Brown&Sharpe

618 and 818 MICROMASTER® Series II Surface Grinding Machines

Brown & Sharpe
QUALITY AND PRECISION SINCE 1833

Micromaster Models

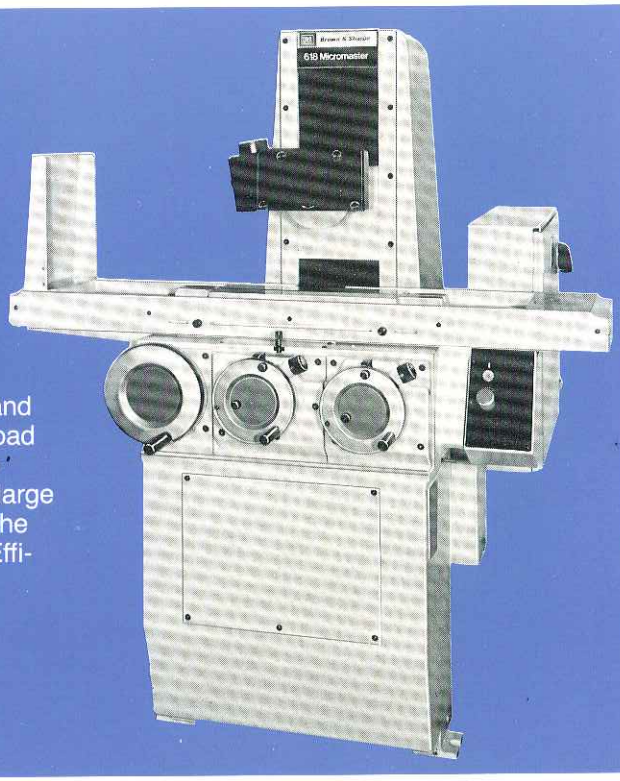
618H/618/618SSC/818/818SSC MICROMASTER® Series II Surface Grinding Machines

5 Basic Models

These MICROMASTER Surface Grinding Machines are now offered in 5 basic models: the 618H Hand Feed Machine; the 618/818 Standard Machines with hydraulic table and cross feeds; and the 618SSC/818SSC Slot and Surface Cycle Machines with automatic downfeed, slot/surface grinding to a positive stop and over-the-wheel hydraulic straight line dresser for increased production capability.

Former High Demand Options are Standard Equipment:

- ☐ 2HP (1.5KW) Direct Drive Spindle
- ☐ Fine Cross Feed Knob reading to .0001″ (0.001mm)
- ☐ Fine Vertical Feed Knob reading to .0001″ (0.001mm) (on 618H, 618 and 818 only)
- ☐ 19½″ (495mm) Vertical Capacity (7″/180mm Wheel)
- ☐ Dual 110 Volt Receptacle for Accessories
- ☐ Separate Wheel Spindle ON/OFF Control (Except 618H)
- ☐ Vertical Rapid Positioning (618SSC/818SSC only)
- ☐ Slot or Surface Grinding to a Positive Stop (618SSC/818SSC only)
- ☐ Over the Wheel Hydraulic Straight Line Dressing Arrangement (618SSC/818SSC only)



618H Hand Feed Model

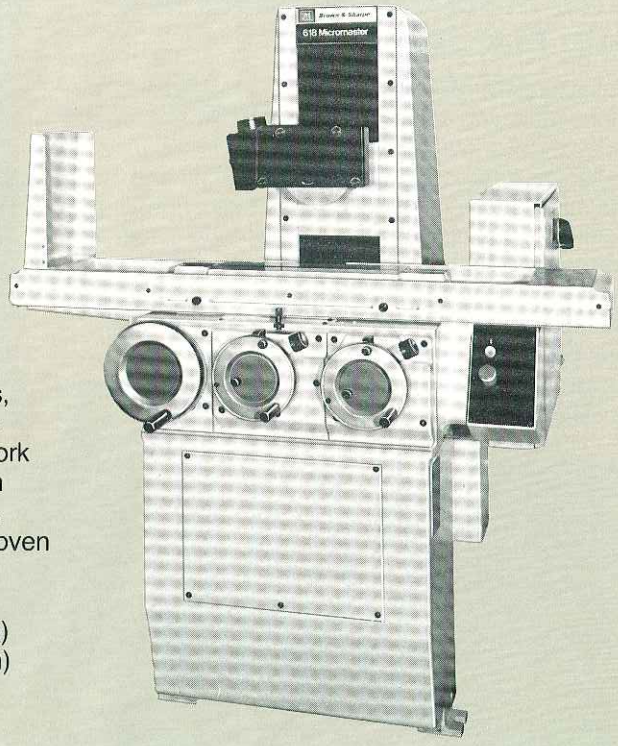
Surface Grinding with sensitive, responsive hand feeds for the toolroom. Featuring new Table Load Compensator to maintain reduced table handwheel forces. The choice of shops requiring a large capacity, rugged surface grinding machine in the toolroom, with Certified Precision Capability, Efficiency and Durability.
Table Size — 6″ x 18″ (150mm x 460mm)

MICROMASTER Certified Precision Capabilities	
Surface Waviness (Proficorder)	Within .000025″ (0.0006mm)
Test Bar across Table	Straight Within .0001″ (0.0025mm)
Test Bar along Table (18″/450mm long)	Straight Within .0001″ (0.0025mm)
Slot Grind (15″/380mm long)	Sides Parallel Within .0001″ (0.0025mm)
Finish	5 Microinches (0.1μm) AA or better

618/818 Standard Models

Hydraulic Table and Cross Feeds for effortless, precision toolroom or semi-production surface grinding. These machines offer outstanding work capacity plus powered controls for efficiency in toolroom surface grinding of diverse materials. MICROMASTER Grinding Machines are of proven Quality, Accuracy and Efficiency with Certified Precision Capabilities standard.

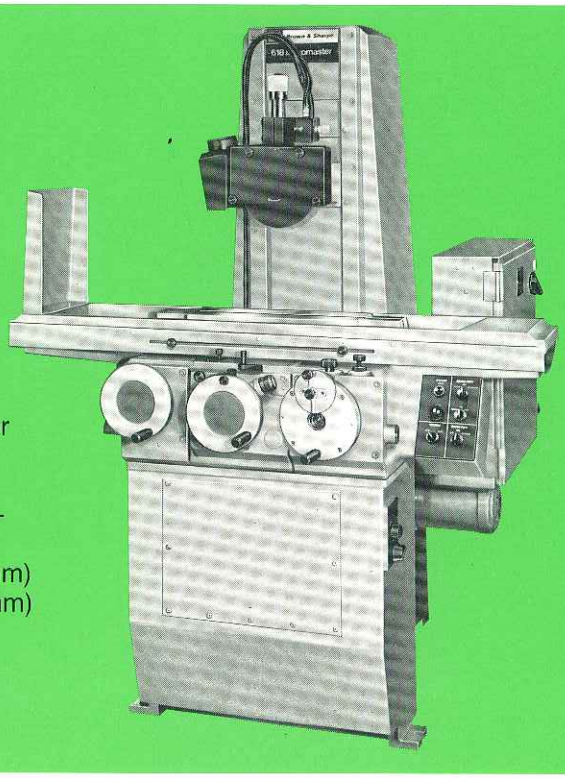
Table Size (618) — 6″ x 18″ (150mm x 460mm)
(818) — 8″ x 18″ (200mm x 460mm)



618SSC/818SSC Models

These machines provide exceptional accuracy for Slot or Surface Cycle Grinding over full table dimensions and automatic downfeed up to the adjustable positive stop on the vertical feed hand-wheel. For toolroom and production ginding.

Table Size (618SSC) — 6″ x 18″ (150mm x 460mm)
(818SSC) — 8″ x 18″ (200mm x 460mm)

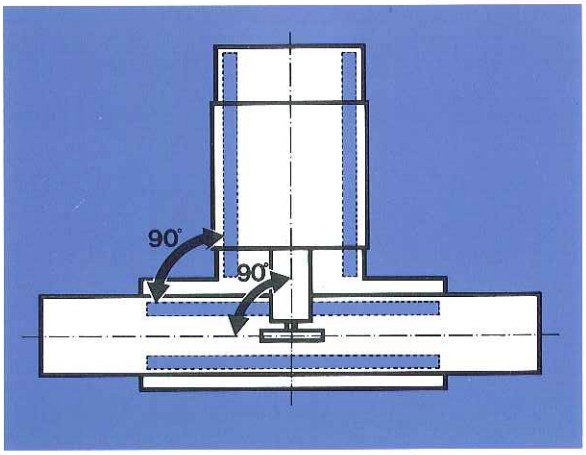


Micromaster Features

Lasting Accuracy is the Hallmark of All MICROMASTER Surface Grinding Machines

Two Independent Sets of V and Flat Ways

To assure continuing accuracy in the relationship of the table and spindle (a crucial factor in accurate side-wheel grinding) all MICROMASTERS utilize separate, integral bed-ways for the table and for the massive upright — aligned at exact right angles during manufacture. Unlike saddle-type construction, the MICROMASTER table and upright move independently of each other on separate bed-ways permanently fixed to the massive machine base. The operator of a MICROMASTER can grind two sides of a slot parallel to within .0001″ (0.0025mm) in 15″ (380mm).



