

ALL METAL ... ALL THE TIME™

Industrial Metalworking Tooling & Solutions Since 1965

JAN-MAR 2024

EDGE TECHNOLOGY

Pro Mill Stop Table Mount

FEATURES:

- Table Slot Width: 5/8".
- Stop rod stays parallel to the milling machine table
- Large 1/2"-13 bolt used to rigidly attach lever arm to base.
- Versatile design rod to be quickly and accurately positioned.
- Lever arm can be rotated for cutter clearance and accurately relocated for repeat setup. (loosening & retightening of screw is required)
- Base of unit is keyed to T-slot in table.
- Non-marring 1/4"-20 nylon tip set screw.
- Non-marring 1/4"-20 flat point set screw.

Part No. **1-811-16000** **\$79⁰³**
Reg. Net Price \$92.98

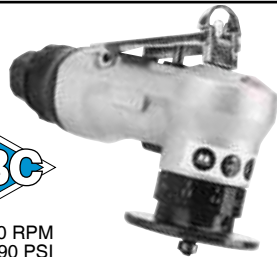
NEW!



Includes T-Nut.

Hand Chamfering & Deburring Tool

Easily chamfer edges consistently with repeatable accuracy up to almost 1mm deep. Bearing runs along edge of surface while 2 carbide inserts chamfer edge for smooth result.



Part No. **1-829-1305**
\$119⁹⁹

SPECIFICATIONS:

No Load Speed 30,000 RPM
Air Consumption / Pressure 7.7 CFM / 90 PSI
Air Inlet 1/4" NPT
Chamfering Capacity 0.004-0.060" (0.1-1.5mm)
Working Capacity 1.004-0.035" (0.1-0.99mm)
Blade Carbide Triangle Tip
Tool Length 5.7"

iGAGING 6" Dial Caliper

NEW!

save 25%



Supplied in a protective case.

Part No. **1-815-006** **\$42⁹⁸**
Reg. Net Price \$57.30

FEATURES:

- Graduation: 0.001".
- Hardened stainless steel frame and covered rack.
- 4-way measurement: Outside, inside, step, & depth.

SHOP IRON

32 oz. Dead Blow Hammer

Comfortable, textured handles for handling ease.

Part No. **1-909-63032** **\$25³¹**
Reg. Net Price \$29.78



SPECIFICATIONS:

Head Weight 32 oz.
Length 13.9"
Face Diameter 2-1/8"

tmx

Indexable End Mills

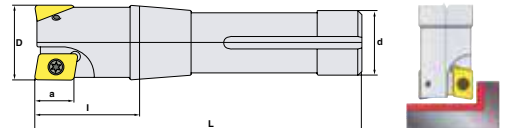
Weldon Shank

FEATURES:

- 90° multi-purpose end mill for low HP machines.
- Rigid, chatterless performance on CNC and conventional milling machines.
- R-8 drawbar thread: 7/16" - 20.



save 20%



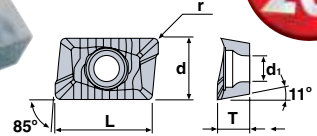
Cutting Dia. (D)	OAL (L)	Cutting Length (l)	Shank Dia. (d)	Cutting Depth (a)	No. of Inserts	Insert Used	Part No. 6-941-	Reg. Net Price	SALE!
1"	5.5"	3.15"	1"	.433"	3	APXT 1035	-006	\$252.85	\$202.28
1"	4.528	1.378	1"	.570	2	APXT 1604	-010	203.21	162.57

KORLOY® APXT Coated Carbide Inserts

85° APXT Parallelogram 11° Positive Rake

GRADE PC-5300:

For milling of steel. Tough sub-micron substrate. Has low coefficient of frictions to prevent built-up edge.



save 20%

Insert Style	L	d	T	r	d1	Part No. 6-APX-	Reg. Net Price	SALE!
APXT 1035PDSR-MM	0.407"	0.263"	0.12"	0.020"	0.112"	-200	\$21.58	\$17.26
APXT 1604PDSR-MM	0.650	0.376	0.227	0.031	0.175	-210	26.70	21.36



BAXTER VERTICUT INC.
BANDSAW MACHINES

General Purpose Gravity Feed Vertical Bandsaws

3/4 HP, 115V, 1 PH Motor

Includes FREE

ADJUSTABLE MATERIAL LENGTH STOP
\$299 VALUE! While Supplies Last.

Use as a cut-off saw, rip cut, notch blocks, or contour cut as a tool room saw.

Capacity: 13"(h) x 9"(w)
Blade Size: 120" x 1/4" x 3/4"

Model 115C
Part No. **6-600-115C**
\$5,969⁰⁰

Model 115C-VS
Variable Speed with End of Cut Shut-off
Part No. **6-600-115C-VS**
\$7,642⁰⁰

AS LOW AS \$134.83/mo.

Click here for complete details.



NEW!



MODEL 115C



WEB:

KBCTools.com

PHONE:

1-888-KBC-TOOL

5 2 2 8 6 6 5

M-F 8am - 8pm, EST

FAX:

1-800-668-5615

FAX ORDERS 24/7

Cutting Tools	2-6
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100% SATISFACTION GUARANTEED:

If you are not 100% satisfied for any reason just return the unused item(s) in its original packaging within 30 days, with your receipt for a replacement, exchange, full credit or refund.



FREE SHIPPING:

Orders over \$449.00 (50 lbs. weight limit per order) SHIPPED FREE - via our standard shipping method. Some restrictions may apply.

99% of All Orders Ship the Same Day... Or you can Pick Up at your Local Branch.* Your Choice.



DAMAGED, LOST, OR SHORT SHIPMENTS:

It doesn't happen often, but if it does, call your local courier office immediately, and advise KBC so that we can reship and place a claim. Please keep damaged goods and containers until the claim is closed.

TRUCK SHIPMENTS:

KBC is not responsible for merchandise damaged or lost by motor freight carriers. If the shipment is damaged or short one or more packages, please have it noted by the truck driver on receipt and freight bill. If you accept a short or damaged shipment from the truck driver without proper notation by the driver, you do so at your own risk.

PRICING:

KBC Tools & Machinery traditionally holds prices for the duration of its sales flyers. As industrial market conditions continue to change across North America (tariffs, raw material, and price increases), KBC reserves the right to change prices based upon inventory conditions and supplier price increases without notice. BUY NOW! KBC Tools & Machinery strives to be your choice for all your tooling needs.

MINIMUM ORDER:

Only \$25.00, to cover processing costs.

OOPS!:

Errors do occur, so mistakes are subject to correction. Sorry for any inconvenience.

ALL METAL ... ALL THE TIME™

Industrial Metalworking Tooling & Solutions Since 1965

R&N Metric Spiral Pointed Hand Taps



GROUND THREAD RIGHT HAND

LIST NO. 102M HIGH SPEED STEEL PLUG STYLE

Commonly known as "gun taps". Flute design forces the evacuation of chips ahead of the cutting action.

Size	Pitch Dia. Limit	No. of Flutes	Part No. 102M-	Reg. Net Price	SALE!
M2X0.45	D3	2	-62814	\$23.46	\$21.11
M3X0.5	D3	2	-62818	19.36	17.42
M4X0.7	D4	2	-62826	15.91	14.32
M5X0.8	D4	2	-62834	15.91	14.32
M6X1	D5	2	-62838	17.00	15.30
M8X1.25	D5	2	-62850	18.98	17.08
M10X1.5	D6	3	-62854	34.90	31.41
M12X1.75	D6	3	-62858	43.44	39.10

WALTON Tap Extractor Set

Remove broken machine screw and hand taps, pipe taps, and STI taps.

Remove broken taps without drilling, lasers, damaged threads, scrapping parts or repair inserts. The hardened steel fingers fit in the flutes of a broken tap to back it out simply and safely. This effective method has been used since 1908.

SIZES: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2"

Part No. 1-391-800

Reg. Net Price \$218.09

\$185³⁸

Supplied in a plastic compartment box.



DORMER SHARK LINE

Black Shark Spiral Pointed Taps

RIGHT HAND PLUG STYLE

Designed for high performance through hole tapping in high strength and heat resistant work materials with hardness up to 45HRC.

FEATURES:

- The color ring on the tool shank identifies suitability for specific materials and enables quick and easy tool selection.
- When using Black Shark taps, it is recommended to use synchronized (rigid) tapping.

SURFACE TREATMENT - TiAlN-Top coating combined with geometry that significantly increases cutting edge strength, provides excellent performance and consistency in hard and difficult to machine materials.

MATERIAL - Shark taps are manufactured from a unique powder metallurgy tool steel different from any other HSS-E-PM. This provides an unbeatable combination of toughness and edge strength, allowing the taps to perform at higher cutting temperatures while offering excellent performance and longer tool life.



For High Strength Steels



Size	No. of Flutes	Ground Thread Limits	Part No. 1-351-	Reg. Net Price	SALE!
10-24 NC	3	H-3	-7812049	\$41.32	\$35.12
10-32 NF	3	H-3	-7812107	41.32	35.12
1/4-20 NC	3	H-5	-7812100	53.25	45.26
1/4-28 NF	3	H-4	-7812108	53.25	45.26
5/16-18 NC	3	H-5	-7812101	57.98	49.28
5/16-24 NF	3	H-4	-7812109	57.98	49.28
3/8-16 NC	3	H-5	-7812102	65.47	55.65
3/8-24 NF	3	H-4	-7812110	65.47	55.65
7/16-14 NC	4	H-5	-7812103	84.56	71.88
7/16-20 NF	4	H-5	-7812111	84.56	71.88
1/2-13 NC	4	H-5	-7812104	98.07	83.36
1/2-20 NF	4	H-5	-7812112	98.07	83.36

GEOMETRY AND CHAMFER - Spiral point geometries with low rake angle for good chip control and edge strength. Features a spiral point that supports:

- Process security.
- Superior surface finish.
- Highly accurate threads
- Through hole threading up to 2.5xD.

SPEEDTAPS™ FASTER THAN THE PROS

HIGH SPEED STEEL RIGHT HAND

Hand tapping is a slow and tedious process that has remained unchanged for years. The SpeedTaps™ drive end is designed to match bolt sizing and utilize all the advantages of common sockets and wrenches.

FEATURES:

- 6 thread taper for faster starts.
- 60° tapered point for easy alignment.
- Highly durable and designed for use with an impact wrench, allowing threads to be tapped up to 14x faster than traditional methods.
- Full-size shaft maximizes strength as well as ease of reversal of the tap.
- Flared head design reduces tangential force maximizing torque transfer.
- Each tap head size matches the bolt size for single tool operation of tapping and bolting.
- Increase productivity - these taps work faster and last longer than traditional hand taps.
- Over 100 holes were tested on Mild Steel keeping the same quality of thread.
- SpeedTaps™ easily out perform in tight spaces that are too close for working with traditional tap wrenches giving the user an advantage over old technology.
- Made from M2 Tool Steel with a Nitrate coating for extended tap life.

FRACTIONAL SIZES

Thread Size	Part No. 1-341-	Reg. Net Price	SALE!
1/4-20 NC	-060	\$19.58	\$14.69
5/16-18 NC	-065	23.50	17.63
3/8-16 NC	-070	26.11	19.58
1/2-13 NC	-075	32.64	24.48

METRIC SIZES

Thread Size	Part No. 1-341-	Reg. Net Price	SALE!
6 x 1.0	-085	\$19.58	\$14.69
8 x 1.25	-090	23.50	17.63
10 x 1.50	-095	26.11	19.58
12 x 1.75	-100	32.64	24.48



4 Pc. SpeedTaps™ Sets

FRACTIONAL: 1/4"-20, 5/16"-18, 3/8"-16, 1/2"-13

Part No. 1-341-080

Reg. NetPrice \$104.49

\$73¹⁴

METRIC: M6x1, M8x1.25, M10x1.5, M12x1.75

Part No. 1-341-105

Reg. NetPrice \$104.49

\$73¹⁴





10 Pc. Solid Carbide Miniature Bur Set

Standard Cut



FEATURES:

- Head Diameter: 1/8"
- Shank Diameter: 1/8"
- Overall Length: 1-1/2"

SET INCLUDES:

SA-43, SC-42, SC-41, SD-42, SE-41, SF-41, SG-41, SM-45, SL-42, SN-42

Part No. **5-100-71049** **\$107.46**
Reg. Net Price \$126.42

The duMONT Company, LLC



No. 10 Standard Keyway Broach Set

1/8" to 3/8"

COLLARED BUSHINGS ONLY

Part No. **1-409-11104**
Reg. Net Price \$965.73

\$869.16



HIGH SPEED STEEL

Keyway Sizes	Broach Style	Bushing Dia. (Hole Size)
1/8"	B	1/2", 5/8", 3/4", 7/8"
3/16"	B	
1/4"	C	1", 1-1/8", 1-1/4", 1-3/8", 1-1/2"
3/8"	C	



40 Pc. SAE & Metric Thread Restorer Kit

Highly tempered for strength and durability, the hex shape allows for use with a socket or wrench.

KIT INCLUDES:

- (7) SAE Coarse Dies, Sizes: 1/4"-20, 5/16"-18, 3/8"-16, 7/16"-14, 1/2"-13, 9/16"-12, 5/8"-11
- (7) SAE Fine Dies, Sizes: 1/4"-28, 5/16"-24, 3/8"-24, 7/16"-20, 1/2"-20, 9/16"-18, 5/8"-18
- (6) Metric Dies, Sizes: M6-1.00, M8-1.25, M10-1.50, M12-1.25, M12-1.50, M12-1.75
- (1) SAE Rethread File, 8 pitches (threads/inch): 11, 12, 13, 14, 16, 18, 20, 24,
- (1) Metric Rethread File, 8 pitches (mm/thread): 0.75mm, 1.00mm, 1.25mm, 1.50mm, 2.00mm, 2.50mm, 3.00mm.



8.125" x 11.5" x 2.5"

NEW!

Part No. **1-820-344**
Reg. Net Price \$184.01

\$156.41

8 Pc. Adjustable Hand Reamer Set

HIGH SPEED STEEL

FEATURES:

- Reamers are used for light cut, repair work, removing stock, or for enlarging holes.
- Each reamer adjusts from a smaller size to a larger size.
- Can be hand operated by use of wrenches.



15/32" to 1-1/16"

Part No. **1-135-800**

Reg. Net Price \$235.40

\$164.78



Supplied in a fitted wood case.

CUTTING TOOLS

Starrett Carbide Tipped Hole Saws

High Performance Triple Chip Tungsten Carbide Tipped Saws

Ultra-high hardness provides long life when cutting difficult and abrasive materials including wood, PVC and fiberglass.

Starrett No.	Saw Diameter		Part No. 1-856-	Reg. Net Price	SALE!
	Inch	mm			
CT034	3/4"	19	-65614	\$26.54	\$23.89
CT078	7/8"	22	-65615	26.82	24.14
CT100	1"	25	-65616	28.58	25.72
CT118	1-1/8"	29	-65617	30.26	27.23
CT114	1-1/4"	32	-65618	31.54	28.39
CT138	1-3/8"	35	-65619	32.09	28.88
CT112	1-1/2"	38	-65620	32.82	29.54
CT158	1-5/8"	41	-65621	34.80	31.32
CT134	1-3/4"	44	-65622	36.44	32.80
CT178	1-7/8"	48	-65623	37.97	34.17
CT200	2"	51	-65624	39.10	35.19
CT218	2-1/8"	54	-65625	46.03	41.43
CT214	2-1/4"	57	-65626	47.63	42.87
CT238	2-3/8"	60	-65627	49.18	44.26
CT212	2-1/2"	64	-65628	51.45	46.31
CT258	2-5/8"	67	-65629	53.11	47.80
CT234	2-3/4"	70	-65630	54.73	49.26
CT300	3"	76	-65631	57.98	52.18



FEATURES:

- A cost effective solution for cutting nail embedded wood, wood and metal combination, reinforced concrete and fiberglass.
- Leaves high quality surface finish on entry and exit and provides a smooth cut.
- Tungsten carbide tipped teeth for outstanding cutting performance and product durability.
- Suitable for use in electric and battery operated tools.
- Cutting Depth: 1-5/8" (41mm).

MICRO 100

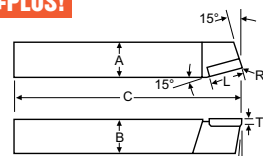
Carbide Toolbits

Styles AR & AL

MICRO-GRAIN CARBIDE +PLUS!

MICRO 100 is a space age, micro grain carbide of excellent quality. It is in a class of its own, resulting from the exclusive treating process. Considerably prolongs tool life in machining all hard stainless steels, efficiently performs in exotic metals. Provides vastly increased speed and feed rates in cutting aluminum, copper, stainless steels, high temperature alloys, thermo-plastics and composites used in the aircraft industry.

Dimensions						Part No. 1-428-		Reg. Net Price	SALE!
Shank		Tip				Right Hand	Left Hand		
A-B	C	T	W	L	R				
1/4"	2"	1/16"	3/16"	1/4"	1/64"	-AR4	-AL4	\$17.14	\$15.43
5/16"	2-1/4"	1/16"	1/4"	5/16"	1/64"	-AR5	-AL5	16.92	15.23
3/8"	2-1/2"	1/8"	1/4"	1/2"	1/64"	-AR6	-AL6	18.02	16.22
7/16"	3"	1/8"	1/4"	1/2"	1/32"	-AR7	-AL7	20.33	18.30
1/2"	3-1/2"	1/8"	1/4"	5/8"	1/32"	-AR8	-AL8	20.99	18.89
5/8"	4"	5/32"	3/8"	3/4"	1/32"	-AR10	-AL10	34.74	31.27
3/4"	4-1/2"	3/16"	7/16"	13/16"	1/32"	-AR12	-AL12	48.49	43.64



Metric Chucking Reamers

STRAIGHT FLUTE

STRAIGHT SHANK

HIGH SPEED STEEL

DIAMETER TOLERANCES:

+0.0002"/-0.0000"

Designed for use in turret lathes, screw machines, drill presses and all types of machine tool equipment. Ground with a 45° chamfer.



Size MM	Flute Length	OAL	Part No. 1-136A-	Reg. Net Price	SALE!
1	1/2"	2-1/2"	-20012	\$31.47	\$26.75
2	3/4"	3"	-20031	29.82	25.35
3	7/8"	3-1/2"	-20050	31.81	27.04
4	1"	4"	-20069	34.85	29.62
5	1-1/4"	5"	-20090	41.35	35.15
6	1-1/2"	6"	-20104	45.72	38.86
7	1-1/2"	6"	-20119	47.38	40.27
8	1-1/2"	6"	-20133	47.71	40.55
9	1-3/4"	7"	-20142	55.99	47.59
10	1-3/4"	7"	-20155	58.11	49.39
11	1-3/4"	7"	-20162	59.11	50.24
12	2"	8"	-20171	65.73	55.87
13	2"	8"	-20179	75.41	64.10
14	2"	8"	-20182	83.36	70.86
15	2"	8"	-20185	87.07	74.01
16	2-1/4"	9"	-20189	118.08	100.37



Carbide Tipped Chucking Reamers

FEATURES:

- Straight shank and straight polished flutes.
- Carbide tips brazed to one-piece hardened tool steel bodies.
- For all general reaming of steel, cast iron, non-ferrous metals, plastics and non-metals.

STANDARD TOLERANCES:

Fractional +.0003"/-.0000"

FRACTIONAL SIZES

Dia.	Flute Length	OAL	Part No. 5-655A-	Reg. Net Price	NOW!
3/16"	1-1/8"	4-1/2"	-012	\$66.65	\$59.99
1/4"	1-1/2"	6"	-016	66.65	59.99
5/16"	1-1/2"	6"	-020	68.12	61.31
3/8"	1-3/4"	7"	-024	70.45	63.41
7/16"	1-3/4"	7"	-028	79.05	71.15
1/2"	2"	8"	-032	95.25	85.73
9/16"	2"	8"	-036	103.62	93.26
5/8"	2-1/4"	9"	-040	107.88	97.09
11/16"	2-1/4"	9"	-044	109.82	98.84
3/4"	2-1/2"	9-1/2"	-048	114.93	103.44
13/16"	2-1/2"	9-1/2"	-052	118.65	106.79
7/8"	2-5/8"	10"	-056	128.11	115.30
15/16"	2-5/8"	10"	-060	149.27	134.34
1"	2-3/4"	10-1/2"	-100	156.32	140.69

Annular Cutters

FEATURES:

- Eliminates multi-step drilling.
- More accurate and clear holes.
- Better finishing.



SHORT SERIES - 1" DEPTH

Size	Part No. 5-530-	Reg. Net Price	NOW!
1/2"	-111	\$53.96	\$48.56
9/16"	-113	53.96	48.56
5/8"	-116	53.96	48.56
11/16"	-119	53.96	48.56
3/4"	-121	57.44	51.70
13/16"	-124	63.33	57.00
7/8"	-127	64.42	57.98
15/16"	-130	68.24	61.42
1"	-133	72.40	65.16
1-1/16"	-136	76.58	68.92
1-1/8"	-139	83.55	75.20
1-3/16"	-142	87.00	78.30
1-1/4"	-145	88.75	79.88

HIGH SPEED STEEL

3/4" SHANK

Size	Part No. 5-530-	Reg. Net Price	NOW!
1-5/16"	-148	\$97.48	\$87.73
1-3/8"	-151	107.89	97.10
1-7/16"	-154	118.34	106.51
1-1/2"	-157	128.78	115.90
1-9/16"	-160	135.76	122.18
1-5/8"	-163	139.24	125.32
1-11/16"	-166	156.64	140.98
1-3/4"	-169	160.15	144.14
1-13/16"	-172	181.01	162.91
1-7/8"	-175	181.01	162.91
1-15/16"	-178	187.96	169.16
2"	-181	201.88	181.69



82° 6 Flute Chatterless Countersinks



Designed for general purpose countersinking, chamfering and deburring. Multiflute design reduces chip load and chatter even at high speeds.



HIGH SPEED STEEL

Body Dia.	Shank	OAL	Part No. 1-160A-	Reg. Net Price	SALE!
3/16"	3/16"	1-1/2"	-81050	\$10.32	\$8.26
1/4"	1/4"	2"	-81051	10.60	8.48
5/16"	1/4"	2"	-81052	12.65	10.12
3/8"	1/4"	2"	-81053	13.21	10.57
1/2"	1/4"	2"	-81054	16.28	13.02
5/8"	1/2"	2-3/4"	-81055	23.16	18.53
3/4"	1/2"	2-3/4"	-81056	31.81	25.45
7/8"	1/2"	2-3/4"	-81057	43.80	35.04
1"	1/2"	2-3/4"	-81058	48.83	39.06
1-1/4"	3/4"	3-3/8"	-81059	74.31	59.45
1-1/2"	3/4"	3-1/2"	-81060	107.42	85.94
1-3/4"	1"	4-1/4"	-81061	143.22	114.58
2"	1"	4-3/8"	-81062	176.89	141.51

Buy In Package Quantity: Up to 1/2" 3 Per Pack



Uniflute Carbide Countersinks Series 60

For use on abrasive, non-metallic and non-ferrous materials.

