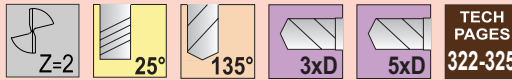


TOLERANCES

<i>d</i>	+.0000" - .0005" (+.0000 - .0127mm)	
<i>l1</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)
<i>l2</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)

NEW ITEMS

Series 1520H, 1205H

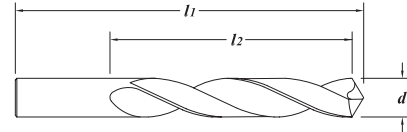
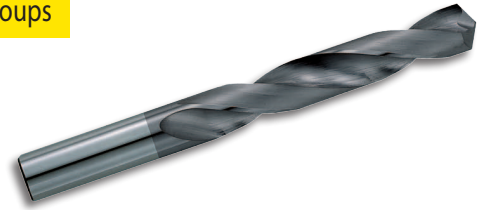


.0625" - .1015"
(1.588mm - 2.578mm)

General purpose for all material groups

Hardlube Coating

- Solid submicron grain carbide drill
- Excellent heat resistance and lubricity
- No spotting required in most applications
- 4-facet self-centering point
- Live tooling recommended on lathe processes
- Uncoated - page 67



GENERAL PURPOSE DRILLS

3xD (1520H) EDP#	5xD (1205H) EDP#	<i>d</i> † Diameter		<i>l1</i> Overall Length	<i>l2</i> Flute Length
		Decimal	Metric		
77166		.0625	1/16"	1-3/4"	5/8"
	89166	.0625	1/16"	1-3/4"	3/4"
77171		.0635	#52	1-3/4"	11/16"
	89171	.0635	#52	1-3/4"	3/4"
77176		.0670	#51	1-3/4"	11/16"
	89176	.0670	#51	1-3/4"	3/4"
77181		.0700	#50	1-3/4"	11/16"
	89181	.0700	#50	1-3/4"	7/8"
77186		.0730	#49	1-3/4"	11/16"
	89186	.0730	#49	1-3/4"	7/8"
77191		.0760	#48	1-3/4"	11/16"
	89191	.0760	#48	1-3/4"	7/8"
77196		.0781	5/64"	1-3/4"	11/16"
	89196	.0781	5/64"	1-3/4"	7/8"
77201		.0785	#47	1-3/4"	3/4"
	89201	.0785	#47	1-3/4"	7/8"
77206		.0787		44	19
	89206	.0787		44	22
77211		.0810	#46	1-3/4"	3/4"
	89211	.0810	#46	1-3/4"	7/8"
77216		.0820	#45	1-3/4"	3/4"
	89216	.0820	#45	1-3/4"	7/8"
77221		.0860	#44	1-3/4"	3/4"
	89221	.0860	#44	2"	1"
77226		.0890	#43	1-3/4"	3/4"
	89226	.0890	#43	2"	1"
77231		.0935	#42	1-3/4"	3/4"
	89231	.0935	#42	2"	1"
77236		.0938	3/32"	1-3/4"	3/4"
	89236	.0938	3/32"	2"	1"
77241		.0960	#41	1-13/16"	13/16"
	89241	.0960	#41	2"	1"
77246		.0980	#40	1-13/16"	13/16"
	89246	.0980	#40	2"	1"
77251		.0984		46	21
	89251	.0984		57	32
77256		.0995	#39	1-13/16"	13/16"
	89256	.0995	#39	2-1/4"	1-1/4"
77261		.1015	#38	1-13/16"	13/16"
	89261	.1015	#38	2-1/4"	1-1/4"

Series 1520H, 1205H (continued)

.1040" - .1719"
(2.642mm - 4.366mm)

