

# TOOLS

#### IN TUNGSTEN CARBIDE

THE ART OF MASTERING SHAPES

# **MACHINES**

INTERNAL GRINDING MACHINES POLISHING LATHES SHAVING HEADS

# **ABOUT US**



MOUTON RIVOM is a major player in the field of tungsten carbide metal forming tools, ranging from wire drawing dies to the most complex dies and punches.

The company's strength lies in its ability to provide custom-made solutions to meet all the industrial sector's needs.

# **Fields of application**



# Tools in tungsten carbide

- Heading tools
- Plate cutting and ironing tools
- Indirect extrusion tools
- Special extrusion and tube finishing tools
- Drawing tools
- Shape dies
- Wire drawing tools
- Extrusion tools









# **Machines**

- Internal grinding machines for the repair of tungsten carbide drawing dies
- Polishing lathes
- Shaving heads for metal wires











## **KNOW-HOW AND R&D**



### **KNOW-HOW**

- Bakelite grinding and manual polishing
- 6 shrinkage types to considerably extend tools
  lifespan
- Choice of materials used (shrinkage steels, carbides adapted to the end use, special steels)



## R&D

- CAD-CAM tools conception according to customer information (machine, drawn material, preliminary section, final section, etc.)
- Proposal of technical solutions
- Collaboration with extrusion heads manufacturers





# EVOLUTION OF DESIGN AND MANUFACTURING :

Requirements for internal use → design → manufacturing → tests → improvements → external customer → internal and external feedback → improvements

#### **CUSTOMIZED MANUFACTURING**



# **HEADING TOOLS**



**Design :** « special shrinkage », segmented inserts for the most heavily used tools : heading of difficult materials, complex shapes or significant sizes.

Fields of application : automotive, aeronautics, construction, cycles, etc.



# PLATE CUTTING AND IRONING TOOLS









TOOLS FOR THE MANUFACTURING OF AMMUNITION







# **INDIRECT EXTRUSION TOOLS**



DIES AND PUNCHES FOR AEROSOLS, CANS AND FLEXIBLE TUBES



DIES, PUNCHES AND MISCELLANEOUS TOOLS FOR BATTERIES



5

## SPECIAL EXTRUSION TOOLS TUBES FINISHING TOOLS











HELICAL GROOVED MANDRELS



MINI-TUBES DRAWING MANDRELS





# **SHAPE DIES**





PROFILE: all tri-dimensional shapes possible (evolutive cone)

- all dimensions
  - from 0,5 mm to 160 mm
- tolerance : +/- 0,005mm
- computer-assisted dimensional control



8

# **DRAWING TOOLS**





9

# **EXTRUSION TOOLS**



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10

# **INTERNAL GRINDING MACHINES**





# IG100 A

#### Automatic horizontal grinding machine

- Chuck ø100mm
- Programm management by computer numerical control
- For dies from ø0.80 to ø30mm
- Machine precision : 5µm
- Angle precision : ±30"
- New motorized lead angle system (0 to 75°)
- Axis management by stepping motor control allowing an advance in micron
- Memorising of 5 operations in « learn » mode on the first die
- Repeat of the memorised operations to reproduce an identical profile
- Various spindle types available (depending on material and diameters to be ground)
- Totally ducted working area for users' safety



# IG100 C

#### Automatic horizontal grinding machine

Classic version without outer casing





# **INTERNAL GRINDING MACHINES**



# IG125 A

# Automatic horizontal wet grinding machine

- Chuck ø125mm or Chunk Ø 160mm
- Programm management by computer numerical control
- For dies up to ø70mm
- Machine precision : 5µm
- Easy to use
- Axis management by stepping motor control allowing an advance in micron
- Memorising of 5 operations in « learn » mode on the first die
- New system of motorised lead angle (0 to 75°)
- Angle precision : ±30"
- Repeat of the memorised operations to reproduce an identical profile
- Various spindle types available (depending on material and diameters to be ground)
- Totally ducted area for users' safety







- Centralized lubrication for easier maintenance
- Lubrication system for better roughing, semifinishing and polishing grinding

# **POLISHING LATHES**

Our manual polishing lathes are dedicated to the polishing of various types of tools and materials. They are equipped with safety devices, electronic speed variators and brakes.

# MP1

#### Polishing lathe

- Equipped with a ø80 mm chuck
- Complete casing around the chuck in order to secure operators' movements
- Motor with variable speed : 0-1500 or 0-3000 rpm
- Small size

# MP2

#### **Polishing lathe**

- Equipped with various systems of tool tightening (chuck ø100 or ø125mm, collet chucks, magnetic plate, with back guiding, etc.)
- · Complete casing around the chuck in order to secure operators' movements
- Control board on a fixed control panel
- Motor vith variable speed : 0-1500 rpm
- · Easy to use
- Option : complete workbench

# MP3

#### Polishing lathe on workbench

- Polishing lathe equipped with various systems of tool tightening (chuck Ø160, ø200 or ø250 mm)
- Complete casing around the chuck in order to secure operators' movements, with safety key
- Angular positioning of the polishing lathe for a better work comfort
- Simplified control board and safety foot controller
- Motor with variable speed : 0-1500 rpm
- Possible adjustment of the torque/speed ratio to adapt to the worked tool
- Various options possible











#### **APPLICATION**

- Non-ferrous wires : copper, brass, aluminum, etc.
- Ferrous wires : high-carbon steel, low-carbon steel, stainless steel, etc.
- Shaved diameter up to 18mm depending on materials





**TR01** Shaving head For diameters < 5mm



# MR

#### Machine equipped with TR02

- Rigid table
- Control board
- Shaving chips conveyor

# vviti I





# **TR02**

#### Shaving head

The most rigid shaving head dedicated to wires up to 18mm depending on materials



#### SHAVING PRINCIPLE



#### FOR FURTHER INFORMATION

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