kennametal.com

KENNAMETAL®

INNOVATIONS

2021 | 01 | METRIC

INNOVATIONS

Services & Support **2–5**
Contact Information 2–3
Spare Parts & Accessories Information • Online Catalogue 4–5
Holemaking **6–50**
HPX Drill • Solid Carbide Drilling 6–23
KenTIP FS • Modular Drilling 24–32
eBore • Modular Boring 34–50
Solid End Milling **52–70, 88–91**
HARVI I TE 52–70
ER Solid Collets for Duo-Lock 88–91
Turning **114–145**
Vibration-Free Boring Bars with Bolt-On Heads 114–131
Beyond Evolution 132–137
Laydown Threading 138–140
Coolant Accessories 141–145
Tooling Systems **146–153**
Turret Adapted Clamping Units (TACU) 146–153
General Information **154–157**
Grades and Grade Descriptions 154–155
Key to Column Headings 156
Material Cross Reference 157

CAS — Customer Application Support

Get Fast and Reliable Answers to Your Toughest Problems

Our CAS Team is the metalworking industry's leading help desk resource for tooling application solutions and problem resolution.

Easy Access to Proven Metalworking Expertise!

Kennametal Application Engineers assist customers and engineering groups throughout the world with expert tool selection and application recommendations for the entire range of Kennametal tooling.

Region	Originating Country	Language	CAS Hotline	Email
North America	**USA**	English	800 835 3668	na.techsupport@kennametal.com
	Mexico	Spanish	1800 253 0758	na.techsupport@kennametal.com
Africa	**South Africa**	English	0800 981643	na.techsupport@kennametal.com
Europe	**Austria**	German	0800 202873	eu.techsupport@kennametal.com
	Belgium	English/French	0800 80850	eu.techsupport@kennametal.com
	Denmark	English	808 89298	na.techsupport@kennametal.com
	Finland	English	0800 919412	na.techsupport@kennametal.com
	France	French	080 5540 367	eu.techsupport@kennametal.com
	Germany	German	0800 0006651	eu.techsupport@kennametal.com
	Israel	English	1809 449889	na.techsupport@kennametal.com
	Italy	Italian	800 916561	eu.techsupport@kennametal.com
	Netherlands	English	0800 0201 130	eu.techsupport@kennametal.com
	Norway	English	800 10080	na.techsupport@kennametal.com
	Poland	Polish	0080 04411887	eu.techsupport@kennametal.com
	Russia (landline)	Russian	8800 5556394	eu.techsupport@kennametal.com
	Russia (cell phone)	Russian	+7 800 5556394	eu.techsupport@kennametal.com
	Sweden	English	0207 99246	na.techsupport@kennametal.com
	UK	English	0800 032 8339	na.techsupport@kennametal.com
	Ukraine	Russian	800 502664	eu.techsupport@kennametal.com
Asia Pacific	**Australia**	English	1800 666 667	ap-kmt.techsupport@kennametal.com
	India	English	1 800 103 5227	in.techsupport@kennametal.com
	Japan	English	03 3820 2855	ap-kmt.techsupport@kennametal.com
	Korea (South)	English	+82 2 2100 6100	ap-kmt.techsupport@kennametal.com
	Malaysia	English	1800 812 990	ap-kmt.techsupport@kennametal.com
	New Zealand	English	0800 450 941	ap-kmt.techsupport@kennametal.com
	Singapore	English	1800 6221031	ap-kmt.techsupport@kennametal.com
	Taiwan	English	0800 666 197	ap-kmt.techsupport@kennametal.com
	Thailand	English	1800 4417820	ap-kmt.techsupport@kennametal.com

Numbers shown only serve the originating country listed.

Service & Sales Centres Around the World

Region	Country	Sales Hotline	Email
North America	**United States**	+1 800 446 7738	FtMill.Service@kennametal.com
	Canada	+1 800 446 7738	toronto.service@kennametal.com
	Mexico	+1 888 402 4963	k-mx.service@kennametal.com
Central/South America	**Argentina**	+54 11 4719 0700	buenos-aires.ventas@kennametal.com
	Brazil	+55 19 3936 9200	bra.marketing@kennametal.com
	Chile	+56 2 2264 1177	kennametalchile@kennametalchile.cl
Africa	**Egypt**	+44 1384 408060	na.techsupport@kennametal.com
	South Africa	+27 11 748 9300	na.techsupport@kennametal.com
Europe	**Austria**	+43 2236 3798980	brunn.sales@kennametal.com
	Belgium	+32 0800 81 372	belgium.sales@kennametal.com
	Czech Republic	+420 800 900 840	k-prha.sales@kennametal.com
	France	+33 1 60 12 81 00	info.fr@kennametal.com
	Germany	+49 6003 8277 0	rosbach.sales@kennametal.com
	Great Britain	+44 1384 408060	kingswinford.service@kennametal.com
	Hungary	+36 96 618 150	gyoer.sales@kennametal.com
	Ireland	+44 1384 408060	na.techsupport@kennametal.com
	Italy	+39 02 895 961	milano.vendite@kennametal.com
	Luxemborg	+32 4 248 48 48	liege.sales@kennametal.com
	Netherlands	+31 0800 44 33 201	netherlands.sales@kennametal.com
	Poland	+48 61 6656501	poland.service@kennametal.com
	Portugal	+351 22 4119 400	porto.service@kennametal.com
	Russia	+7 495 4115386	moscow.information@kennametal.com
	Slovakia	+421 0800 044 053	k-eu-zilina.sales@kennametal.com
	Spain	+34 93 586 03 50	barcelona.service@kennametal.com
	Turkey	+90 216 574 4780	tr.information@kennametal.com
Asia Pacific	**Australia**	+61 800 666 667	k-au.service@kennametal.com
	China	+86 400 889 2135	k-cn.service@kennametal.com
	India	+91 800 103 5138	k-bngl.information@kennametal.com
	Indonesia	+65 6265 9222	k-sg.sales@kennametal.com
	Japan	+81 3 3820 2855	k-jp.service@kennametal.com
	Korea (South)	+82 2 2109 6100	k-kr-service@kennametal.com
	Malaysia	+60 3 5569 9080	k-sg.sales@kennametal.com
	New Zealand	+64 0800 536626	k-nz.service@kennametal.com
	Singapore*	+65 62659222	k-sg.sales@kennametal.com
	Taiwan	+886 4 2350 1920	taiwan.service@kennametal.com
	Thailand	+66 2 642 3455	k-sg.sales@kennametal.com

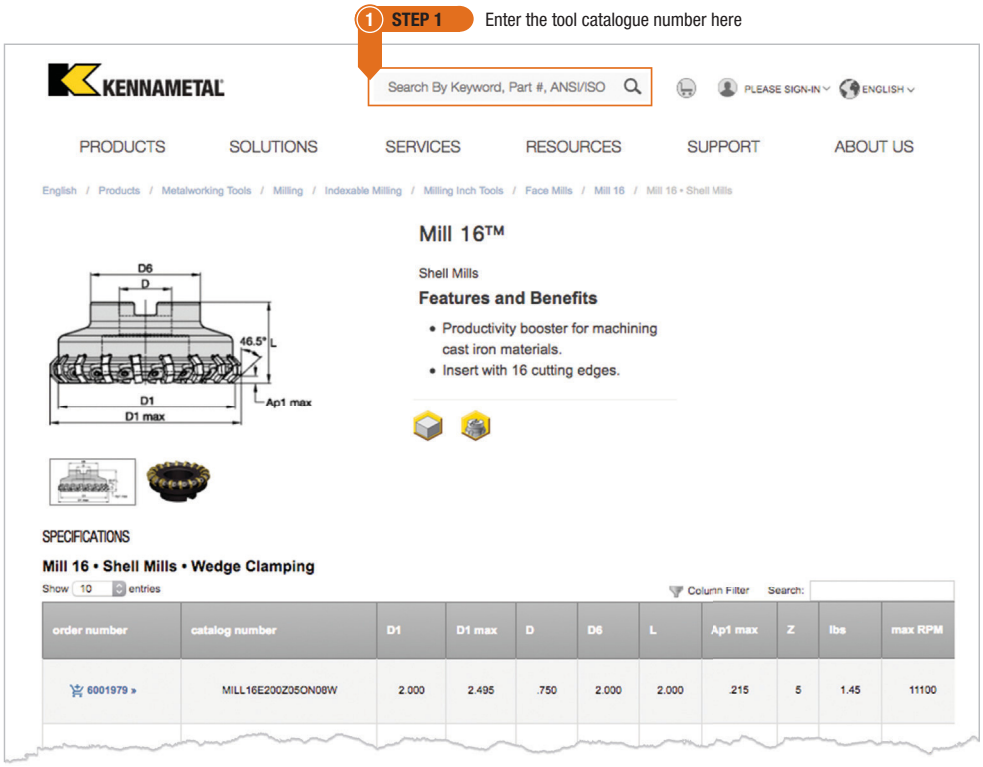
*Vietnam and Philippines individuals should contact the Singapore office.

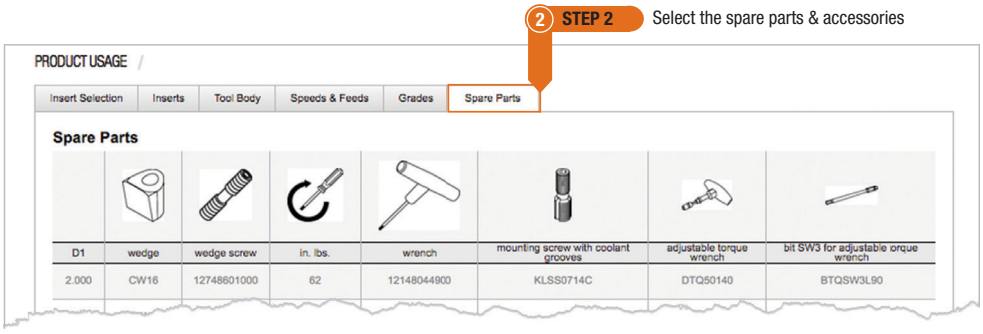
Visit kennametal.com to find local Authorised Kennametal Distributors.

Spare Parts & Accessories Information

Lost a screw? Have to replace worn-out clamping wedges? Need to find and re-order those spare parts?

Are you in need of some accessories, like a torque wrench or coolant shower plate? These tools are at your fingertips!
Go to **kennametal.com** and find what you need in seconds. Enter the catalog number of the corresponding tool, and it will display.





NOVO™

Digitally access spare parts and accessories information to ensure you keep your operation running.

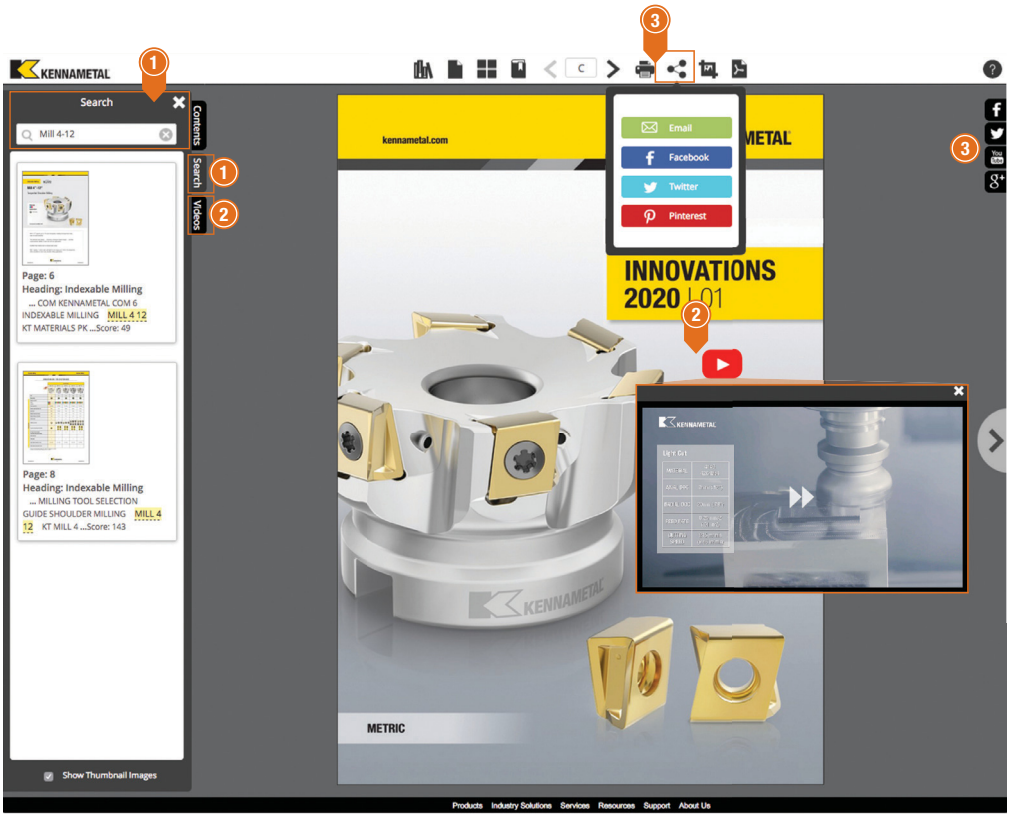
Visit kennametal.com/novo and download today.
It's Free!

Online Catalogue

Can't find your paper copy of our catalogue anymore?
No worries. Go to catalogs.kennametal.com to see what's out there.

Search for what you need, watch a video, and share pages with others, all from one site! Go to catalogs.kennametal.com, and if you want to check it out on your mobile device, just download the FREE app for iOS or Android™.

1. Search for what you need
2. Watch videos
3. Share with others



Check out our new catalogue app. Available in the Google Play™ Store or the App Store®

Holemaking

POWERED BY NOVO

HPX Drill

High-Performance Solid Carbide Drill

Materials

P

Applications

Drilling

Drilling:
Stacked Plates

kennametal.com/HPX-Drill

The new HPX drill series is the high-performance solution for any high-volume steel production.

Material-specific HPX edge preparation — A straight cutting edge reduces build-up and chipping on cutting edge and margin land.

Material-specific HPX drill point — Patented HPX point provides excellent self-centring capabilities, reduces thrust, and enables precise centre chip formation.

Material-specific HPX margins — 2 margin lands provide stability and reduce friction.

The HPX drill design — Up to 3x higher cutting parameters, saving machining time and freeing up capacity.

Ultra-high polished chip flutes reduce friction, improve chip evacuation, and increase tool life.

A continuous chip-flute cross-section reduces vibrations and cutting edge chipping.

High-Performance Solid Carbide Drills

TOOL SELECTION GUIDE • MATERIAL SPECIFIC DRILLS

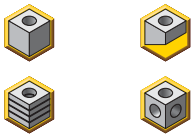
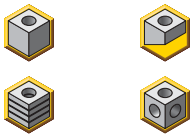
	HPX Drills	HPX Drills	SGL Drills	HPS Drills	Y-TECH™ Drills	KMH Drills	KMH Drills
Series	B221_HPX B222_HPX	B224_HPX B225_HPX B226_HPX	B210_SGL B211_SGL B212_SGL	B284_HPS B285_HPS B286_HPS	B291_YPL B292_YPL	B941A	B951A
Page	11, 14	16, 18, 21	G38*	G88*	G94*	G126*	G127*
Workpiece material							
Primary	P	P	M S	N	M S	H	H
Secondary	K		P		P	P K	P K
Hole tolerance	IT9–IT10	IT9–IT10	IT9–IT10	IT9–IT10	IT9–IT10	IT9–IT10	IT9–IT10
Standard range							
Cutting diameter [D1]	3,0–20,0mm	3,0–20,0mm	2,5–20,0mm	3,0–20,0mm	3,0–20,0mm	2,5–14,0mm	3,0–16,0mm
Drill length [L4 max]	14,0–85,0mm	14,0–160,0mm	12,0–160,0mm	14,0–124,0mm	14,0–77,0mm	14,0–43,0mm	14,0–45,0mm
Drilling depth L/D1	3–5 x D	3–8 x D	3–8 x D	3–8 x D	3–5 x D	3 x D	3 x D
Point angle	140°	140°	140°	135°	140°	142°	140°
Flute angle	30°	30°	30°	30°	30°	15°	30°
Coolant							
Operations							
Flutes and margin							
Corner chamfer							
Shank							

* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

● Primary
○ Secondary

High-Performance Solid Carbide Drills

TOOL SELECTION GUIDE • VERSATILE DRILLS

	GOdrill™	GOdrill	Kenna Universal™ Drills	Kenna Universal Drills
Series	**B041A_CPG** **B042A_CPG**	**B051A_CPG** **B052A_CPG** **B053A_CPG**	**B966A** **B967A**	**B976A** **B977A** **B978A**
Page	G8*	G18*	G132*	G138/G146*
Workpiece material				
Primary	P M K N S	P M K N S	P K	P K
Secondary	H	H	M N S	M N S
Hole tolerance	IT9–IT10	IT9–IT10	IT9–IT10	IT9–IT10
Standard range				
Cutting diameter [D1]	1,0–20,0mm	1,0–20,0mm	3,0–20,0mm	2,4–20,0mm
Drill length [L4 max]	5,0–77,0mm	5,0–124,0mm	14,0–85,0mm	12,0–124,0mm
Drilling depth L/D1	3–5 x D	3–8 x D	3–5 x D	3–8 x D
Point angle	140°	140°	140°	140°/132°
Flute angle	30°	30°	30°	30°
Coolant				
Operations				
Flutes and margin				
Corner chamfer				
Shank				

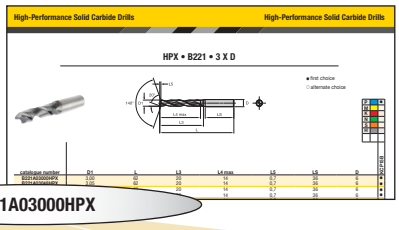
* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

● Primary
○ Secondary

High Performance Solid Carbide Drills

HPX • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

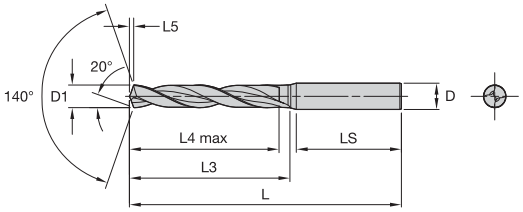


B221A03000HPX

B	22	1	A	03000	HPX
Style	Drill Series	Length/ Coolant	Shank	Diameter	Point Geometry/ Application
B = Metric **K** = Inch	**22*** = Steel Drills	**1** = ~3 x D non-coolant **2** = ~5 x D non-coolant **4** = ~3 x D internal coolant **5** = ~5 x D internal coolant **6** = ~8 x D internal coolant	**A** = Form HA, straight round shank **F** = Form FE, Whistle Notch 2º (B series DIN 6535–2mm steps)	**03000** = 3mm **06350** = 1/4" = E = 6,35mm	**HPX** = Next generation HP point for steel

High-Performance Solid Carbide Drills

HPX • B221 • 3 X D



● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B221A03000HPX	3,00	62	20	14	0,7	36	6	●
B221A03048HPX	3,05	62	20	14	0,7	36	6	●
B221A03100HPX	3,10	62	20	14	0,7	36	6	●
B221A03175HPX	3,18	62	20	14	0,7	36	6	●
B221A03200HPX	3,20	62	20	14	0,7	36	6	●
B221A03264HPX	3,26	62	20	14	0,8	36	6	●
B221A03300HPX	3,30	62	20	14	0,8	36	6	●
B221A03400HPX	3,40	62	20	14	0,8	36	6	●
B221A03455HPX	3,46	62	20	14	0,8	36	6	●
B221A03500HPX	3,50	62	20	14	0,8	36	6	●
B221A03571HPX	3,57	62	20	14	0,8	36	6	●
B221A03600HPX	3,60	62	20	14	0,8	36	6	●
B221A03658HPX	3,66	62	20	14	0,8	36	6	●
B221A03700HPX	3,70	62	20	14	0,8	36	6	●
B221A03800HPX	3,80	66	24	17	0,9	36	6	●
B221A03900HPX	3,90	66	24	17	0,9	36	6	●
B221A03970HPX	3,97	66	24	17	0,9	36	6	●
B221A04000HPX	4,00	66	24	17	0,9	36	6	●
B221A04039HPX	4,04	66	24	17	0,9	36	6	●
B221A04100HPX	4,10	66	24	17	0,9	36	6	●
B221A04200HPX	4,20	66	24	17	0,9	36	6	●
B221A04217HPX	4,22	66	24	17	1,0	36	6	●
B221A04300HPX	4,30	66	24	17	1,0	36	6	●
B221A04366HPX	4,37	66	24	17	1,0	36	6	●
B221A04400HPX	4,40	66	24	17	1,0	36	6	●
B221A04500HPX	4,50	66	24	17	1,0	36	6	●
B221A04600HPX	4,60	66	24	17	1,0	36	6	●
B221A04623HPX	4,62	66	24	17	1,0	36	6	●
B221A04700HPX	4,70	66	24	17	1,1	36	6	●
B221A04763HPX	4,76	66	28	20	1,1	36	6	●
B221A04800HPX	4,80	66	28	20	1,1	36	6	●
B221A04852HPX	4,85	66	28	20	1,1	36	6	●
B221A04900HPX	4,90	66	28	20	1,1	36	6	●
B221A05000HPX	5,00	66	28	20	1,1	36	6	●
B221A05100HPX	5,10	66	28	20	1,1	36	6	●
B221A05106HPX	5,11	66	28	20	1,1	36	6	●
B221A05159HPX	5,16	66	28	20	1,1	36	6	●
B221A05200HPX	5,20	66	28	20	1,2	36	6	●
B221A05300HPX	5,30	66	28	20	1,2	36	6	●
B221A05400HPX	5,40	66	28	20	1,2	36	6	●
B221A05410HPX	5,41	66	28	20	1,2	36	6	●
B221A05500HPX	5,50	66	28	20	1,2	36	6	●
B221A05558HPX	5,56	66	28	20	1,2	36	6	●
B221A05600HPX	5,60	66	28	20	1,2	36	6	●
B221A05700HPX	5,70	66	28	20	1,3	36	6	●
B221A05791HPX	5,79	66	28	20	1,3	36	6	●
B221A05800HPX	5,80	66	28	20	1,3	36	6	●
B221A05900HPX	5,90	66	28	20	1,3	36	6	●
B221A05954HPX	5,95	66	28	20	1,3	36	6	●
B221A06000HPX	6,00	66	28	20	1,3	36	6	●
B221A06100HPX	6,10	79	34	24	1,3	36	8	●
B221A06200HPX	6,20	79	34	24	1,4	36	8	●
B221A06300HPX	6,30	79	34	24	1,4	36	8	●
B221A06350HPX	6,35	79	34	24	1,4	36	8	●
B221A06400HPX	6,40	79	34	24	1,4	36	8	●
B221A06500HPX	6,50	79	34	24	1,4	36	8	●
B221A06528HPX	6,53	79	34	24	1,4	36	8	●
B221A06600HPX	6,60	79	34	24	1,4	36	8	●
B221A06700HPX	6,70	79	34	24	1,5	36	8	●
B221A06746HPX	6,75	79	34	24	1,5	36	8	●

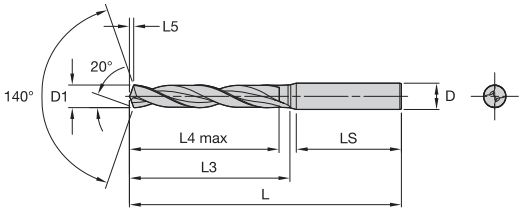
154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B221 • 3 X D

(continued)

● first choice
○ alternate choice



P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B221A06800HPX	6,80	79	34	24	1,5	36	8	●
B221A06900HPX	6,90	79	34	24	1,5	36	8	●
B221A07000HPX	7,00	79	34	24	1,5	36	8	●
B221A07100HPX	7,10	79	41	29	1,5	36	8	●
B221A07145HPX	7,15	79	41	29	1,6	36	8	●
B221A07200HPX	7,20	79	41	29	1,6	36	8	●
B221A07300HPX	7,30	79	41	29	1,6	36	8	●
B221A07400HPX	7,40	79	41	29	1,6	36	8	●
B221A07500HPX	7,50	79	41	29	1,6	36	8	●
B221A07541HPX	7,54	79	41	29	1,6	36	8	●
B221A07600HPX	7,60	79	41	29	1,6	36	8	●
B221A07700HPX	7,70	79	41	29	1,7	36	8	●
B221A07800HPX	7,80	79	41	29	1,7	36	8	●
B221A07900HPX	7,90	79	41	29	1,7	36	8	●
B221A07938HPX	7,94	79	41	29	1,7	36	8	●
B221A08000HPX	8,00	79	41	29	1,7	36	8	●
B221A08100HPX	8,10	89	47	35	1,7	40	10	●
B221A08200HPX	8,20	89	47	35	1,8	40	10	●
B221A08300HPX	8,30	89	47	35	1,8	40	10	●
B221A08334HPX	8,33	89	47	35	1,8	40	10	●
B221A08400HPX	8,40	89	47	35	1,8	40	10	●
B221A08500HPX	8,50	89	47	35	1,8	40	10	●
B221A08600HPX	8,60	89	47	35	1,8	40	10	●
B221A08700HPX	8,70	89	47	35	1,9	40	10	●
B221A08733HPX	8,73	89	47	35	1,9	40	10	●
B221A08800HPX	8,80	89	47	35	1,9	40	10	●
B221A08900HPX	8,90	89	47	35	1,9	40	10	●
B221A09000HPX	9,00	89	47	35	1,9	40	10	●
B221A09100HPX	9,10	89	47	35	1,9	40	10	●
B221A09129HPX	9,13	89	47	35	2,0	40	10	●
B221A09200HPX	9,20	89	47	35	2,0	40	10	●
B221A09300HPX	9,30	89	47	35	2,0	40	10	●
B221A09347HPX	9,35	89	47	35	2,0	40	10	●
B221A09400HPX	9,40	89	47	35	2,0	40	10	●
B221A09500HPX	9,50	89	47	35	2,0	40	10	●
B221A09525HPX	9,53	89	47	35	2,0	40	10	●
B221A09600HPX	9,60	89	47	35	2,0	40	10	●
B221A09700HPX	9,70	89	47	35	2,1	40	10	●
B221A09800HPX	9,80	89	47	35	2,1	40	10	●
B221A09900HPX	9,90	89	47	35	2,1	40	10	●
B221A09921HPX	9,92	89	47	35	2,1	40	10	●
B221A10000HPX	10,00	89	47	35	2,1	40	10	●
B221A10100HPX	10,10	102	55	40	2,1	45	12	●
B221A10200HPX	10,20	102	55	40	2,2	45	12	●
B221A10300HPX	10,30	102	55	40	2,2	45	12	●
B221A10320HPX	10,32	102	55	40	2,2	45	12	●
B221A10400HPX	10,40	102	55	40	2,2	45	12	●
B221A10500HPX	10,50	102	55	40	2,2	45	12	●
B221A10600HPX	10,60	102	55	40	2,2	45	12	●
B221A10700HPX	10,70	102	55	40	2,3	45	12	●
B221A10716HPX	10,72	102	55	40	2,3	45	12	●
B221A10800HPX	10,80	102	55	40	2,3	45	12	●
B221A11000HPX	11,00	102	55	40	2,3	45	12	●
B221A11100HPX	11,10	102	55	40	2,3	45	12	●
B221A11113HPX	11,11	102	55	40	2,3	45	12	●
B221A11200HPX	11,20	102	55	40	2,4	45	12	●
B221A11300HPX	11,30	102	55	40	2,4	45	12	●
B221A11400HPX	11,40	102	55	40	2,4	45	12	●
B221A11500HPX	11,50	102	55	40	2,4	45	12	●
B221A11509HPX	11,51	102	55	40	2,4	45	12	●

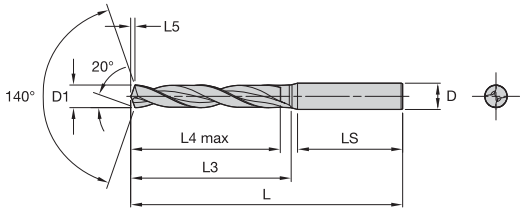
154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B221 • 3 X D

(continued)

● first choice
○ alternate choice



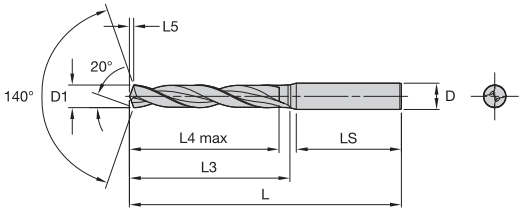
P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B221A11600HPX	11,60	102	55	40	2,4	45	12	●
B221A11700HPX	11,70	102	55	40	2,5	45	12	●
B221A11800HPX	11,80	102	55	40	2,5	45	12	●
B221A11900HPX	11,90	102	55	40	2,5	45	12	●
B221A11908HPX	11,91	102	55	40	2,5	45	12	●
B221A12000HPX	12,00	102	55	40	2,5	45	12	●
B221A12100HPX	12,10	107	60	43	2,5	45	14	●
B221A12200HPX	12,20	107	60	43	2,6	45	14	●
B221A12300HPX	12,30	107	60	43	2,6	45	14	●
B221A12304HPX	12,30	107	60	43	2,6	45	14	●
B221A12400HPX	12,40	107	60	43	2,6	45	14	●
B221A12500HPX	12,50	107	60	43	2,6	45	14	●
B221A12600HPX	12,60	107	60	43	2,6	45	14	●
B221A12700HPX	12,70	107	60	43	2,7	45	14	●
B221A12800HPX	12,80	107	60	43	2,7	45	14	●
B221A12900HPX	12,90	107	60	43	2,7	45	14	●
B221A13000HPX	13,00	107	60	43	2,7	45	14	●
B221A13100HPX	13,10	107	60	43	2,7	45	14	●
B221A13300HPX	13,30	107	60	43	2,8	45	14	●
B221A13500HPX	13,50	107	60	43	2,8	45	14	●
B221A13700HPX	13,70	107	60	43	2,9	45	14	●
B221A13800HPX	13,80	107	60	43	2,9	45	14	●
B221A14000HPX	14,00	107	60	43	2,9	45	14	●
B221A14100HPX	14,10	115	65	45	2,9	48	16	●
B221A14200HPX	14,20	115	65	45	3,0	48	16	●
B221A14288HPX	14,29	115	65	45	3,0	48	16	●
B221A14300HPX	14,30	115	65	45	3,0	48	16	●
B221A14500HPX	14,50	115	65	45	3,0	48	16	●
B221A14600HPX	14,60	115	65	45	3,0	48	16	●
B221A14700HPX	14,70	115	65	45	3,1	48	16	●
B221A15000HPX	15,00	115	65	45	3,1	48	16	●
B221A15100HPX	15,10	115	65	45	3,1	48	16	●
B221A15300HPX	15,30	115	65	45	3,2	48	16	●
B221A15500HPX	15,50	115	65	45	3,2	48	16	●
B221A15600HPX	15,60	115	65	45	3,2	48	16	●
B221A15700HPX	15,70	115	65	45	3,3	48	16	●
B221A15800HPX	15,80	115	65	45	3,3	48	16	●
B221A15875HPX	15,88	115	65	45	3,3	48	16	●
B221A16000HPX	16,00	115	65	45	3,3	48	16	●
B221A16500HPX	16,50	123	73	51	3,4	48	18	●
B221A17000HPX	17,00	123	73	51	3,5	48	18	●
B221A17463HPX	17,46	123	73	51	3,6	48	18	●
B221A17500HPX	17,50	123	73	51	3,6	48	18	●
B221A17700HPX	17,70	123	73	51	3,7	48	18	●
B221A18000HPX	18,00	123	73	51	3,7	48	18	●
B221A18500HPX	18,50	131	79	55	3,8	50	20	●
B221A19000HPX	19,00	131	79	55	3,9	50	20	●
B221A19050HPX	19,05	131	79	55	3,9	50	20	●
B221A19500HPX	19,50	131	79	55	4,0	50	20	●
B221A20000HPX	20,00	131	79	55	4,1	50	20	●

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B222 • 5 X D



● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

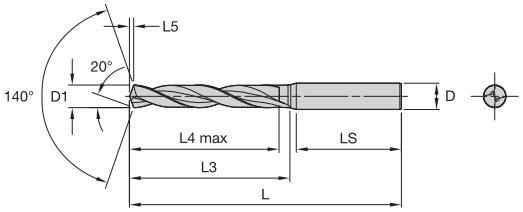
catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B222A03000HPX	3,00	66	28	23	0,7	36	6	●
B222A03048HPX	3,05	66	28	23	0,7	36	6	●
B222A03100HPX	3,10	66	28	23	0,7	36	6	●
B222A03175HPX	3,18	66	28	23	0,7	36	6	●
B222A03200HPX	3,20	66	28	23	0,7	36	6	●
B222A03264HPX	3,26	66	28	23	0,8	36	6	●
B222A03300HPX	3,30	66	28	23	0,8	36	6	●
B222A03400HPX	3,40	66	28	23	0,8	36	6	●
B222A03455HPX	3,46	66	28	23	0,8	36	6	●
B222A03500HPX	3,50	66	28	23	0,8	36	6	●
B222A03571HPX	3,57	66	28	23	0,8	36	6	●
B222A03600HPX	3,60	66	28	23	0,8	36	6	●
B222A03700HPX	3,70	66	28	23	0,8	36	6	●
B222A03800HPX	3,80	74	36	29	0,9	36	6	●
B222A03900HPX	3,90	74	36	29	0,9	36	6	●
B222A03970HPX	3,97	74	36	29	0,9	36	6	●
B222A04000HPX	4,00	74	36	29	0,9	36	6	●
B222A04100HPX	4,10	74	36	29	0,9	36	6	●
B222A04200HPX	4,20	74	36	29	0,9	36	6	●
B222A04300HPX	4,30	74	36	29	1,0	36	6	●
B222A04400HPX	4,40	74	36	29	1,0	36	6	●
B222A04500HPX	4,50	74	36	29	1,0	36	6	●
B222A04600HPX	4,60	74	36	29	1,0	36	6	●
B222A04700HPX	4,70	74	36	29	1,1	36	6	●
B222A04763HPX	4,76	82	44	35	1,1	36	6	●
B222A04800HPX	4,80	82	44	35	1,1	36	6	●
B222A04900HPX	4,90	82	44	35	1,1	36	6	●
B222A05000HPX	5,00	82	44	35	1,1	36	6	●
B222A05100HPX	5,10	82	44	35	1,1	36	6	●
B222A05106HPX	5,11	82	44	35	1,1	36	6	●
B222A05159HPX	5,16	82	44	35	1,1	36	6	●
B222A05200HPX	5,20	82	44	35	1,2	36	6	●
B222A05300HPX	5,30	82	44	35	1,2	36	6	●
B222A05400HPX	5,40	82	44	35	1,2	36	6	●
B222A05410HPX	5,41	82	44	35	1,2	36	6	●
B222A05500HPX	5,50	82	44	35	1,2	36	6	●
B222A05558HPX	5,56	82	44	35	1,2	36	6	●
B222A05600HPX	5,60	82	44	35	1,2	36	6	●
B222A05700HPX	5,70	82	44	35	1,3	36	6	●
B222A05791HPX	5,79	82	44	35	1,3	36	6	●
B222A05800HPX	5,80	82	44	35	1,3	36	6	●
B222A05900HPX	5,90	82	44	35	1,3	36	6	●
B222A06000HPX	6,00	82	44	35	1,3	36	6	●
B222A06100HPX	6,10	91	53	43	1,3	36	8	●
B222A06200HPX	6,20	91	53	43	1,4	36	8	●
B222A06300HPX	6,30	91	53	43	1,4	36	8	●
B222A06350HPX	6,35	91	53	43	1,4	36	8	●
B222A06400HPX	6,40	91	53	43	1,4	36	8	●
B222A06500HPX	6,50	91	53	43	1,4	36	8	●
B222A06600HPX	6,60	91	53	43	1,4	36	8	●
B222A06700HPX	6,70	91	53	43	1,5	36	8	●
B222A06746HPX	6,75	91	53	43	1,5	36	8	●
B222A06800HPX	6,80	91	53	43	1,5	36	8	●
B222A06900HPX	6,90	91	53	43	1,5	36	8	●
B222A07000HPX	7,00	91	53	43	1,5	36	8	●
B222A07100HPX	7,10	91	53	43	1,5	36	8	●
B222A07145HPX	7,15	91	53	43	1,6	36	8	●
B222A07200HPX	7,20	91	53	43	1,6	36	8	●
B222A07300HPX	7,30	91	53	43	1,6	36	8	●
B222A07400HPX	7,40	91	53	43	1,6	36	8	●

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B222 • 5 X D

(continued)



