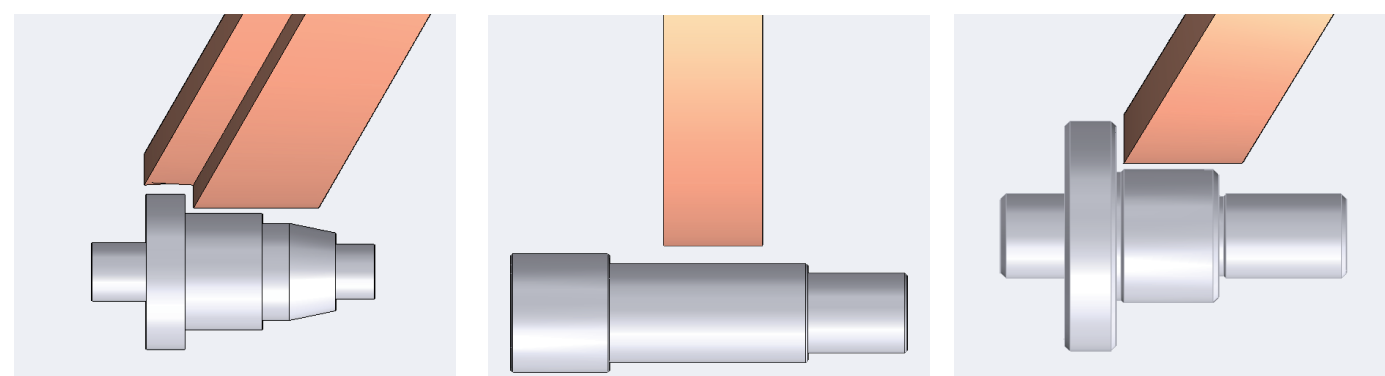




Rhino Series Printed in Taiwan EI 06/2022 en

## CNC Cylindrical Grinder

*Rhino Series*



### Grinder Professionals

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E-tech Machinery Grinder Professional

**Machine Features and  
Wheel Dressing Cycle**

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1

**Structure Features**

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3

**Specification: EGP Series**

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5

**Specification: EGA Series**

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7



FACEBOOK



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YOUTUBE



WEBSITE

# 1 EGP Rhino Series 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

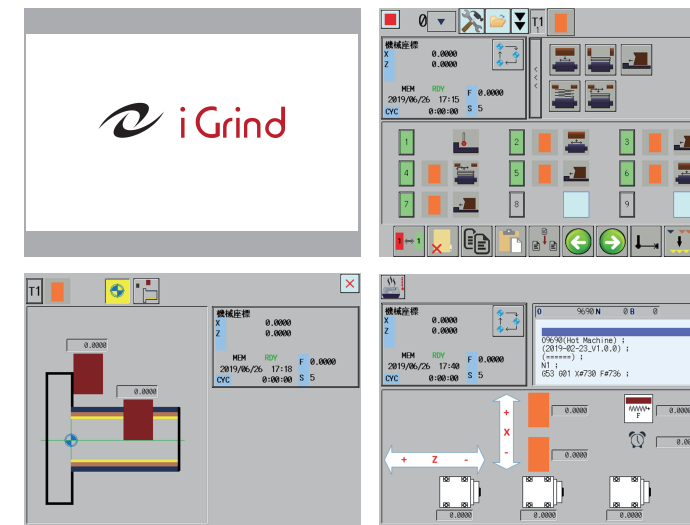
- For customers' heavy duty grinding purpose, e-tech strengthen and expand the machine into heavy duty series. The features include increasing 33% of the base span and 38% of the dovetail span, which greatly improves the load capacity of the workpiece and strengthen the center of gravity support for workpiece grinding. It highly increases the workload capacity and the force resistance from the center gravity during grinding. The work-head we choose is a Thru-hole spindle with MT5.Max. weight load capacity is up to 400kg.

## iGrind CNC Controller

- e-tech Machinery carry on the developing iGRIND software. The total graphic conversational software overcomes the language barrier, high technical level requirement toward GM codes, shorten the training time for beginners and conventional users, helping users to put their hands on the machine within the shortest amount of time. With such user-friendly settings, multiple and complete grinding cycles and paths, we can efficiently achieve various operation. Moreover, we can also combine with all kinds of measuring accessories, automatic system, and so on ....

