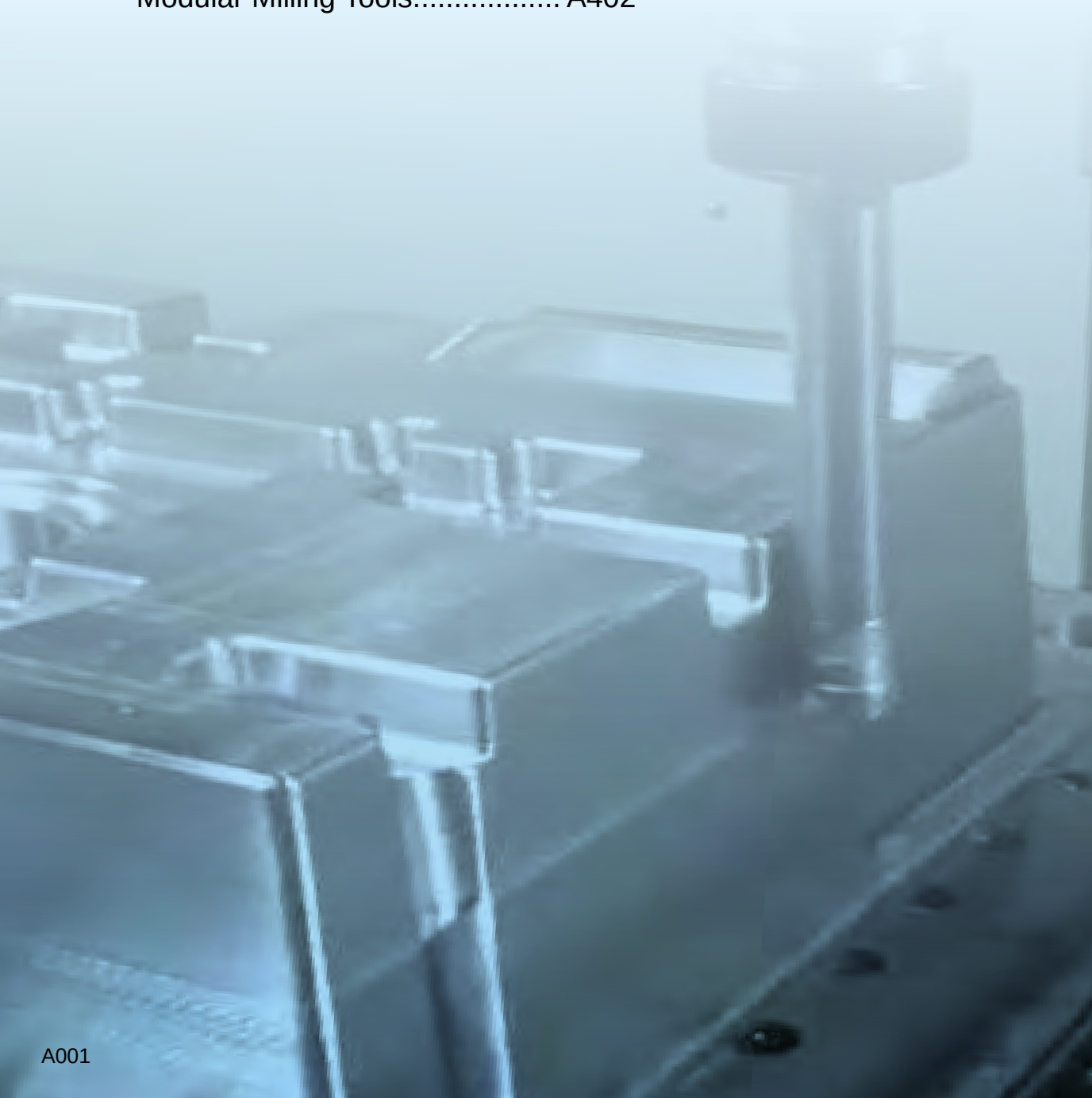
Milling



INDEX

Index

Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
H700 Series *for high feed milling (Hardened steel HRC 40~68)*													
	High Helix · Square · 6F	EHSSS	Ø6~Ø14	6	45°	SICO	●	○	●		○	●	A011
	High Helix · Square · 8F	EHSSS	Ø16~Ø20	8	45°	SICO	●	○	●		○	●	A011
	High Helix · Short Flute · Square · 4F	EHSUS	Ø1~Ø5	4	45°	SICO	●	○	●		○	●	A012
	High Helix · Short Flute · Square · 6F	EHSUS	Ø6~Ø12	6	45°	SICO	●	○	●		○	●	A012
	High Helix · Short Flute · Square · 8F	EHSUS	Ø16~Ø20	8	45°	SICO	●	○	●		○	●	A012
	Low Helix · Short Flute · Ball Nose · 2F	EHBUS	0.5R~8R	2	15°	SICO	●	○	●		○	●	A013
	High Feed · Short Flute · Corner Radius · 4F	EHCUK	Ø2~Ø12	4	0°	SICO	●	○	●		○	●	A014
	High Feed · Corner Radius · 4F	EHCUS	Ø1~Ø12	4	0°	SICO	●	○	●		○	●	A015
H680 Series *for high precision milling (Hardened steel HRC 40~68)*													
	High Precision · Square · 4F	EHSSF	Ø1~Ø12	4	45°	SICO-TH	●	○	●		○	●	A017
	High Precision · Long Shank · Square · 4F	EHSLF	Ø4~Ø16	4	45°	SICO-TH	●	○	●		○	●	A018
	High Precision · Ball Nose · 2F	EHBSF	0.5R~6R	2	30°	SICO-TH	●	○	●		○	●	A019
	High Precision · Long Shank · Ball Nose · 2F	EHBLF	2R~6R	2	30°	SICO-TH	●	○	●		○	●	A020
	High Precision · Short with Neck · Ball Nose · 2F	EHBUF	0.5R~6R	2	30°	SICO Pro	●	○	●		○	●	A021
	High Precision · Corner Radius · 4F	EHCSF	Ø1~Ø12	4	30°	SICO-TH	●	○	●		○	●	A022
	High Precision · Long Shank · Corner Radius · 4F	EHCLF	Ø4~Ø12	4	30°	SICO-TH	●	○	●		○	●	A023

Index

Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
H650 Series *for high speed general milling (Hardened steel HRC 40~68)*													
	High Helix · Square · 2F / 4F	EHSSH	Ø0.2~Ø20	4	45°	ARCO	●	○	●		○	●	A025
	High Helix · Long Shank · Square · 4F	EHSLH	Ø3~Ø20	4	45°	ARCO	●	○	●		○	●	A026
	Ball Nose · 2F	EHBSH	0.1R~8R	2	30°	ARCO	●	○	●		○	●	A027
	Long Shank · Ball Nose · 2F	EHBLH	1R~10R	2	30°	ARCO	●	○	●		○	●	A028
	Short Flute · Ball Nose · 2F	EHBUH	1R~8R	2	27°	SICO	●	○	●		○	●	A029
	Taper Neck · Ball Nose · 2F	EHBRT	0.5R~6R	2	30°	ARCO	●	○	●		○	●	A030
	Corner Radius · 4F	EHCSH	Ø1~Ø12	4	30°	ARCO	●	○	●		○	●	A031
	Long Shank · Corner Radius · 4F	EHCLH	Ø4~Ø12	4	30°	ARCO	●	○	●		○	●	A032
	Short Flute · Corner Radius · 4F	EHCUH	Ø3~Ø12	4	30°	SICO	●	○	●		○	●	A033
	Double Corner High Feed EndMill · 4F / 6F	EHWSA	Ø3.175~16	6	38°	SICO	●	○	●		○	●	A034
	Long Neck · Square · 2F	EHSRC	Ø0.2~Ø12	2	30°	ARCO	●	○	●		○	●	A035
	Long Neck · Square · 4F	EHSRC	Ø1~Ø12	4	30°	ARCO	●	○	●		○	●	A041
	Long Neck · Ball Nose · 2F	EHBRC	0.15R~6R	2	30°	ARCO	●	○	●		○	●	A044
	Long Neck · Corner Radius · 2F	EHCRC	Ø1~Ø12	2	30°	ARCO	●	○	●		○	●	A049
	Long Neck · Corner Radius · 4F	EHCRC	Ø2~Ø12	4	30°	ARCO	●	○	●		○	●	A056
H600 Series *for general milling (Hardened steel HRC 40~68)*													
	Square · 2F	EHSSC	Ø1~Ø20	2	30°	SICO	●	○	●		○	●	A062
	Square · 4F	EHSSC	Ø3~Ø25	4	30°	SICO	●	○	●		○	●	A063
	High Helix · Square · 4F	EHSSD	Ø1~Ø16	4	45°	SICO	●	○	●		○	●	A064
	Short Flute · Square · 4F	EHSHC	Ø1~Ø6	4	30°	SICO	●	○	●		○	●	A065
	Long Shank · Square · 4F	EHSLC	Ø4~Ø16	4	30°	SICO	●	○	●		○	●	A066
	Long Flute · Square · 4F	EHSCC	Ø3~Ø20	4	35°	SICO	●	○	●		○	●	A067
	Extra Long Flute · Square · 4F	EHSCH	Ø6~Ø12	4	45°	SICO	●	○	●		○	●	A068
	Ball Nose · 2F	EHBSC	1.5R~10R	2	30°	SICO	●	○	●		○	●	A069
	Long Shank · Ball Nose · 2F	EHBLC	2R~10R	2	30°	SICO	●	○	●		○	●	A070
	Spherical Ball Nose · 2F	EHRRC	1R~3R	2	15°	SICO	●	○	●		○	●	A071
	Corner Radius · 4F	EHCSC	Ø1~Ø16	4	30°	SICO	●	○	●		○	●	A072
	Long Shank · Corner Radius · 4F	EHCLC	Ø4~Ø16	4	30°	SICO	●	○	●		○	●	A073

Index

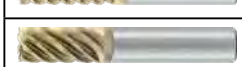
G550 Series for general milling (Hardened steel & Steel HRC 25~55)

Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
	Square · 2F	EPSSC	Ø0.2~Ø25	2	30°	UNICO	●	●	●			○	A075
	Square · 3F	EPSSC	Ø1~Ø25	3	30°	UNICO	●	●	●			○	A076
	Square · 4F	EPSSC	Ø1~Ø25	4	30°	UNICO	●	●	●			○	A077
	High Helix · Square · 4F	EPSSH	Ø1~Ø16	4	45°	UNICO	●	●	●			○	A078
	Long Flute · Square · 4F	EPSCC	Ø3~Ø25	4	35°	UNICO	●	●	●			○	A079
	High Helix · Square · 6F	EPSSH	Ø6~Ø12	6	45°	UNICO	●	●	●			○	A080
	High Helix · Long Flute · Square · 6F	EPSCH	Ø6~Ø16	6	45°	UNICO	●	●	●			○	A081
	Long Shank · Square · 2F	EPSLC	Ø4~Ø20	2	30°	UNICO	●	●	●			○	A082
	Long Shank · Square · 4F	EPSLC	Ø3~Ø20	4	30°	UNICO	●	●	●			○	A083
	Roughing · Square · 4F	EPSRR	Ø6~Ø20	4	30°	UNICO	●	●	●			○	A084
	Stub Length · Square · 2F	EPSHC	Ø0.2~Ø6	2	30°	UNICO	●	●	●		○	○	A085
	Stub Length · Square · 4F	EPSHC	Ø1~Ø6	4	30°	UNICO	●	●	●		○	○	A086
	Taper · Square · 2F	EPSST	Ø0.15~10	2	35°	UNICO	●	●	●			○	A087
	Ball Nose · 2F	EPBSC	0.1R~10R	2	30°	UNICO	●	●	●			○	A090
	Ball Nose · 4F	EPBSC	1R~10R	4	30°	UNICO	●	●	●			○	A091
	Long Shank · Ball Nose · 2F	EPBLC	1.5R~10R	2	30°	UNICO	●	●	●			○	A092
	Long Shank · Ball Nose · 4F	EPBLC	2R~8R	4	30°	UNICO	●	●	●			○	A093
	Stub Length · Ball Nose · 2F	EPBHC	0.1R~3R	2	30°	UNICO	●	●	●		○	○	A094
	Taper · Ball Nose · 2F	EPBST	1R~3R	2	30°	UNICO	●	●	●			○	A095
	Taper Neck · Ball Nose · 2F	EPBRT	0.5R~2R	2	30°	UNICO	●	●	●			○	A096
	Corner Radius · 2F	EPCSC	Ø1~Ø12	2	30°	UNICO	●	●	●			○	A097
	Corner Radius · 4F	EPCSC	Ø1~Ø16	4	30°	UNICO	●	●	●			○	A098
	High Helix · Corner Radius · 4F	EPCSH	Ø3~Ø12	4	45°	UNICO	●	●	●			○	A099
	Long Shank · Corner Radius · 4F	EPCLC	Ø4~Ø16	4	30°	UNICO	●	●	●			○	A100
	Stub Length · Corner Radius · 2F	EPCHC	Ø1~Ø6	2	30°	UNICO	●	●	●		○	○	A101
	Stub Length · Corner Radius · 4F	EPCHC	Ø2~Ø6	4	30°	UNICO	●	●	●		○	○	A102
	Taper Neck · Corner Radius · 2F	EPCRT	Ø1~Ø6	2	30°	UNICO	●	●	●			○	A103
	Inner Radius · 2F / 4F	EPISA	Ø2.9~Ø3.9	2	0°	UNICO	●	●	●			○	A105

Index

Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
G550 Series *for general milling (Hardened steel & Steel HRC 25~55)*													
	Chamfering Type Endmill · 4F / 5F /6F	EPFSA	Ø4~Ø12	4	0°	UNICO	●	●	●	○	●	●	A106
	Drill Mills · 2F	EPFSC	Ø3~Ø12	2	30°	UNICO	●	●	●	○			A107
	Long Neck · Square · 2F	EPSRC	Ø0.2~Ø12	2	30°	UNICO	●	●	●			○	A108
	Long Neck · Square · 4F	EPSRC	Ø1~Ø12	4	30°	UNICO	●	●	●			○	A114
	Long Neck · Ball Nose · 2F	EPBRC	0.15R~6R	2	30°	UNICO	●	●	●			○	A117
	Long Neck · Corner Radius · 2F	EPCRC	Ø1~Ø12	2	30°	UNICO	●	●	●			○	A122
	Long Neck · Corner Radius · 4F	EPCRC	Ø2~Ø12	4	30°	UNICO	●	●	●			○	A129
V470 Series *for high performance milling (Hardened steel & Steel HRC 25~55)*													
	Variable Spacing · Square · 4F	EPSSV	Ø3~Ø16	4	38°	UNICO	●	○	●				A135
	Variable Spacing · Square · Inch · 4F	EPS_V, EPC_V, EPF_V	Ø1/8"~1"	4	38°	UNICO	●	○	●				A136
G450 Series *for semi-finishing (Hardened steel & Steel HRC 25~55)*													
	Square · 2F	EPSSA	Ø1~Ø25	2	35°	UNICO	●	●	●				A140
	Square · 4F	EPSSA	Ø1~Ø25	4	35°	UNICO	●	●	●				A141
V530 Series *for Stainless Steel & High Temperature Alloy*													
	Variable Helix 30° ~ 32° · Square · 4F	ESSSVA	Ø6~Ø16	4	30~32°	SICO-TH	●	●	●		●	○	A144
	Variable Helix 35° ~ 38° · Square · 4F	ESSSVB	Ø4~Ø20	4	35~38°	SICO-TH	●	●	●		●	○	A145
	Variable Helix 38° ~ 41° · Square · 4F	ESSSVC	Ø4~Ø12	4	38~41°	SICO-TH	●	●	●		●	○	A146
	Variable Helix 38° ~ 42° · Square · 5F	ESSSVC	Ø4~Ø16	5	38~42°	SICO-TH	●	●	●		●	○	A147
	Variable Helix 43° ~ 46° · Square · 4F	ESSSVD	Ø4~Ø12	4	43~46°	SICO-TH	●	●	●		●	○	A148

Index

Appearance	Series	Code No.	Ø Range	Num. of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
V520 Series *for Stainless Steel & High Temperature Alloy*													
	Variable Spacing · Square · 4F	EMSSV	Ø4~Ø16	4	38°	SICO	●	●	●		○	○	A150
	Variable Spacing · High Helix · Square · 4F	EMSHV	Ø8~Ø16	4	52°	SICO	●	●	●		●	○	A151
	Variable Spacing · Roughing & Finishing · Square · 4F	EMSRV	Ø6~Ø16	4	38°	SICO	●	●	●		○	○	A152
	Variable Spacing · Square · 5F	EMSSV	Ø6~Ø16	5	38°	SICO	●	●	●		●	●	A153
	Variable Spacing · Long Flute · Square · 5F	EMSCV	Ø6~Ø16	5	43°	SICO	●	●	●		●	●	A154
	Variable Spacing · Square · 7F	EMSSV	Ø10~Ø16	7	43°	SICO	●	●	●		●	●	A155
	Variable Spacing · Long Flute · Square · 7F	EMSCV	Ø10~Ø16	7	43°	SICO	●	●	●		●	●	A156
	Variable Spacing · Square · Inch · 4F	EMS_V, EMC_V, EMF_V	Ø1/8"~1"	4	38°	SICO	●	●	●		○	○	A157
	Variable Spacing · Square · Inch · 5F	EMC_V	Ø1/4"~5/8"	5	38°	SICO	●	●	●		●	●	A159
	Variable Spacing · Square · Inch · 7F	EMC_V	Ø1/4"~5/8"	7	43°	SICO	●	●	●		●	●	A160
	Variable Spacing · Ball Nose · Inch · 4F	EMB_V	Ø1/4"~5/8"	4	38°	SICO	●	●	●		●	●	A161
M500 Series *for general milling (Stainless Steel & High Temperature Alloy)*													
	Square · 2F	ESSSA	Ø3~Ø16	2	35°	ARCO	●	●	●		●	○	A163
	Square · 4F	ESSSA	Ø1~Ø16	4	35°	ARCO	●	●	●		●	○	A164
	High Helix · U-Flute · Square · 4F	ESSSB	Ø1~Ø16	4	45°	ARCO	●	●	●		●	○	A165
	Wave Edge · Square · 3F	ESSSW	Ø6~Ø20	3	30°	ARCO	●	●	●		●	○	A166
	Wave Edge · Square · 4F	ESSSW	Ø6~Ø20	4	30°	ARCO	●	●	●		●	○	A167
	High Feed · Square · 4F	ESSSU	Ø3~Ø16	4	30°	ARCO	●	●	●		●	○	A168
	Toric · Square · 4F	ESCSU	Ø3~Ø16	4	40°	ARCO	●	●	●		●	○	A169
	Ball Nose · 2F	ESBSA	0.25R~8R	2	30°	ARCO	●	●	●		●	○	A170
	Ball Nose · 4F (For High Temperature Alloy)	ESBHS	3R~8R	4	30°	SICO	●	●	●		●	○	A171
	Corner Radius · 4F	ESCSA	Ø3~Ø12	4	30°	ARCO	●	●	●		●	○	A172
Hypex Series *for 5-axis machining (Stainless Steel & High Temperature Alloy)*													
	5-Axis Solid Endmills · 3F	ERTSA	Ø8~Ø10	3	20~30°	SICO	●	●			●	○	A174
	5-Axis Solid Endmills · 2F	ERTSA	Ø10	2	20~30°	SICO	●	●			●	○	A174
	5-Axis Solid Endmills · 3F	ERTSB	Ø4~Ø12	3	45°	SICO	●	●			●	○	A175
	5-Axis Solid Endmills · 3 / 4F	ERTSC	Ø0.2~Ø12	3	30°	SICO	●	●			●	○	A176

Index

ICONS Guide

Micro Grain	MG
Ultra Micro Grain	UMG
Ultra Micro Grain 0.4μm	UMG 0.4μm
Helix Angle	30°
Material Hardness	HRC 35
Unequal	Unequal
Variable Helix	Varix
UNICO Coated	UNICO
ARCO Coated	ARCO
SICO Coated	SICO
SICO-TH Coated	SICO-TH
DIA Coated	DIA
NDLC Coated	NDLC
Sharp Corner Type	
Flatland Type	
Chamfer Type	C
Corner Radius	R
Square Type 2F	2
Square Type 3F	3
Square Type 4F	4
Square Type 6F	6
Square Type 8F	8
Ball Nose 2F	2
Ball Nose 4F	4
Corner Radius 2F	2
Corner Radius 4F	4

H700 Series for high feed milling (Hardened steel HRC 40~68)

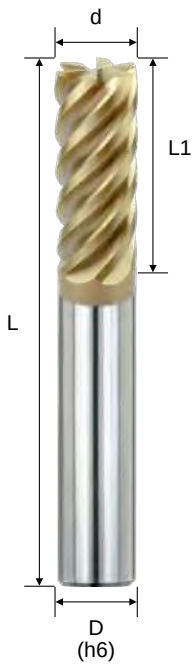
- Ultra grain carbide rods with better abrasion resistance.
- SICO coating with anti-high temperature & anti-oxidation.
- The tools with large core diameter has good rigidity.
- Negative rake angle design is suitable for machining hardened material.
- The special design of multiple flutes provide excellent surface finishing.
- We also provide NACO coating.

H700 - High Helix · Square · 6F / 8F

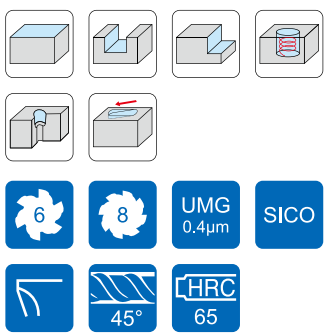
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Horsepower consumption will be decreased with greater shearing action.
- High Helix and 6 Flutes design gives a good finishing surface.
- The coating can change to Naco Blue is optional.

EHSSS

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSSS606000S	6	15	50	6	6
EHSSS608000S	8	20	60	8	6
EHSSS610000S	10	25	75	10	6
EHSSS612000S	12	30	75	12	6
EHSSS614000S	14	30	75	14	6
EHSSS816000S	16	40	100	16	8
EHSSS818000S	18	40	100	18	8
EHSSS820000S	20	45	100	20	8
EHSSS825000S	25	45	100	25	8



d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Cutting conditions : Table 001

* S is SICO Coating

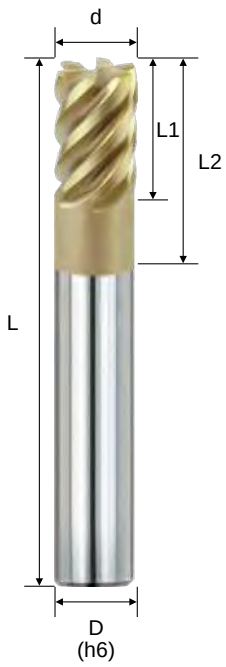
N is Naco Blue Coating

H700 - High Helix · Short Flute · Square · 4F / 6F / 8F

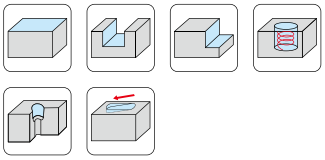
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Prevents clogging of the flutes.
- The coating can change to Naco Blue is optional.

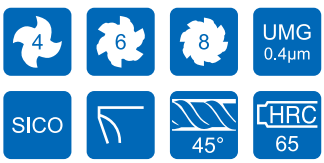
EHSUS

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSUS441000S	1	1.5	2.5	50	4	4
* EHSUS442000S	2	3.0	5.0	50	4	4
EHSUS403000S	3	4.5	7.5	50	6	4
EHSUS404000S	4	6.0	10.0	50	6	4
EHSUS405000S	5	7.5	12.5	50	6	4
EHSUS606000S	6	9.0	15.0	50	6	6
EHSUS608000S	8	12.0	20.0	60	8	6
EHSUS610000S	10	15.0	25.0	75	10	6
EHSUS612000S	12	18.0	30.0	75	12	6
EHSUS816000S	16	24.0	40.0	100	16	8
EHSUS820000S	20	30.0	50.0	100	20	8
* EHSSH441000N	1	3	-	50	4	4
* EHSSH441500N	1.5	4	-	50	4	4
* EHSSH442000N	2	5	-	50	4	4
* EHSSH442500N	2.5	6	-	50	4	4
* EHSSH443000N	3	8	-	50	4	4
* EHSSH444000N	4	10	-	50	4	4





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Cutting conditions：Table 002

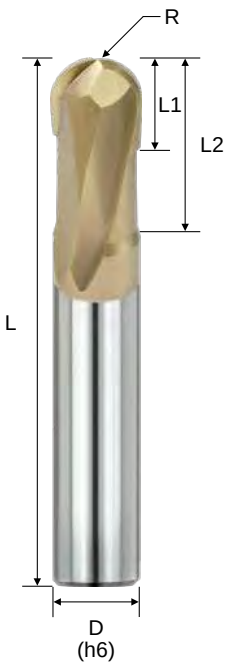
* S is SICO Coating
N is Naco Blue Coating

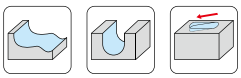
H700 - Low Helix · Short Flute · Ball Nose · 2F

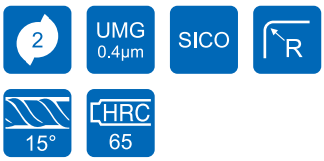
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Due to short cutting length it provides an excellent surface roughness of the work pieces.
- Low helix design is suitable for hardened steel cutting.
- The coating can change to Naco Blue is optional.

EHBUS

P	M	K	N	S	H
●	○	●		○	●







R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBUS241000S	0.50R	1.0	1.0	2	50	4	2
EHBUS241500S	0.75R	1.5	1.5	3	50	4	2
EHBUS202000S	1.00R	2.0	2.0	4	50	6	2
EHBUS203000S	1.50R	3.0	3.0	6	50	6	2
EHBUS204000S	2.00R	4.0	4.0	8	50	6	2
EHBUS205000S	2.50R	5.0	5.0	10	50	6	2
EHBUS206000S	3.00R	6.0	6.0	12	50	6	2
EHBUS208000S	4.00R	8.0	8.0	16	60	8	2
EHBUS210000S	5.00R	10.0	10.0	20	75	10	2
EHBUS212000S	6.00R	12.0	12.0	24	75	12	2
EHBUS216000S	8.00R	16.0	16.0	32	100	16	2

Cutting conditions：Table 003

* S is SICO Coating

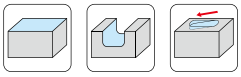
N is Naco Blue Coating

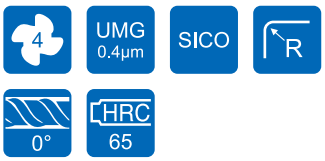
H700 - High Feed · Short Flute · Corner Radius · 4F

- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Cutting edges are very strong and wear resistant.
- For High speed and high feed cutting.

EHCUK

P	M	K	N	S	H
●	○	●		○	●





Order No.	Dia. (d)	RADIUS (R)	Flute Length (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCUK40200506S	2	0.5R	1.0	6	50	6	4
EHCUK40300508S	3	0.5R	1.5	8	50	6	4
EHCUK40400512S	4	0.5R	2.0	12	60	6	4
EHCUK40400516S	4	0.5R	2.0	16	60	6	4
EHCUK40401012S	4	1.0R	2.0	12	60	6	4
EHCUK40401016S	4	1.0R	2.0	16	60	6	4
EHCUK40600512S	6	0.5R	3.0	12	60	6	4
EHCUK40600515S	6	0.5R	3.0	15	60	6	4
EHCUK40601015S	6	1.0R	3.0	15	60	6	4
EHCUK40601515S	6	1.5R	3.0	15	60	6	4
EHCUK40800520S	8	0.5R	4.0	20	60	8	4
EHCUK40801020S	8	1.0R	4.0	20	60	8	4
EHCUK41000525S	10	0.5R	5.0	25	75	10	4
EHCUK41001025S	10	1.0R	5.0	25	75	10	4
EHCUK41201030S	12	1.0R	6.0	30	75	12	4
EHCUK41202030S	12	2.0R	6.0	30	75	12	4

Cutting conditions：Table 004

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

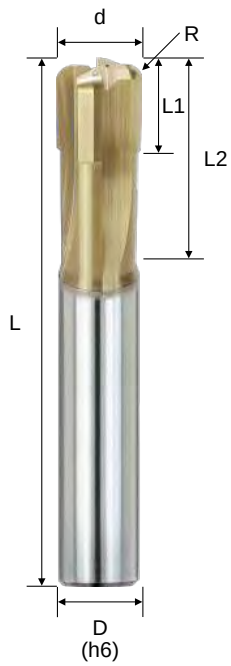
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

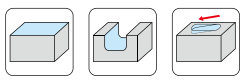
H700 - High Feed · Corner Radius · 4F

- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Non-Helix Design.
- Cutting edges are very strong and wear resistant.
- The coating can change to Naco Blue is optional.

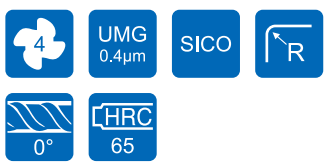
EHCUS

P	M	K	N	S	H
●	○	●		○	●





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCUS441002S	1	0.20R	1	2.5	50	4	4
EHCUS442002S	2	0.25R	2	6.5	50	4	4
EHCUS403005S	3	0.50R	3	7.5	50	6	4
EHCUS404005S	4	0.50R	4	10.0	50	6	4
EHCUS404010S	4	1.00R	4	10.0	50	6	4
EHCUS405010S	5	1.00R	5	12.5	50	6	4
EHCUS406010S	6	1.00R	6	15.0	50	6	4
EHCUS406015S	6	1.50R	6	15.0	50	6	4
EHCUS408010S	8	1.00R	8	20.0	60	8	4
EHCUS408015S	8	1.50R	8	20.0	60	8	4
EHCUS408020S	8	2.00R	8	20.0	60	8	4
EHCUS410010S	10	1.00R	10	25.0	75	10	4
EHCUS410020S	10	2.00R	10	25.0	75	10	4
EHCUS412010S	12	1.00R	12	30.0	75	12	4
EHCUS412020S	12	2.00R	12	30.0	75	12	4
EHCUS412030S	12	3.00R	12	30.0	75	12	4



Cutting conditions：Table 005

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

* S is SICO Coating

N is Naco Blue Coating

H680 Series for high precision milling (Hardened steel HRC 40~68)

- Ultra grain carbide rods with better abrasion resistance.
- Use SICO-TH coating with anti-high temperature & anti-oxidation.
- Special geometry design, suitable for high hardened working materials.
- Comparable to Europe, America, Japan's tolerance with high precision and high performance on Finishing working situation.
- Long Tool life tools reduce tool costs and working cost effectively.

Features

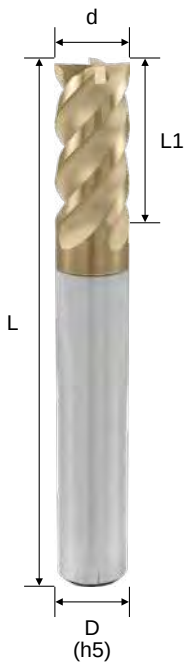
- **High Precision**
- **High Speed**
- **High Hardness**

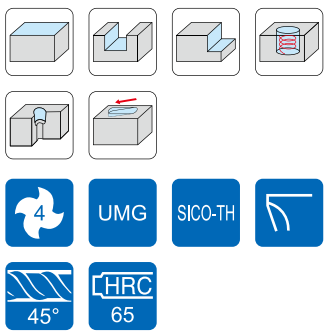
H680 - High Precision · Square · 4F

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHSSF

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 6	0 ~ -0.01
d > 6	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSSF441000S	1.0	3	50	4	4
* EHSSF441500S	1.5	4	50	4	4
* EHSSF442000S	2.0	5	50	4	4
* EHSSF442500S	2.5	6	50	4	4
EHSSF403000S	3.0	8	50	6	4
EHSSF404000S	4.0	10	50	6	4
EHSSF405000S	5.0	13	50	6	4
EHSSF406000S	6.0	15	50	6	4
EHSSF408000S	8.0	20	60	8	4
EHSSF410000S	10.0	25	75	10	4
EHSSF412000S	12.0	30	75	12	4

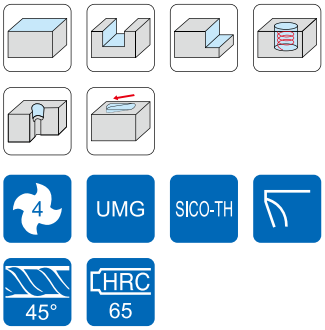
Cutting conditions：Table 006

H680 - High Precision · Long Shank · Square · 4F

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHSLF

P	M	K	N	S	H
●	○	●		○	●



d Tolerance	
d ≤ 6	0 ~ -0.02
d > 6	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
Helix angle : 45°					
* EHSLF404007S	4	10	75	6	4
* EHSLF406007S	6	15	75	6	4
* EHSLF406010S	6	15	100	6	4
* EHSLF408007S	8	20	75	8	4
* EHSLF408010S	8	20	100	8	4
* EHSLF410010S	10	25	100	10	4
* EHSLF412010S	12	30	100	12	4
Helix angle : 50°					
EHSMF606000S	6	15	50	6	6
EHSMF608000S	8	20	60	8	6
EHSMF610000S	10	25	75	10	6
EHSMF612000S	12	30	75	12	6
EHSMF816000S	16	40	100	16	8

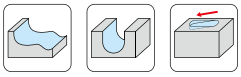
Cutting conditions : Table 006

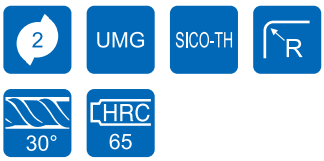
H680 - High Precision · Ball Nose · 2F

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- R tolerance ±5μm with high precision and high performance on Finishing working situation.
- Special geometry design, suitable for high hardened working materials.

EHBSF

P	M	K	N	S	H
●	○	●		○	●





R Tolerance	
R ≤ 3	±0.005
R > 3	±0.007

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBSF241000S	0.5R	1	2	50	4	2
* EHBSF242000S	1.0R	2	4	50	4	2
* EHBSF244000S	2.0R	4	8	50	4	2
EHBSF203000S	1.5R	3	6	50	6	2
EHBSF204000S	2.0R	4	8	50	6	2
EHBSF206000S	3.0R	6	12	50	6	2
EHBSF208000S	4.0R	8	16	60	8	2
EHBSF210000S	5.0R	10	20	75	10	2
EHBSF212000S	6.0R	12	24	75	12	2

Cutting conditions：Table 007

H680 - High Precision · Long Shank · Ball Nose · 2F

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- R tolerance ±5μm with high precision and high performance on Finishing working situation.
- Special geometry design, suitable for high hardened working materials.

EHBLF

P	M	K	N	S	H
●	○	●		○	●

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBLF204007S	2R	4	8	75	6	2
* EHBLF206007S	3R	6	12	75	6	2
* EHBLF206010S	3R	6	12	100	6	2
* EHBLF208007S	4R	8	16	75	8	2
* EHBLF208010S	4R	8	16	100	8	2
* EHBLF210010S	5R	10	20	100	10	2
* EHBLF212010S	6R	12	24	100	12	2

Cutting conditions：Table 007

R Tolerance	
R ≤ 3	±0.007
R > 3	±0.010

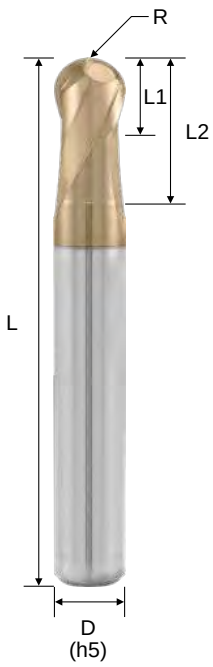
H680 Pro - High Precision · Short with Neck · Ball Nose · 2F

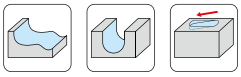
- SICO Pro coating improve heat and oxidation resistance.
- Special SR geometry design with wear resistance, good chip discharge and high rigidity.
- For hardened materials milling from HRC 40 to HRC 60.
- High-efficiency for roughing and high feed finishing.
- SICO Pro coating includes Al, Ti, Si, N elements.

H680 Pro

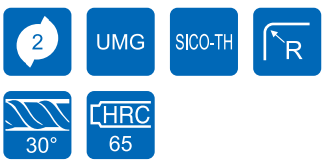
EHBUF

P	M	K	N	S	H
●	○	●		○	●





Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBUF241000PS	0.50R	1.0	1.0	2	50	4	2
EHBUF241500PS	0.75R	1.5	1.5	3	50	4	2
EHBUF242000PS	1.00R	2.0	2.0	4	50	4	2
EHBUF243000PS	1.50R	3.0	3.0	6	50	4	2
EHBUF244000PS	2.00R	4.0	4.0	8	50	4	2
EHBUF206000PS	3.00R	6.0	6.0	12	50	6	2
EHBUF208000PS	4.00R	8.0	8.0	16	60	8	2
EHBUF210000PS	5.00R	10.0	10.0	20	75	10	2
EHBUF212000PS	6.00R	12.0	12.0	24	75	12	2



R Tolerance	
R ≤ 3	±0.005
R > 3	±0.007

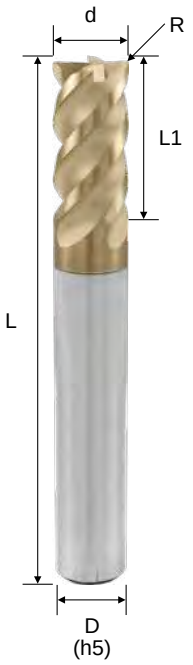
Cutting conditions：Table 007

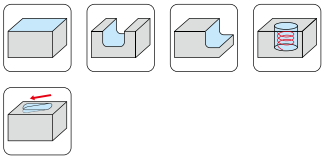
H680 - High Precision · Corner Radius · 4F

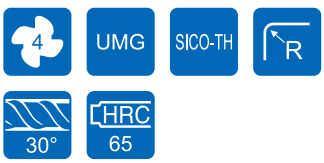
- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHCSF

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 6	0 ~ -0.01
d > 6	0 ~ -0.02

R Tolerance	
R < 2	±0.010
R ≥ 2	±0.015

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHCSF441001S	1.0	0.1R	2	50	4	4
* EHCSF441002S	1.0	0.2R	2	50	4	4
* EHCSF441501S	1.5	0.1R	3	50	4	4
* EHCSF441502S	1.5	0.2R	3	50	4	4
* EHCSF442001S	2.0	0.1R	4	50	4	4
* EHCSF442002S	2.0	0.2R	4	50	4	4
* EHCSF442005S	2.0	0.5R	4	50	4	4
* EHCSF443002S	3.0	0.2R	6	50	4	4
* EHCSF443005S	3.0	0.5R	6	50	4	4
EHCSF403005S	3.0	0.5R	6	50	6	4
* EHCSF444002S	4.0	0.2R	8	50	4	4
* EHCSF444005S	4.0	0.5R	8	50	4	4
EHCSF404005S	4.0	0.5R	8	50	6	4
EHCSF404010S	4.0	1.0R	8	50	6	4
EHCSF406005S	6.0	0.5R	12	50	6	4
EHCSF406010S	6.0	1.0R	12	50	6	4
EHCSF406002S	6.0	0.2R	12	50	6	4
EHCSF406003S	6.0	0.3R	12	50	6	4
EHCSF408005S	8.0	0.5R	16	60	8	4
EHCSF408010S	8.0	1.0R	16	60	8	4
EHCSF410005S	10.0	0.5R	20	75	10	4
EHCSF410010S	10.0	1.0R	20	75	10	4
EHCSF412005S	12.0	0.5R	24	75	12	4
EHCSF412010S	12.0	1.0R	24	75	12	4

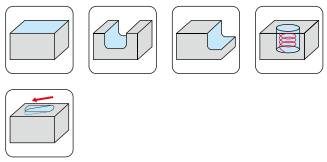
Cutting conditions：Table 006

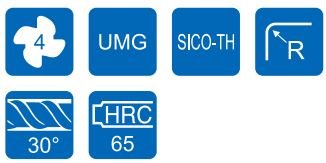
H680 - High Precision · Long Shank · Corner Radius · 4F

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHCLF

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 6	0 ~ -0.02
d > 6	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHCLF40400507S	4	0.5R	8	75	6	4
* EHCLF40600507S	6	0.5R	12	75	6	4
* EHCLF40600510S	6	0.5R	12	100	6	4
* EHCLF40800507S	8	0.5R	16	75	8	4
* EHCLF40800510S	8	0.5R	16	100	8	4
* EHCLF41000510S	10	0.5R	20	100	10	4
* EHCLF41200510S	12	0.5R	24	100	12	4

Cutting conditions：Table 006

H650 Series for high speed general milling (Hardened steel HRC 40~68)

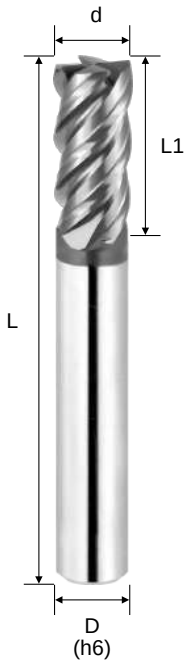
- Ultra grain carbide rods with better abrasion resistance.
- SICO coating with anti-high temperature & anti-oxidation.
- ARCO coating shows good performance in coolant machining.
- Large core diameter promote its rigidity of the tool.
- Negative rake angle design is suitable for machining hardened material.
- Long tool-life and good performance in hardened steel material.

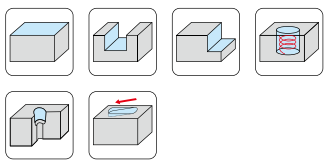
H650 - High Helix · Square · 2F / 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- Good surface and long tool life.
- The coating can change to SICO.

EHSSH

P	M	K	N	S	H
●	○	●		○	●





2 | 4 | UMG 0.4μm | ARCO

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSSH240200A	0.2	0.4	50	4	2
* EHSSH240300A	0.3	0.6	50	4	2
* EHSSH240400A	0.4	0.8	50	4	2
* EHSSH240500A	0.5	1.0	50	4	2
* EHSSH240600A	0.6	1.5	50	4	2
* EHSSH240700A	0.7	2.0	50	4	2
* EHSSH240800A	0.8	2.0	50	4	2
* EHSSH240900A	0.9	2.0	50	4	2
* EHSSH441000A	1.0	3	50	4	4
* EHSSH441500A	1.5	4	50	4	4
* EHSSH442000A	2.0	5	50	4	4
* EHSSH442500A	2.5	6	50	4	4
* EHSSH433000A	3.0	8	50	3	4
* EHSSH443000A	3.0	8	50	4	4
* EHSSH444000A	4.0	10	50	4	4
EHSSH404000A	4.0	10	50	6	4
EHSSH405000A	5.0	13	50	6	4
EHSSH406000A	6.0	15	50	6	4
EHSSH408000A	8.0	20	60	8	4
EHSSH410000A	10.0	25	75	10	4
EHSSH412000A	12.0	30	75	12	4
EHSSH416000A	16.0	35	100	16	4
EHSSH420000A	20.0	45	100	20	4

Cutting conditions：Table 008

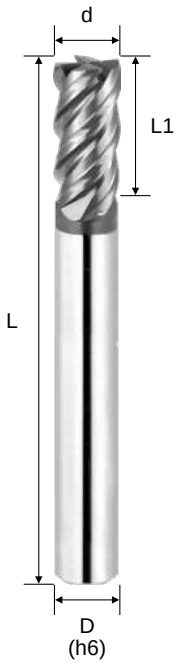
* A is ARCO Coating
S is SICO Coating

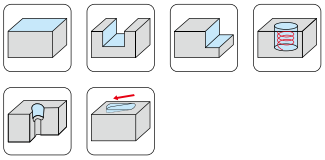
H650 - High Helix · Long Shank · Square · 4F

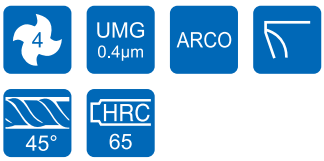
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- Good surface and long tool life.
- The coating can change to SICO.

EHSLH

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSLH443007A	3.0	8	75	4	4
* EHSLH443010A	3.0	8	100	4	4
* EHSLH444006A	4.0	10	60	4	4
* EHSLH444007A	4.0	10	75	4	4
* EHSLH444010A	4.0	10	100	4	4
* EHSLH406006A	6.0	15	60	6	4
* EHSLH406007A	6.0	15	75	6	4
* EHSLH406010A	6.0	15	100	6	4
* EHSLH408007A	8.0	20	75	8	4
* EHSLH408010A	8.0	20	100	8	4
* EHSLH408015A	8.0	20	150	8	4
* EHSLH410010A	10.0	25	100	10	4
* EHSLH410015A	10.0	25	150	10	4
* EHSLH412010A	12.0	30	100	12	4
* EHSLH412015A	12.0	30	150	12	4
* EHSLH416015A	16.0	35	150	16	4
* EHSLH420015A	20.0	45	150	20	4

Cutting conditions：Table 009

* A is ARCO Coating
S is SICO Coating

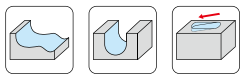
H650 - Ball Nose · 2F

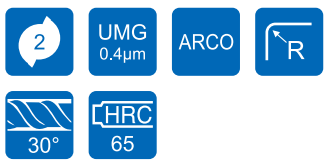
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- The coating can change to SICO.

EHBSH

P	M	K	N	S	H
●	○	●		○	●

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBSH240200A	0.10R	0.2	0.4	50	4	2
* EHBSH240300A	0.15R	0.3	0.6	50	4	2
* EHBSH240400A	0.20R	0.4	0.8	50	4	2
* EHBSH240500A	0.25R	0.5	1	50	4	2
* EHBSH240600A	0.30R	0.6	1.2	50	4	2
* EHBSH240700A	0.35R	0.7	1.4	50	4	2
* EHBSH240800A	0.40R	0.8	1.6	50	4	2
* EHBSH240900A	0.45R	0.9	1.8	50	4	2
* EHBSH241000A	0.50R	1.0	2	50	4	2
* EHBSH241500A	0.75R	1.5	3	50	4	2
* EHBSH242000A	1.00R	2.0	4	50	4	2
* EHBSH233000A	1.50R	3.0	6	50	3	2
* EHBSH243000A	1.50R	3.0	6	50	4	2
* EHBSH244000A	2.00R	4.0	8	50	4	2
EHBSH205000A	2.50R	5.0	10	50	6	2
EHBSH206000A	3.00R	6.0	12	50	6	2
EHBSH208000A	4.00R	8.0	16	60	8	2
EHBSH210000A	5.00R	10.0	20	75	10	2
EHBSH212000A	6.00R	12.0	24	75	12	2
EHBSH216000A	8.00R	16.0	32	100	16	2





R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Cutting conditions：Table 010

* A is ARCO Coating
S is SICO Coating

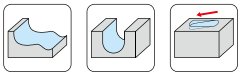
H650 - Long Shank · Ball Nose · 2F

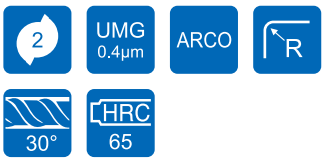
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- The coating can change to SICO.

EHBLH

P	M	K	N	S	H
●	○	●		○	●

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBLH242007A	1.0R	2	4	75	4	2
* EHBLH243007A	1.5R	3	6	75	4	2
* EHBLH243010A	1.5R	3	6	100	4	2
* EHBLH244006A	2.0R	4	8	60	4	2
* EHBLH244007A	2.0R	4	8	75	4	2
* EHBLH244010A	2.0R	4	8	100	4	2
* EHBLH206006A	3.0R	6	12	60	6	2
* EHBLH206007A	3.0R	6	12	75	6	2
* EHBLH206010A	3.0R	6	12	100	6	2
* EHBLH208007A	4.0R	8	16	75	8	2
* EHBLH208010A	4.0R	8	16	100	8	2
* EHBLH208015A	4.0R	8	16	150	8	2
* EHBLH210010A	5.0R	10	20	100	10	2
* EHBLH210015A	5.0R	10	20	150	10	2
* EHBLH212010A	6.0R	12	24	100	12	2
* EHBLH212015A	6.0R	12	24	150	12	2
* EHBLH216015A	8.0R	16	32	150	16	2
* EHBLH220015A	10.0R	20	40	150	20	2





R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Cutting conditions：Table 011

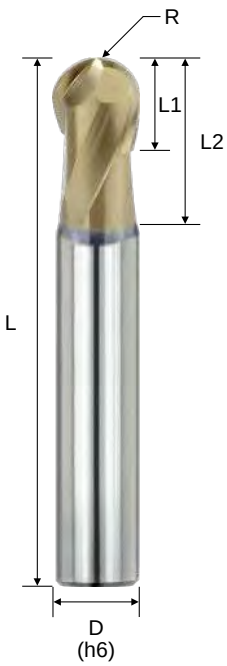
* A is ARCO Coating
S is SICO Coating

H650 - Short Flute · Ball Nose · 2F

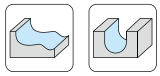
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- Short cutting length provides hi resistance for hi speed cutting.
- The coating can change to TOP ARCO.

EHBUH

P	M	K	N	S	H
●	○	●		○	●



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBUH202000S	1.0R	2	2	4	50	6	2
EHBUH203000S	1.5R	3	3	6	50	6	2
EHBUH204000S	2.0R	4	4	8	50	6	2
EHBUH205000S	2.5R	5	5	10	50	6	2
EHBUH206000S	3.0R	6	6	12	50	6	2
EHBUH208000S	4.0R	8	8	16	60	8	2
EHBUH210000S	5.0R	10	10	20	75	10	2
EHBUH212000S	6.0R	12	12	24	75	12	2
EHBUH216000S	8.0R	16	16	32	100	16	2



R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Cutting conditions：Table 012

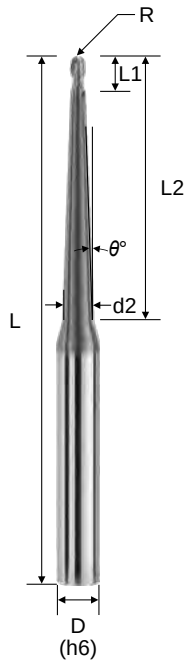
* A is ARCO Coating
S is SICO Coating

H650 - Taper Neck · Ball Nose · 2F

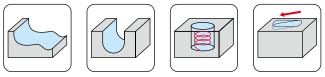
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- High strength of taper neck, can cut deep grooves without breaking.
- Suitable for cutting groves at hi speed.
- The coating can change to SICO.

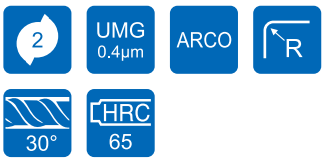
EHBRT

P	M	K	N	S	H
●	○	●		○	●



Order No.	Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EHBRT201023AA	0.5R	1	1.5°	2	23	2.20	60	6	2
EHBRT202023AA	1.0R	2	1.5°	4	23	3.00	60	6	2
EHBRT2020423A	1.0R	2	3.0°	4	42	5.98	100	8	2
EHBRT203052AA	1.5R	3	1.5°	6	52	5.40	100	6	2
EHBRT2030473A	1.5R	3	3.0°	6	47	7.29	100	8	2
EHBRT204046AA	2.0R	4	1.5°	8	46	6.00	100	6	2
EHBRT2040383A	2.0R	4	3.0°	8	38	7.14	100	8	2
EHBRT2050283A	2.5R	5	3.0°	10	28	6.88	100	8	2
EHBRT2060383A	3.0R	6	3.0°	12	38	8.72	100	10	2
EHBRT2080383A	4.0R	8	3.0°	16	38	10.30	100	12	2
EHBRT2100573A	5.0R	10	3.0°	20	57	13.88	100	16	2
EHBRT2120383A	6.0R	12	3.0°	24	38	13.47	100	16	2





R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Cutting conditions：Table 013

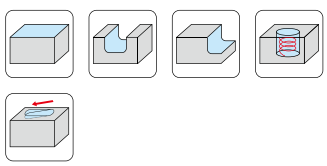
* A is ARCO Coating
S is SICO Coating

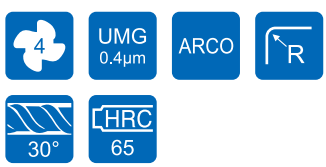
H650 - Corner Radius · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long tool life and wear resistant due to its negative angle with corner radius design.
- The coating can change to SICO.

EHCSH

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHCSH441002A	1	0.2R	2	50	4	4
* EHCSH441003A	1	0.3R	2	50	4	4
* EHCSH441502A	1.5	0.2R	3	50	4	4
* EHCSH441503A	1.5	0.3R	3	50	4	4
* EHCSH442002A	2	0.2R	4	50	4	4
* EHCSH442003A	2	0.3R	4	50	4	4
* EHCSH442005A	2	0.5R	4	50	4	4
* EHCSH433002A	3	0.2R	6	50	3	4
* EHCSH443002A	3	0.2R	6	50	4	4
* EHCSH433003A	3	0.3R	6	50	3	4
* EHCSH443003A	3	0.3R	6	50	4	4
* EHCSH433005A	3	0.5R	6	50	3	4
* EHCSH443005A	3	0.5R	6	50	4	4
* EHCSH433010A	3	1.0R	6	50	3	4
* EHCSH443010A	3	1.0R	6	50	4	4
* EHCSH444002A	4	0.2R	8	50	4	4
* EHCSH444003A	4	0.3R	8	50	4	4
* EHCSH444005A	4	0.5R	8	50	4	4
* EHCSH444010A	4	1.0R	8	50	4	4
EHCSH404003A	4	0.3R	8	50	6	4
EHCSH404005A	4	0.5R	8	50	6	4
EHCSH404010A	4	1.0R	8	50	6	4
EHCSH405005A	5	0.5R	10	50	6	4
EHCSH405010A	5	1.0R	10	50	6	4
EHCSH406003A	6	0.3R	12	50	6	4
EHCSH406005A	6	0.5R	12	50	6	4
EHCSH406010A	6	1.0R	12	50	6	4
EHCSH408005A	8	0.5R	16	60	8	4
EHCSH408010A	8	1.0R	16	60	8	4
EHCSH408015A	8	1.5R	16	60	8	4
EHCSH410005A	10	0.5R	20	75	10	4
EHCSH410010A	10	1.0R	20	75	10	4
EHCSH410015A	10	1.5R	20	75	10	4
EHCSH410020A	10	2.0R	20	75	10	4
EHCSH412005A	12	0.5R	24	75	12	4
EHCSH412010A	12	1.0R	24	75	12	4
EHCSH412015A	12	1.5R	24	75	12	4
EHCSH412020A	12	2.0R	24	75	12	4

Cutting conditions：Table 014

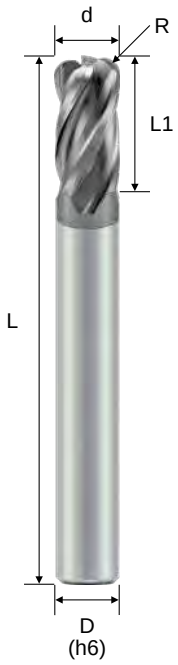
* A is ARCO Coating
S is SICO Coating

H650 - Long Shank · Corner Radius · 4F

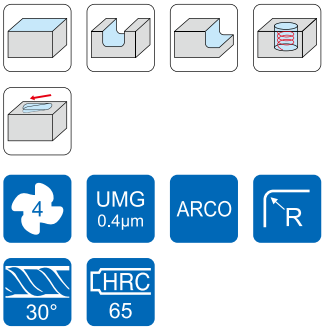
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long tool life and wear resistant due to its negative angle with corner radius design.
- The coating can change to SICO.

EHCLH

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHCLH44400507A	4	0.5R	8	75	4	4
* EHCLH44401007A	4	1.0R	8	75	4	4
* EHCLH44400510A	4	0.5R	8	100	4	4
* EHCLH44401010A	4	1.0R	8	100	4	4
* EHCLH40600507A	6	0.5R	12	75	6	4
* EHCLH40601007A	6	1.0R	12	75	6	4
* EHCLH40600510A	6	0.5R	12	100	6	4
* EHCLH40601010A	6	1.0R	12	100	6	4
* EHCLH40800507A	8	0.5R	16	75	8	4
* EHCLH40801007A	8	1.0R	16	75	8	4
* EHCLH40800510A	8	0.5R	16	100	8	4
* EHCLH40801010A	8	1.0R	16	100	8	4
* EHCLH41000510A	10	0.5R	20	100	10	4
* EHCLH41001010A	10	1.0R	20	100	10	4
* EHCLH41000515A	10	0.5R	20	150	10	4
* EHCLH41001015A	10	1.0R	20	150	10	4
* EHCLH41200510A	12	0.5R	24	100	12	4
* EHCLH41201010A	12	1.0R	24	100	12	4
* EHCLH41200515A	12	0.5R	24	150	12	4
* EHCLH41201015A	12	1.0R	24	150	12	4



Cutting conditions：Table 015

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

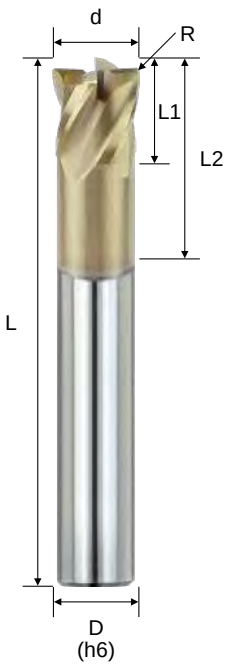
* A is ARCO Coating
S is SICO Coating

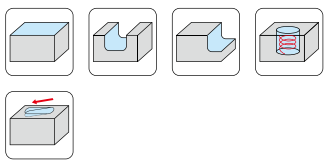
H650 - Short Flute · Corner Radius · 4F

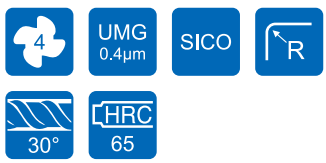
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Short cutting length with high rigidity is suitable for high speed cutting.
- The coating can change to TOP ARCO.

EHCUH

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCUH403001S	3	0.1R	3	7.5	50	6	4
EHCUH403005S	3	0.5R	3	7.5	50	6	4
EHCUH404002S	4	0.2R	4	10.0	50	6	4
EHCUH404005S	4	0.5R	4	10.0	50	6	4
EHCUH405002S	5	0.2R	5	12.5	50	6	4
EHCUH405005S	5	0.5R	5	12.5	50	6	4
EHCUH406002S	6	0.2R	6	15.0	50	6	4
EHCUH406005S	6	0.5R	6	15.0	50	6	4
EHCUH406010S	6	1.0R	6	15.0	50	6	4
EHCUH408003S	8	0.3R	8	20.0	60	8	4
EHCUH408005S	8	0.5R	8	20.0	60	8	4
EHCUH408010S	8	1.0R	8	20.0	60	8	4
EHCUH408015S	8	1.5R	8	20.0	60	8	4
EHCUH410003S	10	0.3R	10	25.0	75	10	4
EHCUH410005S	10	0.5R	10	25.0	75	10	4
EHCUH410010S	10	1.0R	10	25.0	75	10	4
EHCUH410015S	10	1.5R	10	25.0	75	10	4
EHCUH410020S	10	2.0R	10	25.0	75	10	4
EHCUH412003S	12	0.3R	12	30.0	75	12	4
EHCUH412005S	12	0.5R	12	30.0	75	12	4
EHCUH412010S	12	1.0R	12	30.0	75	12	4
EHCUH412015S	12	1.5R	12	30.0	75	12	4
EHCUH412020S	12	2.0R	12	30.0	75	12	4

Cutting conditions：Table 016

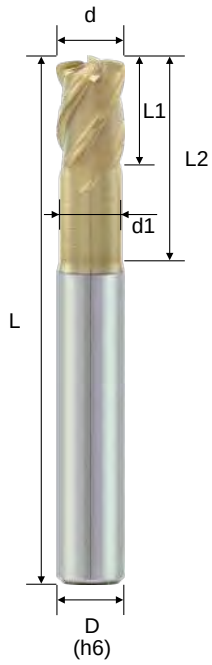
* A is ARCO Coating
S is SICO Coating

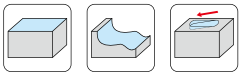
H650 - Double Corner High Feed EndMill · 4F / 6F

- SICO Nano coating provides a superior wear and heat resistance.
- Duotec design and multi-flute geometry design.
- High feed and high metal removal rate in surface milling.
- UMG Carbide substrate possess high TRS and good wear resistance.

