



MASTER CATALOG **2018**

VOLUME TWO | **ROTATING TOOLS**



HOLEMAKING | TAPPING | SOLID END MILLING | INDEXABLE MILLING

➤ TF Drill for High Metal Removal Rates

Primary Application

B105 solid carbide drills are ideal for high metal removal rates and excellent hole quality in short chipping materials such as gray cast iron, ductile iron, and aluminum as well as in short-hole titanium applications.

Features and Benefits

Three Cutting Edges

- Higher feed rates than with two-edged drills.

Three Spacious Flutes

- Rapid chip evacuation.
- Three-margin lands deliver better hole quality and straightness than two-flute drills.

Wear-Resistant Carbide Grade

- High tool life in abrasive materials such as cast iron and aluminum die cast alloys.



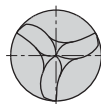
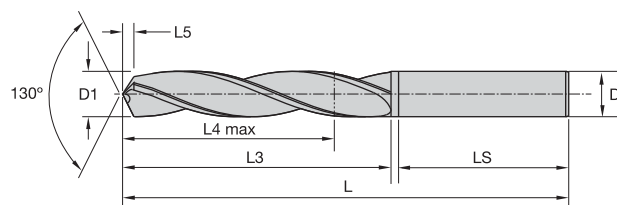
Uncoated K10™ Grade

- The uncoated grade helps to prevent built-up edge in drilling aluminum and high-temp alloys.

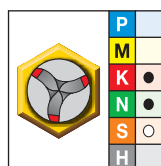
Customization

- Intermediate diameters available as engineered solutions.
- Length variations and step drills available as custom solutions.





■ B105 • ~5 x D



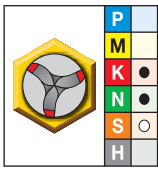
● first choice

○ alternate choice

K10	D1 diameter				L	L3	L4 max	L5	LS	D
	mm	in	fraction	wire size						
B105A03000	3,000	.1181	—	—	66	28	23	0,7	36	6
B105A03100	3,100	.1220	—	—	66	28	23	0,8	36	6
B105A03200	3,200	.1260	—	—	66	28	23	0,8	36	6
B105A03300	3,300	.1299	—	—	66	28	23	0,8	36	6
B105A03400	3,400	.1339	—	—	66	28	23	0,8	36	6
B105A03500	3,500	.1378	—	—	66	28	23	0,9	36	6
B105A03600	3,600	.1417	—	—	66	28	23	0,9	36	6
B105A03700	3,700	.1457	—	—	66	28	23	0,9	36	6
B105A03800	3,800	.1496	—	—	74	36	29	0,9	36	6
B105A03900	3,900	.1535	—	—	74	36	29	1,0	36	6
B105A04000	4,000	.1575	—	—	74	36	29	1,0	36	6
B105A04100	4,100	.1614	—	—	74	36	29	1,0	36	6
B105A04200	4,200	.1654	—	—	74	36	29	1,0	36	6
B105A04300	4,300	.1693	—	—	74	36	29	1,1	36	6
B105A04500	4,500	.1772	—	—	74	36	29	1,1	36	6
B105A04600	4,600	.1811	—	—	74	36	29	1,1	36	6
B105A04650	4,650	.1831	—	—	74	36	29	1,2	36	6
B105A04700	4,700	.1850	—	13	74	36	29	1,2	36	6
B105A04800	4,800	.1890	—	12	82	44	35	1,2	36	6
B105A04900	4,900	.1929	—	—	82	44	35	1,2	36	6
B105A05000	5,000	.1969	—	—	82	44	35	1,2	36	6
B105A05100	5,100	.2008	—	—	82	44	35	1,3	36	6
B105A05200	5,200	.2047	—	—	82	44	35	1,3	36	6
B105A05400	5,400	.2126	—	—	82	44	35	1,3	36	6
B105A05500	5,500	.2165	—	—	82	44	35	1,4	36	6
B105A05550	5,550	.2185	—	—	82	44	35	1,4	36	6
B105A05600	5,600	.2205	—	—	82	44	35	1,4	36	6
B105A05700	5,700	.2244	—	—	82	44	35	1,4	36	6
B105A05800	5,800	.2283	—	—	82	44	35	1,4	36	6
B105A06000	6,000	.2362	—	—	82	44	35	1,5	36	6
B105A06100	6,100	.2402	—	—	91	53	43	1,5	36	8
B105A06200	6,200	.2441	—	—	91	53	43	1,5	36	8
B105A06300	6,300	.2480	—	—	91	53	43	1,6	36	8
B105A06350	6,350	.2500	1/4	—	91	53	43	1,6	36	8
B105A06400	6,400	.2520	—	—	91	53	43	1,6	36	8
B105A06500	6,500	.2559	—	—	91	53	43	1,6	36	8

(continued)

(B105 • ~5 x D — continued)