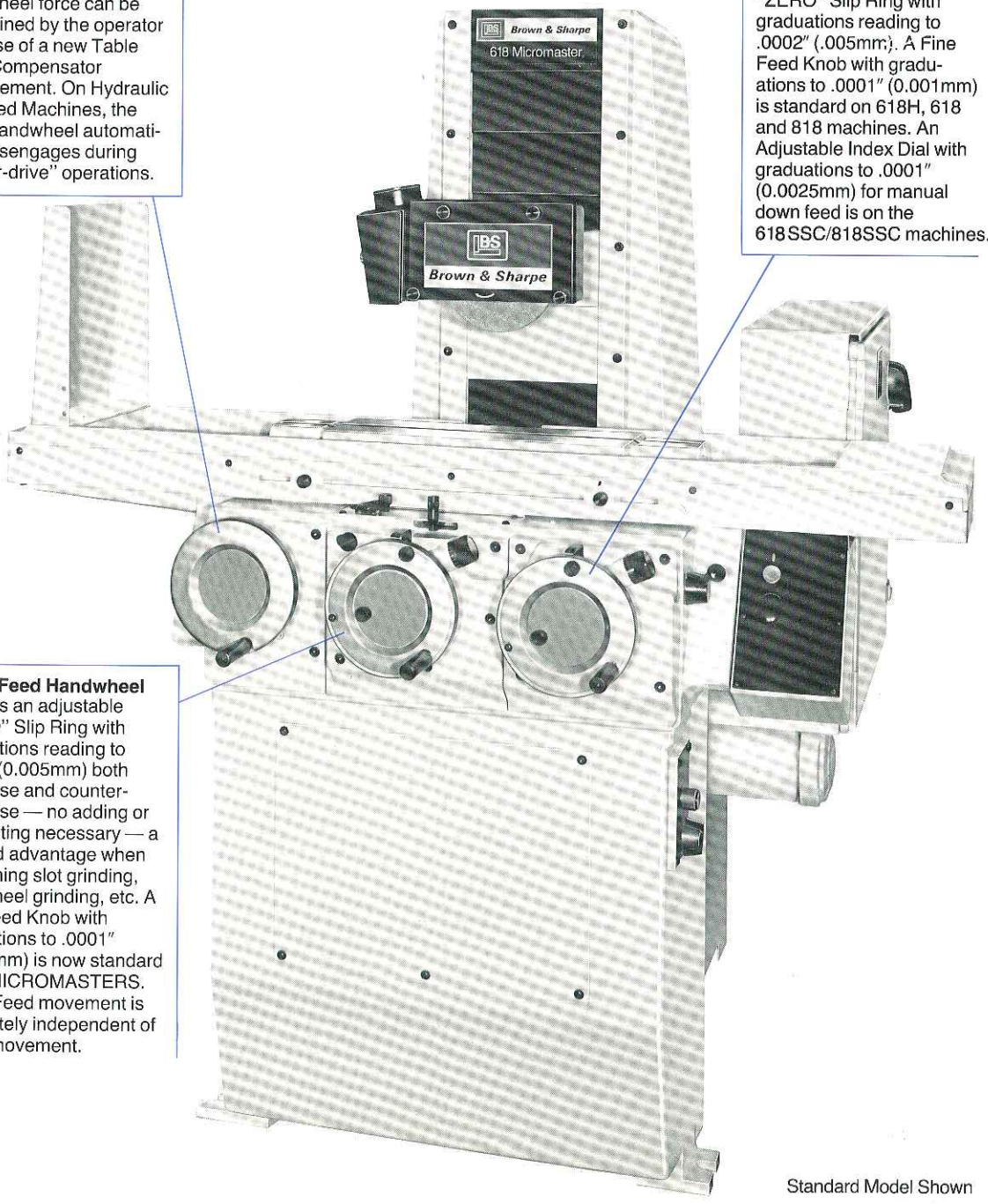
Handwheel Controls Responsive — Precise — Convenient

Handwheels for Table, Cross and Vertical Movement are conveniently located at hip-level at the front of the machine. 110 Volt Control Station is located at the right "safe" side of the machine, facing the operator. During grinding operations all the controls needed by the operator are out front.

Table travel on the 618H Hand Machine is velvet smooth, requiring only 2½ pounds (11N) of force to move the table 2⅞" (73mm) in one revolution. On Power Machines, the same slight effort moves the table 2" (50mm).

Table Handwheel Drive by tensioned timing belt provides outstanding smoothness of movement. On the 618H Hand Powered Machine, a consistently low handwheel force can be maintained by the operator because of a new Table Load Compensator Arrangement. On Hydraulic Powered Machines, the table handwheel automatically disengages during "power-drive" operations.

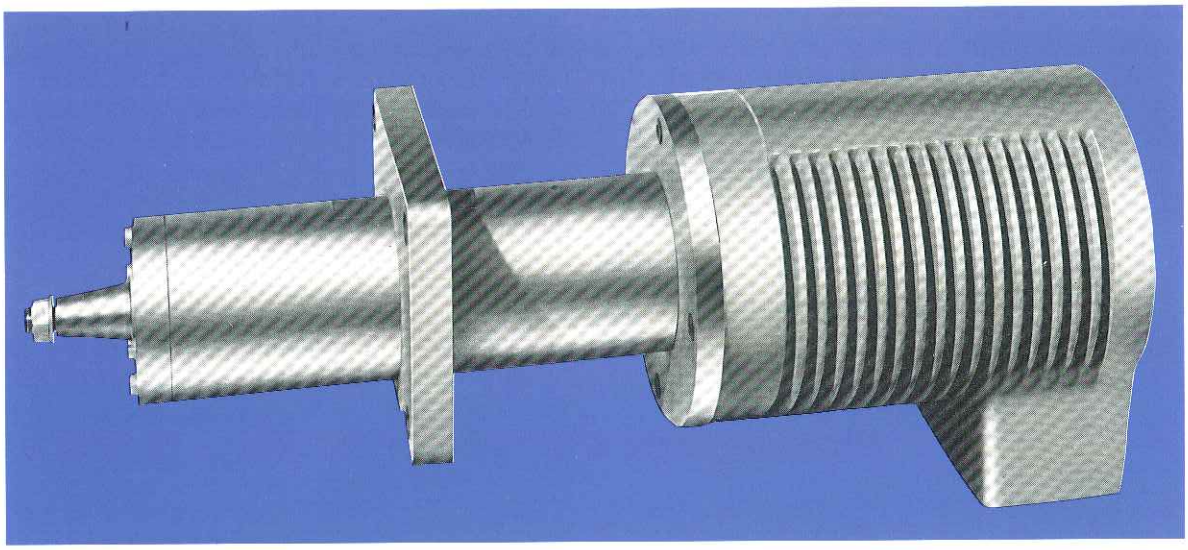
Vertical Feed Handwheel features an adjustable "ZERO" Slip Ring with graduations reading to .0002" (.005mm). A Fine Feed Knob with graduations to .0001" (0.001mm) is standard on 618H, 618 and 818 machines. An Adjustable Index Dial with graduations to .0001" (0.0025mm) for manual down feed is on the 618SSC/818SSC machines.



Cross Feed Handwheel features an adjustable "ZERO" Slip Ring with graduations reading to .0002" (0.005mm) both clockwise and counter-clockwise — no adding or subtracting necessary — a decided advantage when performing slot grinding, side-wheel grinding, etc. A Fine Feed Knob with graduations to .0001" (0.001mm) is now standard on all MICROMASTERS. Cross Feed movement is completely independent of Table movement.

Standard Model Shown

Flange Mounted Cartridge-Type Spindle and Smooth Table Drive Contribute to MICROMASTER Precision



Flange Mounted, Cartridge-type Spindle

These machines utilize a rigid, precision ground Flange Mounted Cartridge-type Spindle that guarantees surface parallelism between spindle and machine for exact and lasting alignment. The spindle is equipped with two pairs of precision angular contact bearings (front and rear) with sealed lubrication.

The standard spindle furnished with these MICROMASTERS is a 2HP (1.5KW) Direct Drive unit which delivers 3600 RPM and uses a 7" (175mm) diameter wheel. Optional spindle drives are listed on page 10.

Table Drive

Designed to provide smooth operation without backlash, Table Drive is by tensioned timing belt.

Power Table Drive is by hydraulic cylinder with automatic disengagement of the handwheel (hydraulic models only).

The smooth Hand Table Feed of these MICROMASTERS is a feature which makes it a favorite of toolmakers. Rough grinding under power and finish grinding by hand provide the ultimate in surface finish and integrity.

Heavy Wheel Guard matched to spindle drive to assure proper wheel size. Built-in exhause port. Guard meets applicable OSHA Specs.

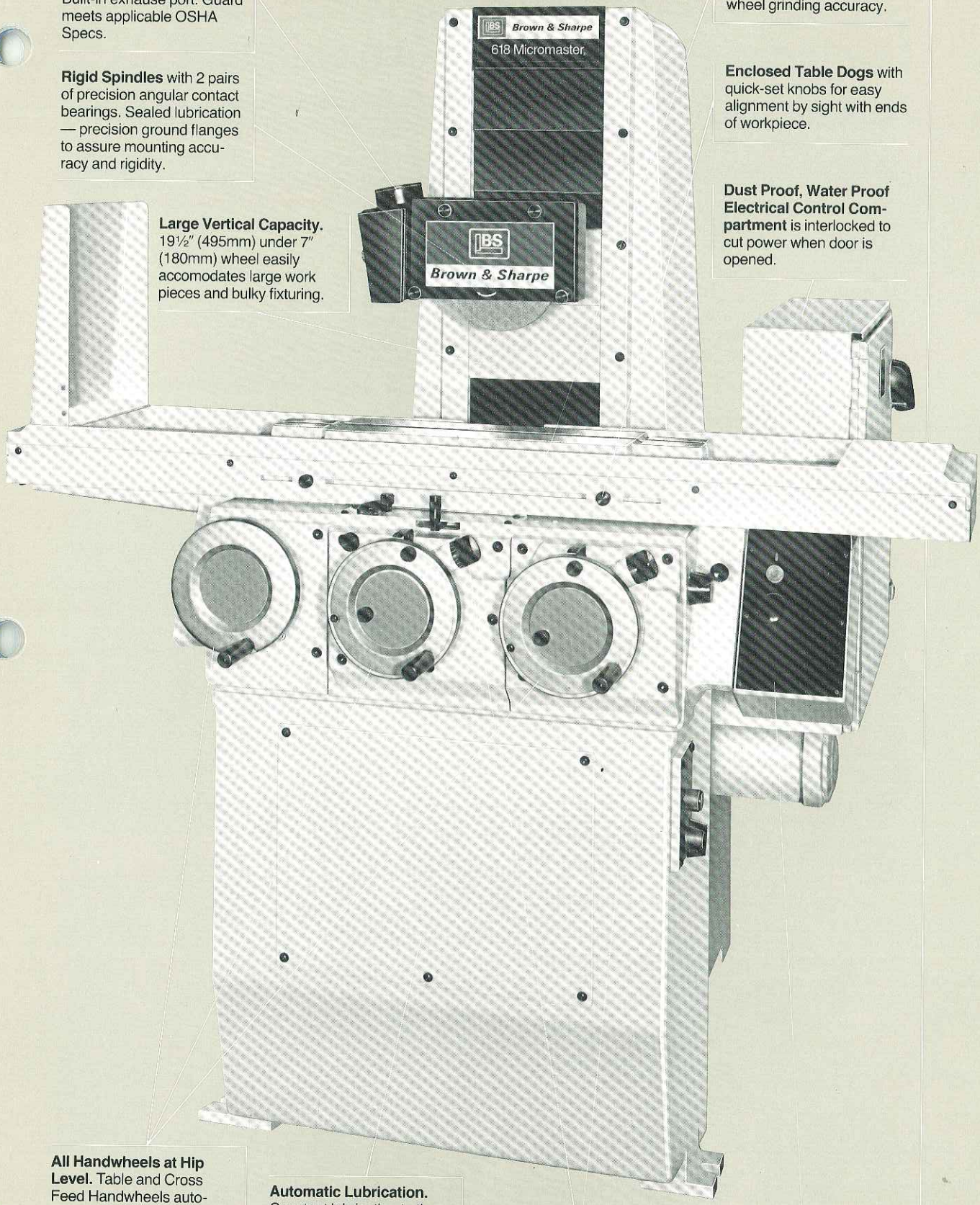
Rigid Spindles with 2 pairs of precision angular contact bearings. Sealed lubrication — precision ground flanges to assure mounting accuracy and rigidity.

Large Vertical Capacity. 19½" (495mm) under 7" (180mm) wheel easily accomodates large work pieces and bulky fixturing.

Independent, Bed-type Ways eliminate saddle. Exceptional slot and side-wheel grinding accuracy.

Enclosed Table Dogs with quick-set knobs for easy alignment by sight with ends of workpiece.

Dust Proof, Water Proof Electrical Control Compartment is interlocked to cut power when door is opened.