FEATURES:

- Easily resharpened.
- May be used on hardened steel and work hardening alloys.
- Rigid set-ups & good machinery maintenance are a must.



Not recommended for use in hand-held tools.

Body Dia.	OAL	Shank Dia.	Part No. 5-100-	Reg. Net Price	SALE!
			60°		
1/8"	1-1/2"	1/8"	-60001	-60011	\$23.68
3/16"	1-1/2"	3/16"	-60021	-60031	29.60
1/4"	2"	1/4"	-60041	-60051	35.78
			82°		
3/8"	2"	1/4"	-60061	-60071	69.62
1/2"	2-3/8"	1/4"	-60081	-60091	96.60
3/4"	3"	1/2"	-60101	-60111	179.65
1"	3"	1/2"	-60121	-60131	293.85



5 Pc. Combined Drill and Countersink Set

60° RIGHT HAND HIGH SPEED STEEL

Plain type combined drills and countersinks are used for producing center holes in components or workpieces which require machining between centers.

No. 1 through No. 5

Part No. 1-031-200

Reg. Net Price \$57.92

\$49²³



Supplied with a plastic case.



6 Flute Double End Countersinks

HIGH SPEED STEEL

Two cutting ends give you twice the tool life of a single end tool.



Body Dia.	OAL	60°			82°			90°			Reg. Net Price	NOW!
		Part No. 1-1646H-			Part No. 1-1646H-			Part No. 1-1646H-				
1/8"	1-1/2"	-60008			-82008			-90008			\$33.06	\$29.75
3/16"	2	-60012			-82012			-90012			33.79	30.41
1/4"	2	-60016			-82016			-90016			35.11	31.60
5/16"	2-1/2"	-60020			-82020			-90020			40.70	36.63
3/8"	2-1/2"	-60024			-82024			-90024			45.26	40.73
1/2"	3	-60032			-82032			-90032			56.85	51.17

Solid Carbide Combined Drills & Countersinks

FINE GRAIN 6% COBALT C-2 GRADE

60° INCLUDED ANGLE

Plain type, solid carbide, 60° combined drills and countersinks with straight flutes. Used for producing center holes in components or workpieces which require machining between centers.



Size	Body Dia.	Drill Dia.	Part No. 1-049-	Reg. Net Price	SALE!
1	1/8"	3/64"	-001	\$19.76	\$16.80
2	3/16"	5/64"	-002	20.93	17.79
3	1/4"	7/64"	-003	23.25	19.76
4	5/16"	1/8"	-004	37.20	31.62
5	7/16"	3/16"	-005	65.10	55.34

5 Pc. 3/4" Reduced Shank Drill Set

118° POINT HIGH SPEED STEEL

FEATURES:

- Ideal for drilling in low and medium tensile strength materials.
- Precision ground for a high degree of concentricity between shank and body diameter.
- Common flute and overall length for minimal adjustment during tool changes.

1" to 1-1/2" by 8ths

Part No. 1-059-000

Reg. Net Price \$339.45

\$271⁵⁶



7 Pc. Solid Cap Screw Counterbore Set

3 FLUTE STRAIGHT SHANK HIGH SPEED STEEL



FEATURES:

- Designed to create a recess for socket head cap screws and shoulder screws.
- Solid pilot will not score or damage pilot hole.
- Cutting action is chatterless.
- Also used for spot facing smaller spots, enlarging, or cleaning holes.

Sizes: 6, 8, 10, 1/4", 5/16", 3/8", 1/2"

Part No. 1-166-400

Reg. Net Price \$217.47

\$173⁹⁸



Milwaukee Shockwave Impact Duty™ RED HELIX™ Titanium Drill Bit Sets

FEATURES:

- RED HELIX™ Technology combines QUAD EDGE™ tip, VARIABLE HELIX™ flute, and thicker tapered web.
- QUAD EDGE Tip™ stays sharper longer.
- VARIABLE HELIX™ flute designed for rapid chip removal.
- Thicker tapered web design increases bit strength.
- Titanium coated for 5x Life vs. black oxide drill bits.
- 1/4" hex shank for use with impact drivers and drill drivers.
- Ideal for metal, wood, and plastics.
- Laser etched size for easy identification.



NEW!
15 Pc. Set
Sizes: 1/16" to 3/8"
Part No. 1-828-48894670

\$34⁷³

10 Pc. Metric Set
Sizes: 3mm to 10mm
Part No. 1-828-48894859

\$49²⁶

Case designed for use in PACKOUT™.



Solid Carbide Hi-Roc Drills

135° POINT FINE GRAIN
6% COBALT C-2 GRADE

Designed to drill hardened steel in the 42-65 Rockwell "C" range.



FEATURES:

- Produces chips without generating excessive heat.
- Both a production drill and a salvage or reclaim tool.
- Reamer type finishes are easily produced.
- Accurately sized holes are produced without annealing or softening the workpiece.



Series
200

Size	Dia.	Flute Length	OAL	Part No. 5-100-	Reg. Net Price	SALE!
1/32"	.0312"	3/16"	1-1/2"	-20004	\$30.89	\$26.26
3/64"	.0469	1/4"	1-1/2"	-20067	27.21	23.13
1/16"	.0625	5/16"	1-1/2"	-20100	27.21	23.13
5/64"	.0781	3/8"	1-1/2"	-20130	27.21	23.13
3/32"	.0938	1/2"	1-1/2"	-20163	27.21	23.13
7/64"	.1094	5/8"	1-1/2"	-20199	31.95	27.16
1/8"	.1250	5/8"	1-1/2"	-20229	32.84	27.91
9/64"	.1406	5/8"	2"	-20253	35.22	29.94
5/32"	.1562	5/8"	2"	-20283	41.05	34.89
11/64"	.1719	5/8"	2"	-20313	43.85	37.27
3/16"	.1875	5/8"	2"	-20340	47.53	40.40
13/64"	.2031	3/4"	2"	-20376	50.80	43.18
7/32"	.2187	3/4"	2"	-20403	53.39	45.38
15/64"	.2344	3/4"	2"	-20427	55.51	47.18
1/4"	.2500	3/4"	2"	-20451	66.35	56.40
17/64"	.2656	3/4"	2-1/2"	-20472	71.74	60.98
9/32"	.2812	3/4"	2-1/2"	-20499	76.25	64.81
19/64"	.2969	3/4"	2-1/2"	-20520	79.93	67.94
5/16"	.3125	3/4"	2-1/2"	-20541	82.96	70.52
21/64"	.3281	1"	2-1/2"	-20562	93.53	79.50
11/32"	.3438	1"	2-1/2"	-20583	97.01	82.46
23/64"	.3594	1"	2-1/2"	-20604	100.25	85.21
3/8"	.3750	1"	2-1/2"	-20622	103.05	87.59
25/64"	.3906	1"	2-3/4"	-20643	114.03	96.93
13/32"	.4062	1"	2-3/4"	-20664	135.03	114.78
27/64"	.4219	1"	2-3/4"	-20682	152.73	129.82
7/16"	.4375	1"	2-3/4"	-20697	160.50	136.43
29/64"	.4531	1"	3"	-20712	164.86	140.13
15/32"	.4688	1"	3"	-20727	167.19	142.11
31/64"	.4844	1"	3"	-20733	174.76	148.55
1/2"	.5000	1"	3"	-20739	174.76	148.55

VIKING VORTEX-POINT DRILL & TOOL

Mechanics Length Drills

HIGH SPEED STEEL

TYPE 250-VT 135° SPLIT POINT

FEATURES:

- Vortex-Point™ tip design cuts 45% faster and excels at sheet metal and hardened metals.
- Stays sharp up to 4X longer than conventional and specialty tip designs.
- Multi-stepped tip acts like a step drill, allowing for laser like holes through sheet metal and prevents walking on curved surfaces.
- 3-flatted shanks to reduce slippage common with keyless chucks.
- Recommended for cast iron, brass, sheet metal, plastic, mild steel, copper, and hardened steel.

Size	Flute Length	OAL	Part No. 1-067-	Reg. Net Price	SALE!
5/32"	1-11/16"	2-3/4"	-010	\$9.30	\$6.98
11/64"	1-13/16"	2-7/8"	-011	9.47	7.10
3/16"	1-7/8"	3"	-012	10.58	7.94
13/64"	1-15/16"	3-1/8"	-013	11.07	8.30
7/32"	2"	3-1/4"	-014	11.25	8.44
15/64"	2-1/16"	3-3/8"	-015	11.62	8.72
1/4"	2"	3-1/2"	-016	12.36	9.27
17/64"	2-1/8"	3-5/8"	-017	13.85	10.39
9/32"	2-1/4"	3-3/4"	-018	14.32	10.74
19/64"	2-3/8"	3-7/8"	-019	15.26	11.45
5/16"	2-1/2"	4"	-020	15.72	11.79
21/64"	2-9/16"	4-1/16"	-021	16.39	12.29
11/32"	2-5/8"	4-1/8"	-022	19.22	14.42
23/64"	2-11/16"	4-3/16"	-023	20.63	15.47
3/8"	2-11/16"	4-1/4"	-024	21.33	16.00
25/64"	2-3/4"	4-5/16"	-025	23.45	17.59
13/32"	2-13/16"	4-3/8"	-026	24.03	18.02
27/64"	2-7/8"	4-7/16"	-027	25.89	19.42
7/16"	2-15/16"	4-1/2"	-028	26.72	20.04
29/64"	3"	4-5/8"	-029	29.20	21.90
15/32"	3-1/8"	4-3/4"	-030	30.62	22.97
31/64"	3-1/4"	4-7/8"	-031	32.12	24.09
1/2"	3-3/8"	5"	-032	32.66	24.50

Buy In Package Quantity:

Up to 9/32" 6 Per Pack 19/64" to 1/2" 3 Per Pack



PRECISION

Silver & Deming Drills

1/2" SHANK

118° POINT

6" OVERALL LENGTH

HIGH SPEED STEEL



Expands the size range capacity of a 1/2" portable drill chuck.

Ideal for drilling in low and medium tensile strength materials.

Size	Part No. 1-060A-	Reg. Net Price	NOW!	Size	Part No. 1-060A-	Reg. Net Price	NOW!
9/16"	-036	\$57.38	\$48.77	1-1/8"	-108	\$166.66	\$141.66
5/8"	-040	64.57	54.88	1-3/16"	-112	182.28	154.94
11/16"	-044	71.61	60.87	1-1/4"	-116	204.85	174.12
3/4"	-048	79.08	67.22	1-5/16"	-120	249.98	212.48
7/8"	-056	95.48	81.16	1-3/8"	-124	289.04	245.68
15/16"	-060	106.76	90.75	1-7/16"	-128	319.42	271.51
1"	-100	124.12	105.50	1-1/2"	-132	347.20	295.12
1-1/16"	-104	149.30	126.91				



CLE-LINE Screw Machine Drills

135° SPLIT POINT RIGHT HAND



BLACK OXIDE SURFACE TREATED

Increases abrasion resistance, reduces the amount of chip welding and improves the chip flow.



Size	OAL	Part No. 1-050AX-	Reg. Net Price	SALE!	Size	OAL	Part No. 1-050AX-	Reg. Net Price	SALE!
1/16"	1-5/8"	-004	\$2.60	\$2.21	19/64"	2-3/4"	-019	\$6.91	\$5.87
5/64"	1-11/16"	-005	2.69	2.29	5/16"	2-13/16"	-020	7.08	6.02
3/32"	1-3/4"	-006	2.77	2.35	21/64"	2-15/16"	-021	8.57	7.28
7/64"	1-13/16"	-007	2.86	2.43	11/32"	3"	-022	9.21	7.83
1/8"	1-7/8"	-008	2.90	2.47	23/64"	3-1/16"	-023	10.02	8.52
9/64"	1-15/16"	-009	3.11	2.64	3/8"	3-1/8"	-024	10.44	8.87
5/32"	2-1/16"	-010	3.41	2.90	25/64"	3-1/4"	-025	11.89	10.11
11/64"	2-1/8"	-011	3.67	3.12	13/32"	3-5/16"	-026	12.23	10.40
3/16"	2-3/16"	-012	3.84	3.26	27/64"	3-3/8"	-027	13.34	11.34
13/64"	2-1/4"	-013	4.26	3.62	7/16"	3-7/16"	-028	13.68	11.63
7/32"	2-3/8"	-014	4.65	3.95	29/64"	3-9/16"	-029	15.90	13.52
15/64"	2-7/16"	-015	4.82	4.10	15/32"	3-5/8"	-030	16.96	14.42
1/4"	2-1/8"	-016	5.03	4.28	31/64"	3-11/16"	-031	17.56	14.93
17/64"	2-5/8"	-017	6.01	5.11	1/2"	3-3/4"	-032	17.73	15.07
9/32"	2-11/16"	-018	6.18	5.25					

Buy In Package Quantity: Up to 5/16" 12 Per Pack 21/64" to 1/2" 6 Per Pack

DORMER TiN Coated Jobbers Drills

RIGHT HAND HIGH SPEED STEEL TIN TIPPED 118° POINT

Jobbers length drills are designed to perform in a wide variety of normal conditions. Jobbers length also perform in a broad range of materials in both machine and portable drilling. Superhard TITANIUM NITRIDE (TiN) surface treatment improves drill life, chip ejection, and productivity; decreases horsepower requirements.

Size	OAL	Part No. 1-001TA-	Reg. Net Price	SALE!	Size	OAL	Part No. 1-001TA-	Reg. Net Price	SALE!
3/32"	2-1/4"	-006	\$3.57	\$3.03	5/16"	4-1/2"	-020	\$11.26	\$9.57
7/64"	2-5/8"	-007	3.79	3.22	21/64"	4-5/8"	-021	12.53	10.65
1/8"	2-3/4"	-008	3.79	3.22	11/32"	4-3/4"	-022	13.81	11.74
9/64"	2-7/8"	-009	4.12	3.50	23/64"	4-7/8"	-023	15.77	13.40
5/32"	3-1/8"	-010	4.19	3.56	3/8"	5"	-024	16.03	13.63
11/64"	3-1/4"	-011	4.55	3.87	25/64"	5-1/8"	-025	18.58	15.79
3/16"	3-1/2"	-012	5.06	4.30	13/32"	5-1/4"	-026	19.01	16.16
13/64"	3-5/8"	-013	5.57	4.73	27/64"	5-3/8"	-027	21.02	17.87
7/32"	3-3/4"	-014	6.19	5.26	7/16"	5-1/2"	-028	21.93	18.64
15/64"	3-7/8"	-015	6.67	5.67	29/64"	5-5/8"	-029	24.37	20.71
1/4"	4"	-016	7.10	6.04	15/32"	5-3/4"	-030	26.01	22.11
17/64"	4-1/8"	-017	8.56	7.28	31/64"	5-7/8"	-031	27.28	23.19
9/32"	4-1/4"	-018	8.78	7.46	1/2"	6"	-032	27.32	23.22
19/64"	4-3/8"	-019	10.20	8.67					

PRECISION

Cobalt Jobbers Drills

For drilling tough, high tensile strength materials.

Heat resistant 8% cobalt and heavy-duty flute construction.

HIGH SPEED STEEL 135° SPLIT POINT RIGHT HAND



Size	OAL	Part No. 1-011A-	Reg. Net Price	NOW!	Size	OAL	Part No. 1-011A-	Reg. Net Price	NOW!
1/16"	1-7/8"	-004	\$4.92	\$4.18	19/64"	4-3/8"	-019	\$18.11	\$15.39
5/64"	2"	-005	4.92	4.18	5/16"	4-1/2"	-020	19.14	16.27
3/32"	2-1/4"	-006	4.92	4.18	21/64"	4-5/8"	-021	21.28	18.09
7/64"	2-5/8"	-007	5.17	4.39	11/32"	4-3/4"	-022	23.21	19.73
1/8"	2-3/4"	-008	6.24	5.30	23/64"	4-7/8"	-023	26.95	22.91
9/64"	2-7/8"	-009	6.31	5.36	3/8"	5"	-024	26.56	22.58
5/32"	3-1/8"	-010	7.06	6.00	25/64"	5-1/8"	-025	30.48	25.91
11/64"	3-1/4"	-011	7.49	6.37	13/32"	5-1/4"	-026	31.62	26.88
3/16"	3-1/2"	-012	8.34	7.09	27/64"	5-3/8"	-027	35.12	29.85
13/64"	3-5/8"	-013	10.05	8.54	7/16"	5-1/2"	-028	35.86	30.48
7/32"	3-3/4"	-014	11.02	9.37	29/64"	5-5/8"	-029	43.31	36.81
15/64"	3-7/8"	-015	11.69	9.94	15/32"	5-3/4"	-030	44.13	37.51
1/4"	4"	-016	12.33	10.48	31/64"	5-7/8"	-031	45.49	38.67
17/64"	4-1/8"	-017	14.12	12.00	1/2"	6"	-032	44.71	38.00
9/32"	4-1/4"	-018	14.83	12.61					

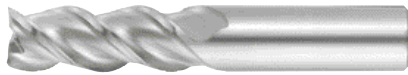
**ELITE Series**

45° HELIX LIST A345

3 Flute TiCN Coated Solid Carbide Center Cutting Single End Mills

For Aluminum

Advanced geometrics for high performance machining of aluminum.

**FEATURES:**

- Extra fine grain carbide.
- Full form ground flute shape.
- Eccentric primary relief and cylindrical land.
- Ultra high transverse rupture strength.

**MICROSHIELD™ TiCN - Titanium Carbonitride:**

Incorporation of Carbon into the TiN matrix to increase hardness and abrasion resistance. TiCN is an alternative to TiN for HSS & HSCo applications where additional wear resistance is required. Primary solid carbide applications are milling aluminum alloys and cast iron.

Mill Dia.	Shank Dia.	Length of Cut	OAL	Part No. 5-303C-	Reg. Net Price	NOW!
1/8"	1/8"	1/4"	1-1/2"	-61626	\$37.67	\$32.02
1/8"	1/8"	3/8"	1-1/2"	-61627	41.23	35.05
3/16"	3/16"	5/16"	2"	-61630	55.34	47.04
3/16"	3/16"	9/16"	2"	-61631	74.40	63.24
1/4"	1/4"	3/8"	2-1/2"	-61634	69.91	59.42
1/4"	1/4"	3/4"	2-1/2"	-61635	77.50	65.88
1/4"	1/4"	1-1/4"	4"	-61636	120.75	102.64
5/16"	5/16"	7/16"	2-1/2"	-61639	82.77	70.35
5/16"	5/16"	13/16"	2-1/2"	-61640	91.76	78.00
5/16"	5/16"	2-1/4"	4"	-61642	195.30	166.01
3/8"	3/8"	1/2"	2-1/2"	-61645	102.61	87.22
3/8"	3/8"	1"	2-1/2"	-61646	113.77	96.70
3/8"	3/8"	1-1/2"	4"	-61647	175.15	148.88
7/16"	7/16"	9/16"	2-3/4"	-61650	92.78	78.86
7/16"	7/16"	1"	2-3/4"	-61651	141.05	119.89
1/2"	1/2"	5/8"	3"	-61654	156.55	133.07
1/2"	1/2"	1-1/4"	3"	-61655	175.15	148.88
1/2"	1/2"	2"	4"	-61656	248.00	210.80
1/2"	1/2"	3-1/8"	6"	-61657	430.90	366.27



2 Flute Premium Solid Carbide End Mills

MINIATURE - CENTER CUTTING

Size	Flute Length	Part No. 5-100-	Reg. Net Price	SALE!
.005"	.015"	-52101	\$83.58	\$71.04
.010	.030	-52103	59.72	50.76
.015	.045	-52105	35.34	30.04
.020	.060	-52109	34.72	29.51
.025	.075	-52111	34.72	29.51
.030	.090	-52113	35.34	30.04
.035	.105	-52116	27.33	23.23
.040	.120	-52120	27.33	23.23
.045	.135	-52122	27.33	23.23
.050	.150	-52125	27.33	23.23
.055	.165	-52127	27.33	23.23
.060	.180	-52131	24.36	20.71
.065	.195	-52134	21.35	18.15
.070	.210	-52136	21.85	18.57
.075	.225	-52139	21.85	18.57
.080	.240	-52143	21.85	18.57
.085	.255	-52144	21.85	18.57
.090	.270	-52145	21.85	18.57
.100	.300	-52150	21.85	18.57

Series 121**FEATURES:**

- 1/8" shank diameter.
- 1-1/2" OAL.
- Micrograin 10% cobalt grade.



Designed for aggressive milling of most materials.



2 Flute Uncoated Solid Carbide Single End Mills

Designed for slotting, drilling, pocketing, and general purpose milling.

**FEATURES:**

- General purpose.
- 30° Helix carbide.
- 10% Micro grain carbide.
- Extremely rigid quality control to assure the tightest tolerances and consistency.
- Engineered to the highest quality with the best raw material & coatings for demanding applications.
- High Tech geometries manufactured on the most state of the art 5-axis CNC Grinders in the world.



