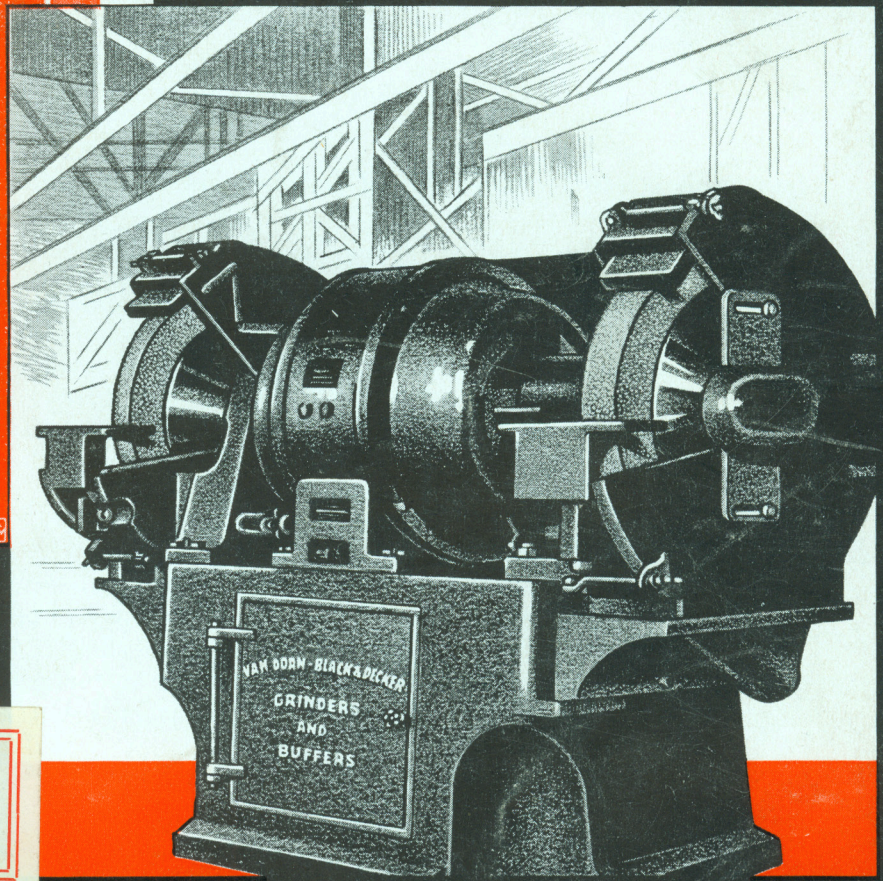


VAN DORN-BLACK & DECKER



HEAVY DUTY GRINDERS AND BUFFERS



**CATALOG
No 9**

READING MACHINE & TOOL CO.
560 NORTH 11TH STREET
READING, PA.

THE VAN DORN ELECTRIC TOOL CO.
THE BLACK & DECKER MFG. CO.
TOWSON, MARYLAND, U. S. A.

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

(Formerly Marschke)

THESE Heavy Duty Electric Grinders and Buffers have earned a splendid reputation for safety, long life and high efficiency due to the design, workmanship and generous use of material making for excess strength and rigidity.

Van Dorn-Black & Decker Heavy Duty Grinders and Buffers are products that have been evolved from the combined engineering knowledge and experience of The Van Dorn Electric Tool Company, The Marschke Manufacturing Company, and The Black & Decker Mfg. Co. For the past twenty years each of these companies has been building quality grinders, and now the outstanding features of the three lines have been combined in this new comprehensive array of Production and Maintenance Grinders and Buffers.



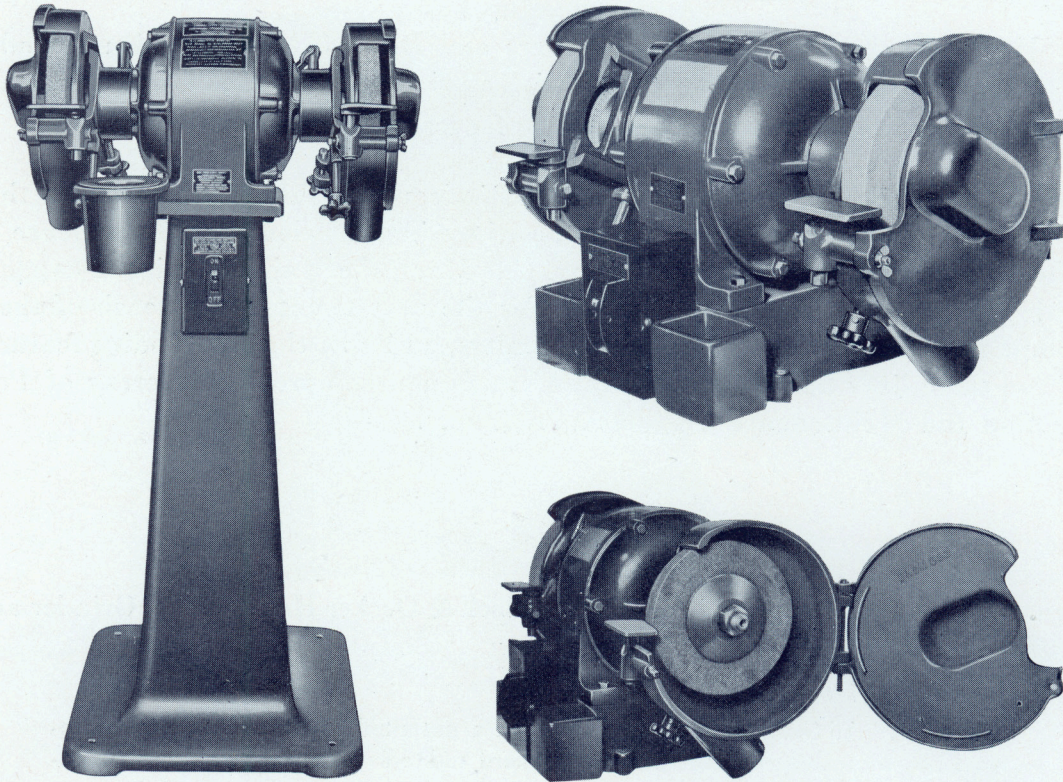
Outstanding features of the Van Dorn - Black & Decker Heavy Duty Grinder and Buffer Line are:

- 1. SAFETY.** All Grinders are provided with a patented spark shield which automatically hugs the grinding wheel as the guard and tool rest are adjusted to compensate for the decreasing diameter of the grinding wheel. The tool rest in each case is mounted on the wheel guard so as to compel the operator to adjust the wheel guard close to the wheel when it wears and this, in turn, keeps the automatic spark shield always hugging the wheel and consequently affords maximum protection.
- 2. ACCESSIBILITY.** Due to the type of construction and method of adjustment of both adjustable and universal type guards, the grinding wheels are just as accessible when worn to small diameters as when they were originally installed. This means increased production and the satisfactory use of grinding wheels until the time that they are discarded or stepped down to smaller machines.
- 3. LONG LIFE.** In the construction of Van Dorn - Black & Decker Heavy Duty Electric Grinders and Buffers, special metals are used for all parts of major importance such as electric steel for wheel guards, extra large ball bearings throughout, cast steel spark shields, high-carbon alloy steel spindles, etc. It is interesting to note that these machines are the heaviest on the market for their rated power and this weight which is built into them repays the owner many times over, in long life due to absence of vibration, maintained alignment of bearings, etc. No shims of any kind are used in the alignment of bearings on these machines, all parts being solid metal to metal, accurately machined.

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

10-INCH BENCH and PEDESTAL GRINDERS—1 H. P.



Safety, long life and economy of operation are built-in qualities of Van Dorn - Black & Decker Heavy Duty Grinders.

MOTOR

Heavy duty type, fully enclosed, capable of 100% momentary overload, insuring adequate power for the hardest jobs. Perfectly balanced—no vibration.

SPINDLE

One-piece, extra heavy alloy steel.

BEARINGS

Heavy duty radial and thrust type ball bearings protected by labyrinth and felt seals. No dust can get in nor grease leakout.

CONTROL

Protected hand control, 3-pole, heavy duty, toggle switch—simple, rugged, fool-proof.

GUARDS AND TOOL RESTS

Universal and adjustable iron guards are mounted on machined V-Ways pivoted on spindle housing. The guard openings may be set to grind at any point on the circumference of the wheel.

Tool rests are attached to wheel guards so that, as the grinder operator adjusts tool rests, the wheel guards are automatically set to a safe position. This results in guard always hugging wheel closely.

BASE

Rugged and solid, one piece cast-iron, with large area base to adequately support the unit.

WATER POTS

Cast iron, furnished at no additional charge.

Grinding wheels are not furnished

Type	Code	H. P.	Wheel Size	Speed R. P. M.	Dia. Spindle	Spindle Length	Size Base	Height	Net Weight Lbs.	Can be furnished for the following currents:
Bench	DOB	1	10x1½	1800	⅞	24"	11"x12"	9½"	225	Single Phase, 110 or 220 Volts 25, 30, 50 or 60 Cycles
Pedestal	DOP	1	10x1½	1800	⅞	24"	18"x20"	39"	375	2 or 3 Phase, 220, 440 or 550 Volts 25, 30, 40, 50 or 60 Cycles 115 or 230 Volts D.C.

