

**BLACK & DECKER**

**PORTABLE ELECTRIC  
TOOLS**

DRILLS • HOLE SAWS • DRILL STANDS  
SCREW DRIVERS • NUT RUNNERS • TAPPERS  
SHEARS • BENCH GRINDERS • DIE GRINDERS  
PORTABLE GRINDERS • SANDERS • BUFFERS  
HAMMERS • SAWS • WIRE WHEEL BRUSHES  
INDUSTRIAL VACUUM CLEANERS • GLUE POTS  
VALVE REFACTERS • VALVE SEAT GRINDERS  
VALVE LAPPER • ATTACHMENTS & SUPPLIES

*Black &  
Decker*

**PORTABLE  
ELECTRIC  
TOOLS**



**THE BLACK & DECKER MFG. CO.**

"ELECTRIC TOOL HEADQUARTERS"

TOWSON 4, MARYLAND, U. S. A.

1947

**ELECTRIC TOOL HEADQUARTERS**



# "ELECTRIC TOOL HEADQUARTERS"

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### The Most Complete Line of PORTABLE ELECTRIC TOOLS

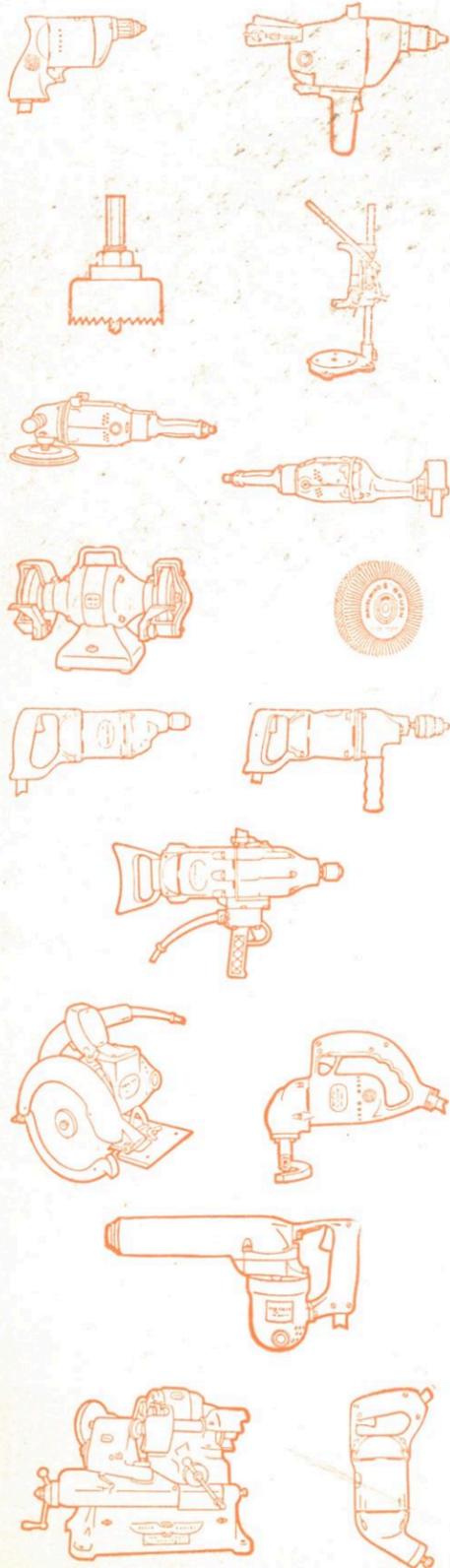
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ALL PRICES SHOWN IN THIS CATALOG ARE NET PRICES TO THE USER. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

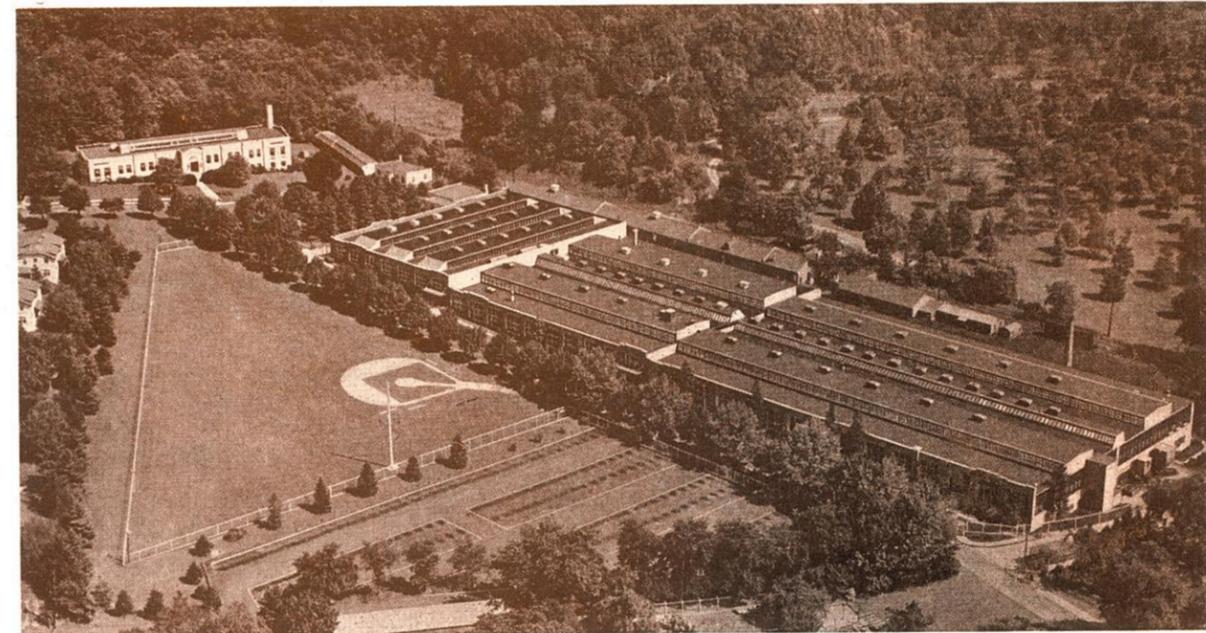
"BUY from your BLACK & DECKER Distributor"

For greater convenience and quicker service to users, Black & Decker Portable Electric Tools, Attachments and Supplies are sold through and carried in stock by leading automotive, hardware, electrical, industrial, plumbing, machinery and mill supply distributors throughout the world. Depend on your local distributor for expert help and advice on all tooling problems and as a convenient source for all your equipment and supply needs.

LEADING DISTRIBUTORS EVERYWHERE SELL BLACK & DECKER



# Black & Decker



THE HOME OFFICES and factory of The Black & Decker Mfg. Co. are located in a modern plant at Towson, Maryland, equipped with up-to-the-minute production machinery and methods. Here a skilled and co-ordinated group of engineers, machinists and production experts build the world-famous Black & Decker line. Most of our employees come from the surrounding suburban and rural communities where their families and neighbors have attractive homes, comfortable farms and prosperous shops. This is the home of the world's largest manufacturer of portable electric tools for industrial, automotive, farm and home users.

In the case of Black & Decker, "the world's largest" is no idle boast. In addition to the great expanse of modern factory and office buildings at Towson, turning out more portable electric tools of more kinds than any other maker, there is a subsidiary company in England, whose equally modern plant is making and selling the same tools to British, European and other markets. Black & Decker companies in Canada, Australia and Brazil serve these busy industrial areas and our Export Department, with headquarters at Towson, is selling through

distributors in every continent on the globe. There are 22 Black & Decker Factory Service Branches in the United States; three in Canada; seven in Great Britain; one in Australia and one in Brazil.

In our more than 30 years of electric tool development, we have always been able to offer you products of finest quality at reasonable prices, backed by a fair guarantee and sold through the most complete and convenient merchandising organization ever set up to serve electric tool users.

"LEADING DISTRIBUTORS EVERYWHERE  
SELL BLACK & DECKER"





## "ELECTRIC TOOL HEADQUARTERS"



**1/4-INCH JUNIOR DRILL**

A PRACTICAL "handy" Drill for the user who wants a *good* low-priced Drill. Die-cast aluminum housings combine light weight and strength; are shaped to fit the hand comfortably. "Compo" bearings give long, smooth service. 3-jaw geared chuck is threaded on the spindle. The motor has plenty of power for hundreds of intermittent service jobs. An ideal Drill for the tool kit in maintenance work, automotive shops, electrical, carpentry, plumbing and cabinet work.

### 1/4-Inch Junior Electric Drill

CATALOG No. 30

#### Specifications

Drilling Capacity: in Steel..... up to 1/4"  
in Hardwood..... up to 1/2"  
Spindle Speed: No-load..... 1800 R.P.M.  
Full-load..... 1050 R.P.M.  
Weight: Net..... 3 3/4 lbs.  
Shipping..... 5 lbs.  
Overall Length..... 10 3/4"  
Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs threaded chuck and key; thumb control switch; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 30 (specify voltage)  
Price, complete..... **\$22.95**

#### Attachments and Supplies

No. 22148 Bench Drill Stand.....\$15.00  
No. 8169 Horizontal Drill Stand..... 1.70  
No. 3071 Arbor for Grinding and Buffing Wheels.. .85



**1/4-INCH STANDARD "HOLGUN"**

### 1/4-Inch Standard HOLGUN\* Ball-Bearing Drill

CATALOG Nos. 345 and 346

A PERFECTLY proportioned "Handful of Power" of surprising compactness and smooth lines. "Pistol Grip and Trigger Switch," special ball spindle bearing, splined gear mounting, screened air inlets and full ball-bearing equipped. Available in seven spindle speeds from high torque at 500 R.P.M. to high speed at 5,000 R.P.M. Use Standard Holgun for regular production service; Low-speed Holgun for stainless steel and hard alloys.

#### Specifications

	Standard Speed Model	Low Speed Model
Capacity: in Steel.....	up to 1/4"	up to 1/4"
in Hardwood.....	up to 1/2"	up to 1/2"
Standard Speed: No-load.....	1700 R.P.M.*	500 R.P.M.*
Full-load.....	900 R.P.M.	225 R.P.M.
Net Weight.....	3 lbs.	3 3/4 lbs.
Shipping Weight.....	4 1/4 lbs.	4 1/2 lbs.
Overall Length.....	6 3/4"	7 1/8"
Spindle Offset.....	3/4"	3/4"
Catalog No. (specify voltage).....	345	346
Price, complete.....	<b>\$32.50</b>	<b>\$38.00</b>
*Optional No-load Speeds— (at no extra cost).....	{2500, 3500 {or 5000 R.P.M.	{750 or {1000 R.P.M.

Standard Equipment—2-pole automatic-release trigger switch and locking pin, mounted as a unit with cord protector; 3-wire cable and plug; 3-jaw Jacobs threaded chuck and key; "universal" motor.  
Equipped with No. 24449 Chuck Protector..... \$ .85 extra  
Standard Voltage—110; also available for 220 or 250 volts.  
\*Trade-mark Reg. U. S. Pat. Off.

## "ELECTRIC TOOL HEADQUARTERS"

**Black & Decker**

### 1/4-Inch Standard Ball-Bearing Drill

CATALOG No. 31

POPULAR general-purpose Drill of 1/4" capacity, for twist drills, wood augers, countersinks and Hole Saws. Well-balanced and shaped for portable use; an excellent drill press in Bench Stand.

#### Specifications

Capacity: in Steel..... up to 1/4";  
in Hardwood..... up to 1/2".  
Standard Speed: No-load..... 2,000 R.P.M.\*;  
Full-load..... 1,100 R.P.M.  
Weight: Net..... 5 1/4 lbs.; Shipping..... 7 1/2 lbs.  
Overall Length (including chuck)..... 12 1/16".  
Standard Equipment — Automatic-release trigger switch and locking pin; 3-wire cable and plug; 3-jaw Jacobs threaded chuck and key; removable commutator cover; "universal" motor.  
\*Optional No-load Speeds (at no extra cost)..... 3,500 or 5,000 R.P.M.  
Equipped with No. 24322 Chuck Protector..... \$1.00 extra  
Standard Voltage — 110; also available for 32, 220 or 250 volts.  
Catalog No. 31 (specify voltage)  
Price, complete..... **\$38.00**



**1/4-INCH STANDARD DRILL**

### 1/4-Inch Heavy-Duty Ball-Bearing Drill

CATALOG Nos. 32 and 386

FULL-POWERED and built for constant production service. 1/4" capacity geared chuck and key are standard equipment. For frequent bit-changing, use "Portomatic" keyless chuck and patented gear lock.

#### Specifications

	Standard Geared Chuck	Portomatic Keyless Chuck
Capacity: in Steel.....	up to 1/4"	up to 1/4"
in Hardwood.....	up to 1/2"	up to 1/2"
Speed: No-load.....	2000 R.P.M.	2000 R.P.M.
Full-load.....	1280 R.P.M.	1280 R.P.M.
Weight: Net.....	6 3/4 lbs.	7 1/4 lbs.
Shipping.....	9 3/4 lbs.	10 1/4 lbs.
Overall Length.....	12 1/4"	12 1/2"
Catalog No. (specify voltage)....	32	386

Price, complete..... **\$45.00 \$48.00**

Standard Equipment — 3-conductor cable and plug; two-pole automatic-release switch with locking pin; removable commutator cover; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.



**1/4-INCH HEAVY-DUTY DRILL**

### 5/16-Inch Heavy-Duty Ball-Bearing Drill

CATALOG Nos. 360 and 387

A FULL-POWERED production Drill. 5/16" capacity geared chuck and key are standard equipment. If job requires frequent changing of bits, use "Portomatic" keyless chuck and patented gear lock.

#### Specifications

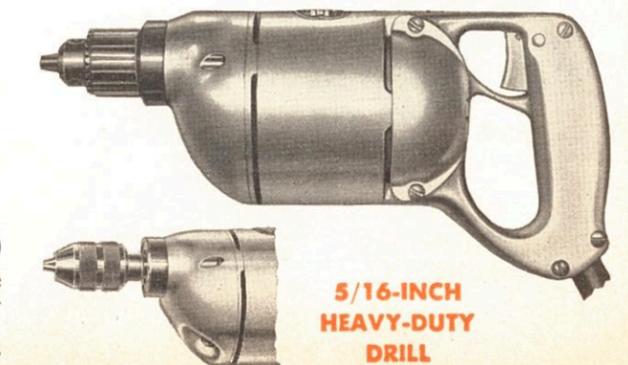
	Standard Geared Chuck	Portomatic Keyless Chuck
Capacity: in Steel.....	up to 5/16"	up to 5/16"
in Hardwood.....	up to 5/8"	up to 5/8"
Speed: No-load (Standard).....	1400 R.P.M.*	1400 R.P.M.*
Full-load.....	920 R.P.M.	920 R.P.M.
Weight: Net.....	7 lbs.	7 1/2 lbs.
Shipping.....	9 3/4 lbs.	10 1/4 lbs.
Overall Length.....	12 3/8"	12 5/8"
Catalog No. (specify voltage)....	360	387

Price, complete..... **\$48.00 \$51.00**

Standard Equipment—3-conductor cable and plug; two-pole automatic-release switch and locking pin; removable commutator cover; "universal" motor.

Standard Voltage—110; also available for 220 or 250 volts.

\*Special Speed—1000 R.P.M. (for either unit)..... \$2.50 extra



**5/16-INCH HEAVY-DUTY DRILL**



## "ELECTRIC TOOL HEADQUARTERS"

### 3/8-Inch Standard Ball-Bearing Drill

CATALOG No. 490

POPULAR general-purpose Drill with extra chuck capacity so often needed in "odd-job" work. Spindle speed suited to smaller Hole Saws, wood augers and twist drills. An excellent drill press in Bench Stand.

#### Specifications

Capacity: in Steel .....	up to 3/8"
in Hardwood .....	up to 5/8"
Speed: No-load .....	700 R.P.M.*
Full-load .....	360 R.P.M.
Weight: Net .....	6 7/8 lbs.
Shipping .....	8 1/2 lbs.
Overall Length .....	13 3/4"
Catalog No. (specify voltage) .....	490

**\$45.00**

Standard Equipment — Automatic-release trigger switch with locking pin; 3-wire cable with plug; 3-jaw Jacobs threaded chuck and key; "universal" motor.

\*Optional no-load speeds ..... {350, 500, or 1100 R.P.M. (at no extra cost)

Standard Voltage — 110; also available for 220 or 250 volts. This Drill can be furnished with 3/4" geared chuck and no load speed of 1,100 R.P.M. at no extra cost.

### 3/8-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 362

DESIGN and construction features same as the 1/2" Standard Drill. The spindle speed, weight and operating balance of this unit are ideal for production drilling of 3/8" holes at high speed.

#### Specifications

Capacity: in Steel .....	up to 3/8"	in Hardwood .....	up to 3/4"
Speed: No-load .....	900 R.P.M.;	Full-load .....	625 R.P.M.
Weight: Net .....	9 1/2 lbs.;	Shipping .....	12 3/4 lbs.
Overall length .....	13 1/2"		

Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs threaded chuck and key; automatic-release trigger switch with locking pin; spade handle with key holder; detachable pipe handle; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 362 (specify voltage)

**\$53.00**

Price, complete .....

### 1/2-Inch Junior Electric Drill

CATALOG No. 38

A PRACTICAL general purpose Drill with correct spindle speed for a wide variety of uses. Die-cast aluminum housings stand hard use, light in weight. Ample power for intermittent service. 3-jaw geared chuck is threaded on spindle. Use this Drill to drive twist drills, wood augers, Hole Saws, in repair and maintenance of machinery, equipment and appliances.

#### Specifications

Drilling Capacity: in Steel .....	up to 1/2"
in Hardwood .....	up to 1"
Spindle Speed: No-load .....	375 R.P.M.
Full-load .....	240 R.P.M.
Weight: Net .....	9 1/8 lbs.
Shipping .....	11 3/4 lbs.
Overall Length .....	14 1/4"

Standard Equipment—3-wire cable and plug; 3-jaw Jacobs threaded chuck and key; automatic-release trigger switch with locking pin; spade handle with chuck-key holder; detachable pipe handle; "universal" motor.

Standard Voltage—110; also available for 220 or 250 volts.

Catalog No. 38 (specify voltage)

**\$38.00**

Price, complete .....



1/4-INCH  
STANDARD  
DRILL



3/8-INCH  
HEAVY-DUTY  
DRILL



1/2-INCH  
JUNIOR  
DRILL

## "ELECTRIC TOOL HEADQUARTERS"

*Black & Decker*

### 1/2-Inch Standard Ball-Bearing Drill

CATALOG No. 361

THE most popular general purpose Electric Drill with perfect operating balance, close coupled construction, minimum spindle offset and horizontal spade handle. Spindle speed is ideal for driving all types of twist drills, Hole Saws and wood augers. Deep groove ball bearing on chuck spindle with inner and outer races locked in place. Spline-mounted spindle gear increases strength, minimizes friction and wear.



1/2-INCH  
STANDARD  
DRILL

#### Specifications

Capacity: in Steel .....	up to 1/2"	in Hardwood .....	up to 1"
Speed: No-load .....	400 R.P.M.;	Full-load .....	275 R.P.M.
Weight: Net .....	9 3/4 lbs.;	Shipping .....	13 lbs.
Overall Length .....	13 3/4"		

Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs threaded chuck and key; automatic-release trigger switch with locking pin; spade handle with key holder; detachable pipe handle; "universal" motor.

Standard Voltage — 110; also available for 32, 220 or 250 volts.

Catalog No. 361 (specify voltage)

**\$53.00**

Price, complete .....

### 1/2-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 40

A CONSTANT-SERVICE production tool for heavy-duty drilling in metal, wood boring, driving Hole Saws and cylinder hones. Helical armature pinion and intermediate gear; alloy steel gears.

#### Specifications

Capacity: in Steel .....	up to 1/2"	in Hardwood .....	up to 1"
Speed: No-load (Standard) .....	500 R.P.M.*;	Full-load .....	330 R.P.M.
Weight: Net .....	17 lbs.;	Shipping .....	19 1/2 lbs.
Overall Length .....	18 1/2"		

Standard Equipment—3-conductor cable with plug; 3-jaw Jacobs chuck, key and chain; automatic release switch with locking pin; spade handle; detachable pipe handle; "universal" motor.

Optional—No. 1 or No. 2 Morse Taper Socket, instead of chuck, no extra charge.

Standard Voltage—110; also available for 220 or 250 volts.

Catalog No. 40 (specify voltage)

**\$68.00**

Price, complete .....

\*Special no-load speeds, 750 R.P.M. or 900 R.P.M. .... \$5.00 extra

No. 22555 Feed Screw .....

Reversing Switch .....

10.00



1/2-INCH  
HEAVY-DUTY  
DRILL

### 5/8-Inch Standard Ball-Bearing Drill

CATALOG No. 238

MOTOR is mounted on ball bearings. Chuck spindle operates on Timken tapered roller bearings, insuring smooth power.

#### Specifications

Drilling Capacity: in Steel .....	5/8" to 5/8"	in Hardwood .....	1 1/4"
Speed: No-load .....	300 R.P.M.;	Full-load .....	180 R.P.M.
Weight: Net .....	17 lbs.;	Shipping .....	21 3/4 lbs.
Overall Length .....	18"		

Standard Equipment—3-wire cable and plug; 5/8" Jacobs chuck, key and chain; automatic-release switch with locking pin; spade handle; detachable pipe handle; "universal" motor.

Optional—No. 2 Morse Taper Socket instead of chuck, no extra charge.

Standard Voltage—110; also available for 220 or 250 volts.

Catalog No. 238 (specify voltage)

**\$60.00**

Price, complete .....

No. 19930 Feed Screw Assembly .....

\$ 6.90



5/8-INCH  
STANDARD  
DRILL



# "ELECTRIC TOOL HEADQUARTERS"

## 5/8-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 42

ROLLER-BEARING equipment on chuck spindle, to withstand severe side and end thrust; ball-bearing construction throughout. Amply powered and built for heavy-duty service.

### Specifications

Capacity: in Steel.....	5/32" to 5/8"	in Hardwood.....	up to 1 1/4"
Speed: No-load.....	450 R.P.M.;	Full-load.....	265 R.P.M.
Weight: Net.....	21 1/4 lbs.;	Shipping.....	27 3/4 lbs.
Overall Length.....	20"		

Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs chuck, key and key chain; automatic-release switch with locking pin; spade handle; detachable pipe handle; "universal" motor.

Optional — No. 2 Morse Taper Socket, instead of chuck, no extra charge.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 42 (specify voltage)

**\$85.00**

Price, complete

No. 16962 Feed Screw.....\$ 6.90

Reversing Switch.....10.00

5/8-INCH HEAVY-DUTY DRILL



## 3/4-Inch Standard Ball-Bearing Drill

CATALOG No. 239

A POWERFUL tool, with triple gear reduction for low spindle speed. Motor mounted on ball bearings, chuck spindle operates on Timken tapered roller bearings.

### Specifications

Drilling Capacity: in Steel.....	3/16" to 3/4"	in Hardwood.....	1 1/2"
Speed: No-load.....	250 R.P.M.;	Full-load.....	155 R.P.M.
Weight: Net.....	19 1/4 lbs.;	Shipping.....	25 1/2 lbs.
Overall Length.....	18 3/4"		

Standard Equipment—3-wire cable and plug; 3-jaw Jacobs chuck, key and key chain; automatic-release switch with locking pin; spade handle with chuck-key holder; detachable pipe handle; "universal" motor.

Optional — No. 2 or No. 3 Morse Taper Socket instead of chuck, no extra charge.

Standard Voltage — 110; also available for 220 or 250 volts.

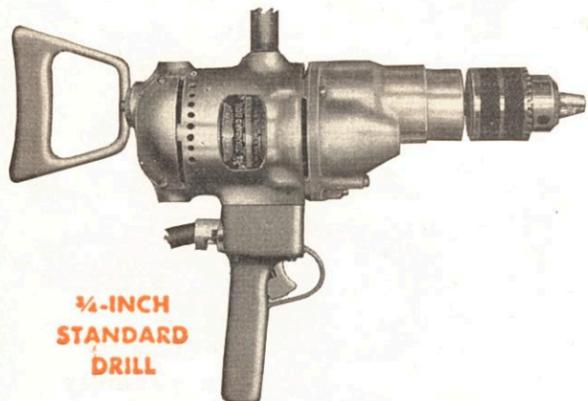
Catalog No. 239 (specify voltage)

**\$68.00**

Price, complete

No. 19930 Feed Screw Assembly.....\$ 6.90

3/4-INCH STANDARD DRILL



## 3/4-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 45

CHUCK spindle equipped with Timken taper-roller bearings; all other shafts mounted on ball bearings. Extra long switch handle and pipe handle for complete control and balance.

### Specifications

Capacity: in Steel.....	3/16" to 3/4"	in Hardwood.....	up to 1 1/2"
Speed: No-load (Standard).....	375 R.P.M.*;	Full-load.....	200 R.P.M.
Weight: Net.....	27 1/4 lbs.;	Shipping.....	34 lbs.
Overall Length.....	21"		

Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs chuck, key and key chain; automatic-release switch with locking pin; spade handle; detachable pipe handle; "universal" motor.

Optional — No. 2 or No. 3 Morse Taper Socket instead of chuck, no extra charge.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 45 (specify voltage)

**\$97.00**

Price, complete

\*Special no-load speeds; 275, 600, or 900 R.P.M.....\$5.00 extra

No. 19960 Feed Screw.....\$ 6.90

Reversing Switch.....10.00

3/4-INCH HEAVY-DUTY DRILL



# "ELECTRIC TOOL HEADQUARTERS"

# Black & Decker

## 1-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 47

(For Twist Drills with No. 3 Morse Taper Shanks)

### Specifications

Drilling Capacity: in Steel.....	1"
(With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1/8")	
Reaming Capacity: Light up to 3/4"; Heavy.....	up to 5/8"
Speed: No-load.....	350 R.P.M.*;
Full-load.....	200 R.P.M.
Weight: Net.....	28 1/2 lbs.;
Shipping.....	35 1/2 lbs.
Overall Length.....	20"

Standard Equipment — 3-conductor cable and plug; No. 3 Morse Taper Socket; spade handle and detachable pipe handle; instant-release safety switch with locking pin; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 47 (specify voltage)

**\$115.00**

Price, complete

\*Special Speeds (\$5.00 extra) — 250 or 600 R.P.M.

No. 19960 Feed Screw.....\$ 6.90

Reversing Switch.....10.00

ONE-INCH HEAVY-DUTY DRILL



## 1 1/4-Inch Heavy-Duty Ball-Bearing Drill

CATALOG No. 494

(For Twist Drills with No. 3 Morse Taper Shanks)

OUR LARGEST and most powerful Drill, with extra long safety switch and pipe handles. Motor housing is cast with adaptor pad to fit this Drill to No. 80 Drill Stand.

### Specifications

Drilling Capacity: in Steel.....	up to 1 1/4"
(With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1/8")	
Reaming Capacity: Light up to 1"; Heavy.....	up to 3/4"
Speed: No-load.....	250 R.P.M.*;
Full-load.....	160 R.P.M.
Weight: Net.....	32 lbs.;
Shipping.....	40 lbs.
Overall Length.....	20 1/2"

Standard Equipment — 3-conductor cable and plug; No. 3 Morse Taper Socket; spade handle and detachable pipe handle; instant-release safety switch with locking pin; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 494 (specify voltage)

**\$125.00**

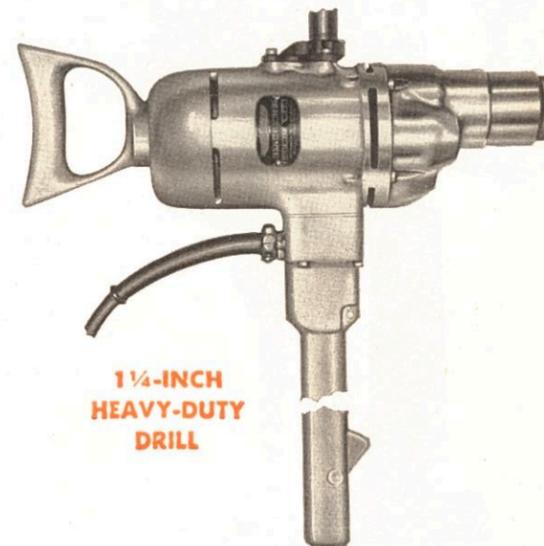
Price, complete

\*Special No-load Speeds (\$5. extra).....350, 600, 800 or 900 R.P.M.

No. 19960 Feed Screw.....\$ 6.90

Reversing Switch.....10.00

1 1/4-INCH HEAVY-DUTY DRILL



## Chucks Mounted on Morse Taper Arbors

No. 1585 5/8" Chuck on No. 2 M. T. Arbor, for all 3/8" H.D. Drills, except Types D and F.....	\$10.25
No. 22083 5/8" Chuck with No. 3 Morse Taper Arbor, to fit 1" and 3/8" H.D. Drills, Types D and F.....	10.75
No. 10601 3/4" Chuck with No. 3 M. T. A., to fit 1" Drills and 3/8" Heavy-Duty Types D and F.....	13.75
No. 3151 No. 2 Morse Taper Arbor only.....	1.25
No. 10949 No. 3 Morse Taper Arbor only.....	1.75

## Morse Taper Sockets and Reducing Sleeves

For use with taper shank bits in all drills normally equipped with Jacobs chucks, from 1/4" to 3/4" sizes.

No. 23009 No. 1 Morse Taper Socket, threaded for 1/4" Std.; 1/4" H.-D.; 3/8" Util.; 5/16" H.-D.; 3/8" Std.; 3/8" H.-D.; 1/2" Jr.; 1/2" Std.....	\$4.83
No. 18849 No. 1 Morse Taper Socket for 3/8" Drill.....	4.83
No. 11066 No. 1 Morse Taper Socket for 1/2" Drill.....	4.83
No. 11676 No. 1 Morse Taper Socket for 3/8" and 1/2" Drills.....	4.83
No. 25981 No. 2 Morse Taper Socket, threaded for 1/4" Std.; 1/4" H.-D.; 3/8" Util.; 5/16" H.-D.; 3/8" Std.; 3/8" H.-D.; 1/2" Jr.; 1/2" Std.....	5.75
No. 12186 No. 2 Morse Taper Socket for 1/2" H.-D.; 1/2" Std.....	5.75
No. 11067 No. 2 Morse Taper Socket for 3/8" and 1/2" Drills.....	5.75
No. 12849 No. 3 Morse Taper Socket for 3/8" and 1/2" Drills.....	6.90
To adapt Morse Taper Sockets to next smaller taper bits:	
No. 4122 No. 4-3 Reducing Sleeve.....	2.50
No. 3153 No. 3-2 Reducing Sleeve.....	2.00
No. 3152 No. 2-1 Reducing Sleeve.....	1.50
No. 22480 No. 3-1 Reducing Sleeve.....	2.00

CHUCK ON M. T. ARBOR



REDUCING SLEEVE





# "ELECTRIC TOOL HEADQUARTERS"

## Radial Arm

THIS Radial Arm is particularly adapted to chain production methods. Arm has vertical adjustment up and down column and can be swung to any desired position.

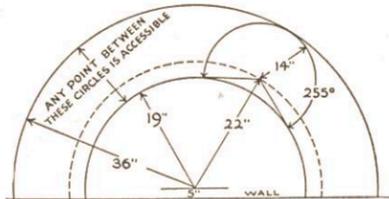


Diagram of operating range and areas showing maximum and minimum radii.

Travel of Arm on column.....24"  
 Vertical travel of Bracket.....4"  
 Angular adjustment, electrical tool bracket.....255°  
 Angle of swing.....180°  
 Distance, center of column to elbow.....22"  
 Elbow to spindle electric tool.....14"  
 Effective area of operation is within radii from 19" to 36" from column.

Weight: Net .....180 lbs.; Shipping .....235 lbs.  
 Catalog No. 20057  
 Price, complete .....\$120.00

In ordering be sure to specify type and size of Electric Tool to be used, so that the proper adapter will be supplied on the bracket.

## Sliding Arm

THE Sliding Arm operates on ball and roller bearings and is furnished complete with pedestal. Illustration shows Sliding Arm equipped with fixed head. Completely equipped with brackets and adapters for Electric Drills, Screw Drivers and Nut Runners.

Total travel of slide (horizontal).....26½"; Travel of tool in bracket.....4"  
 Radius for operating (minimum).....21½"; (maximum).....49"  
 Pivotal Arc (pedestal mounted).....360°  
 Height adjustment of supporting pedestal column.....24"  
 Weight: Net (pedestal mounted).....415 lbs.; Shipping .....490 lbs.  
 Cat. No. 9756 Pedestal mounting, 4" travel, fixed head.....\$300.00  
 Cat. No. 10396 Pedestal mounting, 8" travel, fixed head.....300.00  
 Cat. No. 31458 Pedestal mounting, 4" travel, adjustable head.....330.00

In ordering be sure to specify type and size of Electric Tool to be used, so that the proper adapter will be supplied on the bracket.

## Wheel Arbors

Adapt ¼" and ½" Drills to light grinding and wire brushing by holding wheels in chuck of drill. Body of arbor is ½" diam. and will take 3" and 4" wheels.  
 No. 3071 ¼" Drill Arbor (½" diam.; ¼" shank).....\$0.85  
 No. 8449 ½" Drill Arbor (½" diam.; ½" shank).....1.75

## Sanding Pad Arbor

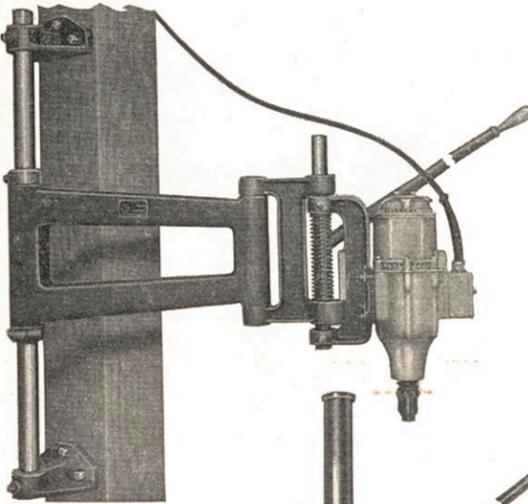
No. 23041 Arbor for 5" Sanding Pad; fits ¼" H.-D., ⅜" and ⅝" Drills (⅝"-11 thread spindle; ¼" shank).....\$0.50

## Auxiliary Side Handles

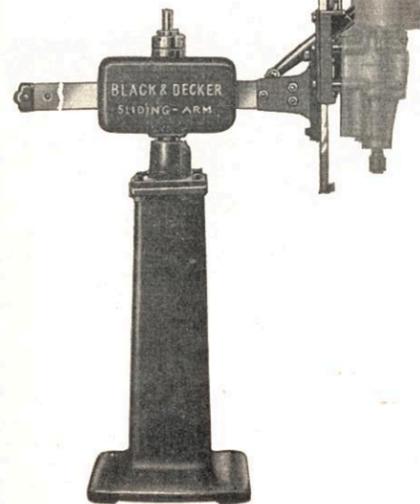
Improve control and balance of end handle Drills and Screw Drivers. Clamp around spindle housing; adjustable radially to any convenient position.  
 No. 22178 Auxiliary Side Handle for ¼" and ⅝" H.-D. Drills.....\$2.75  
 No. 26958 Auxiliary Side Handle for ⅜" and ⅝" Std. Drills.....2.75  
 No. 30426 Side Handle for No. 14 Positive and Adjustable Screw Drivers.....2.75  
 No. 30427 Side Handle for No. 18 Positive and Adjustable Screw Drivers.....2.75

## Horizontal Drill Stands (Shown on next page)

With this stand, drills can be used for stationary drilling, reaming, light buffing, grinding and wire brushing. The stand is screwed or clamped to the bench and holds the drill rigidly by means of an adjustable chain.  
 No. 23046 Drill stand for current models, ¼" Std.; ¼" H.-D.; ⅜" H.-D.; ⅝" Std.....\$3.15  
 Weight: Net.....3¾ lbs.; Shipping.....4 lbs.  
 No. 8169 Drill stand for ¼" Junior (types A and B).....1.70  
 Weight: Net.....1¼ lbs.; Shipping.....1¾ lbs.



RADIAL ARM



SLIDING ARM



WHEEL ARBOR



SIDE HANDLE

# "ELECTRIC TOOL HEADQUARTERS"



## DRILL STANDS

INCREASE the usefulness of Black & Decker Drills, Screw Drivers and Tappers by converting the portable unit to a drill press for heavy-duty work. Available in Bench type for all sizes; size 60 also in Post and Pedestal types.

Handle leverage multiplies working pressure; feeds smoothly for accurate work. Tool bracket adjustable for height and radial position. Adjustments for tool size eliminate adapters; one stand fits several units.

### SIZE 20 DRILL STAND —

Fits all Black & Decker end-handle Drills from ¼" Junior to ⅜" Standard; the SCRUGUN, TAPGUN, No. 14 and No. 18 Screw-Drivers and ¼" Tapper. Maximum feed is 2"; from C/L Bit to C/L Column is 5¼".

CAT. No. 22148 BENCH DRILL STAND —  
 Net Weight 16 lbs.; shipping 19½ lbs. Price...\$15.00

### SIZE 40 DRILL STAND —

Fits ⅜" Heavy-Duty, ½" Junior, ½" Utility, ½" Standard Drills. Maximum feed is 4"; from C/L Bit to C/L Column is 6".

CAT. No. 22145 BENCH DRILL STAND —  
 Net Weight 30 lbs.; shipping 37 lbs. Price...\$22.00

### SIZE 60 DRILL STAND —

Fits all Black & Decker side-handle Drills from ½" Heavy-Duty to the 1" Heavy-Duty. Maximum feed is 4"; from C/L Bit to C/L Column is 8".

CAT. No. 13857 BENCH DRILL STAND —  
 Net Weight 59 lbs.; shipping 69 lbs. Price...\$32.00

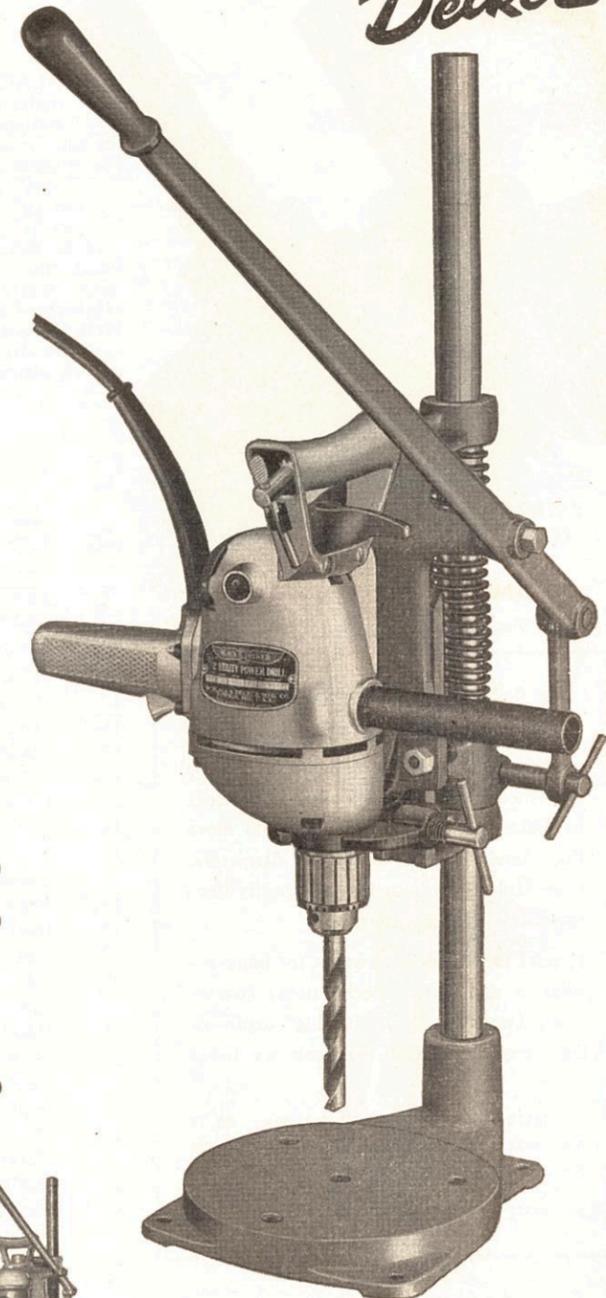
CAT. No. 31454 POST DRILL STAND —  
 Net Weight 87 lbs.; shipping 112 lbs. Price...\$38.00

CAT. No. 31455 PEDESTAL DRILL STAND —  
 Net Weight 109 lbs.; shipping 132 lbs. Price...\$40.00

### SIZE 80 DRILL STAND —

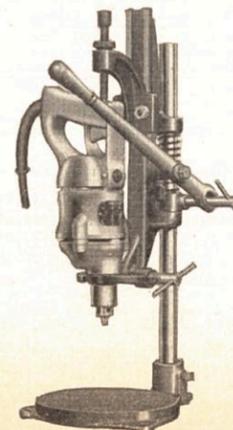
Fits the 1¼" Heavy-Duty Drill only. Maximum feed is 4"; from C/L Bit to C/L Column is 12".