Mill Dia.	Shank Dia.	Length Of Cut	OAL	Part No. 4-325-	Reg. Net Price	SALE!
1/16"	1/8"	3/16"	1-1/2"	-004	\$9.04	\$7.68
3/32"	1/8"	3/8"	1-1/2"	-006	9.04	7.68
1/8"	1/8"	1/2"	1-1/2"	-008	9.04	7.68
5/32"	3/16"	9/16"	2"	-010	14.87	12.64
3/16"	3/16"	5/8"	2"	-012	14.37	12.22
7/32"	1/4"	5/8"	2-1/2"	-014	17.38	14.77
1/4"	1/4"	3/4"	2-1/2"	-016	16.00	13.60
9/32"	3/8"	7/8"	2-1/2"	-018	21.56	18.32
5/16"	5/16"	7/8"	2-1/2"	-020	20.70	17.60
3/8"	3/8"	1"	2-1/2"	-024	27.50	23.38
7/16"	7/16"	1"	2-1/2"	-028	35.09	29.83
1/2"	1/2"	1"	3"	-032	41.78	35.51

DIAMETER TOLERANCES:
+0.0000"/-0.0020"



Buy In Package Quantity:
3 Per Pack

4 Flute Solid Carbide Center Cutting Single End Mills

Metric



Mill Dia. (mm)	Shank Dia. (mm)	Length of Cut (mm)	OAL (mm)	Part No. 1-326M-	Reg. Net Price	SALE!
1	3	3	38	-001	\$15.41	\$13.10
2	3	6	38	-002	12.28	10.44
3	3	12	38	-003	11.86	10.08
4	4	14	50	-004	16.03	13.63
5	6	16	50	-005	18.01	15.31
6	6	19	63	-006	22.09	18.78
8	8	19	63	-008	29.06	24.70
10	10	22	70	-010	36.83	31.31
12	12	25	75	-012	52.31	44.46
14	14	30	88	-014	85.93	73.04
16	16	32	88	-016	114.58	97.39
18	18	36	100	-018	130.94	111.30
20	20	38	100	-020	157.14	133.57

Buy In Package Quantity:
Up to 6mm 3 Per Pack

2 & 4 Flute Drill Point End Mills

90° INCLUDED

POINT ANGLE

**APPLICATIONS:**

• Drilling • Milling • Spotting • Chamfering • Countersinking

Size	Shank Dia.	Flute Length	OAL	2 Flute			4 Flute		
				Part No. 1-325DT-	Reg. Net Price	SALE!	Part No. 1-326DT-	Reg. Net Price	SALE!
1/8"	1/8"	1/2"	1-1/2"	-008	\$21.95	\$18.66	-008	\$21.95	\$18.66
3/16"	3/16"	5/8"	2"	-012	27.90	23.72	-012	27.90	23.72
1/4"	1/4"	3/4"	2-1/2"	-016	36.38	30.92	-016	36.38	30.92
5/16"	5/16"	13/16"	2-1/2"	-020	49.29	41.90	-020	49.29	41.90
3/8"	3/8"	1"	2-1/2"	-024	53.49	45.47	-024	53.49	45.47
7/16"	7/16"	1"	2-1/2"	-028	84.82	72.10	-028	84.82	72.10
1/2"	1/2"	1"	3"	-032	91.14	77.47	-032	91.14	77.47
5/8"	5/8"	1-1/4"	3-1/2"	-040	146.94	124.90	-040	146.94	124.90
3/4"	3/4"	1-1/2"	4"	-048	218.55	185.77	-048	218.55	185.77



4 Flute Extra Length TiAlN Coated Solid Carbide Center Cutting Single End Mills

Longer flute length to allow deeper cuts.

LIST C430



Mill Dia.	Shank Dia.	Length of Cut	OAL	Part No. 1-3244T-	Reg. Net Price	SALE!	Mill Dia.	Shank Dia.	Length of Cut	OAL	Part No. 1-3244T-	Reg. Net Price	SALE!
1/8"	1/8"	5/8"	2"	-001	\$35.19	\$28.15	5/16"	5/16"	1-5/8"	4"	-013	\$93.16	\$74.53
1/8"	1/8"	3/4"	3"	-002	53.32	42.66	5/16"	5/16"	1-1/2"	6"	-014	144.31	115.45
1/8"	1/8"	1"	3"	-003	53.32	42.66	3/8"	3/8"	1"	3"	-015	98.27	78.62
3/16"	3/16"	1"	3"	-004	59.83	47.86	3/8"	3/8"	1"	4"	-016	107.73	86.18
3/16"	3/16"	1-1/8"	3"	-005	59.06	47.25	3/8"	3/8"	2"	4"	-017	107.73	86.18
3/16"	3/16"	1"	4"	-006	65.26	52.21	3/8"	3/8"	1-1/2"	6"	-018	156.55	125.24
1/4"	1/4"	1"	3"	-007	68.82	61.94	3/8"	3/8"	3"	6"	-019	156.55	125.24
1/4"	1/4"	1"	4"	-008	72.85	65.57	1/2"	1/2"	1"	4"	-024	158.10	126.48
1/4"	1/4"	1-1/2"	4"	-009	72.85	58.28	1/2"	1/2"	2"	4"	-025	158.10	126.48
1/4"	1/4"	1-1/2"	6"	-010	98.27	78.62	1/2"	1/2"	1-1/2"	6"	-026	227.85	182.28
5/16"	5/16"	1"	3"	-011	87.58	70.06	1/2"	1/2"	3"	6"	-027	227.85	182.28
5/16"	5/16"	1"	4"	-012	97.81	78.25							

MICROSHIELD™ TiAlN - Titanium Aluminum Nitride:

TiAlN offers a higher level of thermal stability above TiN & TiCN with abrasion resistance. Ideal for high heat applications found in milling steels, stainless steels and high temp alloys with a hardness of 52 HRC and below.

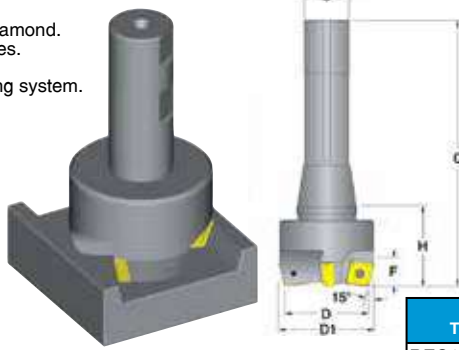


DORIAN TOOL Indexable 2" Diameter Recyclable 15° Face Mill

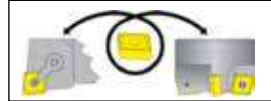
FEATURES:

- Recycles negative inserts, 80° diamond.
- Index insert with four cutting edges.
- High rate of material removal.
- Torx screw (TS-1032-5M1) locking system.
- Number of Inserts: 3.
- Insert: CNMG-432.
- Torx Key: T-20.

After the cutting edges are used on your turning toolholder, do not throw the insert away. It can be used in this milling cutter to utilize two more cutting edges that were not used in your lathe work.



CUTTING RAKE - NEGATIVE 7°:
For negative 80° diamond CNMG inserts.



KORLOY® CCMT Carbide Inserts 80° DIAMOND

FEATURES:

- Single sided.
- 7° relief angle.
- Screw on insert.
- Standard chip control.
- Use for medium cuts.
- Depth of Cut: 3/64" ~ 1/8".
- Feed Rate: .004" ~ .012"/rev.

GRADE TG-320: Excellent coated grade for general purpose cuts in steel & steel alloys. Equivalent to P10-P30 grade. Recommended cutting speed 500-1,000 SFM.

ASA Code	Insert IC Size	Hole Dia.	Thickness	Corner Radius	Part No. 1-2443-	Reg. Net Price	SALE!
CCMT-21.51	1/4"	.110"	3/32"	1/64"	-931	\$14.91	\$11.93
CCMT-32.51	3/8"	.173"	5/32"	1/64"	-932	15.31	12.25
CCMT-32.52	3/8"	.173"	5/32"	1/32"	-933	15.31	12.25
CCMT-431	1/2"	.216"	3/16"	1/64"	-934	20.31	16.25
CCMT-432	1/2"	.216"	3/16"	1/32"	-923	20.31	16.25



Tool Number	C	D	D1	d	F	H	Part No. 1-286A-	Reg. Net Price	NOW!
REC15-200-CN4-075	3-1/4"	2"	2-1/4"	3/4"	.45"	1-1/2"	-080	\$375.36	\$319.06
REC15-200-CN4-100	4"	2"	2-1/4"	1"	.45"	1-1/2"	-085	375.36	319.06
REC15-200-CN4-R8	5-5/8"	2"	2-1/4"	R8	.45"	1-3/4"	-090	473.60	402.56

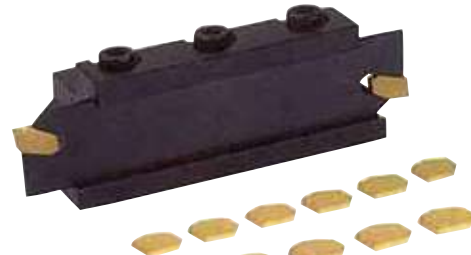
tmx Cut-Off & Grooving Tool Sets

FEATURES:

- Integral flexible clamping.
- Used on CNC's and universal turning machines.
- Applies for both right and left hand turning operations.

SETS INCLUDE:

- (1) Block
- (1) Blade
- (1) Extractor
- (1) Allen Wrench
- (10) TiN Coated Inserts.



Blade	Block	Insert Type	Part No. 6-895-	Reg. Net Price	SALE!
26-3	19-5	GTN 3	-903	\$509.82	\$433.35
26-4		GTN 4	-904	345.76	293.90
26-5		GTN 5	-905	357.60	303.96
32-3	19-6	GTN 3	-913	360.32	306.27
32-4		GTN 4	-914	364.87	310.14
32-3	25-6	GTN 3	-923	360.32	306.27
32-4		GTN 4	-924	364.87	310.14
32-5		GTN 5	-925	377.61	320.97

tmx "TURBO" Face Milling Cutters

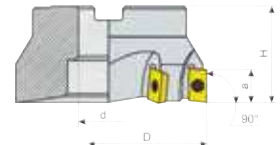
FEATURES:

- 90° square shoulder cutter body.
- APXT utility inserts make this an economical and multi-purpose choice.



TOOL ANGLES:

Cutting Rake Angle -12° to -6°
Radial Rake Angle -12° to -6°
Axial Rake Angle 7° to 10°
Setting Angle 90°



Dia. (D)	Arbor Hole (d)	Height (H)	(a)	No. of Inserts	Part No. 6-954-	Reg. Net Price	SALE!
1-1/2"	1/2"	1-37/64"	5/8"	4	-015	\$412.86	\$350.93
2"	3/4"	1-37/64"	5/8"	5	-020	409.69	348.24
2-1/2"	1"	1-37/64"	5/8"	6	-025	488.97	415.62
3"	1"	1-31/32"	5/8"	6	-030	561.42	477.21
4"	1-1/4"	1-31/32"	5/8"	8	-040	640.10	544.09
5"	1-1/2"	2-31/64"	5/8"	9	-050	873.32	742.32

RIGHT HAND CUT

tmx 3 Pc. SI-STUCR Boring Bar Set

FEATURES:

- For use with 60° triangle negative clearance TCMT inserts.
- Negative 3° side and end cutting edge angle.

SET INCLUDES:

- **Boring Bars:**
3/8", 1/2", & 5/8"
- **TiN Coated Inserts:**
6 pcs. TCMT-21.51
- 1 Torx Key
- 1 Spare Screw

Part No. 6-884-500
Reg. Net Price \$429.31

\$343.45

KORLOY® TCMT Coated Carbide Inserts TRIANGULAR

FEATURES:

- Single sided.
- 7° relief angle.
- Screw on insert.
- Standard chip control.
- Use for medium cuts.
- Depth of Cut: 3/64" ~ 1/8".
- Feed Rate: .004" ~ .012"/rev.

ASA Code	Insert IC Size	Hole Dia.	Thick.	Corner Radius	Part No. 1-2443-	Reg. Net Price	SALE!
TCMT-21.50.5	1/4"	.110"	3/32"	1/128"	-305	\$13.07	\$10.46
TCMT-21.51	1/4"	.110"	3/32"	1/64"	-927	13.07	10.46
TCMT-21.52	1/4"	.110"	3/32"	1/32"	-928	13.07	10.46
TCMT-32.51	3/8"	.173"	5/32"	1/64"	-929	15.70	12.56
TCMT-32.52	3/8"	.173"	5/32"	1/32"	-930	15.70	12.56



GRADE TG-320: Excellent coated grade for general purpose cuts in steel and steel alloys. Equivalent to P10-P30 grade. Recommended cutting speed 500-1,000 SFM.



KORLOY® Pro-X Mill Indexable Milling Cutters For Aluminum

FEATURES:

- Strong clamping provided by the concave grooves on the back surface of the inserts.
- Inserts feature a buffed top surface ensuring a smoother chip evacuation and reducing built-up edge.
- Through coolant system, longer tool life due to direct cooling injection into the cutting edge of the insert.
- Suitable for square shouldering and curved surface machining.
- High rake angle of insert provides good surface finish and low cutting load.



Specially designed for high speed machining of aluminum.



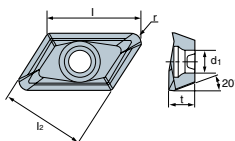
90° Approach Angle

Tool Number	Cutting Dia.	Shank Dia.	OAL	Cutting Length	No. of Inserts	Part No. 1-244-	Reg. Net Price	SALE!
PAXCA5150HR-A	3/4"	3/4"	5.12"	2.36"	1	-214	\$360.72	\$288.58
PAXCA5200HR-A	1"	1"	5.51"	2.36"	2	-215	399.79	319.83
PAXCA5300HR-A	1-1/4"	1-1/4"	5.91"	2.76"	2	-216	426.52	341.22
PAXCA5400HR-A	1-1/2"	1-1/2"	6.30"	2.76"	3	-217	579.21	463.37

KORLOY® XEKT Carbide Inserts

FEATURES:

- Single sided.
- Aluminum chip control.
- Use for aluminum cuts.
- Depth of cut - 0.004" ~ 0.157".
- Feed rate - 0.001" ~ 0.016"/rev.



80° Diamond for roughing aluminum.



GRADE H01: Excellent for aluminum and other non-ferrous metals. Equivalent to K10-K20 grade. Recommended cutting speed 1000-2600 SFM.

Insert Style	Dimensions					Part No. 6-XEK-	Reg. Net Price	SALE!
	l	l2	t	r	d1			
XEKT 19M504FR-MA	.709"	.646"	.197"	.016"	.171"	-19043	\$45.24	\$36.19
XEKT 19M508FR-MA	.709"	.646"	.197"	.031"	.171"	-19083	45.24	36.19
XEKT 19M516FR-MA	.689"	.646"	.197"	.063"	.171"	-19163	45.24	36.19
XEKT 19M532FR-MA	.689"	.646"	.197"	.126"	.171"	-19323	45.24	36.19



Collet Wrenches

FEATURES:

- The collet wrench simplifies insertion and removal of collets in the spindle nose on CNC lathes.
- Manufactured with a steel head and fins for greater strength and durability.
- Redesigned with an aluminum knurled handle for improved grip. Handle includes a cross-hole when additional torque is required, by simply inserting screwdriver to tighten or loosen collets.

NEW!



Model	Collet Size	Fins	Part No. 1-904	Reg. Net Price	SALE!
1005C	5C	3	-005	\$69.75	\$59.29
1016C	16C	3	-010	69.75	59.29
1003J	3J	4	-015	69.75	59.29



ER Collets

FEATURES:

- Unique self-releasing system eliminates sticking.
- Concentricity guaranteed to 0.0004".
- Wide holding range of each collet requires fewer collets and changes.
- Collapse approximately 1/32" while maintaining full accuracy.



ER 32 COLLETS

Size	Part No. 7-171-	Reg. Net Price	SALE!
1/8"	-330	\$32.82	\$27.90
1/4"	-338	32.82	27.90
3/8"	-346	32.82	27.90
1/2"	-354	32.82	27.90
5/8"	-362	32.82	27.90

ER 16 COLLETS

Size	Part No. 7-171-	Reg. Net Price	SALE!
1/16"	-161	\$25.90	\$22.02
1/8"	-163	25.90	22.02
3/16"	-164	25.90	22.02
1/4"	-166	25.90	22.02
5/16"	-167	25.90	22.02
3/8"	-169	25.90	22.02

ER 20 COLLETS

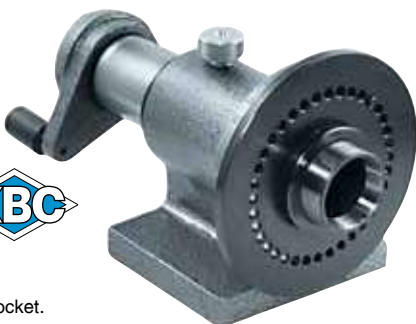
Size	Part No. 7-171-	Reg. Net Price	SALE!
1/8"	-205	\$27.49	\$23.37
1/4"	-211	27.49	23.37
3/8"	-217	27.49	23.37
1/2"	-223	27.49	23.37

5C Spin Index Fixture

save 20%

FEATURES:

- Spindle hardened and ground to 0.0004" T.I.R.
- Hardened and ground indexing plate with 36 ground holes for direct indexing in 10° increments and graduations in 5° increments.
- 10 vernier hole for 1° indexing.
- Base ground parallel to spindle socket.



SPECIFICATIONS:

Center Height 2-3/4"
Weight 15 lbs.

Part No. **8-552-003**
Reg. Net Price \$150.35

\$120.28

5C Collet Block Set



FEATURES:

- A simple and effective short jig, for machinist parallel, square or hex shapes as well as for cross hole drilling at 60°, 90°, or 120°.
- Standard nut closer and cam operated, quick-acting closer can be used on both square and hex blocks.
- Ground to .0005" flatness, squareness and parallelism ±0.0005".
- Made of hardened tool steel.

OVERALL DIMENSIONS:

1-3/4" x 1-3/4" x 3"

CAPACITY:

1/16" through 1-1/8"

Model No. CBS

Part No. **1-519-004**

Reg. Net Price \$147.55

\$125.42



5C Mount Precision Chucks



0.003" T.I.R. Repeatability

3 Jaw Self Centering Chucks:

Supplied with 5C Chuck, T-Wrench, 2 sets hard jaws (1 internal & 1 external).

4 Jaw Independent Chucks:

Supplied with 5C Chuck, T-Wrench, and 1 Piece solid reversible jaws.

Chuck Dia.	Chuck Type	Internal Clamping Range	Jamming Range	External Clamping Range	Hole Size 5C Chuck	Hole Size thru Chuck	Weight (lbs.)	Part No.	Reg. Net Price	SALE!
3"	3 Jaw	2-22mm	25-70mm	22-63mm	24mm	.630"	6.7	6-303-003	\$321.90	\$273.62
4"	3 Jaw	2-30mm	30-90mm	30-80mm	24mm	.866"	10.4	6-303-004	350.75	298.14
3"	4 Jaw	5-40mm	—	35-80mm	24mm	.860"	9.0	6-304-003	268.54	228.26
4"	4 Jaw	6-45mm	—	40-100mm	24mm	.980"	12.5	6-304-004	393.65	334.60



TJD T.J. DAVIES
RETENTION KNOBS FOR TODAY'S TECH.

BT & CAT40 Retention Knob Socket

NEW!

FEATURES:

- Fits T.J. Davis and other brand retention knobs.
- Made from alloy steel.
- Hardened to Rc 54-56.
- Black oxide finish.
- Lifetime guarantee.

Part No. **7-081-RKS002**
Reg. Net Price \$93.19

\$77.34

SPECIFICATIONS:

Shank Type BT & CAT40
Square Drive 1/2"
Flat Drive 3/4"



CAT40 V-Flange End Mill Holders

FEATURES:

- Balanced to 15,000 RPM at G6.3.
- High precision bore (H5) is best in industry.
- Taper ground to AT3 for maximum spindle contact.
- Individually inspected, tested and certified for accuracy.



Bore	Proj.	Dia.	Part No. 7-520-	Reg. Net Price	SALE!
1/8"	2.37"	.69"	-22907	\$153.62	\$130.58
3/16"	2-1/2"	.69	-22909	153.62	130.58
1/4"	3	.78	-22911	153.62	130.58
3/8"	3	1	-22915	153.62	130.58
1/2"	1-3/4"	1-1/2"	-22917175	153.62	130.58
1/2"	2-1/2"	1-1/4"	-22917212	153.62	130.58
1/2"	3	1-1/4"	-22917	153.62	130.58
1/2"	4.63	1-3/4"	-22918	213.90	181.82
5/8"	1-3/4"	1-1/2"	-22919175	153.62	130.58
3/4"	1-3/4"	1-3/4"	-22921175	173.17	147.19
3/4"	3	1-3/4"	-229213	153.62	130.58
1	1-3/4"	2	-22925175	173.17	147.19
1	4	2	-22925	173.17	147.19
1-1/2"	4-1/2"	2-1/2"	-22929	216.46	183.99

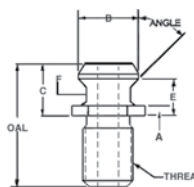
CAT40 V-Flange Pull Studs or Retention Knobs



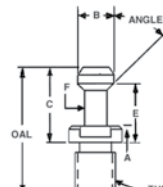
Although retention knobs often look very similar they are not interchangeable. The use of an incorrect knob or the misuse of a knob may result in injury or property damage. It is the responsibility of the end user to verify the supplied knob is correct for the machine.

Retention knob failures may occur for several reasons: improper knob configuration, misaligned machines, metal fatigue due to usage, over torquing, exceeding the machine's capability, etc.

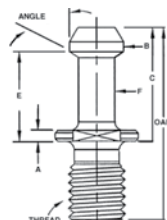
Retention knobs should periodically be inspected. If there are signs of excessive wear or damage, the retention knob should be replaced.



STYLE 1



STYLE 3



STYLE 6

THREAD: 5/8"-11
ANGLE: 45°



Style	OAL	A	B	C	E	F	Coolant Hole	Part No. 7-081-	Reg. Net Price	NOW!
3	2-1/4"	.236"	.590"	1.281"	.990"	.390"	—	-C40002	\$28.68	\$25.81
3	2-1/4"	.236"	.590"	1.281"	.990"	.390"	—	-C40008	34.41	30.97
6	2-1/8"	.120"	.590"	1.250"	.990"	.390"	.156	-C40020	31.54	28.39
1	1-1/2"	.120"	.740"	.625"	.440"	.490"	—	-C40044	28.68	25.81
1	1-1/2"	.120"	.740"	.625"	.440"	.490"	.250	-C40046	32.98	29.68
1	1-5/8"	.118"	.740"	.625"	.440"	.490"	.250	-C40054	32.98	29.68



Jacobs Heavy-Duty Ball Bearing Chucks

For extra heavy-duty drilling applications on production drilling machines, jig bore, milling machines, lathes and radials. Ideal for close tolerance drilling. The ball thrust bearing reduces friction in the chuck's closing mechanism.



Chuck Model	Capacity	Chuck Mount	Uses Key	Part No. 1-508-	Reg. Net Price	SALE!
14N	0 - 1/2	3JT	K3	-30221	\$337.00	\$286.45
16N	1/8 - 5/8	3JT	K4	-30227	433.49	368.47
18N	1/8 - 3/4	4JT	K4	-30233	652.00	554.20

6" Precision Milling Machine Vise With Swivel Base



save 25%

FEATURES:

- All important surfaces precision ground.
- Patented Griplock principle eliminates tilt of the movable jaw when it is clamped and also takes up wear.
- 4-jaw plate positions allow extra capacity with the jaw plates in the outside position.

SPECIFICATIONS:

Jaw Width 6"
Max. Jaw Opening 6-1/4"
Weight 77 lbs.

Part No. **8-251-106**
Reg. Net Price \$391.85

\$293⁸⁹



TITAN 5" General Purpose Bench Vise With Swivel Base

NEW!

save 20%

FEATURES:

- Incorporated anvil.
- Precision cast iron beam.
- Swivel base with position lock.
- Replaceable hardened steel jaws.

SPECIFICATIONS:

Jaw Width 5"
Max. Jaw Opening 4"
Throat Depth 2.36"
Weight 21.7 lbs.

Part No. **1-909-22013**
Reg. Net Price \$198.46

\$158⁷⁷



2-3/8" Toolmakers Precision Steel Vise

Made from hardened alloy steel.

