



Leading Through Innovation

CARBIDE, HSS & HSS-E

REAMERS

REIBAHLEN

- Carbide NC Machine Reamers
HSS Hand Reamers, HSS-E Chucking Reamers
- Hartmetall NC Maschinenreibahlen
HSS-Handreibahlen, HSS-E Spannfutter-Reibahlen

CARBIDE
HSS
i-ONE DRILLS
i-DREAM DRILLS
DREAM DRILLS -PRO
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MOL
DREAM DRILLS for HIGH HARDENED STEELS
GENERAL CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
SUPER-GP DRILLS
STRAIGHT SHANK DRILLS
TAPER SHANK DRILLS
NC-SPOTTING DRILLS
CENTER DRILLS
SPADE DRILLS
REAMERS
COUNTER SINKS
COUNTER BORES
TECHNICAL DATA

SELECTION GUIDE



SERIES	K4101	K4111
HOLETYPE		
FLUTETYPE	Straight	LH Spiral
SIZE MIN	D2.0	D2.0
SIZE MAX	D20.0	D20.0
PAGE	A384	A385
SURFACE TREATMENT		
	Bright	

CARBIDE, HSS & HSS-E REAMERS

Carbide NC Machine Reamers
HSS Hand Reamers
HSS-E Chucking Reamers

Please visit global.yg1.com/mat for material search

⊙ : Excellent ○ : Good

Recommended cutting conditions : p.A405



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc		
P	1	Non-alloy steel	About 0.15% C Annealed	125		⊙	⊙
	2		About 0.45% C Annealed	190	13	⊙	⊙
	3		About 0.45% C Quenched & Tempered	250	25	⊙	⊙
	4		About 0.75% C Annealed	270	28	○	○
	5		About 0.75% C Quenched & Tempered	300	32	○	○
	6	Low alloy steel	Annealed	180	10	⊙	⊙
	7		Quenched & Tempered	275	29	⊙	⊙
	8		Quenched & Tempered	300	32	○	○
	9		Quenched & Tempered	350	38	○	○
	10		High alloyed steel, and tool steel	Annealed	200	15	○
	11		Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	○	○
	13		Martensitic Quenched & Tempered	240	23	○	○
	14	Austenitic	180	10	○	○	
K	15	Grey cast iron	Pearlitic / ferritic	180	10	⊙	⊙
	16		Pearlitic (Martensitic)	260	26	○	○
	17	Nodular cast iron	Ferritic	160	3	⊙	⊙
	18		Pearlitic	250	25	○	○
	19		Ferritic	130		⊙	⊙
	20		Pearlitic	230	21	○	○
N	21	Aluminum-wrought alloy	Not Curable	60		○	○
	22		Curable Hardened	100		○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○
	24		≤ 12% Si, Curable Hardened	90		○	○
	25		> 12% Si, Not Curable	130		○	○
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		○	○
	27		CuZn, CuSnZn (Brass)	90		○	○
	28		CuSn, lead-free copper and electrolytic copper	100		○	○
	29		Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic Rubber, Wood, etc.			
	30						
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15		
	32		Cured	280	30		
	33		Annealed	250	25		
	34		Ni or Co Based Cured	350	38		
	35	Cast	320	34			
	36	Titanium Alloys	Pure Titanium	400 Rm			
	37		Alpha + Beta Alloys Hardened	1050 Rm			
H	38	Hardened steel	Hardened	550	55		
	39		Hardened	630	60		
	40	Chilled Cast Iron	Cast	400	42		
	41		Hardened Cast Iron	Hardened	550	55	

K1143	K1153	K2101	K2111	K2121	K2102	K2112	K21B1
Straight	LH Spiral	Straight	LH Spiral	LH Spiral (Quick Spiral)	Straight	LH Spiral	LH Spiral
D2.0	D2.0	D2.0	D2.0	D4.0	D10.0	D10.0	D2.0
D60.0	D60.0	D20.0	D20.0	D20.0	D50.0	D50.0	D20.0
A386	A388	A390	A392	A394	A395	A397	A399
SURFACE TREATMENT							
Bright							



○	○	⊙	⊙	○	⊙	⊙	⊙	1
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CARBIDE
HSS
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TECHNICAL DATA



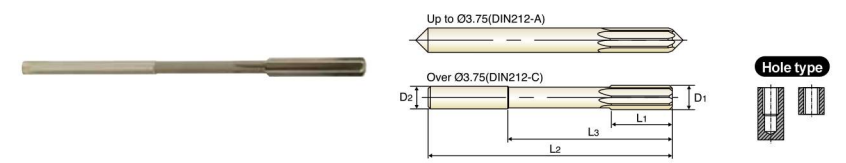
K2101 SERIES

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTES

- HSS-E, MASCHINENREIBAHLE mit ZYLINDERSCHAFT - GERADEGENUTET
- ALÉS-OIRS HSS-E MACHINE DROIT - ENTRÉE DROITE
- ALESATORI IN HSS-E, ATTACCO CILINDRICO - ELICA DRITTA

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter Tolerances : h8
- ▶ Straight Flute / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Schneiden-Ø Tolerenzen : DIN 1420 für H7
- ▶ Schaft-Ø Toleranzen : h8
- ▶ Geradegenutet / Rechtsschneidend
- ▶ Anschnittwinkel - bis Ø3,75 mm : 15°
- über Ø3,75 mm : 45°