3xD (1520H) EDP#	5xD (1205H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length
		Decimal	Metric		
77266		.1040	#37	2.642	1-13/16"
	89266	.1040	#37	2.642	2-1/4"
77271		.1065	#36	2.705	1-13/16"
	89271	.1065	#36	2.705	2-1/4"
77276		.1094	7/64"	2.779	1-13/16"
	89276	.1094	7/64"	2.779	2-1/4"
77281		.1100	#35	2.794	1-7/8"
	89281	.1100	#35	2.794	2-1/4"
77286		.1110	#34	2.819	1-7/8"
	89286	.1110	#34	2.819	2-1/4"
77291		.1130	#33	2.870	1-7/8"
	89291	.1130	#33	2.870	2-1/4"
77296		.1160	#32	2.946	1-7/8"
	89296	.1160	#32	2.946	2-1/4"
77301		.1181		3.000	48
	89301	.1181		3.000	57
77306		.1200	#31	3.048	1-7/8"
	89306	.1200	#31	3.048	2-1/4"
77311		.1250	1/8"	3.175	1-7/8"
	89311	.1250	1/8"	3.175	2-1/4"
77316		.1285	#30	3.264	1-15/16"
	89316	.1285	#30	3.264	2-1/4"
77321		.1360	#29	3.454	1-15/16"
	89321	.1360	#29	3.454	2-1/2"
77326		.1378		3.500	49
	89326	.1378		3.500	63
77331		.1405	#28	3.569	1-15/16"
	89331	.1405	#28	3.569	2-1/2"
77336		.1406	9/64"	3.571	1-15/16"
	89336	.1406	9/64"	3.571	2-1/2"
77341		.1440	#27	3.658	2-1/16"
	89341	.1440	#27	3.658	2-1/2"
77346		.1470	#26	3.734	2-1/16"
	89346	.1470	#26	3.734	2-1/2"
77351		.1495	#25	3.797	2-1/16"
	89351	.1495	#25	3.797	2-1/2"
77356		.1520	#24	3.861	2-1/16"
	89356	.1520	#24	3.861	2-1/2"
77361		.1540	#23	3.912	2-1/16"
	89361	.1540	#23	3.912	2-1/2"
77366		.1562	5/32"	3.967	2-1/16"
	89366	.1562	5/32"	3.967	2-1/2"
77371		.1570	#22	3.988	2-1/8"
	89371	.1570	#22	3.988	2-1/2"
77376		.1575		4.000	54
	89376	.1575		4.000	63
77381		.1590	#21	4.039	2-1/8"
	89381	.1590	#21	4.039	2-1/2"
77386		.1610	#20	4.089	2-1/8"
	89386	.1610	#20	4.089	2-1/2"
77391		.1660	#19	4.216	2-1/8"
	89391	.1660	#19	4.216	2-3/4"
77396		.1695	#18	4.305	2-1/8"
	89396	.1695	#18	4.305	2-3/4"
77401		.1719	11/64"	4.366	2-1/8"
	89401	.1719	11/64"	4.366	2-3/4"

3xD (1520H) EDP#	5xD (1205H) EDP#	d^+ Diameter		l_1 Overall Length	l_2 Flute Length	
		Decimal	Metric			
77406		.1730	#17	4.394	2-3/16"	1-1/8"
	89406	.1730	#17	4.394	2-3/4"	1-5/8"
77411		.1770	#16	4.496	2-3/16"	1-1/8"
	89411	.1770	#16	4.496	2-3/4"	1-5/8"
77416		.1772		4.500	56	29
	89416	.1772		4.500	70	41
77421		.1800	#15	4.572	2-3/16"	1-1/8"
	89421	.1800	#15	4.572	2-3/4"	1-5/8"
77426		.1820	#14	4.623	2-3/16"	1-1/8"
	89426	.1820	#14	4.623	2-3/4"	1-5/8"
77431		.1850	#13	4.700	2-3/16"	1-1/8"
	89431	.1850	#13	4.700	2-3/4"	1-5/8"
77436		.1875	3/16"	4.763	2-3/16"	1-1/8"
	89436	.1875	3/16"	4.763	2-3/4"	1-5/8"
77441		.1890	#12	4.801	2-1/4"	1-3/16"
	89441	.1890	#12	4.801	2-3/4"	1-5/8"
77446		.1910	#11	4.851	2-1/4"	1-3/16"
	89446	.1910	#11	4.851	2-3/4"	1-5/8"
77451		.1935	#10	4.915	2-1/4"	1-3/16"
	89451	.1935	#10	4.915	2-3/4"	1-5/8"
77456		.1960	#9	4.978	2-1/4"	1-3/16"
	89456	.1960	#9	4.978	3"	1-3/4"
77461		.1969		5.000	57	30
	89461	.1969		5.000	76	44
77466		.1990	#8	5.055	2-1/4"	1-3/16"
	89466	.1990	#8	5.055	3"	1-3/4"
77471		.2010	#7	5.105	2-1/4"	1-3/16"
	89471	.2010	#7	5.105	3"	1-3/4"
77476		.2031	13/64"	5.159	2-1/4"	1-3/16"
	89476	.2031	13/64"	5.159	3"	1-3/4"
77481		.2040	#6	5.182	2-3/8"	1-1/4"
	89481	.2040	#6	5.182	3"	1-3/4"
77486		.2055	#5	5.220	2-3/8"	1-1/4"
	89486	.2055	#5	5.220	3"	1-3/4"
77491		.2090	#4	5.309	2-3/8"	1-1/4"
	89491	.2090	#4	5.309	3"	1-3/4"
77496		.2130	#3	5.410	2-3/8"	1-1/4"
	89496	.2130	#3	5.410	3"	1-3/4"
77501		.2165		5.500	60	32
	89501	.2165		5.500	76	44
77506		.2188	7/32"	5.558	2-3/8"	1-1/4"
	89506	.2188	7/32"	5.558	3"	1-3/4"
77511		.2210	#2	5.613	2-7/16"	1-5/16"
	89511	.2210	#2	5.613	3"	1-3/4"
77516		.2280	#1	5.791	2-7/16"	1-5/16"
	89516	.2280	#1	5.791	3"	1-3/4"
77521		.2340	A	5.944	2-7/16"	1-5/16"
	89521	.2340	A	5.944	3-1/4"	2"
77526		.2344	15/64"	5.954	2-7/16"	1-5/16"
	89526	.2344	15/64"	5.954	3-1/4"	2"
77531		.2362		6.000	64	35
	89531	.2362		6.000	82	50
77536		.2380	B	6.045	2-1/2"	1-3/8"
	89536	.2380	B	6.045	3-1/4"	2"
77541		.2420	C	6.147	2-1/2"	1-3/8"
	89541	.2420	C	6.147	3-1/4"	2"