FEATURES:

- Single piece construction with V-grooved jaws.
- All surface including jaws and base are precision ground square and parallel.
- Clamping slots at bottom easily affix to angle plates, etc.

SPECIFICATIONS:

Jaw Width 2-3/8"
Jaw Depth 1"
Max. Jaw Opening 2-1/8"
Body Length 4-3/8"
Weight 3.3 lbs.

Part No. **2-466-000**
Reg. Net Price \$135.06

\$101³⁰



save 25%



3-Jaw Lathe Chucks

SERIES 342 SEMI-STEEL BODY
MEDIUM DUTY VALUE LINE

FEATURES:

- Hardened scroll.
- Three hardened pinions.
- Maximum .003" TIR using nominating pinion.
- .001" repeatability using nominating pinion.
- 1 year warranty.

PLAIN BACK w/ 2-Piece Reversible Jaws

Chuck Dia.	Weight (lbs.)	Part No. 1-495-	Reg. Net Price	NOW!
5"	11	-0500	\$503.75	\$453.38
6"	25	-0600	542.50	488.25



Tool Post with Indicator

Reduce set up time with the tool post indicator. This unit is much faster to install and more rigid than a mag base indicator holder. It is the best way to align a work piece in a 4-jaw chuck.

FEATURES:

- Mounts in any tool post tool holder.
- Body made from high strength aluminum.
- Durable anodized finish.
- High resolution .0005" indicator included.

Supplied with a padded case.

Part No. **1-811-42000**
Reg. Net Price \$100.73

save 20%

\$80⁵⁸



Flycutter

Hardened, Ground and Balanced

FEATURES:

- Larger tool capacity.
- 1/4"-20 set screw allows for a larger smooth cut.
- Comes with a wooden holder.



SPECIFICATIONS:
Head Diameter 2-1/2"
Shank Diameter 3/4"
Tool Bit Size 1/2"

Part No. **1-512-110**
Reg. Net Price \$81.47

\$69²⁵

Vise Clamp Workstop

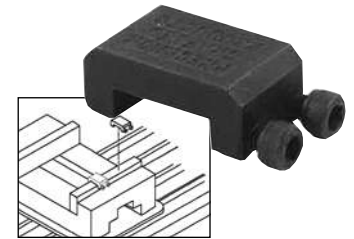
FEATURES:

- Fits most 6" milling machine vises.
- Clamps quickly and easily to top of jaw.

Part No. **1-541-161**
Reg. Net Price \$15.61



\$14⁰⁵



TECO Vise Mounting Kit

KIT INCLUDES:

- (2) 1/2"-13 x 3" Studs.
- (2) 1/2"-13 x 5/8" T-Nuts.
- (2) 1/2"-13 x Flange Nuts.
- (2) 1/2"-13 x Washers.
- (1) T-Slot Cleaner.

Part No. **1-903-90442**
\$25⁰⁶

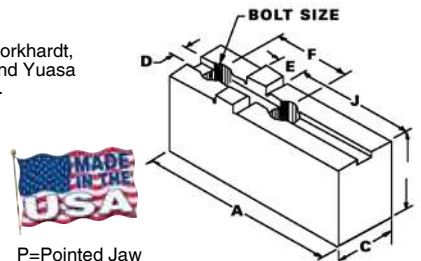


Soft Top Jaws American Standard Tongue & Groove (A.S.T.G.)

MEDIUM DUTY 1/8" TONGUE HEIGHT

For Bergman, Bison, Cushman, Huron, Rohm, Forkhardt, Pratt Burnerd America, SCA, SP, W&S, Nobel and Yuasa chucks. All Jaws are made from 1018 Mild Steel.

Chuck Size	STANDARD HEIGHT									Part No. 7-905-	Reg. Net Price Ea.	NOW!
	H&R Reference #	A	B	C	D	E	F	Bolt	J			
6"	HR-459-P	3-3/16"	1-5/8"	1-1/4"	5/16"	1/2"	1.50"	3/8"	1-11/16"	-002	\$42.73	\$40.59
8	HR-450	3-1/2"	1-5/8"	1-1/4"	5/16"	1/2"	1.75"	3/8"	1-5/8"	-003	33.21	31.55
8	HR-462-P	3-15/16"	1-5/8"	1-1/4"	5/16"	1/2"	1.75"	3/8"	2-1/4"	-004	46.68	44.35
10	HR-452	4-1/4"	1-7/8"	1-1/2"	1/2"	3/4"	2.12"	1/2"	1-15/16"	-005	42.73	40.59
10	HR-464-P	4-13/16"	1-7/8"	1-1/2"	1/2"	3/4"	2.12"	1/2"	2-11/16"	-006	55.38	52.61



SHAVIV Set C The Scraper Deburring Tool Set

THE FINISHING TOUCH...

Complete with Mango II. Model C blade holder (with key) & C42 scraper.

Mango II

Part No. 1-457-256

Reg. Net Price \$31.34

\$23⁵¹

SHAVIV Heavy Duty Deburring & Scraping Kit

SET INCLUDES:

- Mango II Handle
- Holder E
- Holder C
- Blades: E100P, E111, E200, E300, E600, E700, C42
- C Key

Part No. 1-457-370

Reg. Net Price \$69.64

\$52²³

TITAN EXO-BURR™ External Deburrers

FEATURES:

- Quickly repairs damaged threads on steel bolts including stainless steel and hardened steel, threaded rod, copper, brass, aluminum, plastics, and wood.
- Low speeds make this tool more effective. Recommended speed should not exceed 500 RPM in a clockwise direction only.
- Hardened HRC steel blades remain sharp even after multiple uses.



Capacity	Hex Shank	Part No. 1-909-	Reg. Net Price	SALE!
5/16 to 7/8" (8-22mm)	1/4"	-51950	\$120.67	\$96.54
7/64 to 7/16" (4-12mm)	1/4"	-51951	82.23	65.78



NOGA
simply sophisticated

S Tele Set Heavy Duty

Deburs steel, aluminum, plastic, brass and cast iron.

Model NG8350

Part No. 1-457-555

Reg. Net Price \$33.93

SET INCLUDES:

- NogaGrip 3 Handle
- S Holder
- (5) S10 Blades
- (5) S20 Blades

\$28⁸⁴

NOGA 007 Deburring Tool Set

Deburring, cleaning, finishing, and countersink.

SET INCLUDES:

- S100 Blade (for steel).
- S150 Blade (for plastic).
- RB handle (12mm hex, aluminum).
- OR ("O" ring grooves blade).
- RD 16.5 (RotoDrive countersink).
- RDE 18 (External RotoDrive countersink).
- TC (Thread cleaner blade).

Model SP1007

Part No. 1-457-525

Reg. Net Price \$93.83

\$75⁰⁶



cyclone
Manufacturing

Abrasive Media

50 LB. CARTONS



Glass Bead -

Used for honing, polishing, peening, blending, finishing and removing light burrs, frosting glass and cleaning most light foreign matter.



Description	Grit	Part No. 2-011-	Reg. Net Price	SALE!
Medium Glass Bead	60-100	-5002	\$92.42	\$83.18
Coarse Glass Bead	40-60	-5009	98.08	88.27
Fine Glass Bead	100-170	-5010	101.66	91.49

6 Pc. Diamond Needle File Sets



Gunsmiths, tool and die makers, jewelers, and stockmakers all rely on needle files to get the job done.

Supplied in a plastic pouch.

- ▶ THREE-SQUARE
- ▬ FLAT/WARDING
- ▼ KNIFE

- ROUND
- ◐ HALF ROUND
- SQUARE

Coarse Set - 250 Grit

Part No. 1-609-600C

Reg. Net Price \$67.73

\$54¹⁸

Fine Set - 600 Grit

Part No. 1-609-600F

Reg. Net Price \$60.22

\$48¹⁸



CRESCENT NICHOLSON

Mill Files

FEATURES:

- Two square edges.
- Single cut on edge and sides.
- File tapers toward the point for detail.



BASTARD CUT

Size	Quantity Per Box	Part No. 1-552-	Reg. Net Price/Ea.	NOW!
6"	12	-08354	\$12.24	\$10.40
8	12	-08497	14.72	12.51
10	12	-08642	19.13	16.26
12	6	-08737	31.21	26.53

PFERD Crimped Circular End Wire Brushes

Provide lighter brushing actions and superior finish when cleaning, removing rust and paint, smoothing, descaling, cleaning fettling from cast seams, light deburring.

Dia.	Wire Size	Trim Length	Part No. 1-621-	Reg. Net Price	NOW!
1-1/2"	.006"	7/16"	-031	\$28.18	\$23.95
1-1/2"	.012	7/16"	-032	25.81	21.94
3	.006	1	-034	37.00	31.45
3	.014	1	-035	28.54	24.26
3	.020	1	-036	27.70	23.55



1/4" SHANK



PFERD Mini-Grinder Brushes

Maximize your "Mini" grinder with the line of compact brushes. Designed specifically to fit the majority of the mini-grinders used today, our wide line and multiple arbor hole adaptation covers both light and heavy-duty cleaning jobs. Carbon steel wire.



5/8"-11
THREADED HOLE
WIRE SIZE .020"

Knot Style Cup Wheel
Wheel Dia.: 2-3/4"
Trim Length: 7/8"

Part No. 1-621-115

Reg. Net Price \$43.44

\$36⁹²

Stringer Bead Twist Wheel
Wheel Dia.: 4"
Trim Length: 3/4"
Face Width: 3/16"

Part No. 1-621-117

Reg. Net Price \$40.79

\$34⁶⁷



Bench & Pedestal Grinding Wheels

Size	Grit	Max. RPM	Part No. 1-595-	Reg. Net Price	SALE!
6" x 3/4" x H	36-M	4,456	-38007	\$26.85	\$22.82
	46-M		-38008	30.53	25.95
	60-M		-38009	26.85	22.82
	80-M		-38010	43.58	37.04
6 x 1 x H	36-O	4,456	-38012	45.93	39.04
	46-M		-38013	45.93	39.04
	60-M		-38014	45.93	39.04
	80-M		-38015	45.93	39.04
7 x 1 x H	36-M	3,760	-38017	38.54	32.76
	46-M		-38018	36.68	31.18
	60-M		-38019	36.68	31.18
	80-M		-38020	56.15	47.73
8 x 1 x H ⁴	36-O	3,600	-38022	46.64	39.64
	46-M		-38023	46.64	39.64
	60-M		-38024	53.09	45.13
	80-M		-38025	46.64	39.64

BROWN ALUMINUM OXIDE
General purpose off-hand work.



AZ Surface Grinding Wheels

VITRIFIED BONDED - AZ

8" x 1/2" x 1-1/4" - 3,600 RPM

Grit	Part No. 1-595-	Reg. Net Price	SALE!
46-H	-34350	\$47.36	\$40.26
46-I	-34351	47.36	40.26
46-J	-34352	47.36	40.26
46-K	-34353	47.36	40.26
60-H	-34354	47.36	40.26
60-I	-34355	47.36	40.26
60-J	-34356	47.36	40.26
60-K	-34357	47.36	40.26
80-K	-34358	47.36	40.26



PREMIUM BLUE ALUMINUM OXIDE:
Particularly suited for grinding HSS over 55RC. Specially recommended for grinding heat sensitive steels like aluminum and stainless steels. It grinds with an exceptionally cool cutting action. Requires minimum dressing.

Diamond Cut-Off Wheels

Type 1A1R

For cut-off and grooving applications. Use Diamond on non-ferrous material.



4" x .035" x 1-1/4"

Part No. 1-640-263
Reg. Net Price \$152.83

\$122²⁶

6" x .035" x 1-1/4"

Part No. 1-640-265
Reg. Net Price \$144.77

\$115⁸²

3M 2" Scotch-Brite™ Roloc™ Bristle Discs

FEATURES:

- Discs are designed to resist loading, extending service life.
- Continuous supply of mineral in abrasive-filled bristles provides a high cut rate and more uniform finish.
- Flexible yet durable bristles conform the work piece without damaging base material.
- Maximum Speed: 25,000 RPM.

Grit	Color	Part No. 1-630-	Reg. Net Price/Disc	NOW!
50	Green	-18730	\$22.81	\$19.39
80	Yellow	-18732	22.81	19.39
120	White	-18733	22.81	19.39



Beltbrasive® Dresser

For use on coated abrasive belts and discs for removing the load caused by grinding steel, brass, plastic or wood. When used at frequent intervals it will prevent most of the load from forming and considerably increase the life of the belt or disc. For use with 0-60 Grain Belts or 40-80 Grit Wheels for blade sharpening.



Model BCA-4
Part No. 1-607-003
Reg. Net Price \$72.54

\$61⁶⁶



Abrasive Rolls

1" ROLLS - 50 YARD LENGTHS
HEAVY-DUTY - FINEST QUALITY

FEATURES:

- Aluminum oxide is a tough, durable grain characterized by the long life of its cutting edges.
- A resin over resin bond provides strong heat and moisture resistance.
- The flexible backing can withstand heavy use without tearing.

Grit	Part No. 1-625-	Reg. Net Price	SALE!
60	-060	\$34.28	\$29.14
80	-080	31.99	27.19
100	-100	29.25	24.86
120	-120	29.25	24.86
150	-150	27.09	23.03
180	-180	29.25	24.86
220	-220	29.25	24.86
240	-240	30.09	25.58
320	-320	29.25	24.86
400	-400	30.09	25.58



ALUMINUM OXIDE

Constructed with a universal aluminum oxide grain and a flexible cloth backing. Ideal for use in many hand sanding applications such as deburring, blending and surface preparation.



SHUR-KUT® Premium Gold Stik-On Stearate Paper Discs

Heavy duty paper disc with anti-load stearate coating that is resin bonded for fast cutting and long life. Designed for industrial and automotive use. Ideal for metal, wood, paint and fiberglass.

Size	Grit	Part No. 1-613-	Reg. Net Price/Roll	SALE!
5"	80	-25078	\$69.04	\$58.68
	100	-25079	64.56	54.88
	120	-25080	64.56	54.88
	150	-25081	64.56	54.88
	180	-25082	64.56	54.88
	220	-25083	64.56	54.88
	240	-25084	64.56	54.88
	320	-25085	64.56	54.88



6" Diamond Plain Cup Wheels

Type 6A2C

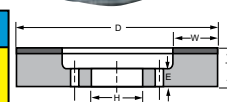
FEATURES:

- Resin bonded.
- 150 Grit,
- 100 Concentration - 1/8" Depth
- 75 Concentration - 1/16" Depth
- With countersunk bolt holes.



Use for grinding single point turning tools. Available in D11V9.

Thick. T	Depth W	Hole H	Part No. 1-640-	Reg. Net Price	SALE!
3/4"	3/4"	1-1/4"	-162	\$170.66	\$136.53
3/4"	1/2"	1-1/4"	-163	175.46	140.37
1"	3/4"	1-1/4"	-164	223.20	178.56



TRIUMPH PLUS Flap Discs

FEATURES:

- Gives up to 30x more life than a resin fiber-disc.
- Cuts much cooler and reduces glazing and loading with self sharpening flaps.
- Especially lightweight design reduces operator fatigue and noise levels.

Z3 ZIRCONIA: Premium 100% Zirconia Aluminum with cotton backing to provide flexibility. Offers maximum cutting capacity, strong edge stability and long-life.

TYPE 27 - Used when working on flat grinding surfaces. Most efficient when used between 0-15° angle.

TYPE 29 - Conical type has an angle excellent for contour and edge work. Best at more dramatic angle of 15-25°.

		TYPE 27			TYPE 29		
Size	Grit	Part No. 1-704-	Reg. Net Price/Ea.	SALE!	Part No. 1-704 -	Reg. Net Price/Ea.	SALE!
4-1/2" x 7/8"	40	-2302	\$7.97	\$7.17	-2322	\$7.97	\$7.17
13,300 RPM	60	-2304	7.97	7.17	-2324	7.97	7.17
	80	-2305	7.97	7.17	-2325	8.43	7.59





IP65 Extended Range Test Indicator

FEATURES:

- Automatic reversal.
- Revolution counter.
- Jeweled movement.
- Easy-to-read tilted dial.
- IP65 Protective Rating.

INCLUDES:

- (2) Dovetail Stems.
- (3) Tungsten Carbide Points: .080", .040", .120".
- 1 Year Warranty.

SPECIFICATIONS:

Range060"
Swivel Arc 210°
Dial Reading 0-15-0

Supplied with a molded case.

Part No. **1-815-355**
Reg. Net Price \$135.41

\$101⁵⁶

NEW!



save 25%

EDGE TECHNOLOGY

Indicator Holders

FEATURES:

- Designed to keep the indicator tip on a plane that intersects the spindle axis.
- Clamp Mount: Mounts to 1.75" boss that is on most CAT40 tool holders.
- Made from high strength aluminum.
- Durable red anodized finish.
- The unit clamps to the spindle nose without the need to remove tooling from the collet.
- Indicator clamp holds both dovetail and 5/32" post adapter.

SPECIFICATIONS:

Top & Bottom Arm Length 2-1/4"
Indicator Stem Hole 5/32" & Dovetail

3/8" Shank Mount

Model # 44-000

Part No. **1-811-44000**

Reg. Net Price \$100.73

\$80⁵⁸

Clamp Mount

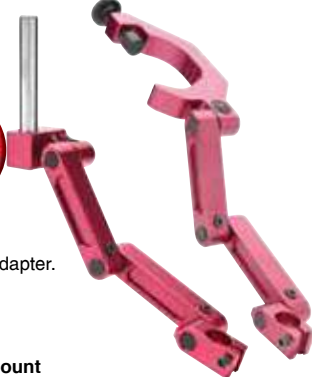
Model # 43-000

Part No. **1-811-43000**

Reg. Net Price \$116.23

\$92⁹⁸

save 20%



Mitutoyo

"QUICK-SET" Dial Test Indicator

Series 513 - Horizontal Type

FEATURES:

- Performs easy and accurate measurement of narrow or recessed areas, plus inside and outside diameters that dial indicators cannot access.
- No-clutch structure for automatic reversal of measuring direction.
- The glare-free flat crystal face has a scratch-resistant coating.
- High sensitivity and quick response because of jeweled bearings.
- One-piece bezel and crystal design with O-ring provides resistance to water and dust.

Part No. **1-808-513402**
Reg. Net Price \$173.00
\$147⁰⁵

INCLUDES:

- Indicator.
- Stem: 3/8" (8mm).
- Knurled Clamp Ring.
- Carbide Contact Point: .079" (2mm).

SPECIFICATIONS:

Range03"
Graduation0005"
Dial Reading 0-15-0



NEW!

Fowler
XTRA MAG

Magnetic Base & Test Indicator Kit

MAG BASE FEATURES:

- 2 universal ball sockets.
- Microfine adjustment screw.
- Extension Screw: 3-9/16"
- Dovetail mounting.

INDICATOR FEATURES:

- Range: .030"
- Reading: 0-15-0
- Graduation: .0005"
- Diameter Point: .080"
- Jewelled movement.
- Auto-reversing.

Part No. **52-585-100**

Reg. Net Price \$305.02

\$228⁷⁷

COMPLETE WITH SHOP HARDENED CASE & EXTRA .040" & .120" CONTACT POINTS.

save 25%

Virtually unlimited positioning as universal base!



iGAGING

IP54 Absolute Origin Digital Indicators

With SPC/USB Data Output

FEATURES:

- Stem Diameter: 3/8".
- Thread Size: #4-48.
- Resolution: 0.0005" (0.01mm).
- Repeatability: 0.0005".
- IP54 protective rating: Moisture and dust resistance.
- Absolute encoding technology: Memorize absolute origin zero.
- Ultra-Response measure speed.
- Inch/Metric conversion.
- High contrast LCD display.
- 330° display rotation.
- Preset and tolerance function.
- Ceramic contact point.
- Lug and flat back included.
- Battery 3V CR2032 included.
- Attachable finger lever included.

NEW!



Supplied in a protective case.

Range	Accuracy	Part No. 1-815-	Reg. Net Price	SALE!
0-1/2" (0-12.7mm)*	0.0005"/0.01mm	-430	\$130.43	\$104.34
0-1" (0-25.4mm)	0.0005"/0.01mm	-432	159.43	127.54
0-2" (0-50.8mm)	0.001"/0.015mm	-434	246.43	197.14

* Attachable finger lever not included.

3 Pc. Set-Up & Inspection Kit

KIT INCLUDES:

- Dial Indicator: 1".
- Dial Reading: 0-100.
- 22 Pc. Indicator point set.
- Mini mag base.

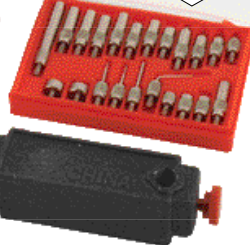
White Face

Part No. **8-135-0010**
Reg. Net Price \$65.88

\$46¹⁴



save 30%



NNOGA
simply sophisticated

Universal Magnetic Base

FEATURES:

- Five axis holder.
- Magnetic Pull: 176 lbs./ft.
- Black finished arms (bottom arm 5.26", top arm 5.24").
- Instant fixation in any position.
- Central locking mechanism with NNOGA designed spring loaded bearing.
- Powerful magnet with on/off switch.
- Universal swivel clamp holds a 6mm, 8mm, 3/8" stem, dovetail or back lug.
- Fast and easy to set up gauges.

Model No. MG61003

Part No. **1-457-910**

Reg. Net Price \$276.54

\$235⁰⁶



With Fine Adjustment On Top Clamp

EDGE TECHNOLOGY

Touch Off Gage

Allows standardization the way tool offsets are measured in the shop. Use this gage by lowering the tool down onto the contact face until the indicator reads zero. At that point the tool tip is exactly 4" from the surface the touch off gage is sitting on.

FEATURES:

- The rectangular base and recessed indicator face allow it to fit between vise jaws on a pair of parallel bars.
- Accurately establishes tool length offsets for CNC milling machines.
- The contact face (1/4" dia.) is lightly spring loaded to protect against overrun.
- Large 2.2" easy to read indicator face.
- Easy calibration check using 1-2-3 blocks.
- Body and contact face are made from red anodized 6061-T6 aluminum.
- Offset Height: 4" (101.6mm).
- Gage Graduations: 0.001".
- Gage Repeatability: 0.0002".



Part No. **1-811-52000**
Reg. Net Price \$193.73

\$154⁹⁸

Supplied with a padded case & manual.



0-6" IP54 Electronic Digital Caliper

With Fastener Size Reading

NEW!

Fast & accurate fastener size reading!
No more conversion needed!
Eliminate all the guess work!



FEATURES:

- Resolution: 0.0005" (0.01mm)
- Accuracy: 0.001"
- 4 Reading Modes: Inch, Metric, Inch Fractional, & Fastener Size.
- IP54 water and dust protective rating.
- Fastener Reading: 32nd (1/2, 4th, 8th, 16th)

Supplied with a fitted case.

