

TECHNICAL SPECIFICATION MODEL PFM 3248 PIPEMASTER™ SYSTEM

The Model PFM 3248 PIPEMASTER™ System is a portable ID mount machine tool for beveling and facing 32" through 48" pipe. The tool is configured with twin hydraulic motor drives that power helical drive gears attached to the main spindle for smoother power delivery and optimal surface finish. A set of hydraulic cylinders with rapid and slow feed control, advance and feed the cutting head into the pipe. A large diameter mandrel shaft is provided for optimum stability during heavy cutting operations. Also, there's an integrated flow control manifold that minimizes hydraulic connections. The lifting frame does not require removal or separate lay down stands. The tool can be lifted for mounting in horizontal, vertical-up, or vertical-down positions for prepping on site pipes.

The Model PFM 3248 PIPEMASTER™ System comes complete with:

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| • Model PFM 3248 Sub-Assembly | 1 ea. |
| • ID Tracking Tool Modules Assembly | 5 ea. |
| • Mandrel Head Assembly | 1 ea. |
| • Hydraulically Powered Mandrel Head Shaft Assembly 32" - 48" | 1 ea. |
| • Lathe Lifting Frame Assembly | 1 ea. |
| • Drive Motor Assembly | 2 ea. |
| • Wrench Kit | 1 ea. |
| • Operator's Manual | 1 ea. |

