

Myford

MG 12 M

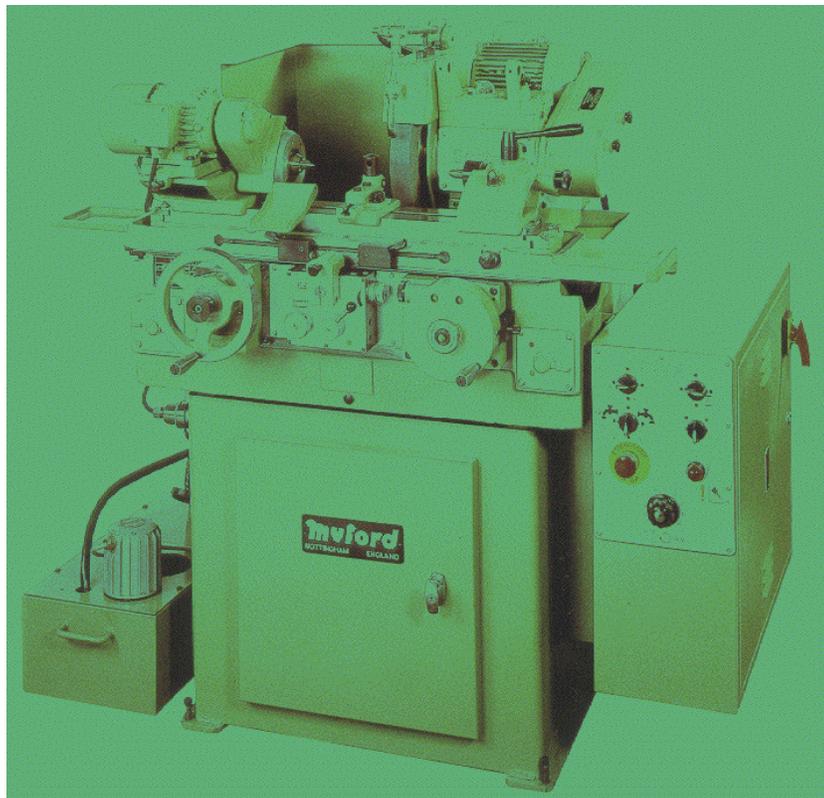
Manually operated cylindrical grinding machine - capacity 5in x 12in - providing hand operated table traverse, hand operated wheelhead travel, table swivels 7 degrees either way, standard equipment as illustrated and described the Myford Accessories section of this CD Rom

- Completely manual machine
- Toolroom work or production grinding
- Accurate at low cost
- Table swivels 7 degrees either way

MG 12 ME

Cylindrical grinding machine with hydraulic table traverse - capacity 5in x 12 in - providing hydraulic table traverse with dwell control, hand-operated wheelhead travel, table swivels 7 degrees either way, as illustrated and described the Myford Accessories section of this CD Rom

- Hydraulic table traverse with dwell control
- Toolroom work or production grinding
- Accurate at low cost
- Table swivels 7 degrees either way



FACTORY INSTALLED OPTIONS:

MODELS M & ME

- 20/169 Micrometer carriage stops in lieu of standard, Imperial per pair
- 20/176 Micrometer carriage stops in lieu of standard, Metric per pair
- 30/047 Table set over dial gauge with 30/049 fine pitch table set-over screw and nut, Imperial
- 30/048 Table set over dial gauge with 30/049 fine pitch table set-over screw and nut, Metric
- SWING Increased swing option for machines under construction to allow capacity of 7" (178mm) maximum weight of component 23 lbs (10.5 kg)

ALL MACHINES

Acu-Rite ENC-150 Precision Glass Scale Linear Encoder ENC-150 with 4" scale for wheelhead advancement, .00002" resolution. Microscale with 14" scale for table traverse, .00005" resolution. Two axis digital readout display. Monitor DR0200G, with both inch and metric displays.

