



Manual rack  
presses  
from 200  
to 5,000 kg



*Power available depending on the force applied to the lever arm*

| Manual rack presses                        | 2HR   | 3HR | 4HR<br>4HRLP | 14HR | 18HR | 50HR |
|--|---|-----|--------------|------|------|------|
| Static power exerted<br>on the lever in kg | Power restored by the press in the direction<br>of the slider in kg |     |              |      |      |      |
| 5  | 35  | 60  | 90           | 110  | 190  | 350  |
| 10   | 75  | 120 | 180          | 220  | 380  | 700  |
| 15   | 110   | 180 | 270          | 330  | 570  | 1050 |
| 20   | 150   | 240 | 360          | 440  | 760  | 1400 |
| 25   | 185   | 300 | 450          | 550  | 950  | 1750 |
| Maximum permitted power<br>by the press    | 200   | 400 | 600          | 1400 | 1800 | 5000 |

# 1 - Manual rack presses from 200 to 600 kg

## 2HR - 3HR - 4HR - 4HRLP

### Rack presses

The power is linear and constant over the whole travel according to the applied load on the lever.

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...

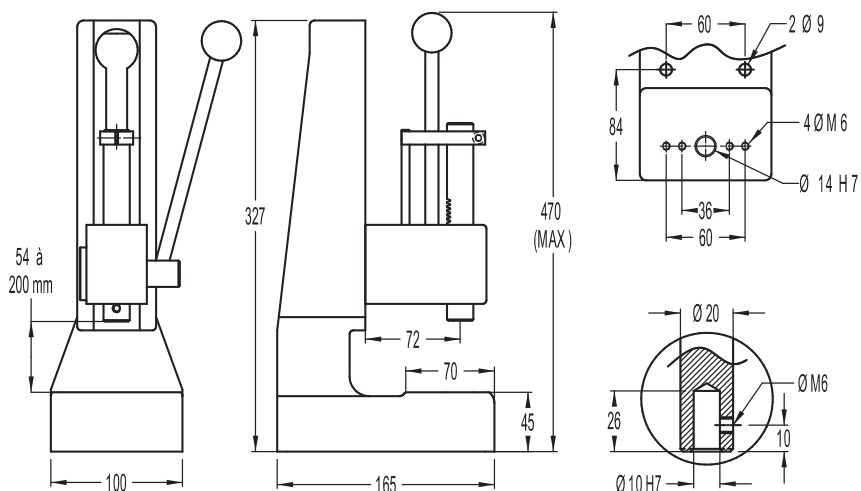
- *Slider adjusted and locked for rotation, ensuring longevity and precision.*
- *Automatic raising of the slider by spring (adjustable tension, except 2HR).*
- *Quick and reliable adjustment of the clear height.*
- *Accurate adjustment of bottom dead center by a mechanical stop ensuring the repetitiveness of the cycle.*
- *Adjustment of the starting position of the lever in order to optimize ergonomics of the press.*
- *Base support and press head made of FGL 250 cast iron, thus ensuring robustness and rigidity.*
- *Predisposition for fixation on a bench.*
- *No maintenance, no greasing.*
- *Paint: Frame in sky blue, RAL 5015  
Tête Gris Platine RAL 7036.*



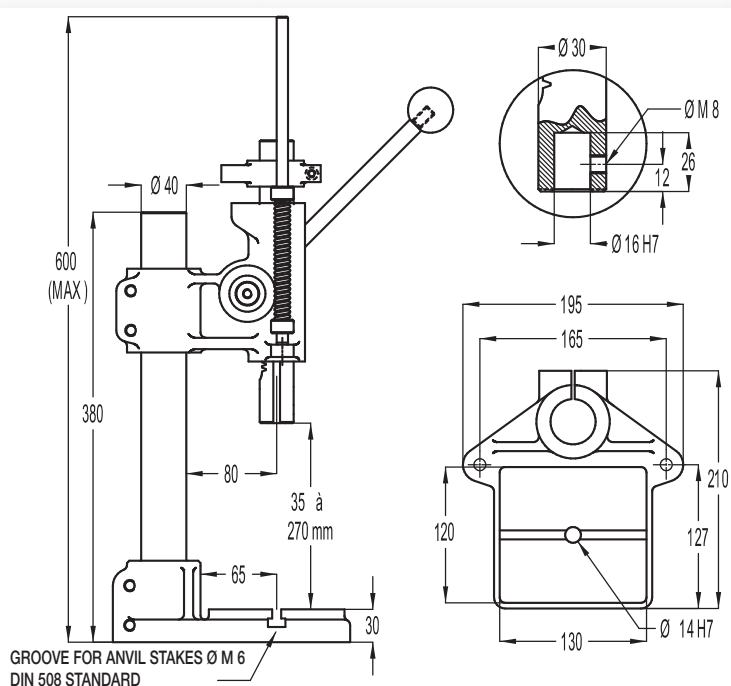
### Technical characteristics:

