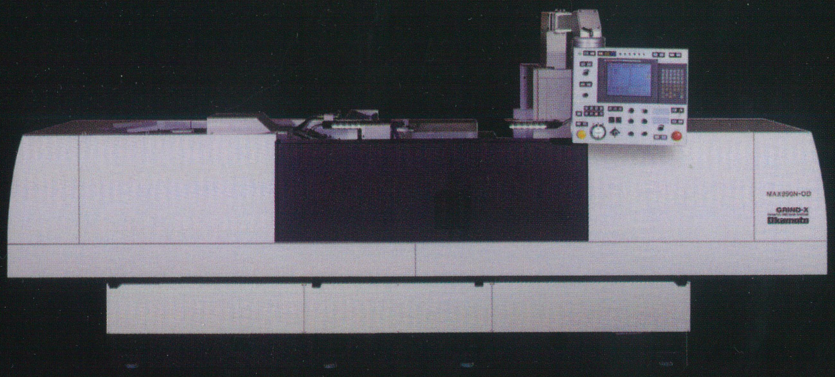
CYLINDRICAL GRINDING MACHINE

MAX-OD
MAX-N-OD
SERIES



Okamoto

MAX-OD/MAX-N-OD Series

Automatic setting function of grinding parameters and dress data by graphical screen to reduce the data input time

Grinding data automatic setting function.

By only data input of abrasive grain and width, and work finish size, it is automatically programming of most suitable grinding parameters which is added grinding theory to our experience.

Touch panel input

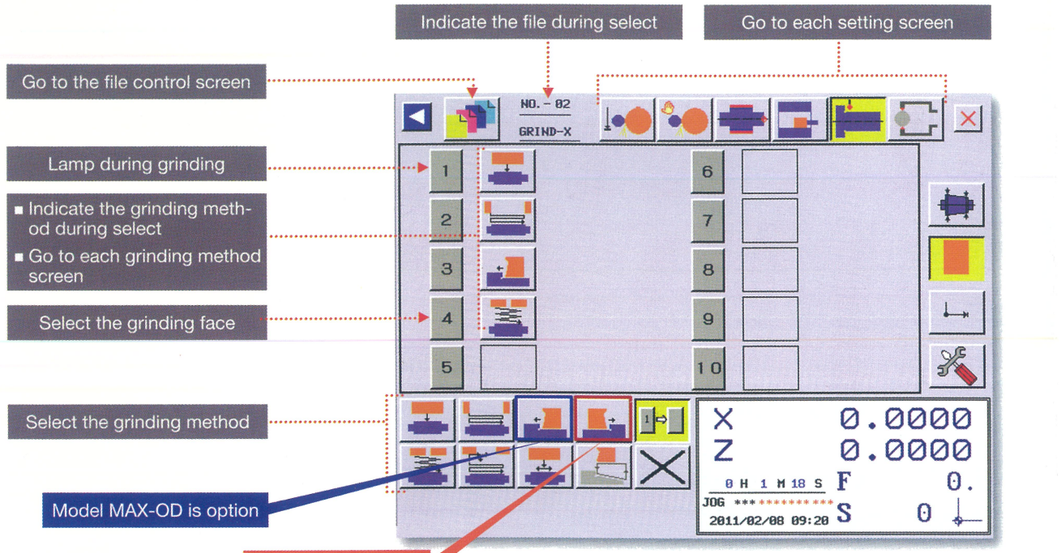
There are no language on the CRT.
With a panel button and touch on CRT, it is possible to apply the complicated form.

