



**FACTORY
OVERSTOCK**

**LIMITED TIME
OFFER SUBJECT TO
PRIOR SALE**

* Stock Updated November 30, 2021 *

FACTORY WAREHOUSE ORDER ONLY – MUST REFER to Promotion Code EX0522



BA302 Series

SERIES DESCRIPTION

- ✓ BALL END - STANDARD GEOMETRY - 2 FLUTE, BRIGHT - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ SLOTTING AND CONTOUR MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
BA302001	115	\$6.20	2F D1/64"x1/32"/1-1/2"-1/8", Uncoated, Ball Endmill
BA302002	50	\$3.60	2F D1/32"x5/64"/1-1/2"-1/8", Uncoated, Ball Endmill
BA302003	158	\$3.47	2F D3/64"x7/64"/1-1/2"-1/8", Uncoated, Ball Endmill
BA302006	30	\$2.94	2F D3/32"x5/16"/1-1/2"-1/8", Uncoated, Ball Endmill
BA302008X	8	\$5.25	2F D1/8"x1"/3"-1/8", Uncoated, Ball Endmill
BA302010	60	\$4.14	2F D5/32"x9/16"/2"-3/16", Uncoated, Ball Endmill
BA302013	100	\$5.79	2F D13/64"x5/8"/2-1/2"-1/4", Uncoated, Ball Endmill
BA302014	180	\$5.79	2F D7/32"x5/8"/2-1/2"-1/4", Uncoated, Ball Endmill
BA302020	18	\$7.40	2F D5/16"x13/16"/2-1/2"-5/16", Uncoated, Ball Endmill
BA302024LS	30	\$25.79	2F D3/8"x2"/6"-3/8", Uncoated, Ball Endmill
BA302024X	20	\$14.54	2F D3/8"x1-3/4"/4"-3/8", Uncoated, Ball Endmill
BA302028	160	\$12.43	2F D7/16"x1"/3"-7/16", Uncoated, Ball Endmill
BA302028X	40	\$26.56	2F D7/16"x2"/6"-7/16", Uncoated, Ball Endmill
BA302032	30	\$14.75	2F D1/2"x1"/3"-1/2", Uncoated, Ball Endmill
BA302032LS	130	\$48.63	2F D1/2"x3"/6"-1/2", Uncoated, Ball Endmill
BA302032X	59	\$31.01	2F D1/2"x2"/6"-1/2", Uncoated, Ball Endmill
BA302040	80	\$26.58	2F D5/8"x1-1/4"/3-1/2"-5/8", Uncoated, Ball Endmill
BA302040X	80	\$54.84	2F D5/8"x3"/6"-5/8", Uncoated, Ball Endmill
BA302044	15	\$43.42	2F D11/16"x1-3/8"/4"-3/4", Uncoated, Ball Endmill
BA302048	30	\$40.19	2F D3/4"x1-1/2"/4"-3/4", Uncoated, Ball Endmill
BA302048X	40	\$68.26	2F D3/4"x3"/6"-3/4", Uncoated, Ball Endmill
BA302056	10	\$59.99	2F D7/8"x1-1/2"/4"-7/8", Uncoated, Ball Endmill
BA302064	30	\$64.11	2F D1"x1-1/2"/4"-1", Uncoated, Ball Endmill



BA304 Series

SERIES DESCRIPTION

- ✓ BALL END - STANDARD GEOMETRY - 4 FLUTE, BRIGHT - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ SLOTTING AND CONTOUR MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
BA304001	75	\$6.20	4F D1/64"x1/32"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304002	40	\$3.60	4F D1/32"x5/64"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304003	50	\$3.47	4F D3/64"x7/64"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304005	100	\$2.94	4F D5/64"x1/4"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304006	35	\$2.94	4F D3/32"x5/16"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304007	120	\$2.94	4F D7/64"x3/8"/1-1/2"-1/8", Uncoated, Ball Endmill
BA304008	185	\$2.83	4F D1/8"x1/2"/2"-1/8", Uncoated, Ball Endmill
BA304009	140	\$4.14	4F D9/64"x1/2"/2"-3/16", Uncoated, Ball Endmill
BA304010	77	\$4.14	4F D5/32"x9/16"/2"-3/16", Uncoated, Ball Endmill
BA304011	120	\$4.14	4F D11/64"x9/16"/2"-3/16", Uncoated, Ball Endmill
BA304012	51	\$3.84	4F D3/16"x5/8"/2"-3/16", Uncoated, Ball Endmill
BA304012LS	100	\$8.48	4F D3/16"x1-1/2"/4"-3/16", Uncoated, Ball Endmill
BA304012X	100	\$6.85	4F D3/16"x1-1/8"/3"-3/16", Uncoated, Ball Endmill
BA304013	100	\$5.79	4F D13/64"x5/8"/2-1/2"-1/4", Uncoated, Ball Endmill
BA304014	120	\$5.79	4F D7/32"x5/8"/2-1/2"-1/4", Uncoated, Ball Endmill
BA304015	120	\$5.79	4F D15/64"x3/4"/2-1/2"-1/4", Uncoated, Ball Endmill
BA304016	433	\$5.43	4F D1/4"x3/4"/2-1/2"-1/4", Uncoated, Ball Endmill
BA304016LS	160	\$12.07	4F D1/4"x1-1/2"/6"-1/4", Uncoated, Ball Endmill
BA304016X	110	\$10.11	4F D1/4"x1-1/2"/4"-1/4", Uncoated, Ball Endmill
BA304018	110	\$8.06	4F D9/32"x3/4"/2-1/2"-5/16", Uncoated, Ball Endmill
BA304020	56	\$7.40	4F D5/16"x13/16"/2-1/2"-5/16", Uncoated, Ball Endmill
BA304020X	168	\$11.94	4F D5/16"x1-5/8"/4"-5/16", Uncoated, Ball Endmill
BA304022	220	\$9.79	4F D11/32"x7/8"/2-1/2"-3/8", Uncoated, Ball Endmill
BA304024	168	\$9.96	4F D3/8"x1"/3"-3/8", Uncoated, Ball Endmill
BA304024L	70	\$19.68	4F D3/8"x1-1/8"/3-1/2"-3/8", Uncoated, Ball Endmill
BA304024LS	58	\$23.66	4F D3/8"x2"/6"-3/8", Uncoated, Ball Endmill
BA304024X	110	\$14.54	4F D3/8"x1-3/4"/4"-3/8", Uncoated, Ball Endmill
BA304026	70	\$13.10	4F D13/32"x1"/3"-7/16", Uncoated, Ball Endmill
BA304028	120	\$12.43	4F D7/16"x1"/3"-7/16", Uncoated, Ball Endmill
BA304028X	60	\$26.56	4F D7/16"x2"/6"-7/16", Uncoated, Ball Endmill
BA304030	70	\$15.73	4F D15/32"x1"/3"-1/2", Uncoated, Ball Endmill
BA304032LS	60	\$44.57	4F D1/2"x3"/6"-1/2", Uncoated, Ball Endmill
BA304032X	160	\$31.01	4F D1/2"x2"/6"-1/2", Uncoated, Ball Endmill
BA304036	70	\$22.37	4F D9/16"x1-1/8"/3-1/2"-9/16", Uncoated, Ball Endmill
BA304040X	60	\$54.84	4F D5/8"x3"/6"-5/8", Uncoated, Ball Endmill
BA304044	30	\$43.42	4F D11/16"x1-3/8"/4"-3/4", Uncoated, Ball Endmill
BA304048X	10	\$68.26	4F D3/4"x3"/6"-3/4", Uncoated, Ball Endmill
BA304056	50	\$59.99	4F D7/8"x1-1/2"/4"-7/8", Uncoated, Ball Endmill
BA304064	10	\$64.11	4F D1"x1-1/2"/4"-1", Uncoated, Ball Endmill
BA304064X	60	\$109.60	4F D1"x3"/6"-1", Uncoated, Ball Endmill



DA302 Series

SERIES DESCRIPTION

- ✓ 2 FLUTE

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
DA302003	32	\$13.06	2F D3/32"x3/32"/1-1/2"-1/8", TiAlN Coating, Ball Endmill
DA302008	49	\$24.05	2F D1/4"x1/2"/2-1/2"-1/4", TiAlN Coating, Ball Endmill
DA302010	67	\$31.01	2F D5/16"x9/16"/2-1/2"-5/16", TiAlN Coating, Ball Endmill
DA302012	34	\$36.20	2F D3/8"x3/4"/2-1/2"-3/8", TiAlN Coating, Ball Endmill
DA302016	30	\$56.80	2F D1/2"x7/8"/3"-1/2", TiAlN Coating, Ball Endmill
DA302020	48	\$118.53	2F D5/8"x1-1/4"/3-1/2"-5/8", TiAlN Coating, Ball Endmill
DA302024	55	\$195.08	2F D3/4"x1-1/2"/4"-3/4", TiAlN Coating, Ball Endmill