## Modular Automation Application

- e-tech is good at helping customer increasing productivity. Combining our Maximum Swing design, modularized operation, automatic system, and experience, we can offer complete automatic solution toward heavier workpiece to increase grinding efficiency and stabilize the finish accuracy.

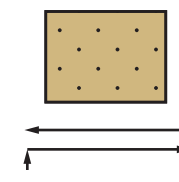


- OD Grinding / End Face Grinding / Form Grinding
- Form Dressing w/Auto Compensation
- Multiple Section Grinding Sequences
- Setup Parameter Storage
- Graphic Parameter Instruction

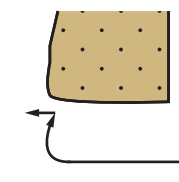
## Wheel Dressing Cycle

### Plunge Type

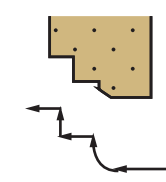
Straight - Parallel



LHS Radius and Concave below

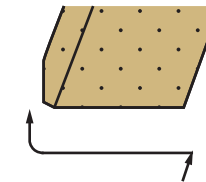


Steps Wheel (option) (Under 15 points)

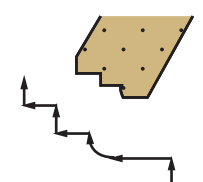


### Angular Type

Wheel with radius



Steps Wheel (option) (Under 15 points)



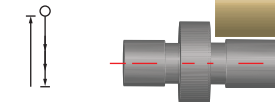
Remarks :

- Max. 5 types of wheel profile can be saved.
- Dressing condition can set rough, mediate and fine dressing
- Machine with ID attachment, setup has to be done by manual.

