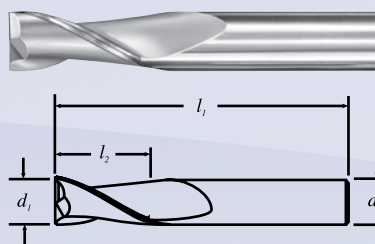


TOLERANCES

$d_1 = +.000 - .002$
 $d_2 = -.0001 - .0004$



Cutting Diameter d_1	Length of Cut l_2	Overall Length l_1	Shank Diameter d_2	Uncoated	Ti-NAMITE (TiN)	Ti-NAMITE-C (TiCN)	Ti-NAMITE-A (AlTiN)	DIA-CARB (CVD) [†]	Series Number
				EDP No.	EDP No.	EDP No.	EDP No.	EDP No.	
1/64	1/32	1-1/2	1/8	30301	39301	39501	30397	–	3
1/32	5/64	1-1/2	1/8	30303	39303	39503	30398	–	3
3/64	7/64	1-1/2	1/8	30305	39305	39505	30399	–	3
1/16	1/8	1-1/2	1/8	31701	31750	31303	31358	–	17
1/16	3/16	1-1/2	1/8	30307	39307	39507	30400	91266	3
5/64	3/16	1-1/2	1/8	30309	39309	39509	30435	–	3
3/32	3/16	1-1/2	1/8	31703	31751	31304	31359	–	17
3/32	9/32	1-1/2	1/8	30311	39311	39511	30436	–	3
7/64	3/8	1-1/2	1/8	30313	39313	39513	30437	–	3
1/8	1/4	1-1/2	1/8	31705	31752	31305	31360	–	17
1/8	3/8	1-1/2	1/8	30377	39377	39577	30469	–	3
1/8	3/8	2-1/2"	1/4"	–	32280	32260	32270	–	59
*1/8	1/2	1-1/2	1/8	30315	39315	39515	30438	91270	3
1/8	3/4	2-1/4	1/8	33341	31800	31810	31850	–	3L
1/8	1	3	1/8	33343	31938	31948	31958	–	3EL
9/64	1/2	2	3/16	30317	39317	39517	30439	–	3
5/32	5/16	2	3/16	31707	31753	31306	31361	–	17
5/32	1/2	2	3/16	30319	39319	39519	30440	–	3
11/64	5/8	2	3/16	30321	39321	39521	30441	–	3
3/16	3/8	2	3/16	31709	31754	31307	31362	–	17
3/16	9/16	3	1/4	–	32281	32261	32271	–	59
*3/16	5/8	2	3/16	30323	39323	39523	30442	91274	3
3/16	3/4	2-1/2	3/16	33301	31820	31825	31851	–	3L
3/16	1-1/8	3	3/16	33321	31939	31949	31959	–	3EL
13/64	5/8	2-1/2	1/4	30325	39325	39525	30443	–	3
7/32	7/16	2	1/4	31711	31755	31308	31363	–	17
7/32	5/8	2-1/2	1/4	30327	39327	39527	30444	–	3
15/64	3/4	2-1/2	1/4	30329	39329	39529	30445	–	3
1/4	1/2	2	1/4	31713	31756	31309	31364	–	17
1/4	5/8	3-1/2	1/4	–	32282	32262	32272	–	59
*1/4	3/4	2-1/2	1/4	30331	39331	39531	30446	91278	3
1/4	1-1/8	3	1/4	33303	31802	31812	31852	–	3L
1/4	1-1/2	4	1/4	33323	31940	31950	31960	–	3EL
17/64	3/4	2-1/2	5/16	30333	39333	39533	30447	–	3
9/32	3/4	2-1/2	5/16	30335	39335	39535	30448	–	3
19/64	13/16	2-1/2	5/16	30337	39337	39537	30449	–	3
5/16	1/2	2	5/16	31715	31757	31310	31365	–	17
5/16	11/16	4	5/16	–	32283	32263	32273	–	59
*5/16	13/16	2-1/2	5/16	30339	39339	39539	30450	91282	3
5/16	1-1/8	3	5/16	33305	31821	31826	31853	–	3L
5/16	1-5/8	4	5/16	33325	31941	31951	31961	–	3EL
21/64	1	2-1/2	3/8	30341	39341	39541	30451	–	3

continued on next page

Series 3



2-Flute End Mills – Square End
Micrograin Solid Carbide
30° Right Hand Spiral – Right Hand
Cutting – Center Cutting
[†] CVD = Dia-Carb CVD Diamond
Coatings

Serie 3



Fresas de 2 filos – Punta plana
Carburo sólido con micrograno
Hélice a derecha 30° – Corte a
derecha – Corte al centro
[†] CVD = Recubrimientos de
diamante CVD Dia-Carb

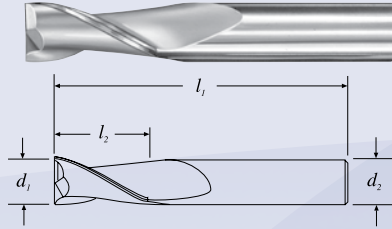
Série 3



Fraises 2 dents – Bout plat
Carbure monobloc, micrograin
Hélice à droite, 30° – Coupe à droite
– Coupe au centre
[†] CVD = Revêtements de diamant
Dia-Carb CVD



