



WORLD EXPERT IN ASSEMBLY
and riveting machines



GUILLEMIN

WHO ARE WE?

GUILLEMIN is a renowned world specialist in Orbital and Radial riveting and crimping as well as in the automated assembly of parts, since 1911.

With more than 15 000 assembly machines installed all over the world, GUILLEMIN has the widest range of riveting machines on the market, from standard riveting machines up to automated assembly lines for large series of production.

The manufacturing of the machines is done in France according to European standards.

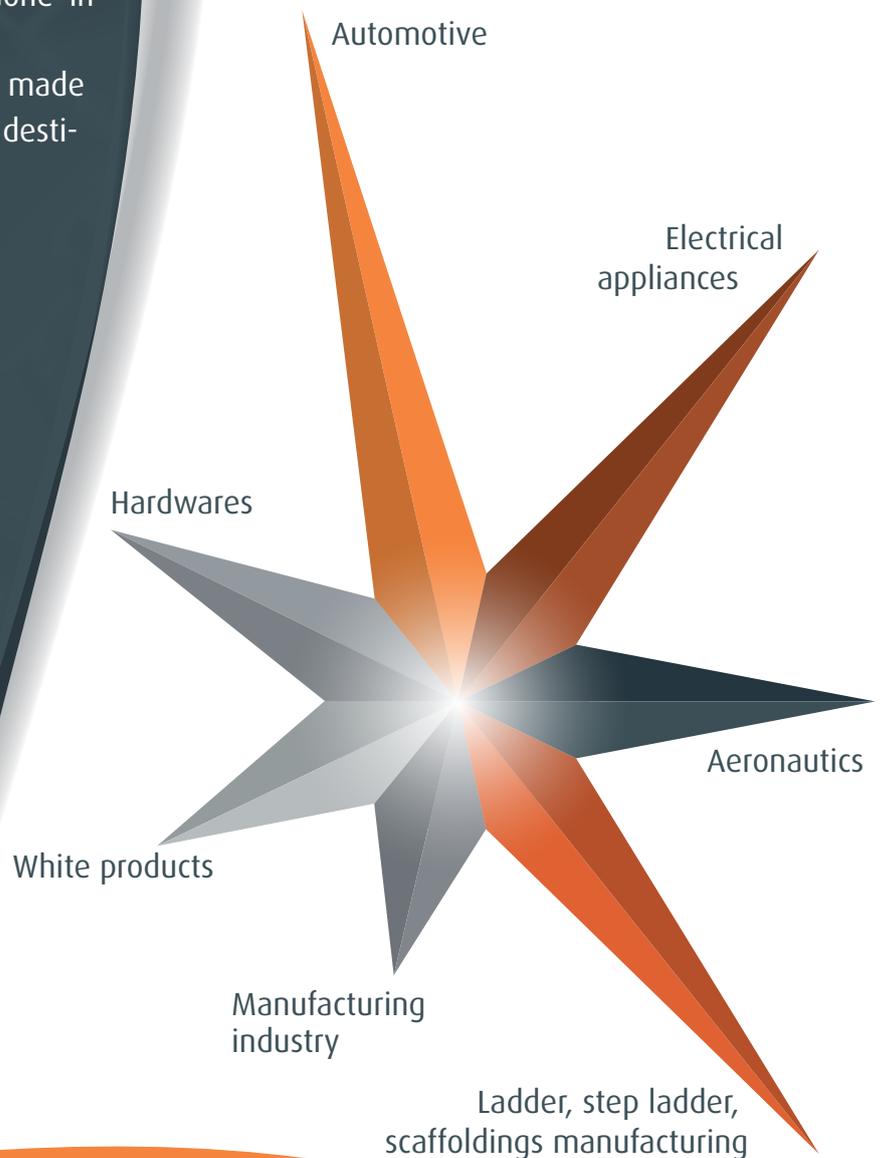
Machines intended for exportation are made according to the standards in force in the destination country.

