# **EXPERT'S PRIDE** HORIZONTAL LATHES





# **GEMINIS** WE FOCUS ON THE USER'S EXPERIENCE

We are leaders in the development of horizontal and multi-process lathes.

Under the name of **GEMINIS** and as a leading brand with more than 60 years experience and acknowledged prestige, we develop horizontal and multi-process lathes with cutting-edge technology.



### ROBUST/SOLID TECHNOLOGY

Our machines are built on a structure that makes them extraordinarily rigid, providing reliability, maximum machining precision and accuracy, and a long-term guarantee. We have the most robust machine bed on the market.

# MAHER HOLDING, EXPERTS IN CREATING SOLUTIONS

**GEMINIS** forms part of **MAHER HOLDING**, an industrial group comprised of machine-tool specialist companies, which provides a portfolio of machining solutions geared towards the industry's complex needs.

Solutions based on a robust and tested user-centred technology, due to its ease of use and flexibility.

# MAHER HOLDING

To learn more about **MAHER HOLDING**, **GEMINIS** and sudsidiary companies, visit www.maherholding.es



With the **GEMINIS** line of horizontal lathes we offer customized and specialized technological solutions for the most demanding industrial applications.

### **MULTI-PROCESS**

Competitive solutions for complex highadded value components that can be machined from start to finish.

- Productivity improvements.
- · Saved time.
- · Incorporation of different devices.
- · Adaptability.
- · Configurability.

## QUALITY

Guaranteed solutions.

- · Reliability.
- · Precision.
- · Robustness.
- · Eco-design.

### **USABILITY**

Solutions based on tested technology, with the user in mind.

- · Cleanness.
- Order.
- · Design and ergonomics.
- · Industry 4.0
- · Easy maintenance.
- · User-friendly work environment.

### SPECIALIZATION

Solutions for configurations and R&D projects with the client.

- · References.
- · Experience.
- · Service.
- · Machining cycles.
- · Accuracy.

# GTi Range of horizontal lathes:









# **B** RANGE



# **ADVANTAGES**

A range with greater rigidity, clean, tidy and ergonomic workplace, as well as machine customization options.

The applications engineering enables new functionalities such as smart tailstock, temperature compensation models or the **SMART MANUFACTURING** application option.

### WHAT ALSO SETS US APART:

- · Our 4-range headstocks.
- · Greater chip removal capacity.
- · Modular design.
- · Improved finishing capabilities.
- Integration of latest-generation multi-process accessories.
- · Greater ergonomics.

### GTI CARRIAGES:

- · Bigger and more rigid saddle.
- $\cdot$  Less exposed to cutting fluid and chips.
- Directly driven cross slide.
- Improved drive system with double rack-pinion and two motors (master/slave) with electronic pre-load.
- · Fully protected cabling.

### GTI CHIP REMOVAL:

- · At the front.
- · Less chip accumulation.
- Thermal and dimensional stability of the bed.
- · Greater cleanliness.
- · Cable channel not exposed to chips.
- · Double chip conveyor.

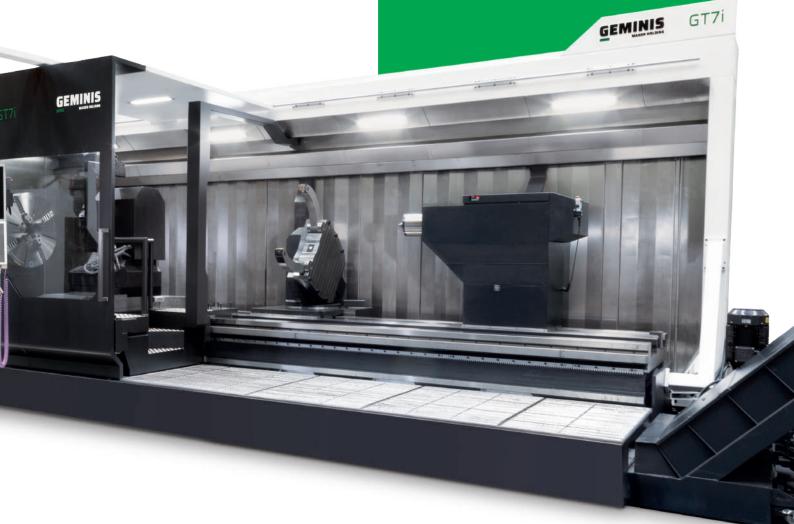


### THE RESEARCH THAT MAKE US BETTER

10 years studying our machines combined with our customers' needs have resulted in the new **GTi range.** 

### ONLY IN GT9i-GT11i LATHES

- Work platform with safe zone.
- The operator moves with the work area.
- · Easy access to the machine, with more height.
- · Good visualization.