Heidenhain ND9202 Axis Counter Display Unit with LS406 linear scales. Accuracy of the LS406 scale is plus or minus .0002" (.005 microns) over 12" (300 mm)



MG 12 HM

Hydraulic cylindrical grinding machine - capacity 5in x 12in - providing hydraulic table traverse with dwell control, hydraulic rapid advance/retract of wheelhead to facilitate loading/unloading, automatic mechanical wheelhead infeed on traverse grinding, table swivels 10 degrees either way, including the standard equipment. Options are as illustrated and described the Myford Accessories section of this CD Rom

Hydraulic table traverse with dwell control

Hydraulic rapid advance/retract of wheelhead to facilitate loading/unloading

Automatic mechanical wheelhead infeed on traverse grinding

Wheelhead advances on one side or the other only

Operator must retract wheelhead at end of grind

Operator must reset handwheel for stock removal each cycle

Manual plunge grinding capability

Table swivels 10 degrees either way

MG 12 HMR

Hydraulic cylindrical grinding machine - capacity 5in x 12in - providing hydraulic table traverse with dwell control, hydraulic rapid advance/retract of wheelhead to facilitate loading/unloading, automatic mechanical wheelhead infeed on traverse grinding, sparkout dwell timer and automatic wheelhead retraction on traverse table grinding swivels 10 degrees either way, including standard equipment. Options are as illustrated and described the Myford Accessories section of this CD Rom

Mostly the same as MG 12 HM

Sparkout timer and automatic wheelhead retraction on traverse grind

Operator must reset handwheel, stock removal on each cycle

More consistent sizing possible by way of sparkout timer

Manual plunge grinding capability

Table swivels 10 degrees either way

MG 12 HPM

Hydraulic cylindrical grinding machine - capacity 5in x 12in - providing hydraulic table traverse with dwell control, hydraulic rapid advance/retract of wheelhead to facilitate loading/unloading, automatic hydraulic wheelhead infeed on traverse and plunge grinding, sparkout dwell timer and automatic wheelhead retraction on traverse rates, visual indication of feed, table swivels 10 degrees either way, including the standard equipment as illustrated and described in Publication No. 1224, Optional In-Process Gage

Can be used as fully manual machine

Can be used as fully automatic machine

Automatic Plunge grinding capability

Coarse/fine feed rates

Visual indication of feed

0.025 inch depth of plunge, with optional .100 and .200 inch

Wheelhead advances on either side or both sides on traverse grinds

Spark-out retraction on both plunge and traverse grinds, operator

DOES NOT reset handwheel

Optional in-process gaging

In-Process gaging overrides coarse/fine changeover settings and dwell control. Also, provides auto compensation for wheel wear.

MODELS HM, HMR, HPM

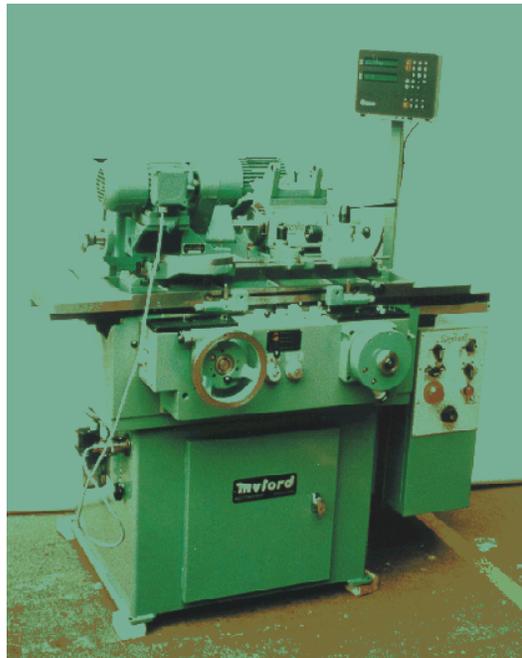
Micrometer carriage stops are included as standard equipment on these machines.

30/057	Table set over dial gauge with 30/059 fine pitch table set-over screw and nut, Imperial
30/058	Table set over dial gauge with 30/059 fine pitch table set-over screw and nut, Metric
SWING	Increased swing option for machines under construction to allow increased capacity of 8 3/4" (222 mm)
ANGLE	Angled wheelhead in lieu of standard wheelhead set at 12 degrees from right angle with straight approach (must be used with increased swing capacity option above)
11754	Entended table option - for HM & HPM machines under construction using 11755 carriage to allow 18" (475 mm) to be mounted between centres with 6" (150 mm) dead zone at lefthand end allowing 12" (300 mm) to be ground towards righthand side
100/096	Autosizing control equipment comprising, wiring to outlet socket and hydraulic pipe work with two-way valve
60946	300 second spark out timer in lieu of standard 50 second timer
100/085	0.100" (2.5mm) plunge distance in lieu of standard 0.025" (0.6mm) distance. Please note this feature multiplies the standard feed increment/rate by 4
100/086	0.200" (5.0mm) plunge distance in lieu of standard 0.025" (0.6mm) distance. Please note this feature multiplies the standard feed increment/rate by 8

ALL MACHINES

Acu-Rite ENC-150 Precision Glass Scale Linear Encoder ENC-150 with 4" scale for wheelhead advancement, .00002" resolution. Microscale with 14" scale for table traverse, .00005" resolution. Two axis digital readout display. Monitor DR0200G, with both inch and metric displays.

