

ROLL GRINDER OPERATIONS

Through the Pomini brand, Tenova is worldwide leader in the design and supply of Roll Grinders for flat product rolling mills, as well as of special machines for grinding of heavy components. The product range of Pomini Tenova embraces heavy, medium and light duty, fully automatic CNC roll grinders, fully automatic CNC roll loaders, roll storage racks, chocking and de-chocking machines for all roll types, able to speed up grinding, handling and maintenance operations, and to guarantee the level of precision required by the most sophisticated rolling mills. Pomini also supplies other ancillaries such as washing machines and tilters for chocks, roll cooling systems and other devices used in daily roll shop operations. In addition it boasts extensive expertise in reconditioning, upgrading and fully automatic revamping of used roll grinders of any brands. The constant pursuit of innovation in automation and machine integration for the rolling mill process combined with the precision and reliability that have always distinguished Pomini Tenova, provide our customers with products that represent the highest level in roll grinding worldwide.

Pomini Tenova designs, produces and delivers worldwide:

Heavy, Medium and Light Duty Fully Automatic CNC Roll Grinders, for superb performance in terms of tolerances and surface finishing, high reliability and internationally patented measuring and control devices.

Fully Automatic CNC Roll Loaders, with either two or three controlled axes, combining high handling speeds with outstanding positioning accuracy, for faster roll handling and enhanced grinder productivity.

Roll Storage Racks, to optimize use of the Roll Shop floor in relation to crane and grinder availability, leveraging Pomini Tenova know-how in handling all roll types.

Chocking and Dechocking Machines for all roll types, to speed up maintenance operations and guarantee the level of precision required by the most sophisticated roll supporting systems.

Other Ancillaries such as washing machines and tilters for chocks, roll cooling systems and other devices used in daily roll shop operations.

Roll Shop Management System, a complete hardware and software solution developed by Pomini Tenova for full control of all roll shop operations, from actual grinding to collection and processing of production, consumption and requirement data, with minimum outlay of resources.



POMINI Tenova
Via Leonardo da Vinci, 20
21053 Castellanza (VA) - ITALY
Phone +39 0331 444356
Fax +39 0331 444390
pomini@it.tenovagroup.com

POMINI INC.
100 Corporate Center Drive, 1st Floor
Coraopolis, PA 15108 - USA
Phone +1 412 262 2244 2248
Fax +1 412 5071026
pomini@us.tenovagroup.com

Tenova TITB
1700 Air China Plaza
36, Xiaoyun Lu
100027 Beijing - China
Phone +86 10 8447 5656
Fax +86 10 8447 5858
titb@tenovagroup.com

POMINI Tenova Nordic AB
Cedersdalsvägen 5D,
SE 18640 Vallentuna - Sweden
Phone: +46 8 511 716 00
pomini.nordic@it.tenovagroup.com

