

Technical Data

Column travel longitudinal, maximum:	27.5"
Column speed, electro-mechanical:	0.98 ... 984 IPM
Cross travel, automatic, maximum:	13"
Wheelhead infeed, automatic, minimum:	0.000050"
Wheelhead travel:	21.5"
Grinding spindle drive, A. C.:	80 HP from 1500 RPM
Grinding wheel width, maximum with ganged wheels:	20" x 8" x 8"
Floor space required (l x b x h):	6.6' x 13' x 8.5'
Weight of machine, including electrical cabinet, approximately:	15,000 lbs.

DESIGN DETAILS

X-AXIS (Machine Column - Longitudinal Traverse)

Guideways:	preloaded antifriction guideway
Feed System:	recirculating ball screw
Drive system:	A. C. Servo motor
Speed:	0.98 ... 984 IPM
Position measurements:	direct encoder
Input / output resolution:	0.000050"

Y-AXIS (Grinding Wheel Head - Vertical Traverse)

Guideways:	preloaded antifriction guideway
Feed system:	recirculating ball screw
Drive system:	A. C. Servo motor
Speed:	0.16 ... 148 IPM
Position measurements:	linear glass measuring scale
Input / output resolution:	0.000050"

Z-AXIS (Cross Traverse)

Guideways:	preloaded antifriction guideway
Feed system:	recirculating ball screw
Drive system:	A. C. Servo motor
Speed:	0.16 ... 157 IPM
Position measurements:	linear glass measuring scale
Input / output resolution:	0.000050"

C-AXIS (Grinding Spindle Drive)

A. C. grinding spindle motor:	80 HP from 1500 RPM
Grinding spindle speed:	infinitely variable in a range of 45 ... 7000 RPM
Drive:	direct via flexible coupling
Grinding spindle:	high precision cartridge-type spindle, diameter 5.5"
Lubrication:	pregreased and sealed for life

Machine Control

GE Fanuc 18i with integrated PLC for machine axes (X, Y and Z)

Grinding cycles: L 936 Plunge cut grinding, with manual feed
L 935 Surface grinding, manual with continuous cross feed
L 933 Plunge cut grinding, with intermittent down feed and sparking out
L 934 Surface grinding, with intermittent down feed and sparking out
L 993 Jog to operation range limits
L 994 Jog to loading position
L 930 Creep feed grinding

Dressing cycles: L 941 Dressing with single point diamond from machine table

Further cycles on request at extra cost

- * Linear interpolation with 3 axes out of 3 (X, Y and Z)
- * Circular interpolation with 2 axes out of 3 (X, Y and Z)
- * NC program memory 64 kB
- * Serial interface RS 232 C at the control panel
- * Calculation and compensation of dressing amounts
- * Automatic travel into home position
- * Feed rate override for all NC-axes
- * Inch input system
- * 9.5" LCD monitor, monochrome

- * Information in clear text
- * Programmable operation range limits
- * Battery back-up for machine cycles and parameters
- * Free-standing movable control panel in front of machine
- * Portable impulse generator to facilitate machine set-up

Standard Equipment

- * Totally enclosed illuminated work area
- * Coolant nozzle at right side of the wheel head
- * One (1) grinding wheel guard for grinding wheels maximum diameter 20" x 8"
- * One (1) grinding wheel flange, for wheels diameter 20", bore 8", clamping width 2" ... 8"
- * One (1) set of leveling pads
- * Electrical installation for 400 volts, 60 cycles, control voltage 24 volts
- * Machine color: 2-pack paint, painted in 2 colors:

blue	RAL 5009
light gray	RAL 9002

Included Accessories

8213008

Key-switch to permit grinding wheel circumferential (cutting) speed higher than 45 m/s. The key-switch as per item 8213004 permits a circumferential speed of grinding wheel up to 45 m/s. By use of the key-switch item 8213008 additionally, the range is extended for higher speeds than 45 m/s. The maximum required circumferential cutting speed has to be stated.

8330908

Mechanical and electrical preparation for installation of profile dressing attachments on the machine table consisting of necessary electrical units, cable connections and 2 plugs. One contour dressing attachment PEA-TLR40 with two drive motors or one profile dressing attachment PEA-TL/R 100/150/200 can be connected. Direction of rotation of drive motors selectable via control panel or program.

8414019

Return pump station for machine PROFIMAT MC, PROFIMAT RT 800 and PROFIMAT RT 1000 for returning dirty water to coolant filtration plant, consisting of 1 No. torque-flow pump featuring a mechanical seal, free from wear, and protection against dry running. Scope of supply also includes pipe connection between machine's coolant water exit channel and pump, as well as between pump and dirty water tank of coolant filtration plant. Operating voltage: 400 volts, 50/60 cycles. Paintwork according to RAL 9002 grey/white.

8138117

Extractor fitting \varnothing 200 mm for an emulsion mist exhaust system.

8162032/s

Three-phase transformer for machine PROFIMAT MT, MC, RT with grinding spindle drive up to 80 HP and coolant unit. Built-in separate cabinet. Primary voltage 480 V \pm 10% 50/60 Hz. In case of major voltage fluctuation, voltage stabilizers are required.

8215014/s

Chiller for electrical cabinet, to be used at an ambient temperature exceeding 95°F (maximum 113°F).

8131015

Automatic compensating coolant nozzles for right hand side of wheel head to maintain constant position in relation to the grinding wheel. Nozzle position compensates at dress.

8800032

Grinding Cycle L951: Radius grinding convex or concave in creepfeed mode, upcut or downcut grinding.

8800024

Grinding Cycle L952: Radius grinding in creepfeed mode, CD.

8327037

Wheelhead mounted diamond profile roll dressing attachment for utilizing the machine with continuous dress creepfeed grinding.

Feed system:	recirculating ball screw
Drive system (infeed of roll):	A. C. Servo motor
Speed (infeed of roll):	0.04 ... 40 IPM
Distance grinding spindle center to diamond roll center:	6.25" ... 11.25"
Position measurement:	linear glass measuring scale
Input/output resolution:	0.000050"
Diamond roll arbor bearing:	precision roller bearing/outboard support
Diamond roll arbor:	exchangeable, together with diamond roll permanently installed
Diamond roll drive:	A. C. drive, 12 HP
Speed of diamond roll:	max 6,000 RPM
Profile width of diamond roll:	maximum 200 mm with recessed grinding wheels
O. D. of diamond roll:	maximum 6.00"
Bore:	35mm
Coolant supply:	from one side only