

# RAILWAYS



**GEMINIS**  
MAHER HOLDING

BEHIND GEMINIS  
YOU WILL FIND  
A TEAM OF  
MORE THAN  
100 PEOPLE  
DEVELOPING  
MACHINING  
SOLUTIONS.

Our technology and experience allow us to work in the most challenging sectors and projects. Besides railways we are reference in Iron & Steel, Oil&Gas, Power generation, Wind energy, Shipyard or Cranes.



**GR5-S / GR7-S**



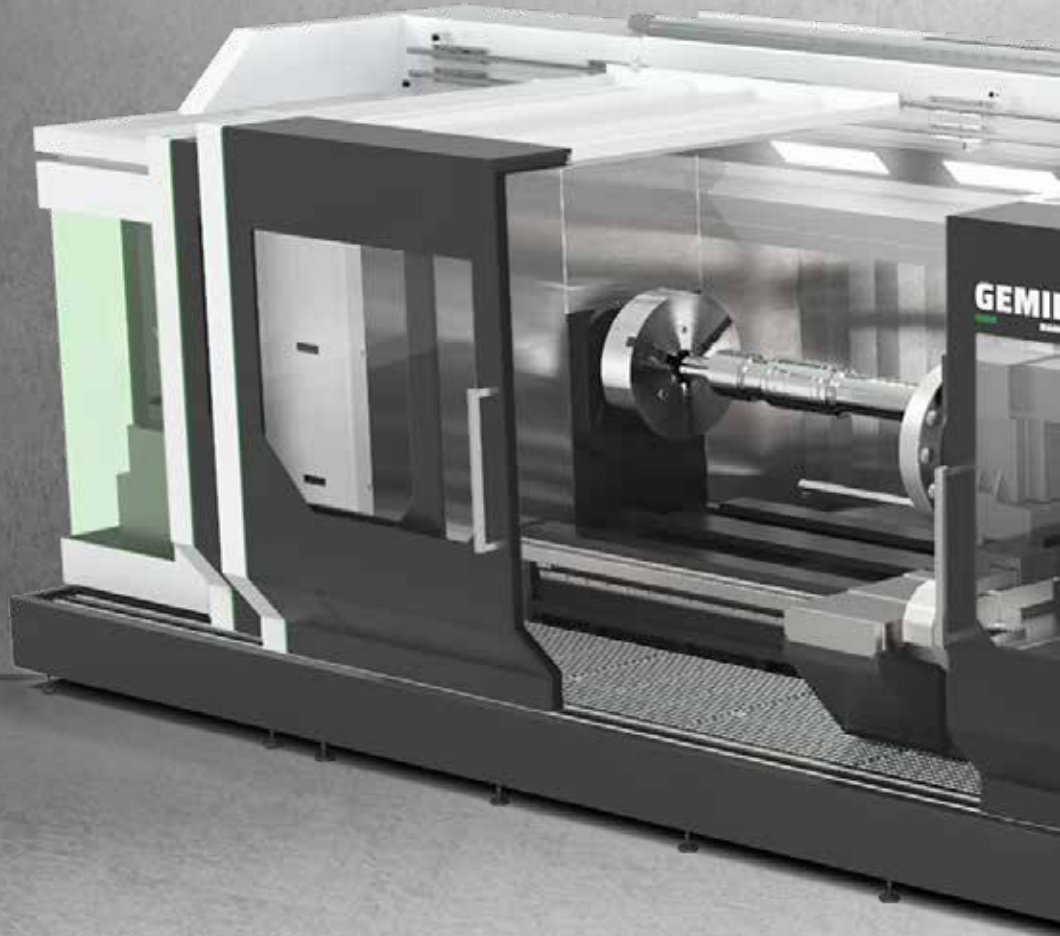
**WE BELIEVE IN RAILWAYS  
AS A MAJOR ACTOR IN  
CONNECTING OUR WORLD**

We are proud to support railway manufacturers, railway lines managers, etc. with close contact and customize solutions manufacturing high reliability machines for rolling stock maintenance. Our Geminis lathes are specialized in machining of axles, wheelset and wheels. We have a track of more than 60 years supplying highly demanding machining solutions and service all over the world.



# GR5-A

FOR AXLE  
MACHINING



## TECHNICAL CHARACTERISTICS

## GR5-A

Swing over bed	mm	1,000 - 1,200*
Max. Axle diameter	mm	500
Max. Axle length	mm	3,000 - 4,000*
Max. Axle weight	kg	5,000
Spindle nose		DIN 55026-11
Spindle range	r.p.m.	0 ... 1,400
Main motor power	kW	28 - 37*
Rapid traverse	m/min	8
Quill diameter	mm	160
Machine dimensions	mm	3,100 x 2,600 x 8,900
Machine weight	Kg	16,000

\* Optional



# AXLES

HORIZONTAL LATHE FOR HIGH PRECISION FINISHING.