|                                    | 2HR       | 3HR       | 4HR       | 4HRLP     |
|------------------------------------|-----------|-----------|-----------|-----------|
| Power (kg)                         | 200       | 400       | 600       | 600       |
| Travel (mm)                        | 0 to 50   | 0 to 80   | 0 to 100  | 0 to 100  |
| Adjustable clear height (mm)       | 54 to 200 | 35 to 270 | 46 to 280 | 30 to 400 |
| Swan-neck depth (mm)               | 72        | 80        | 95        | 155       |
| Angle of rotation per mm of travel | 4° 58     | 4° 02     | 3° 37     | 3° 37     |
| Slider bore (mm)                   | 10H7 x 24 | 16H7 x 26 | 16H7 x 26 | 16H7 x 26 |
| Table bore                         | 14H7      | 14H7      | 14H7      | 14H7      |
| Table (mm)                         | 100 x 70  | 130 x 120 | 160 x 145 | 210 x 220 |
| Weight (kg)                        | 8         | 17        | 25        | 40        |

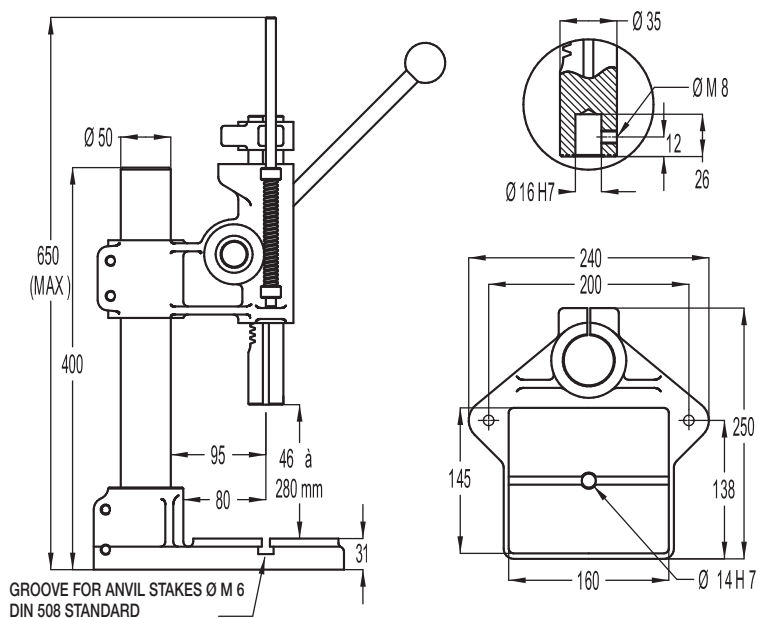
**2HR**



**3HR**



**4HR**





## > Options

### • Counter

5 digit counter with reset function..



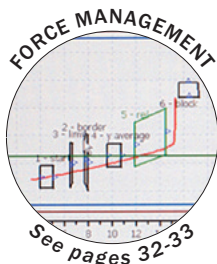
### • BDC micrometric adjustment

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



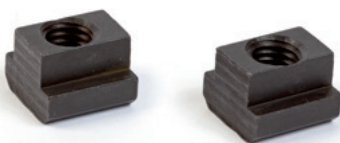
### • Quality control by force and/or displacement sensors

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.



### • Anvil stakes

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



### • Collet

Collet chuck with ER25 collet for Ø1.5 to Ø16 mm shank (Ø to be selected).



### • Capstan: travel + 100 mm, clear height increased

For bigger parts, possibility to increase the 100 mm travel (on the 4HR model), change the column to increase the clear height and replace the level by a 3-arm capstan.

4HR press with 200mm travel, clear height +600 mm and 3-arm capstan.



### • Non return system

Non return system : does not release the lever until the end of travel (ensures complete and repeatable execution of the operation).

Working stroke : from 0 to 70 mm for 3HR press, from 0 to 83 mm for 4HR press.