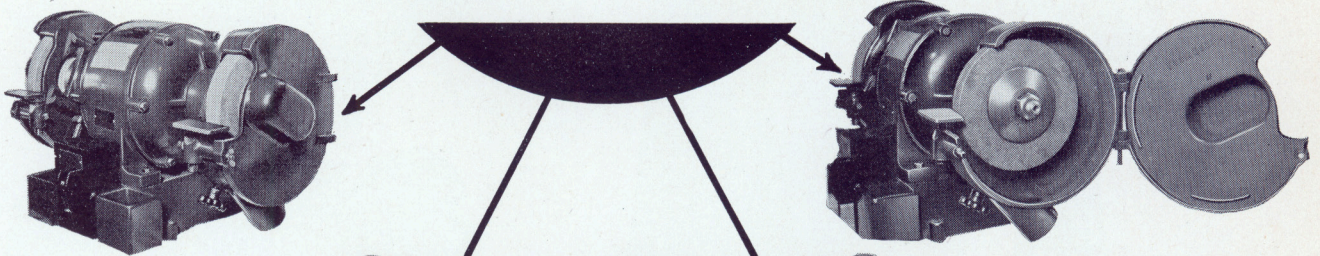
When ordering give code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

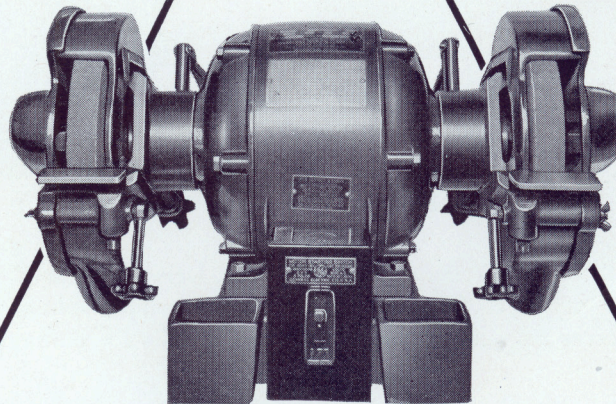
The Basic Safety Principle of These Grinders is
AUTOMATIC ADJUSTMENT of wheel guards to wheel wear

Convenient, No Tools Required

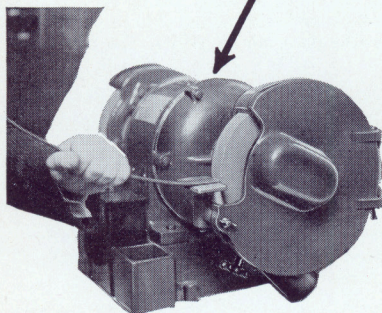


While the above illustration shows both grinding wheels apparently the same size, actually the one on the right is worn 2" smaller than the other, demonstrating how Black & Decker Guards hug wheel surfaces until wheels are used up.

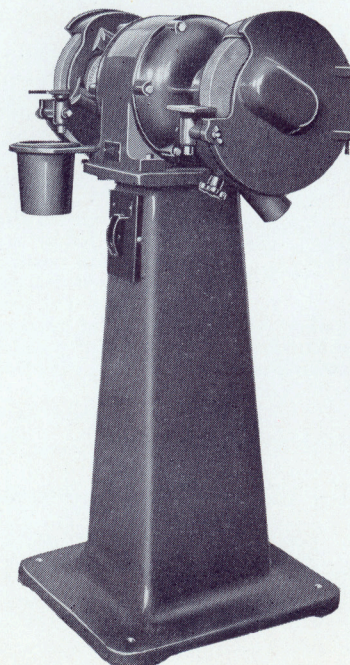
Guard hugs wheel closely until wheel is worn to flanges. Note flanged and hinged side cover and exhaust port—features not usually found on this size and price machine.



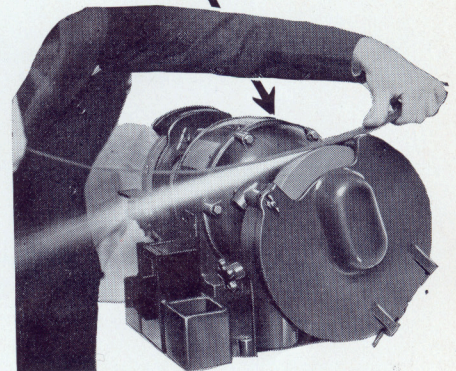
1 H. P. 10" BENCH GRINDER



NO INJURIES
 Sparks and chips are all safely carried away from the operator. There is no need for any extra park shields on these Grinders.



1 H. P. 10" PEDESTAL GRINDER

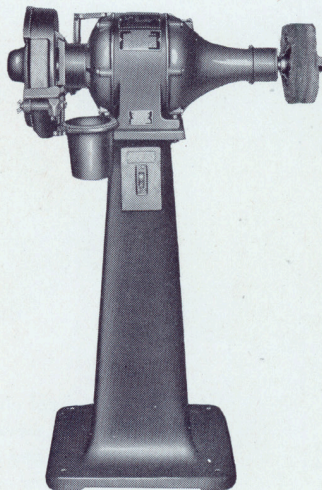


Guard is pivoted on spindle housing and the opening may be brought to any desired position on the periphery of the wheel.

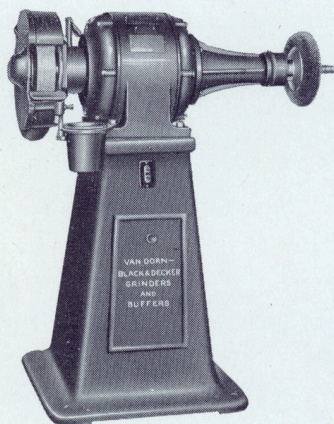
VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

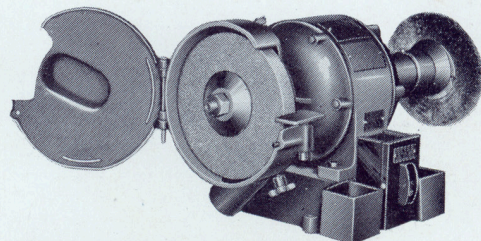
Combination Grinders—Buffers



10"—1 H. P. Combination Pedestal Type



12"—3 H. P. Combination Pedestal Type



10"—1 H. P. Combination Bench Type

Exceptionally useful tools for general all round work. Grinding wheels are completely protected with Heavy Duty Type. Universal guards. The extended spindle on right hand side of these machines gives adequate clearance around spindle for buffing, wire wheel brushing, or polishing.

MOTOR

Totally enclosed, dirt and dust proof, heavy duty type capable of 100% momentary overloads. Motor has quickly removable windings and welded type rotor. Completely balanced.

SPINDLE

Heavy alloy steel, one-piece construction designed for strength and rigidity.

BEARINGS

Spindle is mounted on 3 deep-groove radial and thrust type ball bearings with self-contained grease seals.

CONTROL

One and two H. P. machines have heavy duty manual control switch. Three H. P. units are equipped with Push-

button control, magnetic type starter with overload protection and under-voltage release. All starters are mounted within pedestal for protection.

GUARDS

Are of one-piece construction, held securely on collars by means of machined V-ways. Guards are adjustable to wheel wear, giving protection and safety at all times. No tools required.

TOOL RESTS

Mounted directly on guard so that as tool rest is moved in, to follow up wheel wear, guard automatically assumes safest position.

BASE

Solid casting with three-point suspension, designed for rigidity and ruggedness. Can be placed solidly on any surface with freedom from strains and vibrations.

Grinding wheels are not furnished

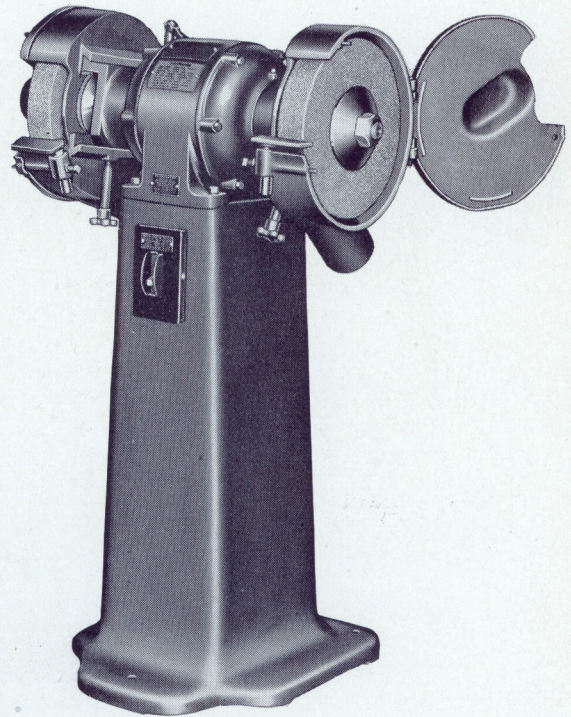
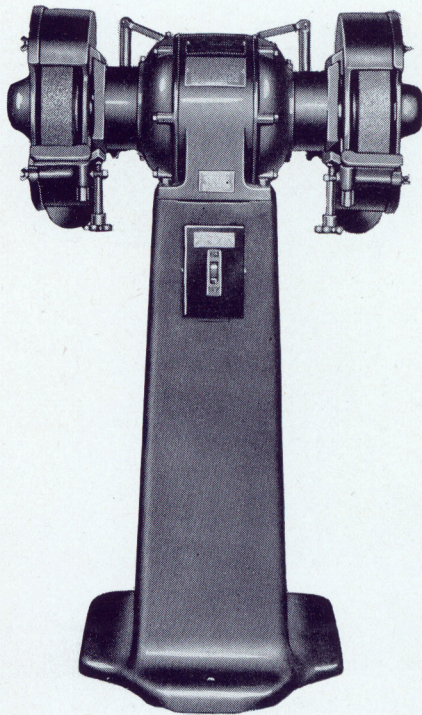
Code	Type	H.P.	Max. Wheel Size	Max. Buff Width	Speed R.P.M	Spindle Dia.	Spindle Length	Base Size	Height	Net Weight	CURRENT		
											Volts	Phase	Cycles
DOCB	Bench	1	10" x 1 1/2"	2"	1800	7/8"	30"	11" x 12"	9 1/2"	225	110 or 220 220, 440 or 550 115 or 230	1 2 or 3 D. C.	25, 30, 50 or 60 25, 30, 50 or 60 D. C.
DOC	Pedestal	1	10" x 1 1/2"	2"	1800	7/8"	30"	18" x 20"	39"	375	220, 440 or 550	2 or 3	50 or 60
EQCB	Bench	2	12" x 2"	3"	1800	1 1/4"	32"	14" x 15"	12"	375			
EQC	Pedestal	2	12" x 2"	3"	1800	1 1/4"	32"	19" x 21"	39"	500	220, 440 or 550	2 or 3	50 or 60
FRC	Pedestal	3	14" x 3"	4"	1800	1 1/4"	34"	21" x 23"	34"	750			

When ordering give code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

12-Inch 2 H. P. Grinders



A rugged, general purpose, heavy duty grinder designed for efficient service, long life, and economy of operation.