All Handwheels at Hip Level. Table and Cross Feed Handwheels automatically disengage in power mode. Cross Feed Handwheel Graduations read left or right with an adjustable "Zero". No need to add or subtract. Both handwheels have slip ring reading to .0002" (0.005mm)

Automatic Lubrication. Constant lubrication to the right places in the proper amount assures long life and smooth operation.

Maintenance Solutions Built-In. Simple hydraulic circuits. Easily accessible components.

Fine Feed Knobs Standard on Vertical and Cross Feed. Read to .0001" (0.001mm). Wide spaced graduations permit split-tenth setting.

Safe Location of Power Controls. Stop and Start Controls on OSHA recommended right side.

618SSC/818SSC Models

SSC Machines Operate as Conventional Surface Grinders and Automatic Cycle Machines for Slot or Surface Grinding!

Standard Equipment Now Includes Former High Demand Options:

- 2HP (1.5KW) Direct Drive Spindle
- Fine Cross Feed Knob reading to .0001" (0.001mm)
- 19½" (495mm) Vertical Capacity (7"/180mm wheel)
- Automatic Slot or Surface Grinding to a Positive Stop with Adjustable Index Dial for .0001" (0.0025mm) Manual Down Feed
- Over-the-Wheel Hydraulic Straight Line Dressing Arrangement
- Separate Wheel Spindle ON/OFF Control
- Vertical Rapid Positioning
- Dual 110 Volt Receptacle for Accessories

The 618SSC/818SSC Slot and Surface Grinding Machines maintain the same time proven MICRO-MASTER construction and performance capabilities of the basic machines with the added features of Slot and Surface Grinding Cycle capability.

The Slot or Surface Grinding Cycle provides automatic operation of the machine during the cycle. On the production line, several machines can be producing simultaneously with only one operator in attendance. The ratio of parts produced per man-hour can therefore be substantially increased.

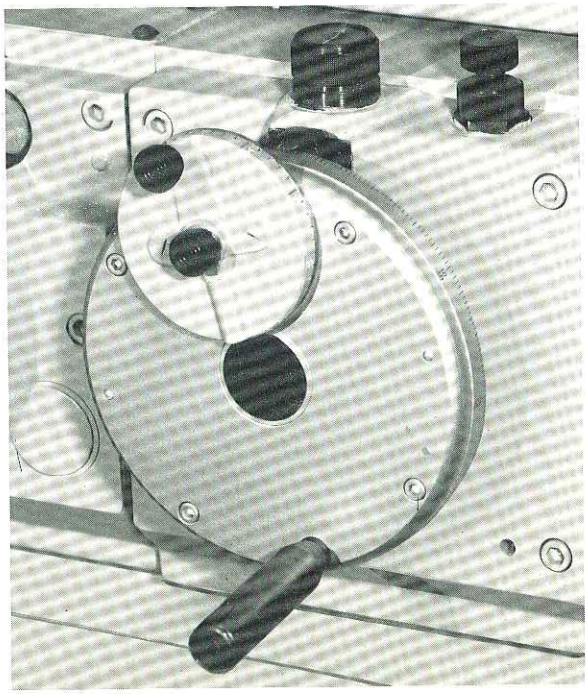
The following modes provide automatic operation which allows the operation of more than one machine at a time.

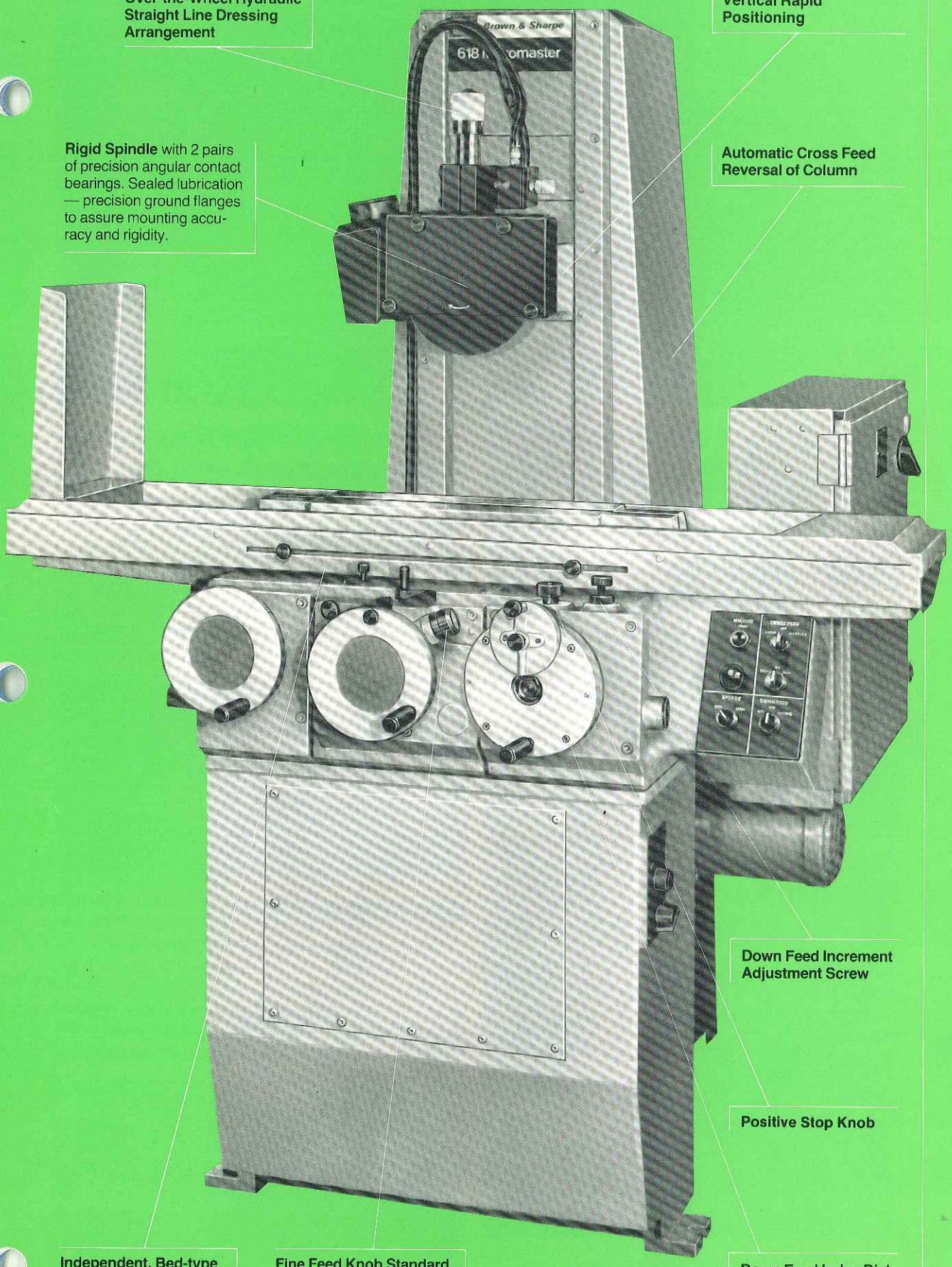
Automatic Slot Grinding to a Positive Stop

This arrangement provides automatic downfeed of the grinding wheel for such jobs as slot grinding and the grinding of narrow surfaces. The wheel is fed down at each table reversal when longitudinal power travel is used. Incremental feed is adjustable from .0002" (0.005mm) to .003" (0.076mm). Feed is automatically stopped at any desired depth to .040" (1.016mm). An index dial, on the Vertical Feed Handwheel, permits setting of the stop to .0001" (.0025mm). To feed the wheel down more than the .040" (1.016mm), the automatic stop can be retracted and the wheel can be automatically fed any desired amount. Provision has been made to make the arrangement inoperative when manual operation is desired.

Automatic Surface Grinding to a Positive Stop

Operation in this mode is essentially the same as above except that the wheel is automatically fed down at the end of each transverse motion.





Over-the-Wheel Hydraulic Straight Line Dressing Arrangement

Vertical Rapid Positioning

Rigid Spindle with 2 pairs of precision angular contact bearings. Sealed lubrication — precision ground flanges to assure mounting accuracy and rigidity.

Automatic Cross Feed Reversal of Column

Down Feed Increment Adjustment Screw

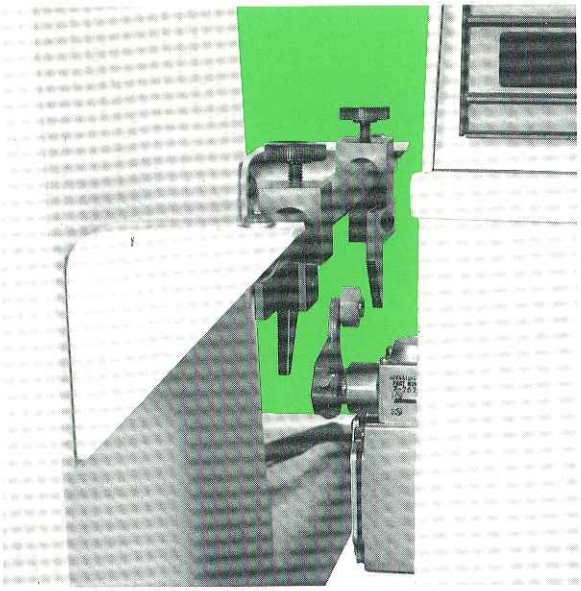
Positive Stop Knob

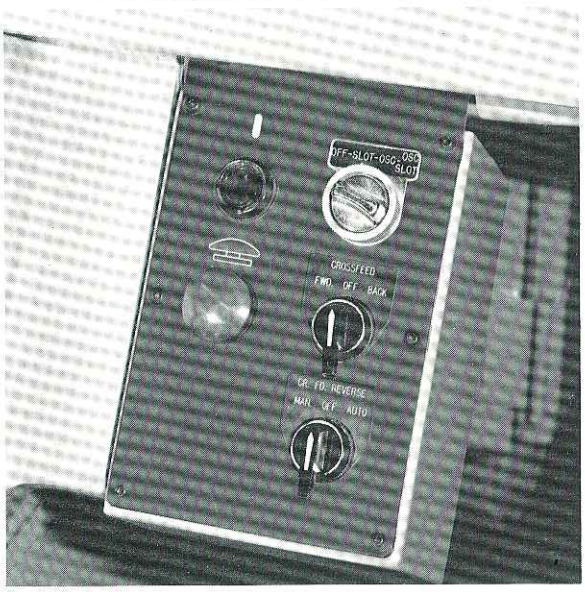
Independent, Bed-type Ways eliminate saddle. Exceptional slot and side-wheel grinding accuracy.

Fine Feed Knob Standard on Cross Feed. Reads to .0001" (0.001mm). Wide spaced graduations permit split-tenths setting.