# GR5-S / GR7-S

## FOR WHEELS SET MACHINING

Machine also capable  
of machining axles and  
loose wheels.

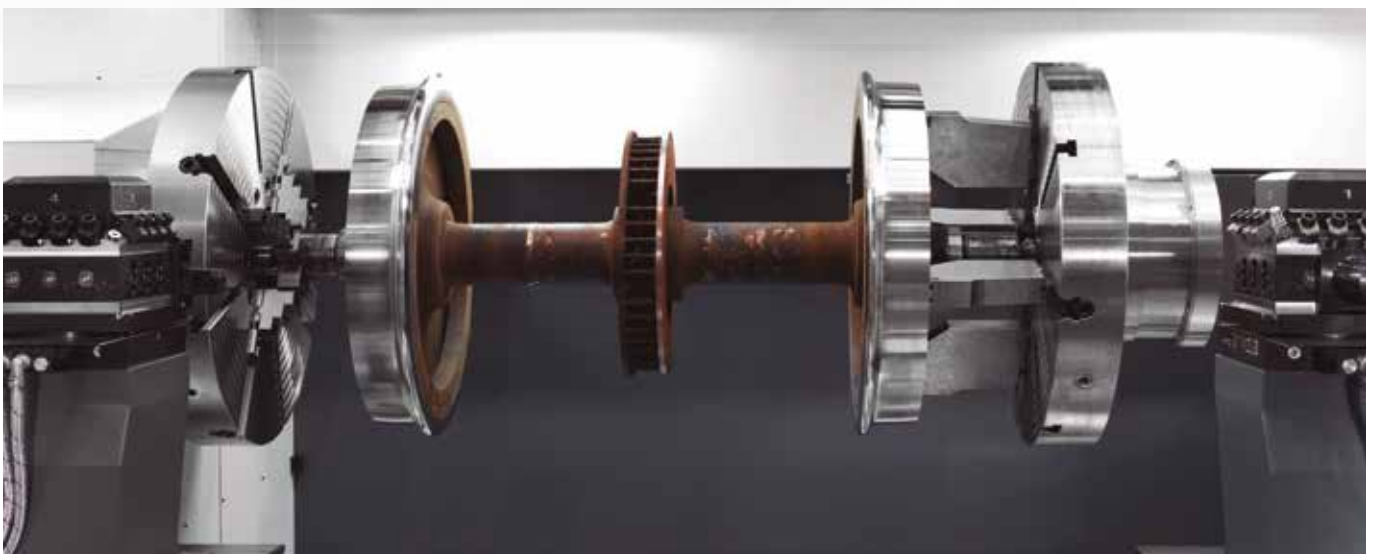
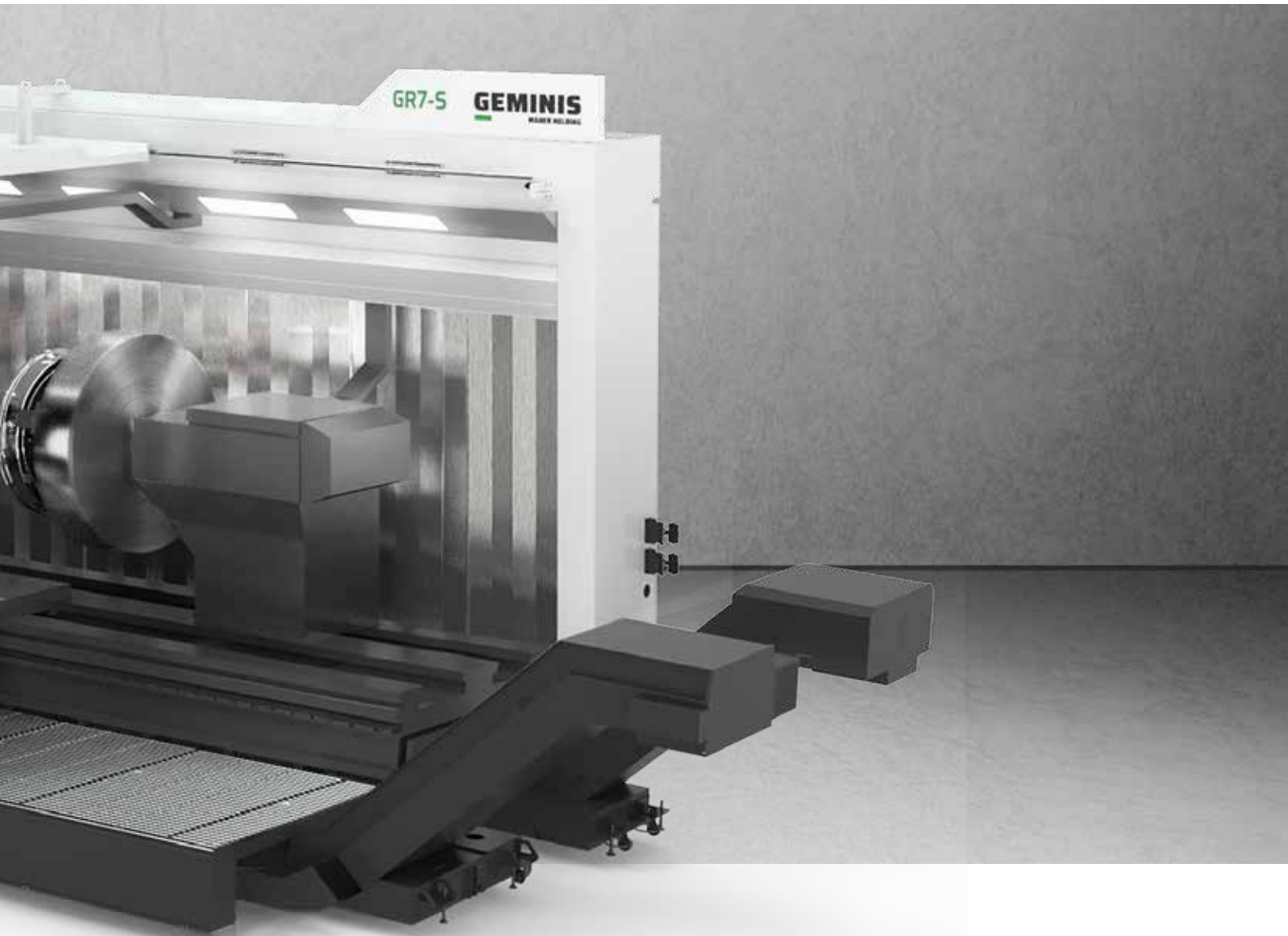


