



Cranfield Precision OGM

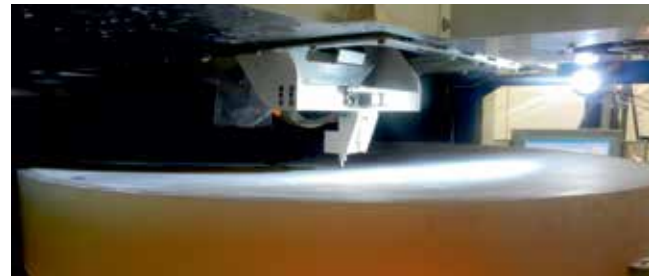
Off axis grinding machine



High precision freeform grinding machine for components up to 2,500 mm diameter

- Hydrostatic rotary and linear bearings
- Linear motor drives
- In-situ measuring probe
- Patented vertical axis counterbalance

Diamond turning machine for the production of ultra-precision optical film



In-situ metrology

The Cranfield Precision Off Axis Grinding Machine has the capacity to produce components up to Ø2500 mm.

FEATURES

- Hydrostatic bearings
- Twin linear motors
- Linear encoders
- Patented vertical axis counterbalance
- FEA optimised base and bridge
- 3,050 rev/min work spindle (5,000 rev/min optional)
- 60 rev/min 800 Nm rotary table

MACHINE GRINDING MODES

- Spheric, aspheric and freeform mode
- Spiral and raster grinding path modes
- Edging: Circular boundary
- Edging: Non-symmetrical edge profiling
- Chamfering
- Light weighting

Model	Cranfield Precision OGM1200	Cranfield Precision OGM1600	Cranfield Precision OGM2500
Machining capacity			
Max. diameter	1,200 mm (47")	1,600 mm (63")	2,500 mm (98.4")
Max. workpiece height capacity	200 mm (7.9")	600 mm (23.6")	800 mm (31.5")
Max. workpiece mass	1,200 kg (2,645.5 lb)	1,600 kg (3,527.4 lb)	2,000 kg (4,409 lb)
Y axis (horizontal workpiece travel)			
Axis stroke	1,430 mm (56.3")	2,000 mm (78.7")	2,200 mm (86.6")
Min. command resolution	0.05 µm	0.05 µm	0.05 µm
Max. linear motor force (continuous)	1,640 N	1,640 N	1,640 N
Max. working feed rate velocity	3,000 mm/min (118 in/min)	3,000 mm/min (118 in/min)	3,000 mm/min (118 in/min)
Z axis (vertical grinding wheel infeed)			
Axis stroke	275 mm (10.8")	455 mm (18")	655 mm (25.8")
Min. command resolution	0.05 µm	0.05 µm	0.05 µm
Max. working feed rate velocity	3,000 mm/min (118 in/min)	3,000 mm/min (118 in/min)	3,000 mm/min (118 in/min)
C Axis (component work table)			
Axis rotation (continuous)	+/- 360°	+/- 360°	+/- 360°
Max. axis velocity	60 rev/min	60 rev/min	60 rev/min
Encoder resolution	0.0001°	0.0001°	0.0001°
S1 grinding spindle			
Spindle speed (standard spindle)	100 - 3,055 rev/min	100 - 3,055 rev/min	100 - 3,055 rev/min
Theoretical stiffness (radius and axial)	950 N/µm	950 N/µm	950 N/µm
Rated spindle power (continuous)	20 kW	20 kW	20 kW
Dimensions			
Dimensions (W x D x H)	2,180 x 6,000 x 3,050 mm (7' x 20' x 10')	2,600 x 7,550 x 3,850 mm (8.5' x 24.8' x 12.6')	3,600 x 8,750 x 4,100 mm (11.8' x 28.7' x 13.5')
Machine weight	30,000 kg (66,138.7 lb)	40,000 kg (88,185 lb)	55,000 kg (121,254 lb)

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