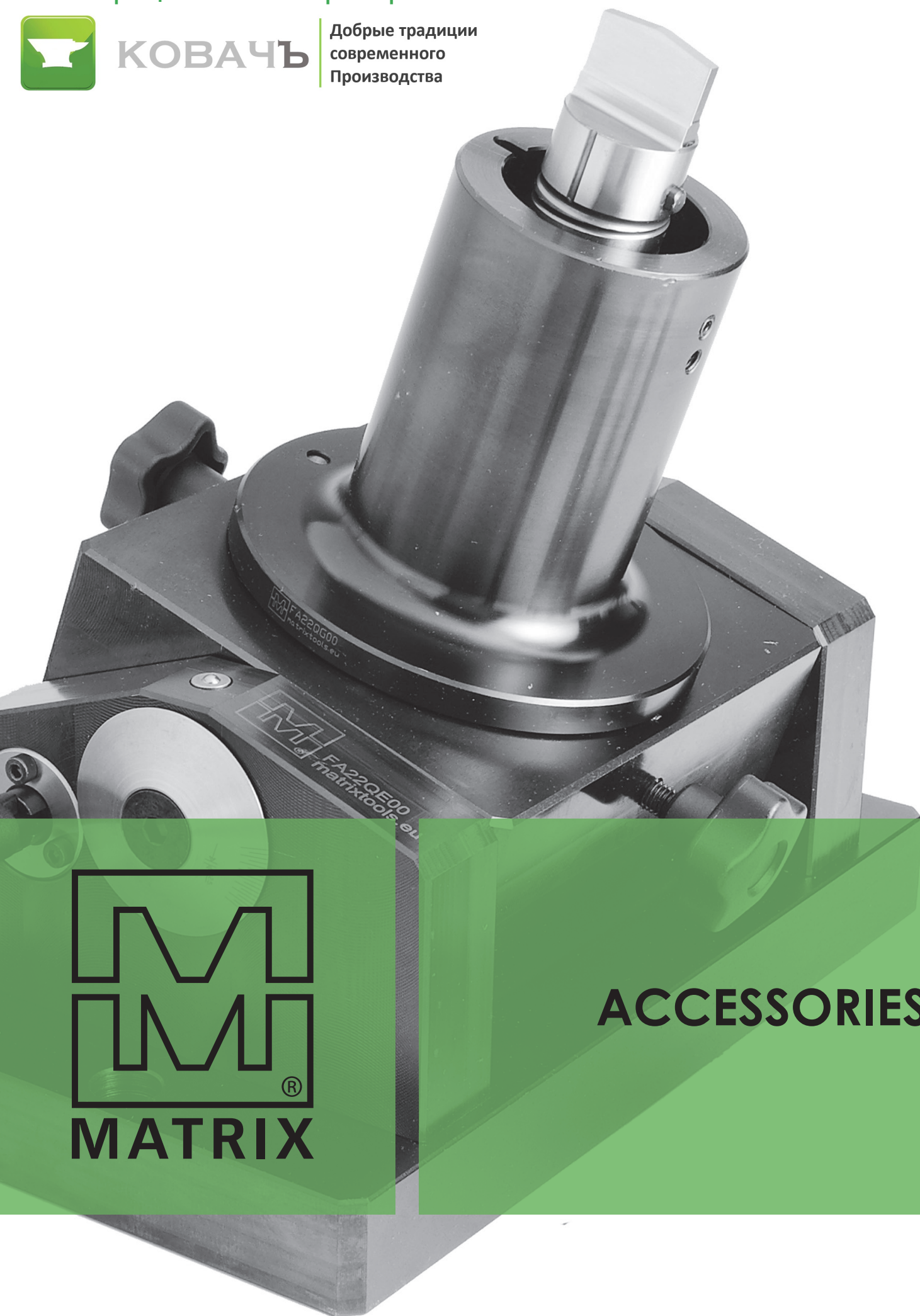


Ваш официальный партнер:



