

PRECISION INTERNAL GRINDING MACHINE

MAX15-ID
MAX15N-ID
MAX15N-ID-2 SPINDLE



Okamoto

MAX15-ID/15N-ID/15N-ID-2 SPINDLE

From contour form to mixed grinding, automatic setting function of grinding parameters and dress data by graphical

Grinding data automatic setting function.

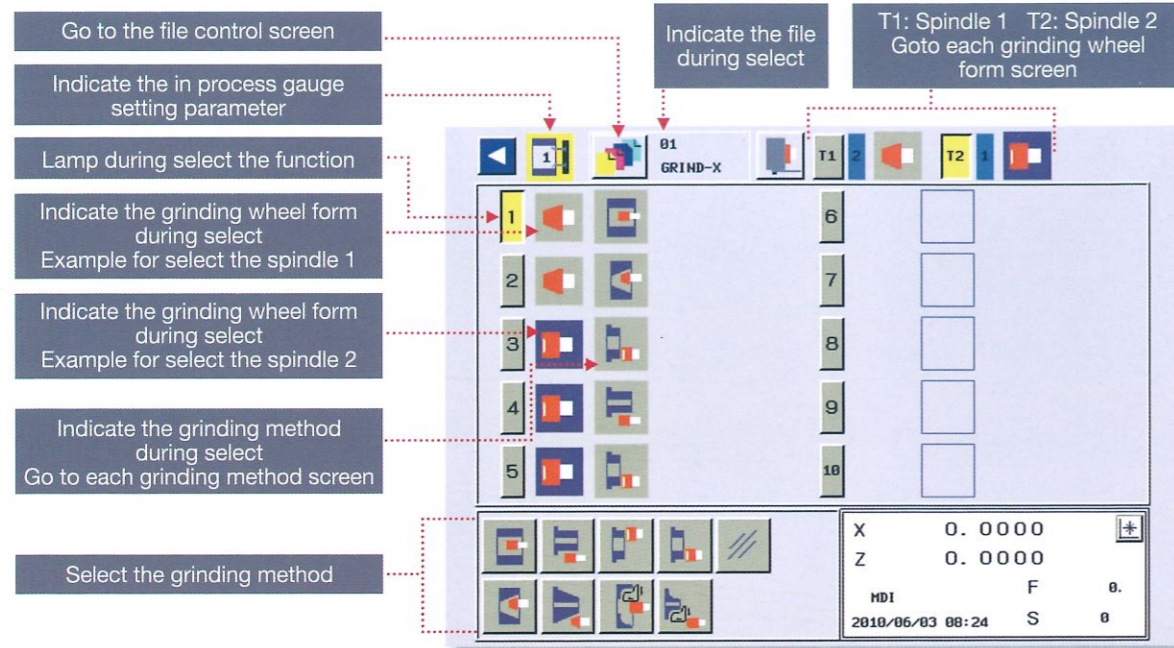
By data input of grinding wheel grain, width and work finish size, programming is automatically selected by using most suitable grinding parameters based on our grinding theory and process experience.

Touch panel input

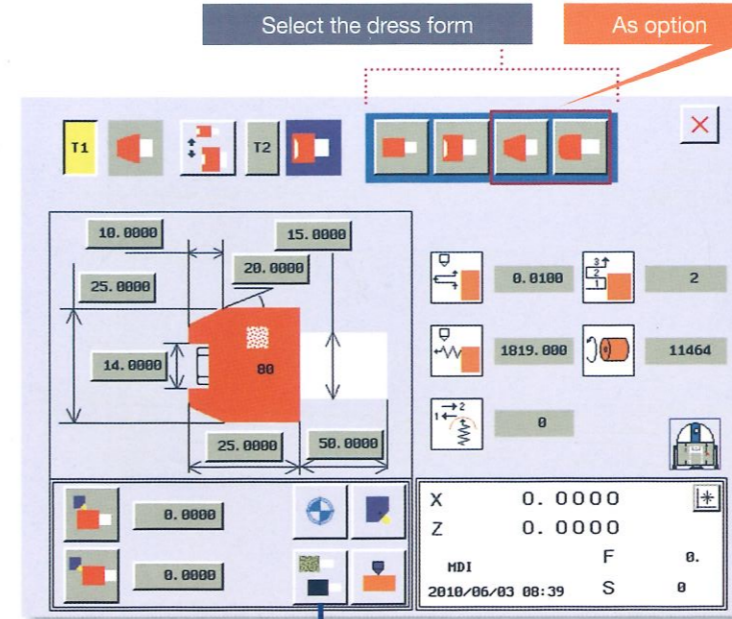
No languages are used in the CRT. By just using a touch panel input, complex grinding form can be selected for processing.

