

MASTER CATALOG 2018

VOLUME TWO | **ROTATING TOOLS**



HOLEMAKING | TAPPING | SOLID END MILLING | INDEXABLE MILLING

➤ **Y-TECH™ Drills** with **Through Coolant** for **Difficult-to-Machine Materials**

Primary Application

The B29_YPL series solid carbide drills are specifically engineered to drill stainless steel, high-temp alloys, and difficult-to-machine materials.

Y-TECH drills deliver best-in-class hole quality and longest tool life in these difficult-to-machine workpiece materials. Operate these drills with standard through coolant.

Features and Benefits

YPL Drill-Point Design

- Ensures good centering and chip formation.
- No jamming of chips and enables easy reconditioning.

Uneven Flute-to-Flute Angle

- Unbalanced forces by design eliminate chipping on margin lands.

Three-Margin Lands

- Reduce pendulum motion by directing forces towards third margin, which results in superior hole accuracy (cylindricity, constant diameter, hole straightness).

KC7315™ Grade

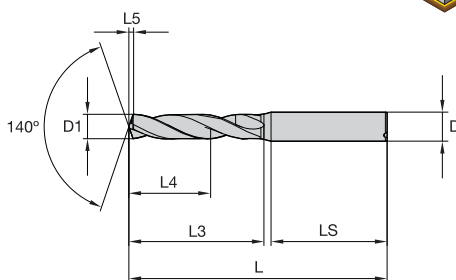
- A multilayer, TiAlN-based coating with high hot hardness enables higher cutting speeds and outstanding wear resistance.
- Optimized surface finish of the tool ensures chip evacuation in high-speed drilling applications.

Y-TECH[™] drills deliver best-in-class hole quality.



Customization

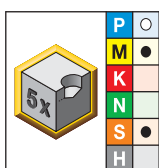
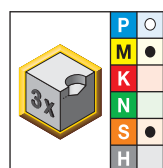
- Intermediate diameters available as semi-standards.
- Length variations and step drills available as engineered solutions.
- Using Kennametal slim line hydraulic chucks together with standard B29_YPL is recommended if workpiece contours need to be bypassed.



For information on L, L3, and L4 max, see the Solid Carbide Drills foldout table.



■ B291/B292_YPL • ~3 x D/~5 x D

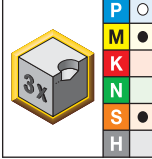
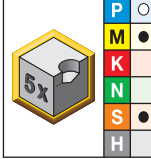


- first choice
- alternate choice

		D1 diameter						
short • KC7315	long • KC7315	mm	in	fraction	wire size	L5	LS	D
B291A03000YPL	B292A03000YPL	3,000	.1181	—	—	0,6	36	6
B291A03100YPL	B292A03100YPL	3,100	.1220	—	—	0,6	36	6
B291A03175YPL	B292A03175YPL	3,175	.1250	1/8	—	0,6	36	6
B291A03200YPL	B292A03200YPL	3,200	.1260	—	—	0,6	36	6
B291A03300YPL	B292A03300YPL	3,300	.1299	—	—	0,7	36	6
B291A03400YPL	B292A03400YPL	3,400	.1339	—	—	0,7	36	6
B291A03454YPL	—	3,454	.1360	—	29	0,7	36	6
B291A03500YPL	B292A03500YPL	3,500	.1378	—	—	0,7	36	6
B291A03600YPL	B292A03600YPL	3,600	.1417	—	—	0,7	36	6
B291A03700YPL	B292A03700YPL	3,700	.1457	—	—	0,7	36	6
B291A03800YPL	B292A03800YPL	3,800	.1496	—	—	0,8	36	6
B291A03900YPL	B292A03900YPL *	3,900	.1535	—	—	0,8	36	6
B291A03970YPL	B292A03970YPL	3,970	.1563	5/32	—	0,8	36	6
B291A04000YPL	B292A04000YPL	4,000	.1575	—	—	0,8	36	6
B291A04100YPL	B292A04100YPL	4,100	.1614	—	—	0,8	36	6
—	B292A04200YPL	4,200	.1654	—	—	0,8	36	6
B291A04300YPL	B292A04300YPL	4,300	.1693	—	—	0,8	36	6
B291A04400YPL	—	4,400	.1732	—	—	0,9	36	6
B291A04500YPL	B292A04500YPL	4,500	.1772	—	—	0,9	36	6
—	B292A04700YPL	4,700	.1850	—	13	0,9	36	6
B291A04763YPL	B292A04763YPL	4,763	.1875	3/16	—	0,9	36	6
B291A04800YPL	B292A04800YPL	4,800	.1890	—	12	0,9	36	6
B291A04851YPL	B292A04851YPL	4,851	.1910	—	11	0,9	36	6
B291A04900YPL	—	4,900	.1929	—	—	0,9	36	6
B291A04915YPL	B292A04915YPL	4,915	.1935	—	10	1,0	36	6
B291A05000YPL	B292A05000YPL	5,000	.1969	—	—	1,0	36	6
B291A05100YPL	B292A05100YPL	5,100	.2008	—	—	1,0	36	6
B291A05200YPL	B292A05200YPL	5,200	.2047	—	—	1,0	36	6
B291A05410YPL	B292A05410YPL	5,410	.2130	—	3	1,1	36	6
B291A05500YPL	B292A05500YPL	5,500	.2165	—	—	1,1	36	6
—	B292A05558YPL	5,558	.2188	7/32	—	1,1	36	6
B291A05600YPL	B292A05600YPL	5,600	.2205	—	—	1,1	36	6
—	B292A05800YPL	5,800	.2283	—	—	1,1	36	6
B291A05900YPL	—	5,900	.2323	—	—	1,1	36	6
B291A06000YPL	B292A06000YPL	6,000	.2362	—	—	1,2	36	6
B291A06200YPL	B292A06200YPL	6,200	.2441	—	—	1,2	36	8