MOTOR

Totally enclosed, heavy duty type capable of 100% momentary overloads. Accurately balanced to prevent vibration. Has quickly removable windings, and welded type rotor.

SPINDLE

Extra heavy, alloy steel one-piece construction. Rigid and rugged.

BEARINGS

Heavy duty, deep-groove radial and thrust type ball bearings. Grease lubricated and protected by both felt and metal-labyrinth type seals.

CONTROL

Positive motor control switch which opens all phases. Switch operating lever protected by steel guards.

GUARDS

The one-piece, cast iron guards with hinged and flanged enclosing covers are held securely on collars by means of machined V-ways. Guards are of the universal type with exhaust opening, and are adjustable to follow up wheel wear. No tools required to make adjustments. Steel guards can be furnished at small additional cost.

TOOL RESTS

Mounted directly on guard so that as tool rest is moved to follow up wheel wear, guards automatically assume safest position.

BASE

Solid casting with three-point suspension which makes it possible to mount grinder or any surface rigidly and with freedom from vibration.

WATER POT

Standard Equipment.

Grinding Wheels are not furnished

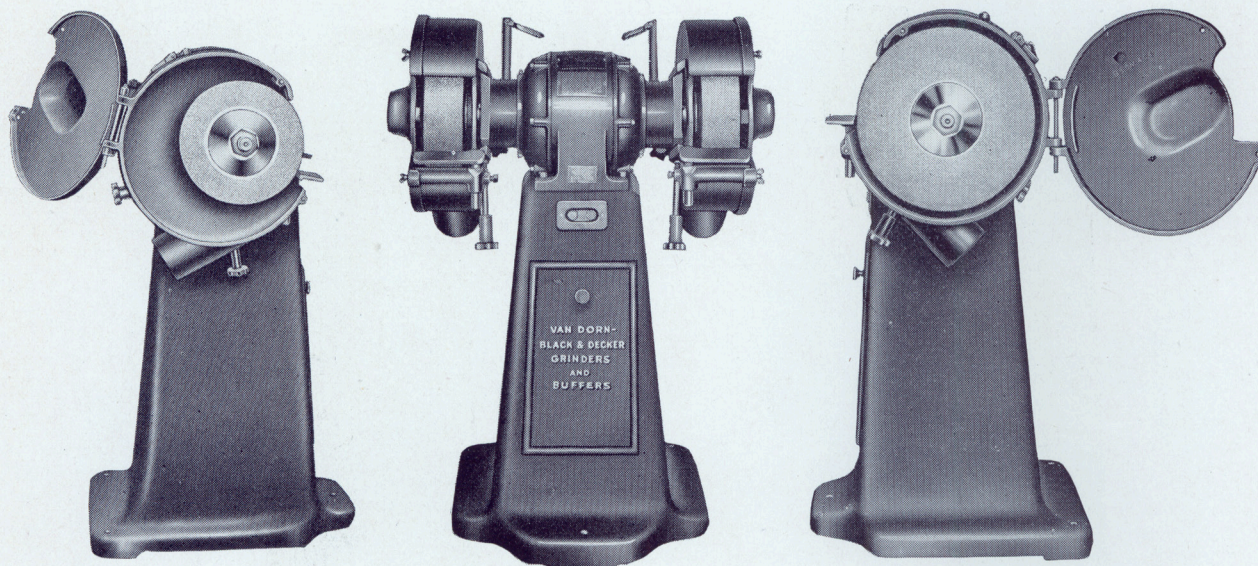
Code	H. P.	Maximum Wheel Size	Speed R. P. M.	Spindle Diameter	Spindle Length	Base Size	Height	Net Weight	Current
EQP	2	12" x 2"	1800	1 1/4"	27"	19" x 21"	39"	500	220, 440 or 550 volts, 2 or 3 phase 50 or 60 cycles
EQP	2	12" x 2"	1800	1 1/4"	27"	19" x 21"	39"	500	

When ordering give code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

12" and 14"—3-HP. PEDESTAL GRINDERS



These Heavy Duty Grinders possess safety features above the requirements of State and Federal regulations. Safety and quiet efficiency are the basic principles of Van Dorn-Black & Decker design.

MOTOR

Heavy duty type, totally enclosed, dirt and dust proof, capable of 100% momentary overloads. Quickly removable field windings and solid welded type motor. Completely balanced to prevent vibration.

SPINDLE

Heavy alloy steel, one-piece construction, extra large and rigid.

BEARINGS

Deep-groove radial and thrust type ball bearings, grease lubricated and protected by both felt and labyrinth type seals.

CONTROL

Push-button control, magnetic type starter with overload protection and under voltage release. Starter mounted within base for protection.

GUARDS

One-piece construction held securely on collars by means of

machined V-ways. Guards adjustable to wheel wear, giving perfect safety and protection to the operator's eyes at all wheel sizes. All adjustments are made without tools. Electric Steel Guards are standard on 14" size grinders, and iron guards on 12" size. At slight additional cost, 12" grinders can be furnished with electric steel guards.

WORK RESTS

Adjustable without tools. Mounted directly on guard in such a manner that spark shield and chip breaker lip hugs the wheel at same distance from wheel as work rest.

BASE

Solid casting, heavy and rugged, with three-point suspension enabling it to be mounted on any surface and remain rigid and vibrationless without strains.

WATER POTS

Standard Equipment.

Grinding Wheels are not furnished

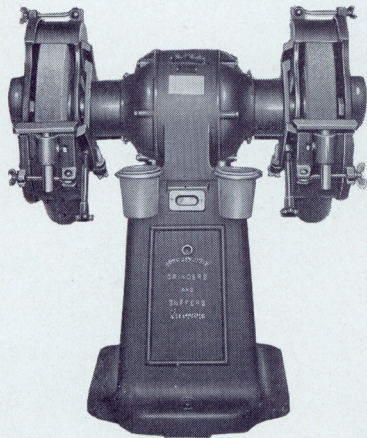
Code	H. P.	Max. Wheel Size	Speed R.P.M.	Spindle Dia. Inches	Spindle Length Inches	Base Size	Height	Net Weight Lbs.	Current *
FQP	3	12" x 2"	1800	1 1/4"	29 3/4"	21" x 23"	34"	700	220, 440 or 550 Volts 2 or 3 Phase 50 or 60 Cycles
FRP	3	14" x 3"	1800	1 1/4"	31 1/2"	21" x 23"	34"	725	

*Other currents can be supplied. Prices furnished on request.

When ordering, give code letters, phase and cycles.

VAN DORN - BLACK & DECKER HEAVY DUTY GRINDERS

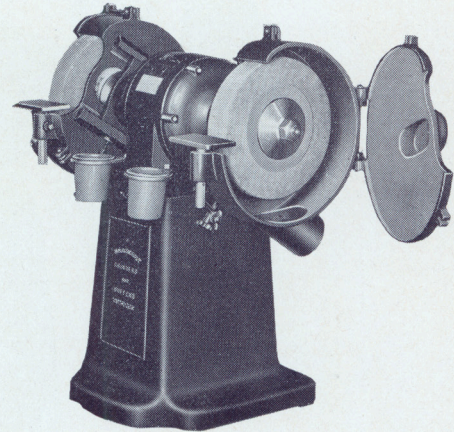
Narrow Type Universal Guard Grinder



16" x 3"
WHEEL

18" x 3"
WHEEL

20" x 3"
WHEEL



Years of trouble-free service are engineered into Van Dorn-Black & Decker Heavy Duty Grinders. Double-row, deep-groove type ball bearings are used throughout. These bearings are protected from grease leakage or dirt penetration with both felt and metal-labyrinth seals.

MOTOR

Heavy duty type, totally enclosed, dirt and dust proof, capable of 100% momentary overloads and balanced to prevent vibration. Internal fans keep motor temperatures to AIEE standards. Motor has quickly removable windings and welded type rotor.

SPINDLE

Heavy alloy steel, one-piece construction, extra large and rigid.

BEARINGS

Double row Radial and Thrust type ball bearings, grease lubricated and protected by both felt and metal-labyrinth seals.

CONTROL

Push button control, magnetic type starter with overload protection and under voltage release. Starter mounted within base for protection.

GUARDS

Electric steel, one-piece, held securely on collars by means of machined V-ways. Guards adjustable to wheel wear giving perfect safety and protection to the operator at all wheel sizes. Adjustable without tools.

