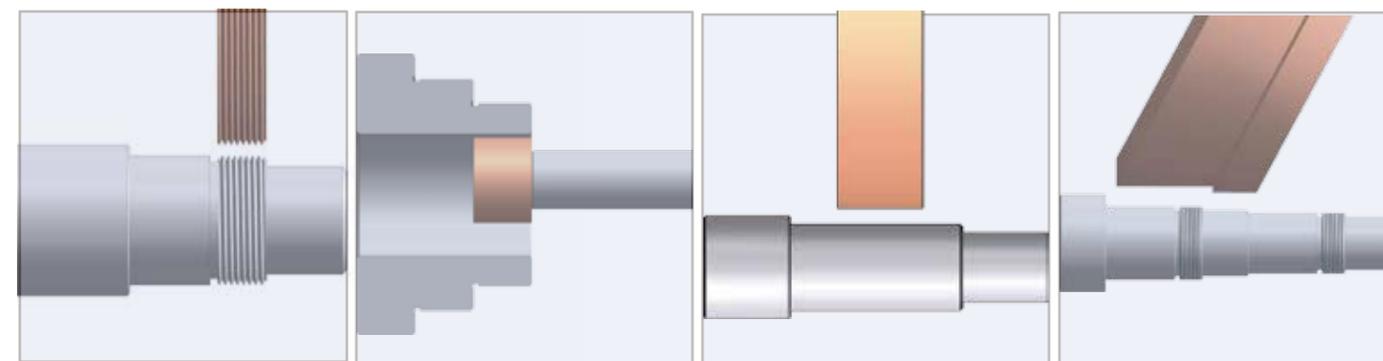


CNC Precision Hybrid ID & OD Grinder EGP-B series

EGP-B CNC • Printed in Taiwan • E2 • 12/2019 • en



Grinder Professionals

e-tech USA

6435 Alondra Blvd, Paramount,
CA.90723

E-mail : info@supertecusa.com

TEL : (562) 220-1675

e-tech Asian Operation Center

No.36, Ln.686, Sec.4, Changping Rd.,

Daya Dist., Taichung City 428

Taiwan(R.O.C)

E-mail : info@etechtw.com

TEL : 886-425686418

WEB: www.etechtw.com

EGP-B series CNC Precision Hybrid ID & OD Grinder

Cylindrical Grinder EGP series of Etech Machinery is a leading series amount manufacturer in Taiwan. Joined technology and experience of EGM composite grinding machine, Etech developed the complex grinding machine with higher precision.

Features

- Taking advantage of the cylindrical grinding machine in the leading position in the Taiwan market, Etech Machinery developed the structure of the box-type base and fully supported lower slide structure to ensure the integrity of the foundation stiffness.
- Equipped with the full-screen touch interface of Etech Machinery i-Grind, it is easy to learn and operate for operators. It is not only loved by the majority of users, but also enables new users to enter the field of grinding in a very short time.
- Unique B-axis turntable design is high rigidity, high positioning accuracy, and software flexibility application, to meet the needs of grinding complex workpieces. Different from other brands, it shows the essence of composite grinding machine.



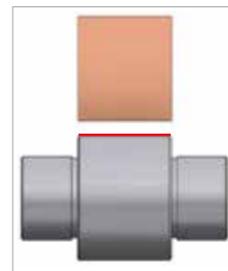
CNC Controller

- High speed Box type dressing function drastically reduces dressing time (Mitsubishi M80)
- Optional graphic conversational programming for grinding and wheel dressing (Mitsubishi)
- Dressing interrupt function during the grinding cycle can save time for the initial set-up.
- 10.4" color touch screen for Mitsubishi M80.
- Internal / External cylindrical compensation function.
- 0.001mm least increment input for X/Z axes.
- 1deg. least increment input for B axis.
- Programs can be stored for future use.
- Current anti-collision function.
- MPG simulation function to test-run for the program to avoid accidental wheel crash.