EA302 Series

SERIES DESCRIPTION

- ✓ SQUARE-STANDARD GEOMETRY - 2 FLUTE , BRIGHT - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ SLOTTING AND MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
EA302003	96	\$2.81	2F D3/64"x7/64"/1-1/2"-1/8", Uncoated, Square Endmill
EA302004	46	\$2.11	2F D1/16"x3/16"/1-1/2"-1/8", Uncoated, Square Endmill
EA302005	75	\$2.11	2F D5/64"x1/4"/1-1/2"-1/8", Uncoated, Square Endmill
EA302007	16	\$2.39	2F D7/64"x3/8"/1-1/2"-1/8", Uncoated, Square Endmill
EA302008L	56	\$3.70	2F D1/8"x3/4"/2-1/4"-1/8", Uncoated, Square Endmill
EA302008S	7	\$2.22	2F D1/8"x1/4"/1-1/2"-1/8", Uncoated, Square Endmill
EA302009	1	\$3.06	2F D9/64"x1/2"/2"-3/16", Uncoated, Square Endmill
EA302010	16	\$3.06	2F D5/32"x9/16"/2"-3/16", Uncoated, Square Endmill
EA302012	31	\$3.09	2F D3/16"x5/8"/2"-3/16", Uncoated, Square Endmill
EA302012L	30	\$4.33	2F D3/16"x3/4"/2-1/4"-3/16", Uncoated, Square Endmill
EA302012LS	20	\$7.58	2F D3/16"x1-1/2"/4"-3/16", Uncoated, Square Endmill
EA302012S	20	\$3.28	2F D3/16"x3/8"/2"-3/16", Uncoated, Square Endmill
EA302012X	180	\$5.55	2F D3/16 x 1-1/8/3 - 3/16, Uncoated, Square Endmill
EA302013	5	\$4.36	2F D13/64"x5/8"/2-1/2"-1/4", Uncoated, Square Endmill
EA302016L	100	\$6.09	2F D1/4"x1-1/8"/3"-1/4", Uncoated, Square Endmill
EA302016LS	40	\$14.39	2F D1/4"x1-1/2"/6"-1/4", Uncoated, Square Endmill
EA302016S	90	\$4.15	2F D1/4"x1/2"/2-1/2"-1/4", Uncoated, Square Endmill
EA302016X	35	\$8.82	2F D1/4"x1-1/2"/4"-1/4", Uncoated, Square Endmill
EA302020	160	\$5.40	2F D5/16"x13/16"/2-1/2"-5/16", Uncoated, Square Endmill
EA302020L	330	\$8.12	2F D5/16"x1-1/8"/3"-5/16", Uncoated, Square Endmill
EA302020S	80	\$4.15	2F D5/16"x1/2"/2-1/2"-5/16", Uncoated, Square Endmill
EA302020X	40	\$10.64	2F D5/16"x1-5/8"/4"-5/16", Uncoated, Square Endmill
EA302024L	100	\$9.48	2F D3/8"x1-1/8"/3-1/2"-3/8", Uncoated, Square Endmill
EA302024LS	60	\$20.24	2F D3/8"x2"/6"-3/8", Uncoated, Square Endmill
EA302024S	50	\$6.44	2F D3/8"x9/16"/2-1/2"-3/8", Uncoated, Square Endmill
EA302024X	140	\$13.61	2F D3/8"x1-3/4"/4"-3/8", Uncoated, Square Endmill
EA302028	100	\$9.20	2F D7/16"x1"/3"-7/16", Uncoated, Square Endmill
EA302032L	100	\$18.89	2F D1/2"x1-1/2"/4"-1/2", Uncoated, Square Endmill
EA302032LS	50	\$30.92	2F D1/2"x3"/6"-1/2", Uncoated, Square Endmill
EA302032S	120	\$11.54	2F D1/2"x5/8"/3"-1/2", Uncoated, Square Endmill
EA302032X	50	\$29.60	2F D1/2"x2"/6"-1/2", Uncoated, Square Endmill
EA302040	40	\$20.91	2F D5/8"x1-1/4"/3-1/2"-5/8", Uncoated, Square Endmill
EA302040L	60	\$39.29	2F D5/8"x2-1/4"/5"-5/8", Uncoated, Square Endmill
EA302040X	70	\$51.01	2F D5/8"x3"/6"-5/8", Uncoated, Square Endmill
EA302048	19	\$31.90	2F D3/4"x1-1/2"/4"-3/4", Uncoated, Square Endmill
EA302048L	30	\$51.00	2F D3/4"x2-1/4"/5"-3/4", Uncoated, Square Endmill
EA302048X	10	\$63.48	2F D3/4"x3"/6"-3/4", Uncoated, Square Endmill
EA302064	50	\$51.94	2F D1"x1-1/2"/4"-1", Uncoated, Square Endmill
EA302064L	20	\$83.35	2F D1"x2-1/4"/5"-1", Uncoated, Square Endmill
EA302064X	20	\$104.33	2F D1"x3"/6"-1", Uncoated, Square Endmill



EA304 Series

SERIES DESCRIPTION

- ✓ SQUARE-STANDARD GEOMETRY - 4 FLUTE , BRIGHT - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ SLOTTING AND MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
EA304002	143	\$2.81	4F D1/32"x5/64"/1-1/2"-1/8", Uncoated, Square Endmill
EA304006	115	\$2.11	4F D3/32"x5/16"/1-1/2"-1/8", Uncoated, Square Endmill
EA304008L	32	\$3.70	4F D1/8"x3/4"/2-1/4"-1/8", Uncoated, Square Endmill
EA304008S	411	\$2.22	4F D1/8"x1/4"/1-1/2"-1/8", Uncoated, Square Endmill
EA304010	70	\$3.06	4F D5/32"x9/16"/2"-3/16", Uncoated, Square Endmill
EA304012S	116	\$3.28	4F D3/16"x3/8"/2"-3/16", Uncoated, Square Endmill
EA304018	54	\$5.99	4F D9/32"x3/4"/2-1/2"-5/16", Uncoated, Square Endmill
EA304032L	9	\$18.89	4F D1/2"x1-1/2"/4"-1/2", Uncoated, Square Endmill
EA304032S	175	\$11.54	4F D1/2"x5/8"/3"-1/2", Uncoated, Square Endmill



ZA302 Series

SERIES DESCRIPTION

- ✓ SQUARE - STANDARD GEOMETRY - 2 FLUTE, AlTiN COATING - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ ENHANCED TOOL LIFE DUE TO AlTiN COATING
- ✓ SLOTTING AND MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
ZA302001	45	\$5.25	2F D1/64"x1/32"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302002	21	\$3.37	2F D1/32"x5/64"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302003	23	\$3.37	2F D3/64"x7/64"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302005	10	\$2.98	2F D5/64"x1/4"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302006	16	\$2.98	2F D3/32"x5/16"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302007	10	\$2.98	2F D7/64"x3/8"/1-1/2"-1/8", AlTiN Coating ,Square Endmill
ZA302011	4	\$3.99	2F D11/64"x9/16"/2"-3/16", AlTiN Coating ,Square Endmill
ZA302015	40	\$5.75	2F D15/64"x3/4"/2-1/2"-1/4", AlTiN Coating ,Square Endmill
ZA302016L	98	\$7.71	2F D1/4"x1-1/8"/3"-1/4", AlTiN Coating ,Square Endmill
ZA302016LS	15	\$18.74	2F D1/4"x1-1/2"/6"-1/4", AlTiN Coating ,Square Endmill
ZA302016S	40	\$5.39	2F D1/4"x1/2"/2-1/2"-1/4", AlTiN Coating ,Square Endmill
ZA302020L	98	\$10.33	2F D5/16"x1-1/8"/3"-5/16", AlTiN Coating ,Square Endmill
ZA302020S	50	\$7.40	2F D5/16"x1/2"/2-1/2"-5/16", AlTiN Coating ,Square Endmill
ZA302024L	98	\$11.95	2F D3/8"x1-1/8"/3-1/2"-3/8", AlTiN Coating ,Square Endmill
ZA302024LS	100	\$25.66	2F D3/8"x2"/6"-3/8", AlTiN Coating ,Square Endmill
ZA302024S	90	\$8.60	2F D3/8"x9/16"/2-1/2"-3/8", AlTiN Coating ,Square Endmill
ZA302024X	100	\$16.74	2F D3/8"x1-3/4"/4"-3/8", AlTiN Coating ,Square Endmill
ZA302032LS	97	\$34.94	2F D1/2"x3"/6"-1/2", AlTiN Coating ,Square Endmill
ZA302032S	110	\$14.24	2F D1/2"x5/8"/3"-1/2", AlTiN Coating ,Square Endmill
ZA302032X	48	\$33.68	2F D1/2"x2"/6"-1/2", AlTiN Coating ,Square Endmill
ZA302040L	19	\$46.53	2F D5/8"x2-1/4"/5"-5/8", AlTiN Coating ,Square Endmill
ZA302040X	20	\$58.78	2F D5/8"x3"/6"-5/8", AlTiN Coating ,Square Endmill



ZA304 Series

SERIES DESCRIPTION

- ✓ SQUARE - STANDARD GEOMETRY - 4 FLUTE, AlTiN COATING - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ ENHANCED TOOL LIFE DUE TO AlTiN COATING
- ✓ SLOTTING AND MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
ZA304011	80	\$3.99	4F D11/64"x9/16"/2"-3/16", AlTiN Coating ,Square Endmill
ZA304014S	29	\$5.38	4F D7/32"x7/16"/2"-1/4", AlTiN Coating ,Square Endmill
ZA304015	66	\$5.75	4F D15/64"x3/4"/2-1/2"-1/4", AlTiN Coating ,Square Endmill
ZA304020S	5	\$7.40	4F D5/16"x1/2"/2-1/2"-5/16", AlTiN Coating ,Square Endmill
ZA304028L	26	\$17.98	4F D7/16"x1-1/2"/4"-7/16", AlTiN Coating ,Square Endmill
ZA304028S	30	\$12.42	4F D7/16"x9/16"/2-1/2"-7/16", AlTiN Coating ,Square Endmill
ZA304028X	29	\$31.02	4F D7/16"x2"/6"-7/16", AlTiN Coating ,Square Endmill
ZA304030	44	\$15.57	4F D15/32"x1"/3"-1/2", AlTiN Coating ,Square Endmill
ZA304044	24	\$40.56	4F D11/16"x1-3/8"/4"-3/4", AlTiN Coating ,Square Endmill



ZB302 Series

SERIES DESCRIPTION

- ✓ BALL - STANDARD GEOMETRY - 2 FLUTE , AlTiN COATING - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ ENHANCED TOOL LIFE DUE TO AlTiN COATING
- ✓ CENTER CUTTING
- ✓ SLOTTING AND CONTOUR MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEEL

