

**Okamoto**

Precision Vertical Rotary Grinding Machine  
VRG-DX Series

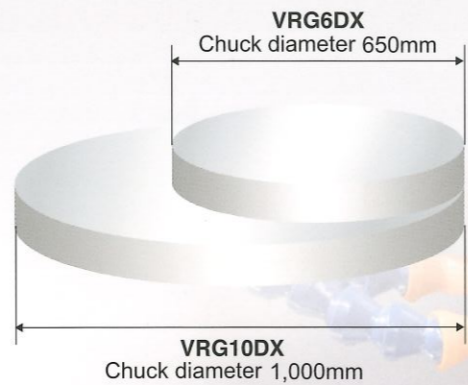


# User friendly, high rigidity, highly productive new vertical rotary grinding machine VRG-DX Series

OKAMOTO's vertical axis rotary grinding machine is simple and easy to use !

- High-efficiency and high-rigidity rotary grinding machine equipped with vertical wheel spindle.
- 3-point support column structure for easy adjustment. The combination of made-in-house highly rigid column and bed allows you to maintain high precision for a long operating time.
- Okamoto original FX controller can prevent operational mistakes with minimum number of intuitive operations.
- Fully enclosed cover for safety and regulatory factory requirement.
- Ideal for grinding brittle materials such as glass/ceramics as well as metals.

