



AUTOMATISMS AND INDUSTRIAL PERIPHERALS

ACCURACY INDUSTRIAL DETAIL



Automatizms and industrial peripherals

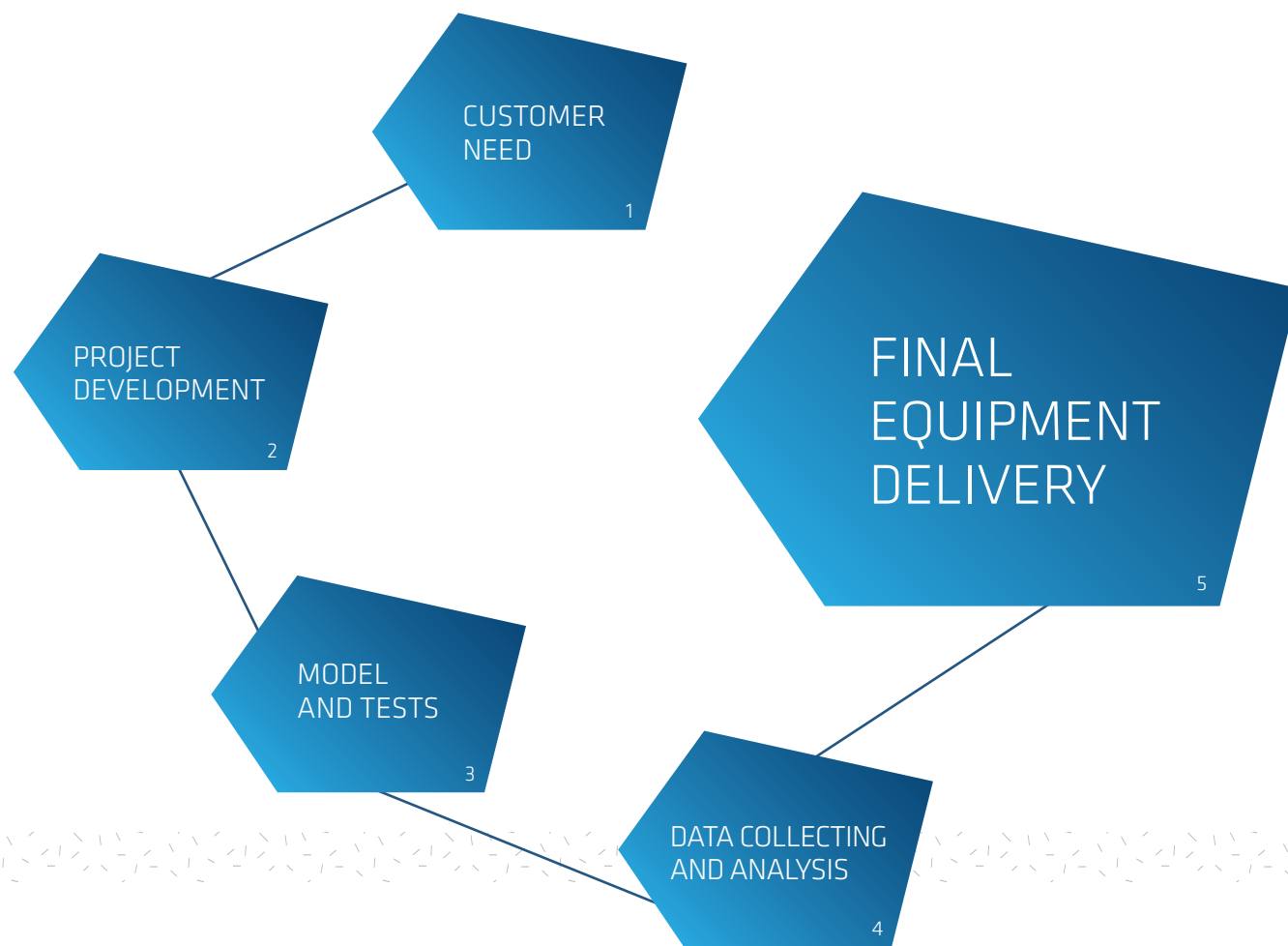
Divmac is a solutions company operating in a wide range of industries, devoted on developing and manufacturing systems and focused on specific customer needs, according to well-defined standards.

Divmac enhances Research, Development and Innovation, as well as the design and manufacturing systems, creating top quality equipment.

From electrical test equipment for the aeronautics and automotive, to industrial automation and peripherals, it develops systems that,

integrated in the production processes of customers, complement or replace hand labor, increase production efficiency and capacity, increment security levels and enhance and/or ensure top quality of final product.

The success of Divmac is the reflected success of its stakeholders and its presence in the ever expanding global market, as well as the recognition by manufacturers known worldwide, is the reward sought for excellence and constant dedication to exceed the expectations presented by our customers.



WHAT WE DO EQUIPMENTS / SOLUTIONS



Aeronautics

Through automotive sector "Know-how", and with the aim of diversifying activity sectors, Divmac has continuously been developing high voltage products and solutions according to the Pr-EN2283 standard. Only a strong knowledge and extensive experience on designing and manufacturing equipments, allows Divmac to fulfill its customer needs.



Automotive

Divmac has developed valences which enable the conception of innovative solutions, focused on fulfilling customer needs, considering as main goal an increase of effectiveness and efficiency of manufacturing processes, as well as quality assurance. It presents a wide range of products, especially intended for quality monitoring, ensuring the full compliance of customer requirements.



Customized Solutions

Divmac has a strong design and product development team, with a huge "Know-how" in several engineering areas. Through strong capabilities in developing special and customized solutions, its products are designed according to customer needs, and are applicable for components and parts manufacturing, as for after processing assessment control.



Artificial Vision

Based on sustained growth and overall experience increase in other sectors, and regarding specific customer needs, Divmac develops control software and hardware solutions trough artificial vision, which can be use for several segments of industrial activity, since components detection to color detectors, or LCD display analysis.



KNOWLEDGE STRICT PROCESS



STAKEHOLDERS RESPECT WORK REFLEX

Strict management

Divmac administration success is achieved by accomplishment of several guidelines:

- . Development of a customer value feeling among employees.
- . Split the scope of action, to attend to multiple stakeholders, interests and influences.
- . Management clearness.
- . Balance between different deadlines, creating results and values cycles.
- . Priorities adaptation depending on differentiation and competitor benefit.
- . Network collaboration stimulation.
- . Time available combined with discipline, to markets and businesses that are beyond sectors operating.
- . Identification, understanding, selection and adoption of top technologies through several trends and innovations available in the market.
- . Systematic innovation promotion based on stout and suitable processes.

ISO 9001

Organization enhancement is an everyday goal and company certification based on, an initial phase, ISO 9001 standard, and later, on a Quality (ISO 9001), Environment (ISO 14001) and Security (OHSAS 18001) Management System were stages that enable the presented goal.

Always having as first priority customer satisfaction, certification is used to assess actuation needs, production improvement, employees motivation and to establish a balanced ratio between environment, security and good work conditions. This is only possible with collaboration of all staff.

Only with customer satisfaction and betting on innovation, Divmac is able to maintain loyalty and customers trust.



People are our success!

People surrounding, integrity, consistency, ethic, professionalism and trust, together with team work, makes people satisfied, compromised and with their own sense of valorization.

Customers partners!