**КОВАЧЬ**

Добрые традиции  
современного  
Производства

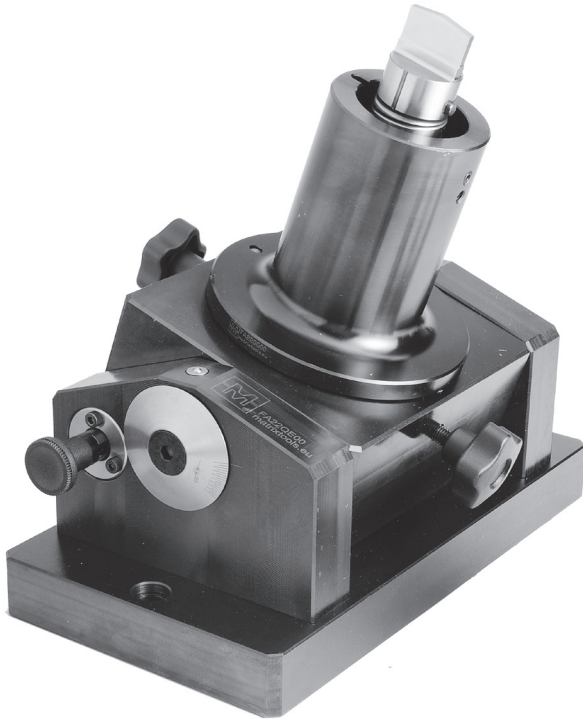


**ACCESSORIES**

# INDEX

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## SHEAR GRINDING FIXTURE



The sharpening of tools often is a problem, especially when tools have a single inclined cutting part or even a double inclined cutting part (see whisper sharpening).

This fixture solves the problem by allowing to execute all kind of sharpening in an easy and fast way: when it is clamped on grinding machine, it accepts all adaptors showed in the the following pages.

This element is used on 0° position for plan punches and dies, or with a maximum +20°/-20° inclination for whisper punches.



**FA22QE00**  
**Universal Base**

# THICK TURRET ADAPTORS

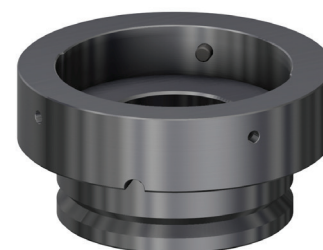
To use adaptors FA22QF00 and FA22WH00 it is necessary to combine them with adaptor FA22QG00.



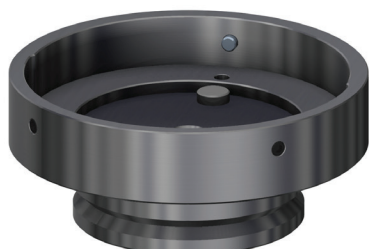
**FA22QF00**  
Punch and Die Adaptor  
A STATION



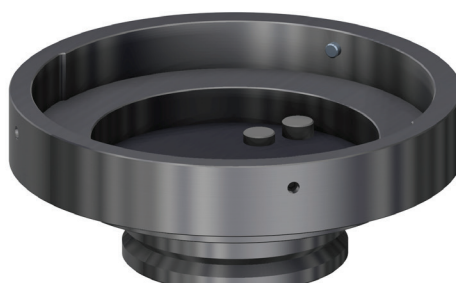
**FA22QG00**  
Punch and Die Adaptor  
B STATION



**FA22QH00**  
Punch and Die Adaptor  
C STATION



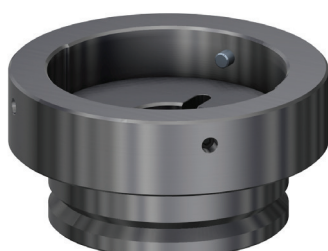
**FA22QJ00**  
Punch and Die Adaptor  
D STATION