Part No. **1-815-145**
Reg. Net Price \$81.29

\$60⁹⁷

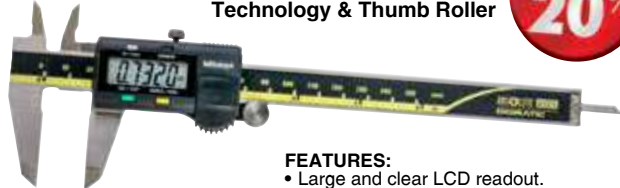


0-6" ABSOLUTE Digimatic Caliper

Series 500

With Absolute Encoder Technology & Thumb Roller

save 20%



FEATURES:

- Large and clear LCD readout.
- The ZERO/ABS key allows the display to be Zero-Set at any slider position and will allow return to the absolute (ABS) coordinate and display of the true position from the origin point (usually jaws-closed point).

Part No. **1-808-500196**

Reg. Net Price \$221.00

\$176⁸⁰

Without SPC Output.

Supplied in a fitted plastic case.



Dial Calipers

Series 505

STAINLESS STEEL

save 20%



"QUADRI" 4-Way
Measuring: Outside,
Inside, Step, & Depth.

FEATURES:

- Graduation: .001"
- White face for easy readability.
- Improved finish on sliding surfaces for longevity.
- Dial movement for ultra smooth sliding and high shock protection.

Supplied in a fitted plastic case.

Range	Part No.	Reg. Net Price	SALE!
0-6"	-505742	\$189.00	\$151.20
0-8"	-505743	250.48	200.38
0-12"	-505746	390.23	312.18



EURO-CAL IV

Electronic Calipers

save 20%



FEATURES:

- 4-way measurement: outside, inside, step, depth.
- Resolution: .0005" (.01mm) (fractions in 1/64" increments)
- Water resistant to IP54 standards.
- Absolute/Incremental measurement.



Range: 0-6" (0-150mm)

Part No. **54-100-3301**
Reg. Net Price \$246.36

\$197⁰⁹

Range: 0-12" (0-300mm)

Part No. **54-100-332**
Reg. Net Price \$373.95

\$299¹⁶



Bore Gages

Series 3089

FEATURES:

- Graduation: .0005".
- Probe Depth: 6".
- Carbide 2-point contacts for extended wear.
- All anvils laser marked for easy selection.
- Gage chart for quick and easy anvil selection.
- Ergonomic design with non-slip insulating grip.



Starrett No.	Measuring Range	Contacts	Spacers	Part No.	Reg. Net Price	SALE!
3089Z-131-715J	0.7-1.5"	10	2	-12456	\$457.00	\$388.45
3089Z-131-1424J	1.4-2.4"	6	4	-12457	457.00	388.45
3089Z-131-26J*	2.0-6.0"	11	4	-12458	511.00	434.35

* Includes one 2" extension.

Supplied with a sturdy aluminum case (cutouts for gage and all accessories).

Wire & Sheet Metal Gage



3-1/4" Diameter, 1/8" Thick

Part No. **1-397-1988**

Reg. Net Price \$27.62

\$20⁷²

save 25%

FEATURES:

- U.S. Standard.
- Hardened and tempered tool steel.
- For gaging uncoated sheet, plate iron & steel.
- Measurements from 0 to 36 on one face and shows decimal equivalents on reverse side.



Screw Pitch Gages

FEATURES:

- 28 Blades included are both V, American National & U.S. Standard 60° threads.
- Locking device at each end secures blades.
- Narrow leaf blade for internal and external thread.
- Each blade clearly marked with proper thread size.

Type	No. Of Groups	Blades Included	Part No.	Reg. Net Price	SALE!
English	2	1, 4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 16 inch 2, 18, 20, 24, 27, 28, 32, 36, 40, 44, 48, 56, 64, 72, 80 inch	-511	\$42.28	\$35.94
English/Metric	2	1, 4, 6, 8, 10, 11, 11-1/2, 12, 13, 16, 20, 28, 32, 40, 58 inch 2, .5, .75, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6 mm	-513	42.28	35.94
Metric	2	1, 25, .3, .35, .4, .45, .5, .55, .6, .65, .7, .75, .8, .85, .9 mm 2, 1, 1.1, 1.2, 1.25, 1.3, 1.4, 1.5, 1.6, 1.7, 1.75, 1.8, 1.9, 2, 2.5 mm	-515	42.28	35.94

1 x 2 x 3" Block Pairs

Ideal for mounting work for precision grinding and layout.

save 25%

FEATURES:

- Precision ground and hardened on all sides.
- 23 Holes per Block: 5 are tapped 3/8"-11, 18 are untapped.
- Parallelism: ±.0002".
- Hardness HRC 56-60.



Part No. **1-806-003T**
Reg. Net Price \$32.16

\$24¹²



4 Pc. Full Ball Hole Gage Set

SET INCLUDES:

- (4) Gages:
 - .125 to .200"
 - .200 to .300"
 - .300 to .400"
 - .400 to .500"



Heat-treated & precision-ground.

Part No. **8-412-002C**
Reg. Net Price \$37.20

\$29⁷⁶

For measuring inside diameters of small holes and slots (1/8-1/2").



Bore Gage

Inch/Metric

save 25%

FEATURES:

- Graduation: 1/64" (.1mm)
- Range: 1/32" - 5/8" (1-15mm)
- Made from polished stainless steel.
- Clearly etched graduations for inch on one side and metric on the other.
- Handy gage for measuring cylindrical bores, bearing work and for gaging slots.



Part No. **1-397-359**
Reg. Net Price \$18.23

\$13⁶⁷



GENERAL 6" Stainless Rule



Depth gage pocket clip.
Width 1/2" Front: Quick-reading 32nds & 64ths.
Back: Decimal Equivalents.

Part No. 1-805-300 **\$377**
Reg. Net Price \$4.44

4 Pc. Machinists' Steel Square Sets

Thin Blade With Wide Beam

FEATURES:

- Accuracy to workshop grade.
- Square accurate both inside and outside.
- Made of finest steel.
- Hardened blade.

Sizes Included	Part No. 1-397-	Reg. Net Price	SALE!
2", 3", 4", 6"	-026X	\$46.40	\$34.80
4", 6", 9", 12"	-028X	96.67	72.50

save 25%



Center Finder

FEATURES:

- Accurately and quickly locates center on round workpiece.
- Place the tool in drill chuck or collet and line up pointer with line scribed on shaft.

SPECIFICATIONS:

Shank Diameter 3/8"
Overall Length 4-1/8"

Part No. 1-397-730 **\$1078**
Reg. Net Price \$15.40

save 30%



Starrett Edge Finders

FEATURES:

- Contact Diameter: 0.200".
- Work surfaces may be located easily and accurately.
- Body and contacts are made of tool steel, hardened and ground lapped to close tolerances for diameter and concentricity.

Starrett #827A

Single End

Body Diameter: 0.375"
Part No. 1-855-53062
Reg. Net Price \$48.00

\$4224

Starrett #827B

Double End

Body Diameter: 0.500"
Part No. 1-855-53063
Reg. Net Price \$59.00

\$5192

OptiVISOR[®] Binocular Magnifiers

FEATURES:

- Precision binocular headband magnifier offering hands-free efficiency and eye-strain reduction
- Can be worn with or without glasses by anyone requiring close accuracy in their work.
- Ground and polished optical lenses.

Power	Focal Lgt.	Part No. 1-700D-	Reg. Net Price	SALE!
2.00X	10"	-DA-4	\$109.10	\$92.74
2.50X	8"	-DA-5	109.10	92.74



Starrett 2 Pc. 12" Combination Square Set Series 11H

GRADUATIONS:

No. 4R -
8ths, 16ths,
Quick Reading
32nds, 64ths

With reversible lock bolt, scribe, spirit level, and hardened steel, machine-divided blade with regular or satin chrome finish. Cast iron heads with black wrinkle finish.



Starrett #11H-12-4R
Part No. 1-855-50055
Reg. Net Price \$146.00
\$12410

Mitutoyo Coolant Proof Digimatic Micrometer Series 293

FEATURES:

- Resolution: .00005" (.001mm).
- Ratchet Stop.
- Auto power ON/OFF function.
- Certificate of inspection is included. It is not the type used to obtain calibration certificates.
- IP65 protection level, enabling use in environments exposed to cutting oil, etc. Anti-corrosion treatment is required after use.



IP65

Supplied in a fitted plastic case.

Range 0-1" (0-25mm)
Part No. 1-808-293340
Reg. Net Price \$268.00
\$22780

Fowler II Electronic Micrometer

XTRA-VALUE



FEATURES:

- Ratchet thimble.
- Large LCD display.
- Direct RS232 output.
- Carbide measuring faces.
- Jet black, grey, enamel finish.
- Resolution: .00005" (.001mm).
- Accuracy: $\pm 0.00016"/.004$ (up to 2").
- Absolute and incremental modes.
- Replacement battery: CR2032
- Supplied with a shop hardened case.



save 20%



FREE BALL ATTACHMENT!

Range: 0-1" (0-25mm)
Part No. 54-870-001 **\$14781**
Reg. Net Price \$184.76



Mitutoyo 0-4" Depth Micrometer Series 129 Interchangeable Rod Type

FEATURES:

- Satin-chromed finished throughout.
- Ratchet stop for constant force.
- Crisp, clear graduations on the thimble.
- Graduation: .001".

Part No. 1-808-129127 **\$22270**
Reg. Net Price \$262.00



Interchangeable rods, with lapped measuring end, are calibrated and tested at the factory. Rods can be adjusted in 1" or 25mm increments, to compensate wear on the measuring tip, with 2 supplied wrenches.

SPECIFICATIONS:

Range 0-4"
Base Length 2.5"
No of Rods 4
Supplied with a fitted plastic case.

TITAN 4.4x Magnifying Glass With LED Light

FEATURES:

- 4.4x magnification.
- Lens measures 2-7/8"
- 7-1/4" overall length.
- Non-distorting optical grade glass lense.
- Comfortable TPR rubber grip handle.
- TRP rubber framing for extra protection.
- Slide on/off switch to control light.
- Includes (3) LR44 batteries.



Part No. 1-909-15029
Reg. Net Price \$22.25
\$2003

IP54 Absolute Digital Height Gages

FEATURES:

- IP54 protective rating.
- High contrast LCD display.
- Hold Function.
- SPC data output port.
- INC Function.
- Absolute Encoding Technology: Memorize absolute origin zero.
- Single beam construction with hand wheel for optimize movement.
- Resolution: 0.0005" (0.01mm).
- AC Power or CR2032 battery.
- Ultra-Response measure speed.
- Work with ABS Indicator for extreme accuracy.
- Includes: Carbide tipped scriber & molded protective case.

Range: 0-12" (0-300mm)
Accuracy: 0.001" (0.03mm)

Part No. **1-815-630**

Reg. Net Price \$676.88

\$507⁶⁶

Range: 0-18" (0-500mm)
Accuracy: 0.002" (0.05mm)

Part No. **1-815-635**

Reg. Net Price \$1,015.40

\$761⁵⁵

Precision Magnetic Dial Protractor

With Center Punch

FEATURES:

- Marks center of flat, square, or round stock.
- Magnetic v-base.
- Hardened steel center punch.

Part No. **1-815-500**

Reg. Net Price \$135.33

\$108²⁶

SPECIFICATIONS:

Range 360° (0-90° / 4 quad)
Graduation 1°
Dial Face Diameter 2-1/4"
Max. Vee Opening 3.20"

Stainless Steel Center Gages

FEATURES:

- Made of hardened, spring tempered steel with satin chrome finish.
- Micro-fine graduations 14ths and 20th on one side, 24ths and 32nds on the other.

60° American National

Part No. **1-999-035**

\$7⁰³

55° Whitworth

Part No. **1-999-040**

\$8⁷⁰

Fowler 81 Pc. Rectangular SHOP-BLOX® Gage Block Set

Fowler "Economy/Workshop" grade gage block set is identical to standard sets in all respects, except for a wider range of tolerance which is more than adequate for a majority of shop needs. Blocks are rectangular, constructed of the finest grade of high carbon/chrome steel, fully stress relieved, hardened to 65 RC, lapped and mirror polished to a very low micro-surface finish. Blocks feature a low coefficient of thermal expansion, and they are carefully inspected for accurate size, parallelism, and flatness.

FEATURES:

- Accuracy ±.00005".
- Certificate of calibration traceable to NIST.
- Inspected according to meet NIST Federal Specification ASME B89. 1.9 - 2002 tolerances on length for inch gage blocks.

SET INCLUDES:

- 9 Blocks .1001" - .1009" (Steps of .0001")
- 49 Blocks .101" - .149" (Steps of .001")
- 19 Blocks .05" - .95" (Steps of .05")
- 4 Blocks 1" - 4" (Steps of 1")

Supplied with a high-quality fitted wooden case.

Part No. **53-672-081**

Reg. Net Price \$466.69

\$373³⁵

Fowler X-BLOX® V-Block Set

FEATURES:

- Two V-blocks with approx. 1-1/2" dia. clamping capacity, each measuring 1-1/2" square, and 2" long.
- Two V-blocks with approx. 1" dia. clamping capacity, each measuring 1-1/4" square, and 1-1/2" long.
- Corresponding dimensions for each pair are alike within .0005".
- Surfaces and V-Grooves are square & parallel within .0005".

4 Blocks & 4 Clamps

Part No. **52-475-500**

Reg. Net Price \$278.30

\$222⁶⁴

Supplied with a shop hardened case.

6 Pc. Adjustable Parallel Set

SET INCLUDES:

- (6) Parallels:
- 3/8 to 1/2"
- 1/2 to 11/16"
- 11/16 to 15/16"
- 15/16 to 1-5/16"
- 1-5/16 to 1-3/4"
- 1-3/4 to 2-1/4"

Part No. **8-410-065**

Reg. Net Price \$85.17

\$72³⁹

FEATURES:

- Set consists of two precision ground pieces which slide smoothly on each other.
- Locked into position by set screws.
- Can be quickly be inserted into openings and expanded to exact size, then measured with a micrometer.

Supplied in a vinyl case.

Magnetic Base With Fine Adjust

FEATURES:

- Magnetic Pull: 130 lbs.
- Base: 2-5/8" x 2"
- Overall Height: 9"
- Permanent magnetic type on-off switch makes it easy to rest on iron or steel.

Part No. **8-410-005F**

Reg. Net Price \$32.55

\$24⁴¹

Universal Bevel Protractor

FEATURES:

- Graduation: 1° Dial, 5 min. Vernier.
- Satin chrome finish on dial face and vernier for easy reading.
- Hardened stainless steel.
- Blade slides over full length, with knurled thumb lock.
- Vernier reading in 5 min. of the arc.
- Positive locking.
- Supplied in a fitted case.

6" Blade & Acute Angle Attachment

Part No. **8-570-208**

Reg. Net Price \$95.33

\$81⁰³

Starrett® 6" Machinists' Improved Level

Series 98 with Cross Test Vials

FEATURES:

- Ground and graduated main vials.
- Adjustable to a positive setting.
- Base of the levels feature an involute groove running the length of base, providing a reliable seat for round work.
- With the cross test level, it's possible to simultaneously level in both directions.

Starrett #98-6

Size: 6" (150mm)

Part No. **1-855-50441**

Reg. Net Price \$293.44

\$258²²

9" x 49" Turret Milling Machines

Model TUM-1VS (230V, 3 PH)
Part No. 6-265-007

\$12,895⁰⁰

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-007-N3 **\$16,050⁰⁰**

Model TUM-1VS (575V, 3 PH)

Part No. 6-265-007C

\$12,895⁰⁰

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-007C-N3 **\$16,050⁰⁰**

SPECIFICATIONS:

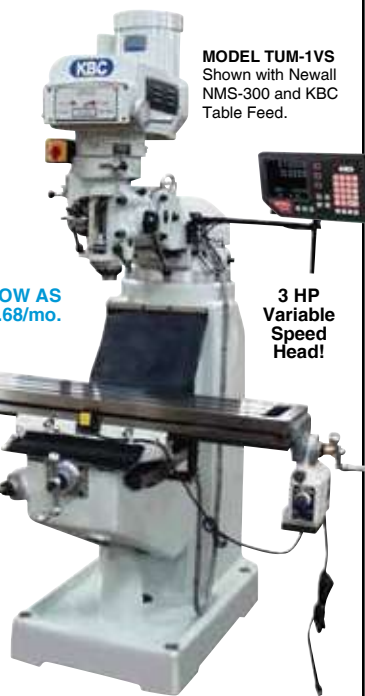
Longitudinal Travel Manual Model35"
Longitudinal Travel w/ Power Feed31"
Cross Travel / Knee Travel 12" / 16"
Table To Spindle (min-max.) 0-18-3/4"
Spindle To Column at 90° 6-3/4"-18-3/4"
Speeds (Var.) 70-4,200 RPM
Spindle Taper R8
Power Quill Feeds
(per rev.) 0.0017"/.0032"/.0053"
Quill Travel 5"
Spindle Motor ..3 HP, 230V or 575V, 3 PH

MODEL TUM-1VS
Shown with Newall
NMS-300 and KBC
Table Feed.



AS LOW AS
\$283.68/mo.

3 HP
Variable
Speed
Head!



NEWALL NMS-300 2-Axis Digital Readout



10" x 54" Heavy-Duty Milling Machines

Model TUM-3VS (230V, 3 PH)

Part No. 6-265-006 **\$13,995.00**

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-006-N3 **\$17,150⁰⁰**

Model TUM-3VS (575V, 3 PH)

Part No. 6-265-006C **\$13,995⁰⁰**

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-006C-N3 **\$17,150⁰⁰**

Model TUM-40VS (230V, 3 PH)

Part No. 6-265-009 **\$16,500⁰⁰**

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-009-N3 **\$19,655⁰⁰**

Model TUM-40VS (575V, 3 PH)

Part No. 6-265-009C **\$16,500⁰⁰**

With NEWALL NMS-300
DRO & Table Feed Installed

Part No. 6-265-009C-N3 **\$19,655⁰⁰**

SPECIFICATIONS:	TUM-3VS	TUM-40VS
Table Size	10" x 54"	10" x 54"
Longitudinal Travel Manual	32"	32"
with Power Feed	28"	28"
Cross Travel	16"	16"
Knee Travel	16"	16"
Spindle Speeds	70-4,200 RPM	70-4,200 RPM
Spindle Taper	R8	NST40
Quill Travel	5"	5"
Spindle Motor	3 HP, 3 PH	5 HP, 3 PH
Voltage	230/460V or 575V	230/460V or 575V

MODEL TUM-3VS
Shown with Newall
NMS-300 and KBC
Table Feed.

AS LOW AS
\$307.88/mo.



MODEL TUM-40VS
5 HP Motor, #40 NST
Spindle Taper,
Hardened & Ground
Square Ways on
Knee and Column.

6" x 26" Vertical Milling Machine 1 HP, 115V, 1 PH Motor

FEATURES:

- Dovetail ways with adjustable tapered gibs under the table and saddle 7 on the column face.
- Turret head tilts to either side 90° and swivels 120° right or left.
- Spindle feeds with a manually operated rapid feed lever or a fine feed handwheel.

Model VM-12-R8

Part No. 6-380-001 **\$6,095⁰⁰**

AS LOW AS \$137.68/mo.

SPECIFICATIONS:

Spindle Taper R8
Quill Travel 2-3/4"
Spindle Speeds (9) 230-2,520 RPM
Long. / Cross Travel 14-1/2" / 6"
Table Size 6" x 26"



COMPLETE WITH: FREE Cabinet floor stand, work light, front and rear rubber way covers, and drawbar for R8 collets.



7" x 31" Universal Vertical Milling Machine 1-1/2 HP, 115V, 1 PH Motor

FEATURES:

- Spindle feeds with a manually operated rapid feed lever or a fine feed handwheel.
- Dovetail ways with adjustable tapered gibs under the table and saddle and on the column face.
- Turret head tilts to either side 90° and swivels 120° right or left.

Model VM-22-R8

Part No. 6-380-002 **\$7,750⁰⁰**

AS LOW AS \$175.06/mo.

SPECIFICATIONS:

Max. Distance, Spindle to Table 20"
Spindle Taper R8
Spindle Speeds (9) 270-3,200 RPM
Quill Travel 3-1/8"
Cross Slide Travel 8"
Longitudinal Travel 17-5/16"
Vertical Knee Travel 21-1/2"
Table Size 7" x 31-1/2"



COMPLETE WITH: Front and rear rubber way covers, drawbar for R8 collets, and more!



Bench Model Milling/Drilling Machine 1-1/2 HP, 220V, 1 PH Motor

FEATURES:

- Manual quill feed both rapid spoke wheel and fine feed hand-wheel control with an easy-to-read front mounted depth gage.
- Handwheel dials graduated in 0.001" increments.
- Dovetail ways on table and saddle with adjustable tapered gibs.

2 FULL YEAR WARRANTY

Model PDM30

Part No. 6-125-030 **\$2,999⁰⁰**

AS LOW AS \$71.48/mo.

SPECIFICATIONS:

Drilling / End Mill Capacity 1-1/4" / 3/4"
Swing 15-7/8"
Max. Distance, Spindle to Table 18-7/8"
Spindle Taper / Travel R8 / 5"
Spindle Speeds (12) 150-2,500 RPM
Table / Cross Slide Travel 17" / 7-1/4"
Effective Table Area 28-3/4" x 8-1/4"
Overall Height 43"

COMPLETE WITH: 3" Face mill, safety guard, 3-1/2" angle vise, drawbar for R8 collets, rear rubber way cover, & 1/2" capacity drill chuck.



2 HP Metal Dust Collector

Ideal for metal chips and dust from sanders, grinders, cold saws, and chamfering.

Model KC-7300C
Part No. 6-125-015 **\$1,699⁰⁰**

FEATURES:

- Powerful 2 HP, 220V motor.
- Noise Level Reading at 60": 81 dB
- Large metal chips collection drawer.
- 2 step activation safety switch with line voltage interruption in case of power failure.
- 6" inlet with Y-inlet adapter with (2) 3" dust inlets connecting up to 2 metalworking machines.
- Comes with large paper filter and iron activated carbon filter.

2 FULL YEAR WARRANTY



KING 8" Bench Drill Press

115V, 1 PH

Model KC-108C
Part No. 6-125-019
\$159³⁹

2 FULL YEAR WARRANTY



SPECIFICATIONS:

Drill Chuck & Arbor 1/2"
Max. Distance Chuck to Base 10"
Max. Distance Chuck to Table 7"
Speeds (5) 620-3,100 RPM
Spindle Taper / Travel JT #33 / 2"

KING 13" Drill Press

1/2 HP with Dual Laser Guide System

2 FULL YEAR WARRANTY

FEATURES:

- Locking depth stop for repetitive blind hold drilling.
- 5/8" drill chuck and key included.
- 45° tilting table for angular drilling.
- Light socket incorporated into drill press head.

