



# ELECTRONIC IN DIE TAPPING UNIT FOR VERY HIGH VELOCITY

SL. 2005.1 / 2



# INTERCOM

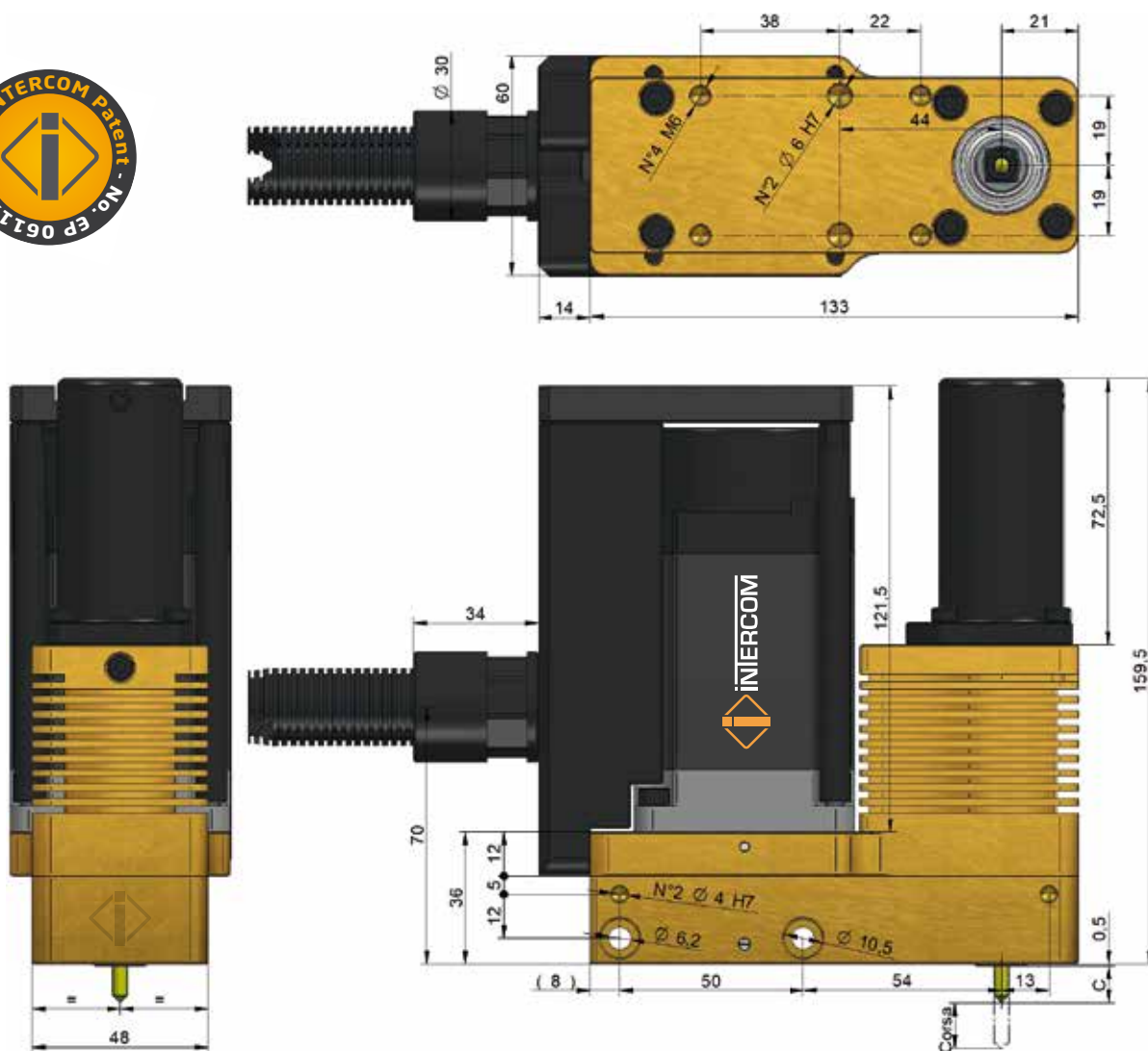
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MADE IN ITALY



