



Doimak

Solutions
Quality
Accuracy

DOIMAK Company

DOIMAK >> Spanish Machine tool manufacturer since 1974

44th anniversary

LOCATION >> Basque Country-North Spain. City of Elgoibar

COMPANY CHARACTERISTICS >>

ACTIVITY: CNC Grinding machine manufacturing

VISION: Go beyond the state of the art in grinding processes

MISION: Co-create CNC grinding machines, customer oriented
and based on **client focused** strategy



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- Doimak manufactures a comprehensive range of last generation grinding machines.

[Doimak was **first company** in Spain who developed and manufactured a **CNC grinding machine**]

- The **R&D** Departament of Doimak and the **Technological Center of Tekniker** have been working together over the years
- **CORE VALUE:** **The close cooperation** with the users has brought up a comprehensive range of machinery **excelling and outperforming** the traditional technology available.
- Doimak quality assurance by means of **ISO 9001:2015**

DOIMAK KEY ACTIVITIES

- MACHINE AND PROCESS DESIGN.
 - **MODULAR SUBGROUP DESIGNS** >> SOLIDWORKS. Customer adapted PUZZLE
 - **PROCESS DESIGNS** >> CNC software, customized interface, process parameter control, etc...
- MACHINE PRECISION AND QUALITY ASSEMBLY & ADJUSTMENT.
 - HIGHEST QUALIFICATION ASSEMBLY ENGINEERS. Prestigious “know how” and experience acquired in the **precision assembly** field.
 - QUALITY PART MANUFACTURING.
- R&D PROJECT CONTINUOUS FOCUS.
 - Multi-Partner collaborative projects in
 - Spanish industrial programs (CDTI)
 - European programs (Eurostars Eureka)
 - Own financed developments

SPECIALIZED APPLICATIONS & PRODUCT LINES

• THREAD APPLICATIONS PRODUCT LINE.

- EUROPEAN LEADING THREAD GRINDER MANUFACTURERS
- AMPLY RANGE OF MACHINES (EXTERNAL THREADS, INTERNAL THREAD, TOOL MANUFACTURING –HOBBS, TAPS, GAUGES...)
- GRINDING QUALITY ASSURANCE >> Profile, pitch, Cilindricity

• CYLINDRICAL APPLICATIONS.

- FOCUSED IN CUSTOMIZED DESIGNS AND HEAVY DUTY CYLINDRICAL MACHINES.
- HIGH RANGE OF MACHINE CONFIGURATIONS.

• OTHER APPLICATIONS.

- MAINLY FOCUSED IN AUTOMOTIVE SECTOR
- CUSTOMER FOCUSED SOLUTIONS TO OBTAIN HIGH PRODUCTIVITY



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THREAD APPLICATIONS

EUROPEAN LEADING THREAD GRINDER MANUFACTURERS

EXTERNAL THREADS



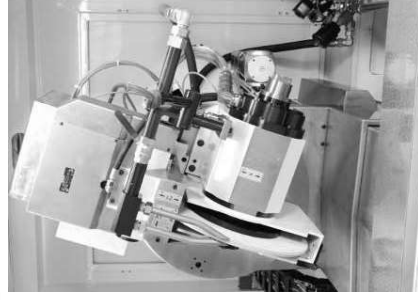
INTERNAL THREAD



TOOL MANUFACTURING



EXTERNAL THREAD MACHINES

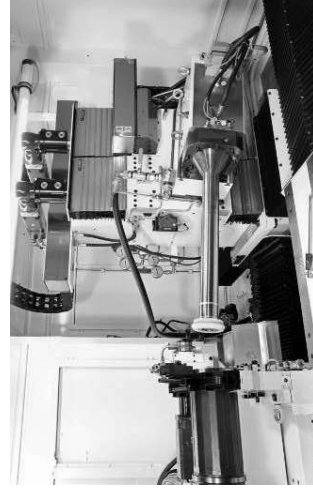




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INTERNAL THREAD MACHINES





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TOOL GRINDING MACHINES





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CYLINDRICAL APPLICATIONS

SPECIALIZED IN HEAVY DUTY SHAFTS OD GRINDING

ENERGY/TRANSMISSIONS



ROLLING INDUSTRY



OTHERS





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CYLINDRICAL GRINDERS

**Focused in customized heavy-duty cylindrical machines
up to 8 meters between centers**

- Transmission Shafts
- Steel Rolling Shafts
- Extruder Shafts
- Barrels Screws
- Printing Rolls
- Rubber Rollers
- Idler Pinions
- Hydraulic Piston Cylinders
- Axles