Heidenhain ND9202 Axis Counter Display Unit with LS406 linear scales. Accuracy of the LS406 scale is plus or minus .0002" (.005 microns) over 12" (300 mm)



Myford MG 12-CNC

- 1 1 MG 12 CNC Myford Cylindrical Grinding Machine:
capacity 5" x 12" (125mm x 305mm) with 12" (305mm) diameter straight approach wheel and Myford/Fanuc Controls for the X and Z axis (arranged for grinding components with multiple external diameters). The basic machine programming includes built in wheel dressing cycle macros (i.e. initial wheel dressing when setting new wheels and in cycle dressing during production runs). When supplied with optional Internal Grinding Equipment internal grinding cycles may be selected. The Myford/Fanuc Controls, model 21i-TA, are integrated within the machine to accept optional Marposs Gaging.

The Machine Features:

- * Motor Driven live and dead Center Standard Workhead with fixed base, having stepless variable speeds from 50 - 1000 rpm.
- * Workhead speeds are fixed by programmed value, either to give fixed r.p.m. or constant surface speed.
- * Motor Driven Wheelhead arranged with an easily replaced Cartridge Type Wheel Spindle Unit with Nitralloy Spindle.
- * Motor Driven wheelhead arranged for the mounting of the motor-driven swing down internal attachment; including mounting bracket, contactor, and switch.
- * Table swivels 10 degrees either way.
- * Tailstock incorporating Diamond Holder (without diamond).
- * Coolant delivery and filtration is provided by means of a Paper Roll Clarifier, fitted one roll of medium paper.
- * Automatic compensated dressing cycles.
- * Automatic lubrication for Wheelhead and Carriage Slideways.
- * Electronic Impulse Generator Handwheel for manual positioning.
- * Manual Pulse Handwheel Generator with fine feed increments of .00004" (.001mm) or a course feed of .0004" (.01 mm) per pulse.
- * Programming input by Manual Direct Input or by a RS232C Computer Port.
- * Provides "G" coded canned cycles.
- * Programming by "Teach Method".
- * Can be used as a Fully Manual Machine with a console at the normal operators position.
- * Can be used as a fully Automatic Machine

Standard Equipment Comprises:

Grinding Wheel 12" x 1-1/2" x 5" (305mm x 37mm x 127mm) bore, recessed 1/4" (6mm) both sides. Grade 51A601K5VMRAA

Wheel Adapter for 12" (305mm) x 5" (127mm) bore wheels with Balance Weights

Grinding Wheel Balance Arbor

Extractor for Grinding Wheel Adapter

Centering Sleeve

Workhead - Full Center

Tailstock - Half Center

Oil Guns

Set of Oils, Spanners, and Allen Keys

Optional Factory Fitted Equipment:

- * Shoulder Location - Programmable, active locating mechanism, employing Marposs Gage Head with interchangeable probe.
- * In-Process Gaging - Hydraulic Power Pack (complete with distribution block valves), Myford Hydraulic Gage Slide, Marposs P5 Amplifier and Unimar Gaging for both diameter and passive shoulder location.
- * Options for Marposs In-Process Gaging:
 - Dirac
 - Gap Elimination
 - Digital Micrometers through an RS232 Port
- * Inverter Controlled Variable Speed Wheelhead Motor, programmed for the wheel to run at optimum speed.

Many of the Optional Equipment stated in Myford Catalog Nr. 1224 is available for this machine.