EHWSA

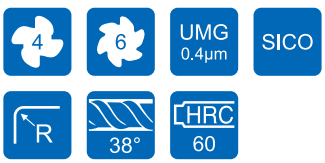
P	M	K	N	S	H
●	○	●		○	●





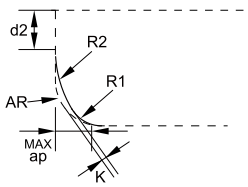
Order No.	Dia. (d)	ND (d1)	(d2)	(ap)	(R1)	(R2)	Approx Radius (AR)	(K)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
													
EHWSA403101S	3.175(1/8")	-	0.4	0.18	0.3	2.0	0.64	0.08	3.175	-	63.5	6.35	4
EHWSA404701S	4.763(3/16")	-	0.6	0.30	0.5	3.0	0.815	0.17	4.763	-	63.5	6.35	4
EHWSA406001S	6	-	0.75	0.35	0.6	3.5	0.92	0.21	6	-	60	6	4
EHWSA406301S	6.35(1/4")	-	0.79	0.35	0.6	3.5	0.92	0.21	6.35	-	63.5	6.35	4
EHWSA408001S	8	-	1.6	0.40	0.8	4.5	1.16	0.22	8	-	75	8	4
EHWSA409501S	9.525(3/8")	-	1.9	0.55	1.0	5.5	1.47	0.28	9.525	-	76.2	9.52	4
EHWSA410001S	10	-	2.0	0.55	1.0	5.5	1.47	0.28	10	-	75	10	4
EHWSA412001S	12	-	2.4	0.70	1.2	6.5	1.77	0.34	12	-	75	12	4
EHWSA412701S	12.7(1/2")	-	2.5	0.70	1.2	6.5	1.77	0.34	12.7	-	76.2	12.7	4
EHWSA616001S	16	-	3.2	0.90	1.6	8.5	2.35	0.43	16	-	100	16	6
													
EHWSA406000S	6	5.6	0.75	0.35	0.6	3.5	0.92	0.21	9	18	60	6	4
EHWSA608000S	8	7.6	1.6	0.40	0.8	4.5	1.16	0.22	12	24	75	8	6
EHWSA610000S	10	9.4	2.0	0.55	1.0	5.5	1.47	0.28	15	30	75	10	6
EHWSA612000S	12	11.4	2.4	0.70	1.2	6.5	1.77	0.34	18	36	75	12	6

Cutting conditions：Table 017



d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

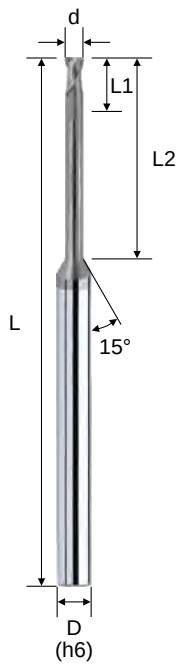


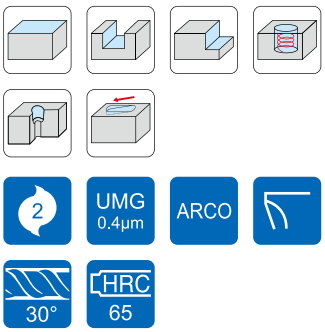
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC240201A	0.2	0.3	1	50	4	2
* EHSRC240202A	0.2	0.3	2	50	4	2
* EHSRC240301A	0.3	0.4	1	50	4	2
* EHSRC240302A	0.3	0.4	2	50	4	2
* EHSRC240303A	0.3	0.4	3	50	4	2
* EHSRC240304A	0.3	0.4	4	50	4	2
* EHSRC240305A	0.3	0.4	5	50	4	2
* EHSRC240401A	0.4	0.5	1	50	4	2
* EHSRC240402A	0.4	0.5	2	50	4	2
* EHSRC240403A	0.4	0.5	3	50	4	2
* EHSRC240404A	0.4	0.5	4	50	4	2
* EHSRC240405A	0.4	0.5	5	50	4	2
* EHSRC240406A	0.4	0.5	6	50	4	2
* EHSRC240408A	0.4	0.5	8	50	4	2
* EHSRC240410A	0.4	0.5	10	50	4	2
* EHSRC240502A	0.5	0.6	2	50	4	2
* EHSRC240503A	0.5	0.6	3	50	4	2
* EHSRC240504A	0.5	0.6	4	50	4	2
* EHSRC240505A	0.5	0.6	5	50	4	2
* EHSRC240506A	0.5	0.6	6	50	4	2
* EHSRC240508A	0.5	0.6	8	50	4	2
* EHSRC240510A	0.5	0.6	10	50	4	2
* EHSRC240512A	0.5	0.6	12	50	4	2
* EHSRC240514A	0.5	0.6	14	50	4	2

Cutting conditions：Table 018 ~ 020

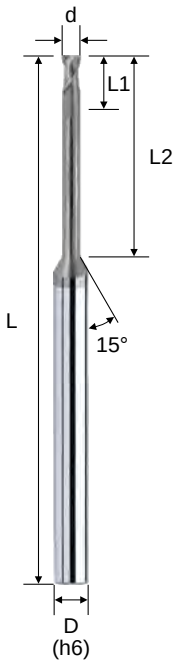
* A is ARCO Coating
S is SICO Coating

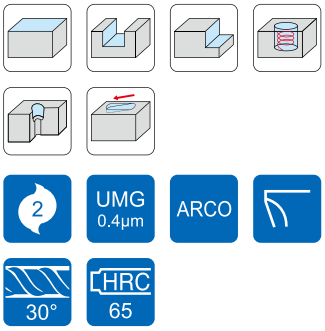
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC240602A	0.6	0.7	2	50	4	2
* EHSRC240603A	0.6	0.7	3	50	4	2
* EHSRC240604A	0.6	0.7	4	50	4	2
* EHSRC240605A	0.6	0.7	5	50	4	2
* EHSRC240606A	0.6	0.7	6	50	4	2
* EHSRC240608A	0.6	0.7	8	50	4	2
* EHSRC240610A	0.6	0.7	10	50	4	2
* EHSRC240612A	0.6	0.7	12	50	4	2
* EHSRC240614A	0.6	0.7	14	50	4	2
* EHSRC240616A	0.6	0.7	16	50	4	2
* EHSRC240702A	0.7	0.8	2	50	4	2
* EHSRC240704A	0.7	0.8	4	50	4	2
* EHSRC240706A	0.7	0.8	6	50	4	2
* EHSRC240708A	0.7	0.8	8	50	4	2
* EHSRC240710A	0.7	0.8	10	50	4	2
* EHSRC240712A	0.7	0.8	12	50	4	2
* EHSRC240802A	0.8	1.0	2	50	4	2
* EHSRC240804A	0.8	1.0	4	50	4	2
* EHSRC240806A	0.8	1.0	6	50	4	2
* EHSRC240808A	0.8	1.0	8	50	4	2
* EHSRC240810A	0.8	1.0	10	50	4	2
* EHSRC240812A	0.8	1.0	12	50	4	2
* EHSRC240814A	0.8	1.0	14	50	4	2
* EHSRC240906A	0.9	1.1	6	50	4	2
* EHSRC240908A	0.9	1.1	8	50	4	2
* EHSRC240910A	0.9	1.1	10	50	4	2

Cutting conditions : Table 018 ~ 020

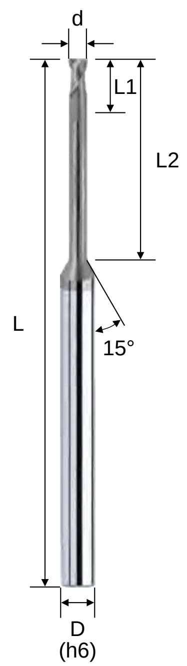
* A is ARCO Coating
S is SICO Coating

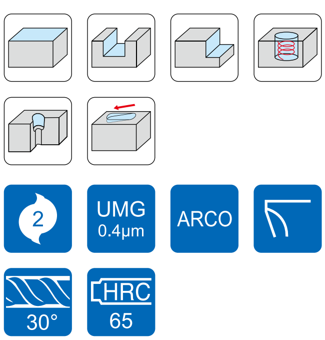
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC241002A	1.0	1.2	2	50	4	2
* EHSRC241003A	1.0	1.2	3	50	4	2
* EHSRC241004A	1.0	1.2	4	50	4	2
* EHSRC241005A	1.0	1.2	5	50	4	2
* EHSRC241006A	1.0	1.2	6	50	4	2
* EHSRC241008A	1.0	1.2	8	50	4	2
* EHSRC241010A	1.0	1.2	10	50	4	2
* EHSRC241012A	1.0	1.2	12	50	4	2
* EHSRC241014A	1.0	1.2	14	50	4	2
* EHSRC241016A	1.0	1.2	16	50	4	2
* EHSRC241018A	1.0	1.2	18	50	4	2
* EHSRC241020A	1.0	1.2	20	50	4	2
* EHSRC241204A	1.2	1.5	4	50	4	2
* EHSRC241206A	1.2	1.5	6	50	4	2
* EHSRC241208A	1.2	1.5	8	50	4	2
* EHSRC241210A	1.2	1.5	10	50	4	2
* EHSRC241212A	1.2	1.5	12	50	4	2
* EHSRC241216A	1.2	1.5	16	50	4	2
* EHSRC241220A	1.2	1.5	20	50	4	2
* EHSRC241406A	1.4	1.8	6	50	4	2
* EHSRC241408A	1.4	1.8	8	50	4	2
* EHSRC241410A	1.4	1.8	10	50	4	2
* EHSRC241414A	1.4	1.8	14	50	4	2
* EHSRC241416A	1.4	1.8	16	50	4	2
* EHSRC241420A	1.4	1.8	20	50	4	2

Cutting conditions : Table 018 ~ 020

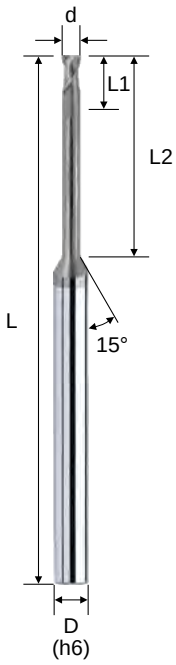
* A is ARCO Coating
S is SICO Coating

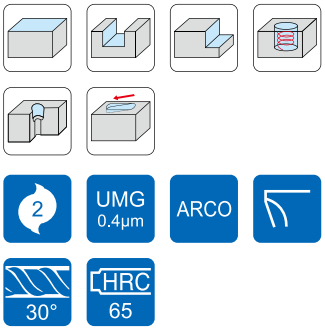
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC241504A	1.5	1.8	4	50	4	2
* EHSRC241506A	1.5	1.8	6	50	4	2
* EHSRC241508A	1.5	1.8	8	50	4	2
* EHSRC241510A	1.5	1.8	10	50	4	2
* EHSRC241512A	1.5	1.8	12	50	4	2
* EHSRC241514A	1.5	1.8	14	50	4	2
* EHSRC241516A	1.5	1.8	16	50	4	2
* EHSRC241518A	1.5	1.8	18	50	4	2
* EHSRC241520A	1.5	1.8	20	50	4	2
* EHSRC241610A	1.6	1.9	10	50	4	2
* EHSRC241614A	1.6	1.9	14	50	4	2
* EHSRC241618A	1.6	1.9	18	50	4	2
* EHSRC241810A	1.8	2.0	10	50	4	2
* EHSRC241814A	1.8	2.0	14	50	4	2
* EHSRC241818A	1.8	2.0	18	50	4	2
* EHSRC242004A	2.0	2.5	4	50	4	2
* EHSRC242006A	2.0	2.5	6	50	4	2
* EHSRC242008A	2.0	2.5	8	50	4	2
* EHSRC242010A	2.0	2.5	10	50	4	2
* EHSRC242012A	2.0	2.5	12	50	4	2
* EHSRC242014A	2.0	2.5	14	50	4	2
* EHSRC242016A	2.0	2.5	16	50	4	2
* EHSRC242018A	2.0	2.5	18	50	4	2
* EHSRC242020A	2.0	2.5	20	50	4	2
* EHSRC242022A	2.0	2.5	22	60	4	2
* EHSRC242025A	2.0	2.5	25	60	4	2
* EHSRC242030A	2.0	2.5	30	75	4	2
* EHSRC242035A	2.0	2.5	35	75	4	2

Cutting conditions : Table 018 ~ 020

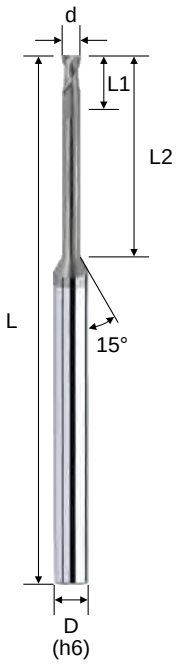
* A is ARCO Coating
S is SICO Coating

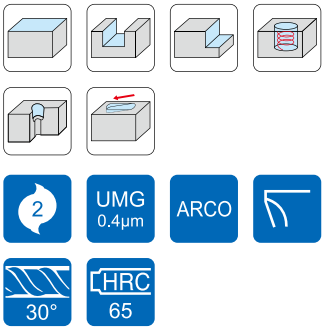
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC242508A	2.5	3.0	8	50	4	2
* EHSRC242510A	2.5	3.0	10	50	4	2
* EHSRC242512A	2.5	3.0	12	50	4	2
* EHSRC242516A	2.5	3.0	16	50	4	2
* EHSRC242520A	2.5	3.0	20	50	4	2
* EHSRC242525A	2.5	3.0	25	60	4	2
* EHSRC242530A	2.5	3.0	30	75	4	2
* EHSRC242535A	2.5	3.0	35	75	4	2
EHSRC203006A	3.0	3.5	6	50	6	2
EHSRC203010A	3.0	3.5	10	50	6	2
EHSRC203012A	3.0	3.5	12	50	6	2
EHSRC203016A	3.0	3.5	16	50	6	2
EHSRC203020A	3.0	3.5	20	60	6	2
EHSRC203025A	3.0	3.5	25	60	6	2
EHSRC203030A	3.0	3.5	30	75	6	2
EHSRC203035A	3.0	3.5	35	75	6	2
EHSRC204008A	4.0	4.5	8	50	6	2
EHSRC204010A	4.0	4.5	10	50	6	2
EHSRC204012A	4.0	4.5	12	50	6	2
EHSRC204016A	4.0	4.5	16	50	6	2
EHSRC204020A	4.0	4.5	20	60	6	2
EHSRC204025A	4.0	4.5	25	60	6	2
EHSRC204030A	4.0	4.5	30	75	6	2
EHSRC204035A	4.0	4.5	35	75	6	2
EHSRC205016A	5.0	7.0	16	50	6	2
EHSRC205020A	5.0	7.0	20	60	6	2
EHSRC205025A	5.0	7.0	25	60	6	2
EHSRC205030A	5.0	7.0	30	75	6	2
EHSRC205035A	5.0	7.0	35	75	6	2

Cutting conditions：Table 018 ~ 020

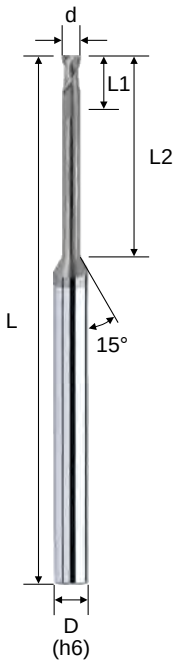
* A is ARCO Coating
S is SICO Coating

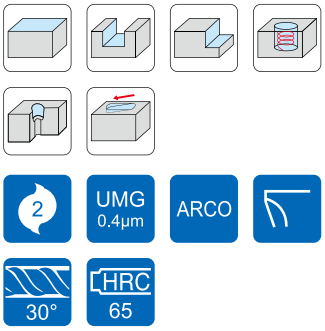
H650 - Long Neck · Square · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSRC206020A	6.0	10.0	20	60	6	2
EHSRC206030A	6.0	10.0	30	75	6	2
EHSRC208020A	8.0	15.0	20	60	8	2
EHSRC208030A	8.0	15.0	30	75	8	2
EHSRC208040A	8.0	15.0	40	100	8	2
EHSRC210025A	10.0	20.0	25	75	10	2
EHSRC210035A	10.0	20.0	35	75	10	2
EHSRC210045A	10.0	20.0	45	100	10	2
EHSRC212030A	12.0	25.0	30	75	12	2
EHSRC212040A	12.0	25.0	40	100	12	2
EHSRC212050A	12.0	25.0	50	100	12	2

Cutting conditions：Table 018 ~ 020

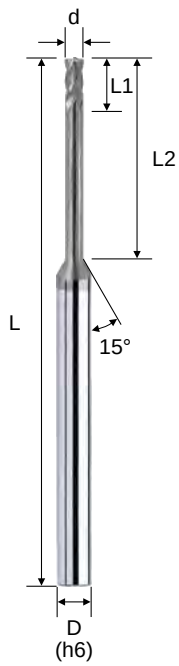
* A is ARCO Coating
S is SICO Coating

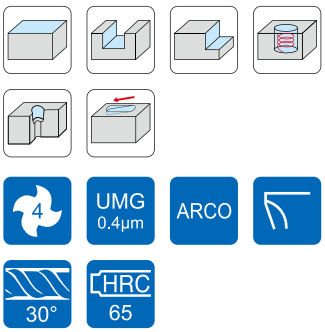
H650 - Long Neck · Square · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC441003A	1.0	1.0	3	50	4	4
* EHSRC441004A	1.0	1.0	4	50	4	4
* EHSRC441006A	1.0	1.0	6	50	4	4
* EHSRC441008A	1.0	1.0	8	50	4	4
* EHSRC441010A	1.0	1.0	10	50	4	4
* EHSRC441012A	1.0	1.0	12	50	4	4
* EHSRC441016A	1.0	1.0	16	50	4	4
* EHSRC441020A	1.0	1.0	20	50	4	4
* EHSRC441025A	1.0	1.0	25	60	4	4
EHSRC401004A	1.0	1.0	4	50	6	4
EHSRC401006A	1.0	1.0	6	50	6	4
EHSRC401008A	1.0	1.0	8	50	6	4
EHSRC401010A	1.0	1.0	10	50	6	4
EHSRC401012A	1.0	1.0	12	50	6	4
* EHSRC441506A	1.5	1.5	6	50	4	4
* EHSRC441508A	1.5	1.5	8	50	4	4
* EHSRC441510A	1.5	1.5	10	50	4	4
* EHSRC441512A	1.5	1.5	12	50	4	4
* EHSRC441516A	1.5	1.5	16	50	4	4
* EHSRC441520A	1.5	1.5	20	50	4	4
* EHSRC441525A	1.5	1.5	25	60	4	4
EHSRC401506A	1.5	1.5	6	50	6	4
EHSRC401508A	1.5	1.5	8	50	6	4
EHSRC401510A	1.5	1.5	10	50	6	4
EHSRC401512A	1.5	1.5	12	50	6	4

Cutting conditions：Table 021

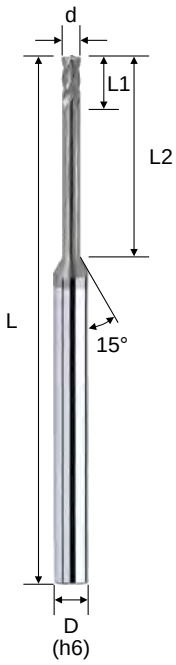
* A is ARCO Coating
S is SICO Coating

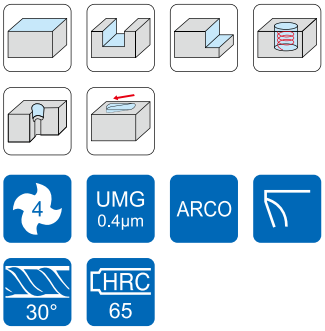
H650 - Long Neck · Square · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHSRC442006A	2.0	2.0	6	50	4	4
* EHSRC442008A	2.0	2.0	8	50	4	4
* EHSRC442010A	2.0	2.0	10	50	4	4
* EHSRC442012A	2.0	2.0	12	50	4	4
* EHSRC442016A	2.0	2.0	16	50	4	4
* EHSRC442020A	2.0	2.0	20	50	4	4
* EHSRC442025A	2.0	2.0	25	60	4	4
* EHSRC442030A	2.0	2.0	30	75	4	4
EHSRC402006A	2.0	2.0	6	50	6	4
EHSRC402008A	2.0	2.0	8	50	6	4
EHSRC402010A	2.0	2.0	10	50	6	4
EHSRC402016A	2.0	2.0	16	50	6	4
* EHSRC442510A	2.5	2.5	10	50	4	4
* EHSRC442512A	2.5	2.5	12	50	4	4
* EHSRC442516A	2.5	2.5	16	50	4	4
* EHSRC442520A	2.5	2.5	20	50	4	4
* EHSRC442525A	2.5	2.5	25	60	4	4
* EHSRC442530A	2.5	2.5	30	75	4	4
EHSRC402506A	2.5	2.5	6	50	6	4
EHSRC402510A	2.5	2.5	10	50	6	4
EHSRC403010A	3.0	3.0	10	50	6	4
EHSRC403012A	3.0	3.0	12	50	6	4
EHSRC403016A	3.0	3.0	16	50	6	4
EHSRC403020A	3.0	3.0	20	60	6	4
EHSRC403025A	3.0	3.0	25	60	6	4
EHSRC403030A	3.0	3.0	30	75	6	4
EHSRC403035A	3.0	3.0	35	75	6	4

Cutting conditions：Table 021

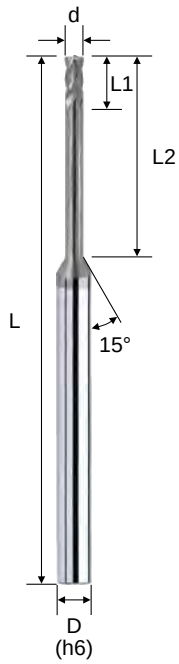
* A is ARCO Coating
S is SICO Coating

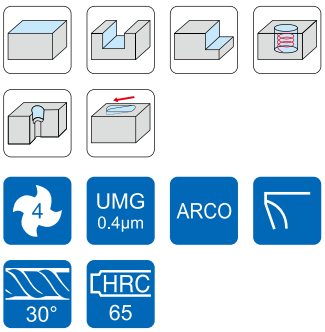
H650 - Long Neck · Square · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSRC

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSRC404010A	4.0	4.0	10	50	6	4
EHSRC404012A	4.0	4.0	12	50	6	4
EHSRC404016A	4.0	4.0	16	50	6	4
EHSRC404020A	4.0	4.0	20	60	6	4
EHSRC404025A	4.0	4.0	25	60	6	4
EHSRC404030A	4.0	4.0	30	75	6	4
EHSRC405016A	5.0	5.0	16	50	6	4
EHSRC405020A	5.0	5.0	20	60	6	4
EHSRC405025A	5.0	5.0	25	60	6	4
EHSRC405030A	5.0	5.0	30	75	6	4
EHSRC406020A	6.0	6.0	20	60	6	4
EHSRC406030A	6.0	6.0	30	75	6	4
EHSRC408020A	8.0	15.0	20	60	8	4
EHSRC408030A	8.0	15.0	30	75	8	4
EHSRC408040A	8.0	15.0	40	100	8	4
EHSRC410025A	10.0	20.0	25	75	10	4
EHSRC410035A	10.0	20.0	35	100	10	4
EHSRC410045A	10.0	20.0	45	100	10	4
EHSRC412030A	12.0	25.0	30	75	12	4
EHSRC412040A	12.0	25.0	40	100	12	4
EHSRC412050A	12.0	25.0	50	100	12	4

Cutting conditions：Table 021

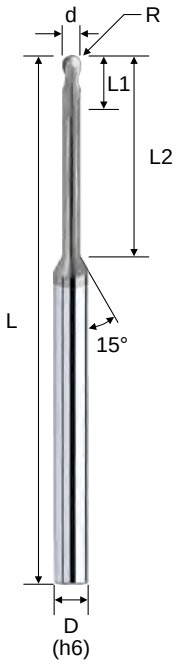
* A is ARCO Coating
S is SICO Coating

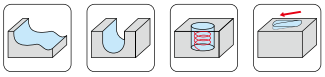
H650 - Long Neck · Ball Nose · 2F

- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBRC

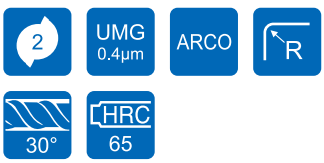
P	M	K	N	S	H
●	○	●		○	●





Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHBRC240301A	0.15R	0.3	0.3	1	50	4	2
* EHBRC240302A	0.15R	0.3	0.3	2	50	4	2
* EHBRC240303A	0.15R	0.3	0.3	3	50	4	2
* EHBRC240401A	0.20R	0.4	0.4	1	50	4	2
* EHBRC240402A	0.20R	0.4	0.4	2	50	4	2
* EHBRC240403A	0.20R	0.4	0.4	3	50	4	2
* EHBRC240404A	0.20R	0.4	0.4	4	50	4	2
* EHBRC240405A	0.20R	0.4	0.4	5	50	4	2
* EHBRC240406A	0.20R	0.4	0.4	6	50	4	2
* EHBRC240408A	0.20R	0.4	0.4	8	50	4	2
* EHBRC240501A	0.25R	0.5	0.5	1	50	4	2
* EHBRC240502A	0.25R	0.5	0.5	2	50	4	2
* EHBRC240503A	0.25R	0.5	0.5	3	50	4	2
* EHBRC240504A	0.25R	0.5	0.5	4	50	4	2
* EHBRC240505A	0.25R	0.5	0.5	5	50	4	2
* EHBRC240506A	0.25R	0.5	0.5	6	50	4	2
* EHBRC240508A	0.25R	0.5	0.5	8	50	4	2
* EHBRC240510A	0.25R	0.5	0.5	10	50	4	2
* EHBRC240601A	0.30R	0.6	0.6	1	50	4	2
* EHBRC240602A	0.30R	0.6	0.6	2	50	4	2
* EHBRC240603A	0.30R	0.6	0.6	3	50	4	2
* EHBRC240604A	0.30R	0.6	0.6	4	50	4	2
* EHBRC240605A	0.30R	0.6	0.6	5	50	4	2
* EHBRC240606A	0.30R	0.6	0.6	6	50	4	2
* EHBRC240608A	0.30R	0.6	0.6	8	50	4	2
* EHBRC240610A	0.30R	0.6	0.6	10	50	4	2
* EHBRC240612A	0.30R	0.6	0.6	12	50	4	2

Cutting conditions：Table 022



R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

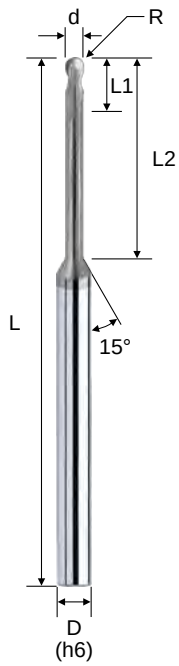
* A is ARCO Coating
S is SICO Coating

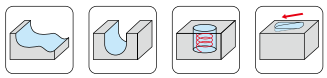
H650 - Long Neck · Ball Nose · 2F

- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBRC

P	M	K	N	S	H
●	○	●		○	●





2 | UMG 0.4μm | ARCO | R

30° | HRC 65

R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHBRC240702A	0.35R	0.7	0.7	2	50	4	2
* EHBRC240704A	0.35R	0.7	0.7	4	50	4	2
* EHBRC240708A	0.35R	0.7	0.7	8	50	4	2
* EHBRC240710A	0.35R	0.7	0.7	10	50	4	2
* EHBRC240712A	0.35R	0.7	0.7	12	50	4	2
* EHBRC240802A	0.40R	0.8	0.8	2	50	4	2
* EHBRC240804A	0.40R	0.8	0.8	4	50	4	2
* EHBRC240806A	0.40R	0.8	0.8	6	50	4	2
* EHBRC240808A	0.40R	0.8	0.8	8	50	4	2
* EHBRC240810A	0.40R	0.8	0.8	10	50	4	2
* EHBRC240812A	0.40R	0.8	0.8	12	50	4	2
* EHBRC240904A	0.45R	0.9	0.9	4	50	4	2
* EHBRC241002A	0.50R	1.0	1.0	2	50	4	2
* EHBRC241003A	0.50R	1.0	1.0	3	50	4	2
* EHBRC241004A	0.50R	1.0	1.0	4	50	4	2
* EHBRC241005A	0.50R	1.0	1.0	5	50	4	2
* EHBRC241006A	0.50R	1.0	1.0	6	50	4	2
* EHBRC241008A	0.50R	1.0	1.0	8	50	4	2
* EHBRC241010A	0.50R	1.0	1.0	10	50	4	2
* EHBRC241012A	0.50R	1.0	1.0	12	50	4	2
* EHBRC241014A	0.50R	1.0	1.0	14	50	4	2
* EHBRC241016A	0.50R	1.0	1.0	16	50	4	2
* EHBRC241018A	0.50R	1.0	1.0	18	50	4	2
* EHBRC241020A	0.50R	1.0	1.0	20	50	4	2
* EHBRC241022A	0.50R	1.0	1.0	22	60	4	2
EHBRC201004A	0.50R	1.0	1.0	4	50	6	2
EHBRC201006A	0.50R	1.0	1.0	6	50	6	2
EHBRC201008A	0.50R	1.0	1.0	8	50	6	2
EHBRC201010A	0.50R	1.0	1.0	10	50	6	2
EHBRC201012A	0.50R	1.0	1.0	12	50	6	2

Cutting conditions：Table 022

* A is ARCO Coating

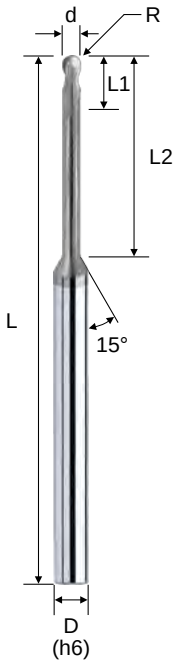
S is SICO Coating

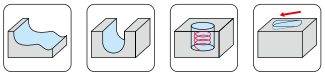
H650 - Long Neck · Ball Nose · 2F

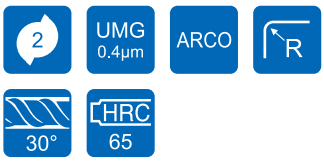
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBRC

P	M	K	N	S	H
●	○	●		○	●







R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHBRC241204A	0.60R	1.2	1.2	4	50	4	2
* EHBRC241206A	0.60R	1.2	1.2	6	50	4	2
* EHBRC241208A	0.60R	1.2	1.2	8	50	4	2
* EHBRC241210A	0.60R	1.2	1.2	10	50	4	2
* EHBRC241212A	0.60R	1.2	1.2	12	50	4	2
* EHBRC241216A	0.60R	1.2	1.2	16	50	4	2
* EHBRC241220A	0.60R	1.2	1.2	20	50	4	2
* EHBRC241224A	0.60R	1.2	1.2	24	60	4	2
* EHBRC241406A	0.70R	1.4	1.4	6	50	4	2
* EHBRC241408A	0.70R	1.4	1.4	8	50	4	2
* EHBRC241412A	0.70R	1.4	1.4	12	50	4	2
* EHBRC241416A	0.70R	1.4	1.4	16	50	4	2
* EHBRC241503A	0.75R	1.5	1.5	3	50	4	2
* EHBRC241504A	0.75R	1.5	1.5	4	50	4	2
* EHBRC241506A	0.75R	1.5	1.5	6	50	4	2
* EHBRC241508A	0.75R	1.5	1.5	8	50	4	2
* EHBRC241510A	0.75R	1.5	1.5	10	50	4	2
* EHBRC241512A	0.75R	1.5	1.5	12	50	4	2
* EHBRC241514A	0.75R	1.5	1.5	14	50	4	2
* EHBRC241516A	0.75R	1.5	1.5	16	50	4	2
* EHBRC241518A	0.75R	1.5	1.5	18	50	4	2
* EHBRC241520A	0.75R	1.5	1.5	20	50	4	2
* EHBRC241522A	0.75R	1.5	1.5	22	60	4	2
* EHBRC241525A	0.75R	1.5	1.5	25	60	4	2
* EHBRC241530A	0.75R	1.5	1.5	30	75	4	2
EHBRC201506A	0.75R	1.5	1.5	6	50	6	2
EHBRC201508A	0.75R	1.5	1.5	8	50	6	2
EHBRC201510A	0.75R	1.5	1.5	10	50	6	2
EHBRC201512A	0.75R	1.5	1.5	12	50	6	2

Cutting conditions：Table 022

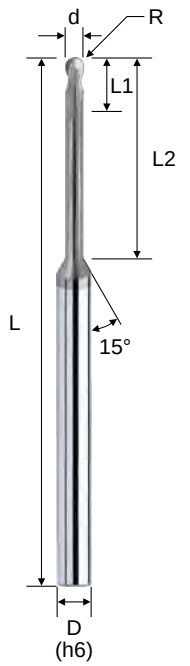
* A is ARCO Coating
S is SICO Coating

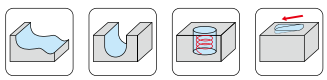
H650 - Long Neck · Ball Nose · 2F

- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBRC

P	M	K	N	S	H
●	○	●		○	●





2 | UMG 0.4μm | ARCO | R

30° | HRC 65

R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHBRC241606A	0.80R	1.6	1.6	6	50	4	2
* EHBRC241608A	0.80R	1.6	1.6	8	50	4	2
* EHBRC241612A	0.80R	1.6	1.6	12	50	4	2
* EHBRC241616A	0.80R	1.6	1.6	16	50	4	2
* EHBRC241620A	0.80R	1.6	1.6	20	50	4	2
* EHBRC241806A	0.90R	1.8	1.8	6	50	4	2
* EHBRC241808A	0.90R	1.8	1.8	8	50	4	2
* EHBRC241812A	0.90R	1.8	1.8	12	50	4	2
* EHBRC241816A	0.90R	1.8	1.8	16	50	4	2
* EHBRC241820A	0.90R	1.8	1.8	20	50	4	2
* EHBRC242004A	1.00R	2.0	2.0	4	50	4	2
* EHBRC242006A	1.00R	2.0	2.0	6	50	4	2
* EHBRC242008A	1.00R	2.0	2.0	8	50	4	2
* EHBRC242010A	1.00R	2.0	2.0	10	50	4	2
* EHBRC242012A	1.00R	2.0	2.0	12	50	4	2
* EHBRC242014A	1.00R	2.0	2.0	14	50	4	2
* EHBRC242016A	1.00R	2.0	2.0	16	50	4	2
* EHBRC242018A	1.00R	2.0	2.0	18	50	4	2
* EHBRC242020A	1.00R	2.0	2.0	20	50	4	2
* EHBRC242022A	1.00R	2.0	2.0	22	60	4	2
* EHBRC242025A	1.00R	2.0	2.0	25	60	4	2
EHBRC202006A	1.00R	2.0	2.0	6	50	6	2
EHBRC202008A	1.00R	2.0	2.0	8	50	6	2
EHBRC202010A	1.00R	2.0	2.0	10	50	6	2
EHBRC202016A	1.00R	2.0	2.0	16	50	6	2

Cutting conditions：Table 022

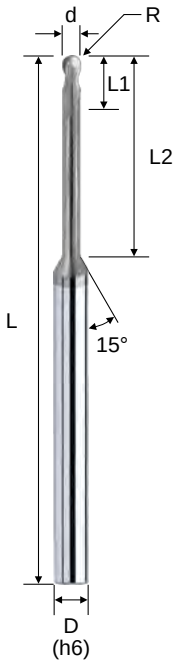
* A is ARCO Coating
S is SICO Coating

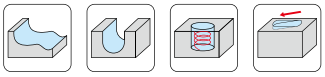
H650 - Long Neck · Ball Nose · 2F

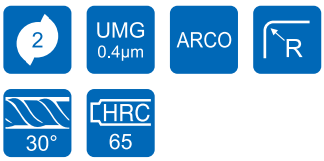
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBRC

P	M	K	N	S	H
●	○	●		○	●







R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EHBRC242508A	1.25R	2.5	2.5	8	50	4	2
* EHBRC242510A	1.25R	2.5	2.5	10	50	4	2
* EHBRC242516A	1.25R	2.5	2.5	16	50	4	2
* EHBRC242520A	1.25R	2.5	2.5	20	60	4	2
* EHBRC242525A	1.25R	2.5	2.5	25	60	4	2
* EHBRC242530A	1.25R	2.5	2.5	30	75	4	2
EHBRC202506A	1.25R	2.5	2.5	6	50	6	2
EHBRC202510A	1.25R	2.5	2.5	10	50	6	2
EHBRC203006A	1.50R	3.0	3.0	6	50	6	2
EHBRC203008A	1.50R	3.0	3.0	8	50	6	2
EHBRC203010A	1.50R	3.0	3.0	10	50	6	2
EHBRC203012A	1.50R	3.0	3.0	12	50	6	2
EHBRC203016A	1.50R	3.0	3.0	16	60	6	2
EHBRC203020A	1.50R	3.0	3.0	20	60	6	2
EHBRC203025A	1.50R	3.0	3.0	25	60	6	2
EHBRC203030A	1.50R	3.0	3.0	30	75	6	2
EHBRC203035A	1.50R	3.0	3.0	35	75	6	2
EHBRC204008A	2.00R	4.0	4.0	8	50	6	2
EHBRC204010A	2.00R	4.0	4.0	10	50	6	2
EHBRC204012A	2.00R	4.0	4.0	12	50	6	2
EHBRC204016A	2.00R	4.0	4.0	16	60	6	2
EHBRC204020A	2.00R	4.0	4.0	20	60	6	2
EHBRC204025A	2.00R	4.0	4.0	25	60	6	2
EHBRC204030A	2.00R	4.0	4.0	30	75	6	2
EHBRC204035A	2.00R	4.0	4.0	35	75	6	2
EHBRC205015A	2.50R	5.0	5.0	15	60	6	2
EHBRC205020A	2.50R	5.0	5.0	20	60	6	2
EHBRC205025A	2.50R	5.0	5.0	25	60	6	2
EHBRC205030A	2.50R	5.0	5.0	30	75	6	2
EHBRC206015A	3.00R	6.0	10.0	15	50	6	2
EHBRC208025A	4.00R	8.0	12.0	25	60	8	2
EHBRC210030A	5.00R	10.0	16.0	30	75	10	2
EHBRC212030A	6.00R	12.0	18.0	30	75	12	2

Cutting conditions : Table 022

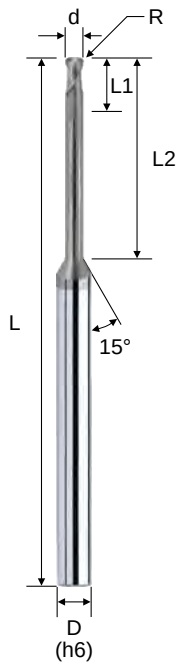
* A is ARCO Coating
S is SICO Coating

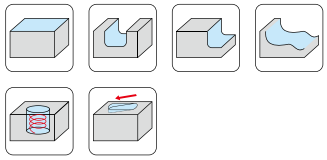
H650 - Long Neck · Corner Radius · 2F

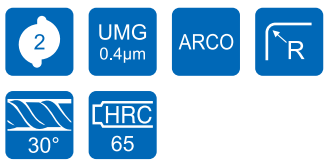
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC24100104A	1.0	0.1R	1.0	4	50	4	2
*EHCRC24100106A	1.0	0.1R	1.0	6	50	4	2
*EHCRC24100108A	1.0	0.1R	1.0	8	50	4	2
*EHCRC24100110A	1.0	0.1R	1.0	10	50	4	2
*EHCRC24100112A	1.0	0.1R	1.0	12	50	4	2
*EHCRC24100204A	1.0	0.2R	1.0	4	50	4	2
*EHCRC24100206A	1.0	0.2R	1.0	6	50	4	2
*EHCRC24100208A	1.0	0.2R	1.0	8	50	4	2
*EHCRC24100210A	1.0	0.2R	1.0	10	50	4	2
*EHCRC24100212A	1.0	0.2R	1.0	12	50	4	2
*EHCRC24100304A	1.0	0.3R	1.0	4	50	4	2
*EHCRC24100306A	1.0	0.3R	1.0	6	50	4	2
*EHCRC24100308A	1.0	0.3R	1.0	8	50	4	2
*EHCRC24100310A	1.0	0.3R	1.0	10	50	4	2
*EHCRC24100312A	1.0	0.3R	1.0	12	50	4	2
*EHCRC24120104A	1.2	0.1R	1.2	4	50	4	2
*EHCRC24120106A	1.2	0.1R	1.2	6	50	4	2
*EHCRC24120108A	1.2	0.1R	1.2	8	50	4	2
*EHCRC24120110A	1.2	0.1R	1.2	10	50	4	2
*EHCRC24120112A	1.2	0.1R	1.2	12	50	4	2
*EHCRC24120204A	1.2	0.2R	1.2	4	50	4	2
*EHCRC24120206A	1.2	0.2R	1.2	6	50	4	2
*EHCRC24120208A	1.2	0.2R	1.2	8	50	4	2
*EHCRC24120210A	1.2	0.2R	1.2	10	50	4	2
*EHCRC24120212A	1.2	0.2R	1.2	12	50	4	2
*EHCRC24120304A	1.2	0.3R	1.2	4	50	4	2
*EHCRC24120306A	1.2	0.3R	1.2	6	50	4	2
*EHCRC24120308A	1.2	0.3R	1.2	8	50	4	2
*EHCRC24120310A	1.2	0.3R	1.2	10	50	4	2
*EHCRC24120312A	1.2	0.3R	1.2	12	50	4	2

Cutting conditions：Table 023

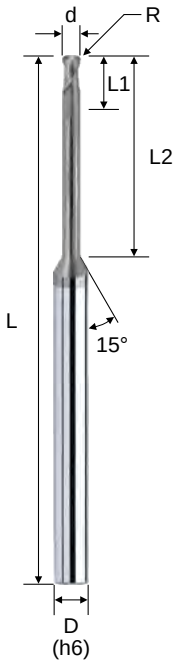
* A is ARCO Coating
S is SICO Coating

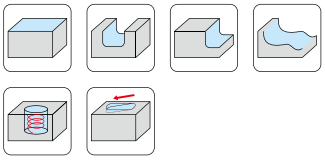
H650 - Long Neck · Corner Radius · 2F

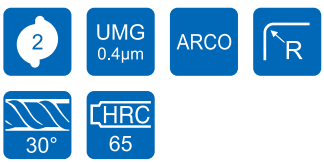
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC24150106A	1.5	0.1R	1.5	6	50	4	2
*EHCRC24150108A	1.5	0.1R	1.5	8	50	4	2
*EHCRC24150110A	1.5	0.1R	1.5	10	50	4	2
*EHCRC24150112A	1.5	0.1R	1.5	12	50	4	2
*EHCRC24150116A	1.5	0.1R	1.5	16	50	4	2
*EHCRC24150206A	1.5	0.2R	1.5	6	50	4	2
*EHCRC24150208A	1.5	0.2R	1.5	8	50	4	2
*EHCRC24150210A	1.5	0.2R	1.5	10	50	4	2
*EHCRC24150212A	1.5	0.2R	1.5	12	50	4	2
*EHCRC24150216A	1.5	0.2R	1.5	16	50	4	2
*EHCRC24150306A	1.5	0.3R	1.5	6	50	4	2
*EHCRC24150308A	1.5	0.3R	1.5	8	50	4	2
*EHCRC24150310A	1.5	0.3R	1.5	10	50	4	2
*EHCRC24150312A	1.5	0.3R	1.5	12	50	4	2
*EHCRC24150316A	1.5	0.3R	1.5	16	50	4	2
*EHCRC24150506A	1.5	0.5R	1.5	6	50	4	2
*EHCRC24150508A	1.5	0.5R	1.5	8	50	4	2
*EHCRC24150510A	1.5	0.5R	1.5	10	50	4	2
*EHCRC24150512A	1.5	0.5R	1.5	12	50	4	2
*EHCRC24150516A	1.5	0.5R	1.5	16	50	4	2

Cutting conditions：Table 023

* A is ARCO Coating
S is SICO Coating

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

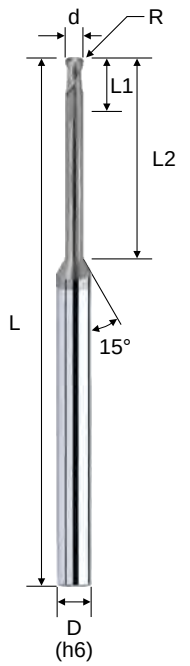
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

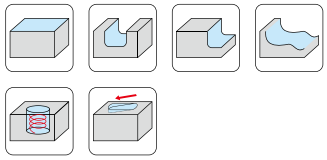
H650 - Long Neck · Corner Radius · 2F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●





2 | UMG 0.4μm | ARCO | R

30° | HRC 65

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC24200106A	2.0	0.1R	2.0	6	50	4	2
*EHCRC24200108A	2.0	0.1R	2.0	8	50	4	2
*EHCRC24200110A	2.0	0.1R	2.0	10	50	4	2
*EHCRC24200112A	2.0	0.1R	2.0	12	50	4	2
*EHCRC24200116A	2.0	0.1R	2.0	16	50	4	2
*EHCRC24200120A	2.0	0.1R	2.0	20	50	4	2
*EHCRC24200125A	2.0	0.1R	2.0	25	60	4	2
*EHCRC24200206A	2.0	0.2R	2.0	6	50	4	2
*EHCRC24200208A	2.0	0.2R	2.0	8	50	4	2
*EHCRC24200210A	2.0	0.2R	2.0	10	50	4	2
*EHCRC24200212A	2.0	0.2R	2.0	12	50	4	2
*EHCRC24200216A	2.0	0.2R	2.0	16	50	4	2
*EHCRC24200220A	2.0	0.2R	2.0	20	50	4	2
*EHCRC24200225A	2.0	0.2R	2.0	25	60	4	2
*EHCRC24200306A	2.0	0.3R	2.0	6	50	4	2
*EHCRC24200308A	2.0	0.3R	2.0	8	50	4	2
*EHCRC24200310A	2.0	0.3R	2.0	10	50	4	2
*EHCRC24200312A	2.0	0.3R	2.0	12	50	4	2
*EHCRC24200316A	2.0	0.3R	2.0	16	50	4	2
*EHCRC24200320A	2.0	0.3R	2.0	20	50	4	2
*EHCRC24200325A	2.0	0.3R	2.0	25	60	4	2
*EHCRC24200506A	2.0	0.5R	2.0	6	50	4	2
*EHCRC24200508A	2.0	0.5R	2.0	8	50	4	2
*EHCRC24200510A	2.0	0.5R	2.0	10	50	4	2
*EHCRC24200512A	2.0	0.5R	2.0	12	50	4	2
*EHCRC24200516A	2.0	0.5R	2.0	16	50	4	2
*EHCRC24200520A	2.0	0.5R	2.0	20	50	4	2
*EHCRC24200525A	2.0	0.5R	2.0	25	60	4	2
EHCRC20200510A	2.0	0.5R	2.0	10	50	6	2
EHCRC20200515A	2.0	0.5R	2.0	15	50	6	2

Cutting conditions：Table 023

* A is ARCO Coating
S is SICO Coating

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

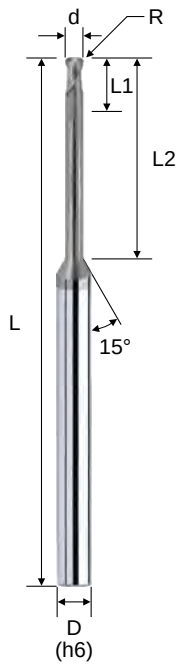
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

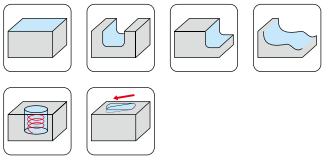
H650 - Long Neck · Corner Radius · 2F

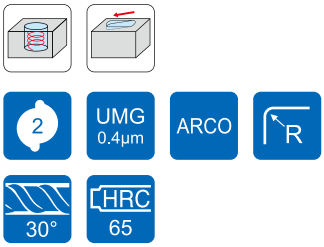
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC24250110A	2.5	0.1R	2.5	10	50	4	2
*EHCRC24250116A	2.5	0.1R	2.5	16	50	4	2
*EHCRC24250120A	2.5	0.1R	2.5	20	50	4	2
*EHCRC24250125A	2.5	0.1R	2.5	25	60	4	2
*EHCRC24250210A	2.5	0.2R	2.5	10	50	4	2
*EHCRC24250216A	2.5	0.2R	2.5	16	50	4	2
*EHCRC24250220A	2.5	0.2R	2.5	20	50	4	2
*EHCRC24250225A	2.5	0.2R	2.5	25	60	4	2
*EHCRC24250310A	2.5	0.3R	2.5	10	50	4	2
*EHCRC24250316A	2.5	0.3R	2.5	16	50	4	2
*EHCRC24250320A	2.5	0.3R	2.5	20	50	4	2
*EHCRC24250325A	2.5	0.3R	2.5	25	60	4	2
*EHCRC24250510A	2.5	0.5R	2.5	10	50	4	2
*EHCRC24250516A	2.5	0.5R	2.5	16	50	4	2
*EHCRC24250520A	2.5	0.5R	2.5	20	50	4	2
*EHCRC24250525A	2.5	0.5R	2.5	25	60	4	2

Cutting conditions：Table 023

* A is ARCO Coating
S is SICO Coating

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

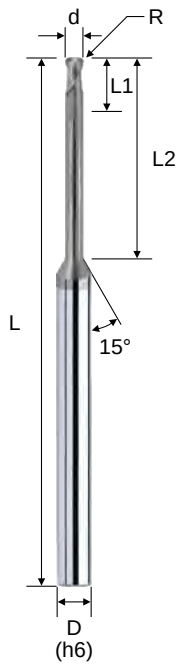
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

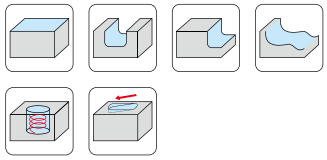
H650 - Long Neck · Corner Radius · 2F

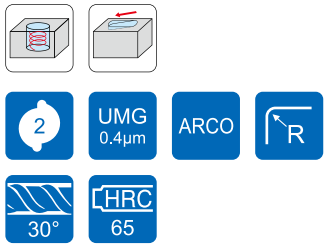
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20300110A	3.0	0.1R	3.0	10	50	6	2
EHCRC20300116A	3.0	0.1R	3.0	16	60	6	2
EHCRC20300120A	3.0	0.1R	3.0	20	60	6	2
EHCRC20300125A	3.0	0.1R	3.0	25	60	6	2
EHCRC20300130A	3.0	0.1R	3.0	30	75	6	2
EHCRC20300135A	3.0	0.1R	3.0	35	75	6	2
EHCRC20300210A	3.0	0.2R	3.0	10	50	6	2
EHCRC20300216A	3.0	0.2R	3.0	16	60	6	2
EHCRC20300220A	3.0	0.2R	3.0	20	60	6	2
EHCRC20300225A	3.0	0.2R	3.0	25	60	6	2
EHCRC20300230A	3.0	0.2R	3.0	30	75	6	2
EHCRC20300235A	3.0	0.2R	3.0	35	75	6	2
EHCRC20300310A	3.0	0.3R	3.0	10	50	6	2
EHCRC20300316A	3.0	0.3R	3.0	16	60	6	2
EHCRC20300320A	3.0	0.3R	3.0	20	60	6	2
EHCRC20300325A	3.0	0.3R	3.0	25	60	6	2
EHCRC20300330A	3.0	0.3R	3.0	30	75	6	2
EHCRC20300335A	3.0	0.3R	3.0	35	75	6	2
EHCRC20300510A	3.0	0.5R	3.0	10	50	6	2
EHCRC20300516A	3.0	0.5R	3.0	16	60	6	2
EHCRC20300520A	3.0	0.5R	3.0	20	60	6	2
EHCRC20300525A	3.0	0.5R	3.0	25	60	6	2
EHCRC20300530A	3.0	0.5R	3.0	30	75	6	2
EHCRC20300535A	3.0	0.5R	3.0	35	75	6	2
EHCRC20301010A	3.0	1.0R	3.0	10	50	6	2
EHCRC20301016A	3.0	1.0R	3.0	16	60	6	2
EHCRC20301020A	3.0	1.0R	3.0	20	60	6	2
EHCRC20301025A	3.0	1.0R	3.0	25	60	6	2
EHCRC20301030A	3.0	1.0R	3.0	30	75	6	2
EHCRC20301035A	3.0	1.0R	3.0	35	75	6	2

Cutting conditions：Table 023

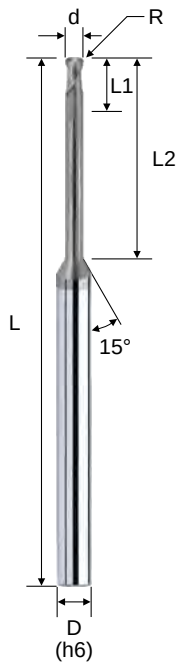
* A is ARCO Coating
S is SICO Coating

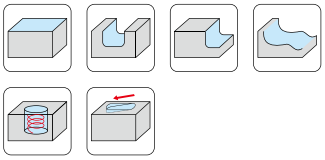
H650 - Long Neck · Corner Radius · 2F

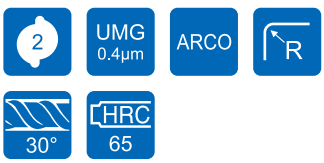
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20400113A	4.0	0.1R	4.0	13	50	6	2
EHCRC20400116A	4.0	0.1R	4.0	16	60	6	2
EHCRC20400120A	4.0	0.1R	4.0	20	60	6	2
EHCRC20400125A	4.0	0.1R	4.0	25	60	6	2
EHCRC20400130A	4.0	0.1R	4.0	30	75	6	2
EHCRC20400135A	4.0	0.1R	4.0	35	75	6	2
EHCRC20400213A	4.0	0.2R	4.0	13	50	6	2
EHCRC20400216A	4.0	0.2R	4.0	16	60	6	2
EHCRC20400220A	4.0	0.2R	4.0	20	60	6	2
EHCRC20400225A	4.0	0.2R	4.0	25	60	6	2
EHCRC20400230A	4.0	0.2R	4.0	30	75	6	2
EHCRC20400235A	4.0	0.2R	4.0	35	75	6	2
EHCRC20400313A	4.0	0.3R	4.0	13	50	6	2
EHCRC20400316A	4.0	0.3R	4.0	16	60	6	2
EHCRC20400320A	4.0	0.3R	4.0	20	60	6	2
EHCRC20400325A	4.0	0.3R	4.0	25	60	6	2
EHCRC20400330A	4.0	0.3R	4.0	30	75	6	2
EHCRC20400335A	4.0	0.3R	4.0	35	75	6	2
EHCRC20400513A	4.0	0.5R	4.0	13	50	6	2
EHCRC20400516A	4.0	0.5R	4.0	16	60	6	2
EHCRC20400520A	4.0	0.5R	4.0	20	60	6	2
EHCRC20400525A	4.0	0.5R	4.0	25	60	6	2
EHCRC20400530A	4.0	0.5R	4.0	30	75	6	2
EHCRC20400535A	4.0	0.5R	4.0	35	75	6	2
EHCRC20401013A	4.0	1.0R	4.0	13	50	6	2
EHCRC20401016A	4.0	1.0R	4.0	16	60	6	2
EHCRC20401020A	4.0	1.0R	4.0	20	60	6	2
EHCRC20401025A	4.0	1.0R	4.0	25	60	6	2
EHCRC20401030A	4.0	1.0R	4.0	30	75	6	2
EHCRC20401035A	4.0	1.0R	4.0	35	75	6	2

Cutting conditions：Table 023

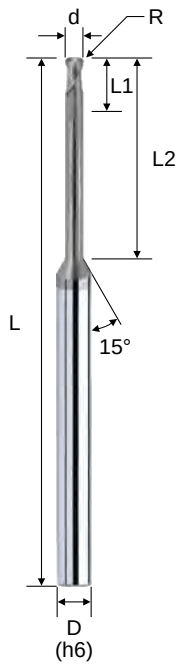
* A is ARCO Coating
S is SICO Coating

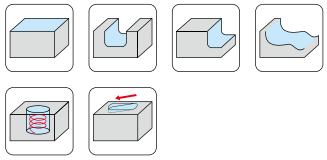
H650 - Long Neck · Corner Radius · 2F

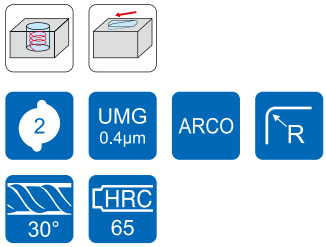
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20500116A	5.0	0.1R	5.0	16	60	6	2
EHCRC20500130A	5.0	0.1R	5.0	30	75	6	2
EHCRC20500216A	5.0	0.2R	5.0	16	60	6	2
EHCRC20500230A	5.0	0.2R	5.0	30	75	6	2
EHCRC20500316A	5.0	0.3R	5.0	16	60	6	2
EHCRC20500330A	5.0	0.3R	5.0	30	75	6	2
EHCRC20500516A	5.0	0.5R	5.0	16	60	6	2
EHCRC20500530A	5.0	0.5R	5.0	30	75	6	2
EHCRC20501016A	5.0	1.0R	5.0	16	60	6	2
EHCRC20501030A	5.0	1.0R	5.0	30	75	6	2
EHCRC20600120A	6.0	0.1R	7.0	20	60	6	2
EHCRC20600130A	6.0	0.1R	7.0	30	75	6	2
EHCRC20600220A	6.0	0.2R	7.0	20	60	6	2
EHCRC20600230A	6.0	0.2R	7.0	30	75	6	2
EHCRC20600320A	6.0	0.3R	7.0	20	60	6	2
EHCRC20600330A	6.0	0.3R	7.0	30	75	6	2
EHCRC20600520A	6.0	0.5R	7.0	20	60	6	2
EHCRC20600530A	6.0	0.5R	7.0	30	75	6	2
EHCRC20601020A	6.0	1.0R	7.0	20	60	6	2
EHCRC20601030A	6.0	1.0R	7.0	30	75	6	2
EHCRC20601520A	6.0	1.5R	7.0	20	60	6	2
EHCRC20601530A	6.0	1.5R	7.0	30	75	6	2
EHCRC20800522A	8.0	0.5R	9.0	22	60	8	2
EHCRC20801022A	8.0	1.0R	9.0	22	60	8	2
EHCRC20801522A	8.0	1.5R	9.0	22	60	8	2
EHCRC20802022A	8.0	2.0R	9.0	22	60	8	2
EHCRC21000524A	10.0	0.5R	11.0	24	75	10	2
EHCRC21001024A	10.0	1.0R	11.0	24	75	10	2
EHCRC21001524A	10.0	1.5R	11.0	24	75	10	2
EHCRC21002024A	10.0	2.0R	11.0	24	75	10	2
EHCRC21200526A	12.0	0.5R	13.0	26	75	12	2
EHCRC21201026A	12.0	1.0R	13.0	26	75	12	2
EHCRC21201526A	12.0	1.5R	13.0	26	75	12	2
EHCRC21202026A	12.0	2.0R	13.0	26	75	12	2

Cutting conditions：Table 023

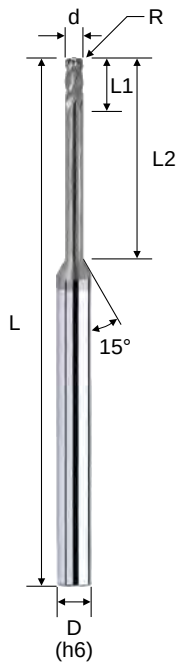
* A is ARCO Coating
S is SICO Coating

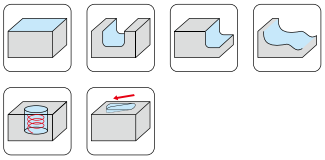
H650 - Long Neck · Corner Radius · 4F

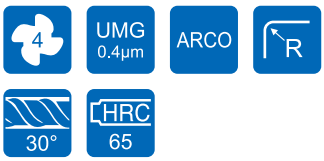
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC44200106A	2.0	0.1R	2.0	6	50	4	4
*EHCRC44200108A	2.0	0.1R	2.0	8	50	4	4
*EHCRC44200110A	2.0	0.1R	2.0	10	50	4	4
*EHCRC44200112A	2.0	0.1R	2.0	12	50	4	4
*EHCRC44200116A	2.0	0.1R	2.0	16	50	4	4
*EHCRC44200120A	2.0	0.1R	2.0	20	50	4	4
*EHCRC44200125A	2.0	0.1R	2.0	25	60	4	4
*EHCRC44200206A	2.0	0.2R	2.0	6	50	4	4
*EHCRC44200208A	2.0	0.2R	2.0	8	50	4	4
*EHCRC44200210A	2.0	0.2R	2.0	10	50	4	4
*EHCRC44200212A	2.0	0.2R	2.0	12	50	4	4
*EHCRC44200216A	2.0	0.2R	2.0	16	50	4	4
*EHCRC44200220A	2.0	0.2R	2.0	20	50	4	4
*EHCRC44200225A	2.0	0.2R	2.0	25	60	4	4
*EHCRC44200306A	2.0	0.3R	2.0	6	50	4	4
*EHCRC44200308A	2.0	0.3R	2.0	8	50	4	4
*EHCRC44200310A	2.0	0.3R	2.0	10	50	4	4
*EHCRC44200312A	2.0	0.3R	2.0	12	50	4	4
*EHCRC44200316A	2.0	0.3R	2.0	16	50	4	4
*EHCRC44200320A	2.0	0.3R	2.0	20	50	4	4
*EHCRC44200325A	2.0	0.3R	2.0	25	60	4	4
*EHCRC44200506A	2.0	0.5R	2.0	6	50	4	4
*EHCRC44200508A	2.0	0.5R	2.0	8	50	4	4
*EHCRC44200510A	2.0	0.5R	2.0	10	50	4	4
*EHCRC44200512A	2.0	0.5R	2.0	12	50	4	4
*EHCRC44200516A	2.0	0.5R	2.0	16	50	4	4
*EHCRC44200520A	2.0	0.5R	2.0	20	50	4	4
*EHCRC44200525A	2.0	0.5R	2.0	25	60	4	4
EHCRC40200510A	2.0	0.5R	2.0	10	50	6	4
EHCRC40200515A	2.0	0.5R	2.0	15	50	6	4

Cutting conditions：Table 024

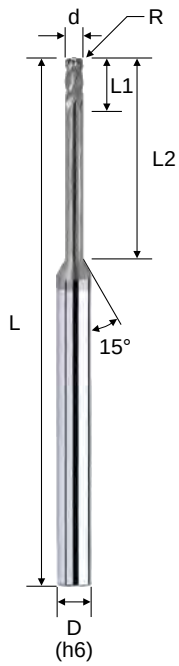
* A is ARCO Coating
S is SICO Coating

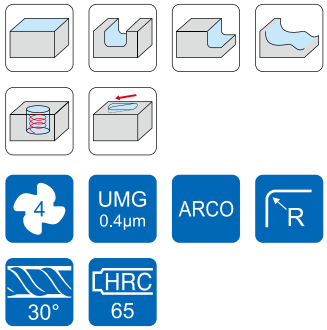
H650 - Long Neck · Corner Radius · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
*EHCRC44250110A	2.5	0.1R	2.5	10	50	4	4
*EHCRC44250116A	2.5	0.1R	2.5	16	50	4	4
*EHCRC44250120A	2.5	0.1R	2.5	20	50	4	4
*EHCRC44250125A	2.5	0.1R	2.5	25	60	4	4
*EHCRC44250210A	2.5	0.2R	2.5	10	50	4	4
*EHCRC44250216A	2.5	0.2R	2.5	16	50	4	4
*EHCRC44250220A	2.5	0.2R	2.5	20	50	4	4
*EHCRC44250225A	2.5	0.2R	2.5	25	60	4	4
*EHCRC44250310A	2.5	0.3R	2.5	10	50	4	4
*EHCRC44250316A	2.5	0.3R	2.5	16	50	4	4
*EHCRC44250320A	2.5	0.3R	2.5	20	50	4	4
*EHCRC44250325A	2.5	0.3R	2.5	25	60	4	4
*EHCRC44250510A	2.5	0.5R	2.5	10	50	4	4
*EHCRC44250516A	2.5	0.5R	2.5	16	50	4	4
*EHCRC44250520A	2.5	0.5R	2.5	20	50	4	4
*EHCRC44250525A	2.5	0.5R	2.5	25	60	4	4

Cutting conditions：Table 024

* A is ARCO Coating
S is SICO Coating

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

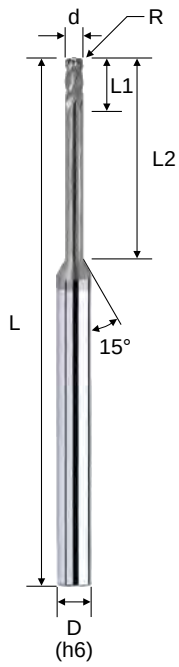
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

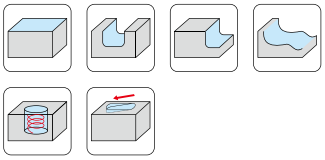
H650 - Long Neck · Corner Radius · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●





4 | UMG 0.4μm | ARCO | R

30° | HRC 65

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40300110A	3.0	0.1R	3.0	10	50	6	4
EHCRC40300116A	3.0	0.1R	3.0	16	60	6	4
EHCRC40300120A	3.0	0.1R	3.0	20	60	6	4
EHCRC40300125A	3.0	0.1R	3.0	25	60	6	4
EHCRC40300130A	3.0	0.1R	3.0	30	75	6	4
EHCRC40300135A	3.0	0.1R	3.0	35	75	6	4
EHCRC40300210A	3.0	0.2R	3.0	10	50	6	4
EHCRC40300216A	3.0	0.2R	3.0	16	60	6	4
EHCRC40300220A	3.0	0.2R	3.0	20	60	6	4
EHCRC40300225A	3.0	0.2R	3.0	25	60	6	4
EHCRC40300230A	3.0	0.2R	3.0	30	75	6	4
EHCRC40300235A	3.0	0.2R	3.0	35	75	6	4
EHCRC40300310A	3.0	0.3R	3.0	10	50	6	4
EHCRC40300316A	3.0	0.3R	3.0	16	60	6	4
EHCRC40300320A	3.0	0.3R	3.0	20	60	6	4
EHCRC40300325A	3.0	0.3R	3.0	25	60	6	4
EHCRC40300330A	3.0	0.3R	3.0	30	75	6	4
EHCRC40300335A	3.0	0.3R	3.0	35	75	6	4
EHCRC40300510A	3.0	0.5R	3.0	10	50	6	4
EHCRC40300516A	3.0	0.5R	3.0	16	60	6	4
EHCRC40300520A	3.0	0.5R	3.0	20	60	6	4
EHCRC40300525A	3.0	0.5R	3.0	25	60	6	4
EHCRC40300530A	3.0	0.5R	3.0	30	75	6	4
EHCRC40300535A	3.0	0.5R	3.0	35	75	6	4
EHCRC40301010A	3.0	1.0R	3.0	10	50	6	4
EHCRC40301016A	3.0	1.0R	3.0	16	60	6	4
EHCRC40301020A	3.0	1.0R	3.0	20	60	6	4
EHCRC40301025A	3.0	1.0R	3.0	25	60	6	4
EHCRC40301030A	3.0	1.0R	3.0	30	75	6	4
EHCRC40301035A	3.0	1.0R	3.0	35	75	6	4

Cutting conditions：Table 024

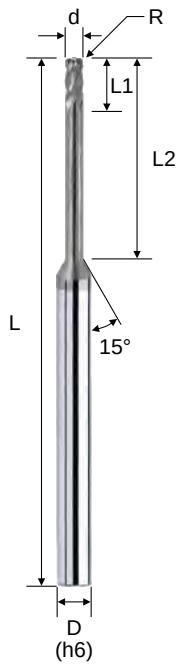
* A is ARCO Coating
S is SICO Coating

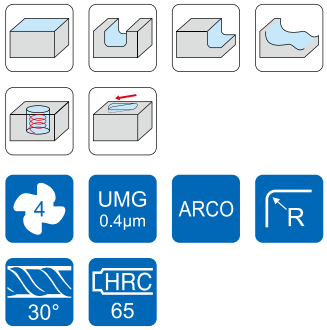
H650 - Long Neck · Corner Radius · 4F

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40400113A	4.0	0.1R	4.0	13	50	6	4
EHCRC40400116A	4.0	0.1R	4.0	16	60	6	4
EHCRC40400120A	4.0	0.1R	4.0	20	60	6	4
EHCRC40400125A	4.0	0.1R	4.0	25	60	6	4
EHCRC40400130A	4.0	0.1R	4.0	30	75	6	4
EHCRC40400135A	4.0	0.1R	4.0	35	75	6	4
EHCRC40400213A	4.0	0.2R	4.0	13	50	6	4
EHCRC40400216A	4.0	0.2R	4.0	16	60	6	4
EHCRC40400220A	4.0	0.2R	4.0	20	60	6	4
EHCRC40400225A	4.0	0.2R	4.0	25	60	6	4
EHCRC40400230A	4.0	0.2R	4.0	30	75	6	4
EHCRC40400235A	4.0	0.2R	4.0	35	75	6	4
EHCRC40400313A	4.0	0.3R	4.0	13	50	6	4
EHCRC40400316A	4.0	0.3R	4.0	16	60	6	4
EHCRC40400320A	4.0	0.3R	4.0	20	60	6	4
EHCRC40400325A	4.0	0.3R	4.0	25	60	6	4
EHCRC40400330A	4.0	0.3R	4.0	30	75	6	4
EHCRC40400335A	4.0	0.3R	4.0	35	75	6	4
EHCRC40400513A	4.0	0.5R	4.0	13	50	6	4
EHCRC40400516A	4.0	0.5R	4.0	16	60	6	4
EHCRC40400520A	4.0	0.5R	4.0	20	60	6	4
EHCRC40400525A	4.0	0.5R	4.0	25	60	6	4
EHCRC40400530A	4.0	0.5R	4.0	30	75	6	4
EHCRC40400535A	4.0	0.5R	4.0	35	75	6	4
EHCRC40401013A	4.0	1.0R	4.0	13	50	6	4
EHCRC40401016A	4.0	1.0R	4.0	16	60	6	4
EHCRC40401020A	4.0	1.0R	4.0	20	60	6	4
EHCRC40401025A	4.0	1.0R	4.0	25	60	6	4
EHCRC40401030A	4.0	1.0R	4.0	30	75	6	4
EHCRC40401035A	4.0	1.0R	4.0	35	75	6	4

Cutting conditions：Table 024

* A is ARCO Coating
S is SICO Coating

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

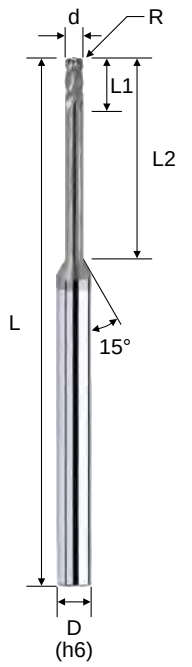
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

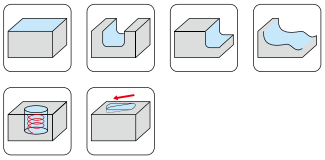
H650 - Long Neck · Corner Radius · 4F

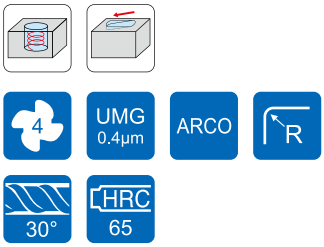
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCRC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40500116A	5.0	0.1R	5.0	16	60	6	4
EHCRC40500130A	5.0	0.1R	5.0	30	75	6	4
EHCRC40500216A	5.0	0.2R	5.0	16	60	6	4
EHCRC40500230A	5.0	0.2R	5.0	30	75	6	4
EHCRC40500316A	5.0	0.3R	5.0	16	60	6	4
EHCRC40500330A	5.0	0.3R	5.0	30	75	6	4
EHCRC40500516A	5.0	0.5R	5.0	16	60	6	4
EHCRC40500530A	5.0	0.5R	5.0	30	75	6	4
EHCRC40501016A	5.0	1.0R	5.0	16	60	6	4
EHCRC40501030A	5.0	1.0R	5.0	30	75	6	4
EHCRC40600120A	6.0	0.1R	7.0	20	60	6	4
EHCRC40600130A	6.0	0.1R	7.0	30	75	6	4
EHCRC40600220A	6.0	0.2R	7.0	20	60	6	4
EHCRC40600230A	6.0	0.2R	7.0	30	75	6	4
EHCRC40600320A	6.0	0.3R	7.0	20	60	6	4
EHCRC40600330A	6.0	0.3R	7.0	30	75	6	4
EHCRC40600520A	6.0	0.5R	7.0	20	60	6	4
EHCRC40600530A	6.0	0.5R	7.0	30	75	6	4
EHCRC40601020A	6.0	1.0R	7.0	20	60	6	4
EHCRC40601030A	6.0	1.0R	7.0	30	75	6	4
EHCRC40601520A	6.0	1.5R	7.0	20	60	6	4
EHCRC40601530A	6.0	1.5R	7.0	30	75	6	4
EHCRC40800522A	8.0	0.5R	9.0	22	60	8	4
EHCRC40801022A	8.0	1.0R	9.0	22	60	8	4
EHCRC40801522A	8.0	1.5R	9.0	22	60	8	4
EHCRC40802022A	8.0	2.0R	9.0	22	60	8	4
EHCRC41000524A	10.0	0.5R	11.0	24	75	10	4
EHCRC41001024A	10.0	1.0R	11.0	24	75	10	4
EHCRC41001524A	10.0	1.5R	11.0	24	75	10	4
EHCRC41002024A	10.0	2.0R	11.0	24	75	10	4
EHCRC41200526A	12.0	0.5R	13.0	26	75	12	4
EHCRC41201026A	12.0	1.0R	13.0	26	75	12	4
EHCRC41201526A	12.0	1.5R	13.0	26	75	12	4
EHCRC41202026A	12.0	2.0R	13.0	26	75	12	4

Cutting conditions：Table 024

* A is ARCO Coating
S is SICO Coating

H600 Series for general milling (Hardened steel HRC 40~68)

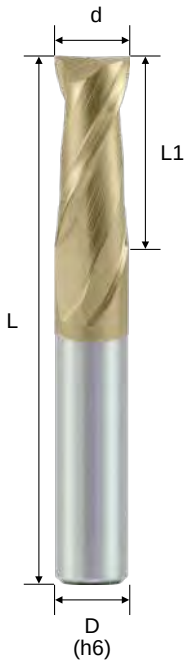
- For wide range material and more economical cutting.
- For general cutting in hardened steel HRC 40 ~ 60.
- For high speed cutting in alloy steel HRC 30 ~ 40.

