



MASTER CATALOG 2018

VOLUME TWO | **ROTATING TOOLS**



HOLEMAKING | TAPPING | SOLID END MILLING | INDEXABLE MILLING

➤ HP Beyond™ Step Drills with Through Coolant for Steel and Iron



Primary Application

Most tapped holes require a chamfer. The B731_HP and B732_HP step drills offer a one-pass solution in steels and irons in traditional tap sizes to reduce cycle time and increase productivity. An extensive range of step drills are available to cover taps products by Kennametal.

Features and Benefits

HP Drill-Point Design

- Low thrust prevents workpiece flexing.
- Excellent centering capabilities.

Unique Flute Design

- Drastically improved chip evacuation.
- Better hole surface quality.

KCPK15™ Beyond Grade

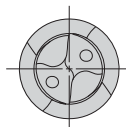
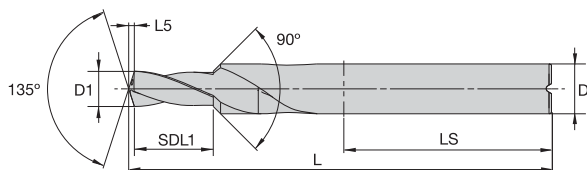
- The grade is a multilayer, TiAlN-based coating with high hot hardness. High cutting speeds enable usage in MQL applications.
- The highly polished surface ensures superior chip evacuation even when low-pressure coolant is applied.
- Improves average metal removal rate and tool life by 10–20%.

Drill and chamfer in one shot before tapping.

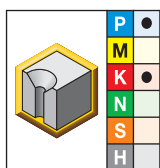


Customization

- Intermediate diameters available as semi-standards.
- Using Kennametal slim line hydraulic chucks together is recommended if workpiece contours need to be bypassed.



■ B731_HP • Short



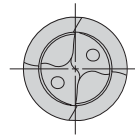
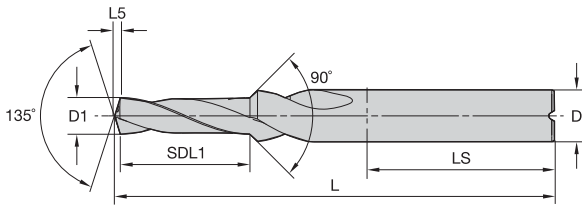
● first choice
○ alternate choice

short • KCPK15	D1 diameter			L	SDL1	L5	LS	D
	mm	in	fraction					
B731A03734HP	3,734	.1470	—	66	10	0,7	36	6
B731A04200HP	4,200	.1654	—	66	12	0,8	36	6
B731A04496HP	4,496	.1770	—	79	13	0,9	36	8
B731A05000HP	5,000	.1969	—	79	13	0,9	36	8
B731A05106HP	5,106	.2010	—	79	15	1,0	36	8
B731A05410HP	5,410	.2130	—	79	16	1,0	36	8
B731A06528HP	6,528	.2570	—	89	17	1,2	40	10
B731A06800HP	6,800	.2677	—	89	16	1,3	40	10
B731A06909HP	6,909	.2720	—	89	18	1,3	40	10
B731A07938HP	7,938	.3125	5/16	89	19	1,5	45	12
B731A08433HP	8,433	.3320	—	102	21	1,6	45	12
B731A08500HP	8,500	.3346	—	102	19	1,6	45	12
B731A09921HP	9,921	.3906	25/64	107	23	1,9	45	14
B731A10200HP	10,200	.4016	—	107	22	1,9	45	14
B731A10500HP	10,500	.4134	—	107	22	2,0	45	14
B731A10716HP	10,716	.4219	27/64	107	27	2,0	45	14
B731A12000HP	12,000	.4724	—	115	27	2,2	48	16
B731A12304HP *	12,304	.4844	31/64	115	28	2,3	48	16
B731A12500HP	12,500	.4921	—	115	27	2,3	48	16
B731A13096HP	13,096	.5156	33/64	115	31	2,4	48	16
B731A13495HP	13,495	.5313	17/32	123	32	2,5	48	18
B731A14000HP	14,000	.5512	—	123	29	2,6	48	18
B731A16670HP *	16,670	.6563	21/32	131	38	3,1	50	20
B731A17463HP	17,463	.6875	11/16	131	40	3,2	50	20
B731A19446HP *	19,446	.7656	49/64	153	43	3,6	56	25

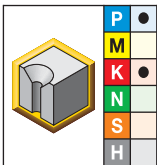
NOTE: *Made-to-order standard item. Standard pricing, manufacturing lead time, and minimum order quantity applies.

nominal size range	Tolerance • Metric	
	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

nominal size range	Tolerance • Inch	
	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