### GTI HEADSTOCK:

- <sup>Range</sup> · Better headstocks: **C Axis.** 
  - · Larger bearing ø.
  - · Larger shaft.
  - · Better clamping.
  - · Greater positioning accuracy and precision.
  - Twin Drive: extra accuracy and precisión in milling.

### GTI BED:

- <sup>,e</sup> · Rib optimization.
- Additional guide to provide better support.
- · Lower height for improved ergonomics.
- · Greater rigidity.

#### GTI STRUCTURAL Range BODIES:

- · Design optimization by means
- of finite element calculation.
- · Better-dimensioned bodies.
- · 20% more rigid than before.

### GTI TAILSTOCK:

- · Better mass distribution: Better tolerance.
- · Greater rigidity.
- · Smart tailstock option.

### GTI LATHE DRIVE:

- Range
   Better dynamics and higher precision and accuracy.
   Optimised and redesigned kinematic chain.
  - · Better locking.

### GTI FAIRING:

- Enhanced lighting.
- $\cdot$  Door collisions are avoided.
- · Added window for better view of the work area.
- $\cdot$  Window to view the maintenance zone.
- More comfortable.
- · Better leak tightness.

# **ECO-DESIGN**

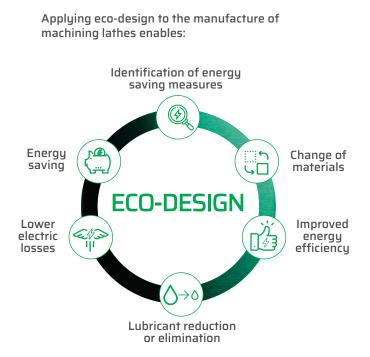
AT GEMINIS WE DESIGN AND DEVELOP OUR LATHES ACCORDING TO ECO-DESIGN PARAMETERS

# Eco-design, a differentiating factor in the design of machining lathes

### Our aim:

to reduce environmental impacts in all phases of the machines' life cycle. We make machines that are more respectful of the environment.





Many aspects must be taken into account when making lathes to ensure that our machines are the lathes that most respect the environment.

- Toxicity.
- · Internal management.
- · Structure.
- · Consumption during service life.
- · Customer service.
- · Long-lasting products.
- · Materials and finishes.
- · Identification.
- Material hygiene.
- · Joints.



# GEMINIS Eco-design Management System

At **GEMINIS** we don't say it; we do it. Our Eco-design Management System is certified according to standard ISO 14006:2011, assuring identification, control and continual improvement through the design of environmental aspects of products and services.

**GEMINIS** identifies, controls and constantly improves the environmental aspects of its products and/or services throughout their service life and aims to reduce and continually improve their environmental impacts.

Numerous environmental improvements are applied to **GEMINIS** products, resulting in the following benefits:

- · Noise reduction.
- Better use of lubricants and coolants.
- · Possibility of multi-process machining.
- · Improved chip recycling.
- · Less consumption/energy saving.
- · Lower cycle times.
- · Improved energy performance.
- Less heat generation.
- · Less maintenance.
- Remote servicing to resolve minor problems.
- · Feed control.
- · Elimination of downtime for cleaning.
- No use of paints with toxic components and reduced use of solvents.



# ORDER AND CLEANLINESS AND CHIP REMOVAL

I Chip Conveuor.

# THE BEST SOLUTIONS FOR REMOVAL AND MANAGEMENT OF SWARF AND COOLANT

Easy-to-clean lathes are safe lathes.

### CHIP CONVEYOR

### **CHIP EVACUATION**

- · Frontal chip conveyor.
- Removes from the working area main part of the chips.
- · Optional back chip conveyor.
- Removes the chips from the back side of the bed.
- · High machining accuracy.



I Bed Design.

BED

I Chuck Protection.

### **BACK DOOR**

#### **STAINLESS STEEL**

- · Inner in stainless steel.
- · Clean working espace.
- · High machine durability.
- · Improvement in the image of the workshop.

