Supertec

SUPERTEC MACHINERY

NC SURFACE GRINDER

PLANOTEC SERIES

Your Source for Grinding Solutions

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Planotec NC Series

Planotec Series includes saddle and column type models to accommodate different machining needs. Both the saddle and column types deliver high precision and rigidity, while the column type models can accommodate especially large workpieces. The Planotec models feature a PLC control with easy-to-learn, easy-to-program, conversational shop floor language, reducing setup time.

Saddle Type Structure

Planotec - 820NC / 820CXII / 1224NC / 1632NC

- The machine base utilizes a rigid box-structure design that provides stable support for long-term accuracy.
- The double-V slideway design enhances structural support and improves grinding accuracy.
- CXII models are available for multi-slicing applications.

Column Type Structure

Planotec - 2040NC / 2060NC / 2448NC/ 2460NC / 2480NC / 24100NC / 24120NC

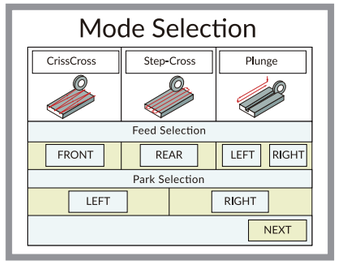
- The column-type design requires less floor space than a saddle-type.
- The column-type is a boxway design for enhanced stability.
- A precision ballscrew and AC servo motor on the downfeed ensure excellent accuracy and repeatability.

Controller

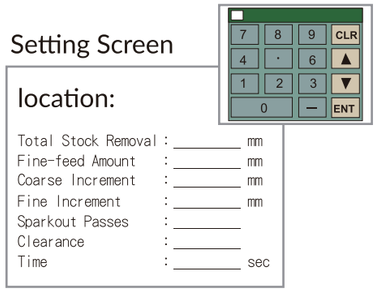
Planotec Series is equipped with a PLC control system combined with a color touch screen and a user-friendly interface.
Operators can easily set grinding parameters and start a grinding cycle with minimal input. The control system automatically saves the most recently used grinding parameters, allowing the operator to simply press the “Cycle Start” button to repeat the previous setup and begin a new cycle.

Setting Display

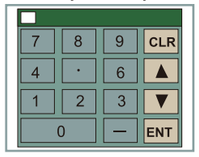
Main Menu



Setting Screen



Data input keyboard

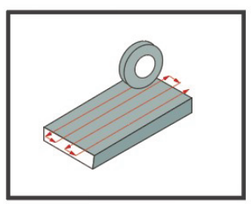


The crossfeed distance can be preset, and the operator may choose to feed from both sides or from either the front or rear of the worktable.

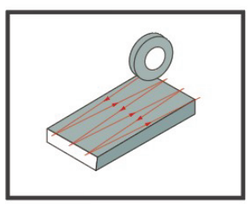
The grinding cycle can be configured to start from either side or from both sides of the worktable, depending on the application.

The longitudinal travel distance of the worktable can be precisely set and maintained at a steady rate. Operators can also define the start and stop positions at either the left or right end of the table.
(An automatic dressing attachment is available as an optional accessory.)

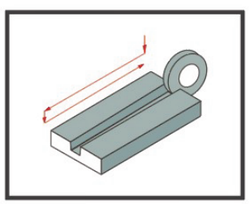
Grinding Cycle



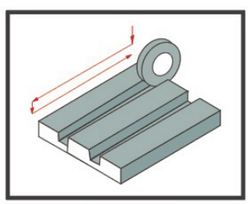
Step Grinding



Crisscross Grinding

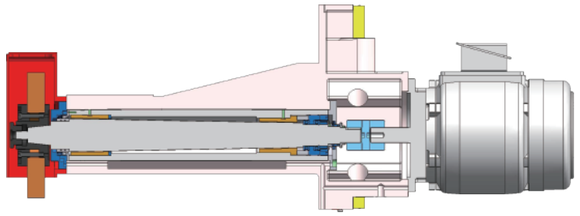


Plunge Grinding



Multi-Slicing Grinding (Opt.)