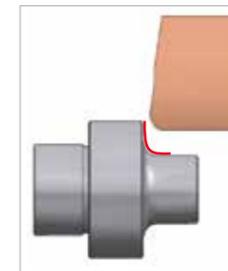


Standard grinding cycles and multi-steps graphic conversational functions

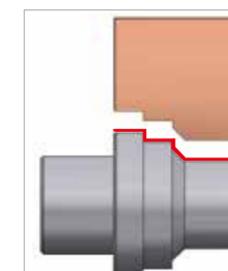
Wheel T1



Plunge grinding



OD + Radius + Face

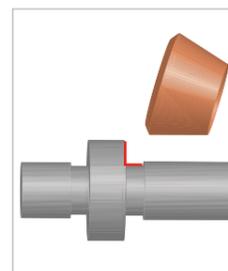


Profile grinding

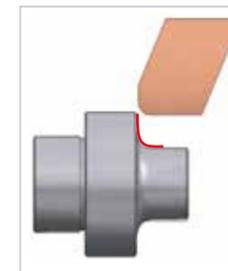


Thread grinding

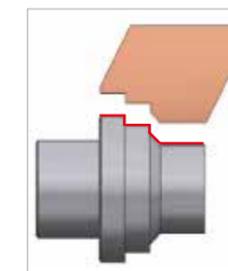
Wheel T2



Outer diameter + End Surface

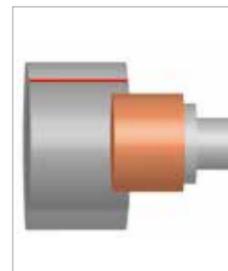


OD + Radius + Face

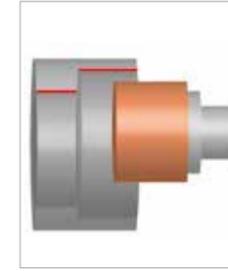


Angular profile grinding

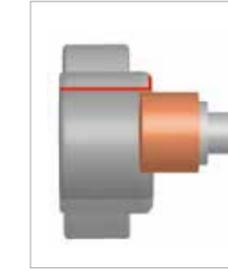
Wheel T3



Inner through hole



2 steps straight hole



Inner through hole + outer end face (gear trip)

