Supra Series nted Ľ a .E2.09/2024.en

# **CNC Cylindrical Grinder** Supra Series

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## **Grinder Professionals**



Machine Features and Wheel Dressing Cycle

**Structure Features** 

Specification: EGP Series

Specification: EGA Series



e-tech Machinery Grinder Professional



## EGP Supra Series CNC Cylindrical Grinder

EGP Series grinders are designed for high precision, high efficiency, and user-friendly operation. They are suitable for various applications including but not limited to automotive, aerospace, transmission parts, gear shafts, spindles, hydraulic and pneumatic parts, medical instrument, tooling, job shop and mold industries.

### Features

Supra series is a series of CNC cylindrical grinder with great grinding capacity, designing for high efficiency and energy saving. Although the weight is less than 4 tons, with Ø455 grinding wheel, the grinding performnce toward smaller, thinner, and lighter workpiece is effective and reliable, such as ballscrews and spindle or shafts with longer diameter-length ratio. Distance between enters is designed with 500mm, center height is 130mm, and the maximum weight load capacity is 100kg.

### *∞* i Grind 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 lightweight design, modularized operation, automatic system, and experience, we can offer complete automatic solution toward smaller workpiece to increase grinding efficiency and stabilize the finish accuracy.





### Wheel Dressing Cycle

### **Plunge Type**



Remarks :

1. Max. 5 types of wheel profile can be saved.

2. Dressing condition can set rough, mediate and fine dressing

3. Machine with ID attachment, setup has to be done by manual.

### **Grinding Cycle**

### **Plunge Type**



### **Angular Type**



4. OD +End Face Grinding



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

#### **Angular Type**

Wheel with radius



Steps Wheel (option) (Under 15 points)



3. Plunge And Traverse grinding
3. Plunge And Traverse grinding

Both sides LHS feed RHS feed



#### **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.

#### **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.



#### **Tail Stock**

A coolant nozzle is installed on the top of the tailstock for cooling the center tip. An air floating devise allows for smoother movement and protection of the table.

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 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 SNCM220 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.



#### 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.

## **5** Specification

Madal			EGP-	EGP-	EGP-				
woder			2550	2575	25100				
Grinding	Swing over table	mm	Ø250	Ø250	Ø250				
Capacity	Distance between centers	mm	500	750	1000				
	Max. grinding daimeter	mm	Ø230	Ø230	Ø230				
	Max. load held between center	kg	80	100	100				
	Center distance between spindle & slide table	mm	130	130	130				
Grinding	Diameter v Width v Bore	mm		Ø455x50xØ127 (5")					
Wheel	Diameter X Width X Dore	111111	Op	Opt.Ø455x50xØ152.4 ( 6")					
	Motor rated power / max. torque	kW/Nm	3.75/13	3.75/13	3.75/13				
	Wheel speed	rpm	1400	1400	1400				
Workhead	Swiveling angle	deg	90	90	90				
	Spindle speed (infinite variable)	rpm	10 ~ 600	10 ~ 600	10 ~ 600				
	Motor rated power / max. torque	kW	0.75	1	1				
	Center taper	-	MT3(Opt.MT4)	MT3(Opt. MT4)	MT3(Opt. MT4)				
	Spindle type	-	Fixed or Rotary	Fixed or Rotary	Fixed or Rotary				
	Diameter of bore	mm	Ø20	Ø20	Ø20				
Tailstock	Quill travel	mm	25	25	25				
	Cente taper	-	MT3(Opt.MT4)	MT3(Opt. MT4)	MT3(Opt. MT4)				
X Axis	Travel	mm	200	200	200				
	Max. rapid feedrate	m / min	6	6	6				
	Heidenhain linear scale resolution	um	0.05	0.05	0.05				
	Min. increment	mm	0.0001	0.0001	0.0001				
	Servo motor rated power	kW	1.2(F) / 1.5(M)	1.2(F) / 1.5(M)	1.2(F) / 1.5(M)				
Z Axis	Travel	mm	750	1000	1250				
	Swiveling angle	deg	±7	±6	±5				
	Max. rapid feedrate	m / min	8	8	8				
	Min. increment	mm	0.0001	0.0001	0.0001				
	Servo motor rated power	kW	1.2(F) / 1.5(M)	1.58(F) / 2.2(M)	1.8(F) / 2.2(M)				
Motor	Hydraulic pump	kW	0.38	0.38	0.38				
	Coolant pump	kW	0.2	0.2	0.2				
	Hydrodynamic grinding wheel	kW	0.2	0.2	0.2				
	Coolant pump	k\\/	0.2	0.2	0.2				
Machine	Net Weight (semi-enclosed splash quard)	ka	3100	3500	3900				
	Gross Weight	ka	3800	4200	4600				
	Size	ka	3170 x 2500 x 2050	3670 x 2500 x 2050	4200 x 2500 x 2050				