OUR BUSINESS SECTORS

A presence in all the industrial sectors.

OUR SKILLS

In addition to our machines, we offer a wide set of related pluridisciplinary services in order to provide you with sustainable and productive equipments.





RADIAL AND ORBITAL RIVETING

This assembly process offers many benefits. It is particularly recommended for safety parts as well as assemblies that must be impregnable and should not be dismantled. It enables to assemble different types of material altogether. It is intended for fixed or hinged assemblies.

It provides for a cost-saving assembly with excellent mechanical strength, reduced space requirement, is fast and easy to use.

GUILLEMIN has full technical proficiency in the two most efficient technologies:

- *orbital riveting,*
- *radial riveting.*



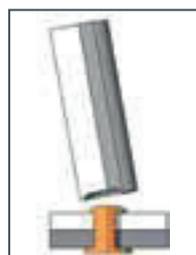
Flat insider



Flat



Conical



Tronconical



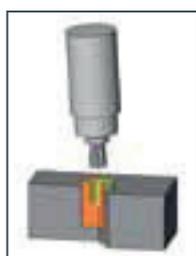
Oval head



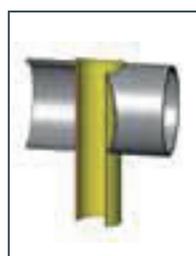
Roll swaged



Flared



Torx riveting



Rolled swaged



Inner swaging



conditions of limited accessibility



Flared riveting



ORBITAL RIVETING - ORBIONE

Orbital pneumatic riveting machine, multi-purpose, economical and robust, intended for small, medium and mass production with simple tool.

- *Micrometric setting of the spindle stroke of 20 μ m / Riveting process with high accuracy 1/10 mm / Programmable Logic Controller.*

ECONOMICAL RANGE	ORBIONE
Power (DaN)	2000
Rivet diameter (mm) in steel 370 N/mm ²	Ø12
Power	Pneumatic
Adjustable stroke (mm)	10 to 60
Spindle (1500 tr/mn)	Electrical 0.75 KW





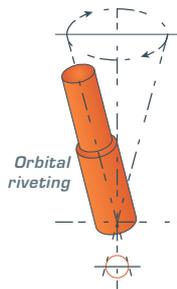
ORBITAL RIVETING MACHINES

Radial pneumatic or hydraulic riveting machines, multi purpose, ideal for small, medium and mass series.

- Adjustable unit and table, Micrometric setting of the spindle stroke by step of 50 μm / Riveting process with high accuracy 1/10 mm / programmable logic controller.

Many options:

Electronic Control system of the riveting power / Multi pins head / Specific tool



MODEL	S2	S5	S8	S12
Power (DaN)	100	750	1 200	1 900
Rivet diameter in steel 370 N/mm ²	Ø2 mm	Ø5 mm	Ø8 mm	Ø12 mm
Power motion	<i>Pneumatic / from 4 to 6 bars</i>			
Adjustable stroke (mm) Micrometric setting	0 to 20	5 to 50	5 to 50	5 to 50
Spindle motor 1500 tr/mn	0.18 KW	0.37 KW	0.75 KW	0.75 KW



MODEL	S12H	S131	S201
Power (DaN)	2 000	3 000	5 000
Rivet Diameter (mm) in steel 370 N/mm ²	Ø12 mm	Ø14 mm	Ø18 mm
Power motion	<i>Hydraulic / from 50 to 85 bars</i>		
Adjustable stroke (mm) micrometric setting	5 to 50	10 to 50	10 to 50
Spindle motor 1500 tr/mn	0.75 KW	1.8 KW	2.2 KW



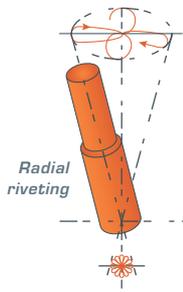
RADIAL RIVETING MACHINES

Radial pneumatic or hydraulic riveting machines, multi purpose, ideal for small, medium and mass series.

