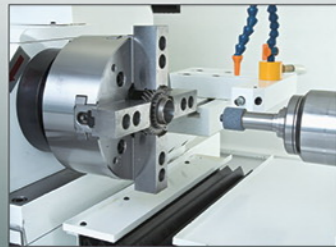


JAGULAR INDUSTRY LTD. has been established in 1986. Base on the excellent technologies and R&D capability, we manufacture and provide a wide range of high quality grinding machines for various grinding applications. In order to provide our customers' more selection and better services, we have been continuously 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.



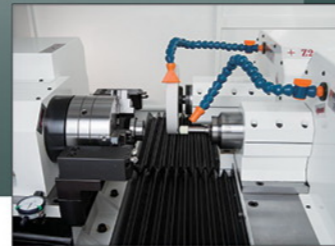
CNC INTERNAL GRINDER

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



INTERNAL & CYLINDRICAL GRINDER (CARBIDE DIE SERIES)

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



INTERNAL & CYLINDRICAL GRINDER (IN-LINE SERIES)

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



CNC CYLINDRICAL GRINDER

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



CNC CYLINDRICAL GRINDER (ANGULAR TYPE)

- CGA2535
- CGA2550
- CGA3545
- CGA3565



CNC CENTERLESS GRINDER

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



INTERNAL GRINDER SERIES



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2019.03



Reaching you... Worldwide

JAGULAR INDUSTRY LTD.



Reaching you...Worldwide

The design principle of **JAGURA** Internal Grinding Machine Series is emphasized on operation ability and working function. The full series provide users total solutions to completely satisfy all users' requirement. The full series complete with several models which are equipped with different workhead swings and workpiece clamping capacity. Especially, the control system is equipped with our own user-friendly dialog operation interface. It makes operation very easy. Furthermore, it can work with various measuring instruments to enhance workpiece quality and production efficiency.

Applications

**Collet industry / Gear industry /
Bush industry / Automotive industry /
Fluid transmission industry /
Mold industry**



Model:

IG06

This model is especially designed for micro internal grinding. It is equipped with built-in high frequency grinding spindle (30,000 ~12,000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. The full automatic grinding cycles are including: rough grinding / step finish grinding / spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface.

The working range of ID grinding: 0.5~6.0mm

IG50

This model is especially designed for grinding short workpiece with small size inner hole. It is equipped with grease lubricated grinding spindle (Max. 55000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface.

The working range of ID grinding: 1.5~50mm



■ IG06 Easy CNC (Customized machine)



■ IG50 Easy CNC (Customized machine)



Reaching you...Worldwide

IG80:

This model is especially designed for grinding short workpiece with middle size inner hole. It is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user* requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface. This model is most suitable for gear industry, collect industry and bush industry.



■ IG80 CNC/ Easy CNC

IG150:

This model is especially designed for grinding middle size and large size inner hole. It is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. V That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate.

That can ensure size stability and excellent surface.



■ IG150 CNC/ Easy CNC

IG35100

This model is especially designed for grinding large size inner hole. It can install adjustable 3-point Steady Rest to enhance grinding stability when grind long workpiece. This model is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm.

Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface. This model is most suitable for spindle grinding.



■ IG35100 CNC/ Easy CNC



Reaching you... Worldwide

Model:

IG06

This model is especially designed for micro internal grinding. It is equipped with built-in high frequency grinding spindle (30,000 ~ 12,000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. The full automatic grinding cycles are including: rough grinding / step finish grinding / spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface.

The working range of ID grinding: 0.5~6.0mm

Machine Features

Machine Bed:

The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precisionground for maximum stability and rigidity. Outstanding structural reinforcement assures distortion-free operation and long life.

Slide-ways:

The slide-ways are also heat treated and precision ground to make this machine extremely smooth-running and accurate.

Feed axes:

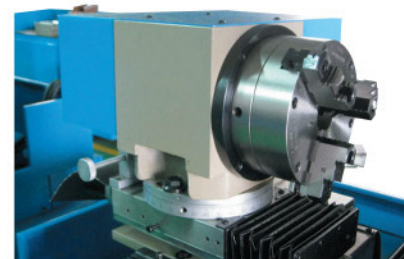
X-axis and Z-axis are equipped with precision ball screws and servo motors. A servo motor drives the ball screw directly guaranteeing positioning accuracy and feeding stability.



