# 



IMB (**Mechanical Industries Busseto**) was born in 1976 from the idea of Alberto Mora who designed new equipment for panel builders and electrical installers. Starting from a garage in Busseto, in the province of Parma, the company grew nationally and internationally developing cutting-edge solutions for processing electrical cabinets and copper bars. Today Alberto's sons carry on the father's legacy and ensure the continuity of IMB production.

For more than 4 decades, the company has invested in **quality**, **customiza-tion** and **innovation**.

Focusing on its workforce, IMB has been able to develop internally most parts of the production. This choice makes the production reliable and guarantees the highest standards of **quality and durability** of the product. The quality system is certified according to **ISO 9001: 2015** standards.

The winning aspect of the company's strategy is the customization. IMB's customers can rely on tailored solutions for every need. In addition to the standard offer, IMB remains unique for its collaboration with customers to create **special equipments** that allow them to achieve their goals.

IMB's commitment for the future is to create social and environmental benefits while ensuring continuous **innovation** and full customer satisfaction.

#### Choosing IMB today is the best decision for constant results over time.





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#### Electric pipes bender



# Cutting machine for plastic channels



# Electric and pneumatic control units, pumps



# Complementary accessories and working benches



### Tris work unit for copper and metal bars

#### **TECHNICAL APPLICATION**



EXAMPLE OF BARS BENDED WITH FLAT BAR BENDER

**EXAMPLE OF MULTIPLE HOLES** 

Statistic is

EXAMPLE OF OVAL OBLIQUE PUNCHING



BENDING REALIZED WITH UNIT ART.9046 ON BAR 200X20

BAR WITH BEVELLED EDGE



EXAMPLE OF MULTIPLE BENDING

HALF-OVAL HOLE FOR DIRECT INSERTION OF THE BAR



HOLE Ø 58 REALIZED WITH A SPECIAL TOOL

EXAMPLE OF BENDING AND PUNCHING

**BAR COUPLING** 

**SPECIAL PUNCHING ON IRON** 



PATENTED

### 9042 Tris Work Unit

Suitable for small and large quantities. Functional and time-saving, it makes the job easier



**9042 TRIS WORK UNIT** can be used with all MULTIFOR pumps and control units. It is extremely versatile for its different operations. Our tris unit is made up of :

- a practical tool change-over system.
- a hinged tool frame fully opening, which allows simple introduction and removal of bars.
- a millimetric adjustment on the piston, which regulates the stroke of the tools.
- a protractor for reading the bending angle of the bar (on request).

Once set up, this accessory can repeat the work cycle without checking every time lenghts and angles.

#### These characteristics are patented.

In order to achieve the maximum working precision, as well as to save time, the tooling is mounted on a workbench, which has been **designed specially** to be rational and practical in operation. It has all the necessary adjustments and references in order to position quickly the work pieces, avoiding measurements and engravings.

#### **Technical Characteristics**

Power	200 kN
Max. Working pressure	700 Bars
Stroke	50 mm
Adjustable stroke	40 mm
Amount oil required for full stroke	0,180 lt.
Lenght	850 mm
Width	600 mm
Height	500 mm
Weight	90 Kg
Supplied with 1 meter ruler and protection carter.	



Adjustment distance for punching and cutting.



Positioning mechanical end-stroke



Drawer to collect metal swarf



7

Punching, bending, cutting copper bars, metal profiles and din-rails. All these operations with only one Tris work unit.

#### Punching

Copper bars, aluminium and steel bars, etc. with max. thickness 12 mm - Round holes from  $\emptyset$  5 to  $\emptyset$  25 mm - Oval holes from 7X13 mm to 18x25 mm

Fot higher thickness than 12 mm, please contact our Technical Department. It is possible to achieve equidistant punching on bars of maximum width 120 mm. Using special punches, which have the automatic extraction from the bar, one obtains holes.

**IN 4 SECONDS\*** 



Copper bars, aluminium and steel bars etc. with thickness from 3 mm to 12 mm and maximum width 120 mm. On request, tools for 160 mm bars IN 5 SECONDS\*





#### Cutting

**Copper bars, aluminium and steel bars, etc.** with thickness from 5 mm to 12 mm and max. width 120 mm.

For higher width than 120 mm and with thicker material than 12 mm , please contact our Technical Department.

**IN 3 SECONDS\*** 





TOOLS AND ACCESSORIES PAG. 12+15

POWER UNITS - PUMPS AND ELECTRIC UNITS PAG. 80÷87

\* Times are approximately, for unit already tooled and connected to the electric control unit.

#### **OUR TECHNICAL DEPARTMENT IS AT YOUR SERVICE FOR SPECIAL APPLICATIONS.**



### 9042/AL Swivel Tris work unit

For bars processing in cramped spaces (e.g. cabins). 9042/AL is used with all MULTIFOR pumps and control units.

It has the same characteristics of the TRIS 9042, but in horizontal position it can swivel on a vertical pin. By doing so, the bar remains stationary on its support surface, taking up less space in the working area. PATENTED

Technical Characteristics	•
Power	200 kN
Max. Working pressure	700 Bar
Stroke	50 mm
Adjustable stroke	40 mm
Amount of oil required	0,180 lt.
for full stroke	
Lenght	850 mm
Width	600 mm
Height	500 mm
Weight	90 Kg
Supplied with 1-meter ruler and protection carter.	

TOOLS AND ACCESSORIES PAG. 12+15

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### 9045 Horizontal Tris work unit

It has the same characteristics of the Unit 9042 and 9042/AL with horizontally fixed position. Small dimensions, it is lighter and economic. It uses standard tools. It is supplied with 1-meter ruler. **Not recommended for punching operations** 

<b>Technical Characteristics</b>	;
Lenght	700 mm
Width	600 mm
Height	500 mm
Weight	77 Kg





### 9045V Vertical Tris Work Unit

It has the same characteristics of the Unit 9042. Its cylinder is vertically fixed. USED ONLY FOR CUTTING AND PUNCHING OPERATIONS.

It uses the same tools of the TRIS 9042. Small dimensions and weight. It is supplied with 1-meter ruler



Technical Characteristics			
Lenght	530 mm		
Width complete with 1-meter ruler	1.310 mm		
Height	720 mm		
Weight	67 Kg		

TRIS WORK UNIT FOR COPPER AND METAL BARS

TOOLS AND ACCESSORIES PAG. 12+15

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### 9046 Tris Work unit 30 Ton

It is larger and more powerful than unit 9042. The unit 9046 is recommended for processing large size bars, larger than the standard ones. This unit has a 30 tons cylinder that allows to work bars until 200x20 mm. It is also possible to make special tools for punching four holes in one operation. It is supplied with 1 meter ruler, protection carter and adapters for the use of 9042 standard tools. **On request we can realize special punches for specific workings.** 

Technical Characteristics				
Power 300 kN				
Max. Working press	sure	700 bar		
Stroke		65 mm		
Adjustable stroke		50 mm		
Amount of oil requine full stroke	red for	0,300 lt		
It punches bars up to 15 mm thickness				
It cuts bars up to 160 x 15 mm				
It bends bars up to 200x20 mm				
Lenght		1200 mm		
Width		700 mm		
Height		520 mm		
Weight		192 Kg		





### 9044 Tris work unit

#### **Coupled Tris cylinders**

For specific works or a big production, we have made a special unit which uses two cylinders to avoid unnecessary changes of tools, allowing the realisation of punching and bending with a considerable reduction in time and labour costs. The cylinders have the same chatacteristics of the Tris Unit 9042.

# Technical CharacteristicsLenght940 mmWidth600 mmHeight720 mmWeight122 KgIt is supplied with 1 meter ruler andprotection carter.

TOOLS AND ACCESSORIES PAG. 12+15

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### 9043 Tris work unit

For occasional and on field workings. For bending, cutting and punching.

We have created it expressly for small quantities. It differs from our Tris Units with bench for its simplicity and lightness as it has no specific accessories, making it simple and light. Its structure is fixed and it is used in vertical position.

We recommend to fix it on a bench or on a working table, in order to have stability. The cylinder has an adjustable run. Bar benders are simplified with only one male punch supplied with n. 2 female dies of different dimensions for various thicknesses. (Max 10

mm) and different bending radius. It is supplied complete with bending tools. Tools for cutting and punching are the same of

our standard tris unit 9042. It can be used with all our power units present in

our Catalogue.

Supplied with 1-meter ruler.

It has to be connected to our power units present in our catalogue.

Technical Characterist	ics
General characteristics	as Tris Unit
	9042
Power	200 kN
Max. Working pressure	700 bar
Width	130 mm
Lenght	230 mm
Height	610 mm
Weight	34 Kg



### 9023 **Punching cylinder**

#### For flat and angular bars

It can be used with all MULTIFOR pumps and control units.

It is particularly practical and handy. It allows the punching of flat and angular bars in difficult positions and on pylons.

It is used expecially for connections in transformer cabinets and for electrical switchboards.

This tool is very reliable like all our MULTIFOR equipments.

On request, we can realize special sizes.

For a correct use of the punches, the operator should not punch bars

thicker than the diameter of the same punch.

On request, it can be supplied with 90° connector.

Technical Characteristics			
Power	120 kN		
Max. Working pressure	700 bar		
Stroke	1/1 mm		

SUUKE	14 11111		
Internal depth	30 mm		
External depth	20 mm		
Copper bar thickness	10 mm max		
Thickness of other materials:			
according to the resistance and hole $\emptyset$			
Lenght	270 mm		
Width	135 mm		
Weight	5,7 Kg		



Kit punching cylinder 9023P

Ø Punch mm.

8

10

12

14

16

18





It is supplied with metal case and n. 6 pairs of punches (odd sizes or even sizes).

## Kit punching cylinder 9023D Odd size code Ø Punch mm.

Odd size code	Ø Punch mm.	Even size code
9511	7	9512
9513	9	9514
9515	11	9516
9517	13	9518
9519	15	9520
9521	17	9522



Bar bender built for bending copper bars in workshops or in site.

Thanks to its structure and to its integrated protractor, it works on small and large quantities of bars until 100 mm width.

This tool is equipped with 2 female bending tools of different dimension for several thickness and bending radius.

It can operate with all our power units included in our catalogue.

#### **Technical Characteristics**

Power	50 kN
Dimensions	78x150x190h mm
Weight	18 Kg
Stroke	50 mm
Adjustable stroke	30 mm
Material bending	copper 100x8/60x10 mm max.
Equipped with n 21	her sloot pribred

Equipped with n. 2 bending tools and protractor.





Mechanical end-stroke - maximum accuracy



Integrated protractor indicator



### **Punches for Tris unit**

They are composed by a male punch and a female die with stamped diameter to avoid mistakes during the assembly.

Punch extraction is automatic by means of special springs.

It is possible to request the female die, the male punch separately as spares and the inner part of the male punch

It is recommended to always regulate the stroke of the cylinder stem, in order to avoid excessive pressure.

N.B. For a correct use of round and oval punches, please do not use superior thickness to the diameter of the same punch.

Available punches for 15 mm thickness for 9046 Tris Unit.

SPECIAL SIZES ON REQUEST.



Round punches					
Code	Ø mm	Male spare	Female spare	Inner spare	
9100	5	9100M	9100F	9122/5	
9101	6	9101M	9101F	9122/6	
9102	7	9102M	9102F	9122/7	
9103	8	9103M	9103F	9122/8	
9104	9	9104M	9104F	9122/9	
9105	10	9105M	9105F	9122/10	
9106	11	9106M	9106F	9106S	
9107	12	9107M	9107F	9107S	
9108	13	9108M	9108F	9108S	
9109	14	9109M	9109F	9109S	
9110	15	9110M	9110F	9110S	
9111	16	9111M	9111F	9111S	
9112	17	9112M	9112F	9112S	
9113	18	9113M	9113F	9113S	
9114	19	9114M	9114F	9114S	
9115	20	9115M	9115F	9115S	
9116	21	9116M	9116F	9116S	
9117	22	9117M	9117F	9117S	
9118	23	9118M	9118F	9118S	
9119	24	9119M	9119F	9119S	
9120	25	9120M	9120F	9120S	

#### **Oval punches**

These punches have the same characteristics as the round punches and in addition they are fitted with a positioning guide to avoid assembly errors.

It is recommended to always suggested to regulate the stroke of the cylinder stem, in order to avoid excessive pressure.

N.B. For a correct use of round and oval punches, please do not use superior thickness to the diameter of the same punch.

Available punches for 15 mm thickness for 9046 Tris Unit.

SPECIAL SIZES ON REQUEST.



Oval punches				
Code	Ø mm	Male spare	Female spare	Inner spare
9130	7x13	9130M	9130F	9130S
9131	8x14	9131M	9131F	9131S
9132	9x15	9132M	9132F	9132S
9134	10x16	9134M	9134F	9134S
9136	11x17	9136M	9136F	9136S
9138	12x18	9138M	9138F	9138S
9140	13x19	9140M	9140F	9140S
9142	14x20	9142M	9142F	9142S
9144	15x21	9144M	9144F	9144S
9146	16x22	9146M	9146F	9146S
9148	17x24	9148M	9148F	9148S
9149	18x25	9149M	9149F	9149S



### **Special punches**

#### Tool for multiple punching in only one operation



### **Bar cutter**

It is a tool for our Tris units, made from special steel composed by a sharpened male and a female die. You can cut bars with maximum thickness 12 mm and maximum width 120 mm, or, on demand, bars with thinner thickness and of greater width (max 125 mm).

Bar cutting takes place by removing one section of material equal to the width of the cutting point (10 mm).

Bar cutter	
Code	Description
9155	Bar cutter 120x12
9155/30 Ton	Bar cutter 160x15 for 9046





# Tool for radial bars with support guides for different bars.



### Tool for the cutting of flexible bus bars 9158

It can be used on all our Tris Units. It cuts flexible bus bars max. 100x10 mm. Easy to assemble , as all our standard tools.



#### Din Rail Cutter 9055 for Tris unit

It has the same characteristics of the standard Din Rail Cutting Machine Model 9050. The installation of this tool on the Tris Units is simple





### **Standard bar benders**

#### Bar bende

We have standa thickness and w please consult t We realize bar b

<sup>.</sup> bender	Bar bender			
ave standard bar bender for different	Code	Description		
ness and width. For bar bender selection,	9150	V bar bender for thickness from 4 to 6 mm		
e consult the table enclosed.	9151	V bar bender for thickness from 5 to 8 mm		
ealize bar bender on demand.	9152	V bar bender for thickness from 6 to 12 mm		
	9153	Special flat bar bender for bars from 20-40, thickness $5 \div 10 \text{ mm}$ Internal radius 30 mm		
	9150/160	V bar bender for thickness from 4 to 6 mm for bars with width 160 mm		
	9151/160	V bar bender for thickness from5 to 8 mm for bars with width 160 mm		
	9152/160	V bar bender for thickness from 6 to 12 mm for bars with width 160 mm.		
	9154/30 Ton	Bar bender for bars 160x15 mm for Tris 9046		
	9154/200x20	Bar bender for bars 200x20 mm for Tris 9046		
9150	9151	9152 <b>(10)</b>		

9153 Flat bar bender



### **Special bar benders**

#### 9154/01

It is recommended for brackets, clamps and small bars of different material. Max. Thickness 5 mm. Higher thickness on demand.



#### 9154/02

It is recommended for aluminium and lined bars



#### Special bar benders on demand









### **Accessories for Tris units**

#### Mechanical protractor 9160

It is a very practical accessory to put on the tris cylinder for measuring bar bending angles up to 90°. It is made of steel with direct reading and eccentric corrector for resetting the rod according to the thickness and elasticity of the material to bend.

