



MAGNUM™ Bully Premium Drill Bits – Jobber Length

- Precision ground flats on the shank (3/16" and larger) give positive chuck grip and help eliminate slippage
- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Out-performs cobalt drill bits in materials such as work-hardening grades of stainless steel

JOBBER LENGTH – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	DIA	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
092010	1/16	1-7/8	7/8	Round	12	\$0.75	\$0.71	\$0.68	\$0.64
092020	5/64	2	1	Round	12	0.78	0.74	0.70	0.67
092030	3/32	2-1/4	1-1/4	Round	12	0.79	0.75	0.71	0.68
092040	7/64	2-5/8	1-1/2	Round	12	0.85	0.80	0.76	0.73
092050	1/8	2-3/4	1-5/8	Round	12	0.96	0.91	0.86	0.82
092060	9/64	2-7/8	1-3/4	Round	12	1.01	0.96	0.91	0.87
092070	5/32	3-1/8	2	Round	12	1.08	1.03	0.98	0.93
092080	11/64	3-1/4	2-1/8	Round	12	1.14	1.08	1.03	0.98
092090	3/16	3-1/2	2-5/16	3-Flatted	12	1.54	1.46	1.39	1.32
092100	13/64	3-5/8	2-7/16	3-Flatted	12	1.71	1.62	1.54	1.46
092110	7/32	3-3/4	2-1/2	3-Flatted	12	1.76	1.67	1.59	1.51
092120	15/64	3-7/8	2-5/8	3-Flatted	12	1.86	1.76	1.68	1.60
092130	1/4	4	2-3/4	3-Flatted	12	2.04	1.93	1.84	1.75
092140	17/64	4-1/8	2-7/8	3-Flatted	12	2.44	2.32	2.20	2.10
092150	9/32	4-1/4	2-15/16	3-Flatted	12	2.61	2.47	2.35	2.24

JOBBER LENGTH – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	DIA	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
092160	19/64	4-3/8	3-1/16	3-Flatted	6	\$2.94	\$2.79	\$2.65	\$2.52
092170	5/16	4-1/2	3-3/16	3-Flatted	6	3.13	2.96	2.81	2.68
092180	21/64	4-5/8	3-5/16	3-Flatted	6	3.31	3.13	2.98	2.83
092190	11/32	4-3/4	3-7/16	3-Flatted	6	3.89	3.68	3.50	3.33
092200	23/64	4-7/8	3-1/2	3-Flatted	6	4.15	3.93	3.74	3.56
092210	3/8	5	3-5/8	3-Flatted	6	3.56	4.26	4.05	3.86
092220	25/64	5-1/8	3-3/4	3-Flatted	6	4.92	4.66	4.43	4.21
092230	13/32	5-1/4	3-7/8	3-Flatted	6	5.18	4.91	4.66	4.44
092240	27/64	5-3/8	3-15/16	3-Flatted	6	5.42	5.13	4.88	4.64
092250	7/16	5-1/2	4-1/16	3-Flatted	6	6.08	5.76	5.48	5.21
092260	29/64	5-5/8	4-3/16	3-Flatted	6	6.69	6.34	6.03	5.74
092270	15/32	5-3/4	4-5/16	3-Flatted	6	7.13	6.75	6.41	6.11
092280	31/64	5-7/8	4-3/8	3-Flatted	6	7.32	6.93	6.59	6.27
092290	1/2	6	4-1/2	3-Flatted	6	7.54	7.14	6.79	6.46

The professional, attractive way to sell drill bits!

AQF-300 Magnum™ Bully Premium 300 Piece Countertop Drill Bit Display

- Comes fully stocked with 300 drill bits, in all 29 sizes from 1/16 – 1/2".
- Display case has a durable, Plexi-glass, lockable lid.
- Individual bins clearly marked for their respective sizes.
- Same drill bits as our extremely popular line listed above.



Size	Included Qty
1/16	24
5/64	12
3/32	24
7/64	18
1/8	48
9/64	18
5/32	18
11/64	12
3/16	24
13/64	6
7/32	12
15/64	6
1/4	24
17/64	6
9/32	6
19/64	2
5/16	6
21/64	2
11/32	3
23/64	2
3/8	6
25/64	2
13/32	2
27/64	2
7/16	3
29/64	2
15/32	2
31/64	2
1/2	6

ITEM NO.	DESCRIPTION	1	2	3	4
391100	300-pc stocked display	\$578.25	\$558.53	\$540.12	\$522.88
391103	Empty cabinet only	126.46	122.15	118.12	114.35

MAGNUM™ Bully Premium Drill Bits – Jobber Length

- Precision ground flats on the shank (3/16" and larger) give positive chuck grip and help eliminate slippage
- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Out-performs cobalt drill bits in materials such as work-hardening grades of stainless steel



AQF-29P, 29 Piece Drill Bit Set

- Includes sizes 1/16 – 1/2" x 64th increments
- Unbreakable, weather-proof, canister keeps bits from harm
- Features pocket clip and screw-on cap with rubber washer
- Excellent "grab-and-go" set for use on the jobsite, on the farm, in the shop, or at home.



AQF-29PO, 29 Piece Drill Bit Set

- Includes sizes 1/16 – 1/2" x 64th increments
- Unbreakable, weather-proof, canister keeps bits from harm
- Features pocket clip and screw-on cap with rubber washer
- Excellent "grab-and-go" set for use on the job-site, on the farm, in the shop, or at home.
- Blaze orange canister stands out in semi-dark conditions



AQF-29, 29 Piece Drill Bit Set

- Includes sizes 1/16 – 1/2" x 64th increments
- Black metal index conveniently marked with the diameter decimal equivalents, as well as common tap diameters and their corresponding drill bit sizes
- The set to have sitting at the drill press or on the work bench

Mix & Match

You may combine any of the sets on this page to obtain quantity pricing!

29 PIECE DRILL BIT SETS			PRICE PER SET (can mix or match)				
ITEM NO.	DESCRIPTION	CASE QTY	1	6	12	24	48
093010	AQF-29P, Black Canister	12	\$86.62	\$82.29	\$78.37	\$74.81	\$71.55
093060	AQF-29PO, Orange Canister	12	86.62	82.29	78.37	74.81	71.55
092960	AQF-29, Metal Index	14	84.14	79.94	76.13	72.67	69.51

MAGNUM™ Bully Premium Drill Bits – Jobber Length (continued)



AQF-29R, 29 Piece Drill Bit Set

- Includes sizes 1/16 – 1/2" x 64th increments
- 3/8" reduced shank on sizes above 3/8" to allow usage in standard 3/8" drill chucks
- Black metal index conveniently marked with the diameter decimal equivalents, as well as common tap diameters and their corresponding drill bit sizes
- The set to have sitting at the drill press or on the work bench.



AQF-21, 21 Piece Drill Bit Set

- Includes sizes 1/16 – 3/8" x 64th increments
- A nice set for those who only have a 3/8" drill, or simply don't need the larger drill bits
- Black metal index conveniently marked with the diameter decimal equivalents
- A good handyman / homeowner's set



AQF-15, 15 Piece Drill Bit Set

- Includes sizes 1/16 – 1/2" x 32nd increments
- Black metal index conveniently marked with the diameter decimal equivalents
- The set for those who don't want all the "in-between" 64th sizes, and yet have a full size range

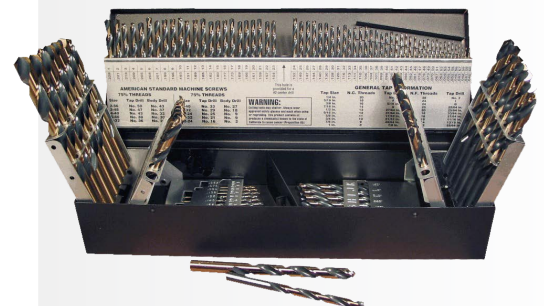


AQF-13, 13 Piece Drill Bit Set

- Includes sizes 1/16 – 1/4" x 64th increments
- A handy set to have around the house, or as 'spares' to keep the big sets stocked
- Black metal index conveniently marked with the diameter decimal equivalents

115 Piece set available, with the 29 fractional sizes from 1/16 to 1/2", all 26 letter sizes, and all 60 wire sizes – round shank only.

See Page 12



JOBBER LENGTH DRILL BIT SETS		PRICE PER SET			
ITEM NO.	DESCRIPTION	1	6	12	24
093110	29 Piece, 1/16 – 1/2 x 64ths, 3/8" shank	\$93.08	\$88.43	\$84.21	\$80.39
092860	21 Piece, 1/16 – 3/8" x 64th, Metal Index	52.13	49.38	46.91	44.68
092910	15 Piece, 1/16 – 1/2" x 32nd, Metal Index	93.08	88.43	84.21	80.39
092810	13 Piece, 1/16 – 1/4" x 64th, Metal Index	21.40	20.28	19.26	18.35



Type 175-VT

Mechanic Length, 3-Flat on Shank

- Unique tip geometry reduces heat generation & cutting tool wear increasing tool life.
- Easily enlarges existing holes without damaging the point.
- Split-point design gives accurate starting and its self-centering eliminating the need for the use of a center punch.
- Ideal for Hard steel, Sheet metal, Brass and Acrylics.

VORTEX-POINT DRILL BITS						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	DIA	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
094510	1/16	1-7/8	7/8	Round	6	\$0.92	\$0.87	\$0.83	\$0.83
094520	5/64	2	1	Round	6	0.96	0.91	0.86	0.82
094530	3/32	2-1/4	1-1/4	Round	6	0.97	0.92	0.88	0.83
094540	7/64	2-3/8	1-5/16	Round	6	3.24	3.07	2.91	2.77
094550	1/8	2-1/2	1-7/16	Round	6	3.44	3.26	3.10	2.95
094560	9/64	2-5/8	1-9/16	Round	6	3.46	3.28	3.11	2.96
094570	5/32	2-3/4	1-11/16	Round	6	3.54	3.36	3.19	3.04
094580	11/64	2-7/8	1-13/16	Round	6	3.60	3.41	3.24	3.08
094590	3/16	3	1-7/8	3-Flatted	6	4.03	3.82	3.63	3.45
094600	13/64	3-1/8	1-15/16	3-Flatted	6	4.22	4.00	3.80	3.62
094610	7/32	3-1/4	2	3-Flatted	6	4.28	4.05	3.85	3.67
094620	15/64	3-3/8	2-1/16	3-Flatted	6	4.43	4.20	3.99	3.80
094630	1/4	3-1/2	2	3-Flatted	6	4.71	4.46	4.24	4.04
094640	17/64	3-5/8	2-1/8	3-Flatted	6	5.28	5.28	4.75	4.52
094650	9/32	3-3/4	2-1/4	3-Flatted	6	5.46	5.17	4.91	4.68
						3	15	30	60
094660	19/64	3-7/8	2-3/8	3-Flatted	3	5.82	5.51	5.24	4.99
094670	5/16	4	2-1/2	3-Flatted	3	6.00	5.68	5.40	5.14
094680	21/64	4-1/16	2-9/16	3-Flatted	3	6.25	5.92	5.63	5.36
094690	11/32	4-1/8	2-5/8	3-Flatted	3	7.32	6.93	6.59	6.27
094700	23/64	4-3/16	2-11/16	3-Flatted	3	7.86	7.86	7.08	6.74
094710	3/8	4-1/4	2-11/16	3-Flatted	3	8.13	7.70	7.31	6.96
094720	25/64	4-5/16	2-3/4	3-Flatted	3	8.93	8.46	8.04	7.65
094730	13/32	4-3/8	2-13/16	3-Flatted	3	9.15	8.67	8.24	7.85
094740	27/64	4-7/16	2-7/8	3-Flatted	3	9.86	9.34	8.88	8.45
094750	7/16	4-1/2	2-15/16	3-Flatted	3	10.18	9.64	9.16	8.73
094760	29/64	4-5/8	3	3-Flatted	3	11.13	10.54	10.01	9.54
094770	15/32	4-3/4	3-1/8	3-Flatted	3	11.67	11.05	10.50	10.00
094780	31/64	4-7/8	3-1/4	3-Flatted	3	12.24	11.59	11.01	10.49
094790	1/2	5	3-3/8	3-Flatted	3	12.44	12.44	11.20	10.67

VORTEX-POINT SETS		PRICE PER SET				
ITEM NO.	DESCRIPTION	1	3	6	12	24
094810	VT-13, 1/16" - 1/4" x 64ths, Metal Index	\$44.44	\$42.11	\$40.00	\$38.10	
094840	VT-21, 1/16" - 3/8" x 64ths, Metal Index	95.85		90.94	86.50	82.48
094870	VT-15, 1/16" - 1/2" x 32nds, Metal Index	94.28		89.45	85.09	81.13
094900	VT-29, 1/16" - 1/2" x 64ths, Metal Index	175.21		166.45	158.52	151.32
094930	VT-29P, 1/16" - 1/2" x 64ths, BL Canister	176.29		167.48	159.50	152.25
094960	VT-29PO, 1/16" - 1/2" x 64ths, OR Canister	176.29		167.48	159.50	152.25

Unique tip geometry reduces heat generation!

Split-point design gives accurate starting!



AQF-96 Magnum™ 96 Piece 3-Drawer Stocking Cabinet

(drill bits included)

- Comes fully stocked with 96 drill bits, in all 29 sizes from 1/16 – 1/2" (see table at right).
- All steel cabinet has each bin clearly marked with the correct drill size.
- Same drill bits as our extremely popular line listed on the previous pages.



Size	Included Qty
1/16	6
5/64	3
3/32	6
7/64	3
1/8	6
9/64	3
5/32	6
11/64	6
3/16	6
13/64	3
7/32	6
15/64	3
1/4	6
17/64	2
9/32	3
19/64	1
5/16	3
21/64	2
11/32	3
23/64	2
3/8	2
25/64	2
13/32	2
27/64	2
7/16	2
29/64	2
15/32	2
31/64	1
1/2	2

ITEM NO.	DESCRIPTION	1	2	3	4
391180	96-pc stocked cabinet	\$248.92	\$240.43	\$232.51	\$225.09

3-Drawer Stocking Cabinet (drill bits not included)

- Individual bins for the 29 sizes from 1/16" - 1/2" x 1/64th increments
- Each bin clearly marked with the correct drill size



ITEM NO.	DESCRIPTION	1	2	3	4
391120	Cabinet for 1/16 – 1/2 x 64ths	\$115.82	\$110.03	\$104.79	\$100.02

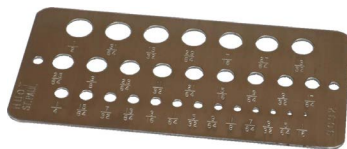
Empty Drill Bit Indexes

- For our popular Magnum® drill bit line.
- Keep your bits organized!



Drill Bit Gauges

- Economical gauge made from prime steel and finished.



ITEM NO.	DESCRIPTION	1	5	10	20
391600	1/16 – 1/2 x 64ths	\$10.49	\$9.93	\$9.44	\$8.99
391603	LARGE: 1/2 – 1" x 64ths	28.99	27.46	26.09	24.85
391606	WIRE: #1 to #60	12.03	11.39	10.83	10.31

ITEM NO.	DESCRIPTION	1	3	6	12
391260	29SP Fractional, Black Metal	\$13.16	\$12.49	\$11.89	\$11.34
391263	29PO Fractional, Blaze Orange	14.84	14.09	13.41	13.41
391266	29P Fractional, Black U-Dex	14.84	14.09	13.41	12.79

JOBBER LENGTH DRILL BITS - WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
389601	1/16	1-7/8	7/8	Round	12	\$0.92	\$0.87	\$0.83	\$0.79
389602	5/64	2	1	Round	12	0.96	0.91	0.86	0.82
389603	3/32	2-1/4	1-1/4	Round	12	0.97	0.92	0.88	0.83
389604	7/64	2-5/8	1-1/2	Round	12	0.83	0.99	0.94	0.89
389605	1/8	2-3/4	1-5/8	Round	12	0.89	1.12	1.06	1.01
389606	9/64	2-7/8	1-3/4	Round	12	1.25	1.18	1.13	1.07
389607	5/32	3-1/8	2	Round	12	1.33	1.26	1.20	1.14
389608	11/64	3-1/4	2-1/8	Round	12	1.39	1.32	1.25	1.19
389609	3/16	3-1/2	2-5/16	Round	12	1.65	1.57	1.49	1.42
389610	13/64	3-5/8	2-7/16	Round	12	1.82	1.72	1.64	1.56
389611	7/32	3-3/4	2-1/2	Round	12	1.88	1.78	1.69	1.61
389612	15/64	3-7/8	2-5/8	Round	12	2.00	1.89	1.80	1.71
389613	1/4	4	2-3/4	Round	12	2.19	2.08	1.98	1.88
389614	17/64	4-1/8	2-7/8	Round	12	2.51	2.38	2.27	2.16
389615	9/32	4-1/4	2-15/16	Round	12	2.81	2.66	2.53	2.40

JOBBER LENGTH DRILL BITS - WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
389616	19/64	4-3/8	3-1/16	Round	6	\$3.15	\$2.99	\$2.84	2.70
389617	5/16	4-1/2	3-3/16	Round	6	3.35	3.17	3.01	2.87
389618	21/64	4-5/8	3-5/16	Round	6	3.57	3.38	3.21	3.06
389619	11/32	4-3/4	3-7/16	Round	6	4.22	4.00	3.80	3.62
389620	23/64	4-7/8	3-1/2	Round	6	4.49	4.25	4.04	3.85
389621	3/8	5	3-5/8	Round	6	4.89	4.63	4.40	4.19
389622	25/64	5-1/8	3-3/4	Round	6	5.35	5.07	4.81	4.58
389623	13/32	5-1/4	3-7/8	Round	6	5.64	5.34	5.08	4.83
389624	27/64	5-3/8	3-15/16	Round	6	5.90	5.59	5.31	5.06
389625	7/16	5-1/2	4-1/16	Round	6	6.36	6.04	5.75	5.48
389626	29/64	5-5/8	4-3/16	Round	6	7.33	6.95	6.60	6.29
389627	15/32	5-3/4	4-5/16	Round	6	7.48	7.10	6.76	6.45
389628	31/64	5-7/8	4-3/8	Round	6	8.01	7.59	7.21	6.87
389629	1/2	6	4-1/2	Round	6	8.24	7.80	7.41	7.06



MAGNUM™ Super Premium Drill Bits – Jobber Length – Round Shank

- Same as our top-selling jobber length bits on pages 3-6, but without the three flats on shank.
- Work well in milling machines where a collet is involved.

Note: Not 3-flatted. See pages 3-6 for our popular 3-flatted jobber length bits.

JOBBER LENGTH DRILL BITS - WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	1	5	10	20
389630	33/64	6-5/8	4-13/16	Round	1	\$16.33	\$15.47	\$14.70	\$14.00
389631	17/32	6-5/8	4-13/16	Round	1	16.41	15.58	14.83	14.15
389632	35/64	6-5/8	4-13/16	Round	1	17.76	16.86	16.05	15.31
389633	9/16	6-5/8	4-13/16	Round	1	18.61	17.67	16.82	16.05
389634	37/64	6-5/8	4-13/16	Round	1	18.65	17.71	16.86	16.08
389635	19/32	7-1/8	5-3/16	Round	1	19.17	18.20	17.33	16.53
389636	39/64	7-1/8	5-3/16	Round	1	21.05	19.99	19.02	18.15
389637	5/8	7-1/8	5-3/16	Round	1	21.43	20.30	19.29	18.37
389638	41/64	7-1/8	5-3/16	Round	1	23.44	22.21	22.21	20.10
389639	21/32	7-1/8	5-3/16	Round	1	21.56	20.47	19.48	18.59
389640	43/64	7-5/8	5-5/8	Round	1	23.52	22.33	21.25	20.28
389641	11/16	7-5/8	5-5/8	Round	1	23.35	22.12	21.01	20.01
389642	45/64	7-5/8	5-5/8	Round	1	24.93	23.67	22.53	21.49
389643	23/32	7-5/8	5-5/8	Round	1	23.73	22.53	21.45	20.46
389644	47/64	7-5/8	5-5/8	Round	1	25.99	24.67	23.48	22.40
389645	3/4	7-3/8	5-5/8	Round	1	24.72	23.47	22.34	21.31



Jobber Length Round Shank Fractional Sets

- 13 Piece includes sizes 1/16 – 1/4" x 64th increments
- 21 Piece includes sizes 1/16 – 3/8" x 64th increments
- 15 Piece includes sizes 1/16 – 1/2" x 32nd increments
- 29 Piece includes sizes 1/16 – 1/2" x 64th increments (available in three different cases)

ITEM NO.	DESCRIPTION	1 set	6	12	24	48
389675	13 Piece, Black Metal Index	\$21.93	\$20.82	\$20.82	\$18.91	
389678	21 Piece, Black Metal Index	55.41	52.61	50.07	47.77	
389681	15 Piece, Black Metal Index	60.31	57.25	54.49	51.99	
389684	29 Piece, Black Metal Index	108.33	102.91	98.01	93.56	
389687	29 Piece, Black Canister	111.82	106.23	101.17	96.57	92.37
389690	29 Piece, Orange Canister	111.82	106.23	101.17	96.57	

MAGNUM™ Super Premium Drill Bits – Jobber Length – Wire Sizes

- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Out-performs cobalt drill bits in materials such as work-hardening grades of stainless steel
- Round shank well suited for use in collets



JOBBER LENGTH DRILL BITS – WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
389001	1	3-7/8	2-5/8	Round	12	\$2.54	\$2.41	\$2.29	\$2.18
389002	2	3-7/8	2-5/8	Round	12	2.54	2.41	2.29	2.18
389003	3	3-3/4	2-1/2	Round	12	2.35	2.22	2.11	2.01
389004	4	3-3/4	2-1/2	Round	12	2.35	2.22	2.11	2.01
389005	5	3-3/4	2-1/2	Round	12	2.35	2.22	2.11	2.01
389006	6	3-3/4	2-1/2	Round	12	2.35	2.22	2.11	2.01
389007	7	3-5/8	2-7/16	Round	12	2.07	1.96	1.86	1.77
389008	8	3-5/8	2-7/16	Round	12	2.07	1.96	1.86	1.77
389009	9	3-5/8	2-7/16	Round	12	2.07	1.96	1.86	1.77
389010	10	3-5/8	2-7/16	Round	12	2.03	1.92	1.83	1.74
389011	11	3-1/2	2-5/16	Round	12	1.88	1.78	1.69	1.61
389012	12	3-1/2	2-5/16	Round	12	1.88	1.78	1.69	1.61
389013	13	3-1/2	2-5/16	Round	12	1.81	1.71	1.63	1.55
389014	14	3-3/8	2-3/16	Round	12	1.81	1.71	1.63	1.55
389015	15	3-3/8	2-3/16	Round	12	1.81	1.71	1.63	1.55
389016	16	3-3/8	2-3/16	Round	12	1.81	1.71	1.63	1.55
389017	17	3-3/8	2-3/16	Round	12	1.81	1.71	1.63	1.55
389018	18	3-1/4	2-1/8	Round	12	1.57	1.49	1.41	1.35
389019	19	3-1/4	2-1/8	Round	12	1.57	1.49	1.41	1.35
389020	20	3-1/4	2-1/8	Round	12	1.57	1.49	1.41	1.35
389021	21	3-1/4	2-1/8	Round	12	1.43	1.36	1.29	1.23
389022	22	3-1/8	2	Round	12	1.43	1.43	1.29	1.23
389023	23	3-1/8	2	Round	12	1.23	1.34	1.28	1.21
389024	24	3-1/8	2	Round	12	1.42	1.34	1.28	1.21
389025	25	3	1-7/8	Round	12	1.38	1.30	1.24	1.18
389026	26	3	1-7/8	Round	12	1.38	1.30	1.24	1.18
389027	27	3	1-7/8	Round	12	1.38	1.30	1.24	1.18
389028	28	2-7/8	1-3/4	Round	12	1.22	1.16	1.10	1.05
389029	29	2-7/8	1-3/4	Round	12	1.22	1.16	1.10	1.05
389030	30	2-3/4	1-5/8	Round	12	1.22	1.16	1.10	1.05

JOBBER LENGTH DRILL BITS – WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
389031	31	2-3/4	1-5/8	Round	12	\$1.22	\$1.16	\$1.10	\$1.05
389032	32	2-3/4	1-5/8	Round	12	1.22	1.16	1.10	1.05
389033	33	2-5/8	1-1/2	Round	12	1.22	1.16	1.10	1.05
389034	34	2-5/8	1-1/2	Round	12	1.22	1.16	1.10	1.05
389035	35	2-5/8	1-1/2	Round	12	1.22	1.16	1.10	1.05
389036	36	2-1/2	1-7/16	Round	12	1.22	1.16	1.10	1.05
389037	37	2-1/2	1-7/16	Round	12	1.22	1.16	1.10	1.05
389038	38	2-1/2	1-7/16	Round	12	1.22	1.16	1.10	1.05
389039	39	2-3/8	1-3/8	Round	12	1.22	1.16	1.10	1.05
389040	40	2-3/8	1-3/8	Round	12	1.22	1.16	1.10	1.05
389041	41	2-3/8	1-3/8	Round	12	1.22	1.16	1.10	1.05
389042	42	2-1/4	1-1/4	Round	12	1.22	1.16	1.10	1.05
389043	43	2-1/4	1-1/4	Round	12	1.22	1.16	1.10	1.05
389044	44	2-1/8	1-1/8	Round	12	1.22	1.16	1.10	1.05
389045	45	2-1/8	1-1/8	Round	12	1.22	1.16	1.10	1.05
389046	46	2-1/8	1-1/8	Round	12	1.22	1.16	1.10	1.05
389047	47	2	1	Round	12	1.22	1.16	1.10	1.05
389048	48	2	1	Round	12	1.22	1.16	1.10	1.05
389049	49	2	1	Round	12	1.22	1.16	1.10	1.05
389050	50	2	1	Round	12	1.22	1.16	1.10	1.05
389051	51	2	1	Round	12	1.22	1.16	1.10	1.05
389052	52	1-7/8	7/8	Round	12	1.22	1.16	1.10	1.05
389053	53	1-7/8	7/8	Round	12	1.22	1.16	1.10	1.05
389054	54	1-7/8	7/8	Round	12	1.22	1.16	1.10	1.05
389055	55	1-7/8	7/8	Round	12	1.22	1.16	1.10	1.05
389056	56	1-3/4	3/4	Round	12	1.22	1.16	1.10	1.05
389057	57	1-3/4	3/4	Round	12	1.22	1.16	1.10	1.05
389058	58	1-5/8	11/16	Round	12	1.22	1.16	1.10	1.05
389059	59	1-5/8	11/16	Round	12	1.22	1.16	1.10	1.05
389060	60	1-5/8	11/16	Round	12	1.22	1.16	1.10	1.05

MAGNUM™ Super Premium Drill Bits – Jobber Length – Wire & Letter Sizes (continued)

JOBBER LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
389074	A	3-7/8	2-5/8	Round	12	\$2.74	\$2.59	\$2.46	\$2.35
389075	B	4	2-3/4	Round	12	2.74	2.59	2.46	2.35
389076	C	4	2-3/4	Round	12	2.74	2.59	2.46	2.35
389077	D	4	2-3/4	Round	12	2.67	2.53	2.40	2.29
389078	E	4	2-3/4	Round	12	2.19	2.08	1.98	1.88
389079	F	4-1/8	2-7/8	Round	12	2.94	2.79	2.65	2.52
389080	G	4-1/8	2-7/8	Round	12	3.19	3.03	2.88	2.74
389081	H	4-1/8	2-7/8	Round	12	3.28	3.11	2.95	2.81
389082	I	4-1/8	2-7/8	Round	12	3.28	3.11	2.95	2.81
389083	J	4-1/8	2-7/8	Round	12	3.44	3.26	3.10	2.95
389084	K	4-1/4	2-15/16	Round	12	3.85	3.64	3.46	3.30
389085	L	4-1/4	2-15/16	Round	12	3.74	3.54	3.36	3.20
						6	30	60	120
389086	M	4-3/8	3-1/16	Round	6	4.08	3.87	3.68	3.50
389087	N	4-3/8	3-1/16	Round	6	4.08	3.87	3.68	3.50
389088	O	4-1/2	3-3/16	Round	6	4.08	3.87	3.68	3.50
389089	P	4-5/8	3-5/16	Round	6	4.58	4.34	4.13	3.93
389090	Q	4-3/4	3-7/16	Round	6	4.69	4.45	4.23	4.02
389091	R	4-3/4	3-7/16	Round	6	4.90	4.64	4.41	4.20
389092	S	4-7/8	3-1/2	Round	6	5.31	5.03	4.78	4.55
389093	T	4-7/8	3-1/2	Round	6	5.96	5.64	5.36	5.11
389094	U	5	3-5/8	Round	6	5.96	5.64	5.36	5.11
389095	V	5	3-5/8	Round	6	6.08	5.76	5.48	5.21
389096	W	5-1/8	3-3/4	Round	6	6.36	6.03	5.73	5.45
389097	X	5-1/8	3-3/4	Round	6	7.57	7.17	6.81	6.49
389098	Y	5-1/4	3-7/8	Round	6	8.89	8.42	8.00	7.62
389099	Z	5-1/4	3-7/8	Round	6	9.10	8.62	8.19	7.80

SP-26, 26 Piece Drill Bit Set

- Includes letter sizes A - Z
- Black metal index conveniently marked with the diameter decimal equivalents
- Part of the popular MAGNUM™ family



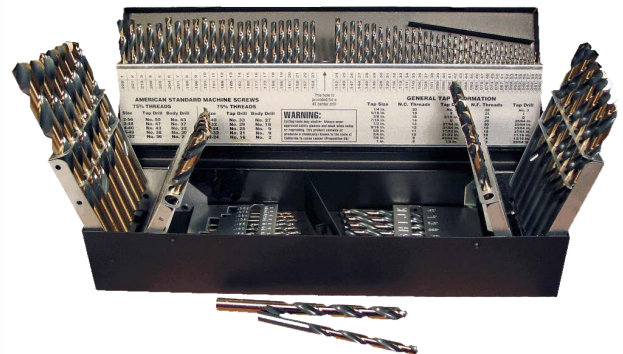
SP-60, 60 Piece Drill Bit Set

- Includes wire sizes #1 - 60
- Black metal index conveniently marked with the diameter decimal equivalents, as well as tap sizes and the corresponding drill bits
- Part of the popular MAGNUM™ family



SP-115, 115 Piece Drill Bit Set

- All drills have a round shank, great for use in collets etc.
- Includes fractional sizes 1/16 – 1/2", letter sizes A – Z, and wire sizes 1 - 60
- Black metal index conveniently marked with the diameter decimal equivalents, as well as tap sizes and the corresponding drill bits
- Part of the popular MAGNUM™ family



ULTRA LUBE™

- Super-concentrated, no-run formula
- Clings to vertical surfaces for continuous lubrication
- This fluid will extend tool life and yield a super machined finish



* See page 104

ITEM NO.	DESCRIPTION	1 set	3	6	12
389065	26 Piece, A - Z, Black Metal	\$119.38	\$113.18	\$107.59	\$102.53
389066	60 Piece, #1 - 60, Black Metal	93.11	88.21	83.80	79.81
		1 set	2	4	6
389067	115 Piece, A - Z, #1 - 60	311.99	296.77	282.97	270.39

72-SP Magnum™ 72-Piece Stocking Unit, Letter Sizes

- 3-drawer unit comes fully stocked with 72 drill bits: 3 each of sizes A-T, and 2 each of sizes U-Z.
- All steel cabinet has each bin clearly marked with the correct drill size.



ITEM	DESCRIPTION	1	2	3	4
389150	72-pc. stocked cabinet	\$306.70	\$292.10	\$278.82	\$266.70

249-SP Magnum™ 249-Piece Stocking Unit, Wire Sizes

- 5-drawer unit comes fully stocked with 249 drill bits: 3 each of sizes 1-22, 4 each of sizes 23-29, and 5 each of sizes 30-60.
- All steel cabinet has each bin clearly marked with the correct drill size.



ITEM	DESCRIPTION	1	2	3	4
389160	249-pc. stocked cabinet	\$349.88	\$333.21	\$318.07	\$304.24

Drill Stands

- These drill stands can be hung on a wall, used on a bench, or mounted on a press.
- USA made.



#391310



#391313 for
S & D drills from 1/2" to 1"

ITEM	DESCRIPTION	1	3	6	12
391310	Stand for 1/16" - 1/2" x 64ths	\$10.27	\$9.75	\$9.28	\$8.85
391313	Stand for 1/2" - 1" x 64ths	67.18	63.64	60.46	57.58

Drawer-Mount Drill Organizer

- For fractional drills 1/16 to 1/2" by 64ths.
- Can be mounted underneath a work bench, desk, shelf, inside a cabinet, or just about anywhere.
- Security built-in cam lock and two keys.
- Heavy-duty ball bearing drawer slides.
- Each space clearly marked for the proper drill.
- Decimal equivalent shown under each size.
- Overall dimensions 26-1/8" W x 12-1/2" D x 4-1/2" H.



ITEM	DESCRIPTION	1	2	3	4
391225	Organizer for fractional sizes	\$235.09	\$227.08	\$219.59	\$212.59

MAGNUM™ Super Premium Drill Bits – S & D Type, 1/2" Shank, 3-Flats

- One piece solid construction
- Precision ground flats on the shank give positive chuck grip and help eliminate slippage
- 135° split point (118° on sizes over 1") for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Recommended for use in work-hardening grades of stainless steel
- Feature a 1/2"-reduced shank for use in a standard 1/2" drill chuck



TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	SHANK DIAM	SHANK TYPE	PKG QTY	1	5	10	20
093410	33/64	6	1/2	3-Flatted	1	\$20.11	\$19.05	\$18.10	\$17.24
093420	17/32	6	1/2	3-Flatted	1	19.15	18.14	17.24	16.42
093430	35/64	6	1/2	3-Flatted	1	20.97	19.87	18.88	17.98
093440	9/16	6	1/2	3-Flatted	1	19.76	18.72	17.79	16.94
093450	37/64	6	1/2	3-Flatted	1	22.97	21.76	20.68	19.69
093460	19/32	6	1/2	3-Flatted	1	21.86	20.71	19.68	18.74
093470	39/64	6	1/2	3-Flatted	1	23.15	21.93	20.84	19.85
093480	5/8	6	1/2	3-Flatted	1	22.04	20.88	19.84	18.89
093490	41/64	6	1/2	3-Flatted	1	24.92	23.61	22.43	21.36
093500	21/32	6	1/2	3-Flatted	1	23.74	22.49	21.36	20.35
093510	43/64	6	1/2	3-Flatted	1	25.89	24.53	23.30	22.19
093520	11/16	6	1/2	3-Flatted	1	24.65	23.36	22.19	21.13
093530	45/64	6	1/2	3-Flatted	1	27.24	25.80	24.51	23.35
093540	23/32	6	1/2	3-Flatted	1	25.93	24.57	23.34	22.23
093550	47/64	6	1/2	3-Flatted	1	28.21	26.72	25.39	24.18
093560	3/4	6	1/2	3-Flatted	1	26.86	25.45	24.18	23.02
093570	49/64	6	1/2	3-Flatted	1	30.57	28.96	27.51	26.20
093580	25/32	6	1/2	3-Flatted	1	29.08	27.55	26.18	24.93
093590	51/64	6	1/2	3-Flatted	1	31.11	29.47	28.00	26.67
093600	13/16	6	1/2	3-Flatted	1	29.64	28.08	26.68	25.40
093610	53/64	6	1/2	3-Flatted	1	32.90	31.17	29.61	28.20
093620	27/32	6	1/2	3-Flatted	1	28.20	29.70	28.21	26.87

TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	SHANK DIAM	SHANK TYPE	PKG QTY	1	5	10	20
093630	55/64	6	1/2	3-Flatted	1	\$33.65	\$31.88	\$30.29	\$28.85
093640	7/8	6	1/2	3-Flatted	1	32.06	30.37	28.85	27.48
093650	57/64	6	1/2	3-Flatted	1	35.71	33.83	32.14	30.61
093660	29/32	6	1/2	3-Flatted	1	34.00	32.21	30.60	29.14
093670	59/64	6	1/2	3-Flatted	1	37.58	35.61	33.83	32.21
093680	15/16	6	1/2	3-Flatted	1	35.79	33.91	32.21	30.68
093690	61/64	6	1/2	3-Flatted	1	40.53	38.39	36.48	34.74
093700	31/32	6	1/2	3-Flatted	1	38.60	36.57	34.74	33.08
093710	63/64	6	1/2	3-Flatted	1	43.76	41.46	39.39	37.51
093720	1	6	1/2	3-Flatted	1	41.68	39.49	37.51	35.73
						1	3	6	12
093730	1-1/32	6	1/2	3-Flatted	1	59.81	56.66	53.83	51.26
093740	1-1/16	6	1/2	3-Flatted	1	54.78	51.89	49.30	46.95
093750	1-3/32	6	1/2	3-Flatted	1	66.08	62.61	59.48	56.64
093760	1-1/8	6	1/2	3-Flatted	1	59.92	56.76	53.93	51.36
093770	1-5/32	6	1/2	3-Flatted	1	62.42	59.13	56.18	53.50
093780	1-3/16	6	1/2	3-Flatted	1	63.79	60.43	57.41	54.68
093790	1-7/32	6	1/2	3-Flatted	1	80.93	76.67	72.84	69.37
093800	1-1/4	6	1/2	3-Flatted	1	69.37	66.58	63.25	60.24
093810	1-5/16	6	1/2	3-Flatted	1	97.85	92.70	88.06	83.87
093820	1-3/8	6	1/2	3-Flatted	1	99.50	94.26	89.55	85.29
093830	1-7/16	6	1/2	3-Flatted	1	109.62	103.92	98.79	94.14
093840	1-1/2	6	1/2	3-Flatted	1	112.36	106.52	101.26	96.49

3/4" Reduced Shank, Round Shank

- 3/4"-reduced shank, but not 3-flatted, for drilling with Bridgeport style or other production machines with 3/4" chucks



TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	SHANK DIAM	SHANK TYPE	PKG QTY	1	5	10	20
094010	13/16	5-1/2	3/4	Round	1	\$29.64	\$28.08	\$26.68	\$25.40
094020	7/8	5-1/2	3/4	Round	1	32.06	30.37	28.85	27.48
094030	15/16	5-1/2	3/4	Round	1	35.79	33.91	32.21	30.68
094040	1	5-1/2	3/4	Round	1	41.68	39.49	37.51	35.73
						1	3	6	12
094050	1-1/8	5-27/32	3/4	Round	1	59.92	56.76	53.93	51.36
094060	1-1/4	5-7/8	3/4	Round	1	70.28	66.58	66.58	60.24
094070	1-3/8	5-29/32	3/4	Round	1	99.50	94.26	89.55	85.29
094080	1-1/2	5-15/16	3/4	Round	1	112.36	106.52	101.26	96.49

MAGNUM™ Super Premium Drill Bit Sets – S & D Type, 1/2” Shank, 3-Flats

- Precision ground flats on the shank give positive chuck grip and help eliminate slippage
- 135° split point (118° on sizes over 1”) for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Recommended for use in work-hardening grades of stainless steel
- Feature a 1/2”-reduced shank for use in a standard 1/2” drill chuck
- One piece solid construction



S & D 4SP, 4 Piece Drill Bit Set

- Includes sizes 9/16, 5/8, 3/4, & 1”
- 1/2” reduced shank allows usage in standard 1/2” drill chucks
- Convenient bit storage in a heavy duty, plastic index
- The set for those who want only the most common sizes above 1/2”



S & D 8SP, 8 Piece Drill Bit Set

- Includes sizes 9/16 – 1” in 1/16th increments
- 1/2” reduced shank allows usage in standard 1/2” drill chucks
- Convenient bit storage in a sturdy metal index
- The most popular S & D drill bit set



S & D 33SP, 33 Piece Drill Bit Set

- Includes sizes 1/2” – 1” in 1/64th increments
- 1/2” reduced shank allows usage in standard 1/2” drill chucks
- Metal drill stand

TYPE S & D DRILL BIT SETS		PRICE PER SET				
ITEM NO.	DESCRIPTION	1	2	5	10	20
093870	4 Piece, Black Plastic Case	\$105.40	\$99.92	\$94.99	\$90.52	\$86.45
093880	8 Piece, Black Metal Index	244.63	232.98	222.39	212.72	
		1	2	3	4	
093890	33 Piece, Metal Drill Stand	879.75	838.35	805.20	774.57	

Our all time most popular drill bit line!