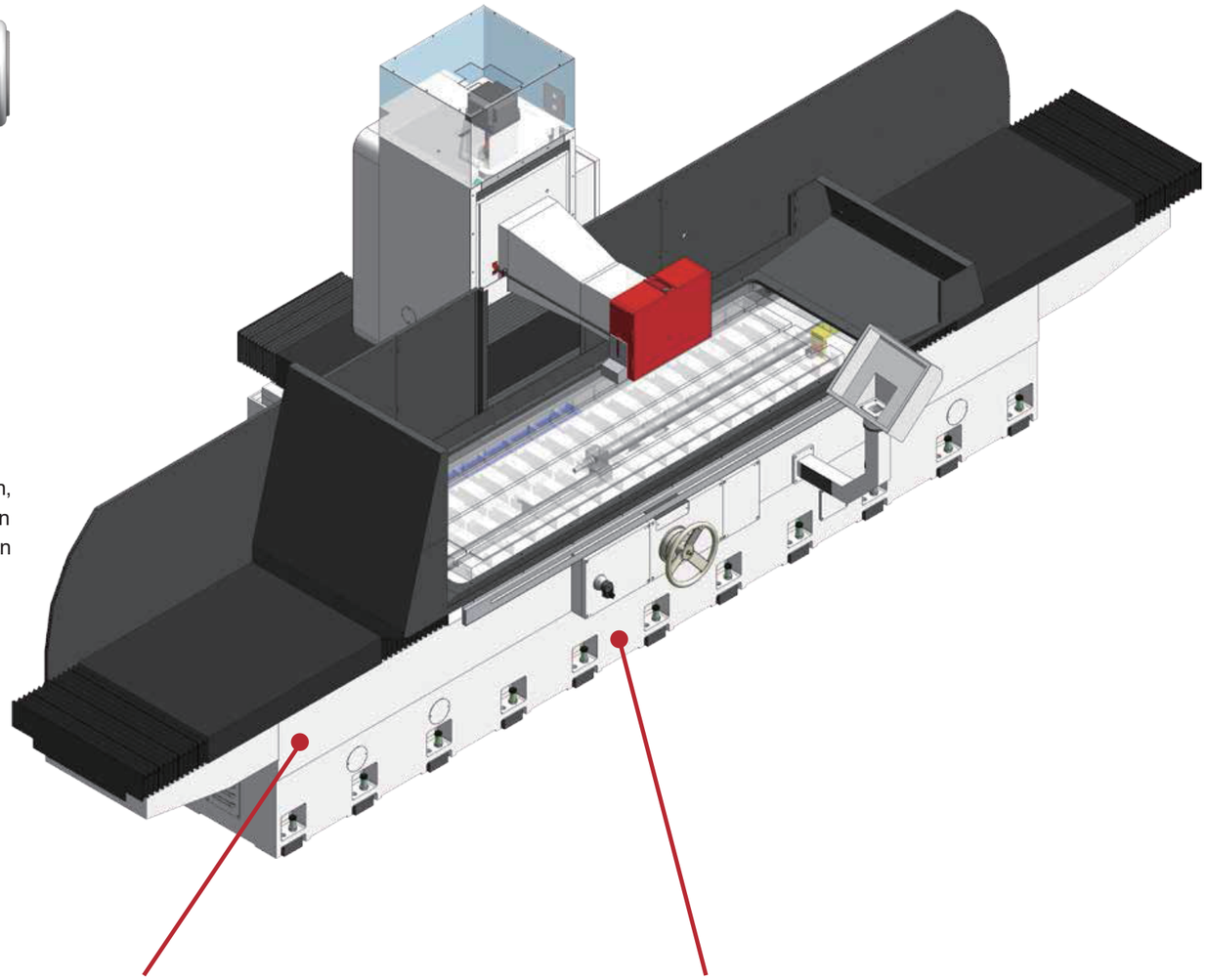
Column Type Design & Feature



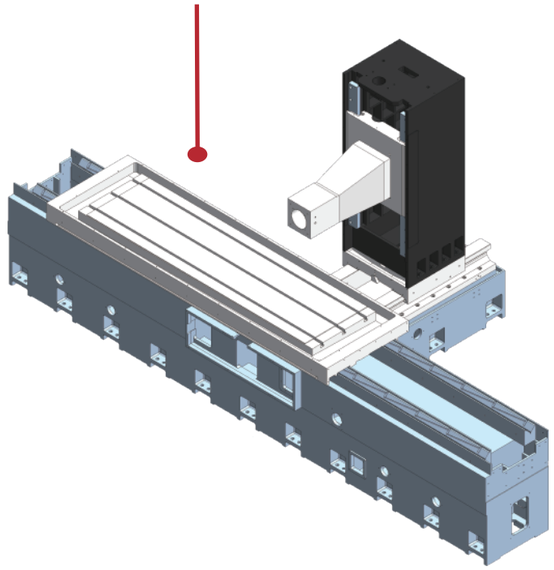
- The hydrodynamic spindle utilizes a constant oil-pressure supply for stable spindle support. Spindle run-out is less than 0.002mm, and stiffness exceeding 50Kgf/um.
  This feature is suitable for both light- and heavy-duty grinding operations.
  The hydraulic system is connected to a pressure sensor, If oil pressure drops below the preset level, the grinding wheel will automatically stop to prevent spindle damage.