HSS-E DIN 212 H7 15° 45° Bright P.A406

Plain Shank Page ER COLLET CHUCK D73-115

up to Ø3.75 over Ø3.75

Unit : mm

EDP No.	Reamer Diameter D1	Shank Diameter D2	Cutting Length L1	Neck Length L3	Overall Length L2	No. of Flute
K210100200	2.0	2	11	-	49	4
K210100220	2.2	2.2	12	-	53	4
K210100250	2.5	2.5	14	-	57	4
K210100260	2.6	2.6	14	-	57	4
K210100280	2.8	2.8	15	-	61	4
K210100300	3.0	3	15	-	61	6
K210100310	3.1	3.1	16	-	65	6
K210100320	3.2	3.2	16	-	65	6
K210100350	3.5	3.5	18	-	70	6
K210100360	3.6	3.6	18	-	70	6
K210100370	3.7	3.7	18	-	70	6
K210100400	4.0	4	19	42	75	6
K210100430	4.3	4.5	21	46	80	6
K210100450	4.5	4.5	21	46	80	6
K210100460	4.6	4.5	21	46	80	6
K210100500	5.0	5	23	51	86	6
K210100550	5.5	5.6	26	56	93	6
K210100560	5.6	5.6	26	56	93	6
K210100600	6.0	5.6	26	56	93	6
K210100650	6.5	6.3	28	62	101	6
K210100700	7.0	7.1	31	68	109	6
K210100720	7.2	7.1	31	68	109	6
K210100800	8.0	8	33	74	117	6
K210100830	8.3	8	33	74	117	6
K210100850	8.5	8	33	74	117	6
K210100900	9.0	9	36	80	125	6

▶NEXT PAGE ◎: Excellent ○: Good

ISO Material Description	P Non-alloy steel								M Low alloy steel				S High alloyed steel and tool steel				H Stainless steel			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VDI 3323 HRC	13	25	28	32	10	29	32	38	15	35	15	23	40	10	28	3	25	21		
HB	125	190	250	270	300	180	275	300	200	240	180	260	160	250	130	230				
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

A390 phone:+82-32-526-0909, www.yg1.kr, E-mail:yg1@yg1.kr YG YG-1 CO., LTD.



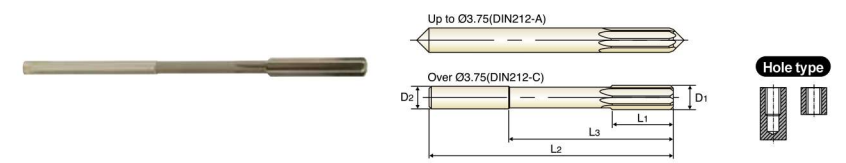
K2101 SERIES

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - STRAIGHT FLUTES

- HSS-E, MASCHINENREIBAHLE mit ZYLINDERSCHAFT - GERADEGENUTET
- ALÉS-OIRS HSS-E MACHINE DROIT - ENTRÉE DROITE
- ALESATORI IN HSS-E, ATTACCO CILINDRICO - ELICA DRITTA

- ▶ O.D. Tolerances : DIN 1420 for H7
- ▶ Shank Diameter Tolerances : h8
- ▶ Straight Flute / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Schneiden-Ø Tolerenzen : DIN 1420 für H7
- ▶ Schaft-Ø Toleranzen : h8
- ▶ Geradegenutet / Rechtsschneidend
- ▶ Anschnittwinkel - bis Ø3,75 mm : 15°
- über Ø3,75 mm : 45°



HSS-E DIN 212 H7 15° 45° Bright P.A406

Plain Shank Page ER COLLET CHUCK D73-115

up to Ø3.75 over Ø3.75

Unit : mm

EDP No.	Reamer Diameter D1	Shank Diameter D2	Cutting Length L1	Neck Length L3	Overall Length L2	No. of Flute
K210100950	9.5	9	36	80	125	6
K210101000	10.0	10	38	86	133	6
K210101050	10.5	10	38	86	133	6
K210101100	11.0	10	41	95	142	6
K210101200	12.0	10	44	104	151	6
K210101300	13.0	10	44	104	151	6
K210101400	14.0	12.5	47	108	160	8
K210101500	15.0	12.5	50	110	162	8
K210101600	16.0	12.5	52	118	170	8
K210101700	17.0	14	54	121	175	8
K210101800	18.0	14	56	128	182	8
K210101900	19.0	16	58	129	189	8
K210102000	20.0	16	60	135	195	8

◎: Excellent ○: Good

ISO Material Description	P Non-alloy steel								M Low alloy steel				S High alloyed steel and tool steel				H Stainless steel			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VDI 3323 HRC	13	25	28	32	10	29	32	38	15	35	15	23	40	10	28	3	25	21		
HB	125	190	250	270	300	180	275	300	200	240	180	260	160	250	130	230				
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

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YG REAMERS

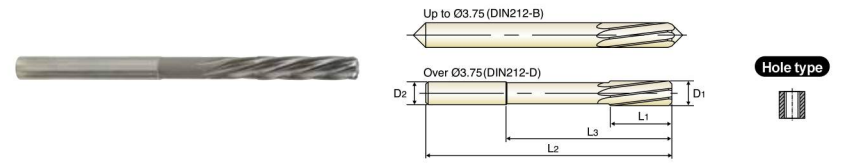
K2111 SERIES

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES

- HSS-E, MASCHINENREIBAHLE mit ZYLINDERSCHAFT - SPIRALGENUTET mit LINKSDRALL
- ALÉSUIRS HSS-E MACHINE DROIT - HÉLICE À GAUCHE
- ALESATORI IN HSS-E, ATTACCO CILINDRICO - ELICA SINISTRA

- ▶ O.D. Tolerances : DIN 1420 für H7
- ▶ Shank Diameter Tolerances : h8
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Schneiden-Ø Toleranzen : DIN 1420 für H7
- ▶ Schaft-Ø Toleranzen : h8
- ▶ Spiralgenutet mit Linksdrahl / Rechtsschneidend
- ▶ Anschnittwinkel - bis Ø3,75 mm : 15°
- über Ø3,75 mm : 45°