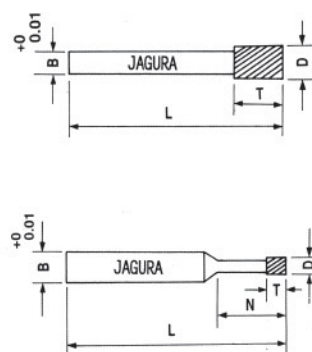
Machine Bed/Slide-Way/Feed axes

Workhead:

The workhead spindle runs on high precision roller bearings featuring high accuracy, rigidity and silent running.



Grinding bar



Model	B	L	N	T	D	Grit Size(Mesh)		
						General Grinding	Precision Grinding	
JAG-ID01	3	40	8	4	0.8	1.0	200	400
			8	5	1.0	2.0		
			12	5	1.5	3.0		
JAG-ID02	45	45	15	5	4.0	3.0	200	600
			5	5.0	4.0			
JAG-ID03	6	80	22	10	4.0	6.0	200	400
			22	10	7			
JAG-ID04	6	80	10	7.0	8.0		200	400
			10	9.0	9.0			
			10	11.0	10.0			
JAG-ID05	10	70	10	12.0	13.0		200	400
			10	14.0	15.0			
			10	11				

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



IG06 Easy CNC (Customized machine)

Internal grinding spindles



Nakanishi 60000rpm 80000rpm

Easy CNC Software & Dialogue Hmi (Human Machine Interface)

JAGURA EASY CNC Series Internal grinding machines are specially designed for ID grinding.

The EASY CNC control system is constructed by DELTA but it employs the exclusive advanced software developed by JAGURA.

Unlike the traditional hydraulic rapid feed system& NC systems, JAGURA Dialogue HMI is easy to both learn and use, thereby saving JAGURA EASY CNC users valuable training time as well as money.

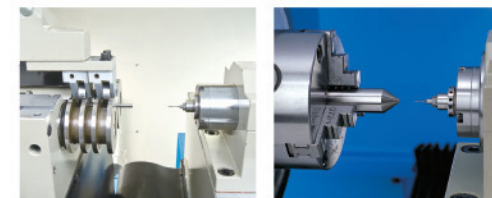
The JAGURA Dialogue HMI is divided into 4 main sections: Main Menu, Dressing Programs, Grinding Path Programs, and Program Links. Users simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work.

JAGURA Dialogue HMI is the best solution for grinding, The graphic directory enables the user to divide complicated grinding processes into individual stages. First, one of the pre-loaded grinding programs is selected: ID or ID Step After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

Finally, users can enter one of the pre-loaded dressing programs: ID dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. It greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.

Clamping Application



Roller workhead (optional)

3JAW



Main Menu

Grinding Rates

Link Cycle

Model	IG06-CNC(Easy)	
Clamping diameters	φ 140mm	
Max. clamped unit length	60mm	
Max. travel	X Axis	150mm
	Z Axis	220mm
Min feeding unit	X Axis	0.001mm
	Z Axis	0.001mm
Table speed	X Axis	0-6 m/min
	Z Axis	0-6 m/min
Workhead speed	100-500rpm	
Spindle Max. speed	80000rpm	
Motor	Workhead	120W-AC
	Spindle	230W
	X Axis	750w
Z Axis	750w	
Weight:	1000kgs	
Working range (inner hole)	φ 0.5- φ 6mm	
Machine dimensions (LxWxH)	1700x1550x1700mm	
Standard accessories	1. φ3mm collet x 1 pc 2. Nut x 1 pc 3. Tool box and accessories x 1 set 4. High frequency spindle with inverter 5. Air dryer 6. F.R.L Combination 7. Spindle water cooler 8. Splash guard	

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



Reaching you... Worldwide

Model:

IG50

This model is especially designed for grinding short workpiece with small size inner hole. It is equipped with grease lubricated grinding spindle (Max. 55000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface. The working range of ID grinding: 1.5~50mm

Machine Features

Machine Bed:

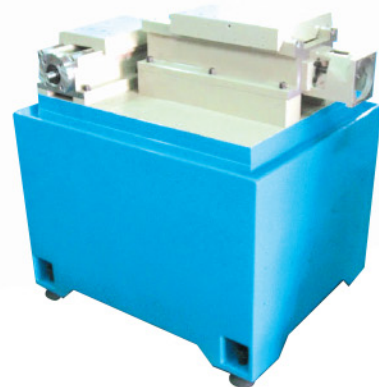
The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precision ground for maximum stability and rigidity. Outstanding structural reinforcement assures distortion-free operation and long life.

Slide-ways:

The slide-ways are also heat treated and precision ground to make this machine extremely smooth-running and accurate.

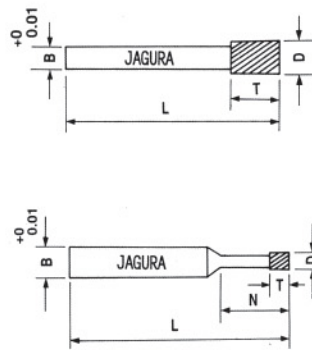
Feed axes:

X-axis and Z-axis are equipped with precision ball screws and servo motors. A servo motor drives the ball screw directly guaranteeing positioning accuracy and feeding stability.



Machine Bed/Slide-Way/Feed axes

Grinding bar



Model	B	L	N	T	D	Grit Size(Mesh)		
						General Grinding	Precision Grinding	
JAG-ID01	3	40	8	4	0.8	1.0	200	400 600
			8	5	1.0	2.0		
			12	5	1.5	3.0		
JAG-ID02	45	45	15	5	4.0	3.0	200	
			5	5.0	4.0			
JAG-ID03	6	80	22	10	4.0	6.0	200	400 600
			22	10	7			
JAG-ID04	6	80	10	7.0	8.0		200	400 600
			10	9.0	9.0			
			10	11.0	10.0			
JAG-ID05	10	70	10	12.0	13.0		200	400 600
			10	14.0	15.0			
			10	11				

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



IG50 Easy CNC (Customized machine)

Internal grinding spindle



Easy CNC Software & Dialogue Hmi (Human Machine Interface)

JAGURA EASY CNC Series Internal grinding machines are specially designed for ID grinding.

The EASY CNC control system is constructed by DELTA but it employs the exclusive advanced software developed by JAGURA.

Unlike the traditional hydraulic rapid feed system & NC systems, JAGURA Dialogue HMI is easy to both learn and use, thereby saving JAGURA EASY CNC users valuable training time as well as money.

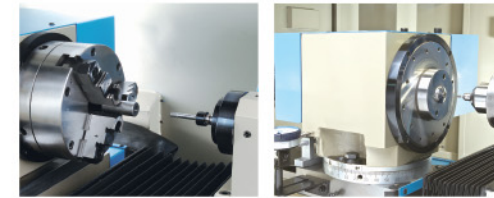
The JAGURA Dialogue HMI is divided into 4 main sections: Main Menu, Dressing Programs, Grinding Path Programs, and Program Links. Users simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work.

JAGURA Dialogue HMI is the best solution for grinding. The graphic directory enables the user to divide complicated grinding processes into individual stages. First, one of the pre-loaded grinding programs is selected: ID or ID Step. After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

Finally, users can enter one of the pre-loaded dressing programs: ID dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. It greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.