File control

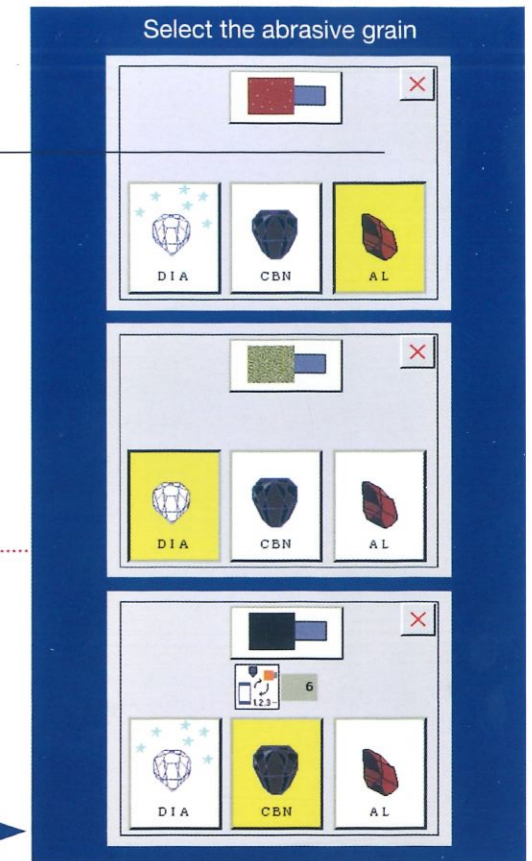
Can be storage 6 kinds of grinding wheel data, 21 files of work piece data.



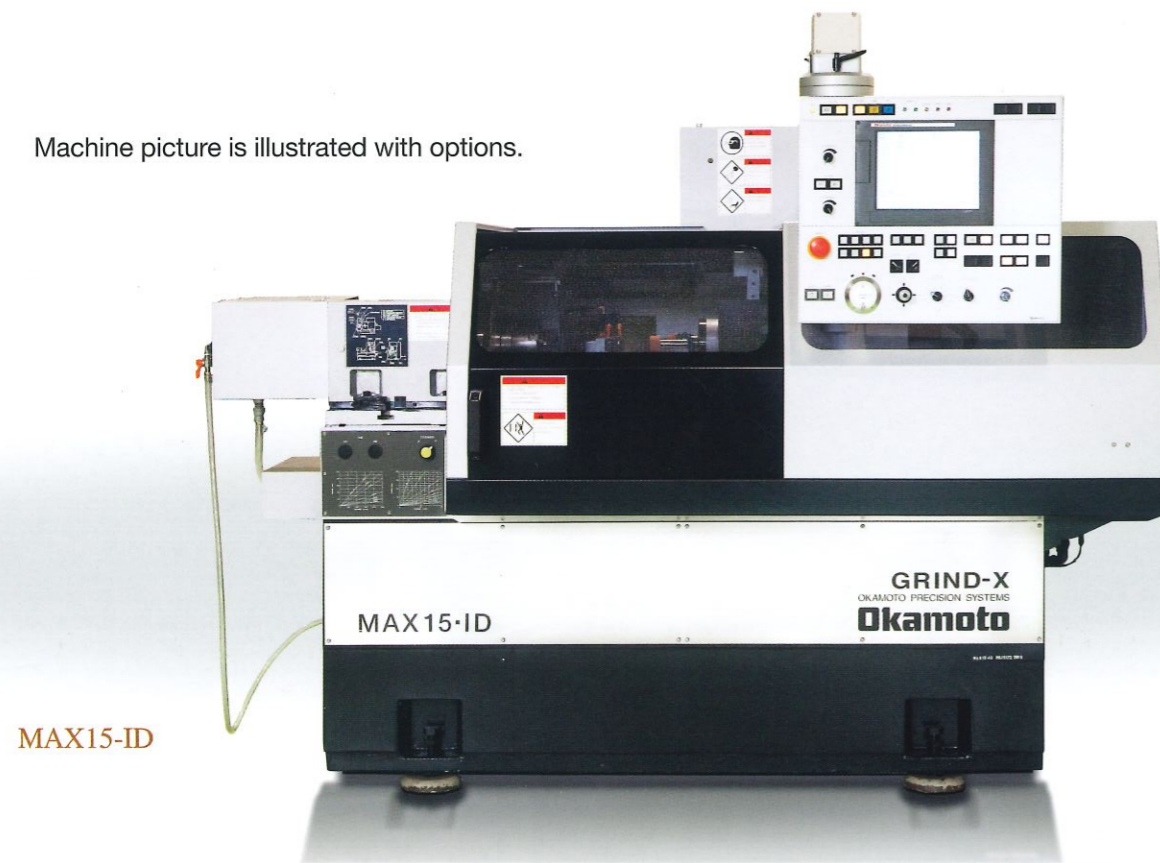
【 Main screen (Common MAX15-ID, 15N-ID-2) 】