TECHNICAL CHARACTERISTICS		GR5-S	GR7-S
Max. Wheel tread diameter	mm	840	1,250
Track gauge	mm	1,435	1,435
Max. wheelset weight	kg	5,000	8,000
Max. Axle length	mm	3,000 - 4,000	3,000 - 4,000
Main motor power	kW	30 / 51*	51 / 71*
Machine dimensions	mm	3,600 x 3,000 x 8,900	4,100 x 3,300 x 9,300
Machine weight	Kg	18,500	25,000
Radial run out	mm		<0.10
Accuracy of profile	mm		<0.15
Difference in diameters between wheels	mm		<0.10
Roughness of Surface Ra	µm		<1.2

\* Optional

# WHEELSETS

HORIZONTAL LATHE FOR HIGH POWER CUTTING.

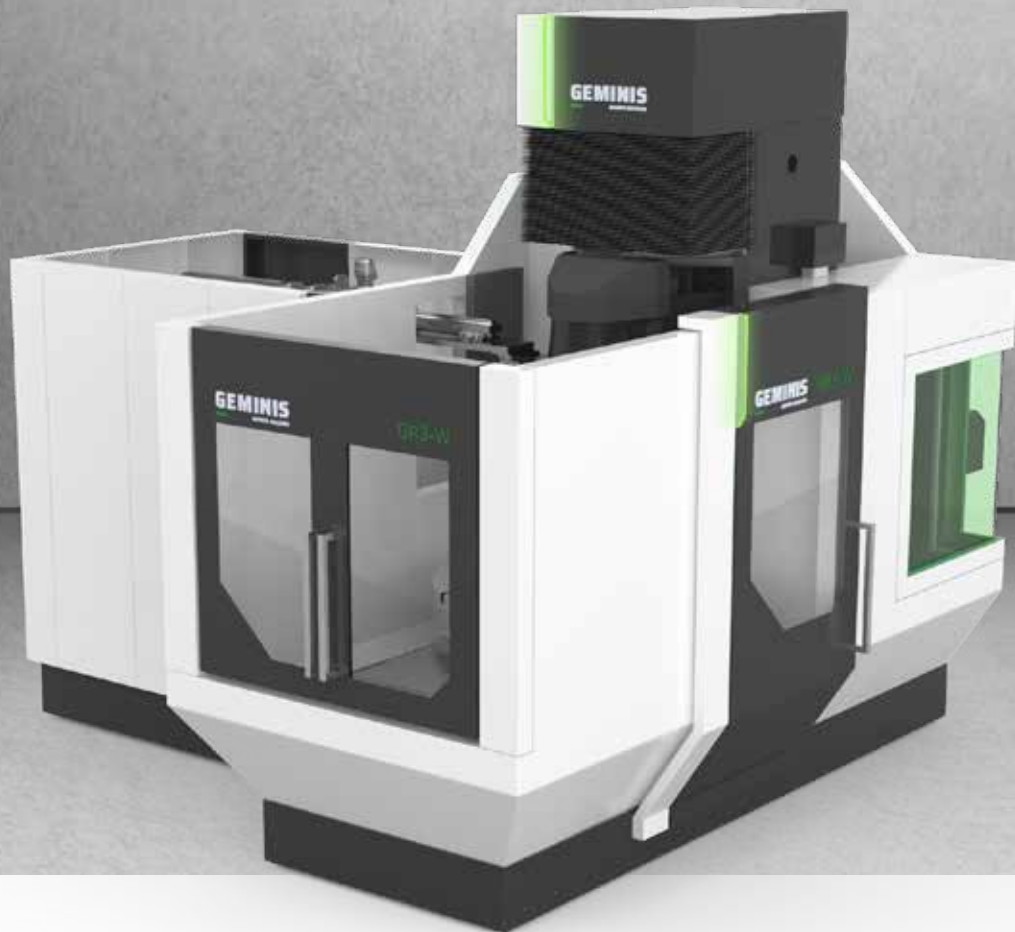


# GR3-W

## WHEELS

VERTICAL MACHINE FOR BORING APPLICATIONS

FOR WHEEL  
HUB BORING



### TECHNICAL CHARACTERISTICS

### GR3-W

Max. Wheel tread diameter	mm	840 ... 1,250*
Min. Wheel tread diameter	mm	580
Chuck diameter	mm	1,200 - 1,500*
Max. Boring diameter	mm	350
Max. Weight over table	kg	3,000
Main motor power	kW	22
Speed range	r.p.m.	0 ... 500
Machine taper		HSK 63A
Automatic tool changer		12 - 20* - 30*
Machine dimensions	mm	4,200 x 5,000 x 3,900
Machine weight	Kg	15,000
Boring accuracy		IT6 - IT7
Roundness	mm	<0.02
Cilindricity	mm	<0.02
Roughness of Surface Ra	µm	<1.2

\* Optional





# GR3-W

WHEELS  
LOADING SOLUTIONS

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## MAIN CHARACTERISTICS

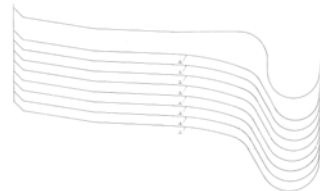
GR3-W

- Designed for all range of wheel dimensions
- Storage buffer at the entrance of the conveyor
- Wheel input area before processing
