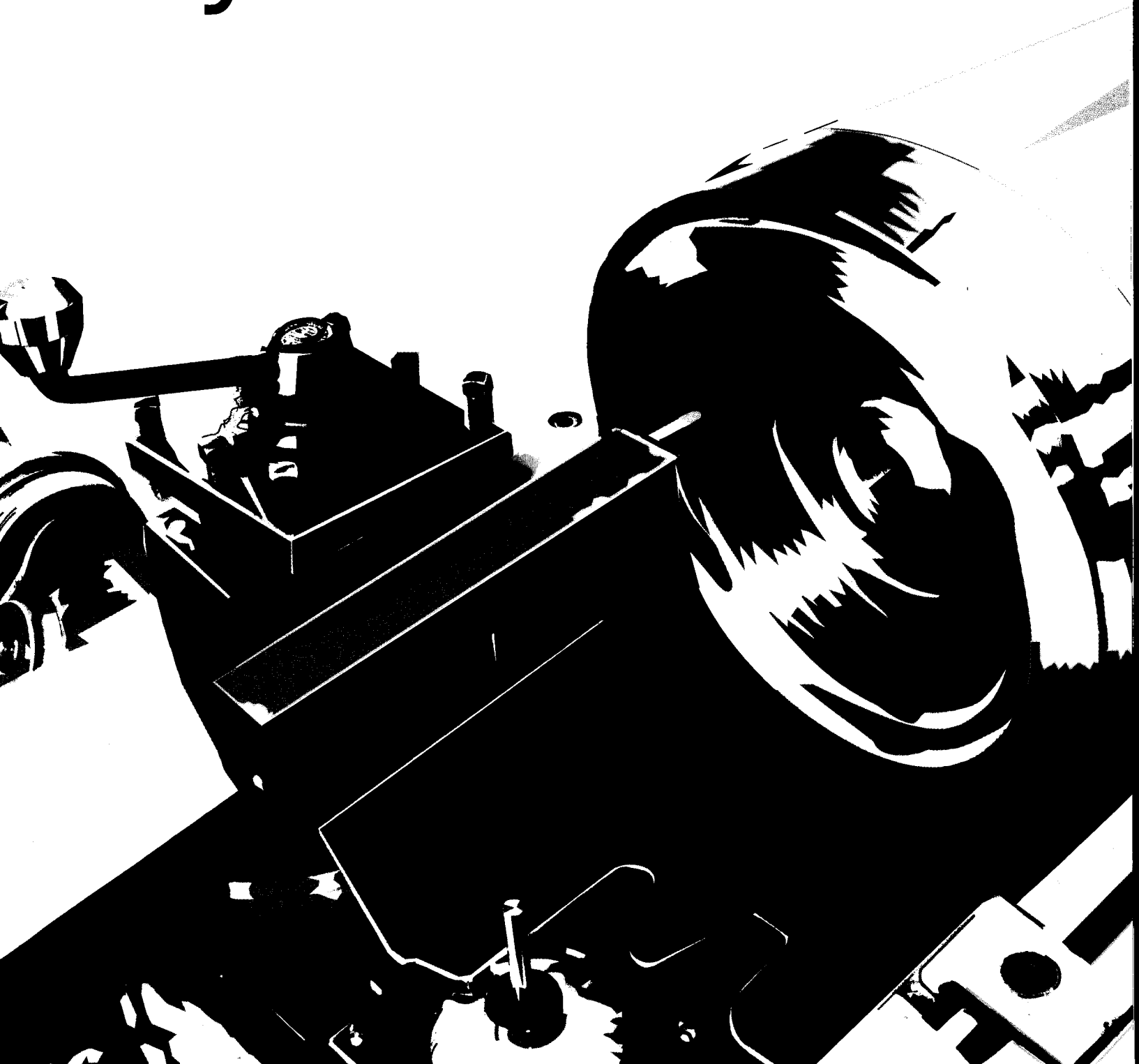
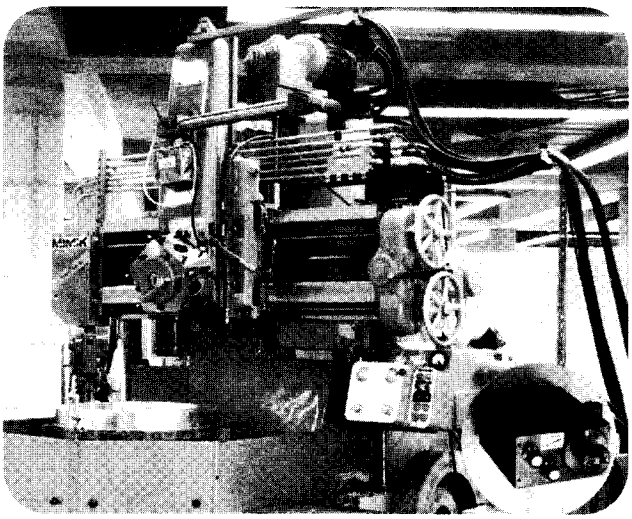
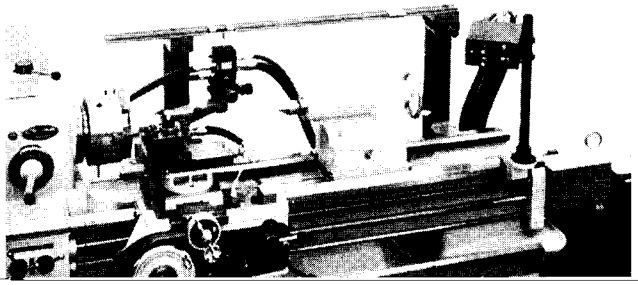
MIMIK
MIMIK
MIMIK

