LEADERS IN HEAVY DUTY CNC LATHES

GURUTZPE

4 GUIDE-WAY LATHE
A-2000 4G

TÜVRheinland® CERT ISO 9001

TÜVRheinland® CERT ISO 14001

"Gurutzpe's prestige is a result of 50 years of achievement."

History

Series “M”, “A”, and “B” were the corner stones for the manufacture of Gurutzpe conventional parallel lathes.

In 1961 Gurutzpe makes their very first lathe. It is “M1” model with 1,500 mm between centres and with a 390 mm bed width. It was sold to our first customer Talleres Enteriza, in Barcelona. Two years after the “A” model is made. It was a lathe with a wider bed (540 mm). This lathe will give way in 1968 to the “Super A” model and in 1975 to the definitive “Super AT”.
The “M1” model from the 60s gives way to the “M2”, turning into model “Super M” in 1972.

From 1962 to 1975 more than 2400 lathes from our series “A” and “M” were manufactured.

On the other hand, in 1968 a new and bigger lathe is started to be made which will set the example for the peer lathes, it was the Super B model. It was a lathe with 800 mm bed width. This lathe will turn into the Super-BT model.

Before taking the definitive step to the manufacturing of CNC lathes, several variants to the conventional lathes appeared with more sophisticated standard equipement, the RT-API model (threading with automatic cycle).The Super BT model was also designed with an electric copier which interpolated the “X” and “Z” axis. This model was a key one for rollers machining and the wheels from the trains up til the development of the CNC.

The new era of Gurutzpe as CNC lathe manufacturer is started in the Machine Tools Exhibition in Bilbao in 1972. We showed there the first CNC lathe in Spain, it was the TF-215 model. It was a frontal lathe in order to machine pieces on the air.

It was in 1980 when we started to manufacture CNC lathes in mass production. The first model to be designed was the “A-1000” model (1981). Afterwards the “M-640”, “B-1400” and “B-1800/3” models were born.

In 1986 Gurutzpe manufactured the first slant lathe, model A-800 CNC, a lathe that was very popular. Due to the great success, we manufactured another one with less capacity: MS-500 CNC model.

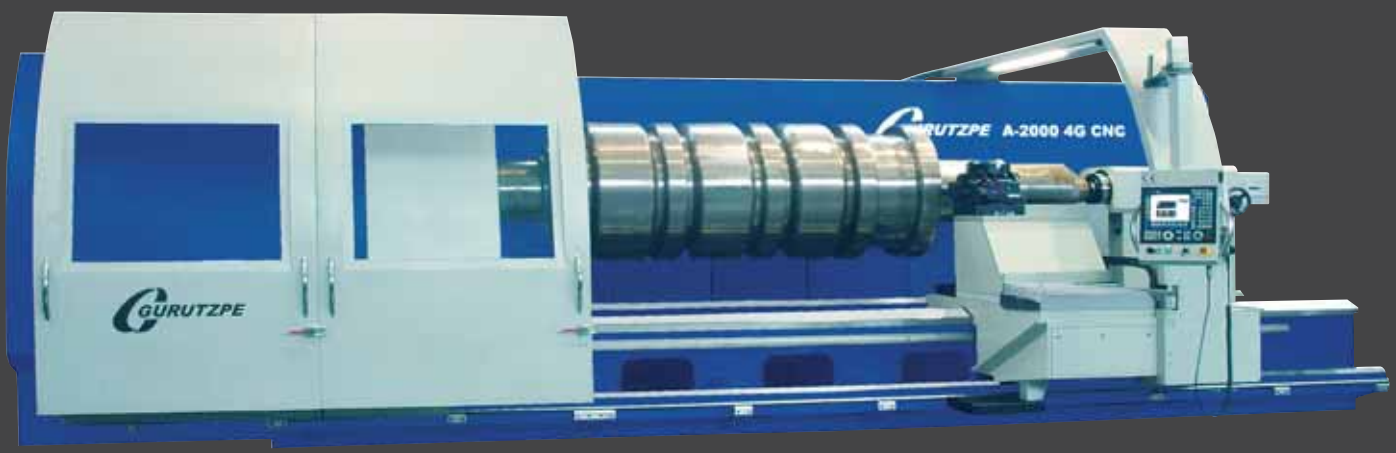
Nowadays, the A and B series comprise our productive range with turning capacities up to diameter 2,400 mm over bed. The diameter, lenght and weight of the piece to be machined are the features that determine the ideal model for the customer´s need.

