



TRI TOOL INC.

3806 Security Park Drive, Rancho Cordova, CA 95742-6990 USA • (916) 351-0144 • (888) TRI TOOL • FAX (916) 351-0372
www.tritool.com customer.service@tritool.com

TRI TOOL INC.
TECHNICAL SPECIFICATION
MODEL PFM 816 PIPEMASTER™ SYSTEM
FEBRUARY 9, 2006

MODEL PFM 816 PIPEMASTER™ SYSTEM

The Model 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:

- Model 816 Sub-Assembly 1 ea.
- I.D. Tracking Tool Module 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

1. The tool accepts it's own torque through the mandrel.
2. The hydraulically expanded mandrel provides fast, accurate self-centering and alignment.
3. All wrenches needed for operation (less Tool Bits) are provided with the system.
4. The lathe is provided with a lifting frame.
5. The mandrel head provides 40,000 lbs. of clamping force. (2000 PSI Hydraulic Pressure)
6. The mandrel head and adapters cover the full mounting range of the tool.
7. The power train uses a precision helical cut gear system, for precise weld preparation.
8. The lathe has a 4.0" diameter mandrel shaft for optimum rigidity.
9. Extra feed travel is provided to allow the tool to handle heavy wall pipe.
10. Four (4) ID tracking tool modules allow distributing the cutting loads to more tool bits to handle greater wall thickness.
11. Two (2) torque acceptance bars insure greater torque handling and a balanced load for accurate end facing.
12. The hydraulic drive system delivers smooth power for optimum cutting.
13. A chip guard with a Shut-Off switch is supplied for the safety of the operator and bystanders.
14. A patented interlocking safety mechanism is supplied to avoid unclamping the mandrel while the headstock is rotating.

Specifications

1. Reference Envelope Drawing No. 77-1644.
2. Pipe Cutting Capacities
 - A. Basic Pipe Sizes
 - i. 8" pipe Schedules 5 & 10 (ID cannot be less than 8.239" or 209.3 mm) and all Schedules of 10" through 16" pipe.

B. Basic Tube Sizes

- i. 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.

C. Wall Thickness Capacity

- i. 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 Inc. for procedure recommendations.

3. Material Cutting Capabilities

- A. 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 as specified in the above paragraphs.
- B. 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's Engineering Department for details.

4. Clearances and Dimensions

A. Maximum Rotating Head Dia.

- i. 24.00" (609.6 mm)

B. Length (parallel to axis of pipe)

- i. 85.06" (2160.5 mm)

C. Available Feed Travel

- i. 5.50" (139.7 mm)

5. Drive System

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

- i. Requires a separate hydraulic power supply. (Ref: HPU 75-60/5; Technical Specifications)

B. Unit Requirements

- i. 60 GPM at 2000 PSI & 5 G.P.M. AT 2000 PSI.
- 6. Cutting Head Speeds
 - A. Dual Hydraulic Drive
 - i. Maximum Cutting Head Speed
 - a. 72 RPM
- 7. Mounting
 - A. Hydraulically actuated cylinder expands mandrel pins and jaw blocks.
- 8. Feed
 - A. Dual hydraulic powered cylinders with rapid positioning in both directions and fine adjustment feed for cutting.
- 9. Approximate Weight (with mandrel)
 - A. 2640 lbs.

Accessories (Optional)