(continued)

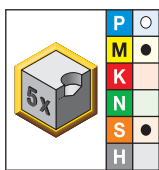
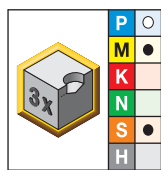
(B291/B292_YPL • ~3 x D/~5 x D — continued)

 		D1 diameter				● first choice ○ alternate choice		
short • KC7315	long • KC7315	mm	in	fraction	wire size	L5	LS	D
B291A06350YPL	B292A06350YPL	6,350	.2500	1/4	—	1,2	36	8
B291A06500YPL	B292A06500YPL	6,500	.2559	—	—	1,3	36	8
—	B292A06528YPL	6,528	.2570	—	—	1,3	36	8
—	B292A06600YPL	6,600	.2598	—	—	1,3	36	8
—	B292A06746YPL	6,746	.2656	17/64	—	1,3	36	8
B291A06747YPL	—	6,747	.2656	17/64	—	1,3	36	8
B291A06800YPL	B292A06800YPL	6,800	.2677	—	—	1,3	36	8
—	B292A06900YPL	6,900	.2717	—	—	1,3	36	8
B291A07000YPL	B292A07000YPL	7,000	.2756	—	—	1,4	36	8
—	B292A07100YPL	7,100	.2795	—	—	1,4	36	8
B291A07144YPL	—	7,144	.2813	9/32	—	1,4	36	8
—	B292A07145YPL	7,145	.2813	9/32	—	1,4	36	8
B291A07200YPL	B292A07200YPL	7,200	.2835	—	—	1,4	36	8
—	B292A07400YPL	7,400	.2913	—	—	1,4	36	8
B291A07500YPL	B292A07500YPL *	7,500	.2953	—	—	1,4	36	8
—	B292A07600YPL	7,600	.2992	—	—	1,5	36	8
—	B292A07900YPL	7,900	.3110	—	—	1,5	36	8
B291A07938YPL	B292A07938YPL	7,938	.3125	5/16	—	1,5	36	8
B291A08000YPL	B292A08000YPL	8,000	.3150	—	—	1,5	36	8
—	B292A08100YPL	8,100	.3189	—	—	1,6	40	10
—	B292A08200YPL	8,200	.3228	—	—	1,6	40	10
B291A08334YPL	B292A08334YPL *	8,334	.3281	21/64	—	1,6	40	10
—	B292A08433YPL	8,433	.3320	—	—	1,6	40	10
B291A08500YPL	B292A08500YPL	8,500	.3346	—	—	1,6	40	10
B291A08600YPL	B292A08600YPL	8,600	.3386	—	—	1,7	40	10
B291A08733YPL	B292A08733YPL	8,733	.3438	11/32	—	1,7	40	10
B291A08800YPL	B292A08800YPL	8,800	.3465	—	—	1,7	40	10
B291A08900YPL *	B292A08900YPL	8,900	.3504	—	—	1,7	40	10
B291A09000YPL	B292A09000YPL	9,000	.3543	—	—	1,7	40	10
B291A09129YPL	—	9,129	.3594	23/64	—	1,8	40	10
—	B292A09130YPL	9,130	.3594	23/64	—	1,8	40	10
—	B292A09200YPL	9,200	.3622	—	—	1,8	40	10
B291A09300YPL	—	9,300	.3661	—	—	1,8	40	10
—	B292A09347YPL	9,347	.3680	—	—	1,8	40	10
B291A09500YPL	B292A09500YPL	9,500	.3740	—	—	1,8	40	10
B291A09525YPL	B292A09525YPL	9,525	.3750	3/8	—	1,8	40	10
—	B292A09600YPL	9,600	.3780	—	—	1,8	40	10
B291A09700YPL	B292A09700YPL	9,700	.3819	—	—	1,9	40	10
B291A09800YPL	B292A09800YPL	9,800	.3858	—	—	1,9	40	10
B291A10000YPL	B292A10000YPL	10,000	.3937	—	—	1,9	40	10
—	B292A10100YPL	10,100	.3976	—	—	1,9	45	12
B291A10200YPL	B292A10200YPL	10,200	.4016	—	—	2,0	45	12
B291A10320YPL	B292A10320YPL	10,320	.4063	13/32	—	2,0	45	12
B291A10500YPL	B292A10500YPL	10,500	.4134	—	—	2,0	45	12
B291A10716YPL	B292A10716YPL	10,716	.4219	27/64	—	2,0	45	12
B291A11000YPL	B292A11000YPL	11,000	.4331	—	—	2,1	45	12
—	B292A11112YPL	11,112	.4375	7/16	—	2,1	45	12
B291A11113YPL	—	11,113	.4375	7/16	—	2,1	45	12
B291A11500YPL	B292A11500YPL *	11,500	.4528	—	—	2,2	45	12
B291A11509YPL	B292A11509YPL	11,509	.4531	29/64	—	2,2	45	12
B291A11800YPL	—	11,800	.4646	—	—	2,2	45	12
B291A11908YPL	B292A11908YPL	11,908	.4688	15/32	—	2,3	45	12

