

# FMB

## M a c h i n e r y



## **Turbo 5-55 & Turbo 8-80**

The FMB Turbo 5-55 and Turbo 8-80 are automatic Bar Loading Magazine Feeders for processing bars in the diameter ranges of 5-55 mm and 8-80mm and in lengths from 10' to 14' on CNC lathes. Quick change polyurethane guide channels allow for quiet operation at high RPM while feeding round, square or hex bar stock.

The Turbo 5-55 and 8-80 are compatible with all kinds of fixed headstock lathes. Swiss type synchronization device is also available.

# Turbo 5-55 & 8-80

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The FMB Turbo 5-55 and Turbo 8-80 are automatic Bar Loading Magazine Feeders for processing bars in the diameter ranges of 5-55 mm and 8-80mm and in lengths from 10' to 14' on CNC lathes.



- The FMB Turbo 5-55 and 8-80 are designed for automatically feeding round, square or hexagonal bar stock into CNC lathes.
- Oil filled polyurethane guide channels provide the ideal guiding system while reducing noise and vibration to a minimum.
- The polyurethane guide channels can be changed quickly and easily for feeding other diameters of bar stock.
- Damage to the bar stock is avoided since there is no metal to metal contact.
- Sturdy base structure due to the use of gray cast iron for the machine bed. The Turbo 8-80 uses 3 heavy duty stands for added rigidity.
- The magazine storage capacity is 11 inches. Optional extensions and bundle loaders are available to handle capacities up to 2.5 tons.
- 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)
- The bar remnant is withdrawn to the back end of the magazine. A gripper then extracts it out from the bar stock collet.

- **Drive**

Precise synchronous toothed belt drive facilitates accurate feed tolerances.



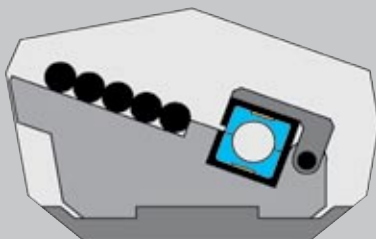
- **Profiled material**

The feed mechanism is automatically pulsed to ensure the profiled material is successfully located in the lathe collet/chuck.

- **In-feed control**

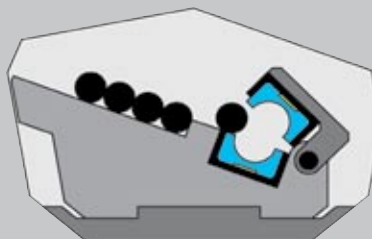
The new bar is automatically positioned in the lathe ready for facing before the first component is produced. Part to part feedout can be controlled without a dead stop required.

## The mode of function of FMB loading magazines



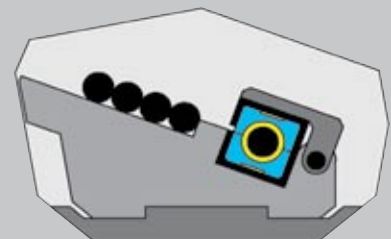
### Loading

The storage capacity is 11 inches.



### Bar Separation

The material is loaded from the bar storage table into the guide channel.



### Processing

Support of the bar within the oil-filled guide channel.

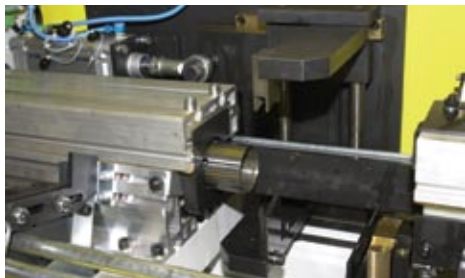
● **Control**

FANUC SPS controller with servo motor drive to the feed mechanism. Flexible control of length and rate of feed guarantee the optimum practical and therefore economic use of the magazine.



● **Gripper**

A pneumatic gripper uses a force of up to 1500 N to press the bar stock into the collet and pull out the material remnant. The gripper which is arranged on a side block performs an action in the function mentioned above. It is not necessary to chamfer the bars if they are cleanly cut.