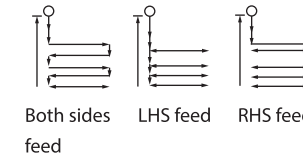
## Grinding Cycle

### Plunge Type

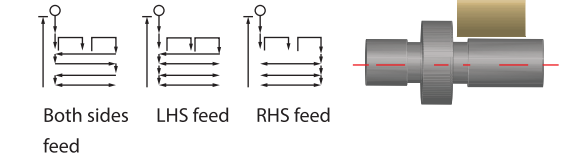
1. Plunge grinding



2. Traverse grinding

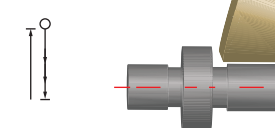


3. Plunge And Traverse grinding

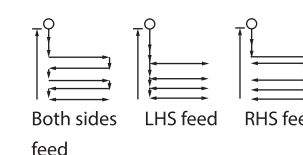


### Angular Type

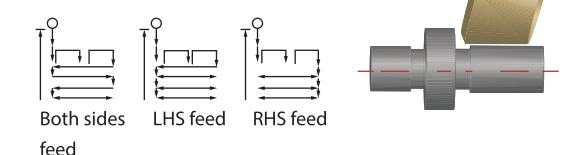
1. Plunge grinding



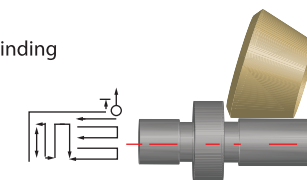
2. Traverse grinding



3. Plunge And Traverse grinding



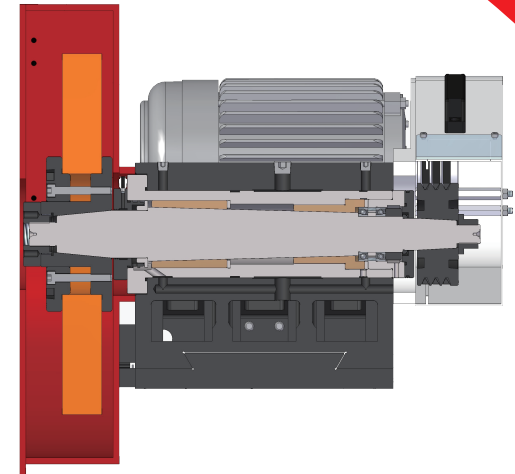
4. OD +End Face Grinding





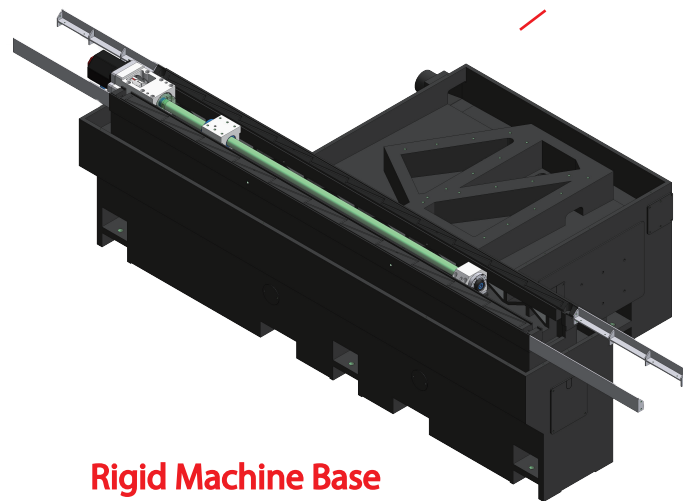
### Work Head

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. The features include increasing 38% of the dovetail span which greatly improves the load capacity of the workpiece.



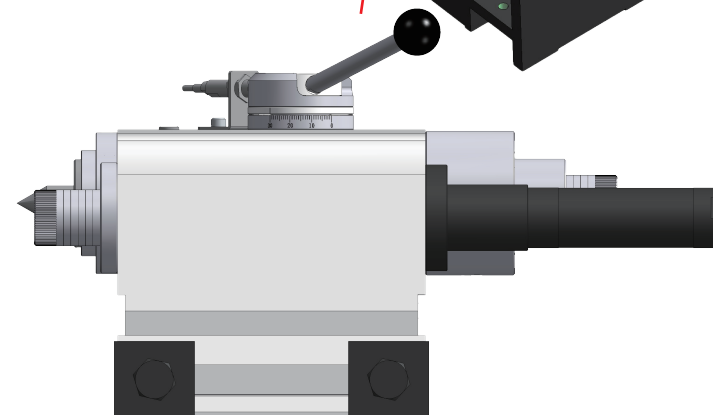
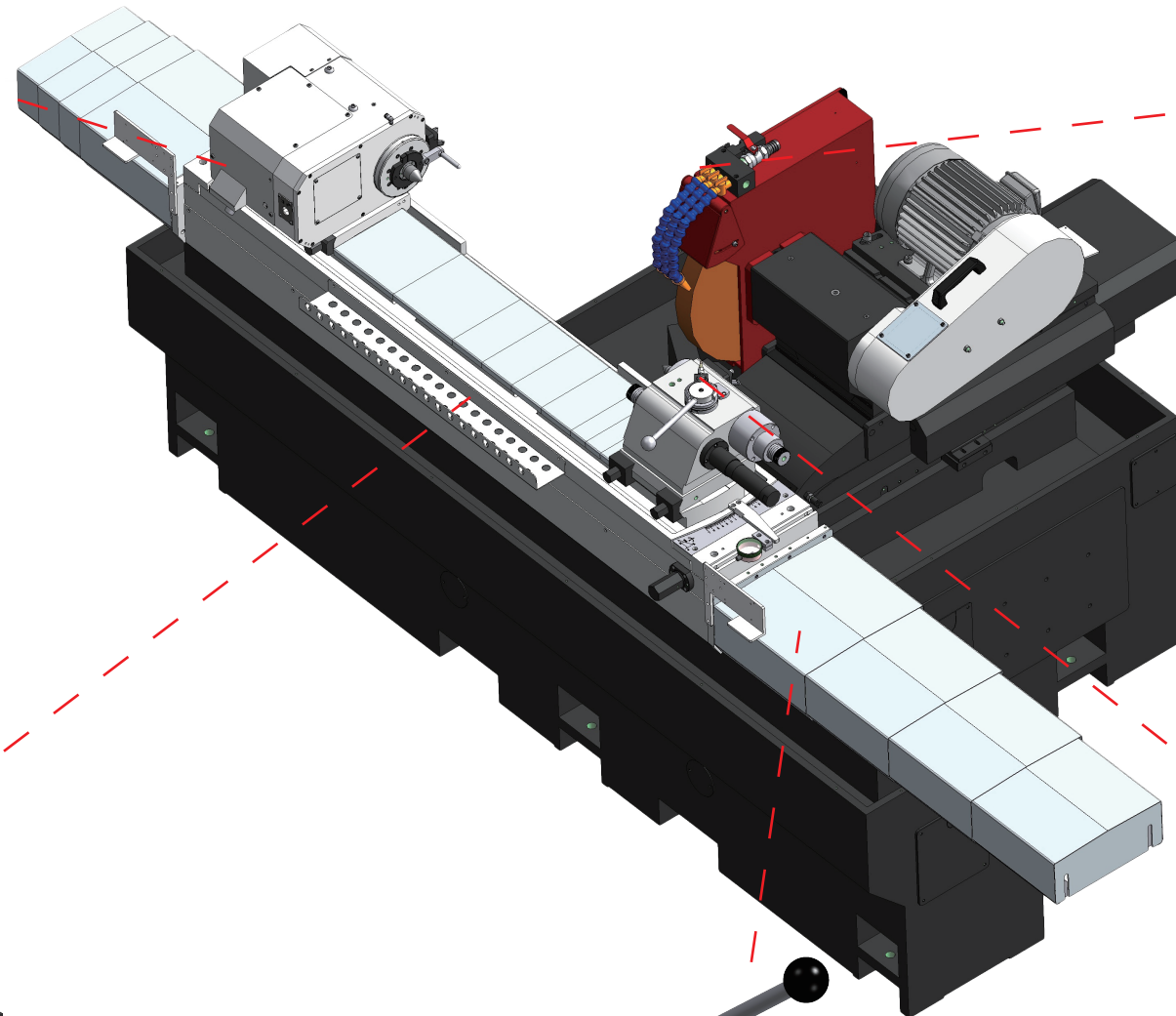
### Wheel head Spindle Bearing Options:

- Standard — Contact Bearing Type Spindle is easy to maintain, environmentally friendly and minimizes thermal growth issues.
- Optional — Hydrodynamic Babbit Bearing Type Spindle applies SNM220 super alloy steel with multiple heat treatments makes the surface hardness of spindle up to HRC 62. These features ensure maximum cutting capability and best part finish performance in the grinding operation.



### Rigid Machine Base

The machine based is designed to ensure the table is fully supported on both ends. The heavily ribbed box-type base is made of Meehanite casting, providing excellent rigidity and stability of the machine. The features include increasing 33% of the base span which strengthen the center of gravity support for workpiece grinding.

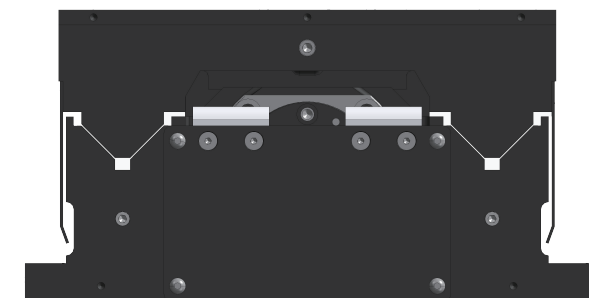


### Tail Stock

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. The features include increasing 38% of the dovetail span which greatly improves the load capacity of the workpiece.

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.