HSS-E DIN 212 H7 LH7° 15° 45° Bright p. A406

up to Ø3.75 over Ø3.75

Plain Shank ER COLLET CHUCK D73-115

Recommended Toolholder

Unit : mm

EDP No.	Reamer Diameter		Shank Diameter		Cutting Length L1	Neck Length L3	Overall Length L2	No. of Flute
	D1	D2	D2	D1				
K211100200	2.0	2	2	2	11	-	49	4
K211100220	2.2	2.2	2.2	2.2	12	-	53	4
K211100250	2.5	2.5	2.5	2.5	14	-	57	4
K211100260	2.6	2.6	2.6	2.6	14	-	57	4
K211100280	2.8	2.8	2.8	2.8	15	-	61	4
K211100300	3.0	3	3	3	15	-	61	6
K211100310	3.1	3.1	3.1	3.1	16	-	65	6
K211100320	3.2	3.2	3.2	3.2	16	-	65	6
K211100350	3.5	3.5	3.5	3.5	18	-	70	6
K211100360	3.6	3.6	3.6	3.6	18	-	70	6
K211100370	3.7	3.7	3.7	3.7	18	-	70	6
K211100400	4.0	4	4	4	19	42	75	6
K211100430	4.3	4.5	4.5	4.3	21	46	80	6
K211100450	4.5	4.5	4.5	4.5	21	46	80	6
K211100460	4.6	4.5	4.5	4.6	21	46	80	6
K211100500	5.0	5	5	5	23	51	86	6
K211100550	5.5	5.6	5.6	5.5	26	56	93	6
K211100560	5.6	5.6	5.6	5.6	26	56	93	6
K211100600	6.0	6.0	6.0	6.0	26	56	93	6
K211100650	6.5	6.3	6.3	6.5	28	62	101	6
K211100700	7.0	7.1	7.1	7.0	31	68	109	6
K211100720	7.2	7.1	7.1	7.2	31	68	109	6
K211100800	8.0	8	8	8	33	74	117	6
K211100830	8.3	8	8	8.3	33	74	117	6

▶NEXT PAGE

◎ : Excellent ○ : Good

ISO Material Description	P										M										F																							
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel					Stainless steel					Grey cast iron		Nodular cast iron		Malleable cast iron																			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HfC	125	13	25	28	32	10	29	32	38	15	35	15	23	40	10	28	3	25	21		200	240	180	180	280	160	280	130	230															
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

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YG REAMERS

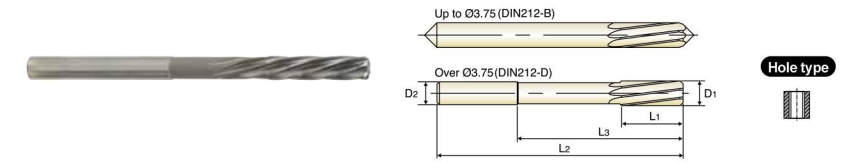
K2111 SERIES

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES

- HSS-E, MASCHINENREIBAHLE mit ZYLINDERSCHAFT - SPIRALGENUTET mit LINKSDRALL
- ALÉSUIRS HSS-E MACHINE DROIT - HÉLICE À GAUCHE
- ALESATORI IN HSS-E, ATTACCO CILINDRICO - ELICA SINISTRA

- ▶ O.D. Tolerances : DIN 1420 für H7
- ▶ Shank Diameter Tolerances : h8
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Schneiden-Ø Toleranzen : DIN 1420 für H7
- ▶ Schaft-Ø Toleranzen : h8
- ▶ Spiralgenutet mit Linksdrahl / Rechtsschneidend
- ▶ Anschnittwinkel - bis Ø3,75 mm : 15°
- über Ø3,75 mm : 45°



HSS-E DIN 212 H7 LH7° 15° 45° Bright p. A406

up to Ø3.75 over Ø3.75

Plain Shank ER COLLET CHUCK D73-115

Recommended Toolholder

Unit : mm

EDP No.	Reamer Diameter		Shank Diameter		Cutting Length L1	Neck Length L3	Overall Length L2	No. of Flute
	D1	D2	D2	D1				
K211100850	8.5	8	8	8	33	74	117	6
K211100900	9.0	9	9	9	36	80	125	6
K211100950	9.5	9	9	9	36	80	125	6
K211101000	10.0	10	10	10	38	86	133	6
K211101050	10.5	10	10	10	38	86	133	6
K211101100	11.0	10	10	11	41	95	142	6
K211101200	12.0	10	10	12	44	104	151	6
K211101300	13.0	10	10	13	44	104	151	6
K211101400	14.0	12.5	12.5	14	47	108	160	8
K211101500	15.0	12.5	12.5	15	50	110	162	8
K211101600	16.0	12.5	12.5	16	52	118	170	8
K211101700	17.0	14	14	17	54	121	175	8
K211101800	18.0	14	14	18	56	128	182	8
K211101900	19.0	16	16	19	58	129	189	8
K211102000	20.0	16	16	20	60	135	195	8

◎ : Excellent ○ : Good

ISO Material Description	P										M										F																							
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel					Stainless steel					Grey cast iron		Nodular cast iron		Malleable cast iron																			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41			
HfC	125	13	25	28	32	10	29	32	38	15	35	15	23	40	10	28	3	25	21		200	240	180	180	280	160	280	130	230															
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

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A393

CARBIDE
HSS
HSS-E
H7
LH45°
FORM E
Bright
P.A406
Plain Shank
ER COLLET CHUCK
D73-115
Unit: mm

HSS-E
DIN 212
H7
LH45°
FORM E
Bright
P.A406
Plain Shank
ER COLLET CHUCK
D73-115
Unit: mm