S & D 8SPA Magnum™ Super Premium 8 Piece Counter-Top Drill Bit Display

- Comes stocked with a set of 8 bits; 1 each of: 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, & 1"
- Accommodates up to three bits of each size
- Display case has a durable, Plexi-glass, lockable lid
- Individual holes clearly marked for their respective sizes
- Same drill bits as our extremely popular line listed on the previous pages



ITEM NO.	DESCRIPTION	1	2	3	4
391110	8-pc stocked display	\$335.21	\$323.78	\$313.11	\$303.12
391220	Empty display case	\$216.06	205.77	196.42	187.88

S & D 13-SP Magnum™ Super Premium 13 Piece Stocking Unit (bits included)

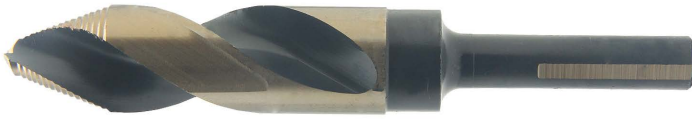
(bits included)

- Closed drawer all-steel stocking unit
- Comes fully stocked with 13 Magnum Super Premium drill bits
- 1/2" Reduced, 3-flatted shanks

Size	Included Qty
9/16	3
5/8	3
11/16	1
3/4	2
13/16	1
7/8	1
15/16	1
1"	1



ITEM NO.	DESCRIPTION	1	2	3	4
391130	13-pc stocked cabinet	\$453.58	\$431.19	\$410.89	\$392.43



VORTEX-POINT™

S & D Type, 1/2" Shank Silver Deming 135° Split point, 3-Flats on Shank

- Unique tip geometry reduces heat generation & cutting tool wear increasing tool life.
- Easily enlarges existing holes without damaging the point.
- Stay sharp up to 4X longer compared to conventional and other specialty tip design.
- Recommended for Cast Iron, Brass, Sheet Metal, Plastic, Mild Steel, Copper, Hardened Steel.

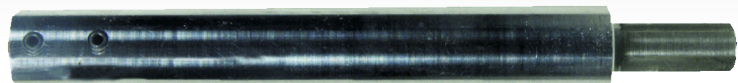
TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	SHANK DIAM	SHANK TYPE	PKG QTY	1	5	10	20
095040	9/16	6	1/2	3-Flatted	1	\$24.79	\$23.49	\$22.31	\$21.25
095080	5/8	6	1/2	3-Flatted	1	26.18	24.80	23.56	22.44
095120	11/16	6	1/2	3-Flatted	1	27.78	26.32	25.00	23.81
095160	3/4	6	1/2	3-Flatted	1	29.17	27.63	26.25	25.00
095200	13/16	6	1/2	3-Flatted	1	31.40	29.75	28.26	26.92
095240	7/8	6	1/2	3-Flatted	1	35.92	34.03	32.33	30.79
095280	15/16	6	1/2	3-Flatted	1	35.46	33.59	31.91	30.39
095320	1"	6	1/2	3-Flatted	1	38.79	36.75	34.91	33.25



TYPE S & D DRILL BIT SETS			PRICE PER SET				
ITEM NO.	SIZE	DESCRIPTION	1	2	5	10	20
095450	9/16 - 1"	4 Piece, Black Plastic Case	\$123.03	\$116.64	\$110.88	\$105.66	\$100.91
095460	9/16 - 1"	8 Piece, Black Metal Index	247.61	235.82	225.10	215.32	

S & D Drill Bit Extension

- Includes an Allen Wrench
- For use with all S & D Type drills with 1/2" shank



ITEM NO.	BORE/SHANK	EXT LENGTH	OAL (INS)	1	3	6	12
834296	1/2	6"	7-1/2	\$37.15	\$35.20	\$33.44	\$31.85

MAGNUM™ Super Premium Drill Bits – Jobber Length

METRIC

- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured to NAS 907B specification from Premium Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Will out-perform cobalt drill bits in materials such as work-hardening grades of stainless steel
- Withstands substantially higher drilling temperatures while maintaining sharpness



TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	10	30	60	120
253010	0.70	1-1/4	25/64	Round	10	\$2.42	\$2.29	\$2.18	\$2.07
253020	0.80	1-3/8	1/2	Round	10	1.71	1.62	1.54	1.46
253030	0.85	1-1/2	5/8	Round	10	1.61	1.53	1.45	1.38
253040	0.90	1-1/2	5/8	Round	10	1.24	1.17	1.11	1.06
253050	0.95	1-1/2	5/8	Round	10	1.24	1.17	1.11	1.06
253060	0.98	1-1/2	5/8	Round	10	1.24	1.17	1.11	1.06
253070	1.00	1-5/8	11/16	Round	10	1.15	1.09	1.04	0.99
253080	1.05	1-5/8	11/16	Round	10	1.15	1.09	1.04	0.99
253090	1.10	1-3/4	3/4	Round	10	1.15	1.09	1.04	0.99
253100	1.15	1-3/4	3/4	Round	10	1.15	1.09	1.04	0.99
253110	1.18	1-3/4	3/4	Round	10	1.15	1.09	1.04	0.99
253120	1.20	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253130	1.25	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253140	1.30	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253150	1.35	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253160	1.40	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253170	1.45	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253180	1.50	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253190	1.55	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253200	1.60	1-7/8	7/8	Round	10	1.15	1.09	1.04	0.99
253210	1.65	2	1	Round	10	1.15	1.09	1.04	0.99
253220	1.70	2	1	Round	10	1.15	1.09	1.04	0.99
253230	1.75	2	1	Round	10	1.15	1.09	1.04	0.99
253240	1.80	2	1	Round	10	1.15	1.09	1.04	0.99
253250	1.90	2	1	Round	10	1.15	1.09	1.04	0.99
253260	2.00	2	1	Round	10	1.01	0.96	0.91	0.87
253270	2.05	2-1/8	1-5/32	Round	10	1.10	1.04	0.99	0.94
253280	2.10	2-1/8	1-5/32	Round	10	1.10	1.04	0.99	0.94
253290	2.20	2-1/4	1-1/4	Round	10	1.10	1.04	0.99	0.94
253300	2.30	2-1/4	1-1/4	Round	10	1.10	1.04	0.99	0.94
253310	2.40	2-23/64	1-3/8	Round	10	1.10	1.04	0.99	0.94
253320	2.50	2-23/64	1-3/8	Round	10	1.10	1.04	0.99	0.94
253330	2.60	2-1/2	1-29/64	Round	10	1.10	1.04	0.99	0.94
253340	2.70	2-1/2	1-15/32	Round	10	1.10	1.04	0.99	0.94
253350	2.80	2-5/8	1-1/2	Round	10	1.10	1.04	0.99	0.94
253360	2.90	2-3/4	1-5/8	Round	10	1.01	0.96	0.91	0.87
253370	3.00	2-3/4	1-5/8	Round	10	1.01	0.96	0.91	0.87
253380	3.10	2-3/4	1-5/8	Round	10	1.13	1.07	1.01	0.96
253390	3.20	2-3/4	1-5/8	Round	10	1.18	1.12	1.06	1.01
253400	3.30	2-7/8	1-3/4	Round	10	1.18	1.12	1.06	1.01
253410	3.40	2-7/8	1-3/4	Round	10	1.18	1.12	1.06	1.01
253420	3.50	2-7/8	1-3/4	Round	10	1.22	1.16	1.10	1.05
253430	3.60	3	1-7/8	Round	10	1.22	1.16	1.10	1.05
253440	3.70	3	1-7/8	Round	10	1.22	1.16	1.10	1.05

TYPE S & D DRILL BITS						PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	10	30	60	120
253450	3.80	3	1-7/8	Round	10	\$1.25	\$1.18	\$1.13	\$1.07
253460	3.90	3-1/8	2	Round	10	1.25	1.18	1.13	1.13
253470	4.00	3-1/4	2-1/8	Round	10	1.26	1.20	1.14	1.08
253480	4.10	3-1/4	2-1/8	Round	10	1.33	1.26	1.20	1.14
253490	4.20	3-1/4	2-1/8	Round	10	1.35	1.28	1.21	1.15
253500	4.30	3-1/4	2-1/8	Round	10	1.35	1.28	1.21	1.21
253510	4.40	3-3/8	2-13/64	Round	10	1.49	1.41	1.34	1.27
253520	4.50	3-3/8	2-13/64	Round	10	1.57	1.49	1.41	1.35
253530	4.60	3-3/8	2-13/64	Round	10	1.60	1.51	1.44	1.37
253540	4.70	3-1/2	2-21/64	Round	10	1.65	1.57	1.49	1.42
253550	4.80	3-1/2	2-21/64	Round	10	1.71	1.62	1.54	1.46
253560	4.90	3-5/8	2-7/16	Round	10	1.76	1.67	1.59	1.51
253570	5.00	3-5/8	2-7/16	Round	10	1.76	1.67	1.59	1.51
253580	5.10	3-5/8	2-7/16	Round	10	1.81	1.71	1.63	1.55
253590	5.20	3-3/4	2-1/2	Round	10	1.86	1.76	1.68	1.60
253600	5.30	3-3/4	2-1/2	Round	10	1.89	1.79	1.70	1.62
253610	5.40	3-3/4	2-1/2	Round	10	1.93	1.83	1.74	1.65
253620	5.50	3-3/4	2-1/2	Round	10	1.89	1.79	1.70	1.62
253630	5.60	3-7/8	2-5/8	Round	10	2.10	1.99	1.89	1.80
253640	5.70	3-7/8	2-5/8	Round	10	2.10	1.99	1.89	1.80
253650	5.80	3-7/8	2-5/8	Round	10	2.13	2.01	1.91	1.82
253660	5.90	3-7/8	2-5/8	Round	10	2.11	2.00	1.90	1.81
253670	6.00	4	2-3/4	Round	10	2.11	2.00	1.90	1.81
253680	6.10	4	2-3/4	Round	10	2.17	2.05	1.95	1.86
253690	6.20	4	2-3/4	Round	10	2.33	2.21	2.10	2.00
253700	6.30	4	2-3/4	Round	10	2.33	2.21	2.10	2.00
253710	6.40	4-1/8	2-7/8	Round	10	2.54	2.41	2.29	2.18
253720	6.50	4-1/8	2-7/8	Round	10	2.50	2.37	2.25	2.14
253730	6.60	4-1/8	2-7/8	Round	10	2.58	2.45	2.33	2.21
253740	6.70	4-1/8	2-7/8	Round	10	2.54	2.41	2.29	2.18
253750	6.80	4-1/8	2-7/8	Round	10	2.72	2.58	2.45	2.33
253760	6.90	4-1/8	2-7/8	Round	10	2.76	2.62	2.49	2.37
253770	7.00	4-1/8	2-7/8	Round	10	2.72	2.58	2.45	2.33
253780	7.10	4-1/4	2-61/64	Round	10	3.04	2.88	2.74	2.61
253790	7.20	4-1/4	2-61/64	Round	10	3.08	2.92	2.78	2.64
253800	7.30	4-1/4	2-61/64	Round	10	3.15	2.99	2.84	2.70
253810	7.40	4-3/8	3	Round	10	3.21	3.04	2.89	2.75
						5	15	30	60
253820	7.50	4-3/8	3	Round	5	3.18	3.01	2.86	2.73
253830	7.60	4-3/8	3	Round	5	3.38	3.20	3.04	2.89
253840	7.70	4-1/2	3-3/16	Round	5	3.49	3.30	3.14	2.99
253850	7.80	4-1/2	3-3/16	Round	5	3.49	3.30	3.14	2.99
253860	7.90	4-1/2	3-3/16	Round	5	3.54	3.36	3.19	3.04
253870	8.00	4-1/2	3-3/16	Round	5	3.64	3.45	3.28	3.12

MAGNUM™ Super Premium Drill Bits – Jobber Length

METRIC (continued)

METRIC DRILL BITS – JOBBER LENGTH – ROUND SHANK						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	5	15	30	60
253880	8.10	4-9/16	3-5/16	Round	5	\$3.93	\$3.72	\$3.54	\$3.37
253890	8.20	4-9/16	3-5/16	Round	5	3.93	3.72	3.54	3.37
253900	8.30	4-9/16	3-5/16	Round	5	4.00	3.79	3.60	3.43
253910	8.40	4-3/4	3-27/64	Round	5	4.00	3.79	3.60	3.43
253920	8.50	4-3/4	3-27/64	Round	5	4.13	3.91	3.71	3.54
253930	8.60	4-3/4	3-27/64	Round	5	4.04	3.83	3.64	3.46
253940	8.70	4-3/4	3-27/64	Round	5	4.29	4.07	3.86	3.68
253950	8.80	4-7/8	3-1/2	Round	5	4.43	4.20	3.99	3.80
253960	8.90	4-7/8	3-1/2	Round	5	4.68	4.43	4.21	4.01
253970	9.00	4-7/8	3-1/2	Round	5	4.68	4.43	4.21	4.01
253980	9.10	4-7/8	3-1/2	Round	5	5.10	4.83	4.59	4.37
253990	9.20	5	3-5/8	Round	5	5.10	4.83	4.59	4.37
254000	9.30	5	3-5/8	Round	5	5.10	4.83	4.59	4.37
254010	9.40	5	3-5/8	Round	5	5.10	4.83	4.59	4.37
254020	9.50	5	3-5/8	Round	5	4.94	4.68	4.45	4.24
254030	9.60	5-1/8	3-3/4	Round	5	5.33	5.05	4.80	4.57
254040	9.70	5-1/8	3-3/4	Round	5	5.33	5.05	4.80	4.57
254050	9.80	5-1/8	3-3/4	Round	5	5.56	5.26	5.00	4.76
254060	9.90	5-1/8	3-3/4	Round	5	5.56	5.26	5.00	4.76
254070	10.00	5-1/8	3-3/4	Round	5	5.67	5.37	5.10	4.86
254080	10.10	5-1/8	3-3/4	Round	5	5.69	5.39	5.13	4.88
254090	10.20	5-15/64	3-7/8	Round	5	6.08	5.76	5.48	5.21
254100	10.30	5-15/64	3-7/8	Round	5	6.56	6.21	5.90	5.62
254110	10.40	5-15/64	3-7/8	Round	5	6.56	6.21	5.90	5.62
254120	10.50	5-15/64	3-7/8	Round	5	6.56	6.21	5.90	5.62

METRIC DRILL BITS – JOBBER LENGTH – ROUND SHANK						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	5	15	30	60
254130	10.60	5-15/64	3-7/8	Round	5	\$6.58	\$6.24	\$5.93	\$5.64
254140	10.70	5-1/4	3-5/8	Round	5	6.72	6.37	6.05	5.76
254150	10.80	5-1/2	4-1/16	Round	5	6.83	6.47	6.15	5.86
254160	10.90	5-1/2	4-1/16	Round	5	6.96	6.59	6.26	5.96
254170	11.00	5-1/2	4-1/16	Round	5	6.94	6.58	6.25	5.95
254180	11.10	5-1/2	4-1/16	Round	5	7.00	6.63	6.30	6.00
254190	11.20	5-5/8	4-7/32	Round	5	7.11	6.74	6.40	6.10
254200	11.30	5-5/8	4-7/32	Round	5	8.31	7.87	7.48	7.12
254210	11.40	5-5/8	4-7/32	Round	5	7.31	6.92	6.58	6.26
254220	11.50	5-5/8	4-7/32	Round	5	7.51	7.12	6.76	6.44
254230	11.60	5-5/8	4-7/32	Round	5	7.40	7.01	6.66	6.35
254240	11.70	5-3/4	4-11/32	Round	5	7.63	7.22	6.86	6.54
254250	11.80	5-3/4	4-11/32	Round	5	7.63	7.22	6.86	6.54
254260	11.90	5-3/4	4-11/32	Round	5	7.83	7.42	7.05	6.71
254270	12.00	5-7/8	4-3/8	Round	5	7.89	7.47	7.10	6.76
254280	12.10	5-7/8	4-3/8	Round	5	7.63	7.22	6.86	6.54
254290	12.20	5-7/8	4-3/8	Round	5	7.63	7.22	6.86	6.54
254300	12.30	5-7/8	4-3/8	Round	5	8.15	7.72	7.34	6.99
254310	12.40	5-7/8	4-3/8	Round	5	8.15	7.72	7.34	6.99
254320	12.50	6	4-1/2	Round	5	8.36	7.92	7.53	7.17
254330	12.60	6	4-1/2	Round	5	8.32	7.88	7.49	7.13
254340	12.70	6	4-1/2	Round	5	8.51	8.07	7.66	7.30
254350	12.80	6	4-1/2	Round	5	8.68	8.22	7.81	7.44
254360	12.90	6	4-1/2	Round	5	8.83	8.37	7.95	7.57
254370	13.00	6	4-1/2	Round	5	9.58	9.08	8.63	8.21

MAGNUM™ Super Premium Drill Bits – S & D Metric

- Precision ground flats on the shank give positive chuck grip and help eliminate slippage
- Recommended for use in work-hardening grades of stainless steel
- Feature a 1/2"-reduced shank for use in a standard 1/2" drill chuck



METRIC DRILL BITS – S & D – 1/2" 3-FLATTED SHANK						UOM: EA			
ITEM NO.	SIZE	OAL (INS)	SHANK DIA	SHANK TYPE	PKG QTY	1	5	10	20
255000	14.0	6	1/2	3-Flatted	1	\$19.97	\$18.92	\$17.98	\$17.12
255005	14.5	6	1/2	3-Flatted	1	20.93	19.83	18.84	17.94
255010	15.0	6	1/2	3-Flatted	1	21.88	20.72	19.69	18.75
255015	15.5	6	1/2	3-Flatted	1	22.81	21.61	20.53	19.55
255020	16.0	6	1/2	3-Flatted	1	23.72	22.47	21.35	20.33
255025	16.5	6	1/2	3-Flatted	1	24.19	22.92	21.78	20.74
255030	17.0	6	1/2	3-Flatted	1	24.67	23.37	22.20	21.14
255035	17.5	6	1/2	3-Flatted	1	25.31	23.97	22.78	21.69
255040	18.0	6	1/2	3-Flatted	1	25.93	24.57	23.34	22.23
255045	18.5	6	1/2	3-Flatted	1	26.40	25.01	23.76	22.63
255050	19.0	6	1/2	3-Flatted	1	26.86	25.45	24.18	23.02
255055	19.5	6	1/2	3-Flatted	1	28.10	26.62	25.29	24.08

METRIC DRILL BITS – S & D – 1/2" 3-FLATTED SHANK						UOM: EA			
ITEM NO.	SIZE	OAL (INS)	SHANK DIA	SHANK TYPE	PKG QTY	1	5	10	20
255060	20.0	6	1/2	3-Flatted	1	\$29.33	\$27.79	\$26.40	\$25.14
255065	20.5	6	1/2	3-Flatted	1	29.97	28.39	26.98	25.69
255070	21.0	6	1/2	3-Flatted	1	30.63	29.01	27.56	26.25
255075	21.5	6	1/2	3-Flatted	1	31.19	29.55	28.08	26.74
255080	22.0	6	1/2	3-Flatted	1	31.76	30.09	28.59	27.23
255085	22.5	6	1/2	3-Flatted	1	32.49	30.78	29.24	27.85
255090	23.0	6	1/2	3-Flatted	1	33.18	31.43	29.86	28.44
255095	23.5	6	1/2	3-Flatted	1	35.33	33.47	31.80	30.29
255100	24.0	6	1/2	3-Flatted	1	37.50	35.53	33.75	32.14
255105	24.5	6	1/2	3-Flatted	1	39.44	37.37	35.50	33.81
255110	25.0	6	1/2	3-Flatted	1	41.36	39.18	37.23	35.45

MAGNUM™ Super Premium Drill Bit Sets – Jobber Length **METRIC**

- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured to NAS 907B specification from Premium Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Out-performs cobalt drill bits in materials such as work-hardening grades of stainless steel
- Withstands substantially higher drilling temperatures while maintaining sharpness



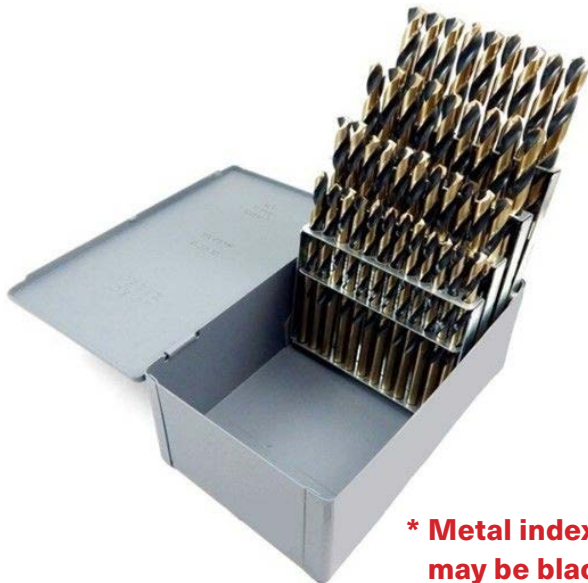
SP-13M, 13 Piece **METRIC** Drill Bit Set

- Includes metric sizes 1.0 – 7.0mm x .5mm increments
- Metal index conveniently marked with the diameter decimal equivalents
- Part of the popular MAGNUM™ family



SP-25M, 25 Piece **METRIC** Drill Bit Set

- Includes metric sizes 1.0 – 13.0mm x .5mm increments
- Black metal index conveniently marked with the diameter decimal equivalents
- Part of the popular MAGNUM™ family



*** Metal index
may be black**

SP-41M, 41 Piece **METRIC** Drill Bit Set

- Includes metric sizes 6.0 – 10.0mm x .1mm increments
- Metal index conveniently marked with the diameter decimal equivalents
- Part of the popular MAGNUM™ family

METRIC MAGNUM™ DRILL BIT SETS		PRICE PER SET			
ITEM NO.	DESCRIPTION	1	3	6	12
254410	SP-11M, Sizes 1.0 – 6.0mm x .5mm	\$21.13	\$20.01	\$19.01	\$18.11
254420	SP-13M, Sizes 1.0 – 7.0mm x .5mm	31.89	30.21	28.70	27.33
254430	SP-19M, Sizes 1.0 – 10.0mm x .5mm	57.74	54.70	51.96	49.49
254440	SP-25M, Sizes 1.0 – 13.0mm x .5mm	104.08	98.68	93.80	89.39
		1	2	4	8
254450	SP-41M, Sizes 6.0 – 10.0mm x .1mm	191.38	181.44	172.48	164.36
254460	SP-118M, Sizes 1.0 – 2.05mm x .05mm, 2.10 – 10.0mm x .1mm, + 10.2, 10.5, 10.8, 11.0, 11.2, 11.5, 11.8, 12.0, 12.2, 12.5, 12.8, & 13.0	404.06	384.23	366.26	349.89

MAGNUM™ Super Premium Drill Bits – Jobber Length **LEFT-HAND**



LF-8, 8 Piece Left-Hand Drill Bit Set

- Includes LH drill bit sizes 1/16 – 1/2" x 16th increments
- Black metal index conveniently marked with the diameter decimal equivalents
- A popular farm shop or DIY set!



LF-12, 12 Piece Left-Hand Drill Bit Set

- Includes LH drill bit sizes 1/16 – 5/16" x 32nd increments, + 3/8, 7/16, & 1/2"
- Black metal index conveniently marked with the diameter decimal equivalents



LF-13, 13 Piece Left-Hand Drill Bit Set

- Don't need all those large, expensive sizes? This is the set for you!
- Includes LH drill bit sizes 1/16 – 1/4" x 64th increments
- Black metal index conveniently marked with the diameter decimal equivalents



LF-15, 15 Piece Left-Hand Drill Bit Set

- Includes LH drill bit sizes 1/16 – 1/2" x 32nd increments
- Black metal index conveniently marked with the diameter decimal equivalents

*** A good mechanic's set!**



LF-17, 17 Piece Left-Hand Drill Bit Set

- Includes LH drill bit sizes 1/16 – 1/4" x 64th increments & 5/16 - 1/2" x 16th increments
- Black metal index conveniently marked with the diameter decimal equivalents

*** Pricing on next page**

MAGNUM™ Super Premium Drill Bits – Jobber Length **LEFT-HAND** (continued)

*** Set Pricing for this page and previous page**

LEFT-HAND MAGNUM™ DRILL BIT SETS		PRICE PER SET			
ITEM NO.	DESCRIPTION	1	3	6	12
924331	LF-13, Sizes 1/16 – 1/4" x 64ths	\$67.44	\$63.89	\$60.70	\$57.81
924332	LF-8, Sizes 1/16 - 1/2" x 16ths	118.47	112.31	106.77	101.74
924333	LF-12, 1/16 – 5/16 x 32nds + 3/8, 7/16, & 1/2"	138.49	131.30	124.81	118.94
		1	2	4	6
924334	LF-17, 1/16 – 1/4 x 64ths + 5/16 – 1/2" x 16ths	159.25	150.97	143.52	136.76
924335	LF-15, 1/16" - 1/2" x 32nds	198.49	188.44	179.36	171.11
924336	LF-29, 1/16" - 1/2" x 1/64ths, Metal Index	364.59	346.36	329.87	314.88
924337	LF-29P, 1/16" - 1/2" x 1/64ths – Ultra-Dex	366.05	347.75	331.19	316.14

LF-29, 29 Piece Left-Hand Drill Bit Set (not pictured)

- The ultimate set for the person who wants to be fully equipped for every emergency!
- Includes LH drill bit sizes 1/16 – 1/2" x 64th increments
- Black metal index conveniently marked with the diameter decimal equivalents

LF-29P, 29 Piece Left-Hand Drill Bit Set (not pictured)

- The ultimate set for the person who wants to be fully equipped for every emergency!
- Includes LH drill bit sizes 1/16 – 1/2" x 64th increments
- Unbreakable, weather-proof, canister keeps bits from harm. Features pocket clip and screw-on cap with rubber washer.

MAGNUM™ Super Premium Drill Bits – Jobber Length **LEFT-HAND**

- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured from Premium Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Precision ground point, flutes, body, clearance and drill diameter for the ultimate in accuracy and performance
- Ideal for removing broken studs



*** These drill bits are available CARDED as well.**

LEFT HAND MAGNUM™ DRILL BITS – JOBBER LENGTH						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	SHANK DIA	SHANK TYPE	PKG QTY	6	18	36	54
924300	1/16	1-7/8	7/8	Round	6	\$4.00	\$3.79	\$3.60	\$3.43
924301	5/64	2	1	Round	6	4.00	3.79	3.60	3.43
924302	3/32	2-1/4	1-1/4	Round	6	4.00	3.79	3.60	3.43
924303	7/64	2-5/8	1-1/2	Round	6	4.00	3.79	3.60	3.43
924304	1/8	2-3/4	1-5/8	Round	6	4.00	3.79	3.60	3.43
924305	9/64	2-7/8	1-3/4	Round	6	4.00	3.79	3.60	3.43
924306	5/32	3-1/8	2	Round	6	4.65	4.41	4.19	3.99
924307	11/64	3-1/4	2-1/8	Round	6	5.36	5.08	4.83	4.60
924308	3/16	3-1/2	2-5/16	Round	6	5.60	5.30	5.04	4.80
924309	13/64	3-5/8	2-7/16	Round	6	6.26	5.93	5.64	5.37
924310	7/32	3-3/4	2-1/2	Round	6	6.69	6.34	6.03	5.74
924311	15/64	3-7/8	2-5/8	Round	6	7.15	6.78	6.44	6.13
924312	1/4	4	2-3/4	Round	6	7.74	7.33	6.96	6.63
924313	17/64	4-1/8	2-7/8	Round	6	8.22	7.79	7.40	7.05
924314	9/32	4-1/4	2-15/16	Round	6	9.83	9.32	8.85	8.43

LEFT HAND MAGNUM™ DRILL BITS – JOBBER LENGTH						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	SHANK DIA	SHANK TYPE	PKG QTY	3	9	18	27
924315	19/64	4-3/8	3-1/16	Round	3	\$11.17	\$10.58	\$10.05	\$9.57
924316	5/16	4-1/2	3-3/16	Round	3	11.74	11.12	10.56	10.06
924317	21/64	4-5/8	3-5/16	Round	3	12.71	12.04	11.44	10.89
924318	11/32	4-3/4	3-7/16	Round	3	14.90	14.12	13.41	12.77
924319	23/64	4-7/8	3-1/2	Round	3	16.74	15.86	15.06	14.35
924320	3/8	5	3-5/8	Round	3	18.24	17.28	16.41	15.63
924321	25/64	5-1/8	3-3/4	Round	3	19.71	18.67	17.74	16.89
924322	13/32	5-1/4	3-7/8	Round	3	21.10	19.99	18.99	18.08
924323	27/64	5-3/8	3-15/16	Round	3	22.31	21.13	20.08	19.12
924324	7/16	5-1/2	4-1/16	Round	3	23.88	22.62	21.49	20.46
924325	29/64	5-5/8	4-3/16	Round	3	26.69	25.29	24.03	22.88
924326	15/32	5-3/4	4-5/16	Round	3	27.01	25.59	24.31	23.15
924327	31/64	5-7/8	4-3/8	Round	3	29.74	28.17	26.76	25.49
924328	1/2	6	4-1/2	Round	3	30.36	28.76	27.33	26.02



General Purpose Drill Bits – Jobber Length – Fractional

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials
- Bright finish
- 118° point

*** Note: These are not the MAGNUM series**

GENERAL PURPOSE – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	DIA (INS)	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
151201	1/64	3/4	3/16	Round	12	\$3.29	\$3.12	\$2.96	
151202	1/32	1-3/8	1/2	Round	12	2.03	1.92	1.83	
151203	3/64	1-3/4	3/4	Round	12	0.80	0.76	0.72	
151204	1/16	1-7/8	7/8	Round	12	0.65	0.62	0.59	0.56
151205	5/64	2	1	Round	12	0.65	0.62	0.59	0.56
151206	3/32	2-1/4	1-1/4	Round	12	0.65	0.62	0.59	0.56
151207	7/64	2-5/8	1-1/2	Round	12	0.67	0.63	0.60	0.57
151208	1/8	2-3/4	1-5/8	Round	12	0.72	0.68	0.65	0.62
151209	9/64	2-7/8	1-3/4	Round	12	0.80	0.76	0.72	0.69
151210	5/32	3-1/8	2	Round	12	0.84	0.80	0.76	0.72
151211	11/64	3-1/4	2-1/8	Round	12	0.92	0.87	0.83	0.79
151212	3/16	3-1/2	2-5/16	Round	12	1.05	1.00	0.95	0.91
151213	13/64	3-5/8	2-7/16	Round	12	1.22	1.16	1.10	1.05
151214	7/32	3-3/4	2-1/2	Round	12	1.28	1.22	1.16	1.10
151215	15/64	3-7/8	2-5/8	Round	12	1.39	1.32	1.25	1.20
151216	1/4	4	2-3/4	Round	12	1.56	1.48	1.41	1.34
151217	17/64	4-1/8	2-7/8	Round	12	2.01	1.91	1.81	1.73
151218	9/32	4-1/4	2-15/16	Round	12	2.15	2.04	1.94	1.85
						6	30	60	120
151219	19/64	4-3/8	3-1/16	Round	6	2.35	2.23	2.12	2.02
151220	5/16	4-1/2	3-3/16	Round	6	2.41	2.29	2.18	2.08
151221	21/64	4-5/8	3-5/16	Round	6	2.76	2.62	2.49	2.37
151222	11/32	4-3/4	3-7/16	Round	6	3.08	2.92	2.78	2.66
151223	23/64	4-7/8	3-1/2	Round	6	3.40	3.23	3.07	2.93

GENERAL PURPOSE – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	DIA (INS)	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
151224	3/8	5	3-5/8	Round	6	\$3.49	\$3.32	\$3.16	\$3.01
151225	25/64	5-1/8	3-3/4	Round	6	4.07	3.86	3.66	3.49
151226	13/32	5-1/4	3-7/8	Round	6	4.00	3.80	3.61	3.45
151227	27/64	5-3/8	3-15/16	Round	6	4.43	4.20	4.00	3.82
151228	7/16	5-1/2	4-1/16	Round	6	4.75	4.51	4.29	4.09
151229	29/64	5-5/8	4-3/16	Round	6	5.52	5.24	4.99	4.76
151230	15/32	5-3/4	4-5/16	Round	6	5.60	5.32	5.06	4.83
151231	31/64	5-7/8	4-3/8	Round	6	5.84	5.54	5.28	5.03
151232	1/2	6	4-1/2	Round	6	6.17	5.84	5.55	5.29
						1	5	10	20
151233	33/64	6-5/8	4-13/16	Round	1	12.55	11.91	11.34	10.82
151234	17/32	6-5/8	4-13/16	Round	1	13.13	12.47	11.87	11.32
151235	35/64	6-5/8	4-13/16	Round	1	14.20	13.48	12.83	12.24
151236	9/16	6-5/8	4-13/16	Round	1	14.88	14.13	13.45	12.83
151237	37/64	6-5/8	4-13/16	Round	1	14.92	14.16	13.48	12.86
151238	19/32	7-1/8	5-3/16	Round	1	15.31	14.53	13.83	13.20
151239	39/64	7-1/8	5-3/16	Round	1	16.83	15.97	15.20	14.51
151240	5/8	7-1/8	5-3/16	Round	1	16.43	15.59	14.84	14.16
151241	41/64	7-1/8	5-3/16	Round	1	17.40	16.52	15.72	15.00
151242	21/32	7-1/8	5-3/16	Round	1	17.37	16.49	15.70	14.98
151243	43/64	7-5/8	5-5/8	Round	1	20.43	19.39	18.46	17.61
151244	11/16	7-5/8	5-5/8	Round	1	19.96	18.95	18.04	17.21
151248	3/4	7-5/8	5-5/8	Round	1	22.44	21.26	20.20	19.24