Indicate estimated cycle time

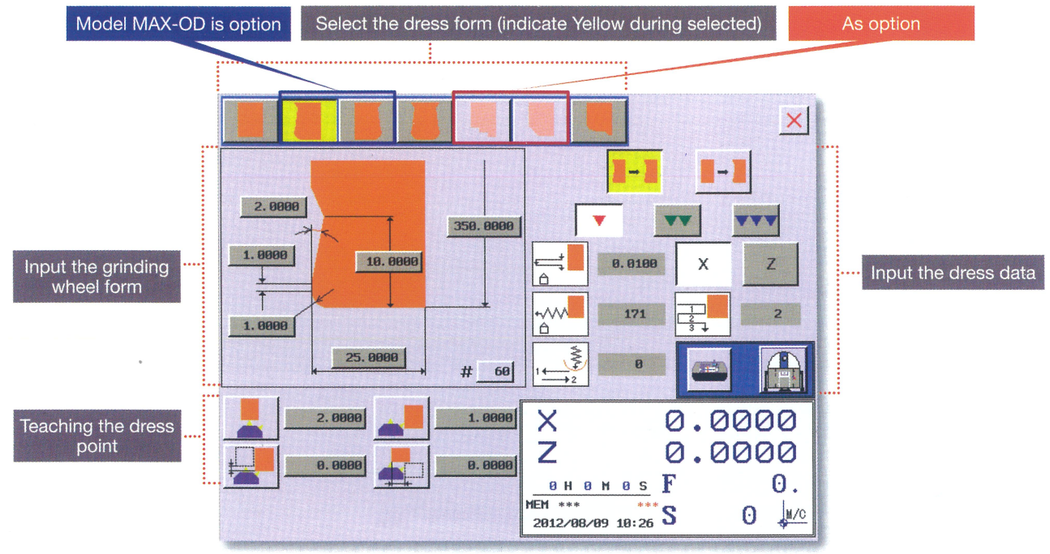
There is no useless of setting time.

File control

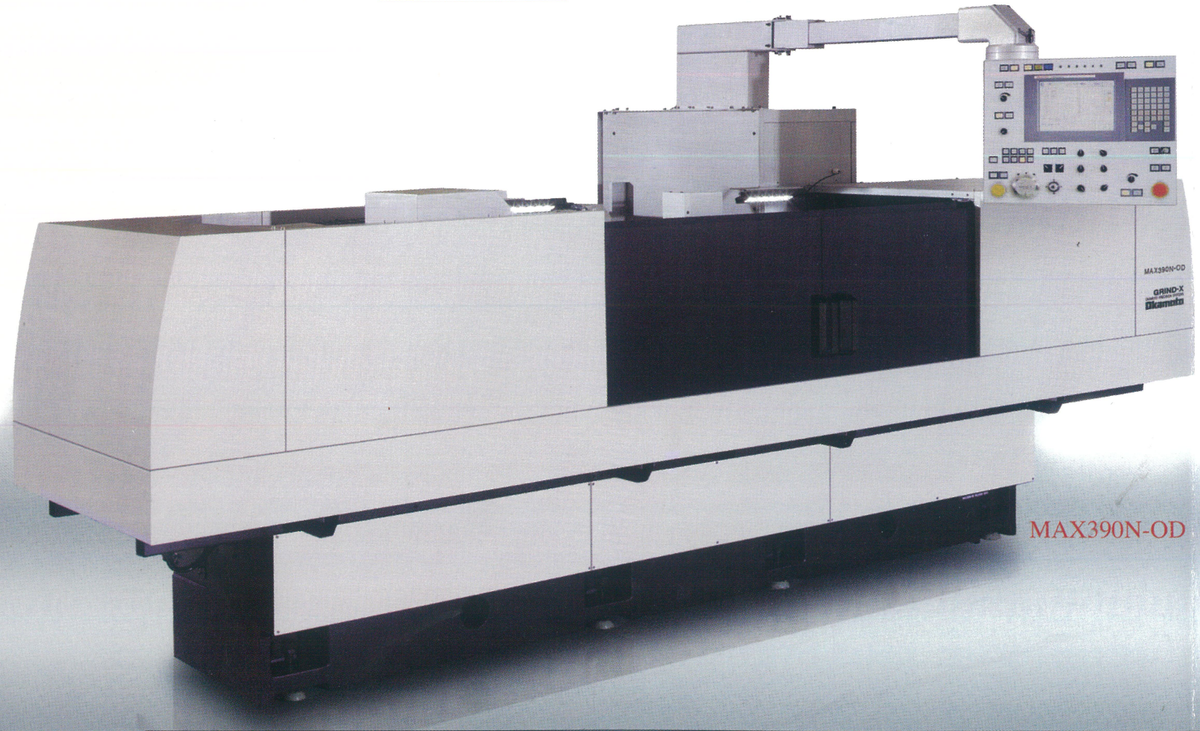
Can be storage 21 files of grinding parameters.



