

CERTIFICATE OF INSPECTION

PCNC 440 Mill

Serial Number:

Made in China



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Part A: Certification

Machinery Certification

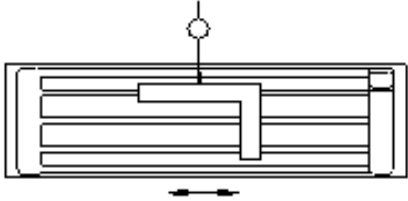
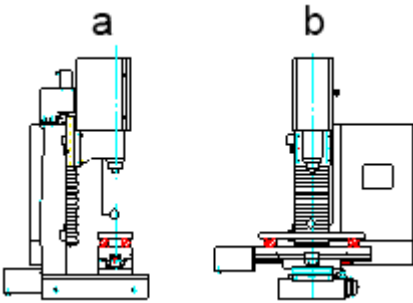
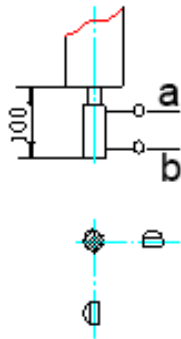
Title	Seal or Signature ¹	Date
Inspection Director		
Inspector		
Tormach QA Representative		

¹The above signatures certify this machine has passed all precision-inspection requirements and is approved for delivery. See attached inspection documentation.

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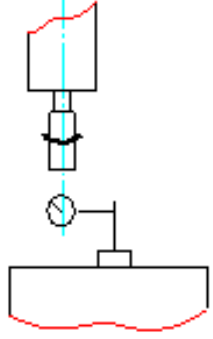
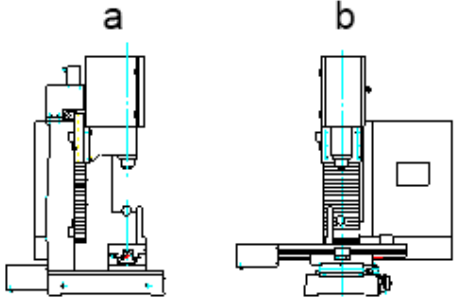
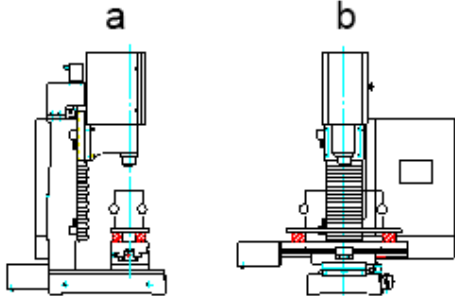
Part B: Quality Detail

QA I: Precision Inspection

No.	Inspection Sketch	Inspection Item	Allowable Error (mm)	Actual (mm)
G1		Perpendicularity of X-Y motion	0.04/200	
G2		Parallelism of axis motion to the table surface a: With respect to Y-axis b: With respect to X-axis	a: Within the measure length of 100: 0.04/100 b: Within a random measure length of 200: 0.03/200 Within the total travel length: ≤400 0.04 > 400 0.06	
G3		Spindle radial runout a: <10 mm below spindle face b: 100 mm below spindle face	a: 0.02 b: 0.03	

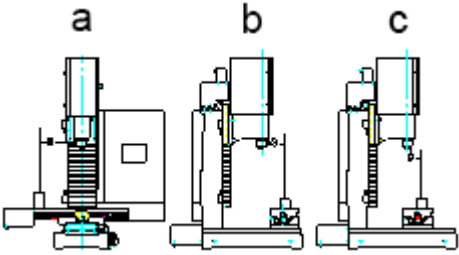
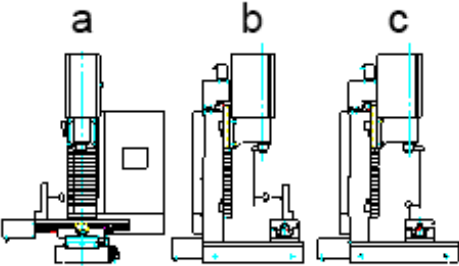
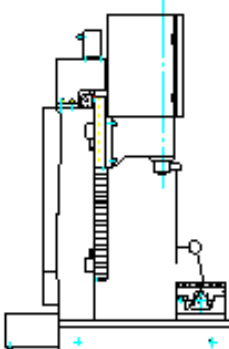
CERTIFICATE OF INSPECTION

QA I: Precision Inspection

No.	Inspection Sketch	Inspection Item	Allowable Error (mm)	Actual (mm)
G4		Spindle float within cartridge with respect to Z motion	0.015	
G5		Perpendicularity of spindle head to table surface a: With respect to Y-axis b: With respect to X-axis	a: 0.035/150 b: 0.035/150	
G6		Perpendicularity of centerline of spindle to table surface a: With respect to Y-axis b: With respect to X-axis	a: 0.04/200 b: 0.04/200	