CAT. No. 26607 BENCH DRILL STAND —  
 Net Weight 73 lbs.; shipping 90 lbs. Price...\$45.00

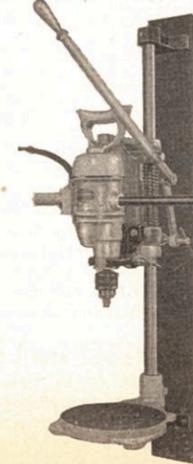


SIZE 40 BENCH STAND

### SIZE 20 STAND



### POST STAND



HORIZONTAL STAND  
 ← PEDESTAL STAND



# "ELECTRIC TOOL HEADQUARTERS"

## A Complete Line of Hole Saws

BLACK & DECKER Hole Saws will cut clean, round holes in any material a hacksaw will cut. They can be used with any Drill or spindle equipped with a correct chucking device, but the power and speed of the spindle will govern the size Hole Saw to be used and the results obtained. We suggest the following limits on Black & Decker Drills:

- On  $\frac{1}{4}$ " low-speed HOLSUN..... not larger than  $\frac{1}{8}$ " Hole Saw
- On  $\frac{3}{8}$ " Standard Drill..... not larger than  $\frac{1}{2}$ " Hole Saw
- On  $\frac{1}{2}$ " Junior and  $\frac{1}{2}$ " Standard..... not larger than  $\frac{3}{4}$ " Hole Saw

Hole Saws are available in three types: *Coarse-tooth tungsten steel* for wood, fibre, bakelite, cast iron and all thick, coarse materials; *Fine-tooth tungsten steel* for sheet metal, steel, porcelain and all thin or sheet materials; *High-speed steel* for hard alloys and for longer service on production work. Hole Saws are interchangeable on Mandrels as indicated in the table below; each Mandrel includes a pilot drill which centers the Hole Saw and keeps the cutting concentric. Standard Hole Saws have approximately  $\frac{3}{4}$ " depth-of-cut.



**COARSE-TOOTH STANDARD HOLE SAWS**  
**FINE-TOOTH STANDARD HOLE SAWS**

### Hole Saw Specifications

SAW Outside Diam.	TUNGSTEN STEEL SAW			HIGH SPEED		MANDRELS		For Con- duit Sizes	For Pipe Tap Sizes
	Fine Tooth Cat. No.	Coarse Tooth Cat. No.	Price Each Saw Only	Cat. No.	Price Each Saw Only	For $\frac{1}{2}$ " or Larger Drills	For $\frac{1}{4}$ " $\frac{5}{16}$ " or $\frac{3}{8}$ " Drills		
$\frac{5}{8}$ "	23051	.....	\$1.65	.....	.....	*	*	.....	.....
$\frac{3}{4}$ "	16882	14906	.55	21747	\$1.28	14903	22181	$\frac{3}{8}$ "	.....
$\frac{7}{8}$ "	16883	14908	.55	21748	1.28	14903	22181	$\frac{1}{2}$ "	.....
$\frac{15}{16}$ "	21382	.....	.55	21749	1.28	14903	22181	.....	$\frac{3}{4}$ "
1"	16884	14910	.55	21771	1.28	14903	22181	.....	.....
$1\frac{1}{16}$ "	21875	22953	.72	22809	1.28	14903	22181	.....	.....
$1\frac{1}{8}$ "	16885	14912	.72	21772	1.28	14903	22181	$\frac{3}{4}$ "	.....
$1\frac{3}{16}$ "	17678	17679	.72	21773	1.28	14903	22181	.....	1"
$1\frac{1}{4}$ "	16886	14911	.72	21781	1.28	14904	22182	.....	.....
$1\frac{3}{8}$ "	16887	14913	.72	21782	1.28	14904	22182	1"	.....
$1\frac{1}{2}$ "	16888	14914	.72	21783	1.28	14904	22182	.....	$1\frac{1}{4}$ "
$1\frac{5}{8}$ "	16889	14915	.85	21784	1.28	14904	.....	.....	.....
$1\frac{3}{4}$ "	16890	14916	.85	21785	1.70	14904	.....	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "
$1\frac{7}{8}$ "	16891	14917	.85	21786	1.70	14904	.....	.....	.....
2"	16892	14918	1.02	21787	1.70	18028	.....	$1\frac{1}{2}$ "	.....
$2\frac{1}{16}$ "	16893	14919	1.02	21788	2.26	18028	.....	.....	.....
$2\frac{1}{8}$ "	16894	14920	1.02	21789	2.26	18028	.....	.....	.....
$2\frac{1}{4}$ "	16895	14922	1.20	21790	2.26	18028	.....	.....	2"
$2\frac{3}{8}$ "	16896	14921	1.20	21791	2.26	18028	.....	.....	.....
$2\frac{1}{2}$ "	16897	14923	1.20	21792	2.26	18028	.....	2"	.....
$2\frac{5}{8}$ "	16898	14924	1.28	21793	2.26	18028	.....	.....	.....
$2\frac{3}{4}$ "	16899	14925	1.28	21794	2.26	18028	.....	.....	$2\frac{1}{2}$ "
$2\frac{7}{8}$ "	16900	14927	1.28	21795	2.26	18028	.....	.....	.....
3"	16901	14926	1.40	21796	2.26	18028	.....	$2\frac{1}{2}$ "	.....
$3\frac{1}{8}$ "	16902	14930	1.40	21797	2.26	18028	.....	.....	.....
$3\frac{1}{4}$ "	16903	14929	1.40	21798	2.26	18028	.....	.....	3"
$3\frac{3}{8}$ "	.....	24172	1.40	.....	.....	18028	.....	.....	.....
$3\frac{1}{2}$ "	16904	14928	1.40	21799	2.26	18028	.....	3"	.....
$3\frac{5}{8}$ "	.....	24173	1.70	.....	.....	18028	.....	.....	.....
$3\frac{3}{4}$ "	.....	24174	1.70	.....	.....	18028	.....	.....	.....
$3\frac{7}{8}$ "	.....	24175	1.70	.....	.....	18028	.....	.....	.....
4"	16905	14932	1.70	21800	3.85	18028	.....	$3\frac{1}{2}$ "	.....

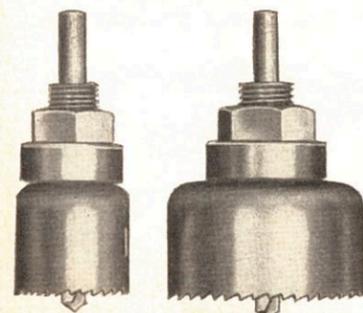
### Mandrels for $\frac{1}{4}$ ", $\frac{5}{16}$ " and $\frac{3}{8}$ " Drills

No. 22181	Mandrel with Pilot Drill (to fit $\frac{3}{4}$ " to $1\frac{1}{16}$ " Hole Saws)	\$1.45
No. 22182	Mandrel with Pilot Drill (to fit $1\frac{1}{4}$ " to $1\frac{1}{2}$ " Hole Saws)	1.45
No. 22192	Pilot Drill Only, for above Mandrels	.30
No. 23050	$\frac{5}{16}$ " Pilot Drill for the No. 23051 Hole Saw only	.30

\* The No. 23051 Hole Saw has a built-in Mandrel; no separate Mandrel supplied.

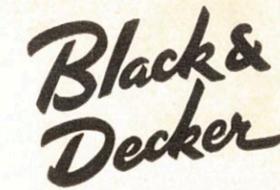
### Mandrels for $\frac{1}{2}$ " and Larger Drills

No. 14903	Mandrel with Pilot Drill (to fit $\frac{3}{4}$ " to $1\frac{1}{16}$ " Hole Saws)	\$1.40
No. 14904	Mandrel with Pilot Drill (to fit $1\frac{1}{4}$ " to $1\frac{1}{2}$ " Hole Saws)	1.50
No. 18028	Mandrel with Pilot Drill (to fit 2" to 4" Hole Saws)	1.70
No. 14935	Pilot Drill only, for above Mandrels	.30



**HOLE SAWS ON SMALL DRILL MANDRELS**

# "ELECTRIC TOOL HEADQUARTERS"



## Jacobs Drill Chucks and Keys

Chuck Size	Chuck and Key			Key Only*		Used on These Units
	Cat No.	Migrs. No.	Price	Cat. No.	Price	
$\frac{3}{16}$ " Threaded	23224	1-BS	\$5.50	3030-T	\$0.40	$\frac{3}{16}$ " Hornet (type A)
$\frac{1}{4}$ " Threaded	23226	1-B	5.00	3030-T	.40	Shorty Drills (all types); $\frac{3}{16}$ " Drill (A); $\frac{1}{4}$ " Holsun (A); $\frac{1}{4}$ " Junior (B)
$\frac{1}{4}$ " Tapered	3030	1-A	5.00	3030-T	.40	$\frac{1}{4}$ " Special (all types); $\frac{1}{4}$ " Junior (A)
$\frac{1}{4}$ " Tapered	7705	7	5.00	7705-L	.40	$\frac{1}{4}$ " Heavy-Duty (A to G)
$\frac{1}{4}$ " Threaded	23227	7-B $\frac{1}{2}$ -20 Tap	5.00	7705-L	.40	$\frac{1}{4}$ " Heavy Duty (H to L)
$\frac{1}{4}$ " Threaded	23762	7-B $\frac{3}{8}$ -24 Tap	5.00	7705-L	.40	$\frac{1}{4}$ " Standard (B, C, CP, CSP, D)
$\frac{5}{16}$ " Tapered	6133	30	5.50	6133-L	.50	$\frac{1}{4}$ " Holsun (B); H.-D. Holsun
$\frac{5}{16}$ " Threaded	23228	30-B	5.50	6133-L	.50	$\frac{5}{16}$ " (all types except Utility and H.-D. L to R)
$\frac{5}{16}$ " Tapered	23519	30-1A	5.50	6133-L	.50	$\frac{5}{16}$ " Utility; $\frac{5}{16}$ " H.-D. (L to R)
$\frac{5}{16}$ " Tapered	23926	318-Tap	8.00	6133-L	.50	$\frac{5}{16}$ " (No. 8) Taggun (Standard)
$\frac{3}{8}$ " Threaded	23229	32-B	5.75	4794-L	.50	$\frac{5}{16}$ " (No. 8) Taggun (Special)
$\frac{3}{8}$ " Tapered	7244	32-Drill	5.75	4794-L	.50	$\frac{3}{8}$ " Standard (all types); $\frac{3}{8}$ " Utility (M to U); $\frac{3}{8}$ " H.-D. (N to T)
$\frac{3}{8}$ " Tapered	4794	32-Tapper	5.75	4794-L	.50	$\frac{3}{8}$ " Utility (K, L); $\frac{3}{8}$ "
$\frac{3}{8}$ " Tapered	20454	381-Tap	10.00	4794-L	.50	$\frac{3}{8}$ " (No. 22) & No. 2 Tappers (Std.)
$\frac{1}{2}$ " Threaded	23230	33-B	6.50	4794-L	.50	$\frac{1}{2}$ " (No. 22) & No. 2 Tappers (Spl.)
$\frac{1}{2}$ " Tapered	15839	33	6.50	4794-L	.50	$\frac{1}{2}$ " Junior (B); $\frac{1}{2}$ " Standard (B); $\frac{1}{2}$ " Utility (E, F); $\frac{1}{2}$ " End Handle
$\frac{1}{2}$ " Tapered	9480	34	7.50	1534-L	.65	$\frac{1}{2}$ " Junior (A)
$\frac{5}{8}$ " Tapered	11329	3-A	9.00	1534-L	.65	$\frac{1}{2}$ " H.-D. (A to E); $\frac{1}{2}$ " Spl. (C, D)
$\frac{3}{4}$ " Tapered	9522	36	12.00	9522-L	.95	$\frac{5}{8}$ " Standard (D); $\frac{5}{8}$ " Utility (A); $\frac{5}{8}$ " Heavy Duty (A to D)

\* "T" indicates T-shaped key; "L" indicates L-shaped key.

## Keyless Chucks

Can be furnished as replacements on  $\frac{1}{4}$ ",  $\frac{5}{16}$ " and  $\frac{3}{8}$ " Drills, as follows:

Cat. No. & Type	For use on	Price*	Spacer	Price
12792 Tapered	$\frac{1}{4}$ " Special	\$5.75	.....	.....
10666 Tapered	$\frac{1}{4}$ " H.-D. (all types to G; GP to LP)	5.75	.....	.....
21758 Threaded	$\frac{1}{4}$ " Holsun and Hornet	5.75	21759	\$0.10
22029 Threaded	$\frac{1}{4}$ " H.-D. (H to L); $\frac{1}{4}$ " Standard (B, C, CP, CSP, D)	5.75	22032	.10
10800 Tapered	$\frac{5}{16}$ " H.-D. (all types to H; HP to RP)	6.75	.....	.....
22030 Threaded	$\frac{5}{16}$ " Utility (K to T); $\frac{5}{16}$ " H.-D. (L to R)	6.75	22032	.10
22031 Threaded	$\frac{3}{8}$ " Utility (M to U); $\frac{3}{8}$ " Standard	7.00	22032	.10

\* These are replacement prices. See listings under individual tools for prices as original equipment

## Heavy-Duty Chuck Keys

For  $\frac{1}{4}$ " Drills. Provide greater leverage for tightening and opening geared chucks. Also furnished with cord and belt clip

No. 1 Heavy-Duty Key fits No. 23224; No. 23226 and No. 3030 Chucks.	
No. 7 Heavy-Duty Key fits No. 23227; No. 23762 and No. 7705 Chucks.	
No. 26368 No. 1 Heavy-Duty Chuck Key only	\$0.40
No. 26369 No. 1 Heavy-Duty Key, with Cord and Clip	.60
No. 26370 No. 7 Heavy-Duty Chuck Key only	.40
No. 26371 No. 7 Heavy-Duty Key, with Cord and Clip	.60

## Chuck Key Chain

To fasten Chuck Keys to Drill or Cord. Standard on $\frac{1}{2}$ ", $\frac{3}{8}$ " and $\frac{1}{4}$ " Heavy-Duty Drills.	
No. 26684 Chuck Key Chain	\$0.15

## Right Angle Drilling Attachment

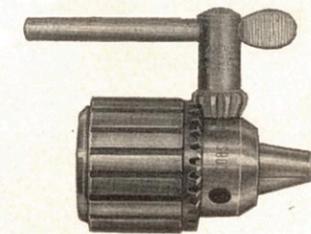
To reach out-of-the-way places in work on joists, etc. Equipped with 3-Jaw Geared Chuck, $\frac{1}{2}$ " capacity.	
No. 6222 Right Angle Attachment for $\frac{1}{2}$ " Special (C) and $\frac{5}{8}$ " Standard (P)	\$33.00
No. 17819 Right Angle Attachment for $\frac{1}{2}$ " Special (D); $\frac{1}{2}$ " Utility, and $\frac{1}{2}$ " Standard	33.00
No. 17820 Right Angle Attachment for $\frac{1}{2}$ " H.-D. (A to E); $\frac{3}{8}$ " Standard, and $\frac{3}{8}$ " Utility	33.00
No. 23574 Right Angle Attachment for $\frac{1}{2}$ " Junior (B)	33.00

## Feed Screw Attachment

Use for constant, steady feeding pressure. Mount in place of spade handle.	
No. 22555 For $\frac{1}{2}$ " Heavy-Duty (types B to E)	\$6.90
No. 19930 For $\frac{3}{8}$ ", $\frac{1}{4}$ " and $\frac{5}{16}$ " Utility; $\frac{5}{16}$ " Std. (D); $\frac{3}{4}$ " Std. (E); $\frac{1}{2}$ " Spec. (D)	6.90
No. 19960 For $\frac{3}{8}$ " H.-D. (types E to H); $\frac{3}{8}$ " H.-D. (types B to H); 1" H.-D. (types B to F); $1\frac{1}{4}$ " H.-D.	6.90
No. 10245 For $\frac{3}{8}$ " Heavy-Duty (type A) and previous models, $\frac{3}{4}$ ", $\frac{5}{8}$ " and 1"	6.90
No. 16962 For $\frac{3}{8}$ " Heavy-Duty (types B, C, D); $\frac{3}{4}$ " Std. (D)	6.90
No. 2140 For $1\frac{1}{2}$ " Drill only	15.25

## Gear Grease

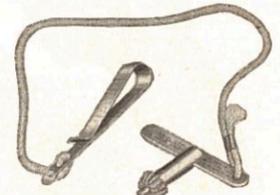
A gear lubricant, best suited to portable electric tool use. Recommended for most electric tools, except Saws, Sanders, Buffers, and others requiring special lubricant.	
No. 23638 1 lb. Container of Standard Gear Grease	\$0.30
No. 23639 2 lb. Container of Standard Gear Grease	.50
No. 23640 7 $\frac{1}{2}$ lb. Container of Standard Gear Grease	1.70



**DRILL CHUCK & KEY**



**KEYLESS CHUCK**



**KEY CORD & CLIP**



**RIGHT ANGLE DRILLING ATTACHMENT**



**FEED SCREW**



## "ELECTRIC TOOL HEADQUARTERS"

### PORTABLE ELECTRIC SANDERS

BLACK & DECKER Sanders are most versatile surfacing tools, used with a wide variety of attachments for sanding, grinding, wire brushing, rubbing and planing operations on metal, wood, stone, tile, concrete and many other surfaces.

These Sanders are fully powered with B. & D. "universal" motors; perfectly balanced, with reversible side handles for right or left hand use; spiral bevel gears of heat-treated alloy are matched and lapped; bearings are grease-sealed.

#### 7-Inch Standard Ball-Bearing Sander CATALOG No. 92

THE most popular general-service unit for maintenance and production. Switch, commutator and bearings are sealed against dust and dirt. Equipped with quick-acting spindle lock for changing discs and other attachments.

##### Specifications

Diam. Sanding Pad .7"; Spindle .5/8" diam.; 11 thread, right hand  
No-load Speed .4200 R.P.M. Overall Length (not including pad) .17 1/2"  
Net Weight .12 3/4 lbs.; Shipping .16 1/2 lbs.  
Standard Equipment — Spindle lock; 3-conductor cable and plug; reversible side handle; 7" moulded rubber pad; three 7" sanding discs (1 coarse, 1 medium, 1 fine); strap metal stand; clamp washer; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 92 (specify voltage)

Price, complete ..... \$55.00

#### 7-Inch Heavy-Duty Ball-Bearing Sander CATALOG No. 93

EXTRA power for continuous high-speed production. All vital parts sealed against dust and dirt. Equipped with convenient spindle lock.

##### Specifications

Diam of Sanding Pad .7"; Spindle .5/8" diam.; 11 thread, right hand  
No-load Speed .4200 R.P.M. Overall length (not inc. pad) .18"  
Net Weight .14 1/4 lbs.; Shipping .21 1/2 lbs.  
Standard Equipment—Spindle lock; 3-conductor cable and plug; reversible side handle; 7" heavy duty moulded rubber pad; three 7" sanding discs (1 coarse, 1 medium, 1 fine); strap metal stand; clamp washer; "universal" motor.

Standard Voltage—110; also available for 220 or 250 volts.

Catalog No. 93 (specify voltage)

Price, complete ..... \$67.00

#### 9-Inch Heavy-Duty Ball-Bearing Sander CATALOG No. 433

POWERED for heavy-duty production, faster schedules, more output per tool. Switch, commutator and bearings sealed against dust and dirt. Equipped with spindle-lock. Recommended for wire cup brushes, saucer grinding wheels and planer heads.

##### Specifications

Diam. of Sanding Pad, 9"; Spindle, 5/8" diam.; 11 thread, right hand.  
No-load Spindle Speed .4000 R.P.M.\*  
Weight: Net .18 3/4 lbs.; Shipping .25 lbs.  
Overall Length (not including pad) .19 1/2"  
Standard Equipment—Spindle lock; 9" moulded rubber pad; three 9 1/8" abrasive discs (1 coarse, 1 medium, 1 fine); clamp washer; reversible side handle; strap metal stand; suspension eye-bolt; 3-conductor cable and plug (3rd wire for grounding); "universal" motor.

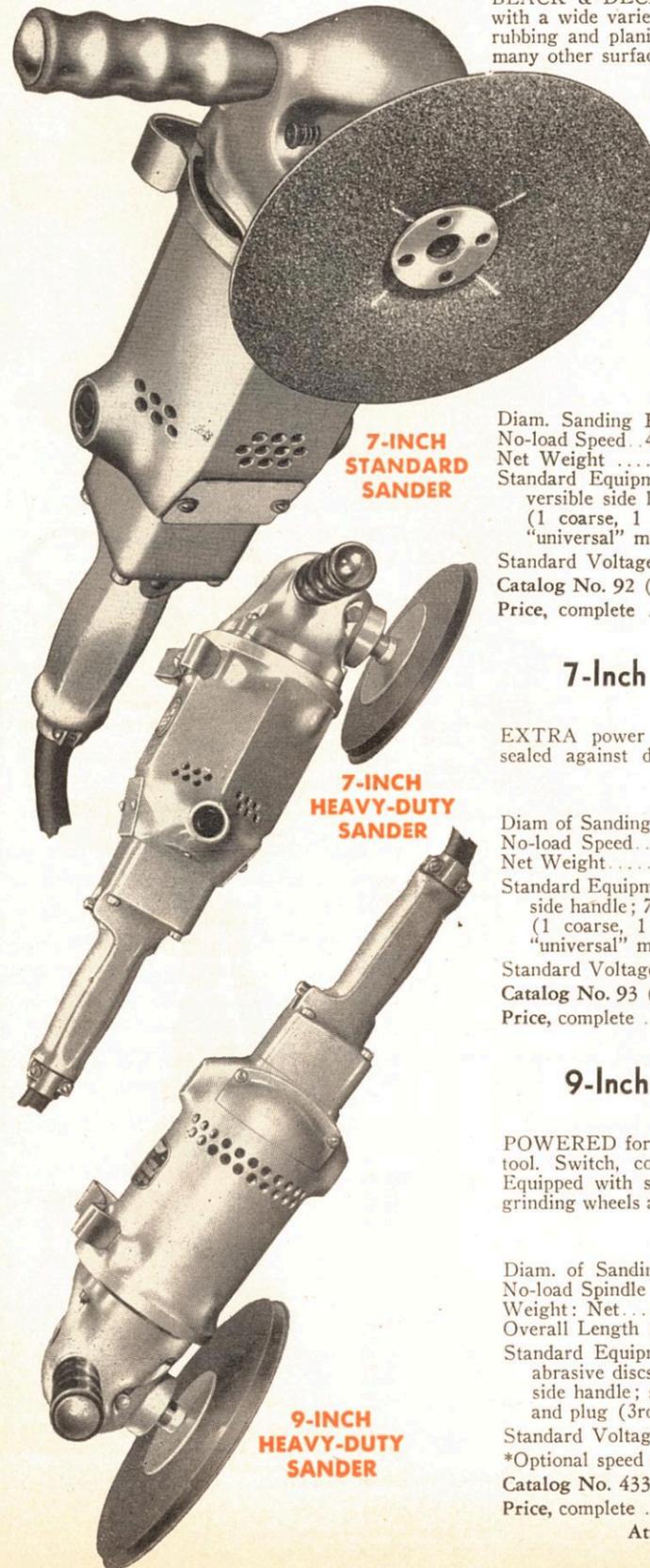
Standard Voltage—110; also available for 220 or 250 volts.

\*Optional speed of 5000 R.P.M. available at no extra cost.

Catalog No. 433 (specify voltage)

Price, complete ..... \$80.00

Attachments and Supplies, Pages 14 and 15.



7-INCH  
STANDARD  
SANDER

7-INCH  
HEAVY-DUTY  
SANDER

9-INCH  
HEAVY-DUTY  
SANDER

## "ELECTRIC TOOL HEADQUARTERS"

**Black & Decker**

### Automatic Electric Buffer CATALOG No. 97

THE automatic-feed principle greatly speeds up the Power-Glaze operation by applying the liquid directly to the car surface. A metal reservoir at the handle end holds a supply of Power-Glaze, and is equipped with a plunger pump (operated with the thumb) which feeds the liquid by means of a tube, through the hollow spindle of the Buffer, directly to the car surface.

##### Specifications

Pad Diameter .....7"  
Spindle Diameter .5/8"-11 thread  
Speed: No-load .1400 R.P.M.  
Weight: Net .9 1/2 lbs.  
Shipping .18 1/2 lbs.  
Overall Length (not including pad) .16 1/4"

Standard Equipment — Automatic Electric-Buffer complete with reservoir, plunger pump and tube; 3-conductor cable and plug; rocker-type switch; 7" moulded rubber pad; 7" sponge rubber cushion pad; lambswool buffing bonnet; reversible side handle; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 97 (specify voltage)

Price, complete ..... \$65.00

### Standard Electric Buffer CATALOG No. 96

THIS unit contains all the features of the Automatic Electric Buffer except that it does not have the automatic feed and reservoir for liquid. The power and torque factors make the Standard Electric Buffer an ideal unit for rubbing-down operations on new paint jobs, and for cleaning all types of metal surfaces.

##### Specifications

Pad Diameter .....7"  
Spindle Diameter .5/8"-11 thread  
Speed: No-load .1400 R.P.M.  
Weight: Net .8 1/4 lbs.  
Shipping .17 1/4 lbs.  
Overall Length (not including pad) .14 1/4"

Standard Equipment — Standard Electric-Buffer complete; 3-conductor cable and plug; rocker-type switch; 7" moulded rubber pad; 7" sponge rubber cushion pad; lambswool buffing bonnet; reversible side handle; strap metal stand; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 96 (specify voltage)

Price, complete ..... \$54.00

### Lambswool Buffing Pad and Bonnet

For cleaning and polishing lacquered finishes and for obtaining final high lustre after spraying. Attached direct to flexible pad of Buffer.

No. 31553	Lambswool Buffing Pad for 7" Buffer or 7" Sander, individually boxed, each.....	\$1.33
No. 13086	Lambswool Buffing Pad for 7" Buffer or 7" Sander, packed 6 to a carton, each.....	1.22
No. 13087	Lambswool Buffing Bonnet with Hood and Drawstring.....	1.95
No. 22176	Lambswool Buffing Bonnet (for use with Sponge Rubber Cushion).....	2.45
No. 22174	7" Sponge-rubber Cushion.....	.90
No. 22191	Long Clamp Washer only, for Sponge-rubber Cushion.....	.30

### Power-Glaze

A special car-body cleaning and buffing compound, chemically and mechanically correct for use with Buffers and Sander-Buffer. Cleans, burnishes and seals the surface in one quick, easy operation, leaving a hard, glazed surface with pores sealed against oxidation and corrosion.

Cat. No. 31461 Power-Glaze, 1-gallon jar..... \$2.85

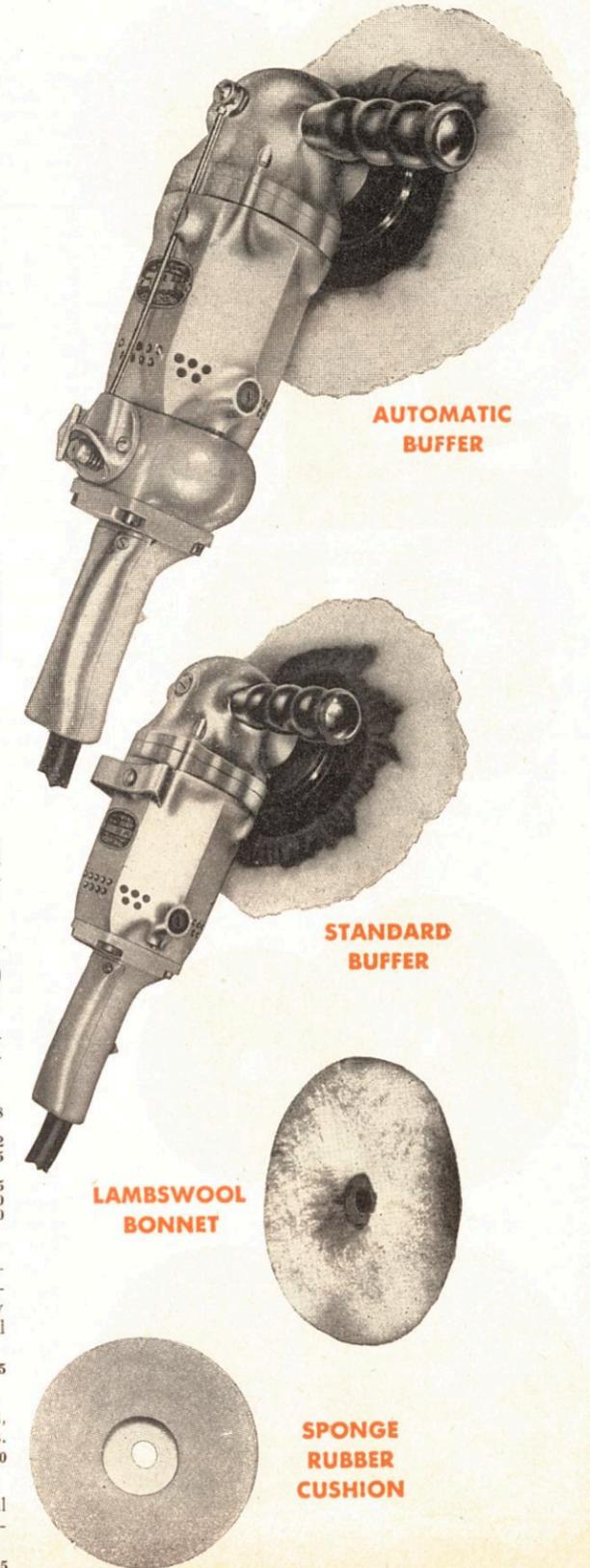
### Power-Wax

For those desiring the additional high gloss of a wax finish, Black & Decker Power Wax is available for use with Buffers. Cat. No. 31463 Power Wax, Quart Can..... \$1.50

### Power Rubbing Compound

Applied with Buffer equipped with Pile Fabric Buff, will quickly remove "orange peel" and spray pits from newly lacquered surfaces, giving a smoother, more uniform surface.

Cat. No. 31459 Power Rubbing Compound, 1-gallon jar..... \$2.25



AUTOMATIC  
BUFFER

STANDARD  
BUFFER

LAMBSWOOL  
BONNET

SPONGE  
RUBBER  
CUSHION



## "ELECTRIC TOOL HEADQUARTERS"

### Sander and Buffer Attachments and Supplies

#### Sanding Discs

SANDING and abrasive discs can be furnished in a variety of grades and grains. Discs designated as "Open Grain" are especially suited for wood sanding (Nos. 16, 24 and 36 for removing paint and varnish); "Closed Grain" discs are for metal work.

Grade	7-Inch Sanding Discs			9 1/4-Inch Sanding Discs		
	Cat. No.	Price Each	Price Per 100	Cat. No.	Price Each	Price Per 100
Closed Grain						
*16	17815	\$0.32	\$31.90	26458	\$0.43	\$42.58
24	9990	.25	24.82	10719	.34	33.07
30	18488	.25	24.56	18492	.33	32.77
36	9991	.25	24.30	10720	.32	31.95
50	9992	.23	22.70	12153	.31	30.24
60	18489	.22	21.56	18493	.29	28.79
80	10485	.20	19.85	10721	.28	27.10
100	12145	.20	19.85	12149	.28	27.10
120	12146	.20	19.85	12150	.28	27.10
150	12147	.20	19.85	12151	.28	27.10
180	12148	.20	19.85	12152	.28	27.10
Open Grain						
*16	15134	.32	31.90	15137	.43	42.58
24	15135	.25	24.82	15138	.34	33.07
36	15136	.25	24.30	15139	.32	31.95
50	12011	.23	22.70	12131	.31	30.24
60	18491	.22	21.56	18495	.29	28.79
80	12012	.20	19.85	12132	.28	27.10
120	12013	.20	19.85	12133	.28	27.10

\* No. 16 Discs are packed 10 to a box; all other discs packed 25 to a box.

#### Abrasive Disc Trimmer

FOR complete use of abrasive discs, this Disc Trimmer cuts them down to smaller sizes as the outer edges are worn out. Adjustable center-hole pilot on calibrated swinging arm; cutting wheel mounted on one-piece spindle and crank; base casting is screwed to bench. Takes discs of 9 1/8" maximum diameter and either 7/8" or 1/2" center-hole; trims down to 3" diameter.

No. 21808 Abrasive Disc Trimmer, complete..... \$6.90  
No. 21753 Replacement Cutter..... .40

#### Replacement Sander Pads and Parts

All pads and replacement assemblies are interchangeable on all Sanders and Buffers as the spindle diameter and thread is the same for all units of this group; 5/8"-11 thread.

No. 17687 7" Moulded Rubber Pad..... \$3.00  
No. 18329 7" Heavy Duty Moulded Rubber Pad..... 3.50  
No. 18330 9" Moulded Rubber Pad..... 5.50  
No. 14237 3" Flexible Pad, complete..... 3.50  
No. 14551 Replacement Pad for 3" Flexible Pad..... 1.15  
No. 22589 5" Moulded Rubber Pad..... 2.50  
No. 10279 Clamp Washer..... .25

#### "Koolflex" Backing Pads

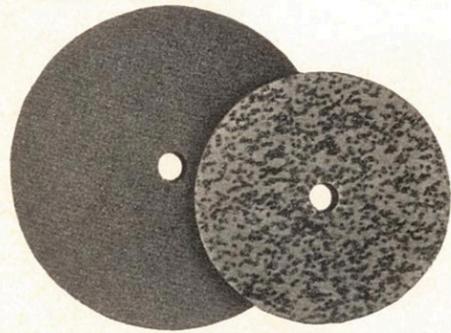
LIGHT-WEIGHT, fabric-base, plastic-bonded discs provide greater flexibility, cooler operation and longer life on sanding applications. Used with No. 22589 Moulded Rubber Pad. For maximum flexibility, use one "Koolflex" pad with corresponding size abrasive disc. For "feathering" finish, use No. 31000 "Koolflex" pad with 9" abrasive. For more rigid backing use both sizes of "Koolflex" pads with 9" abrasive. Use with Special Clamp Washers listed below.

No. 31000 6 3/4" "Koolflex" Backing Pad..... \$1.50  
No. 31001 8 1/2" "Koolflex" Backing Pad..... 2.00  
No. 31003 Special Clamp Washer, to be used with either one of the "Koolflex" Pads..... .30  
No. 31004 Extra-long Clamp Washer, to be used when both "Koolflex" Pads are used..... .30

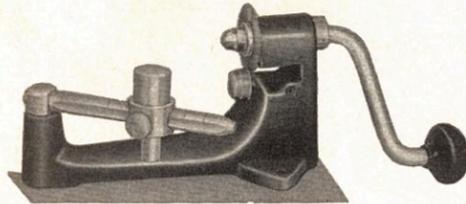
#### Rubbing Pads

For rubbing down orange peel in lacquer finishes, etc. Attaches direct to flexible pad of Buffer or Sander.

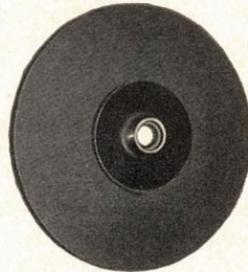
No. 20619 7" Pile Fabric Rubbing Pad..... 1.40  
No. 21207 9 1/4" Pile Fabric Rubbing Pad..... 2.30  
No. 10661 Felt Rubbing Pad for 7" Buffer or 7" Sander..... 1.45  
No. 10709 Felt Rubbing Pad for 9" Sander..... 1.95



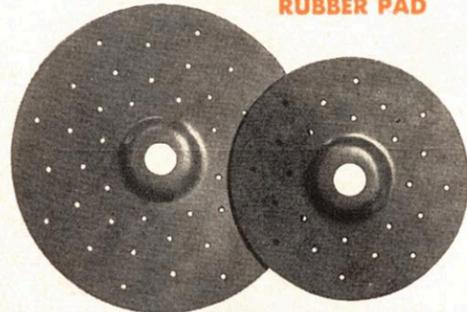
SANDING DISCS



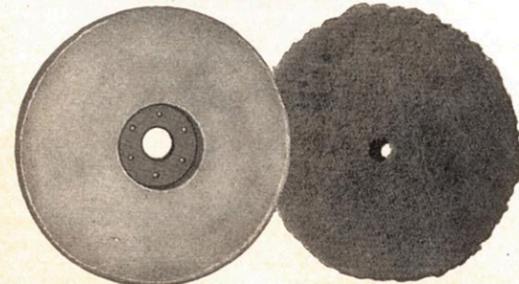
DISC TRIMMER



RUBBER PAD



KOOLFLEX PADS



FELT RUBBING PADS PILE FABRIC RUBBING PADS

## "ELECTRIC TOOL HEADQUARTERS"

### Sander and Buffer Attachments and Supplies



TAKE full advantage of the many types of surfacing operations that can be done with Black & Decker Sanders. The attachments below will increase the usefulness of these versatile time-savers. Each attachment threads directly onto the ground-thread spindle of the Sander, replacing the flexible backing pad.

#### Wire Cup Brushes

Made in our own plant, for use on Standard and Heavy-Duty Sanders. Well built of finest quality wire to give long service on the toughest kinds of cleaning operations. Use these Wire Cup Brushes for removing rust and scale from all metal surfaces; for cleaning tanks and boat hulls; for taking off old paint; for cleaning castings and structural metal. The hub of the Wire Cup Brush is fitted with a 5/8"-11 thread bushing, which threads on the Sander spindle.

No. 18056 4" Wire Cup Brush (.020"-crimped) for 7" Standard Sander.....\$2.25  
No. 24353 5" Wire Cup Brush (.020"-smooth) for 7" Heavy-Duty Sander... 2.75  
No. 12398 6" Wire Cup Brush (.022"-crimped) for 9" Heavy-Duty Sander.. 3.25

#### Saucer Grinding Wheel

For some metal grinding applications, the Sander equipped with a Saucer Grinding Wheel does smoother and faster work than a Portable Grinder. Saucer Wheels have 5/8"-11 thread bushing to fit spindle direct.

No. 24050 4" Saucer Grinding Wheel (for 7" Standard Sander)... \$5.50  
No. 23444 5" Saucer Grinding Wheel (for 7" Heavy-Duty Sander)... 6.90  
No. 18039 6" Saucer Grinding Wheel (for 9" Heavy-Duty Sander)... 8.35  
No. 17329 Skirt Wheel Guard (for Heavy-Duty Sander)..... 5.00

#### Cup Grinding Wheel

For smoothing welds and other metal surfaces. Use No. 10711 Spindle Extension to attach to Sander.

No. 10663 4" Cup Grinding Wheel..... \$1.95  
No. 10711 Spindle Extension ..... 2.00

#### Rotary Planer Heads

Perform many wood surfacing and shaping operations formerly done with jack-plane and adz. Two types of planer head are supplied; one with rounded surfacing for deep gouging, the other with flat face for surfacing and semi-finishing. These heads are interchangeable on the spindle of the 7" Heavy-Duty and 9" Heavy-Duty Sanders.

No. 14743 Set of two 5" Planer Heads, one Gouging and one Surfacing, complete with blades, packed in neat oak box.... \$23.00  
No. 14734 5" Gouging Planer Head, complete with blades..... 11.00  
No. 14735 5" Surfacing Planer Head, complete with blades..... 11.00  
No. 14733 Replacement Blade (same for either head), Set of 3.... 1.90

#### Miscellaneous Attachments

Suspension Eye-Bolt for all Sanders (except "Junior") which are drilled and tapped. No. 2473, price, each..... \$ .25  
Strap-metal Stand, to support Sander when not in use. Standard equipment on all Sanders (except "Junior") and Buffers (except Automatic). No. 22411, price..... \$ .30  
Sander Spindle Adapter — A bushing, threaded inside and outside to adapt the above-listed Sander pads and attachments to Sanders with 3/4" diameter threaded Spindles. No.30571, price..... \$1.35

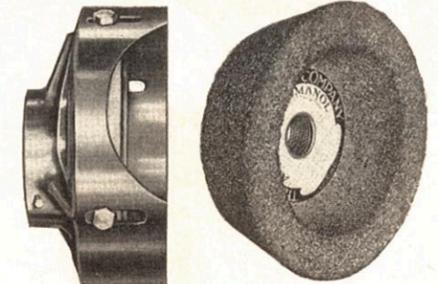
#### Special Lubricant for Sanders

The spiral bevel gears in all Black & Decker Sanders and Buffers require a lubricant of different viscosity than that recommended for Drills and other Portable Tools. This special lubricant is available in convenient containers.

