CNC ROTARY SURFACE GRINDING MACHINE

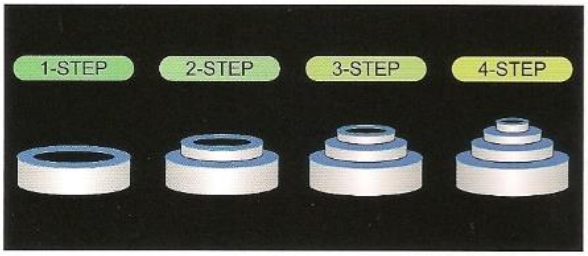
PRG-DXNC

Okamoto

CNC rotary surface grinding with 2-axes control attains higher accuracy and much higher productivity. Equally suitable for single parts to mass production.

Step-grinding upto 4 steps with high accuracy and high Speed

- Multi-step grinding is one of the big advantages PRG-DXNC series have. CNC 2-axis simultaneous control enables grinding upto 4 steps, thus so widely expands shape coverage of workpieces.

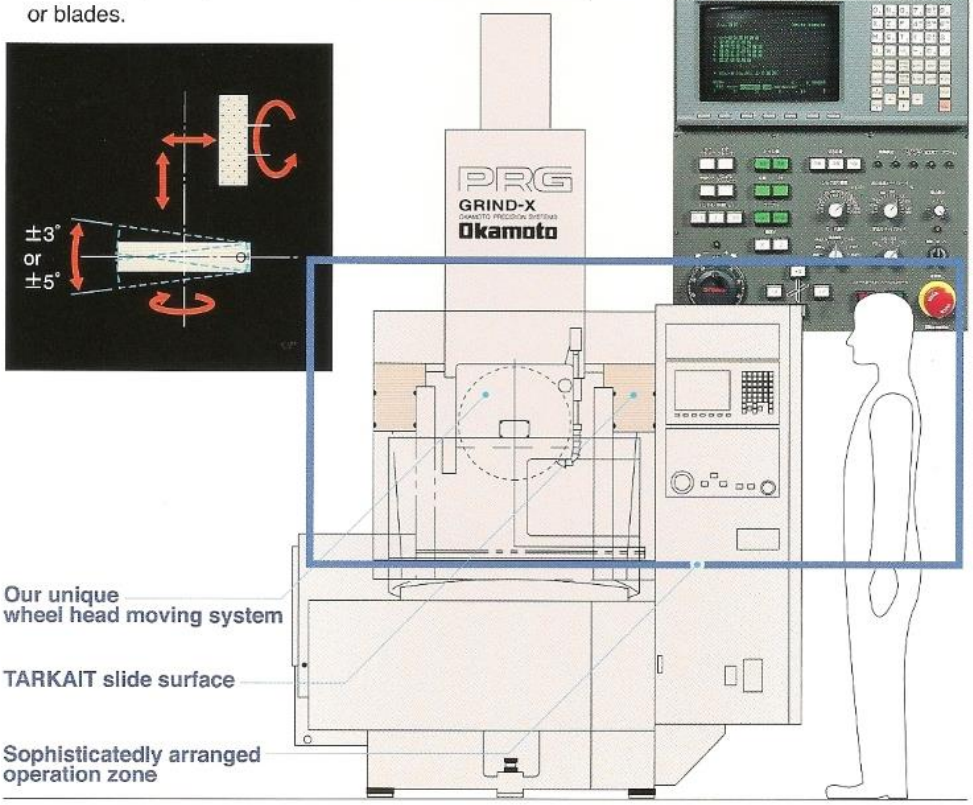


- Simple adjustment permits table to incline by ±3°

Suited to tapered parts with interior convex or concave, or blades.

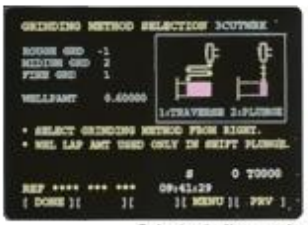
Unique machine construction supporting high precision grinding

- Novel system is employed for wheel head moving. All our advanced design know-how utilized in our machines line-up of high precision specs are made the most of therein. Our original unique construction uncomparable with the conventional one ensures highly performed, excellent operation.
- Employing permanent grease seal system and also super-precision class angular contact ball bearing for the wheel spindle, PRG-DXNC is successful in increasing surface accuracy as well as streamlining troublesome maintenance. Metal bearing is optionally available at request.
- TARKAITE is adopted on slide surface, which therefore leads to stable revolution for long time.
- In order to keep peripheral speed at the grinding section constant table revolution varies synchronously with wheel crossfeed moving from periphery to center, thus crossfeed rate per table revolution is controlled to be constant.