### ENCLOSURE

#### LEAKTIGHTNESS

- Full enclosure option.
- Prevents from chip or coolant splashes out of the machine.
- · Great cleanliness in the work enviroment.

### FRONT DOOR

CHIP CHANNELING

• Chip evacuation angle.

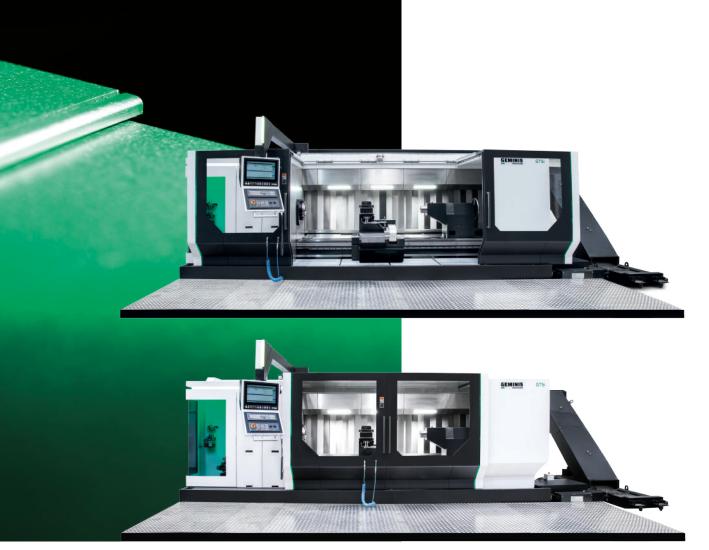
· High machining accuracy.

### CHIP CHANNELING

- Internal design for chip evacuation.
- · Prevents from chip accumulation in the front side.

· Avoids bed dilatations due to chip accumulation.





I Full enclosure.

### CHUCK PROTECTION

### **CHIP CHANNELING**

- Internal design for chip evacuation.
- Prevents from chip or coolant splashes out of the machine.
- · Great cleanliness in the work enviroment.

### INTERIOR

### **TOTAL PROTECTION**

- · Cable chain.
- · Cabling completely protected.
- High machine durability.
- High machine availability.
- · Inner in stainless steel.

### LED LIGHTING

#### **BRIGHT INSIDE**

- · Illuminated working area.
- High security for the machine operator.

### CARRIAGE

### TOTAL PROTECTION

- · Protected scale.
- · Avoids contact with the coolant or the chips.
- · High machine availability.

# DESIGN, ERGONOMICS FOR A USER-FRIENDLY ENVIRONMENT

## LATHES DESIGNED WITH OCCUPATIONAL SAFETY IN MIND

The ergonomic study behind our lathes creates user-friendly work environments.

# BACK DOOR

#### EASY ACCESS

- · Openable back doors.
- Easy access to the back side of the parts or accesories.
- · High security for the machine operator.

### PLATFORM

### **COMFORTABLE WORK AREA**

- · Optional elevated working platform.
- · Delimited working area around the machine.
- · Great cleanliness in the work enviroment.
- · Allows the access to the machine.
- · Enhanced ergonomy for the operator.

### BED

### EASY ACCESS

- · Low bed height.
- · Easy acces to machining part.
- Higher security for the machine operator.
- Easy access to machining tools.
- · Fast tool change.

### DOORS

### FRONT DOOR AND CHUCK PROTECTION

- Protection doors with wide transparent area.
- Enables to control safely the working area of the tools.
- · High security for the machine operator.

### CHIP CONVEYOR

#### WALKABLE SURFACE

- · Wide walkable grid over chip conveyor.
- · Comfortable working area.
- High security for the machine operator.

I Bed Design.



I Carriage.

I Operator's platform.

### CONTROL

#### **MACHINE INTERFACE**

- · 22" touch-screen.
- · Better display of machine parameters.
- Enhanced ergonomy for the operator.
- · HMI Human Machine Interface.
- · Easy display of main machine parameters.
- · Better machine management.

### CARRIAGE

#### **COMFORTABLE WORK AREA**

- Walkable platform.
- Easy access to the part.
- · High security for the machine operator.
- GT9i / GT11i lathes:

Work platform with safe zone. The worker moves with the work area.





# EASY MAINTENANCE

WE ADD THE ADVANTAGES DEVELOPED FOR CLEANING AND ERGONOMICS TO MAKE OUR LATHES THE EASIEST TO MAINTAIN

Maintenance tasks become easier, improving users' quality of life.