【 Grinding wheel form select screen (MAX15-ID, 15N-ID-2) 】



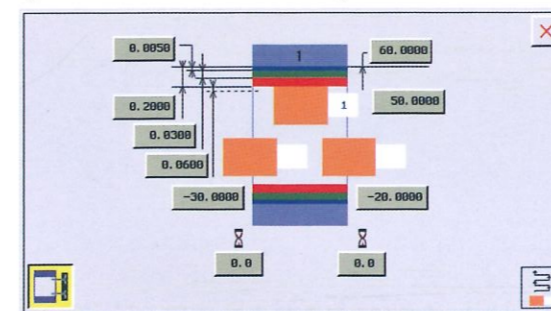
Machine picture is illustrated with options.



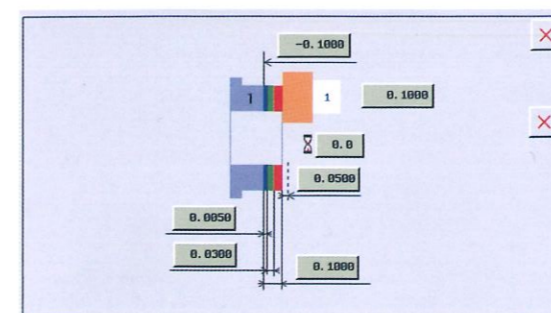
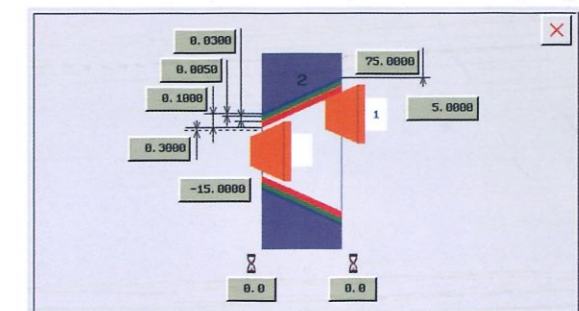
MAX15-ID

Main screen

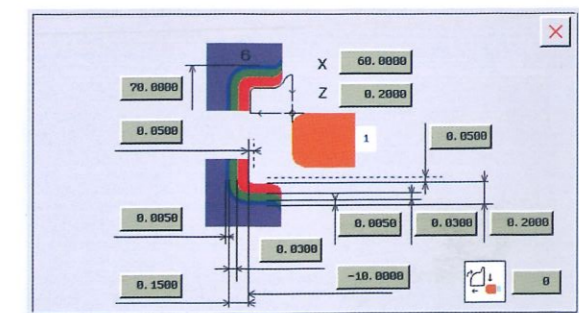
Straight grinding setting screen
(Common all machines model)



Taper grinding data setting screen
(MAX15N-ID, 15N-ID-2 as option)