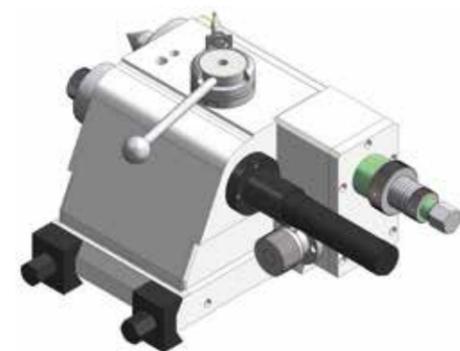


Inner radius grooving



Work Head

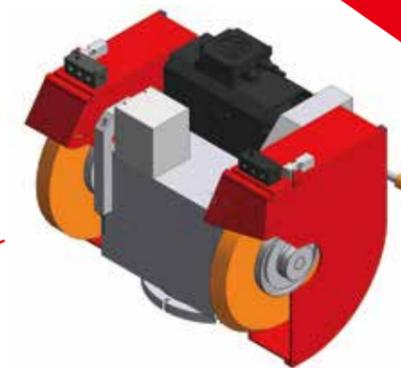
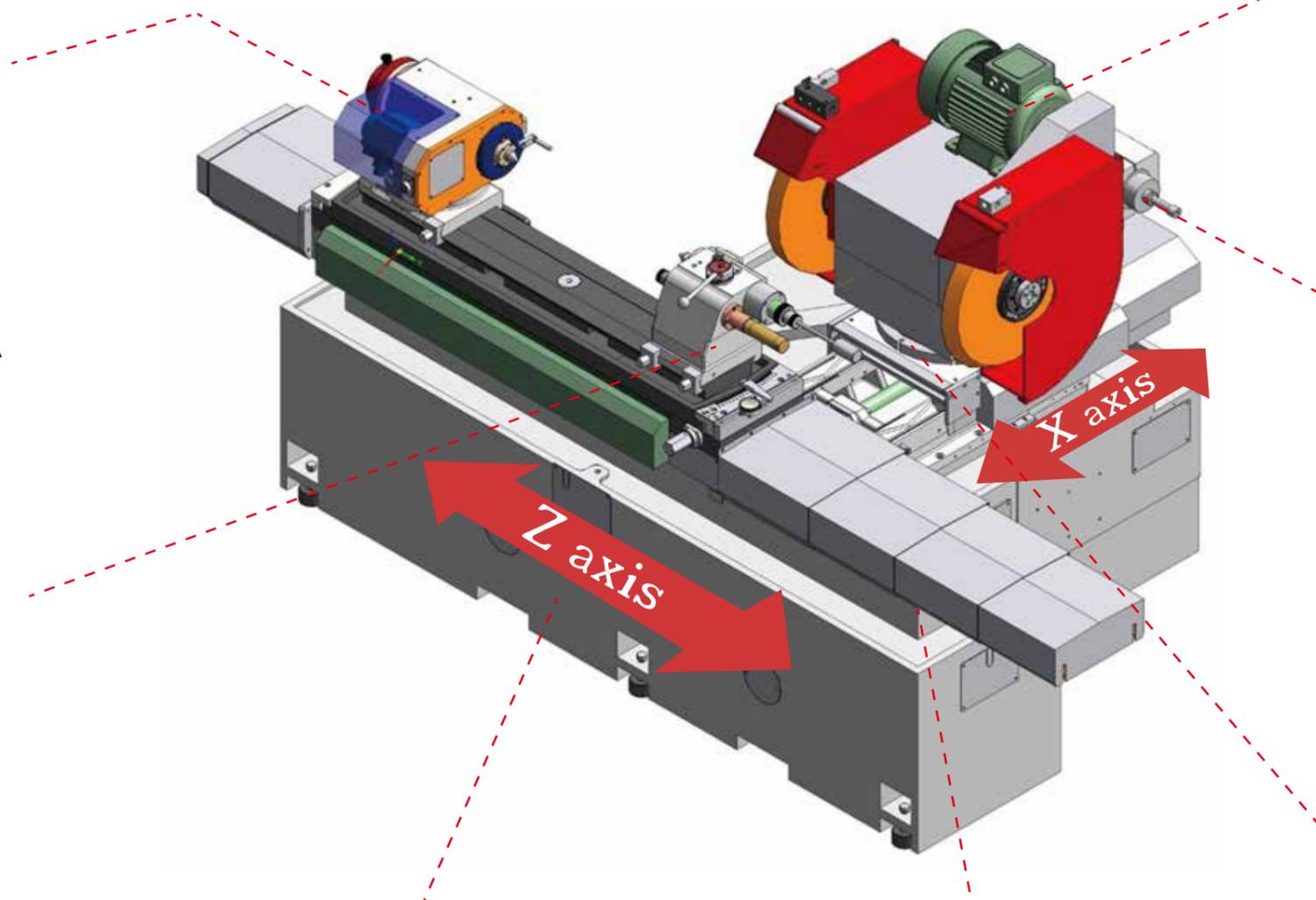
NN bearing designed work spindle offers heavy duty load capacity, optimal rotation accuracy, and high rigidity. The servo motor drive offers steady speed and torque during the grinding operation. A positive air purge system keeps grinding swarf and coolant out of the work head, thus it prolongs its life.



Tail Stock

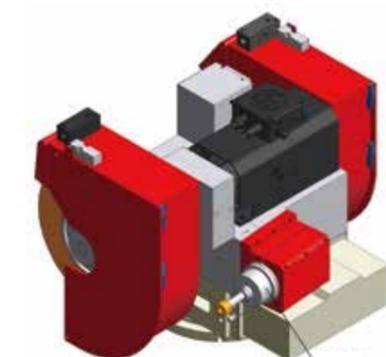
A coolant nozzle is installed on the top of the tailstock for cooling the center tip. An air floating device allows for smoother movement and protection of the table. It is capable of slightly adjustment and no need to reset dressing zero.

- An optional tailstock quill travel of 75mm helps to load/unload the workpiece with ease. The quill is oil-bathed to ensure smooth movement.
- An optional tailstock taper adjustment feature allows the operator to easily adjust for taper error.



Wheel Head

T1 and T1 share a spindle. NN bearing designed work spindle ensures rigidity and accuracy while grinding, and provides a bigger output power to increase grinding efficiency. (Standard line speed: 45 m/sec)



Built-in Spindle

ID Grinding Spindle

ID grinding spindle of T3 axis is designed with built-in spindle. It not only reduces the space, but provides steady torque and rigidity. (Opt.)