9160/30 Ton for 9046 Unit



#### Electrical protractor 9161

Similar to the mechanical one, the electrical protractor is equipped with a micro switch and a device to automatically stop the electric control unit.

N.B. It can be used only with electric control units 9008-9009-9010.

9161/30 Ton for 9046 Unit



#### Positioning valve 9162

The positioning valve is supplied with male and female rapid connectors for a rapid assembly. This two-way valve can be fitted to the Tris cylinder when you use electric control units as it permits small movements of the tools and therefore an easy positioning of the bars.



Units for flexible copper bars

### TECHNICAL APPLICATION



EXAMPLE OF PUNCHING

EXAMPLE OF OVAL PUNCHING



BAR CUTS WITH ART. 9039 OR ART. 9158



SAMPLE OF BARS CUT



PATENTED

### 9020 Punching cylinder

For flexible copper bars and generic bars.



This punching cylinder can be used with pumps and all MULTIFOR control units.

It is designed exclusively for punching packs of flexible copper bars. Its particular technical characteristics allow to punch easily this kind of bars. This tool is made up of two cylinders, one blocks the bar and the other makes the hole. This particularity ensures a rapid and precise punching, without burrs and deformation of the bar. This cylinder is mounted on a support which allows the punching in square and without traces. Brackets and millimetric positioning rulers allow punching in series avoiding mistakes.

Special punch sizes on request.

The 9020 is supplied with no. 2 lock nuts, one for punches up to 9 mm dia. max and one for punches from dia.10 mm to dia. 13 mm max.



References with millimetric ruler for the right bar positioning.



POWER UNITS - PUMPS AND ELECTRIC UNITS PAG. 80÷87



Special lock nut blankholder for a punching without burrs and marks



l'echnical Characteristic	:5		
Power	120 kN		
Max. Working pressure	700 bar		
Max. Stroke	15 mm		
Internal depth	29 mm		
External depth	17 mm		
Max.copper bar thickness 10 mm			
Thickness of the other materials			
to define according with the resistance and hole $\emptyset$			
Lenght	390 mm		
Width	300 mm		
Height	160 mm		
Weight	16,7 Kg		

signal Charry

for packs bars 9020 D				
Odd size set code	Ø Punch mm.			
9531	9			
9533	11			
9535	13			

#### Kit punching cylinder for packs bars 9020 P Even size set code Ø Punch mm.

Even size set code	Ø Punch mm.
9541	8
9543	10
9545	12

EQUIPMENT FOR FLEXIBLE BUS BARS

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### 9039 Cylinder for cutting flexible bus bars

Complete and autonomous equipment. It is equipped with ruler and adjustments for the bars measurement.

Bar dimensions: Thickness from 2 to 10 mm Width from 15 to 100 mm

This cylinder can work with all IMB power units.

Technical Characteristics			
Power	120 kN		
Lenght	220 mm		
Width	80 mm		
Height	345 mm		
Weight	20 Kg about		





### Tools for flexible bus bars

#### Round punch with step

This solution for round holes has 3 standard measures : 9 - 11 - 13 mm with a special shape, which reduces the distance between the hole and the protective covering. It also cuts down the specific pression on the bar

to reach at the end a better result, both aesthetic and functional.

#### **Technical Characteristics**

Code punch	Ø mm	Range Center distance hole-protection	Range Edge hole- protection	Male spare	Female spare
9104 FLEX	9	18	13,5	9104M FLEX	9104F FLEX
9106 FLEX	11	18	12,5	9106M FLEX	9106F FLEX
9108 FLEX	13	18	11,5	9108M FLEX	9108F FLEX

#### Can be used with all our Tris units



#### **Oval punches with step**

This solution for oval holes has 3 standard measures: 9x15 - 11x17 - 13x18 mm with a special shape, which reduces the distance between the hole and the protective sheath. It also cuts down the specific pression on the bar to reach at the end a better result, both aesthetic and functional.

#### **Technical Characteristics**

Code punch	Ø mm	Range Center distance hole-protection	Range Edge hole- protection	Male spare	Female spare
9132 FLEX	9 x 15	18	13,5 - 10,5	9132M FLEX	9132F FLEX
9136 FLEX	11 x 17	18	12,5 - 9,5	9136M FLEX	9136F FLEX
9140 FLEX	13 x 18	18	11,5 - 9	9140M FLEX	9140F FLEX

Can be used with all our Tris units







#### 9158 Tool for the cutting of flexible bus bars

Practical and accurate tool to cut flexible bars. It is easy to assemble it on all our Tris Units. Dimensions of the bars to cut: Thickness from 2 to 10 mm Width from 15 to 100 mm

It can cut bars with or without protection sheath.

#### Can be used with all our Tris units

Technical Characteristics		
Lenght	180 mm	
Width	80 mm	
Height	105 mm	
Weight	8 Kg c.a.	



### Flex dies to combine with standard males

It is possible to realize with these dies, round and oval holes on flexible bus bars.

They are practical as they work combined with standard males.

This operation allows to reduce the time for changing the punch and tooling costs. These Flex dies ensure a punching without burrs on flexible bus bars until  $10 \times 1$  mm.

These dies have not the step and they can reach max. 27 mm with round dies and 32 mm with oval ones.

N.B. Don't use them for punching flat bars.

Can be used with all our Tris units.



#### **Round FLEX dies**

Code	Ø mm	Combined male
9121F/9 FLEX	9	9104M
9121F/10 FLEX	10	9105M
9121F/11 FLEX	11	9106M
9121F/12 FLEX	12	9107M
9121F/13 FLEX	13	9108M
9121F/14 FLEX	14	9109M
9121F/15 FLEX	15	9110M
9121F/16 FLEX	16	9111M
9121F/17 FLEX	17	9112M
9121F/18 FLEX	18	9113M



#### **Oval FLEX dies**

Code	Ø mm	Combined male
9129F/7x13 FLEX	7x13	9130M
9129F/8x14 FLEX	8x14	9131M
9129F/9x15 FLEX	9x15	9132M
9129F/10x16 FLEX	10x16	9134M
9129F/11x17 FLEX	11x17	9136M
9129F/12x18 FLEX	12x18	9138M
9129F/13x19 FLEX	13x19	9140M
9129F/14x20 FLEX	14x20	9142M
9129F/15x21 FLEX	15x21	9144M
9129F/16x22 FLEX	16x22	9146M
9129F/17x24 FLEX	17x24	9148M
9129F/18x25 FLEX	18x25	9149M





### **TECHNICAL APPLICATION**





EXAMPLE OF PERFORATED PANELS

**EXAMPLE OF PUNCHING ON BOXES** 

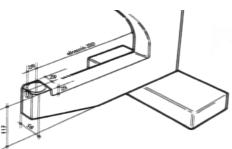
EXAMPLE OF SQUARE AND **RECTANGULAR PUNCHING** 





### **10030L** Hydraulic punchig machine for panels and boxes





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#### PUNCHES AND ACCESSORIES PAG. 30÷35

#### Characteristics

Max depth	350 mm	
Power	35 kN (3,5 Ton.)	
Working pressure	700 bar	
Max dia of round hole	Ø 40,5 mm	
Max square hole	26x26 mm	
Max rectangular hole	within Ø 37 mm	
Distance between punches	55 mm	
Lenght	560 mm	
Width with ruler	1.100 mm	
Height	680 mm	
Weight	113 Kg	

The punching machine **10030L** is planned for making holes of small dimensions; it is very versatile and it can be used for punching either the bottom or the sides of boxes, panels, lids, steel, aluminium, plastic and masonite sheets. Its building characteristics are the same of the other MULTIFOR punching machines. Punches are built in different shaped and sizes according to the power of the machine. This punching machine can be used with all IMB power units: foot pedal and electric control units. In order to reduce the working cycles, it is supplied with a **stroke regulator**, which cuts down the gap between punch and die.

It is equipped with safety device and protection cover.

It is also possible to assemble an adjustable end stroke during the descent phase

### The punching machine is supplied with:

**N. 1 punch holder Ø 11** (code 10101L) for round punches up to Ø 40,5.

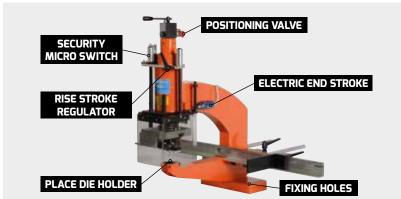
**N. 1 punch holder lock nut Ø 28** (cod. 10171).

**N. 1 set of extractors** for the extraction of the punch from the material (cod. 10145).

N. 1 positioning valve (cod. 9162).

N.B. The punching machine does not need die holder flanges.

Max. diameter Ø 40,5 on mild steel sheet with thickness 2 mm.





Micro switch for laser pointing

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### 

### **10040L** Simplified hydraulic punching machine

#### **Technical Characteristics**

Max. depht	400 mm	
Power	56kN (5,6 Ton.)	
Lenght	1110 mm (max)	
Width	1100 mm	
Height	870 mm	
Weight	136 Kg	
Run positioning brackets	X Axe 500mm Y Axe 395mm	
Max. round hole	Ø 68 mm	
Max. square hole	68x68 mm	
Max. rectangular hole	within Ø 96 mm	
Die flanges	10131, 10132, 10133, 10134	
MAX. THICKNESS		
Sheet steel	2,0 mm	
Ctainless steel	1.0 mana	

Sheet steel	2,0 mm
Stainless steel	1,8 mm
Aluminium	5 mm
Plastic laminate	5 mm

The punching machine **10040L** has a system of brackets regulation with simplified X and Y-axis. The technical characteristics of this equipment are between the punching machine 10050L and 10030L.

With a new system of flanges, this punching machine can do round, square, rectangular and special punches. This hydraulic punching machine can operate on panel sheets, plastic and stainless boxes.

Practical and speedy use to avoid tracing, the machine has a system of guides for the X and



Y axis. The punching machine is equipped with bracket regulations, protection carter and micro security.

On request, we can build an arm for the panel support.

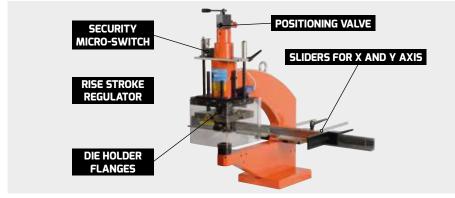
### The punching machine is equipped with:

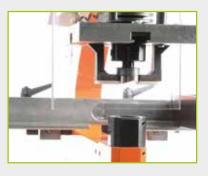
N. 1 positioning valve (code 9162). N. 1 punch holder (code 10101L) for round punches until Ø mm 40, 5 max. **N. 1 die holder flange** (code 10131) for round dies Ø mm 40,5 max, for square dies until □ mm 26 and rectangular or special dies with dimensions within Ø mm 37.

N. 2 series of extractors (code 10141 - 10142) for the extraction of the punch from the steel N. 1 lock nut punches holder Ø 28 mm (code 10171).

Mechanical end stroke for the rise of the punch: it reduces times

Protection carter: with an electric micro-switch End down-stroke: with an electric micro-switch





#### **Die holder flanges**



10131







POWER UNITS PAG. 80÷87

PUNCHES AND ACCESSORIES PAG. 30÷35



### 10050L / 10050LV Hydraulic punching machine



Technical Characteristics	
Max depth	500 mm
Power	85 kN
Working pressure	700 bar
Max round hole Ø	130 mm
Max square hole	92x92 mm
Max rectangular hole	within Ø 130 mm
Distance between punches	55 mm
Lenght	1.150 mm
Width	2.120 mm
Height	980 mm
Weight	331 Kg
Oil capacity for a complete stroke	0,08 lt.
Stroke	65 mm
Die flanges:	10161, 10162, 10163, 10164, 10165

The hydraulic punching machine **10050L** has the characteristics and performances in between the small 10035L and the big 10090L. In order to reduce the working time, a stroke regulation allows to cut down the opening between punch and die. This equipment is supplied with protection cover and with an electric security micro switch.

It is not necessary to make a pre-hole. It is designed to operate with a system of axis X-Y shifting on prismatic guides, sleeves and panel supports complete with locking.

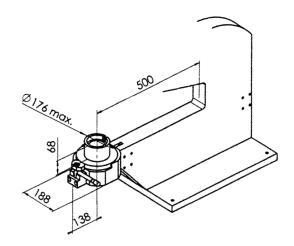
#### The 10050L is supplied with:

N. 1 positioning valve (code 9162).

**N. 1 punch holder** (code 10101L) for round punches up to Ø 40, 5 mm **N. 1 die flange** (code 10161) for round dies up to Ø 40,5 mm, for square dies up to □ mm 26 mm, rectangular or special dies within Ø 37mm.

N. 2 sets of extractors (code 10141 -10142) for the extraction of the punch from the panel sheet.

**N. 1 punch holder lock nut** (code 10171).





BASE

10100/50



Rise stroke and electric end stroke regulators



Fast system of die flanges locking



Axis reference and locking panel board

PRISMATIC GUIDES



#### Die holder flanges









POWER UNITS PAG. 80÷87

PUNCHES AND ACCESSORIES PAG. 30÷35

#### 10161

10162

10163

10165

27

GENERAL CATALOGUE



### 10090EL - 10090ELV Economic hydraulic punching machine 20 Ton

#### Light system of brackets regulation with X - Y axis

Technical Characteristics		
Maximum depth	900 mm	
Power	200 kN (20 Ton)	
Oil capacity for a complete stroke	0,18 lt.	
Max. round hole	Ø 170 mm	
Max. square hole	138x138 mm	
Working pressure	700 bar	
Lenght	2100 mm	
Width	2160 mm	
Height with the base	1760 mm	
Distance between punches	50 mm	
Punch stroke	65 mm	
X Axis stroke	1.000 mm	
Y Axis stroke	900 mm	
Approx. weight	1000 Kg	
MAX. THICKNESS		
Sheet steel	2,0 mm	
Stainless steel	1,8 mm	
Aluminium	5 mm	
Plastic laminate	5 mm	

The hydraulic punching machine 10090EL, is a high power machine with a simple system of brackets regulation for X and Y axis. It has the same characteristics and performance of the hydraulic punching machine 10090L. The axis run is for X axe 1000 mm and for Y axe 900 mm. These units are studied exclusively for making holes. They are fast and practical to use, thanks to a special system of guides of axis X and Y. This system avoids tracing and the panel board is held up by a mobile support and fixed on X-Y axis. The version **10090EL** has the laser pointing which indicates the center of the hole on the material to punch.

The version **10090ELV** has the laser pointing and the visualizer.

Die holder flange system





#### The punching machines are supplied with the following items:

**N. 1 punch holder** (code 10101L) for round dies up to  $\emptyset$  mm 40,5 max.

**N. 1 die holder flange** (code 10191) for round dies up to  $\emptyset$  mm 40,5 max, for square dies up to  $\emptyset$  mm 26 max and rectangular dies or specials with max dimension within 37 mm. dia.

#### Laser pointing

All punching machines are supplied with **LASER POINTING** which **indicates ONLY the centre of the hole** to realize on the control board door. The diode is protected inside the stem, to avoid breaking. N. 2 series of extractors (code 10141 - 10142) for the extraction of punch from the steel. N. 1 punch holder lock nut Ø 28 mm (cod. 10171).

N. 1 positioning valve (code 9162).

Laser	diode type class 1
Power	1 mW
Supply	direct current, battery 4,5 V.

For the operator who uses the laser pointing, there are no protection supplied. Please don't watch the beam of light, which comes out from the diode.