Face grinding data setting screen
(Common all machines model)

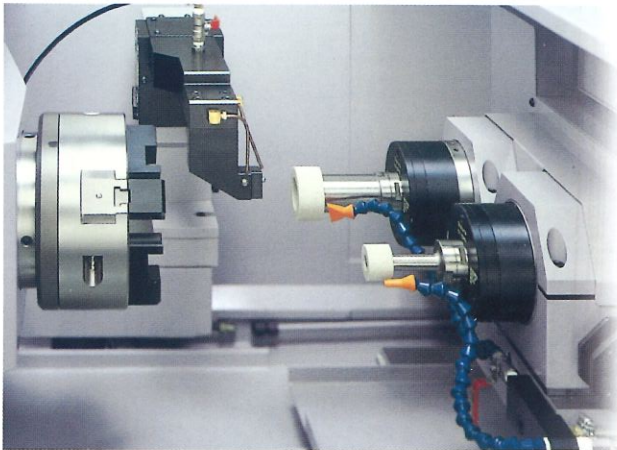


Contour grinding screen
(MAX15N-ID, 15N-ID-2 as option)

screen to reduce the data input time.



MAX15-ID



MAX15-ID-2

MAX15-ID

Internal grinding machine like conventional type, apply conversational software 10 steps. (Single axis control)

- Apply the conversational software 10 steps (previously only one step). Developed especially for the straight grinding and face grinding.
- Grinding wheel spinder by AC servo motor and Work head by AC servo motor are as standard. Most high accuracy has come true.

MAX15N-ID

G code input. Key board specifications are expanded. (Two axis simultaneous control)

- Taper and contour form software are available by the simultaneous controlled 2 axis. EDELAC Win for contour way software is very useful.
- Grinding wheel spindle by AC servo motor and Work head by AC servo motor are as standard. Most high accuracy has come true.

MAX15N-ID-2

2 spindle is available for multiple face by one chucking.

- Apply the conversational software 10 steps.

Standard accessories

Item	MAX15-ID	MAX15N-ID	MAX15N-ID-2
Grinding wheel, X-axis ball screw oil cooling type	—	—	○
Grinding wheel spindle with holder 20000 mm^{-1} (grease packed)	○	○	—
High frequency spindle 10000 mm^{-1} , 20000 mm^{-1}	—	—	○
Wheel spindle inverter for high frequency spindle	—	—	○
Grinding wheel AC spindle motor	○	○	—
Work head AC servo motor	○	○	○
Oil mist lube system (small refuel type)	—	—	○
Tool nose radius compensation	—	○	○
10 steps grinding, no key board, straight face-grinding specifications	○	—	—
10 steps grinding, key board specification + G code input	—	○	○
Dress coolant system, Center coolant supply	○	○	○
Table cleaning nozzle	○	○	○
Duct hole preparation (include food)	○	○	○
LED lamp inside cover	○	○	○
Workhead shift device	○	○	○
Grinding wheel spindle load indicator	○	○	○
Work spindle RPM indicator	○	○	○
Working hour meter. No. of workpiece indicator	○	○	○
Coolant system with magnetic dust separator	○	○	○