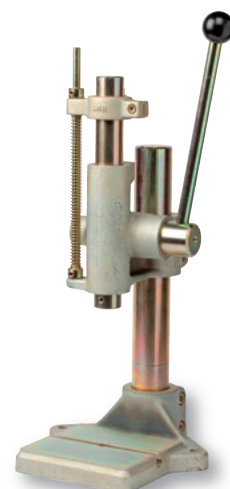


### • Press version zinc/nickel plating

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

These treatments are most commonly used in the world of anti-corrosion. It is to take advantage of their exceptional properties to protect a part against external aggressions.

Ideal for using the press in "salt mist" environments or to avoid pollution in a laboratory by painting and/or standard lubricating of our machines.

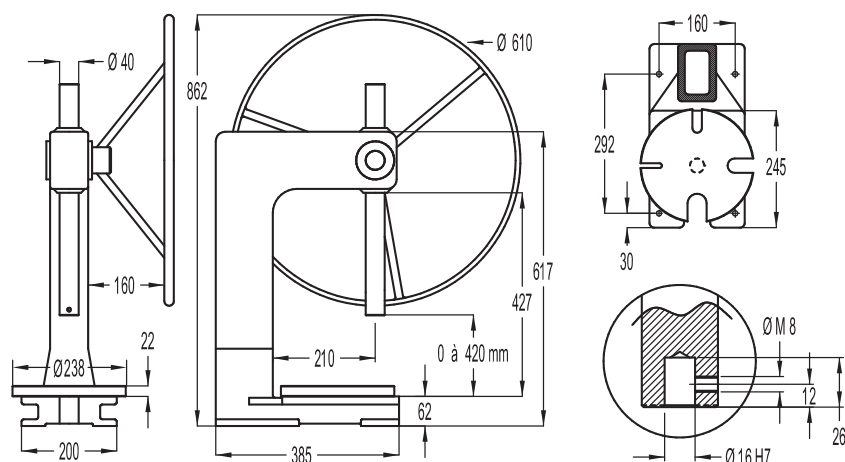


### Additional options

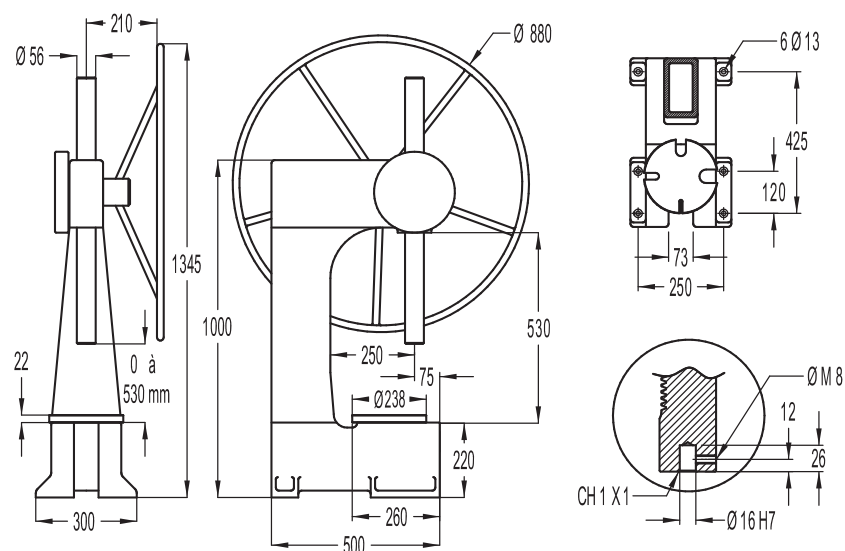
- On request: special bores, press head only.
- Special RAL paint.
- Locking of the press head on the column for rotation.
- Engage the press when in position and release by lever.
- Special services on request (press modifications, small tooling and fitting).