1- Gurutzpe lathe A-2000 4G (2009)
2- M1 model (1957)

A-2000 4G

"The latest technology for the new machining requests"

The A-2000 4G model has been designed taking into account the requests existing in the market for machining pieces of big swing and weight. It allows to machine pieces of up to 20 tonnes and 1,700 mm of swing over carriage. It has been designed taking into account the identity signs of every Gurutzpe lathe: great rigidity (bed of 1,650 mm) together with guiding in reversed "V".



A-2000 4G Model

Remark: the model shown includes some special features with respect to the standard equipment list.

Standard equipment

- Stabilized casting and hardened guides.
- High accuracy ground ball-screws.
- Double pinion rack system with mechanical preload for the longitudinal feed for Z > 4 m.
- Headstock with automatic two-gear change.
- Headstock and carriage lubrication commanded by the CNC.
- Hard-tempered and ground helicoid gears in the headstock.
- Biplast plates in the carriages with low friction coefficient and high toughness.
- Convenient travel of the CNC keyboard with the longitudinal carriage.
- Machine design complying with rigorous European Safety Norms (CE).

10.4. 4 position-automatic square turret size 320 mm.
20.1. Fagor CNC.
25.1. Main motor of 51 kw.
30.7. Motorised movement of the tailstock.
30.8. Automatic clamping of the tailstock.
30.9. Tailstock with rotating motorised quill of diameter 220 mm with pressure regulator and expansion balance device.
90.1. Electronic handwheel.
90.8. Double front door.