- Adjustable unit and table, Micrometric setting of the spindle stroke by step of 50 µm, Riveting process with high accuracy 1/10 mm / programmable logic controller.

Many options:

Electronic control system of the riveting power / Specific tool



MODEL	M8	M12	M14	M24
Power (DaN)	1 200	1 900	3 000	5 000
Rivet diameter in steel 370 N/mm ²	Ø8 mm	Ø12 mm	Ø15 mm	Ø20 mm
Power motion	<i>Pneumatic</i>		<i>Hydraulic</i>	
Pressure (bars)	4 - 6	4 - 6	50	85
Adjustable stroke (mm) micrometric setting	5 to 50	5 to 50	10 to 50	10 to 50
Spindle motor 1500 tr/mn	0.75 KW	0.75 KW	1.8 KW	2.2 KW





MASS PRODUCTION MACHINES

MODEL DLS - DLM LOADING BY DRAWER



MASS PRODUCTION MACHINES	DLS - DLM Loading by AUTOMATIC DRAWER			DLS - DLM Loading by MANUAL MOVABLE DRAWER	
Loading mode	Machine configuration with loading by automatic movable drawer 2 or 3 positions. Machine in accordance with CE. Riveting unit can be orbital or radial. Tool fitted to the product application.			Machine configuration with loading by manual movable drawer 2 or 3 positions. Machine in accordance with CE. Riveting unit can be orbital or radial. Tool fitted to the product application.	
MORE PRODUCTIVITY: + 25% <i>Increase the ergonomics and safety for the worker (loading on the machine is at 50% hidden).</i>					
ORBITAL Model	DLS 5	DLS 8	DLS 12	DLS 131	DLS 201
RADIAL Model	-	DLM 8	DLM 12	DLM 14	DLM 24
Power (DaN)	750	1 200	1 900	3 000	5 000
Dimensions of the tool (width x depth)	550 x 250 mm			320 x 170 mm	
Standard Equipment	<ul style="list-style-type: none"> • GUILLEMIN Controller (16 inputs / 16 outputs) • 1 riveting unit • "Cycle Start" by sensitive hand control • Multiple light beam safety device • Pneumatic or hydraulic equipment 			<ul style="list-style-type: none"> • GUILLEMIN Controller (16 Inputs/ 16 outputs) • 1 riveting unit • "Cycle Start" by manual motion of the drawer • Pneumatic or hydraulic equipment 	
Drawer stroke	150-200-250 mm			150-200-250 mm	
Config TYPE 1	Automatic drawer 2 positions			Manual drawer 2 positions	
Config TYPE 2	Automatic drawer 3 positions			Manual drawer 2 positions - automatic return	
Config TYPE 3	-			Semi automatic drawer 3 positions: position 1->2 manual, position 2 -> 3 automatic, 3 -> 1 manual	
General Options	Refer to Accessories / Options P.10				



