

JAGULAR INDUSTRY LTD. has been established in 1986. Base on the excellent technologies and R&D capability, we manufacture and provide a wide range of high quality grinding machines for various grinding applications. In order to provide our customers' more selection and better services, we have been continuously enhancing our grinding technique and improving the mechanism design. In the beginning, we manufactured punch grinder and various internal and external grinding machines. After over 30 years' continuous effort, we now can manufacture full range of CNC internal and cylindrical grinding machines, CNC internal grinding machine, CNC cylindrical grinding machine, CNC centerless grinding machine, variety of precision micro internal and external grinding machine and precision knife grinder. The most variety of grinding machines can satisfy all our clients. We sell our grinding machine under the brand name "JAGURA" all over the world.



#### CNC CENTERLESS GRINDER

- 12C
- 20C
- 24C
- 18C
- 2010C
- 2410C
- 1810C
- 2012C
- 2412C
- 1812C



#### CNC INTERNAL GRINDER

- IG06
- IG35100
- IG50
- IG35150
- IG80
- IG35200
- IG150



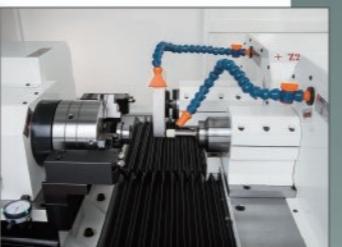
#### INTERNAL & CYLINDRICAL GRINDER (CARBIDE DIE SERIES)

- ICG-S200
- ICG-SL200
- ICG-SL210
- ICG-SL410



#### CNC CYLINDRICAL GRINDER

- CG175
- CG3250
- CG2535
- CG3260
- CG2550
- CG3275
- CG2575
- CG32100
- CG3240
- CG32120



#### INTERNAL & CYLINDRICAL GRINDER (IN-LINE SERIES)

- ICG1512 SL11 SL20
- ICG2012 SL11 SL20
- ICG2512 SL11 SL20



#### CNC CYLINDRICAL GRINDER (ANGULAR TYPE)

- CGA2535
- CGA2550
- CGA3545
- CGA3565



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## CENTERLESS GRINDER SERIES



Reaching you... Worldwide

**JAGULAR INDUSTRY LTD.**

# Centerless Endless Roundess

The design of the Jagura centerless grinders focuses on achieving superior roundness with customized loading/unloading.

Jagura centerless grinders are engineered for tomorrow's production demands and provide flexible solutions to meet a variety of users's needs.

Jagura's exclusive control interface is user friendly, easy-to-learn, and can improve the quality and production efficiency of the user's facility.

Typical users include, but are not limited to, the following industries: Forging, Tungsten Carbide, Textiles, Auto Parts, Cutting Tool Manufacturing, Punches, Hydraulic & Pneumatic Parts and Mould & Die.

## Models:

### VARIABLE SPEED (SP series):

Regulating wheel is directly driven by hydraulic motor, and can be freely adjusted to any rotation speed within limits. Hydraulic direct driving system is designed to achieve best quality and efficiency of grinding works. The system can prevent side effects caused by any indirect transmission part, and ensure consistent high-precision either in low rpm or high rpm. With hydraulic direct driving system, Jagura centerless grinders is much more stable in operation, and can help workpieces achieving better roundness and accuracy.



JAG-1812C-SP

### EASY CNC series:

This series is especially designed for single step or multi-step profiles. Users can choose suitable dressing system with preloaded programs to process grinding. The dialogue control interface makes the setting procedure much more efficient. Setting parameters (e.g. feeding amount, feeding speed, grinding cycle (Rough, Finish and Spark- Out), dressing amount, or off-set value) can easily be done without programming G-code and M-code. Users can also further improve the working efficiency by choosing various automatic loading/unloading systems to fit their works.



JAG-12C-CNC1(Easy)  
1Axis

### CNC series:

The feeding axis (Z1) equipped with ball screw and servo motor makes the accuracy  $\pm 0.001\text{mm}$  per feed. Dressing system composed by X1-axis & Y1-axis also equipped with ball screw and servo motors. The dialogue control interface makes the setting procedure much more efficient. Setting parameters (e.g. feeding amount, feeding speed, grinding cycle, dressing amount, or off-set value) can easily be done without programming G-code and M-code. Moreover, for CNC series, dressing taper or radius on grinding wheel is easy through preloaded programs. Users can also further improve the working efficiency by choosing various automatic loading/unloading systems to fit their works.



JAG-18C-CNC3  
(3Axis)

# The Description of Mechanism



## Machine Bed:

The machine bed is designed according to optimum mechanical principles, ensuring maximum stability and vibration free operation. The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precision ground before machining. The slideways are also heat treated and precision ground, making this machine virtually distortion-free.

## Hydraulic Motor for Regulating Wheel Via Direct-drive Transmission:

There is no interference with the reducer and the temperature of worm gear box is risen, which can maintain the accuracy and stability of regulating wheel in both of high and low speed Due to the regulating wheel is direct driven. The preloaded of the regulating wheel will increase the rigidity obviously. Operators can adjust the optimum grinding speed ratio between the grinding wheel and regulating wheel within different O.D. of the workpiece, This design offers a better grinding condition to the different material of the workpiece. That's why the accuracy and the roundness of the workpiece in fine grinding process are better than other system.