● first choice
○ alternate choice

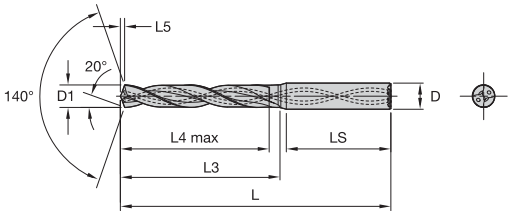
P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B222A07500HPX	7,50	91	53	43	1,6	36	8	●
B222A07541HPX	7,54	91	53	43	1,6	36	8	●
B222A07800HPX	7,80	91	53	43	1,7	36	8	●
B222A07938HPX	7,94	91	53	43	1,7	36	8	●
B222A08000HPX	8,00	91	53	43	1,7	36	8	●
B222A08100HPX	8,10	103	61	49	1,7	40	10	●
B222A08200HPX	8,20	103	61	49	1,8	40	10	●
B222A08334HPX	8,33	103	61	49	1,8	40	10	●
B222A08500HPX	8,50	103	61	49	1,8	40	10	●
B222A08700HPX	8,70	103	61	49	1,9	40	10	●
B222A08733HPX	8,73	103	61	49	1,9	40	10	●
B222A08800HPX	8,80	103	61	49	1,9	40	10	●
B222A09000HPX	9,00	103	61	49	1,9	40	10	●
B222A09129HPX	9,13	103	61	49	2,0	40	10	●
B222A09400HPX	9,40	103	61	49	2,0	40	10	●
B222A09500HPX	9,50	103	61	49	2,0	40	10	●
B222A09525HPX	9,53	103	61	49	2,0	40	10	●
B222A09800HPX	9,80	103	61	49	2,1	40	10	●
B222A10000HPX	10,00	103	61	49	2,1	40	10	●
B222A10200HPX	10,20	118	71	56	2,2	45	12	●
B222A10300HPX	10,30	118	71	56	2,2	45	12	●
B222A10320HPX	10,32	118	71	56	2,2	45	12	●
B222A10500HPX	10,50	118	71	56	2,2	45	12	●
B222A10716HPX	10,72	118	71	56	2,3	45	12	●
B222A10800HPX	10,80	118	71	56	2,3	45	12	●
B222A11000HPX	11,00	118	71	56	2,3	45	12	●
B222A11113HPX	11,11	118	71	56	2,3	45	12	●
B222A11500HPX	11,50	118	71	56	2,4	45	12	●
B222A11509HPX	11,51	118	71	56	2,4	45	12	●
B222A12000HPX	12,00	118	71	56	2,5	45	12	●
B222A12500HPX	12,50	124	77	60	2,6	45	14	●
B222A12700HPX	12,70	124	77	60	2,7	45	14	●
B222A13000HPX	13,00	124	77	60	2,7	45	14	●
B222A13500HPX	13,50	124	77	60	2,8	45	14	●
B222A14000HPX	14,00	124	77	60	2,9	45	14	●
B222A14288HPX	14,29	133	83	63	3,0	48	16	●
B222A14500HPX	14,50	133	83	63	3,0	48	16	●
B222A15000HPX	15,00	133	83	63	3,1	48	16	●
B222A15500HPX	15,50	133	83	63	3,2	48	16	●
B222A15875HPX	15,88	133	83	63	3,3	48	16	●
B222A16000HPX	16,00	133	83	63	3,3	48	16	●
B222A16500HPX	16,50	143	93	71	3,4	48	18	●
B222A17000HPX	17,00	143	93	71	3,5	48	18	●
B222A17500HPX	17,50	143	93	71	3,6	48	18	●
B222A18000HPX	18,00	143	93	71	3,7	48	18	●
B222A18500HPX	18,50	153	101	77	3,8	50	20	●
B222A19000HPX	19,00	153	101	77	3,9	50	20	●
B222A20000HPX	20,00	153	101	77	4,1	50	20	●

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B224 • 3 X D • THROUGH COOLANT



● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B224A03000HPX	3,00	62	20	14	0,7	36	6	●
B224A03048HPX	3,05	62	20	14	0,7	36	6	●
B224A03100HPX	3,10	62	20	14	0,7	36	6	●
B224A03175HPX	3,18	62	20	14	0,7	36	6	●
B224A03200HPX	3,20	62	20	14	0,7	36	6	●
B224A03264HPX	3,26	62	20	14	0,8	36	6	●
B224A03300HPX	3,30	62	20	14	0,8	36	6	●
B224A03400HPX	3,40	62	20	14	0,8	36	6	●
B224A03455HPX	3,46	62	20	14	0,8	36	6	●
B224A03500HPX	3,50	62	20	14	0,8	36	6	●
B224A03571HPX	3,57	62	20	14	0,8	36	6	●
B224A03600HPX	3,60	62	20	14	0,8	36	6	●
B224A03658HPX	3,66	62	20	14	0,8	36	6	●
B224A03700HPX	3,70	62	20	14	0,8	36	6	●
B224A03800HPX	3,80	66	24	17	0,9	36	6	●
B224A03900HPX	3,90	66	24	17	0,9	36	6	●
B224A03970HPX	3,97	66	24	17	0,9	36	6	●
B224A04000HPX	4,00	66	24	17	0,9	36	6	●
B224A04100HPX	4,10	66	24	17	0,9	36	6	●
B224A04200HPX	4,20	66	24	17	0,9	36	6	●
B224A04217HPX	4,22	66	24	17	1,0	36	6	●
B224A04300HPX	4,30	66	24	17	1,0	36	6	●
B224A04400HPX	4,40	66	24	17	1,0	36	6	●
B224A04500HPX	4,50	66	24	17	1,0	36	6	●
B224A04600HPX	4,60	66	24	17	1,0	36	6	●
B224A04700HPX	4,70	66	24	17	1,1	36	6	●
B224A04763HPX	4,76	66	28	20	1,1	36	6	●
B224A04800HPX	4,80	66	28	20	1,1	36	6	●
B224A04852HPX	4,85	66	28	20	1,1	36	6	●
B224A04900HPX	4,90	66	28	20	1,1	36	6	●
B224A05000HPX	5,00	66	28	20	1,1	36	6	●
B224A05100HPX	5,10	66	28	20	1,1	36	6	●
B224A05106HPX	5,11	66	28	20	1,1	36	6	●
B224A05159HPX	5,16	66	28	20	1,1	36	6	●
B224A05200HPX	5,20	66	28	20	1,2	36	6	●
B224A05300HPX	5,30	66	28	20	1,2	36	6	●
B224A05400HPX	5,40	66	28	20	1,2	36	6	●
B224A05410HPX	5,41	66	28	20	1,2	36	6	●
B224A05500HPX	5,50	66	28	20	1,2	36	6	●
B224A05558HPX	5,56	66	28	20	1,2	36	6	●
B224A05600HPX	5,60	66	28	20	1,2	36	6	●
B224A05700HPX	5,70	66	28	20	1,3	36	6	●
B224A05791HPX	5,79	66	28	20	1,3	36	6	●
B224A05800HPX	5,80	66	28	20	1,3	36	6	●
B224A05900HPX	5,90	66	28	20	1,3	36	6	●
B224A06000HPX	6,00	66	28	20	1,3	36	6	●
B224A06100HPX	6,10	79	34	24	1,3	36	8	●
B224A06200HPX	6,20	79	34	24	1,4	36	8	●
B224A06300HPX	6,30	79	34	24	1,4	36	8	●
B224A06350HPX	6,35	79	34	24	1,4	36	8	●
B224A06400HPX	6,40	79	34	24	1,4	36	8	●
B224A06500HPX	6,50	79	34	24	1,4	36	8	●
B224A06600HPX	6,60	79	34	24	1,4	36	8	●
B224A06700HPX	6,70	79	34	24	1,5	36	8	●
B224A06746HPX	6,75	79	34	24	1,5	36	8	●
B224A06800HPX	6,80	79	34	24	1,5	36	8	●
B224A07000HPX	7,00	79	34	24	1,5	36	8	●
B224A07100HPX	7,10	79	41	29	1,5	36	8	●
B224A07145HPX	7,15	79	41	29	1,6	36	8	●
B224A07200HPX	7,20	79	41	29	1,6	36	8	●

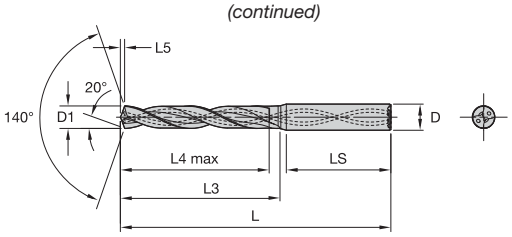
154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B224 • 3 X D • THROUGH COOLANT

(continued)

● first choice
○ alternate choice



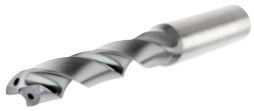
P	●
M	
K	
N	
S	
H	

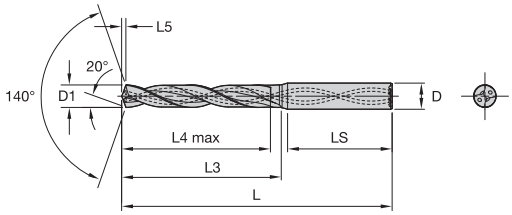
catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B224A07300HPX	7,30	79	41	29	1,6	36	8	●
B224A07400HPX	7,40	79	41	29	1,6	36	8	●
B224A07500HPX	7,50	79	41	29	1,6	36	8	●
B224A07541HPX	7,54	79	41	29	1,6	36	8	●
B224A07800HPX	7,80	79	41	29	1,7	36	8	●
B224A07938HPX	7,94	79	41	29	1,7	36	8	●
B224A08000HPX	8,00	79	41	29	1,7	36	8	●
B224A08100HPX	8,10	89	47	35	1,7	40	10	●
B224A08200HPX	8,20	89	47	35	1,8	40	10	●
B224A08334HPX	8,33	89	47	35	1,8	40	10	●
B224A08500HPX	8,50	89	47	35	1,8	40	10	●
B224A08700HPX	8,70	89	47	35	1,9	40	10	●
B224A08733HPX	8,73	89	47	35	1,9	40	10	●
B224A08800HPX	8,80	89	47	35	1,9	40	10	●
B224A09000HPX	9,00	89	47	35	1,9	40	10	●
B224A09100HPX	9,10	89	47	35	1,9	40	10	●
B224A09129HPX	9,13	89	47	35	2,0	40	10	●
B224A09400HPX	9,40	89	47	35	2,0	40	10	●
B224A09500HPX	9,50	89	47	35	2,0	40	10	●
B224A09525HPX	9,53	89	47	35	2,0	40	10	●
B224A09800HPX	9,80	89	47	35	2,1	40	10	●
B224A10000HPX	10,00	89	47	35	2,1	40	10	●
B224A10200HPX	10,20	102	55	40	2,2	45	12	●
B224A10300HPX	10,30	102	55	40	2,2	45	12	●
B224A10320HPX	10,32	102	55	40	2,2	45	12	●
B224A10500HPX	10,50	102	55	40	2,2	45	12	●
B224A10716HPX	10,72	102	55	40	2,3	45	12	●
B224A10800HPX	10,80	102	55	40	2,3	45	12	●
B224A11000HPX	11,00	102	55	40	2,3	45	12	●
B224A11113HPX	11,11	102	55	40	2,3	45	12	●
B224A11500HPX	11,50	102	55	40	2,4	45	12	●
B224A11509HPX	11,51	102	55	40	2,4	45	12	●
B224A12000HPX	12,00	102	55	40	2,5	45	12	●
B224A12500HPX	12,50	107	60	43	2,6	45	14	●
B224A12700HPX	12,70	107	60	43	2,7	45	14	●
B224A13000HPX	13,00	107	60	43	2,7	45	14	●
B224A13500HPX	13,50	107	60	43	2,8	45	14	●
B224A14000HPX	14,00	107	60	43	2,9	45	14	●
B224A14288HPX	14,29	115	65	45	3,0	48	16	●
B224A14500HPX	14,50	115	65	45	3,0	48	16	●
B224A15000HPX	15,00	115	65	45	3,1	48	16	●
B224A15500HPX	15,50	115	65	45	3,2	48	16	●
B224A15875HPX	15,88	115	65	45	3,3	48	16	●
B224A16000HPX	16,00	115	65	45	3,3	48	16	●
B224A16500HPX	16,50	123	73	51	3,4	48	18	●
B224A17000HPX	17,00	123	73	51	3,5	48	18	●
B224A17500HPX	17,50	123	73	51	3,6	48	18	●
B224A18000HPX	18,00	123	73	51	3,7	48	18	●
B224A18500HPX	18,50	131	79	55	3,8	50	20	●
B224A19000HPX	19,00	131	79	55	3,9	50	20	●
B224A20000HPX	20,00	131	79	55	4,1	50	20	●

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B225 • 5 X D • THROUGH COOLANT





● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

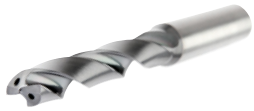
catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B225A03000HPX	3,00	66	28	23	0,7	36	6	●
B225A03048HPX	3,05	66	28	23	0,7	36	6	●
B225A03100HPX	3,10	66	28	23	0,7	36	6	●
B225A03175HPX	3,18	66	28	23	0,7	36	6	●
B225A03200HPX	3,20	66	28	23	0,7	36	6	●
B225A03264HPX	3,26	66	28	23	0,8	36	6	●
B225A03300HPX	3,30	66	28	23	0,8	36	6	●
B225A03400HPX	3,40	66	28	23	0,8	36	6	●
B225A03455HPX	3,46	66	28	23	0,8	36	6	●
B225A03500HPX	3,50	66	28	23	0,8	36	6	●
B225A03571HPX	3,57	66	28	23	0,8	36	6	●
B225A03600HPX	3,60	66	28	23	0,8	36	6	●
B225A03700HPX	3,70	66	28	23	0,8	36	6	●
B225A03800HPX	3,80	74	36	29	0,9	36	6	●
B225A03900HPX	3,90	74	36	29	0,9	36	6	●
B225A03970HPX	3,97	74	36	29	0,9	36	6	●
B225A04000HPX	4,00	74	36	29	0,9	36	6	●
B225A04039HPX	4,04	74	36	29	0,9	36	6	●
B225A04100HPX	4,10	74	36	29	0,9	36	6	●
B225A04200HPX	4,20	74	36	29	0,9	36	6	●
B225A04300HPX	4,30	74	36	29	1,0	36	6	●
B225A04366HPX	4,37	74	36	29	1,0	36	6	●
B225A04400HPX	4,40	74	36	29	1,0	36	6	●
B225A04500HPX	4,50	74	36	29	1,0	36	6	●
B225A04600HPX	4,60	74	36	29	1,0	36	6	●
B225A04700HPX	4,70	74	36	29	1,1	36	6	●
B225A04763HPX	4,76	82	44	35	1,1	36	6	●
B225A04800HPX	4,80	82	44	35	1,1	36	6	●
B225A04900HPX	4,90	82	44	35	1,1	36	6	●
B225A05000HPX	5,00	82	44	35	1,1	36	6	●
B225A05100HPX	5,10	82	44	35	1,1	36	6	●
B225A05106HPX	5,11	82	44	35	1,1	36	6	●
B225A05159HPX	5,16	82	44	35	1,1	36	6	●
B225A05200HPX	5,20	82	44	35	1,2	36	6	●
B225A05300HPX	5,30	82	44	35	1,2	36	6	●
B225A05400HPX	5,40	82	44	35	1,2	36	6	●
B225A05410HPX	5,41	82	44	35	1,2	36	6	●
B225A05500HPX	5,50	82	44	35	1,2	36	6	●
B225A05558HPX	5,56	82	44	35	1,2	36	6	●
B225A05600HPX	5,60	82	44	35	1,2	36	6	●
B225A05700HPX	5,70	82	44	35	1,3	36	6	●
B225A05791HPX	5,79	82	44	35	1,3	36	6	●
B225A05800HPX	5,80	82	44	35	1,3	36	6	●
B225A05900HPX	5,90	82	44	35	1,3	36	6	●
B225A05954HPX	5,95	82	44	35	1,3	36	6	●
B225A06000HPX	6,00	82	44	35	1,3	36	6	●
B225A06100HPX	6,10	91	53	43	1,3	36	8	●
B225A06200HPX	6,20	91	53	43	1,4	36	8	●
B225A06300HPX	6,30	91	53	43	1,4	36	8	●
B225A06350HPX	6,35	91	53	43	1,4	36	8	●
B225A06400HPX	6,40	91	53	43	1,4	36	8	●
B225A06500HPX	6,50	91	53	43	1,4	36	8	●
B225A06528HPX	6,53	91	53	43	1,4	36	8	●
B225A06600HPX	6,60	91	53	43	1,4	36	8	●
B225A06700HPX	6,70	91	53	43	1,5	36	8	●
B225A06746HPX	6,75	91	53	43	1,5	36	8	●
B225A06800HPX	6,80	91	53	43	1,5	36	8	●
B225A06900HPX	6,90	91	53	43	1,5	36	8	●
B225A07000HPX	7,00	91	53	43	1,5	36	8	●
B225A07100HPX	7,10	91	53	43	1,5	36	8	●

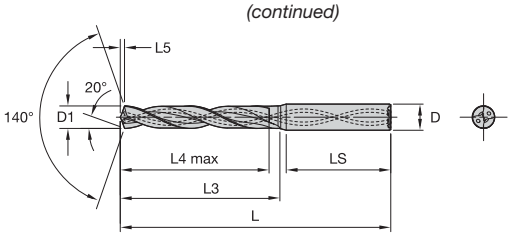
154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B225 • 5 X D • THROUGH COOLANT

(continued)





● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B225A07145HPX	7,15	91	53	43	1,6	36	8	●
B225A07200HPX	7,20	91	53	43	1,6	36	8	●
B225A07300HPX	7,30	91	53	43	1,6	36	8	●
B225A07400HPX	7,40	91	53	43	1,6	36	8	●
B225A07500HPX	7,50	91	53	43	1,6	36	8	●
B225A07541HPX	7,54	91	53	43	1,6	36	8	●
B225A07600HPX	7,60	91	53	43	1,6	36	8	●
B225A07700HPX	7,70	91	53	43	1,7	36	8	●
B225A07800HPX	7,80	91	53	43	1,7	36	8	●
B225A07900HPX	7,90	91	53	43	1,7	36	8	●
B225A07938HPX	7,94	91	53	43	1,7	36	8	●
B225A08000HPX	8,00	91	53	43	1,7	36	8	●
B225A08100HPX	8,10	103	61	49	1,7	40	10	●
B225A08200HPX	8,20	103	61	49	1,8	40	10	●
B225A08300HPX	8,30	103	61	49	1,8	40	10	●
B225A08334HPX	8,33	103	61	49	1,8	40	10	●
B225A08400HPX	8,40	103	61	49	1,8	40	10	●
B225A08500HPX	8,50	103	61	49	1,8	40	10	●
B225A08600HPX	8,60	103	61	49	1,8	40	10	●
B225A08700HPX	8,70	103	61	49	1,9	40	10	●
B225A08733HPX	8,73	103	61	49	1,9	40	10	●
B225A08800HPX	8,80	103	61	49	1,9	40	10	●
B225A08900HPX	8,90	103	61	49	1,9	40	10	●
B225A09000HPX	9,00	103	61	49	1,9	40	10	●
B225A09100HPX	9,10	103	61	49	1,9	40	10	●
B225A09129HPX	9,13	103	61	49	2,0	40	10	●
B225A09200HPX	9,20	103	61	49	2,0	40	10	●
B225A09300HPX	9,30	103	61	49	2,0	40	10	●
B225A09347HPX	9,35	103	61	49	2,0	40	10	●
B225A09400HPX	9,40	103	61	49	2,0	40	10	●
B225A09500HPX	9,50	103	61	49	2,0	40	10	●
B225A09525HPX	9,53	103	61	49	2,0	40	10	●
B225A09600HPX	9,60	103	61	49	2,0	40	10	●
B225A09700HPX	9,70	103	61	49	2,1	40	10	●
B225A09800HPX	9,80	103	61	49	2,1	40	10	●
B225A09900HPX	9,90	103	61	49	2,1	40	10	●
B225A09921HPX	9,92	103	61	49	2,1	40	10	●
B225A10000HPX	10,00	103	61	49	2,1	40	10	●
B225A10100HPX	10,10	118	71	56	2,1	45	12	●
B225A10200HPX	10,20	118	71	56	2,2	45	12	●
B225A10300HPX	10,30	118	71	56	2,2	45	12	●
B225A10320HPX	10,32	118	71	56	2,2	45	12	●
B225A10400HPX	10,40	118	71	56	2,2	45	12	●
B225A10500HPX	10,50	118	71	56	2,2	45	12	●
B225A10600HPX	10,60	118	71	56	2,2	45	12	●
B225A10700HPX	10,70	118	71	56	2,3	45	12	●
B225A10716HPX	10,72	118	71	56	2,3	45	12	●
B225A10800HPX	10,80	118	71	56	2,3	45	12	●
B225A11000HPX	11,00	118	71	56	2,3	45	12	●
B225A11100HPX	11,10	118	71	56	2,3	45	12	●
B225A11113HPX	11,11	118	71	56	2,3	45	12	●
B225A11200HPX	11,20	118	71	56	2,4	45	12	●
B225A11300HPX	11,30	118	71	56	2,4	45	12	●
B225A11400HPX	11,40	118	71	56	2,4	45	12	●
B225A11500HPX	11,50	118	71	56	2,4	45	12	●
B225A11509HPX	11,51	118	71	56	2,4	45	12	●
B225A11600HPX	11,60	118	71	56	2,4	45	12	●
B225A11700HPX	11,70	118	71	56	2,5	45	12	●
B225A11800HPX	11,80	118	71	56	2,5	45	12	●
B225A11900HPX	11,90	118	71	56	2,5	45	12	●

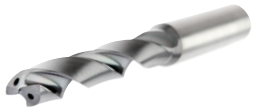
154	156	10	4	160

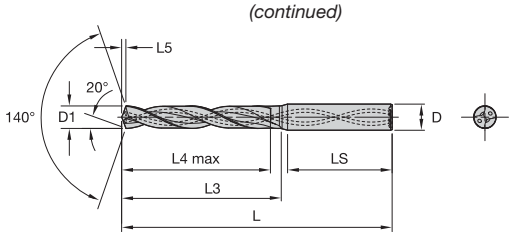
High-Performance Solid Carbide Drills

HPX • B225 • 5 X D • THROUGH COOLANT

(continued)

● first choice
○ alternate choice





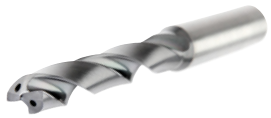
P	●
M	
K	
N	
S	
H	

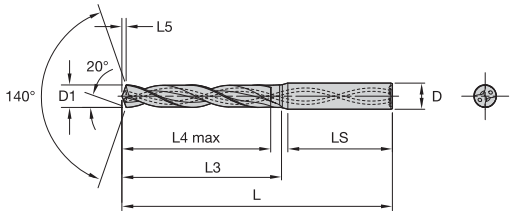
catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B225A11908HPX	11,91	118	71	56	2,5	45	12	●
B225A12000HPX	12,00	118	71	56	2,5	45	12	●
B225A12100HPX	12,10	124	77	60	2,5	45	14	●
B225A12200HPX	12,20	124	77	60	2,6	45	14	●
B225A12300HPX	12,30	124	77	60	2,6	45	14	●
B225A12304HPX	12,30	124	77	60	2,6	45	14	●
B225A12400HPX	12,40	124	77	60	2,6	45	14	●
B225A12500HPX	12,50	124	77	60	2,6	45	14	●
B225A12600HPX	12,60	124	77	60	2,6	45	14	●
B225A12700HPX	12,70	124	77	60	2,7	45	14	●
B225A12800HPX	12,80	124	77	60	2,7	45	14	●
B225A12900HPX	12,90	124	77	60	2,7	45	14	●
B225A13000HPX	13,00	124	77	60	2,7	45	14	●
B225A13100HPX	13,10	124	77	60	2,7	45	14	●
B225A13300HPX	13,30	124	77	60	2,8	45	14	●
B225A13500HPX	13,50	124	77	60	2,8	45	14	●
B225A13700HPX	13,70	124	77	60	2,9	45	14	●
B225A13800HPX	13,80	124	77	60	2,9	45	14	●
B225A14000HPX	14,00	124	77	60	2,9	45	14	●
B225A14100HPX	14,10	133	83	63	2,9	48	16	●
B225A14200HPX	14,20	133	83	63	3,0	48	16	●
B225A14288HPX	14,29	133	83	63	3,0	48	16	●
B225A14300HPX	14,30	133	83	63	3,0	48	16	●
B225A14500HPX	14,50	133	83	63	3,0	48	16	●
B225A14600HPX	14,60	133	83	63	3,0	48	16	●
B225A14700HPX	14,70	133	83	63	3,1	48	16	●
B225A15000HPX	15,00	133	83	63	3,1	48	16	●
B225A15100HPX	15,10	133	83	63	3,1	48	16	●
B225A15300HPX	15,30	133	83	63	3,2	48	16	●
B225A15500HPX	15,50	133	83	63	3,2	48	16	●
B225A15600HPX	15,60	133	83	63	3,2	48	16	●
B225A15700HPX	15,70	133	83	63	3,3	48	16	●
B225A15800HPX	15,80	133	83	63	3,3	48	16	●
B225A15875HPX	15,88	133	83	63	3,3	48	16	●
B225A16000HPX	16,00	133	83	63	3,3	48	16	●
B225A16100HPX	16,10	143	93	71	3,3	48	18	●
B225A16500HPX	16,50	143	93	71	3,4	48	18	●
B225A16670HPX	16,67	143	93	71	3,5	48	18	●
B225A17000HPX	17,00	143	93	71	3,5	48	18	●
B225A17463HPX	17,46	143	93	71	3,6	48	18	●
B225A17500HPX	17,50	143	93	71	3,6	48	18	●
B225A17700HPX	17,70	143	93	71	3,7	48	18	●
B225A18000HPX	18,00	143	93	71	3,7	48	18	●
B225A18500HPX	18,50	153	101	77	3,8	50	20	●
B225A19000HPX	19,00	153	101	77	3,9	50	20	●
B225A19050HPX	19,05	153	101	77	3,9	50	20	●
B225A19500HPX	19,50	153	101	77	4,0	50	20	●
B225A20000HPX	20,00	153	101	77	4,1	50	20	●

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • B226 • 8 X D • THROUGH COOLANT





● first choice
○ alternate choice

P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B226A03000HPX	3,00	78	40	33	0,7	36	6	●
B226A03048HPX	3,05	78	40	33	0,7	36	6	●
B226A03100HPX	3,10	78	40	33	0,7	36	6	●
B226A03175HPX	3,18	78	40	33	0,7	36	6	●
B226A03200HPX	3,20	78	40	33	0,7	36	6	●
B226A03264HPX	3,26	78	40	33	0,8	36	6	●
B226A03300HPX	3,30	78	40	33	0,8	36	6	●
B226A03400HPX	3,40	78	40	33	0,8	36	6	●
B226A03455HPX	3,46	78	40	33	0,8	36	6	●
B226A03500HPX	3,50	78	40	33	0,8	36	6	●
B226A03571HPX	3,57	78	40	33	0,8	36	6	●
B226A03600HPX	3,60	78	40	33	0,8	36	6	●
B226A03700HPX	3,70	78	40	33	0,8	36	6	●
B226A03800HPX	3,80	87	49	41	0,9	36	6	●
B226A03900HPX	3,90	87	49	41	0,9	36	6	●
B226A03970HPX	3,97	87	49	41	0,9	36	6	●
B226A04000HPX	4,00	87	49	41	0,9	36	6	●
B226A04100HPX	4,10	87	49	41	0,9	36	6	●
B226A04200HPX	4,20	87	49	41	0,9	36	6	●
B226A04300HPX	4,30	87	49	41	1,0	36	6	●
B226A04500HPX	4,50	87	49	41	1,0	36	6	●
B226A04600HPX	4,60	87	49	41	1,0	36	6	●
B226A04700HPX	4,70	87	49	41	1,1	36	6	●
B226A04763HPX	4,76	94	56	48	1,1	36	6	●
B226A04800HPX	4,80	94	56	48	1,1	36	6	●
B226A04900HPX	4,90	94	56	48	1,1	36	6	●
B226A05000HPX	5,00	94	56	48	1,1	36	6	●
B226A05100HPX	5,10	94	56	48	1,1	36	6	●
B226A05106HPX	5,11	94	56	48	1,1	36	6	●
B226A05159HPX	5,16	94	56	48	1,1	36	6	●
B226A05200HPX	5,20	94	56	48	1,2	36	6	●
B226A05300HPX	5,30	94	56	48	1,2	36	6	●
B226A05400HPX	5,40	94	56	48	1,2	36	6	●
B226A05410HPX	5,41	94	56	48	1,2	36	6	●
B226A05500HPX	5,50	94	56	48	1,2	36	6	●
B226A05558HPX	5,56	94	56	48	1,2	36	6	●
B226A05600HPX	5,60	94	56	48	1,2	36	6	●
B226A05700HPX	5,70	94	56	48	1,3	36	6	●
B226A05800HPX	5,80	94	56	48	1,3	36	6	●
B226A05900HPX	5,90	94	56	48	1,3	36	6	●
B226A06000HPX	6,00	94	56	48	1,3	36	6	●
B226A06100HPX	6,10	105	67	57	1,3	36	8	●
B226A06200HPX	6,20	105	67	57	1,4	36	8	●
B226A06300HPX	6,30	105	67	57	1,4	36	8	●
B226A06350HPX	6,35	105	67	57	1,4	36	8	●
B226A06400HPX	6,40	105	67	57	1,4	36	8	●
B226A06500HPX	6,50	105	67	57	1,4	36	8	●
B226A06600HPX	6,60	105	67	57	1,4	36	8	●
B226A06700HPX	6,70	105	67	57	1,5	36	8	●
B226A06746HPX	6,75	105	67	57	1,5	36	8	●
B226A06800HPX	6,80	105	67	57	1,5	36	8	●
B226A06900HPX	6,90	105	67	57	1,5	36	8	●
B226A07000HPX	7,00	105	67	57	1,5	36	8	●
B226A07100HPX	7,10	113	74	64	1,5	36	8	●
B226A07145HPX	7,15	113	74	64	1,6	36	8	●
B226A07200HPX	7,20	113	74	64	1,6	36	8	●
B226A07300HPX	7,30	113	74	64	1,6	36	8	●
B226A07400HPX	7,40	113	74	64	1,6	36	8	●
B226A07500HPX	7,50	113	74	64	1,6	36	8	●
B226A07541HPX	7,54	113	74	64	1,6	36	8	●

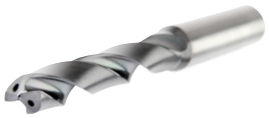
154	156	10	4	160

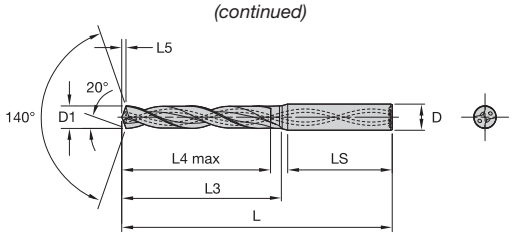
High-Performance Solid Carbide Drills

HPX • B226 • 8 X D • THROUGH COOLANT

(continued)

● first choice
○ alternate choice





P	●
M	
K	
N	
S	
H	

catalogue number	D1	L	L3	L4 max	L5	LS	D	KCP15B
B226A07800HPX	7,80	113	74	64	1,7	36	8	●
B226A07938HPX	7,94	113	74	64	1,7	36	8	●
B226A08000HPX	8,00	113	74	64	1,7	36	8	●
B226A08100HPX	8,10	135	92	80	1,7	40	10	●
B226A08200HPX	8,20	135	92	80	1,8	40	10	●
B226A08334HPX	8,33	135	92	80	1,8	40	10	●
B226A08500HPX	8,50	135	92	80	1,8	40	10	●
B226A08700HPX	8,70	135	92	80	1,9	40	10	●
B226A08733HPX	8,73	135	92	80	1,9	40	10	●
B226A08800HPX	8,80	135	92	80	1,9	40	10	●
B226A09000HPX	9,00	135	92	80	1,9	40	10	●
B226A09129HPX	9,13	135	92	80	2,0	40	10	●
B226A09400HPX	9,40	135	92	80	2,0	40	10	●
B226A09500HPX	9,50	135	92	80	2,0	40	10	●
B226A09525HPX	9,53	135	92	80	2,0	40	10	●
B226A09800HPX	9,80	135	92	80	2,1	40	10	●
B226A10000HPX	10,00	135	92	80	2,1	40	10	●
B226A10200HPX	10,20	158	110	96	2,2	45	12	●
B226A10300HPX	10,30	158	110	96	2,2	45	12	●
B226A10320HPX	10,32	158	110	96	2,2	45	12	●
B226A10500HPX	10,50	158	110	96	2,2	45	12	●
B226A10716HPX	10,72	158	110	96	2,3	45	12	●
B226A10800HPX	10,80	158	110	96	2,3	45	12	●
B226A11000HPX	11,00	158	110	96	2,3	45	12	●
B226A11113HPX	11,11	158	110	96	2,3	45	12	●
B226A11500HPX	11,50	158	110	96	2,4	45	12	●
B226A11509HPX	11,51	158	110	96	2,4	45	12	●
B226A12000HPX	12,00	158	110	96	2,5	45	12	●
B226A12500HPX	12,50	176	128	112	2,6	45	14	●
B226A12700HPX	12,70	176	128	112	2,7	45	14	●
B226A13000HPX	13,00	176	128	112	2,7	45	14	●
B226A13500HPX	13,50	176	128	112	2,8	45	14	●
B226A14000HPX	14,00	176	128	112	2,9	45	14	●
B226A14288HPX	14,29	197	146	128	3,0	48	16	●
B226A14500HPX	14,50	197	146	128	3,0	48	16	●
B226A15000HPX	15,00	197	146	128	3,1	48	16	●
B226A15500HPX	15,50	197	146	128	3,2	48	16	●
B226A15875HPX	15,88	197	146	128	3,3	48	16	●
B226A16000HPX	16,00	197	146	128	3,3	48	16	●
B226A16500HPX	16,50	214	163	144	3,4	48	18	●
B226A17000HPX	17,00	214	163	144	3,5	48	18	●
B226A17500HPX	17,50	214	163	144	3,6	48	18	●
B226A18000HPX	18,00	214	163	144	3,7	48	18	●

TOLERANCE

nominal size range	D1 tolerance m7	D tolerance h6
1–3	0,002/0,012	0,000/-0,006
>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

154	156	10	4	160

High-Performance Solid Carbide Drills

HPX • FLOOD COOLANT • APPLICATION DATA

Material Group		Cutting Speed — vc Range — m/min min	Starting Value	max	Metric Recommended Feed Rate per Rev	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
P	0	80	**110**	170	mm/r	0,06–0,19	0,07–0,21	0,09–0,25	0,11–0,30	0,13–0,34	0,15–0,38	0,19–0,47	0,23–0,56
	1	70	**110**	150	mm/r	0,05–0,22	0,07–0,24	0,11–0,30	0,14–0,35	0,17–0,40	0,21–0,45	0,28–0,56	0,34–0,66
	2	90	**120**	160	mm/r	0,09–0,21	0,11–0,23	0,13–0,29	0,16–0,34	0,19–0,39	0,22–0,44	0,27–0,55	0,33–0,65
	3	60	**90**	120	mm/r	0,12–0,22	0,13–0,24	0,16–0,30	0,19–0,35	0,22–0,40	0,25–0,45	0,31–0,56	0,37–0,66
	4	50	**80**	120	mm/r	0,23–0,11	0,25–0,12	0,31–0,15	0,36–0,17	0,41–0,20	0,46–0,23	0,57–0,28	0,67–0,33
	5	50	**60**	70	mm/r	0,08–0,15	0,09–0,17	0,12–0,21	0,14–0,26	0,17–0,30	0,20–0,34	0,25–0,43	0,30–0,52
	6	50	**60**	70	mm/r	0,08–0,15	0,09–0,17	0,12–0,21	0,14–0,26	0,17–0,30	0,20–0,34	0,25–0,43	0,30–0,52

HPX • THROUGH COOLANT • APPLICATION DATA

Material Group		Cutting Speed — vc Range — m/min min	Starting Value	max	Metric Recommended Feed Rate per Rev	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
P	0	140	**240**	290	mm/r	0,13–0,24	0,14–0,26	0,15–0,30	0,17–0,34	0,19–0,38	0,21–0,42	0,24–0,50	0,28–0,58
	1	130	**240**	290	mm/r	0,15–0,30	0,16–0,33	0,18–0,39	0,20–0,45	0,22–0,51	0,24–0,57	0,28–0,69	0,32–0,81
	2	190	**230**	270	mm/r	0,14–0,29	0,15–0,32	0,18–0,38	0,21–0,43	0,24–0,49	0,27–0,55	0,33–0,66	0,39–0,77
	3	130	**160**	190	mm/r	0,15–0,30	0,17–0,33	0,20–0,38	0,23–0,44	0,26–0,50	0,29–0,56	0,36–0,67	0,42–0,79
	4	110	**150**	170	mm/r	0,13–0,25	0,15–0,27	0,19–0,33	0,22–0,38	0,26–0,43	0,30–0,48	0,37–0,59	0,44–0,69
	5	70	**90**	110	mm/r	0,11–0,21	0,13–0,24	0,15–0,28	0,18–0,33	0,21–0,38	0,24–0,42	0,29–0,51	0,35–0,61
	6	60	**80**	100	mm/r	0,11–0,21	0,13–0,24	0,15–0,28	0,18–0,33	0,21–0,38	0,24–0,42	0,29–0,51	0,35–0,61

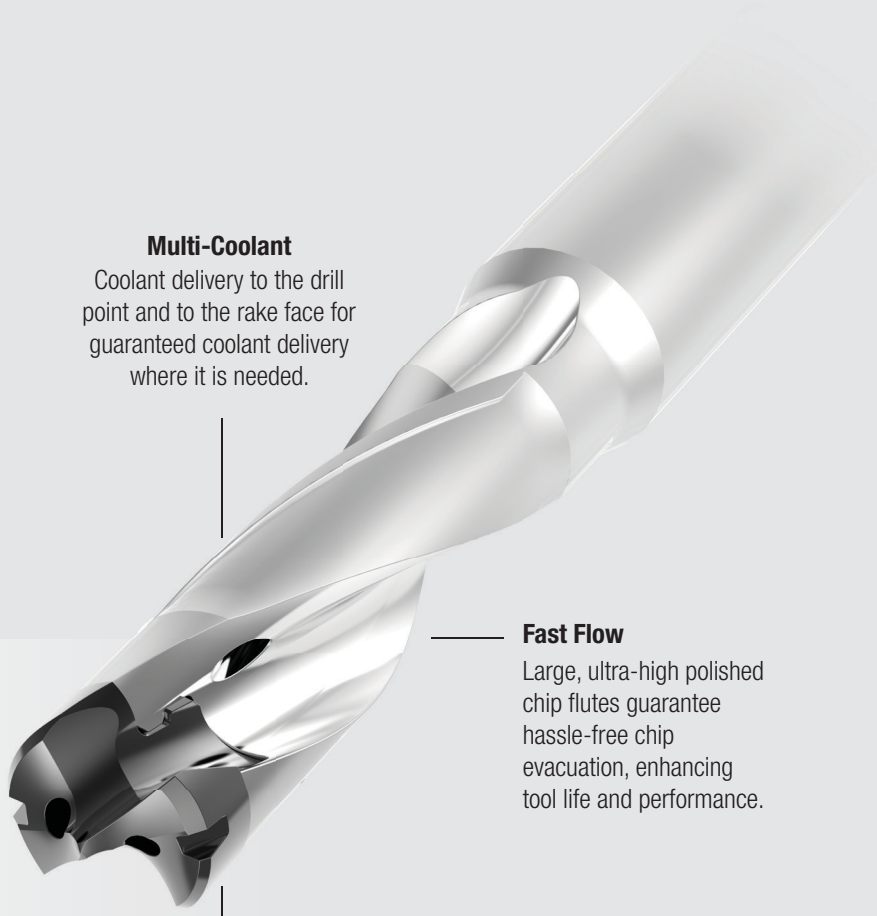
HPX • MQL • APPLICATION DATA

Material Group		Cutting Speed — vc Range — m/min min	Starting Value	max	Metric Recommended Feed Rate per Rev	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
P	0	70	**130**	150	mm/r	0,15–0,28	0,16–0,31	0,18–0,35	0,20–0,40	0,22–0,45	0,25–0,50	0,29–0,59	0,33–0,68
	1	70	**130**	150	mm/r	0,18–0,35	0,19–0,39	0,21–0,46	0,24–0,53	0,26–0,60	0,28–0,67	0,33–0,81	0,38–0,96
	2	100	**120**	140	mm/r	0,16–0,35	0,18–0,38	0,21–0,45	0,25–0,51	0,28–0,58	0,32–0,64	0,39–0,78	0,46–0,91
	3	70	**90**	100	mm/r	0,18–0,35	0,19–0,38	0,23–0,45	0,27–0,52	0,31–0,59	0,35–0,66	0,42–0,80	0,50–0,93
	4	60	**80**	90	mm/r	0,16–0,29	0,18–0,32	0,22–0,38	0,26–0,45	0,31–0,51	0,35–0,57	0,43–0,69	0,52–0,81
	5	40	**50**	60	mm/r	0,13–0,25	0,15–0,28	0,18–0,33	0,21–0,39	0,25–0,44	0,28–0,50	0,35–0,61	0,41–0,71
	6	30	**40**	50	mm/r	0,13–0,25	0,15–0,28	0,18–0,33	0,21–0,39	0,25–0,44	0,28–0,50	0,35–0,61	0,41–0,71

POWERED BY NOVO

KenTIP™ FS

Modular Drilling



Multi-Coolant
Coolant delivery to the drill point and to the rake face for guaranteed coolant delivery where it is needed.

