



**ADVANCED GRINDING
SOLUTIONS**

NOVAMATIC PGE

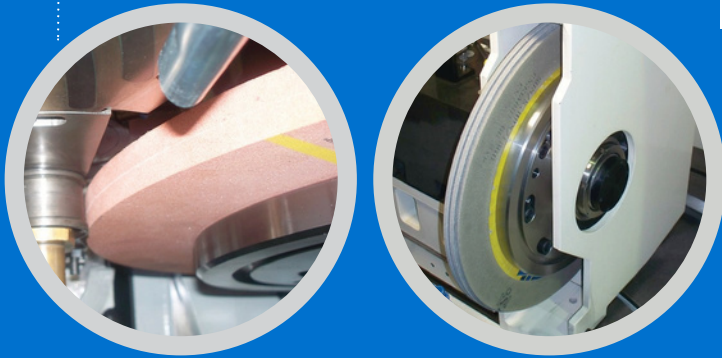
High-productivity External Grinders



 **NOVA**
GRINDING SYSTEMS

GRINDING OF OUTSIDE DIAMETER
AND TWO LIPS ON BEARING INNER
RINGS FOR THE EARTH MOVING
INDUSTRY

PROFILED WHEEL FOR GRINDING OF
STRAIGHT TRACKS ON BEARING
INNER RINGS



NOVAMATIC PGE

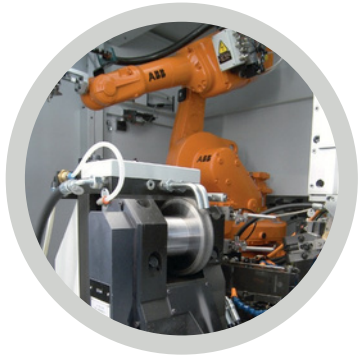
External Grinding

A range of high-productivity external grinding systems for workparts with outside diameter ranging from 5 to 460 mm and width up to 200 mm. Possibility to swivel the workpart axis by 15 and 36 degrees for grinding of special components. Dressing units depending on the workpart profiles ranging from diamond roll and rotary dressing wheels to CNC-controlled double-fulcrum rotary dressers or single-point dressers for both conventional and CBN wheels.



MODEL	STANDARD MACHINE RANGE
NOVAMATIC PGE	Ø 5 – 40 mm ≠ 40 mm
NOVAMATIC PGE 10/80 SF	Ø 10 – 80 mm ≠ 150 mm
NOVAMATIC PGE 20/80 PP	Ø 20 – 80 mm ≠ 80 mm
NOVAMATIC PGE 10/120	Ø 10 – 120 mm ≠ 60 mm
NOVAMATIC PGE 35/200	Ø 35 – 200 mm ≠ 100 mm
NOVAMATIC PGE 50/300	Ø 50 – 300 mm ≠ 100 mm
NOVAMATIC PGE 200/420	Ø 200 – 420 mm ≠ 190 mm
NOVAMATIC PGE TANDEM	Ø 10 – 80 mm ≠ 46 mm
NOVAMATIC PGE HB	Ø 150 – 460 mm ≠ 190 mm
NOVAMATIC PGE U	Ø 100 – 460 mm ≠ 200 mm