# SL.2005.1 400W M2 - M5

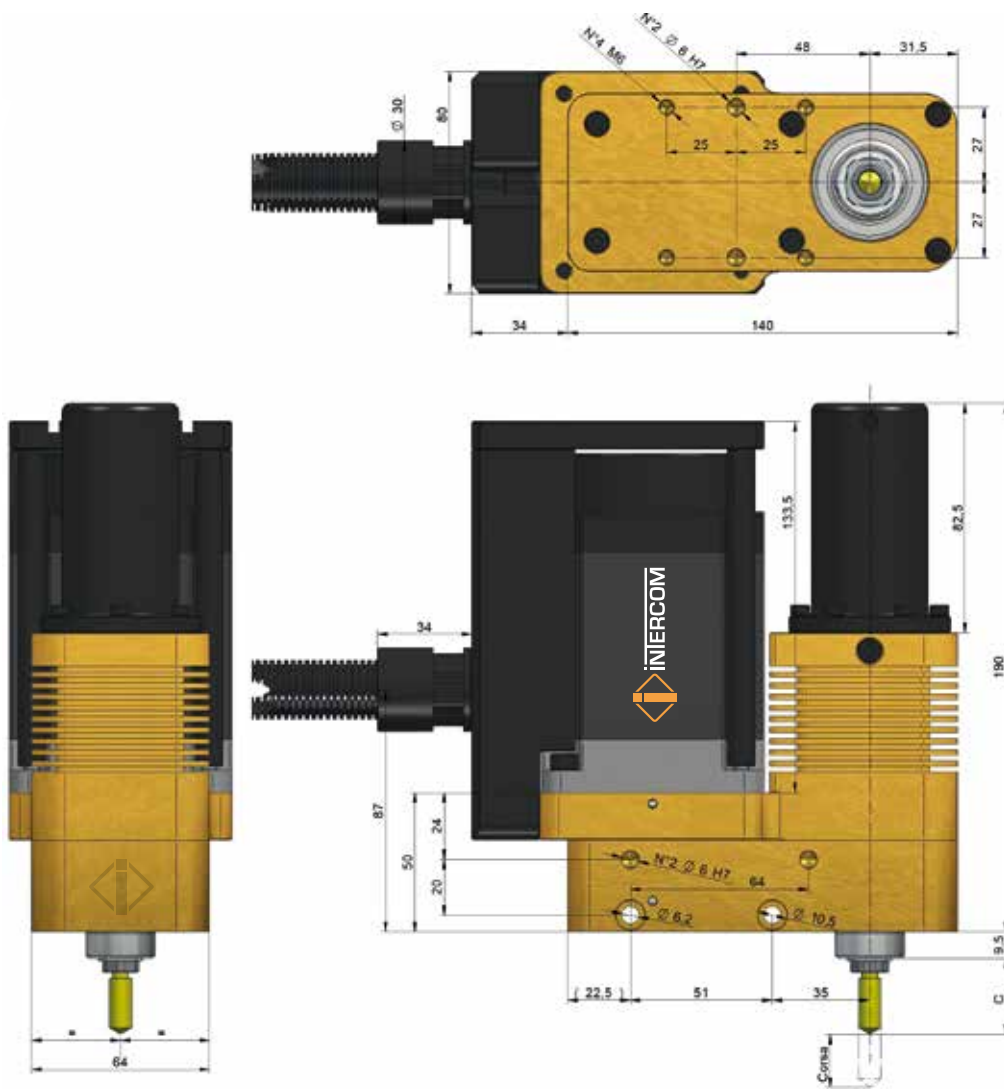


Tapping unit type	Motorization	C	Axis Stroke
SL.2005.1 M2	400 W	3 ± 1	~50 mm
SL.2005.1 M2.5	400 W	5 ± 1	~50 mm
SL.2005.1 M3	400 W	7 ± 1	~50 mm
SL.2005.1 M4	400 W	11 ± 1	~50 mm
SL.2005.1 M5	400 W	31 ± 1	~50 mm