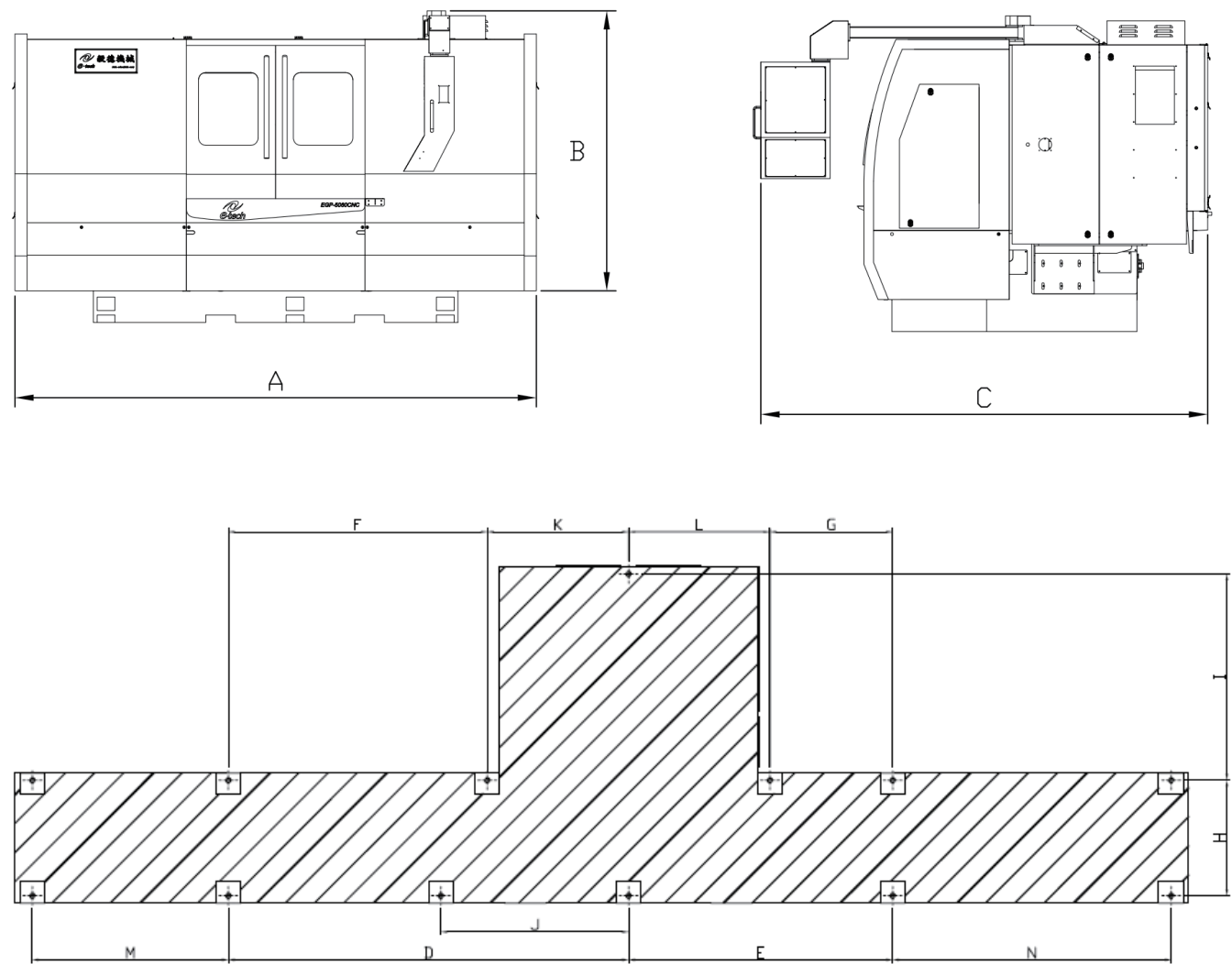
### X-axis Guideway

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.