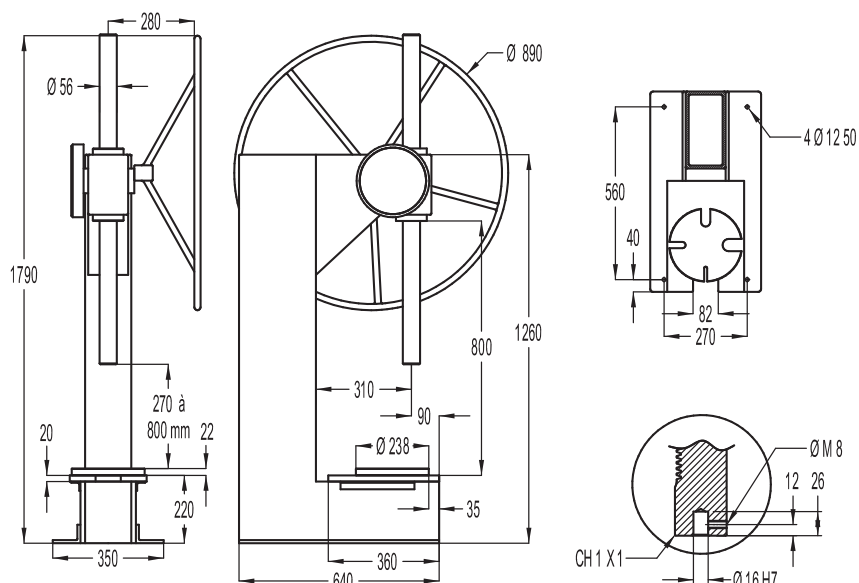
**14HR**  
**18HR**



**50HR**



**50HR LP**



## 2 - High force capacity manual rack presses

### 14HR - 50HR - 50HR LP

#### Rack presses

The power is linear and constant over the whole travel according to the applied load on the capstan.

These models complete the range of rack presses. These presses, strongly built, propose significant power throughout the travel thanks to the high quality tempered steel pinions.

These models are used for assembly, connections and deep fitting, especially for applications requiring a significant travel and/or a significant clear height.

- **Control by 3-arm capstan or wheel.**
- **Slider adjusted and locked for rotation, ensuring longevity and precision.**
- **Tempered steel pinion.**
- **Cast iron or mechanically welded frame ensuring robustness and rigidity.**
- **Option for fixation on a bench.**
- **Removable circular table.**
- **Maintenance by grease nipple.**
- **Sky Blue paint - RAL 5015.**



+  
of stroke  
+  
of clear height  
+  
of swan-neck

#### Technical characteristics:

|                                    | 14HR      | 18HR      | 50HR      | 50HR LP    |
|------------------------------------|-----------|-----------|-----------|------------|
| Power (kg)                         | 1 400     | 1 800     | 5 000     | 5 000      |
| Travel (mm)                        | 0 to 420  | 0 to 420  | 0 to 530  | 270 to 800 |
| Clear height (mm)                  | 420       | 420       | 530       | 800        |
| Swan-neck depth (mm)               | 210       | 210       | 250       | 310        |
| Angle of rotation per mm of travel | 2° 86     | 2° 86     | 12° 74    | 12° 74     |
| Slider bore (mm)                   | 16H7 x 26 | 16H7 x 26 | 16H7 x 26 | 16H7 x 26  |
| Table (mm)                         | 240 x 200 | 240 x 200 | 210 x 250 | 250 x 360  |
| Table recess (mm)                  | 55 x 90   | 55 x 90   | 70 x 120  | 82 x 115   |
| Ø rotating table                   | 238       | 238       | 238       | 238        |
| Weight (kg)                        | 45        | 50        | 145       | 145        |

#### Additional options

- On request: special bores.
- Special RAL paint.
- Travel end stop.
- Special services on request (press modifications, small tooling and fitting).

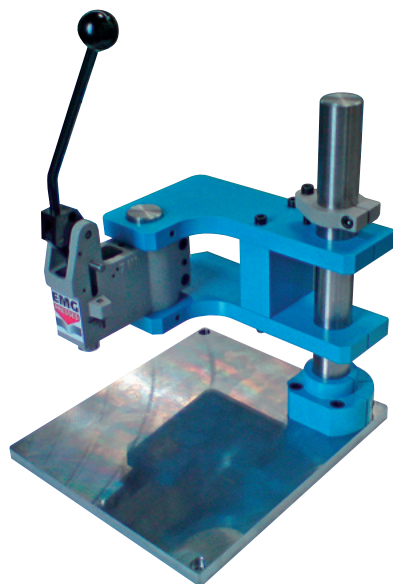




## > Special services

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.