Suggested pre-hole diameters					
M2	M2,5	M3	M3,5	M4	M5
Ø1,85	Ø2,3	Ø2,8	Ø3,3	Ø3,7	Ø4,7

ISO 6HX pre-hole diameters					
M2	M2,5	M3	M3,5	M4	M5
Ø1,8 - 1,85	Ø2,27 - 2,33	Ø2,75 - 2,81	Ø3,2 - 3,27	Ø3,65 - 3,73	Ø4,6 - 4,69

ISO 6GX pre-hole diameters					
M2	M2,5	M3	M3,5	M4	M5
Ø1,81 - 1,86	Ø2,28 - 2,34	Ø2,76 - 2,82	Ø3,21 - 3,28	Ø3,66 - 3,74	Ø4,61 - 4,70

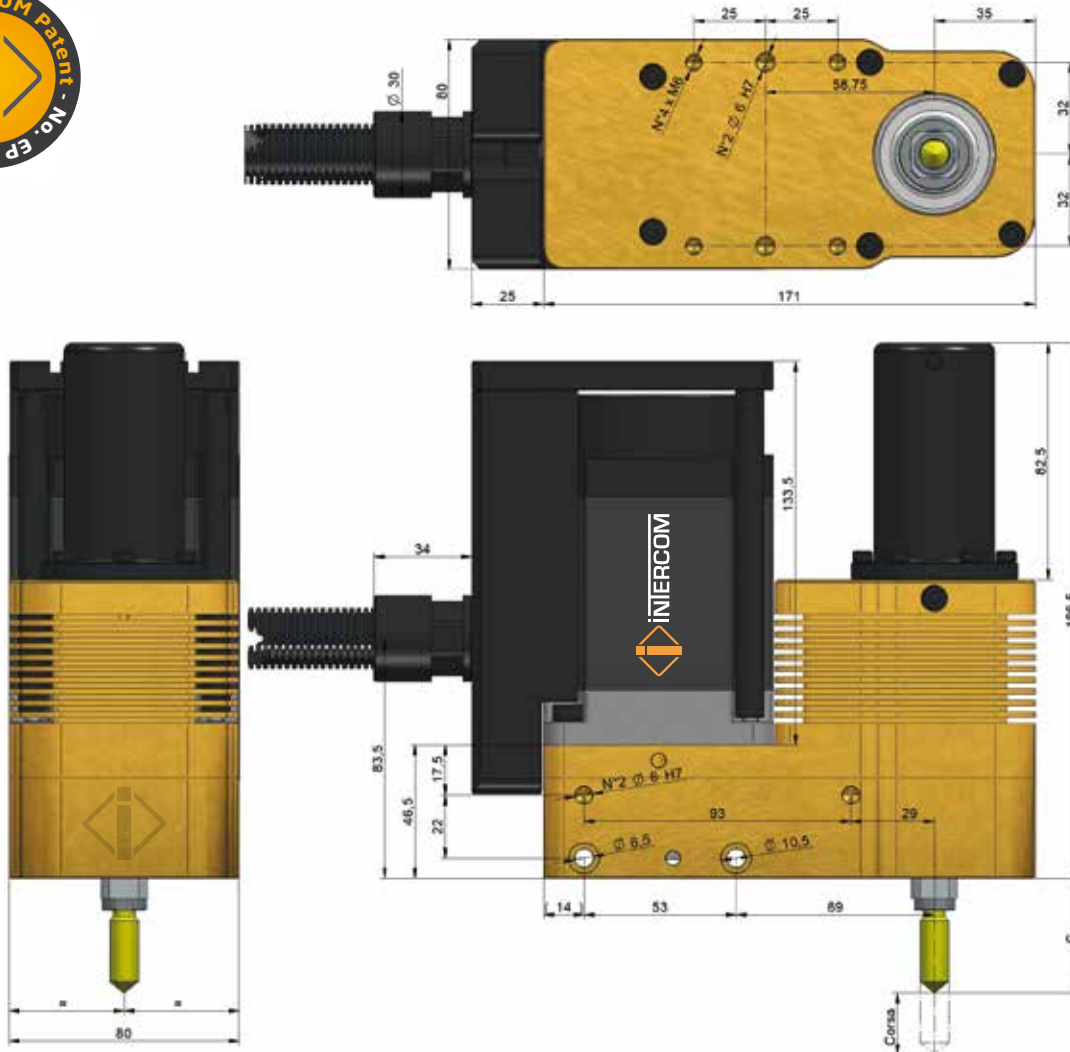


Tapping unit type	Motorization	C	Axis Stroke
SL.2005.2 M6	750W	27 ± 1	~50 mm
SL.2005.2 M8	750W	27 ± 1	~50 mm
SL.2005.2 M10	750W	27 ± 1	~50 mm

Suggested pre-hole diameters				
M6	M7	M8	M10	M12
Ø5,6	Ø6,6	Ø7,6	Ø9,4	Ø11,5

ISO 6HX pre-hole diameters				
M6	M7	M8	M10	M12
Ø5,5 - 5,6	Ø6,5 - 6,6	Ø7,37 - 7,49	Ø9,25 - 9,39	Ø11,12 - 11,28

ISO 6GX pre-hole diameters				
M6	M7	M8	M10	M12
Ø5,51 - 5,62	Ø6,51 - 6,62	Ø7,38 - 7,51	Ø9,26 - 9,41	Ø11,14 - 11,30



Tapping unit type	Motorization	C	Axis Stroke
SL.2005.2S M10	750W	40 ± 1	~50 mm
SL.2005.2S M12	750W	40 ± 1	~50 mm