Clamping Application



3 Jaw

Collet workhead (optional)



Main Menu



Grinding Rates



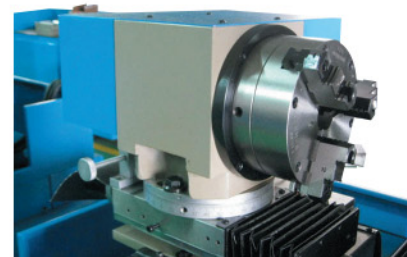
Link Cycle

Model	IG50-CNC(Easy)	
Clamping diameters	φ 140mm	
Max. clamped unit length	100mm	
Max. travel	X Axis	60mm
	Z Axis	220mm
Min feeding unit	X Axis	0.001mm
	Z Axis	0.001mm
Table speed	X Axis	0-6 m/min
	Z Axis	0-6 m/min
Workhead speed	100-500rpm	
Spindle speed	0-5500rpm (oil grease spindle)	
Motor	Workhead	1/2HP
	Spindle	1HP
	X Axis	750w
	Z Axis	750w
Weight:	1100kgs	
Working range (inner hole)	φ 1.5- φ 50mm	
Machine dimensions (LxWxH)	1700x1550x1750	
Standard accessories	1. φ 3mm collet x 1 pc 2. φ 6mm collet x 1 pc 3. Nut (M14xP0.75) x 1 pc 4. Tool box and accessories x 1 set 5. Splash guard	

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

Workhead:

The workhead spindle runs on high precision roller bearings featuring high accuracy, rigidity and silent running.





Reaching you... Worldwide

Model:

IG80:

This model is especially designed for grinding short workpiece with middle size inner hole. It is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user* requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface. This model is most suitable for gear industry, collect industry and bush industry.

The working range of ID grinding: 1.5~80mm

Machine Features

Machine Bed:

The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precision ground for maximum stability and rigidity. Outstanding structural reinforcement assures distortion-free operation and long life.

Slide-ways:

The slide-ways are also heat treated and precision ground to make this machine extremely smooth-running and accurate.

Feed axes:

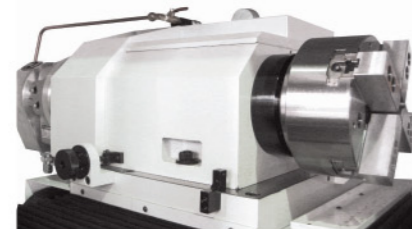
X-axis and Z-axis are equipped with precision ball screws and servo motors. A servo motor drives the ball screw directly guaranteeing positioning accuracy and feeding stability.



Machine Bed/Slide-Way/Feed axes

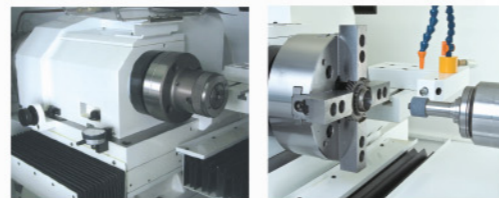
Workhead:

The workhead spindle runs on high precision roller bearings featuring high accuracy, rigidity and silent running.



IG80 Easy CNC

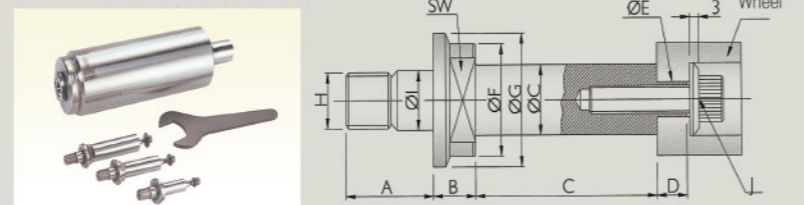
Clamping Application



Collet workhead (optional)

Hydraulic chuck (optional)

INTERNAL GRINDING SPINDLES



Grinding	Grease type	A	B	C	D	E	F	G	H	I	J	SW
70-150	8,000rpm	42	16	40X100 40X85 40X55	12	12	50	58	M26x2P	28	M8x1.25P	41
25-60	10,000rpm	29	14	30X90 25X70 20X60	10	10	32	38	M16x1.5P	17	M8x1.25P	24
20-30	20,000rpm	28	11	24X80 20X60 16X40	8	8	26	32	M14x1.5P	15	M6x1.0P	19
6-15	30,000rpm	21	9	16X40 13X30 10X25	6	6	21	26	M10x1.5P	10.5	M4x0.7P	17
3-10	40,000rpm	20	8	12X35 10X30 8X25	X	X	18	23	M8x1.25P	8.5	M4x0.7P	14
1.5-6	50,000rpm	18	7	8X30 7X25 6X20	X	X	15	20	M7x1P	7.5	M4x0.7P	11
		13	6	6.7X25 6X20 5.7X15	X	X	11	14	M5x0.8P	5.5	M4x0.7P M3x0.5P	8