Series 1520H, 1205H (continued)

.2460" - .3543"
(6.248mm - 9.000mm)

3xD (1520H) EDP#	5xD (1205H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	
		Decimal	Metric			
77546		.2460	D	6.248	2-1/2"	1-3/8"
	89546	.2460	D	6.248	3-1/4"	2"
77551		.2500	1/4" / E	6.350	2-1/2"	1-3/8"
	89551	.2500	1/4" / E	6.350	3-1/4"	2"
77556		.2559		6.500	67	37
	89556	.2559		6.500	82	50
77561		.2570	F	6.528	2-5/8"	1-7/16"
	89561	.2570	F	6.528	3-1/4"	2"
77566		.2610	G	6.629	2-5/8"	1-7/16"
	89566	.2610	G	6.629	3-1/2"	2-1/8"
77571		.2656	17/64"	6.746	2-5/8"	1-7/16"
	89571	.2656	17/64"	6.746	3-1/2"	2-1/8"
77576		.2660	H	6.756	2-11/16"	1-1/2"
	89576	.2660	H	6.756	3-1/2"	2-1/8"
77581		.2720	I	6.909	2-11/16"	1-1/2"
	89581	.2720	I	6.909	3-1/2"	2-1/8"
77586		.2756		7.000	68	38
	89586	.2756		7.000	88	54
77591		.2770	J	7.036	2-11/16"	1-1/2"
	89591	.2770	J	7.036	3-1/2"	2-1/8"
77596		.2810	K	7.137	2-11/16"	1-1/2"
	89596	.2810	K	7.137	3-1/2"	2-1/8"
77601		.2812	9/32"	7.142	2-11/16"	1-1/2"
	89601	.2812	9/32"	7.142	3-1/2"	2-1/8"
77606		.2900	L	7.366	2-3/4"	1-9/16"
	89606	.2900	L	7.366	3-1/2"	2-1/8"
77611		.2950	M	7.493	2-3/4"	1-9/16"
	89611	.2950	M	7.493	3-3/4"	2-3/8"
77616		.2953		7.500	70	40
	89616	.2953		7.500	95	60
77621		.2969	19/64"	7.541	2-3/4"	1-9/16"
	89621	.2969	19/64"	7.541	3-3/4"	2-3/8"
77626		.3020	N	7.671	2-15/16"	1-5/8"
	89626	.3020	N	7.671	3-3/4"	2-3/8"
77631		.3125	5/16"	7.938	2-15/16"	1-5/8"
	89631	.3125	5/16"	7.938	3-3/4"	2-3/8"
77636		.3150		8.000	75	43
	89636	.3150		8.000	95	60
77641		.3160	O	8.026	2-15/16"	1-11/16"
	89641	.3160	O	8.026	3-3/4"	2-3/8"
77646		.3230	P	8.204	2-15/16"	1-11/16"
	89646	.3230	P	8.204	3-3/4"	2-3/8"
77651		.3281	21/64"	8.334	2-15/16"	1-11/16"
	89651	.3281	21/64"	8.334	4"	2-1/2"
77656		.3320	Q	8.433	3"	1-11/16"
	89656	.3320	Q	8.433	4"	2-1/2"
77661		.3346		8.500	76	43
	89661	.3346		8.500	101	63
77666		.3390	R	8.611	3"	1-11/16"
	89666	.3390	R	8.611	4"	2-1/2"
77671		.3438	11/32"	8.733	3"	1-11/16"
	89671	.3438	11/32"	8.733	4"	2-1/2"
77676		.3480	S	8.839	3-1/16"	1-3/4"
	89676	.3480	S	8.839	4"	2-1/2"
77681		.3543		9.000	78	44
	89681	.3543		9.000	101	63