No. 24380 1-lb. container Special Lubricant..... \$ .55  
No. 24381 2-lb. container Special Lubricant..... 1.00  
No. 24382 7-1/2lb. container Special Lubricant..... 3.50



WIRE CUP BRUSHES



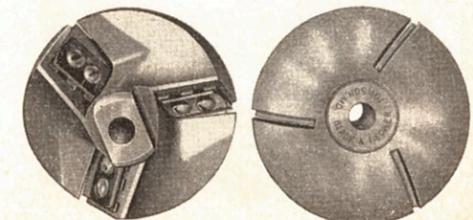
SKIRT GUARD

SAUCER WHEEL



CUP WHEEL

SPINDLE EXTENSION



ROTARY PLANER HEADS



## "ELECTRIC TOOL HEADQUARTERS"

### Electric PORTO-SHEARS\*

PORTO-SHEARS will cut all types of sheet metal quickly, easily and accurately. A simple adjustment of the blade clearance adapts the Porto-Shear to any thickness up to its rated capacity in sheet steel and galvanized iron; about one gage thinner in Monel and stainless; 50% above rating in sheet copper, aluminum, lead and other non-ferrous metals. Porto-Shears are also used successfully for cutting thin sections of laminated wood and sheet plastics, with slight changes in blade contours.

A rapid reciprocating action of the vertical blade against the stationary horizontal blade makes a clean, smooth cut without burrs or ragged edges on either piece. Porto-Shears easily follow a straight line or irregular pattern laid out on the sheet, *because the cutting blade is always visible*. The patented shoe construction permits cutting to a small radius and the shoe contour indicates the correct cutting angle. The Porto-Shear feeds easily and only a light forward pressure is required to cut at a surprisingly rapid speed.

Both Porto-Shears are full ball-bearing equipped (except the eccentric, which operates in a phosphor-bronze block) and powered by "universal" motors which operate on either alternating or direct current. Accessible set-screws make blade adjustments simple and blades can be reground without special fixtures. Overall simplicity and sturdy construction reduce service replacements and increase the useful life of Porto-Shears.

### 18-Gage PORTO-SHEAR

CATALOG No. 258

Motor and commutator housings of pressed steel; reduce the diameter, overall length and weight of this unit, with improved operating balance and ease of handling. Motor housing is small enough to serve as handle, eliminating the need for an extra handle.

#### Specifications

Shearing Capacity in Steel (U. S. Std.).....18 gage.  
Cutting Speed (Strokes per minute): No-load.....2,500.  
Minimum Cutting Radius..... $\frac{3}{4}$ " Overall Length.....9 $\frac{1}{8}$ ".  
Weight: Net.....3 $\frac{1}{2}$  lbs.; Shipping.....8 lbs.  
Standard Equipment — 3-wire cable and plug; slide switch in commutator end-cap; one each No. 20724 and No. 19916 blades with locking and set screws; one set screw wrench; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 258 (Specify voltage)

Price, complete .....\$68.00

### 16-Gage PORTO-SHEAR

CATALOG No. 259

Balance and control of this larger, more powerful Shear are improved with operating handle that can be held in any position, over-top to rear-end. Handle contains instant-release trigger switch with locking pin for continuous use.

#### Specifications

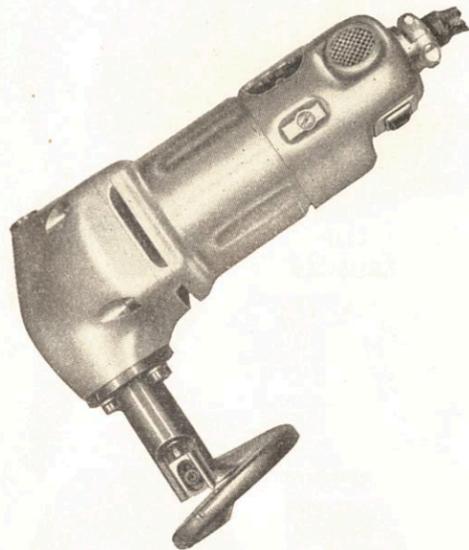
Shearing Capacity in Steel (U. S. Std.).....16 gage.  
Cutting Speed (Strokes per minute): No-load.....2,500.  
Minimum Cutting Radius..... $\frac{3}{4}$ " Overall Length.....12 $\frac{1}{8}$ ".  
Weight: Net.....8 $\frac{1}{2}$  lbs.; Shipping.....10 $\frac{1}{2}$  lbs.  
Standard Equipment — 3-wire cable and plug; trigger switch with locking pin; one each No. 20724 and No. 19916 blades with locking and set screws; one set screw wrench; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 259 (Specify voltage)

Price, complete .....\$78.00

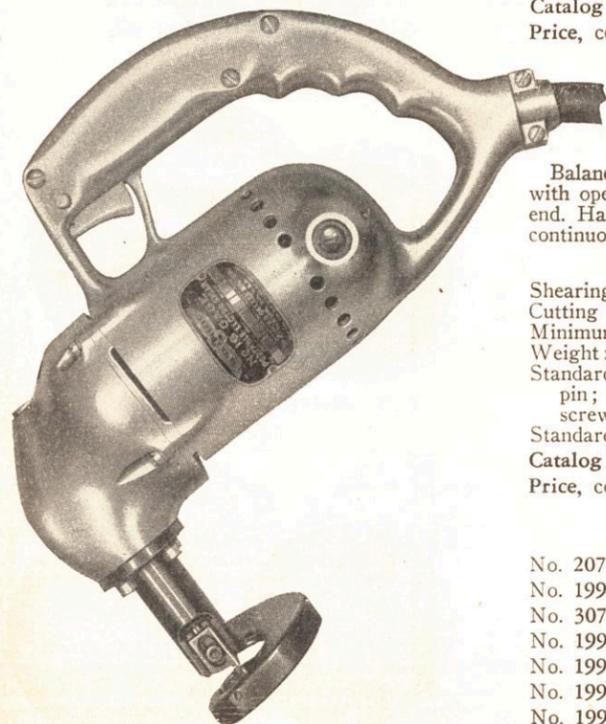
#### Replacement Parts (for both Shears)

No. 20724 Vertical Shear Blade.....\$1.00  
No. 19916 Horizontal Stationary Blade.....1.00  
No. 30746 Socket Head Locking Screw for Vertical Blade......10  
No. 19937 Socket Head Locking Screw for Horizontal Blade......10  
No. 19912 Nut for Horizontal Blade......10  
No. 19907 Adjusting Stop-pin Screw for Vertical Blade......25  
No. 19906 Adjusting Set Screw for Horizontal Blade......03

\* Trade Mark Reg. U. S. Pat. Off.



18-GAGE PORTO-SHEAR



16-GAGE PORTO-SHEAR

## "ELECTRIC TOOL HEADQUARTERS"

Black & Decker

### No. 95 VACKAR\*

#### Automotive and Industrial Electric Vacuum Cleaner

A SUPER-POWERED, compact, self-contained vacuum cleaner for both automotive and industrial use. With both inlet and outlet hose connections, it can be used as a vacuum cleaner or a blower. Ideal for cleaning floors, walls, ceilings and other parts of the plant. Recovers rivets, metal and similar material. Has hurricane blower action for cleaning motors, transformers, etc.

Baffle plates and filters adapt the No. 95 Vackar to wet cleaning and to removing excess moisture after scrubbing upholstery and carpets. The motor and mechanism are completely protected from moisture and unharmed under such use. Makes an ideal all-purpose cleaner for heavy-duty use in garages, super-service stations, wash-racks, etc.

No. 95 Vackar "tows by the hose" and rolls easily over rough floors on ball-bearing swivel casters. Its 15-foot flexible hose easily reaches out-of-the-way corners. The dirt compartment, with a capacity of 3.7 gallons, is quickly cleaned. Moves 60 cubic feet of air per minute at a speed of 2 miles per minute.

#### Specifications

Dimensions: Height.....28"; Diam. Top.....16 $\frac{1}{4}$ "  
Diam. Body.....13 $\frac{1}{4}$ "; Diam. Base.....18 $\frac{1}{2}$ ".

Scaled vacuum pull......65"

Vacuum with 1" orifice......18"

Mechanism: "Universal" motor drives 3-stage centrifugal fan moving 60 cu. ft. of air per minute. Baffle plates prevent air slippage.

Weight: Net.....52 lbs.; Shipping.....67 lbs.

Standard Equipment — 15 feet of 1 $\frac{1}{2}$ " flexible hose with 2 swivel connections; 3-wire cable and plug; wide upholstery nozzle; detachable brush; flat-tube nozzle; 3 ball-bearing swivel casters; brackets for coiling hose and cable; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 95 (specify voltage)

Price, complete .....\$145.00

\* Trade-Mark Reg. U. S. Pat. Off.

#### No. 95 Vackar Replacement Attachments

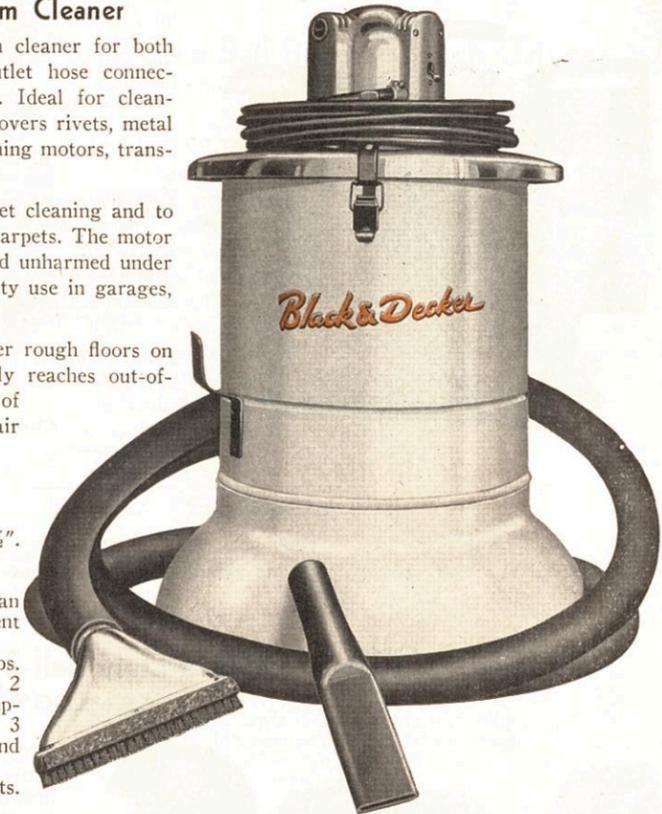
No. 23902 15-foot Flexible Hose.....\$12.00  
No. 23891 Wide Upholstery Nozzle.....2.55  
No. 23903 Flat Tube Nozzle......50  
No. 18186 6 $\frac{1}{2}$ " Upholstery Brush......95  
No. 23676 Set of 3 Ball Bearing Casters.....3.45

#### Additional Industrial Attachments

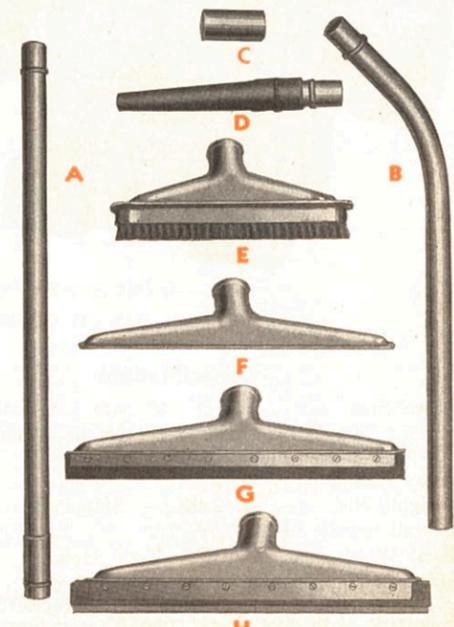
TO EXPAND the use of the Vackar to industrial cleaning, a special group of attachments is listed below. The various nozzles fit the long rigid operator's handle, which is in two parts (Items A and B). This handle requires the Coupling Adaptor to fit the hose of the No. 95 Vackar. The Blower Tool also uses the Coupling Adaptor to fit the No. 95 Vackar hose.

No. 24834 Operator's Handle—Straight Section\* (A).....\$ 4.60  
No. 24835 Operator's Handle—Curved Section\* (B).....4.60  
No. 26081 Soft Rubber Blower Tool\* (D).....2.10  
No. 24836 Coupling Adaptor for No. 95 Vackar (C).....1.30  
No. 25913 Extension Coupling, to join 2 Hose Sections..1.15  
No. 24833 14" Floor Nozzle\*\* (F).....6.30  
No. 26084 14" Felt Floor Tool\*\* (G).....11.50  
No. 26086 Replacement Felt Strip for No. 26084, Set of 2.....1.90  
No. 26083 10" Carpet and Floor Brush Tool\*\* (E).....12.95  
No. 26600 Replacement Nozzle for No. 26083.....8.00  
No. 26518 Replacement Brush for No. 26083.....4.95  
No. 26085 14" Squeegee Nozzle\*\* (H).....15.25  
No. 26087 Replacement Wide Rubber Strip for No. 26085, Set of 2.....2.55  
No. 26088 Replacement Narrow Rubber Strip for No. 26085, Set of 2.....2.55

† Price includes Set of No. 26087 and Set of No. 26088.  
\* Use with Adaptor No. 24836 for No. 95 Vackar.  
\*\* Fit on end of Operator's Handle: Nos. 24834-24835.



No. 95 "VACKAR"



"VACKAR" TOOLS



**"ELECTRIC TOOL HEADQUARTERS"**

**6" Junior Bench Grinder**

A STURDY, well-balanced Bench Grinder for practical shop use. Powered by a standard Black & Decker constant speed 1/4-H.P. motor.

Rotor and wheel spindle mounted on full-size bearings; special protective sleeves covering these bearings. Guards are cast integral with motor housings.

Tool rests are locked in base grooves with wing nuts, and adjusted for wheel wear.

**Specifications**

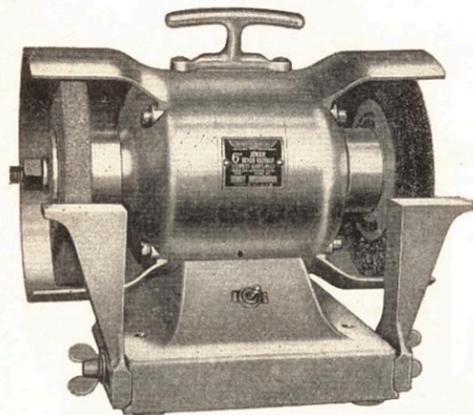
Wheel size . . . . . 6" diam. x 3/4" face x 1/2" hole.  
 Motor—Not Universal. Supplied for all standard A.C. single-phase voltages and cycles only.  
 Not available for Direct Current.  
 Motor rating . . . . . 1/4 H.P. (except 25 cycle, 1/2 H.P.)  
 Weight: Net . . . . . 31 1/2 lbs. Shipping . . . . . 34 lbs.  
 Overall spindle length . . . . . 12 1/4" Overall height . . . . . 10"  
 Height to center-line of spindle . . . . . 5 1/4"  
 Standard Equipment: 3-conductor cable and plug; toggle switch in base; carrying handle, 4 rubber feet, 2 wheel guards, 2 tool rests, 1 medium grinding wheel, 1 wire wheel brush.

Price, complete (specify voltage, phase and cycle) . . . . . **\$27.00**  
 No. 18614 Metal End Cover for 6" Junior Wheel Guard . . . . . \$ 1.00

**CURRENT SPECIFICATIONS AND CATALOG NUMBERS:**

Phase	Cycles	R.P.M.	Standard Unit Catalog Number	Available Voltages
1	60	3600	66	110, 220, 250
	50	3000	66	110, 220, 250
	40	2400	65	110, 220
	25	1500	64	110, 220

Give complete current characteristics of your power supply when ordering.



**6-INCH JUNIOR BENCH GRINDER**

**NEW 6" Heavy Duty Ball-Bearing Bench Grinder**

CATALOG No. 67

A COMPLETELY new Bench Grinder, designed and styled for better service on heavy-duty grinding, tool sharpening, wire brushing and buffing. Modern streamlined housings of die-cast zinc improve working clearances and decrease weight. Strong steel wheel guards and covers give extra protection and meet all safety requirements; the wheel guards are wide enough to accommodate a standard 3-section wire wheel brush without any change in the guard. U-shaped tool rests fit around the wheel for added support in tool grinding and are adjustable for wheel wear. A 2-pole push-button switch is set in a recess in the housing where it is easy to reach, but completely protected against damage or accidental contact. A machined hole is provided in the base for mounting attachments commonly used on a Bench Grinder.

The new 6" Heavy-Duty Bench Grinder can be bolted to a bench or mounted on the new streamlined pedestal which makes a complete Grinder unit that can be spotted anywhere in the shop. Equipped with two 6" grinding wheels; medium grade for rough, fast work; fine grade for finish grinding and tool sharpening.



**CURRENT SPECIFICATIONS AND CATALOG NUMBERS:**

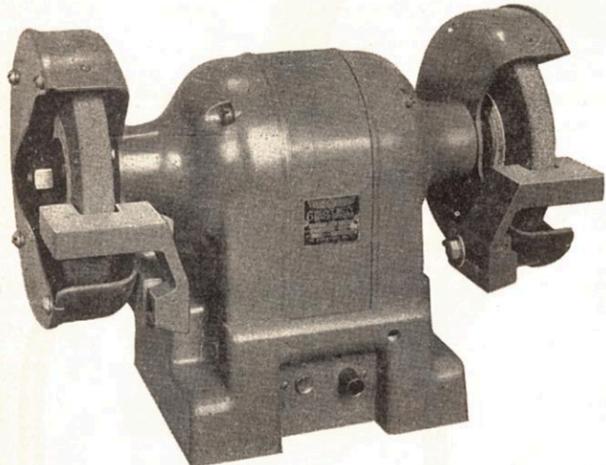
Phase	Cycles	R.P.M.	Standard Grinder Cat. No.	Available Voltages
1	60	3600	67	110, 220
	50	3000	67	110, 220

Give complete current characteristics of your power supply when ordering.

**Extra Equipment**

No. 30700 Pedestal, with water pot . . . \$22.00  
 No. 6405 1/2" Threaded Chuck (R.H.) 7.50

See Pages 22, 23 and 26 for Attachments and Supplies.



**6-INCH HEAVY-DUTY BENCH GRINDER**

**Specifications**

Wheel Size . . . . . 6" diam. x 3/4" face x 1/2" hole  
 Motor: Not "Universal." See table of available currents, voltages and spindle speeds.

Motor Rating . . . . . 1/2 H.P.  
 Weight: Net . . . . . 42 lbs.; Shipping . . . . . 45 lbs.  
 Overall Spindle Length . . . . . 15"  
 Total Width . . . . . 16" Total Height . . . . . 10 7/8"

Standard Equipment: 3-wire cable and plug; 2-pole push-button switch mounted in base; two enclosed steel wheel guards with tool rests; two 6" grinding wheels, one medium, one fine.

Cat. No. 67 (for listed A.C. currents only) . . . **\$45.00**

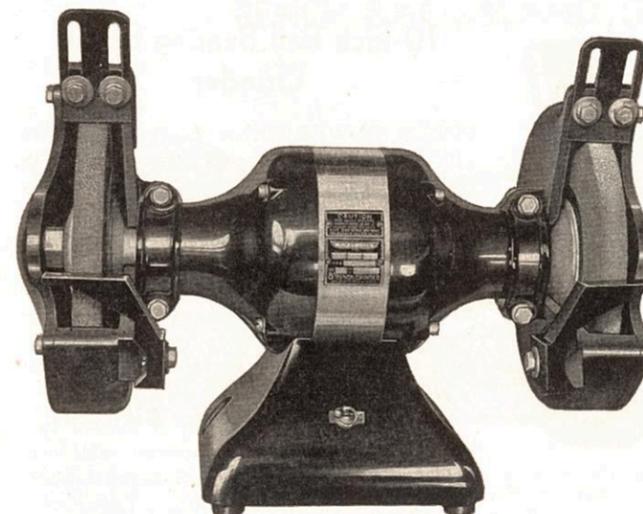
**"ELECTRIC TOOL HEADQUARTERS"**



**8-Inch Ball Bearing Bench Grinder**

Standard Model

FULL ONE-HALF horsepower motor, of the constant speed type. Long spindle, with grease-sealed ball bearings near wheels for smooth operation. Tapered spindle housings give ample room around wheels for large and odd-shaped work. Completely enclosed wheel guards, with adjustable tool-rests and spark-shields, meet all safety regulations. Guards are adjustable radially; tool-rests and spark-shields adjustable for wheel wear. Guards are drilled and tapped for eye shields which are available at small extra cost. Equipped with two 8" wheels: one medium, for fast, rough grinding; one fine, for finish grinding and tool sharpening.



**8-INCH BENCH GRINDER**

**Specifications**

Wheel size: 8" diameter x 7/8" face x 5/8" hole.  
 Motor: Not "universal", not available for direct current. See table of available currents below.

Motor Rating: 1/2 H. P. (except 25 cycle, which is 1/3 H. P.).  
 Weight: Net . . . . . 72 lbs.;  
 Shipping . . . . . 82 lbs. Overall Spindle Length . . . . . 17 3/4".  
 Height: Total . . . . . 12"; to C/L Spindle . . . . . 7 1/4".

Standard Equipment — On 1-phase units, 3-wire cable and plug; on 2-phase and 3-phase units, lead wires for permanent connection; toggle switch in base; rubber feet; two enclosed wheel guards with tool rests and spark shields; two 8" grinding wheels, one medium, one fine.

Price, (see table below for Cat. Nos. and available currents) . . . . **\$80.00**

**Combination Model**

FOR SHOPS that wish to do wire-brushing and grinding on the same machine. Equipped with one extra-wide enclosed guard (without tool rest or spark shield) and one No. 21405 8" Wire Wheel Brush; one standard guard (with tool rest and spark shield) and one 8" medium grinding wheel. Other specifications same as Standard unit.

Price, (see table below for Cat. Nos. and available currents) . . . . **\$85.00**

**CURRENT SPECIFICATIONS AND CATALOG NUMBERS:**

Phase	Cycles	R.P.M.	Standard Grinder Cat. No.	Combination Grinder Cat. No.	Available Voltages
1	60	3600	74	74-C	110, 220, 250
	50	3000	74	74-C	110, 220, 250
	40	2400	71	71-C	110, 220, 250
	25	1500	69	69-C	110, 220, 250
2	60	3600	75	75-C	110, 220, 250, 440, 550
	50	3000	75	75-C	110, 220, 250, 440, 550
	40	2400	72	72-C	110, 220, 250, 440, 550
3*	60	3600	76	76-C	110/220, 220/440, 250/500, 550
	50	3000	76	76-C	110/220, 220/440, 250/500, 550
	40	2400	73	73-C	110/220, 220/440, 275/550
	25	1500	70	70-C	110/220, 220/440, 275/550

\* Three-phase voltages shown in combination are reconnectable for either voltage. Give complete current characteristics of your power supply when ordering.

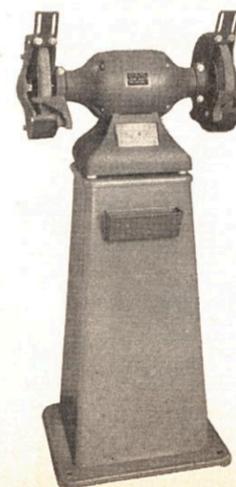
**Extra Equipment**

No. 30700 Pedestal with water pot . . . . . \$22.00  
 No. 18465 Wide Wheel Guard (R. H.) for 8" Wire Wheel Brush . . . . . 5.00

See Pages 21, 22, 23 and 26 for other Attachments and Supplies.



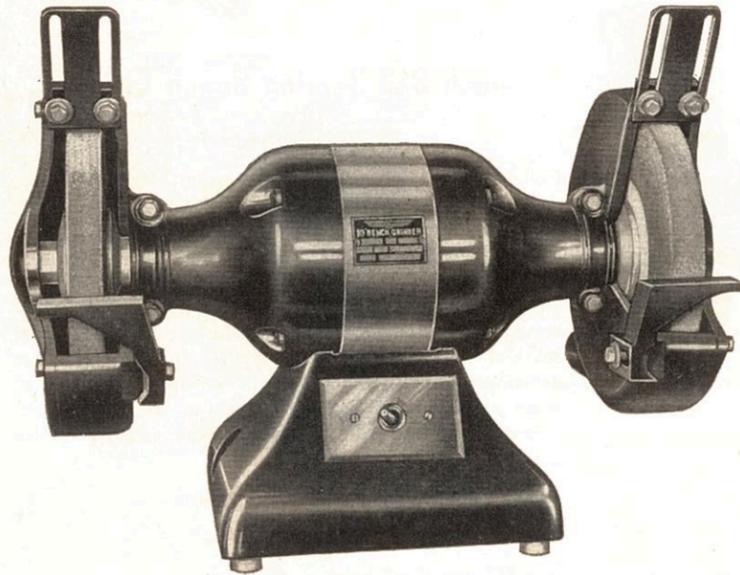
**COMBINATION BENCH GRINDER**



**GRINDER ON PEDESTAL**



## "ELECTRIC TOOL HEADQUARTERS"



10-INCH BENCH GRINDER

### 10-Inch Ball Bearing Bench Grinder

FULLY POWERED for heavy-duty service with a one-horsepower constant-speed Black & Decker motor. Wheel guards meet all safety regulations, being completely enclosed, with spark shields and tool rests adjustable for wheel wear. Guards are also equipped with outlets, which can be connected to exhaust or dust-collecting system. Guards are adjustable radially on the spindle. Tapered spindle housings and extended spindles provide ample room for handling large work.

Wire leads are brought out at rear of base for permanent conduit or armored cable connection. The base is drilled and tapped for conduit and a connector is furnished for armored cable. Grounding is accomplished through conduit or cable cover.

#### Standard Model

EQUIPPED WITH two 10" grinding wheels; a coarse wheel for rough grinding and fast removal of metal; a medium wheel for finish-grinding and tool sharpening. Standard guards with adjustable tool rests and spark shields. Guards are drilled and tapped for eye shields which can be furnished at slight extra cost.

Price (see table below for Catalog Numbers and available currents) ..... **\$115.00**

#### Combination Model

EQUIPPED WITH one No. 21407 10" Wire Wheel Brush and extra-wide wheel guard without tool rest or spark shield; one 10" medium grinding wheel with standard guard, tool rest and spark shield. Other specifications same as Standard Unit. For finishing operations that require both grinding and brushing.

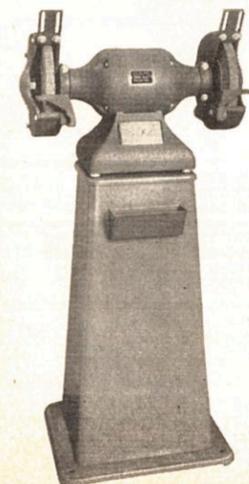
Price (see table below for Catalog Numbers and available currents) ..... **\$121.00**

#### CURRENT SPECIFICATIONS AND CATALOG NUMBERS:

Phase	Cycle	R.P.M.	Standard Grinder Cat. No.	Combination Grinder Cat. No.	Available Voltages
1	60	1800	83	83-C	110, 220, 250
	50	1500	83	83-C	110, 220, 250
	40	2400	80	80-C	110, 220, 250
	25	1500	78	78-C	110, 220, 250
2	60	1800	84	84-C	110, 220, 250, 440, 550
	50	1500	84	84-C	110, 220, 250, 440, 550
	40	2400	81	81-C	110, 220, 250, 440, 550
3*	60	1800	85	85-C	110/220, 220/440, 250, 550
	50	1500	85	85-C	110/220, 220/440, 250, 550
	40	2400	82	82-C	110/220, 220/440, 250, 550
	25	1500	79	79-C	110/220, 220/440, 250, 550
Direct Current		2000	77	77-C	115, 230, 250

\* Three phase voltages shown in combination are reconnectable for either voltage. Give complete current characteristics of your power supply when ordering.

See Pages 22, 23 and 26 for other Attachments and Supplies.

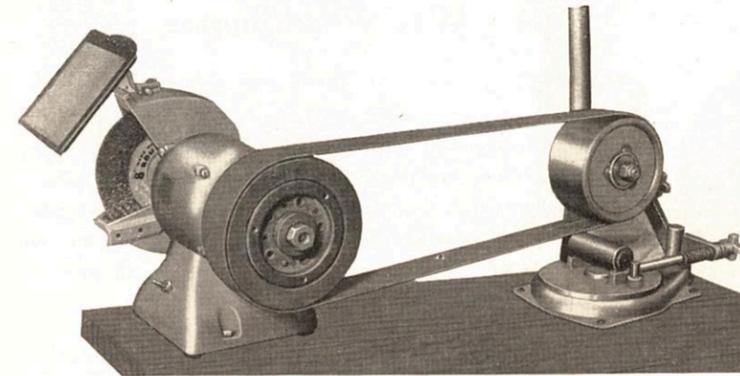


GRINDER ON PEDESTAL

## "ELECTRIC TOOL HEADQUARTERS"

*Black & Decker*

### BENCH BACK-STAND GRINDER



THE ABRASIVE belt method of grinding can be done on either the 8" or 10" Black & Decker Bench Grinders by using a Back-Stand Idler, a Compress Contact Wheel of suitable size and abrasive belts of correct grit for the job to be done.

This method does faster work at lower cost than wheels and presents more abrasive material in the length and width of the belt. The Compress Contact Wheel offers a resilient cushion surface and retains full diameter, thus maintaining maximum grinding speed at all times. The belt is very quickly changed or replaced.

#### Back-Stand Idler

THIS IDLER unit can be used on either the right or left side of the Bench Grinder. The Idler consists of an idler pulley, a lever which quickly releases the belt tension, a spring adjustment to increase or decrease belt tension and a swivel adjustment on the base to align the belt with the Grinder spindle.

#### Specifications

Pulley diameter.....6"; Face.....3 1/4".  
 Size of base.....8" x 11"; Height to C/L spindle.....7 3/8".  
 Weight: Net.....20 1/2 lbs.; Shipping.....23 lbs.

Catalog No. 30328..... **\$34.50**

**Compress Contact Wheels**—Act as drive pulley and work wheel; segment construction gives desired cushion for maximum surface contact on flat or shaped pieces.

No. 30897 6" x 2 1/2" x 5/8" Medium Contact Wheel, for use on 8" Bench Grinder.....\$15.00

No. 30898 8" x 2 1/2" x 3/4" Medium Contact Wheel, for use on 10" Bench Grinder..... 19.40

**Abrasive Belts**—A 60" x 2 1/2" belt is recommended for correct surface and cooling. The three grits listed are the most popular "general purpose" grades.

No. 31028 60" x 2 1/2" 36-Grit Abrasive Belt.....\$ .48

No. 31029 60" x 2 1/2" 80-Grit Abrasive Belt..... .39

No. 31030 60" x 2 1/2" 150-Grit Abrasive Belt..... .37

#### Adjustable Lamp for Bench Grinders

Can be mounted on base of Grinder and attached to line switch. Equipped with flexible "goose-neck," socket with switch, swivel head, metal shade, necessary cord, bolts, etc., for attachment.

No. 22173 Adjustable Lamp Assembly, complete.....\$5.40

#### Shatter-Proof Eye-Shields for Bench Grinders

The 6" Heavy-Duty, 8" and 10" Bench Grinders can be equipped with shatter-proof eye-shields, attached to the wheel guards with adjustable brackets. Shields furnished complete with brackets and bolts.

No. 17904 Eye-Shield (5" x 6") for 6" and 8" Grinders.....\$ 1.75

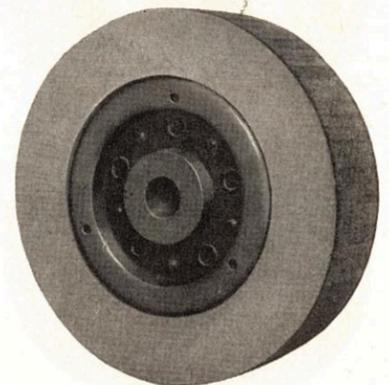
No. 23641 5" x 6" Replacement Shatter-proof Glass..... .75

No. 18123 Eye-Shield (6" x 8") for 10" Grinder..... 2.50

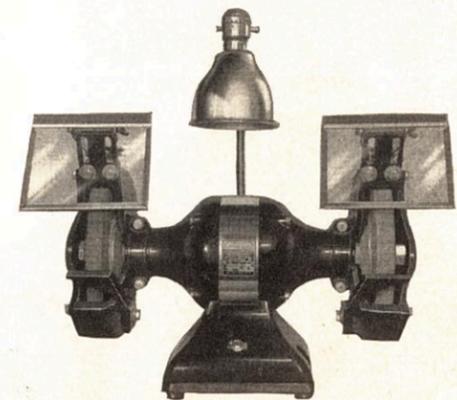
No. 23642 6" x 8" Replacement Shatter-proof Glass..... 1.00



BACK-STAND IDLER



COMPRESS CONTACT WHEEL



EYE-SHIELDS AND LAMP ON BENCH GRINDER



**"ELECTRIC TOOL HEADQUARTERS"**

**WHIRLWIND\*  
Wire Wheel Brushes**

MADE BY US, on our own special machines, Whirlwind Brushes give longer service on high-speed operations. Each tuft is locked independently; hence a more dense and even brushing surface and less danger of loose wire. The wire sizes, number of sections and brush diameters in the complete line adapt Whirlwind Brushes to most any wire brushing job and our arbor hole adaptor system fits them to nearly all grinding, buffing or cleaning machines.

**.014" Wire Diameter Size (for rough general purpose cleaning)**

Diameter of Brush	No. of Sections	Brush Width		Size Arbor Hole Adaptor*	Catalog Number	Price each*
		Hub	Face			
4"	1	7/16"	5/8"	1/2"	23200	\$ .72
	2	11/16"	7/8"		23201	.98
	3	1"	1 1/8"		21397	1.28
6"	1	7/16"	3/4"	1/2"	23202	1.15
	2	11/16"	1"		23203	1.62
	3	1"	1 3/8"		21401	2.14
7"	1	7/16"	3/4"	5/8"	23204	1.50
	2	11/16"	1"		23205	2.10
	3	1"	1 3/8"		21411	2.78
8"	1	7/16"	7/8"	5/8"	23206	1.62
	2	11/16"	1 1/8"		23207	2.25
	3	1"	1 1/2"		21405	3.00
10"	4	1 3/8"	1 3/4"	3/4"	21407	5.14
12"	4	1 3/8"	2 3/4"	3/4"	21409	6.85

**.0118" Wire Diameter Size (for high-speed buffing operations)**

Diameter of Brush	No. of Sections	Brush Width		Size Arbor Hole Adaptor*	Catalog Number	Price each*
		Hub	Face			
4"	1	7/16"	5/8"	1/2"	27000	\$ .72
	2	11/16"	7/8"		27001	.98
	3	1"	1 1/8"		27002	1.28
6"	1	7/16"	3/4"	1/2"	27003	1.15
	2	11/16"	1"		27004	1.62
	3	1"	1 3/8"		27005	2.14
8"	1	7/16"	7/8"	5/8"	27009	1.62
	2	11/16"	1 1/8"		27010	2.25
	3	1"	1 1/2"		27011	3.00
10"	4	1 3/8"	1 3/4"	3/4"	27012	5.14
12"	4	1 3/8"	2 3/4"	3/4"	27013	6.85

**.005" Wire Diameter Size (for fine finishing and burnishing)**

Diameter of Brush	No. of Sections	Brush Width		Size Arbor Hole Adaptor*	Catalog Number	Price each*
		Hub	Face			
4"	1	7/16"	5/8"	1/2"	23208	\$1.10
	2	11/16"	7/8"		23209	1.40
	3	1"	1 1/8"		23210	1.84
6"	1	7/16"	3/4"	1/2"	23211	1.80
	2	11/16"	1"		23212	2.35
	3	1"	1 3/8"		23213	3.12
8"	1	7/16"	7/8"	5/8"	23217	2.30
	2	11/16"	1 1/8"		23218	3.30
	3	1"	1 1/2"		23219	4.40

\*ARBOR HOLE ADAPTORS: Whirlwind Brushes are equipped with washer-type adaptors. Price of Brush includes one set of size shown in table above. Other sizes, shown in tables below may be substituted if specified on order. Extra sets may also be ordered, in desired sizes, at prices shown.

For 4" Brushes: 1/2" arbor hole is standard. Solid bushing can be furnished to fit 3/8" arbor.  
Price, each..... \$0.20  
No. 23809 For 1-section Brush  
No. 23810 For 2-section Brush  
No. 14066 For 3-section Brush

For 7", 8", 10" and 12" Brushes: Side plate has 2" hole. Extra adaptors available in sizes shown below. Same adaptors fit 1, 2 or 3-section Brushes  
Price, per pair..... \$0.10

Cat. No.	Hole Size	Cat. No.	Hole Size
14067	3/8"	14072	1"
14068	1/2"	14073	1 1/8"
14069	5/8"	14074	1 1/4"
14070	3/4"	14075	1 3/8"
14071	7/8"	14076	1 1/2"
		14077	1 3/4"

For New Type 6" Brushes: Built-in arbor hole plates have 1" hole. Extra adaptors available in sizes below. Same adaptors fit 1, 2 or 3-section Brushes.  
Price, per pair..... \$0.06  
Hole  
Cat. No. Size Cat. No. Size  
14080 1/2" 14082 3/4"  
14081 5/8" 14771 7/8"

\* Trade-mark Reg. U. S. Pat. Off.



3 BRUSH WIDTHS



3 WIRE GAUGES



ARBOR ADAPTORS

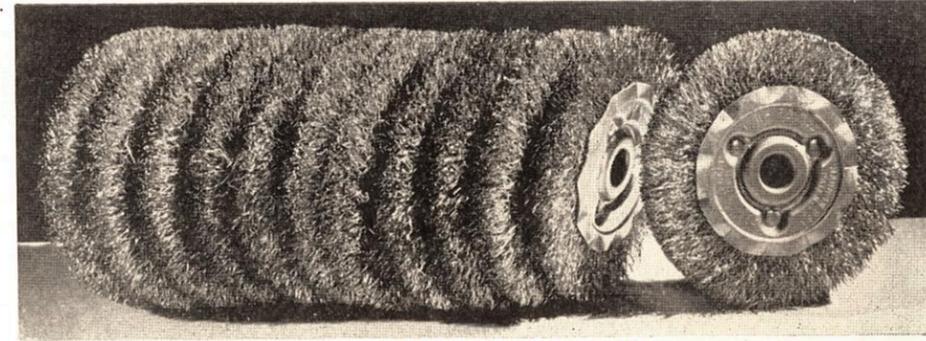


**"ELECTRIC TOOL HEADQUARTERS"**



**WHIRLWIND  
Wire Wheel  
Brushes**

Single Sections  
Bulk Packed



12 SECTIONS TO A CARTON

YOU CAN NOW adapt "Whirlwind" Brush sections to any length spindle—build a brushing surface to any width you wish—mass the sections solidly for inches or feet—space them to match shapes or patterns—in fact, you can "tailor-make" a wire wheel brush for your exact requirements from bulk-packaged "Whirlwind" sections. Each section is a complete brush, with built-in arbor adaptor and face plates—so you can use the sections singly or in groups. The hub and face plate design permit solid massing of the sections—or spacers can be used to make the brushing surface more flexible. It is entirely possible to group brushes of different diameters to handle irregular castings, forgings or other odd-shaped surfaces. "Whirlwind" bulk-packed sections are now available in 4" and 6" diameters. 1/2" arbor holes are standard in both; but 6" sections can also be furnished with 3/8", 3/4", 7/8" or 1" arbor holes, on special order. Three wire sizes are available: .014" for rough, general purpose cleaning; .0118" for high speed buffing operations; .005" for fine finishing and burnishing. The bulk-packed single section brushes are packaged in cartons of 12 sections, all of one diameter, one wire size and one arbor hole size. The prices shown are list prices per individual section.