Model KC-116N

Part No. 6-125-020 **\$429⁹⁹**

SPECIFICATIONS:

Chuck Size 5/8"
Swing 13"
Stroke 3-1/8"
Table Size 12-13/16"
Spindle Taper 2 MT
Speeds (16) 220-3,600 RPM



3" x 79" Metal Belt Sander

Model KC-379MS
Part No. 6-125-007 **\$999⁰⁰**

FEATURES:

- Motor: 2 HP, 220V.
- Horizontal working height of 36".
- Head pivots up or down on base.
- Hinged top cover for access to entire length of belt for larger pieces.
- Comes with 80 grit pure zirconium sanding belt.
- Sanding belt rotates on 7-1/2" vented drive wheel and solid rubber rear wheel for maximum tracking and sanding control.



PALMGREN 17" Heavy-Duty Step Pulley Drill Press

1 HP, 120/240V, 1 PH Motor

FEATURES:

- Front mounted industrial paddle-type power switch.
- Precision ground t-slotted work table with coolant trough.
- Extended quill/spindle travel ideal for deep hole applications.
- Table tilts 45° right and left and rotates 360° around the column.
- Quick change vertical depth stop for accurate, repeatable feed length.
- LED readout of spindle speed and quill travel.
- Includes chuck with key and arbor.

SPECIFICATIONS:

Swing 17"
Spindle Taper / Travel 2 MT / 5"
Table Size 14-3/8" x 14-3/8"
Speed Range (16) 138-3,476 RPM

Model 80177

Part No. 1-549-80177

\$2,388⁵⁵



3 YEAR



22" Drill Press

With Safety Guard
1 HP, 115V, 1 PH Motor

FEATURES:

- Powerful 1 HP motor.
- 45° tilting table for angular drilling.
- Chuck safety guard with microswitch prevents spindle from running unless guard is in place.
- Line interruption electromechanical switch and safety guard with limit switch protection.

COMPLETE WITH:

Drill chuck and arbor, work light socket (less bulb), chuck safety guard with limit switch, manual and parts list.



Model KC-122FC-LS
Part No. 6-125-029

\$1,199⁰⁰



2 FULL YEAR WARRANTY

SPECIFICATIONS:

Drilling Capacity Steel 1-1/4"
Chuck Size 3/4"
Swing 22"
Table Size 18-3/4" x 16-1/4"
T-Slot Size 5/8"
Spindle Taper 4MT
Speeds (12) 180-4,200 RPM



16" Nova Viking DVR Drill Press

1 HP, 120V, 1 PH Motor

NEW!

FEATURES:

- Digital Variable Reluctance (DVR) Direct Drive Technology with Adaptive Control™ Software which works for you to produce optimum results in wood, metal, plastic and glass.
- Automatic electronic depth stop, quickly and accurately stops to the precise programmed depth.
- Electronic braking and forward/reverse.
- Intelligent speed selection and dial knob for precise speed adjustments.
- Convenient LED light and twin laser guide system.

Model 83705

Part No. 6-125-075

\$1,699⁰⁰

SPECIFICATIONS:

Chuck Size 5/8"
Drilling Capacity 5/8"
Swing 16"
Spindle Taper 2 MT
Speeds (Var.) .. 150-3,000 RPM

COMPLETE WITH:

5/8" Drill chuck & key, firmware USB cable, knock-out wedge, adjustment wrench, and hex keys.



[Click here for complete details.](#)



18" Nova Voyager DVR Drill Press

1 HP, 115V, 1 PH Motor

NEW!

FEATURES:

- Digital Variable Reluctance (DVR) Direct Drive Technology with Adaptive Control™ Software which works for you to produce optimum results in wood, metal, plastic and glass.
- Constant torque under load, depth and vibration sensors and emergency stop.
- Slow start pilot hole, tapping assist with chip breaking cycle and self start functions.
- Electronic braking and forward/reverse.

Model 58006

Part No. 6-125-076

\$2,399⁰⁰

SPECIFICATIONS:

Chuck Size 5/8"
Drilling Capacity 5/8"
Swing 18"
Spindle Taper 2 MT
Speeds (Var.) ... 50-3,000 RPM

COMPLETE WITH:

5/8" Drill chuck and key, firmware USB cable, knock-out wedge, adjustment wrench, & hex keys.



Radial Drill Press

2 HP, 230/575V, 3 PH Motor

Box Table, Coolant System and Work Light Included!

AS LOW AS
\$441.54/mo.



FEATURES:

- Geared spindle drive with six speeds selected by change levers.
- Three spindle feed rates selected by a single knob.
- Motorize power arm elevation.

SPECIFICATIONS:

Column Diameter 8-1/4"
Distance Spindle/Column 30-1/2"
Drilling Capacity 1-1/2"
Overall Height 85-5/8"
Quill Travel 7-7/8"
Spindle Taper 4 MT

Model RD-750
(230V, 3 HP)

Part No. 6-269-010

\$20,500⁰⁰

Model RD-750
(575V, 3 HP)

Part No. 6-269-010C

\$20,500⁰⁰



TENNSMITH 52" 16-Gauge Foot Squaring Shear

Model 52
Part No. 6-700-010

\$5,959⁷⁵

AS LOW AS
\$134.62/mo.

Hi-Carbon,
Hi-Chrome
Steel Blades
Included!



FEATURES:

- Upper and lower shear blades with unique adjustment features.
- Shear frame, bed and cutter head constructed of heavy-duty cast iron.
- Double-locking back gauge with embossed scales and vernier wheels for fine adjustment standard.

F.O.B. FACTORY
— TENNESSEE

SPECIFICATIONS:

Back / Front Gauge Range	30" / 37"
Max. Cutting Length	52-1/4"
Dimensions (less gauge)	61" x 36" x 42"
Floor Space, Gauges in Position	60" x 80"

**3 FULL
YEAR
WARRANTY**

TENNSMITH Universal Box & Pan Brake With Stand

AS LOW AS
\$78.87/mo.

F.O.B. FACTORY
— TENNESSEE



MODEL
HBU48-16

MODEL
HBU48-12

Model HBU48-12

Part No. 6-700-045 **\$8,199⁵⁰**

Model HBU48-16

Part No. 6-700-040 **\$3,309²⁵**

Model HBU48-22

Part No. 6-700-035 **\$2,177⁷⁵**



SPECIFICATIONS:

	HBU48-22	HBU48-16	HBU48-12
Capacity (mild steel)	22 GA.	16 GA.	12 GA.
Bending Length	48-1/4"	48-1/4"	48-1/4"
Maximum Depth of Body	3"	4"	4"
Maximum Lift of Beam	7/8"	1-1/4"	1-1/2"
Front to Rear Beam Adjustment	5/8"	5/8"	1"
Minimum Reverse Bend	5/16"	1/4"	1/4"
Min. Flange in Cap. Material	3/8"	1"	1"
Finger Widths	2, 3 & 4"	2, 3 & 4"	2, 3 & 4"

Automatic Cycle Bandsaws

FEATURES:

- Full auto cycle.
- 3 HP drive motor.
- 1" bi-metal blade.
- Cast iron construction.
- Net Weight:
1,800 or 2,200 lbs.
- Shipping Weight:
2,000 or 2,500 lbs.

AS LOW AS
\$458.77/mo.



Model BS-12A
12" Round Capacity
(230/460V, 3 PH)

Part No. 6-275-007 **\$21,300⁰⁰**

Model BS-12A
12" Round Capacity
(575V, 3 PH)

Part No. 6-275-007C **\$21,300⁰⁰**



MODEL
BS-15A

Model BS-15A
15" Round Capacity
(230/460V, 3 PH)

Part No. 6-275-009 **\$25,400⁰⁰**

Model BS-15A
15" Round Capacity
(575V, 3 PH)

Part No. 6-275-009C **\$25,400⁰⁰**



10" x 18" Horizontal Bandsaw

FEATURES:

- Powerful 2 HP drive motor.
- Infinitely adjustable hydraulic feed control.
- Built-in coolant system.
- Precision dial gage display for proper blade tensioning.

Model KC227-2
(230V, 1 PH)

Part No. 6-125-044 **\$5,999⁰⁰**

Model KC227-2
(575V, 3 PH)

Part No. 6-125-044C **\$5,999⁰⁰**

AS LOW AS \$135.51/mo.



SPECIFICATIONS:

Round Capacity at 45° / 90°	10"
Rectangular Capacity at 90°	10" x 18"
Rectangular Capacity at 45°	7" x 9-3/8"
Blade Size	1" x 122"
Blade Speed (4)	114-377 SFPM

**2 FULL
YEAR
WARRANTY**



Jaws 55 Ton Punch Pressure Ironworker

5 HP, 230V, 3 PH Motor

Hydraulic powered punching capacity with open tooling station, built-in stations for shearing plate and angle iron.

Call us for punches and dies and all the other available accessories for these versatile machines.

SPECIFICATIONS:

Max. Capacity	1-3/8" Dia. -1/2" Plate
Largest Standard Punch/Die	1-1/16"/1-1/4"
Bar Shear Rounds/Squares	1-1/8"
Max. Flat Thickness	3/4" x 4"
Max. Flat Width	1/2" x 12-3/8" x 14"
Max. Angle Shear Size	3" x 3" x 3/8"



Model 55T
Part No. 6-700-215C

\$25,212⁶⁰

AS LOW AS \$527.75/mo.



7" x 12" Dual Swivel Horizontal Bandsaw

1 HP, 220V, 1 PH Motor

**2 FULL
YEAR
WARRANTY**

Saw Blade & Coolant System Included!

FEATURES:

- Saw bow swivels 45° right and left.
- Portable - Take to the job and plug it in.
- Hydraulic feed control.

Model KC-712DS
Part No. 6-125-043

\$3,599⁰⁰

AS LOW AS \$85.78/mo.

SPECIFICATIONS:

Blade Size	3/4" x 93"
Capacity Rectangular	7" x 12"
Capacity Round	7"
Motor	1 HP, 220V, 1 PH
Blade Speeds (4)	85-235 RPM



PALMGREN Belt Grinder

FEATURES:

- Belt is adjustable for use in either the vertical or horizontal position or any position in-between.
- Front mounted on/off paddle switch.
- Simple belt tensioning and adjustment.
- Full belt guard and dust collection port.

Model 82401
Part No. 1-549-82401
\$567⁰⁰



SPECIFICATIONS:

Belt Size 1" x 42"
Belt Speed 1,800 SFPM
Motor 1/2 HP, 120/240V



Disc & Belt Sander

1 HP, 115V, 1 PH Motor

FEATURES:

- Can be switched from horizontal to vertical.
- Table can be switched from disc side to belt side and tilts 45° right and left.
- Heavy-duty cast iron construction.

Model KC-760L
Part No. 6-125-003
\$499⁹⁹

2 FULL YEAR WARRANTY

COMPLETE WITH: Miter gauge, 2-1/2" to 4" dust chute adapter, and sturdy enclosed cabinet stand.

SPECIFICATIONS:

Belt Size / Speed 6" x 48" / 1,250 SFPM
Disc Size / Speed 9" / 1,740 RPM
Dimensions 30" x 19" x 56"



KALAMAZOO 2" Belt Sander

1/2 HP, 115V, 1 PH Motor

FEATURES:

- 2" x 48" Belt.
- Multi-position sanding head.
- Hinged guard for quick belt change.
- Removable & adjustable 0-45° steel work table.
- Shipping Weight (approx.): 50 lbs.

Part No. 2-002-2FSM
\$983⁶⁰



PALMGREN 7" x 12" Horizontal Bandsaw

1 HP, 120/240V, 1 PH Motor

FEATURES:

- Automatic shut off at end of cut.
- Chip brush and rapid acting vise.
- Adjustable material work stop.
- Adjustable ball bearing blade guides delivers straight accurate cuts.
- Flood coolant system cools and cleans chips from the blade.

Model 83311
Part No. 1-549-83311
\$3,550⁴⁰

AS LOW AS \$84.62/mo.

SPECIFICATIONS:

Capacity at 45°
Rectangle 7" x 11-3/4"
Round 7"
Square 7"
Speeds (4) 96/132/178/260 FPM
Blade Size 3/4" x 0.035" x 93"



14-1/2" Capacity Gravity Feed Vertical Saw

1 HP, 115V, 1 PH Motor

Model EF-1459
Part No. 6-398-005
\$12,472⁰⁰

AS LOW AS \$274.37/mo.

FEATURES:

- Speeds (4): 70-525 SFPM
- Rugged simple construction for easy maintenance and long service life.
- Accurate gravity feed with hydraulic speed control and depth stop.
- Accepts blades from 1/4"-3/4" wide.



Variable Speed Vertical Bandsaws

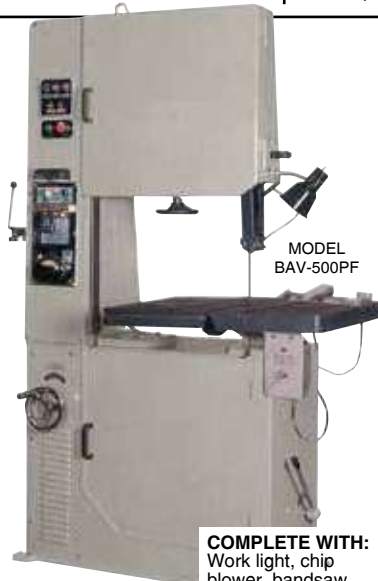
with Blade Welder & Power Table Feed

FEATURES:

- Use heavy cast iron blade wheels with rubber tire liners for traction and quiet operation.
- Built on cast iron frames with heavy duty construction throughout.
- Infinitely variable blade speeds so you can select the most efficient cutting speed for a wide variety of materials.
- Cast iron table with variable electric power table feed (12-1/2" travel).



AS LOW AS \$291.82mo.



COMPLETE WITH:
Work light, chip blower, bandsaw blade, grinding wheel, built-in blade welder, variable blade speeds, rubber tires for blade wheels, and variable electric power table feed.

Model BAV-500PF (230V, 3 PH)
Part No. 6-396-025
\$13,265⁰⁰

Model BAV-500PF (575V, 3 PH)
Part No. 6-396-025C
\$13,265⁰⁰

Model BAV-700PF (230V, 3 PH)
Part No. 6-396-035
\$14,150⁰⁰

Model BAV-700PF (575V, 3 PH)
Part No. 6-396-035C
\$14,150⁰⁰

SPECIFICATIONS

	Model BAV-500PF	Model BAV-700PF
Table Size	26-3/4" x 29-1/8"	26-3/4" x 29-1/8"
Table Tilt (R & L)	5°	5°
Cutting Capacity (width x thick.)	20" x 12-7/8"	28" x 12-5/8"
Cutting Speeds (var.)	82-1,496 FPM	65-1,292 FPM
Blade (width x length)	1/8-1" x 159-1/2"	1/8-1" x 161"
Motor	2 HP, 230/460V or 575V, 3 PH	2 HP, 230/460V or 575V, 3 PH



18" Vertical Bandsaw

1 HP, 220V, 1 PH Motor

Model KC-450
Part No. 6-125-047
\$5,499⁰⁰

AS LOW AS \$124.22/mo.

FEATURES:

- Variable Blade Speed: 82-384 FPM
- Infinitely variable speeds allows selection of the most efficient speed (FPM) for each piece.
- 18" W x 10" H capacity.
- Cast iron blade wheels with rubber tires for traction are mounted on shafts with taper roller bearings.
- Large cast iron work tables tilt R & L / F & B.

COMPLETE WITH: Built-in blade welder with grinder wheel, work light and blade shear that welds blades up to the saw capacity.



2 FULL YEAR WARRANTY

KENT USA 10" x 20" 3-Axis Auto Feed Surface Grinder

2 HP, 230/460V, 3 PH Motor

FEATURES:

- Precision hand scrapped turcite table and saddle ways.
- Rapid elevation motor for quick and easy positioning.
- 3-axis automatic movement with incremental downfeed in .0001" steps.
- High column design with 19" spindle center to table.
- 10" x 20" grinding capacity.
- Auto. lubrication system.

Model
SGS-1020AHD
Part No. 6-273-015
\$39,000⁰⁰

AS LOW AS
\$816.34/mo.

COMPLETE WITH: 8" x 20" Magnetic chuck, dust-suction, coolant system, and overhead parallel dresser.



KENT USA 10" x 20" 3-Axis Automatic Surface Grinder

3 HP, 230/460V, 3 PH Motor

COMPLETE WITH: 8" x 20" Permanent magnetic chuck, and flood coolant system with splash guards.

AS LOW AS
\$659.35/mo.

FEATURES:

- 3-axis automatic with incremental downfeed and electronic auto crossfeed.
- Precision cartridge type direct drive spindle (3,500 RPM).
- Heavy cast iron base absorbs vibration.
- Automatic lubrication.
- Wheel Size: 8" x 1" x 1-1/4".

Model KGS-1020AHD
Part No. 6-273-012
\$31,500⁰⁰



KENT USA 12" x 30" 3-Axis Auto Feed Surface Grinder

5 HP, 230/460V, 3 PH Motor

AS LOW AS
\$989.03/mo.

Model SGS-1230AHD
14" x 1-1/4" x 5" Wheel
Part No. 6-273-020
\$47,250⁰⁰

COMPLETE WITH: Electric chuck, dust-suction coolant, over head parallel dresser, auto lubrication system, wheel balancing base, and arbor.



Large Bore Engine Lathes

10 HP, 230/460V, 3 PH Motor

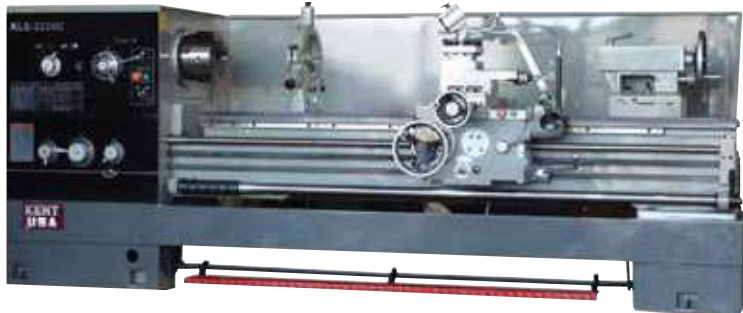
FEATURES:

- 10 HP main spindle motor, 12 speeds.
- Centralized lube system in headstock.
- Hardened and ground gears and bedways.
- D1-8 camlock, 4.12" spindle bore.
- Jog button, 4-way rapid traverse.
- Inch dials and leadscrews.
- Clutch style headstock.
- Safety foot brake.

COMPLETE WITH:

- 12" 3-Jaw Chuck.
- 16" 4-Jaw Chuck.
- Work Light.
- 8" Steady Rest.
- 1-3" Follow Rest.
- 4-Way Toolpost.
- Thread Chasing Dial.
- Full-Length. Splash guard.
- Coolant System.

AS LOW AS
\$706.45/mo.



SPECIFICATIONS:

Swing Over Bed 22" / 26"
Swing Over Cross Slide 12.5 / 16.5"
Distance Between Centers 60" / 80" / 120"
Spindle Speed (Range 12) 36-1,600 RPM
Spindle Nose / Bore D1-8 / 4.12"
Threads Standard (32) 2-28 TPI
Threads Metric Pitch (22) 1-14mm
Tailstock Quill Travel/Taper 6" / 5MT

Model KLS-2260C (22" x 60")
Part No. 6-273-067

\$33,750⁰⁰

With NEWALL NMS-300 Digital Readout Installed
Part No. 6-273-067-N3 **\$36,200⁰⁰**

Model KLS-2280C (22" x 80")
Part No. 6-273-068

\$35,000⁰⁰

With NEWALL NMS-300 Digital Readout Installed
Part No. 6-273-068-N3 **\$37,825⁰⁰**

Model KLS-26120C (26" x 120")
Part No. 6-273-069

\$41,600⁰⁰

With NEWALL DP-700 Digital Readout Installed
Part No. 6-273-069-N **\$49,750⁰⁰**



NEWALL
NMS-300 2-Axis
Digital Readout



NEWALL
DP-700 2-Axis
Digital Readout



12" Slow Speed Cold Cut Saw

4-1/2 HP, 220V, 1 PH Motor

2 FULL YEAR WARRANTY

FEATURES:

- Low 52 RPM blade speed is ideal for cutting ferrous metals.
- Mitering head pivots to the right or left positive stops at 45° & 90°.
- Quick action clamping vice secures workpiece.
- Control handle with integrated safety trigger.

[Click here for complete details.](#)

SPECIFICATIONS:

Cutting Capacity
Solid Round 2-3/8" / 2"
Hollow Round 4" / 3-1/2"
Square 3-1/4" / 3-1/4" / 3" x 3"
Spindle Speed 52 RPM
Max. Vise Opening 4-3/4"

COMPLETE WITH: Side roller, anti-splash guards, coolant system, and workshop assembly.

Model KC-315CS
Part No. 6-125-036
\$3,299⁰⁰

AS LOW AS \$78.63/mo.

12" Blade Not Included.

Optional 12" Cold Cut Saw Blade

Model KM-1200
Part No. 6-125-KM1200 **\$359⁰⁰**



7" x 12" Nova DVR Metal Cutting Bandsaw

1 HP, 120V, 1 PH Motor

nova voyager dvr
BY KING INDUSTRIAL

NEW!

FEATURES:

- Smart metal bandsaw combines common bandsaw features with state of the art technology.
- Powerful direct drive 1 HP high torque brushless motor without pulleys or belts to cause vibration.
- Digital Variable Reluctance (DVR) Direct Drive Technology with Adaptive Control™ Software.
- Includes a 240V conversion components kit which increases the HP of the motor.
- TRU-LOCK quick locking clamping vise system.

Model 59001

Part No. 6-125-080 **\$3,499⁰⁰** AS LOW AS \$90.55/mo.

SPECIFICATIONS:

Cutting Capacity:
90° Rectangular/Round 7" x 12/7"
45° Rectangular/Round 4-1/2" x 5/5"
Speeds 80-340 FPM
Blade 93" x 3/4" x 0.032"
Motor 15 AMP, 120V, 1PH, 60 Hz



COMPLETE WITH:

- Blade.
- Firmware.
- Adjustment Wrenches.
- Workstop.
- USB cable.
- Vertical Saw Table.



7" x 12" Variable Speed Mini Lathe

110V, 1 PH Motor

FEATURES:

- Bed ways are hardened and precision ground.
- Clear plastic safety guard automatically shuts lathe off when lifted.
- Power feed of apron along the bed towards the chuck.