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

Easy CNC Software & Dialogue Hmi (Human Machine Interface)

JAGURA EASY CNC Series Internal grinding machines are specially designed for ID grinding. The EASY CNC control system is constructed by DELTA but it employs the exclusive advanced software developed by JAGURA. Unlike the traditional hydraulic rapid feed system & NC systems, JAGURA Dialogue HMI is easy to both learn and use, thereby saving JAGURA EASY CNC users valuable training time as well as money. The JAGURA Dialogue HMI is divided into 4 main sections: Main Menu, Dressing Programs, Grinding Path Programs, and Program Links. Users simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work.

JAGURA Dialogue HMI is the best solution for grinding. The graphic directory enables the user to divide complicated grinding processes into individual stages. First, one of the pre-loaded grinding programs is selected: ID or ID Step. After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

Finally, users can enter one of the pre-loaded dressing programs: ID dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. It greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



Main Menu

Dressing Rates

Grinding Rates

Link Cycle

CNC Software & Dialogue Hmi (Human Machine Interface)

JAGURA CNC Series Internal grinding machines are specially designed for ID profile grinding. The CNC control system is constructed by Mitsubishi but it employs the exclusive advanced software developed by JAGURA. Unlike the traditional CNC systems, utilizing complicated G and M codes, JAGURA Dialogue HMI is easy to both learn and use, thereby saving JAGURA CNC users valuable training time as well as money.

The JAGURA Dialogue HMI is divided into 4 main sections: Main Menu, Dressing Programs, Grinding Path Programs, and Program Links. Users simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work.

JAGURA Dialogue HMI is the best solution for grinding, especially grinding complicated profiles. The graphic directory enables the user to divide complicated grinding processes into individual stages. First, one of the pre-loaded grinding programs is selected: ID, Taper, Radius grinding.

After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

Finally, users can enter one of the pre-loaded dressing programs: ID, Taper, Radius, ID profile dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. Since it can be readily integrated with most ancillary automation e.g. loaders / unloaders and gauging, it greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



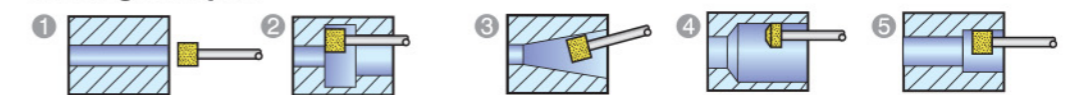
Main Menu

Dressing Rates

Grinding Rates

Link Cycle

Grinding example:



Model		IG80-CNC/ Easy CNC
Clamping diameters		φ 200mm
Max. clamped unit length		100mm
Max. travel	X Axis	220mm
	Z Axis	260mm
Min feeding unit	X Axis	0.001mm
	Z Axis	0.001mm
Table speed		0-6 m/min
Workhead speed		0-6 m/min
Spindle speed		100-500rpm
		(alternative of 10000~50000rpm)
Motor	Workhead	1 HP
	Spindle	3HPx4
	X Axis	750w
	Z Axis	750w
Weight:		2300kgs
Working range (inner hole)		φ 1.5- φ 80mm
Machine dimensions (LxWxH)		2100x1700x1800mm
Standard accessories:		1. Grinding wheel spindle 2. Coolant system 3. Splash guard 4. Tool box and accessories x 1 set

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



Reaching you... Worldwide

Model:

IG150:

This model is especially designed for grinding middle size and large size inner hole. It is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. V That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate.

That can ensure size stability and excellent surface.

Machine Features

Machine Bed:

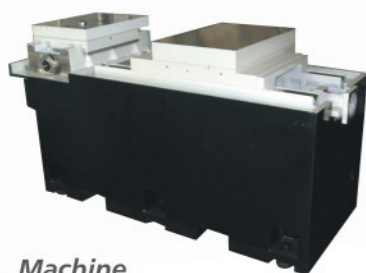
The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precision ground for maximum stability and rigidity. Outstanding structural reinforcement assures distortion-free operation and long life.