Fast Flow
Large, ultra-high polished chip flutes guarantee hassle-free chip evacuation, enhancing tool life and performance.

Quick Release
Every drill body comes with a KenTIP smart wrench. Insert exchange in the machine becomes easy and saves idle time. And that saves money.

Materials

P M K

Applications

- Counterboring
- Drilling
- Drilling: Inclined Entry
- Drilling: Flat Bottom
- Drilling: Inclined Exit
- Drilling: Cross Hole

kennametal.com/KenTIPFS

KenTIP™ FS covers more applications and provides better performance than any other modular system, delivering substantial cost savings and process simplifications on your shop floor.

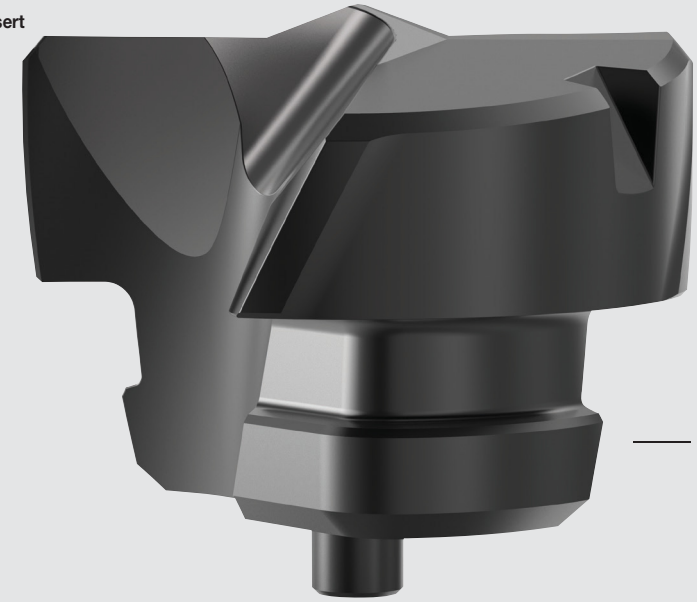
KenTIP FS inserts cover the entire front part of the drill.

The coupling is completely protected from chip flow and contact with workpiece.

180° point geometry for holes
that require a flat bottom.

NEW!

FEG Insert



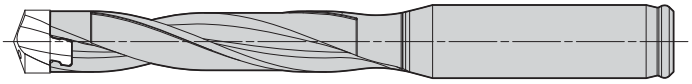
Corner chamfer to reduce bur formation.

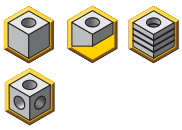
Four margin lands for hole straightness and stability on inclined exits.

NEW! FEG inserts with 180° point geometry for holes that require a flat bottom, performing two operations in one.

In conjunction with the other KenTIP FS inserts (HPG, HPC, HPL geometries), the new FEG insert can be utilised as pilot drill point for deep-hole applications.

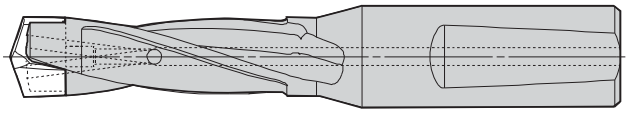
MODULAR DRILLS • TOOL SELECTION GUIDE

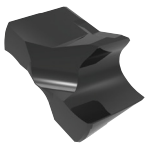
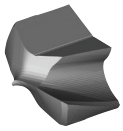
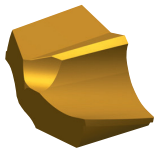
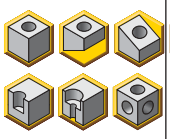


	KenTIP™ FS			
	FEG	HPG	HPC	HPL
Page	31	H8*	H12*	H14*
Workpiece material				
Primary	P K	P	K	M
Secondary	M	K	P	S
Main operation				
Point angle	Inside 140° – Outside 180°	143°	143°	140°
Cutting diameter [D1]	6,0–26,0mm	6,0–26,0mm	6,0–26,0mm	6,0–26,0mm
Flutes and margin				
Corner chamfer				

*See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

MODULAR DRILLS • TOOL SELECTION GUIDE



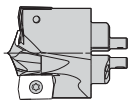
	KSEM™						
	FEG	HP	HPG	HPCCL	HPL	SPL	PC
							
Page	H29*	H26*	H8*	H48*	H14*	H52*	H56*
Workpiece material							
Primary	P K	P	P	K	M	M S	P K
Secondary	M S	K	M K			P N	M
Main operation							
Point angle	150°/180°	140°	140°	140°	140°	140°	150°
Cutting diameter [D1]	12,5–40,0mm	12,5–40,0mm	12,5–40,0mm	12,5–40,0mm	12,5–40,0mm	12,5–40,0mm	12,5–40,0mm
Flutes and margin							
Corner chamfer							

*See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

MODULAR DRILLS • TOOL SELECTION GUIDE

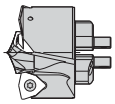
KSEM PLUS—A1 Heads

dia.: 28–31,75mm



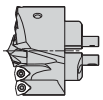
2 x DFR

dia.: 31,76–70,34mm



2 x DFT

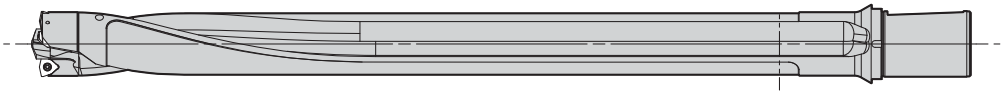
dia.: 70,35–93,34mm



4 x DFT

dia.: 93,35–101mm

6 x DFT



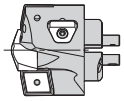
	KSEM PLUS™ A1 Heads					
Drill head style						
Centre insert	HPG			FEG		
Outboard insert	DFR-GD	DFR-MD	DFR-LD	DFT-HP	DFT-MD	DFT-DS
Page	H89–J84*			H90–J87*		
Workpiece material						
Primary	P K S	P M	K N	P K S	P M	P M
Secondary	M N	K N S	P M S	M N	K N S	N S
Main operation						
Cutting diameter [D1]	28,0–31,75mm			31,75–101,40mm		
Flutes and margin						

*See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

MODULAR DRILLS • TOOL SELECTION GUIDE

KSEM PLUS—B1 Heads

dia.: 28–70,34mm



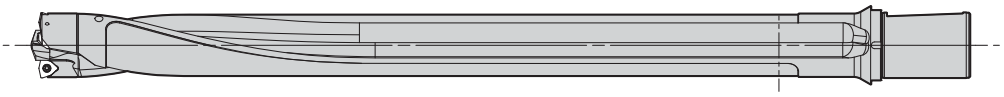
2 x DFC

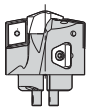
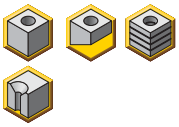
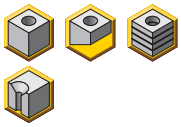
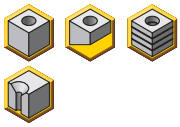
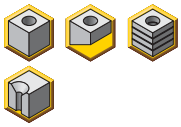
dia.: 70,34–93,34mm

4 x DFC

dia.: 93,35–101mm

6 x DFC



	KSEM PLUS™ B1 Heads			
Drill head style				
Centre insert	HPG		FEG	
Outboard insert	DFC-HP	DFC-MD	DFC-DS	DFC-HPF
Page	H90*			40**
Workpiece material				
Primary	P K S	P M	P M	P S
Secondary	M N	K N S	N S	M K N
Main operation				
Cutting diameter [D1]	28,0–101mm			
Flutes and margin				

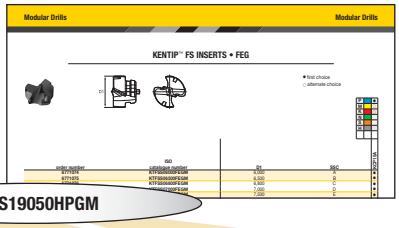
*See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

** See page in the Kennametal Innovations 2020 • 02, A-19-06096.

Modular Drills

KTFS • FEG • CATALOGUE NUMBERING SYSTEM

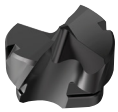
Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

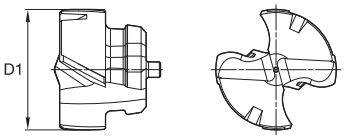


KTFSS19050HPGM

KTFS	S	19050	HPG	M
Drill Series	Coolant Type	Diameter	Point Geometry	Suffix
KTFS = KenTIP™ FS	**T** = Through-the-insert coolant **S** = Solid insert without coolant channels	Metric or Inch, depends on suffix	**HPG** = Steel **HPL** = Stainless Steel **HPC** = Cast Iron **FEG** = Flat Bottom	**M** = Metric diameter **Blank** = Inch diameter

KENTIP™ FS INSERTS • FEG





● first choice
○ alternate choice

P		●
M		○
K		○
N		
S		
H		

order number	ISO catalogue number	D1	SSC	KCP15A
6771074	KTFSS06000FEGM	6,000	A	●
6771075	KTFSS06500FEGM	6,500	B	●
6771076	KTFSS06800FEGM	6,800	C	●
6771077	KTFSS07000FEGM	7,000	D	●
6771078	KTFSS07500FEGM	7,500	E	●
6771079	KTFSS07938FEGM	7,938	E	●
6771080	KTFSS08000FEGM	8,000	F	●
6771111	KTFSS08500FEGM	8,500	G	●
6771112	KTFSS08520FEGM	8,520	G	●
6771113	KTFSS09000FEGM	9,000	H	●
6771114	KTFSS09500FEGM	9,500	I	●
6771115	KTFSS09525FEGM	9,525	I	●
6771116	KTFSS10000FEGM	10,000	J	●
6771117	KTFSS10200FEGM	10,200	J	●
6771118	KTFSS10500FEGM	10,500	K	●
6771119	KTFSS10800FEGM	10,800	K	●
6771120	KTFSS11000FEGM	11,000	L	●
6771121	KTFSS11113FEGM	11,112	L	●
6771122	KTFSS11500FEGM	11,500	M	●
6771123	KTFSS11800FEGM	11,800	M	●
6771124	KTFSS12000FEGM	12,000	N	●
6771125	KTFSS12304FEGM	12,304	N	●
6771127	KTFSS12500FEGM	12,500	O	●
6771128	KTFSS12700FEGM	12,700	O	●
6771129	KTFSS13000FEGM	13,000	P	●
6771130	KTFSS13500FEGM	13,500	Q	●
6771131	KTFSS14000FEGM	14,000	R	●
6771132	KTFSS14288FEGM	14,288	R	●
6771133	KTFSS14500FEGM	14,500	S	●
6771134	KTFSS15000FEGM	15,000	T	●
6771135	KTFSS15300FEGM	15,300	T	●
6771136	KTFSS15500FEGM	15,500	T	●
6771137	KTFSS15875FEGM	15,875	T	●
6771138	KTFSS16000FEGM	16,000	U	●
6771139	KTFSS16500FEGM	16,500	U	●
6771140	KTFSS16670FEGM	16,670	U	●
6771151	KTFSS17000FEGM	17,000	V	●
6771152	KTFSS17463FEGM	17,462	V	●
6771153	KTFSS17500FEGM	17,500	V	●
6771154	KTFSS17700FEGM	17,700	V	●
6771155	KTFSS18000FEGM	18,000	W	●
6771156	KTFSS18500FEGM	18,500	W	●
6771157	KTFSS19000FEGM	19,000	X	●
6771158	KTFSS19050FEGM	19,050	X	●
6771159	KTFSS19200FEGM	19,200	X	●
6771160	KTFSS19500FEGM	19,500	X	●
6771161	KTFSS20000FEGM	20,000	Y	●
6771162	KTFSS20500FEGM	20,500	Y	●
6771163	KTFSS20638FEGM	20,638	Y	●
6771164	KTFSS21000FEGM	21,000	Z	●
6771165	KTFSS21500FEGM	21,500	Z	●
6771166	KTFSS22000FEGM	22,000	ZA	●
6771167	KTFSS22225FEGM	22,225	ZA	●
6771168	KTFSS22500FEGM	22,500	ZA	●
6771169	KTFSS23000FEGM	23,000	ZB	●
6771170	KTFSS23500FEGM	23,500	ZB	●
6771171	KTFSS24000FEGM	24,000	ZC	●
6771172	KTFSS24500FEGM	24,500	ZC	●
6771173	KTFSS25000FEGM	25,000	ZD	●
6771174	KTFSS25400FEGM	25,400	ZD	●
6771175	KTFSS26000FEGM	26,000	ZD	●

154	156	30	4	160

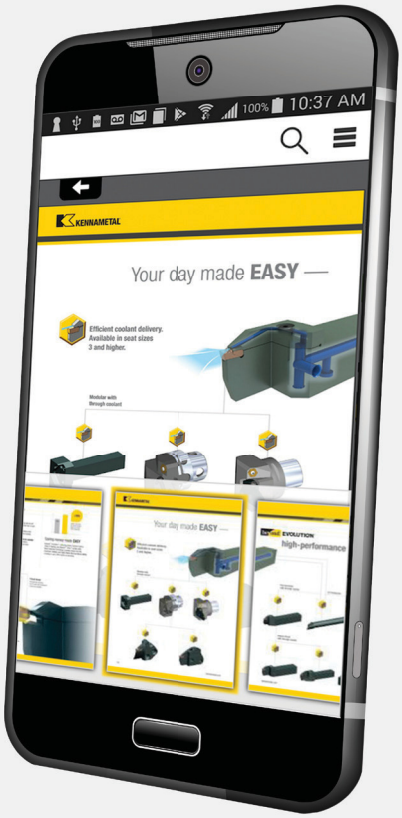
APPLICATION DATA • KENTIP™ FS • FEG INSERT

Material Group		Cutting Speed — vc Range — m/min			Metric									
					Recommended Feed Rate per Rev									
		min	Starting Value	max		6,0	8,0	10,0	12,0	14,0	16,0	20,0	24,0	26,0
P	0	110	**140**	170	mm/r	0,10–0,19	0,11–0,22	0,13–0,24	0,15–0,26	0,17–0,29	0,19–0,31	0,21–0,34	0,23–0,38	0,24–0,40
	1	110	**140**	170	mm/r	0,10–0,19	0,11–0,22	0,13–0,24	0,15–0,26	0,17–0,29	0,19–0,31	0,21–0,34	0,23–0,38	0,24–0,40
	2	100	**120**	140	mm/r	0,10–0,19	0,11–0,22	0,13–0,24	0,15–0,26	0,17–0,29	0,19–0,31	0,21–0,34	0,23–0,38	0,24–0,40
	3	80	**100**	120	mm/r	0,10–0,17	0,11–0,20	0,12–0,22	0,14–0,24	0,16–0,26	0,18–0,28	0,20–0,31	0,21–0,35	0,22–0,36
	4	70	**90**	110	mm/r	0,10–0,17	0,11–0,20	0,12–0,22	0,14–0,24	0,16–0,26	0,18–0,28	0,20–0,31	0,21–0,35	0,22–0,36
	5	60	**80**	100	mm/r	0,09–0,16	0,10–0,18	0,11–0,20	0,13–0,22	0,15–0,24	0,16–0,26	0,18–0,29	0,19–0,33	0,20–0,34
	6	60	**80**	100	mm/r	0,09–0,16	0,10–0,18	0,11–0,20	0,13–0,22	0,15–0,24	0,16–0,26	0,18–0,29	0,19–0,33	0,20–0,34
M	1	40	**60**	80	mm/r	0,07–0,12	0,08–0,14	0,09–0,16	0,11–0,18	0,12–0,20	0,13–0,22	0,14–0,24	0,15–0,26	0,16–0,27
	2	35	**55**	70	mm/r	0,07–0,12	0,08–0,14	0,09–0,16	0,11–0,18	0,12–0,20	0,13–0,22	0,14–0,24	0,15–0,26	0,16–0,27
K	1	90	**120**	175	mm/r	0,12-0,21	0,14-0,24	0,16-0,28	0,18-0,32	0,20-0,36	0,22-0,40	0,25-0,44	0,28-0,48	0,29-0,50
	2	80	**110**	140	mm/r	0,12–0,21	0,14–0,24	0,16–0,28	0,18–0,32	0,20–0,36	0,22–0,40	0,25–0,44	0,28–0,48	0,29–0,50
	3	70	**80**	100	mm/r	0,11-0,19	0,13-0,22	0,14-0,25	0,16-0,28	0,18-0,32	0,21-0,36	0,23-0,40	0,26-0,44	0,27-0,46

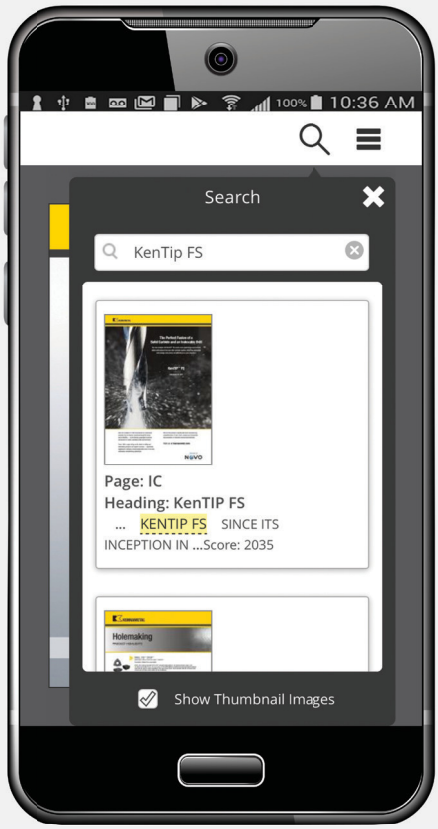
For complete portfolio, see Kennametal Master Catalogue 2018 | A-16-05217, or visit **kennametal.com.**

Catalogue App

Browse Pages



Search Products



Watch a Video

Check out our new catalogue app.
Available in the Google Play™ Store
or the App Store®

OR VISIT **CATALOGS.KENNAMETAL.COM** TODAY.

KENNAMETAL

eBore™

Digital Fine Boring System

One digital display for all fine boring tools.

Materials

P M K N S H

Applications

- Reaming: Through Hole
- Reaming: Blind Hole
- Reaming: Through & Cross Holes
- Reaming: Blind & Cross Holes

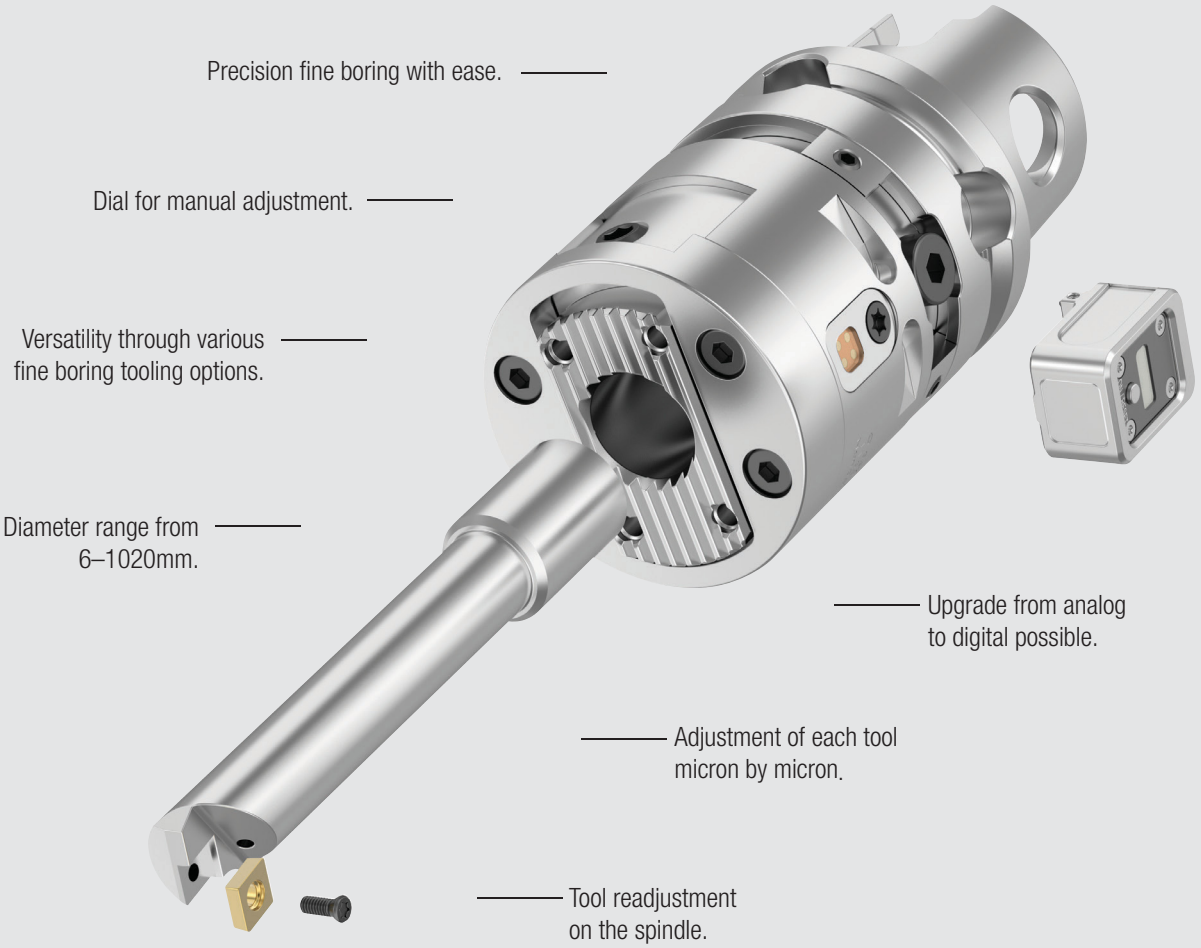
kennametal.com/eBore

The eBore boring system covers a diameter range from 6–1020mm by providing state-of-the-art fine boring tooling solutions that have one thing in common: all of them are digital ready.

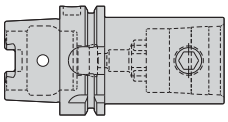
The digital eBore display provides the option to readjust the tool on the spindle, reducing setup time and idle time.

One for all — One eBore digital display serving all eBore fine boring tools.

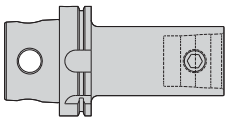
Micron by micron, the precision adjustment of each tool is just as easy as 1, 2, 3.



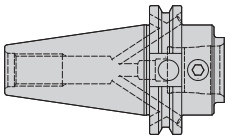
Adaptors



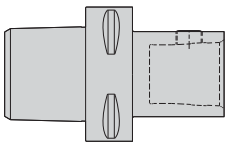
HSK to KM™



KM4X™ to KM

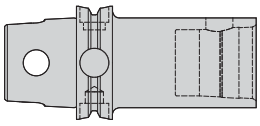


BT, CV, DV to KM

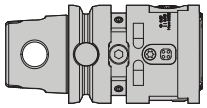


PSC to KM

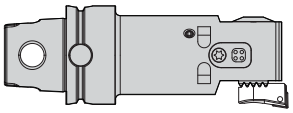
Extensions



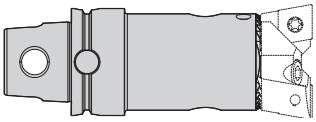
eBore™



eBore Universal

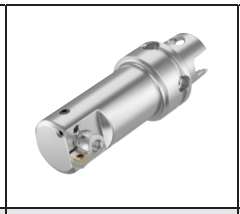
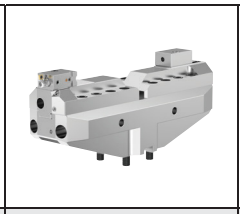
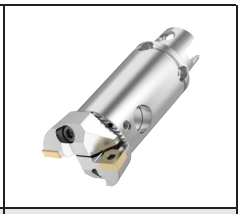


eBore Fine Boring



eBore Twin Cutter

Tool Selection Guide • Fine Boring

				
Series	eBore™ Universal	eBore Fine Boring Tool	eBore Bridge Finishing Tools	eBore Twin Cutters
Page	40	45	46	49
Workpiece material				
Primary	P M K N S	P M K N S	P M K N S	P M K N S
Secondary	H	H	H	
Boring range [BR1]	6–152mm	20–205mm	200–1020mm	19,5–1020mm
Accuracy	IT6			IT9
Cylindricity	5 µm			10 µm
Position	5–10 µm			>20 µm
Surface roughness (Ra) P	0,8–2,0 µm			1,0–5,0 µm
Surface roughness (Ra) M	0,8–2,0 µm			1,0–5,0 µm
Surface roughness (Ra) K	0,8–2,0 µm			1,0–5,0 µm
Surface roughness (Ra) N	0,8–2,0 µm			1,0–2,0 µm
Surface roughness (Ra) S	0,8–2,0 µm			1,0–5,0 µm
Surface roughness (Ra) H	< 1,2 µm			
Coolant				
Main Operations				

For insert selection, see Kennametal Master Catalogue 2018 I A-16-05217, or visit **kennametal.com.**

NOVO™

Digitally access and leverage product data and knowledge to connect systems and processes throughout the entire manufacturing lifecycle.

VISIT **KENNAMETAL.COM**/NOVO AND DOWNLOAD TODAY.

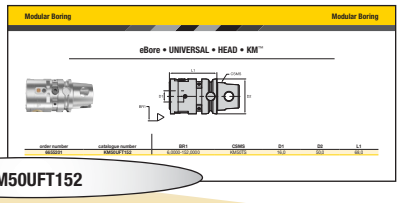
KENNAMETAL®

kennametal.com

eBore™ • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

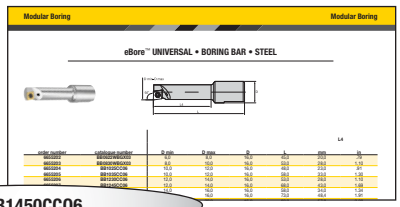
Head



KM50UFT152

KM50	UFT	152
Back End	Boring System	Boring Range
KM™	**UTF** = UNIVERSAL Fine Boring Tool **BT** = Fine Boring Tool **BDG** = Bridge Tool **TC** = Twin Cutter	Diameter (min. or max.)

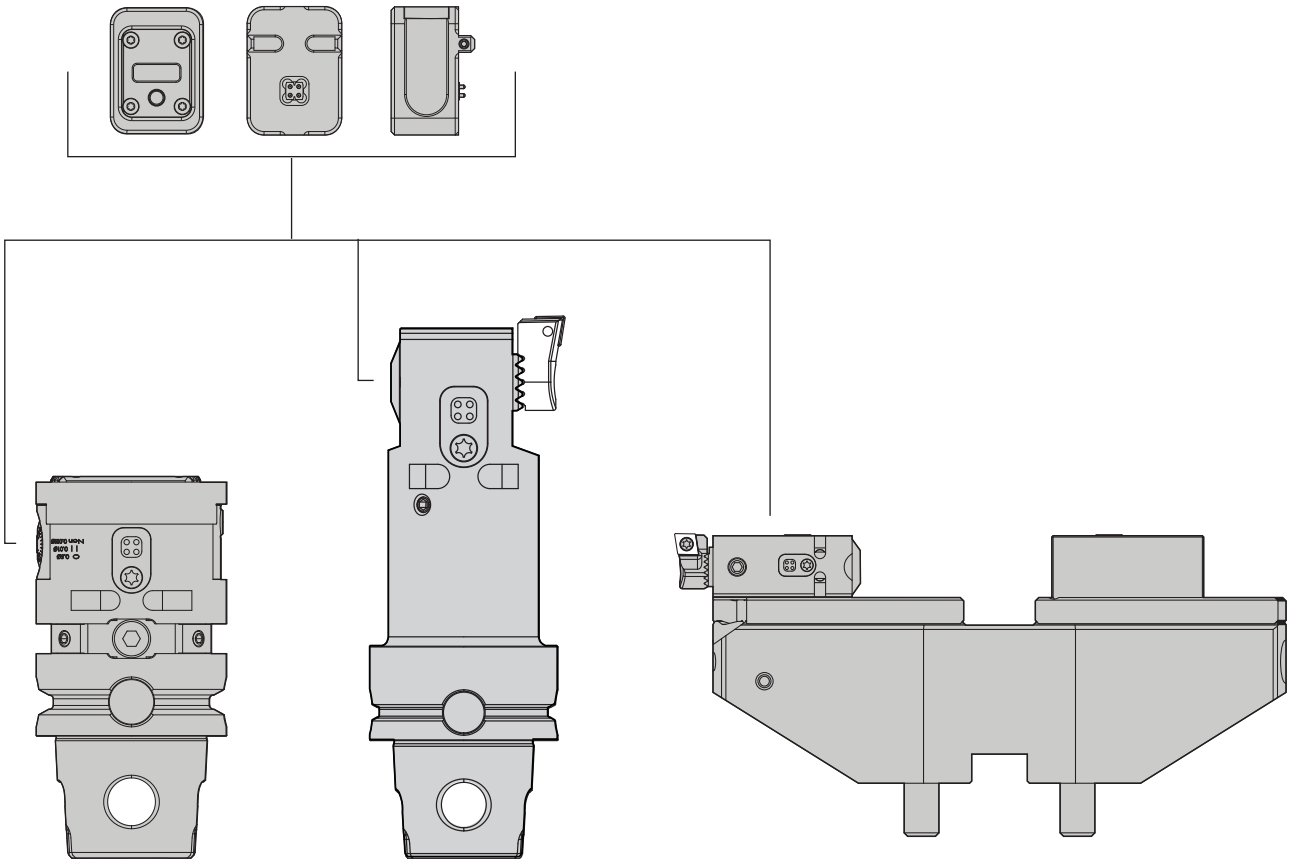
Boring Bar and Insert Holder



BB1450CC06

BB	14	50	CC06
Tool Type	Diameter	Length	Insert Style and Size
BB = Boring bar **IH** = Insert holder	Ø14mm	50mm	**CC** = Rhomboid 60º, 7º clearance angle **06** = IC 6mm **09** = IC 9mm **12** = IC 12mm

eBore™ DIGITAL DISPLAY OVERVIEW

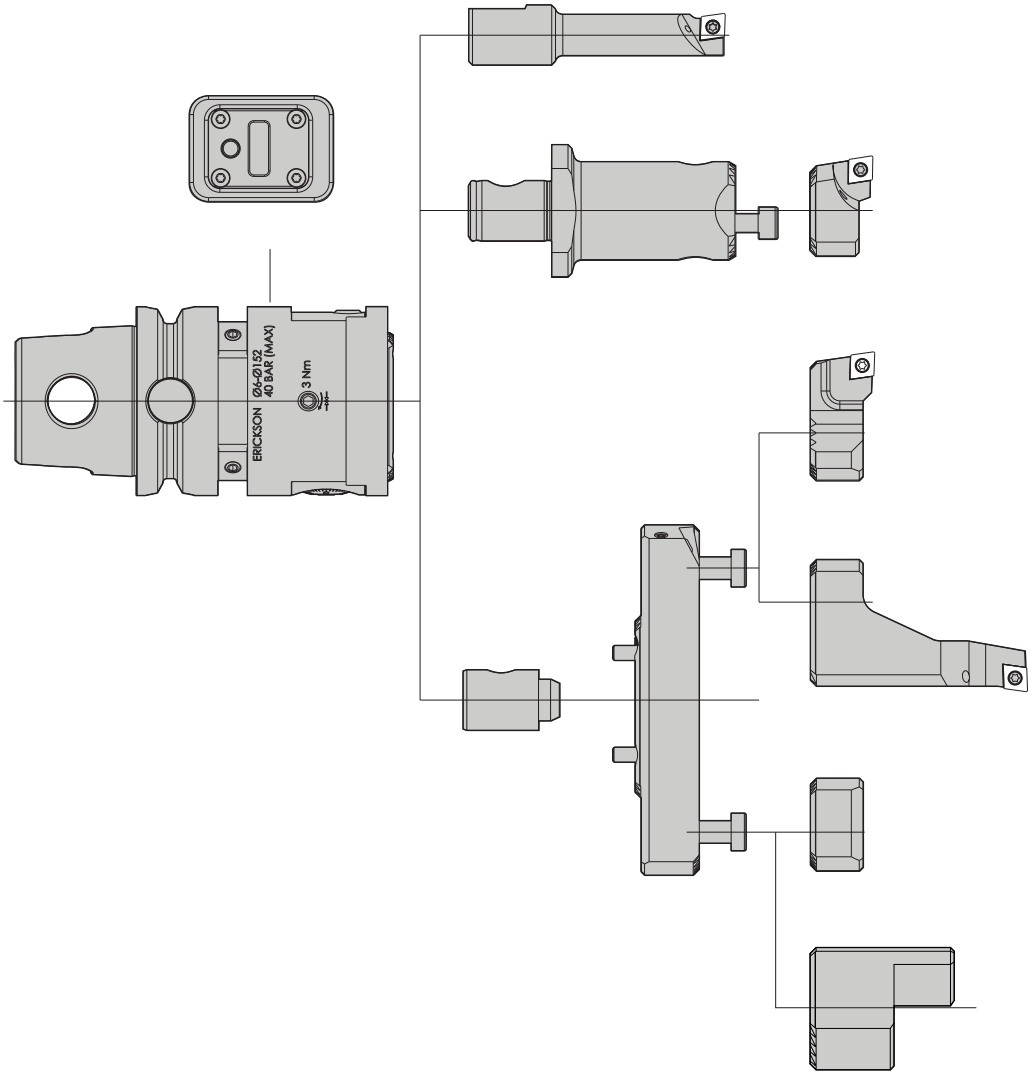


eBore DIGITAL DISPLAY

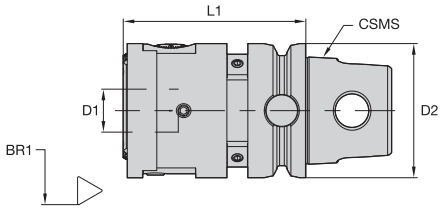
order number	catalogue number
6655307	FBDD0001IN
6655306	FBDD0001M