# MAINTENANCE

### MAINTENANCE AREA

- · Transparent maintenance area door.
- · Direct visual control.
- Easy access to maintenance area.
- Easy access to pneumatic and hydraulic components.
- · Centralised lubrication system.
- $\cdot\,$  Fast maintenance operations.

#### **HEADSTOCK MAINTENANCE AREA**

- · Removable panels.
- · Easy access to headstock maintenance.
- Fast maintenance operations.



# **INDUSTRIAL SECTORS**

# THESE ARE OUR BEST REASONS

We are recognized as partners of lead clients in sectors such as steel, power generation, railways, oil & gas, shipbuilding, defense and pulp & paper.

- We design and make the most robust bed on the market.
- Our solutions are guaranteed for the long term and are extraordinarily reliable.
- The engineering department offers manufacturing solutions to the client, who we advise regarding every need.
- We develop R&D projects with the end-customer and provide long-term accompaniment.

## OUR CUSTOMERS ARE OUR BEST GUARANTEE.





### STEEL MANUFACTURING

• Machining of rolling rolls for profile and sheet production.

Siemens Vai / Danieli / SMS Meer / Tata Steel / Arcelor Mittal / Vallourec / S+C / BGH / Gerdau / US Steel.

### POWER GENERATION

- $\cdot\,$  Turbine rotors.
- Multiplier gearboxes.
- Low speed shaft of wind generators.

Siemens / Alstom / General Electric / BHEL / TGM Turbinas / Alfa Laval / Rolls Royce / Gamesa / Acciona / Ecotecnia.













### RAILWAYS

- · Axles.
- · Wheels.
- · Wheelsets.

Alstom / Ansaldo - Hitachi / CAF / Renfe / Euskotren / Talgo / SNCF / Cofmow - Indian / Railways / TMR Vernayaz / Railtech.

# OIL&GAS

- Pipes and coupling for extraction.
- Extraction machine components – offshore and onshore.

FMC Technologies / Aker Solutions / General Electric / Cameron / Vetco Gray / Tenaris Tamsa / Oss-Nor / Venture Gulf / Sino Gulf / Saudi Aramco / Delta Corporation.

### NAVAL

· Propeller shafts.

Navantia / Hakkinen / Baliño / Saudi Aramco Maritime Yard.

### DEFENSE

 $\cdot$  Cannon barrels.

US Navy / US Coast Guard HSW / General Atomics / General Dynamics / FGK.

# PULP&PAPER

- · Paper machine rollers.
- · Drums.
- · Pope reels.

### GENERAL MACHINING

- · Hydraulic cylinders.
- · Extrusion spindles.
- · Valves.
- · Crane drums.
- · Shakers.
- Public works.
- · Forged and cast components.
- · etc.

# GT5i

Swing over bed Swing over carriage Max weight between centers

### GT5i G2

1.000/1.200/1.400 (mm) 650/850/1.050 (mm) 6.000-12.000 (kg) GT5i G4

1.000/1.200/1.400 (mm) 700/900/1.100 (mm) 6.000-12.000 (kg)



