



# polwelt

## Pneumatic presses from 360 to 6,000 kg

### Pneumatic presses

**6PHR - 8PHR - 1T - 1T LP  
2T - 3T - 4,3 T  
2T LP - 3T LP - 4,3T LP - 6T LP**

The range of EMG pneumatic presses completes the range of manual presses and perfectly complies with the customer requirements when the stroke rates are more significant and/or the power to be restored is high.

Single or continuous stroke, the range of EMG pneumatic presses is integrated into the workstations or production line, ensuring Ergonomy - Operator safety - Process reliability.

2 pneumatic presses range:

- Direct push double effect presses from 360 kg to 1t
- Indirect push double effect presses from 2t to 6t

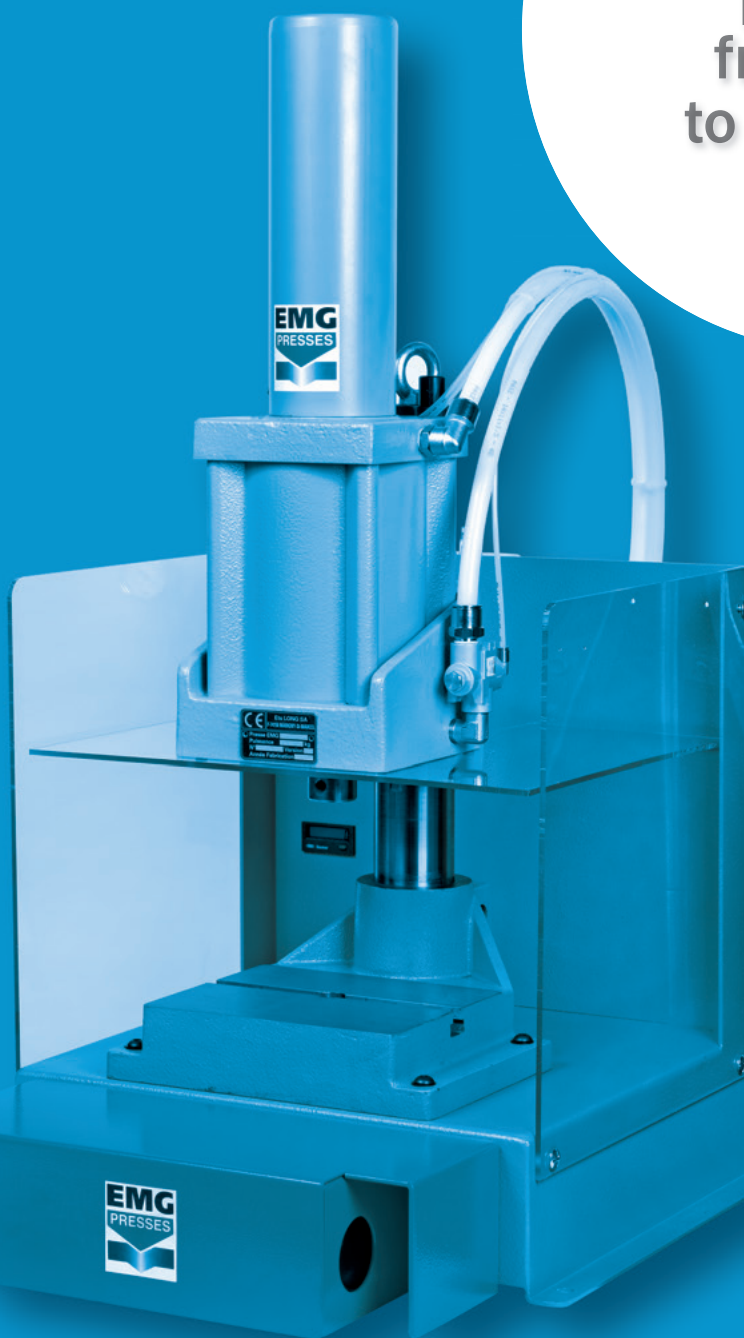
These presses are robust, accurate, flexible and ergonomic. These are frequently used for assembly, connections of rings or bearings, small forms, various crimping operations, etc...

- Slider adjusted and locked for rotation, ensuring longevity and precision.
- Automatic load of the cylinder when controls released
- Quick and reliable adjustment, with locking ensuring perfect repetitiveness.
- Accurate adjustment of bottom dead center by a mechanical stop ensuring the repetitiveness of the cycle.
- Cast iron FGL 250 or mechanically welded frame ensuring robustness and rigidity.
- No maintenance, no greasing.
- Paint: Sky blue RAL 5015 frame - Platinum grey RAL 7036 press head.

All cylinders are manufactured by EMG and have millions of users across the world which ensures their exceptionally good quality. The slider is made of chromated steel set on rings and locked for rotation by a key. The piston slides effortlessly in the chromated cylinder, seals ensuring perfect sealing of the cylinder.

The power of our presses is indicated with a pressure at 6 bars and is proportionally adjustable as a standard from 3 to 6 bars.

*E.g.: the 6PHR press delivers 360 kg at 6 bars, and thus 180 kg at 3 bars, 240 kg at 4 bars and 300 kg at 5 bars.*



# 1 - Direct push double effect presses from 360 kg to 1,000 kg

	6PHR	8PHR	1T	1T LP
Power (kg)	360	700	1 000	1 000
Travel (mm)	0 to 50	0 to 100	0 to 100	0 to 100
Adjustable clear height (mm)	20 to 250	40 to 260	140 to 200	300
Swan-neck depth (mm)	95	95	100	180
Slider bore (mm)	16H7 x 26	16H7 x 26	16H7 x 26	16H7 x 26
Table bore	14H7	20H7	32H7	50H11
Table (mm)	160 x 145	200 x 170	300 x 200	300 x 200
Press speed (mm/sec.)	150	130	100	100
Air consumption (l.)	0,6	2,3	3,4	3,4
Weight (kg)	25	50	125	150