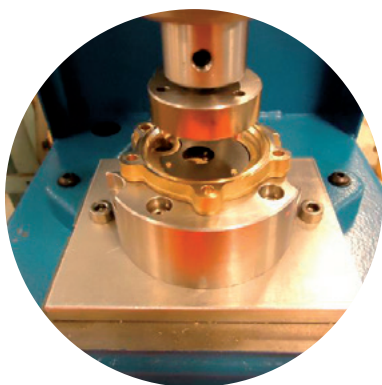
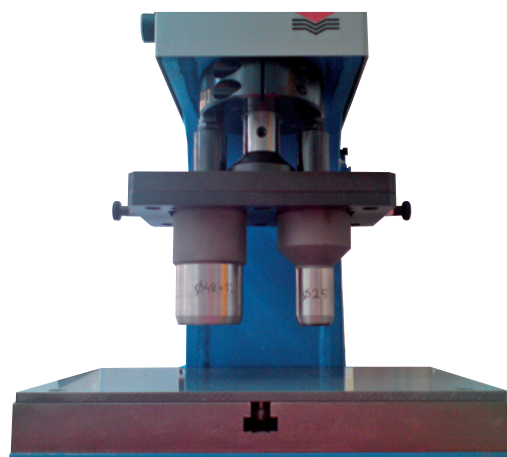
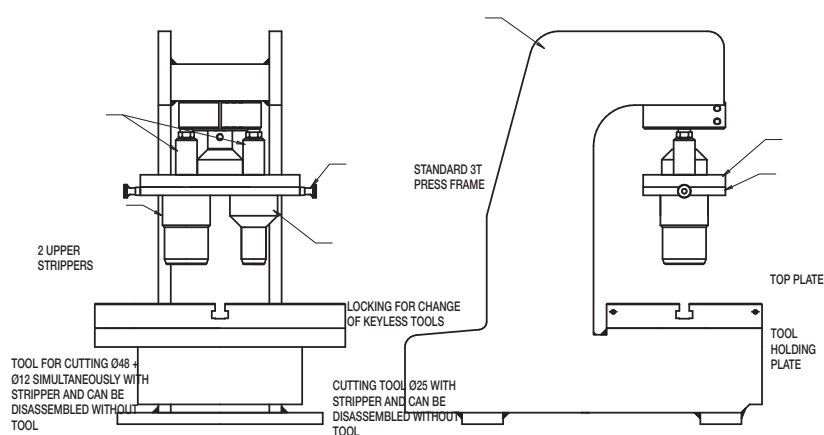


### Offset 7HR press

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.



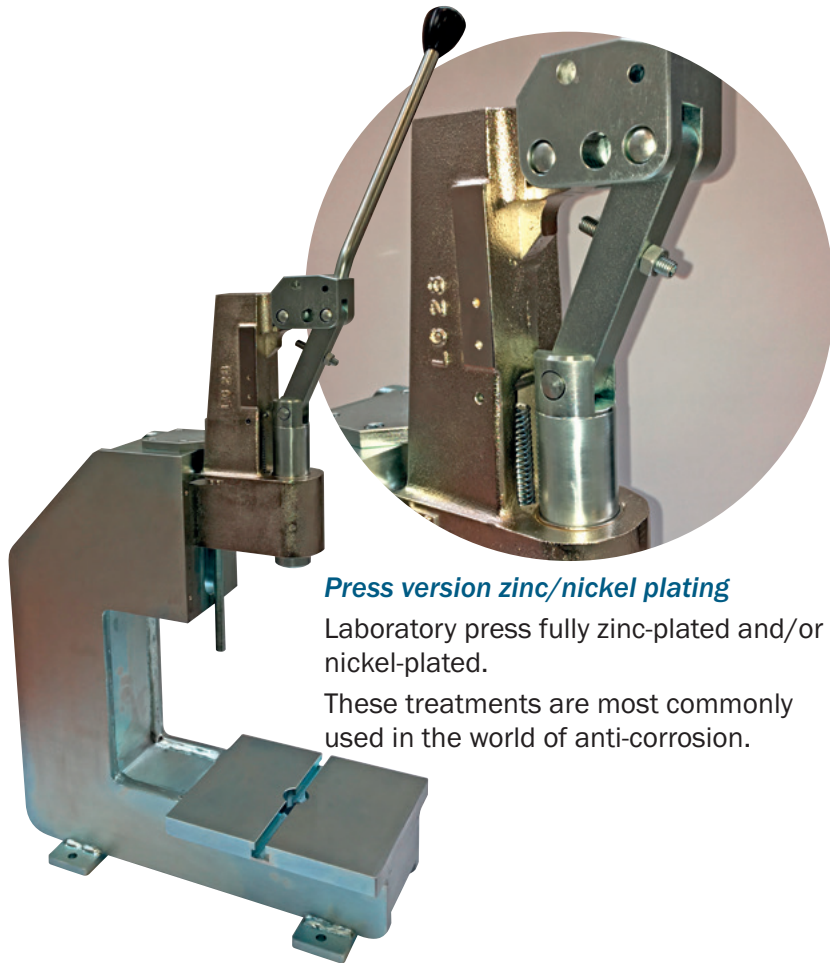
### 3 point crimping tool

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



Pneumatic press with electric controlling cabinet.





