

TRI TOOL INC.
TECHNICAL SPECIFICATION
MODEL 604SB LOW PROFILE CLAMSHELL
JANUARY, 1997

MODEL 604SB Low Profile Clamshell

Description: The 604SB Low Profile Clamshell is a split-frame pipe lathe for severing and beveling in-line pipe with a range of 2" through 4" pipe with minimal radial and axial clearances.

Design and Operating Features

1. Easily adjustable precision bearing surfaces preload and stabilize the rotating head to provide long life, low maintenance, stability and precision.
2. The Clamshell splits into two halves for mounting on closed looped systems. All parts are secured to the two halves to avoid loss of parts and provide maximum ease of handling.
3. The machine may be equipped with self-centering mounting pads for quick, easy mounting or may be equipped with adjustable mounting pads for out-of-round pipe conditions.
4. Dual tool modules with auto-feed sprockets and adjustable slide ways provide maximum maintainability, life and operator safety with minimum operator training.
5. The auto-feed star sprockets provide .003" (.08mm) of radial feed per revolution for a controlled depth of cut.
6. Drive gears and bearing surfaces are covered for operator safety and sealed to prevent cutting chip damage.
7. Operator controls are away from the rotating headstock for safety.
8. Modular design concepts provide quick, easy maintenance and maximum versatility in drive and tooling options.
9. Detachable right angle air motor provides maximum handling ease and low axial clearance. Torque accepting mounting bracket allows the air motor to be rotated in various positions.

Specifications

1. Reference Envelope Drawing No. 77-0260

2. Cutting capacities* with pneumatic drive on 2" through 4" pipe:
(Note: Capacity exceeds maximum wall thickness for small pipe sizes)
 - a. Severing with standard procedures .80" (20.3mm) wall
 - b. Severing with special procedures 1.50" (38.1mm) wall
 - c. Severing and single beveling .80" (20.3mm) wall
 - b. Severing and double beveling .40" (10.2mm) wall

3. Cutting capacities* with electric drive on 2" through 4" pipe:
 - a. Severing with standard procedures .75" (19.1mm) wall
 - b. Severing and single beveling .50" (12.7mm) wall
 - c. Severing and double beveling .38" (9.7mm) wall

* Materials include, but are not limited to: carbon steel , low alloy steel, chrome steel (20% max.), chrome / molly alloys (Rc 32 max.), austenitic stainless steel, inconel, copper, aluminum and copper nickel alloys.

4. Clearances:
 - a. Rotating parts diameter 9.00" (228.6mm)
 - b. Main frame diameter 9.00" (228.6mm)
 - c. Axial clearance required relative to center line of cut
(with standard tool modules).
Mounting side 4.50" (114.3mm)
Side opposite frame .62" (15.7mm)
 - d. Radial clearance over pipe:

	With Standard Tool Module	With Extended Tool Module
4" pipe	2.25" (57.2mm)	3.25" (82.6mm)
3 ½" pipe	2.50" (63.5mm)	3.50" (88.9mm)
3" pipe	2.75" (69.9mm)	3.75" (95.3mm)
2½" pipe	3.06" (77.7mm)	4.06" (103.1 mm)
2" pipe	N/A	3.31" (84.1mm)

5. Drive Options:

a. Right angle air motor-standard duty

Air requirements @ 90 PSI (6.3 kg/cm ²)	67 CFM (32 lt/sec)
Head Speed @ maximum horsepower	25 RPM

b. Right angle air motor-heavy duty

Air requirements @ 90 PSI (6.3 kg/cm ²)	85 CFM (40 lt/sec)
Head speed @ maximum horsepower	19 RPM

Recommended when cutting wall thickness greater than:

.75" (19.1mm) for carbon steels
.50" (12.7mm) for stainless steels

c. Right angle drive electric motor kit-light duty

Power requirements (7.5 amp circuit)	115V (25 to 60 Hz)
Head speed @ maximum horsepower	25 RPM

d. In-line hydraulic motor (Special order only)

Requires separate hydraulic power supply)

Speed control	(Primary)	Hydraulic power source
	(Secondary)	Flow control valve

6. Tool Modules

Standard

Extended

a. Working diameter range	2.50" - 4.50" (63.5 - 114.3mm)	0 - 4.50" (0 - 114.3mm)
b. Travel per side	.90" (22.8mm)	1.40" (35.5mm)

7. Clamping

a. Fixed, self centering pad sets

All sizes within the specified size range are available.

b. Adjustable pads only, available upon request.

