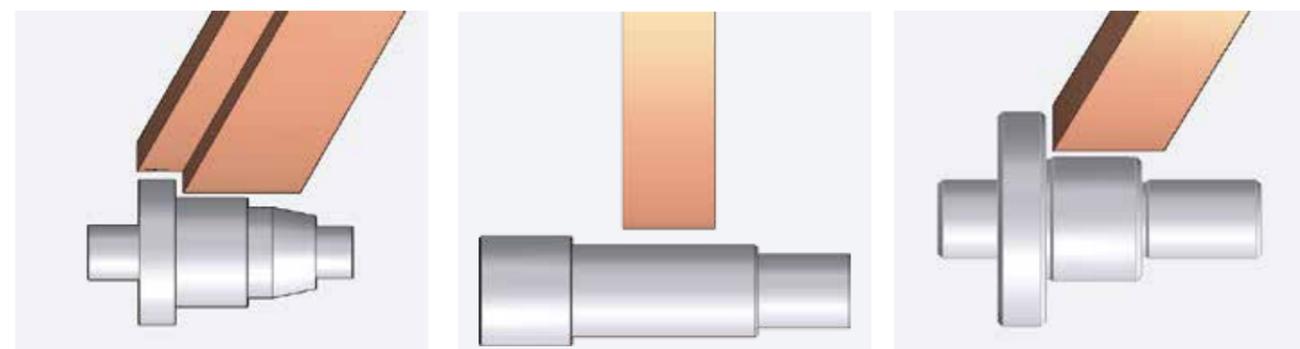


CNC Cylindrical Grinder

Mini Genie 2020 & 2520



Grinder Professionals

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Mini Genie Series High Precision CNC Cylindrical Grinders

Mini Genie CNC cylindrical grinders are designed for high precision, high efficiency, and ease of operation. They are suitable for various applications including but not limited to automotive, aerospace, medical instrument, tooling, job shops and mold industry.

Features

- With a floor space requirement of less than 47 square feet, the Mini Genie CNC cylindrical grinders are designed with the ultimate reduction in foot print in mind. The 16"/20" diameter grinding wheel and a grinding envelope of 9" diameter, 8" between centers and 45lbs. work load capacity makes them suitable for small workpieces with optimal cycle times and maximum stock removal.

CNC Controller

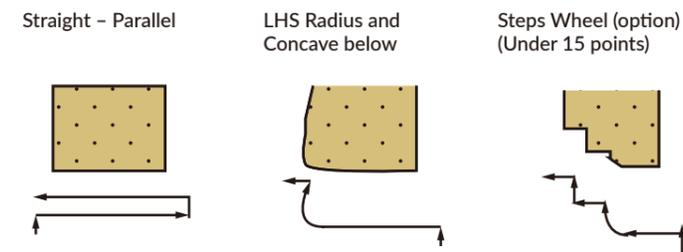
- Supertec continues its years of software development with the introduction of iGrind, the easy to learn easy to program software on the Mini Genie grinders. The conversational software allows for the grinding of many different types and shapes of parts. The software allows for the integration of many types of measurements systems and automation.



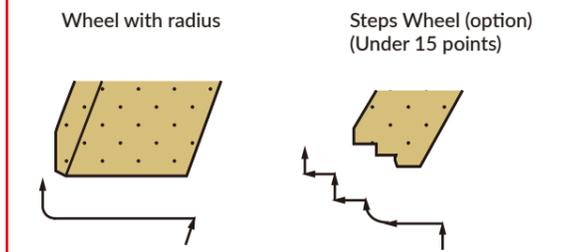
- OD Grinding / End Face Grinding / Form Grinding
- Form Dressing w/Auto Compensation
- Multiple Section Grinding Sequences
- Setup Parameter Storage
- Graphic Parameter Instruction