(continued)

(B291/B292_YPL • ~3 x D/~5 x D — continued)

Solid Carbide Drills



● first choice

○ alternate choice

		D1 diameter						
short • KC7315	long • KC7315	mm	in	fraction	wire size	L5	LS	D
B291A12000YPL	B292A12000YPL	12,000	.4724	—	—	2,3	45	12
B291A12300YPL	—	12,300	.4843	—	—	2,3	45	14
—	B292A12304YPL	12,304	.4844	31/64	—	2,3	45	14
B291A12500YPL	B292A12500YPL	12,500	.4921	—	—	2,4	45	14
B291A12700YPL	B292A12700YPL	12,700	.5000	1/2	—	2,4	45	14
B291A12900YPL	—	12,900	.5079	—	—	2,5	45	14
B291A13000YPL	B292A13000YPL	13,000	.5118	—	—	2,5	45	14
—	B292A13500YPL	13,500	.5315	—	—	2,6	45	14
B291A13800YPL	—	13,800	.5433	—	—	2,6	45	14
—	B292A13900YPL *	13,900	.5472	—	—	2,6	45	14
B291A14000YPL	B292A14000YPL	14,000	.5512	—	—	2,7	45	14
—	B292A14200YPL *	14,200	.5591	—	—	2,7	48	16
B291A14288YPL	B292A14288YPL	14,288	.5625	9/16	—	2,7	48	16
B291A14500YPL	B292A14500YPL	14,500	.5709	—	—	2,8	48	16
B291A15000YPL	B292A15000YPL	15,000	.5906	—	—	2,8	48	16
—	B292A15500YPL	15,500	.6102	—	—	2,9	48	16
—	B292A15600YPL	15,600	.6142	—	—	3,0	48	16
B291A15800YPL	—	15,800	.6220	—	—	3,0	48	16
B291A15875YPL	B292A15875YPL	15,875	.6250	5/8	—	3,0	48	16
B291A16000YPL	B292A16000YPL *	16,000	.6299	—	—	3,0	48	16
B291A16100YPL *	—	16,100	.6339	—	—	3,1	48	18
—	B292A16500YPL *	16,500	.6496	—	—	3,1	48	18
B291A17000YPL	B292A17000YPL *	17,000	.6693	—	—	3,2	48	18
B291A17463YPL	B292A17463YPL	17,463	.6875	11/16	—	3,3	48	18
B291A17500YPL *	B292A17500YPL *	17,500	.6890	—	—	3,3	48	18
B291A17900YPL *	—	17,900	.7047	—	—	3,4	48	18
B291A18000YPL	B292A18000YPL *	18,000	.7087	—	—	3,4	48	18
—	B292A18500YPL *	18,500	.7283	—	—	3,5	50	20
—	B292A19000YPL *	19,000	.7480	—	—	3,6	50	20
B291A19050YPL *	B292A19050YPL	19,050	.7500	3/4	—	3,6	50	20
B291A19800YPL	—	19,800	.7795	—	—	3,7	50	20
—	B292A20000YPL	20,000	.7874	—	—	3,8	50	20
—	B292A20500YPL *	20,500	.8071	—	—	3,9	50	20
—	B292A21000YPL *	21,000	.8268	—	—	4,0	50	20

