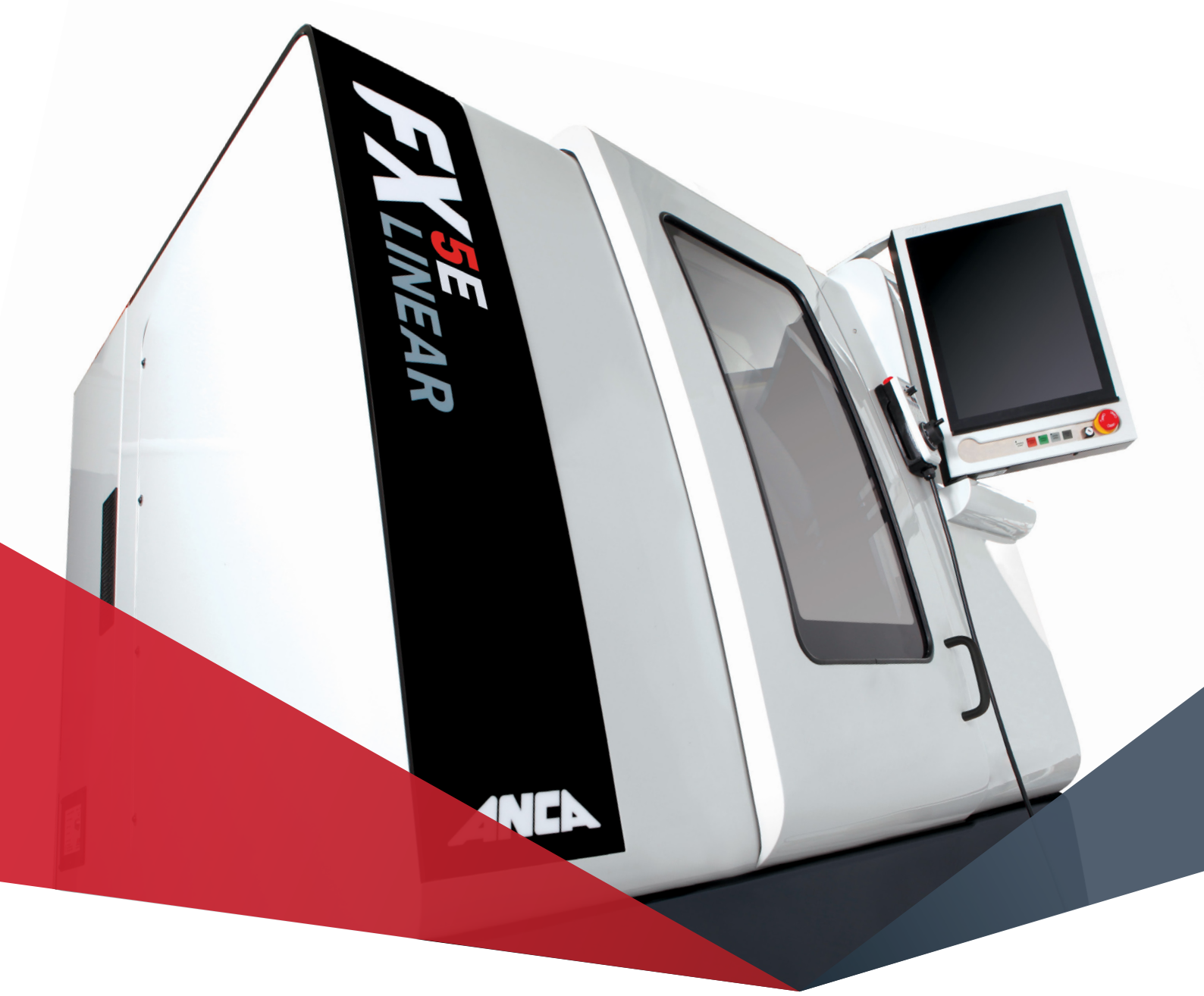
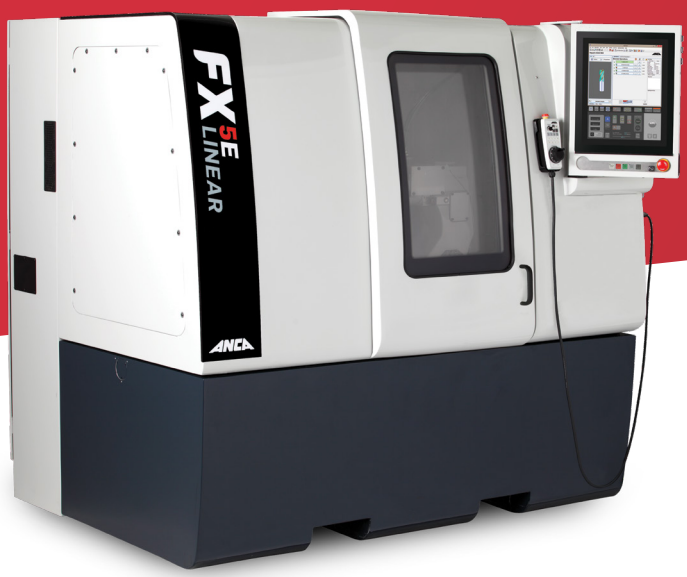