H600 - Square · 2F

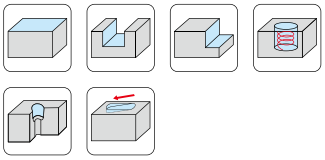
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

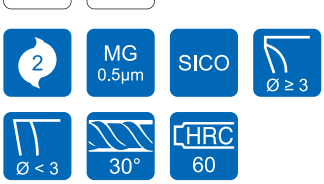
EHSSC

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSSC241000S	1	3	50	4	2
* EHSSC242000S	2	5	50	4	2
* EHSSC243000S	3	8	50	4	2
* EHSSC203000S	3	8	50	6	2
* EHSSC244000S	4	10	50	4	2
EHSSC204000S	4	10	50	6	2
EHSSC205000S	5	13	50	6	2
EHSSC206000S	6	15	50	6	2
EHSSC208000S	8	20	60	8	2
EHSSC210000S	10	25	75	10	2
EHSSC212000S	12	30	75	12	2
EHSSC216000S	16	35	100	16	2
EHSSC220000S	20	45	100	20	2





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

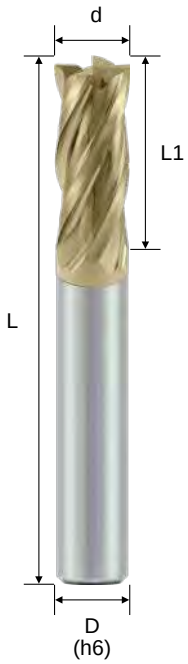
Cutting conditions：Table 025

H600 - Square · 4F

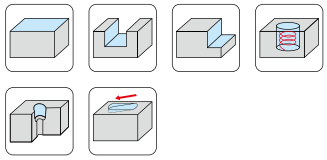
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

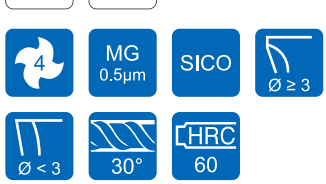
EHSSC

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSSC441000S	1.0	3	50	4	4
* EHSSC441500S	1.5	4	50	4	4
* EHSSC442000S	2.0	5	50	4	4
* EHSSC442500S	2.5	6	50	4	4
* EHSSC433000S	3.0	8	50	3	4
* EHSSC443000S	3.0	8	50	4	4
* EHSSC444000S	4.0	10	50	4	4
EHSSC405000S	5.0	13	50	6	4
EHSSC406000S	6.0	15	50	6	4
EHSSC408000S	8.0	20	60	8	4
EHSSC410000S	10.0	25	75	10	4
EHSSC412000S	12.0	30	75	12	4
EHSSC414000S	14.0	30	75	14	4
EHSSC416000S	16.0	40	100	16	4
EHSSC420000S	20.0	45	100	20	4
EHSSC425000S	25.0	45	100	25	4





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

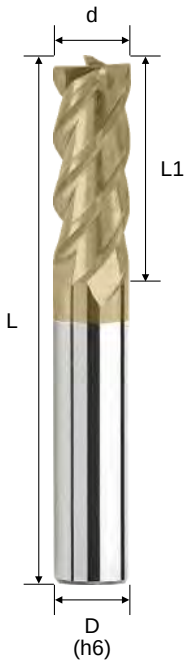
Cutting conditions：Table 026

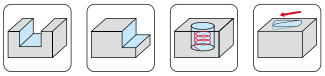
H600 - High Helix · Square · 4F

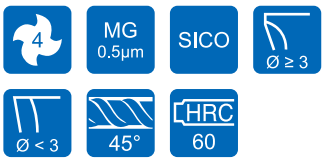
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHSSD

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSSD441000S	1	3	50	4	4
* EHSSD441500S	1.5	4	50	4	4
* EHSSD442000S	2	5	50	4	4
* EHSSD442500S	2.5	6	50	4	4
* EHSSD443000S	3	8	50	4	4
* EHSSD444000S	4	10	50	4	4
EHSSD406000S	6	15	50	6	4
EHSSD408000S	8	20	60	8	4
EHSSD410000S	10	25	75	10	4
EHSSD412000S	12	30	75	12	4
EHSSD414000S	14	30	75	14	4
EHSSD416000S	16	35	100	16	4

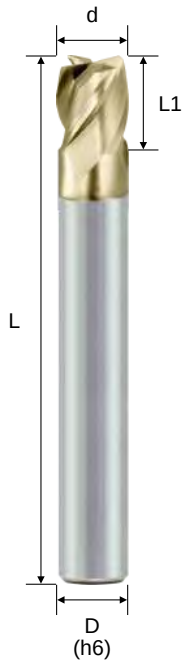
Cutting conditions：Table 027

H600 - Short Flute · Square · 4F

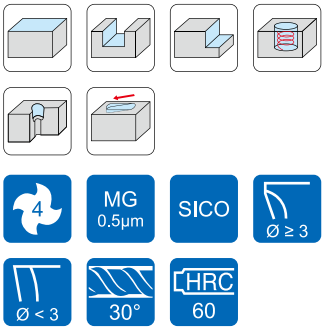
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHSHC

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSHC441000S	1	1	50	4	4
EHSHC441500S	1.5	1.5	50	4	4
EHSHC442000S	2	2	50	4	4
EHSHC442500S	2.5	2.5	50	4	4
EHSHC403000S	3	3	50	6	4
EHSHC404000S	4	4	50	6	4
EHSHC405000S	5	5	50	6	4
EHSHC406000S	6	6	60	6	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

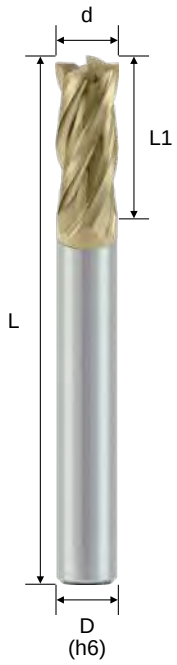
Cutting conditions：Table 026

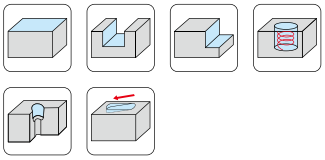
H600 - Long Shank · Square · 4F

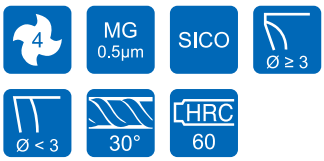
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHSLC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHSLC444006S	4	10	60	4	4
* EHSLC444007S	4	10	75	4	4
* EHSLC444010S	4	10	100	4	4
* EHSLC406006S	6	15	60	6	4
* EHSLC406007S	6	15	75	6	4
* EHSLC406010S	6	15	100	6	4
* EHSLC408007S	8	20	75	8	4
* EHSLC408010S	8	20	100	8	4
* EHSLC410010S	10	25	100	10	4
* EHSLC412010S	12	30	100	12	4
* EHSLC416015S	16	40	150	16	4

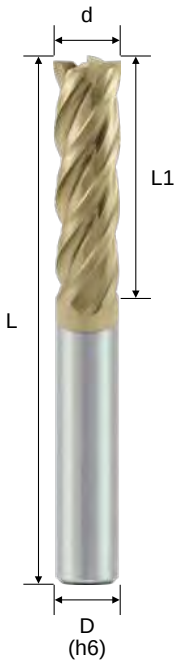
Cutting conditions：Table 031

H600 - Long Flute · Square · 4F

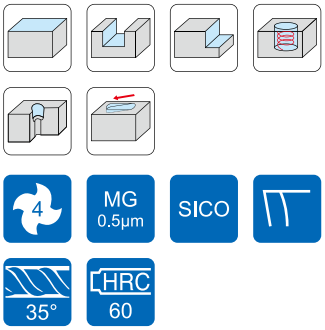
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHSCC

P	M	K	N	S	H
●	○	●		○	●



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSCC403000S	3	15	60	6	4
EHSCC404000S	4	20	60	6	4
EHSCC406000S	6	30	75	6	4
EHSCC408000S	8	35	100	8	4
EHSCC410000S	10	45	100	10	4
EHSCC410015S	10	50	150	10	4
EHSCC412000S	12	45	100	12	4
EHSCC412015S	12	50	150	12	4
EHSCC414000S	14	70	150	14	4
EHSCC416000S	16	70	150	16	4
EHSCC420000S	20	75	150	20	4



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

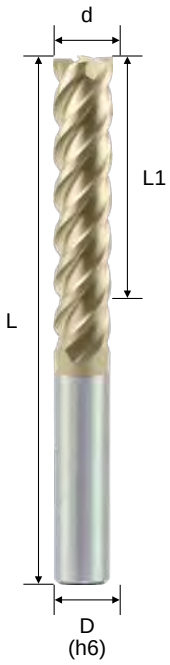
Cutting conditions：Table 028

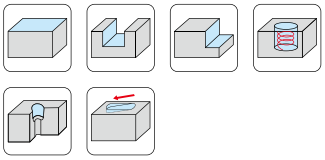
H600 - Extra Long Flute · Square · 4F

- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Suitable for deep side milling and finishing.
- Special geometry design, outstanding anti-vibrations and high surface finish quality.

EHSCH

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSCH406035S	6	35	100	6	4
EHSCH408040S	8	40	100	8	4
EHSCH410035S	10	35	75	10	4
EHSCH410050S	10	50	100	10	4
EHSCH412035S	12	35	75	12	4
EHSCH412055S	12	55	100	12	4

Cutting conditions：Table 028

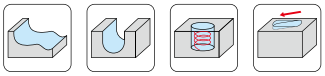
H600 - Ball Nose · 2F

- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHBSC

P	M	K	N	S	H
●	○	●		○	●

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBSC241000S	0.5R	1	2	50	4	2
* EHBSC241500S	0.75R	1.5	3	50	4	2
* EHBSC242000S	1.0R	2	4	50	4	2
* EHBSC233000S	1.5R	3	6	50	3	2
* EHBSC243000S	1.5R	3	6	50	4	2
* EHBSC244000S	2.0R	4	8	50	4	2
EHBSC204000S	2.0R	4	8	50	6	2
EHBSC206000S	3.0R	6	12	50	6	2
EHBSC208000S	4.0R	8	16	60	8	2
EHBSC210000S	5.0R	10	20	75	10	2
EHBSC212000S	6.0R	12	24	75	12	2
EHBSC216000S	8.0R	16	32	100	16	2
EHBSC220000S	10.0R	20	40	100	20	2



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Cutting conditions：Table 035

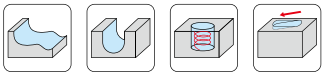
H600 - Long Shank · Ball Nose · 2F

- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHBLC

P	M	K	N	S	H
●	○	●		○	●

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHBLC244006S	2R	4	8	60	4	2
* EHBLC244007S	2R	4	8	75	4	2
* EHBLC244010S	2R	4	8	100	4	2
* EHBLC206006S	3R	6	12	60	6	2
* EHBLC206007S	3R	6	12	75	6	2
* EHBLC206010S	3R	6	12	100	6	2
* EHBLC208007S	4R	8	16	75	8	2
* EHBLC208010S	4R	8	16	100	8	2
* EHBLC210010S	5R	10	20	100	10	2
* EHBLC212010S	6R	12	24	100	12	2
* EHBLC216015S	8R	16	32	150	16	2
* EHBLC220015S	10R	20	40	150	20	2



R Tolerance	
R ≤ 3	±0.020
R > 3	±0.025

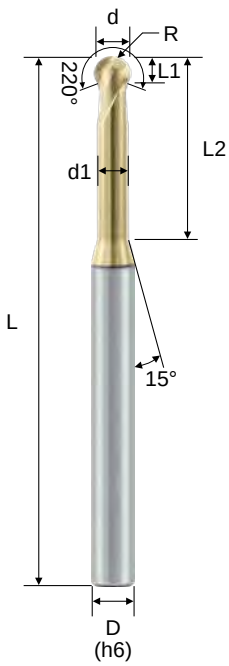
Cutting conditions：Table 037

H600 - Spherical Ball Nose · 2F

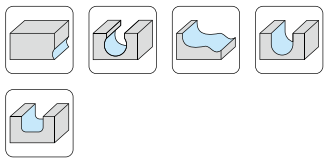
- Designed for undercutting & deburring applications.
- It provides an excellent surface finishing of vertical machining.
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for Steel, Alloy steel, Stainless steel, Cast iron, & Hardened steel.

EHRRC

P	M	K	N	S	H
●	○	●		○	●



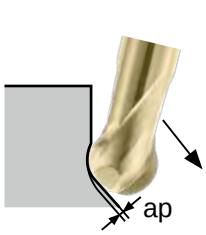
Order No.	Radius (R)	Dia. (d)	ND (d1)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHRRC2020221S	1.0R	2	1.7	1.4	5	60	6	2
EHRRC2020222S	1.0R	2	1.7	1.4	10	60	6	2
EHRRC2030221S	1.5R	3	2.6	2.0	8	75	6	2
EHRRC2030222S	1.5R	3	2.6	2.0	15	75	6	2
EHRRC2040221S	2.0R	4	3.4	2.7	10	75	6	2
EHRRC2040222S	2.0R	4	3.4	2.7	20	75	6	2
EHRRC2050221S	2.5R	5	4.3	3.4	12	75	6	2
EHRRC2050222S	2.5R	5	4.3	3.4	25	75	6	2
EHRRC2060221S	3.0R	6	5.1	4.3	15	75	6	2
EHRRC2060222S	3.0R	6	5.1	4.3	30	75	6	2

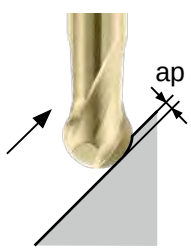


R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

■ *Recommended Cutting Conditions*

Material	Carbon Steel / Alloy Steel / Cast iron			Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)			Stainless Steel (SUS304, SUS316)			Hardened Steel		
Hardness	HRC < 30			HRC 30 ~ 45			-			HRC 45 ~ 60		
VC	220 ~ 300 m/min			150 ~ 220 m/min			70 ~ 150 m/min			130 ~ 150 m/min		
R (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)
1.0R	40,000	1,600	0.04	30,000	1,200	0.04	24,000	960	0.04	24,000	960	0.04
1.5R	32,000	1,920	0.06	23,000	1,380	0.06	16,000	960	0.06	16,000	960	0.06
2.0R	24,000	1,920	0.08	17,000	1,360	0.08	12,000	960	0.08	12,000	960	0.08
2.5R	19,200	1,920	0.10	14,000	1,400	0.10	9,600	960	0.10	9,600	960	0.10
3.0R	16,000	1,920	0.12	12,000	1,440	0.12	8,000	960	0.12	8,000	960	0.12



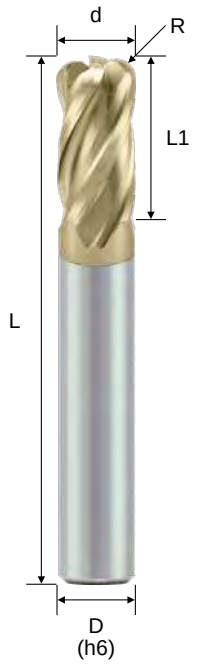


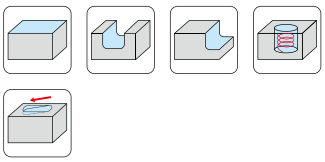
H600 - Corner Radius · 4F

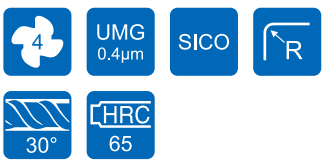
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHCSC

P	M	K	N	S	H
●	○	●		○	●







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EHCSC441002S	1	0.2R	2	50	4	4
* EHCSC441003S	1	0.3R	2	50	4	4
* EHCSC441502S	1.5	0.2R	3	50	4	4
* EHCSC441503S	1.5	0.3R	3	50	4	4
* EHCSC441505S	1.5	0.5R	3	50	4	4
* EHCSC442002S	2	0.2R	4	50	4	4
* EHCSC442003S	2	0.3R	4	50	4	4
* EHCSC442005S	2	0.5R	4	50	4	4
* EHCSC443002S	3	0.2R	6	50	4	4
* EHCSC443003S	3	0.3R	6	50	4	4
* EHCSC443005S	3	0.5R	6	50	4	4
* EHCSC443010S	3	1.0R	6	50	4	4
* EHCSC444002S	4	0.2R	8	50	4	4
* EHCSC444003S	4	0.3R	8	50	4	4
* EHCSC444005S	4	0.5R	8	50	4	4
* EHCSC444010S	4	1.0R	8	50	4	4
EHCSC406002S	6	0.2R	12	50	6	4
EHCSC406003S	6	0.3R	12	50	6	4
EHCSC406005S	6	0.5R	12	50	6	4
EHCSC406010S	6	1.0R	12	50	6	4
EHCSC408005S	8	0.5R	16	60	8	4
EHCSC408010S	8	1.0R	16	60	8	4
EHCSC410005S	10	0.5R	20	75	10	4
EHCSC410010S	10	1.0R	20	75	10	4
EHCSC410015S	10	1.5R	20	75	10	4
EHCSC412005S	12	0.5R	24	75	12	4
EHCSC412010S	12	1.0R	24	75	12	4
EHCSC412015S	12	1.5R	24	75	12	4
EHCSC416010S	16	1.0R	32	100	16	4

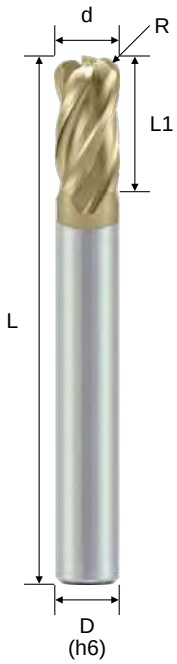
Cutting conditions：Table 042

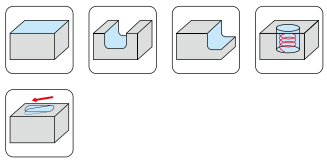
H600 - Long Shank · Corner Radius · 4F

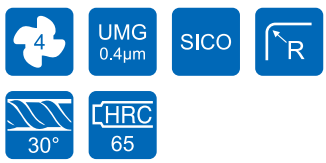
- SICO coating with anti-high temperature & anti-oxidation.
- Suitable for HRC 30 to HRC 60 Alloy Steel, Cast Iron, Prehardened steel, Hardened Steel, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- Universal geometry design is suitable for most materials.

EHCLC

P	M	K	N	S	H
●	○	●		○	●







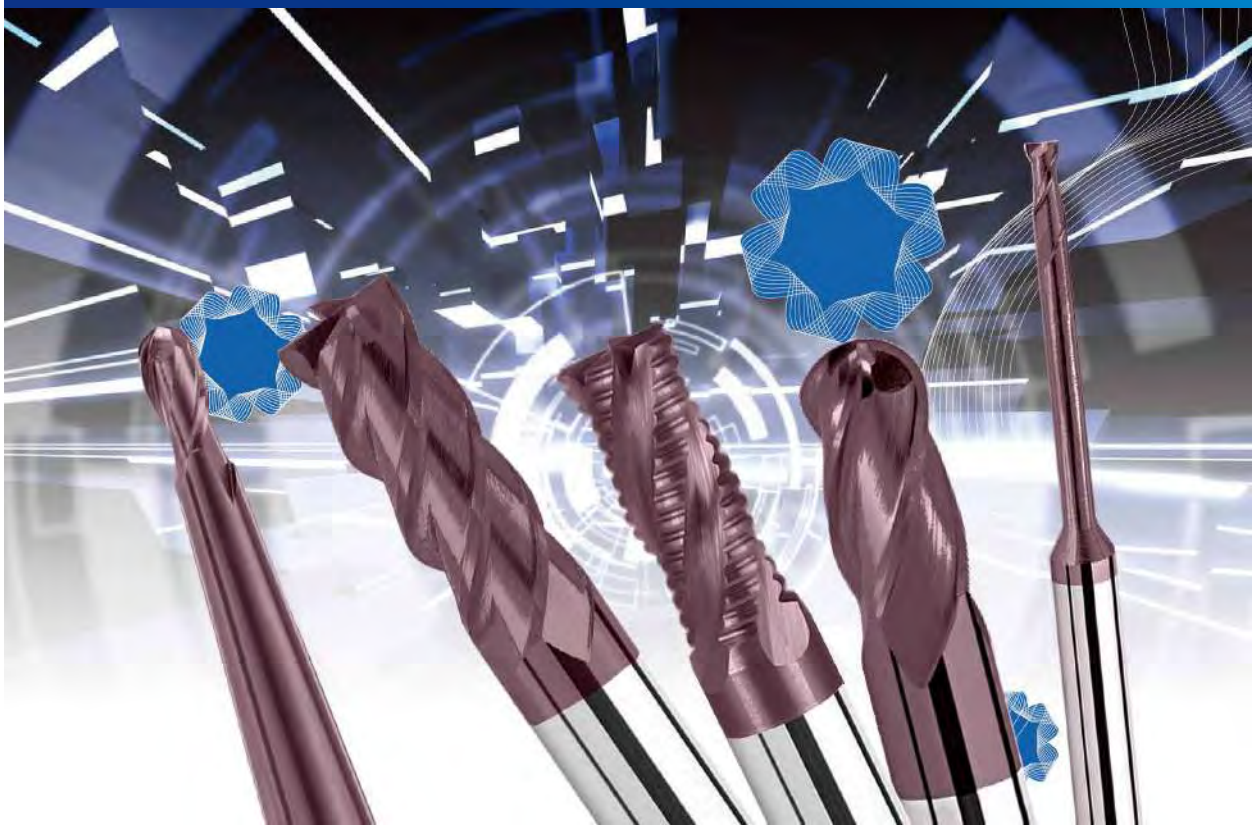
d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

R Tolerance	
R < 2	±0.020
R ≥ 2	±0.025

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
*EHCLC44400507S	4	0.5R	8	75	4	4
*EHCLC44400510S	4	0.5R	8	100	4	4
*EHCLC40600507S	6	0.5R	12	75	6	4
*EHCLC40601007S	6	1.0R	12	75	6	4
*EHCLC40600510S	6	0.5R	12	100	6	4
*EHCLC40800507S	8	0.5R	16	75	8	4
*EHCLC40800510S	8	0.5R	16	100	8	4
*EHCLC40801010S	8	1.0R	16	100	8	4
*EHCLC41000510S	10	0.5R	20	100	10	4
*EHCLC41001010S	10	1.0R	20	100	10	4
*EHCLC41200510S	12	0.5R	24	100	12	4
*EHCLC41201010S	12	1.0R	24	100	12	4
*EHCLC41601015S	16	1.0R	32	150	16	4

Cutting conditions：Table 044

G550 Series for general milling (Hardened steel & Steel HRC 25~55)



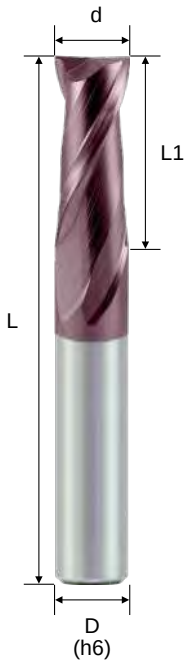
- Micro grain carbide rod is suitable for general machining.
- UNICO coating provides superior wear resistance and reduces the coefficient of friction.
- Stabilization of the cutting edge by edge flatland design and prevent chipping at corners.
- Universal geometry design is suitable for most materials.

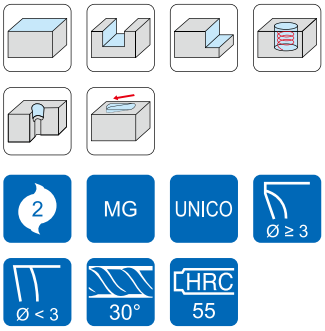
G550 - Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel,etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSSC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSC240200U	0.2	0.4	50	4	2
* EPSSC240300U	0.3	0.6	50	4	2
* EPSSC240400U	0.4	0.8	50	4	2
* EPSSC240500U	0.5	1.0	50	4	2
* EPSSC240600U	0.6	1.5	50	4	2
* EPSSC240700U	0.7	2.0	50	4	2
* EPSSC240800U	0.8	2.0	50	4	2
* EPSSC240900U	0.9	2.0	50	4	2
* EPSSC241000U	1.0	3.0	50	4	2
EPSSC201000U	1.0	3.0	50	6	2
* EPSSC241500U	1.5	4.0	50	4	2
* EPSSC242000U	2.0	5.0	50	4	2
EPSSC202000U	2.0	5.0	50	6	2
* EPSSC242500U	2.5	6.0	50	4	2
EPSSC233000U	3.0	8.0	50	3	2
* EPSSC243000U	3.0	8.0	50	4	2
EPSSC203000U	3.0	8.0	50	6	2
* EPSSC243500U	3.5	9.0	50	4	2
EPSSC203500U	3.5	9.0	50	6	2
* EPSSC244000U	4.0	10.0	50	4	2
EPSSC204000U	4.0	10.0	50	6	2
EPSSC204500U	4.5	11.0	50	6	2
EPSSC205000U	5.0	13.0	50	6	2
EPSSC205500U	5.5	14.0	50	6	2
EPSSC206000U	6.0	15.0	50	6	2
EPSSC206500U	6.5	16.0	60	8	2
EPSSC207000U	7.0	18.0	60	8	2
EPSSC208000U	8.0	20.0	60	8	2
EPSSC209000U	9.0	22.0	75	10	2
EPSSC210000U	10.0	25.0	75	10	2
EPSSC211000U	11.0	25.0	75	12	2
EPSSC212000U	12.0	30.0	75	12	2
EPSSC214000U	14.0	30.0	75	14	2
EPSSC216000U	16.0	40.0	100	16	2
EPSSC218000U	18.0	40.0	100	20	2
EPSSC220000U	20.0	45.0	100	20	2
EPSSC225000U	25.0	45.0	100	25	2

Cutting conditions：Table 025

G550 - Square · 3F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel,etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSSC

P	M	K	N	S	H
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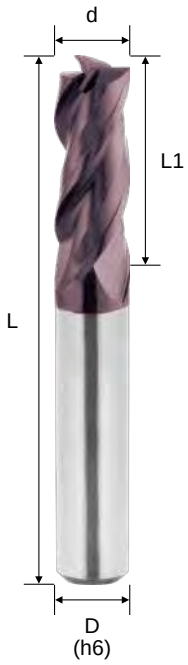

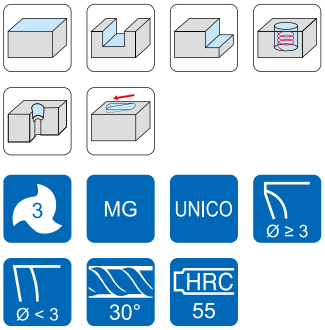

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSC331000U	1.0	3	50	3	3
* EPSSC331500U	1.5	4	50	3	3
* EPSSC332000U	2.0	5	50	3	3
* EPSSC333000U	3.0	8	50	3	3
* EPSSC341000U	1.0	3	50	4	3
* EPSSC341500U	1.5	4	50	4	3
* EPSSC342000U	2.0	5	50	4	3
* EPSSC342500U	2.5	6	50	4	3
* EPSSC343000U	3.0	8	50	4	3
* EPSSC343500U	3.5	9	50	4	3
* EPSSC344000U	4.0	10	50	4	3
EPSSC303000U	3.0	8	50	6	3
EPSSC303500U	3.5	9	50	6	3
EPSSC304000U	4.0	10	50	6	3
EPSSC304500U	4.5	11	50	6	3
EPSSC305000U	5.0	13	50	6	3
EPSSC305500U	5.5	14	50	6	3
EPSSC306000U	6.0	15	50	6	3
EPSSC306500U	6.5	16	60	8	3
EPSSC307000U	7.0	18	60	8	3
EPSSC308000U	8.0	20	60	8	3
EPSSC309000U	9.0	22	75	10	3
EPSSC310000U	10.0	25	75	10	3
EPSSC311000U	11.0	25	75	12	3
EPSSC312000U	12.0	30	75	12	3
EPSSC314000U	14.0	30	75	14	3
EPSSC316000U	16.0	40	100	16	3
EPSSC318000U	18.0	40	100	20	3
EPSSC320000U	20.0	45	100	20	3
EPSSC325000U	25.0	45	100	25	3

Cutting conditions：Table 026

G550 - Square · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSSC

P	M	K	N	S	H
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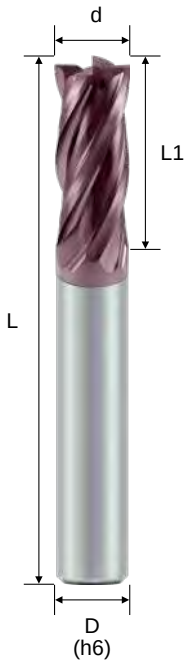
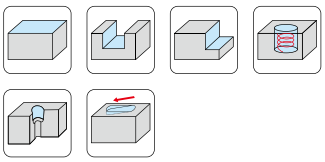
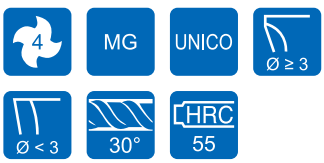






d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSC431000U	1.0	3	50	3	4
* EPSSC431500U	1.5	4	50	3	4
* EPSSC432000U	2.0	5	50	3	4
* EPSSC433000U	3.0	8	50	3	4
* EPSSC441000U	1.0	3	50	4	4
* EPSSC441500U	1.5	4	50	4	4
* EPSSC442000U	2.0	5	50	4	4
* EPSSC442500U	2.5	6	50	4	4
* EPSSC443000U	3.0	8	50	4	4
* EPSSC443500U	3.5	9	50	4	4
* EPSSC444000U	4.0	10	50	4	4
EPSSC403000U	3.0	8	50	6	4
EPSSC403500U	3.5	9	50	6	4
EPSSC404000U	4.0	10	50	6	4
EPSSC404500U	4.5	11	50	6	4
EPSSC405000U	5.0	13	50	6	4
EPSSC405500U	5.5	14	50	6	4
EPSSC406000U	6.0	15	50	6	4
EPSSC406500U	6.5	16	60	8	4
EPSSC407000U	7.0	18	60	8	4
EPSSC408000U	8.0	20	60	8	4
EPSSC409000U	9.0	22	75	10	4
EPSSC410000U	10.0	25	75	10	4
EPSSC411000U	11.0	25	75	12	4
EPSSC412000U	12.0	30	75	12	4
EPSSC414000U	14.0	30	75	14	4
EPSSC416000U	16.0	40	100	16	4
EPSSC418000U	18.0	40	100	20	4
EPSSC420000U	20.0	45	100	20	4
EPSSC425000U	25.0	45	100	25	4

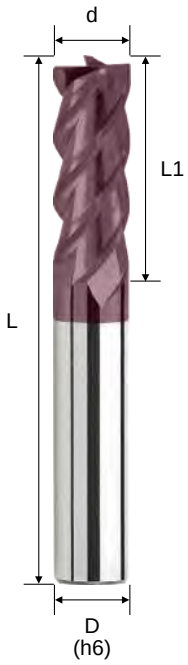
Cutting conditions：Table 026

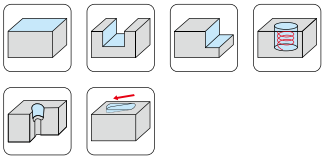
G550 - High Helix · Square · 4F

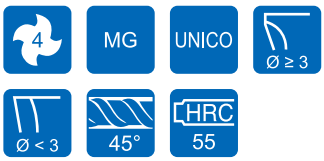
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, FRP, etc.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides hi speed milling capabilities.

EPSSH

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSH441000U	1.0	3	50	4	4
* EPSSH442000U	2.0	5	50	4	4
* EPSSH443000U	3.0	8	50	4	4
* EPSSH444000U	4.0	10	50	4	4
EPSSH405000U	5.0	13	50	6	4
EPSSH406000U	6.0	15	50	6	4
EPSSH407000U	7.0	18	60	8	4
EPSSH408000U	8.0	20	60	8	4
EPSSH409000U	9.0	22	75	10	4
EPSSH410000U	10.0	25	75	10	4
EPSSH411000U	11.0	25	75	12	4
EPSSH412000U	12.0	30	75	12	4
EPSSH414000U	14.0	30	75	14	4
EPSSH416000U	16.0	35	100	16	4

Cutting conditions：Table 027

G550 - Long Flute · Square · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Long cutting length is suitable for deep side milling.

EPSCC

P	M	K	N	S	H
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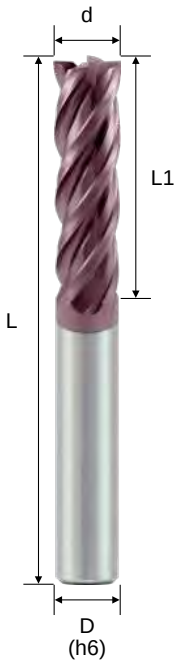
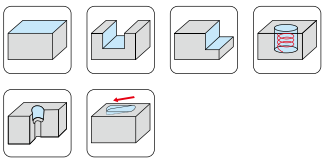




d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSCC403000U	3	15	60	6	4
EPSCC404000U	4	20	60	6	4
EPSCC405000U	5	25	75	6	4
EPSCC406000U	6	30	75	6	4
EPSCC408000U	8	35	100	8	4
EPSCC410000U	10	45	100	10	4
EPSCC412000U	12	45	100	12	4
EPSCC414000U	14	70	150	14	4
EPSCC416000U	16	70	150	16	4
EPSCC420000U	20	75	150	20	4
EPSCC425000U	25	75	150	25	4

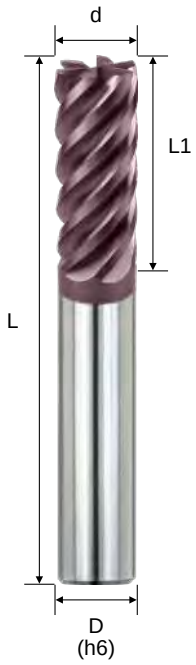
Cutting conditions：Table 028

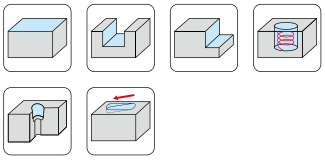
G550 - High Helix · Square · 6F

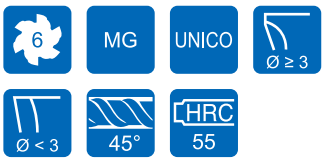
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, FRP, etc.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides hi speed milling capabilities.
- Six flute for good surface milling.

EPSSH

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSSH606000U	6	15	50	6	6
EPSSH608000U	8	20	60	8	6
EPSSH610000U	10	25	75	10	6
EPSSH612000U	12	30	75	12	6

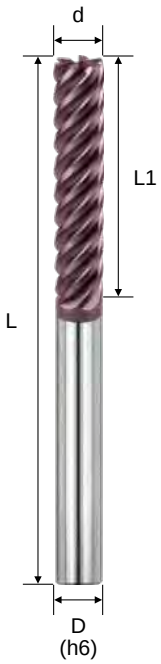
Cutting conditions：Table 027

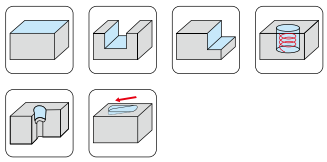
G550 - High Helix · Long Flute · Square · 6F

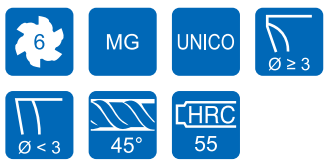
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, FRP, etc.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides hi speed milling capabilities.
- Six flute for good surface milling.

EPSCH

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSCH606000U	6	30	75	6	6
EPSCH608000U	8	35	100	8	6
EPSCH610000U	10	45	100	10	6
EPSCH612000U	12	45	100	12	6
EPSCH616000U	16	70	150	16	6

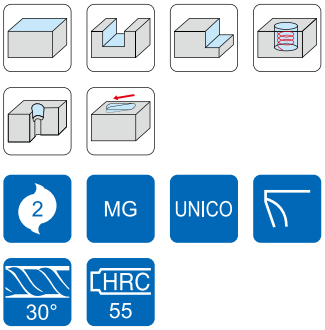
Cutting conditions：Table 029

G550 - Long Shank · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

EPSLC

P	M	K	N	S	H
●	●	●			○



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSLC244006U	4	10	60	4	2
* EPSLC244007U	4	10	75	4	2
* EPSLC244010U	4	10	100	4	2
* EPSLC204006U	4	10	60	6	2
* EPSLC204007U	4	10	75	6	2
* EPSLC204010U	4	10	100	6	2
* EPSLC206006U	6	15	60	6	2
* EPSLC206007U	6	15	75	6	2
* EPSLC206010U	6	15	100	6	2
* EPSLC208007U	8	20	75	8	2
* EPSLC208010U	8	20	100	8	2
* EPSLC208015U	8	20	150	8	2
* EPSLC210010U	10	25	100	10	2
* EPSLC210015U	10	25	150	10	2
* EPSLC212010U	12	30	100	12	2
* EPSLC212015U	12	30	150	12	2
* EPSLC216015U	16	40	150	16	2
* EPSLC220015U	20	40	150	20	2

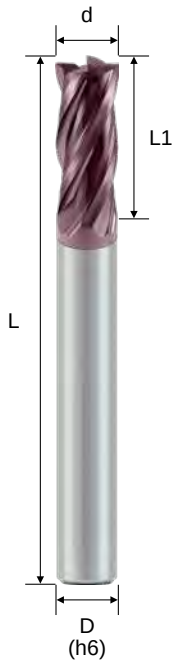
Cutting conditions：Table 030

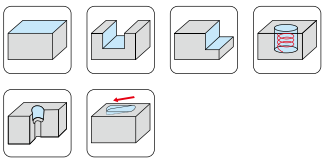
G550 - Long Shank · Square · 4F

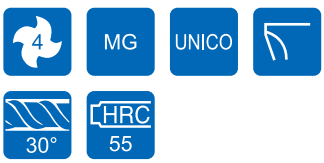
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

EPSLC

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSLC443007U	3	8	75	4	4
* EPSLC443010U	3	8	100	4	4
* EPSLC444006U	4	10	60	4	4
* EPSLC444007U	4	10	75	4	4
* EPSLC444010U	4	10	100	4	4
* EPSLC404006U	4	10	60	6	4
* EPSLC404007U	4	10	75	6	4
* EPSLC404010U	4	10	100	6	4
* EPSLC406006U	6	15	60	6	4
* EPSLC406007U	6	15	75	6	4
* EPSLC406010U	6	15	100	6	4
* EPSLC408007U	8	20	75	8	4
* EPSLC408010U	8	20	100	8	4
* EPSLC408015U	8	20	150	8	4
* EPSLC410010U	10	25	100	10	4
* EPSLC410015U	10	25	150	10	4
* EPSLC412010U	12	30	100	12	4
* EPSLC412015U	12	30	150	12	4
* EPSLC416015U	16	40	150	16	4
* EPSLC420015U	20	40	150	20	4

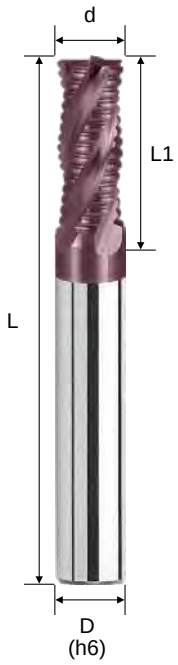
Cutting conditions：Table 031

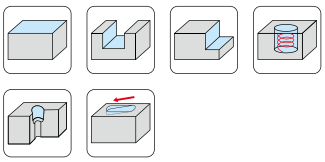
G550 - Roughing · Square · 4F

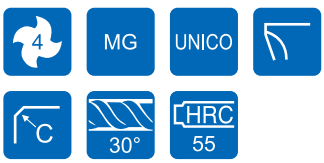
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides hi performance and avoids tip fracture.

EPSRR

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSRR406000U	6	15	50	6	4
EPSRR408000U	8	20	60	8	4
EPSRR410000U	10	25	75	10	4
EPSRR412000U	12	30	75	12	4
EPSRR416000U	16	40	100	16	4
EPSRR420000U	20	45	100	20	4

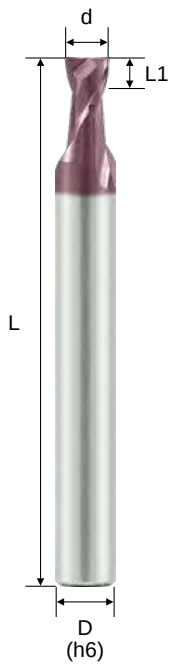
Cutting conditions：Table 032

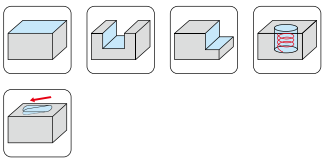
G550 - Stub Length · Square · 2F

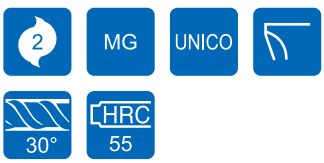
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

EPSHC

P	M	K	N	S	H
●	●	●		○	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSHC240200U	0.2	0.3	50	4	2
EPSHC240300U	0.3	0.4	50	4	2
EPSHC240400U	0.4	0.5	50	4	2
EPSHC240500U	0.5	0.6	50	4	2
EPSHC240600U	0.6	0.7	50	4	2
EPSHC240700U	0.7	0.8	50	4	2
EPSHC240800U	0.8	1.0	50	4	2
EPSHC240900U	0.9	1.1	50	4	2
EPSHC241000U	1.0	1.2	50	4	2
EPSHC241200U	1.2	1.5	50	4	2
EPSHC241400U	1.4	1.8	50	4	2
EPSHC241500U	1.5	1.8	50	4	2
EPSHC241600U	1.6	1.9	50	4	2
EPSHC241800U	1.8	2.0	50	4	2
EPSHC242000U	2.0	2.5	50	4	2
EPSHC242500U	2.5	3.0	50	4	2
EPSHC203000U	3.0	3.5	50	6	2
EPSHC204000U	4.0	4.5	50	6	2
EPSHC205000U	5.0	7.0	50	6	2
EPSHC206000U	6.0	9.0	50	6	2

Cutting conditions：Table 033

G550 - Stub Length · Square · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

EPSHC

P	M	K	N	S	H
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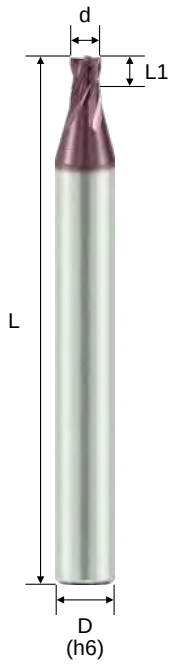
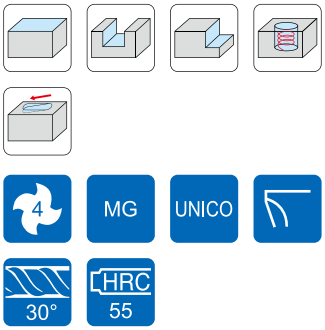


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSHC441000U	1.0	1.0	50	4	4
EPSHC441500U	1.5	1.5	50	4	4
EPSHC442000U	2.0	2.0	50	4	4
EPSHC442500U	2.5	2.5	50	4	4
EPSHC403000U	3.0	3.0	50	6	4
EPSHC404000U	4.0	4.0	50	6	4
EPSHC405000U	5.0	5.0	50	6	4
EPSHC406000U	6.0	6.0	50	6	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

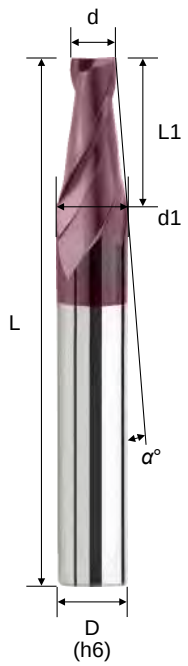
Cutting conditions：Table 033

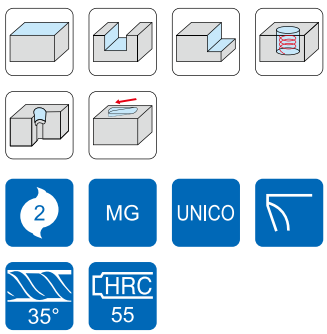
G550 - Taper · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSST

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (F)
* EPSST24015CU	0.15	20°	5.29	-	42	4	2
* EPSST24030CU	0.30	20°	5.08	-	42	4	2
* EPSST24030DU	0.30	25°	3.96	-	42	4	2
* EPSST24060BU	0.60	15°	4.50	-	42	4	2
* EPSST24060CU	0.60	20°	4.67	-	42	4	2
* EPSST24120CU	1.20	20°	3.84	-	42	4	2
* EPSST241005U	1.0	0.5°	4.0	1.07	50	4	2
* EPSST241010U	1.0	1.0°	4.0	1.14	50	4	2
* EPSST241015U	1.0	1.5°	4.0	1.21	50	4	2
* EPSST241020U	1.0	2.0°	4.0	1.28	50	4	2
* EPSST241025U	1.0	2.5°	4.0	1.35	50	4	2
* EPSST241030U	1.0	3.0°	4.0	1.42	50	4	2
* EPSST241050U	1.0	5.0°	4.0	1.70	50	4	2
* EPSST241070U	1.0	7.0°	4.0	1.98	50	4	2
* EPSST2410A0U	1.0	10.0°	4.0	2.41	50	4	2
* EPSST2410A5U	1.0	15.0°	4.0	3.14	50	4	2
* EPSST241505U	1.5	0.5°	5.0	1.59	50	4	2
* EPSST241510U	1.5	1.0°	5.0	1.68	50	4	2
* EPSST241515U	1.5	1.5°	5.0	1.76	50	4	2
* EPSST241520U	1.5	2.0°	5.0	1.85	50	4	2
* EPSST241525U	1.5	2.5°	5.0	1.93	50	4	2
* EPSST241530U	1.5	3.0°	5.0	2.02	50	4	2
* EPSST241550U	1.5	5.0°	5.0	2.37	50	4	2
* EPSST242005U	2.0	0.5°	6.0	2.10	50	4	2
* EPSST242010U	2.0	1.0°	6.0	2.21	50	4	2
* EPSST242015U	2.0	1.5°	6.0	2.31	50	4	2
* EPSST242020U	2.0	2.0°	6.0	2.41	50	4	2
* EPSST242025U	2.0	2.5°	6.0	2.52	50	4	2
* EPSST242030U	2.0	3.0°	6.0	2.62	50	4	2
* EPSST242050U	2.0	5.0°	6.0	3.05	50	4	2
* EPSST242070U	2.0	7.0°	6.0	3.47	50	4	2
EPSST2020A0U	2.0	10.0°	6.0	4.11	50	6	2
EPSST2020A5U	2.0	15.0°	6.0	5.22	50	6	2

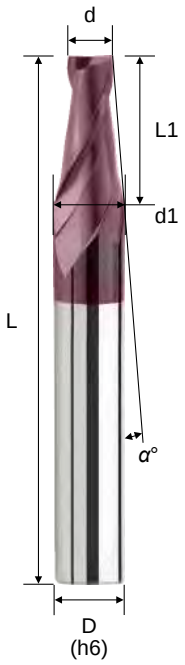
Cutting conditions : Table 034

G550 - Taper · Square · 2F

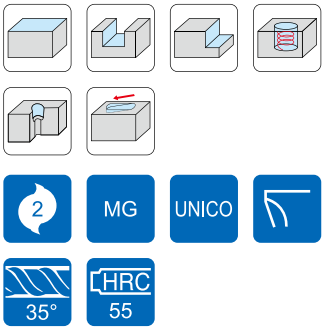
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSST

P	M	K	N	S	H
●	●	●			○



Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (F)
* EPSST242505U	2.5	0.5°	8.0	2.64	50	4	2
* EPSST242510U	2.5	1.0°	8.0	2.78	50	4	2
* EPSST242515U	2.5	1.5°	8.0	2.91	50	4	2
* EPSST242520U	2.5	2.0°	8.0	3.05	50	4	2
* EPSST242525U	2.5	2.5°	8.0	3.20	50	4	2
* EPSST242530U	2.5	3.0°	8.0	3.33	50	4	2
* EPSST242550U	2.5	5.0°	8.0	3.90	50	4	2
EPSST203005U	3.0	0.5°	10.0	3.17	50	6	2
EPSST203010U	3.0	1.0°	10.0	3.35	50	6	2
EPSST203015U	3.0	1.5°	10.0	3.52	50	6	2
EPSST203020U	3.0	2.0°	10.0	3.69	50	6	2
EPSST203025U	3.0	2.5°	10.0	3.87	50	6	2
EPSST203030U	3.0	3.0°	10.0	4.05	50	6	2
EPSST203050U	3.0	5.0°	10.0	4.75	50	6	2
EPSST203070U	3.0	7.0°	12.0	6.00	50	6	2
EPSST2030A0U	3.0	10.0°	12.0	7.22	60	8	2
EPSST2030A5U	3.0	15.0°	12.0	9.40	75	10	2
EPSST204005U	4.0	0.5°	15.0	4.26	50	6	2
EPSST204010U	4.0	1.0°	15.0	4.52	50	6	2
EPSST204015U	4.0	1.5°	15.0	4.79	50	6	2
EPSST204020U	4.0	2.0°	15.0	5.04	50	6	2
EPSST204025U	4.0	2.5°	15.0	5.31	50	6	2
EPSST204030U	4.0	3.0°	15.0	5.57	50	6	2
EPSST204050U	4.0	5.0°	15.0	6.62	60	8	2
EPSST204070U	4.0	7.0°	16.0	8.00	60	8	2
EPSST2040A0U	4.0	10.0°	17.0	10.00	75	10	2
EPSST2040A5U	4.0	15.0°	14.9	12.00	75	12	2



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

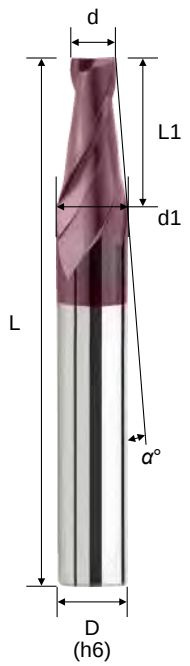
Cutting conditions：Table 034

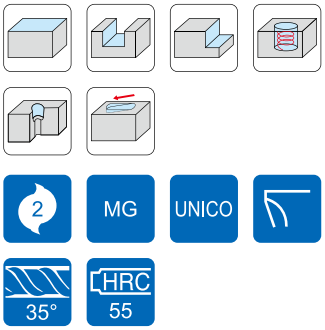
G550 - Taper · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSST

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (F)
EPSST205005U	5.0	0.5°	20.0	5.34	60	6	2
EPSST205010U	5.0	1.0°	20.0	5.70	60	6	2
EPSST205015U	5.0	1.5°	19.6	6.00	60	6	2
EPSST205020U	5.0	2.0°	20.0	6.39	60	8	2
EPSST205025U	5.0	2.5°	20.0	6.74	60	8	2
EPSST205030U	5.0	3.0°	20.0	7.10	60	8	2
EPSST205050U	5.0	5.0°	20.0	8.50	75	10	2
EPSST205070U	5.0	7.0°	20.0	10.00	75	10	2
EPSST2050A0U	5.0	10.0°	20.0	12.00	75	12	2
EPSST206005U	6.0	0.5°	20.0	6.35	60	8	2
EPSST206010U	6.0	1.0°	20.0	6.70	60	8	2
EPSST206015U	6.0	1.5°	20.0	7.05	60	8	2
EPSST206020U	6.0	2.0°	20.0	7.40	60	8	2
EPSST206025U	6.0	2.5°	20.0	7.75	60	8	2
EPSST206030U	6.0	3.0°	20.0	8.10	75	10	2
EPSST206050U	6.0	5.0°	20.0	9.50	75	10	2
EPSST206070U	6.0	7.0°	24.0	12.00	75	12	2
EPSST2060A0U	6.0	10.0°	22.0	14.00	75	14	2
EPSST208005U	8.0	0.5°	25.0	8.44	75	10	2
EPSST208010U	8.0	1.0°	25.0	8.87	75	10	2
EPSST208015U	8.0	1.5°	25.0	9.31	75	10	2
EPSST208020U	8.0	2.0°	25.0	9.75	75	10	2
EPSST208030U	8.0	3.0°	25.0	10.62	75	12	2
EPSST208050U	8.0	5.0°	25.0	12.37	75	14	2
EPSST208070U	8.0	7.0°	32.0	16.00	100	16	2
EPSST2080A0U	8.0	10.0°	28.0	18.00	100	18	2
EPSST210005U	10.0	0.5°	35.0	10.61	75	12	2
EPSST210010U	10.0	1.0°	35.0	11.22	75	12	2
EPSST210015U	10.0	1.5°	35.0	11.83	75	12	2
EPSST210020U	10.0	2.0°	35.0	12.44	75	14	2
EPSST210030U	10.0	3.0°	35.0	13.67	75	14	2
EPSST210050U	10.0	5.0°	34.2	16.00	100	16	2

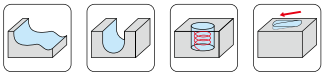
Cutting conditions：Table 034

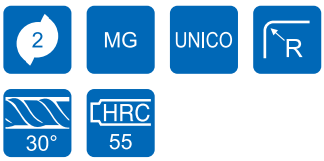
G550 - Ball Nose · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

EPBSC

P	M	K	N	S	H
●	●	●			○





R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPBSC240200U	0.10R	0.2	0.4	50	4	2
* EPBSC240300U	0.15R	0.3	0.6	50	4	2
* EPBSC240400U	0.20R	0.4	0.8	50	4	2
* EPBSC240500U	0.25R	0.5	1.0	50	4	2
* EPBSC240600U	0.30R	0.6	1.2	50	4	2
* EPBSC240700U	0.35R	0.7	1.4	50	4	2
* EPBSC240800U	0.40R	0.8	1.6	50	4	2
* EPBSC240900U	0.45R	0.9	1.8	50	4	2
* EPBSC241000U	0.50R	1.0	2.0	50	4	2
* EPBSC241500U	0.75R	1.5	3.0	50	4	2
* EPBSC242000U	1.00R	2.0	4.0	50	4	2
EPBSC233000U	1.50R	3.0	6.0	50	3	2
* EPBSC243000U	1.50R	3.0	6.0	50	4	2
* EPBSC244000U	2.00R	4.0	8.0	50	4	2
EPBSC203000U	1.50R	3.0	6.0	50	6	2
EPBSC204000U	2.00R	4.0	8.0	50	6	2
EPBSC205000U	2.50R	5.0	10.0	50	6	2
EPBSC206000U	3.00R	6.0	12.0	50	6	2
EPBSC207000U	3.50R	7.0	14.0	60	8	2
EPBSC208000U	4.00R	8.0	16.0	60	8	2
EPBSC210000U	5.00R	10.0	20.0	75	10	2
EPBSC212000U	6.00R	12.0	24.0	75	12	2
EPBSC216000U	8.00R	16.0	32.0	100	16	2
EPBSC220000U	10.00R	20.0	40.0	100	20	2

Cutting conditions：Table 035

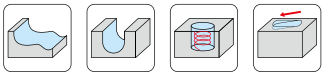
G550 - Ball Nose · 4F

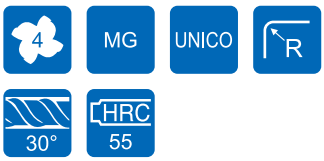
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Multiple flutes design improves the cutting surface.

EPBSC

P	M	K	N	S	H
●	●	●			○

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPBSC442000U	1.0R	2	4	50	4	4
* EPBSC443000U	1.5R	3	6	50	4	4
* EPBSC444000U	2.0R	4	8	50	4	4
EPBSC404000U	2.0R	4	8	50	6	4
EPBSC405000U	2.5R	5	10	50	6	4
EPBSC406000U	3.0R	6	12	50	6	4
EPBSC408000U	4.0R	8	16	60	8	4
EPBSC410000U	5.0R	10	20	75	10	4
EPBSC412000U	6.0R	12	24	75	12	4
EPBSC416000U	8.0R	16	32	100	16	4
EPBSC420000U	10.0R	20	40	100	20	4





R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

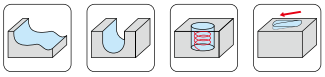
Cutting conditions：Table 036

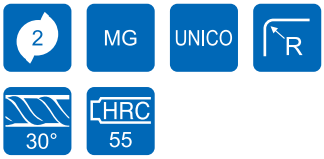
G550 - Long Shank · Ball Nose · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

EPBLC

P	M	K	N	S	H
●	●	●			○





R Tolerance	
R ≤ 3	±0.020
R > 3	±0.025

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPBLC243007U	1.5R	3	6	75	4	2
* EPBLC243010U	1.5R	3	6	100	4	2
* EPBLC244006U	2.0R	4	8	60	4	2
* EPBLC244007U	2.0R	4	8	75	4	2
* EPBLC244010U	2.0R	4	8	100	4	2
* EPBLC204006U	2.0R	4	8	60	6	2
* EPBLC204007U	2.0R	4	8	75	6	2
* EPBLC204010U	2.0R	4	8	100	6	2
* EPBLC206006U	3.0R	6	12	60	6	2
* EPBLC206007U	3.0R	6	12	75	6	2
* EPBLC206010U	3.0R	6	12	100	6	2
* EPBLC208007U	4.0R	8	16	75	8	2
* EPBLC208010U	4.0R	8	16	100	8	2
* EPBLC208015U	4.0R	8	16	150	8	2
* EPBLC210010U	5.0R	10	20	100	10	2
* EPBLC210015U	5.0R	10	20	150	10	2
* EPBLC212010U	6.0R	12	24	100	12	2
* EPBLC212015U	6.0R	12	24	150	12	2
* EPBLC216015U	8.0R	16	32	150	16	2
* EPBLC220015U	10.0R	20	40	150	20	2

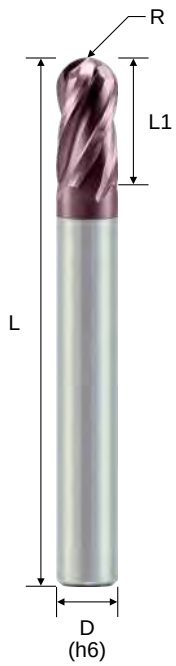
Cutting conditions：Table 037

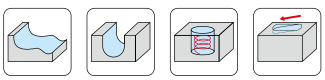
G550 - Long Shank · Ball Nose · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Multiple flutes design and long shank design makes possible deep surface cutting.