General Purpose Drill Bits – Jobber Length – Letter Sizes

JOBBER LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
151451	A	3-7/8	2-5/8"	Round	12	\$1.56	\$1.48	\$1.41	\$1.34
151452	B	4	2-3/4	Round	12	1.56	1.48	1.41	1.34
151453	C	4	2-3/4	Round	12	1.52	1.44	1.37	1.31
151454	D	4	2-3/4	Round	12	1.52	1.44	1.37	1.31
151455	E	4	2-3/4	Round	12	1.31	1.48	1.41	1.34
151456	F	4-1/8	2-7/8	Round	12	1.84	1.75	1.66	1.59
151457	G	4-1/8	2-7/8	Round	12	1.97	1.87	1.78	1.70
151458	H	4-1/8	2-7/8	Round	12	2.01	1.91	1.82	1.74
151459	I	4-1/8	2-7/8	Round	12	2.01	1.91	1.82	1.74
151460	J	4-1/8	2-7/8	Round	12	2.27	2.15	2.05	1.95
151461	K	4-1/4	2-15/16	Round	12	2.27	2.15	2.15	1.95
151462	L	4-1/4	2-15/16	Round	12	2.52	2.39	2.28	2.17

JOBBER LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
151463	M	4-3/8	3-1/16	Round	6	\$2.65	\$2.52	\$2.40	\$2.29
151464	N	4-3/8	3-1/16	Round	6	2.65	2.65	2.40	2.29
151465	O	4-1/2	3-3/16	Round	6	2.67	2.53	2.41	2.30
151466	P	4-5/8	3-5/16	Round	6	2.91	2.76	2.63	2.51
151467	Q	4-3/4	3-7/16	Round	6	2.97	2.82	2.69	2.56
151468	R	4-3/4	3-7/16	Round	6	3.11	2.95	2.81	2.68
151469	S	4-7/8	3-1/2	Round	6	3.57	3.39	3.23	3.08
151470	T	4-7/8	3-1/2	Round	6	3.57	3.39	3.23	3.08
151471	U	5	3-5/8	Round	6	3.61	3.43	3.27	3.11
151472	V	5	3-5/8	Round	6	3.67	3.48	3.31	3.16
151473	W	5-1/8	3-3/4	Round	6	4.07	3.86	3.67	3.51
151474	X	5-1/8	3-3/4	Round	6	4.67	4.43	4.22	4.02
151475	Y	5-1/4	3-7/8	Round	6	4.88	4.63	4.41	4.21
151476	Z	5-1/4	3-7/8	Round	6	5.43	5.15	4.90	4.68



General Purpose Drill Bits – Jobber Length – Wire Sizes

*** Note: These are not
the MAGNUM series**

GENERAL PURPOSE – WIRE SIZES						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
151275	1	3-7/8	2-5/8	Round	12	\$1.58	\$1.50	\$1.43	\$1.36
151276	2	3-7/8	2-5/8	Round	12	1.58	1.50	1.43	1.36
151277	3	3-3/4	2-1/2	Round	12	1.52	1.44	1.37	1.31
151278	4	3-3/4	2-1/2	Round	12	1.58	1.50	1.43	1.36
151279	5	3-3/4	2-1/2	Round	12	1.58	1.50	1.43	1.36
151280	6	3-3/4	2-1/2	Round	12	1.52	1.44	1.37	1.31
151281	7	3-5/8	2-7/16	Round	12	1.31	1.06	1.01	0.97
151282	8	3-5/8	2-7/16	Round	12	1.12	1.06	1.01	0.97
151283	9	3-5/8	2-7/16	Round	12	1.29	1.22	1.16	1.11
151284	10	3-5/8	2-7/16	Round	12	1.24	1.18	1.12	1.07
151285	11	3-1/2	2-5/16	Round	12	1.24	1.18	1.12	1.07
151286	12	3-1/2	2-5/16	Round	12	1.24	1.18	1.12	1.07
151287	13	3-1/2	2-5/16	Round	12	1.09	1.04	0.99	0.94
151288	14	3-3/8	2-3/16	Round	12	1.09	1.04	0.99	0.94
151289	15	3-3/8	2-3/16	Round	12	1.09	1.04	0.99	0.94
151290	16	3-3/8	2-3/16	Round	12	1.09	1.04	0.99	0.94
151291	17	3-3/8	2-3/16	Round	12	1.09	1.04	0.99	0.94
151292	18	3-1/4	2-1/8	Round	12	0.97	0.92	0.88	0.84
151293	19	3-1/4	2-1/8	Round	12	0.97	0.92	0.88	0.84
151294	20	3-1/4	2-1/8	Round	12	0.97	0.92	0.88	0.84
151295	21	3-1/4	2-1/8	Round	12	0.88	0.84	0.80	0.76
151296	22	3-1/8	2	Round	12	0.88	0.84	0.80	0.76
151297	23	3-1/8	2	Round	12	0.88	0.84	0.80	0.76
151298	24	3-1/8	2	Round	12	0.88	0.84	0.80	0.76
151299	25	3	1-7/8	Round	12	0.80	0.76	0.72	0.69
151300	26	3	1-7/8	Round	12	0.80	0.76	0.72	0.69
151301	27	3	1-7/8	Round	12	0.80	0.76	0.72	0.69
151302	28	2-7/8	1-3/4	Round	12	0.80	0.76	0.72	0.69
151303	29	2-7/8	1-3/4	Round	12	0.80	0.76	0.72	0.69
151304	30	2-3/4	1-5/8	Round	12	0.80	0.76	0.72	0.69
151305	31	2-3/4	1-5/8	Round	12	0.75	0.71	0.67	0.64
151306	32	2-3/4	1-5/8	Round	12	0.75	0.71	0.67	0.64
151307	33	2-5/8	1-1/2	Round	12	0.75	0.71	0.67	0.64
151308	34	2-5/8	1-1/2	Round	12	0.75	0.71	0.67	0.64
151309	35	2-5/8	1-1/2	Round	12	0.72	0.68	0.65	0.62
151310	36	2-1/2	1-7/16	Round	12	0.72	0.68	0.65	0.62
151311	37	2-1/2	1-7/16	Round	12	0.72	0.68	0.65	0.62
151312	38	2-1/2	1-7/16	Round	12	0.72	0.68	0.65	0.62
151313	39	2-3/8	1-3/8	Round	12	0.72	0.68	0.65	0.62
151314	40	2-3/8	1-3/8	Round	12	0.72	0.68	0.65	0.62
151315	41	2-3/8	1-3/8	Round	12	0.72	0.68	0.65	0.62
151316	42	2-1/4	1-1/4	Round	12	0.73	0.70	0.66	0.63
151317	43	2-1/4	1-1/4	Round	12	0.73	0.70	0.66	0.63
151318	44	2-1/8	1-1/8	Round	12	0.73	0.70	0.66	0.63
151319	45	2-1/8	1-1/8	Round	12	0.73	0.70	0.66	0.63
151320	46	2-1/8	1-1/8	Round	12	0.73	0.70	0.66	0.63
151321	47	2	1	Round	12	0.73	0.70	0.66	0.63
151322	48	2	1	Round	12	0.73	0.70	0.66	0.63
151323	49	2	1	Round	12	0.73	0.70	0.66	0.63

JOBBER LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
151324	50	2	1	Round	12	\$0.73	\$0.70	\$0.66	\$0.63
151325	51	2	1	Round	12	0.73	0.70	0.66	0.63
151326	52	1-7/8	7/8	Round	12	0.73	0.70	0.66	0.63
151327	53	1-7/8	7/8	Round	12	0.80	0.76	0.72	0.69
151328	54	1-7/8	7/8	Round	12	0.80	0.76	0.72	0.69
151329	55	1-7/8	7/8	Round	12	0.80	0.76	0.72	0.69
151330	56	1-3/4	3/4	Round	12	0.80	0.76	0.72	0.69
151331	57	1-3/4	3/4	Round	12	0.81	0.77	0.73	0.70
151332	58	1-5/8	11/16	Round	12	0.81	0.77	0.73	0.70
151333	59	1-5/8	11/16	Round	12	0.81	0.77	0.73	0.70
151334	60	1-5/8	11/16	Round	12	0.81	0.77	0.73	0.70
151335	61	1-5/8	11/16	Round	12	1.04	0.99	0.94	0.90
151338	62	1-1/2	5/8	Round	12	1.04	0.99	0.94	0.90
151341	63	1-1/2	5/8	Round	12	1.04	0.99	0.94	0.90
151344	64	1-1/2	5/8	Round	12	1.04	0.99	0.94	0.90
151347	65	1-1/2	5/8	Round	12	1.04	0.99	0.94	0.90
151350	66	1-3/8	1/2	Round	12	1.95	1.85	1.76	1.68
151353	67	1-3/8	1/2	Round	12	1.95	1.85	1.76	1.68
151356	68	1-3/8	1/2	Round	12	1.95	1.85	1.76	1.68
151359	69	1-3/8	1/2	Round	12	2.25	2.14	2.04	1.94
151362	70	1-1/4	3/8	Round	12	2.25	2.14	2.04	1.94
151365	71	1-1/4	3/8	Round	12	2.68	2.54	2.42	2.31
151368	72	1-1/8	5/16	Round	12	2.68	2.54	2.42	2.31
151371	73	1-1/8	5/16	Round	12	2.68	2.54	2.42	2.31
151374	74	1	1/4	Round	12	1.68	1.59	1.52	1.45
151377	75	1	1/4	Round	12	2.68	2.54	2.42	2.31
151380	76	7/8	3/16	Round	12	1.68	1.59	1.52	1.45
151383	77	7/8	3/16	Round	12	2.68	2.54	2.42	2.31
151386	78	7/8	3/16	Round	12	2.68	2.54	2.42	2.31
151389	79	3/4	1/8	Round	12	3.16	3.00	2.86	2.72
151392	80	3/4	1/8	Round	12	3.16	3.16	2.86	2.72
151395	81	3/4	1/8	Round	12	4.53	4.30	4.10	3.91
151398	82	3/4	1/8	Round	12	4.53	4.30	4.10	3.91
151401	83	3/4	1/8	Round	12	4.96	4.71	4.48	4.28
151404	84	3/4	3/32	Round	12	4.96	4.71	4.48	4.28
151407	85	3/4	3/32	Round	12	4.96	4.71	4.48	4.28
151410	86	3/4	3/32	Round	12	5.28	5.01	4.77	4.55
151413	87	3/4	3/32	Round	12	5.28	5.01	4.77	4.55
151416	88	3/4	5/64	Round	12	6.72	6.38	6.07	5.79
151419	89	3/4	5/64	Round	12	6.72	6.38	6.07	5.79
151422	90	3/4	5/64	Round	12	6.72	6.38	6.07	5.79
151425	91	3/4	5/64	Round	12	6.72	6.38	6.07	5.79
151428	92	3/4	1/16	Round	12	6.72	6.38	6.07	5.79
151431	93	3/4	1/16	Round	12	6.72	6.38	6.07	5.79
151434	94	3/4	1/16	Round	12	8.28	7.86	7.48	7.14
151437	95	3/4	1/16	Round	12	8.28	7.86	7.48	7.14
151440	96	3/4	1/16	Round	12	9.23	8.76	8.34	7.95
151443	97	3/4	1/16	Round	12	15.37	14.59	13.89	13.25

General Purpose Drill Bits – Jobber Length – Sets

- Widely used in general purpose applications
- Designed for a wide range of operating conditions and materials
- Bright finish
- 118° point

*** Note: These are not the
MAGNUM series**



J-13



J-26

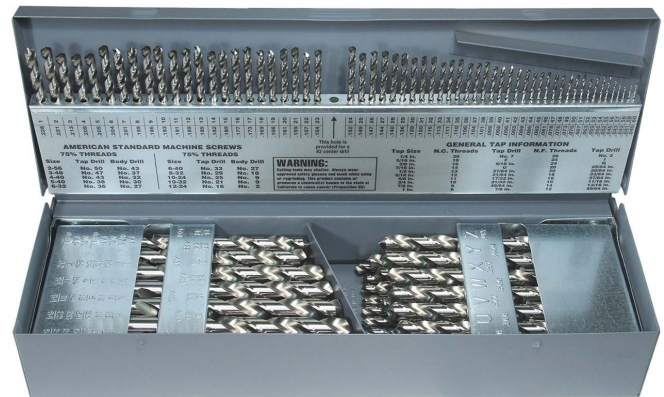


J-29



J-60

- J-10, 10 piece set includes fractional sizes 1/16 – 5/32" x 64ths increments, plus 3/16, 7/32, and 1/4"
- J-11, 11 piece set includes fractional sizes 1/16 – 3/8" x 32nds
- J-13, 13 piece set includes fractional sizes 1/16 – 1/4" x 64ths
- J-15, 15 piece set includes fractional sizes 1/16 – 1/2" x 32nds
- J-20, 20 piece set includes wire sizes #61 – #80
- J-21, 21 piece set includes fractional sizes 1/16 – 3/8" x 64ths
- J-26, 26 piece set includes letter sizes A – Z
- J-29, 29 piece set includes fractional sizes 1/16 – 1/2" x 64ths
- J-60, 60 piece set includes wire sizes #1 – #60
- J-115, 115 piece set includes fractional sizes 1/16 – 1/2", letter sizes A – Z, and wire sizes 1 - 60



J-115

ITEM NO.	DESCRIPTION	1	6	12	24
151481	J-10, 10 Pc Set, Metal Index	\$11.28	\$10.71	\$10.19	\$9.72
151483	J-11, 11 Pc Set, Metal Index	23.03	21.86	20.81	19.85
151485	J-13, 13 Pc Set, Metal Index	15.96	15.15	14.42	13.76
151487	J-15, 15 Pc Set, Metal Index	44.17	41.94	39.92	38.08
151489	J-20, 20 Pc Set, Metal Index	43.53	41.33	39.34	37.53
151491	J-21, 21 Pc Set, Metal Index	39.27	37.28	35.48	33.85
151493	J-26, 26 Pc Set, Metal Index	81.24	77.13	73.41	70.03
151495	J-29, 29 Pc Set, Metal Index	81.83	77.68	73.94	70.54
151497	J-60, 60 Pc Set, Metal Index	57.88	54.95	52.30	49.90
		1	2	4	6
151499	J-115, 115 Pc Set, Metal Index	233.57	222.04	211.59	202.08

MAGNUM™ Super Premium Drill Bits – Screw Machine Length

*** NOTE: SCREW MACHINE length.**

- Heavy-duty construction, will not flex as easily
- 135° split point for fast penetration and accurate starting without a center punch
- Manufactured from special Hi-Molybdenum tool steel
- Black & gold finish for maximum lubricity
- Recommended for work hardening grades of stainless steel and other hard metal drilling applications
- Round shank well suited for use in collets



SCREW MACHINE LENGTH DRILL BITS – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
877001	1/16	1-5/8	5/8	Round	12	\$0.92	\$0.87	\$0.83	\$0.79
877002	5/64	1-11/16	11/16	Round	12	0.96	0.91	0.86	0.82
877003	3/32	1-3/4	3/4	Round	12	0.97	0.92	0.88	0.83
877004	7/64	1-13/16	13/16	Round	12	1.04	0.99	0.94	0.89
877005	1/8	1-7/8	7/8	Round	12	1.10	1.04	0.99	0.94
877006	9/64	1-15/16	15/16	Round	12	1.13	1.07	1.01	0.96
877007	5/32	2-1/16	1	Round	12	1.24	1.17	1.11	1.06
877008	11/64	2-1/8	1-1/16	Round	12	1.38	1.30	1.24	1.18
877009	3/16	2-3/16	1-1/8	Round	12	1.43	1.36	1.29	1.23
877010	13/64	2-1/4	1-3/16	Round	12	1.53	1.45	1.38	1.31
877011	7/32	2-3/8	1-1/4	Round	12	1.81	1.71	1.63	1.55
877012	15/64	2-7/16	1-5/16	Round	12	1.82	1.72	1.64	1.56
877013	1/4	2-1/2	1-3/8	Round	12	1.94	1.84	1.75	1.67
877014	17/64	2-5/8	1-7/16	Round	12	2.25	2.13	2.03	1.93
877015	9/32	2-11/16	1-1/2	Round	12	2.44	2.32	2.20	2.10
						6	30	60	120
877016	19/64	2-3/4	1-9/16	Round	6	2.60	2.46	2.46	2.23
877017	5/16	2-13/16	1-5/8	Round	6	2.85	2.70	2.56	2.44
877018	21/64	2-15/16	1-11/16	Round	6	3.07	2.91	2.76	2.63
877019	11/32	3	1-11/16	Round	6	3.46	3.28	3.11	2.96
877020	23/64	3-1/16	1-3/4	Round	6	4.03	3.82	3.63	3.45
877021	3/8	3-1/8	1-13/16	Round	6	4.24	4.01	3.81	3.63
877022	25/64	3-1/4	1-7/8	Round	6	4.76	4.51	4.29	4.08
877023	13/32	3-5/16	1-15/16	Round	6	5.04	4.78	4.54	4.32

SCREW MACHINE LENGTH DRILL BITS – FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
877024	27/64	3-3/8	2	Round	6	\$5.46	\$5.17	\$4.91	\$4.68
877025	7/16	3-7/16	2-1/16	Round	6	5.60	5.30	5.04	4.80
877026	29/64	3-9/16	2-1/8	Round	6	6.63	6.28	5.96	5.68
877027	15/32	3-5/8	2-1/8	Round	6	7.03	6.66	6.33	6.02
877028	31/64	3-11/16	2-3/16	Round	6	7.24	6.86	6.51	6.20
877029	1/2	3-3/4	2-1/4	Round	6	7.24	6.86	6.51	6.20
						1	5	10	20
877051	33/64	3-7/8	2-3/8	Round	1	16.53	15.66	14.88	14.17
877052	17/32	3-7/8	2-3/8	Round	1	17.28	16.37	15.55	14.81
877053	35/64	4	2-1/2	Round	1	18.01	17.07	16.21	15.44
877054	9/16	4	2-1/2	Round	1	18.01	17.07	16.21	15.44
877055	37/64	4-1/8	2-5/8	Round	1	20.63	19.54	18.56	17.68
877056	19/32	4-1/8	2-5/8	Round	1	20.63	19.54	18.56	17.68
877057	39/64	4-1/4	2-3/4	Round	1	20.67	19.58	18.60	17.71
877058	5/8	4-1/4	2-3/4	Round	1	20.82	19.72	18.74	17.85
877059	41/64	4-1/2	2-7/8	Round	1	23.85	22.59	21.46	20.44
877060	21/32	4-1/2	2-7/8	Round	1	26.50	25.11	23.85	22.71
877061	43/64	4-1/2	2-7/8	Round	1	23.85	22.59	21.46	20.44
877062	11/16	4-1/2	2-7/8	Round	1	26.50	25.11	23.85	22.71
877063	45/64	4-3/4	3	Round	1	28.68	27.17	25.81	24.58
877064	23/32	4-3/4	3	Round	1	28.68	27.17	25.81	24.58
877065	47/64	5	3-1/8	Round	1	30.89	29.26	27.80	26.48
877066	3/4	5	3-1/8	Round	1	30.33	28.74	27.30	26.00

***Need larger diameter sizes? See page 28 for up to 2 1/2"!**

SCREW MACHINE LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
877101	A	2-7/16	1-5/16	Round	12	\$2.18	\$2.07	\$1.96	\$1.87
877102	B	2-1/2	1-3/8	Round	12	2.18	2.07	1.96	1.87
877103	C	2-1/2	1-3/8	Round	12	2.18	2.07	1.96	1.87
877104	D	2-1/2	1-3/8	Round	12	2.18	2.07	1.96	1.87
877105	E	2-1/2	1-3/8	Round	12	1.94	1.84	1.75	1.67
877106	F	2-5/8	1-7/16	Round	12	2.39	2.26	2.15	2.05
877107	G	2-5/8	1-7/16	Round	12	2.53	2.39	2.28	2.17
877108	H	2-11/16	1-1/2	Round	12	2.53	2.39	2.28	2.17
877109	I	2-11/16	1-1/2	Round	12	2.53	2.39	2.28	2.17
877110	J	2-11/16	1-1/2	Round	12	2.71	2.57	2.44	2.32
877111	K	2-11/16	1-1/2	Round	12	2.92	2.76	2.63	2.50
877112	L	2-3/4	1-9/16	Round	12	2.92	2.76	2.63	2.50

SCREW MACHINE LENGTH DRILL BITS – LETTER						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	6	30	60	120
877113	M	2-3/4	1-9/16	Round	6	\$3.21	\$3.04	\$2.89	\$2.75
877114	N	2-13/16	1-5/8	Round	6	3.21	3.04	2.89	2.75
877115	O	2-15/16	1-11/16	Round	6	3.21	3.04	2.89	2.75
877116	P	2-15/16	1-11/16	Round	6	3.54	3.36	3.19	3.04
877117	Q	3	1-11/16	Round	6	3.54	3.36	3.19	3.04
877118	R	3	1-11/16	Round	6	3.54	3.36	3.19	3.04
877119	S	3-1/16	1-3/4	Round	6	4.07	3.86	3.66	3.49
877120	T	3-1/16	1-3/4	Round	6	4.78	4.53	4.30	4.10
877121	U	3-1/8	1-13/16	Round	6	4.78	4.53	4.30	4.10
877122	V	3-1/4	1-7/8	Round	6	5.13	4.86	4.61	4.39
877123	W	3-1/4	1-7/8	Round	6	5.33	5.05	4.80	4.57
877124	X	3-5/16	1-15/16	Round	6	6.25	5.92	5.63	5.36
877125	Y	3-5/16	1-15/16	Round	6	7.42	7.03	6.68	6.36
877126	Z	3-3/8	2	Round	6	7.42	7.03	6.68	6.36

MAGNUM™ Super Premium Drill Bits – Screw Machine Length (continued)



SCREW MACHINE LENGTH DRILL BITS – WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
877151	1	2-7/16	1-5/16	Round	12	\$2.11	\$2.00	\$1.90	\$1.81
877152	2	2-7/16	1-5/16	Round	12	2.11	2.00	1.90	1.81
877153	3	2-3/8	1-1/4	Round	12	1.93	1.83	1.74	1.65
877154	4	2-3/8	1-1/4	Round	12	1.93	1.83	1.74	1.65
877155	5	2-3/8	1-1/4	Round	12	1.93	1.83	1.74	1.65
877156	6	2-3/8	1-1/4	Round	12	1.93	1.83	1.74	1.65
877157	7	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877158	8	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877159	9	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877160	10	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877161	11	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877162	12	2-1/4	1-3/16	Round	12	1.72	1.63	1.55	1.48
877163	13	2-3/16	1-1/8	Round	12	1.60	1.51	1.44	1.37
877164	14	2-3/16	1-1/8	Round	12	1.60	1.51	1.44	1.37
877165	15	2-3/16	1-1/8	Round	12	1.60	1.51	1.44	1.37
877166	16	2-3/16	1-1/8	Round	12	1.60	1.51	1.44	1.37
877167	17	2-3/16	1-1/8	Round	12	1.60	1.51	1.44	1.37
877168	18	2-1/8	1-1/16	Round	12	1.43	1.36	1.29	1.23
877169	19	2-1/8	1-1/16	Round	12	1.43	1.36	1.29	1.23
877170	20	2-1/8	1-1/16	Round	12	1.43	1.36	1.29	1.23
877171	21	2-1/8	1-1/16	Round	12	1.38	1.30	1.24	1.18
877172	22	2-1/8	1-1/16	Round	12	1.38	1.30	1.24	1.18
877173	23	2-1/16	1	Round	12	1.38	1.30	1.24	1.18
877174	24	2-1/16	1	Round	12	1.38	1.30	1.24	1.18
877175	25	2-1/16	1	Round	12	1.32	1.25	1.19	1.13
877176	26	2-1/16	1	Round	12	1.32	1.25	1.19	1.13
877177	27	2-1/16	1	Round	12	1.32	1.25	1.19	1.13
877178	28	1-15/16	15/16	Round	12	1.17	1.11	1.05	1.00
877179	29	1-15/16	15/16	Round	12	1.17	1.11	1.05	1.00
877180	30	1-15/16	15/16	Round	12	1.17	1.11	1.05	1.00

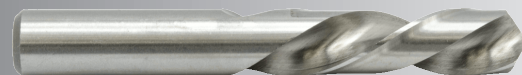
SCREW MACHINE LENGTH DRILL BITS – WIRE						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	12	60	120	240
877181	31	1-7/8	7/8	Round	12	\$1.13	\$1.07	\$1.01	\$0.96
877182	32	1-7/8	7/8	Round	12	1.13	1.07	1.01	0.96
877183	33	1-7/8	7/8	Round	12	1.13	1.07	1.01	0.96
877184	34	1-7/8	7/8	Round	12	1.13	1.07	1.01	0.96
877185	35	1-7/8	7/8	Round	12	1.13	1.07	1.01	0.96
877186	36	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877187	37	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877188	38	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877189	39	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877190	40	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877191	41	1-13/16	13/16	Round	12	1.13	1.07	1.01	0.96
877192	42	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877193	43	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877194	44	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877195	45	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877196	46	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877197	47	1-3/4	3/4	Round	12	1.13	1.07	1.01	0.96
877198	48	1-11/16	11/16	Round	12	1.13	1.07	1.01	0.96
877199	49	1-11/16	11/16	Round	12	1.13	1.07	1.01	0.96
877200	50	1-11/16	11/16	Round	12	1.13	1.07	1.01	0.96
877201	51	1-11/16	11/16	Round	12	1.13	1.07	1.01	0.96
877202	52	1-11/16	11/16	Round	12	1.13	1.07	1.01	0.96
877203	53	1-5/8	5/8	Round	12	1.13	1.07	1.01	0.96
877204	54	1-5/8	5/8	Round	12	1.13	1.07	1.01	0.96
877205	55	1-5/8	5/8	Round	12	1.13	1.07	1.01	0.96
877206	56	1-3/8	1/2	Round	12	1.13	1.07	1.01	0.96
877207	57	1-3/8	1/2	Round	12	1.13	1.07	1.01	0.96
877208	58	1-3/8	1/2	Round	12	1.13	1.07	1.01	0.96
877209	59	1-3/8	1/2	Round	12	1.13	1.07	1.01	0.96
877210	60	1-3/8	1/2	Round	12	1.13	1.07	1.01	0.96



Screw Machine Drill Bit Sets

- SPT-29 includes fractional sizes 1/16 – 1/2" x 64th increments
- SPT-26 includes letter sizes A – Z
- SPT-60 includes wire sizes 1 – 60
- Shorter screw machine length bit will not flex as easily
- Black metal index conveniently marked with the diameter decimal equivalents
- The set to have sitting at the drill press or on the work bench

ITEM NO.	DESCRIPTION	1	3	6	12
877221	29 Piece, 1/16 – 1/2", Black Metal	108.15	102.53	97.47	92.88
877222	26 Piece, A – Z, Black Metal	\$127.67	\$121.04	\$115.06	\$109.65
877223	60 Piece, #1 – 60, Black Metal	97.63	92.49	87.86	83.68



High Speed Steel Screw Machine Drill Bits

- For use in screw machine setups where spindle clearance is limited
- Popular in the automotive and construction industries
- The short flute and overall length provide maximum rigidity
- 118° point on all sizes
- Bright Finish

SCREW MACHINE LENGTH DRILL BITS - FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE (INS)	OAL (INS)	FLUTE LENGTH	SHANK DIA (IN)	PKG QTY	1	3	6	12
600149	49/64	5-1/8	3-1/4	49/64	1	\$28.44	\$26.86	\$25.45	\$24.18
600150	25/32	5-1/8	3-1/4	25/32	1	27.43	25.90	24.54	23.31
600151	51/64	5-1/4	3-3/8	51/64	1	29.94	28.28	26.79	25.45
600152	13/16	5-1/4	3-3/8	13/16	1	28.87	27.26	25.83	24.54
600153	53/64	5-3/8	3-1/2	53/64	1	31.71	29.94	28.37	26.95
600154	27/32	5-3/8	3-1/2	27/32	1	30.56	28.86	27.34	27.34
600155	55/64	5-1/2	3-1/2	55/64	1	32.84	31.01	29.38	27.91
600156	7/8	5-1/2	3-1/2	7/8	1	31.66	29.90	28.33	26.91
600157	57/64	5-5/8	3-5/8	57/64	1	34.09	32.19	30.50	28.98
600158	29/32	5-5/8	3-5/8	29/32	1	32.88	31.06	29.42	27.95
600159	59/64	5-3/4	3-3/4	59/64	1	37.57	35.49	33.62	31.94
600160	15/16	5-3/4	3-3/4	15/16	1	36.24	34.22	32.42	30.80
600161	61/64	5-7/8	3-7/8	61/64	1	40.87	38.60	36.57	34.74
600162	31/32	5-7/8	3-7/8	31/32	1	34.74	37.22	35.26	33.50
600163	63/64	6	4	63/64	1	42.41	40.06	37.95	36.05
600164	1"	6	4	1	1	40.89	38.62	36.59	34.76
						1	2	4	6
600165	1-1/64	6-1/4	4	1	1	69.88	66.00	62.53	59.40
600166	1-1/32	6-1/4	4	1	1	69.88	66.00	62.53	59.40
600167	1-3/64	6-1/4	4	1	1	76.00	71.78	68.00	64.60
600168	1-1/16	6-1/4	4	1	1	51.01	48.18	45.64	43.36
600169	1-5/64	6-3/8	4	1	1	84.44	79.75	75.55	71.78
600170	1-3/32	6-3/8	4	1	1	84.44	79.75	75.55	71.78
600171	1-7/64	6-3/8	4	1	1	86.19	81.40	77.12	73.26
600172	1-1/8	6-3/8	4	1	1	57.79	54.58	51.71	49.13
600173	1-9/64	6-5/8	4	1	1	87.94	83.06	78.68	74.75
600174	1-5/32	6-5/8	4-1/4	1	1	93.06	87.89	83.26	79.10
600175	1-11/64	6-5/8	4-1/4	1	1	95.74	90.42	85.66	81.38
600176	1-3/16	6-5/8	4-1/4	1	1	66.97	63.25	59.92	56.93
600177	1-13/64	6-3/4	4-3/8	1	1	102.91	97.19	92.08	87.48
600178	1-7/32	6-3/4	4-3/8	1	1	102.91	97.19	92.08	87.48
600179	1-15/64	6-3/4	4-3/8	1	1	107.74	101.75	96.39	91.58
600180	1-1/4	6-3/4	4-3/8	1	1	73.31	69.24	65.59	62.31
600181	1-17/64	7	4-3/8	1-1/4	1	115.45	109.12	103.45	98.35
600182	1-9/32	7	4-3/8	1-1/4	1	115.45	109.12	103.45	98.35
600183	1-19/64	7	4-3/8	1-1/4	1	123.39	116.63	110.57	105.11
600184	1-5/16	7	4-3/8	1-1/4	1	104.82	99.00	93.79	89.10
600185	1-21/64	7-1/8	4-1/2	1-1/4	1	137.74	130.19	123.43	117.33
600186	1-11/32	7-1/8	4-1/2	1-1/4	1	141.54	133.78	126.83	120.57
600187	1-23/64	7-1/8	4-1/2	1-1/4	1	146.35	138.33	131.14	124.67
600188	1-3/8	7-1/8	4-1/2	1-1/4	1	109.59	103.59	98.21	93.36
600189	1-25/64	7-3/8	4-3/4	1-1/4	1	151.51	143.21	135.77	129.06

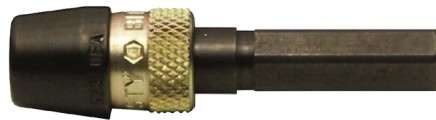
SCREW MACHINE LENGTH DRILL BITS - FRACTIONAL						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK DIA	PKG QTY	1	2	4	6
600190	1-13/32	7-3/8	4-3/4	1-1/4	1	\$151.51	\$143.21	\$135.77	\$129.06
600191	1-27/64	7-3/8	4-3/4	1-1/4	1	212.35	200.71	190.29	180.89
600192	1-7/16	7-3/8	4-3/4	1-1/4	1	118.10	111.63	105.83	100.60
600193	1-29/64	7-1/2	4-7/8	1-1/4	1	157.25	148.63	140.91	133.95
600194	1-15/32	7-1/2	4-7/8	1-1/4	1	157.25	148.63	140.91	133.95
600195	1-31/64	7-1/2	4-7/8	1-1/4	1	160.70	151.89	144.00	136.89
600196	1-1/2	7-1/2	4-7/8	1-1/4	1	121.96	115.27	109.29	103.89
						1	2	3	4
600197	1-17/32	7-3/4	4-7/8	1-1/2	1	166.43	157.32	149.14	141.78
600198	1-9/16	7-3/4	4-7/8	1-1/2	1	137.74	130.19	123.43	117.33
600199	1-19/32	7-3/4	4-7/8	1-1/2	1	209.88	198.38	188.08	178.79
600200	1-5/8	7-3/4	4-7/8	1-1/2	1	155.25	146.74	139.12	132.25
600201	1-21/32	8	5-1/8	1-1/2	1	220.63	208.70	198.00	188.34
600202	1-11/16	8	5-1/8	1-1/2	1	178.26	168.49	159.74	151.85
600203	1-23/32	8	5-1/8	1-1/2	1	231.94	219.41	208.15	198.00
600204	1-3/4	8	5-1/8	1-1/2	1	183.65	173.59	164.57	156.44
600205	1-25/32	8-1/4	5-3/8	1-1/2	1	248.91	235.46	223.38	212.49
600206	1-13/16	8-1/4	5-3/8	1-1/2	1	200.87	189.86	180.00	171.11
600207	1-27/32	8-1/4	5-3/8	1-1/2	1	268.81	254.28	241.24	229.48
600208	1-7/8	8-1/4	5-3/8	1-1/2	1	206.90	195.56	185.40	176.25
600209	1-29/32	8-1/2	5-5/8	1-1/2	1	271.83	257.14	243.95	232.05
600210	1-15/16	8-1/2	5-5/8	1-1/2	1	217.80	206.03	195.46	185.93
600211	1-31/32	8-1/2	5-5/8	1-1/2	1	277.20	262.22	248.77	236.63
600212	2"	8-1/2	5-5/8	1-1/2	1	226.00	213.78	202.82	192.93
600213	2-1/16	8-1/2	5-5/8	1-1/2	1	271.54	256.86	243.69	231.80
600214	2-1/8	8-1/2	5-5/8	1-1/2	1	280.03	264.89	251.31	239.05
600215	2-3/16	8-1/2	5-5/8	1-1/2	1	298.70	282.55	268.06	268.06
600216	2-1/4	8-1/2	5-5/8	1-1/2	1	322.46	305.03	289.38	275.27
600217	2-5/16	8-1/2	5-5/8	1-1/2	1	345.09	326.43	309.69	294.59
600218	2-3/8	8-1/2	5-5/8	1-1/2	1	350.17	331.24	314.26	298.93
600219	2-7/16	8-1/2	5-5/8	1-1/2	1	424.29	401.35	380.77	362.20
600220	2-1/2	8-1/2	5-5/8	1-1/2	1	429.79	408.03	388.36	370.51

Hex Shank – 1/4" Quick Release Drill Bits

- Mechanic length with a quick release shank
- Made from special Hi-Molybdenum tool steel
- Feature a 135° split point for fast penetration and accurate starting without a center punch
- Body and clearance are gold treated for maximum lubricity
- Specially designed for hand held drills and impact tools
- Recommended for use in work-hardening grades of stainless steel and other hard metal drilling applications.



