

TX7+



***The Tough
Production Performer***



ANCA[®]

TX7+ : the machine by which others are judged

A benchmark in CNC grinding

ANCA TX7+ is the result of more than 20 years of intensive R&D, listening to our customers, and then implementing changes to suit their needs. Our achievements in the fields of CNC technology, mechanical and electronics design, and software engineering over two decades are the basis of this unique product. It is a machine that has established itself as a benchmark in the world of CNC grinding.

ANCA has introduced a range of innovative solutions to the CNC tool grinding world that are industry standard today. These include automatic tool digitising, 3D simulation, integrated modem for remote diagnosis and MPG feed – just to name a few.

Precision, productivity, versatility and confidence

These are ANCA's core values, and they're built into every TX7+ machine. The mechanical concept and its flawless execution guarantees the highest possible **precision** and superior surface finish of the resulting product.

The robustness of the TX7+, combined with cleverly designed tooling and automation, provides high **productivity** output. ANCA ToolRoom software suite delivers **versatility** for your application needs today and tomorrow. Just as importantly, you can be **confident** that ANCA will continue to provide you with world-class customer support and equipment that is innovative, technologically advanced and reliable.

Accurate and reliable

Among the most important factors for ground tools are accuracy and surface finish. These are among the strengths of the ANCA TX7+. All linear and rotary axes, as well as the grinding spindle, use ANCA direct-drive technology. In our design, we have eliminated all belts, pulley, and gears. This means not only a more precise machine, but also a more reliable one. Less vibration also contributes to the excellent surface finish produced by the TX7+.



Direct-drive spindle

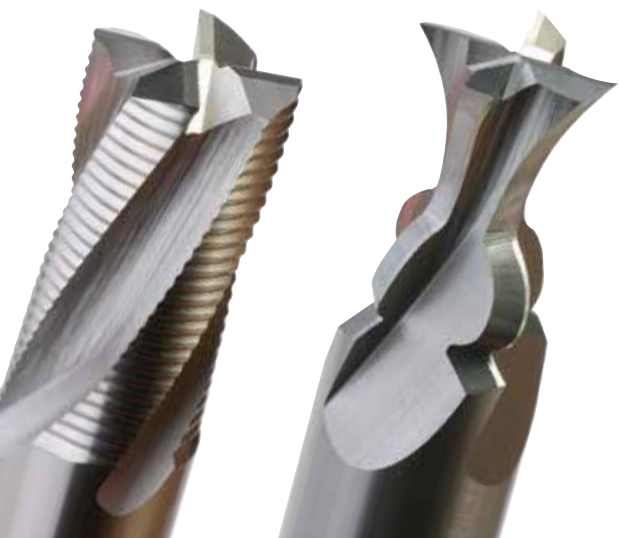
The TX7+ is equipped with a powerful direct-drive 10,000 RPM, 37 kW (49 HP) spindle. For applications that require higher speeds a 15,000 RPM option is available.

The spindle reaches its full power at 3,500 RPM which makes it ideal for both solid carbide and HSS grinding applications.



ANCA TX7+ at a glance

- ANCA TX7+ has the application diversity to cover a wide range of cutting tools and precision components.
- It is suitable for heavy-duty manufacturing or reconditioning of precision cutting and drilling tools.
- An automatic wheel changer allows up to eight grinding wheels in one set-up.
- CIMulator3D software saves time with off-line tool design and development.
- A wide variety of work holding and support tooling enables the TX7+ to be customised to individual requirements.
- The RoboMate provides a versatile automation solution for increased unmanned operation.



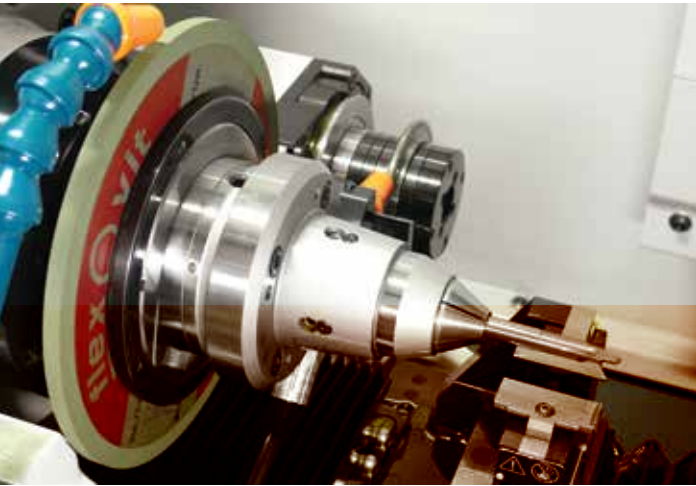
TX7+ : here's what makes it such a tough performer

Large working envelope

Despite its compact size, the TX7+ actually provides a large working envelope. It allows tools up to 400 mm (16") long and 300 mm (12") diameter, and has the ability to position grinding wheels in all four quadrants. All combinations of left and right-hand cutting tool direction and helix are possible.