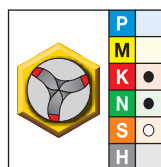


- first choice
- alternate choice

K10	D1 diameter				L	L3	L4 max	L5	LS	D
	mm	in	fraction	wire size						
B105A06600	6,600	.2598	—	—	91	53	43	1,6	36	8
B105A06700	6,700	.2638	—	—	91	53	43	1,7	36	8
B105A06800	6,800	.2677	—	—	91	53	43	1,7	36	8
B105A07000	7,000	.2756	—	—	91	53	43	1,7	36	8
B105A07100	7,100	.2795	—	—	91	53	43	1,8	36	8
B105A07400	7,400	.2913	—	—	91	53	43	1,8	36	8
B105A07500	7,500	.2953	—	—	91	53	43	1,9	36	8
B105A07600	7,600	.2992	—	—	91	53	43	1,9	36	8
B105A07800	7,800	.3071	—	—	91	53	43	1,9	36	8
B105A08000	8,000	.3150	—	—	91	53	43	2,0	36	8
B105A08100	8,100	.3189	—	—	103	61	49	2,0	40	10
B105A08200	8,200	.3228	—	—	103	61	49	2,0	40	10
B105A08300	8,300	.3268	—	—	103	61	49	2,1	40	10
B105A08400	8,400	.3307	—	—	103	61	49	2,1	40	10
B105A08500	8,500	.3346	—	—	103	61	49	2,1	40	10
B105A08600	8,600	.3386	—	—	103	61	49	2,1	40	10
B105A08700	8,700	.3425	—	—	103	61	49	2,2	40	10
B105A08800	8,800	.3465	—	—	103	61	49	2,2	40	10
B105A09000	9,000	.3543	—	—	103	61	49	2,2	40	10
B105A09100	9,100	.3583	—	—	103	61	49	2,3	40	10
B105A09300	9,300	.3661	—	—	103	61	49	2,3	40	10
B105A09500	9,500	.3740	—	—	103	61	49	2,4	40	10
B105A09700	9,700	.3819	—	—	103	61	49	2,4	40	10
B105A09800	9,800	.3858	—	—	103	61	49	2,4	40	10
B105A10000	10,000	.3937	—	—	103	61	49	2,5	40	10
B105A10100	10,100	.3976	—	—	118	71	56	2,5	45	12
B105A10200	10,200	.4016	—	—	118	71	56	2,5	45	12
B105A10300	10,300	.4055	—	—	118	71	56	2,6	45	12
B105A10400	10,400	.4094	—	—	118	71	56	2,6	45	12
B105A10500	10,500	.4134	—	—	118	71	56	2,6	45	12
B105A10700	10,700	.4213	—	—	118	71	56	2,7	45	12
B105A10800	10,800	.4252	—	—	118	71	56	2,7	45	12
B105A11000	11,000	.4331	—	—	118	71	56	2,7	45	12
B105A11100	11,100	.4370	—	—	118	71	56	2,8	45	12
B105A11200	11,200	.4409	—	—	118	71	56	2,8	45	12
B105A11500	11,500	.4528	—	—	118	71	56	2,9	45	12
B105A11700	11,700	.4606	—	—	118	71	56	2,9	45	12
B105A11800	11,800	.4646	—	—	118	71	56	2,9	45	12
B105A12000	12,000	.4724	—	—	118	71	56	3,0	45	12
B105A12100	12,100	.4764	—	—	124	77	60	3,0	45	14
B105A12500	12,500	.4921	—	—	124	77	60	3,1	45	14
B105A12700	12,700	.5000	1/2	—	124	77	60	3,2	45	14
B105A12800	12,800	.5039	—	—	124	77	60	3,2	45	14
B105A13000	13,000	.5118	—	—	124	77	60	3,2	45	14
B105A13100	13,100	.5157	—	—	124	77	60	3,3	45	14
B105A13500	13,500	.5315	—	—	124	77	60	3,4	45	14
B105A13800	13,800	.5433	—	—	124	77	60	3,4	45	14
B105A14000	14,000	.5512	—	—	124	77	60	3,5	45	14

(continued)

(B105 • ~5 x D — continued)