#### Die holder flanges

10191



10192



10193





10195

28

HYDRAULIC PUNCHING MACHINES

### 

### 10090 L - 10090 LV Punching hydraulic machine 20 Ton

#### **Technical Characteristics**

Maximum depth	900 mm
Power	200 kN (20 Ton)
Amount of oil required for a full stroke	0,18 lt.
Max. dia of hole	Ø 170 mm
Max round hole	138x138 mm
Working pressure	700 bar
Length max	1850 mm
Width	3020 mm
Height with base	1680 mm
Distance between punches	50 mm
Punch stroke	65 mm
X Axis stroke	1.500 mm
Y Axis stroke	900 mm
Approx. Weight	1527 Kg
MAX. THICKNESS	
Sheet steel	2,0 mm
Stainless steel	1,8 mm
Aluminium	5 mm

In the **10090LV** the measures detector takes place through bidirectional heads on a measuring stripe (accuracy  $\pm 0.1$  mm)

5 mm

N.B. Shifting of the axis is manual.

**Plastic laminate** 

The hydraulic punching machine with visualizer is supplied with a plug.

Supply	220V/240V
Frequency	50/60Hz



**N. 1 punch holder** (code 10101L) for round dies up to Ø 40,5 mm max.

**N. 1 die holder flange** (code 10191) for round dies up to Ø 40,5 mm max, for square dies up to Ø 26 mm max. and rectangular dies or specials with max dimension within 37 mm. dia.

The MULTIFOR hydraulic punching machines, which combine high power with compact dimensions, are built to resolve the problems of making holes in panels, lids, sheet steel, aluminium strip or plastic. These units are studied exclusively for making holes. They are quick and practical as they avoids marks working on a special rail sysstem of X-Y axis, on which the panel board is fixed. The pre-hole is not necessary.

With the special punches, you can realize the following holes: round, square, rectangular, shaped, round with more holes, square with

round holes, rectangular with round holes,

tools for ventilation slots, etc.

**N. 2 series of extractors** (code 10141 - 10142) for the extraction of punch from the steel

N. 1 punch holder lock nut Ø 28 mm (cod. 10171)

- N. 1 metal basement (code 10100/90)
- N. 1 positioning valve (code 9162).

10090 LV

The MULTIFOR punching machines can be connected with a rapid connector to the MULTIFOR electric units.

These units can be also used in small workshop due to their versatility and small size. All our hydraulic punching machines are equipped with carter protection, safety micro switch and electric micro end-stroke. The dies assembly is very simple and it is not necessary to take away the panel board. In order to reduce the working cycles, a rise stroke regulator allows to reduce the opening between the punch and the die.



#### Hydraulic punching machine 10098 With PLC X-Y axis control

It is a punching machine with same features as the standard version.

In addition, it is equipped with re-circulating ball screw and motors for axis shifting.

This programmable logic control permits to carry out complete automatic working cycles with pauses for changing the tools. With the menu all the positioning operations, single or automatic, can be performed. Storage up to 96 programs of 30 steps each.

All operations are readable on a display. The

control board is complete with feeding and startstop-alarm, axis shifting manual control.

The hydraulic punching machine is equipped with safety barrier and photocells. The visualizer is calibrated by the manufacturer in order to visualize dimensions with absolute values. However the operator can set the value 0 (zero) and use the visualizer for movements with incremental values.

### **Accessories for punching machines**

#### **DIE FLANGES**

The flanges are used for positioning the different dies. As shown in the list, based on the die flanges on the left column, you can see the possible dimensions.

Die flanges	Round dies Ø mm	Square dies	Rectangular Dies Within Ø mm
10131	2,5-40,5	26	37
10132	41-48,5	36	51
10133	49-68,5	48,5	68
10134	69-99	70	99
	10131 10132 10133	Die flanges         Ø mm           10131         2,5-40,5           10132         41-48,5           10133         49-68,5	Die flanges         Ø mm         □ max mm           10131         2,5-40,5         26           10132         41-48,5         36           10133         49-68,5         48,5

#### Dies flanges for 10050L



Die flanges	Round dies Ø mm	Square dies □ max mm	Rectangular Dies Within Ø mm
10161	2,5-40,5	26	37
10162	41-48,5	36	51
10163	49-68,5	48,5	68
10164	69-99	70	99
10165	143	92	143

#### Dies flanges for 10090



Die flanges	Round dies Ø mm	Square dies □ max mm	Rectangular Dies Within Ø mm
10191	2,5-40,5	26	37
10192	41-48,5	36	51
10193	49-68,5	48,5	68
10194	69-99	70	99
10195	100-143	101	143

**N.B.** The round dies for the 10090 with higher dimensions up to  $\emptyset$  170 mm, are built to be inserted directly in the machine.

This is also the case of square and rectangular dies within Ø 144 mm to max. Ø 170 mm.

#### **PUNCH HOLDERS**

Punch holders are used to assemble the different round, square, rectangular and special punches. They are held in position by lock nut and must be chosen in relation to the type and dimensions of the punch to be used, as shown in the table. The reference pin is re-entering less the one code 10104.



The punch holders for the hydraulic punching machines with laser pointing have not the central reference re-entering, but a passer-by hole.



### **Accessories for hydraulic punching machines**

#### LOCK NUTS



Code	Description	Application field
10171	Lock nut Ø 30	Punch holders 10101 - 10106
10172	Lock nut Ø 35	Special punch holders
10173	Lock nut for punches superior to 100 mm	

#### **EXCTRACTORS**

The extractors are used for extracting the punch from the steel after perforation. Their position can be adjusted so that they can be placed as close as possible to the punch.

Two series are supplied; one for round holes, the other for square, rectangular or special holes.

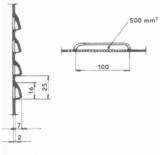


#### **TOOLING FOR VENTILATION SLOTS**

#### 10804 for 10090

Tooll for ventilation slots of 500 sq. mm on sheet steel of max. thickness 2 mm. This tooling is equipped with blank holder. For different material thickness, please contact our Technical Department



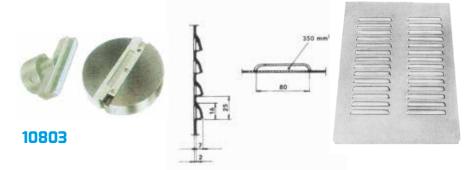




#### 10803 for 10050

Tool to realize ventilation slots of 350 sq mm on sheet steel of max. thickness 2 mm. This tooling is supplied with a blank holder. On request, we can realize tooling for small sizes.

For different thickness, please contact our Technical Department.





### Standard round punches for hydraulic punching machines





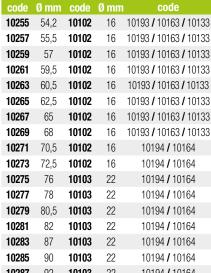
All our of round punches are made of special tempered steel. They have 3 cutting edges and they are used to punch holes on sheet steel max.thickness 2,0 mm and stainless steel max.1,8 mm. Aluminium plastic laminates and other material from 0,5 to 5 mm max. The punching is carried out with maximum precision and without deformation of the material. The dia of the punches is clearly marked with the nominal Ø, in order to avoid mistakes.

The punches in the following list are mounted directly on the machine without punch holders.

When ordering punches, it is recommended to check the right column of the list to identify the kind of holders and flanges to use depending on the hydraulic punching machine.

PUNC	н	Flange to use			
code	0 mm	code			
10200/2,5	2,5	10191 <b>/</b> 10161 <b>/</b> 10131			
10200/3	3	10191 <b>/</b> 10161 <b>/</b> 10131			
10200/3,25	3,25	10191 <b>/</b> 10161 <b>/</b> 10131			
10200/3,5	3,5	10191 <b>/</b> 10161 <b>/</b> 10131			
10200/4	4	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/4,25	4,25	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/4,5	4,5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/5	5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/5,5	5,5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/6	6	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/6,75	6,75	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/7	7	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/7,75	7,75	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/8	8	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/8,5	8,5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/9	9	10191 <b>/</b> 10161 <b>/</b> 10131			
*10200/9,5	9,5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10201	10	10191 <b>/</b> 10161 <b>/</b> 10131			
*10203	13	10191 <b>/</b> 10161 <b>/</b> 10131			
*10205	15,5	10191 <b>/</b> 10161 <b>/</b> 10131			
*10207	16,2	10191 <b>/</b> 10161 <b>/</b> 10131			
*10209	17	10191 <b>/</b> 10161 <b>/</b> 10131			

PUNCH		Punch holder		Flange		
-101	Torr	to use		to use		
code	Ø mm	code	Ø mm	code		
10211	18,5	10101	11	10191 / 10161 / 10131		
10213	19,5	10101	11	10191 / 10161 / 10131		
10215	21	10101	11	10191 / 10161 / 10131		
10217	22,5	10101	11	10191 / 10161 / 10131		
10219	24	10101	11	10191 / 10161 / 10131		
10221	25,5	10101	11	10191 / 10161 / 10131		
10223	26,5	10101	11	10191 / 10161 / 10131		
10225	27,5	10101	11	10191 / 10161 / 10131		
10227	28,5	10101	11	10191 / 10161 / 10131		
10229	30,5	10101	11	10191 / 10161 / 10131		
10231	32,5	10101	11	10191 / 10161 / 10131		
10233	33,5	10101	11	10191 / 10161 / 10131		
10235	35,5	10101	11	10191 / 10161 / 10131		
10237	37	10101	11	10191 / 10161 / 10131		
10239	38,5	10101	11	10191 / 10161 / 10131		
10241	40,5	10101	11	10191 / 10161 / 10131		
10243	42,5	10102	16	10192 / 10162 / 10132		
10245	45,5	10102	16	10192 / 10162 / 10132		
10247	47	10102	16	10192 / 10162 / 10132		
10249	48,5	10102	16	10192 / 10162 / 10132		
10251	50,5	10102	16	10193 / 10163 / 10133		
10253	52,5	10102	16	10193 / 10163 / 10133		



The punches in this list can be used on punching

machine 10030L up to 10241; on our 10040L

punching machine until code 10269 and on our

**Punch holder** 

to use

Flance

to use

10050L until code 10301.

PUNCH

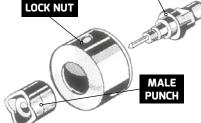
10277	78	10103	22	10194 <b>/</b> 10164
10279	80,5	10103	22	10194 <b>/</b> 10164
10281	82	10103	22	10194 <b>/</b> 10164
10283	87	10103	22	10194 <b>/</b> 10164
10285	90	10103	22	10194 <b>/</b> 10164
10287	92	10103	22	10194 <b>/</b> 10164
10289	96	10103	22	10194 <b>/</b> 10164
• 10291	100,5	10103	22	10195 <b>/</b> 10165
• 10293	103	10103	22	10195 <b>/</b> 10165
• 10295	105	10103	22	10195 <b>/</b> 10165
• 10297	113	10103	22	10195 <b>/</b> 10165
• 10299	116	10103	22	10195 <b>/</b> 10165
• 10301	120	10103	22	10195 <b>/</b> 10165
• 10303	134	10103	22	10195
• 10305	140	10103	22	10195

• To assemble with lock nut code 10173

When ordering punches, it is suggested to check the right column of the list to identify the kind of holders and flanges to use depending on the hydraulic punching machine.

Please verify, also, if the hydraulic punching machine has the LASER POINTING.

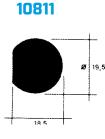
\* Please add to the code the letter "L" if the operator has an hydraulic punching machine with Laser



PUNCH HOLDER

# Shaped punches for handles, locks and push buttons

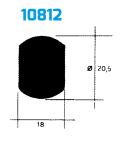
Special punches have been studied for the assembly of handles, locks and push buttons.



10822

Ø 21,5

5,5

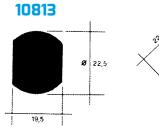


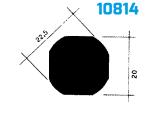
10824

28.5

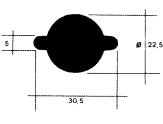
22,5

ø





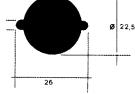
10826



10842

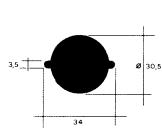
Ø 30,5 17,6





10832

30.5



22,3

The punches of this list can be used on all our IMB hydraulic punching machines. **Special punches** are fixed directly on the hydraulic punching machine.

P	UNCH		
Code	Slot dimension mm	Nut code	Lock Flange to use
* 10811	19,5x18,5	10171	10191 <b>/</b> 10161 <b>/</b> 10131
* 10812	20,5x18	10171	10191 / 10161 / 10131
* 10813	22,5x19,5	10171	10191 <b>/</b> 10161 <b>/</b> 10131
* 10814	22,5x20,5	10171	10191 <b>/</b> 10161 <b>/</b> 10131
* 10822	21,5x30,5	10172	10191 <b>/</b> 10161 <b>/</b> 10131
* 10824	22,5x28,5	10172	10191 <b>/</b> 10161 <b>/</b> 10131
* 10826	22,5x30,5	10172	10191 <b>/</b> 10161 <b>/</b> 10131
* 10831	22,5x26	10171	10191 / 10161 / 10131
* 10832	30,5x34	10172	10191 / 10161 / 10131
* 10841	22,3x23,5	10171	10191 / 10161 / 10131
* 10842	30,5x32,85	10172	10191 / 10161 / 10131

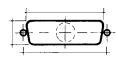
\* Add to the codes the letter "L" if the operator uses them with punching hydraulic machine with laser.

#### Punches for D-SUB

1

32,85

#### connectors



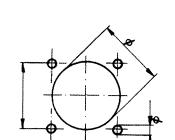
 Position
 Code

 9
 \*10850

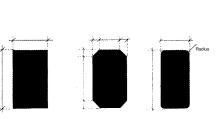
 15
 10851

 25
 10852

 \* Assemble with lock nut 10172



**Example of special punches** 



Measures on request

### Square punches for hydraulic punching machines

They have four cutting edges on the mid point of each side. This patented technical innovation leads to a better auto-centering, an easier and fast punching on the sheet metal and less stress for a longer tool life.

These punches can be used on sheet steel thickness from 0,5 to 2 mm max.; on stainless steel from 0, 5 to 1,8 mm; on aluminium, plastic laminates or other materials from 0,5 to 5 mm.

For higher thickness, please call our Technical Department.

When ordering punches, we recommend to check the list for appropriate punch holders and flanges.

We remember you, to verify, if your punching machine has the LASER POINTING





PUNCH		Punch holder to use		Flange to use			
Code	side 🗆 mm	Code	🗆 mm	10030	10040	10050	10090
*10401	12x12		-	Direct	10131	10161	10191
*10403	15x15		-	Direct	10131	10161	10191
*10405	18x18	Mounted directly	-	Direct	10131	10161	10191
*10407	19x19	on the piston	-	Direct	10131	10161	10191
*10409	20x20		_	Direct	10131	10161	10191
* **10411	22x22		_	Direct	10131	10161	10191
10413	25x25	10104	10	Direct	10131	10161	10191
10415	26x26	10104	10	Direct	10131	10161	10191
10417	30x30	10105	14	Х	10132	10162	10192
10419	35x35	10105	14	Х	10132	10162	10192
10421	40x40	10105	14	Х	10133	10163	10193
10423	45x45	10105	14	Х	10133	10163	10193
10425	46x46	10105	14	Х	10133	10163	10193
10427	48,5x48,5	10106	20	Х	10133	10163	10193
10429	50x50	10106	20	Х	10134	10164	10194
10431	55x55	10106	20	Х	10134	10164	10194
10433	57x57	10106	20	Х	10134	10164	10194
10435	60,5x60,5	10106	20	Х	10134	10164	10194
10437	68x68	10106	20	Х	10134	10164	10194
10439	80,5x80,5	10106	20	Х	Х	10165	10195
10441	90,5x90,5	10106	20	Х	Х	10165	10195
10443	92x92	10106	20	Х	Х	10165	10195
10445	96x96	10106	20	Х	Х	Х	10195
10448	112x112	10106	20	Х	Х	Х	Direct
● ● 10450	126x126	10106	20	Х	Х	Х	Direct
●●10452	138x138	10106	20	Х	Х	Х	Direct

Other sizes available on request.