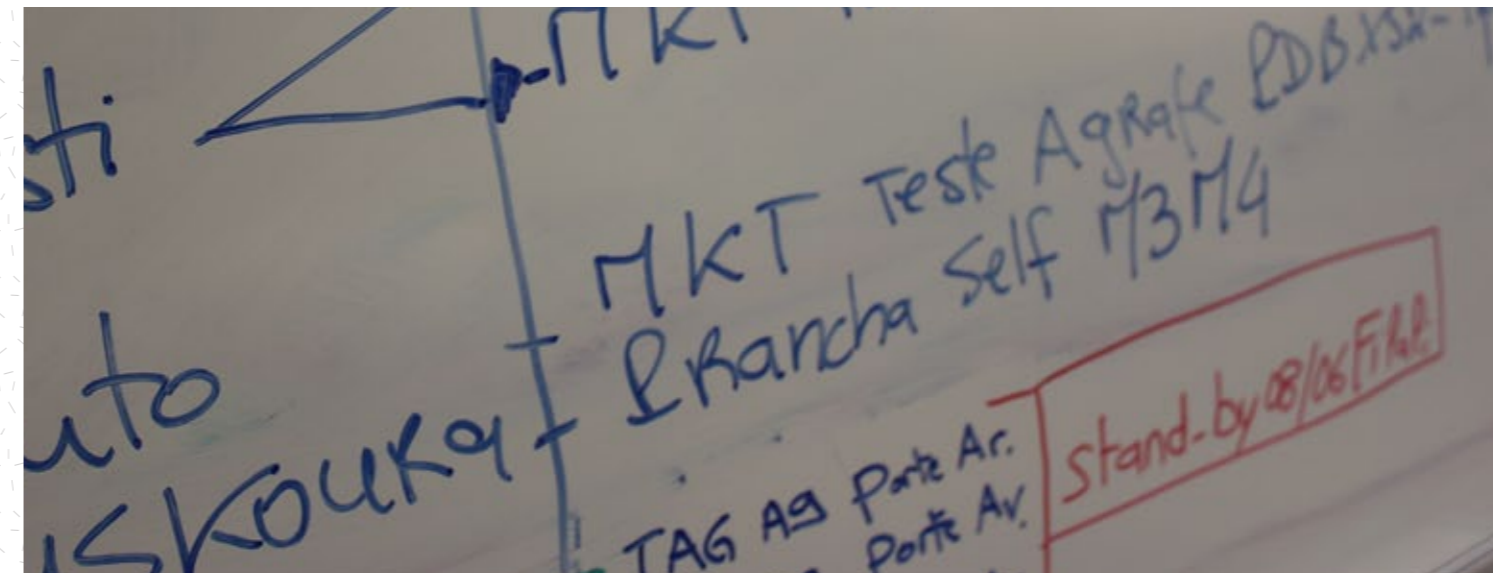
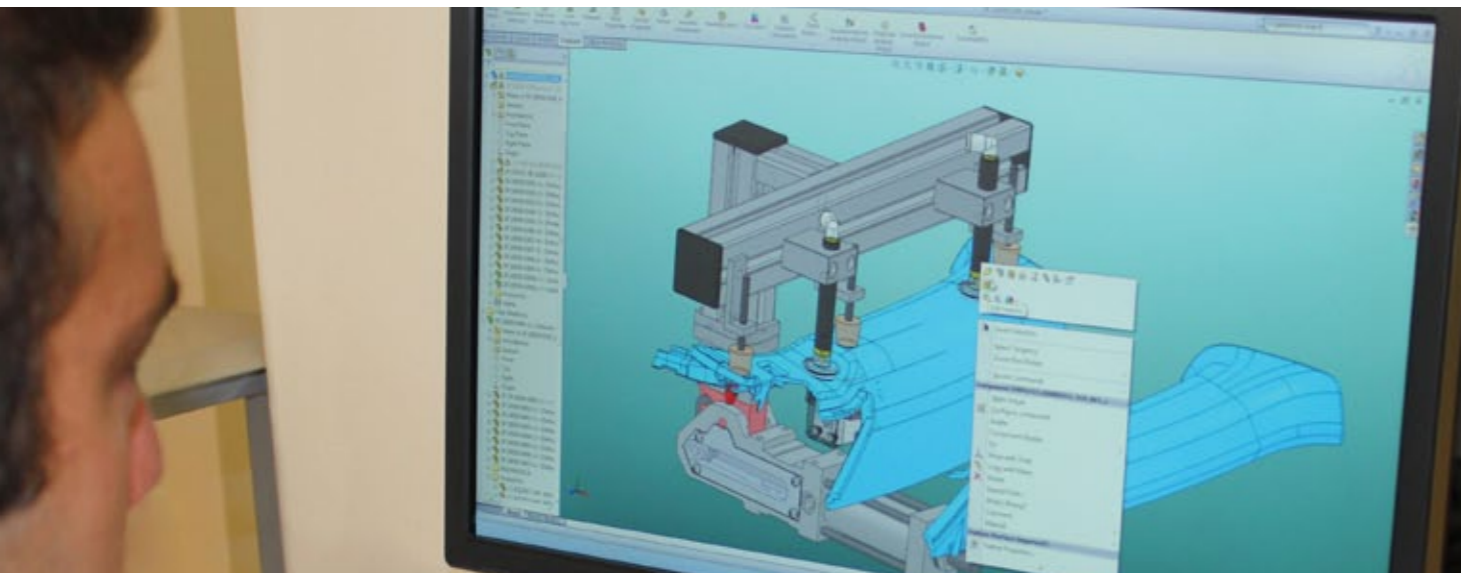
Proud and posture sense, to who we work every day with the goal of needs fulfillment, based on high trust and professionalism compromised levels.

Socially responsible!

We worry ourselves by an active way of contribution for the society we live.

Grow sustainably!

Looking for planned strategies that help us reinforce our organization and generate sustainable support, by meeting stakeholders satisfaction (bringing up shareholder profitability and guaranteed respect for life Quality, environment and society in general).



AERONAUTICS



AERONAUTICS

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TIGER

ELECTRICAL TEST - WORKSTATIONS

Description

Equipment for high voltage test of small helicopter electrical wiring.

Characteristics

- . Thousands references in the same equipment.
- . Automatic Recognition of test interfaces.
- . Ergonomic and modular design.
- . 1024 test points expandable regarding customer requirement.
- . Insulation resistance and dielectric rigidity test.
- . Maximum work voltage: 1300V (Standard Pr-EN2283).



HAR-9300

ELECTRICAL TEST - LINES

Description

Equipment for high voltage test of helicopter electrical wiring on its production line.

Characteristics

- . 2500 test points expandable up to 17000 through expansion cars addition with 1024 ou 2048 test points.
- . Maximum work voltage: 1300V (Standard Pr-EN2283).
- . Mobile work station which enables remote control.



TIGER/HAR-9300

ELECTRICAL TEST - MODULES

Description

Product developed in order to be an extension of test points for test interfaces.

Characteristics

- . Simple continuity with mobile bloc.
- . Led pushbutton for error indication and connector release.
- . Automatic recognition of test interfaces.
- . Maximum work voltage: 1500V.
- . 512 test points (HAR-9300).



CONSOLES

FUNCTIONAL TEST - WORKSTATIONS

Description

Equipment developed for high voltage of functional and electrical test of console command.

Characteristics

- . Ergonomic design.
- . 1024 test points expandable regarding customer requirement.
- . Relays, lamps and switches functional test.
- . Automatic algorithm software for different test steps.
- . Maximum work voltage: 1300V (Standard Pr-EN2283).



INTERFACES

ELECTRICAL TEST - MODULES

Description

Product developed in order to be an extension of test points for wiring.

Characteristics

- . Maximum work voltage: 1500V.



MONCAB/EDCAB

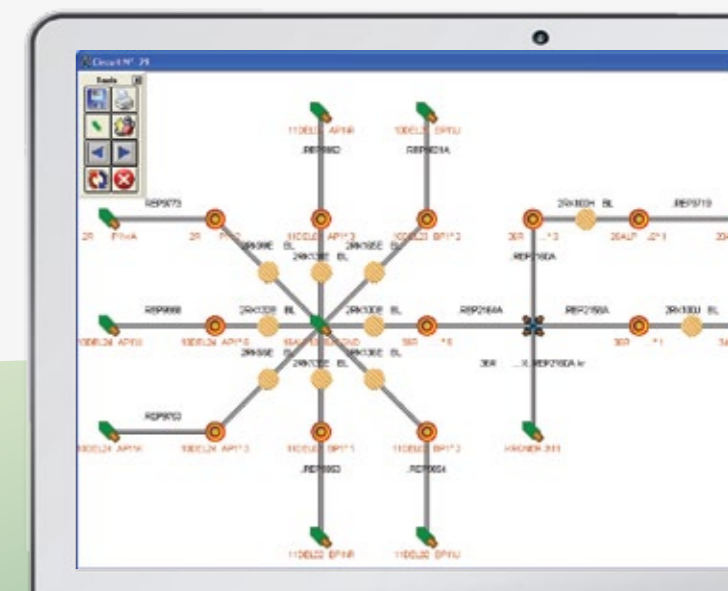
SOFTWARE AND HARDWARE

Description

Software developed for references setup and high voltage test equipment control.

