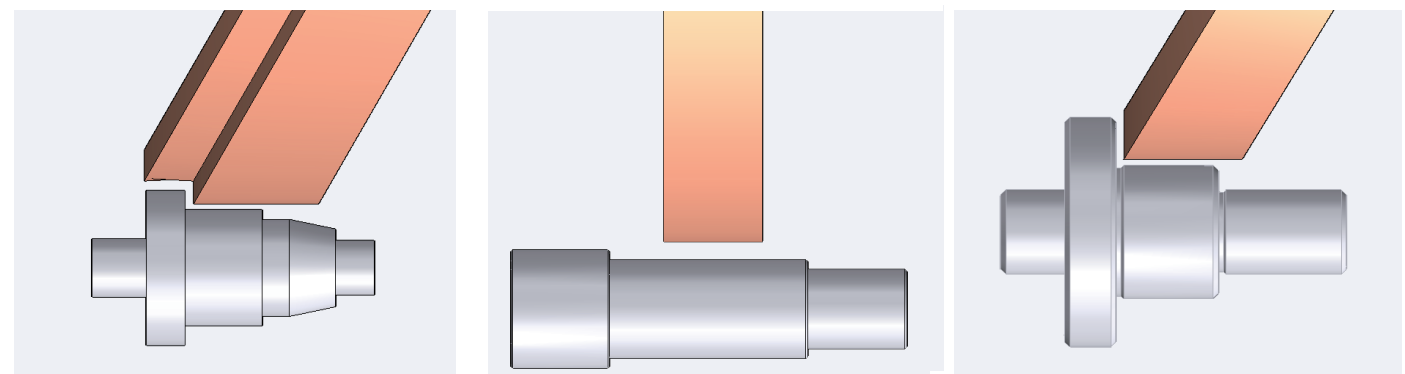




Mini Genie CNC • Printed in Taiwan • E3 • 10/2021 • en

CNC Cylindrical Grinder

Mini Genie Series (EGP-2020/2520)



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1 EGP Series Mini Genie CNC Cylindrical Grinder

EGP Series grinders are designed for high precision, high efficiency, and ease of operation. They are suitable for various applications including but not limited to automatic, aerospace, medical instrument, tooling, job shop and mold industries.

Features

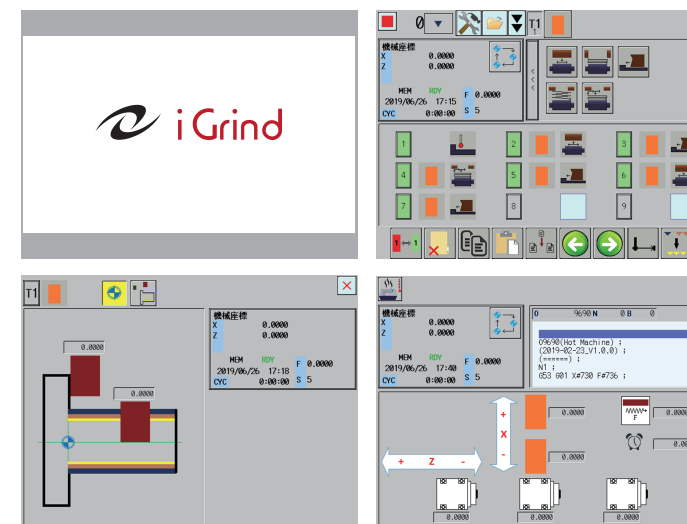
- Mini Genie is a high-efficiency cylindrical grinding machine with ultimate reduction in footprint. With a floorspace requirement of less than 3 square meter and 405/510mm diameter grinding wheel, it is suitable for small workpieces machining. Distance between center is designed to be 200mm, the center height is 110/130mm, and the maximum weight of workpiece can be processed is 20kg.

iGrind CNC Controller

- e-tech Machinery continues its years of software development experience with the introduction of iGrind, the easy to learn easy to program software on the Mini Genie grinders. It can grind various spare parts efficiently with the easy-setting software, and can be combined with multiple measurement systems or even automatic machining system.

