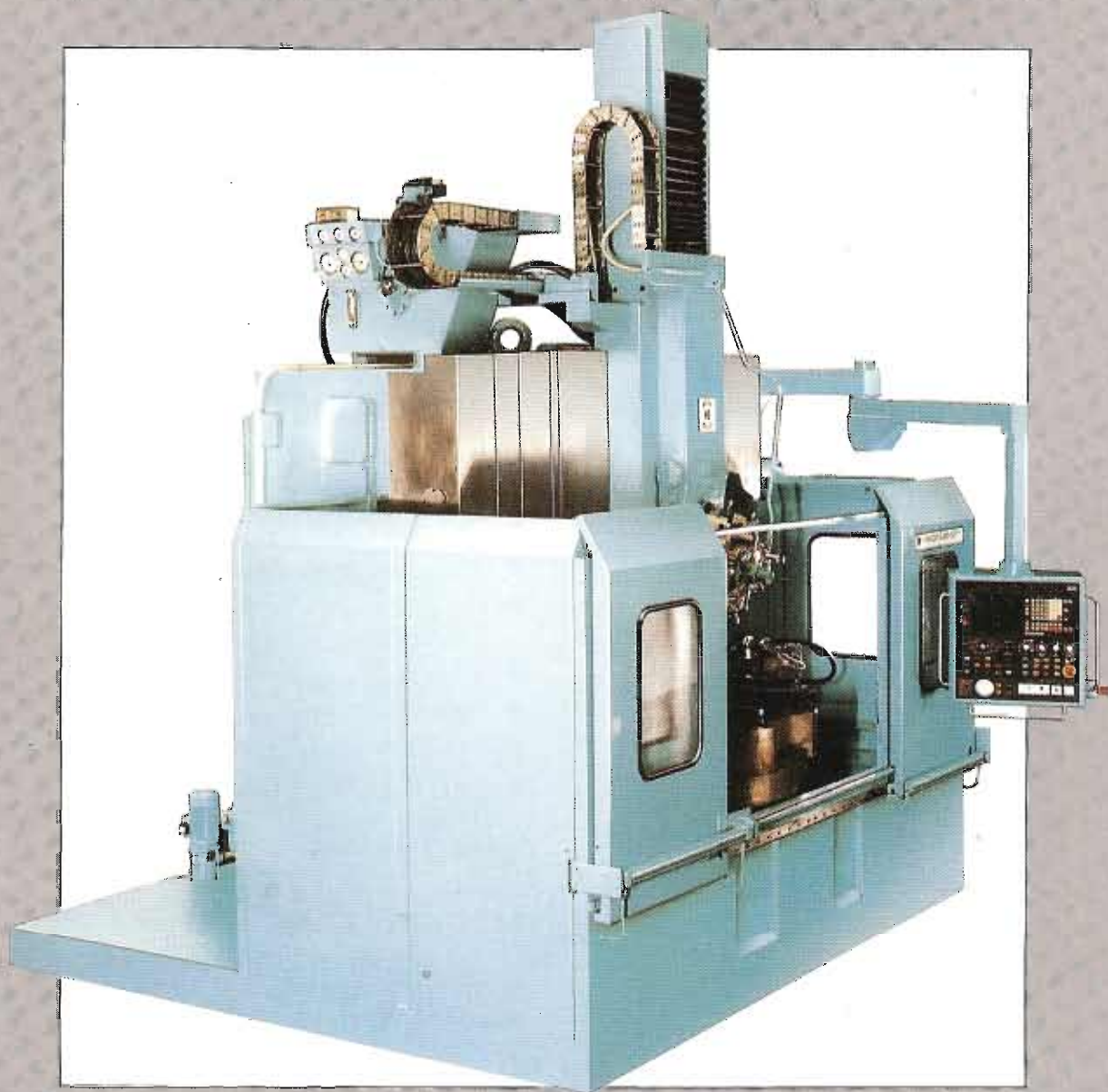


WEBSTER BENNETT

SERIES 'TX'



CNC VERTICAL TURRET LATHES



1887



1887

The 'TX' Series of Vertical CNC Turn

STANDARD FEATURES

- Monobloc column and base in high grade iron providing strength, rigidity and vibration absorbing characteristics for maximum rigidity under heavy cuts.
- 2 speed gearbox with DC main drive motor.
- Pre-loaded tapered roller bearings mounted on large diameter spindle to absorb both radial and axial forces.
- Steel forged power operated pentagon turret with precision multi-toothed coupling for accurate location and repeatability.
- Elevating cross slide for maximum utilisation.
- Infinitely variable feeds and speeds.
- Pendant Mounted CNC control.
- Recirculating ballscrews to vertical and horizontal axis.
- Hardened and precision ground integral guideways.
- Encoder or linear feedback system.



