



Patriot 338 & 551

The Patriot Series is an automatic magazine style barfeeder designed for feeding round, square and hexagonal bar stock in CNC lathes. The Patriot 338 and 551 are compatible with all kinds of fixed and sliding headstock lathes. An optional swiss type synchronization is also available.

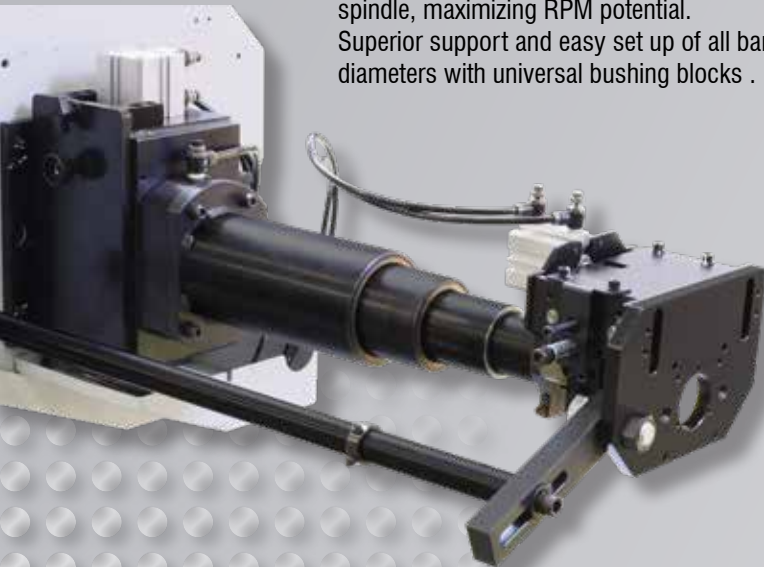


The **Patriot 338 & 551** are Automatic Bar Loading Magazine Feeders for processing bars in the diameter ranges of 3 mm to 56 mm and in lengths of 8FT and 12FT on CNC lathes.

- The **Patriot 338 & 551** are designed for automatically feeding round, square or hexagonal bar stock into CNC lathes.
- Heavy gauge structural steel ensures rigidity and long term durability.
- Double pusher, space saving design.
- Oil reservoir located beneath the remnant area
- Bar diameters within a 20 mm range can be accommodated within one guide channel size. The 20 mm range is increased significantly when straight bars are used. (.007"/ft. TIR max)
- Bar stock magazine uses an incline rack with a loading capacity of 12 linear inches.
- Oil filled polyurethane guide channels provide the ideal guiding system while reducing noise and vibration to a minimum.

- **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 .



- **Axial Shift Assembly (optional)**

Used to convert from guide bushing mode to non-guide bushing mode. (This can also be used for spindle maintenance)



- **Storage Cabinet**

Allows for full storage of collets, bushing blocks, tools, and manual in the back stand.



- **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The bar remnant is withdrawn to the back end of the magazine.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.



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Electronic Package

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.



Remote Pendant

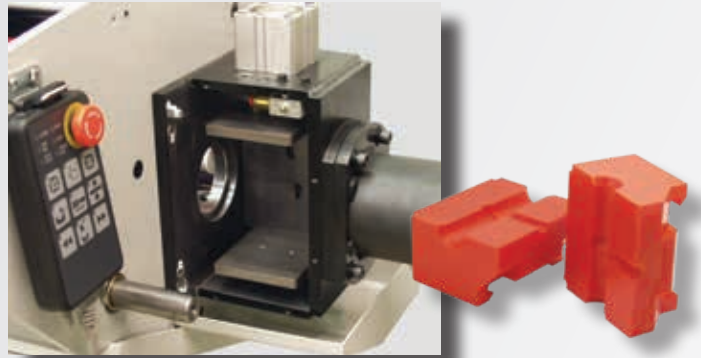
The Patriot Series features the convenience of an easy-to-use remote control pendant. Functions include:



- Manual and automatic operation
- Manual load/unload of bar stock for set-up and/or changeover
- Movement of bar pusher
- Emergency stop

Universal Bushing Blocks

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



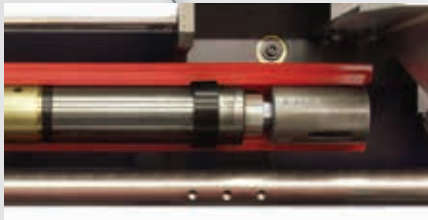
Guide Channels

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.



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



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.