REAMERS
COUNTER SINKS
COUNTER BORES
TECHNICAL DATA

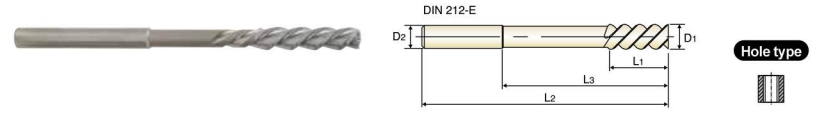
YG REAMERS

K2121 SERIES

HSS-E, STRAIGHT SHANK CHUCKING REAMERS - LH SPIRAL FLUTES (QUICK SPIRAL)

- HSS-E, MASCHINEN - SCHÄLREIBAHLE mit ZYLINDERSCHAFT - SPIRALGENUTET mit LINKSDRAL
- ALÉSOIRS HSS-E MACHINE DROIT - HÉLICE À GAUCHE (HÉLICE RAPIDE)
- ALESATORI IN HSS-E, ATTACCO CILINDRICO - ELICA RAPIDA, SINISTRA

- O.D. Tolerances : DIN 1420 for H7
- Shank Diameter Tolerances : h8
- Chamfer Angle - tapered
- LH High Spiral Flutes / Right Hand Cut
- Schneiden-Ø Tolerances : DIN 1420 for H7
- Schaft-Ø Tolerances : h8
- Anschnittwinkel - Konisch
- Spiralgenutet mit Linksdral / Rechtsschneidend



HSS-E DIN 212 H7 LH45° FORM E Bright P.A406 Plain Shank ER COLLET CHUCK D73-115

EDP No.	Reamer Diameter	Shank Diameter	Cutting Length	Neck Length	Overall Length	No. of Flute
	D1	D2	L1	L3	L2	
K212100400	4.0	4	19	42	75	3
K212100450	4.5	4.5	21	46	80	3
K212100500	5.0	5	23	51	86	3
K212100550	5.5	5.6	26	56	93	3
K212100600	6.0	5.6	26	56	93	3
K212100650	6.5	6.3	28	62	101	3
K212100700	7.0	7.1	31	68	109	3
K212100800	8.0	8	33	74	117	3
K212100850	8.5	8	33	74	117	3
K212100900	9.0	9	36	80	125	3
K212100950	9.5	9	36	80	125	3
K212101000	10.0	10	38	86	133	3
K212101100	11.0	10	41	95	142	3
K212101200	12.0	10	44	104	151	3
K212101300	13.0	10	44	104	151	3
K212101400	14.0	12.5	47	108	160	4
K212101500	15.0	12.5	50	110	162	4
K212101600	16.0	12.5	52	118	170	4
K212101700	17.0	14	54	121	175	4
K212101800	18.0	14	56	128	182	4
K212101900	19.0	16	58	129	189	4
K212102000	20.0	16	60	135	195	4

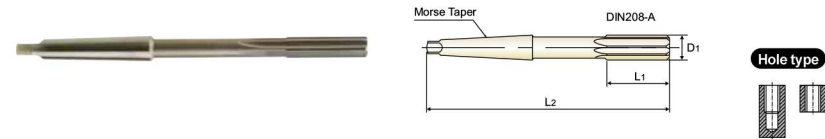
YG REAMERS

K2102 SERIES

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - STRAIGHT FLUTES

- HSS-E, MASCHINENREIBAHLE mit MK - GERADEGENUTET
- ALÉSOIRS HSS-E MACHINE QUEUE CONIQUE - ENTRÉE DROITE
- ALESATORI IN HSS-E, ATTACCO CONICO - TAGLIANTI DRITTI

- O.D. Tolerances : DIN 1420 for H7
- Straight Flute / Right Hand Cut
- Chamfer Angle : 45°
- Schneiden-Ø Tolerances : DIN 1420 for H7
- Geradegenutet / Rechtsschneidend
- Anschnittwinkel : 45°



HSS-E DIN 208 H7 45° Bright P.A406 Plain Shank ER COLLET CHUCK D73-115

EDP No.	Reamer Diameter	No. of Morse Taper	Cutting Length	Overall Length	No. of Flute
	D1		L1	L2	
K210201000	10.0	1	38	168	6
K210201100	11.0	1	41	175	6
K210201200	12.0	1	44	182	6
K210201300	13.0	1	44	182	6
K210201400	14.0	1	47	189	8
K210201500	15.0	2	50	204	8
K210201600	16.0	2	52	210	8
K210201700	17.0	2	54	214	8
K210201800	18.0	2	56	219	8
K210201900	19.0	2	58	223	8
K210202000	20.0	2	60	228	8
K210202100	21.0	2	62	232	8
K210202200	22.0	2	64	237	8
K210202300	23.0	2	66	241	8
K210202400	24.0	3	68	268	8
K210202500	25.0	3	68	268	8
K210202600	26.0	3	70	273	8
K210202700	27.0	3	71	277	10
K210202800	28.0	3	71	277	10
K210202900	29.0	3	73	281	10
K210203000	30.0	3	73	281	10
K210203100	31.0	3	75	285	10
K210203200	32.0	4	77	317	10
K210203400	34.0	4	78	321	10
K210203500	35.0	4	78	321	10
K210203600	36.0	4	79	325	10

▶NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M								F																											
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel				Stainless steel				Grey cast iron				Nodular cast iron				Malleable cast iron																			
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41					
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41					
HRC	125	190	250	270	300	180	275	300	350	200	325	200	240	180	160	260	160	250	130	230																										
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

◎ : Excellent ○ : Good

ISO	P										M								F																														
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel				Stainless steel				Grey cast iron				Nodular cast iron				Malleable cast iron																						
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41								
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41								
HRC	125	190	250	270	300	180	275	300	350	200	325	200	240	180	160	260	160	250	130	230																													
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