EPBLC

P	M	K	N	S	H
●	●	●			○





4 | MG | UNICO | R

30° | HRC 55

R Tolerance	
R ≤ 3	±0.020
R > 3	±0.025

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPBLC444007U	2R	4	8	75	4	4
* EPBLC444010U	2R	4	8	100	4	4
* EPBLC404007U	2R	4	8	75	6	4
* EPBLC404010U	2R	4	8	100	6	4
* EPBLC406007U	3R	6	12	75	6	4
* EPBLC406010U	3R	6	12	100	6	4
* EPBLC408007U	4R	8	16	75	8	4
* EPBLC408010U	4R	8	16	100	8	4
* EPBLC408015U	4R	8	16	150	8	4
* EPBLC410010U	5R	10	20	100	10	4
* EPBLC410015U	5R	10	20	150	10	4
* EPBLC412010U	6R	12	24	100	12	4
* EPBLC412015U	6R	12	24	150	12	4
* EPBLC416015U	8R	16	32	150	16	4

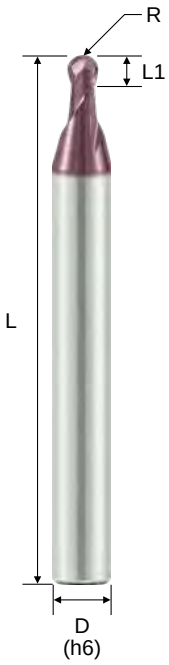
Cutting conditions：Table 038

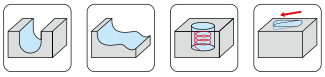
G550 - Stub Length · Ball Nose · 2F

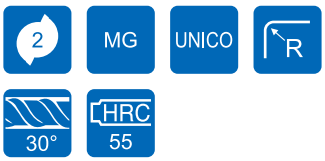
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

EPBHC

P	M	K	N	S	H
●	●	●		○	○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPBHC240200U	0.10R	0.2	0.2	50	4	2
EPBHC240300U	0.15R	0.3	0.3	50	4	2
EPBHC240400U	0.20R	0.4	0.4	50	4	2
EPBHC240500U	0.25R	0.5	0.5	50	4	2
EPBHC240600U	0.30R	0.6	0.6	50	4	2
EPBHC240700U	0.35R	0.7	0.7	50	4	2
EPBHC240800U	0.40R	0.8	0.8	50	4	2
EPBHC240900U	0.45R	0.9	0.9	50	4	2
EPBHC241000U	0.50R	1.0	1.0	50	4	2
EPBHC241200U	0.60R	1.2	1.2	50	4	2
EPBHC241400U	0.70R	1.4	1.4	50	4	2
EPBHC241500U	0.75R	1.5	1.5	50	4	2
EPBHC241600U	0.80R	1.6	1.6	50	4	2
EPBHC241800U	0.90R	1.8	1.8	50	4	2
EPBHC242000U	1.00R	2.0	2.0	50	4	2
EPBHC242500U	1.25R	2.5	2.5	50	4	2
EPBHC203000U	1.50R	3.0	3.0	50	6	2
EPBHC204000U	2.00R	4.0	4.0	50	6	2
EPBHC205000U	2.50R	5.0	5.0	50	6	2
EPBHC206000U	3.00R	6.0	9.0	50	6	2

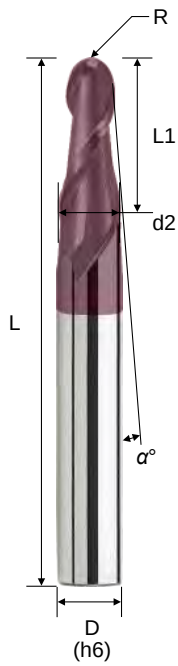
Cutting conditions：Table 039

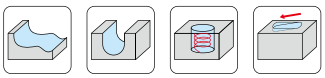
G550 - Taper · Ball Nose · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Tape cutting length is convenient for high performance 3D milling.
- Stronger geometry design gives good wear resistance.

EPBST

P	M	K	N	S	H
●	●	●			○





2 | MG | UNICO | R

30° | HRC 55

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
* EPBST242010U	1.00R	1°	8	2.24	50	4	2
* EPBST242030U	1.00R	3°	8	2.74	50	4	2
* EPBST242050U	1.00R	5°	8	3.23	50	4	2
* EPBST242510U	1.25R	1°	10	2.81	50	4	2
* EPBST242530U	1.25R	3°	10	3.42	50	4	2
EPBST202550U	1.25R	5°	10	4.04	50	6	2
* EPBST243010U	1.50R	1°	12	3.37	50	4	2
EPBST203030U	1.50R	3°	12	4.10	50	6	2
EPBST203050U	1.50R	5°	12	4.85	50	6	2
EPBST204010U	2.00R	1°	16	4.49	60	6	2
EPBST204030U	2.00R	3°	16	5.47	60	6	2
EPBST204050U	2.00R	5°	16	6.46	60	8	2
EPBST206010U	3.00R	1°	24	6.73	75	8	2
EPBST206030U	3.00R	3°	24	8.20	75	10	2
EPBST206050U	3.00R	5°	24	9.67	75	10	2

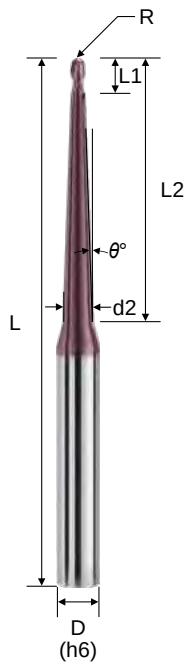
Cutting conditions：Table 040

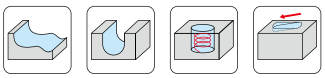
G550 - Taper Neck · Ball Nose · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Suitable for high performance profile milling.
- High strength of taper neck, can cut deep grooves without breaking.

EPBRT

P	M	K	N	S	H
●	●	●			○





2 | MG | UNICO | R

30° | HRC 55

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPBRT201023AU	0.5R	1	1.5°	2	23	2.10	60	6	2
EPBRT2010235U	0.5R	1	5.0°	2	23	4.67	60	6	2
EPBRT2010423U	0.5R	1	3.0°	2	42	5.19	75	6	2
EPBRT202035HU	1.0R	2	0.5°	4	35	2.54	75	6	2
EPBRT2020351U	1.0R	2	1.0°	4	35	3.08	75	6	2
EPBRT202023AU	1.0R	2	1.5°	4	23	3.00	60	6	2
EPBRT202035AU	1.0R	2	1.5°	4	35	3.62	75	6	2
EPBRT2020235U	1.0R	2	5.0°	4	23	5.32	60	6	2
EPBRT2020413U	1.0R	2	3.0°	4	41	5.88	75	6	2
EPBRT203052AU	1.5R	3	1.5°	6	52	5.40	100	6	2
EPBRT2030323U	1.5R	3	3.0°	6	32	5.73	75	6	2
EPBRT204046AU	2.0R	4	1.5°	8	46	6.00	100	6	2
EPBRT2040273U	2.0R	4	3.0°	8	27	6.00	75	6	2

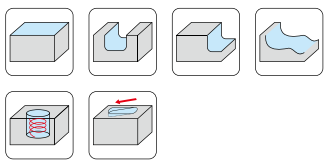
Cutting conditions：Table 040

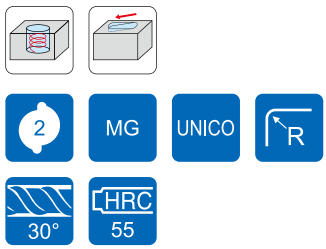
G550 - Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius design is suitable for high speed surface milling and profiling.

EPCSC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPCSC241001U	1.0	0.1R	2	50	4	2
* EPCSC241002U	1.0	0.2R	2	50	4	2
* EPCSC241003U	1.0	0.3R	2	50	4	2
* EPCSC241502U	1.5	0.2R	3	50	4	2
* EPCSC241503U	1.5	0.3R	3	50	4	2
* EPCSC241505U	1.5	0.5R	3	50	4	2
* EPCSC242002U	2.0	0.2R	4	50	4	2
* EPCSC242003U	2.0	0.3R	4	50	4	2
* EPCSC242005U	2.0	0.5R	4	50	4	2
* EPCSC243002U	3.0	0.2R	6	50	4	2
* EPCSC243003U	3.0	0.3R	6	50	4	2
* EPCSC243005U	3.0	0.5R	6	50	4	2
* EPCSC244002U	4.0	0.2R	8	50	4	2
* EPCSC244003U	4.0	0.3R	8	50	4	2
* EPCSC244005U	4.0	0.5R	8	50	4	2
* EPCSC244010U	4.0	1R	8	50	4	2
EPCSC204003U	4.0	0.3R	8	50	6	2
EPCSC204005U	4.0	0.5R	8	50	6	2
EPCSC204010U	4.0	1.0R	8	50	6	2
EPCSC205005U	5.0	0.5R	10	50	6	2
EPCSC205010U	5.0	1.0R	10	50	6	2
EPCSC206003U	6.0	0.3R	12	50	6	2
EPCSC206005U	6.0	0.5R	12	50	6	2
EPCSC206010U	6.0	1.0R	12	50	6	2
EPCSC208005U	8.0	0.5R	16	60	8	2
EPCSC208010U	8.0	1.0R	16	60	8	2
EPCSC208015U	8.0	1.5R	16	60	8	2
EPCSC210005U	10.0	0.5R	20	75	10	2
EPCSC210010U	10.0	1.0R	20	75	10	2
EPCSC210015U	10.0	1.5R	20	75	10	2
EPCSC212020U	10.0	2.0R	20	75	10	2
EPCSC212005U	12.0	0.5R	20	75	12	2
EPCSC212010U	12.0	1.0R	20	75	12	2
EPCSC212015U	12.0	1.5R	20	75	12	2
EPCSC212020U	12.0	2.0R	20	75	12	2

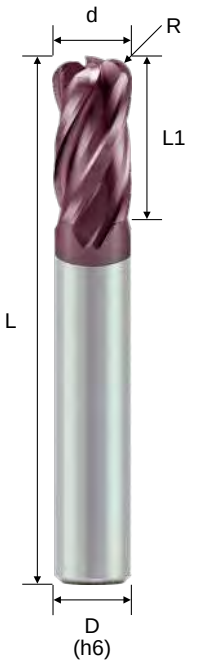
Cutting conditions：Table 041

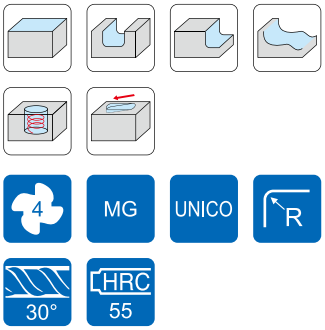
G550 - Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with multiple design increases the finish milling surface.

EPCSC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPCSC441002U	1.0	0.2R	2	50	4	4
* EPCSC441003U	1.0	0.3R	2	50	4	4
* EPCSC441502U	1.5	0.2R	3	50	4	4
* EPCSC441503U	1.5	0.3R	3	50	4	4
* EPCSC441505U	1.5	0.5R	3	50	4	4
* EPCSC442002U	2.0	0.2R	4	50	4	4
* EPCSC442003U	2.0	0.3R	4	50	4	4
* EPCSC442005U	2.0	0.5R	4	50	4	4
* EPCSC443002U	3.0	0.2R	6	50	4	4
* EPCSC443003U	3.0	0.3R	6	50	4	4
* EPCSC433005U	3.0	0.5R	6	50	3	4
* EPCSC443005U	3.0	0.5R	6	50	4	4
* EPCSC443010U	3.0	1.0R	6	50	4	4
EPCSC403003U	3.0	0.3R	6	50	6	4
EPCSC403005U	3.0	0.5R	6	50	6	4
EPCSC403010U	3.0	1.0R	6	50	6	4
* EPCSC444001U	4.0	0.1R	8	50	4	4
* EPCSC444002U	4.0	0.2R	8	50	4	4
* EPCSC444003U	4.0	0.3R	8	50	4	4
* EPCSC444005U	4.0	0.5R	8	50	4	4
* EPCSC444010U	4.0	1.0R	8	50	4	4
EPCSC404003U	4.0	0.3R	8	50	6	4
EPCSC404005U	4.0	0.5R	8	50	6	4
EPCSC404010U	4.0	1.0R	8	50	6	4
EPCSC405005U	5.0	0.5R	10	50	6	4
EPCSC405010U	5.0	1.0R	10	50	6	4
EPCSC406003U	6.0	0.3R	12	50	6	4
EPCSC406005U	6.0	0.5R	12	50	6	4
EPCSC406010U	6.0	1.0R	12	50	6	4
EPCSC408005U	8.0	0.5R	16	60	8	4
EPCSC408010U	8.0	1.0R	16	60	8	4
EPCSC408015U	8.0	1.5R	16	60	8	4
EPCSC410005U	10.0	0.5R	20	75	10	4
EPCSC410010U	10.0	1.0R	20	75	10	4
EPCSC410015U	10.0	1.5R	20	75	10	4
EPCSC410020U	10.0	2.0R	20	75	10	4
EPCSC412005U	12.0	0.5R	24	75	12	4
EPCSC412010U	12.0	1.0R	24	75	12	4
EPCSC412015U	12.0	1.5R	24	75	12	4
EPCSC412020U	12.0	2.0R	24	75	12	4
EPCSC412030U	12.0	3.0R	24	75	12	4
EPCSC416010U	16.0	1.0R	32	100	16	4
EPCSC416020U	16.0	2.0R	32	100	16	4
EPCSC416030U	16.0	3.0R	32	100	16	4

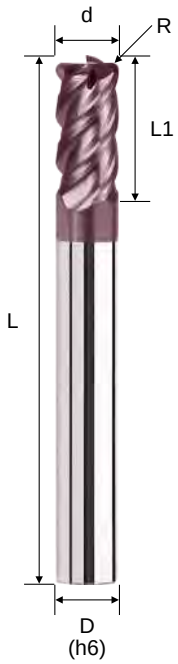
Cutting conditions：Table 042

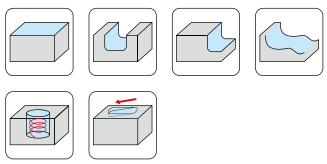
G550 - High Helix · Corner Radius · 4F

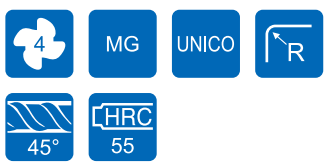
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with high helix angle improves the side milling quality.

EPCSH

P	M	K	N	S	H
●	●	●			○







Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPCSH443005U	3.0	0.5R	6	50	4	4
* EPCSH444005U	4.0	0.5R	8	50	4	4
EPCSH405005U	5.0	0.5R	10	50	6	4
EPCSH405010U	5.0	1.0R	10	50	6	4
EPCSH406005U	6.0	0.5R	12	50	6	4
EPCSH406010U	6.0	1.0R	12	50	6	4
EPCSH408005U	8.0	0.5R	16	60	8	4
EPCSH408010U	8.0	1.0R	16	60	8	4
EPCSH410005U	10.0	0.5R	20	75	10	4
EPCSH410010U	10.0	1.0R	20	75	10	4
EPCSH410015U	10.0	1.5R	20	75	10	4
EPCSH410020U	10.0	2.0R	20	75	10	4
EPCSH412010U	12.0	1.0R	24	75	12	4
EPCSH412020U	12.0	2.0R	24	75	12	4
EPCSH412030U	12.0	3.0R	24	75	12	4

Cutting conditions：Table 043

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

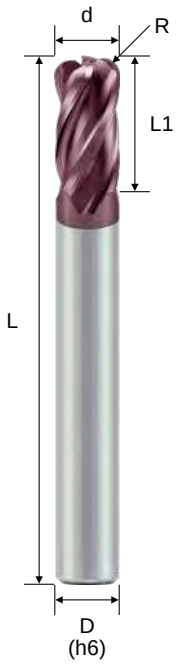
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

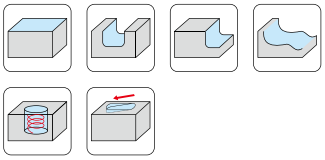
G550 - Long Shank · Corner Radius · 4F

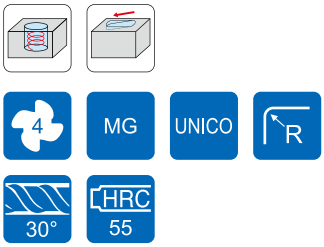
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with multiple flutes is suitable for general cutting and 3D milling.

EPCLC

P	M	K	N	S	H
●	●	●			○







Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPCLC44400507U	4	0.5R	8	75	4	4
* EPCLC44400510U	4	0.5R	8	100	4	4
* EPCLC40300507U	3	0.5R	6	75	6	4
* EPCLC40301007U	3	1.0R	6	75	6	4
* EPCLC40400507U	4	0.5R	8	75	6	4
* EPCLC40401007U	4	1.0R	8	75	6	4
* EPCLC40500507U	5	0.5R	10	75	6	4
* EPCLC40501007U	5	1.0R	10	75	6	4
* EPCLC40600507U	6	0.5R	12	75	6	4
* EPCLC40601007U	6	1.0R	12	75	6	4
* EPCLC40600510U	6	0.5R	12	100	6	4
* EPCLC40800507U	8	0.5R	16	75	8	4
* EPCLC40800510U	8	0.5R	16	100	8	4
* EPCLC40801010U	8	1.0R	16	100	8	4
* EPCLC40801510U	8	1.5R	16	100	8	4
* EPCLC41000510U	10	0.5R	20	100	10	4
* EPCLC41001010U	10	1.0R	20	100	10	4
* EPCLC41001510U	10	1.5R	20	100	10	4
* EPCLC41002010U	10	2.0R	20	100	10	4
* EPCLC41000515U	10	0.5R	20	150	10	4
* EPCLC41200510U	12	0.5R	24	100	12	4
* EPCLC41201010U	12	1.0R	24	100	12	4
* EPCLC41201510U	12	1.5R	24	100	12	4
* EPCLC41202010U	12	2.0R	24	100	12	4
* EPCLC41200515U	12	0.5R	24	150	12	4
* EPCLC41601015U	16	1.0R	32	150	16	4
* EPCLC41602015U	16	2.0R	32	150	16	4
* EPCLC41603015U	16	3.0R	32	150	16	4

Cutting conditions：Table 044

d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

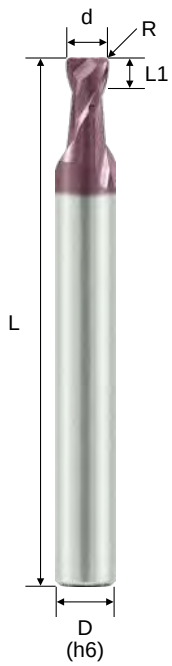
R Tolerance	
R < 2	±0.020
R ≥ 2	±0.025

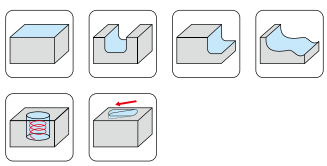
G550 - Stub Length · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

EPCHC

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCHC241001U	1.0	0.1R	1.0	50	4	2
EPCHC241002U	1.0	0.2R	1.0	50	4	2
EPCHC241003U	1.0	0.3R	1.0	50	4	2
EPCHC241201U	1.2	0.1R	1.2	50	4	2
EPCHC241202U	1.2	0.2R	1.2	50	4	2
EPCHC241203U	1.2	0.3R	1.2	50	4	2
EPCHC241501U	1.5	0.1R	1.5	50	4	2
EPCHC241502U	1.5	0.2R	1.5	50	4	2
EPCHC241503U	1.5	0.3R	1.5	50	4	2
EPCHC241505U	1.5	0.5R	1.5	50	4	2
EPCHC242001U	2.0	0.1R	2.0	50	4	2
EPCHC242002U	2.0	0.2R	2.0	50	4	2
EPCHC242003U	2.0	0.3R	2.0	50	4	2
EPCHC242005U	2.0	0.5R	2.0	50	4	2
EPCHC242501U	2.5	0.1R	2.5	50	4	2
EPCHC242502U	2.5	0.2R	2.5	50	4	2
EPCHC242503U	2.5	0.3R	2.5	50	4	2
EPCHC242505U	2.5	0.5R	2.5	50	4	2
EPCHC203001U	3.0	0.1R	3.0	50	6	2
EPCHC203002U	3.0	0.2R	3.0	50	6	2
EPCHC203003U	3.0	0.3R	3.0	50	6	2
EPCHC203005U	3.0	0.5R	3.0	50	6	2
EPCHC203010U	3.0	1.0R	3.0	50	6	2
EPCHC204001U	4.0	0.1R	4.0	50	6	2
EPCHC204002U	4.0	0.2R	4.0	50	6	2
EPCHC204003U	4.0	0.3R	4.0	50	6	2
EPCHC204005U	4.0	0.5R	4.0	50	6	2
EPCHC204010U	4.0	1.0R	4.0	50	6	2
EPCHC205001U	5.0	0.1R	5.0	50	6	2
EPCHC205002U	5.0	0.2R	5.0	50	6	2
EPCHC205003U	5.0	0.3R	5.0	50	6	2
EPCHC205005U	5.0	0.5R	5.0	50	6	2
EPCHC205010U	5.0	1.0R	5.0	50	6	2
EPCHC206001U	6.0	0.1R	7.0	50	6	2
EPCHC206002U	6.0	0.2R	7.0	50	6	2
EPCHC206003U	6.0	0.3R	7.0	50	6	2
EPCHC206005U	6.0	0.5R	7.0	50	6	2
EPCHC206010U	6.0	1.0R	7.0	50	6	2
EPCHC206015U	6.0	1.5R	7.0	50	6	2

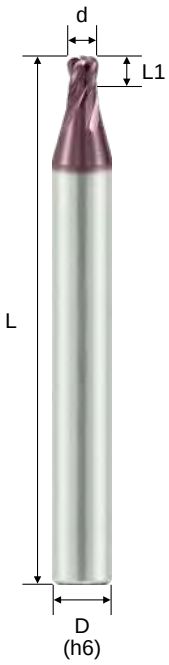
Cutting conditions：Table 045

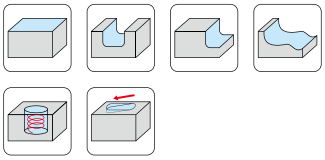
G550 - Stub Length · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

EPCHC

P	M	K	N	S	H
●	●	●		○	○





4 | MG | UNICO | R

30° | HRC 55

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCHC442001U	2.0	0.1R	2.0	50	4	4
EPCHC442002U	2.0	0.2R	2.0	50	4	4
EPCHC442003U	2.0	0.3R	2.0	50	4	4
EPCHC442005U	2.0	0.5R	2.0	50	4	4
EPCHC442501U	2.5	0.1R	2.5	50	4	4
EPCHC442502U	2.5	0.2R	2.5	50	4	4
EPCHC442503U	2.5	0.3R	2.5	50	4	4
EPCHC442505U	2.5	0.5R	2.5	50	4	4
EPCHC403001U	3.0	0.1R	3.0	50	6	4
EPCHC403002U	3.0	0.2R	3.0	50	6	4
EPCHC403003U	3.0	0.3R	3.0	50	6	4
EPCHC403005U	3.0	0.5R	3.0	50	6	4
EPCHC403010U	3.0	1.0R	3.0	50	6	4
EPCHC404001U	4.0	0.1R	4.0	50	6	4
EPCHC404002U	4.0	0.2R	4.0	50	6	4
EPCHC404003U	4.0	0.3R	4.0	50	6	4
EPCHC404005U	4.0	0.5R	4.0	50	6	4
EPCHC404010U	4.0	1.0R	4.0	50	6	4
EPCHC405001U	5.0	0.1R	5.0	50	6	4
EPCHC405002U	5.0	0.2R	5.0	50	6	4
EPCHC405003U	5.0	0.3R	5.0	50	6	4
EPCHC405005U	5.0	0.5R	5.0	50	6	4
EPCHC405010U	5.0	1.0R	5.0	50	6	4
EPCHC406001U	6.0	0.1R	7.0	50	6	4
EPCHC406002U	6.0	0.2R	7.0	50	6	4
EPCHC406003U	6.0	0.3R	7.0	50	6	4
EPCHC406005U	6.0	0.5R	7.0	50	6	4
EPCHC406010U	6.0	1.0R	7.0	50	6	4
EPCHC406015U	6.0	1.5R	7.0	50	6	4

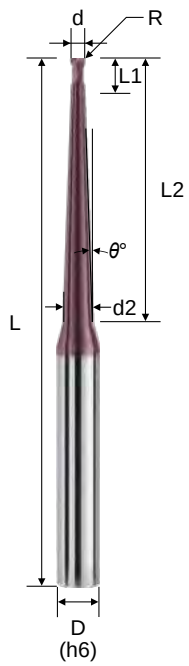
Cutting conditions：Table 045

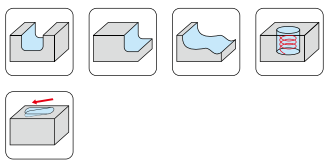
G550 - Taper Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Various tape angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
  High strength of taper neck, can cut deep grooves without breaking.

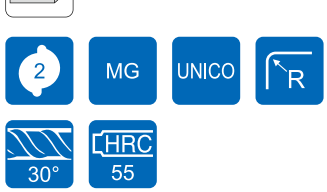
EPCRT

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRT20100120HU	1.0	0.10R	0.5°	2.0	20	60	6	2
EPCRT201001201U	1.0	0.10R	1.0°	2.0	20	60	6	2
EPCRT20100120AU	1.0	0.10R	1.5°	2.0	20	60	6	2
EPCRT201201230HU2C	1.2	0.12R	0.5°	2.0	30	75	6	2
EPCRT2012012301U2C	1.2	0.12R	1.0°	2.0	30	75	6	2
EPCRT201201230AU2C	1.2	0.12R	1.5°	2.0	30	75	6	2
EPCRT201501530HU2C	1.5	0.15R	0.5°	2.0	30	75	6	2
EPCRT2015015301U2C	1.5	0.15R	1.0°	2.0	30	75	6	2
EPCRT201501530AU2C	1.5	0.15R	1.5°	2.0	30	75	6	2
EPCRT201801830HU2C	1.8	0.18R	0.5°	2.0	30	75	6	2
EPCRT2018018301U2C	1.8	0.18R	1.0°	2.0	30	75	6	2
EPCRT201801830AU2C	1.8	0.18R	1.5°	2.0	30	75	6	2
EPCRT20200225AU	2.0	0.20R	1.5°	3.0	25	75	6	2
EPCRT20200239AU	2.0	0.20R	1.5°	3.0	39	75	6	2
EPCRT20200525AU	2.0	0.50R	1.5°	3.0	25	75	6	2
EPCRT20200539AU	2.0	0.50R	1.5°	3.0	39	75	6	2
EPCRT20200550AU	2.0	0.50R	1.5°	3.0	50	100	6	2
EPCRT20200535HU4C	2.0	0.50R	0.5°	4.0	35	75	6	2
EPCRT202005351U4C	2.0	0.50R	1.0°	4.0	35	75	6	2
EPCRT20200535AU4C	2.0	0.50R	1.5°	4.0	35	75	6	2
EPCRT20250535HU5C	2.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT202505351U5C	2.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20250535AU5C	2.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20251035HU5C	2.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT202510351U5C	2.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20251035AU5C	2.5	1.00R	1.5°	5.0	35	75	6	2



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

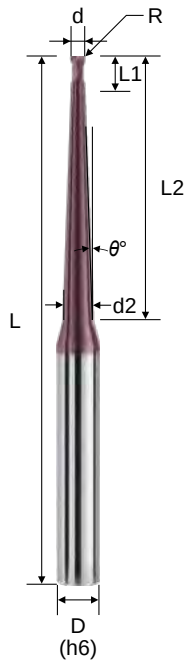
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

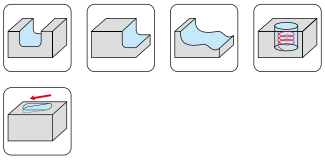
G550 - Taper Neck · Corner Radius · 2F

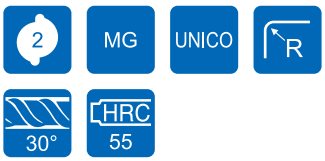
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Various tape angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
  High strength of taper neck, can cut deep grooves without breaking.

EPCRT

P	M	K	N	S	H
●	●	●			○







Order No.	Dia. (d)	Corner Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRT20300525AU	3.0	0.50R	1.5°	4.5	25	75	6	2
EPCRT20301025AU	3.0	1.00R	1.5°	4.5	25	75	6	2
EPCRT20301039AU	3.0	1.00R	1.5°	4.5	39	75	6	2
EPCRT20301050AU	3.0	1.00R	1.5°	4.5	50	100	6	2
EPCRT20300535HU5C	3.0	0.50R	0.5°	5.0	35	75	6	2
EPCRT203005351U5C	3.0	0.50R	1.0°	5.0	35	75	6	2
EPCRT20300535AU5C	3.0	0.50R	1.5°	5.0	35	75	6	2
EPCRT20301035HU5C	3.0	1.00R	0.5°	5.0	35	75	6	2
EPCRT203010351U5C	3.0	1.00R	1.0°	5.0	35	75	6	2
EPCRT20301035AU5C	3.0	1.00R	1.5°	5.0	35	75	6	2
EPCRT20350535HU	3.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT203505351U	3.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20350535AU	3.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20351035HU	3.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT203510351U	3.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20351035AU	3.5	1.00R	1.5°	5.0	35	75	6	2
EPCRT20400545HU	4.0	0.50R	0.5°	6.0	45	100	6	2
EPCRT204005451U	4.0	0.50R	1.0°	6.0	45	100	6	2
EPCRT20400525AU	4.0	0.50R	1.5°	6.0	25	75	6	2
EPCRT20400545AU	4.0	0.50R	1.5°	6.0	45	100	6	2
EPCRT20401045HU	4.0	1.00R	0.5°	6.0	45	100	6	2
EPCRT204010451U	4.0	1.00R	1.0°	6.0	45	100	6	2
EPCRT20401025AU	4.0	1.00R	1.5°	6.0	25	75	6	2
EPCRT20401045AU	4.0	1.00R	1.5°	6.0	45	100	6	2
EPCRT20501025AU	5.0	1.00R	1.5°	7.5	25	75	6	2
EPCRT20501050AU	5.0	1.00R	1.5°	7.5	50	100	8	2
EPCRT20601035AU	6.0	1.00R	1.5°	9.0	35	75	8	2
EPCRT20601050AU	6.0	1.00R	1.5°	9.0	50	100	10	2

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

G550 - Inner Radius · 2F / 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Inner radius tools are suitable for chamfering with round corner application.

EPISA

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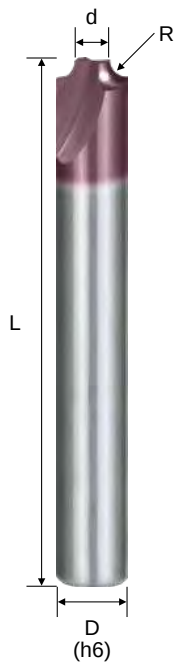
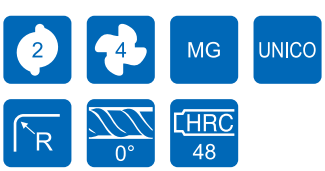
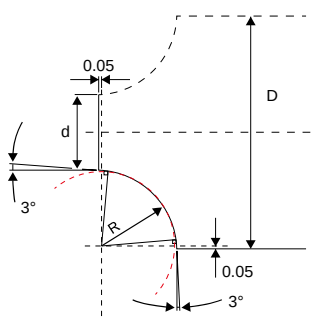


Order No.	Corner Radius (R)	Dia. (d)	OAL (L)	Shank (D)	Flutes (F)
* EPISA242905U	0.5R	2.9	50	4	2
EPISA204905U	0.5R	4.9	50	6	2
* EPISA241910U	1.0R	1.9	50	4	2
EPISA203910U	1.0R	3.9	50	6	2
EPISA205910U	1.0R	5.9	60	8	2
EPISA204915U	1.5R	4.9	60	8	2
EPISA205920U	2.0R	5.9	75	10	2
EPISA204925U	2.5R	4.9	75	10	2
EPISA205930U	3.0R	5.9	75	12	2
EPISA203940U	4.0R	3.9	75	12	2
EPISA205950U	5.0R	5.9	75	16	2
EPISA203960U	6.0R	3.9	75	16	2
* EPISA442905U	0.5R	2.9	50	4	4
EPISA404905U	0.5R	4.9	50	6	4
* EPISA441910U	1.0R	1.9	50	4	4
EPISA403910U	1.0R	3.9	50	6	4
EPISA405910U	1.0R	5.9	60	8	4
EPISA404915U	1.5R	4.9	60	8	4
EPISA405920U	2.0R	5.9	75	10	4
EPISA404925U	2.5R	4.9	75	10	4
EPISA405930U	3.0R	5.9	75	12	4
EPISA403940U	4.0R	3.9	75	12	4
EPISA405950U	5.0R	5.9	75	16	4
EPISA403960U	6.0R	3.9	75	16	4

Cutting conditions：Table 046





G550 - Chamfering Type Endmill · 4F / 5F /6F

- Designed for chamfer milling.
- Chamfering angle can be divided into 30° or 45°.
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for Steel, Alloy steel, Stainless steel, Cast iron, & Hardened steel.

EPFSA

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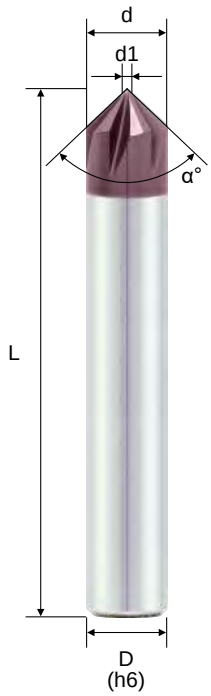
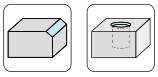
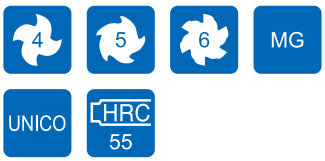


Order No.	Dia. (d)	(d1)	OAL (L)	Shank (D)	α°	Flutes (F)
* EPFSA444060U	4	0.5	50	4	60°	4
EPFSA406060U	6	1.0	60	6	60°	4
EPFSA508060U	8	1.5	60	8	60°	5
EPFSA610060U	10	1.5	75	10	60°	6
EPFSA612060U	12	2.0	75	12	60°	6
* EPFSA444090U	4	0.5	50	4	90°	4
EPFSA406090U	6	1.0	60	6	90°	4
EPFSA508090U	8	1.5	60	8	90°	5
EPFSA610090U	10	1.5	75	10	90°	6
EPFSA612090U	12	2.0	75	12	90°	6





※ Use uncoating tools for N material machining.

Cutting conditions：Table 047

G550 - Drill Mills · 2F

- Designed for chamfer milling.
- Chamfering angle can be divided into 30° or 45°.
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for Steel, Alloy steel, Stainless steel, Cast iron, & Hardened steel.

EPFSC

P	M	K	N	S	H
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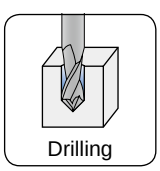
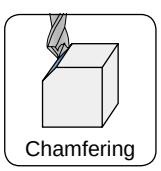
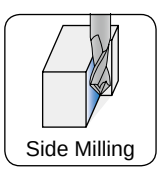
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	α°	Flutes (F)
EPFSC203060U	3	6	50	6	60°	2
EPFSC204060U	4	8	50	6	60°	2
EPFSC205060U	5	10	50	6	60°	2
EPFSC206060U	6	12	50	6	60°	2
EPFSC208060U	8	16	60	8	60°	2
EPFSC210060U	10	20	75	10	60°	2
EPFSC212060U	12	24	75	12	60°	2
EPFSC203090U	3	6	50	6	90°	2
EPFSC204090U	4	8	50	6	90°	2
EPFSC205090U	5	10	50	6	90°	2
EPFSC206090U	6	12	50	6	90°	2
EPFSC208090U	8	16	60	8	90°	2
EPFSC210090U	10	20	75	10	90°	2
EPFSC212090U	12	24	75	12	90°	2
EPFSC203012U	3	6	50	6	120°	2
EPFSC204012U	4	8	50	6	120°	2
EPFSC205012U	5	10	50	6	120°	2
EPFSC206012U	6	12	50	6	120°	2
EPFSC208012U	8	16	60	8	120°	2
EPFSC210012U	10	20	75	10	120°	2
EPFSC212012U	12	24	75	12	120°	2

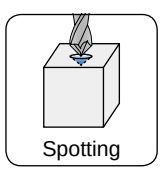
Cutting conditions：Table 048

2 | MG | UNICO | 30° | HRC 45


Drilling


Chamfering


Side Milling


Spotting


Countersinking

Tolerance	
Ød ≤ 6	0 ~ -0.02
6 < Ød ≤ 12	0 ~ -0.03
Ød > 12	0 ~ -0.04

G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

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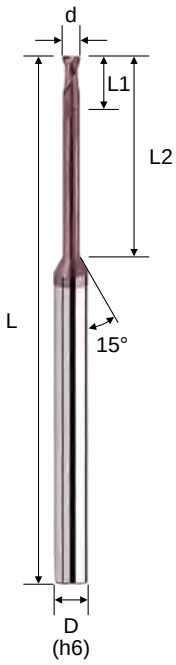

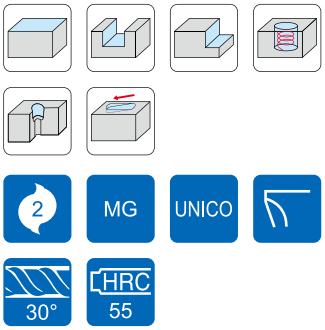

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC240201U	0.2	0.3	1	50	4	2
* EPSRC240202U	0.2	0.3	2	50	4	2
* EPSRC240301U	0.3	0.4	1	50	4	2
* EPSRC240302U	0.3	0.4	2	50	4	2
* EPSRC240303U	0.3	0.4	3	50	4	2
* EPSRC240304U	0.3	0.4	4	50	4	2
* EPSRC240305U	0.3	0.4	5	50	4	2
* EPSRC240401U	0.4	0.5	1	50	4	2
* EPSRC240402U	0.4	0.5	2	50	4	2
* EPSRC240403U	0.4	0.5	3	50	4	2
* EPSRC240404U	0.4	0.5	4	50	4	2
* EPSRC240405U	0.4	0.5	5	50	4	2
* EPSRC240406U	0.4	0.5	6	50	4	2
* EPSRC240408U	0.4	0.5	8	50	4	2
* EPSRC240410U	0.4	0.5	10	50	4	2
* EPSRC240502U	0.5	0.6	2	50	4	2
* EPSRC240503U	0.5	0.6	3	50	4	2
* EPSRC240504U	0.5	0.6	4	50	4	2
* EPSRC240505U	0.5	0.6	5	50	4	2
* EPSRC240506U	0.5	0.6	6	50	4	2
* EPSRC240508U	0.5	0.6	8	50	4	2
* EPSRC240510U	0.5	0.6	10	50	4	2
* EPSRC240512U	0.5	0.6	12	50	4	2
* EPSRC240514U	0.5	0.6	14	50	4	2

Cutting conditions：Table 049 ~ 051

G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

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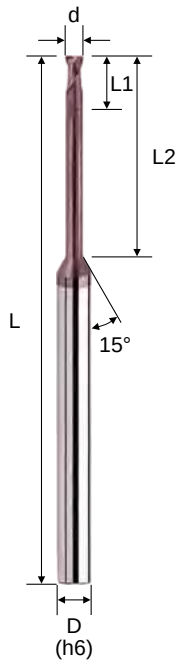

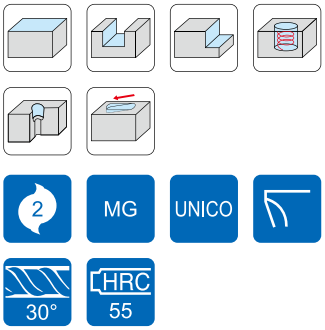

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC240602U	0.6	0.7	2	50	4	2
* EPSRC240603U	0.6	0.7	3	50	4	2
* EPSRC240604U	0.6	0.7	4	50	4	2
* EPSRC240605U	0.6	0.7	5	50	4	2
* EPSRC240606U	0.6	0.7	6	50	4	2
* EPSRC240608U	0.6	0.7	8	50	4	2
* EPSRC240610U	0.6	0.7	10	50	4	2
* EPSRC240612U	0.6	0.7	12	50	4	2
* EPSRC240614U	0.6	0.7	14	50	4	2
* EPSRC240616U	0.6	0.7	16	50	4	2
* EPSRC240702U	0.7	0.8	2	50	4	2
* EPSRC240704U	0.7	0.8	4	50	4	2
* EPSRC240706U	0.7	0.8	6	50	4	2
* EPSRC240708U	0.7	0.8	8	50	4	2
* EPSRC240710U	0.7	0.8	10	50	4	2
* EPSRC240712U	0.7	0.8	12	50	4	2
* EPSRC240802U	0.8	1.0	2	50	4	2
* EPSRC240804U	0.8	1.0	4	50	4	2
* EPSRC240806U	0.8	1.0	6	50	4	2
* EPSRC240808U	0.8	1.0	8	50	4	2
* EPSRC240810U	0.8	1.0	10	50	4	2
* EPSRC240812U	0.8	1.0	12	50	4	2
* EPSRC240814U	0.8	1.0	14	50	4	2
* EPSRC240906U	0.9	1.1	6	50	4	2
* EPSRC240908U	0.9	1.1	8	50	4	2
* EPSRC240910U	0.9	1.1	10	50	4	2

Cutting conditions：Table 049 ~ 051

G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
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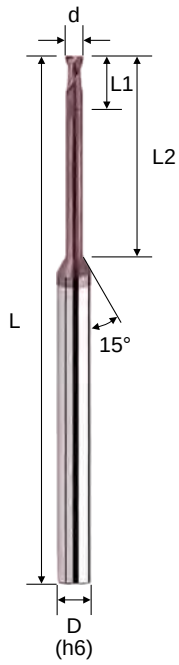

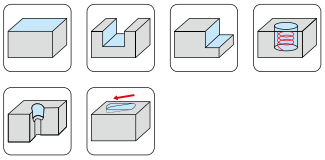

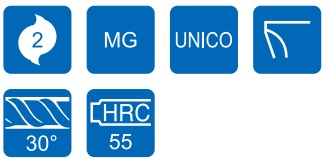

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC241002U	1.0	1.2	2	50	4	2
* EPSRC241003U	1.0	1.2	3	50	4	2
* EPSRC241004U	1.0	1.2	4	50	4	2
* EPSRC241005U	1.0	1.2	5	50	4	2
* EPSRC241006U	1.0	1.2	6	50	4	2
* EPSRC241008U	1.0	1.2	8	50	4	2
* EPSRC241010U	1.0	1.2	10	50	4	2
* EPSRC241012U	1.0	1.2	12	50	4	2
* EPSRC241014U	1.0	1.2	14	50	4	2
* EPSRC241016U	1.0	1.2	16	50	4	2
* EPSRC241018U	1.0	1.2	18	50	4	2
* EPSRC241020U	1.0	1.2	20	50	4	2
* EPSRC241204U	1.2	1.5	4	50	4	2
* EPSRC241206U	1.2	1.5	6	50	4	2
* EPSRC241208U	1.2	1.5	8	50	4	2
* EPSRC241210U	1.2	1.5	10	50	4	2
* EPSRC241212U	1.2	1.5	12	50	4	2
* EPSRC241216U	1.2	1.5	16	50	4	2
* EPSRC241220U	1.2	1.5	20	50	4	2
* EPSRC241406U	1.4	1.8	6	50	4	2
* EPSRC241408U	1.4	1.8	8	50	4	2
* EPSRC241410U	1.4	1.8	10	50	4	2
* EPSRC241414U	1.4	1.8	14	50	4	2
* EPSRC241416U	1.4	1.8	16	50	4	2
* EPSRC241420U	1.4	1.8	20	50	4	2

Cutting conditions：Table 049 ~ 051

G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

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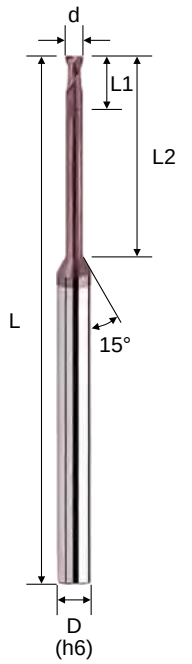
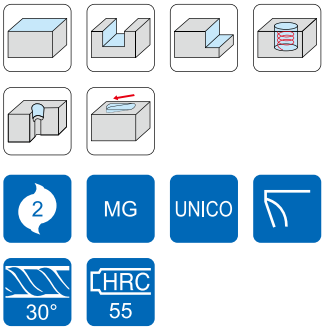




d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC241504U	1.5	1.8	4	50	4	2
* EPSRC241506U	1.5	1.8	6	50	4	2
* EPSRC241508U	1.5	1.8	8	50	4	2
* EPSRC241510U	1.5	1.8	10	50	4	2
* EPSRC241512U	1.5	1.8	12	50	4	2
* EPSRC241514U	1.5	1.8	14	50	4	2
* EPSRC241516U	1.5	1.8	16	50	4	2
* EPSRC241518U	1.5	1.8	18	50	4	2
* EPSRC241520U	1.5	1.8	20	50	4	2
* EPSRC241610U	1.6	1.9	10	50	4	2
* EPSRC241614U	1.6	1.9	14	50	4	2
* EPSRC241618U	1.6	1.9	18	50	4	2
* EPSRC241810U	1.8	2.0	10	50	4	2
* EPSRC241814U	1.8	2.0	14	50	4	2
* EPSRC241818U	1.8	2.0	18	50	4	2
* EPSRC242004U	2.0	2.5	4	50	4	2
* EPSRC242006U	2.0	2.5	6	50	4	2
* EPSRC242008U	2.0	2.5	8	50	4	2
* EPSRC242010U	2.0	2.5	10	50	4	2
* EPSRC242012U	2.0	2.5	12	50	4	2
* EPSRC242014U	2.0	2.5	14	50	4	2
* EPSRC242016U	2.0	2.5	16	50	4	2
* EPSRC242018U	2.0	2.5	18	50	4	2
* EPSRC242020U	2.0	2.5	20	50	4	2
* EPSRC242022U	2.0	2.5	22	60	4	2
* EPSRC242025U	2.0	2.5	25	60	4	2
* EPSRC242030U	2.0	2.5	30	75	4	2
* EPSRC242035U	2.0	2.5	35	75	4	2

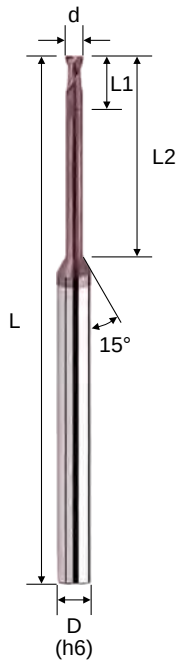
Cutting conditions：Table 049 ~ 051

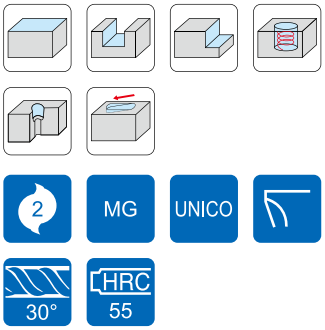
G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC242508U	2.5	3.0	8	50	4	2
* EPSRC242510U	2.5	3.0	10	50	4	2
* EPSRC242512U	2.5	3.0	12	50	4	2
* EPSRC242516U	2.5	3.0	16	50	4	2
* EPSRC242520U	2.5	3.0	20	50	4	2
* EPSRC242525U	2.5	3.0	25	60	4	2
* EPSRC242530U	2.5	3.0	30	75	4	2
* EPSRC242535U	2.5	3.0	35	75	4	2
EPSRC203006U	3.0	3.5	6	50	6	2
EPSRC203010U	3.0	3.5	10	50	6	2
EPSRC203012U	3.0	3.5	12	50	6	2
EPSRC203016U	3.0	3.5	16	50	6	2
EPSRC203020U	3.0	3.5	20	60	6	2
EPSRC203025U	3.0	3.5	25	60	6	2
EPSRC203030U	3.0	3.5	30	75	6	2
EPSRC203035U	3.0	3.5	35	75	6	2
EPSRC204008U	4.0	4.5	8	50	6	2
EPSRC204010U	4.0	4.5	10	50	6	2
EPSRC204012U	4.0	4.5	12	50	6	2
EPSRC204016U	4.0	4.5	16	50	6	2
EPSRC204020U	4.0	4.5	20	60	6	2
EPSRC204025U	4.0	4.5	25	60	6	2
EPSRC204030U	4.0	4.5	30	75	6	2
EPSRC204035U	4.0	4.5	35	75	6	2

Cutting conditions : Table 049 ~ 051

G550 - Long Neck · Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
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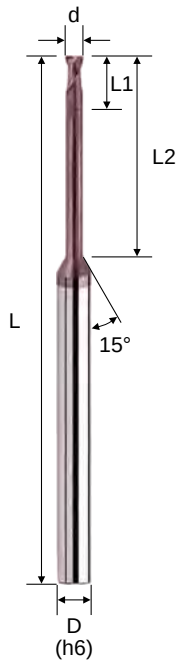
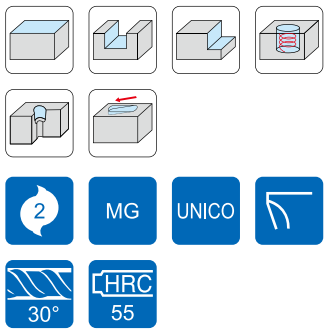




d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSRC205016U	5.0	7.0	16	50	6	2
EPSRC205020U	5.0	7.0	20	60	6	2
EPSRC205025U	5.0	7.0	25	60	6	2
EPSRC205030U	5.0	7.0	30	75	6	2
EPSRC205035U	5.0	7.0	35	75	6	2
EPSRC206020U	6.0	10.0	20	60	6	2
EPSRC206030U	6.0	10.0	30	75	6	2
EPSRC208020U	8.0	15.0	20	60	8	2
EPSRC208030U	8.0	15.0	30	75	8	2
EPSRC208040U	8.0	15.0	40	100	8	2
EPSRC210025U	10.0	20.0	25	75	10	2
EPSRC210035U	10.0	20.0	35	75	10	2
EPSRC210045U	10.0	20.0	45	100	10	2
EPSRC212030U	12.0	25.0	30	75	12	2
EPSRC212040U	12.0	25.0	40	100	12	2
EPSRC212050U	12.0	25.0	50	100	12	2

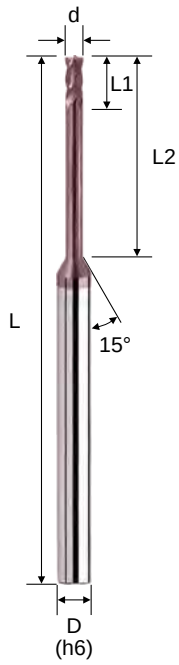
Cutting conditions：Table 049 ~ 051

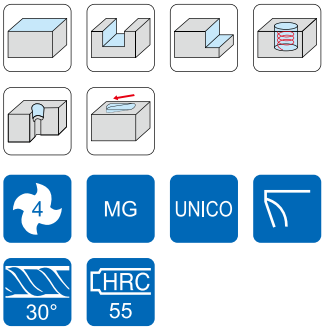
G550 - Long Neck · Square · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC441003U	1.0	1.0	3	50	4	4
* EPSRC441004U	1.0	1.0	4	50	4	4
* EPSRC441006U	1.0	1.0	6	50	4	4
* EPSRC441008U	1.0	1.0	8	50	4	4
* EPSRC441010U	1.0	1.0	10	50	4	4
* EPSRC441012U	1.0	1.0	12	50	4	4
* EPSRC441016U	1.0	1.0	16	50	4	4
* EPSRC441020U	1.0	1.0	20	50	4	4
* EPSRC441025U	1.0	1.0	25	60	4	4
EPSRC401004U	1.0	1.0	4	50	6	4
EPSRC401006U	1.0	1.0	6	50	6	4
EPSRC401008U	1.0	1.0	8	50	6	4
EPSRC401010U	1.0	1.0	10	50	6	4
EPSRC401012U	1.0	1.0	12	50	6	4
EPSRC441506U	1.5	1.5	6	50	4	4
EPSRC441508U	1.5	1.5	8	50	4	4
EPSRC441510U	1.5	1.5	10	50	4	4
EPSRC441512U	1.5	1.5	12	50	4	4
EPSRC441516U	1.5	1.5	16	50	4	4
EPSRC441520U	1.5	1.5	20	50	4	4
EPSRC441525U	1.5	1.5	25	60	4	4
EPSRC401506U	1.5	1.5	6	50	6	4
EPSRC401508U	1.5	1.5	8	50	6	4
EPSRC401510U	1.5	1.5	10	50	6	4
EPSRC401512U	1.5	1.5	12	50	6	4

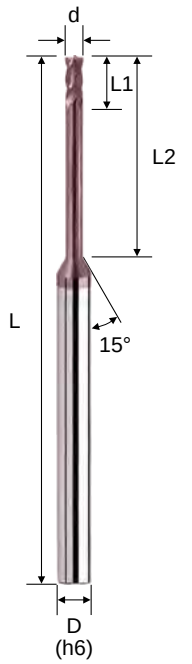
Cutting conditions : Table 052 ~ 053

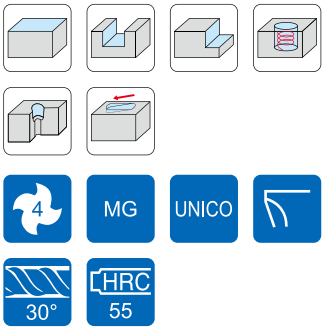
G550 - Long Neck · Square · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPSRC442006U	2.0	2.0	6	50	4	4
* EPSRC442008U	2.0	2.0	8	50	4	4
* EPSRC442010U	2.0	2.0	10	50	4	4
* EPSRC442012U	2.0	2.0	12	50	4	4
* EPSRC442016U	2.0	2.0	16	50	4	4
* EPSRC442020U	2.0	2.0	20	50	4	4
* EPSRC442025U	2.0	2.0	25	60	4	4
* EPSRC442030U	2.0	2.0	30	75	4	4
EPSRC402006U	2.0	2.0	6	50	6	4
EPSRC402008U	2.0	2.0	8	50	6	4
EPSRC402010U	2.0	2.0	10	50	6	4
EPSRC402016U	2.0	2.0	16	50	6	4
* EPSRC442510U	2.5	2.5	10	50	4	4
* EPSRC442512U	2.5	2.5	12	50	4	4
* EPSRC442516U	2.5	2.5	16	50	4	4
* EPSRC442520U	2.5	2.5	20	50	4	4
* EPSRC442525U	2.5	2.5	25	60	4	4
* EPSRC442530U	2.5	2.5	30	75	4	4
EPSRC402506U	2.5	2.5	6	50	6	4
EPSRC402510U	2.5	2.5	10	50	6	4
EPSRC403010U	3.0	3.0	10	50	6	4
EPSRC403012U	3.0	3.0	12	50	6	4
EPSRC403016U	3.0	3.0	16	50	6	4
EPSRC403020U	3.0	3.0	20	60	6	4
EPSRC403025U	3.0	3.0	25	60	6	4
EPSRC403030U	3.0	3.0	30	75	6	4
EPSRC403035U	3.0	3.0	35	75	6	4

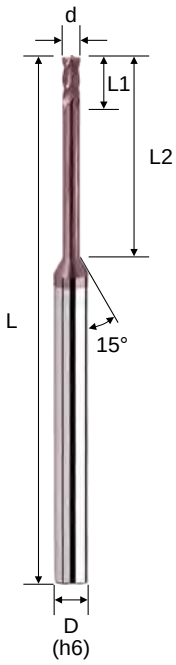
Cutting conditions : Table 052 ~ 053

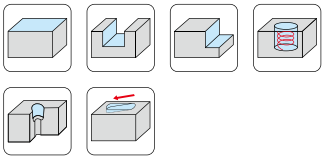
G550 - Long Neck · Square · 4F

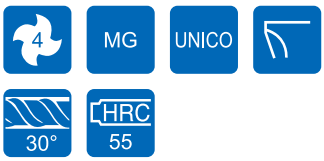
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSRC

P	M	K	N	S	H
●	●	●			○







Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSRC404010U	4.0	4.0	10	50	6	4
EPSRC404012U	4.0	4.0	12	50	6	4
EPSRC404016U	4.0	4.0	16	50	6	4
EPSRC404020U	4.0	4.0	20	60	6	4
EPSRC404025U	4.0	4.0	25	60	6	4
EPSRC404030U	4.0	4.0	30	75	6	4
EPSRC405016U	5.0	5.0	16	50	6	4
EPSRC405020U	5.0	5.0	20	60	6	4
EPSRC405025U	5.0	5.0	25	60	6	4
EPSRC405030U	5.0	5.0	30	75	6	4
EPSRC406020U	6.0	6.0	20	60	6	4
EPSRC406030U	6.0	6.0	30	75	6	4
EPSRC408020U	8.0	15.0	20	60	8	4
EPSRC408030U	8.0	15.0	30	75	8	4
EPSRC408040U	8.0	15.0	40	100	8	4
EPSRC410025U	10.0	20.0	25	75	10	4
EPSRC410035U	10.0	20.0	35	100	10	4
EPSRC410045U	10.0	20.0	45	100	10	4
EPSRC412030U	12.0	25.0	30	75	12	4
EPSRC412040U	12.0	25.0	40	100	12	4
EPSRC412050U	12.0	25.0	50	100	12	4

Cutting conditions：Table 052 ~ 053

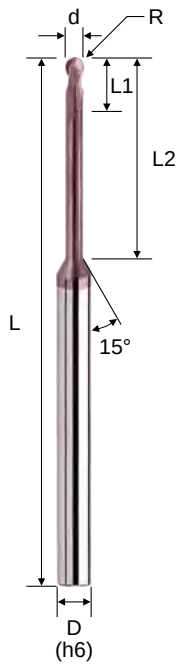
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

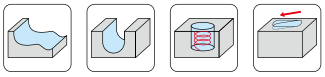
G550 - Long Neck · Ball Nose · 2F

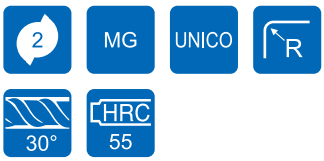
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBRC

P	M	K	N	S	H
●	●	●			○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPBRC240301U	0.15R	0.3	0.3	1	50	4	2
* EPBRC240302U	0.15R	0.3	0.3	2	50	4	2
* EPBRC240303U	0.15R	0.3	0.3	3	50	4	2
* EPBRC240401U	0.20R	0.4	0.4	1	50	4	2
* EPBRC240402U	0.20R	0.4	0.4	2	50	4	2
* EPBRC240403U	0.20R	0.4	0.4	3	50	4	2
* EPBRC240404U	0.20R	0.4	0.4	4	50	4	2
* EPBRC240405U	0.20R	0.4	0.4	5	50	4	2
* EPBRC240406U	0.20R	0.4	0.4	6	50	4	2
* EPBRC240408U	0.20R	0.4	0.4	8	50	4	2
* EPBRC240501U	0.25R	0.5	0.5	1	50	4	2
* EPBRC240502U	0.25R	0.5	0.5	2	50	4	2
* EPBRC240503U	0.25R	0.5	0.5	3	50	4	2
* EPBRC240504U	0.25R	0.5	0.5	4	50	4	2
* EPBRC240505U	0.25R	0.5	0.5	5	50	4	2
* EPBRC240506U	0.25R	0.5	0.5	6	50	4	2
* EPBRC240508U	0.25R	0.5	0.5	8	50	4	2
* EPBRC240510U	0.25R	0.5	0.5	10	50	4	2
* EPBRC240601U	0.30R	0.6	0.6	1	50	4	2
* EPBRC240602U	0.30R	0.6	0.6	2	50	4	2
* EPBRC240603U	0.30R	0.6	0.6	3	50	4	2
* EPBRC240604U	0.30R	0.6	0.6	4	50	4	2
* EPBRC240605U	0.30R	0.6	0.6	5	50	4	2
* EPBRC240606U	0.30R	0.6	0.6	6	50	4	2
* EPBRC240608U	0.30R	0.6	0.6	8	50	4	2
* EPBRC240610U	0.30R	0.6	0.6	10	50	4	2
* EPBRC240612U	0.30R	0.6	0.6	12	50	4	2

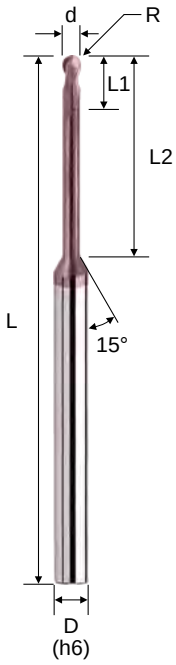
Cutting conditions：Table 054 ~ 056

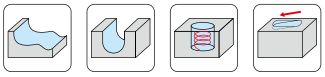
G550 - Long Neck · Ball Nose · 2F

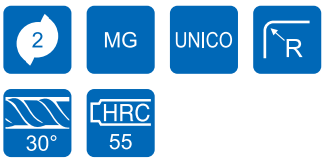
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBRC

P	M	K	N	S	H
●	●	●			○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPBRC240702U	0.35R	0.7	0.7	2	50	4	2
* EPBRC240704U	0.35R	0.7	0.7	4	50	4	2
* EPBRC240708U	0.35R	0.7	0.7	8	50	4	2
* EPBRC240710U	0.35R	0.7	0.7	10	50	4	2
* EPBRC240712U	0.35R	0.7	0.7	12	50	4	2
* EPBRC240802U	0.40R	0.8	0.8	2	50	4	2
* EPBRC240804U	0.40R	0.8	0.8	4	50	4	2
* EPBRC240806U	0.40R	0.8	0.8	6	50	4	2
* EPBRC240808U	0.40R	0.8	0.8	8	50	4	2
* EPBRC240810U	0.40R	0.8	0.8	10	50	4	2
* EPBRC240812U	0.40R	0.8	0.8	12	50	4	2
* EPBRC240904U	0.45R	0.9	0.9	4	50	4	2
* EPBRC241002U	0.50R	1.0	1.0	2	50	4	2
* EPBRC241003U	0.50R	1.0	1.0	3	50	4	2
* EPBRC241004U	0.50R	1.0	1.0	4	50	4	2
* EPBRC241005U	0.50R	1.0	1.0	5	50	4	2
* EPBRC241006U	0.50R	1.0	1.0	6	50	4	2
* EPBRC241008U	0.50R	1.0	1.0	8	50	4	2
* EPBRC241010U	0.50R	1.0	1.0	10	50	4	2
* EPBRC241012U	0.50R	1.0	1.0	12	50	4	2
* EPBRC241014U	0.50R	1.0	1.0	14	50	4	2
* EPBRC241016U	0.50R	1.0	1.0	16	50	4	2
* EPBRC241018U	0.50R	1.0	1.0	18	50	4	2
* EPBRC241020U	0.50R	1.0	1.0	20	50	4	2
* EPBRC241022U	0.50R	1.0	1.0	22	60	4	2
EPBRC201004U	0.50R	1.0	1.0	4	50	6	2
EPBRC201006U	0.50R	1.0	1.0	6	50	6	2
EPBRC201008U	0.50R	1.0	1.0	8	50	6	2
EPBRC201010U	0.50R	1.0	1.0	10	50	6	2
EPBRC201012U	0.50R	1.0	1.0	12	50	6	2