| MEDIUM HE | AVY SERIES                                   |              | GT5i G2        |             | GT5i G4        |            |             |  |  |
|-----------|----------------------------------------------|--------------|----------------|-------------|----------------|------------|-------------|--|--|
| CAPACITY  | Swing over bed (mm)                          |              | 1000/1200/1400 | ו           | 1000/1200/1400 |            |             |  |  |
| CAPACITY  | Swing over carriage (mm)                     | 650/850/1050 |                |             | 700/900/1100   |            |             |  |  |
| TAILSTOCK | Quill diameter (mm)                          | 160/220      |                |             |                | 160/220    |             |  |  |
| TAILSTUCK | Max weight between centers (kg)              | 6000 - 12000 |                |             | 6000 - 12000   |            |             |  |  |
|           | Main motor (51-100%/56-40%) ( <b>kW)</b>     | 30/45        | 37/55,5        | 51/78       | 30/45          | 37/55,5    | 51/78       |  |  |
|           | Torque (S1-100%/S6-40%) <b>(Nm)</b>          | 6400/9500    | 7800/11800     | 15000/21600 | 6400/9500      | 7800/11800 | 14000/21600 |  |  |
| HEADSTOCK | Speed range ( <b>rpm</b> )                   | 0 - 1400     | 0 - 1400       | 0 - 800     | 0 - 1400       | 0 - 1400   | 0 - 800     |  |  |
|           | Ø bar through <b>(mm)</b>                    | 130          |                | 162         | 130            |            | 162         |  |  |
|           | Ø headstock bearing (mm)                     | 190          |                | 240         | 190            |            | 240         |  |  |
|           | Z-axis travel <b>(m)</b>                     | 124          |                |             |                | 124        |             |  |  |
|           | X-axis travel (mm)                           | 700          |                |             | 700            |            |             |  |  |
| CARRIAGES | Z-axis speed (m/min)                         | 10           |                |             | 10             |            |             |  |  |
| LARRIAGES | X-axis speed (m/min)                         | 8            |                |             | 8              |            |             |  |  |
|           | Forward force Fz DPC (S1-100%/S3-40%) (N)    | 26000,       | /34000         | 36000/43000 | 26000/34000    |            | 36000/43000 |  |  |
|           | Forward force Fx (S1-100%/S3-40%) <b>(N)</b> | 15000/21000  |                | 22000/30000 | 15000/21000    |            | 22000/30000 |  |  |
| BED       | Bed guide width <b>(mm)</b>                  |              | 655            |             | 1000           |            |             |  |  |
| BED       | Bed height <b>(mm)</b>                       | 650          |                |             | 700            |            |             |  |  |



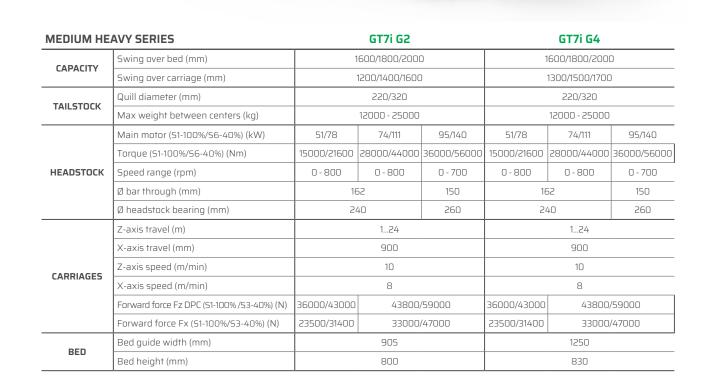
# GT7i

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Swing over bed Swing over carriage Max weight between centers

| GT7i G2                                          | GT7i G4                                          |   |
|--------------------------------------------------|--------------------------------------------------|---|
| 1.600/1.800/2.000 (mm)<br>1.200/1.400/1.600 (mm) | 1.600/1.800/2.000 (mm)<br>1.300/1.500/1.700 (mm) | 1 |
| 12.000-25.000 (kg)                               | 12.000-25.000 (kg)                               |   |

GT71 GEMINIS



# GT9i

Swing over bed Swing over carriage Max weight between centers

### GT9i G2

2.000/2.200/2.400/2.600 (mm) 1.600/1.800/2.000/2.200 (mm) 25.000-60.000 (kg)

### GT9i G4

2.000/2.200/2.400/2.600 (mm) 1.700/1.900/2.100/2.300 (mm) 25.000-60.000 (kg)



### **ONLY IN GT9i-GT11i**

- · Work platform with safe zone.
- $\cdot$  The worker moves with the work area.
- · Easy access to the machine, with more height.
- · Good view.
- · Easy chip collection.
- · More comfortable cleaning.

