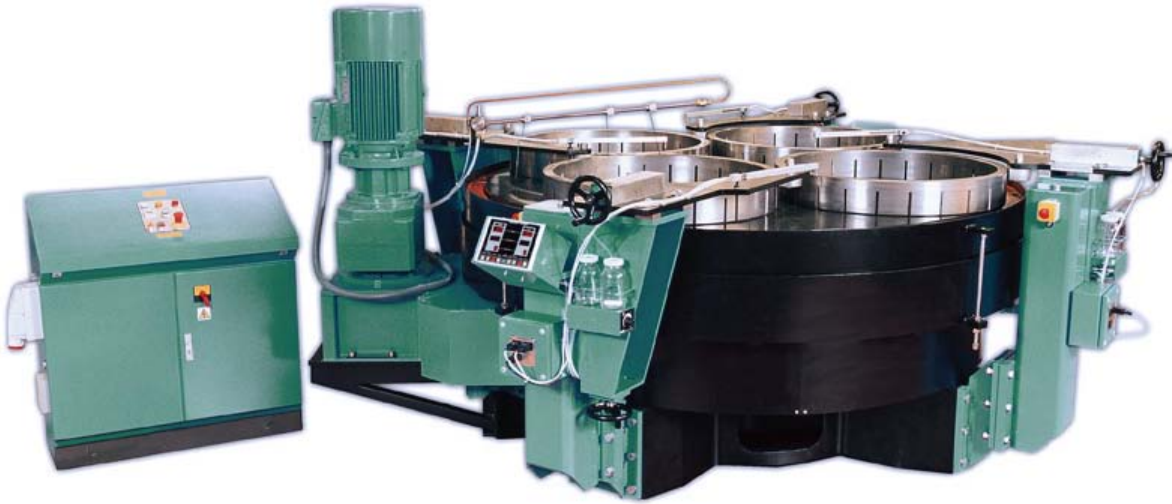


# Kemet

## Precision Diamond Flat Lapping & Polishing Machines Series 84



Picture of Kemet 84 lapping machine with Kemet Diamond Dispensing System

The Kemet 84 is a 4 ring lapping machine built on a cruciform shaped structural steel base. The mechanical reduction gearbox and motor are mounted to the side of the plate. Power is transmitted via a flat belt and the moving parts of the system are enclosed within a panel-clad base.

The Kemet 84 lapping machine includes a fabricated base assembly with segment support plate, splash trough and four equally spaced pillars. The four roller yokes and splash trough are mounted off pillars. The yokes can be positioned independently inboard or outboard for conditioning ring placement required to maintain a flat lap plate. The four conditioning rings are driven by the friction of the rotating lap plate and guided on the O.D. by the yokes and bearing assemblies.

The Kemet 84 lapping machine is equipped with a 84 inch (2132mm) diameter non-hardened cast alloy segmental lap plate, 125mm thick. The lap plate consists of 16 cast iron individual segments, which are bolted to the support plate to form a serrated plate. This design minimises lapping plate deflection under load and maximises axial support for achieving very tight flatness and parallelism specifications.

The Kemet 84 lapping machine is supplied with four 35 inch (889mm) O.D. x 32 inch (813mm) I.D. non hardened cast alloy conditioning ring assemblies with serrated and lapped conditioning surfaces.

Kemet 84 lapping machines are available in Open Face or Pneumatic lift versions. The primary function of the pneumatic arrangement is to permit loading and unloading to be carried out without the need to lift the pressure weights manually. However, they can also be used to supply additional loading to the components within the conditioning ring should this be required. This equipment consists of an air cylinder mounted on each of the four stations. Each station is individually controlled.

A 117 litre capacity floor standing slurry tank and pump assembly is included. The machine can be used with conventional abrasive slurries or Kemet Diamond slurries. The abrasive distribution system has a continuous agitation feature which permits the pump to keep running after the lap plate times out. This insures that the abrasive kept in proper suspension at all times even between lap cycles. Also included is a four feed slurry distribution feature which supplies a regulated flow of abrasive and vehicle equally to all four work stations on the lap plate. The Diamond Dispensing system consists of an electronic dispenser for fully controlled metering of liquid diamond and lubricating fluid, liquid diamond stirrer unit, dual dispensing bars and spray heads.

Automotive timing device permits setting a pre-determined lapping cycle for machine operation.

The Kemet 84 lapping machine is driven by a 30 kW main drive motor. It also has a special high torque gear reducer.

The machine is equipped with a power factor controller for energy conservation. The attachment automatically adjusts the drive motor voltage to meet load requirements while maintaining full motor speed and torque availability. It provides smooth, stepless acceleration through the gear reducer, reduces motor operating temperatures and eliminates sudden, high torque start up.

### Standard Tooling

- Cast iron serrated lapping plate (16 segments) 84" O.D. x 18" I.D. (2132mm O.D. x 457mm I.D.).
- Four cast iron serrated conditioning rings 35" O.D. x 32" I.D. (889mm O.D. x 813mm I.D.).
- Four work holder blanks (32" diameter).
- Starter sample of abrasive.
- Starter sample of vehicle.
- Operation and Maintenance Manual.
- Allen Keys.

**Note:** No pressure weights or felt pads are supplied normally, as for most work using this size of machine, sufficient lapping load is obtained from the weight of the components themselves.

### Available Options

- 3-ring model.
- Variable speed lap plate drive (using frequency inverter).
- Water cooled lap plate.
- Non-standard voltages.

### Technical Specification

Lap Plate Diameter	2132mm	84 inches
Diameter of Lap Plate centre recess	457.2mm	18 inches
Wear Life	100mm	4 inches
Maximum single point loading on lap plate	2700 Kg	6000 lbs
Number of conditioning rings	4	
Inner Diameter of conditioning ring	813mm	32 inches
Outer Diameter of conditioning ring	889mm	35 inches
Wear Life of conditioning ring	89mm	3.5 inches
Working height of machine	912mm	59.8 inches
Width of machine	2401mm	102.4 inches
Length of machine	2970mm	102.4 inches
Abrasive Tank capacity	117 litres	31 US Gallons
Waste tank capacity	37 litres	9.6 US Gallons
Main drive Motor	30 kW	40 HP
Abrasive Pimp and Motor	0.18 kW	¾ HP
Net Weight (Open face)	8400 Kg	
Gross Weight (Open Face)	9979 Kg	

In the interests of development, we reserve the right to change the specification without notice.