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
ZB302001	34	\$6.81	2F D1/64"x1/32"/1-1/2"-1/8", AlTiN Coating ,Ball Endmill
ZB302003	12	\$4.14	2F D3/64"x7/64"/1-1/2"-1/8", AlTiN Coating ,Ball Endmill
ZB302008	148	\$3.52	2F D1/8"x1/2"/2"-1/8", AlTiN Coating ,Ball Endmill
ZB302009	30	\$4.80	2F D9/64"x1/2"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB302010	6	\$4.80	2F D5/32"x9/16"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB302011	30	\$4.80	2F D11/64"x9/16"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB302012LS	30	\$10.95	2F D3/16"x1-1/2"/4"-3/16", AlTiN Coating ,Ball Endmill
ZB302012S	26	\$4.51	2F D3/16"x3/8"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB302012X	15	\$8.50	2F D3/16"x1-1/8"/3"-3/16", AlTiN Coating ,Ball Endmill
ZB302013	80	\$6.79	2F D13/64"x5/8"/2-1/2"-1/4", AlTiN Coating ,Ball Endmill
ZB302014	20	\$6.79	2F D7/32"x5/8"/2-1/2"-1/4", AlTiN Coating ,Ball Endmill
ZB302016LS	20	\$15.84	2F D1/4"x1-1/2"/6"-1/4", AlTiN Coating ,Ball Endmill
ZB302016X	10	\$13.21	2F D1/4"x1-1/2"/4"-1/4", AlTiN Coating ,Ball Endmill
ZB302018	80	\$7.87	2F D9/32"x3/4"/2-1/2"-5/16", AlTiN Coating ,Ball Endmill
ZB302024LS	8	\$29.01	2F D3/8"x2"/6"-3/8", AlTiN Coating ,Ball Endmill
ZB302024S	10	\$11.83	2F D3/8"x3/4"/3"-3/8", AlTiN Coating ,Ball Endmill
ZB302026	15	\$15.43	2F D13/32"x1"/3"-7/16", AlTiN Coating ,Ball Endmill
ZB302028	80	\$14.78	2F D7/16"x1"/3"-7/16", AlTiN Coating ,Ball Endmill
ZB302032S	10	\$18.04	2F D1/2"x7/8"/3"-1/2", AlTiN Coating ,Ball Endmill
ZB302032X	20	\$41.49	2F D1/2"x2"/6"-1/2", AlTiN Coating ,Ball Endmill
ZB302040	30	\$32.76	2F D5/8"x1-1/4"/3-1/2"-5/8", AlTiN Coating ,Ball Endmill
ZB302040X	10	\$64.84	2F D5/8"x3"/6"-5/8", AlTiN Coating ,Ball Endmill
ZB302048	35	\$48.04	2F D3/4"x1-1/2"/4"-3/4", AlTiN Coating ,Ball Endmill
ZB302048X	15	\$75.02	2F D3/4"x3"/6"-3/4", AlTiN Coating ,Ball Endmill
ZB302064	5	\$75.80	2F D1"x1-1/2"/4"-1", AlTiN Coating ,Ball Endmill
ZB302064S	5	\$75.80	2F D1"x1"/4"-1", AlTiN Coating ,Ball Endmill



ZB304 Series

SERIES DESCRIPTION

- ✓ BALL - STANDARD GEOMETRY - 4 FLUTE , AlTiN COATING - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ ENHANCED TOOL LIFE DUE TO AlTiN COATING
- ✓ CENTER CUTTING
- ✓ SLOTTING AND CONTOUR MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
ZB304008L	90	\$6.09	4F D1/8"x3/4"/2"-1/4", AlTiN Coating ,Ball Endmill
ZB304009	99	\$4.80	4F D9/64"x1/2"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB304011	100	\$4.80	4F D11/64"x9/16"/2"-3/16", AlTiN Coating ,Ball Endmill
ZB304012LS	90	\$10.95	4F D3/16"x1-1/2"/4"-3/16", AlTiN Coating ,Ball Endmill
ZB304013	70	\$6.79	4F D13/64"x5/8"/2-1/2"-1/4", AlTiN Coating ,Ball Endmill
ZB304015	100	\$6.79	4F D15/64"x3/4"/2-1/2"-1/4", AlTiN Coating ,Ball Endmill
ZB304016X	330	\$13.21	4F D1/4"x1-1/2"/4"-1/4", AlTiN Coating ,Ball Endmill
ZB304018	75	\$7.87	4F D9/32"x3/4"/2-1/2"-5/16", AlTiN Coating ,Ball Endmill
ZB304020X	67	\$16.19	4F D5/16"x1-5/8"/4"-5/16", AlTiN Coating ,Ball Endmill
ZB304022	60	\$11.66	4F D11/32"x7/8"/2-1/2"-3/8", AlTiN Coating ,Ball Endmill
ZB304024LS	10	\$26.33	4F D3/8"x2"/6"-3/8", AlTiN Coating ,Ball Endmill
ZB304024X	40	\$20.42	4F D3/8"x1-3/4"/4"-3/8", AlTiN Coating ,Ball Endmill
ZB304026	50	\$15.43	4F D13/32"x1"/3"-7/16", AlTiN Coating ,Ball Endmill
ZB304028X	50	\$38.98	4F D7/16"x2"/6"-7/16", AlTiN Coating ,Ball Endmill
ZB304030	50	\$18.00	4F D15/32"x1"/3"-1/2", AlTiN Coating ,Ball Endmill
ZB304032X	78	\$41.49	4F D1/2"x2"/6"-1/2", AlTiN Coating ,Ball Endmill
ZB304036	48	\$23.58	4F D9/16"x1-1/8"/3-1/2"-9/16", AlTiN Coating ,Ball Endmill
ZB304040	100	\$32.76	4F D5/8"x1-1/4"/3-1/2"-5/8", AlTiN Coating ,Ball Endmill
ZB304040X	18	\$64.84	4F D5/8"x3"/6"-5/8", AlTiN Coating ,Ball Endmill
ZB304044	13	\$51.47	4F D11/16"x1-3/8"/4"-3/4", AlTiN Coating ,Ball Endmill
ZB304048	40	\$48.04	4F D3/4"x1-1/2"/4"-3/4", AlTiN Coating ,Ball Endmill
ZB304056	15	\$70.24	4F D7/8"x1-1/2"/4"-7/8", AlTiN Coating ,Ball Endmill
ZB304064	100	\$75.80	4F D1"x1-1/2"/4"-1", AlTiN Coating ,Ball Endmill



ZR304 Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - STANDARD GEOMETRY - 4 FLUTE, AlTiN COATING - INCH
- ✓ MICRO GRAIN CARBIDE
- ✓ CENTER CUTTING
- ✓ ENHANCED TOOL LIFE DUE TO AlTiN COATING
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ SLOTTING AND MILLING
- ✓ BEST PERFORMANCE ON CARBON AND ALLOY STEELS