Lineup	Chuck Size
VRG6DX	φ 650 mm
VRG10DX	φ 1,000 mm



## VRG6DX

- Series Name
- Series Size
- Vertical Rotary Grinding Machine



VRG6DX

# Original control system makes grinding easy

OKAMOTO original FX Controller

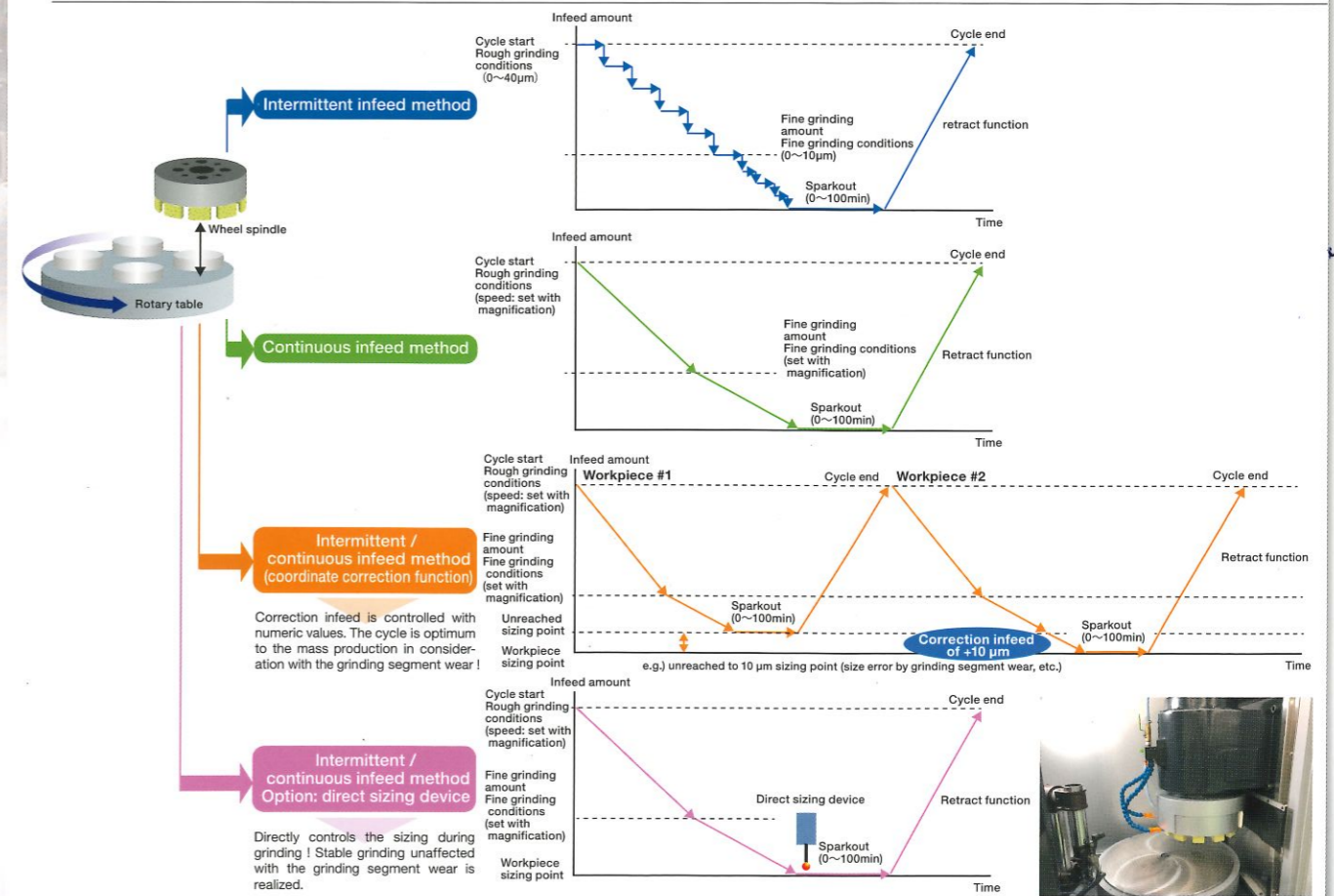


- **Grinding amount setting**  
Equipped with an automatic grinding cycle as standard. Rough and fine finish grinding plus spark-out, and retract functions enable mass production in a good setup.
- **Interlock function**  
The fully enclosed cover is equipped with an interlock function as standard. In view of safety and the factory environment, the machining cycle cannot be performed while the cover is open.
- **Vertical grinding feed and current position display**  
Achieves a minimum vertical increment of 1 μm accuracy. The feed amount is changed by the magnification, and the current position is displayed on a clear LED.

## Down-feed grinding method

Equipped with continuous mode and intermittent mode for plunge grinding. Please select the mode according to the workpieces to be ground and its application.

The down-feed grinding method is significantly different in grinding efficiency compared to an ordinary square slide grinding machine.



Simple structure and operability that makes use of the features of vertical axis. It achieves high efficiency and high productivity.

Switches are all laid on the front side of the machine to facilitate easy operation and access.

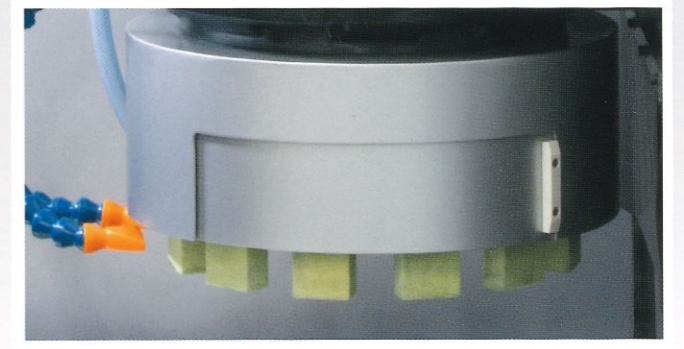
Fully enclosed cover slide is adopted as standard in consideration of safety and the factory environment.



Coolant unit is laid at the back for easy maintenance.