Quick Release
Hex Shank



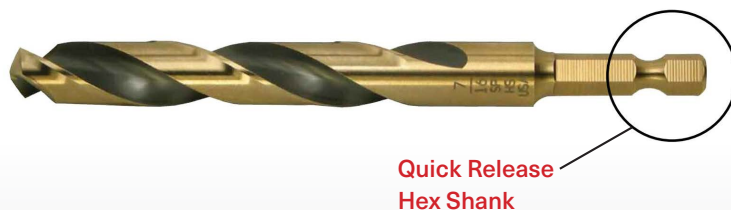
345021 QR Adapter

HEX SHANK – 1/4" QUICK RELEASE DRILL BITS						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK DIA	PKG QTY	6	18	36	72
345001	1/16	2-5/8	7/8	N/A	6	\$3.39	\$3.21	\$3.05	\$2.90
345002	3/32	3-1/4	1-1/4	N/A	6	3.39	3.21	3.05	2.90
345003	1/8	3-1/2	1-7/16	N/A	6	3.11	2.95	2.80	2.67
345004	5/32	3-1/2	1-11/16	N/A	6	3.47	3.29	3.13	2.98
345005	3/16	3-3/4	1-7/8	N/A	6	3.90	3.70	3.51	3.35
345006	7/32	4	2	N/A	6	4.94	4.68	4.45	4.24
345007	1/4	4-1/4	2	N/A	6	5.31	5.03	4.78	4.55
345008	9/32	3-13/16	2-1/4	N/A	6	5.13	4.86	4.61	4.39
						3	9	18	36
345009	5/16	4	2-1/2	N/A	3	5.28	5.00	4.75	4.52
345010	11/32	4-7/32	2-5/8	N/A	3	5.61	5.32	5.05	4.81
345011	3/8	4-1/4	2-11/16	N/A	3	6.07	5.75	5.46	5.20
345012	13/32	4-1/2	2-13/16	N/A	3	7.01	6.64	6.31	6.01
345013	7/16	4-1/2	2-15/16	N/A	3	8.21	7.78	7.39	7.04
345014	15/32	4-7/8	3-1/8	N/A	3	8.71	8.25	7.84	7.46
345015	1/2	5	3-3/8	N/A	3	9.71	9.20	8.74	8.32
						1	5	10	20
345021	QUICK RELEASE ADAPTER				1	11.24	10.64	10.11	9.63

QUICK RELEASE DRILL BITS – CARDED						PRICE PER CARD			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK DIA	PKG QTY	1	5	10	20
345031	1/16	2-5/8	7/8	N/A	2	\$6.78	\$6.42	\$6.10	\$5.81
345032	3/32	3-1/4	1-1/4	N/A	2	6.76	6.41	6.09	5.80
345033	1/8	3-1/2	1-7/16	N/A	2	6.53	6.18	5.88	5.60
345034	5/32	3-1/2	1-11/16	N/A	2	6.92	6.55	6.23	5.93
345035	3/16	3-3/4	1-7/8	N/A	2	7.79	7.38	7.01	6.68
345036	7/32	4	2	N/A	1	5.17	4.89	4.65	4.43
345037	1/4	4-1/4	2	N/A	1	5.54	5.25	4.99	4.75
345038	9/32	3-13/16	2-1/4	N/A	1	5.36	5.08	4.83	4.60
345039	5/16	4	2-1/2	N/A	1	5.51	5.22	4.96	4.73
345040	11/32	4-7/32	2-5/8	N/A	1	5.61	5.32	5.05	4.81
345041	3/8	4-1/4	2-11/16	N/A	1	6.35	6.01	5.71	5.44
345042	13/32	4-1/2	2-13/16	N/A	1	7.00	6.63	6.30	6.00
345043	7/16	4-1/2	2-15/16	N/A	1	8.58	8.13	7.73	7.36
345044	15/32	4-7/8	3-1/8	N/A	1	8.69	8.24	7.83	7.45
345045	1/2	5	3-3/8	N/A	1	10.15	9.62	9.14	8.70
						1	5	10	20
345051	QUICK RELEASE ADAPTER – CARDED				1	11.19	10.61	10.08	9.60

Hex Shank – 1/4" Quick Release Drill Bit Sets

- Mechanic length with a quick release shank
- Made from special Hi-Molybdenum tool steel
- Feature a 135° split point for fast penetration and accurate starting without a center punch
- Body and clearance are gold treated for maximum lubricity
- Specially designed for hand held drills and impact tools
- Recommended for use in work-hardening grades of stainless steel and other hard metal drilling applications.



QR-7A, 7 Piece Set

- Includes sizes: 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, & 1/4"
- Conveniently contained in a nylon, soft-pouch index
- Part of the popular MAGNUM™ family

QR-7B, 7 Piece Set

- Includes sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, & 1/2"
- Conveniently contained in a nylon, soft-pouch index
- Part of the popular MAGNUM™ family

QR-12, 12 Piece Set

- Includes sizes: 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16, & 1/2" + Quick Release Adapter
- Conveniently contained in a hard-case index
- Part of the popular MAGNUM™ family

QR-16, 16 Piece Set

- Includes sizes: 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32, & 1/2" + Quick Release Adapter
- Conveniently contained in a nylon, soft-pouch index
- Part of the popular MAGNUM™ family



LEFT-HAND MAGNUM™ DRILL BIT SETS		PRICE PER SET			
ITEM NO.	DESCRIPTION	1	3	6	12
345052	QR 7A-AG Quick Release Set	\$36.39	\$34.47	\$32.75	\$31.19
345053	QR 7B-AG Quick Release Set	50.47	47.82	45.43	43.26
345054	QR 12-AG Quick Release Set	82.14	77.82	73.93	70.40
345055	QR 16-AG Quick Release Set	108.61	102.89	97.75	93.10

MAGNUM™ Super Premium Xtra-Length Drill Bits

- Feature a heavy-duty 135° split point, round shank
- Black & Gold surface finish for maximum lubricity
- Gyroidal Torsion flute and wide land construction yield exceptional performance in deep hole drilling applications
- Recommended for work-hardening grades of stainless steel and other hard metal drilling applications
- Will drill 12 or more diameters deep without drill removal to clear chips. Feed rates may be twice that of standard drills.



EXTRA-LENGTH – 6"						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	3	9	18	36
392001	1/8	6	4	Round	3	\$7.03	\$6.66	\$6.33	\$6.02
392002	#29	6	4	Round	3	7.12	6.76	6.43	6.14
392003	9/64	6	4	Round	3	7.12	6.76	6.43	6.14
392004	5/32	6	4	Round	3	7.56	7.16	6.80	6.48
392005	11/64	6	4	Round	3	7.97	7.55	7.18	6.83
392006	3/16	6	4	Round	3	6.83	7.29	6.93	6.60
392007	#10	6	4	Round	3	7.51	7.13	6.78	6.47
392008	13/64	6	4	Round	3	8.04	7.62	7.24	6.89
392009	7/32	6	4	Round	3	8.28	7.84	7.45	7.10
392010	#1	6	4	Round	3	8.99	8.53	8.12	7.75
392011	15/64	6	4	Round	3	8.99	8.53	8.12	7.75
392012	1/4	6	4	Round	3	8.61	8.16	7.75	7.38
392013	F	6	4	Round	3	8.48	8.05	7.66	7.31
392014	9/32	6	4	Round	3	7.31	8.20	7.81	7.45
392015	5/16	6	4	Round	3	8.60	8.16	7.77	7.41
392016	11/32	6	4	Round	3	9.95	9.44	8.99	8.57
						1	3	6	12
392017	3/8	6	4	Round	1	11.49	10.91	10.39	9.91
392018	13/32	6	4	Round	1	12.09	11.48	10.93	10.43
392019	7/16	6	4	Round	1	12.96	12.30	11.71	11.17
392020	1/2	6	4	Round	1	13.44	12.76	12.14	11.59

EXTRA-LENGTH – 9" & 12"						PRICE EACH (SOLD IN PKG QTY)			
ITEM NO.	SIZE	OAL (INS)	FLUTE LENGTH	SHANK TYPE	PKG QTY	3	9	18	36
392051	1/8	9	6	Round	3	\$11.80	\$11.20	\$10.66	\$10.17
392052	9/64	9	6	Round	3	12.49	11.86	11.29	10.77
392053	5/32	9	6	Round	3	12.72	12.05	11.45	10.90
392054	11/64	9	6	Round	3	13.15	12.48	11.88	11.33
392055	3/16	9	6	Round	3	12.88	12.23	11.64	11.10
392056	13/64	9	6	Round	3	14.55	13.81	13.14	12.54
392057	7/32	9	6	Round	3	14.25	13.53	12.88	12.29
392058	15/64	9	6	Round	3	15.07	14.30	13.61	12.99
392059	1/4	9	6	Round	3	15.40	14.59	13.86	13.20
392060	9/32	9	6	Round	3	16.28	15.46	14.71	14.11
392061	5/16	9	6	Round	3	16.33	15.51	14.76	14.08
392062	11/32	9	6	Round	3	17.71	16.81	16.00	15.26
						1	3	6	12
392063	3/8	9	6	Round	1	19.22	18.21	17.30	16.48
392064	7/16	9	6	Round	1	25.88	24.57	23.39	22.31
392065	1/2	9	6	Round	1	29.96	28.38	26.96	25.68
ITEM NO.	SIZE	OAL	FLUTE L	SHANK	PK	3	9	18	36
392101	1/8	12	9	Round	3	15.31	14.50	13.78	13.12
392102	9/64	12	9	Round	3	15.32	14.54	13.84	13.21
392103	5/32	12	9	Round	3	15.05	14.29	14.29	12.98
392104	11/64	12	9	Round	3	16.25	15.43	14.69	14.01
392105	3/16	12	9	Round	3	16.65	15.78	14.99	14.27
392106	13/64	12	9	Round	3	18.45	17.52	16.67	15.91
392107	7/32	12	9	Round	3	18.93	17.93	17.04	16.23
392108	15/64	12	9	Round	3	22.15	21.03	20.01	19.09
392109	1/4	12	9	Round	3	22.76	21.57	20.49	19.51
392110	9/32	12	9	Round	3	22.65	21.51	20.47	19.53
392111	5/16	12	9	Round	3	24.50	23.21	22.05	21.00
392112	11/32	12	9	Round	3	24.85	23.59	22.46	21.43
						1	3	6	12
392113	3/8	12	9	Round	1	27.06	25.63	24.35	23.19
392114	7/16	12	9	Round	1	35.04	33.27	31.66	30.21
392115	1/2	12	9	Round	1	41.63	39.43	37.46	35.68

Solid Carbide Drills

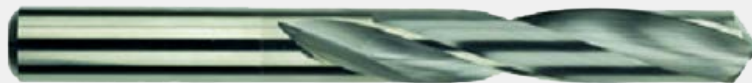
Jobber Length, Uncoated



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15 / 20
366003	1/16	1-1/2	3/4	\$5.50	\$5.18	\$4.90	\$4.64
366004	5/64	1-3/4	7/8	5.82	5.48	5.18	4.91
366005	3/32	2	1	6.59	6.21	5.87	5.56
366006	7/64	2-1/4	1-1/4	7.24	6.82	6.44	6.11
366007	1/8	2-1/4	1-1/4	7.44	7.01	6.62	6.28
366008	9/64	2-1/2	1-3/8	8.92	8.40	7.94	7.53
366009	5/32	2-1/2	1-3/8	7.72	7.28	6.88	6.52
366010	11/64	2-3/4	1-5/8	10.98	10.35	9.78	9.27
366011	3/16	2-3/4	1-5/8	9.17	8.64	8.16	7.74
366012	13/64	3	1-3/4	13.38	12.61	11.92	11.30
366013	7/32	3	1-3/4	13.65	12.86	12.15	11.52
366014	15/64	3-1/4	2	16.28	15.34	14.50	13.75
366015	1/4	3-1/4	2	16.10	15.17	14.33	13.59
366016	17/64	3-1/2	2-1/8	17.32	16.31	15.42	14.62
366017	9/32	3-1/2	2-1/8	16.65	15.68	14.82	14.05
366018	19/64	3-3/4	2-3/8	20.49	19.30	19.30	17.30
366019	5/16	3-3/4	2-3/8	21.58	20.33	19.22	18.22
366020	21/64	4	2-1/2	22.62	21.30	20.14	19.09
366021	11/32	4	2-1/2	26.49	24.96	23.59	22.36
366022	23/64	4-1/4	2-3/4	28.84	27.17	25.68	24.34
366023	3/8	4-1/4	2-3/4	28.86	27.19	25.70	25.70
366024	25/64	4-1/2	2-7/8	35.66	33.59	31.75	30.10
366025	13/32	4-1/2	2-7/8	39.67	37.37	35.33	33.49
366026	27/64	4-1/2	2-7/8	43.37	40.85	40.85	36.61
366027	7/16	4-1/2	2-7/8	46.98	44.26	41.84	39.66
366028	29/64	4-3/4	3	50.99	48.03	45.40	43.04
366029	15/32	4-3/4	3	54.87	51.69	48.85	46.32
366030	31/64	4-3/4	3	56.55	53.27	50.35	47.74
366031	1/2	4-3/4	3	58.41	55.03	52.01	52.01
				1	3	6	9
366035	9/16	5	3-1/4	107.50	101.27	95.72	90.75
366039	5/8	6	4-1/4	124.09	117.00	110.68	105.00
366047	3/4	6	4-1/4	179.47	169.22	160.07	151.86

ITEM NO.	WIRE SIZE	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15 / 20
366189	1	3	1-3/4	\$18.87	\$17.77	\$16.80	\$15.93
366188	2	3	1-3/4	16.87	15.90	15.02	14.24
366187	3	3	1-3/4	16.19	15.25	14.42	13.67
366186	4	3	1-3/4	15.45	14.56	13.76	13.04
366185	5	3	1-3/4	15.45	14.56	13.76	13.04
366184	6	3	1-3/4	15.25	14.37	13.58	12.87
366183	7	3	1-3/4	10.49	9.88	9.34	8.86
366182	8	3	1-3/4	14.71	13.86	13.10	12.42
366181	9	3	1-3/4	14.71	13.86	13.10	12.42
366180	10	2-3/4	1-5/8	13.83	13.03	12.31	11.67
366179	11	2-3/4	1-5/8	13.61	12.82	12.12	11.49
366178	12	2-3/4	1-5/8	13.38	13.38	13.38	11.30
366177	13	2-3/4	1-5/8	13.07	12.31	11.64	11.03
366176	14	2-3/4	1-5/8	12.92	12.17	11.51	10.91
366175	15	2-3/4	1-5/8	12.92	12.17	11.51	10.91
366174	16	2-3/4	1-5/8	12.63	11.90	11.24	10.66
366173	17	2-3/4	1-5/8	12.28	11.57	10.93	10.36
366172	18	2-3/4	1-5/8	11.69	11.01	10.41	9.86
366171	19	2-3/4	1-5/8	11.69	11.01	10.41	9.86
366170	20	2-1/2	1-3/8	11.22	10.57	9.99	9.48
366169	21	2-1/2	1-3/8	11.22	10.57	9.99	9.48
366168	22	2-1/2	1-3/8	11.00	10.37	9.80	9.29
366167	23	2-1/2	1-3/8	10.56	9.95	9.40	8.91
366166	24	2-1/2	1-3/8	10.34	9.74	9.21	8.73
366165	25	2-1/2	1-3/8	10.34	9.74	9.21	8.73
366164	26	2-1/2	1-3/8	10.34	9.74	9.21	8.73
366163	27	2-1/2	1-3/8	9.66	9.10	8.60	8.15
366162	28	2-1/2	1-3/8	9.66	9.10	8.60	8.15
366161	29	2-1/2	1-3/8	9.66	9.10	8.60	8.15
366160	30	2-1/4	1-1/4	8.92	8.40	7.94	7.53
366159	31	2-1/4	1-1/4	8.55	8.05	7.61	7.22
366158	32	2-1/4	1-1/4	8.47	7.98	7.55	7.15
366157	33	2-1/4	1-1/4	8.33	7.84	7.41	7.03
366156	34	2-1/4	1-1/4	8.33	7.84	7.41	7.03
366155	35	2-1/4	1-1/4	8.03	7.57	7.15	6.78
366154	36	2-1/4	1-1/4	7.96	7.50	7.08	6.72
366153	37	2-1/4	1-1/4	7.96	7.50	7.08	6.72
366152	38	2-1/4	1-1/4	7.96	7.50	7.08	6.72
366151	39	2-1/4	1-1/4	7.66	7.22	6.82	6.47
366150	40	2	1	7.51	7.08	6.69	6.34
366149	41	2	1	7.37	6.94	6.56	6.22
366148	42	2	1	7.27	6.85	6.48	6.14
366147	43	2	1	7.13	6.71	6.35	6.02
366146	44	2	1	7.13	6.71	6.35	6.02
366145	45	1-3/4	7/8	6.83	6.43	6.08	5.77
366144	46	1-3/4	7/8	6.68	6.30	5.95	5.64
366143	47	1-3/4	7/8	6.68	6.30	5.95	5.64
366142	48	1-3/4	7/8	6.68	6.30	5.95	5.64
366141	49	1-3/4	7/8	6.48	6.10	5.77	5.47
366140	50	1-3/4	7/8	6.37	6.00	5.67	5.38
366139	51	1-1/2	3/4	6.31	5.95	5.62	5.33
366138	52	1-1/2	3/4	6.33	5.97	5.64	5.35
366137	53	1-1/2	3/4	6.33	5.97	5.64	5.35
366136	54	1-1/2	3/4	6.33	5.97	5.64	5.35
366135	55	1-1/2	3/4	6.33	5.97	5.64	5.35
366134	56	1-1/2	3/4	6.48	6.10	5.77	5.47
366133	57	1-1/2	3/4	6.78	6.38	6.03	5.72
366132	58	1-1/2	3/4	6.78	6.38	6.03	5.72
366131	59	1-1/2	3/4	6.78	6.38	6.03	5.72
366130	60	1-1/2	3/4	6.78	6.38	6.03	5.72

Solid Carbide Drills Jobber Length, Uncoated (continued)



LETTER SIZES

ITEM NO.	LETTER SIZE	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
366100	A	3-1/4	2	\$20.51	\$19.32	\$18.26	\$17.31
366101	B	3-1/4	2	21.10	19.88	18.79	17.81
366102	C	3-1/4	2	21.23	20.00	18.90	17.92
366103	D	3-1/4	2	17.92	20.52	19.40	18.39
366104	E	3-1/4	2	19.70	18.56	17.54	16.63
366105	F	3-1/4	2	23.04	21.70	20.52	19.45
366106	G	3-1/2	2-1/8	19.45	22.49	21.25	20.15
366107	H	3-1/2	2-1/8	24.04	22.64	21.40	20.29
366108	I	3-1/2	2-1/8	24.44	23.03	21.76	20.63
366109	J	3-1/2	2-1/8	25.11	23.65	22.36	21.19
366110	K	3-1/2	2-1/8	21.19	23.95	22.64	21.46
366111	L	3-1/2	2-1/8	26.46	24.92	23.56	22.33
366112	M	3-3/4	2-3/8	27.43	25.84	24.43	23.16

ITEM NO.	LETTER SIZE	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
366113	N	3-3/4	2-3/8	\$29.06	\$27.37	\$25.87	\$24.53
366114	O	3-3/4	2-3/8	30.76	28.97	27.39	25.96
366115	P	3-3/4	2-3/8	31.81	29.97	28.32	26.85
366116	Q	4	2-1/2	33.88	31.91	30.16	28.60
366117	R	4	2-1/2	34.86	32.83	31.04	29.42
366118	S	4	2-1/2	37.16	35.01	33.09	31.37
366119	T	4-1/4	2-3/4	38.49	36.26	34.27	32.49
366120	U	4-1/4	2-3/4	40.43	38.09	36.00	34.13
366121	V	4-1/4	2-3/4	43.70	41.17	38.91	36.89
366122	W	4-1/2	2-7/8	45.91	43.25	40.88	38.76
366123	X	4-1/2	2-7/8	50.09	47.18	44.60	42.28
366124	Y	4-1/2	2-7/8	51.82	48.82	46.14	43.75
366125	Z	4-1/2	2-7/8	64.28	60.56	57.24	54.26



HSS Taper Shank Drill Bits

- Tapered Shank drills are made to fit tapered holders
- High speed steel, 118 degree point, black oxide flutes and clearance
- Precision ground flutes, clearance, and points
- Morse Taper Shank numbers are listed below. For special requirements or non-standard Morse Taper shank sizes, refer to pages 34-35.
- Adapters also available to change to a different size Morse Taper Shank – see page 37.



ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408104	1/16	4-5/8	1-1/4	1	\$14.56	\$13.75	\$13.03	\$12.38
408105	5/64	4-3/4	1-3/8	1	13.35	12.61	11.95	11.35
408106	3/32	4-3/4	1-3/8	1	13.35	12.61	11.95	11.35
408107	7/64	4-7/8	1-5/8	1	13.35	12.61	11.95	11.35
408108	1/8	5-1/8	1-7/8	1	12.47	11.78	11.16	10.60
408109	9/64	5-3/8	2-1/8	1	11.44	10.81	10.24	9.73

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408110	5/32	5-3/8	2-1/8	1	\$11.44	\$10.81	\$10.24	\$9.73
408111	11/64	5-3/4	2-1/2	1	9.73	11.78	11.16	10.60
408112	3/16	5-3/4	2-1/2	1	12.47	11.78	11.16	10.60
408113	13/64	6	2-3/4	1	12.47	11.78	11.16	10.60
408114	7/32	6	2-3/4	1	10.63	10.04	9.51	9.04
408115	15/64	6-1/8	2-7/8	1	12.47	11.78	11.16	10.60

HSS Taper Shank Drill Bits (continued)



ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408116	1/4	6-1/8	2-7/8	1	\$12.47	\$11.78	\$11.16	\$10.60
408117	17/64	6-1/4	3	1	12.85	12.14	11.50	10.93
408118	9/32	6-1/4	3	1	11.75	11.10	10.51	9.99
408119	19/64	6-3/8	3-1/8	1	12.85	12.14	11.50	10.93
408120	5/16	6-3/8	3-1/8	1	11.85	11.19	10.61	10.08
408121	21/64	6-1/2	3-1/4	1	17.13	16.18	15.33	14.56
408122	11/32	6-1/2	3-1/4	1	17.13	16.18	15.33	14.56
408123	23/64	6-3/4	3-1/2	1	17.13	16.18	15.33	14.56
408124	3/8	6-3/4	3-1/2	1	17.13	16.18	15.33	14.56
408125	25/64	7	3-5/8	1	18.10	17.10	16.20	15.39
408126	13/32	7	3-5/8	1	18.21	17.19	16.29	15.48
408127	27/64	7-1/4	3-7/8	1	18.74	17.69	16.76	15.93
408128	7/16	7-1/4	3-7/8	1	17.06	16.11	15.26	14.50
408129	29/64	7-1/2	4-1/8	1	14.50	20.89	19.79	18.80
408130	15/32	7-1/2	4-1/8	1	22.12	20.89	19.79	18.80
408131	31/64	8-1/4	4-3/8	2	22.12	22.12	19.79	18.80
408132	1/2	8-1/4	4-3/8	2	19.69	18.60	17.62	16.74
408133	33/64	8-1/2	4-5/8	2	22.71	21.44	20.32	19.30
408134	17/32	8-1/2	4-5/8	2	22.71	21.44	20.32	19.30
408135	35/64	8-3/4	4-7/8	2	24.34	22.07	21.78	20.69
408136	9/16	8-3/4	4-7/8	2	22.70	21.44	20.31	19.30
408137	37/64	8-3/4	4-7/8	2	26.00	24.56	23.26	22.10
408138	19/32	8-3/4	4-7/8	2	25.53	24.11	22.84	21.70
408139	39/64	8-3/4	4-7/8	2	25.53	24.11	22.84	21.70
408140	5/8	8-3/4	4-7/8	2	25.53	24.11	22.84	21.70
408141	41/64	9	5-1/8	2	28.13	26.57	25.17	23.91
408142	21/32	9	5-1/8	2	28.13	26.57	25.17	23.91
408143	43/64	9-1/4	5-3/8	2	30.19	28.51	27.01	25.66
408144	11/16	9-1/4	5-3/8	2	28.47	26.89	26.89	24.20
408145	45/64	9-1/2	5-5/8	2	31.44	29.69	28.13	26.73
408146	23/32	9-1/2	5-5/8	2	31.44	29.69	28.13	26.73
408147	47/64	9-3/4	5-7/8	2	33.38	31.53	29.87	28.38
408148	3/4	9-3/4	5-7/8	2	31.79	30.03	28.45	27.03
408149	49/64	9-7/8	6	2	40.13	37.90	35.91	34.11
408150	25/32	9-7/8	6	2	41.69	39.38	37.30	35.44
408151	51/64	10-3/4	6-1/8	3	43.96	41.51	39.33	37.36
408152	13/16	10-3/4	6-1/8	3	42.65	40.28	38.16	36.25
408153	53/64	10-3/4	6-1/8	3	47.40	44.76	42.41	40.29
408154	27/32	10-3/4	6-1/8	3	47.40	44.76	42.41	40.29
408155	55/64	10-3/4	6-1/8	3	49.28	46.54	44.09	41.89
408156	7/8	10-3/4	6-1/8	3	46.41	43.83	41.53	39.45
408157	57/64	10-3/4	6-1/8	3	50.50	47.69	45.18	42.93
408158	29/32	10-3/4	6-1/8	3	49.91	47.14	44.66	42.43
408159	59/64	10-3/4	6-1/8	3	51.34	48.49	45.93	43.64
408160	15/16	10-3/4	6-1/8	3	51.34	48.49	45.93	43.64
408161	61/64	11	6-3/8	3	55.28	52.21	49.46	46.99
408162	31/32	11	6-3/8	3	55.28	52.21	49.46	46.99
408163	63/64	11	6-3/8	3	56.46	53.32	50.51	47.99
408164	1"	11	6-3/8	3	51.82	48.94	46.37	44.05

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	3	6	12
408165	1-1/64	11-1/8	6-1/2	3	\$60.91	\$57.53	\$54.50	\$51.78
408166	1-1/32	11-1/8	6-1/2	3	63.10	59.60	56.46	53.64
408167	1-3/64	11-1/4	6-5/8	3	68.35	64.56	61.16	58.10
408168	1-1/16	11-1/4	6-5/8	3	64.41	60.83	57.63	54.75
408169	1-5/64	12-1/2	6-7/8	4	73.82	69.72	66.05	62.75
408170	1-3/32	12-1/2	6-7/8	4	73.82	69.72	66.05	62.75
408171	1-7/64	12-3/4	7-1/8	4	76.75	72.49	68.67	65.24
408172	1-1/8	12-3/4	7-1/8	4	75.38	71.19	67.45	64.08
408173	1-9/64	12-7/8	7-1/4	4	81.35	76.83	72.79	69.15
408174	1-5/32	12-7/8	7-1/4	4	81.35	76.83	72.79	69.15
408175	1-11/64	13	7-3/8	4	82.26	77.69	77.69	69.93
408176	1-3/16	13	7-3/8	4	82.26	77.69	73.61	69.93
408177	1-13/64	13-1/8	7-1/2	4	88.03	83.14	78.76	74.83
408178	1-7/32	13-1/8	7-1/2	4	88.03	83.14	78.76	74.83
408179	1-15/64	13-1/2	7-7/8	4	96.01	90.68	85.91	81.61
408180	1-1/4	13-1/2	7-7/8	4	93.09	87.92	83.29	79.13
408181	1-17/64	14-1/8	8-1/2	4	109.09	103.11	97.75	92.93
408182	1-9/32	14-1/8	8-1/2	4	111.91	105.78	100.29	95.33
408183	1-19/64	14-1/4	8-5/8	4	116.14	109.78	104.08	98.94
408184	1-5/16	14-1/4	8-5/8	4	111.91	105.78	100.29	95.33
408185	1-21/64	14-3/8	8-3/4	4	120.07	113.49	107.60	102.28
408186	1-11/32	14-3/8	8-3/4	4	120.07	113.49	107.60	102.28
408187	1-23/64	14-1/2	8-7/8	4	122.68	115.96	109.94	104.51
408188	1-3/8	14-1/2	8-7/8	4	122.68	115.96	109.94	104.51
408189	1-25/64	14-5/8	9"	4	126.06	119.15	112.96	107.38
408190	1-13/32	14-5/8	9"	4	126.06	119.15	112.96	107.38
408191	1-27/64	14-3/4	9-1/8	4	130.54	130.54	130.54	111.20
408192	1-7/16	14-3/4	9-1/8	4	130.54	123.38	116.97	111.20
408193	1-29/64	14-7/8	9-1/4	4	136.72	129.23	122.52	116.47
408194	1-15/32	14-7/8	9-1/4	4	129.23	122.52	116.47	140.90
408195	1-31/64	15	9-3/8	4	140.90	133.18	126.26	120.02
408196	1-1/2	15	9-3/8	4	140.90	133.18	126.26	120.02
					1	2	3	4
408197	1-33/64	16-3/8	9-3/8	5	225.33	213.15	202.22	192.35
408198	1-17/32	16-3/8	9-3/8	5	181.36	171.42	162.52	154.49
408199	1-35/64	16-5/8	9-5/8	5	236.97	224.16	212.67	202.29
408200	1-9/16	16-5/8	9-5/8	5	181.36	171.42	162.52	154.49
408201	1-37/64	16-7/8	9-7/8	5	236.97	236.97	212.67	202.29
408202	1-19/32	16-7/8	9-7/8	5	181.36	171.42	162.52	154.49
408203	1-39/64	17	10	5	243.26	230.11	218.31	207.66
408204	1-5/8	17	10	5	186.52	176.30	167.14	158.89
408205	1-41/64	17-1/8	10-1/8	5	254.74	240.97	228.62	217.46
408206	1-21/32	17-1/8	10-1/8	5	198.00	187.15	177.43	168.67
408207	1-43/64	17-1/8	10-1/8	5	277.34	262.35	248.90	236.76
408208	1-11/16	17-1/8	10-1/8	5	294.26	278.35	264.08	264.08
408209	1-45/64	17-1/8	10-1/8	5	277.34	277.34	248.90	236.76
408210	1-23/32	17-1/8	10-1/8	5	215.22	203.42	192.86	183.33
408211	1-47/64	17-1/8	10-1/8	5	288.86	273.24	259.23	246.59
408212	1-3/4	17-1/8	10-1/8	5	215.22	203.42	192.86	183.33
408213	1-49/64	17-1/8	10-1/8	5	294.60	278.68	264.38	251.49

HSS Taper Shank Drill Bits (continued)



ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	2	3	4
408214	1-25/32	17-1/8	10-1/8	5	\$223.46	\$211.38	\$200.54	\$190.76
408215	1-51/64	17-1/8	10-1/8	5	302.94	286.57	271.87	258.61
408216	1-13/16	17-1/8	10-1/8	5	237.14	224.32	212.82	202.44
408217	1-53/64	17-1/8	10-1/8	5	319.97	302.68	287.15	273.15
408218	1-27/32	17-1/8	10-1/8	5	237.14	224.32	212.82	202.44
408219	1-55/64	17-3/8	10-3/8	5	331.17	313.27	297.21	282.71
408220	1-7/8	17-3/8	10-3/8	5	237.14	224.32	212.82	202.44
408221	1-57/64	17-3/8	10-3/8	5	333.77	315.73	299.54	284.93
408222	1-29/32	17-3/8	10-3/8	5	246.09	232.78	220.85	210.07
408223	1-59/64	17-3/8	10-3/8	5	347.73	328.93	312.06	296.84
408224	1-15/16	17-3/8	10-3/8	5	254.57	240.81	228.46	217.32
408225	1-61/64	17-3/8	10-3/8	5	373.64	353.45	335.32	335.32
408226	1-31/32	17-3/8	10-3/8	5	263.63	249.38	236.59	225.05
408227	1-63/64	17-3/8	10-3/8	5	390.44	369.34	350.40	333.30
408228	2"	17-3/8	10-3/8	5	263.63	249.38	236.59	225.05
408229	2-1/64	17-3/8	10-3/8	5	414.59	393.59	374.63	357.40
408230	2-1/32	17-3/8	10-3/8	5	417.61	395.04	374.78	356.50
408231	2-3/64	17-3/8	10-1/4	5	418.57	397.38	378.23	360.84
408232	2-1/16	17-3/8	10-1/4	5	393.74	372.46	353.36	336.12
408234	2-3/32	17-3/8	10-1/4	5	418.57	397.38	378.23	360.84
408236	2-1/8	17-3/8	10-1/4	5	401.74	380.03	360.54	342.95
408238	2-5/32	17-3/8	10-1/4	5	427.68	406.03	386.46	368.69
408240	2-3/16	17-3/8	10-1/4	5	412.11	389.84	369.85	351.80
408242	2-7/32	17-3/8	10-1/8	5	427.68	406.03	386.46	368.69
408244	2-1/4	17-3/8	10-1/8	5	423.91	401.00	380.44	361.88
408245	2-17/64	17-3/8	10-1/8	5	470.24	446.43	424.92	405.38
408246	2-9/32	17-3/8	10-1/8	5	470.24	446.43	424.92	405.38
408247	2-19/64	17-3/8	10-1/8	5	488.00	463.29	440.96	420.69
408248	2-5/16	17-3/8	10-1/8	5	449.04	426.30	405.76	387.10
408249	2-21/64	17-3/8	10-1/8	5	554.47	526.39	501.02	477.99
408250	2-11/32	17-3/8	10-1/8	5	554.47	526.39	501.02	477.99
408252	2-3/8	17-3/8	10-1/8	5	486.19	461.57	439.33	419.13
408253	2-25/64	18-3/4	11-1/4	5	581.12	551.70	525.11	500.97
408254	2-13/32	18-3/4	11-1/4	5	500.97	551.70	525.11	500.97
408256	2-7/16	18-3/4	11-1/4	5	522.92	496.44	472.52	450.79
408257	2-29/64	18-3/4	11-1/4	5	588.49	558.70	531.77	507.32
408258	2-15/32	18-3/4	11-1/4	5	581.12	551.70	525.11	500.97
408260	2-1/2	18-3/4	11-1/4	5	522.92	496.44	472.52	450.79
408262	2-17/32	19-1/2	11-7/8	5	648.45	615.62	585.95	559.01
408264	2-9/16	19-1/2	11-7/8	5	623.36	591.80	563.28	537.38
408265	2-37/64	19-1/2	11-7/8	5	657.43	626.12	597.66	571.67
408266	2-19/32	19-1/2	11-7/8	5	643.55	612.90	585.05	559.61
408268	2-5/8	19-1/2	11-7/8	5	623.44	591.87	563.35	537.45
408270	2-21/32	20-3/8	12-3/4	5	787.74	750.23	716.13	684.99
408272	2-11/16	20-3/8	12-3/4	5	643.55	612.90	585.05	559.61
408274	2-23/32	20-3/8	12-3/4	5	704.14	670.61	640.13	612.29
408276	2-3/4	20-3/8	12-3/4	5	668.25	636.43	607.50	581.09
408278	2-25/32	21-1/8	13-3/8	5	785.86	748.44	714.42	683.36
408279	2-51/64	21-1/8	13-3/8	5	885.00	842.86	804.55	769.57
408280	2-13/16	21-1/8	13-3/8	5	704.14	670.61	640.13	612.29

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	2	3	4
408282	2-27/32	21-1/8	13-3/8	5	832.71	793.06	757.01	724.10
408283	2-55/64	21-1/8	13-3/8	5	853.56	812.92	775.97	742.23
408284	2-7/8	21-1/8	13-3/8	5	785.86	748.44	714.42	683.36
408286	2-29/32	21-1/8	13-3/8	5	861.35	820.33	820.33	749.00
408288	2-15/16	21-3/4	14	5	832.71	793.06	757.01	724.10
408290	2-31/32	21-3/4	14	5	724.10	1,023.48	976.95	934.48
408292	3"	21-3/4	14	5	861.35	820.33	783.05	749.00
408296	3-1/16	24-1/2	14-5/8	6	1,074.65	1,023.48	976.95	934.48
408300	3-1/8	24-1/2	14-5/8	6	1,138.50	1,084.29	1,035.00	990.00
408304	3-3/16	24-1/2	14-5/8	6	1,225.63	1,167.26	1,114.20	1,065.76
408308	3-1/4	25-1/2	15-1/2	6	1,225.63	1,167.26	1,114.20	1,065.76
408312	3-5/16	25-1/2	15-1/2	6	1,322.01	1,275.35	1,231.88	1,191.26
408316	3-3/8	25-1/2	15-1/2	6	1,413.52	1,363.64	1,317.15	1,273.73
408320	3-7/16	25-1/2	15-1/2	6	1,778.38	1,715.61	1,657.13	1,602.49
408324	3-1/2	26-1/2	16-3/8	6	1,778.38	1,715.61	1,657.13	1,602.49
408332	3-5/8	26-1/2	16-3/8	6	1,842.37	1,777.34	1,716.75	1,660.15
408340	3-3/4	26-1/2	16-3/8	6	2,257.68	2,178.00	2,103.75	2,034.40
408348	3-7/8	26-1/2	16-3/8	6	2,602.98	2,511.11	2,425.50	2,345.54
408352	3-15/16	26-1/2	16-3/8	6	2,844.44	2,744.05	2,650.50	2,563.12
408356	4"	27-1/2	17-1/2	6	2,844.44	2,744.05	2,650.50	2,563.12

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408401	A	6-1/8	2-7/8	1	\$15.94	\$13.25	\$14.26	\$13.55
408402	B	6-1/8	2-7/8	1	15.94	15.06	14.26	13.55
408403	C	6-1/8	2-7/8	1	15.94	15.06	14.26	13.55
408404	D	6-1/8	2-7/8	1	14.15	13.36	12.66	12.03
408405	E	6-1/8	2-7/8	1	12.47	11.78	11.16	10.60
408406	F	6-1/4	3	1	14.01	13.24	12.54	11.91
408407	G	6-1/4	3	1	16.71	15.78	14.95	14.20
408408	H	6-1/4	3	1	16.71	15.78	14.95	14.20
408409	I	6-1/4	3	1	16.71	15.78	14.95	14.20
408410	J	6-1/4	3	1	15.43	14.57	13.80	13.11
408411	K	6-1/4	3	1	17.54	16.57	15.70	14.91
408412	L	6-3/8	3-1/8	1	17.54	16.57	15.70	14.91
408413	M	6-3/8	3-1/8	1	17.54	16.57	15.70	14.91
408414	N	6-3/8	3-1/8	1	17.54	16.57	15.70	14.91
408415	O	6-3/4	3-1/4	1	20.81	19.65	18.62	17.69
408416	P	6-3/4	3-1/4	1	20.81	19.65	18.62	17.69
408417	Q	6-3/4	3-1/4	1	21.82	20.61	19.53	18.55
408418	R	6-3/4	3-1/4	1	24.01	22.68	21.49	20.41
408419	S	6-3/4	3-1/2	1	25.16	23.76	22.51	21.39
408420	T	6-3/4	3-1/2	1	25.16	23.76	22.51	21.39
408421	U	6-3/4	3-1/2	1	25.16	23.76	22.51	21.39
408422	V	7	3-5/8	1	26.51	25.04	23.72	22.54
408423	W	7	3-5/8	1	26.51	25.04	23.72	22.54
408424	X	7	3-5/8	1	27.34	25.82	24.46	23.24
408425	Y	7	3-5/8	1	27.34	25.82	24.46	23.24
408426	Z	7-1/4	3-7/8	1	28.56	26.97	25.55	24.28