## Hydraulic Oil Cooler:

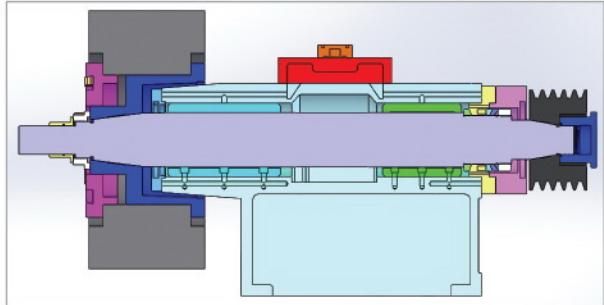
1. Controls the oil temperature. Oil temperature is maintained at a constant temperature ( $\pm 1.5^{\circ}\text{C}$ ) and keeps the oil circulating automatically.
2. Assures the oil stability and prevents chemical change.
3. Increases bearing life by keeping the connection between spindle and alloy bearings stable. The spindle dimension will not change due to temperature change. A reduced oil temperature prolongs oil seal life, thereby reducing oil leakage.



# The Description of Mechanism

## Spindle:

The grinding and regulating wheel spindles are made of high quality alloy steel SNCM439. They are normalized, hardened, heat treated, tempered and finally sub-zero, precision ground and machined. They are sturdy and strong enough to permit heavy duty grinding at high speeds and assure superior surface finish.



## Regulating Wheel Dresser:

The angle of the regulating wheel dressing unit can be swiveled to suit workpiece requirements, assuring cylindrical accuracy.

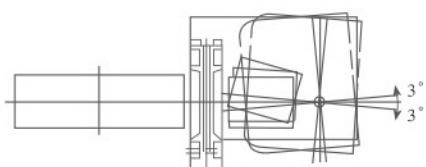
## Hydraulic Dressing Unit:

Both the grinding wheel and regulating wheel dressing units are hydraulically driven. Speed is infinitely variable. Dressing slides are made of special alloy cast iron which is processed by annealing treatment. The surface is processed with precision hand scraping, ensuring outstanding wear resistance. This additionally assures a very smooth slide movement and workpiece straightness.



## Pressure Switch:

The lubrication system of the grinding wheel spindle is fitted with a pressure switch. This pressure switch allows starting only when oil enters the bearings. This safety protection prevents the spindle from running dry and being damaged.



## Upper Slide:

The upper slide can be rapidly and precisely swiveled in order to grind tapers during infeed grinding and to provide perfect contact between workpiece and grinding wheel in thru-feed grinding.

Variable  
Speed

## CENTERLESS GRINDER



MODEL	JAG-12C-SP
Grinding range ( dia)	1-30 mm (0.04"-1.58")
Grinding wheel size ( dia x width x hole)	305 x 150 x 120mm (12"x6"x5")
Regulating wheel size ( dia x width x hole)	205 x 150 x 90mm (8"x6"x3.54")
Grinding wheel speed	1900 R.P.M
Regulating wheel speed	0-310 R.P.M
Grinding wheel motor	71/2 HP 4P
Regulating wheel motor	Hydraulic motor
Hydraulic pump motor	1HP 4P
Coolant pump motor	1/8HP 2P
Upper slide feed graduation	3.5mm(Rev.) 0.05mm( Gra.)
Lower slide feed graduation	7mm(Rev.) 0.05mm(Gra.)
Lower slide micro feed graduation	0.2mm(Rev.) 0.001mm( Gra.)
Dressing device graduation	1.25mm(Rev.) 0.01mm( Gra.)
Regulating wheel tile angle	±5 °
Regulating wheel swivel angle	±5 °
Net weight(approx)	1600Kgs(3527 lbs)
Shipping gross weight (approx)	1850Kgs(4079 lbs)
Size of machine (approx) (L x W x H )	2250 x 1100 x 1700mm

\* All specifications and design are subject to change without notice.