**Specifications**

**.014" Wire Diameter Size (for rough, general purpose cleaning.)**

Diameter of Brush	Brush Width Hub Face	Arbor Hole Size	Catalog Number	Price Per Section*
4"	13/32" 5/8"	1/2"	31110	\$0.67
6"	15/32" 3/4"	1/2"	30434	.95
		3/8"	30437	.95
		5/8"	30440	.95
		7/8"	30443	.95
		1"	30446	.95

**.0118" Wire Diameter Size (for high speed buffing operations.)**

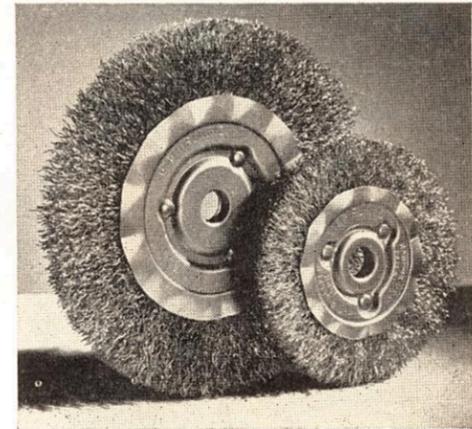
Diameter of Brush	Brush Width Hub Face	Arbor Hole Size	Catalog Number	Price Per Section*
4"	13/32" 5/8"	1/2"	31108	\$0.67
6"	15/32" 3/4"	1/2"	30433	.95
		3/8"	30436	.95
		5/8"	30439	.95
		7/8"	30442	.95
		1"	30445	.95

**.005" Wire Diameter Size (for fine finishing and burnishing.)**

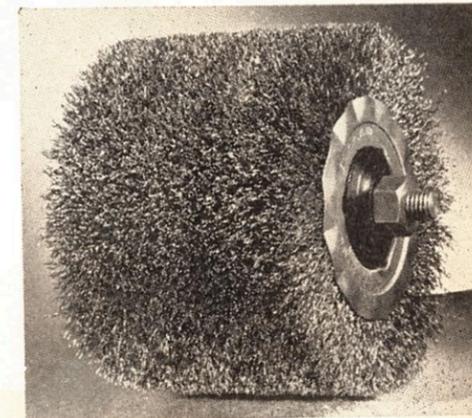
Diameter of Brush	Brush Width Hub Face	Arbor Hole Size	Catalog Number	Price Per Section*
4"	13/32" 5/8"	1/2"	31106	\$1.05
6"	15/32" 3/4"	1/2"	30432	1.70
		3/8"	30435	1.70
		5/8"	30438	1.70
		7/8"	30441	1.70
		1"	30444	1.70

\*Packaged and sold only in cartons of 12 single sections, all of one wire size, diameter and arbor hole size.

\*\*In the 6" diameter sections, 1/2" is the standard arbor hole size. Other arbor hole sizes will be furnished only if specified on the order.



6" AND 4" DIAMETERS



MAKE BRUSH OF ANY  
DESIRED WIDTH



# "ELECTRIC TOOL HEADQUARTERS"

## Electric Die Grinders 2-Inch (No. 7) Die Grinder

Specifications	Bonnet Cap Switch-in-Line	Extended Switch Handle
Maximum Wheel Size*	2" x 1/2" x 1/2"	2" x 1/2" x 1/2"
No-load Spindle Speed	19,000 R.P.M.	19,000 R.P.M.
Net Weight	2 1/2 lbs.	3 lbs.
Shipping Weight	5 1/2 lbs.	6 lbs.
Overall Length	9"	14 3/4"
Catalog No. (specify voltage)	288	289

Price, complete ..... **\$40.00** **\$43.00**

Standard Equipment — 3-wire cable and plug; No. 21755 1/4" Chuck with No. 21955 Reducing Sleeve; two No. 20285 Wrenches; "universal" motor.

Replacement and Extra Equipment —

No. 20330 2" High-speed bonded Grinding Wheel	\$1.15
No. 20353 2" Wheel Guard	1.75
No. 21757 Wheel Arbor	1.50
No. 20285 Double End Wrench (5/16" and 11/16")	.25
No. 21755 1/4" S. A. Chuck with 1/8" Reducing Sleeve	3.50
No. 21955 1/8" Reducing Sleeve Only, for No. 21755 Chuck	.75
No. 20846 Tool Post Holder	5.00

## 2 1/2-Inch (No. 12) Die Grinder

Specifications	Bonnet Cap Switch-in-Line	Extended Switch Handle
Maximum Wheel Size*	2 1/2" x 1/2" x 1/2"	2 1/2" x 1/2" x 1/2"
No-load Speed	17,500 R.P.M.	17,500 R.P.M.
Net Weight	4 lbs.	4 1/4 lbs.
Shipping Weight	7 lbs.	7 1/4 lbs.
Overall Length	12 1/4"	16 1/8"
Catalog No. (specify voltage)	291	290

Price, complete ..... **\$45.00** **\$48.00**

Standard Equipment — 3-wire cable and plug; No. 26533 1/4" Chuck with No. 21955 Reducing Sleeve; two No. 20285 Wrenches; "universal" motor.

Replacement and Extra Equipment —

No. 20329 2 1/2" High-speed bonded Grinding Wheel	\$1.30
No. 26537 2 1/2" Wheel Guard	2.25
No. 26361 Outer Wheel Washer	1.00
No. 26362 Inner Wheel Washer	.50
No. 20285 Double End Wrench (5/16" and 11/16")	.25
No. 26533 1/4" S. A. Chuck with 1/8" Reducing Sleeve	3.50
No. 21955 1/8" Reducing Sleeve Only, for No. 26533 Chuck	.75
No. 26530 Tool Post Holder	5.00
—For Types A, B No. 12 Die Grinder—	
No. 21757 Wheel Arbor	1.50
No. 20845 Tool Post Holder	5.00

## 3-Inch (No. 20) Die Grinder

Maximum Wheel Size*	3" x 1/2" x 3/8"
No-load Speed	16,000 R.P.M.
Weight: Net	7 lbs.; Shipping 11 1/2 lbs.
Overall Length	17 3/4"
Catalog No. 499 with extended switch handle	

Price, complete (specify voltage) ..... **\$55.00**

Standard Equipment — 3-wire cable and plug; No. 24187 1/4" Chuck with No. 21955 Reducing Sleeve; two No. 20285 Wrenches; "universal" motor.

\* No wheels are supplied with any Die Grinders. Caution: Use only with high-speed bonded wheels. Ask your jobber about wheels and burrs for use with these units.

Standard Voltage — 110; also available for 220 or 250 volts.

Replacement and Extra Equipment, same as 3" Portable Grinder, listed below.

## 3" Portable Grinder

Wheel Size	3" x 1/2" x 3/8"
No-load Speed	16,000 R.P.M.
Weight: Net	7 5/8 lbs.; Shipping 11 1/2 lbs.
Overall Length	16 1/2"
Catalog No. 395 with extended switch handle	

Price, complete (specify voltage) ..... **\$55.00**

Standard Equipment — 3-wire cable and plug; No. 24317 3" high-speed wheel; No. 31456 Clamp Nut; No. 31457 Wheel Guard; two No. 20285 Wrenches; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Replacement and Extra Equipment for 3" Die and 3" Portable Grinders.

No. 24317 3" High-speed bonded Grinding Wheel	\$1.45
No. 31457 3" Wheel Guard Assembly, complete	2.50
No. 31456 Clamp Nut	.75
No. 20285 Double End Wrench (5/16" and 11/16")	.25
No. 24187 1/4" S. A. Chuck with 1/8" Reducing Sleeve	3.50
No. 21955 1/8" Reducing Sleeve Only for No. 24187 Chuck	.75



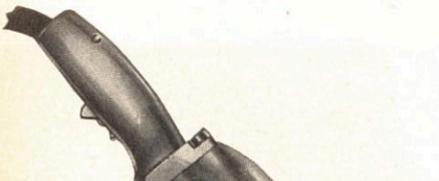
2-INCH DIE GRINDER



2 1/2-INCH DIE GRINDER



3-INCH DIE GRINDER



3-INCH PORTABLE GRINDER

# "ELECTRIC TOOL HEADQUARTERS"



## Portable Electric Grinders

PORTABLE GRINDERS have splined gear mountings, steel inserts for bearings and welded steel wheel guards. Full size ball-bearings, set at extreme ends of wheel spindle, absorb all side thrust and insure long life. Armature shaft also mounted on ball-bearings.

Completely enclosed commutator and switch compartments protect these parts from abrasive dust.

Improved ventilating system forces air straight through ample slots, which prevent clogging and accumulation of dirt.

Shaped grips prevent tool turning in operator's hand. Adjustable wheel guards can be turned to any desired position.

Applications — Grinding, wire brushing, buffing and polishing all types of metal surfaces, where the grinder must be taken to the work. Removing rust, scale, paint, etc. Grinding or cutting off rivets, bolts, pins, studs, etc. Smoothing welded surfaces.

## 4" Portable Grinder

CATALOG No. 59

Wheel size	4" x 3/4" x 1/2"
No-load speed	5250 R.P.M.
Weight: Net	13 1/4 lbs.; Shipping 18 lbs.
Overall length	20 1/2"
Standard Equipment	3-conductor cable and plug; toggle switch; grip end handle; adjustable steel wheel guard and one grinding wheel; "universal" motor.

Catalog No. 59 (specify voltage) ..... **\$62.00**

Price, Complete

## 5" Portable Grinder

CATALOG No. 60

Wheel size	5" x 3/4" x 1/2"
No-load speed	4500 R.P.M.
Weight: Net	15 1/2 lbs.; Shipping 21 lbs.
Overall length	23 3/8"
Standard Equipment	3-conductor cable and plug; plunger switch; grip end handle; adjustable steel wheel guard and one grinding wheel; "universal" motor.

Catalog No. 60 (specify voltage) ..... **\$80.00**

Price, complete

## 6" Portable Grinder

CATALOG No. 61

Wheel size	6" x 1" x 5/8"
No-load speed	3800 R.P.M.
Weight: Net	20 lbs.; Shipping 26 lbs.
Overall length	25"
Standard Equipment	3-conductor cable and plug; plunger switch; grip end handle; adjustable steel wheel guard and one grinding wheel; "universal" motor.

Catalog No. 61 (specify voltage) ..... **\$100.00**

Price, complete

## 8" Portable Grinder

CATALOG No. 62

Wheel size	8" x 1" x 5/8"
No-load speed	4000 R.P.M.†
Weight: Net	25 1/2 lbs.; Shipping 32 3/4 lbs.
Overall length	26 3/4"
Standard Equipment	3-conductor cable and plug; dust-sealed plunger switch; grip end handle, suspension eye-bolt; adjustable steel wheel guard; "universal" motor. No wheels supplied with grinder.

\* For use with special bonded wheels for high speed service only.

† Optional speed ..... 5000 R.P.M., no extra charge

Optional Equipment — Spade-type switch handle in place of straight grip handle — no extra charge.

Catalog No. 62 (specify voltage) ..... **\$120.00**

Price, complete

Standard Voltage for all units — 110; also available for 220 or 250 volts.

Wheel rotation — counter-clockwise, facing wheel-end.

See Pages 22, 23 and 26 for Wheels and Wire Brushes.



4-INCH PORTABLE GRINDER



5-INCH PORTABLE GRINDER



6-INCH PORTABLE GRINDER



8-INCH PORTABLE GRINDER



# "ELECTRIC TOOL HEADQUARTERS"

## Grinding Wheels

Unit	Cat. No.	Price	Description			
			Diam.	Face	Hole	Grade
6" Junior Bench Grinder (A)	18124	\$1.70	6"	5/8"	1/2"	Fine 60K
	18125	1.70				Medium 36G
6" H.-D. Bench Grinder (H, K, and L)	15315	1.95	6"	3/4"	1/2"	Medium 36G
	15314	1.95				Fine 60K
6" Bench Grinder (Ball Bearing) (G)	13950	2.30	6"	3/4"	1/2"	Medium 36G
	5183	2.30				Fine 60K
7" Bench Grinder (Type B)	14236	2.90	7"	1"	5/8"	Medium 36G
	14235	2.90				Fine 60K
8" Bench Grinder (Type F)	18061	4.90	8"	3/4"	5/8"	Medium 36K
	18062	4.90				Fine 60M
10" Bench Grinder (B and C)	10275	7.35	10"	1"	3/4"	Medium 40K
	10274	7.35				Coarse 24H
Portable Grinders and Die Grinders	20330	1.15	2"	1/2"	1/2"	36-598E
	20329	1.30	2 1/2"	1/2"	1/2"	36-598E
	24317	1.45	3"	1/2"	1/2"	36-598E
4" Portable Grinder	6772	1.20	4"	3/4"	1/2"	Medium 36G
5" Portable Grinder	3042	1.70	5"	3/4"	1/2"	Medium 36G
6" Portable Grinder	3148	2.25	6"	1"	5/8"	Medium 36G
7" Junior Sander	10663	1.95	4"	3/4"***	1/2"	Medium 36H
7" Special Sander	24050	5.50	4"	1"††	5/8"	163-9-K4
7" H.-D. Sander	23444	6.90	5"	1 1/4"††	5/8"	163-9-K4
9" H.-D. Sander	18039	8.35	6"	1 1/4"††	5/8"	163-9-K4
1/2" Refacer (Types A to EF)	10495	1.10	3"	1/2"	1/2"	Hard Valves
	7923	1.10	3"	1/2"	1/2"	Soft Valves
	8605	1.20	3"	1/2"	1/2"	40K
5/8" Refacer	11196	1.80	4"	1/2"	3/4"	Hard Valves
	11197	1.80	4"	1/2"	3/4"	Soft Valves
Super-Service Refacer	81471	2.70	4"	1/2"	5/8"	Hard Valves
	16371	2.45	4"	1/2"	5/8"	Stellite Valves
	19897	2.70	4"	1/2"	5/8"	90° Valves
	22813	2.70	4"	1/2"	5/8"	Fine 80P
Micrometer and Rocker Arm Attachment	20939	2.40	4"	3/4"***	1/2"	36R
1/4" Drill	21463	.70	3"	1/2"	1/2"	40L

\* Offset. † Recessed. \*\* Cup. †† Saucer—11 thread bushing.

## Grinding Wheel Dressers

TWO TYPES of Wheel Dressers are available for truing and cleaning Bench Grinder Wheels. The cutter type dresses the wheel quickly for fast grinding; the diamond type produces a very accurate, smooth face for finish-grinding.

- No. 19115 Cutter-type Dresser (with spare cutter set) ..... \$0.95
- No. 19983 Replacement Cutter Set for above ..... .15
- No. 21961 Diamond Wheel Dresser, complete with diamond ..... 3.75
- No. 5574 Diamond and Nib for No. 21961 Dresser ..... 3.00

## Cotton Buffs

USED ON Portable or Bench Grinders for general purpose buffing, polishing, coloring, cutting and finishing. Mounted directly on wheel spindle. Available in full disc, loose type and in a harder, spiral stitched, pieced-type.

- Full-disc. Loose Buffs — 50-Ply, Grade L.
- No. 26870 4" x 5/8" x 1/2"; Stitched 2 Rows ..... \$ .75
  - No. 26871 6" x 5/8" x 1/2"; Stitched 2 Rows ..... 1.20
  - No. 26872 8" x 5/8" x 5/8"; Stitched 2 Rows ..... 2.00
  - No. 26873 10" x 5/8" x 3/4"; Stitched 3 Rows ..... 2.95
- Pieced-type, Narrow Buffs, Grade SB.
- No. 26874 6" x 1/4" x 1/2"; 3/8" Spiral Stitched ..... .55
  - No. 26875 8" x 1/4" x 5/8"; 3/8" Spiral Stitched ..... .90
  - No. 26876 10" x 1/4" x 3/4"; 3/8" Spiral Stitched ..... 1.25

## Spindle Extensions

USE ON Bench Grinders where work requires extra clearance around wheel. Tapped hole threads on Grinder spindle.

- For 6" Bench Grinders —
- No. 3564 Tapered Buffing Spindle (Left Hand) ..... \$5.00
  - No. 3565 Tapered Buffing Spindle (Right Hand) ..... 5.00
  - No. 6664 Spindle Extension (Right Hand) ..... 4.00
  - No. 6665 Spindle Extension (Left Hand) ..... 4.00
- For 8" Bench Grinder —
- No. 6666 Spindle Extension (Right Hand) ..... 5.50
  - No. 6667 Spindle Extension (Left Hand) ..... 5.50
- For 10" Bench Grinder —
- No. 12297C Spindle Extension (Right Hand) ..... 8.00



GRINDING WHEELS



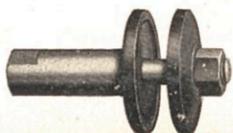
DIAMOND DRESSER



COTTON BUFFS



TAPER BUFF SPINDLE



SPINDLE EXTENSION

# "ELECTRIC TOOL HEADQUARTERS"



## Portable Electric Tappers

THREADING HOLES in steel, cast iron, brass or aluminum is performed with these tools eight times faster than by hand. Automatic reversing mechanism backs the tap out of the threaded hole at high speed when operator pulls backward. No reversing switch is needed. Will greatly reduce tap breakage.

### 3/16-Inch TAPGUN\*

(Formerly No. 8 Tapgun)  
CATALOG No. 383

A PERFECT assembly "team" with Holgun and Scrugun. Same features of compact, powerful construction.

#### Specifications

- Tapping Capacity: In mild steel ..... 3/16"
- In cast iron ..... 5/16"
- In brass or aluminum ..... 3/8"
- No-load spindle speed: Tapping ..... 400 R.P.M.; Reversing ..... 525 R.P.M.
- Weight: Net ..... 3 3/4 lbs.; Shipping ..... 5 lbs.
- Overall length ..... 9 1/2"
- Standard Equipment — 3-conductor cable and plug; 3-jaw Jacobs chuck and key; 2-pole automatic-release trigger switch and locking pin mounted as a unit with cord protector; "universal" motor.
- Standard Voltage — 110; also available for 220 or 250 volts.
- Catalog No. 383 (specify voltage) ..... \$64.00
- Price, complete ..... \$64.00
- With special tap-holding chuck ..... \$67.50
- No. 23926 Jacobs Tap-holding Chuck ..... 8.00

\* Trade-mark Reg. U. S. Pat. Off.

### 1/4-Inch Tapper

(Formerly No. 22 Tapper)  
CATALOG No. 90

TEAMS UP with No. 12 or No. 22 Power Driver for assembly operations in metal. Equipped with auxiliary side handle for better aim and control.

#### Specifications

- Tapping Capacity: In steel ..... 1/4"
- In cast iron ..... 3/8"
- In brass or aluminum ..... 1/2"
- No-load speed (tapping) ..... 300 R.P.M.; Reversing ..... 500 R.P.M.
- Weight: Net ..... 10 1/2 lbs.; Shipping ..... 14 1/2 lbs.
- Overall length ..... 15 3/4"
- Standard Equipment — 3-conductor cable and plug; 3/8" Jacobs chuck and key; automatic-release switch and locking pin; detachable side handle; "universal" motor.
- Standard Voltage — 110; also available for 220 or 250 volts.
- Catalog No. 90 (specify voltage) ..... \$85.00
- Price, complete ..... \$85.00
- With special tap-holding chuck ..... \$90.00
- No. 20454 Jacobs Tap-holding Chuck ..... 10.00
- Special speeds — 500, 700 or 1200 R.P.M. .... \$5.00 extra
- No. 22148 Bench Stand (for both Tapgun and Tapper) ..... 15.00

### Electric Glue Pot

CATALOG No. 89

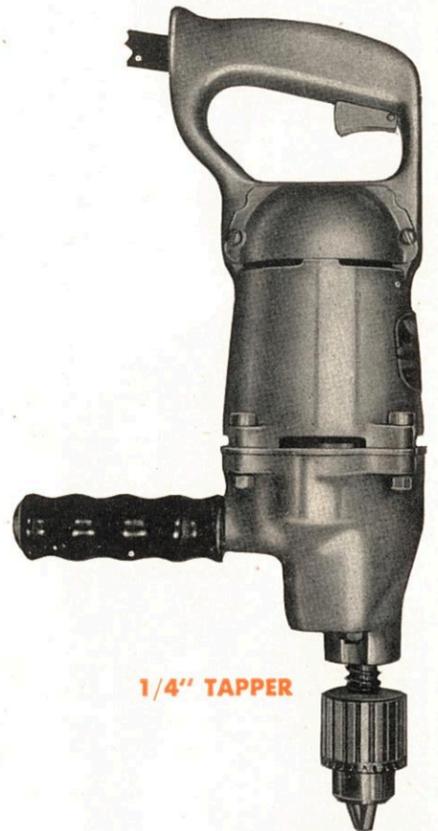
FOR CONTINUOUS use where maintenance of constant working temperature is important. Thermostatic control brings the glue up to 150° Fahrenheit rapidly (best working temperature), and maintains that temperature within 5°. Nichrome heating element sealed and protected against moisture and foreign substance. Cast iron glue pot is machined to fit in the water jacket, conserving heat and reducing current consumption. Equipped with convenient carrying handle and heavy iron brush wiper.

Applications — Book binderies, printing plants, furniture and cabinet factories, toy factories, piano factories, etc.

- Specifications — Capacity of glue container ..... 2 quarts.
- Weight: Net ..... 14 1/2 lbs.; Shipping ..... 16 lbs.
- Furnished complete with nichrome heating element, iron water pot, cast-iron glue pot, 3-wire cable and plug.
- Supplied for either 110 volts or 220 volts, alternating current only; not for D. C.
- Catalog No. 89 (specify voltage) ..... \$19.50
- Price, complete ..... \$19.50



3/16" TAPGUN



1/4" TAPPER



GLUE POT



# "ELECTRIC TOOL HEADQUARTERS"

## No. 4 Adjustable Clutch Torsimeter\*

(Formerly No. 3 Torsimeter)  
CATALOG No. 244

A VERY light, compact tool for self-threading screws in light metal and wood. Can be equipped with a socket for hex. head screws. Has paddle switch control at chuck end for easy operation, especially in suspended position.

### Specifications

Capacity.....up to No. 4 Screws; No-load Speed .....1000 R.P.M.  
Overall Length (including bit).....11½".  
Weight: Net .....2¾ lbs.; Shipping .....4 lbs.  
Standard Equipment — 3-wire cable with plug; toggle-switch mounted in end cap with paddle switch control; one No. 13208 bit with centering sleeve, spring sleeve and protector; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 244 (specify voltage)

Price, complete .....\$63.00

Reversing Switch .....\$7.50 extra



No. 3  
TORSIMETER

## No. 10 Positive Clutch SCRUGUN\*

(Formerly No. 8 SCRUGUN)

CATALOG Nos. 402, 403, 404

A COMPACT Power Driver for production assembly use; teams up with Holgun and Tapgun; has same structural features. "Free" spindle is disengaged until operating pressure closes clutch. Keeps driving until clutch is released by operator. Standard unit is perfectly balanced for portable "free-hand" driving, has "Pistol Grip and Trigger Switch." The Center-Drive unit is best for suspended use; has bonnet grip (illustrated) or paddle switch; no handles needed.

### Specifications

Capacity: Wood Screws.....up to No. 10 x 2".  
Self-Tapping Screws.....up to No. 12.  
Machine Screws and Nuts.....up to ¼" diam.  
No-load Standard Speed.....750 R.P.M.  
Optional Speeds (no extra charge)—500, 1000 or 1500 R.P.M.  
Standard Equipment — 3-wire cable and plug; 20° positive clutch; No. 13207 bit with protector, centering and spring sleeves; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.

### Standard Unit

Net Weight.....3½ lbs.; Shipping.....4¾ lbs.  
Overall Length (including bit).....8¾".

Price, Catalog No. 402.....\$47.00

Special 13° clutch instead of standard angle.....\$2.50 extra

### Center-Drive Unit

Net Weight.....4¾ lbs.; Shipping.....6 lbs.  
Overall Length (including bit).....12".

Price, Catalog No. 403 (with bonnet grip).....\$52.00

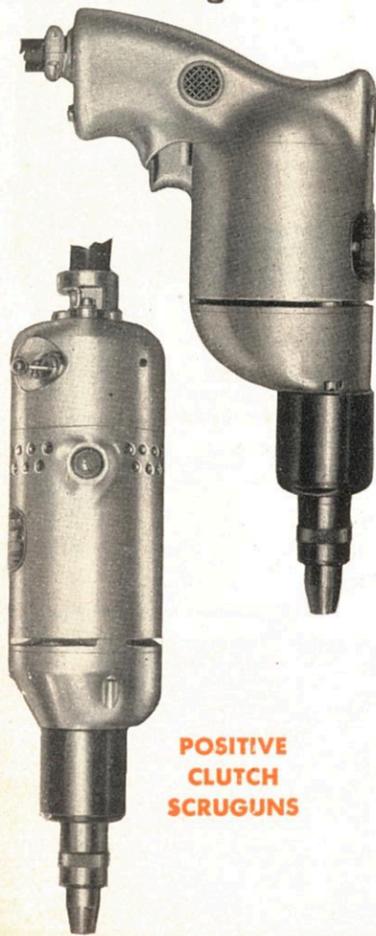
Catalog No. 404 (with paddle switch).....\$55.00

Special 13° clutch instead of standard angle.....\$2.50 extra

Reversing Switch for Center-Drive Units only.....\$7.50 extra

Catalog No. 22148 Bench Stand.....\$15.00

\* Trade-mark Reg. U. S. Pat. Off.



POSITIVE  
CLUTCH  
SCRUGUNS



# "ELECTRIC TOOL HEADQUARTERS"



## No. 10 Adjustable Clutch SCRUGUN\*

(Formerly No. 8 Adjustable Clutch SCRUGUN)

CATALOG Nos. 350, 380, 381

WITH ADJUSTABLE clutch, every screw is driven automatically to a uniform and pre-determined tension. "Free" spindle idles until operating pressure engages clutch. Double clutch relieves operator of twisting motion. Standard unit has "Pistol Grip and Trigger Switch"; best for portable, free-hand use. Center-Drive unit is ideal for suspended use; has either bonnet grip with toggle switch, or paddle switch (illustrated).

### Specifications

Capacity: Self-tapping screws.....up to No. 12.  
Machine Screws.....up to ¼" diam.  
No-load Standard Speed.....750 R.P.M.\*  
Standard Equipment — 3-wire cable and plug, No. 13207 bit with protector, centering and spring sleeves; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.

### Standard Unit

Net Weight:.....3¾ lbs.; Shipping.....5¼ lbs.  
Overall Length (including bit).....10¼".

Price, Catalog No. 350.....\$57.00

### Center-Drive Unit

Net Weight:.....5 lbs.; Shipping.....6¾ lbs.  
Overall Length (including bit).....13½".

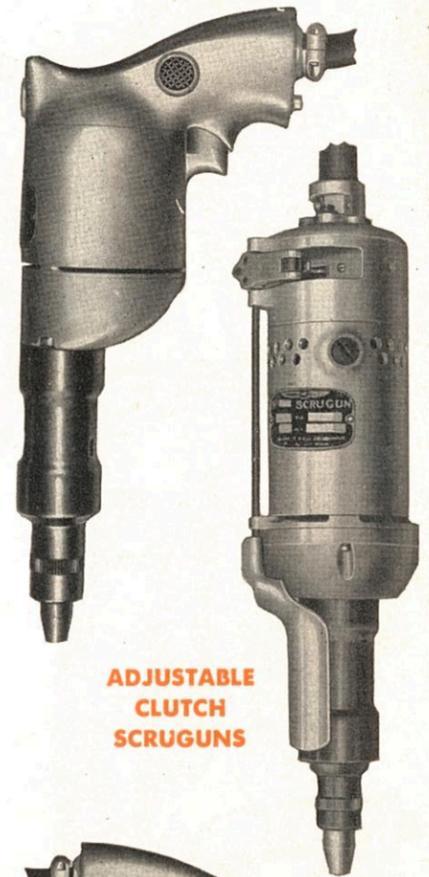
Price, Catalog No. 380 (with bonnet grip).....\$62.00

Catalog No. 381 (with paddle switch).....\$65.00

\*Optional Speeds (no extra charge).....500, 1000 or 1500 R.P.M.

Reversing Switch for Center-Drive units only.....\$7.50 extra

Catalog No. 22148 Bench Stand.....\$15.00



ADJUSTABLE  
CLUTCH  
SCRUGUNS

## No. 10 90°-Angle Adjustable Clutch SCRUGUN\*

(Formerly No. 8 90° Angle SCRUGUN)

SUPPLEMENTING this compact tool with 90°-angle drive adapts the Scrugun to work in the most limited clearances. Several heads adapt the tool to screw-driving and nut-running. Available with standard "pistol grip," bonnet grip or paddle switch.

### Specifications

Capacity: Machine screws and nuts....up to ¼" diam.  
Self-tapping screws.....up to No. 12  
No-load Speed.....500 R.P.M.\*

	Standard Unit	Bonnet† Grip	Paddle† Switch
Net Weight.....	4½ lbs.	5¼ lbs.	5¼ lbs.
Shipping Weight.....	6 lbs.	7 lbs.	7 lbs.
Overall Length.....	10¾"	14½"	14½"
Switch Type.....	Trigger	Toggle	Toggle
Catalog Number.....	374	390	391

Price, complete with one head\*\*

Pt. No. 100 to 108 Heads....	\$82.00	\$87.00	\$90.00
Pt. No. 150 to 152 Heads....	90.00	95.00	98.00
Pt. No. 156 Head.....	102.00	107.00	110.00

Standard Equipment — 3-wire cable and plug; adjustable clutch and one 90°-Angle Head as specified; "universal" motor.

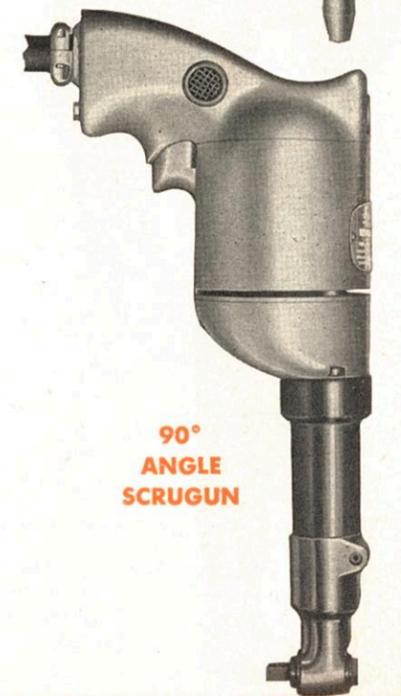
Standard Voltage — 110; also available for 220 or 250 volts.

\* Optional speeds (no extra charge) — 350, 750 or 1000 R.P.M.

\*\*See Page 35 for 90°-Angle Head Specifications.

† Bonnet Grip and Paddle Switch units are similar to Center Drive units.

\* Trade-mark Reg. U. S. Pat. Off.



90°  
ANGLE  
SCRUGUN



# "ELECTRIC TOOL HEADQUARTERS"

## No. 14 Positive Clutch Screw Driver (Formerly No. 12 Power Driver) CATALOG No. 53

POSITIVE PIN-TYPE clutch in the driving spindle idles until the bit "finds" the screw slot.

### Specifications

Capacity: Wood screws ..... up to No. 14 x 2½".  
 Self-tapping screws ..... up to 5/16" diam.  
 Lag screws ..... up to 1/4" x 2".  
 Machine screws and nuts ..... up to 3/8" diam.  
 Standard No-load speed ..... 500 R.P.M.\*  
 Weight: Net ..... 6¾ lbs.; Shipping ..... 9 lbs.  
 Overall length (not including bit) ..... 13¾".  
 Standard equipment — Quick-change chuck, with 7/16" hex. socket; 20° positive clutch; 3-conductor cable and attachment plug; and one each No. 5330 and No. 5344 Standard Bits with finders; automatic-release switch with locking pin; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 53 (specify voltage) **\$58.00**  
 Price, complete .....  
 \* Special speeds — 750, 1000 or 1600 R.P.M. .... \$2.50 extra  
 No. 30426 Auxiliary Side Handle ..... 2.75 extra  
 Special 13° or 30° clutch, instead of standard angle ..... \$2.50 extra

## No. 14 Adjustable Clutch Screw Driver (Formerly No. 12 Power Driver) CATALOG No. 169

### Specifications

Capacity: Same as above.  
 Standard No-load speed ..... 500 R.P.M.\*  
 Net Weight ..... 8 lbs.; Shipping ..... 12 lbs.  
 Overall length (not including bit) ..... 15½".  
 Standard Equipment — 3-conductor cable and plug; quick-change chuck with 7/16" hex. socket; adjustable clutch; one each No. 5330 and No. 5344 Standard Bits with finders; automatic-release switch with locking pin; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 169 (specify voltage) **\$78.00**  
 Price, complete .....  
 \* Special speeds — 750, 1000 or 1600 R.P.M. .... \$2.50 extra  
 No. 30426 Auxiliary Side Handle ..... 2.75 extra

## No. 14 90°-Angle Adjustable Clutch Screw Driver (Formerly No. 12 Power Driver) CATALOG No. 172

A NUMBER of right-angle drive heads adapt this tool to special assembly operations.

### Specifications

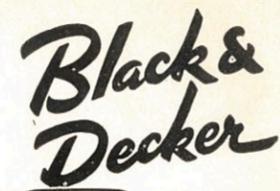
Capacity: Same as above.  
 Standard No-load speed ..... 500 R.P.M.\*; Overall length ..... 18¾".  
 Weight: Net ..... 9½ lbs.; Shipping ..... 13 lbs.  
 Standard Equipment — 3-conductor cable and plug; special geared end and one right-angle head; automatic-release switch; "universal" motor.  
 Available Right-Angle Heads and Catalog Numbers:

Head (Part No.)	Equipped with:	Catalog No. (Complete Unit)	Head (Part No.)	Equipped with:	Catalog No. (Complete Unit)
300	1/2" Square Shank	172-300	305	1/2" Square Shank	172-305
301	1/2" Hex. Socket	172-301	308	5/8" Hex. Socket	172-308
303	3/8" Square Shank	172-303	350	7/16" Hex. Chuck	172-350
304	1 1/32" Hex. Socket	172-304			

Standard Voltage — 110; also available for 220 or 250 volts.  
 Price, with any one Head (except No. 305) ..... **\$106.00**  
 with No. 305 Head ..... **116.00**  
 \* Special speeds — 350 or 700 R.P.M. .... \$2.50 extra  
 Reversing switch for all No. 14 Drivers ..... 7.50 extra  
 Cat. No. 22148 Bench Stand ..... \$15.00



# "ELECTRIC TOOL HEADQUARTERS"



## No. 18 Positive Clutch Screw Driver (Formerly No. 22 Power Driver) CATALOG No. 54

### Specifications

Capacity: Wood screws ..... up to No. 18 x 3½".  
 Self-tapping screws ..... up to 3/8" diameter.  
 Lag screws ..... up to 5/16" x 3".  
 Machine screws and nuts ..... up to 1/2" diameter.  
 Standard No-load speed ..... 500 R.P.M.\*  
 Weight: Net ..... 9 lbs.; Shipping ..... 11¾ lbs.  
 Overall length (not including bit) ..... 14¼".  
 Standard Equipment—Quick-change chuck, with 7/16" hex. socket; 20° positive clutch; 3-conductor cable and plug; and one each No. 5343 and No. 5329 Standard Bits with finders; automatic-release switch with locking pin; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 54 (specify voltage) **\$72.00**  
 Price, complete .....  
 \* Special speeds — 750, 1000 or 1600 R.P.M. .... \$2.50 extra  
 Special 13° or 30° Clutch, instead of standard angle ..... 2.50 extra  
 No. 30427 Auxiliary Side Handle ..... 2.75 extra

## No. 18 Adjustable Clutch Screw Driver (Formerly No. 22 Power Driver) CATALOG No. 164

### Specifications

Capacity: Same as above.  
 Standard No-load speed ..... 500 R.P.M.\*  
 Net Weight ..... 10½ lbs.; Shipping ..... 16 lbs.  
 Overall length (not including bit) ..... 17¼".  
 Standard Equipment — 3-conductor cable and plug; quick-change chuck with 7/16" hex. socket; adjustable clutch; one each No. 5343 and No. 5329 Standard Bits with finders; automatic-release switch with locking pin; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 164 (specify voltage) **\$90.00**  
 Price, complete .....  
 \* Special speeds — 750, 1000 or 1600 R.P.M. .... \$2.50 extra  
 No. 30427 Auxiliary Side Handle ..... 2.75 extra

## No. 18 90°-Angle Adjustable Clutch Screw Driver (Formerly No. 22 Power Driver) CATALOG No. 167

BY ADDING the advantages of the right-angle drive to the No. 22 Power Driver, limited clearance, "corner" work and other obstacles to the efficient use of the straight drive unit are entirely overcome.

### Specifications

Capacity: Same as above.  
 Standard No-load speed ..... 500 R.P.M.\*; Overall length ..... 19 5/8".  
 Weight: Net ..... 12 lbs.; Shipping ..... 18 lbs.  
 Standard Equipment — 3-conductor cable and plug; special geared end and one right-angle head; automatic-release switch; "universal" motor.  
 Available Right-Angle Heads and Catalog Numbers:

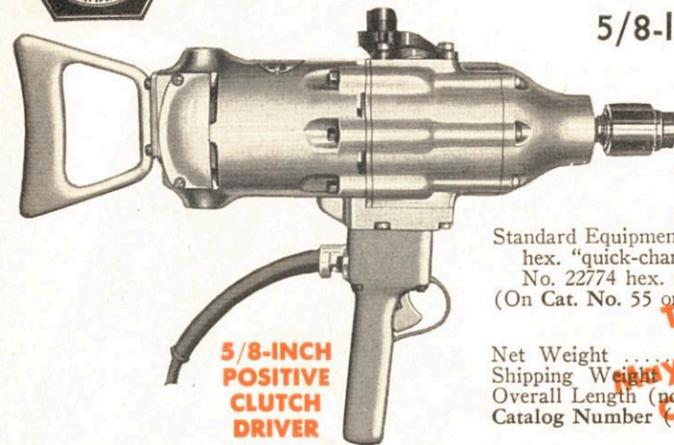
Head (Part No.)	Equipped with:	Catalog No. (Complete Unit)	Head (Part No.)	Equipped with:	Catalog No. (Complete Unit)
300	1/2" Square Shank	167-300	305	1/2" Square Shank	167-305
301	1/2" Hex. Socket	167-301	308	5/8" Hex. Socket	167-308
303	3/8" Square Shank	167-303	350	7/16" Hex. Chuck	167-350
304	1 1/32" Hex. Socket	167-304			

Standard Voltage — 110; also available for 220 or 250 volts.  
 Price, with any one Head (except No. 305) ..... **\$118.00**  
 with No. 305 Head ..... **\$128.00**  
 \* Special Speeds — 350 or 700 R.P.M. .... \$2.50 extra  
 Reversing Switch for all No. 18 Drivers ..... 7.50 extra  
 Cat. No. 22148 Bench Stand ..... \$15.00





# "ELECTRIC TOOL HEADQUARTERS"



## 5/8-Inch Positive Clutch Nut Runner

(Formerly No. 32 Power Driver)

CATALOG Nos. 55, 392

### Specifications

Capacity: Machine screws and nuts..... up to 5/8" diam.

Lag screws..... up to 3/8" x 4 1/2" long.

Standard No-load speed..... 500 R.P.M.\*

Standard Equipment—3-wire cable and plug; 20° positive pipe pipe Clutch; 5/8" hex. "quick-change" chuck; instant-release switch with locking pin; one No. 22774 hex. socket wrench (5/8" a.f.) and shank; "universal" motor. (On Cat. No. 55 only, spade handle and side pipe handle also standard.)

	Side Switch Handle	End Switch Handle
Net Weight	23 lbs.	21 3/4 lbs.
Shipping Weight	29 lbs.	28 lbs.
Overall Length (not including bit)	20 3/4"	20 3/4"
Catalog Number (specify voltage)	55	392

Price, complete ..... \$119.00 \$119.00

Special 13° or 30° clutch, instead of standard angle..... \$ 3.50 extra

Standard Voltage — 110; also available for 220 or 250 volts.

## 5/8-Inch Adjustable Clutch Nut Runner

(Formerly No. 32 Power Driver)

CATALOG Nos. 352, 373

### Specifications

Capacity and Standard Speed same as above.

