage, the operator presses the button on the chassis to put the buggy on B (inside) status; After that, he presses the hydraumotor buttons “open” and “close” to put the jaws on a suitable position from the wheel. After the wheel is located on its position and it is observed by the operator, the operator presses the “front” button and the knob moves toward the wheel with a suitable speed and power and separates the tire from the ring. It should be noted that a mechanism is designed under the front part of the jaw by the spring and polymer which puts the ring in the middle of the device in its right position to do the separation task appropriately. The front part of the jaw which exerts the power is made of aluminum so as not to hurt the airplane ring. After separating the tire from the ring, the operator presses the “back” button to gather the knob of the device and then presses the button on the panel of the buggy to put the device again on the “A” status; eventually the operator sets about fastening the nuts and bolts and separating the tire from the ring.

In order to assemble the wheel, the operator puts the tire and the ring on a suitable position on the device and after gathering the up and down accordion table and locating it on the proper height, he starts to fasten the nuts and bolts to complete the assembling task.



Potentials:

This device has the capacity to automate through PLC. Also the device can change the size of the jaws both by the hydraulmotor and manually. This device can be programmed for different types of wheels.

- The technical features of the device
- Device dimensions

- Length: 4000 mm

- Width: 3500 mm

- Height: 2000 mm

- Weight: 1500 kg

- The electrical system: 220V

- The hydraulic system: with Behran 68 oil, a 90-liter tank and a 120 bar working pressure

The maximum and minimum wheel diameters are 1450 mm and 350 mm, respectively.

❖ Assembling & Disassembling Wheels

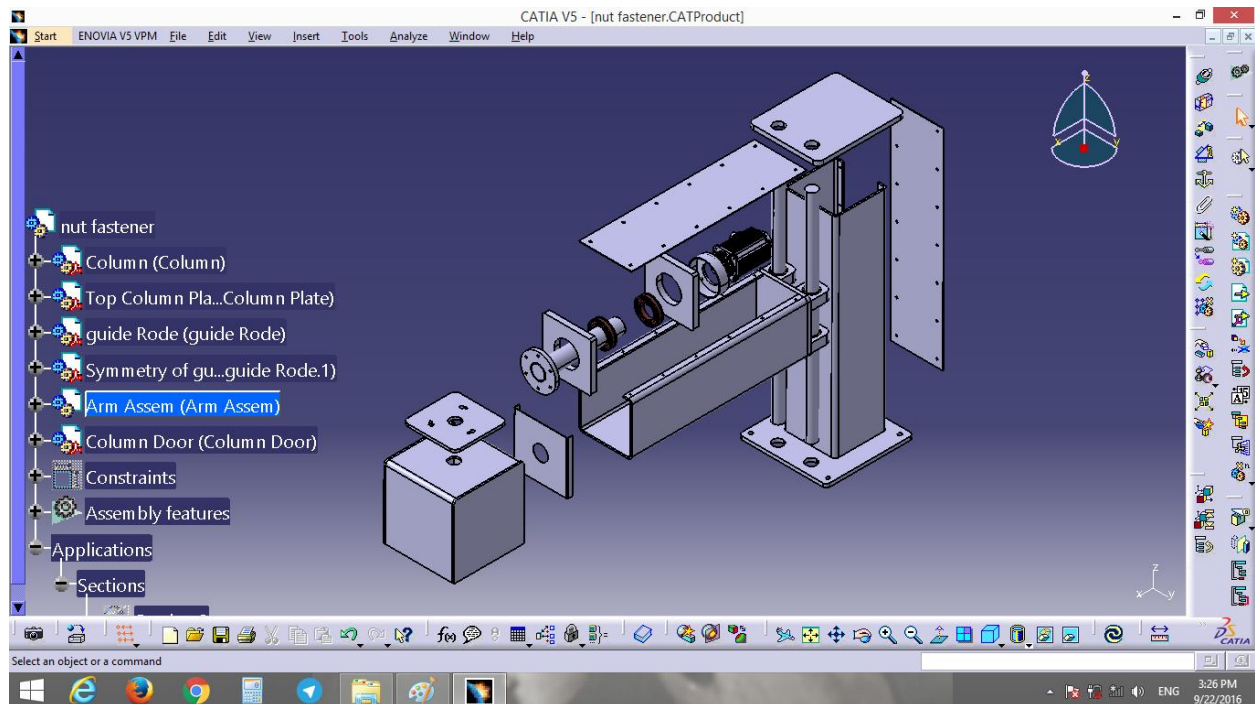
Features and capabilities of the device

This device is used for assembling and disassembling the wheel of the airplane. This device can produce a hydraulic pressure up to 250 bar with a 3kw electric motor and a 28-liter pump. The bi-