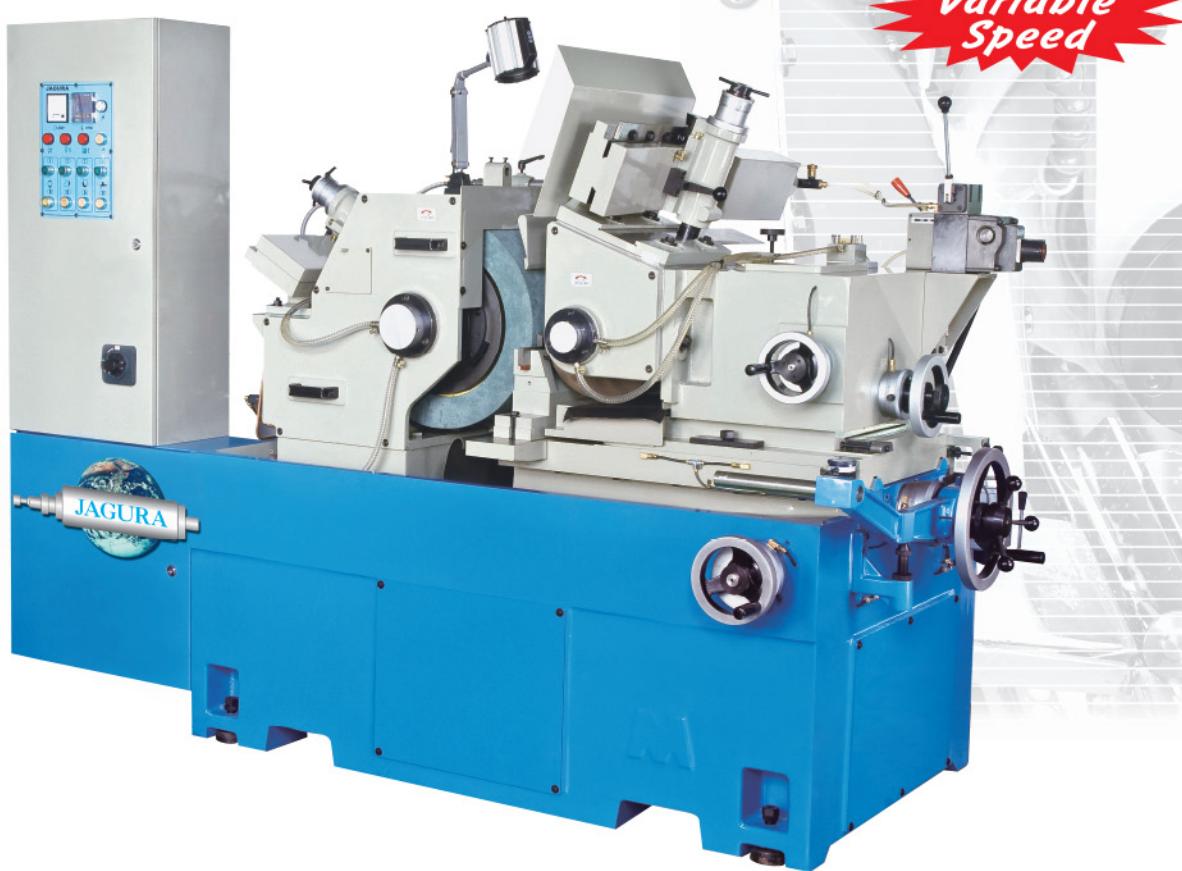
## CENTERLESS GRINDER



MODEL	JAG-18C-SP	JAG-1810C-SP	JAG-1812C-SP
Grinding range ( dia)	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")
Grinding wheel size ( dia x width x hole)	455 x 205 x 228.6mm (18"x8"x9")	455 x 255 x 228.6mm (18"x10"x9")	455 x 305 x 228.6mm (18"x12"x9")
Regulating wheel size ( dia x width x hole)	255 x 205 x 111.2mm (10"x8"x4.38")	255 x 255 x 111.2mm (10"x10"x4.38")	255 x 305 x 111.2mm (10"x12"x4.38")
Grinding wheel speed	1350 R.P.M	1350 R.P.M	1350 R.P.M
Regulating wheel speed	0-310 R.P.M	0-310 R.P.M	0-310 R.P.M
Grinding wheel motor	15HP 4P	15HP 4P	15HP 4P
Regulating wheel motor	Hydraulic motor	Hydraulic motor	Hydraulic motor
Hydraulic pump motor	1HP 4P	1HP 4P	1HP 4P
Coolant pump motor	1/4HP 2P	1/4HP 2P	1/4HP 2P
Upper slide feed graduation	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)
Upper slide micro feed graduation	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)
Lower slide feed graduation	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)
Lower slide micro feed graduation	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)
Dressing device graduation	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)
Regulating wheel tile angle	±5 °	±5 °	±5 °
Regulating wheel swivel angle	±5 °	±5 °	±5 °
Net weight(approx)	3000Kgs (6613 lbs)	3100Kgs (6613 lbs)	4858 Kgs
Shipping gross weight (approx)	3300Kgs (7274 lbs)	3400Kgs (7274 lbs)	5258 Kgs
Size of machine (approx) (L x W x H)	2400X2400X1650mm	2400X2400X1650mm	2400X2400X1650mm