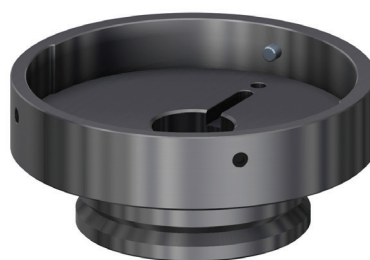
**FA22WF00**  
Punch and Die Adaptor  
E STATION



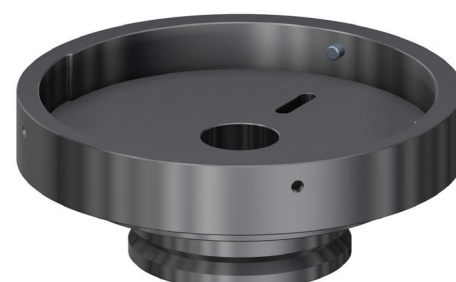
**FA22WH00**  
Punch and Die Adaptor  
W90 A STATION



**FA22QI00**  
Punch and Die Adaptor  
W90 C STATION



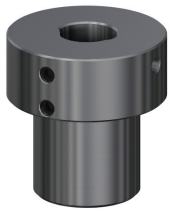
**FA22QK00**  
Punch and Die Adaptor  
W90 D STATION



**FA22WG00**  
Punch and Die Adaptor  
W90 E STATION

## MULTITOOL AND TRUMPF® ADAPTORS

To use adaptors FA22QL00, FA22QM00, FA22QN00, FA22QP00 and FA22WI00 it is necessary to combine them with adaptor FA22QG00.



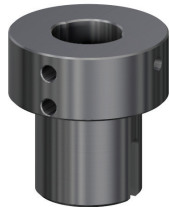
**FA22QN00**  
**Punch and Die Adaptor**  
 MULTIMT SERIES 8



**FA22QM00**  
**Punch and Die Adaptor**  
 MULTIMATRIX SERIES 16



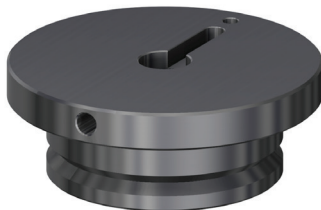
**FA22QL00**  
**Punch and Die Adaptor**  
 MULTIMT AND MULTIMATRIX SERIES 24



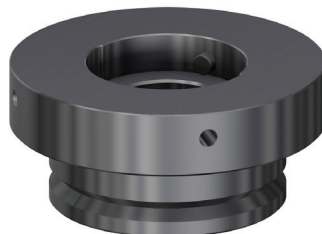
**FA22WI00**  
**Punch and Die Adaptor**  
 MULTIMT SERIES X12,7



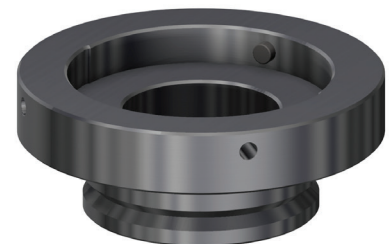
**FA22QP00**  
**Punch and Die Adaptor**  
 MULTIMATRIX SERIES 18



**FA226100**  
**Punch Adaptor**  
 TRUMPF®



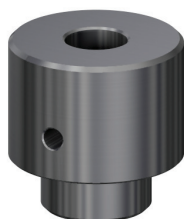
**FA226300**  
**Die Adaptor**  
 TRUMPF® SIZE I



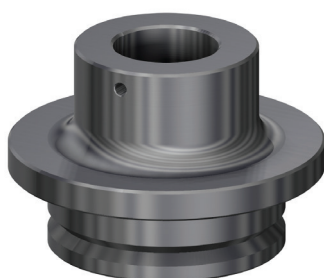
**FA226400**  
**Die Adaptor**  
 TRUMPF® SIZE II

# MURATA WIEDEMANN® ADAPTORS

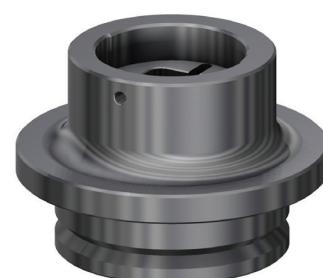
FAB0QF00 it is necessary to combine it with adaptor FAB0QG00.