GENERAL PURPOSE

EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
ZR304A012010L	96	\$6.21	4F D3/16" x R.010" x 1-1/8" / 3" -3/16", AlTiN Coating ,Corner Radius Endmill
ZR304A012020L	128	\$6.21	4F D3/16" x R.020" x 1-1/8" / 3" -3/16", AlTiN Coating ,Corner Radius Endmill
ZR304A012030L	65	\$6.21	4F D3/16" x R.030" x 1-1/8" / 3" -3/16", AlTiN Coating ,Corner Radius Endmill
ZR304A016010L	77	\$8.87	4F D1/4" x R.010" x 1-1/8" / 3" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016010LS	70	\$20.61	4F D1/4" x R.010" x 1-1/2" / 6" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016010X	125	\$12.09	4F D1/4" x R.010" x 1-1/2" / 4" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016020L	11	\$8.87	4F D1/4" x R.020" x 1-1/8" / 3" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016020LS	76	\$20.61	4F D1/4" x R.020" x 1-1/2" / 6" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016020X	140	\$12.09	4F D1/4" x R.020" x 1-1/2" / 4" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016030LS	100	\$20.61	4F D1/4" x R.030" x 1-1/2" / 6" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016030X	138	\$12.09	4F D1/4" x R.030" x 1-1/2" / 4" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016045L	145	\$8.87	4F D1/4" x R.045" x 1-1/8" / 3" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016045LS	100	\$20.61	4F D1/4" x R.045" x 1-1/2" / 6" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A016045X	140	\$12.09	4F D1/4" x R.045" x 1-1/2" / 4" -1/4", AlTiN Coating ,Corner Radius Endmill
ZR304A020020L	35	\$11.88	4F D5/16" x R.020" x 1-1/8" / 3" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A020020X	160	\$14.70	4F D5/16" x R.020" x 1-5/8" / 4" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A020030L	31	\$11.88	4F D5/16" x R.030" x 1-1/8" / 3" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A020030X	70	\$14.70	4F D5/16" x R.030" x 1-5/8" / 4" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A020045L	150	\$11.88	4F D5/16" x R.045" x 1-1/8" / 3" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A020045X	90	\$14.70	4F D5/16" x R.045" x 1-5/8" / 4" -5/16", AlTiN Coating ,Corner Radius Endmill
ZR304A024010L	21	\$13.74	4F D3/8" x R.010" x 1-1/8" / 3-1/2" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024010LS	100	\$28.23	4F D3/8" x R.010" x 2" / 6" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024010X	90	\$17.26	4F D3/8" x R.010" x 1-3/4" / 4" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024020LS	126	\$28.23	4F D3/8" x R.020" x 2" / 6" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024020X	15	\$17.26	4F D3/8" x R.020" x 1-3/4" / 4" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024045L	100	\$13.74	4F D3/8" x R.045" x 1-1/8" / 3-1/2" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024045LS	150	\$28.23	4F D3/8" x R.045" x 2" / 6" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A024045X	110	\$17.26	4F D3/8" x R.045" x 1-3/4" / 4" -3/8", AlTiN Coating ,Corner Radius Endmill
ZR304A032010LS	10	\$34.68	4F D1/2"xR.010"x3"/6"-1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032015L	135	\$24.11	4F D1/2" x R.015" x 1-1/2" / 4" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032015LS	100	\$34.68	4F D1/2" x R.015" x 3" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032015X	96	\$32.69	4F D1/2" x R.015" x 2" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032020L	65	\$24.11	4F D1/2" x R.020" x 1-1/2" / 4" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032020LS	150	\$34.68	4F D1/2" x R.020" x 3" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032020X	97	\$32.69	4F D1/2" x R.020" x 2" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032060L	70	\$24.11	4F D1/2" x R.060" x 1-1/2" / 4" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032060LS	130	\$34.68	4F D1/2" x R.060" x 3" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032060X	28	\$32.69	4F D1/2" x R.060" x 2" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032090L	100	\$24.11	4F D1/2" x R.090" x 1-1/2" / 4" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032090LS	100	\$34.68	4F D1/2" x R.090" x 3" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A032090X	150	\$32.69	4F D1/2" x R.090" x 2" / 6" -1/2", AlTiN Coating ,Corner Radius Endmill
ZR304A040030L	23	\$47.21	4F D5/8" x R.030" x 2-1/4" / 5" -5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A040030X	35	\$57.06	4F D5/8" x R.030" x 3" / 6" -5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A040060X	30	\$57.06	4F D5/8" x R.060" x 3" / 6" -5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A040090	36	\$28.32	4F D5/8" x R.090 x 1-1/4" / 3-1/2" - 5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A040090L	40	\$47.21	4F D5/8" x R.090" x 2-1/4" / 5" -5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A040090X	40	\$57.06	4F D5/8" x R.090" x 3" / 6" -5/8", AlTiN Coating ,Corner Radius Endmill
ZR304A048060	1	\$42.35	4F D3/4" x R.060 x 1-1/2" / 4" - 3/4", AlTiN Coating ,Corner Radius Endmill
ZR304A048090	25	\$42.35	4F D3/4" x R.090 x 1-1/2" / 4" - 3/4", AlTiN Coating ,Corner Radius Endmill
ZR304A048090L	15	\$59.59	4F D3/4" x R.090" x 2-1/4" / 5" -3/4", AlTiN Coating ,Corner Radius Endmill
ZR304A048090X	10	\$70.49	4F D3/4" x R.090" x 3" / 6" -3/4", AlTiN Coating ,Corner Radius Endmill
ZR304A048125	10	\$70.59	4F D3/4" x R.125 x 1-1/2" / 4" - 3/4", AlTiN Coating ,Corner Radius Endmill
ZR304A064030L	7	\$91.44	4F D1" x R.030" x 2-1/4" / 5" -1", AlTiN Coating ,Corner Radius Endmill
ZR304A064030X	5	\$111.51	4F D1" x R.030" x 3" / 6" -1", AlTiN Coating ,Corner Radius Endmill
ZR304A064060	10	\$66.00	4F D1" x R.060 x 1-1/2" / 4" - 1", AlTiN Coating ,Corner Radius Endmill
ZR304A064060L	20	\$91.44	4F D1" x R.060" x 2-1/4" / 5" -1", AlTiN Coating ,Corner Radius Endmill
ZR304A064060X	5	\$111.51	4F D1" x R.060" x 3" / 6" -1", AlTiN Coating ,Corner Radius Endmill
ZR304A064090L	15	\$152.41	4F D1" x R.090" x 2-1/4" / 5" -1", AlTiN Coating ,Corner Radius Endmill



DA412 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE WITH NECK - 2XD CUT LENGTH, AlTiN COATING - INCH
- ✓ GOOD FOR COPY MILLING
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ NECKED TO PROVIDE CLEARANCE
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS
- ✓ SUITABLE FOR OTHER HIGH HARDENED MATERIALS

Z-PLUS	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA412003	160	\$29.37	2F D3/32"x3/32"/3/16"/2"-1/4",Altin,Ball Endmill
	DA412004	10	\$29.37	2F D1/8"x1/8"/1/4"/2-1/2"-1/4",Altin,Ball Endmill
	DA412008	30	\$34.11	2F D1/4"x1/4"/1/2"/3-1/2"-1/4",Altin,Ball Endmill
	DA412010	20	\$44.12	2F D5/16"x5/16"/5/8"/4"-5/16",Altin,Ball Endmill
	DA412016	14	\$71.89	2F D1/2"x1/2"/1"/4-1/2"-1/2",Altin,Ball Endmill



DA512 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE - LONG LENGTH - 2XD CUT LENGTH, AlTiN COATING - INCH
- ✓ GOOD FOR COPY MILLING
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS.
- ✓ SUITABLE FOR OTHER HIGH HARDENED MATERIALS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA512003	90	\$28.73	2F D3/32"x3/32"/2-1/2"-1/4",Altin Coating,Ball Endmill
	DA512010	10	\$39.39	2F D5/16"x9/16"/4"-5/16",Altin Coating,Ball Endmill



DA514 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 4 FLUTE WITH NECK & EXTENDED LENGTH - 2XD CUT LENGTH, AlTiN COATING - INCH
- ✓ GOOD FOR COPY MILLING
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ NECKED TO PROVIDE CLEARANCE
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS.
- ✓ SUITABLE FOR OTHER HIGH HARDENED MATERIALS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA514002	10	\$33.49	4F D1/16"x1/16"/2-1/2"-1/4",Altin Coating,Ball Endmill
	DA514003	40	\$33.49	4F D3/32"x3/32"/2-1/2"-1/4",Altin Coating,Ball Endmill
	DA514010	10	\$45.44	4F D5/16"x9/16"/4"-5/16",Altin Coating,Ball Endmill
	DA514020	45	\$164.36	4F D5/8"x1-1/4"/5-1/2"-5/8",Altin Coating,Ball Endmill
	DA514024	15	\$273.67	4F D3/4"x1-1/2"/6-1/4"-3/4",Altin Coating,Ball Endmill



DA522 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE WITH TAPER NECK - SHORT CUT LENGTH, AlTiN COATING - INCH
- ✓ GOOD FOR DEEP COPY MILLING WITH TAPER LONG NECK DESIGN
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ TAPER NECKED TO PROVIDE CLEARANCE
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS
- ✓ SUITABLE FOR OTHER HIGH HARDENED MATERIALS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA522010	30	\$46.09	2F D5/16"x9/16"/1-1/16"/3-1/2"-5/16",Altin Coating,Ball Endmill
	DA522012	50	\$54.63	2F D3/8"x3/4"/1-1/4"/4"-3/8",Altin Coating,Ball Endmill
	DA522020	40	\$172.73	2F D5/8"x1-1/4"/2"/5-1/2"-5/8",Altin Coating,Ball Endmill
	DA522024	8	\$270.79	2F D3/4"x1-1/2"/2-1/4"/6-1/4"-3/4",Altin Coating,Ball Endmill



DA542 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE WITH PENCIL NECK - SHORT CUT LENGTH, AlTiN COATING - INCH
- ✓ GOOD FOR DEEP COPY MILLING WITH PENCIL LONG NECK DESIGN
- ✓ MULTIPLE OAL FOR EACH DIAMETER
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ PENCILED NECKED TO PROVIDE CLEARANCE
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS
- ✓ SUITABLE FOR OTHER HIGH HARDENED MATERIALS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA542001	30	\$40.49	2F D1/16"x5/32"/15/64"/2-3/8"-1/4",Altin Coating,Ball Endmill
	DA542002	20	\$41.96	2F D1/16"x5/32"/15/64"/3-1/8"-1/4",Altin Coating,Ball Endmill
	DA542012	5	\$112.26	2F D3/8"x11/16"/13/16"/5-1/16"-1/2",Altin Coating,Ball Endmill



DA552 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE - REGULAR CUT LENGTH, AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ HIGH PRECISION MILLING CAPABILITIES
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ DESIGNED FOR HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AEROSPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE IN TOOL, MOLD AND HIGH HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	DA552006	5	\$81.89	2F D3/16"x9/16"/.659"/7-3/4"-3/8",Altin Coating,Ball Endmill
	DA552007	15	\$68.59	2F D3/16"x9/16"/.666"/6"-3/8",Altin Coating,Ball Endmill
	DA552008	10	\$118.18	2F D1/4"x3/4"/.859"/7-3/4"-1/2",Altin Coating,Ball Endmill
	DA552009	20	\$101.98	2F D1/4"x3/4"/.856"/6"-1/2",Altin Coating,Ball Endmill
	DA552016	5	\$192.76	2F D1/2"x1-3/16"/1.309"/7-3/4"-5/8",Altin Coating,Ball Endmill



FA503 & FA504 Series

SERIES DESCRIPTION

- ✓ ROUGHING CUTTER - AlTiN COATING
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ GOOD SELECTION OF CUTTING DIAMETERS
- ✓ EXCELLENT FOR TOOL, ALLOY AND MOLD STEELS. SUITABLE FOR OTHER HIGH HARDENED MATERIALS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	FA503020	90	\$45.27	3F D5/16"x3/4"/2-1/2"-5/16",Altin Coating,Rougher
	FA503024	18	\$59.98	3F D3/8"x7/8"/2-1/2"-3/8",Altin Coating,Rougher
	FA504040	28	\$120.07	4F D5/8"x1-1/4"/3-1/2"-5/8",Altin Coating,Rougher



MD502 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 2 FLUTE - MICRO DIAMETER, 2XD CUT LENGTH, AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ HIGH PRECISION MILLING CAPABILITIES
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ DESIGNED FOR HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AEROSPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE IN HIGH HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	MD502020	10	\$27.75	2F D.020"x.038"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MD502047	5	\$22.25	2F D.047"x.118"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MD502062	11	\$22.25	2F D.062"x.157"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill



MZ502 Series

SERIES DESCRIPTION

- ✓ 2 FLUTE, MINIATURE
- ✓ HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AERO SPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE ON HIGH HARDENED STEEL