A-2000 4G

Optional equipment

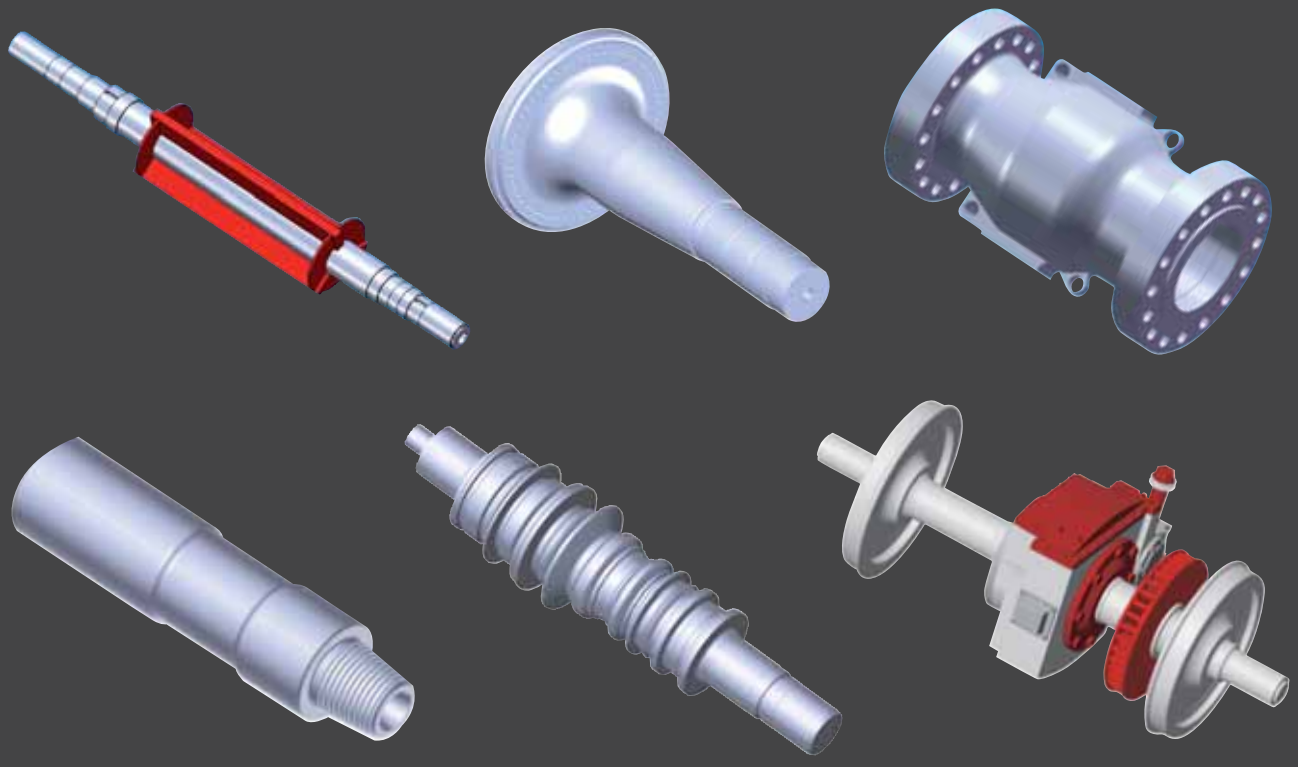
10.5. 8 position automatic disk type turret size 320 mm with or without live tools.
10.6. A 4-position automatic square turret size 400 mm.
10.8. 8 position automatic disk type turret size 400 mm with or without live tools.
20.2. Siemens and Fanuc CNC.
25.2. Main motor of 71 kw.
30.11. Tailstock positioning commanded by the CNC.
30.92. Tailstock with rotating motorised quill of diameter 280 mm with pressure regulator and expansion balance device for > 15 tonnes.
40.1. "C" axis with headstock motor or independent motor.
40.2. "Y" axis in-built in the carriage.
50.4. Manual steady rests capacity 100-600 mm with passage in front of the cariage.
50.5. Manual steady rest capacity 500-900 mm with passage in front of the cariage.
50.6. Manual steady rest capacity 900-1300 mm without passage in front of the cariage.
50.9. Hydraulic steady rest capacity 125-460 mm commanded by the CNC.
50.11. 90º automatic rotation for hydraulic steady rests.
50.12. "C" type steady rests with different capacities.
60.2. Boring bar support of 160 mm in the square turret.
60.3. Boring bar support of 200 mm in the base of the turret.
70.1. ISO 40 milling headstock with two ranges.
70.2. ISO 40 milling headstock with "Y" axis ±40 mm.
70.3. ISO 50 milling headstock with two ranges.
70.5. Burnishing tools for turret clamping.
80.1. Manual chucks.
80.2. Automatic chucks: hydraulic or pneumatic.
90.2. Automatic chip conveyor in pit with coolant equipment included.
90.3. Piece measuring probe.
90.4. Tool wear probe.
90.5. Teleservice.
90.6. Air conditioning system in the electric cabinet.
90.9. Second longitudinal carriage for turning, milling and boring operations.
90.10. Special coolant equipment with motopumps of high pressure and flow.
90.11. Digital scales in "X" and "Z" axis.
90.12. Oil skimmer.

Detail of the machinning proccess with pieces of big eccentricity.

Detail of standard protections in the A-2000 4G model.