**FAB0QF00**  
Punch and Die Adaptor  
SERIES 114 A STATION



**FAB0QG00**  
Punch and Die Adaptor  
SERIES 114 B STATION



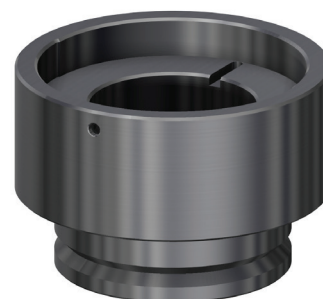
**FAB0QH00**  
Punch and Die Adaptor  
SERIES 114 C STATION



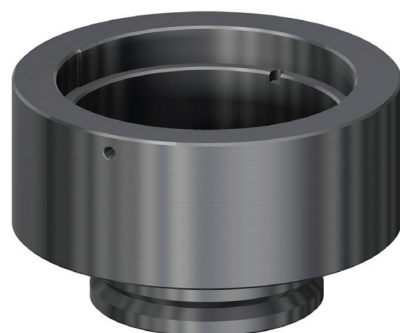
**FAB0QI00**  
Punch and Die Adaptor  
SERIES 114 D STATION



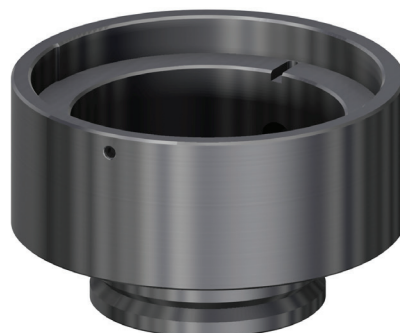
**FAB0QJ00**  
Punch and Die Adaptor  
SERIES 114 E STATION



**FAB0QK00**  
Punch and Die Adaptor  
SERIES 114 F STATION



**FAB0QL00**  
Punch and Die Adaptor  
SERIES 114 G STATION



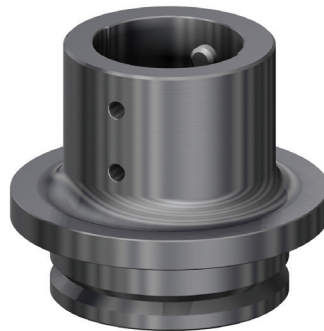
**FAB0QM00**  
Punch and Die Adaptor  
SERIES 114 H STATION

# RAINER ADAPTORS

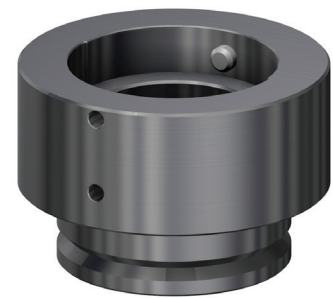
To use adaptor **FABFQF00** it is necessary to combine it with adaptor **FABFQG00**.



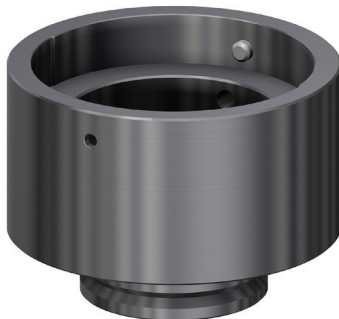
**FABFQF00**  
Punch and Die Adaptor  
RAINER OS A STATION



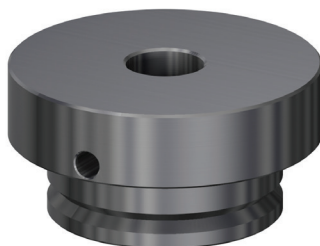
**FABFQG00**  
Punch and Die Adaptor  
RAINER OS B STATION