Wheel Dressing Cycle

Plunge Type



Angular Type

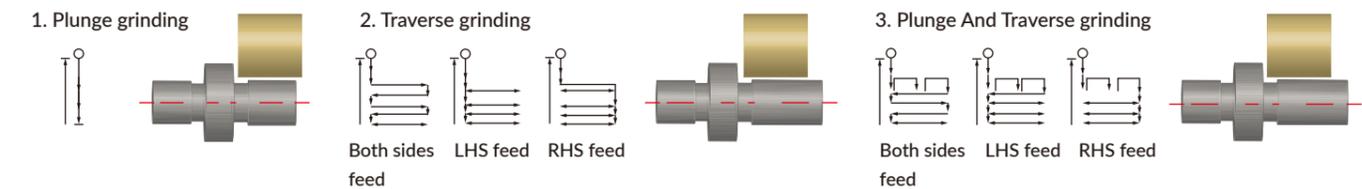


Remarks :

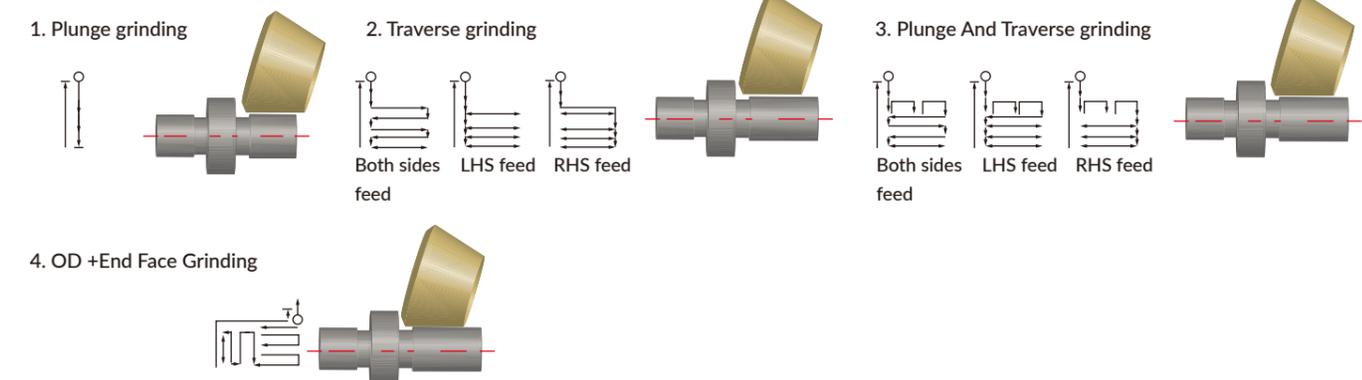
1. Max. 5 types of wheel profile can be saved.
2. Dressing condition can setup rough, intermediate and fine dressing
3. Machine with ID attachment, the dressing operation of ID wheel is manual operated.