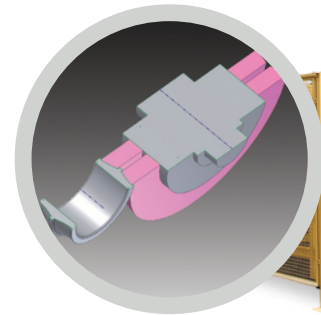
NOVAMATIC PGE



NOVAMATIC PGE U CNC
GRINDING OF OUTSIDE DIAMETER ON
DOUBLE TAPER TRACK BEARING OUTER
RINGS FOR THE RAILWAY INDUSTRY

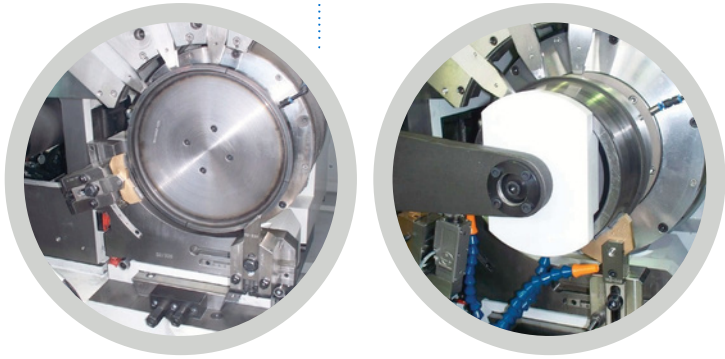
Main Available Devices

- Automatic loader and load and unload conveyors
- Automatic wheel balancing device
- Acoustic emission system for gap elimination
- Electric wheel spindles for external grinding wheel with diamtere 610 mm
- Integrated demagnetizer
- Nova CNC control specially designed for optimum grinding performance



NOVAMATIC PGE CNC
GRINDING OF TWO TAPER TRACKS ON BEARING
INNER RINGS FOR THE WIND ENERGY SECTOR

WORKHEAD UNIT WITH
ELECTROMAGNETIC CHUCK FOR
THE WORKPART DRIVE



Workhead Unit

The workhead unit is mounted onto the CNC-controlled X axis slide for the work feed and wheel wear compensation. The workhead spindle diameter is eccentric so that the workpart axis can be adjusted to the wheel axis. The spindle body holds an electromagnetic chuck for the workpart drive. The workhead unit also accommodates an automatic loader with one or two swivel arms and adjustable load and unload chutes.

Dressing Unit

The dressing unit is mounted onto the X axis slide

Single-Point Dresser

The unit can accommodate holders for one, two or three single-point diamonds depending on the profile to be obtained on the wheel.

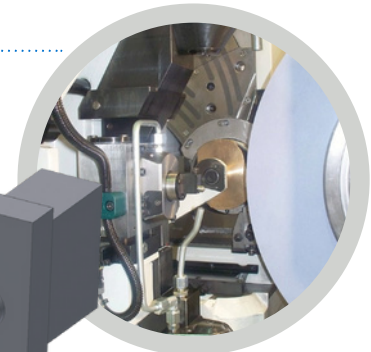
Diamond Roll Dresser

Dressing takes place in plunge system with a profiled roll or by interpolation of the machine axes with forming roll. The dresser is equipped with a device monitoring the effective diamond roll rotation.

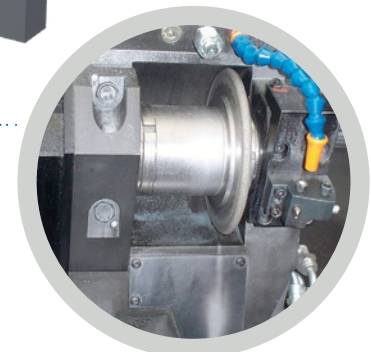
Double Fulcrum Rotatory Dresser

Used to obtain wheel radius profiles with form errors lower than 1μ . The unit can accommodate a fixed holder for up to three single-point diamonds. The rotation of the dresser holder is electrically controlled by AC motor via gear reducer and encoder (E axis).