【Main screen of MAX-N-OD Series】



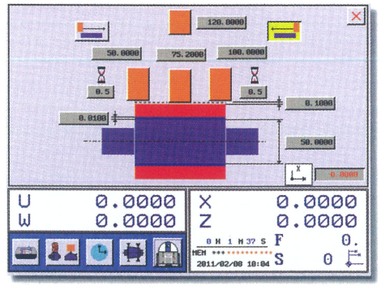
【Grinding form select screen （Screen is MAX-N-OD）】



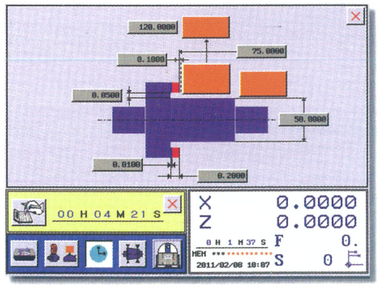
MAX390N-OD

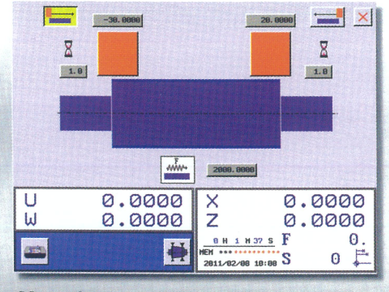
Main screen（Common MAX-OD・MAX-N-OD）

Traverse data setting screen

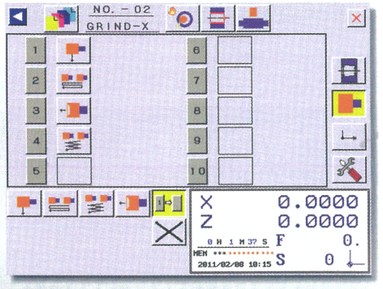


Face grinding data setting





Manual traverse setting screen

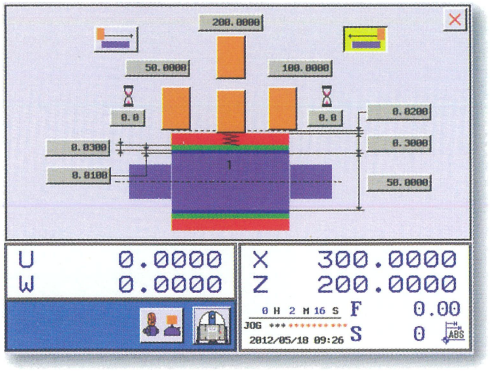


Main screen of the internal grinding (The internal grinding attachment as option)

MAX-OD Series

Concept is as conventional type machine with automatic dress function

- The standard software is 10 steps grinding.
- Locator and Gap eliminator are available as option.

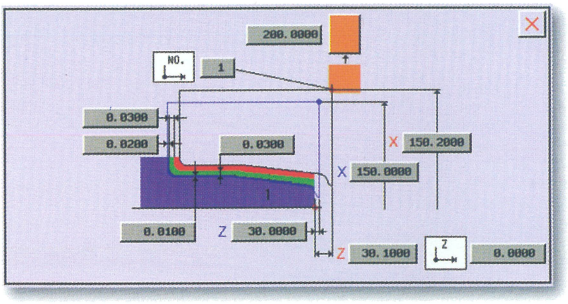


【Plunge oscillation grinding】

MAX-N-OD Series

Make simple the complicate form grinding

- The standard software is 10 steps grinding.
- Contour grinding software available as option.
- Face grinding is also setteing by teaching.
- Locator and Gap eliminator are available as option.