SPECIFICATIONS:

Distance Between Centers.....12"
Spindle Bore.....3/4"
Spindle Speeds (var.).....0-2,500 RPM
Spindle Taper.....3 MT
Swing Over Bed/Cross Slide.....7 1/4-1/2"
Tailstock Spindle Taper.....2 MT
Thread Range.....12-52 TPI

Model KC0712ML

Part No. **\$1,099⁰⁰**

COMPLETE WITH: 3-Way jaw chuck, 4-way tool post, thread dial indicator rear chip guard, e-stop button, and centers.

2 FULL YEAR WARRANTY



12" x 36" Gearhead Metal Lathe

1-1/2 HP, 220V, 1 PH Motor

FEATURES:

- Line interruption switch system needs a restart after a power failure.
- Guideway and gears in headstock are all hardened and precision ground.
- Safety guard with limit switch protection.

Model KC1236ML
Part No. **\$7,969⁹¹**

AS LOW AS \$135.51/mo.

COMPLETE WITH: 6" 3-Jaw chuck, 8" 4-jaw chuck, 1/2" drill chuck, 3MT dead center and arbor taper, 10" DI-4 camlock face plate, steady and follow rest, imperial and metric gears, quick-change tool post, full length splash guard, chuck and hex keys, and thread chasing dial indicator.

2 FULL YEAR WARRANTY



14" x 40" Gearhead Metal Lathe

2 HP, 240V, 1 PH Motor

Model KC1440ML-2
Part No. **\$9,499⁰⁰**

AS LOW AS \$214.57/mo.

FEATURES:

- Line interruption switch system needs a restart after a power failure.
- Guideway and gears in headstock are all hardened and precision ground.
- Safety guard with limit switch protection.
- Spindle foot brake in the cabinet stand for easy operation and reliable safety.
- Speeds (8): 70-2,000 RPM.

2 FULL YEAR WARRANTY



18" x 60" High Precision Engine Lathe

7.3 HP, 230/460V, 3 PH

FEATURES:

- 7.3 HP main spindle motor, 12 speeds.
- D1-8 camlock, 3.2" spindle bore.
- Solid one-piece cast iron base.
- Hardened & ground gears & bedways.
- Centralized lube system in headstock.
- Inch dials and leadscrews.
- Full-length safety foot brake.

COMPLETE WITH: Follow rest, 2-way rapid traverse on apron, coolant system with full length rear splash guard, 4-position carriage stop, and 4-way indexable toolpost.

Model KLS-1860G
Part No. **\$27,250⁰⁰**

With NEWALL NMS-300 Digital Readout Installed
Part No. **\$29,700⁰⁰**

AS LOW AS \$570.39/mo.



16" x 40" High Precision Toolroom Metal Lathe

4 HP, 575V, 3 PH Motor

FEATURES:

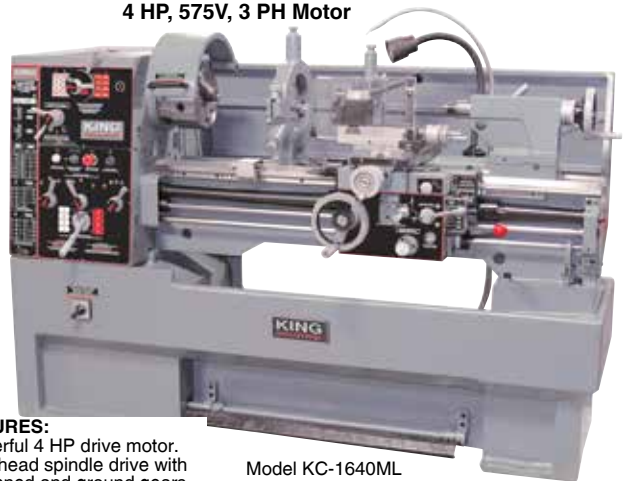
- Powerful 4 HP drive motor.
- Gearhead spindle drive with hardened and ground gears.
- Bedways hardened and precision ground.
- 4-way power feed.
- Inch/metric graduated dials.
- Lathe chuck safety guard automatically shuts lathe off when lifted.
- Speeds (16) 45-1,800 RPM.

Model KC-1640ML
Part No. **\$16,999⁰⁰**

AS LOW AS \$384.74/mo.

COMPLETE WITH: 12" 4-Jaw chuck, 8" 3-jaw chuck, work light, e-stop button, full-length rear chip guard, coolant system, & thread dial indicator.

2 FULL YEAR WARRANTY



17" x 40" Heavy-Duty Precision Lathe

7-1/2 HP, 230/460V, 3 PH Motor



Model ML-1740T
Part No. **\$33,000⁰⁰**

With NEWALL NMS-300 Digital Readout Installed
Part No. **\$35,270⁰⁰**

AS LOW AS \$690.75/mo.

FEATURES:

- Centralized lube system in headstock.
- D1-6 camlock, 3-1/8" spindle bore.
- Speeds (12) 36-1,800 RPM.
- Hardened and ground gears and bedways.

COMPLETE WITH: 10" 3-jaw chuck, steady and follow rest, 4-way tool post, halogen work light, and coolant system with full length rear splash guard.

NEWALL NMS-300 2-Axis Digital Readout





General Purpose Maintenance Sock

3" Dia. x 4' Long

Highly absorbent sock for industrial maintenance. You can absorb most non-aggressive fluids, oil or water based. The sock "skin" allows fluids to pass through quickly to the absorbent fill inside.

Box of 30
Part No. 1-835-706B
Reg. Net Price \$148.51
\$126²³



PALMGREN 14" Horizontal Roller Material Support Stand

FEATURES:

- A clamping mechanism on the column allows for quick and easy height adjustments.
- Chrome-plated, 2" x 14" ball-bearing roller head is designed to smoothly move up to 2,000 lbs. of flat stock.
- Locking screws provide added safety.
- Made of heavy-duty cast iron and steel.

SPECIFICATIONS:

Height 23" to 38-1/2"
Base 15" x 16-1/2"
Weight 47 lbs.

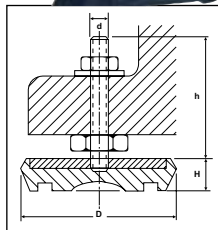
Part No. 1-549-MSH14
Reg. Net Price \$313.10
\$281⁷⁹



Machinery Mounts LOW SERIES

FEATURES:

- Extra tough rigid design.
- Extra tough support screw.
- Complete range of sizes with long screw length.
- Solid finish quality rubber base.
- Supplied with bolts, nuts & washers.



Load Per Mount/lbs.	Pad Dia. (D)	Pad Height (H)	Bolt Dia. (mm)	Bolt Length (h)	Part No. 1-915-	Reg. Net Price	SALE!
0-130	1-5/8"	9/16"	8	1-1/2"	-000B	\$7.04	\$6.34
70-220	2-3/8"	11/16"	10	3-1/4"	-00B	12.93	11.64
180-300	3"	13/16"	12	3-1/2"	-0B	15.54	13.99
300-700	3-3/8"	1"	12	3-1/2"	-1B	19.68	17.71
700-1,200	4-5/16"	1-1/8"	16	4-5/16"	-2B	24.23	21.81
1,200-2,000	5"	1-3/16"	16	4-5/16"	-3B	31.40	28.26

LiftAll® LoadHugger Ratchet Tiedown Flat Hooks

Secure your loads with these quality tiedowns!

2" WIDE ASSEMBLIES:

- Long Handle Ratchet
- 18" Fixed End Length
- 30 ft. Standard Assembly Length
- Ultimate Strength - 10,000 lbs.
- Working Load Limit - 3,300 lbs.

LiftAll Code: 61002
Part No. 3-003-30001
Reg. Net Price \$71.27
\$60⁵⁸



TITAN Magnetizer-Demagnetizer

FEATURES:

- To Magnetize: insert tool in and out of the "+" chamber.
- To Demagnetize: Insert tool in and out of the lowest step in the "-" chamber.
- If tool is still magnetized, repeat on a higher step.
- Size: 3.3" x 1.4" x 4.9"

Part No. 1-909-11145
Reg. Net Price \$5.06
\$4³⁰



BluBird Retractable Air Hose Reels with 3' Lead-In Hose

REEL FEATURES:

- 20 gauge powder coated steel construction.
- Smooth auto-rewind with locking 12 point ratchet gearing system.
- L-Shaped base with groove reinforcement ensuring a stable support.
- Heavy-duty spring vibration resistant mechanism.
- Adjustable hose stopper and 4 non-sag rollers reduces hose abrasion. Complete with rubber gasket.

HOSE FEATURES:

- 40% Lighter than standard rubber hoses and as light as hybrids.
- 300 PSI working pressure with a 4:1 safety factor.
- Ultra light, super strong rubber - resists abrasion and kinks.
- Constructed with high strength polyester braided reinforcement.
- Solid Brass fittings.



3/8" x 25' Hose
Model: BBR3825
Part No. 1-838-100
\$163¹³

3/8" x 50' Hose
Model: BBR3850
Part No. 1-838-105
\$210⁰⁴

1/2" x 50' Hose
Model: BBR1250
Part No. 1-838-110
\$231⁹⁸

TASCO Nextera® Over-the-Head Earmuff



The most comfortable, highest powered muff type ear protector in the industry. Heavy weight, high band pressure and high cost are no longer necessary to get the best.

FEATURES:

- 2 point suspension for even pressure distribution.
- Sewn, foam filled head pad for optimal comfort.
- Soft-Seal™ ear cushions provide maximum acceptance & comfort.
- NRR = 30, highest rated anywhere.
- Tested at NVLAP accredited laboratory.
- Meets CSA Class AL.

Part No. 1-700T-3006
Reg. Net Price \$45.97
\$39⁰⁷



NitriShield Stealth Xtra Disposable Gloves

100 PER BOX

FEATURES:

- Rolled cuff.
- 6 mil, 12" length.
- Powder-free.
- Black color hides soiling.
- Ambidextrous.
- 100% disposable black Nitrile.
- Textured finish.
- Industrial / food service grade.

Size	Part No. 1-711-	Reg. Net Price/Box	NOW!
Large	-6062L	\$27.59	\$23.45
Extra Large	-6062XL	27.59	23.45



Safety Glasses

FEATURES:

- Exclusive Duramass® scratch-resistant coating.
- Universal nose bridge.
- Strong, lightweight polycarbonate lens block 99.9% ultraviolet rays.
- Flexible bayonet temple design for a comfortable fit during long use.
- Near total seal of eye orbit assures the highest level of protection.

Lens Description	Part No. 1-711-	Reg. Net Price	SALE!
Clear	-CK110	\$3.32	\$2.99
Grey	-CK112	3.49	3.14
Rainbow Mirror	-CK118	5.74	5.17





Welding Cart

FEATURES:

- Designed to store and transport most MIG and plasma machines, shielding gas tanks and other welding equipment & accessories.
- Tilted top shelf allows access to welder controls.
- Side hooks for torch and cable storage.
- Additional shelves for storing accessories.
- Heavy duty molded rear wheels.

Part No. **1-701-41197** **\$153⁶²**
Reg. Net Price \$204.82

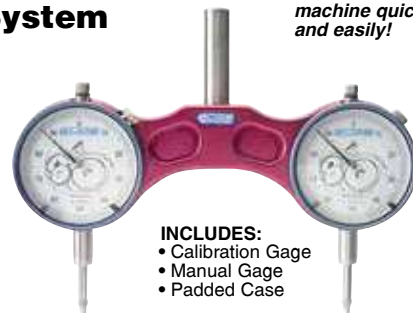


Pro Tram System

Square the head of a milling machine quickly and easily!

FEATURES:

- To use the Pro Tram simply lower unit to the table and adjust the head until both indicators read the same.
- Can be used with a sine bar or sine plate to adjust the head to precise angles.
- Calibration procedure accounts for any error introduced by worn collets.
- Large 2.2" easy-to-read indicator faces.
- Body made from red anodized aluminum.
- Indicator Repeatability: 0.0002"
- Indicator Graduation: 0.001"



INCLUDES:

- Calibration Gage
- Manual Gage
- Padded Case

1/2" Shank

Part No. **1-811-01000** **\$164⁶⁷**
Reg. Net Price \$193.73

GUARDAIR® Blind Hole® Safety Air Gun WITH 6" EXTENSION

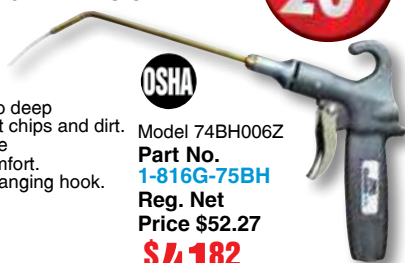
Specifically designed to clean out blind holes in metal, wood, and plastic work pieces.

FEATURES:

- Delivers a high velocity jet of air into deep crevices and blind holes to flush out chips and dirt.
- Ergonomic, Classic+ pistol grip-style handle provides maximum user comfort.
- Durable cast aluminum body with hanging hook.
- Safety air shield.
- 3/16" OD brass extension with 1/8" OD plastic stylus tip.
- 1/4" FNPT inlet.
- Meets OSHA standards.



Model 74BH006Z
Part No. **1-816G-75BH**
Reg. Net Price \$52.27
\$41⁸²



GUARDAIR® 1500 Gun Vac®

Serious cleaning power in the palm of your hands!



Great for all types of cleaning:
Metal chips, plastic pellets, food crumbs, wood shavings, dirt and dust.

INCLUDES:

Gun Vac®, 9" Crevice Tool, & High Filtration Collection Bag.

Part No. **1-816G-1500** **\$134³⁹**
Reg. Net Price \$179.18

ALIGN® Variable Speed Power Table Feed

FEATURES:

- Electrical and mechanical parts are made for easy maintenance.
- Design assures long trouble-free life.
- Special electrical relay protects against damage caused by power failure.

SPECIFICATIONS:

Motor 110V, 50/60 Hz., 1 PH
Speed (4-160) Max. 200 RPM
Max. Torque 150 in./lbs.



Part No. **2-011-211**
Reg. Net Price \$950.20
\$760¹⁶



Part No. **1-815-805**
Reg. Net Price \$63.35
\$57⁰²

FEATURES:

- IP54 protective rating: Moisture and dust resistance.
- Easy to read LCD display.
- On/Off button.
- Incremental function.
- Auto shut off.
- Universal fit.
- Hardened stainless steel beam.
- Double rail mounting brackets included.
- CR2032 Battery included.
- Installation parts and tool included.

SPECIFICATIONS:

Range 0-5"/125 mm
Resolution 0.0005"/0.01 mm/ 1/64"
Accuracy 0.001"

KENNEDY® 20" 7-Drawer Machinists' Chest Signature Series

LIMITED!
Quantities



FEATURES:

- Vinyl cushioned, steel core top handle.
- 6 adjustable drawer dividers.
- Drawers and top till wool felt-lined.
- Two piece welded I-beam drawer slides hold up to 90 lbs. per drawer.
- Brown wrinkle finish.



Model 520
20-1/8" x 8-1/2" x 13-5/8"
Weight: 35 lbs.
Part No. **1-823-00001**
Reg. Net Price \$839.89
\$671⁹¹

Mitutoyo® Quill Kit With ABSOLUTE Encoder

FEATURES:

- Push button controls for inch/mm, zero-set and on/off.
- Easy to read LCD with resolution of .0005" (0.01mm). 0-5" travel inch/mm.
- Powered by a single SR-44 battery lasting about 1 year with normal use.
- SPC Output for data transmission to data processors or a remote display.



Part No. **1-808-053906**
Reg. Net Price \$417.10
\$333⁶⁸



Filter, Regulator, and Lubricator Trios

Heavy-duty filter, regulator, and lubricator trio assemblies provide valuable time savings when installed.

FEATURES:

- Compact assembly.
- Faster installation time.
- Gauge packaged uninstalled for installation on either side.
- Plastic bowl is standard on filters and lubricators.
- These units also come standard with a gauge.
- Standard on regulators is 0-125 PSI.



Pipe Size (NPT)	Heavy-Duty Trios		
	Part No. 1-816-	Reg. Net Price	SALE!
1/4"	-8882AAG	\$374.34	\$318.19
3/8"	-8883AAG	374.34	318.19



TOOL ROOM ACCESSORIES



20 Pc. Steel Poc-Kit Feeler Gage Assortment

FEATURES:

- Each blade marked with thickness.
- Rounded ends and smooth edges for safety.



INCH 1/2" x 5"

Sizes (1 Each): .001", .0015", .002", .003", .004", .005", .006", .007", .008", .009", .010", .012", .014", .015", .016", .018", .020", .022", .024", & .025"

Part No. 1-958-19740 **\$5674**
Reg. Net Price \$63.04

METRIC 12.7 x 127mm

Sizes (1 Each): .05, .10, .15, .20, .25, .30, .35, .40, .45, .50, .55, .60, .65, .70, .75, .80, .85, .90, .95, & 1.00mm

Part No. 1-958-09740 **\$9277**
Reg. Net Price \$103.08



One-Handed EZS Clamps

Throat Depth 3-1/2"

FEATURES:

- Single-handed clamping and spreading of workpieces with up to 445 lbs. clamping force.
- EZS extend throat depth right to the outside edge of the pads - power spread across the entire pad.
- The upper section can quickly convert from clamping to spreading without tools.
- Ergonomic handle positioned behind the rail, enabling a powerful grip.
- Soft pressure caps optimize material protection and secure clamping.



Clamping Capacity	Spreading	Approx. Weight (lbs.)	Part No. 1-820B-	Reg. Net Price	NOW!
6"	6-1/2" - 14"	1.20	-EZS15	\$34.26	\$30.83
12	6-1/2" - 20"	1.80	-EZS30	37.68	33.91
18	6-1/2" - 25-3/4"	2.00	-EZS45	42.83	38.55
24	6-1/2" - 31-3/4"	2.30	-EZS60	47.91	43.12
36	6-1/2" - 43-1/2"	2.50	-EZS90	56.56	50.90



Toggle Clamps

Supplied with spindle assembly.

VERTICAL HANDLE HOLD-DOWN

Model	Overall Height	Height Under Bar	OAL	Holding Capacity (lbs.)	Part No. 1-910-	Reg. Net Price	SALE!
201-U	2-7/8"	5/8"	2-1/8"	100	-52010	\$25.93	\$22.82
202-	3-3/4"	15/16"	2-9/16"	200	-52020	27.48	24.18
202-B	3-15/16"	1-1/8"	2-9/16"	200	-52025	36.20	31.86
202-U	3-15/16"	15/16"	2-9/16"	200	-52026	26.94	23.70
207-TUL	3-7/8"	1-1/4"	5-13/32"	350	-52077	65.19	57.37
207-U	5-1/2"	1-1/4"	3-7/8"	500	-52070	35.22	30.99
207-LB	7-31/64"	1-1/2"	5"	500	-52086	48.69	42.84
207-USS	5-3/4"	1-1/4"	4-3/8"	400	-52079	91.08	80.15
210-U	7-1/2"	1-11/16"	5-1/2"	750	-52100	54.97	48.37
210-TU	5-3/8"	1-23/32"	5-7/8"	600	-52102	91.79	80.77
247-S	8-11/16"	2"	7"	1,000	-52471	99.26	87.35
247-U	8-11/16"	2"	7"	1,000	-52470	83.46	73.44
267-U	12"	3-1/4"	8-13/16"	1,200	-52670	134.06	119.97

-U "U" Shaped Holding Bar *Supplied with spindle assembly.



15 Pc. 6" x 12" Shim Stock Assortment

This handy shim stock comes ready packaged in dispenser cartons for easy use. Saves time, waste, and bother. Precision-gauged for accuracy.

BRASS SHIM STOCK

Sizes (1 Each): .001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015", .020", .025", .031"

Part No. 1-953-SF15
Reg. Net Price \$130.02

\$11702

STEEL SHIM STOCK

Sizes (1 Each): .001", .0015", .002", .003", .004", .005", .006", .007", .008", .010", .012", .015", .020", .025", .031"

Part No. 1-955-AF15
Reg. Net Price \$90.81

\$8173



KEN FORGING

"U" Clamps



Drop Forged Carbon Steel Natural Finish

Length	Width	Thickness	Size of Slot		Approx. Weight (lbs.)	Part No. 1-901-	Reg. Net Price	SALE!
			Width	Length				
4"	1-3/4"	3/4"	11/16"	3-1/2"	1	-064	\$10.67	\$9.07
6	2	7/8"	11/16"	5-1/2"	2	-066	18.52	15.74
8	2-3/8"	1-1/8"	13/16"	7-3/8"	4	-068	29.05	24.69
10	2-3/4"	1-1/4"	15/16"	9	6	-110	46.38	39.42
12	3-1/4"	1-3/8"	1-1/16"	11	11	-112	63.89	54.31

TEKZ 300 Pc. Snap Ring Assortment

SET INCLUDES:

- External (20) 1/8" (10) 5/32" (25) 1/4" (15) 5/16" (25) 1/2" (15) 9/16" (20) 5/8" (15) 13/16" (15) 1" (15) 1-1/16" (10) 1-1/8" (5) 1-1/4"
- Internal (15) 3/16" (20) 3/8" (15) 7/16" (15) 7/8" (20) 7/8"



Part No. 1-928-45212
Reg. Net Price \$18.60
\$1581



Supplied in re-sealable plastic case.

TEKZ 150 Pc. Pin Hitch Assortment



SET INCLUDES:

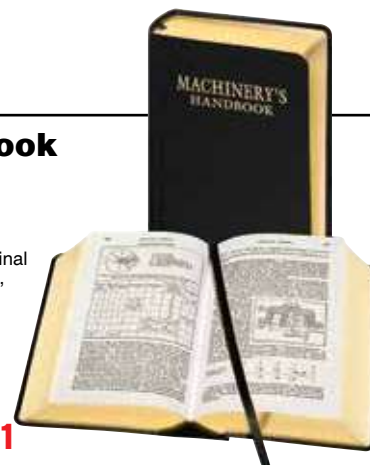
- (42) 3/32" x 1-3/16"
- (30) 5/64" x 1-5/16"
- (25) 5/64" x 1-9/16"
- (25) 7/64" x 1-5/8"
- (20) 9/64" x 1-3/4"
- (8) 5/32" x 2-15/16"

Part No. 1-928-45210
Reg. Net Price \$17.90
\$1522



Machinery's Handbook Collector's Edition

In commemoration of our 125th Anniversary, we are proud to present the Collector's Edition Replica of the original first edition of the Machinery's Handbook, published in January, 1914. For virtually its entire life in print, it has been a world-renowned reference and "the Bible" of the metalworking and mechanical industries.



1914 First Edition Replica

Part No. 1-961-001 **\$11851**
Reg. Net Price \$139.42



Machinist Jack Set

FEATURES:

- Range: Min: 3", Max: 4".
- Lifting capacity: 1,000 lbs.
- 1-1/2" jack base for added stability.
- Individual jacks consist of a heavy, steel cast base with adjustable steel screw and tilting swivel head, with a lock nut for permanent positioning.
- Set consists of 2 machinist jacks supplied in a shop hardened case.