Grinding Cycle

Plunge Type



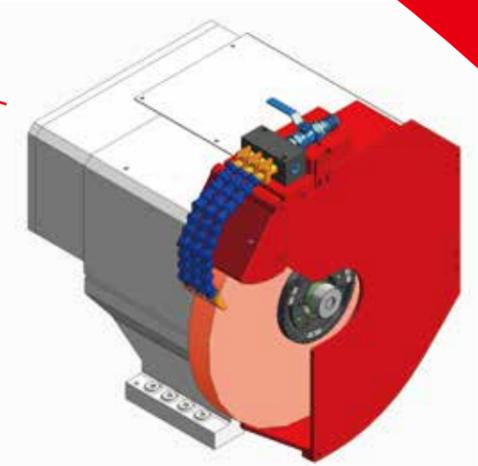
Angular Type





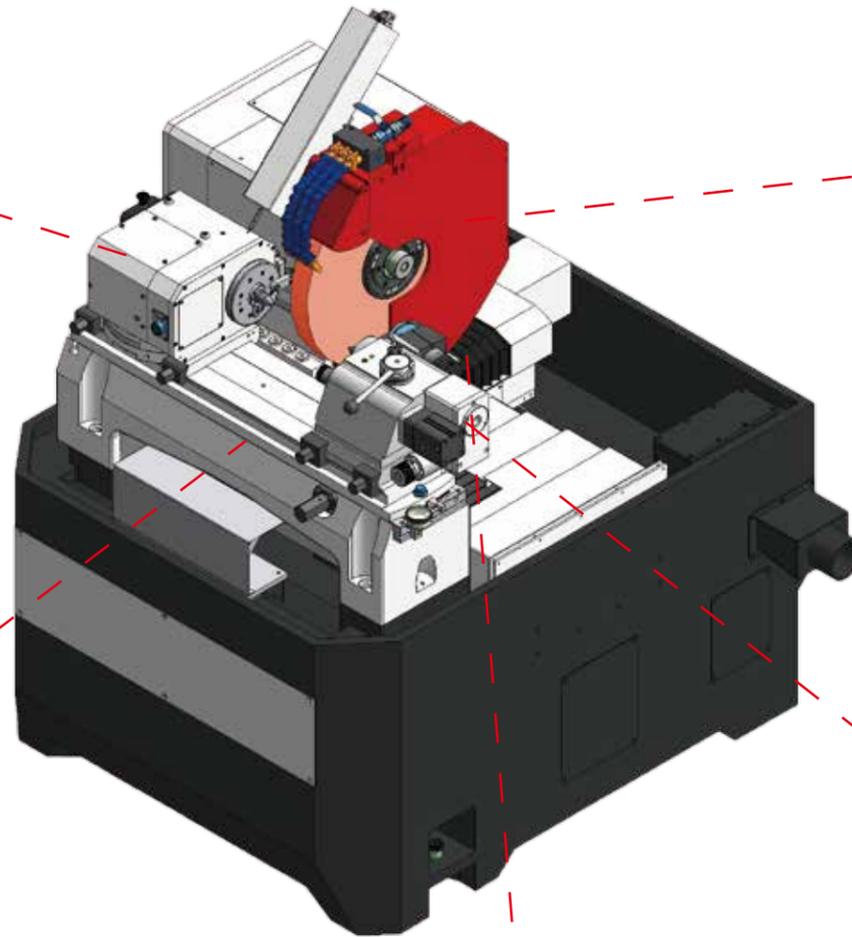
Direct Drive Motors

Both the workhead and wheel head utilize a direct drive motor design for maximum accuracy and repeatability.



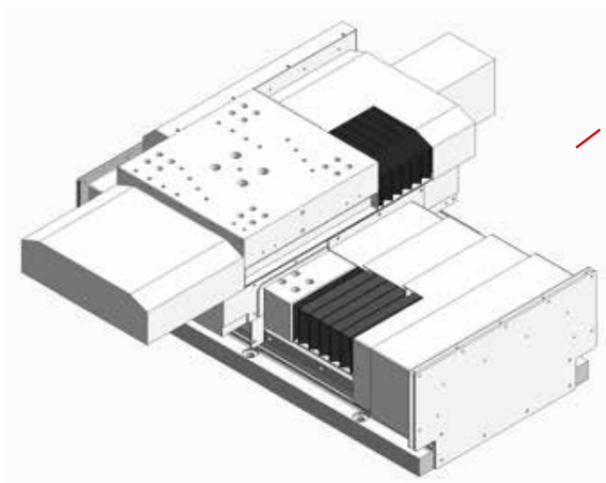
Work Head

NN bearing designed work spindle offers heavy duty load capacity, optimal rotation accuracy, and high rigidity. The servo motor drive offers steady speed and torque during the grinding operation. A positive air purge system keeps grinding swarf and coolant out of the work head, thus prolonging its life.



Wheel Head

The wheelhead utilizes two roller bearing and 3 angular bearings to support the spindle while grinding the OD and face of the part. Combined with a heavy duty 7.5 HP motor and 20" (2520P/PA) and 16" (2020P/PA) grinding wheel, maximum stock removal is assured regardless of the required spindle rpm. Optional NN high load capacity roller bearings can be added to increase grinding efficiency up to 30% over standard bearings. The Mini Genie comes in two workhead versions, a plunge type fixed at 0 degrees (model P) and an anglehead type fixed at 20 degrees (model A). The anglehead version travels on the same 90 degree linear guide way as the plunge type.