TOOL REST

Mounted directly on guard, thus insuring proper position of spark shield and chip breaker, because as tool rest is moved in, the guard automatically assumes safest position.

BASE

Solid casting, heavy and rugged, with three-point suspension, enabling it to be placed on any surface and remain rigid and vibrationless without strains.

WATER POTS

Standard Equipment.

Grinding Wheels are not Furnished

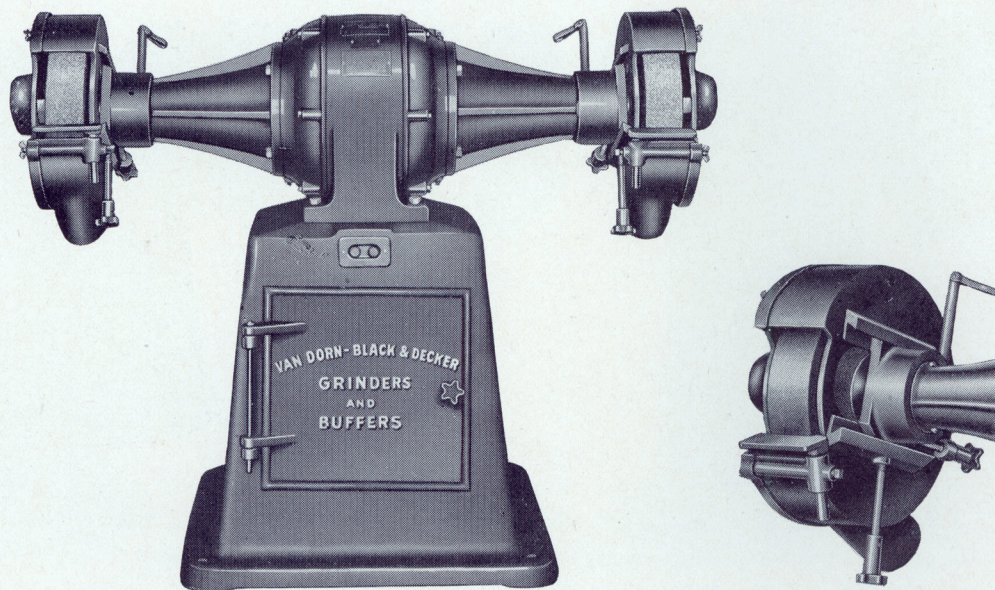
Code	H. P.	Maximum Wheel Size	Speed RPM	Dia. Spindle	Spindle Length	Size Base	Height	Net Weight Lbs.	Cycles	Current
GTN	5	16" x 3"	1500	1½"	39"	25" x 23"	34"	1100	25	{ 220, 440 or 550 volts 2 or 3 phase
GTN	5	16" x 3"	1500	1½"	39"	25" x 23"	34"	1100	50	
GXN	5	18" x 3"	1200	1½"	39"	25" x 23"	34"	1100	60	
GXN	5	18" x 3"	1000	1½"	39"	25" x 23"	34"	1100	50	
GXN	5	18" x 3"	1200	1½"	39"	25" x 23"	34"	1100	40	
GYN	5	20" x 3"	1200	1½"	39"	25" x 23"	34"	1100	60	
*GYNH	5	20" x 3"	1800	1½"	39"	25" x 23"	34"	1175	60	

* Specify diameter of center hole of wheel to be used.

When ordering, give code letters, voltage, phase and cycles.

VAN DORN-BLACK & DECKER HEAVY DUTY GRINDERS

10", 12" and 14" WIDE TYPE GRINDERS—1 to 5 HP.



These wide type Grinders fit efficiently into production lines, as auxiliary units. They efficiently use up stub wheels from larger machines and are indispensable for grinding bulky and irregular shapes.

MOTOR

Totally enclosed, dirt and dust proof, heavy duty type capable of 100% momentary overloads. All rotating parts are accurately balanced to prevent vibration. Motor has quickly removable windings and welded type rotor.

SPINDLE

Heavy alloy steel, one piece construction, extra large and rigid.

BEARINGS

Four deep groove combination radial and thrust type ball bearings are mounted with approximately equal spacing along the shaft to prevent shaft whip, and insure true running. Bearings are protected from dust and grit by self-contained, built-in seals.

CONTROL

Manual type control is used on one H. P. units. The larger grinders are equipped with Push-button control, and mag-

netic type starter with overload protection and under-voltage release. Starters are mounted within the grinder pedestal for protection.

GUARD

Universal, exhaust type of electric steel. Made in one piece and held securely on collars by means of machined V-ways which are integral parts of guards. Adjustment is made instantly and without tools by means of the hand operated screws on collars and V-ways.

WORK RESTS

Work rests are mounted directly on wheel guards, so that as work rest is moved to follow wheel wear, the guard automatically assumes safest position.

BASE

Solid casting, rigid and rugged, especially designed for perfect support of grinder head at proper height without vibration or strain.

Grinding Wheels are not furnished

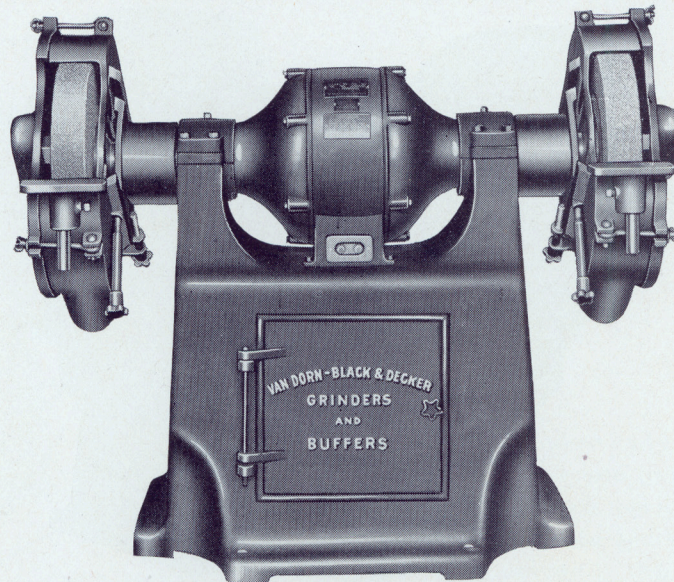
Code	H. P.	Max. Wheel Size	Speed R.P.M.	Dia. Spindle	Spindle Length	Base Size	Height	Net Weight Lbs.	Current
DOW	1	10" x 1½"	1800	7/8"	36"	18" x 20"	39"	425	220, 440 or 550 volts 2 and 3 phase 25, 30, 50 and 60 cycles
FWW	3	12" x 2"	1800	1¼"	48"	21" x 23"	34"	725	
FRW	3	14" x 3"	1800	1¼"	50"	21" x 23"	34"	775	
GRW	5	14" x 3"	1800	1½"	56"	23" x 25"	34"	1200	

When ordering, give code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

18' and 20'' UNIVERSAL GUARD GRINDER



An extra heavy duty, medium sized production grinder of a very versatile type. In this grinder, great care has been taken to give maximum clearance on all sides of the grinding wheels, so that long or irregular shaped pieces may be ground with ease.

MOTOR

Totally enclosed, heavy-duty type capable of 100% momentary overloads. Internal fans are used to keep motor temperatures within limits prescribed by AIEE standards. All rotating parts are dynamically and statically balanced to prevent vibration. Motor has quickly removable windings and welded type rotor.

SPINDLE

Extra heavy, alloy steel, one piece construction. Completely machined and provided with square type threads. Correctly mounted to prevent shaft-whip.

BEARINGS

Ball bearings are located on each side of the motor and at the extreme ends of the shaft, and are fitted in special one-piece housings. This means that the spindle is supported by four bearings, in accurate alignment, giving long life, lack of vibration and easy running. All bearings are protected by frictionless metal-labyrinth seals with double throw washers, which prevent the entry of dirt and grit and keep grease from working out.

CONTROL

Equipped with Push Button control and magnetic type starter, complete, with overload protection and under voltage release. Starter is mounted inside of base where it is easily accessible, but protected. Direct current units are equipped with the necessary protective device to prevent over-speeding in case of field failure.

GUARDS

Universal, exhaust type of electric steel. Made in one piece and held securely on collars by means of machined V-ways which are integral parts of guards. Adjustment is made instantly and without tools by means of the hand operated screws on collars and V-ways.

WORK RESTS

Work rests are mounted directly on wheel guards, so that as work rest is moved to follow wheel wear, the guard automatically assumes the safest position.

BASE

A solid casting designed for rigidity and ruggedness. It is accurately machined to perfectly support the grinder head.

