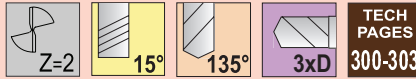


TOLERANCES

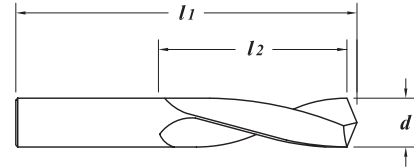
d	+0,0000 -0,0127mm (+.0000" -.0005")	
l_1	$\leq 1/8"$	+3,175 -1,588mm (+.125" -.062")
	$> 1/8"$	+3,175 -3,175mm (+.125" -.125")
l_2	$\leq 1/8"$	+3,175 -1,588mm (+.125" -.062")
	$> 1/8"$	+3,175 -3,175mm (+.125" -.125")



Series 1510H

1,588mm - 4,000mm
(.0625" - .1575")

- Slow Helix - HARDLUBE Coated**
- Reduzierte Helix - HARDLUBE-Beschichtet**
- Hélice Lenta - Recubrimiento de HARDLUBE**
- Hélice Réduite - Revêtement HARDLUBE**
- Elica Dolce - Rivestimento in HARDLUBE**
- 缓螺旋 - HARDLUBE 涂层**



Solid submicron grain carbide drill
Excellent heat resistance and lubricity
Heavy web for extra rigidity and added strength
Thinned point

Recommended to run in titanium, inconel, hastalloy, waspalloy, and stainless steel

Live tooling recommended on lathe processes
Shank tolerance: h6
Uncoated - page 57



Vollhartmetallbohrer aus Feinkornhartmetall
Exzellente Hitzebeständigkeit und Schmiereigenschaften
Starke Schneidkante für hohe Stabilität
Ausspitzung

Empfohlen für Titan, Inconel, Hastalloy, Waspalloy, und Rostfreie Stähle

Empfehlung fuer den Einsatz auf der Drehmaschine
Schaft-Toleranz: h6
Unbeschichtet - Seite 57



Broca de submicrograno sólido carburo
Excelente resistencia térmica y lubricación
Cuerpo resistente para mayor rigidez y resistencia
Punta rebajada

Recomendado para titanio, inconel, hastalloy, waspalloy y acero inoxidable

Recomendación para la aplicación en torno
Tolerancia del vástago: h6
Sin recubrimiento - Página 57



Forets carbure submicrograin
Excellente resistance a la haute temperature et glissement
Corps lourd pour plus de rigidite
Ame amincie

Recommander pour titane, inconel, hastalloy, waspalloy et acier inoxydable

Outil de filature nécessaires pour une utilisation sur un processus de tournage
Tolerance queue: h6
Sans revêtement - Page 57



Punte in sub-micro grana
Eccellente resistenza al calore e autolubrificante
Gambo robusto per una massima rigidità
Centro scaricato

Raccomandata per lavorazioni su titanio, inconel, hastalloy, waspalloy e acciaio inox

Utensili rotanti sono consigliate se usato su un tornio
Tolleranza gambo: h6
Non Rivestito - Pagina 57