MYFORD PRECISION CYLINDRICAL GRINDERS

ACCESSORIES

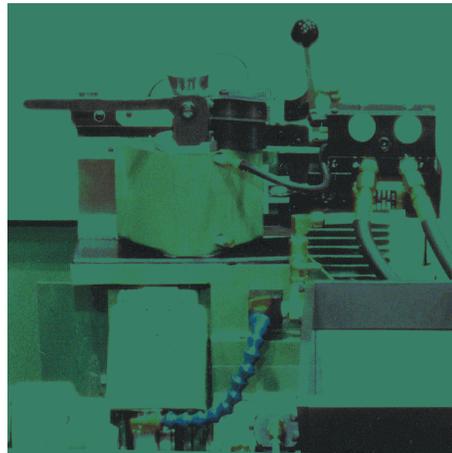
FOR ALL MODELS OF MYFORD GRINDING MACHINES

WHEEL ACCESSORIES

- WWM-150 Grinding Wheel 12"x1 1/2" x 5" 3A60K6V22
20/201 Extra Wheel Adapters for 12in x 5in bore wheels
20/009 Wheel Adapters 10in x 3in for Old Taper Style Spindle 10in before 1970
20/202 Wheel Adapter 12in x 5in for Old Taper Style Spindle was 20/009A
G9383 Special Wheel Adapter 12in x 3in for New Style Spindle was 20/201A
20/124 Wheel Balancing Stand for 12in wheels
11558 3/4 Carat Diamond 1/2 in. diameter shank for standard equipment table and tailstock wheel dressers, table and tailstock attachment (20/035)
11559 Diamond 3/8 in diameter shank for swing arm diamond dressers (20/071)
11560 Chisel point 3/8 in. diameter shank for radius attachment (20/136)

WHEEL DRESSERS

- MSA-107 Air Sensing wheel dresser mounted over grinding wheel including bracketing, coolant, and hydraulics



- 20/136 Radius wheel dressing attachment, table mounted, Max. radius 3/4in with new 1-1/2in wide wheels
20/035 Angular wheel dresser, table mounted
20/071 Swing arm production type sizing dresser, tailstock mounted, micrometer adjusted diamond
20/112 Swing Arm Diamond Dresser as above but table mounted for dressing internal wheels
11129 Splash Guard (required for use with diamond dresser)
Diaform 8/1 Pantograph dresser 10:1 ratio from template to wheel (1in wide by 1/4in depth wheel profile)
Diaform 8/2 Pantograph dresser 5:1 ratio from template to wheel (2in wide by 1/4in depth wheel profile). Suitable mounting adapters, wheel guards, roughing diamond and finishing chisels are readily available

WORKHOLDING DEVICES

- 40/076 3-1/4in Three Jaw Burnerd 'Griptru' geared scroll chuck .0001 repeat with adapter MG6703/2
- 40/038 3-1/4in Three Jaw Burnerd standard geared scroll chuck with adapter MG6703/2
- 40/039 3-1/4in Four Jaw Independent Burnerd chuck with adapter MG6811/2
- 40/088 4in Four Jaw Independent Burnerd chuck with adapter MG6811/2
- 40/041 4-3/4in diameter Eclipse magnetic chuck with adapter MG6812/1
- 40/042 5in diameter faceplate with adapter MG6703/2
- 20/005 Two point steady rest, capacity 3/16" to 5/8"

COLLET ATTACHMENT AND COLLETS

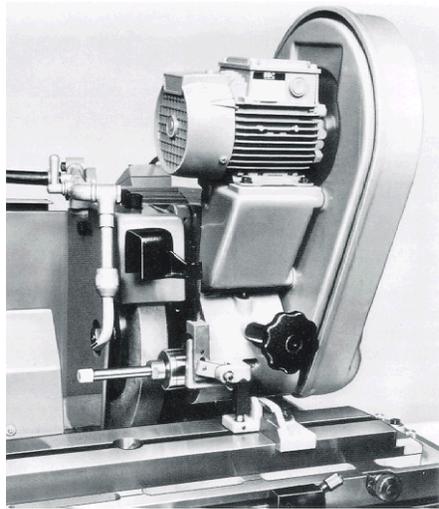
- 30/009 Adapter with draw tube and handwheel for G7006 4C collets
- G7006 Collets for dia. range 1/16in to 3/4in by 64ths, Threads on O.D. (sold individually)
- 20/107 Rear operated lever collet closing mechanism with draw tube and adapter for G7006 4C collets
- 20/129 Pneumatic collet closer for G/7006 collets, with draw tube adapter, air filter, regulator, oil mist lubricator, foot valve
- 30/008 Adapter with draw tube and hand wheel for G2459 collets (For multiple machine installations where customer already has G2459 collets)
- G/2459 Collets for dia. range 1/16in to 1/2in by 64ths, Threads on I.D. (sold individually)
- 20/106 Rear operated lever collet closing mechanism with draw tube and adapter for G2459 collets (For multiple machine installations where customer already has G2459 collets)
- 30/125 Adapter (G2704/1) with draw tube and handwheel for 5C Collets

CENTRE AND CENTRE POINTER

- G2258 Steel half centre (one in std. equipment)
- G2401 Steel full centre (one in std. equipment)
- G3032 Carbide tipped half centre
- G3034 Carbide tipped full centre
- 20/018 Stellite tipped full centre
- 20/021 Centre Pointing Attachment
- G6697 Workhead Centering Sleeve (one in std. equipment)