Grinding Wheels are not furnished

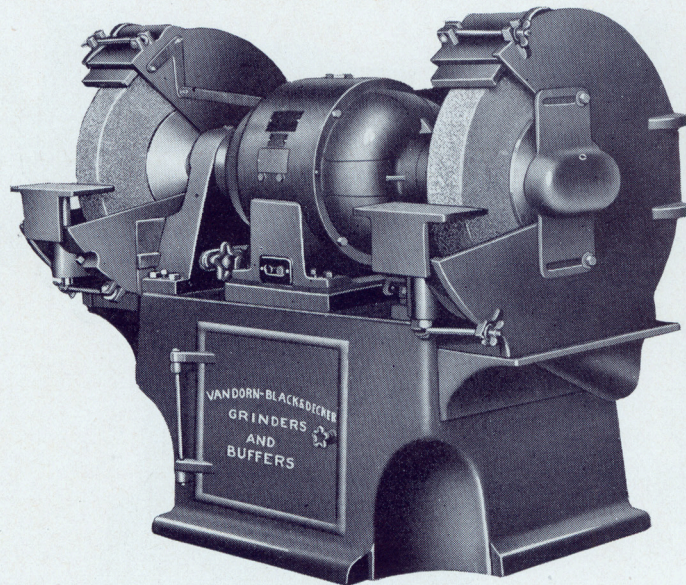
Code	H. P.	Max. Wheel Size	Speed R. P. M.	Dia. Spindle	Spindle Length	Base Size	Height	Net Weight Lbs.	Current
GXU	5	18" x 3"	1200	1 3/4"	57"	40" x 30 1/2"	34"	1625	220, 440 or 550 Volts 2 or 3 phase 25, 30, 50 or 60 cycles or 230 volts D.C.
*GXUH	5	18" x 3"	1800	1 3/4"	57"	40" x 30 1/2"	34"	1650	
GYU	5	20" x 3"	1200	1 3/4"	57"	40" x 30 1/2"	34"	1675	
*GYUH	5	20" x 3"	1800	1 3/4"	57"	40" x 30 1/2"	34"	1700	
IYU	7 1/2	20" x 3"	1200	1 3/4"	57"	40" x 30 1/2"	34"	1750	
*IYUH	7 1/2	20" x 3"	1800	1 3/4"	57"	40" x 30 1/2"	34"	1775	

* Specify diameter of center hole of wheel to be used.

When ordering give code letters, voltage, phase and cycles

VAN DORN-BLACK & DECKER HEAVY DUTY GRINDERS

“Constant Cutting Speed” Stand Grinders



These grinders operate at constant cutting speeds throughout the life of the grinding wheels. This maintaining of proper wheel speed assures quick metal removal, with less effort on the part of the operator, and greatly lengthens the life of the wheels.

MOTOR

Totally enclosed, dirt and dust proof, extra-heavy duty type capable of 100% momentary overloads. Armature is quill mounted on shaft, and all rotating parts are dynamically and statically balanced to prevent vibration.

SPINDLE

Heavy alloy steel, one-piece construction, extra large and rigid. Square threads are used to give greater strength and longer life.

BEARINGS

Four combination radial and thrust type ball bearings are spaced equally along the shaft preventing shaft-whip, and insuring true running. The bearings are grease lubricated and protected by all-metal, frictionless labyrinth seals.

CONTROL

Push-button control with magnetic type starter and continuous duty, rugged starting resistances. Starter has 30 second positive starting relays, overload, under-voltage and field protection relays. Enclosed in metal box, starter and relays are easily accessible for wiring and inspection, yet completely protected against dirt and dust.

SPEED CONTROL

These grinders maintain a constant cutting speed throughout the life of the wheels. The constant cutting speed is maintained by means of a rheostat link connected to the guard. As guard is moved forward, to follow up wheel wear, speed of motor is automatically advanced.

GUARDS

Electric steel, one-piece construction with flanged and hinged covers. Guard adjusts horizontally on table, is tongue and groove fitted to base and is locked by means of hand wheel. Provided with a patented spark shield which automatically hugs grinding wheel as the guard and work rest are adjusted to compensate for decreasing diameter of the grinding wheel. The work rest is mounted on wheel guard so as to compel the operator to adjust the guard close to the wheel when it wears, and this, in turn, keeps the automatic spark shield always hugging the wheel, affording a maximum protection from chips and wheel particles.

BASE

A solid casting designed for extreme rigidity and ruggedness. Corners of base are relieved providing greater comfort for the operator.

Grinding wheels are not furnished

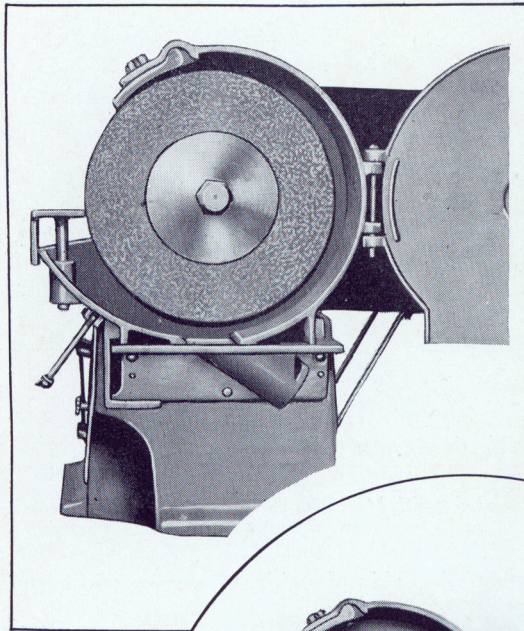
Code	H. P.	Maximum Wheel Size	Constant Cutting Speed Under Load S. F. P. M.	Spindle Diameter	Spindle Length	Size Base	Height	Weight Net	Current
JZAV	10	24" x 4"	6000	2 1/4"	59"	42 1/4" x 32"	34"	2800	230 or 250 volts, D. C.
JZAVH	10	24" x 4"	9000	*	59"	42 1/4" x 32"	34"	2800	
KZAV	15	24" x 4"	6000	2 1/4"	59"	42 1/4" x 32"	34"	3000	
KZAVH	15	24" x 4"	9000	*	59"	42 1/4" x 32"	34"	3000	
LZAVH	20	24" x 4"	9000	*	59"	42 1/4" x 32"	34"	3300	
LGZAVH	25	24" x 4"	9000	*	59"	42 1/4" x 32"	34"	3500	

*Unless otherwise noted high speed flanges with 12" hole centers will be furnished.

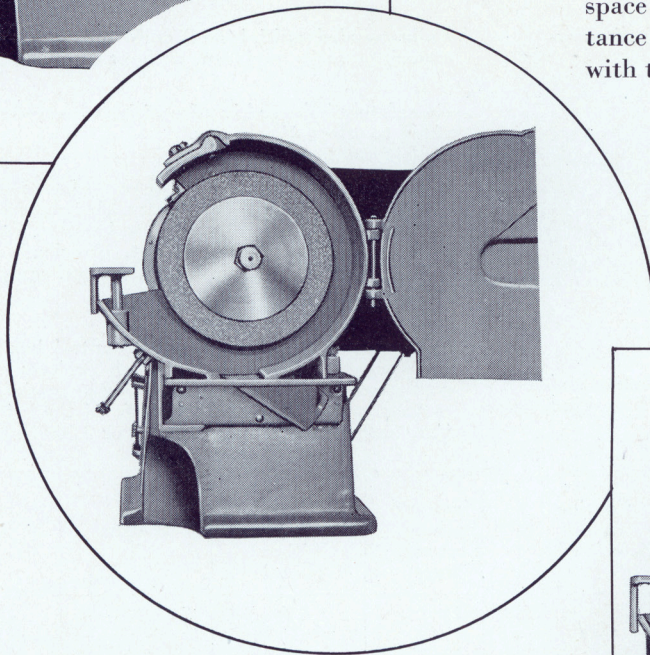
When ordering give code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER HEAVY DUTY GRINDERS

"Constant Cutting Speed" Stand Grinders



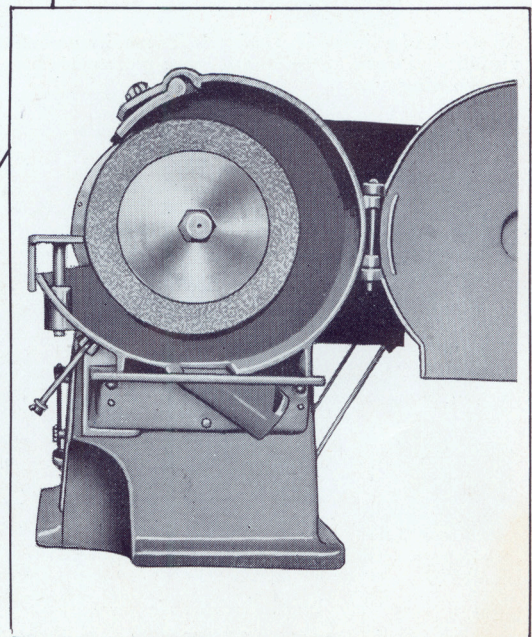
Grinder with full size wheel in place. Illustration clearly shows how tool rest and automatic spark-lip are mounted on guard. This construction makes it impossible for operator to adjust tool rest, to follow up wheel wear, without moving guard into safest position, and in so doing, the spark-lip is automatically adjusted through a link connection to the base.



Grinder with wheel worn and before adjustment has been made to bring tool rest into proper position. Observe the space between tool rest and wheel, also the distance between spark-lip and wheel. Grinding with tool rest in this position would be difficult and dangerous because there would be a tendency for wheel to pull work into space between tool rest and wheel. Operator will naturally make proper adjustment of tool rest, and by so doing, automatically bring guard and spark lip to safest position.