Standard Equipment — 3-wire cable and plug; adjustable clutch; 5/8" hex. "quick-change" chuck; instant-release switch with locking pin; one No. 22774 hex. socket wrench (5/8" a.f.) and shank; "universal" motor.

(On Cat. No. 352 only, spade handle and side pipe handle also standard.)

	Side Switch Handle	End Switch Handle
Net Weight	27 lbs.	25 1/2 lbs.
Shipping Weight	32 lbs.	31 lbs.
Overall Length (not includ. wrench)	21 3/8"	21 3/4"
Catalog Number (specify voltage)	352	373

Price, complete ..... \$138.00 \$138.00

Standard Voltage — 110; also available for 220 or 250 volts.

## 5/8-Inch 90°-Angle Adjustable Clutch Nut Runner

(Formerly No. 32 Power Driver)

CATALOG Nos. 248, 182

### Specifications

Capacity and Standard Speed same as above.

Weight: Net ..... 28 1/2 lbs.

Shipping ..... 38 lbs.

Overall Length ..... 24 1/2"

Standard Equipment — 3-conductor cable and plug; special geared end with adjustable clutch and one of the right-angle heads listed below; spade handle; side switch handle and pipe handle; "universal" motor.

Optional Equipment — End switch handle can be supplied if desired, no extra charge.

Standard Voltage — 110; also available for 220 or 250 volts.

Available Right-Angle Heads and Catalog Numbers:

Head (Part No.)	Catalog Numbers		Head (Part No.)	Catalog Numbers	
	With Side Switch Handle	With End Switch Handle		With Side Switch Handle	With End Switch Handle
400	248-400	182-400	451	248-451	182-451
450	248-450	182-450	452	248-452	182-452

Price, (specify voltage) with any one of above Heads... \$178.00

\*Special Speeds (for all units)—350, 700 or 900 R.P.M. \$ 5.00 extra

Reversing Switch for all 5/8" Nut Runners..... 10.00 extra



ADJUSTABLE CLUTCH DRIVER



90°-ANGLE DRIVER



# "ELECTRIC TOOL HEADQUARTERS"

## 7/8-Inch Positive Clutch Nut Runner

(Formerly No. 42 Power Driver)

CATALOG No. 56

### Specifications

Capacity:

Lag screws ..... up to 1/2" x 5 1/2" long.

Machine screws and nuts..... up to 7/8" diam.

Standard No-load speed..... 500 R.P.M.\*

Weight: Net ..... 35 lbs.; Shipping ..... 43 lbs.

Overall length (not including wrench)..... 21 3/4"

Standard Equipment — 3-wire cable and plug; 20° positive clutch; "quick-change" chuck

(5/8" hex.); side switch handle with safety switch; spade handle; side pipe handle; one No. 22782 hex. socket wrench (7/8" a.f.) and shank; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 56 (specify voltage)

Price, complete..... \$149.00

Special 13° or 30° clutch, instead of standard angle..... \$ 3.50 extra



7/8-INCH POSITIVE NUT-RUNNER

## 7/8-Inch Adjustable Clutch Nut Runner

(Formerly No. 42 Power Drive)

CATALOG No. 353

### Specifications

Capacity: Machine screws and nuts..... up to 7/8" diam.

Lag screws ..... up to 1/2" x 5 1/2" long.

Standard No-load speed..... 500 R.P.M.\*

Weight: Net ..... 47 1/2 lbs.; Shipping ..... 57 lbs.

Overall length (not including wrench)..... 26 3/4"

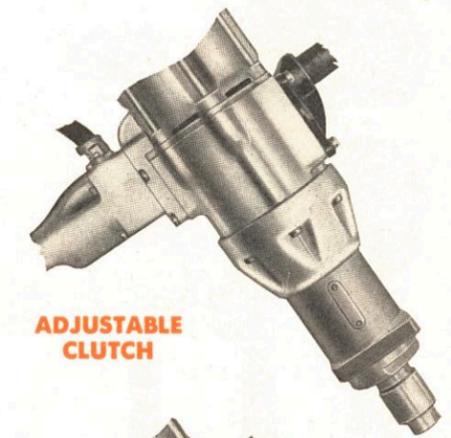
Standard Equipment — 3-wire cable and plug; adjustable clutch; "quick-change" chuck (5/8" hex.); side switch handle with instant-release safety switch; spade handle; side pipe handle; one No. 22782 hex. socket wrench (7/8" a.f.) and shank; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 353 (specify voltage)

Price, complete..... \$178.00

Standard Voltage — 110; also available for 220 or 250 volts.



ADJUSTABLE CLUTCH

## 7/8-Inch 90°-Angle Adjustable Clutch Nut Runner

(Formerly No. 42 Power Driver)

CATALOG Nos. 185, 252

### Specifications

Capacity: Machine screws and nuts..... up to 7/8" diam.

Standard No-load speed..... 500 R.P.M.\*

Weight: Net ..... 52 1/2 lbs.; Shipping ..... 65 lbs.

Overall length ..... 28 3/4"

Standard Equipment — 3-conductor cable and plug; special geared end with adjustable clutch and one of the right-angle heads listed below; spade handle, side switch handle and pipe handle; "universal" motor.

Optional Equipment — End switch handle can be supplied if desired, no extra charge.

Standard Voltage — 110; also available for 220 or 250 volts.

Price, complete..... \$178.00

Standard Voltage — 110; also available for 220 or 250 volts.

Price, complete..... \$178.00

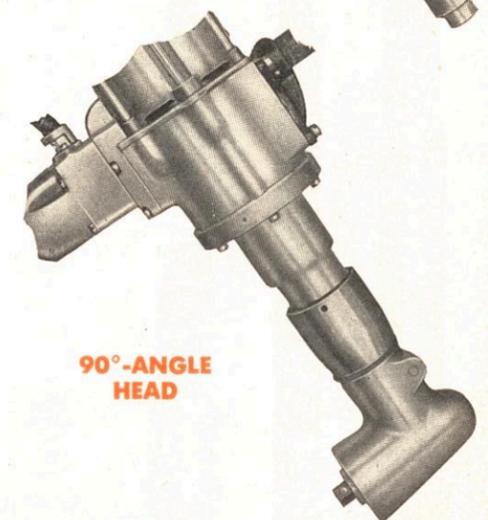
### Right Angle Head Specifications

Head (Part No.)	Description	Catalog Numbers		Price Complete Specify Voltage
		With Side Switch Handle	With End Switch Handle	
501	5/8" square shank†	185-501	252-501	\$228.00
505	3/4" square shank†	185-505	252-505	\$248.00

† These shanks fit Blackhawk or Snap-on Sockets.

\*Special speeds—for all 7/8" Nut Runners—350, 700 or 900 R.P.M. \$5.00 extra

Reversing switch—for all 7/8" Nut Runners.... 10.00 extra



90°-ANGLE HEAD



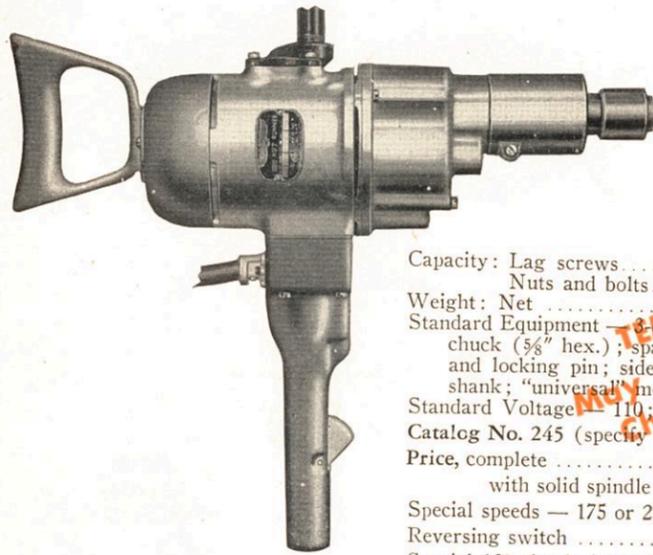


# "ELECTRIC TOOL HEADQUARTERS"

## 1-Inch Positive Clutch Nut Runner

(Formerly No. 43 Power Driver)

CATALOG No. 245



A LOW-SPEED tool with high torque. This unit can be supplied with solid spindle and 3/4" Jacobs geared chuck, for slow speed drilling and reaming.

### Specifications

Capacity: Lag screws... up to 3/4" x 6" long. Speed No-load... 90 R.P.M.  
 Nuts and bolts... up to 1" diameter. Overall length... 22 3/4".  
 Weight: Net... 30 3/4 lbs.; Shipping... 39 3/4 lbs.  
 Standard Equipment — 3-conductor cable and plug; 20° positive clutch; "quick-change" chuck (5/8" hex.); spade handle; side switch handle with automatic-release switch and locking pin; side pipe handle; one No. 22782 socket wrench (7/8" a.f.) and shank; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 245 (specify voltage)

Price, complete... **\$149.00**  
 with solid spindle and 3/4" chuck for drilling... \$164.00  
 Special speeds — 175 or 275 R.P.M. \$ 5.00 extra  
 Reversing switch... 10.00 extra  
 Special 13° clutch, instead of standard... \$3.50 extra

## Socket Wrenches

COMPLETE RANGE of sizes, for use on all Screw Drivers and Nut Runners. Sockets are interchangeable on separable drive-shanks. Shank sizes fit Drivers as follows:

- 1/4" Hexagon Shank — for Torsimeters and Scruguns.
- 7/16" Hexagon Shank — for Nos. 14 and 18 Drivers.
- 5/8" Hexagon Shank — for 5/8", 7/8" and 1" Drivers.

"Socket size" indicates opening to fit nut or bolt to be driven; available in hexagon or double-square openings. "Drive opening" in socket fits corresponding "drive square" on shank; match these sizes when ordering.

### Sockets

Socket Size	Drive Opening	Cat. No. Hexagon Socket	Price Each	Cat. No. Double-Square	Price Each	Shank Size	Drive Square Size	Overall Length	Cat. No.	Price Each
1/4"	1/4"	20512	\$0.70	20519	\$0.85					
5/16"	5/16"	20513	.70							
3/8"	3/8"	20514	.70	20520	.85					
1/2"	1/2"	20515	.70	20521	.85	1/4"	1/4"	2"	20510	\$1.00
5/8"	5/8"	20516	.70	20522	.85	3/4"	3/4"	6"	20511	1.50
7/8"	7/8"	20517	.70	20516	.85					
1 1/8"	1 1/8"	20518	.75	22915	.90					
1 1/4"	1 1/4"	22917	.80	22916	.95					
1 1/2"	1 1/2"	22762	.75	22763	1.00	7/16"	3/8"	2 3/4"	22792	1.50
1 3/4"	1 3/4"	22764	.75	22765	1.00	1/2"	5/8"	5"	22793	1.85
2"	2"	22766	.75	22767	1.00					
2 1/4"	2 1/4"	22768	.75	22769	1.00					
2 1/2"	2 1/2"	22770	.75	22771	1.00					
2 3/4"	2 3/4"	22772	.75	22773	1.00					
3"	3"	22774	.75	22775	1.00	1/2"	1 1/2"	2 3/4"	22794	2.00
3 1/4"	3 1/4"	22776	.75	22777	1.00	3/4"	3"	5"	22795	2.25
3 1/2"	3 1/2"	22778	1.00	22779	1.30	5/8"	3 1/2"	5"	22796	2.25
3 3/4"	3 3/4"	22780	1.00	22781	1.30	3/4"	3 1/2"	5"	22797	2.50
4"	4"	22782	1.00	22783	1.50					
4 1/4"	4 1/4"	22784	1.25	22785	1.60					
4 1/2"	4 1/2"	22786	1.35	22787	1.75					
4 3/4"	4 3/4"	22788	2.00	22789	2.50					
5"	5"	22790	2.25	22791	2.75					
5 1/4"	5 1/4"	23298	3.50	23297	5.50					
5 1/2"	5 1/2"	23300	3.50	23299	5.50	5/8"	3 3/8"	3"	22798	2.75
5 3/4"	5 3/4"	23302	4.00	23301	6.00				22799	3.00
6"	6"	23304	4.50	23303	6.50					
6 1/4"	6 1/4"	23306	5.00	23305	7.00					
6 1/2"	6 1/2"	23308	5.00	23307	7.00					
6 3/4"	6 3/4"	25943	5.50							

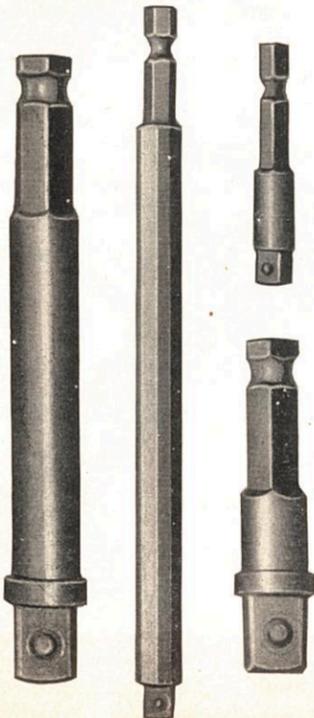
ADAPTORS Used to adapt larger size sockets to smaller size shanks. "Male" is drive-square to fit drive opening of socket; "Female" is drive opening to fit drive-square of shank.

No. 22800 3/4" Male; 1/2" Female... \$3.50  
 No. 22801 5/8" Male; 1/2" Female... 3.00  
 No. 22802 1/2" Male; 3/8" Female... 2.65  
 No. 22803 1 1/2" Male; 1/2" Female... 2.65



HEXAGON SOCKETS

DOUBLE SQUARE SOCKETS



SHANKS

# "ELECTRIC TOOL HEADQUARTERS"

## Right-Angle Head Specifications

AVAILABLE Heads for Right Angle Screw Drivers and Nut Runners, as shown on preceding pages, are listed below. The following specifications are indicated: first group — size of built-in socket (for direct use on nut tightening) and dimensions of clearance hole behind socket; second group — size of "drive square" shank, to which various size sockets may be fitted; third group — size of built-in screw driver bit or socket to take bit-shank.

Head Part No.	Hexagon-Socket Size Across Flats	Clearance Hole		Head Part No.	Size of † Square Shank
		Diam.	Depth		
100	3/8"	1/4"	1 1/16"	103	3/8"
101	1/2"	3/8"	1 1/16"	105	1/2"
102	5/8"	1/2"	1 1/16"	300	5/8"
104	7/8"	3/4"	1 1/16"	303	7/8"
106	1 1/8"	7/8"	1 1/16"	305	1 1/8"
107	1 1/2"	1 1/4"	1 1/16"	400	1 1/2"
108	1 3/4"	1 1/2"	1 1/16"	501	1 3/4"
				505	1 3/4"
301	1/2"	1/2"	7/8"	Head	Screw Driver
304	1 1/2"	1 1/2"	1"	Part No.	Bit Size
308	3/8"	3/8"	1"		
450	3/4"	1 1/2"	1 1/4"	150	No. 4
451	5/8"	1 3/4"	1 3/4"	151	No. 6 & No. 8
452	3/16"	1 1/8"	1 3/4"	152	No. 10
				156	No. 6 & No. 8**
				350	1/16" Hex. Chuck

\* Square Socket, instead of Hexagon.  
 \*\* This Head equipped with dead spindle.  
 † Shank to fit Blackhawk and Snap-On type Sockets.

## Screw Driver Bits for Phillips Head Screws

(For Scrugun, Torsimeter, Nos. 14 and 18 Screw Drivers)

A SPECIAL bit is required for driving the Phillips Head Screw, which has a cross form slot instead of the conventional slot and four different slot sizes designated as Nos. 1, 2, 3 and 4. Several screw sizes are covered by one slot size; see Table No. 1. Bits available for Black & Decker Screw Drivers are listed in Table No. 2.

Table No. 1

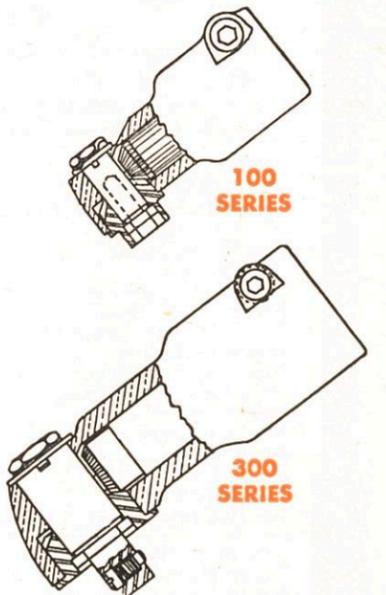
Type of Screw	Slot No. 1	Slot No. 2	Slot No. 3	Slot No. 4
Wood Screws	Flat and Oval Head	No. 4 and Smaller	No. 5 to No. 9	No. 10 to No. 16
	Round Head	No. 4 and Smaller	No. 5 to No. 10	No. 11 to No. 16
Stove Bolts	Flat, Oval and Oven Head	....	5/32" and 3/16"	1/4"
	Round Head	....	5/32" and 3/16"	1/4" and 3/16"
Machine Screws	Flat, Oval and Binding Head	No. 4 and Smaller	No. 5 to No. 10	No. 12 and 1/4"
	Round and Fillister Head	No. 4 and Smaller	No. 5 to No. 10	No. 12 to 3/16"
	Truss Head	No. 5 and Smaller	No. 6 to No. 10	No. 12 and 1/4"
Sheet Metal Screws	Flat, Round Oval, Binding and Stove Head	No. 4 and Smaller	No. 5 to No. 10	No. 12 and No. 14

Table No. 2

Slot Size	Cat. No.	Unit Used With	Price Each	Price Each		
				Box of 6*	1/2 Gross Lot*	Four Gross Lot*
No. 1 { 1/4" hex. shank }	17922	Torsimeter and Scrugun	\$0.70	\$0.65	\$0.55	\$0.48
No. 1 { 3/16" hex. shank }	18938	Nos. 14 and 18 S. D.	.90	.85	.75	.70
No. 2 { 1/4" hex. shank }	17923	Torsimeter and Scrugun	.70	.65	.55	.48
No. 2 { 3/16" hex. shank }	17924	Nos. 14 and 18 S. D.	.90	.85	.75	.70
No. 3 { 1/4" hex. shank }	21356	Torsimeter and Scrugun	.70	.65	.55	.48
No. 3 { 3/16" hex. shank }	17925	Nos. 14 and 18 S. D.	.90	.85	.75	.70
No. 4 { 3/16" hex. shank }	17926	Nos. 14 and 18 S. D.	.90	.85	.75	.70

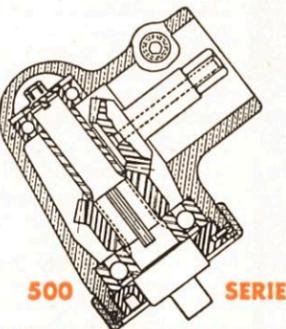
\* Quantity prices apply only on designated quantities of one size.  
 1/4" hex. shank bits have a projecting length (from chuck to bit end) of 1 1/2".  
 3/16" hex. shank bits have a projecting length (from chuck to bit end) of 2 1/2".

Standard and Hex. Socket Bits are listed on next page.



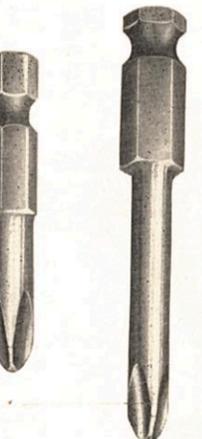
100 SERIES

300 SERIES



500 SERIES

RIGHT-ANGLE HEADS



PHILLIPS HEAD BITS



**"ELECTRIC TOOL HEADQUARTERS"**

**Standard Screw-Driver Bits**  
With 1/4" Hex Shanks—For Torsimeters and Scruguns

For use with these Screw Types and Sizes	Bit Length *	Bit and Stan'd. Finder Assem. No. (C)	** Price Each	Bit Only No. (B)	** Price Each	Standard Finder No.	Price Each	Special Blank Finder No.	Price Each
Nos. 2, 3 Wood No. 2 Machine (except Filister) No. 3 Machine No. 2 Sheet Metal No. 4 Filister	1 1/4"			18051	\$0.70	18050†	\$0.45	24475	\$0.35
						20482†	.45	24478	.35
	2 3/4"			22396	.90	22397†	.70	24476	.45
						23979†	.70	24477	.45
Nos. 4, 5, 6, 7 Wood No. 4 Machine (except Filister) Nos. 5, 6 Machine Nos. 4, 5 Sheet Metal No. 6 Sheet Metal (except Stove)	1 1/4"			13208	.70	13210†	.45	24479	.35
						15588†	.45	24480	.35
	2 3/4"	17690	\$1.40	17688	.90	5103	.45	24466	.35
	5 1/4"	22111	1.50	22108	1.00	5103	.45	24466	.35
Nos. 8, 9 Wood No. 6 Stove No. 7, 8 Sheet Metal No. 8 Machine No. 10 Filister	1 1/4"			13207	.70	13209†	.45	24481	.35
						16529†	.45	24482	.35
	2 3/4"	13356	1.40	13353	.90	5105	.45	24467	.35
	5 1/4"	13469	1.50	13470	1.00	5105	.45	24467	.35
Nos. 10, 11 Wood No. 10 Sheet Metal No. 10 Machine (except Filister) No. 12 Filister	1 1/4"			15475	.70	15469†	.45	24483	.35
						23494	.90	23493†	.70
	2 3/4"	18593	1.40	18594	.90	5107†	.45	24468	.35
No. 12 Wood No. 12 Sheet Metal No. 12 Machine (except Filister) 1/4" Filister	1 1/4"			16772	.70	16773†	.45	24485	.35
	2 3/4"	21731	1.40	21730	.90	5109†	.45	24469	.35

† Used with Scrugun only.  
‡ Used with Torsimeter and 90° heads.

\* All lengths shown are the projecting lengths, from chuck to end of bit; they do not indicate overall lengths.

\*\*Quantity Prices—All Standard Bits and Bit-and-Finder Assemblies in this group are packed and stocked in boxes of six. We recommend ordering in standard packages or multiples thereof and offer special quantity prices which apply on designated quantities, all of one size only.

One	In Box of Six	In 1/2-Gross Lot	In 1-Gross Lot	In 4-Gross Lot
\$0.70	\$0.50	\$0.45	\$0.40	\$0.35
.90	.65	.60	.55	.45
1.00	.70	.65	.60	.50
1.40	.95	.85	.80	.65
1.50	1.05	.95	.85	.70

**Protecting Sleeves (D)**

Used on Torsimeters and Scruguns, when Bits are used without Finders.  
No. 19178 Protecting Sleeve for No. 4 Torsimeter..... \$0.65  
No. 13201 Protecting Sleeve for Scrugun..... .65

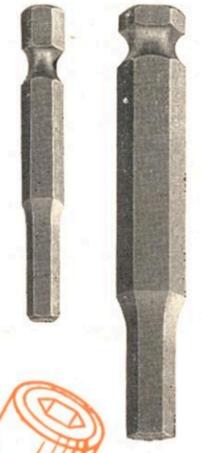
**Bit Extensions (A)**

Screw Driver Bit Extensions are available in various lengths, with 1/4" or 5/16" shank to fit Torsimeter, Scrugun or Screw Driver Chuck, and a chuck socket to take standard bits and socket wrenches. These Extensions greatly reduce bit replacement costs, where long bits are needed.

Cat. No.	Length	Shank Size	Price Each
22581	4"	1/4"	\$1.45
22539	6"	1/4"	1.45
22540	8"	1/4"	1.50
22323	10"	1/4"	1.50
15023	4"	5/16"	1.30
14989	6"	5/16"	1.45
5287	8"	5/16"	1.55
5288	10"	5/16"	1.70

**Special Hex. Drive Bits for Hollow Head Cap Screws**

This special type of screw has a driving recess consisting of a hexagon-shaped socket requiring a bit with a hexagon driving end. We can supply correct bits for driving these special screws in both the 1/4" hex. shank and 5/16" hex. shank size. Thus these bits are adapted to all Drivers from the Torsimeter to the No. 18.



Cat. No.	Diam. Across Flat on Driving End of Bit	Ex-tension of Bit	Size Screws with which Bit is Used			
			Cap Screws	Set Screws	Pipe Plugs	Price Each
Hex. Drive Bits with 1/4" Hex. Shanks						
18577	1/8"	1 1/4"	# 8	1/4"	...	\$2.30
18578	5/16"	1 3/4"	# 10 & # 12	5/16"	...	2.30
18579	3/8"	1 3/4"	1/4"	3/8"	...	2.30
Hex. Drive Bits with 5/16" Hex. Shanks						
17892	5/16"	2"	1/4"	3/8"	1/2"	\$2.85
19223	5/16"	2"	5/16"	7/8"	1"	2.85
26842	1/4"	2"	1/2"	Allen	1/4"	2.85
18977	5/16"	2"	3/8" and 7/16"	5/8"	3/8"	2.85
23492	3/8"	2"	1/2" and 5/16"	3/4"	1/2"	2.85



**"ELECTRIC TOOL HEADQUARTERS"**

**Standard Screw-Driver Bits**  
with 7/16" Hex. Shanks—for No. 14 and No. 18 Drivers

For use with these Screw Types and Sizes	Bit Length *	Bit and Stan'd. Finder Assem. No. (F)	Price Each	Bit Only No. (E)	Price Each	Standard Finder No.	Price Each	Special Blank Finder No.	Price Each
Nos. 4, 5, 6, 7 Wood No. 4 Machine (except Filister) Nos. 5, 6 Machine Nos. 4, 5 Sheet Metal No. 6 Sheet Metal (except Stove)	2 1/2"	5345	\$1.45	5104	\$.95	5103	\$0.45	24466	\$0.35
	4"	15085	1.65	15049	1.15				
	6"	15086	1.75	15050	1.25				
	8"	15087	1.85	15051	1.35				
	10"	15088	1.95	15052	1.45				
Nos. 8, 9 Wood No. 6 Stove No. 7, 8 Sheet Metal No. 8 Machine No. 10 Filister	2 1/2"	5346	1.45**	5106	.95**	5105	.45	24467	.35
	4"	15089	1.65**	15053	1.15**				
	6"	15090	1.75**	15054	1.25**				
	8"	15091	1.85**	15055	1.35**				
No. 10, 11 Wood No. 10 Sheet Metal No. 10 Machine (except Filister) No. 12 Filister	2 1/2"	5330	1.45**	5108	.95**	5107	.45	24468	.35
	4"	15093	1.65**	15057	1.15**				
	6"	15094	1.75**	15058	1.25**				
	8"	15095	1.85**	15059	1.35**				
No. 12 Wood No. 12 Sheet Metal No. 12 Machine (except Filister) 1/4" Filister	2 1/2"	5343	1.45**	5110	.95**	5109	.45	24469	.35
	4"	15097	1.65**	15061	1.15**				
	6"	15098	1.75**	15062	1.25**				
	8"	15099	1.85**	15063	1.35**				
No. 14 Wood No. 14 Sheet Metal 1/4" Machine (except Filister)	2 1/2"	5344	1.45**	5112	.95**	5111	.45	24470	.35
	4"	15101	1.65**	15065	1.15**				
	6"	15102	1.75**	15066	1.25**				
	8"	15103	1.85**	15067	1.35**				
No. 16 Wood 5/16" Filister	2 1/2"	5329	1.45**	5114	.95**	5113	.45	24471	.35
	4"	15105	1.65**	15069	1.15**				
	6"	15106	1.75**	15070	1.25**				
	8"	15107	1.85**	15071	1.35**				
No. 18 Wood 5/16" Sheet Metal	2 5/8"	5364	1.45	5116	.95	5115	.45	24472	.35
	4"	15109	1.65	15073	1.15				
	6"	15110	1.75	15074	1.25				
	8"	15111	1.85	15075	1.35				
5/16" Machine (except Filister) No. 20 Wood 3/8" Filister	2 3/4"	5366	1.45	5118	.95	5117	.45	24473	.35
	4"	15113	1.65	15077	1.15				
	6"	15114	1.75	15078	1.25				
	8"	15115	1.85	15079	1.35				
No. 24 Wood 3/8" Machine (except Filister)	2 3/4"	5369	1.45	5120	.95	5119	.45	24474	.35
	4"	15117	1.65	15081	1.15				
	6"	15118	1.75	15082	1.25				
	8"	15119	1.85	15083	1.35				
	10"	15120	1.95	15084	1.45				

\* All lengths shown are the projecting lengths, from chuck to end of bit; they do not indicate overall lengths.

\*\*Quantity Prices—Standard Bits and Bit-and-Finder Assemblies in this group, when marked thus (\*\*), are packed and stocked in boxes of six. We recommend ordering in standard packages or multiples thereof and offer special quantity prices which apply on designated quantities, all of one size only.

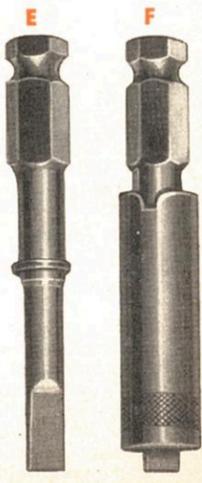
Bit Only, Without Finder				
Price Each	In Box of Six, Each	1/2-Gross Lot, Each	One-Gross Lot, Each	Four-Gross Lot, Each
\$0.95	\$0.65	\$0.60	\$0.55	\$0.45
1.15	.80	.70	.65	.55
1.25	.85	.80	.70	.60
1.35	.95	.85	.80	.65
1.45	1.00	.90	.85	.70

Bit-and-Finder Assembly				
Price Each	In Box of Six, Each	1/2-Gross Lot, Each	One-Gross Lot, Each	Four-Gross Lot, Each
\$1.45	\$1.00	\$0.90	\$0.85	\$0.65
1.65	1.15	1.00	.95	.80
1.75	1.20	1.05	1.00	.85
1.85	1.30	1.15	1.05	.90
1.95	1.35	1.20	1.15	.95

**Adaptors**

To use Screw Driver Bits and Socket Wrenches with 7/16" hex. shanks in the 5/8", 7/8" and 1" Nut Runners, an Adaptor is necessary to reduce the Chuck capacity from 5/8" to 7/16".

No. 24880 5/8" to 7/16" Bit Adaptor...\$3.25





## "ELECTRIC TOOL HEADQUARTERS"

### Portable Electric Hammers

COMPLETELY self-contained, operated by "universal" motors, require no transformers or rectifiers. Positive motor drive, through reducing gears, develops hammer action by oscillating a weight and spring assembly. A definite "follow-through" stroke produces high efficiency.

Use to speed up any drilling or cutting operation requiring a hammer action; drill and channel in concrete, stone and brick; caulk joints and seams; remove scale and rust; tamp and vibrate concrete forms; gouge and chisel trees, timbers.

#### 1/2-Inch Portable Electric Hammer (Formerly No. 30 Hammer)

CATALOG No. 102

Operating Range\*: Efficient... 3/16" to 1/2"; Extreme... 3/16" to 3/4".  
Blows Per Minute..... 2400. Overall Length... 12 7/8".  
Weight: Net ..... 5 3/4 lbs.; Shipping ..... 15 lbs.  
Standard Equipment — One No. 22587 chuck wrench; one dust shield; one No. 24024 (1/2") speed bit; 3-conductor cable and plug; rocker-type switch; tool retaining spring; drift key; carrying case and can of oil; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 102 (specify voltage)

Price, complete ..... \$85.00

#### 3/4-Inch Portable Electric Hammer (Formerly No. 32 Hammer)

CATALOG No. 103

Operating Range\*: Efficient..... 1/4" to 3/4"; Extreme... 3/16" to 1 1/8".  
Blows Per Minute..... 2300. Overall Length... 14 5/8".  
Weight: Net ..... 10 3/4 lbs.; Shipping ..... 22 lbs.  
Standard Equipment — One No. 22587 chuck wrench; one dust shield; one No. 7162 (5/8") star drill; 3-conductor cable and plug; trigger switch; tool retaining spring; drift key; carrying case and can of oil; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 103 (specify voltage)

Price, complete ..... \$115.00

#### 1 1/8-Inch Portable Electric Hammer (Formerly No. 34 Hammer)

CATALOG No. 104

Operating Range\*: Efficient..... 3/4" to 1 1/8"; Extreme... 3/4" to 1 1/2".  
Blows Per Minute..... 2200. Overall Length... 18 7/8".  
Weight: Net ..... 19 1/4 lbs.; Shipping ..... 31 lbs.  
Standard Equipment — One No. 22754 chuck wrench; one dust shield; one No. 7096 (1") star drill; 3-conductor cable and plug; trigger switch; tool retaining spring; drift key; carrying case and can of oil; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 104 (specify voltage)

Price, complete ..... \$145.00



\*"Efficient Operating Range" (black circles) indicates maximum and minimum hole sizes in concrete, between which each Hammer does its most efficient work. "Extreme Operating Range" (orange circles) indicates the limits to which each Hammer can be used in emergency. If bits or drills below the Efficient Operating Range are used, there is danger of excessive bit breakage. If drills above the Efficient Operating Range are used, work will be noticeably slower and less satisfactory.

## "ELECTRIC TOOL HEADQUARTERS"

**Black & Decker**

### 2-Inch Portable Electric Hammer (Formerly No. 36 Hammer)

CATALOG No. 105

Operating Range\*: Efficient... 1/4" to 2"; Extreme... 3/4" to 2".  
Blows Per Minute..... 1,950. Overall Length... 20 1/4".  
Weight: Net ..... 29 1/4 lbs.; Shipping ..... 44 lbs.  
Standard Equipment — One No. 21726 turning handle; one No. 21946 (1 1/2") star drill; 3-conductor cable and plug; trigger switch; tool retaining yoke mounted on barrel; carrying case and can of oil; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 105 (specify voltage)

Price, complete ..... \$195.00

\* See "Operating Range" reference at bottom of Page 38.

### Supplies

- DRIFT KEY** Used to remove taper shank bits from Chuck Wrench.  
No. 7276 For all Chuck Wrenches..... \$ .35
- TOOL RETAINING SPRINGS** To hold straight-shank tool in nose-piece of Hammer.  
No. 10909 Tool Retaining Spring for 1/2" and 3/4" Hammers..... .15  
No. 21750 Tool Retaining Spring for 1 1/8" Hammer..... .15
- DUST SHIELDS** Used in overhead drilling to keep dust out of Hammer nose and mechanism.  
No. 17746 For Wrenches Nos. 22587, 23806, 22510..... .35  
No. 17747 For Wrenches Nos. 22749, 22754..... .35
- CARRYING CASES** Ample space for Hammer, Wrenches and full assortment of tools.  
No. 18296 Carrying Case for 1/2" Hammer..... 7.75  
No. 18389 Carrying Case for 3/4" Hammer..... 9.00  
No. 21003 Carrying Case for 1 1/8" Hammer..... 10.00  
No. 18679 Carrying Case for 2" Hammer..... 12.50
- SPECIAL HAMMER LUBRICATING OIL** For all Hammers.  
No. 22926 3-Oz. Container..... .25  
No. 22930 Pint Container..... .50  
No. 22931 Quart Container..... .85  
No. 22932 Gallon Container..... 2.50

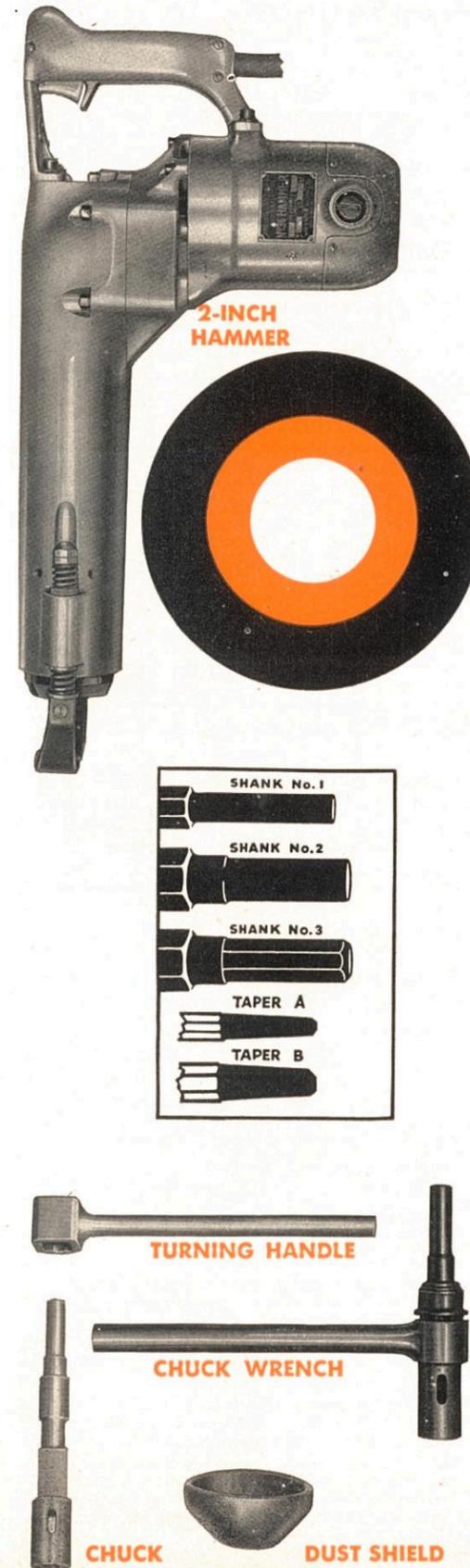
### Shanks and Tapers

To make it easy to identify shanks and tapers for chuck wrenches and tools, we have established the following standards:  
**SHANK No. 1**—Straight, round shank 2 1/4" long, fits the nose piece of 1/2" and 3/4" Hammers. Used on Chuck Wrenches Nos. 22587, 23806, and on tools that fit directly into these Hammers.  
**SHANK No. 2**—Straight, round shank 2 1/2" long, fits the nose piece of 1 1/8" and 2" Hammers. Used on Chuck Wrenches Nos. 22749, 22754, Chuck No. 22510 and on tools which must turn freely in the nose piece.  
**SHANK No. 3**—Straight, hexagonal shank 2 1/2" long, fits the nose piece of 1 1/8" and 2" Hammers. Used on hammer tools which do not rotate in the Hammer nose piece.  
**TAPER "A"**—Tapered shank on all star drills, speed-bits and diamond points in diameters up to 3/4" inclusive, fitting chuck wrenches Nos. 22587 and 22749.  
**TAPER "B"**—Tapered shank on all star drills in diameters 3/4" to 1 1/8" inclusive, fitting chuck wrenches Nos. 23806, 22754 and Chuck No. 22510.

### Chuck Wrenches and Turning Handles

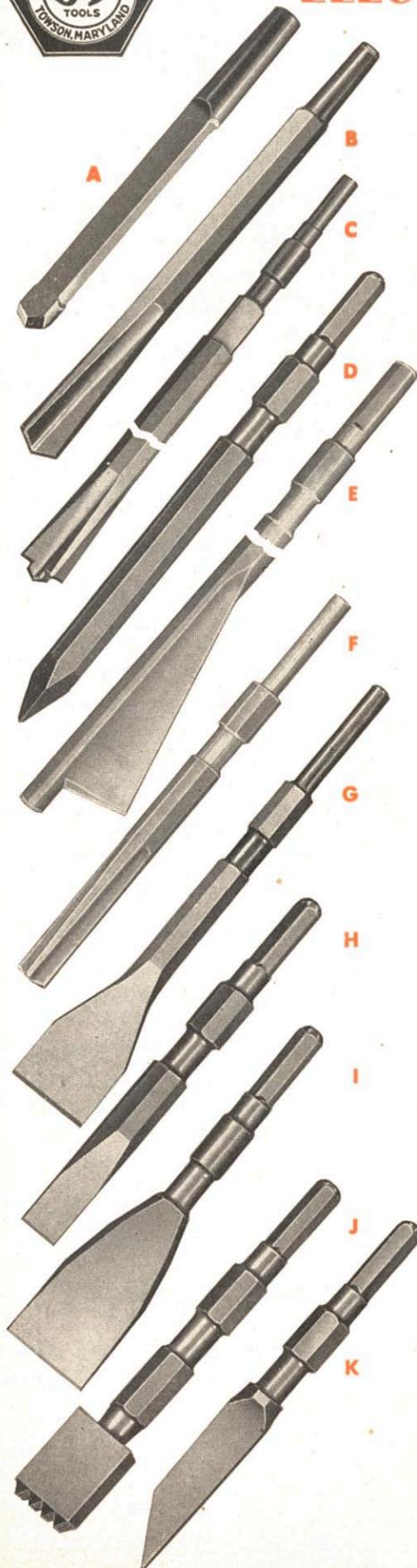
Cat. No.	Item	For Drill Sizes	Shank No.	Taper Socket	Use with Hammer	Price Each
22587	Chuck Wrench	up to 3/4"	1	A	1/2" & 3/4"	\$4.35
23806	Chuck Wrench	1 1/8" and Over	1	B	3/4"	4.35
22749	Chuck Wrench	up to 3/4"	2	A	1 1/8"	4.85
22754	Chuck Wrench	1 1/8" to 1 1/2"	2	B	1 1/8"	5.75
22510	Chuck Only	1 1/8" to 1 1/2"	2	B	2"	5.00
21726	Turning Handle	Over 1 1/8"	..	..	2"	2.30

\* Star Drills 1 1/4" and up are made with No. 2 Shank to fit directly into nose piece of 2" Hammer. Just below the shank is a square that accommodates the No. 21726 Turning Handle.