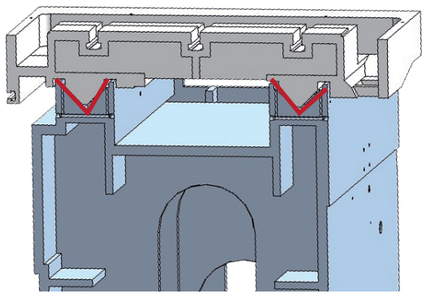
- The bearing type spindle features high accuracy, non-vibration, and low thermal growth. The spindle is equipped with precision angular contact ball bearings and the grease-sealed lubrication makes the spindle easy to maintain and ensures continuous operation. The spindle run-out is less than 0.002mm.

- The X and Z Axis guideway lubrication system is equipped with a pressure-sensing function, to ensure sufficient lubrication pressure is consistently supplied.



Wider and heavier design of the column, which offers high stability and rigidity.
Lubrication is supplied through an independent system to extend machine service life.





X-Axis

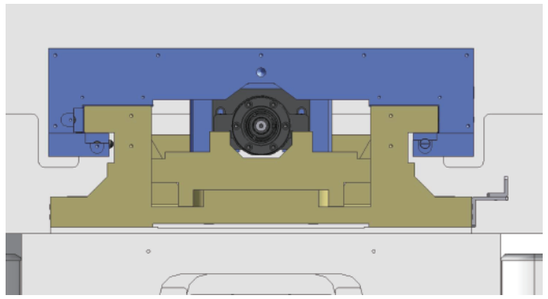
X-Axis Worktable Guideway Double-V Design

For large workpieces and heavy-duty applications, the worktable slideways are upgraded to a Double-V guideway design.
The deepened and widened guideways, combined with a large-span design, provide the worktable with stable and smooth movement.

The X-axis guideway is precisely hand-scraped, coated with Turcite-B, and supported by oil-film lubrication to ensure positioning accuracy and long-term durability.

The integral “T” shape base is manufactured from Meehanite casting, with tempering & stress-relief treatment to ensure structure stability and prevent structural deformation.

The machine base is 2.5 times longer than the worktable, providing full support throughout the entire travel range.
This design significantly enhances structural rigidity during grinding operations.



Z-Axis Saddle Structure

The hand-scraped saddle is driven by a precision ballscrew, allowing it to smoothly move along the box-type guideways, improving machine support, positioning accuracy, and service life.