Down Feed Index Dial reads to .0001" (0.002mm)

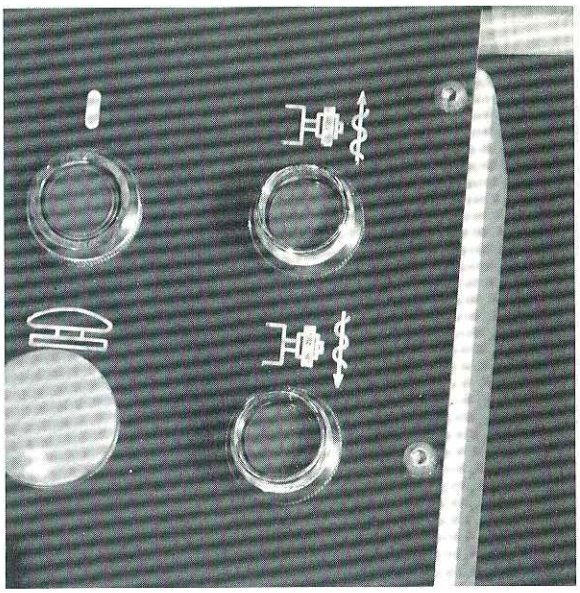
Options & Attachments





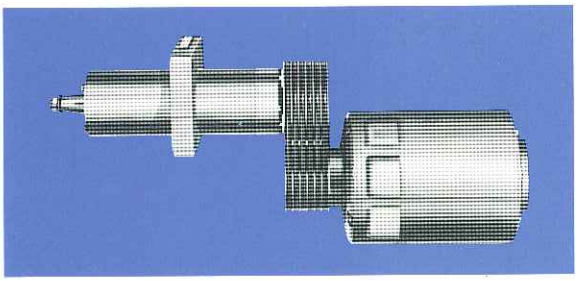
Automatic Cross Feed Reversing Arrangement

(Std. on SSC Models) Available only for machines with power cross feed, this option provides automatic reversal of the machine upright. Reversal is continuous until the cycle is stopped by the operator, and return to hand cross feed can be made at will.



Vertical Rapid Positioning Arrangement

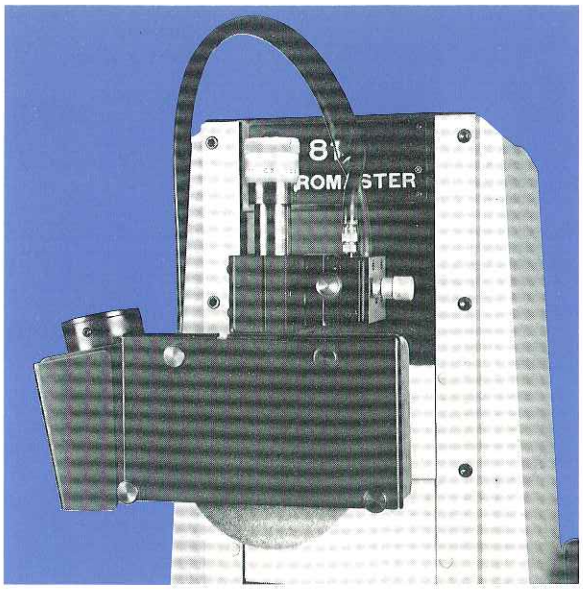
(Std. on SSC Models) Available for the customer who needs quick change in machine set-up. It also eliminates operator fatigue. Power positioning at 40 ipm (1016mm/min) has a range of 18¾" (476mm). Brake-type motor for fast stop with push button control. Elevating handwheel is interlocked to activate with the vertical positioning controls. Weight (approx.): 50 lbs. (22kg).



Optional Spindles

A 2860 RPM Spindle with 2HP (1.5KW) Oriflex Drive which uses an 8" (200mm) diameter wheel is available instead of the standard spindle drive at extra cost. Positive power transmission with optimum cushioning is provided through 6 "O" rings mounted on precision, grooved pulleys, resulting in extra-fine finishes.

Also available at extra cost are a 3600 RPM 2HP (1.5KW) Oriflex Drive Spindle for 7" diameter wheels and an 1800 RPM 2HP (1.5KW) Direct Drive Spindle for 12" diameter wheels.

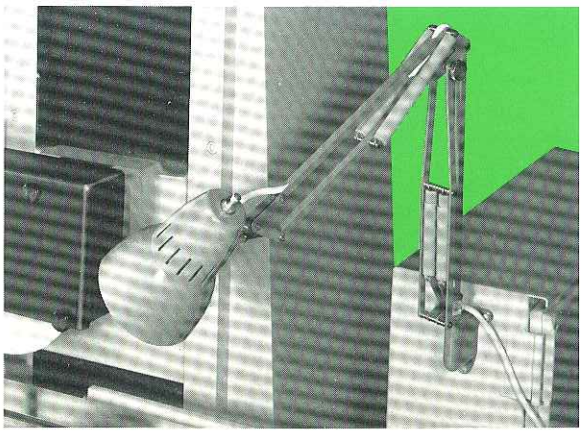


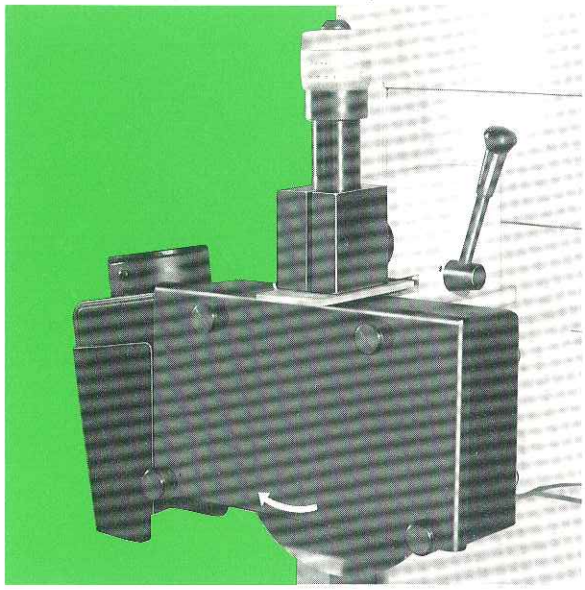
Over-The-Wheel Hydraulic Straight Line Dressing Arrangement

(Std. on SSC Models) Time and effort required for wheel truing is greatly reduced with this hydraulically actuated truing arrangement mounted directly over the wheel. A truing pass is initiated after simply pressing a button on the right front of the arrangement. Unit has a total range of 3″ (75mm) with 1″ (25mm) radial feed using the micrometer adjustment in increments as fine as .0001″ (0.0025mm). This is a straight line truing device for wheels up to 1″ (25mm) wide. Truing rates are adjustable from 2 to 20 inches per minute (51 to 508mm/min). A diamond (approximately one carat) in a mounting is available at extra cost.

Vertical Position Indicator

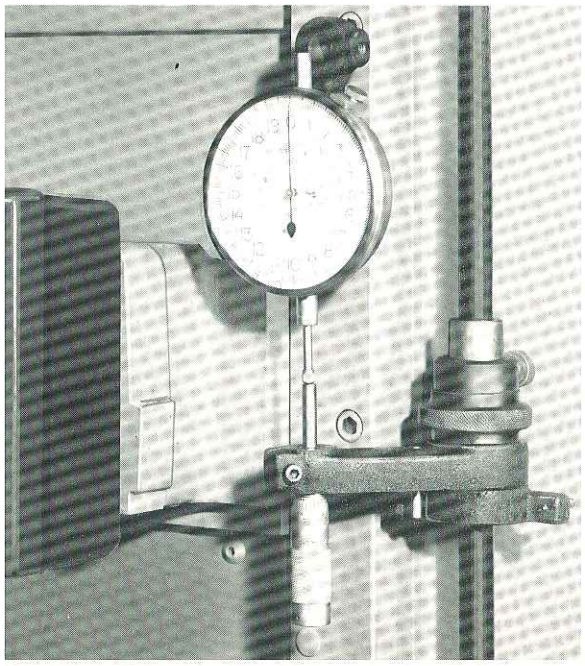
A time-saving attachment that mounts easily to the upright and allows wheel to be positioned quickly with great accuracy. It replaces the customary procedure of "feeling down" to workpiece surface. Unit's built-in micrometer has large, easy-to-read dial that "reads out" exact relative position of wheel to workpiece. Unit is adjustable over full vertical range of machine — provides rapid positioning without trial and error. Weight (approx): 25 lbs. (11kg).





Over-The-Wheel Manual Straight Line Dressing Arangement

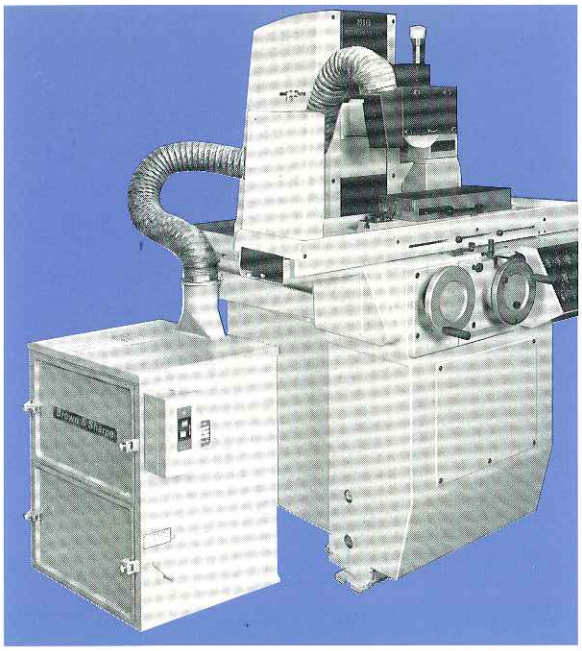
Mounts directly over the wheel for maximum speed and convenience in wheel dressing. Unit has a total range of 3″ (75mm) with 1″ (25mm) radial feed using the micrometer adjustment in increments as fine as .0001″ (0.0025mm). Straight line truing for wheels up to 1″ (25mm) in width provides the all-around capacity to speed up any grinding operation. A diamond (approximately one carat), in a mounting, is available at extra cost. Weights (approx): Net 27 lbs. (12kg). Shipping 45 lbs. (20kg).



Adjustable Work Light

Is machine mounted with a shaped and vented shade to provide concentrated light. The overall reach is 30″ (760mm). First quality materials are used throughout for a long, trouble free life.

Options & Attachments



Exhaust Attachment

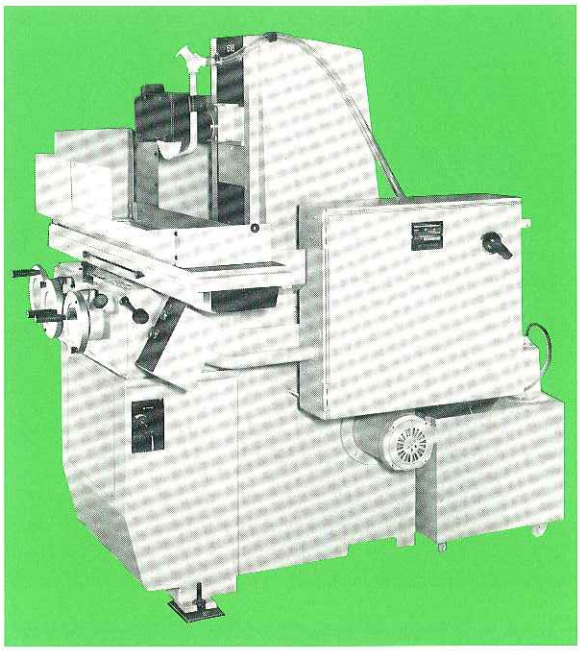
Removes grit and dust from vicinity of grinding operation — exceeds OSHA standards. Separating efficiency is approximately 98.4% to 99.75% on uniform flows of 1-micron particles — 99.97% on 2-micron particles. Flexible suction tube attaches directly to built-in exhaust nozzle of wheel guard. A ¾HP motor running at 4823 RPM processes 420 cfpm (12.6 cuM/min) through a 4″ (100mm) diameter hose. Space requirement: no more than necessary for table traverse plus enough behind machine for flexing the suction tube. Weight: Net 120 lbs. (54kg).

