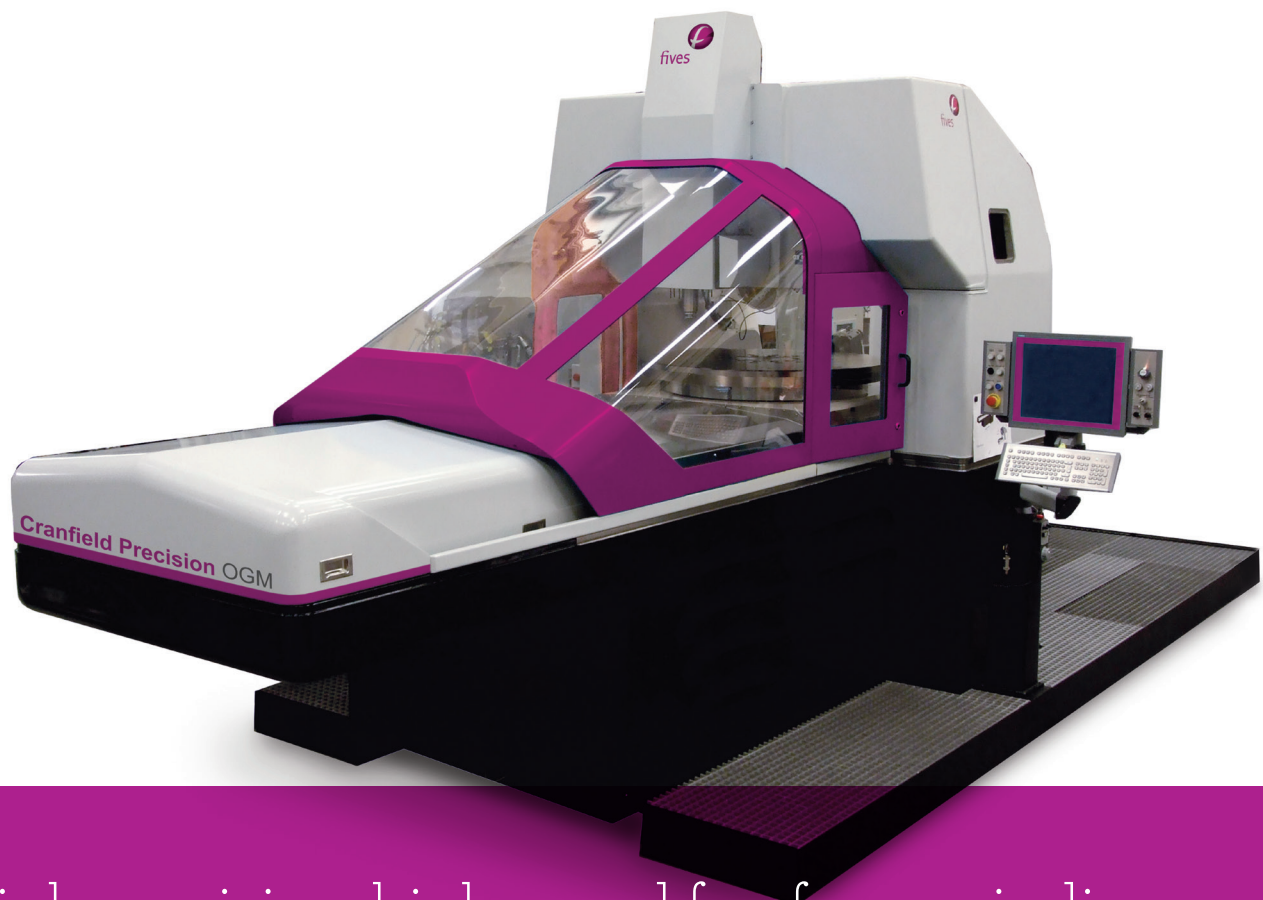




Cranfield Precision OGM

Off axis grinding machine



High precision, high speed freeform grinding machine for components up to 2,000 mm diameter