Sectors of activity

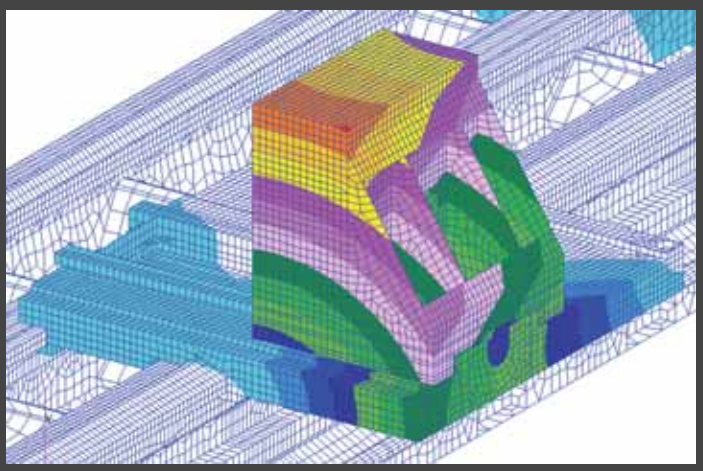
SECTORS/PRODUCTS	2G A SERIES	4G A SERIES	4G B SERIES
NAVAL: Ships shafts		●	●
WIND ENERGY: Wind-driven generator shafts	●	●	●
PAPER INDUSTRY: Rolls			●
IRON AND STEEL INDUSTRY: Mill rolls and steel suppliers	●	●	●
TRAIN INDUSTRY: Shafts and wheels	●	●	
BORING/DRILLING: Tubes		●	
OIL INDUSTRY: Tubes	●		
HYDRAULIC: Cylinders		●	
HOISTS/CRANES: Drums	●		
TURBINES/GENERATORS: Shafts		●	●
MOTORS: Casing and shafts	●	●	
AERONAUTICS: Landing shafts		●	
AGRICULTURAL: Spiral drums		●	
VALVES	●		

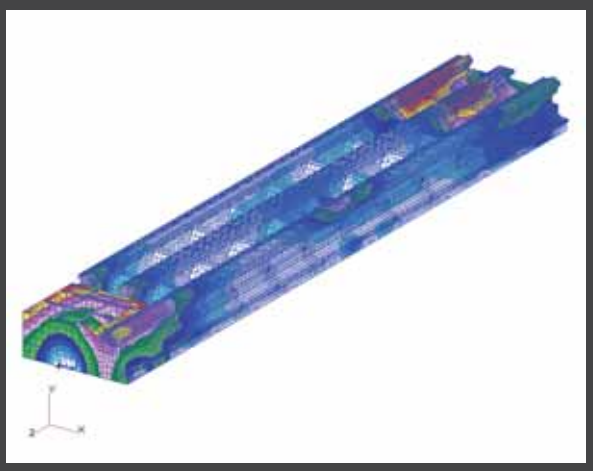


Guidance for models according to the weight and diameter of the piece to be machined

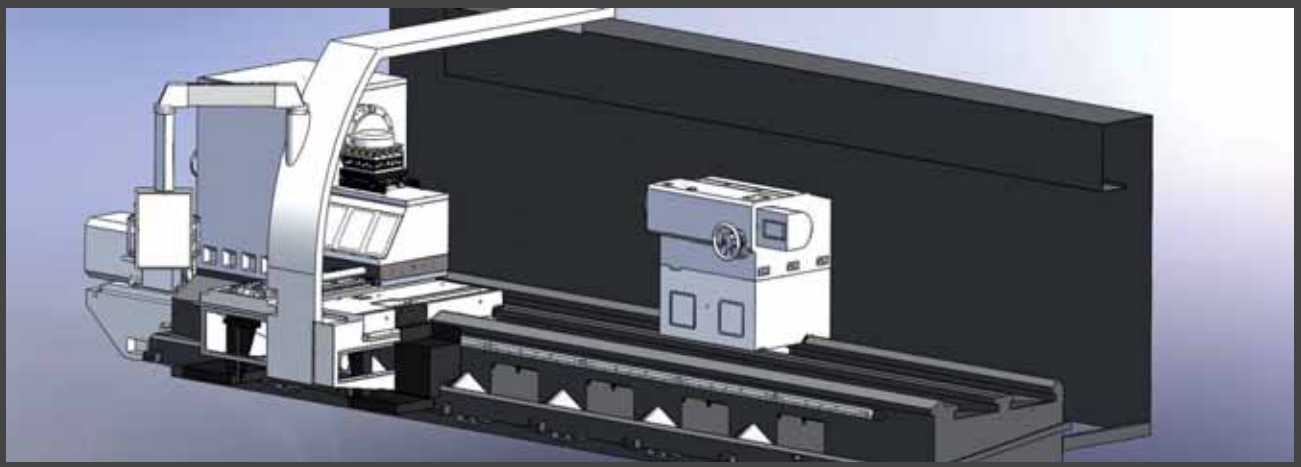
In this chart each model is segmented according to the size and length of the piece to be machined (diameter over carriage).