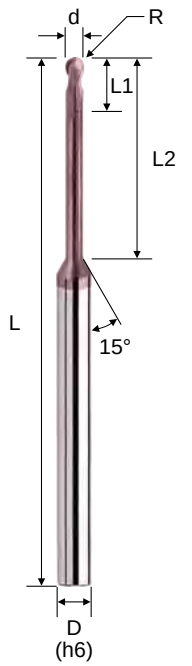
Cutting conditions：Table 054 ~ 056

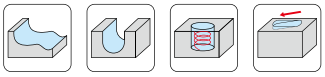
G550 - Long Neck · Ball Nose · 2F

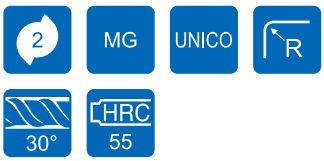
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBRC

P	M	K	N	S	H
●	●	●			○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPBRC241204U	0.60R	1.2	1.2	4	50	4	2
* EPBRC241206U	0.60R	1.2	1.2	6	50	4	2
* EPBRC241208U	0.60R	1.2	1.2	8	50	4	2
* EPBRC241210U	0.60R	1.2	1.2	10	50	4	2
* EPBRC241212U	0.60R	1.2	1.2	12	50	4	2
* EPBRC241216U	0.60R	1.2	1.2	16	50	4	2
* EPBRC241220U	0.60R	1.2	1.2	20	50	4	2
* EPBRC241224U	0.60R	1.2	1.2	24	60	4	2
* EPBRC241406U	0.70R	1.4	1.4	6	50	4	2
* EPBRC241408U	0.70R	1.4	1.4	8	50	4	2
* EPBRC241412U	0.70R	1.4	1.4	12	50	4	2
* EPBRC241416U	0.70R	1.4	1.4	16	50	4	2
* EPBRC241503U	0.75R	1.5	1.5	3	50	4	2
* EPBRC241504U	0.75R	1.5	1.5	4	50	4	2
* EPBRC241506U	0.75R	1.5	1.5	6	50	4	2
* EPBRC241508U	0.75R	1.5	1.5	8	50	4	2
* EPBRC241510U	0.75R	1.5	1.5	10	50	4	2
* EPBRC241512U	0.75R	1.5	1.5	12	50	4	2
* EPBRC241514U	0.75R	1.5	1.5	14	50	4	2
* EPBRC241516U	0.75R	1.5	1.5	16	50	4	2
* EPBRC241518U	0.75R	1.5	1.5	18	50	4	2
* EPBRC241520U	0.75R	1.5	1.5	20	50	4	2
* EPBRC241522U	0.75R	1.5	1.5	22	60	4	2
* EPBRC241525U	0.75R	1.5	1.5	25	60	4	2
* EPBRC241530U	0.75R	1.5	1.5	30	75	4	2
EPBRC201506U	0.75R	1.5	1.5	6	50	6	2
EPBRC201508U	0.75R	1.5	1.5	8	50	6	2
EPBRC201510U	0.75R	1.5	1.5	10	50	6	2
EPBRC201512U	0.75R	1.5	1.5	12	50	6	2

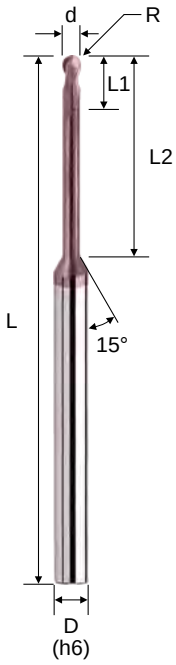
Cutting conditions：Table 054 ~ 056

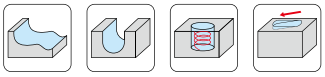
G550 - Long Neck · Ball Nose · 2F

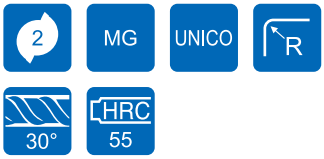
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBRC

P	M	K	N	S	H
●	●	●			○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPBRC241606U	0.80R	1.6	1.6	6	50	4	2
* EPBRC241608U	0.80R	1.6	1.6	8	50	4	2
* EPBRC241612U	0.80R	1.6	1.6	12	50	4	2
* EPBRC241616U	0.80R	1.6	1.6	16	50	4	2
* EPBRC241620U	0.80R	1.6	1.6	20	50	4	2
* EPBRC241806U	0.90R	1.8	1.8	6	50	4	2
* EPBRC241808U	0.90R	1.8	1.8	8	50	4	2
* EPBRC241812U	0.90R	1.8	1.8	12	50	4	2
* EPBRC241816U	0.90R	1.8	1.8	16	50	4	2
* EPBRC241820U	0.90R	1.8	1.8	20	50	4	2
* EPBRC242004U	1.00R	2.0	2.0	4	50	4	2
* EPBRC242006U	1.00R	2.0	2.0	6	50	4	2
* EPBRC242008U	1.00R	2.0	2.0	8	50	4	2
* EPBRC242010U	1.00R	2.0	2.0	10	50	4	2
* EPBRC242012U	1.00R	2.0	2.0	12	50	4	2
* EPBRC242014U	1.00R	2.0	2.0	14	50	4	2
* EPBRC242016U	1.00R	2.0	2.0	16	50	4	2
* EPBRC242018U	1.00R	2.0	2.0	18	50	4	2
* EPBRC242020U	1.00R	2.0	2.0	20	50	4	2
* EPBRC242022U	1.00R	2.0	2.0	22	60	4	2
* EPBRC242025U	1.00R	2.0	2.0	25	60	4	2
EPBRC202006U	1.00R	2.0	2.0	6	50	6	2
EPBRC202008U	1.00R	2.0	2.0	8	50	6	2
EPBRC202010U	1.00R	2.0	2.0	10	50	6	2
EPBRC202016U	1.00R	2.0	2.0	16	50	6	2

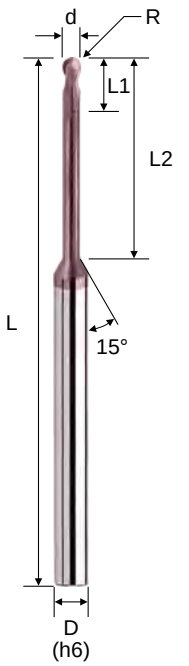
Cutting conditions：Table 054 ~ 056

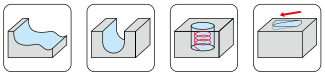
G550 - Long Neck · Ball Nose · 2F

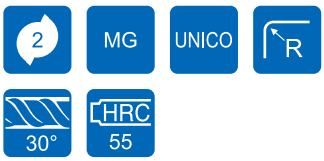
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBRC

P	M	K	N	S	H
●	●	●			○







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPBRC242508U	1.25R	2.5	2.5	8	50	4	2
* EPBRC242510U	1.25R	2.5	2.5	10	50	4	2
* EPBRC242516U	1.25R	2.5	2.5	16	50	4	2
* EPBRC242520U	1.25R	2.5	2.5	20	60	4	2
* EPBRC242525U	1.25R	2.5	2.5	25	60	4	2
* EPBRC242530U	1.25R	2.5	2.5	30	75	4	2
EPBRC202506U	1.25R	2.5	2.5	6	50	6	2
EPBRC202510U	1.25R	2.5	2.5	10	50	6	2
EPBRC203006U	1.50R	3.0	3.0	6	50	6	2
EPBRC203008U	1.50R	3.0	3.0	8	50	6	2
EPBRC203012U	1.50R	3.0	3.0	12	50	6	2
EPBRC203016U	1.50R	3.0	3.0	16	60	6	2
EPBRC203020U	1.50R	3.0	3.0	20	60	6	2
EPBRC203025U	1.50R	3.0	3.0	25	60	6	2
EPBRC203030U	1.50R	3.0	3.0	30	75	6	2
EPBRC203035U	1.50R	3.0	3.0	35	75	6	2
EPBRC204008U	2.00R	4.0	4.0	8	50	6	2
EPBRC204010U	2.00R	4.0	4.0	10	50	6	2
EPBRC204012U	2.00R	4.0	4.0	12	50	6	2
EPBRC204016U	2.00R	4.0	4.0	16	60	6	2
EPBRC204020U	2.00R	4.0	4.0	20	60	6	2
EPBRC204025U	2.00R	4.0	4.0	25	60	6	2
EPBRC204030U	2.00R	4.0	4.0	30	75	6	2
EPBRC204035U	2.00R	4.0	4.0	35	75	6	2
EPBRC205015U	2.50R	5.0	5.0	15	60	6	2
EPBRC205020U	2.50R	5.0	5.0	20	60	6	2
EPBRC205025U	2.50R	5.0	5.0	25	60	6	2
EPBRC205030U	2.50R	5.0	5.0	30	75	6	2
EPBRC206015U	3.00R	6.0	10.0	15	50	6	2
EPBRC208025U	4.00R	8.0	12.0	25	60	8	2
EPBRC210030U	5.00R	10.0	16.0	30	75	10	2
EPBRC212030U	6.00R	12.0	18.0	30	75	12	2

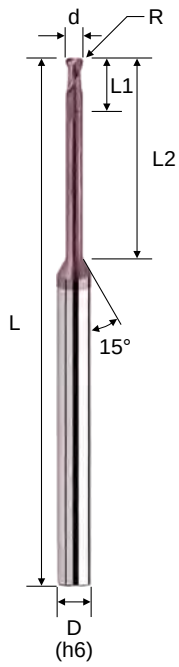
Cutting conditions：Table 054 ~ 056

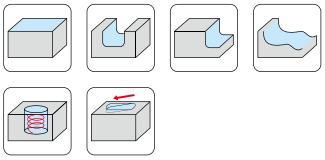
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





2 | MG | UNICO | R | 30° | HRC 55

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC24100104U	1.0	0.1R	1.0	4	50	4	2
* EPCRC24100106U	1.0	0.1R	1.0	6	50	4	2
* EPCRC24100108U	1.0	0.1R	1.0	8	50	4	2
* EPCRC24100110U	1.0	0.1R	1.0	10	50	4	2
* EPCRC24100112U	1.0	0.1R	1.0	12	50	4	2
* EPCRC24100204U	1.0	0.2R	1.0	4	50	4	2
* EPCRC24100206U	1.0	0.2R	1.0	6	50	4	2
* EPCRC24100208U	1.0	0.2R	1.0	8	50	4	2
* EPCRC24100210U	1.0	0.2R	1.0	10	50	4	2
* EPCRC24100212U	1.0	0.2R	1.0	12	50	4	2
* EPCRC24100304U	1.0	0.3R	1.0	4	50	4	2
* EPCRC24100306U	1.0	0.3R	1.0	6	50	4	2
* EPCRC24100308U	1.0	0.3R	1.0	8	50	4	2
* EPCRC24100310U	1.0	0.3R	1.0	10	50	4	2
* EPCRC24100312U	1.0	0.3R	1.0	12	50	4	2
* EPCRC24120104U	1.2	0.1R	1.2	4	50	4	2
* EPCRC24120106U	1.2	0.1R	1.2	6	50	4	2
* EPCRC24120108U	1.2	0.1R	1.2	8	50	4	2
* EPCRC24120110U	1.2	0.1R	1.2	10	50	4	2
* EPCRC24120112U	1.2	0.1R	1.2	12	50	4	2
* EPCRC24120204U	1.2	0.2R	1.2	4	50	4	2
* EPCRC24120206U	1.2	0.2R	1.2	6	50	4	2
* EPCRC24120208U	1.2	0.2R	1.2	8	50	4	2
* EPCRC24120210U	1.2	0.2R	1.2	10	50	4	2
* EPCRC24120212U	1.2	0.2R	1.2	12	50	4	2
* EPCRC24120304U	1.2	0.3R	1.2	4	50	4	2
* EPCRC24120306U	1.2	0.3R	1.2	6	50	4	2
* EPCRC24120308U	1.2	0.3R	1.2	8	50	4	2
* EPCRC24120310U	1.2	0.3R	1.2	10	50	4	2
* EPCRC24120312U	1.2	0.3R	1.2	12	50	4	2

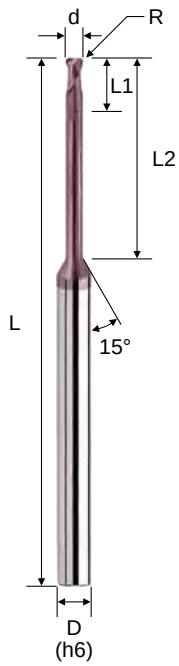
Cutting conditions：Table 057

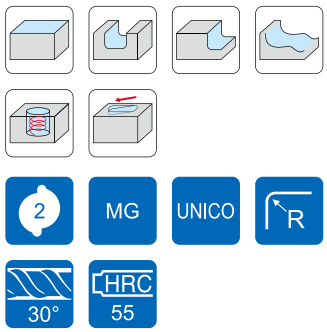
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC24150106U	1.5	0.1R	1.5	6	50	4	2
* EPCRC24150108U	1.5	0.1R	1.5	8	50	4	2
* EPCRC24150110U	1.5	0.1R	1.5	10	50	4	2
* EPCRC24150112U	1.5	0.1R	1.5	12	50	4	2
* EPCRC24150116U	1.5	0.1R	1.5	16	50	4	2
* EPCRC24150206U	1.5	0.2R	1.5	6	50	4	2
* EPCRC24150208U	1.5	0.2R	1.5	8	50	4	2
* EPCRC24150210U	1.5	0.2R	1.5	10	50	4	2
* EPCRC24150212U	1.5	0.2R	1.5	12	50	4	2
* EPCRC24150216U	1.5	0.2R	1.5	16	50	4	2
* EPCRC24150306U	1.5	0.3R	1.5	6	50	4	2
* EPCRC24150308U	1.5	0.3R	1.5	8	50	4	2
* EPCRC24150310U	1.5	0.3R	1.5	10	50	4	2
* EPCRC24150312U	1.5	0.3R	1.5	12	50	4	2
* EPCRC24150316U	1.5	0.3R	1.5	16	50	4	2
* EPCRC24150506U	1.5	0.5R	1.5	6	50	4	2
* EPCRC24150508U	1.5	0.5R	1.5	8	50	4	2
* EPCRC24150510U	1.5	0.5R	1.5	10	50	4	2
* EPCRC24150512U	1.5	0.5R	1.5	12	50	4	2
* EPCRC24150516U	1.5	0.5R	1.5	16	50	4	2

Cutting conditions：Table 057

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

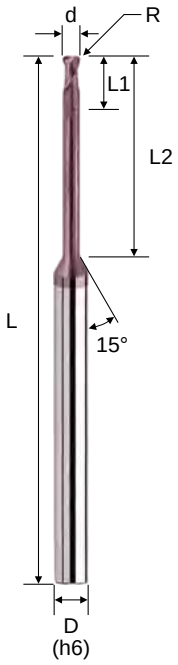
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

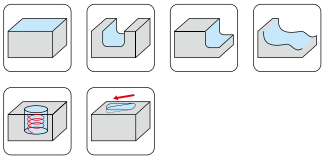
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





2 | MG | UNICO | R | 30° | HRC 55

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC24200106U	2.0	0.1R	2.0	6	50	4	2
* EPCRC24200108U	2.0	0.1R	2.0	8	50	4	2
* EPCRC24200110U	2.0	0.1R	2.0	10	50	4	2
* EPCRC24200112U	2.0	0.1R	2.0	12	50	4	2
* EPCRC24200116U	2.0	0.1R	2.0	16	50	4	2
* EPCRC24200120U	2.0	0.1R	2.0	20	50	4	2
* EPCRC24200125U	2.0	0.1R	2.0	25	60	4	2
* EPCRC24200206U	2.0	0.2R	2.0	6	50	4	2
* EPCRC24200208U	2.0	0.2R	2.0	8	50	4	2
* EPCRC24200210U	2.0	0.2R	2.0	10	50	4	2
* EPCRC24200212U	2.0	0.2R	2.0	12	50	4	2
* EPCRC24200216U	2.0	0.2R	2.0	16	50	4	2
* EPCRC24200220U	2.0	0.2R	2.0	20	50	4	2
* EPCRC24200225U	2.0	0.2R	2.0	25	60	4	2
* EPCRC24200306U	2.0	0.3R	2.0	6	50	4	2
* EPCRC24200308U	2.0	0.3R	2.0	8	50	4	2
* EPCRC24200310U	2.0	0.3R	2.0	10	50	4	2
* EPCRC24200312U	2.0	0.3R	2.0	12	50	4	2
* EPCRC24200316U	2.0	0.3R	2.0	16	50	4	2
* EPCRC24200320U	2.0	0.3R	2.0	20	50	4	2
* EPCRC24200325U	2.0	0.3R	2.0	25	60	4	2
* EPCRC24200506U	2.0	0.5R	2.0	6	50	4	2
* EPCRC24200508U	2.0	0.5R	2.0	8	50	4	2
* EPCRC24200510U	2.0	0.5R	2.0	10	50	4	2
* EPCRC24200512U	2.0	0.5R	2.0	12	50	4	2
* EPCRC24200516U	2.0	0.5R	2.0	16	50	4	2
* EPCRC24200520U	2.0	0.5R	2.0	20	50	4	2
* EPCRC24200525U	2.0	0.5R	2.0	25	60	4	2
EPCRC20200510U	2.0	0.5R	2.0	10	50	6	2
EPCRC20200515U	2.0	0.5R	2.0	15	50	6	2

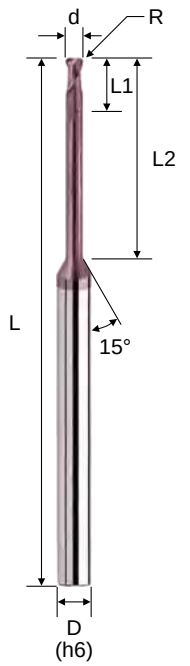
Cutting conditions：Table 057

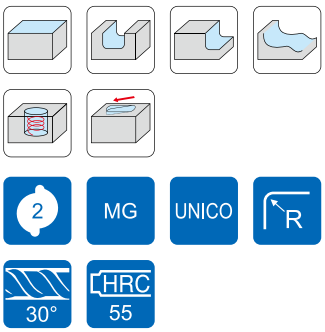
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC24250110U	2.5	0.1R	2.5	10	50	4	2
* EPCRC24250116U	2.5	0.1R	2.5	16	50	4	2
* EPCRC24250120U	2.5	0.1R	2.5	20	50	4	2
* EPCRC24250125U	2.5	0.1R	2.5	25	60	4	2
* EPCRC24250210U	2.5	0.2R	2.5	10	50	4	2
* EPCRC24250216U	2.5	0.2R	2.5	16	50	4	2
* EPCRC24250220U	2.5	0.2R	2.5	20	50	4	2
* EPCRC24250225U	2.5	0.2R	2.5	25	60	4	2
* EPCRC24250310U	2.5	0.3R	2.5	10	50	4	2
* EPCRC24250316U	2.5	0.3R	2.5	16	50	4	2
* EPCRC24250320U	2.5	0.3R	2.5	20	50	4	2
* EPCRC24250325U	2.5	0.3R	2.5	25	60	4	2
* EPCRC24250510U	2.5	0.5R	2.5	10	50	4	2
* EPCRC24250516U	2.5	0.5R	2.5	16	50	4	2
* EPCRC24250520U	2.5	0.5R	2.5	20	50	4	2
* EPCRC24250525U	2.5	0.5R	2.5	25	60	4	2

Cutting conditions：Table 057

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

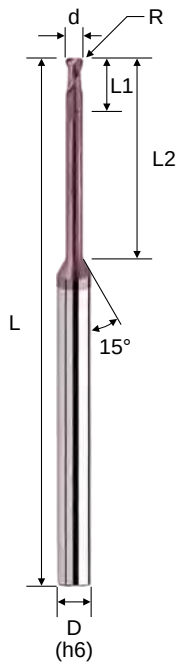
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

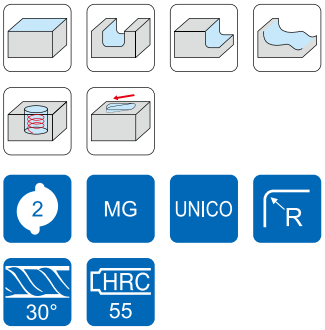
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20300110U	3.0	0.1R	3.0	10	50	6	2
EPCRC20300116U	3.0	0.1R	3.0	16	60	6	2
EPCRC20300120U	3.0	0.1R	3.0	20	60	6	2
EPCRC20300125U	3.0	0.1R	3.0	25	60	6	2
EPCRC20300130U	3.0	0.1R	3.0	30	75	6	2
EPCRC20300135U	3.0	0.1R	3.0	35	75	6	2
EPCRC20300210U	3.0	0.2R	3.0	10	50	6	2
EPCRC20300216U	3.0	0.2R	3.0	16	60	6	2
EPCRC20300220U	3.0	0.2R	3.0	20	60	6	2
EPCRC20300225U	3.0	0.2R	3.0	25	60	6	2
EPCRC20300230U	3.0	0.2R	3.0	30	75	6	2
EPCRC20300235U	3.0	0.2R	3.0	35	75	6	2
EPCRC20300310U	3.0	0.3R	3.0	10	50	6	2
EPCRC20300316U	3.0	0.3R	3.0	16	60	6	2
EPCRC20300320U	3.0	0.3R	3.0	20	60	6	2
EPCRC20300325U	3.0	0.3R	3.0	25	60	6	2
EPCRC20300330U	3.0	0.3R	3.0	30	75	6	2
EPCRC20300335U	3.0	0.3R	3.0	35	75	6	2
EPCRC20300510U	3.0	0.5R	3.0	10	50	6	2
EPCRC20300516U	3.0	0.5R	3.0	16	60	6	2
EPCRC20300520U	3.0	0.5R	3.0	20	60	6	2
EPCRC20300525U	3.0	0.5R	3.0	25	60	6	2
EPCRC20300530U	3.0	0.5R	3.0	30	75	6	2
EPCRC20300535U	3.0	0.5R	3.0	35	75	6	2
EPCRC20301010U	3.0	1.0R	3.0	10	50	6	2
EPCRC20301016U	3.0	1.0R	3.0	16	60	6	2
EPCRC20301020U	3.0	1.0R	3.0	20	60	6	2
EPCRC20301025U	3.0	1.0R	3.0	25	60	6	2
EPCRC20301030U	3.0	1.0R	3.0	30	75	6	2
EPCRC20301035U	3.0	1.0R	3.0	35	75	6	2

Cutting conditions：Table 057

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

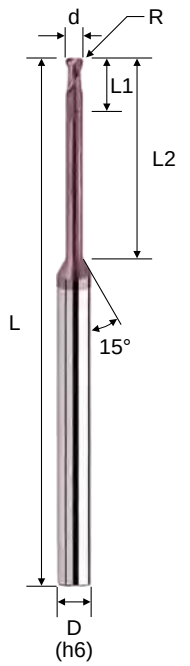
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

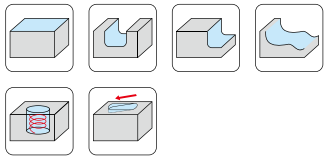
G550 - Long Neck · Corner Radius · 2F

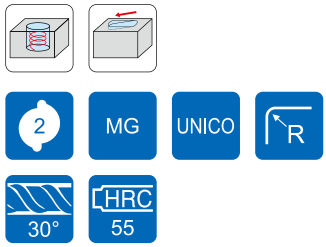
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20400113U	4.0	0.1R	4.0	13	50	6	2
EPCRC20400116U	4.0	0.1R	4.0	16	60	6	2
EPCRC20400120U	4.0	0.1R	4.0	20	60	6	2
EPCRC20400125U	4.0	0.1R	4.0	25	60	6	2
EPCRC20400130U	4.0	0.1R	4.0	30	75	6	2
EPCRC20400135U	4.0	0.1R	4.0	35	75	6	2
EPCRC20400213U	4.0	0.2R	4.0	13	50	6	2
EPCRC20400216U	4.0	0.2R	4.0	16	60	6	2
EPCRC20400220U	4.0	0.2R	4.0	20	60	6	2
EPCRC20400225U	4.0	0.2R	4.0	25	60	6	2
EPCRC20400230U	4.0	0.2R	4.0	30	75	6	2
EPCRC20400235U	4.0	0.2R	4.0	35	75	6	2
EPCRC20400313U	4.0	0.3R	4.0	13	50	6	2
EPCRC20400316U	4.0	0.3R	4.0	16	60	6	2
EPCRC20400320U	4.0	0.3R	4.0	20	60	6	2
EPCRC20400325U	4.0	0.3R	4.0	25	60	6	2
EPCRC20400330U	4.0	0.3R	4.0	30	75	6	2
EPCRC20400335U	4.0	0.3R	4.0	35	75	6	2
EPCRC20400513U	4.0	0.5R	4.0	13	50	6	2
EPCRC20400516U	4.0	0.5R	4.0	16	60	6	2
EPCRC20400520U	4.0	0.5R	4.0	20	60	6	2
EPCRC20400525U	4.0	0.5R	4.0	25	60	6	2
EPCRC20400530U	4.0	0.5R	4.0	30	75	6	2
EPCRC20400535U	4.0	0.5R	4.0	35	75	6	2
EPCRC20401013U	4.0	1.0R	4.0	13	50	6	2
EPCRC20401016U	4.0	1.0R	4.0	16	60	6	2
EPCRC20401020U	4.0	1.0R	4.0	20	60	6	2
EPCRC20401025U	4.0	1.0R	4.0	25	60	6	2
EPCRC20401030U	4.0	1.0R	4.0	30	75	6	2
EPCRC20401035U	4.0	1.0R	4.0	35	75	6	2

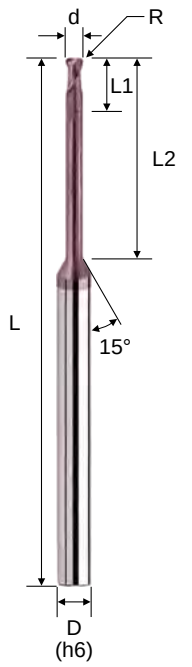
Cutting conditions：Table 057

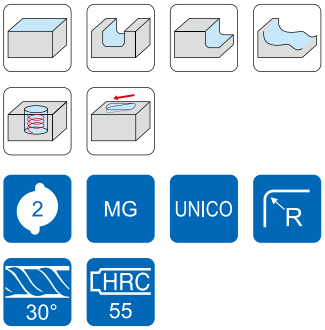
G550 - Long Neck · Corner Radius · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCRC

P	M	K	N	S	H
●	●	●			○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20500116U	5.0	0.1R	5.0	16	60	6	2
EPCRC20500130U	5.0	0.1R	5.0	30	75	6	2
EPCRC20500216U	5.0	0.2R	5.0	16	60	6	2
EPCRC20500230U	5.0	0.2R	5.0	30	75	6	2
EPCRC20500316U	5.0	0.3R	5.0	16	60	6	2
EPCRC20500330U	5.0	0.3R	5.0	30	75	6	2
EPCRC20500516U	5.0	0.5R	5.0	16	60	6	2
EPCRC20500530U	5.0	0.5R	5.0	30	75	6	2
EPCRC20501016U	5.0	1.0R	5.0	16	60	6	2
EPCRC20501030U	5.0	1.0R	5.0	30	75	6	2
EPCRC20600120U	6.0	0.1R	7.0	20	60	6	2
EPCRC20600130U	6.0	0.1R	7.0	30	75	6	2
EPCRC20600220U	6.0	0.2R	7.0	20	60	6	2
EPCRC20600230U	6.0	0.2R	7.0	30	75	6	2
EPCRC20600320U	6.0	0.3R	7.0	20	60	6	2
EPCRC20600330U	6.0	0.3R	7.0	30	75	6	2
EPCRC20600520U	6.0	0.5R	7.0	20	60	6	2
EPCRC20600530U	6.0	0.5R	7.0	30	75	6	2
EPCRC20601020U	6.0	1.0R	7.0	20	60	6	2
EPCRC20601030U	6.0	1.0R	7.0	30	75	6	2
EPCRC20601520U	6.0	1.5R	7.0	20	60	6	2
EPCRC20601530U	6.0	1.5R	7.0	30	75	6	2
EPCRC20800522U	8.0	0.5R	9.0	22	60	8	2
EPCRC20801022U	8.0	1.0R	9.0	22	60	8	2
EPCRC20801522U	8.0	1.5R	9.0	22	60	8	2
EPCRC20802022U	8.0	2.0R	9.0	22	60	8	2
EPCRC21000524U	10.0	0.5R	11.0	24	75	10	2
EPCRC21001024U	10.0	1.0R	11.0	24	75	10	2
EPCRC21001524U	10.0	1.5R	11.0	24	75	10	2
EPCRC21002024U	10.0	2.0R	11.0	24	75	10	2
EPCRC21200526U	12.0	0.5R	13.0	26	75	12	2
EPCRC21201026U	12.0	1.0R	13.0	26	75	12	2
EPCRC21201526U	12.0	1.5R	13.0	26	75	12	2
EPCRC21202026U	12.0	2.0R	13.0	26	75	12	2

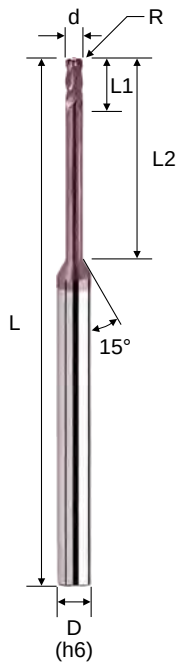
Cutting conditions：Table 057

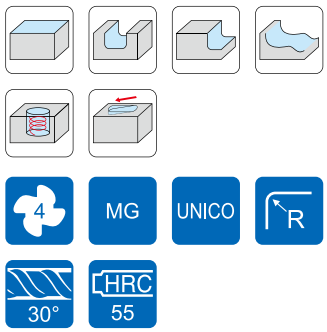
G550 - Long Neck · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC44200106U	2.0	0.1R	2.0	6	50	4	4
* EPCRC44200108U	2.0	0.1R	2.0	8	50	4	4
* EPCRC44200110U	2.0	0.1R	2.0	10	50	4	4
* EPCRC44200112U	2.0	0.1R	2.0	12	50	4	4
* EPCRC44200116U	2.0	0.1R	2.0	16	50	4	4
* EPCRC44200120U	2.0	0.1R	2.0	20	50	4	4
* EPCRC44200125U	2.0	0.1R	2.0	25	60	4	4
* EPCRC44200206U	2.0	0.2R	2.0	6	50	4	4
* EPCRC44200208U	2.0	0.2R	2.0	8	50	4	4
* EPCRC44200210U	2.0	0.2R	2.0	10	50	4	4
* EPCRC44200212U	2.0	0.2R	2.0	12	50	4	4
* EPCRC44200216U	2.0	0.2R	2.0	16	50	4	4
* EPCRC44200220U	2.0	0.2R	2.0	20	50	4	4
* EPCRC44200225U	2.0	0.2R	2.0	25	60	4	4
* EPCRC44200306U	2.0	0.3R	2.0	6	50	4	4
* EPCRC44200308U	2.0	0.3R	2.0	8	50	4	4
* EPCRC44200310U	2.0	0.3R	2.0	10	50	4	4
* EPCRC44200312U	2.0	0.3R	2.0	12	50	4	4
* EPCRC44200316U	2.0	0.3R	2.0	16	50	4	4
* EPCRC44200320U	2.0	0.3R	2.0	20	50	4	4
* EPCRC44200325U	2.0	0.3R	2.0	25	60	4	4
* EPCRC44200506U	2.0	0.5R	2.0	6	50	4	4
* EPCRC44200508U	2.0	0.5R	2.0	8	50	4	4
* EPCRC44200510U	2.0	0.5R	2.0	10	50	4	4
* EPCRC44200512U	2.0	0.5R	2.0	12	50	4	4
* EPCRC44200516U	2.0	0.5R	2.0	16	50	4	4
* EPCRC44200520U	2.0	0.5R	2.0	20	50	4	4
* EPCRC44200525U	2.0	0.5R	2.0	25	60	4	4
EPCRC40200510U	2.0	0.5R	2.0	10	50	6	4
EPCRC40200515U	2.0	0.5R	2.0	15	50	6	4

Cutting conditions：Table 058

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

G550 - Long Neck · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCRC

P	M	K	N	S	H
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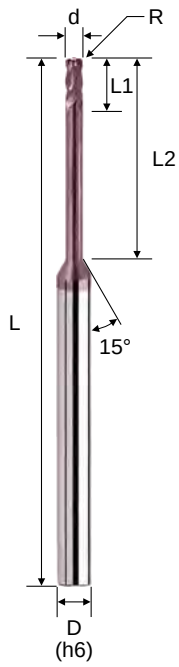
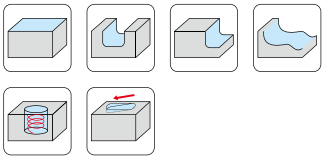
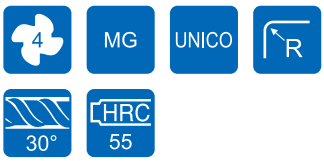






Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EPCRC44250110U	2.5	0.1R	2.5	10	50	4	4
* EPCRC44250116U	2.5	0.1R	2.5	16	50	4	4
* EPCRC44250120U	2.5	0.1R	2.5	20	50	4	4
* EPCRC44250125U	2.5	0.1R	2.5	25	60	4	4
* EPCRC44250210U	2.5	0.2R	2.5	10	50	4	4
* EPCRC44250216U	2.5	0.2R	2.5	16	50	4	4
* EPCRC44250220U	2.5	0.2R	2.5	20	50	4	4
* EPCRC44250225U	2.5	0.2R	2.5	25	60	4	4
* EPCRC44250310U	2.5	0.3R	2.5	10	50	4	4
* EPCRC44250316U	2.5	0.3R	2.5	16	50	4	4
* EPCRC44250320U	2.5	0.3R	2.5	20	50	4	4
* EPCRC44250325U	2.5	0.3R	2.5	25	60	4	4
* EPCRC44250510U	2.5	0.5R	2.5	10	50	4	4
* EPCRC44250516U	2.5	0.5R	2.5	16	50	4	4
* EPCRC44250520U	2.5	0.5R	2.5	20	50	4	4
* EPCRC44250525U	2.5	0.5R	2.5	25	60	4	4

Cutting conditions：Table 058

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

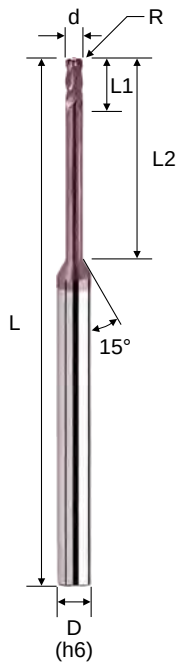
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

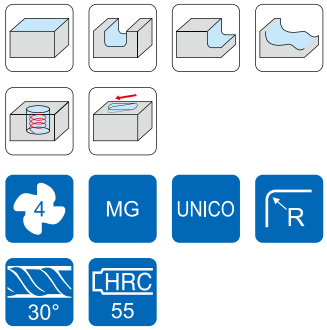
G550 - Long Neck · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40300110U	3.0	0.1R	3.0	10	50	6	4
EPCRC40300116U	3.0	0.1R	3.0	16	60	6	4
EPCRC40300120U	3.0	0.1R	3.0	20	60	6	4
EPCRC40300125U	3.0	0.1R	3.0	25	60	6	4
EPCRC40300130U	3.0	0.1R	3.0	30	75	6	4
EPCRC40300135U	3.0	0.1R	3.0	35	75	6	4
EPCRC40300210U	3.0	0.2R	3.0	10	50	6	4
EPCRC40300216U	3.0	0.2R	3.0	16	60	6	4
EPCRC40300220U	3.0	0.2R	3.0	20	60	6	4
EPCRC40300225U	3.0	0.2R	3.0	25	60	6	4
EPCRC40300230U	3.0	0.2R	3.0	30	75	6	4
EPCRC40300235U	3.0	0.2R	3.0	35	75	6	4
EPCRC40300310U	3.0	0.3R	3.0	10	50	6	4
EPCRC40300316U	3.0	0.3R	3.0	16	60	6	4
EPCRC40300320U	3.0	0.3R	3.0	20	60	6	4
EPCRC40300325U	3.0	0.3R	3.0	25	60	6	4
EPCRC40300330U	3.0	0.3R	3.0	30	75	6	4
EPCRC40300335U	3.0	0.3R	3.0	35	75	6	4
EPCRC40300510U	3.0	0.5R	3.0	10	50	6	4
EPCRC40300516U	3.0	0.5R	3.0	16	60	6	4
EPCRC40300520U	3.0	0.5R	3.0	20	60	6	4
EPCRC40300525U	3.0	0.5R	3.0	25	60	6	4
EPCRC40300530U	3.0	0.5R	3.0	30	75	6	4
EPCRC40300535U	3.0	0.5R	3.0	35	75	6	4
EPCRC40301010U	3.0	1.0R	3.0	10	50	6	4
EPCRC40301016U	3.0	1.0R	3.0	16	60	6	4
EPCRC40301020U	3.0	1.0R	3.0	20	60	6	4
EPCRC40301025U	3.0	1.0R	3.0	25	60	6	4
EPCRC40301030U	3.0	1.0R	3.0	30	75	6	4
EPCRC40301035U	3.0	1.0R	3.0	35	75	6	4

Cutting conditions：Table 058

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

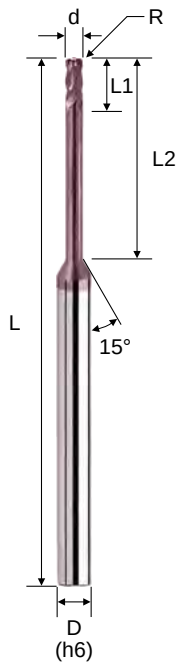
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

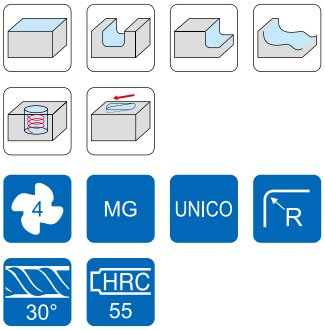
G550 - Long Neck · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCRC

P	M	K	N	S	H
●	●	●			○





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40400113U	4.0	0.1R	4.0	13	50	6	4
EPCRC40400116U	4.0	0.1R	4.0	16	60	6	4
EPCRC40400120U	4.0	0.1R	4.0	20	60	6	4
EPCRC40400125U	4.0	0.1R	4.0	25	60	6	4
EPCRC40400130U	4.0	0.1R	4.0	30	75	6	4
EPCRC40400135U	4.0	0.1R	4.0	35	75	6	4
EPCRC40400213U	4.0	0.2R	4.0	13	50	6	4
EPCRC40400216U	4.0	0.2R	4.0	16	60	6	4
EPCRC40400220U	4.0	0.2R	4.0	20	60	6	4
EPCRC40400225U	4.0	0.2R	4.0	25	60	6	4
EPCRC40400230U	4.0	0.2R	4.0	30	75	6	4
EPCRC40400235U	4.0	0.2R	4.0	35	75	6	4
EPCRC40400313U	4.0	0.3R	4.0	13	50	6	4
EPCRC40400316U	4.0	0.3R	4.0	16	60	6	4
EPCRC40400320U	4.0	0.3R	4.0	20	60	6	4
EPCRC40400325U	4.0	0.3R	4.0	25	60	6	4
EPCRC40400330U	4.0	0.3R	4.0	30	75	6	4
EPCRC40400335U	4.0	0.3R	4.0	35	75	6	4
EPCRC40400513U	4.0	0.5R	4.0	13	50	6	4
EPCRC40400516U	4.0	0.5R	4.0	16	60	6	4
EPCRC40400520U	4.0	0.5R	4.0	20	60	6	4
EPCRC40400525U	4.0	0.5R	4.0	25	60	6	4
EPCRC40400530U	4.0	0.5R	4.0	30	75	6	4
EPCRC40400535U	4.0	0.5R	4.0	35	75	6	4
EPCRC40401013U	4.0	1.0R	4.0	13	50	6	4
EPCRC40401016U	4.0	1.0R	4.0	16	60	6	4
EPCRC40401020U	4.0	1.0R	4.0	20	60	6	4
EPCRC40401025U	4.0	1.0R	4.0	25	60	6	4
EPCRC40401030U	4.0	1.0R	4.0	30	75	6	4
EPCRC40401035U	4.0	1.0R	4.0	35	75	6	4

Cutting conditions：Table 058

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

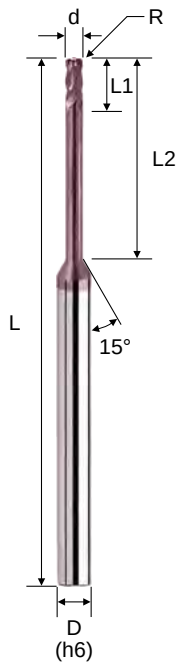
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

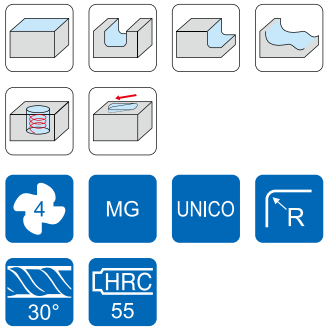
G550 - Long Neck · Corner Radius · 4F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCRC

P	M	K	N	S	H
●	●	●			○





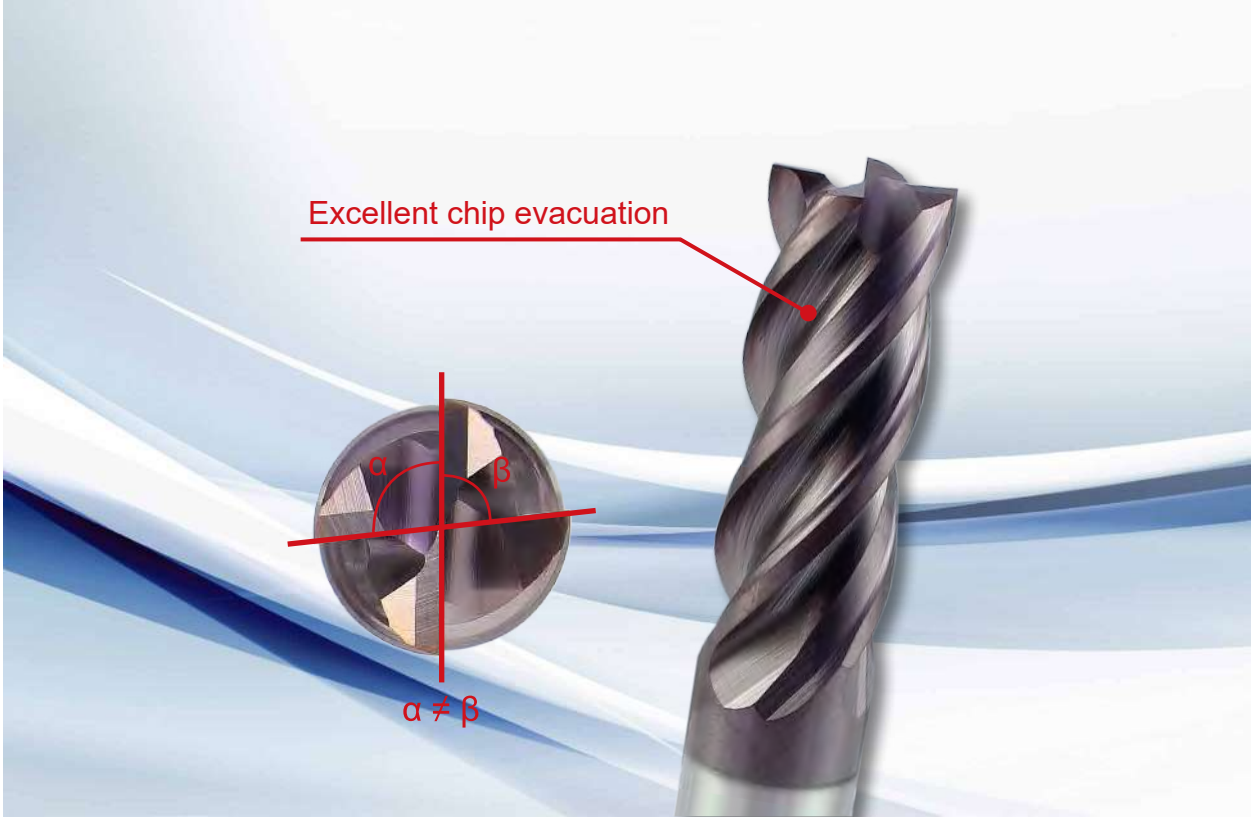
Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40500116U	5.0	0.1R	5.0	16	60	6	4
EPCRC40500130U	5.0	0.1R	5.0	30	75	6	4
EPCRC40500216U	5.0	0.2R	5.0	16	60	6	4
EPCRC40500230U	5.0	0.2R	5.0	30	75	6	4
EPCRC40500316U	5.0	0.3R	5.0	16	60	6	4
EPCRC40500330U	5.0	0.3R	5.0	30	75	6	4
EPCRC40500516U	5.0	0.5R	5.0	16	60	6	4
EPCRC40500530U	5.0	0.5R	5.0	30	75	6	4
EPCRC40501016U	5.0	1.0R	5.0	16	60	6	4
EPCRC40501030U	5.0	1.0R	5.0	30	75	6	4
EPCRC40600120U	6.0	0.1R	7.0	20	60	6	4
EPCRC40600130U	6.0	0.1R	7.0	30	75	6	4
EPCRC40600220U	6.0	0.2R	7.0	20	60	6	4
EPCRC40600230U	6.0	0.2R	7.0	30	75	6	4
EPCRC40600320U	6.0	0.3R	7.0	20	60	6	4
EPCRC40600330U	6.0	0.3R	7.0	30	75	6	4
EPCRC40600520U	6.0	0.5R	7.0	20	60	6	4
EPCRC40600530U	6.0	0.5R	7.0	30	75	6	4
EPCRC40601020U	6.0	1.0R	7.0	20	60	6	4
EPCRC40601030U	6.0	1.0R	7.0	30	75	6	4
EPCRC40601520U	6.0	1.5R	7.0	20	60	6	4
EPCRC40601530U	6.0	1.5R	7.0	30	75	6	4
EPCRC40800522U	8.0	0.5R	9.0	22	60	8	4
EPCRC40801022U	8.0	1.0R	9.0	22	60	8	4
EPCRC40801522U	8.0	1.5R	9.0	22	60	8	4
EPCRC40802022U	8.0	2.0R	9.0	22	60	8	4
EPCRC41000524U	10.0	0.5R	11.0	24	75	10	4
EPCRC41001024U	10.0	1.0R	11.0	24	75	10	4
EPCRC41001524U	10.0	1.5R	11.0	24	75	10	4
EPCRC41002024U	10.0	2.0R	11.0	24	75	10	4
EPCRC41200526U	12.0	0.5R	13.0	26	75	12	4
EPCRC41201026U	12.0	1.0R	13.0	26	75	12	4
EPCRC41201526U	12.0	1.5R	13.0	26	75	12	4
EPCRC41202026U	12.0	2.0R	13.0	26	75	12	4

Cutting conditions：Table 058

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

V470 Series for high performance milling (Hardened steel & Steel HRC 25~55)



V470 Variable Spacing Series

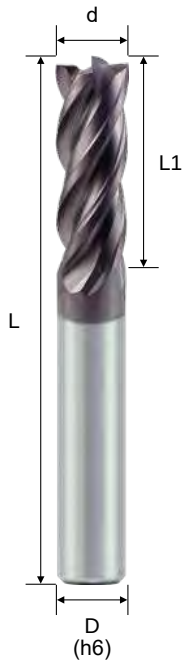
- Unequal flute spacing for anti-vibration.
- Suitable for hardened steel & steel machining.
- High removal rate for steel and stainless steel machining.
- Low cutting force and burr prevention.

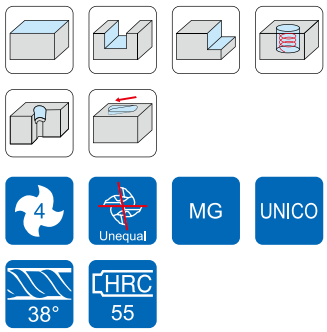
V470 - Variable Spacing · Square · 4F

- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO coating includes Al, Ti, Cr, N elements.

EPSSV

P	M	K	N	S	H
●	○	●			





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSSV403000U	3	8	50	6	4
EPSSV444000U	4	10	50	4	4
EPSSV404000U	4	10	50	6	4
EPSSV406000U	6	15	50	6	4
EPSSV408000U	8	20	60	8	4
EPSSV410000U	10	25	75	10	4
EPSSV412000U	12	30	75	12	4
EPSSV416000U	16	35	100	16	4

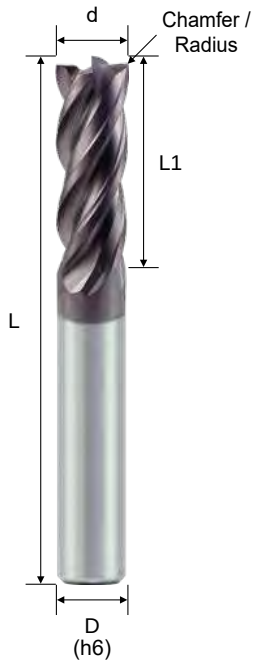
Cutting conditions：Table 059

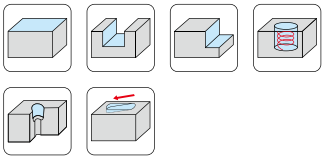
V470 - Variable Spacing · Square · Inch · 4F

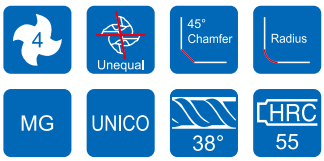
- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO coating includes Al, Ti, Cr, N elements.

EPS_V
EPC_V
EPF_V

P	M	K	N	S	H
●	○	●			







d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer / Radius	Flutes (F)
INCH SIZE						
EPF2V40120210U	1/8	1/4	1 1/2	1/8	.010C	4
EPS2V40120200U	1/8	1/4	1 1/2	1/8	-	4
EPC2V40120215U	1/8	1/4	2 1/2	1/8	.015R	4
EPC4V40120515U	1/8	1/2	2	1/8	.015R	4
EPS4V40120500U	1/8	1/2	2	1/8	-	4
EPF4V40120510U	1/8	1/2	2	1/8	.010C	4
EPS9V40120500U	1/8	1/2	2 1/2	1/8	-	4
EPF2V40180310U	3/16	5/16	2 1/2	3/16	.010C	4
EPC2V40180315U	3/16	5/16	2 1/2	3/16	.015R	4
EPS7V40180300U	3/16	5/16	2 1/2	3/16	-	4
EPF3V40180610U	3/16	5/8	2 1/2	3/16	.010C	4
EPC8V40180615U	3/16	5/8	2 1/2	3/16	.015R	4
EPC8V40180630U	3/16	5/8	2 1/2	3/16	.030R	4
EPS8V40180600U	3/16	5/8	2 1/2	3/16	-	4
EPC2V40250330U	1/4	3/8	2	1/4	.030R	4
EPS2V40250300U	1/4	3/8	2	1/4	-	4
EPF2V40250315U	1/4	3/8	2	1/4	.015C	4
EPC3V40250715U	1/4	3/4	2 1/2	1/4	.015R	4
EPC3V40250730U	1/4	3/4	2 1/2	1/4	.030R	4
EPC3V40250760U	1/4	3/4	2 1/2	1/4	.060R	4
EPF3V40250715U	1/4	3/4	2 1/2	1/4	.015C	4
EPS3V40250700U	1/4	3/4	2 1/2	1/4	-	4
EPC4V40251015U	1/4	1	3	1/4	.015R	4
EPS4V40251000U	1/4	1	3	1/4	-	4
EPC5V40251215U	1/4	1 1/4	3	1/4	.015R	4
EPC5V40251230U	1/4	1 1/4	3	1/4	.030R	4
EPS5V40251200U	1/4	1 1/4	3	1/4	-	4

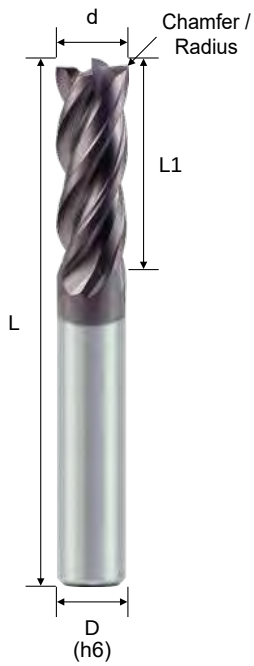
Cutting conditions : Table 060

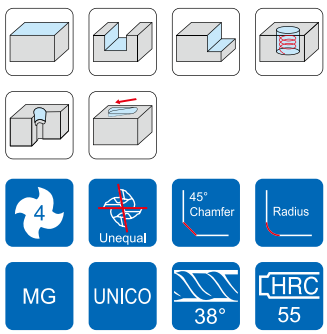
V470 - Variable Spacing · Square · Inch · 4F

- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO coating includes Al, Ti, Cr, N elements.

EPS_V
EPC_V
EPF_V

P	M	K	N	S	H
●	○	●			





d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer / Radius	Flutes (F)
INCH SIZE						
EPC2V40310530U	5/16	1/2	2 1/2	5/16	.030R	4
EPF2V40310515U	5/16	1/2	2 1/2	5/16	.015C	4
EPS2V40310500U	5/16	1/2	2 1/2	5/16	-	4
EPC2V40310715U	5/16	3/4	2 1/2	5/16	.015R	4
EPC2V40310730U	5/16	3/4	2 1/2	5/16	.030R	4
EPC2V40310760U	5/16	3/4	2 1/2	5/16	.060R	4
EPF2V40310715U	5/16	3/4	2 1/2	5/16	.015C	4
EPS2V40310700U	5/16	3/4	2 1/2	5/16	-	4
EPC4V40311230U	5/16	1 1/4	3	5/16	.030R	4
EPS4V40311200U	5/16	1 1/4	3	5/16	-	4
EPC2V40370815U	3/8	7/8	2 1/2	3/8	.015R	4
EPC2V40370830U	3/8	7/8	2 1/2	3/8	.030R	4
EPC2V40370860U	3/8	7/8	2 1/2	3/8	.060R	4
EPC2V40370890U	3/8	7/8	2 1/2	3/8	.090R	4
EPF2V40370820U	3/8	7/8	2 1/2	3/8	.020C	4
EPS2V40370800U	3/8	7/8	2 1/2	3/8	-	4
EPC3V40371015U	3/8	1	3	3/8	.015R	4
EPC3V40371030U	3/8	1	3	3/8	.030R	4
EPC3V40371060U	3/8	1	3	3/8	.060R	4
EPS3V40371000U	3/8	1	3	3/8	-	4
EPC4V40371530U	3/8	1 1/2	4	3/8	.030R	4
EPC4V40371560U	3/8	1 1/2	4	3/8	.060R	4
EPS4V40371500U	3/8	1 1/2	4	3/8	-	4
EPC7V40372530U	3/8	2 1/2	4	3/8	.030R	4
EPC7V40372560U	3/8	2 1/2	4	3/8	.060R	4
EPF1V40430620U	7/16	5/8	2 3/4	7/16	.020C	4
EPS1V40430600U	7/16	5/8	2 3/4	7/16	-	4
EPF2V40430820U	7/16	7/8	2 3/4	7/16	.020C	4
EPS2V40430800U	7/16	7/8	2 3/4	7/16	-	4

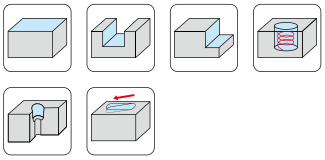
Cutting conditions：Table 060

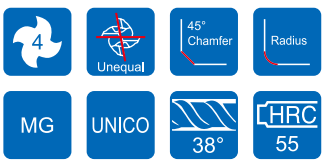
V470 - Variable Spacing · Square · Inch · 4F

- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO coating includes Al, Ti, Cr, N elements.

EPS_V
EPC_V
EPF_V

P	M	K	N	S	H
●	○	●			





d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer / Radius	Flutes (F)
INCH SIZE						
EPC2V40501030U	1/2	1	3	1/2	.030R	4
EPC2V40501060U	1/2	1	3	1/2	.060R	4
EPS2V40501000U	1/2	1	3	1/2	-	4
EPF2V40501020U	1/2	1	3	1/2	.020C	4
EPC3V40501215U	1/2	1 1/4	3	1/2	.015R	4
EPC3V40501230U	1/2	1 1/4	3	1/2	.030R	4
EPC3V40501260U	1/2	1 1/4	3	1/2	.060R	4
EPC3V40501290U	1/2	1 1/4	3	1/2	.090R	4
EPC3V405012C0U	1/2	1 1/4	3	1/2	.120R	4
EPF3V40501220U	1/2	1 1/4	3	1/2	.020C	4
EPS3V40501200U	1/2	1 1/4	3	1/2	-	4
EPC3V40501530U	1/2	1 1/2	4	1/2	.030R	4
EPC3V40501560U	1/2	1 1/2	4	1/2	.060R	4
EPF3V40501520U	1/2	1 1/2	4	1/2	.020C	4
EPS3V40501500U	1/2	1 1/2	4	1/2	-	4
EPC4V40502030U	1/2	2	4	1/2	.030R	4
EPC4V40502060U	1/2	2	4	1/2	.060R	4
EPS4V40502000U	1/2	2	4	1/2	-	4
EPC2V40621230U	5/8	1 1/4	3 1/2	5/8	.030R	4
EPC2V40621260U	5/8	1 1/4	3 1/2	5/8	.060R	4
EPC2V40621290U	5/8	1 1/4	3 1/2	5/8	.090R	4
EPC2V406212C0U	5/8	1 1/4	3 1/2	5/8	.120R	4
EPS2V40621200U	5/8	1 1/4	3 1/2	5/8	-	4
EPF2V40621220U	5/8	1 1/4	3 1/2	5/8	.020C	4
EPC2V40751530U	3/4	1 1/2	4	3/4	.030R	4
EPC2V40751560U	3/4	1 1/2	4	3/4	.060R	4
EPC2V40751590U	3/4	1 1/2	4	3/4	.090R	4
EPF2V40751520U	3/4	1 1/2	4	3/4	.020C	4
EPS2V40751500U	3/4	1 1/2	4	3/4	-	4
EPF2V41002020U	1	2	5	1	.020C	4
EPS2V41002000U	1	2	5	1	-	4
EPC2V41002230U	1	2 1/4	5	1	.030R	4
EPC2V41002260U	1	2 1/4	5	1	.060R	4
EPS2V41002200U	1	2 1/4	5	1	-	4
EPF2V41002220U	1	2 1/4	5	1	.020C	4

Cutting conditions : Table 060

G450 Series for semi-finishing (Hardened steel & Steel HRC 25~55)

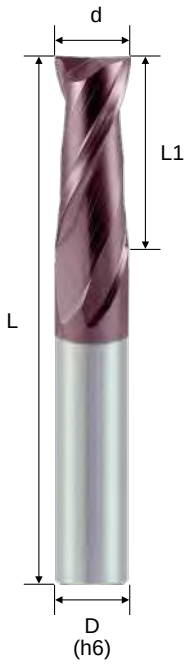
- Micro grain carbide rod is suitable for general machining.
- UNICO coating provides superior wear resistance and reduces the coefficient of friction.
- Positive geometry is suitable for better shearing.
- Excellent cutting ability of cutting edges.

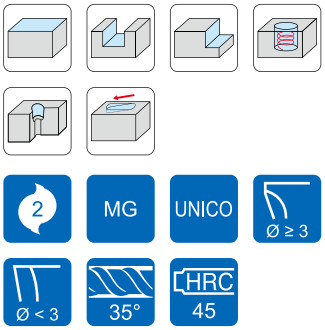
G450 - Square · 2F

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- High precision cutting.
- Positive Geometry design is suitable for better shearing.

EPSSA

P	M	K	N	S	H
●	●	●			





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSA241000U	1.0	3	50	4	2
* EPSSA241500U	1.5	4	50	4	2
* EPSSA242000U	2.0	5	50	4	2
* EPSSA242500U	2.5	6	50	4	2
* EPSSA243000U	3.0	8	50	4	2
EPSSA203000U	3.0	8	50	6	2
EPSSA203500U	3.5	9	50	6	2
* EPSSA244000U	4.0	10	50	4	2
EPSSA204000U	4.0	10	50	6	2
EPSSA204500U	4.5	11	50	6	2
EPSSA205000U	5.0	13	50	6	2
EPSSA205500U	5.5	14	50	6	2
EPSSA206000U	6.0	15	50	6	2
EPSSA206500U	6.5	16	60	8	2
EPSSA207000U	7.0	18	60	8	2
EPSSA208000U	8.0	20	60	8	2
EPSSA209000U	9.0	22	75	10	2
EPSSA210000U	10.0	25	75	10	2
EPSSA212000U	12.0	30	75	12	2
EPSSA214000U	14.0	30	75	14	2
EPSSA216000U	16.0	40	100	16	2
EPSSA218000U	18.0	40	100	20	2
EPSSA220000U	20.0	45	100	20	2
EPSSA225000U	25.0	45	100	25	2

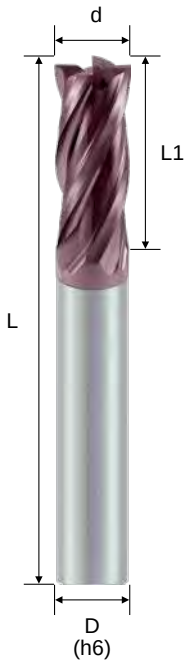
Cutting conditions：Table 025

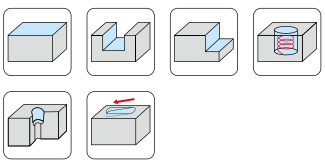
G450 - Square · 4F

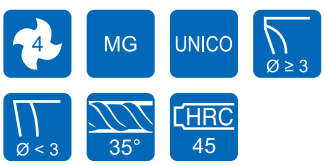
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- High precision cutting.
- Positive Geometry design is suitable for better shearing.

