



# THE **CPX LINEAR** BLANK PREPARATION GRINDER

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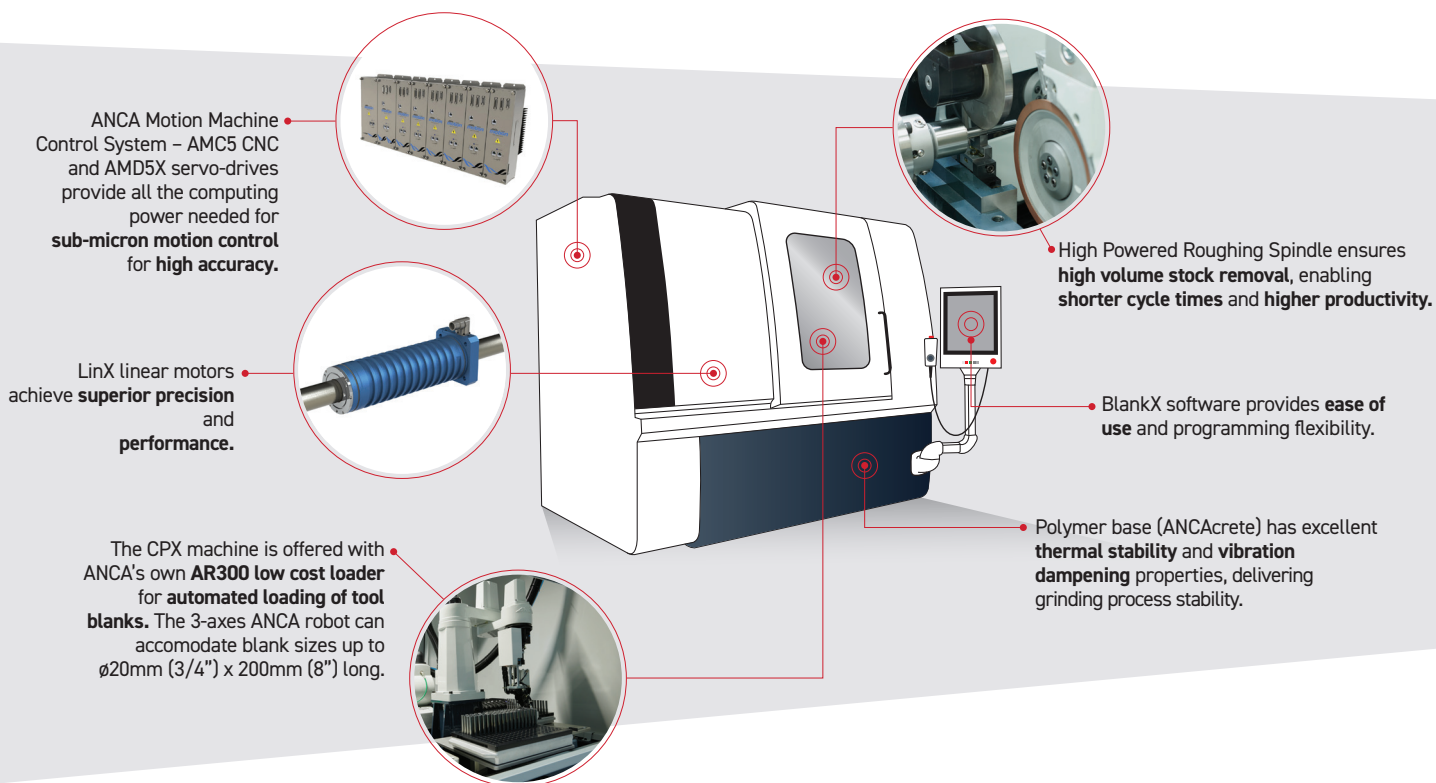
Capable of achieving a surface finish better than 0.2ra with run out of less than 2 microns, this four axes grinder for grinding tool blanks complements ANCA's full machine range.

The CPX Linear has a large working envelope and powerful grinding spindles to achieve the highest precision and productivity for blank preparation in the market today. Using the pinch peel method of grinding it offers the same strength, rigidity and thermal stability expected from an ANCA tool grinder.

**ANCA**  
CNC MACHINES

Taking the best aspects of ANCA's technology and our deep experience in the tool grinding industry, the new CPX Linear Blank Preparation Grinder has been designed to surpass our customers' needs. For example, our proprietary polymer concrete base provides the utmost stability in our grinding process so we took that and used it in the CPX Linear model.

The CPX Linear provides the same strength, rigidity and thermal stability expected from an ANCA tool grinder.



## POWERED BY LINX

Our LinX linear motor technology for axis motion (X, Y and V axes), in conjunction with linear scales, achieves superior precision and performance.

Specially designed for a lifetime of operation in harsh grinding environments, the LinX motors have a cylindrical magnetic field which means there is no additional down force on the rails or machine base.

With no temperature variations (meaning no need for a separate chiller unit), and being sealed to IP67, there is minimal wear and tear so that the machine accuracy remains over the lifetime of the machine. The LinX linear motor has higher axis speed and acceleration, leading to reduced cycle times while maintaining a smoother axis motion.