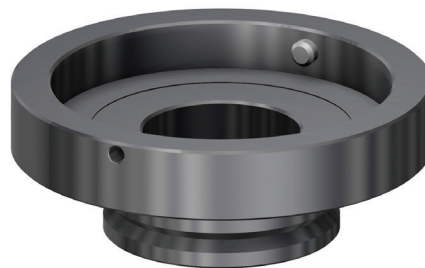
**FABFQH00**  
Punch and Die Adaptor  
RAINER OS C STATION



**FABFQI00**  
Punch and Die Adaptor  
RAINER OS D STATION



**FABF6100**  
Punch Adaptor  
RAINER ECCENTRIC



**FABF6400**  
Die Adaptor  
RAINER ECCENTRIC SERIES 100

# TECNOLOGY ADAPTORS

To use adaptors **FABLQK00** and **FABLQG00** it is necessary to combine them with adaptor **FABLQH00**.



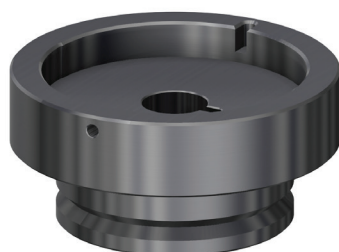
**FABLQK00**  
Punch and Die Adaptor  
SERIES 15



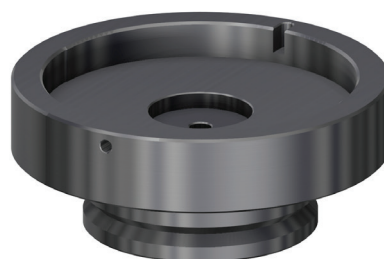
**FABLQG00**  
Punch and Die Adaptor  
SERIES 40/1



**FABLQH00**  
Punch and Die Adaptor  
SERIES 40/2



**FABLQI00**  
Punch and Die Adaptor  
SERIES 70



**FABLQJ00**  
Punch and Die Adaptor  
SERIES 100



# TGM-150S

Professional Grinding Machine



# EASY QUICK INNOVATIVE

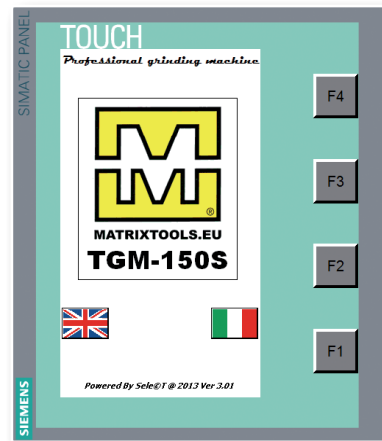
TGM 150S grinding machine with electrical driver, designed to grind any punching tool in tempered steel.

Economic and efficient maintenance of tools, completed of all accessories.

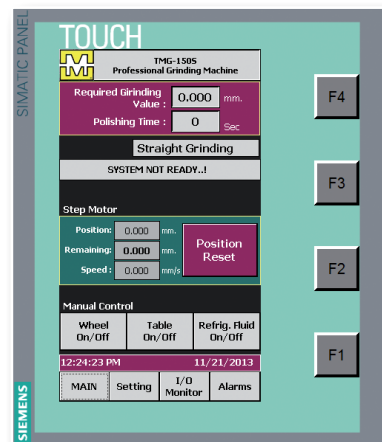
Multilanguage Touch screen, to manage all operations necessities for a quick and quality grinding, simply from one single screen; possibility to parameter all control functions, for a flexible performing of any type of grinding, for tools from diameter mm 1,5 up to mm 180.

Four simple passages are sufficient to complete the whole cycle: tool fixing, setting of quantity to be grinded, zero piece research and start.

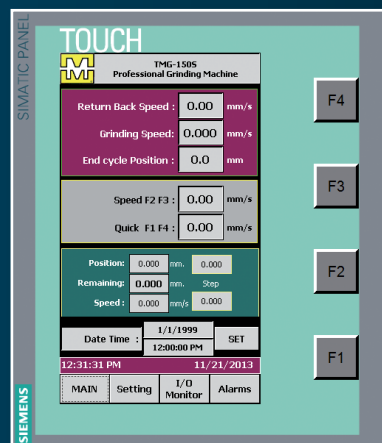
Certified CE, TGM 150 S grants the operator safety thanks to a working area completely closed.