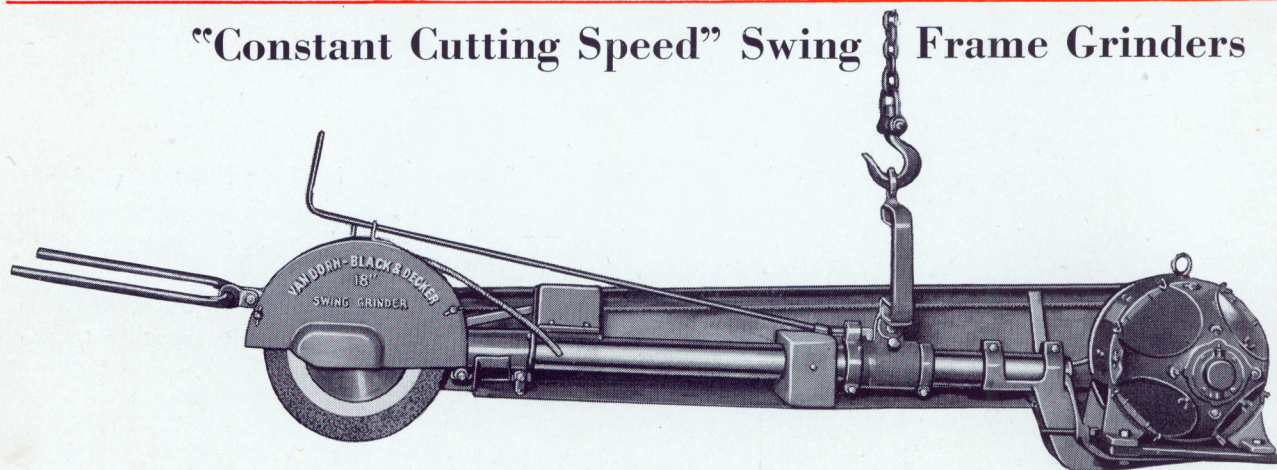
Showing position of tool rest after correct adjustment has been made to follow up wheel wear. It is of particular interest to note, that in moving tool rest in to follow up wheel wear, spark lip has automatically assumed the safest operating position, hugging wheel at same distance as tool rest.

Your attention is also directed to the exhaust opening. As the position of guard does not affect the exhaust opening, they can be connected to a permanent exhaust system easily.



VAN DORN - BLACK & DECKER HEAVY DUTY GRINDERS

"Constant Cutting Speed" Swing Frame Grinders



Van Dorn-Black & Decker Heavy Duty Swing Grinders have the maximum amount of conveniences. Operators have fullest vision at all times—handles and guards are easily adjusted without use of tools. Belts and wheels may be changed quickly and with no trouble.

MOTOR

Direct current, ball bearing throughout, capable of carrying 100% momentary overloads.

FRAME

Extra heavy, all steel, rigid and rugged.

SPINDLE

Mounted in grinder head, on deep groove radial and thrust type ball bearings, provided with full metal-labyrinth frictionless dust seals. Square threads used for maximum ruggedness. Wheel overhung for quick and convenient change.

GUARD

All steel and adjustable. Designed for maximum safety and visibility of work. Steel guard cover removable by taking off two wing nuts.

DRIVE

Fully guarded multiple endless "V" belt with ample overload capacity—easily replaced, without dismantling grinder.

BALANCE

Completely balanced in all positions—counter-weight provided to offset wheel wear.

CONTROL

Magnetic type, remote control box, wired permanently to grinder by means of 20 feet of flexible rubber cable. Starter button mounted on guard close to handles. Extra length of cable supplied at additional cost. Overload, undervoltage and field protective relays are standard equipment on the control panel.

SPEED

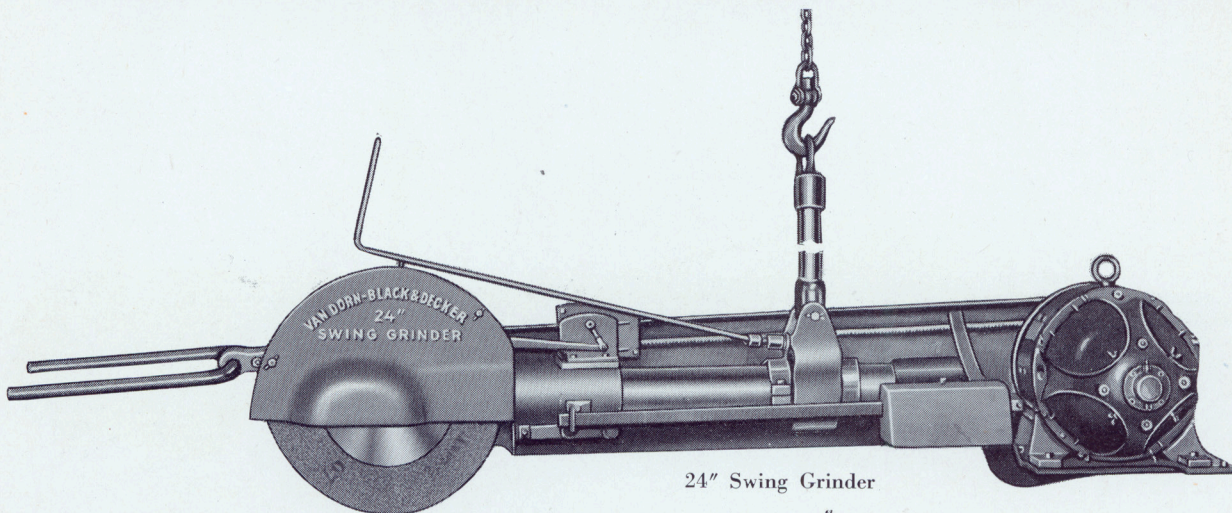
Self contained, fool-proof speed control box mounted on beam and link connected to guard. Position of guard governs speed. Grinders are furnished to maintain constant cutting speed throughout the life of the grinding wheel. Can be furnished for either 6,000 or 9,000 S. F. P. M.

Code	H. P.	Max. Wheel Diameter and Width in Inches	Cutting Speed S. F. P. M.	Diameter Spindle Between Flanges	Overall Length Without Handle	Net Weight Lbs.	Current
GTSV	5	16 x 3	6000 or 9000	1½"	8 ft.	800	220, 230, or 250 Volts, D. C. as specified
ITSV	7½	16 x 3	6000 or 6000	1½"	8 ft.	850	
IXSV	7½	18 x 3	6000 or 9000	1½"	8 ft.	875	
JXSV	10	18 x 3	6000 or 9000	1½"	8 ft.	925	
JYSV	10	20 x 3	6000 or 9000	2¼"	9 ft.	1500	
KYSV	15	20 x 3	6000 or 9000	2¼"	9 ft.	1700	
JZSV	10	24 x 3	6000 or 9000	2¼"	9 ft.	1700	
KZSV	15	24 x 3	6000 or 9000	2¼"	9 ft.	1900	

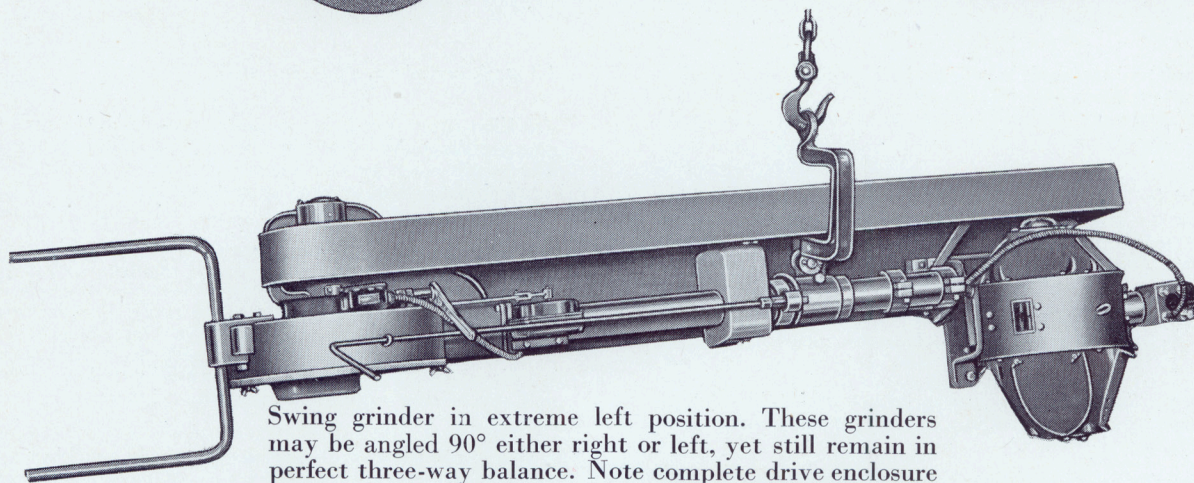
(Code letters shown are for 6000 S. F. P. M. Grinders. For 9000 S. F. P. M. Grinders, add H to Code Letters.)
When ordering, give code letters and voltage. For 9000 SFPM Grinders give diameter of center hole of wheel to be used.
Grinding wheels not furnished.

VAN DORN - BLACK & DECKER

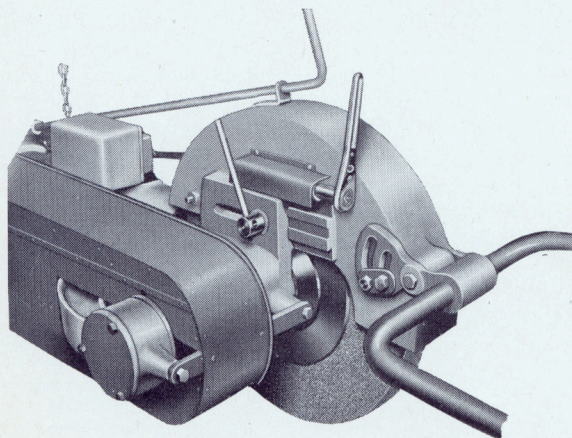
HEAVY DUTY GRINDERS



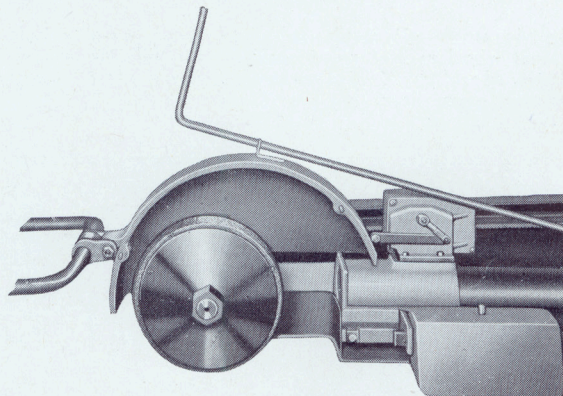
24" Swing Grinder



Swing grinder in extreme left position. These grinders may be angled 90° either right or left, yet still remain in perfect three-way balance. Note complete drive enclosure and steel guard under grinder protecting working parts from sparks, dirt and dust.