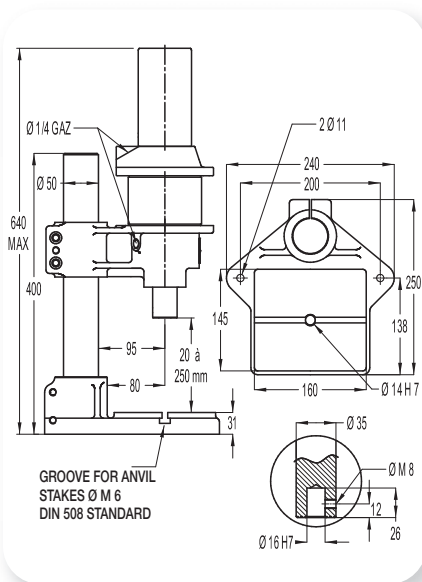


### Stroke adjustment:

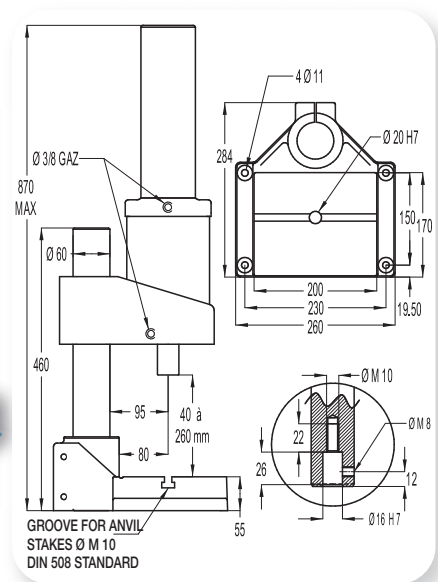
The stroke of our presses is adjustable by a mechanical precision nut, graduated to 1/10th of a mm with a locking ensuring a perfect repetitiveness of the cycle. View of stroke end mechanical stop and information sensor for bottom dead center timeout (optional).



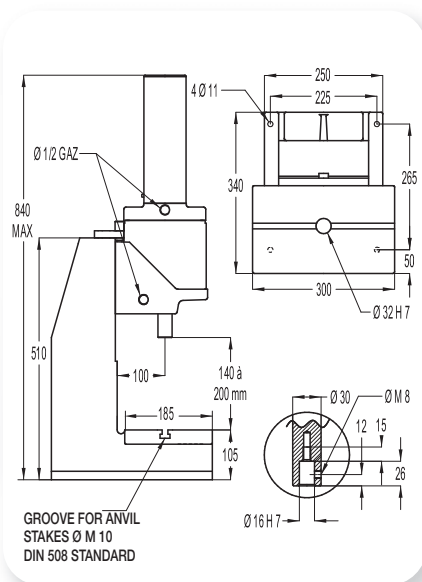
**6PHR**



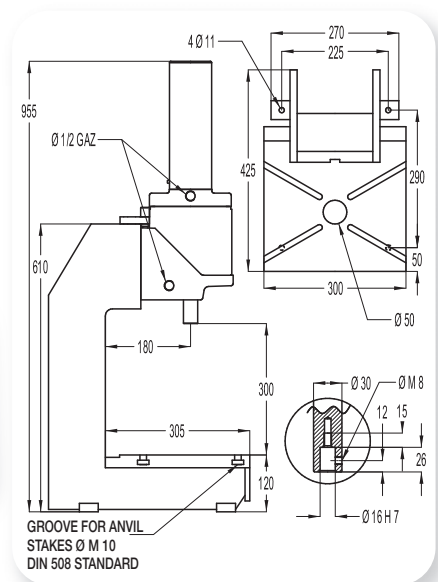
**8PHR**



**1T**



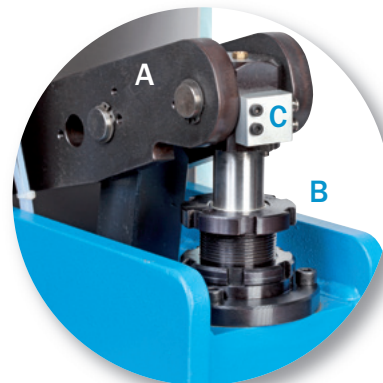
**1T LP**



## 2 - Indirect push double effect presses from 2 to 6 t

In order to obtain significant power with a lesser air consumption, EMG proposes a range of pneumatic presses with force multiplication by the principle of lever arm. This range of press is divided into 2 types of frames: standard or large passage LP.

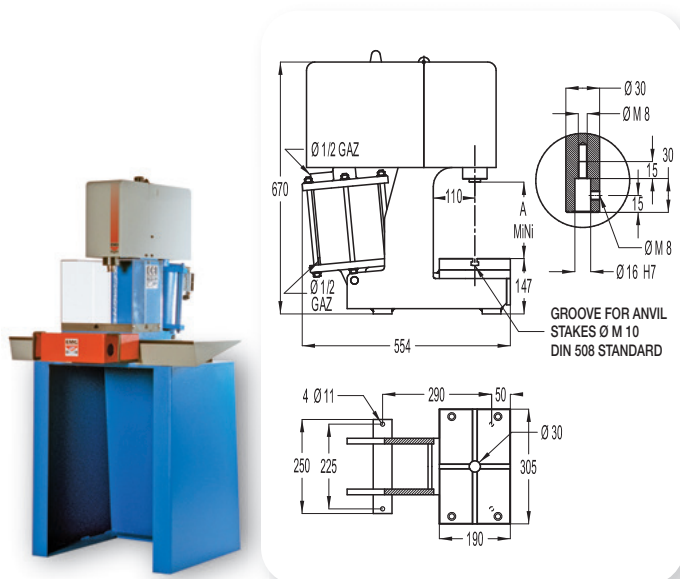
	2T	3T	4,3T
Power (kg)	2 000	3 000	4 300
Travel (mm)	0 to 69	0 to 54	0 to 40
Minimum clear height (A in mm)	200	180	175
Swan-neck depth (mm)	110	110	110
Slider bore (mm)	16H7 x 30	16H7 x 30	16H7 x 30
Table bore (mm)	30	30	30
Table (mm)	305 x 190	305 x 190	305 x 190
Press speed (mm/sec.)	75	48	26
Air consumption (l.)	5,2	5,2	5,2
Weight (kg)	150	150	150



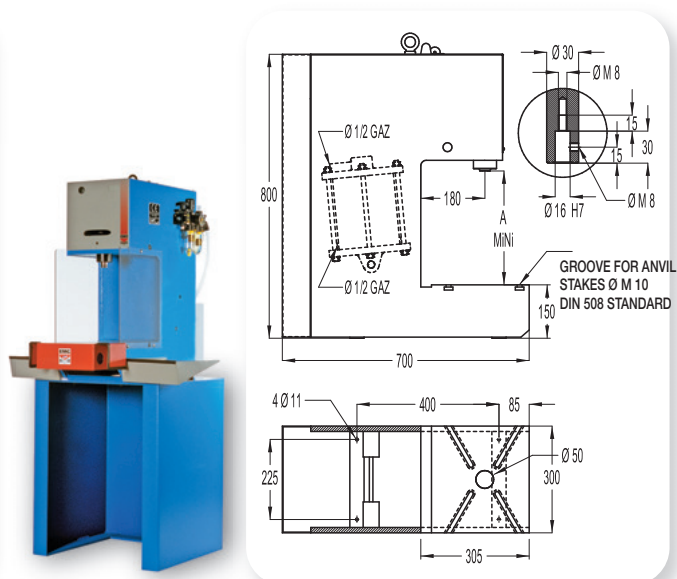
A : View of the lever arm.  
B : View of the mechanical stop.  
C : BDC timeout info sensor.