 Please add to the code the letter "L" if the user has a laser hydraulic punching machine.

**\*\*** In order to assemble, use 10172 lock nut.

Assemble with lock nut 10173.

 Use extractors 10143 and the big lock nut 10173.



### Rectangular punches for hydraulic punching machines

They have four cutting edges on the mid point of each side. This patented technical innovation leads to a better auto-centering, an easier and fast punching on the sheet metal and less stress for a longer tool life.

These punches can be used on sheet steel thickness from 0,5 to 2 mm max.; on stainless steel from 0, 5 to 1,8 mm; on aluminium, plastic laminates or other materials from 0,5 to 5 mm.

For higher thickness, please call our Technical Department.

When ordering punches, recommend to check the list for appropriate punch holders and flanges.

We remember you, to verify, if your punching machine has the LASER POINTING

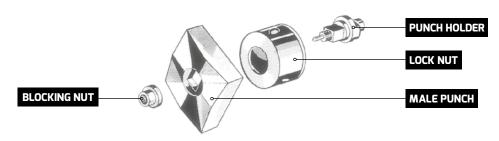


PUNCH		Punch holder to use			Flange to use	
Code	side 🗆 mm	Code	🗆 mm	10040	10050	10090
<b>*</b> ●●10607	17,5x33,5	Direct		10132	10162	10192
10609	20x41	10104	10	10132	10162	10192
10611	22x30	10104	10	10132	10162	10192
10613	22x42	10104	10	10132	10162	10192
10615	24x36	10104	10	10132	10162	10192
10/29x71	29x71	10105	14	10134	10164	10194
10617	30x45	10105	14	10133	10163	10193
10619	32x60	10105	14	10133	10163	10193
10621	34x68	10105	14	10134	10164	10194
10623	36x46	10106	20	10134	10164	10194
10625	36x85	10106	20	10134	10164	10194
10627	36x112	10106	20	Х	10165	10195
10631	44x92	10106	20	Х	10165	10195
10632	45x93	10106	20	Х	10165	10195
10633	46x53,5	10106	20	Х	10164	10194
10635	46x71	10106	20	Х	10164	10194
10637	50x98	10106	20	Х	10165	10195
• 10640	68x138	10106	20	Х	Х	Direct
• 10642	81x117	10106	20	Х	Х	Direct

Other sizes available on request.

All rectangular punches are to be considered as specials.

- \* Please add the letter "L" if the user has a laser hydraulic punching machine.
- Assemble with the big lock nut 10173 and with extractors 10143.
- Equipped with lock nut 10172.



How to assemble square and rectangular punches



# **DIN rail cutting machines**



# **TECHNICAL APPLICATION**



HOLES AND CUT ACHIEVABLE WITH ART. 9050-52-54-55 HOLE AND CUT ACHIEVABLE WITH ART. 9056 - 58

HOLE ACHIEVABLE WITH ART. 9056

HOLE ACHIEVABLE WITH ART. 9050-52-54-55

HOLE AND CUT ACHIEVABLE WITH ART. 9050-52-54 HOLES AND CUT ACHIEVABLE WITH ART. 9050-52-54



# Manual din rail cutting machines For cutting and punching standard and special Din Rails

### 9050

It cuts four profiles in the desired positions and punches oval holes 6,5 x12 mm in longitudinal and transversal position. It is equipped with 1-meter ruler and slider.

Characteristics	
Weight	19 Kg
Width	180 mm
Height complete with lever	990 mm
Lenght	1.160 mm (with ruler)



### 9056

It cuts 4 standard din rails and punches a round hole Ø 6,5 mm It is equipped complete with 1 meter ruler and slider.

### **Characteristics**

Weight	14 Kg
Width	180 mm
Height complete with lever	990 mm
Lenght	1.160 mm (with ruler)



### 9058

It cuts two din rails impressions in the desired position and it punches a round hole Ø 6, 5 mm at the beginning of the din rail. It is equipped with 1 mt. ruler and slider.

Characteristics	
Weight	11 Kg
Width	130 mm
Height complete with lever	870 mm
Lenght	1.150 mm (with ruler)





Din rail cutting machines For cutting and punching standard and special Din rails

### 9052 **Pneumatic**

Very fast machine and effortless user experience. It cuts with rapidity and with a low air consumption with a feeding pressure from 7 to 9 bars.

The pneumatic version is equipped with a foot pedal. It cuts four standard din rails in the desired positions and punches oval holes 6,5x12 mm in a longitudinal and transversal position. It is equipped with 1 meter ruler and slider.



Characteristics	
Dimensions without ruler	180x110xh540 mm
Total Weight	31 Kg
Patented model.	

### 9054 Oleodynamic

It has the same features of the model 9050. Very fast machine and effortless user experience. This tool takes advantage of the strength of an oleodynamic cylinder, which acts directly on the cutting blade.

It can be used with all IMB pumps or electric controls units.

It is equipped with 1 meter ruler and slider.



**Characteristics** 

Dimensions without ruler	180x110xh300 mm.
Total Weight	14 Kg
Patented model.	

### **POWER UNITS** PAG. 80+87

### 9055 For Tris unit

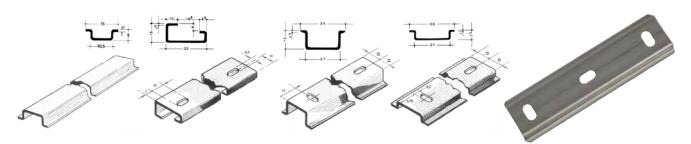
It has the same working characteristics of the din rail model 9050. It is easy to install it on the Tris Unit.



**Characteristics** Lenaht 180 mm Width 70 mm Height 120 mm Weight 12 Kg

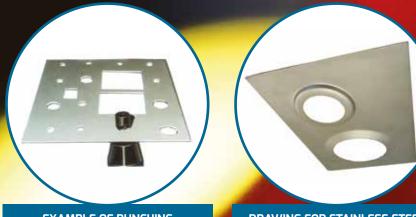
### **STANDARD DIN RAILS**

Special rail shapes and holes on request. Also on aluminium.



Perforation cylinders for metal panels and sheets.

# **TECHNICAL APPLICATION**



EXAMPLE OF PUNCHING WITH ART. 9022 DRAWING FOR STAINLESS STEEL KITCHEN SINKS

TH

EXAMPLE OF FLAT DRAWING

EXAMPLE OF PUNCHING WITH ART. 9070E



**DRAWING ON PIPE** 



# 9070 Manual punching cylinder

Manual punching cylinder. It punches steel sheet from1 to 2 mm but it depends on the diameter of the hole.

For aluminium and plastic laminates max. 5 mm thickness.

For other material, please contact our Technical Department.

Supplied with a plastic case and complete of spacers for the use of pins of the perforation cylinder 9022.

Kit

Characteristics	
Power	50 kN
Weight	2,2 Kg
Round hole max	Ø 72,5 mm
Square hole max	68x68 mm
Stroke	20 mm



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Kit Manual Punching cylinder PG 9861			
Code	Description	Quantity	
9070	Cylinder	1	
9192	Punch Ø 15,5	1	
9206	Punch Ø 18,5	1	
9210	Punch Ø 21	1	
9212	Punch Ø 22,5	1	
9222	Punch Ø 28,5	1	
9224	Punch Ø 30,5	1	
9180	Drill for pre-hole	1	
9601	Pin Ø 9	1	
9602	Pin Ø 11	1	
9825	Case	1	

Kit Manual punching cylinder ISO 9862			
Code	Description	Quantity	
9070	Cylinder	1	
9202	Punch Ø 16,2	1	
9210	Punch Ø 21	1	
9212	Punch Ø 22,5	1	
9216	Punch Ø 25,5	1	
9228	Punch Ø 32,5	1	
9180	Drill for pre-hole	1	
9601	Pin Ø 9	1	
9602	Pin Ø 11	1	
9603	Pin Ø 16	1	
9825	Case	1	

Kit Manual Punching Cylinder GAS 9863			
Code	Description	Quantity	
9070	Cylinder	1	
9204	Punch Ø 17	1	
	<b>D</b> 1 <b>d</b> 6 4		

9204	Punch Ø 17	1
9210	Punch Ø 21	1
9212	Punch Ø 22,5	1
9214	Punch Ø 24	1
9218	Punch Ø 26,5	1
9224	Punch Ø 30,5	1
9180	Drill for pre-hole	1
9601	Pin Ø 9	1
9602	Pin Ø 11	1
9825	Case	1

# 9070E Punching cylinder with battery

Characteristics	
Power	63 kN
Weight	3,3 Kg
Max. round hole	Ø 120 mm
Max. square hole	92x92 mm

Cylinder with battery, provided with a trigger switch and manual lever for the cylinder return. Tool used for punching panels and sheets of steel max. thickness 2 mm; alluminium and plastic max. 5 mm.

Please contact our Technical Department for other material.

Supplied with a plastic case, battery charger and spacers for the use of series pins of our cylinder perforation 9022.

Patented Model





Kit Punc 9863E	hing Cylinder GAS	5
Code	Description	Quantity
9070E	Cylinder	1
9204	Punch Ø 17	1
9210	Punch Ø 21	1
9212	Punch Ø 22,5	1
9214	Punch Ø 24	1
9218	Punch Ø 26,5	1
9224	Punch Ø 30,5	1
9180	Drill for pre-hole	1
9601	Pin Ø 9	1
9602	Pin Ø 11	1
9829	Case	1
9843	Battery charger 18 V	1

### Kit



# KIT Punching cylinder with battery PG 9861E

Code	Description	Quantity
9070E	Cylinder	1
9192	Punch Ø 15,5	1
9206	Punch Ø 18,5	1
9210	Punch Ø 21	1
9212	Punch Ø 22,5	1
9222	Punch Ø 28,5	1
9224	Punch Ø 30,5	1
9180	Drill for pre-hole	1
9601	Pin Ø 9	1
9602	Pin Ø 11	1
9829	Case	1
9843	Battery charger 18 V	1

Kit Punching cylinder with battery ISO 9862E									
Code	Description	Quantity							
9070E	Cylinder	1							
9202	Punch Ø 16,2	1							
9210	Punch Ø 21	1							
9212	Punch Ø 22,5	1							
9216	Punch Ø 25,5	1							
9228	Punch Ø 32,5	1							
9180	Drill for pre-hole	1							
9601	Pin Ø 9	1							
9602	Pin Ø 11	1							
9603	Pin Ø 16	1							
9829	Case	1							
9843	Battery charger 18 V	1							



# 9022 Perforation cylinder

For punching metals, inox, aluminium, masonite, plastic laminates panels and sheets



This is a hydraulic cylinder with simple acting made of high quality steel, which ensures maximum efficiency and constant results. It is used in combination with pumps and all our MULTIFOR control units. It works with its relative punches to make holes in sheet metal, aluminium, masonite and plastic laminates. This tool can use punches from Ø 13 to Ø 170 mm; square punches from □ 12 to dia. □ 145 mm and rectangular punches of equal dimensions.

This tool can punch sheet metal max. thickness 2,5 mm; stainless steel max.2 mm; aluminium and plastic laminates 5 mm.

It is equipped with male rapid connector ready to be used.

Characteristics	
Power	130 kN
Max. Working pressure	700 bar
Max. Stroke	30 mm
Oil capacity for full stroke	0,080lt.
Lenght	200 mm
Diameter	70 mm
Weight	2,9 Kg

### External diameter in mm GAS, PG and ISO

GAS thread	Ø ext. GAS thread	Recomm. punch	PG thread	Ø ext. PG thread	Recomm. punch	ISO thread	Ø ext. ISO thread	Recom punc
1/4"	13,15	-	7	12,5	13	16	16	16,2
3/8"	16,66	17	9	15,2	15,5	20	20	21
1/2"	20,9	21	11	18,5	18,5	25	25	25,5
5/8"	22,9	24	13,5	20,4	21	32	32	32,5
3/4"	26,44	26,5	16	22,5	22,5	40	40	40,5
1"	33,24	33,5	21	28,3	28,5	50	50	50,5
1 1/4"	41,9	42,5	29	37	37	63	63	65
1 1/2"	47,8	48,5	36	47	47			
2"	59,62	60,5	42	53,9	54,2			
2 1/2"	75,18	76	48	59,3	59,5			
3"	87,8	90						
4"	112,5	113						

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SQUARE PUNCHES PAG. 49

POWER UNITS PAGE 80÷87



### 9180 Drill for pre-hole

This special drill has been realized to carry out the pre-holes. It has to be installed on portable drilling machines with little chucks and it has a special cutting angle to soften and decrease the cutting strength avoiding strokes. The use is very easy. This drill has 3 working measures; one for the starting hole  $\emptyset$  6.4; one for the pre-hole  $\emptyset$  12 and one for the pre-hole  $\emptyset$  17. Chuck socket  $\emptyset$  12.

Only one drill for two processing.



### 9022/18Ton Perforation cylinder

It has the same features and the same use of the cylinder 9022 but it has a bigger power and stroke. This tool can punch bigger thicknesses and it realizes special works as for example, holes for drawing.

It is equipped with male rapid connector ready to be used.

# Please contact our IMB Technical Department for any question.

### **Characteristics**

Power	180 kN
Max. Working pressure	700 bar
Max. Stroke	40 mm
Oil capacity for full stroke	0,110lt.
Lenght	265 mm
Diameter	92 mm
Weight	7,5 Kg
Oil capacity for full stroke Lenght Diameter	0,110lt. 265 mm 92 mm



### Round pins for 9022/18 Ton

They are composed by a special pin and a lock nut. This lock nut is screwed over the punch in order to lighten the strain of the punch. They are suited for HD punches only.

Code	Ø mm	Ø pare-hole
9610/11	11	13
9610/16	16	12
9610/27	27	27,5





# Manual punching kit

### 9853 Manual kit ISO

On request manual pins and punches of different diameters can be supplied. The kit is equipped with a special pawl wrench to facilitate the punching operation.



Code	Description	Quantity
9202	Punch Ø 16,2	1
9210	Punch Ø 21	1
9212	Punch Ø 22,5	1
9216	Punch Ø 25,5	1
9228	Punch Ø 32,5	1
9642	Manual pins Ø 9	1
9643	Manual pins Ø 11	1
9644	Manual pins Ø 16	1
9180	Drill Ø 12 and Ø 17	1
9870	Pawl wrench with 2 b	oushes 1
9826	Case	1

### **Manual pins**

For small needs or where it is impossible to use Multifor pumps, manual pins are available. With the help of a wrench, they can punch thickness max. 1,5 mm. These pins are suggested until a  $\emptyset$  50,5 mm max.



Code	Ø mm	Ø pre-hole
9642	9	10
9643	11	12
9644	16	17

# Punch with handle for thin sheets and down pipes

9570 Punch Ø 79

9572 Punch Ø 98

9875 Wrench



# **Standard round pins**

Round punches use pins in the list. It is essential that the pre-hole is increased by about 1 mm.