154	156	38	4	160

eBore™ UNIVERSAL OVERVIEW



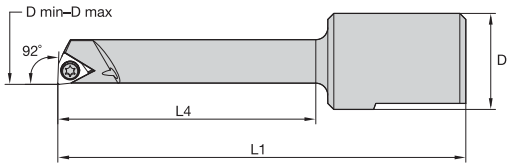
eBore • UNIVERSAL • HEAD • KM™



order number	catalogue number	BR1	CSMS	D1	D2	L1
6655201	KM50UFT152	6,0000-152,0000	KM50TS	16,0	50,0	68,0

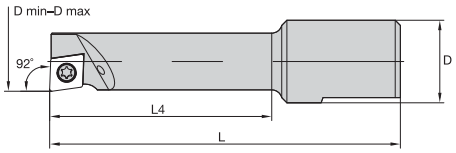
154	156	38	4	160

eBore™ UNIVERSAL • BORING BAR • HEAVY METAL



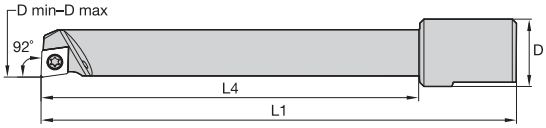
order number	catalogue number	D min	D max	D	L1	L4
6655221	BB0632WBGX03	6,0	8,0	16,0	55,0	30,0
6655222	BB0845WBGX03	8,0	10,0	16,0	68,0	43,0

eBore UNIVERSAL • BORING BAR • STEEL



order number	catalogue number	D min	D max	D	L	L4
6655202	BB0622WBGX03	6,0	8,0	16,0	45,0	20,0
6655203	BB0830WBGX03	8,0	10,0	16,0	53,0	28,0
6655204	BB1025CC06	10,0	12,0	16,0	48,0	23,0
6655205	BB1035CC06	10,0	12,0	16,0	58,0	33,0
6655206	BB1230CC06	12,0	14,0	16,0	53,0	28,0
6655207	BB1245CC06	12,0	14,0	16,0	68,0	43,0
6655208	BB1435CC06	14,0	16,0	16,0	58,0	34,0
6655209	BB1450CC06	14,0	16,0	16,0	73,0	48,4
6655210	BB1560CC06	15,0	20,0	16,0	83,0	57,8
6655211	BB1640CC06	16,0	20,0	16,0	63,0	40,0
6655212	BB2070CC06	20,0	25,0	16,0	93,0	70,0
6655213	BB2570CC06	25,0	30,0	16,0	93,0	70,0

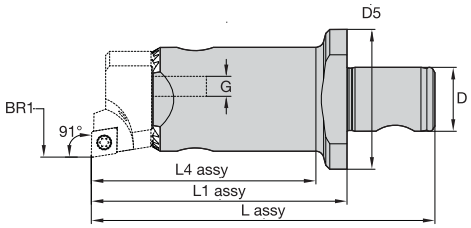
eBore UNIVERSAL • BORING BAR • CARBIDE



order number	catalogue number	D min	D max	D	L1	L4
6655214	BB1055CC06	10,0	12,0	16,0	78,0	55,0
6655215	BB1075CC06	10,0	12,0	16,0	98,0	75,0
6655216	BB1290CC06	12,0	14,0	16,0	113,0	90,0
6655217	BB1475CC06	14,0	16,0	16,0	98,0	75,0
6655218	BB14100CC06	14,0	16,0	16,0	123,0	100,0
6655219	BB1690CC06	16,0	20,0	16,0	113,0	90,0
6655220	BB16120CC06	16,0	20,0	16,0	143,0	120,0

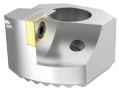
154	156	38	4	160

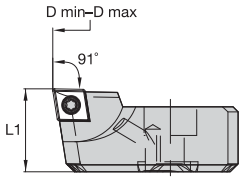
eBore™ UNIVERSAL • EXTENSION



order number	catalogue number	BR1	D	D5	L1 assy	L2 assy	G
6655223	UFTE64	29,0000	16,0	35,0	64,0	56,2	M5X20
6655224	UFTE100	29,0000-53,0000	16,0	35,0	100,0	92,2	M5X20

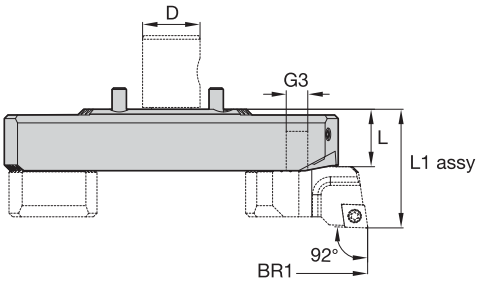
eBore UNIVERSAL • INSERT HOLDER • CC06





order number	catalogue number	D min	D max	L1
6655226	IH02916CC06	29,0	41,0	16,0
6655227	IH04016CC06	40,0	53,0	16,0
6655228	IH05216CC06	52,0	77,0	16,5
6655229	IH07616CC06	76,0	102,0	16,5

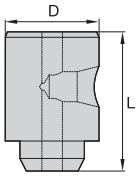
eBore UNIVERSAL • BRIDGE



order number	catalogue number	BR1	D	L	L1 assy	G3
6655233	UFTB06816	68,0000-96,0000	16,0	17,1	32,5	M4X0.7
6655234	UFTB09616	96,0000-124,0000	16,0	17,1	32,5	M4X0.7
6655235	UFTB12416	124,0000-152,0000	16,0	17,1	32,5	M4X0.7

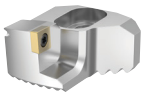
154	156	38	4	160

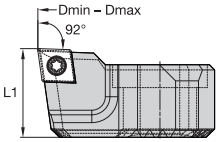
eBore™ UNIVERSAL • COOLANT CONNECTOR



order number	catalogue number	D	L
6655238	CBUFTB	16,0	25,5

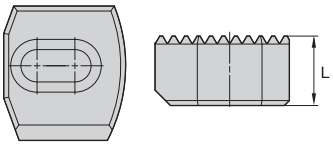
eBore UNIVERSAL • INSERT HOLDER I.D. • CC06





order number	catalogue number	D min	D max	L1
6655236	IHUFTBCC06	68,0	152,0	16,5

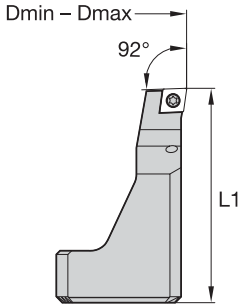
eBore UNIVERSAL • COUNTERWEIGHT I.D.



order number	catalogue number	L
6655237	CWUFTB	14,0

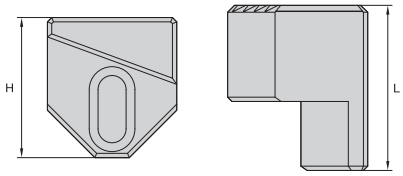
154	156	38	4	160

eBore™ UNIVERSAL • INSERT HOLDER O.D. • CC06



order number	catalogue number	D min	D max	L1
6655308	IHUFTODCC06	2,0	58,0	57,0

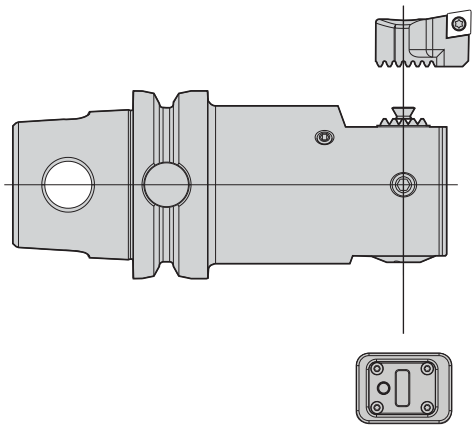
eBore UNIVERSAL • COUNTERWEIGHT O.D.



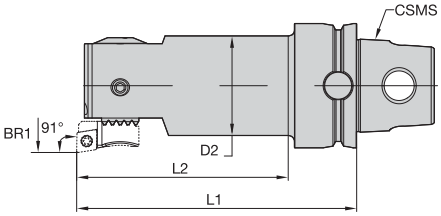
order number	catalogue number	L	H
6655309	CWUFTBOD	38,3	32,5

154	156	38	4	160

eBore™ FINE BORING OVERVIEW

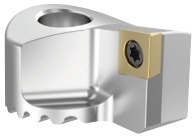


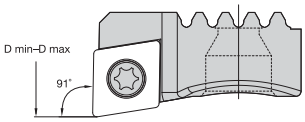
eBore FINE BORING • CUTTING UNIT • KM™



order number	catalogue number	BR1	CSMS	D2	L1 assy	L2 assy
6655290	KM32BT024532	24,5000-29,5000	KM32TS	23,0	90,0	78,0
6655292	KM32BT02942	29,0000-44,0000	KM32TS	27,0	100,0	88,0
6655294	KM40BT04352	43,0000-54,0000	KM40TS	32,0	90,0	68,0
6655295	KM50BT05357	53,0000-66,0000	KM50TS	42,0	90,0	68,0
6655297	KM50BT06557	65,0000-83,0000	KM50TS	50,0	90,0	90,0
6655298	KM63BT08272	82,0000-103,0000	KM63TS	63,0	100,0	100,0
6655299	KM80BT10072	100,0000-130,0000	KM80TS	80,0	120,0	120,0
6655300	KM80BT12572	125,0000-167,5000	KM80TS	—	120,0	120,0
6655301	KM80BT162572	162,5000-205,0000	KM80TS	—	150,0	150,0

eBore FINE FINISHING • INSERT HOLDER



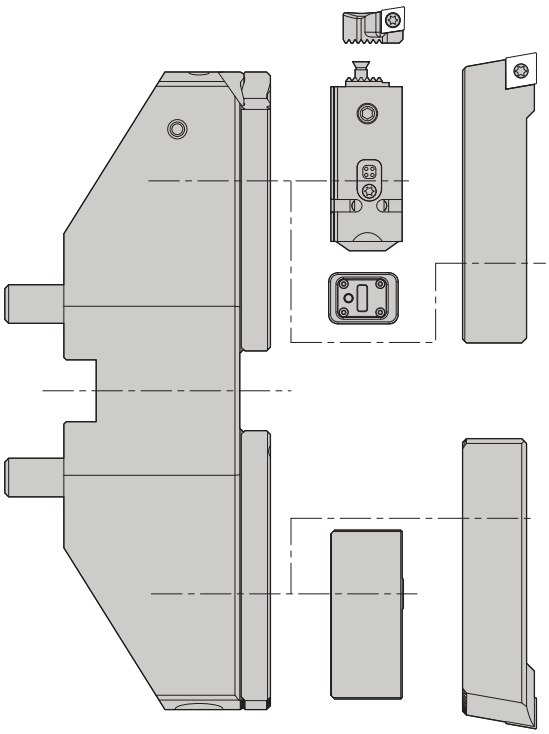


order number	catalogue number	D min	D max
6655291	IHBT024CC06	24,5	29,5
6655293	IHBT036CC06	29,0	42,0
6655296	IHBT053CC06	53,0	205,0

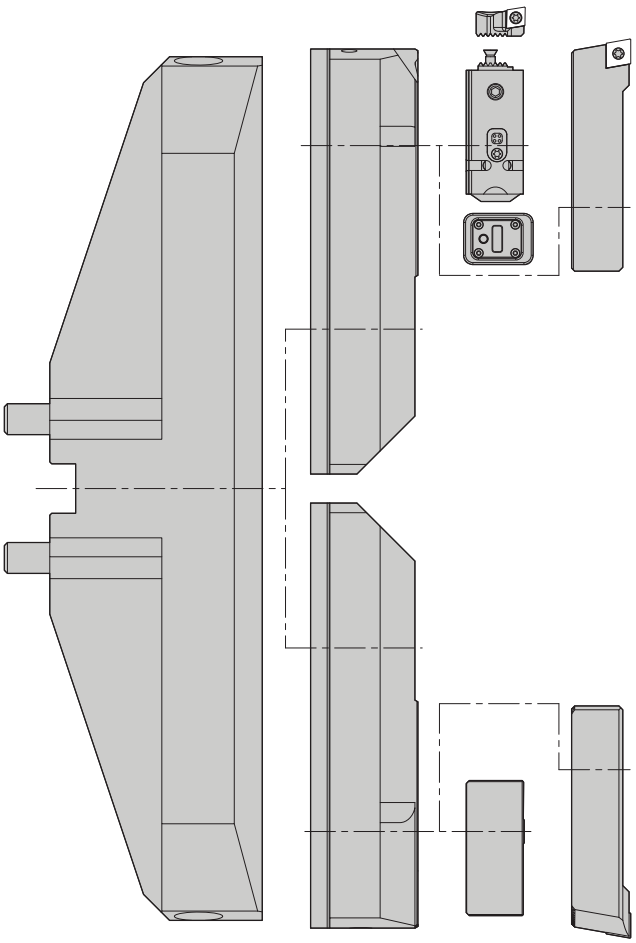
154	156	38	4	160

eBore™ BRIDGE TOOLS OVERVIEW

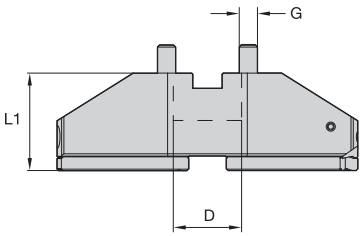
eBore — Bridge S (Small)



eBore — Bridge L (Large)



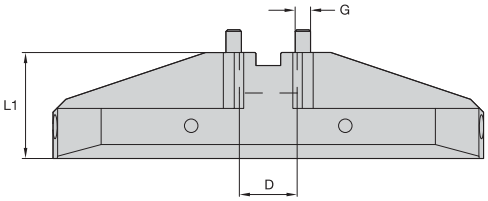
eBore • BRIDGE S



order number	catalogue number	BR1	D	L1	L1 assy	G
6655282	BDG20060	200,0000-280,0000	60,0	85,0	115,1	M10X50
6655284	BDG27560	275,0000-355,0000	60,0	85,0	115,1	M10X50
6655285	BDG35060	350,0000-430,0000	60,0	85,0	115,1	M10X50
6655286	BDG42560	425,0000-505,0000	60,0	85,0	115,1	M10X50

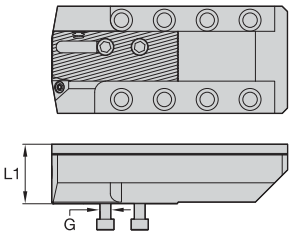
154	156	38	4	160

eBore™ • BRIDGE L



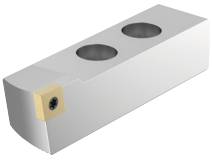
order number	catalogue number	BR1	D	L1	L1 assy	G
6655287	BDG46560	465,0000-745,0000	60,0	110,0	185,1	M12X55
6655289	BDG74060	740,0000-1020,0000	60,0	110,0	185,1	M12X55

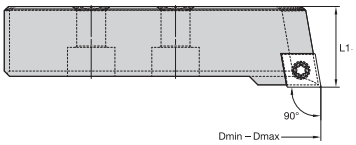
eBore • BRIDGE L • EXTENDER



order number	catalogue number	L1	G
6655288	SBDG46545	45,0	M10X1.5

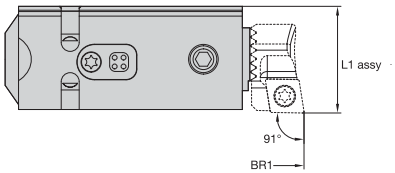
eBore • BRIDGE S/L • INSERT HOLDER • CC12





order number	catalogue number	D min	D max	L1
6655283	IHBDGCC12	200,0	1020,0	30,1

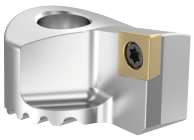
eBore • BRIDGE S/L • SLIDE

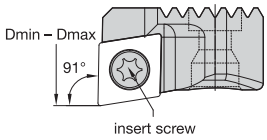


order number	catalogue number	BR1	L1 assy
6655302	BFBS10012	100,0000-1020,0000	30,0

154	156	38	4	160

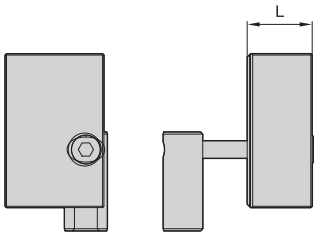
eBore™ • BRIDGE S/L • INSERT HOLDER • CC09





order number	catalogue number	D min	D max
6655303	IHBFBSCC09	200,0	1020,0

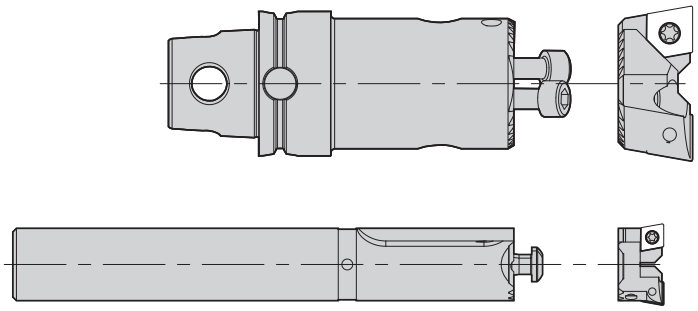
eBore • BRIDGE S/L • SLIDE • COUNTERWEIGHT



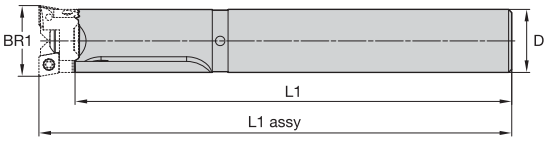
order number	catalogue number	L
6655305	CWBFBS	68,2

154	156	38	4	160

eBore™ TWIN CUTTER OVERVIEW

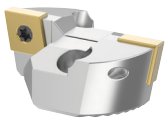


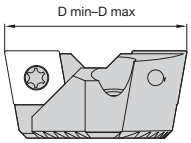
eBore • TWIN CUTTER • STRAIGHT SHANK



order number	catalogue number	BR1	D	L1	L1 assy
6655239	SS18TC0195	19,5000-23,0000	18,0	138,0	150,0
6655241	SS20TC0225	22,2000	20,0	138,0	150,0
6655243	SS23TC0255	25,5000-30,0000	23,0	148,2	160,0

eBore • TWIN CUTTER • STRAIGHT SHANK • INSERT HOLDER

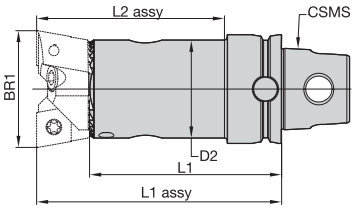




order number	catalogue number	D min	D max
6655240	IHTC0195CC06	19,5	23,0
6655242	IHTC0225CC06	22,5	26,0
6655244	IHTC0255CC06	25,5	30,0

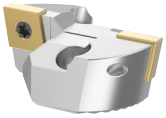
154	156	38	4	160

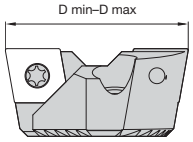
eBore™ • TWIN CUTTER • KM™



order number	catalogue number	BR1	CSMS	D2	L1	L1 assy	L2 assy
6655245	KM32TC029	29,0000-37,0000	KM32TS	25,0	86,0	100,0	88,0
6655247	KM32TC036	36,0000-44,0000	KM32TS	30,0	86,0	100,0	79,5
6655249	KM40TC043	43,0000-54,0000	KM40TS	36,0	70,0	90,0	69,0
6655271	KM40TC053	53,0000-66,0000	KM40TS	40,0	70,0	90,1	90,1
6655273	KM50TC065	65,0000-83,0000	KM50TS	50,0	70,0	90,1	90,1
6655275	KM63TC082	82,0000-103,0000	KM63TS	63,0	70,0	100,1	100,1
6655277	KM80TC100	100,0000-155,0000	KM80TS	80,0	90,0	120,1	120,1
6655280	KM80TC150	150,0000-205,0000	KM80TS	125,0	120,0	150,1	150,1

eBore • TWIN CUTTER • KM • INSERT HOLDER



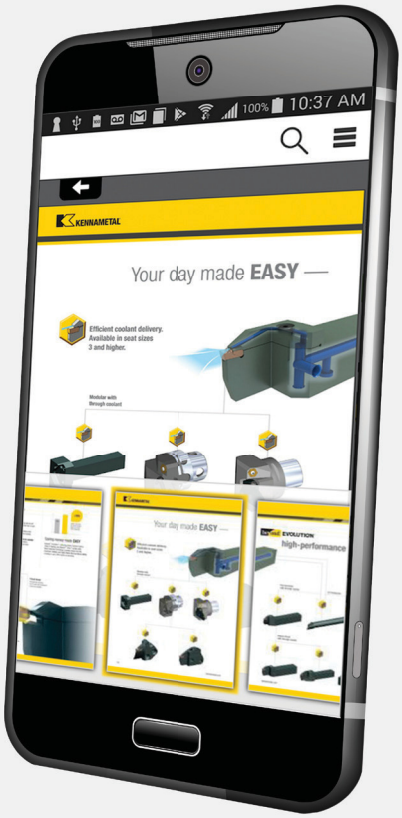


order number	catalogue number	D min	D max
6655246	IHTC029CC09	29,0	37,0
6655248	IHTC036CC09	36,0	44,0
6655250	IHTC043CC12	43,0	54,0
6655272	IHTC053CC12	53,0	66,0
6655274	IHTC065CC12	65,0	83,0
6655276	IHTC082CC12	82,0	103,0
6655278	IHTC100CC12	100,0	130,0
6655279	IHTC125CC12	125,0	155,0
6655281	IHTC150CC12	150,0	205,0

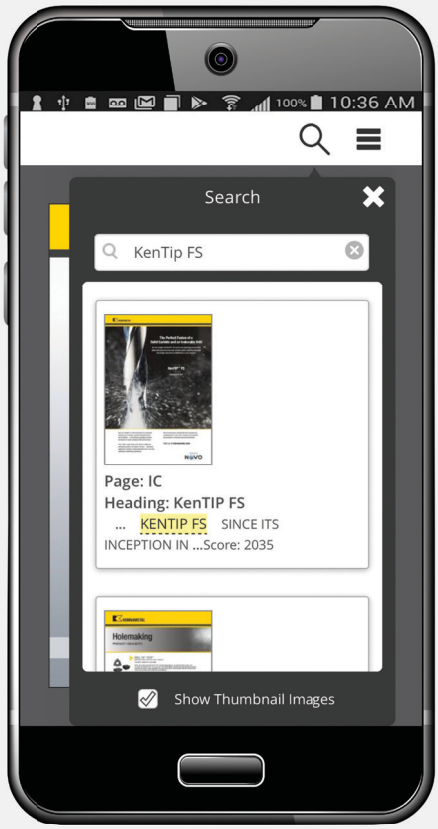
154	156	38	4	160

Catalogue App

Browse Pages



Search Products



Watch a Video

Check out our new catalogue app.
Available in the Google Play™ Store
or the App Store®

OR VISIT **CATALOGS.KENNAMETAL.COM** TODAY.

KENNAMETAL

POWERED BY NOVO

HARVI™ I TE

High-Performance Solid End Milling

Materials

P M K S H

Applications

- Slotting
- 3D Profiing
- Side Milling/ Shoulder Milling
- Ramping
- Helical Interpolation
- Plunge Milling
- Trochoidal Milling
- Trochoidal Milling: Ball Nose

kennametal.com/HARVI1TE

Proprietary end face design — Twisted cutting edge increases corner stability, enabling soft cutting action even at highest ramping angles.

Proprietary core design — Increases tool stability.

Innovative end face design — Asymmetrical divided flutes and variable helix, enabling vibration dampening and unmatched feed rates.

Proprietary relief — With AVF technology. A precision-faceted eccentric relief reduces vibrations and friction. For excellent cutting conditions in multiple materials.

Proprietary flute design — Innovative chip gashes within the flutes reduce cutting forces and supports efficient chip evacuation.

HARVI™ I TE — Innovative proprietary design features driving maximum productivity.

Universal character. Machines steel, stainless steel, cast iron, and high-temperature alloys with exceptional feed rates, reaching unmatched metal removal rates.

Applicable for a variety of operations, including dynamic milling and extreme ramping operations.

4-fluted end mill for high-performance roughing and finishing with only one tool.

HARVI I TE — Maximum metal removal. Maximum productivity. Maximum benefit.

HARVI™ • TOOL SELECTION GUIDE

	HARVI I	HARVI I	HARVI I	HARVI I Chipbreaker	HARVI I Extended Reach	HARVI I TE	HARVI I TE
Series	F4AS...DL	UADE	F4AS.. WM-WX-WL/UBDE	F4BS.. WM-WX-WL	UADE	H1TE4CH..R..	H1TE4CH..N..
Page	P16*	P17*	P18*	P19*	P20*	62	63
Tool type							
Rougher	●	●	●	●	●	●	●
Finisher	○	○	○	○	○	○	○
Chamfering							
Main operation							
Workpiece material							
Primary	P M K	P M K	P M K S	P M K	P M K	P M K	P M K
Secondary	S H	S H	H	H	H	S H	S H
Corner style							
Corner radius [Rε]	—	—	0,50–6mm	0,50–4mm	—	—	—
Corner chamfer width [BCH]	0,40–0,50mm	0,40–0,50mm	—	—	0,40–0,50mm	0,40–0,50mm	0,15–0,35mm
Cutter diameter [D1]	4–25mm	4–25mm	6–25mm	6–25mm	6–20mm	4–25mm	4–25mm
Length of cut	1,8–3 x D1	3–4 x D	2–2,5 x D1	1,5 x D1	2 x D1	1,8–3 x D1	1,8–3 x D1
Maximum cutting depth [Ap1 max]	12–45mm	11–45mm	9–37,5mm	9–37,5mm	12–40mm	12–45mm	11–45mm
Flute helix angle	38°	38°	38°	38°	38°	36°/39°	36°/39°
Number of flutes [ZU]	4	4	4	4	4	4	4
Centre cutting	✔	✔	✔	✔	✔	✔	✔
Additional operations							

* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

● Primary
○ Secondary

Solid Carbide End Mills

HARVI™ • TOOL SELECTION GUIDE

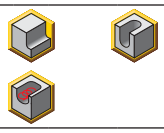
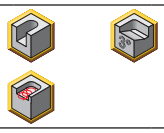
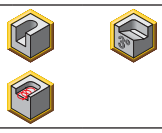
	HARVI I TE	HARVI I TE	HARVI I TE	HARVI I TE
		NEW!	NEW!	NEW!
Series	**H1TE4RA..N..**	**H1TE4SE..N..**	**H1TE4CH..S..**	**H1TE4SE..S..**
Page	64–65	59	60	61
Tool type				
Rougher	●	●	●	●
Finisher	○	○	○	○
Chamfering				
Main operation				
Workpiece material				
Primary	P M K S	P M K	P M K	P M K
Secondary	H	S H	S H	S H
Corner style				
Corner radius [Rε]	0,50–6mm	—	—	—
Corner chamfer width [BCH]	—	—	0,1–0,35mm	—
Cutter diameter [D1]	6–25mm	2–25mm	2–25mm	2–25mm
Length of cut	1,5–2 x D1	1,8–3 x D1	1,2–2 x D1	1,2–2 x D1
Maximum cutting depth [Ap1 max]	9–37,5mm	6–45mm	4–30mm	4–30mm
Flute helix angle	36°/39°	36°/39°	36°/39°	36°/39°
Number of flutes [ZU]	4	4	4	4
Centre cutting	✔	✔	✔	✔
Additional operations				

* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

● Primary
○ Secondary

Solid Carbide End Mills

HARVI™ • TOOL SELECTION GUIDE

	HARVI I Ball Nose	HARVI I Taper Ball Nose	HARVI II	HARVI II
Series	F4AW..WL-WX	F4AW..AWL38-AWX38	UCDE	UDDE
Page	P21*	P22*	P30*	P31–P32*
Tool type				
Rougher	●	●	●	●
Finisher	○	○	○	○
Chamfering				
Main operation				
Workpiece material				
Primary	P M K	P M	P M K S	P K S
Secondary	H	S H	H	H
Corner style				
Corner radius [Rε]	—	—	0,25–0,75mm	0,20–6mm
Corner chamfer width [BCH]	—	—	—	—
Cutter diameter [D1]	6–16mm	4–10mm	4–25mm	6–25mm
Length of cut	1 x D1	5–7 x D	1,8–2,7 x D1	1,8–2,2 x D1
Maximum cutting depth [Ap1 max]	6–16mm	30,5–61mm	11–45mm	13–45mm
Flute helix angle	38°	38°	38°	38°
Number of flutes [ZU]	4	4	5	5
Centre cutting	✔	✔		
Additional operations				

* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

● Primary
○ Secondary

Solid Carbide End Mills

HARVI™ • TOOL SELECTION GUIDE

	HARVI III	HARVI III	HARVI III Ball Nose	HARVI III Taper Ball Nose	HARVI II Long	HARVI II Long
Series	UJDE	UJDE with neck	UJBE	UJBE	UGDE 3 x D	UGDE 5 x D
Page	P48*	P49*	P54*	P62*	P36*	P37*
Tool type						
Rougher	○	○	○	○		
Finisher	●	●	●	●	●	●
Chamfering						
Main operation						
Workpiece material						
Primary	M S	M S	M S	M S	P M S	P M S
Secondary	P H	P H	P H	P H	K H	K H
Corner style						
Corner radius [Rε]	0,50–0,75mm	0,50–6mm	—	—	0,20–6mm	0,20–6mm
Corner chamfer width [BCH]	—	—	—	—	—	—
Cutter diameter [D1]	10–25mm	10–25mm	10–20mm	4–10mm	6–25mm	6–25mm
Length of cut	2 x D	3 x D	1 x D1	5–7 x D	3 x D	5 x D
Maximum cutting depth [Ap1 max]	22–45mm	22–45mm	10–20mm	26–39mm	18–75mm	30–125mm
Flute helix angle	38°	38°	38°	38°	43°	43°
Number of flutes [ZU]	6	6	6	6	5	5
Centre cutting	✔	✔	✔	✔		
Additional operations						

* See page in the Kennametal Master Catalogue 2018 • Volume Two • Rotating Tools, A-16-05217.

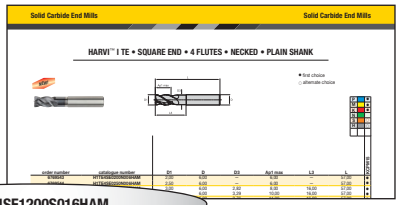
● Primary

○ Secondary

Solid Carbide End Mills

HARVI™ I TE • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



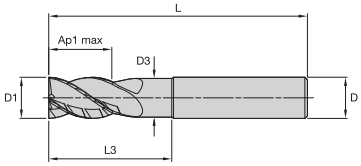
H1TE4SE1200S016HAM

H1TE	4	SE	1200	S	016	HA			M
Series	Number of Flutes	Front End Style	Cutting Diameter D1	Flute Section Style	Length of Cut Ap1 max	Shank Style	Radius	Specific Features	Standard
H1TE = HARVI I TE	**1** = 1-Flute **2** = 2-Flute **3** = 3-Flute **4** = 4-Flute **5** = 5-Flute **6** = 6-Flute **7** = 7-Flute **8** = 8-Flute **9** = 9-Flute **M** = Multi-flute	**SE** = Sharp Edge **CH** = Chamfer **RA** = Radius **BN** = Ball Nose **TB** = Taper Ball Nose **TO** = Toroidal	**Metric** = D1 in mm **Inch** = D1 in decimal inch	**N** = Neck **E** = Extended Neck **S** = Short Without Neck **R** = Regular Without Neck **L** = Long Without Neck **X** = Extra Long Without Neck	**Metric** = Ap1 Max in mm **Inch** = Ap1 Max in decimal inch	**HA** =Plain **HB** = Weldon® **SL** = Safe-Lock™ **DL** = Duo-Lock™		**C** = Chip Splitter **I** = Internal Coolant **O** = Coolant Grooves in Shank **P** = Polished Flutes	**M** = Metric **Blank** = Inch

Radius Metric
R020 = 0,2mm
R025 = 0,25mm
R030 = 0,3mm
R040 = 0,4mm
R050 = 0,5mm
R075 = 0,75mm
R100 = 1,0mm
R125 = 1,25mm
R150 = 1,5mm
R200 = 2,0mm
R250 = 2,5mm
R300 = 3,0mm
R400 = 4,0mm
R500 = 5,0mm
R600 = 6,0mm

HARVI™ I TE • SQUARE END • 4 FLUTES • NECKED • PLAIN SHANK

NEW!



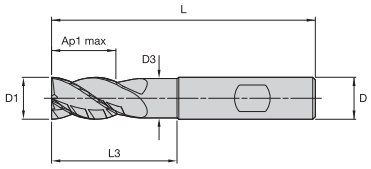
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	KCPM15
6769543	H1TE4SE0200N006HAM	2,00	6,00	–	6,00	–	57,00	●
6769544	H1TE4SE0250N006HAM	2,50	6,00	–	6,00	–	57,00	●
6769545	H1TE4SE0300N008HAM	3,00	6,00	2,82	8,00	16,00	57,00	●
6769546	H1TE4SE0350N010HAM	3,50	6,00	3,29	10,00	16,00	57,00	●
6769547	H1TE4SE0400N011HAM	4,00	6,00	3,76	11,00	16,00	57,00	●
6769548	H1TE4SE0500N013HAM	5,00	6,00	4,70	13,00	18,00	57,00	●
6769549	H1TE4SE0600N013HAM	6,00	6,00	5,64	13,00	18,00	57,00	●
6769563	H1TE4SE0800N016HAM	8,00	8,00	7,52	16,00	24,00	63,00	●
6769564	H1TE4SE1000N022HAM	10,00	10,00	9,40	22,00	30,00	72,00	●
6769565	H1TE4SE1200N026HAM	12,00	12,00	11,28	26,00	36,00	83,00	●
6769566	H1TE4SE1400N026HAM	14,00	14,00	13,16	26,00	42,00	83,00	●
6769567	H1TE4SE1600N032HAM	16,00	16,00	15,04	32,00	48,00	92,00	●
6769568	H1TE4SE1800N035HAM	18,00	18,00	16,92	35,00	54,00	92,00	●
6769569	H1TE4SE2000N038HAM	20,00	20,00	18,80	38,00	60,00	104,00	●
6769581	H1TE4SE2500N045HAM	25,00	25,00	24,00	45,00	75,00	121,00	●

HARVI I TE • SQUARE END • 4 FLUTES • NECKED • WELDON® SHANK

NEW!



● first choice
○ alternate choice

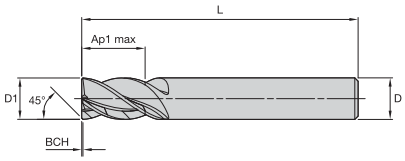
P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	KCPM15
6769582	H1TE4SE0200N006HBM	2,00	6,00	–	6,00	–	57,00	●
6769583	H1TE4SE0250N006HBM	2,50	6,00	–	6,00	–	57,00	●
6769584	H1TE4SE0300N008HBM	3,00	6,00	2,82	8,00	16,00	57,00	●
6769585	H1TE4SE0350N010HBM	3,50	6,00	3,29	10,00	16,00	57,00	●
6769586	H1TE4SE0400N011HBM	4,00	6,00	3,76	11,00	16,00	57,00	●
6769587	H1TE4SE0500N013HBM	5,00	6,00	4,70	13,00	18,00	57,00	●
6769588	H1TE4SE0600N013HBM	6,00	6,00	5,64	13,00	18,00	57,00	●
6769589	H1TE4SE0800N016HBM	8,00	8,00	7,52	16,00	24,00	63,00	●
6769590	H1TE4SE1000N022HBM	10,00	10,00	9,40	22,00	30,00	72,00	●
6769591	H1TE4SE1200N026HBM	12,00	12,00	11,28	26,00	36,00	83,00	●
6769592	H1TE4SE1400N026HBM	14,00	14,00	13,16	26,00	42,00	83,00	●
6769593	H1TE4SE1600N032HBM	16,00	16,00	15,04	32,00	48,00	92,00	●
6769594	H1TE4SE1800N035HBM	18,00	18,00	16,92	35,00	54,00	92,00	●
6769595	H1TE4SE2000N038HBM	20,00	20,00	18,80	38,00	60,00	104,00	●
6769596	H1TE4SE2500N045HBM	25,00	25,00	24,00	45,00	75,00	121,00	●

154	156	58	4	160

HARVI™ I TE • CHAMFERED • 4 FLUTES • SHORT • PLAIN SHANK

NEW!



