

TECHNICAL SPECIFICATION MODEL PFM 816 PIPEMASTER™ SYSTEM

The Model PFM 816 PIPEMASTER™ is a portable ID mount machine tool for beveling and facing 8" through 16" pipe. The tool is configured with dual hydraulic motor drives, that power helical gears attached to the main spindle. A set of hydraulic cylinders with rapid and slow feed control, advance and feed the cutting head into the pipe. A 4" diameter mandrel shaft is provided for optimum stability during heavy cutting operations. One hydraulically actuated mandrel head assembly with mounting pads covers the whole range of the tool.

The Model PFM 816 PIPEMASTER™ System comes complete with:

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| • Model PFM 816 Sub-Assembly | 1 ea. |
| • ID Tracking Tool Modules Assembly | 4 ea. |
| • Mandrel Head Assembly | 1 ea. |
| • Hydraulically Powered Mandrel Head Shaft Assembly | 1 ea. |
| • Lathe Lifting Frame Assembly | 1 ea. |
| • Drive Motor Assembly | 2 ea. |
| • Wrench Kit | 1 ea. |
| • Operator's Manual | 1 ea. |

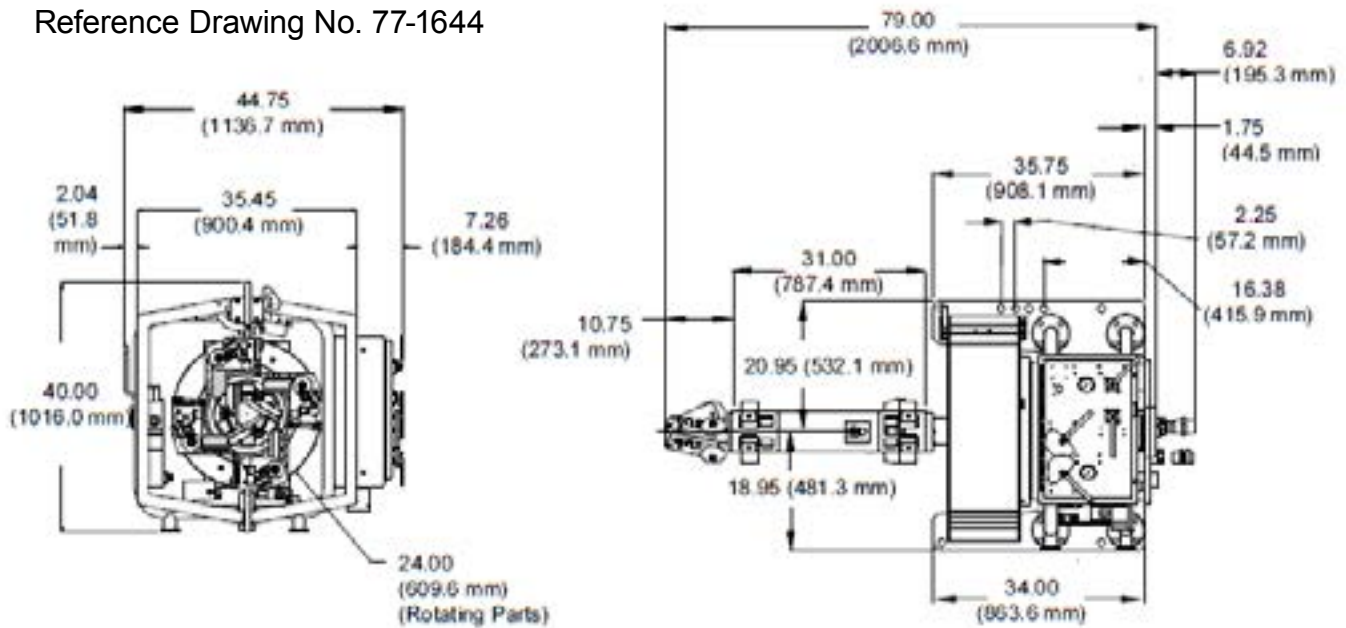
Design and Operating Features

- The tool accepts its own torque through the mandrel.
- The hydraulically expanded mandrel provides fast, accurate self-centering and alignment.
- All wrenches needed for operation (less Tool Bits) are provided with the system.
- The lathe is provided with lifting frame.
- The mandrel head provides 40,000 lbs. of clamping force. (2000 PSI Hydraulic Pressure)
- The mandrel head and adapters cover the full mounting range of the tool.
- The power train uses a precision helical cut gear system, for precise weld preparation.
- The lathe has a 4.0" diameter mandrel shaft for optimum rigidity.
- Extra feed travel is provided to allow the tool to handle heavy wall pipe.
- Four (4) ID tracking tool modules allow distributing the cutting loads to more tool bits to handle greater wall thickness.
- Two (2) torque acceptance bars insure greater torque handling and a balanced load for accurate end facing.

- The hydraulic drive system delivers smooth power for optimum cutting.
- A chip guard with a Shut-Off switch is supplied for the safety of the operator and bystanders.
- A patented interlocking safety mechanism is supplied to avoid unclamping the mandrel while the headstock is rotating.

Specifications

Reference Drawing No. 77-1644



Weight (Approximate w/ Mandrel)

2640 lbs. (1197 kg)

Clearance and Dimensions

Maximum Rotating Head DIA	24.00" (609.6 mm)
Length (parallel to axis of pipe)	85.06" (2160.5 mm)
Available Feed Travel	5.50" (139.7 mm)

Pipe Cutting Capacities

Basic Pipe Sizes

8" pipe Schedules 5 & 10 (ID cannot be less than 8.239" or 209.3 mm) and all Schedules of 10" through 16" pipe.

Basic Tube Sizes

Up to 1.60" (40.6 mm) wall tubing with a maximum OD of 16" (406.4 mm) and a minimum ID of 8.239" (209.3 mm) may be beveled with the PFM fitted with the standard mandrel.

Wall Thickness Capacity (Limitations)

Pipe or Tubing with wall thickness up to 1.60" (40.6 mm) and an ID that exceeds 8.239" (209.3 mm) with an OD that does not exceed 16". Pipe or Tubing with greater wall thickness than 1.60" (40.6 mm) may be beveled with special procedures. Contact Tri Tool Technologies for procedure recommendations.

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

72 RPM (maximum cutting head speed)

Drive System

Dual hydraulic drive motor for 8" to 16" pipe.

Requires a separate hydraulic power supply. (Ref: TRI TOOL Inc. 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.

Accessories

- Short Perch Mandrel Head Kit for restricted axial mounting.
 - Electric 60 GPM Power Unit
 - Diesel 60 GPM Power Unit
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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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