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## CENTERLESS GRINDER

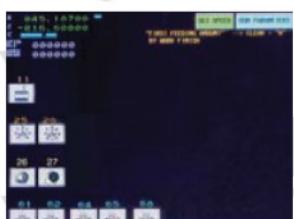


MODEL	JAG-20C-SP	JAG-2010C-SP	JAG-2012C-SP
Grinding range ( dia)	1-60mm	1-60mm	1-60mm
Grinding wheel size ( dia x width x hole)	510x205x304.8(20"x8"x12")	510x255x304.8(20"x10"x12")	510x305x304.8(20"x12"x12")
Regulating wheel size ( dia x width x hole)	305x205x127 (12"x8"x5")	305x255x127 (12"x10"x5")	305x305x127 (12"x12"x5")
Grinding wheel speed	1200 r.p.m	1200 r.p.m	1200 r.p.m
Regulating wheel speed	0-310 r.p.m	0-310 r.p.m	0-310 r.p.m
Grinding wheel motor	20Hp 4P	20Hp 4P	20Hp 4P
Regulating wheel motor	Hydraulic motor	Hydraulic motor	Hydraulic motor
Hydraulic pump motor	1HP 4P	1HP 4P	1HP 4P
Coolant pump motor	1/4HP 2P	1/4HP 2P	1/4HP 2P
Upper slide feed graduation	4mm(Rev.) 0.05mm( Gra.)	4mm(Rev.) 0.05mm( Gra.)	4mm(Rev.) 0.05mm( Gra.)
Upper slide micro feed graduation	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)
Lower slide feed graduation	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)
Lower slide micro feed graduation	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm( Gra.)
Dressing device graduation	2mm(Rev.) 0.01mm( Gra.)	2mm(Rev.) 0.01mm( Gra.)	2mm(Rev.) 0.01mm( Gra.)
Regulating wheel tilt angle	±5 °	±5 °	±5 °
Regulating wheel swivel angle	±5 °	±5 °	±5 °
Net weight(approx)	4100kg	4200kg	5558 Kgs
Shipping gross weight (approx)	4600kg	4700kg	6058 Kgs
Size of machine (approx) (L x W x H )	3200x2500x1650mm	3200x2500x1650mm	3200x2500x1650mm

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# CNC software & Dialogue HMI (Human Machine Interface)

**JAGURA CNC** series grinding machine are specially designed for profile grinding. The Jagura dialogue HMI is divided into 4 main sections: Main Menu, Dressing programs, Grinding Path Programs, and Program Links. Unlike the traditional CNC systems, utilizing complicated G & M codes. User simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work. Since it can be readily integrated with most ancillary automation e.g. loaders/ unloaders, it greatly improved efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



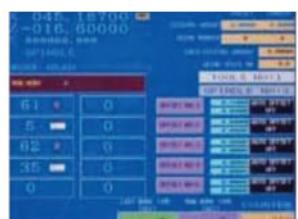
Main Menu



Dressing  
Programs

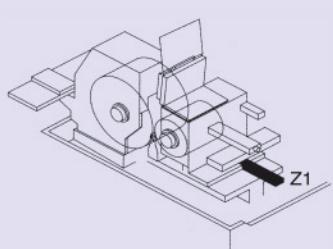


Grinding Path  
Program



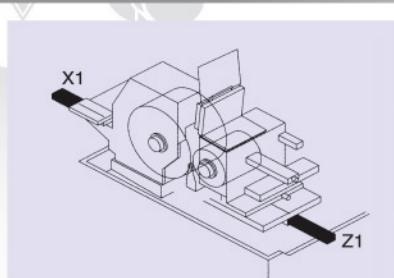
Program Links

## CNC Control example



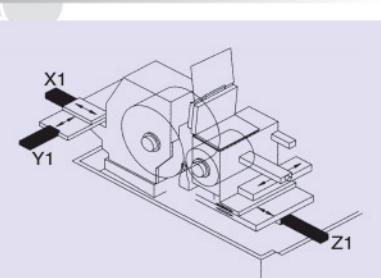
### 1 AXIS

X1:Regulating wheel lower slide auto.  
infeed



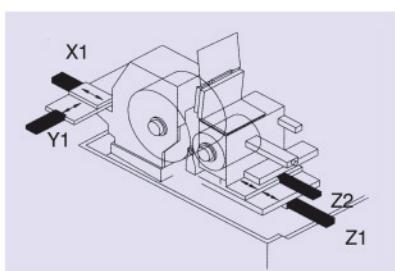
### 2 AXIS

X1:Grinding wheel auto. dressing(vertical)  
Z1:Regulating wheel lower slide auto.  
infeed



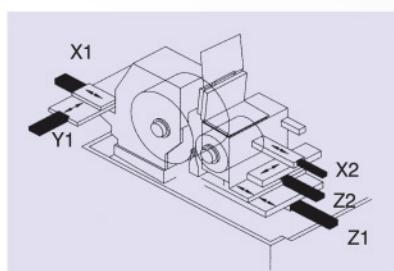
### 3 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
Z1:Regulating wheel lower slide auto.  
infeed



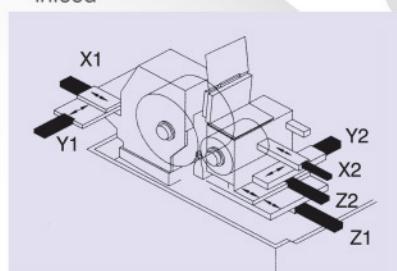
### 4 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
Z2:Regulating wheel upper slide auto. infeed  
Z1:Regulating wheel lower slide auto. infeed



### 5 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
X2:Regulating wheel auto. dressing (vertical)  
Z2:Regulating wheel upper slide auto. infeed  
Z1:Regulating wheel lower slide auto. infeed



### 6 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
X2:Regulating wheel auto. dressing (vertical)  
Y2:Regulating wheel auto. dressing(horizontal)  
Z2:Regulating wheel upper slide auto. infeed  
Z1:Regulating wheel lower slide auto. infeed

\* All specifications and design are subject to change without notice.

