

Power Tools & Lifting Solutions

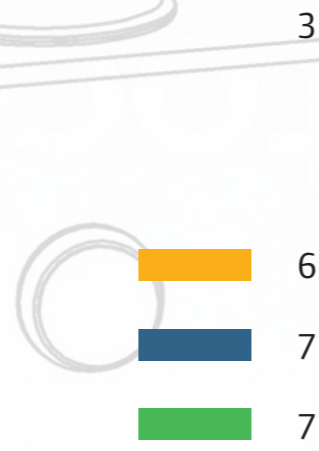
Europe, Middle East, India & Africa



SOLUTION CENTER

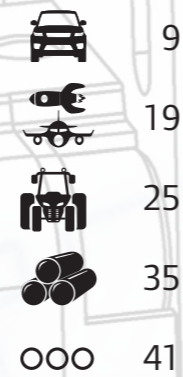
TYPES OF APPLICATIONS

- ERGONOMIC HANDLING SYSTEMS
- FASTENING SOLUTIONS
- FIXTURED TOOL SYSTEMS



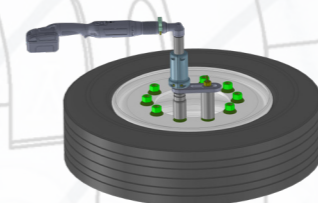
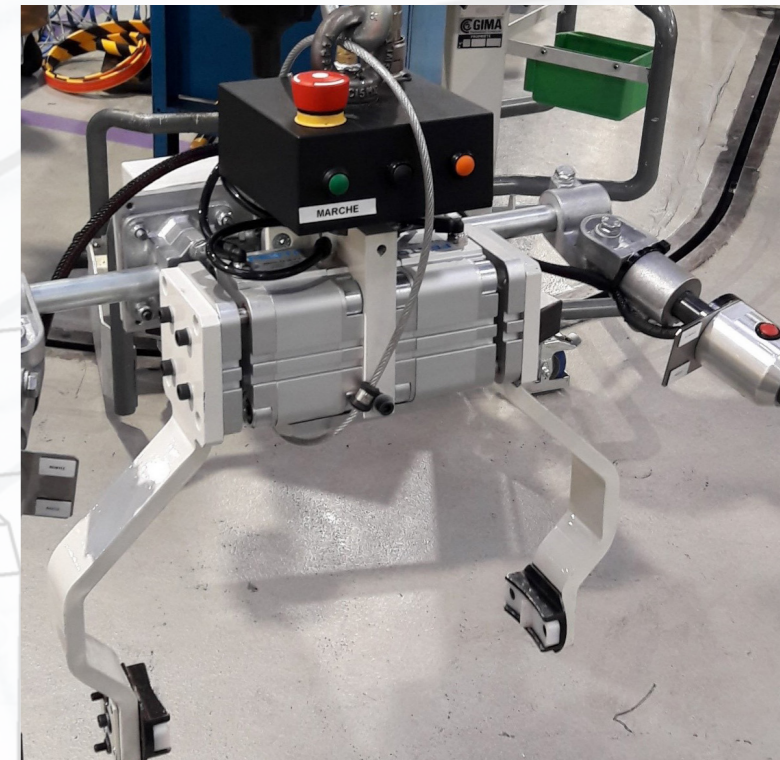
APPLICATIONS IN INDUSTRIES

- AUTOMOTIVE
- AEROSPACE
- OFF-ROAD
- CONSTRUCTION & RAW MATERIALS
- OTHER



Ingersoll Rand has more than 100 years of experience solving customer needs for the toughest jobs. With a global network and the best people in the industry, Ingersoll Rand is a leading brand known for being reliable, durable and innovative.

Ingersoll Rand Solution Center provides turnkey, customized solutions that improve our customers' productivity and efficiency, offering full-service capabilities tailored to our customers' needs.



**EMEA SOLUTION CENTER
POWER TOOLS & LIFTING**

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FRANCE



SUCCESSFULLY SOLVING YOUR PROBLEMS

Power, finesse, ruggedness, precision — Ingersoll Rand Solution Center can develop the right solution for whatever your operation demands. Across all industries, our tools and equipment are hard at work enhancing safety, productivity, efficiency and profitability for our many and varied partners.



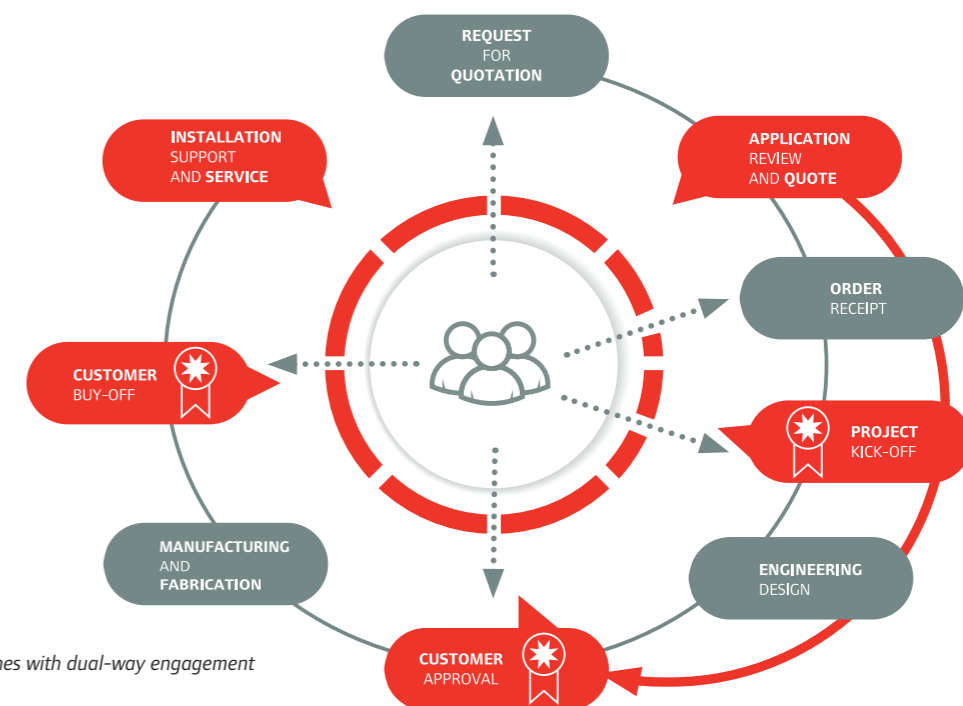
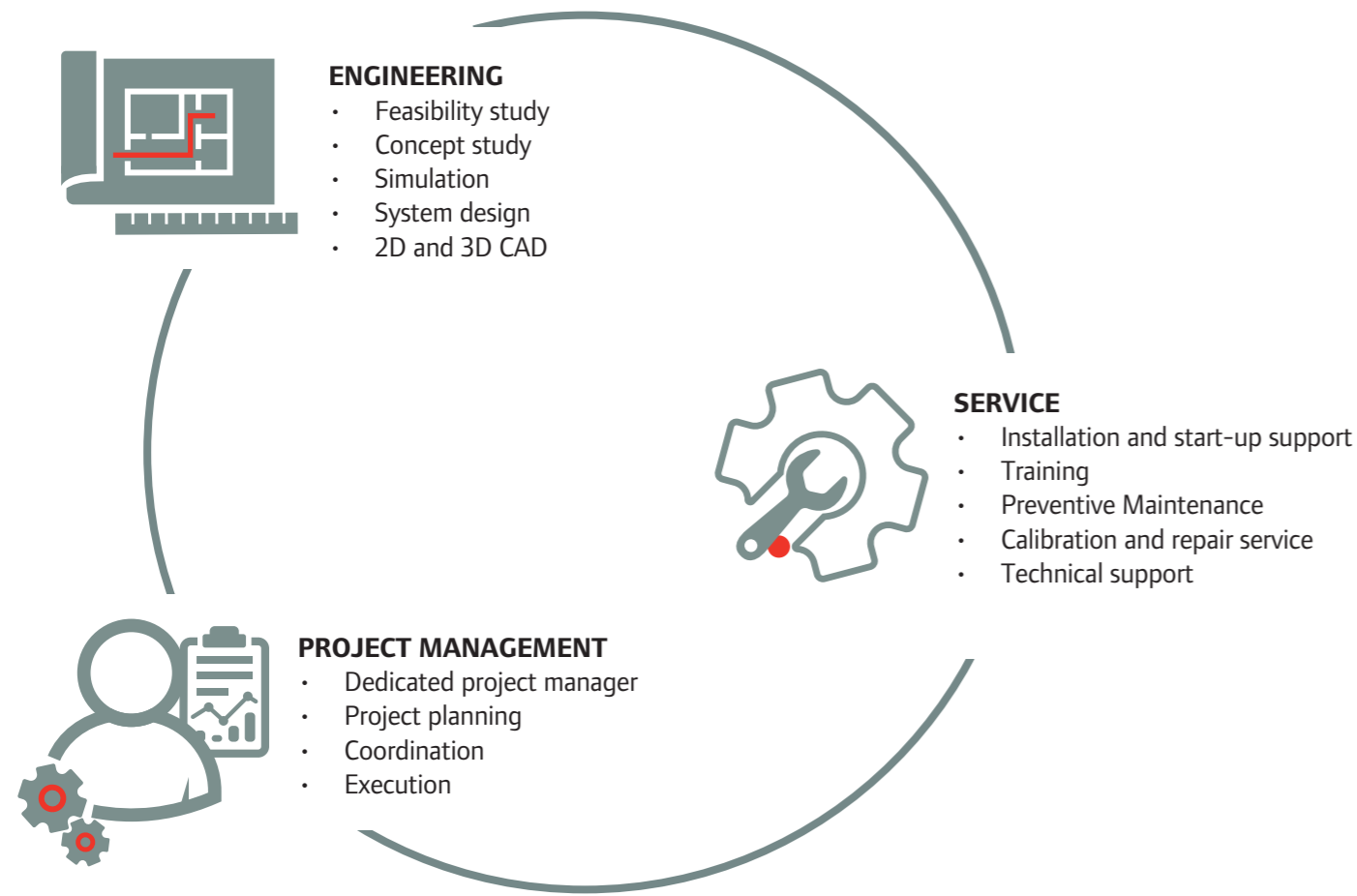
OUR PEOPLE MAKE THE DIFFERENCE

Highly skilled teams with the technical knowledge, training, and experience needed to keep your equipment performing at its best with solutions that meet your requirements, the Ingersoll Rand offering ranges from basic labor to providing critical parts, from maintenance plans and system optimization to comprehensive system design. Whatever your needs, our goal is to reduce your downtime and maximize your efficiency. From request for quotation through installation to maintenance, we deliver outstanding customer value.



FULFILLING SERVICE NEEDS BEYOND THE PRODUCT

Ingersoll Rand Solution teams start with what you really need. They assess your requirements and mould them into perfectly customized solutions. This covers simple adaptations, such as the modification of tools, fully-configured rail systems, pumps, hoists, or starters thanks to the config team. But our individual approach also includes holistic integration services, application engineering, installation, set-up and training. All of our services are tailored exactly to your needs. They are not restricted to product expertise but offer value chains complete with integration and project management.



ERGONOMICS MADE TO MEASURE

The Ingersoll Rand Solution Center specializes in customized design and manufacturing. Since 1959, Ingersoll Rand has been at the forefront of ergonomic solutions for lifting, manipulating and transferring loads. The highest ergonomic standards are set to make positioning quick and precise. Intuitive design lets even untrained personnel operate with ease. Fully customized solutions include rail systems, lifting and balancing devices, handling devices.