Code	Ø mm	Ø Pre-hole
9601	9	10
9602	11	12
9603	16	17



# **Standard round punches**

These round punches are made of special tempered steel. They have cutting edges with 3 or 4 bits and they can realize holes in sheet steel from 0, 5 to 2 mm. max.- in stainless steel from 0,5 to 1,8 mm max - in aluminium, plastic laminates or other material from 0,5 to 5 mm.

For greater material thickness, recommend to use our HD series.

The holes are built with the maximum precision and without bucking; all punches are stamped with its nominal  $\emptyset$  for an easy selection and to avoid mistakes during the use.

Male and female spares are available. It is sufficient to add to the code "M "or "F".

Please contact our Technical Department for thicker material.

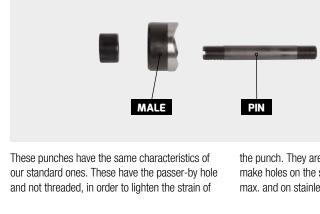


	<b>~</b> 1	~ ·	<b>a</b> 11		Suitable with							
Code	Ø punch	Ø pin	Ø pre-hole	Male spare	9022	9022/18ton	9070	9070E				
9200	13	9	10	9200M	1	×	1	1				
9192	15,5	9	10	9192M	1	×	1	1				
9202	16,2	9	10	9202M	1	×	1	1				
9204	17	9	10	9204M	1	×	1	1				
9206	18,5	11	12	9206M	1	×	1	1				
9208	19,5	11	12	9208M	1	×	1	1				
9210	21	11	12	9210M	1	×	1	1				
9212	22,5	11	12	9212M	1	×	1	1				
9214	24	11	12	9214M	1	×	1	1				
9216	25,5	11	12	9216M	1	×	1	1				
9218	26,5	11	12	9218M	1	×	1	1				
9220	27,5	11	12	9220M	1	×	1	1				
9222	28,5	11	12	9222M	1	×	1	1				
9224	30,5	11	12	9224M	1	×	1	1				
9226	30,5	16	17	9226M	1	×	1	1				
9228	32,5	16	17	9228M	1	×	1	1				
9230	33,5	16	17	9230M	1	×	1	1				
9232	35,5	16	17	9232M	1	×	1	1				
9194	37	16	17	9194M	1	×	1	1				
9234	38,5	16	17	9234M	1	×	1	1				
9236	40,5	16	17	9236M	1	×	1	1				
9238	42,5	16	17	9238M	1	×	1	1				
9240	45,5	16	17	9240M	1	×	1	1				
9196	47	16	17	9196M	1	×	1	1				
9242	48,5	16	17	9242M	1	×	1	1				
9244	50,5	16	17	9244M	1	×	1	1				
9246	52,5	16	17	9246M	1	×	1	1				
9248	54,2	16	17	9248M	1	×	1	1				
9250	55,5	16	17	9250M	1	×	1	1				
9252	57,5	16	17	9252M	1	×	1	1				
9198	59,5	16	17	9198M	1	×	1	1				
9254	60,5	16	17	9254M	1	×	1	1				
9256	62,5	16	17	9256M	1	×	1	1				
9258	65	16	17	9258M	1	×	1	1				
9260	68	16	17	9260M	1	×	1	1				
9262	70,5	16	17	9262M	1	×	1	1				
9264	72,5	16	17	9264M	1	×	1	1				

\* The dimensions of the punches are suitable for our standard max. thickness. The possibility is reduced with different material and thickness.



# **Round HD punches**



the punch. They are used with their pins and they make holes on the sheet steel from 0,5 to 2,5 mm max. and on stainless steel 2 mm max.

DIE / FEMALE

Male and female spares are availabe. It is sufficient to add the code "M" and "F". Please contact our IMB Technical Department for thicker material.

	Ø	Ø	Ø pre-	Male		Suital	ole wit	h		Ø	Ø	Ø pre-	Male		Suital	ole wit	h
Code	punch	pin	hole	spare	9022	9022/ 18ton	9070	9070E	Cod	<sup>2</sup> punch	h pin	hole	spare	9022	9022/ 18ton	9070	9070E
9201	13	9	10	9201M	1	Х	1	1	925	55,5	16	17	9251M	1	1	1	1
9193	15,5	9	10	9193M	1	Х	1	1	925	<b>3</b> 57,5	16	17	9253M	1	1	1	1
9203	16,2	9	10	9203M	1	×	1	1	919	<b>9</b> 59,5	16	17	9199M	1	1	1	✓
9205	17	9	10	9205M	1	Х	1	1	925	<b>5</b> 60,5	16	17	9255M	1	1	1	1
9207	18,5	11	12	9207M	1	1	1	1	925	<b>7</b> 62,5	16	17	9257M	1	1	1	1
9209	19,5	11	12	9209M	1	1	1	1	925	<b>9</b> 65	16	17	9259M	1	1	1	1
9211	21	11	12	9211M	1	1	1	1	926	68	16	17	9261M	1	1	1	1
9213	22,5	11	12	9213M	1	1	1	1	926	<b>3</b> 70,5	16	17	9263M	1	1	1	1
9215	24	11	12	9215M	1	1	1	1	926	5 72,5	16	17	9265M	1	1	1	1
9217	25,5	11	12	9217M	1	1	1	1	926	<b>5</b> 76	27	27,5	9266M	1	1	Х	1
9219	26,5	11	12	9219M	1	1	1	1	926		27	27,5	9268M	1	1	Х	1
9221	27,5	11	12	9221M	1	1	1	1	927	<b>)</b> 80,5	27	27,5	9270M	1	1	Х	1
9223	28,5	11	12	9223M	1	1	1	1	927		27	27,5	9272M	1	1	Х	1
9225	30,5	11	12	9225M	1	1	1	1	927		27	27,5	9274M	1	1	Х	1
9227	30,5	16	17	9227M	1	1	1	1	927		27	27,5	9276M	1	1	Х	1
9229	32,5	16	17	9229M	1	1	1	1	927		27	27,5	9278M	1	1	Х	1
9231	33,5	16	17	9231M	1	1	1	1	928		27	27,5	9280M	1	1	Х	1
9233	35,5	16	17	9233M	1	1	1	1	928	) -	27	27,5	9282M	1	1	Х	1
9195	37	16	17	9195M	1	1	1	1	928		27	27,5	9284M	1	1	Х	1
9235	38,5	16	17	9235M	1	1	1	1	928		27	27,5	9286M	1	1	Х	1
9237	40,5	16	17	9237M	1	1	1	1	928		27	27,5	9288M	1	1	Х	1
9239	42,5	16	17	9239M	1	1	1	1	929		27	27,5	9290M	1	1	Х	1
9241	45,5	16	17	9241M	1	1	1	1	929		27	27,5	9291M	1	1	Х	1
9197	47	16	17	9197M	1	1	1	1	929		27	27,5	9292M	1	1	X	×
9243	48,5	16	17	9243M	1	1	1	1	929		27	27,5	9293M	1	1	Х	×
9245	50,5	16	17	9245M	1	1	1	1	929		27	27,5	9294M	1	1	Х	×
9247	52,5	16	17	9247M	1	1	1	1	929		27	27,5	9295M	1	1	Х	×
9249	54,2	16	17	9249M	1	1	1	1	929	<b>6</b> 170	27	27,5	9296M	1	1	×	×

\*The dimensions of the punches are suitable for our standard max. thickness. The possibility is reduced with different material and thickness.

### **Round pins for HD punches**

They are composed by a threaded pin and lock nut, which is screwed over the HD punch in order to lighten the strain of the punch



Code	Ø mm	Ø pre-hole
9611	9	10
9612	11	12
9613	16	17
9614	27	27,5



# **Square punches**

These punches have a special feature on male parts as they have four cutting edges on the mid points.

This patented technical innovation allows a better self-centring, a faster perforation with less strain. This is a guarantee for the tool life. These punches realize holes on sheet of stainless steel from 0, 5 to 2,0 mm max. and on aluminium, laminated plastics or other sheet materials from 0,5 to 5 mm

Please contact our Technical Dep

	contact our Te nent for thicke						
Code Punch size Pin		Pin size	Ø pre-		Suitable with		
COUE	T UNCH SIZE	1 111 3120	hole	9022	9022/ 18ton	9070	9070E
9302	12x12	8x8	11	1	×	1	1
9304	18x18	10x10	15	1	×	1	1
9306	19x19	10x10	15	1	×	1	1
9308	20x20	10x10	15	1	×	1	1
9309	22x22	10x10	15	1	×	1	1
9310	25x25	14x14	19,5	1	1	1	1
9312	26x26	14x14	19,5	1	1	1	1
9314	30x30	14x14	19,5	1	1	1	1
9316	35x35	14x14	19,5	1	1	1	1
9318	40x40	14x14	19,5	1	1	1	1
9320	45x45	14x14	19,5	1	1	1	1
9322	46x46	14x14	19,5	1	1	1	1
9324	48,5x48,5	20x20	27,5	1	1	1	1

			Ø pre-		Suitable with			
Code	Punch size		hole	9022	9022/ 18ton	9070	9070E	
9326	50x50	20x20	27,5	1	1	1	1	
9328	55x55	20x20	27,5	1	1	1	1	
9330	57x57	20x20	27,5	1	1	1	1	
9332	60,5x60,5	20x20	27,5	1	1	1	1	
9334	68x68	20x20	27,5	1	1	1	1	
9336	80,5x80,5	20x20	27,5	1	1	×	1	
9338	90,5x90,5	20x20	27,5	1	1	Х	1	
9340	92x92	20x20	27,5	1	1	×	1	
9342	96x96	20x20	27,5	1	1	×	×	
9344	112x112	22x22	28,5	1	1	×	×	
9346	126x126	22x22	28,5	1	1	×	X	
9348	138x138	22x22	28,5	1	1	×	×	
9350	145x145	22x22	28,5	1	1	×	X	

\* The dimensions of the punches are suitable for our standard max. thickness. The possibility is reduced with different material and thickness.

### Pins for square punches

Please use square pins for square punches (see the list ).

It is essential to do the pre-hole indicated.

Code	Pin size	Ø pre-hole
9621	6x6	9
9622	8x8	11
9623	10x10	15
9624	12x12	17
9625	14x14	19,5
9626	20x20	27,5
9627	22x22	28,5



### Pins for square punches 9022/18Ton

Code	Pin size	Ø pre-hole
9620/14	14x14	19,5
9620/20	20x20	27,5
9620/22	22x22	28,5





# **Rectangular punches**

These punches have a special feature on male part as they have four cutting edges on the mid points.

This patented technical innovation allows a better self-centring, a faster perforation with less strain. This is a guarantee for the tool life.

These punches realize holes on sheet of stainless steel from 0, 5 to 2,0 mm max. and on aluminium, laminated plastics or other sheet materials from 0,5 to 5 mm.

Please contact our Technical Department for thicker material.



Code	Code Punch size Pin size Ø pre-hol		Ø wys hale				
Code	Punch size	PIN SIZE	ze Ø pre-hole	9022	9022/18ton	9070	9070E
9405	17,5x33,5	10x10	15	1	×	1	✓
9410	20x41	10x10	15	1	×	1	✓
9412	22x30	10x10	15	1	×	1	1
9411	22x42	10x10	15	1	×	1	1
9414	22x46	10x10	15	1	×	1	1
9417	24x36	14x14	19,5	1	1	1	1
94/29x71	29x71	20x20	27,5	1	1	1	1
9421	30x45	20x20	27,5	1	1	1	✓
9425	34x68	20x20	27,5	1	1	1	✓
9428	36x46	20x20	27,5	1	1	1	✓
9431	36x85	20x20	27,5	1	1	×	✓
9433	36x52	20x20	27,5	✓	1	✓	✓
9434	36x112	20x20	27,5	1	1	×	✓
9443	44x92	20x20	27,5	1	1	×	$\checkmark$
9452	45x93	20x20	27,5	1	1	×	✓
9450	46x53,5	20x20	27,5	1	1	1	✓
9451	46x71	20x20	27,5	1	1	1	✓
9459	50x98	20x20	27,5	1	1	×	$\checkmark$
9478	68x138	22x22	28,5	1	1	×	×
9485	81x117	22x22	28,5	1	1	×	×

\*The dimensions of the punches are suitable for our standard max. thickness. The possibility is reduced with different material and thickness.

# Pins with reference mark for rectangular punches

Rectangular punches use square pins with a reference mark to avoid punch positioning mistakes.

Code	Lato x lato	Ø preforo
9631	6x6	9
9632	8x8	11
9633	10x10	15
9634	12x12	17
9635	14x14	19,5
9636	20x20	27,5
9637	22x22	28,5

### Pins with reference mark for rectangular punches 9022/18Ton



Code	Pin size	Ø pre-hole
9620/14R	14x14	19,5
9620/20R	20x20	27,5
9620/22R	22x22	28,5

Pin type

9633

9633

9633

9623

9633

9633 9633

9633

9635

9633

9635

9636

9636

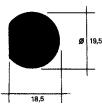


# **Special and shaped punches**

We have built special punches for mounting handles, locks and push buttons. These punches can be used with our perforation cylinder 9022, with the manual puncher 9070 and with the electric puncher 9070E.



9552





Code

9552

9554

9556

9557

9558

9559

9560

9561

9562

9564

9565

9566

9568

Description

for 19,5 mm locks

for 20,5 mm locks

for 22,5 mm locks

for 22,5 mm locks

for 21,5 mm handle

for 22,5 mm handle

for 22,5 mm handle

for 16A CEE sockets

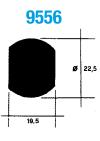
for 32A CEE sockets

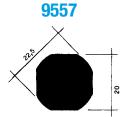
with cave 22.3

with cave 30,5

for 22,5 mm push button

for 30,5 mm push button





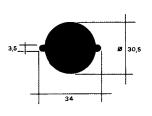
9561

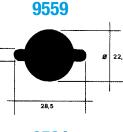
9558

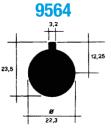
5,5

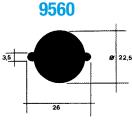
21.5

9562

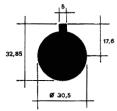








9565



5

Pin

10x10

10x10

10x10

10x10

10x10

10x10

10x10

10x10

14x14

10x10

14x14

20x20

20x20



30,5

# Special rectangular punches

We designed with the same features of the standard punches, special punches but with bevelled or with radius corners in most of the common sizes. When ordering, it is important to specify the material and the thickness to punch.

### Punches for D-Sub connectors

Pin for cylinder 9022 -code 9648 Manual pin - code 9649 Pre-hole Ø 13

Code Description Pin size Ø pre-hole
<b>9495</b> 70,5x117,5 with bevel L=15 20x20 27,5
<b>9496</b> 40x90 R=4 with radius 20x20 27,5
<b>9497</b> 51x118 R=4 with radius 20x20 27,5
<b>9499</b> 107x119 R=4 with radius 20x20 28,5

Positions	Code
9	9574
15	9576
25	9578



# Punching cylinder for cable channels and boxes

# **TECHNICAL APPLICATION**



EXAMPLE OF PUNCHED BOX



**EXAMPLE OF A SPECIAL WORKING** 



WORKING ON PROFILES FOR ALUMINIUM



PUNCHING ON THE BOTTOM OF THE CHANNEL ART. 7060-1-2



PUNCHING WORKING

0

EXAMPLE OF BAR WITH RADIUS



# 7001 Manual punching cylinder for cable channels

54



Technical Characteristics		
Power	28 kN	
Max. hole	41 mm	
Internal depth	50 mm	
External depth	25 mm	
Max. thickness steel	1,2 mm	
Stroke	16 mm	
Weight	3,8 Kg	
Rotating head	290°	

It is a reliable and practical tool for punching cable channels in steel and plastic sheets without prehole.