	2T LP	3T LP	4,3T LP	6T LP
Power (kg)	2 000	3 000	4 300	6 000
Travel (mm)	0 to 69	0 to 54	0 to 40	0 to 50
Minimum clear height (A in mm)	315	300	295	305
Swan-neck depth (mm)	180	180	180	180
Slider bore (mm)	16H7 x 30	16H7 x 30	16H7 x 30	16H7 x 30
Table bore (mm)	50	50	50	50
Table (mm)	300 x 295	300 x 295	300 x 295	300 x 295
Press speed (mm/sec.)	75	48	36	20
Air consumption (l.)	5,2	5,2	5,2	9,8
Weight (kg)	200	200	200	230

### 2T - 3T - 4,3T



### 2T LP - 3T LP - 4,3T LP - 6T LP



## > Versions of control for pneumatic presses



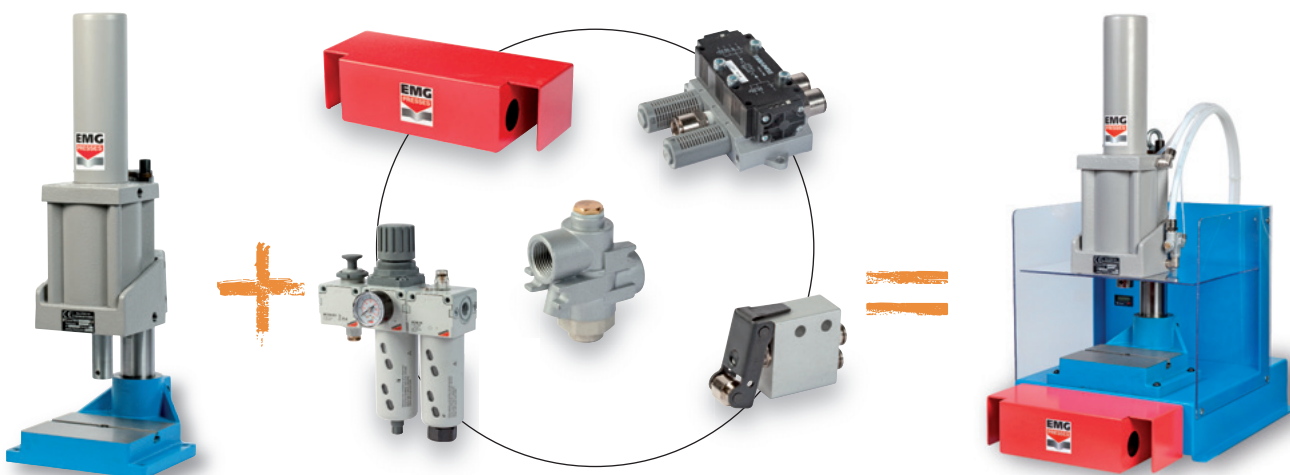
- **Version 1:** intended for integration by the customer

Only machine delivered, no controls, no equipment.

- **Version 2:** running condition with two hand controls

Version 1 + :

- Two hand controls with push buttons.
- Protection of side and top tables.
- Distributor, check valve, control valve of protection cover and pneumatic fittings.
- Regulation and lubrication filter (lockable).

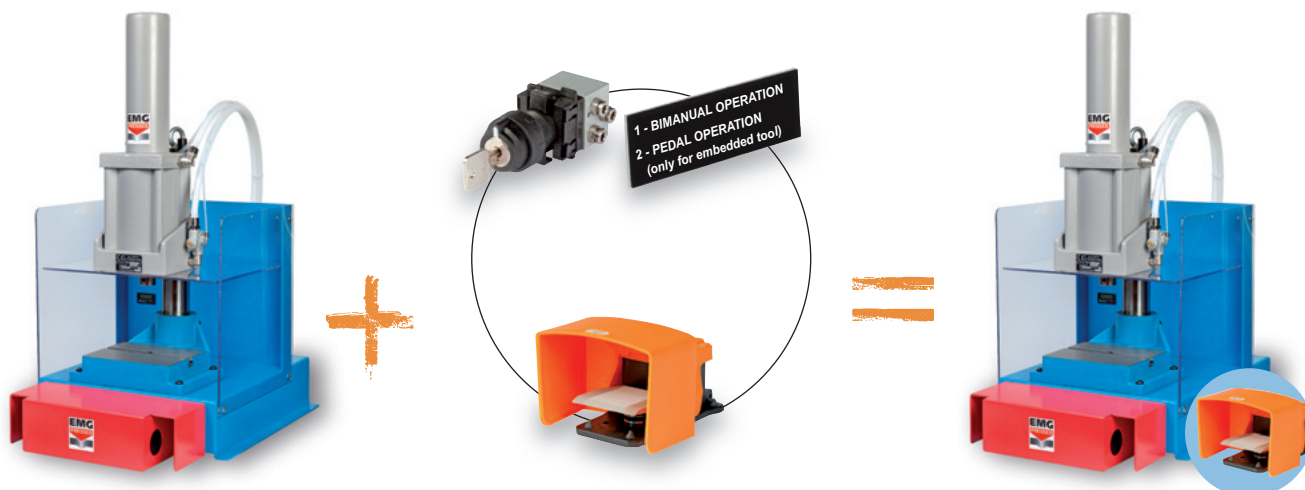


- **Version 3:** running condition with two hand or pedal controls

Version 2 + :

- Pedal control for embedded **tool work\***
- 2-position key selector.

*\*Definition: The embedded tools must be intrinsically safe. Their corresponding openings and safety distances must be in compliance with the standards in force or must not exceed 6 mm. Any risk of additional deformation outside the embedded tools must be avoided.*



## > Options

### • Additional regulator

Additional regulator allowing working with a pressure from 0.5 to 6 bars.