Specification

	820NC/CXII	1224NC	1632NC	2040NC	2060NC	2448NC	2460NC	2480NC	24100NC	24120NC
Grinding Capacity										
Max. Grinding Length	21.6”	24"	31.5"	41.3"	61"	50"	61"	80"	100"	120"
Max. Grinding Width	8.26”	12"	15.7"	19.6"	19.6"	25"	25"	25"	25"	25"
Distance from Table Surface to Spindle Center	14.96”	19.7"	19.6"	23.6" (31.4 opt.)	23.6" (31.4 opt.)	27.5"	27.5"	27.5"	27.5"	27.5"
Max. Load on Table (incl. Magnetic Chuck)	265 lbs	882 lbs	1,278 lbs	1,323 lbs	2,205 lbs	2,646 lbs.	2,866 lbs	3,197 lbs.	3,527 lbs	3,858 lbs
Table										
Table Size	8” x 20”	12” x 24”	16” x 32”	20” x 40”	20” x 60”	24” x 48”	24” x 60”	24” x 80”	24” x 100”	24” x 120”
Standard Magnetic Chuck Size	8” x 20”	12” x 24”	16” x 32”	20” x 40”	20” x 60”	24” x 48”	24” x 60”	24” x 80”	24” x 100”	24” x 120”
Saddle / Column Moving	Saddle	Saddle	Saddle	Column	Column	Column	Column	Column	Column	Column
Longitudinal Movement (X-Axis)										
Travel Distance	20"	25.6"	33.5"	43.3"	63"	53"	65"	84.6"	104.3"	124"
Table Speed	3.28'-82.02' /min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min	9.8'-82' / min
Manual Travel	23.6"	27.6"	35.4"	x	x	x	x	x	x	x
Auto. Cross Movement (Z-Axis)										
Automatic Increment Feeds	9"	14"	18"	21.6"	21.6"	28.5"	28.5"	28.5"	28.5"	28.5"
Rapid Travel (60Hz)	25.59"/min	67.3"/min	67.3"/min	39.3"/min	39.3"/min	67.3"/min	67.3"/min	67.3"/min	67.3"/min	67.3"/min
Min. Input Unit	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"
Cross feed Z-Axis Motor	0.5 hp	0.24 hp	0.24 hp	0.5 hp	0.5 hp	0.5 hp	0.5 hp	0.5 hp	0.5 hp	0.5 hp
Manual Cross Movement (Z-Axis)										
Manual Travel	9.06"	13.4"	18.5"	22.6"	22.6"	28.5"	28.5"	28.5"	28.5"	28.5"
Handwheel per Graduation	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"	0.0008"
Handwheel per Revolution	0.2"	0.2"	0.2"	0.2"	0.2"	0.2"	0.2"	0.2"	0.2"	0.2"
Vertical Down Feed (Y-Axis)										
Automatic Down Feed Travel	15.7"	15.74"	15.74"	23.6"	23.6"	19.7"	19.7"	19.7"	19.7"	19.7"
Max. Infeed Speed	8.2" / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min	8.2' / min
Min. Input Unit	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"	0.0001"
Y-Axis Servo Motor	0.5 hp	1.35 hp	1.35 hp	1.35 hp	1.35 hp	4 hp	4 hp	4 hp	4 hp	4 hp
Grinding Wheel										
Wheel Size (OD x W x ID)	7" x 0.5" x 1.25"	14" x 2" x 5"	14" x 1.5" x 5"	14" x 1.5" x 5"	14" x 1.5" x 5"	16" x 2" x 5"	16" x 2" x 5"	16" x 2" x 5"	16" x 2" x 5"	16" x 2" x 5"
Spindle Speed (60Hz)	3600 rpm	1800 rpm	1800 rpm	1750 rpm	1750 rpm	1800 rpm	1800 rpm	1800 rpm	1800 rpm	1800 rpm
Spindle Motor	3 hp	5 hp / 7.5hp (opt.)	5 hp / 7.5 hp (opt.)	7.5 hp / 10 hp (opt.)	7.5 hp / 10 hp (opt.)	15 hp	15 hp	15 hp	15 hp	15 hp
Motor										
Hydraulic Motor	1 hp	2 hp	2 hp	5 hp	7.5 hp	5 hp	5 hp	5 hp	5 hp	5 hp
Lubrication Motor	0.1 hp	0.1 hp	0.1 hp	0.03 hp	0.03 hp	0.25 hp	0.25 hp	0.25 hp	0.25 hp	0.25 hp
Machine Size & Weight										
Size (L x W x H)	70" x 63" x 87"	112" x 89" x 98"	126" x 89" x 100"	142" x 88" x 90"	177" x 88" x 90"	157" x 118" x 100"	197" x 118" x 100"	244" x 118" x 100"	280" x 118" x 100"	303" x 118" x 100"
Net Weight	2,334 lbs	6,614 lbs	7,716 lbs	13,007 lbs	15,653 lbs	14,550 lbs	19,400 lbs	22,972 lbs	24,030 lbs	26,433 lbs
Gross Weight	3,561 lbs	7,716 lbs	9,921 lbs	15,212 lbs	18,960 lbs	16,755 lbs	21,605 lbs	24,074 lbs	25,794 lbs	28,220 lbs

** Specification subject to change without notice*

Accessories

Standard Accessories

- Grinding Wheel & Wheel Flange
- PLC + Touch Screen & Control Panel
- Y-axis Ballscrew & Servo Motor
- Hydraulic System & Cooling Fan
- Operating Manual & Parts List
- Leveling Bolts + Blocks
- Balancing Stand & Arbor
- Standard Coolant Tank
- Semi-Enclosure Splash Guard
- Grinding Wheel Extractor
- Diamond Dresser + Stand
- Tools + Toolbox

Optional Accessories

- Fine-pole Electromagnetic Chuck + Automatic Demagnetizer
- Electromagnetic Chuck + Automatic Demagnetizer
- Coolant System + Magnetic Separator and/or Paper Filter
- Y/Z-Axis Linear Scales (Vertical/Cross) + DRO
- Y-Axis Linear Scales (Vertical) + DRO
- Overhead Parallel Dresser (Manual/Hydraulic)
- Overhead Parallel Dresser + Automatic Compensation (Stepping Motor)
- Permanent Magnetic Rotary Chuck
- Dual-Side Dresser
- Spare Grinding Wheel Flange
- Angular Dresser
- Radius Dresser
- Oil & Mist Collector
- Grinding Wheel Inverter
- Dust Collector