- High speed spiral freeform and raster grinding mode capabilities
- Patented vertical axis counterbalance
- Symmetric configuration for maximum thermal stability and dynamic performance
- Bespoke controller (CNC6400) highly customised to enable high-precision, high-speed interpolation of machine axes
- Linear motor drives
- In-situ measuring probe

Off Axis Grinding Machine

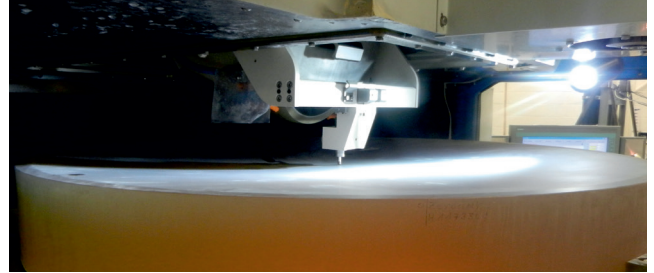
The Cranfield Precision Off Axis Grinding Machine has the capacity to produce components up to Ø2000 mm.

FEATURES

- Hydrostatic bearings
- Twin linear motors
- Linear encoders
- Patented vertical axis counterbalance
- Highly symmetric machine configuration
- Freeform capability with only three axes, the minimum possible
- FEA optimised base and bridge
- 3,050 rev/min work spindle (5,000 rev/min optional)
- 60 rev/min 800 Nm rotary table
- Precision Temperature Control
- Real Time Digital Twin
- MobiusCam Toolpath Generation

MACHINE GRINDING MODES

- High speed grinding modes
- Auxiliary Spindles Modes (Options)



In-situ metrology

Model	Cranfield Precision OGM800	Cranfield Precision OGM1200	Cranfield Precision OGM1600	Cranfield Precision OGM2000
Machining capacity				
Max. diameter	800 mm	1,200 mm	1,600 mm	2,000 mm
Max. workpiece height capacity	200 mm	200 mm	600 mm	800 mm
Max. workpiece mass	1,200 kg	1,200 kg	1,600 kg	2,000 kg
Y axis (horizontal workpiece travel)				
Axis stroke	1,400 mm	1,430 mm	2,000 mm	2,200 mm
Min. command resolution	0.05 µm	0.05 µm	0.05 µm	0.05 µm
Max. linear motor force (continuous)	1,640 N	1,640 N	1,640 N	1,640 N
Max. working feed rate velocity	3,000 mm/min	3,000 mm/min	3,000 mm/min	3,000 mm/min
Z axis (vertical grinding wheel infeed)				
Axis stroke	310 mm	275 mm	455 mm	655 mm
Min. command resolution	0.05 µm	0.05 µm	0.05 µm	0.05 µm
Max. working feed rate velocity	3,000 mm/min	3,000 mm/min	3,000 mm/min	3,000 mm/min
C Axis (component work table)				
Axis rotation (continuous)	+/- 360°	+/- 360°	+/- 360°	+/- 360°
Max. axis velocity	60 rev/min	60 rev/min	60 rev/min	60 rev/min
Encoder resolution	0.0001°	0.0001°	0.0001°	0.0001°
S1 grinding spindle				
Spindle speed (standard spindle)	100 - 3,055 rpm	100 - 3,055 rpm	100 - 3,055 rpm	100 - 3,055 rpm
Theoretical stiffness (radius and axial)	950 N/µm	950 N/µm	950 N/µm	950 N/µm
Rated spindle power (continuous)	20 kW	20 kW	20 kW	20 kW
Dimensions				
Dimensions (W x D x H)	3,000x 5,000 x 3,000 mm	2,180 x 6,000 x 3,050 mm	2,600 x 7,550 x 3,850 mm	3,300 x 8,100 x 4,000 mm
Machine weight	25,000 kg	30,000 kg	40,000 kg	55,000 kg

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