【Screen of contour grinding (option)】

Standard accessories

Item	MAX-OD Series	MAX-N-OD
GRIND-X grinding wheel & grinding wheel flange	○	○
Carbide center 2pcs	○	○
Grease gun	○	○
Short circuit breaker	○	○
Manual taper fine adjustment type tailstock	○	○
Indicate estimated cycle time	○	○
Table swivel measuring device	○	○
Tool nose R compensation	–	○
LED lamp inside cover	○	○
Work head AC servo motor	○	○
Grinding wheel AC spindle motor	○	○
Table inside water supply always	○	○
Dress coolant system	○	○
Coolant system with magnetic dust separator	○	○
Automatic dog set (φ6～φ80×6 pieces)	○	○
Locator (Grinding wheelhead front type)	Option	○

Graphic conversational software

10 steps software & 2 points dress		○	○
Automatic grinding cycle	Plunge grinding	○	○
	Traverse grinding (left, right, both sides)	○	○
	Plunge oscillation grinding	○	○
	Plunge + fine oscillation grinding	○	○
	Rough shift plunge grinding + Fine traverse grinding	○	○
	Manual traverse grinding	○	○
	Shoulder grinding (right side)	○	○
	Shoulder grinding (left side)	Option	○
	Contour grinding	–	Option
Automatic dress cycle	Straight	○	○
	Shoulder grinding (right side)	○	○
	Shoulder grinding (left side)	Option	○
	Shoulder grinding (both side)	Option	○
	Taper	–	Option
	Multi-step straight	–	Option
	Callthe G code wheel dresser pathway	–	○
G code		–	○

Optional accessories

Item	MAX-OD Series				MAX-N-OD Series			
	200		300		200		300	
	Plain	Universal	Plain	Universal	Plain	Universal	Plain	Universal
1. Internal grinding attachment (with automatic grinding cycle)	○※1	○※1	—	○	○※2	○※2	—	○
2. Spindle for internal grinding attachment								
1) 10000rpm	—	—	—	○	—	—	—	○
2) 18000rpm	○※1	○※1	—	○	○※2	○※2	—	○
3) 25000rpm	○※1	○※1	—	○	○※2	○※2	—	○
3. 3-jaws scroll chuck (with face plate, chuck cover)								
1) No.4, 5	○	○	○	○	○	○	○	○
2) No.6, 7	—	—	○	○	—	—	○	○
4. Tailstock								
1) Manual taper fine adjustment type tailstock	Standard							
2) Motor retract type tailstock	○	○	○	○	○	○	○	○
3) Hydraulic type tailstock	○	○	○	○	○	○	○	○
4) Quil stretch type tailstock (150mm)	○	○	○	○	○	○	○	○
5. Steady rest								
1) Manual adjust type 2 point steady rest	○	○	○	○	○	○	○	○
2) Manual adjust type 3 point steady rest	○	○	○	○	○	○	○	○
6. Work rest	○	○	○	○	○	○	○	○
7. Work driver	○	○	○	○	○	○	○	○
8. Duct hole preparation (include food)	○	○	○	○	○	○	○	○
9. Grinding wheel balancing device								
1) BW-5 (with an arbor)	—	—	○	—	—	—	○	—
2) BW-360 (with an arbor)	○	○	—	○	○	○	—	○
3) Micro balancer	○	○	○	○	○	○	○	○
4) Automatic balancer	○	○	○	○	○	○	○	○
10. Spare grinding wheel flange	○	○	○	○	○	○	○	○
11. Jib crane	○	○	○	○	○	○	○	○
12. Lubricating oil	○	○	○	○	○	○	○	○
13. OD direct sizing device	○	○	○	○	○	○	○	○
14. Rotary dresser specification	—	—	—	—	—	—	○	○
15. Hyddrostasics wheel spindle (with oil temperature regurator, tank, spindle oil)	○	○	○	○	○	○	○	○
16. Oil cooled type wheel head (with oil temperature regurator, oil)	○	○	○	○	○	○	○	○
17. Removal manual pulse handle	○	○	○	○	○	○	○	○
18. Auto loader specification	—	—	—	—	○	○	○	○
19. 10 steps software & Locator & 3 points dresser, include Locator cycle software	○	○	○	○	—	—	—	—
20. Swing over table ϕ 420 mm	—	—	○	○	—	—	○	○
21. Gapeliminator	○	○	○	○	○	○	○	○