DOUBLE-FULCRUM ROTARY DRESSER

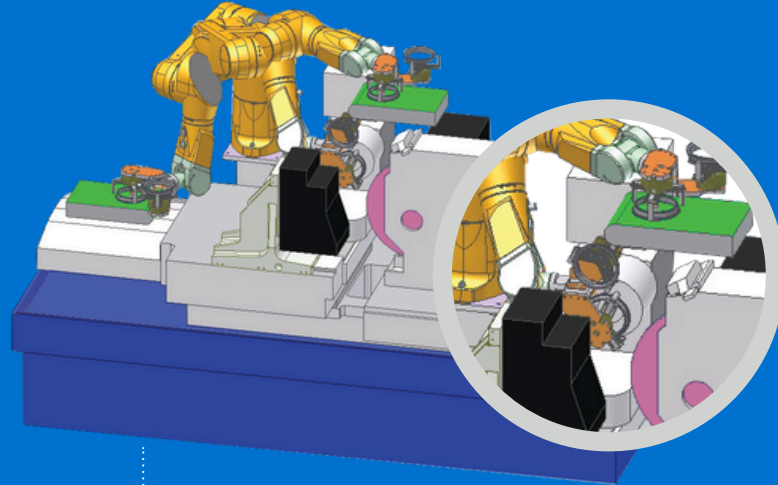


DIAMOND ROLL
WITH HOLDER FOR
UP TO THREE
SINGLE-POINT
DIAMONDS

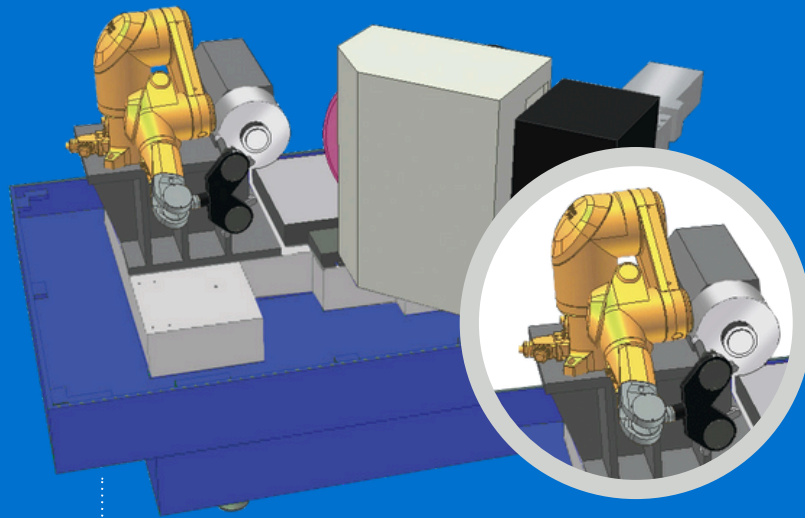


Wheelhead Units

The machine can be configured with wheel axis parallel to the workpart axis or swivelled up to 45 degrees for the grinding of external taper profiles, faces and lips