MACHINE CONTROLS

Webster Bennett offer the latest "State of the Art" controls from G.E. Fanuc.

These are all pendant mounted, and incorporate a manual pulse generator.

CONTROL FEATURES

- 2 Axis Linear and Circular Interpolation (4 axis for side head applications).

- High Speed Micro-Processor Control.
- Monochrome 9" CRT.
- Canned Cycles.
- 40M part program storage length (expandable).
- RS-232 Serial Data Port and EIA/ISO/ASCII Auto-Recognition of Input Data.
- Manual Pulse Generator.
- 32 Tool Offset Files.
- 14" CRT with Graphics (optional).
- Digital Encoder Feedback.

MACHINE FRAME

Machine Frame is a massive single piece casting and heavily ribbed to ensure the utmost rigidity under all cutting conditions and easily absorbs the cutting stresses and pressures induced during the heaviest cutting operations. It will provide vibration free working, constant accuracy, and long machine life which are directly due to the strength and weight of this fundamental machine element.

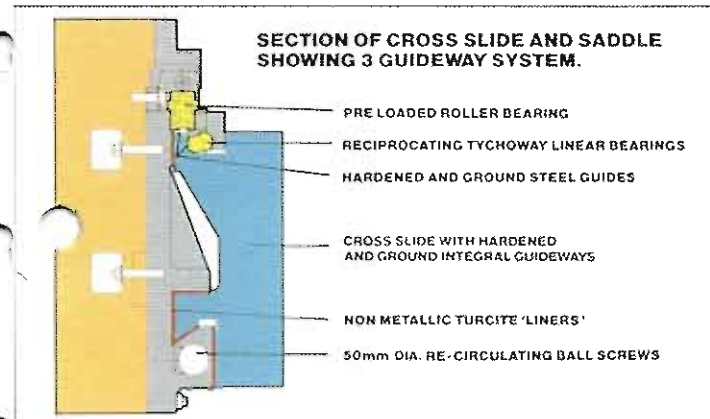
CROSS SLIDE

The machine cross slide is a rigid close-grained high quality iron casting with full contact induction-hardened and precision ground guideways which are automatically lubricated and fitted with protective steel covers.

Turret Lathes for increased production

Pre-loaded roller bearings and "Tychoway" bearings are fitted to the saddle unit for all motions along the cross-slide to reduce static friction. All other guideways are lined with "Turcite" to prevent "stick-slip" and maintain the high accuracies required.

On elevating rail machines a variable speed drive arrangement is fitted which in conjunction with a digital readout unit allows the cross slide to be set precisely at any required height within its elevating capacity.



TURRET AND TURRET SLIDE

The machine is equipped with a forged steel, power operated pentagon turret which includes skip indexing.

The turret locates on a large diameter, precision radial toothed coupling ensuring a high degree of positioning accuracy and repeatability.

The turret slide is a rigid close-grained high quality iron casting with full contact, hardened and ground precision guideways. It is supported by integral cast retainers and guideways lined with low-wearing non-metallic "Turcite" material having anti "stick-slip" characteristics, and balanced by means of a hydro-pneumatic system.

AXIS SERVO DRIVES

The drives to both horizontal and vertical axes are by means of a high performance A.C. Servo motors coupled directly to precision ground, pre-loaded recirculating ballscrews, with torsionally rigid flexible couplings. The feedback system is by means of encoder (a linear system is optional).

LUBRICATION

A pressurised lubrication system for lubricating all main bearings, driving gears and gearbox is supplied by an independent motor driven pump and contains a filter to ensure clarification of the oil.

The lubrication of the machine slideways and screw shafts is by means of a separate motor driven pump unit which meters oil to the ample oiling points.

BRAKING

Regenerative with 'fail safe' dynamic braking system.