It is composed by an hydraulic manual pump with incorporated cylinder. Light and easily handled. Designed for punching the edges of cable channels with max. thickness 1,2 mm. and maximum Ø 41 mm.

A special punch can be installed to make holes on the extremities of cable channels for junctions, without tracing wheelbases (7040). Please specify the trademark of the cable channel when ordering.

It can punch several types of metal sheet.

It is equipped with a plastic case.

On request, we can design special punches for stainless steel channels.

We make punches for clinching on demand.



# 7002 Hydraulic punching cylinder for cable channels

It is a reliable and practical tool for punching cable channels in steel and plastic sheets without prehole.

It is composed by an hydraulic cylinder which works connected to our power units. Light and easily handled. It has been designed for punching the edges of cable channels with max. thickness 1,2 mm. and maximum Ø 41 mm.

It is possible to install a special punch in order to do holes on the extremity of cable channels for junctions, without tracing wheelbases (7040). On request, we can realize special punches for stainless steel channels.



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### **Characteristics**

Power	34 kN
Max.hole	41 mm
Internal depht.	50 mm
External depht	25 mm
Max. thickness steel	1,2 mm
Weight	3 Kg
Stroke	16 mm



# 7009 Punching cylinder for cable channels with battery

It is a reliable and practical tool for punching cable channels in steel and plastic sheets without pre-hole. It is composed by an hydraulic pump supllied with an indipendent battery. Light and easily handled. It has been studied for punching the edges of cable channels with max. thickness 1,2 mm. and maximum  $\emptyset$  41 mm.

A special punch can be installed to make holes on the extremities of cable channels for junctions, without tracing wheelbases (7040). It can punch different types of metal sheets.

# It is equipped with a plastic case and a battery charger code 9843

On request, it is possible to make special punches for stainless steel.

Characteristics	
Power	32 kN
Max. hole	41 mm
Internal depht	50 mm
External depht	25 mm
Max. thickness steel	1,2 mm
Stroke	16 mm
Weight	5 Kg
Rotating head	325°
Autonomy	about 140 punching



### Accessories



9829 Case for punching cylinders with battery



7099 Adapter / Punch holder



Rechargeable battery 18 V.



9843 Battery charger 18 V (recharge 1 h.)



Case for manual punching cylinders



# **Punching cylinder for bottom channels**

It is a tool designed for punching the bottom cable channels and edges of particular boxes.

It can also punch sheet in aluminium and plastic.

Principal characteristic, it is the possibility of punching without pre-hole. It is built in light alloy; it is handy and the introduction of the cable channel is very simple. The metal tube carrying the dies is sliding in order to facilitate the placement in channels already mounted. With a simple manual operation, one takes the die on the part to punch, reducing the punching time in few seconds.

### 7060

It works with a pump with battery 18V CC. The rotating cylinder is included. Weight 7 Kg.

### Characteristics

Power	28 kN
Stroke	16 mm
Max.hole	ø 33,5 mm
Max.thickness steel	1,2 mm
Internal depth	50 mm
External depth	35 mm
Total depht	85 mm



### 7061

Manual tool, it works with a pump. The rotating cylinder is included. Weight Kg. 5,2

## Characteristics

Power	28 kN
Stroke	16 mm
Max. hole	ø 33,5 mm
Max. thickness steel	1,2 mm
Internal depth	50 mm
External depth	35 mm
Total depht	85 mm

### 7062

It is composed by an oleodynamic cylinder, which can operate with all our power units: foot pedal, pneumatic pump or electric unit. Weight kg. 4,8

Characteristics	
Power	28 kN
Stroke	16 mm
Max. hole	ø 33,5 mm
Max. thickness steel	1,2 mm
Internal depth	50 mm
External depth	35 mm
Total depht	85 mm



POWER UNITS PAG 80÷87

# Round punches for punching cylinders for cable channels

Patented Model



	to Par
el	Williams
	-

CodeØType of punchDie dischage7010/1313DirectDirect7010/15,515,5DirectDirect701116,5AdapterDirect701217AdapterDirect701318,5AdapterDirect701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect701/3737AdapterDirect701/3141AdapterDirect	Round Punches			
7010/15,515,5DirectDirect701116,5AdapterDirect701217AdapterDirect701318,5AdapterDirect701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	Code	Ø	Type of punch	Die dischage
701116,5AdapterDirect701217AdapterDirect701318,5AdapterDirect701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7010/13	13	Direct	Direct
701217AdapterDirect701318,5AdapterDirect701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7010/15,5	15,5	Direct	Direct
701318,5AdapterDirect701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7011	16,5	Adapter	Direct
701419,5AdapterDirect701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7012	17	Adapter	Direct
701521AdapterDirect701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7013	18,5	Adapter	Direct
701622,5AdapterDirect701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702230,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7014	19,5	Adapter	Direct
701724AdapterDirect701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702230,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7015	21	Adapter	Direct
701825,5AdapterDirect701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702230,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7016	22,5	Adapter	Direct
701926,5AdapterDirect702027,5AdapterDirect702128,5AdapterDirect702230,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7017	24	Adapter	Direct
702027,5AdapterDirect702128,5AdapterDirect702230,5AdapterDirect702332,5AdapterDirect702433,5AdapterDirect7010/3737AdapterDirect	7018	25,5	Adapter	Direct
7021         28,5         Adapter         Direct           7022         30,5         Adapter         Direct           7023         32,5         Adapter         Direct           7024         33,5         Adapter         Direct           7010/37         37         Adapter         Direct	7019	26,5	Adapter	Direct
7022         30,5         Adapter         Direct           7023         32,5         Adapter         Direct           7024         33,5         Adapter         Direct           7010/37         37         Adapter         Direct	7020	27,5	Adapter	Direct
7023         32,5         Adapter         Direct           7024         33,5         Adapter         Direct           7010/37         37         Adapter         Direct	7021	28,5	Adapter	Direct
7024         33,5         Adapter         Direct           7010/37         37         Adapter         Direct	7022	30,5	Adapter	Direct
<b>7010/37</b> 37 Adapter Direct	7023	32,5	Adapter	Direct
	7024	33,5	Adapter	Direct
7010/41 41 Adapter Front assembly	7010/37	37	Adapter	Direct
	7010/41	41	Adapter	Front assembly

GAS Channel puncher kit - 7003 Battery - 7003E			
Code	Description	Quantity	
7001/9	Channel Puncher	1	
7012	Punch Ø 17	1	
7015	Punch Ø 21	1	
7019	Punch Ø 26,5	1	
7024	Punch Ø 33,5	1	
9825/9	Case	1	

PG Channel puncher kit - 7004 Battery - 7004E		
Code	Description	Quantity
7001/9	Channel Puncher	1
7013	Punch Ø 18,5	1
7015	Punch Ø 21	1
7016	Punch Ø 22,5	1
7021	Punch Ø 28,5	1
9825/9	Case	1

### ISO Channel puncher kit - 7005 Battery - 7005E Code Description Quantity 7001/9 **Channel Puncher** 1 7011 Punch Ø 16,5 1 7015 Punch Ø 21 1 7016 Punch Ø 22,5 1 7018 Punch Ø 25,5 1 7023 Punch Ø 32.5 1 9825/9 Case 1

On demand, we realise punches for clinching process. Please contact our Technical Department for special requests.

### Special punch for double oval holes for channel junctions. 7040



With this special punch 7040, it is possible to realize oval holes for channel junctions. The die has a reference in oder to punch with the standard interaxis. Its performance is the faster as the one of standard punches.

It doesn't leave any burrs on the cable channels. This punch 7040 can be used on all our standard heads 7000



# **Punching cylinders for boxes**

### Portable and rapid tool, without pre-hole

### 7050

It is a handy and rapid tool, particularly indicated for the punching of plastic boxes with internal ribbing. It doesn't need the pre-hole and the extraction of the punch is easy. It is composed by a hydraulic system. It is enuinped with a

a hydraulic system. It is equipped with a particularly head realized to enter in the little spaces between the ribbing. It is used in workshops or on-site. Patented Model



Technical Characteristics		
Power 28 kN		
Weight 3,7 Kg		
Head rotation 290°		
Internal depth 50 mm		
Round hole max Ø 32,5 mm		
Thickness sheet max. 1,2 mm		
Thickness plastic max.3 mm		

### 7051

It is a handy and rapid tool, particularly indicated for the punching of plastic boxes with internal ribbing.

It doesn't need the pre-hole and the extraction of the punch is easy. It is composed by a hydraulic system which works with any of our power units. It is equipped with a particularly head realized to enter in the little spaces between the ribbing. It is used in workshops or on-site. Patented Model



# CharacteristicsPower34 kNWeight3,2 KgHead rotation360°Internal depth50 mmRound hole maxØ 32,5 mmThickness sheet max.1,2 mmThickness plastic max.3 mm

POWER UNITS PAG. 80÷87

### 7052

It is a handy and rapid tool, particularly indicated for the punching of plastic boxes with internal ribbing.

It doesn't need the pre-hole and the extraction of the punch is easy. It is composed by a hydraulic system which works with a battery 18 V. It is equipped with a particularly head realized to enter in the little spaces between the ribbing. It is used in workshops or on-site. Patented Model



Characteristics	
Power	32 kN
Weight	4,9 Kg
Head rotation	325°
Internal depth	50 mm
Round hole max	Ø 32,5 mm
Thickness sheet max.	1,2 mm
Thickness plastic max.	3 mm



# 7053 Punching cylinder for boxes

### With adjustments for positioning

It has the same characteristics of the other punching cylinders for boxes, but this tool has the rulers with sliders for repetitive working. These rulers simplify the work.

# It can be used also without adjustments

It is an easy tool for punching in particularly uncomfortable positions. It can be used also for cable channels, panels, panel boards already in operation. It is very easy to disassemble the brackets.

Characteristics	
Power	34 kN
Weight	3,2 Kg
Head rotating	360°
Internal depth	50 mm
Round hole max.	Ø 32,5 mm
Plastic thickness max.	3 mm
Adjustment	min. 33 mm, max 300 mm

# PWER UNITS PAG. 80+87

# **Punches and kit**

### Kit manual puncher for boxes ISO - 7006

Code	Description	Quantity
7050	Puncher	1
7299/16,5	Punch Ø 16,5	1
7299/20,5	Punch Ø 20,5	1
7299/22,5	Punch Ø 22,5	1
7299/25,2	Punch Ø 25,2	1
9825	Case	1

### Punches for punching cylinder for boxes

Code	Ø Diameter	
7299/13	13	
7299/15,5	15,5	
7299/16,5	16,5	
7299/18,5	18,5	
7299/20,5	20,5	
7299/22,5	22,5	
7299/25,2	25,5	
7299/26,5	26,5	
7299/28,5	28,5	
7299/32,5	32,5	

# Kit puncher for boxes with battery ISO - 7006E

Code	Description	Quantity
7052	Puncher	1
7299/16,5	Punch Ø 16,5 1	
7299/20,5	Punch Ø 20,5	1
7299/22,5	Punch Ø 22,5 1	
7299/25,2	Punch Ø 25,2 1	
9829	Case 1	

# Kit puncher for boxes with adjustments ISO - 7007

Code	Description	Quantity
7053	Puncher	1
7299/16,5	Punch Ø 16,5	1
7299/20,5	Punch Ø 20,5	1
7299/22,5	Punch Ø 22,5	1
7299/25,2	Punch Ø 25,2	1



Please contact our Technical Department for other diameters.



# Cable cutting shears



# TECHNICAL APPLICATION





# **Cable cutting shears**

**Copper and aluminium** until Ø 95 mm.

The cable cutting shears are hydraulically operated tools for cutting copper and aluminium cables of different sizes or compositions, plain or insulated with PVC covering up to 800-mmg section.

These tools are also availble with insulated version with grounding cable. All the cable cutting shears are equipped with protection carter.

**Characteristics** 

**Characteristics** 

Max. working pressure

Oil capacity for a

complete stroke

Width

Cable

Weight

Power

Lenght

### 9030

The 9030 cable cutting shears works with the cvlinder 9022 and with all our power units. It is sufficient to screw well its pin on the cylinder before starting to work.



Width 150 mm Cable Ø from 10 to 48 mm Weight with cylinder 5,2 Kg Power 80 kN 650÷700 bar Max. working pressure Oil capacity for a 0,080 lt. complete stroke

410 mm

300 mm

150 mm

Ø from 10 to 48 mm

5,2 Kg

80 kN

650÷700 bar

0.050 lt.

### 9032

The cable cutting shears 9032 cuts cables until Ø 48 mm.

Thanks to its rapid connector, it works with all our power units.

It is equipped with a clear protection carter which allows to see the working area. It is handy thanks to its light weight.



9034

The cable cutting shears 9034 cuts cables until Ø 95 mm.

Thanks to its rapid connector, it works with all our power units.

It is equipped with a clear protection carter which allows to see the working area.

The transport is easy thanks to its handle. This cable is an insulated version with grounding cable.



Characteristics	
Lenght	400 mm
Width	270 mm
Cable	Ø from 30 to 95 mm
Weight	10,1 Kg
Power	150 kN
Max. working pressure	650÷700 bar
Oil capacity for a complete stroke	0,140 lt.
Fornita con cassetta 98	23

Characteristics		
Lenght	300 mm	
Width	75 mm	
Height	280 mm	
Power	55 kN	
Weight	3,4 Kg	
Cable	Ø 25 mm max	
Battery	18V 2.0Ah	
Autonomy	about 150 cuts	

9035

The cable cutting shears with battery 9035 cuts cables until Ø 25 mm.

Thanks to its weight and to its balance, it is easy to handle it with a hand.

The battery has an autonomy of about 150 cuts (depending on working conditions).

It is equipped with a plastic case, a battery charger and a battery 18 V 2Ah.

A second battery can be delivered on demand.





# **Cable cutting shears**

### HIGH QUALITY CABLE CUTTING SHEARS WITH BENDED AND INTERCHANGEABLE BLADES



9981 For copper and aluminium cables up to Ø 35 mm and max. section for connectors 180 mmg. Lenght 530 mm Weight 1,5 Kg



9982 For copper and aluminium cables up to Ø 50 mm and max section for connectors 500 mmg. Lenght 780 mm Weight 3,2 Kg.



### **CABLE CUTTING SHEARS WITH INSULATED HANDLES**



9980

120 mmg.

For copper and

aluminium cables up

to Ø 20 mm and max.

section for connectors

Lenght 370 mm

Weight 0,650 Kg

For copper and aluminium cables up to Ø 20 mm and max section for connectors 120 mmg. Lenght 370 mm Weight 0,750 Kg



### 9984

9987

45 mm.

240 mmg.

Weight 0,9 Kg

Maximum section

For copper and aluminium cables up to Ø 35 and max section for connectors 180 mmq. Lenght 530 mm Weight 1,8 Kg



9985

For copper and aluminium cables up to Ø 50 mm and max section for connectors 500 mmg. Lenght 780 mm Weight 3,8 Kg



### **CABLE CUTTING SHEARS WITH FORGED BLADES**



It cuts aluminium and copper cables up to Ø 38 mm. Maximum section 180 mmq. Weight 0,8 Kg





### 9988

It cuts rigid wire ropes up to Ø14 mm and flexible metal cables up to Ø16 mm. Weight 0,8 Kg





# Crimping tools

# TECHNICAL APPLICATION



EXAMPLE OF CRIMPING

EXAMPLE OF CRIMPING

EXAMPLE OF CRIMPING



**CRIMPING OF A COPPER BRAID** 



TUBE TERMINAL CRIMPED WITH A "V" DIE AND PUNCH SAMPLE OF TOTAL PERMEATION OF CRIMPED ELEMENTS



# 9028 Manual crimping tool

It is a tool operated with one hand. Its power, capacity and lightness, make a tool fitted for all type of crimping for copper conductors.