ERGONOMIC HANDLING SYSTEMS

ERGONOMICS FOR POWER TOOLS

The Ingersoll Rand Solution Center knows how to combine its skills to offer perfectly customized solutions. The adaptation of our Power Tools to your requirements moves your performance to a new level. When a precision fastening system needs to be lifted to reduce the load or to make positioning quick and precise, we can integrate it with an ergonomics system.

FIXTURED TOOL SYSTEMS



Manipulators

Coil manipulator



Fastening station with pantograph arm

Dual spindle fastening station

Fastening station under Torque Tube

POWER TOOLS TO MEET YOUR NEEDS

Ingersoll Rand looks back on 100 years of experience in manufacturing impact tools, precision fastening systems, engine starting systems and air motors. Using this experience and expertise from customization to installation and service, we adapt our Power Tools to your requirements. Our project teams are sure to find an optimal solution. With flexible scope, we are able to provide comprehensive solutions—from start to finish.

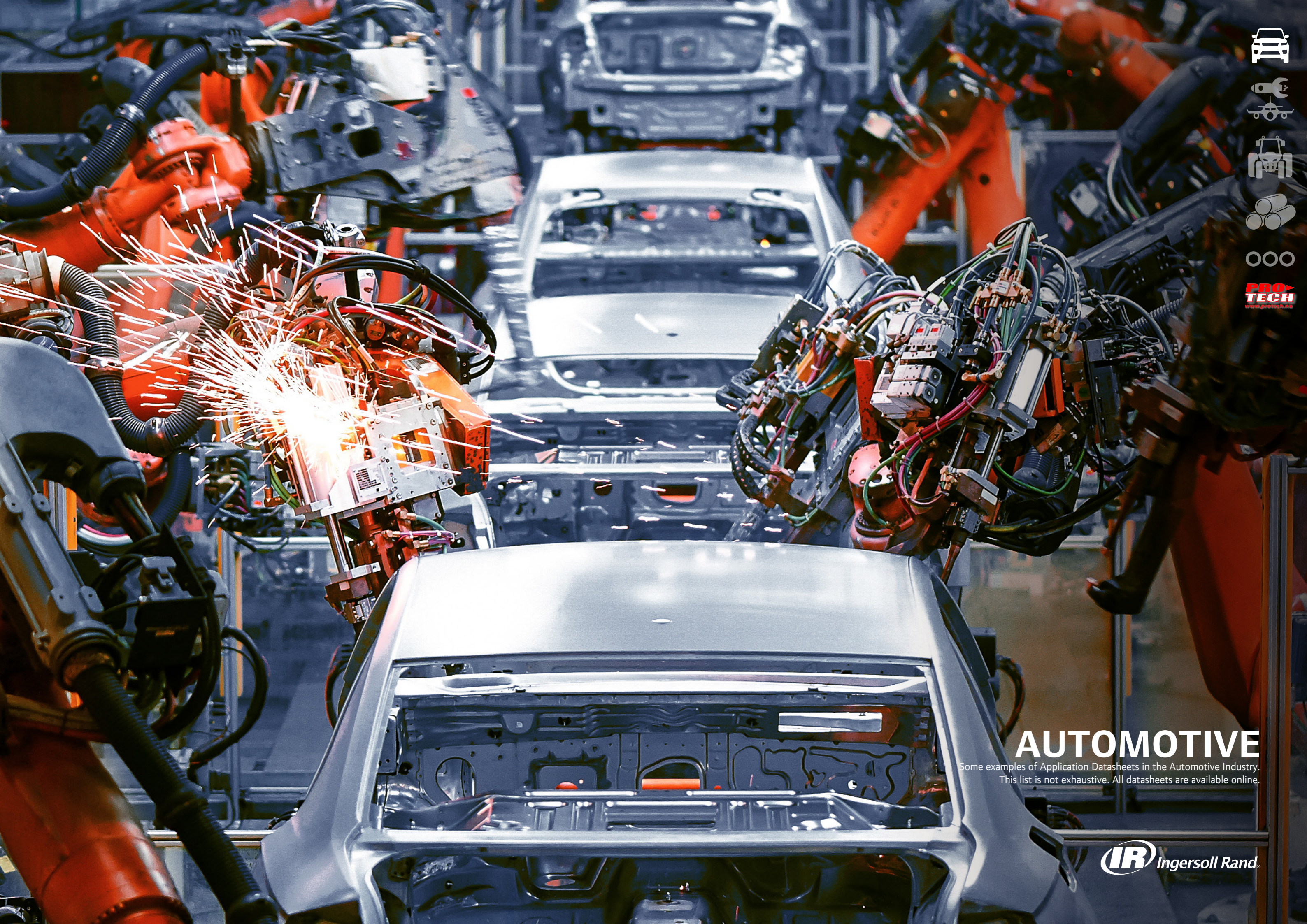
FASTENING SOLUTIONS

APPLICATIONS IN DIFFERENT INDUSTRIES

Ingersoll Rand has designed solutions for many different industries. We capture the specific needs and features in those industries and incorporate those into our design process. For the automotive and off-road industries, we focus on the ergonomics and cycle time reduction; in the aerospace industry, we are fully aware of the special emphasis on safety and reliability; the construction and raw materials industries involve the toughest environments and demand exceptional equipment durability and lifetime. We are also experienced in industries including Food & Beverage, White & Brown goods, Chemical and more. We continue to develop our knowledge and understanding across other industries, while focusing on the creation of solutions tailored to the multiple needs identified.



- AUTOMOTIVE
- CONSTRUCTION & RAW MATERIALS
- OFF-ROAD
- AEROSPACE
- OTHER



AUTOMOTIVE

Some examples of Application Datasheets in the Automotive Industry.
This list is not exhaustive. All datasheets are available online.



HOW TO MANIPULATE SCISSOR LIFT WHEELS WITH A SINGLE OPERATOR



HOW TO MANIPULATE DASHBOARDS WITH A SINGLE OPERATOR



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TECH**
www.protech.nu

WHEEL GRIPPER

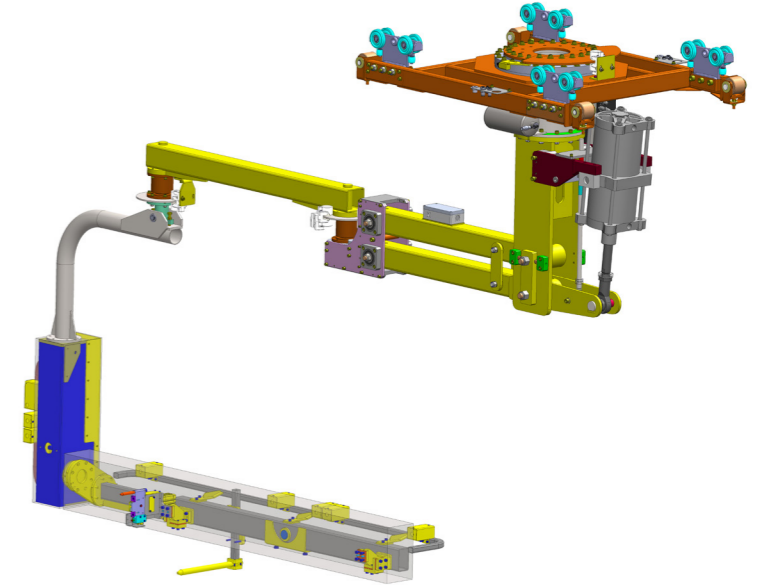
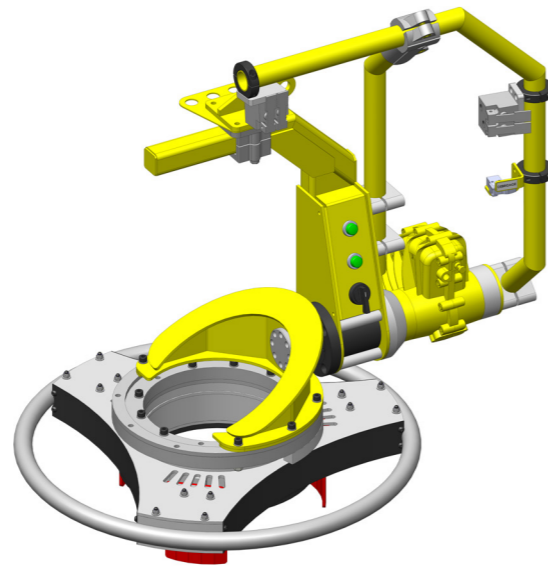
15020 FRANCE

ERGONOMIC
HANDLING
SYSTEMS

DASHBOARD MANIPULATOR

17007 GERMANY

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- Two working positions horizontal / vertical
- Automatic clamping when the wheel is detected
- Assisted rotation
- Safe Working Load: 25kg.

ADVANTAGES

- Multi control handles, to cover all work heights and insure an efficient and ergonomic position
- Easy to orientate the wheel thanks to the peripheral handwheel
- Wide hole into the center of the gripper allows access for a wrench to tighten the product and save time
- Automatic clamping allows the clamping function only when the part is properly placed and reduces the number of operations for the operator
- Light indicators help the operator at each step of the process.

POWER SUPPLY

Pneumatic 7 bars clean, dry air only

BUDGET

Gripper 15-20k€*

*The price mentioned is indicative only



FUNCTIONS

- Transfer dashboards from delivery stillage to production line. Mounted on a zero gravity pantograph arm
- Zero gravity balancing technology allows up and down movement by action directly on the part
- A sensor detects the part and allows clamping. System automatically switches to loaded mode without utilizing buttons.
- The arm system can easily be manipulated by a single operator
- Arm radius: 2.5 m
- Safe Working Load: 100kg.

ADVANTAGES

- Arm is balanced throughout its stroke
- Lifting movements are smooth and fluent
- Number of actions during the process is reduced
- System has excellent positioning precision.

POWER SUPPLY

Pneumatic 7 bars clean, dry air only
Electric 110VAC to 230VAC 50W max.