Characteristics

- . Powerful and intuitive graphic interface for setup and errors presentation on different test equipments.
- . Multilanguage.
- . User-friendly and quick learn.
- . Possible to add new requirements regarding customer needs.
- . Excel, txt and specific customer files conversor.





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MTE-08 (1 PLANE)

ELECTRICAL TEST - WORKSTATIONS

Description

Developed for wiring test, in its design several issues were considered like ergonomics, ease of movement and handling for equipment transport, being a customer requirement equipment.

Characteristics

- . Ergonomic, functional and operator-oriented design.
- . One work plane (both sides operations).
- . Easy electrical and pneumatic module connection.
- . Available in 1, 2, 3, 4, 5 and 6 meters (customer requirement).
- . Modular elements constitution.
- . Able to meet one or more workstations.
- . Exterior and interior lighting.



MTE-99 (2 PLANES)

ELECTRICAL TEST - WORKSTATIONS

Description

Developed for wiring test, in its design several issues were considered like ergonomics, ease of movement and handling for equipment transport, being a customer requirement equipment.

Characteristics

- . Ergonomic, functional and operator-oriented design.
- . Two work planes.
- . Modular design.
- . Easy electrical and pneumatic module connection.
- . Available in 1, 2, 3, 4, 5 and 6 meters (customer requirement).
- . Able to meet one or more workstations.
- . Exterior and interior lighting.



M-MTE-20-01 (1 PLANE)

ELECTRICAL TEST - WORKSTATIONS

Description

Developed for small wiring test with high cadence whose test requirements are not complex, in its design several issues were considered like workstations ergonomics, being a customer requirement equipment.

Characteristics

- . Ergonomic, functional and operator-oriented design.
- . Work plan.
- . Easy electrical and pneumatic module connection.
- . Size regarding customer needs.
- . Modular elements constitution.
- . Able to meet one or more workstations.
- . Designed to be installed in a conventional workstation.



HAR-700/1000

ELECTRICAL TEST - LINES

Description

Equipment developed for automobile wiring high voltage test in automatic production lines.

Characteristics

- . Kelvin test.
- . Maximum work voltage: 1000V.
- . Reference selection testing and test result through high level Inputs/Outputs.



SELF PLANK

ELECTRICAL TEST - WORKSTATIONS

Description

Equipment developed together with customer, which enables the complete production of a wiring. This product fits small and with short outputs wirings. In this planks wiring production is made with dimensional control, and the electrical test begins after operator order. Its modules are similar, in characteristics and functions, to the MTE-99 ones, although they are exterior shielded and applied above the plank. The mobile structure has high and leaning regulation and is easily detachable from the plank.

Characteristics

- . Enables complete production of a wiring.
- . Fits small and with short outputs wirings.
- . Wiring mounting with dimensional control.
- . Electrical test after operator order.
- . Mobile structure with high and leaning regulation.
- . Table base in wood or perforated aluminum.



ELECTRICAL TEST WORKSTATION

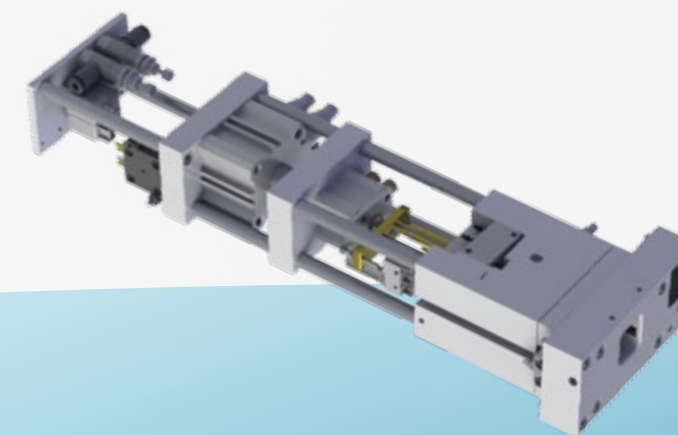
ELECTRICAL TEST - MODULES

Description

Product with electropneumatic design based on customer requirements and/or connector manufacturer for workstations application: MTE-99 (2 PLANES) and MTE-08 (1 PLANE).

Characteristics

- . Automatic connector retention by electropneumatic block.
- . Automatic connector release by power cut.
- . Led pushbutton for error indication and connector release.
- . Fitting or own manufacture threaded pin contacts with forces from 0,8N to 25N and with heads indication for respective terminal.
- . Several insertion types: fixed bloc; simple contact mobile bloc and "push-back" contact mobile bloc.
- . Several functions: automatic and with controlled force block closure terminal; connector tightness test by under pressure or vacuum and colour detection by optical detectors.
- . Several components detection linked by micro-switchs or optical barriers.
- . Minimum dimensions 50x100mm; multiples of 50mm.
- . System wiring by plug.



SELF PLANK

ELECTRICAL TEST - MODULES

Description

Product with electropneumatic design based on customer requirements and/or connector manufacturer for workstations application: Self Plank.

Characteristics

- . Automatic connector retention by electropneumatic block.
- . Automatic connector release by power cut.
- . Led pushbutton for error indication and connector release.
- . Fitting or own manufacture threaded pin contacts with forces from 0,8N to 25N and with heads indication for respective terminal.
- . Several insertion types: fixed bloc; simple contact mobile bloc and "push-back" contact mobile bloc.
- . Several functions: automatic and with controlled force block closure terminal; connector tightness test by under pressure or vacuum and colour detection by optical detectors.
- . Several components detection linked by micro-switches or optical barriers.
- . System wiring by plug.
- . Shielded modules externally to be applied above the plank.



MOCKUP

CLIPS TEST - WORKSTATIONS

Description

Product developed for presence, position and orientation clips (staples) control in the wirings. Presence control by a test system. Mechanical clip block and release, through operator, or pneumatic release in the end of the test. Mockup enables wiring distribution, through forks, whose support it and guarantee clips position control. Can be developed on rotative workstation to right and left wiring.

Characteristics

- . Presence, position and orientation clips control in the wirings.
- . Presence control by test system (standard or personal).
- . Enables wiring distribution.
- . Clips position control by forks.
- . Can be developed on rotative workstation to right and left wiring.
- . It enables wiring dimensional control.
- . Table base in wood or perforated aluminum.



SIMPLE ELECTRIFIED

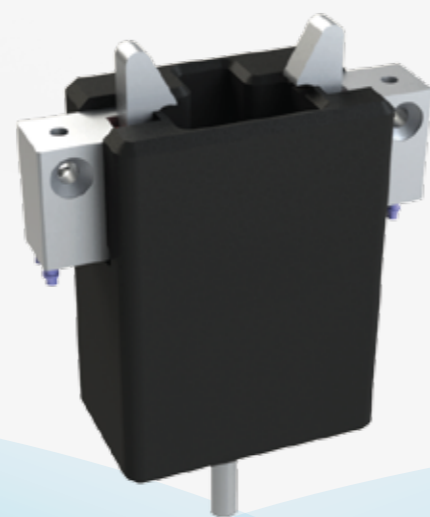
ELECTRICAL TEST - MODULES

Description

Product with simple electropneumatic design based on customer requirements and/or connector manufacturer for workstations application: Self Plank.

Characteristics

- . Mechanical connector retention.
- . Individual mechanical release or collective automotive release.
- . Contact by threaded pins or fit pins with forces from 0,8N to 3N and heads indication for the respective terminal.
- . It only enables simple continuity test and vertical detections.