Optional accessories

Item	MAX15-ID	MAX15N-ID	MAX15N-ID-2
1. Coolant system			
1) with magnetic separator	○	○	○
2) with magnetic separator/paper filter	○	○	○
3) with magnetic separator/paper filter/temperature regulator	○	○	○
4) with magnetic separator/paper/cartridge filter/temperature regulator	○	○	○
2. Sleeve type grinding wheel spindle (high frequency spindle, oil mist type)			
1) OH-10MB (10000min ⁻¹)	○	○	Standard
2) OH-20MB (20000min ⁻¹)	○	○	Standard
3) OH-30MB (30000min ⁻¹)	○	○	○
4) OH-40MB (40000min ⁻¹)	○	○	○
5) OH-60MB (60000min ⁻¹)	○	○	○
3. Sleeve type grinding wheel spindle (oil mist type)			
1) GS-5 (60000min ⁻¹ , 40000min ⁻¹)	○	○	—
2) B-32M (30000min ⁻¹)	○	○	—
3) B-23M (20000min ⁻¹ , 16000min ⁻¹ , 13000min ⁻¹)	○	○	—
4) R-7B-A (10000min ⁻¹)	○	○	—
4. Grinding wheel spindle with holder (grease packed)			
1) OH-10G (10000min ⁻¹)	○	○	—
2) OH-15G (15000min ⁻¹)	○	○	—
3) OH-20G (20000min ⁻¹)	Standard	Standard	—
4) OH-30G (30000min ⁻¹)	○	○	—
5) OH-40G (40000min ⁻¹)	○	○	—
6) OH-50G (50000min ⁻¹)	○	○	—
5. Grinding wheel spindle with holder (oil mist type)			
1) OH-10M (10000min ⁻¹)	○	○	—
2) OH-20M (20000min ⁻¹)	○	○	—
3) OH-30M (30000min ⁻¹)	○	○	—
4) OH-40M (40000min ⁻¹)	○	○	—
5) OH-60M (60000min ⁻¹)	○	○	—
6. Sleeve type grinding wheel spindle holder			
	○	○	—
7. Chucks			
1) 3-jaw scroll chuck	○	○	○
2) 4-jaw independent chuck	○	○	○
3) Micro centric chuck	○	○	○
4) Diaphragm chuck	○	○	○
5) Collet chuck	○	○	○
6) Finger chuck	○	○	○
7) Diaphragm finger chuck	○	○	○
8) Gear chuck	○	○	○
9) Various power chuck	○	○	○
10) Hydraulic pressure drive device for power chuck	○	○	○
8. Workhead spindle NC swing, swing min. setting unit: 0.00001°			
	—	○	○
9. Graphic conversational software for workhead spindle NC swing angle setting			
	—	○	○
10. Workhead spindle rotation constant control			
	—	○	○
11. Taper and contour form software are available by the simultaneous controlled 2 axis			
	—	○	○
12. Grinding wheel forming software (taper form, free form)			
	—	○	○
13. Auto programming software EDELAC Win			
	—	○	○
14. Auto power cut-off device			
	○	○	○
15. Inprocess guage system			
	—	○	○
16. Rotary dressing device			
	○	○	○
17. Signal tower			
	○	○	○

MAX15-ID/15N-ID/15N-ID-2 specifications

Item	Unit	MAX15-ID	MAX15N-ID	MAX15N-ID-2
Internal diameter to be ground	mm	Ø 6 ~ 150		Ø 6 ~ 100
Grinding stroke	mm	maximum 125		
Swing over table	mm	Ø 600		
Swing inside workpiece guard	mm	Ø 260		
Distance from bottom of frame to center of chuck	mm	1000		
Wheel spindle cross feed (X-axis)	Maximum travel	mm	170	300
	Feed rate	mm/min	0.001 ~ 10000	
	Rapid feed rate	mm/min	10000	
Table longitudinal feed (Z-axis)	Maximum travel	mm	500	
	Feed rate	mm/min	0.001 ~ 15000	
	Rapid feed rate	mm/min	15000	
Least input increment	X-axis	mm	Ø 0.0001	
	Z-axis	mm	0.0001	
Work spindle speed	min ⁻¹	100~850		
Work spindle swivel angle	deg.	-5 ~ 15		
Motor	Work spindle (AC servo motor)	kW	1.8	
	Wheel spindle (AC servo motor)	kW	3.7	
	X-axis (AC servo motor)	kW	1.2	
	Z-axis (AC servo motor)	kW	1.2	
Power supply (including optional coolant system)	kVA	8		12
Machine space	mm	2535 x 2255 x 1786		2535 x 2405 x 1786
Machine net weight	kg	2500		2650

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CAUTION

*When and before using our products, you are requested to well go through the articles on danger, warning and attention for the sake of safety described in operation manual attached to the machine and also in the warning plates mounted on the machine.

*Specifications subject to change without notice.

*Electrical Voltage vary according to Buyer's country

*When a product/manufactured at our factory comes under the

Foreign Exchange And Foreign Trade Control Law and is exported or carried overseas, it is necessary to receive permission or approval of the Japanese Government.

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