MODEL RTS - RTM ROTARY TABLE



MASS PRODUCTION MACHINES	RTS - RTM ROTARY TABLE		RTS - RTM ROTARY TABLE BOTTOM UP UNIT		RTS - RTM ROTARY TABLE CONTROL OF THE COMPONENTS AUTOMATIC UNLOADING
Loading mode	Machine configuration with loading system on rotary indexing table 2, 4 or 6 workstations. Loading is done during the riveting operation. Orbital or radial Unit. Standard CE				
Configuration	Standard riveting unit 	Bottom up unit 		<ul style="list-style-type: none"> • 1 work station for control of the components • 1 work station for unloading handling 	
	MORE PRODUCTIVITY: +100%				MORE PRODUCTIVITY: +125%
	Loading is hidden				Loading and unloading are hidden
ORBITAL Model	RTS 5	RTS 8	RTS 12	RTS 131	RTS 201
RADIAL Model	-	RTM 8	RTM 12	RTM 14	RTM 24
Power (DaN)	750	1 200	1 900	3 000	5 000
Max dimensions of tool (mm)	Ø600 (2 or 4 tools) Ø800 / Ø1000 / Ø1200 (2, 4 or 6 tools)				
Standard Equipment	Ø600 (4 tools of 150 x 100 mm)	Ø800 (4 tools of 350 x 200 mm) (6 tools of 250 x 200 mm)	Ø1000 (4 tools of 400 x 300 mm)	Ø1200 (4 tools of 400 x 300 mm)	
Équipement Standard	<ul style="list-style-type: none"> • GUILLEMIN Controller (32 inputs / 32 outputs) • "Cycle start" by sensitive hand control • Multiple light beam safety device • Lighting/ Pneumatic or hydraulic equipment 				
Controller options	SIEMENS or SCHNEIDER Controller / HMI device				
General options	Refer to Accessories / Options P.10				





ORBITAL RIVETING MACHINES HIGH POWER

From 12 000
to 20 000 DaN



MODEL	S 1200	S 2000
General	The high power CNC machines allow to work on large diameters, for example, the manufacturing of bearings or all other applications where high power is required (Alloy steel or stainless steel)	
Advantages	VERSATILE - MULTI PRODUCTS Very fast selection of the type of product by change of the tool on the machine and selection of the product program High productivity with the numerical Z axis (optimization of the stroke)	
Power (DaN)	12 000	20 000
Rivet shank diameter (mm) steel 500 N /mm ²	Ø22 mm	Ø40 mm
Part diameter on rings or pipes (mm) steel 500 N /mm ²	Ø ext. 30 mm / Ø int. 10 mm *	Ø ext. 60 mm / Ø int. 30 mm *
Numerical Z axis/ stroke (mm)	0 to 280 mm - Numerical by servo motor	
Adjustable speed (mm/s)	0.1 to 50	
Accuracy / Repeatability	40 µm / 10 µm	
Power of spindle motor (adjustable speed from 250 to 1250 tr/mm)	7,5 kW	15 kW
Standard Equipment	<ul style="list-style-type: none"> • Frame with 4 columns for a high rigidity • Product on its fixture is lifted up to the riveting unit • Motion is monitored by an electrical cylinder (servo motor) 	SIEMENS CONTROLLER with HMI 12"
General options	Anti rotation device Pressure pad from 5 to 10 tons Electronic control of the riveting power	

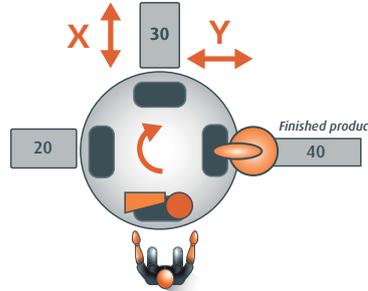
* Technical tests done on rings or pipe



VERSATILE MACHINES

CNC riveting machines for customers having a large diversity of products to manufacture on the same machine.

- Very fast selection of product by change of the tool on the machine and selection of the product program.
- High productivity with the numerical Z axis (optimization of the strokes).
- Production of multi-products in the same time.



CNC RIVETING MACHINES	CR T100		CR T200		CR T500
Power (DaN)	1 000		2 000		5 000
Indexing table diameter (mm)	Ø850	Ø1200	Ø850	Ø1200	Ø1500
Number of pallets	2 or 4				2.3 or 4
Pallet dimensions (mm)	300 x 200	400 x 350	300 x 200	400 x 350	500 x 300
Stroke in X / Y / Z (mm)	300 / 200 / 100	400 / 350 / 100	300 / 200 / 100	400 / 350 / 100	600 / 400 / 160
Speed X / Y / Z	25 m/mn (X, Y) - 100 mm/s (Z)				20 m/mn (X, Y) - 80 mm/s (Z)
Command system	Panel PC SIEMENS / HMI 8 '' Hard disk (for the storage of the production data) / 2 USB ports				
Options	Control station of components before assembly/ unloading by robot/ Electronic control of the riveting power				