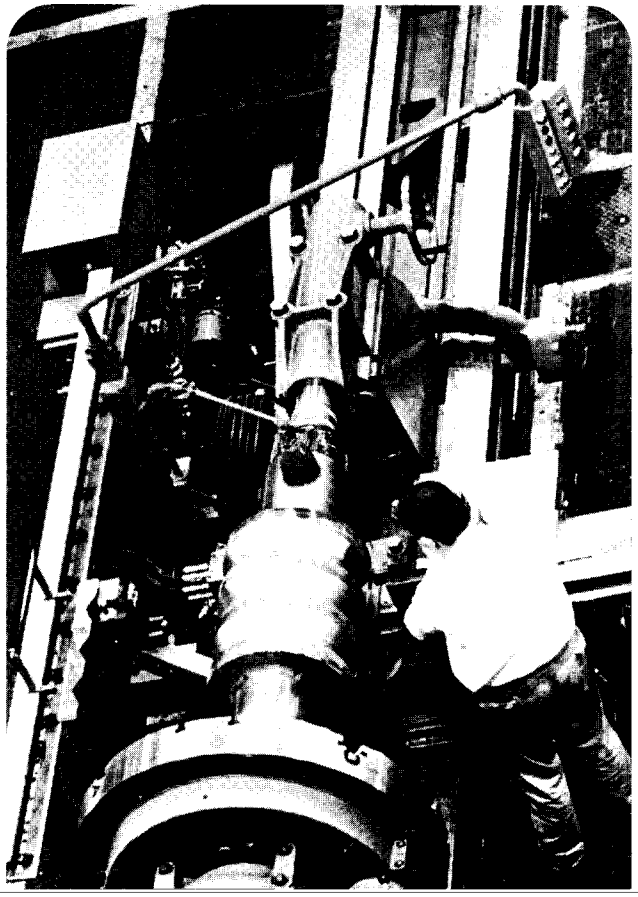
Dual-axis tracing system

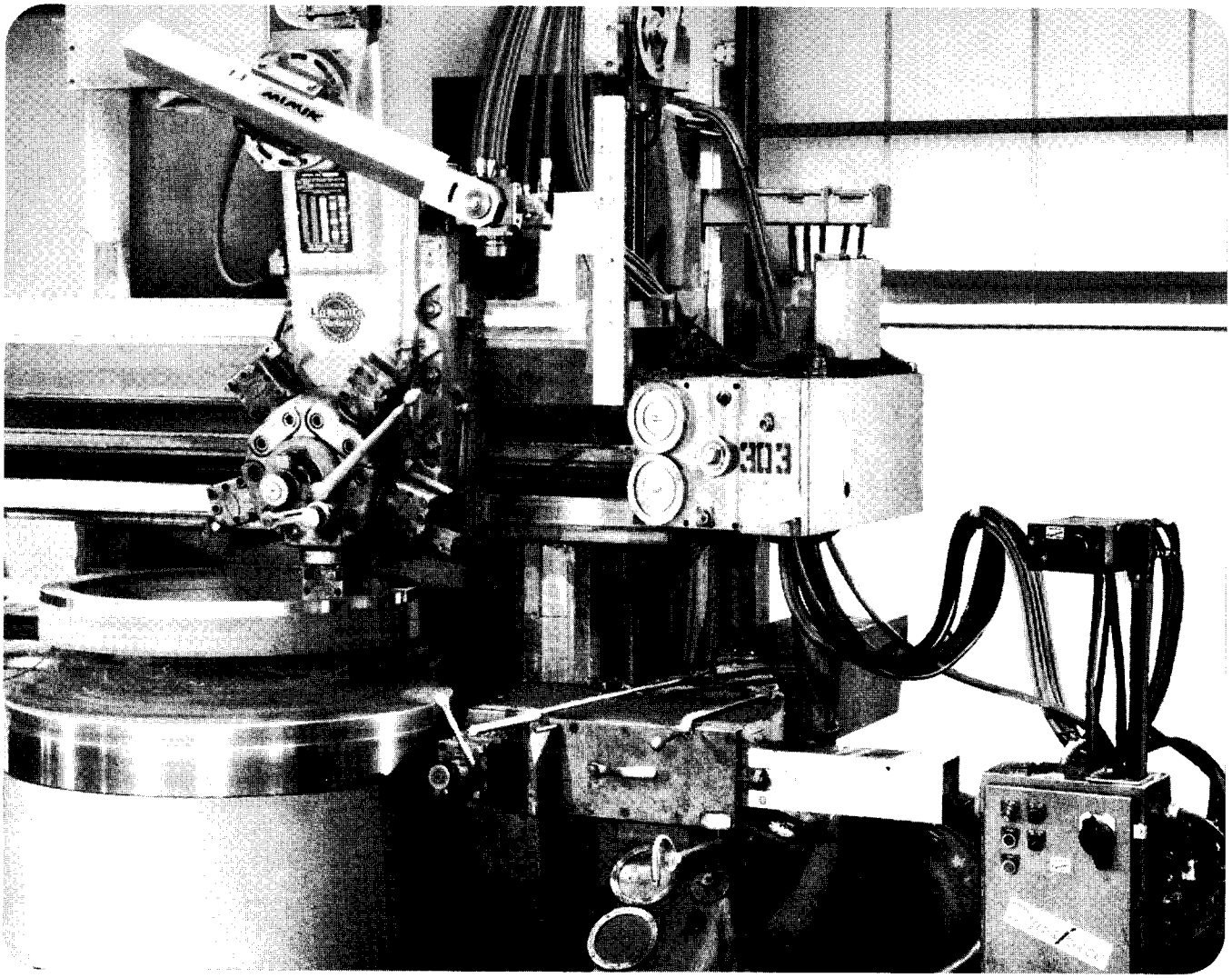
dynatrace 180° A











The Dynatrace 180°A – all the benefits of tracer control, Mimik's expert engineering, and ...