Model			EGP-5060	EGP-50100	EGP-50150	EGP-50200
Grinding	Swing over table	mm	Ø500	Ø500	Ø500	Ø500
	Distance between centers	mm	600	1000	1500	2000
	Max. grinding daimeter	mm	Ø480	Ø480	Ø480	Ø480
	Max. load held between center	kg	150	150	150	250
	Center distance between spindle & slide table	mm	255	255	255	255
Capacity	Diameter x Width x Bore	mm	Ø510x50-100xØ152.4(6") Opt.Ø610x50-100xØ203.2 (8")			
	Motor rated power / max. torque	kW/Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)			
	Wheel speed	rpm	1250 (Opt.1650)			
Workhead	Swiveling angle	deg	90	90	90	90
	Spindle speed (infinite variable)	rpm	10 ~ 600	10 ~ 600	10 ~ 600	10 ~ 600
	Motor rated power / max. torque	kW	2	2	2	2
	Center taper	-	MT4 (Opt. MT5)			
	Spindle type	-	Fixed or Rotary			
	Diameter of bore	mm	Ø23(Opt.Ø65)			
Tailstock	Quill travel	mm	25 (Opt.50/75)			
	Cente taper	-	MT4 (Opt. MT5)			
X Axis	Travel	mm	270	270	270	270
	Max. rapid feedrate	m / min	6	6	6	6
	Heidenhain linear scale resolution	um	0.05	0.05	0.05	0.05
	Min. increment	mm	0.0001	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)
	Z Axis	Travel	mm	850	1250	1850
	Swiveling angle	deg	±9	±7	±5	±5
	Max. rapid feedrate	m / min	10	10	10	10
	Min. increment	mm	0.0001	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	2.5(F) / 3.5(M)	2.5(F) / 3.5(M)
	Motor	Hydraulic pump	HP	0.38	0.38	0.38
	Lubrication pump	HP	0.2	0.2	0.2	0.2
	Slideway lube motor	HP	0.2	0.2	0.2	0.2
	Coolant pump	HP	0.2	0.2	0.2	0.2
	Machine	Net Weight (semi-enclosed splash guard)	kg	6000	6300	6700
	Gross Weight	kg	6800	7100	7500	7700
	Size	kg	3510x2920x2100	4310x2920x2100	5610x2920x2100	7130x2920x2100

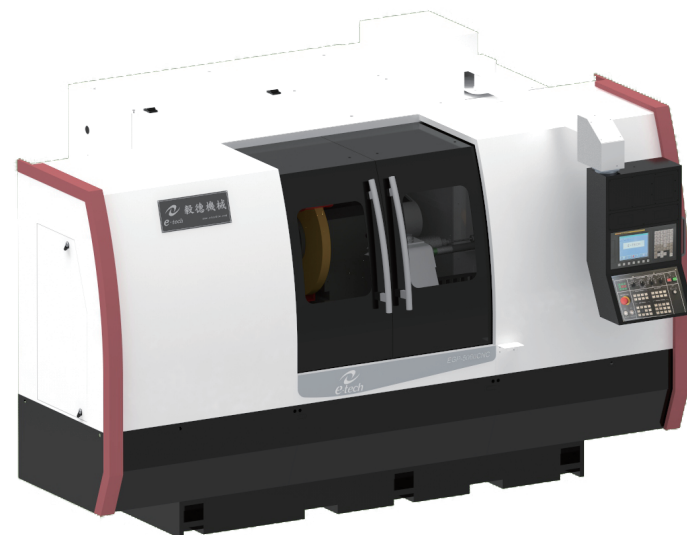
Measurement



EGP	A	B	C	D	E	F	G	H	I	J	K	L	M	N
5060	3500	2095	2950	1270	1010	585	325	560	1000	None	685	685	None	None
50100	4300	2095	2950	1670	1410	985	725	560	1000	None	685	685	None	None
50150	5600	2095	2950	1540	1280	855	595	560	1000	None	685	685	730	730
50200	7120	2095	2950	1940	1280	1255	595	560	1000	910	685	685	950	1350

EGA	A	B	C	D	E	F	G	H	I	J	K	L	M	N
5060	3500	2095	2950	1270	1010	585	325	560	1000	None	685	685	None	None
50100	4300	2095	2950	1670	1410	985	725	560	1000	None	685	685	None	None
50150	5600	2095	2950	1540	1280	855	595	560	1000	None	685	685	730	730
50200	7120	2095	2950	1940	1280	1255	595	560	1000	910	685	685	950	1350