## ADVANTAGES:

- Threading by high velocity; up to 150 strokes/min (according to the diameter, height and material to thread)
- Easy installation and maintenance
- The unit is compact and speed, with an electrical-mechanical functioning, without any compressed air
- The threading operation is independent from any die stroke, in each position: horizontal, vertical or inclined
- Reduced spaces
- Automatic approach of the tap to the hole
- Automatic tap lubrication at each stroke
- Torque controlled
- Control that each thread has been properly done
- Thread on dead holes
- Left threading (on request)
- Multiple threadings are possible



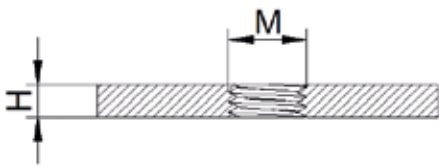
Rolling



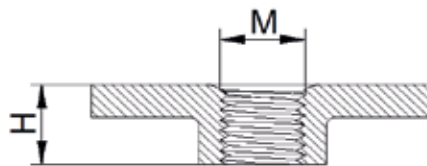
Cutting

Material to be threaded: \_\_\_\_\_  
 Threading "M": \_\_\_\_\_  
 Thickness "H" of the thread: \_\_\_\_\_  
 How many holes to thread: \_\_\_\_\_  
 Time required for threading operation: \_\_\_\_\_  
 Threading angle  $\beta$  (see at page 07) \_\_\_\_\_