Slide-ways:

The slide-ways are also heat treated and precision ground to make this machine extremely smooth-running and accurate.

Feed axes:

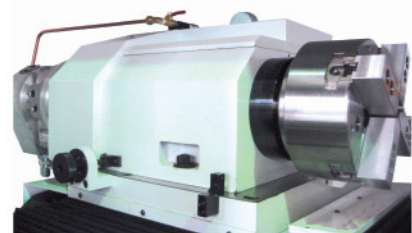
X-axis and Z-axis are equipped with precision ball screws and servo motors. A servo motor drives the ball screw directly guaranteeing positioning accuracy and feeding stability.



Machine Bed/Slide-Way/Feed axes

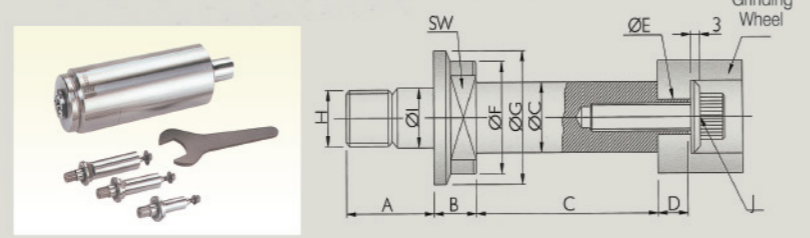
Workhead:

The workhead spindle runs on high precision roller bearings featuring high accuracy, rigidity and silent running.



IG150 CNC

INTERNAL GRINDING SPINDLES



Grinding	Grease type	A	B	C	D	E	F	G	H	I	J	SW	Oil mist type	Grinding hold
φ70-φ150	8,000rpm	42	16	φ40x100 φ40x95 φ40x95	12	φ12	φ50	φ58	M26x2P	φ28	M8x1.25P	41		
φ25-φ60	10,000rpm	29	14	φ30x90 φ25x70 φ20x60	10	φ10	φ32	φ38	M16x1.5P	φ17	M8x1.25P	24	20,000rpm	φ24-φ40
φ20-φ30	20,000rpm	28	11	φ24x80 φ20x60 φ16x40	8	φ8	φ26	φ32	M14x1.5P	φ15	M6x1.0P	19	30,000rpm	φ15-φ25
φ6-φ15	30,000rpm	21	9	φ16x40 φ13x30 φ10x25	6	φ6	φ21	φ26	M10x1.5P	φ10.5	M4x0.7P	17	40,000rpm	φ12-φ16
φ3-φ10	40,000rpm	20	8	φ12x35 φ10x30 φ8x25	x	x	φ18	φ23	M8x1.25P	φ8.5	M4x0.7P	14	50,000rpm	φ9-φ13
φ1.5-φ6	50,000rpm	18	7	φ8x30 φ7x25 φ6x20	x	x	φ15	φ20	M7x1P	φ7.5	M4x0.7P	11	60,000rpm	φ7-φ10
		13	6	φ6.7x25 φ6x20 φ5.7x15	x	x	φ11	φ14	M5x0.8P	φ5.5	M4x0.7P M3x0.5P	8	80,000rpm	φ6-φ8

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

Easy CNC Software & Dialogue Hmi (Human Machine Interface)

JAGURA EASY CNC Series Internal grinding machines are specially designed for ID grinding. The EASY CNC control system is constructed by DELTA but it employs the exclusive advanced software developed by JAGURA. Unlike the traditional hydraulic rapid feed system & NC systems, JAGURA Dialogue HMI is easy to both learn and use, thereby saving JAGURA EASY CNC users valuable training time as well as money.

The JAGURA Dialogue HMI is divided into 4 main sections: Main Menu, Dressing Programs, Grinding Path Programs, and Program Links. Users simply select a dressing pattern and grinding path, enter the processing parameters, and the machine can start to work.