CNC RIVETING MACHINES	CR 350	CR 500
Power (DaN)	2 000	
Number of pallets	2	
Dimensions of the pallet (mm)	350 x 220	500 x 300
Stroke in X / Y / Z (mm)	650 / 525 / 120	800 / 730 / 120
Speed X / Y / Z	20 m/mn	
Options	2nd riveting unit/ 1 Press station 3000 DaN / 1 or 2 lubrication stations	





ACCESSORIES / OPTIONS



Head and pressure pad
T120 or T200



Head with
anti rotation device
T120 or T200



Standard Head
with electrical pressure
pad **T120 or T200**



Multi pins head
with pressure pad



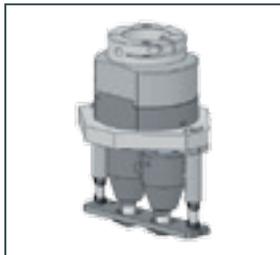
Multi- spindle head (3)



Multi spindle heads with:
1 single head **T120**
+ 1 multi pins head



Head with
Anti rotation device **S159**
and central pressure pad



Multi-spindle head (2)
with pressure pad



Rolling head type 1



Rolling head type 2



Rolling head type 3



Rolling head type 4



Rolling head type 5



Specific Tool
for assembly of
the components



Sensitive two hands
control unit



Cycle start by sensitive
hand control



lighting

Indicator light
2 or 3 colors



table for components
300 x 400 (mm)



SIEMENS
or SCHNEIDER
Controller on DLS, DLM



SIEMENS
or SCHNEIDER Controller
on RTS/ RTM



Hydraulic group located
outside the machine
S131, S201, M14, M24



Hydraulic group with
air ventilation on all models
(CNOMO STANDARD)



Handling Pallet
(on all models)



ELECTRONIC CONTROL SYSTEM

OF THE POWER RIVETING

GUILLEMIN 's riveting machines have been designed to integrate an electronic control system of the riveting power. This system developed by one of the most famous specialists in Europe is one of the most efficient of the market.



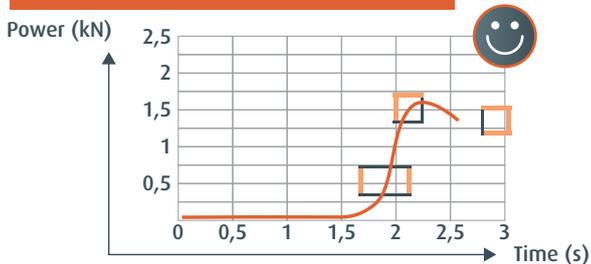
- The system is made up of:
 - power sensor (measures of the power of riveting).
 - 1 monitoring control panel.

According to the parameters of control, it checks the parts and stores data.