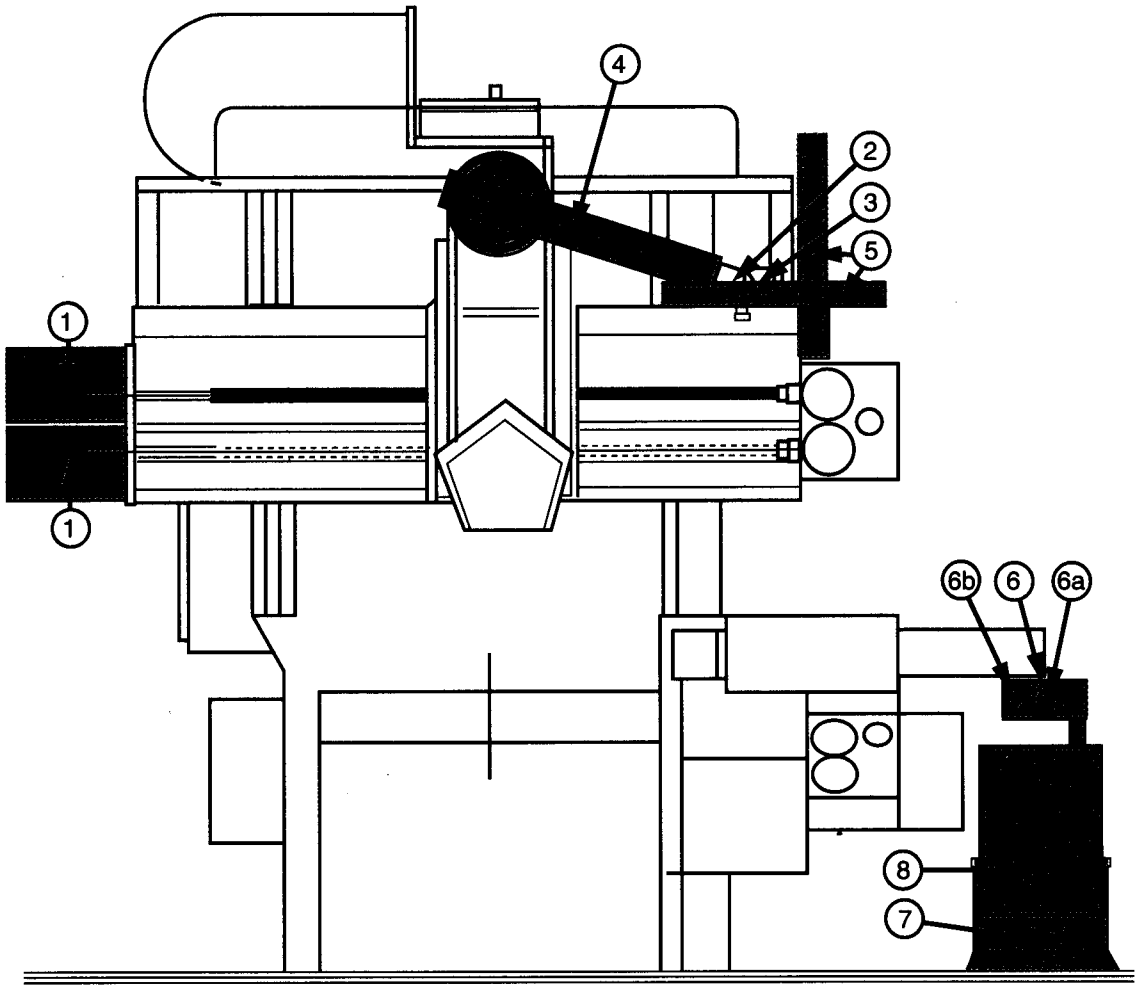
- the advantage of full machine travel with no restriction to your machine's capability
- ability to do 90° opposed shoulders without resetting the machine
- increased productivity through continuous-path tool control over the entire contour
- Heavier cuts through higher tool forces
- eight-way feed and trace direction selector
- ability to quickly return machine to normal operation when needed
- tool stations freed for other operations

The Dynatrace 180°A – more profits for you when used on any of these machines:

- vertical turning and boring machines
- conventional engine lathes
- turret lathes
- roll-turning lathes
- single and multi-spindle automatics
- horizontal boring mills

If you own one of these machines

call or write Mimik today for more information on how a Dynatrace system can greatly increase your machine's production capability – at a very low cost.



1. HYDRAULIC DRIVE UNITS (MOTOR, GEARBOX AND CLUTCH) FOR VERTICAL AND HORIZONTAL MACHINE SLIDES.
2. 180°A TRACER VALVE
3. TWO-AXIS ADJUSTMENT SLIDE
4. SWIVELING VALVE ARM
5. TEMPLATE RAIL AND MOUNTING BRACKET
6. HYDRAULIC CONTROL CONSOLE

6a. EIGHT MODE SELECTOR

6b. TRACE AND FEED RATE CONTROLS

7. HYDRAULIC POWER UNIT
8. ELECTRICAL PANEL

ROSEBROOK
TRACERS INC.

3105 North Cascade Avenue #106
Colorado Springs, Co 80907-5165
USA
Phone or Fax 719.632.8894
www.rosebrooktracer.com

CAT 1400 DIT2M 696 PRINTED IN CANADA

TECHNICAL INFORMATION

MIMIK DYNATRACE 180°A DUAL-AXIS TRACING SYSTEM

Description

Dynatrace 180°A is a hydraulic two-axis tracing system which controls trace and feed movements simultaneously. Tool path guidance is derived from a template, and co-ordinated movements of the machine slides are controlled by a two-axis tracer valve. Slide movements are powered by gear-reduced hydraulic motors driving through clutches.

Every Dynatrace system is carefully matched to machine model and job requirements by MIMIK's engineering staff. This policy, plus custom adaption of system components, ensures proper mating to the machine, optimum performance, and convenient location of controls.