Modular Automation Application

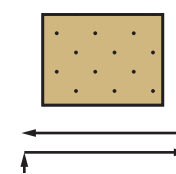
- e-tech is good at helping customers increase productivity. Through process modularization and automation, it can improve long-term processing efficiency and maintain accuracy stability.
- Mini Genie with robotic system is suitable for workpieces in small quantity and various styles.



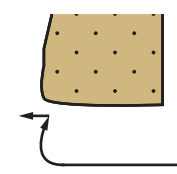
Wheel Dressing Cycle

Plunge Type

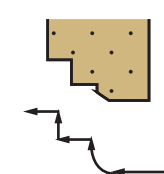
Straight - Parallel



LHS Radius and Concave below

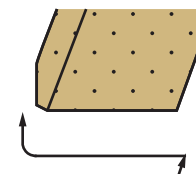


Steps Wheel (option)
(Under 15 points)

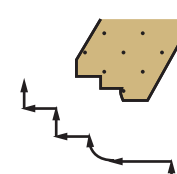


Angular Type

Wheel with radius



Steps Wheel (option)
(Under 15 points)



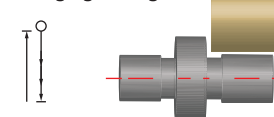
Remarks :

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

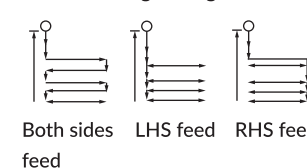
Grinding Cycle

Plunge Type

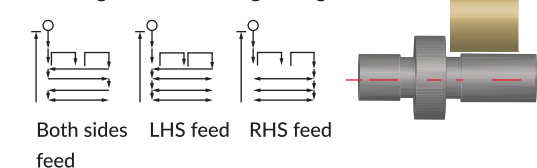
1. Plunge grinding



2. Traverse grinding

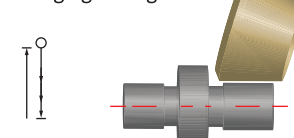


3. Plunge And Traverse grinding

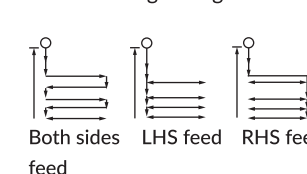


Angular Type

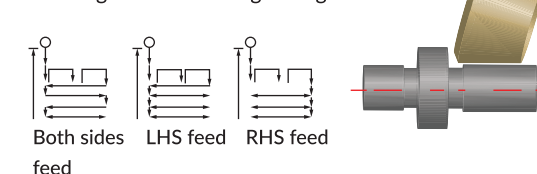
1. Plunge grinding



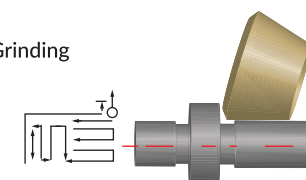
2. Traverse grinding

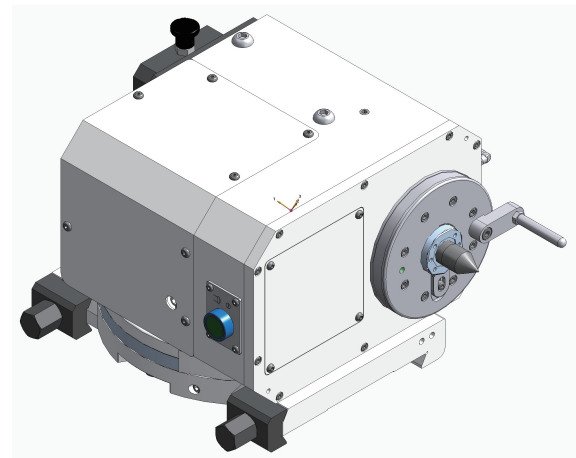


3. Plunge And Traverse grinding



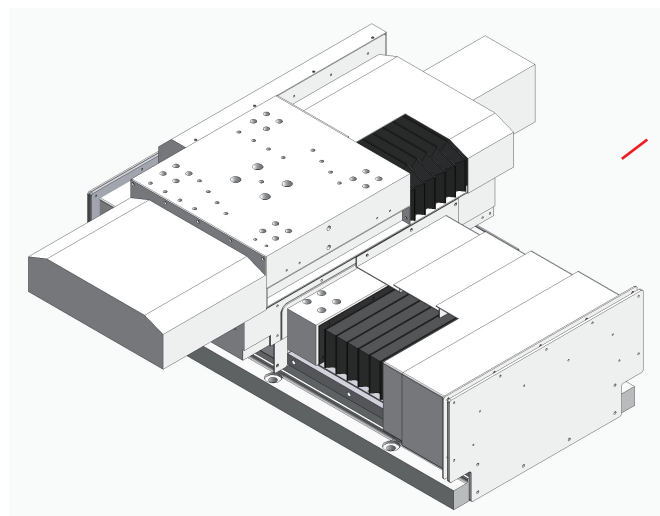
4. OD +End Face Grinding





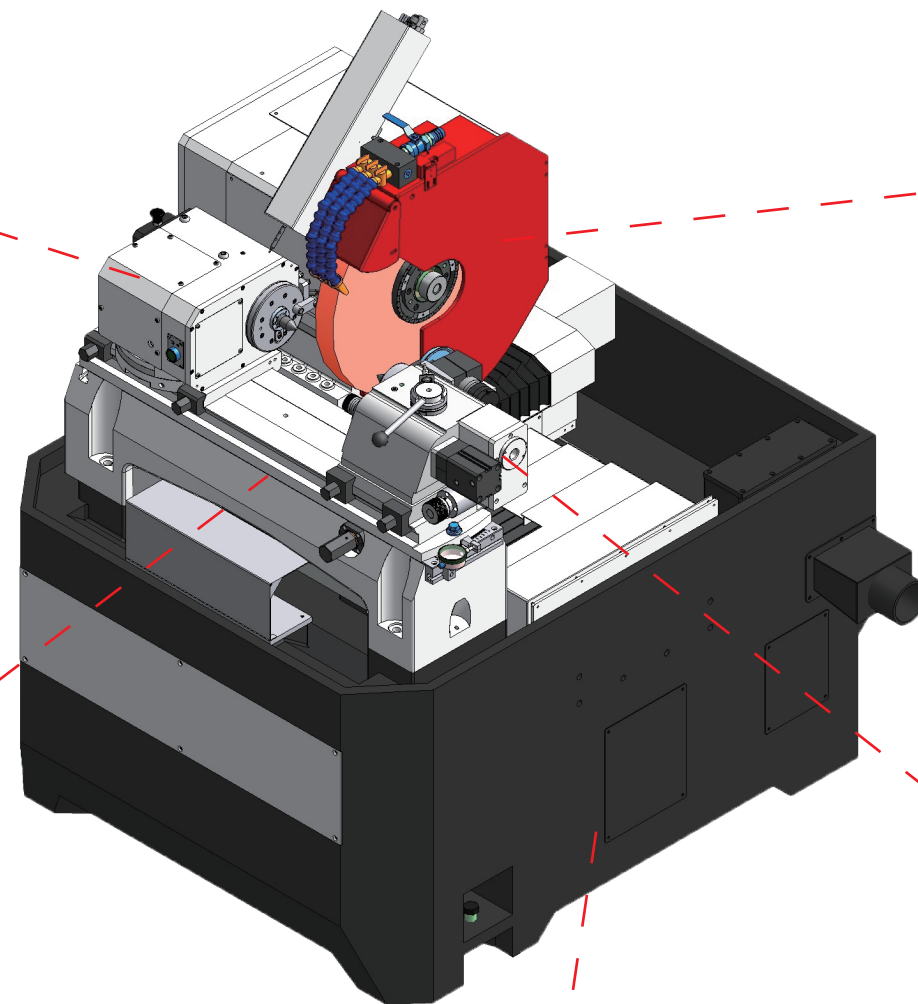
Work Head

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 it prolongs its life.