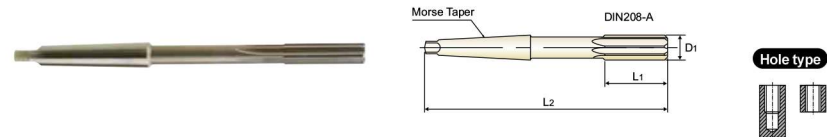


K2102 SERIES

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - STRAIGHT FLUTES

- HSS-E, MASCHINENREIBAHLE mit MK - GERADEGENUTET
ALÉSOIRS HSS-E MACHINE QUEUE CONIQUE - ENTRÉE DROITE
ALESA TORI IN HSS-E, ATTACCO CONICO - TAGLIANTI DRITTI

- O.D. Tolerances : DIN 1420 for H7
Straight Flute / Right Hand Cut
Chamfer Angle : 45°
Schneiden-Ø Toleranzen : DIN 1420 für H7
Geradegenutet / Rechtsschneidend
Anschnittwinkel : 45°



HSS-E DIN 208 H7 45° Bright p.A406

Plain Shank ER COLLET CHUCK D73-115

Unit : mm

Table with 6 columns: EDP No., Reamer Diameter D1, No. of Morse Taper, Cutting Length L1, Overall Length L2, No. of Flute. Lists various reamer models and their specifications.

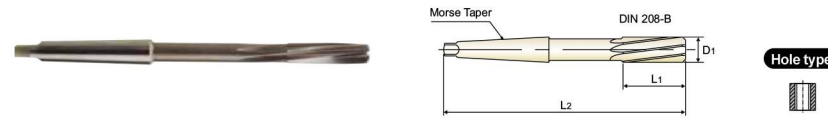


K2112 SERIES

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - LH SPIRAL FLUTES

- HSS-E, MASCHINENREIBAHLE mit MK - SPIRALGENUTET mit LINKSDRALL
ALÉSOIRS HSS-E MACHINE QUEUE CONIQUE - HÉLICE À GAUCHE
ALESA TORI IN HSS-E, ATTACCO CONICO - ELICA SINISTRA

- O.D. Tolerances : DIN 1420 for H7
LH Spiral Flutes / Right Hand Cut
Chamfer Angle : 45°
Schneiden-Ø Toleranzen : DIN 1420 für H7
Spiralgenutet mit Linksdraht / Rechtsschneidend
Anschnittwinkel : 45°



HSS-E DIN 208 H7 LH7 45° Bright p.A406

Plain Shank ER COLLET CHUCK D73-115

Unit : mm

Table with 6 columns: EDP No., Reamer Diameter D1, No. of Morse Taper, Cutting Length L1, Overall Length L2, No. of Flute. Lists various reamer models and their specifications.

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ISO material compatibility chart for reamers. Columns include Material Description, P (Non-alloy steel, Low alloy steel, High alloyed steel, Stainless steel, Grey cast iron, Nodular cast iron, Malleable cast iron), M, S, and H.

ISO material compatibility chart for reamers. Columns include Material Description, P (Non-alloy steel, Low alloy steel, High alloyed steel, Stainless steel, Grey cast iron, Nodular cast iron, Malleable cast iron), M, S, and H.

HSS-E, MORSE TAPER SHANK CHUCKING REAMERS - LH SPIRAL FLUTES

- HSS-E, MASCHINENREIBAHLE mit MK - SPIRALGENUTET mit LINKSDRALL
ALÉSOIRS HSS-E MACHINE QUEUE CONIQUE - HÉLICE À GAUCHE
ALESA TORI IN HSS-E, ATTACCO CONICO - ELICA SINISTRA

- O.D. Tolerances : DIN 1420 for H7
LH Spiral Flutes / Right Hand Cut
Chamfer Angle : 45°
Schneiden-Ø Toleranzen : DIN 1420 für H7
Spiralgenutet mit Linksdraht / Rechtsschneidend
Anschnittwinkel : 45°



HSS-E DIN 208 H7 LH7 45° Bright p.A406

Unit : mm

Table with 6 columns: EDP No., Reamer Diameter D1, No. of Morse Taper, Cutting Length L1, Overall Length L2, No. of Flute. Lists various reamer models and their specifications.

▶NEXT PAGE

ISO material compatibility chart for reamers. Columns include Material Description, P (Non-alloy steel, Low alloy steel, High alloyed steel, Stainless steel, Grey cast iron, Nodular cast iron, Malleable cast iron), M, S, and H.



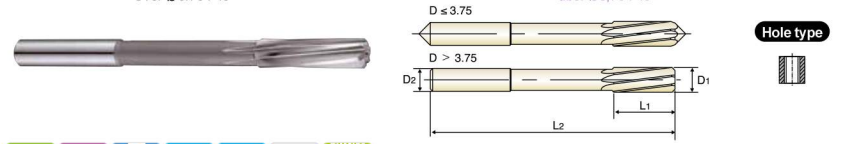
K21B1 SERIES

HSS-E, NC MACHINE REAMERS WITH WHOLE-NUMBER SHANK Ø

- HSS-E, NC-MASCHINENREIBAHLEN mit GERADZÄHLIGEN SCHAFT Ø
- ALÉSOIRS HSS-E MACHINE CN AVEC DIFFÉRENTES TOLÉRANCES DE QUEUE
- ALESATORI A MACCHINA IN HSS-E CON GAMMA Ø NOMINALI

- O.D. Tolerances: Whole-number Ø and 1/10 size: DIN 1420 for H7
1/10 size: from Ø2.01 to Ø5.03: +0.004/-0.000mm
from Ø5.97 to Ø12.03: +0.005/-0.000mm
- Shank Diameter Tolerances: h6
- LH Spiral Flutes / Right Hand Cut
- Chamfer Angle - Up to Ø3.75: 15°
- Over Ø3.75: 45°

- Ø Toleranzen: ganzzahlige Ø und 1/10 Größen: DIN 1420 für H7
1/100 Größen: ab Ø2,01 bis Ø5,03: +0,004/-0,000mm
von Ø5,97 bis Ø12,03: +0,005/-0,000mm
- Schaft-Durchmesser-Toleranzen: h6
- linksspiralig/ rechtsschneidend
- Answitnwinkel - bis Ø3,75: 15°
- über Ø3,75: 45°