### • 3% regulator

Power regulator, adjustable from 0.5 to 6 bars with dial pressure gauge ensuring a repetitiveness of the cycle and precision up to 3%.



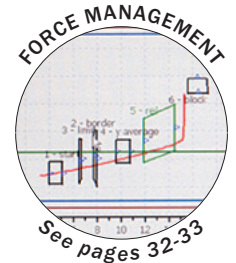
### • 1% regulator

Power regulator, adjustable from 0.5 to 6 bars with digital pressure gauge ensuring a repetitiveness of the cycle and precision up to 1%.



### • Quality control by force and/or displacement sensors

EMG proposes management solutions regarding force and/or displacement thanks to its force and displacement sensor solutions which can be adapted as per the requirement, for a 100% control.



### • Counter

5 digit counter with reset function



### • Exhaust filter

Complete exhaust filter system for reduction in pollution and noise levels (75dB instead of 85).



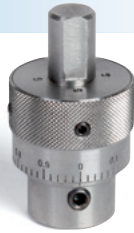
### • Exhaust restrictor

Press speed regulation by exhaust restrictor.



- **BDC micrometric adjustment**

Bottom dead center adjustment system, graduated after every 0.02 mm.



- **Anvil stakes**

Set of 2 anvil stakes for securing the tools in T slots.



- **Collet**

Collet chuck with ER25 collet for  $\varnothing 1.5$  to  $\varnothing 16$  mm shank ( $\varnothing$  to be selected).



- **Base support and lateral panels**

Press base support and set of 2 350x250 mm side panels.

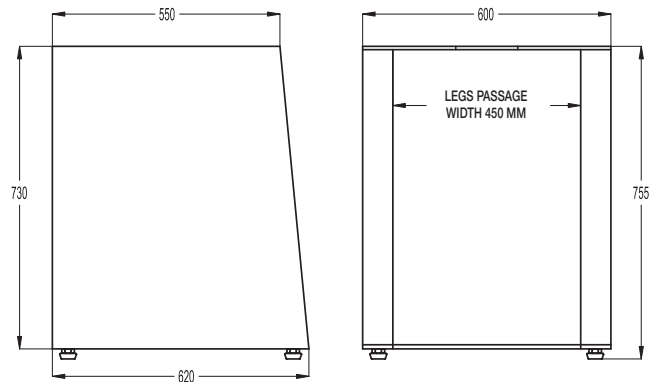
These accessories allow designing a very ergonomic workstation:

- Legs passage 450 mm.
- Height of base support 730 mm (755 mm with anti-vibration supports).
- Lateral panels inclined for the 350 x 250 mm parts.



**Additional options**

- *Bottom Dead center timeout, allowing:*
  - Stalling the press from 0 to 15s at bottom dead center.
  - Ensuring attainment of bottom dead center thanks to a detection in the last mm.
- *Press locking at bottom dead center by a support on the two hand controls and engaged by an impulse on the two hand control.*
- *Special RAL paint.*
- *Special services on request (press modifications, small tooling and fitting).*

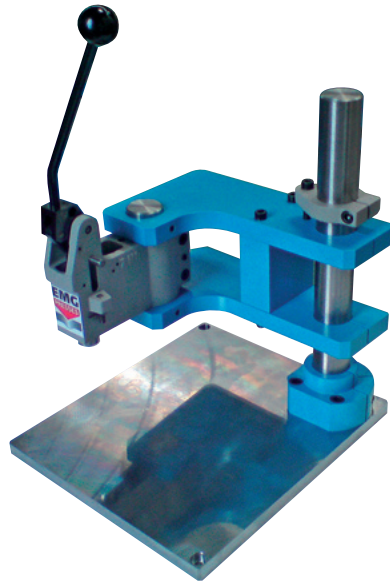




## > Special services

In order to comply with the requirements of specific applications required by some professions, EMG proposes special tailor-made equipments, perfectly adapted to specifications and production constraints.

Thanks to its design department and a pool of more than 40 machines, EMG studies and carries out, on request, modifications or production of special presses as well as small fittings and press tooling.

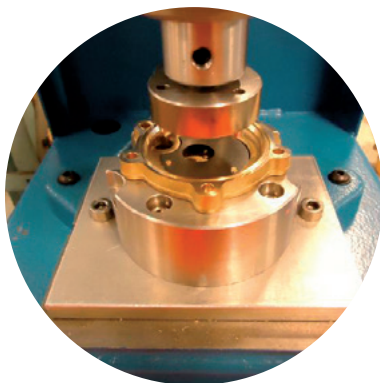
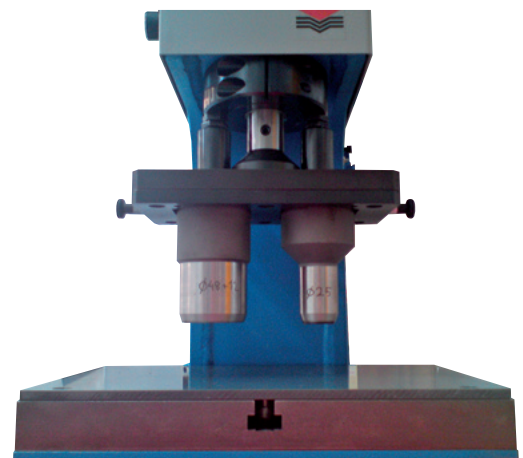
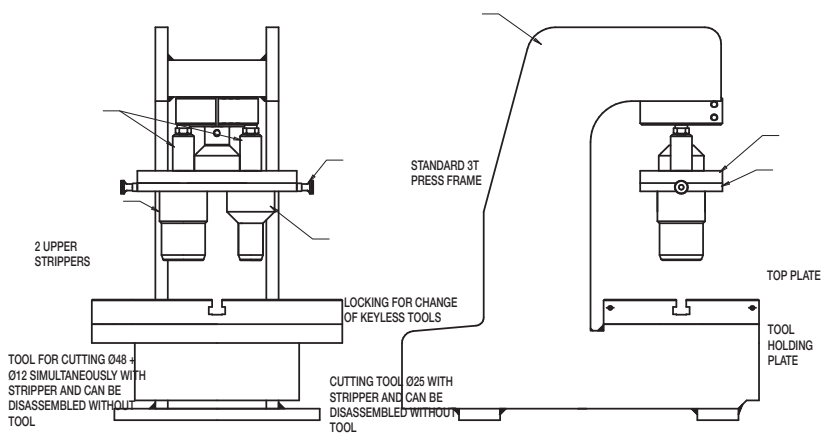


### Offset 7HR press

Offset 7HR toggle press allowing increasing the swan-neck depth and work table.

