

PATRIOT Machine specifications

GENERAL DIMENSIONS AND LATHE SPECIFICATIONS

LENGTH	54 "
WIDTH	31"
HEIGHT	72" + - 1" FOR LEG LEVELERS
SHIPPING WEIGHT	900 #
MACHINE WEIGHT	880# INCLUDES BENCH
CRATE SIZE	52"W x 31"D x 44"H
FOOTPRINT	64" x 32"
T SLOT SIZE	1/2"
POWER FEED X AXIS	YES forward and reverse with cnc or Power feed
POWER FEED Y AXIS	YES forward and reverse with cnc or Power feed
POWER FEED Z AXIS	YES up and down with cnc or Power feed
TABLE SIZE	9" X 19"
T SLOTS ON TABLE	3 FULL LENGTH EQUALLY SPACED
DISTANCE BETWEEN CENTERS	32"
DIAL CALIBRATION ON CROSSFEED	0.001"
DIAL CALIBRATION ON COMPOUND	0.002" (double scaled for threading)
DIAL CALIBRATION ON LEADSCREW	0.001"
DIAL CALIBRATION ON TAILSTOCK	0.001"
FEED RATES ON X AXIS	ADJUSTABLE 0-MAX UNDER CNC or Power feed
FEED RATE ON Y AXIS	ADJUSTABLE 0-MAX UNDER CNC or Power feed
FEED RATE ON Z AXIS	ADJUSTABLE 0-MAX UNDER CNC or Power feed
HEADSTOCK TAPER	MORSE # 4
LATHE CHUCK BORE	1.115"
LATHE CHUCK DIAMETER	5"
LATHE CHUCK MAX WORK PIECE DIA.	5.32"
LATHE CHUCK MINIMUM WORKPIECE	0.125" (practical limit)
LATHE CHUCK MOUNT	PLAIN BACK
LATHE CHUCK TYPE	3 JAW SELF CENTERING
SPINDLE ACCURACY T.I.R.	0.00076"
SPINDLE BORE	1.125"
SPINDLE SPEEDS	0-800 default- adjustable to 1920 through VFD
SWING OVER BED	17"
SWING OVER CARRIAGE	7.5"
TAILSTOCK OFFSET	0.890" + -
TAILSTOCK TAPER	MORSE # 3
TAILSTOCK BARREL TRAVEL	6.25"
THREADS – INCH	INFINITE
THREADS- METRIC	INFINITE
Y AXIS TRAVEL	11.5"
COMPOUND TRAVEL	1.75"
TOOL BIT SIZE	0.125" TO 0.50"
X AXIS TRAVEL WITH TAILSTOCK ON	22"
X AXIS TRAVEL WITH TAILSTOCK OFF	24"
STEADY REST	2.5" MAX DIAMETER
FOLLOW REST	1.5" MAX DIAMETER

MILL SPECIFICATIONS

SUPPORT COLUMNS - 4 1.263" GROUND	5.05" TOTAL DIAMETER
DRAWBAR 7/16-20 THREADS	12.0" WITH SPINDLE CENTERING BUSHING
DRILL CHUCK	0-1/2"
DRILL CHUCK ARBORS -2	R-8 and MORSE #3
FEED RATES MILL X AXIS	ADJUSTABLE 0-MAX UNDER CNC or Power feed

FEED RATE MILL Y AXIS	ADJUSTABLE 0-MAX UNDER CNC or Power feed
FEED RATE MILL/DRILL Z AXIS	ADJUSTABLE 0-MAX UNDER CNC or power feed
MILL HEAD SPINDLE TO LATHE SPINDLE TRAM	0.001"
Z AXIS TRAVEL	12" (MILL HEAD PLUS QUILL)
QUILL DIAMETER	2.75"
QUILL TRAVEL	4"
SPINDLE CENTER TO FRONT OF LATHE CHUCK	13.5"
SPINDLE CENTER TO LATHE SPINDLE FLANGE	15.75
SPINDLE CENTER TO SUPPORT COLUMN	17.5"
SPINDLE TO TABLE DISTANCE	2" - 14"
SPINDLE SPEEDS	0-1500 default- adjustable through VFD to 2400
SPINDLE TAPER	R-8
TOOL SIZE LIMITS (END MILLS/DRILL)	1" recommended
X AXIS TRAVEL	22" (11" right and left from center)
Y AXIS TRAVEL	12.5" (6.25" forward and back from center)

ELECTRICAL

MOTORS (2) 220/380 VOLT 60 HZ TEFC	1.5 AMPS EACH 4 POLE INVERTER DUTY
HORSEPOWER	2 rated at max VFD torque compensation
PHASE	THREE
POWER CORDS	1 12 GAUGE
POWER REQUIREMENT 220 VOLT	HOUSEHOLD OUTLET 20 AMP CIRCUIT
MOTOR MOUNTING FRAME – DUAL	METRIC 425
MOTOR SHAFT SIZE	24 mm (15/16")
MOTOR RPM	1400 @ 50Hz adjustable through VFD to 120 Hz= 2940
INVERTER 220 VOLT SINGLE PHASE INPUT 380 VOLT 3 PHASE OUTPUT	

OTHER

BENCH- ALL STEEL WELDED CONSTRUCTION	6 LEGS WITH ADJUSTABLE LEVELING PADS BUILT IN DRIP TRAY FOR COOLANT SYSTEM
DRO MOUNTING	ALL POINTS DRILLED AND TAPPED, SHIELDS AND HARDWARE ON MACHINE AND COLOR MATCHED- INSTALLATION IS STRICTLY BOLT UP.
CNC MOUNTING AND HARDWARE	CNC FULLY INSTALLED IN USA INCLUDING X, Y, Z AND A AXES (MILL HEAD UP AND DOWN)
CNC ENCLOSURE	ALL STEEL SHEET METAL HOUSING INTEGRATED INTO THE MACHINE DESIGN. GECKO DRIVE , RS 232 CONNECTIONS AND COOLING FAN INSTALLED IN USA
BALL SCREWS	C-7 BALL SCREWS WITH MULTI TRACK DEFLECTOR NUTS INSTALLED AT FACTORY ON X, Y AND Z AXES. A AXIS USES 10 TPI ACME SCREW.
HAND WHEELS X, Y, Z	" T " TYPE WITH GRIP
MACHINE FASTENERS	STEEL
MOTIONS	ALL SPINDLES RUN ON TAPERED ROLLER BEARINGS, MOTORS RUN ON SEALED ROLLER BEARINGS .