INTERNAL GRINDING EQUIPMENT

20/133/2 Swingdown internal grinding attachment (less spindle) complete with 3/4 hp motor and automatic, mach. operated grinding wheel guard



- GS6580** Spindle for above with drive belt (26,400 rpm) for holes up to 3/4in diameter with two (2) quills, one for 3/16in bore wheels with 2-1/2in extension and one for 1/4in bore wheels with 3in extension
- 76018-size** 1/8, 3/16, 1/4, or 3/8 Collet for mounted wheels, for Spindle GS6580 (sold individually)
- GS6582** Spindle for above with drive belt (16,150 rpm) for holes from 3/4in to 2in diameter with two (2) quills, one for 1/4in bore wheels, one for 3/8in bore wheels, both having 3in extension
- 76019-size** 1/8, 3/16, 1/4, 3/8, 3mm, 4mm, 6mm, or 8mm Collet for mounted wheels, for Spindle GS6582 (sold individually)
- 20/156** Equipment to provide coolant through workhead spindle FOR USE WITH 3 JAW AND 4 JAW CHUCKS, including set of 20/155 basic equipment and adapter with feed pipe assembly and plug, etc
- 20/157** Equipment to provide coolant through workhead spindle FOR USE WITH HANDWHEEL OPERATED G2459 TYPE COLLET ATTACHMENT, including set of 20/155 basic equipment and adapter with feed pipe assembly and plug, etc
- 20/158** Equipment to provide coolant through workhead spindle FOR USE WITH HANDWHEEL OPERATED G7006 TYPE COLLET ATTACHMENT, including set of 20/155 basic equipment and adapter with feed pipe assembly and plug, etc
- 20/159** Equipment to provide coolant through workhead spindle FOR USE WITH LEVER OPERATED AND PNEUMATIC OPERATED G2459 TYPE COLLET ATTACHMENT, including set of 20/155 basic equipment and adapter with feed pipe assembly and plug, etc
- 20/160** Equipment to provide coolant through workhead spindle FOR USE WITH LEVER OPERATED AND PNEUMATIC OPERATED G7006 TYPE COLLET ATTACHMENT, including set of 20/155 basic equipment and adapter with feed pipe assembly and plug, etc

WORKHEADS

All machines are equipped with a fixed workhead and matched tailstock.

- SWIV For machine supplied with swiveling workhead in lieu of standard workhead and no tailstock
- SWIV T For machine supplied with swiveling workhead in lieu of standard workhead, with workhead matched to tailstock
- 20/187 ** Swiveling workhead for "live spindle" grinding with graduated swivel base, stepless variable speeds from 50 rpm to 900 rpm with lead and plug, utilizing G7006 collets (1/16" to 3/4" dia). All attachments apply to both fixed and swiveling workheads
- 20/188 Fixed workhead for live and dead center grinding. Stepless variable speeds from 50 rpm to 900 rpm, with lead and plug
- 20/188-1 Fixed workhead above, however, supplied with tailstock (M10629) matched to centerline height
- M10629 Tailstock assembly complete
- ** *The swiveling workhead cannot be used for dead center grinding. This is a live center spindle.*

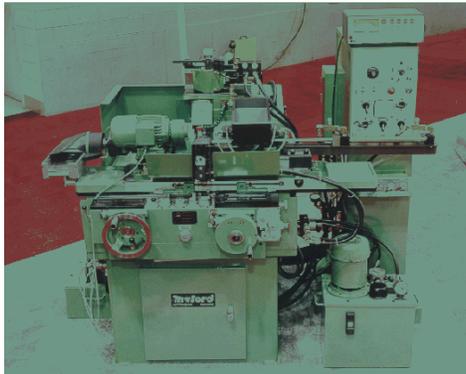


FILTRATION EQUIPMENT

- 20/063 Coolant Clarifier comprising electric pump and coolant service fittings, paper roll filter - in lieu of standard coolant system
- If ordered separately without machine*
- M65076 Replacement Roll of Filter Paper type E 7601 (Medium Grade)
- M65077 Replacement Roll of Filter Paper Type E 7603-3 (Fine Grade)

LOADING AND GAGING

S- Magazine Style Part Loader with part hopper, part escapement device on magazine loader allows one part to enter the loading head, pneumatic actuated pushrod will push part through tube to collect



In-Process Gaging. Control Gaging's Model 800 grinder monitor, with model 60 jump-on gage