CLIP

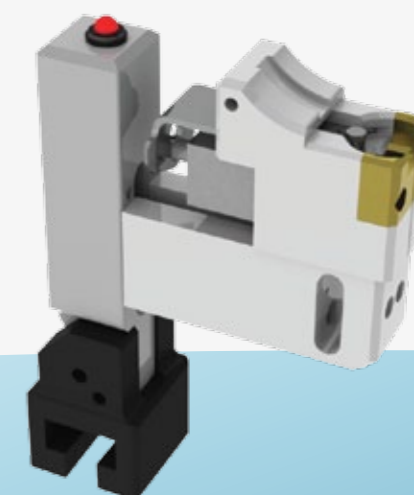
CLIPS TEST - MODULES

Description

Product developed for clip test mockup introduction for presence, type, position and orientation control of the clip on wiring.

Characteristics

- . Mechanical clip lock with manual release, through operator, or pneumatic release in the end of the test.
- . Specific configuration to guarantee clip orientation.
- . It guarantee the presence electrically and the clip type mechanically.
- . Led for error indication.
- . Enables rods application with different highs, adjustables and folding.





PRESENCE

CLIPS TEST - MODULES

Description

Product developed for clips test mockup and for presence and connectors wiring position control.

Characteristics

- . It guarantees, electrically, connector presence.
- . Led for error indication.
- . Used for guarantee wiring dimension and clip position.



BFDB

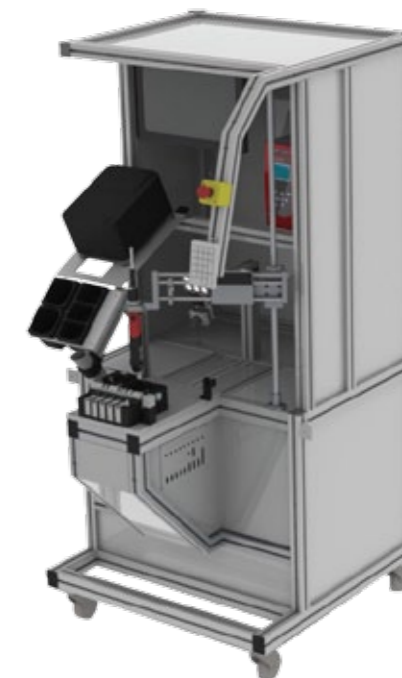
BOLTING SYSTEMS - BATTERY BOX

Description

Product developed for bolting terminals in its respective box position and to check elements presence by artificial vision.

Characteristics

- . Product type selection by bar code.
- . Guarantees terminal bolting in its right spot.
- . Bolting with torque and angle control.
- . Electrical continuity verification.
- . Elements presence control by artificial vision.
- . Can work independently or integrated in other equipment.



INERT

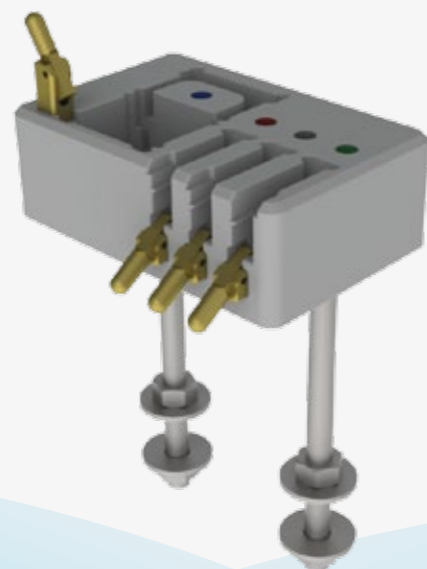
CLIPS TEST - MODULES

Description

Product developed for lines production to hold the connector for wires introduction on it.

Characteristics

- . Several support types.
- . Machined or injected.
- . Mechanical hold system.



MEF-V2001

TWISTERS - EXPANDABLE

Description

Telescopic machine for wire brade.

Characteristics

- . 1 workstation.
- . Manual introduction of number of turns according to wire type.
- . 2 winding heads.
- . Possible to brade 2 or 3 wires per head.
- . Possible to brade 2 wires sets of the same type.
- . Easy wire block on the head.
- . Pneumatic wire block on car compensation.
- . Dimensions: 500x3750 to 6100mm.



DIVTESTER

SOFTWARE AND HARDWARE

Description
Hardware specially developed for small wiring test.

- Characteristics**
- . Test system All-In-One (PC and integrated data acquisition unit).
 - . Up to 256 test points.
 - . 8 inputs and 8 setup outputs.
 - . Compact metal box W340xH170xD310mm.
 - . Front panel with numeric keyboard, LCD, probe and USB input.
 - . Setup with DV-SCAN software or through auto-learning option.

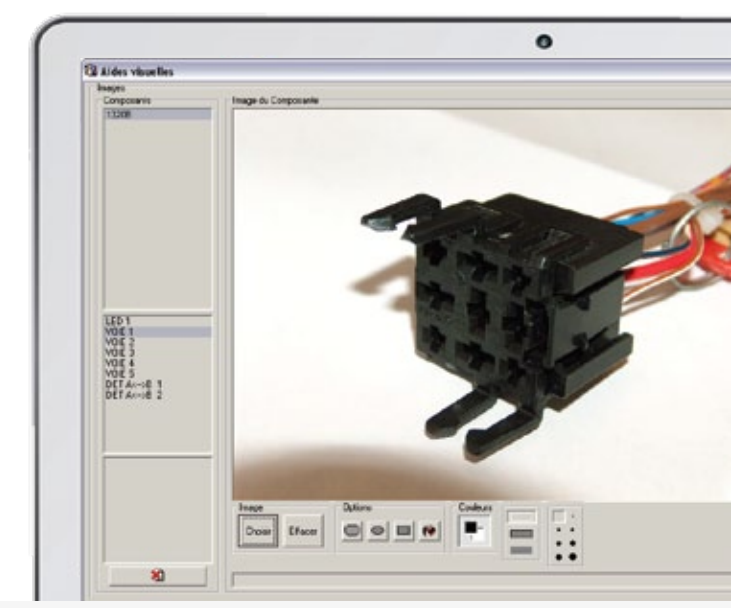


DV-SCAN

SOFTWARE AND HARDWARE

Description
Software developed for setup/control of small wirings.

- Characteristics**
- . User-friendly and quick learning.
 - . Powerful processes editor.
 - . Modular setup.
 - . Possible to introduce new requirements based on customer needs.

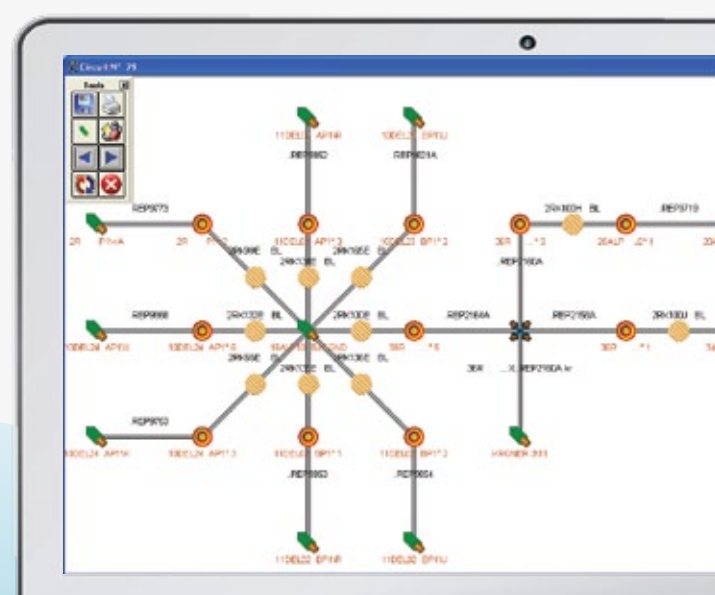


MONCAB/EDCAB

SOFTWARE AND HARDWARE

Description
Software developed for references setup and low voltage equipment test control.

- Characteristics**
- . Power and intuitive graphical interface for setup and errors presentation on several test equipments.
 - . Multilanguage.
 - . User-friendly and quick learning.
 - . Possible to implement new requirements regarding customer needs.
 - . Excel, txt and specific customer formats conversor.