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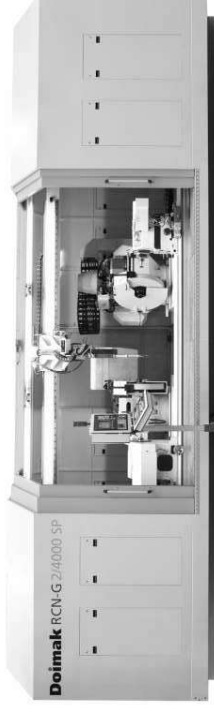
CYLINDRICAL APPLICATIONS

HIGH RANGE OF MACHINE CONFIGURATIONS

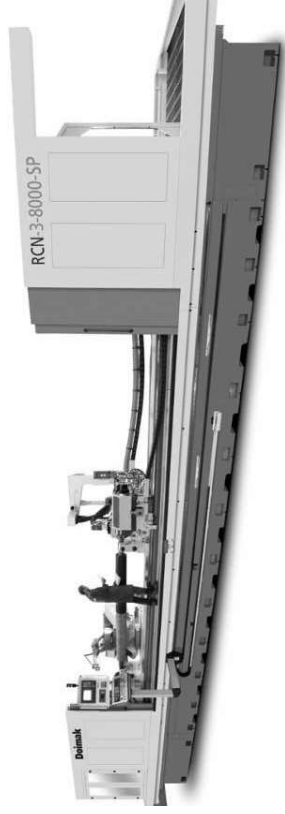
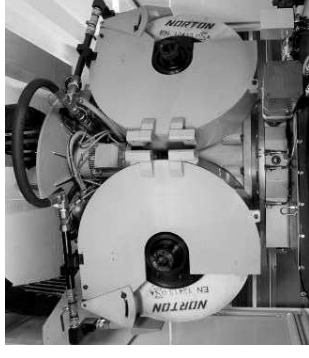
LIGHT SERIES



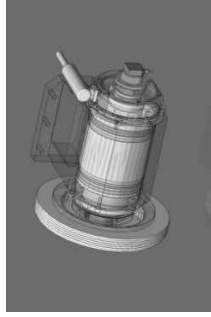
CROSS SLIDE CONF.



MOVING TABLE

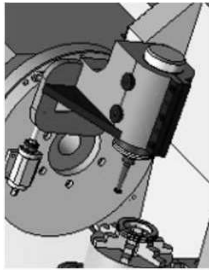


MECHANICAL CONCEPTS: WHEEL HEADS



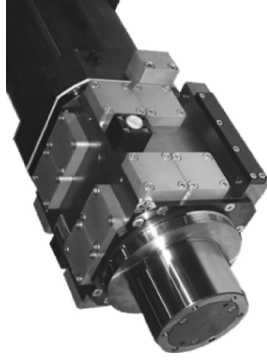
Thread & Profile Grinding Wheel head

- Power 11 kW at 5,500 rpm (max. 10,000 rpm)
- Wheel diameter 250-350 mm
- Oversized shaft with double mounted bearing groups [improved stiffness]
- Built-in servo-motor and encoder.



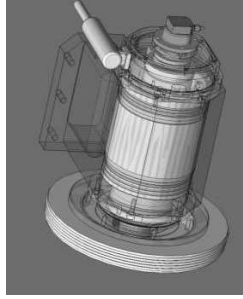
Internal Grinding Electro-Spindle ID / Profile

- High speed built-in electro-spindle.
- Power 5 kW at 75,000 rpm [other speed and power available]
- Wheel diameter: depending on mounted electro-spindle