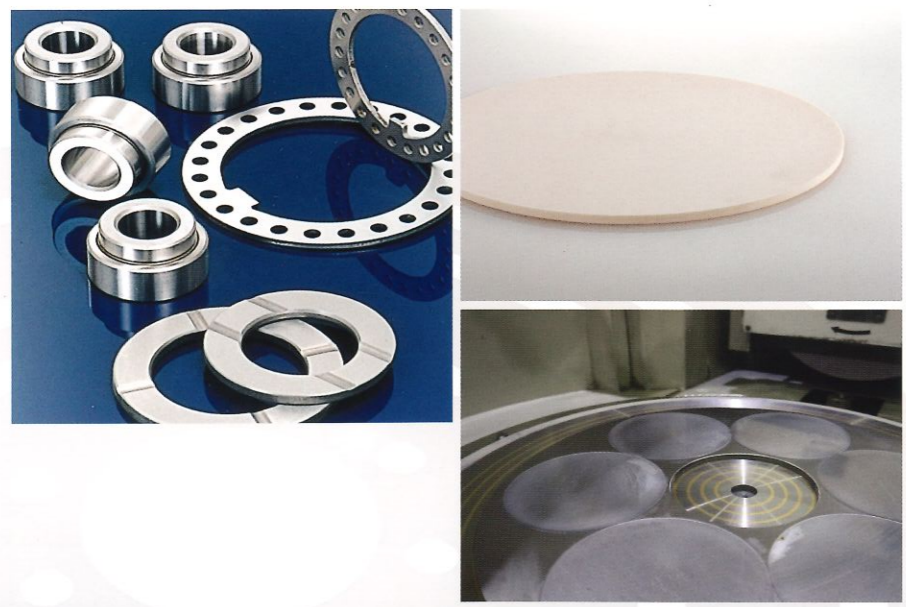
Easy-to-replace wheel segments. Achieves high-precision machining of the order of 1 μm.



Uses Okamoto original FX controller. Minimal intuitive operation can prevent mistakes.



Grinding of brittle material workpieces such as ceramics and quartz glass with a diamond wheel is also available.



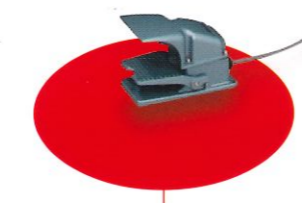
By adopting a 3-point support column structure, accuracy adjustment and surface quality adjustment are easily performed.



Rotary pattern



Cross hatch pattern



Equipped with a rotary table foot switch as standard. Significantly improved setup and operability.

VRG6DX

Highly efficient grinding is achieved with a vertical axis wheel. Greatly supports the needs for productivity.



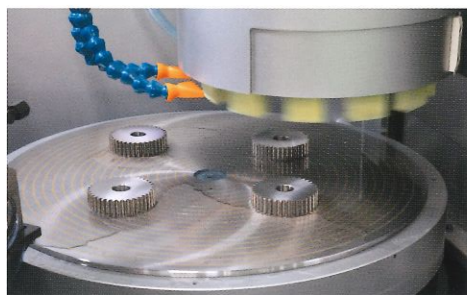
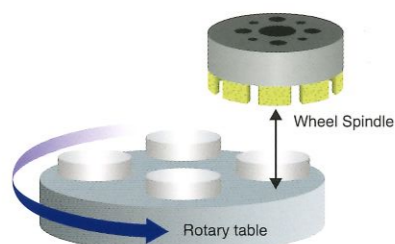
# Lineup of 2 types of rotary grinding machines. The optimum series can be selected according to the grinding application!

## Vertical axis & rotary table VRG series

### VRG6DX



Grinding methods  
Down feed grinding

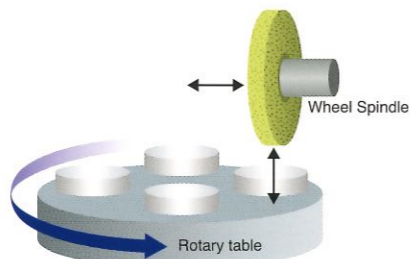


## Horizontal axis & rotary table PRG series

### PRG8DXNC



Grinding methods  
Plunge or traverse grinding

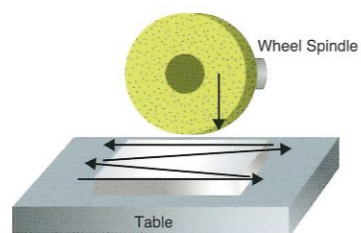


## Horizontal axis & square table PSG series

### PSG63GX



Grinding methods  
Plunge or traverse grinding



	Vertical axis & rotary table	Horizontal axis & rotary table	Horizontal axis & square table
Grinding wheel work area	Big	General	General
Spindle Motor	VRG6DX: 11kw VRG10DX: 37kw	PRG6DXNC: 11kw	PSG63GX: 3.7kw
Productivity	Maximum	Big	Normal
Grinding load	Big	Small	Small
Surface pattern	Cross hatch or rotary pattern	Rotary pattern	Grinding pattern
Generally recommended workpieces	Round surface grinding, many numbers, large surface area		Square surface grinding High geometric tolerance items Items that require form grinding

\*Results will vary depending on the workpiece, grinding wheel used, and target value.