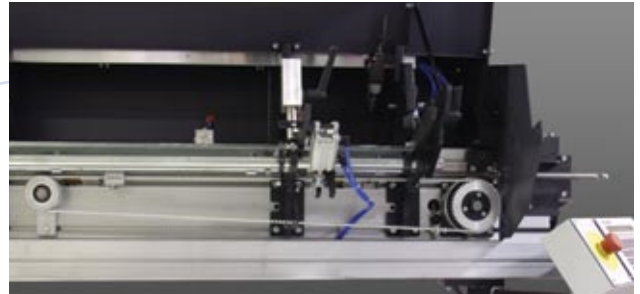
● **Guide Channels**

Polyurethane inserts which can easily be changed for the range of 25 to 80 mm diameter. For the choice of channel sizes please see the list on the back page.



● **Swiss Headstock Sync. (optional)**

The headstock synchronization device allows the Turbo 5-55 and 8-80 to be compatible with fast moving, sliding headstock lathes.



● **Bar Pusher**

A swing out bar pusher bar system reduces the total length of the loading magazine.



● **Roller Steady Rest**

This device guides the bar stock between the lathe and bar feeder. Rollers or blocks provide the ideal guiding of round or profiled material. The rollers can be continuously adjusted to the bar diameter and can quickly be replaced with blocks for supporting profiled material.



**FMB Guide Channel**

The channel is filled with hydraulic oil from the storage tank. The rotation of the bar creates turbulence which keeps it in the center of the channel. The higher the rotation speed the better centralization effect, therefore the magazine will help the lathe to achieve optimum cutting conditions.

If the diameter of the bar stock is close to that of the channel, very little turbulence can be created by rotation and thus the hydrodynamic bearing effect supports the center of the channel.



# Turbo 5-55 & 8-80

## Technical Data

- **Power consumption**  
1,5 KW
- **Feed force**  
adjustable, max. 750 N
- **In feed rate**  
adjustable from 0-700 mm/sec
- **Forward feed rate**  
adjustable max. 1000 mm/sec
- **Return feed rate**  
1000 mm/sec
- **Loading time**  
30 sec (for bars of 4200 mm)
- **Oil capacity**  
80 litres (22 gallons)
- **Oil viscosity**  
150 cSt at 40°C
- **Operating voltage**  
230 V/60 Hz
- **Compressed air supply**  
0,6 MPA (=6 bar)
- **Compressed air consumption**  
approx. 10 litres per loading action
- **Weight without oil**  
3200 mm - 1000 kg (6,160 lbs)  
4200 mm - 1200 kg (7,260 lbs)
- **Remnant length**  
530 mm max. (22.8 inches)

## Options Available

- **Maximum bar length**  
3200 mm (10'6"), 3800 mm (12'5" *Turbo 5-55 only*)  
and 4200 mm (13'8")
- **Bar Diameter Range**  
5 - 55 mm and 8-80 mm

## Loading Configurations

### Type A/D - Standard



### Type B/C - Optional\*



\*By special request only - Please allow 8-10 weeks for delivery

## Channel Sizes

### Turbo 5-55

Channel Size	Maximum Bar Size Capacity (mm)		
	Round Diameter	Hex A/F	Square A/F
15	12(15)	10(13)	8(10)
25	22(25)	19(21)	15(17)
32	28(32)	24(27)	19(22)
36	32(36)	27(31)	22(25)
42	38(42)	33(36)	26(29)
50	45(50)	38(43)	31(35)
55	50(55)	42(47)	34(38)

### Turbo 8-80

Channel Size	Maximum Bar Size Capacity (mm)		
	Round Diameter	Hex A/F	Square A/F
25	22(25)	19(21)	15(17)
42	38(42)	32(36)	26(29)
50	45(50)	38(43)	31(35)
60	55(60)	47(51)	38(42)
65	60(65)	51(56)	42(45)
72	65(72)	56(62)	45(50)
80	72	62	50

(\*) Diameters in brackets can be achieved if bar ends are turned down or if forward ejection of the bar remnant is possible.