### Cutting tooling on 3T press

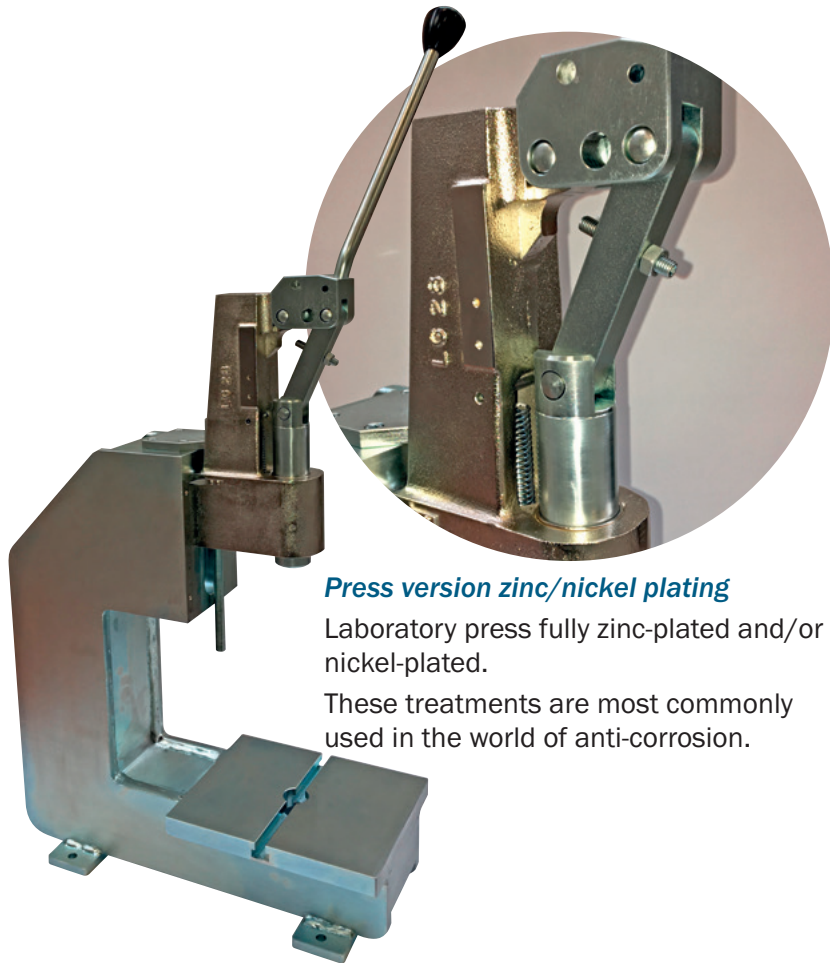
3T pneumatic press with a cutting tooling at 2 positions integrating an upper stripper for separating the parts.



### 3 point crimping tool

6PHR pneumatic press with a crimping tooling of 3 rivets for retaining a steel part in a stainless steel support.





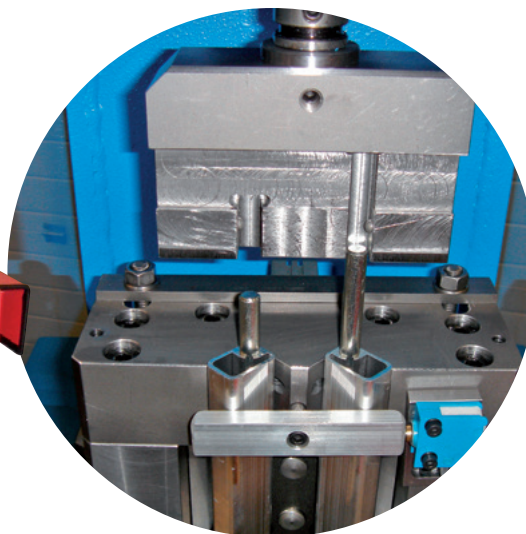
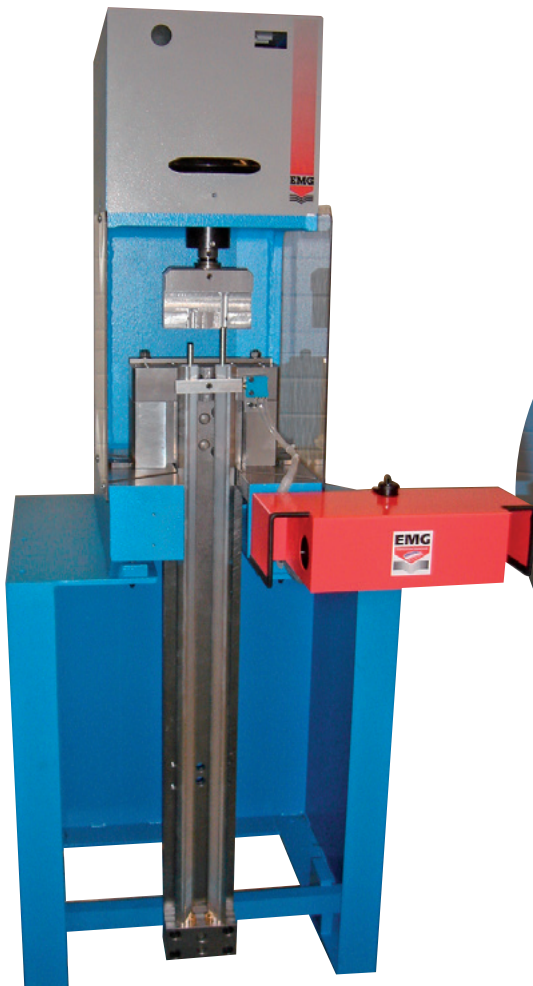
**Press version zinc/nickel plating**

Laboratory press fully zinc-plated and/or nickel-plated.

These treatments are most commonly used in the world of anti-corrosion.



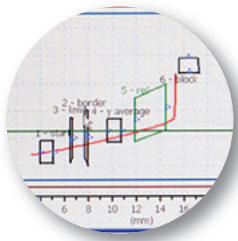
**High-capacity manual rack press 50 HR LP**



**Tooling for fitting shaft in an aluminium profile on press 3t LP**

- Modification of the frame for the passage of profile
- Study and realization of tooling





## > Force management

**EMG offers all types of effort and/or displacement management thanks to force and displacement sensor solutions adapted to each need, for 100% parts control. It is the quality guaranteed by the monitoring of industrial processes:**

- > **Permanent quality control**
- > **Product process control**
- > **Total traceability**
- > **Monitoring the production**

The quality assurance goes through a permanent process check. The EMG presses, equipped with the force and / or displacement sensor allowing production of compliant parts from the start of the production process.