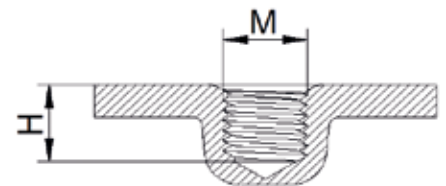
## Types of threaded holes



Through hole



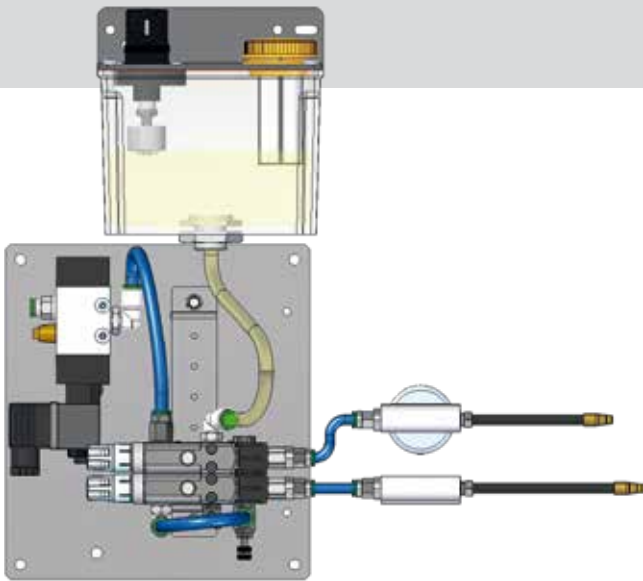
Skirted through hole



Dead hole

**Send by fax at the +39 02 95300023  
 or by e-mail at [intercom@intercomonline.it](mailto:intercom@intercomonline.it)**

## Minimal lubrication pumps



Minimal pumps emit a preset quantity of lubricant as an instant spray, just after receiving an electrical impulse. Such a spray, which consists in a pressure of oil, is suitable to lubricate as well as a tool area or a precise point like a thread.

At each pulse, the emission does not generate fog.

The particularity of these pumps consists in being able to dose (for each individual pump body) the proper volume of lubricant required at each cycle through special nozzles, to create a homogeneous spray.

They are simple to install, to configure and to use.

The tank is equipped by a float which allows to monitor electrically the quantity of residual lubricant.

An automatic lubrication of the taps inside the die, guarantees longer tool life and high performance.

The operator does not have to worry about lubricating the die and can operate only on machine management and quality of the production.

Minimal pumps are modular systems and can be available in different configurations, according to the types of use.

### Oils

#### Integral oil



Pumps can work with different kinds of lubricants, high viscosity oils and light oils, which can be carefully controlled.

#### Emulsible oil



Suitable for cold steel deformation processes. It gives high performances in the fine blanking, traditional blanking, drawing, bending, minting and by the use of rolling taps, for both steels and stainless steels.

A universal oil suitable for scrap removing and cold deforming. It grants more high performances and longer life time to the parts of the die.

Both oils are new green generation.

They follow all environmental requirement prescriptions.

## Rolling taps



Rolling taps guarantee very high performances if compared to the conventional screw taps, avoiding the problems of scraps in the dies.

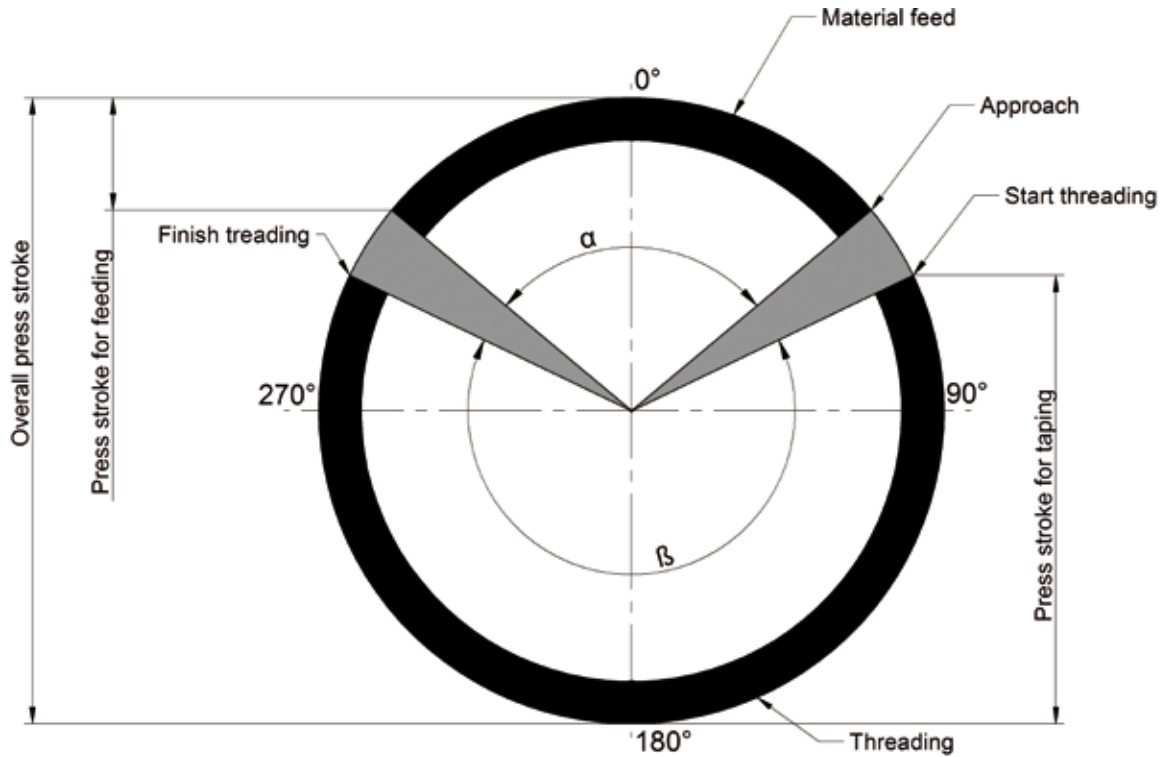
Rolling taps can even work at higher speed compared with other taps and give better quality to the surfaces that they generate (less roughness).