Part No. 52-104-025 **\$3086**
Reg. Net Price \$36.30





Tool Black® Liquid

FEATURES:

- Fast, inexpensive alternative to black oxide.
- Imparts a tough, dull black protective finish to ferrous metal parts.
- Ideal for prototypes, repair parts, and general machine work.
- No special ventilation required.
- One quart of Tool Black® covers 50 to 75 square feet, however coverage varies with application technique.
- Prevent® is ozone safe.



1 Quart
Part No.
1-958-45110
Reg. Net
Price \$128.92
\$109⁵⁸



Fine Metal Nib Paint Markers

Squeeze Action, Oil-Based

Color	Part No. 1-124-
White	-1295
Black	-1323
Yellow	-1324
Red	-1326
Blue	-1500
Green	-1600
Neon Orange	-1700
Neon Yellow	-1900
Nuclear White	-3000
Metallic Gold	-3011
Metallic Silver	-3012

Press tip and squeeze barrel to draw lines, mark, write, and color code parts.

FEATURES:

- Water-resistant.
- Quick-drying.
- Heavy duty, 1.4 mm stroke width.
- Marking range: -50 F° to 150 F°.

YOUR CHOICE

NOW! \$4⁷⁵

Reg. Net Price \$5.59



Model 500 Starter Special

FEATURES:

- Completely portable.
- 4' nylon braided coolant line.
- 5/16" Diameter x 6" Long brass nozzle.
- Output from each nozzle is regulated by a single knob on the control.
- Mist spray may be turned on or off instantly to coordinate with the cutting cycle, and the spray mix made lean or rich as needed.

INCLUDES:

- (1) Model 100N mist coolant system with 1 gallon stainless steel tank.
- (1) Adjustable magnetic nozzle positioner.
- (1) Sample formula 77 concentrated coolant.
- (1) 1 gallon formula 78 concentrated coolant.



Part No.
1-437-500
Reg. Net
Price \$516.15



\$438⁷³



Junior Pump Oilers

Constructed for industrial applications, these steel pump oilers have double seamed or drawn steel bases. Spouts are removable from plated top cap & handle assembly. Delivers a drop or a stream of oil and stays primed for instant use. Powder coated copper bronze finish with zinc plated top cap.

Capacity	Spout	Part No. 1-914-	Reg. Net Price	SALE!
12 oz.	8" Rigid	-700	\$34.84	\$29.61
12 oz.	8" Flexible	-707	34.84	29.61
12 oz.	8" Angle	-720	34.84	29.61



Mist or Flood Coolants

Formula 77 for Tougher Service

For mist and flood cooling. Highly recommended where tougher machining conditions require greater lubricity, where material is very abrasive, or tool pressure is exceptionally great.

1 Gallon Plastic Bottle
Part No. 1-437-771
Reg. Net
Price \$96.87
\$87¹⁸

Formula 78 for Light Duty Service

For Mist Systems. Chemical base mist coolant that dissolves in water to a clear solution. Meets OSHA standards. Clings to the tool to reduce friction.

1 Gallon Plastic Bottle
Part No. 1-437-781
Reg. Net
Price \$92.61
\$83³⁵



COOLANT KING™

SOLUBLE OIL
METALWORKING FLUID

FEATURES:

- Designed for all cutting and turning applications where a soluble oil is desired.
- An excellent choice of machining materials such as Titanium, Inconel 718, Rene 41, Waspalloy, Cobalt based Super Alloys, Aluminum, Stainless Steel and other Aerospace materials.
- Exceptionally good bacteria and mold control ensure a long life and minimize the use of other additives.
- Outstanding lubricity and corrosion control with EP additives provide long tool life.

1 Gallon

Part No. 1-123-185
Reg. Net Price \$82.80

\$74⁵²



WATER SOLUBLE!



Economy Drum Mixer

The easiest way to start automatic mixing at your drum. Most effective for smaller shops where constant concentrations is required.

FOR MIXING & DELIVERING METALWORKING FLUIDS.

FEATURES:

- 30 day warranty.
- 48" discharge tube.
- 14 metering tips included for concentrations of 1% to 20% (ratios 4:1 to 99:1).
- Maximum viscosity of 500 SUS.
- Check valve for precise mixing.
- Works on barrels or totes.
- 4.8 gallons per minute capacity.
- In/out 1/2" NPT fittings.

Model MIX05120

Part No. 1-122-030
Reg. Net Price \$337.90

\$287²²



Aqua Bearing Grease Water Resistant

Specially formulated bearing grease which withstands the effects of running water and provides excellent, long lasting lubrication even when fully submerged in fresh or salt water. It resists water washout and provides excellent corrosion resistance. Reduces wear and grease consumption by extending re-lubrication intervals.

Part No.
1-444-70514
Reg. Net
Price \$48.07
\$40⁸⁶



LittleGIANT NO-KORODE Submersible Pump

FEATURES:

- Highly corrosion-resistant pump motor housing of metal and glass-filled polymer which aids in heat dissipation.
- Oil-filled may be used in vertical or horizontal applications.
- Nylon impeller and pumping head with smooth inlet and 1/4" male NPT outlet.
- Equipped with a filter screen which is easily removed for cleaning.
- Must be operated submersed.
- 210 gallons per hour at 1'.
- Shut off at 10.2' 4.4 PSI.



For mild acids, alkalis, and hard water.

Model NK-1
Part No.
1-440-526003
Reg. Net
Price \$443.79
\$377²²



GENERAL Carbide Point Scriber



FEATURES:

- Screw chuck for reversing tungsten carbide point when not in use.
- Knurled aluminum handle provides maximum control and comfort.
- Tungsten carbide tip marks hard materials including hardened steel, stainless steel, ceramics and glass.
- Replaceable point and convenient pocket-clip.
- Overall Length: 5-5/16"

Model 88

Part No. 1-805-088
Reg. Net Price \$11.24

\$9⁵⁵

Replacement Point
Part No. 1-805-88P
ONLY! \$6.36

Eklind 13 Pc. Hex-L Long Key Set

FEATURES:

- Made with Eklind® Alloy Steel.
- Heat Treated for optimum strength and ductility.
- Finished with Eklind® Black Finish to resist rust.
- Plastic holder firmly retains each key in a size marked hole.
- Key holders are color-coded, red for inch sizes and blue for metric sizes.

SET INCLUDES:

- Sizes - .050", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 5/16", and 3/8".



Part No. 1-900-10213
Reg. Net Price \$23.89

\$20³¹

Starrett Angle Meter

FEATURES:

- Large readable scale for accurate reading from 0°-90° in any quadrant.
- Measures any angle, pitch or slope.
- Handy rise, run, angle, and pitch information on back of tool.
- Magnetic base frees hands when used on ferrous surfaces.



Starrett #AM-2

Part No. 1-855-36080
Reg. Net Price \$25.46

\$21⁶⁴

SK Adjustable Wrenches

FEATURES:

- Adjustable wrenches provide a wide capacity range in a single tool when it is impractical to carry a full set of wrenches.
- The finish on the adjustable wrench is a cobalt-based coating for rust and corrosion protection.



Size	Capacity	Length	Part No. 1-931-	Reg. Net Price	SALE!
4"	0.50"	4.00"	-8004	\$61.68	\$52.43
6"	0.75	6.25	-8006	53.96	45.87
8"	0.94	8.06	-8008	53.58	45.54
10"	1.13	10.13	-8010	76.38	64.92
12"	1.31	12.25	-8012	118.45	100.68
15"	1.63	15.00	-8015	167.55	142.42

12 Pc. Screw Extractor Set

For removing broken screws, bolts, studs, and pipes.
Sizes: #1 to #6.

Part No. 1-397-6718
Reg. Net Price \$30.92
\$26²⁸



Supplied in a plastic case.

wiha 5 Pc. Round Blade Screwdriver Set with Wiha-SoftFinish® Handle

Our Most Comfortable Industrial Drivers Ever!

FEATURES:

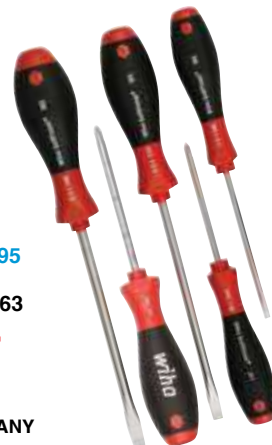
- Handle molded on to blade for a permanent bond.
- Safe molded on Cushion Grip, won't slide off.
- Shafts are anti-corrosion hard chrome plated.
- Ergonomic shape reduces hand fatigue.
- Special hardening for longest tool life.
- Achieve more torque with less force.
- Micron vapor chromed non slip tips.
- Precision machined for exact fit.
- Lifetime Guarantee.

SET INCLUDES:

- Slotted: 1/8" x 4", 5/32" x 4", 1/4" x 6".
- Phillips: #1 x 3", #2 x 4".

MADE IN GERMANY

Part No. 1-939-30295
Reg. Net Price \$74.63
\$63⁴⁴



3 Pc. Expanding Transfer Punch Set

FEATURES:

- Compact set of 3 takes the place of numerous individual solid punches.
- Each punch expands within its range to pick up the true center of holes from 1/4" to 11/16" dia.
- By turning the knurled head, the punch body expands to the perfect fit in the bottom of the hole.



Part No. 8-408-058
Reg. Net Price \$56.58

\$48⁰⁹

CRESCENT WISS 9-3/4" MetalMaster® Compound Action Snips

FEATURES:

- Self-opening action for fast, effortless feed.
- Non-slip serrated jaws are made of wear-resistant molybdenum steel.
- Cuts low carbon cold rolled steel.
- Convenient, protective safety latch.
- Non-slip, textured grips.



Model No.	Cut	Color	Part No. 1-552-	Reg. Net Price	SALE!
M1R	Left Hand & Straight	Red	-58012	\$34.21	\$30.79
M2R	Right Hand & Straight	Green	-58018	34.21	30.79
M3R	Straight	Yellow	-58021	34.21	30.79

WORK SHARP SHARPENERS Precision Adjust Knife Sharpener™ With Tri-Brasive™ and Pivot Response™

Makes manual sharpening faster, easier and more precise than ever!

NEW!

FEATURES:

- Tri-brasive™ rod quickly indexes between coarse and fine diamond and fine ceramic stone.
- Tri-Brasive™ includes coarse 320 & fine 600 grit diamond plates and a fine grit ceramic stone.
- Removable v-block clamp secures knife safely and consistently.
- Sharpening angle can be easily adjusted from 15°- 30°, in 1° increments.



Model #WSBCHPAJ
Part No. 1-817-40303

\$108⁴²

TEKTON Micrometer Torque Wrenches

FEATURES:

- ±4% Accuracy: Calibrated according to the ASME B107.300-2010 standard.
- Reversible ratchet head.
- Pivot pin enables the wrench to pivot seamlessly.
- Drives in both directions and measures torque in the clockwise direction.
- High-contrast, easy-to-read scale is marked with in.-lb. and Nm units.
- Locking Nut locks the torque setting in place while you are using the wrench.

1/4" Drive
Torque Range:
20-200 in./lbs.
Part No. 1-909-2432
Reg. Net Price \$109.45
\$93⁰³

1/2" Drive
Torque Range:
10-150 ft./lbs.
Part No. 1-909-2460
Reg. Net Price \$109.45
\$93⁰³

3/8" Drive
Torque Range:
120-960 in./lbs.
Part No. 1-909-2455
Reg. Net Price \$109.45
\$93⁰³



NEW!



Precision Drill Bit Sharpener

Restore a full range of bits to like-new sharpness in less than 60 seconds!

INCLUDES:

- 180 Grit Wheel.
- User's Guide.
- Instructional DVD.
- Storage Bag.

FEATURES:

- Custom points from 115° to 140°.
- Sharpens 3/32"-3/4" high-speed steel, masonry, carbide, and TiN-coated bits.
- Creates split-point bits from standard bits.
- Adjustable Material Take-Off (MTO) - Fine-tune the sharpening process, touch-up a slightly dull bit, or deep grind for a heavily damaged bit.
- Quick Change diamond sharpening wheel is long-lasting and easy to replace after several hundred sharpenings (no tools needed).
- E-Z Align System™ for correct sharpening alignment.



3 Year Warranty!

Model DD750X

Part No. 1-817-DD750X
Reg. Net Price \$247.92

\$232⁵⁰



1/4" Mini Die Grinders

FEATURES:

- High polished aluminum housing design.
- Precision collet for secure accessory retention.
- Safety lock-off lever prevents accidental start-ups.
- Rear exhaust.

Model FPX-100
Right-Angle

Part No. 1-829-900
Reg. Net Price \$79.36
\$67⁴⁶

Model FPX-300
Straight

Part No. 1-829-902
Reg. Net Price \$59.52
\$50⁵⁹

SPECIFICATIONS:

	FPX-100	FPX-300
Speed	20,000 RPM	25,000 RPM
Collet Size	1/4"	1/4"
Noise Level (dBA)	89	94
Air Inlet (NPT)	1/4"	1/4"
Min. Hose Size	3/8" I.D.	3/8" I.D.
Tool Length	6"	6"



3/8" Air Ratchet

FEATURES:

- Built-in forward/reverse switch in ratchet head.
- High polished aluminum housing design.
- Reliable single pawl ratchet head design.

Model FPX-500

Part No. 1-829-904
Reg. Net Price \$85.56

\$72⁷³



SPECIFICATIONS:

Square Drive	3/8"
No Load Speed	200 RPM
Max. Torque	55 ft./lbs.
Air Consumption	4 CFM
Air Inlet	1/4" NPT
Air Pressure	90 PSI
Min. Hose Size	3/8" ID
Tool Length	10.25"



M12™ Cordless Rotary Tool

This compact, portable and powerful cutoff solution offers up to 10X longer life and 10% more speed compared to competitors. Able to use for thousands of cutting, grinding, sanding and polishing solutions. Indispensable for close-quarter cutoff and grinding applications. Grinder-style exhaust ports and front-bearing protection.

FEATURES:

- Powerful 12-volt motor delivers 5,000-32,000 RPM for superior speed and performance under load.
- 1/8" Collet accommodates all 1/32" - 1/8" shank accessories for thousands of applications.
- Variable-speed dial offers fluid control.
- Compact, lightweight (1.3 lbs.) design.
- Compatible with M12™ batteries.

- INCLUDES:**
- (5) Cutting Wheels.
 - (1) Mandrel.
 - (1) Wrench.

Part No. 1-828-2460-20

\$118⁰⁰

SPECIFICATIONS:

Motor	12V
No Load Speed	5,000-32,000 RPM
Collet	1/8"
Tool Length	9"



Composite Extended Straight Die Grinder

Rear Exhaust



Model 6210
Part No. 1-830-040
\$241⁸⁰



FEATURES:

- Extended head to reach in tight spots.
- Patented quiet tuned exhaust (82 dBA.)
- Superior steel grade internal bearings for longer life.
- Feather trigger for better speed control.
- Ergonomically designed housing
- Most comfortable trigger in the industry.

SPECIFICATIONS:

Motor	0.5 HP
Free Speed	22,000 RPM
Collet Size	1/4"
Average Air Consumption	4.2 CFM
Air Inlet	1/4" NPT
Rec. Hose Size	3/8"
Tool Length	13.5"

eVOLUTION® 1-5/8" Magnetic Drill



FEATURES:

- Simple to use coolant system ensures that the workpiece stays cool while drilling.
- Textured, Tri-spoke spindle handle gives you ultimate control when lowering the drill.
- Ultra-smooth dovetail slides offer smooth and precise operation.
- 2 stage magnet allows you to configure the machine so you get a perfect result.
- Supplied with an 8 ft. rubber power cord.

INCLUDES:

- Keyed Chuck.
- Chuck Adaptor.
- Chuck Key.
- Safety Guard & Fixing Screws.
- Safety Strap.
- 3 Piece Handle.
- (4) Hex keys.
- Cooling Fluid Bottle & Tube.
- Instruction Manual.
- Carrying Case.

SPECIFICATIONS:

Max. Annular Cutting Capacity	1-5/8"
Drill Capacity	1/2"
Max. Cutting Depth	2"
Min. Plate Thickness	3/8"
Cutter Shank	3/4"
Magnet Dimensions	1-5/8" x 3-1/2" x 7-1/8"
Drill Travel	11-1/2"
Magnetic Adhesion	2,860 lbs./f
No Load Speed	450 RPM
Motor	120V, 60Hz, 10 Amps

Model EVOMAG42

Part No. 1-827-425K
\$879⁰⁰

\$221.65 Value!



FREE KBC® 6 Pc. Annular Cutter Set

INCLUDES:

- (1 Ea.) 7/16, 9/16, 11/16, 13/16, 15/16, & 1-1/16" at 1" Depth.
- (2 Ea.) 1/4" x 3" OAL Pilot.



M12 FUEL™ Installation Drill/Driver Kit

The M12 FUEL™ Installation Drill/Driver Kit provides you with a 4-in-1 drilling and driving solution that is purposefully designed to reach uniquely challenging locations. The modular drill/driver is equipped with a POWERSTATE™ Brushless Motor, delivering you with 1,600 RPMs and 300"/lbs of torque. This provides you with the necessary power for installation applications, especially in electrical, cabinet installation, MRO, HVAC, automotive, and remodel applications. The installation drill/driver features REDLINK Plus™ Intelligence, protecting your tool from overloading or overheating.

FEATURES:

- 4-in-1 dedicated solutions.
- Each attachment connects in 16 different positions for access at almost every angle.
- 1/4" Hex, 3/8" Chuck, and Offset can attach to the right angle for additional drilling or fastening needs at a 90°.
- Magnetic bit holder holds multiple bits on board to save time when switching accessories.
- Inline grip allows for maximum tool control and easier access to hard to reach places.
- Lightest, most compact: only 5.12" in length and 2 lbs with battery attached, allowing for easier access in tight spaces and less user fatigue.
- Compatible with all M12™ batteries.

INCLUDES:

- (1) M12 FUEL™ Installation Drill/Driver (Tool-Only).
- (2) M12™ REDLITHIUM™ CP2.0 Battery.
- (1) M12™ Lithium-ion Battery Charger.
- (1) Right Angle Attachment.
- (1) Offset Attachment.
- (1) 3/8" Metal Chuck Attachment.
- (1) 1/4" Hex Attachment.
- (1) Compartmentalized Contractor Bag.
- (1) Belt Clip.

SPECIFICATIONS:

Chuck Size	3/8"
Dimensions (hxlw)	7" x 5.1" x 1.8"
No Load Speed	0-400 / 0-1,600 RPM
Torque	300"/lbs.



Part No. 1-828-2505-22
\$299⁰⁰

SHOP WHENEVER, WHEREVER FROM
THE CONVENIENCE OF YOUR DEVICE



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PACKOUT™ Rolling Tool Box

Fully Customize Your Storage!
Build your system in any
configuration that works for you.

NEW!

FEATURES:

- 9" All-Terrain wheels.
- IP65 rated weather seal.
- Metal reinforced corners.
- Metal reinforced locking point.
- Interior organizer tray.
- Heavy duty latches.
- Industrial grade extension handle.
- Modular connectivity with ALL PACKOUT™ components.
- Mounting location for the ONE-KEY™ TICK™.
- Dimensions: Exterior 22.1" x 18.6" x 25.6"
Interior 19.1" x 14.6" x 13.9"

Part No.
1-828-48228426
\$149⁰⁰



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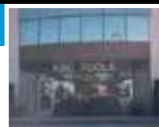


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ALL METAL... ALL THE TIME™

FLEXBAR VISORGUARD

Provides complete protection
between the cutting tool
and the operator's eyes!

FEATURES:

- Flexbar arm permits setting of Visorguard at the correct height and angle for each setup.
- Flip shield up to load part and down for machining.
- Can be installed in minutes on CNC mills, conventional milling machines and others.
- Special spring-loaded shaft makes shield stay put - no spring back.
- Wing-shaped shield protects workers at adjacent machines.

DIMENSIONS:

Shield Size - 16" W x 8" H
Flexbar Arm - 10" Length

Part No. 1-820-13055
Reg. Net Price \$340.23 **\$306²¹**



INCLUDES: Mounting Bracket,
Flexbar and All Hardware Including
Mounting Hole and Thumbscrew for
Attaching Coolant System.

PALMGREN Bench Grinder

1/3 HP, 120/140V, 1 PH Motor

For general purpose grinding including
sharpening, shaping, deburring, stock
removal, and cleaning of rust and scale.

FEATURES:

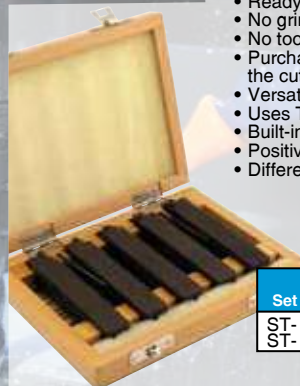
- Wheel Diameter: 6".
- Maximum Speed: 3,450 RPM.
- Arbor Size: 1/2".
- Large cast aluminum tool rest tilts for angle grinding.
- Heavy-duty construction with powerful, long-life motor for use all day, everyday.
- Dust collection hose on #82081 (2-1/2").



INCLUDES:

- (1) 36 Grit & (1) 60 Grit Grinding Wheel.
- Tool Rest.
- Eyeshields.
- Spark Arrestors.
- Power Cord.

Part No. 1-549-82061
Reg. Net Price \$296.05 **\$266⁴⁵**



Indexable Turning Tool Sets

Tool holder sets
save time & money!
Have the right style
holder on hand.

**save
35%**

FEATURES:

- Ready to use.
- No grinding.
- No tool resetting.
- Purchase the shank once, index the cutting edge from then on.
- Versatility of cutting in any direction.
- Uses TT Style (7° positive rake) inserts.
- Built-in chip breaker groove.
- Positive rake cutting action.
- Different radii available.



SETS INCLUDE:

5 Tools in Styles -
TAR, TAL, TBR, TBL, & TE.

Set No.	Shank Size	Part No. 1-254-	Reg. Net Price	SALE!
ST-6	3/8"	-200	\$142.71	\$92.76
ST-8	1/2"	-205	150.83	98.04

INSERTS NOT INCLUDED.

LANG Snap Ring Pliers

FEATURES:

- A flip of the tab and the pliers change between internal and external applications.
- Adjustable stop on the jaw allows you to turn clockwise to reduce jaw opening and counter-clockwise to increase jaw opening.
- Comfort grip made of low-temp, high-impact material providing extra durability.

Ring Sizes:
1/8" to 1" External
and 1/4" to 1" Internal

Model 1421-S

Part No. 1-820-330
Reg. Net Price \$44.13 **\$39⁷²**

Includes 5 color coded pairs of tips.

Sizes: .023", .036" & .047" straight and .036" & .047" diameters bent 90°. With hex wrench for stop adjustment and tip change in tip kit pouch.



Supplied
in pouch.

Replacement Tip Kit
Part No. 1-820-331
\$14.02

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