solenoid speed-control valves and a standard block are designed by this company which has improved the efficiency of the device with its strong steel structure.

The device fixture is made of hard steel and standard springs to hold the wheel.

The radius and diameter of the adaptor is machined by the CNC device and then hardware which gives it a high level of safety and efficiency.



➤ Technical definition and procedure:

First, the operator puts the wheel fixture on the device and then he puts the screws on the box and after that the ring is placed on the device. Afterward, the operator pushes the up-down lever to pull the main shaft inward and guide the ring toward the fixture and lock it. After that, the operator puts the tire on the ring and eventually puts the outward ring in its place. After this action and fixing the wheel on the device, the operator adjusts the wheel with his height through the up-down button. Finally, he uses a wrench to fasten the nuts on the wheel bolts.

After finishing the procedure and fastening the nuts and bolts, the operator pushes the 90° lever to put the arm parallel to the earth and the wheel upright on the two rollicks. After that, he pushes the lock lever to displace the wheel and put it on the rollick and then guide it to its appropriate place.

It should be mentioned that this device can be used for different wheel sizes. Due to being equipped with a strong central hydraulic cylinder, the up and down height of the device can be adjusted to the operator's height.

In order to turn the tire from 0 to 90 a hydraulic cylinder with a forked clamp is used. In order to transfer that a strong shaft with standard ball bearings at the two ends of the shaft is used for ease and safety.

- Technical features of the device
- Dimensions of the device



- Length: 3000 mm
- Width: 1800 mm
- Height: 1700 mm
- Weight: 750 kg
- Electrical system: 220 V
- Hydraulic system: with Behran 68 oil, a 50-liter tank and a 120-bar working pressure

The maximum and minimum wheel diameters are 1450 mm and 250 mm, respectively.

❖ Wheel Cage:

- Features and capabilities of the device

This device is used for air injection to the airplane wheels.

➤ Technical definition and the procedure:



The cage collection is designed and manufactured for the sake of tire security during nitrogen injection as follows: first, the tire is placed inside the device and the up and down lids are locked. After that, the **walf** is installed on the tire and the injection process is initiated.

There some gauges at the air entrance to detect air pressure. To detect air leak in the tires first the gauge entrance is closed and if after 24 hours the second gauge is less than expected, the leak is confirmed and dealt with and if not, the tire is faultless and can be used safely.

The structure of the device is made of **profiles** and industrial pipes and some suitable sheets are used on the surface for correct placement of the wheels.

➤ Potentials:

This device has the potential to be accompanied by a nitrogen-maker device; also, its dimensions and size is changeable and can be made in a single or double form.

➤ Technical features of the device:

➤ Dimensions of the device:

- Length: 2000

- Width: 1600 mm

- Height: 1800 mm

- Weight: 450 kg

The maximum and minimum wheel diameters are 1450 mm and 250 mm, respectively.

❖ Hydraulic Press

- Features and capabilities of the device

This device is made of a strong steel structure which can be used for placing and displacing the ball bearing cups. The device has a three-phase 3HP motor with 1400 round in the class of **motogen**. Its gear pump with a pumping power of 30-liter per minute and two manual bidirectional levers are used for raising and lowering the table and the jaw of the device. For the sake of ease of control in the exerted power we have used a control valve on the main cylinder to control the linear speed.

- Technical definition and procedure:

First, the device table is guided up and down with two strong hydraulic cylinders placed on the two sides of the device to stabilize the position of the device.



After placing the device table in its place, for more safety the table shafts are put in specific holes to do the pressing more efficiently.