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	MZ502016	50	\$15.38	2F D.016"x.031"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502020	50	\$14.59	2F D.020"x.040"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502024	40	\$13.83	2F D.024"x.047"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502028	50	\$13.43	2F D.028"x.055"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502031	50	\$13.03	2F D.031"x.063"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502043	15	\$12.65	2F D.043"x.100"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502047	50	\$12.65	2F D.047"x.157"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502052	30	\$12.65	2F D.052"x.157"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502055	50	\$12.65	2F D.055"x.157"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill
	MZ502062	30	\$12.65	2F D.062"x.157"/1-1/2"-1/8",AlTiN Coating,Miniature,Ball Endmill

**TPRB604A & TPRB624A & TPRE604A Series****SERIES DESCRIPTION**

- ✓ 4 FLUTE TAPER RIB BALL, SHORT LENGTH
- ✓ DESIGNED TO MACHINE TOOL STEEL, ALLOY STEEL, MOLD STEEL AND OTHER HIGH HARDENED MATERIALS
- ✓ FOR COPY-MILLING MACHINES

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	TPRB604A-0040-20	40	\$77.93	4F D.040"x.280"/3"-3/16" 2°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0070-05	15	\$77.93	4F D.070"x.490"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0070-10	10	\$77.93	4F D.070"x.490"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0080-05	10	\$77.93	4F D.080"x.560"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0090-05	15	\$84.76	4F D.090"x.630"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0090-10	10	\$84.76	4F D.090"x.630"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0100-05	10	\$84.76	4F D.100"x.700"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0100-10	15	\$84.76	4F D.100"x.700"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0125-05	10	\$84.76	4F D.125"x.875"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB604A-0125-10	15	\$84.76	4F D.125"x.875"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0030-15	40	\$82.03	4F D.030"x.420"/3"-3/16" 1.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0030-20	40	\$82.03	4F D.030"x.420"/3"-3/16" 2°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0040-30	50	\$82.03	4F D.040"x.260"/3"-3/16" 3°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0050-10	20	\$82.03	4F D.050"x.700"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0060-10	20	\$82.03	4F D.060"x.840"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0070-05	15	\$82.03	4F D.070"x.980"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0080-05	15	\$82.03	4F D.080"x1.120"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0090-05	10	\$89.22	4F D.090"x1.260"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0090-10	5	\$89.22	4F D.090"x1.260"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0100-05	10	\$89.22	4F D.100"x1.400"/3"-3/16" 0.5°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0100-30	25	\$89.22	4F D.100"x.830"/3"-3/16" 3°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0125-10	20	\$89.22	4F D.125"x1.750"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill
	TPRB624A-0125-30	20	\$89.22	4F D.125"x.590"/3"-3/16" 3°,AlTiN Coating,Ball Tapered Endmill
	TPRE604A-0080-10	20	\$53.68	4F D.080"x.560"/3"-3/16" 1°,AlTiN Coating,Ball Tapered Endmill

**ZA502 Series****SERIES DESCRIPTION**

- ✓ SQUARE END - 2 FLUTE - LONG CUT LENGTH, AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ HIGH PRECISION MILLING CAPABILITIES
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ DESIGNED FOR HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AEROSPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE IN TOOL, MOLD AND HIGH HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZA502012	20	\$12.52	2F D3/16"x5/8"/2"-3/16",Altin Coating,Square Endmill
	ZA502016	10	\$15.21	2F D1/4"x3/4"/2-1/2"-1/4",Altin Coating,Square Endmill
	ZA502020	40	\$21.98	2F D5/16"x13/16"/2-1/2"-5/16",Altin Coating,Square Endmill
	ZA502024	40	\$25.98	2F D3/8"x1"/2-1/2"-3/8",Altin Coating,Square Endmill
	ZA502026	10	\$37.28	2F D13/32"x1"/2-3/4"-7/16",Altin Coating,Square Endmill
	ZA502032	50	\$41.42	2F D1/2"x1"/3"-1/2",Altin Coating,Square Endmill
	ZA502040	15	\$90.84	2F D5/8"x1-1/4"/3-1/2"-5/8",Altin Coating,Square Endmill

**ZA504 Series****SERIES DESCRIPTION**

- ✓ SQUARE END - 4 FLUTE - LONG CUT LENGTH, AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ HIGH PRECISION MILLING CAPABILITIES
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ DESIGNED FOR HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AEROSPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE IN TOOL, MOLD AND HIGH HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZA504028	28	\$33.10	4F D7/16"x1"/2-3/4"-7/16",Altin Coating,Square Endmill
	ZA504048	10	\$140.91	4F D3/4"x1-1/2"/4"-3/4",Altin Coating,Square Endmill
	ZA504064	50	\$198.48	4F D1"x1-1/2"/4"-1",Altin Coating,Square Endmill



ZA506 & ZA508 Series

SERIES DESCRIPTION

- ✓ SQUARE END - 6 & 8 FLUTES - LONG CUT & OVERALL LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ DESIGNED FOR HIGH SPEED CUTTING AND FINISH MILLING WITH HIGH FEED RATES SUPERIOR WEAR RESISTANCE
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	ZA506016	6	\$29.95	6F D1/4"x1/2"/2-1/4"-1/4", Altin Coating, Square Endmill
	ZA506020	80	\$37.92	6F D5/16"x3/4"/2-1/2"-5/16", Altin Coating, Square Endmill
	ZA506040	28	\$125.50	6F D5/8"x1-1/4"/3-5/8"-5/8", Altin Coating, Square Endmill
	ZA508064	5	\$261.81	8F D1"x1-3/4"/4-1/4"-1", Altin Coating, Square Endmill



ZA522 Series

SERIES DESCRIPTION

- ✓ SQUARE END - 2 FLUTE - REGULAR CUT LENGTH, AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ HIGH PRECISION MILLING CAPABILITIES
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ DESIGNED FOR HIGH PRECISION MILLING IN MEDICAL, OPTICAL, ELECTRONICS AND AEROSPACE INDUSTRIES
- ✓ EXCELLENT PERFORMANCE IN TOOL, MOLD AND HIGH HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	ZA522008	20	\$14.71	2F D1/8"x3/4"/2-1/4"-1/8", Altin Coating, Square Endmill
	ZA522012	10	\$15.74	2F D3/16"x3/4"/2-1/2"-3/16", Altin Coating, Square Endmill
	ZA522016	20	\$20.05	2F D1/4"x1-1/8"/3"-1/4", Altin Coating, Square Endmill
	ZA522020	40	\$29.03	2F D5/16"x1-1/8"/3"-5/16", Altin Coating, Square Endmill
	ZA522024	70	\$31.18	2F D3/8"x1-1/8"/3"-3/8", Altin Coating, Square Endmill
	ZA522032	20	\$54.70	2F D1/2"x2"/4"-1/2", Altin Coating, Square Endmill
	ZA522040	10	\$125.38	2F D5/8"x2-1/4"/5"-5/8", Altin Coating, Square Endmill



ZA524 Series

SERIES DESCRIPTION

- ✓ SQUARE END - 4 FLUTE - SHORT CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ DESIGNED FOR HIGH SPEED CUTTING AND FINISH MILLING WITH HIGH FEED RATES
- ✓ SUPERIOR WEAR RESISTANCE
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	ZA524020	98	\$29.03	4F D5/16"x1-1/8"/3"-5/16", Altin Coating, Square Endmill
	ZA524040	120	\$125.38	4F D5/8"x2-1/4"/5"-5/8", Altin Coating, Square Endmill
	ZA524048	110	\$186.00	4F D3/4"x2-1/4"/5"-3/4", Altin Coating, Square Endmill
	ZA524064	30	\$238.18	4F D1"x2-1/4"/5"-1", Altin Coating, Square Endmill



ZA526 & ZA528 Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 6 & 8 FLUTES - STUB CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
Z-CLASSIC	ZA526016	30	\$40.30	6F D1/4"x1"/2-3/4"-1/4", Altin Coating, Square Endmill
	ZA528050	30	\$318.24	8F D3/4"x4-1/8"/7"-3/4", Altin Coating, Square Endmill



ZR502A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 2 FLUTE - REGULAR CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR502A00408	10	\$21.85	2F D1/16"xR.008"x1/8"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A00810	15	\$20.87	2F D1/8"xR.010"x1/4"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A00820	30	\$20.87	2F D1/8"xR.020"x1/4"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A01610	25	\$20.87	2F D1/4"xR.010"x1/2"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A01620	15	\$20.87	2F D1/4"xR.020"x1/2"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A01630	46	\$20.87	2F D1/4"xR.030"x1/2"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR502A02020	28	\$28.74	2F D5/16"xR.020"x1/2"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR502A02060	15	\$31.36	2F D5/16"xR.060"x1/2"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR502A02090	30	\$31.36	2F D5/16"xR.090"x1/2"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR502A02420	20	\$30.86	2F D3/8"xR.020"x5/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR502A02460	30	\$33.68	2F D3/8"xR.060"x5/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR502A02490	20	\$33.68	2F D3/8"xR.090"x5/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR502A03220	20	\$54.16	2F D1/2"xR.020"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR502A03260	30	\$59.06	2F D1/2"xR.060"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR502A03290	50	\$59.06	2F D1/2"xR.090"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill



ZR504A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE - REGULAR CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR504A01210	49	\$20.87	4F D3/16"xR.010"x3/8"/2-1/2"-1/4",Altin Coating,Corner Radius Endmill
	ZR504A01220	250	\$20.87	4F D3/16"xR.020"x3/8"/2-1/2"-1/4",Altin Coating,Corner Radius Endmill
	ZR504A01230	16	\$20.87	4F D3/16"xR.030"x3/8"/2-1/2"-1/4",Altin Coating,Corner Radius Endmill
	ZR504A01660	30	\$20.87	4F D1/4"xR.060"x1/2"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR504A02020	15	\$28.74	4F D5/16"xR.020"x1/2"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR504A02060	30	\$31.36	4F D5/16"xR.060"x1/2"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR504A02420	9	\$30.86	4F D3/8"xR.020"x5/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR504A02430	60	\$30.86	4F D3/8"xR.030"x5/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR504A03220	27	\$54.16	4F D1/2"xR.020"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR504A03230	30	\$54.16	4F D1/2"xR.030"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR504A03260	250	\$59.06	4F D1/2"xR.060"x5/8"/4"-1/2",Altin Coating,Corner Radius Endmill