Graphic conversational software

1) Automatic grinding cycle								
Shoulder (left side)	○	○	○	○	Standard	Standard	Standard	Standard
Contour grinding	—	—	—	—	○	○	○	○
2) Automatic dress cycle								
Shoulder (left side)	○	○	○	○	Standard	Standard	Standard	Standard
Shoulder (both side)	○	○	○	○	Standard	Standard	Standard	Standard
Taper	—	—	—	—	○	○	○	○
Multi-step straight	—	—	—	—	○	○	○	○

※1 Does not include 225MAX-OD type ※2 Does not include 225MAX-N-OD type

MAX-OD/MAX-N-OD series specifications

Item			Unit	200 Series				300 Series							
				Plain Type		Universal Type		Plain Type				Universal Type			
				225	250	225	250	225	350	390	3150	330	350	390	3150
Capacity	Swing on the table		mm	220				320							
	Distance between centers		mm	250	500	250	500	300	500	900	1500	300	500	900	1500
	Maximum machining diameter		mm	200				300							
	Maximum mass of workpiece	center	kg	50				150							
		chuck		20 (Face plate+chuck+work)				40 (Face plate+chuck+work)							
Grinding wheel	Size (Outer dia. x Width x Inner dia.)		mm	Ø355 x 38 x Ø127		Ø305 x 25 x Ø127		Ø405 x 50 x Ø127				Ø355 x 38 x Ø127			
	Rotation speed (Stepless control)		min^{-1}	1610 to 1980		1880 to 2210		1570 to 1742				1767 to 1996			
	Maximum operating peripheral velocity		m/sec	30				33							
Grinding head	X-axis movement distance		mm	215				300							
	Swivel angle		deg	0 (No swivel)		±30		0 (No swivel)				±30			
	Least input increment (Ø)		mm	0.0001											
	Rapid feed speed (Ø)		mm/min	4000											
Table	Z-axis movement distance		mm	512	762	512	762	670	870	1270	1870	670	870	1270	1870
	Swivel angle		deg	0~ -11	0~ -9	0~ -11	0~ -9	0~ -12	0~ -10	0~ -8.5	0~ -5	0~ -12	0~ -10	0~ -8.5	0~ -5
	Least input increment		mm	0.0001											
	Rapid feed speed		mm/min	8000				10000							
Work head	Main spindle type		-	Dead and live combination spindle											
	Center taper		MT	No.3				No.4							
	Through hole diameter		mm	Ø8				Ø20							
	Rotational speed		min^{-1}	10 ~ 500											
	Swivel angle		deg	30~ -90				0 (No swivel)				30~ -90			
Tailstock	Tailstock spindle movement distance		mm	20				30							
	Center taper		MT	No.3				No.4							
Motor	Wheel spindle (AC Spindle motor)		kW	3.7				5.5							
	Main spindle		kW	1.8 (AC servo motor)											
	Table feed		kW	1.2 (AC servo motor)											
	Grinding head feed		kW	1.2 (AC servo motor)											
	For lubricant pump		W/P	3/4											
	Coolant pump		W/P	180/2											
	Magnetic separator		W/P	25/4											
Tank capacity	Lubricant		L	3											
	Coolant		L	120											
Power supply	Voltage, Frequency, Capacity		-	200VAC, 50Hz, 15kVA				200VAC, 50Hz, 20kVA							
Height from floor surface to machining axis center			mm	980				1000							
Machine Net Weight			kg	2900	3300	2900	3300	3900	4600	5000	6000	3900	4600	5000	6000

Floor space (Unit:mm)

			MAX-OD Series						MAX-N-OD Series					
			225	250	330	350	390	3150	225	250	330	350	390	3150
Footprint	Width	mm	2670	2920	3000	3400	4200	5600	2670	2920	3000	3400	4200	5600
	Depth	mm	2010		2330				2010		2330			
	Height	mm	1950											

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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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