EPSSA

P	M	K	N	S	H
●	●	●			





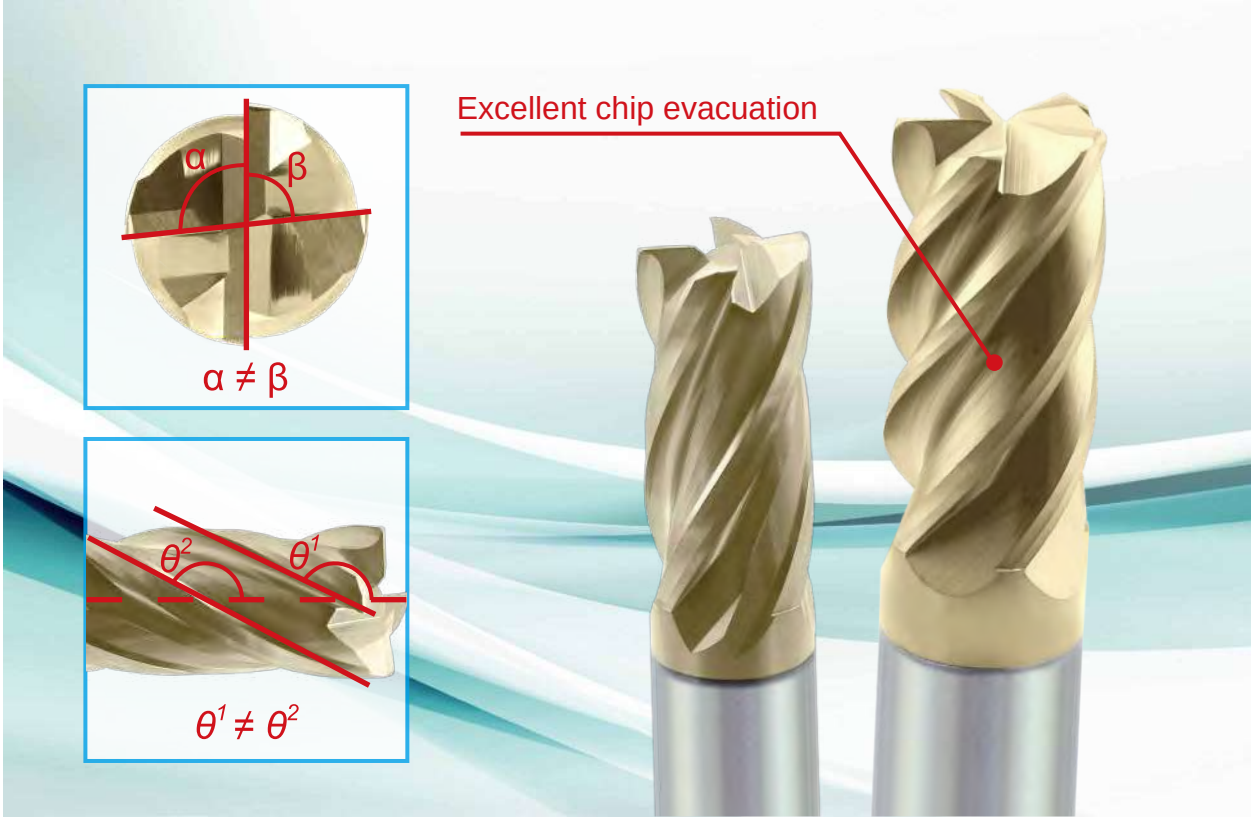


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EPSSA441000U	1.0	3	50	4	4
* EPSSA441500U	1.5	4	50	4	4
* EPSSA442000U	2.0	5	50	4	4
* EPSSA442500U	2.5	6	50	4	4
* EPSSA443000U	3.0	8	50	4	4
EPSSA403000U	3.0	8	50	6	4
* EPSSA444000U	4.0	10	50	4	4
EPSSA404000U	4.0	10	50	6	4
EPSSA405000U	5.0	13	50	6	4
EPSSA406000U	6.0	15	50	6	4
EPSSA408000U	8.0	20	60	8	4
EPSSA410000U	10.0	25	75	10	4
EPSSA412000U	12.0	30	75	12	4
EPSSA414000U	14.0	30	75	14	4
EPSSA416000U	16.0	40	100	16	4
EPSSA420000U	20.0	45	100	20	4
EPSSA425000U	25.0	45	100	25	4

Cutting conditions：Table 026

V530 Series for Stainless Steel & High Temperature Alloy



V530 Variable Helix Series

- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

V530 - Variable Helix

■ *Select V530 tools recommended*

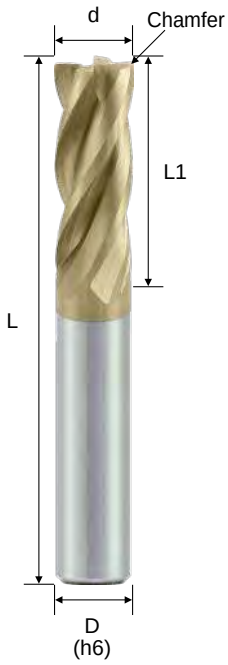
V530 Series		Cutting Recommendation			
		Slot milling	Side roughing	Side finishing	Trochoidal
ESSSVA (30° ~ 32°)		●	●	○	○
ESSSVB (35° ~ 38°)		●	●	○	○
ESSSVC (38° ~ 41°)		○	●	●	○
ESSSVC (38° ~ 42°)			○	●	●
ESSSVD (43° ~ 46°)		○	○	●	●

V530 - Variable Helix 30° ~ 32° · Square · 4F

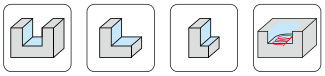
- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

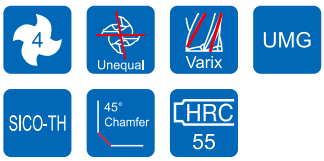
ESSSVA

P	M	K	N	S	H
●	●	●		●	○



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer	Flutes (F)
Helix angle : 30° ~ 32°						
ESSSVA4060011S	6	15	50	6	0.10C	4
ESSSVA4080011S	8	20	60	8	0.15C	4
ESSSVA4100021S	10	25	75	10	0.20C	4
ESSSVA4120021S	12	30	75	12	0.20C	4
ESSSVA4160031S	16	35	100	16	0.32C	4





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

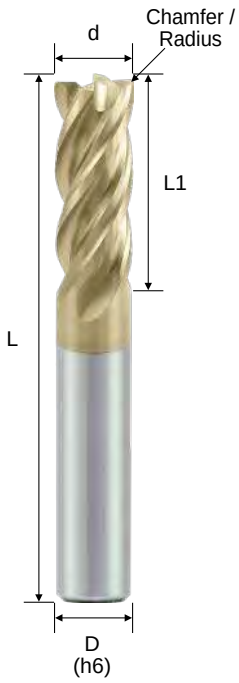
Cutting conditions：Table 061

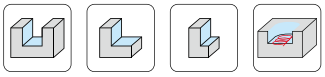
V530 - Variable Helix 35° ~ 38° · Square · 4F

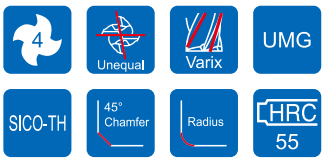
- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

ESSSVB

P	M	K	N	S	H
●	●	●		●	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer/ Radius	Flutes (F)
Helix angle : 35° ~ 38°						
ESSSVB4040000S	4	10	50	6	-	4
ESSSVB4040011S	4	10	50	6	0.10C	4
ESSSVB4040022S	4	8	50	6	0.20R	4
ESSSVB4040032S	4	8	50	6	0.30R	4
ESSSVB4040052S	4	8	50	6	0.50R	4
ESSSVB4060000S	6	13	50	6	-	4
ESSSVB4060011S	6	13	50	6	0.15C	4
ESSSVB4060022S	6	12	50	6	0.20R	4
ESSSVB4060052S	6	12	50	6	0.50R	4
ESSSVB4080000S	8	20	60	8	-	4
ESSSVB4080011S	8	20	60	8	0.15C	4
ESSSVB4080022S	8	16	60	8	0.20R	4
ESSSVB4080052S	8	16	60	8	0.50R	4
ESSSVB4100000S	10	25	75	10	-	4
ESSSVB4100021S	10	25	75	10	0.20C	4
ESSSVB4100032S	10	20	75	10	0.30R	4
ESSSVB4100052S	10	20	75	10	0.50R	4
ESSSVB4120000S	12	30	75	12	-	4
ESSSVB4120021S	12	30	75	12	0.20C	4
ESSSVB4120032S	12	24	75	12	0.30R	4
ESSSVB4120052S	12	24	75	12	0.50R	4
ESSSVB4120102S	12	24	75	12	1.00R	4
ESSSVB4120302S	12	24	75	12	3.00R	4
ESSSVB4160000S	16	35	100	16	-	4
ESSSVB4160031S	16	35	100	16	0.32C	4
ESSSVB4160102S	16	32	100	16	1.00R	4
ESSSVB4160302S	16	32	100	16	3.00R	4
ESSSVB4200000S	20	45	100	20	-	4

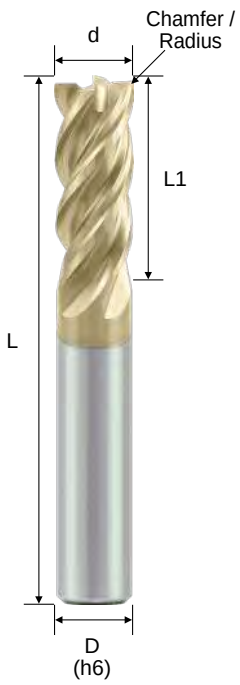
Cutting conditions：Table 061

V530 - Variable Helix 38° ~ 41° · Square · 4F

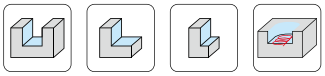
- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

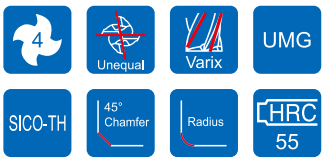
ESSSVC

P	M	K	N	S	H
●	●	●		●	○



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer/ Radius	Flutes (F)
Helix angle : 38° ~ 41°						
ESSSVC4040011S	4	10	50	6	0.10C	4
ESSSVC4040012S	4	10	50	6	0.10R	4
ESSSVC4060011S	6	15	50	6	0.15C	4
ESSSVC4060012S	6	15	50	6	0.15R	4
ESSSVC4080011S	8	20	60	8	0.15C	4
ESSSVC4080012S	8	20	60	8	0.15R	4
ESSSVC4100021S	10	25	75	10	0.20C	4
ESSSVC4100022S	10	25	75	10	0.20R	4
ESSSVC4120021S	12	30	75	12	0.20C	4
ESSSVC4120022S	12	30	75	12	0.20R	4
ESSSVC4120052S	12	30	75	12	0.50R	4





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Cutting conditions：Table 061

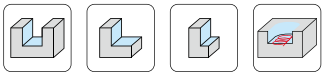
V530 - Variable Helix 38° ~ 42° · Square · 5F

- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

ESSSVC

P	M	K	N	S	H
●	●	●		●	○

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
Helix angle : 38° ~ 42°						
ESSSVC5040022S	4	8	50	6	0.25R	5
ESSSVC5060000S	6	15	50	6	-	5
ESSSVC5060042S	6	12	50	6	0.40R	5
ESSSVC5080000S	8	20	60	8	-	5
ESSSVC5080012S	8	16	60	8	0.15R	5
ESSSVC5080052S	8	16	60	8	0.50R	5
ESSSVC5100000S	10	25	75	10	-	5
ESSSVC5100052S	10	20	75	10	0.50R	5
ESSSVC5100102S	10	20	75	10	1.00R	5
ESSSVC5120000S	12	30	75	12	-	5
ESSSVC5120052S	12	24	75	12	0.50R	5
ESSSVC5120072S	12	24	75	12	0.75R	5
ESSSVC5120102S	12	24	75	12	1.00R	5
ESSSVC5120202S	12	24	75	12	2.00R	5
ESSSVC5160072S	16	32	100	16	0.75R	5
ESSSVC5160102S	16	32	100	16	1.00R	5
ESSSVC5160202S	16	32	100	16	2.00R	5
ESSSVC5160302S	16	32	100	16	3.00R	5
ESSSVC5160402S	16	32	100	16	4.00R	5



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

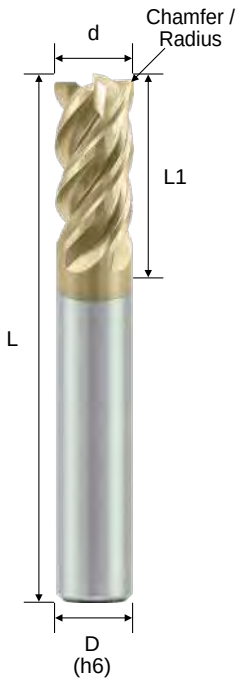
Cutting conditions：Table 061

V530 - Variable Helix 43° ~ 46° · Square · 4F

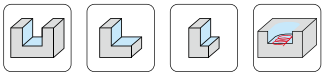
- Unequal Flute Spacing and variable lead design.
- High removal rate for Difficult-to-cut materials and Stainless steel.
- Outstanding Anti-vibrations design.
- Low cutting force and burr prevention.

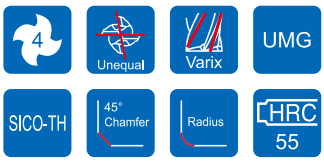
ESSSVD

P	M	K	N	S	H
●	●	●		●	○



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer/ Radius	Flutes (F)
Helix angle : 43° ~ 46°						
ESSSVD4040000S	4	8	50	6	-	4
ESSSVD4040011S	4	8	50	6	0.10C	4
ESSSVD4040032S	4	8	50	6	0.30R	4
ESSSVD4060000S	6	12	50	6	-	4
ESSSVD4060011S	6	12	50	6	0.15C	4
ESSSVD4060052S	6	12	50	6	0.50R	4
ESSSVD4080000S	8	16	60	8	-	4
ESSSVD4080011S	8	16	60	8	0.15C	4
ESSSVD4080052S	8	16	60	8	0.50R	4
ESSSVD4100000S	10	20	75	10	-	4
ESSSVD4100021S	10	20	75	10	0.20C	4
ESSSVD4100052S	10	20	75	10	0.50R	4
ESSSVD4120000S	12	24	75	12	-	4
ESSSVD4120021S	12	24	75	12	0.20C	4
ESSSVD4120052S	12	24	75	12	0.50R	4

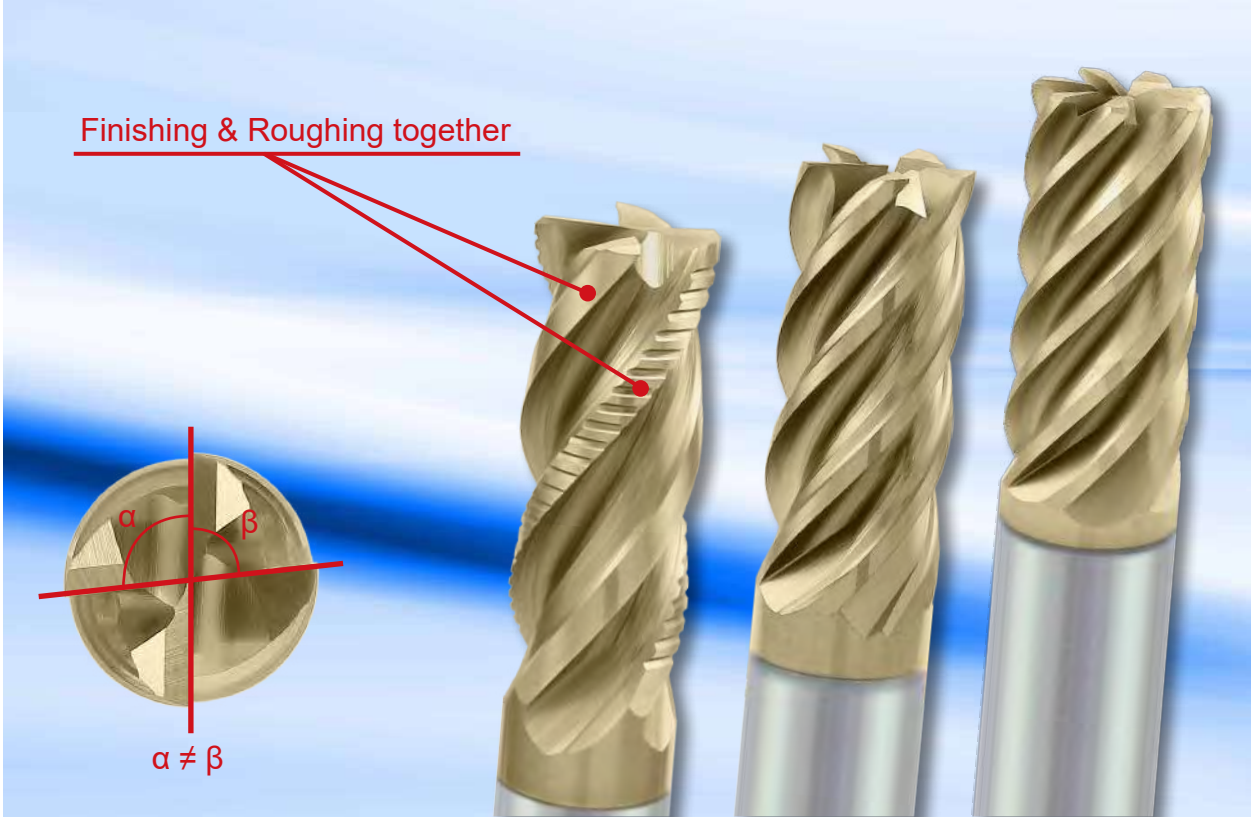




d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Cutting conditions : Table 061

V520 Series for Stainless Steel & High Temperature Alloy



V520 Variable Spacing Series

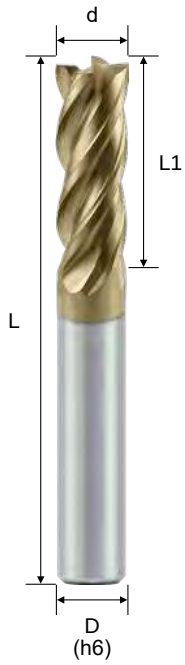
- Unequal flute spacing for anti-vibration.
- Suitable for stainless steel & high temperature alloy machining.
- High removal rate for steel and stainless steel machining.
- Low cutting force and burr prevention.

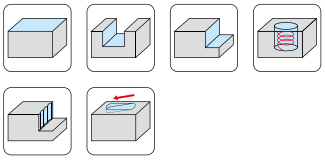
V520 - Variable Spacing · Square · 4F

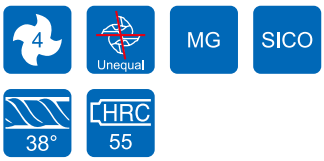
- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- SICO coating includes Al, Ti, Si, N elements.

EMSSV

P	M	K	N	S	H
●	●	●		○	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EMSSV403000S	3	8	50	6	4
EMSSV444000S	4	10	50	4	4
EMSSV404000S	4	10	50	6	4
EMSSV406000S	6	15	50	6	4
EMSSV408000S	8	20	60	8	4
EMSSV410000S	10	25	75	10	4
EMSSV412000S	12	30	75	12	4
EMSSV416000S	16	35	100	16	4

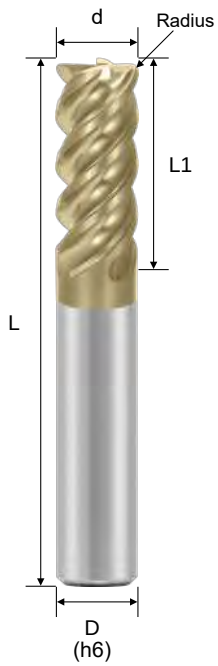
Cutting conditions：Table 062

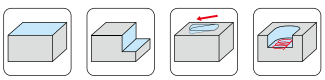
V520 - Variable Spacing · High Helix · Square · 4F

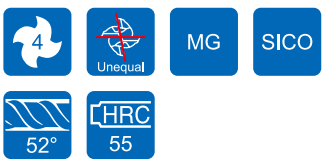
- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel side milling.
- Low cutting force and burr prevention for trochoidal milling.
- SICO coating includes Al, Ti, Si, N elements.

EMSHV

P	M	K	N	S	H
●	●	●		●	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
EMSHV408005S	8	16	60	8	0.5R	4
EMSHV410010S	10	20	75	10	1.0R	4
EMSHV412010S	12	24	75	12	1.0R	4
EMSHV416015S	16	32	100	16	1.5R	4

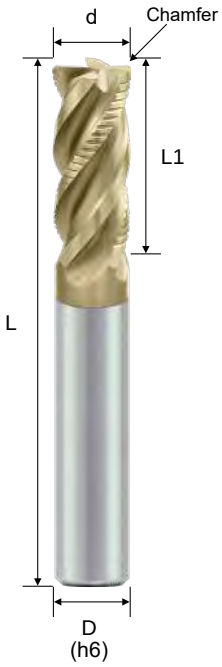
Cutting conditions：Table 062

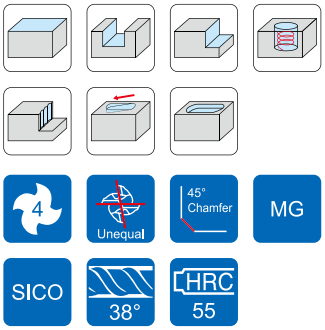
V520 - Variable Spacing · Roughing & Finishing · Square · 4F

- Unequal flute spacing for reducing vibrations at high load applications.
- High removal rate for steel and alloy steel side roughing.
- Provides finish surface at rough machining parameters.
- SICO coating includes Al, Ti, Si, N elements.

EMSRV

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer	Flutes (F)
EMSRV406000S	6	15	50	6	0.25C	4
EMSRV408000S	8	20	60	8	0.30C	4
EMSRV410000S	10	25	75	10	0.40C	4
EMSRV412000S	12	30	75	12	0.50C	4
EMSRV416000S	16	35	100	16	0.60C	4

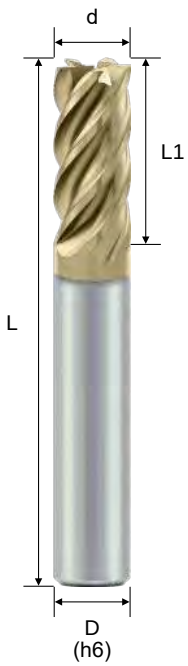
Cutting conditions：Table 062

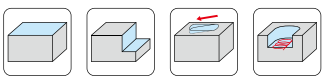
V520 - Variable Spacing · Square · 5F

- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel machining.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

EMSSV

P	M	K	N	S	H
●	●	●		●	●





5 | Unequal | MG | SICO

38° | HRC 55

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EMSSV506000S	6	15	50	6	5
EMSSV508000S	8	20	60	8	5
EMSSV510000S	10	25	75	10	5
EMSSV512000S	12	30	75	12	5
EMSSV516000S	16	35	100	16	5

Cutting conditions：Table 062

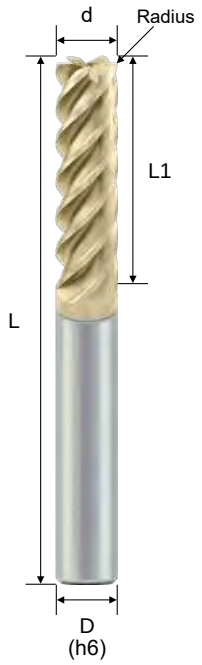
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

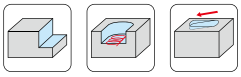
V520 - Variable Spacing · Long Flute · Square · 5F

- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel machining.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

EMSCV

P	M	K	N	S	H
●	●	●		●	●





5 | Unequal | Radius | MG

SICO | 43° | HRC 55

d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
EMSCV506000S	6	24	75	6	-	5
EMSCV506052S	6	24	75	6	0.5R	5
EMSCV506102S	6	24	75	6	1.0R	5
EMSCV508000S	8	32	75	8	-	5
EMSCV508052S	8	32	75	8	0.5R	5
EMSCV508102S	8	32	75	8	1.0R	5
EMSCV510000S	10	40	100	10	-	5
EMSCV510052S	10	40	100	10	0.5R	5
EMSCV510202S	10	40	100	10	2.0R	5
EMSCV512000S	12	48	100	12	-	5
EMSCV512102S	12	48	100	12	1.0R	5
EMSCV512202S	12	48	100	12	2.0R	5
* EMSCV516000S	16	55	105	16	-	5

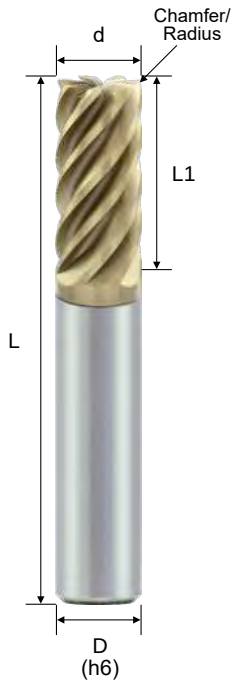
Cutting conditions：Table 062

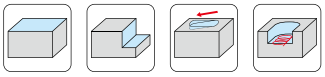
V520 - Variable Spacing · Square · 7F

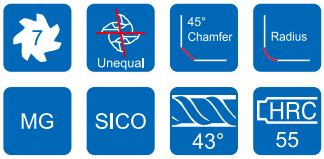
- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel side milling.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

EMSSV

P	M	K	N	S	H
●	●	●		●	●







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer/ Radius	Flutes (F)
EMSSV710000S	10	25	75	10	-	7
EMSSV710051S	10	25	75	10	0.5C	7
EMSSV710052S	10	25	75	10	0.5R	7
EMSSV712000S	12	30	75	12	-	7
EMSSV712051S	12	30	75	12	0.5C	7
EMSSV716000S	16	35	100	16	-	7

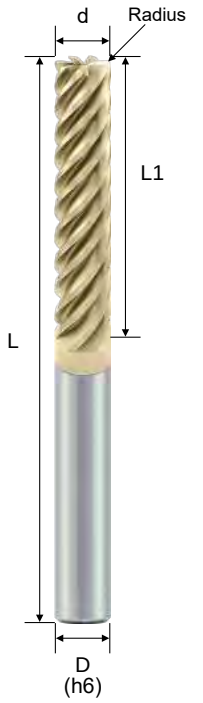
Cutting conditions：Table 062

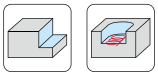
V520 - Variable Spacing · Long Flute · Square · 7F

- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel side milling.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

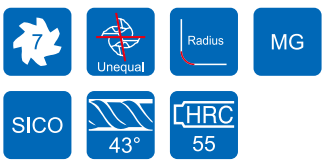
EMSCV

P	M	K	N	S	H
●	●	●		●	●





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
EMSCV710000S	10	50	100	10	-	7
EMSCV710052S	10	50	100	10	0.5R	7
EMSCV712000S	12	60	110	12	-	7
EMSCV712052S	12	60	110	12	0.5R	7
EMSCV716000S	16	80	150	16	-	7
EMSCV716052S	16	80	150	16	0.5R	7



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

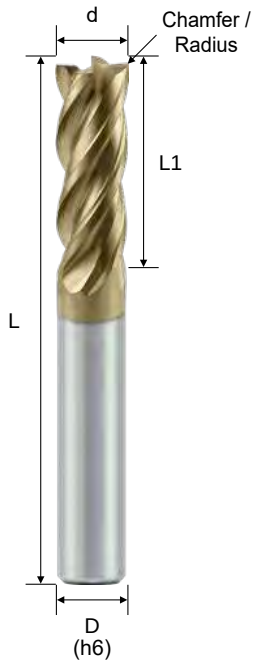
Cutting conditions：Table 062

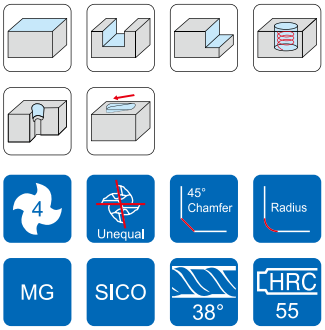
V520 - Variable Spacing · Square · Inch · 4F

- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- SICO coating includes Al, Ti, Si, N elements.

EMS_V
EMC_V
EMF_V

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer / Radius	Flutes (F)
INCH SIZE						
EMF2V40120210S	1/8	1/4	1 1/2	1/8	.010C	4
EMS2V40120200S	1/8	1/4	1 1/2	1/8	-	4
EMC2V40120215S	1/8	1/4	2 1/2	1/8	.015R	4
EMF2V40180310S	3/16	5/16	2 1/2	3/16	.010C	4
EMC2V40180315S	3/16	5/16	2 1/2	3/16	.015R	4
EMF3V40180610S	3/16	5/8	2 1/2	3/16	.010C	4
EMC2V40250330S	1/4	3/8	2	1/4	.030R	4
EMS2V40250300S	1/4	3/8	2	1/4	-	4
EMF2V40250315S	1/4	3/8	2	1/4	.015C	4
EMC3V40250715S	1/4	3/4	2 1/2	1/4	.015R	4
EMC3V40250730S	1/4	3/4	2 1/2	1/4	.030R	4
EMC3V40250760S	1/4	3/4	2 1/2	1/4	.060R	4
EMF3V40250715S	1/4	3/4	2 1/2	1/4	.015C	4
EMS3V40250700S	1/4	3/4	2 1/2	1/4	-	4
EMC2V40310530S	5/16	1/2	2 1/2	5/16	.030R	4
EMF2V40310515S	5/16	1/2	2 1/2	5/16	.015C	4
EMS2V40310500S	5/16	1/2	2 1/2	5/16	-	4
EMC2V40310715S	5/16	3/4	2 1/2	5/16	.015R	4
EMC2V40310730S	5/16	3/4	2 1/2	5/16	.030R	4
EMC2V40310760S	5/16	3/4	2 1/2	5/16	.060R	4
EMF2V40310715S	5/16	3/4	2 1/2	5/16	.015C	4
EMS2V40310700S	5/16	3/4	2 1/2	5/16	-	4
EMC2V40370815S	3/8	7/8	2 1/2	3/8	.015R	4
EMC2V40370830S	3/8	7/8	2 1/2	3/8	.030R	4
EMC2V40370860S	3/8	7/8	2 1/2	3/8	.060R	4
EMC2V40370890S	3/8	7/8	2 1/2	3/8	.090R	4
EMF2V40370820S	3/8	7/8	2 1/2	3/8	.020C	4
EMS2V40370800S	3/8	7/8	2 1/2	3/8	-	4
EMC3V40371015S	3/8	1	3	3/8	.015R	4
EMC3V40371030S	3/8	1	3	3/8	.030R	4
EMC3V40371060S	3/8	1	3	3/8	.060R	4
EMS3V40371000S	3/8	1	3	3/8	-	4

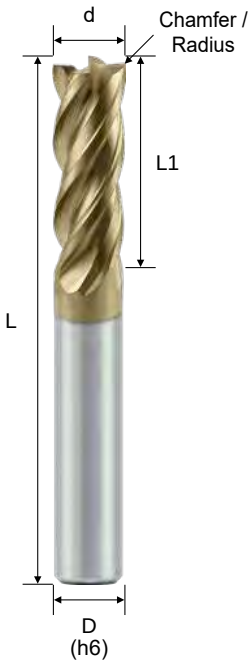
Cutting conditions：Table 063

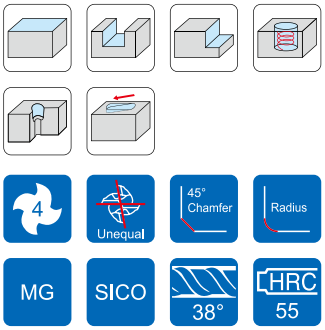
V520 - Variable Spacing · Square · Inch · 4F

- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- SICO coating includes Al, Ti, Si, N elements.

EMS_V
EMC_V
EMF_V

P	M	K	N	S	H
●	●	●		○	○





d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer / Radius	Flutes (F)
INCH SIZE						
EMC2V40501030S	1/2	1	3	1/2	.030R	4
EMC2V40501060S	1/2	1	3	1/2	.060R	4
EMS2V40501000S	1/2	1	3	1/2	-	4
EMF2V40501020S	1/2	1	3	1/2	.020C	4
EMC3V40501215S	1/2	1 1/4	3	1/2	.015R	4
EMC3V40501230S	1/2	1 1/4	3	1/2	.030R	4
EMC3V40501260S	1/2	1 1/4	3	1/2	.060R	4
EMC3V40501290S	1/2	1 1/4	3	1/2	.090R	4
EMC3V405012C0S	1/2	1 1/4	3	1/2	.120R	4
EMF3V40501220S	1/2	1 1/4	3	1/2	.020C	4
EMS3V40501200S	1/2	1 1/4	3	1/2	-	4
EMC2V40621230S	5/8	1 1/4	3 1/2	5/8	.030R	4
EMC2V40621260S	5/8	1 1/4	3 1/2	5/8	.060R	4
EMC2V40621290S	5/8	1 1/4	3 1/2	5/8	.090R	4
EMC2V406212C0S	5/8	1 1/4	3 1/2	5/8	.120R	4
EMS2V40621200S	5/8	1 1/4	3 1/2	5/8	-	4
EMF2V40621220S	5/8	1 1/4	3 1/2	5/8	.020C	4
EMC2V40751530S	3/4	1 1/2	4	3/4	.030R	4
EMC2V40751560S	3/4	1 1/2	4	3/4	.060R	4
EMC2V40751590S	3/4	1 1/2	4	3/4	.090R	4
EMF2V40751520S	3/4	1 1/2	4	3/4	.020C	4
EMS2V40751500S	3/4	1 1/2	4	3/4	-	4
EMF2V41002020S	1	2	5	1	.020C	4
EMS2V41002000S	1	2	5	1	-	4

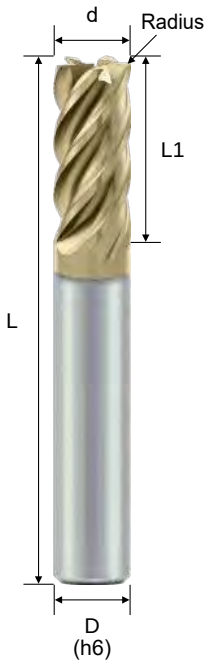
Cutting conditions：Table 063

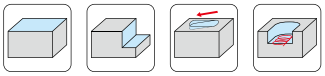
V520 - Variable Spacing · Square · Inch · 5F

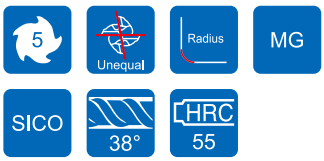
- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel machining.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

EMC_V

P	M	K	N	S	H
●	●	●		●	●







d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
INCH SIZE						
EMC3V50250715S	1/4	3/4	2 1/2	1/4	.015R	5
EMC3V50250730S	1/4	3/4	2 1/2	1/4	.030R	5
EMC3V50250760S	1/4	3/4	2 1/2	1/4	.060R	5
EMC2V50310715S	5/16	3/4	2 1/2	5/16	.015R	5
EMC2V50310730S	5/16	3/4	2 1/2	5/16	.030R	5
EMC2V50310760S	5/16	3/4	2 1/2	5/16	.060R	5
EMC3V50371015S	3/8	1	3	3/8	.015R	5
EMC3V50371030S	3/8	1	3	3/8	.030R	5
EMC3V50371060S	3/8	1	3	3/8	.060R	5
EMC3V50371090S	3/8	1	3	3/8	.090R	5
EMC3V50501215S	1/2	1 1/4	3	1/2	.015R	5
EMC3V50501230S	1/2	1 1/4	3	1/2	.030R	5
EMC3V50501260S	1/2	1 1/4	3	1/2	.060R	5
EMC3V50501290S	1/2	1 1/4	3	1/2	.090R	5
EMC3V505012C0S	1/2	1 1/4	3	1/2	.120R	5
EMC3V50621630S	5/8	1 5/8	3 1/2	5/8	.030R	5
EMC3V50621660S	5/8	1 5/8	3 1/2	5/8	.060R	5
EMC3V50621690S	5/8	1 5/8	3 1/2	5/8	.090R	5
EMC3V506216C0S	5/8	1 5/8	3 1/2	5/8	.120R	5

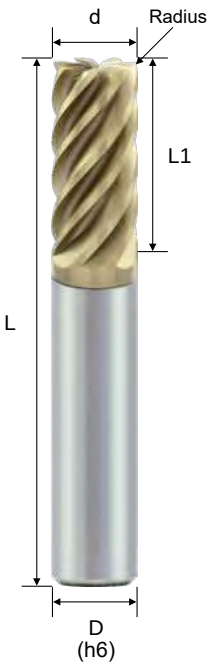
Cutting conditions：Table 063

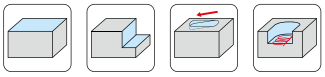
V520 - Variable Spacing · Square · Inch · 7F

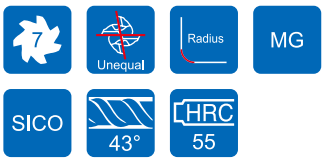
- Unequal flute spacing for anti-vibration.
- Suitable for high temperature alloy and stainless steel machining.
- Low cutting force and outstanding finishing for mold & die.
- SICO coating includes Al, Ti, Si, N elements.

EMC_V

P	M	K	N	S	H
●	●	●		●	●







d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius	Flutes (F)
INCH SIZE						
EMC3V70250715S	1/4	3/4	2 1/2	1/4	.015R	7
EMC3V70250730S	1/4	3/4	2 1/2	1/4	.030R	7
EMC2V70310715S	5/16	3/4	2 1/2	5/16	.015R	7
EMC2V70310730S	5/16	3/4	2 1/2	5/16	.030R	7
EMC3V70371015S	3/8	1	3	3/8	.015R	7
EMC3V70371030S	3/8	1	3	3/8	.030R	7
EMC3V70371060S	3/8	1	3	3/8	.060R	7
EMC3V70501215S	1/2	1 1/4	3	1/2	.015R	7
EMC3V70501230S	1/2	1 1/4	3	1/2	.030R	7
EMC3V70501260S	1/2	1 1/4	3	1/2	.060R	7
EMC3V70501290S	1/2	1 1/4	3	1/2	.090R	7
EMC3V705012C0S	1/2	1 1/4	3	1/2	.120R	7
EMC3V70621630S	5/8	1 5/8	3 1/2	5/8	.030R	7
EMC3V70621660S	5/8	1 5/8	3 1/2	5/8	.060R	7
EMC3V70621690S	5/8	1 5/8	3 1/2	5/8	.090R	7
EMC3V706216C0S	5/8	1 5/8	3 1/2	5/8	.120R	7

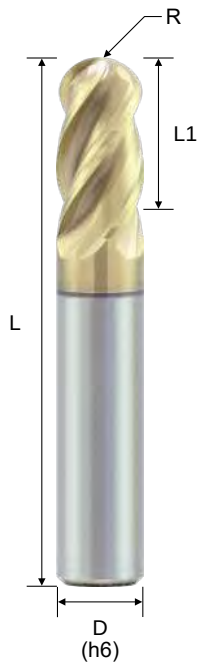
Cutting conditions：Table 063

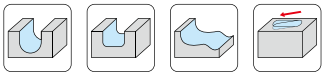
V520 - Variable Spacing · Ball Nose · Inch · 4F

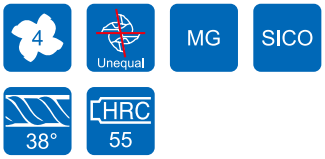
- Unequal flute spacing for anti-vibration.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- SICO coating includes Al, Ti, Si, N elements.

EMB_V

P	M	K	N	S	H
●	●	●		●	●







d Tolerance	
d	.000 ~ -.002"

R Tolerance	
R	.000 ~ -.001"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Radius (R)	Flutes (F)
INCH SIZE						
EMB4V40120500S	1/8	1/2	2	1/8	1/16	4
EMB3V40180600S	3/16	5/8	2 1/4	3/16	3/32	4
EMB3V40250700S	1/4	3/4	2 1/2	1/4	1/8	4
EMB2V40310700S	5/16	3/4	2 1/2	5/16	5/32	4
EMB2V40370800S	3/8	7/8	2 1/2	3/8	3/16	4
EMB2V40430800S	7/16	7/8	2 1/2	7/16	7/32	4
EMB2V40501000S	1/2	1	3	1/2	1/4	4
EMB2V40621200S	5/8	1 1/4	3 1/2	5/8	5/16	4

Cutting conditions：Table 064

M500 Series for general milling (Stainless Steel & High Temperature Alloy)

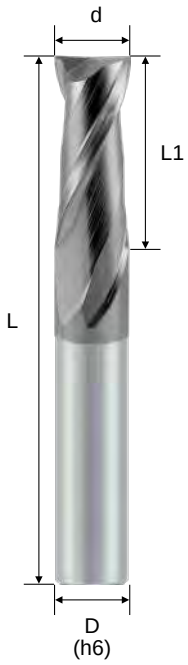
- Ultra grain carbide rods with better abrasion resistance.
- ARCO coating shows good performance in coolant machining.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.

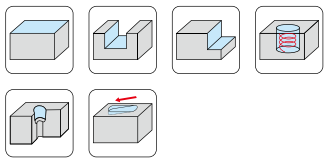
M500 - Square · 2F

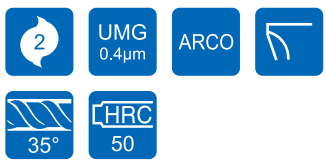
- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSA

P	M	K	N	S	H
●	●	●		●	○







Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ESSSA243000A	3	8	50	4	2
* ESSSA244000A	4	10	50	4	2
ESSSA204000A	4	10	50	6	2
ESSSA205000A	5	13	50	6	2
ESSSA206000A	6	15	50	6	2
ESSSA208000A	8	20	60	8	2
ESSSA210000A	10	25	75	10	2
ESSSA212000A	12	30	75	12	2
ESSSA214000A	14	30	75	14	2
ESSSA216000A	16	35	100	16	2

Cutting conditions：Table 065

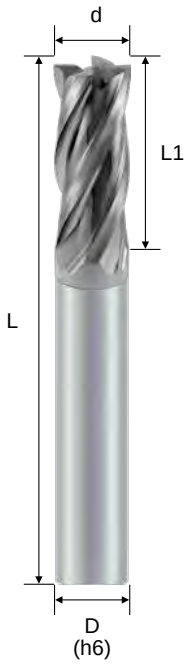
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

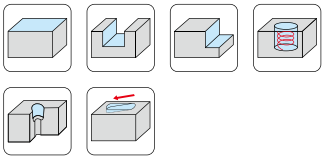
M500 - Square · 4F

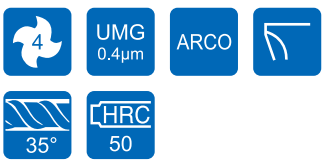
- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- High precise tolerance EndMills.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSA

P	M	K	N	S	H
●	●	●		●	○







Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ESSSA441000A	1	3	50	4	4
* ESSSA441500A	1.5	4	50	4	4
* ESSSA442000A	2	5	50	4	4
* ESSSA442500A	2.5	6	50	4	4
* ESSSA443000A	3	8	50	4	4
* ESSSA443500A	3.5	9	50	4	4
* ESSSA444000A	4	10	50	4	4
ESSSA404000A	4	10	50	6	4
ESSSA405000A	5	13	50	6	4
ESSSA406000A	6	15	50	6	4
ESSSA408000A	8	20	60	8	4
ESSSA410000A	10	25	75	10	4
ESSSA412000A	12	30	75	12	4
ESSSA414000A	14	30	75	14	4
ESSSA416000A	16	35	100	16	4

Cutting conditions：Table 066

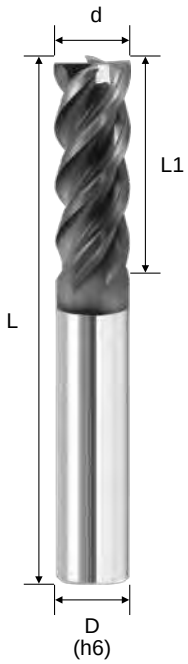
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

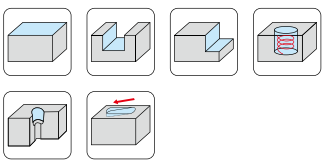
M500 - High Helix · U-Flute · Square · 4F

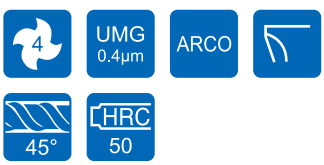
- U-flute design with high chips volume space and easy to remove chips.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- ARCO coating provides a superior wear resistance.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSB

P	M	K	N	S	H
●	●	●		●	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ESSSB441000A	1	3	50	4	4
* ESSSB442000A	2	5	50	4	4
* ESSSB443000A	3	8	50	4	4
* ESSSB444000A	4	10	50	4	4
ESSSB404000A	4	10	50	6	4
ESSSB405000A	5	13	50	6	4
ESSSB406000A	6	15	50	6	4
ESSSB408000A	8	20	60	8	4
ESSSB410000A	10	25	75	10	4
ESSSB412000A	12	30	75	12	4
ESSSB416000A	16	35	100	16	4

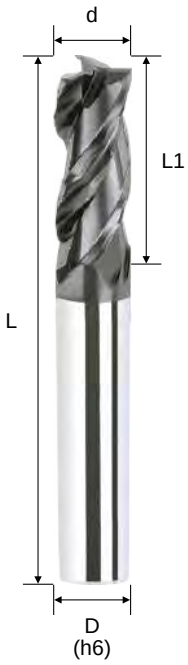
Cutting conditions：Table 067

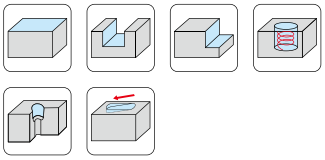
M500 - Wave Edge · Square · 3F

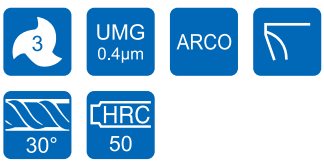
- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ESSSW

P	M	K	N	S	H
●	●	●		●	○







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW306000A	6	15	50	6	3
ESSSW308000A	8	20	60	8	3
ESSSW310000A	10	25	75	10	3
ESSSW312000A	12	30	75	12	3
ESSSW316000A	16	40	100	16	3
ESSSW320000A	20	45	100	20	3

Cutting conditions：Table 068

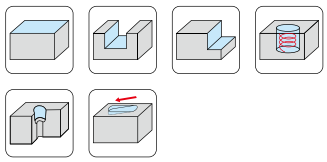
M500 - Wave Edge · Square · 4F

- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ESSSW

P	M	K	N	S	H
●	●	●		●	○

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW406000A	6	15	50	6	4
ESSSW408000A	8	20	60	8	4
ESSSW410000A	10	25	75	10	4
ESSSW412000A	12	30	75	12	4
ESSSW416000A	16	40	100	16	4
ESSSW420000A	20	45	100	20	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

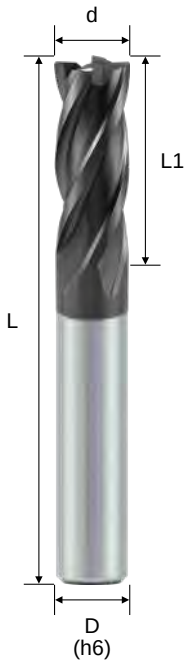
Cutting conditions：Table 068

M500 - High Feed · Square · 4F

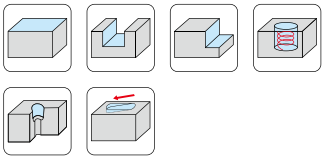
- ARCO coating provides a superior wear resistance.
- Honing & chamfering at the cutting edge geometries for high feed milling.
- Outstanding results for HRC 30 to HRC 55 steel, such as Alloy steel,cast Iron ...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

ESSSU

P	M	K	N	S	H
●	●	●		●	○



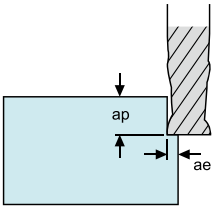
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	45°	Flutes (F)
ESSSU403000A	3	8	50	6	0.10	4
ESSSU404000A	4	10	50	6	0.10	4
ESSSU405000A	5	13	50	6	0.15	4
ESSSU406000A	6	15	50	6	0.15	4
ESSSU408000A	8	20	60	8	0.15	4
ESSSU410000A	10	25	75	10	0.20	4
ESSSU412000A	12	30	75	12	0.20	4
ESSSU416000A	16	35	100	16	0.20	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Feed recommend table

Dia (mm)	Fz (mm)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



ap = 1.5D ae = 0.1D

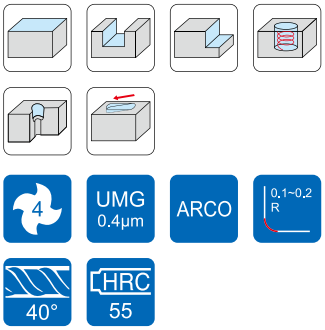
M500 - Toric · Square · 4F

- ARCO coating provides a superior wear resistance.
- With "Small positive" rake angle and small corner radius geometries for high feed cutting.
- Outstanding results and tool life for 2-D and 3-D machining of HRC 30 to HRC 55 steel, such as Alloy steel,cast Iron...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

ESCSU

P	M	K	N	S	H
●	●	●		●	○

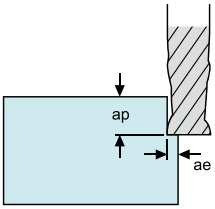
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	R	Flutes (F)
ESCSU403000A	3	8	50	6	0.10	4
ESCSU404000A	4	10	50	6	0.10	4
ESCSU405000A	5	13	50	6	0.15	4
ESCSU406000A	6	15	50	6	0.15	4
ESCSU408000A	8	20	60	8	0.15	4
ESCSU410000A	10	25	75	10	0.20	4
ESCSU412000A	12	30	75	12	0.20	4
ESCSU416000A	16	35	100	16	0.20	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Feed recommend table

Dia (mm)	Fz (mm)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



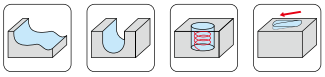
ap = 1.5D ae = 0.1D

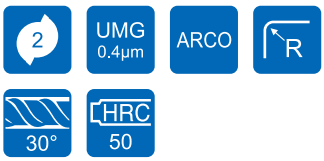
M500 - Ball Nose · 2F

- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at hi speeds, suitable for high performance profile milling.
- New tool geometry increases wear resistance and cutting force is decreased
- UMG carbide grade is suitable for cutting difficult materials.

ESBSA

P	M	K	N	S	H
●	●	●		●	○





R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ESBSA240500A	0.25R	0.5	1	50	4	2
* ESBSA241000A	0.5R	1	2	50	4	2
* ESBSA242000A	1.0R	2	4	50	4	2
* ESBSA243000A	1.5R	3	6	50	4	2
* ESBSA244000A	2.0R	4	8	50	4	2
ESBSA204000A	2.0R	4	8	50	6	2
ESBSA205000A	2.5R	5	10	50	6	2
ESBSA206000A	3.0R	6	12	50	6	2
ESBSA208000A	4.0R	8	16	60	8	2
ESBSA210000A	5.0R	10	20	75	10	2
ESBSA212000A	6.0R	12	24	75	12	2
ESBSA214000A	7.0R	14	28	75	14	2
ESBSA216000A	8.0R	16	32	100	16	2

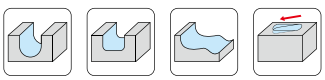
Cutting conditions：Table 069

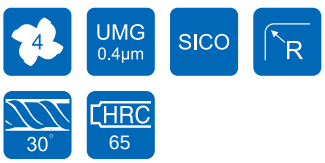
M500 - Ball Nose · 4F (For High Temperature Alloy)

- For high temperature alloy machining.
- For high hardened steel finish milling.
- All flutes near to center design, significantly improves the tool life in 5-axis machining.
- SICO coating provides superior wear and heat resistance.

ESBHS

P	M	K	N	S	H
●	●	●		●	○





R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESBHS406000S	3.0R	6	6	50	6	4
ESBHS408000S	4.0R	8	8	60	8	4
ESBHS410000S	5.0R	10	10	75	10	4
ESBHS412000S	6.0R	12	12	75	12	4
ESBHS416000S	8.0R	16	16	100	16	4

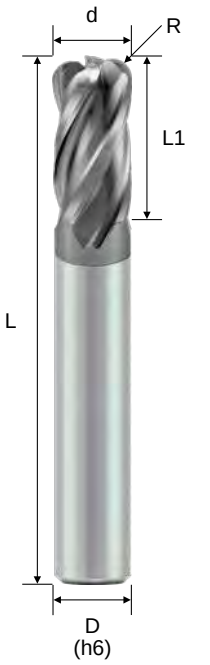
Cutting conditions：Table 070

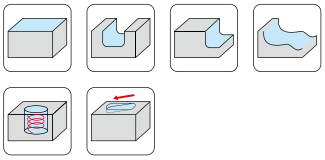
M500 - Corner Radius · 4F

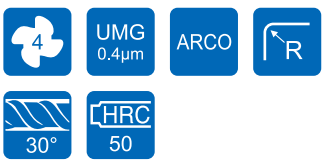
- ARCO coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- Corner geometry and stronger design makes it suitable for cutting difficult material.

ESCSA

P	M	K	N	S	H
●	●	●		●	○







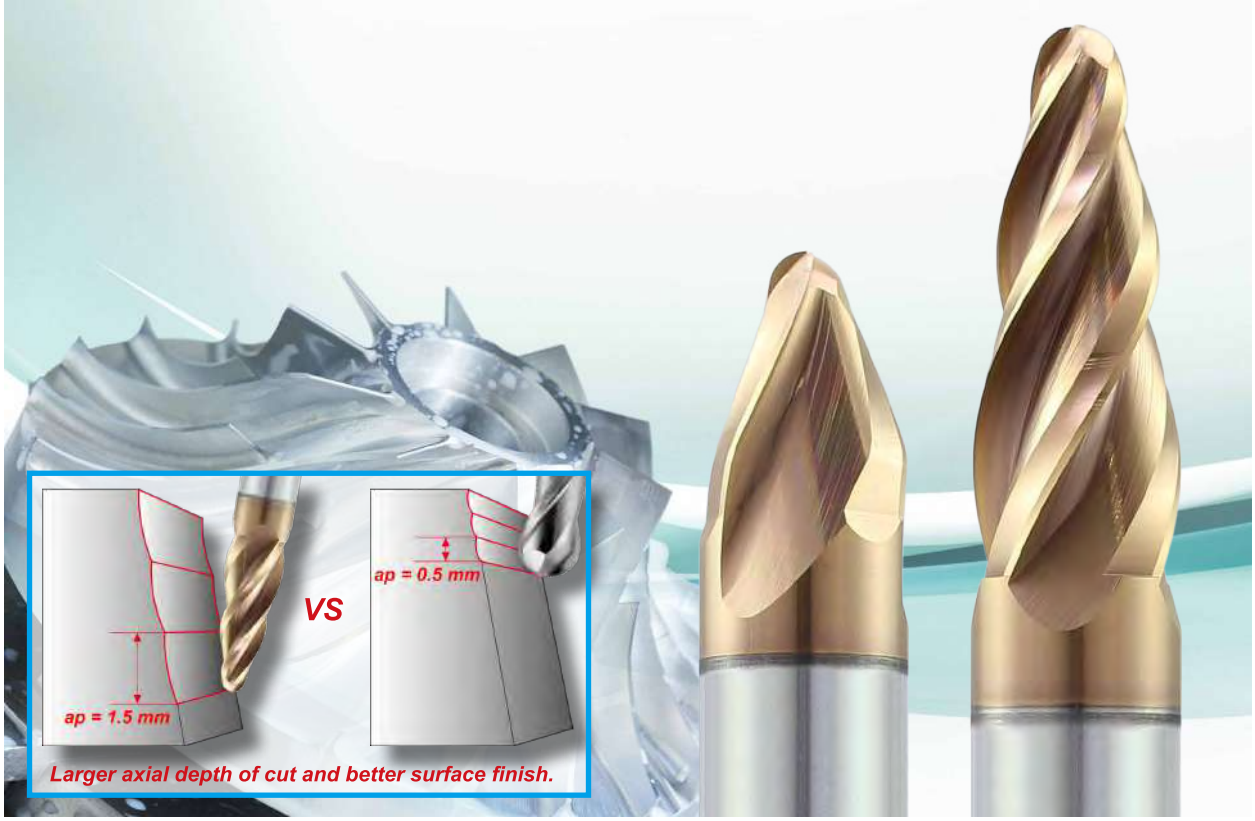
Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSA403003A	3	0.3R	6	50	6	4
ESCSA403005A	3	0.5R	6	50	6	4
ESCSA403010A	3	1.0R	6	50	6	4
ESCSA404003A	4	0.3R	8	50	6	4
ESCSA404005A	4	0.5R	8	50	6	4
ESCSA404010A	4	1.0R	8	50	6	4
ESCSA405003A	5	0.3R	10	50	6	4
ESCSA405005A	5	0.5R	10	50	6	4
ESCSA406003A	6	0.3R	12	50	6	4
ESCSA406005A	6	0.5R	12	50	6	4
ESCSA406010A	6	1.0R	12	50	6	4
ESCSA408005A	8	0.5R	16	60	8	4
ESCSA408010A	8	1.0R	16	60	8	4
ESCSA408015A	8	1.5R	16	60	8	4
ESCSA410005A	10	0.5R	20	75	10	4
ESCSA410010A	10	1.0R	20	75	10	4
ESCSA410015A	10	1.5R	20	75	10	4
ESCSA410020A	10	2.0R	20	75	10	4
ESCSA412005A	12	0.5R	24	75	12	4
ESCSA412010A	12	1.0R	24	75	12	4
ESCSA412015A	12	1.5R	24	75	12	4
ESCSA412020A	12	2.0R	24	75	12	4
ESCSA412030A	12	3.0R	24	75	12	4

Cutting conditions：Table 071

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Hypex Series for 5-axis machining (Stainless Steel & High Temperature Alloy)



Hypex 5-Axis Solid Carbide Endmills

- Designed for 5-axis machine.
- Provide larger axial depth of cut, improve machining efficiency.
- Optimal surface finish and tool life.
- Suitable for mould & die, aerospace, turbine blades and impellers 5-axis machining.

Hypex 5-Axis Solid Endmills

ERTSA Series

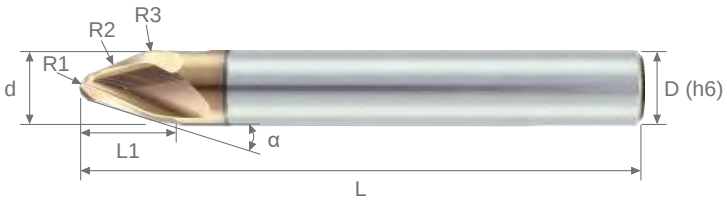
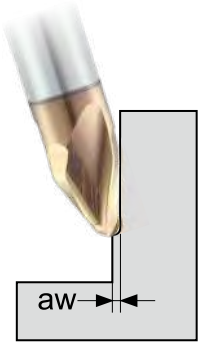
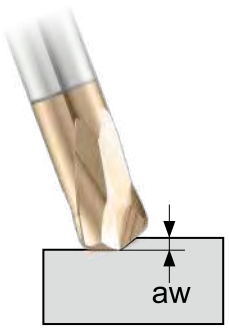


Fig 1

Fig 2

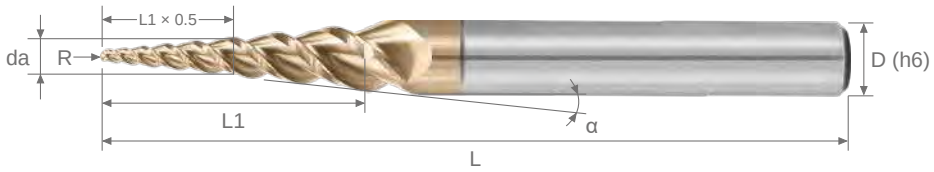
Order No.	α	d	R1	R2	R3	L1	L	D	Flute	Fig
ERTSA30815025S	20°	8	1.5R	250R	4.0R	10.5	75	8	3	1
ERTSA31020025S	20°	10	2.0R	250R	5.0R	12.5	75	10	3	
ERTSA21010020S	60°	10	1.0R	200R	1.5R	6.0	75	10	2	2

Recommended Cutting Conditions

Working Material	Cutting Application	aw (mm)	Vc (m/min)	fz (mm/z)	
				8 mm	10 mm
Carbon Steel (S45C)		0.05 ~ 0.1 mm	210 ~ 420	0.032 ~ 0.056	0.04 ~ 0.07
		0.1 ~ 0.2 mm	210 ~ 420	0.024 ~ 0.040	0.03 ~ 0.05
Carbon Steel (S50C)		0.05 ~ 0.1 mm	158 ~ 315	0.024 ~ 0.040	0.03 ~ 0.05
		0.1 ~ 0.2 mm	158 ~ 315	0.016 ~ 0.024	0.02 ~ 0.03
Tool Steel (SKD)		0.05 ~ 0.1 mm	135 ~ 270	0.024 ~ 0.032	0.03 ~ 0.04
		0.1 ~ 0.2 mm	135 ~ 270	0.016 ~ 0.024	0.02 ~ 0.03
Stainless Steel (SUS304, SUS316)		0.05 ~ 0.1 mm	100 ~ 150	0.024 ~ 0.032	0.03 ~ 0.04
		0.1 ~ 0.2 mm	100 ~ 150	0.016 ~ 0.024	0.02 ~ 0.03
Superalloy, Inconel		0.05 ~ 0.1 mm	30 ~ 60	0.016 ~ 0.024	0.02 ~ 0.03
		0.1 ~ 0.2 mm	30 ~ 60	0.008 ~ 0.016	0.01 ~ 0.02
Titanium		0.05 ~ 0.1 mm	60 ~ 80	0.024 ~ 0.032	0.03 ~ 0.04
		0.1 ~ 0.2 mm	60 ~ 80	0.016 ~ 0.024	0.02 ~ 0.03
Hardened Steel (HRC < 55)		0.05 ~ 0.1 mm	100 ~ 130	0.032 ~ 0.040	0.04 ~ 0.05
		0.1 ~ 0.2 mm	100 ~ 130	0.024 ~ 0.032	0.03 ~ 0.04

Hypex 5-Axis Solid Endmills

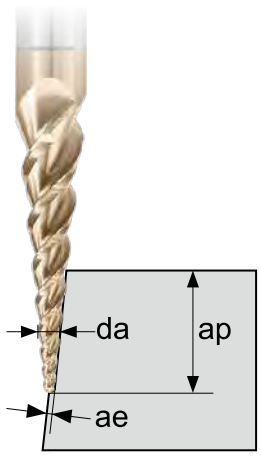
■ *ERTSB Series*



Order No.	R	α	L1	L	da	D	Flute
ERTSB30100620S	0.5R	6°	20	60	3.00	6	3
ERTSB30200619S	1.0R	6°	19	60	3.80	6	3
ERTSB30100818S	0.5R	8°	18	60	3.40	6	3
ERTSB30200815S	1.0R	8°	15	60	3.85	6	3

※ The da value is average diameter at 0.5*L1

■ *Recommended Cutting Conditions*

Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)
Carbon Steel (S45C)		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	100 ~ 120	0.01 × R
Carbon Steel (S50C)		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	70 ~ 90	0.008 × R
Tool Steel (SKD)		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	50 ~ 60	0.006 × R
Stainless Steel (SUS304, SUS316)		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	50 ~ 60	0.006 × R
Superalloy, Inconel		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	15 ~ 20	0.004 × R
Titanium		0.1 ~ 0.2 mm	0.5 ~ 1.0 × L1	30 ~ 50	0.006 × R

$da \fallingdotseq 1.8R + ap \times \tan(\alpha)$

(※da : average diameter at 0.5*ap)

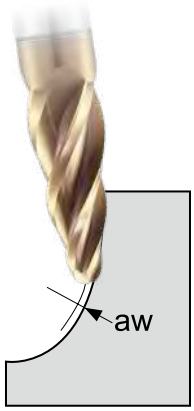
$$RPM = \frac{Vc \times 1000}{da \times \pi}$$

Hypex 5-Axis Solid Endmills

ERTSC Series

Order No.	d	R1	R2	L1	L	D	Flute
ERTSC30810090S	8	1R	90R	25	75	8	3
ERTSC41020085S	10	2R	85R	26	75	10	4

Recommended Cutting Conditions

Working Material	Cutting Application	aw (mm)	Vc (m/min)	fz (mm/z)	
				8 mm	10 mm
Carbon Steel (S45C)		0.05 ~ 0.1 mm	210 ~ 420	0.032 ~ 0.064	0.04 ~ 0.08
		0.1 ~ 0.2 mm	210 ~ 420	0.024 ~ 0.056	0.03 ~ 0.07
		0.2 ~ 0.3 mm	210 ~ 420	0.024 ~ 0.048	0.03 ~ 0.06
Carbon Steel (S50C)		0.05 ~ 0.1 mm	158 ~ 315	0.024 ~ 0.048	0.03 ~ 0.06
		0.1 ~ 0.2 mm	158 ~ 315	0.024 ~ 0.040	0.03 ~ 0.05
		0.2 ~ 0.3 mm	158 ~ 315	0.016 ~ 0.032	0.02 ~ 0.04
Tool Steel (SKD)		0.05 ~ 0.1 mm	135 ~ 270	0.024 ~ 0.040	0.03 ~ 0.05
		0.1 ~ 0.2 mm	135 ~ 270	0.016 ~ 0.032	0.02 ~ 0.04
		0.2 ~ 0.3 mm	135 ~ 270	0.016 ~ 0.024	0.02 ~ 0.03
Stainless Steel (SUS304, SUS316)		0.05 ~ 0.1 mm	100 ~ 150	0.032 ~ 0.040	0.04 ~ 0.05
		0.1 ~ 0.2 mm	100 ~ 150	0.024 ~ 0.032	0.03 ~ 0.04
		0.2 ~ 0.3 mm	100 ~ 150	0.016 ~ 0.024	0.02 ~ 0.03
Superalloy, Inconel		0.05 ~ 0.1 mm	30 ~ 60	0.024 ~ 0.032	0.03 ~ 0.04
		0.1 ~ 0.2 mm	30 ~ 60	0.016 ~ 0.024	0.02 ~ 0.03
		0.2 ~ 0.3 mm	30 ~ 60	0.008 ~ 0.016	0.01 ~ 0.02
Titanium		0.05 ~ 0.1 mm	60 ~ 80	0.032 ~ 0.040	0.04 ~ 0.05
		0.1 ~ 0.2 mm	60 ~ 80	0.024 ~ 0.032	0.03 ~ 0.04
		0.2 ~ 0.3 mm	60 ~ 80	0.016 ~ 0.024	0.02 ~ 0.03
Hardened Steel (HRC < 55)		0.05 ~ 0.1 mm	100 ~ 130	0.032 ~ 0.040	0.04 ~ 0.05
		0.1 ~ 0.2 mm	100 ~ 130	0.024 ~ 0.032	0.03 ~ 0.04
		0.2 ~ 0.3 mm	100 ~ 130	0.016 ~ 0.024	0.02 ~ 0.03

A300 Series for CFRP/GFRP milling (Non-Ferrous Metals)

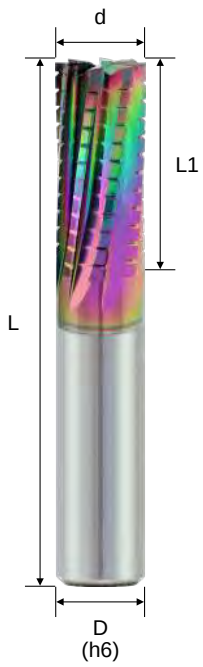
- For CFRP / GFRP machining.
- DIA - Diamond coating provides exceptional wear resistance.
- ECSSF Series - Finishing design for reducing flaking and burrs.
- ECSSR Series - Roughing design for machining and routing.