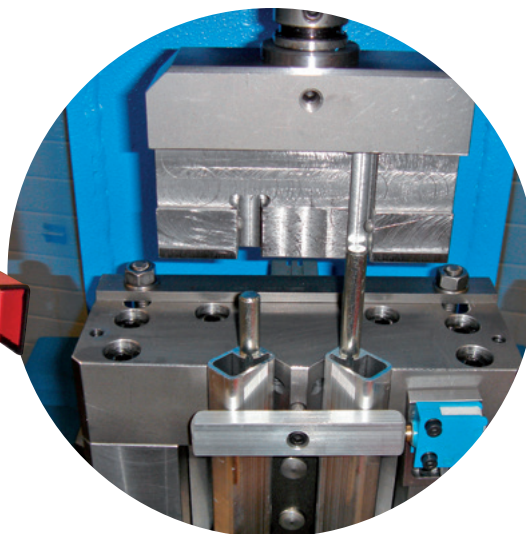
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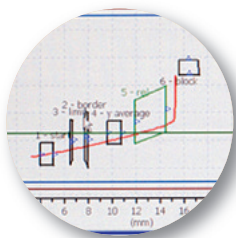
***High-capacity manual rack press 50 HR LP***



***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

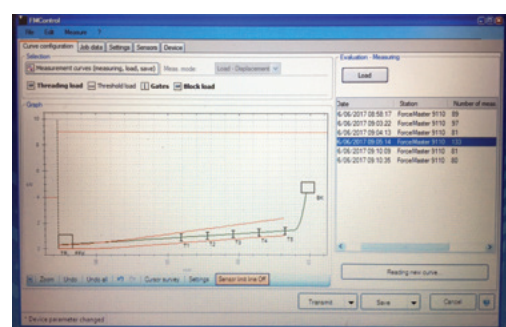
### Description:

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...