Rigid Machine Base

The machine based is designed with ribbed-box structure which thickness is 25mm, and internalized coolant guide with three outlet. This design provides excellent rigidity and stability of the machine, and also ensure accuracy and quality of grinding.



X-axis Guideway

The hand scraped Double V guideways provide maximum support to the wheel head for greater stability and grinding capacity. This design insures superior accuracy over the life of the machine.



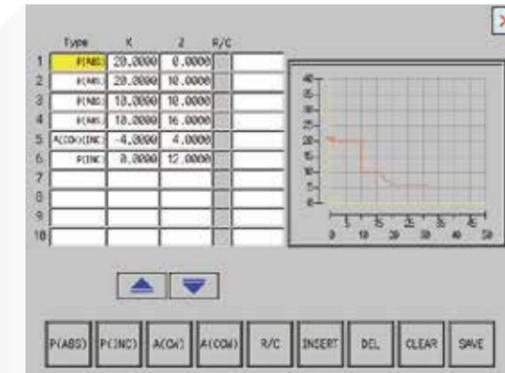
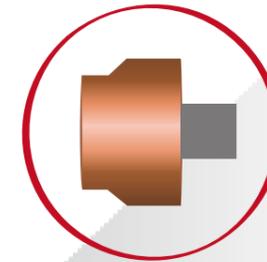
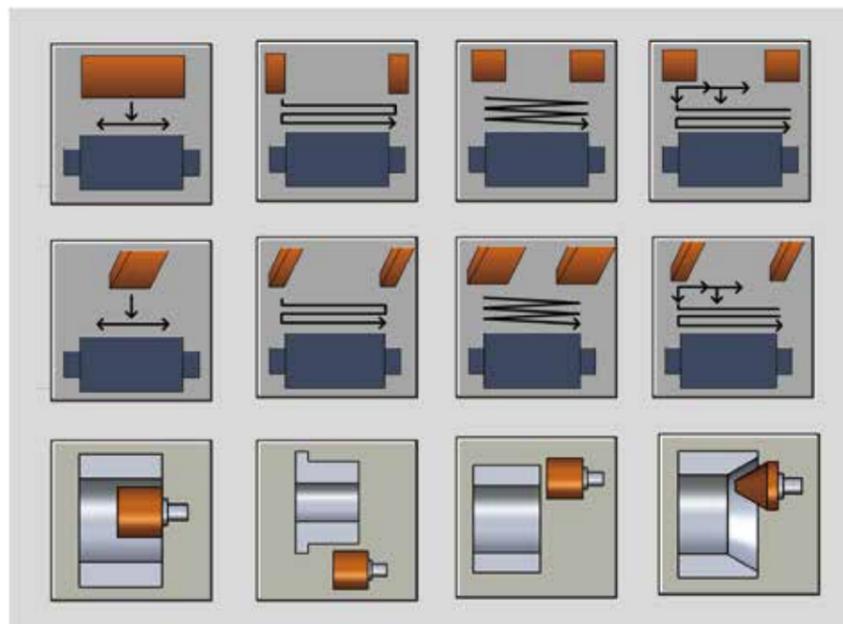
Rotary Table

Positioning by three-piece tooth type clutch gear. It is high positioning accuracy, able to hold heavy-duty working, and good water-proof.

- Operation set-up through simple graphic display icons for easy learning progress.

The main interface shows a top menu bar with 'Edit/Execute', 'File Management', 'T1 Option', 'T2 Option', and 'T3 Option'. Below this is a 'Machine Positioning & Situation Display' showing X, Y, Z coordinates and machine status. A central area contains 'Grinding Mode Selection' icons. A bottom section has 'Intelligence Sequence Selection' buttons (1-9) and 'Axial Compensation Selection' controls. A 'Former Page' button is also visible.

- Grinding mode selection



Grinding Wheel Dressing

With the iGrind high speed box type dressing function, the operator just have to input the necessary parameters for the dresser and the geometric data of the profile to create the optimal dressing path. Thus, it drastically reduces the wheel dressing time.

The 'T2 Angular wheel parameter setting' screen shows a 3D model of a grinding wheel with various parameters and a graph for profile grinding customization.