## Specifications

Items		Unit	VRG6DX	VRG10DX
Table	Table OD	mm	φ800	φ1,200
	Electromagnetic chuck OD	mm	φ650	φ1,000
	Table rotation speed	rpm	1~30	1~26
	Distance from chuck top face to segment bottom end	mm	290 (at chuck self-grinding: 400)	
	Load capacity (excl chuck)	kg	250	500
Wheel head Vertical feed	Vertical stroke	mm	300	400
	Maximum wheel spindle feed speed	mm/min	300	
	Minimum infeed setting amount	mm	0.001	
Grinding wheel	Continuous infeed speed	mm/min	0.06 to 2.4 (at 100% Override)	
	Wheel diameter (segment)	mm	φ350	φ550
	Grinding segment (Length x Thk x Width)	mm	49.5×25×125	
	Maximum number of grinding segment	pcs	12	18
Motors	Grinding wheel rotation	rpm	1,000/1,200 (50/60Hz)	590/710(50/60Hz)
	Table rotation motor horsepower	kW	1.5	3.5
Main unit	Wheel spindle motor horsepower	kW	11	37
	Power supply	-	3-phase AC200V	
	Power requirement	kVA	20	Contact Okamoto for options
	Machine weight (incl load)	kg	4,000	6,500
	Machine dimension	mm	1,770×1,320×2,597	2,810×1,825×3,324
	Machine dimension (incl coolant unit and maintenance area)	mm	2,315×2,065×2,597	3,310×2,600×3,324

\*Specifications are subjected to change without prior notice due to improvements.

## Standard accessories

Items
Standard grinding wheel
Wheel flange (adaptor)
Electromagnetic chuck, controller
Fully enclosed cover
LED work light
Cover interlock
Leveling plate
Foot switch for table jogging
Necessary tools
Center coolant

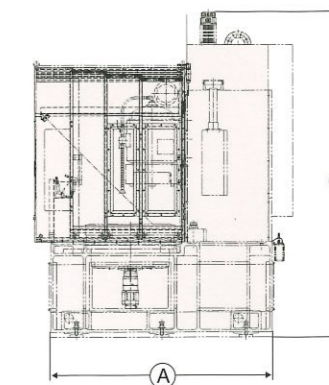
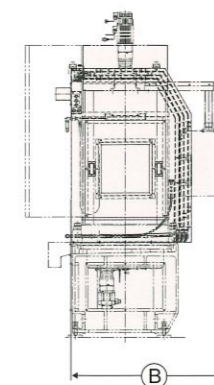
## Optional accessories

Items
Coolant unit
Mist collector
Direct sizing device
Signal tower
Deburring device
Custom color

## External view

	VRG6DX	VRG10DX
Length (A)	1,770	2,810
Width (B)	1,320	1,825
Height (C)	2,597	3,324

\* Exclude coolant unit



## Recommended workpiece materials

Glass / Quartz
Sapphire
SiC
Die / Mold
Steel
Hydraulic & Pneumatic Parts
Bearings



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## OKAMOTO MACHINE TOOL WORKS, LTD.

2993 Gobara, Annaka, Gunma, Japan 379-0135

TEL : +81-27-388-9595 FAX : +81-27-385-1144

URL : [www.okamoto.co.jp](http://www.okamoto.co.jp)



JQA-QMA10960  
Annaka Factory



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\*Specifications subject to change without notice.



This printed matter uses environmentally friendly paper and vegetable oil inks

Printed in Japan in February 2023

2023021000MTR-0