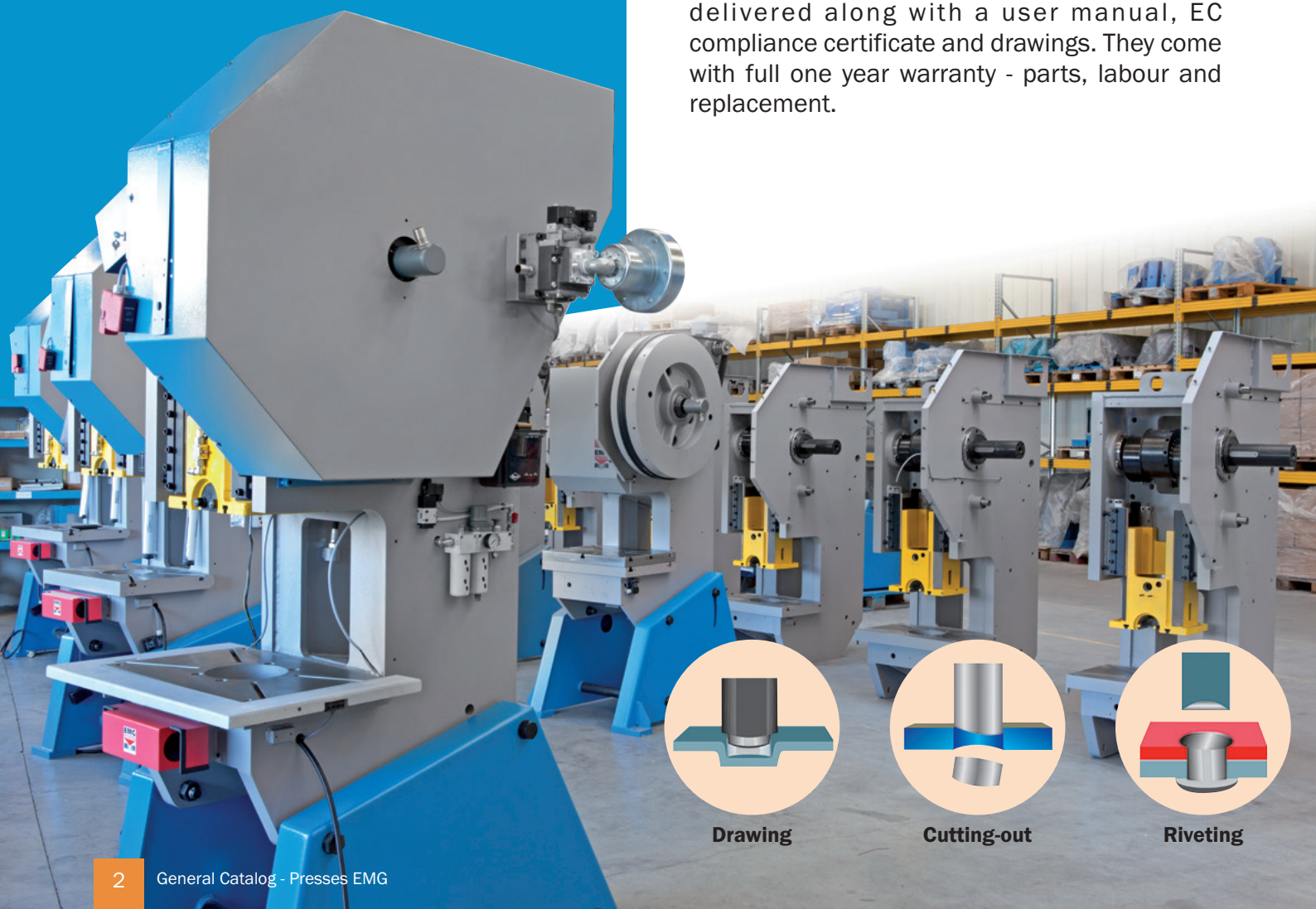


### *“Some important points” from standard to custom-made*

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.





## 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

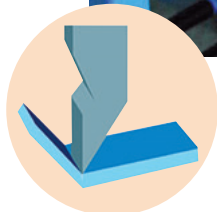
The production workshops facilitate integrated production from A to Z ensured by a multi-disciplinary team proficient in all the production steps, from designing to complex mechanical operations and assembly with precision, going through various machining operations: milling, turning, surface or cylindrical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