They guarantee more resistance to the thread splitting, allowing shorter executions, with shorter die strokes and longer tap life.

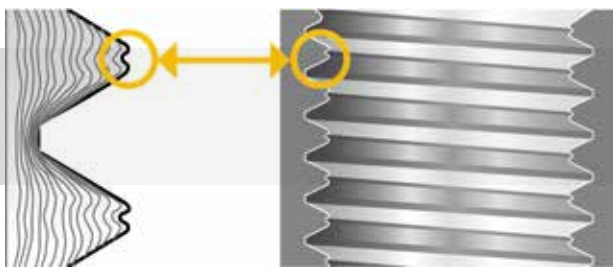
There is a wide range of taps' type like TiN, TiCN coated or the new generation BLACK taps, metric threading ISO (with 6HX, 6GX, 7GX tolerances) and UNC or UNF.

Our technical office is always at your disposal for further questions or any suggestion on the best way to use our products.

## Threading process



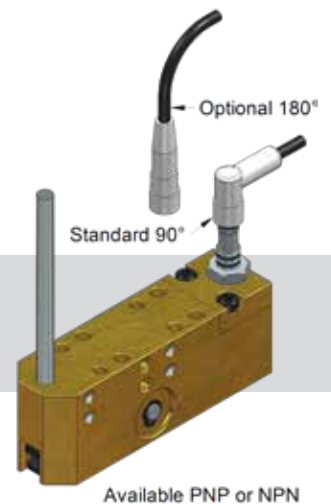
The smaller is the angle of material feed, the greater will be the time for threading, (more strokes / min ).



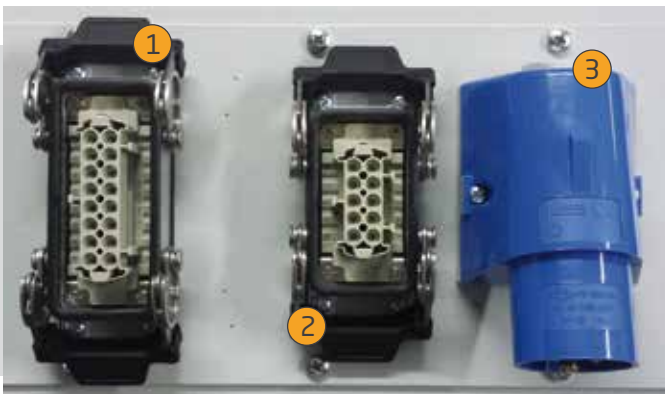
## Rolling thread example

## End threading controller

To check the production is 100% properly executed



The electronic tapping unit is a unit that can make threading operations inside the dies and in special settings, in a very easy and simple way, autonomously, and independently from the stroke of the die. It works with a brushless motor and with a servo driver that control each threading step. Just one start is enough to begin threading process independently and quickly, always with the possibility to regulate the speed and the threading depth. It is also possible to control the threading has been properly executed.