Ø(mm) / WEIGHT (kg)	700	950	1.300	1.700	2.200
4.000	A 1000 / A 1000 4G				
6.000		A 1200 / A 1200 4G			
10.000			A 1600 / A 1600 4G		
15.000				A 2000 4G	
20.000					
25.000					B 2200
35.000					





FEM analysis.



Design of the model in 3D.

Summary of the standard and optional features

10.4. 4 position automatic square turrets.

10.5. 8/12 automatic disk type turret up to size 320 mm with or without live tools.

20.1. Fagor CNC.

20.2. Siemens/Fanuc CNC.

40.2. "Y" axis built into the carriage.

50.1. Manual steady rests.

50.7. Hydraulic steady rest commanded by the CNC.

50.11. 90° automatic rotation for the hydraulic steady rest.

50.12. "C" type steady rests.

60.2. Boring bar supports up to 160 mm.

60.3. Boring bar supports up to 200 mm in the base of the turret.

70.1. ISO 40 milling headstock with two ranges.

70.2. ISO 40 milling headstock with "Y" axis ±40 mm.

70.5. Burnishing tool for clamping in the turret.

80.1. Manual chucks.

90.1. Automatic chucks: hydraulic or pneumatic.

90.2. Chip conveyor.

90.3. Piece measuring probe.

90.4. Tool wear probe.

90.9. Second longitudinal carriage for turning, milling and boring operations.

90.12. Oil skimmer.


10.4.


10.5.


20.1.


20.2.


40.2.


50.1.

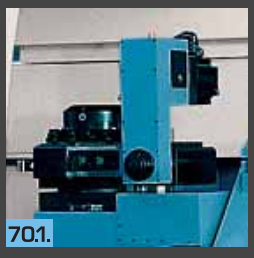

50.7.


50.11.


50.12.


60.2.


60.3.


70.1.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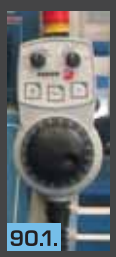
70.5.


80.1.


90.1.


90.2.