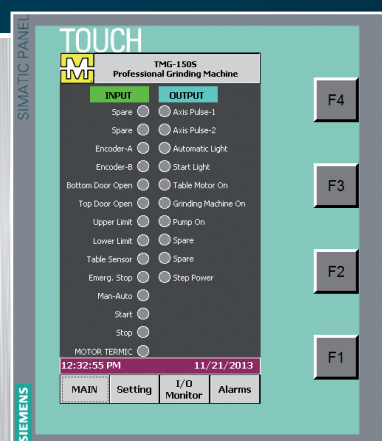
1



2

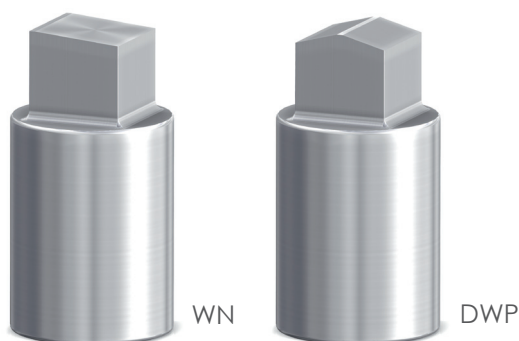


3



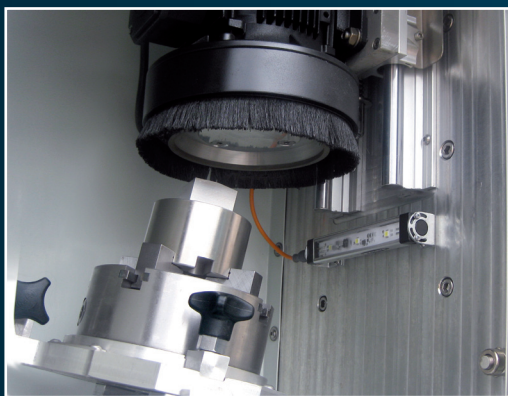
4

# TYPES OF WORKING



The grinding machine is equipped with reclining mandrel completed of all accessories necessary to fix the tools most commonly used.

Equipped with straight and backwards terminals, to clamp pieces with diameter max mm 180, the machine allows to obtain plan grinding on punches and dies, or, by inclining the mandrel, single WN or double DWP.



Besides the rotating table with standard configuration, on TGM 150S grinding machine you can get the option of an inclining universal base, designed to be clamped on dedicated grinder or surface grinder.



A series of adaptors duly designed to house on the reclining universal base for a quick handling of the most common type of punches and dies on the marked such as:

- Multitool - Thick Turret
- Trumpf® - Murata Wiedemann®
- Rainer - Technology

# TGM-150S

## Professional Grinding Machine

F936HK00 REV00

### TECHNICAL SPECIFICATIONS

#### DIMENSIONS AND WEIGHT

Height	1700 mm
Width	600 mm
Depth	450 mm
Weight	180 Kg

#### POWER SUPPLY

Voltage	380V 3 PH 50 Hz ±10%
Power	1,2 Kw

#### GRINDING

CBN Grinding Wheel	150 x 5 x 4 mm (Cod. F680WV00)
Maximum Grinding Diameter	180 mm
Maximum Grinding Height	230 mm
Maximum Grinding Speed	0,2 mm/min
Quick Speed	600 mm/min
Minimum Step	0,01 mm
Grinding Motor Power Supply	380V 3 PH 50 Hz ±10% (0,75 Kw)

#### PIECE HOLDER

Rotating base diameter	310 mm
Inclination Mandrel	7°
Rotating motor power supply	380V 3 PH 50 Hz ±10% (0,18 Kw)

#### COOLANT

Reservoir capacity	20 l
Pump flow rate	60 l/min
Filter	TR160018-C
Pump power Supply	380V 3 PH 50 Hz ±10% (0,09 Kw)