Integrated Dresser

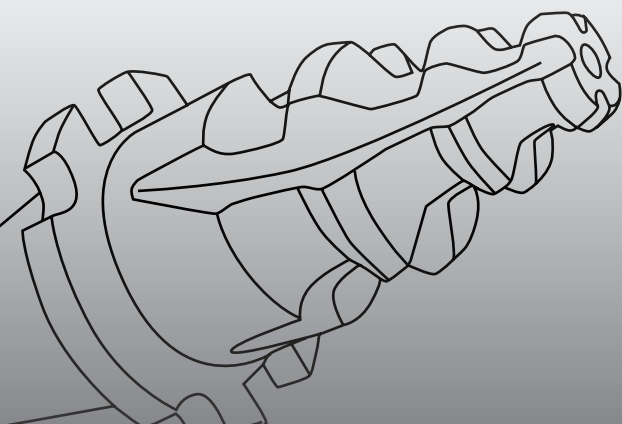
There are two integrated dresser options for the TX7+. The headstock is capable of running up to 3,000 RPM with a 200 mm (7.87") dresser roll. A secondary motorised dresser can also be fitted to provide additional flexibility and utilises a quick change HSK arbor.



Automatic coolant pipe and wheel changeover

ANCA TX7+ incorporates an automatic wheel changer that allows up to eight grinding wheels (four per arbor) to be used in one set-up and one grinding cycle.

The coolant pipes get changed automatically with the wheel pack, so that optimal coolant delivery for each wheel is guaranteed at all times.



Machine-enhancing options

Travelling Steady (P-axis)

ANCA has developed three interchangeable configurations to increase rigidity and accuracy when grinding tools on the TX7+. For grinding long, slender tools, travelling steadies with either fixed-bush, or an Arobotech hydraulic follow-down steady, provide support under the point of grinding. Alternatively, the travelling steady can be set up with a CNC tailstock for grinding between centres.

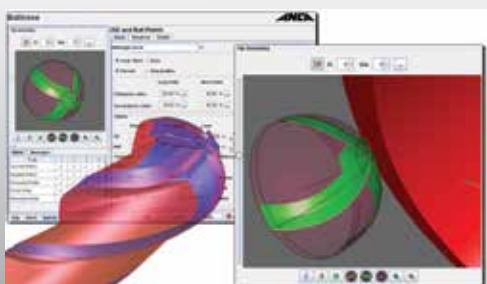
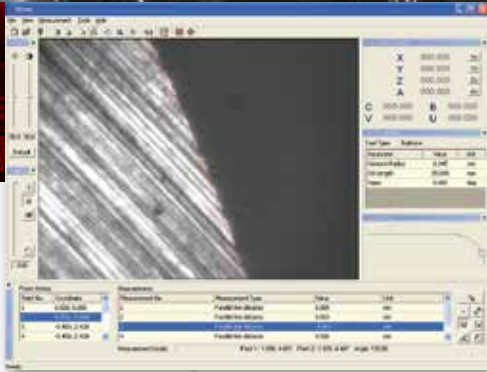
iView

iView is a precise tool measurement system developed by ANCA. A CCD camera is set up inside the machine to provide accurate measurement data without needing to remove the tool from the work holding. This enables measured results to be fed directly into the grinding program for automatic compensation and eliminates errors caused by transferring the tool to other measuring devices.

Software

The standard ToolRoom software suite supports grinding endmills, drills, reamers and step tools. ToolRoom has the flexibility and simplicity needed to create cutting tools quickly and easily. As well as the standard tools, software options are available to enable the TX7+ to grind:

- Profile tools
- Side and face cutters
- Punch tools
- Wood working cutters
- Gun drills
- 3D forms using UGS CAD/CAM grinding





RoboMate - Robot Loader

The ANCA generic robot loader is suitable for the TX7+, MX7, MX5 & GX7. This means common tooling between the robot loaders on your ANCA machines.

- RoboMate is based around the reliable Fanuc 200iC robot and is a versatile automation solution.
- The loader comes in a 2 pallet configuration as standard, with 4 as an option. The 4 pallet configuration can hold:
 - 1560 x 6 mm ($\frac{1}{4}$ " tools or
 - 462 x 16 mm ($\frac{5}{8}$ " tools or
 - 189 x 25 mm (1" tools
- The RoboMate can load tool diameters from $\text{\O}3$ mm ($\frac{1}{8}$ " to $\text{\O}32$ mm (1- $\frac{1}{4}$ " on the TX7+.
- The size of the loader is:
 - L 2379 mm x W 722 mm x H 1865 mm
 - L 94" x W 28" x H 73"

ANCA global support is part of your investment

When you buy an ANCA product, you can be confident that no matter where you are in the world, ANCA is always behind you with our highly trained, customer-focused sales and support network that has 10 branches internationally, and a partner network that extends over 30 countries. While our success is built on being responsive to our customers, ongoing innovation, integration and our global network set us apart.