2 Flute – Single End – Square End



Fractional Series

3

TOLERANCES

$d_1 = +.000 - .002$
 $d_2 = -.0001 - .0004$

Series 3 • 3M



2-Flute End Mills – Square End
Micrograin Solid Carbide
30° Right Hand Spiral – Right Hand
Cutting – Center Cutting
† CVD = Dia-Carb CVD Diamond
Coatings

Serie 3 • 3M



Fresas de 2 filos – Punta plana
Carburo sólido con micrograno
Hélice a derecha 30° – Corte a
derecha – Corte al centro
† CVD = Recubrimientos de
diamante CVD Dia-Carb

Série 3 • 3M

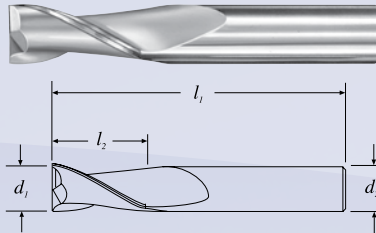


Fraises 2 dents – Bout plat
Carbure monobloc, micrograin
Hélice à droite, 30° – Coupe à droite
– Coupe au centre
† CVD = Revêtements de diamant
Dia-Carb CVD

Cutting Diameter d_1	Length of Cut l_2	Overall Length l_1	Shank Diameter d_2	Uncoated EDP No.	Ti-NAMITE (TiN) EDP No.	Ti-NAMITE-C (TiCN) EDP No.	Ti-NAMITE-A (AlTiN) EDP No.	DIA-CARB (CVD) [†] EDP No.	Series Number
11/32	1	2-1/2	3/8	30343	39343	39543	30452	–	3
23/64	1	2-1/2	3/8	30345	39345	39545	30453	–	3
3/8	5/8	2	3/8	31717	31758	31311	31366	–	17
3/8	7/8	4	3/8	–	32284	32264	32274	–	59
*3/8	1	2-1/2	3/8	30347	39347	39547	30454	91286	3
3/8	1-1/8	3	3/8	33307	31804	31814	31854	–	3L
3/8	1-3/4	4	3/8	33327	31942	31952	31962	–	3EL
25/64	1	2-3/4	7/16	30349	39349	39549	30455	–	3
13/32	1	2-3/4	7/16	30351	39351	39551	30456	–	3
27/64	1	2-3/4	7/16	30353	39353	39553	30457	–	3
7/16	5/8	2-1/2	7/16	31719	31759	31312	31367	–	17
7/16	1	2-3/4	7/16	30355	39355	39555	30458	–	3
7/16	2	4-1/2	7/16	33309	31822	31827	31855	–	3L
7/16	3	6	7/16	33329	31943	31953	31963	–	3EL
29/64	1	3	1/2	30357	39357	39557	30459	–	3
15/32	1	3	1/2	30359	39359	39559	30460	–	3
31/64	1	3	1/2	30361	39361	39561	30461	–	3
1/2	5/8	2-1/2	1/2	31721	31760	31313	31368	–	17
*1/2	1	3	1/2	30363	39363	39563	30462	91290	3
1/2	1	4-1/2	1/2	–	32285	32265	32275	–	59
1/2	2	4-1/2	1/2	33311	31806	31816	31856	–	3L
1/2	3	6	1/2	33331	31944	31954	31964	–	3EL
9/16	1-1/8	3-1/2	9/16	30365	39365	39565	30463	–	3
5/8	3/4	3	5/8	31723	31761	31314	31369	–	17
5/8	1-1/8	5	5/8	–	32286	32266	32276	–	59
5/8	1-1/4	3-1/2	5/8	30367	39367	39567	30464	–	3
5/8	2-1/4	5	5/8	33313	31823	31817	31857	–	3L
5/8	3	6	5/8	33333	31945	31955	31965	–	3EL
11/16	1-3/8	4	3/4	30369	39369	39569	30465	–	3
3/4	1	3	3/4	31725	31762	31315	31370	–	17
3/4	1-3/8	5-1/4	3/4	–	32287	32267	32277	–	59
3/4	1-1/2	4	3/4	30371	39371	39571	30466	–	3
3/4	2-1/4	5	3/4	33315	31808	31818	31858	–	3L
3/4	3	6	3/4	33335	31946	31956	31966	–	3EL
7/8	1-1/2	4	7/8	30373	39373	39573	30467	–	3
1	1-1/2	4	1	30375	39375	39575	30468	–	3
1	2-1/4	5	1	33317	31824	31819	31859	–	3L
1	3	6	1	33337	31947	31957	31967	–	3EL
				30389	39389	39589	30470	–	3