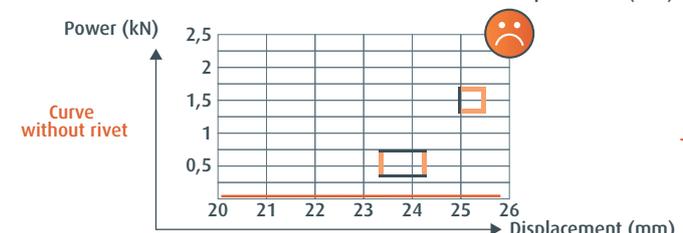
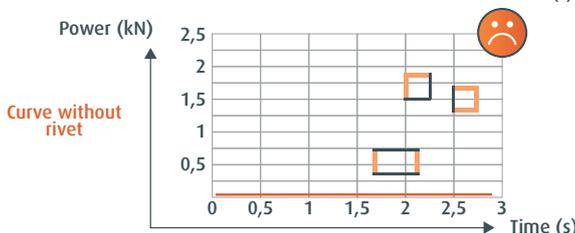
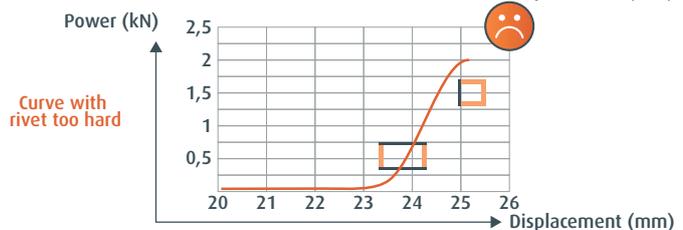
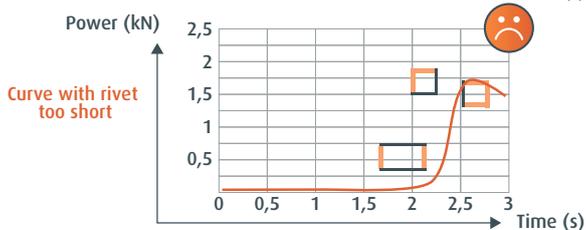
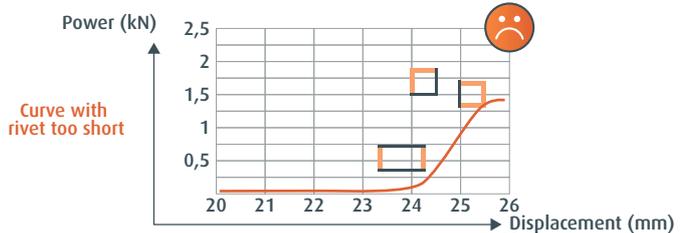
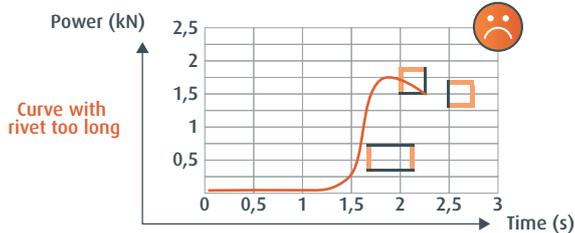
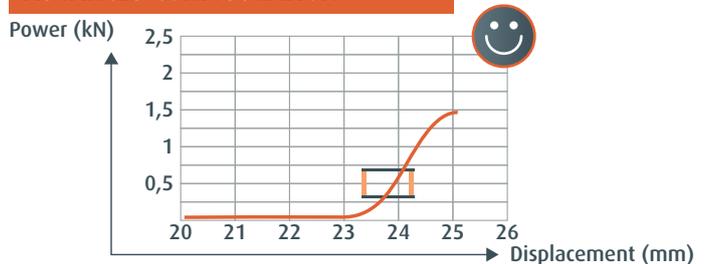


	BASIC CONFIGURATION	ADVANCED CONFIGURATION
Set	Power sensor Monitoring control panel	Power sensor Monitoring control panel Linear motion Sensor
Curves measured	F=f(t) Measure of the riveting power (P) according to time (t)	F=f(x) Measure of the riveting power (F) according to displacement (x) F=f(t) Measure of the riveting power (F) according to time (t)
Main function	Detection of a too long rivet, too short rivet, no rivet, too hard rivet. The corresponding process values can be displayed and saved in numerical form.	

BASIC CONFIGURATION



ADVANCED CONFIGURATION

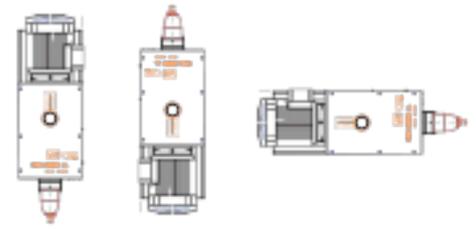




RIVETING UNITS

ORBITAL AND RADIAL

- The riveting units are intended for integration in machines or assembly lines. They can be oriented in all directions.