| HEAVY SERIES |                                              | GT9i G2                    | GT9i G4                    |
|--------------|----------------------------------------------|----------------------------|----------------------------|
| CAPACITY     | Swing over bed <b>(mm)</b>                   | 2000/2200/2400/2600        | 2000/2200/2400/2600        |
| LAPALITY     | Swing over carriage <b>(mm)</b>              | 1600/1800/2000/2200        | 1700/1900/2100/2300        |
| TAILSTOCK    | Quill diameter <b>(mm)</b>                   | 320 - 450 - 520            | 320 - 450 - 520            |
| TAILSTUCK    | Max weight between centers (kg)              | 25000 - 60000              | 25000 - 60000              |
|              | Main motor (S1-100%/S6-40%) <b>(kW)</b>      | 95/140 - 150/221           | 95/140 - 150/221           |
|              | Torque (51-100%/56-40%) <b>(Nm)</b>          | 36000/56000 - 72000/106000 | 36000/56000 - 72000/106000 |
| HEADSTOCK    | Speed range ( <b>rpm</b> )                   | 0 - 700                    | 0 - 700                    |
|              | Ø bar through <b>(mm)</b>                    | 150                        | 150                        |
|              | Ø headstock bearing <b>(mm)</b>              | 260 - 480                  | 260 - 480                  |
|              | Z-axis travel <b>(m)</b>                     | 124                        | 124                        |
|              | X-axis travel (mm)                           | 1200                       | 1200                       |
| CARRIAGES    | Z-axis speed (m/min)                         | 10                         | 10                         |
| CARRIAGES    | X-axis speed (m/min)                         | 8                          | 8                          |
|              | Forward force Fz DPC (51-100% /53-40%) (N)   | 61500/81500 - 83000/115000 | 61500/81500 - 83000/115000 |
|              | Forward force Fx (S1-100%/S3-40%) <b>(N)</b> | 52000/70500 - 65000/91100  | 52000/70500 - 65000/91100  |
| BED          | Bed guide width <b>(mm)</b>                  | 1350                       | 1750                       |
| BED          | Bed height (mm)                              | 650                        | 680                        |



GTIII GEMINIS

# GT11i

Swing over bed Swing over carriage Max weight between centers

### GT11i G2

2.600/3.600 (mm) 2.000/3.000 (mm) 45.000-150.000 (kg)

GTIN GENINIS

2.600/3.600 (mm) 2.050/3.050 (mm) 45.000-150.000 (kg)

**GT11i G4** 

### **ONLY IN GT9i-GT11i**

- · Work platform with safe zone.
- $\cdot$  The worker moves with the work area.
- $\cdot$  Easy access to the machine, with more height.
- · Good view.
- · Easy chip collection.
- · More comfortable cleaning.

| HEAVY SERIES |                                              | GT11i G2                   | GT11i G4                   |
|--------------|----------------------------------------------|----------------------------|----------------------------|
| CAPACITY     | Swing over bed (mm)                          | 2600 - 3600                | 2600 - 3600                |
| CAPACITY     | Swing over carriage (mm)                     | 2000 - 3000                | 2050 - 3050                |
| TAILSTOCK    | Quill diameter <b>(mm)</b>                   | 450 - 600                  | 450 - 600                  |
| TAILSTUCK    | Max weight between centers (kg)              | 45000 - 150000             | 45000 - 150000             |
|              | Main motor (51-100%/56-40%) <b>(kW)</b>      | 113/166 - 182/272          | 113/166 - 182/272          |
|              | Torque (51-100%/56-40%) <b>(Nm)</b>          | 54000/79500 - 87300/130500 | 54000/79500 - 87300/130500 |
| HEADSTOCK    | Speed range <b>(rpm)</b>                     | 0 - 400                    | 0 - 400                    |
|              | Ø bar through <b>(mm)</b>                    | 150                        | 150                        |
|              | Ø headstock bearing <b>(mm)</b>              | 400 - 520                  | 400 - 520                  |
|              | Z-axis travel (m)                            | 124                        | 124                        |
|              | X-axis travel (mm)                           | 1400/1700                  | 1400/1700                  |
| CARRIAGES    | Z-axis speed (m/min)                         | 10                         | 10                         |
| LARRIAGES    | X-axis speed (m/min)                         | 8                          | 8                          |
|              | Forward force Fz DPC (S1-100% /S3-40%) (N)   | 83000/115000               | 83000/115000               |
|              | Forward force Fx (S1-100%/S3-40%) <b>(N)</b> | 65000/91100                | 65000/91100                |
| DED          | Bed guide width <b>(mm)</b>                  | 1850/2300                  | 2250/2700                  |
| BED          | Bed height (mm)                              | 750                        | 750                        |

# GTI RANGE

# MEDIUM HEAVY SERIES

|                          | GT5i G2        | GT5i G4        | GT5i G4 GT7i G2 |                |
|--------------------------|----------------|----------------|-----------------|----------------|
| CAPACITY                 |                |                |                 |                |
| Swing over bed (mm)      | 1000/1200/1400 | 1000/1200/1400 | 1600/1800/2000  | 1600/1800/2000 |
| Swing over carriage (mm) | 650/850/1050   | 700/900/1100   | 1200/1400/1600  | 1300/1500/1700 |
|                          | •              |                |                 |                |