8. Weight:

Basic machine	24.0 lbs. (10.9 Kg)
Right angle drive air motor (standard duty)	12.0 lbs. (5.5 Kg)
Standard Tool Module Set	2.3 lbs. (1.1 Kg) / module
Extended Tool Module set	3.3 lbs. (1.5 Kg) / module
Stand for bench operation	6.3 lbs. (2.9 Kg)

9. Optional Accessories

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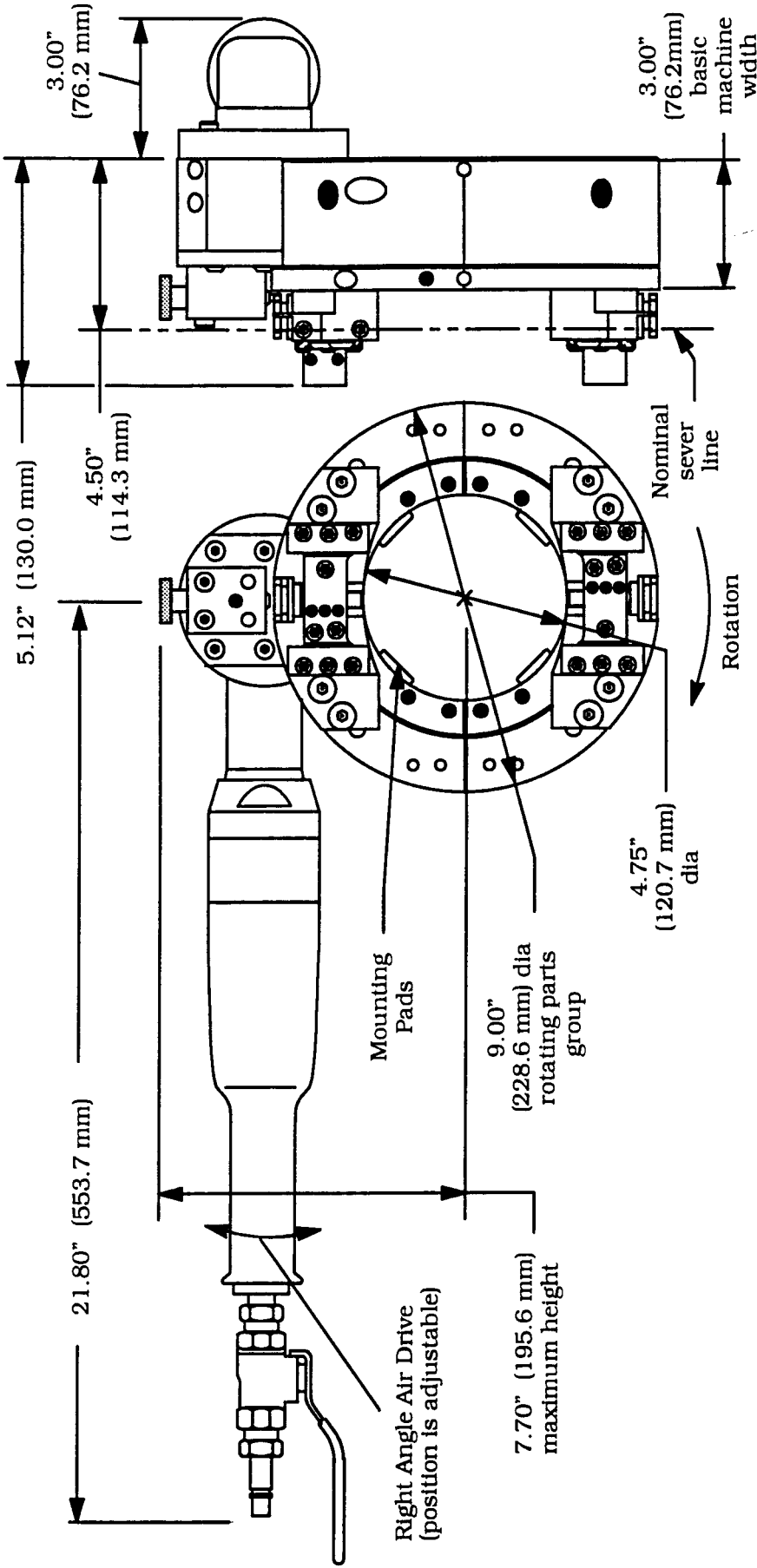
- a. Counterbore Module Kit
- b. Reversible Drive Housing Kit
- c. Lathe Stand Kit
- d. Carrying Case


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/or equipment are warranted against defects in material and workmanship for a period of one year from date of purchase. Full details supplied on request and/or with tools.

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



 TRI TOOL Inc. 3806 SECURITY PARK DRIVE, RANCHO CORDOVA, CA 95742-6890		Envelope Drawing Model 604SB, Air, Clamshell		REV. B
CONTRACT NO.	APPROVALS DRAWN PFAFMAN CHECKED ISSUED	DATE 2/7/92	SIZE A FSCM NO.	DWG. NO. 77-0260
DO NOT SCALE DRAWING			SCALE Note	SHEET 1 of 1

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