Mist Coolant Equipment

Combines compressed air with coolant to develop a mist that evaporates on contact with the work. Cooling takes place during evaporation. Full-time visibility maintained. Needle valve on jet provides precision control of mist —from very fine mist to heavy spray. No flooding, dripping, or spurting. Weights: Net 14 lbs. (6kg). Shipping 15 lbs. (7kg).

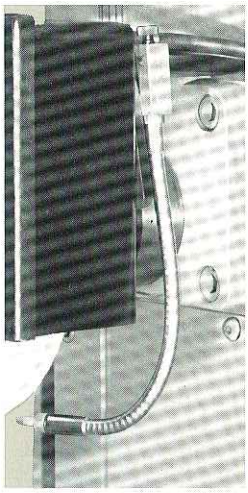
Variable Spindle Speed

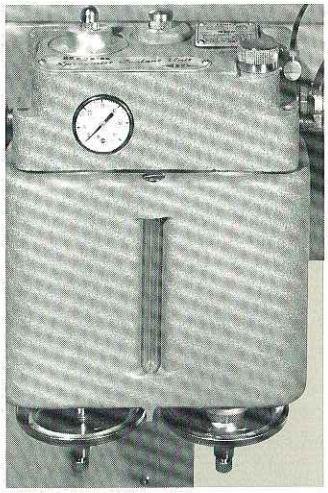
The ultimate in controlled surface speed. It allows adjustment of spindle speed as the wheel wears to maintain surface speed. Adjustment of spindle speed is up to 6,000 sfm for maximum efficiency on different materials. Speed indicator and interlock to prevent overspeeding of wheels are provided. Solid-state, plug-in modules in a JIC, NEMA 12 enclosure.

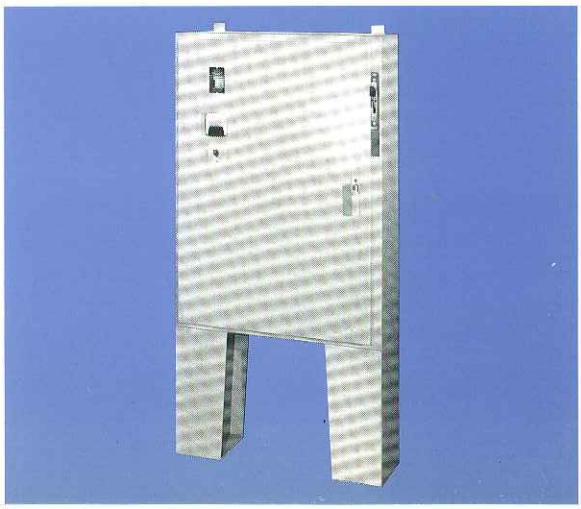


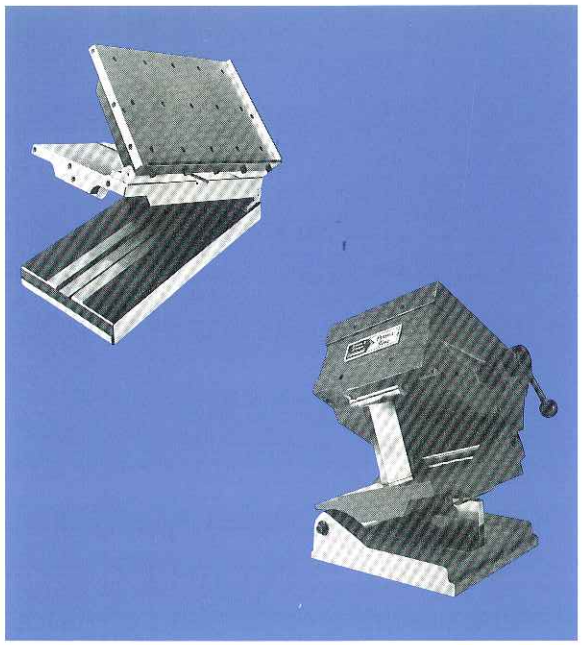
Wet Grinding Attachment

Equips machine for grinding with coolant. Powered by ⅛HP centrifugal pump. Coolant volume controlled by valve at nozzle. Complete set of adjustable splash guards contain coolant spray. Coolant is gathered and automatically returned to 30-gallon (114 liters) welded-steel coolant tank. Removable compound baffle in tank aids settling. Comes complete — ready to attach and plug in. Weights: Net 120 lbs. (54kg). Shipping 152 lbs. (68kg).





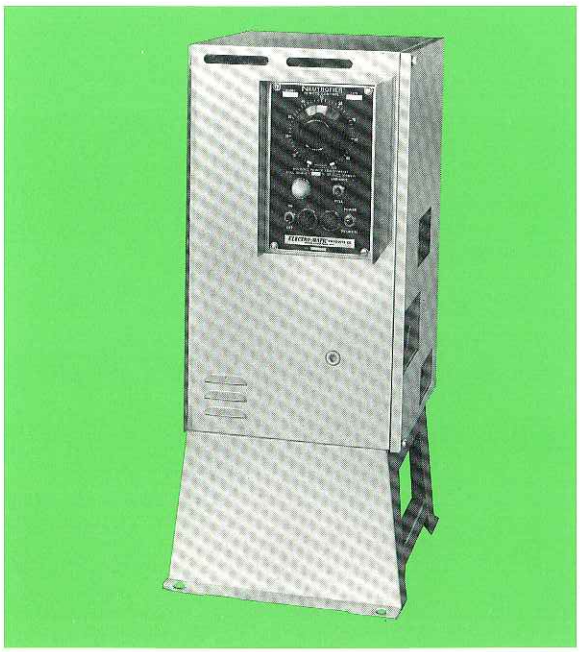


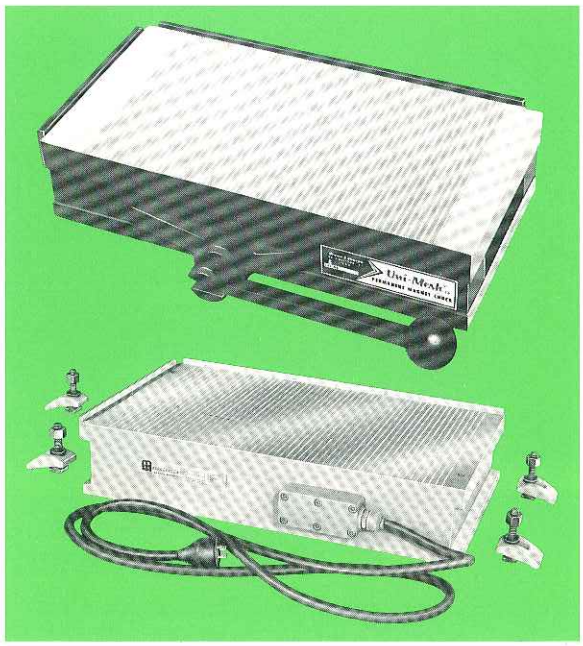


Sine Plates and Perma-Sines

Establish precise angles for grinding, toolmaking and inspection. Overall accuracy is within 0.0002" (0.005mm) with gage block accuracy for angular settings. Made from normalized steel, case hardened and aged with a precision finish on bottom, top, and sides. Simple or Compound Models are available.

Type	Working Surface		Height Set at 0°		Ship. Wt. (approx.)	
	in	mm	in	mm	lbs	kg
Inspection Sine Plates						
5" (125mm) Simple	3 7/16 x 6	87x152	1 15/16	49	11	5
10" (250mm) Simple	6 x 12 7/16	152 x 316	2 7/16	62	44	20
5" (125mm) Compound	6 x 6 7/16	152 x 164	3¾	95	28	13
10" (250mm) Compound	6⅜ x 12	162 x 305	4 3/16	106	55	25
Perma-Sines Permanent Magnet Sine Plates						
5" (125mm) Simple	6 x 6	152 x 152	5⅛	130	36	16
10" (250mm) Simple	6 x 12	152 x 305	5⅛	130	80	36
5" (125mm) Compound	6 x 6	152 x 152	6½	165	42	19
10" (250mm) Compound	6 x 12	152 x 305	6 13/16	173	96	43





Permanent Magnetic Chucks

These chucks have long magnet life for rapid holding and release of ferrous workpieces and for bench work and inspection. All have Uni-Mesh topplates with 0.165" pole spacing.

No.	Working Surface		Height of Chuck		Ship.Wt. (approx.)	
	in	mm	in	mm	lbs	kg
510-6	5 x 10	125 x 250	2.7	68	27	12
512-6	5 x 12	125 x 300	2.7	68	31	14
612-6	6 x 12	150 x 300	2.7	68	41	18
614-6	6 x 14	150 x 350	2.7	68	57	26
618-6	6 x 18	150 x 450	2.7	68	61	27
818-6	8 x 18	200 x 450	2.7	68	114	51

Electrical Magnetic Chucks

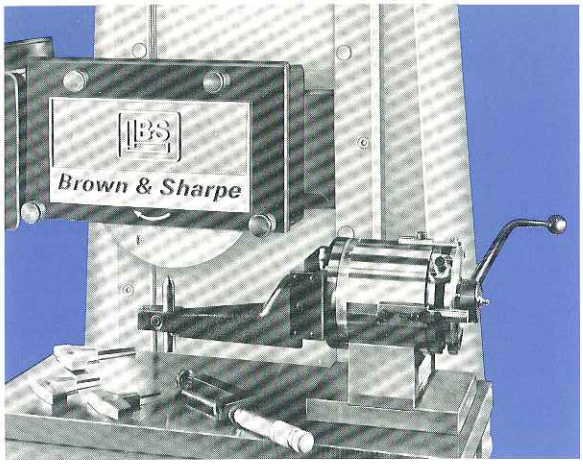
With ⅛" (3.2mm) wide magnetic low carbon steel poles and 1/32" (0.79mm) non-magnetic stainless steel separators.