# "ELECTRIC TOOL HEADQUARTERS"



## Speed Bits (Fig. A)

Cut small holes in hard material at higher speed than Star Drills or Diamond Points. Easily and quickly sharpened. Used with Chuck Wrench No. 22587 in 1/2" or 3/4" Hammer.

Cat. No.	Point Diam.	Overall Length	Price Per Doz.*	Cat. No.	Point Diam.	Overall Length	Price Per Doz.*
23453	3/16"	3"	\$5.40	11367	1/2"	9"	\$7.20
11363	3/8"	3 1/2"	5.40	24025	5/8"	9"	7.20
11364	1/2"	3 3/4"	6.00	11368	3/4"	9"	7.80
11365	5/8"	4"	6.00	24026	7/8"	9"	7.20
11366	15/16"	4 1/2"	6.60	11369	1"	9"	7.80
24024	1 1/2"	5"	6.60				

\* Priced in dozen lots only. Packaged six bits to a carton.

## Star Drills (Figs. B and C)

Cat. No.	Point Diam.	Overall Length	Shank	Price Each**	Use Chuck Wrench or Turning Handle			
					For 1/2" Hammer	For 3/4" Hammer	For 1 1/2" Hammer	For 2" Hammer
7167	1/2"	5"	A	\$0.60	22587	22587	22749†	.....
7168	5/8"	5"	A	.65	22587	22587	22749†	.....
7160	3/8"	5"	A	.65	22587	22587	22749†	.....
7169	1/2"	5"	A	.70	22587	22587	22749†	.....
7161	1/2"	9"	A	.70	22587	22587	22749†	.....
9364	1/2"	18"	A	.95	22587	22587	22749†	.....
7170	9/16"	9"	A	.75	22587*	22587	22749†	.....
7162	5/8"	9"	A	.75	22587*	22587	22749†	.....
9372	5/8"	18"	A	1.00	22587*	22587	22749†	.....
7171	11/16"	9"	A	.80	22587*	22587	22749†	.....
24673	11/16"	9"	B	.80	23806*	23806	22754†	.....
7163	3/4"	9"	A	.80	22587*	22587	22749†	.....
9380	3/4"	18"	A	1.10	22587*	22587	22749†	.....
9382	3/4"	24"	A	1.25	22587*	22587	22749†	.....
23081	3/4"	9"	B	.80	23806	22754	.....	.....
23082	3/4"	18"	B	1.10	23806	22754	.....	.....
23083	3/4"	24"	B	1.25	23806	22754	.....	.....
7172	13/16"	9"	B	.90	23806*	22754	22510†	.....
7097	7/8"	9"	B	.90	23806*	22754	22510†	.....
9388	7/8"	18"	B	1.25	23806*	22754	22510†	.....
9390	7/8"	24"	B	1.50	23806*	22754	22510†	.....
7173	15/16"	9"	B	1.00	23806*	22754	22510†	.....
7096	1"	9"	B	1.00	23806*	22754	22510†	.....
9396	1"	18"	B	1.50	23806*	22754	22510†	.....
9398	1"	24"	B	1.75	23806*	22754	22510†	.....
10751	1 1/8"	12"	B	1.25	23806*	22754	22510†	.....
10981	1 1/8"	24"	B	2.00	23806*	22754	22510†	.....
21942	1 1/8"	18"	No. 2	2.00	.....	21726*	21726	.....
21943	1 1/8"	30"	No. 2	2.75	.....	21726*	21726	.....
21944	1 3/8"	18"	No. 2	2.30	.....	21726*	21726	.....
21945	1 3/8"	30"	No. 2	3.00	.....	21726*	21726	.....
21946	1 3/8"	18"	No. 2	2.55	.....	21726*	21726	.....
21947	1 3/8"	30"	No. 2	3.25	.....	21726*	21726	.....
21948	1 3/8"	18"	No. 2	2.85	.....	21726*	21726	.....
21949	1 3/8"	30"	No. 2	3.75	.....	21726*	21726	.....
21950	2"	18"	No. 2	3.50	.....	21726*	21726	.....
21951	2"	30"	No. 2	4.50	.....	21726*	21726	.....

\*These sizes beyond Hammer's efficiency range.

† These sizes below limit which can be used without danger of excessive drill breakage.

\*\* Standard Package—6 to a box.

**Bull-Point (Fig. D)**—For demolition drilling.  
 No. 23804 10" long; shank No. 1 (3/4" or 3/4" Hammer) ..... \$ 1.65  
 No. 23805 18" long; shank No. 1 (3/4" or 3/4" Hammer) ..... 2.30  
 No. 9036 12" long; shank No. 3 (1 1/8" or 2" Hammer) ..... 1.80  
 No. 9410 20" long; shank No. 3 (1 1/8" or 2" Hammer) ..... 2.50

**Web-Cutting Tool (Fig. E)**—To break out "web" between star drill holes for large openings in concrete.  
 No. 20859 19" long; shank No. 3 (1 1/8" or 2" Hammer) ..... 7.75

**4-Point Scaling Tool (Fig. F)**—For removing scale.  
 No. 17335 9" long; shank No. 1 (1/2" or 3/4" Hammer) ..... 2.25

**Scaling Chisels (Fig. G)**—For removing scale and weld spatter.  
 No. 12446 1 1/4" blade; 9" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 2.15  
 No. 17314 1 1/2" blade; 9" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 2.25  
 No. 17315 2" blade; 9" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 2.35  
 No. 12401 1 1/2" blade; 12" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 2.40  
 No. 22886 2" blade; 12" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 2.50  
 No. 22887 2 1/2" blade; 12" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 4.25

**Cold Chisels (Fig. H)**—For chipping, edging, channeling.  
 No. 11108 5/8" blade; 8" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 1.40  
 No. 7095 7/8" blade; 9" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 1.50  
 No. 9405 3/4" blade; 20" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 2.25

**Flat Wood Chisels (Fig. I)**—For wood gouging and shaping.  
 No. 9039 2" blade; 9" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 3.00

**Bushing Tool (Fig. J)**—For surfacing concrete.  
 No. 11624 8" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 6.25  
 No. 9040 9" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 6.25  
 No. 10684 Bushing Head Only ..... 4.75

**Seam Tool (Fig. K)** For seaming, caulking and pointing.  
 No. 17232 9" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 2.25  
 No. 9035 9" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 2.35

**Stripping Chisel** For stripping, "peeling" and separating die-cut cardboard boxes and cartons.  
 No. 39837 1 1/2" blade; 24" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 2.75  
 No. 30703 1" blade; 24" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 3.00

**Tool Blanks**—Can be forged into any special shapes required for special applications.  
 No. 11107 10" long; No. 1 shank (1/2" or 3/4" Hammer) ..... 1.15  
 No. 7267 12" long; No. 3 shank (1 1/8" or 2" Hammer) ..... 1.25

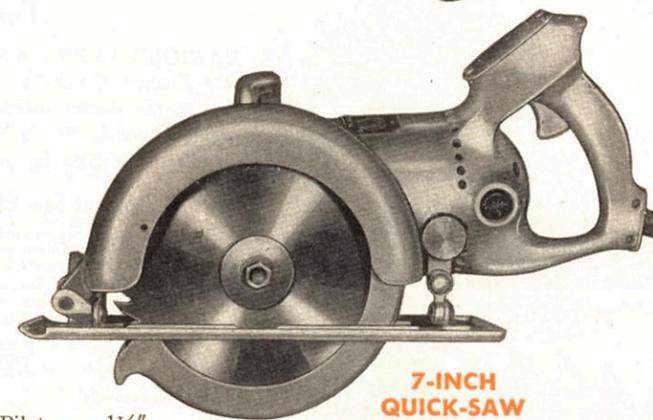
# "ELECTRIC TOOL HEADQUARTERS"



## Portable Electric QUICK-SAWS\*

BLACK & DECKER Portable Electric Quick-Saws offer complete safety, perfect balance, increased power; efficient fan and ample vent slots, close-coupled design, reduced weight and length, "saw grip" switch handle.

Cutting depth can be adjusted at any point up to maximum. Shoe can be tilted for bevel cutting at any angle to 45°. A detachable, adjustable rip-fence guides rip-cutting up to 6". Telescoping guard covers blade except when cutting. Inner guard opens as Saw enters cut, and springs closed as Saw emerges. Outer guard swivels to follow depth adjustment. 2-pole instant-release switch inside the grip prevents accidents.



### 7-Inch Electric QUICK-SAW (Formerly No. 75 Quick-Saw)

CATALOG No. 260 Depth of Cut—2 3/8"

Widely useful portable Saw; depth of cut will handle all popular lumber sizes; power is transmitted by efficient worm gears.

#### Specifications

Diameter of Saw blade ..... 7 1/4"; Driving Flange Pilot ..... 1 1/8".  
 Maximum vertical depth of cut:  
 On vertical cut ..... 2 3/8" (2 1/2" dressed).  
 On 45° cut ..... 1 3/4" (2" dressed).  
 Speed: No-load ..... 3200 R.P.M. Overall length ..... 17 1/2".  
 Weight: Net ..... 18 3/4 lbs.; Shipping ..... 38 lbs.  
 Standard Equipment — 2-pole instant-release switch; 3-wire cable and plug; adjustable shoe; detachable ripping fence; combination rip and cross-cut blade; carrying case; one-half pound container of "Saw Lube"; T-handle wrench; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 260 (specify voltage) ..... \$110.00  
 Price, complete

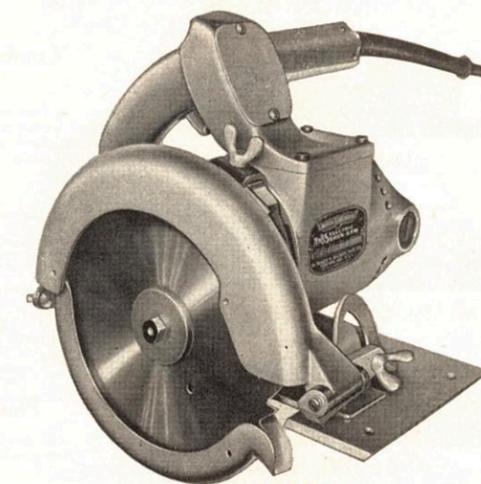
### 8-Inch Electric QUICK-SAW (Formerly No. 85 Quick-Saw)

CATALOG No. 382 Depth of Cut—2 5/8"

A close-coupled, perfectly balanced cut-off Saw, especially suited to one-hand operation. Helical gears, splined spindle, full-powered motor.

#### Specifications

Diameter of blade ..... 8 3/8"; Driving Flange Pilot ..... 1 3/8".  
 Maximum vertical depth of cut:  
 On vertical cut ..... 2 5/8" (3" dressed).  
 On 45° cut ..... 2"  
 No-load spindle speed ..... 5,000 R.P.M. Overall length ..... 13 3/4".  
 Weight: Net ..... 19 5/8 lbs.; Shipping ..... 45 lbs.  
 Standard Equipment — 2-pole instant-release switch; 3-wire cable and plug; adjustable shoe; detachable ripping fence; one combination rip and cross-cut blade; T-handle wrench; metal carrying case; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 382 (specify voltage) ..... \$130.00  
 Price, complete



### 9-Inch Electric QUICK-SAW (Formerly No. 95 Quick-Saw)

CATALOG No. 375 Depth of Cut—3 1/8"

A larger unit for work requiring greater depth of cut; power is transmitted by efficient worm gears.

#### Specifications

Diam. of Saw blade ..... 9 3/4"; Driving Flange Pilot ..... 1 3/8".  
 Maximum vertical depth of cut:  
 On vertical cut ..... 3 1/8" (3 1/2" dressed).  
 On 45° cut ..... 2 3/8" (2 1/2" dressed).  
 Speed: No-load ..... 2500 R.P.M. Overall length ..... 19 1/4".  
 Weight: Net ..... 25 1/4 lbs.; Shipping ..... 54 lbs.  
 Standard Equipment — 3-wire cable and plug; 2-pole instant-release switch; adjustable shoe; detachable ripping fence; combination rip and cross-cut blade; carrying case; one-half pound container of "Saw Lube"; T-handle wrench; "universal" motor.  
 Standard Voltage — 110; also available for 220 or 250 volts.  
 Catalog No. 375 (specify voltage) ..... 145.00  
 Price, complete



\* Trade-Mark Reg. U. S. Pat. Off.





# "ELECTRIC TOOL HEADQUARTERS"

Automotive

## "VIBRO-CENTRIC" REG. U.S. PAT. OFF.

Valve Seat Grinders

ALL VIBRO-CENTRIC Driving Units are engineered to produce perfect accuracy and mirror-finish on all types of valve seats. They are designed for high-speed dry grinding and built to give years of satisfactory service.

In all Vibro-Centric Drivers, the driving spindle incorporates a positive vibrating action, which lifts the grinding stone from the seat once each revolution. This prevents loading the stone, speeds up grinding and reduces stone wear. All grinding is concentric, cutting the entire circumference of the seat and insuring correct alignment. No complicated adjustments or "rigging" are required.

### No. 115 Standard Straight Driver

A popular Driver with ample power and stamina for average shop volume.

Spindle Speed ..... 12,000 R.P.M.  
Weight: Net ..... 6 1/4 lbs.; Shipping ..... 8 lbs.  
Overall Length ..... 12 3/4"  
Standard Equipment — 3-conductor cable and plug; safety trigger switch; hex. ball spindle; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 115 (specify voltage)  
Price, complete ..... **\$36.00**  
No. 21068 Angle Drive Attachment ..... \$14.75

### No. 343 Standard Basic Kit

Contains the basic items on which to build complete Vibro-Centric equipment for general garage and service station use.

1 No. 115 Standard Straight Driver.  
1 No. 20153 Standard Stone Dressing Stand.  
2 No. 22100 Standard Stone Sleeves.  
1 No. 30868 Universal Kit Box.  
Catalog No. 343 (specify voltage)  
Price, complete ..... **\$77.00**

### No. 416 Standard Universal Kit

1 No. 115 Standard Straight Driver.  
1 No. 20153 Standard Stone Dressing Stand.  
2 No. 22100 Standard Stone Sleeves.  
1 No. 30868 Universal Kit Box.  
5 "Gruv-Top" Self-Centering Pilots:  
14425 (5/16"); 14426 (1 1/32"); 14427 (3/8"); 14155 (Ford V-8); 23633 (1 1/32" for Chevrolet Counter-bored Guide).  
2 Hard Seat Stones\*: 14049 (1 3/4"-45°); 14100 (1 5/8"-45°).  
7 Soft Seat Stones\*:  
14084 (1 1/2"-45°); 14063 (1 5/8"-45°); 14085 (1 3/4"-45°);  
14064 (2"-45°); 14198 (1 1/2"-30°); 14199 (1 5/8"-30°); 14090 (1 3/4"-30°).  
1 Finishing Stone\*: 14383 (1 5/8"-45°).  
\*Any 10 standard stones may be substituted for above assortment.  
Catalog No. 416 (specify voltage)  
Price, complete ..... **\$112.00**  
Catalog No. 30868 Universal Kit Box only ..... \$16.00



No. 115  
STANDARD STRAIGHT  
VIBRO-CENTRIC DRIVER



No. 416 STANDARD  
UNIVERSAL KIT

# "ELECTRIC TOOL HEADQUARTERS"

Automotive

## "VIBRO-CENTRIC" REG. U.S. PAT. OFF.

Method Kits

THE VIBRO-CENTRIC Valve Seat Grinding Method is composed of precision equipment, designed to be used as a group and built to produce accurate results. To provide a means of protecting this precision equipment and for convenient storage, we have worked out a series of Vibro-Centric Kits, each containing a different assortment of equipment — and each packed in a sturdy, attractive kit box. There is definite space for each item, with room for additional items as required. Select the Vibro-Centric Kit best suited to your shop needs.

"Universal" Vibro-Centric Kits are designed for the general service shop or car dealer handling a variety of car models and an average volume of valve reconditioning work. The assortment of Self-Centering Pilots and Valve Seat Grinding Stones has been selected to handle all popular engines from 1935 through current models.

### No. 440 Standard 55° Driver

Incorporates the popular angle drive for working in confined space. Ideal for general garage work on medium and smaller valve seats.

Spindle Speed ..... 12,000 R.P.M.  
Weight: Net ..... 6 1/2 lbs.; Shipping ..... 8 1/2 lbs.  
Overall Length ..... 11 1/2"  
Standard Equipment — 3-conductor cable and plug; safety trigger switch; hex. ball spindle; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.  
Catalog No. 440 (specify voltage)  
Price, complete ..... **\$42.00**

### No. 456 Standard Basic Kit

Basic equipment, with 55° Standard Driver, especially adapted to working in confined space.

1 No. 440 Standard 55° Driver.  
1 No. 20153 Standard Stone Dressing Stand.  
2 No. 22100 Standard Stone Sleeves.  
1 No. 30868 Universal Kit Box.  
Catalog No. 456 (specify voltage)  
Price, complete ..... **\$83.00**

### No. 447 Standard Universal Kit

1 No. 440 Standard 55° Driver.  
1 No. 20153 Standard Stone Dressing Stand.  
2 No. 22100 Standard Stone Sleeves.  
1 No. 30868 Universal Kit Box.  
5 "Gruv-Top" Self-Centering Pilots:  
14425 (5/16"); 14426 (1 1/32"); 14427 (3/8"); 14155 (Ford V-8); 23633 (1 1/32" for Chevrolet Counter-bored Guide).  
2 Hard Seat Stones\*: 14049 (1 3/4"-45°); 14100 (1 5/8"-45°).  
7 Soft Seat Stones\*:  
14084 (1 1/2"-45°); 14063 (1 5/8"-45°); 14085 (1 3/4"-45°);  
14064 (2"-45°); 14198 (1 1/2"-30°); 14199 (1 5/8"-30°);  
14090 (1 3/4"-30°).  
1 Finishing Stone\*: 14383 (1 5/8"-45°).  
\*Any 10 standard stones may be substituted for above assortment.  
Catalog No. 447 (specify voltage)  
Price, complete ..... **\$118.00**  
Catalog No. 30868 Universal Kit Box only ..... \$16.00

Black & Decker



No. 440  
STANDARD 55°  
VIBRO-CENTRIC DRIVER



No. 447 STANDARD  
UNIVERSAL KIT



# "ELECTRIC TOOL HEADQUARTERS"



**No. 331 HEAVY-DUTY VIBRO-CENTRIC DRIVER**

Automotive

## "VIBRO-CENTRIC"

No. 331 Heavy-Duty 55° Driver

THE ADAPTATION of Vibro-Centric reconditioning to larger valves in truck, tractor and Diesel work, has required a more powerful high speed Heavy-Duty Vibro-Centric Driver. The angle drive of this unit improves working clearance where body, cowl, cab or other obstructions interfere. The Heavy-Duty Driver has nearly double the power of the Standard unit and maintains high grinding speed with larger, heavier stones. Angle drive is through a gear train and positive vibrating action is built into the spindle. An ideal Valve Seat Grinder for production valve work in large shops.

Spindle Speed .....10,000 R.P.M.  
Weight: Net .....8 lbs.; Shipping .....9¼ lbs.  
Overall Length .....12¾"

Standard Equipment — 3-conductor cable and plug; 55° geared angle head; safety trigger switch; hex. ball spindle; "universal" motor.  
Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 331 (specify voltage) .....**\$48.00**  
Price, complete .....

## No. 408 Heavy-Duty Basic Kit

CONTAINS THE Heavy-Duty Driver and basic equipment which enable the "production" shop to assemble the items needed for high speed valve seat grinding on large and special engines. The Kit Box has ample storage room for any needed assortment of Pilots and Stones.

- 1 No. 331 Heavy-Duty 55° Driver.
- 1 No. 20153 Standard Stone Dressing Stand.
- 2 No. 22100 Standard Stone Sleeves.
- 1 No. 30767 Heavy-Duty Kit Box.

Catalog No. 408 (specify voltage) .....**\$94.00**  
Price, complete .....

## No. 336 Heavy-Duty Universal Kit

COMPLETE VALVE seat grinding equipment for large-volume shops and on larger truck and tractor engines. Large assortment of Stones and Pilots for handling wide range of valve seat sizes. Specially recommended to shops specializing in valve work.

- 1 No. 331 Heavy-Duty 55° Driver.
- 1 No. 20153 Standard Stone Dressing Stand.
- 2 No. 22100 Standard Stone Sleeves.
- 1 No. 30767 Heavy-Duty Kit Box.
- 1 No. 19829 Pilot Turning Wrench.
- 5 Standard "Gruv-Top" Self-Centering Pilots\*: 14425 (5/16"); 14426 (11/32"); 14427 (3/8"); 14429 (7/16"); 14155 (Ford V-8).
- 7 Hard-Seat 45° Vibro-Centric Stones\*: 14056 (1 1/2"); 14100 (1 5/8"); 14049 (1 3/4"); 14101 (1 7/8"); 14103 (2 1/8"); 14104 (2 1/4"); 14050 (2 1/2").
- 7 Soft-Seat 45° Vibro-Centric Stones\*: 14084 (1 1/2"); 14063 (1 5/8"); 14085 (1 3/4"); 14086 (1 7/8"); 14087 (2 1/8"); 14088 (2 1/4"); 14089 (2 1/2").
- 2 Soft-Seat 30° Vibro-Centric Stones\*: 14199 (1 5/8"); 14090 (1 3/4").

\* Any standard stones or pilots, of the same prices, may be substituted for the above.

Catalog No. 336 (specify voltage) .....**\$140.00**  
Price, complete .....

Catalog No. 30767 Heavy-Duty Kit Box only.....\$20.00



**No. 336 HEAVY-DUTY UNIVERSAL KIT**

# "ELECTRIC TOOL HEADQUARTERS"



## SPECIAL "VIBRO-CENTRIC" KITS

FOR THE convenience of tractor and farm implement dealers who sell and service the leading lines of agricultural and industrial tractors and power units. Each Kit has been checked with the tractor manufacturer's service department and contains the correct assortment of Vibro-Centric equipment to recondition current model engines. Each Kit also has ample room for additional stones and pilots, which can be added at small cost, to handle other makes.

### No. 336 "Vibro-Centric" Kit (For Massey-Harris Farm Tractors)

This Heavy-Duty Universal Kit, described in detail on page 46, will handle popular Massey-Harris tractor models.

Catalog No. 336. Price, Complete.....**\$140.00**

### No. 411 "Vibro-Centric" Kit (For John Deere Tractors)

Contents:

- 1 No. 115 Standard Straight Driver
- 1 No. 20153 Standard Dressing Stand
- 1 No. 13725 Valve Seat Indicator
- 2 No. 22100 Standard Stone Sleeves
- 8 Self-Centering Expanding Pilots: No. 18608 (5/16"); No. 23937 (3/8"); No. 23971 (7/16"); No. 19894 (1/2"); No. 22184 (1/2"); No. 23522 (5/16"); No. 23578 (5/8"); No. 23939 (5/8").
- 4 45° Soft-Seat Vibro-Centric Stones: No. 23957 (1 1/4"); No. 14087 (2 3/8"); No. 14285 (2 5/8"); No. 26148 (2 1 3/4").
- 3 70° Soft-Seat Vibro-Centric Stones: No. 23821 (1 9/16"); No. 23822 (2 1/16"); No. 23824 (2 3/8").
- 1 30° Soft-Seat Vibro-Centric Stone: No. 14283 (2 7/8").
- 4 Multiple-angle Soft-Seat Stones: No. 23968 (3"x45"x20°); No. 26285 (2 5/16"x30"x20°); No. 26284 (1 7/8"x90"x30°); No. 26147 (2 1 1/16"x90"x30°).
- 1 No. 30767 Heavy-Duty Kit Box

Catalog No. 411. Price, Complete Kit.....**\$171.00**

### No. 30894 Auxiliary Kit

(For John Deere Power Lifts, Models A, B, G and H)

AN ASSORTMENT of special pilots, stones, guides and adaptors to recondition valve seats on John Deere Power Lifts. Use with Driver and Dressing Stand in No. 411 Kit listed above.

Contents:

- 1 No. 30506 1 5/16" 45° Soft Stone
- 1 No. 30507 1 1/16" 45° Soft Stone
- 1 No. 30512 .2485" Special Pilot Assembly
- 1 No. 30513 .280" Special Pilot Assembly
- 1 No. 30514 .311" (Long) Special Pilot Assem.
- 1 No. 30515 .311" (Short) Special Pilot Assem.
- 1 No. 30498 Pilot Guide Sleeve
- 1 No. 30496 Small Guide Bushing
- 1 No. 30500 Large Guide Bushing
- 1 No. 30501 Sleeve for Dressing Stand
- 1 No. 30508 T-Wrench for Pilots

No. 30894 Auxiliary Kit (complete in carton)...**\$19.25**

### No. 498 "Vibro-Centric" Kit (For Allis-Chalmers Farm Tractors)

Contents:

- 1 No. 440 Standard 55° Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 30868 Universal Kit Box
- 5 Self-Centering Pilots: No. 14425 (5/16"); No. 18608 (3/8"); No. 14426 (1 1/32"); No. 14427 (3/8"); No. 14429 (7/16"); No. 23971 (7/16").
- 4 Soft-Seat 45° Vibro-Centric Stones: No. 18541 (1 3/8"); No. 14084 (1 1/2"); No. 14085 (1 3/4"); No. 14086 (1 7/8"); No. 14064 (2"); No. 16929 (2 3/8").
- 2 20° Soft-Seat Vibro-Centric Stones: No. 14092 (1 1/2"); No. 14093 (1 5/8"); No. 14094 (1 3/4"); No. 14095 (1 7/8"); No. 14096 (2"); No. 23668 (2 3/8").
- 4 70° Soft-Seat Vibro-Centric Stones: No. 23821 (1 9/16"); No. 23822 (2 1/16"); No. 23823 (2 1/4"); No. 23824 (2 3/8").
- 2 45° Hard-Seat Vibro-Centric Stones: No. 14100 (1 5/8"); No. 14049 (1 3/4").
- 2 20° Hard-Seat Vibro-Centric Stones: No. 14108 (1 5/8"); No. 14109 (1 3/4").
- 1 No. 14198 (1 1/2"); No. 14090 (1 3/4").

Catalog No. 498. Price, Complete.....**\$100.00**

See Additional Special "Vibro-Centric" Kits on Next Page.

### No. 439 "Vibro-Centric" Kit

(For Minneapolis-Moline Tractors and Portable Power Units)

Contents:

- 1 No. 115 Standard Straight Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 No. 30767 Heavy-Duty Kit Box
- 2 Self-Centering Pilots: No. 14426 (1 1/32"); No. 22989 (7/16").
- 3 Soft-Seat 45° Vibro-Centric Stones: No. 14063 (1 5/8"); No. 14086 (1 7/8"); No. 14064 (2").
- 3 Hard-Seat 45° Vibro-Centric Stones: No. 14100 (1 5/8"); No. 14049 (1 3/4"); No. 14101 (1 7/8").
- 1 Soft-Seat 30° Vibro-Centric Stone: No. 14197 (1 1/4").
- 2 Soft-Seat 20° Narrowing Stones: No. 14094 (1 3/4"); No. 14096 (2").
- 3 Hard-Seat 20° Narrowing Stones: No. 14109 (1 3/4"); No. 14110 (1 7/8"); No. 14111 (2").
- 4 Finishing 45° Vibro-Centric Stones: No. 14383 (1 5/8"); No. 14384 (1 3/4"); No. 14385 (1 7/8"); No. 14386 (2").

Catalog No. 439. Price, Complete.....**\$118.00**

### No. 500 "Vibro-Centric" Kit

(For McCormick-Deering-International Agricultural and Industrial Tractors)

Contents:

- 1 No. 440 Standard 55° Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 No. 30767 Heavy-Duty Kit Box
- 5 Self-Centering Expanding Pilots: No. 14425 (5/16"); No. 14426 (1 1/32"); No. 14427 (3/8"); No. 14429 (7/16"); No. 17903 (7/16").
- 6 45° Soft-Seat Vibro-Centric Stones: No. 18541 (1 3/8"); No. 14084 (1 1/2"); No. 14085 (1 3/4"); No. 14086 (1 7/8"); No. 14064 (2"); No. 16929 (2 3/8").
- 6 20° Soft-Seat Vibro-Centric Stones: No. 14092 (1 1/2"); No. 14093 (1 5/8"); No. 14094 (1 3/4"); No. 14095 (1 7/8"); No. 14096 (2"); No. 23668 (2 3/8").
- 4 70° Soft-Seat Vibro-Centric Stones: No. 23821 (1 9/16"); No. 23822 (2 1/16"); No. 23823 (2 1/4"); No. 23824 (2 3/8").
- 2 45° Hard-Seat Vibro-Centric Stones: No. 14100 (1 5/8"); No. 14049 (1 3/4").
- 2 20° Hard-Seat Vibro-Centric Stones: No. 14108 (1 5/8"); No. 14109 (1 3/4").

Catalog No. 500. Price, Complete.....**\$142.00**

### No. 504 "Vibro-Centric" Kit

(For J. I. Case Farm Tractors)

Contents:

- 1 No. 440 Standard 55° Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 30868 Universal Kit Box
- 5 Self-Centering Pilots: No. 14425 (5/16"); No. 18608 (3/8"); No. 14426 (1 1/32"); No. 14427 (3/8"); No. 14429 (7/16"); No. 23971 (7/16").
- 4 Soft-Seat 45° Vibro-Centric Stones: No. 18541 (1 3/8"); No. 14084 (1 1/2"); No. 14086 (1 7/8"); No. 14087 (2 1/8").
- 2 Hard-Seat 45° Vibro-Centric Stones: No. 14101 (1 7/8"); No. 14103 (2 1/8").
- 2 Soft-Seat 30° Vibro-Centric Stones: No. 14198 (1 1/2"); No. 14090 (1 3/4").

Catalog No. 504. Price, Complete.....**\$118.00**



**"ELECTRIC TOOL HEADQUARTERS"**

**SPECIAL "VIBRO-CENTRIC" KITS (Continued)**

**No. 505 "Vibro-Centric" Kit**  
(For Oliver Farm Tractors)

Contents:

- 1 No. 440 Standard 55° Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 No. 30868 Universal Kit Box
- 4 Self-Centering Expanding Pilots: No. 14425 ( $\frac{5}{16}$ " ); No. 14427 ( $\frac{3}{8}$ " ); No. 17345 ( $\frac{3}{8}$ " ); No. 22989 ( $\frac{7}{16}$ " ).
- 4 Soft-seat 45° Vibro-Centric Stones: No. 18541 ( $1\frac{3}{8}$ " ); No. 14085 ( $1\frac{3}{4}$ " ); No. 14064 (2" ); No. 16929 ( $2\frac{3}{8}$ " ).
- 1 Soft-Seat 30° Vibro-Centric Stone: No. 14199 ( $1\frac{5}{8}$ " ).

Catalog No. 505. Price, Complete..... **\$110.00**

**No. 506 "Vibro-Centric" Kit**  
(For Caterpillar Equipment)

Contents:

- 1 No. 331 Heavy-Duty 55° Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 22100 Standard Stone Sleeves
- 1 No. 19829 Pilot Wrench
- 1 No. 30767 Heavy-Duty Kit Box
- 8 Self-Centering Expanding Pilots: No. 23937 ( $\frac{3}{8}$ " ); No. 23971 ( $\frac{7}{16}$ " ); No. 14429 ( $\frac{7}{16}$ " ); No. 14431 ( $\frac{1}{2}$ " ); No. 16047 ( $\frac{1}{2}$ " ); No. 23665 ( $\frac{1}{2}$ " ); No. 19203 ( $\frac{9}{16}$ " ); No. 23939 ( $\frac{5}{8}$ " ).
- 9 Soft-Seat 45° Seating Stones: No. 14084 ( $1\frac{1}{2}$ " ); No. 14085 ( $1\frac{3}{4}$ " ); No. 14064 (2" ); No. 14088 ( $2\frac{1}{4}$ " ); No. 16929 ( $2\frac{3}{8}$ " ); No. 14089 ( $2\frac{1}{2}$ " ); No. 14285 ( $2\frac{5}{8}$ " ); No. 14153 ( $2\frac{3}{4}$ " ); No. 21465 ( $3\frac{1}{8}$ " ).
- 9 Soft-Seat 20° Narrowing Stones: No. 14093 ( $1\frac{5}{8}$ " ); No. 14095 ( $1\frac{7}{8}$ " ); No. 14097 ( $2\frac{1}{8}$ " ); No. 23668 ( $2\frac{3}{8}$ " ); No. 14099 ( $2\frac{1}{2}$ " ); No. 14274 ( $2\frac{5}{8}$ " ); No. 14275 ( $2\frac{3}{4}$ " ); No. 14276 ( $2\frac{7}{8}$ " ); No. 25951 ( $3\frac{1}{4}$ " ).
- 9 Soft-Seat 45° Finishing Stones: No. 14382 ( $1\frac{1}{2}$ " ); No. 14384 ( $1\frac{3}{4}$ " ); No. 14386 (2" ); No. 14388 ( $2\frac{1}{4}$ " ); No. 23670 ( $2\frac{3}{8}$ " ); No. 14389 ( $2\frac{1}{2}$ " ); No. 14390 ( $2\frac{5}{8}$ " ); No. 14391 ( $2\frac{3}{4}$ " ); No. 21466 ( $3\frac{1}{8}$ " ).

Catalog No. 506. Price, Complete..... **\$210.00**

**No. 513 "Vibro-Centric" Kit**

(For International Trucks, All Current and Recent Models)

Contents:

- 1 No. 331 Heavy-Duty Driver
- 1 No. 20153 Standard Dressing Stand
- 2 No. 27200 Ball-Bearing Stone Sleeves
- 1 No. 13725 Dial Indicator
- 1 No. 30767 Heavy-Duty Kit Box
- 5 Gruv-Top Self-Centering Pilots: No. 17345 ( $\frac{3}{8}$ " ); No. 14427 ( $\frac{3}{8}$ " ); No. 18608 ( $\frac{5}{16}$ " ); No. 14426 ( $1\frac{1}{32}$ " ); No. 22989 ( $\frac{7}{16}$ " ).
- 7 45° Vibro-Centric Stones: No. 14084 ( $1\frac{1}{2}$ " ); No. 14063 ( $1\frac{5}{8}$ " ); No. 14085 ( $1\frac{3}{4}$ " ); No. 14049 ( $1\frac{3}{4}$ " ); No. 14086 ( $1\frac{7}{8}$ " ); No. 14064 (2" ); No. 14088 ( $2\frac{1}{4}$ " ).
- 1 15° Vibro-Centric Stone: No. 25632 ( $2\frac{3}{8}$ " ).
- 6 45° Finishing Stones: No. 14382 ( $1\frac{1}{2}$ " ); No. 14383 ( $1\frac{5}{8}$ " ); No. 14384 ( $1\frac{3}{4}$ " ); No. 14385 ( $1\frac{7}{8}$ " ); No. 14386 (2" ); No. 14388 ( $2\frac{1}{4}$ " ).
- 1 15° Finishing Stone: No. 25638 ( $2\frac{3}{8}$ " ).

Catalog No. 513. Price, Complete..... **\$171.00**

The Vibro-Centric Drivers in all of the above Special Kits are equipped with "universal" motors, operating on either direct or alternating current, and can be furnished for 110, 220 or 250 volts. Always specify voltage desired when ordering any of these Kits.

**No. 20153 Standard Stone Dressing Stand**

A STURDIER, more flexible Stand with greater range for truing and cleaning all sizes of Vibro-Centric Stones with absolute accuracy and minimum waste. The design incorporates a micrometer diamond feed, a horizontal adjustment for various stone sizes and for vertical or horizontal cutting, and an improved angle indicator that is more easily read and set.

Stone Size Capacity..... up to  $3\frac{1}{2}$ " ;  
Mandrel Diameter .....  $\frac{3}{8}$ " ; Angle Adjustment..... 0° to 90°.  
Weight: Net ..... 10 $\frac{1}{4}$  lbs; Shipping ..... 11 $\frac{1}{4}$  lbs.  
Standard Equipment — Diamond Point; Mandrel; Adjustable Feeding Arm with Micrometer Diamond Feed.

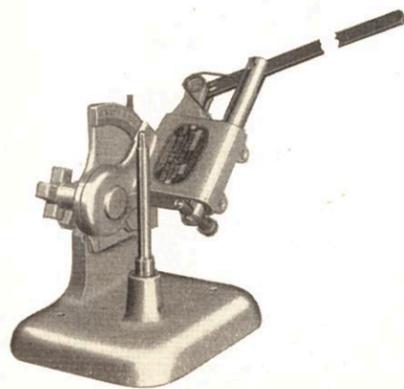
Catalog No. 20153 Standard Stone Dressing Stand, complete..... \$20.00

Catalog No. 20157 Diamond Nib for No. 20153 Stand..... 3.50

**Angle Drive Attachment for Use with Standard Straight Driver**

Consists of a flexible shaft operating in a metal sleeve, curved to an angle of about 30°. The upper end of the sleeve fits around the turned nose of the Driver. The flexible shaft is fitted with a hexagon socket in which the hex-ball Driver spindle seats; the lower end is fitted with a hexagon ball spindle.

Catalog No. 21068 Angle Drive Attachment, complete..... \$14.75  
Weight: Net ..... 1 $\frac{1}{2}$  lbs.; Shipping ..... 2 lbs.



**No. 20153 DRESSING STAND**

**"ELECTRIC TOOL HEADQUARTERS"**

**"GRUV-TOP"**

**Automotive Expanding Sleeve Self-Centering Pilots**

"GRUV-TOP" Self-Centering Pilots provide an accurate, rigid axis for grinding with "Vibro-Centric" Stones. Two machined tapers—at the top of the shank, to fit the top of the valve guide, and at the bottom, to expand a split sleeve in the lower end of the guide. The expanding feature compensates for worn guides and eliminates a large stock of oversize pilots, as Self-Centering Pilots expand .020" to .030".

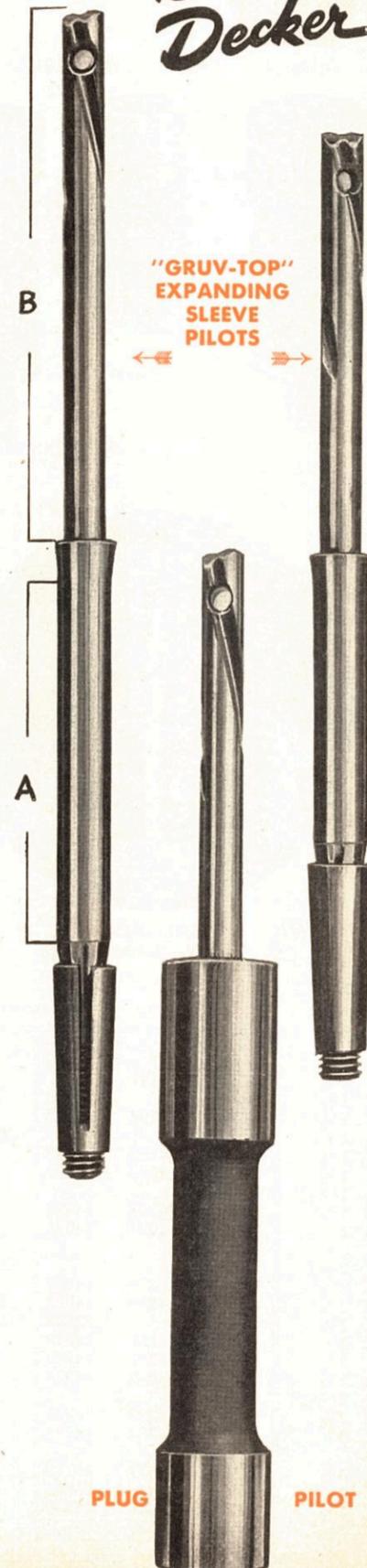
The patented "GRUV-TOP" feature locks the retainer ball in No. 27200 Ball-Bearing Stone Sleeve, holding the inner sleeve stationary and preventing friction and wear between sleeve and pilot stem. These Pilots also fit other Stone Sleeves listed on page 50.