The detection of anomalies is immediate if the requested parameters are not met, the monitoring unit delivers an "OK" or "NOK" message by means of an optical display, a sound signal, or by locking the press in position.

This signal allows the operator to immediately isolate the defected part.

The information is stored in the control unit and can be exported to a PC for analysis, statistics or archiving.

- **Three standard solutions exist in the range.**
- **Specific solutions can be offered according to customer needs.**

*Delivered in a ready to use condition, these systems are available in many versions depending on the complexity of the operations to be controlled and its precision.*

### I. Display of force only

**Description:**

The force control includes a force sensor (accuracy 0.5% of the nominal value) and a force indicator with digital display (50 measures per second).

**Operation:**

The operator activates the control lever of the press and reads the immediate measure.



## II. Force display with maximum value memory and OK NOK indicator

### Description:

The force control includes a force sensor (accuracy 0.5% of the nominal value), a force indicator with 5-digit LCD display (20 measures per second) and a green/red indicator light + buzzer.

### Operation:

The operator activates the press and makes a part.

- If the force value reaches the preset minimum threshold (S1), the green indicator lights up.
- If the force value exceeds the preset maximum threshold (S2), the red indicator lights up and the buzzer sounds
- A reset via a push-button on the front panel resets the last maximum value.



## III. Effort and displacement management

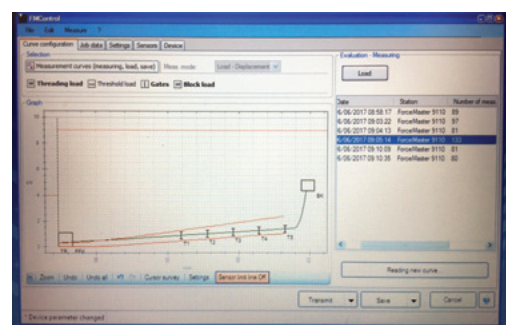
### Description:

The force control includes a force sensor (2% accuracy of the nominal value), a displacement sensor (0.1 mm resolution), a FORCEMASTER process controller (1000 measures per second), OK / NOK indicator and a buzzer.

### Operation:

It is necessary to parameterize the windows through which the curve produced by a typical part must pass (displacement in x, force in y with maximum 9 windows of passage).

As long as the resulting curve passes through the defined windows, the press operates normally and a green light validates each cycle. If during the operation the curve does not pass through one of the predefined windows, the press emits a sound signal (buzzer) and it is possible to set a lock for a pneumatic press. After isolating the bad part, the operator will have to reset the system by pressing a pushbutton and can then continue the production.

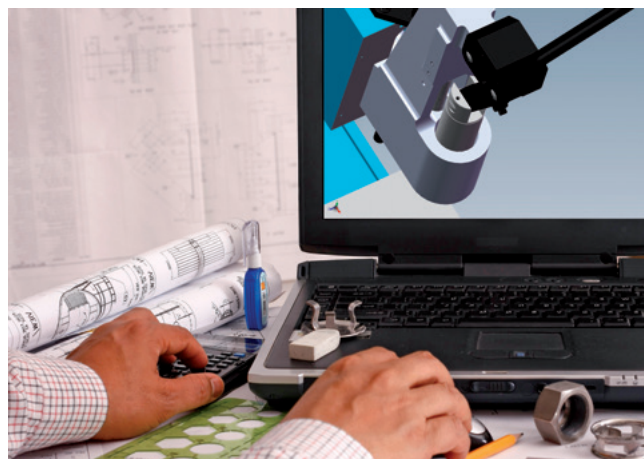


## A mark of excellence in productivity

EMG has earned its reputation of excellence thanks to its integrated design and production methods and a solid technological prowess. This is backed up by an efficient distribution network, in compliance with the expectations of manufacturers.

Benefitting from a strategy dedicated to quality and active search of performances, EMG equipments ensure competitiveness, reliability and durability which are the core values for productivity of companies in numerous domains:

- Watchmaking, jewellery,
- Mechanical optics,
- Electrical equipments,
- Automotive industry,
- Electrical goods, toys,
- Locksmithing...