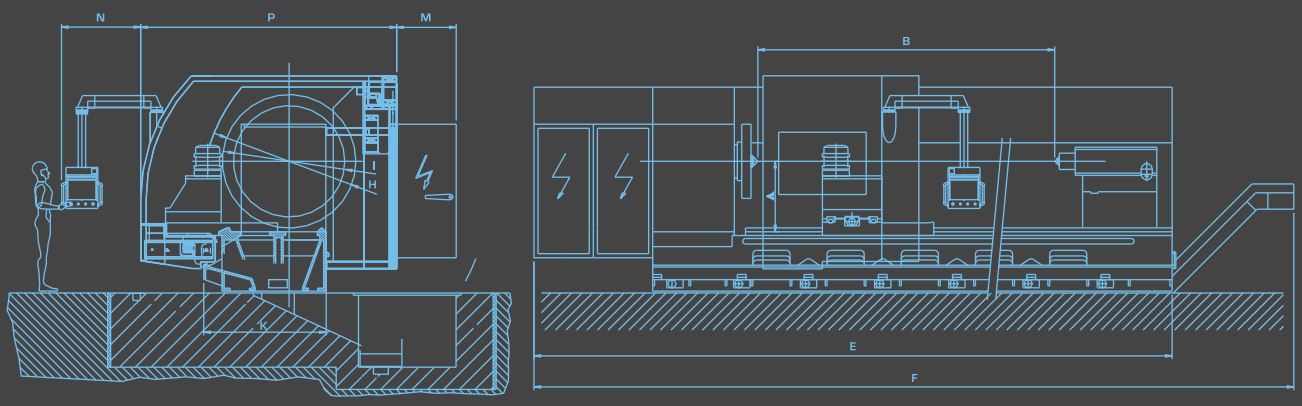

90.3.


90.4.


90.9.


90.12.

Technical chart



Main Characteristics A-2000 4G			
Centre height	A	950	1.050
Swing over bed	H	1,800	2,000
Swing over carriage	I	1,500	1,700
Cross slide stroke	mm	900	
Bed width	K	1,650	
Allowable weight without steadies	kg	15.000	20.000
Diameter of the tailstock´quill	mm	Ø220	Ø280
Main spindle bore	mm	Ø110	
Diameter of the front bearing	mm	Ø254	
Main spindle nose	-	DIN 55026 Type A20	
Headstock power (S1/S6)	kw	51 / 65	71 / 88
Headstock torque (S1/S6)	Nm	17.000 / 22.000	24.000 / 30.200
Speed range	r.p.m.	0 - 650	0 - 500
Length for 3 meter machine	mm	(E) 7.650 // (F) 9.250	
Machine width	mm	(P) 3.550 // (P+M+N) 5.320	

*The manufacturer has the right to alter some of the characteristics described in order to improve the machine design.

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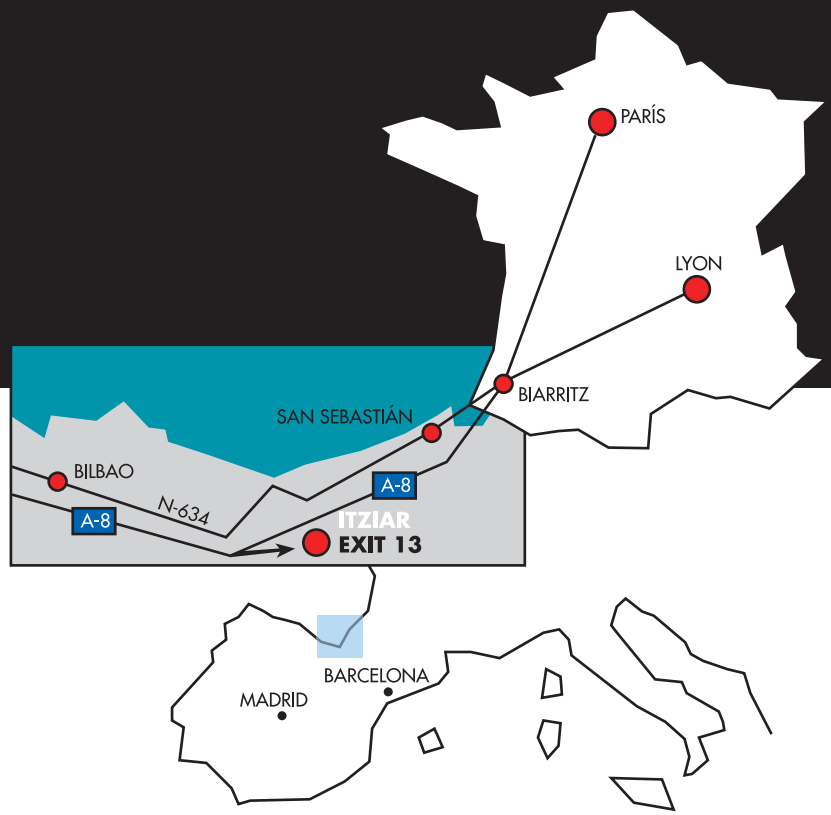

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