#### TAILSTOCK

| Quill diameter <b>(mm)</b>             | 160/220      | 160/220      | 220/320       | 220/320       |
|----------------------------------------|--------------|--------------|---------------|---------------|
| Max weight between centers <b>(kg)</b> | 6000 - 12000 | 6000 - 12000 | 12000 - 25000 | 12000 - 25000 |

#### HEADSTOCK

| Main motor (51-100%/56-40%) (kW) | 30/45 | 37/55,5 | 51/78 | 30/45 | 37/55,5 | 51/78 | 51/78 | 74/111 | 95/140 | 51/78 | 74/111 | 95/140 |
|----------------------------------|-------|---------|-------|-------|---------|-------|-------|--------|--------|-------|--------|--------|
|----------------------------------|-------|---------|-------|-------|---------|-------|-------|--------|--------|-------|--------|--------|

# **HEAVY SERIES**

|                                        | GT9i G2             | GT9i G4             | GT11i G2       | GT11i G4       |  |
|----------------------------------------|---------------------|---------------------|----------------|----------------|--|
| CAPACITY                               |                     |                     |                |                |  |
| Swing over bed (mm)                    | 2000/2200/2400/2600 | 2000/2200/2400/2600 | 2600 - 3600    | 2600 - 3600    |  |
| Swing over carriage (mm)               | 1600/1800/2000/2200 | 1700/1900/2100/2300 | 2000 - 3000    | 2050 - 3050    |  |
| TAILSTOCK                              |                     |                     |                |                |  |
| Quill diameter (mm)                    | 320 - 450 - 520     | 320 - 450 - 520     | 450 - 600      | 450 - 600      |  |
| Max weight between centers <b>(kg)</b> | 25000 - 60000       | 25000 - 60000       | 45000 - 150000 | 45000 - 150000 |  |
|                                        |                     |                     |                |                |  |

#### HEADSTOCK

| Main motor (51-100%/56-40%) (kW) | 95/140 - 150/221 | 95/140 - 150/221 | 113/166 - 182/272 | 113/166 - 182/272 |
|----------------------------------|------------------|------------------|-------------------|-------------------|
|----------------------------------|------------------|------------------|-------------------|-------------------|

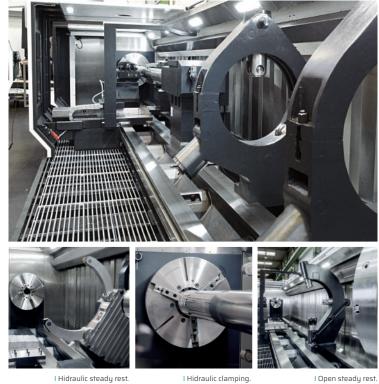


# CLAMPING ACCESSORIES

The **GEMINIS** clamping accessories enable anchoring the parts and machining them safely, guaranteeing finish quality. Moreover, we have automated options which result in anchoring time reduction and improve our lathe availability.

I Closed steady rest.





# CHUCKS

- · Manual.
- Automatic: pneumatic or hydraulic.
- Smart Chuck.

### | TAILSTOCKS

- · Manual.
- $\cdot$  Motorised.
- · Smart tailstock.

# STEADIES

· Manual.

Τ

• Automatic: hydraulic or hydrostatic.

### **AUTOMATED LOADING / UNLOADING**

- Machines prepared to be integrated into automated loading and unloading systems.
- Pre-placement of parts in the lathe.

# MACHINING OPERATIONS

GEMINIS has an extensive catalogue of machining devices and solutions allowing for different finishing options in parts. Based on a horizontal lathe, a wide variety of tools and devices can be fitted to completely machine a part, pursuant to the most demanding quality requirements, and reducing exchange times.

### I TURRETS

- · Manual.
- · Square.
- Disc.
- Motorised.
- · With movement on Y-axis.
- Live tooling

### MILLING

- $\cdot$  Light, on motorized turret.
- $\cdot$  Milling column.
- Turning and milling column with automatic tool exchange and storage.
- Y and B axes machining options.

### | GRINDING

- · Light on motorized turret.
- · Grinding unit.
- $\cdot$  Gap & Crash: closed loop.
- · Specific **GEMINIS** cycles.

### QUICK DEVICE EXCHANGE SYSTEM

Improvement in machine OEE availability.
Reduction of adjustment times.