Technical Data

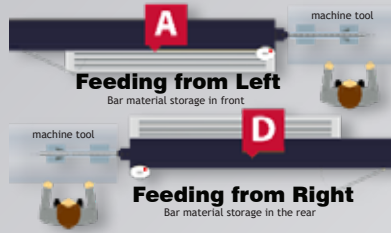
- Power consumption
1.5 kW - (2kVA)
- Feed force
adjustable, max. 450 N (101 lbf)
- Forward feed rate
adjustable 750 mm/sec (2.46 ft/sec)
- Return feed rate
1000 mm/sec (3.3 ft/sec)
- Loading time
30 sec (for 12 ft. bars)
- Oil capacity
55 liters (15 gallons)
- Oil viscosity
ISO 100 - 150 hydraulic oil
- Operating voltage
200 - 230 V/60 Hz
- Compressed air supply
6 - 10 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)
- Magazine capacity
304 mm (12 inches)
- Material Straightness Spec.
(.007" TIR/foot of material (V blocks, 6" equidistant))

Options Available

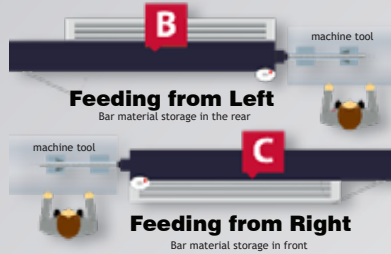
- Axial shifting device
convert from swiss to non-guide bushing mode or use for spindle maintenance
- Pusher extension
- Moveable Steady Device
- High voltage transformer (400 - 460V)
- Moveable Steady Device
- Tall Stands
For lathe taller than 1250mm
- Ethernet lathe connection
- Dual channel safety kit

Loading Config

Type A/D - Standard



Type B/C - Optional*



*By special request only

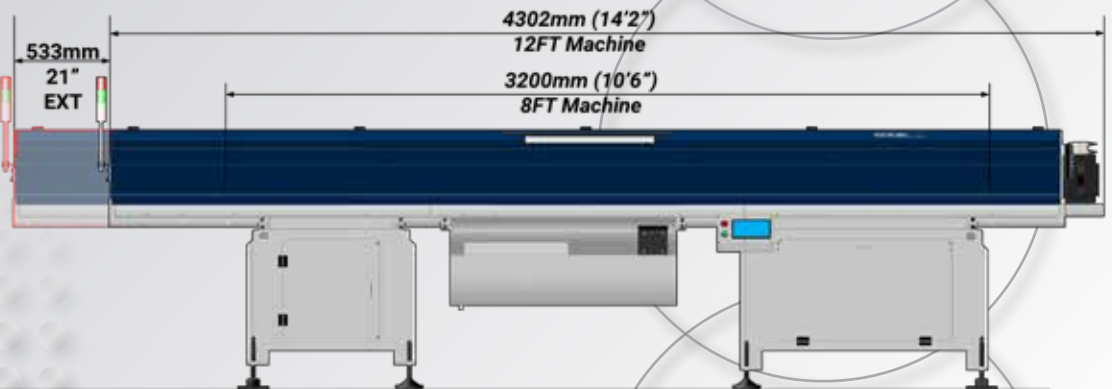
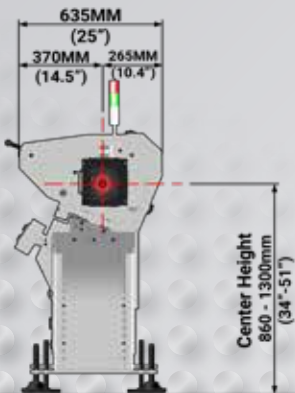
Guide Channel Sizes

Guide Channel Sets	Pusher Diameter	Minimum Bar Size	Maximum Bar Size	Maximum Bar Size with Front Remnant Expulsion*
Ø 13mm	13mm	3mm (.118")	10mm (.393")	12mm (.472")
Ø 17mm	17mm	5mm (.196")	15mm (.591")	16mm (.629")
Ø 21mm	21mm	8mm (.315")	19.05mm (.750")	20mm (.787")
Ø 26mm	26mm	8mm (.315")	22.2mm (.875")	25mm (.984")
Ø 28mm	28mm	10mm (.393")	25.4mm (1.000")	27mm (1.062")
Ø 33mm	33mm	10mm (.393")	28.5mm (1.125")	32mm (1.259")
Ø 36mm	36mm	12.7mm (.500")	32mm (1.260")	35mm (1.377")
Ø 39mm	39mm	15.8mm (.625")	33.3mm (1.312")	38mm (1.500")
Ø 43mm	43mm	19mm (.750")	38mm (1.500")	42mm (1.653")
Ø 46mm	46mm	22.2mm (.875")	41.2mm (1.625")	44.5mm (1.750")
Ø 52mm	52mm	25.4mm (1.000")	47.75mm (1.880")	50.5mm* (2.000")
Ø 56mm	56mm	25.4mm (1.000")	50.8mm (2.000")	54.5mm* (2.145")

Patriot 338

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(* 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



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