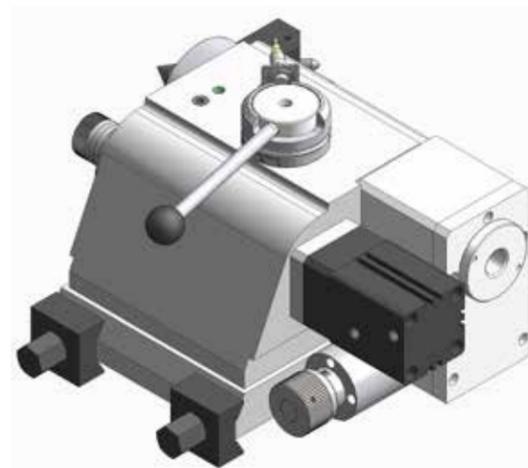


Cross Slides

The structure of the cross slide is made of twice annealed hardened and ground, hand scrapped meehanite cast iron. A 0.000002" resolution Heidenhain linear scale and linear guide ways maximize the grinder's repeatability and accuracy.

Traveling Wheel Head

A fixed table and traveling wheel head design allows the Mini Genie to occupy a minimum amount of floor space (78" x 78"). The wheelhead carriage travels on a linear guide way system that is automatically lubricated for extended machine life.

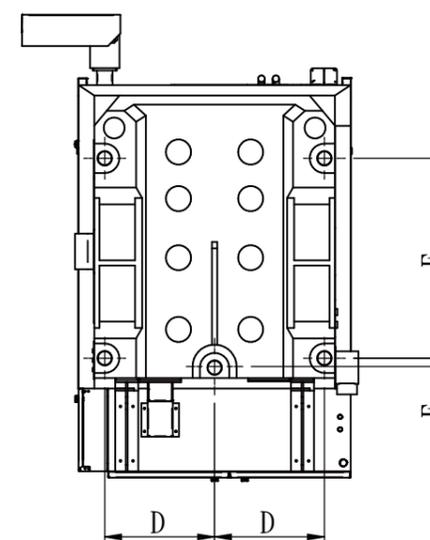
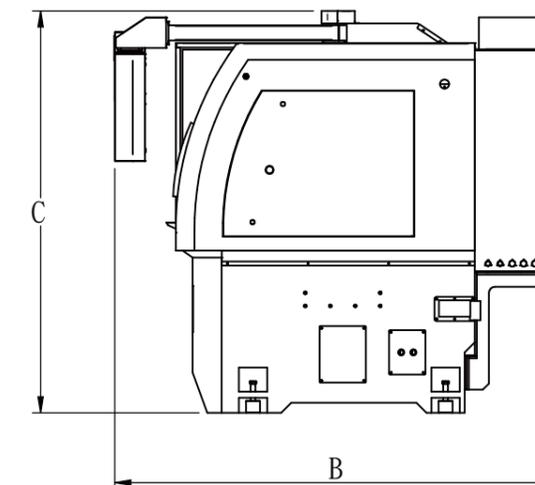
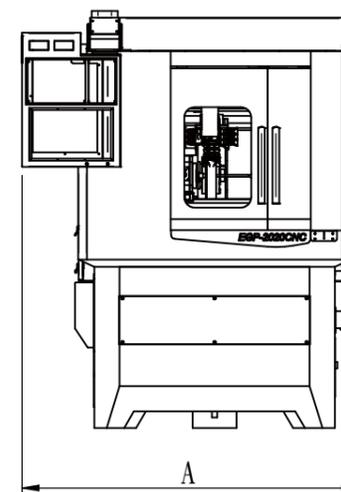


Tail Stock

The tailstock taper adjustment feature makes workpiece set-up faster and more accurate. A MT3 spindle is standard with an optional MT4 (only 2520) available.