T2 Angular wheel parameter setting

The 'T3 ID wheel parameter setting' screen shows a 3D model of an internal diameter grinding wheel with various parameters and a graph for profile grinding customization.

ID wheel parameter setting

The 'Profile grinding customization' screen shows a 3D model of a grinding wheel with various parameters and a graph for profile grinding customization.

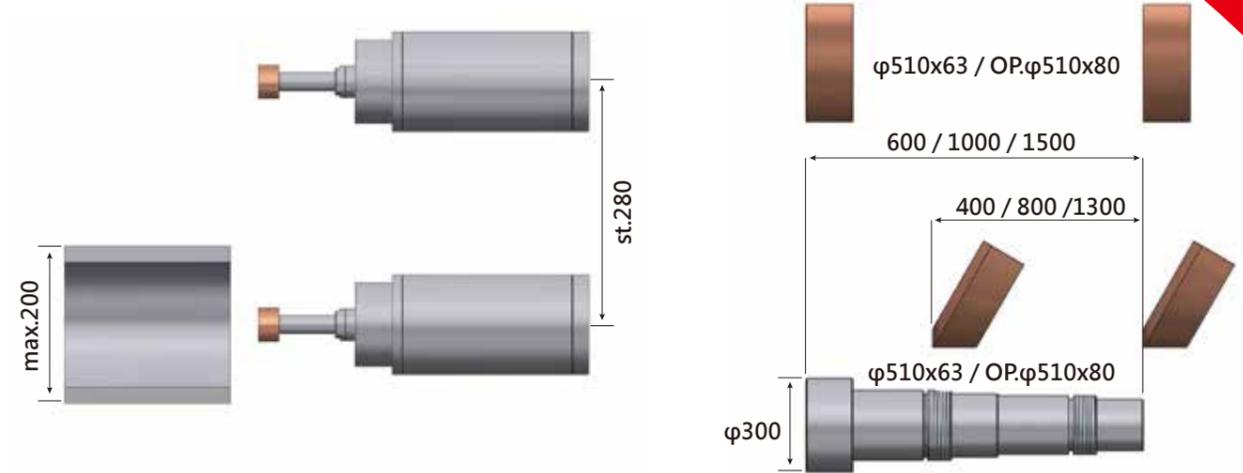
Profile grinding customization

7 Grinding Example



ID auto. gauging device

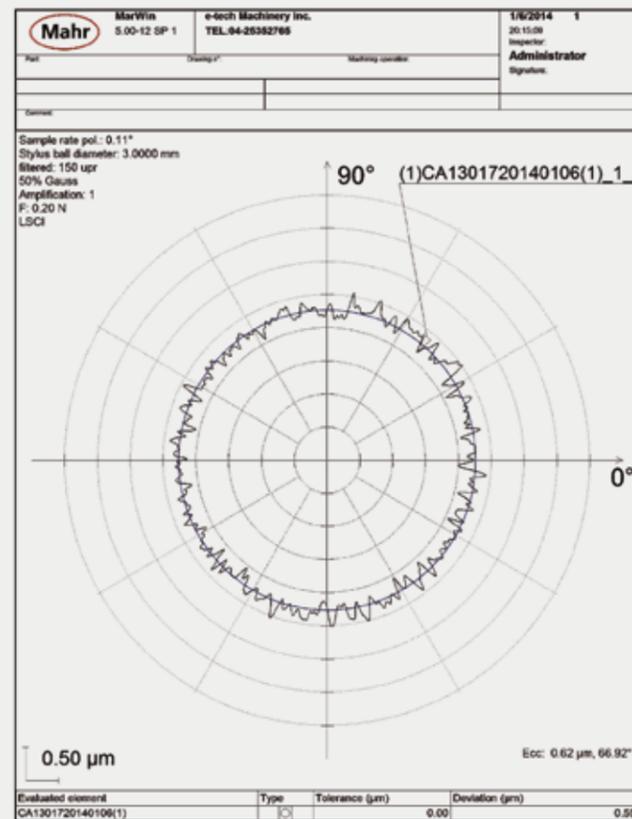
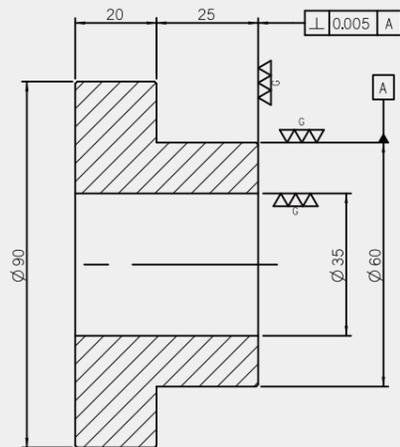
Grinding Range