BUDGET

Pantograph zero gravity Arm + Gripper: 40-50k€*

*The price mentioned is indicative only



HOW TO MANIPULATE FLYWHEELS WITH A SINGLE OPERATOR



HOW TO TRANSFER DIFFERENT WHEELS WITH A SINGLE OPERATOR



FLYWHEEL LIFT ASSIST

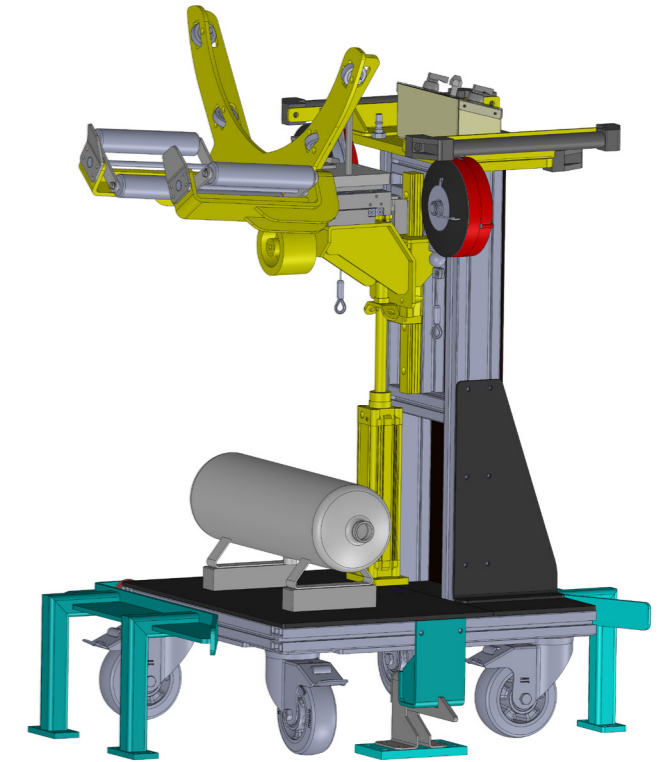
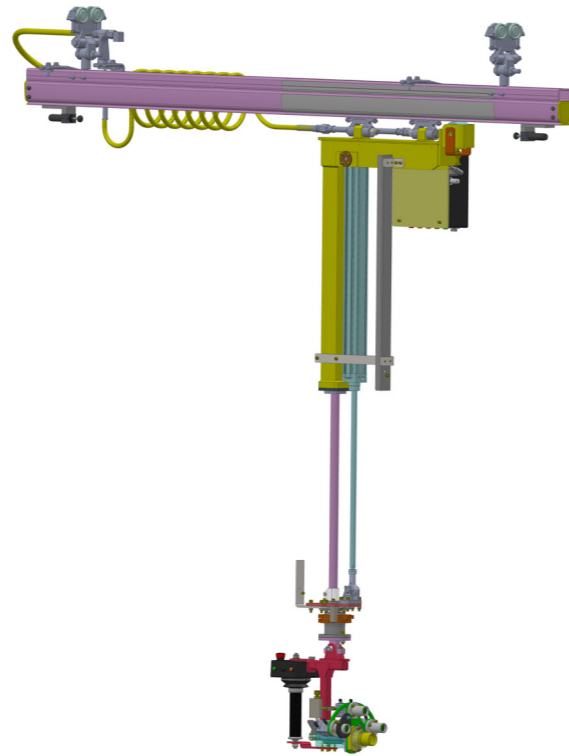
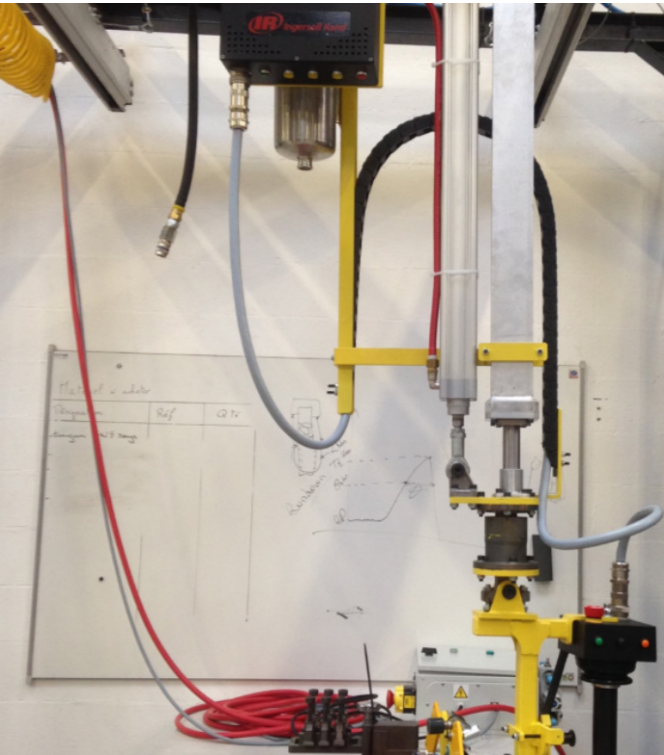
17245 UNITED KINGDOM

ERGONOMIC HANDLING SYSTEMS

WHEEL TROLLEY ASSIST

14036 UNITED KINGDOM

ERGONOMIC HANDLING SYSTEMS



FUNCTIONS

- The flywheel gripper and the torque tube are fully piloted by zero gravity
- Zero gravity balancing Technology allows up and down movement by action directly on the part
- Sensors allow detection of the flywheel and engage clamping
- Clamping is achieved magnetically
- Safe Working Load: 10kg.

ADVANTAGES

- Excellent positioning accuracy
- Safety functions on picking and placing
- In compliance with safety standard DIN EN ISO 12100.

POWER SUPPLY

Pneumatic 7 bars clean, dry air only
Electric 110VAC to 230VAC 50W max.

BUDGET

Torque tube + zero gravity Balancer + Gripper: 25-30k€*

*The price mentioned is indicative only

FUNCTIONS

- The whole system is on a trolley
- The cylinder adjusts the load height
- Pneumatic clamping
- Safe Working Load: 35kg.

ADVANTAGES

- Guides assist positioning on the assembly line
- Easy movement thanks to low friction wheels with parking brake
- The trolley is used as an alternative to the existing assistors, during maintenance or failure.

POWER SUPPLY

Pneumatic 5-7 bars clean, dry air only

BUDGET

Trolley: 25-30k€*

*The price mentioned is indicative only



HOW TO MANIPULATE TRUCK SPOILERS WITH A SINGLE OPERATOR



HOW TO MANIPULATE TRUCK SPOILERS WITH A SINGLE OPERATOR



TRUCK SPOILER LIFT ASSIST

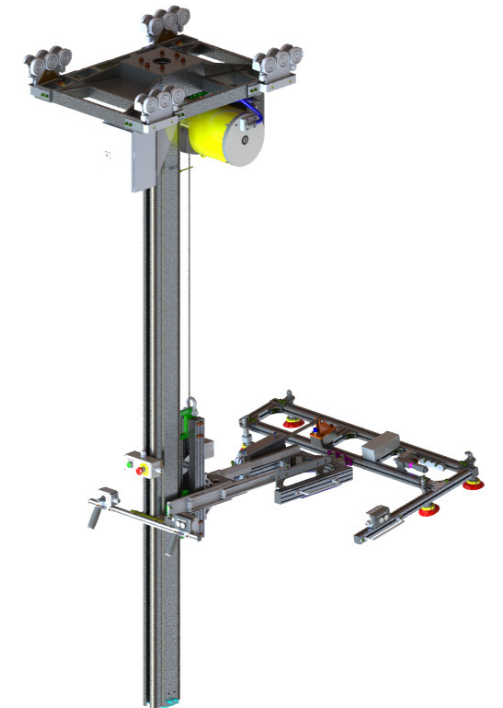
18227 AUSTRIA

ERGONOMIC
HANDLING
SYSTEMS

TRUCK SPOILER LIFT ASSIST

18227 AUSTRIA

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- Zero gravity Balancer with suction end-effector
- Suction frame can be inclined
- Handle bar height fully adjustable.

ADVANTAGES

- Lifting ring position automatically adjusted to keep different loads level
- Handlebar height to suit operator ergonomic position
- No precise positioning is required
- Operator can manipulate the part directly in zero gravity mode.

POWER SUPPLY

Pneumatic 7 bars clean, dry air only
Electric 11VAC to 230VAC 50W max.

BUDGET

Zero gravity Balancer + Gripper :25-30k€*

*The price mentioned is indicative only

FUNCTIONS

- Zero gravity Balancer with telescopic suction end-effector
- Suction frame can be both inclined and expanded.

ADVANTAGES

- Full rigid system for better ergonomics
- Operator can manipulate the part directly in zero gravity mode.

POWER SUPPLY

Pneumatic 7 bars clean, dry air only
Electric 110VAC to 230VAC 50W max.

BUDGET

Vertical Mast + zero gravity Balancer + Gripper: 25-30k€*

*The price mentioned is indicative only

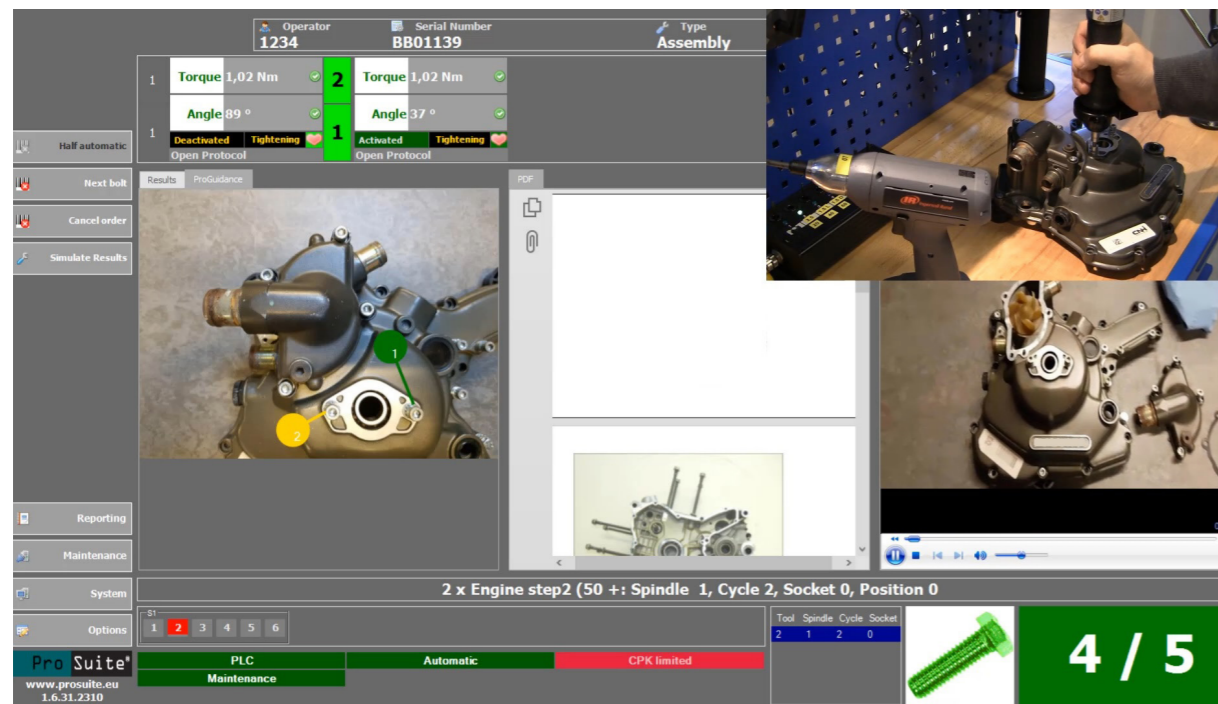


HOW TO SECURE YOUR TIGHTENING OPERATIONS AND IMPROVE QUALITY ASSURANCE



ASSEMBLY GUIDANCE & PROCESS CONTROL SOFTWARE

18183 UNITED KINGDOM



FASTENING SOLUTIONS

HOW TO TIGHTEN A BOLT UP TO 1000NM WITH A CORDLESS TOOL

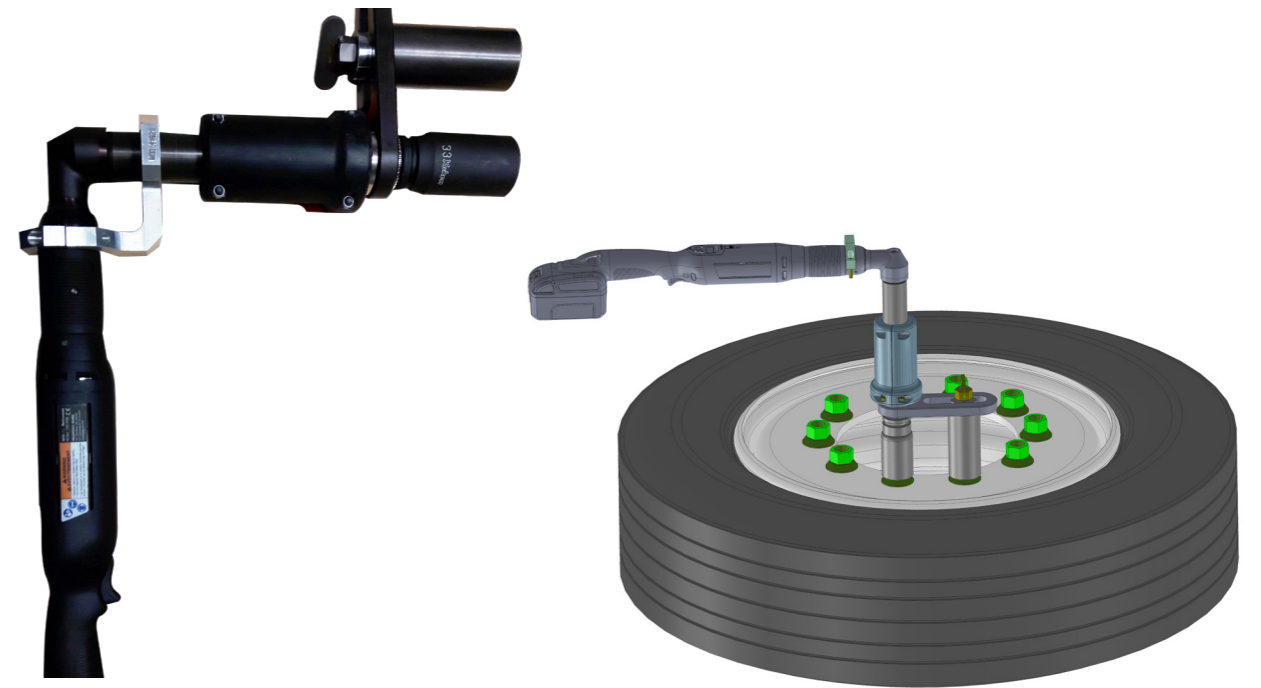


PRO
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QX + SPECIAL REACTION ARM