3xD (1520H) EDP#	5xD (1205H) EDP#	d^+ Diameter		l_1 Overall Length	l_2 Flute Length
		Decimal	Metric		
77686		.3580	T	9.093	3-1/16"
	89686	.3580	T	9.093	4-1/4"
77691		.3594	23/64"	9.129	3-1/16"
	89691	.3594	23/64"	9.129	4-1/4"
77696		.3680	U	9.347	3-1/8"
	89696	.3680	U	9.347	4-1/4"
77701		.3740		9.500	79
	89701	.3740		9.500	107
77706		.3750	3/8"	9.525	3-1/8"
	89706	.3750	3/8"	9.525	4-1/4"
77711		.3770	V	9.576	3-1/4"
	89711	.3770	V	9.576	4-1/4"
77716		.3860	W	9.804	3-1/4"
	89716	.3860	W	9.804	4-1/2"
77721		.3906	25/64"	9.921	3-1/4"
	89721	.3906	25/64"	9.921	4-1/2"
77726		.3937		10.000	84
	89726	.3937		10.000	114
77731		.3970	X	10.084	3-5/16"
	89731	.3970	X	10.084	4-1/2"
77736		.4040	Y	10.262	3-5/16"
	89736	.4040	Y	10.262	4-1/2"
77741		.4062	13/32"	10.317	3-5/16"
	89741	.4062	13/32"	10.317	4-1/2"
77746		.4130	Z	10.490	3-3/8"
	89746	.4130	Z	10.490	4-1/2"
77751		.4134		10.500	86
	89751	.4134		10.500	114
77756		.4219	27/64"	10.716	3-3/8"
	89756	.4219	27/64"	10.716	4-1/2"
77761		.4331		11.000	87
	89761	.4331		11.000	114
77766		.4375	7/16"	11.113	3-7/16"
	89766	.4375	7/16"	11.113	4-1/2"
77771		.4528		11.500	91
	89771	.4528		11.500	120
77776		.4531	29/64"	11.509	3-9/16"
	89776	.4531	29/64"	11.509	4-3/4"
77781		.4688	15/32"	11.908	3-5/8"
	89781	.4688	15/32"	11.908	4-3/4"
77786		.4724		12.000	94
	89786	.4724		12.000	120
77791		.4844	31/64"	12.304	3-11/16"
	89791	.4844	31/64"	12.304	4-3/4"
77796		.4921		12.500	95
	89796	.4921		12.500	120
77801		.5000	1/2"	12.700	3-3/4"
	89801	.5000	1/2"	12.700	4-3/4"
77806		.5118		13.000	107
	89806	.5118		13.000	127
77811		.5156	33/64"	13.096	4-1/4"
	89811	.5156	33/64"	13.096	5"
77816		.5312	17/32"	13.492	4-1/4"
	89816	.5312	17/32"	13.492	5"
NEW 77821		.5315		13.500	107
	89821	.5315		13.500	127

Series 1520H, 1205H (continued)

.5469" - .6299"
(13.891mm - 16.000mm)

	3xD (1520H) EDP#	5xD (1205H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	
			Decimal	Metric			
NEW	77826		.5469	35/64"	13.891	4-1/4"	2-3/8"
		89826	.5469	35/64"	13.891	5"	3-1/4"
NEW	77831		.5512		14.000	107	60
		89831	.5512		14.000	127	83
NEW	77836		.5625	9/16"	14.287	4-1/2"	2-1/2"
		89836	.5625	9/16"	14.287	5"	3-1/4"
NEW	77841		.5709		14.500	115	65
		89841	.5709		14.500	127	83
NEW	77846		.5781	37/64"	14.683	4-1/2"	2-1/2"
		89846	.5781	37/64"	14.683	5-1/4"	3-1/2"
NEW	77851		.5906		15.000	115	65
		89851	.5906		15.000	133	89
NEW	77856		.5938	19/32"	15.082	4-1/2"	2-1/2"
		89856	.5938	19/32"	15.082	5-1/4"	3-1/2"
NEW	77861		.6094	39/64"	15.478	4-1/2"	2-1/2"
		89861	.6094	39/64"	15.478	5-1/4"	3-1/2"
NEW	77866		.6102		15.500	115	65
		89866	.6102		15.500	133	89
NEW	77871		.6250	5/8"	15.875	4-1/2"	2-1/2"
		89871	.6250	5/8"	15.875	5-1/4"	3-1/2"
NEW	77876		.6299		16.000	115	65
		89876	.6299		16.000	133	89