No.	Working Surface		Height of Chuck		Ship. Wt. (approx.)	
	in	mm	in	mm	lbs	kg
618	6 x 18	150 x 450	4	100	115	52
818	8 x 18	200 x 450	4	100	114	65

Neutrofier

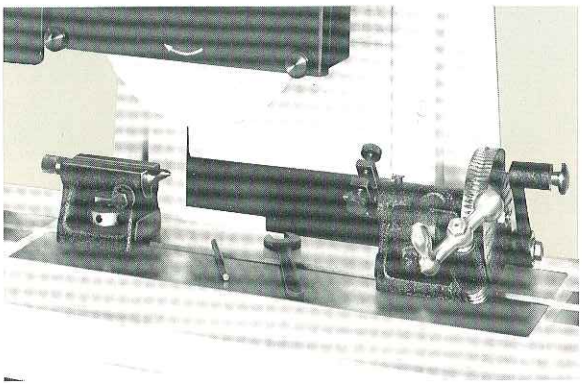
For electromagnetic chucks, the unit is free standing and self-contained. It neutralizes swarf and workpiece to allow easy reloading and cleaning of the chuck surface. It provides variable holding power and automatic de-magnetizing of the chuck surface.

Options & Attachments



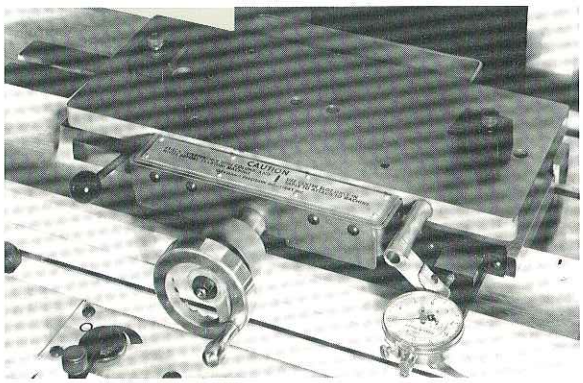
Continuous Radius and Tangent Wheel Truing Attachment

Forms accurate wheel radii with tangents at either or both sides of radii. Forms convex radii up to 1″ (25mm) with tangents to 5/8″ (16mm) long at any setting. Forms concave radii with both the maximum and minimum radius in relation to the adjoining angles and to the geometry of the diamond tool being used. A diamond (approx. 1/4 carat) in suitable mounting is furnished with this unit. (The use of coolant with this unit is not recommended.) Weights: Net 32 lbs. (14.5kg). Shipping 55 lbs. (25kg).



Index Centers – 4¾″ (120mm)

A "must have" accessory for correct grinding of taps, reamers, formed cutters, and similar work. Unit indexes majority of common spacings — all divisions from 2 to 14 and all even numbers from 18 to 28. Centers swing 4¾″ (120mm) diameter — optional raising blocks increase swing to 8″ (200mm). Precision worm drive can be disengaged for hand rotation of indexing wheel. T-bolts allow fast position changes or rapid removal of entire unit. Weights: Net 12 lbs. (5kg). Shipping 18 lbs. (8kg).

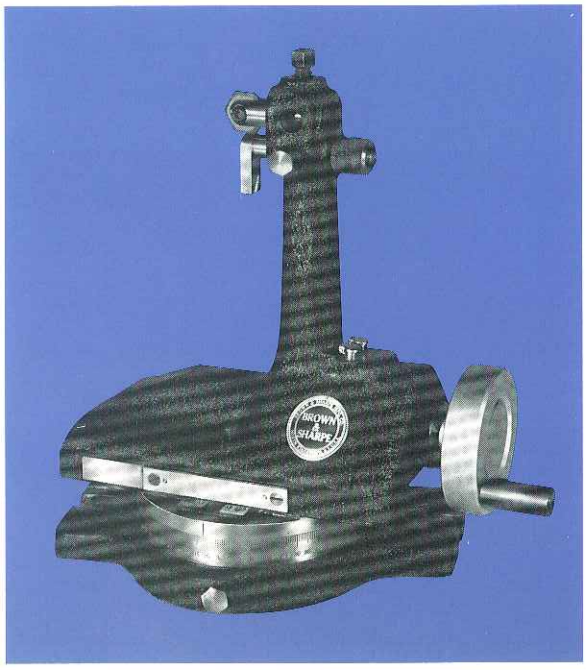


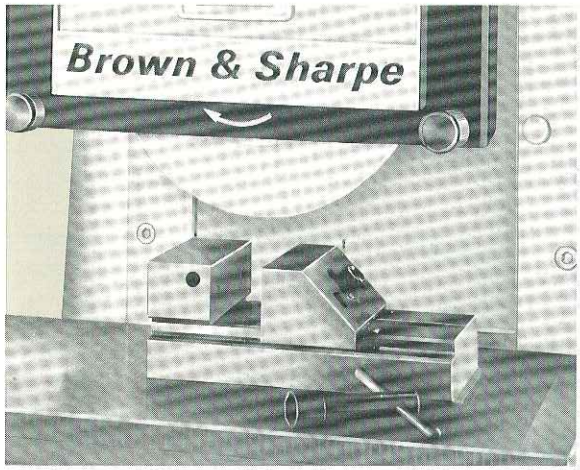
Work Positioning Table

Allows monitored positioning of workpiece for rapid, precise transverse adjustment in slot grinding, rack tooth grinding, grinding broach teeth, splines, keyways, tool and die sections, etc. An adjustable dial indicator with a range of 1″ (25mm) with 0.0001″ (0.0025mm) graduations is provided. Gage block stage, precision ground lead screw, hardened and ground dovetail ways and a patented non-distorting Table Top Lock are additional features. The Table accomodates magnetic chucks up to 6″ x 12″ (152mm x 304mm).

Radius and Angle Wheel Truing Attachment

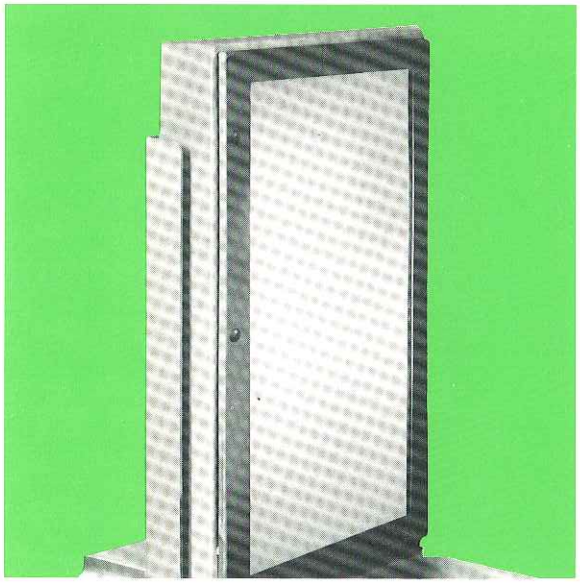
For accurate, efficient shaping of wheels having radial or angular faces — for grinding lamination dies, flat forming tools and similar operations. Forms concave or convex outlines having radii up to 1″ (25mm); face angles up to 90° either side of zero; and numerous combinations of radial and angular shapes otherwise difficult to obtain. Truing is done by running slide holding diamond back and forth by handwheel. Diamond (mounted) can be furnished at extra cost. Weights: Net 26 lbs. (12kg). Shipping 35 lbs. (16kg).

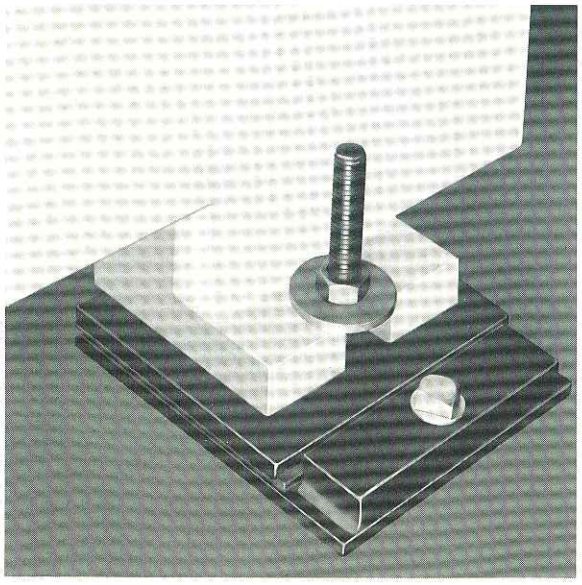


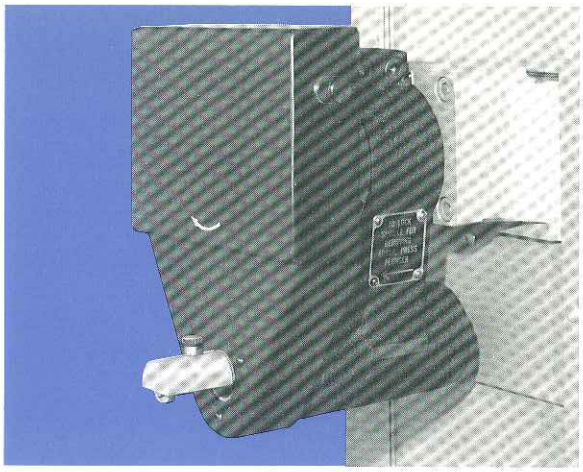


Precision Grinding Vise

Rigid-holding vise for close tolerance work (jaw opening range 4″ (101mm). All work contacting surfaces are precision ground with sides and jaws square and parallel within 0.0002″ (0.0005mm). A unique jaw cam prevents up-lift of the workpiece under pressure. The jaws are 2½″ wide (63mm) and 1″ deep (25mm).







High Speed Surface Grinding Attachment

For punches and other work requiring small diameter wheels. Mounts on machine spindle housing in any position around spindle axis. Speeds: 15,000 RPM with Oriflex; 18,000 RPM with Direct. Features super-precision ball bearings; adjustable drive-belt tension; and spindle lock for rapid arbor change. Weights: Net 12 lbs. (5kg). Shipping 18 lbs. (8kg). Recommended arbors are listed below:

Arbor Number	Grinding Wheel Size Diam. x Thick. x Hole		Distance**	
	in	mm	in	mm
2103*	½ x ¼ x 3/32	13 x 6 x 2	13/16	20
2105*	½ x ¼ x 3/32	13 x 6 x 2	1 3/16	30
2107*	½ x ¼ x 3/32	13 x 6 x 2	1 9/19	40
2109	⅞ x ¼ x ¼	22 x 6 x 6	1¾	44
2111	1¼ x ⅜ x ⅝	32 x 10 x 15	1¾	44

*Used with No. 2125 collet (furnished at extra cost)
**Rear Face of Grinding Wheel to End of Attachment

Illuminated Dust Guard

With contrasting background for form grinding, etc. fits over standard guard on left end of table. Made with frosted glass and two 6-Watt florescent tubes. Weights: Net 11 lbs. (5kg). Shipping 23 lbs. (10kg).

Isolation Mountings

This set of three mounts eliminates the need for expensive machine foundations where external vibrations are a problem. A machine resting on these mountings is isolated from external vibrations such as those present when a machine is located on an upper floor of a multi-story building or located near vibration-causing machinery. Use of these mountings raises the machine approximately ¾″ (19mm) off the floor. Weight (approx): 18 lbs. (8kg).