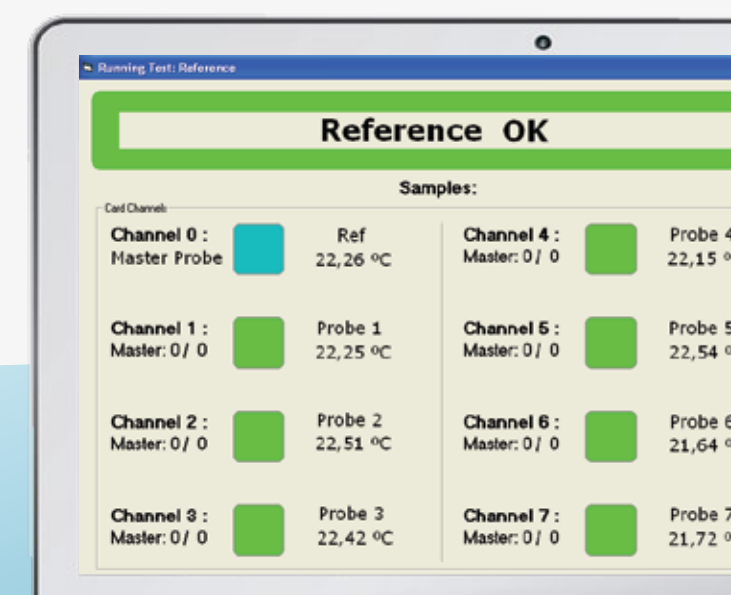


HVAC SENSORS

SOFTWARE AND HARDWARE

Description
Software/Hardware developed for functional test of several system HVAC sensors.

- Characteristics**
- . Signals reading from several HVAC sensors.
 - . Gauges and reading comparison.
 - . Setup/analysis graphical interface.
 - . Setup/parameterization user-friendly.



CUSTOMIZED SOLUTIONS



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GAS BOTTLE

ULTRASOUND WELDING - PLASTICS

Description

Ultrasound welding equipment (Plastic-Plastic) for gas bottle handles welding.

Characteristics

- . Manual placing of the chip and handles on the equipment.
- . Chip presence checking.
- . Handles welding by ultrasound.
- . Frontal door for operator protection.
- . Bimanual control.
- . Console for process control and welding parameteres introduction.



HEADREST

ULTRASOUND WELDING - PLASTICS

Description

Equipment specially designed for automotive sector for welding the headrest (plastic piece).

Characteristics

- . 5 sonotrodes.
- . OK warning, when the piece is correctly welded.
- . Frontal protection system.
- . Console for process control and welding parameteres introduction.



ASM PANEL

ULTRASOUND WELDING - PLASTICS

Description

Equipment developed for ultrasound welding, clips introduction and final checking.

Characteristics

- . Based on 2 generators and 5 sonotrodes.
- . Automatic system for withdraw the piece from the welding area.
- . Setup console for checking all cycle steps.
- . Safety barriers ensuring operator protection.



MOLD PARTS 7157

ULTRASOUND WELDING - PLASTICS

Description

Equipment developed for simultaneously ultrasound welding in left and right parts.

Characteristics

- . Based on 9 welding sonotrodes placed on top position.
- . 3 generators.
- . Parameter control console.
- . Safety barriers for operator protection.



C PILLAR L/R A3

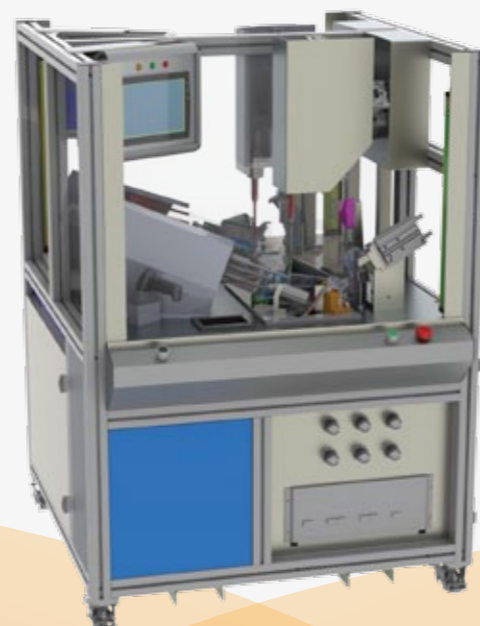
ULTRASOUND WELDING - PLASTICS

Description

Equipment developed for right and left piece ultrasound welding on the Audi A3, working 2 operators simultaneously on opposite sides of the same equipment.

Characteristics

- . Based on 4 generators and 6 sonotrodes.
- . Time setup console with all welding steps, since placing the piece until it is ready.
- . Safety barriers for operators protection.
- . Bar code reader.



SOLAR PANEL

ULTRASOUND WELDING - METAL

Description

Ultrasound welding equipment (Metal-Metal) for welding water pipes on the heat absorbs panel.

Characteristics

- . Enables several pipes welding on the same panel.
- . Possible to weld pipes with different diameters by gags change.
- . Sonotrode rotation welding.
- . Safety barriers for operator protection.
- . Console for process control and welding parameters introduction.



SURGICAL GOWNS

ULTRASOUND WELDING - TEXTILES

Description

Equipment developed for surgical gowns production by ultrasound welding.

Characteristics

- . Ultrasound welding.
- . Parameterization console of pieces quantity by lot.
- . Cycles number count.
- . Folding tape.
- . Continuous welding with tape traction system.



PASSAGE ROUE

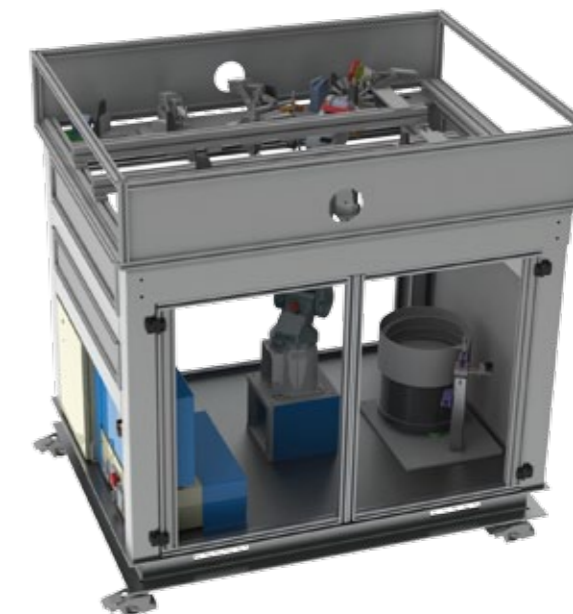
ROBOTIC - CELLS

Description

Equipment developed for elements mounting on pieces after its injection.

Characteristics

- . Robot equipment with 6 axes.
- . Robot arm moves from vibration pots, for picking elements, to the piece.
- . Injected pieces are placed and removed from the equipment by the injection machine robot.
- . The detection of the elements placed by the robot is made by a detector located at its head.



COSTADILLO SE250

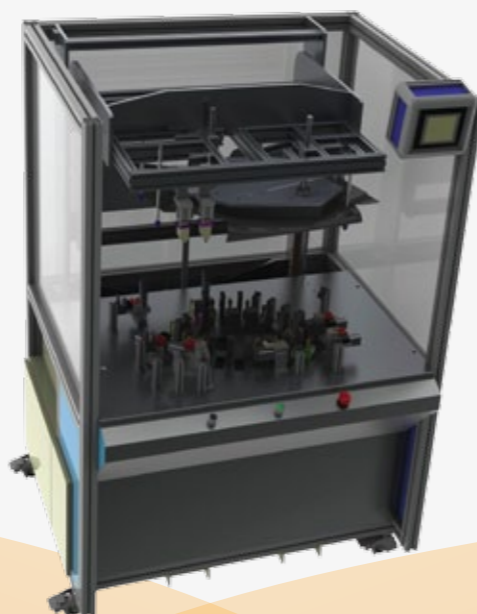
WELDING BY HOT SPOTS - PLASTICS

Description

Equipment for hot spots welding on door panel.