- 1 SIGNALS CABLE
- 2 MOTOR CABLE (MOTOR+ENCODER)
- 3 POWER SUPPLY SOCKET



- 1 MASTER ON
- 2 PANEL CONTROL

## PANEL ELECTRICAL CHARACTERISTICS OF SINGLE UNIT CONTROL (PLC VERSION):

Power supply:  
single-phase 230 Vac (+ 15%, -15%) 50 Hz ( $\pm 3$  Hz)

Maximum absorbed current: 16 A

Approximate dimensions of the electronic box,  
including the size of the connectors:  
height 500, width 400, depth 300  
(dimensions in mm)





## NEW WHEEL CONSOLE WITH TOUCH SCREEN

NEW

### CONSOLE ELECTRICAL CHARACTERISTICS OF 2-UNITS CONTROL (TOUCH SCREEN VERSION 7"):

Power supply: single-phase 230 Vac (+ 15%, -15%) 50 Hz ( $\pm 3$  Hz)

Maximum absorbed current: 16 A

Approximate dimensions of the console, inclusive of the overall dimensions of the connectors and the flashing light: height 1300, width 700, depth 500 (dimensions in mm)

### CONSOLE ELECTRICAL CHARACTERISTICS FROM 4 TO 6 UNITS CONTROL (TOUCH SCREEN VERSION 10"):\*

Power supply: three-phases 400 Vac (+ 15%, -15%) 50 Hz ( $\pm 3$  Hz)

Maximum absorbed current: 32 A

Approximate dimensions of the console, inclusive of the overall dimensions of the connectors and the flashing light: height 1300, width 700, depth 500 (dimensions in mm)

\*: 8 units version available on demand.



## NEW TOUCH SCREEN

NEW

### SINGLE UNIT CONTROL PANEL ELECTRICAL CHARACTERISTICS (TOUCH SCREEN VERSION 7"):

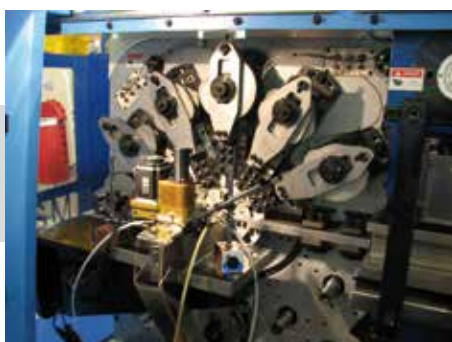
Power supply: single-phase 230 Vac (+ 15%, -15%) 50 Hz ( $\pm 3$  Hz)

Maximum absorbed current: 16 A

Approximate dimensions of the electronic box, including the size of the connectors and the flashing light: height 650, width 550, depth 350 (dimensions in mm)



*Example of application by high-speed tools*



*Example of application by presses like Bihler or similar*



*Example of application with 6 tapping units by components for automotive industry*



**150 STROKES/MINUTE**



**BLIND HOLES THREADINGS**



**EASY INSTALLATION**



**THREADING IN SAFETY**

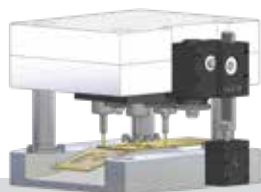


**HIGH PERFORMANCE**



**UP TO 8 THREADINGS WITH ONE CONSOLE**

## PRODUCTS



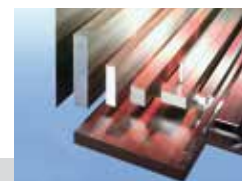
Mechanical in die tapping units



Standard components



Special parts according to drawing



Steels and ground steel plates

## SERVICE



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IN SPECIFIC SOLUTION FOR EVERY SITUATION



**AFTER SALES ASSISTANCE**



**PRICE-QUALITY, READY**  
FOR EACH COMPARISON



**ADVANCED CHECKING CONTROLS**



**ALWAYS THINKING ON NEW SOLUTIONS**



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*We form the quality*

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