Then, the ring is placed on the table and the ball bearing cup is put parallel to the main shaft for placement. The pressing is done by pushing the “Down” lever. After finishing the task, the operator guides the lever upward and releases the ring for the next steps.

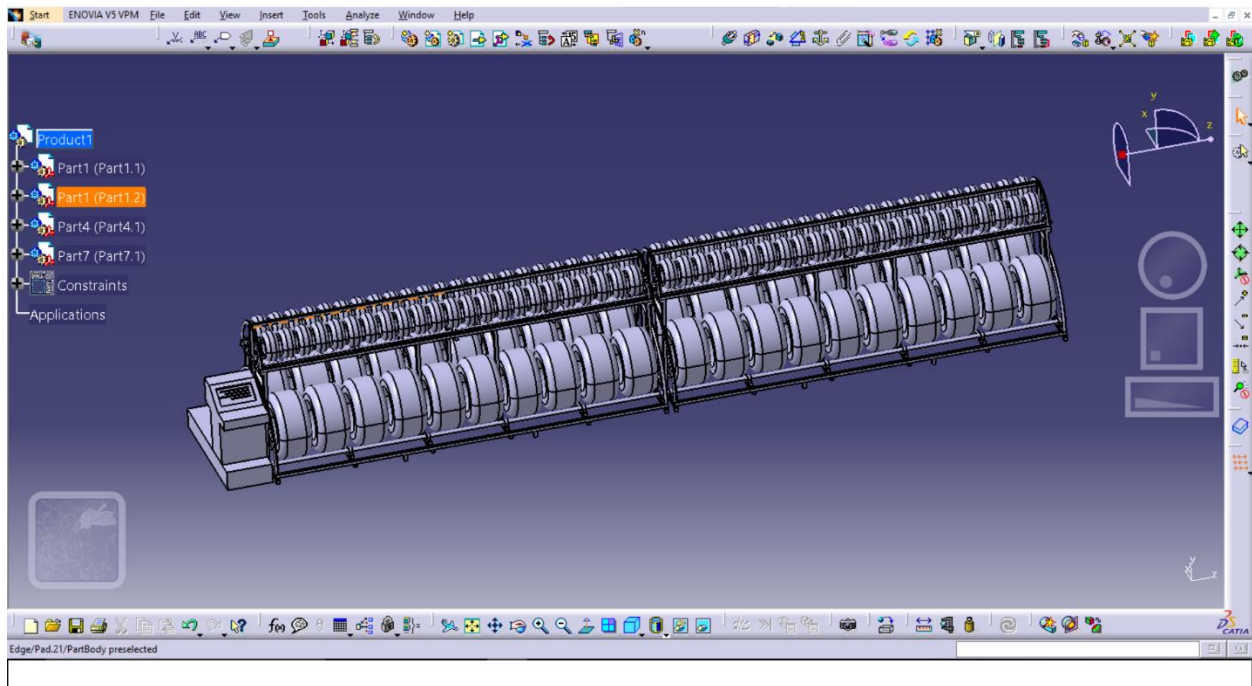
- Technical features of the device:
- Device dimensions:

- Length: 1700 mm
- Width: 1000 mm
- Height: 2000 mm
- Weight: 500 kg
- The electrical system of the device: 220 V
- The hydraulic system of the device: with 68 Behran oil, a 50-liter tank and device working pressure of 120 bars.

❖ Automation Tire Stand:

- Features and capabilities of the device:

The correct way of placing the tires is upward; the device has a turning capacity so as not to injure the tires. There is a 2kw motor and a snail 100/1 gearbox which can transfer the power to moving **rollicks**; the rollicks use appropriate bearing for easy rotation. The PIC program has the capacity to change the time and angle and print a report.



- Technical definition and procedure

The main effects are on the ground floor and the nose tires are on the top floor in an upright posture.

Then, by choosing the relevant PIC program, the program is transferred to the motor and gearbox and the gearbox transfers the power to the pipes. One of the pipes is moving and the other is

stimulating which withstand the radial power from the gearbox and are programmed to be on for some seconds and moves the tire and then is off for some seconds and the procedure goes on like this.

➤ Potentials:

The dimensions of the device are changeable according to the needs of the customers and various numbers of tire can be put on the stand.