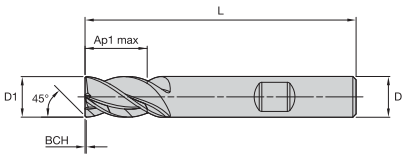
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	BCH	KCPM15
6769607	H1TE4CH0200S004HAM	2,00	6,00	4,00	54,00	0,10	●
6769608	H1TE4CH0250S005HAM	2,50	6,00	5,00	54,00	0,10	●
6769609	H1TE4CH0300S006HAM	3,00	6,00	6,00	54,00	0,10	●
6769610	H1TE4CH0350S007HAM	3,50	6,00	7,00	54,00	0,10	●
6769611	H1TE4CH0400S008HAM	4,00	6,00	8,00	54,00	0,15	●
6769613	H1TE4CH0500S009HAM	5,00	6,00	9,00	54,00	0,15	●
6769614	H1TE4CH0600S010HAM	6,00	6,00	10,00	54,00	0,15	●
6769615	H1TE4CH0800S012HAM	8,00	8,00	12,00	58,00	0,20	●
6769616	H1TE4CH1000S014HAM	10,00	10,00	14,00	66,00	0,25	●
6769617	H1TE4CH1200S016HAM	12,00	12,00	16,00	73,00	0,25	●
6769619	H1TE4CH1400S018HAM	14,00	14,00	18,00	75,00	0,25	●
6769620	H1TE4CH1600S022HAM	16,00	16,00	22,00	82,00	0,35	●
6769621	H1TE4CH1800S024HAM	18,00	18,00	24,00	92,00	0,35	●
6769622	H1TE4CH2000S026HAM	20,00	20,00	26,00	92,00	0,35	●
6769623	H1TE4CH2500S030HAM	25,00	25,00	30,00	121,00	0,35	●

HARVI I TE • CHAMFERED • 4 FLUTES • SHORT • WELDON® SHANK

NEW!



● first choice
○ alternate choice

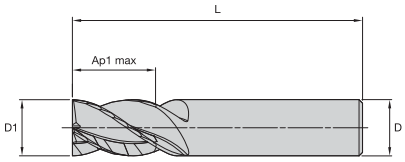
P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	BCH	KCPM15
6769625	H1TE4CH0200S004HBM	2,00	6,00	4,00	54,00	0,10	●
6769626	H1TE4CH0250S005HBM	2,50	6,00	5,00	54,00	0,10	●
6769627	H1TE4CH0300S006HBM	3,00	6,00	6,00	54,00	0,10	●
6769628	H1TE4CH0350S007HBM	3,50	6,00	7,00	54,00	0,10	●
6769629	H1TE4CH0400S008HBM	4,00	6,00	8,00	54,00	0,15	●
6769630	H1TE4CH0500S009HBM	5,00	6,00	9,00	54,00	0,15	●
6769631	H1TE4CH0600S010HBM	6,00	6,00	10,00	54,00	0,15	●
6769632	H1TE4CH0800S012HBM	8,00	8,00	12,00	58,00	0,20	●
6769633	H1TE4CH1000S014HBM	10,00	10,00	14,00	66,00	0,25	●
6769634	H1TE4CH1200S016HBM	12,00	12,00	16,00	73,00	0,25	●
6769635	H1TE4CH1400S018HBM	14,00	14,00	18,00	75,00	0,25	●
6769636	H1TE4CH1600S022HBM	16,00	16,00	22,00	82,00	0,35	●
6769637	H1TE4CH1800S024HBM	18,00	18,00	24,00	92,00	0,35	●
6769638	H1TE4CH2000S026HBM	20,00	20,00	26,00	92,00	0,35	●
6769639	H1TE4CH2500S030HBM	25,00	25,00	30,00	121,00	0,35	●

154	156	58	4	160

HARVI™ I TE • SQUARE END • 4 FLUTES • SHORT • PLAIN SHANK

NEW!



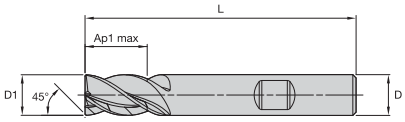
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	KCPM15
6769558	H1TE4SE0200S004HAM	2,00	6,00	4,00	54,00	●
6769559	H1TE4SE0250S005HAM	2,50	6,00	5,00	54,00	●
6769560	H1TE4SE0300S006HAM	3,00	6,00	6,00	54,00	●
6769681	H1TE4SE0350S007HAM	3,50	6,00	7,00	54,00	●
6769682	H1TE4SE0400S008HAM	4,00	6,00	8,00	54,00	●
6769683	H1TE4SE0500S009HAM	5,00	6,00	9,00	54,00	●
6769684	H1TE4SE0600S010HAM	6,00	6,00	10,00	54,00	●
6769685	H1TE4SE0800S012HAM	8,00	8,00	12,00	58,00	●
6769686	H1TE4SE1000S014HAM	10,00	10,00	14,00	66,00	●
6769687	H1TE4SE1200S016HAM	12,00	12,00	16,00	73,00	●
6769688	H1TE4SE1400S018HAM	14,00	14,00	18,00	75,00	●
6769689	H1TE4SE1600S022HAM	16,00	16,00	22,00	82,00	●
6769690	H1TE4SE1800S024HAM	18,00	18,00	24,00	92,00	●
6769701	H1TE4SE2000S026HAM	20,00	20,00	26,00	92,00	●
6769702	H1TE4SE2500S030HAM	25,00	25,00	30,00	121,00	●

HARVI I TE • SQUARE END • 4 FLUTES • SHORT • WELDON® SHANK

NEW!



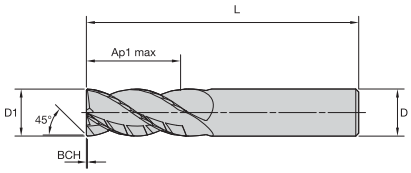
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	KCPM15
6769705	H1TE4SE0200S004HBM	2,00	6,00	4,00	54,00	●
6769706	H1TE4SE0250S005HBM	2,50	6,00	5,00	54,00	●
6769707	H1TE4SE0300S006HBM	3,00	6,00	6,00	54,00	●
6769708	H1TE4SE0350S007HBM	3,50	6,00	7,00	54,00	●
6769709	H1TE4SE0400S008HBM	4,00	6,00	8,00	54,00	●
6769710	H1TE4SE0500S009HBM	5,00	6,00	9,00	54,00	●
6769711	H1TE4SE0600S010HBM	6,00	6,00	10,00	54,00	●
6769712	H1TE4SE0800S012HBM	8,00	8,00	12,00	58,00	●
6769713	H1TE4SE1000S014HBM	10,00	10,00	14,00	66,00	●
6769714	H1TE4SE1200S016HBM	12,00	12,00	16,00	73,00	●
6769715	H1TE4SE1400S018HBM	14,00	14,00	18,00	75,00	●
6769716	H1TE4SE1600S022HBM	16,00	16,00	22,00	82,00	●
6769717	H1TE4SE1800S024HBM	18,00	18,00	24,00	92,00	●
6769718	H1TE4SE2000S026HBM	20,00	20,00	26,00	92,00	●
6769719	H1TE4SE2500S030HBM	25,00	25,00	30,00	121,00	●

154	156	58	4	160

HARVI™ I TE • CHAMFERED • 4 FLUTES • PLAIN SHANK

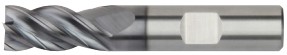


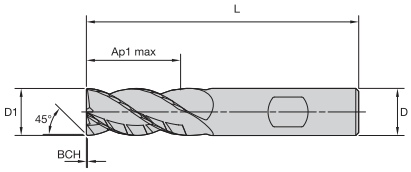
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	BCH	KCPM15
6675697	H1TE4CH0400R012HAM	4,00	6,00	12,00	55,00	0,40	●
6675698	H1TE4CH0500R013HAM	5,00	6,00	13,00	57,00	0,40	●
6675699	H1TE4CH0600R013HAM	6,00	6,00	13,00	57,00	0,40	●
6675700	H1TE4CH0800R016HAM	8,00	8,00	16,00	63,00	0,40	●
6675742	H1TE4CH1000R022HAM	10,00	10,00	22,00	72,00	0,50	●
6675743	H1TE4CH1200R026HAM	12,00	12,00	26,00	83,00	0,50	●
6675744	H1TE4CH1400R026HAM	14,00	14,00	26,00	83,00	0,50	●
6675745	H1TE4CH1600R032HAM	16,00	16,00	32,00	92,00	0,50	●
6675746	H1TE4CH1800R032HAM	18,00	18,00	32,00	92,00	0,50	●
6675747	H1TE4CH2000R038HAM	20,00	20,00	38,00	104,00	0,50	●
6675748	H1TE4CH2500R045HAM	25,00	25,00	45,00	121,00	0,50	●

HARVI I TE • CHAMFERED • 4 FLUTES • WELDON® SHANK





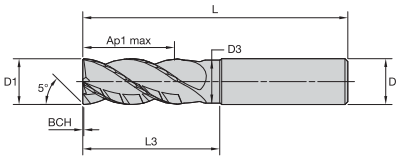
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	Ap1 max	L	BCH	KCPM15
6675749	H1TE4CH0400R012HBM	4,00	6,00	12,00	55,00	0,40	●
6675750	H1TE4CH0500R013HBM	5,00	6,00	13,00	57,00	0,40	●
6675751	H1TE4CH0600R013HBM	6,00	6,00	13,00	57,00	0,40	●
6675752	H1TE4CH0800R016HBM	8,00	8,00	16,00	63,00	0,40	●
6675753	H1TE4CH1000R022HBM	10,00	10,00	22,00	72,00	0,50	●
6675754	H1TE4CH1200R026HBM	12,00	12,00	26,00	83,00	0,50	●
6675755	H1TE4CH1400R026HBM	14,00	14,00	26,00	83,00	0,50	●
6675756	H1TE4CH1600R032HBM	16,00	16,00	32,00	92,00	0,50	●
6675757	H1TE4CH1800R032HBM	18,00	18,00	32,00	92,00	0,50	●
6675758	H1TE4CH2000R038HBM	20,00	20,00	38,00	104,00	0,50	●
6687137	H1TE4CH2500R045HBM	25,00	25,00	45,00	121,00	0,50	●

154	156	58	4	160

HARVI™ I TE • CHAMFERED • 4 FLUTES • NECKED • PLAIN SHANK

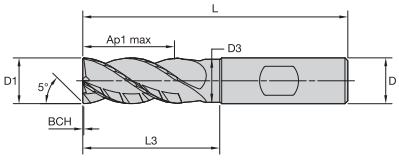


● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	BCH	KCPM15
6676308	H1TE4CH0400N011HAM	4,00	6,00	3,76	11,00	16,00	57,00	0,15	●
6676310	H1TE4CH0500N013HAM	5,00	6,00	4,70	13,00	18,00	57,00	0,15	●
6676332	H1TE4CH0600N013HAM	6,00	6,00	5,64	13,00	18,00	57,00	0,15	●
6676334	H1TE4CH0800N016HAM	8,00	8,00	7,52	16,00	24,00	63,00	0,20	●
6676336	H1TE4CH1000N022HAM	10,00	10,00	9,40	22,00	30,00	72,00	0,20	●
6676338	H1TE4CH1200N026HAM	12,00	12,00	11,28	26,00	36,00	83,00	0,20	●
6676340	H1TE4CH1400N026HAM	14,00	14,00	13,16	26,00	42,00	83,00	0,25	●
6676342	H1TE4CH1600N032HAM	16,00	16,00	15,04	32,00	48,00	92,00	0,35	●
6676344	H1TE4CH2000N038HAM	20,00	20,00	18,80	38,00	60,00	104,00	0,35	●
6676346	H1TE4CH2500N045HAM	25,00	25,00	24,00	45,00	75,00	121,00	0,35	●

HARVI I TE • CHAMFERED • 4 FLUTES • NECKED • WELDON® SHANK



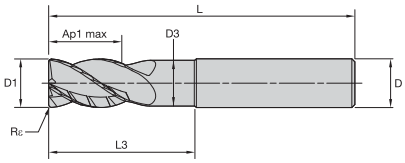
● first choice
○ alternate choice

P	●
M	●
K	●
N	
S	○
H	○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	BCH	KCPM15
6676309	H1TE4CH0400N011HBM	4,00	6,00	3,76	11,00	16,00	57,00	0,15	●
6676331	H1TE4CH0500N013HBM	5,00	6,00	4,70	13,00	18,00	57,00	0,15	●
6676333	H1TE4CH0600N013HBM	6,00	6,00	5,64	13,00	18,00	57,00	0,15	●
6676335	H1TE4CH0800N016HBM	8,00	8,00	7,52	16,00	24,00	63,00	0,20	●
6676337	H1TE4CH1000N022HBM	10,00	10,00	9,40	22,00	30,00	72,00	0,20	●
6676339	H1TE4CH1200N026HBM	12,00	12,00	11,28	26,00	36,00	83,00	0,20	●
6676341	H1TE4CH1400N026HBM	14,00	14,00	13,16	26,00	42,00	83,00	0,25	●
6676343	H1TE4CH1600N032HBM	16,00	16,00	15,04	32,00	48,00	92,00	0,35	●
6676345	H1TE4CH2000N038HBM	20,00	20,00	18,80	38,00	60,00	104,00	0,35	●
6676347	H1TE4CH2500N045HBM	25,00	25,00	24,00	45,00	75,00	121,00	0,35	●

154	156	58	4	160

HARVI™ I TE • RADIUSED • 4 FLUTES • NECKED • PLAIN SHANK



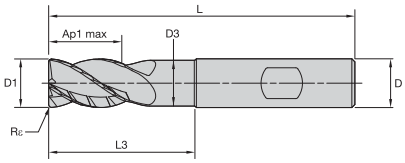
● first choice
○ alternate choice

P		○
M		●
K		○
N		
S		●
H		○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	Rε	KCSM15
6767968	H1TE4RA0400N006HAR025M	4,00	6,00	3,76	6,00	–	57,00	0,25	●
6767969	H1TE4RA0400N006HAR050M	4,00	6,00	3,76	6,00	–	57,00	0,50	●
6676190	H1TE4RA0600N009HAR050M	6,00	6,00	5,64	9,00	18,00	63,00	0,50	●
6676231	H1TE4RA0600N009HAR100M	6,00	6,00	5,64	9,00	18,00	63,00	1,00	●
6676234	H1TE4RA0800N012HAR050M	8,00	8,00	7,52	12,00	24,00	68,00	0,50	●
6676235	H1TE4RA0800N012HAR100M	8,00	8,00	7,52	12,00	24,00	68,00	1,00	●
6676238	H1TE4RA1000N015HAR050M	10,00	10,00	9,40	15,00	30,00	76,00	0,50	●
6676239	H1TE4RA1000N015HAR100M	10,00	10,00	9,40	15,00	30,00	76,00	1,00	●
6676240	H1TE4RA1000N015HAR200M	10,00	10,00	9,40	15,00	30,00	76,00	2,00	●
6676251	H1TE4RA1000N015HAR300M	10,00	10,00	9,40	15,00	30,00	76,00	3,00	●
6676252	H1TE4RA1000N015HAR400M	10,00	10,00	9,40	15,00	30,00	76,00	4,00	●
6676257	H1TE4RA1200N018HAR050M	12,00	12,00	11,28	18,00	36,00	83,00	0,50	●
6676258	H1TE4RA1200N018HAR100M	12,00	12,00	11,28	18,00	36,00	83,00	1,00	●
6676259	H1TE4RA1200N018HAR200M	12,00	12,00	11,28	18,00	36,00	83,00	2,00	●
6676260	H1TE4RA1200N018HAR300M	12,00	12,00	11,28	18,00	36,00	83,00	3,00	●
6676271	H1TE4RA1200N018HAR400M	12,00	12,00	11,28	18,00	36,00	83,00	4,00	●
6676277	H1TE4RA1600N024HAR050M	16,00	16,00	15,04	24,00	48,00	100,00	0,50	●
6676278	H1TE4RA1600N024HAR100M	16,00	16,00	15,04	24,00	48,00	100,00	1,00	●
6676279	H1TE4RA1600N024HAR200M	16,00	16,00	15,04	24,00	48,00	100,00	2,00	●
6676280	H1TE4RA1600N024HAR300M	16,00	16,00	15,04	24,00	48,00	100,00	3,00	●
6676281	H1TE4RA1600N024HAR400M	16,00	16,00	15,04	24,00	48,00	100,00	4,00	●
6676282	H1TE4RA1600N024HAR600M	16,00	16,00	15,04	24,00	48,00	100,00	6,00	●
6676289	H1TE4RA2000N030HAR050M	20,00	20,00	18,80	30,00	60,00	115,00	0,50	●
6676290	H1TE4RA2000N030HAR100M	20,00	20,00	18,80	30,00	60,00	115,00	1,00	●
6676291	H1TE4RA2000N030HAR200M	20,00	20,00	18,80	30,00	60,00	115,00	2,00	●
6676292	H1TE4RA2000N030HAR300M	20,00	20,00	18,80	30,00	60,00	115,00	3,00	●
6676293	H1TE4RA2000N030HAR400M	20,00	20,00	18,80	30,00	60,00	115,00	4,00	●
6676294	H1TE4RA2000N030HAR600M	20,00	20,00	18,80	30,00	60,00	115,00	6,00	●
6676299	H1TE4RA2500N038HAR050M	25,00	25,00	24,00	37,50	75,00	135,00	0,50	●
6676300	H1TE4RA2500N038HAR100M	25,00	25,00	24,00	37,50	75,00	135,00	1,00	●
6676301	H1TE4RA2500N038HAR200M	25,00	25,00	24,00	37,50	75,00	135,00	2,00	●
6676302	H1TE4RA2500N038HAR300M	25,00	25,00	24,00	37,50	75,00	135,00	3,00	●
6676303	H1TE4RA2500N038HAR400M	25,00	25,00	24,00	37,50	75,00	135,00	4,00	●
6676304	H1TE4RA2500N038HAR600M	25,00	25,00	24,00	37,50	75,00	135,00	6,00	●

154	156	58	4	160

HARVI™ I TE • RADIUSED • 4 FLUTES • NECKED • WELDON® SHANK



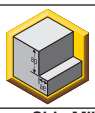
● first choice
○ alternate choice

P		○
M		●
K		○
N		
S		●
H		○

order number	catalogue number	D1	D	D3	Ap1 max	L3	L	Rε	KCSM15
6767970	H1TE4RA0400N006HBR025M	4,00	6,00	3,76	6,00	–	57,00	0,25	●
6767981	H1TE4RA0400N006HBR050M	4,00	6,00	3,76	6,00	–	57,00	0,50	●
6676232	H1TE4RA0600N009HBR050M	6,00	6,00	5,64	9,00	18,00	63,00	0,50	●
6676233	H1TE4RA0600N009HBR100M	6,00	6,00	5,64	9,00	18,00	63,00	1,00	●
6676236	H1TE4RA0800N012HBR050M	8,00	8,00	7,52	12,00	24,00	68,00	0,50	●
6676237	H1TE4RA0800N012HBR100M	8,00	8,00	7,52	12,00	24,00	68,00	1,00	●
6676253	H1TE4RA1000N015HBR050M	10,00	10,00	9,40	15,00	30,00	76,00	0,50	●
6676254	H1TE4RA1000N015HBR100M	10,00	10,00	9,40	15,00	30,00	76,00	1,00	●
6676255	H1TE4RA1000N015HBR200M	10,00	10,00	9,40	15,00	30,00	76,00	2,00	●
6676256	H1TE4RA1000N015HBR300M	10,00	10,00	9,40	15,00	30,00	76,00	3,00	●
6687139	H1TE4RA1000N015HBR400M	10,00	10,00	9,40	15,00	30,00	76,00	4,00	●
6676272	H1TE4RA1200N018HBR050M	12,00	12,00	11,28	18,00	36,00	83,00	0,50	●
6676273	H1TE4RA1200N018HBR100M	12,00	12,00	11,28	18,00	36,00	83,00	1,00	●
6676274	H1TE4RA1200N018HBR200M	12,00	12,00	11,28	18,00	36,00	83,00	2,00	●
6676275	H1TE4RA1200N018HBR300M	12,00	12,00	11,28	18,00	36,00	83,00	3,00	●
6676276	H1TE4RA1200N018HBR400M	12,00	12,00	11,28	18,00	36,00	83,00	4,00	●
6676283	H1TE4RA1600N024HBR050M	16,00	16,00	15,04	24,00	48,00	100,00	0,50	●
6676284	H1TE4RA1600N024HBR100M	16,00	16,00	15,04	24,00	48,00	100,00	1,00	●
6676285	H1TE4RA1600N024HBR200M	16,00	16,00	15,04	24,00	48,00	100,00	2,00	●
6676286	H1TE4RA1600N024HBR300M	16,00	16,00	15,04	24,00	48,00	100,00	3,00	●
6676287	H1TE4RA1600N024HBR400M	16,00	16,00	15,04	24,00	48,00	100,00	4,00	●
6676288	H1TE4RA1600N024HBR600M	16,00	16,00	15,04	24,00	48,00	100,00	6,00	●
6676295	H1TE4RA2000N030HBR050M	20,00	20,00	18,80	30,00	60,00	115,00	0,50	●
6676296	H1TE4RA2000N030HBR100M	20,00	20,00	18,80	30,00	60,00	115,00	1,00	●
6676297	H1TE4RA2000N030HBR200M	20,00	20,00	18,80	30,00	60,00	115,00	2,00	●
6676298	H1TE4RA2000N030HBR300M	20,00	20,00	18,80	30,00	60,00	115,00	3,00	●
6687140	H1TE4RA2000N030HBR400M	20,00	20,00	18,80	30,00	60,00	115,00	4,00	●
6687151	H1TE4RA2000N030HBR600M	20,00	20,00	18,80	30,00	60,00	115,00	6,00	●
6676305	H1TE4RA2500N038HBR050M	25,00	25,00	24,00	37,50	75,00	135,00	0,50	●
6687152	H1TE4RA2500N038HBR100M	25,00	25,00	24,00	37,50	75,00	135,00	1,00	●
6687153	H1TE4RA2500N038HBR200M	25,00	25,00	24,00	37,50	75,00	135,00	2,00	●
6687154	H1TE4RA2500N038HBR300M	25,00	25,00	24,00	37,50	75,00	135,00	3,00	●
6676306	H1TE4RA2500N038HBR400M	25,00	25,00	24,00	37,50	75,00	135,00	4,00	●
6676307	H1TE4RA2500N038HBR600M	25,00	25,00	24,00	37,50	75,00	135,00	6,00	●

154	156	58	4	160

HARVI™ I TE • 4 FLUTES • APPLICATION DATA



Material Group		Side Milling (A) and Slotting (B) A ap	A ae	B ap	KCPM15 Cutting Speed — vc m/min min		max	Recommended feed per tooth (fz = mm/th) for side milling (A). For slotting (B), reduce fz by 20%. D1 — Diameter mm	2,0	2,5	3,0	3,5	4,0	5,0	6,0	8,0	10,0	12,0	14,0	16,0	18,0	20,0	25,0
P	0	1,5 x D	0,5 x D	1,25 x D	150	–	200	fz	0,011	0,013	0,016	0,027	0,031	0,040	0,048	0,066	0,079	0,091	0,102	0,111	0,119	0,125	0,136
	1	1,5 x D	0,5 x D	1,25 x D	150	–	200	fz	0,011	0,013	0,016	0,027	0,031	0,040	0,048	0,066	0,079	0,091	0,102	0,111	0,119	0,125	0,136
	2	1,5 x D	0,5 x D	1,25 x D	140	–	190	fz	0,011	0,013	0,016	0,027	0,031	0,040	0,048	0,066	0,079	0,091	0,102	0,111	0,119	0,125	0,136
	3	1,5 x D	0,5 x D	1,25 x D	120	–	160	fz	0,009	0,011	0,013	0,022	0,026	0,033	0,040	0,055	0,067	0,077	0,087	0,096	0,104	0,111	0,125
	4	1,5 x D	0,5 x D	1,25 x D	90	–	150	fz	0,008	0,010	0,012	0,021	0,024	0,030	0,036	0,049	0,059	0,069	0,077	0,084	0,091	0,097	0,107
	5	1,5 x D	0,5 x D	1,25 x D	60	–	100	fz	0,007	0,009	0,011	0,018	0,021	0,027	0,032	0,044	0,053	0,062	0,070	0,077	0,083	0,089	0,100
	6	1,5 x D	0,5 x D	1,25 x D	50	–	75	fz	0,006	0,008	0,009	0,016	0,018	0,022	0,027	0,037	0,044	0,051	0,057	0,063	0,067	0,071	0,078
M	1	1,5 x D	0,5 x D	1,25 x D	90	–	115	fz	0,009	0,011	0,013	0,022	0,026	0,033	0,040	0,055	0,067	0,077	0,087	0,096	0,104	0,111	0,125
	2	1,5 x D	0,5 x D	1,25 x D	60	–	80	fz	0,007	0,009	0,011	0,018	0,021	0,027	0,032	0,044	0,053	0,062	0,070	0,077	0,083	0,089	0,100
	3	1,5 x D	0,5 x D	1,00 x D	60	–	70	fz	0,006	0,008	0,009	0,016	0,018	0,022	0,027	0,037	0,044	0,051	0,057	0,063	0,067	0,071	0,078
K	1	1,5 x D	0,5 x D	1,00 x D	120	–	150	fz	0,011	0,013	0,016	0,027	0,031	0,040	0,048	0,066	0,079	0,091	0,102	0,111	0,119	0,125	0,136
	2	1,5 x D	0,5 x D	1,00 x D	110	–	140	fz	0,009	0,011	0,013	0,022	0,026	0,033	0,040	0,055	0,067	0,077	0,087	0,096	0,104	0,111	0,125
	3	1,5 x D	0,5 x D	1,00 x D	110	–	130	fz	0,007	0,009	0,011	0,018	0,021	0,027	0,032	0,044	0,053	0,062	0,070	0,077	0,083	0,089	0,100
S	1	1,5 x D	0,3 x D	0,75 x D	50	–	90	fz	0,009	0,011	0,013	0,022	0,026	0,033	0,040	0,055	0,067	0,077	0,087	0,096	0,104	0,111	0,125
	2	1,5 x D	0,3 x D	0,75 x D	50	–	80	fz	0,007	0,009	0,011	0,018	0,021	0,027	0,032	0,044	0,053	0,062	0,070	0,077	0,083	0,089	0,100
	3	1,5 x D	0,5 x D	0,50 x D	25	–	40	fz	0,005	0,006	0,007	0,012	0,014	0,018	0,021	0,029	0,035	0,041	0,046	0,051	0,055	0,059	0,067
	4	1,5 x D	0,5 x D	1,25 x D	50	–	60	fz	0,006	0,007	0,009	0,015	0,017	0,023	0,028	0,040	0,049	0,057	0,064	0,071	0,076	0,082	0,092
H	1	1,5 x D	0,5 x D	1,00 x D	80	–	140	fz	0,008	0,010	0,012	0,021	0,024	0,030	0,036	0,049	0,059	0,069	0,077	0,084	0,091	0,097	0,107
	2	1,5 x D	0,2 x D	1,00 x D	70	–	120	fz	0,006	0,008	0,009	0,016	0,018	0,022	0,027	0,037	0,044	0,051	0,057	0,063	0,067	0,071	0,078

NOTE: Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machinining centres, please adjust parameters accordingly on >12mm diameter.
For tools with reach >5 x D, reduce fz by 30%.
Slot milling aplications — for longest reach (L3) tools, reduce Ae by 30%.

HARVI™ I TE • 4 FLUTES • ADJUSTMENT FACTOR FOR FEED AND SPEED CALCULATION

To calculate application specific cutting data, please use KV coefficient table to the right for adaptation of cutting speed and KFz for feed respectively.

Vc new = Vc * Kv
Fz new = IPT * KFz

Calculation example:
Application: D = 20mm; M2 material group;
Ae = 2mm
Cutting data recommendation: Vc = 80 m/min;
fz = 0,089 mm/th
Adjustment coefficients: Ae = 2mm equals 10,0%;
Kv = 1,35; KFz = 1,7

Final cutting data recommendation:
Vc new = 80 * 1,35 = 108 m/min
Fz new = 0,089 * 1,7 = 0,15 mm/min

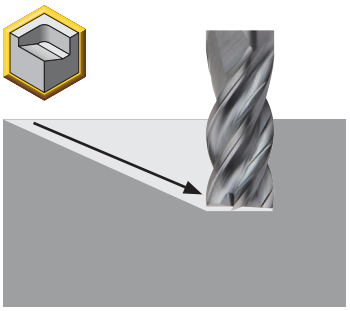
	Ae/D	0,50%	1,00%	1,60%	2,00%	4,00%	5,00%	8,00%	10,00%	20,00%	30,00%	40,00%	50,00%
Speed factor	Kv	2,9	2,85	2,8	2	1,5	1,45	1,4	1,35	1,25	1,2	1	1
Feed factor	KFz	2,8	2,6	2,5	2,4	2,3	2,2	2	1,7	1,25	1,02	1	1

HARVI™ I TE • APPLICATION INFORMATION • RAMPING

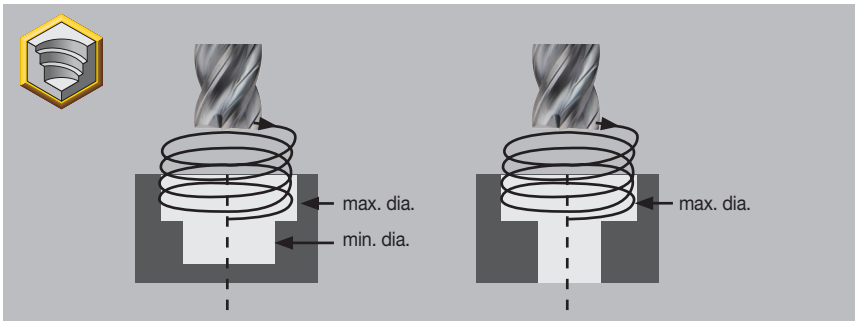
Angle	Ramping Style	Hole -Ø / End Mill -Ø	Vc		fz	
			Recommendation	Page	Recommendation	Page
0º–15º		–	See application data	66	See application data and reduce fz by 20%	66
		1.15–1.35*	See min. Vc of application data	66	See application data and reduce fz by 20%	66
		>1.35–1.6*	See application data	66	See application data and reduce fz by 10%	66
		>1.6–1.9*	See application data	66	See application data	66
>15º–30º		–	See min Vc of application data	66	See application data and reduce fz by 30%	66
		1.15–1.35*	See min. Vc of application data	66	See application data and reduce fz by 30%	66
		>1.35–1.6*	See medium range Vc of application data	66	See application data and reduce fz by 25%	66
		>1.6–1.9*	See application data	66	See application data and reduce fz by 20%	66
30º–45º		–	See Vc from plunging data	68	See application data and reduce fz by 40%	66
		1.15–1.35*	See Vc from plunging data	68	See application data and reduce fz by 40%	66
		>1.35–1.6*	See min. Vc of application data	66	See application data and reduce fz by 35%	66
		>1.6–1.9*	See medium range Vc of application data	66	See application data and reduce fz by 30%	66
>45º		–	See Vc from plunging data	68	See fz from plunging data	68
		1.15–1.35*	See Vc from plunging data	68	See fz from plunging data	68
		>1.35–1.6*	See Vc from plunging data	68	See fz from plunging data	68
		>1.6–1.9*	See min. speed of application data	66	See fz from plunging data	68

NOTE: Z effective = 2 — for all calculations.
*Calculations are based on tool path of tool-centerline.
For ISO P and K materials, coolant supply into cutting zone is preferred.
For ISO M, S, and H materials, coolant supply into cutting zone is required.

Linear Ramping



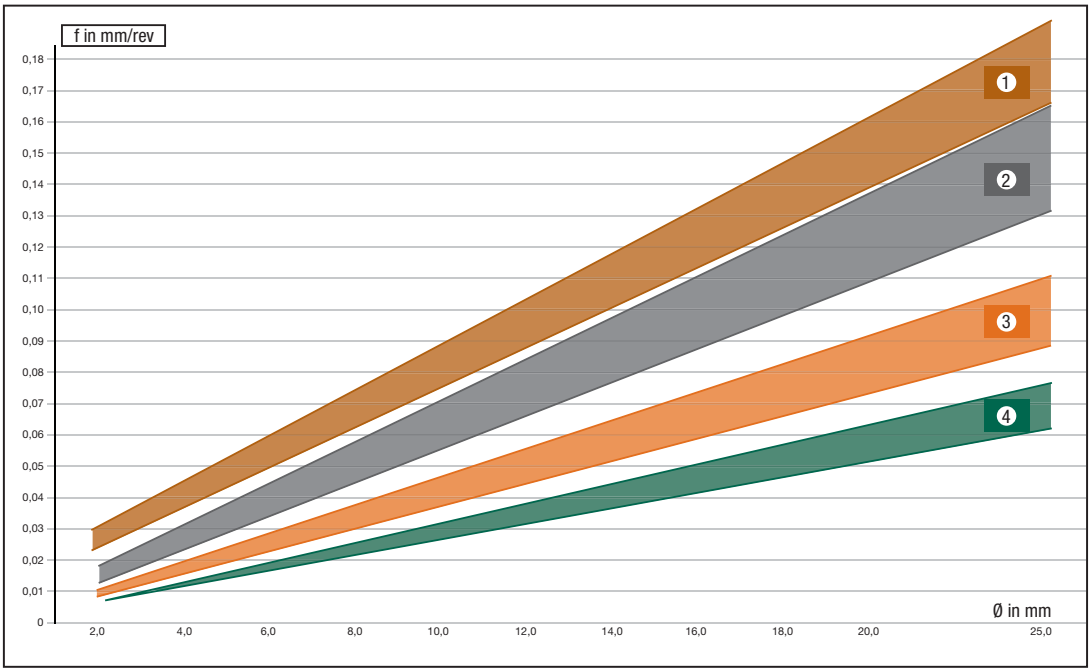
Helical Ramping

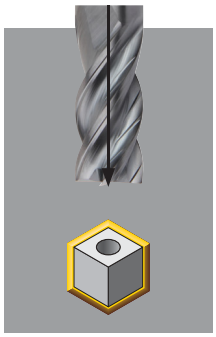


Min. hole Ø = End mill -Ø x 1.1 + 2x corner configuration (Re/CHF) size. Hole -Ø/End mill -Ø min 1:1.15
Min. hole Ø = 2x End mill -Ø 2x corner configuration (Re/CHF) size. Hole -Ø/End mill -Ø max 1:1.9

Solid Carbide End Mills

HARVI™ I TE • APPLICATION DATA • 90º PLUNGING





ISO Material		Applicable	Graph Number	Vc max m/min	Max Depth	Coolant Supply
P	0	●	1	150	1,5 x Ø	Preferred
	1	●	1	150	1,5 x Ø	Recommended
	2	●	1	150	1,5 x Ø	Recommended
	3	●	2	115	1 x Ø	Recommended
	4	●	2	100	1 x Ø	Recommended
	5	●	3	75	0,5 x Ø	Required
	6	●	3	50	0,5 x Ø	Required
M	1	●	2	85	0,75 x Ø	Required
	2	●	3	55	0,5 x Ø	Required
	3	●	3	50	0,5 x Ø	Required
K	1	●	1	120	1,5 x Ø	Recommended
	2	●	2	110	1 x Ø	Required
	3	●	2	100	1 x Ø	Required
S	1	○	2	85	0,3 x Ø	Required
	2	○	3	60	0,1 x Ø	Required
	3	○	4	25	0,1 x Ø	Required
	4	○	3	40	0,2 x Ø	Required
H	1	○	2	80	0,3 x Ø	Required
	2	○	3	70	0,2 x Ø	Required

● highly recommended
○ recommended

Solid Carbide End Mills

HARVI™ I TE • APPLICATION INFORMATION

Materials to Cut	• Steels (P0-P5). • Stainless steels (M1-M3). • Cast iron (K1-K3). • High-temp alloys (S1-S4). • Hardened materials (H1-H2).
Cutting Speed	• Refer to application data recommendation.
Feed Rate	• Refer to application data recommendation. • Works in same feed rate range as standard 4FL high-versatility tools, for productivity advantage follow application recommendation.
Depth of Cut	• Refer to application data recommendation.
Coolant	• External coolant preferred for steel, stainless, high-temp alloys, and hardened materials. • Pressurized air applicable for carbon steels. • Minimal quantity lubrication (MQL) and dry applicable for carbon steels.
Adaptation	• Hydraulic chuck with or without sleeve preferred. • Weldon® adaptor for Weldon shank tools preferred for high Ap/high Ae applications, but not recommended for finishing applications. • High-performance collet (HPMC) or milling power chucks applicable. • Shrink adaptor applicable.
Roughing Application	• Yes.
Finishing Application	• Yes.
Milling Strategy	• Traditional milling (full slotting, high Ae side and shoulder milling). • High velocity milling (dynamic milling, trochoidal milling).
Application Range	• Full slotting. • Shoulder milling. • Peel milling and HPC techniques. • Centre cutting. • Linear ramping at unlimited angle and 90° plunging. • Ramping into stainless and high-temperature alloys limited by coolant configuration. • Helical interpolation.
Engineered Solutions	• Available upon request.
Reconditioning Service	• Full reconditioning available with Kennametal reconditioning procedures. • Check services under Kennametal website for detailed information.