Specifications

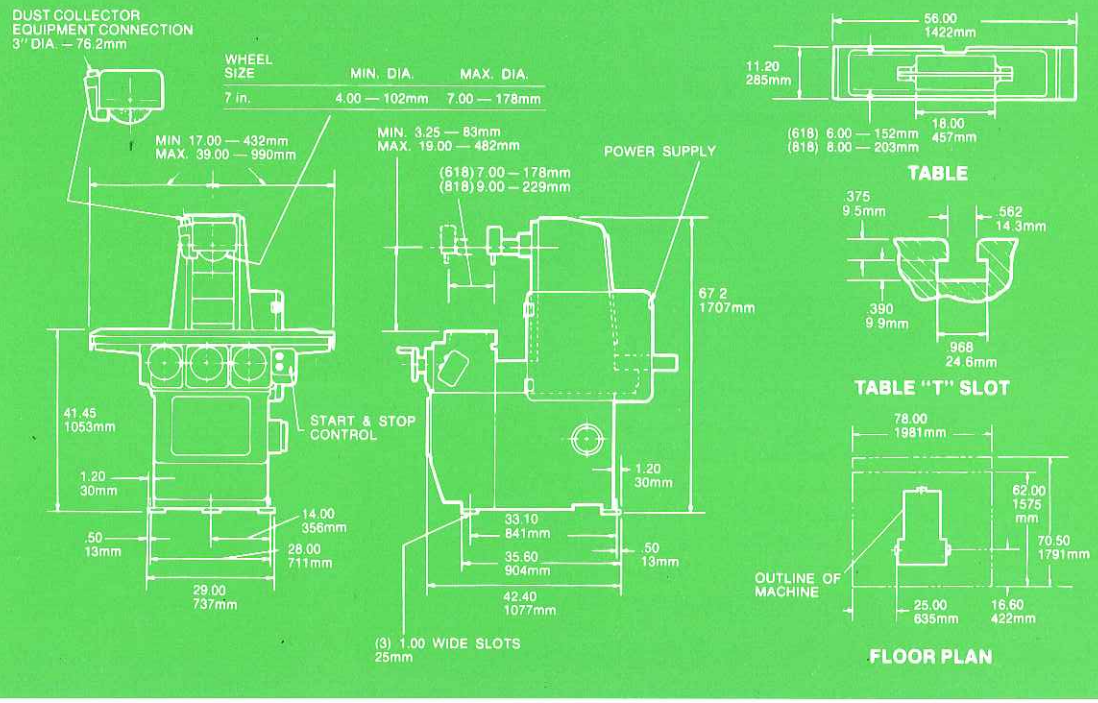
618H/618/618SSC/818/818SSC MICROMASTER Series II Surface Grinding Machines	English Machines	Metric Machines
	inches	mm
Capacity		
Width and Length of Work Ground:		
618H, 618 and 618SSC	6 x 18	150 x 460
818 and 818SSC	8 x 18	200 x 460
Height of Work Ground with:		
Standard: 7" OD x 1¼" hole (178mm x 32mm) Wheel with 2HP (1.5KW) Direct Drive	19½	495
Optional: 8" OD x 1¼" hole (203mm x 32mm) Wheel with 2HP (1.5KW) Oriflex Drive (additional cost)	19	482
Optional: 12" OD x 3" hole (305mm x 75mm) Wheel with 2HP (1.5KW) Direct Drive (additional cost)	17	432
Spindle		
Removable Cartridge-type with 2 Pairs of Super-precision Angular Contact Ball Bearings. RPM with:		
Standard: 2HP (1.5KW) Direct Drive with 7" OD x 1¼" hole x ½" wide* (178mm x 32mm x 13mm) Wheel	3600 RPM	3600 RPM
Optional: 2HP (1.5KW) Oriflex Drive with 8" OD x 1¼" hole x ½" wide* (203mm x 32mm x 13mm) Wheel (additional cost)	2860 RPM	2860 RPM
Optional: 2HP (1.5KW) Direct Drive with 12" OD x 3" hole x 1" wide (305mm x 76mm x 25mm) Wheel (additional cost)	1800 RPM	1800 RPM
Lubrication of Spindle Bearings	Sealed	Sealed
Table		
Working Surface:		
618H, 618 and 618SSC	6 x 18	150 x 460
818 and 818SSC	8 x 18	200 x 460
Number of T-Slots	One	One
Width of T-Slot	9/16	14
Slides on One V-Way and One Flat Way	Standard	Standard
Feeds		
Longitudinal (Table):**		
Hydraulic (feet/meters per minute) (except 618H)	5-100 fpm	1.5-30 M/min
Maximum Longitudinal Travel	22	560
Handwheel (one revolution moves table):		
618, 618SSC, 818 and 818SSC (optional 618H)	2	50
618H	2⅞	73
Low Friction Table Ways (618H only)	Standard	Standard
Cross (Spindle Slide Upright):**		
Hydraulic Feed at each Reversal of Power Longitudinal Table Travel (except 618H)	.01-.25	0.25-6.25
Continuous Hydraulic Transverse Feed provided for Wheel Truing (rate per minute) (except 618H)	10	250
Continuous Hydraulic Transverse Feed provided for Transverse Rapid Positioning (feet/meters per minute) (except 618H)	12 fpm	3.6 M/min
Adjustable Handwheel Dial reads to	.0002	0.005
Fine Feed Knob reads to	.0001	0.001
Maximum Transverse Travel:		
618H, 618 and 618SSC	7	178
818 and 818SSC	9	240
Handwheel (one revolution moves upright)	.100	2.54
Vertical (Wheel Spindle Slide):		
Maximum Vertical Travel	19½	495
Vertical Rapid Positioning (rate per minute) (SSC models only)	40	1016
Adjustable Handwheel Dial reads to	.0002	0.005
Fine Feed Control reads to	.0001	0.001
Handwheel (one revolution moves spindle)	.05	1.27
Hydraulic System (all models except 618H)		
Capacity (gallons/liters)	22 gals.	83 ltrs.
Pump (B&S No. 2S Gear) Motor HP/KW	1 HP	.75KW
Automatic Lubrication		
Hydraulic System (all models except 618H)	Standard	Standard
Reservoir Capacity (gallons/liters) (618H only)	5 gals.	19.5 ltrs.

*Wheel Sleeve available for 1" (25mm) wide wheels

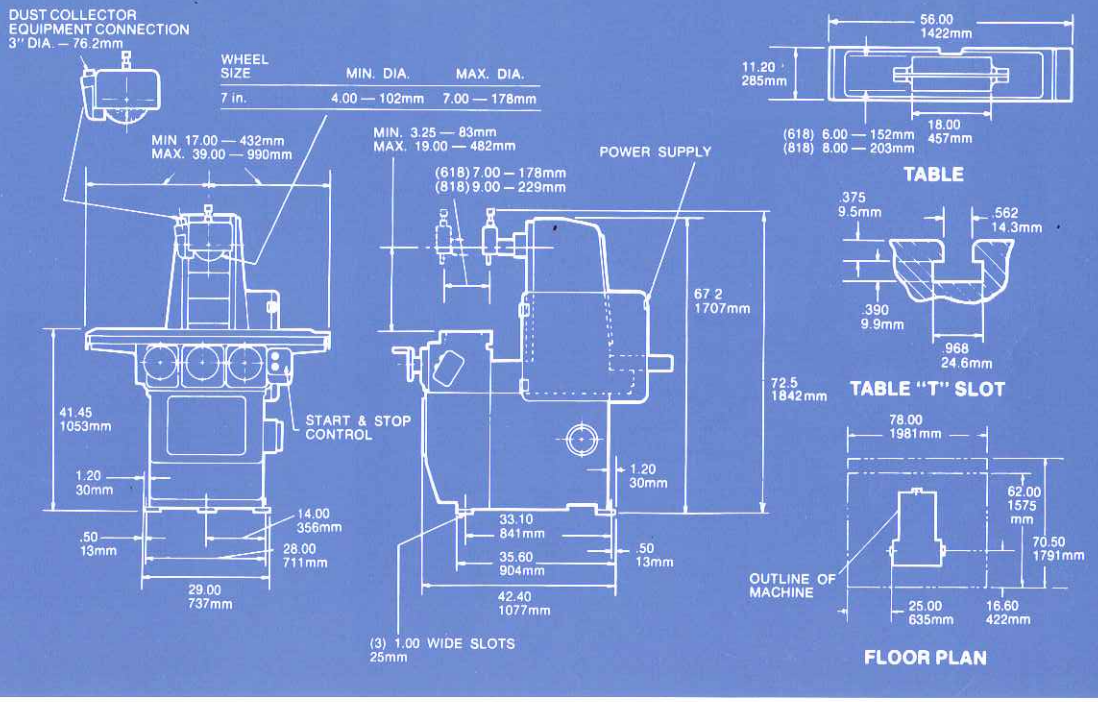
**618/618SSC/818/818SSC Machines have hydraulic longitudinal feed and hydraulic cross feed. 618H Machines have hand longitudinal feed and hand cross feed only.

Machine Dimensions

618H/618/818



618SSC/818SSC



Weights and Shipping Data	618H	618	618SSC	818	818SSC
Net Weight (Approx.) lbs./kg	2340/1053	2475/1114	2475/1114	2545/1144	2545/1144
Domestic Ship. Wt. (Approx.) lbs./kg	2640/1188	2775/1249	2775/1249	2845/1279	2845/1279
Foreign Ship. Wt. (Approx.) lbs./kg	2840/1278	2975/1339	2975/1339	3045/1369	3045/1369
Dimensions for Shipment (inches)	66x59x75	66x59x75	66x59x75	66x59x75	66x59x75
Dimensions for Shipment (cm)	168x150x190	168x150x190	168x150x190	168x150x190	168x150x190
Space Occupied (cu. ft./cu. meters)	168/4.76	168/4.76	168/4.76	168/4.76	168/4.76

As Brown & Sharpe is constantly improving the design of its machines, appearance, specifications, weights and dimensions are subject to change without notice.

About Brown & Sharpe

Brown & Sharpe Manufacturing Company

Brown & Sharpe is a leading producer of metal cutting type machine tools and well-known manufacturer of machinists' precision measuring tools, electronic quality control equipment, consumable metalcutting tools, industrial hydraulics and precision components for the nuclear manufacturing industry.

Founded in 1833, the Company is structured into three operating divisions, the Machine Tool and Industrial Products Division, both headquartered in North Kingstown, Rhode Island, and the Hydraulics Division, centered in Manchester, Michigan.

Other domestic operations are located in Traverse City, Michigan and Statesville, North Carolina.

International operations are located in Renens and Zurich, Switzerland; London, Plymouth, Sunbury and High Wycombe, England; Mainz on Rhein, West Germany; and Paris, France.

Research

The Brown & Sharpe Research Department is staffed by highly competent specialists in numerous fields. Constantly searching for and developing new ideas, materials and methods, this group helps to insure that Brown & Sharpe products remain leaders in their field by constantly improving current machinery and developing new products to satisfy the needs of our customers.

Applications Engineering

Among the many departments maintained to provide service for customers are the Grinding Machine, Turning Machine and Machining Center Special Applications Departments. These groups have been developed solely to solve machining problems.

Their engineers have at their disposal an abundance of data and a wealth of knowledge acquired through years of work in our own shop and in others where our machines are in use. Utilizing this fund of information and experience, Application Engineers are especially equipped to design correct machining methods for any of our customers' particular job requirement on any Brown & Sharpe machine.