HYDROSTATIC Grinding Wheel head

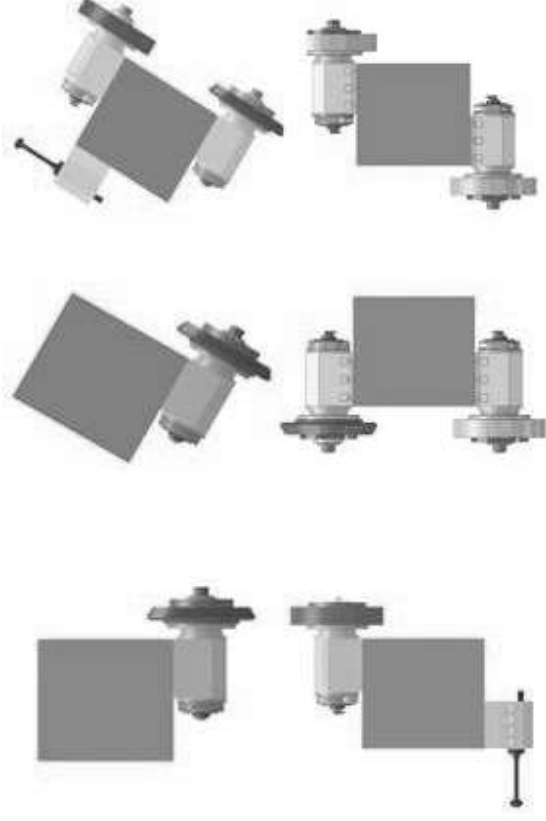
- Power 15 kW at 5,000 rpm (max. 10,000 rpm)
- Wheel diameter 350-250 mm
- High damping and stiffness hydrostatic bearing

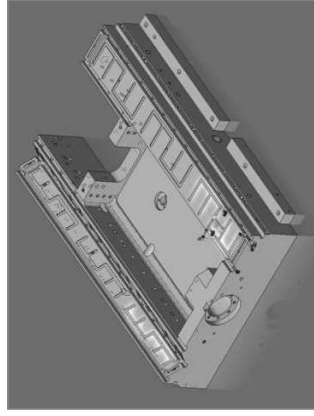
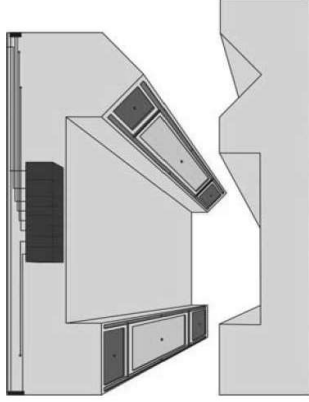
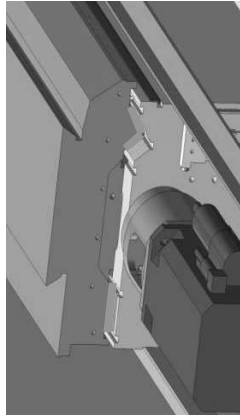


ALTERNATIVE Grinding Wheel head

- Power 24 kW at 3,500 rpm (max. 5,500 rpm)
- Oversized shaft with double mounted bearing groups
- Built-in servo-motor and encoder.

WHEEL HEAD CONFIGURATIONS





GUIDEWAYS

- V & Flat shape guideways on X and Z axes
- Covered with “turcite” sliding material
- Continuous greasing to create hydrodynamic effect
- Oil + turcite =
 - Vibration dampening
 - Smooth and constant movements at both: high and low (near 0) speed
 - No wear on the guideways, extended usability, free of maintenance over the years



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R&D PARTNER:

IK4 TEKNIKER
Research Alliance



- 200 engineers work with Doimak to develop the best grinding technology

R&D PARTNER:

IK4 TEKNIKER TECHNOLOGICAL CENTER

• MULTI-DEPARTMENTAL CAPABILITIES

- MECHATRONICS DEPARTMENT: Research in Mechanical developments, electronics, integration, vibration and structural calculations
- OIL AND TRIBOLOGY DEPARTMENT: Oil quality research, friction studies, etc.
- SOFTWARE PROCESS AND APPLICATIONS DEPARTMENT: Interface developments, complex spline and profile calculations, etc.
- METROLOGY DEPARTMENT: MMC machines, LASER measuring, custom applications, etc.