HSS Taper Shank Drill Bits (continued)

Shank larger than standard

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408621	21/64	7-3/8	3-1/2	2	\$25.63	\$24.21	\$22.93	\$21.79
408623	23/64	7-3/8	3-1/2	2	25.63	24.21	22.93	21.79
408624	3/8	7-3/8	3-1/2	2	22.71	21.44	20.32	19.30
408625	25/64	7-1/2	3-5/8	2	23.47	22.17	21.00	19.95
408626	13/32	7-1/2	3-5/8	2	23.47	22.17	21.00	19.95
408627	27/64	7-3/4	3-7/8	2	24.24	22.89	21.68	20.60
408628	7/16	7-3/4	3-7/8	2	22.21	20.97	19.87	18.88
408629	29/64	8	4-1/8	2	29.06	27.44	26.00	24.70
408630	15/32	8	4-1/8	2	29.06	27.44	26.00	24.70
408634	17/32	8-1/2	4-5/8	3	29.06	27.44	26.00	24.70
408638	19/32	9-3/4	5-1/8	3	29.06	27.44	26.00	24.70

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
408641	41/64	9-3/4	5-1/8	3	\$38.49	\$36.35	\$34.43	\$32.71
408642	21/32	9-3/4	5-1/8	3	38.49	36.35	34.43	32.71
408643	43/64	10	5-3/8	3	41.31	39.01	36.96	35.11
408644	11/16	10	5-3/8	3	40.44	38.19	36.18	34.38
408645	45/64	10-1/4	5-5/8	3	44.71	42.22	40.00	38.00
408646	23/32	10-1/4	5-5/8	3	44.71	42.22	40.00	38.00
408647	47/64	10-1/2	5-7/8	3	48.38	45.69	43.29	41.13
408648	3/4	10-1/2	5-7/8	3	45.41	42.89	40.63	38.60
408649	49/64	10-5/8	6	3	53.79	50.81	48.13	45.73
408650	25/32	10-5/8	6	3	54.54	51.51	48.80	46.36
408664	1"	12"	6-3/8	4	72.74	68.69	65.08	61.83
					1	3	6	12
408666	1-1/32	12-1/8	6-1/2	4	81.99	77.43	73.36	69.69
408667	1-3/64	12-1/8	6-1/2	4	88.82	83.89	79.47	75.50
408668	1-1/16	12-1/4	6-5/8	4	85.66	80.90	76.64	72.81

Shank smaller than standard

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	5	10	20
409131	31/64	7-3/4	4-3/8	1	\$23.09	\$21.81	\$20.66	\$19.63
409132	1/2	7-3/4	4-3/8	1	18.47	17.44	16.53	15.70
409133	33/64	8	4-5/8	1	25.32	23.92	22.66	21.53
409134	17/32	8	4-5/8	1	25.32	23.92	22.66	21.53
409135	35/64	8-1/4	4-7/8	1	27.06	25.56	24.21	23.00
409136	9/16	8-1/4	4-7/8	1	25.38	23.97	22.71	21.58
409137	37/64	8-1/4	4-7/8	1	28.69	27.10	25.67	24.39
409138	19/32	8-1/4	4-7/8	1	37.85	35.75	33.87	32.18
409139	39/64	8-1/4	4-7/8	1	42.35	40.00	37.89	36.00
409140	5/8	8-1/4	4-7/8	1	42.35	40.00	37.89	36.00
409142	21/32	8-1/2	5-1/8	1	38.15	36.03	34.13	32.43
409151	51/64	10	6-1/8	2	54.06	51.06	48.37	45.95
409152	13/16	10	6-1/8	2	50.06	47.28	44.79	42.55
409153	53/64	10	6-1/8	2	57.94	54.72	51.84	49.25
409154	27/32	10	6-1/8	2	57.94	54.72	51.84	49.25
409155	55/64	10	6-1/8	2	61.15	57.75	54.71	51.98
409156	7/8	10	6-1/8	2	61.15	57.75	54.71	51.98
409157	57/64	10	6-1/8	2	65.53	61.89	58.63	55.70
409158	29/32	10	6-1/8	2	65.53	61.89	58.63	55.70
409164	1"	10-1/8	6-1/4	2	71.04	67.10	63.57	60.39
					1	3	6	12
409169	1-5/64	11-1/2	6-7/8	3	96.09	90.75	85.97	81.68
409170	1-3/32	11-1/2	6-7/8	3	96.09	90.75	85.97	81.68
409171	1-7/64	11-3/4	7-1/8	3	99.00	93.50	88.58	84.15
409172	1-1/8	11-3/4	7-1/8	3	98.44	92.97	88.08	83.68
409173	1-9/64	11-7/8	7-1/4	3	110.06	103.94	98.47	93.55
409174	1-5/32	11-7/8	7-1/4	3	110.06	103.94	98.47	93.55
409175	1-11/64	12	7-3/8	3	107.15	101.19	95.87	91.08
409176	1-3/16	12	7-3/8	3	107.15	101.19	95.87	91.08

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	3	6	12
409176	1-3/16	12	7-3/8	3	\$107.15	\$101.19	\$95.87	\$91.08
409177	1-13/64	12-1/8	7-1/2	3	119.84	113.27	107.39	102.09
409178	1-7/32	12-1/8	7-1/2	3	119.84	113.27	107.39	102.09
409179	1-15/64	12-1/2	7-7/8	3	119.84	113.27	107.39	102.09
409180	1-1/4	12-1/2	7-7/8	3	114.20	114.20	102.34	97.28
409182	1-9/32	13-1/8	8-1/2	3	152.09	143.75	136.29	129.56
409184	1-5/16	13-1/4	8-5/8	3	158.12	149.45	141.69	134.69
409186	1-11/32	13-3/8	8-3/4	3	160.93	152.11	144.21	137.09
409188	1-3/8	13-1/2	8-7/8	3	169.71	160.41	152.08	144.57
409189	1-25/64	13-5/8	9	3	191.30	180.82	171.43	162.96
409190	1-13/32	13-5/8	9	3	162.96	167.38	158.69	150.85
409192	1-7/16	13-3/4	9-1/8	3	177.09	167.38	158.69	150.85
409194	1-15/32	13-7/8	9-1/4	3	193.06	182.48	173.00	164.46
409196	1-1/2	14	9-3/8	3	193.06	182.48	173.00	164.46
					1	2	3	4
409197	1-33/64	15	9-3/8	4	225.33	213.15	202.22	192.35
409198	1-17/32	15	9-3/8	4	208.33	196.92	186.69	177.47
409199	1-35/64	15-1/4	9-5/8	4	236.97	224.16	212.67	202.29
409200	1-9/16	15-1/4	9-5/8	4	208.33	196.92	186.69	177.47
409201	1-37/64	15-1/2	9-7/8	4	236.97	224.16	212.67	202.29
409202	1-19/32	15-1/2	9-7/8	4	210.42	198.89	188.56	179.25
409203	1-39/64	15-5/8	10	4	243.26	230.11	218.31	207.66
409204	1-5/8	15-5/8	10	4	214.44	202.85	192.45	183.06
409205	1-41/64	15-3/4	10-1/8	4	254.74	240.97	228.62	217.46
409206	1-21/32	15-3/4	10-1/8	4	232.29	219.73	208.46	198.29
409207	1-43/64	15-3/4	10-1/8	4	277.34	262.35	248.90	236.76
409208	1-11/16	15-3/4	10-1/8	4	235.69	222.95	211.51	201.20
409209	1-45/64	15-3/4	10-1/8	4	277.34	262.35	248.90	236.76
409210	1-23/32	15-3/4	10-1/8	4	259.87	259.87	233.22	221.84
409211	1-47/64	16-1/4	10-3/8	4	288.86	273.24	259.23	246.59
409212	1-3/4	16-1/4	10-3/8	4	263.06	248.84	236.08	224.56
409213	1-49/64	16-1/4	10-3/8	4	294.60	278.68	264.38	251.49



Shank smaller than standard

ITEM NO.	SIZE	OAL INCHES	FLUTE LENGTH	MORSE TAPER SHANK	PRICE EACH			
					1	2	3	4
409214	1-25/32	16-1/4	10-3/8	4	\$265.31	\$250.97	\$238.10	\$226.49
409215	1-51/64	16-1/4	10-3/8	4	302.94	286.57	286.57	258.61
409216	1-13/16	16-1/4	10-3/8	4	281.73	266.50	252.83	240.50
409217	1-53/64	16-1/4	10-3/8	4	319.97	302.68	287.15	273.15
409218	1-27/32	16-1/4	10-3/8	4	299.86	283.65	269.10	255.98
409219	1-55/64	16-1/2	10-1/2	4	331.17	313.27	297.21	282.71
409220	1-7/8	16-1/2	10-1/2	4	299.86	283.65	269.10	255.98
409221	1-57/64	16-1/2	10-1/2	4	333.77	315.73	299.54	284.93
409222	1-29/32	16-1/2	10-1/2	4	308.57	291.89	276.92	263.41
409223	1-59/64	16-5/8	10-5/8	4	347.73	328.93	312.06	296.84
409224	1-15/16	16-5/8	10-5/8	4	327.83	310.11	294.21	279.85
409225	1-61/64	16-5/8	10-5/8	4	373.64	353.45	335.32	318.96
409226	1-31/32	16-5/8	10-5/8	4	382.99	362.28	343.71	326.94
409227	1-63/64	16-5/8	10-5/8	4	390.44	369.34	350.40	333.30
409228	2"	16-5/8	10-5/8	4	321.14	303.78	288.21	274.15
409229	2-1/64	16-5/8	10-5/8	4	440.00	417.72	397.59	379.31
409230	2-1/32	16-1/4	10-3/8	4	417.61	417.61	374.78	356.50
409232	2-1/16	16-1/4	10-1/4	4	417.61	395.04	374.78	356.50
409233	2-5/64	16-1/4	10-1/4	4	472.00	448.10	426.51	406.90
409234	2-3/32	16-1/4	10-1/4	4	418.57	397.38	378.23	360.84
409236	2-1/8	16-1/4	10-1/4	4	418.57	397.38	378.23	360.84
409237	2-9/64	16-1/4	10-1/4	4	544.00	516.46	491.57	468.97
409238	2-5/32	16-1/4	10-1/4	4	427.68	406.03	386.46	368.69
409239	2-11/64	16-1/4	10-1/4	4	576.00	546.84	520.48	496.55
409240	2-3/16	16-1/4	10-1/4	4	427.68	406.03	386.46	368.69
409242	2-7/32	16-1/8	10-1/8	4	427.68	406.03	386.46	368.69
409243	2-15/64	16-1/8	10-1/8	4	592.00	562.03	534.94	510.34
409244	2-1/4	16-1/8	10-1/8	4	427.68	406.03	386.46	368.69
409246	2-9/32	16-1/8	10-1/8	4	470.24	446.43	424.92	405.38
409248	2-5/16	16-1/8	10-1/8	4	470.24	446.43	424.92	405.38
409250	2-11/32	16-1/8	10-1/8	4	554.47	526.39	501.02	477.99
409252	2-3/8	16-1/8	10-1/8	4	554.47	526.39	501.02	477.99
409254	2-13/32	17-1/4	11-1/4	4	581.12	551.70	525.11	500.97
409256	2-7/16	17-1/4	11-1/4	4	581.12	551.70	525.11	500.97
409258	2-15/32	17-1/4	11-1/4	4	581.12	551.70	525.11	500.97
409259	2-31/64	17-1/4	11-1/4	4	637.50	607.14	579.55	554.35
409260	2-1/2	17-1/4	11-1/4	4	581.12	551.70	525.11	500.97
409268	2-5/8	18	11-7/8	4	623.36	591.80	563.28	537.38
409276	2-3/4	19-1/8	12-3/4	4	688.14	655.37	625.58	598.38
409296	3-1/16	22	14-1/4	5	1,074.65	1,023.48	976.95	934.48
409300	3-1/8	22	14-1/4	5	1,138.50	1,084.29	1,035.00	990.00
409304	3-3/16	22	14-1/4	5	1,225.63	1,167.26	1,114.20	1,065.76
409308	3-1/4	23	15-1/4	5	1,225.63	1,167.26	1,114.20	1,065.76
409312	3-5/16	23	15-1/4	5	1,322.01	1,275.35	1,231.88	1,191.26
409316	3-3/8	23	15-1/4	5	1,413.52	1,363.64	1,317.15	1,273.73
409320	3-7/16	23	15-1/4	5	1,778.38	1,715.61	1,657.13	1,602.49
409324	3-1/2	24	16-1/4	5	1,778.38	1,715.61	1,657.13	1,602.49
409332	3-5/8	24	16-1/4	5	1,842.37	1,777.34	1,716.75	1,660.15
409340	3-3/4	24	16-1/4	5	2,257.68	2,178.00	2,103.75	2,034.40
409348	3-7/8	24	16-1/4	5	2,602.98	2,511.11	2,425.50	2,345.54
409356	4"	24-1/4	16-1/2	5	2,844.44	2,744.05	2,650.50	2,563.12

Morse Taper Shank Sleeves

For adapting Morse Taper shank tools to machine spindles having large Morse Taper holes. Hardened and ground throughout.



MORSE TAPER SHANK SLEEVES					PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	INSIDE MT	OUTSIDE MT	1	2	4	8
014012	12	3-9/16	1	2	\$11.63	\$10.99	\$10.41	\$9.89
014013	13	3-15/16	1	3	15.28	14.43	13.67	12.99
014014	14	4-7/8	1	4	24.62	23.25	22.03	20.93
014023	15	6 1/8	1	5	37.53	35.44	33.58	31.90
014015	23	4-7/16	2	3	15.56	14.69	13.92	13.23
014016	24	4-7/8	2	4	26.49	25.01	23.70	22.51
014017	25	6-1/8	2	5	37.53	35.44	33.58	31.90
014018	34	5-3/8	3	4	26.50	25.03	23.71	22.53
014019	35	6-1/8	3	5	37.50	35.42	33.55	31.88
014020	45	6-5/8	4	5	37.50	35.42	33.55	31.88
					1	2	3	4
014021	46	8-5/8	4	6	107.28	101.32	95.99	91.19
014022	56	8-5/8	5	6	114.70	108.41	102.78	97.70
014024	47	11-1/2	4	7	402.86	381.08	361.54	343.90
014025	67	11-1/2	6	7	496.00	470.89	448.19	427.59

Drill Drifts

- Drop Forged and Hardened
- Used for removing taper shank tools from sleeves or spindles.



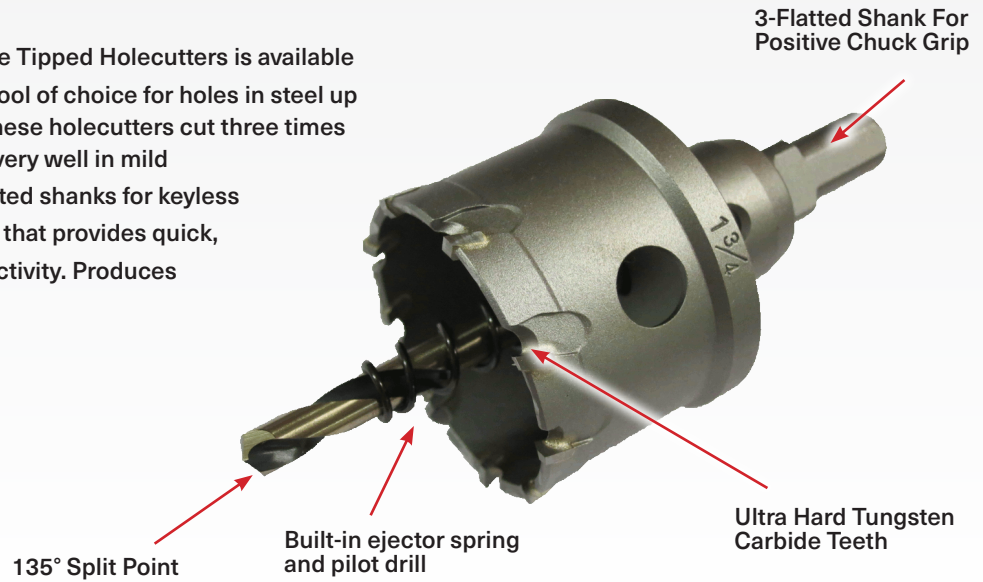
DRILL DRIFTS				PRICE EACH			
ITEM NO.	SIZE	OAL (INS)	FOR MT SIZE	1	4	8	12
014036	1	4-1/2	1	\$3.62	\$3.42	\$3.24	\$3.08
014037	2	5-1/4	2	4.38	4.14	3.92	3.73
014038	3	6	3	4.84	4.57	4.33	4.11
014039	4	7	4, 5, 6	7.49	7.07	6.70	6.36

MAGNUM™ Carbide-Tipped Holecutters

Hole Cutters

The extremely popular line of MAGNUM™ Carbide Tipped Holecutters is available in diameters ranging from 9/16" to 5" and is the tool of choice for holes in steel up to 1" thick, as well as for larger diameter holes. These holecutters cut three times faster than bi-metal hole saws, and they perform very well in mild steel as well as stainless steel. They feature 3-flatted shanks for keyless chucks, and a built-in pilot drill and ejector spring that provides quick, smooth discharge of metal slug for greater productivity. Produces over-lapping and interrupted holes easily.

* Sizes up to 2-15/16" (2-5/8" in the 3/16" cutting depth) have a 3/8" shank. Larger sizes have a 1/2" shank. **



1" CUT DEPTH					
ITEM NO.	DIA (INS)	PRICE EACH			
		1	4	8	12
834300	9/16	\$39.50	\$37.42	\$35.55	\$33.86
834303	5/8	39.50	37.42	35.55	33.86
834306	11/16	39.50	37.42	35.55	33.86
834309	3/4	41.10	38.93	36.99	35.23
834312	13/16	39.45	37.46	35.65	34.01
834315	7/8	41.10	38.93	36.99	35.23
834318	15/16	41.10	38.93	36.99	35.23
834321	1"	41.10	38.93	36.99	35.23
834324	1-1/16	44.28	41.95	39.85	37.95
834327	1-1/8	44.28	41.95	39.85	37.95
834330	1-3/16	52.50	49.74	47.25	45.00
834333	1-1/4	52.50	49.74	47.25	45.00
834336	1-5/16	52.50	49.74	47.25	45.00
834339	1-3/8	52.50	49.74	47.25	45.00
834342	1-7/16	55.67	52.74	50.10	47.71
834345	1-1/2	55.67	52.74	50.10	47.71
		1	3	6	12
834348	1-9/16	55.67	52.74	50.10	47.71
834351	1-5/8	62.11	58.84	55.90	53.24
834354	1-11/16	59.63	56.61	53.88	51.40
834357	1-3/4	62.11	58.84	55.90	53.24
834360	1-13/16	53.24	58.84	55.90	53.24
834363	1-7/8	62.11	58.84	55.90	53.24
834366	1-15/16	62.11	58.84	55.90	53.24
834369	2"	72.94	69.11	65.65	62.52
834372	2-1/16	72.94	69.11	65.65	62.52
834375	2-1/8	92.51	87.82	83.59	79.75
834378	2-3/16	95.53	90.70	86.33	82.36
834381	2-1/4	99.51	94.28	89.56	85.30
834384	2-5/16	99.51	94.28	89.56	85.30
834387	2-3/8	99.51	94.28	89.56	85.30

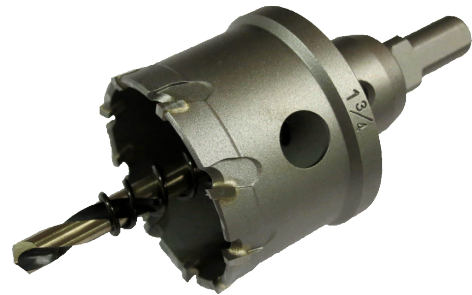
3/16" CUT DEPTH					
ITEM NO.	DIA (INS)	PRICE EACH			
		1	4	8	12
834100	9/16	\$28.09	\$26.67	\$25.39	\$24.22
834103	5/8	27.87	26.46	25.18	24.02
834106	11/16	27.87	26.46	25.18	24.02
834109	3/4	29.03	27.50	26.13	24.88
834112	13/16	27.87	26.46	25.18	24.02
834115	7/8	29.28	27.80	26.46	25.24
834118	15/16	29.28	27.80	26.46	25.24
834121	1"	32.68	30.96	29.41	28.01
834124	1-1/16	33.72	31.95	30.35	28.90
834127	1-1/8	36.54	34.62	32.89	31.32
834130	1-3/16	35.08	33.30	31.70	30.24
834133	1-1/4	35.07	33.22	31.56	30.06
834136	1-5/16	35.55	33.75	32.12	30.64
834139	1-3/8	39.54	37.46	35.59	33.89
834142	1-7/16	41.23	39.14	37.25	35.54
834145	1-1/2	42.94	40.68	38.65	36.81
		1	3	6	12
834148	1-9/16	42.94	40.68	38.65	36.81
834151	1-5/8	44.75	42.48	40.43	38.57
834154	1-11/16	44.75	42.48	40.43	38.57
834157	1-3/4	44.75	42.48	40.43	38.57
834160	1-13/16	46.25	43.91	41.80	39.87
834163	1-7/8	48.18	45.64	43.36	41.30
834166	1-15/16	46.25	43.91	41.80	39.87
834169	2"	57.56	54.53	51.80	49.33
834172	2-1/16	57.56	54.53	51.80	49.33
834175	2-1/8	57.56	54.53	51.80	49.33
834178	2-3/16	69.56	66.04	62.86	59.97
834181	2-1/4	72.46	68.64	65.21	62.11
834184	2-5/16	69.56	66.04	62.86	59.97
834187	2-3/8	79.19	75.03	71.28	67.88

Carbide-Tipped Holecutters (continued)

1" CUT DEPTH					
ITEM NO.	DIA (INS)	PRICE EACH			
		1	3	6	12
834390	2-7/16	\$95.53	\$90.70	\$86.33	\$82.36
834393	2-1/2	99.51	94.28	89.56	85.30
		1	2	4	6
834396	2-9/16	99.51	94.28	89.56	85.30
834399	2-5/8	107.28	101.63	96.55	91.95
834402	2-11/16	107.28	101.63	96.55	91.95
834405	2-3/4	105.81	100.31	95.36	90.87
834408	2-13/16	107.28	101.63	96.55	91.95
834411	2-7/8	107.28	101.63	96.55	91.95
834414	2-15/16	107.28	101.63	96.55	91.95
834417	3"	121.08	114.79	109.12	103.99
		1	2	3	4
834420	3-1/4	121.08	114.79	109.12	103.99
834423	3-1/2	126.23	119.68	113.77	108.41
834426	3-3/4	149.47	141.70	134.70	128.36
834429	4"	156.51	148.38	141.05	134.41
834432	4-1/4	156.51	148.38	141.05	134.41
834435	4-1/2	165.27	156.69	148.95	141.94
834438	4-3/4	158.75	150.81	143.63	137.10
	5"	*Not available at this time*			

3/16" CUT DEPTH					
ITEM NO.	DIA (INS)	PRICE EACH			
		1	3	6	12
834190	2-7/16	\$76.03	\$72.18	\$68.70	\$65.54
834193	2-1/2	79.19	75.03	71.28	67.88
		1	2	4	6
834196	2-9/16	83.97	79.55	75.58	71.98
834199	2-5/8	80.61	76.53	72.84	69.49
834202	2-11/16	80.61	76.53	72.84	69.49
834205	2-3/4	83.37	79.15	75.34	71.87
834208	2-13/16	89.68	85.14	81.04	77.31
834211	2-7/8	89.68	85.14	81.04	77.31
834214	2-15/16	89.68	85.14	81.04	77.31
834217	3"	93.42	88.50	84.08	80.07
		1	2	3	4
834220	3-1/4	117.85	111.73	106.21	101.21
834223	3-1/2	113.20	107.54	102.42	97.76
834226	3-3/4	141.45	134.10	127.48	121.48
834229	4"	147.18	139.83	133.17	127.11
834232	4-1/4	147.18	139.83	133.17	127.11
834235	4-1/2	161.76	153.68	146.36	139.70
834238	4-3/4	161.76	153.68	146.36	139.70
834241	5"	177.96	169.06	161.01	153.69

MAGNUM™ Carbide-Tipped Holecutter Sets

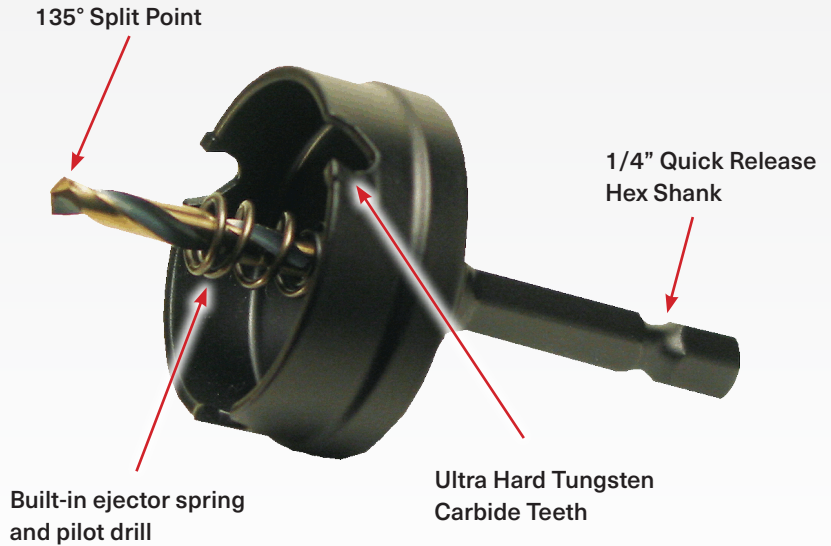


ITEM NO.	SET DESCRIPTION	CUT DEPTH	PRICE EACH			
			1	2	4	6
834460	4 Piece Holecutter Set, Sizes: 5/8, 3/4, 7/8, & 1"	1"	\$166.84	\$158.17	\$150.36	\$143.28
834463	4 Piece Holecutter Set, Sizes: 11/16, 13/16, 15/16, & 1-1/16"	1"	167.66	159.06	151.30	144.27
834466	5 Piece Holecutter Set, Sizes: 7/8, 1-1/8, 1-3/8, 1-3/4, & 2"	1"	268.12	254.54	242.28	231.14
834275	4 Piece Holecutter Set, Sizes: 5/8, 3/4, 7/8, & 1"	3/16"	120.86	114.81	109.35	104.38
834278	4 Piece Holecutter Set, Sizes: 11/16, 13/16, 15/16, & 1-1/16"	3/16"	121.87	115.78	110.26	105.25
834281	5 Piece Holecutter Set, Sizes: 7/8, 1-1/8, 1-3/8, 1-3/4, & 2"	3/16"	208.43	197.87	188.34	179.68

MAGNUM™ Carbide-Tipped Holecutters—Quick Release

Quick Release MAGNUM Carbide-Tipped Hole-cutters offer all the same features as the Hole-cutters listed on the previous pages, with an additional feature: a 1/4" Quick Release Hex Shank. This allows for use in tools such as impact drivers or small hand held drills.

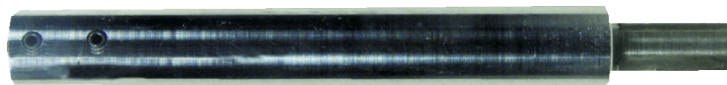
- Sizes range from 5/8" - 1-3/8", with a cut-depth of 3/16".
- Please note: this series uses different springs, screws, and pilot drills, than the cutters listed on previous pages.



QUICK RELEASE HOLECUTTERS				PRICE EACH			
ITEM NO.	DIA	CUT DEPTH	SHANK	1	4	8	12
834701	5/8	3/16	1/4" QR Hex	\$28.20	\$26.77	\$25.48	\$24.31
834702	11/16	3/16	1/4" QR Hex	28.20	26.77	25.48	24.31
834703	3/4	3/16	1/4" QR Hex	29.38	27.83	26.44	25.18
834704	13/16	3/16	1/4" QR Hex	28.20	26.77	25.48	24.31
834705	7/8	3/16	1/4" QR Hex	29.63	28.13	26.77	25.54
834706	15/16	3/16	1/4" QR Hex	29.63	28.13	26.77	25.54
834707	1"	3/16	1/4" QR Hex	31.69	30.09	28.64	27.32
834708	1-1/16	3/16	1/4" QR Hex	32.72	31.06	29.57	28.21
834709	1-1/8	3/16	1/4" QR Hex	35.43	33.63	32.01	30.54
834710	1-3/16	3/16	1/4" QR Hex	35.43	33.63	32.01	30.54
834711	1-1/4	3/16	1/4" QR Hex	34.01	32.29	30.73	29.32
834712	1-5/16	3/16	1/4" QR Hex	35.88	34.06	32.42	30.93
834713	1-3/8	3/16	1/4" QR Hex	38.29	36.35	34.60	33.01
				1	5	10	20
834721	Pilot Drill, 1/Pack			2.45	2.33	2.22	2.11
834722	Set Screw, 1/Pack			0.01	0.01	0.01	0.01
834723	Ejector Spring, 1/Pack			0.03	0.03	0.02	0.02

Carbide-Tipped Holecutter Extension

- Includes an Allen Wrench
- For 3/16" and 1" Standard Carbide-Tipped Holecutters Only



ITEM NO.	BORE/SHANK	EXT LENGTH	OAL (INS)	1	3	6	12
834290	3/8	5"	6-1/4	\$34.72	\$32.89	\$31.25	\$29.76
834293	1/2	5"	6-1/4	35.67	33.86	32.23	30.75

unibor



1" CUT DEPTH				PRICE EACH			
ITEM NO.	DIA (INS)	SHANK	COATING	1	4	8	12
405000	7/16	3/4"	N/A	\$35.54	\$33.57	\$31.80	\$30.21
405001	1/2	3/4"	N/A	35.54	33.57	31.80	30.21
405002	9/16	3/4"	N/A	38.72	36.57	34.64	32.91
405003	5/8	3/4"	N/A	43.47	41.06	38.89	36.95
405004	11/16	3/4"	N/A	44.43	41.96	39.75	37.76
405005	3/4	3/4"	N/A	47.93	45.26	42.88	40.74
405006	13/16	3/4"	N/A	50.72	47.90	45.38	43.11
405007	7/8	3/4"	N/A	54.59	51.56	48.84	46.40
405008	15/16	3/4"	N/A	59.47	56.17	53.21	50.55
405009	1"	3/4"	N/A	63.41	59.89	56.74	53.90
405010	1-1/16	3/4"	N/A	65.06	61.44	58.21	55.30
405011	1-1/8	3/4"	N/A	74.90	70.74	67.01	63.66
405012	1-3/16	3/4"	N/A	78.51	74.15	70.25	66.74
405013	1-1/4	3/4"	N/A	81.25	76.74	72.70	69.06
405014	1-5/16	3/4"	N/A	85.69	80.93	76.67	72.84
405015	1-3/8	3/4"	N/A	109.81	103.71	98.25	93.34
405016	1-7/16	3/4"	N/A	122.41	115.70	109.69	104.27
405017	1-1/2	3/4"	N/A	127.61	120.62	114.35	108.70
				1	2	4	8
405018	1-9/16	3/4"	N/A	143.87	135.99	128.92	122.56
405019	1-5/8	3/4"	N/A	148.87	140.71	133.40	126.81
405020	1-11/16	3/4"	N/A	157.62	148.99	141.25	134.27
405021	1-3/4	3/4"	N/A	167.64	158.45	150.22	142.80
405022	1-13/16	3/4"	N/A	173.90	164.37	155.83	148.14
405023	1-7/8	3/4"	N/A	182.65	172.64	163.68	155.59
405024	1-15/16	3/4"	N/A	195.16	184.47	174.88	166.25
405025	2"	3/4"	N/A	199.55	188.62	178.82	169.99
				1	2	3	4
405026	2-1/16	3/4"	N/A	258.14	244.19	231.67	220.37

1" CUT DEPTH				PRICE EACH			
ITEM NO.	DIA	SHANK	COATING	1	2	3	4
405027	2-1/8	3/4"	N/A	\$275.76	\$260.85	\$247.47	\$235.40
405028	2-3/16	3/4"	N/A	284.57	269.19	255.38	242.93
405029	2-1/4	3/4"	N/A	286.80	271.30	257.38	244.83
405030	2-5/16	1-1/4	N/A	295.84	279.85	265.50	252.55
405031	2-3/8	1-1/4	N/A	302.30	285.96	271.29	258.06
405032	2-7/16	1-1/4	N/A	308.76	292.07	277.09	263.57
405033	2-1/2	1-1/4	N/A	316.51	299.41	284.05	270.20
405034	2-9/16	1-1/4	N/A	322.97	305.51	289.85	275.71
405035	2-5/8	1-1/4	N/A	348.94	330.08	313.15	297.88
405036	2-11/16	1-1/4	N/A	352.57	333.51	316.41	300.98
405037	2-3/4	1-1/4	N/A	372.06	351.95	333.90	317.61
405038	2-13/16	1-1/4	N/A	392.14	370.95	351.92	334.76
405039	2-7/8	1-1/4	N/A	396.07	374.66	355.45	338.11
405040	2-15/16	1-1/4	N/A	401.89	380.16	360.67	343.07
405041	3"	1-1/4	N/A	405.97	384.03	364.33	346.56
405042	3-1/16	1-1/4	N/A	247.70	234.31	222.29	211.45
405043	3-1/8	1-1/4	N/A	250.96	237.39	225.22	214.23
405044	3-3/16	1-1/4	N/A	257.23	243.32	230.85	219.59
405045	3-1/4	1-1/4	N/A	263.59	249.34	236.55	225.01
405046	3-5/16	1-1/4	N/A	266.77	252.35	239.41	227.73
405047	3-3/8	1-1/4	N/A	273.10	258.34	245.09	233.13
405049	3-1/2	1-1/4	N/A	282.66	267.38	253.67	241.29
405050	3-9/16	1-1/4	N/A	289.01	273.39	259.37	246.72
405051	3-5/8	1-1/4	N/A	292.17	276.38	262.21	249.41
405053	3-3/4	1-1/4	N/A	301.69	285.38	270.74	257.54
405054	3-13/16	1-1/4	N/A	307.94	291.30	276.36	262.88
405055	3-7/8	1-1/4	N/A	311.23	294.41	279.31	265.68
405056	3-15/16	1-1/4	N/A	317.59	300.42	285.01	271.11
405057	4"	1-1/4	N/A	323.93	306.42	290.71	276.52

unibor



2" CUT DEPTH			PRICE EACH			
ITEM NO.	DIA	SHANK	1	4	8	12
405100	7/16"	3/4"	\$49.19	\$46.46	\$44.01	\$41.81
405101	1/2"	3/4"	49.19	46.46	44.01	41.81
405102	9/16	3/4"	54.53	51.50	48.79	46.35
405103	5/8	3/4"	58.40	55.15	52.25	49.64
405104	11/16	3/4"	65.82	62.17	58.89	55.95
405105	3/4"	3/4"	71.09	67.14	63.61	60.43
405106	13/16	3/4"	76.10	71.88	68.09	64.69
405107	7/8	3/4"	81.25	76.74	72.70	69.06
405108	15/16	3/4"	88.24	83.33	78.95	75.00
405109	1"	3/4"	95.21	89.92	85.18	80.93
			1	4	8	12
405110	1-1/16	3/4"	98.90	93.40	88.49	84.06
405111	1-1/8	3/4"	112.99	106.71	101.09	96.04
405112	1-3/16	3/4"	116.79	110.31	104.50	99.28
405113	1-1/4	3/4"	120.10	113.52	107.62	102.31
405114	1-5/16	3/4"	124.48	117.66	111.55	106.04
405115	1-3/8	3/4"	132.61	125.34	118.83	112.96
405116	1-7/16	3/4"	148.87	140.71	133.40	126.81
405117	1-1/2	3/4"	160.13	151.36	143.49	136.41
405118	1-9/16	3/4"	178.90	169.10	160.31	152.40
405119	1-5/8	3/4"	192.65	182.10	172.64	164.11
405120	1-11/16	3/4"	198.91	188.01	178.25	169.44
405121	1-3/4	3/4"	211.42	199.84	189.45	180.10
405122	1-13/16"	3/4"	220.17	208.11	197.30	187.56
405123	1-7/8	3/4"	233.07	220.47	209.17	198.96
405124	1-15/16	3/4"	245.40	232.14	220.23	209.49
405125	2"	3/4"	257.73	243.80	231.29	220.01
			1	2	3	4
405126	2-1/16	3/4"	289.39	273.74	259.71	247.04
405127	2-1/8	3/4"	300.73	284.47	269.88	256.72
405128	2-3/16	3/4"	317.97	300.78	285.36	271.44
405129	2-1/4	3/4"	326.51	308.86	293.03	278.73
405130	2-5/16	1-1/4"	331.54	313.62	297.54	283.02
405131	2-3/8	1-1/4"	336.24	318.07	301.76	287.04
405132	2-7/16	1-1/4"	349.27	330.39	313.45	298.16
405133	2-1/2	1-1/4"	365.60	345.84	328.10	312.10
405134	2-9/16	1-1/4"	388.27	367.28	348.45	331.45
405135	2-5/8	1-1/4"	395.90	374.50	355.29	337.96
405136	2-11/16	1-1/4"	403.91	382.08	362.49	344.80
405137	2-3/4	1-1/4"	403.91	382.08	362.49	344.80
405138	2-13/16	1-1/4"	422.01	400.65	381.34	363.80
405139	2-7/8	1-1/4"	428.59	406.89	387.28	369.47
405140	2-15/16	1-1/4"	442.75	420.33	400.07	381.68
405141	3"	1-1/4"	448.16	425.47	404.96	386.34

2" CUT DEPTH			PRICE EACH			
ITEM NO.	DIA	SHANK	1	2	4	6
405142	3-1/16"	1-1/4"	\$275.34	\$260.46	\$247.10	\$235.05
405143	3-1/8	1-1/4"	278.87	263.80	250.27	238.06
405144	3-3/16	1-1/4"	266.87	253.35	241.14	230.06
405145	3-1/4	1-1/4"	273.47	259.62	247.11	235.75
405146	3-5/16	1-1/4"	276.76	262.75	250.08	238.59
405147	3-3/8	1-1/4"	293.24	278.39	264.98	252.79
405149	3-1/2	1-1/4"	296.76	281.73	268.16	255.83
405150	3-9/16"	1-1/4"	299.83	284.65	270.93	258.47
405151	3-5/8	1-1/4"	303.13	287.78	273.92	261.32
405153	3-3/4	1-1/4"	313.00	297.15	282.83	269.83
405154	3-13/16	1-1/4"	332.90	315.38	299.61	285.35
405155	3-7/8	1-1/4"	336.19	318.50	302.58	288.17
405156	3-15/16	1-1/4"	343.46	325.38	309.11	294.39
405157	4"	1-1/4"	350.06	331.63	315.05	300.05

ROTACUTTER Straight Shank Extension Adapters

- For use in drill press.
- Adapts cutters with 3/4" Weldon shanks for use in shop machines where magnetic base machines are not necessary.