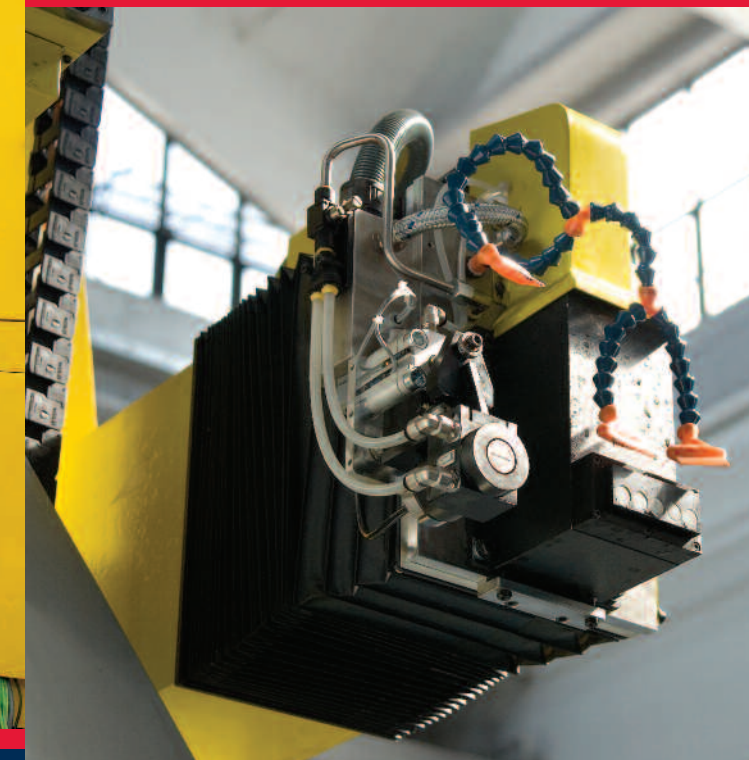
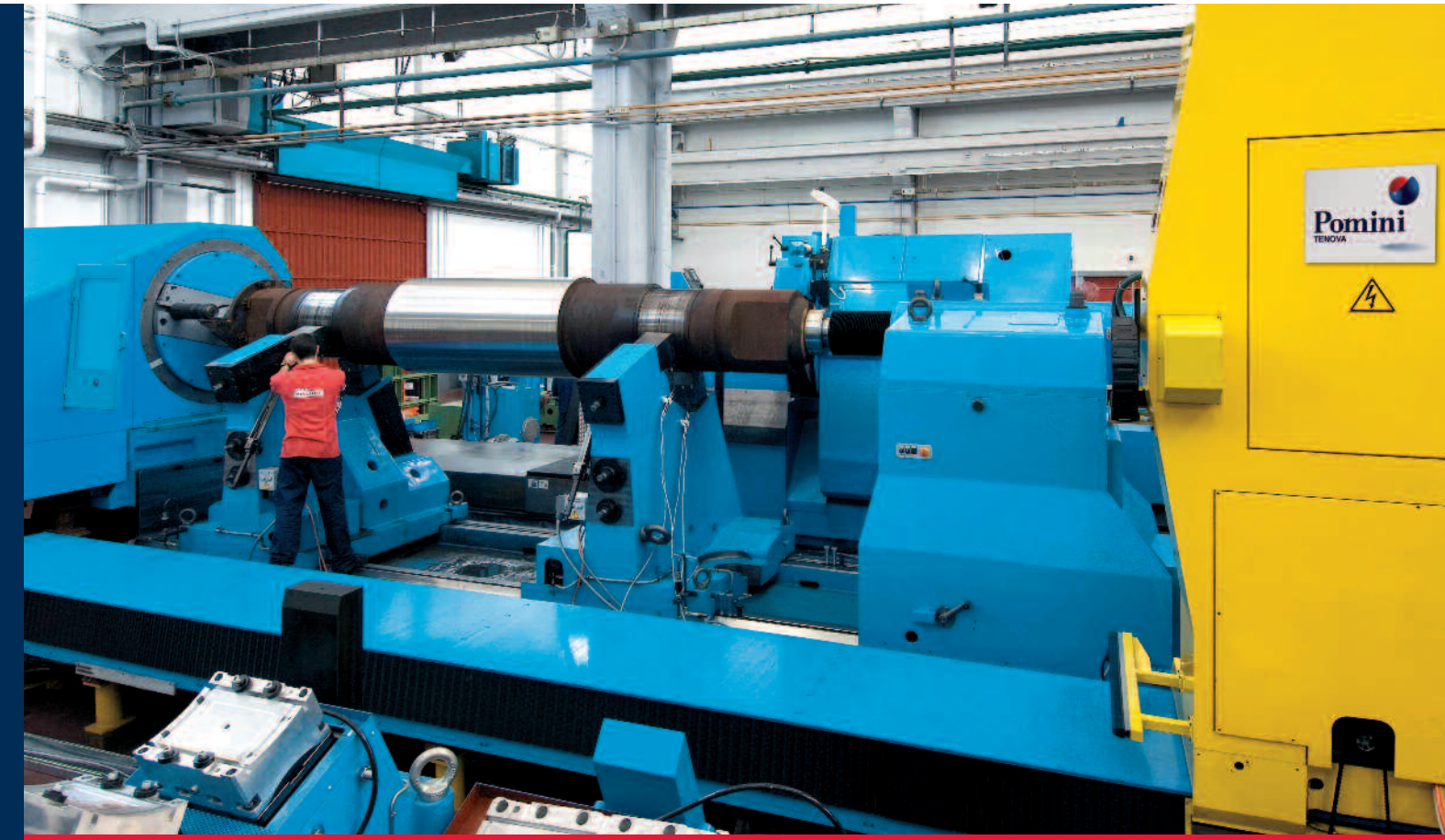
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TECHINT GROUP