## CPX LINEAR CAPABILITIES

- With a peak power of 43Kw (58 HP) the grinding spindle for roughing uses a 250mm (10") diameter wheel, ensuring high volume stock removal in the shortest possible cycle time. This high-powered spindle removes the need for removing material in multiple passes which means shorter cycle times and higher productivity.
- Finishing spindle uses a 150mm (6") diameter wheel supplying a peak power of 9.7Kw (13HP) for optimal finish grinding operations.
- Large working envelope with an overall blank length of 380 mm (14.9") and a maximum diameter of 32mm (1 1/4") when manual loading.



## CONTROL PANEL

Including touch screen, USB ports and space for a standard keyboard. Ergonomic tilt adjusts to suit different height operators.

## HAND-HELD REMOTE PENDANT

Includes ANCA's MPG Feed to make machine control and setup easier and safer.

## WHEEL ARBORS

Perfect zero run out wheel arbors ensure accuracy and repeatability when grinding.

## POLYMER BASE (ANCACRETE)

Provides excellent thermal stability and vibration dampening properties delivering grinding process stability and outstanding blank surface finish.

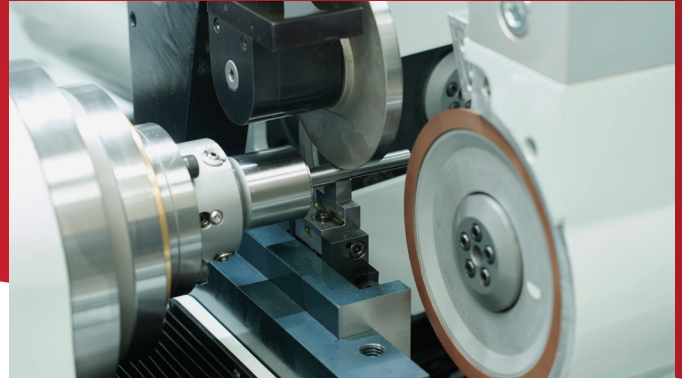
## MACHINE CONTROL SYSTEM

ANCA Motion's latest AM5C CNC and AMD5X servo-drives provide all the computing power needed for sub-micron motion control.



## SOFTWARE

The CPX Linear uses ANCA's market leading versatile and intuitive BlankX software which is easy to use and familiar to operators using an ANCA machine. The user is guided through a step by step process enabling quick programming for grinding a blank.



## LOADERS AND ACCESSORIES

The CPX Linear machine has the option of the V Steady and Top Roller for tool blanks to provide rigid support and maintain low run out.

A gauging station for diameter measurement and touch probe for probing the end of the blank is also available for larger batch quantities when unattended operation is required.



The CPX machine is offered with ANCA's own AR300 low cost loader for automated loading of tool blanks.

The 3-axes ANCA robot can accommodate blank sizes up to  $\varnothing 20\text{mm}$  ( $3/4''$ ) x 200mm (8") long.

- The AR 300 uses 3 pallets (one empty, two full) to maximise production output.
- Pallet capacity of 221 blanks for 12 mm ( $1/2''$ ) diameter.
- Pallets used are common and interchangeable with other ANCA tool grinding machines (MX, FX and TX).

# TECHNICAL SPECIFICATIONS

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

## TOOL BLANK RANGE

Tool blank length	Overall blank length	380 mm (14.9")
	Maximum OD grinding length* (manual loading)	360 mm (14.1")
Tool blank diameter range*	3-32mm (1/8"-1 1/4")*	
Blank grinding diameter range	0.14mm (0.0039") 32mm (1 1/4")*	

<b>AUTO LOADING</b>		
Tool blank length range for auto loading	30-200 mm (1 1/2" -8")	
Tool blank diameter range for auto loading	3-20 mm (1/8" - 3/4")	

<b>MACHINE SIZE</b>		
Width	2477 mm (97.5")	
Depth	1659 mm (65.3")	
Height	2052 mm (80.8")	
Colour	RAL 7035, RAL 5008	
Machine weight	4500 kg (9920 lbs)	

<b>CNC SYSTEM</b>		
CNC Control	AMC5	
Operating software	Windows 8	
CD ROM	None	
USB port	Standard 2 off	
Software	ANCA designed	

<b>ROUGHING SPINDLE</b>		
Type	Induction Motor	
Power at S1	13.8 Kw (18.5 HP)	
Peak power	43 Kw (58 HP) @ 5500 rpm	
Maximum torque	24 Nm @ 5500 rpm	
Speed range	0 - 9000 rpm	
Maximum grinding wheel diameter	250 mm (10")	

<b>FINISHING SPINDLE</b>		
Type	Induction Motor	
Power at S1	3.8 Kw (5HP)	
Peak power	9.7 Kw (13HP) @ 7000 rpm	
Maximum torque	6 Nm @ 6000 rpm	
Speed range	0 - 9000 rpm	
Maximum grinding wheel diameter	150 mm (6")	

<b>X AXIS</b>		
Axis Travel	535 mm (21")	
<b>Y AXIS</b>		
Axis Travel	125 mm (4.9")	
<b>V AXIS</b>		
Axis Travel	125 mm (4.9")	
<b>A AXIS</b>		
Axis Travel	360°	
RPM	3000 rpm	
Workhead taper	ISO50	

\* 32mm diameter grinding is subject to tooling and grind length limited to 150mm

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