➤ Technical features of the device

➤ Device dimensions:

- Length: 12000 mm
- Width: 2000 mm
- Height: 2000 mm
- Weight: 800 kg
- The electrical system: 220 V

❖ Nose Wheel Balancer:



This device is used for balancing the nose wheel of the airplane; to build this device after assembling and manufacturing the structure of the device, we machined the main shaft with the CNC and then the nuts and spacers are built and finally the stand is installed on the device using specific ball bearings.

The device is designed in such a way to allow the nose wheel to be placed correctly and completely on it.



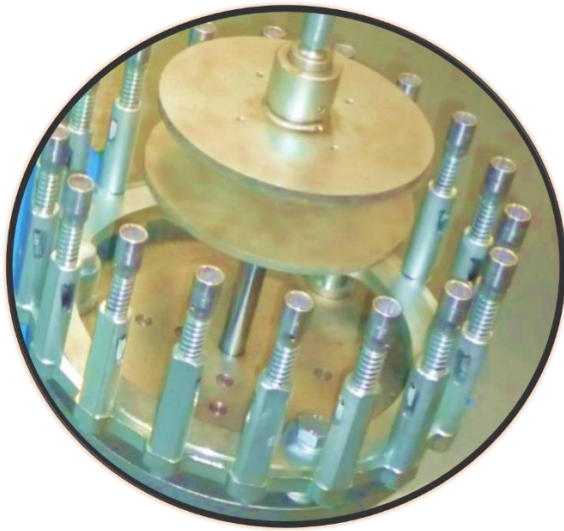
❖ Tools Manufacturing

Manufacturing pieces and specific tools of the airplane: It should be mentioned that this company has specialized in manufacturing and delivering airplane tools meticulously based on customers' orders in accordance with aeronautic standards. The procedure followed by our company is as follows: based on the order of body pieces, cockpit and the engine, we first measure the solidity (hardship) of the samples in accordance with the standard using the most up-to-date knowledge and the material is chosen and machined with a high quality and delivered to the customer eventually.



❖ Wheel Adaptor

This adaptor is used to assemble the wheel and is made of a steel plate which is machined with a CNC; after being manufactured, the main plate, the shafts and the springs and ... are installed on it. After assembling the tools on the main plate, all the shafts are fastened by proper nuts and checked for safety.



It should be added that for each type the wheel needs an adaptor.

❖ Brake Test Bench Machin:

This testing device is designed and manufactured for hydrostatic testing of different types of airplane brakes which work with SKYDROL oil. It also exerts various and gradual pressures to the brake to simulate the brake behavior on the airplane. This device has the potential to be adaptable to test the hydrostatic pressure of other airplane pieces.

➤ Working Limit:

This device is capable of testing various kinds of airplane brakes.



➤ Potentials:

This device can include additional packages to enhance the efficiency for doing specific tests. Furthermore, the device has been standardized based on the variety of pieces. A large amount of changeability potential is considered according to the customer's order.

❖ The Hydraulic Stand with A 5000 PSI Pressure

This stand is changeable and designable for airplanes working with 3000 PSI and 5000 PSI such as A380.

❖ The Software Package:

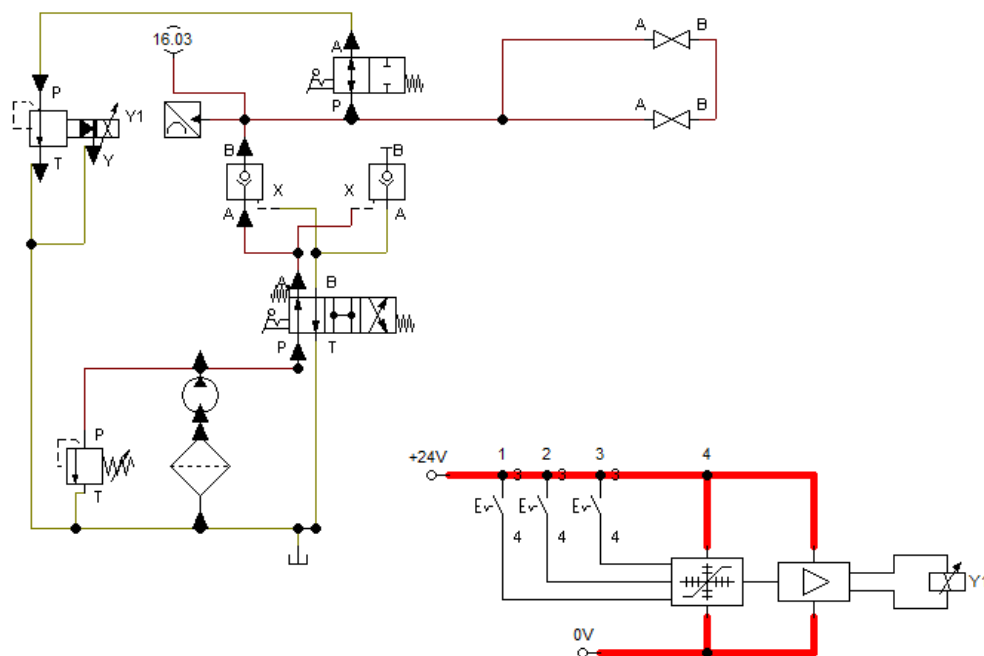
This package consists of various programs which have the capability of testing different brakes based on the technical booklet of each piece automatically.

❖ **The Testing Cage:**

The testing cage is used to cover the brake during the testing process to protect the operator.

❖ **The testing procedure**

The testing procedure is done in accordance with the technical booklet. First, the operator attaches the brake to the device and then the preliminary measures like attaching the hose and venting is done; hereafter, all the testing process is done automatically by the device.



❖ **The Automatic Process:**

1. The nonleakage testing in low pressure
2. Testing the cyclical or alternate function of the brake
3. The nonleakage testing in moderate pressure
4. The nonleakage testing in high pressure
5. Visual observation of the test result regarding nonleakage by the operator
6. Saving the results and preparing them for printing in case there is no leakage and the result of the testing is positive.



❖ The Manual Process

The brake testing device has a manual brake testing besides automatic brake testing procedure; in the manual process the operator specifies the pressure amount after connecting the brakes to the device as he wishes. And then the process of pressure making and releasing the brake manually is done.



➤ Device Pieces

- Hydraulic pressure-making section (hydraulic power unit)
- Hydraulic circuits including: valves and hydraulic manifolds for automatic pressure testing
- Automatic control panel which include control buttons and touch panel or the medium between the operator or the machine (HMI)
- Manual user panel which include hydraulic valves for direction specification and pressure control valves
- Power board which include PLC and relay boards and contractors to control the systems.

➤ Device Features:

- Efficiency and being user-friendly
- Education and ease of use
- The potential of pressure making up to 5500 PSI
- The ability of being run in two automatic and manual mood
- The efficient use of oil SKIDROL 500 (RMS 3-11) and reducing the required oil volume and economical saving

➤ **Technical features:**

The operating method is as follows: the pressure exerted on the rivet will lead to mild material transfer up to the relevant point smoothly and with an even speed. In this situation the structure remains intact and a unique pattern comes into existence.

These kinds of machines are very meticulous and have an exact pressure control.

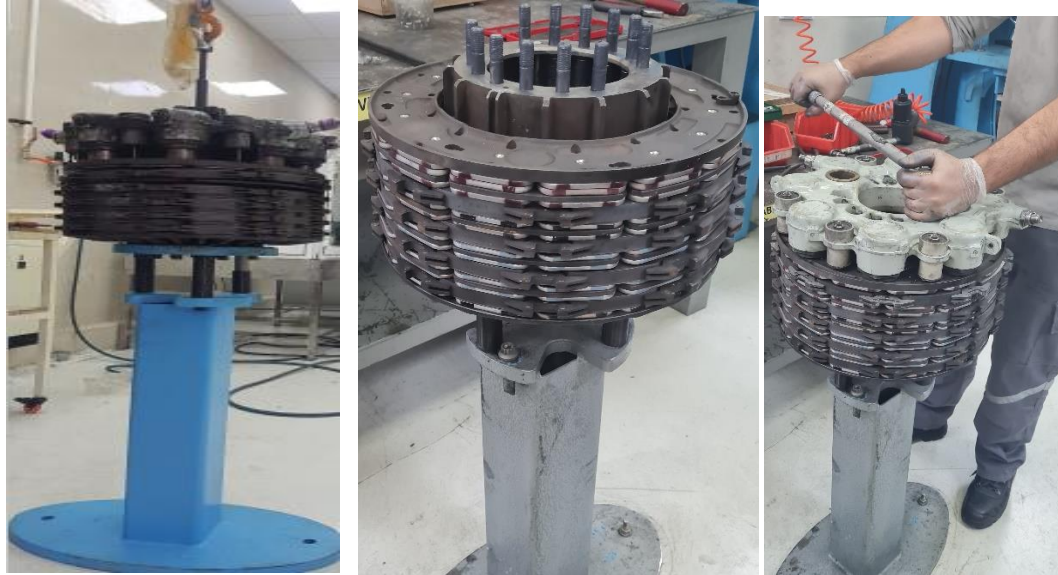
This company uses two different devices for riveting which is explained below:



❖ **Brake Stand:**

This device has a strong structure bolted on the ground; there is also a head devised on top of it and there is a separate head installed for each brake (sheet) which gives the operator the possibility of assembling and disassembling. It should be mentioned that the mechanism of the head of the

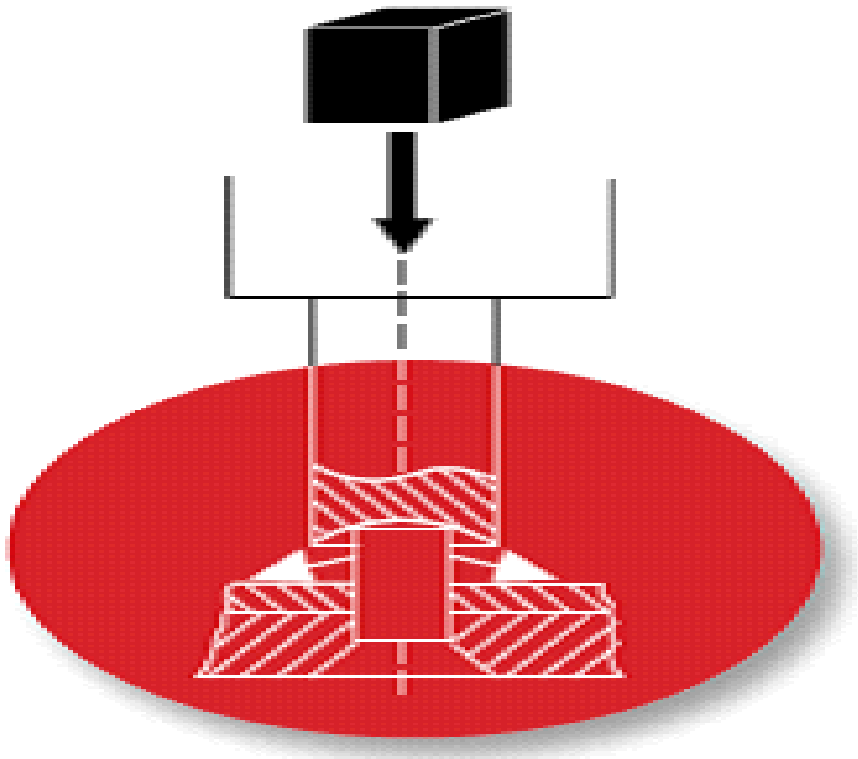
stand is such that the bolts of the brake are placed in it appropriately and makes it possible for the brake to open and close.



❖ Riveting Machine:

1. Press Riveting Machine:

This device is used for riveting the airplane brake hydraulically. First, the brake board is placed on the fixture and the linings are put on two directions. After that, the rivet is put inside it under the piston on the die (matrix). After making sure that the rivet and the lining are placed on their appropriate position, the operator pushes the foot pedal and then the piston smartly exerts pressure on the rivet with 4m/s and rivets it on the lining; after holding it on the rivet for 2 seconds, it returns to its prior position. This process and its length is different for different rivets and linings which is increased and decreased by the working pressure and its time is controllable. The whole process makes use of a PLC circuit which is smart. The steel structure of the device is very strong which do not let it move or change.