Solid Carbide End Mills

HARVI™ I TE • CAUSES AND REMEDIES FOR MILLING PROBLEMS

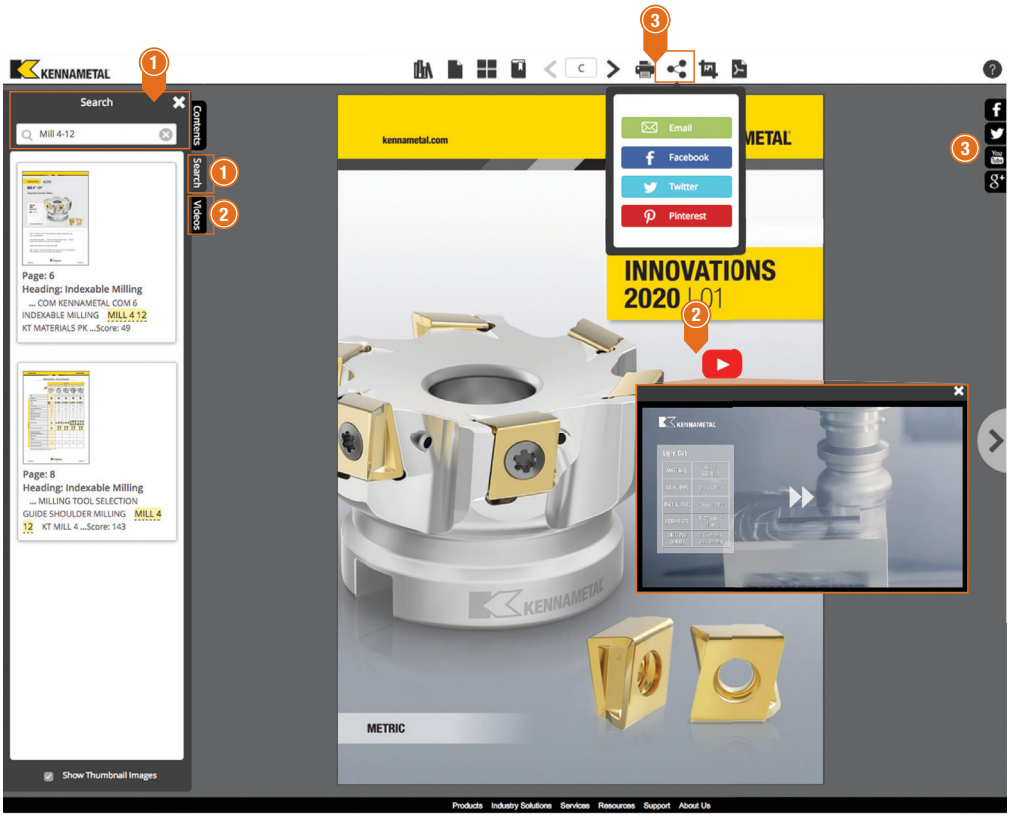
PROBLEM	CAUSE	REMEDIES
• Tool pullout.	• High axial forces. • Wrong adaptor. • Unadapted application data.	• Use Weldon® chuck if applicable or adaptor with higher clamping force. • Reduce feed per tooth.
• Unevenly colored chips when slotting deep (>1.25 x D).	• Not enough coolant in cutting zone.	• Adjust coolant method to improve coolant in cutting zone.
• Sudden breakage when milling dry in Shrink Fit or hydraulic adaptor.	• Tool is too hot and loses fit in adaptor.	• Check temperature on adaptor/spindle. • Improve coolant provision or reduce cutting speed; eventually change to HPMC or Weldon, if applicable.
• Material build-up on cutting edge.	• Cold welding of material at cutting edge.	• Increase coolant in cutting zone. • Decrease cutting speed.
• High flank wear.	• Unadapted application data. • High tool runout.	• Decrease feed rate. • Check tool runout.
• Chipping on tool.	• Unadapted application data. • Insufficient coolant. • High tool runout. • Unstable adaptor. • Clamping on coating area.	• Adjust to recommended speeds and feeds. • Adjust coolant method to improve coolant in cutting zone. • Check runout; eventually change to more stable adaptor. • Adjust clamping to clamp on uncoated area only. • Minimise overhang length.

Online Catalogue

Can't find your paper copy of our catalogue anymore?
No worries. Go to catalogs.kennametal.com to see what's out there.

Search for what you need, watch a video, and share pages with others, all from one site! Go to catalogs.kennametal.com, and if you want to check it out on your mobile device, just download the FREE app for iOS or Android™.

1. Search for what you need
2. Watch videos
3. Share with others



Check out our new catalogue app. Available in the Google Play™ Store or the App Store®

POWERED BY NOVO

Solid ER Collets for DUO-λOCK®

Adapting Duo-Lock Modular End Mills to CNC Lathes

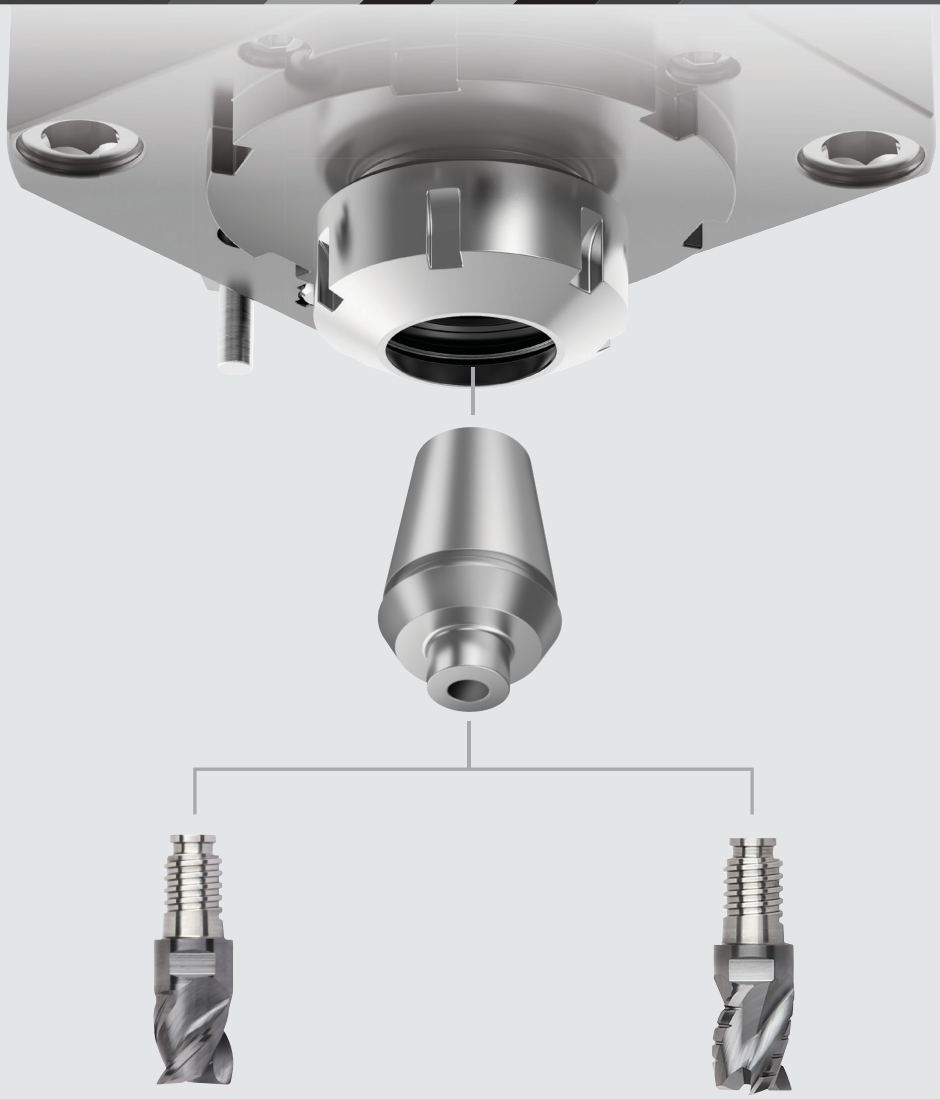
kennametal.com/ER-Solid-Collets

Duo-Lock solid ER collets turn CNC lathe machines into multitasking machines by providing access of any Duo-Lock modular end mills to ER driven units.

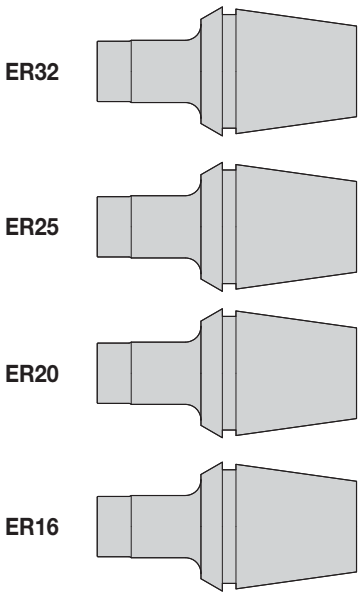
These new Duo-Lock solid ER collets maximise machine flexibility through a broad range of Duo-Lock modular end mills. From high-performance versatile tools, to roughers and finishers, as well as chamfering and corner rounding tools.

The short projection from the face of the collet nut provides rigid toolholding and requires a small machine envelope.

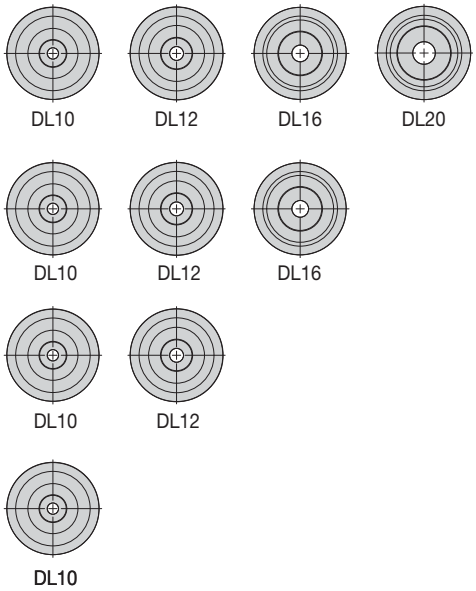
Compatible with all standard ER collet chucks and ER driven units.



Portfolio



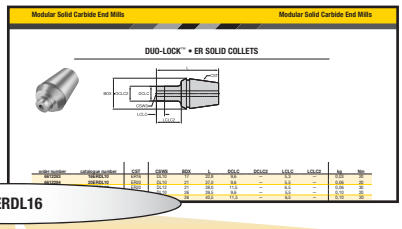
Thread Sizes



Solid Carbide End Mills

DUO-LOCK™ SOLID ER COLLET • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



32ERDL16

32

Collet
Size

16 = ER16
20 = ER 20
25 = ER 25
32 = ER 32

ER

Collet
Type

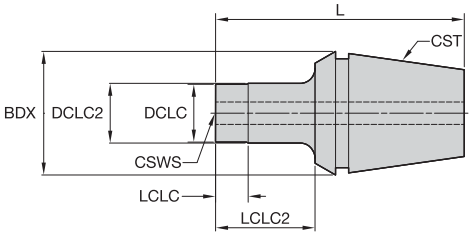
ER

DL16

Duo-Lock
Coupling size

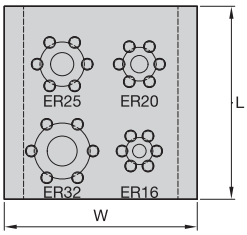
DL10
DL12
DL16
DL20

DUO-LOCK™ • ER SOLID COLLETS



order number	catalogue number	CST	CSWS	BDX	L	DCLC	DCLC2	LCLC	LCLC2	kg	Nm
6612283	**16ERDL10**	ER16	DL10	17	32,8	9,6	–	5,3	–	0,03	20
6612284	**20ERDL10**	ER20	DL10	21	37,0	9,6	–	5,5	–	0,06	20
6612285	**20ERDL12**	ER20	DL12	21	38,0	11,5	–	6,5	–	0,06	30
6612286	**25ERDL10**	ER25	DL10	26	39,5	9,6	–	5,5	–	0,10	20
6612287	**25ERDL12**	ER25	DL12	26	40,5	11,5	–	6,5	–	0,10	30
6612288	**25ERDL16**	ER25	DL16	26	39,5	15,5	–	5,5	–	0,10	60
6612289	**32ERDL10**	ER32	DL10	33	66,5	9,6	10	5,0	26,5	0,21	20
6612290	**32ERDL12**	ER32	DL12	33	67,5	11,5	12	6,0	27,5	0,21	30
6612331	**32ERDL16**	ER32	DL16	33	66,5	15,5	16	8,0	26,5	0,22	60
6612332	**32ERDL20**	ER32	DL20	33	66,5	19,3	20	10,0	26,5	0,23	80

DUO-LOCK • ER SOLID COLLET MOUNTING PLATE

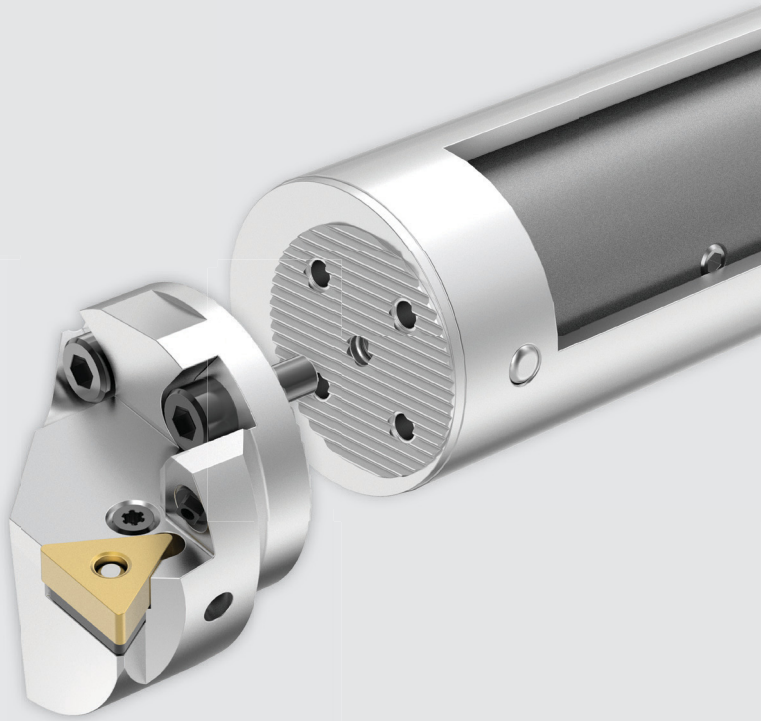


order number	catalogue number	L	W	kg
6612333	**DLCCDER**	100	100	0,57

154	156	90	4	160

POWERED BY NOVO

Vibration-Free Boring Bars With Bolt-On Heads



Materials

P M K N S

Applications

- Boring
- Back Boring
- Chamfering
- ID Grooving
- ID Threading

kennametal.com/Vibration-FreeBoringBars

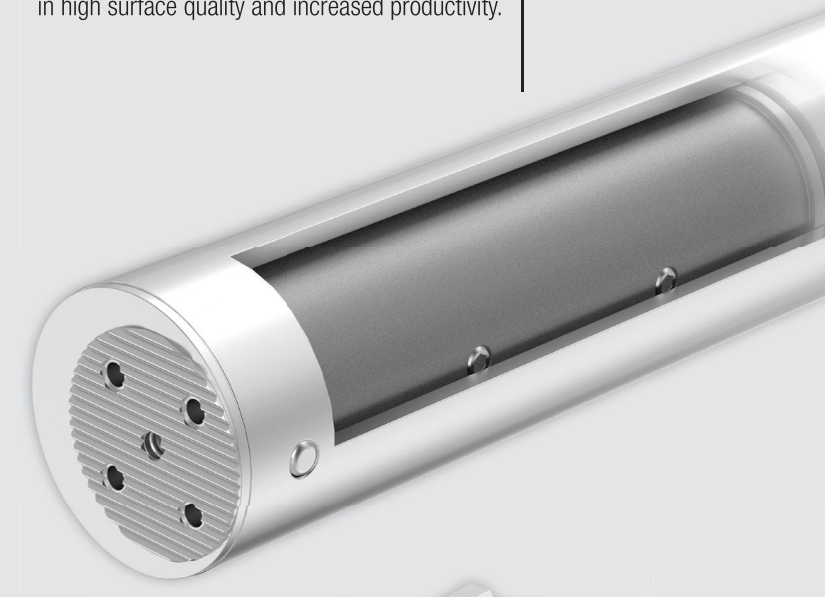
Coupled with our bolt-on heads, the vibration-free boring bars provide stability and rigidity when boring at extended overhangs up to 10 x D.

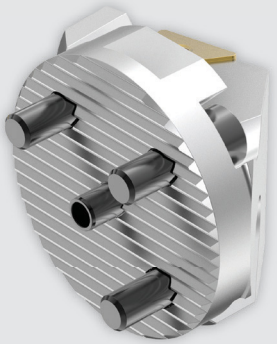
Vibration-free boring bars are a plug-and-play solution designed to work out of the box with no manual adjusting required or possible. The internal dampening package is designed to provide process stability by increasing the stiffness of the bar and dampening out chatter.

NEW! Serrated connection provides higher connection strengths, enabling an increased accuracy of insert positioning.

Short design bolt-on heads result in low weight, providing high stability and consistent repeatability.

Internal dampening package ensures vibration- and chatter-free machining, allowing high metal removal rates and large depths-of-cut, resulting in high surface quality and increased productivity.



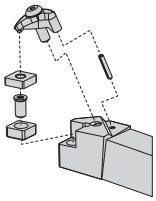


Through coolant bolt-on heads to achieve optimum insert performance and tool life.

Serrated design interface creates a secure connection.

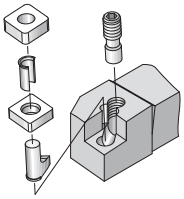
Lightweight Bolt-On Heads with Through Coolant

Kenclamp™



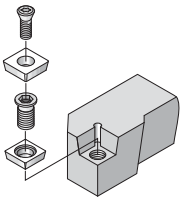
H-DCLN 95°
H-DDUN 93°
H-DTFN 90°
H-DVUN 93°
H-DWLN 95°

Kenlever™



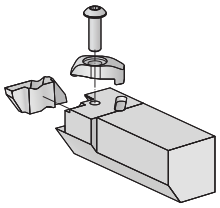
H-PCLN 95°
H-PDUN 93°
H-PTFN 90°

Screw-On



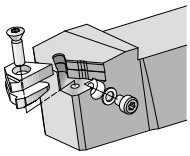
H-SCLC 95°
H-SDPC 62.5°
H-SDUC 93°
H-STFC 90°
H-SVUB 93°
H-SWLP 95°

Top Notch™ Grooving



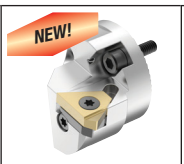
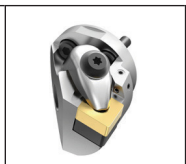
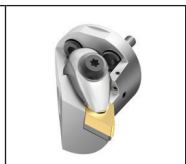
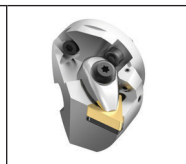
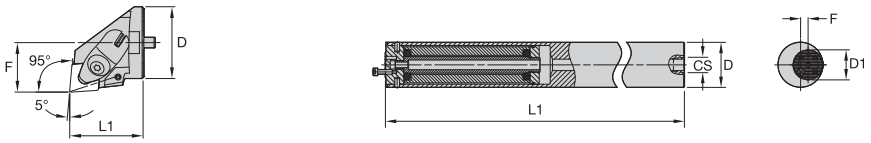
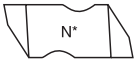
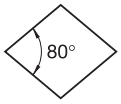
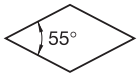
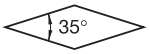
NG...
NF...
NR...
NT...
NA...
ND...
NJ...
NW...

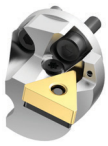
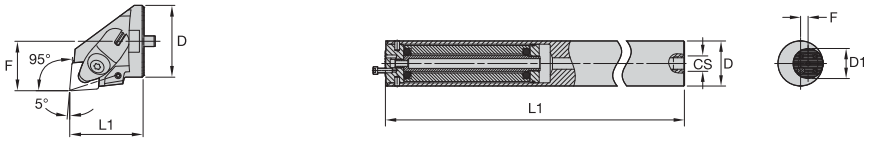
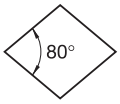
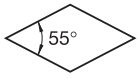
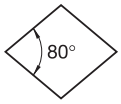
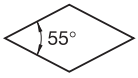
Laydown Threading



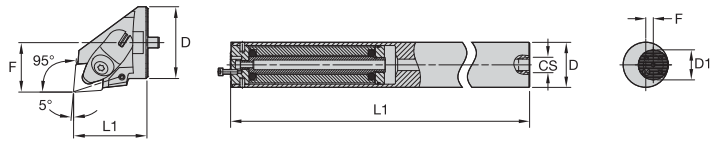
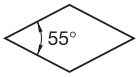
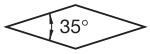
LT...

VIBRATION-FREE • BOLT-ON HEADS • SELECTION GUIDE

						
	H-N...	H-LS...	H-DCLN	H-DDUN	H-DTFN	H-DVUN
Page	124	125	125	126	127	128
Bolt-On "D" diameter = "D1" on the vibration-free boring bar						
Clamping Style	Top Notch™	Laydown Threading	D	D	D	D
Lead Angle	45–90°	90°	95°	93°	90°	93°
Bolt-On Head Diameter [D]	32–50mm	25–50mm	32–50mm	32–50mm	40–50mm	40–50mm
Minimum Boring Diameter [DMIN]	40–63mm	32–63mm	40–63mm	40–63mm	50–63mm	50–63mm
Centre of Boring Bar to Insert Tip [F]	22–35mm	18,3–37mm	22–35mm	22–35mm	27–35mm	27–35mm
Boring Head Length [L1]	32,2–39,6mm	25,2–35,2mm	33–36mm	33–39mm	35–36mm	35–36mm
Insert Shape						
Gage Inserts	NG_3L NG_4L NG_6L NG_3R NG_4R NU_3L	LT16NR LT22NR LT27NR	CN..120408 CN..160612 CN..190612	DN..110408 DN..150408 DN..150608	TN..160408 TN..220408	VN..160408

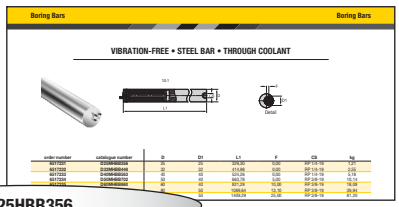
						
	H-DWLN	H-PCLN	H-PDUN	H-PTFN	H-SCLC	H-SDPC
Page	129	126	127	128	129	129
Bolt-On "D" diameter = "D1" on the vibration-free boring bar						
Clamping Style	D	P	P	P	Screw-On	Screw-On
Lead Angle	95°	95°	93°	90°	95°	62.5°
Bolt-On Head Diameter [D]	32mm	25–50mm	25–50mm	25–50mm	25–40mm	25mm
Minimum Boring Diameter [DMIN]	40mm	33–63mm	32–63mm	33–63mm	32–50mm	32mm
Centre of Boring Bar to Insert Tip [F]	22mm	17–35mm	17–35mm	17–35mm	17–27mm	17mm
Boring Head Length [L1]	33mm	26–36mm	27–36mm	25–36mm	19–32mm	18mm
Insert Shape						
Gage Inserts	WN..060408	CN..090308 CN..120408 CN..160612	DN..110408 DN..150608	TN..160408	CCMT09T308 CCMT120408	DCMT070204

VIBRATION-FREE • BOLT-ON HEADS • SELECTION GUIDE

	H-SDUC	**H-STFC**	**H-SVUB**	**H-SWLP**
Page	130	130	131	131
Bolt-On "D" diameter = "D1" on the vibration-free boring bar				
Clamping Style	Screw-On	Screw-On	Screw-On	Screw-On
Lead Angle	93°	90°	93°	95°
Bolt-On Head Diameter [D]	25–50mm	25–40mm	25–50mm	25mm
Minimum Boring Diameter [DMIN]	32–63mm	32–50mm	32–63mm	32mm
Centre of Boring Bar to Insert Tip [F]	17–35mm	17–27mm	17–35mm	17mm
Boring Head Length [L1]	18–36mm	18–32mm	18–36mm	18mm
Insert Shape				
Gage Inserts	DCMT070204 DCMT11T308	TCMT16T308	VBMT110304 VBMT160408	WPMT040204

VIBRATION-FREE • BORING BARS • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

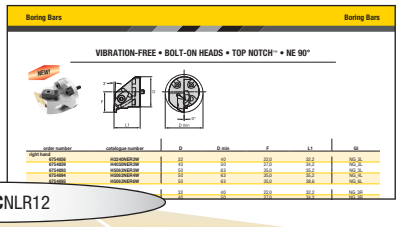


D25HBB356

D	25	HBB	356
Dampened Bar with Coolant	Bar Diameter	Vibration-Free Boring Bar	Total Assembled Length
	Metric: A two-digit number indicates the bar diameter in mm.		**Metric:** Measured in mm when using a standard bolt-on head. Round up or down to the nearest 0,5mm increment.

VIBRATION-FREE • BOLT-ON HEADS • CATALOGUE NUMBERING SYSTEM

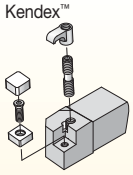
Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



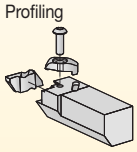
H3240DCNLR12

H	32	40	D	C
Bolt-On Head	Head Diameter	Minimum Boring Diameter	Insert Holding Method	Insert Shape
	A two-digit number indicates the bar diameter in mm.			

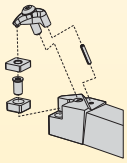
C Kendex™



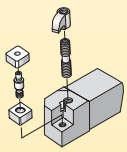
N Top Notch™ Profiling



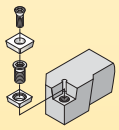
D Kenclamp™



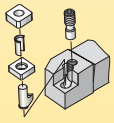
M Kenloc™



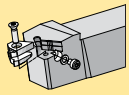
S Screw-On

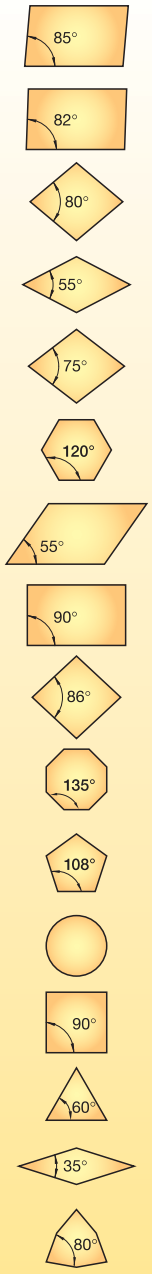


P Kenlever™



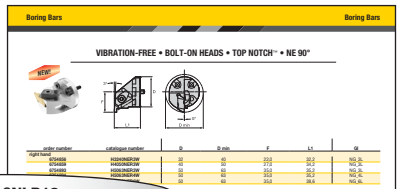
LS Laydown Threading





VIBRATION-FREE • BOLT-ON HEADS • CATALOGUE NUMBERING SYSTEM

(continued)



H3240DC**NLR12**

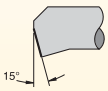
N

Bar Style or Lead Angle

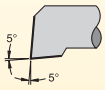
E

F

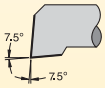
K



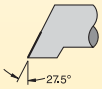
L (E-style inserts)



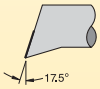
L



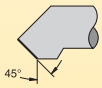
P



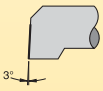
Q



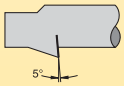
S



U



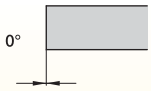
X



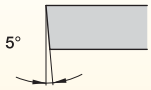
L

Insert Clearance Angle

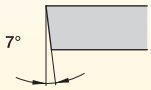
N



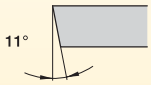
B



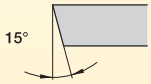
C



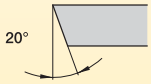
P



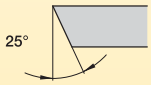
D



E



F

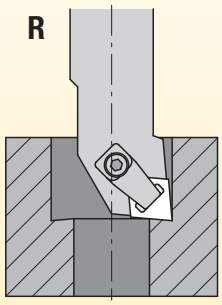


R

Hand of Tool

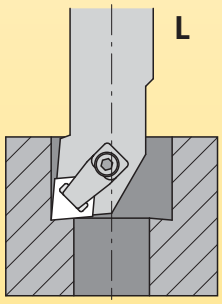
R =

Right-hand boring bar



L =

Left-hand boring bar

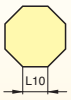


12

Insert Size Cutting Edge Length L10

H

O



P

S

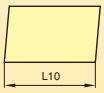
T

CDE
M
V

W

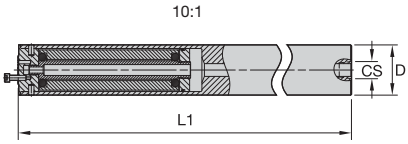
L

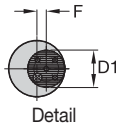
A
B
K



R

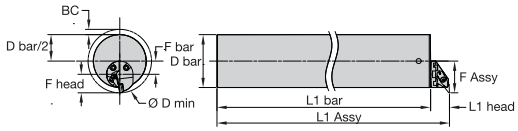
VIBRATION-FREE • STEEL BAR • THROUGH COOLANT





order number	catalogue number	D	D1	L1	F	CS	kg
6517231	**D25MHBB356**	25	25	329,30	0,00	RP 1/4-19	1,21
6517232	**D32MHBB448**	32	32	414,98	0,00	RP 1/4-19	2,55
6517233	**D40MHBB563**	40	40	524,26	0,00	RP 1/4-19	5,18
6517234	**D50MHBB702**	50	40	663,78	5,00	RP 3/8-19	10,14
6517235	**D60MHBB860**	60	40	821,29	10,00	RP 3/8-19	18,08
6549456	**D80MHBB1125**	80	50	1089,64	13,10	RP 3/8-19	39,94
6549457	**D100MHBB1445**	100	50	1409,29	25,00	RP 3/8-19	81,20

NOTE: When using smaller bolt-on heads on larger bars:
Minimum Bore = (F bar + F head) + (0.5 x D bar) + Bore Clearance

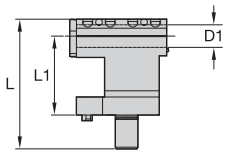


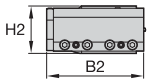
D min = F head + F bar + D/2 + BC

Metric	
Bar Diameter	**Bore Clearance**
32–50mm	3mm
50–100mm	7mm

155	156	117	4	160

VIBRATION-FREE • SPLIT BLOCK • MAZAK™

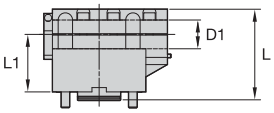


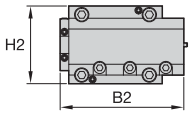


Detail

order number	catalogue number	D1	L1	L	H2	B2	series
6423189	**SB40QTN200M065**	40	140	230,0	84,0	172,0	QTN200M
6423190	**SB40QTN300M175**	40	175	285,0	100,0	172,0	Nexus 300/350/400/450M
6423201	**SB50QTN300M175**	50	175	290,0	100,0	212,0	SQT28, 30, 300 - QT Nexus 300/350M, 400/450M

VIBRATION-FREE • SPLIT BLOCK • DMG MORI



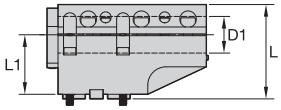


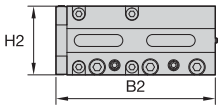
Detail

order number	catalogue number	D1	L1	L	H2	B2	series
6423204	**SB40NL2000080**	40	80	127,0	108,0	172,0	DMG Mori NL1500, NL2000, NL2500, NL3000, NT5400DCG
6423205	**SB60NZX4000080**	60	80	144,0	135,0	252,0	DMG Mori NZX4000080

155	156	117	4	160

VIBRATION-FREE • SPLIT BLOCK • DOOSAN™

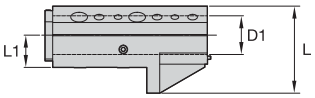


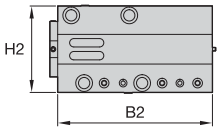


Detail

order number	catalogue number	D1	L1	L	H2	B2	series
6423207	SB40PU230M060	40	60	115,0	93,0	172,0	PUMA 230M, 240M, 280M, 1500, 2000, 2500SY&LSY, TT1500, 18
6423206	SB40L220M065	40	65	103,0	75,0	174,0	LYNX L220LM/M (BMT45 TURRET)
6423208	SB40PU300M072	40	70	139,0	110,0	172,0	PUMA 300M, MA, LMA, LM, LMB, MB, MC, LMC, MS (BMT65 TURRET)
6423209	SB60PU400MB060	60	60	150,0	120,0	252,0	PUMA 400MA, 400MB, 400LMA, 400LMB (BMT75 TURRET)

VIBRATION-FREE • SPLIT BLOCK • OKUMA™



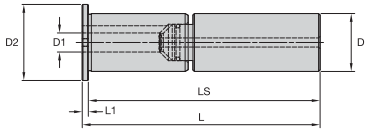


Detail

order number	catalogue number	D1	L1	L	H2	B2	series
6423221	SB40LB4000EX085	40	85	130,0	100,0	172,0	LB4000 EX (M,MY)
6423222	SB50LU35035	50	35	100,0	120,0	212,0	LU35, LB35 (2 AXIS)
6423223	SB60LU45050	60	50	120,0	134,0	252,0	LB45II & LU45
6423210	SB60LU45M050	60	50	135,0	134,0	252,0	LB45II & LU45/M

155	156	117	4	160

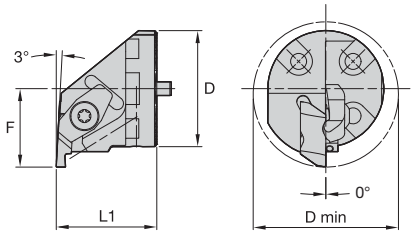
VIBRATION-FREE • REDUCER SLEEVES



order number	catalogue number	D	D1	D2	L1	L	LS
6423264	SL040025	40	25	50	10	170	160
6423263	SL040032	40	32	50	4	164	160
6423262	SL050032	50	32	60	4	204	200
6423261	SL050040	50	40	60	4	204	200
6423260	SL060032	60	32	70	4	244	240
6423259	SL060040	60	40	70	4	244	240
6423258	SL080050	80	50	90	6	326	320
6423256	SL080060	80	60	90	4	324	320
6423255	SL100060	100	60	110	4	404	400
6423254	SL100080	100	80	110	4	404	400
6423253	SL120080	120	80	138	8	395	387
6423252	SL120100	120	100	138	8	488	480

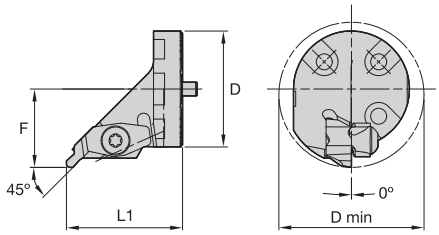
155 156 117 4 160

VIBRATION-FREE • BOLT-ON HEADS • TOP NOTCH™ • NE 90°



order number	catalogue number	D	D min	F	L1	GI
right hand						
6754856	H3240NER3W	32	40	22,0	32,2	NG_3L
6754859	H4050NER3W	40	50	27,0	34,2	NG_3L
6754893	H5063NER3W	50	63	35,0	35,2	NG_3L
6754894	H5063NER4W	50	63	35,0	35,2	NG_4L
6754895	H5063NER6W	50	63	35,0	38,6	NG_6L
left hand						
6754855	H3240NEL3W	32	40	22,0	32,2	NG_3R
6754858	H4050NEL3W	40	50	27,0	34,2	NG_3R
6754891	H5063NEL3W	50	63	35,0	35,2	NG_3R
6754892	H5063NEL4W	50	63	35,0	35,2	NG_4R

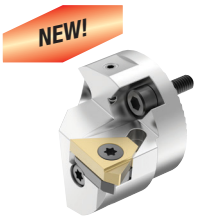
VIBRATION-FREE • BOLT-ON HEADS • TOP NOTCH • NE 45°

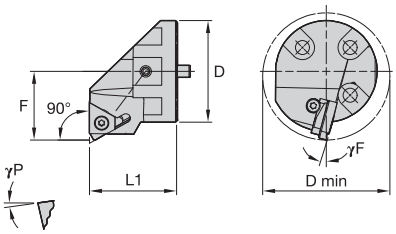


order number	catalogue number	D	D min	F	L1	GI
right hand						
6754857	H3240N45R3W	32	40	22,0	37,1	NU_3L
6754860	H4050N45R3W	40	50	27,0	39,6	NU_3L

155	156	118	4	160

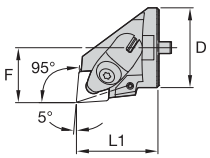
VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • LS 90°



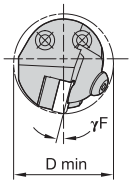


order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6752815	H2532LSER16W	25	32	18,3	25,2	-15.0	-1.5	LT16NR
6752816	H3240LSER16W	32	40	23,3	32,2	-15.0	-1.5	LT16NR
6752817	H4050LSER16W	40	50	28,3	34,2	-15.0	-1.5	LT16NR
6752819	H4050LSER22W	40	50	28,7	34,2	-15.0	-1.5	LT22NR
6752818	H5063LSER16W	50	63	36,3	35,2	-15.0	-1.5	LT16NR
6752820	H5063LSER22W	50	63	36,7	35,2	-15.0	-1.5	LT22NR
6752841	H5063LSER27W	50	63	37,0	35,2	-15.0	-1.5	LT27NR