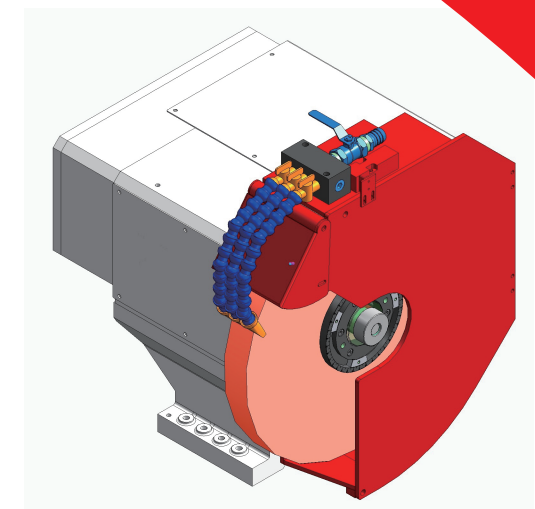
Cross Slides

The structure of cross slides is made of Meehanite cast iron. Its good thermostability compensates for temporary temperature changes. (Roller bearing and straight lead rail with Heidenhain linear scale)



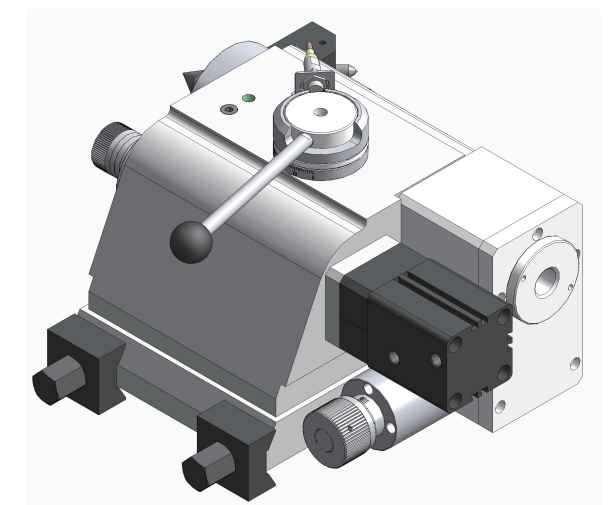
Machine Base

Bath type of machine base is made in Meehanite cast iron, which experience natural aging and twice stress relief to make machine base itself more stable and durable.



Wheel Head

NN bearing designed work spindle with high power motor provides enough power to outer diameter 405mm of wheel head, and improves processing efficiency. The angle of wheel head could be choose as 0 or 20 degree.



Tail Stock

Oil-bath tail stock remains lubrication and makes the machine more durable. Tailstock taper adjustment feature makes workpiece setting faster.

| Model | | | EGP-2020 | EGP-2520 |
|-----------|---|-------|--------------------|--------------------|
| Grinding | Swing over table | mm | φ210 | φ250 |
| | Distance between centers | mm | 200 | 200 |
| Capacity | Max. grinding diameter | mm | φ200 | φ230 |
| | Max. load held between center | kg | 20 | 20 |
| | Center distance between spindle and slide table | mm | 110 | 130 |
| | Diameter x Width x Bore | mm | φ405×50×φ127 | φ510×50×φ152.4 |
| Wheel | Motor rapied power / max. torque | Kw/Nm | 3.7/17.7 | 5.5/27.6 |
| | Wheel speed | rpm | 1570 (Opt.2100) | 1250 (Opt.1650) |
| | Spindle type | - | bearing spindle | bearing spindle |
| | Wheel head angle | deg | 0 or 20 | 0 or 20 |
| | Max. manual swiveling angle | deg | 90 | 90 |
| Work Head | Spindle speed (infinite variable) | rpm | 10 ~ 600 | 10 ~ 600 |
| | Motor rated power / max. torque | kw | 0.75 | 0.75 |
| | Center taper | - | MT3 | MT3 (Opt. MT4) |
| | Center working | - | Fixed or Rotary | Fixed or Rotary |
| | Diameter of bore | mm | φ20 | φ20 |
| | Tailstock quill travel | mm | 25 | 25 |
| Tailstock | Center taper | - | MT3 | MT3 (Opt. MT4) |
| | Micro-taper adjustment | mm | ±0.04 | ±0.04 |
| | Travel | mm | 200 | 200 |
| X Axis | Max. rapid feedrate | m/min | 6 | 6 |
| | Heidenhain linear scale resolution | um | 0.05 | 0.05 |
| | Min. increment | mm | 0.0001 | 0.0001 |
| | Servo motor rated power | Kw | 1.2(F) / 1.5(M) | 1.2(F) / 1.5(M) |
| | Guide way | - | linear way | linear way |
| | Travel | mm | 300 | 300 |
| Z Axis | Swiveling angle | deg | +8° ~ -3° | +8° ~ -3° |
| | Max. rapid feedrate | m/min | 8 | 8 |
| | Min. increment | mm | 0.0001 | 0.0001 |
| | Servo motor rated power | Kw | 1.2(F) / 1.5(M) | 1.2(F) / 1.5(M) |
| | Guide way | - | linear way | linear way |
| Motor | Hydraulic pump | Kw | 0.38 | 0.38 |
| | Coolant pump | Kw | 0.2 | 0.2 |
| Machine | Net Weight | kg | 2500 | 2500 |
| | Measurement | mm | 1300 x 2300 x 2000 | 1300 x 2300 x 2050 |