JAGURA Dialogue HMI is the best solution for grinding. The graphic directory enables the user to divide complicated grinding processes into individual stages. First, one of the pre-loaded grinding programs is selected: ID or ID Step. After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

Finally, users can enter one of the pre-loaded dressing programs: ID dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. It greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



Main Menu Dressing Rates Grinding Rates Link Cycle

CNC Software & Dialogue Hmi (Human Machine Interface)

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After choosing from the program list, the operator can set up total feed volume, individual cycle feed volume, feed speed, spindle RPM, workhead RPM, and grinding length.

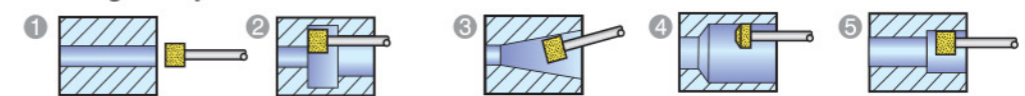
Finally, users can enter one of the pre-loaded dressing programs: ID, Taper, Radius, ID profile dressing. After entering the desired dressing program, users can set dressing volume and off-set volume. This function not only reduces time spent adjusting tools, but also reduces the potential for accidental input errors.

JAGURA Dialogue HMI is your best grinding solution. Since it can be readily integrated with most ancillary automation e.g. loaders / unloaders and gauging, it greatly improves efficiency and assures production of the finest quality parts, while employing the most user friendly operation.



Main Menu Dressing Rates Grinding Rates Link Cycle

Grinding example:



Model	IG150-CNC/ Easy CNC	
Clamping diameters	φ 200mm	
Max. clamped unit length	150mm	
Max. travel	X Axis	220mm
	Z Axis	500mm
Min feeding unit	X Axis	0.001mm
	Z Axis	0.001mm
Table speed	X Axis	0-6 mm
	Z Axis	0-6 mm
Workhead speed	100-500rpm	
Spindle speed	(alternative of 10000~50000rpm)	
Swivel range	forward 8° backward 5°	
Motor	Workhead	1HP
	Spindle	3HPx4φ
	X Axis	1kw
	Z Axis	1kw
Weight:	3500kgs	
Working range (inner hole)	φ 6- φ 150mm	
Machine dimensions (LxWxH)	2400x1950x 2000	
Standard accessories:	1. Grinding wheel spindle (alternative of 10000~50000rpm) 2. Coolant system 3. Splash guard 4. Tool box and accessories x 1 set	

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Reaching you... Worldwide

Model:

IG35100

This model is especially designed for grinding large size inner hole. It can install adjustable 3-point Steady Rest to enhance grinding stability when grind long workpiece. This model is equipped with grease lubricated grinding spindle (Max. 20000rpm). Both X-axis and Z-axis are driven by ball screw and servo motor. The positioning accuracy is up to 0.001mm. Its Z-axis design is different from the traditional & NC ID grinder. Z-axis is double V guideways with optimum span and furthermore its travel distance is shortened. That can improve two defects: Z-axis travel is too long and Z-axis stand-by position can not be set. Both X-axis and Z-axis stand-by position can be set according to user requirement. It is convenient for workpiece loading and unloading and it can enhance working efficiency. The full automatic grinding cycles are including: rough grinding/ wheel dressing/step finish grinding/spark-out grinding. In step finish grinding cycle, operator can set feed amount and feed rate. That can ensure size stability and excellent surface. This model is most suitable for spindle grinding.



- IG35100 CNC/Easy CNC
- IG35150 CNC/Easy CNC
- IG35200 CNC/Easy CNC

(Welcome Customized Machine Accepted)

Machine Features

Machine Bed:

The machine bed is constructed of high quality "MEEHANITE" cast iron and has been heat treated, normalized and precision ground for maximum stability and rigidity. Outstanding structural reinforcement cement assures distortion-free operation and long life.

