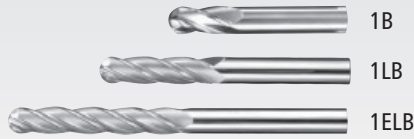
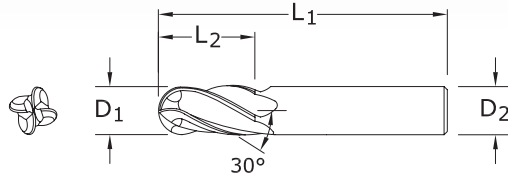


4 Flute Ball End



1B • 1LB • 1ELB

FRACTIONAL SERIES



TOLERANCES (inch)
 $D_1 = +0.000/-0.002$
 $D_2 = h_6$

TECH INFO 115

- STEELS
- STAINLESS STEELS
- CAST IRON
- HIGH TEMP ALLOYS
- TITANIUM
- NON-FERROUS
- PLASTICS/COMPOSITES

inch				EDP NO.							SERIES
CUTTING DIAMETER D_1	LENGTH OF CUT L_2	OVERALL LENGTH L_1	SHANK DIAMETER D_2	UNCOATED	UNCOATED W/ FLAT	TI-NAMITE (TiN)	TI-NAMITE-C (TiCN)	TI-NAMITE-A (AlTiN)	TI-NAMITE-A (AlTiN) W/FLAT	DI-NAMITE (Diamond)	
1/64	1/32	1-1/2	1/8	30102	—	39102	39002	30031	—	—	1B
1/32	5/64	1-1/2	1/8	30104	—	39104	39004	30032	—	—	1B
3/64	7/64	1-1/2	1/8	30106	—	39106	39006	30033	—	—	1B
1/16	3/16	1-1/2	1/8	30108	—	39108	39008	30034	—	91269	1B
5/64	3/16	1-1/2	1/8	30110	—	39110	39010	30035	—	—	1B
3/32	9/32	1-1/2	1/8	30112	—	39112	39012	30036	—	—	1B
7/64	3/8	1-1/2	1/8	30114	—	39114	39014	30037	—	—	1B
*1/8	3/8	1-1/2	1/8	30069	—	39178	39078	—	—	—	1B
1/8	1/2	1-1/2	1/8	30116	—	39116	39016	30038	—	91273	1B
1/8	3/4	2-1/4	1/8	33142	—	31770	31780	31790	—	—	1LB
1/8	1	3	1/8	33144	—	31900	31918	31928	—	—	1ELB
9/64	1/2	2	3/16	30118	—	39118	39018	30039	—	—	1B
5/32	1/2	2	3/16	30120	—	39120	39020	30040	—	—	1B
11/64	5/8	2	3/16	30122	—	39122	39022	30041	—	—	1B
*3/16	5/8	2	3/16	30124	—	39124	39024	30042	—	—	1B
3/16	3/4	2-1/2	3/16	33102	—	31771	31781	31791	—	91277	1LB
3/16	1-1/8	3	3/16	33122	—	31902	31919	31929	—	—	1ELB
13/64	5/8	2-1/2	1/4	30126	—	39126	39026	30043	—	—	1B
7/32	5/8	2-1/2	1/4	30128	—	39128	39028	30044	—	—	1B
15/64	3/4	2-1/2	1/4	30130	—	39130	39030	30045	—	—	1B
*1/4	3/4	2-1/2	1/4	30132	—	39132	39032	30046	—	91281	1B
1/4	1-1/8	3	1/4	33104	—	31772	31782	31792	—	—	1LB
1/4	1-1/2	4	1/4	33124	—	31904	31920	31930	—	—	1ELB
17/64	3/4	2-1/2	5/16	30134	—	39134	39034	30047	—	—	1B
9/32	3/4	2-1/2	5/16	30136	—	39136	39036	30048	—	—	1B
19/64	13/16	2-1/2	5/16	30138	—	39138	39038	30049	—	—	1B
*5/16	13/16	2-1/2	5/16	30140	—	39140	39040	30050	—	91285	1B
5/16	1-1/8	3	5/16	33106	—	31773	31783	31793	—	—	1LB

continued on next page



4 Flute Ball End



1B • 1LB • 1ELB

FRACTIONAL SERIES

inch				EDP NO.							SERIES
CUTTING DIAMETER D ₁	LENGTH OF CUT L ₂	OVERALL LENGTH L ₁	SHANK DIAMETER D ₂	UNCOATED	UNCOATED W/ FLAT	Ti-NAMITE (TiN)	Ti-NAMITE-C (TiCN)	Ti-NAMITE-A (AlTiN)	Ti-NAMITE-A (AlTiN) W/FLAT	Di-NAMITE (Diamond)	
5/16	1-5/8	4	5/16	33126	–	31906	31921	31931	–	–	1ELB
21/64	1	2-1/2	3/8	30142	–	39142	39042	30051	–	–	1B
11/32	1	2-1/2	3/8	30144	–	39144	39044	30052	–	–	1B
23/64	1	2-1/2	3/8	30146	–	39146	39046	30053	–	–	1B
*3/8	1	2-1/2	3/8	30148	30184	39148	39048	30054	30384	91289	1B
3/8	1-1/8	3	3/8	33108	–	31774	31784	31794	–	–	1LB
3/8	1-3/4	4	3/8	33128	–	31908	31922	31932	–	–	1ELB
25/64	1	2-3/4	7/16	30150	–	39150	39050	30055	–	–	1B
13/32	1	2-3/4	7/16	30152	–	39152	39052	30056	–	–	1B
27/64	1	2-3/4	7/16	30154	–	39154	39054	30057	–	–	1B
7/16	1	2-3/4	7/16	30156	–	39156	39056	30058	–	–	1B
7/16	2	4-1/2	7/16	33110	–	31775	31785	31795	–	–	1LB
7/16	3	6	7/16	33130	–	31910	31923	31933	–	–	1ELB
29/64	1	3	1/2	30158	–	39158	39058	30059	–	–	1B
15/32	1	3	1/2	30160	–	39160	39060	30060	–	–	1B
31/64	1	3	1/2	30162	–	39162	39062	30061	–	–	1B
*1/2	1	3	1/2	30164	30185	39164	39064	30062	30385	91293	1B
1/2	2	4-1/2	1/2	33112	–	31776	31786	31796	–	–	1LB
1/2	3	6	1/2	33132	–	31912	31924	31934	–	–	1ELB
9/16	1-1/8	3-1/2	9/16	30166	–	39166	39066	30063	–	–	1B
5/8	1-1/4	3-1/2	5/8	30168	30186	39168	39068	30064	30386	–	1B
5/8	2-1/4	5	5/8	33114	–	31777	31787	31797	–	–	1LB
5/8	3	6	5/8	33134	–	31914	31925	31935	–	–	1ELB
11/16	1-3/8	4	3/4	30170	–	39170	39070	30065	–	–	1B
3/4	1-1/2	4	3/4	30172	30187	39172	39072	30066	30387	–	1B
3/4	2-1/4	5	3/4	33116	–	31778	31788	31798	–	–	1LB
3/4	3	6	3/4	33136	–	31916	31926	31936	–	–	1ELB
7/8	1-1/2	4	7/8	30174	–	39174	39074	30067	–	–	1B
1	1-1/2	4	1	30176	30188	39176	39076	30068	30388	–	1B
1	2-1/4	5	1	33118	–	31779	31789	31799	–	–	1LB
1	3	6	1	33138	–	31917	31927	31937	–	–	1ELB
*Series 1B Set				30190	–	39190	39090	30070	–	–	1B

CONTINUED