FX5E LINEAR
THE AFFORDABLE TOOL GRINDING PACKAGE

The new FX5E is an affordable first step into CNC tool grinding - an economical choice for a quality elemental machine. With the new automatic pneumatic headstock clamping the machine is “Loader Ready” and can provide unattended operation in combination with the low cost ANCA-designed SCARA robot AR300.

ANCA
CNC MACHINES



The FX5E Linear is ANCA's new economical machine for grinding cylindrical tools with small to medium diameters. The FX5E is a tailored solution for 3C, automotive, aerospace, medical or wood working and is available with ANCA-designed and built AR300 robot tool loading option.

The FX5E Linear has the same aesthetically pleasing industrial redesign as any other model in the FX platform.

Fitted with a new pneumatic headstock in combination with reliable work-holding PremierPlus Collet Adaptor, users can make radial adjustments to the collet to obtain low run out on tools.

The FX5E is a compact machine, with user-friendly touchscreen technology and runs ANCA's versatile ToolRoom software. The remote handheld pendant allows improved access and makes set-up fast and easy.

Every part on the machine, from the positioning of the grinding wheel on the C-axis centreline to reduce thermal influence, to the new ANCA designed Linear Motors, has been designed with accuracy and productivity in mind.

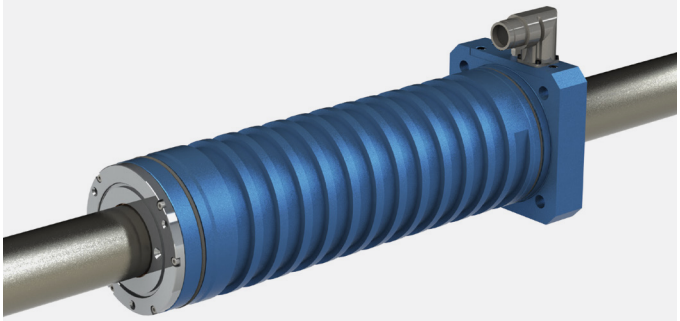
LINX LINEAR MOTORS

The FX Linear range uses ANCA LinX Linear Motors for axis motion (X & Y axes). In conjunction with linear scales, a high level of machine precision and performance is able to be achieved, resulting in superior tool accuracy and surface finish. With LinX Linear Motors there is no loss of machine accuracy over time due to wear and it is not affected by temperature variations.

The cylindrical LinX Linear motors experience less wear as there are no contacting parts.