17037 FRANCE

FASTENING SOLUTIONS



FUNCTIONS

- ProTight™ software to monitor tightening cycles
- Ensure all steps of the tightening process are carried out
- Tools only enable in accordance with the predefined sequence
- Alarm if operator fails to perform
- Prints a label at the end.

ADVANTAGES

- Immediate report of OK or NOK at the assembly station
- Ease of maintenance
- Real-time overview of the assembly line
- Real-time status of all tightening results.

BUDGET

12 Licence Pack + Training on site: 42-45k€*

*The price mentioned is indicative only



FUNCTIONS

- QXX cordless angle wrench with 22:1 multiplier
- Adapted reaction arm and extended nose to reach restricted fastening areas
- Displays results on tool's screen
- 8 programmable tightening configurations.

ADVANTAGES

- Connected to an ICPCM controller, you can send and archive results on your network
- Designed to improve accuracy and productivity of your precision fastening and assembly operations
- The slave socket can be adjusted to meet the to meet the different bolt position
- Configurable preventive maintenance alarms.

POWER SUPPLY

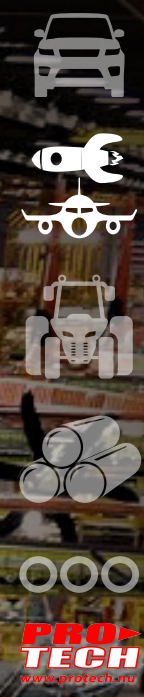
Electric: Lithium-Ion Battery Pack 40V

BUDGET

QX multiplier + reaction arm: 13-15k€*

*The price mentioned is indicative only





AEROSPACE

Some examples of Application DataSheets in the Aerospace Industry
This list is not exhaustive, all DataSheets are available online

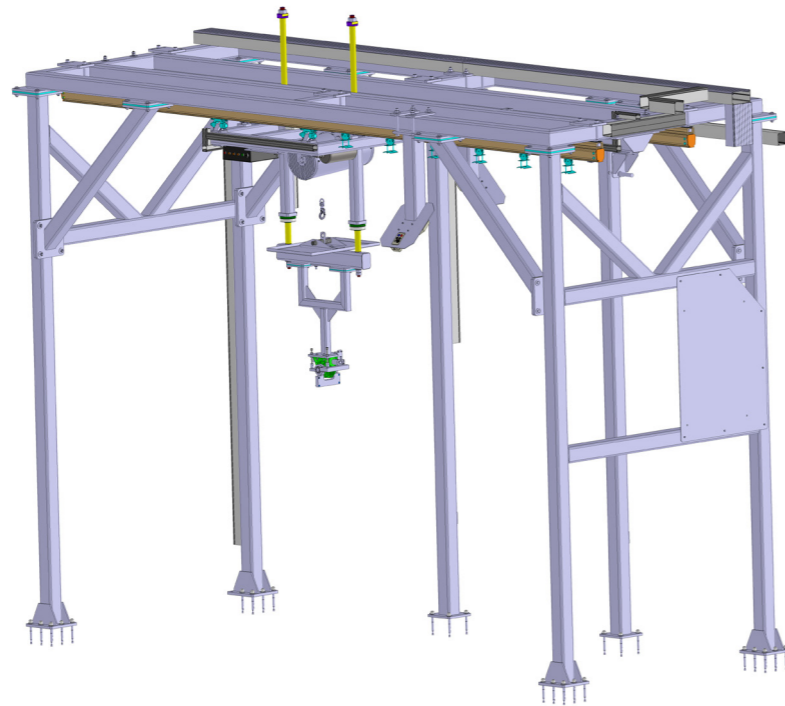




CUSTOM ZERO GRAVITY BALANCER

16331 FRANCE

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- This project required a very specific zero gravity program able to manage a fully automatic process, linked to the main plant controller software
- The lifting speed has to adapt to the different steps of production but the part must remain balanced throughout
- Safe Working Load: between 65 and 205kg.

ADVANTAGES

- Main plant controller software and zero gravity communicate in real time about lifting operation & status
- Fully automated process
- Only 3kg of effort required to move 205kg
- The system has excellent positioning precision (less than 0.5mm on the entire vertical stroke)
- This system is suitable for cleanroom environment

POWER SUPPLY

Pneumatic: 7 bars, exhaust air is collected and recycled

Electric: 110VAC to 230VAC 50W max

BUDGET

Zero gravity materials (without the steel structure) + programming :10-12k€* each; 13 units produced

*The price mentioned is indicative only



MULTI-SPINDLES WITH ADJUSTABLE CENTERS

17326 UNITED KINGDOM

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- The multi-spindle is on a torque tube pneumatically assisted
- Maximum tightening torque: 390Nm
- The span can manually be adjusted between 228mm and 584mm
- Fastening operation is controlled by bi-manual action.

ADVANTAGES

- Excellent ergonomics for the operator
- A ruler ensures superior accuracy of the span
- Two bolts can be fastened at the same time at the same torque
- High precision tightening
- Light indicators help the operator during the production process
- 99 programs can be selected.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

Electric: 230VAC

BUDGET

Full station: 100-120k€*

*The price mentioned is indicative only



HOW TO TIGHTEN AN AIRCRAFT REACTOR UP TO 300NM WITH A CORDLESS TOOL



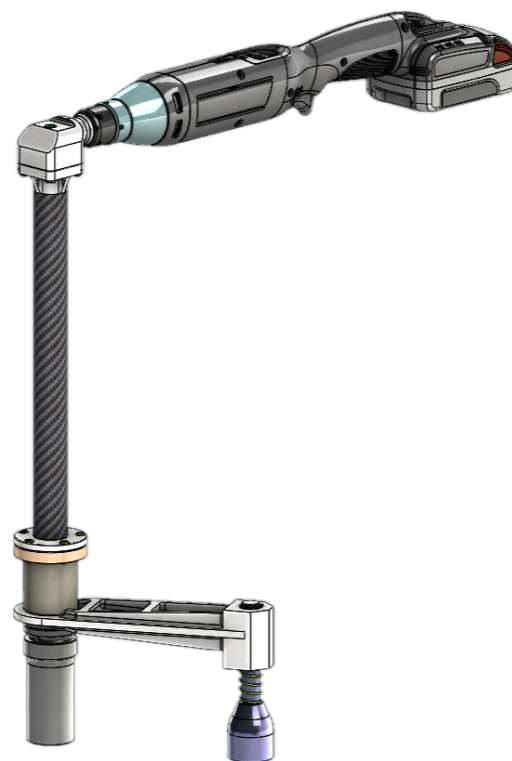
HOW TO TIGHTEN A PIPE NUT WITH A CORDLESS TOOL



QX + SPECIAL REACTION ARM

16038 FRANCE

FASTENING SOLUTIONS



FUNCTIONS

- QXC cordless angle wrench of 10Nm with a 43:1 torque multiplier
- Adapted reaction arm and extended nose to reach confined working areas
- Displays the actual measured torque or angle result
- 8 programmable tightening configurations.

ADVANTAGES

- Lightweight tool, only 4.6kg for 300Nm
- Special aluminum head and carbon extension
- User-friendly control simplifies the work of the operator
- Simple identification of the data with wireless data transmission and on tool display

POWER SUPPLY

Electric: 20V Lithium-Ion Battery 2.5Ah

BUDGET

Screwdriver + Case: 14-16k€*

*The price mentioned is indicative only



QX + LÜBBERING SPECIAL HEAD

18052 FRANCE

FASTENING SOLUTIONS



FUNCTIONS

- This QXX angle head 5Nm has been upgraded with an inline open offset head
- With this tool, a target torque of 1Nm +/- 10% can be achieved
- It displays the actual measured torque or angle result
- 8 programmable tightening configurations.

ADVANTAGES

- Connected to an ICPCM controller, results can be sent and archived on the customer network
- Designed to improve accuracy and productivity of your precision fastening and assembly operations
- The socket slave can be adjusted to meet a wide range of customer specified tightening points
- Configurable preventive maintenance alarms.

POWER SUPPLY

Electric: Lithium-Ion Battery Pack 20V

BUDGET

QX + Special head: 8-10k€*

*The price mentioned is indicative only



HOW TO TIGHTEN UP TO 500NM WITH A PISTOL TYPE SCREWDRIVER



HOW TO TIGHTEN AN AIRCRAFT WHEEL WITH A MULTI-SPINDLE



QX PISTOL 500NM + REACTION BAR

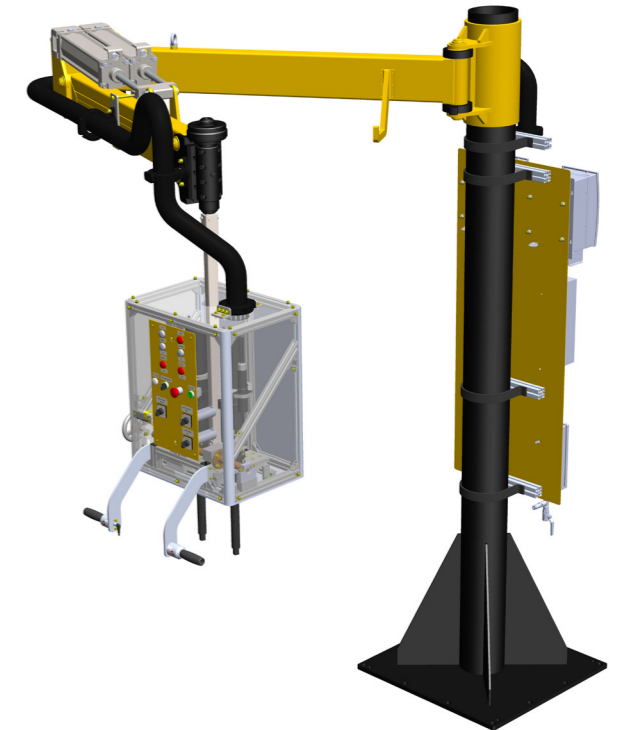
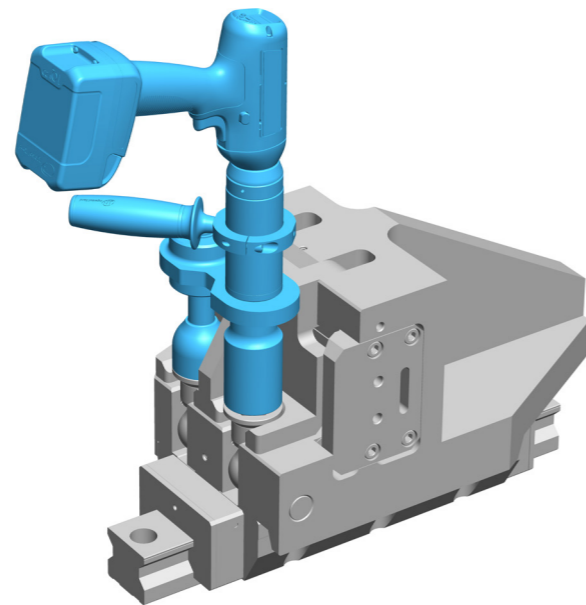
18082 FRANCE

FASTENING
SOLUTIONS

MULTI-SPINDLES WITH ADJUSTABLE CENTERS ON FLOOR MOUNTED PANTOGRAPH ARM

18114 UNITED KINGDOM

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- This QXM pistol has been fitted with a custom reaction bar allowing tightening up to 500Nm
- A spring on the reaction socket allows tightening even if the first screw is not pre-tightened.