VIBRATION-FREE • BOLT-ON HEADS • KENCLAMP™ • DCLN 95°



Detail

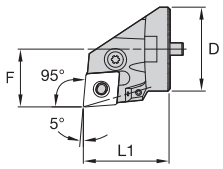


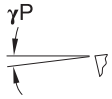
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550556	H3240DCLNR12	32	40	22,0	32,6	-14.0	-5.0	CNMA120408
6550558	H4050DCLNR12	40	50	27,0	34,6	-12.0	-5.0	CNMA120408
6550560	H4050DCLNR16	40	50	27,0	35,6	-14.0	-5.0	CNMA160612
6550632	H5063DCLNR12	50	63	35,0	35,6	-12.0	-5.0	CNMA120408
6549432	H5063DCLNR16	50	63	35,0	35,6	-12.0	-5.0	CNMA160612
6549434	H5063DCLNR19	50	63	35,0	35,6	-12.0	-5.0	CNMA190612
left hand								
6550557	H3240DCLNL12	32	40	22,0	32,6	-14.0	-5.0	CNMA120408
6550559	H4050DCLNL12	40	50	27,0	34,6	-12.0	-5.0	CNMA120408
6550631	H4050DCLNL16	40	50	27,0	35,6	-14.0	-5.0	CNMA160612
6550633	H5063DCLNL12	50	63	35,0	35,6	-12.0	-5.0	CNMA120408
6549431	H5063DCLNL16	50	63	35,0	35,6	-12.0	-5.0	CNMA160612
6549433	H5063DCLNL19	50	63	35,0	35,6	-12.0	-5.0	CNMA190612

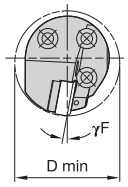
155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • KENLEVER™ • PCLN 95°





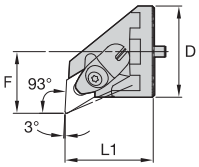
Detail



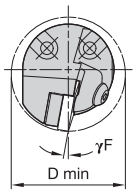
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549409	**H2532PCLNR09**	25	33	17,0	25,6	-10.0	-5.0	CNMA090308
6550656	**H3240PCLNR12**	32	40	22,0	32,6	-10.0	-5.0	CNMA120408
6550658	**H4050PCLNR12**	40	50	27,0	34,6	-10.0	-5.0	CNMA120408
6550660	**H4050PCLNR16**	40	50	27,0	34,6	-11.0	-5.0	CNMA160612
6549442	**H5063PCLNR12**	50	63	35,0	35,6	-10.0	-5.0	CNMA120408
left hand								
6549408	**H2532PCLNL09**	25	33	17,0	25,6	-10.0	-5.0	CNMA090308
6550657	**H3240PCLNL12**	32	40	22,0	32,6	-10.0	-5.0	CNMA120408
6550659	**H4050PCLNL12**	40	50	27,0	34,6	-10.0	-5.0	CNMA120408
6550671	**H4050PCLNL16**	40	50	27,0	34,6	-11.0	-5.0	CNMA160612
6549441	**H5063PCLNL12**	50	63	35,0	35,6	-10.0	-5.0	CNMA120408

VIBRATION-FREE • BOLT-ON HEADS • KENCLAMP™ • DDUN 93°



Detail

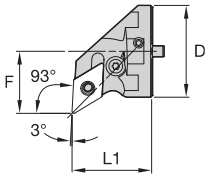


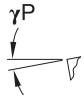
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550634	**H3240DDUNR11**	32	40	22,0	32,6	-10.0	-5.0	DNMA110408
6550636	**H4050DDUNR15**	40	50	27,0	38,6	-10.0	-5.0	DNMA150408
6549436	**H5063DDUNR15**	50	63	35,0	35,6	-8.0	-5.0	DNMA150608
left hand								
6550635	**H3240DDUNL11**	32	40	22,0	32,6	-10.0	-5.0	DNMA110408
6550637	**H4050DDUNL15**	40	50	27,0	38,6	-10.0	-5.0	DNMA150408
6549435	**H5063DDUNL15**	50	63	35,0	35,6	-8.0	-5.0	DNMA150608

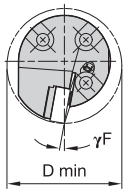
155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • KENLEVER™ • PDUN 93°





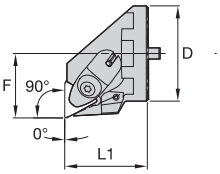
Detail



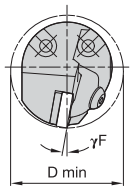
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550672	**H2532PDUNR11**	25	32	17,0	26,6	-11.0	-5.0	DNMA110408
6550674	**H3240PDUNR15**	32	40	22,0	32,6	-12.0	-5.0	DNMA150608
6550676	**H4050PDUNR15**	40	50	27,0	34,6	-10.0	-5.0	DNMA150608
6549444	**H5063PDUNR15**	50	63	35,0	35,6	-10.0	-5.0	DNMA150608
left hand								
6550673	**H2532PDUNL11**	25	32	17,0	26,6	-11.0	-5.0	DNMA110408
6550675	**H3240PDUNL15**	32	40	22,0	32,6	-12.0	-5.0	DNMA150608
6550677	**H4050PDUNL15**	40	50	27,0	34,6	-10.0	-5.0	DNMA150608
6549443	**H5063PDUNL15**	50	63	35,0	35,6	-10.0	-5.0	DNMA150608

VIBRATION-FREE • BOLT-ON HEADS • KENCLAMP™ • DTFN 90°



Detail

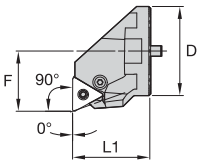


Detail

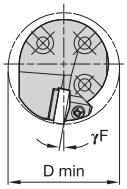
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550638	**H4050DTFNR16**	40	50	27,0	34,6	-10.0	-5.0	TNMA160408
6549438	**H5063DTFNR22**	50	63	35,0	35,6	-8.0	-5.0	TNMA220408
left hand								
6550639	**H4050DTFNL16**	40	50	27,0	34,6	-10.0	-5.0	TNMA160408
6549437	**H5063DTFNL22**	50	63	35,0	35,6	-8.0	-5.0	TNMA220408

155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • KENLEVER™ • PTFN 90°



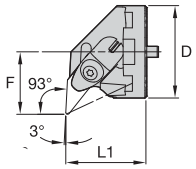
Detail

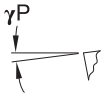


Detail

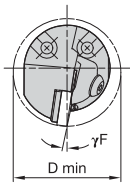
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549411	**H2532PTFNR16**	25	32	17,0	24,6	-12.0	-15.0	TNMA160408
6550678	**H3240PTFNR16**	32	40	22,0	32,6	-12.0	-5.0	TNMA160408
6550680	**H4050PTFNR16**	40	50	27,0	34,6	-10.0	-5.0	TNMA160408
6549446	**H5063PTFNR16**	50	63	35,0	35,6	-8.0	-5.0	TNMA160408
left hand								
6549410	**H2532PTFNL16**	25	32	17,0	24,6	-12.0	-15.0	TNMA160408
6550679	**H3240PTFNL16**	32	40	22,0	32,6	-12.0	-5.0	TNMA160408
6550681	**H4050PTFNL16**	40	50	27,0	34,6	-10.0	-5.0	TNMA160408
6549445	**H5063PTFNL16**	50	63	35,0	35,6	-8.0	-5.0	TNMA160408

VIBRATION-FREE • BOLT-ON HEADS • KENCLAMP™ • DVUN 93°





Detail

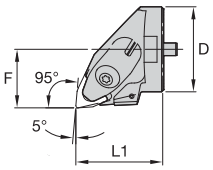


Detail

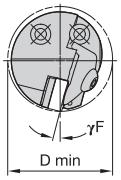
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550640	**H4050DVUNR16**	40	50	27,0	34,6	-9.0	-4.0	VNMA160408
6549440	**H5063DVUNR16**	50	63	35,0	35,6	-9.0	-5.0	VNMA160408
left hand								
6550651	**H4050DVUNL16**	40	50	27,0	34,6	-9.0	-4.0	VNMA160408
6549439	**H5063DVUNL16**	50	63	35,0	35,6	-9.0	-5.0	VNMA160408

155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • KENCLAMP™ • DWLN 95°



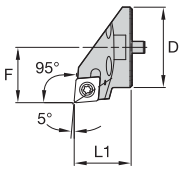
Detail

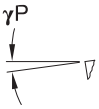


Detail

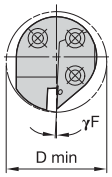
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6550652	H3240DWLNR06	32	40	22,0	32,6	-14.0	-5.0	WNMA060408
left hand								
6550653	H3240DWLNL06	32	40	22,0	32,6	-14.0	-5.0	WNMA060408

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • SCLC 95°





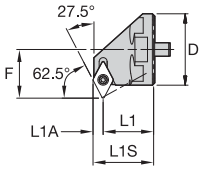
Detail

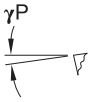


Detail

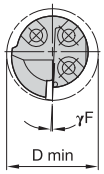
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549070	H2532SCLCR09	25	32	17,0	18,6	-3.0	0.0	CCMT09T308
6549392	H3240SCLCR09	32	40	22,0	22,6	-3.0	0.0	CCMT09T308
6549394	H4050SCLCR12	40	50	27,0	31,6	-3.0	0.0	CCMT120408
left hand								
6549391	H2532SCLCL09	25	32	17,0	18,6	-3.0	0.0	CCMT09T308
6549393	H3240SCLCL09	32	40	22,0	22,6	-3.0	0.0	CCMT09T308
6549395	H4050SCLCL12	40	50	27,0	31,6	-3.0	0.0	CCMT120408

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • SDPC 62.5°





Detail

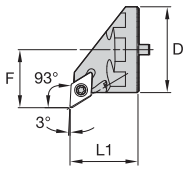


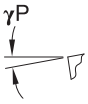
Detail

order number	catalogue number	D	D min	F	L1	L1A	L1S	γF°	γP°	GI
right hand										
6549413	H2532SDPCR07	25	32	17,0	17,6	3,5	21,2	-3.0	0.0	DCMT070204
left hand										
6549412	H2532SDPCL07	25	32	17,0	17,6	3,5	21,2	-3.0	0.0	DCMT070204

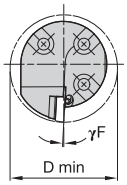
155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • SDUC 93°





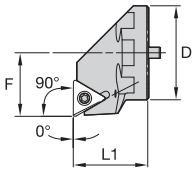
Detail



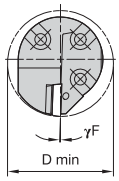
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549415	**H2532SDUCR07**	25	32	17,0	17,6	-3.0	0.0	DCMT070204
6549396	**H2532SDUCR11**	25	32	17,0	17,6	-3.0	0.0	DCMT11T308
6549398	**H3240SDUCR11**	32	40	22,0	22,6	-3.0	0.0	DCMT11T308
6549400	**H4050SDUCR11**	40	50	27,0	31,6	-3.0	0.0	DCMT11T308
6549448	**H5063SDUCR11**	50	63	35,0	35,6	-3.0	0.0	DCMT11T308
left hand								
6549414	**H2532SDUCL07**	25	32	17,0	17,6	-3.0	0.0	DCMT070204
6549397	**H2532SDUCL11**	25	32	17,0	17,6	-3.0	0.0	DCMT11T308
6549399	**H3240SDUCL11**	32	40	22,0	22,6	-3.0	0.0	DCMT11T308
6549401	**H4050SDUCL11**	40	50	27,0	31,6	-3.0	0.0	DCMT11T308
6549447	**H5063SDUCL11**	50	63	35,0	35,6	-3.0	0.0	DCMT11T308

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • STFC 90°



Detail

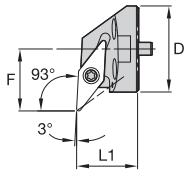


Detail

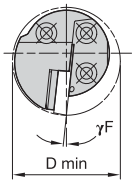
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549417	**H2532STFCR11**	25	32	17,0	17,6	-2.0	0.0	TCMT110204
6549403	**H3240STFCL16**	32	40	22,0	24,6	-3.0	0.0	TCMT16T308
6549404	**H4050STFCR16**	40	50	27,0	31,6	-2.0	0.0	TCMT16T308
left hand								
6549416	**H2532STFCL11**	25	32	17,0	17,6	-2.0	0.0	TCMT110204
6549402	**H3240STFCR16**	32	40	22,0	24,6	-3.0	0.0	TCMT16T308
6549405	**H4050STFCL16**	40	50	27,0	31,6	-2.0	0.0	TCMT16T308

155	156	118	4	160

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • SVUB 93°



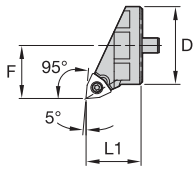
Detail



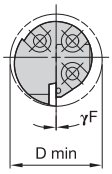
Detail

order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549406	**H2532SVUBR11**	25	32	17,0	17,6	-5.0	0.0	VBMT110304
6549452	**H3240SVUBR16**	32	40	23,0	22,6	-6.0	0.0	VBMT160408
6549450	**H5063SVUBR16**	50	63	35,0	35,6	-3.0	0.0	VBMT160408
left hand								
6549407	**H2532SVUBL11**	25	32	17,0	17,6	-5.0	0.0	VBMT110304
6549451	**H3240SVUBL16**	32	40	23,0	22,6	-6.0	0.0	VBMT160408
6549449	**H5063SVUBL16**	50	63	35,0	35,6	-3.0	0.0	VBMT160408

VIBRATION-FREE • BOLT-ON HEADS • SCREW-ON • SWLP 95°



Detail



Detail

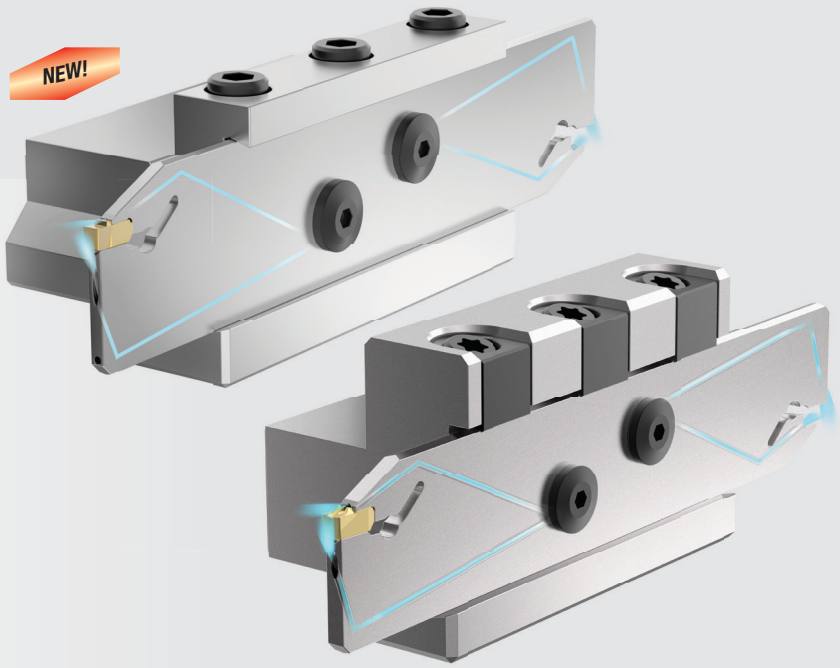
order number	catalogue number	D	D min	F	L1	γF°	γP°	GI
right hand								
6549419	**H2532SWLPR04**	25	32	17,0	17,6	0.0	0.0	WPMT040204
left hand								
6549418	**H2532SWLPL04**	25	32	17,0	17,6	0.0	0.0	WPMT040204

155	156	118	4	160

POWERED BY NOVO

Beyond™ Evolution™

Grooving and Cut-Off



Materials

P M N S

Applications

- Cut-Off
- O.D. Deep Grooving
- Grooving

kennametal.com/BeyondEvolution

Beyond Evolution is the new single-sided grooving and cut-off tool that also performs multi-directional turning.

Whether you are using a high- or low-pressure coolant supply, Beyond Evolution, featuring active coolant control, delivers longer tool life and higher Metal Removal Rates (MRR).

Available now:

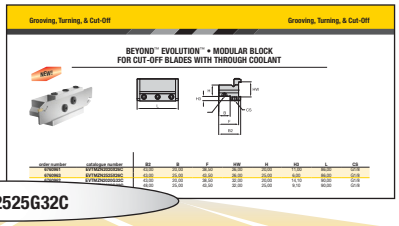
Cut-off blades and supporting blocks with active coolant control.
For even higher productivity in cut-off and deep-grooving applications.

NEW! Modular block with removable top rail, providing accessibility in turret-style machines.

Grooving, Turning, & Cut-Off

BEYOND™ EVOLUTION™ • CATALOGUE NUMBERING SYSTEM • BLOCKS

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



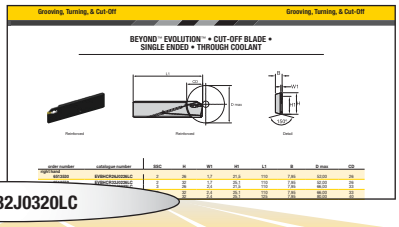
EVTZN2525G32C

EV	T	Z	N	2525	G	32	C
Family Name	Tool Block	Clamping Style	Hand of Tool	Shank Size	Tool Length in (mm)	Blade Size	Coolant
Beyond™ Evolution™		**E** = Integral Clamp **M** = Modular **Z** = Removable Clamp	**R** = Right **L** = Left **N** = Neutral	**Metric** = Height x width in mm letter indicates tool length according to ISO	**G** = 80 **J** = 110 **X** = Other Length	in millimetres	**C** = Through Coolant Capable

Grooving, Turning, & Cut-Off

BEYOND™ EVOLUTION™ • CATALOGUE NUMBERING SYSTEM • CUT-OFF BLADES

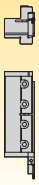
Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



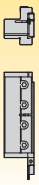
EVBSCL32J0320LC

EV	BS	C	L	32	J	03	20	L	C
Family Name	Tool Style	Support Type	Hand of Pocket	Blade Height	Overall Length	Seat Size (SSC)	Max. Cutting Depth	Hand of Blade	Coolant
Beyond™ Evolution™	**BS** = Blade Standard 2 Pocket **BH** = Blade Heavy 1 Pocket	**C** = Reinforced	**N** = Neutral **L** = Left Hand **R** = Right Hand	in millimetres	According to ISO **G** = 90mm **J** = 110mm **M** = 150mm **X** = Special	**1B** **1F** **02** **03** **04** **05** **06** **08** **10**	in millimetres	**L** = Left Hand **R** = Right Hand	**C** = Through Coolant Capable

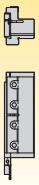
RH Blade
RH Pocket



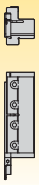
RH Blade
LH Pocket



LH Blade
RH Pocket

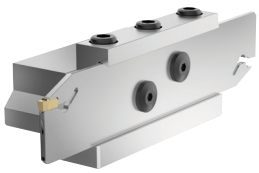


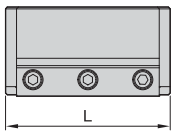
LH Blade
LH Pocket

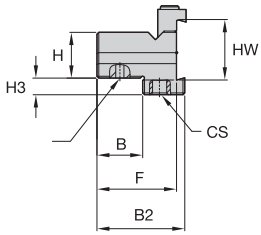


BEYOND™ EVOLUTION™ • MODULAR BLOCK FOR CUT-OFF BLADES WITH THROUGH COOLANT

NEW!

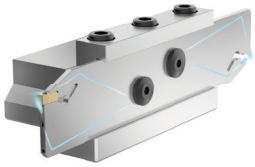


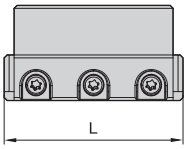


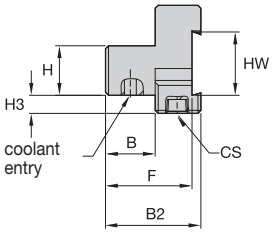


order number	catalogue number	B2	B	F	HW	H	H3	L	CS
6760961	EVTMZN2020X26C	43,00	20,00	38,50	26,00	20,00	11,00	86,00	G1/8
6760963	EVTMZN2525X26C	43,00	25,00	43,50	26,00	25,00	6,00	86,00	G1/8
6760962	EVTMZN2020G32C	43,00	20,00	38,50	32,00	20,00	14,10	90,00	G1/8
6760964	EVTMZN2525G32C	48,00	25,00	43,50	32,00	25,00	9,10	90,00	G1/8

BEYOND EVOLUTION • BLOCK FOR CUT-OFF BLADES WITH THROUGH COOLANT







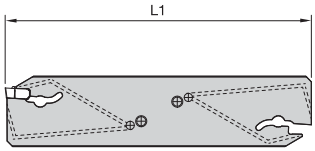
order number	catalogue number	B2	B	F	HW	H	H3	L	CS
6543722	EVTZN2020X26C	43,00	20,00	38,50	26,00	20,00	11,00	78,00	G1/8
6543723	EVTZN2020X32C	43,00	20,00	38,50	32,00	20,00	14,10	78,00	G1/8
6543724	EVTZN2525G26C	48,00	25,00	43,50	26,00	25,00	6,00	90,00	G1/8
6543725	EVTZN2525G32C	48,00	25,00	43,50	32,00	25,00	9,10	90,00	G1/8

155	156	133	4	160

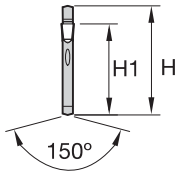
Grooving, Turning, & Cut-Off

BEYOND™ EVOLUTION™ • CUT-OFF BLADE • DOUBLE ENDED • THROUGH COOLANT

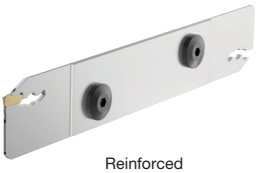
Straight

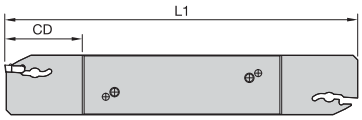


Straight

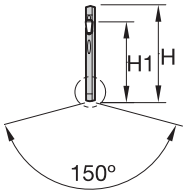


Detail

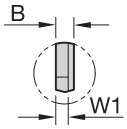

Reinforced



Reinforced



Detail



Detail

order number	catalogue number	SSC	H	W1	H1	L1	B	CD
neutral hand								
6513449	**EVBSN26M0233C**	2	26	1,7	21,5	150	2,40	33
6513450	**EVBSN32M0233C**	2	32	1,7	25,1	150	2,40	33
6513521	**EVBSN26J0340C**	3	26	—	21,5	110	2,40	40
6513522	**EVBSN26M0340C**	3	26	—	21,5	150	2,40	40
6513523	**EVBSN32M0350C**	3	32	—	25,1	150	2,40	50
6513524	**EVBSN26J0440C**	4	26	—	21,5	110	3,40	40
6513525	**EVBSN26M0440C**	4	26	—	21,5	150	3,40	40
6513526	**EVBSN32M0450C**	4	32	—	25,1	150	3,40	50
6513527	**EVBSN32M0560C**	5	32	—	25,1	150	4,40	60
6513529	**EVBSN32M0660C**	6	32	—	25,1	150	5,40	60

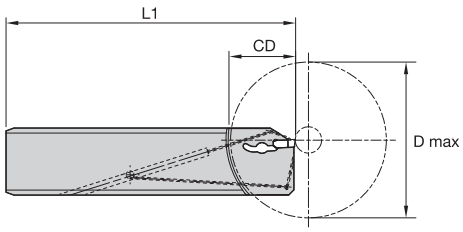
SSC = To correspond with the SSC on the insert.

155	156	134	4	160

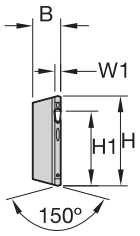
Grooving, Turning, & Cut-Off

BEYOND™ EVOLUTION™ • CUT-OFF BLADE • SINGLE ENDED • THROUGH COOLANT

Reinforced



Reinforced



Detail

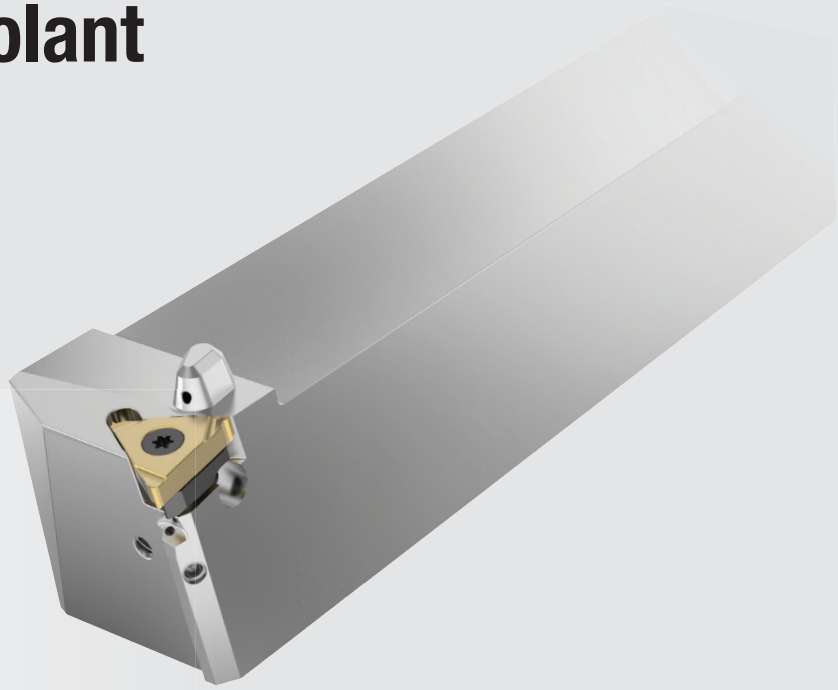
order number	catalogue number	SSC	H	W1	H1	L1	B	D max	CD
right hand									
6513530	**EVBHCR26J0226LC**	2	26	1,7	21,5	110	7,95	52,00	26
6513552	**EVBHCR32J0226LC**	2	32	1,7	25,1	110	7,95	52,00	26
6513554	**EVBHCR26J0333LC**	3	26	2,4	21,5	110	7,95	66,00	33
6513558	**EVBHCR32J0333LC**	3	32	2,4	25,1	110	7,95	66,00	33
6513556	**EVBHCR32K0340LC**	3	32	2,4	25,1	125	7,95	80,00	40
6513560	**EVBHCR26J0433LC**	4	26	3,4	21,5	110	7,95	66,00	33
6513574	**EVBHCR32J0433LC**	4	32	3,4	25,1	110	7,95	66,00	33
6513572	**EVBHCR32K0440LC**	4	32	3,4	25,1	125	7,95	80,00	40
left hand									
6513551	**EVBHCL26J0226RC**	2	26	1,7	21,5	110	7,95	52,00	26
6513553	**EVBHCL32J0226RC**	2	32	1,7	25,1	110	7,95	52,00	26
6513555	**EVBHCL26J0333RC**	3	26	2,4	21,5	110	7,95	66,00	33
6513559	**EVBHCL32J0333RC**	3	32	2,4	25,1	110	7,95	66,00	33
6513557	**EVBHCL32K0340RC**	3	32	2,4	25,1	125	7,95	80,00	40
6513571	**EVBHCL26J0433RC**	4	26	3,4	21,5	110	7,95	66,00	33
6513575	**EVBHCL32J0433RC**	4	32	3,4	25,1	110	7,95	66,00	33
6513573	**EVBHCL32K0440RC**	4	32	3,4	25,1	125	7,95	80,00	40

SSC = To correspond with the SSC on the insert.

155	156	134	4	160

POWERED BY NOVO

Laydown Threading Toolholders with Through Coolant



Applications

Threading

kennametal.com/LT-Threading

NEW! With precise, through the tool coolant delivery.

Ultimate convenience as multiple coolant ports provide ease-of-connection.

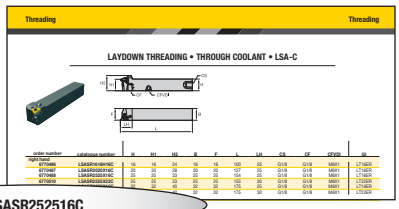
Plug-and-Play through quick-change VDI coolant connection.

Maximum heat reduction, maximum tool life, and maximum performance through precision coolant delivery to both the flank and rake face of the insert.

Increased chip evacuation results in a better surface finish on the finished part.

LAYDOWN THREADING • CATALOGUE NUMBERING SYSTEM

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

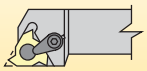


LSASR252516C

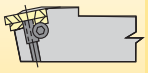
LSASR163C

Metric	L	S	AS	R		2525		16	C
Inch	L	S	AS	R		16		3	C
	Insert Style	Insert Holding Method	Tool Style	Hand of Tool	Drop Head	Shank Size	Length	Insert Size	Coolant

L – Laydown triangle



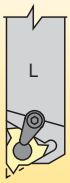
S – Screw-on



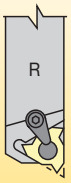
Straight shank

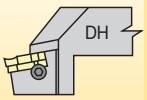
Offset shank

Left hand



Right hand





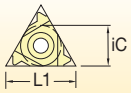
Metric = Height x Width in mm

Inch = Height x Width in 1/16 inch increments

G = 90mm
J = 110mm
M = 150mm
X = Special

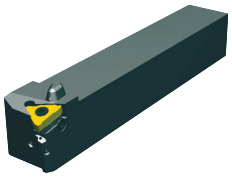
C = Through the pocket cooolant capable

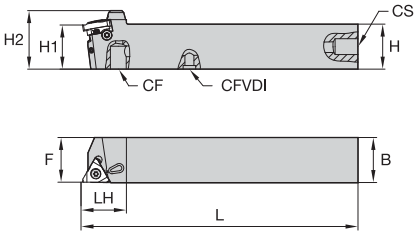
ANSI insert size is equal to the iC in 1/8 increments.
Ex.: For a 1/4" iC, the ANSI insert size = 2



ISO Insert Size	IC		L1	
	Inch	Metric	Inch	Metric
06	5/32	4,0	0.273	6,9
08	3/16	5,0	0.341	8,7
11	1/4	6,4	0.433	11,0
16	3/8	9,5	0.650	16,5
22	1/2	12,7	0.866	22,0

LAYDOWN THREADING • THROUGH COOLANT • LSA-C





order number	catalogue number	H	H1	H2	B	F	L	LH	CS	CF	CFVDI	GI
right hand												
6770486	**LSASR1616H16C**	16	16	24	16	16	100	25	G1/8	G1/8	M6X1	LT16ER
6770487	**LSASR2020X16C**	20	20	28	20	20	127	25	G1/8	G1/8	M6X1	LT16ER
6770488	**LSASR2525X16C**	25	25	33	25	25	154	25	G1/8	G1/8	M6X1	LT16ER
6770510	**LSASR2525X22C**	25	25	33	25	25	155	30	G1/8	G1/8	M6X1	LT22ER
6770489	**LSASR3232X16C**	32	32	40	32	32	175	25	G1/8	G1/8	M6X1	LT16ER
6770511	**LSASR3232X22C**	32	32	40	32	32	175	30	G1/8	G1/8	M6X1	LT22ER
left hand												
6770490	**LSASL1616H16C**	16	16	24	16	16	100	25	G1/8	G1/8	M6X1	LT16EL
6770501	**LSASL2020X16C**	20	20	28	20	20	127	25	G1/8	G1/8	M6X1	LT16EL
6770502	**LSASL2525X16C**	25	25	33	25	25	155	25	G1/8	G1/8	M6X1	LT16EL
6770512	**LSASL2525X22C**	25	25	33	20	25	155	30	G1/8	G1/8	M6X1	LT22EL
6770503	**LSASL3232X16C**	32	32	40	32	32	175	25	G1/8	G1/8	M6X1	LT16ER
6770513	**LSASL3232X22C**	32	32	40	32	32	175	30	G1/8	G1/8	M6X1	LT22EL

155	156	139	4	160

POWERED BY NOVO

Coolant Accessories

kennametal.com/CoolantAccessories

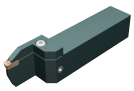
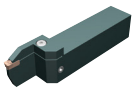
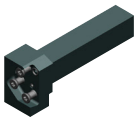
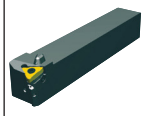
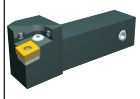
Connecting Kennametal tooling to your machine is easy. Whether requiring heavy duty hoses capable of 350 bar (5,000 psi) or more flexible braided hoses capable of 210 bar (3,000 psi), we have you covered.

Pre-assembled coolant kits
These kits connect Kennametal turning tooling to the industry's most common machines. The Kennametal universal coolant kits are ideal! Each kit contains the most common thread sizes with a variety of fitting styles for maximum flexibility.

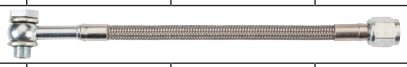
Know exactly what you need?
Knowing the precise components required will allow you to choose only the fittings you need! Each component is individually available, including less common fittings for your convenience.

KITS • SELECTION GUIDE

1 STEP 1: Look for your application, holder style, and size.

Application	Cut-Off		Grooving			Threading	Turning
Holder Style	Front clamp	Top clamp	Top clamp	Top clamp	Modular holder	Screw down	ISO turning holder
Shank Size — mm	12–20	12–20	12–20	25–40	all	all	all
							

2 STEP 2: Find the matching coolant kits.

Kit Description	Hose Type:						
Universal 200mm flex hose coolant kit	•	•	•	•	•	•	•
Universal 300mm flex hose coolant kit	•	•	•	•	•	•	•
Maximum Coolant Pressure Bar/psi	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901
Kit Description	**Hose Type:** 						
M8x1.0 banjo 200mm flex hose coolant kit	•	•	•				
M8x1.0 banjo 300mm flex hose coolant kit	•	•	•				
G 1/8 banjo 200mm flex hose coolant kit				•	•	•	•
G 1/8 banjo 300mm flex hose coolant kit				•	•	•	•
Maximum Coolant Pressure Bar/psi	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901	200 / 2901
Kit Description	**Hose Type:**						
Universal 200mm heavy-duty coolant kit				•	•	•	•
Universal 300mm heavy-duty coolant kit				•	•	•	•
Maximum Coolant Pressure Bar/psi	200 / 2901	* 350 / 5,076	* 350 / 5,076	* 350 / 5,076	* 350 / 5,076	* 350 / 5,076	* 350 / 5,076

* Max pressure for seat size (SSC) 02 holders is 200 bar/2901 psi.