Process ID $\phi 6 \sim \phi 150\text{mm}$ (Wheel diameter max.60mm)
Max. travel 600mm (Exclude chuck)

Parts Name:

- Material : SCM415(JIS)
- Workpiece dimension : $\phi 90 \times 45 \times \phi 35\text{mm}$
- Grinding application : 0.25mm/60 sec.
- Hardness : HRC55 $\pm 2^\circ$
- Dimension tolerance : 5 μm
- Grinding wheel speed : 20,000 rpm
- Roundness : 2 μm
- Cylindricity : 3 μm



T1+T3



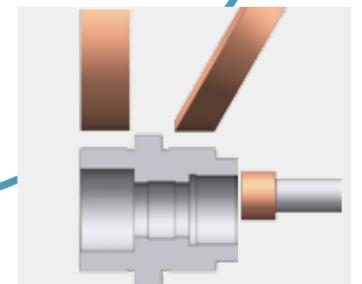
T2+T3



T3

T1

T2



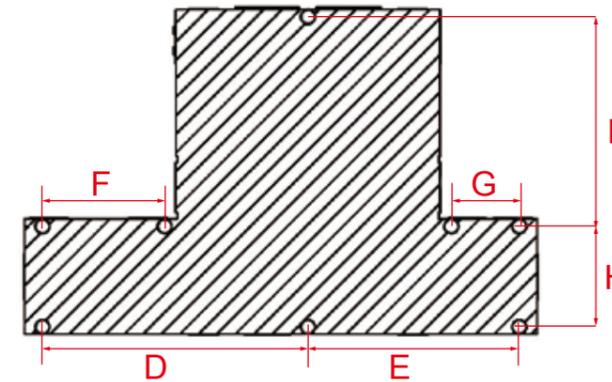
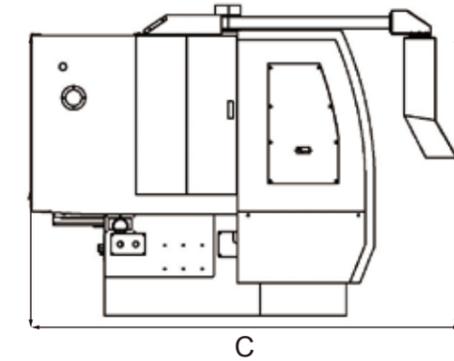
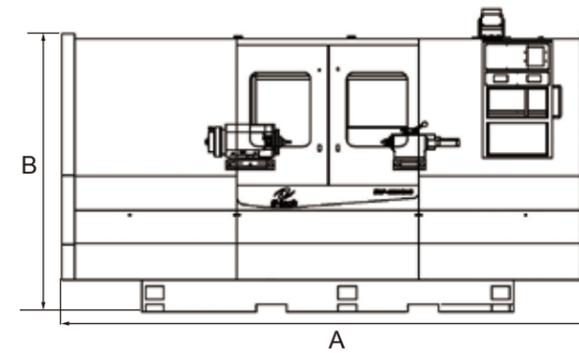
T1+T3