ADVANTAGES

- Very portable solution
- High torque achievable with cordless tool
- Improve accuracy and productivity of your assembly operations.

POWER SUPPLY

Electric: Lithium-Ion Battery Pack 20V

BUDGET

QX + reaction bar: 8-10k€*

**The price mentioned is indicative only*

FUNCTIONS

- The multi-spindle is on a floor mounted pantograph arm pneumatically assisted
- Maximum tightening torque: 435Nm
- The span can manually be adjusted between 190mm and 254mm
- Fastening operation is controlled by bi-manual action.

ADVANTAGES

- Perfect ergonomics for the operator
- A ruler allows for superior accuracy of the span
- Two bolts can be fastened at the same time at the same torque
- High precision tightening
- Light indicators help the operator during the production process
- 99 programs can be selected.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

Electric: 230VAC

BUDGET

Full station: 70-80k€*

**The price mentioned is indicative only*





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OFF-ROAD

Some examples of Application Datasheets in the Off-Road Industry.
This list is not exhaustive. All datasheets are available online.

IR Ingersoll Rand.

HOW TO HANDLE GEARS PRECISELY AND CAREFULLY



HOW TO MANIPULATE A WINDSCREEN PRECISELY AND CAREFULLY WITH A SINGLE OPERATOR

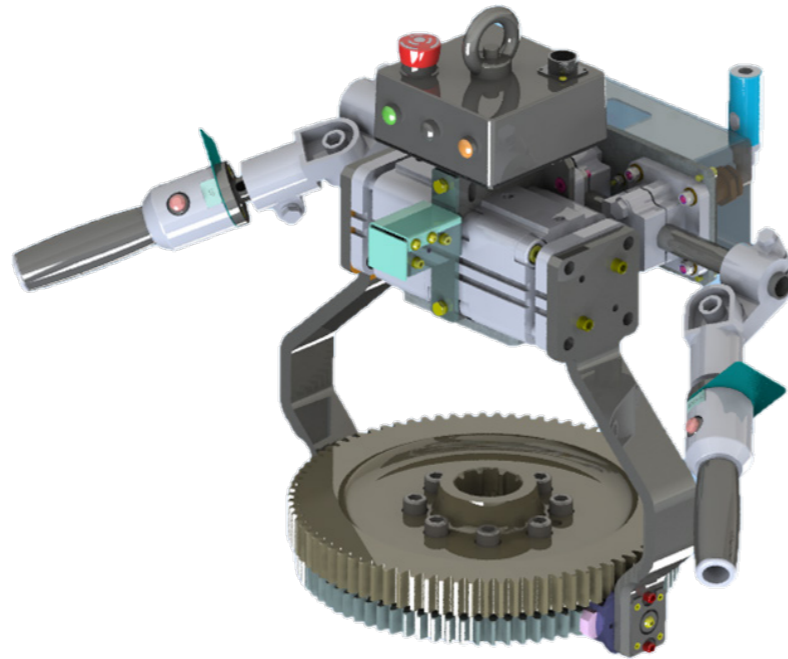
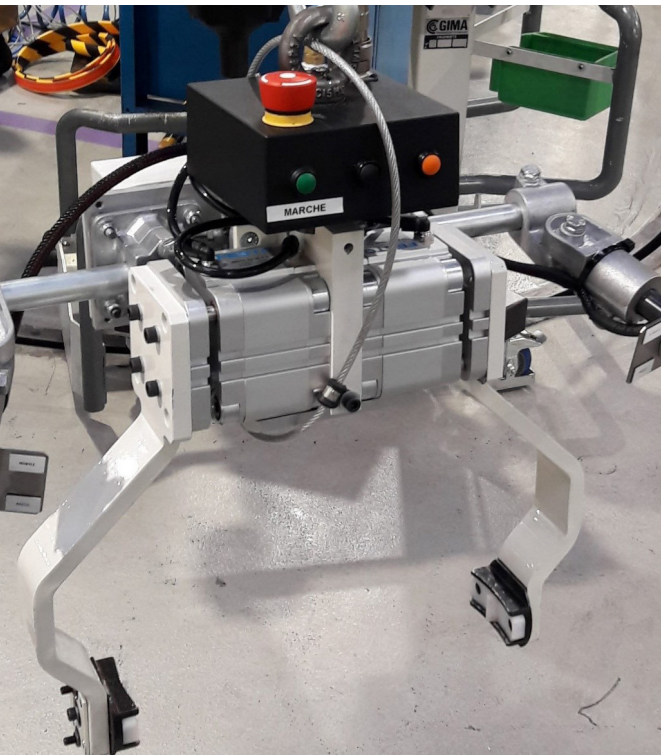


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GEAR GRIPPER

17064 FRANCE

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- Fully managed by a zero gravity balancer
- The gears are pneumatically clamped
- Zero gravity balancing technology allows up and down movement by action directly on the part
- Operator can manually rotate the gears by 180 degrees
- Safe Working Load: 12kg.

ADVANTAGES

- Laser location simplifies the positioning of the clamp jaws around the part
- System has excellent positioning precision.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only
Electric: 110VAC to 230VAC 50W max

BUDGET

Gripper + zero gravity Balancer: 20-25k€*

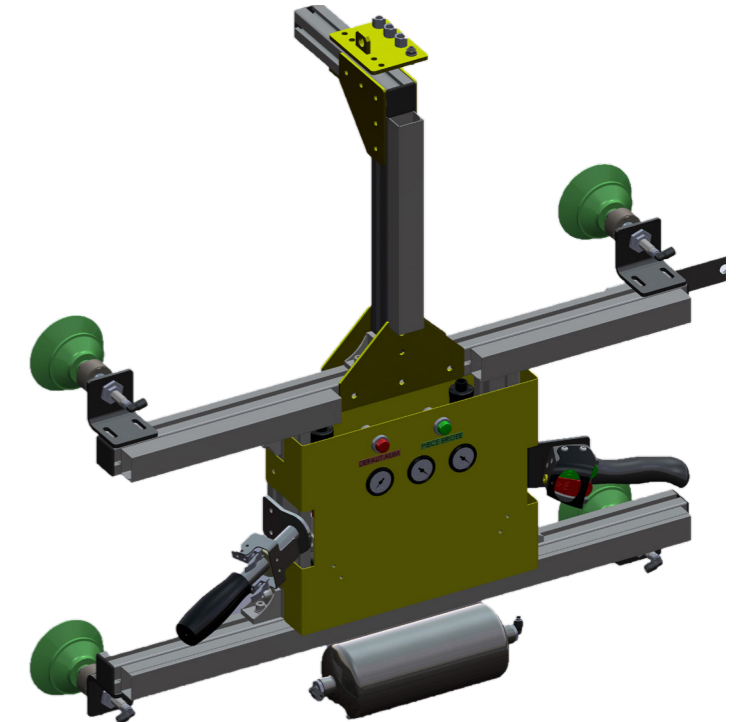
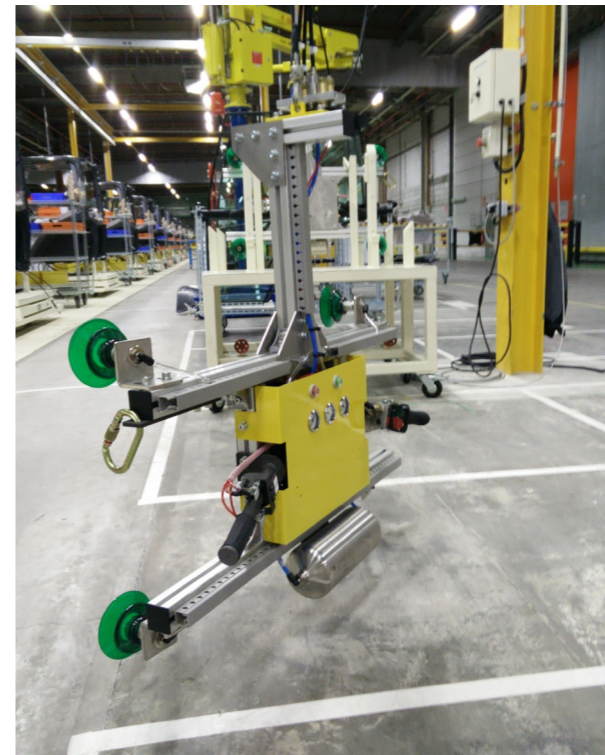
*The price mentioned is indicative only



DOOR / BACK WINDSCREEN GRIPPER

15067 FRANCE

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- The door gripper is mounted on a pneumatic balancer
- It takes the door on the display and puts it on the tractor
- Suction cups system
- Safe Working Load: 30kg.

ADVANTAGES

- Light indicators help the operator during the production steps
- The handling panel provides all necessary information to operator during different steps of the working process
- There are three easy-to-use controls: up, down, clamp.

POWER SUPPLY

Pneumatic: 5-7 bars clean, dry air only

BUDGET

Gripper + Balancer: 8-12k€*

*The price mentioned is indicative only



HOW TO LIFT TRACTOR HOODS PRECISELY AND CAREFULLY



HOW TO REMOVE A PART IN TWO STEPS WITH ONLY ONE MANIPULATOR AND A SINGLE OPERATOR



HOOD GRIPPER

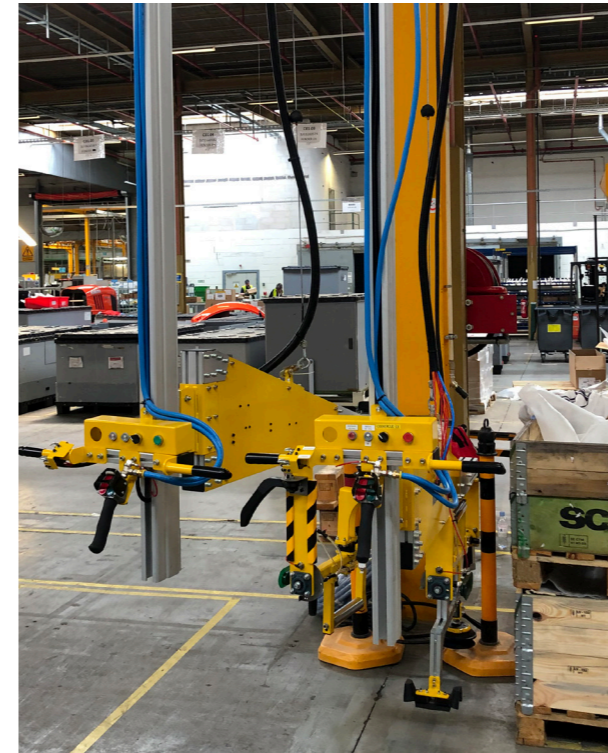
16089 FRANCE

ERGONOMIC
HANDLING
SYSTEMS

TRACTOR BONNET LIFT ASSIST

18068 FRANCE

ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- The hood gripper is mounted on a pneumatic balance
- Operator can work at 3 different heights, to remain in an ergonomic position
- Suction cup
- Safe Working Load: 20kg.

