EDGE TECHNOLOGIES
A DIVISION OF HYDROMAT INC

FMB

Micromag 18

The FMB Micromag 18 is an automatic magazine style Bar Feeder for processing bars in the diameter range of 0.8mm - 18mm in lengths from 12’ to 14’ on CNC lathes. Equipped with a Swiss type headstock synchronization device, peck drilling and threading on small diameter bars is simple and done with close tolerances. To increase the productivity on your Swiss type lathe, the Micromag 18 is a smart choice.

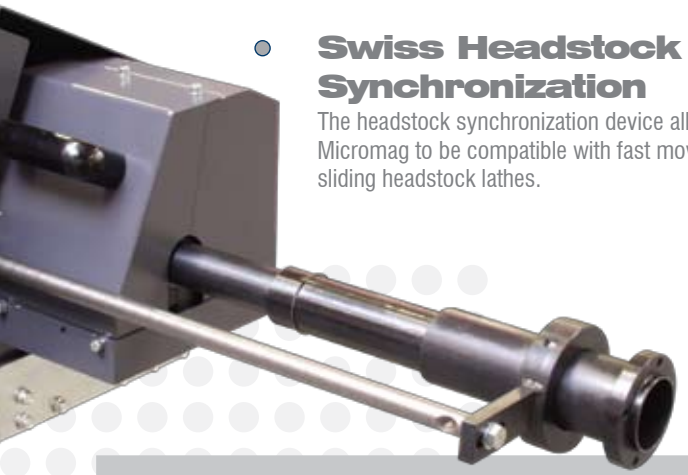
HYDROMAT®

Micromag 18

FMB Machinery

The FMB Micromag 18 is an automatic bar loading magazine for processing bars in the diameter range of 0.8mm to 18mm and in lengths up to 12' or 14' on machine tools.

- The FMB Micromag is designed to automatically feed round, square or hexagonal bars into CNC lathes.
- Oil filled polyurethane quick-change guide channels provide the ideal guiding system while reducing noise and vibration to a minimum. The guide channel size can be changed to allow the processing of the smallest bar diameters and it is securely closed with a very efficient, air operated, toggle lever system. Channel changeovers can be performed in as little as 10 minutes.
- The space needed to load the magazine is minimized since the bars are placed on the storage table (9 inches wide) at the side of the guide channel.
- Bars within a larger diameter range can be accomodated within one guide channel size.
- The bar remnant is withdrawn to the back end of the magazine. A gripper extracts it from the bar stock collet. No manual adjustments are necessary.
- A walking beam system is used to load 0.8mm to 3mm material without misloads. System folds away for loading larger diameter material.



Swiss Headstock Synchronization

The headstock synchronization device allows the Micromag to be compatible with fast moving, sliding headstock lathes.

Control Panel

Easy options guarantee the interaction between the bar feeder and the CNC lathe. Parameters are clearly shown on the text display. Positioning of the limit switch is no longer necessary.

In-Feed control

The new bar is automatically positioned in the lathe ready for facing before the first component is produced.

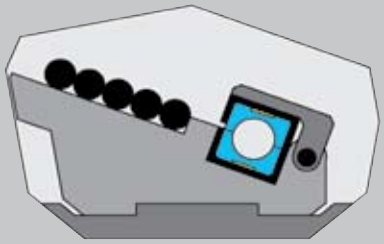
Profiled Material

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

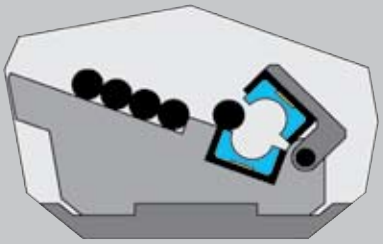
Bar Pusher

Single bar pusher design reduces bar change time by 50%.

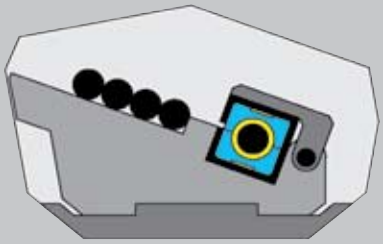
The mode of function of FMB loading magazines



Loading
The storage capacity is 9 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

Omron SPS control with position sensor. Flexible control of length and rate of feed guarantee the optimum and economic use of the magazine.

Bar Stock Alignment Guides

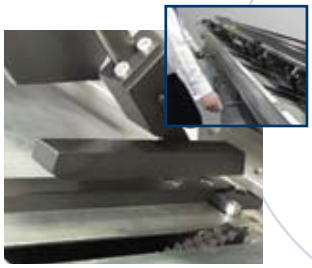
The design of the material guides on the storage table efficiently keeps the bars separate and yet are simple and easy to adjust for different material sizes. This helps to reduce bar diameter changeover time.

Length Monitoring

By inserting maximum and minimum length dimensions into the control, it serves as a safety device, shutting down the magazine if a mis-feed should occur.

Walking Beam For Small Bar Applications

Walking Beam & Knobs used to ensure loading of 0.8mm to 3mm bar stock with a storage capacity for 24 bars. Beam folds down when loading larger bar stock.