Coolant Supply

KIT COMPONENTS

			COMPONENT DESCRIPTION														
			1/16 NPTF MALE TO JIC MALE	1/8 NPTF MALE TO JIC MALE	M8 X 1.25 MALE TO JIC MALE	M8 X 1.0 MALE TO JIC MALE	G1/8 MALE TO JIC MALE	M10 MALE TO JIC MALE	MALE JIC TO FEMALE JIC ELBOW	HEAVY DUTY 200MM COOLANT HOSE	HEAVY DUTY 300MM COOLANT HOSE	UNIV 200MM FLEX COOLANT HOSE	UNIV 300MM FLEX COOLANT HOSE	M8X1.0 BANJO 200MM FLEX HOSE	G1/8 BANJO 200MM FLEX HOSE	M8X1.0 BANJO 300MM FLEX HOSE	G1/8 BANJO 300MM FLEX HOSE
Kit Description	**Catalogue Number**	**Order Number**															
Universal 200mm flex hose coolant kit	**COOL-KIT-UNIVERSAL-FLEX-101**	**6475019**	●	●	●	●	●	●	●			●					
Universal 300mm flex hose coolant kit	**COOL-KIT-UNIVERSAL-FLEX-201**	**6475021**	●	●	●	●	●	●	●				●				
M8x1.0 banjo 200mm flex hose coolant kit	**COOL-KIT-FLEX-301B**	**6475023**					●	●	●					●			
M8x1.0 banjo 300mm flex hose coolant kit	**COOL-KIT-FLEX-401B**	**6475025**					●	●	●							●	
G 1/8 banjo 200mm flex hose coolant kit	**COOL-KIT-FLEX-501B**	**6475027**					●	●	●						●		
G 1/8 banjo 300mm flex hose coolant kit	**COOL-KIT-FLEX-601B**	**6475029**					●	●	●								●
Universal 200mm heavy-duty coolant kit	**COOL-KIT-101-HD**	**6145372**	●	●			●	●	●	●							
Universal 300mm heavy-duty coolant kit	**COOL-KIT-201-HD**	**6145373**	●	●			●	●	●		●						

INDIVIDUAL KIT COMPONENT LIST

order number	catalogue number	description
6145374	1-16NPTF-JIC	Straight fitting, 1/16 NPTF male thread to JIC male thread
6145375	1-8NPTF-JIC	Straight fitting, 1/8 NPTF male thread to JIC male thread
6145378	M8X1.25-JIC	Straight fitting, M8 x 1.25 male thread to JIC male thread
6475041	M8X1-JIC	Straight fitting, M8 x 1.0 male thread to JIC male thread
6145376	G18-JIC	Straight fitting, G 1/8 male thread to JIC male thread
6145377	M10X1.5-JIC	Straight fitting, M10 x 1.5 male thread to JIC male thread
6145379	JICM-JICF-ELB	Elbow fitting, male JIC thread to female JIC thread
6145380	COOL-HOSE-200-HD	Heavy Duty 200mm Coolant hose with JIC female fitting both ends
6145381	COOL-HOSE-300-HD	Heavy Duty 300mm Coolant hose with JIC female fitting both ends
6432549	COOL-HOSE-200-FLEX	Flexible braided 200mm Coolant hose with JIC female fitting both ends
6432550	COOL-HOSE-300-FLEX	Flexible braided 300mm Coolant hose with JIC female fitting both ends
6475043	M8X1-BAN-JIC-HOSE-200	Flexible braided 200mm Coolant hose, M8 x 1.0 male thread to JIC female thread. Contains (1) M8x1.0 banjo bolt and (2) M8 bonded washers
6475045	G18-BAN-JIC-HOSE-200	Flexible braided 200mm Coolant hose, G 1/8 male thread to JIC female thread. Contains (1) G 1/8 banjo bolt and (2) G 1/8 bonded washers
6475047	M8X1-BAN-JIC-HOSE-300	Flexible braided 300mm Coolant hose, M8 x 1.0 male thread to JIC female thread. Contains (1) M8x1.0 banjo bolt and (2) M8 bonded washers
6475049	G18-BAN-JIC-HOSE-300	Flexible braided 300mm Coolant hose, G 1/8 male thread to JIC female thread. Contains (1) G 1/8 banjo bolt and (2) G 1/8 bonded washers

COOLANT ACCESSORIES

The items shown below are not part of any coolant kits shown on previous pages.

order number	catalogue number	description
6145382	M6X1-JIC	Straight fitting, M6 x 1.0 male thread to JIC male thread
6145383	JICM-JICM-STR	Straight fitting, JIC male thread to JIC male thread
6145386	G14-G18-RED	Straight fitting, G 1/4 male thread to G 1/8th male thread
6475058	R18-JIC	Straight fitting, 1/8 BSPT male thread to JIC male thread
6475059	R14-JIC	Straight fitting, 1/4 BSPT male thread to JIC male thread

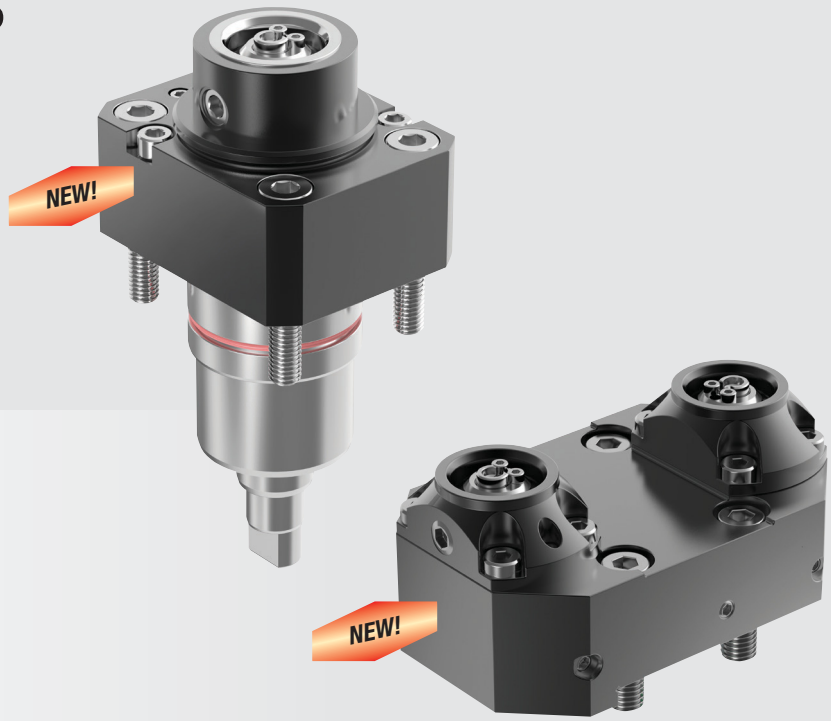
COOLANT SPARE PARTS

Included in kits; part of components.

order number	catalogue number	description
6475051	M8X1-BAN-BOLT	Banjo bolt, M8 x 1.0 male thread
6475053	G18-BAN-BOLT	Banjo bolt, G1/8 male thread
6475060	M6-BON-WASHER	M6 bonded washer
6475055	M8-BON-WASHER	M8 bonded washer
6475061	M10-BON-WASHER	M10 bonded washer
6475056	G18-BON-WASHER	G 1/8 bonded washer

POWERED BY NOVO

Turret Adapted Clamping Units



kennametal.com/TACU

Driven and Static • KM™ for NAKAMURA™ Machines

Turret adapted clamping units provide unmatched performance and guaranteed productivity improvement.

Ensure optimised machine utilisation by increasing repeatability and reducing setup times.

Turret adapted clamping units are designed to fit specific machine-tool turret interfaces.

The offering covers various machine models from leading machine-tool builders such as DOOSAN™, HAAS™, HWACHEON™, HYUNDIA WIA, Mazak™, DMG Mori, and OKUMA™.

NEW! Driven and static tools for NAKAMURA™ machines up to 6,000 RPM. Gear ratio 1:1.

KENNAMETAL

- Standard portfolio features static blocks and driven tools for KM™ sizes 32, 40, 50, and 63.
- Driven tools for ER sizes 25, 32, and 40.
- Driven tools up to 12,000 RPM. Gear ratio 1:1.
- Designed to fit machine-tool specific turret interfaces.
- VDI mounted units for easy handling.
- Bolt mounted units (BMT) for high rigidity.
- Available with internal and external coolant supply.

Turret Adapted Clamping Units

TACU • TOOL SELECTION GUIDE

1 STEP 1: Find machine tool manufacturer.

2 STEP 2: Choose machine tool model.

3 STEP 3: Find machine mount code (MMC).

1

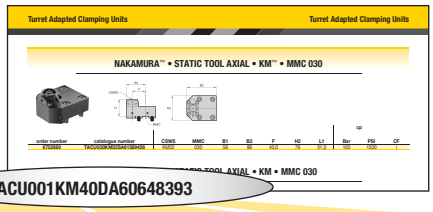
	MACHINE TOOL MANUFACTURER		
	NEW! NAKAMURA™		
2 Machine Tool Model	• WY-100 II • NTY3-100	• WY-150 • AS-200/200L (TW10)	
3 Machine Mount Code (MMC)	MMC 030 Pages: 150–151	MMC031 Pages: 152–153	
	DMG MORI	OKUMA™	HAAS™
Machine Tool Model	• DuraTurn 2050, 2550 MC • NL/NLX 1500–2500 (20 Station Turret) • NT 3100, 3150, 3200 • NT/NTX 1000, 2000 • NZ/NZX 1500–2000 (16 Station Turret) • DIM 1500	• Genos L300 MW/MYW • LB/LU 2000–3000 EX M/MY/MW/MYW • MULTUS U3000, 4000 2S	• ST–20/30, SL–20/30 (BOT Turret)
Machine Mount Code (MMC)	MMC 001 Pages: 55–58*	MMC 009 Pages: 62–64*	MMC 013 Page: 34*
Machine Tool Model	• NL/NLX 1500–4000 MC/Y/SMC/SY • NLX 4000 (High Torque Milling) • NZX 2500 (12 Station Turret)	• ES L10 • Genos L400 • LB/LU 2500–3000 EX • LB300, LU300	• ST–20 (BMT65) • ST–20Y (BMT65) • ST–25 (BMT65) • ST–25Y (BMT65) • ST–30 (BMT65) • ST–30Y (BMT65) • ST–35 (BMT65) • ST–35Y (BMT65) • DS–30 (BMT65) • DS–30Y (BMT65)
Machine Mount Code (MMC)	MMC 002 Pages: 58–61*	MMC 013 Page: 64*	MMC 036 Pages: 34–36*
	MAZAK™		
Machine Tool Model	• Quick Turn Nexus 200, 250 M, MY (12 Station Turret) • Quick Turn Nexus 200, 250 MS, MSY (12 Station Turret) • Super Quadrex 200, 250 M (12 Station Turret) • Super Quick Turn 200, 250, M, MY (12 Station Turret) • Super Quick Turn 200, 250, MS, MSY (12 Station Turret)	• Hyper Quadrex 200, 250 MSY (12 Station Turret) • Multiplex 6200, 6200Y, 6250 (12 Station Turret)	• Hyper Quadrex 450 M • Megaturn Nexus 900 M • Quick Turn Nexus 300–450 M, MY • Slant Turn Nexus 500, 550 M
Machine Mount Code (MMC)	MMC 016 Pages: 45–47*	MMC 017 Pages: 47–49*	MMC 018 Pages: 50–51*
Machine Tool Model	• MP430, 630 (12 Station Turret) • MP6300, 6300 Y (12 Station Turret)	• Quick Turn Smart 100, 150 M S • Quick Turn Smart 200, 250 M	
Machine Mount Code (MMC)	MMC 019 Pages: 51–53*	MMC 020 Pages: 53–54*	
	DOOSAN™ (DAEWOO™)	HYUNDAI WIA	HWACHEON™
Machine Tool Model	• Lynx 300M • Puma 1500, 2000, 2500 M/Y (12 Station, BMT55) • Puma 1500-2500 MS/SY (12 Station, BMT55) • Puma 2100 M/MS/Y/SY (24 Station, BMT55) • Puma 2100 M/Y (12 Station, BMT55) • Puma 230, 240, 280 M/MS/LM • Puma MX1600, 2100 ST (BMT55) • Puma TL2000, 2500 M • Puma TT1500, 1800 MS/SY	• L230LMSA • LM1600, 1800TTSY • SKT160, 180TTMS/TTSY (BMT55)	• Cutex 160 MC/SMC (BMT 55)
Machine Mount Code (MMC)	MMC 035 Pages: 30–31*	MMC 035 Pages: 41–42*	MMC 035 Pages: 37–38*
Machine Tool Model	• Puma 2100, 2600 M/MS/Y/SY (24 Station, BMT65) • Puma 2100, 2600 M/MS/Y/SY (12 Station, BMT65) • Puma 3100 M/Y/MY (12 Station, BMT65) • Puma MX2000, 2500, 2600 T/ST/SY • Puma VT450 M, VT450 M-2SP • Puma Inverturn 3000 M • Puma 300 M/MS • Puma TT2000, 2500 MS/SY • Puma V400M	• SKT200, 250TTM/MS/SY • SKT250, 300M/MS • L2100SY • LM2000, 2500TTM/TTMS/TTSY • L300M/MS	• Cutex 240 MC/SMC • Hi-Tech 200-450 MC/SMC/YMC/YSMC (BMT 65) • T2 MC/SMC/YMC/YSMC • VT450 MC (BMT65)
Machine Mount Code (MMC)	MMC 036 Pages: 31–33*	MMC 036 Pages: 42–44*	MMC 036 Pages: 38–40*

* See page in the Kennametal Innovations Catalogue 2020 | 01 • A-19-05951.

Turret Adapted Clamping Units

TACU • CATALOGUE NUMBERING SYSTEM

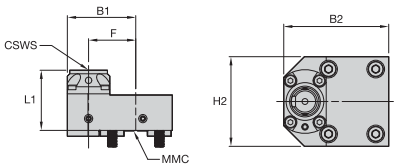
Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



TACU	001	KM	40	D	A	60648393
Turret Adapted Clamping Unit	Machine Mount Code (MMC)	System Style	System Size (CSWS)	Tool Type	Tool Orientation	8 Digit Drawing Number
		KM = KM **ER** = ER	**25, 32, 40, 50, 63**	**S** = Static Tool **D** = Driven Tool	**A** = Axial **R** = Radial	

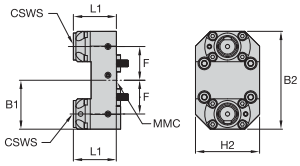
For additional information, see Kennametal Innovations Catalogue 2020 | 01 • A-19-05951, or visit **kennametal.com/TACU**.

NAKAMURA™ • STATIC TOOL AXIAL • KM™ • MMC 030



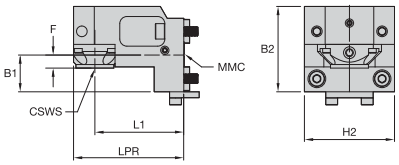
order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	cp Bar	PSI	CF
6752660	TACU030KM32SA61569456	KM32	030	58	89	40,0	76	51,0	100	1500	i

NAKAMURA • STATIC TOOL AXIAL • KM • MMC 030



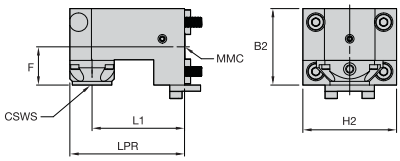
order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	cp Bar	PSI	CF
6752722	TACU030KM32SA61569459 *	KM32	030	58	116	40,0	76	31,0	100	1500	i

NAKAMURA • STATIC TOOL RADIAL • KM • MMC 030



order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	LPR	cp Bar	PSI	CF
6752721	TACU030KM32SR61569457	KM32	030	31	72	11,0	76	75,0	93	100	1500	i

NAKAMURA • STATIC TOOL RADIAL • KM • MMC 030

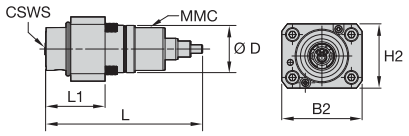


order number	catalogue number	CSWS	MMC	B2	F	H2	L1	LPR	cp Bar	PSI	CF
6752723	TACU030KM32SR61569460	KM32	030	62	31,0	76	75,0	93	100	1500	i

156	149	4	160

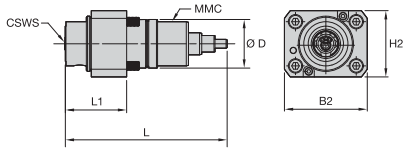
NOTE: * = Only usable on machines equipped with sub-spindle.

NAKAMURA™ • DRIVEN TOOL AXIAL • KM™ • MMC 030



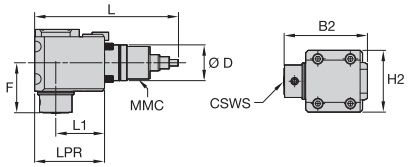
order number	catalogue number	CSWS	MMC	B2	D	H2	L	L1	mST (Nm)	Bar	PSI	CF	CS1	max RPM
											cp			
6741420	TACU030KM32DA61569437	KM32	030	75	44	60	147	55,5	25	70	1000	e	M10X1	6000

NAKAMURA • DRIVEN TOOL AXIAL • KM • MMC 030



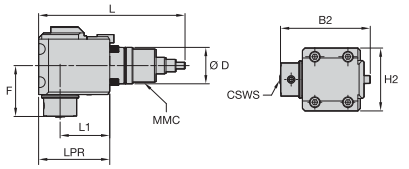
order number	catalogue number	CSWS	MMC	B2	D	H2	L	L1	mST (Nm)	Bar	PSI	CF	CS1	max RPM
											cp			
6741592	TACU030KM32DA61569454	KM32	030	75	44	60	147	55,5	25	70	1000	i/e	M10X1	6000

NAKAMURA • DRIVEN TOOL RADIAL • KM • MMC 030



order number	catalogue number	CSWS	MMC	B2	D	F	H2	L	L1	LPR	mST (Nm)	Bar	PSI	CF	CS1	max RPM
													cp			
6741591	TACU030KM32DR61569438	KM32	030	103	44	61,5	76	177	60,0	86	25	70	1000	e	M10X1	6000

NAKAMURA • DRIVEN TOOL RADIAL • KM • MMC 030

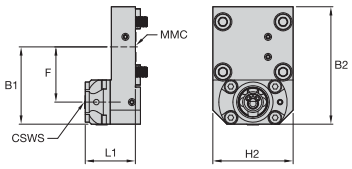


order number	catalogue number	CSWS	MMC	B2	D	F	H2	L	L1	LPR	mST (Nm)	Bar	PSI	CF	CS1	max RPM
													cp			
6741593	TACU030KM32DR61569455	KM32	030	109	44	61,5	76	177	60,0	86	25	70	1000	i/e	M10X1	6000

156	149	4	160

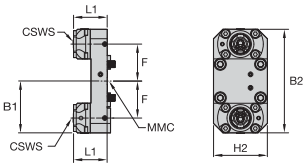
Turret Adapted Clamping Units

NAKAMURA™ • STATIC TOOL AXIAL • KM™ • MMC 031



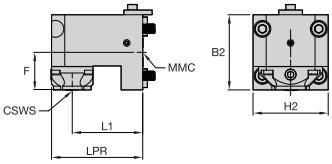
order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	cp Bar	cp PSI	cp CF
6752724	TACU031KM40SA61569465	KM40	031	77	117	55,0	80	50,0	100	1500	i

NAKAMURA • STATIC TOOL AXIAL • KM • MMC 031



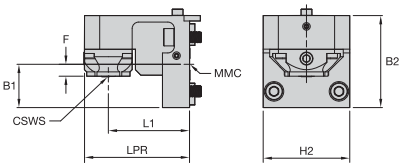
order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	cp Bar	cp PSI	cp CF
6752726	TACU031KM40SA61569467 *	KM40	031	77	154	55,0	80	50,0	100	1500	i

NAKAMURA • STATIC TOOL RADIAL • KM • MMC 031



order number	catalogue number	CSWS	MMC	B2	F	H2	L1	LPR	cp Bar	cp PSI	cp CF
6752725	TACU031KM40SR61569466	KM40	031	80	40,0	80	75,0	97	100	1500	i

NAKAMURA • STATIC TOOL RADIAL • KM • MMC 031



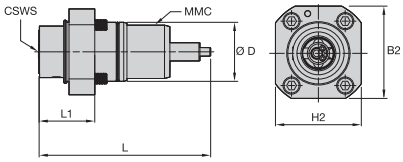
order number	catalogue number	CSWS	MMC	B1	B2	F	H2	L1	LPR	cp Bar	cp PSI	cp CF
6752727	TACU031KM40SR61569468	KM40	031	40	85	11,0	80	75,0	97	100	1500	i

156	149	4	160

NOTE: * = Only usable on machines equipped with sub-spindle.

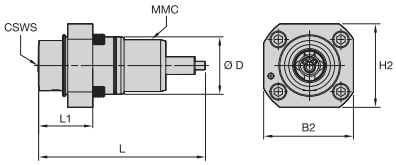
Turret Adapted Clamping Units

NAKAMURA™ • DRIVEN TOOL AXIAL • KM™ • MMC 031



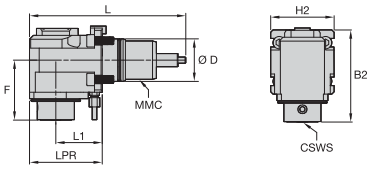
order number	catalogue number	CSWS	MMC	B2	D	H2	L	L1	mST (Nm)	Bar	cp PSI	CF	CS1	max RPM
6741594	TACU031KM40DA61569461	KM40	031	86	55	80	160	52,0	25	70	1000	e	M10X1	6000

NAKAMURA • DRIVEN TOOL AXIAL • KM • MMC 031



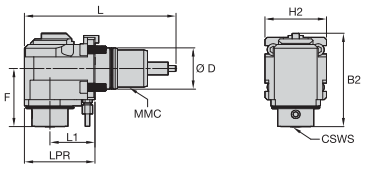
order number	catalogue number	CSWS	MMC	B2	D	H2	L	L1	mST (Nm)	Bar	cp PSI	CF	CS1	max RPM
6741596	TACU031KM40DA61569463	KM40	031	86	55	80	160	52,0	25	70	1000	i/e	M10X1	6000

NAKAMURA • DRIVEN TOOL RADIAL • KM • MMC 031



order number	catalogue number	CSWS	MMC	B2	D	F	H2	L	L1	LPR	mST (Nm)	Bar	cp PSI	CF	CS1	max RPM
6741595	TACU031KM40DR61569462	KM40	031	119	55	77,5	82	202	60,0	94	25	70	1000	e	G 1/8	6000

NAKAMURA • DRIVEN TOOL RADIAL • KM • MMC 031



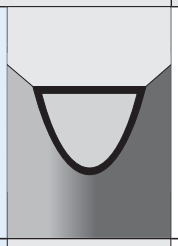
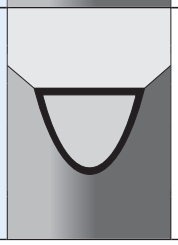
order number	catalogue number	CSWS	MMC	B2	D	F	H2	L	L1	LPR	mST (Nm)	Bar	cp PSI	CF	CS1	max RPM
6741597	TACU031KM40DR61569464	KM40	031	125	55	77,5	82	202	60,0	94	25	70	1000	i/e	G 1/8	6000

156	149	4	160

Grade and Grade Descriptions

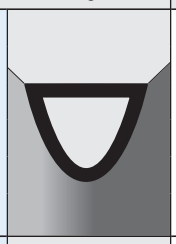
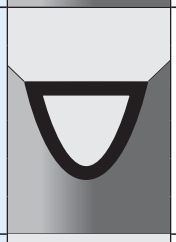
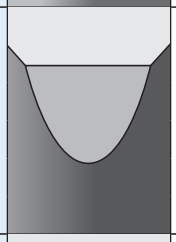
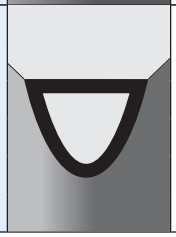
HOLEMAKING

wear resistance ← → toughness

Coating	Grade Description		05	10	15	20	25	30	35	40	45
KCP15A 	**Composition:** Monolayer PVD AlTiN coated submicron grain carbide. **Application:** First choice for steel and second choice for cast iron. This grade consists of an updated AlTiN coating, offering improved high temperature properties on top of the proven fine grain carbide substrate offering required toughness for modular drilling applications.	P									
		K									
KCP15B 	**Composition:** Multilayered PVD AlTiN-based coated submicron grain carbide with superior surface finish. **Application:** First choice for steel. A proprietary coating combined with a state-of-the-art surface condition results in best-in-class tool life, as well as performance consistency in all steel workpieces at elevated cutting conditions.	P									

SOLID END MILLING

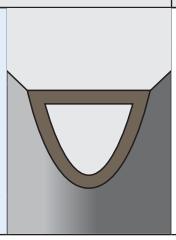
wear resistance ← → toughness

Coating	Grade Description		05	10	15	20	25	30	35	40	45
KCPM15 	Coated carbide grade with thick PVD coating and optimised chemistry and process for increased wear resistance. Outstanding protection in milling stainless steel to mitigate crater, DOCN (depth-of-cut notching), and flank wear. Excellent performance up to 52 HRC.	P									
		M									
		K									
KCSM15 	Coated carbide grade with thick PVD coating and optimised chemistry and process for increased wear resistance. Outstanding protection in milling stainless steel to mitigate crater, DOCN (depth-of-cut notching), and flank wear. Excellent performance up to 52 HRC.										
		M									
		S									
		H									
K600 	Carbide grade made from high-quality, micrograin materials for cutting all types of workpiece materials. Very high toughness ensures a controlled wear rate. The micrograin structure enables extremely sharp cutting edges.										
		N									
KC643M 	Coated fine-grain grade with PVD multilayer (AlTiN). KC643M™ is a very thin and hard PVD coating particularly suited for cutting steel, cast iron, stainless steel (wet), and titanium (wet). This grade can be used for materials with hardness up to 52 HRC.	P									
		M									
		K									
		S									

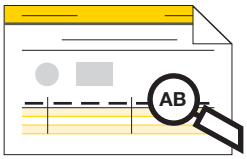
Grade and Grade Descriptions

TURNING

wear resistance ← → toughness

Coating		Grade Description		05	10	15	20	25	30	35	40	45
KCS10B		**Composition:** PVD-AlTiN coating with a very smooth coating surface and extremely hard, wear-resistant ultra fine-grain carbide substrate. **Application:** The KCS10B™ grade is ideal for medium machining and finishing operations of Nickel-Based, Cobalt-Based, and Iron-Based High-Temperature Alloys. The extremely hard, wear-resistant carbide substrate allows for longer tool life while the ultra fine-grain carbide substrate and smoother coating reduces friction.										
			S									

KEY TO PRODUCT TABLE COLUMN HEADINGS



You may notice a slight change in the appearance of our product tables and specification charts. In this catalogue, Kennametal introduces a set of short-name codes to improve the readability of tables and drawings. These codes replace full-text descriptions. The full list of codes and their definitions can be found below.

Short-Name Code	Full Text Description
Ap1 max	Maximum Cutting Depth
B	Shank Width
B1	Front Clearance
B2	Overall Width
Bar	Coolant Pressure Bar
BCH	Corner Chamfer Width
BDX	Maximum Body Diameter
BR1	Boring Range
CD	Cutting Depth
CE	Cutting Edges
CF	Coolant Feature: i = internal e = external i/e = internal and external
CF	Coolant Supply Size Radial
CFVDI	Coolant Supply Size - VDI
cp	Coolant Pressure
CS	Coolant Supply Size
CS1	External Coolant, Coolant Supply Exit Size
CSMS	Connection Style Machine Side
CST	Collet Series
CSWS	Connection Style Workpiece Side
D	Insert: Insert IC Size
D	Milling: Mounting Diameter
D	Toolholder: Shank/Bore Diameter
D max	Maximum Bore Diameter
D min	Minimum Bore Diameter
D1	Milling: Cutter Diameter
D1	Holemaking: Drill Diameter
D1	Toolholder: Clamping Diameter
D2	Body Diameter 1 Workpiece Side
D3	Neck Diameter
D5	Body Diameter Machine Side
DCLC	Boss Diameter
DCLC2	Boss Diameter 2
F	F Dimension
G	Connector Thread Size Machine Side
G3	Connection Thread Size Workpiece Side
GI	Gage Insert
H	Shank Height
H1	Cutting Height
H2	Overall Height
H2	Toolholder: Head Height
H3	Head Bottom Offset
HW	Shank Height
kg	Weight Kilograms
L	Overall Length
L1	Gage Length
L1	Toolholder: Tool Length
L1A	L1 A Dimension
L1 assy	L1 Assembly Length
L1S	Secondary Tool Length
L10	Insert Cutting Edge Length
L2	Usable Length
L2 assy	L2 Assembly Length
L3	Maximum Depth
L3	Drill Flute Length
L4	Maximum Boring Depth
L4 max	Maximum Drill Depth
L5	Drill Point Length
lbs	Weight Pounds
LCLC	Boss Length
LCLC2	Boss Length 2
LH	Head Length
LPR	Protruding Length
LS	Shank Length
M	Insert Gage Dimension
max RPM	Maximum Revolutions Per Minute
MMC	Machine Mount Code
mST (Nm)	Max Spindle Torque (Nm)
Nm	Torque Newton Meters
PSI	Coolant Pressure PSI
Rε	Corner Radius
S	Insert Thickness
SSC	Seat Size Code
W	Overall Width
W1	Blade Width
γF°	Radial Rake Angle
γP°	Axial Rake Angle

Material Cross Reference • DIN

P	Steel	N	Non-Ferrous	H	Hardened Materials
M	Stainless Steel	S	High-Temp Alloys	C	CFRP Materials
K	Cast Iron				

material group	description	content	tensile strength RM (MPa)*	hardness (HB)	hardness (HRC)	material number
P0	Low-Carbon Steels, Long Chipping	C <0,25%	<530	<125	–	–
P1	Low-Carbon Steels, Short Chipping, Free Machining	C <0,25%	<530	<125	–	C15, Ck22, ST37-2, S235JR, 9SMnPb28, GS38
P2	Medium- and High-Carbon Steels	C >0,25%	>530	<220	<25	ST52, S355JR, C35, GS60, Cf53
P3	Alloy Steels and Tool Steels	C >0,25%	600–850	<330	<35	16MnCr5, Ck45, 21CrMoV5-7, 38SMn28
P4	Alloy Steels and Tool Steels	C >0,25%	850–1400	340–450	35–48	100Cr6, 30CrNiMo8, 42CrMo4, C70W2, S6525, X120Mn12
P5	Ferritic, Martensitic, and PH Stainless Steels	–	600–900	<330	<35	100Cr6, 30CrNiMo8, 42CrMo4, C70W2, S6525, X120Mn12
P6	High-Strength Ferritic, Martensitic, and PH Stainless Steels	–	900–1350	350–450	35–48	X102CrMo17, G-X120Cr29
M1	Austenitic Stainless Steel	–	<600	130–200	–	X5CrNi 18 10, X2CrNiMo 17 13 2, G-X25CrNiSi18 9, X15CrNiSi 20 12
M2	High-Strength Austenitic Stainless and Cast Stainless Steels	–	600–800	150–230	<25	X2CrNiMo 13 4, X5NiCr 32 21, X5CrNiNb 18 10, G-X15CrNi 25-20
M3	Duplex Stainless Steel	–	<800	135–275	<30	X8CrNiMo27 5, X2CrNiMoN22 5 3, X20CrNiSi25 4, G-X40CrNiSi27 4
K1	Grey Cast Iron	–	125–500	120–290	<32	GG15, GG25, GG30, GG40, GTW40
K2	Low- and Medium-Strength Ductile Irons (Nodular Irons) and Compacted Graphite Irons (CGI)	–	<600	130–260	<28	GGG40, GTS35
K3	High-Strength Ductile Irons and Austempered Ductile Iron (ADI)	–	>600	180–350	<43	GGG60, GTW55, GTS65
N1	Wrought Aluminium	–	–	–	–	AlMg1, Al99.5, AlCuMg1, AlCuBiPb, AlMgSi1, ALMgSiPb
N2	Low-Silicon Aluminium Alloys and Magnesium Alloys	Si <12,2%	–	–	–	GAlSiCu4, GDAlSi10Mg
N3	High-Silicon Aluminium Alloys and Magnesium Alloys	Si >12,2%	–	–	–	G-ALSi12, G-AlSi17Cu4, G-AlSi21CuNiMg
N4	Copper-, Brass-, Zinc-Based on Machinability Index Range of 70–100	–	–	–	–	CuZn40, Ms60, G-CuSn5ZnPb, CuZn37, CuSi3Mn
N5	Nylon, Plastics, Rubbers, Phenolics, Resins, Fibreglass	–	–	–	–	Lexan®, Hostalen™, Polystyrol, Makrolon
N6	Carbon, Graphite Composites, CFRP	–	–	–	–	CFK, GFK
N7	Metal Matrix Composites (MMC)	–	–	–	–	–
S1	Iron-Based, Heat-Resistant Alloys	–	500–1200	160–260	25–48	X1NiCrMoCu32 28 7, X12NiCrSi36 16, X5NiCrAlTi31 20, X40CoCrNi20 20
S2	Cobalt-Based, Heat-Resistant Alloys	–	1000–1450	250–450	25–48	Haynes® 188, Stellite® 6,21,31
S3	Nickel-Based, Heat-Resistant Alloys	–	600–1700	160–450	<48	INCONEL® 690, INCONEL 625, Hastelloy®, NIMONIC® 75
S4	Titanium and Titanium Alloys	–	900–1600	300–400	33–48	Ti1, TiAl5Sn2, TiAl6V4, TiAl4Mo4Sn2
H1	Hardened Materials	–	–	–	44–48	GX260NiCr42, GX330NiCr42, GX300CrNiSi952, GX300CrMo153, Hardox® 400
H2	Hardened Materials	–	–	–	48–55	–
H3	Hardened Materials	–	–	–	56–60	–
H4	Hardened Materials	–	–	–	>60	–
C1	CFRP, CFRP/CFRP	–	–	–	–	–
C2	CFRP/Non-Ferrous	–	–	–	–	–
C3	CFRP/High Temp	–	–	–	–	–
C4	CFRP/Stainless Steel	–	–	–	–	–
C5	CFRP/Non-Ferrous/High-Temp	–	–	–	–	–

kennametal.com

NOTES

NOTES

NOVO™

Digitally access and leverage product data and knowledge to connect systems and processes throughout the entire manufacturing lifecycle.

VISIT **KENNAMETAL.COM**/NOVO AND DOWNLOAD TODAY.

KENNAMETAL®

kennametal.com

METALCUTTING SAFETY

IMPORTANT SAFETY INSTRUCTIONS

Read before using the tools in this catalogue!

Projectile and Fragmentation Hazards:

Modern metalcutting operations involve high spindle and cutter speeds and high temperatures and cutting forces. Hot metal chips may fly off the workpiece during metalcutting. Although cutting tools are designed and manufactured to withstand high cutting forces and temperatures, they can sometimes fragment, particularly if they are subjected to over-stress, severe impact, or other abuse.

To avoid injury:

- Always wear appropriate personal protective equipment, including safety goggles, when operating metalcutting machines or working nearby.
- Always make sure all machine guards are in place.

Breathing and Skin Contact Hazards:

Grinding carbide or other advanced cutting tool materials produces dust or mist containing metallic particles. Breathing this dust or mist — especially over an extended period — can cause temporary or permanent lung disease or make existing medical conditions worse. Contact with this dust or mist can irritate eyes, skin, and mucous membranes and may make existing skin conditions worse.

To avoid injury:

- Always wear breathing protection and safety goggles when grinding.
- Provide ventilation control and collect and properly dispose of dust, mist, or sludge from grinding.
- Avoid skin contact with dust or mist.

For more information, read the applicable Material Safety Data Sheet provided by Kennametal and consult General Industry Safety and Health Regulations, Part 1910, Title 29 of the Code of Federal Regulations.

These safety instructions are general guidelines. Many variables affect machining operations. It is impossible to cover every specific situation. The technical information included in this catalog and recommendations on machining practices may not apply to your particular operation. For more information, consult the Kennametal Metalcutting Safety booklet, available free from Kennametal at 724 539 5747 or fax 724 539 5439. For specific product safety and environmental questions, contact our Corporate Environmental Health and Safety Office at 724 539 5066 or fax 724 539 5372.

Kennametal, the stylised K, Beyond Evolution, GOdrill, HARVI, KCP15A, KCS10B, KenClamp, Kendex, Kenlever, Kenloc, KenTIP, K-Lock, KM, KOR 5, KOR 6, KSEM, KSEM PLUS, NOVO, Romicron, Stellite, Top Notch, and Y-Tech are trademarks of Kennametal, Inc. and are used as such herein. The absence of a product, service name, or logo from this list does not constitute a waiver of the Kennametal trademark or other intellectual property rights concerning that name or logo.

Android ™ is a trademark of Google Inc.
App Store ® is a registered trademark of Apple Inc., registered in the U.S. and other countries.
ATI A286 ™, VascoMax ®, etc. are trademarks of Allegheny Technologies, Inc.
Centralloy ® is a registered trademark of Schmidt + Clemens GmbH.
Daewoo ™ is a trademark owned and licensed by Daewoo International Corporation.
Discaloy ™ is a trademark of Westinghouse Electric Corporation.
DOOSAN ™ is a trademark owned and licensed by Doosan Corporation.
DUO-λOCK ® is a registered trademark and Duo-Lock™ is a trademark of Haimer GmbH.
Google Play ™ is a trademark of Google Inc.
HAAS ™ is a trademark owned and licensed by Haas Automation, Inc.
Hardox ® is a registered trademark of SSAB Technology AB Corporation.
Hastelloy ® and Haynes ® are registered trademarks of Haynes International, Inc. Corporation.
Hostalen ™ is a trademark of Hoechst GmbH Corporation.
HWACHEON ™ is a trademark owned and licensed by Hwacheon Machine Tool Co., Ltd.
INCONEL ® , NIMONIC ®, and Udimet are registered trademarks of Special Metals Corporation. INVAR ® is a registered trademark of Imphy Alloys Joint Stock Company.
Lexan ® is a registered trademark of Sabic Innovative Plastics IP B.V. Company.
Mazak ® are registered trademarks of Yamatomo Kosan Kabushiki Kaisha Corporation.
Nakamura-Tome ™ is a trademark of Nakamura-Tome Precision Industry Co., Ltd.
OKUMA ™ is a trademark owned and licensed by OKUMA Corporation.
SAFE-λOCK® is a registered trademark and Safe-Lock™ is a trademark of Haimer GmbH.
Weldon ® is a registered trademark of Weldon Tool Company.

©2020 Kennametal Inc. All rights reserved.

KENNAMETAL®

INNOVATIONS

WORLD HEADQUARTERS
Kennametal Inc.
525 William Penn Place I Suite 3300
Pittsburgh, PA 15219 USA
Tel: 1 800 446 7738
ftmill.service@kennametal.com

EUROPEAN HEADQUARTERS
Kennametal Europe GmbH
Rheingoldstrasse 50
CH 8212 Neuhausen am Rheinfall
Switzerland
Tel: +41 52 6750 100
neuhausen.info@kennametal.com

ASIA-PACIFIC HEADQUARTERS
Kennametal Singapore Pte. Ltd.
3A International Business Park
Unit #01-02/03/05, ICON@IBP
Singapore 609935
Tel: +65 6265 9222
k-sg.sales@kennametal.com

INDIA HEADQUARTERS
Kennametal India Limited
CIN: L27109KA1964PLC001546
8/9th Mile, Tumkur Road
Bangalore - 560 073
Tel: +91 080 22198444 or +91 080 43281444
bangalore.information@kennametal.com

KENNAMETAL®

kennametal.com

©2020 Kennametal Inc. I All rights reserved. I A-20-06200EN_me