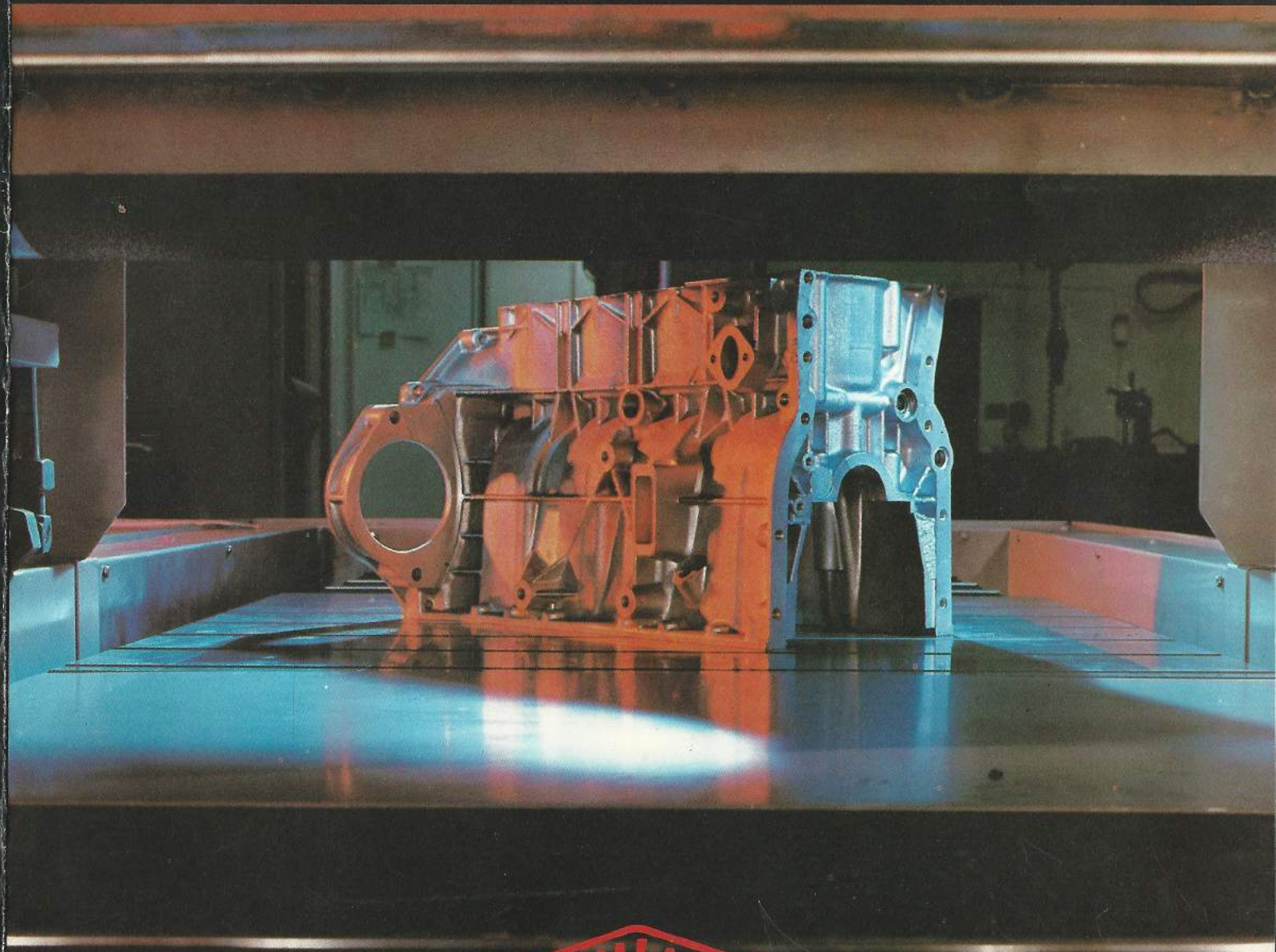


# HIGH PRESSURE ABRASIVE BELT GRINDING MACHINE



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## RESEARCH AND DEVELOPMENT

All illustrations, text matter and specifications given in this brochure are applicable at the time of printing. The Newall policy to improve products continually may, however, result in modifications to machines subsequently manufactured.