Nominal Size	Range	Catalog No.	Dimensions		Price Complete	Sleeve No.	Price of Sleeve
			A	B			
1/4"	.233"—.254"	14423	1 1/16"	2 27/32"	\$3.50	13908	\$.75
		25245	1 1/16"	3 1/4"	5.90	15145	.75
17/64"—9/32"	.262"—.283"	14424	1 1/16"	2 5/16"	3.50	13907	.75
		15792	1 3/16"	3 1/2"	5.90	15145	.75
9/32"—19/64"	.277"—.303"	14425	1 5/32"	3"	3.50	13902	.75
			18608	1 5/32"	2 1/2"	5.90	13902
5/16"—21/64"	.308"—.339"	16197	1 1/32"	4"	5.90	13902	.75
		21300	1 5/32"	2 1/2"	3.50	13902	.75
11/32"	(for counter-bored guides)	23633*	1 9/32"	3 1/2"	3.50	13904	.75
		21302	1 7/32"	2 1/16"	3.50	13904	.75
11/32"—23/64"	.339"—.370"	16199*	1 1/32"	3 1/4"	3.50	13904	.75
		14426	1 1/32"	3 1/4"	3.50	13904	.75
3/8" (for counter-bored guides)	.371"—.394"	24319	1 1/32"	4 1/4"	9.00	13904	.75
		26528	2 1/32"	3 7/8"	5.90	13904	.75
2 5/64"	.3906"—.4062"	21304	1 1/32"	3 5/32"	3.50	13903	.75
		14427	1 1/32"	3 3/16"	3.50	13903	.75
13/32"—27/64"	.402"—.424"	16207	2 5/32"	3 7/32"	5.90	13903	.75
		16201	1 1/32"	3 7/32"	5.90	13903	.75
2 7/64"—7/16"	.418"—.434"	17345	2 9/32"	3 23/32"	5.90	13903	.75
		16204	1 1/32"	4 1/2"	5.90	13903	.75
7/16"—29/64"	.433"—.455"	23937	2 29/32"	3 23/32"	5.90	13903	.75
		17903	3 1/2"	4 11/32"	5.90	13901	.75
1 5/32"—31/64"	.464"—.495"	14430	2 5/32"	3 3/8"	3.50	13910	.75
		14431	2"	3 19/32"	3.50	13905	.75
1/2"—17/32"	.496"—.535"	16047	2"	4 19/32"	5.90	13905	.75
		23975	3 1/8"	3 19/32"	9.00	13905	.75
17/32"—9/16"	.5312"—.5625"	23665	3"	3 1/4"	9.00	13905	.75
		26908	3"	4 1/2"	9.00	13905	.75
9/16"—19/32"	.558"—.598"	19894	4"	3 19/32"	5.90	13905	.75
		22184	3 1/2"	4 5/8"	5.90	13905	.75
1 9/32"—39/64"	.5937"—.620"	27108	2 3/16"	3 23/32"	9.00	24497	1.00
		14432	2"	3 11/32"	3.50	13899	1.00
5/8"—21/32"	.621"—.661"	15656	2"	4 31/32"	5.90	13899	1.00
		23522	3 1/2"	3 27/32"	5.90	13899	1.00
1 1/16"—23/32"	.683"—.724"	26864	3 1/4"	4 1/2"	9.00	13899	1.00
		19203	4 1/2"	3 11/32"	9.00	13899	1.00
1 1/8"—21/32"	.621"—.661"	14435	3/4"	3 5/16"	3.50	13899	1.00
		14433	1 3/64"	3 37/64"	3.50	13906	1.00
1 1/16"—23/32"	.683"—.724"	23939	3 1/2"	3 19/32"	5.90	13906	1.00
		23578	3"	4 7/8"	5.90	13906	1.00
3/4"—2 5/32"	.746"—.786"	26143	5 1/8"	4 31/32"	9.00	13906	1.00
		15178	2"	3 19/32"	4.90	15046	1.50
1 1/8"—2 1/32"	.8458"—.8525"	18242	2"	4 1/8"	7.25	15046	1.50
		26327	2 7/8"	3 27/32"	9.00	15046	1.50
1 0 2/9"—1 0 3/30"	.8458"—.8525"	18244	2"	5 1/4"	7.25	15046	1.50
		27110	7 1/2"	3 7/8"	9.00	14149	1.50

\* For Chevrolet. # For Ford Model "A".

**"Gruv-Top" Plug Type Automotive Pilots**

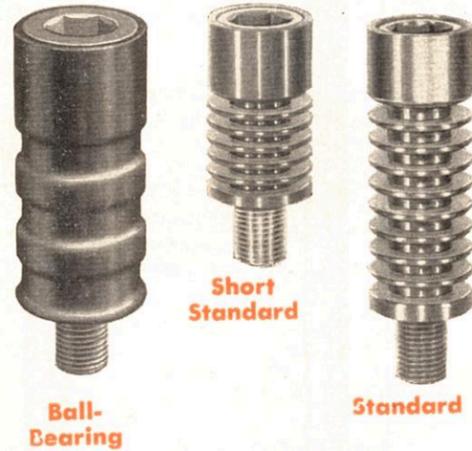
Range	Catalog No.	Engine	Price Complete
.8458"—.8525"	18248	Ford "60"	\$3.50
1.0278"—1.0330"	14155	Ford "V-8"	3.50
1.029"—1.033"	22337	Lincoln Zephyr	7.25





"ELECTRIC TOOL HEADQUARTERS"

AUTOMOTIVE STONE SLEEVES



Ball-Bearing

Short Standard

Standard

"VIBRO-CENTRIC"

Automotive Stone Sleeves

AUTOMOTIVE Seat-Grinding Stones have threaded bushings and are interchangeable on any of the following Automotive Sleeves which fit over Self-Centering Pilots and hold the stone in correct alignment with the pilot. Upper end of the sleeve is a hexagon socket which forms a universal joint with the Driver spindle.

**Standard Automotive Stone Sleeve**—Long bronze bushing accurately reamed to fit Pilot. Furnished with Automotive Kits and Valve Shops.  
No. 22100 Standard Vibro-Centric Stone Sleeve.....\$3.50

**Short Standard Automotive Stone Sleeve**—For increased clearance on hard-to-reach seats. Overall length, 2 3/4". Use with Aircraft Pilots and Stand 25248; or Stand 20153 with 25247 Mandrel.  
No. 23652 Short Standard Vibro-Centric Stone Sleeve.....\$3.50

**Ball-Bearing Automotive Stone Sleeve**—Designed to minimize wear, to preserve accuracy and give longer service. Ball-bearings are between inner and outer sleeve.  
No. 27200 Ball-Bearing Stone Sleeve with retainer ball for "Gruv-Top" Pilots.....\$10.00

No. 19825 Ball-Bearing Stone Sleeve without retainer ball..... 10.00

No. 30582 Ball-Bearing Sleeve for Driver with 1/2" Hex. Spindle 10.50

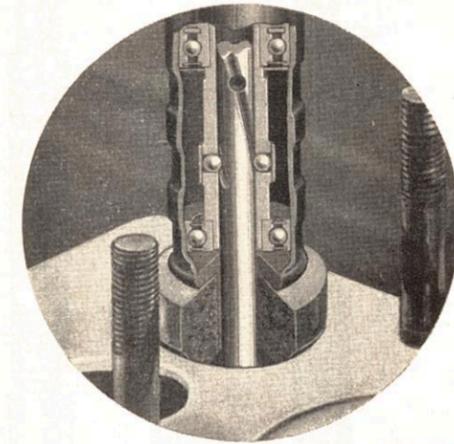
No. 30780 Special Dressing Stand Mandrel for above Sleeves; has tapered round shank with flat for use with Dressing Stand having sliding block; does not fit 20153 or 25248 stands..... 2.25

**Pilot Turning Wrench**, to prevent injury to user's hands while inserting or removing Self-Centering or other Pilots. Equipped with chuck which quickly grasps or releases Pilot shank.  
No. 19829 Pilot Turning Wrench.....\$4.50

Automotive Valve Seat Grinding Stones

Special Angle and Multiple-Angle Stones:

- No. 24494 1 1/2" x 12°30' (for Chevrolet).....\$2.15
- No. 26284 1 7/8" x 90° x 30°..... 1.70
- No. 24493 2 3/8" x 10°45' and 35° (for Chevrolet)..... 2.55
- No. 26285 2 3/16" x 30° x 20°..... 2.80
- No. 25632 2 3/8" x 15° (Soft Seat)..... 2.55
- No. 25638 2 3/8" x 15° (Finishing)..... 2.55
- No. 26147 2 11/16" x 90° x 30°..... 2.55
- No. 23968 3" x 45° x 20°..... 3.20
- No. 27116 1 1/4" x 45° extra deep, for Hard Seats..... 2.55
- No. 27117 1 1/4" x 45° extra deep, for Soft Seats..... 2.55
- No. 27118 1 1/4" x 45° extra deep, for Finishing..... 2.55



CUTAWAY OF BALL-BEARING SLEEVE ON "GRUV-TOP" PILOT

Standard Automotive Vibro-Centric Stones

Size	For Soft Steel and Cast Iron				For Hard Steel and Stellite				Size	For Finish-Grinding		Price Each
	45° Stone	30° Stone	20° Stone	70° Stone	45° Stone	90° Stone	30° Stone	20° Stone		45° Stone	30° Stone	
1 1/4"	14216	14197	.....	.....	14217	.....	14218	.....	11 1/4"	14414	14413	\$1.70
1 3/8"	18541	.....	23666	.....	18540	.....	.....	.....	1 3/8"	18542	.....	1.70
1 1/2"	14084	14198	14092	.....	14056	.....	14219	14107	1 1/2"	14382	14370	1.70
1 9/16"	.....	.....	.....	23821	.....	.....	.....	.....	1 9/16"	.....	.....	1.70
1 5/8"	14063	14199	14093	.....	14100	.....	14287	14108	1 5/8"	14383	14371	1.70
1 3/4"	14085	14090	14094	.....	14049	.....	14105	14109	1 3/4"	14384	14372	1.70
1 13/16"	23957	.....	.....	.....	.....	.....	.....	.....	1 13/16"	.....	.....	1.70
1 7/8"	14086	14268	14095	.....	14101	.....	14288	14110	1 7/8"	14385	14373	1.70
2"	14064	14091	14096	.....	14102	15892	14106	14111	2"	14386	14374	1.70
2 1/16"	.....	.....	.....	23822	.....	.....	.....	.....	2 1/16"	.....	.....	2.10
2 1/8"	14087	14278	14097	.....	14103	.....	14289	14112	2 1/8"	14387	14375	2.10
2 1/4"	14088	14279	14098	23823	14104	15893	14290	14113	2 1/4"	14388	14376	2.10
2 3/8"	16929	.....	23668	23824	16951	.....	.....	23669	2 3/8"	23670	.....	2.10
2 1/2"	14089	14280	14099	.....	14050	.....	14291	14114	2 1/2"	14389	14377	2.10
2 5/8"	14285	14281	14274	.....	14239	15894	14292	14270	2 5/8"	14390	14378	2.55
2 3/4"	14153	14282	14275	.....	14200	.....	14293	14271	2 3/4"	14391	14379	2.55
2 13/16"	26148	.....	.....	.....	.....	.....	.....	.....	2 13/16"	.....	.....	2.55
2 7/8"	14286	14283	14276	.....	14295	.....	14269	14272	2 7/8"	14392	14380	2.55
3"	14154	14284	14277	.....	14243	.....	14294	14273	3"	14393	14381	2.55
3 1/8"	21465	16971	25749	.....	21464	.....	16970	.....	3 1/8"	21466	.....	3.00
3 1/4"	21468	25948	25951	.....	21467	.....	25947	25950	3 1/4"	21469	25949	3.00
3 3/8"	21471	26446	26449	.....	21470	.....	26445	26448	3 3/8"	21472	26447	3.00
3 1/2"	21474	26527	.....	.....	21473	.....	.....	.....	3 1/2"	21475	.....	3.00

Prices and Specifications of larger diameter stones can be secured on application.

"ELECTRIC TOOL HEADQUARTERS"

"VIBRO-CENTRIC"

Automotive Valve Seat Grinding Stones

"VIBRO-CENTRIC" Valve Seat Grinding Stones are carefully formed and accurately dressed at the factory to grind smooth, true faces on valve seats. They are made in three grades to do the fastest and most satisfactory work on all types of seats; one grade is for the average cast iron or soft steel seats found in most engines; another grade is for faster grinding of hard steel, stellite and other hard alloy inserts; a third grade is for a highly polished "finish grind" on all seats. An accurately-threaded steel bushing is cast in the center of each stone, to thread on the Automotive Stone Sleeves.

All "Vibro-Centric" Stones should be dressed when placed on a stone sleeve to establish a true angle to the pilot, and should be re-dressed when loaded or grooved to restore fast, smooth cutting surface. The Dressing Stand, on Page 48, performs this important dressing quickly and with no unnecessary waste of stone material.



Black & Decker

Standard Automotive Vibro-Centric Stones (Numerically Arranged)

Cat. No.	Diameter	Face Angle	Type	Price Each	Cat. No.	Diameter	Face Angle	Type	Price Each	Cat. No.	Diameter	Face Angle	Type	Price Each
14049	1 3/4"	45°	Hard	\$1.70	14273	3"	20°	Hard	\$2.55	16951	2 3/8"	45°	Hard	\$2.10
14050	2 1/2"	45°	Hard	2.10	14274	2 5/8"	20°	Soft	2.55	16970	3 1/8"	30°	Hard	3.00
14056	1 1/2"	45°	Hard	1.70	14275	2 3/4"	20°	Soft	2.55	16971	3 1/8"	30°	Soft	3.00
14063	1 5/8"	45°	Soft	1.70	14276	2 7/8"	20°	Soft	2.55	18540	1 3/8"	45°	Hard	1.70
14064	2"	45°	Soft	1.70	14277	3"	20°	Soft	2.55	18541	1 3/8"	45°	Soft	1.70
14084	1 1/2"	45°	Soft	1.70	14278	2 1/8"	30°	Soft	2.10	18542	1 3/8"	45°	Finish	1.70
14085	1 3/4"	45°	Soft	1.70	14279	2 1/4"	30°	Soft	2.10	21464	3 1/8"	45°	Hard	3.00
14086	1 7/8"	45°	Soft	1.70	14280	2 1/2"	30°	Soft	2.10	21465	3 1/8"	45°	Soft	3.00
14087	2 1/8"	45°	Soft	2.10	14281	2 5/8"	30°	Soft	2.55	21466	3 1/8"	45°	Finish	3.00
14088	2 1/4"	45°	Soft	2.10	14282	2 3/4"	30°	Soft	2.55	21467	3 1/4"	45°	Hard	3.00
14089	2 1/2"	45°	Soft	2.10	14283	2 3/8"	30°	Soft	2.55	21468	3 1/4"	45°	Soft	3.00
14090	1 3/4"	30°	Soft	1.70	14284	3"	30°	Soft	2.55	21469	3 1/4"	45°	Finish	3.00
14091	2"	30°	Soft	1.70	14285	2 5/8"	45°	Soft	2.55	21470	3 3/8"	45°	Hard	3.00
14092	1 1/2"	20°	Soft	1.70	14286	2 7/8"	45°	Soft	2.55	21471	3 3/8"	45°	Soft	3.00
14093	1 5/8"	20°	Soft	1.70	14287	1 5/8"	30°	Hard	1.70	21472	3 3/8"	45°	Finish	3.00
14094	1 3/4"	20°	Soft	1.70	14288	1 7/8"	30°	Hard	1.70	21473	3 1/2"	45°	Hard	3.00
14095	1 7/8"	20°	Soft	1.70	14289	2 1/8"	30°	Hard	2.10	21474	3 1/2"	45°	Soft	3.00
14096	2"	20°	Soft	1.70	14290	2 1/4"	30°	Hard	2.10	21475	3 1/2"	45°	Finish	3.00
14097	2 1/8"	20°	Soft	2.10	14291	2 1/2"	30°	Hard	2.10	23666	1 3/8"	20°	Soft	1.70
14098	2 1/4"	20°	Soft	2.10	14292	2 5/8"	30°	Hard	2.55	23667	1 3/8"	20°	Hard	1.70
14099	2 1/2"	20°	Soft	2.10	14293	2 3/4"	30°	Hard	2.55	23668	2 3/8"	20°	Soft	2.10
14100	1 5/8"	45°	Hard	1.70	14294	3"	30°	Hard	2.55	23669	2 3/8"	20°	Hard	2.10
14101	1 7/8"	45°	Hard	1.70	14295	2 7/8"	45°	Hard	2.55	23670	2 3/8"	45°	Finish	2.10
14102	2"	45°	Hard	1.70	14370	1 1/2"	30°	Finish	1.70	23821	1 9/16"	70°	Soft	1.70
14103	2 1/8"	45°	Hard	2.10	14371	1 5/8"	30°	Finish	1.70	23822	2 1/16"	70°	Soft	2.10
14104	2 1/4"	45°	Hard	2.10	14372	1 3/4"	30°	Finish	1.70	23823	2 1/4"	70°	Soft	2.10
14105	1 3/4"	30°	Hard	1.70	14373	1 7/8"	30°	Finish	1.70	23824	2 3/8"	70°	Soft	2.10
14106	2"	30°	Hard	1.70	14374	2"	30°	Finish	1.70	23957	1 13/16"	45°	Soft	1.70
14107	1 1/2"	20°	Hard	1.70	14375	2 1/8"	30°	Finish	2.10	23968	3"	45°-20°	Soft	3.20
14108	1 5/8"	20°	Hard	1.70	14376	2 1/4"	30°	Finish	2.10	24493	2 1/8"	10°-45°-35°	Soft	2.55
14109	1 3/4"	20°	Hard	1.70	14377	2 1/2"	30°	Finish	2.10	24494	1 1/2"	12°-30°	Soft	2.15
14110	1 7/8"	20°	Hard	1.70	14378	2 5/8"	30°	Finish	2.55	25632	2 3/8"	15°	Soft	2.55
14111	2"	20°	Hard	1.70	14379	2 3/4"	30°	Finish	2.55	25638	2 3/8"	15°	Finish	2.55
14112	2 1/8"	20°	Hard	2.10	14380	2 7/8"	30°	Finish	2.55	25749	3 1/8"	20°	Soft	3.00
14113	2 1/4"	20°	Hard	2.10	14381	3"	30°	Finish	2.55	25947	3 1/4"	30°	Hard	3.00
14114	2 1/2"	20°	Hard	2.10	14382	1 1/2"	45°	Finish	1.70	25948	3 1/4"	30°	Soft	3.00
14153	2 3/4"	45°	Soft	2.55	14383	1 5/8"	45°	Finish	1.70	25949	3 1/4"	30°	Finish	3.00
14154	3"	45°	Soft	2.55	14384	1 3/4"	45°	Finish	1.70	25950	3 1/4"	20°	Hard	3.00
14197	1 1/4"	30°	Soft	1.70	14385	1 7/8"	45°	Finish	1.70	25951	3 1/4"	20°	Soft	3.00
14198	1 1/2"	30°	Soft	1.70	14386	2"	45°	Finish	1.70	26147	2 1/16"	90°-30°	Soft	2.55
14199	1 5/8"	30°	Soft	1.70	14387	2 1/8"	45°	Finish	2.10	26148	2 1/8"	45°	Soft	2.55
14200	2 3/4"	45°	Hard	2.55	14388	2 1/4"	45°	Finish	2.10	26284	1 7/8"	90°-30°	Soft	1.70
14216	1 1/4"	45°	Soft	1.70	14389	2 1/2"	45°	Finish	2.10	26285	2 5/16"			



**"ELECTRIC TOOL HEADQUARTERS"**

**Aircraft  
"VIBRO-CENTRIC"**

**No. 421 Aircraft 30° Driver**

EQUIPPED WITH long spindle, encased in aluminum housing, which reaches easily into cylinders of radial engines. 30° angle head brings driving spindle in line with valve guides. Gear train in angle head transmits full power; positive vibrating action built into spindle. Completely self-contained, there is no danger of the unit scarring or damaging the cylinder walls.

Spindle speed .....10,000 R.P.M.; Overall length .....20 3/4".  
Weight: Net .....9 lbs.; Shipping .....10 1/2 lbs.  
Standard Equipment — 3-conductor cable and plug; instant-release trigger switch with locking pin; "universal" motor.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 421 (specify voltage) **\$75.00**  
Price, complete .....

**70° Angle Head:** The above Driver can be furnished with a 70° angle head, instead of the standard 30° angle head, at no extra cost. Equipped thus, the Driver is ideal for cab-over-engine trucks and "alligator" hood cars. If desired, specify "No. 421 Special with 70° Head."

**No. 451 Straight Aircraft Driver**

Instead of the 30° angle head, this unit has a straight geared head, in line with the spindle for special applications.

Net Weight .....9 lbs.; Shipping .....10 1/2 lbs.  
Overall length .....21 1/4".

Other specifications same as above.

Catalog No. 451 (specify voltage) **\$90.00**  
Price, complete .....

**No. 25248 Aircraft Stone Dressing Stand**

A STURDY, flexible Stand with ample range and adjustments for truing and cleaning all sizes and types of Vibro-Centric Valve-Seat Grinding Stones. This Stand is equipped with a special mandrel, short to accommodate the short Aircraft Stone Sleeve, and grooved to take the retainer ball in this sleeve. Also equipped with micrometer diamond feed, angle indicator that is easily read and set and adjustments for vertical or horizontal cutting.

Stone Size Capacity.....up to 3 1/2".  
Mandrel Diameter .....3/8"; Angle Adjustment ....0° to 90°.  
Weight: Net .....10 1/4 lbs.; Shipping .....11 1/4 lbs.  
Standard Equipment — Diamond point; mandrel; adjustable feeding arm; micrometer diamond feed.

Catalog No. 25248 Aircraft Stone Dressing Stand.....\$20.00  
Catalog No. 20157 Diamond Nib for No. 25248 Stand.....3.50

**No. 423 Aircraft Basic Kit**

CONTAINS the basic Vibro-Centric Aircraft units around which complete aircraft valve-seat reconditioning equipment can be built. The kit has ample storage room for a large assortment of Stones and Pilots. Because of the variation in Stone and Pilot sizes required in this field, we do not include any set assortment of these items in the kit. When ordering, add the prices of Stones and Pilots required to the price of the kit, or send us engine specifications and we will recommend an assortment.

- 1 No. 421 Aircraft 30° Driver.
- 1 No. 25248 Aircraft Stone Dressing Stand.
- 2 No. 25500 Aircraft Ball-Bearing Stone Sleeves.
- 2 No. 25249 Pilot Wrenches for Plug Pilots.
- 1 No. 30767 Special Kit Box.

Catalog No. 423 (specify voltage) **\$138.00**  
Price, complete .....

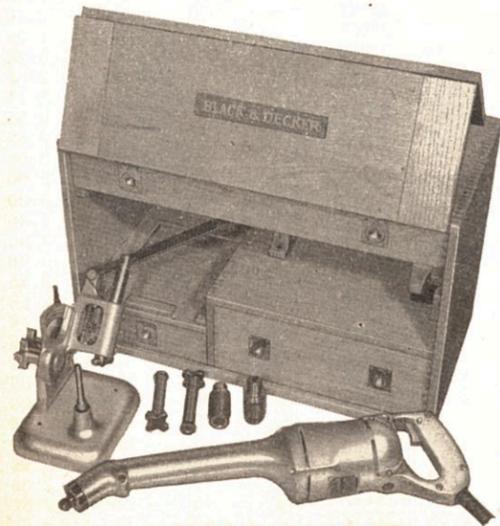
Catalog No. 30767 Special Kit Box, only.....\$20.00



**AIRCRAFT  
VIBRO-CENTRIC  
DRIVER**



**AIRCRAFT  
DRESSING  
STAND**



**AIRCRAFT BASIC KIT**

**"ELECTRIC TOOL HEADQUARTERS"**

**AIRCRAFT "VIBRO-CENTRIC" SUPPLIES**

**Aircraft Vibro-Centric Stones**

(Used only with Short Ball-Bearing Stone Sleeve)

THE AIRCRAFT (Short) Ball-Bearing Stone Sleeve requires Vibro-Centric Stones with larger-than-standard threaded bushings. Stones are available in three grades: for cast-iron and soft steel seats; for hard steel and stellite inserts; and for finishing-grinding.



Size	45° Stone—Cat. No.			30° Stone—Cat. No.			20° Stone—Cat. No.		90° Stone—Cat. No.			Price Each
	Hard Seat	Soft Seat	Finishing	Hard Seat	Soft Seat	Finishing	Hard Seat	Soft Seat	Hard Seat	Soft Seat	Finishing	
1 1/8"	25502	25503	25504	25599	25600	25601	25602	25603	.....	.....	.....	\$1.70
1 5/8"	25505	25506	25507	25562	25563	25564	25604	25605	.....	.....	.....	1.70
1 3/8"	25508	25509	25510	25565	25566	25567	25606	25607	.....	.....	.....	1.70
1 7/8"	25512	25513	25514	25568	25569	25570	25608	25609	25555	.....	.....	1.70
2"	25515	25516	25517	25571	25572	25573	25610	25611	.....	25620	25618	1.70
2 1/8"	25518	25519	25520	25574	25575	25576	25612	25613	25558	.....	25616	2.10
2 1/4"	25521	25522	25523	25577	25578	25579	25614	25615	25556	.....	25560	2.10
2 3/8"	25524	25525	25526	.....	.....	.....	.....	26805	25554	25621	25559	2.10
2 1/2"	25527	25528	25529	25580	25581	25582	.....	26861	.....	25619	25561	2.10
2 5/8"	25530	25531	25532	25584	25585	25586	.....	25748	.....	.....	.....	2.55
2 3/4"	25533	25534	25535	25587	25588	25589	.....	.....	25557	.....	25617	2.55
2 7/8"	25536	25537	25538	25590	25591	25592	.....	25746	.....	.....	.....	2.55
3"	25539	25540	25541	25593	25594	25595	.....	.....	.....	.....	.....	2.55
3 1/8"	25542	25543	25544	25596	25597	25598	.....	25747	.....	.....	.....	3.00
3 1/4"	25545	25546	25547	.....	.....	.....	.....	.....	.....	.....	.....	3.00
3 3/8"	25548	25549	25550	.....	.....	.....	.....	.....	.....	.....	.....	3.00
3 1/2"	25551	25552	25553	.....	.....	.....	.....	.....	.....	.....	.....	3.00

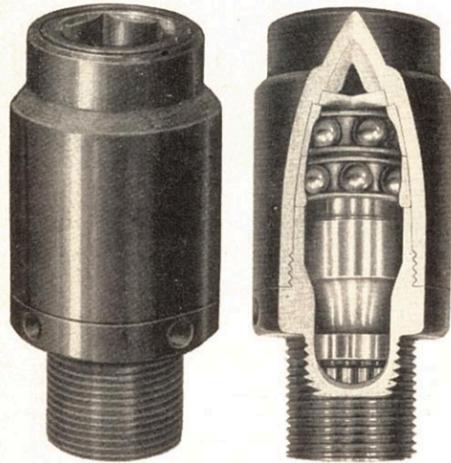
**AIRCRAFT Vibro-Centric Stones (Listed Numerically)**

Cat. No.	Diameter	Face Angle	Type	Price Each	Cat. No.	Diameter	Face Angle	Type	Price Each	Cat. No.	Diameter	Face Angle	Type	Price Each
25502	1 1/2"	45°	Hard	\$1.70	25544	3 1/8"	45°	Finish	\$3.00	25586	2 5/8"	30°	Finish	\$2.55
25503	1 1/2"	45°	Soft	1.70	25545	3 1/4"	45°	Hard	3.00	25587	2 3/4"	30°	Hard	2.55
25504	1 1/2"	45°	Finish	1.70	25546	3 1/4"	45°	Soft	3.00	25588	2 3/4"	30°	Soft	2.55
25505	1 5/8"	45°	Hard	1.70	25547	3 1/4"	45°	Finish	3.00	25589	2 3/4"	30°	Finish	2.55
25506	1 5/8"	45°	Soft	1.70	25548	3 3/8"	45°	Hard	3.00	25590	2 1/2"	30°	Hard	2.55
25507	1 5/8"	45°	Finish	1.70	25549	3 3/8"	45°	Soft	3.00	25591	2 1/8"	30°	Soft	2.55
25508	1 3/4"	45°	Hard	1.70	25550	3 3/8"	45°	Finish	3.00	25592	2 3/8"	30°	Finish	2.55
25509	1 3/4"	45°	Soft	1.70	25551	3 1/2"	45°	Hard	3.00	25593	3"	30°	Hard	2.55
25510	1 3/4"	45°	Finish	1.70	25552	3 1/2"	45°	Soft	3.00	25594	3"	30°	Soft	2.55
25511	1 7/8"	45°	Hard	1.70	25553	3 1/2"	45°	Finish	3.00	25595	3"	30°	Finish	2.55
25512	1 7/8"	45°	Soft	1.70	25554	2 3/8"	90°	Hard	2.10	25596	3 1/8"	30°	Hard	3.00
25513	1 7/8"	45°	Finish	1.70	25555	1 7/8"	90°	Hard	1.70	25597	3 1/8"	30°	Soft	3.00
25514	2"	45°	Hard	1.70	25556	2 1/4"	90°	Hard	2.10	25598	3 1/8"	30°	Finish	3.00
25515	2"	45°	Soft	1.70	25557	2 3/4"	90°	Hard	2.55	25599	1 1/2"	30°	Hard	1.70
25516	2"	45°	Finish	1.70	25558	2 1/8"	90°	Hard	2.10	25600	1 1/2"	30°	Soft	1.70
25517	2 1/8"	45°	Hard	2.10	25559	2 3/8"	90°	Finish	2.10	25601	1 1/2"	30°	Finish	1.70
25518	2 1/8"	45°	Soft	2.10	25560	2 1/4"	90°	Finish	2.10	25602	1 1/2"	20°	Hard	1.70
25519	2 1/8"	45°	Finish	2.10	25561	2 1/2"	90°	Finish	2.10	25603	1 1/2"	20°	Soft	1.70
25520	2 1/8"	45°	Hard	2.10	25562	1 5/8"	30°	Hard	1.70	25604	1 3/8"	20°	Hard	1.70
25521	2 1/4"	45°	Hard	2.10	25563	1 5/8"	30°	Soft	1.70	25605	1 5/8"	20°	Soft	1.70
25522	2 1/4"	45°	Soft	2.10	25564	1 5/8"	30°	Finish	1.70	25606	1 3/4"	20°	Hard	1.70
25523	2 1/4"	45°	Finish	2.10	25565	1 3/4"	30°	Hard	1.70	25607	1 3/4"	20°	Soft	1.70
25524	2 3/8"	45°	Hard	2.10	25566	1 3/4"	30°	Soft	1.70	25608	1 7/8"	20°	Hard	1.70
25525	2 3/8"	45°	Soft	2.10	25567	1 3/4"	30°	Finish	1.70	25609	1 7/8"	20°	Soft	1.70
25526	2 3/8"	45°	Finish	2.10	25568	1 7/8"	30°	Hard	1.70	25610	2"	20°	Hard	1.70
25527	2 1/2"	45°	Hard	2.10	25569	1 7/8"	30°	Soft	1.70	25611	2"	20°	Soft	1.70
25528	2 1/2"	45°	Soft	2.10	25570	1 7/8"	30°	Finish	1.70	25612	2 1/8"	20°	Hard	2.10
25529	2 1/2"	45°	Finish	2.10	25571	2"	30°	Hard	1.70	25613	2 1/8"	20°	Soft	2.10
25530	2 5/8"	45°	Hard	2.55	25572	2"	30°	Soft	1.70	25614	2 1/4"	20°	Hard	2.10
25531	2 5/8"	45°	Soft	2.55	25573	2"	30°	Finish	1.70	25615	2 1/4"	20°	Soft	2.10
25532	2 5/8"	45°	Finish	2.55	25574	2 1/8"	30°	Hard	2.10	25616	2 1/4"	90°	Finish	2.10
25533	2 3/4"	45°	Hard	2.55	25575	2 1/8"	30°	Soft	2.10	25617	2 3/4"	90°	Finish	2.55
25534	2 3/4"	45°	Soft	2.55	25576	2 1/8"	30°	Finish	2.10	25618	2"	90°	Finish	1.70
25535	2 3/4"	45°	Finish	2.55	25577	2 1/4"	30°	Hard	2.10	25619	2 1/2"	90°	Soft	2.10
25536	2 7/8"	45°	Hard	2.55	25578	2 1/4"	30°	Soft	2.10	25620	2"	90°	Soft	1.70
25537	2 7/8"	45°	Soft	2.55	25579	2 1/4"	30°	Finish	2.10	25621	2 3/8"	90°	Soft	2.10
25538	2 7/8"	45°	Finish	2.55	25580	2 1/2"	30°	Hard	2.10	25746	2 3/8"	20°	Soft	2.55
25539	3"	45°	Hard	2.55	25581	2 1/2"	30°	Soft	2.10	25747	2 3/8"	20°	Soft	3.00
25540	3"	45°	Soft	2.55	25582	2 1/2"	30°	Finish	2.10	25748	2 5/8"	20°	Soft	2.55
25541	3"	45°	Finish	2.55	25583	2 3/8"	30°	Hard	2.55	26805	2 3/8"	20°	Soft	2.10
25542	3 1/8"	45°	Hard	3.00	25584	2 3/8"	30°	Hard	2.55	26861	2 1/2"	20°	Soft	2.10
25543	3 1/8"	45°	Soft	3.00	25585	2 5/8"	30°	Soft	2.55					



**"ELECTRIC TOOL HEADQUARTERS"**

**AIRCRAFT "VIBRO-CENTRIC" SUPPLIES**



**AIRCRAFT BALL-BEARING STONE SLEEVE**

**Aircraft (Short) Ball-Bearing Stone Sleeve**

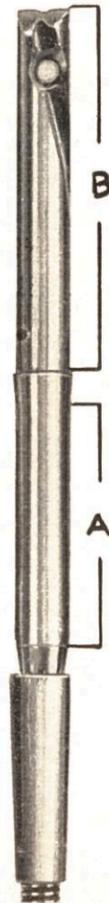
A PRECISION Sleeve designed for use with Aircraft (short-shank) Gruv-Top Pilots and Aircraft Vibro-Centric Stones. The Aircraft Ball-Bearing Sleeve is specially constructed to allow the maximum clearance in radial cylinder; in addition to the double-row ball-bearing between inner and outer sleeve, there is a needle bearing at the lower (threaded) end for compactness and accuracy. The overall length of this Sleeve is only 2 3/4". Aircraft Vibro-Centric Stones have large threaded bushings to fit this Sleeve. Retainer balls in the inner Sleeve fit the grooves of the Gruv-Top Pilots, preventing friction and wear between Sleeve and Pilot. Use with No. 25248 Dressing Stand or with No. 20153 Stand with No. 25247 Short Mandrel.

Cat. No. 25500 Aircraft (Short) Ball-Bearing Stone Sleeve.....\$12.50

**"Gruv-Top" Aircraft Self-Centering Pilots**

(Used only with Short Stone Sleeves)

THIS SPECIAL group of Pilots adapts the popular expanding feature of the Self-Centering Pilot to aircraft reconditioning, eliminating the necessity for a large stock of oversize Pilots. Two accurately machined tapers (one fitting top of guide and one at bottom on which split sleeve expands) provide a rigid, true axis for Vibro-Centric Stones. These special Aircraft Pilots have shorter-than-usual top shanks and are used only with short Stone Sleeves to provide maximum working clearance in cylinders. Grooves lock retainer balls in Aircraft Ball-Bearing Stone Sleeve, prevent friction and wear.



**AIRCRAFT SELF-CENTERING PILOT**

**Aircraft Expanding Sleeve Self-Centering Pilots**

Nominal Size	Range	Catalog No.	Dimensions A	Dimensions B	Price Complete	Sleeve No.	Price of Sleeve
3/16"-21/64"	.308"-.339"	25279	2 1/8"	2 1/16"	\$5.90	13902	.75
11/32"-23/64"	.339"-.370"	25275	1 3/8"	2 1/16"	5.90	13904	.75
		25267	1 1/2"	1 1/2"	5.90	13904	.75
3/8"-25/64"	.371"-.394"	25280	1 3/8"	2 1/16"	5.90	13903	.75
		25281	1 3/8"	2 3/4"	5.90	13903	.75
25/64"-13/32"	.386"-.409"	25282	1 3/8"	2 1/16"	5.90	13903	.75
		25296	1 5/8"	3"	5.90	13903	.75
15/32"-27/64"	.402"-.424"	25261	1 13/16"	2 3/16"	5.90	13909	.75
7/16"-29/64"	.433"-.455"	25298	1 3/8"	2 1/16"	5.90	13901	.75
		25845	1 13/16"	2"	5.90	13901	.75
		25293	1 3/8"	2 3/16"	5.90	13901	.75
		25250	1 7/8"	2 3/8"	5.90	13901	.75
		25292	2 1/8"	2 3/16"	5.90	13901	.75
		25251	2 1/4"	2 1/16"	5.90	13901	.75
		25260	1 3/4"	3 3/16"	5.90	13901	.75
		25278	2 1/8"	3"	5.90	13901	.75
		25263	3 1/8"	2 1/2"	5.90	13901	.75
		25283	2 3/8"	2 1/16"	5.90	13901	.75
25/64"-15/32"	.449"-.472"	25262	1 1/2"	2"	5.90	13901	.75
15/32"-31/64"	.464"-.495"	25266	1 11/16"	2 3/8"	5.90	13910	.75
		25272	2 1/8"	2 1/16"	5.90	13910	.75
1/2"-17/32"	.496"-.535"	25252	1 3/4"	2 1/8"	5.90	13905	.75
		25254	1 15/16"	2 3/8"	5.90	13905	.75
		25291	2 1/16"	2 3/8"	5.90	13905	.75
		25253	1 15/16"	2 1/2"	5.90	13905	.75
		25286	2 17/32"	2 1/16"	5.90	13905	.75
25/64"-9/16"	.539"-.562"	26471	3 1/2"	2 3/8"	5.90	24497	1.00
9/16"-19/32"	.558"-.598"	25287	1 19/32"	2 3/16"	5.90	13899	1.00
		25265	1 15/16"	2 1/4"	5.90	13899	1.00
		25255	2 3/64"	2 3/16"	5.90	13899	1.00
		25269	1 43/64"	2 15/16"	5.90	13899	1.00
19/32"-5/8"	.590"-.630"	25277	1 41/64"	2 3/4"	5.90	13899	1.00
5/8"-21/32"	.621"-.661"	25256	1 45/64"	2 3/8"	5.90	13906	1.00
		25257	2 11/64"	2 1/2"	5.90	13906	1.00
		25290	1 41/64"	2 3/8"	5.90	13906	1.00
21/32"-11/16"	.651"-.691"	25270	2 51/64"	2 3/8"	5.90	13906	1.00
11/16"-23/32"	.683"-.723"	25258	1 3/4"	2 11/32"	5.90	15046	1.50

See next page for Aircraft Plug Pilots.



**"ELECTRIC TOOL HEADQUARTERS"**

**AIRCRAFT "VIBRO-CENTRIC" SUPPLIES**

**"Gruv-Top" Aircraft Plug Pilots (Used only with Short Stone Sleeves)**

A SPECIAL group of Plug Pilots for use in aircraft engine reconditioning. Top shank is shortened for maximum clearance, and grooved for use with Aircraft Ball-Bearing Stone Sleeve. Lower end is threaded and Plug Pilot Wrench is used to draw the Pilot tight in the guide.