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Roll Grinders and Automatic Roll Shops

TENOVA is a world-wide supplier of advanced technologies, products and services for the metal and mining industries.

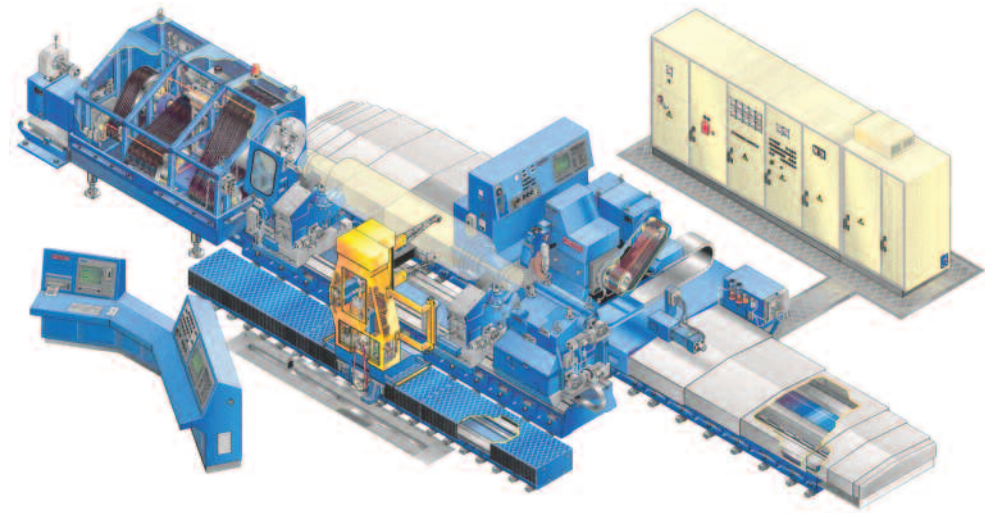


Tenova is a world-wide supplier of advanced technologies, products and services for the metal and mining industries providing innovative integrated solutions. Combined process automation and metallurgical know-how enhance the value delivered to the customers. Tenova is committed further to develop its technology in the areas that mostly impact the future of the industries it serves: quality of the products delivered by the customers, energy saving and environmental safeguard.

CNC ROLL GRINDERS

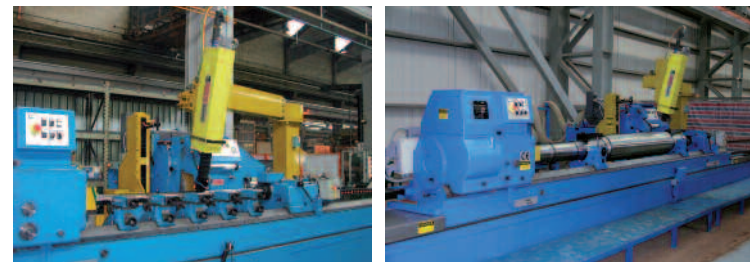
Grinding

- Cylindrical
- CVC Shapes (Since 1985)
- Concave and Convex Shapes
- Empirical and all possible combinations