Standard Accessories

- Infinite variable workhead w/servo motor

Fanuc CNC Controller (0i TF) /(Opt.Mitsubishi M80)

Carbide center tip (MT3/C10)

Diamond Dresser and Stand

Automatic wheel speed change (15 steps)

X Axis Heidenhain/Mitsubishi linear scale (resolution 0.05 um)

Levelling bolts and blocks

Operation manual and part lists

Grinding wheel + Wheel flange

Full-enclosed splash guard
- Standard coolant tank 140L

MPG handwheel 2 Axes control

Automatic lubrication system

Roller type balancing stand/arbor

LED working light

Tools and Tool Box

Electricity cabinet w/ heat exchanger

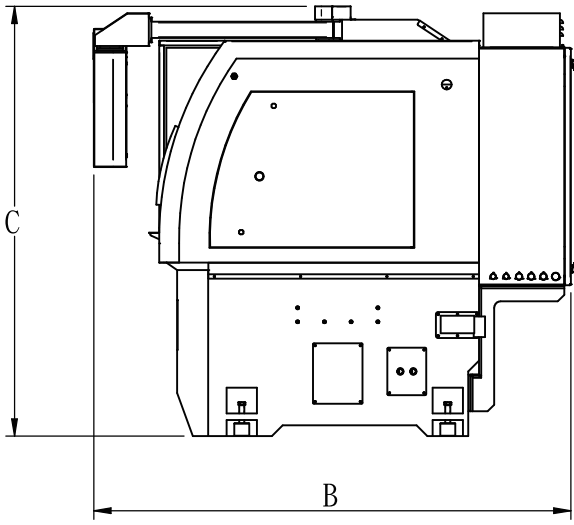
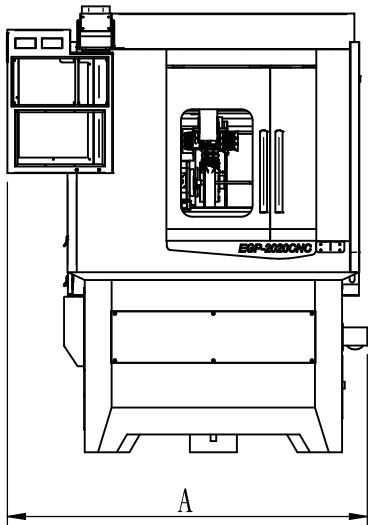
Wheel extractor

4-color indication signal light

Electrical wiring diagram

* e-tech reserves the right to change specifications without notice

Measurement



| EGP | A | B | C |
|------|------|------|------|
| 2020 | 1608 | 2212 | 1993 |
| 2520 | 1608 | 2212 | 2043 |

Optional Accessories

- FANUC 0i-TF iGrind program

Mitsubishi controller (M80) iGrind program

Electrical cabinet air conditioner

Workhead upgrade to MT4 (EGP-2520CNC only)

Tailstock upgrade to MT4 (EGP-2520CNC only)

Roller type balancing stand/ arbor

CE standard electrical cabinet

Automation with robot arm

Touch probe

Transformer

Workpiece carrier

Workpiece supporting seat, 2pc / set (EGP-2520CNC only)

2 Point Steady Rest (EGP-2520CNC only)

3-jaw scroll chuck (EGP-2520CNC only)
- BS VM15 Integration system (OD gauging+ crash & gap control)

Hydraulic tailstock (w/ foot pedal)

Z Axis Heidenhain/Mitsubishi linear scale (resolution 0.05 um)

Manual grinding wheel balance system (vibrator)

Gap & crash control device

Safety door lock

Automatic 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