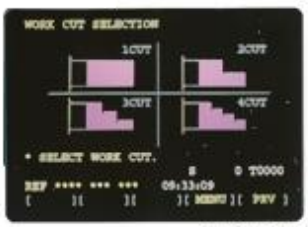


PRG-8DXNC

Easy Operation through conversational input system



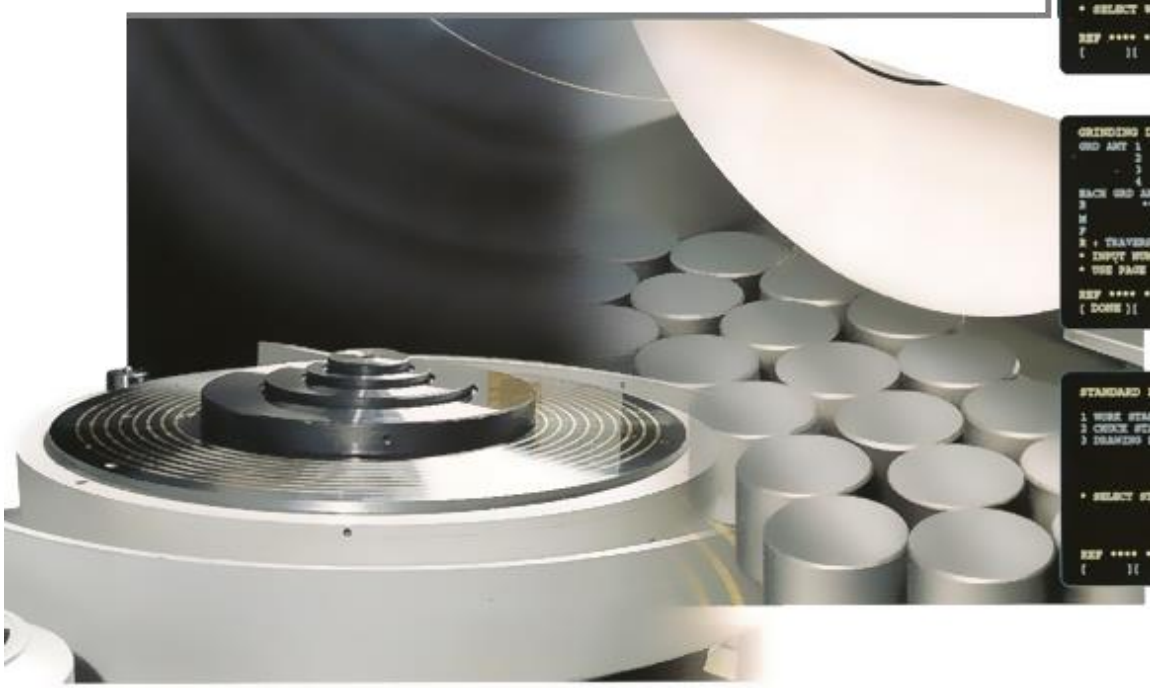
Select grinding mode



Set form data

Enter grinding condition

Set datum position



CNC ROTARY SURFACE GRINDING MACHINE

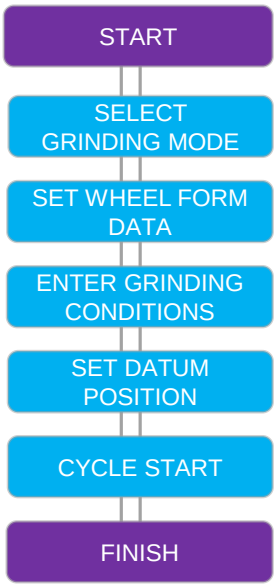
PRG-DXNC series

2-axis simultaneous control offers high efficiency and speed for unrivalled power in mass production grinding.

Graphical conversational input system assures easy operation

- Easy operation does not require highly skilled operators. The operational system has been matured and refined to allow easy setting through conversational programming. Common grinding operations are selected from the main menu and setting is achieved quickly by responding to questions on the display. The design of this conversational system presents an easy to use comfortable interface to the operator that is optimized for grinding.

Grinding process simplified



- The machine is made ready to start grinding after determining only 4 main working grinding conditions from start to finish.
- Following this the operator only has to push the start button in order for the machine to run completely automatically.

Variety of optional accessories to suit all grinding operations

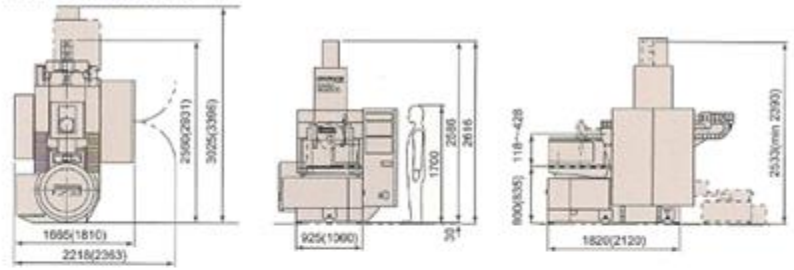
Coolant unit

- Coolant unit with magnetic separator(left)
- Coolant unit with magnetic separator, mist extractor and temperature regulator(right)