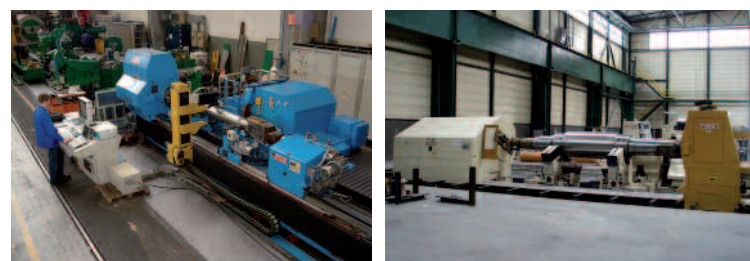
Sendzimir & Cold

Work rolls, intermediate rolls, back-up rings
Ø max. 400mm



Cold & Hot Mill

Work rolls
Ø max. 800mm
With and without chocks



Cold & Hot Mill

Work rolls, back-up rolls
Ø max. 1800mm
With and without chocks



Plate & Hot Mill

Work rolls, back-up rolls
Ø max. 2400mm +
With and without chocks

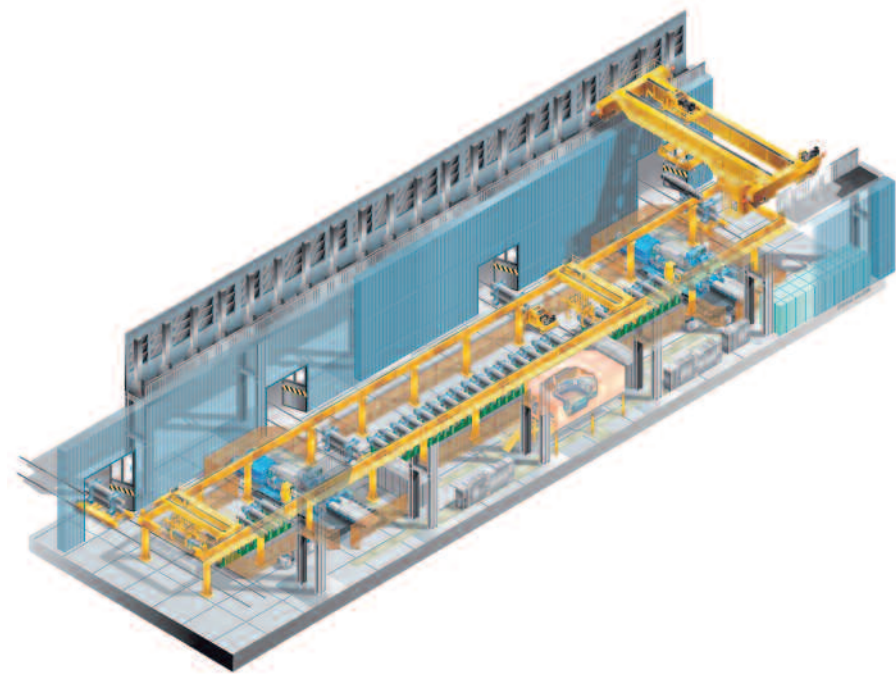


Paper Mill, Roll Makers, Other Special Applications

For all roll and mill sizes

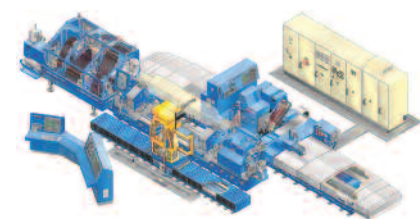


AUTOMATIC ROLL SHOPS



Roll Shop Management System (RSMS)