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newall

Machine type  
Component  
Material  
Stock removal  
Grinding time

— Contact Roll and Reciprocating Table  
— Bearing housing  
— Cast iron  
— 3.0 mm  
— 5 seconds



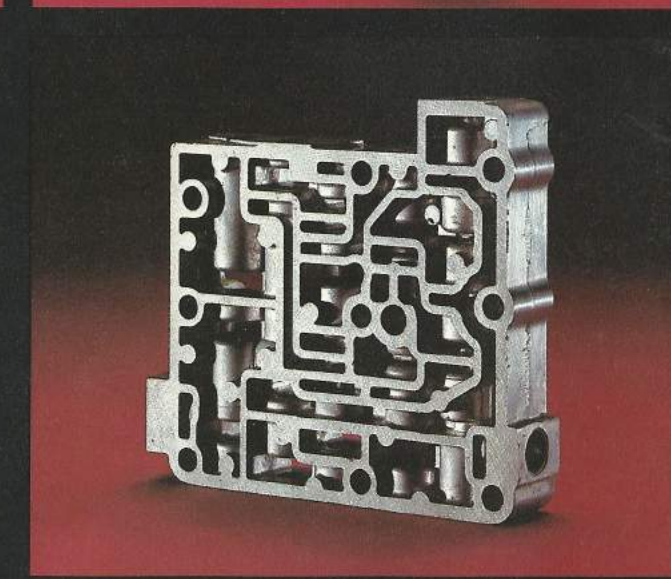
Machine type  
Component  
Material  
Stock removal  
Grinding time

— Contact Roll and Reciprocating Table  
— Exhaust manifold  
— Cast iron  
— 2.0 mm  
— 15 seconds



Machine type  
Component  
Material  
Stock removal  
Grinding time

— Platen Head and Rotary Table  
— Manifold  
— Aluminium alloy  
— 0.8 mm  
— 30 seconds per 6 components





# HIGH PRESSURE ABRASIVE BELT GRINDING MACHINE



The Newall Engineering Company Limited have extended their range of High Pressure Abrasive Belt Grinders with the introduction of a series of machines based on a wide belt concept. The design and construction of these machines is keyed to making maximum use of the remarkably heavy stock removal capabilities of the new alumina-zirconia mineral alloy. An extremely stiff machine has been produced which is capable of not only providing the very best cutting conditions required by the abrasive belt but also maintain these conditions for long periods.

This new range of wide belt machines is available at present in three basic forms and all offer the following features:

1. Abrasive belt size 3150 mm long and up to 700 mm wide
2. Electronic belt tracking
3. Belt change time of only 30 seconds
4. Belt oscillation
5. Variable belt tension
6. DC servo drives to all axes
7. Minimum feed increment of 10 microns
8. Heavy duty anti friction bearings on all belt rolls
9. Centralised lubrication system
10. Low friction plain slides
11. Noise reducing acoustic panelling
12. Safety monitoring system for low air pressure, broken belt, mis-track etc.
13. Emergency caliper disc brake to belt drive assembly
14. Centralised and simple control system.



## With Contact Roll and Reciprocating Table

**Reciprocating Table** A table size of 750 mm x 750 mm is provided and has tee slots for component attachment. The working stroke is selectable by switches to give 150 mm minimum to 750 mm maximum. Reciprocating speeds up to 250 mm/second are available with the facility to select alternatives to suit the component being machined.

**Vertical Feed** The maximum component height is 300 mm, the minimum zero using a 150 mm auxiliary table.

Feed is applied in increments of 10 microns with a rapid rate of 360 mm/minute. The total feed required is selected by thumbwheel switches, as is the feed required per pass. Machining in auto cycle will continue until the total feed register has counted down to zero or until spark out passes, if selected, are complete. In all instances at the completion of auto cycle the worktable returns to the load/unload position and the vertical feed to its datum zero.

## With Contact Roll and Rotary Table

**Rotary Table** A table diameter of 650 mm is provided and is available with tee slots or a magnetic surface for component attachment. The rotary table is carried from the load/unload position to the machining zone by a sub table which is adjustable for position under the contact roll. Table rotational speeds are variable to suit the component being machined and are in the range 5 to 70 rpm.

**Vertical Feed** The maximum component height is 150 mm, the minimum zero. Feed is applied in increments of 10 microns with a rapid rate of 360 mm/minute. The total feed required is selected by thumbwheel switches as is the feed rate. Machining in auto cycle will continue until the total feed register has counted down to zero or the dwell time has expired. On completion of the auto cycle the vertical feed returns to datum zero and the worktable to the load/unload position.

## With Platen Head and Rotary Table

**Platen Head** A platen area of 750 mm x 700 mm is provided and is water cooled; carbide surfacing can be supplied as an optional extra. Easy platen change for resurfacing, when required, is a feature of the design. Normally for platen head operation the main drive motor would be reduced in power to 40 kW, the selection of the most suitable motor would take place at the time of technical discussion.

**Rotary Table** A table diameter of 650 mm is provided and is available with tee slots or a magnetic surface for component attachment. The rotary table is carried from the load/unload position to the machining zone by a sub table which is adjustable for position under the platen head. Table rotational speeds are variable to suit the component being machined and are in the range 5 to 70 rpm.

**Vertical Feed** The maximum component height is 150 mm, the minimum zero. Feed is applied in increments of 10 microns with a rapid rate of 360 mm/minute. The total feed required is selected by thumbwheel switches as is the feed rate. Machining in auto cycle will continue until the total feed register has counted down to zero or the dwell time has expired. On completion of the auto cycle the vertical feed returns to datum zero and the worktable to the load/unload position.