NOTE: *Made-to-order standard item. Standard pricing, manufacturing lead time, and minimum order quantity applies.

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

Tolerance • Inch

nominal size range	D1 tolerance m7	D tolerance h6
>.1181–.2362	.0002/.0006	.0000/-0.0003
>.2362–.3937	.0002/.0008	.0000/-0.0004
>.3937–.7087	.0003/.0010	.0000/-0.0004
>.7087–1.0000	.0003/.0011	.0000/-0.0005

■ Y-TECH™ Drill • B29_YPL Series • Grade KC7315™ • Through 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
P	5	45	65	80	mm/r	0,04–0,08	0,06–0,09	0,07–0,12	0,09–0,16	0,11–0,19	0,13–0,21	0,15–0,26	0,18–0,30
	6	50	60	90	mm/r	0,04–0,06	0,04–0,07	0,06–0,10	0,10–0,15	0,09–0,16	0,11–0,20	0,13–0,24	0,16–0,28
M	1	40	50	60	mm/r	0,07–0,11	0,08–0,12	0,13–0,17	0,14–0,21	0,14–0,21	0,17–0,23	0,19–0,25	0,22–0,27
	2	40	50	80	mm/r	0,07–0,11	0,07–0,12	0,08–0,17	0,13–0,21	0,14–0,22	0,17–0,23	0,19–0,25	0,22–0,27
	3	40	50	70	mm/r	0,04–0,06	0,04–0,07	0,04–0,07	0,05–0,08	0,06–0,09	0,06–0,10	0,06–0,10	0,07–0,11
S	1	15	20	30	mm/r	0,06–0,08	0,06–0,08	0,07–0,10	0,10–0,13	0,11–0,14	0,12–0,16	0,14–0,19	0,17–0,22
	2	20	20	30	mm/r	0,05–0,07	0,05–0,07	0,06–0,08	0,08–0,11	0,09–0,12	0,10–0,13	0,12–0,16	0,14–0,18
	3	25	30	50	mm/r	0,03–0,05	0,03–0,05	0,04–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,11	0,08–0,12
	4	30	30	50	mm/r	0,03–0,05	0,03–0,05	0,04–0,08	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,11	0,08–0,12
H	1	10	20	30	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,02–0,05	0,04–0,07	0,06–0,09	0,07–0,10	0,08–0,11
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
P	5	150	210	260	IPR	.002–.003	.002–.004	.003–.005	.004–.006	.004–.008	.005–.008	.006–.010	.007–.012
	6	160	200	300	IPR	.002–.002	.002–.003	.002–.004	.004–.006	.004–.006	.004–.008	.005–.009	.006–.011
M	1	130	160	200	IPR	.003–.004	.003–.005	.005–.007	.006–.008	.006–.008	.007–.009	.008–.010	.009–.011
	2	130	160	260	IPR	.003–.004	.003–.005	.003–.007	.005–.008	.006–.009	.007–.009	.008–.010	.009–.011
	3	130	160	230	IPR	.002–.002	.002–.003	.002–.003	.002–.003	.002–.004	.002–.004	.002–.004	.003–.004
S	1	50	70	100	IPR	.002–.003	.002–.003	.003–.004	.004–.005	.004–.006	.005–.006	.006–.008	.007–.009
	2	70	70	100	IPR	.002–.003	.002–.003	.002–.003	.003–.004	.004–.005	.004–.005	.005–.006	.006–.007
	3	80	100	160	IPR	.001–.002	.001–.002	.002–.003	.002–.004	.002–.004	.002–.004	.003–.004	.003–.005
	4	100	100	160	IPR	.001–.002	.001–.002	.002–.003	.002–.004	.002–.004	.002–.004	.003–.004	.003–.005
H	1	30	70	100	IPR	.000–.001	.001–.001	.001–.002	.001–.002	.002–.003	.002–.004	.003–.004	.003–.004