Model			EGA-5060	EGA-50100	EGA-50150	EGA-50200
Grinding	Swing over table	mm	Ø500	Ø500	Ø500	Ø500
	Distance between centers	mm	600	1000	1500	2000
Capacity	Max. grinding diameter	mm	Ø480	Ø480	Ø480	Ø480
	Max. grinding length - dresser on workhead side	mm	450	850	1350	1850
	Max. grinding length - dresser on tailstock side (Opt.)	mm	600	1000	1500	2000
	Max. load held between center	kg	150	150	150	250
	Center distance between spindle and slide table	mm	255	255	255	255
			60*	60*	60*	60*
Grinding	Grinding wheel infeed angle	deg				
Wheel			Ø510x50-100xØ152.4(6")			
	Diameter x Width x Bore	mm	Opt.Ø610x50-100xØ203.2 (8")			
	Motor rapied power / max. torque	kW/Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)			
	Wheel speed	rpm	1250 (Opt.1650)			
Work Head	Swiveling angle	deg	90	90	90	90
	Spindle speed (infinite variable)	rpm	10 ~ 600	10 ~ 600	10 ~ 600	10 ~ 600
	Motor rated power / max. torque	kW	2	2	2	2
	Center taper	-	MT4 (Opt. MT5)			
	Center working	-	Fixed or Live			
	Diameter of bore	mm	Ø23(Opt.Ø65)			
Tailstock	Quill travel	mm	25 (Opt.50/75)			
	Cente taper	-	MT4 (Opt. MT5)			
X Axis	Travel	mm	270	270	270	270
	Max. rapid feedrate	m / min	6	6	6	6
	Heidenhain linear scale resolution	um	0.05	0.05	0.05	0.05
	Min. increment	mm	0.0001	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)
			850	1250	1850	2450
Z Axis	Travel	mm				
	Swiveling angle	deg	±9	±7	±5	±5
	Max. rapid feedrate	m / min	10	10	10	10
	Min. increment	mm	0.0001	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.8(F) / 2.2(M)	1.8(F) / 2.2(M)	2.5(F) / 3.5(M)	2.5(F) / 3.5(M)
			0.38	0.38	0.38	0.38
Motor	Hydraulic pump	kW				
	Lubrication pump	kW	0.2	0.2	0.2	0.2
	Slideway lube motor	kW	0.2	0.2	0.2	0.2
	Coolant pump	kW	0.2	0.2	0.2	0.2
Machine	Net Weight (semi-enclosed splash guard)	kg	6000	6300	6700	6900
	Gross Weight	kg	6800	7100	7500	7700
	Size	kg	3510x2920x2100	4310x2920x2100	5610x2920x2100	7130x2920x2100



## Standard Accessories

Infinite variable workhead w/servo motor	Standard coolant tank 140L
Diamond Dresser and Stand	MPG handwheel 2 Axes control
Automatic wheel speed change (15 steps)	Touch probe (for EGA series only)
Carbide tip center	LED working light
X Axis linear scale (resolution 0.05 um)	Tools and Tool Box
Levelling bolts and blocks	Electricity cabinet w/ heat exchanger
Operation manual and part lists	Semi-enclosed splash guard
Fanuc CNC Controller (0i TF)	Wheel Extractor
Grinding Wheel + Wheel Flange	4-color indication signal light
Standard oil cooler (cooling fan)	Electrical wiring diagram

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

## Optional Accessories

BS VM25 Integration system	FANUC 0i-TF i-Grind program
(OD gauging+ crash & gap control + dynamic balance system)	Mitsubishi controller (M80) i-Grind program
BS VM15 Integration system	Electrical cabinet air conditioner
(OD gauging+ crash & gap control)	Internal grinding attachment (for EGP series only)
Hydraulic tailstock (w/ foot pedal)	Workhead upgrade to MT4/MT5
Z Axis linear scale (resolution 0.05 um)	Tailstock upgrade to MT4/MT5
Manual grinding wheel balance system (vibrator)	Automatic 3-jaw hydraulic chuck
Grinding wheel dynamic (balance system)	CE standard electrical cabinet
Wheel spindle lubrication oil cooler for hydrodynamic spindle	Transformer
Gap & crash control device	Workpiece carrier
Safety door lock	Full-enclosed splash guard
Workhead spindle adjustment arbor	Workpiece supporting seat, 2pc / set
Auto gauging device	2 Point Steady Rest
Coolant system with magnetic separator & paper filter	3-point steady rest
Coolant system with magnetic separator	3-jaw scroll chuck
Coolant system with paper filter	4-jaw scroll chuck
Oil & mist collecting system	
Spare grinding wheel flange	
Full-Carbide center tip	

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