ADVANTAGES

- Multi control handles, to cover all working heights and insure an efficient and ergonomic position
- Light indicators help the operator during the production process
- User friendly controls
- Auxiliary air tank in case of breakdown.

POWER SUPPLY

Pneumatic: 5-7 bars clean, dry air only

BUDGET

Gripper + Balancer: 20-25k€*

*The price mentioned is indicative only

FUNCTIONS

- Vertical mast with dual function end-effector
- Function 1: open and store the transport container cover
- Function 2: remove the tractor bonnet from the container to a trolley
- Suction system
- Lifting only allowed when minimum suction threshold reached
- Safe Working Load: 50kg.

ADVANTAGES

- Zero effort for the operator
- No marking on the parts.

POWER SUPPLY

Pneumatic: 5-7 bars clean, dry air only

BUDGET

Full station: 20-25k€*

*The price mentioned is indicative only



HOW TO HANDLE A LARGE WIDE VARIETY OF FUEL TANKS WITH A SINGLE OPERATOR



HOW TO TIGHTEN A BOLT UP TO 430NM WITH A CORDLESS TOOL



PRO
TECH
www.protech.nu

TRACTOR FUEL TANK MANIPULATOR

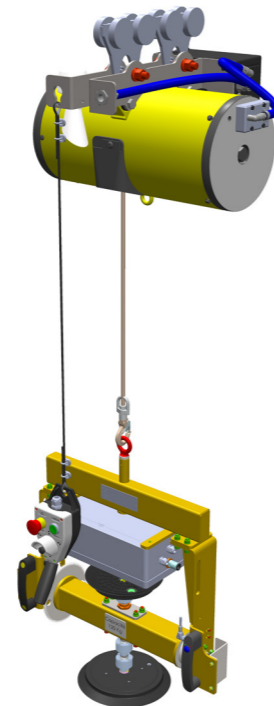
18295 FRANCE

ERGONOMIC
HANDLING
SYSTEMS

LIGHT QX MULTIPLIER WIFI

17003 FRANCE

FASTENING
SOLUTIONS



FUNCTIONS

- Fully managed by a zero gravity balancer
- Zero gravity balancing technology allows up and down movement by action directly on the fuel tank
- Safe Working Load: 120kg.

ADVANTAGES

- Only one tool for more than 10 different fuel tanks
- Allow the operator to assemble the fuel tank on the tractor with very low effort
- The weight of the different fuel tanks is automatically detected and balancing is adapted accordingly.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only
Electric: 110VAC to 230VAC 50W max

BUDGET

Zero gravity Balancer + Manipulator: 25-30k€*

*The price mentioned is indicative only

 **Ingersoll Rand.**

FUNCTIONS

- QXX cordless angle wrench 10Nm with a 43:1 torque multiplier able to reach a max torque of 430Nm
- Adapted reaction arm
- Displays results on an onboarding screen
- 8 programmable tightening configurations.

ADVANTAGES

- This design is the lightest wireless tool on the market able to reach a torque of 430Nm
- Connected to an ICPCM controller you can send and archive results on the customer network
- Configurable preventive maintenance alarms.

POWER SUPPLY

Electric: Lithium-Ion Battery Pack 20V

BUDGET

QX Multiplier + Reaction bar: 8-10k€*

*The price mentioned is indicative only

 **Ingersoll Rand.**

HOW TO TIGHTEN DOUBLE PINIONS WITH CARE



HOW TO TIGHTEN TRACTOR TRANSMISSION PARTS ERGONOMICALLY

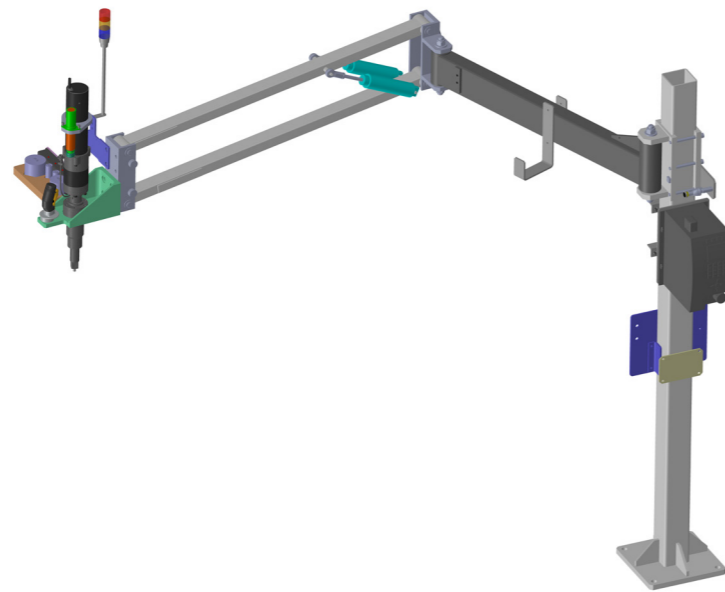


PRO
TECH
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FASTENING STATION

16333 FRANCE

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- Control handle socket tray and light tower are integrated close to the fastening point at an ergonomic height
- Arm radius: 2 m
- Parking position.

ADVANTAGES

- The arm avoids any reaction movement during fastening
- Weight of the tool is always balanced to increase user comfort
- Tightening precision is around 4-5%
- The closed loop transducerized control provides exceptional accuracy and traceability for advanced torque control strategies.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

Electric: 230VAC

BUDGET

Full station: 20-25k€*

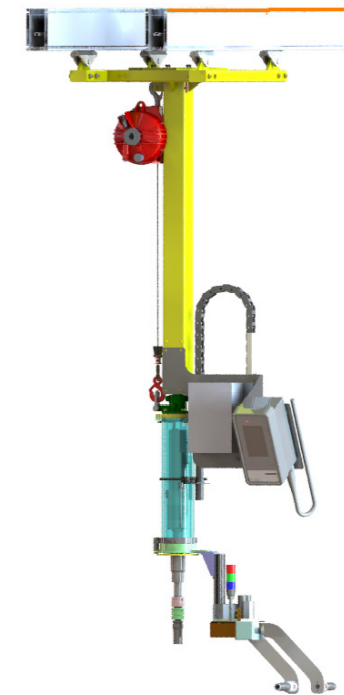
*The price mentioned is indicative only



FASTENING SYSTEM UNDER A TORQUE TUBE

17278 FRANCE

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- The QM9 screwdriver is on a torque tube, which is assisted by a spring balancer
- Maximum tightening torque: 560Nm
- Rotation of the handle around the Z-axis
- Maximum fastening height: 1660mm; Min: 760mm
- Fastening operation is controlled by bi-manual action.

ADVANTAGES

- The tool is always balanced to increase the user comfort
- Control handle, socket tray and light tower are integrated close to the fastening point at an ergonomic height
- This allows tightening all the bolts to the same torque
- The tightening precision is around 4-5%.

POWER SUPPLY

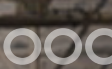
Electric: 230VAC

BUDGET

Torque tube + Spindle: 30-40k€*

*The price mentioned is indicative only





CONSTRUCTION & RAW MATERIALS

Some examples of Application Datasheets in the Construction & Raw Materials Industry.
This list is not exhaustive. All datasheets are available online.