Characteristics

- . 19 Welding by hot spots.
- . 2 Metallic clips introduction.
- . 6 Plastic clips introduction.
- . Safety barriers.
- . Panel block by superior sum descent.
- . Parameterization console and operational sequences visualization.



ACCOUDOIR M3M4

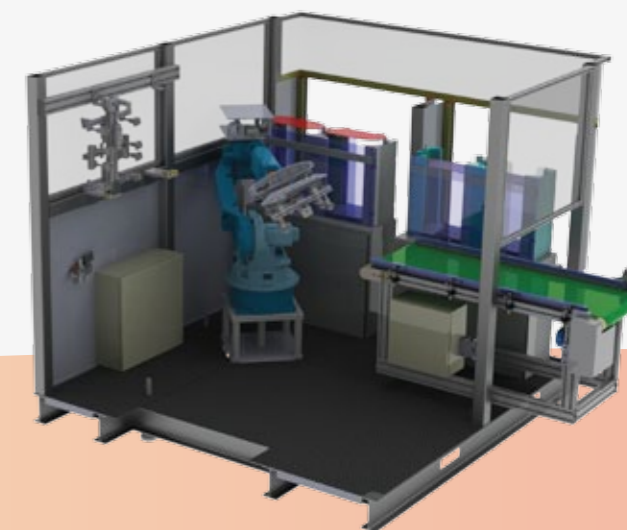
ROBOTIC - CELLS

Description

Equipment specially developed for placing tissue locket on injection mold.

Characteristics

- . Robot equipment with 6 axes.
- . 4 textile locket feeders triggered by gearmotor.
- . Double gripper, linked to 6 axes robot to remove injected pieces and placing medallion.
- . Safety barriers for operator protection.
- . Treadmill for placing injected pieces with tissue.



REACTION PLATE

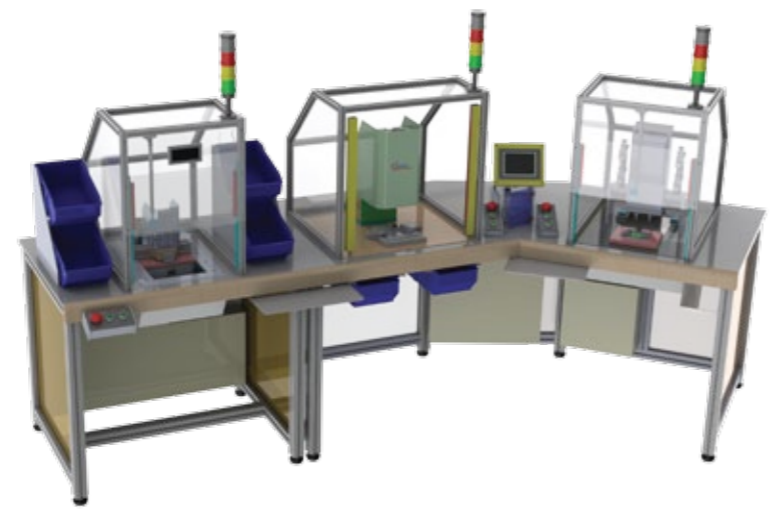
ASSEMBLY - ASSEMBLY LINES

Description

Assembly, ultrasound welding and airbag checking equipment.
Console for functional parameters introduction.

Characteristics

- Workstation 1** (Spring assembly U type):
- . U-Spring automatic assembly.
 - . Spring force checking.
 - . 2 helical springs assembly.
 - . Shield for operator protection.
- Workstation 2** (Ultrasound welding):
- . Plastic pins detection.
 - . Contours sensor for anomalies checking in the welding tracks.
 - . Safety barriers.
- Workstation 3** (checkings):
- . Continuity checking.
 - . Opening contacts measuring.
 - . Checking welding and all the elements by view camera.
 - . OK warning.



IRUE PANEL

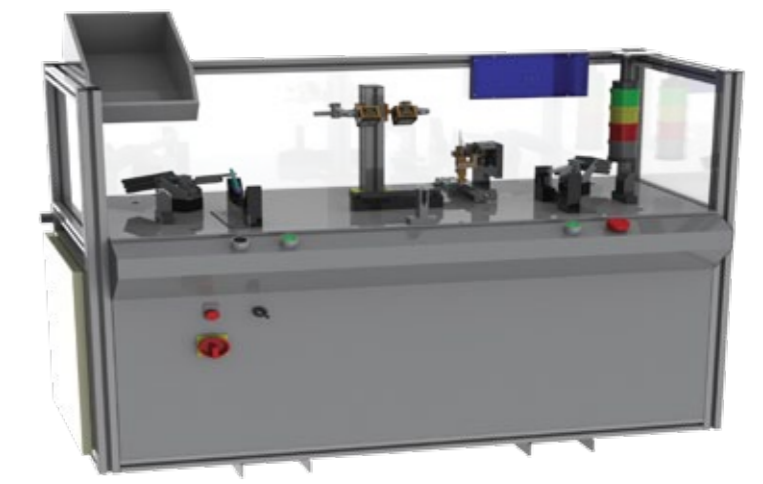
ASSEMBLY - ASSEMBLY WORKSTATION

Description

Equipment for 3 sensors assembly and checking.

Characteristics

- . Operator intervention only in the beginning and operation ending.
- . Manual placing of the elements in the equipment.
- . Checking sensors assembly through infrared view cameras.
- . Checking piece version.
- . Checking OK by hot point regarding piece version.
- . LED's panel for error identification.



GLOVE COMPARTMENT AXE

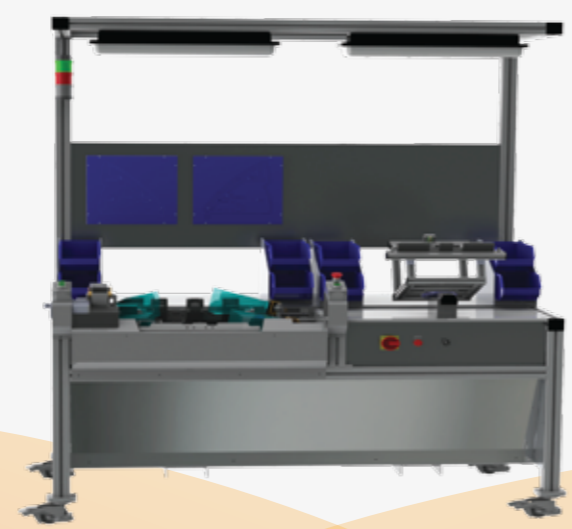
ASSEMBLY - ASSEMBLY WORKSTATION

Description

Equipment specially designed for assembly and final checking of the right and left glove compartment axes.

Characteristics

- . Automatic charging and assembly of the metallic axes.
- . Checking elements through cameras.
- . LED's panel for error identification presented by view cameras.
- . Bimanual control for operator protection.
- . Manual assembly for dumper and backstops.



MOLDING ASM – WS SI

ASSEMBLY - ASSEMBLY WORKSTATION

Description

Equipment specially designed for assembly and checking elements.

Characteristics

- . Possible to work with one operator, with robot pieces charging, or, instead, work with two operators and manual charging.
- . 2 linked structures that can be separated when the equipment is working with two operators.
- . Safety barriers with one operator.
- . Bimanual control when two operators are working.
- . Injection channel cut.
- . Metallic clips insertion in the pieces.
- . Bimanual control for operator protection.
- . LED's frame for errors identification.