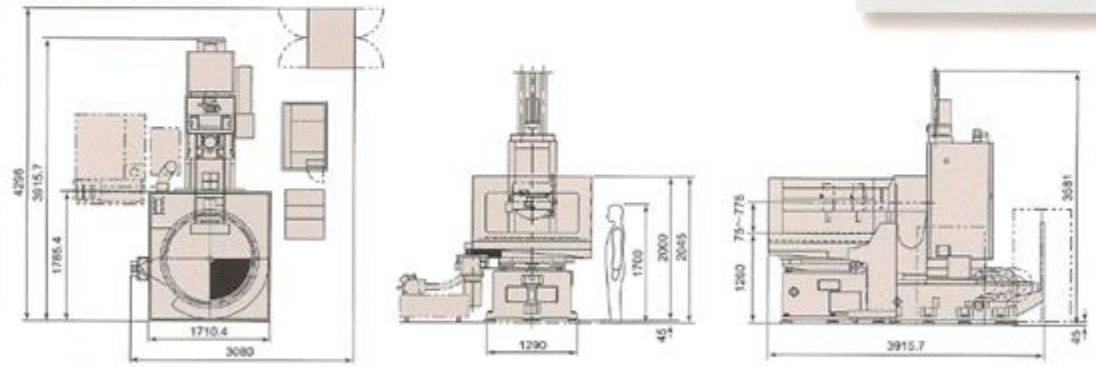
External view

Figures in ( ) represent PRG8DXNC

PRG6DXNC/8DXNC



PRG10DXNC/12DXNC



Standard accessories

- Electromagnetic chuck
- Automatic demagnetizing with adjustable magnetic power
- Grinding wheel
- Wheel adaptor
- Tabletop dresser with diamond tool
- Automatic circuit breaker
- Chuck interlock
- Harf-open table cover
- Necessary tools kit with a tool box
- Levelling bolts and paltes

Machine specifications

item			unit	PRG6DXNC	PRG8DXNC	PRG10DXNC	PRG12DXNC
Capacity	Diameter of electromagnetic chuck		mm	φ600	φ800	φ1000	φ1200
	Swing inside table cover		mm	φ750	φ900	φ1200	φ1300
	Distance from chuck top to wheel underside	50Hz	mm	−60~250		—	
		60Hz	mm	−35~275		—	
		φ510 wheel	mm	—		500	
	Table load capacity		kg	150	250	1200	1300
Table	Revolution speed (peripheral speed controlled to be constant, stepless)		min⁻¹	20~150	15~130	8~65	
	Inclinable angle		degree	±5	±3	±0.4	
Column cross feed (X axis)	Drive unit			AC servo motor (NC)			
	Travel		mm	450	550	800	860
	Feed rate under automatic run	set range	mm/min	0~2000			
		override	mm/min	Max.2000(0~150%)			
		rapid feed	mm/min	4000		5000	
	Manual pulse feed	per revolution (100 scale)	mm	0.01(×1), 0.1(×10), 1(×100)			
		per scale	mm	0.0001(×1), 0.001(×10), 0.01(×100)			
		jog feed (16 steps)	mm/min	0~2000			
		rapid feed	mm/min	4000		5000	
Wheel head vertical feed (Z axis)	Drive unit			AC servo motor (NC)			
	Travel		mm	310		500	
	Feed rate under automatic run	set range	mm/min	0~2000			
		override	mm/min	Max.2000(0~150%)			
		rapid feed	mm/min	4000			
	Manual feed	per revoluiton	mm	0.01(×1), 0.1(×10), 1(×100)			
	Pulse feed	per scale	mm	0.0001(×1), 0.001(×10), 0.01(×100)			
		jog feed (16 steps)	mm/min	0~2000			
		rapid feed	mm/min	4000			
Grinding wheel	Diameter×width×bore <50/60Hz>		mm	φ355/φ305×38(max.50)×φ127		φ510×50(OP:max.75)×φ127	
	Revolution speed <50/60Hz>		min⁻¹	1500/1800		1000/1200	
Motor	Grinding wheel spindle		kW	7.5			
	Rotary table		kW	2.2	3.7	7.5	
Machine space	Width×depth×height		mm	1665×2560×2586	1810×2931×2586	4535×4296×3581	
Weight	Machine proper		kg	4000	5000	12800	13000

Optional accessories

- Coolant unit
  - With magnetic separator
  - With dust suction unit and magnetic separator
  - With magnetic separator and automatic water temperature regulator
- Overhead wheel dresser
- Wheel adaptor
- GRIND-X micro balancer (MB-3)
- Wheel balancing apparatus with balancing arbor
- Balance arbor for BW-360
- Wheel spindle motor 11kW
- Wheel spindle inverter
  - 7.5kW 1000~2500 min⁻¹
  - 11kW 1000~2500 min⁻¹
- Wheel spindle meter relay
- Table tachometer
- Automatic oil temperature regulator
- Run hour meter and work counter
- Manual interruption
- Tape memory length
- Integrating run hour meter for hydraulic unit and wheel spindle
- Work end automatic power off unit
- Cycle completion buzzer
- Work light (Z light, halogen light)
- 3-color signal tower
- Calender timer
- Designated machine color
- 8.4" color LCD display

GRIND - X

OKAMOTO PRECISION SYSTEMS

Okamoto

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