Slide-ways:

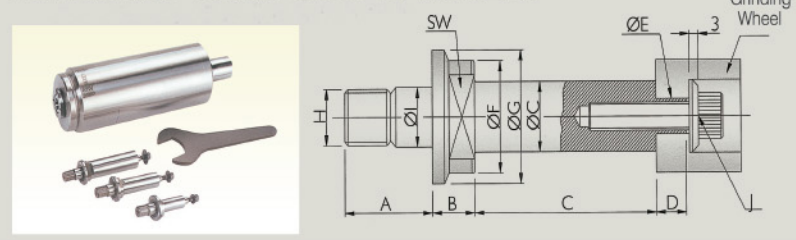
The slide-ways are also heat treated and precision ground to make this machine extremely smooth-running and accurate.

Feed axes:

X-axis and Z-axis are equipped with precision ball screws and servo motors. A servo motor drives the ball screw directly guaranteeing positioning accuracy and feeding stability.



INTERNAL GRINDING SPINDLES

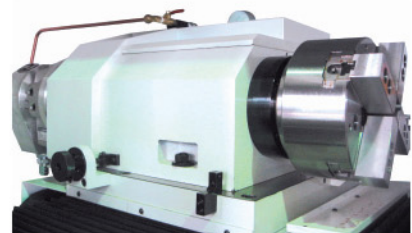


Grinding	Grease type	A	B	C	D	E	F	G	H	I	J	SW	Ø11 mist type	Grinding hold
φ70-φ150	8,000rpm	42	16	φ40x100 φ40x85 φ40x55	12	φ12	φ50	φ58	M26x2P	φ28	M8x1.25P	41		
φ25-φ60	10,000rpm	29	14	φ30x90 φ25x70 φ20x60	10	φ10	φ32	φ38	M16x1.5P	φ17	M8x1.25P	24	20,000rpm	φ24-φ40
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φ6-φ15	30,000rpm	21	9	φ16x40 φ13x30 φ10x25	6	φ6	φ21	φ26	M10x1.5P	φ10.5	M4x0.7P	17	40,000rpm	φ12-φ16
φ3-φ10	40,000rpm	20	8	φ12x35 φ10x30 φ8x25	x	x	φ18	φ23	M8x1.25P	φ8.5	M4x0.7P	14	50,000rpm	φ9-φ13
φ1.5-φ6	50,000rpm	18	7	φ8x30 φ7x25 φ6x20	x	x	φ15	φ20	M7x1P	φ7.5	M4x0.7P	11	60,000rpm	φ7-φ10
		13	6	φ6.7x25 φ6x20 φ5.7x15	x	x	φ11	φ14	M5x0.8P	φ5.5	M4x0.7P M3x0.5P	8	80,000rpm	φ6-φ8

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

Workhead:

The workhead spindle runs on high precision roller bearings featuring high accuracy, rigidity and silent running.



Easy CNC Software & Dialogue Hmi (Human Machine Interface)

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CNC Software & Dialogue Hmi (Human Machine Interface)

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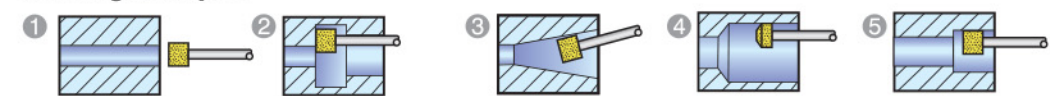
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Grinding example:



Model	IG35100-CNC/ Easy CNC
Clamping diameters	φ 350mm
Max. clamped unit length	1000mm
Max. travel	X Axis 220mm Z Axis 500mm
Min feeding unit	X Axis 0.001mm Z Axis 0.001mm
Table speed	X Axis 0-6 m/min Z Axis 0-6 m/min
Workhead speed	100-500rpm
Spindle speed	(alternative of 10000~50000rpm)
Swivel range	-1° ~ +9°
Motor	Workhead 2 HP Spindle 3HPx4φ X Axis 1kw Z Axis 1kw
Weight:	6500kgs
Working range (inner hole)	φ 20- φ 150mm
Machine dimensions (LxWxH)	3880x2680x1750mm
Standard accessories:	1. Grinding wheel spindle (alternative of 10000~50000rpm) 2. Coolant system 3. Splash guard 4. Tool box and accessories x 1 set

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