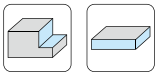
A300 - CFRP/GFRP · Finishing · 6F / 8F

- For CFRP/GFRP multi-purpose finish milling.
- Multi flutes and fine nick geometry design.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

ECSSF

P	M	K	N	S	H
			●		





6 | 8 | MG | NDLC | DIA | 8°

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
 NDLC Nano DLC coating					
ECSSF606000L	6	15	60	6	6
ECSSF608000L	8	20	75	8	6
ECSSF810000L	10	25	75	10	8
ECSSF812000L	12	30	100	12	8
 DIA Diamond Coating					
ECSSF606000D	6	15	60	6	6
ECSSF608000D	8	20	75	8	6
ECSSF810000D	10	25	75	10	8
ECSSF812000D	12	30	100	12	8

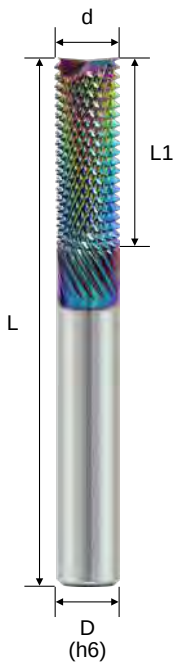
Cutting conditions：Table 072

A300 - CFRP/GFRP · Roughing · 8~17F

- For CFRP/GFRP rough milling.
- Right helix and left helix design.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

ECSSR

P	M	K	N	S	H
			●		



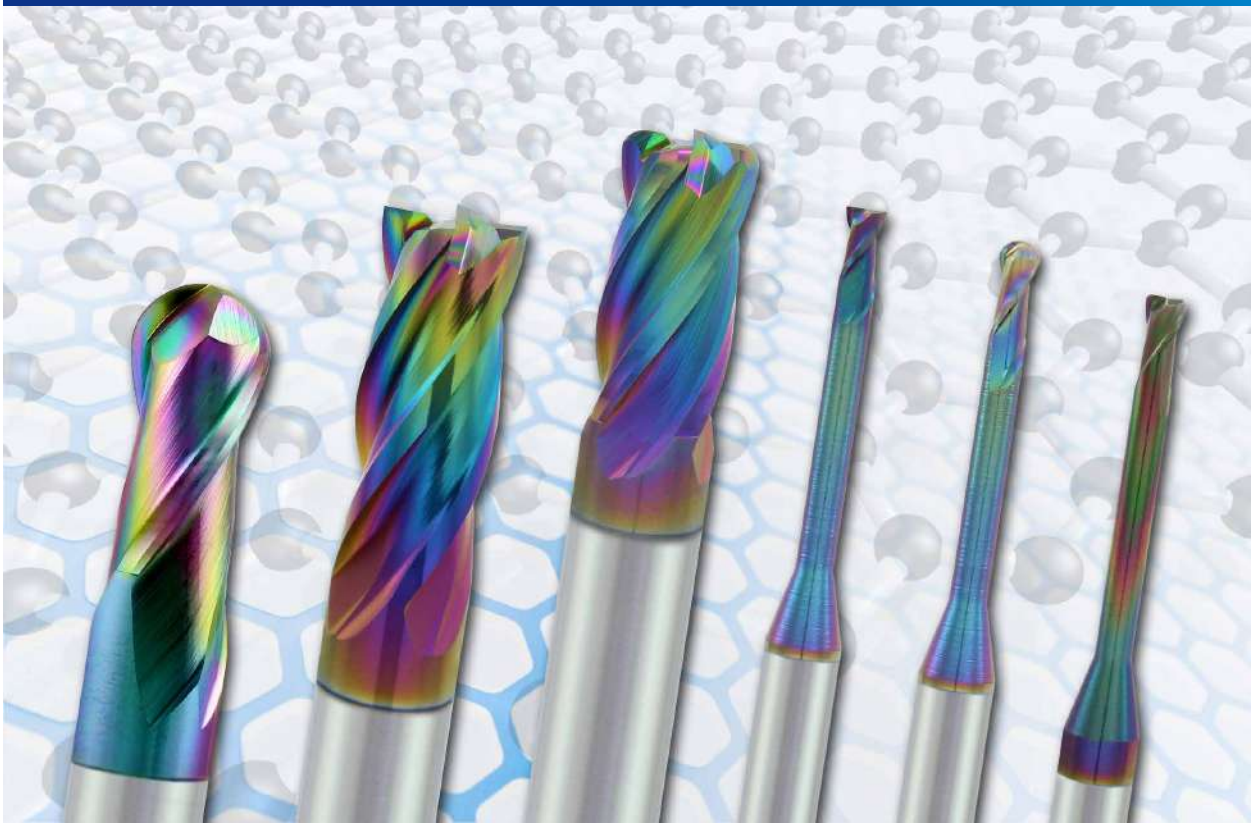
MG NDLC DIA ±25°

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
 NDLC Nano DLC coating					
ECSSR804000L	4	12	60	6	8
ECSSR106000L	6	18	60	6	11
ECSSR408000L	8	24	60	8	14
ECSSR610000L	10	30	75	10	16
ECSSR712000L	12	36	100	12	17
 DIA Diamond Coating					
ECSSR804000D	4	12	60	6	8
ECSSR106000D	6	18	60	6	11
ECSSR408000D	8	24	60	8	14
ECSSR610000D	10	30	75	10	16
ECSSR712000D	12	36	100	12	17

Cutting conditions：Table 073

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

A200 Series for Graphite milling (Non-Ferrous Metals)



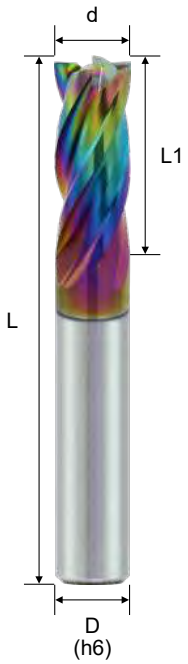
- Suitable for Graphite.
- Available in various effective length.
- Suitable carbide rod brings good tightness of Diamond coating.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

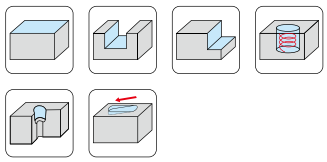
A200 - Graphite · Square · 4F

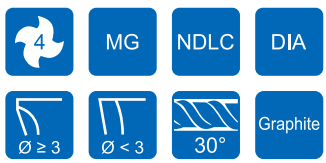
- Suitable for Graphite.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGSSC

P	M	K	N	S	H
			●		







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EGSSC443000L	3	8	50	4	4
* EGSSC444000L	4	10	50	4	4
EGSSC404000L	4	10	50	6	4
EGSSC405000L	5	13	50	6	4
EGSSC406000L	6	15	50	6	4
EGSSC408000L	8	20	60	8	4
EGSSC410000L	10	25	75	10	4
EGSSC412000L	12	30	75	12	4

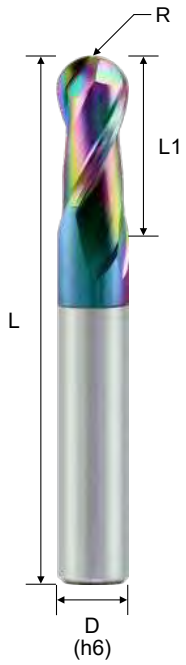
* L NDLC Nano DLC coating D DIA Diamond Coating

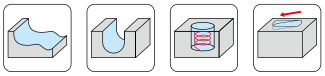
A200 - Graphite · Ball Nose · 2F

- Suitable for Graphite.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGBSC

P	M	K	N	S	H
			●		





2 | MG | NDLC | DIA

R | 30° | Graphite

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EGBSC240200L	0.10R	0.2	0.4	50	4	2
* EGBSC240300L	0.15R	0.3	0.6	50	4	2
* EGBSC240400L	0.20R	0.4	0.8	50	4	2
* EGBSC240500L	0.25R	0.5	1.0	50	4	2
* EGBSC240600L	0.30R	0.6	1.2	50	4	2
* EGBSC240700L	0.35R	0.7	1.4	50	4	2
* EGBSC240800L	0.40R	0.8	1.6	50	4	2
* EGBSC240900L	0.45R	0.9	1.8	50	4	2
* EGBSC241000L	0.50R	1.0	2.0	50	4	2
* EGBSC241500L	0.75R	1.5	3.0	50	4	2
* EGBSC242000L	1.00R	2.0	4.0	50	4	2
* EGBSC243000L	1.50R	3.0	6.0	50	4	2
* EGBSC244000L	2.00R	4.0	8.0	50	4	2
EGBSC204000L	2.00R	4.0	8.0	50	6	2
EGBSC205000L	2.50R	5.0	10.0	50	6	2
EGBSC206000L	3.00R	6.0	12.0	50	6	2
EGBSC208000L	4.00R	8.0	16.0	60	8	2
EGBSC210000L	5.00R	10.0	20.0	75	10	2
EGBSC212000L	6.00R	12.0	24.0	75	12	2

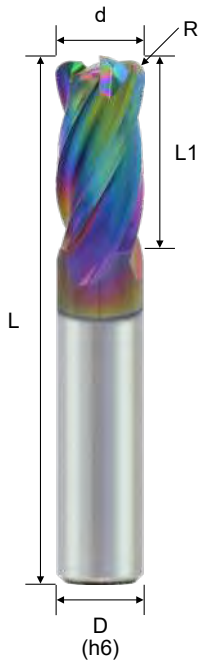
* L NDLC Nano DLC coating D DIA Diamond Coating

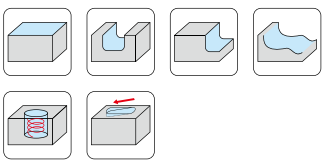
A200 - Graphite · Corner Radius · 4F

- Suitable for Graphite.
- Corner radius with multiple design increases the finish milling surface.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGCSC

P	M	K	N	S	H
			●		





4 | MG | NDLC | DIA

R | 30° | Graphite

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* EGCSC443003L	3	0.3R	6	50	4	4
* EGCSC443005L	3	0.5R	6	50	4	4
* EGCSC443010L	3	1.0R	6	50	4	4
EGCSC403003L	3	0.3R	6	50	6	4
EGCSC403005L	3	0.5R	6	50	6	4
EGCSC403010L	3	1.0R	6	50	6	4
* EGCSC444003L	4	0.3R	8	50	4	4
* EGCSC444005L	4	0.5R	8	50	4	4
* EGCSC444010L	4	1.0R	8	50	4	4
EGCSC404003L	4	0.3R	8	50	6	4
EGCSC404005L	4	0.5R	8	50	6	4
EGCSC404010L	4	1.0R	8	50	6	4
EGCSC405005L	5	0.5R	10	50	6	4
EGCSC405010L	5	1.0R	10	50	6	4
EGCSC406003L	6	0.3R	12	50	6	4
EGCSC406005L	6	0.5R	12	50	6	4
EGCSC406010L	6	1.0R	12	50	6	4
EGCSC408005L	8	0.5R	16	60	8	4
EGCSC408010L	8	1.0R	16	60	8	4
EGCSC408015L	8	1.5R	16	60	8	4
EGCSC410005L	10	0.5R	20	75	10	4
EGCSC410010L	10	1.0R	20	75	10	4
EGCSC410015L	10	1.5R	20	75	10	4
EGCSC410020L	10	2.0R	20	75	10	4
EGCSC412005L	12	0.5R	24	75	12	4
EGCSC412010L	12	1.0R	24	75	12	4
EGCSC412015L	12	1.5R	24	75	12	4
EGCSC412020L	12	2.0R	24	75	12	4
EGCSC412030L	12	3.0R	24	75	12	4

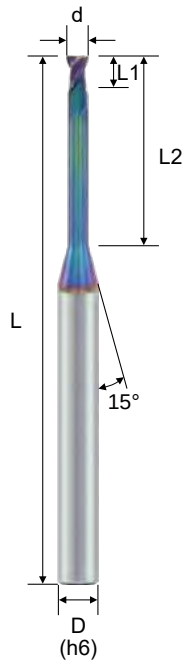
* L NDLC Nano DLC coating D DIA Diamond Coating

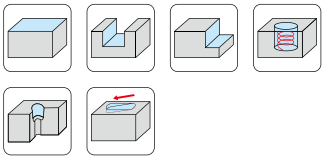
A200 - Graphite · Long Neck · Square · 2F

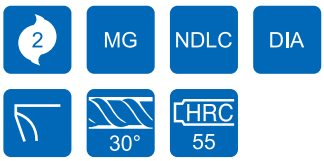
- Suitable for Graphite.
- Available in various effective length.
- Suitable for deep cutting application.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGSRC

P	M	K	N	S	H
			●		







d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EGSRC240504L	0.5	0.6	4	50	4	2
* EGSRC240506L	0.5	0.6	6	50	4	2
* EGSRC240508L	0.5	0.6	8	50	4	2
* EGSRC241006L	1.0	1.2	6	50	4	2
* EGSRC241008L	1.0	1.2	8	50	4	2
* EGSRC241012L	1.0	1.2	12	50	4	2
* EGSRC241016L	1.0	1.2	16	50	4	2
* EGSRC241020L	1.0	1.2	20	50	4	2
* EGSRC241508L	1.5	1.8	8	50	4	2
* EGSRC241512L	1.5	1.8	12	50	4	2
* EGSRC241516L	1.5	1.8	16	50	4	2
* EGSRC241520L	1.5	1.8	20	50	4	2
* EGSRC242010L	2.0	2.5	10	50	4	2
* EGSRC242016L	2.0	2.5	16	50	4	2
* EGSRC242020L	2.0	2.5	20	50	4	2
* EGSRC242025L	2.0	2.5	25	60	4	2
EGSRC203012L	3.0	3.5	12	50	6	2
EGSRC203020L	3.0	3.5	20	60	6	2
EGSRC203025L	3.0	3.5	25	60	6	2
EGSRC203030L	3.0	3.5	30	75	6	2
EGSRC204016L	4.0	4.5	16	50	6	2
EGSRC204020L	4.0	4.5	20	60	6	2
EGSRC204025L	4.0	4.5	25	60	6	2
EGSRC204030L	4.0	4.5	30	75	6	2
EGSRC204035L	4.0	4.5	35	75	6	2
EGSRC205020L	5.0	7.0	20	60	6	2
EGSRC205025L	5.0	7.0	25	60	6	2
EGSRC205030L	5.0	7.0	30	75	6	2
EGSRC205035L	5.0	7.0	35	75	6	2
EGSRC206020L	6.0	10.0	20	60	6	2
EGSRC206030L	6.0	10.0	30	75	6	2

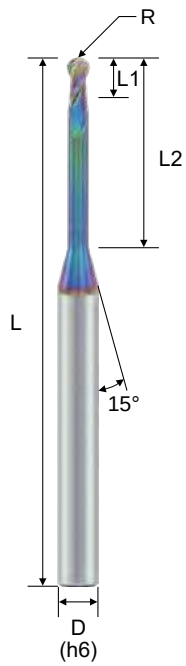
* L NDLC Nano DLC coating D DIA Diamond Coating

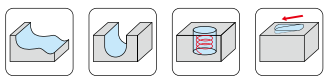
A200 - Graphite · Long Neck · Ball Nose · 2F

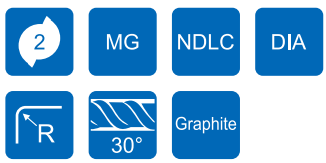
- Suitable for Graphite.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGBRC

P	M	K	N	S	H
			●		







R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EGBRC240504L	0.25R	0.5	0.5	4	50	4	2
* EGBRC240506L	0.25R	0.5	0.5	6	50	4	2
* EGBRC240508L	0.25R	0.5	0.5	8	50	4	2
* EGBRC241006L	0.50R	1.0	1.0	6	50	4	2
* EGBRC241008L	0.50R	1.0	1.0	8	50	4	2
* EGBRC241012L	0.50R	1.0	1.0	12	50	4	2
* EGBRC241016L	0.50R	1.0	1.0	16	50	4	2
* EGBRC241020L	0.50R	1.0	1.0	20	50	4	2
* EGBRC241508L	0.75R	1.5	1.5	8	50	4	2
* EGBRC241512L	0.75R	1.5	1.5	12	50	4	2
* EGBRC241516L	0.75R	1.5	1.5	16	50	4	2
* EGBRC241520L	0.75R	1.5	1.5	20	50	4	2
* EGBRC242010L	1.00R	2.0	2.0	10	50	4	2
* EGBRC242016L	1.00R	2.0	2.0	16	50	4	2
* EGBRC242020L	1.00R	2.0	2.0	20	50	4	2
* EGBRC242025L	1.00R	2.0	2.0	25	60	4	2
EGBRC203012L	1.50R	3.0	3.0	12	50	6	2
EGBRC203016L	1.50R	3.0	3.0	16	60	6	2
EGBRC203020L	1.50R	3.0	3.0	20	60	6	2
EGBRC203025L	1.50R	3.0	3.0	25	60	6	2
EGBRC203030L	1.50R	3.0	3.0	30	75	6	2
EGBRC204016L	2.00R	4.0	4.0	16	60	6	2
EGBRC204020L	2.00R	4.0	4.0	20	60	6	2
EGBRC204025L	2.00R	4.0	4.0	25	60	6	2
EGBRC204030L	2.00R	4.0	4.0	30	75	6	2
EGBRC205020L	2.50R	5.0	5.0	20	60	6	2
EGBRC205025L	2.50R	5.0	5.0	25	60	6	2
EGBRC205030L	2.50R	5.0	5.0	30	75	6	2
EGBRC206020L	3.00R	6.0	10.0	20	60	6	2
EGBRC206030L	3.00R	6.0	10.0	30	75	6	2

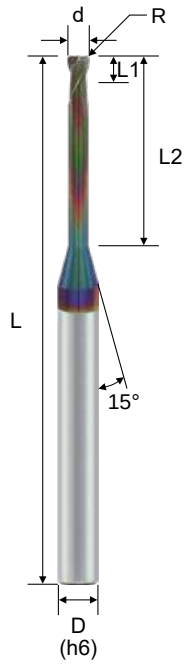
* L NDLC Nano DLC coating D DIA Diamond Coating

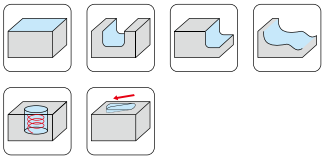
A200 - Graphite · Long Neck · Corner Radius · 2F

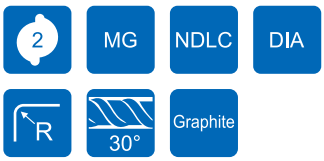
- Suitable for Graphite.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

EGCRC

P	M	K	N	S	H
			●		







Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
* EGCRC24100106L	1	0.1R	1	6	50	4	2
* EGCRC24100108L	1	0.1R	1	8	50	4	2
* EGCRC24100110L	1	0.1R	1	10	50	4	2
* EGCRC24100112L	1	0.1R	1	12	50	4	2
* EGCRC24200210L	2	0.2R	2	10	50	4	2
* EGCRC24200216L	2	0.2R	2	16	50	4	2
* EGCRC24200220L	2	0.2R	2	20	50	4	2
* EGCRC24200225L	2	0.2R	2	25	60	4	2
* EGCRC24200510L	2	0.5R	2	10	50	4	2
* EGCRC24200516L	2	0.5R	2	16	50	4	2
* EGCRC24200520L	2	0.5R	2	20	50	4	2
* EGCRC24200525L	2	0.5R	2	25	60	4	2
EGCRC20300210L	3	0.2R	3	10	50	6	2
EGCRC20300220L	3	0.2R	3	20	60	6	2
EGCRC20300230L	3	0.2R	3	30	75	6	2
EGCRC20300510L	3	0.5R	3	10	50	6	2
EGCRC20300520L	3	0.5R	3	20	60	6	2
EGCRC20300530L	3	0.5R	3	30	75	6	2
EGCRC20400516L	4	0.5R	4	16	60	6	2
EGCRC20400525L	4	0.5R	4	25	60	6	2
EGCRC20400535L	4	0.5R	4	35	75	6	2
EGCRC20401016L	4	1.0R	4	16	60	6	2
EGCRC20401025L	4	1.0R	4	25	60	6	2
EGCRC20401035L	4	1.0R	4	35	75	6	2
EGCRC20500520L	5	0.5R	5	20	60	6	2
EGCRC20500530L	5	0.5R	5	30	75	6	2
EGCRC20600520L	6	0.5R	7	20	60	6	2
EGCRC20600530L	6	0.5R	7	30	75	6	2
EGCRC20601020L	6	1.0R	7	20	60	6	2
EGCRC20601030L	6	1.0R	7	30	75	6	2

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

* L NDLC Nano DLC coating D DIA Diamond Coating

A100 Series for Aluminum alloy milling (Non-Ferrous Metals)

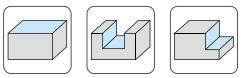
- Micro grain carbide rod is suitable for general machining.
- High efficient processing can be achieved by great chip evacuation.
- High helix angle offers stable and excellent finished surface in high speed.
- Radial flute design is good for chip evacuation and easy of machining.

A100 - Square · 1F

- 30° helix design for general milling.
- Single flute endmill has large chip evacuation.
- Sharp and polishing cutting edge produces an excellent surface finish.
- Suitable for aluminum, copper and plastic material.

ENSSC

P	M	K	N	S	H
			●		



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSC141000	1	3	50	4	1
ENSSC142000	2	6	50	4	1
ENSSC143000	3	9	50	4	1
ENSSC144000	4	12	50	4	1
ENSSC104000	4	12	50	6	1
ENSSC105000	5	13	50	6	1
ENSSC106000	6	15	50	6	1
ENSSC108000	8	20	60	8	1
ENSSC110000	10	30	75	10	1
ENSSC112000	12	30	75	12	1

Cutting conditions：Table 074

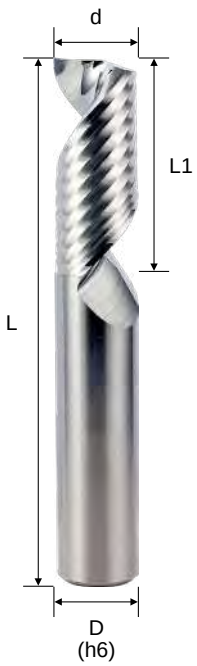
d Tolerance	
d ≤ 10	0 ~ -0.03
d > 10	0 ~ -0.04

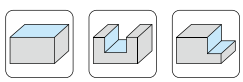
A100 - High Helix · Square · 1F

- 45° helix design for side milling.
- Single flute endmill has large chip evacuation.
- Sharp and polishing cutting edge produces an excellent surface finish.
- Suitable for aluminum, copper and plastic material.

ENSSP

P	M	K	N	S	H
			●		





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSP104000	4	12	50	6	1
ENSSP106000	6	15	50	6	1
ENSSP108000	8	20	60	8	1
ENSSP110000	10	30	75	10	1
ENSSP112000	12	30	75	12	1

Cutting conditions：Table 075

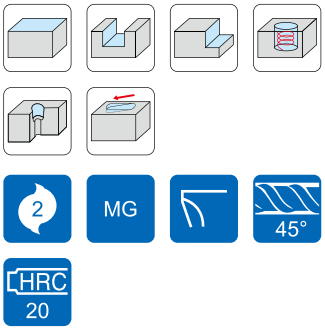
d Tolerance	
d ≤ 10	0 ~ -0.03
d > 10	0 ~ -0.04

A100 - Square · 2F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing increase cutting surface and feed rate.

ENSSS

P	M	K	N	S	H
			●		



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ENSSS241000	1	3	50	4	2
* ENSSS242000	2	6	50	4	2
* ENSSS233000	3	9	50	3	2
* ENSSS243000	3	9	50	4	2
* ENSSS244000	4	12	50	4	2
ENSSS204000	4	12	50	6	2
ENSSS205000	5	15	50	6	2
ENSSS206000	6	15	50	6	2
ENSSS208000	8	20	60	8	2
ENSSS210000	10	30	75	10	2
ENSSS212000	12	30	75	12	2
ENSSS216000	16	40	100	16	2
ENSSS220000	20	45	100	20	2

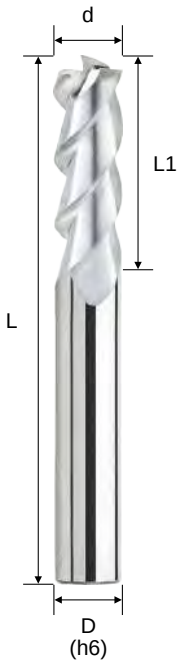
Cutting conditions：Table 076

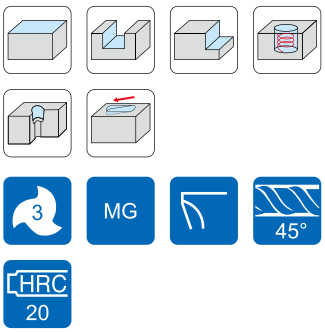
A100 - Square · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.

ENSSS

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ENSSS342000	2	6	50	4	3
* ENSSS333000	3	9	50	3	3
* ENSSS343000	3	9	50	4	3
* ENSSS344000	4	12	50	4	3
ENSSS304000	4	12	50	6	3
ENSSS305000	5	15	50	6	3
ENSSS306000	6	15	50	6	3
ENSSS308000	8	20	60	8	3
ENSSS310000	10	30	75	10	3
ENSSS312000	12	30	75	12	3
ENSSS316000	16	40	100	16	3
ENSSS320000	20	45	100	20	3

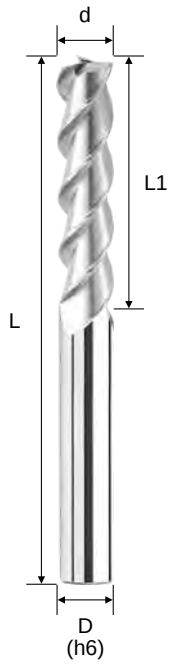
Cutting conditions：Table 076

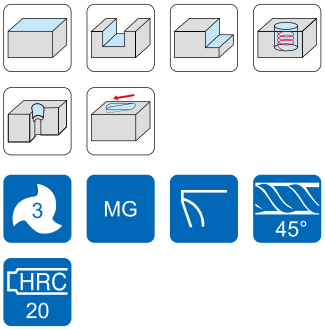
A100 - Long Flute · Square · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.

ENSCS

P	M	K	N	S	H
			●		





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSCS303000	3	15	60	6	3
ENSCS304000	4	20	60	6	3
ENSCS305000	5	25	60	6	3
ENSCS306000	6	30	75	6	3
ENSCS308000	8	45	100	8	3
ENSCS310000	10	55	100	10	3
ENSCS312000	12	55	100	12	3
ENSCS316000	16	75	150	16	3
ENSCS320000	20	90	150	20	3

Cutting conditions：Table 076

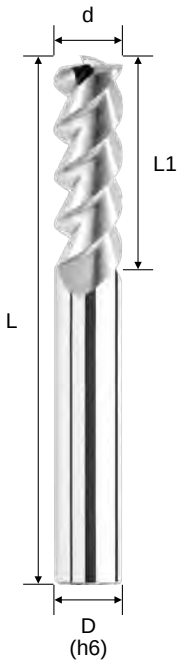
d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

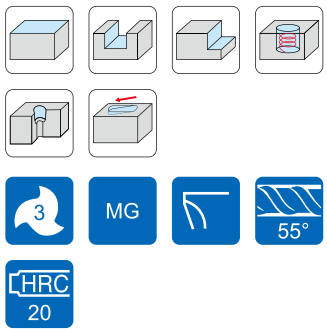
A100 - High Helix · Square · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- 55° degree Helix offers excellent and stable finished surfaces in high speed side milling.
- Flute polishing gives a very good cutting surface and high feed rate.

ENSSH

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSH304000	4	12	50	6	3
ENSSH305000	5	15	50	6	3
ENSSH306000	6	15	50	6	3
ENSSH308000	8	20	60	8	3
ENSSH310000	10	30	75	10	3
ENSSH312000	12	30	75	12	3
ENSSH316000	16	40	100	16	3

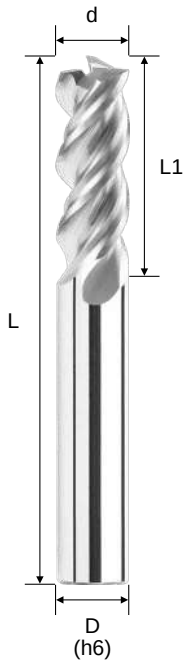
Cutting conditions：Table 076

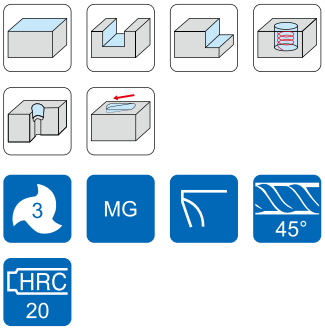
A100 - High Performance · Square · 3F (for side milling)

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- U-flute design with high chips volume space and easy to remove chips.
- Excellent for high feed rough milling.
- Also suitable for surface finish in high speed milling.

ENSSB

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ENSSB343000	3	9	50	4	3
* ENSSB344000	4	12	50	4	3
ENSSB304000	4	12	50	6	3
ENSSB305000	5	15	50	6	3
ENSSB306000	6	15	50	6	3
ENSSB308000	8	20	60	8	3
ENSSB310000	10	30	75	10	3
ENSSB312000	12	30	75	12	3
ENSSB316000	16	40	100	16	3
ENSSB320000	20	45	100	20	3

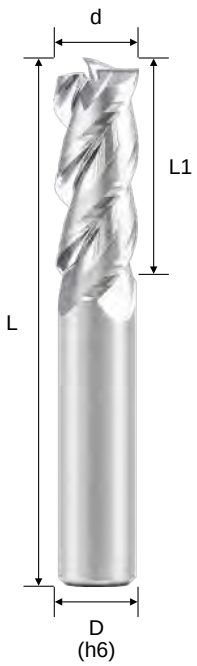
Cutting conditions：Table 077

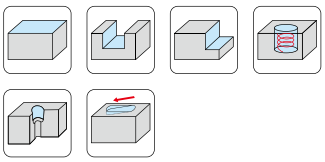
A100 - AL Finishing · Square · 3F

- Mirror-like flute surface design.
- For finishing cutting of aluminum alloys.
- Medium to high speed cutting.

ENSSF

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSF301000	1	3	50	6	3
ENSSF302000	2	6	50	6	3
ENSSF303000	3	11	60	6	3
ENSSF304000	4	13	60	6	3
ENSSF305000	5	17	60	6	3
ENSSF306000	6	17	60	6	3
ENSSF308000	8	22	75	8	3
ENSSF310000	10	27	75	10	3
ENSSF312000	12	32	75	12	3

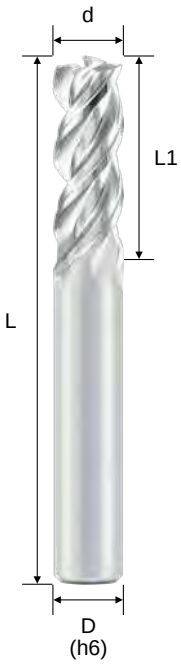
Cutting conditions：Table 078

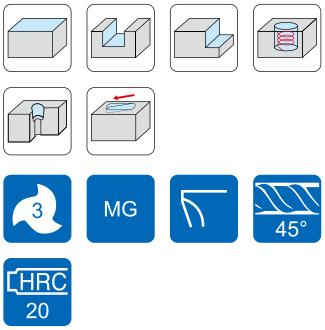
A100 - ALU High Speed Finishing · Square · 3F

- U-flute and Mirror-like flute surface design.
- For medium to finishing cutting of aluminum alloys.
- High speed cutting.
- Is better for Aluminum alloy with Si ≥ 8%.

ENSSP

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSP306000	6	15	50	6	3
ENSSP308000	8	20	60	8	3
ENSSP310000	10	30	75	10	3
ENSSP312000	12	30	75	12	3
ENSSP316000	16	40	100	16	3

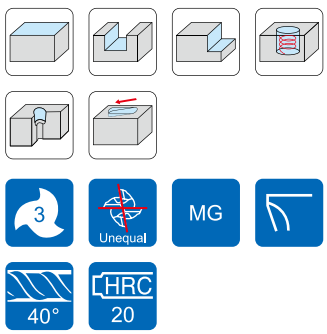
Cutting conditions：Table 079

A100 - Variable Spacing · Square · 3F

- Unequal flute spacing, good for high performance machining.
- No chattering surface due to anti-vibration design.
- Polished and U flute designs provide excellent chip evacuation.
- Good for semi-fininshing and roughing of aluminum parts(5052/6061/7075).

ENSSV

P	M	K	N	S	H
			●		



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSV303000	3	9	50	6	3
ENSSV304000	4	12	50	6	3
ENSSV305000	5	15	50	6	3
ENSSV306000	6	18	50	6	3
ENSSV308000	8	24	60	8	3
ENSSV310000	10	30	75	10	3
ENSSV312000	12	35	75	12	3
ENSSV316000	16	40	100	16	3
INCH Size					
ENS2V30120500	1/8	1/2	2	1/8	3
ENS2V30250300	1/4	3/8	2	1/4	3
ENS2V30310500	5/16	1/2	2	5/16	3
ENS2V30370600	3/8	5/8	3	3/8	3
ENS3V30371000	3/8	1	3	3/8	3
ENS2V30501000	1/2	1	3	1/2	3
ENS3V30621600	5/8	1 5/8	3 1/2	5/8	3

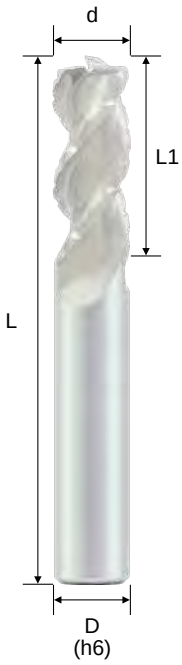
Cutting conditions：Table 080

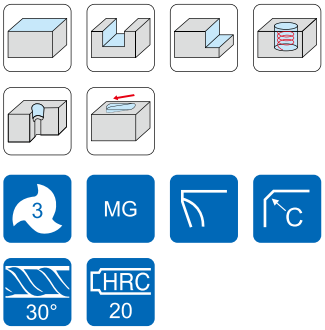
A100 - Roughing · Square · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides hi performance and avoids tip fracture.
-

ENSSR

P	M	K	N	S	H
			●		





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSR306000	6	15	50	6	3
ENSSR308000	8	20	60	8	3
ENSSR310000	10	25	75	10	3
ENSSR312000	12	30	75	12	3
ENSSR316000	16	40	100	16	3
ENSSR320000	20	45	100	20	3

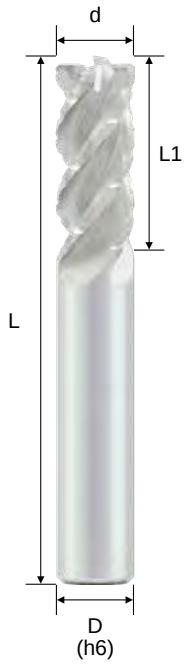
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

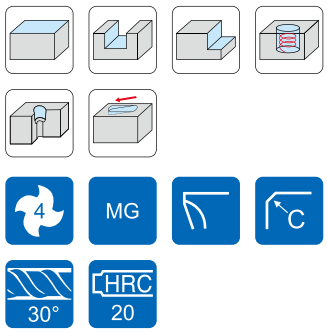
A100 - Roughing · Square · 4F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides hi performance and avoids tip fracture.
-

ENSSR

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

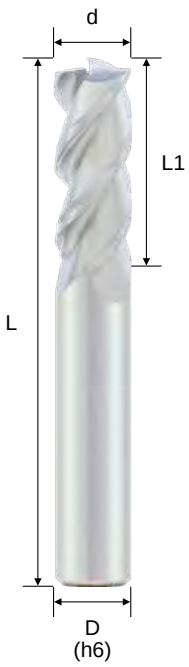
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSR406000	6	15	50	6	4
ENSSR408000	8	20	60	8	4
ENSSR410000	10	25	75	10	4
ENSSR412000	12	30	75	12	4
ENSSR416000	16	40	100	16	4
ENSSR420000	20	45	100	20	4

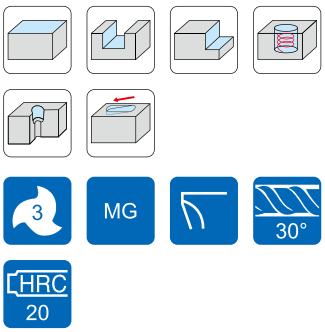
A100 - Wave Edge · Square · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- Incredible toughness and vibration reduction at high speeds.
- Wave type increases the performance.

ENSSW

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

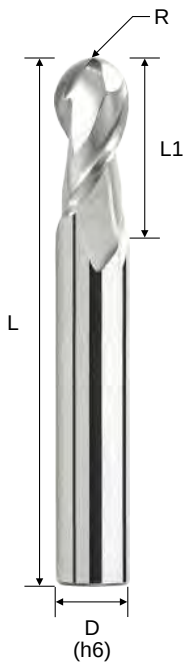
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSW306000	6	15	50	6	3
ENSSW308000	8	20	60	8	3
ENSSW310000	10	30	75	10	3
ENSSW312000	12	30	75	12	3

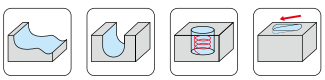
A100 - Ball Nose · 2F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- Great chip evacuation.
- Due to polish surface grinding of cutting it provides an excellent surface.
- New tool geometry increases wear resistance and cutting force is decreased.

ENBSA

P	M	K	N	S	H
			●		





R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
* ENBSA241000	0.5R	1	2	50	4	2
* ENBSA242000	1.0R	2	4	50	4	2
* ENBSA243000	1.5R	3	6	50	4	2
* ENBSA244000	2.0R	4	8	50	4	2
ENBSA204000	2.0R	4	8	50	6	2
ENBSA205000	2.5R	5	10	50	6	2
ENBSA206000	3.0R	6	12	50	6	2
ENBSA208000	4.0R	8	16	60	8	2
ENBSA210000	5.0R	10	20	75	10	2
ENBSA212000	6.0R	12	24	75	12	2
ENBSA216000	8.0R	16	32	100	16	2

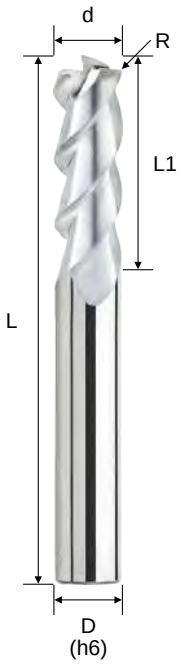
Cutting conditions：Table 081

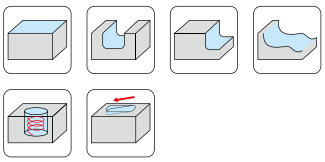
A100 - Corner Radius · 3F

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.

ENCSS

P	M	K	N	S	H
			●		





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENCSS306005	6	0.5R	15	50	6	3
ENCSS308005	8	0.5R	20	60	8	3
ENCSS310010	10	1.0R	30	75	10	3
ENCSS312010	12	1.0R	30	75	12	3
ENCSS316020	16	2.0R	40	100	16	3

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

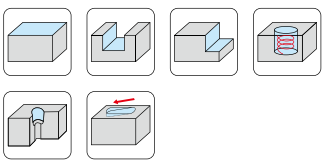
R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

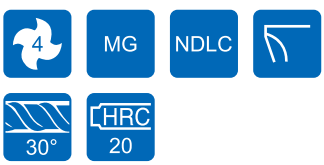
A100 - Square · 4F (for CU & AL)

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Multiple processing efficiency, coefficient of friction <0.1μm.
- Large positive rake angle and deep flute design, improves cutting efficiency.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

ENSSC

P	M	K	N	S	H
			●		





d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

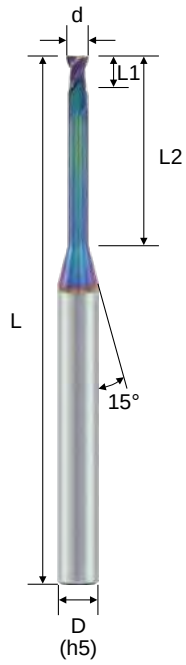
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSC405000L	5	13	50	6	4
ENSSC406000L	6	15	50	6	4
ENSSC408000L	8	20	60	8	4
ENSSC410000L	10	25	75	10	4
ENSSC412000L	12	30	75	12	4

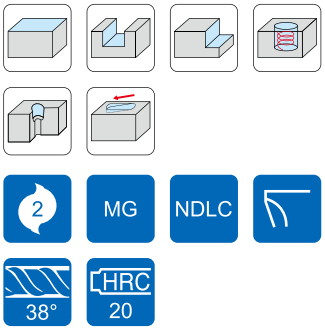
A100 - Long Neck · Square · 2F (for CU & AL)

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Suitable for deep cutting application.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

ENSRC

P	M	K	N	S	H
			●		





d Tolerance	
d	0 ~ -0.015

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
ENSRC240501L	0.5	1	1.5	50	4	2
ENSRC240502L	0.5	1	2	50	4	2
ENSRC240503L	0.5	1	3	50	4	2
ENSRC240504L	0.5	1	4	50	4	2
ENSRC240506L	0.5	1	6	50	4	2
ENSRC241003L	1	2	3	50	4	2
ENSRC241004L	1	2	4	50	4	2
ENSRC241005L	1	2	5	50	4	2
ENSRC241006L	1	2	6	50	4	2
ENSRC241008L	1	2	8	50	4	2
ENSRC241010L	1	2	10	50	4	2
ENSRC241012L	1	2	12	50	4	2
ENSRC242006L	2	4	6	50	4	2
ENSRC242008L	2	4	8	50	4	2
ENSRC242010L	2	4	10	50	4	2
ENSRC242012L	2	4	12	50	4	2
ENSRC242014L	2	4	14	50	4	2
ENSRC242016L	2	4	16	50	4	2
ENSRC242020L	2	4	20	50	4	2
ENSRC243010L	3	6	10	50	4	2
ENSRC243016L	3	6	16	50	4	2
ENSRC243020L	3	6	20	50	4	2
ENSRC244016L	4	8	16	50	4	2
ENSRC244020L	4	8	20	50	4	2

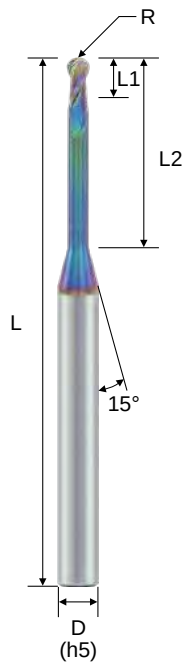
Cutting conditions：Table 082

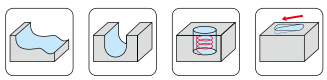
A100 - Long Neck · Ball Nose · 2F (for CU & AL)

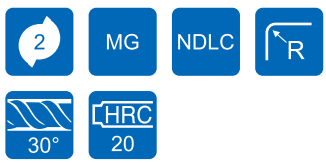
- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

ENBRC

P	M	K	N	S	H
			●		







R Tolerance	
R	±0.01

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
ENBRC240502L	0.25R	0.5	0.35	2	50	4	2
ENBRC240503L	0.25R	0.5	0.35	3	50	4	2
ENBRC240504L	0.25R	0.5	0.35	4	50	4	2
ENBRC240505L	0.25R	0.5	0.35	5	50	4	2
ENBRC241003L	0.5R	1	0.75	3	50	4	2
ENBRC241004L	0.5R	1	0.75	4	50	4	2
ENBRC241005L	0.5R	1	0.75	5	50	4	2
ENBRC241006L	0.5R	1	0.75	6	50	4	2
ENBRC241008L	0.5R	1	0.75	8	50	4	2
ENBRC241010L	0.5R	1	0.75	10	50	4	2
ENBRC241012L	0.5R	1	0.75	12	50	4	2
ENBRC242004L	1.0R	2	1.5	4	50	4	2
ENBRC242006L	1.0R	2	1.5	6	50	4	2
ENBRC242008L	1.0R	2	1.5	8	50	4	2
ENBRC242010L	1.0R	2	1.5	10	50	4	2
ENBRC242012L	1.0R	2	1.5	12	50	4	2
ENBRC242016L	1.0R	2	1.5	16	50	4	2
ENBRC242020L	1.0R	2	1.5	20	50	4	2
ENBRC243008L	1.5R	3	2.5	8	50	4	2
ENBRC243010L	1.5R	3	2.5	10	50	4	2
ENBRC243016L	1.5R	3	2.5	16	50	4	2
ENBRC243020L	1.5R	3	2.5	20	50	4	2
ENBRC244012L	2.0R	4	3	12	50	4	2
ENBRC244016L	2.0R	4	3	16	50	4	2
ENBRC244020L	2.0R	4	3	20	50	4	2

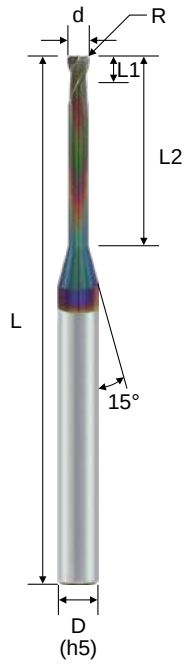
Cutting conditions：Table 083

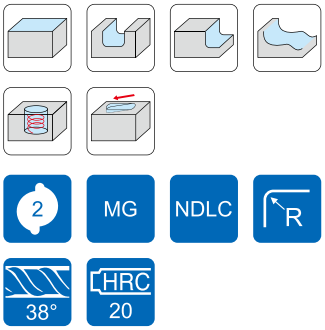
A100 - Long Neck · Corner Radius · 2F (for CU & AL)

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

ENCRC

P	M	K	N	S	H
			●		





d Tolerance	
d	0 ~ -0.015

R Tolerance	
R	±0.0015

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
ENCRC24050102L	0.5	0.1R	1	2	50	4	2
ENCRC24050103L	0.5	0.1R	1	3	50	4	2
ENCRC24050104L	0.5	0.1R	1	4	50	4	2
ENCRC24050105L	0.5	0.1R	1	5	50	4	2
ENCRC24100103L	1	0.1R	2	3	50	4	2
ENCRC24100104L	1	0.1R	2	4	50	4	2
ENCRC24100105L	1	0.1R	2	5	50	4	2
ENCRC24100106L	1	0.1R	2	6	50	4	2
ENCRC24100108L	1	0.1R	2	8	50	4	2
ENCRC24100110L	1	0.1R	2	10	50	4	2
ENCRC24100203L	1	0.2R	2	3	50	4	2
ENCRC24100204L	1	0.2R	2	4	50	4	2
ENCRC24100205L	1	0.2R	2	5	50	4	2
ENCRC24100206L	1	0.2R	2	6	50	4	2
ENCRC24100208L	1	0.2R	2	8	50	4	2
ENCRC24100210L	1	0.2R	2	10	50	4	2
ENCRC24200105L	2	0.1R	4	5	50	4	2
ENCRC24200108L	2	0.1R	4	8	50	4	2
ENCRC24200110L	2	0.1R	4	10	50	4	2
ENCRC24200115L	2	0.1R	4	15	50	4	2
ENCRC24200120L	2	0.1R	4	20	50	4	2
ENCRC24200305L	2	0.3R	4	5	50	4	2
ENCRC24200308L	2	0.3R	4	8	50	4	2
ENCRC24200310L	2	0.3R	4	10	50	4	2
ENCRC24200315L	2	0.3R	4	15	50	4	2
ENCRC24200320L	2	0.3R	4	20	50	4	2
ENCRC24300212L	3	0.2R	6	12	50	4	2
ENCRC24300215L	3	0.2R	6	15	50	4	2
ENCRC24300220L	3	0.2R	6	20	50	4	2
ENCRC24300512L	3	0.5R	6	12	50	4	2
ENCRC24300515L	3	0.5R	6	15	50	4	2
ENCRC24300520L	3	0.5R	6	20	50	4	2
ENCRC24400216L	4	0.2R	8	16	50	4	2
ENCRC24400220L	4	0.2R	8	20	50	4	2
ENCRC24400516L	4	0.5R	8	16	50	4	2
ENCRC24400520L	4	0.5R	8	20	50	4	2

Cutting conditions：Table 084

Recommended Cutting Conditions

Table 001

H700 Seires EHSSS

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 M/min		98 M/min		65 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
6mm	6,890	1,900	5,200	1,000	3,445	505
8mm	5,200	1,900	3,900	1,000	2,600	505
10mm	4,160	1,900	3,120	1,000	2,080	505
12mm	3,445	1,900	2,600	1,000	1,755	505
14mm	2,925	1,800	2,210	1,000	1,430	505
16mm	2,535	1,700	2,015	930	1,294	505
18mm	2,275	1,600	1,885	895	1,151	505
20mm	2,015	1,500	1,495	845	1,040	505
25mm	1,625	1,500	1,242	915	826	505
Milling Amount (mm)			ap 1.5D / ae 0.05D aeMax ≦ 1.0mm		ap 1.5D / ae 0.03D aeMax ≦ 0.5mm		ap 1.0D / ae 0.02D aeMax ≦ 0.5mm

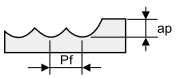
Table 002

H700 Seires EHSUS4, EHSUS6, EHSUS8

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	208 M/min		195 M/min		129 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
6mm	11,050	2,450	10,335	2,000	6,890	1,210
8mm	8,255	2,440	7,735	1,995	5,200	1,215
10mm	6,630	2,450	6,110	1,970	4,160	1,215
12mm	5,525	2,450	5,135	1,985	3,445	1,210
14mm	4,680	2,420	4,420	1,995	2,925	1,200
16mm	4,095	2,420	3,900	2,000	2,535	1,285
18mm	3,640	2,420	3,445	2,000	2,275	1,200
20mm	3,250	2,400	3,055	1,970	2,015	1,180
25mm	2,600	2,400	2,470	1,990	1,625	1,190
Milling Amount (mm)			ap 1.5D / ae 0.05D aeMax ≦ 1.0mm		ap 1.5D / ae 0.03D aeMax ≦ 0.5mm		ap 1.0D / ae 0.02D aeMax ≦ 0.5mm

Table 003

H700 Seires EHBUS2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	86 ~ 129 m/min		77 ~ 116 m/min		42 ~ 63 m/min	
Radius	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
0.5R	41,600	960	39,000	850	33,150	500
1.0R	40,950	1,900	37,050	1,880	20,150	600
1.5R	27,300	2,080	24,700	1,880	13,650	625
2.0R	20,150	2,050	18,200	1,850	10,335	630
2.5R	16,250	2,060	14,300	1,815	8,255	630
3.0R	13,650	2,080	12,350	1,880	6,890	630
4.0R	10,335	1,550	9,295	1,400	5,135	470
5.0R	8,255	1,250	7,410	1,100	4,095	375
6.0R	6,890	1,050	6,175	950	3,445	315
8.0R	5,135	790	4,745	710	2,535	230
Milling Amount (mm)	ap: 0.02D, Pf: 0.1D 					

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 004

H700 Seires EHCUK4

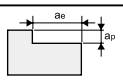
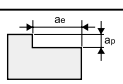
WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
HARDNESS	HRC 40~50		HRC 50~55		HRC 55~60	
Vc	90 ~ 130 m/min		55 ~ 78 m/min		36 ~ 52 m/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
2mm	20,700	5,750	12,420	3,450	8,280	2,310
3mm	13,800	6,050	8,280	3,640	5,520	2,420
4mm	10,350	7,030	6,210	4,220	4,140	2,810
6mm	6,900	6,900	4,140	4,140	2,760	2,760
8mm	5,200	6,850	3,105	4,090	2,070	2,730
10mm	4,150	6,600	2,500	3,970	1,650	2,640
12mm	3,450	6,900	2,070	4,140	1,380	2,760
Milling Amount (mm)	ae / ap R ≦ 1: 0.2 x R / 0.025D R > 1: 0.4mm / 0.025D		ae / ap R ≦ 1: 0.1 x R / 0.025D R > 1: 0.2mm / 0.025D			

Table 005

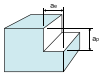
H700 Seires EHCUS4

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	65 M/min		39 M/min		26 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1mm	20,670	2,150	12,350	980	8,281	500
2mm	10,335	2,145	6,175	980	4,134	500
3mm	6,890	2,150	4,160	990	2,756	500
4mm	5,200	2,160	3,120	990	2,067	500
6mm	4,350	2,150	2,600	990	1,750	500
8mm	3,260	2,160	1,950	990	1,310	500
10mm	2,600	2,160	1,560	980	1,050	500
12mm	2,175	2,190	1,300	980	875	500
Milling Amount (mm)	ae / ap R ≦ 2: 0.2 x R / 0.05D R > 2: 0.4mm / 0.05D		ae / ap R ≦ 2: 0.1 x R / 0.05D R > 2: 0.2mm / 0.05D			

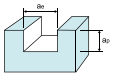
1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 006

H680 Seires EHSSF4, EHSLF4, EHCSF4, EHCLF4

Side Milling 

Work Material	Condition Range	Cutting Depth	Cutting Condition	Diameter (d)							
				Ø1	Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12
Pre-Harden Steels (HRC 35~45) NAK80,CENA1	High Speed	ap=1.5D	RPM	35000	17500	12000	8700	5830	4380	3500	2900
		ae=0.05D	Feed(mm/min)	630	830	1000	1000	1100	1100	1100	1100
	General	ap=1.5D	RPM	25500	12700	8500	6350	4200	3200	2500	2150
		ae=0.07D	Feed(mm/min)	460	510	550	600	750	800	750	700
Hardened Steels (HRC 45~60) SKD61,SKD11,SKH51	High Speed	ap=1.5D	RPM	32000	16000	11000	8000	5300	4000	3200	2750
		ae=0.02D	Feed(mm/min)	600	750	800	850	900	1000	900	850
	General	ap=1.5D	RPM	22000	11200	7400	5600	3750	2800	2200	2000
		ae=0.05D	Feed(mm/min)	360	440	460	500	560	600	580	550

Slotting Milling 

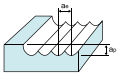
Work Material	Condition Range	Cutting Depth	Cutting Condition	Diameter (d)						
				Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12
Pre-Harden Steels (HRC 35~45) NAK80,CENA1	General	ap=0.5D	RPM	7690	5800	4640	3770	2900	2320	1890
		ae=1D	Feed(mm/min)	460	580	670	610	580	550	520
Hardened Steels (HRC 45~60) SKD61,SKD11,SKH51	General	ap=0.2D	RPM	3990	3000	2430	1950	1500	1200	1020
		ae=1D	Feed(mm/min)	200	240	300	330	300	270	240

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

Table 007

H680 Seires EHBSF2, EHBLF2, EHBUF2



Work Material	Condition Range	Cutting Depth	Cutting Condition	Radius						
				0.5R	1R	2R	3R	4R	5R	6R
Pre-Harden Steels (HRC 35~45) NAK80,CENA1	High Speed	ap=0.05~0.1	RPM	50000	32000	22000	16000	12000	10000	8000
		ae=0.02D	Feed(mm/min)	4000	3000	2850	2800	2400	2000	1600
	General	ap=0.05~0.1	RPM	36000	20000	13000	8500	6400	5000	4200
		ae=0.02D	Feed(mm/min)	1600	1500	1500	1400	1200	1060	920
Hardened Steels (HRC 45~55) SKD61,SKT4	High Speed	ap=0.05~0.1	RPM	50000	32000	20000	13000	10000	8000	6600
		ae=0.02D	Feed(mm/min)	3200	2560	2500	2200	1840	1600	1400
	General	ap=0.05~0.1	RPM	36000	20000	10000	6800	5200	4000	3500
		ae=0.02D	Feed(mm/min)	1280	1280	1280	1160	960	820	730
Hardened Steels (HRC 55~60) SKD11,SKH51	High Speed	ap=0.05~0.1	RPM	50000	32000	16000	11000	8000	6400	5300
		ae=0.15D	Feed(mm/min)	2000	2000	1920	1760	1400	1200	1060
	General	ap=0.05~0.1	RPM	25000	15000	9500	6500	4800	3800	3200
		ae=0.15D	Feed(mm/min)	1000	1000	960	960	840	720	640

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 008

H650 Seires EHSSH2, EHSSH4

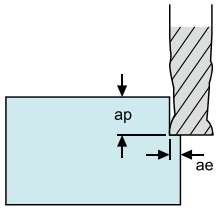
Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	145(m/min)				125 (m/min)				105 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

Table 009

H650 Seires EHSLH4

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	123 (m/min)				106 (m/min)				89 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	13080	1200	3	0.15	11280	1038	3	0.15	9480	871	3	0.15
4mm	9820	1178	4	0.2	8460	1015	4	0.2	7100	852	4	0.2
6mm	6545	1050	6	0.3	5635	900	6	0.3	4740	757	6	0.3
8mm	4905	785	8	0.4	4235	676	8	0.4	3555	568	8	0.4
10mm	3927	785	10	0.5	3385	676	10	0.5	2845	568	10	0.5
12mm	3270	655	12	0.6	2820	564	12	0.6	2370	474	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 010

H650 Seires EHBSH2

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	145 (m/min)				125 (m/min)				105 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	45270	1130	0.14	0.2	39030	975	0.14	0.2	32780	820	0.14	0.2
2R	22636	1358	0.28	0.4	19500	1170	0.28	0.4	16400	984	0.28	0.4
3R	15090	1130	0.42	0.6	13000	975	0.42	0.6	10930	820	0.42	0.6
4R	11320	905	0.56	0.8	9750	780	0.56	0.8	8195	655	0.56	0.8
5R	9055	770	0.7	1	7800	663	0.7	1	6555	557	0.7	1
6R	7545	680	0.84	1.2	6500	585	0.84	1.2	5460	491	0.84	1.2

Table 011

H650 Seires EHBLH2

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	145 (m/min)				125 (m/min)				105 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	36200	904	0.14	0.2	31200	780	0.14	0.2	26200	656	0.14	0.2
2R	18100	1086	0.28	0.4	15600	930	0.28	0.4	13120	787	0.28	0.4
3R	12050	904	0.42	0.6	10400	780	0.42	0.6	8750	656	0.42	0.6
4R	9050	724	0.56	0.8	7800	624	0.56	0.8	6550	524	0.56	0.8
5R	7250	616	0.7	1	6250	530	0.7	1	5250	446	0.7	1
6R	6036	544	0.84	1.2	5200	468	0.84	1.2	4370	393	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

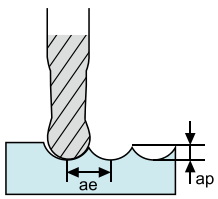


Table 012

H650 Seires EHBUH2

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	145 (m/min)				125 (m/min)				105 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	45270	1130	0.14	0.2	39030	975	0.14	0.2	32780	820	0.14	0.2
2R	22636	1358	0.28	0.4	19500	1170	0.28	0.4	16400	984	0.28	0.4
3R	15090	1130	0.42	0.6	13000	975	0.42	0.6	10930	820	0.42	0.6
4R	11320	905	0.56	0.8	9750	780	0.56	0.8	8195	655	0.56	0.8
5R	9055	770	0.7	1	7800	663	0.7	1	6555	557	0.7	1
6R	7545	680	0.84	1.2	6500	585	0.84	1.2	5460	491	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

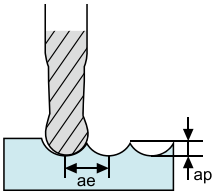
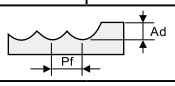


Table 013

H650 Seires EHBRT2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 35~45		HRC 45~55		HRC 55~60	
Vc	260 M/min		195 M/min		130 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	41,600	1,920	31,200	1,440	20,800	960
2.0R	20,800	1,920	15,600	1,440	10,335	955
3.0R	13,650	1,890	10,335	1,430	6,890	955
4.0R	10,335	1,910	7,735	1,430	5,200	960
5.0R	8,255	1,905	6,240	1,440	4,160	960
6.0R	6,890	1,910	5,200	1,440	3,445	955
8.0R	5,200	1,920	3,900	1,440	2,600	960
10.0R	4,160	1,920	3,120	1,440	2,080	960
Milling Amount (mm)	Ad = 0.05D Pf = 0.1D					



1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 014

H650 Seires EHCSH4

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	145 (m/min)				125 (m/min)				105 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

Table 015

H650 Seires EHCLH4

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	123 (m/min)				106 (m/min)				89 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	13080	1200	3	0.15	11280	1038	3	0.15	9480	871	3	0.15
4mm	9820	1178	4	0.2	8460	1015	4	0.2	7100	852	4	0.2
6mm	6545	1050	6	0.3	5635	900	6	0.3	4740	757	6	0.3
8mm	4905	785	8	0.4	4235	676	8	0.4	3555	568	8	0.4
10mm	3927	785	10	0.5	3385	676	10	0.5	2845	568	10	0.5
12mm	3270	655	12	0.6	2820	564	12	0.6	2370	474	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

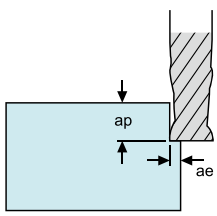


Table 016

H650 Seires EHCUH4

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
Vc	123 (m/min)				106 (m/min)				89 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

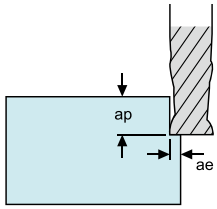


Table 017

H650 Seires EHWSA4, EHWSA6

Working Material	Carbon / Alloy steel (< HRC 30)			Carbon / Alloy steel (HRC 35~45)			Stainless steel			Hardened steel (HRC 40~55)			High temperature alloy		Hardened steel (HRC 55~62)
Vc	150 m/min			135 m/min			120 m/min						80 m/min		
Diameter (d)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)
6mm	0.35	0.24	3.0	0.35	0.24	3.0	0.35	0.24	3.0	0.30	0.24	3.0			
8mm	0.35	0.32	4.8	0.35	0.32	4.8	0.35	0.32	4.8	0.30	0.32	4.8			
10mm	0.40	0.40	6.0	0.40	0.40	6.0	0.40	0.40	6.0	0.35	0.40	6.0			
12mm	0.45	0.48	7.2	0.45	0.48	7.2	0.45	0.48	7.2	0.40	0.48	7.2			