PGE GRINDER WITH STRAIGHT WHEELHEAD UNIT



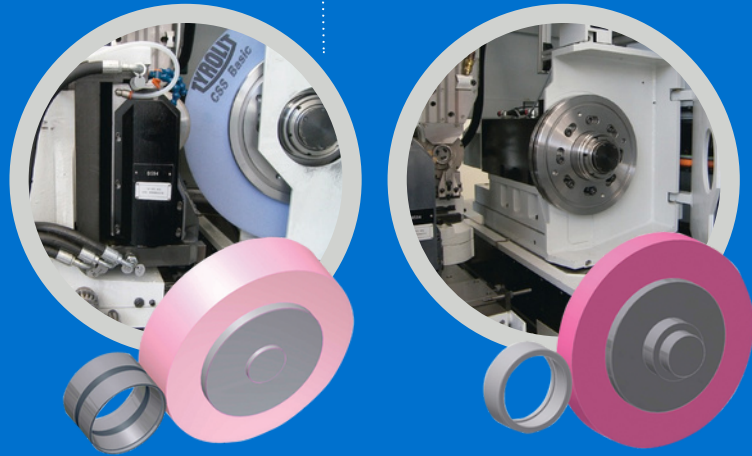
PGE GRINDER WITH SWIVELLED WHEELHEAD UNIT

SIMULTANEOUS GRINDING OF OUTSIDE DIAMETER AND LIP ON TAPER BEARING INNER RINGS FOR THE RAILWAY INDUSTRY



WHEEL DIAMETERS UP TO 610 MM, 80 M/S
WHEEL SURFACE SPEED

ELECTRIC WHEEL SPINDLE COMPLETE WITH
WHEEL FLANGE AND PRIMARY WHEEL GUARD



Wheelhead Unit

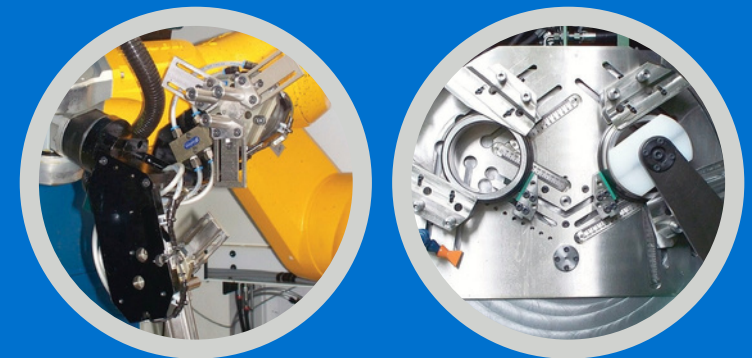
The CNC-controlled Z axis slide carries out the transversal wheel positioning to the workpart and dresser as well as the dressing strokes. The wheelhead unit can be manually swivelled on the Z axis slide up to 45 degrees. The electric wheel spindle with up to 50 kW is equipped with incremental gear reducer and protected against contamination by external substances with an air barrier.