■ B732_HP • Long



● first choice
○ alternate choice

long • KCPK15	D1 diameter			L	SDL1	L5	LS	D
	mm	in	fraction					
B732A03734HP	3,734	.1470	—	66	16	0,7	36	6
B732A04200HP	4,200	.1654	—	66	17	0,8	36	6
B732A04496HP	4,496	.1770	—	79	17	0,9	36	8
B732A05000HP	5,000	.1969	—	79	20	0,9	36	8
B732A05106HP	5,106	.2010	—	79	20	1,0	36	8
B732A05410HP *	5,410	.2130	—	79	21	1,0	36	8
B732A06528HP	6,528	.2570	—	89	24	1,2	40	10
B732A06800HP	6,800	.2677	—	89	25	1,3	40	10
B732A06909HP	6,909	.2720	—	89	25	1,3	40	10
B732A07938HP	7,938	.3125	5/16	102	27	1,5	45	12
B732A08433HP	8,433	.3320	—	102	29	1,6	45	12
B732A08500HP	8,500	.3346	—	102	30	1,6	45	12
B732A09921HP *	9,921	.3906	25/64	107	33	1,9	45	14
B732A10200HP	10,200	.4016	—	107	35	1,9	45	14
B732A10500HP	10,500	.4134	—	107	35	2,0	45	14
B732A10716HP	10,716	.4219	27/64	107	37	2,0	45	14
B732A12000HP	12,000	.4724	—	115	40	2,2	48	16
B732A12500HP *	12,500	.4921	—	115	40	2,3	48	16
B732A13096HP *	13,096	.5156	33/64	123	44	2,4	48	16
B732A13495HP *	13,495	.5313	17/32	123	45	2,5	48	18
B732A14000HP	14,000	.5512	—	123	43	2,6	48	18
B732A16670HP	16,670	.6563	21/32	141	55	3,1	50	20
B732A17463HP	17,463	.6875	11/16	141	58	3,2	50	20

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

nominal size range	Tolerance • Metric		nominal size range	Tolerance • Inch	
	D1 tolerance m7	D tolerance h6		D1 tolerance m7	D tolerance h6
>3-6	0,004/0,016	0,000/-0,008	>.1181-.2362	.0002/.0006	.0000/-0.0003
>6-10	0,006/0,021	0,000/-0,009	>.2362-.3937	.0002/.0008	.0000/-0.0004
>10-18	0,007/0,025	0,000/-0,011	>.3937-.7087	.0003/.0010	.0000/-0.0004
>18-25,4	0,008/0,029	0,000/-0,013	>.7087-1.0000	.0003/.0011	.0000/-0.0005

■ HP Step Drills • B73_HP Series • Grade KCPK15™ • Through Coolant • Drill Diameters 3–20mm (.1181–.7874")

Solid Carbide Drills

		Cutting Speed – vc			Metric								
		Range – m/min			Recommended Feed Rate (f) by Diameter								
Material Group		min	Starting Value	max		3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
P	0	150	240	270	mm/r	0,06–0,14	0,08–0,18	0,09–0,20	0,12–0,26	0,14–0,30	0,15–0,33	0,17–0,39	0,20–0,43
	1	140	220	240	mm/r	0,07–0,17	0,09–0,21	0,11–0,24	0,14–0,30	0,16–0,35	0,18–0,39	0,20–0,46	0,24–0,50
	2	180	210	240	mm/r	0,07–0,14	0,09–0,17	0,11–0,20	0,14–0,24	0,16–0,28	0,18–0,32	0,20–0,37	0,24–0,43
	3	120	150	180	mm/r	0,09–0,17	0,12–0,21	0,14–0,24	0,17–0,30	0,20–0,35	0,22–0,39	0,26–0,46	0,29–0,50
	4	100	140	180	mm/r	0,08–0,17	0,11–0,20	0,12–0,23	0,15–0,28	0,17–0,33	0,19–0,37	0,22–0,43	0,25–0,45
	6	140	150	180	mm/r	0,07–0,13	0,09–0,15	0,11–0,17	0,13–0,21	0,15–0,24	0,17–0,27	0,19–0,33	0,21–0,36
K	1	140	160	180	mm/r	0,09–0,18	0,12–0,22	0,13–0,26	0,16–0,33	0,19–0,37	0,21–0,41	0,24–0,48	0,27–0,51
	2	100	150	200	mm/r	0,09–0,16	0,12–0,19	0,13–0,22	0,16–0,27	0,19–0,32	0,21–0,35	0,24–0,41	0,27–0,45
	3	100	140	180	mm/r	0,07–0,14	0,09–0,17	0,12–0,20	0,14–0,24	0,16–0,28	0,18–0,32	0,21–0,37	0,24–0,39
		Cutting Speed – vc			Inch								
		Range – SFM			Recommended Feed Rate (f) by Diameter								
Material Group		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	0	490	790	890	IPR	.002–.006	.003–.007	.004–.008	.005–.010	.006–.012	.006–.013	.007–.015	.008–.017
	1	460	720	790	IPR	.003–.007	.004–.008	.004–.009	.006–.012	.006–.014	.007–.015	.008–.018	.009–.020
	2	590	690	790	IPR	.003–.006	.004–.007	.004–.008	.006–.009	.006–.011	.007–.013	.008–.015	.009–.017
	3	390	490	590	IPR	.004–.007	.005–.008	.006–.009	.007–.012	.008–.014	.009–.015	.010–.018	.011–.020
	4	330	460	590	IPR	.003–.007	.004–.008	.005–.009	.006–.011	.007–.013	.008–.015	.009–.017	.010–.018
	6	460	490	590	IPR	.003–.005	.004–.006	.004–.007	.005–.008	.006–.009	.007–.011	.008–.013	.008–.014
K	1	460	520	590	IPR	.004–.007	.005–.009	.005–.010	.006–.013	.008–.015	.008–.016	.009–.019	.011–.020
	2	330	490	660	IPR	.004–.006	.005–.008	.005–.009	.006–.011	.008–.013	.008–.014	.009–.016	.011–.018
	3	330	460	590	IPR	.003–.006	.004–.007	.005–.008	.006–.009	.006–.011	.007–.013	.008–.015	.009–.015