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

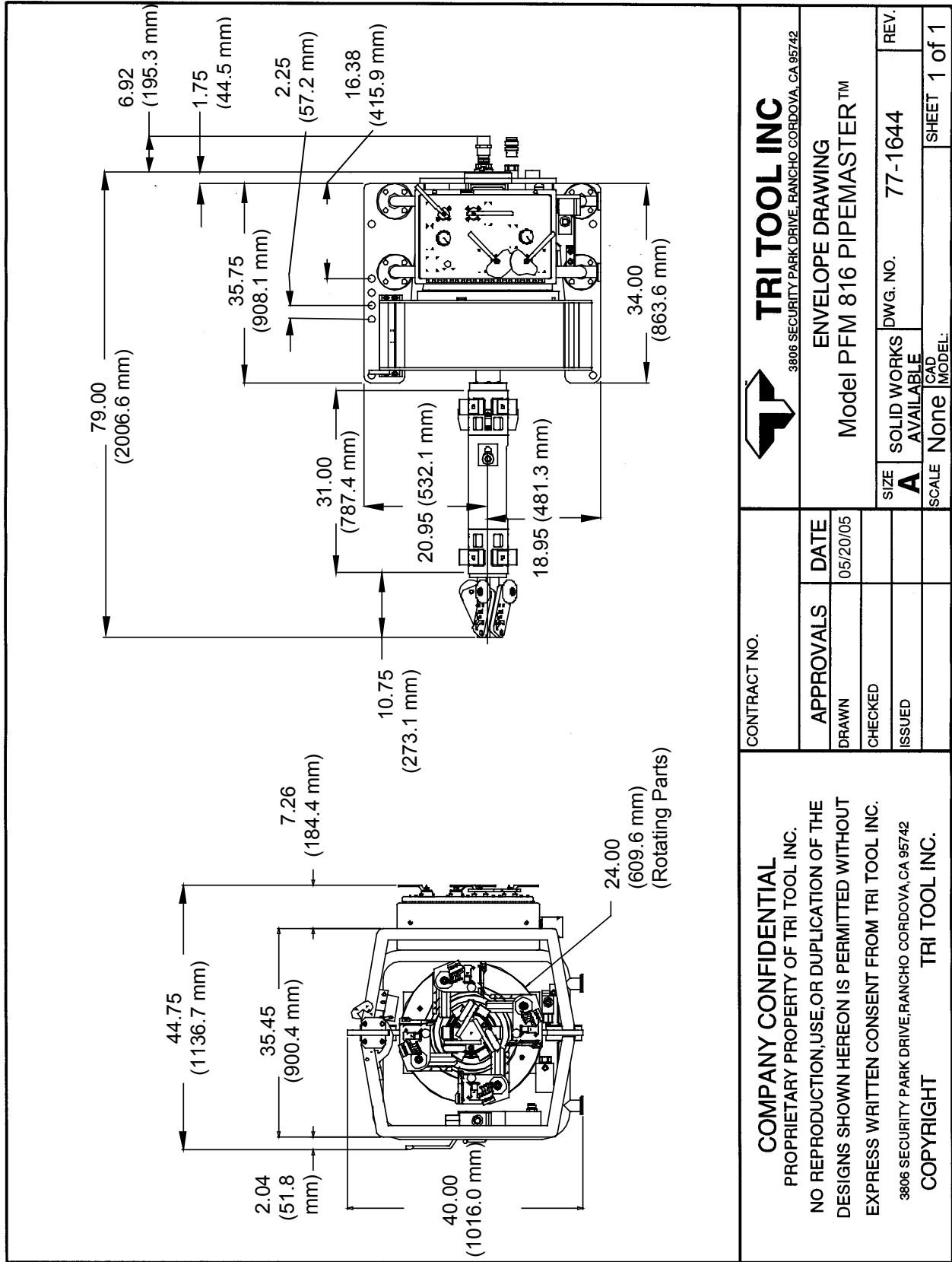
Note To The Customer


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 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.

Filter, regulator and lubricator are required to protect the warranty on air powered tools.



 TRI TOOL INC 3806 SECURITY PARK DRIVE, RANCHO CORDOVA, CA 95742		ENVELOPE DRAWING Model PFM 816 PIPEMASTER™	
		SIZE A SCALE None	DWG. NO. 77-1644
CONTRACT NO.		APPROVALS	DATE
DRAWN		05/20/05	
CHECKED			
ISSUED			
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