- Wheels loading and unloading system to the machining area
- Wheel output area after processing
- Storage buffer at the exit of the conveyor
- Integrated to the GR3-W machine
- Software
- Safety guarding



# TECHNOLOGIES

- PERSONALIZED INTERFACES
- AUTOMATIC MEASURING SYSTEMS
- AUTOMATIC MACHINING OF THE OPTIMUM PROFILE
- MEASURING REPORTS
- KEY PARAMETERS COMMUNICATION BETWEEN MACHINES
- AUTOMATIC LOADING / UNLOADING SYSTEMS FOR ALL TYPE OF LATHES



GEMINIS		Geminis Machine Tools, S.A.	
MACHINE TOOLS		Calle 1 de Mayo, 27-28 48940 BILBAO (Vizcaya) (Spain)	
Machine:	GEMINIS GTT 04 N3 300000	Order No.:	2017/7
Project No.:	20	Client:	
Features		Right Hand dimensions	
Axis run out	0,05	Lead (mm/rev)	0,00000
Tread diameter (mm)	170,03	Wear Detected	0,00
Flange Height H	27,00	Flange Width w	10,00
Radial Run Out	0,01	Cr	0,00
Features		Left Hand dimensions	
Axis run out	0,05	Lead (mm/rev)	0,00000
Tread diameter (mm)	170,00	Wear Detected	0,00
Flange Height H	27,07	Flange Width w	10,00
Radial Run Out	0,02	Cr	0,02
Features		Set dimensions	
Worked Profile	1	Lead (mm/rev)	0,00000
Distance between inner Flank	100,0	Cr	0,00





## REFERENCES

**ALSTOM**

**Ansaldo STS**  
A Hitachi Group Company

**CAF**

*Talgo*



*renfe*

  
euskotren

**TMR**

**SNCF**

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ISO 9001  
ISO 14001  
ISO 14006  
BUREAU VERITAS  
Certification



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