ZR506A Series

SERIES DESCRIPTION

- ✓ FINISHING END - 6 FLUTE - 45° HELIX CUT LENGTH - AlTiN COATING - INCH
- ✓ DESIGNED FOR HIGH VELOCITY MILLING
- ✓ DRY OR WET MILLING
- ✓ FAST CHIP EVACUATION
- ✓ EXCELLENT PERFORMANCE IN TOOL, ALLOY, MOLD AND HIGH HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR506A02020	20	\$41.72	6F D5/16"xR.020"x3/4"/2-1/2"-5/16",Altin Coating,Corner Radius Endmill
	ZR506A02420	20	\$62.48	6F D3/8"xR.020"x7/8"/2-7/8"-3/8",Altin Coating,Corner Radius Endmill
	ZR506A03230	14	\$84.90	6F D1/2"xR.030"x1"/3-1/4"-1/2",Altin Coating,Corner Radius Endmill



ZR522A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 2 FLUTE - LONG CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR522A00408	40	\$21.85	2F D1/16"xR.008"x13/16"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A00820	30	\$20.87	2F D1/8"xR.020"x1/2"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A00830	30	\$20.87	2F D1/8"xR.030"x1/2"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A01220	10	\$20.87	2F D3/16"xR.020"x5/8"/2-1/2"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A01230	15	\$20.87	2F D3/16"xR.030"x5/8"/2-1/2"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A01610	30	\$20.87	2F D1/4"xR.010"x3/4"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A01620	30	\$20.87	2F D1/4"xR.020"x3/4"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A01660	50	\$22.87	2F D1/4"xR.060"x3/4"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR522A02430	20	\$30.86	2F D3/8"xR.030"x1"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR522A03230	15	\$54.16	2F D1/2"xR.030"x1"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR522A03290	25	\$59.06	2F D1/2"xR.090"x1"/4"-1/2",Altin Coating,Corner Radius Endmill



ZR524A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE - LONG CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR524A00820	50	\$20.87	4F D1/8"xR.020"x1/2"/2-1/4"-1/4",Altin Coating,Corner Radius Endmill
	ZR524A02030	10	\$28.74	4F D5/16"xR.030"x13/16"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR524A02060	10	\$31.36	4F D5/16"xR.060"x13/16"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR524A02090	5	\$31.36	4F D5/16"xR.090"x13/16"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR524A02820	10	\$47.25	4F D7/16"xR.020"x1"/4"-7/16",Altin Coating,Corner Radius Endmill
	ZR524A02860	25	\$51.68	4F D7/16"xR.060"x1"/4"-7/16",Altin Coating,Corner Radius Endmill
	ZR524A02890	10	\$51.68	4F D7/16"xR.090"x1"/4"-7/16",Altin Coating,Corner Radius Endmill



ZR532A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 2 FLUTE - LONG CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR532A01630	55	\$24.07	2F D1/4"xR.030"x1-1/8"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR532A02060	25	\$38.30	2F D5/16"xR.060"x1-1/8"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR532A03290	10	\$72.21	2F D1/2"xR.090"x2"/4"-1/2",Altin Coating,Corner Radius Endmill



ZR534A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE - SHORT CUT LENGTH - AlTiN COATING - INCH
- ✓ MILL DIAMETER TOLERANCE - 0 / -0.0012"
- ✓ DESIGNED FOR HIGH SPEED CUTTING AND FINISH MILLING WITH HIGH FEED RATES
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ SUPERIOR WORKPIECE FINISH
- ✓ EXCELLENT PERFORMANCE IN DRY CUTTING CONDITIONS
- ✓ EXCELLENT PERFORMANCE IN TOOL AND HARDENED STEELS

Z-CLASSIC	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR534A01660	20	\$26.49	4F D1/4"xR.060"x1-1/8"/3"-1/4",Altin Coating,Corner Radius Endmill
	ZR534A02020	20	\$34.83	4F D5/16"xR.020"x1-1/8"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR534A02060	10	\$38.30	4F D5/16"xR.060"x1-1/8"/3"-5/16",Altin Coating,Corner Radius Endmill
	ZR534A02420	15	\$37.41	4F D3/8"xR.020"x1-1/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR534A02430	10	\$37.41	4F D3/8"xR.030"x1-1/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR534A02460	20	\$41.14	4F D3/8"xR.060"x1-1/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR534A02490	15	\$41.14	4F D3/8"xR.090"x1-1/8"/3"-3/8",Altin Coating,Corner Radius Endmill
	ZR534A03220	5	\$65.64	4F D1/2"xR.020"x2"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR534A03260	38	\$72.21	4F D1/2"xR.060"x2"/4"-1/2",Altin Coating,Corner Radius Endmill
	ZR534A03290	10	\$72.21	4F D1/2"xR.090"x2"/4"-1/2",Altin Coating,Corner Radius Endmill



DA734 Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 4 FLUTE, STUB CUT LENGTH WITH EXTENDED NECK - AlTiN+HH COATING - INCH
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING.
- ✓ EXCELLENT WORKPIECE FINISH - ESPECIALLY FOR FINISHING OPERATION

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	DA734008	20	\$67.03	4F D1/4"x1/4"/1.7"/4"-3/8",Altin-HH Coating,Ball Endmill
	DA734010	20	\$67.03	4F D5/16"x5/16"/1.04"/4"-3/8",Altin-HH Coating,Ball Endmill
	DA734012	25	\$122.57	4F D3/8"x3/8"/1.82"/5"-1/2",Altin-HH Coating,Ball Endmill



ZB702A Series

SERIES DESCRIPTION

- ✓ RADIUS - 2 FLUTE, 12° HELIX, STUB CUT LENGTH WITH EXTENDED NECK - AlTiN+HH COATING - INCH
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING
- ✓ EXCELLENT WORKPIECE FINISH

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZB702A012093	30	\$38.43	2F D3/16"x.265"/.65"/2"-3/16",Altin-HH Coating,Corner Radius Endmill
	ZB702A032250	20	\$103.70	2F D1/2"x.625"/1.39"/4"-1/2",Altin-HH Coating,Corner Radius Endmill



ZE712A Series

SERIES DESCRIPTION

- ✓ SQUARE - 2 FLUTE, REGULAR LENGTH - 30° HELIX - AlTiN+HH COATING
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING
- ✓ EXCELLENT WORKPIECE FINISH

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZE712A004	50	\$23.06	2F D1/16"x3/16"/1-1/2"-1/8",Altin-HH Coating,Square Endmill
	ZE712A008	90	\$23.06	2F D1/8"x1/2"/1-1/2"-1/8",Altin-HH Coating,Square Endmill
	ZE712A020	50	\$30.91	2F D5/16"x13/16"/2-1/2"-5/16",Altin-HH Coating,Square Endmill
	ZE712A024	50	\$41.58	2F D3/8"x1"/2-1/2"-3/8",Altin-HH Coating,Square Endmill
	ZE712A032	50	\$62.06	2F D1/2"x1"/3"-1/2",Altin-HH Coating,Square Endmill



ZE714A Series

SERIES DESCRIPTION

- ✓ SQUARE - 4 FLUTE, REGULAR LENGTH - 30° HELIX - AlTiN+HH COATING
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING
- ✓ EXCELLENT WORKPIECE FINISH

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZE714A004	15	\$23.06	4F D1/16"x3/16"/1-1/2"-1/8",Altin-HH Coating,Square Endmill



ZE716A Series

SERIES DESCRIPTION

- ✓ SQUARE - 6 FLUTE, REGULAR CUT LENGTH - 30° HELIX - AlTiN+HH COATING
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING
- ✓ EXCELLENT WORKPIECE FINISH

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZE716A016L	3	\$40.49	6F D1/4"x1"/2-3/4"-1/4",Altin-HH Coating,Square Endmill
	ZE716A020	18	\$45.90	6F D5/16"x3/4"/2-1/2"-5/16",Altin-HH Coating,Square Endmill
	ZE716A020L	30	\$56.14	6F D5/16"x1-1/2"/3-5/8"-5/16",Altin-HH Coating,Square Endmill
	ZE716A040	12	\$189.73	6F D5/8"x1-1/4"/3-5/8"-5/8",Altin-HH Coating,Square Endmill



ZR706A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 6 FLUTE - STANDARD CUT LENGTH - TiAlN COATING
- ✓ FINE GRAIN CARBIDE
- ✓ CENTER CUTTING WITH A 45° HELIX AND TOLERANCE OF +0 / - 0.0008"
- ✓ CUTTING DIAMETER RANGE 3/16" - 5/8"
- ✓ EXTENDED CHOICE OF CORNER RADIUS FOR CUTTING DIAMETERS
- ✓ SUITABLE FOR CURVATURE AND COPY MACHINING OF LOW HARDNESS MATERIAL

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZR706A01220L	20	\$50.14	6F D3/16"xR.020"x.265"/1.300"/2"-1/4",Altin-HH Coating,Corner Radius Endmill
	ZR706A01230	20	\$44.99	6F D3/16"xR.030"x.265"/.650"/2"-1/4",Altin-HH Coating,Corner Radius Endmill
	ZR706A01620L	10	\$73.01	6F D1/4"xR.020"x.350"/1.6"/6"-1/4",Altin-HH Coating,Corner Radius Endmill
	ZR706A02420	15	\$76.71	6F D3/8"xR.020"x.460"/1.270"/3"-3/8",Altin-HH Coating,Corner Radius Endmill
	ZR706A02420L	20	\$103.12	6F D3/8"xR.020"x.460"/2.1"/6"-3/8",Altin-HH Coating,Corner Radius Endmill
	ZR706A03260	10	\$110.68	6F D1/2"xR.060"x.625"/1.390"/4"-1/2",Altin-HH Coating,Corner Radius Endmill
	ZR706A03260L	25	\$136.77	6F D1/2"xR.060"x.625"/2.300"/6"-1/2",Altin-HH Coating,Corner Radius Endmill
	ZR706A04030	20	\$160.19	6F D5/8"xR.030"x.750"/1.66"/4"-5/8",Altin-HH Coating,Corner Radius Endmill