Parts Availability

Replacement Parts for Brown & Sharpe machines are readily available from specialized parts inventories and distribution systems especially organized for that purpose. In the main plant in North Kingstown, computerized parts ordering, location, pricing and distribution assure the customers fast, reliable service. In addition parts are available from warehouses and authorized parts distributors strategically located through North America.

Design Engineering

The machines on the drawing boards today result in the manufacture of more productive machines for tomorrow. To show the importance Brown & Sharpe attaches to design engineering, every division has its own product planning and engineering departments. The trained minds and skills of the men behind the drawing board are keeping Brown & Sharpe in the forefront of advanced design in such areas as the investigation of the latest materials and lubricants, computer aided structural and vibration analysis and other advanced machine tool technology.

Leasing

Brown & Sharpe, through its wholly-owned subsidiary, Brown & Sharpe Financial Company, offers a wide array of lease plans specifically tailored to Brown & Sharpe machine tool customers. Thanks to the Brown & Sharpe lease plans, you can acquire the productive use of quality Brown & Sharpe machine tools at a cost substantially lower than you may think possible.

Four lease plans are available offering a variety of alternatives to meet our customers' specific requirements:

- Plan A – Features a six-month payment delay, allowing sufficient time to build a cash flow from the new machine.
- Plan B – Features attractive pre-determined purchase options at the end of any year for the customer who may be planning an early buyout of the lease.
- Plan C – Features level payment over the lease term for customers desiring a traditional lease structure.
- Plan D – Features the lowest payments of all plans by permitting B&S to retain the Investment Tax Credit.

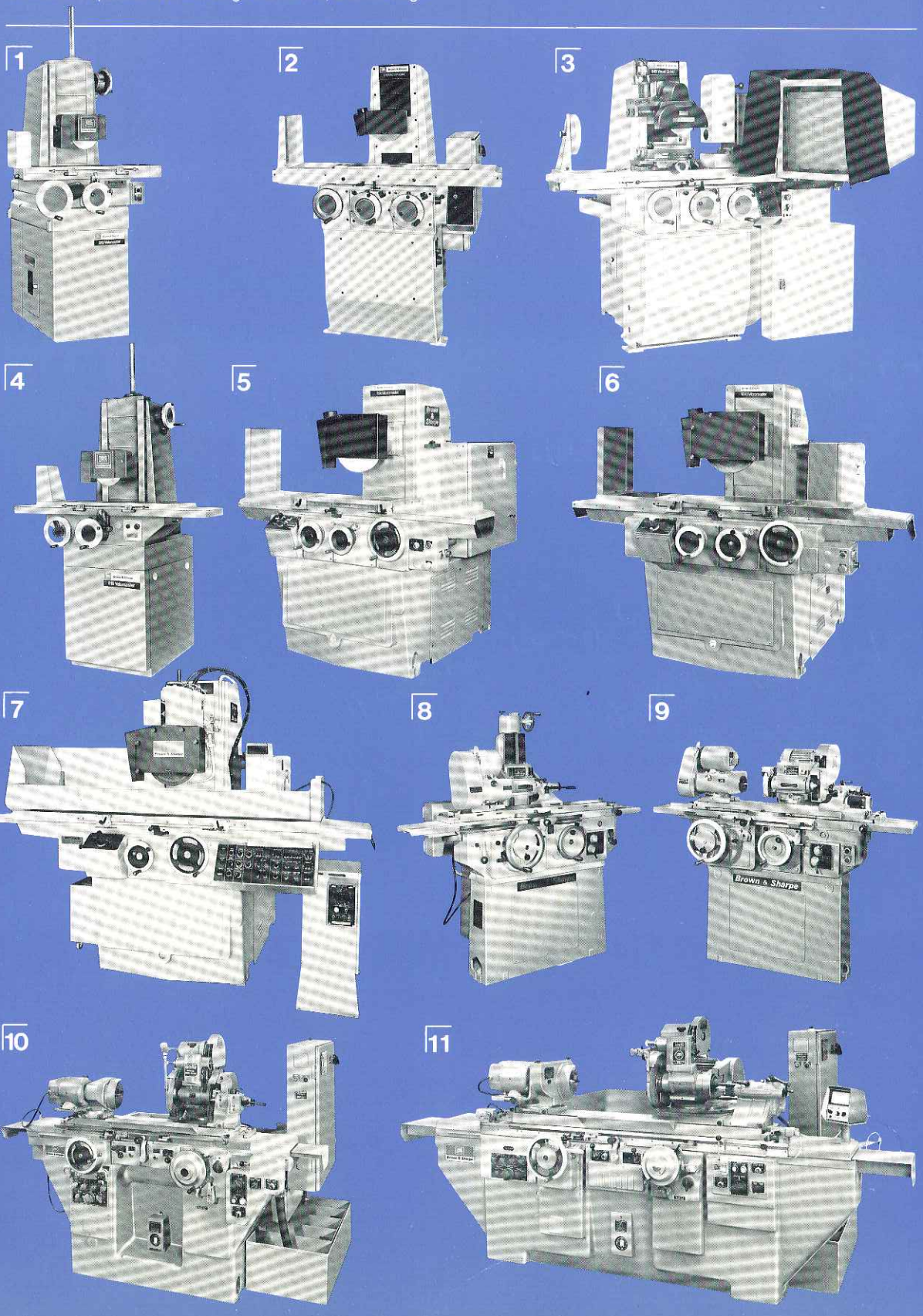
All Brown & Sharpe lease plans feature:

- Low payments.
- Predetermined purchase options.
- Seven year lease terms with renewals available for up to three additional years.
- Investment Tax Credit passed thru to the customer or exchanged for reduced lease payment.

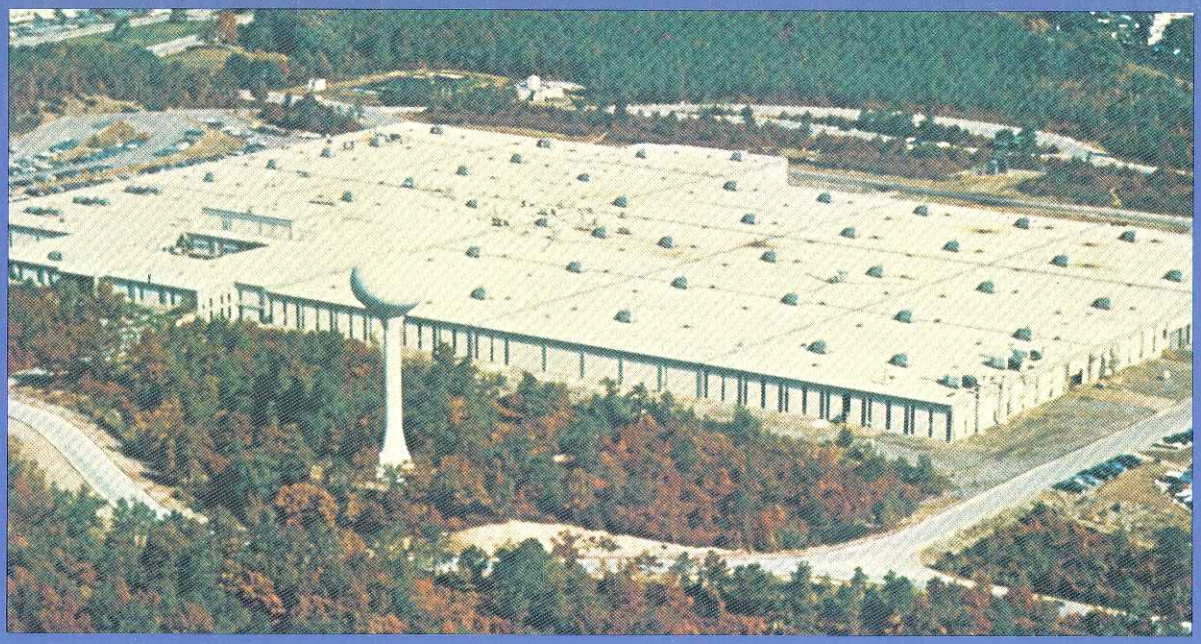
Before making a decision about how to pay for your new MICROMASTER Surface Grinding Machine, explore the lease plans available from Brown & Sharpe. Contact your B&S representative, or call: Manager of Customer Financing, Brown & Sharpe Financial Company, Precision Park, N. Kingstown, RI 02852. Phone (401) 886-2662.

The Industry's Most Complete Choice

Shown below: (1) 510V/612V VALUMASTER™ Surface Grinding Machine; (2) 618/818 MICROMASTER® Surface Grinding Machine; (3) 618 VISUAL GRIND, shown with optional Reciprocating Wheel Slide Model KE; (4) 618V VALUMASTER™ Surface Grinding Machine; (5) 824 MICROMASTER® Surface Grinding Machine; (6) 1030 MICROMASTER® Surface Grinding Machine; (7) 1224/1236 MICROMASTER® DIAL-A-SIZE®, shown with optional Wet Grinding Attachment, Electro-magnetic Chuck and Neutrofier; (8) 13 Universal and Tool Grinding Machine; (9) 814U VALUMASTER™ Universal Grinding Machine; (10) 1024U Universal Grinding Machine, shown with optional Automatic Cycle with Wheelside Rapid Travel; (11) 1440U Universal Grinding Machine, shown with optional ELECTRALIGN® and Automatic Cycle with Wheelslide Rapid Travel.



Warranty



We warrant that within twelve (12) months from the date of shipment, if the product manufactured by us and sold by us is in the possession of the original buyer (or lessee) from us (or from an authorized distributor), we will replace or repair, at our option, free of charge, any part or parts which upon examination we find defective in workmanship or material, provided that, on our request, the product or parts thereof are returned to our plant, along with satisfactory documentation that the product has been installed, used, and maintained in accordance with instructions in the Service Manual and has not been subject to abuse.

In addition, there may be specified Occupational Safety and Health Standards Warranties which, if applicable to the product, are set out in the attached schedule and incorporated by reference and subject to the provision hereof. We shall not be liable or responsible for any expense or liability for repairs, additions or modifications made upon the product without our written consent.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES (INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS OR OTHER DAMAGES FROM LOSS OF PRODUCTION) CAUSED BY DEFECTIVE MATERIAL, OR BY UNSATISFACTORY PERFORMANCE OF THE PRODUCT, OR BY ANY OTHER BREACH OF CONTRACT BY US.

Grinding Machine Sales
Brown & Sharpe Manufacturing Co.
Machine Tool Division
Precison Park, No. Kingstown, R.I. 02852
Phone: (401) 886-2700 Telex 92-7771

For the name and address of your authorized Brown & Sharpe Distributor or Agent, contact your BROWN & SHARPE DIRECT REGIONAL SALES OFFICE listed below:

BOSTON/HARTFORD
Brown & Sharpe Regional Office
702 Rahway Avenue, Union, NJ 07083
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CHARLOTTE, NORTH CAROLINA
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213-946-4391

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Printed in U.S.A.

GM106 3.5M 11/83F