Model			Mini Genie 2520 P/PA	Mini Genie 2020 P/PA
Grinding	Swing over table	in	10"	8.3"
Capacity	Distance between centers	in	8"	8"
	Max. grinding diameter	in	9"	8"
	Max. load held between center	lbs.	44.5	44.5
	Center distance between spindle and slide table	in	5"	4.3"
Grinding Wheel	Diameter x Width x Bore	in	20"x2"x6"	16"x2"x5"
Work Head	Motor rated power / max. torque	Kw(HP)/Nm	5.5(7.4)/27.6	3.7(5)/17.7
	Wheel speed	rpm	1250 (Opt. 1650)	1570 (Opt. 2100)
	Spindle type	-	bearing spindle	bearing spindle
	Wheel head angle	deg	0(P) or 20(A)	0(P) or 20(A)
Tailstock	Max. manual swiveling angle	deg	90	90
	Spindle speed (infinite variable)	rpm	10 ~ 600	10 ~ 600
	Motor rated power / max. torque	Kw(HP)	0.75(1)	0.75(1)
	Center taper	-	MT3 (Opt. MT4)	MT3
	Center spindle	-	Live or Dead	Live or Dead
	Diameter of bore	in	0.8"	0.8"
X Axis	Tailstock quill travel	in	1"	1"
	Center taper	-	MT3 (Opt. MT4)	MT3
	Micro-taper adjustment	in	±0.0016	±0.0016
Z Axis	Travel	in	7.9"	7.9"
	Max. rapid feedrate	in/min	236	236
	Heidenhain linear scale resolution	in	0.000002	0.000002
	Min. increment	in	0.00001	0.00001
	Servo motor rated power	Kw(HP)	1.2(1.6HP)(F) / 1.5(2HP)(M)	1.2(1.6HP)(F) / 1.5(2HP)(M)
Motor	Guide way	-	linear way	linear way
	Travel	in	12"	11.8"
	Swiveling angle	deg	+8° ~ -3°	+8° ~ -3°
	Max. rapid feedrate	in/min	315	315
Machine	Min. increment	in	0.00001	0.00001
	Servo motor rated power	Kw(HP)	1.2(1.6HP)(F) / 1.5(2HP)(M)	1.2(1.6HP)(F) / 1.5(2HP)(M)
Motor	Guide way	-	linear way	linear way
	Hydraulic pump	Kw(HP)	0.38(0.5)	0.38(0.5)
Machine	Coolant pump	Kw(HP)	0.2(0.3)	0.2(0.3)
	Net Weight	lbs.	5512	5512
Machine	Measurement	in	51" x 91" x 81"	51" x 90.6" x 78.7"

Measurement



EGP	A	B	C	D	E	F
2020	63.3"	87"	78.5"	20.7"	1.6"	37.6"
2520	63.3"	87"	80.4"	20.7"	1.6"	37.6"

Standard Accessories

- Infinite variable workhead w/servo motor
- Fanuc CNC Controller (0i TF) /(Opt.Mitsubishi M80)
- 2 Carbide tipped centers (MT3/C10)
- Diamond Dresser and Stand
- Automatic wheel speed change (15 steps)
- X Axis Heidenhain linear scale (resolution 0.000002")
- Levelling bolts and blocks
- Operation manual and part lists
- Grinding Wheel + Wheel Flange
- Fully-enclosed splash guard
- Micro-taper adjustment on tail stock
- Upper table

- Standard coolant tank 140L
- MPG handwheel 2 Axes control
- Automatic lubrication system
- Roller type balancing stand/arbor
- LED work light
- Tools and Tool Box
- Electric cabinet w/ heat exchanger
- Wheel Extractor
- 4-color indication signal light
- Electrical wiring diagram

Optional Accessories

- FANUC 0i-TF control w/ iGrind programming software
- Mitsubishi controller (M80) iGrind program
- NN Bearing type wheel head
- Electrical cabinet air conditioner
- Workhead upgrade to MT4 (only 2520)
- Tailstock upgrade to MT4 (only 2520)
- Roller type balancing stand/ arbor
- CE standard electrical cabinet
- Automation with robot arm
- Touch probe
- Transformer
- Workpiece carrier
- Workpiece supporting seat, 2pc / set
- 2 Point Steady Rest
- 3-jaw scroll chuck
- 5C air collect closer

- BS VM25 Integration system (OD gauging+ crash & gap control + dynamic balance system)
- BS VM15 Integration system (OD gauging+ crash & gap control)
- Pneumatic tailstock (w/ foot pedal)
- Z Axis Heidenhain linear scale (resolution 0.000002")
- Manual grinding wheel balance system (vibrator)
- Grinding wheel dynamic balance system
- Gap & crash control device
- Safety door lock
- Auto gauging device
- Coolant system with magnetic separator & paper filter
- Coolant system with magnetic separator
- Coolant system with paper filter
- Oil & mist collecting system
- Spare grinding wheel flange
- Full-Carbide center tip

* Supertec reserves the right to change specifications without notice