It is equipped with a case.



Characteristics	
Power	35 kN
Capacity	until 120 mm <sup>2</sup>
Stroke of the piston	adjustable from 5 to 8 mm
Hydraulic system	with two speeds
Valve	automatic of max. pressure audible with a "click"
Return of the piston	with the help of a discharge lever
Weight	1,5 Kg
Head	with 360° rotation with rapid opening and closing
Dies	interchangeable

# 9038 Crimping tool with battery

It is a tool operated with one hand. Light and handy, it has the necessary strengh to crimp cables max.section up to 240 mmq. It has a relief valve with automatic return when the crimping is completed and a valve for the manual return.

Available on request, "V" dies with semicircular or circular punch.



Characteristics		
Dimensions	285x60x270 mm	
Weight	3,15 kg with battery	
Power	55kN	
Piston stroke	13 mm	
Tempo di aggraffatura	3÷5 s	
Autonomy	about 220 crimpings (on section 185 mmq )	
Max.section cable	240 mmq	
Valve for max.pression right crimping	confirming the	
Head with rotation at 3 opening and closing.	40° with rapid	
Dies	interchangeable	
Equipped complete with a case, 1 battery 18 V-2Ah and battery charger.		



# Dies and crimping kit 9028



### V Crimping Kit 9867

Code	Description	Quantity
9028	Crimping tool	1
9912	Die 10	1
9913	Die 16	1
9914	Die 25	1
9915	Die 35 1	
9916	Die 50 1	
9917	Die 70	1
9918	Die 95	1
9919	Die 120	1
9910	Punch	1
9911	Punch	1

### Hexagonal crimping Kit 9865

Code	Description	Quantity
9028	Crimping tool	1
*9901	Die 10	1
*9902	Die 16	1
9903	Die 25	1
9904	Die 35	1
9905	Die 50	1
9906	Die 70	1
9907	Die 95	1
9908	Die 120	1

\* Not included in the kit. Supplied on request.



### **Hexagonal dies**

They are used for the crimping of non-insulated tube terminals and head connectors. Supplied in pair.

Cable section mmq	Die code
10	9901
16	9902
25	9903
35	9904
50	9905
70	9906
95	9907
120	9908



### V dies and punches

These are used for ther crimping of non-insulated tube terminals and head connectors. Supplied separately.

Cable sect.	Non-insulated					sulated
mmq.	Code die	Code Punch	Code die	Code Punch		
10	9912	9910	9913	9910		
16	9913	9910	9914	9910		
25	9914	9910	9915	9910		
35	9915	9911	9916	9911		
50	9916	9911	9916	9910		
70	9917	9911				
95	9918	9911				
120	9919	9911				



### Semicircular dies

These are used for "C" connectors. Supplied in pair.

Die code
9920
9921
9922
9923
9924

# DIES FOR 9038

### **Hexagonal dies**



Cable section mmq.	Die code
6 / 35	9925
10 / 50	9926
16 / 70	9927
25 / 95	9928
4 / 120	9929
150	9930
185	9931
240	9932



On demand, dies for "V" crimping, semi-circular and circular are available.



# 9026 Manual C crimping tool 130 kN

It is used for the crimping of: Tube terminals and connectors non-insulated section 10-300 mmq.; tube terminals pre-insulated section 10÷120 mmq.; C connectors section 16÷185 mmq

### **Characteristics**

Weight	5,3 Kg	
Power	130 Kn	
Lenght	565 mm	
Width	160 mm	
Thickness	70 mm	
Insulated handles		
Rotating head 180 °		
Supplied with case complete with compartment for dies.		



DIES PAG. 69

# 9025 "C" Crimping head

This hydraulic head works with all our pumps and control units. It is particularly practical with a frontal opening, which allows an easy positioning of the terminal to crimp. As the technical characteristics are similar to other Multifor tools, maximum reliability is assured. It uses dies for crimping terminals and connectors non-insulated with a section from 10 to 300 mmq; dies for crimping tube terminals pre-insulated section  $10\div120$  mmq; and for "C" connectors section  $10\div185$  mmq.

Characteristics	
Power	130 kN
Max. Working pressure	700 bars
Stroke	22 mm
Oil capacity for full stroke	0,040 lt.
Lenght	235 mm
Width	140 mm
Thickness	78 mm
Weight	4,5 Kg



POWER UNITS PAG 80÷87

DIES PAG. 69



**Hexagonal dies** 

Cable section mmq.

For the crimping of non- insulated tube

terminals and head connectors. They are

inserted on the "C" head 9025 "C" and they

are manufactured with special steel in order

to withstand the heavy load to which they

are subjected. The standard impression is

hexagonal. They are supplied in pairs

Dies for the "C" head 9025 - 9026

**CRIMPING TOOLS** 

### **Pre-insulated "V" punches** and dies

They are used for the crimping of pre-insulated power terminals. Punches and dies are supplied separately

Cable section mmq.	Die code	Punch code
10	9736	9731
16	9737	9731
25	9738	9731
35	9739	9732
50	9740	9732
70	9741	9733
95	9742	9733
120	9743	9733





Die code

### Semicircular dies of medium tension

These dies are for circular crimping with automatic cutting of possible burrs. They are supplied in pairs.

<b>.</b>		Capie Sec
Cable section mmq.	Die code	(
25-40	9723	1
50-70	9725	16
95-120	9727	3
150-185	9729	50
		9



"V" punches and dies

supplied separately

**Cable section** 

mmq.

For the crimping of non-insulated tube terminals

and head connectors. The punches and dies are

Die code

Punch

code

### Semicircular dies for "C" connectors

They are for the crimping of "C" connectors. They are supplied in pairs.

	Cable section mmq.	Die code
code	6	9748
723	10	9749
725	16-25	9753
727	35	9755
729	50-70	9756
	95	9757
	120-185	9759



# "U " head for the crimping of tube terminals and connectors

### 9024

This hydrailic head crimps tube terminals on cables from 10 to 400 mmq.

Due to its compact size, the cramping tool is very practical.

It has been realized with high quality steel. It is used with all our pumps and electric units. This head with different dies can crimp tube terminals ,"C" connectors, cable joints and shunts.

It is supplied with male rapid connector, ready to use.



Characteristics	
Power kN	200
Max working pression bars	700
Stroke mm	23
Oil capacity for full stroke It.	0,080
Lenght mm	250
Width Ø mm	90
Weight Kg	5,6

### DIES FOR 9024 Hexagonal dies



These dies are for the crimping of: plein tube terminals , plein head connectors.

Cable section mmq.	Die code
10	9770
16	9772
25	9774
35	9776
50	9778
70	9780
95	9782
120	9784
150	9786
185	9793
240	9795
300	9797
400	9798

Pre-insulated and plein "V" dies



These dies are for the crimping of plein and pre-insulated tube terminals and head connectors

Die code	Punch code		
9706	9702		
9706	9702		
9708	9704		
	9704		
	9704		
	9704		
	9704		
	9704		
	9704		
9712	9704		
Pre-insulated			
Die code	Punch code		
9706	9718/9702		
9706	9702		
9706	9702		
9708	9702		
	code 9706 9708 9708 9708 9708 9708 9710 9710 9712 9712 9712 9712 9712 0712 9712 9712 9712 9712 9712 9712		

9710

9710

95

120

9702

9704

# Semicircular dies of medium tension



These dies are for crimping pre-insulated.

Cable section mmq.	Die code
25-40	9722
50-70	9724
95-120	9726
150-185	9728
240-315	9730

### Semicircular dies for "C" connectors



These dies are for the crimping of "C" connectors

Cable section mmq.	Die code
16-25	9750
35	9751
50-70	9752
95	9754
120-185	9758



# 2015

### 9036

This hydrailic head crimps tube terminals on cables from 10 to 630 mmq.

Due to its compact size, the cramping tool is very practical.

It has been realized with high quality steel.

It is used with all our pumps and electric units.

This head with different dies can crimp tube terminals, "C" connectors, cable joints and shunts. It is supplied with male rapid connector, ready to use.

Characteristics	
Power kN	200
Max working pression bars	700
Stroke mm	30
Oil capacity for full stroke It.	0,100
Lenght mm	290
Width Ø mm	90
Weight Kg	5,9

# **CRIMPING TOOLS**

### DIES FOR 9036 Hexagonal dies



These dies are for the crimping of: plein tube terminals, plein head connectors.

Cable section mmq.	Die code
10	9770/36
16	9772/36
25	9774/36
35	9776/36
50	9778/36
70	9780/36
95	9782/36
120	9784/36
150	9786/36
185	9793/36
240	9795/36
300	9797/36
400	9798/36
500	9799/36
630	9800/36

# Pre-insulated and plein "V" dies



These dies are for the crimping of plein and pre-insulated tube terminals and head connectors

"V" dies			
Cable section mmq.	Die code	Punch code	
35	9706/36	9702/36	
50	9706/36	9702/36	
70	9708/36	9704/36	
95	9708/36	9704/36	
120	9709/36	9704/36	
150	9709/36	9704/36	
185	9710/36	9704/36	
240	9710/36	9704/36	
300	9712/36	9704/36	
400	9713/36	9716/36	
500	9714/36	9716/36	
630	9715/36	9716/36	
Pre-insulated			
Cable section mmq.	Die code	Punch code	
25	9706/36	9702/36	
35	9706/36	9702/36	
= 0		0 7 0 0 /0 0	

9706/36

9708/36

9710/36

9710/36

9702/36

9702/36

9702/36

9704/36

50

70

95

120

# Semicircular dies of medium tension



These dies are for crimping pre-insulated.

Cable section mmg.	Die code
25-40	9722/36
50-70	9724/36
95-120	9726/36
150-185	9728/36
240-315	9730/36
400	9731/36
500	9732/36
630	9733/36

### Semicircular dies for "C" connectors



These dies are for the crimping of "C" connectors

Cable section mmq.	Die code
16-25	9750/36
35	9751/36
50-70	9752/36
95	9754/36
120-185	9758/36

Cut-off machine for wire cable trays



### 9077 Cut-off machine for perforating cylinder

#### Portable, rapid, easy to use

It is a little tool to cut in a fast way rod bars in iron with  $\emptyset$  8 mm max. and in stainless steel  $\emptyset$  5 mm max. This tool makes a clean and an exact cut and it is particularly indicated for the wire cable trays. It can be used on field or in a workshop.\*

To combine with the cylinder **9022** Total Weight Tool + cylinder: 3,7 Kg



**9075** For punching tools 9070E and art. 9070

\* The life of the tool may be subject to changes due to the type of material and to the use.



Patented Model 9077 + 9022

POWER UNITS PAG. 80÷87

# 9075

### Cut-off machine for portabale tools

To combine with punching cylinders **9070E** and **9070** Total Weight: 4 Kg Execution time: 8 sec.



# Electric pipe bender





### 9080 Electric pipe bender set

Handy tool, easy to use. It is a portable and electric tool, suitable for bending galvanized steel, stainless steel and copper pipes in cooling and air-conditioning technology, pipeline construction and industrial applications.

It is equipped with AUTOMATIC SWITCH OFF, when reaching the preset bending angle. Ideal for fast batch production of bends. Set includes: basic 230 V unit, bending formers and guide shoes for respective pipe diameters (mm 16-20-25) and carrying case. On demand, we can supply bending formers and guide shoes until Ø 35 mm.

# CharacteristicsPower1010WWeight13 KgSupply230V 50/60HzSuitable for pipesØ 16-35 mmBendingUp to180°Dimensions590x145x215 mm









Cutting machine for plastic channels



### 9062 Cutting machine for plastic channels

This cutting machine 9062 consists of a blade, which acting on the lever above, allows to cut trunking systems, lids and similar plastic or gummy products.

It cuts all the types of PVC sections, distance 4/8, from 25 mm to the maximum measure of 120 mm.

Maximum height is till 120 mm. The machine must be steadly screwed to a table or to a base.

Characteristics	
Trunking systems	25, 40, 60, 80, 100, 120 mm
Max. Width	120 mm
Max. Height	120 mm
Distance	4/8 mm
Blade lenght	125 mm
Dimensions	1450 x 310 x 260 mm
Weight	7 Kg





### Power units Pumps and electric units





### 9000 Foot pump



This is a hydraulic pump made completely of steel, whose internal components - pumping elements and valves - are all made of special hardened, temperated and rectified steel.

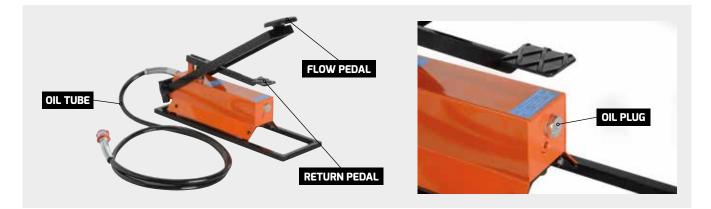
It has two speeds: one is the approach speed and the second is the working speed.

It has double pistons and double valves etc.

When this pump is used with crimping cylinders 9024 and 9036, its release valve enters in action. Infact when it reaches the pressure of 700 Bars, this valve allows the automatic return at zero. This operation facilitates the appropriate push foot pedal for piston return. Supplied ready to use.

#### **Characteristics**

Max. Working pressure	700 bars
Oil tank capacity	0,600 lt.
It supplies cylinder of max capacity	0,380 lt.
Pipe	from 2,50 mt. with female rapid connector
Oil	hydraulic oil AGIP ARNICA 22 (do not use brake or dielectric oil for transformer)
Weight	14,5 Kg





### 9004 **Battery driven pump**



Battery operated hydraulic pump with ergonomic handle for works on filds. It has a shoulder strap and thanks to its light weight, it can be used everywhere. Two speeds :

- Approach (very fast)
- High pression (slow)

It is equipped with:

- Pipe 2,5 Mt.
- Carrying strap
- N.1 Battery 14,4 V 4.0 Ah
- Battery charger

Can be used with all IMB tools

Characteristics	
Weight	6 kg.(with battery and tank with oil)
Dimensions	240 x 120 x 190 mm
Tank	0,6 lt.
Min. pression	20bar
Max. pression	700bar
Working temperature	5÷50°C

#### **ACCESSORIES FOR 9004**



Battery 14,4V Li-ion 4.0 Ah (Weight 500 g)



Carrying strap for the transport of the pump (1,2 mt. about)



High pression hoose connected directly to the power unit (2,5 Mt.)



Rapid battery charger with operation self-cooled.

POWER UNITS - PUMPS AND ELECTRIC UNITS



### 9002 Pneumatic control unit



The pneumatic pump 9002 is made with the same technology as the foot pump 9000, offering the advantage of more rapid operation as it uses compressed air to work with. It has two speeds, one for the approach and one for the working phase; it has therefore been equipped with double valves and double pistons. It is able to produce 700 bars when supplied with a constant pressure of  $7\div10$  bars by a suitable compressor or in-house centralised installation.

It is equipped with air filter and a lubricator already regulated. For the return, it is sufficient to reverse the movement of the foot pedal control. It is ready to use, after the assembly of the breather plug.