HSS-E H7 LH7 15° 45° Bright P.A406
Unit: mm

Plain Shank Page
ER COLLET CHUCK D73-115

EDP No.	Reamer Diameter		Shank Diameter		Flute Length		Overall Length	
	D1	D2	D2	D2	L1	L2	L2	L2
K21B100302	3.02	4	4	16	65			
K21B100303	3.03	4	4	16	65			
K21B100310	3.1	4	4	16	65			
K21B100320	3.2	4	4	16	65			
K21B100330	3.3	4	4	16	65			
K21B100340	3.4	4	4	18	70			
K21B100350	3.5	4	4	18	70			
K21B100360	3.6	4	4	18	70			
K21B100370	3.7	4	4	18	70			
K21B100380	3.8	4	4	19	75			
K21B100390	3.9	4	4	19	75			
K21B100397	3.97	4	4	19	75			
K21B100398	3.98	4	4	19	75			
K21B100399	3.99	4	4	19	75			
K21B100400	4.0	4	4	19	75			
K21B100401	4.01	4	4	19	75			
K21B100402	4.02	4	4	19	75			
K21B100403	4.03	4	4	19	75			
K21B100410	4.1	4	4	19	75			
K21B100420	4.2	4	4	19	75			
K21B100430	4.3	5	21	80	80			
K21B100440	4.4	5	21	80	80			
K21B100450	4.5	5	21	80	80			
K21B100460	4.6	5	21	80	80			

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ISO Material Description	P				M				I																									
	Non-alloy steel				Low alloy steel				High alloyed steel and tool steel				Stainless steel				Grey cast iron				Nodular cast iron				Malleable cast iron									
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20														
HRC	13	25	28	32	10	29	32	38	15	35	15	23	10	10	29	3	25	21																
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	260	160	250	130	230															
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

A400 phone:+82-32-526-0909, www.yg1.kr, E-mail:yg1@yg1.kr YG YG-1 CO., LTD.



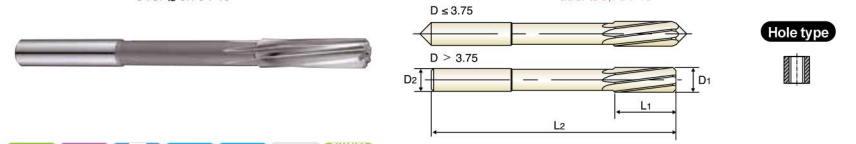
K21B1 SERIES

HSS-E, NC MACHINE REAMERS WITH WHOLE-NUMBER SHANK Ø

- HSS-E, NC-MASCHINENREIBAHLEN mit GERADZÄHLIGEN SCHAFT Ø
- ALÉSOIRS HSS-E MACHINE CN AVEC DIFFÉRENTES TOLÉRANCES DE QUEUE
- ALESATORI A MACCHINA IN HSS-E CON GAMMA Ø NOMINALI

- O.D. Tolerances: Whole-number Ø and 1/10 size: DIN 1420 for H7
1/10 size: from Ø2.01 to Ø5.03: +0.004/-0.000mm
from Ø5.97 to Ø12.03: +0.005/-0.000mm
- Shank Diameter Tolerances: h6
- LH Spiral Flutes / Right Hand Cut
- Chamfer Angle - Up to Ø3.75: 15°
- Over Ø3.75: 45°

- Ø Toleranzen: ganzzahlige Ø und 1/10 Größen: DIN 1420 für H7
1/100 Größen: ab Ø2,01 bis Ø5,03: +0,004/-0,000mm
von Ø5,97 bis Ø12,03: +0,005/-0,000mm
- Schaft-Durchmesser-Toleranzen: h6
- linksspiralig/ rechtsschneidend
- Answitnwinkel - bis Ø3,75: 15°
- über Ø3,75: 45°



HSS-E H7 LH7 15° 45° Bright P.A406
Unit: mm

Plain Shank Page
ER COLLET CHUCK D73-115

EDP No.	Reamer Diameter		Shank Diameter		Flute Length		Overall Length	
	D1	D2	D2	D2	L1	L2	L2	L2
K21B100470	4.7	5	5	21	80			
K21B100480	4.8	5	5	23	86			
K21B100490	4.9	5	5	23	86			
K21B100497	4.97	5	5	23	86			
K21B100498	4.98	5	5	23	86			
K21B100499	4.99	5	5	23	86			
K21B100500	5.0	5	5	23	86			
K21B100501	5.01	5	5	23	86			
K21B100502	5.02	5	5	23	86			
K21B100503	5.03	5	5	23	86			
K21B100510	5.1	5	5	23	86			
K21B100520	5.2	5	5	23	86			
K21B100530	5.3	5	5	23	86			
K21B100540	5.4	6	6	26	93			
K21B100550	5.5	6	6	26	93			
K21B100560	5.6	6	6	26	93			
K21B100570	5.7	6	6	26	93			
K21B100580	5.8	6	6	26	93			
K21B100590	5.9	6	6	26	93			
K21B100597	5.97	6	6	26	93			
K21B100598	5.98	6	6	26	93			
K21B100599	5.99	6	6	26	93			
K21B100600	6.0	6	6	26	93			
K21B100601	6.01	6	6	28	101			

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ISO Material Description	P				M				I																									
	Non-alloy steel				Low alloy steel				High alloyed steel and tool steel				Stainless steel				Grey cast iron				Nodular cast iron				Malleable cast iron									
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20														
HRC	13	25	28	32	10	29	32	38	15	35	15	23	10	10	29	3	25	21																
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	260	160	250	130	230															
Recommended	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

