



## SUPER HYDROBAR BAR FEED

MANUAL LOAD BAR FEEDER FOR FIXED  
OR SLIDING HEADSTOCK LATHES

Diameter range: 1/16" to 2 - 5/8"  
(1.5 mm - 68 mm)

Bar length: 12' (other lengths available)  
8 models available to handle complete range of the lathe



YOUR "ONE-STOP-SHOP"  
FOR MACHINE-TOOL PERIPHERALS



#### No rotation

If the spindle speed is zero, the hydrodynamic support is zero and the bar rests on the feed tube



#### Rotation starting

The revolving bar produces increased oil pressure and the bar is lifted from the bottom of the feed tube



#### Full speed rotation

With increasing speed, the hydrodynamic force increases and the bar revolves centrally, ensuring a smooth feed

### Superior Performance

The pioneer and unmatched manual load hydrodynamic bar feeder provides enhanced performance on all types of turning equipment. Hydrobar ensures vibration-free rotation and unmatched speed, range, and reliability. Designed for flexibility and quick changeovers, Hydrobar systems can be customized to fit a broad range of sizes and lathe capacities.

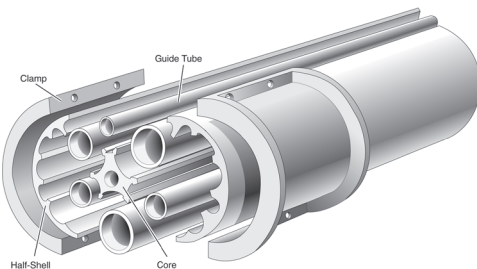
Unmanned operation is possible for extended periods of time, permitting one operator to attend more than one machine.



### Quick Changeovers

The modular multi-tube design allows one person to perform a changeover in less than one minute. Simply index the tube to the appropriate tube and connect the quick disconnect coupling to the new tube. Each guide tube contains its own pusher. Changeover is then completed with inserting the recommended spindle liner into the spindle on the machine tool.

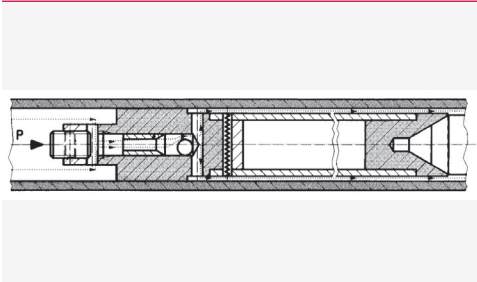
The swing out system permits easy loading from the front side of the lathe and allows unobstructed access to the lathe's spindle for spindle liner changeover and machine maintenance.



### Modular Design

Hydrobar's patented modular design is a radial arrangement of guide tubes on a common pitch circle. The tubes are clamped securely between the patented aluminum core and the half shells to provide maximum rigidity and straightness. Each guide tube is complete with piston and pusher assembly, and because of the flexible modular design, guide tubes are easily repaired or replaced.

The multi-tube design provides greater flexibility. With proper selection of tube to bar stock, Hydrobar permits efficient rotation at optimum speed. A wide range of sizes can be accommodated with either the three-tube or six-tube models. Any size tube can be chosen to meet your production needs.



### Patented Feed System

Hydrobar's patented feed system is a single oil supply that provides bar feeding and hydrodynamic support to the revolving bar. Oil is evenly distributed between the guide tube ID and the bar stock OD. As oil flows from the piston end forward, air is forced out and the bar is completely enveloped in oil. This allows bar stock to rotate at unusually high speeds and ensures peak productivity.

A compact sliding oil recuperator prevents oil spillage between the front of the bar feeder and the back of the spindle.



### Efficiency Benefits

Choose from several standard models or any custom configuration. Hydrobar helps increase manufacturing efficiencies, productivity and profitability with these benefits:

- Permits machining speeds equal to those of pre-cut stock
- Eliminates cut-off saw operations and associated material handling
- Reduces workpiece in process time
- Feeds bar stock automatically, eliminating manual workpiece loading
- Frees machine operator to perform other productive tasks

### Three- and Six-Tube HYS-HS Models

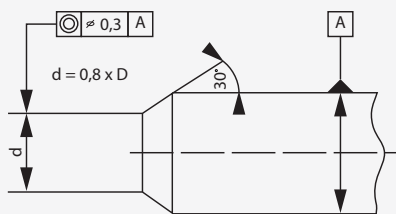
Model	Bar Capacity (round)
HYS 3.12 HS-4.8	1/16" through 1/2"
HYS 3.20 HS-4.8	1/16" through 13/16"
HYS 6.32 HS-4.8	1/16" through 1-1/4"
HYS 6.38 HS-4.8	1/4" through 1-1/2"
HYS 6.42 HS-5.2	1/4" through 1-5/8"
HYS 6.52 HS-5.2	1/2" through 2"
HYS 6.65 HS-5.2	3/4" through 2-1/2"
HYS 6.68 HS-5.2	3/4" through 2-5/8"