Capabilities

Single axis tracers are fed at a uniform rate by the machine's normal feed system. The rate of tool feed over the workpiece varies with changing contours, and becomes excessively fast where contour slopes are close to or parallel to the trace axis. Dynatrace 180°A controls machine feed rate in inverse proportion to contour angles, thus the resulting tool feed rate is uniform over the entire contour.

Basic feed rate can be varied at will, even during the cut, within a range suitable for most job requirements on a given machine. Where feed requirements exceed the system's capacity due to material specs or workpiece size, the range can be extended either upward or downward through auxiliary gearboxes added to the standard drives.

Dynatrace 180°A operates over the full range of machine travel, and its drives may be disengaged at anytime to permit normal machine operation. Trace and feed movements are interchangeable between machine axes in any of eight combinations.

Repetitive accuracy of the system is normally within ±.001" (±.025 mm) on finish cuts.

Convenience Features

Dynatrace 180°A is known not only for its cost-saving capabilities, but for its ease of operation as well.

Clutch switches at the operator's position permit instant conversion between tracer control and normal operation.

On machines so equipped, rapid traverse can be used in the normal manner for fast tool positioning. An interlock switch declutches the tracer drives when rapid traverse is engaged.

Interchange of trace and feed directions together with feed reversal are accomplished by a single dial on the Dynatrace control panel. Easy to read indicators show trace feed directions at a glance.

Customer Service

Dynatrace systems are installed on the customer's machine by factory-trained MIMIK personnel. Our technicians are fully qualified to advise on tracer-controlled machining practices and to service all types of MIMIK tracers. Installation service includes thorough training of operators in the use of the system.

Advanced training is also available at the factory for customer maintenance personnel.

Both technical field service and spare parts can be provided on short notice.

Complete application assistance is available from MIMIK sales offices, and proposals on special applications from the factory.

Machine Applications

Dynatrace180°A is used primarily on vertical turret lathes or boring mills and medium to large engine lathes. It can also be applied to horizontal boring mills, multi-spindle lathes, and special purpose machines where two slide movements require tracer control. In certain applications the system can control one linear and one rotary axis instead of the normal two linear axes.

On VTLs any of the three machine heads can be controlled, and on some machines individual systems can be adapted to two heads. On saddle type turret lathes Dynatrace can control either the main cross-slide or the cross-sliding hex turret, or both.

Job Applications

Common applications include jobs involving some combination of steep opposed contour slopes, large machine areas, superior finish and accuracy, and heavy cutting force requirements.

Parts such as steel mill rolls, railway axles and wheels, turbine components, crusher heads, aircraft engine rings and tire molds can be processed most economically with Dynatrace 180°A.

The versatility of a MIMIK Dynatrace lends itself to virtually any type of turning application.

Standard Components
(As Normally Supplied for Standard Machines)

- Hydraulic drives for machine's feed screws, each consisting of high torque, low speed hydraulic motor, reduction gearbox, and clutch (Motor sizes and gearbox ratios selected by MIMIK to provide suitable feed range, based on machine's screw torques and leads). (No. 1)
- Dynatrace 180°A two-axis tracer valve with universal stylus action, retract/infeed lever, limit switch for stylus over-deflection, and air-operated stylus vibrator. (No. 2)
- Two-axis valve positioning slide with graduated knobs and zero-setting dials. (No. 3)

- Valve mounting arm with swivel plate. (No.4)
- Template holder brackets with 40" template rail (VTLs) up to 12 ft. template beam (engine lathes) with parallel setting adjustment. (No. 5)
- Hydraulic control console with feed and trace rate dials (No. 6b) and eight-mode valve (No. 6a) for selection of feed and trace directions. (No. 6)
- Hydraulic power unit with two h.p. three phase motor, 18 gal. reservoir, variable volume pump, five micron filter, vacuum pump, pressure gauge, and all necessary hoses and fittings, and hose supports. (No. 7)
- Electrical control panel with fused disconnect magnetic starter, transformer, and remote clutch switch station. (No. 8)
- Instruction manual and parts list.

Optional Equipment

- Auxiliary gearboxes to increase basic range of feed rates and to provide selection of basic or extended gear ratio
- Limit switches and stops to restrict machine slide travel under tracer control.
- Remote adjustment slide controls for operator convenience.
- Template platen for use on VTLs in lieu of standard template rail. Available either fixed position or with two-axis adjustable slides.
- Extra length template rail to provide up to full capacity of lathes or VTLs.