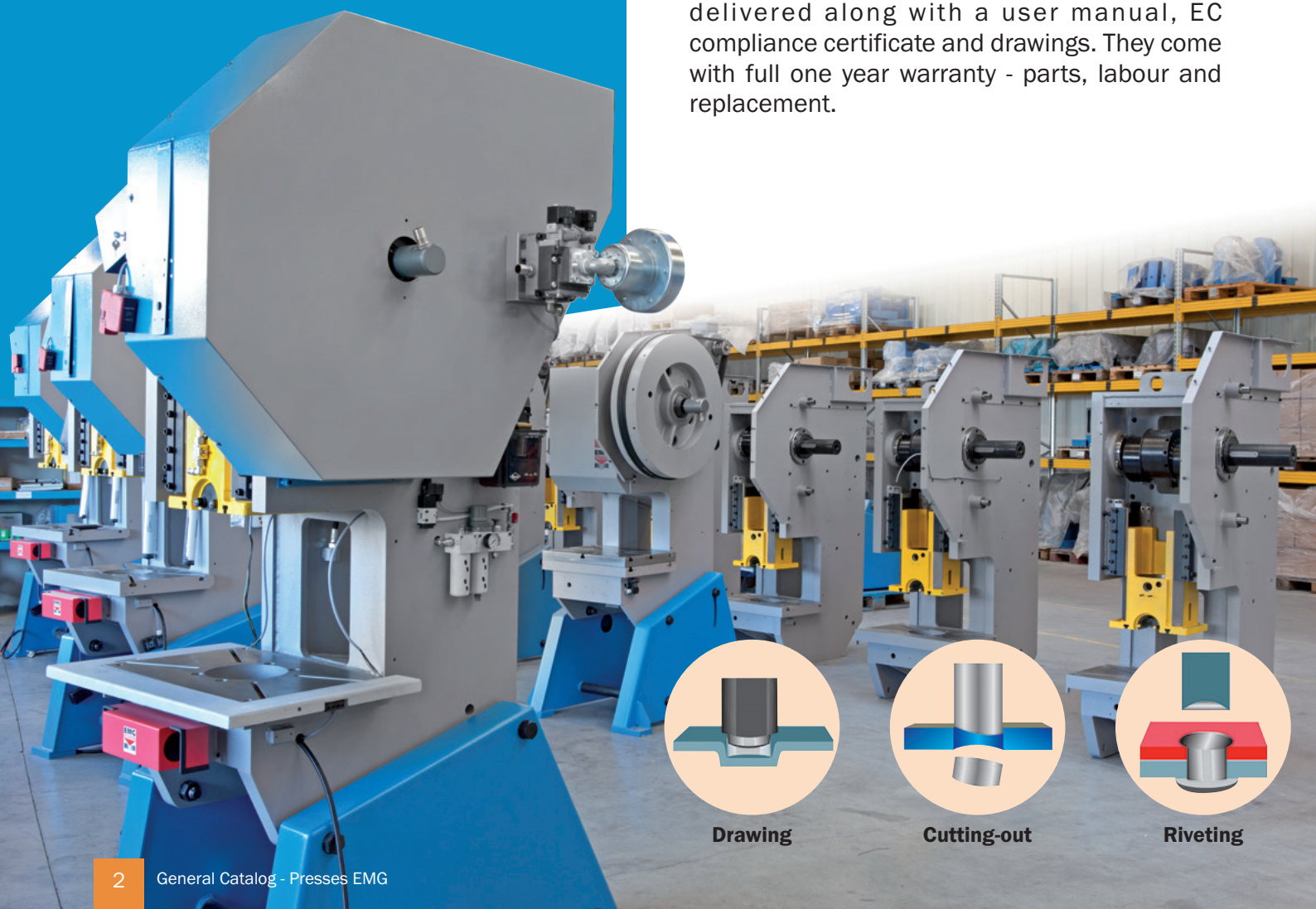


### *“Some important points” from standard to custom-made*

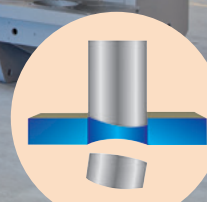
The various operations are executed carefully thanks to the power reserve of each model and a precision of a very rigorous assembly.

The entire EMG range offers a wide range of options and adaptations to satisfy the requirements of each application: LONG thus undertakes to design and equip special machines required by the specific activities of each and every profession.

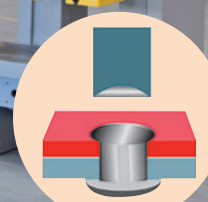
ISO-9001 certified since 2000, EMG presses are delivered along with a user manual, EC compliance certificate and drawings. They come with full one year warranty - parts, labour and replacement.



**Drawing**



**Cutting-out**



**Riveting**

## Developing breakthrough technology for the last 60 years

Manufacturer with a well-recognized expertise, EMG has developed, for the last 3 generations, a wide range of products and services appreciated by the manufacturers all around the world.

Used successfully since 1966 in numerous industry sectors, EMG presses have been the most reliable partner of manufacturers, offering equipments synonymous to precision and durability.



## Integrated production and skills

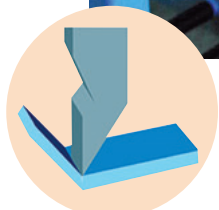
The production workshops facilitate integrated production from A to Z ensured by a multi-disciplinary team proficient in all the production steps, from designing to complex mechanical operations and assembly with precision, going through various machining operations: milling, turning, surface or cylindrical grinding. EMG also integrates thermal or surface treatment, mechanised-welding with machining, or paint.



## EMG test space for your samples

EMG proposes for its customers, at its headquarters, a showroom and a test laboratory related to the production workshops, allowing using and handling all our models.

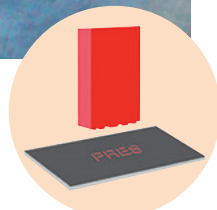
It is this department where all the tests on presses are carried out from the samples submitted by our customers and potential customers.