T1+T2+T3

9 Specification : EGP-B Series

Model			EGP-3860B	EGP-38100B
Grinding Capacity	Swing over table	mm	φ380	φ380
	Distance between centers	mm	600	1000
	Max. grinding diameter	mm	φ360	φ360
	Max. load held between center	kg	150	150
	Center distance between spindle and slide table	mm	192	192
Grinding Wheel T1, T2	Diameter x Width x Bore	mm	Lφ510x50xφ152.4 Rφ405x50xφ152.4	
	Motor rapid power / max. torque	Kw/Nm	7.5Kw/49Nm	
	Wheel speed	rpm	1250 (Opt. 1650)	
Built-in Spindle T3	Opt.		Opt.	
Workhead	Swiveling angle	deg	90	
	Spindle speed (infinite variable)	rpm	10 ~ 600	
	Motor rated power / max. torque	kw	1.5	
	Center taper	-	MT4 (Opt. MT5)	
	Spindle type	-	Fixed or rotary	
Tailstock	Diameter of bore	mm	φ26	
	Quill travel	mm	25 (Opt.50/75)	
	Center taper	-	MT4 (Opt. MT5)	
X Axis	Travel	mm	280	
	Max. rapid feedrate	m/min	6	
	Heidenhain linear scale resolution	um	0.05	
	Min. increment	mm	0.0001	
	Servo motor rated power	Kw	1.8Kw(F)/2.2Kw(M)	
Z Axis	Travel	mm	1000 1400	
	Swiveling angle	deg	±9	
	Max. rapid feedrate	m/min	10	
	Min. increment	mm	0.0001	
	Servo motor rated power	Kw	1.8Kw(F)/2.2Kw(M)	
B Axis	Swiveling angle	deg	-30 ~ +210	
	Max. rotation speed	rpm	15	
	Min. increment	deg	1	
	Servo motor rated power	Kw	1.2Kw(F)/1.5(M)	
Motor	Hydraulic pump	Kw	0.75	
	Guide way lubrication pump	Kw	0.2	
	Coolant pump	Kw	0.2	
Machine	Net Weight (semi-enclosed splash guard)	Kg	6000	
	Gross Weight	Kg	6800	

Measurement



EGP-B	A	B	C	D	E	F	G	H	I
3860	3700	1800	2760	1270	1010	585	385	480	1000
38100	4500	1800	2760	1670	1410	985	725	480	1000

Standard Accessories

Mitsubishi controller (M80) iGrind program	Standard coolant tank 140L
T1 Plunge type wheel + 6" wheel flange	Carbide center tip MT4/C14
T2 Angular type wheel + 6" wheel flange	LED working light
T3 Internal std. wheel w/o spindle + quill	Operating manual and part list
Automatic wheel speed change (15 steps)	Standard oil cooler (cooling fan)
Infinite variable workhead w/servo motor MT4	Tools and Tool Box
X Axis Heidenhain linear scale (resolution 0.05 um)	Electricity cabinet w/ heat exchanger
B axis rotary index table -30~+210 degree	Balancing arbor & stand
Diamond dresser and stand	4-color indication signal light
Grinding wheel extractor	

Optional Accessories

Mitsubishi controller (M80) iGrind conversational program including radius / taper / multiple step / form shape dressing	Coolant system with magnetic separator 120L/min
Mitsubishi controller (M80) iGrind thread grinding program	Coolant system with paper filter 260L
Workhead upgrade to MT5	Grinding wheel dynamic balance system
Tailstock upgrade to MT5	Gap & crash control device
ID built-in type spindle 20,000 ~ 40,000 rpm (w/ dressing seat)	BS VM15 Integration system
ID built-in type spindle 40,000 ~ 60,000 rpm (w/ dressing seat)	(OD gauging+ crash & gap control)
Automatic 3-jaw hydraulic chuck	BS VM25 Integration system
Manual 3-jaw hydraulic chuck	(OD gauging+ crash & gap control + dynamic balance system)
Workpiece carrier	Full-enclosure splash guard
Workpiece supporting seat, 2pc / set	Spare grinding wheel flange 15.24
2 Point Steady Rest (Ø20~70mm)	Z Axis Heidenhain linear scale - 600CNC
2 Point Steady Rest (Ø70~120mm)	Z Axis Heidenhain linear scale - 1000CNC
3-point steady rest (Ø70~120mm)	Hydraulic tailstock (w/ foot pedal)
3-point steady rest (Ø120~200mm)	Auto gauging device
Diamond roller dressing device (Brand: Taiwanese maker)	Tailstock micro taper adjustment
Diamond roller dressing device (Brand: Dr. Kaiser, Germany)	Oil & mist collecting system
Coolant system with magnetic separator 80L/min	Touch probe
Coolant system with paper filter 210L	Electrical cabinet air conditioner
	Full-Carbide center tip

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