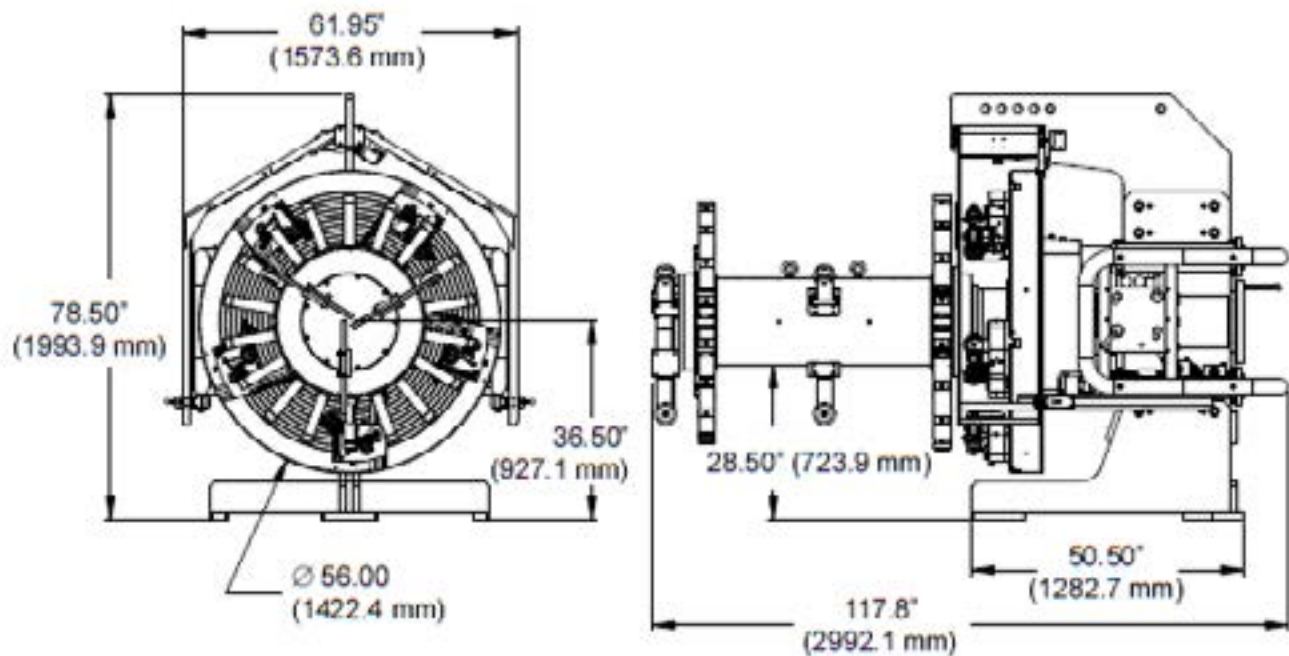
Design and Operating Features

- The tool accepts its own torque through the mandrel.
- The Expanding Mandrel provides fast, accurate self-centering and alignment.
- The Mandrel Head provides 150,000 lbs. of clamping force (2000-PSI Hydraulic Pressure).
- The Mandrel Head and Mounting Pads cover the full mounting range of the tool, 29.5" (749.3 mm) through 47" (1193.8 mm) ID pipe.
- The Lathe is provided with a Combination Lifting Frame and Stand.
- The Lathe has a large diameter Mandrel Shaft for optimum rigidity.
- The five and a half inches (5 1/2") of feed travel allows for easier and more forgiving axial positioning.
- The extra Feed Travel is provided to allow the tool to handle heavy wall pipe.
- Five (5) ID Tracking Tool Modules allow distributing the cutting load to more Tool Bits to handle greater wall thickness.

- Two (2) Torque bars insure greater torque handling and a balanced load for accurate end facing.
- A Twin Hydraulic Drive System delivers optimal torque at the lower RPM required for the larger pipe diameters.
- A Chip Guard with a 'Lock Out' feature is supplied for the safety of the operator.
- A Hydraulic Interlocking Safety Mechanism is supplied to avoid unclamping the Mandrel while the Headstock is rotating.
- A 'Jog' switch is supplied to rotate the Cutting Head for set up.
- All wrenches needed for operation, less Tool Bits, are provided with the system

Specifications

Reference Drawing No. 77-1692



Weight (Approximate)

11,200 lbs. (5080 kg)

Clearance and Dimensions

Maximum Rotating Head DIA	56.00" (1422.4 mm)
Length (parallel to axis of pipe - w/ mandrel assembly 32" - 48")	117.8" (2992.1 mm)
Available Feed Travel	5.50" (139.7 mm)

Pipe Cutting Capacities

Basic Pipe Sizes

Most Schedules of 32" through 48" pipe.

Basic Tube Sizes

Up to 2.00" (50.0 mm) wall tubing with a maximum OD of 48.00" (1219.2 mm) and a minimum ID of 29.50" (749.3 mm) may be beveled with the Standard Mandrel.

Wall Thickness Capacity (Limitations)

Wall thickness of standard pipe schedules with wall thicknesses up to 2.00" (50.0 mm) in the range listed. Tubing or pipe with greater wall thickness may be handled provided the ID is equal or greater than 29.50" (749.3 mm) and the OD is equal or less than 48.00" (1219.2 mm). Contact Tri Tool Technologies for heavier wall procedures.

Material Cutting Capabilities

Mild steels, chrome steels (Rc 35 max), API X42 through X85, stainless steel, copper-nickel alloys and aluminum without limitations except size and wall thickness specified.

Inconel and some other high temperature alloys may require special procedures as a function of wall thickness and type of end preparations. Contact Tri Tool Technologies' Engineering Department for details.

Cutting Head Speeds

Dual Hydraulic Drive

24 RPM (maximum cutting head speed)

Drive System

Dual hydraulic drive motor for 32" to 48" pipe.

Requires a separate hydraulic power supply. (Ref: Tri Tool Technologies HPU 75-60/5)

Power Requirements

60 GPM at 2000 PSI

5 G.P.M. AT 2000 PSI

Feed

Dual hydraulic powered cylinders with rapid positioning in both directions and fine adjustment feed for cutting.

Mounting

Hydraulically actuated cylinder expands mandrel pins and jaw blocks.

Note To The Customer

Spare Parts and Standard Tool Bits are available from stock. Engineering design services for custom tool bits and special function modifications are available from the factory.

All Tri Tool Technologies and allied equipment products are subject to design improvements and specification changes at any time with no obligation to units already sold.

Warranty (limited): Parts and equipment are warranted against defects in material and workmanship for a period of one (1) year from date of purchase. Full details supplied on request and/or with the tools.



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