FRONT END PASSAT COUPÉ

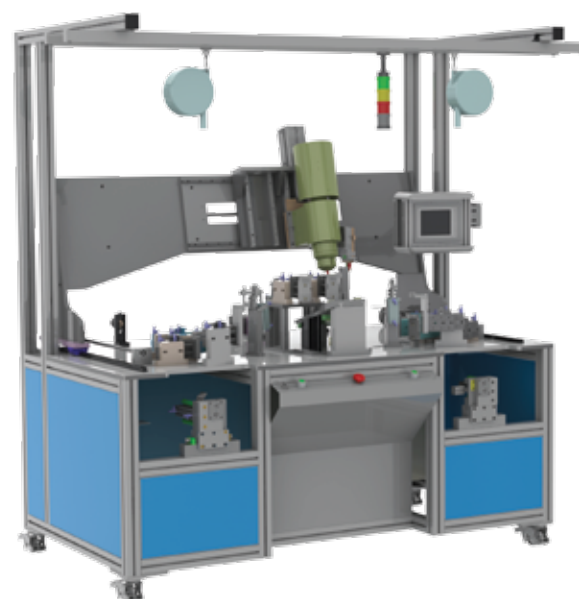
ASSEMBLY - ASSEMBLY WORKSTATION

Description

Equipment specially designed for placing metallic rivets on the plastic front end of the VW Passat Coupé.

Characteristics

- . Pneumatic riveters operation.
- . Rivets application, movements on XYZ axes, for metallic washers with tab crimping.
- . Metallic clips introduction.
- . Checking right placement of all elements.
- . Setup console with all cycle steps.
- . Bimanual control for operator safety.
- . Electric and pneumatic movements.



PORTEUR AV

CUT EQUIPMENTS - PLASTICS

Description

Equipment specially designed to make several holes on the door panel.

Characteristics

- . Enables milling operation on two panel doors (right and left).
- . After remove pieces from injection machine, they are placed on the equipment by a robot.
- . Cuts are made by a system with 4 hydraulic cylinders and cuttings in hardened steel.
- . After several cuts, the piece is taken out of the cut equipment by a robot.



PANEL ASM-LPLR

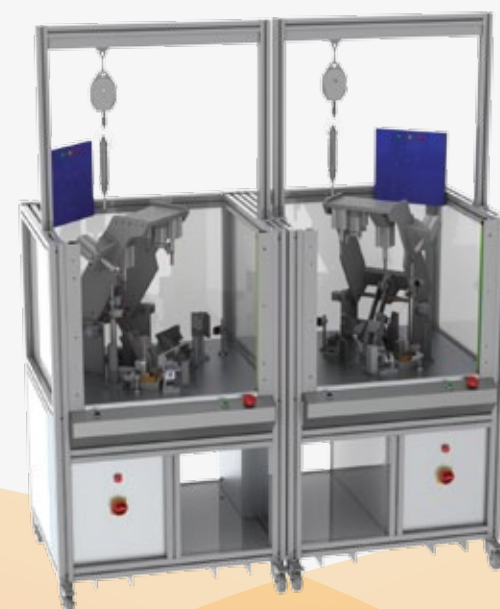
ASSEMBLY - ASSEMBLY WORKSTATION

Description

Equipment specially designed for metallic rings introduction by spiking.

Characteristics

- . Metallic clips placement.
- . Metallic bushings spiking.
- . Torque limit screwdriver.
- . Checking assembly all elements.
- . OK mark on the piece.
- . Safety barriers for operator protection.
- . LED's panel for error identification.
- . Operator intervention in the beginning and end cycle.



PORTEUR AR

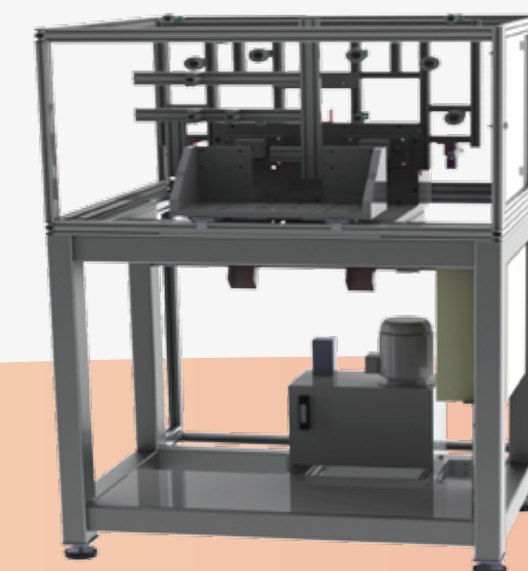
CUT EQUIPMENTS - PLASTICS

Description

Equipment specially designed to make a hole on the door panel.

Characteristics

- . Enables milling operation on two panel doors (right and left).
- . After remove pieces from injection machine, they are placed on the equipment by a robot.
- . Cuts are made by a system with 4 hydraulic cylinders and cuttings in hardened steel.
- . After several cuts, the piece is taken out of the cut equipment by a robot.



PANEL CUTTING PRESS

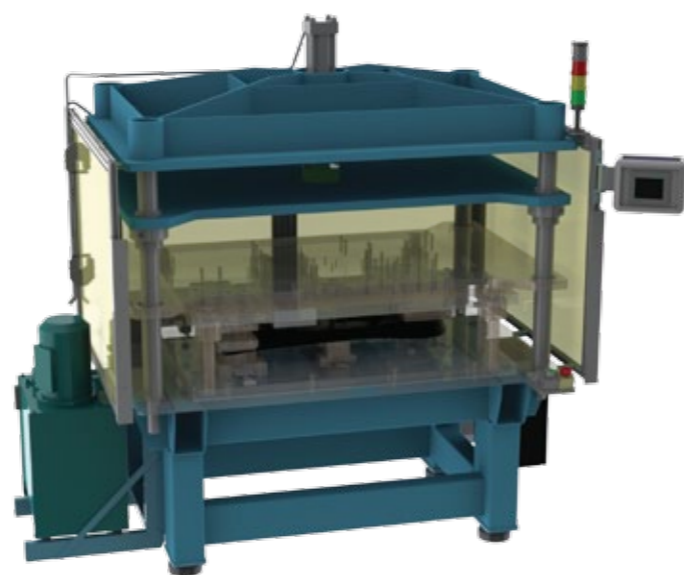
CUT EQUIPMENTS - PLASTICS

Description

Hydraulic press developed to make holes in 3 different panels. Cut tool with all matrices assembled, with activation depending on the respective version.

Characteristics

- . Version selection (1, 2 e 3).
- . It has a setup console where process cycle images are presented.
- . With safety barriers for operator protection.
- . Operator is necessary at the end and cycle beginning.



PORTEUR AR M3M4

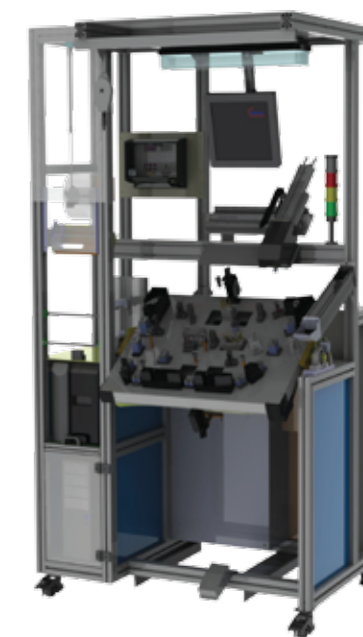
CONTROL EQUIPMENTS - ELEMENTS

Description

Elements control equipment, which enables the use of the right or left panel by means of template rotation.

Characteristics

- . Check presence and position of several elements.
- . Enables bolting with handle door torque control.
- . Check the type of tissue used on the armrest by artificial vision.
- . Bar code reader for the reference produced.
- . Label print with final bar code.



CONTROL TEMPLATE

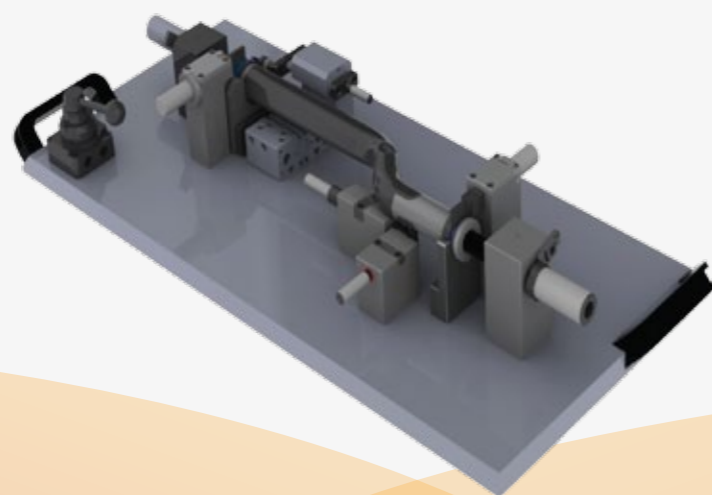
CONTROL EQUIPMENTS - GAUGES

Description

Pass don't pass mechanical caliber for dimensional control.