HOW TO MANIPULATE HEAVY COILS WITH A SINGLE OPERATOR



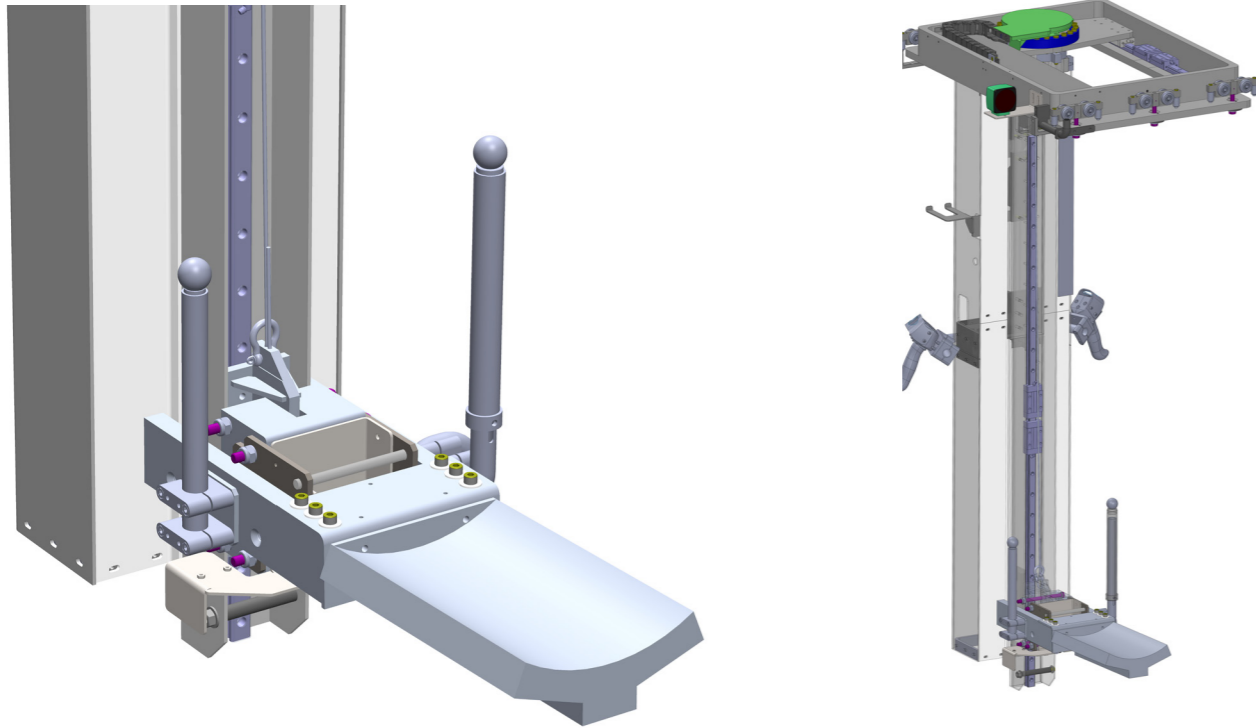
HOW TO LIFT BREAKERS WITH CARE AND PRECISION



COIL LIFT ASSIST

17136 FRANCE

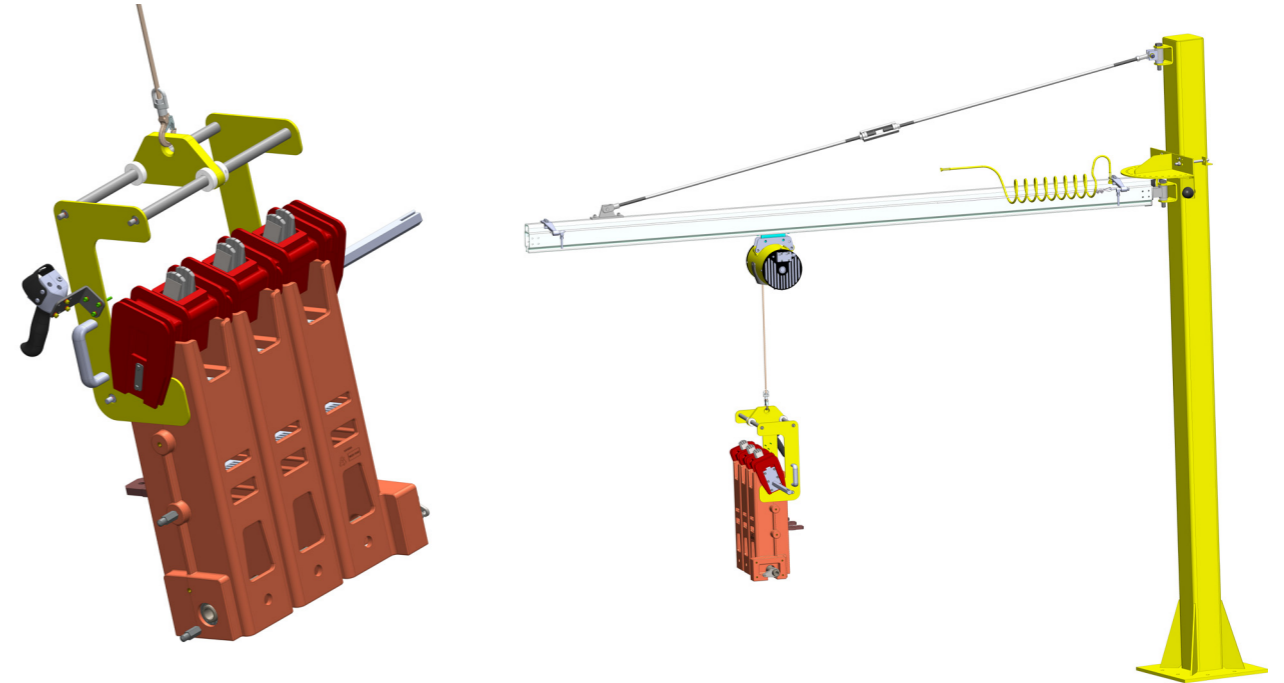
ERGONOMIC HANDLING SYSTEMS



BREAKER LIFT ASSIST

17395 UNITED KINGDOM

ERGONOMIC HANDLING SYSTEMS



FUNCTIONS

- The goal of this project was to develop a handling device able to identify and archive each position of the customer product during each step of the production process
- Insure a manual X / Y movement, Z lifting into a tight environment and rotation at 320°
- Move the coil into an oven 250mm over the runway
- Cover a vertical stroke of 1900mm
- Identify and track the position of each product
- Safe Working Load: Between 10-45kg.

ADVANTAGES

- Tracking products during production and exchanging information with the main plant controller in real time
- Multi control handles on each side to insure an efficient and ergonomic position
- Very compact design to work in an area of 1.5 m square
- Special material able to survive in a corrosive environment.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only

Electric: 230VAC

BUDGET

1 full station + installation(EU): 55-65k€*

*The price mentioned is indicative only



FUNCTIONS

- Ergonomic lifting system for breaker manipulation
- Breaker manipulator is mounted under a Jib Crane
- The gripper is equipped with a control handle to move the load
- Mechanical gripper
- Safe Working Load: 115kg.

ADVANTAGES

- Rotary stops to define a precise working area
- Simple concept for durability and long service life
- Easy handling
- No external supply needed to action clamping function.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only

BUDGET

Jib crane + gripper: 10-15k€*

*The price mentioned is indicative only



HOW TO MANIPULATE LARGE PANELS WITH A SINGLE OPERATOR

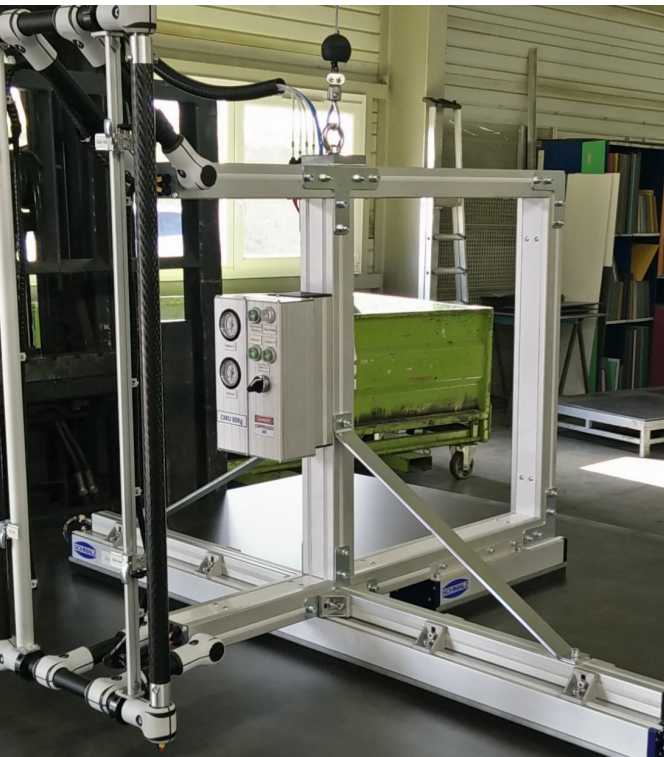


HOW TO IMPROVE ACCURACY AND PRODUCTIVITY OF YOUR PRECISION FASTENING AND ASSEMBLY OPERATIONS

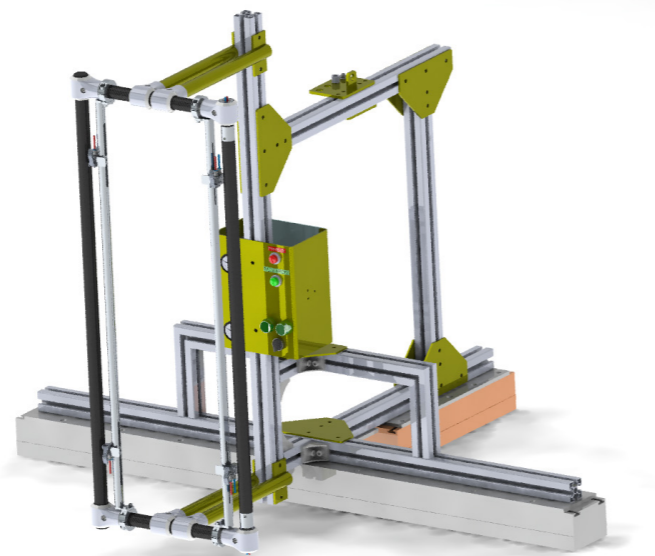


PANEL GRIPPER

16095 FRANCE



ERGONOMIC
HANDLING
SYSTEMS



FUNCTIONS

- The gripper is mounted on a pneumatic balancer
- It's for building panel lifting
- 2 pneumatic suction pad systems
- Allows positioning of the load by moving the handle upward and downward
- Safe Working Load: 70kg.

ADVANTAGES

- User-friendly controls.
- Light indicators help the operator during the production process
- Multi control handles, to cover all working heights and insure an efficient and ergonomic position
- Picking heights from 200mm to 1000mm easily achieved.

POWER SUPPLY

Pneumatic: 4-7 bars clean, dry air only

BUDGET

Balancer + gripper: 14-16k€*

*The price mentioned is indicative only



QX ANGLE WRENCH WITH LUBBERING HEAD

18123 FRANCE

FASTENING
SOLUTIONS



FUNCTIONS

- It is a QXC cordless angle wrench with an offset lubbering head
- It is a close departed head
- This offset head allows a tightening torque of 2Nm
- It displays the actual measured torque or angle result
- 8 programmable tightening configurations.

ADVANTAGES

- This offset head is designed to improve accuracy and productivity of your precision fastening and assembly operations
- The size of this head allows access to hard-to-reach screws
- Very fine tightening torque
- By connecting to ICPCM controller, you can send and archive results on the customer network.

POWER SUPPLY

Electric: Lithium-Ion Battery Pack 20V

BUDGET

QXC + Special head: 6-8k€*

*The price mentioned is indicative only



HOW TO LIFT 900KG WITH A BALANCING ZONE

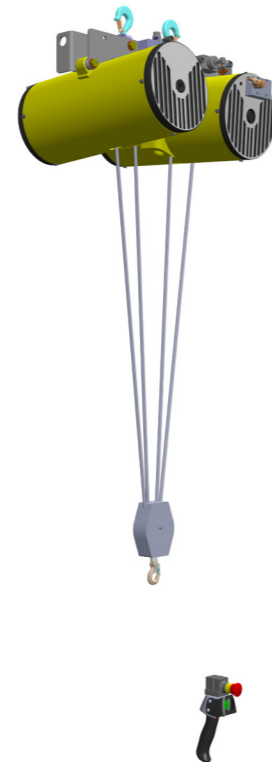


HOW TO HANDLE TWO DIFFERENT WELDMENTS WITH A SINGLE MANIPULATOR/OPERATOR



TANDEM REEVED BALANCER

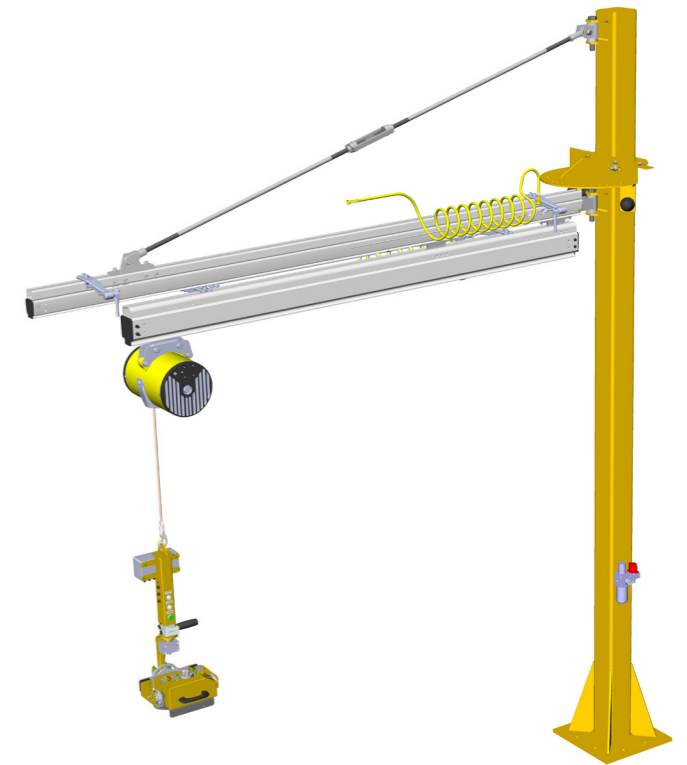
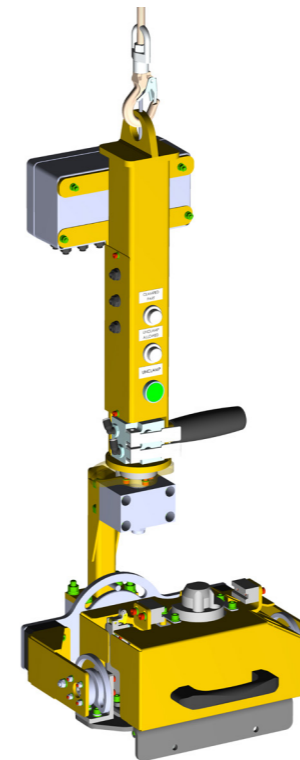
18250 ITALY



ERGONOMIC
HANDLING
SYSTEMS

WELDMENT DUAL MODE MANIPULATOR

18136 UNITED KINGDOM



ERGONOMIC
HANDLING
SYSTEMS

FUNCTIONS

- This system is composed of two 225kg balancers which are reeved
- The standard pendant control has been upgraded with an emergency stop.
- Operating travel: 1 m
- Safe Working Load: 900kg.