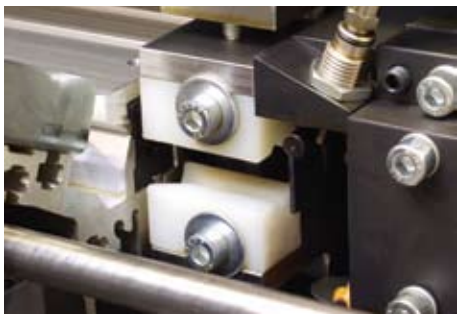


Quick-Change Guide Channels

Polyurethane Quick-Change guide channels reduce noise and vibration to a minimun. Guide channels are used when loading bar stock ranging from 3mm up to 18mm.

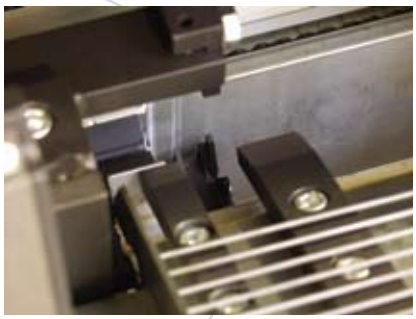
Block Steady Rest

This device guides the round and profiled bar material between the guide channel and the lathe.



Gripper

A mechanical gripping device is used to both insert the new bar into the bar stock collet and to extract the remnant. It is not necessary to chamfer the bar if it is cleanly cut. No adjustment for bar size is necessary. “Self-Centering”.



Storage Tray

An additional storage tray is located on the front of the magazine for fast reloading.

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Technical Data

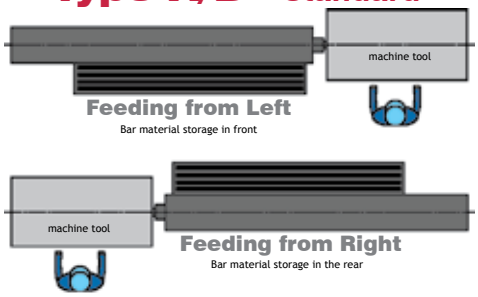
- **Power consumption**
  1.5 kW
- **Feed force**
  adjustable, max. 300 N
- **In-feed rate**
  adjustable from 0-300 mm/sec
- **Forward feed rate**
  adjustable max. 710 inches/minute max
- **Return feed rate**
  1420 inches/minute max
- **Loading time**
  17 sec (for 12 foot bars)
- **Oil capacity**
  50 liters (13.2 gallons)
- **Oil viscosity**
  ISO 100 cST
- **Operating voltage**
  230 V/60 Hz (standard)
- **Compressed air supply**
  6 bar (90 psi)
- **Compressed air consumption**
  approx. 3 liters per loading action
- **Weight without oil**
  1950 lbs
- **Remnant length**
  300 mm max. (11.8")

Options Available

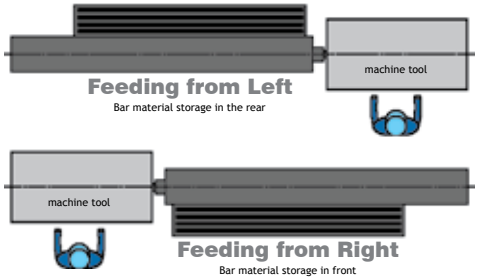
- **Maximum Bar Length**
  3800 mm (12'5") and 4200 mm (13'8")
- **Bar Diameter Range**
  0.8mm - 18mm

Loading Configurations

Type A/D - Standard



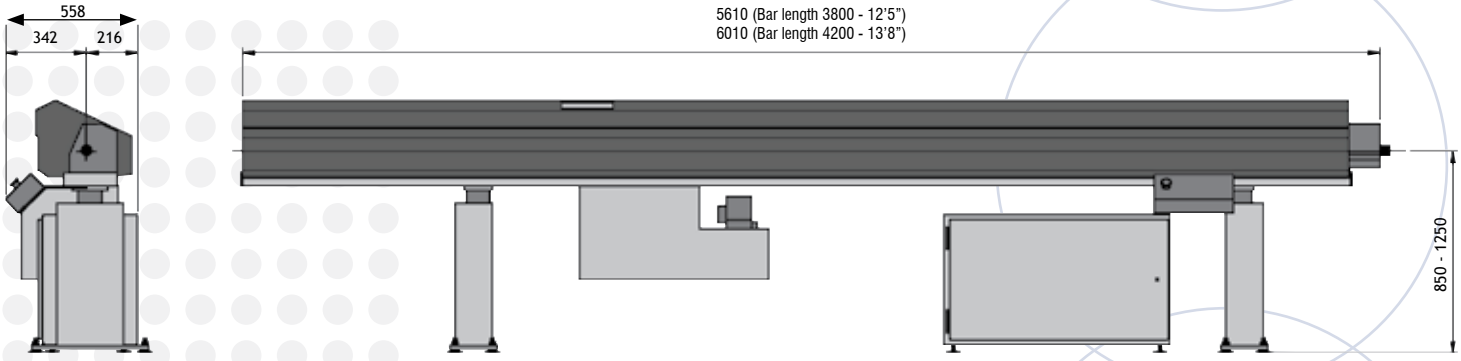
Type B/C - Optional



Standard Guide Channel Sizes

Channel Size	Maximum Bar Size Capacity (mm)		
	Round Diameter	Hex A/F	Square A/F
5	3(5)	2(4)	2(3)
7	5(7)	4(6)	3(5)
10	8(10)	7(8)	5(7)
12	10(12)	8(10)	7(8)
13	11(13)	9(11)	7(9)
15	13(15)	11(13)	9(10)
16	14(16)	12(13)	10(11)
18	16(18)	13	11

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



Technical data subject to change without notice

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