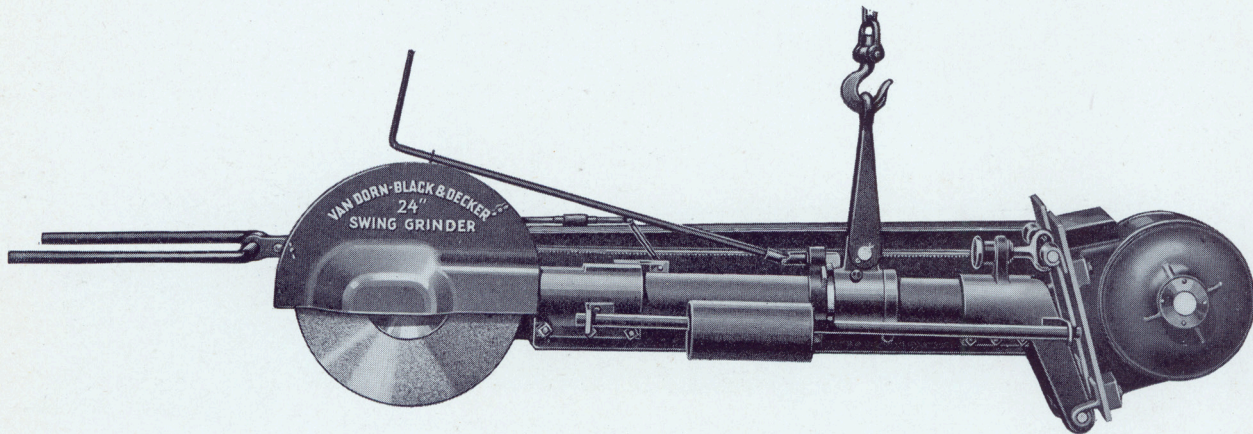
Showing convenience and accessibility of controls as well as completely guarded "V" belt drive. Maximum visibility is obtained, another feature of these Swing Grinders.



Grinder with guard cover removed. Guard may be adjusted to safest position as wheel wears, obtaining maximum safety with visibility throughout the life of the wheel. Note that the rheostat is link connected to wheel guard. As guard is moved forward, speed of motor is automatically advanced, thus maintaining constant cutting speed. Counterweight is provided to maintain balance, as wheel wears.

VAN DORN - BLACK & DECKER HEAVY DUTY GRINDERS

A. C. Multiple Speed Swing Grinders



MOTOR

Completely enclosed. Windings, ball bearings and all other important parts perfectly protected from sparks, dirt and dust. Capable of 100% momentary overloads without injury.

DRIVE

Multiple V Belt drive is used to transmit the power from motor to grinding spindle. Ample belt capacity insures long belt life. Belts can be changed quickly without disassembling grinder.

GRINDING HEAD

All steel, very rigid and rugged. This member carries the spindle, spindle bearings and adjustable guard.

SPINDLE

Heavy alloy steel, one piece, short and stiff. Square threads machined on spindle to better stand abuse.

BEARINGS

Unusually heavy, double row ball bearings protected from dirt and dust by double labyrinth, all-metal, frictionless seals. Grease lubricated.

GUARD

Electric steel, adjustable to wheel wear, equally safe against wheel explosions or breakage on full size or stub wheels. Machined V ways make Grinding head and guard practically one piece.

FRAME

All steel, one piece, short and stiff.

BALANCE

Precision three way balance grinder to be used in any position without strain on the part of the operator. The whole machine may be swiveled to any angle while running and locked in any degree of position.

SPEED CHANGES

Safe, convenient, and compulsory. The adjustable guard is the safety and compulsory speed change. Unless the guard has moved back the proper distance toward the worn wheel no speed change may be made. Coupled with this is an arrangement preventing the operator from failing to make the speed changes. Along with these advantages is a visual device incorporated in the steel guard cover that aids supervision without stopping the grinder.

SUPERVISION

A glance will show what size wheel is on the machine.

CONTROL

Push button control of magnetic starter with overload and undervoltage protection. Push button is mounted on grinder head close to the operator. Magnetic starter is wired to the motor through 20' of rubber covered flexible cable. Starter box can be mounted on any nearby post or wall for ease of inspection and freedom from troubles caused by sparks or grinding dust.

Grinding wheels are not furnished

Code	H. P.	Max. Size Wheel	Primary Cutting Speeds	No. Speeds	Dia. Spindle Between Flanges	Wheel Arbor Hole Size*	Length C/L Motor C/L Wheel	Length Overall Without Handle	Net Weight Pounds	Current
FQS	3	12 x 2 1/2	6000	1	1 1/4"	1 1/4"	4 1/2'	5 1/2'	375	220, 440 or 550 volts, 2 or 3 phase, 25, 30, 40, 50 or 60 cycles
GTSA	5	16 x 3	6000	3	1 3/4"	1 3/4"	5'	6 3/4'	700	
ITSHA	7 1/2	16 x 3	9000	3	1 3/4"	6"	5'	6 3/4'	750	
IXSA	7 1/2	18 x 3	6000	3	1 3/4"	1 3/4"	5'	6 3/4'	775	
JXSHA	10	18 x 3	9000	3	1 3/4"	8"	5'	6 3/4'	900	
JYSA	10	20 x 3	6000	3	2 1/4"	2 1/4"	6 1/4'	8'	1300	
KYSHA	15	20 x 3	9000	3	2 1/4"	10"	6 1/4'	8'	1350	
KZSHA	10	24 x 3	6000	3	2 1/4"	2 1/4"	6 1/4'	8'	1350	
KZSHA	15	24 x 3	9000	3	2 1/4"	12"	6 1/4'	8'	1400	

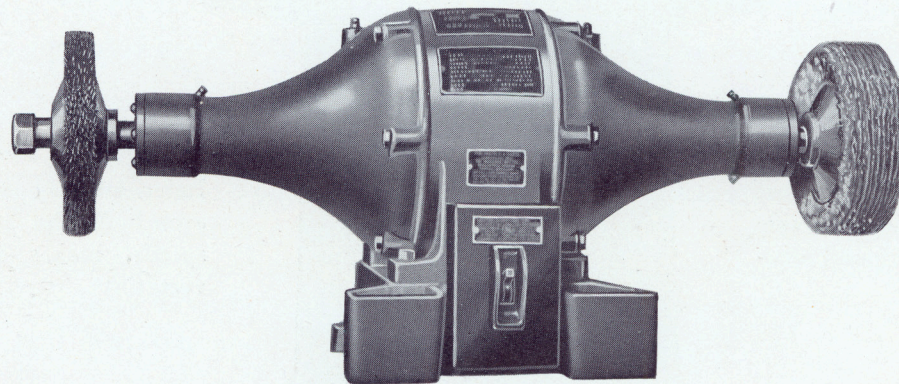
* U. S. Standards as shown furnished unless otherwise ordered.

When ordering give code letters, voltage, phase and cycles

VAN DORN-BLACK & DECKER

HEAVY DUTY GRINDERS

Heavy Duty Direct Drive Buffers—1 to 15 H. P.



MOTOR

Extra heavy duty, totally enclosed to protect windings from dirt and dust. Capable of 100% momentary overloads, insuring ample reserve capacity for the hardest job. Perfectly balanced—no vibration.

SPINDLE

One piece extra heavy alloy steel. The larger sizes are provided with square threads, the smaller sizes with flat top threads for ruggedness and quick wheel change. All buffers are provided with a spindle lock for holding spindle when changing wheels.

BEARINGS

Four heavy duty, deep groove, radial and thrust-type ball bearings are accurately mounted along the shaft at the proper intervals to give maximum stiffness to shaft and prevent shaft whip. Motor bearings are separate from outboard bearings and both are mounted in a one piece

housing insuring permanent alignment. Protection from dirt and dust is secured by felt, or, frictionless all metal labyrinth seals.

CONTROL

Protected hand lever control on 1 & 2 HP units. Larger sizes have push button control of Magnetic starter with overload and undervoltage protection. All switches are mounted inside of base.

BASE

One piece, rigid, heavy casting with weight so distributed and pads so placed as to absorb a very large proportion of any vibration that might come from unbalanced wheels.

CLEARANCE

The greatest clearance possible has been provided between the wheel and any stationary part of buffer. Extra spindle lengths can be furnished at a slight increase in price.