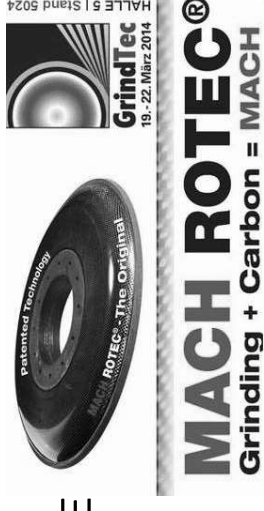


SUPPLIERS AND CUSTOMERS CO-WORKING FOR HIGH PRODUCTION

- EUROSTARS PROJECT: SIMULTANEOUS GRINDING APPLICATIONS

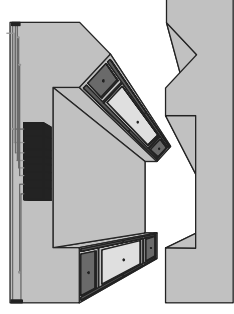
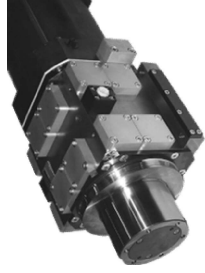
➤ CBN layer + CARBON body wheel manufacturers

High speed and damping performance >> MACH ROTE



➤ Hydrostatic solutions focused on high productivity by means of:

- WHEELHEADS
- LINEAR SLIDES



DOIMAK MAIN REFERENCES

CLIENTS

AUTOMOTIVE SUPPLIER

- ALFING
- DAVALL
- EPC
- GKN
- RBL
- TRW
- WAT
- XLO

AUTOMOTIVE

- C.A.C.I.A.
- FORD
- GENERAL MOTORS
- MAN & DIESEL
- NISSAN
- RENAULT

BALL SCREWS

- BERGER
- DIAKONT
- EISENMANN
- IFRANGA
- KAMMERER
- KSK
- MOOG
- STANDARD
- STEINMEYER
- SHUTON
- SKF
- UMBRA

AERONAUTICAL

- HAL
- I.T.P. ROLLS ROYCE
- RATER
- SIKORSKY AIRCRAFT
- UMBRA

OTHERS

- AHAUSER
- ALPHA LAVAL
- BOSCH
- HAITIAN
- HELLER



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DOIMAK EXPERIENCE IN THE AUTOMOTIVE INDUSTRY

• MANUFACTURERS.

- C.A.C.I.A
- RENAULT
- FORD
- GENERAL MOTORS
- MAN & DIESEL
- NISSAN



• SUPPLIERS.

- TRW
- GKN
- RBL
- DAVALL
- EPC
- WAT
- XLO
- ...



AUTOMOTIVE APPLICATIONS

- STEERING:

- WORM GEARS
- NUT
- BALLSCREW
- LEVER
- WHEEL HUB
- ...



- ENGINE PARTS

- CAMSHAFT
- BALANCING AXE
- CRANKSHAFT
- TRIPOD



- TRANSMISSIONS

- PRIMARY SHAFT
- SECONDARY SHAFT
- IDDL E PINION





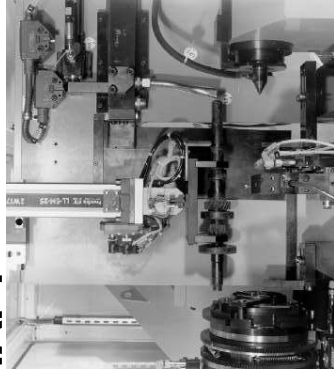
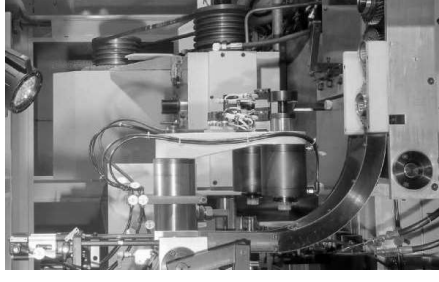
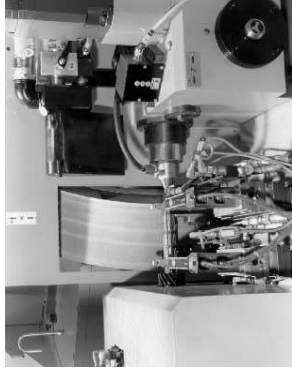
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APPLICATIONS PHOTO GALLERY