### For Swiss-Type CNC Screw Machines

- Designed for ideal headstock synchronization.
- All three- and six-tube HS models designed for Swiss machines are equipped with a 23" z-axis retract system with a safety switch and a kill switch to prevent spindle on sliding headstock lathes from accidentally backing into the bar feed, precluding costly downtime and equipment repairs.
  - Allows for machining different length workpieces
  - Retract permits the bar feed to reach the recessed spindle
- The smaller-sized recuperator allows for positioning behind the recessed machine spindle.
  - For 3-tube models, from centerline of spindle to bottom of recuperator, size requirements can be as small as 2 - 3/8"
  - For 6-tube models, from centerline of spindle to bottom of recuperator, size requirements can be as small as 3 - 1/16"



### 30 Degree Chamfer



### Bar Stock Preparation

- For optimum results and safety purposes, proper bar stock preparation is important
- Bar stock must have 60° included chamfer and should be straight within .020"/3.25 ft. non-accumulative

Note: the LNS specifications are recommended on LNS bar feeders and will support optimum rotational speeds and safety.

Specifications subject to change without notice



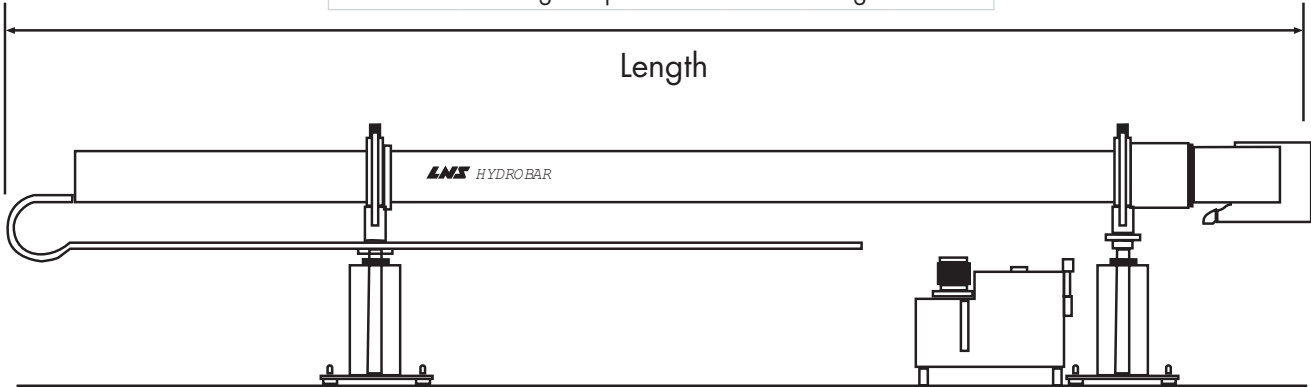
# SUPER HYDROBAR BAR FEED

## TECHNICAL SPECIFICATIONS

Capacity		
Diameter	mm	1.5 - 68 (1/16" to 2 - 5/8")
Bar Length	mm	3700 Standard (6000 mm max.) (6', 10', 12' up to 20')
Loading Capacity		Single Bar
Loading Side		Right / Left headstock configuration
Loading System		Tube swing out system
Shipping Weight	lbs	Shipping weight varies by model, from 1,321 to 2,507
Applications		
Type of Headstock		Fixed / Sliding headstock configuration
Z-axis Retraction standard on sliding headstock	mm	600 (23")
Changeovers		
Complete Changeover	min	1
Driving Systems and Bar Support		
Drive		Hydraulic pump
Guiding		Hydrodynamic oil
Options		
Z-axis retraction 23" (600 mm) - fixed headstock		

**Barstock Straightness Specifications and Performance**  
 For optimum rotational performance speeds, bar stock straightness needs to be .020" per 3.25 feet, non accumulative. Bar stock out of this tolerance will not run at optimum RPM. Other factors such as material type (brass, copper, bronze and other malleable materials), clamping efficiency of the machine workholding, alignment of the bar feed, oil type, bar preparation and spindle liners will affect optimum RPM capability of the system.

Type	2.8	3.3	4.8	5.2	5.4	5.6
Length	3200	3900	5400	5600	6000	6200
Maximum stock length depends on machine configuration						



**YOUR "ONE-STOP-SHOP" FOR MACHINE-TOOL PERIPHERALS**  
 LNS provides a full range of barfeeders, chip conveyors, coolant management systems, air filtration systems, and workholding systems that is second to none on the market. We are known in the industry for the solid experience we have gained over several decades in an exceptionally wide range of applications, our excellent customer service, and our technical support. This support is ensured by highly qualified technicians who are available throughout North America.



LNS America  
 4621 East Tech Drive  
 Cincinnati, Ohio 45245

513-528-5674  
 Sales@LNS-america.com  
 www.LNS-america.com



Specifications subject to change without notice / HYDROBAR / 08-2017