Grinding wheels are not furnished

Type	Code	H. P.	Spindle Speed R.P.M.	Spindle Diameter	Spindle Length*	Max. Width Wheel†	Height	Size of Base	Weight	Current
BENCH PEDESTAL	DMB	1	1800 or 3600	7/8"	36"	2"	9 1/2"	11 x 12	235	110, 220 volts, 1 phase 220, 440, 550 volts, 2 or 3 phase 25,30,50,60 cycles,A.C. 115 or 230 volts, D.C.
	DM	1					39"		375	
BENCH PEDESTAL PEDESTAL	EMB	2	1800 or 3600	1 1/4"	47"	3"	12"	14 x 15	325	220, 440 or 550 volts 2 or 3 phase, 50 or 60 cycles, A. C.
	EM	2					39"		450	
	FM	3					34"		600	
PEDESTAL PEDESTAL PEDESTAL PEDESTAL	GM	5	1200 or 3600	1 1/2"	58"	6"	34"	23 x 25	1000	220, 440 or 550 volts 2 or 3 phase, 25,30,50,60 cycles,A.C. 115 or 230 volts D. C.
	IM	7 1/2					34"		1200	
	JM	10					34"		1300	
	KM	15					34"		1400	

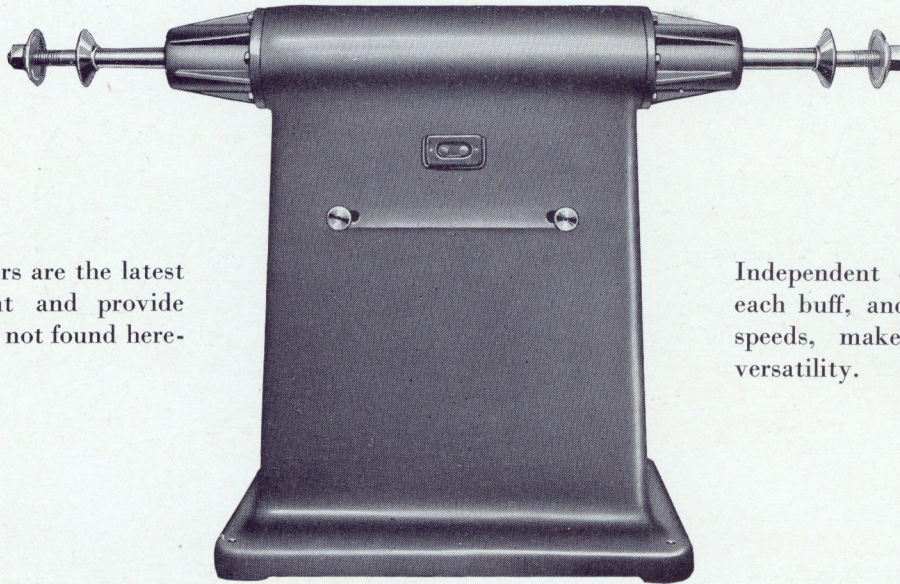
* Special spindle lengths can be furnished at increase in price.
† Special speeds can be furnished at increase in price.

When ordering specify code letters, voltage, phase and cycles

VAN DORN - BLACK & DECKER

HEAVY DUTY GRINDERS

Selective Speed Independent Spindle Buffers



These buffers are the latest development and provide advantages not found heretofore.

Independent operation of each buff, and at varying speeds, makes for great versatility.

MOTOR

Extra heavy duty, ball bearing, capable of 100% momentary overloads, insuring sufficient capacity for the heaviest work. Mounted on removable steel back plate of buffer.

DRIVE

Multiple "V" belt drive from motor to each spindle pulley. Belt adjustments made by hand wheel on outside of base.

CLUTCHES

Multiple disc, dry clutches, each capable of 500% overloads without slippage. Adjustments for wear—very rarely necessary—can be made in 5 minutes without dismantling the machine.

SPINDLES

Extra strong and rigid, one piece alloy steel driven from pulley through clutch.

BRAKE

Automatic in action. Disengaging clutch automatically applies brake to spindle.

SPINDLE LOCK

Can be furnished as extra equipment. In most cases automatic brake serves the purpose satisfactorily.

BEARINGS

All rotating shafts including motor, pulleys and spindles are mounted on heavy duty ball bearings protected from dirt and dust by all-metal frictionless labyrinth seals. Greasing only necessary at long intervals.

BUFFING HEADS

The Buffing heads consist of the spindle bearings, spindle, clutch pulley, clutch and brake assembly. These heads are independent and can be quickly removed or replaced separately.

CONTROL

Each spindle is independently controlled by its own clutch, and may be started or stopped at will without disturbing the other. The automatic brake assures no time lost in changing wheels.

SWITCH

Push button control, magnetic switch with overload and undervoltage protection is mounted within the base. The push button is mounted flush with the front of the base for convenience.

BASE

A very rugged and heavy one piece casting having a three point contact to insure a perfect bearing on any floor. Correctly designed to absorb vibrations resulting from unbalanced wheels.

SPEEDS

Any fixed speed on either spindle can be obtained providing the higher speed is not greater than 50% more than the lower. Speeds can be changed by replacing the motor pulleys with the proper sized pulleys for the new speeds.

Grinding wheels are not furnished

Code	H. P.	Speeds	Spindle Dia. Bet. Flanges	Spindle Overall Length	Max. Width Wheels	Height	Size Base	Weight	Current
GMA	5	2000 to 3000*	1 1/4"	63**	3 1/2***	39"	36 x 30	1100	220, 440 or 550 volts 2 or 3 phase 25, 30, 40, 50, 60 cycles
IMA	7 1/2	2000 to 3000*	1 1/4"	63**	3 1/2***	39"	36 x 30	1150	
JMA	10	2000 to 3000*	1 1/4"	63**	3 1/2***	39"	36 x 30	1200	

* Speeds lower or higher can be furnished on special order.

** Longer or shorter spindles can be furnished on special order.

*** Spindles for wider wheels can be furnished on special order.

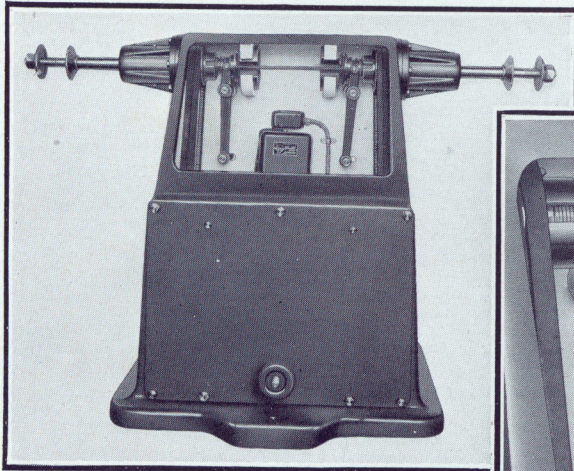
NOTE: Spindle locks can be furnished at extra cost. An allowance will be made if automatic brakes are not desired.

If the independent spindle control feature is not desired, buffers can be supplied with spindles direct-connected to pulley drive at a reduction in price.

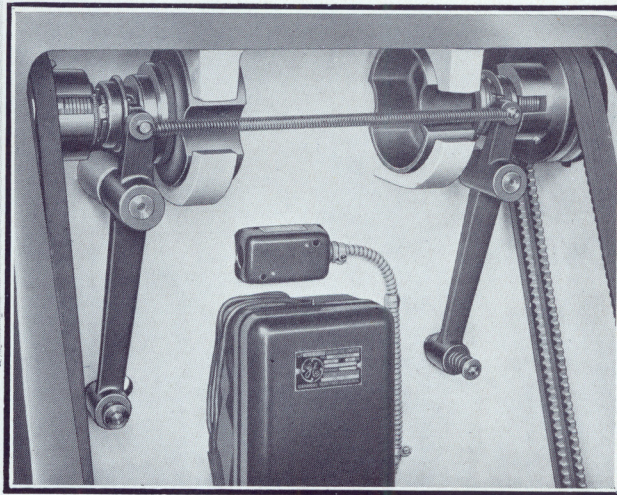
When ordering specify code letters, voltage, phase and cycles, and give the speed desired on each spindle

VAN DORN - BLACK & DECKER HEAVY DUTY GRINDERS

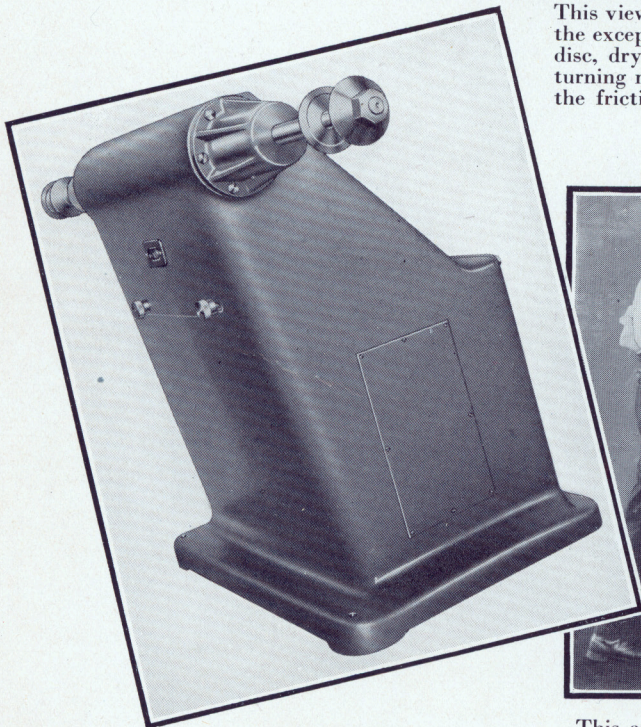
Selective Speed Independent Spindle Buffers



Back view of Buffer with cover plate removed. Note simplicity of design and accessibility. Wheel at base of Buffer adjusts tension on "V" belts.



This view shows all of the internal Buffer mechanism with the exception of the motor. Note particularly the multiple disc, dry clutch with provision for increasing tension by turning notched wheel as necessary. This view also shows the friction brake for stopping spindle when disengaged from motor.



Side view of Buffer showing massive construction and extreme simplicity of design.



This application illustrates the versatility of this machine and the time saving that can be effected. It is not necessary to stop work on both spindles when a buff or wheel must be changed on one end only. Another advantage of paramount importance is the fact that jobs requiring different working speeds may be handled on the one machine at the same time.