ALFA TOOLS®

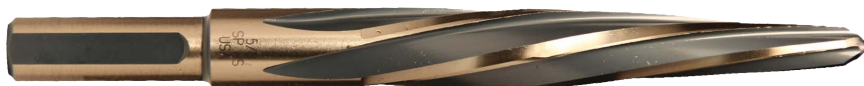


• #370203



• #370209

ITEM NO.	ADAPTER SHANK	CUTTER SHANK	OAL	PRICE EACH			
				1	2	4	6
370200	1/2"	3/4"	2-1/8"	\$125.79	\$118.81	\$112.55	\$106.92
370203	3/4"	3/4"	2"	111.82	105.61	100.05	95.05
370206	3/4"	3/4"	3"	120.12	113.44	107.47	102.10
370209	3/4"	3/4"	12"	137.59	129.94	123.11	116.95
				1	2	3	4
370212	MT-2	3/4"	2"	143.45	135.59	128.55	122.20



MAGNUM™ Car Reamers – Standard Flute

- Car reamers are designed for the reaming of structural steel plates commonly found in truck frames, rail cars, bridges, and pressure vessels.
- Used to enlarge existing holes.
- Constructed with left-hand spiral and right-hand cut, which eliminates the tendency of the reamer to hog into the hole.
- Special Hi-tungsten tool steel, gold surface treated body and clearance for maximum lubricity.
- Three flats on shank for positive chuck grip.

ITEM NO.	DIA INCHES	POINT DIA	MIN. START- ING HOLE	OAL INCHES	SHANK	PKG QTY	PRICE EACH			
							1	4	8	12
395201	3/8"	0.244	9/32	4-5/8"	3/8" 3-Flat	1	\$38.17	\$36.16	\$34.35	\$32.71
395204	1/2	0.291	5/16	5-7/8	1/2" 3-Flat	1	45.53	43.13	40.98	39.02
395207	9/16	0.291	5/16	5-7/8	1/2" 3-Flat	1	48.38	45.83	43.54	41.46
395210	5/8	0.323	11/32	6-3/8	1/2" 3-Flat	1	52.79	50.01	47.51	45.25
395213	11/16	0.385	13/32	6-3/8	1/2" 3-Flat	1	58.65	55.57	52.79	50.27
395216	3/4	0.416	7/16	6-7/8	1/2" 3-Flat	1	70.39	66.68	63.35	60.33
							1	3	6	9
395219	13/16	0.478	1/2	6-7/8	1/2" 3-Flat	1	71.61	67.84	64.45	61.38
395222	7/8	0.51	17/32	6-7/8	1/2" 3-Flat	1	78.92	74.76	71.03	67.64
395225	15/16	0.595	19/32	6-7/8	1/2" 3-Flat	1	75.76	71.92	68.46	65.31
395228	1"	0.604	5/8	6-7/8	1/2" 3-Flat	1	93.58	88.66	84.23	80.21
							1	2	4	6
395231	1-1/16	0.635	21/32	6-7/8	1/2" 3-Flat	1	103.86	98.47	93.60	89.20
395234	1-1/8	0.67	11/16	6-7/8	1/2" 3-Flat	1	113.03	107.16	101.86	97.07
395237	1-3/16	0.71	3/4	6-7/8	1/2" 3-Flat	1	121.03	114.74	109.07	103.94
395240	1-1/4	0.729	3/4	6-7/8	1/2" 3-Flat	1	144.71	137.19	130.42	124.28
395243	1-5/16	0.785	13/16	6-7/8	3/4" 3-Flat	1	145.49	138.21	131.63	125.65
395246	1-3/8	0.82	7/8	6-7/8	3/4" 3-Flat	1	155.39	147.63	140.60	134.20
395249	1-7/16	0.86	29/32	6-7/8	3/4" 3-Flat	1	166.29	157.98	150.45	143.61
395252	1-1/2	0.9	15/16	6-7/8	3/4" 3-Flat	1	191.85	181.88	172.90	164.76



Car Reamers – Standard Flute

- Car reamers are designed for the reaming of structural steel plates commonly found in truck frames, rail cars, bridges, and pressure vessels.
- Used to enlarge existing holes.
- Constructed with left-hand spiral and right-hand cut, which eliminates the tendency of the reamer to hog into the hole.
- Special Hi-tungsten tool steel, gold surface treated body and clearance for maximum lubricity.
- Three flats on shank for positive chuck grip.



ITEM NO.	DIA INCHES	OAL INCHES	SHANK	PRICE EACH			
				1	2	4	6
395154	1-5/16		1/2"	202.05	191.82	182.58	174.18
395157	1-3/8		1/2"	233.95	222.10	211.40	201.68
395160	1-7/16		1/2"	236.40	224.43	213.61	203.79
395163	1-1/2		1/2"	254.28	241.56	230.06	219.60



MAGNUM™ Car Reamers – Fast Spiral

- Similar to the car reamer series on the previous page in purpose and application.
- The fast spiral type is more aggressive than the standard flute on the previous page.
- It will also fit the needs of users who prefer a stop collar.

ITEM NO.	DIA INCHES	POINT DIA	MIN STARTING HOLE	OAL INCHES	SHANK	PKG QTY	PRICE EACH			
							1	4	8	12
395101	5/16"	0.182	3/16	4-5/8	5/16" 3-Flat	1	\$41.78	\$39.58	\$37.60	\$35.81
395104	3/8	0.244	1/4	5-7/8	3/8" 3-Flat	1	42.14	39.92	37.93	36.12
395107	7/16	0.26	9/32	5-7/8	7/16" 3-Flat	1	52.07	49.33	46.86	44.63
395110	1/2	0.291	5/16	5-7/8	1/2" 3-Flat	1	50.21	47.57	45.19	43.04
395113	9/16	0.291	5/16	5-7/8	1/2" 3-Flat	1	53.61	50.79	48.25	45.95
395116	5/8	0.323	11/32	6-3/8	1/2" 3-Flat	1	58.13	55.07	52.31	49.82
395119	0.652	0.385	13/32	6-3/8	1/2" 3-Flat	1	64.68	61.28	58.21	55.44
395122	11/16	0.385	13/32	6-3/8	1/2" 3-Flat	1	64.68	61.28	58.21	55.44
395125	3/4	0.416	7/16	6-7/8	1/2" 3-Flat	1	77.69	73.61	69.93	66.60
							1	3	6	9
395128	0.776	0.416	7/16	6-7/8	1/2" 3-Flat	1	78.92	74.76	71.03	67.64
395131	13/16	0.478	1/2	6-7/8	1/2" 3-Flat	1	78.92	74.76	71.03	67.64
395134	7/8	0.51	17/32	6-7/8	1/2" 3-Flat	1	87.24	82.64	78.51	74.77
395137	15/16	0.595	19/32	6-7/8	1/2" 3-Flat	1	87.24	82.64	78.51	74.77
395140	1"	0.604	5/8	6-7/8	1/2" 3-Flat	1	102.99	97.57	92.69	88.27
							1	2	4	6
395143	1-1/16	0.635	21/32	6-7/8	1/2" 3-Flat	1	96.80	91.90	87.47	83.45
395146	1-1/8	0.67	11/16	6-7/8	1/2" 3-Flat	1	147.29	139.93	133.26	127.20
395149	1-3/16	0.71	3/4	6-7/8	1/2" 3-Flat	1	150.12	142.61	135.82	129.65
395152	1-1/4	0.729	3/4	6-7/8	1/2" 3-Flat	1	159.48	151.19	143.73	136.96
395155	1-5/16	0.785	13/16	6-7/8	3/4" 3-Flat	1	159.66	151.68	144.45	137.89
395158	1-3/8	0.82	7/8	6-7/8	3/4" 3-Flat	1	168.32	159.90	152.29	145.36
395161	1-7/16	0.86	29/32	6-7/8	3/4" 3-Flat	1	179.38	170.41	162.30	154.92
395164	1-1/2	0.9	15/16	6-7/8	3/4" 3-Flat	1	198.13	188.23	179.26	171.11



Car Reamers – Fast Spiral

- Similar to the car reamer series on the previous page in purpose and application.
- The fast spiral type is more aggressive than the standard flute on the previous page.
- It will also fit the needs of users who prefer a stop collar.



ITEM NO.	DIA INCHES	OAL INCHES	SHANK	PRICE EACH			
				1	2	4	6
395242	1-5/16		1/2"	\$196.49	\$185.73	\$176.08	\$167.38
395245	1-3/8		1/2"	213.91	203.08	193.29	184.40
395248	1-7/16		1/2"	219.23	208.13	198.10	188.99
395251	1-1/2		1/2"	247.83	235.44	224.23	214.03

NORSEMAN/CTD DRILL & TOOL

America's Finest High-Speed Steel Cutting Tools™

MAGNUM™ Car Reamer Set – Standard Flute

- 4-piece set with sizes 3/8", 1/2", 5/8", and 3/4".
- Sturdy plastic case.



ITEM NO.	DESCRIPTION	1 set	3	6	12
395281	4 pc. reamer set	\$191.29	\$181.35	\$172.40	\$164.28



MAGNUM™ Car Reamer Display – Standard Flute

- Lexan Cover - lockable counter-top display. Includes one each of sizes 3/8, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, and 1".



ITEM NO.	DESCRIPTION	1	2
395284	8 pc. reamer display	\$547.86	\$529.18

NORSEMAN/CTD DRILL & TOOL

America's Finest High-Speed Steel Cutting Tools™

MAGNUM™ Car Reamer Sets – Fast Spiral

- #395190: Sizes 5/16", 3/8", 7/16", and 1/2".
- #395192: Sizes 3/8", 1/2", 5/8", and 3/4".



ITEM NO.	DESCRIPTION	1 set	3	6	12
395190	4 pc. set 5/16" to 1/2" FAST SPIRAL	\$189.08	\$179.63	\$171.07	\$163.30
395192	4 pc. set 3/8" to 3/4" FAST SPIRAL	200.06	190.19	181.24	173.09



MAGNUM™ Car Reamer Display – Fast Spiral

- Lexan Cover - lockable counter-top display.
- Includes one each of sizes 3/8, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, & 1" in fast spiral type. (Display case shown empty.)



ITEM NO.	DESCRIPTION	1	2
395194	8 pc. reamer display FAST SPIRAL	\$588.22	\$568.17

HSS Step Reamers

- Accurately starts, enlarges and deburrs in holes in material up to 1/2" thick.
- 90° notch point starts holes easily.
- Each reamer has five hole enlargement steps.
- 3/8" three-flatted shank.
- Made in the USA.
- **GOLD OXIDE** – low temperature stress relief enhances lubricity, reduces friction and increases toughness.



ITEM NO.	DESCRIPTION	1	5	10	20
395400	5 hole sizes: 5/16 to 9/16	\$24.26	\$22.99	\$21.84	\$20.80
395403	5 hole sizes: 9/16 to 13/16	29.79	28.22	26.81	25.54
395406	5 hole sizes: 13/16 to 1-1/16	38.22	36.21	34.40	32.76
		1 set	3	6	12
395409	Gold oxide 3-pc set	95.49	90.46	85.94	81.85

- **ZIRCONIUM NITRIDE COATING** – excellent for aluminum, magnesium, titanium alloys and increased lubricity.



ITEM NO.	DESCRIPTION	1	5	10	20
395412	5 hole sizes: 5/16 to 9/16	\$29.52	\$28.03	\$26.67	\$25.45
395415	5 hole sizes: 9/16 to 13/16	36.40	34.56	32.89	31.38
395418	5 hole sizes: 13/16 to 1-1/16	49.53	47.03	44.76	42.70
		1 set	3	6	12
395421	Zirconium nitride 3-pc set	121.47	115.16	109.47	104.32



MAGNUM™ Hole Hog™ Core Drills

- Made from the same high-quality steel as our popular Magnum drill bit line.
- Designed exclusively for enlarging existing holes.
- Four-flute design eliminates the catching and hogging-in experienced with standard drills when breaking through thinner materials such as truck frames.
- These core drills may replace tapered reamers in many applications.
- 1/2" shank with three flats.
- Flute length on all sizes: 1-7/8".

ITEM NO.	SIZE INCHES	OAL INCHES	MIN STARTING HOLE	PRICE EACH			
				1	5	10	20
395700	3/8	4-5/16	1/4	\$21.27	\$20.19	\$19.22	\$18.33
395703	1/2	4-5/16	5/16	28.96	27.43	26.06	24.82
395706	9/16	4-5/16	3/8	35.56	33.76	32.13	30.66
395709	5/8	4-5/16	25/64	41.32	39.14	37.19	35.42
395712	11/16	4-5/16	7/16	44.33	42.09	40.06	38.22
395715	3/4	4-5/16	15/32	48.32	45.87	43.66	41.66

MAGNUM™ Hole Hog™ Core Drill Sets

- The Hole Hog™ core drill sets include the corresponding size drill bit for each core drill.
- For drilling large diameter holes (diameter more than twice the thickness of the material), you would drill a hole with the pilot drill, followed by the core drill.
- Convenient metal index.

6-Piece Set (#395750)

includes:

- Sizes 3/8, 1/2, & 5/8.
- Drill sizes 1/4, 5/16, & 25/64.

6-Piece Set (#395753)

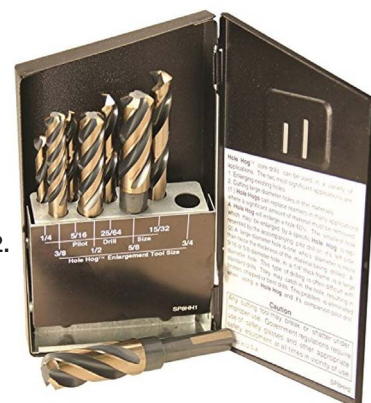
includes:

- Sizes 1/2, 5/8 & 3/4.
- Drill sizes 5/16, 25/64, & 15/32.

8-Piece Set (#395756)

includes:

- Sizes 3/8, 1/2, 5/8, & 3/4.
- Drill sizes 1/4, 5/16, 25/64, & 15/32.



ITEM NO.	DESCRIPTION	1 set	3	6	12
395750	6 piece set – 3/8 to 5/8	\$94.36	\$89.58	\$85.27	\$81.34
395753	6 piece set – 1/2 to 3/4	119.88	113.65	108.04	102.95
395756	8 piece set – 3/8 to 3/4	136.39	129.48	123.24	117.57



Core Drills

- Designed exclusively for enlarging existing holes.
- Four-flute design eliminates the catching and hogging-in experienced with standard drills when breaking through thinner materials such as truck frames.
- These core drills may replace tapered reamers in many applications. Four-flute design.
- 1/2" shank with three flats.
- Flute length on all sizes: 2".



ITEM NO.	SIZE INCHES	OAL INCHES	PRICE EACH			
			1	5	10	20
395503	9/16	4"	\$34.41	\$32.50	\$30.79	\$29.25
395509	5/8	4"	43.24	40.83	38.68	36.75
395512	11/16	4"	52.06	49.17	46.58	44.25
395515	23/32	4"	57.35	54.17	51.32	48.75
			1	3	6	12
395521	13/16	4"	68.82	65.00	61.58	58.50
395524	7/8	4"	72.35	68.33	64.74	61.50
395527	15/16	4"	78.53	74.17	70.26	66.75
395530	1"	4"	85.59	80.83	76.58	72.75
			1	2	4	6
395533	1-1/16	4"	88.24	83.33	78.95	75.00
395536	1-1/8	4"	96.18	90.83	86.05	81.75
395539	1-3/16	4"	98.82	93.33	88.42	84.00
395542	1-1/4	4"	101.47	95.83	90.79	86.25
395554	1-1/2	4"	200.00	189.04	179.22	170.37

Combined Drill & Countersink

- Style: plain.
- Drill ends are of equal diameter.
- Included angle: 60 degrees.



ITEM NO.	SIZE	DIA OF BODY	DIA & LENGTH OF DRILLS	OAL INCHES	PKG QTY	UOM: 1EA x PKG QUANTITY			
						12	36	72	144
153000	000	1/8	.020 x .020	1-1/4	12	\$8.35	\$7.89	\$7.47	\$7.10
153001	00	1/8	.025 x .030	1-7/32	12	5.68	5.39	5.13	4.90
153003	0	1/8	1/32 x .038	1-7/32	12	5.68	5.39	5.13	4.90
153006	1	1/8	3/64 x 3/64	1-1/4	12	4.97	4.71	4.48	4.26
153009	2	3/16	5/64 x 5/64	1-7/8	12	4.97	4.71	4.48	4.26
153012	3	1/4	7/64 x 7/64	2	12	4.97	4.71	4.48	4.26
						6	18	36	72
153015	4	5/16	1/8 x 1/8	2-1/8	6	\$5.17	\$4.89	\$4.65	\$4.43
153018	5	7/16	3/16 x 3/16	2-3/4	6	7.75	7.34	6.98	6.64
153021	6	1/2	7/32 x 7/32	3	6	11.57	10.96	10.41	9.92
						1	5	10	20
153024	7	5/8	1/4 x 1/4	3-1/4	1	\$19.89	\$18.84	\$17.90	\$17.05
153027	8	3/4	5/16 x 5/16	3-1/2	1	26.01	24.70	23.51	22.43
153030	9	7/8	11/32 x 11/32	3-5/8	1	58.97	55.69	52.76	50.13
153033	10	1"	3/8 x 3/8	3-3/4	1	77.41	73.11	69.26	65.80
						1 set	5	10	20
153048	5-piece set, includes sizes 1 to 5					\$34.11	\$32.32	\$30.70	\$29.24



Combined Drill & Countersink – Long Length 60°

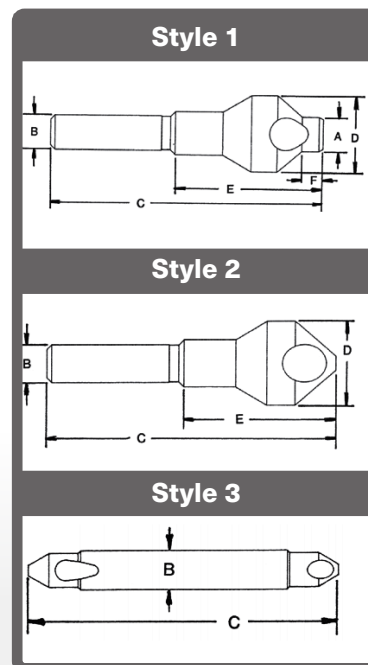
- 60 degree countersink angle fits all standard centers.
- Used for centering work ends, where the work piece is to be revolved on machine centers.
- Made in the USA.

ITEM NO.	SIZE	DIA OF BODY	DRILL DIAMETER	OAL INCHES	PKG QTY	UOM: 1EA x PKG QUANTITY			
						1	5	10	20
153050	1x3	1/8	3/64	3	1	\$8.71	\$8.27	\$7.87	\$7.51
153052	1x4	1/8	3/64	4	1	9.08	8.62	8.20	7.83
153054	1x5	1/8	3/64	5	1	12.61	11.97	11.40	10.87
153056	1x6	1/8	3/64	6	1	17.32	16.44	15.65	14.93
153058	2x3	3/16	5/64	3	1	8.80	8.35	7.95	7.59
153060	2x4	3/16	5/64	4	1	10.43	9.90	9.42	8.99
153062	2x5	3/16	5/64	5	1	13.35	12.67	12.06	11.51
153064	2x6	3/16	5/64	6	1	17.36	16.48	15.69	14.97
153066	3x3	1/4	7/64	3	1	9.63	9.14	8.70	8.30
153068	3x4	1/4	7/64	4	1	10.99	10.43	9.93	9.47
153070	3x5	1/4	7/64	5	1	14.45	13.72	13.06	12.46
153072	3x6	1/4	7/64	6	1	16.73	15.89	15.12	14.43
153074	4x4	5/16	1/8	4	1	12.19	11.57	11.01	10.51
153076	4x5	5/16	1/8	5	1	15.55	14.76	14.05	13.40
153078	4x6	5/16	1/8	6	1	17.97	17.06	16.24	15.49
153080	4-1/2x4	3/8	9/64	4	1	13.68	12.99	12.36	11.79
153082	4-1/2x5	3/8	9/64	5	1	16.17	15.35	14.61	13.94
153084	4-1/2x6	3/8	9/64	6	1	19.51	18.52	17.63	16.82
153086	5x4	7/16	3/16	4	1	16.65	15.78	14.99	14.27
153088	5x5	7/16	3/16	5	1	18.51	17.57	16.72	15.95
153090	5x6	7/16	3/16	6	1	20.76	19.71	18.76	17.90
153092	6x5	1/2	7/32	5	1	19.88	18.87	17.96	17.14
153094	6x6	1/2	7/32	6	1	24.04	22.82	21.72	20.72
153096	7x6	5/8	1/4	6	1	44.79	42.52	40.47	38.61
153098	8x6	3/4	5/16	6	1	48.36	45.91	43.70	41.69

Technical diagram for body styles.

Chatter Proof™ Countersinks

- High performance flute-less countersinks.
- Special Hi-Molybdenum tool steel, gold surface treated for maximum lubricity.
- Free cutting for ease of use.
- Designed for fast stock removal.
- Chatter proof for a micro smooth finish.
- Recommended for smooth finishes on metal, plastic, and wood applications.
- Made in the USA.



• 82° Piloted Countersink



ITEM NO.	SIZE	STYLE	SCREW SIZE	(A)	(B) SHANK DIA	(C) OVERALL LENGTH	(D)	(E)	(F)	PRICE EACH			
										1	3	6	12
153160	CS1/4	1	1/4"	1/4"	3/8"	2"	33/64"	1"	5/32	\$15.07	\$14.28	\$13.56	\$12.92
153163	CS1/4A	1	1/4	17/64	3/8	2	33/64	1	5/32	15.07	14.28	13.56	12.92
153166	CS5/16	1	5/16	5/16	3/8	2-3/16	41/64	1-3/16	5/32	18.01	17.07	16.21	15.44
153169	CS5/16A	1	5/16	21/64	3/8	2-3/16	41/64	1-3/16	5/32	17.29	16.42	15.63	14.91
153172	CS3/8	1	3/8	3/8	1/2	2-5/8	49/64	1-3/8	5/32	23.92	22.66	21.53	20.50
153175	CS3/8A	1	3/8	25/64	1/2	2-5/8	49/64	1-3/8	5/32	22.96	21.80	20.75	19.79
153178	CS7/16	1	7/16	7/16	1/2	2-3/4	53/64	1-1/2	7/32	28.59	27.14	25.83	24.64
153181	CS7/16A	1	7/16	29/64	1/2	2-3/4	53/64	1-1/2	7/32	28.59	27.14	25.83	24.64
153184	CS1/2	1	1/2	1/2	1/2	2-13/16	15/16	1-9/16	1/4	29.71	28.20	26.84	25.61
153187	CS1/2A	1	1/2	33/64	1/2	2-13/16	15/16	1-9/16	1/4	29.71	28.20	26.84	25.61

• 82° Pilotless Countersink



ITEM NO.	SIZE	STYLE	DIAMETER OF CUT		SCREW SIZE	(B) SHANK DIAMETER	(C) OVERALL LENGTH	(D)	(E)	PRICE EACH			
			MIN	MAX						1	3	6	12
153100	CS073	3	5/64"	15/64"	---	1/4"	1-3/4"	---	---	\$10.40	\$9.86	\$9.36	\$8.92
153103	CS3/16	2	3/16	17/32	---	1/4	1-15/16	9/16	1"	13.01	12.33	11.71	11.15
153106	CS307	2	5/16	25/32	---	1/2	2-5/8	13/16	1-3/8	22.57	21.38	20.31	19.35
153109	CS307A	2	5/16	25/32	---	1/4	2-1/16	13/16	1-1/4	22.57	21.38	20.31	19.35
153112	CS431	2	7/16	7/8	---	1/2	2-13/16	1-1/8	1-9/16	38.42	36.39	34.58	32.93
153115	CS1/2B	2	1/2	1-15/32	---	1/2	3-1/2	1-1/2	2-1/8	87.61	83.00	78.85	75.10
153118	CS5S	2	1/8	17/64	No. 4	1/4	1-1/2	17/64	5/8	7.20	6.84	6.51	6.21
153121	CS6S	2	1/8	19/64	No. 6	1/4	1-1/2	19/64	5/8	7.59	7.20	6.86	6.54
153124	CS8S	2	1/8	11/32	No. 8	1/4	1-5/8	11/32	3/4	8.09	7.68	7.31	6.98
153127	CS10S	2	9/64	25/64	No. 10	1/4	1-5/8	25/64	3/4	9.88	9.36	8.89	8.46
153140	1		5/32"	13/32"		1/4"	1-7/8"			9.04	8.54	8.09	7.69
153142	4		9/16	1-1/16		1/2				33.25	31.40	29.75	28.26
										1	2	4	6
153144	6		3/4	1-3/4		5/8				\$109.68	\$103.58	\$98.13	\$93.23
153146	7		1	2		5/8				132.35	125.10	118.60	112.74
153148	8		1-1/4	2-1/2		3/4				146.83	138.78	131.57	125.07

90° Deburring Tool



ITEM NO.	SIZE	STYLE	DIAMETER OF CUT		(B) SHANK DIAMETER	(C) OVERALL LENGTH	(D)	(E)	PRICE EACH			
			MIN	MAX					1	3	6	12
153250	DB1/64	3	1/64"	11/64"	3/16"	1-1/2"	---	---	\$15.96	\$15.15	\$14.42	\$13.76
153253	DB1/16	3	1/16	11/64	3/16	1-1/2	---	---	8.36	7.94	7.55	7.21
153256	DB1/8	3	1/8	15/64	1/4	1-3/4	---	---	8.80	8.35	7.95	7.59
153259	DB5/32	2	5/32	13/32	1/4	1-11/16	7/16	13/16	9.95	9.44	8.99	8.57
153262	DB3/16	2	3/16	17/32	1/4	1-7/8	9/16	1	12.82	12.14	11.54	10.99
153265	DB5/16	2	5/16	25/32	1/2	2-19/32	13/16	1-3/8	22.28	21.11	20.05	19.10
153268	DB5/16C	2	5/16	25/32	1/4	2-1/32	13/16	1-5/32	21.39	20.30	19.33	18.44
153271	DB9/16	2	9/16	1-3/32	1/2	2-13/16	1-1/8	1-9/16	38.03	36.03	34.23	32.60
153274	DB1/2	2	1/2	1-15/32	1/2	3-1/2	1-1/2	2-1/8	83.13	78.92	75.12	71.67

• STYLE refers to technical diagram on preceding page.

9-Piece Piloted & Pilotless Countersink Set

Includes:

- 82° Piloted: CS1/4, CS5/16, CS3/8, CS7/16, CS1/2
- 82° Pilot-less: CS5S, CS6S, CS8S, CS10S.



ITEM NO.	DESCRIPTION	1 set	3	6	12
153248	9 Piece Set, 82°	\$153.04	\$145.39	\$138.46	\$132.17

6-Piece 90° Deburring Tool Set

- Includes DB1/16, DB1/8, DB5/32, DB3/16, DB5/16, & DB9/16



ITEM NO.	DESCRIPTION	1 set	3	6	12
153295	6 Piece Set	\$106.76	\$101.35	\$96.47	\$92.03

4-Piece Pilot-less Countersink Sets



#153156



#153159

ITEM NO.	DESCRIPTION	1 set	3	6	12
153156	CS5S, CS6S, CS8S, CS10S	\$41.72	\$39.61	\$37.70	\$35.97
153159	CS6S, CS8S, CS10S, CS3/16	48.99	46.41	44.09	41.99



Hard Steel Drills

- Hard steel drills are carbide-tipped*, straight flute.
- Designed specifically for drilling hardened ferrous materials in the range of 45 to 65 Rockwell C.
- Used for drilling broken studs, springs, bolts, die sections, broken easy-outs, extra tough or exotic metals, and brake drums.

* Sizes 1/16" to 5/32" are solid carbide

ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	4	8	12
850010	1/16	1-5/8	5/8"	\$15.09	\$14.25	\$13.50	\$12.83
850020	5/64	1-11/16	11/64	15.09	14.25	13.50	12.83
850030	3/32	1-3/4	3/4	17.07	16.13	15.28	14.51
850040	7/64	1-13/16	13/16	17.07	16.13	15.28	14.51
850050	1/8	1-7/8	7/8	17.07	16.13	15.28	14.51
850060	9/64	1-15/16	15/16	18.24	17.22	16.32	15.50
850070	5/32	2-1/16	1"	21.04	19.88	18.83	17.89
850080	11/64	3-1/2	1-1/2	31.75	29.99	28.41	26.99
850090	3/16	3-1/2	1-1/2	31.75	29.99	28.41	26.99
850100	13/64	3-3/4	1-3/4	32.75	30.93	29.30	27.84
850110	7/32	3-3/4	1-3/4	32.75	30.93	29.30	27.84
850120	15/64	4"	2"	33.93	32.04	30.36	28.84
850130	1/4	4"	2"	33.93	32.04	30.36	28.84
850140	17/64	4-1/4	2-1/4	35.84	33.85	32.07	30.46
850150	9/32	4-1/4	2-1/4	35.84	33.85	32.07	30.46
850160	19/64	4-1/2	2-1/2	37.47	35.39	33.53	31.85
850170	5/16	4-1/2	2-1/2	37.47	35.39	33.53	31.85
850180	21/64	4-3/4	2-3/4	40.38	38.14	36.13	34.33
850190	11/32	4-3/4	2-3/4	40.38	38.14	36.13	34.33
850200	23/64	5"	3"	42.99	40.60	38.46	36.54
850210	3/8	5"	3"	42.99	40.60	38.46	36.54

ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	3	6	9
850220	25/64	5-1/4	3"	\$50.13	\$47.35	\$44.86	\$42.61
850230	13/32	5-1/4	3"	50.15	47.36	44.87	42.63
850240	27/64	5-1/2	3"	58.25	55.01	52.12	49.51
850250	7/16	5-1/2	3"	58.25	55.01	52.12	49.51
850260	29/64	5-3/4	3-1/4	64.04	60.48	57.30	54.43
850270	15/32	5-3/4	3-1/4	64.04	60.49	57.30	54.44
850280	31/64	6"	3-1/2	75.07	70.90	67.17	63.81
850290	1/2	6"	3-1/2	75.07	70.90	67.17	63.81
850300	17/32	6"	3-1/2	90.65	85.61	81.11	77.05
850310	9/16	6"	3-1/2	90.65	85.61	81.11	77.05
850320	19/32	7"	4"	98.90	93.40	88.49	84.06
850330	5/8	7"	4"	98.90	93.40	88.49	84.06
				1	2	4	6
850340	21/32	7-1/2	4-1/2	104.18	98.39	93.21	88.55
850350	11/16	7-1/2	4-1/2	107.10	101.15	95.83	91.04
850360	23/32	8"	4-3/4	112.70	106.52	100.99	96.00
850370	3/4	8"	4-3/4	113.68	107.45	101.87	96.84
				1	2	3	4
850380	13/16	8"	4-3/4	195.65	184.93	175.32	166.67
850390	7/8	8"	4-3/4	203.48	192.33	182.34	173.33
850400	15/16	8"	4-3/4	222.17	210.16	199.38	189.66
850410	1"	8"	4-3/4	230.66	218.19	207.00	196.90

BURROUT™ Brad Point Drills

- These high-performance drills made from Hi-Moly tool steel will cut holes in wood or plastics, and leave no burr.
- The special BURROUT™ point cuts at the circumference of the hole to avoid the break through burr problems common with standard point drills.
- Round shank.

ITEM NO.	ITEM NO.	SIZE INCHES	OAL INCHES	PKG QTY			
				12	36	72	144
261002	5/64	2"	12	\$2.31	\$2.19	\$2.08	\$1.99
261005	3/32	2-1/4	12	2.31	2.19	2.08	1.99
261008	7/64	2-5/8	12	2.40	2.28	2.17	2.07
261011	1/8	2-3/4	12	2.43	2.30	2.19	2.09
261014	9/64	2-7/8	12	2.44	2.32	2.20	2.10
261017	5/32	3-1/8	12	2.49	2.37	2.25	2.15
261020	11/64	3-1/4	12	2.53	2.41	2.29	2.18
261023	3/16	3-1/2	12	2.81	2.67	2.54	2.43
261026	7/32	3-3/4	12	3.13	2.97	2.83	2.70
261029	1/4	4	12	3.58	3.39	3.23	3.07
				6	18	36	72
261032	5/16	4-1/2	6	4.69	4.46	4.24	4.05
261035	3/8	5	6	6.36	6.04	5.75	5.48
261038	7/16	5-1/2	6	9.95	9.44	8.99	8.57
261041	1/2	6	6	12.44	11.79	11.20	10.67

BURROUT™ Brad Point Drill Sets



10-Piece Set (#261201)

- Includes sizes 5/64 to 3/16 by 64ths, plus 7/32 and 1/4.

14-Piece Set (#261204)

- Includes sizes 5/64 to 3/16 by 64ths, plus 7/32, 1/4, 5/16, 3/8, 7/16, and 1/2 (all sizes at left).



ITEM NO.	DESCRIPTION	1 set	3	6	12
261201	10-piece set 5/64 – 1/4	\$31.53	\$29.94	\$28.49	\$27.18
261204	14-piece set 5/64 – 1/2	71.14	67.39	64.03	60.98



ULTRA BIT™ Step Drills

Gold oxide

- For use in all thin metals, rigid plastics, wood, or composite materials with a thickness of equal to or less than the step thickness.
- Special axial and radial flute design speeds workpiece penetration.
- Dual flute construction drills clean accurate holes in thin materials, quickly and easily.
- 135-degree split point allows easy starting with no pilot hole required. (When drilling steel with 1/8" or greater thickness, a starter hole of the smallest step diameter will speed the cutting process.)