Roll Grinders



Roll Testing Equipment



Roll Shop Ancillaries



Full Automation

Parameter	Value	Unit	Limit
Roll diameter	200.00mm	mm	300.00mm
Roll length	250.00mm	mm	300.00mm
Roll weight	1.000kg	kg	1.500kg
Roll material	Steel		
Roll speed	1000rpm	rpm	1500rpm
Roll temperature	500°C	°C	600°C

RSMS

Roll ID	Roll Size	Roll Material	Roll Status
001	200mm	Steel	Grinding
002	250mm	Steel	Grinding
003	300mm	Steel	Grinding
004	350mm	Steel	Grinding
005	400mm	Steel	Grinding

ROLL SHOP EQUIPMENT

Dechocker

- WR Dechocker
- BUR Dechocker
- Combi Dechocker



Roll Moving Equipment

- Transfer Cars for WR's and/or BUR's
- Roll buggy for WR's



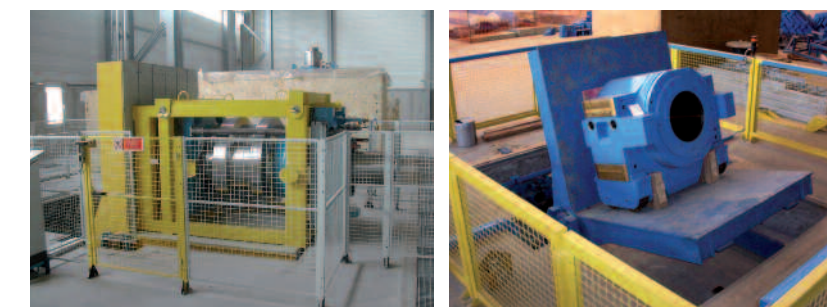
Automatic Roll Loader

- 2-axes loaders
- 3-axes loaders



Chock Tilter

To make chock maintenance easy



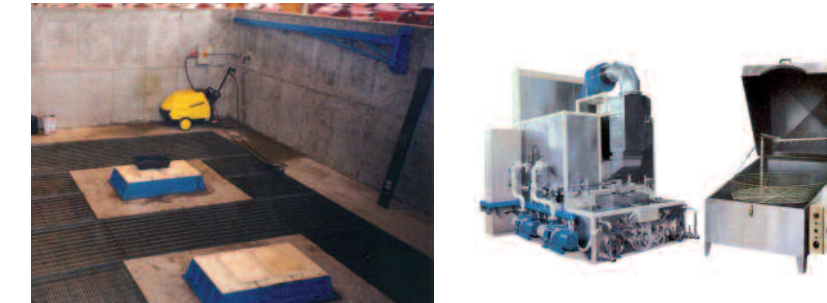
Manual / Automatic Roll Lifting Beams

- Work rolls
- Back-up rolls



Cleaning Devices

- For rolls with chocks
- For chocks with bearings
- For bearings



Roll Cooling

Hot mill work rolls



Texturing Roll Surface

- Shot blast method
- Electro discharge method



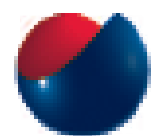
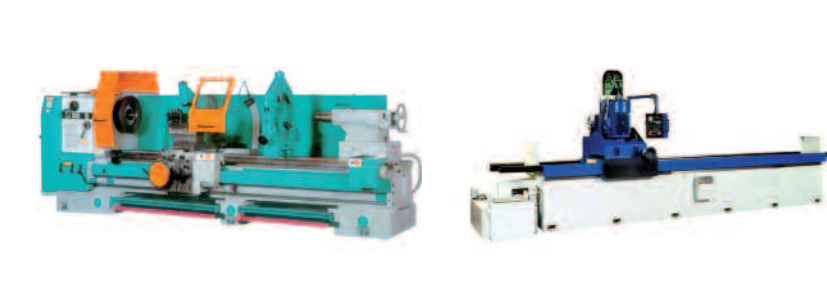
Roll Racks

- Work rolls
- Back-up rolls



Others

- Turning lathes
- Shear blade grinding machines



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TENOVA