# CNC Centerless grinder



**JAG-18C-CNC3  
(3Axis)**

**Wheel dressing mechanism:**  
X1-axis and Y2-axis are equipped with linear guide , driven by ball screw and servo motor.

MODEL	JAG-12C-CNC	JAG-18C-CNC	JAG-1810-CNC	JAG-1812-CNC	JAG-20C-CNC	JAG-2010CNC	JAG-2012-CNC
Grinding range ( dia)	1-30 mm (0.04"-1.58")	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")	1-60mm	1-60mm	1-60mm
Grinding wheel size ( dia x width x hole)	305 x 150 x 120mm (12"x6"x5")	455 x 205 x 228.6mm (18"x8"x9")	455 x 255 x 228.6mm (18"x10"x9")	455 x 305 x 228.6mm (18"x12"x9")	510x205x304.8(20"x8"x12")	510x255x304.8(20"x10"x12")	510x305x304.8(20"x12"x12")
Regulating wheel size ( dia x width x hole)	205 x 150 x 90mm (8"x6"x3.54")	255 x 205 x 111.2mm (10"x8"x4.38")	255 x 255 x 111.2mm (10"x10"x4.38")	255 x 305 x 111.2mm (10"x12"x4.38")	305x205x127 (12"x8"x5")	305x255x127 (12"x10"x5")	305x305x127 (12"x12"x5")
Grinding wheel speed	1900 R.P.M	1350 R.P.M	1350 R.P.M	1350 R.P.M	1200 r.p.m	1200 r.p.m	1200 r.p.m
Regulating wheel speed	0-310 R.P.M	0-310 R.P.M	0-310 R.P.M	0-310 R.P.M	0-310 r.p.m	0-310 r.p.m	0-310 r.p.m
Grinding wheel motor	7.5 HP 4P	15HP 4P	15HP 4P	15HP 4P	20Hp 4P	20Hp 4P	20Hp 4P
Regulating wheel motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor
Hydraulic pump motor	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P
Coolant pump motor	1/8HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P
Upper slide feed graduation	3.5mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)
Upper slide micro feed graduation		0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)
Lower slide feed graduation	7mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)
Lower slide micro feed graduation	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)
Dressing device graduation	1.25mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)
Regulating wheel tilt angle	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$
Regulating wheel swivel angle	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$	$\pm 5^\circ$
Net weight(approx)	1600Kgs(3527 lbs)	3000Kgs (6613 lbs)	3100Kgs (6813 lbs)	4858 Kgs	4100kg	4200kg	5558 Kgs
Shipping gross weight (approx)	1850Kgs(4079 lbs)	3300Kgs (7274 lbs)	3400Kgs (7274 lbs)	5258 Kgs	4600kg	4700kg	6058 Kgs
Size of machine (approx) (L x W x H)	2250 x 1100 x 1700mm	2400x2400x1650mm	2400x2400x1650mm	2400x2400x1650mm	3200x2500x1650mm	3200x2500x1650mm	3200x2500x1650mm

\* All specifications and design are subject to change without notice.

# Easy CNC software & Dialogue HMI (Human Machine Interface)

**JAGURA EASY CNC** series grinding machines are specially designed for straight & step grinding, Jagura offer not only an easy, but also economic operation system. We continue the advantage of CNC operation system, User simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work. Since it can be readily integrated with most ancillary automation e.g. loaders/unloaders, it greatly improved efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



Main Menu



Grinding Path Program

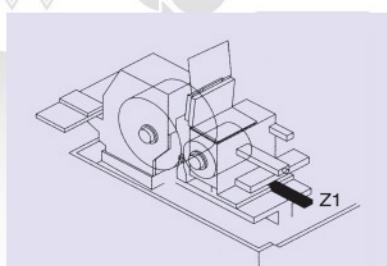


Dressing Programs



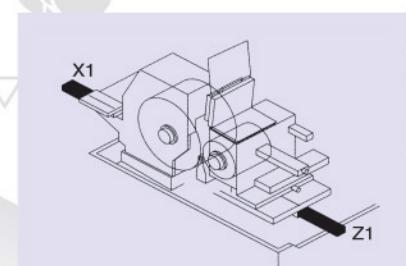
Program Links

## Easy CNC Control example



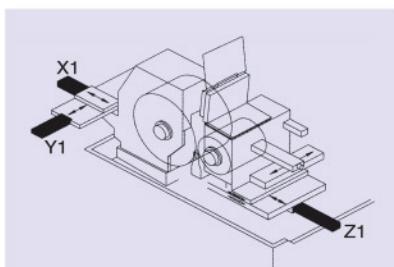
### 1 AXIS

X1:Regulating wheel lower slide auto. infeed



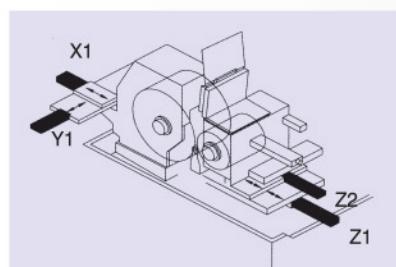
### 2 AXIS

X1:Grinding wheel auto. dressing(vertical)  
Z1:Regulating wheel lower slide auto. infeed



### 3 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
Z1:Regulating wheel lower slide auto. infeed



### 4 AXIS

X1:Grinding wheel auto. dressing (vertical)  
Y1:Grinding wheel auto. dressing (horizontal)  
Z2:Regulating wheel upper slide auto. infeed  
Z1:Regulating wheel lower slide auto. infeed

\* All specifications and design are subject to change without notice.