ADVANTAGES

- The operator has a balancing zone to handle the load, unlike a hoist
- Safety is increased with the emergency stop button on the pendant control
- This solution can be provided with hooks or with overhead rail trolley.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

BUDGET

Full station: 20-25k€*

**The price mentioned is indicative only*



FUNCTIONS

- Floor mounted jib crane with rail extension
- ZA balancer and custom end-effector
- The end-effector has two gripping modes (180° rotation)
- First mode: mechanical clamping
- Second mode: magnetic clamping
- Safe Working Load: 30kg.

ADVANTAGES

- Operator can lift two different parts with only one manipulator
- Easy to switch between the two clamping modes
- The extension rail system avoids interference during jib crane rotation
- Visual indicators to indicate part is clamped and release is permitted.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

BUDGET

Full station: 15-20k€*

**The price mentioned is indicative only*





OTHERS

Some examples of Application DataSheets in the other industries
This list is not exhaustive, all DataSheets are available online



HOW TO MANIPULATE 60KG BARRELS WITH A SINGLE OPERATOR



HOW TO MANIPULATE SCRAP BUNDLES WITH A SINGLE OPERATOR



BARREL LIFT ASSIST

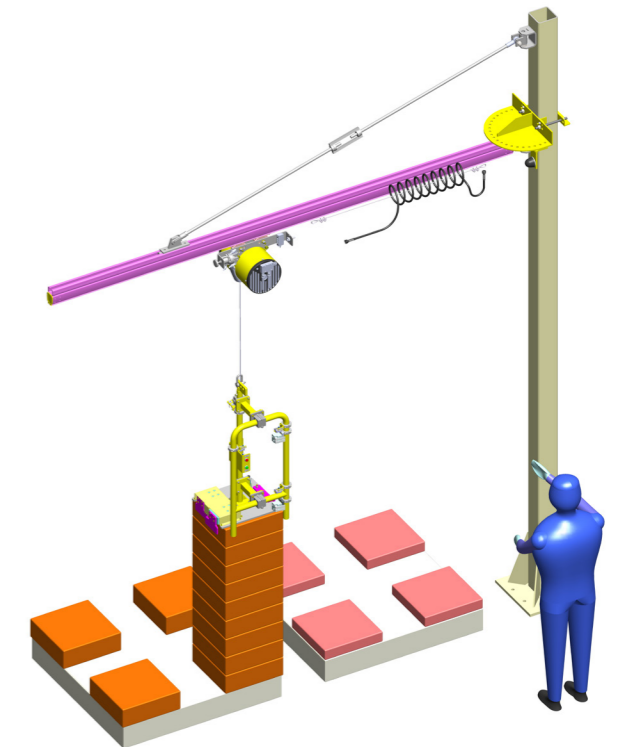
14055 FRANCE

ERGONOMIC HANDLING SYSTEMS

SCRAP BUNDLES LIFT ASSIST

15025 FRANCE

ERGONOMIC HANDLING SYSTEMS



FUNCTIONS

- The gripper is mounted on a pneumatic balancer
- The load can be moved up and down thanks to the inline handle
- Simple hook.

ADVANTAGES

- User-friendly controls
- Simple concept for durability and long service life
- No external supply needed to action clamping function.

POWER SUPPLY

Pneumatic: 5-7 bars clean, dry air only

BUDGET

Gripper (without balancer): 1-2k€*

**The price mentioned is indicative only*

FUNCTIONS

- 220° Jib Crane, rotary stops and speed control kit to regulate the speed between uncharged / charged state
- Pneumatic jaw clamping
- Vertical stroke 1300mm
- Safe Working Load: 65kg.

ADVANTAGES

- Multi control handles, to cover all work heights and insure an efficient and ergonomic position
- Jib crane covers a radius of 220 degrees adjustable to the work area by positioning stoppers
- Speed can be controlled for different load states
- The manipulator can accommodate one bundle horizontally or two vertically
- Light indicators help the operator during the production steps.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only

BUDGET

1 full station + installation (EU): 20-25k€*

**The price mentioned is indicative only*



HOW TO LIFT A LOAD SMOOTHLY



HOW TO TIGHTEN PRECISELY AND WITH MINIMUM EFFORT



PRO
TECH
www.protech.nu

ZERO GRAVITY ARM

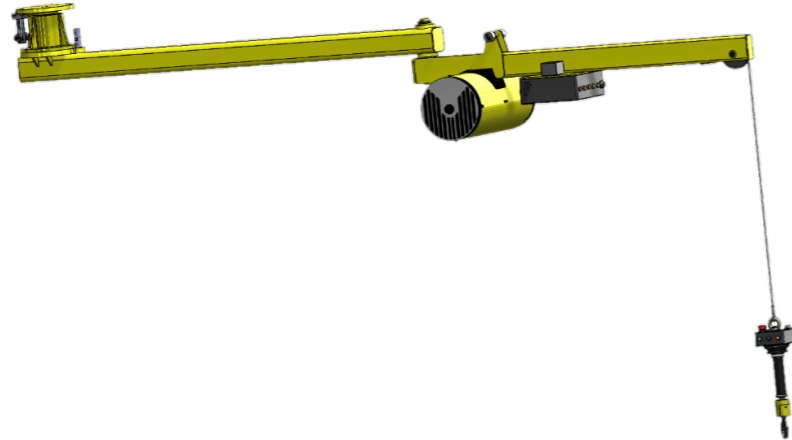
16174 NETHERLANDS

ERGONOMIC
HANDLING
SYSTEMS

QX + REACTION ARM

16243 FRANCE

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- 713 arm with a zero gravity kit, which is provided with a sensitive handle with a closed hook
- This arm can be fixed to a carriage, on a column or directly on the ceiling
- Zero gravity balancing technology allows up and down movement by action directly on the part
- Articulated arm has two rotation axes and end stops to limit the rotation
- Different sizes and capacities of arms are available to fit a large variety of applications
- Safe Working Load: 0 to 225kg.

ADVANTAGES

- All the lifting movements are smooth and fluent
- System has an excellent positioning precision
- This arm can be configured upon request.

POWER SUPPLY

Pneumatic: 7 bars clean, dry air only
Electric: 110VAC to 230VAC 50W max

BUDGET

713 arm + zero gravity technology: 12-18k€*

*The price mentioned is indicative only

FUNCTIONS

- Handling system for a QX Pistol with arm and vertical balancing movement
- A pneumatic handle allows control of the tightening machine
- The reaction arm QTA010 has a torque capacity of 10Nm
- It displays the actual measured torque or angle result
- 8 programmable tightening configurations.

ADVANTAGES

- Simple identification of the data with wireless data transmission and on tool display
- Perfect ergonomics for the operator
- High precision tightening
- Designed to improve accuracy and productivity of critical fastening and assembly operations.

POWER SUPPLY

Electric: Lithium-Ion Battery Pack 20V

BUDGET

1 full system: 4-6k€*

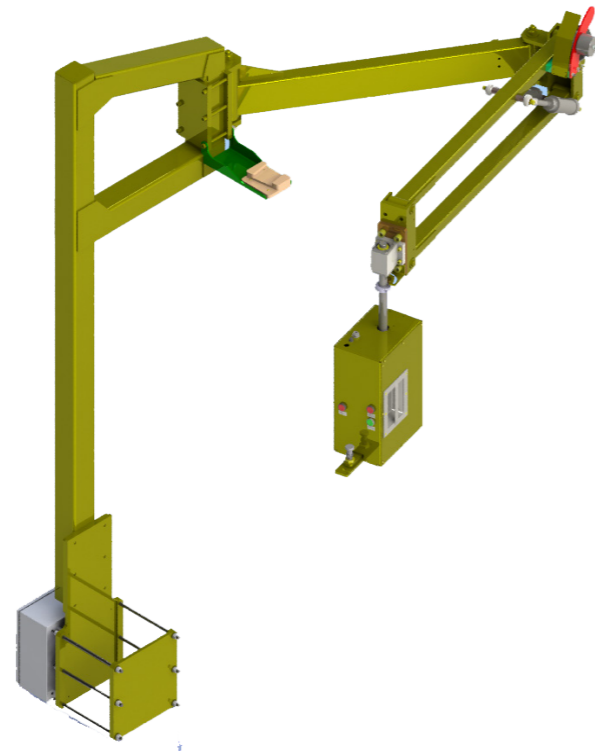
*The price mentioned is indicative only



DUAL SPINDLE HANDLING SYSTEM

18046 FRANCE

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- The double-spindle is on a QTA 475 arm pneumatically assisted
- The double-spindle is designed to tighten sphere valves. Remote control option available
- Maximum tightening torque: 55Nm
- The axial distance is variable between 100mm and 136mm (2 positions).

ADVANTAGES

- The arm reduces the load for the operator
- A brake slows down the descent
- Two bolts can be fastened at the same time and to the same torque
- Parking position
- Light indicators help the operator during the production process.

POWER SUPPLY

Pneumatic: 6-7 bars clean, dry air only

Electric: 230VAC

BUDGET

Station: 27-32k€*

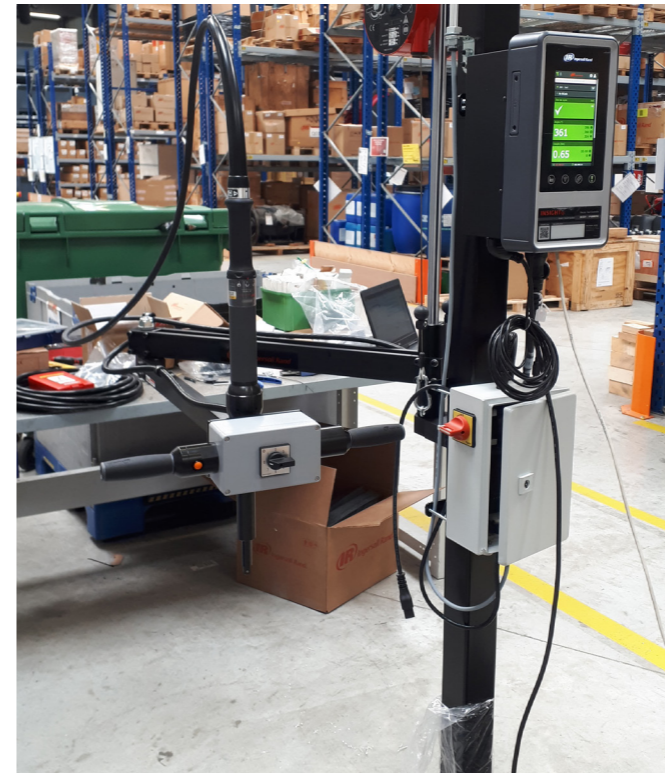
*The price mentioned is indicative only



QE SPINDLE+HANDLEBAR AND REACTION ARM

19034 ITALY

FIXTURED
TOOL
SYSTEMS



FUNCTIONS

- QE8 straight spindle mounted on a QTA150 arm
- Ergonomic handlebar with start & stop commands
- 8 program selection on the handlebar
- Max. torque: 150Nm.

ADVANTAGES

- Operator can select the right tightening program directly on the handlebar
- No effort to handle the tool and no torque reaction for the operator
- Very large operating area thanks to the arm
- Direct visualization of the cycle state thanks to the light tower.

POWER SUPPLY

Electric: 230VAC

BUDGET

Full station: 20-25k€*

*The price mentioned is indicative only





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