整体硬质合金钻头
耐热性和润滑性特好
大的中心刃产生超强刚性和强度
经过修磨的刀尖

推荐加工钛合金、铬镍铁耐热耐蚀合金、耐盐酸镍基合金、耐高热镍基合金和不锈钢合金

不建议在车床，或工具必须纺纱
柄部公差: h6
未涂层 - 57页

EDP#	d † Diameter		l_1 Overall Length	l_2 Flute Length
	Decimal	Metric		
19071	.0625	1/16"	1.588	1-3/4"
19076	.0635	#52	1.613	1-3/4"
19081	.0670	#51	1.702	1-3/4"
19086	.0700	#50	1.778	1-3/4"
19091	.0730	#49	1.854	1-3/4"
19096	.0760	#48	1.930	1-3/4"
19101	.0781	5/64"	1.984	1-3/4"
19106	.0785	#47	1.994	3/4"
19116	.0787		2.000	45
19121	.0810	#46	2.057	1-3/4"
19126	.0820	#45	2.083	1-3/4"
19131	.0860	#44	2.184	1-3/4"
19136	.0890	#43	2.261	1-3/4"
19141	.0935	#42	2.375	1-3/4"
19146	.0938	3/32"	2.383	1-3/4"
19151	.0960	#41	2.438	1-13/16"
19156	.0980	#40	2.489	1-13/16"
19161	.0984		2.500	46
19166	.0995	#39	2.527	1-13/16"
19171	.1015	#38	2.578	1-13/16"
19176	.1040	#37	2.642	1-13/16"
19181	.1065	#36	2.705	1-13/16"
19186	.1094	7/64"	2.779	1-13/16"
19191	.1100	#35	2.794	1-7/8"
19196	.1110	#34	2.819	1-7/8"
19201	.1130	#33	2.870	1-7/8"
19206	.1160	#32	2.946	1-7/8"
19211	.1181		3.000	48
19216	.1200	#31	3.048	1-7/8"
19221	.1250	1/8"	3.175	1-7/8"
19226	.1285	#30	3.264	1-15/16"
19231	.1360	#29	3.454	1-15/16"
19236	.1378		3.500	49
19241	.1405	#28	3.569	1-15/16"
19246	.1406	9/64"	3.571	1-15/16"
19251	.1440	#27	3.658	2-1/16"
19256	.1470	#26	3.734	2-1/16"
19261	.1495	#25	3.797	2-1/16"
19266	.1520	#24	3.861	2-1/16"
19271	.1540	#23	3.912	2-1/16"
19276	.1562	5/32"	3.967	2-1/16"
19281	.1570	#22	3.988	2-1/8"
19286	.1575		4.000	54

continued →

Series 1510H (continued)

4,039mm - 8,500mm
(.1590" - .3346")

DRILLS

EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	
	Decimal	Metric			
19291	.1590	#21	4.039	2-1/8"	1-1/16"
19296	.1610	#20	4.089	2-1/8"	1-1/16"
19301	.1660	#19	4.216	2-1/8"	1-1/16"
19306	.1695	#18	4.305	2-1/8"	1-1/16"
19311	.1719	11/64"	4.366	2-1/8"	1-1/16"
19316	.1730	#17	4.394	2-3/16"	1-1/8"
19321	.1770	#16	4.496	2-3/16"	1-1/8"
19326	.1772		4.500	56	29
19331	.1800	#15	4.572	2-3/16"	1-1/8"
19336	.1820	#14	4.623	2-3/16"	1-1/8"
19341	.1850	#13	4.700	2-3/16"	1-1/8"
19346	.1875	3/16"	4.763	2-3/16"	1-1/8"
19351	.1890	#12	4.801	2-1/4"	1-3/16"
19356	.1910	#11	4.851	2-1/4"	1-3/16"
19361	.1935	#10	4.915	2-1/4"	1-3/16"
19366	.1960	#9	4.978	2-1/4"	1-3/16"
19371	.1969		5.000	57	30
19376	.1990	#8	5.055	2-1/4"	1-3/16"
19381	.2010	#7	5.105	2-1/4"	1-3/16"
19386	.2031	13/64"	5.159	2-1/4"	1-3/16"
19391	.2040	#6	5.182	2-3/8"	1-1/4"
19396	.2055	#5	5.220	2-3/8"	1-1/4"
19401	.2090	#4	5.309	2-3/8"	1-1/4"
19406	.2130	#3	5.410	2-3/8"	1-1/4"
19411	.2165		5.500	60	32
19416	.2188	7/32"	5.558	2-3/8"	1-1/4"
19421	.2210	#2	5.613	2-7/16"	1-5/16"
19426	.2280	#1	5.791	2-7/16"	1-5/16"
19431	.2340	A	5.944	2-7/16"	1-5/16"
19436	.2344	15/64"	5.954	2-7/16"	1-5/16"
19441	.2362		6.000	64	35
19446	.2380	B	6.045	2-1/2"	1-3/8"
19451	.2420	C	6.147	2-1/2"	1-3/8"
19456	.2460	D	6.248	2-1/2"	1-3/8"
19461	.2500	1/4" / E	6.350	2-1/2"	1-3/8"
19466	.2559		6.500	67	37
19471	.2570	F	6.528	2-5/8"	1-7/16"
19476	.2610	G	6.629	2-5/8"	1-7/16"
19481	.2656	17/64"	6.746	2-5/8"	1-7/16"
19486	.2660	H	6.756	2-11/16"	1-1/2"
19491	.2720	I	6.909	2-11/16"	1-1/2"
19496	.2756		7.000	68	38
19501	.2770	J	7.036	2-11/16"	1-1/2"
19506	.2810	K	7.137	2-11/16"	1-1/2"
19511	.2812	9/32"	7.142	2-11/16"	1-1/2"
19516	.2900	L	7.366	2-3/4"	1-9/16"
19521	.2950	M	7.493	2-3/4"	1-9/16"
19526	.2953		7.500	70	40
19531	.2969	19/64"	7.541	2-3/4"	1-9/16"
19536	.3020	N	7.671	2-15/16"	1-5/8"
19541	.3125	5/16"	7.938	2-15/16"	1-5/8"
19546	.3150		8.000	75	43
19551	.3160	O	8.026	2-15/16"	1-11/16"
19556	.3230	P	8.204	2-15/16"	1-11/16"
19561	.3281	21/64"	8.334	2-15/16"	1-11/16"
19566	.3320	Q	8.433	3"	1-11/16"
19571	.3346		8.500	76	43

EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	
	Decimal	Metric			
19576	.3390	R	8.611	3"	1-11/16"
19581	.3438	11/32"	8.733	3"	1-11/16"
19586	.3480	S	8.839	3-1/16"	1-3/4"
19591	.3543		9.000	78	44
19596	.3580	T	9.093	3-1/16"	1-3/4"
19601	.3594	23/64"	9.129	3-1/16"	1-3/4"
19606	.3680	U	9.347	3-1/8"	1-13/16"
19611	.3740		9.500	79	46
19616	.3750	3/8"	9.525	3-1/8"	1-13/16"
19621	.3770	V	9.576	3-1/4"	1-7/8"
19626	.3860	W	9.804	3-1/4"	1-7/8"
19631	.3906	25/64"	9.921	3-1/4"	1-7/8"
19636	.3937		10.000	84	49
19641	.3970	X	10.084	3-5/16"	1-15/16"
19646	.4040	Y	10.262	3-5/16"	1-15/16"
19651	.4062	13/32"	10.317	3-5/16"	1-15/16"
19656	.4130	Z	10.490	3-3/8"	2"
19661	.4134		10.500	86	51
19666	.4219	27/64"	10.716	3-3/8"	2"
19671	.4331		11.000	87	52
19676	.4375	7/16"	11.113	3-7/16"	2-1/16"
19681	.4528		11.500	91	54
19686	.4531	29/64"	11.509	3-9/16"	2-1/8"
19691	.4688	15/32"	11.908	3-5/8"	2-1/8"
19696	.4724		12.000	94	56
19701	.4844	31/64"	12.304	3-11/16"	2-3/16"
19706	.4921		12.500	95	56
19711	.5000	1/2"	12.700	3-3/4"	2-1/4"
19716	.5118		13.000	107	60
19721	.5156	33/64"	13.096	4-1/4"	2-3/8"
19726	.5312	17/32"	13.492	4-1/4"	2-3/8"
19731	.5315		13.500	107	60
19736	.5469	35/64"	13.891	4-1/4"	2-3/8"
19741	.5512		14.000	107	60
19746	.5625	9/16"	14.287	4-1/2"	2-1/2"
19751	.5709		14.500	115	65
19756	.5781	37/64"	14.683	4-1/2"	2-1/2"
19761	.5906		15.000	115	65
19766	.5938	19/32"	15.082	4-1/2"	2-1/2"
19771	.6094	39/64"	15.478	4-1/2"	2-1/2"
19776	.6102		15.500	115	65
19781	.6250	5/8"	15.875	4-1/2"	2-1/2"
19786	.6299		16.000	115	65