OVERVIEW

- Linear motors (X & Y axes)
- Linear scales (X & Y axes)
- AMD5x drive system for faster processing
- Single wheel-spindle (9kW peak power)
- ANCA pneumatic headstock
- A touch-screen monitor that is customisable with Windows
- Remote pendant (handheld) for easy operator access



BENEFITS OF ANCA LINX LINEAR MOTORS

- Increased reliability and long service life
- High level of machine precision and performance
- Reduced heat load – no separate cooling required
- Less power consumption than ballscrew systems
- IP67 rated – keeps out grinding contamination in harsh grinding environments

AMD5x Drive System
Provides faster processing for increased productivity

Automation Option
ANCA AR300 SCARA robot loader for low-volume tool production

Control Panel
Full touch screen configured to machine options. Has Windows functionality with multi-touch & zoom

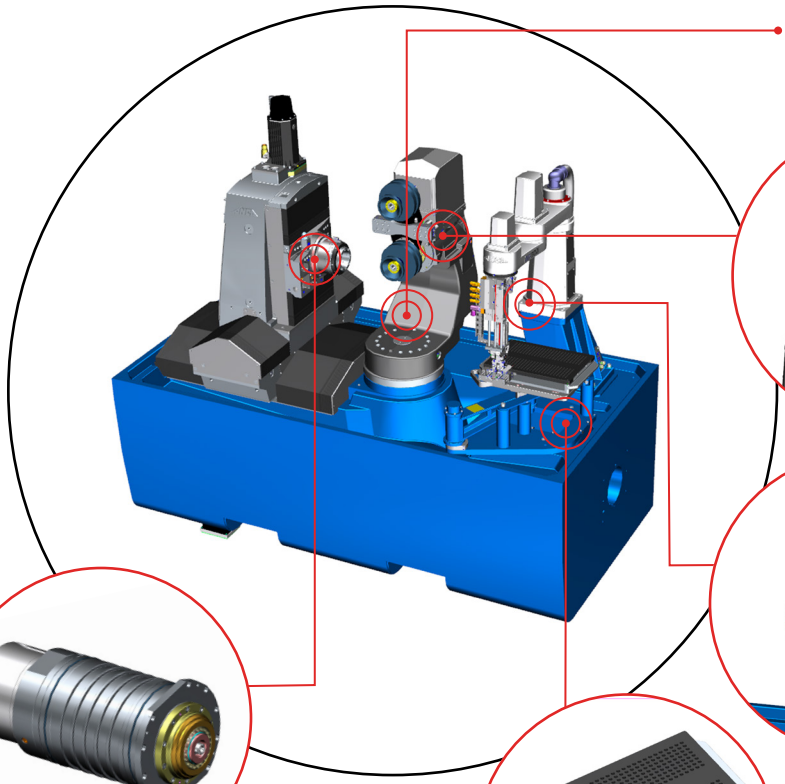
Hand-held Remote Pendant
Provides operator with easier access to the machine during set-up

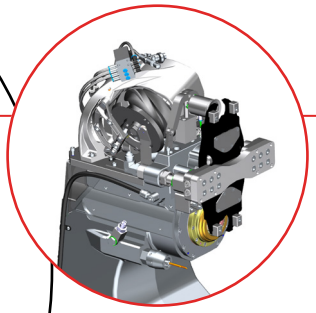
New Innovative Pallet Table Design
Ergonomic access for tool loading or pallet change

Compact Size
The machine has a small footprint saving factory space

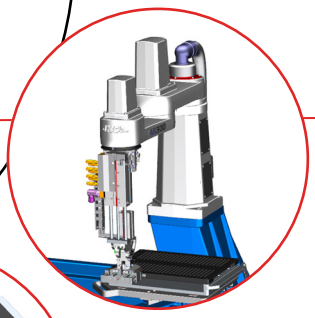
2 Wheel Pack Changer

C-Axis Pivot Point
As the grinding wheel is positioned on the centreline of the C-Axis motor axis motion is reduced which is ideal for ballnose grinding to ensure accuracy is maintained



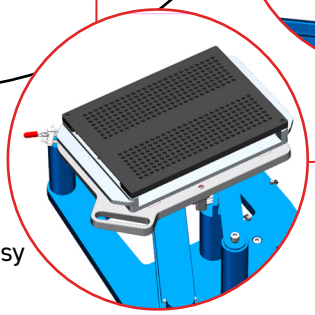


New CAM-driven wheel changer
Mechanically guided on a circular path. Pneumatic dampening of the rotational motion.