ORBITAL UNIT standard	GS5	GS8	GS12	GS131	GS201
Power (DaN)	750	1 200	1 900	3 000	5 000
Max Stroke (mm)	50				
Unit motion	Pneumatic			Hydraulic	

ORBITAL UNIT Narrow range	GS4	GS6	GS12H
Power (DaN)	530	1 020	2 000
Max Stroke (mm)	60	60	50
Unit motion	Pneumatic		Hydraulic

Narrow range - small size in width



ORBITAL UNIT Large stroke	SV8	SV12	SV131	SV201	SV301
Power (DaN)	1 200	1 900	3 000	5 000	8 000
Max Stroke (mm)	150				
Unit motion	Pneumatic			Hydraulic	

Large stroke - for the products which require a large stroke to reach the riveting point

RADIAL UNIT Standard stroke	GM8	GM12	GM14	GM24
Power (DaN)	1 200	1 900	3 000	5 000
Max Stroke (mm)	50			
Unit motion	Pneumatic		Hydraulic	



MODEL	MECATRONIC e6	MECATRONIC e12
Power (DaN)	1 000	2 000
Max Stroke (mm)	90 mm - Numerical axis	
Speed (mm/s)	0.2 to 150	
Power	100 % Electronic Motion Spindle rotation and unit motion by SERVO MOTORS	

CNC Unit for highly complex and precise riveting, or multi products on the same machine.

Spindle rotation speed is adjustable numerically from 500 to 1500 tr/mn

Location and stroke adjustable numerically, accuracy of 2/100 mm

Fast selection of the kind of product by change of program (PANEL PC SIEMENS)

Electronic control system of the riveting power

Automotive industry

Components in steel, Stainless steel, Aluminium, Composite, Cold plastics.



Aeronautics industry (Stainless steel and steel)



Manufacturing industry

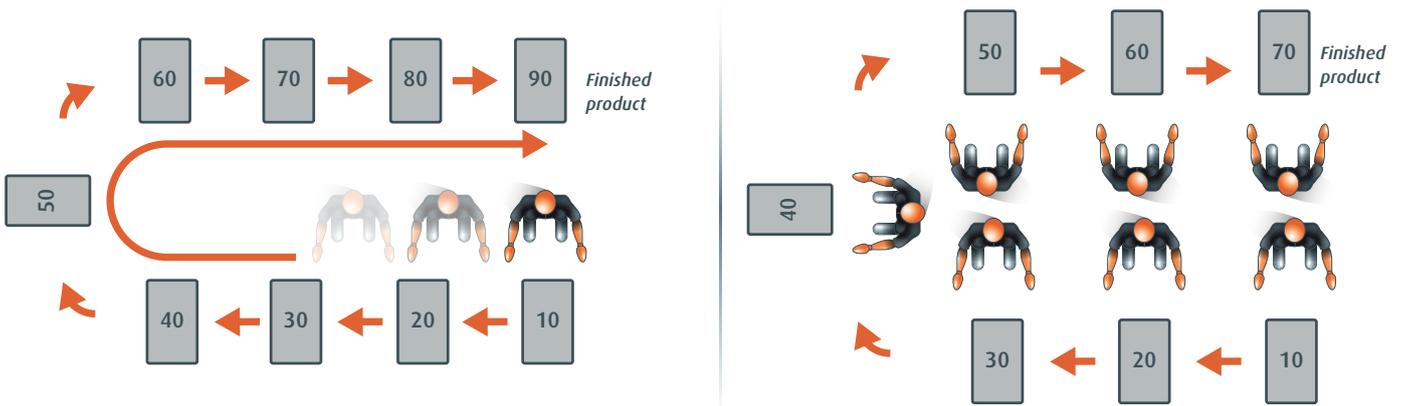


Electrical appliances industry (Stainless steel, Brass, Copper...)