ZS204A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE, SHORT CUT LENGTH WITH NECK - VARIABLE HELIX - AlTiN+HH COATING - INCH
- ✓ A NEW DESIGN OF ENDMILL FOR HIGH HARDENED STEELS UP TO HRC70 AND HIGH SPEED MACHINING UP TO 200M/MIN.
- ✓ CORNER RADIUS TO PREVENT CORNER CHIPPING
- ✓ HIGH PRECISION AND EXCELLENT SURFACE DUE TO EACH 4F VARIABLE HELIX GEOMETRY.
- ✓ LONGER TOOL LIFE OVER 150% DUE TO REDUCED CHATTER AND RESONANCE

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZS204A016060	8	\$37.98	4F D1/4"xR.060"x5/16"/1"/2-1/2"-1/4",Altin-HH Coating,Corner Radius Endmill
	ZS204A016060L	50	\$40.56	4F D1/4"xR.060"x5/16"/1-1/2"/3"-1/4",Altin-HH Coating,Corner Radius Endmill
	ZS204A020020	23	\$47.70	4F D5/16"xR.020"x3/8"/1"/2-1/2"-5/16",Altin-HH Coating,Corner Radius Endmill
	ZS204A024080	77	\$55.65	4F D3/8"xR.080"x7/16"/1"/2-1/2"-3/8",Altin-HH Coating,Corner Radius Endmill
	ZS204A028080	30	\$74.43	4F D7/16"xR.080"x1/2"/1-1/8"/3"-7/16",Altin-HH Coating,Corner Radius Endmill
	ZS204A032090	50	\$85.58	4F D1/2"xR.090"x9/16"/2-1/4"/3"-1/2",Altin-HH Coating,Corner Radius Endmill



ZSPM4A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE WITH EXTENDED NECK, STUB CUT LENGTH - 00 HELIX - AlTiN+HH COATING
- ✓ DESIGNED TO MACHINE HIGH HARDENED MATERIALS UP TO HRC70.
- ✓ SUITABLE FOR DRY CUTTING & HIGH SPEED CUTTING DUE TO NEWLY DEVELOPED RAW-MATERIAL AND NEW COATING.
- ✓ STRAIGHT FLUTE DESIGN TO HELP MINIMIZE CORNER RADIUS BREAKAGE
- ✓ BACKDRAFT DESIGN MAXIMIZING THE REDUCTION OF CHATTER AND PREVENTS DEFLECTION
- ✓ EXCELLENT WORKPIECE FINISH

Z-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	ZSPM4A020	50	\$41.93	4F D5/16"xR3/32"x.130"/5/8"/2-1/2"-5/16",Altin-HH Coating,Corner Radius Endmill



WGB502A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS 2 FLUTE END MILL WITHOUT REACH - INCH
- ✓ TRUE CRYSTALLINE CVD DIAMOND GROWN ON CARBIDE SUBSTRATE
- ✓ MAXIMUM ABRASION RESISTANCE INCREASES TOOL LIFE UP TO 45X
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ H6 SHANK TOLERANCE FOR HIGH PRECISION TOOL HOLDERS
- ✓ CENTER CUTTING
- ✓ IDEAL FOR MACHINING GRAPHITE AND COMPOSITES, GREEN CARBIDE, AND GREEN CERAMICS

Z-GRA-MATE	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	WGB502A002	50	\$54.75	2F D1/32"x3/32"/1-1/2"-1/8",Diamond Coating,BALL Endmill



WGR504A & WGR514A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS 4 FLUTE END MILL WITHOUT REACH - INCH
- ✓ TRUE CRYSTALLINE CVD DIAMOND GROWN ON CARBIDE SUBSTRATE
- ✓ MAXIMUM ABRASION RESISTANCE INCREASES TOOL LIFE UP TO 45X
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ H6 SHANK TOLERANCE FOR HIGH PRECISION TOOL HOLDERS
- ✓ CENTER CUTTING
- ✓ IDEAL FOR MACHINING GRAPHITE AND COMPOSITES, GREEN CARBIDE, AND GREEN CERAMICS

Z-GRA-MATE	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	WGR504A004010	47	\$70.06	4F D1/16" x R.010 x 3/16" / 1-1/2" - 1/8",Diamond Coating,CORNER RADIUS Endmill
	WGR504A006010	50	\$70.06	4F D3/32" x R.010 x 3/8" / 1-1/2" - 1/8",Diamond Coating,CORNER RADIUS Endmill
	WGR504A008015	50	\$78.09	4F D1/8" x R.015 x 1/2" / 1-1/2" - 1/8",Diamond Coating,CORNER RADIUS Endmill
	WGR514A0081000-3-030	50	\$81.68	4F D1/8" x R.030" x 3/8" / 1" / 3" - 1/8",Diamond Coating,CORNER RADIUS Endmill



XE504A Series

SERIES DESCRIPTION

- ✓ SQUARE - 4 FLUTE - 2 - 2.5XD, AlTiN+H COATING
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XE504A028	20	\$43.31	4F D7/16"x1"/2-3/4"-7/16",ALTIN Coating SQUARE Variable Helix Endmill
	XE504A048	47	\$174.05	4F D3/4"x1-1/2"/4"-3/4",ALTIN-H Coating,SQUARE Variable Helix Endmill



XE505A Series

SERIES DESCRIPTION

- ✓ SQUARE - 5 FLUTE - STUB CUT LENGTH, TIALN+SH COATING
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XE505A028	15	\$45.49	5F D7/16"x9/16"/2-1/2"-7/16",Tialn-SH,SQUARE Variable Helix Endmill



XE515A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 5 FLUTE WITH EXTENDED NECK - REGULAR CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XE515A018	30	\$29.84	5F D9/32"x5/8"/2-1/2"-5/16", Tialn-SH, SQUARE Variable Helix Endmill
	XE515A020	40	\$29.84	5F D5/16"x13/16"/2-1/2"-5/16", Tialn-SH, SQUARE Variable Helix Endmill
	XE515A022	25	\$35.32	5F D11/32"x13/16"/2-1/2"-3/8", Tialn-SH, SQUARE Variable Helix Endmill
	XE515A026	30	\$47.67	5F D13/32"x7/8"/2-3/4"-7/16", Tialn-SH, SQUARE Variable Helix Endmill
	XE515A028	15	\$47.67	5F D7/16"x1/2"-3/4"-7/16", Tialn-SH, SQUARE Variable Helix Endmill
	XE515A030	40	\$56.26	5F D15/32"x1/3"-1/2", Tialn-SH, SQUARE Variable Helix Endmill



XR504A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE - 1.5 - 3XD, AlTiN+H COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR504A014015	24	\$17.41	4F D7/32 x R.015 x 3/8 / 2 - 1/4, ALTIN-H Coating, Corner Radius Variable Helix Endmill
	XR504A018	39	\$28.56	4F D9/32"xR.020"x5/8"/2-1/2"-5/16", ALTIN-H Coating, Corner Radius Variable Helix Endmill
	XR504A020020	2	\$22.14	4F D5/16"xR.020"x1/2"/2"-5/16", ALTIN-H Coating, Corner Radius Variable Helix Endmill



XR505A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 5 FLUTE - STUB CUT LENGTH, TIALN+SH COATING
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR505A020015	299	\$29.84	5F D5/16"xR.015"x7/16"/2"-5/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A020030	20	\$29.84	5F D5/16"xR.030"x7/16"/2"-5/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A028015	20	\$47.67	5F D7/16"xR.015"x9/16"/2-1/2"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A028030	50	\$47.67	5F D7/16"xR.030"x9/16"/2-1/2"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A040015	30	\$123.42	5F D5/8"xR.015"x3/4"/3"-5/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A040030	25	\$123.42	5F D5/8"xR.030"x3/4"/3"-5/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A048045	15	\$191.43	5F D3/4"xR.040"x1/3"-3/4", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064015	20	\$283.82	5F D1"xR.015"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064030	15	\$283.82	5F D1"xR.030"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064045	15	\$283.82	5F D1"xR.040"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064060	30	\$283.82	5F D1"xR.060"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064090	20	\$283.82	5F D1"xR.090"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR505A064125	15	\$283.82	5F D1"xR.125"x1-1/2"/4"-1", Tialn-SH, Corner Radius Variable Helix Endmill



XR514A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE WITH LONG SHANK - STUB CUT LENGTH,
- ✓ ALTiN+H COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR514A016010	52	\$19.77	4F D1/4"xR.010"x1/2"/2-1/2"-1/4",ALTiN-H Coating,Corner Radius Variable Helix Endmill
	XR514A033090	25	\$56.54	4F D1/2"xR.090"x1-1/4"/3-1/4"-1/2",ALTiN-H Coating,Corner Radius Variable Helix Endmill
	XR514A036030	40	\$110.37	4F D9/16"xR.030"x1-1/8"/3-1/2"-9/16",ALTiN-H Coating,Corner Radius Variable Helix Endmill
	XR514A064030	30	\$258.01	4F D1"xR.030"x1-1/2"/4"-1",ALTiN-H Coating,Corner Radius Variable Helix Endmill