AR300 Robot Loader Option
ANCA designed loader option fully contained in the machine canopy

Automatic Pneumatic Headstock
Ergonomically designed for the operator. Easy access to the headstock work-holding.



Innovative Pallet Table Design
Ergonomically designed for easy and safe access

TOUCH SCREEN MONITOR

- ANCA designed full touch screen front panel (19")
- Latest touch screen technology
- Windows10 functionality – multi touch, zoom, etc.
- Configured to machine – only machine 'options' are displayed on the screen
- Designed to withstand an industrial environment
- Configured so operator can quickly set-up machine
- ANCA menu and other hard buttons are integrated into the soft panel or as soft touch keys

REMOTE HANDHELD PENDANT

- Allows operator improved access for machine set-up
- Allows operator to remain comfortably standing at machine door during
  set-up instead of moving to screen or having to lean over
- Includes MPG (Manual Pulse Generator) so operator can safely test program step-by-step
- A feed-rate override control on the pendant allows the axis travel speed to be easily varied
- Also acts as a 'hold to run' to meet CE certification

AR300 ROBOT TOOL LOADER

ANCA's designed and built low cost tool loader is fully contained within the machine canopy. The AR300 loader has 3 axes and is easily set up and controlled via the touchscreen and remote handheld pendant. It provides customers with an affordable automatic tool loading solution and is perfect for low-volume production runs.

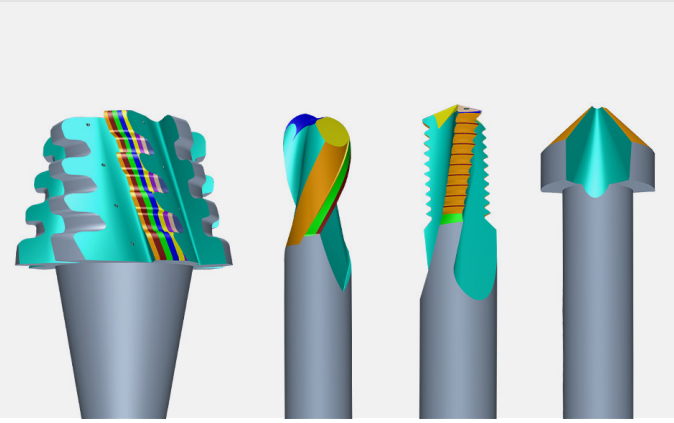
- Operator access from front of machine
- Does not increase machine footprint
- One gripper set for the entire diameter range
- Tool length range 30 - 150 mm (1¼" - 6")
- Double gripper, tool change for load/unload
- Loading time approx. 15 seconds
- The pallet capacity ranges from 380 tools with Ø2 mm (1/8") shank, 200 tools with Ø6 (1/4") shank

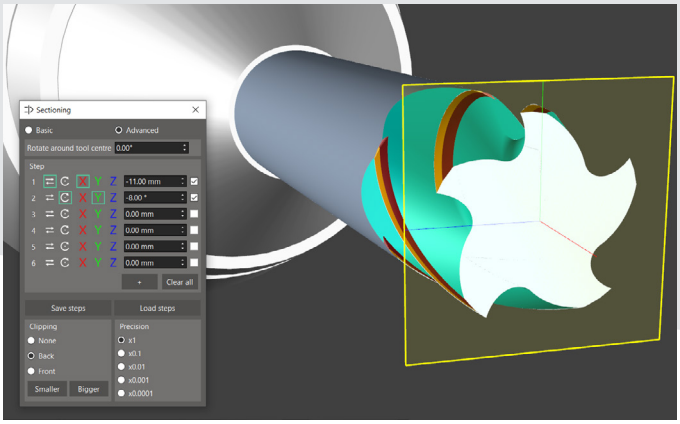
PREMIER PLUS COLLET ADAPTORS

ANCA's new PremierPlus Collet Adaptors provides operators with a premium work-holding range. The PremierPlus Collet Adaptors use a new totally internal clamping mechanism. The spring pack in the adaptor provides the tool clamping force and prevents possible runout that was previously added if misalignment occurred between the drawbar and the collet. PremierPlus Collet Adaptors offer users the ability to make radial adjustments to the collet to obtain low run out on tools.