* Series 3 Set

	3L
	3EL
	17
	59



TOLERANCES

$$d_1 = +0,000 - 0,05$$

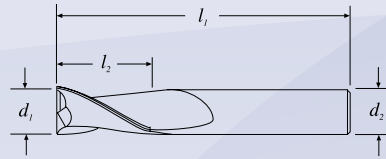
$$d_2 = +0,000 - 0,01$$

Cutting Diameter d_1 mm	Length of Cut l_2 mm	Overall Length l_1 mm	Shank Diameter d_2 mm	Uncoated	Ti-NAMITE (TiN)	Ti-NAMITE-C (TiCN)	Ti-NAMITE-A (AlTiN)	Series Number
				EDP No.	EDP No.	EDP No.	EDP No.	
1	2	38	3	41705	49262	49283	49304	17M
1	4	38	3	40305	48628	48650	48671	3M
1,5	3	38	3	41709	49263	49284	49305	17M
1,5	4,5	38	3	40309	48629	48651	48672	3M
2	4	38	3	41713	49264	49285	49306	17M
2	6,3	38	3	40313	48630	48652	48673	3M
2,5	5	38	3	41717	49265	49286	49307	17M
2,5	9,5	38	3	40317	48631	48653	48674	3M
3	6	38	3	41721	49266	49287	49308	17M
3	9	60	6	43910	43920	43930	43950	59M
3	12	38	3	40321	48632	48654	48675	3M
3	25	75	3	43301	49427	49440	49453	3XLM
3,5	7	50	4	41725	49267	49288	49309	17M
3,5	12	50	4	40325	48633	48655	48676	3M
4	8	50	4	41729	49268	49289	49310	17M
4	12	70	6	43911	43921	43931	43951	59M
4	14	50	4	40329	48634	48656	48677	3M
4	25	75	4	43303	49428	49441	49454	3XLM
4,5	9,5	50	4,5	41733	49269	49290	49311	17M
4,5	16	50	6	40333	48635	48657	48678	3M
5	10	50	5	41737	49270	49291	49312	17M
5	16	50	6	40337	48636	48658	48679	3M
5	25	75	5	43307	49430	49443	49456	3XLM
6	12	50	6	41741	49271	49292	49313	17M
6	15	80	6	43912	43922	43932	43952	59M
6	19	50	6	40341	48637	48659	48680	3M
6	25	75	6	43305	49429	49442	49455	3XLM
7	12	50	8	41745	49272	49293	49314	17M
7	19	63	8	40345	48638	48660	48681	3M
8	12	50	8	41749	49273	49294	49315	17M
8	20	63	8	40349	48639	48661	48682	3M
8	20	90	8	43913	43923	43933	43953	59M
8	25	75	8	43315	49431	49444	49457	3XLM
9	14	50	9	41753	49274	49295	49316	17M
9	22	75	10	40353	48640	48662	48683	3M

→ continued on next page



2 Flute – Single End – Square End



TOLERANCES

$d_1 = +0,000 - 0,05$
 $d_2 = +0,000 - 0,01$

Series 3M



2-Flute End Mills – Square End
Micrograin Solid Carbide
30° Right Hand Spiral – Right Hand
Cutting – Center Cutting

Serie 3M



Fresas de 2 filos – Punta plana
Carburo sólido con micrograno
Hélice a derecha 30° – Corte a
derecha – Corte al centro.

Série 3M



Fraises 2 dents – Bout plat
Carbure monobloc, micrograin
Hélice à droite, 30° – Coupe à droite
– Coupe au centre

Cutting Diameter d_1 mm	Length of Cut l_2 mm	Overall Length l_1 mm	Shank Diameter d_2 mm	Uncoated EDP No.	Ti-NAMITE (TiN) EDP No.	Ti-NAMITE-C (TiCN) EDP No.	Ti-NAMITE-A (AlTiN) EDP No.	Series Number
10	16	50	10	41757	49275	49296	49317	17M
10	22	75	10	40357	48641	48663	48684	3M
10	25	100	10	43914	43924	43934	43954	59M
10	38	100	10	43325	49432	49445	49458	3XLM
11	19	63	12	41761	49276	49297	49318	17M
11	25	75	12	40361	48642	48664	48685	3M
12	19	63	12	41765	49277	49298	49319	17M
12	25	75	12	40365	48643	48665	48686	3M
12	30	110	12	43915	43925	43935	43955	59M
12	50	100	12	43335	49433	49446	49459	3XLM
12	75	150	12	43345	49434	49447	49460	3XLM
14	32	89	14	40369	48644	48666	48687	3M
14	35	120	16	43916	43926	43936	43956	59M
14	75	150	14	43355	49435	49448	49461	3XLM
16	32	89	16	40373	48645	48667	48688	3M
16	40	120	16	43917	43927	43937	43957	59M
16	75	150	16	43365	49436	49449	49462	3XLM
18	38	100	18	40377	48646	48668	48689	3M
18	40	130	20	43918	43928	43938	43958	59M
18	75	150	18	43375	49437	49450	49463	3XLM
20	38	100	20	40381	48647	48669	48690	3M
20	45	130	20	43919	43929	43939	43959	59M
20	75	150	20	43385	49438	49451	49464	3XLM
25	38	100	25	40385	48648	48670	48691	3M
25	75	150	25	43395	49439	49452	49465	3XLM