XR515A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 5 FLUTE - REGULAR CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR515A018015	20	\$31.42	5F D9/32"xR.015"x5/8"/2-1/2"-5/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A018030	20	\$31.42	5F D9/32"xR.030"x5/8"/2-1/2"-5/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A020015	17	\$31.42	5F D5/16"xR.015"x13/16"/2-1/2"-5/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A020030	20	\$31.42	5F D5/16"xR.030"x13/16"/2-1/2"-5/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A022015	16	\$37.16	5F D11/32"xR.015"x13/16"/2-1/2"-3/8",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A022030	20	\$37.16	5F D11/32"xR.030"x13/16"/2-1/2"-3/8",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A024015	54	\$37.16	5F D3/8"xR.015"x7/8"/2-1/2"-3/8",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A026015	15	\$50.17	5F D13/32"xR.015"x7/8"/2-3/4"-7/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A026030	20	\$50.17	5F D13/32"xR.030"x7/8"/2-3/4"-7/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A028015	15	\$50.17	5F D7/16"xR.015"x1"/2-3/4"-7/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A028030	15	\$50.17	5F D7/16"xR.030"x1"/2-3/4"-7/16",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A030015	20	\$59.22	5F D15/32"xR.015"x1"/3"-1/2",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A030030	20	\$59.22	5F D15/32"xR.030"x1"/3"-1/2",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A032015	15	\$59.22	5F D1/2"xR.015"x1"/3"-1/2",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A032045	29	\$59.22	5F D1/2"xR.045"x1"/3"-1/2",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A032090	20	\$59.22	5F D1/2"xR.090"x1"/3"-1/2",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A040030	20	\$129.91	5F D5/8"xR.030"x1-1/4"/3-1/2"-5/8",Tialn-SH,Corner Radius Variable Helix Endmill
	XR515A048045	18	\$201.50	5F D3/4"xR.045"x1-1/2"/4"-3/4",Tialn-SH,Corner Radius Variable Helix Endmill



XR525A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 5 FLUTE WITH EXTENDED NECK - REGULAR CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR525A016015	24	\$31.07	5F D1/4"xR.015"x3/4"/2.125"/4"-1/4", Tialn-SH, Corner Radius Variable Helix Endmill
	XR525A016030	15	\$31.07	5F D1/4"xR.030"x3/4"/2-1/8"/4"-1/4", Tialn-SH, Corner Radius Variable Helix Endmill
	XR525A028015	15	\$81.42	5F D7/16"xR.015"x1-1/4"/2.125"/4"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR525A028030	20	\$81.42	5F D7/16"xR.030"x1-1/4"/2.125"/4"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR525A032030	10	\$92.83	5F D1/2"xR.030"x1-1/4"/2.125"/4"-1/2", Tialn-SH, Corner Radius Variable Helix Endmill
	XR525A048045	15	\$232.73	5F D3/4"xR.045"x1-7/8"/3"/5"-3/4", Tialn-SH, Corner Radius Variable Helix Endmill



XR535A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 5 FLUTE WITH EXTENDED NECK & SHANK - REGULAR CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE ALLOWING FOR INCREASED DEPTH OF CUT AT ELEVATED FEED & SPEEDS
- ✓ MULTIPLE CORNER RADIUS FOR EACH CUTTING DIAMETER
- ✓ HIGHER FEED & SPEEDS FOR INCREASED PRODUCTIVITY
- ✓ REDUCED VIBRATION HARMONICS
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XR535A024030	25	\$67.46	5F D3/8"xR.030"x1-1/4"/3.375"/6"-3/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A028015	20	\$89.58	5F D7/16"xR.015"x1-1/2"/3.375"/6"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A028030	20	\$89.56	5F D7/16"xR.030"x1-1/2"/3.375"/6"-7/16", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A040015	15	\$215.73	5F D5/8"xR.015"x2"/4"/6"-5/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A040030	10	\$215.73	5F D5/8"xR.030"x2"/4"/6"-5/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A040045	15	\$215.73	5F D5/8"xR.045"x2"/4"/6"-5/8", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A048015	15	\$256.00	5F D3/4"xR.015"x2-1/4"/4"/6"-3/4", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A048045	15	\$256.00	5F D3/4"xR.045"x2-1/4"/4"/6"-3/4", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A064015	10	\$343.43	5F D1"xR.015"x3"/4"/6"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A064030	10	\$343.43	5F D1"xR.030"x3"/4"/6"-1", Tialn-SH, Corner Radius Variable Helix Endmill
	XR535A064045	10	\$343.43	5F D1"xR.045"x3"/4"/6"-1", Tialn-SH, Corner Radius Variable Helix Endmill



XXB504A Series

SERIES DESCRIPTION

- ✓ BALL NOSE - 4 FLUTE - VARIABLE HELIX - CUT LENGTH 5XD, TIALN+SH COATING - INCH
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ SUITABLE FOR SEMI-FINISHING AND FINISHING BY 4 FLUTES CUTTING
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON CARBON, ALLOY & PREHARDENED STEELS, COPPER & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XXB524A024	100	\$63.85	4F D3/8"x1/2"/4"-3/8", Tialn-SH, Ball Variable Helix Endmill
	XXB524A032	50	\$96.66	4F D1/2"x5/8"/5"-1/2", Tialn-SH, Ball Variable Helix Endmill
	XXB524A049	20	\$299.88	4F D3/4"x1"/6"-3/4", Tialn-SH, Ball Variable Helix Endmill



XXE504A Series

SERIES DESCRIPTION

- ✓ SQUARE - 4 FLUTE - 1.5 - 3XD, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XXE504A028	30	\$43.31	4F D7/16"x1"-2-3/4"-7/16", Tialn-SH, SQUARE Variable Helix Endmill
	XXE504A036	40	\$104.87	4F D9/16"x1-1/8"/3-1/2"-9/16", Tialn-SH, SQUARE Variable Helix Endmill
	XXE504A040	30	\$112.22	4F D5/8"x1-1/4"/3-1/2"-5/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE504A064	25	\$245.12	4F D1"x1-1/2"/4"-1", Tialn-SH, SQUARE Variable Helix Endmill



XXE524A Series

SERIES DESCRIPTION

- ✓ SQUARE - 4 FLUTE WITH LONG SHANK- STUB CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XXE524A016	25	\$24.39	4F D1/4"x3/8"/4"-1/4", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A024	25	\$48.15	4F D3/8"x1/2"/4"-3/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A032	40	\$72.89	4F D1/2"x5/8"/5"-1/2", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A033	40	\$76.72	4F D1/2"x5/8"/6"-1/2", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A040	20	\$149.23	4F D5/8"x3/4"/5"-5/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A041	30	\$157.10	4F D5/8"x3/4"/6"-5/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A048	10	\$214.95	4F D3/4"x1"/5"-3/4", Tialn-SH, SQUARE Variable Helix Endmill
	XXE524A049	20	\$226.26	4F D3/4"x1"/6"-3/4", Tialn-SH, SQUARE Variable Helix Endmill



XXE534A Series

SERIES DESCRIPTION

- ✓ SQUARE - 4 FLUTE WITH EXTENDED NECKS - STUB CUT LENGTH, TIALN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XXE534A016	48	\$28.05	4F D1/4"x3/8"/1-1/4"/4"-1/4", Tialn-SH, SQUARE Variable Helix Endmill
	XXE534A024	25	\$55.39	4F D3/8"x1/2"/1-7/8"/4"-3/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE534A032	25	\$76.53	4F D1/2"x5/8"/2-1/4"/4"-1/2", Tialn-SH, SQUARE Variable Helix Endmill
	XXE534A040	25	\$129.05	4F D5/8"x3/4"/2-1/4"/4-1/8"-5/8", Tialn-SH, SQUARE Variable Helix Endmill
	XXE534A064	20	\$281.89	4F D1"x1-1/8"/2-1/4"/4-1/2"-1", Tialn-SH, SQUARE Variable Helix Endmill



XXR514A Series

SERIES DESCRIPTION

- ✓ CORNER RADIUS - 4 FLUTE -STUB CUT LENGTH, ALTiN+SH COATING - INCH
- ✓ VARIABLE HELIX TOOLS
- ✓ HIGH PRECISION WITH EXCELLENT SURFACE FINISH DUE TO EACH 4F VARIABLE HELIX GEOMETRY
- ✓ CORNER RADIUS TO REDUCE CORNER CHIPPING
- ✓ UNIQUE PATENTED DESIGN DECREASES CHATTER AND RESONANCE
- ✓ STRONG CUTTING EDGE DESIGN
- ✓ EXCELLENT PERFORMANCE ON MILD MOLD STEELS & STAINLESS STEELS

X-STAR	EDP NO. NEW	QTY	SALE PRICE	SPECIFICATION
	XXR514A012015	12	\$16.26	4F D3/16"xR.015"x7/16"/2"-3/16", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A016030	100	\$19.77	4F D1/4"xR.030"x1/2"/2-1/2"-1/4", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A032045	50	\$53.84	4F D1/2"xR.045"x1"/3"-1/2", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A032125	30	\$53.84	4F D1/2"xR.125"x1"/3"-1/2", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A033060	50	\$56.54	4F D1/2"xR.060"x1-1/4"/3-1/4"-1/2", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A040030	44	\$118.10	4F D5/8"xR.030"x1-1/4"/3-1/2"-5/8", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A040060	20	\$118.10	4F D5/8"xR.060"x1-1/4"/3-1/2"-5/8", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A048060	20	\$183.19	4F D3/4"xR.060"x1-1/2"/4"-3/4", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A064030	15	\$258.01	4F D1"xR.030"x1-1/2"/4"-1", TiAlN-SH, Corner Radius Variable Helix Endmill
	XXR514A064060	25	\$258.01	4F D1"xR.060"x1-1/2"/4"-1", TiAlN-SH, Corner Radius Variable Helix Endmill

Distributed By:



5500 Tomken Rd, Unit #2
Mississauga, ON L4W 2Z4
www.caliberindustrial.com
sales@caliberindustrial.com

Mississauga: 905.624.5524
Toronto: 416.626.7151
Toll Free: 1.800.465.5743
Fax: 905.602.8758

ISO 9001
BUREAU VERITAS
 Certification



FACTORY WAREHOUSE ORDER ONLY - MUST REFER to Promotion Code EX0522

LIMITED TIME OFFER SUBJECT to PRIOR SALE