



Patriot Series

The Patriot Series is an automatic magazine style bar feeder designed for feeding round, square and hexagonal bar stock into CNC lathes. Available in both Swiss and Fixed Headstock versions.



Patriot 338 & 551

EDGE ○○○
TECHNOLOGIES

The Edge Technologies' Patriot Series is designed for automatically feeding round, square and hexagonal bar stock in lengths up to 12', in diameter ranges of 3-38 mm and 5-51 mm, into CNC lathes.

● Double Pusher

The two pusher system drastically reduces the overall length of the unit by as much as 4 feet. A short pusher pre-feeds the bar then retracts. A second full-length pusher lowers into position to continue the feeding process.

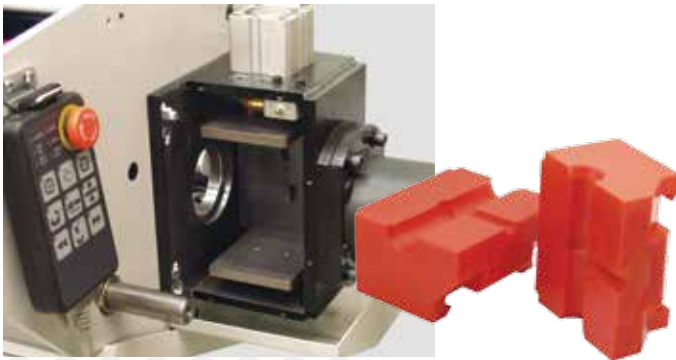
● Stock Size Adjustment

Easy to use, bar diameter adjuster. Use of the supplied allen wrench tool allows for quick, on the fly switching of bar stock.



● Universal Bushing Blocks

Durable Polyurethane bushing blocks eliminate bar vibration. Available in 2mm size increments, oil filled to achieve a hydrodynamic bearing effect.



● Dual Anti-Vibration Bushing Device

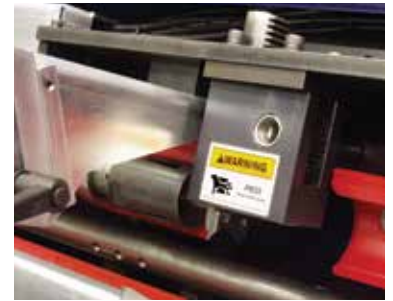
As standard on sliding headstock applications, the dual anti-vibration bushing devices stabilize the bar stock between the guide channel and lathe spindle, maximizing RPM potential. Superior support and easy set up of all bar diameters with universal bushing blocks .



● Self-Centering Gripper - Remnant Retract

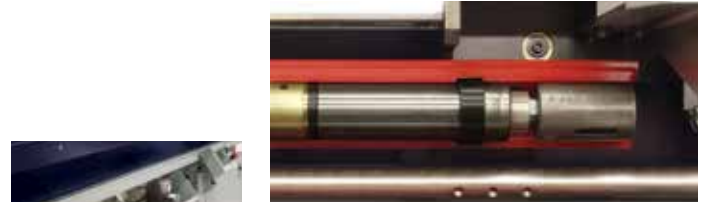
The gripper device holds and inserts the new bar into the bar collet and is also used to extract the remnant. Bar ends that are free of burrs require no additional chamfering. The gripper requires no adjustment for bar size changes as it "self-centers".

The bar remnant is withdrawn to the back end of the magazine. A gripper extracts it from the bar stock collet and deposits it in a remnant area.



● Rotating Tip & Collet

The bar pusher is equipped with a standard rotating tip that ensures smooth running at high RPM. The bar stock collet is a common thread-on or pin-on type.



● Oil Reservoir

Oil reservoir located beneath the remnant area, allows for full storage of collets and bushing blocks in the back stand.



● Swiss Package

As a feature on the Patriot 338 and an optional feature on the 551, the Swiss Package includes a Synchronization device and telescopic nose. The synchronization device employs an electromagnetic coupling, mechanically linking the lathe headstock's z-axis travel to the bar feeder's pusher to ensure synchronous movement and no loss of connection between the bar stock and collet-pusher. Telescopic nose installs on rear of headstock for full coverage with z-axis support.



● Control

A reliable, universal Mitsubishi controller and servo drive provide the Patriot's motion control and functionality. Electronics are mounted on an easy access fold out door.



● Touch Screen Control

The control is easy to program, yet flexible enough for all applications. Memory storage for 36 jobs simplifies changeovers. Diagnostics and trouble shooting are all run from this advanced control screen.



● Robust Construction

Heavy gauge structural steel ensures rigidity and long term durability.

● Large Storage Capacity

The bar stock magazine is an incline rack with a loading capacity of 12 linear inches.

● Stock Alignment Guides

The bar stock alignment guides are quickly and easily adjusted for different bar diameters, effectively reducing set up time.

● Remote Pendant

The Patriot Series features the convenience of an easy-to-use remote control pendant. Functions include:



- manual and automatic operation
- manual load/unload of bar stock for set-up and/or changeover
- movement of bar pusher
- emergency stop

● Guide Channels

Universal polyurethane guide channels handle a wide range of stock sizes, yet change over quickly.