Software

ANCA's versatile software is what sets ANCA and its customers ahead of the competition. ANCA has over 40 years of tool grinding experience and is well-known for its user-friendly and flexible tool design software.





TOOLROOM

ANCA's ToolRoom software suite caters for a wide range of tool types and applications with an easy-to-use interface to input tool geometry parameters. ToolRoom ensures that the FX Linear machines will efficiently handle any regrinding or manufacture challenge.

The machine operator is able to easily and quickly set up or modify tool programs, depending upon the required tool type. For more proficient users, advanced software pages exist to access complex tool designs and operations.

ToolRoom supports the grinding of drills, endmills, profile tools, burrs, routers and many other special applications.

ANCA PROFILE SOFTWARE

Advanced software suite for grinding a wide variety of customer defined profiles tools of any shape containing just lines and arcs.

The user interface provides the possibility to create the tool profile on the screen or by using CAD software. The profile data is then converted using line and arc segments by the ANCA software into grinding path.

DXF import is also available.

CIMULATOR

CIMulator3D simulates the programmed tool path exactly as it would be ground on the machine. New tool programs can be verified for size, shape, machine clearance and even cycle time estimates. CIMulator3D maintains continuous work flow through the machine by reducing development time and trial grinding.

IVIEW

iView is a measuring system that can measure the ground tool while it is still in the work-holding on the machine. The image of the ground tool as taken by the iView camera is compared with an ideal overlay shape generated by the software. The tool size can then be compensated automatically based on the overlay.

- Eliminates the need to remove a tool from the grinder in order to check the dimensions
- Reduces errors caused by relocating and manually compensating
- 90x – 360x range of tool magnification
- Provides measuring accuracy to 2 microns
- Mounted on the inside of the machine on the C-axis

FX5E LINEAR

The affordable Tool Grinding package

ANCA FX5E TECHNICAL DATA/SPECIFICATIONS

Machine Structure	Single column	
Grinding Spindle	Integral direct drive Single ended induction	9KW (12hp) peak 8000 RPM
Tool dimensions	Tool Diameter Max Tool Length Tool Weight	160 mm 150 mm (robot loading) 200 mm (manual loading) 15Kg
CNC System	CNC Controller Operation Software Touch Screen Software	ANCA AMC5 G2 Windows 10 TFT Touch Screen Display ANCA Designed
Tool Probing System	Probe accuracy	Repeatability of 1.0µm
Machine Base	Polymer Base	ANCACrete
Headstock	Automated	Pneumatic Push Headstock
Linear Axis	Direct drive linear motors	X & Y axis
X-axis	Rapid Traverse Motor	15m/min ANCAmotion LinX
Y-axis	Rapid Traverse Motor	15m/min ANCA
Z-axis	Rapid Traverse Motor	9m/min ANCAmotion LinX
A-Axis	Axis Travel Rapid Traverse	360° 1,800 deg/sec (300RPM) Optional 3,600 deg/sec (600RPM)
C-Axis	Axis Travel Motor	230° ANCA
Wheel Change	2 Wheel packs	2x ø 203mm (8")max
Loader Option	AR300 Loader capacity	ANCA one pallet up to 380 tools x ø 2mm

Note: ANCA reserve the right to alter or amend specifications without prior notice

AVAILABLE OPTIONS

Tool Inspection	iView	Measures tools in the work-holding
Tool Steady	Steady Bed long & short	Manual steady rest
Wheel Balancing	iBalance	Balances wheel packs inside the machine