Size







EGP	А	В	С	D	E	F	G	н	I	J	K	L	М	Ν
2550	3160	2000	2750	850	566	309	26	320	599	261	541	540	None	None
2575	3660	2000	2750	1292	1008	751	468	320	599	261	541	540	None	None
25100	4170	2000	2750	929	645	388	105	320	599	261	541	540	613	613
EGA	А	В	С	D	Е	F	G	н	I	J	К	L	М	N
2550	3160	2000	2750	850	566	309	26	320	599	261	541	540	None	None
2575	3660	2000	2750	1292	1008	751	468	320	599	261	541	540	None	None
25100	4170	2000	2750	020	645	200	105	220	F00	201	F 4 1	F 40	(1)	612





### **7** Specification

			EGA-	EGA-	EGA-
Model			2550	2575	25100
Grinding	Swing over table	mm	Ø250	Ø250	Ø250
Capacity	Distance between centers	mm	500	750	1000
oupdony	Max. grinding diameter	mm	Ø230	Ø230	Ø230
	dresser on workhead side	mm	350	600	850
	Max. grinding length - - dresser on tailstock side (Opt.)	mm	500	750	1000
	Max. load held between center	kg	80	100	100
	Center distance between spindle and slide table	mm	130	130	130
Grinding	Grinding wheel infeed angle	deg	60*	60*	60*
Wheel	Diameter x Width x Bore	mm	(	Ø455x50xØ127 (5") Opt.Ø510x50xØ152.4 ( 6")	
	Motor rapied power / max. torque	kW/Nm	3.75/13	3.75/13	3.75/13
	Wheel speed	rpm	1400	1400	1400
Work	Swiveling angle	deg	90	90	90
Head	Spindle speed (infinite variable)	rpm	10 ~ 600	10 ~ 600	10 ~ 600
	Motor rated power / max. torque	kW	0.75	1	1
	Center taper	-	MT3(Opt.MT4)	MT3(Opt. MT4)	MT3(Opt. MT4)
	Center working	-	Fixed or live	Fixed or live	Fixed or live
	Diameter of bore	mm	Ø20	Ø20	Ø20
Tailstock	Quill travel	mm	25	25	25
	Cente taper	-	MT3(Opt.MT4)	MT3(Opt.MT4)	MT3(Opt.MT4)
X Axis	Travel	mm	200	200	200
	Max. rapid feedrate	m / min	6	6	6
	Heidenhain linear scale resolution	um	0.05	0.05	0.05
	Min. increment	mm	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.2(F) / 1.5(M)	1.2(F) / 1.5(M)	1.2(F) / 1.5(M)
Z Axis	Travel	mm	750	1000	1250
	Swiveling angle	deg	±7	±6	±5
	Max. rapid feedrate	m / min	8	8	8
	Min. increment	mm	0.0001	0.0001	0.0001
	Servo motor rated power	kW	1.2(F) / 1.5(M)	1.58(F) / 2.2(M)	1.8(F) / 2.2(M)
Motor	Hydraulic pump	HP	0.38	0.38	0.38
	Lubrication pump	HP	0.2	0.2	0.2
	Slideway lube motor	HP	0.2	0.2	0.2
	Coolant pump	HP	0.2	0.2	0.2
Machine	Net Weight	kq	3100	3500	3900
	(semi-enclosed splash guard)	ka			
	Gross Weight	ĸy	3800	4200	4600
	Size	kg	3170 x 2500 x 2050	3670 x 2500 x 2050	4200 x 2500 x 2050

#### **Standard Accessories**

Infinite variable workhead w/servo motor
Diamond Dresser and Stand
Automatic wheel speed change (15 steps)
Carbide tip center
X Axis linear scale (resolution 0.05 um)
Levelling bolts and blocks
Operation manual and part lists
Fanuc CNC Controller (0i TF)
Grinding Wheel + Wheel Flange
Standard oil cooler (cooling fan)

### **Optional Accessories**

BS VM25 Integration system	
(OD gauging+ crash & gap control + dynamic balance system)	
BS VM15 Integration system	
(OD gauging+ crash & gap control)	
Hydraulic tailstock (w/ foot pedal)	1
Z Axis linear scale (resolution 0.05 um)	
Manual grinding wheel balance system (vibrator)	
Grinding wheel dynamic (balance system)	(
Wheel spindle lubrication oil cooler for hydrodynamic spindle	
Gap & crash control device	1
Safety door lock	
Workhead spindle adjustment arbor	1
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	

Standard coolant tank 140L MPG handwheel 2 Axes control Touch probe (for EGA series only) LED working light Tools and Tool Box Electricity cabinet w/ heat exchanger Semi-enclosed splash guard Wheel Extractor 4-color indication signal light Electrical wiring diagram

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

- FANUC 0i-TF i-Grind program
- Mitsubishi controller (M80) i-Grind program
- Electrical cabinet air conditioner
- Internal grinding attachment (for EGP series only)
- Workhead upgrade to MT4/MT5
- Tailstock upgrade to MT4/MT5
- Automatic 3-jaw hydraulic chuck
- CE standard electrical cabinet
- Transformer
- Workpiece carrier
- Full-enclosed splash guard
- Workpiece supporting seat, 2pc / set
- 2 Point Steady Rest
- 3-point steady rest
- 3-jaw scroll chuck
- 4-jaw scroll chuck