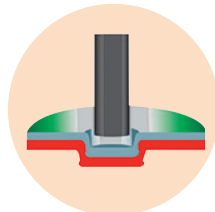
Folding



Pressing



Marking

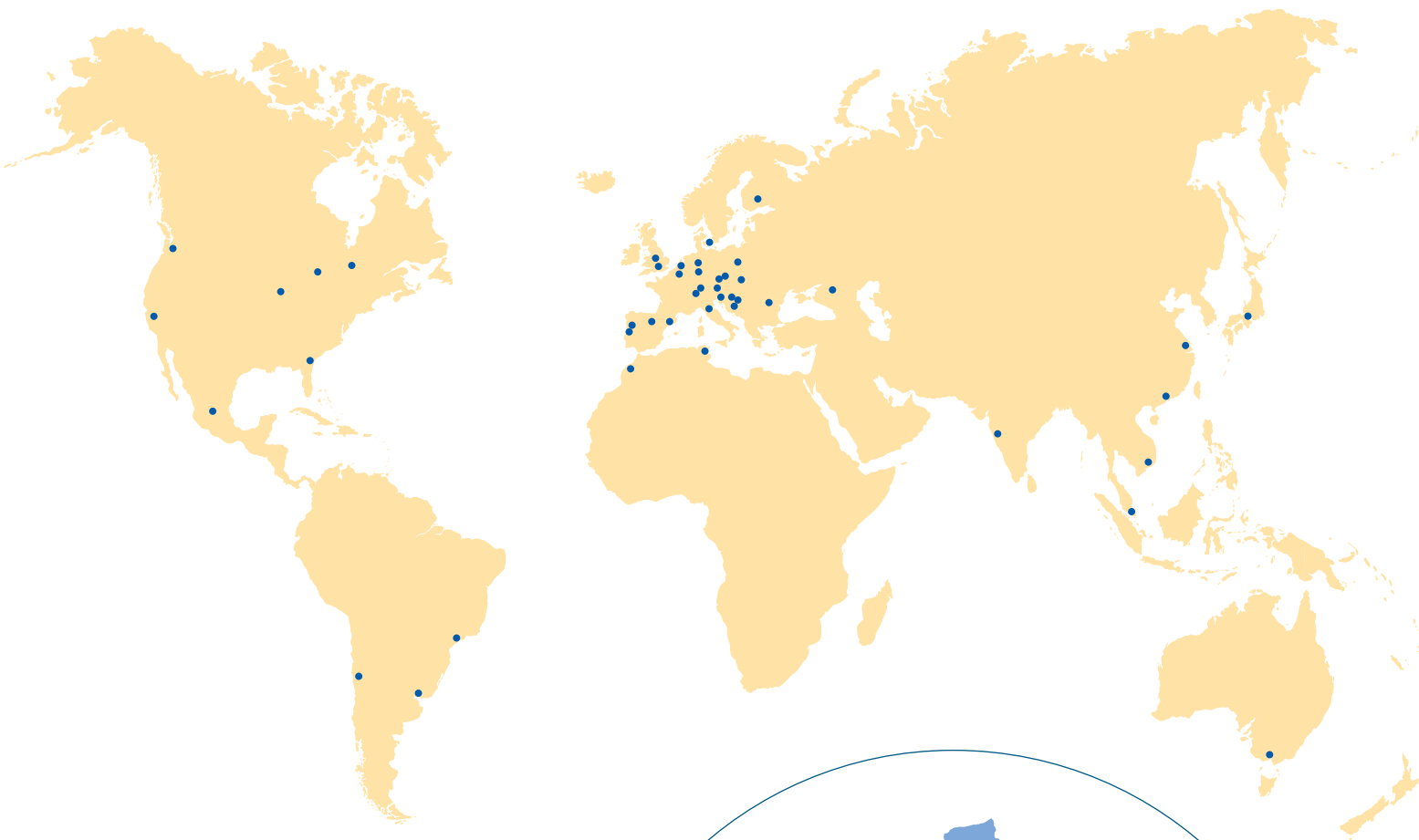


Assembling



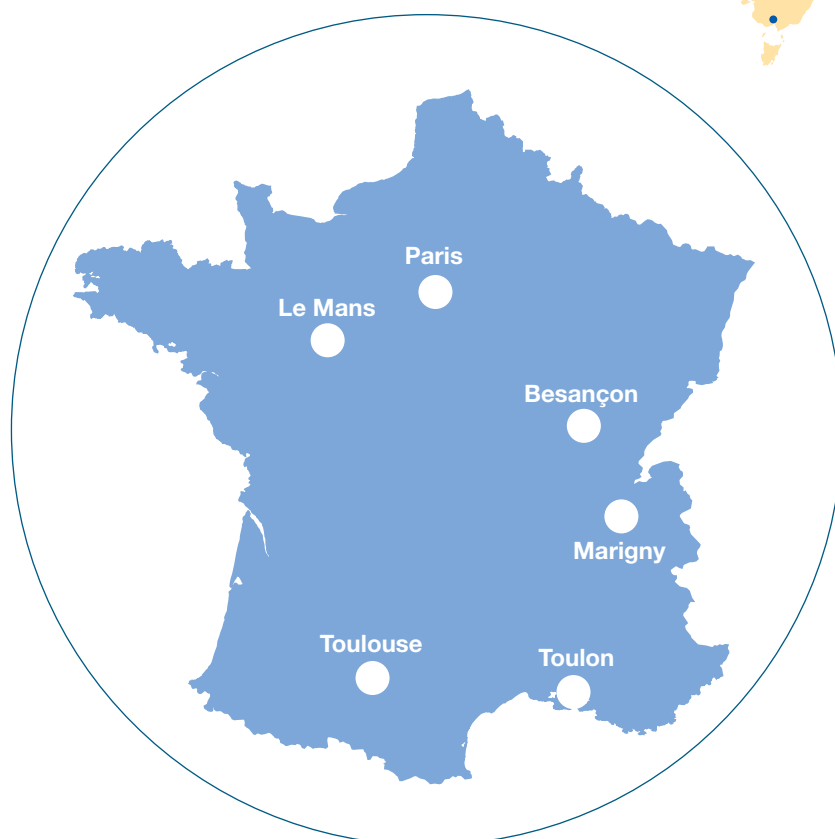
## > EMG presence in France and around the world

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.

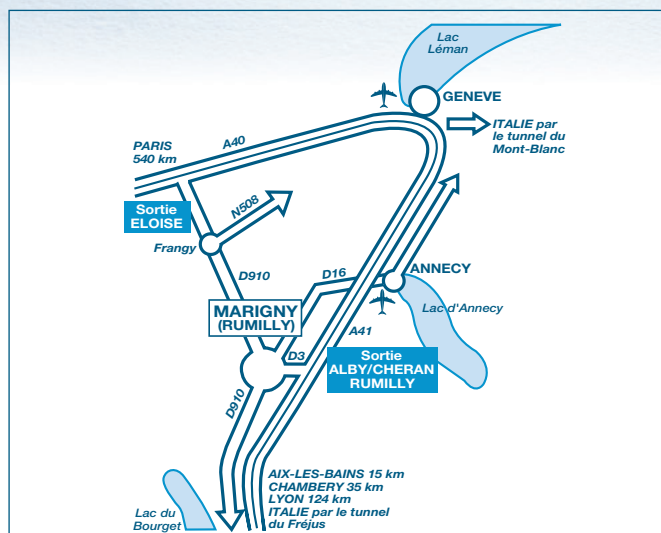


In France, our techno-commercial  
are also machine-tool experts,  
regularly trained on newer versions of  
the equipments and accessories.

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.