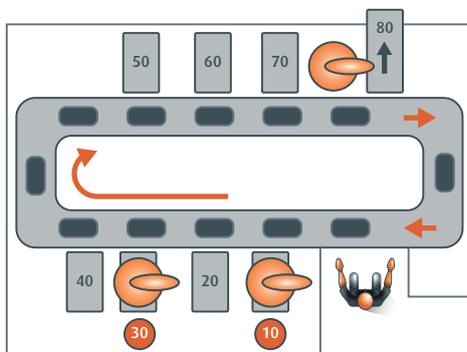
INDEPENDENT MACHINES in LINE or in U-shapped



- Each machine performs one determined operation only. One single operator (or 1 operator at each workstation) performs the loading and unloading of machines. The product is moved from station to station by the operator, or by gravity slide or accumulation conveyor.



TRANSFER LINES



- In this configuration, the product is moved on a pallet.
The various components are loaded by bowl feeders and robots. The workstations perform assembly operations and other operations such as insertion, greasing, control, marking....



Loading and assembly robots.



Bowl feeders (automatic selection and loading of the components which are part of the final product).



Workstations of assembly and control (assembly, screwing, insertion, riveting, control, marking).



Pallet transporting the product to be assembled.



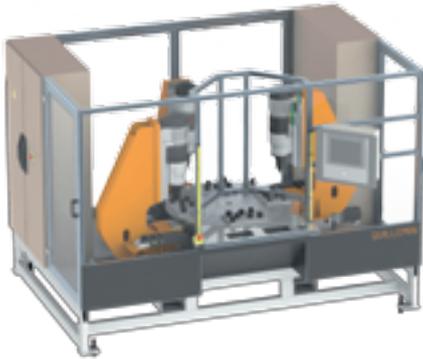
MACHINES WITH ROTARY TABLE

FOR MULTI RIVETING PURPOSES

VERSATILITY and PRODUCTIVITY

- Multi riveting center, 3 to 5 units according to the lay out

Various products simultaneously or 1 product with multiple rivets



- Riveting center (X, Y, Z), multi-riveting with 3 CNC units.

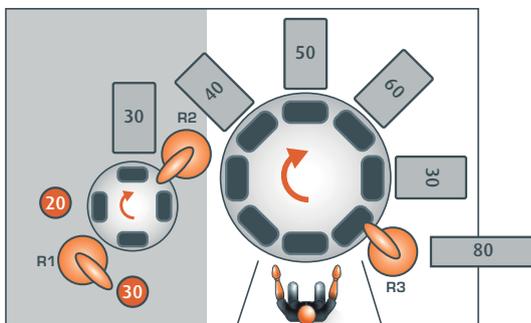


- Riveting center multi-riveting with 5 units: manually adjustable in X, Y, Z.



MULTI ROTARY TABLES MACHINES

FULL AUTO LOADING



Module n°1 of automatic loading of components

Module n°2 of assembly and control of finished part

- In this lay out, module n°1 enables the automatic loading of components and their pre-assembly.
- These pre-assembled components are then integrated in the final product in the assembly module n°2.
- The workstations perform various assembly operations such as screwing, riveting, insertion and controls.
- **Various lay out are possible: they are customized by our engineering Department according to the product and the customers specifications.**



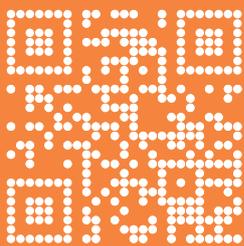
RIVETING ROBOTS

- The 5 axes robot is equipped with a digitalized riveting plier. It performs riveting operations of axes or rivets on products with intricate geometry.
- **Various lay out are possible: they are customized by our Engineering Department according to the product and the customers specifications.**





MACHINES LOCATION



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