### MEASUREMENT ELEMENTS

Parts measurement.
Tools measurement.

### BORING

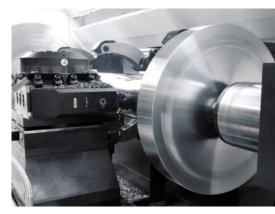
- Light support on turret.
- · On carriage.

### POSITIONING

- · C-axis.
  - Twin Drive: multiplies the accuracy and precision of C-axis by 10.

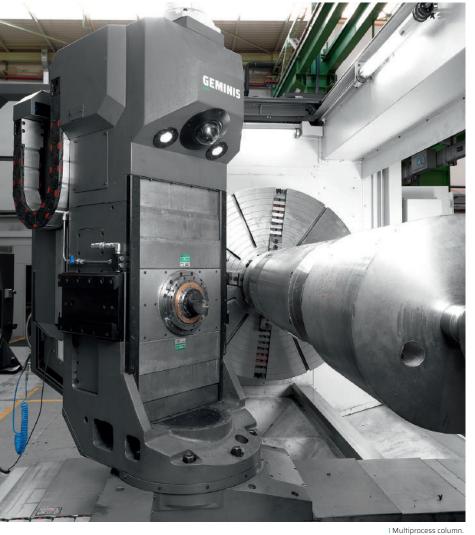
### FINISHING

- · Burnishing device.
- Polishing device.



I Turning



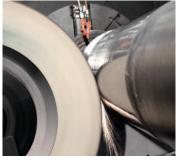




I Milling.



I Quick device exchange system.



I Grinding.

### VALUES THAT WE CAN REACH IN MACHINING OPERATIONS:

### **TURNING:**

- Ra 0.6 µm
- · Runout 0.01 mm
- Dimensional tolerance IT 5

### **GRINDING:**

· Ra 0.2 - 0.4 µm

21

- Runout 0.005 0.01 mm
- $\cdot$  Dimensional tolerance IT 5



# GEMINIS EXPERT SERVICES

# THE PRODUCT IS THE CORE. THE SERVICE, TOO.

Our EXPERT SERVICES offer our customers the most complete package in a THREE-FOLD service.

### ENGINEERING

We guide the customer in his purchase decision by making the machine that the customer needs.

Based on the customer's machining and productivity needs, our technical engineering and applications team develops the solution that best achieves the quality, availability and profitability goals required by our clients.

# INSTALLATION AND START-UP

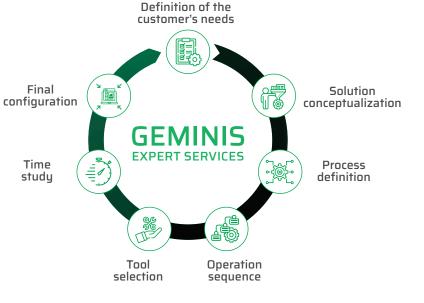
On-demand services to help start machine operation. From installation support to turnkey installation, including training of operators.



### AFTER-SALE

Services for integral maintenance throughout the whole machine lifecycle.

- 1. Telephone advice service.
- 2. Remote assistance.
- 3. On-site repairs.
- 4. Spare parts.
- 5. Preventive maintenance: Finger Print.
- 6. Predictive maintenance: Smart Check. Integration of tools that permit predictive maintenance.
- 7. CAM integration and post-processors:
  - a\_Simulation systems.
  - b\_ Collision detection.
- 8. Up-dating.





# LEAN DIGITAL MANUFACTURING

AT **GEMINIS** WE DEVELOP SOLUTIONS FOR SMART FACTORIES.



### OUR SMART MACHINES INTEGRATE INDUSTRY 4.0 SOLUTIONS

### | SMART HMI

Interface developed by **GEMINIS** for the integral management of all the Industry 4.0 solutions. Simple and user-friendly monitoring of main parameters, visualization of drawings, self-diagnosis cycles, integral tool management, integrated management plan.

### SMART FACTORY

The best tool to know the state and performance of all your machinery pool, and increase their efficiency, quality and profitability.

Using smart sensors and with an interface developed by **GEMINIS**, we achieve the integral management of all the Industry 4.0 solutions, simplifying the planning process.

### SMART APPS

We use smart sensors controlled by applications installed in our machines.

See the advantages of our 4.0 tools at geminislathes.com



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