# TGM-150S

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Tel. +39 0445 671015 - Fax +39 0445 671035

[matrixtools.eu](http://matrixtools.eu)

General information:

Sales department:

[info@matrixtools.eu](mailto:info@matrixtools.eu)

[sales@matrixtools.eu](mailto:sales@matrixtools.eu)

# GRINDING MACHINE

**CODE:** F680Q900

## TECHNICAL INFORMATION

**Power:** 220/380 Volt / 3 /50 Hz

**Max grinding surface:** mm 140x330

**Distance between column axis and wheel axis:** mm 315

**Max distance between table-level and wheel:** mm 280

**Rapid feed per turn of handwheel:** mm 2

**Micrometric feeds by means of small round graduated handle:** mm 0,01

**Cup wheel size:** mm Ø 178x78x78

**Abrasive segments dimensions:** mm 50x16x90

**Wheel motor power:** 2,2 kw (3 HP)

**Wheel motor RPM:** RPM 2840

**Elecropump motor power:** 0,06 kw (0,08 HP)

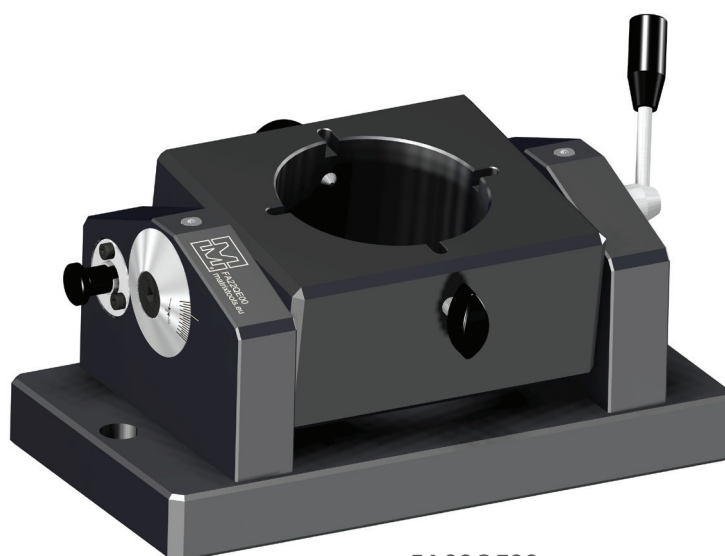
**Machine mass:** 40 kg

**Grinding machine includes:**

**CBN wheel:** mm Ø 175x78x45

**FA22QE00 Reclining Universal Base**

For punch and/or die adaptors please refer to specific punching machines technical sheets



FA22QE00

# PUNCHING UNIT

## for thick turret C station

**CODE:** F227DZ00

### DESCRIPTION

The cheapest solution for any hydraulic mechanical press or bending machine, using common tools

Diameters or shapes within 50,8 mm up to 6 mm thickness, engraving, logos and many other forming, easy to perform. Thick turret tools type, highly precise and performing.

Punch holders with 11 mm height adjusting after resharpening and, when forming, stroke adjusting with 0,08 mm precision.

### TECHNICAL INFORMATION

**Dimensions:** 150 x 650 x H310 with tool fitted on

**Weight:** 30 kg

**C Frame:** 500 mm

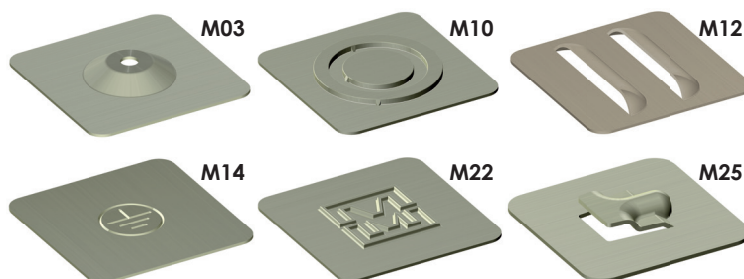
**Max. diagonal:** 50,8 mm

**Housing:** thick turret C station

A and B stations used with standard adaptors

Adjustable stroke with rule

### FORMING



This punching unit is a tool, and it is upon user's responsibility to set up and use the machine in accordance with local and national laws and standards for safety.