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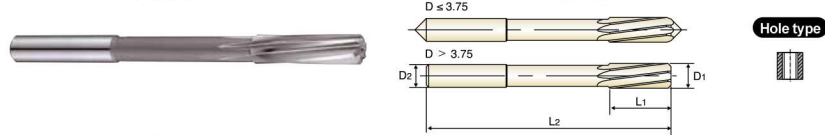
K21B1 SERIES

HSS-E, NC MACHINE REAMERS WITH WHOLE-NUMBER SHANK Ø

- ▶ HSS-E, NC-MASCHINENREIBAHLEN mit GERADZÄHLIGEN SCHAFT Ø
- ▶ ALÉSOIRS HSS-E MACHINE CN AVEC DIFFÉRENTES TOLÉRANCES DE QUEUE
- ▶ ALESATORI A MACCHINA IN HSS-E CON GAMMA Ø NOMINALI

- ▶ O.D. Tolerances
- Whole-number Ø and 1/10 size : DIN 1420 for H7
- 1/100 size : from Ø2.01 to Ø5.03 : +0.004/-0.000mm
- from Ø5.97 to Ø12.03 : +0.005/-0.000mm
- ▶ Shank Diameter Tolerances : h6
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Ø Toleranzen:
- ganzzahlige Ø und 1/10 Größen : DIN 1420 für H7
- 1/100 Größen : ab Ø2,01 bis Ø5,03 : +0,004/-0,000mm
- von Ø5,97 bis Ø12,03 : +0,005/-0,000mm
- ▶ Schaft-Durchmesser Toleranzen : h6
- ▶ linksspiralig/ rechtsscheidend
- ▶ Anschnittwinkel - bis Ø3,75 : 15°
- über Ø3,75 : 45°



HSS-E H7 LH7 15° 45° Bright p.A406 Plain Shank Page 4 ER COLLET CHUCK D73-115 Recommended Toolholder

EDP No.	Reamer Diameter D1	Shank Diameter D2	Flute Length		Overall Length
			L1	L2	
K21B100602	6.02	6	28	101	
K21B100603	6.03	6	28	101	
K21B100610	6.1	6	28	101	
K21B100620	6.2	6	28	101	
K21B100630	6.3	6	28	101	
K21B100640	6.4	6	28	101	
K21B100650	6.5	6	28	101	
K21B100660	6.6	6	28	101	
K21B100670	6.7	6	28	101	
K21B100680	6.8	8	31	109	
K21B100690	6.9	8	31	109	
K21B100700	7.0	8	31	109	
K21B100710	7.1	8	31	109	
K21B100720	7.2	8	31	109	
K21B100730	7.3	8	31	109	
K21B100740	7.4	8	31	109	
K21B100750	7.5	8	31	109	
K21B100760	7.6	8	33	117	
K21B100770	7.7	8	33	117	
K21B100780	7.8	8	33	117	
K21B100790	7.9	8	33	117	
K21B100797	7.97	8	33	117	
K21B100798	7.98	8	33	117	
K21B100799	7.99	8	33	117	

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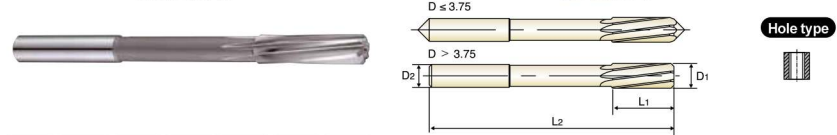
K21B1 SERIES

HSS-E, NC MACHINE REAMERS WITH WHOLE-NUMBER SHANK Ø

- ▶ HSS-E, NC-MASCHINENREIBAHLEN mit GERADZÄHLIGEN SCHAFT Ø
- ▶ ALÉSOIRS HSS-E MACHINE CN AVEC DIFFÉRENTES TOLÉRANCES DE QUEUE
- ▶ ALESATORI A MACCHINA IN HSS-E CON GAMMA Ø NOMINALI

- ▶ O.D. Tolerances
- Whole-number Ø and 1/10 size : DIN 1420 for H7
- 1/100 size : from Ø2.01 to Ø5.03 : +0.004/-0.000mm
- from Ø5.97 to Ø12.03 : +0.005/-0.000mm
- ▶ Shank Diameter Tolerances : h6
- ▶ LH Spiral Flutes / Right Hand Cut
- ▶ Chamfer Angle - Up to Ø3.75 : 15°
- Over Ø3.75 : 45°

- ▶ Ø Toleranzen:
- ganzzahlige Ø und 1/10 Größen : DIN 1420 für H7
- 1/100 Größen : ab Ø2,01 bis Ø5,03 : +0,004/-0,000mm
- von Ø5,97 bis Ø12,03 : +0,005/-0,000mm
- ▶ Schaft-Durchmesser Toleranzen : h6
- ▶ linksspiralig/ rechtsscheidend
- ▶ Anschnittwinkel - bis Ø3,75 : 15°
- über Ø3,75 : 45°



HSS-E H7 LH7 15° 45° Bright p.A406 Plain Shank Page 4 ER COLLET CHUCK D73-115 Recommended Toolholder

EDP No.	Reamer Diameter D1	Shank Diameter D2	Flute Length		Overall Length
			L1	L2	
K21B100800	8.0	8	33	117	
K21B100801	8.01	8	33	117	
K21B100802	8.02	8	33	117	
K21B100803	8.03	8	33	117	
K21B100810	8.1	8	33	117	
K21B100820	8.2	8	33	117	
K21B100830	8.3	8	33	117	
K21B100840	8.4	8	33	117	
K21B100850	8.5	8	33	117	
K21B100860	8.6	10	36	125	
K21B100870	8.7	10	36	125	
K21B100880	8.8	10	36	125	
K21B100890	8.9	10	36	125	
K21B100900	9.0	10	36	125	
K21B100901	9.01	10	36	125	
K21B100902	9.02	10	36	125	
K21B100903	9.03	10	36	125	
K21B100910	9.1	10	36	125	
K21B100920	9.2	10	36	125	
K21B100930	9.3	10	36	125	
K21B100940	9.4	10	36	125	
K21B100950	9.5	10	36	125	
K21B100960	9.6	10	38	133	
K21B100970	9.7	10	38	133	

