

BOWMILL ENGINEERING - MACHINE CAPABILITY MATRIX

Last Reviewed: 02/12/16

<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p style="font-size: 8px; margin: 0;">Company information</p> </div>		Manual Turn	Manual Milling	CNC Vertical Mill (15 X 3 and 14 X 4 axis)	CNC Mill (6 axis)	Robotic Flexcell UNO FZ 12	CNC Vertical Mill (Twin Palk)	CNC Mill - Turn	CNC Turning Fixed Head	CNC Universal Grinding	Universal Grinding	Internal Grinding	Surface Grinding	Centreless Grinding	Tool & Cutter Grinding	Horizontal Honing	Surface Lap	Assembly - Shop	Pressure Test / Flow Test	Clean Room	CMM	Air Gauging	Measurement Projector	Surface Finish Measurement	Roundness Measurement
		M/C Qty	3	4	29	2	1	4	19	5	4	4	1	3	1	1	5	1	2	2	0	2	9	3	3
Capacity [mm]	Capacity - Length	1000	900	1400	730	730	580	1000	1000	1000	1000	200	600	3000	250	250	100	-	600	-	1500	-	300	-	200
	Capacity - Width	150	600	700	400	400	400	250	150	-	-	-	200	-	-	-	100	-	100	-	750	-	100	-	100
	Capacity - Height	150	450	700	360	360	350	250	150	-	-	-	150	-	-	-	100	-	100	-	750	-	100	-	100
	Max Turned Diameter	400	-	-	-	-	-	350	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Max Billet Diameter	225	-	-	-	-	-	250	250	200	200	200	-	50	50	100	150	-	-	-	-	-	-	-	200
Max Bar Diameter	53	-	-	-	-	-	90	75	50	100	200	-	10	50	100	25	-	-	-	-	-	-	-	-	
Accuracy [microns]	Diameters - External	10	15	10	10	10	10	10	5	2.5	2.5	2.5	-	2.5	5	-	-	-	-	-	-	-	-	-	-
	Diameters - Internal	15	15	10	10	10	10	10	7	5	5	2.5	-	-	-	2.5	-	-	-	-	-	-	-	-	-
	Linear	15	25	10	10	10	10	20	10	10	10	10	5	50	10	-	5	-	-	-	-	-	-	-	-
	Positional	10	50	20	20	20	20	20	10	5	5	5	5	25	10	3	5	-	-	-	-	-	-	-	-
	Surface	0.8	1.6	1.6	1.6	1.6	1.6	1.6	0.4	0.2	0.2	0.2	0.4	0.2	0.4	0.05	0.025	-	-	-	-	-	-	-	-
	Roundness & Straightness	15	50	25	25	25	25	10	5	2	2	2	-	10	2	2	2	-	-	-	-	-	-	-	-
Materials	Aluminium	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Stainless Steels	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Titanium	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Non Ferrous	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Plastics	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Stellite	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Inconel	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Misc Details	Adjust Imperial and Metric Threading attachment available	Right Angled Milling Head and Slotting Head available	Simultaneous 4 Axis Machining available				Y Axis and Sub-Spindle available for one stop machining	Thread Rolling available	Match Grinding of Spool and Sleeves with automatic size control facility	Very small Instrument parts processed to sub Micron tolerances	Complete with in cycle Facing Head	Complete with Dialform Profiling Equipment	Bar lengths can be processed on diameters up to 10mm	The capability is retained to house and is utilised for manual out tool sharpening requirements	Hand Honing of Spool Bore to very close geometrical tolerances	On surfaces up to 75mm diameter. Better than 1 Light Wave Band in flatness can be achieved	Bearing Staking under the control of a Statimeter	Hydraulic Test up to 6000 psi. Air Test up to 100 psi. Nitrogen Test up to 2000 psi.	Temperature controlled, pressurised and filtered facility available	Automatic cable less probe rack system. Manual CMM also available	Measurement Probe systems with single and paired Setting Rings available	2 D Measurement and report System available	Tallysurf 10 with peak to valley Chart printing function	Tallyround 200 with Cylinder Concentricity and Roundness Reporting capability	

Company Information

Supplier Contact	Nick Epps - Managing Director
Email	nick.epps@bowmill.co.uk
Business Systems	Epicor 9.05.702A
CAD/CAM, Verification Software	Solid Works / EdgeCAM / CATIA
No of CAD Seats	4
Website	www.bowmill.co.uk
Facility Size: Engineering & Metal Treatments	65,000 Sq. Ft
Quality Management Systems	AS9100 Rev C & NADCAP
Accreditation expiry date	AS9100 - 2018
Date of incorporation	1971
Business Plan produced	Bi-annual [Current 2015-2016]
Awards	WEAF Competitive Improvement Award Overall Winner 2005 [Engineering] & 2006 [Surface Treatments]
Core Customers	GE Aviation / Messier-Bugatti-Dowty / Honeywell Aerospace UK / UTC Aerospace Systems / Agusta Westland / Fokker Landing Gear / Triumph Actuation Systems / Moog Controls
Customer Location	UK, North America, Europe
Turnover for last financial year	2015 = £9.5M
Average age of Machine	4 YEARS
Materials able to machine	Ferrous / Non Ferrous / Stellite / Titanium / Magnesium / Inconel / Plastics
Number of employees	118
Training and development procedure	BOCS-24
Staff Turnover %	0.65% 2011-2013
Current Shift plan	Day & Night Shift 5 day week