TRANSMISSIONS

- PRIMARY SHAFT
- SECONDARY SHAFT
- IDDLLE PINION





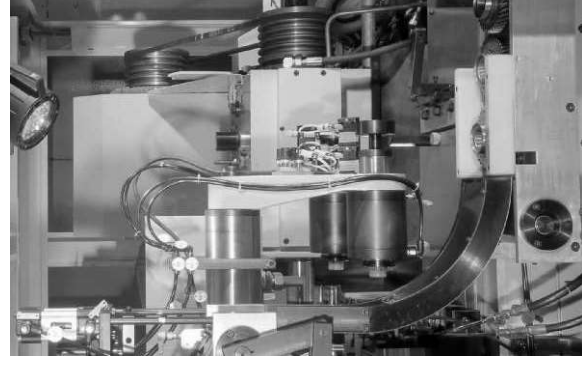
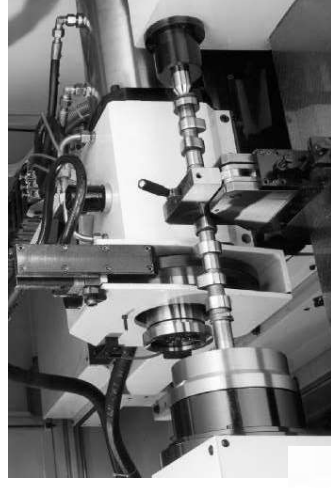
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APPLICATIONS PHOTO GALLERY

ENGINE PARTS

- CAMSHAFT
- BALANCING AXE
- CRANKSHAFT
- TRIPOD





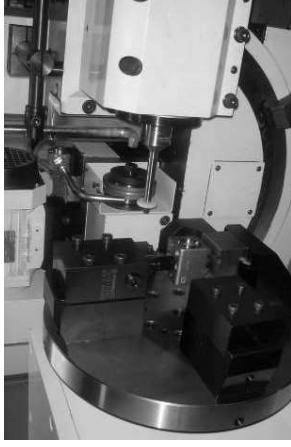
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APPLICATIONS PHOTO GALLERY

STEERING COMPONENTS

- **WORM GEARS**
- **NUT**
- **BALLSCREW**
- **LEVER**
- **WHEEL HUB**





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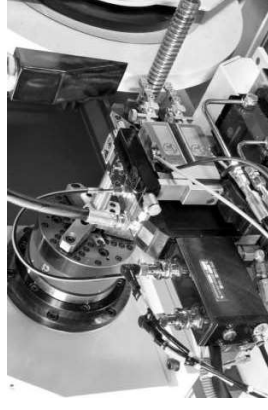
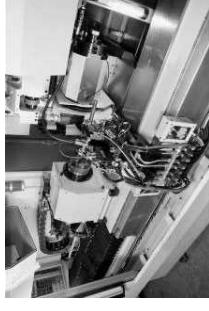
LAST GENERATION AUTOMOTIVE EXPERIENCE: Electronic Steering Ballscrew for TRW

Doimak → **TRW** →



CHARACTERISTICS

- Process Cycle time (Floor to floor) >> 37 sec.
- Automatic Loading system
- Multiribbed CBN Wheel
- Performance hydraulic steady rest + in-process measuring
- Plant trazability control system



IMPLEMENTED SOLUTIONS

- AUTOMATIC LOADING SOLUTIONS
- IN/POST-PROCESS MEASURING SYSTEMS
- HIGH CAPABILITY GRINDING TOOLS
- HIGH ACCURACY FILTERING UNITS
- FIRE EXTINGUISHING SYSTEMS
- etc.

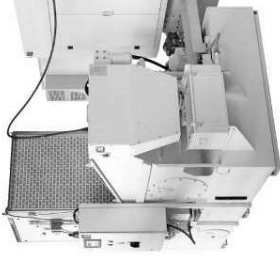


kraft hauer
BRANDSCHUTZSYSTEME

JÖVI



KNOLL
.It works



MARPOSS



AROBOTECH
SYSTEMS