ITEM NO.	ULTRA-BIT™ #	HOLE SIZES	NO. OF SIZES	STEP INCREMENTS	STEP THICKNESS	SHANK SIZE	PRICE EACH			
							1	5	10	20
151020	#1	1/8 - 1/2"	13	1/32"	1/8"	1/4" 3-Flat	\$23.17	\$21.95	\$20.85	\$19.86
151021	#2	1/4 - 1"	8	1/16"	5/32"	3/8" 3-Flat	34.78	32.95	31.30	29.81
151022	#3	1/4 - 3/4"	9	1/16"	5/32"	3/8" 3-Flat	30.11	28.53	27.10	25.81
151023	#4	3/16 - 1/2"	6	1/16"	3/8"	1/4" 3-Flat	19.11	18.11	17.20	16.38
151024	#7	1/4 - 7/8"	11	1/16"	1/16"	3/8" 3-Flat	45.64	43.24	41.08	39.12
151025	#8	3/16 - 7/8"	12	1/16"	1/8"	3/8" 3-Flat	40.36	38.24	36.33	34.60
151026	#9	1/4 - 1-7/32"	3	7/8"	----	3/8" 3-Flat	44.58	42.24	40.13	38.21
151027	#11	1/4 - 1-1/8"	2	27/64"	9/64"	3/8" 3-Flat	57.74	54.70	51.96	49.49
151028	#12	1/4 - 1-3/8"	5	1/8"	*	3/8" 3-Flat	75.26	71.30	67.74	64.51
151029	1/4A	1/4 - 1-1/8"	16	1/16"	1/16"	3/8" 3-Flat	57.74	54.70	51.96	49.49
151030	13/16	13/16 - 1-3/8"	10	1/32"	5/32"	1/2" 3-Flat	75.26	71.30	67.74	64.51

* #151028 has 3/16" steps at 7/8, 1-1/8, 1-7/32, 1-1/4, & 1-3/8 (1/2" & 3/4" conduit)

ULTRA BIT™ Step Drills – QUICK RELEASE Gold oxide

- Same product with a quick-release 1/4" hex shank.

ITEM NO.	ULTRA-BIT™ #	HOLE SIZES	NO. OF SIZES	STEP INCREMENTS	STEP THICKNESS	SHANK SIZE	PRICE EACH			
							1	5	10	20
151001	#1	1/8 - 1/2"	13	1/32"	1/8"	QR 1/4" hex	\$23.88	\$22.62	\$21.49	\$20.46
151002	#2	1/4 - 1"	8	1/16"	5/32"	QR 1/4" hex	35.50	33.63	31.95	30.43
151003	#3	1/4 - 3/4"	9	1/16"	5/32"	QR 1/4" hex	30.83	29.21	27.75	26.43
151004	#4	3/16 - 1/2"	6	1/16"	3/8"	QR 1/4" hex	19.83	18.79	17.85	17.00
151005	#7	1/4 - 7/8"	11	1/16"	1/16"	QR 1/4" hex	46.33	43.89	41.70	39.71
151006	#8	3/16 - 7/8"	12	1/16"	1/8"	QR 1/4" hex	41.07	38.91	36.96	35.20
151007	#11	1/4 - 1-1/8"	2	27/64"	9/64"	QR 1/4" hex	58.46	55.38	52.61	50.11
151009	#12	1/4 - 1-3/8"	5	1/8"	*	QR 1/4" hex	75.97	71.97	68.38	65.12
151008	1/4A	1/4 - 1-1/8"	16	1/16"	1/16"	QR 1/4" hex	58.46	55.38	52.61	50.11

* #151009 has 3/16" steps at 7/8, 1-1/8, 1-7/32, 1-1/4, & 1-3/8 (1/2" & 3/4" conduit)

ULTRA BIT™ Step Drills TiN Coated

- For use in all thin metals, rigid plastics, wood, or composite materials with a thickness of equal to or less than the step thickness.
- Special axial and radial flute design speeds workpiece penetration.
- Dual flute construction drills clean accurate holes in thin materials, quickly and easily.
- 135-degree split point allows easy starting with no pilot hole required. (When drilling steel with 1/8" or greater thickness, a starter hole of the smallest step diameter will speed the cutting process.)
- Titanium nitride coating reduces friction and keeps cutting edge sharper longer.

ITEM NO.	ULTRA-BIT™ #	HOLE SIZES	NO. OF SIZES	STEP INCREMENTS	STEP THICKNESS	SHANK SIZE	PRICE EACH			
							1	5	10	20
151051	#1	1/8 - 1/2"	13	1/32"	1/8"	1/4" 3-Flat	\$24.51	\$23.22	\$22.06	\$21.01
151052	#2	1/4 - 1"	8	1/16"	5/32"	3/8" 3-Flat	37.99	35.99	34.19	32.56
151053	#3	1/4 - 3/4"	9	1/16"	5/32"	3/8" 3-Flat	33.25	31.50	29.93	28.50
151054	#4	3/16 - 1/2"	6	1/16"	3/8"	1/4" 3-Flat	20.49	19.41	18.44	17.56
151055	#7	1/4 - 7/8"	11	1/16"	1/16"	3/8" 3-Flat	48.32	45.78	43.49	41.42
151056	#8	3/16 - 7/8"	12	1/16"	1/8"	3/8" 3-Flat	43.43	41.14	39.09	37.23
151057	#11	1/4 - 1-1/8"	2	27/64"	9/64"	3/8" 3-Flat	61.13	57.91	55.01	52.39
151058	#12	1/4 - 1-3/8"	5	1/8"	*	3/8" 3-Flat	78.21	74.09	70.39	67.04
151059	1/4A	1/4 - 1-1/8"	16	1/16"	1/16"	3/8" 3-Flat	61.13	57.91	55.01	52.39
151060	13/16	13/16 - 1-3/8"	10	1/32"	5/32"	1/2" 3-Flat	78.21	74.09	70.39	67.04

* #151058 has 3/16" steps at 7/8, 1-1/8, 1-7/32, 1-1/4, & 1-3/8 (1/2" & 3/4" conduit)

ULTRA BIT™ Step Drill Sets **Gold oxide**

* Available in
standard or
quick-release
shank.



**4-piece set includes
these step drills:**

- #1: 1/8 – 1/2"
- #3: 1/4 – 3/4"
- #7: 1/4 – 7/8"
- #11: 7/8 & 1-1/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151045	Regular 3-flat shank	\$157.90	\$149.70	\$142.31	\$135.61

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #3: 1/4 – 3/4"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151041	Regular 3-flat shank	\$72.39	\$68.58	\$65.15	\$62.05
151011	Quick-release 1/4" hex shank	89.96	85.22	80.96	77.11

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #8: 3/16 – 7/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151042	Regular 3-flat shank	\$82.64	\$78.29	\$74.38	\$70.83
151010	Quick-release 1/4" hex shank	84.78	80.32	76.30	72.67

3-piece electrician's set includes these step drills:

- #1: 1/8 – 1/2"
- #8: 3/16 – 7/8"
- #11: 7/8 & 1-1/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151043	Regular 3-flat shank	\$112.29	\$106.45	\$101.20	\$96.44
151012	Quick-release 1/4" hex shank	105.70	100.21	95.26	90.78

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #2: 1/4 – 1"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151044	Regular 3-flat shank	\$77.04	\$72.99	\$69.34	\$66.04

ULTRA BIT™ Step Drill Sets TiN Coated

4-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #3: 1/4 – 3/4"
- #7: 1/4 – 7/8"
- #11: 7/8 & 1-1/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151075	Regular 3-flat shank	\$167.71	\$159.00	\$151.15	\$144.04

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #3: 1/4 – 3/4"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151071	Regular 3-flat shank	\$78.24	\$74.12	\$70.41	\$67.06

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #8: 3/16 – 7/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151072	Regular 3-flat shank	\$88.71	\$84.04	\$79.84	\$76.04

3-piece electrician's set includes these step drills:

- #1: 1/8 – 1/2"
- #8: 3/16 – 7/8"
- #11: 7/8 & 1-1/8"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151073	Regular 3-flat shank	\$104.56	\$99.13	\$94.23	\$89.80

3-piece set includes these step drills:

- #1: 1/8 – 1/2"
- #4: 3/16 – 1/2"
- #2: 1/4 – 1"

ITEM NO.	DESCRIPTION	1 set	3	6	12
151074	Regular 3-flat shank	\$82.99	\$78.62	\$74.69	\$71.13

Wood Auger Bits

- High quality auger bits with hex shanks produced from alloy tool steel.
- For deep drilling wood applications, quickly and easily drill holes in all types of wood products.
- Self-drilling lead screw.



ITEM NO.	SIZE	OAL	1	5	10	20
347300	3/8	9"	\$8.97	\$8.50	\$8.08	\$7.69
347303	1/2	9"	9.76	9.25	8.79	8.37
347306	9/16	9"	11.10	10.51	9.99	9.51
347309	5/8	9"	12.17	11.53	10.95	10.43
347312	11/16	9"	12.68	12.04	11.46	10.93
347315	3/4	9"	13.99	13.25	12.59	11.99
347318	7/8	9"	15.48	14.70	13.99	13.34
347321	15/16	9"	16.23	15.41	14.66	13.99
347324	1"	9"	22.05	20.94	19.93	19.01
347327	1-1/8	9"	24.61	23.37	22.24	21.22
347350	3/8	16"	11.89	11.26	10.70	10.19
347353	1/2	16"	15.06	14.26	13.55	12.90
347356	9/16	16"	15.21	14.44	13.75	13.11
347359	5/8	16"	17.51	16.62	15.82	15.09
347362	11/16	16"	21.05	19.99	19.02	18.15
347365	3/4	16"	23.76	22.51	21.39	20.37
347368	7/8	16"	27.21	25.78	24.49	23.32
347371	15/16	16"	30.19	28.66	27.28	26.02
347374	1"	16"	35.15	33.30	31.64	30.13
347377	1-1/8	16"	42.11	39.97	38.05	36.30

ITEM NO.	SIZE	OAL	1	5	10	20
347400	3/8	18"	\$11.93	\$11.33	\$10.78	\$10.29
347403	1/2	18"	15.21	14.44	13.75	13.11
347406	9/16	18"	16.73	15.89	15.12	14.43
347409	5/8	18"	19.03	18.06	17.19	16.40
347412	11/16	18"	22.05	20.94	19.93	19.01
347415	3/4	18"	26.36	25.03	23.82	22.72
347418	7/8	18"	28.41	26.97	25.67	24.49
347421	15/16	18"	33.99	32.27	30.71	29.30
347424	1"	18"	38.80	36.84	35.06	33.45
347427	1-1/8	18"	42.11	39.97	38.05	36.30
347440	3/8	24"	16.23	15.41	14.66	13.99
347443	1/2	24"	19.79	18.78	17.88	17.06
347446	9/16	24"	22.57	21.43	20.40	19.46
347449	5/8	24"	26.36	25.03	23.82	22.72
347452	11/16	24"	29.92	28.41	27.04	25.79
347455	3/4	24"	36.77	34.91	33.23	31.70
347458	7/8	24"	41.08	39.00	37.12	35.41
347461	15/16	24"	48.69	46.23	44.00	41.98
347464	1"	24"	57.32	54.42	51.80	49.41
347467	1-1/8	24"	63.65	60.43	57.52	54.87



Spade Bits

- Cuts clean accurate holes in all soft and hard woods plus foam core, plastic, many non-metallic building sidings, and foam insulation.
- Shank Type: 1/4" Quick-Release

ITEM NO.	DESCRIPTION	PRICE EACH			
		1	5	10	20
347100	1/4" Spade Bit	\$2.27	\$2.15	\$2.05	\$1.95
347103	5/16" Spade Bit	2.27	2.15	2.05	1.95
347106	3/8" Spade Bit	2.52	2.39	2.28	2.17
347109	7/16" Spade Bit	2.32	2.20	2.10	2.00
347112	1/2" Spade Bit	2.52	2.39	2.28	2.17
347115	9/16" Spade Bit	2.52	2.39	2.28	2.17
347118	5/8" Spade Bit	2.73	2.59	2.47	2.36
347121	11/16" Spade Bit	2.73	2.59	2.47	2.36
347124	3/4" Spade Bit	2.73	2.59	2.47	2.36
347127	13/16" Spade Bit	2.96	2.81	2.67	2.55
347130	7/8" Spade Bit	3.08	2.92	2.78	2.64
347133	15/16" Spade Bit	2.96	2.81	2.67	2.55
347136	1" Spade Bit	3.19	3.03	2.88	2.75
347139	1-1/8" Spade Bit	4.50	4.26	4.05	3.86
347142	1-1/4" Spade Bit	4.50	4.26	4.05	3.86
347145	1-3/8" Spade Bit	4.50	4.26	4.05	3.86
347148	1-1/2" Spade Bit	4.50	4.26	4.05	3.86
347172	6" Extension for 1/4" hex shank, includes Allen wrench	5.60	5.30	5.04	4.80
347175	12" Extension for 1/4" hex shank, includes Allen wrench	7.00	6.63	6.30	6.00

ITEM NO.	DESCRIPTION	PRICE EACH			
		1	4	8	12
347180	4 Piece Set, Includes Sizes: 3/8, 1/2, 5/8, & 3/4	\$10.37	\$9.85	\$9.37	\$8.94
347185	6 Piece Set, Includes Sizes: 3/8, 1/2, 5/8, 3/4, 7/8, & 1"	18.10	17.14	16.29	15.51
347190	13 Piece Set, Includes Sizes: 1/4" - 1" x 1/16th Increments	38.15	36.14	34.34	32.70

135° Split Point

Quick release
1/4" Hex Shank



• 347185



• 347190

Glass & Tile Drills

- Carbide-tipped with spear point.
- Designed for drilling in glass, tile, mirrors, and ceramic materials.
- Spear point allows clean penetration with reduced cutting pressure and breakout.
- Carbide tip ensures long tool life.



• 4-piece set,
347850



ITEM NO.	DESCRIPTION	PRICE EACH			
		1	5	10	20
347800	1/8" Glass & Tile Drill	\$7.16	\$6.80	\$6.47	\$6.17
347803	5/32" Glass & Tile Drill	7.27	6.90	6.57	6.26
347806	3/16" Glass & Tile Drill	5.76	5.47	5.20	4.97
347809	1/4" Glass & Tile Drill	6.21	5.90	5.61	5.36
347812	5/16" Glass & Tile Drill	7.57	7.19	6.84	6.53
347815	3/8" Glass & Tile Drill	10.15	9.63	9.17	8.75
347818	1/2" Glass & Tile Drill	14.47	13.73	13.07	12.47
		1 set	4	8	12
347850	4-Piece Set, Sizes 1/8, 3/16, 1/4, & 5/16	26.72	25.37	24.14	23.03





Solid Carbide End Mills
Series 120 – Standard Length,
Single End Square, Uncoated
 (Single End Ball also available)



2 FLUTE	3 FLUTE	4 FLUTE	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
ITEM NO.	ITEM NO.	ITEM NO.				1	5	10	20
361000	361070	361140	1/64	1-1/2	1/16"	\$9.23	\$8.70	\$8.22	\$7.79
361001	361071	361141	1/32	1-1/2	3/32	5.54	5.22	4.93	4.68
361002	361072	361142	3/64	1-1/2	1/8	5.54	5.22	4.93	4.68
361003	361073	361143	1/16	1-1/2	3/16	4.43	4.17	3.95	3.74
361004	361074	361144	5/64	1-1/2	1/4	4.15	3.91	3.70	3.51
361005	361075	361145	3/32	1-1/2	3/8	3.88	3.65	3.45	3.27
361006	361076	361146	7/64	1-1/2	3/8	3.88	3.65	3.45	3.27
361007	361077	361147	1/8	1-1/2	1/2	3.69	3.48	3.29	3.12
361008	361078	361148	9/64	2	9/16	8.58	8.09	7.64	7.25
361009	361079	361149	5/32	2	9/16	8.22	7.74	7.32	6.94
361010	361080	361150	11/64	2	9/16	8.58	8.09	7.64	7.25
361011	361081	361151	3/16	2	5/8	7.94	7.48	7.07	6.70
361012	361082	361152	13/64	2-1/2	5/8	10.87	10.24	9.68	9.18
361013	361083	361153	7/32	2-1/2	5/8	9.60	9.04	8.55	8.10
361014	361084	361154	15/64	2-1/2	3/4	10.87	10.24	9.68	9.18
361015	361085	361155	1/4	2-1/2	3/4	7.85	7.39	6.99	6.62
361016	361086	361156	17/64	2-1/2	7/8	13.02	12.26	11.59	10.99
361017	361087	361157	9/32	2-1/2	7/8	11.91	11.22	10.60	10.05
361018	361088	361158	19/64	2-1/2	7/8	13.02	12.26	11.59	10.99
361019	361089	361159	5/16	2-1/2	7/8	10.62	10.00	9.45	8.96
361020	361090	361160	21/64	2-1/2	7/8	15.05	14.17	13.40	12.70
361021	361091	361161	11/32	2-1/2	7/8	13.85	13.04	12.33	11.69
361022	361092	361162	23/64	2-1/2	7/8	15.05	14.17	13.40	12.70
361023	361093	361163	3/8	2-1/2	7/8	13.48	12.70	12.00	11.38
361024	361094	361164	25/64	2-1/2	7/8	23.54	22.17	20.96	19.87
361025	361095	361165	13/32	2-1/2	7/8	23.08	21.74	20.55	19.48
361026	361096	361166	27/64	2-1/2	7/8	22.15	20.87	19.73	18.70
361027	361097	361167	7/16	2-1/2	1"	19.38	18.26	17.26	16.36
361028	361098	361168	29/64	3	1"	26.03	24.52	23.18	21.97
361029	361099	361169	15/32	3	1"	25.38	23.91	22.60	21.43
361030	361100	361170	31/64	3	1"	24.46	23.04	21.78	20.65
						1	5	10	15
361031	361101	361171	1/2	3	1"	\$23.08	\$21.74	\$20.55	\$19.48

Solid Carbide End Mills Series 120 – Standard Length, Single End Square, Uncoated

(continued)

(Single End Ball also available)



2 FLUTE	3 FLUTE	4 FLUTE	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
ITEM NO.	ITEM NO.	ITEM NO.				1	3	6	9
361032	361102	361172	33/64	3-1/2	1-1/4"	\$51.97	\$48.96	\$46.27	\$43.87
361033	361103	361173	17/32	3-1/2	1-1/4	51.60	48.61	45.95	43.56
361034	361104	361174	35/64	3-1/2	1-1/4	48.92	46.09	43.56	41.30
361035	361105	361175	9/16	3-1/2	1-1/4	45.23	42.61	40.27	38.18
361036	361106	361176	37/64	3-1/2	1-1/4	53.72	50.61	47.84	45.35
361037	361107	361177	19/32	3-1/2	1-1/4	51.69	48.70	46.03	43.64
361038	361108	361178	39/64	3-1/2	1-1/4	49.85	46.96	44.38	42.08
361039	361109	361179	5/8	3-1/2	1-1/4	47.08	44.35	41.92	39.74
361040	361110	361180	41/64	4"	1-1/2	79.13	74.54	70.45	66.79
361041	361111	361181	21/32	4"	1-1/2	78.46	73.91	69.86	66.23
361042	361112	361182	43/64	4"	1-1/2	77.54	73.04	69.04	65.45
361043	361113	361183	11/16	4"	1-1/2	68.31	64.35	60.82	57.66
361044	361114	361184	45/64	4"	1-1/2	72.92	68.70	64.93	61.56
361045	361115	361185	23/32	4"	1-1/2	72.92	68.70	64.93	61.56
361046	361116	361186	47/64	4"	1-1/2	72.92	68.70	64.93	61.56
361047	361117	361187	3/4	4"	1-1/2	65.54	61.74	58.36	55.32
						1	2	4	6
361048	361118	361188	49/64	4"	1-1/2	130.00	122.57	115.95	110.00
361049	361119	361189	25/32	4"	1-1/2	130.00	122.57	115.95	110.00
361050	361120	361190	51/64	4"	1-1/2	130.00	122.57	115.95	110.00
361051	361121	361191	13/16	4"	1-1/2	130.00	122.57	115.95	110.00
361052	361122	361192	53/64	4"	1-1/2	126.00	118.80	112.38	106.62
361053	361123	361193	27/32	4"	1-1/2	126.00	118.80	112.38	106.62
361054	361124	361194	55/64	4"	1-1/2	126.00	118.80	112.38	106.62
361055	361125	361195	7/8	4"	1-1/2	114.55	108.00	102.16	96.92
361056	361126	361196	57/64	4"	1-1/2	133.82	126.17	119.35	113.23
361057	361127	361197	29/32	4"	1-1/2	133.82	126.17	119.35	113.23
361058	361128	361198	59/64	4"	1-1/2	133.82	126.17	119.35	113.23
361059	361129	361199	15/16	4"	1-1/2	128.00	120.69	114.16	108.31
361060	361130	361200	61/64	4"	1-1/2	128.00	120.69	114.16	108.31
361061	361131	361201	31/32	4"	1-1/2	128.00	120.69	114.16	108.31
361062	361132	361202	63/64	4"	1-1/2	128.00	120.69	114.16	108.31
361063	361133	361203	1"	4	1-1/2	116.36	109.71	103.78	98.46



Solid Carbide End Mills Series 125 – Standard Length, Single End Square, TIN Coated, 4 Flute

- (Single End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
361490	1/64	1-1/2	1/16"	\$6.64	\$6.26	\$5.92	\$5.62
361491	1/32	1-1/2	3/32	6.37	6.00	5.67	5.38
361492	3/64	1-1/2	1/8	6.37	6.00	5.67	5.38
361493	1/16	1-1/2	3/16	5.26	4.96	4.68	4.44
361494	5/64	1-1/2	1/4	4.69	4.42	4.18	3.96
361495	3/32	1-1/2	3/8	4.71	4.43	4.19	3.97
361496	7/64	1-1/2	3/8	4.62	4.35	4.11	3.90
361497	1/8	1-1/2	1/2	4.52	4.26	4.03	3.82
361498	9/64	2	9/16	9.54	8.99	8.50	8.06
				1	5	10	20
361499	5/32	2	9/16	9.42	8.87	8.38	7.95
				1	5	10	15
361500	11/64	2	9/16	9.43	8.89	8.40	7.96
361501	3/16	2	5/8	9.14	8.61	8.14	7.71
361502	13/64	2-1/2	5/8	12.61	11.88	11.23	10.64
361503	7/32	2-1/2	5/8	11.72	11.04	10.44	9.90
361504	15/64	2-1/2	3/4	12.46	11.74	11.10	10.52
361505	1/4	2-1/2	3/4	11.54	10.87	10.27	9.74
361506	17/64"	2-1/2"	7/8"	14.70	13.84	13.08	12.41
361507	9/32	2-1/2	7/8	14.31	13.48	12.74	12.08
361508	19/64	2-1/2	7/8	14.47	13.63	12.89	12.22
361509	5/16	2-1/2	7/8	14.03	13.22	12.49	11.84
361510	21/64	2-1/2	7/8	17.10	16.10	15.22	14.43
361511	11/32	2-1/2	7/8	16.62	15.65	14.79	14.03
361512	23/64	2-1/2	7/8	16.49	15.53	14.68	13.92
361513	3/8	2-1/2	7/8	16.15	15.22	14.38	13.64
361514	25/64	2-1/2	7/8	29.08	27.39	25.89	24.55
361515	13/32	2-1/2	7/8	28.62	26.96	25.48	24.16
361516	27/64	2-1/2	7/8	27.69	26.09	24.66	23.38
361517	7/16	2-1/2	1	27.69	26.09	24.66	23.38
361518	29/64	3	1	31.35	29.53	27.91	26.46
361519	15/32	3	1	31.27	29.46	27.85	26.40
361520	31/64	3	1	30.52	28.75	27.17	25.76
361521	1/2	3	1	27.88	26.26	24.82	23.53

ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	3	6	9
361522	33/64	3-1/2	1-1/4"	\$68.71	\$64.73	\$61.18	\$58.01
361523	17/32	3-1/2	1-1/4	67.14	63.25	59.79	56.68
361524	35/64	3-1/2	1-1/4	77.13	72.66	68.68	65.11
361525	9/16	3-1/2	1-1/4	53.82	50.70	47.92	45.43
361526	37/64	3-1/2	1-1/4	66.46	62.61	59.18	56.10
361527	19/32	3-1/2	1-1/4	64.95	61.18	57.83	54.83
361528	39/64	3-1/2	1-1/4	63.06	59.41	56.15	53.24
361529	5/8	3-1/2	1-1/4	53.17	50.09	47.34	44.88
361530	41/64	4	1-1/2	94.43	88.96	84.08	79.71
361531	21/32	4	1-1/2	93.14	87.74	82.93	78.62
361532	43/64	4	1-1/2	91.70	86.38	81.65	77.41
361533	11/16	4	1-1/2	88.34	83.22	78.66	74.57
361534	45/64	4	1-1/2	86.88	81.84	77.36	73.34
361535	23/32	4	1-1/2	86.01	81.03	76.59	72.61
361536	47/64	4	1-1/2	85.29	80.35	75.95	72.00
361537	3/4	4	1-1/2	76.43	72.00	68.05	64.52
				1	2	4	6
361538	49/64	4	1-1/2	144.60	136.34	128.97	122.35
361539	25/32	4	1-1/2	143.80	135.58	128.25	121.68
361540	51/64	4	1-1/2	143.00	134.83	127.54	121.00
361541	13/16	4	1-1/2	142.00	133.89	126.65	120.15
361542	53/64	4	1-1/2	142.71	134.55	127.28	120.75
361543	27/32	4	1-1/2	142.44	134.30	127.04	120.52
361544	55/64	4	1-1/2	142.00	133.89	126.65	120.15
361545	7/8	4	1-1/2	127.82	120.51	114.00	108.15
361546	57/64	4	1-1/2	151.87	143.19	135.45	128.51
361547	29/32	4	1-1/2	149.00	140.49	132.89	126.08
361548	59/64	4	1-1/2	147.00	138.60	131.11	124.38
361549	15/16	4	1-1/2	144.00	135.77	128.43	121.85
361550	61/64	4	1-1/2	145.96	137.62	130.18	123.51
361551	31/32	4	1-1/2	145.05	136.77	129.37	122.74
361552	63/64	4	1-1/2	144.00	135.77	128.43	121.85
361553	1"	4	1-1/2	129.64	122.23	115.62	109.69

Solid Carbide End Mills Series 130 – Standard Length, Single End Square, ALTiN Coated, 4 Flute

- (Single End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
361840	1/64	1-1/2	1/16"	\$7.48	\$7.04	\$6.66	\$6.31
361841	1/32	1-1/2	3/32	7.18	6.77	6.39	6.06
361842	3/64	1-1/2	1/8	7.18	6.77	6.39	6.06
361843	1/16	1-1/2	3/16	6.07	5.72	5.41	5.13
361844	5/64	1-1/2	1/4	5.91	5.57	5.26	4.99
361845	3/32	1-1/2	3/8	5.52	5.20	4.92	4.66
361846	7/64	1-1/2	3/8	5.54	5.22	4.93	4.68
361847	1/8	1-1/2	1/2	5.34	5.03	4.75	4.51
361848	9/64	2	9/16	11.43	10.77	10.18	9.65
361849	5/32	2	9/16	10.62	10.00	9.45	8.96
361850	11/64	2	9/16	11.04	10.40	9.83	9.32
361851	3/16	2	5/8	10.34	9.74	9.21	8.73
361852	13/64	2-1/2	5/8	15.27	14.38	13.59	12.89
361853	7/32	2-1/2	5/8	13.90	13.10	12.38	11.74
361854	15/64	2-1/2	3/4	15.06	14.19	13.41	12.72
361855	1/4	2-1/2	3/4	12.15	11.45	10.82	10.26
361856	17/64	2-1/2	7/8	18.41	17.34	16.39	15.54
361857	9/32	2-1/2	7/8	17.13	16.14	15.25	14.46
361858	19/64	2-1/2	7/8	17.80	16.77	15.85	15.02
361859	5/16	2-1/2	7/8	16.68	15.71	14.85	14.08
361860	21/64	2-1/2	7/8	22.01	20.73	19.59	18.58
361861	11/32	2-1/2	7/8	19.90	18.75	17.72	16.80
361862	23/64	2-1/2	7/8	20.07	18.90	17.87	16.94
361863	3/8	2-1/2	7/8	19.54	18.41	17.40	16.49
361864	25/64	2-1/2	7/8	29.54	27.83	26.30	24.94
361865	13/32	2-1/2	7/8	29.08	27.39	25.89	24.55
361866	27/64	2-1/2	7/8	27.88	26.26	24.82	23.53
361867	7/16	2-1/2	1	28.05	26.42	24.97	23.68
361868	29/64	3	1	34.98	32.96	31.15	29.53
361869	15/32	3	1	34.62	32.61	30.82	29.22
361870	31/64	3	1	34.15	32.17	30.41	28.83
361871	1/2	3	1	31.74	29.90	28.26	26.79

ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	3	6	9
361872	33/64"	3-1/2"	1-1/4"	\$75.08	\$70.73	\$66.85	\$63.38
361873	17/32	3-1/2	1-1/4	73.48	69.22	65.42	62.03
361874	35/64	3-1/2	1-1/4	69.38	65.36	61.78	58.57
361875	9/16	3-1/2	1-1/4	58.74	55.33	52.30	49.58
361876	37/64	3-1/2	1-1/4	70.63	66.54	62.89	59.63
361877	19/32	3-1/2	1-1/4	69.38	65.36	61.78	58.57
361878	39/64	3-1/2	1-1/4	68.07	64.12	60.61	57.46
361879	5/8	3-1/2	1-1/4	60.58	57.07	53.95	51.14
361880	41/64	4	1-1/2	93.27	87.86	83.05	78.73
361881	21/32	4	1-1/2	91.75	86.43	81.70	77.45
361882	43/64	4	1-1/2	91.57	86.26	81.53	77.30
361883	11/16	4	1-1/2	89.35	84.17	79.56	75.43
361884	45/64	4	1-1/2	90.55	85.30	80.63	76.44
361885	23/32	4	1-1/2	89.91	84.70	80.05	75.90
361886	47/64	4	1-1/2	89.67	84.47	79.84	75.69
361887	3/4	4	1-1/2	80.97	76.28	72.10	68.35
				1	2	4	6
361888	49/64	4	1-1/2	164.00	154.63	146.27	138.77
361889	25/32	4	1-1/2	163.31	153.98	145.65	138.18
361890	51/64	4	1-1/2	162.60	153.31	145.02	137.58
361891	13/16	4	1-1/2	160.00	150.86	142.70	135.38
361892	53/64	4	1-1/2	161.00	151.80	143.59	136.23
361893	27/32	4	1-1/2	160.51	151.34	143.16	135.82
361894	55/64	4	1-1/2	160.00	150.86	142.70	135.38
361895	7/8	4	1-1/2	141.15	133.09	125.89	119.44
361896	57/64	4	1-1/2	165.42	155.97	147.54	139.97
361897	29/32	4	1-1/2	164.45	155.06	146.68	139.15
361898	59/64	4	1-1/2	163.51	154.17	145.83	138.35
361899	15/16	4	1-1/2	160.00	150.86	142.70	135.38
361900	61/64	4	1-1/2	159.00	149.91	141.81	134.54
361901	31/32	4	1-1/2	157.98	148.95	140.90	133.68
361902	63/64	4	1-1/2	157.82	148.80	140.76	133.54
361903	1"	4	1-1/2	142.97	134.80	127.51	120.97

Solid Carbide End Mills

- Series 190 – Stub Length, Double End Square, Uncoated, 4 Flute
- (Double End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
362571	1/32	1-1/2	1/16"	\$8.31	\$7.83	\$7.40	\$7.01
362572	3/64	1-1/2	3/32	8.31	7.83	7.40	7.01
362573	1/16	1-1/2	1/8	7.38	6.96	6.58	6.23
362575	3/32	1-1/2	3/16	7.02	6.61	6.25	5.92
362576	7/64	1-1/2	7/32	6.83	6.43	6.08	5.77
362577	1/8	1-1/2	1/4	6.65	6.26	5.92	5.61
362579	5/32	2	5/16	10.15	9.57	9.04	8.57
362581	3/16	2	5/16	9.69	9.13	8.63	8.18
362583	7/32	2	3/8	11.45	10.78	10.19	9.66
362585	1/4	2-1/2	1/2	11.26	10.61	10.03	9.51
362587	9/32	2-1/2	1/2	13.85	13.04	12.33	11.69
362589	5/16	2-1/2	1/2	13.48	12.70	12.00	11.38
362593	3/8	2-1/2	9/16	17.54	16.52	15.62	14.81
362597	7/16	2-3/4	9/16	26.77	25.22	23.84	22.60
362601	1/2	3	5/8	29.54	27.83	26.30	24.94
				1	3	6	9
362605	9/16	3-1/2	11/16	\$64.62	\$60.87	\$57.53	\$54.55
362609	5/8	3-1/2	11/16	62.77	59.13	55.89	52.99
362617	3/4	4	7/8	79.38	74.78	70.68	67.01

Solid Carbide End Mills

- Series 197 – Stub Length, Double End Square, TIN Coated, 4 Flute
- (Double End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
362851	1/32	1-1/2	1/16"	\$9.42	\$8.87	\$8.38	\$7.95
362852	3/64	1-1/2	3/32	9.32	8.78	8.30	7.87
362853	1/16	1-1/2	1/8	8.20	7.72	7.30	6.92
362855	3/32	1-1/2	3/16	8.12	7.65	7.23	6.86
362856	7/64	1-1/2	7/32	8.12	7.65	7.23	6.86
362857	1/8	1-1/2	1/4	8.03	7.57	7.15	6.78
362859	5/32	2	5/16	11.35	10.70	10.11	9.58
362861	3/16	2	5/16	11.26	10.61	10.03	9.51
362863	7/32	2	3/8	13.59	12.80	12.10	11.47
362865	1/4	2-1/2	1/2	13.38	12.61	11.92	11.30
362867	9/32	2-1/2	1/2	16.52	15.57	14.71	13.95
362869	5/16	2-1/2	1/2	16.15	15.22	14.38	13.64
362873	3/8	2-1/2	9/16	20.22	19.04	18.00	17.06
362877	7/16	2-3/4	9/16	31.09	29.29	27.68	26.25
362881	1/2	3	5/8	33.78	31.83	30.08	28.52
				1	3	6	9
362885	9/16	3-1/2	11/16	\$61.02	\$57.48	\$54.33	\$51.51
362889	5/8	3-1/2	11/16	71.37	67.23	63.55	60.25
362897	3/4	4	7/8	90.79	85.53	80.84	76.64

Solid Carbide End Mills Series 200 – Stub Length, Double End Square

- ALTIN Coated, 4 Flute
- (Double End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	15
363131	1/32	1-1/2	1/16"	\$9.23	\$8.70	\$8.22	\$7.79
363132	3/64	1-1/2	3/32	9.23	8.70	8.22	7.79
363133	1/16	1-1/2	1/8	8.31	7.83	7.40	7.01
363135	3/32	1-1/2	3/16	7.94	7.48	7.07	6.70
363136	7/64	1-1/2	7/32	7.75	7.30	6.90	6.55
363137	1/8	1-1/2	1/4	7.57	7.13	6.74	6.39
363139	5/32	2	5/16	12.55	11.83	11.18	10.60
363141	3/16	2	5/16	12.00	11.30	10.68	10.13
363143	7/32	2	3/8	15.69	14.78	13.97	13.25
363145	1/4	2-1/2	1/2	15.14	14.26	13.48	12.78
363147	9/32	2-1/2	1/2	19.38	18.26	17.26	16.36
363149	5/16	2-1/2	1/2	18.83	17.74	16.77	15.90
363153	3/8	2-1/2	9/16	23.08	21.74	20.55	19.48
363157	7/16	2-3/4	9/16	34.15	32.17	30.41	28.83
363161	1/2	3	5/8	35.08	33.04	31.23	29.61
				1	3	6	9
363165	9/16	3-1/2	11/16	\$73.85	\$69.57	\$65.75	\$62.34
363169	5/8	3-1/2	11/16	70.15	66.09	62.47	59.22
363177	3/4	4	7/8	94.15	88.70	83.84	79.48



Solid Carbide End Mills Series 210 – Weld-on Flats, Double End Square, Uncoated, 4 Flute

- (Double End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	SHANK DIA.	OAL INCH-ES	FLUTE LENGTH	PRICE EACH			
					1	5	10	15
363415	3/32	3/8	3"	5/16"	\$26.22	\$24.70	\$23.34	\$22.13
363417	1/8	3/8	3-1/16	3/8	25.85	24.35	23.01	21.82
363419	5/32	3/8	3-1/8	7/16	25.48	24.00	22.68	21.51
363421	3/16	3/8	3-1/4	1/2	24.92	23.48	22.19	21.04
363423	7/32	3/8	3-1/2	9/16	24.92	23.48	22.19	21.04
363425	1/4	3/8	3-1/2	5/8	24.92	23.48	22.19	21.04
363429	5/16	3/8	3-1/2	3/4	26.22	24.70	23.34	22.13
363431	11/32	3/8	3-1/2	3/4	28.06	26.43	24.99	23.69
363433	3/8	3/8	3-1/2	3/4	27.69	26.09	24.66	23.38
363437	7/16	1/2	4	7/8	42.46	40.00	37.81	35.84
363441	1/2	1/2	4	1	38.77	36.52	34.52	32.73
					1	3	6	9
363445	9/16	5/8	5	1-1/4	72.00	67.83	64.11	60.78
363449	5/8	5/8	6	1-1/2	77.54	73.04	69.04	65.45
363457	3/4	3/4	6	1-1/2	112.62	106.09	100.27	95.06