ANCA's core values of **Precision**, **Versatility**, **Productivity** and **Confidence** deliver to you technically-superior products that provide high precision, reliable, consistent production; and the flexibility to make the most of new, profitable opportunities.



Technical data - TX7+

CNC-Data

ANCA 5DX, Pentium 4, min. 3GB RAM, 15" Touch Screen, CD Read and Write/DVD Read Only

Mechanical axes

Position feedback resolution

X, Y & Z-axis 0.0001 mm (0.0000039")
C & A-axis 0.0001 deg

Programming resolution

X, Y & Z-axis 0.001 mm (0.000039")
C & A-axis 0.001 deg

Travel

X-axis 600 mm (23.6")
Y-axis 405 mm (16")
Z-axis 250 mm (9.8")
C-axis 264 deg
A-axis 360 deg

Software axes (patented)

B, V, U, W

Work piece

Max tool diameter* Ø300 mm (12")
Max flute OD/length* 400 mm (15.75")
Max tool weight 25 kg (55 lbs)

Drive system

ANCA Digital (SERCOS standard) / Linear axes direct-drive ballscrew / Rotary axes direct drive

Machine data

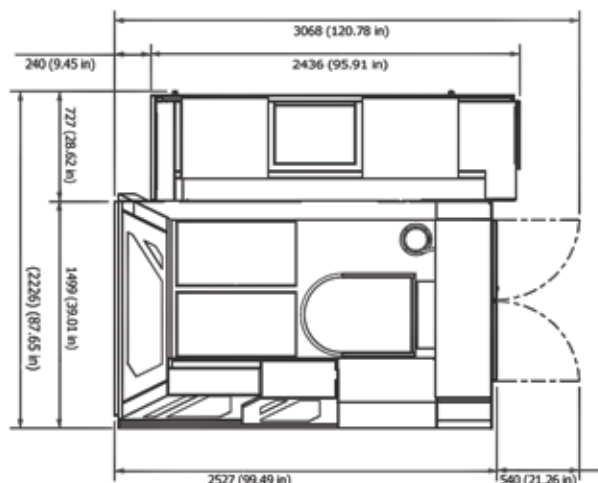
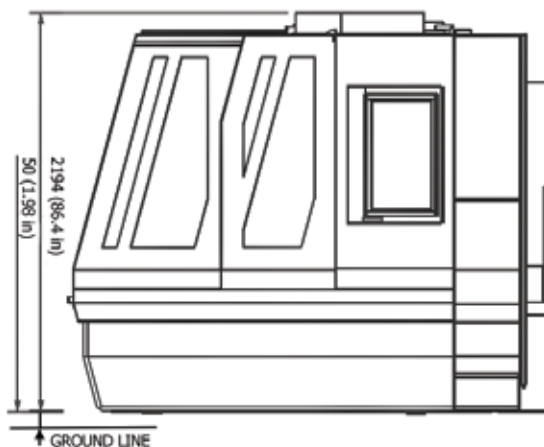
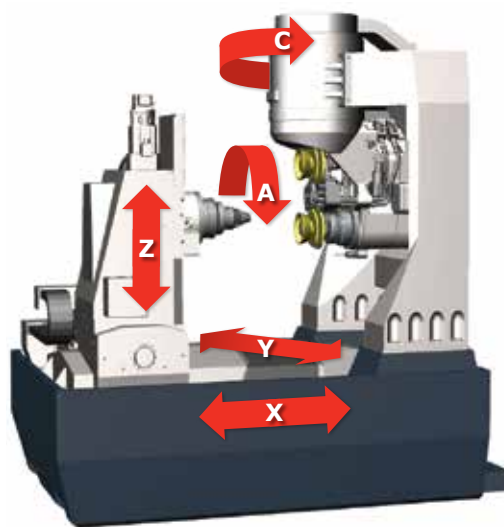
Grinding spindle Bi-directional direct drive
37 kW/49 HP (peak)
10,000 RPM (15,000 RPM option)
Integral direct drive
BIG Plus BT 40
Grinding wheel Max Ø203 mm (8")
Wheel bore Ø50.8 mm (2")
Two wheel packs Max 4 wheels each

Other data

Electrical power 25KVA
Probe system Renishaw
Coolant system External
Machine base ANCAcrete (Polymer concrete)
Colour RAL 7035 / RAL 5008
Weight Approximately 7500 kg (16,500 lbs)
Floor plan Width: 2527 mm (100")
Depth: 1499 mm (59")
Height: 2244 mm (88")

ANCA reserves the right to alter or amend specifications without prior notice.

*Dependent on tool geometry, program and tooling layout



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