It should be mentioned that for security in each stage, the operator can stop the pistol movement by removing his foot from the pedals.

➤ Device features:

- a) The hydraulic pump with 2 liter per minute output and a 250 bar.
- b) A single-phase 2 horsepower engine
- c) An 8-liter oil tank
- d) Direction valve for specifying the direction of the cylinder movement
- e) Pressure reducer for adjusting the system pressure
- f) Pressure gauge for showing the system pressure
- g) The pressure sensor which shows the amount of pressure and its function
- h) Electric tools like fuse, control, contractor, relay, CPU... .
- i) A ST52 steel frame which has high stability and solidity.
- j) The pistons and dies are made of strong HRC steel.
- k) The main shaft guide is made of polymer coupling



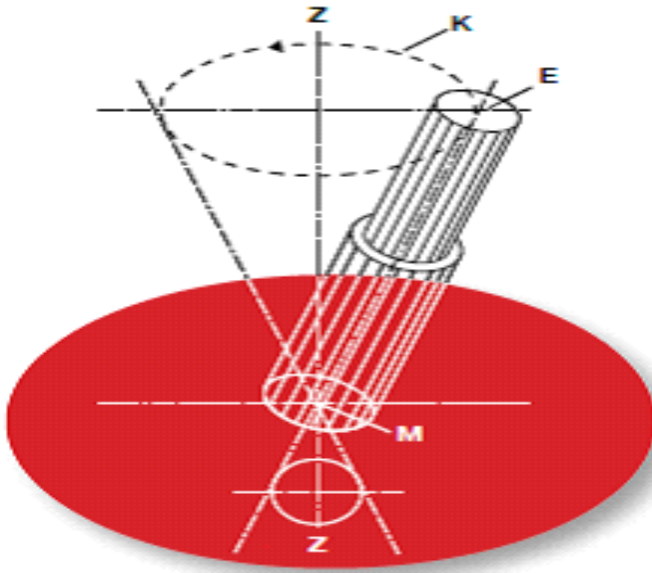
➤ Device dimensions:

- Length: 1000 mm
- Width: 1000 mm
- Height: 1200 mm
- Weight: 150 kg

This device includes an adjustable tuning stand for better placement of linings.

2. Orbital Riveting Machine:

The function of this device causes the piston to move on a circle around the piston which leads to the compression of the piece in the direction of the circular radial movement and doing the riveting task.



This action leads to the smoothness and the least change in the molecule structure of the piece. The head of the device is changeable and is equipped with a timer and electromechanic counter.

- The body of the device is made of gray cast Iron which has been cast with a high quality.
- All the pieces are made of the best materials and are machined meticulously.
- All the pieces are heated and masonrized.
- All sensitive pieces are covered with solid chrome.
- The hydraulic and pneumatic tools are of best quality.
- The electrical devices, PLC and the electronic tools are under quality warranty.

➤ Device dimensions:

- Length: 1000 mm
- Width: 1000 mm
- Height: 1200 mm
- Weight: 120 kg



❖ Spring Testing :

This device has an electromotor and gearbox for adjusting a linear bilateral (shuttle) speed. It is equipped with a S type load cell with a 500 kg measuring capacity and a 100 accuracy.

The device has a digital screen with a maximum power measurement capacity and is equipped with a micro switch in each test for limiting the movement of the moving jaws.

The device plates have for guide bars for guiding the moving plates whose moving jaws is 100 mm.

The device has pressure plates and a spring base which is adjusted to the sample spring.

The mechanical pieces are made of steel and their bodies are covered with electrostatic color.



Working Process

The device uses the motor circular speed and transfers it to the gearbox and the moving jaw; the fixed power is 250 mm per minute and there is a possibility of changing the jaw speed before manufacturing (the operator starts pressing the spring against the pressure plates until it reaches the adjusted position of switches by the operator). The digital screen measures and records the maximum exerted power on the spring up to the adjusted position.

The device is available in two types of desktop and mounted (with legs) versions.

➤ Features and dimensions:

- Length: 750 mm
- Width: 400 mm
- Height: 1350 mm
- Electrical system: 220 V, single-phase, 3 amperages
- Approximate weight: 50 kg

Wheel & Brake shop picture