Catalog No.	Nominal Size	Decimal Size	Dimensions		Catalog No.	Nominal Size	Decimal Size	Dimensions	
			A	B				A	B
25029	3/16"	.311"	2 1/16"	2 15/16"	25024	31/64"	.483"	2 1/8"	2 3/8"
25029-1		.312"			25024-1		.484"		
25029-2		.313"			25024-2		.485"		
25029-3		.314"			25024-3		.486"		
25029-4		.315"							
25017	11/16"	.343"	1 15/16"	2"	25002	1/2"	.500"	2"	2 1/4"
25017-1		.344"			25002-1		.501"		
25017-2		.345"			25002-2		.502"		
25017-3		.346"			25002-3		.503"		
25025	11/16"	.343"	1 5/8"	2 1/4"	25003	1/2"	.4995"	2 1/8"	3"
25025-1		.344"			25003-1		.5005"		
25025-2		.345"			25003-2		.5015"		
25025-3		.346"			25003-3		.5025"		
25025-4		.347"							
25025-5		.348"							
25030	3/8"	.3745"	1 5/8"	2 3/16"	25004	1/2"	.500"	2"	2 1/2"
25030-1		.3755"			25004-1		.501"		
25030-2		.3765"			25004-2		.502"		
25030-3		.3775"			25004-3		.503"		
25031	3/8"	.3745"	2 1/16"	2 3/4"	25035	1/2"	.500"	1 15/16"	2 7/16"
25031-1		.3755"			25035-1		.501"		
25031-2		.3765"			25035-2		.502"		
25031-3		.3775"			25035-3		.503"		
25045	3/8"	.3745"	1 3/8"	2 3/16"	25036	1/2"	.500"	2 3/16"	2 7/16"
25045-1		.3755"			25036-1		.501"		
25045-2		.3765"			25036-2		.502"		
25045-3		.3775"			25036-3		.503"		
25032	25/64"	.390"	2"	2 1/16"	25041	1/2"	.500"	2 1/2"	2 3/4"
25032-1		.391"			25041-1		.501"		
25032-2		.392"			25041-2		.502"		
25032-3		.393"			25041-3		.503"		
25026	25/64"	.388"	2 15/16"	2 3/16"	25005	3/4"	.5625"	2 3/8"	2 3/8"
25026-1		.389"			25005-1		.5635"		
25026-2		.390"			25005-2		.5645"		
25026-3		.391"			25005-3		.5655"		
25026-4		.392"			25005-4		.5610"		
25026-5		.393"							
25011	15/32"	.406"	2"	2 1/16"	25015	3/4"	.5615"	2"	2 3/16"
25011-1		.407"			25015-1		.5625"		
25011-2		.408"			25015-2		.5635"		
25011-3		.409"			25015-3		.5645"		
25011-4		.404"							
25011-5		.405"							
25000	1/16"	.4365"	2 3/16"	2 3/8"	25019	3/8"	.5625"	2 1/8"	2 15/16"
25000-1		.4375"			25019-1		.5635"		
25000-2		.4385"			25019-2		.5645"		
25000-3		.4395"			25019-3		.5655"		
25001	1/16"	.4365"	2 3/16"	2 1/16"	25037	3/8"	.5625"	1 3/4"	2 3/8"
25001-1		.4375"			25037-1		.5635"		
25001-2		.4385"			25037-2		.5645"		
25001-3		.4395"			25037-3		.5655"		
25010	1/16"	.4350"	2 3/8"	2 3/16"	25038	3/8"	.5615"	3"	2 1/2"
25010-1		.4360"			25038-1		.5625"		
25010-2		.4370"			25038-2		.5635"		
25010-3		.4380"			25038-3		.5645"		
25013	1/16"	.4365"	3 1/16"	2 3/16"	25014	19/32"	.595"	2 1/8"	2 3/4"
25013-1		.4375"			25014-1		.596"		
25013-2		.4385"			25014-2		.597"		
25013-3		.4395"			25014-3		.598"		
25028	1/16"	.4370"	2 1/2"	3"	25006	5/8"	.625"	2 1/8"	2 1/2"
25028-1		.4390"			25006-1		.626"		
25028-2		.4390"			25006-2		.627"		
25028-3		.4400"			25006-3		.628"		
25033	1/16"	.4370"	2 3/8"	1 15/16"	25007	5/8"	.6215"	2 1/2"	2 3/16"
25033-1		.4380"			25007-1		.6225"		
25033-2		.4390"			25007-2		.6235"		
25033-3		.4400"			25007-3		.6245"		
25042	1/16"	.4375"	2 1/2"	2 1/4"	25021	5/8"	.6255"	2 3/8"	2 3/8"
25042-1		.4385"			25021-1		.6265"		
25042-2		.4395"			25021-2		.6275"		
25042-3		.4405"			25021-3		.6285"		
25043	1/16"	.4375"	1 3/8"	2 1/4"	25023	5/8"	.6215"	2 1/8"	2 3/8"
25043-1		.4385"			25023-1		.6225"		
25043-2		.4395"			25023-2		.6235"		
25043-3		.4405"			25023-3		.6245"		
25012	29/64"	.453"	2"	2 1/16"	25040	5/8"	.6245"	2 1/16"	2 15/16"
25012-1		.454"			25040-1		.6255"		
25012-2		.455"			25040-2		.6265"		
25012-3		.456"			25040-3		.6275"		
25016	15/32"	.466"	1 15/16"	2 1/16"	25020	21/32"	.6555"	3 1/4"	2 1/16"
25016-1		.467"			25020-1		.6565"		
25016-2		.468"			25020-2		.6575"		
25016-3		.469"			25020-3		.6585"		
25034	15/32"	.468"	2 1/8"	2 1/4"	25020-4		.6595"		
25034-1		.469"			25020-				



## "ELECTRIC TOOL HEADQUARTERS"

### The Black & Decker Electric Valve Shop

(Illustrated on opposite page)

THE BLACK & DECKER Electric Valve Shop is the most complete merchandising "package" of precision valve reconditioning equipment on the market. This one cabinet includes everything necessary for a complete precision valve job, and it carries the complete equipment right to the job, saving time and energy in the shop. The modern streamlined appearance of the Valve Shop has great merchandising value, since it can be shown to a prospective customer; inspires confidence in your equipment and ability and helps you to explain the need and method of valve and valve-seat grinding.

The Super-Service Valve Refacer produces an absolutely smooth surface and true angle on valve faces. The Vibro-Centric Seat Grinder restores perfect accuracy and mirror finish to all types of valve seats, hard or soft. The complete Valve Shop is engineered to turn out perfectly matched gas-tight valve jobs quickly and profitably.

The cabinet's bench-top holds the Refacer and the Stone Dressing Stand at best working height. The large fitted drawer has trays for all seating stones, stone sleeves, self-centering pilots, carbon removing brushes and Refacer attachments with ample room for additional stones and pilots. The full size lower cabinet has storage space for the Vibro-Centric Driver, drills, gaskets and tools and other parts. Two removable valve trays on each side of the cabinet help to keep valves in correct order. The Valve Shop is equipped with an adjustable lamp; four electric outlets to plug in Refacer, Vibro-Driver, drill and hand lamp; extra long extension cord with third wire for grounding; and four large rubber-tired casters, which roll easily over rough floors.

The Electric Valve Shop is available in fourteen different combinations of equipment adapting it to the shop requirements and pocketbook of any shop doing valve work. This is really modern precision equipment which you will be proud to own.

#### Specifications

Cabinet Dimensions: Height	33"	width	35"	depth	20"
Shipping Weight: Complete Standard Valve Shop	302 lbs.				
Complete Heavy-Duty Valve Shop	312 lbs.				
Valve Shop Cabinet only	110 lbs.				

#### Standard Electric Valve Shop

- 1 Valve Shop Cabinet.
  - 1 Super-Service Refacer (Wet-Grinding or Standard).
  - 1 Standard Driving Unit (Straight or 55°).
  - 3 Valve Guide Cleaners: 21441 ( $\frac{5}{16}$ ""); 21445 ( $\frac{3}{8}$ ""); 21449 ( $\frac{7}{16}$ "").
  - 2 Carbon Cleaning Brushes: 21416 (Heavy-Duty); 21417 (Side Flare).
  - 1 Standard Stone Dressing Stand—No. 20153.
  - 2 Standard Stone Sleeves—No. 22100.
  - 5 Self-Centering Pilots
  - 2 Hard-Seat Stones
  - 7 Soft-Seat Stones
  - 1 Finishing Stone
- As itemized in Standard Universal Vibro-Centric Kit.
- Standard Voltage — 110; also available for 220 or 250 volts.

Price, Standard Valve Shop, Complete (specify voltage) —

—with No. 115 Standard Straight Driver and —	
$\frac{1}{16}$ " Standard Refacer (Cat. No. 509)	\$342.00
$\frac{1}{8}$ " Standard Refacer (Cat. No. 510)	352.00
$\frac{1}{4}$ " Wet-Grinding Refacer (Cat. No. 514)	357.00
$\frac{1}{2}$ " Wet-Grinding Refacer (Cat. No. 515)	367.00
—with No. 440 Standard 55° Driver and —	
$\frac{1}{16}$ " Standard Refacer (Cat. No. 465)	348.00
$\frac{1}{8}$ " Standard Refacer (Cat. No. 466)	358.00
$\frac{1}{4}$ " Wet-Grinding Refacer (Cat. No. 463)	363.00
$\frac{1}{2}$ " Wet-Grinding Refacer (Cat. No. 464)	373.00

#### Heavy-Duty Electric Valve Shop

- 1 Valve Shop Cabinet.
- 1 Super-Service Refacer (Wet-Grinding or Standard).
- 3 Valve Guide Cleaners: 21441 ( $\frac{5}{16}$ ""); 21445 ( $\frac{3}{8}$ ""); 21449 ( $\frac{7}{16}$ "").
- 2 Carbon Cleaning Brushes: 21416 (Heavy Duty); 21417 (Side Flare).
- Contents of Heavy-Duty Universal Vibro-Centric Kit; including Heavy-Duty Driving Unit, Standard Dressing Stand, 2 Standard Stone Sleeves, 5 Self-Centering Pilots, 8 Hard-Seat Stones, 7 Soft-Seat Stones, Pilot Turning Wrench.

Standard Voltage — 110; also available for 220 or 250 volts.

Prices — Heavy-Duty Electric Valve Shop, complete (specify voltage) —

—with	
$\frac{1}{16}$ " Standard Refacer (Cat. No. 341)	\$366.00
$\frac{1}{8}$ " Standard Refacer (Cat. No. 342)	376.00
$\frac{1}{4}$ " Wet-Grinding Refacer (Cat. No. 339)	381.00
$\frac{1}{2}$ " Wet-Grinding Refacer (Cat. No. 340)	391.00

Price—Valve Shop Cabinet only (Cat. No. 31363) ... 57.00

#### Aircraft Valve Shops

These Valve Shops include a Super-Service Wet-Grinding Refacer, the Valve Shop Cabinet and the contents of the No. 423 Aircraft Basic Kit, minus the kit box.

Prices—Aircraft Electric Valve Shops (specify voltage)—

Cat. No. 449—with $\frac{1}{16}$ " Wet-Grinding Refacer	\$374.00
Cat. No. 450—with $\frac{1}{8}$ " Wet-Grinding Refacer	384.00

**THE COMPLETE VALVE RECONDITIONING METHOD FOR CARS, TRUCKS, TRACTORS, DIESELS, POWER UNITS, GENERATING PLANTS AND AIRPLANES**

## "ELECTRIC TOOL HEADQUARTERS"

**Black & Decker**

### ELECTRIC VALVE SHOP



Adjustable Lamp—  
"Light where you want it."

Standard Stone-Dressing Stand

Super-Service Valve Refacer (Wet or Dry Grinding)

Full Assortment of Vibro-Centric Stones, Sleeves, Pilots in large fitted Drawer equipped with lock

Handsome, Streamlined Steel Cabinet finished in brilliant red

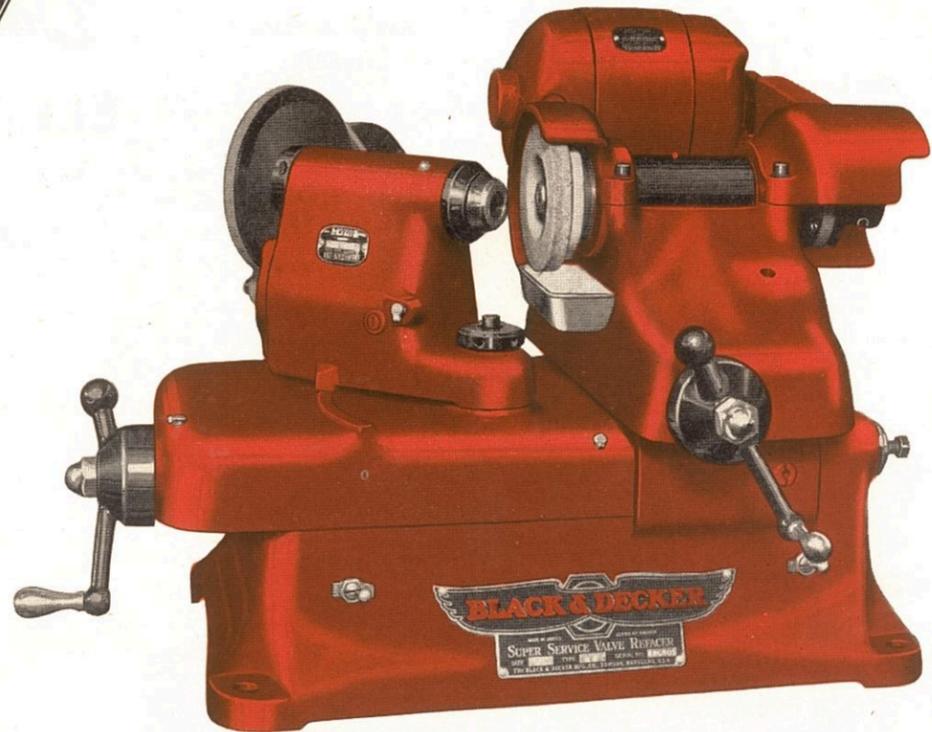
Storage Space for Vibro-Centric Driver, extra tools and equipment.

Ball-bearing rubber-tired casters. "Roll to the car."

**THE COMPLETE VALVE RECONDITIONING METHOD**



**"ELECTRIC TOOL HEADQUARTERS"**



**Standard Super-Service Valve Refacer**  
(for Dry Valve Grinding)  
CATALOG Nos. 106 and 107

The Super-Service Valve Refacer produces an absolutely smooth surface and true angle on the valve face. The collet-head swivels to any desired angle from 30° to 90° and is clearly marked for most popular angles. Proven machine-tool construction features insure perfect finish. These features include:

**Super Power** — from two "universal" motors, independently driving the collet spindle and grinding wheel for abundant, smooth power.

**Super-Speed Feed Screw** — combining the accuracy of screw feed with the speed of lever feed. Bearing construction insures against sideplay and provides perfectly smooth operation of the feed screws.

**Super-Sensitive Slides** — 3-point bearing suspension of feed tables achieves a sensitive, smooth slide action, so important to accurate high-finish valve grinding. This construction eliminates periodic gib adjustment and insures permanent accuracy.

**Super-Service Grinding Spindle** — Extended, double-end wheel spindle permits use of Micrometer Attachment or grinding wheel on outer end of spindle, without disturbing the refacing set-up. Ball-bearing wheel spindle of unit construction, for smoother grinding and correct alignment.

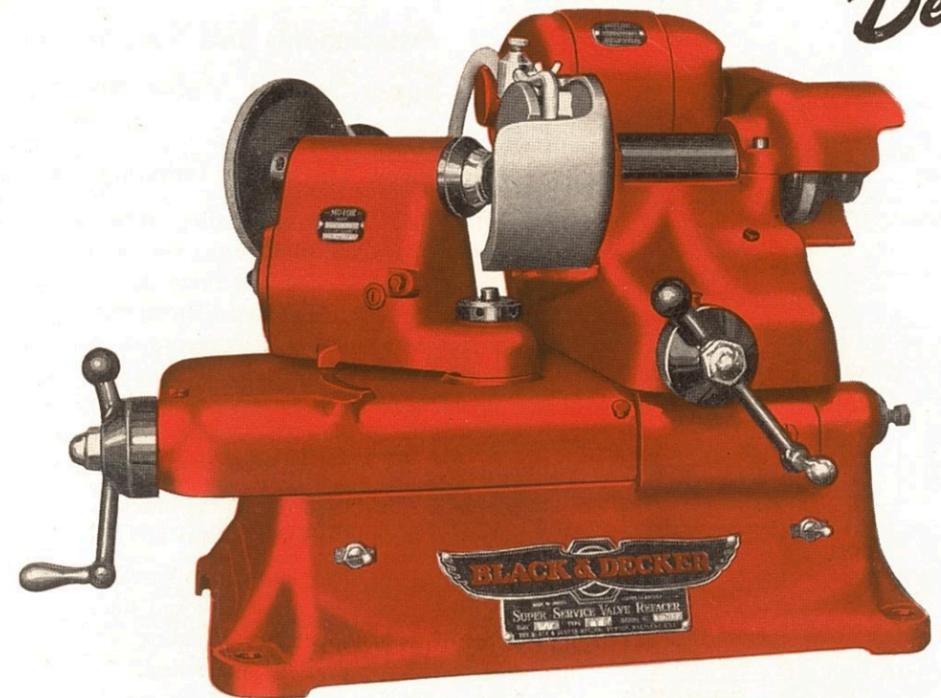
**Specifications**

- Valve Stem Capacity:
  - 1/16" Refacer, equipped with one collet— 3/32" to 1/16".
  - 1 1/16" Refacer, equipped with two collets— 3/32" to 1 1/16".
- Valve Head Capacity . . . . . up to 3 1/2".
- Angle Adjustment — The work-head is easily adjusted and marked for any standard angle from 30° to 90°.
- Motors — are "universal," operating on either direct or alternating current.
- Standard Equipment — 2 "universal" motors, pulleys and V-belts; one 4" grinding wheel for hard valves; one combination diamond wheel-dresser and V-block; Allen set-screw wrench; one dust pan; and 3-wire cable with attachment plug.
- Weight: Net . . . . . 143 lbs.  
Shipping . . . . . 163 lbs.
- Standard Voltage — 110; also available for 220 or 250 volts.
- 1/16" Standard Super-Service Refacer, complete with one collet (3/32"-1/16"); specify voltage. Catalog No. 106, Price . . . . . **\$185.00**
- 1 1/16" Standard Super-Service Refacer, complete with two collets (3/32"-1/16" and 1/2"-1 1/16"). Catalog No. 107, Price . . . . . **\$195.00**

See Pages 60 and 61 for Attachments.

**"ELECTRIC TOOL HEADQUARTERS"**

*Black & Decker*



**Wet Grinding Super-Service Valve Refacer**  
(with Electric Pump)  
CATALOG Nos. 281 and 282

The Super-Service WET-GRINDING Valve Refacer increases the speed of grinding. It reduces heat and prevents burning, permitting the operator to make heavier cuts. It produces an absolutely smooth surface on the valve face, comparable to the finest tool-room results.

The Wet-Grinding mechanism consists of solution tank, divided into two compartments; a centrifugal pump with independent "universal" motor; two tubes fitted into the tank cover, one drawing the filtered solution from the smaller compartment through a regulating valve, to a tube in a special wheel-guard which directs a steady stream onto the grinding wheel. A hinged splash-guard prevents loss of fluid. A return-trough in wheel-guard carries the solution through tubing back to the tank.

Other features of this Refacer include **Super-Power** with two "universal" motors, independently driving collet and wheel spindles; **Super-Speed Feed Screws** with improved bearing construction; **Super-Sensitive Slides** with 3-point bearing suspension of feed tables; and **Super-Service Grinding Spindle** of ball-bearing construction, double-ended to provide for valve stem and rocker arm grinding.

**Specifications**

- Valve Stem Capacity:
  - 1/16" Refacer, equipped with one collet — 3/32" to 1/16".
  - 1 1/16" Refacer, equipped with two collets— 3/32" to 1 1/16".
- Valve Head Capacity . . . . . up to 3 1/2";
- Angle Adjustment . . . . . 30° to 90°;
- Weight: Net . . . . . 146 lbs.;  
Shipping . . . . . 174 lbs.
- Standard Equipment — 2 "universal" motors with pulleys and V-belts; one solution tank with "universal" motor electric pump, cover and tubing; 3-wire cable and plug; one 4" grinding wheel; one wheel dresser and V-block with diamond; one wet-grinding wheel-guard, splash-guard and regulating valve; one Allen set-screw wrench; can of grinding compound.
- Standard Voltage — 110; also available for 220 or 250 volts.
- 1/16" Super-Service Wet-Grinding Refacer, Complete with one collet—3/32"-1/16" Catalog No. 281, Price . . . . . **\$200.00**
- 1 1/16" Super-Service Wet-Grinding Refacer, Complete with two collets—3/32"-1/16" and 1/2"-1 1/16". Catalog No. 282, Price . . . . . **\$210.00**

See Pages 60 and 61 for Attachments.



**"ELECTRIC TOOL HEADQUARTERS"**

**Attachments and Supplies for Super-Service Valve Refacers**

**Micrometer Valve Stem Grinding Attachment**

A "UNIVERSAL" stem grinding attachment for obtaining exact tappet clearance on all Ford valves and other valves not having tappet adjustments. The same attachment will also grind and true Ford and other tappets. The accuracy and simplicity of this attachment will save many hours of guess work. Fits all Super-Service (Standard or Wet-Grinding) Refacers, and operates on the outer end of the wheel spindle; does not interfere with the refacing set-up. The complete Micrometer Valve Stem Grinding Attachment consists of the following items:

A "universal" V-block and clamp bracket, with adjustable V-port bushings for all Ford V-8, four- and six-cylinder engines.

A "universal" B-block and clamp bracket, with adjustable V-stop, adapted to varying head sizes and stem lengths. The clamp bracket also holds tappets for grinding and truing, and holds diamond point\* for dressing the wheel.

A sensitive micrometer feed, clearly calibrated in thousandths, mounted on a carefully machined bar, which fits in wheel spindle housing.

A special recessed wheel, trued across the flat face to insure proper squaring of stems and tappets.

A set of sleeves to cover and protect the shaft and spring of the Attachment, when used for wet grinding with No. 24247 Wet-Grinding Attachment.

Complete as described for use either with or without Wet Attachment listed on next page.

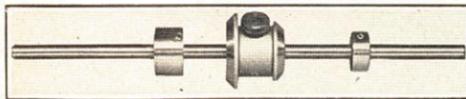
Catalog No. 18252 Complete Micrometer Valve Stem Grinding Attachment as detailed above **\$21.25**

**Rocker Arm Grinding Attachment**

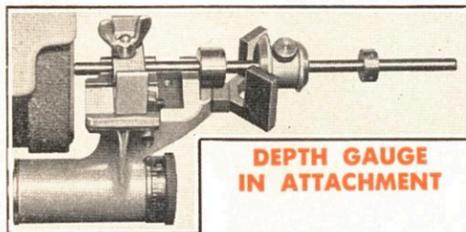
OPERATES on outer end of Refacer wheel spindle. Consists of a micrometer feed mounted on a machined bar. A bracket holds a diamond point\* for dressing the wheel, and an adjustable arm, pivoted and slotted to permit the grinding of various size Rocker Arms. A double-cone clamp holds the Rocker-Arm and is adjusted for bore of the Rocker Arm to be ground. A set of sleeves to cover and protect the shaft and spring of the Attachment, when used for wet grinding with No. 24247 Wet-Grinding Attachment. Grinding Wheel is not included with the attachment. Use No. 20939 Wheel.

Catalog No. 20949 Rocker Arm Grinding Attachment **\$15.00**

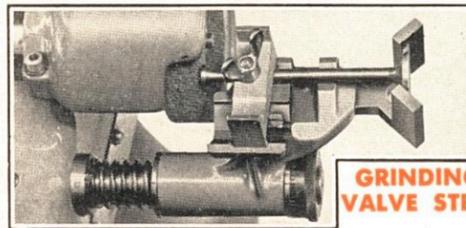
\* Use diamond point supplied with Refacer. Attachment fits all Super-Service Refacers. Can be used with or without Wet Attachment.



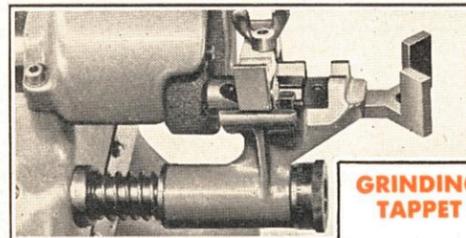
**UNIVERSAL DEPTH GAUGE**



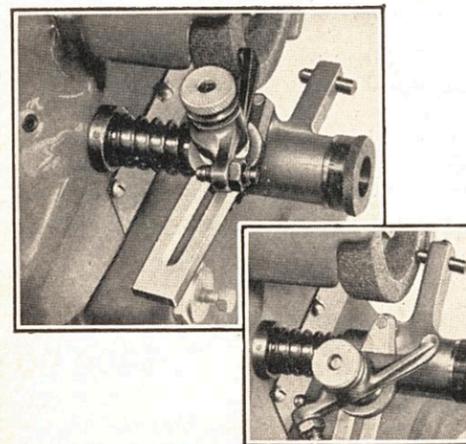
**DEPTH GAUGE IN ATTACHMENT**



**GRINDING VALVE STEM**



**GRINDING TAPPET**



**ROCKER ARM GRINDING ATTACHMENT**



**"ELECTRIC TOOL HEADQUARTERS"**

**Attachments and Supplies for Super-Service Valve Refacers**

**Wet Attachment for Valve Stem and Rocker Arm Grinding**

FOR OWNERS of Wet-Grinding Super-Service Refacers, a wet-grinding attachment is available for use in connection with the Micrometer Valve Stem Grinding Attachment and Rocker Arm Grinding Attachment. The wet-grinding attachment consists of a two-way valve replacing the Refacer regulating valve, which diverts the solution to the wet-grinding attachment; a regulating valve which controls the amount of fluid applied to the wheel; a special splash-guard and return-trough to be attached to the outer end of the grinding spindle in place of the regular outer-end guard; and necessary tubing to carry the solution to the attachment and back to the same solution tank used for wet-grinding the valves. The Wet-Grinding Attachment can be used only on Wet-Grinding Refacers, and must be ordered in addition to the Micrometer Valve Stem Grinding Attachment or Rocker Arm Grinding Attachment, as it includes none of these attachment parts.

Catalog No. 24247 Wet-Grinding Attachment, complete **\$20.00**

**For Grinding 15° and 90° Valves**

A special recessed wheel and wheel-dressing attachment are available for the Super-Service Refacers, to facilitate the grinding of 90° (flat) valves and 15° valves. The attachment is used to dress a 30° angle on the wheel.

Use diamond point supplied with Refacer. Attachment fits all Super-Service Refacers. Can be used with or without Wet Attachment.

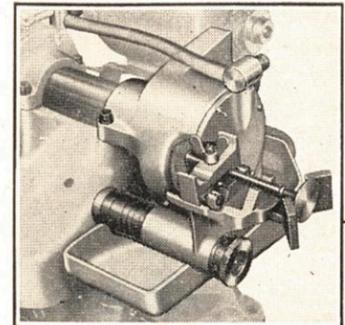
Cat. No. 19898 Dressing Attachment, and special wheel, complete \$8.25  
Cat. No. 19897 Special Wheel only for 15° and 90° Valves 2.70

**Replacement and Special Refacer Wheels**

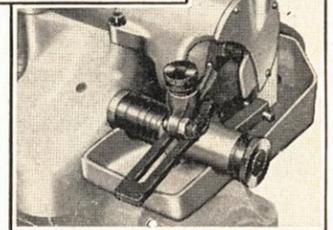
Cat. No. 31471 Standard 4" Wheel for Hard Valves \$2.70  
Cat. No. 16371 Special 4" Wheel for Stellite Valves 2.45  
Cat. No. 20939 4" Recessed Wheel for Micrometer Attachment and Rocker Arm Grinding Attachment 2.40  
Cat. No. 19897 Special Recessed Wheel for 15° and 90° Valves 2.70  
Cat. No. 22813 Special Fine-grade 4" Refacer Wheel 2.70

**Replacement and Special Refacer Equipment**

Cat. No. 18325 Standard Collet (3/32"-9/16" capacity) \$ 8.00  
Cat. No. 15200 Standard Collet (1/2"-1 1/8" capacity) 10.00  
Cat. No. 26060 Special Collet for short valve stems (1/4"-7/16" capacity) 8.00  
Cat. No. 17745 Special Collet for short valve stems (1/2"-1 1/8" capacity) 10.00  
Cat. No. 20934 Wheel Dresser and V-block without Diamond 1.50  
Cat. No. 5574 Diamond and Nib for all Wheel Dressers 3.00  
Cat. No. 16286 V-Belt for Work (Collet) Spindle .50  
Cat. No. 23617 V-Belt for Wheel Motor .50  
Cat. No. 20380 8-oz. Container Wet Grinding Compound .35  
Cat. No. 22946 Pint Container Wet Grinding Compound .60  
Cat. No. 22947 Quart Container Wet Grinding Compound .95  
Cat. No. 22173 Adjustable Lamp, with Socket, Switch, etc. 5.40

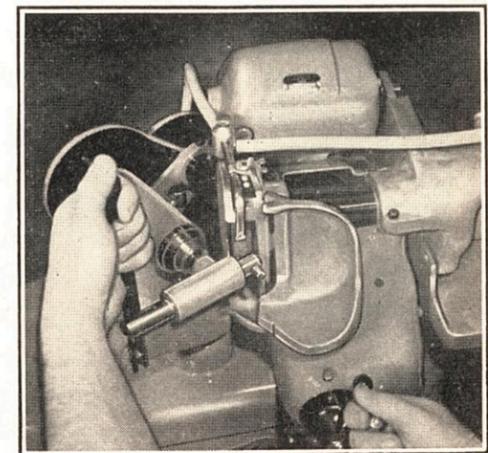


**FOR VALVE STEM GRINDER**



**FOR ROCKER ARM GRINDER**

**WET ATTACHMENT**



**15° AND 90° VALVE GRINDING ATTACHMENT**



## "ELECTRIC TOOL HEADQUARTERS"

### Carbon Cleaning Tools

For use with 1/4" Electric Drill

THE THOROUGH removal of carbon deposits is one of the most important operations in complete valve reconditioning. A bright, burnished surface will retard carbon accumulation in the completed job. Use the Carbon Cleaning Tools listed below to remove quickly and completely all carbon from combustion chamber, piston heads and valves.

### Valve Guide Cleaners (A)

Made of spring wire set spirally about a stem and expanded to give heavy cleaning tension. A few strokes with this Cleaner driven by a 1/4" Drill thoroughly cleans and polishes the Valve Guide.

Cat. No.	Minimum Size	Maximum Size	Price	Cat. No.	Minimum Size	Maximum Size	Price
21436	1/4"	to 9/32"	.98	21453	1/2"	to 35/64"	\$1.12
21441	5/16"	to 23/64"	.98	21456	9/16"	to 39/64"	1.12
22810	11/32"	to 25/64"	.98	21460	5/8"	to 43/64"	1.12
21445	3/8"	to 27/64"	.98	17682	3/4"	to 25/32"	1.50
21449	7/16"	to 31/64"	1.12	15125	Ford V-85		1.45
				22375	Ford V-60		1.70

### Carbon Removing Brushes

Made of tempered steel wire; used with 1/4" Drills, quickly clean carbon from cylinder heads, top of pistons, valve ports, etc., leaving a burnished surface.

21416	Heavy-duty solid wire-filled brush (B)	.85
21417	Side flare brush for close corner work (C)	1.28
21418	Small brush for cleaning valve-guide ports	.75
21419	Hollow core, flare bottom brush (D)	.81

### Wire Wheel Brush

For cleaning valves, top of block, etc. Driven by 1/4" Drill. Compactly made with maximum amount of spring tempered wire.

21397	4" Wire Wheel Brush	\$1.28
3071	Arbor to attach 4" brush to 1/4" Drill	.85
23046	Bench Stand for 1/4" Drill	3.15

### No. 10 Valve Lapper

CATALOG No. 118

THE VALVE LAPPER has operating balance, smooth lines and a powerful "universal" motor for positive, smooth operation.

The spindle oscillates back and forth with a long steady sweep, lapping valves in a fraction of the time formerly required by hand.

Bits of various shapes are provided to fit different style valves.

A lift spring placed under the head of the valve lifts it from the seat when pressure is not applied to the Lapper.

"Universal" motor operates on either alternating or direct current.

Specifications:

Speed.....500 oscillations a minute.

Weight: Net...6 1/4 lbs. Shipping...7 3/4 lbs.

Overall length...14"

Standard Equipment — 3-conductor cable with plug; 2 detachable bits for various types of valves; suction cup for plain valves and lift spring.

Standard Voltage — 110; also available for 220 or 250 volts.

Catalog No. 118 (specify voltage)

Price .....\$55.00

Attachments:

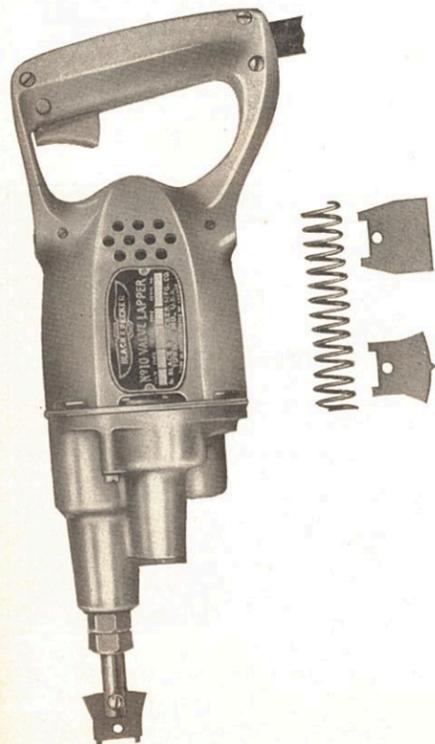
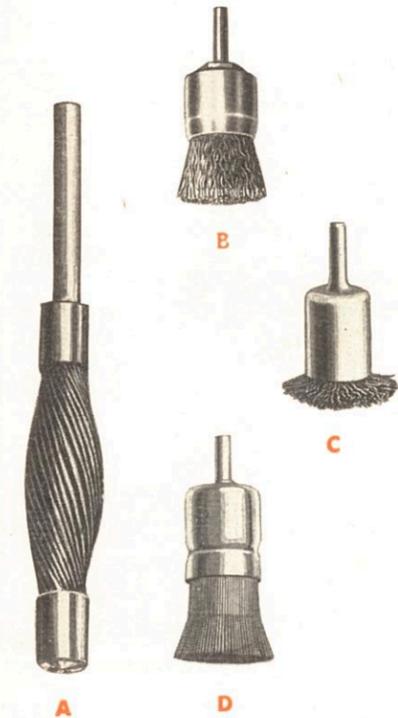
No. 4065 Extension Spindle.....\$2.50

No. 31472 Lift Spring......25

No. 31473 Bit for slotted valves......25

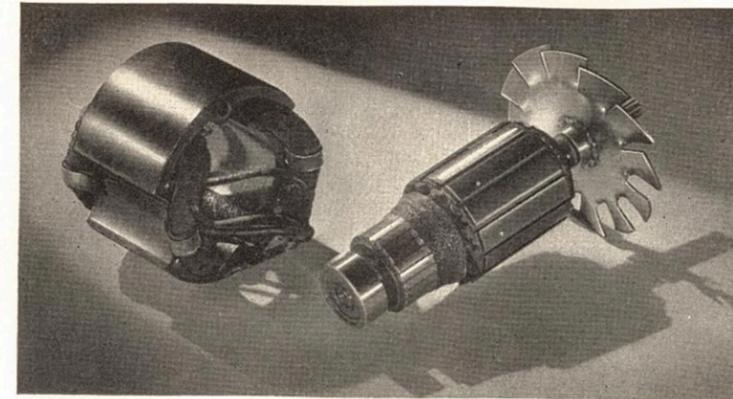
No. 1035 Blank Bit......25

No. 6695 Suction Cup for plain valves......15



## "ELECTRIC TOOL HEADQUARTERS"

Black & Decker



## MOTORS

The motor is the "heart" of any electric tool. It must produce ample power to supply the necessary amount of torque, or turning effort, at the most efficient spindle speed. It must be held to definite weight and size limits, so that the tool it drives is not too bulky or heavy for constant production service.

All motors in Black & Decker Electric Tools (except Bench Grinders) are "universal" motors; i.e., they will operate on either direct current or single-phase alternating current of 25 to 60 cycles of the specified voltage. Every Black & Decker Tool is powered by a Black & Decker motor, designed and built in the B & D plant for the specific tool it is intended to drive. By designing and building our own motors, we can control the specifications to exact limits and you can depend on a reliable source of power that is neither too strong nor too weak; neither too large nor too small; neither too fast nor too slow for the job you want the tool to do. In every Black & Decker Tool, the motor is "tailor-made" to provide the right power, the correct torque at the proper speed. It contains ample material of the highest quality to deliver long service.

### The Black & Decker Guarantee

"Every electric tool has been carefully inspected before shipment, and we guarantee to replace any defect due to faulty material or workmanship. Our obligation assumed under this guarantee is limited to making replacement of any part or parts returned to us at our factory, or to our authorized service stations, transportation charges prepaid, which prove to our satisfaction upon examination to have been defective and which have not been misused or carelessly handled. We reserve the right to decline responsibility where repairs have been made or attempted by others. This guarantee is in lieu of any other liability on our electric tools or parts. None other is authorized."



# "ELECTRIC TOOL HEADQUARTERS"

## FACTORY SERVICE NEAR YOU



**SAN FRANCISCO WAREHOUSE, SALES AND SERVICE BRANCH**

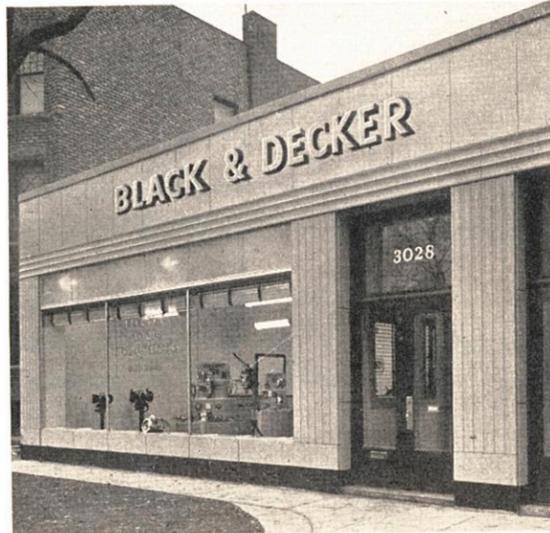
Among owners of quality mechanical products, the natural tendency is to look to "the Factory" when those products eventually show wear and need service attention. And this is as it should be; certainly the manufacturer who built these tools is best qualified to service them. But in most cases, "the Factory" is too far away and there are serious delays and inconveniences in having the tool put in working condition.

Black & Decker has always recognized the importance of "Factory Service" and to assure you prompt, efficient service on all Black & Decker Products, we operate 25 Factory-operated Service Branches conveniently located at strategic points throughout the United States and Canada. These Service Branches are manned by factory-trained personnel, stocked with genuine Black & Decker service and replacements parts and equipped with all necessary machinery to render complete, guaranteed service.

Periodic inspection of your Black & Decker tools will prevent serious damage, minimize costly repairs and increase the productive life of your equipment. When you need "Factory Service" you will find a Black & Decker Service Branch within 24 hours of you, ready to give you every attention you would receive at Towson.

At these modern, well-equipped Factory Branches you will also find a display of Black & Decker products and experienced Sales Representatives who will be glad to help you solve your electric tool problems. Use Black & Decker, through your Distributor, at Towson or at one of our Factory Branches as—

"ELECTRIC TOOL HEADQUARTERS"



**DETROIT BRANCH OFFICE SALES AND SERVICE**



**EFFICIENT FACTORY-TRAINED SERVICE MEN AND COMPLETE STOCKS OF PARTS AT ALL BRANCHES**

# Black & Decker

# SERVICE



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DALLAS 1, TEXAS.....	2613 ROSS AVENUE	PHILADELPHIA 30, PENNSYLVANIA.....	710 NORTH 16TH STREET
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DETROIT 2, MICHIGAN.....	3028 EAST GRAND BOULEVARD	SAN FRANCISCO 3, CALIFORNIA.....	9TH AND BRYANT STREET
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157 Craig St., W., Montreal 1, Quebec, Canada      Winnipeg, Manitoba, Canada

**BLACK & DECKER, Limited**      **BLACK & DECKER (A'asia), PTY., LTD.**      **BLACK & DECKER, INC.**  
Hammondsworth, Middlesex, England      4 Bridge Road, Glebe, Sydney, Australia      Rua Oriente 768, Sao Paulo, Brazil

**THE BLACK & DECKER MFG. CO.**  
"ELECTRICAL TOOL HEADQUARTERS"  
**TOWSON 4, MARYLAND, U. S. A.**