▶NEXT PAGE

◎: Excellent ○: Good

ISO Material Description	P										M																														
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel					Stainless steel					Grey cast iron					Nodular cast iron					Malleable cast iron										
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	280	160	250	130	230																					
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

◎: Excellent ○: Good

ISO Material Description	P										M																														
	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel					Stainless steel					Grey cast iron					Nodular cast iron					Malleable cast iron										
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	280	160	250	130	230																					
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

CARBIDE

HSS



RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

K2101, K2111, K21B1, K2102, K2112 SERIES

**HSS-E, STRAIGHT & LH SPIRAL FLUTE CHUCKING REAMERS
HSS-E, NC MACHINE REAMERS**

RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc	Feed																
				2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	45.0	50.0	
P	1, 2, 3, 4, 6, 7	Non-alloy steel	14	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.14	0.14-0.17	0.17-0.20	0.20-0.23	0.23-0.26	0.26-0.29	0.29-0.32	0.32-0.35	0.35-0.38	0.38-0.41	0.41-0.44	0.44-0.47	0.47-0.50	
			10	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.14	0.14-0.17	0.17-0.20	0.20-0.23	0.23-0.26	0.26-0.29	0.29-0.32	0.32-0.35	0.35-0.38	0.38-0.41	0.41-0.44	0.44-0.47	0.47-0.50	
			8	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
			12	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
			8	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
			6	0.03-0.04	0.04-0.05	0.05-0.06	0.06-0.07	0.07-0.08	0.08-0.10	0.10-0.12	0.12-0.14	0.14-0.16	0.16-0.18	0.18-0.20	0.20-0.22	0.22-0.24	0.24-0.26	0.26-0.28	0.28-0.30	
	M	12, 13	Stainless steel	6	0.03-0.04	0.04-0.05	0.05-0.06	0.06-0.07	0.07-0.08	0.08-0.10	0.10-0.12	0.12-0.14	0.14-0.16	0.16-0.18	0.18-0.20	0.20-0.22	0.22-0.24	0.24-0.26	0.26-0.28	0.28-0.30
				5	0.03-0.04	0.04-0.05	0.05-0.06	0.06-0.07	0.07-0.08	0.08-0.10	0.10-0.12	0.12-0.14	0.14-0.16	0.16-0.18	0.18-0.20	0.20-0.22	0.22-0.24	0.24-0.26	0.26-0.28	0.28-0.30
		14	0.03-0.04	0.04-0.05	0.05-0.06	0.06-0.07	0.07-0.08	0.08-0.10	0.10-0.12	0.12-0.14	0.14-0.16	0.16-0.18	0.18-0.20	0.20-0.22	0.22-0.24	0.24-0.26	0.26-0.28	0.28-0.30		
		K	15, 16	Grey cast iron	14	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.14	0.14-0.17	0.17-0.20	0.20-0.23	0.23-0.26	0.26-0.29	0.29-0.32	0.32-0.35	0.35-0.38	0.38-0.41	0.41-0.44	0.44-0.47
11	0.05-0.07				0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
17, 18	Nodular cast iron		12	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.14	0.14-0.17	0.17-0.20	0.20-0.23	0.23-0.26	0.26-0.29	0.29-0.32	0.32-0.35	0.35-0.38	0.38-0.41	0.41-0.44	0.44-0.47	0.47-0.50	
			10	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
19, 20	Malleable cast iron		12	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.14	0.14-0.17	0.17-0.20	0.20-0.23	0.23-0.26	0.26-0.29	0.29-0.32	0.32-0.35	0.35-0.38	0.38-0.41	0.41-0.44	0.44-0.47	0.47-0.50	
			10	0.05-0.07	0.07-0.09	0.09-0.11	0.11-0.13	0.13-0.15	0.15-0.17	0.17-0.19	0.19-0.21	0.21-0.23	0.23-0.25	0.25-0.27	0.27-0.29	0.29-0.31	0.31-0.34	0.34-0.37	0.37-0.40	
N	21, 22	Aluminum-wrought alloy	18	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
			18	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
	23, 24	Aluminum-cast, alloyed	18	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
			17	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
	26, 27	Copper and Copper Alloys (Bronze / Brass)	18	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
			16	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60	
	28	20	0.10-0.13	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.31	0.31-0.34	0.34-0.37	0.37-0.40	0.40-0.43	0.43-0.46	0.46-0.49	0.49-0.52	0.52-0.56	0.56-0.60		

K2121 SERIES

HSS-E, CHUCKING REAMERS - QUICK SPIRAL

ISO	VDI 3323	Material Description	Vc	Feed							
				2.0	4.0	8.0	10.0	12.0	14.0	16.0	20.0
P	1	Non-alloy steel	18	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.32	0.32-0.36	0.36-0.40
			16	0.13-0.16	0.16-0.19	0.19-0.22	0.22-0.25	0.25-0.28	0.28-0.32	0.32-0.36	0.36-0.40
	6	Low alloy steel	14	0.10-0.12	0.12-0.14	0.14-0.16	0.16-0.18	0.18-0.21	0.21-0.24	0.24-0.27	0.27-0.30
N	21	Aluminum-wrought alloy	20	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60
			20	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60
	23	Aluminum-cast, alloyed	20	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60
18			0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60	
N	26	Copper and Copper Alloys (Bronze / Brass)	19	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60
			18	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60
			20	0.15-0.20	0.20-0.25	0.25-0.30	0.30-0.36	0.36-0.42	0.42-0.48	0.48-0.54	0.54-0.60