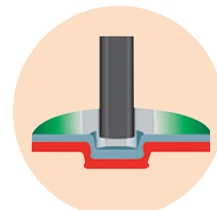
Folding



Pressing



Marking

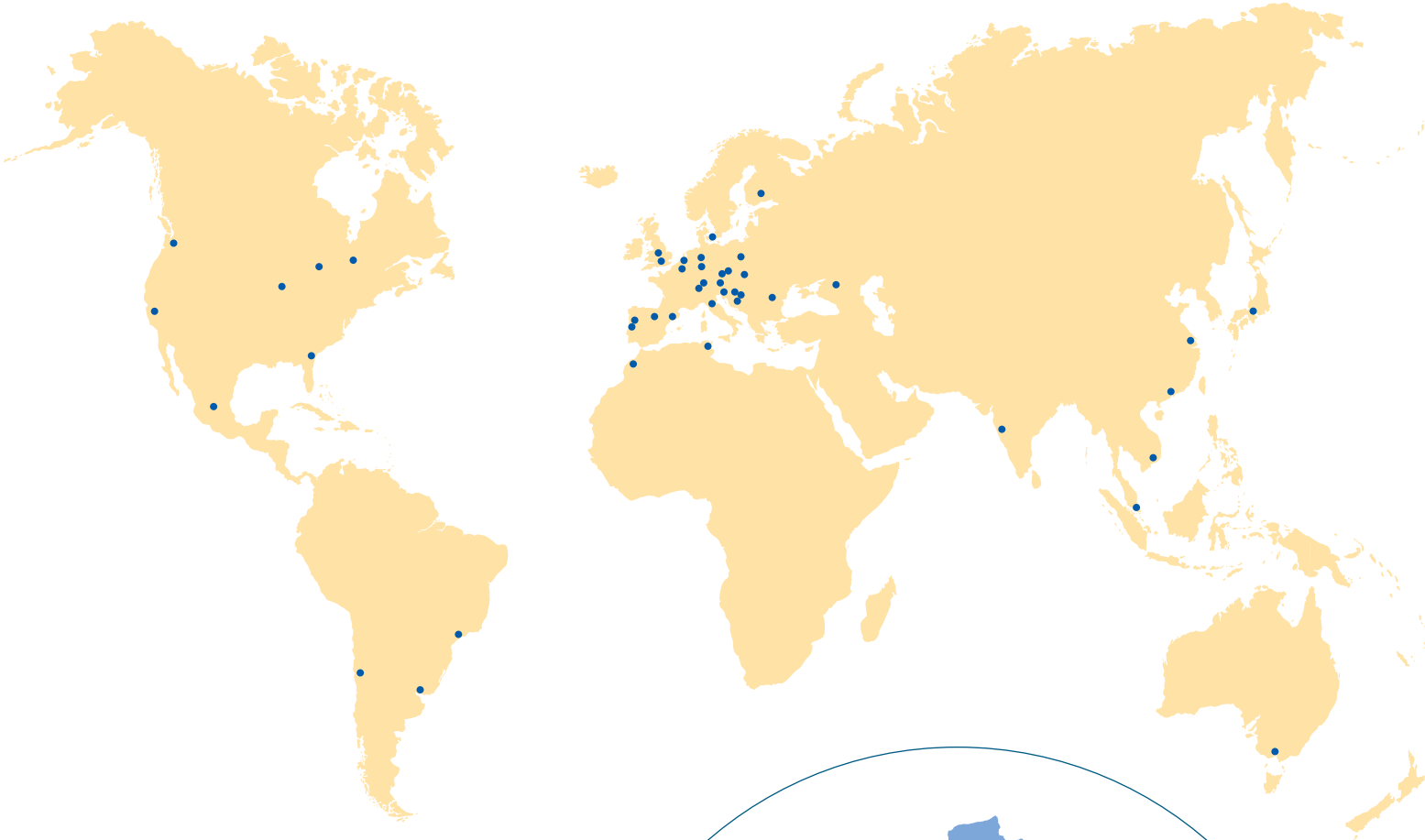


Assembling



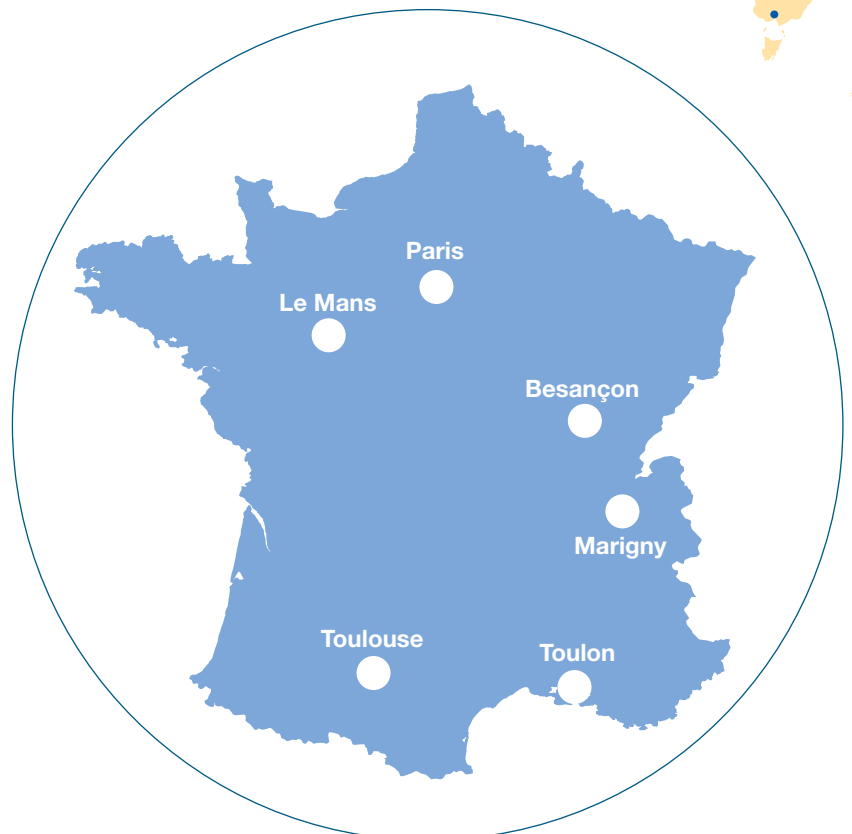
## > EMG presence in France and around the world

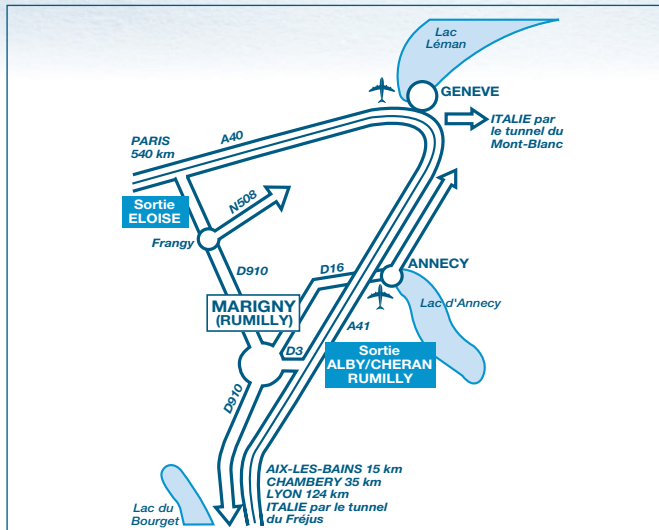
Presence across 5 continents with a strong and reliable chain of distributors, manufacturers or retailers selected by EMG which are locally recognized for their experience and quality-oriented service.



In France, our techno-commercial are also machine-tool experts, regularly trained on newer versions of the equipments and accessories.

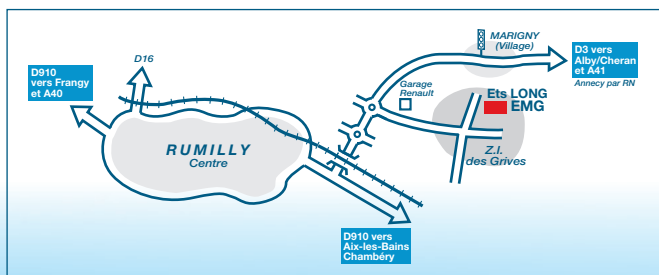
Within its distribution and sales network, all our representatives are specialists, thus ensuring the best possible suggestions and the quality offered by EMG manufacturer





EMG is set up in Haute-Savoie, a department on the border with Switzerland and Italy, and benefits from double advantage of an exceptional environment among lakes and mountains and a privileged commercial activity at the heart of Rhône-Alpes, second best French region and one of the most significant in European union.

Each EMG customer and partner throughout the world benefits, thanks to the equipments and services proposed by the brand, from a standard and a technical know-how inherited from a long industrial tradition and a permanent culture of research and development.



**polwelt**