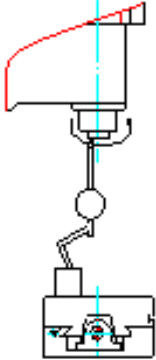
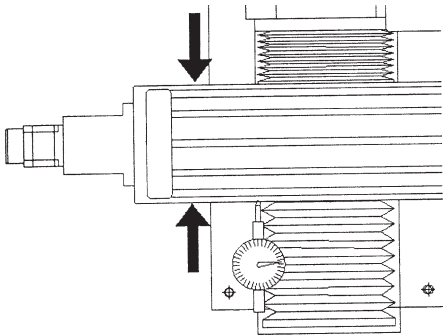
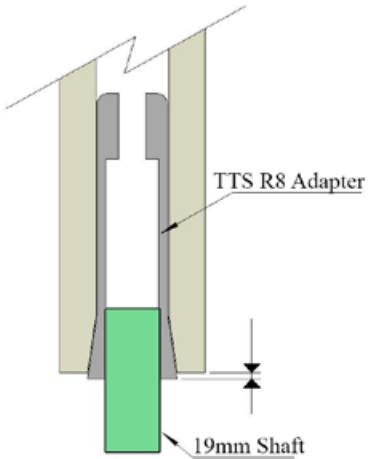
CERTIFICATE OF INSPECTION

QA I: Precision Inspection

No.	Inspection Sketch	Inspection Item	Allowable Error (mm)	Actual (mm)
G7		Lost motion of linear axes a: X-axis b: Y-axis c: Z-axis	a: 0.03 b: 0.03 c: 0.04	
G8		Axis repeatability	0.02	
G10		Parallelism of center T-slot to X-motion (column side)	At any measuring length of 200; 0.015/200	

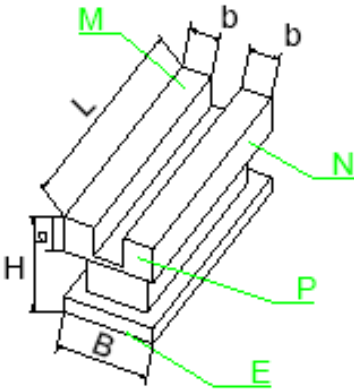
CERTIFICATE OF INSPECTION

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No.	Inspection Sketch	Inspection Item	Allowable Error (mm)	Actual (mm)
G11		Flatness of spindle face	0.02	
G12		Lateral displacement of work table to external load < 300 N	0.04	
G13		Projection of TTS R8 collet past spindle face when drawbar is tightened around 19.05 mm shaft	0.8 minimum 1.4 maximum	

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QA I: Precision Inspection

No.	Inspection Sketch	Inspection Item	Allowable Error (mm)	Actual (mm)
PI	 <p>Size of test piece (bulk piece) $L \times B \times H$ $L \geq 1/3$ longitudinal travel $H \geq L/3$ $B \geq L/3$ $b \geq 16$ mm Material: HT150</p>	<p>Milling accuracy:</p> <p>a: Flatness of surface M b: Parallelism of surface M to surface E c: Perpendicularity of surface P to surface M, and surface N to surface P.</p> <p>One machine is selected for each production batch (or each 20 machines produced, whichever is fewer).</p> <p>If the selected machine does not meet specification, then all machines in the production batch must be completely inspected.</p> <p>If the selected machine does meet specification, all other machines in the production batch will be reported as not selected (NS).</p>	<p>a: 0.04/150 b: 0.06 c: 0.06/50</p>	

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QA 2: Function/Appearance

No.	Test Name	Description	Completed
T1	Spindle Speed	Minimum and maximum speeds calibrated	
T6	Safety Signs	Safety signs have been installed	
T7	Information Signs	Information signs have been installed	
T9	Probe Input	Probe input check for operation	
T10	X Limits	X left and X right limits operate	
T11	Y Limits	Y front and Y back limits operate	
T12	Z Limits	Z up limit switches operate	
T13	Belt Position Change	Belt position can be changed without binding or collision	
T14	Smooth Operation	X,Y,Z and spindle operate without unusual noise or vibration	
T15	24 Hour Test	24-hour run test has been completed	
T16	Adjusting Screw of Gib	Position of adjusting screw	
T17	T-slot of Work Table	Width of T-slot	
T18	Test resistance from prong L and N of the plug to the ground copper plate	If the test result is zero, the machine needs to be repaired	
T19	Test vibration of the spindle at maximum speed	If the test fails, spindle and pulley require re-balancing	
T20	Test for power drawbar plate clearance	If the test fails, re-machine casting	

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QA 3: Packing List

No.	Name ¹	Specification and Mark	Quantity	PN
1	Drawbar and Washer	—	1	—
2	Allen Wrench Set	—	1 for each	—
3	Double Open End Wrench	—	1	—
4	Phillips Screwdriver	—	2	—

¹These items are stored in the plastic toolbox, located on the right side of the shipping pallet.