Solid Carbide End Mills Series 212 – Weld-on Flats, Double End Square, ALTIN Coated, 4 Flute

- (Double End Ball also available)
- (2 Flute & 3 Flute also available)



ITEM NO.	SIZE INCHES	SHANK DIA.	OAL INCH-ES	FLUTE LENGTH	PRICE EACH			
					1	5	10	15
363625	3/32	3/8	3"	5/16"	\$29.91	\$28.17	\$26.63	\$25.25
363627	1/8	3/8	3-1/16	3/8	29.54	27.83	26.30	24.94
363629	5/32	3/8	3-1/8	7/16	29.63	27.91	26.38	25.01
363631	3/16	3/8	3-1/4	1/2	29.08	27.39	25.89	24.55
363633	7/32	3/8	3-1/2	9/16	29.08	27.39	25.89	24.55
363635	1/4	3/8	3-1/2	5/8	29.08	27.39	25.89	24.55
363639	5/16	3/8	3-1/2	3/4	30.55	28.78	27.21	25.79
363641	11/32	3/8	3-1/2	3/4	32.40	30.52	28.85	27.35
363643	3/8	3/8	3-1/2	3/4	32.03	30.17	28.52	27.04
363647	7/16	1/2	4	7/8	47.26	44.52	42.08	39.90
363651	1/2	1/2	4	1	45.23	42.61	40.27	38.18
					1	3	6	9
363655	9/16	5/8	5	1-1/4	80.31	75.65	71.51	67.79
363659	5/8	5/8	6	1-1/2	85.85	80.87	76.44	72.47
363667	3/4	3/4	6	1-1/2	120.00	113.14	107.03	101.54



Solid Carbide Hot Mills

- Variable indexed flute to flute; reduces vibrations, allowing increased feeds & speeds
- Eccentric-radial O.D. relieved; increases tool strength
- Our best hard coating for heavy, fast metal removal rates, can be used dry. Cuts stainless and other tough alloys
- Shank O.D. coolant groove – each flute, to maximize cooling and chip evacuation velocity
- Eccentric O.D. primary relief
- 35 Helix/RHC-RHS; Corner radius standard
- Flute diameter + .000 - .002
- Shank diameter - .0001 - .0004
- HTC ALTiN Hard Coat



• 800 Series



• 810 Series

ITEM NO.	CUTTER DIA	OAL INCHES	FLUTE LENGTH	CORNER RADIUS	PRICE EACH			
					1	5	10	20
365007	1/8	1-1/2	1/2"	.010	\$11.08	\$10.43	\$9.86	\$9.35
365011	3/16	2	5/8	.010	12.92	12.17	11.51	10.91
365015	1/4	2-1/2	3/4	.015	16.62	15.65	14.79	14.03
365019	5/16	2-1/2	7/8	.015	24.00	22.61	21.37	20.26
365023	3/8	2-1/2	1	.020	29.54	27.83	26.30	24.94
365027	7/16	2-3/4	1-1/8	.025	44.31	41.74	39.45	37.40
365031	1/2	3	1-1/4	.030	53.54	50.43	47.67	45.19
					1	3	6	9
365039	5/8	3-1/2	1-1/2	.030	\$86.77	\$81.74	\$77.26	\$73.25
365047	3/4	4	1-3/4	.040	123.64	116.57	110.27	104.62
					1	2	4	6
365063	1"	4	1-3/4	.045	\$196.36	\$185.14	\$175.14	\$166.15

ITEM NO.	CUTTER DIA	OAL INCHES	FLUTE LENGTH	PRICE EACH			
				1	5	10	20
365077	1/8	1-1/2	1/2"	\$15.20	\$14.32	\$13.53	\$12.83
365081	3/16	2	5/8	16.83	15.86	14.99	14.21
365085	1/4	2-1/2	3/4	24.00	22.61	21.37	20.26
365089	5/16	2-1/2	7/8	33.23	31.30	29.59	28.05
365093	3/8	2-1/2	1	36.92	34.78	32.88	31.17
365097	7/16	2-3/4	1-1/8	51.69	48.70	46.03	43.64
365101	1/2	3	1-1/4	66.46	62.61	59.18	56.10
				1	3	6	9
365109	5/8	3-1/2	1-1/2	\$116.36	\$109.71	\$103.78	\$98.46
365117	3/4	4	1-3/4	143.18	135.00	127.70	121.15
				1	2	4	6
365133	1"	4	1-3/4	\$245.29	\$231.67	\$219.47	\$208.50

Type SA – Cylindrical Shape

- Used for general deburring.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH			
						1	5	10	20
701001	SA-1	1/4	1/4	5/8"	2"	\$4.78	\$4.51	\$4.26	\$4.04
701002	SA-1L	1/4	1/4	1	2	6.23	5.87	5.55	5.26
701003	SA-1L3	1/4	1/4	1	3-1/4	7.48	7.04	6.66	6.31
701004	SA-1L6	1/4	1/4	1/2	6-1/4	10.18	9.59	9.07	8.60
701005	SA-2	5/16	1/4	3/4	2-1/16	5.85	5.51	5.21	4.94
701006	SA-2L	5/16	1/4	1	2-1/16	15.44	14.50	13.67	12.93
701007	SA-3	3/8	1/4	3/4	2-1/8	7.08	6.67	6.30	5.97
701008	SA-3L	3/8	1/4	1	2-1/8	7.35	6.93	6.55	6.21
701009	SA-3L6	3/8	1/4	3/4	6-3/8	13.45	12.67	11.97	11.35
701010	SA-3X	3/8	1/4	1-1/2	2-1/8	9.63	9.07	8.58	8.13
701011	SA-4	7/16	1/4	1	2-3/16	8.23	7.75	7.33	6.95
701012	SA-5	1/2	1/4	1	2-1/4	9.74	9.17	8.67	8.22
701013	SA-5L6	1/2	1/4	1	6-1/2	17.69	16.67	15.75	14.94
701014	SA-6	5/8	1/4	1	2-3/8	12.57	11.84	11.19	10.61
701015	SA-7	3/4	1/4	1	2-1/2	19.46	18.33	17.33	16.43
701016	SA-8	7/8	1/4	1	2-5/8	25.22	23.75	22.45	21.29
701017	SA-9	1	1/4	1	2-3/4	38.92	36.67	34.66	32.86
701018	SA-11	1/8	1/4	1/2	2	6.23	5.87	5.55	5.26
701019	SA-12	1/8	1/4	5/8	2	4.69	4.42	4.18	3.96
701020	SA-13	5/32	1/4	5/8	2	4.69	4.42	4.18	3.96
701021	SA-14	3/16	1/4	5/8	2	4.69	4.42	4.18	3.96
701022	SA-15	3/4	1/4	1/2	2-1/2	16.82	15.84	14.97	14.19
701023	SA-16	3/4	1/4	3/4	2-1/2	20.80	19.59	18.52	17.56
701024	SA-41	1/16	1/8	1/4	1-1/2	3.28	3.09	2.92	2.77
701025	SA-41L2	1/16	1/8	1/4	2	3.54	3.33	3.15	2.99
701026	SA-41L3	1/16	1/8	1/4	3	3.98	3.75	3.55	3.36
701027	SA-42	3/32	1/8	7/16	1-1/2	3.28	3.09	2.92	2.77
701028	SA-42L2	3/32	1/8	7/16	2	3.54	3.33	3.15	2.99
701029	SA-42L3	3/32	1/8	7/16	3	3.98	3.75	3.55	3.36
701030	SA-43	1/8	1/8	9/16	1-1/2	3.28	3.09	2.92	2.77
701031	SA-43L2	1/8	1/8	9/16	2	3.54	3.33	3.15	2.99
701032	SA-43L3	1/8	1/8	9/16	3	3.98	3.75	3.55	3.36
701033	SA-51	1/4	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
701034	SA-52	5/32	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
701035	SA-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
701036	SA-61	1/16	3/32	1/4	1-1/2	3.11	2.93	2.77	2.62
701037	SA-63	3/32	3/32	3/8	1-1/2	3.11	2.93	2.77	2.62
701038	SA-81	3/16	3/16	5/8	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
701039	SA-1NF	1/4	1/4	5/8	2	\$6.46	\$6.09	\$5.75	\$5.45
701040	SA-3NF	3/8	1/4	3/4	2-1/8	9.38	8.84	8.36	7.92
701041	SA-5NF	1/2	1/4	1	2-1/4	14.15	13.33	12.60	11.95
701042	SA-6NF	5/8	1/4	1	2-3/8	16.82	15.84	14.97	14.19
701043	SA-7NF	3/4	1/4	1	2-1/2	23.35	22.00	20.79	19.71

Carbide Burrs

- Carbide burrs are a widely used and versatile cutting tool in the metalworking industry. Their primary use is to remove burrs (the small flakes of metal) that often remain on the workpiece after the machining process.
- The carbide burrs on these pages are double cut. Single cut is also available upon request.
- Several types are also available in Aluminum Cut (ending with NF). Aluminum cut burrs have more aggressive cutting edges for rapid stock removal with minimum chip. Ideal for aluminum and other non-ferrous materials.

Type SB – Cylindrical Shape With End Cut

- Used for interior contour work.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH			
						1	5	10	20
701101	SB-1	1/4	1/4	5/8"	2"	\$5.14	\$4.84	\$4.58	\$4.34
701102	SB-1L	1/4	1/4	1	2	6.72	6.33	5.99	5.68
701103	SB-2	5/16	1/4	3/4	2-1/16	6.20	5.84	5.52	5.23
701104	SB-2L	5/16	1/4	1	2-1/16	18.76	17.72	16.79	15.95
701105	SB-3	3/8	1/4	3/4	2-1/8	7.26	6.84	6.47	6.13
701106	SB-3L	3/8	1/4	1	2-1/8	7.62	7.17	6.78	6.43
701107	SB-3X	3/8	1/4	1-1/2	2-1/8	9.74	9.17	8.67	8.22
701108	SB-4	7/16	1/4	1	2-3/16	8.77	8.26	7.81	7.40
701109	SB-5	1/2	1/4	1	2-1/4	10.54	9.93	9.38	8.90
701110	SB-6	5/8	1/4	1	2-3/8	13.72	12.93	12.22	11.58
701111	SB-7	3/4	1/4	1	2-1/2	17.88	16.84	15.92	15.09
701112	SB-8	7/8	1/4	1	2-5/8	25.57	24.09	22.77	21.58
701113	SB-9	1	1/4	1	2-3/4	39.82	37.51	35.45	33.61
701114	SB-11	1/8	1/4	1/2	2	4.75	4.48	4.23	4.01
701115	SB-12	1/8	1/4	5/8	2	4.75	4.48	4.23	4.01
701116	SB-13	5/32	1/4	5/8	2	6.02	5.67	5.36	5.08
701117	SB-14	3/16	1/4	5/8	2	4.75	4.48	4.23	4.01
701118	SB-15	3/4	1/4	1/2	2-1/2	19.74	18.59	17.58	16.66
701119	SB-16	3/4	1/4	3/4	2-1/2	19.74	18.59	17.58	16.66
701120	SB-41	1/16	1/8	1/4	1-1/2	3.28	3.09	2.92	2.77
701121	SB-41L2	1/16	1/8	1/4	2	3.54	3.33	3.15	2.99
701122	SB-41L3	1/16	1/8	1/4	3	3.98	3.75	3.55	3.36
701123	SB-42	3/32	1/8	7/16	1-1/2	3.28	3.09	2.92	2.77
701124	SB-42L2	3/32	1/8	7/16	2	3.54	3.33	3.15	2.99
701125	SB-42L3	3/32	1/8	7/16	3	3.98	3.75	3.55	3.36
701126	SB-43	1/8	1/8	9/16	1-1/2	3.28	3.09	2.92	2.77
701127	SB-43L2	1/8	1/8	9/16	2	3.54	3.33	3.15	2.99
701128	SB-43L3	1/8	1/8	9/16	3	3.98	3.75	3.55	3.36
701129	SB-51	1/4	1/8	1/2	1-3/4	4.58	4.32	4.08	3.87
ALUMINUM CUT									
701130	SB-3NF	3/8	1/4	3/4	2-1/8	\$11.51	\$10.84	\$10.25	\$9.71
701131	SB-5NF	1/2	1/4	1	2-1/4	15.05	14.17	13.40	12.70

Type SC – Cylindrical Radius (Ball Nose)

- Used for surface milling and contour work.



ITEM NO.	TYPE	CUT-TER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701201	SC-1	1/4	1/4	5/8"	2"	\$5.31	\$5.00	\$4.73	\$4.48
701202	SC-1L	1/4	1/4	1	2	6.72	6.33	5.99	5.68
701203	SC-1L6	1/4	1/4	1/2	6-1/4	10.18	9.59	9.07	8.60
701204	SC-2	5/16	1/4	3/4	2-1/16	6.20	5.84	5.52	5.23
701205	SC-2L	5/16	1/4	1	2-1/16	18.31	17.20	16.21	15.34
701206	SC-3	3/8	1/4	3/4	2-1/8	7.08	6.67	6.30	5.97
701207	SC-3L	3/8	1/4	1	2-1/8	7.35	6.93	6.55	6.21
701208	SC-3L6	3/8	1/4	3/4	6-3/8	13.54	12.75	12.05	11.43
701209	SC-3X	3/8	1/4	1-1/2	2-1/8	9.03	8.51	8.04	7.62
701210	SC-4	7/16	1/4	1	2-3/16	8.68	8.17	7.73	7.32
701211	SC-5	1/2	1/4	1	2-1/4	9.74	9.17	8.67	8.22
701212	SC-5L6	1/2	1/4	1	6-1/2	17.69	16.67	15.75	14.94
701213	SC-6	5/8	1/4	1	2-3/8	12.74	12.00	11.34	10.75
701214	SC-7	3/4	1/4	1	2-1/2	25.80	24.30	22.97	21.78
701215	SC-9	1	1/4	1	2-3/4	31.77	29.93	28.29	26.82
701216	SC-11	1/8	1/4	1/2	2	4.69	4.42	4.18	3.96
701217	SC-12	1/8	1/4	5/8	2	4.69	4.42	4.18	3.96
701218	SC-13	5/32	1/4	5/8	2	4.69	4.42	4.18	3.96
701219	SC-14	3/16	1/4	5/8	2	4.69	4.42	4.18	3.96
701220	SC-15	3/4	1/4	1/2	2-1/2	20.80	19.59	18.52	17.56
701221	SC-16	3/4	1/4	3/4	2-1/2	25.48	24.00	22.68	21.51
701222	SC-41	3/32	1/8	7/16	1-1/2	3.28	3.09	2.92	2.77
701223	SC-42	1/8	1/8	9/16	1-1/2	3.28	3.09	2.92	2.77
701224	SC-42L2	1/8	1/8	9/16	2	3.54	3.33	3.15	2.99
701225	SC-42L3	1/8	1/8	9/16	3	3.98	3.75	3.55	3.36
701226	SC-51	1/4	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
701227	SC-52	5/32	1/8	1/2	1-21/32	5.23	4.93	4.66	4.42
701228	SC-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
701229	SC-61	3/32	3/32	3/8	1-1/2	3.11	2.93	2.77	2.62
701230	SC-81	3/16	3/16	5/8	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
701231	SC-1NF	1/4	1/4	5/8	2	6.55	6.17	5.84	5.53
701232	SC-3NF	3/8	1/4	3/4	2-1/8	9.48	8.93	8.44	8.00
701233	SC-5NF	1/2	1/4	1	2-1/4	14.15	13.33	12.60	11.95
701234	SC-6NF	5/8	1/4	1	2-3/8	17.08	16.09	15.21	14.42
701235	SC-7NF	3/4	1/4	1	2-1/2	23.71	22.33	21.11	20.01

Type SD – Ball Shape

- Used for surface milling, deburring and contour work.



• (continued at upper right)

ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701301	SD-1	1/4	1/4	7/32"	2"	\$5.40	\$5.09	\$4.81	\$4.56
701302	SD-1L6	1/4	1/4	7/32	6-1/4	9.91	9.33	8.82	8.36
701303	SD-2	5/16	1/4	1/4	2-1/16	5.75	5.42	5.12	4.86
701304	SD-3	3/8	1/4	5/16	2-1/8	6.46	6.09	5.75	5.45
701305	SD-3L6	3/8	1/4	5/16	6-3/8	12.22	11.51	10.88	10.31
701306	SD-4	7/16	1/4	3/8	2-3/16	7.35	6.93	6.55	6.21
701307	SD-5	1/2	1/4	7/16	2-1/4	8.68	8.17	7.73	7.32
701308	SD-5L6	1/2	1/4	7/16	6-1/2	14.15	13.33	12.60	11.95

Type SD – Ball Shape (continued)

ITEM NO.	TYPE	CUT-TER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701309	SD-6	5/8	1/4	9/16	2-3/8	\$11.95	\$11.26	\$10.64	\$10.09
701310	SD-7	3/4	1/4	11/16	2-1/2	14.51	13.67	12.92	12.25
701311	SD-9	1	1/4	15/16	2-3/4	24.51	23.09	21.82	20.69
701312	SD-11	1/8	1/4	3/32	2	4.60	4.33	4.10	3.88
701313	SD-12	1/8	1/4	1/8	2	10.56	9.97	9.45	8.98
701314	SD-14	3/16	1/4	1/8	2	4.69	4.42	4.18	3.96
701315	SD-41	3/32	1/8	3/32	1-1/2	3.28	3.09	2.92	2.77
701316	SD-42	1/8	1/8	1/8	1-1/2	3.28	3.09	2.92	2.77
701317	SD-42L2	1/8	1/8	1/8	2	3.54	3.33	3.15	2.99
701318	SD-42L3	1/8	1/8	1/8	3	3.98	3.75	3.55	3.36
701319	SD-51	1/4	1/8	7/32	1-3/4	5.23	4.93	4.66	4.42
701320	SD-52	5/32	1/8	5/32	1-21/32	5.23	4.93	4.66	4.42
701321	SD-53	3/16	1/8	3/16	1-11/16	5.23	4.93	4.66	4.42
701322	SD-61	3/32	3/32	3/32	1-1/2	3.11	2.93	2.77	2.62
701323	SD-81	3/16	3/16	5/32	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
701324	SD-1NF	1/4	1/4	7/32	2	\$6.20	\$5.84	\$5.52	\$5.23
701325	SD-3NF	3/8	1/4	5/16	2-1/8	8.49	8.00	7.56	7.17
701326	SD-5NF	1/2	1/4	7/16	2-1/4	12.03	11.33	10.71	10.16
701327	SD-6NF	5/8	1/4	9/16	2-3/8	15.22	14.33	13.55	12.84
701328	SD-7NF	3/4	1/4	11/16	2-1/2	20.35	19.17	18.12	17.18

Type SE – Egg (Oval) Shape

- Used for contour work.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701401	SE-1	1/4	1/4	3/8"	2"	\$5.40	\$5.09	\$4.81	\$4.56
701402	SE-1L6	1/4	1/4	3/8	6-1/4	10.45	9.84	9.30	8.82
701403	SE-2	5/16	1/4	5/8	2-1/16	13.18	12.44	11.79	11.20
701404	SE-3	3/8	1/4	5/8	2-1/8	7.00	6.59	6.23	5.91
701405	SE-3L6	3/8	1/4	5/8	6-3/8	13.89	13.09	12.37	11.73
701406	SE-5	1/2	1/4	7/8	2-1/4	9.74	9.17	8.67	8.22
701407	SE-5L6	1/2	1/4	7/8	6-1/2	17.69	16.67	15.75	14.94
701408	SE-6	5/8	1/4	1	2-3/8	13.09	12.33	11.66	11.05
701409	SE-7	3/4	1/4	1	2-1/2	19.82	18.67	17.64	16.73
701410	SE-11	3/16	1/4	5/16	2	5.05	4.75	4.49	4.26
701411	SE-41	1/8	1/8	7/32	1-1/2	3.28	3.09	2.92	2.77
701412	SE-41L2	1/8	1/8	7/32	2	3.54	3.33	3.15	2.99
701413	SE-41L3	1/8	1/8	7/32	3	3.98	3.75	3.55	3.36
701414	SE-51	1/4	1/8	3/8	1-3/4	5.23	4.93	4.66	4.42
701415	SE-53	3/16	1/8	9/32	1-11/16	5.23	4.93	4.66	4.42
701416	SE-61	3/32	3/32	1/8	1-1/2	3.11	2.93	2.77	2.62
701417	SE-81	3/16	3/16	9/32	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
701418	SE-1NF	1/4	1/4	7/32	2	\$16.19	\$15.29	\$14.49	\$13.76
701419	SE-3NF	3/8	1/4	5/8	2-1/8	9.55	9.00	8.51	8.06
701420	SE-5NF	1/2	1/4	7/8	2-1/4	14.15	13.33	12.60	11.95
701421	SE-6NF	5/8	1/4	1	2-3/8	17.52	16.51	15.60	14.79
701422	SE-7NF	3/4	1/4	1	2-1/2	23.80	22.42	21.19	20.09

Type SF – Round Tree/Radius Shape

- Used for narrow contour work.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701501	SF-1	1/4	1/4	5/8"	2"	7.00	6.59	6.23	5.91
701502	SF-1L	1/4	1/4	3/4	2	11.82	11.17	10.58	10.05
701503	SF-1L6	1/4	1/4	5/8	6-1/4	10.45	9.84	9.30	8.82
701504	SF-3	3/8	1/4	3/4	2-1/8	7.97	7.51	7.10	6.73
701505	SF-3L6	3/8	1/4	3/4	6-3/8	13.28	12.51	11.82	11.21
701506	SF-4	7/16	1/4	1	2-3/16	10.12	9.54	9.01	8.55
701507	SF-5	1/2	1/4	1	2-1/4	10.62	10.00	9.45	8.96
701508	SF-5L6	1/2	1/4	1	6-1/2	17.26	16.26	15.37	14.57
701509	SF-6	5/8	1/4	1	2-3/8	17.69	16.67	15.75	14.94
701510	SF-7	3/4	1/4	1	2-1/2	19.65	18.51	17.49	16.58
701511	SF-11	1/8	1/4	1/2	2	4.78	4.51	4.26	4.04
701512	SF-12	1/8	1/4	5/8	2	11.19	10.57	10.01	9.51
701513	SF-13	1/2	1/4	3/4	2-1/4	9.12	8.59	8.12	7.70
701514	SF-14	3/4	1/4	1-1/4	2-1/2	25.31	23.84	22.53	21.36
701515	SF-15	3/4	1/4	1-1/2	2-1/2	26.54	25.00	23.63	22.40
701516	SF-41	1/8	1/8	1/4	1-1/2	3.28	3.09	2.92	2.77
701517	SF-42	1/8	1/8	1/2	1-1/2	3.28	3.09	2.92	2.77
701518	SF-42L2	1/8	1/8	1/2	2	3.54	3.33	3.15	2.99
701519	SF-42L3	1/8	1/8	1/2	3	3.98	3.75	3.55	3.36
701520	SF-51	1/4	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
701521	SF-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
701522	SF-61	3/32	3/32	1/4	1-1/2	3.11	2.93	2.77	2.62
701523	SF-81	3/16	3/16	1/2	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
701524	SF-1NF	1/4	1/4	5/8	2	\$6.46	\$6.09	\$5.75	\$5.45
701525	SF-3NF	3/8	1/4	3/4	2-1/8	9.48	8.93	8.44	8.00
701526	SF-5NF	1/2	1/4	1	2-1/4	14.08	13.26	12.53	11.88
701527	SF-6NF	5/8	1/4	1	2-3/8	16.98	16.00	15.12	14.34
701528	SF-14NF	3/4	1/4	1-1/4	2-1/2	31.58	29.75	28.12	26.66

Type SG – Pointed Tree Shape

- Used for surface milling and narrow contour work.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701601	SG-1	1/4	1/4	5/8"	2"	\$5.31	\$5.00	\$4.73	\$4.48
701602	SG-1L	1/4	1/4	3/4	2	12.22	11.54	10.93	10.39
701603	SG-1L6	1/4	1/4	1/2	6-1/4	10.45	9.84	9.30	8.82
701604	SG-2	5/16	1/4	3/4	2-1/16	5.66	5.33	5.04	4.78
701605	SG-3	3/8	1/4	3/4	2-1/8	6.72	6.33	5.99	5.68
701606	SG-3L6	3/8	1/4	3/4	6-3/8	13.89	13.09	12.37	11.73
701607	SG-5	1/2	1/4	1	2-1/4	9.74	9.17	8.67	8.22
701608	SG-5L6	1/2	1/4	1	6-1/2	17.69	16.67	15.75	14.94
701609	SG-6	5/8	1/4	1	2-3/8	12.92	12.17	11.51	10.91
701610	SG-7	3/4	1/4	1	2-1/2	19.65	18.51	17.49	16.58
701611	SG-13	1/2	1/4	3/4	2-1/4	7.97	7.51	7.10	6.73
701612	SG-15	3/4	1/4	1-1/2	2-1/2	26.54	25.00	23.63	22.40
701613	SG-41	1/8	1/8	1/4	1-1/2	3.28	3.09	2.92	2.77
701614	SG-42	1/8	1/8	5/16	1-1/2	3.28	3.09	2.92	2.77
701615	SG-43	1/8	1/8	3/8	1-1/2	3.28	3.09	2.92	2.77
701616	SG-44	1/8	1/8	1/2	1-1/2	3.28	3.09	2.92	2.77
701617	SG-44L2	1/8	1/8	1/2	2	3.54	3.33	3.15	2.99
701618	SG-44L3	1/8	1/8	1/2	3	3.98	3.75	3.55	3.36
701619	SG-51	1/4	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
701620	SG-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
701621	SG-61	3/32	3/32	1/4	1-1/2	3.11	2.93	2.77	2.62
701622	SG-81	3/16	3/16	1/2	2	4.08	3.84	3.63	3.44

Type SH – Flame Shape

- Used for contour work.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701701	SH-1	1/4	1/4	5/8"	2"	\$5.49	\$5.17	\$4.89	\$4.64
701702	SH-2	5/16	1/4	3/4	2-1/16	6.20	5.84	5.52	5.23
701703	SH-2L6	5/16	1/4	3/4	6-1/4	14.15	13.33	12.60	11.95
701704	SH-5	1/2	1/4	1-1/4	2-1/4	10.80	10.17	9.62	9.12
701705	SH-5L6	1/2	1/4	1-1/4	6-1/2	19.38	18.26	17.26	16.36
701706	SH-6	5/8	1/4	1-7/16	2-1/2	22.12	20.84	19.70	18.68
701707	SH-7	3/4	1/4	1-5/8	2-1/2	30.08	28.33	26.78	25.39
701708	SH-41	1/8	1/8	1/4	1-1/2	3.28	3.09	2.92	2.77
701709	SH-41L2	1/8	1/8	1/4	2	3.54	3.33	3.15	2.99
701710	SH-41L3	1/8	1/8	1/4	3	3.98	3.75	3.55	3.36
701711	SH-53	3/16	1/8	3/8	1-11/16	5.23	4.93	4.66	4.42

Type SJ – 60° Cone Shape

- Used for machining of acute angle areas and countersinking.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701801	SJ-1	3/16	1/4	3/16"	2"	\$10.34	\$9.76	\$9.25	\$8.79
701802	SJ-2	1/4	1/4	1/4	2-1/16	11.50	10.86	10.29	9.78
701803	SJ-3	3/8	1/4	5/16	2-1/8	6.72	6.33	5.99	5.68
701804	SJ-4	7/16	1/4	3/8	2-3/16	5.31	5.00	4.73	4.48
701805	SJ-5	1/2	1/4	7/16	2-1/4	8.85	8.33	7.88	7.47
701806	SJ-6	5/8	1/4	9/16	2-3/8	10.80	10.17	9.62	9.12
701807	SJ-7	3/4	1/4	11/16	2-1/2	12.57	11.84	11.19	10.61
701808	SJ-9	1	1/4	15/16	2-1/2	19.20	18.09	17.10	16.21
701809	SJ-42	1/8	1/8	3/32	1-1/2	3.28	3.09	2.92	2.77

Type SK – Taper/90° Cone Shape

- Used for machining of acute angle areas and countersinking.



ITEM NO.	TYPE	CUTTER DIA.	SHANK DIA.	FLUTE LENGTH	OVER-ALL LENGTH	PRICE EACH			
						1	5	10	20
701901	SK-1	1/4	1/4	1/8"	2"	\$5.31	\$5.00	\$4.73	\$4.48
701902	SK-2	5/16	1/4	3/16	2-1/16	11.50	10.86	10.29	9.78
701903	SK-3	3/8	1/4	3/16	2-1/8	6.72	6.33	5.99	5.68
701904	SK-5	1/2	1/4	1/4	2-1/4	8.85	8.33	7.88	7.47
701905	SK-6	5/8	1/4	5/16	2-3/8	10.80	10.17	9.62	9.12
701906	SK-7	3/4	1/4	3/8	2-1/2	12.57	11.84	11.19	10.61
701907	SK-9	1	1/4	1/2	2-3/4	19.20	18.09	17.10	16.21
701908	SK-42	1/8	1/8	7/32	1-1/2	4.69	4.43	4.20	3.99
701910	SK-43	1/8	1/8	1/16	1-1/2	3.28	3.09	2.92	2.77

Type SL – 14° Taper Radius Shape

- Used for surface machining and narrow contour work.



ITEM NO.	TYPE	CUT-TER DIA.	SHANK DIA.	FLUTE LENGTH	OAL	PRICE EACH			
						1	5	10	20
702101	SL-1	1/4	1/4	5/8"	2"	\$5.40	\$5.09	\$4.81	\$4.56
702102	SL-1L6	1/4	1/4	5/8	6-1/4	10.35	9.75	9.22	8.74
702103	SL-2	5/16	1/4	7/8	2-1/16	5.85	5.51	5.21	4.94
702104	SL-3	3/8	1/4	1-1/16	2-1/8	8.32	7.84	7.41	7.03
702105	SL-3L6	3/8	1/4	1-1/16	6-3/8	14.34	13.51	12.77	12.10
702106	SL-4	1/2	1/4	1-1/8	2-1/4	10.71	10.09	9.53	9.04
702107	SL-4L6	1/2	1/4	1-1/8	6-1/2	18.58	17.51	16.55	15.69
702108	SL-5	5/8	1/4	1-3/16	2-3/8	19.46	18.33	17.33	16.43
702109	SL-6	5/8	1/4	1-5/16	2-3/8	21.23	20.00	18.90	17.92
702110	SL-7	3/4	1/4	1-1/2	2-1/2	30.08	28.33	26.78	25.39
702111	SL-41	1/8	1/8	3/8	1-1/2	3.28	3.09	2.92	2.77
702112	SL-42	1/8	1/8	1/2	1-1/2	3.28	3.09	2.92	2.77
702113	SL-42L2	1/8	1/8	1/2	2	3.54	3.33	3.15	2.99
702114	SL-42L3	1/8	1/8	1/2	3	3.98	3.75	3.55	3.36
702115	SL-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
702116	SL-81	3/16	3/16	1/2	2	4.08	3.84	3.63	3.44
ALUMINUM CUT									
702117	SL-1NF	1/4	1/4	5/8	2	16.19	15.29	14.49	13.76
702118	SL-3NF	3/8	1/4	1-1/16	2-1/8	11.42	10.75	10.16	9.64
702119	SL-4NF	1/2	1/4	1-1/8	2-1/4	14.69	13.84	13.08	12.40
702120	SL-5NF	5/8	1/4	1-3/16	2-3/8	23.31	21.96	20.75	19.68
702121	SL-6NF	5/8	1/4	1-5/16	2-3/8	26.46	24.93	23.56	22.34
702122	SL-7NF	3/4	1/4	1-1/2	2-1/2	36.28	34.17	32.30	30.62

Type SM – Pointed Cone Flat End

- Used for surface machining and narrow contour work.



ITEM NO.	TYPE	CUT-TER DIA.	SHANK DIA.	FLUTE LENGTH	OAL	PRICE EACH			
						1	5	10	20
702221	SM-1	1/4	1/4	1/2"	2"	\$5.40	\$5.09	\$4.81	\$4.56
702222	SM-2	1/4	1/4	3/4	2	5.49	5.17	4.89	4.64
702223	SM-3	1/4	1/4	1	2	5.75	5.42	5.12	4.86
702224	SM-3L	1/4	1/4	1-1/4	2	12.90	12.18	11.54	10.96
702225	SM-4	3/8	1/4	5/8	2-1/8	7.35	6.93	6.55	6.21
702226	SM-4L	3/8	1/4	1	2-1/8	22.66	21.29	20.07	18.99
702227	SM-5	1/2	1/4	7/8	2-1/4	9.55	9.00	8.51	8.06
702228	SM-6	5/8	1/4	1	2-3/8	13.18	12.42	11.74	11.13
702229	SM-41	1/8	1/8	11/32	1-1/2	3.28	3.09	2.92	2.77
702230	SM-42	1/8	1/8	7/16	1-1/2	3.28	3.09	2.92	2.77
702231	SM-42L2	1/8	1/8	7/16	2	3.54	3.33	3.15	2.99
702232	SM-42L3	1/8	1/8	7/16	3	3.98	3.75	3.55	3.36
702233	SM-43	1/8	1/8	5/8	1-1/2	3.28	3.09	2.92	2.77
702234	SM-51	1/4	1/8	1/2	1-3/4	5.23	4.93	4.66	4.42
702235	SM-53	3/16	1/8	1/2	1-11/16	5.23	4.93	4.66	4.42
702236	SM-61	3/32	3/32	1/4	1-1/2	3.11	2.93	2.77	2.62

Type SN – Inverted Cone

- Used for machining from the rear in hard-to-reach areas.



ITEM NO.	TYPE	CUT-TER DIA.	SHANK DIA.	FLUTE LENGTH	OAL	PRICE EACH			
						1	5	10	20
702301	SN-1	1/4	1/4	5/16"	2"	\$4.51	\$4.25	\$4.01	\$3.81
702302	SN-2	3/8	1/4	3/8	2-1/8	5.85	5.51	5.21	4.94
702303	SN-4	1/2	1/4	1/2	2-1/4	9.03	8.51	8.04	7.62
702304	SN-6	5/8	1/4	3/4	2-3/8	14.15	13.33	12.60	11.95
702305	SN-7	3/4	1/4	5/8	2-1/2	15.86	14.94	14.12	13.39
702306	SN-41	3/32	1/8	1/8	1-1/2	3.28	3.09	2.92	2.77
702307	SN-42	1/8	1/8	3/16	1-1/2	3.28	3.09	2.92	2.77
702308	SN-51	1/4	1/8	1/4	1-3/4	5.23	4.93	4.66	4.42
702309	SN-53	3/16	1/8	1/4	1-11/16	5.23	4.93	4.66	4.42
702310	SN-61	3/32	3/32	1/8	1-1/2	3.11	2.93	2.77	2.62
702311	SN-81	3/16	3/16	1/4	2	4.08	3.84	3.63	3.44
INVERTED CONE WITH END CUT									
702312	SN-1E	1/4	1/4	5/16	2	\$11.74	\$11.08	\$10.50	\$9.98
702313	SN-2E	3/8	1/4	3/8	2-1/8	20.21	19.08	18.08	17.18
702314	SN-4E	1/2	1/4	1/2	2-1/4	22.06	20.83	19.74	18.75
702315	SN-7E	3/4	1/4	5/8	2-1/2	46.91	44.31	41.97	39.88



- Convenient sets come in a metal index.



ITEM NO.	DOUBLE CUT ITEM NO.	SINGLE CUT ITEM NO.	DESCRIPTION	PRICE PER SET			
				1	2	4	6
702350	1/4	5/8"	5 Pc Carbide Burr Set, Double Cut, SA, SC, SF, SG, & SM-5	\$100.91	\$110.52	\$90.43	\$85.96
702351	1/4	5/8"	Set No. 2, 8 Piece Set: SA-3, SC-3, SD-3, SE-3, SF-3, SG-3, SL-3, & SM-4	118.26	111.78	105.97	100.74
702352	1/4	5/8	Set No. 3, 8 Piece Set: SA-5, SC-5, SD-5, SE-5, SF-5, SG-5, SL-4, & SM-5	175.16	191.84	156.96	149.21
702353	1/4	7/8	Set No. 4, 10 Piece Set: SA-1, SA-3, SA-5, SC-1, SC-3, SC-5, SD-3, SF-3, SF-5, & SH-1	152.93	144.55	137.04	130.27
702354	1/4	1-1/16	Set No. 5, 10 Piece Set: SA-5, SC-3, SC-5, SD-5, SE-3, SF-3, SF-5, SG-3, SG-5, & SL-4	187.61	177.33	168.12	159.81
702355	1/4	1-1/16	Set No. 6, 8 Piece Set: SA-43, SC-42, SD-42, SE-41, SF-42, SG-42, SL-41, & SN-42	41.76	39.44	37.37	35.50
702356	1/4	1-1/8	Set No. 7, 8 Piece Set: SA-51, SB-51, SC-51, SD-51, SE-51, SF-51, SG-51, & SM-51	77.59	73.28	69.42	65.95