Characteristics

- . Dimensional control.
- . Position control.



AUTOMATIC OPENING (GLOVE COMP.)

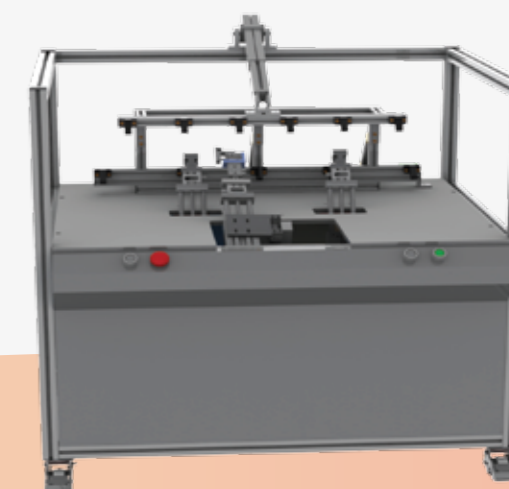
CONTROL EQUIPMENTS - FUNCTIONAL

Description

Laboratory equipment for testing glove compartment opening and closing of the car on its normal assembly position.

Characteristics

- . Opening and closing test.
- . Opening time control.
- . Opening and closing force measure with load cells.
- . Enables right or left glove compartment testing.
- . Records readed values.
- . Setup console.



ARTIFICIAL VISION



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VW GOLF CABRIO

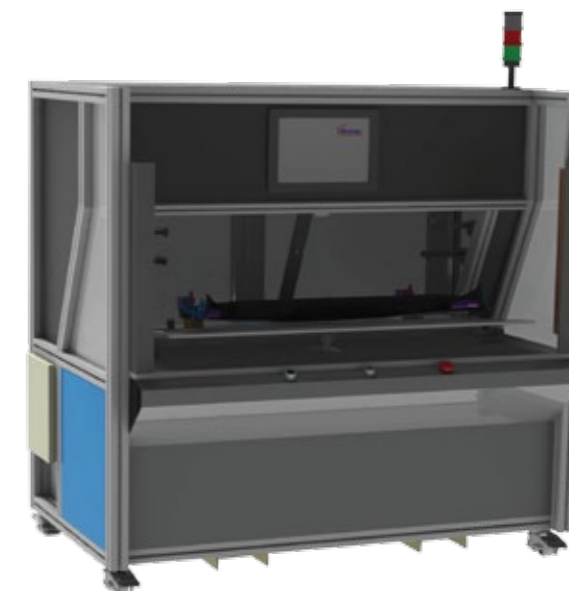
COMPONENTS

Description

Check elements presence and assembly by artificial vision, and enables change pieces accommodation to work with different panels.

Characteristics

- . Bar code reader for equipment setup.
- . Check presence and place of several elements by artificial vision.
- . Specific lighting.
- . Safety barriers



FUSE BOX

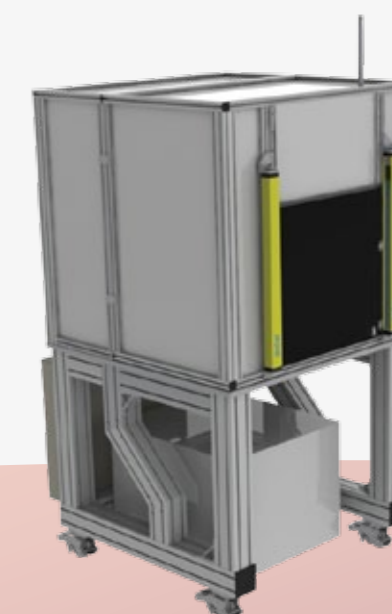
COMPONENTS

Description

Assembly control of several elements on car fuse box.

Characteristics

- . Bar code reader for box setup.
- . Check presence and place of several elements by artificial vision.
- . Checking is made by OCR and/or RGB.
- . Right assembly control by laser (heights measure).
- . Automatic camera movement on X, Y and Z axes.



FUSES MODULE

COMPONENTS - SEVERAL

Description

Product developed for presence test of fuses and relays by camera.

Characteristics

- . Elements presence detection by RGB and/or OCR.
- . Guarantees perfect elements assembly.
- . Smartcard for manual check in case of damage or setup change.
- . Developed according to the box type we wish to control.



DV-COLOR-04

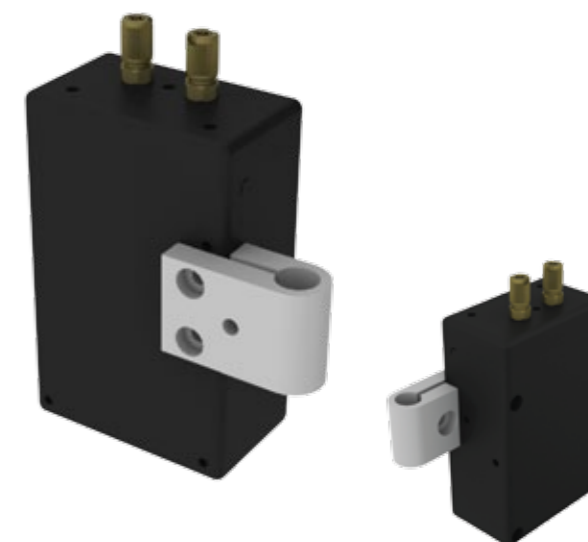
DETECTORS - POLICHROMATIC

Description

Detector specially developed for elements color detection.

Characteristics

- . Light emission and reception by optical fiber.
- . 4 memory seats with 4 independent outputs.
- . Autorecognition or USB port learning by a specific software.



FTC50

LCD - BRIGHTNESS

Description

Equipment developed for testing car radios LCD's vision angle.

Characteristics

- . Spectroradiometer for measuring in several angles.
- . Rotating LCD base.
- . Safety barriers.



DV-VISION

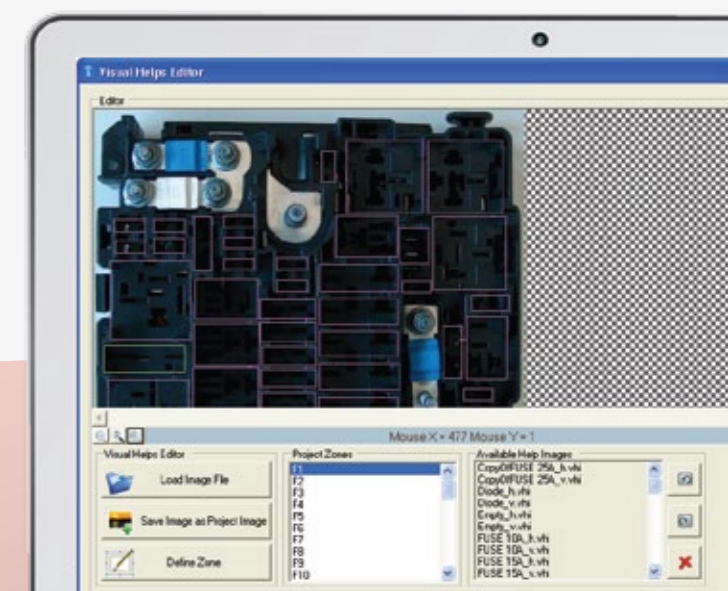
SOFTWARE - VISION

Description

Software developed to check elements by artificial vision.

Characteristics

- . Flexible software, since it can be used with different imaging hardware (Firewire camera, USB, Scanner and file).
- . OCR and/or colour or pattern recognition.
- . User-friendly and quick learning.
- . Possible to add new requirements regarding customer needs.
- . Easily integrated with other test softwares.



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