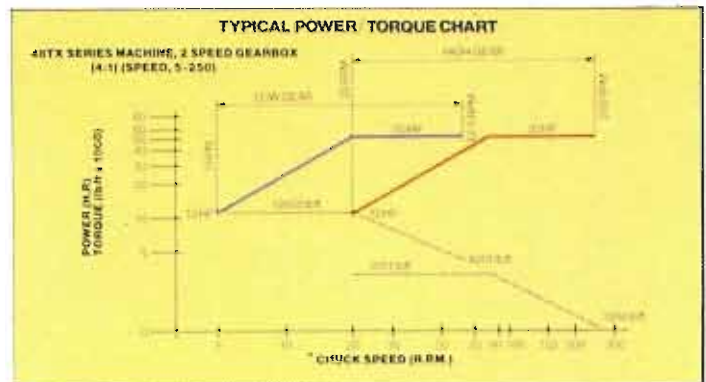


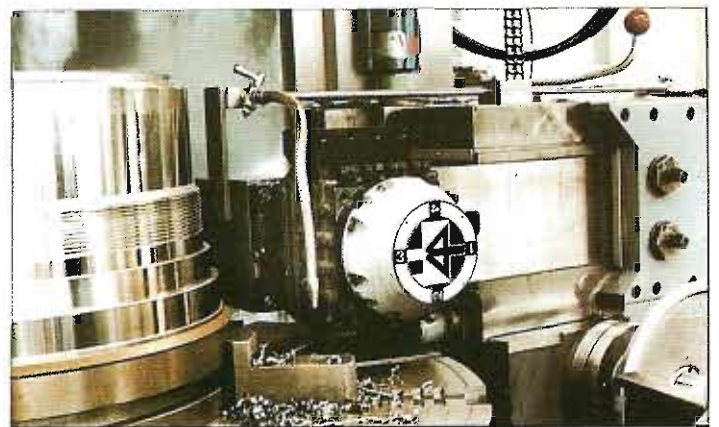
TABLE AND MAIN DRIVE

Webster & Bennett chucks are noted for their gripping power and trouble-free working. The bodies are robust and well proportioned. The standard chuck has four independently operated jaws and has Tee slots for clamps or fixtures. The jaws are separately adjustable on their slippers and are located by solid tenons. The drive to the chuck is transmitted through a high tensile steel single helical pinion shaft and a table gear spigotted, bolted and dowelled to the chuck body. All sizes of machine chucks have tapered roller bearings mounted on large diameter close-grained cast iron hollow spindles which carry both radial and thrust loadings.

Transmission from a 50 HP main drive motor is effected by a multi-grooved pulley coupled to a 2 speed gearbox.

OPTIONS

● The addition of a side head will increase production and make a more efficient machine. The side head comprises of a heavy duty forged steel ram with hardened and ground surfaces guided by low friction non-metallic "turcite" liners, and a Four Station, Powered Indexing Electric Turret. The ram and saddle are driven by A.C. Servo Motors via recirculating ball screws with encoder feedback.



- Ram slide in lieu of turret.
- Taller columns.
- Swarf conveyor.
- Fixed rail machines.
- 75hp DC main drive motor.
- Hydraulic combination and oversize chucks.

CAPACITIES	36"		48"		72"	
	inch	mm	inch	mm	inch	mm
Table diameter	36	914	48	1219	72	1829
Swing diameter	46	1168	60	1524	84	2134
Maximum diameter turned for travel of turret slide	42	1067	54	1372	84	2134
Maximum diameter turned for length of standard toolholder	46	1168	58	1473	84	2134
Maximum height under cross slide (standard machine)	37½	953	45½	1156	45½	1156
Minimum height under cross-slide	16½	419	21½	546	21½	546
Maximum height under turret	48	1219	59	1499	59	1499
Vertical travel of turret slide	34	864	38	965	38	965
Horizontal feed of turret to right of centre	28	711	35	889	50	1270
Horizontal feed of turret to left of centre	3		3		3	
Table loading	8,000 lbs	3,636 kg	25,000 lbs	11,363 kg	30,000 lbs	13,636 kg
Range of speeds (rpm)	7.4 to 266 11 to 399 14 to 500		5 to 250 8.5 to 308 9 to 325		2.5 to 67 5 to 133 7.5 to 200	
Feed range infinitely variable	0.0001 ins-0.9999 ins per rev. 0.001 mm-9.999 mm per rev. rapid power traverse 200 ins per min 5000 mm per min.					
Horsepower	50	37 KW	50	37 KW	50	37 KW
Approximate nett weight	24,200 lbs	11,000 kg	41,800 lbs	19,000 kg	49,500 lbs	22,500 kg
Approximate nett weight with side head	28,160 lbs	12,800 kg	44,220 lbs	20,100 kg	55,880 lbs	25,400 kg
Total height	143	3632	167	4241	167	4241
Standard transit height	122	3098	139	3531	139	3531
Minimum height for transit purposes when required (Unboxed)	94	2388	109	2769	109	2769

Capacities and weights are given for guidance only – we reserve the right to amend the specification.

SIDE HEAD	36"		48"		72"	
Vertical travel	28	711	34	864	34	864
Horizontal travel	22	559	32	813	32	813
Ram section	6	152.4	8	203	8	203
Maximum turning diameter	46	1168	60	1524	84	2134
Minimum turning diameter	2	51	0	0	22	559



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