The channel is flooded with oil to create a hydrodynamic effect resulting in higher RPM with reduced noise and vibration.



Patriot 338 & 551

Technical Data

- **Power consumption**
2 KW
- **Feed force**
adjustable, max. 450 N (101 lbf)
- **Forward feed rate**
adjustable 750 mm/sec max. (2.46 ft/sec)
- **Return feed rate**
1000 mm/sec (3.3 ft/sec)
- **Loading time**
30 sec (for 12' bars)
- **Oil capacity**
55 liters (15 gallons)
- **Oil viscosity**
ISO 100-150 hydraulic oil
- **Operating voltage**
200-230 V/60 Hz
- **Compressed air supply**
6 bar = (90 psi)
- **Compressed air consumption**
approx. 8 liters per loading action
- **Weight without oil**
Patriot 338: 1130 kg (2500 lbs)
Patriot 551: 1225 kg (2700 lbs)
- **Remnant length**
406 mm max (16 inches)
- **Loading Configuration**
Machine is available in front or rear load versions

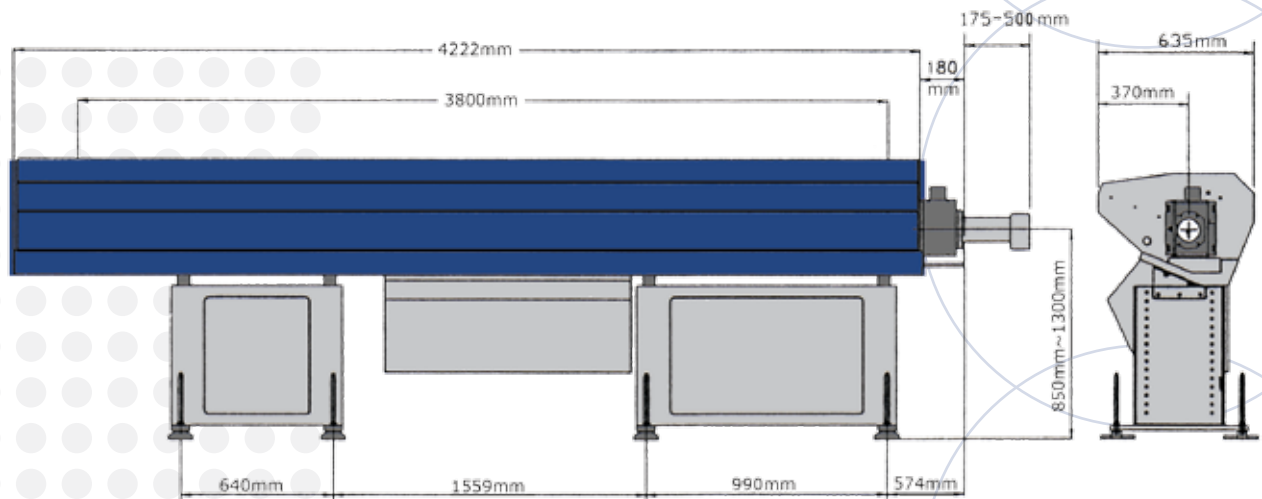


- **Maximum Bar Length**
3810 mm (12'6")
- **Bar Diameter Range**
3-38 mm (.118"-1.5") 5-51 mm (.196"-2")
- **Magazine Capacity**
12 linear inches

**This max. diameter is attainable only if remnant is ejected through the lathe spindle or if one end of the bar stock is turned down to a smaller O.D. to accept a smaller O.D. collet.*

Channel Size	Bar Size Capacities (mm)		
	Minimum Bar Size	Maximum Bar Size	Maximum Bar Size w/Front Remnant Expulsion*
Ø 13 mm	3 mm (.118")	10 mm (.393")	12 mm (.472")
Ø 17 mm	5 mm (.196")	15 mm (.591")	16 mm (.629")
Ø 21 mm	8 mm (.315")	16 mm (.630")	20 mm (.787")
Ø 26 mm	8 mm (.315")	22.2 mm (.875")	25 mm (.984")
Ø 28 mm	10 mm (.393")	25.4 mm (1.00")	27 mm (1.062")
Ø 33 mm	10 mm (.393")	28.5 mm (1.125")	32 mm (1.259")
Ø 36 mm	12.7 mm (.500")	32 mm (1.260")	35 mm (1.377")
Ø 39 mm	15.8 mm (.625")	33.3 mm (1.312")	38 mm (1.500")

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Ø 43 mm	19 mm (.750")	38 mm (1.500")	42 mm (1.653")
Ø 46 mm	22.2 mm (.875")	41.2 mm (1.625")	44.5 mm (1.750")
Ø 52 mm	25.4 mm (1.00")	47.75 mm (1.880")	50.5 mm (2.00" FE*only)
Ø 56 mm	25.4 mm (1.00")	50.8 mm (2.00")	54.5 mm (2.145" FE*only)



Technical data subject to change without notice

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