# LUBRICATING OIL

First rule to apply: punching is a shearing and extrusion process and in order to get a good result, lubrication of the shearing area is a must.

Lubrication is essential for punching machines and particularly punching stamps.

While punching, small quantities of material get stuck to the punch surface, increasing its diameter and decreasing the tolerance obtaining this way a greater material friction.

A lubricant oil with proper characteristics acts as a barrier between punch and material reducing significantly both friction and material build-up on the punch surface, improving therefore the punch life, since greater the viscosity, especially during punch pulling, better the protection

To reduce the negative effects above mentioned, Matrix offers a range of lubricants suitable to prolong punches and dies' life, besides granting geometric and dimensional precisions and an excellent surface roughness on shearing sections.

The evaporation characteristics of the selected lubricant are well used whenever we need to simplify or eliminate any degreasing operations.

If for some reasons lubrication is a problem, Titanium coated punches could help. Our technical and commercial department is at your complete disposal for any information you might require.

## MTX06 OIL FOR PUNCHING - NIBBLING

### PROPERTIES

Aspect:	Liquid, clear limpid
Color:	Light brown
Density at 15° C:	Kg/l 1,092
Viscosity at 40° C:	mm <sup>2</sup> /s 32
Flash point:	> 180° C

Special fluid transparent light brown studied to answer to the technical problems related to fine shearing.

The additive pack allows a longer punches and dies' life, besides granting geometric and dimensional precisions and an excellent surface roughness on shearing sections.

MTX 06 thanks to its chemical-physic structure characteristic, presents a low viscosity variation when temperatures changes, as well as a good antirust power and easy to wash. MTX 06 can be applied by spray, with brush, by roll but it's important to distribute it uniformly on the shearing area.

Supply:	5 lt can
Code:	F680HR00.004



## MTX010 LUBRICANT SPECIFIC FOR ALUMINIUM AND COPPER

### PROPERTIES

Aspect:	Liquid
Density at 20° C:	Kg/m <sup>3</sup> 780
Viscosity at 25° C:	mm <sup>2</sup> /s 1,92
Flash point:	> 62° C

MTX010 studied to answer to the technical problems related to aluminum shearing in particular, although recommended for other materials, according to the application.

MTX010 is characterized by a relatively quick evaporation and a light residual film. In case of painting and welding (TIG, MIG, Laser, etc..) cleaning is not required.

MTX010 can be used by mean of felt, drop to drop or with specific low pressure pulverization system.

Supply:	5 lt can
Code:	F680AJ00.004

## MTX125 LUBRICANT SPECIFIC FOR STEEL AND MILD STEEL

### PROPERTIES

Aspect:	Liquid
Density at 20° C:	Kg/m <sup>3</sup> 780
Viscosity at 20° C:	mm <sup>2</sup> /s 1,22
Flash point:	> 45° C

MTX125 studied to answer to the technical problems related to fine and hard shearing in particular when using stainless steels.

MTX125 is characterized by a quick evaporation and an imperceptible residual film.

In case of varnishing (cadmium plating, passivation, etc.) cleaning is not required.

MTX125 can be used by mean of felt, drop to drop or with specific low pressure pulverization system.

Supply:	5 lt can
Code:	F680QR00.004



# TOOL HOLDER CART

**CODE:** F680WQ00

## TECHNICAL INFORMATION

**Tool holder cart on 4 wheels**

**Dimensions:** mm 745x475x1098

**Weight:** kg 110

**Compartments:** 7 with inner height mm 50 and  
1 with inner height mm 230

**Support plan with anti-slip rubber**

**Tooling for tool maintenance**





## **MATRIX**

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БИ «Бригантина», офис 7

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