# Easy CNC Centerless grinder

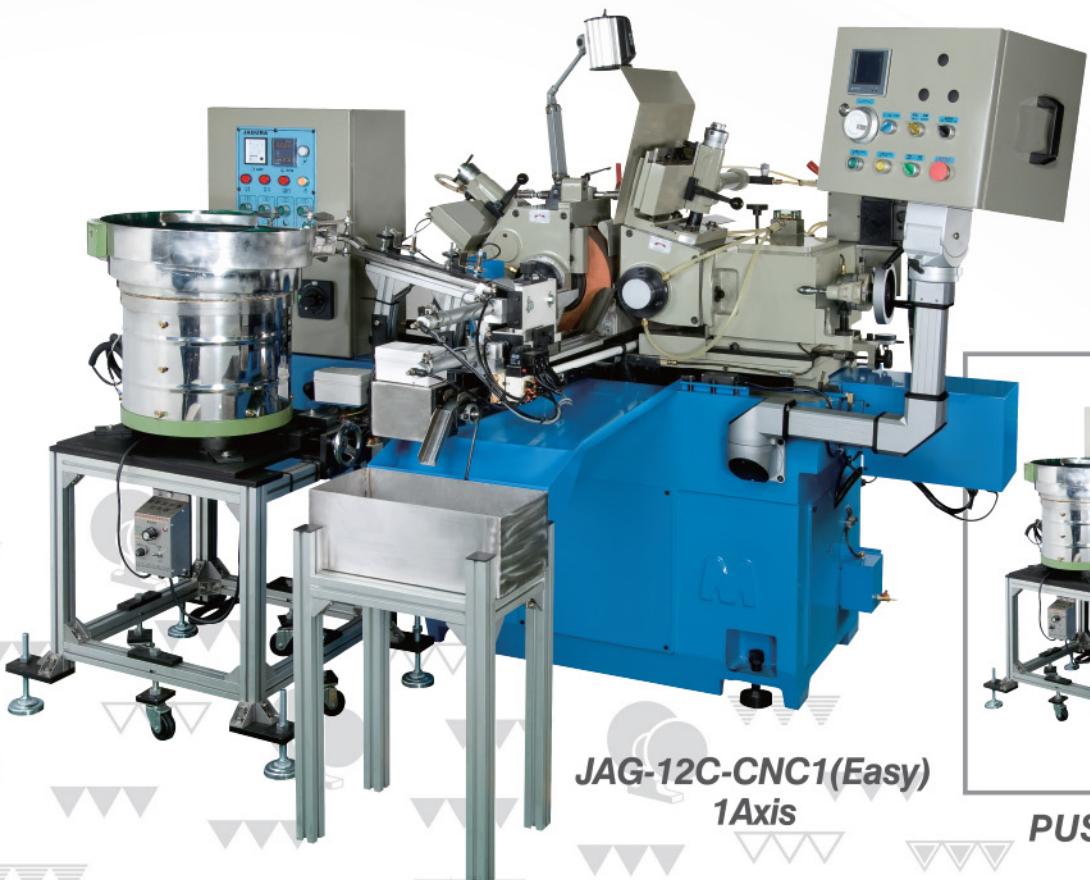


**JAG-12C-CNC1(Easy)  
1 Axis**

MODEL	JAG-12C-CNC	JAG-18C-CNC	JAG-1810-CNC	JAG-1812-CNC	JAG-20C-CNC	JAG-2010CNC	JAG-2012-CNC
Grinding range ( dia)	1-30 mm (0.04"-1.58")	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")	1-50 mm (0.04"-2")	1-60mm	1-60mm	1-60mm
Grinding wheel size ( dia x width x hole)	305 x 150 x 120mm (12"x6"x5")	455 x 205 x 228.6mm (18"x8"x9")	455 x 255 x 228.6mm (18"x10"x9")	455 x 305 x 228.6mm (18"x12"x9")	510x205x304.8(20"x8"x12")	510x255x304.8(20"x10"x12")	510x305x304.8(20"x12"x12")
Regulating wheel size ( dia x width x hole)	205 x 150 x 90mm (8"x6"x3.54")	255 x 205 x 111.2mm (10"x8"x4.38")	255 x 255 x 111.2mm (10"x10"x4.38")	255 x 305 x 111.2mm (10"x12"x4.38")	305x205x127 (12"x8"x5")	305x255x127 (12"x10"x5")	305x305x127 (12"x12"x5")
Grinding wheel speed	1900 R.P.M	1350 R.P.M	1350 R.P.M	1350 R.P.M	1200 r.p.m	1200 r.p.m	1200 r.p.m
Regulating wheel speed	0-310 R.P.M	0-310 R.P.M	0-310 R.P.M	0-310 R.P.M	0-310 r.p.m	0-310 r.p.m	0-310 r.p.m
Grinding wheel motor	7.5 HP 4P	15HP 4P	15HP 4P	15HP 4P	20Hp 4P	20Hp 4P	20Hp 4P
Regulating wheel motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor	Hydraulic motor
Hydraulic pump motor	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P	1HP 4P
Coolant pump motor	1/8HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P	1/4HP 2P