Additional Accessories

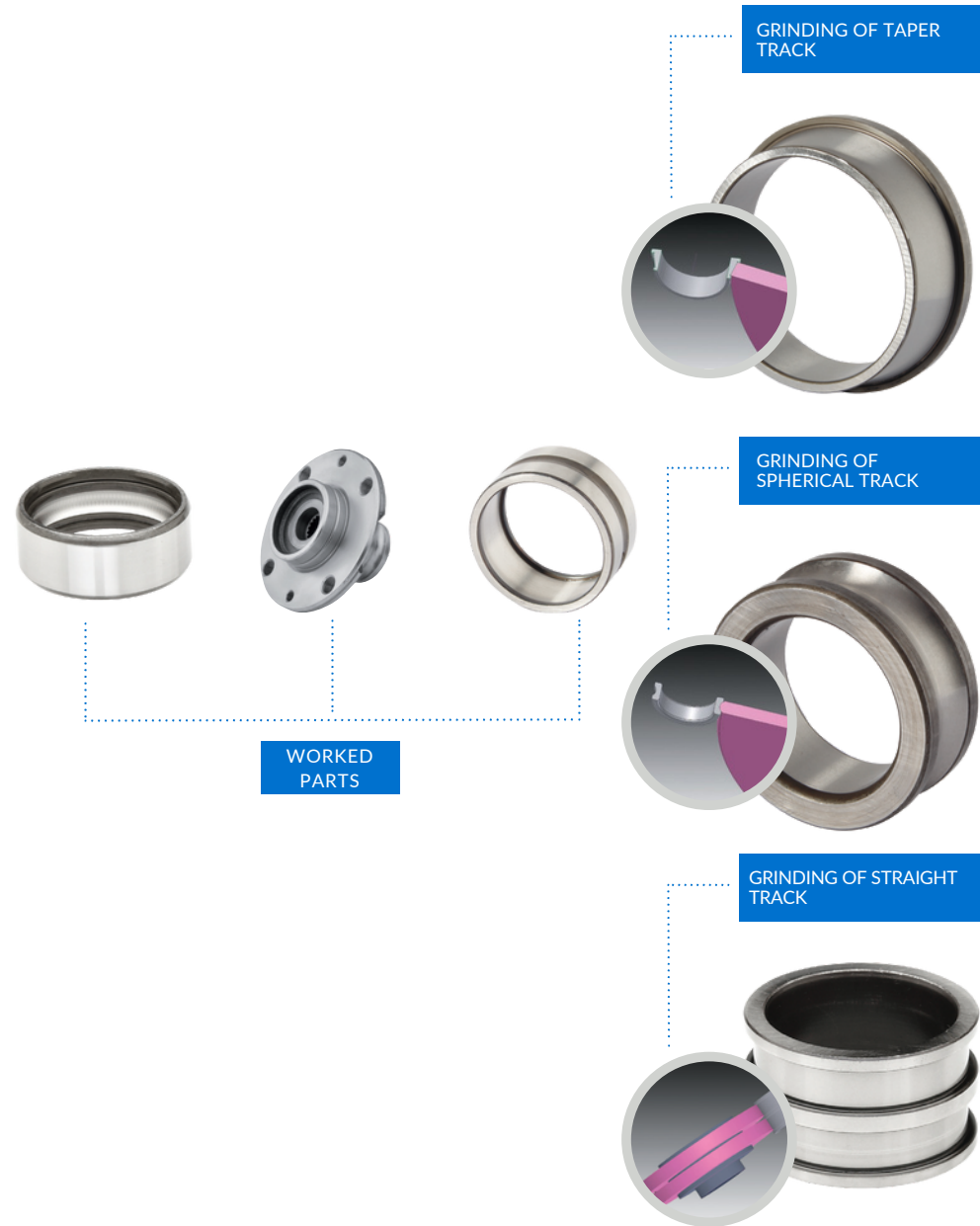
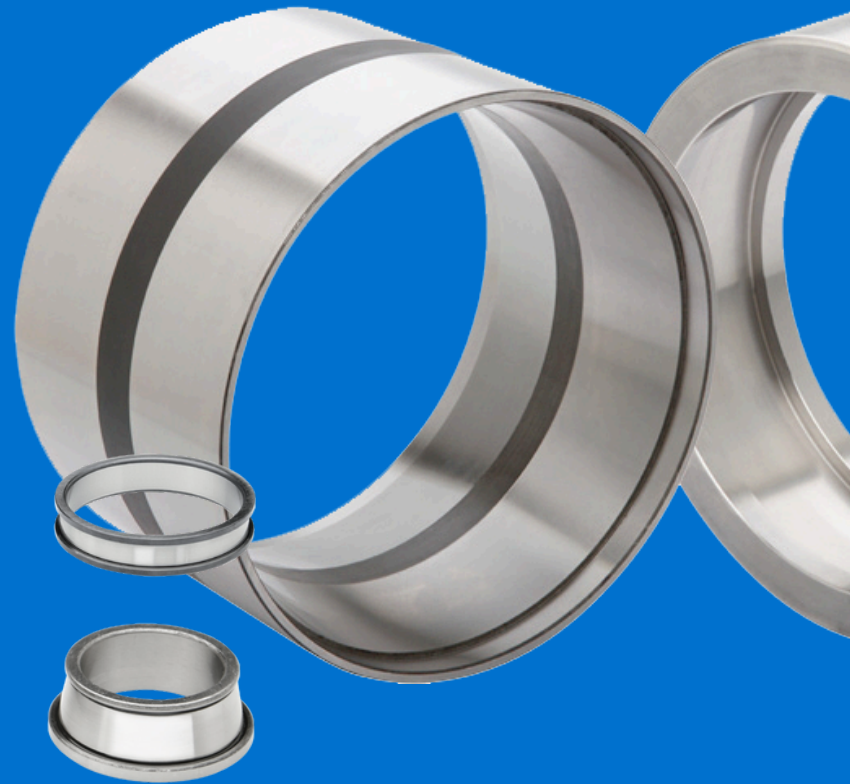
- In-Process electronic sizing unit
- Post-Process electronic sizing unit
- Possibility to equip the machine with Siemens or Fanuc CNC controls
- Automation: integrated automatic loaders, gantry loaders or articulated robots
- Quick change-over device for off-line setup
- Automatic device for driver wear compensation
- Automatic taper correction device
- Automatic wheelhead swivel unit up to 45 degrees

ARTICULATED ROBOT
IN MACHINE FOR
WORKPART LOAD
AND UNLOAD

INTEGRATED ONE-ARM
LOADER



EXAMPLE OF WORKED PARTS



NOVA

GRINDING SYSTEMS

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