It is recommended to have a tank compressor superior to 200 lt. It is supplied with a pipe 2,5 Mt with a female rapid connector and a protection carter. N.B. Do not use brake or dielectric oil for the transformer.

#### **Characteristics** Max. Working pressure 700 bars **Oil tank capacity** 1,250 lt. It supplies cylinder of max 1,00 lt. capacity Air absorption with a It. 48/minuto continuous service da 2,50 mt. with female Hose rapid connector 0il hydraulic oil AGIP ARNICA 22 (do not use brake or dielectric oil for transformer) Weight 19,5 Kg



82



### 9003 Simplified air-hydraulic pump



The hydraulic pump 9003 offers the advantage of a rapid operation as it uses compressed air. It has two speeds, one for the approach and one for the working phase.

It is able to produce 700 bars when supplied with a constant pressure of  $7\div10$  bars by a suitable compressor or in-house centralised installation. For the return, it is sufficient to reverse the movement of the foot pedal control.

It is ready to use and it is equipped with a universal rapid connector for the air.

It is recommended to have a tank compressor superior to 200 It. Complete with a female rapid connector suitable for all our tools. It is supplied with a pipe 2,5 Mt, a protection carter and a rubber handle for the transport.

N.B. Do not use brake or dielectric oil for the transformer.

Technical Characteristics	
Operated	throught pedal
Oil pressure	700 bars
Tank capacity	2,4 It.
Max. noise	75 dbA
Air connection	G 1/4"
Air consumption	400 NI/min
Connected to the pneumatic acces	<b>s</b> (5-10 bar)
Oil	Hydraulic oil AGIP ARNICA 22 (Do not use brake or dielectric oil)
Dimensions	410x295x175 mm
Weight	12 Kg



Pneumatic rapid connector



Operated through pedal



Return pedal



Porthole to check oil level



### 9005 Simplified electric unit 220V





This electric unit 9005 has the same characteristics and mobile components as the other units.

This simplified version is without protection carter, pressure gauge, connectors for accessories and a card system.

It is equipped with a direct control and with a standard foot pedal. It is interchangeable with all our electric units and it can be used with all our equipments less then our hydraulic punching machines. Supply 230 V 1 Ph

Max. working pression 700 Bar.

Characteristics	
Voltage supply	230V 1 Ph
Power	0.70 KW
Max. Working pressure	700 bar
Oil capacity	5.0 lt.
Supply cylinders max. capacity	3.0 lt.
Type oil	Agip Arnica 22
Weight	24 Kg
De pet une broke er dielectrie eil fer trope	f

Do not use brake or dielectric oil for transformers.

### 9007 Simplified electric unit 380V

This simplified electric unit 9007 has the same characteristics than the 9005 but with a supply 400 V 3Ph.

It is equipped with direct control and a standard foot pedal.

It is interchangeable with all our electric units and it can be used with all our equipments less then our hydraulic punching machines.



Characteristics	
Voltage supply	400V 3Ph
Power	0.75 KW
Max. Working pressure	700 bar
Oil capacity	5.0 lt.
Supply cylinders max. capacity	3.0 lt.
Type oil	Agip Arnica 22
Weight	24 Kg
Do not use brake or dielectric oil for transformers.	



### 9008/9009/9010 **Electric control units with options**



These are high-pressure electric control units with radial pistons of high precision and a system with an electric motor in oil bath. This performance has been widely tested to ensure maximum reliability.

240 V single-phase

0,55 kW 700 bars

400 ÷ 700 bar

2,700 lt.

2,200 lt.

AGIP ARNICA 22

33 Kg

420 mm

235 mm

450 mm

They are available in different versions.

**Characteristics 9008** 

Max working pressure Adjustable pressure

**Oil tank capacity** 

It feeds cylinders of

the maximum capacity

Voltage

Power

**Oil type** Weight

Width

Height

Dimensions Lenght

#### They are equipped with:

- Electric system on stamped circuit with a protection fuse
- Motor protection switch
- Foot pedal control included
- Selector switch for the security system.

#### **Characteristics** 9009

Voltage	400 V three-phase
Power	0,75 kW
Max working pressure	700 bars
Adjustable pressure	400 ÷ 700 bar
Oil tank capacity	2,700 lt.
It feeds cylinders of the maximum capacity	2,200 lt.
Oil type	AGIP ARNICA 22
Weight	33 Kg
Dimensions	
Lenght	420 mm
Width	235 mm
Height	450 mm

Pressure gauge with electric contacts, adjustable for automatic stop at the reached pressure and consequent cylinder return

- Socket for electrical protractor \_
- Socket for protection carter
- \_ Socket for remote foot pedal control
- Controls 24 V direct current

Characteristics 9010	
Voltage	400 V three-phase
Power	1,4 kW
Max working pressure	700 bars
Adjustable pressure	400÷700 bar
Oil tank capacity	5,4 lt.
It feeds cylinders of the maximum capacity	4,100 lt.
Oil type	AGIP ARNICA 22
Weight	36 Kg
Dimensions	
Lenght	420 mm
Width	260 mm
Height	470 mm

All our electric control units are supplied with 2,50 meters hoose, female connector and hydraulic oil AGIP ARNICA 22, ready for use. They are also complete with safety protection socket.





9156

Front panel electric control unit





#### Electric control unit 9013

Electric control unit, voltage 240 V single-phase, with 24 V direct current, with motor protection switch and socket micro panel protection for punching machines.

Characteristics	
Voltage	240 V single-phase
Power	0,55 kW
Max. Working pressure	700 bars
Oil tank capacity	2,700 lt.
It feeds cylinders of the max capacity	di 2,200 lt.
Oil type	AGIP ARNICA 22
Weight	33 Kg
Dimensions	
Lenght	420 mm
Width	240 mm
Height	450 mm
Hoose	2,5 mt

#### Electric control unit 9014

Electric control unit, voltage 400 V three-phase, with 24 V direct current, with motor protection switch and socket micro panel protection for punching machines.

Characteristics	
Voltage	400 V three-phase
Power	0,75 kW
Max. Working pressure	700 bars
Oil tank capacity	2,700 lt.
It feeds cylinders of the max capacity	di 2,200 lt.
Oil type	AGIP ARNICA 22
Weight	33 Kg
Dimensions	
Lenght	420 mm
Width	240 mm
Height	450 mm
Hoose	2,5 mt

#### Electric control unit 9015

Electric control unit, voltage 400 V three-phase, with 24 V direct current, with motor protection switch and socket micro panel protection for punching machines.

Characteristics	
Voltage	400 V three-phase
Power	1,4 kW
Max. Working pressure	700 bars
Oil tank capacity	5,4 lt.
It feeds cylinders of the max capacity	di 4,100 lt.
Oil type	AGIP ARNICA 22
Weight	36 Kg
Dimensions	
Lenght	420 mm
Width	260 mm
Height	470 mm
Hoose	2,5 mt





### 9001 Hand pump

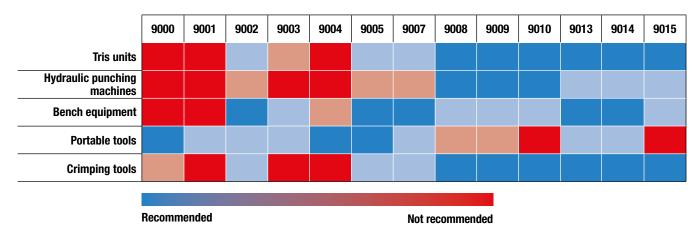


This is a hydraulic pump of simple construction, which is very light and easy to use. It is ready to use.

It is designed for small production or where there are difficult positions to reach.

Characteristics	
Max. Working pressure	450 bars
Oil tank capacity	0,250 lt.
It supplies cylinders of max. capacity	0,200 lt.
Hoose	2,50 mt. with female connector
Oil	hydraulic oil AGIP ARNICA 22 (don't use brake or dielectric oil for transformer)
Weight	5,5 Kg

#### **MATCHING POWER UNITS -EQUIPMENT**



## **Accessories and Work benches**



### **Valves and accessories**

#### 9162 Positioning valve

The positioning valve is equipped with male and female rapid connectors, for a fast assembly.The valve can be connected to the TRIS cylinder when the electric unit is used. The small movements of the tool facilitate the positioning of the bars.



#### 9163 for 2 cylinders 9164 for 3 cylinders 9165 for 4 cylinders Branch valves

Branch valves for 2-3 and 4 cylinders are used when several cylinders have to work with one pump or electrical control unit. These valves avoid to connect or disconnect continually the respective hoses. By just moving a simple lever, the branch valves divert the hydraulic oil to the cylinder to use. All branch valves are equipped with hoses and rapid connectors.

#### 9817/9819 Rapid Connectors

All MULTIFOR equipment, cylinders and hoses are supplied complete with rapid connectors with locking and rapid coupler. 1/4" standard version, 3/8" on request with screw connector

#### 9810 Pipes and extensions

The spare pipe of the MULTIFOR equipment is complete with female rapid connector and it has a standard length of 2,5 mt. The working range of cylinders can be extended by a simple addition of a 2,5 mt. extensions hose (9812) or 5 mt.(9813). These are realised with highpressure pipe, already filled with oil AGIP ARNICA 22 and with rapid connectors.

#### 9828 Hydraulic oil

All MULTIFOR equipment, and hoses contain hydraulic oil. AGIP ARNICA 22. Whenever topping up is required, it is essential to use the same type of oil. For a best working of the pumps, the level must be inspected at regular intervals by checking the oil dipstick.

Available in cans of 1 Kg.

It is highly recommended not to use oils other than those indicated by us, in particular do not use brake oil or dielectric oil for transformers.











### Foot pedal and other accessories

#### 9156 Remote foot pedal

Remote foot pedal for electric control units.



#### 9157 Remote foot pedal with security

Remote foot pedal for electric control units with a total protection. It is equipped with a security device with a double approval in order to avoid accidental manipulation and with a double pressure switch.

The switch stops the electric control if the pressure on the pedal is too high.



#### 9806 Bench clamp

A practical accessory for holding punching cylinder (9022) and crimping tools (9024-9036).



#### 9808 Stand

Used to hold punching cylinders and crimping tool, where it is not possible to use a bench clamp. Equipped with a cylinder holding clamp, it is a folding and portablle accessory.



#### 9809 Stand with roller

This tripod is for holding the heavy bars. During the works, the roller allows a good support and the sliding of the bar without effort. The height is adjustable for the different works.





### Tool cases

#### 9822 Metal case

The case 9822 is suitable for the transport of the MULTIFOR 9000, 9001 cylinders and different accessories.

Dim. mm 650x250x270 h

#### 9823 Metal case

The metal case 9823 is suitable for the transport of shears, cylinders, pump 9001 and different accessories. Dim. mm 600x270x220 h

#### 9830 Portable tools case

This case 9830 is suitable for the transport of cylinders and accessories. Dim. mm 330x170x110



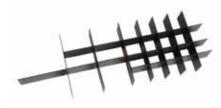


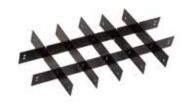


9832 Honeycomb for 9822

9834 Honeycomb for 9823

9833 Honeycomb for 9830







#### 9829 Case for electric tools

The case 9829 is suitable for the transport of the tools with battery.





The case 9825 is suitable for the transport of manual punching cylinders and its accessories.



#### 9826 Portable tools case

The case 9826 is suitable for the transport of punches and different accessories.





### 9048 Work bench



The special MAXI work bench has been designed to enable several cylinders to operate from one single control unit within a small space. The TRIS unit is placed on the MAXI work bench, while on the lateral telescopic cylinder, the punching cylinder (9022) and crimping tools (9024-9036) can be supported. The MAXI work bench is equipped with:

• **Branch valve**, which allows two or more cylinders to operate (cod.9163 valve for two cylinders).

It is possible to assemble valves for the working of more cylinders.

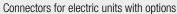
- **Pressure gauge** for regulating the required pressure
- **Socket** for electrical protractor (9161)

• Socket for remote foot pedal control (9156) Dimensions: mm 1300 x 960 x 870 h Weight: 96 Kg. without control unit and accessories.

The unit is used only with control units type 9008-9009-9010

Available versions: 220 V (9048/220 V) and 380 V (9048/380 V)





Branch valve with pressure gauge and general switch.





### Work benches

#### 10100/50

This base can be used for the support of all our equipment apart from than the hydraulic punching machines 10090L. it is a simple open bench for lodging the electric unit and other tools. It has a tool-holder drawer.

Dimensions Lenght 750 mm. Width 750 mm. Height 803 mm. Weight 55 kg.



#### 10100/90E

It is a simple and inexpensive base. It can be used for all our equipments. It has a toolholder drawer and a base for the electric units.

#### Dimensions

Lenght 906 mm. Width 756 mm. Height 786 mm. Weight 45 kg.



#### 10100/90

Specific base for the hydraulic punching machines type 10090 but it can be used also with the other smaller hydraulic punching machines and other equipment. Equipped with a protection carter, there is the possibility to lodge an electric unit inside.

#### Dimensions

Lenght 1026 mm. Width 800 mm. Height 750 mm. Weight 112 kg.





### Notes




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# CERTIFICATO

Nr. 50 100 3768 - Rev.006

Si attesta che / This is to certify that

IL SISTEMA QUALITÀ DI THE QUALITY SYSTEM OF

I.M.B. S.r.I.

SEDE LEGALE: REGISTERED OFFICE:

VIA MADRE TERESA DI CALCUTTA 9 IT - 29122 PIACENZA (PC)

> SEDE OPERATIVA: OPERATIONAL SITE:

STRADA DEL FORNO 66 IT - 43011 BUSSETO (PR)

È CONFORME AI REQUISITI DELLA NORMA HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF

#### UNI EN ISO 9001:2015

QUESTO CERTIFICATO È VALIDO PER IL SEGUENTE CAMPO DI APPLICAZIONE THIS CERTIFICATE IS VALID FOR THE FOLLOWING SCOPE

Progettazione e fabbricazione di macchine, attrezzature e utensili per l'impiantistica elettrica e la lavorazione di quadri elettrici (IAF 18)

Design and manufacture of machines, tools and equipment for electrical plants and electric control boards (IAF 18)

Per l'



CERTIFICA

CEPTU¢UKAT 🔶 CERTIFICADO

CERTIFICATE

ZERTIFIKAT

SGQ Nº 049A

Membro degli Accordi di Muluo Riconosci EA, IAF e ILAC Signatory of EA, IAF and ILAC Mutual Recognition Agreements

Organismo di Certificazione	
or the Certification Body	
TÜV Italia S.r.l.	

Validità /Validity 2018-12-10

2021-12-18

Data emissione / Issuing Date

Dal / From:

AI / To:

2018-12-10

PRIMA CERTIFICAZIONE / FIRST CERTIFICATION: 2004-02-04 DATA DI SCADENZA DEL PRECEDENTE CERTIFICATOISO 9001:2008: 2018-09-14 EXPIRATION DATE OF THE PREVIOUS CERTIFICATE/SO 9001:2008: 2018-09-14

Andrea Coscia

**Direttore Divisione Business Assurance** 

"LA VALIDITÀ DEL PRESENTE CERTIFICATO È SUBORDINATA A SORVEGLIANZA PERIODICA A 12 MESI E AL RIESAME COMPLETO DEL SISTEMA DI GESTIONE AZIENDALE CON PERIODICITÀ TRIENNALE"

"THE VALIDITY OF THE PRESENT CERTIFICATE DEPENDS ON THE ANNUAL SURVEILLANCE EVERY 12 MONTHS AND ON THE COMPLETE REVIEW OF COMPANY'S MANAGEMENT SYSTEM AFTER THREE-YEARS"