Upper slide feed graduation	3.5mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)	4mm(Rev.) 0.05mm(Gra.)
Upper slide micro feed graduation		0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)	0.1mm(Rev.) 0.001mm(Gra.)
Lower slide feed graduation	7mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)	10mm(Rev.) 0.05mm(Gra.)
Lower slide micro feed graduation	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)	0.2mm(Rev.) 0.001mm(Gra.)
Dressing device graduation	1.25mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)	2mm(Rev.) 0.01mm(Gra.)
Regulating wheel tilt angle	±5 °	±5 °	±5 °	±5 °	±5 °	±5 °	±5 °
Regulating wheel swivel angle	±5 °	±5 °	±5 °	±5 °	±5 °	±5 °	±5 °
Net weight(approx)	1600Kgs(3527 lbs)	3000Kgs (6613 lbs)	3100Kgs (6813 lbs)	4858 Kgs	4100kg	4200kg	5558 Kgs
Shipping gross weight (approx)	1850Kgs(4079 lbs)	3300Kgs (7274 lbs)	3400Kgs (7274 lbs)	5258 Kgs	4600kg	4700kg	6058 Kgs
Size of machine (approx) (L x W x H)	2250 x 1100 x 1700mm	2400X2400X1650mm	2400X2400X1650mm	2400X2400X1650mm	3200x2500x1650mm	3200x2500x1650mm	3200x2500x1650mm

\* All specifications and design are subject to change without notice.

# *Easy CNC Centerless grinder with Automatic loading and unloading*



JAG-12C-CNC1(Easy)  
1Axis

**PUSH IN TYPE**

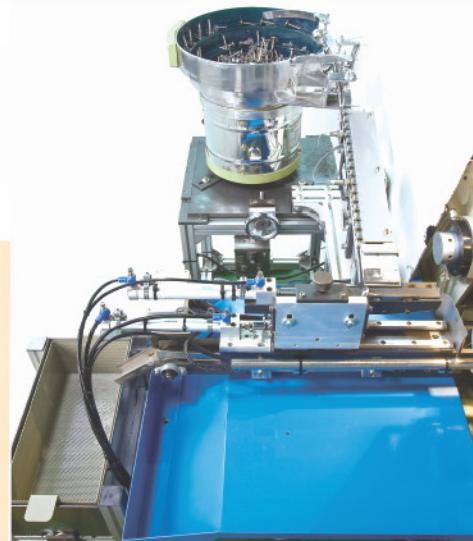
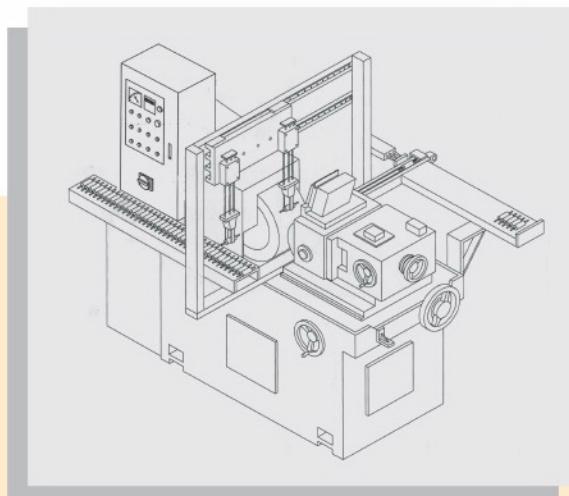
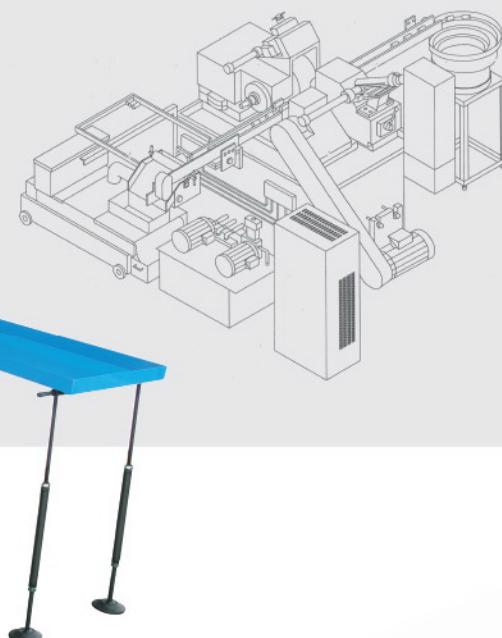