● first choice

○ alternate choice

D1 diameter

K10	mm	in	fraction	wire size	L	L3	L4 max	L5	LS	D
B105A14200	14,200	.5591	—	—	133	83	63	3,5	48	16
B105A14500	14,500	.5709	—	—	133	83	63	3,6	48	16
B105A15000	15,000	.5906	—	—	133	83	63	3,7	48	16
B105A15100	15,100	.5945	—	—	133	83	63	3,8	48	16
B105A15500	15,500	.6102	—	—	133	83	63	3,9	48	16
B105A15800	15,800	.6220	—	—	133	83	63	3,9	48	16
B105A16000	16,000	.6299	—	—	133	83	63	4,0	48	16
B105A16500	16,500	.6496	—	—	143	93	71	4,1	48	18
B105A17000	17,000	.6693	—	—	143	93	71	4,2	48	18
B105A17500	17,500	.6890	—	—	143	93	71	4,4	48	18
B105A18000	18,000	.7087	—	—	143	93	71	4,5	48	18
B105A18500	18,500	.7283	—	—	153	101	77	4,6	50	20
B105A19000	19,000	.7480	—	—	153	101	77	4,7	50	20
B105A19500	19,500	.7677	—	—	153	101	77	4,9	50	20
B105A20000	20,000	.7874	—	—	153	101	77	5,0	50	20
B105A20500	20,500	.8071	—	—	167	112	85	5,1	50	20
B105A21000	21,000	.8268	—	—	167	112	85	5,2	50	20

Tolerance • Inch

nominal size range	D1 tolerance m7	D tolerance h6
>.1181-.2362	.0002/.0006	.0000/- .0003
>.2362-.3937	.0002/.0008	.0000/- .0004
>.3937-.7087	.0003/.0010	.0000/- .0004
>.7087-1.0000	.0003/.0011	.0000/- .0005

Tolerance • Metric

nominal size range	D1 tolerance m7	D tolerance h6
>3-6	0,004/0,016	0,000/-0,008
>6-10	0,006/0,021	0,000/-0,009
>10-18	0,007/0,025	0,000/-0,011
>18-25,4	0,008/0,029	0,000/-0,013

Application Data

■ TF Drills • B105 Series • Grade K10™ • Flood Coolant • Drill Diameters 3–20mm (.1181-.7874")

Material Group													
		Cutting Speed — vc			Metric								
		Range — m/min			Recommended Feed Rate (f) by Diameter								
		min	Starting Value	max		3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
K	1	60	85	110	mm/r	0,11–0,20	0,12–0,20	0,16–0,28	0,20–0,35	0,22–0,42	0,24–0,50	0,28–0,61	0,30–0,68
	2	70	70	90	mm/r	0,11–0,20	0,12–0,20	0,16–0,28	0,20–0,35	0,22–0,42	0,24–0,50	0,28–0,61	0,30–0,68
	3	50	50	70	mm/r	0,09–0,18	0,10–0,18	0,14–0,26	0,18–0,33	0,02–0,40	0,22–0,48	0,26–0,59	0,28–0,66
N	1	100	210	410	mm/r	0,09–0,15	0,10–0,20	0,18–0,33	0,20–0,38	0,25–0,43	0,03–0,51	0,43–0,58	0,64–0,79
	2	100	250	250	mm/r	0,10–0,19	0,12–0,21	0,18–0,33	0,25–0,42	0,30–0,50	0,35–0,58	0,44–0,74	0,52–0,88
	3	100	180	400	mm/r	0,09–0,16	0,10–0,20	0,12–0,26	0,16–0,36	0,20–0,40	0,24–0,45	0,30–0,50	0,34–0,60
S	4	60	170	250	mm/r	0,08–0,15	0,13–0,18	0,18–0,33	0,20–0,36	0,23–0,38	0,33–0,46	0,38–0,48	0,58–0,76
	4	20	20	50	mm/r	0,03–0,05	0,04–0,07	0,07–0,09	0,09–0,12	0,11–0,15	0,13–0,18	0,17–0,24	0,22–0,30
Material Group		Cutting Speed — vc			Inch								
		Range — SFM			Recommended Feed Rate (f) by Diameter								
		min	Starting Value	max		1/8 .125	3/16 .188	1/4 .250	5/16 .313	3/8 .375	1/2 .500	5/8 .625	3/4 .750
K	1	200	280	360	IPR	.004-.008	.005-.008	.006-.011	.008-.014	.009-.017	.009-.020	.011-.024	.012-.027
	2	230	230	300	IPR	.004-.008	.005-.008	.006-.011	.008-.014	.009-.017	.009-.020	.011-.024	.012-.027
	3	160	160	230	IPR	.004-.007	.004-.007	.006-.010	.007-.013	.001-.016	.009-.019	.010-.023	.011-.026
N	1	330	690	1340	IPR	.004-.006	.004-.008	.007-.013	.008-.015	.010-.017	.001-.020	.017-.023	.025-.031
	2	330	820	820	IPR	.004-.008	.005-.008	.007-.013	.010-.017	.012-.020	.014-.023	.017-.029	.021-.035
	3	330	590	1310	IPR	.004-.006	.004-.008	.005-.010	.006-.014	.008-.016	.009-.018	.012-.020	.013-.024
S	4	200	560	820	IPR	.003-.006	.005-.007	.007-.013	.008-.014	.009-.015	.013-.018	.015-.019	.023-.030
	4	70	70	160	IPR	.001-.002	.002-.003	.003-.004	.004-.005	.004-.006	.005-.007	.007-.009	.009-.012