

SBG *LINEAR*



ANCA
CNC MACHINES

SBG LINEAR

The ANCA solution for stick blade grinding

The ANCA Stick Blade Grinder (SBG) is your total solution for the manufacture and reconditioning of stick blades used in the production of hypoid bevel gears.



OVERVIEW

Used in automotive differentials, hypoid bevel gears are a fundamental component in automotive drive train technology.

Therefore, automotive manufacturers seek to manufacture these components to the highest consistency and quality, while also looking for ways to operate more efficiently.

ANCA SBG is a precision CNC grinding machine, designed as a total solution for the automated manufacture and reconditioning of stick blades that are used in production milling, or hobbing, of hypoid bevel gears.

The SBG's rigid machine construction, intuitive software and complete automation sets you up for unmanned production of the highest quality stick blades for the automotive industry.



ANCA's RoboMate robot loader is a versatile and flexible automation solution. Using the accuracy and reliability of the Fanuc robot, RoboMate takes the tool directly from the pallet to the chuck in a single grip.



Features to meet the needs of stick blade regrinders

ANCA's SBG has been developed to suit the requirements of stick blade grinding. Features include:

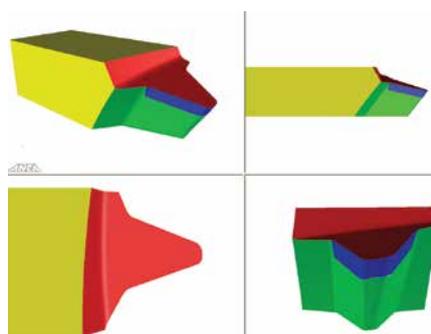
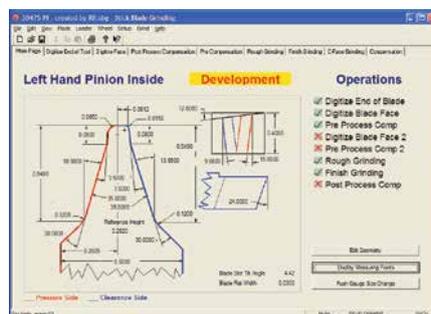
- ANCA LinX linear motors and linear scale feedback on X, Y and Z axis for precision and reliability
- A dedicated blade holding chuck able to accommodate a range of rectangular blades up to 0.6" x 0.6" and pentac blades up to 0.6" x 0.75". Larger sizes possible upon request.
- Being equally capable of manufacturing new, or resharpener used stick blades
- The ability to grind HSS and carbide stick blades
- Unmanned continuous grinding with ANCA tool loading systems
- Optional on-machine wheel dressing SBG

ANCA's SBG Dedicated Software

As with all ANCA grinding machines, ANCA's software enhances SBG's flexibility and ease of use with:

- A Windows based user interface
- Customised reading of industry standard Gleason 300CG, or Klingelberg KiMOS stick blade summary files including RSR, TRI-AC, ARCON, SPIRON and Pentac

- The ability to adjust blade profile to improve cutting performance or gear geometry
- Development and production mode controls and user access levels for parameter adjustment
- Administrator software that allows the connection of multiple SBG machines to a single network point allowing the monitoring of production status and compensation of machines
- Compensation of blade from either Gleason 562 measurement results, Klingelberg P40 measurement results, or from a bench-top push gauge
- ANCA CIMulator3D software for complete offline simulation of the grinding process virtually eliminating on machine set-up grinding



SBG's specialist stick blade processes ensure quality

The SBG has specific stick blade grinding and measurement cycles that ensure the precision and quality of the final product. These include:

- Automatically digitising the stick blade to accurately locate its position and compensate for any tool misalignment
- Manufacturing and regrinding cycles that include rough and finish grinding of profile with primary and secondary relief and C-face
- Post grinding process blade digitising to automatically compensate for wheel wear and process thermal drift relative to a master blade ANCA

ANCA global support is part of your investment

ANCA SBG is the choice of industry which is looking for the ultimate in high precision, reliability and flexibility.

It is designed to meet the demands of a competitive industry, and is supported by ANCA's worldwide team of technical specialists. Confidence that ANCA is the right choice goes beyond the machine. The ANCA team will be your partner with application and machine support from initial training, to ongoing maintenance.

Technical Specifications

CNC DATA

ANCA AMC5, EtherCAT, high performance CNC, 8GB RAM, H/D 64GB SSD, Processor i7, Windows 8

MECHANICAL AXES

	X-axis	Y-axis	Z-axis	C-axis	A-axis
Position Feedback Resolution	0.0001 mm 0.0000039"	0.0001 mm 0.0000039"	0.0001 mm 0.0000039"	0.0001 deg	0.0001 deg
Programming Resolution	0.001 mm 0.000039"	0.001 mm 0.000039"	0.001 mm 0.000039"	0.001 deg	0.001 deg
Travel	586mm 23.1"	408mm 16.1"	242mm 9.5"	264 deg	360 deg

SOFTWARE AXES (PATENTED)

B, V, U, W

WORKPIECE*

Rectangular Blades: up to 15.2mm x 15.2mm (0.6" x 0.6")

Pentac Blades: up to 15.2mm x 19.05mm (0.6" x 0.75")

Other sizes available upon request.

DRIVE SYSTEM

ANCA Digital AMD5X (EtherCat Standard)

Machine Axes:

ANCA LinX Linear Motors (X, Y & Z Axis), Direct drive rotary axis (A & C axis)

MACHINE DATA

Grinding Spindle

37kW (49hp) (peak power)

ANCA Bi-directional, with spindle orientation

8,000RPM (optional 10,000RPM and 15,000RPM)

Direct drive induction motor

BigPlus BT40 wheel arbors

Wheel Pack: Max. wheel diameter: 203 mm (8") / Wheel bore: 50.8 mm (2") / 2 wheel packs with max. four wheels each.

OTHER DATA

Electrical Power: 25 kVa

Probe System: Renishaw

Coolant System: External

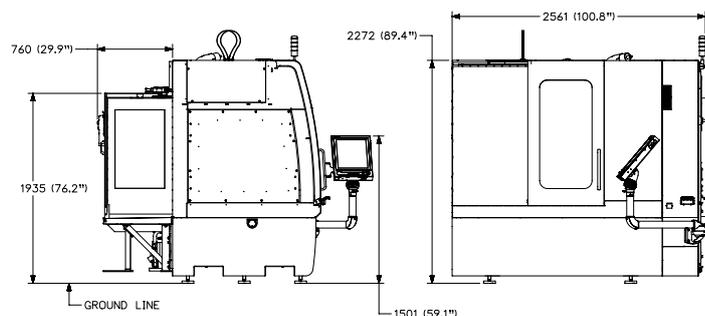
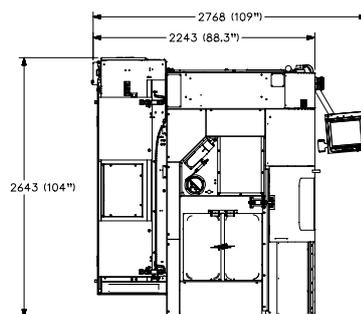
Machine Base: ANCAcrete (polymer concrete)

Colour: RAL 7035 / RAL 5008

Control Panel: 19" touch screen

Machine Structure: Bi-symmetrical column

* Dependent of on tool geometry and weight, program and tooling layout
ANCA reserves the right to update or amend specifications without prior notice.



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Head office: Australia

ANCA offices in the UK, Germany, Japan, China, Thailand, Brazil, Mexico, India and the USA.

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