JAG-12C-CNC1(Easy)  
1Axis

**CLAMPING TYPE**

# Automatic Grinding Examples

## THRUFEED GRINDING



## INFEED GRINDING

### Carbide Blade for Both Thrufeed and Infeed Grinding

Workpiece	Carbide Blade Thickness	Workpiece	Carbide Blade Thickness
1.5 - 2.5m/m	1m/m 0.04"	8.1-10m/m	6m/m 0.25"
0.06 - 0.99"		0.319-0.39"	
2.6 - 4.0m/m	2m/m 0.08"	10.1-16m/m	8m/m 0.32"
0.10 - 0.16"		0.398-0.63"	
4.1 - 5.0m/m	3m/m 0.12"	12-20m/m	10m/m 0.4"
0.163 - 0.19"		0.5-0.8"	
5.1 - 7m/m	4m/m 0.16"	15-30m/m	12m/m 0.5"
0.20 - 0.27"		0.5-1.2"	
7.1 - 8m/m	5m/m 0.2"	25m/m	20m/m
0.279 - 0.315"		1"	0.8"

\* All specifications and design are subject to change without notice.

# Standard Accessories



WHEEL FLANGE  
EXTRACTOR



REGULATING WHEEL+FLANGE  
(MOUNTED ON MACHINE) ISET



WORK  
LAMP  
(MOUNTED ON  
MACHINE) ISET



TOOL BOX WITH SPANNERS,  
SCREW-DRIVERS, ETC. I SET



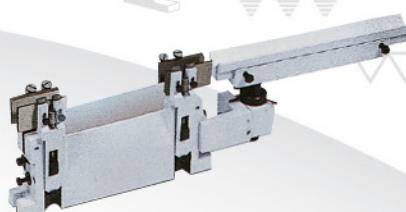
GRINDING WHEEL+FLANGE  
(MOUNTED ON MACHINE) I SET



WORKPIECE  
PRESSOR



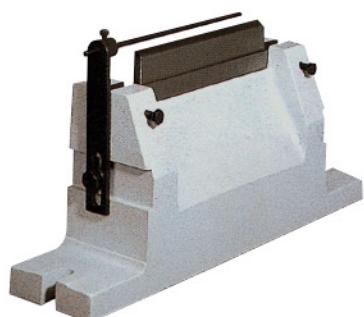
DIAMOND TOOL FOR  
TRUING  
(MOUNTED ON MACHINE)  
2PCS



THRUFEEED WORK REST ISET+  
CARBIDE BLADE (IPCE)



WHEEL BALANCING ARBOR



INFEED WORK REST ISET+  
CARBIDE BLADE (IPCE)

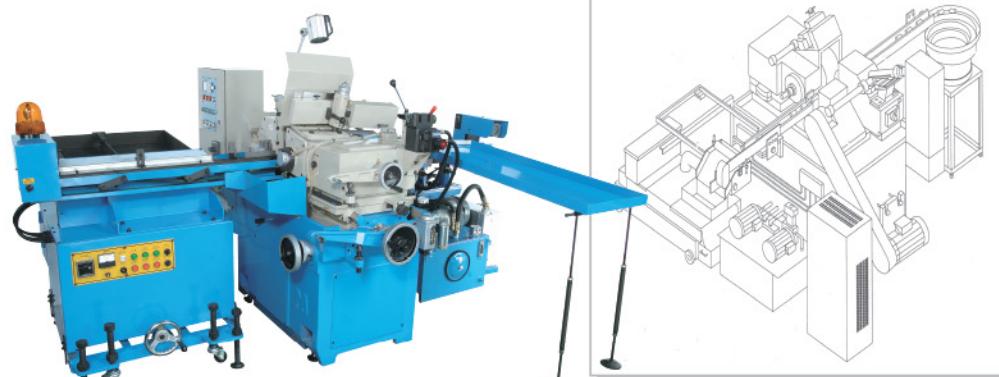


HYDRAULIC TANK WITH PUMP ISET

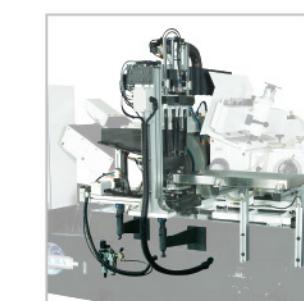


OIL COOLER

# OPTIONAL ACCESSORIES:



THRUFEED AUTOMATIC LOADING & UNLOADING SYSTEM/



**Auto loading/unloading system for infeed grinding:**

(Auto loading/unloading system can be designed according to infeed grinding or through-feed grinding.)



LONG BAR GRINDING LOADING & UNLOADING SYSTEM



AUTOMATIC INFEED ATTACHMENT



WHEEL BALANCING STAND & ARBOR



MANUAL WORK FEEDER FOR INFEED GRINDING



VIBRATION METER



PROFILE TEMPLATE



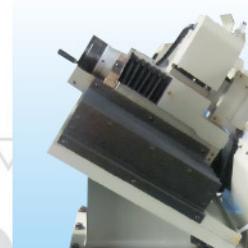
HYDRAULIC WORK EJECTOR FOR INFEED GRINDING



VIBRATORY FEEDER FOR THRUFEED GRINDING



MAGNETIC & PAPER FILTER



ROTARY DRESSER (MANUAL TYPE)



ROTARY DRESSER (CNC TYPE)



HYDROCYCLONE COOLANT FILTER