Table 018

H650 Seires EHSRC2

Material		PREHARDENED STEELS NAK80 CENA1			HARDENED STEELS SKD61,SKD11			Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45			HRC 40~55			HRC 55~65			
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.2mm	0.5	56000	270	0.003	44800	180	0.002	15000	10	0.001	0.160
	1	50900	230	0.004	40800	160	0.003	-	-	-	
	1.5	48200	200	0.002	38500	140	0.002	-	-	-	
0.3mm	1.5	50800	360	0.005	42700	260	0.004	14600	13	0.003	0.057
	3	31900	190	0.001	25500	130	0.001	14600	10	0.001	0.004
	5	20400	80	0.001	16300	60	0.001	-	-	-	-
0.4mm	1	48100	470	0.008	38500	320	0.005	14300	17	0.003	0.054
	5	30100	240	0.002	24100	160	0.001	14300	14	0.001	0.003
	10	24600	150	0.001	19700	100	0.001	14300	11	0.001	0.001
0.5mm	3	32200	370	0.008	25700	260	0.006	14000	19	0.004	0.016
	5	27200	290	0.006	21700	200	0.004	14000	17	0.003	0.008
	8	21600	190	0.001	17400	130	0.001	14000	14	0.001	0.002
	10	19600	150	0.001	15600	100	0.001	14000	12	0.001	0.001
	14	16300	70	0.001	13000	50	0.001	-	-	-	-
0.6mm	3	33500	500	0.013	26800	340	0.009	12000	22	0.005	0.114
	6	23000	290	0.005	18400	200	0.003	12000	19	0.002	0.008
	8	20000	230	0.003	16000	160	0.002	12000	17	0.001	0.003
	10	17900	180	0.002	14300	130	0.001	12000	15	0.001	0.002
	12	16400	150	0.001	13100	100	0.001	12000	13	0.001	0.001
	16	13500	70	0.001	10800	50	0.001	-	-	-	-
0.7mm	4	25800	440	0.012	20600	290	0.009	10000	22	0.006	0.047
	6	21200	330	0.007	16900	230	0.005	10000	20	0.003	0.014
	8	18400	260	0.004	14700	190	0.003	10000	18	0.002	0.006
	10	16500	220	0.003	13200	160	0.002	10000	16	0.001	0.003
0.8mm	4	24100	480	0.019	19300	330	0.013	8000	20	0.010	0.080
	8	17200	300	0.006	13800	200	0.004	8000	16	0.003	0.010
	12	14100	200	0.003	11300	140	0.002	8000	12	0.001	0.003
	14	12300	150	0.001	9800	100	0.001	-	-	-	
0.9mm	6	18500	420	0.013	14800	290	0.010	7200	18	0.007	0.038
	8	16100	330	0.008	12900	230	0.006	7200	16	0.004	0.016
	10	14500	270	0.005	11600	190	0.004	7200	14	0.002	0.008

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

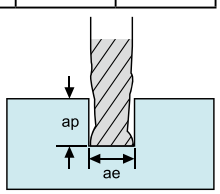
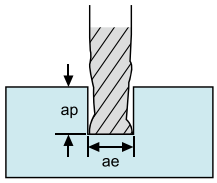


Table 019

H650 Seires EHSRC2

Material		PREHARDENED STEELS NAK80 CENA1			HARDENED STEELS SKD61,SKD11			Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45			HRC 40~55			HRC 55~65			
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1.0mm	5	19600	510	0.022	15700	360	0.016	6500	15	0.009	0.013
	10	13800	300	0.007	11000	210	0.005	6500	12	0.003	0.013
	12	12600	250	0.005	10100	170	0.003	6500	11	0.002	0.007
	14	11700	210	0.003	9400	150	0.002	650	10	0.001	0.005
	16	11000	180	0.003	8800	130	0.002	-	-	-	-
	20	9800	130	0.002	7900	90	0.001	-	-	-	-
1.2mm	6	16100	490	0.026	12800	340	0.019	9600	22	0.011	0.120
	12	11400	290	0.008	9100	200	0.005	-	-	-	-
	16	9800	220	0.004	7900	150	0.003	-	-	-	-
	20	8800	170	0.003	7000	120	0.002	-	-	-	-
1.4mm	8	12900	440	0.025	10300	310	0.018	9600	18	0.010	0.094
	10	11500	380	0.017	9200	260	0.012	-	-	-	0.048
	16	9100	250	0.007	7300	180	0.005	-	-	-	0.012
	20	7800	180	0.004	6200	120	0.003	-	-	-	0.005
1.5mm	8	12500	460	0.029	10000	320	0.020	9600	25	0.012	0.124
	12	10200	340	0.016	8200	240	0.011	-	-	-	-
	14	9500	300	0.012	7600	210	0.008	-	-	-	-
	16	8900	270	0.009	7100	190	0.007	-	-	-	-
	20	7900	220	0.006	6300	150	0.004	-	-	-	-
1.6mm	10	10800	410	0.025	8600	280	0.018	9600	15	0.010	0.082
	14	9100	320	0.014	7300	220	0.010	-	-	-	-
	18	8000	260	0.009	6400	180	0.006	-	-	-	-
2.0mm	6	12500	650	0.045	10000	450	0.032	9600	211	0.019	0.926
	10	9700	470	0.031	7800	330	0.022	9600	45	0.013	0.200
	12	8900	420	0.026	7100	290	0.019	9600	56	0.011	0.116
	14	8200	370	0.022	6600	260	0.016	9600	16	0.009	0.073
	20	6900	280	0.013	5500	190	0.009	-	-	-	-
	25	6200	230	0.008	4900	160	0.006	-	-	-	-
	30	5600	180	0.005	4500	130	0.004	-	-	-	-
2.5mm	8	9600	670	0.054	7700	460	0.039	9600	227	0.023	0.954
	12	7900	520	0.042	6300	360	0.030	9600	67	0.018	0.283
	16	6800	430	0.031	5500	290	0.022	9600	28	0.013	0.119
	20	6100	360	0.023	4900	250	0.017	9600	14	0.010	0.061
	25	5500	300	0.015	4400	210	0.011	-	-	-	-
	30	5000	250	0.010	4000	170	0.007	-	-	-	-
	35	4800	190	0.007	3800	140	0.005	-	-	-	-

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



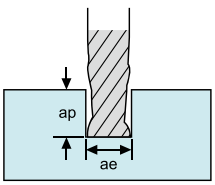
Recommended Cutting Conditions

Table 020

H650 Seires EHSRC2

Material		**PREHARDENED STEELS** NAK80 CENA1			**HARDENED STEELS** SKD61,SKD11			**Hardened Steel** SKD11,SKH51			
Hardness		HRC 35~45			HRC 40~55			HRC 55~65			
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3.0mm	6	8000	700	0.072	6400	480	0.052	8000	435	0.031	1.978
	10	7200	620	0.064	5800	430	0.046	8000	222	0.027	1.013
	16	5900	470	0.045	4700	320	0.032	8000	54	0.019	0.247
	20	5300	400	0.035	4300	280	0.025	8000	27	0.015	0.127
	25	4800	340	0.025	3900	230	0.018	8000	14	0.010	0.065
	30	4500	290	0.018	3600	200	0.013	8000	10	0.007	0.038
	35	4200	250	0.013	3300	170	0.009	-	-	-	-
4.0mm	8	6800	770	0.093	5300	500	0.070	6000	450	0.050	1.990
	12	5100	600	0.078	4100	410	0.056	6000	388	0.033	1.852
	16	4400	510	0.065	3600	350	0.046	6000	164	0.027	0.781
	20	4000	440	0.054	3200	300	0.038	6000	84	0.022	0.400
	25	3600	380	0.042	2900	260	0.030	6000	43	0.018	0.205
	30	3300	330	0.033	2600	230	0.024	6000	24	0.014	0.119
	35	3100	290	0.026	2500	200	0.019	6000	15	0.011	0.075
5.0mm	16	3500	520	0.089	2800	360	0.064	4800	457	0.038	1.907
	20	3100	440	0.085	2500	310	0.061	4800	234	0.036	0.977
	25	2800	390	0.077	2200	270	0.055	4800	120	0.033	0.500
	30	2500	340	0.066	2000	230	0.047	4800	69	0.028	0.289
	35	2300	300	0.054	1900	210	0.038	4800	43	0.022	0.182
6.0mm	20	2600	470	0.088	2100	330	0.063	4000	607	0.037	2.025
	30	2000	340	0.077	1600	240	0.055	4000	180	0.033	0.600
8.0mm	20	2300	450	0.130	1700	330	0.090	3400	580	0.050	1.600
	40	1500	250	0.800	1100	160	0.060	3400	84	0.035	0.200
10.0mm	25	2100	430	0.130	1500	310	0.080	3200	540	0.050	1.760
	45	1300	220	0.700	900	150	0.050	3200	76	0.030	0.240
12.0mm	30	2000	400	0.140	1400	280	0.080	3000	540	0.050	1.840
	50	1500	200	0.800	800	140	0.050	3000	72	0.030	0.280

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 021

H650 Seires EHSRC4

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
Hardness	HRC 35~45		HRC 40~55		HRC 55~65	
Dia	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	38000	1050	25500	710	20500	430
2mm	26000	1250	17500	840	14500	520
3mm	17300	1250	11500	840	9500	520
4mm	13200	1300	8800	880	7200	540
5mm	12500	1500	8300	1000	6400	580
6mm	10350	1400	6900	950	5300	560
8mm	7800	1350	5200	900	4000	520
10mm	6450	1260	4100	840	3200	480
12mm	5250	1260	3500	840	2650	480

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

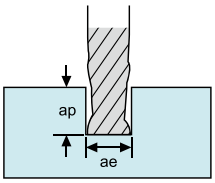


Table 022

H650 Seires EHBRC2

Material		PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45				HRC 40~55				HRC 55~65			
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
R0.15	1	45000	552	0.010	0.010	38000	420	0.090	0.010	38000	348	0.007	0.009
	3	40800	360	0.006	0.007	33600	264	0.005	0.005	33600	216	0.004	0.005
R0.2	1	54000	768	0.016	0.022	39600	516	0.013	0.022	39600	432	0.011	0.021
	3	44400	480	0.010	0.010	32400	312	0.009	0.010	32400	264	0.008	0.010
	5	30000	372	0.008	0.010	26400	288	0.006	0.010	26400	228	0.004	0.005
R0.25	5	34800	552	0.008	0.008	31200	444	0.007	0.010	31200	216	0.006	0.009
	10	28800	456	0.007	0.010	28800	372	0.005	0.010	27600	216	0.005	0.009
R0.3	1	39600	960	0.022	0.091	27600	600	0.019	0.091	26400	516	0.014	0.091
	5	28800	504	0.012	0.043	26400	396	0.008	0.042	26400	336	0.007	0.040
	10	24000	360	0.005	0.020	22800	312	0.004	0.020	22800	240	0.003	0.018
R0.4	2	34800	816	0.045	0.100	27600	552	0.038	0.100	26400	456	0.030	0.010
	6	28800	636	0.028	0.068	21600	420	0.020	0.068	21600	348	0.015	0.065
	10	2040	468	0.020	0.050	19200	408	0.015	0.050	16800	336	0.010	0.050
R0.5	5	33600	900	0.052	0.220	21600	540	0.040	0.220	18000	540	0.008	0.014
	10	16320	600	0.020	0.056	15000	456	0.014	0.056	13680	312	0.008	0.050
	16	13680	480	0.016	0.056	12360	384	0.012	0.056	11520	252	0.005	0.030
R0.75	10	14760	782	0.080	0.170	9720	480	0.062	0.170	9720	456	0.050	0.160
	18	12120	504	0.022	0.110	9600	432	0.020	0.110	9600	408	0.012	0.110
	30	9840	456	0.012	0.050	9480	420	0.010	0.050	9480	396	0.010	0.050
R1.0	4	21000	1392	0.180	0.350	14640	1080	0.140	0.350	14640	900	0.120	0.350
	10	21000	1224	0.140	0.230	14640	972	0.110	0.230	14640	792	0.090	0.230
	20	15960	600	0.060	0.110	12720	600	0.055	0.110	12720	492	0.035	0.110
R1.5	6	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.320
	10	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.300
	20	12360	1476	0.145	0.320	8520	1128	0.120	0.310	5760	660	0.080	0.300
	30	9360	816	0.100	0.150	8520	816	0.080	0.150	5760	384	0.070	0.300
R2.0	8	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	20	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	30	8880	1380	0.200	0.320	6600	1056	0.150	0.300	6600	816	0.130	0.300
	35	7200	1056	0.132	0.320	6600	1056	0.100	0.300	6600	816	0.090	0.300
R2.5	15	8400	1500	0.300	0.700	6000	1140	0.220	0.700	6000	900	0.200	0.650
	25	8400	1380	0.300	0.550	6000	1080	0.220	0.550	6000	816	0.200	0.500
R3.0	15	8160	1764	0.420	0.800	5760	1320	0.300	0.800	4440	864	0.300	0.800
R4.0	25	7200	1176	0.350	0.750	4920	912	0.180	0.600	4560	732	0.200	0.630
R5.0	30	5880	1128	0.370	0.900	4800	852	0.200	0.670	4200	708	0.200	0.650
R6.0	30	4800	984	0.420	0.900	4320	828	0.250	0.600	3600	600	0.250	0.600

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

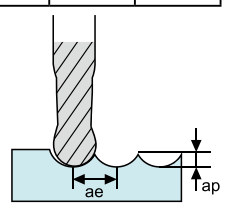
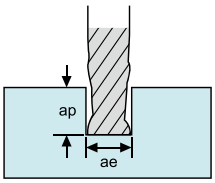


Table 023

H650 Seires EHCBC2, EHCRC2

Material		PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45				HRC 40~55				HRC 55~65			
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1.0mm	4	13800	805	0.029	0.264	11730	655	0.034	0.264	8280	78	0.017	0.264
	10	8625	311	0.011	0.123	7475	264	0.013	0.123	5290	31	0.006	0.123
1.2mm	6	9200	575	0.018	0.088	8165	483	0.215	0.088	6095	59	0.011	0.088
	12	6670	368	0.007	0.070	5980	299	0.008	0.070	4370	37	0.004	0.070
1.5mm	4	12880	1070	0.044	0.440	11730	920	0.059	0.440	8970	121	0.032	0.440
	10	8280	736	0.031	0.282	7590	633	0.041	0.282	5865	83	0.022	0.282
	16	5865	403	0.005	0.106	5405	345	0.006	0.106	4141	45	0.003	0.106
2.0mm	6	12535	1001	0.042	0.792	11730	909	0.095	0.792	9430	130	0.035	0.792
	12	9200	805	0.030	0.440	8280	725	0.043	0.440	6785	105	0.025	0.440
	20	6900	633	0.017	0.194	6440	564	0.023	0.194	5175	82	0.014	0.194
	25	5865	541	0.005	0.132	5405	495	0.005	0.132	4255	68	0.002	0.132
2.5mm	10	10350	1001	0.051	0.528	9775	943	0.073	0.528	8165	151	0.047	0.528
	25	6210	437	0.011	0.176	5865	414	0.016	0.176	4830	65	0.010	0.176
3.0mm	10	10350	1127	0.103	0.616	9775	874	0.103	0.655	8740	196	0.073	0.655
	20	8165	863	0.071	0.567	7705	667	0.071	0.567	6900	147	0.043	0.567
	30	6900	702	0.049	0.371	6325	541	0.049	0.371	5865	115	0.028	0.362
4.0mm	13	8740	1058	0.081	1.124	7360	920	0.117	1.124	6210	210	0.083	1.124
	20	6785	978	0.053	0.880	5750	840	0.078	0.880	4830	194	0.057	0.880
	30	5750	748	0.028	0.671	4715	656	0.041	0.671	4025	149	0.030	0.708
5.0mm	16	7705	1702	0.106	1.346	5520	1139	0.150	1.346	4600	342	0.110	1.346
	30	5290	817	0.053	1.035	3795	541	0.075	1.035	3220	164	0.055	1.035
6.0mm	20	5980	1219	0.476	1.356	3565	1035	0.186	1.356	3105	393	0.145	1.356
	30	4600	909	0.410	1.304	2645	759	0.164	1.304	2300	304	0.123	1.304
8.0mm	22	5520	1081	0.419	1.518	3220	909	0.164	1.518	2760	346	0.128	1.518
10.0mm	24	4485	920	0.356	1.645	2760	771	0.139	1.645	2300	294	0.108	1.645
12.0mm	26	3795	771	0.299	2.024	2300	644	0.117	2.024	1955	247	0.091	2.024

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 024

H650 Seires EHCBC4, EHCRC4

Material		PREHARDENED STEELS NAK80 CENA1				Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45				HRC 55~65			
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
2.0mm	6	12650	1265	0.063	0.633	11730	1173	0.059	0.713
	12	8970	1012	0.045	0.396	8280	943	0.043	0.396
2.5mm	10	10580	1380	0.065	0.528	9775	1150	0.065	0.528
	20	7590	1150	0.047	0.640	7360	655	0.030	0.220
3.0mm	10	11040	2070	0.094	0.684	10235	2070	0.059	0.684
	20	8165	1495	0.057	0.567	7705	1495	0.035	0.567
4.0mm	13	9085	1576	0.105	1.150	7590	1530	0.082	1.150
	20	7130	1380	0.069	0.920	59801	1288	0.054	0.920
	30	6325	1104	0.043	0.745	5290	1058	0.033	0.745
6.0mm	20	5635	1691	0.176	2.305	3335	978	0.176	1.281
	30	2875	782	0.098	1.320	1610	460	0.098	0.733
8.0mm	22	4600	1840	0.212	2.921	2760	782	0.212	1.518
10.0mm	24	3680	2013	0.242	3.140	2185	621	0.253	1.645
12.0mm	26	2875	2070	0.265	3.105	1725	495	0.276	1.714

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

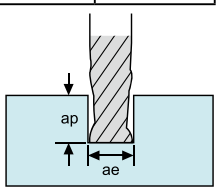


Table 025

H600 Seires EHSSC2 *(H600 Series, vc, rpm and feed increase 20%)*

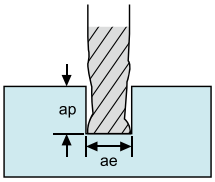
G550 Seires EPSSC2

G450 Seires EPSSA2

Material	**CARBON STEEL / ALLOY STEEL**				**ALLOY STEEL / TOOL STEEL** SCM, SKT, SKD				**PREHARDENED STEEL** NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120(m/min)				95(m/min)				79(m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	380	1.5	3	10000	300	0.9	3	8386	251	0.15	3
4mm	9550	382	2	4	7560	302	1.2	4	6290	251	0.2	4
6mm	6370	445	3	6	5040	352	1.8	6	4200	294	0.3	6
8mm	4770	333	4	8	3780	264	2.4	8	3140	220	0.4	8
10mm	3820	230	5	10	3020	181	3	10	2515	150	0.5	10
12mm	3180	190	6	12	2520	151	3.6	12	2100	126	0.6	12

Material	**HARDENED STEEL** SKD61, SKD11				**STAINLESS STEEL** SUS304 316				**CAST IRON** FC / FCD			
Hardness	HRC 40~55)											
Vc	48(m/min)				79(m/min)				120(m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	152	0.15	3	8386	251	0.15	3	12700	380	1.5	3
4mm	3820	152	0.2	4	6290	251	0.2	4	9550	382	2	4
6mm	2548	178	0.3	6	4200	294	0.3	6	6370	445	3	6
8mm	1910	133	0.4	8	3140	220	0.4	8	4770	333	4	8
10mm	1528	92	0.5	10	2515	150	0.5	10	3820	230	5	10
12mm	1274	76	0.6	12	2100	126	0.6	12	3180	190	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 026

H600 Seires EHSSC4, EHSHC4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPSSC3, EPSSC4, EPSSA4

G450 Seires EPSSA4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

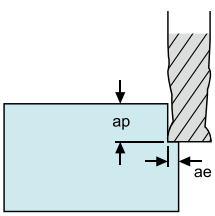


Table 027

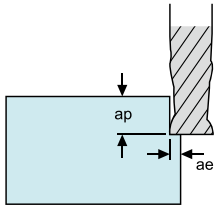
H600 Seires EHSSD4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPSSH4, EPSCH6

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	762	4.5	0.15	10000	600	4.5	0.15	8386	503	4.5	0.15
4mm	9550	764	6	0.2	7560	604	6	0.2	6290	503	6	0.2
6mm	6370	890	9	0.3	5040	705	9	0.3	4200	588	9	0.3
8mm	4770	668	12	0.4	3780	529	12	0.4	3140	440	12	0.4
10mm	3820	458	15	0.5	3020	362	15	0.5	2515	301	15	0.5
12mm	3180	380	18	0.6	2520	302	18	0.6	2100	252	18	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	305	4.5	0.15	7430	743	4.5	0.15	12700	503	4.5	0.15
4mm	3820	305	6	0.2	5570	577	6	0.2	9550	503	6	0.2
6mm	2548	356	9	0.3	3720	595	9	0.3	6370	588	9	0.3
8mm	1910	267	12	0.4	2780	556	12	0.4	4770	440	12	0.4
10mm	1528	183	15	0.5	2230	535	15	0.5	3820	301	15	0.5
12mm	1274	152	18	0.6	1860	484	18	0.6	3180	252	18	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 028

H600 Seires EHSCC4, EHSCH4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPSCC4

Material	**CARBON STEEL / ALLOY STEEL**				**ALLOY STEEL / TOOL STEEL** SCM, SKT, SKD				**PREHARDENED STEEL** NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	96 (m/min)				76 (m/min)				63 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	10160	610	3	0.15	8000	480	3	0.15	6708	402	3	0.15
4mm	7640	610	4	0.2	6048	483	4	0.2	5032	402	4	0.2
6mm	5096	712	6	0.3	4032	564	6	0.3	3360	470	6	0.3
8mm	3816	534	8	0.4	3024	423	8	0.4	2512	352	8	0.4
10mm	3056	366	10	0.5	2416	290	10	0.5	2012	240	10	0.5
12mm	2544	304	12	0.6	2016	242	12	0.6	1680	202	12	0.6

Material	**HARDENED STEEL** SKD61, SKD11				**STAINLESS STEEL** SUS304 316				**CAST IRON** FC / FCD			
Hardness	HRC 40~55)											
Vc	38 (m/min)				63 (m/min)				96 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	4076	244	3	0.15	6708	402	3	0.15	10160	610	3	0.15
4mm	3056	244	4	0.2	5032	402	4	0.2	7640	610	4	0.2
6mm	2038	285	6	0.3	3360	470	6	0.3	5096	712	6	0.3
8mm	1528	214	8	0.4	2512	352	8	0.4	3816	534	8	0.4
10mm	1222	146	10	0.5	2012	240	10	0.5	3056	366	10	0.5
12mm	1016	122	12	0.6	1680	202	12	0.6	2544	304	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

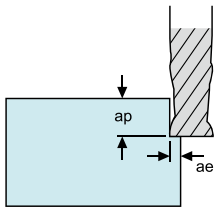


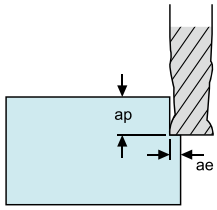
Table 029

G550 Seires EPSSH4, EPSCH6

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	96 (m/min)				76 (m/min)				63 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	10160	610	4.5	0.15	8000	480	4.5	0.15	67010	402	4.5	0.15
4mm	7640	611	6	0.2	6048	483	6	0.2	5032	402	6	0.2
6mm	5096	712	9	0.3	4032	564	9	0.3	3360	470	9	0.3
8mm	3816	534	12	0.4	3024	423	12	0.4	2512	352	12	0.4
10mm	3056	366	15	0.5	2416	290	15	0.5	2012	241	15	0.5
12mm	2544	304	18	0.6	2016	242	18	0.6	1680	202	18	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	38 (m/min)				63 (m/min)				96 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	4076	244	4.5	0.15	5944	594	4.5	0.15	10160	402	4.5	0.15
4mm	3056	244	6	0.2	4456	462	6	0.2	7640	402	6	0.2
6mm	2040	285	9	0.3	2976	476	9	0.3	5096	470	9	0.3
8mm	1528	214	12	0.4	2224	445	12	0.4	3816	352	12	0.4
10mm	1220	146	15	0.5	1784	428	15	0.5	3056	241	15	0.5
12mm	1020	122	18	0.6	1488	387	18	0.6	2544	202	18	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 030

G550 Seires EPSLC2

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	102 (m/min)				80 (m/min)				67 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	10800	323	1.5	3	8500	255	0.9	3	7128	213	0.15	3
4mm	8118	324	2	4	4626	256	1.2	4	5346	213	0.2	4
6mm	5414	378	3	6	4284	300	1.8	6	3570	250	0.3	6
8mm	4054	283	4	8	3210	224	2.4	8	2670	187	0.4	8
10mm	3248	195	5	10	2568	154	3	10	2138	127	0.5	10
12mm	2700	160	6	12	2142	128	3.6	12	1785	107	0.6	12

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	40 (m/min)				67 (m/min)				102 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	4330	130	0.15	3	7128	213	0.15	3	10800	323	1.5	3
4mm	3247	130	0.2	4	5346	213	0.2	4	8118	324	2	4
6mm	2165	151	0.3	6	3570	250	0.3	6	5414	378	3	6
8mm	1624	113	0.4	8	2670	187	0.4	8	4054	283	4	8
10mm	1298	78	0.5	10	2138	127	0.5	10	3248	195	5	10
12mm	1082	65	0.6	12	1785	107	0.6	12	2700	160	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

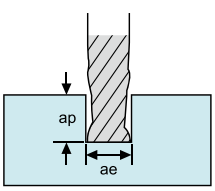


Table 031

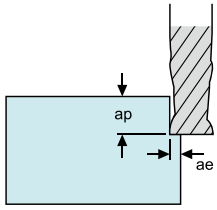
H600 Seires EHSLC4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPSLC4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	102 (m/min)				80 (m/min)				67 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	10800	647	3	0.15	8500	510	3	0.15	7128	427	3	0.15
4mm	8118	649	4	0.2	4626	513	4	0.2	5346	427	4	0.2
6mm	5414	756	6	0.3	4284	600	6	0.3	3570	500	6	0.3
8mm	4054	568	8	0.4	3210	450	8	0.4	2670	340	8	0.4
10mm	3248	389	10	0.5	2568	307	10	0.5	2138	255	10	0.5
12mm	2700	323	12	0.6	2142	256	12	0.6	1785	214	12	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	40 (m/min)				67 (m/min)				102 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	4330	260	3	0.15	7128	427	3	0.15	10800	647	3	0.15
4mm	3247	260	4	0.2	5346	427	4	0.2	8118	649	4	0.2
6mm	2165	302	6	0.3	3570	500	6	0.3	5414	756	6	0.3
8mm	1624	226	8	0.4	2670	340	8	0.4	4054	568	8	0.4
10mm	1298	155	10	0.5	2138	255	10	0.5	3248	389	10	0.5
12mm	1082	129	12	0.6	1785	214	12	0.6	2700	323	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 032

G550 Seires EPSRR4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB 180~250				HRC 25~35				HRC 35~45			
Vc	68 (m/min)				54 (m/min)				45 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
6mm	3600	430	6	0.6	2880	295	6	0.6	2340	200	6	0.6
8mm	2700	430	8	0.8	2160	295	8	0.8	1800	200	8	0.8
10mm	2160	430	10	1	1710	295	10	1	1440	200	10	1
12mm	1800	430	12	1.2	1440	295	12	1.2	1200	200	12	1.2

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55											
Vc	27 (m/min)				54 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
6mm	1440	85	6	0.3	2880	295	6	0.6	4320	520	6	0.6
8mm	1080	85	8	0.4	2160	295	8	0.8	3240	520	8	0.8
10mm	860	85	10	0.5	1710	295	10	1	2520	520	10	1
12mm	720	85	12	0.6	1440	295	12	1.2	2160	520	12	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

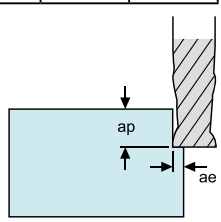


Table 033

G550 Seires EPSHC2, EPSHC4

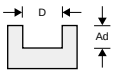
Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	Slot milling	1×d	≤ 0.5×d	50 ~ 90	0.007	0.013	0.018	0.024	0.030	0.036
	Side milling	≤ 0.3×d	≤ 0.3×d	55 ~ 100	0.007	0.013	0.018	0.024	0.030	0.036
	Profile milling	≤ 0.3×d	≤ 0.1×d	80 ~ 135	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	Slot milling	1×d	≤ 0.5×d	40 ~ 70	0.006	0.012	0.017	0.022	0.028	0.033
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 80	0.006	0.012	0.017	0.022	0.028	0.033
	Profile milling	≤ 0.3×d	≤ 0.1×d	55 ~ 100	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	Slot milling	1×d	≤ 0.5×d	30 ~ 40	0.006	0.011	0.015	0.020	0.025	0.030
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 60	0.006	0.011	0.015	0.020	0.025	0.030
	Profile milling	≤ 0.3×d	≤ 0.1×d	50 ~ 70	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	Slot milling	1×d	≤ 0.5×d	20 ~ 40	0.005	0.010	0.014	0.018	0.023	0.027
	Side milling	≤ 0.3×d	≤ 0.3×d	30 ~ 55	0.005	0.010	0.014	0.018	0.023	0.027
	Profile milling	≤ 0.3×d	≤ 0.1×d	40 ~ 70	0.005	0.010	0.014	0.018	0.023	0.027

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

Table 034

G550 Seires EPSST2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760	240
2MM	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3MM	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4MM	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5MM	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6MM	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8MM	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10MM	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
Milling Amount (mm)					Ad = 0.1D (D < 3, Ad ≦ 0.05D)				Ad = 0.5D (D < 3, Ad ≦ 0.25D)			

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

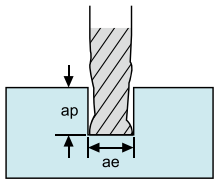


Table 035

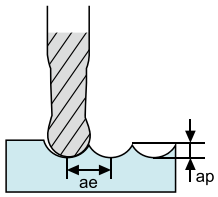
H600 Seires EHBSC2 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPBSC2

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	37470	936	0.14	0.2	29660	740	0.14	0.2	24660	616	0.14	0.2
2R	18730	1120	0.28	0.4	14830	890	0.28	0.4	12330	740	0.28	0.4
3R	12490	936	0.42	0.6	9890	740	0.42	0.6	8220	616	0.42	0.6
4R	9366	750	0.56	0.8	7415	593	0.56	0.8	6170	494	0.56	0.8
5R	7490	636	0.7	1	5930	504	0.7	1	4930	420	0.7	1
6R	6244	560	0.84	1.2	4940	444	0.84	1.2	4110	370	0.84	1.2

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	14990	374	0.14	0.2	24660	616	0.14	0.2	37470	936	0.14	0.2
2R	7490	450	0.28	0.4	12330	740	0.28	0.4	18730	1120	0.28	0.4
3R	4995	374	0.42	0.6	8220	616	0.42	0.6	12490	936	0.42	0.6
4R	3750	300	0.56	0.8	6170	494	0.56	0.8	9366	750	0.56	0.8
5R	3000	255	0.7	1	4930	420	0.7	1	7490	636	0.7	1
6R	2500	225	0.84	1.2	4110	370	0.84	1.2	6244	560	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 036

G550 Seires EPBSC4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	37470	936	0.14	0.2	29660	740	0.14	0.2	24660	616	0.14	0.2
2R	18730	1120	0.28	0.4	14830	890	0.28	0.4	12330	740	0.28	0.4
3R	12490	936	0.42	0.6	9890	740	0.42	0.6	8220	616	0.42	0.6
4R	9366	750	0.56	0.8	7415	593	0.56	0.8	6170	494	0.56	0.8
5R	7490	636	0.7	1	5930	504	0.7	1	4930	420	0.7	1
6R	6244	560	0.84	1.2	4940	444	0.84	1.2	4110	370	0.84	1.2

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	14990	374	0.14	0.2	24660	616	0.14	0.2	37470	936	0.14	0.2
2R	7490	450	0.28	0.4	12330	740	0.28	0.4	18730	1120	0.28	0.4
3R	4995	374	0.42	0.6	8220	616	0.42	0.6	12490	936	0.42	0.6
4R	3750	300	0.56	0.8	6170	494	0.56	0.8	9366	750	0.56	0.8
5R	3000	255	0.7	1	4930	420	0.7	1	7490	636	0.7	1
6R	2500	225	0.84	1.2	4110	370	0.84	1.2	6244	560	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

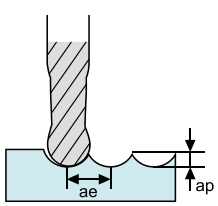


Table 037

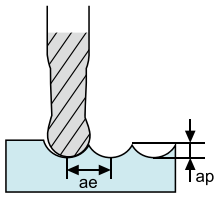
H600 Seires EHBLC2 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPBLC2

Material	**CARBON STEEL / ALLOY STEEL**				**ALLOY STEEL / TOOL STEEL** SCM, SKT, SKD				**PREHARDENED STEEL** NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	31850	796	0.14	0.2	25210	629	0.14	0.2	20960	524	0.14	0.2
2R	15920	952	0.28	0.4	12606	757	0.28	0.4	10480	629	0.28	0.4
3R	10620	796	0.42	0.6	8400	629	0.42	0.6	6990	524	0.42	0.6
4R	7960	638	0.56	0.8	6300	504	0.56	0.8	5244.5	420	0.56	0.8
5R	6370	540	0.7	1	5040	428	0.7	1	4190	357	0.7	1
6R	5308	476	0.84	1.2	4200	377	0.84	1.2	3495	315	0.84	1.2

Material	**HARDENED STEEL** SKD61, SKD11				**STAINLESS STEEL** SUS304 316				**CAST IRON** FC / FCD			
Hardness	HRC 40~55)				HRC25~35				HRC35~45			
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	12740	318	0.14	0.2	20960	524	0.14	0.2	31850	796	0.14	0.2
2R	6370	383	0.28	0.4	10480	629	0.28	0.4	15920	952	0.28	0.4
3R	4245.8	318	0.42	0.6	6990	524	0.42	0.6	10620	796	0.42	0.6
4R	3187.5	255	0.56	0.8	5244.5	420	0.56	0.8	7960	638	0.56	0.8
5R	2550	217	0.7	1	4190	357	0.7	1	6370	540	0.7	1
6R	2125	191	0.84	1.2	3495	315	0.84	1.2	5308	476	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 038

G550 Seires EPBLC4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	31850	796	0.14	0.2	25210	629	0.14	0.2	20960	524	0.14	0.2
2R	15920	952	0.28	0.4	12606	757	0.28	0.4	10480	629	0.28	0.4
3R	10620	796	0.42	0.6	8400	629	0.42	0.6	6990	524	0.42	0.6
4R	7960	638	0.56	0.8	6300	504	0.56	0.8	5245	420	0.56	0.8
5R	6370	540	0.7	1	5040	428	0.7	1	4190	357	0.7	1
6R	5308	476	0.84	1.2	4200	377	0.84	1.2	3495	315	0.84	1.2

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)				HRC25~35				HRC35~45			
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Radius	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1R	12740	318	0.14	0.2	20960	524	0.14	0.2	31850	796	0.14	0.2
2R	6370	383	0.28	0.4	10480	629	0.28	0.4	15920	952	0.28	0.4
3R	4246	318	0.42	0.6	6990	524	0.42	0.6	10620	796	0.42	0.6
4R	3188	255	0.56	0.8	5245	420	0.56	0.8	7960	638	0.56	0.8
5R	2550	217	0.7	1	4190	357	0.7	1	6370	540	0.7	1
6R	2125	191	0.84	1.2	3495	315	0.84	1.2	5308	476	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

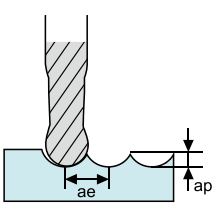


Table 039

G550 Seires EPBHC2

Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	Slot milling	1×d	≤ 0.5×d	50 ~ 90	0.007	0.013	0.018	0.024	0.030	0.036
	Side milling	≤ 0.3×d	≤ 0.3×d	55 ~ 100	0.007	0.013	0.018	0.024	0.030	0.036
	Profile milling	≤ 0.3×d	≤ 0.1×d	80 ~ 135	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	Slot milling	1×d	≤ 0.5×d	40 ~ 70	0.006	0.012	0.017	0.022	0.028	0.033
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 80	0.006	0.012	0.017	0.022	0.028	0.033
	Profile milling	≤ 0.3×d	≤ 0.1×d	55 ~ 100	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	Slot milling	1×d	≤ 0.5×d	30 ~ 40	0.006	0.011	0.015	0.020	0.025	0.030
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 60	0.006	0.011	0.015	0.020	0.025	0.030
	Profile milling	≤ 0.3×d	≤ 0.1×d	50 ~ 70	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	Slot milling	1×d	≤ 0.5×d	20 ~ 40	0.005	0.010	0.014	0.018	0.023	0.027
	Side milling	≤ 0.3×d	≤ 0.3×d	30 ~ 55	0.005	0.010	0.014	0.018	0.023	0.027
	Profile milling	≤ 0.3×d	≤ 0.1×d	40 ~ 70	0.005	0.010	0.014	0.018	0.023	0.027

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

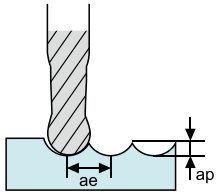
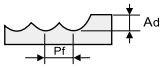


Table 040

G550 Seires EPBST2, EPBRT2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	94 M/min		71 M/min		34 M/min		38 M/min		71 M/min		94 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
Milling Amount (mm)	Ad = 0.05D Pf = 0.1D											



Recommended Cutting Conditions

Table 041

G550 Seires EPCSC2

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	380	1.5	3	10000	300	0.9	3	8386	251	0.15	3
4mm	9550	382	2	4	7560	302	1.2	4	6290	251	0.2	4
6mm	6370	445	3	6	5040	352	1.8	6	4200	294	0.3	6
8mm	4770	333	4	8	3780	264	2.4	8	3140	220	0.4	8
10mm	3820	230	5	10	3020	181	3	10	2515	150	0.5	10
12mm	3180	190	6	12	2520	151	3.6	12	2100	126	0.6	12

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	152	0.15	3	8386	251	0.15	3	12700	380	1.5	3
4mm	3820	152	0.2	4	6290	251	0.2	4	9550	382	2	4
6mm	2548	178	0.3	6	4200	294	0.3	6	6370	445	3	6
8mm	1910	133	0.4	8	3140	220	0.4	8	4770	333	4	8
10mm	1528	92	0.5	10	2515	150	0.5	10	3820	230	5	10
12mm	1274	76	0.6	12	2100	126	0.6	12	3180	190	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

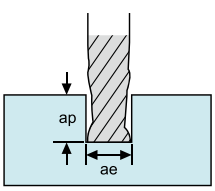


Table 042

H600 Seires EHCSC4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPCSC4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

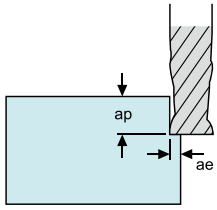


Table 043

G550 Seires EPCSH4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	120 (m/min)				95 (m/min)				79 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	48 (m/min)				79 (m/min)				120 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

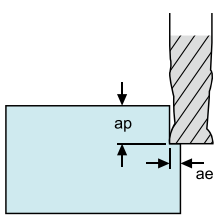


Table 044

H600 Seires EHCLC4 *(H600 Series, vc, rpm and feed increase 20%)*

G550 Seires EPCLC4

Material	CARBON STEEL / ALLOY STEEL				ALLOY STEEL / TOOL STEEL SCM, SKT, SKD				PREHARDENED STEEL NAK80 CENA1			
Hardness	HB180~250				HRC25~35				HRC35~45			
Vc	102 (m/min)				80 (m/min)				67 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	10800	647	3	0.15	8500	510	3	0.15	7128	427	3	0.15
4mm	8118	649	4	0.2	4626	513	4	0.2	5346	427	4	0.2
6mm	5414	756	6	0.3	4284	600	6	0.3	3570	500	6	0.3
8mm	4054	568	8	0.4	3210	450	8	0.4	2670	340	8	0.4
10mm	3248	389	10	0.5	2568	307	10	0.5	2138	255	10	0.5
12mm	2700	323	12	0.6	2142	256	12	0.6	1785	214	12	0.6

Material	HARDENED STEEL SKD61, SKD11				STAINLESS STEEL SUS304 316				CAST IRON FC / FCD			
Hardness	HRC 40~55)											
Vc	40 (m/min)				67 (m/min)				102 (m/min)			
Dia	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
3mm	4330	260	3	0.15	7128	427	3	0.15	10800	647	3	0.15
4mm	3247	260	4	0.2	5346	427	4	0.2	8118	649	4	0.2
6mm	2165	302	6	0.3	3570	500	6	0.3	5414	756	6	0.3
8mm	1624	226	8	0.4	2670	340	8	0.4	4054	568	8	0.4
10mm	1298	155	10	0.5	2138	255	10	0.5	3248	389	10	0.5
12mm	1082	129	12	0.6	1785	214	12	0.6	2700	323	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

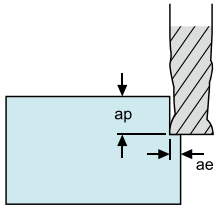


Table 045

G550 Seires EPCHC2, EPCHC4

Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	Slot milling	1×d	≤ 0.5×d	50 ~ 90	0.007	0.013	0.018	0.024	0.030	0.036
	Side milling	≤ 0.3×d	≤ 0.3×d	55 ~ 100	0.007	0.013	0.018	0.024	0.030	0.036
	Profile milling	≤ 0.3×d	≤ 0.1×d	80 ~ 135	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	Slot milling	1×d	≤ 0.5×d	40 ~ 70	0.006	0.012	0.017	0.022	0.028	0.033
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 80	0.006	0.012	0.017	0.022	0.028	0.033
	Profile milling	≤ 0.3×d	≤ 0.1×d	55 ~ 100	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	Slot milling	1×d	≤ 0.5×d	30 ~ 40	0.006	0.011	0.015	0.020	0.025	0.030
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 60	0.006	0.011	0.015	0.020	0.025	0.030
	Profile milling	≤ 0.3×d	≤ 0.1×d	50 ~ 70	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	Slot milling	1×d	≤ 0.5×d	20 ~ 40	0.005	0.010	0.014	0.018	0.023	0.027
	Side milling	≤ 0.3×d	≤ 0.3×d	30 ~ 55	0.005	0.010	0.014	0.018	0.023	0.027
	Profile milling	≤ 0.3×d	≤ 0.1×d	40 ~ 70	0.005	0.010	0.014	0.018	0.023	0.027

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

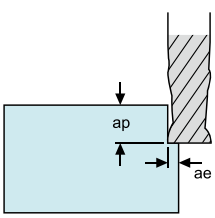
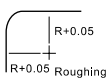
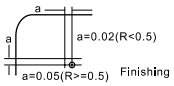


Table 046

G550 Seires EPISA2, EPISA4

WORKING MATERIAL	CARBON STEEL			ALLOY STEEL / TOOL STEEL			HARDENED STEEL		
CODE	S50C			SCM, SKD			SKT, SKD		
HARDNESS	HRC < 20			HRC 30 ~ 40			HRC 40~50		
Vc	30~40 M/min			20~30 M/min			15~25 M/min		
DIAMETER	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)
0.50R	8,800	50	80	6,400	40	55	5,100	30	50
0.75R	7,200	50	80	5,100	40	55	4,100	30	50
1.00R	5,000	50	80	3,500	40	55	3,400	30	50
1.25R	4,300	50	80	3,100	40	55	2,900	30	50
1.50R	3,000	50	80	2,200	40	55	2,600	30	50
2.00R	2,600	50	80	1,900	40	55	2,200	30	50
2.50R	2,200	50	80	1,800	40	55	2,000	30	50
3.00R	2,000	50	80	1,600	40	55	1,700	30	50
4.00R	1,500	50	80	1,200	40	55	1,300	30	50
5.00R	1,300	50	80	960	40	55	1,000	30	50
6.00R	1,200	50	80	880	40	55	900	30	50
Milling Amount (mm)	  · Divide the cutting depth into several time paths. · Use cutting fluid.								

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 047

G550 Seires EPFSA4, EPFSA5, EPFSA6

Material	Carbon Steel / Alloy Steel / Cast iron					Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)					Stainless Steel (SUS304, SUS316)					Hardened Steel				
Hardness	HRC < 30					HRC 30 ~ 40					-					HRC 40 ~ 55				
Vc	80 ~ 230 m/min					60 ~ 180 m/min					45 ~ 140 m/min					25 ~ 30 m/min				
d (mm)	fz (mm)	α = 60°		α = 90°		fz (mm)	α = 60°		α = 90°		fz (mm)	α = 60°		α = 90°		fz (mm)	α = 60°		α = 90°	
		ap (mm)	ae (mm)	ap (mm)	ae (mm)		ap (mm)	ae (mm)	ap (mm)	ae (mm)		ap (mm)	ae (mm)	ap (mm)	ae (mm)		ap (mm)	ae (mm)	ap (mm)	ae (mm)
4	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2
6	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3
8	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4
10	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5
12	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6

※ Effective Cutter Diameter = (d + d1)/2
For machining on two sides, Feed rate reduce 20~30%.
For vertical plunging, Feed rate reduce 30~40%.

Table 048

G550 Seires EPFSC2

Working Material	Normal Steel (S45C)			Alloy Steel / Tool Steel (SCM, SKT, SKD)			Stainless Steel (SUS304)			Aluminum Alloy		
Hardness	HRC < 20			HRC < 30~40			-			-		
Vc	60 m/min			50 m/min			40 m/min			100 m/min		
Dia	RPM	Feed (mm/min)		RPM	Feed (mm/min)		RPM	Feed (mm/min)		RPM	Feed (mm/min)	
		Vertical	Horizontal		Vertical	Horizontal		Vertical	Horizontal		Vertical	Horizontal
3 mm	6400	25	50	5300	20	40	4200	20	40	10600	40	80
4 mm	4800	25	55	4000	20	45	3200	20	45	8000	40	85
6 mm	3200	25	60	2650	20	50	2100	20	50	5300	40	90
8 mm	2400	25	65	2000	20	55	1600	20	55	4000	40	110
10 mm	1900	25	70	1600	20	60	1300	20	60	3200	40	110
12 mm	1600	25	70	1350	20	60	1050	20	60	2700	40	120

Table 049

G550 Seires EPSRC2

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)
0.2mm	1	40000	400	0.001
	2	40000	200	0.005
0.3mm	1	40000	650	0.007
	2	40000	550	0.004
	3	40000	500	0.002
	4	30000	200	0.001
0.4mm	2	40000	800	0.007
	4	40000	800	0.003
	6	28000	350	0.001
	8	20000	200	0.001
	10	17000	150	0.001
0.5mm	4	40000	850	0.003
	6	40000	700	0.003
	8	30000	500	0.002
	12	20000	300	0.001
	14	14000	150	0.001
0.6mm	4	40000	950	0.010
	8	35000	500	0.004
	10	25000	450	0.003
	12	20000	300	0.002
	16	12000	150	0.001
0.7mm	4	40000	950	0.015
	8	30000	700	0.005
	12	9000	200	0.002
0.8mm	4	40000	1100	0.015
	8	40000	1000	0.010
	12	25000	400	0.030
	14	20000	300	0.020
0.9mm	6	40000	1300	0.020
	8	38000	1200	0.010
	10	35000	1000	0.010

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

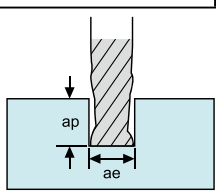


Table 050

G550 Seires EPSRC2

Material		**Carbon Steels/Cast iron/Alloy Steels** S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)
1.0mm	6	40000	1600	0.040
	8	40000	1600	0.030
	10	38000	1300	0.025
	12	30000	1000	0.02
	16	23000	600	0.010
	20	15000	400	0.005
1.2mm	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.020
	20	6500	150	0.01
1.4mm	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.02
	20	6500	150	0.01
1.5mm	6	40000	2400	0.1
	10	30000	1800	0.05
	12	28000	1300	0.04
	16	20000	800	0.02
	20	15000	600	0.02
1.6mm	10	30000	1800	0.07
	14	25000	1500	0.05
	18	20000	1000	0.04
1.8mm	10	30000	1800	0.07
	14	25000	1500	0.05
	18	20000	1000	0.04
2.0mm	6	40000	2400	0.18
	10	30000	1800	0.1
	12	25000	1500	0.08
	16	20000	1000	0.06
	20	12000	800	0.05
	25	9000	600	0.04
	30	8000	500	0.04
	35	6500	300	0.02

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

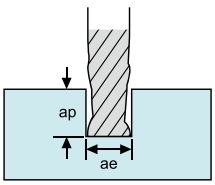


Table 051

G550 Seires EPSRC2

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)
2.5mm	8	25000	2500	0.2
	12	20000	2000	0.15
	16	18000	1700	0.1
	20	12000	1000	0.08
	25	10000	700	0.07
	30	9000	600	0.06
	35	8500	500	0.05
3.0mm	8	20000	2000	0.3
	12	20000	1500	0.18
	16	15000	1400	0.15
	20	10000	800	0.1
	25	8000	600	0.08
	30	7000	450	0.06
	35	6000	300	0.05
4.0mm	10	20000	3200	0.3
	16	13000	2500	0.25
	20	11000	2200	0.22
	25	8000	1500	0.15
	30	6400	1200	0.12
	35	5000	700	0.08
5.0mm	16	12000	2500	0.35
	20	10000	1200	0.3
	25	8000	1000	0.25
	30	6000	900	0.2
	35	5100	750	0.15
6.0mm	20	10000	2000	0.4
	30	6000	1200	0.3
8.0mm	20	3200	910	0.18
	30	3000	800	0.15
	40	2600	600	0.12
10.0mm	25	2900	890	0.20
	35	2500	700	0.16
	45	2200	580	0.14
12.0mm	30	2500	710	0.22
	40	2300	500	0.18
	50	1900	420	0.16

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

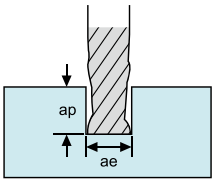


Table 052

G550 Seires EPSRC4

Material		**Carbon Steels/Cast iron/Alloy Steels** S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)
1.0mm	4	40000	3000	0.040
	8	36000	2400	0.030
	10	30000	1500	0.025
	12	20000	1000	0.020
	16	10000	500	0.005
1.5mm	6	40000	3200	0.060
	10	35000	2500	0.050
	12	32000	2400	0.050
	16	16000	1100	0.030
	20	10000	600	0.010
	25	9000	500	0.009
2.0mm	6	40000	4000	0.100
	10	35000	3500	0.080
	12	32000	3200	0.070
	16	24000	2400	0.050
	20	12000	1200	0.030
	25	10000	800	0.020
	30	5000	500	0.010
2.5mm	10	32000	4000	0.200
	12	28000	2500	0.120
	16	23000	1800	0.100
	20	20000	1500	0.060
	25	9000	1100	0.040
	30	2500	300	0.005
3.0mm	10	25000	3600	0.400
	12	23000	3000	0.300
	16	18000	2500	0.200
	20	15000	2000	0.150
	25	12000	1700	0.100
	30	7000	800	0.050
	35	5000	300	0.030

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

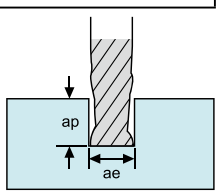
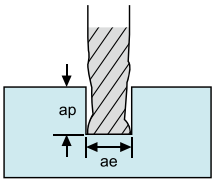


Table 053

G550 Seires EPSRC4

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia	EFF-L	RPM	Feed (mm/min)	ap (mm)
4mm	10	20000	3200	1.200
	12	18000	3000	1.000
	16	15000	2500	1.000
	20	12000	2000	0.500
	25	10000	1800	0.400
	30	8000	1300	0.200
5mm	20	12000	2300	1.000
	25	9500	1800	0.500
	30	6400	1200	0.200
6mm	20	11000	2200	1.200
	30	8000	1600	0.600
8mm	20	8000	1600	1.000
	30	4000	800	0.500
	40	4000	800	0.500
10mm	25	6400	1300	1.000
	35	3200	640	0.600
	45	3200	640	0.600
12mm	30	6000	1200	2.000
	40	3200	640	0.600
	50	3200	640	0.600

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 054

G550 Seires EPBRC2

Material		PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Copper			
Hardness		HRC 35~45				HRC 40~55							
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
R0.15	1.5	48000	480	0.010	0.010	41000	370	0.009	0.010	54000	640	0.014	0.015
	2	43000	370	0.008	0.008	37000	270	0.008	0.008	49000	530	0.011	0.011
	3	38000	320	0.007	0.006	32000	240	0.006	0.006	43000	460	0.009	0.010
	4	28000	200	0.003	0.004	24000	160	0.003	0.004	37000	300	0.004	0.006
	5	26000	125	0.001	0.003	18000	110	0.002	0.003	31000	200	0.002	0.004
R0.2	2	48000	590	0.018	0.024	37000	400	0.015	0.020	54000	790	0.022	0.036
	4	38000	400	0.009	0.012	30000	270	0.009	0.012	50000	640	0.012	0.018
	6	29000	260	0.005	0.006	26000	200	0.004	0.006	37000	360	0.006	0.010
	8	27000	170	0.003	0.003	23000	150	0.002	0.003	27000	200	0.003	0.006
R0.25	2	42000	750	0.022	0.036	32000	500	0.018	0.036	57000	1250	0.028	0.054
	4	38000	580	0.017	0.024	31000	400	0.014	0.024	55000	1010	0.021	0.036
	6	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	610	0.009	0.018
	10	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	460	0.009	0.018
R0.3	2	37000	770	0.027	0.144	37000	770	0.027	0.096	57000	1540	0.034	0.144
	4	35000	600	0.020	0.108	35000	600	0.020	0.072	54000	1130	0.026	0.108
	6	28000	460	0.016	0.072	28000	460	0.016	0.048	46000	960	0.019	0.072
	8	24000	400	0.009	0.054	24000	400	0.009	0.036	30000	570	0.010	0.054
	10	24000	330	0.006	0.036	24000	330	0.006	0.024	30000	490	0.007	0.036
	12	24000	330	0.006	0.036	24000	330	0.006	0.024	30000	490	0.007	0.036
R0.35	4	33000	600	0.035	0.042	26500	410	0.029	0.096	54500	1500	0.045	0.063
	8	12215	420	0.020	0.048	22500	355	0.012	0.048	32000	800	0.019	0.072
	10	22500	380	0.014	0.042	21500	330	0.011	0.042	26500	540	0.017	0.063
	12	21500	380	0.012	0.032	21500	320	0.010	0.042	23000	420	0.017	0.063
R0.4	4	31000	600	0.050	0.012	27000	440	0.041	0.120	55000	1860	0.063	0.018
	8	21000	430	0.021	0.060	22000	390	0.018	0.060	34000	1040	0.027	0.090
	12	19000	430	0.018	0.040	20000	350	0.016	0.060	16000	350	0.027	0.090
	16	16000	430	0.013	0.018	20000	310	0.014	0.060	7600	115	0.027	0.090
R0.45	4	32000	685	0.054	0.130	24500	460	0.043	0.180	50500	1900	0.067	0.190
R0.5	4	32000	770	0.057	0.240	22000	480	0.045	0.240	46000	2000	0.071	0.360
	6	26000	760	0.055	0.120	17600	480	0.009	0.120	39000	1500	0.071	0.180
	8	26000	760	0.034	0.120	17600	480	0.027	0.120	39000	1500	0.043	0.180
	12	17600	530	0.024	0.060	16500	420	0.018	0.060	18700	660	0.027	0.090
	16	15400	440	0.018	0.060	14300	360	0.014	0.060	18700	640	0.022	0.090
	22	14300	360	0.013	0.036	13200	300	0.009	0.036	18700	540	0.017	0.054

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

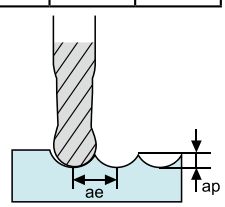
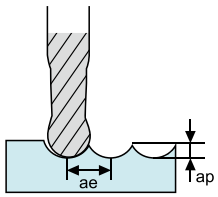


Table 055

G550 Seires EPBRC2

Material		PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Copper			
Hardness		HRC 35~45				HRC 40~55							
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
R0.6	6	26000	770	0.068	0.240	18200	480	0.054	0.240	38000	2000	0.085	0.360
	10	16400	530	0.027	0.120	15100	420	0.022	0.120	24000	1080	0.036	0.180
	12	15300	530	0.027	0.120	14100	420	0.022	0.120	24000	1080	0.036	0.180
	16	13100	460	0.019	0.096	11900	380	0.016	0.096	15400	580	0.024	0.144
	20	12100	380	0.013	0.060	11000	320	0.009	0.096	15400	580	0.017	0.090
	24	11100	320	0.009	0.040	9800	290	0.070	0.040	15400	580	0.010	0.060
R0.7	6	17600	680	0.076	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	8	17600	680	0.079	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	12	13800	530	0.033	0.180	13600	420	0.027	0.180	19800	1080	0.042	0.270
	16	13100	480	0.027	0.120	11900	390	0.021	0.120	13200	620	0.033	0.180
R0.75	4	21000	1060	0.137	0.216	14800	660	0.110	0.216	30000	2200	0.171	0.324
	8	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	12	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	16	12400	480	0.027	0.120	11600	390	0.022	0.120	12100	620	0.036	0.180
	20	12400	480	0.016	0.060	11600	390	0.012	0.060	12100	620	0.019	0.090
	25	12400	440	0.016	0.060	11000	390	0.012	0.060	11000	500	0.019	0.090
	30	10900	400	0.016	0.060	11000	390	0.012	0.060	10700	450	0.019	0.090
R0.8	8	18900	940	0.126	0.216	13800	580	0.102	0.216	26000	1970	0.157	0.324
	12	15100	700	0.09	0.120	11500	440	0.072	0.120	25000	1490	0.112	0.180
	16	12300	530	0.036	0.096	11400	440	0.030	0.096	17600	110	0.046	0.144
	20	11500	480	0.030	0.060	10900	400	0.024	0.060	11000	630	0.036	0.090
R0.9	6	18400	1200	0.185	0.320	18400	738	0.150	0.320	32000	2600	0.230	0.021
	12	13800	700	0.094	0.180	10300	440	0.077	0.180	21000	1480	0.120	0.270
	16	10800	530	0.039	0.120	9900	420	0.031	0.120	15400	1080	0.048	0.180
	20	10200	480	0.031	0.060	9700	400	0.025	0.060	10500	630	0.039	0.090
R1.0	6	18500	1260	0.185	0.360	13200	960	0.150	0.360	22000	2140	0.232	0.540
	10	18500	1120	0.147	0.240	13200	870	0.120	0.240	22000	1920	0.185	0.360
	12	16000	990	0.133	0.240	11700	780	0.107	0.240	18700	1470	0.166	0.360
	16	16000	990	0.118	0.240	11700	780	0.090	0.240	18700	1470	0.148	0.360
	18	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
	20	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
	25	10600	450	0.058	0.120	10200	450	0.045	0.120	9500	630	0.074	0.180

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 056

G550 Seires EPBRC2

Material		PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11				Copper			
Hardness		HRC 35~45				HRC 40~55							
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
R1.25	8	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	10	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	16	13500	1230	0.166	0.240	8400	980	0.135	0.240	16100	1810	0.208	0.360
	20	10200	950	0.093	0.120	8400	980	0.074	0.120	11500	1330	0.116	0.180
	25	8400	540	0.074	0.120	8400	560	0.061	0.120	6900	770	0.093	0.180
	30	8400	540	0.033	0.060	8400	560	0.026	0.060	6900	770	0.040	0.090
R1.5	8	12900	1680	0.222	0.360	9200	1300	0.180	0.360	15000	2890	0.278	0.540
	12	12900	1510	0.222	0.360	9200	1170	0.180	0.360	15000	2600	0.278	0.540
	16	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	20	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	25	8800	1040	0.111	0.180	8100	1040	0.090	0.180	10100	1450	0.139	0.270
	30	8800	780	0.111	0.180	8100	780	0.090	0.180	10100	1450	0.139	0.270
	35	7900	62	0.055	0.180	7500	650	0.045	0.180	6600	840	0.073	0.270
R2.0	8	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.370	0.900
	12	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	16	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	20	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	25	8400	1250	0.223	0.360	6000	980	0.180	0.36	10300	1850	0.279	0.540
	30	8400	1250	0.223	0.360	6000	980	0.180	0.361	10300	1850	0.279	0.540
	35	6600	950	0.148	0.360	6000	700	0.120	0.360	7500	1360	0.185	0.540
R2.5	15	7800	1350	0.324	0.800	5600	1050	0.252	0.800	9600	2590	0.406	0.900
	20	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
	25	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
	30	7800	760	0.243	0.600	4800	600	0.197	0.600	8200	1320	0.305	0.900
R3.0	15	7400	1670	0.443	1.200	5200	1300	0.360	1.200	8000	2530	0.555	1.800
R4.0	25	7200	1200	0.5	1.000	5200	920	0.350	1.000	9000	2400	0.600	1.500
R5.0	30	6800	720	0.23	0.600	4600	570	0.190	0.570	7800	1300	0.300	0.900
R6.0	30	6350	684	0.210	0.570	4370	541.5	0.181	0.550	7410	1235	0.285	0.855

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

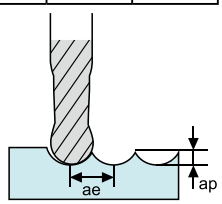


Table 057

G550 Seires EPCRC2

Material	CARBON STEEL / ALLOY STEEL SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1	
Hardness	~HRC35		HRC35~45		HRC45~55	
Dia	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1.0mm	33100	280	21600	120	13200	70
1.2mm	30000	300	18000	125	12000	70
1.5mm	26400	300	16200	130	10200	70
2.0mm	21600	310	13800	140	8640	80
2.5mm	18000	320	11400	150	7320	80
3.0mm	15900	330	10300	160	6300	80
4.0mm	12800	400	8200	200	5150	95
5.0mm	11000	500	7000	240	4560	120
6.0mm	9500	600	6000	300	3930	140
8.0mm	7200	640	4550	300	3020	140
10.0mm	6000	640	4000	300	2420	140
12.0mm	5000	500	3340	270	2000	120

Table 058

G550 Seires EPCRC4

Material	CARBON STEEL / ALLOY STEEL SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1	
Hardness	~HRC35		HRC35~45		HRC45~55	
Dia	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
2mm	21600	380	13800	280	8640	150
2.5mm	18000	390	11400	300	7320	150
3mm	15900	400	10300	310	6300	150
4mm	12800	500	8200	360	5150	160
5mm	11000	510	7000	430	4560	200
6mm	9500	510	6000	430	3930	200
8mm	7200	550	4550	430	3020	200
10mm	6000	550	4000	430	2420	200
12mm	5000	430	3340	380	2000	160

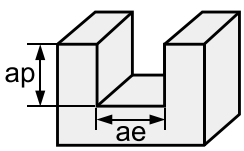
1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 059

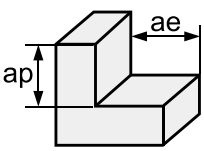
V470 Seires EPSSV4

※If the machine not stable, please reduce the feed about 20%.

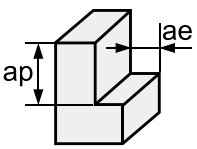
Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C，S55C)	Slot milling	1×d	0.5 ~ 1.0×d	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	90 ~ 160	0.030	0.035	0.050	0.060	0.075	0.100
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	130 ~ 225	0.020	0.025	0.035	0.045	0.055	0.072
Alloy steel (SK, SCM)	Slot milling	1×d	0.5 ~ 1.0×d	70 ~ 130	0.024	0.029	0.038	0.048	0.057	0.076
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	80 ~ 145	0.029	0.033	0.048	0.057	0.071	0.095
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	95 ~ 180	0.019	0.024	0.033	0.043	0.052	0.068
Tool steel (SKD)	Slot milling	1×d	0.5 ~ 1.0×d	65 ~ 110	0.020	0.025	0.035	0.045	0.055	0.072
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	70 ~ 130	0.030	0.035	0.045	0.055	0.070	0.088
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	90 ~ 160	0.020	0.025	0.035	0.040	0.050	0.064
Stainless steel (SUS304, SUS316)	Slot milling	1×d	0.5 ~ 1.0×d	50 ~ 65	0.015	0.020	0.030	0.035	0.040	0.056
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	65 ~ 100	0.020	0.025	0.035	0.045	0.055	0.072
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	80 ~ 110	0.020	0.025	0.035	0.040	0.050	0.064
Hardened steel (HRC ≤ 45)	Slot milling	1×d	0.5 ~ 1.0×d	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	50 ~ 90	0.015	0.020	0.030	0.035	0.040	0.056
	Side finishing	0.1~ 0.3×d	0.7 ~ 1.5×d	65 ~ 120	0.020	0.025	0.035	0.040	0.050	0.064



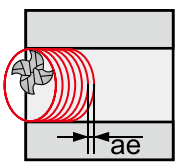
Slot milling



Side roughing



Side finishing



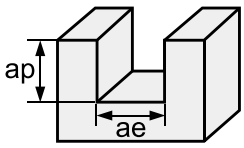
Trochoidal

Table 060

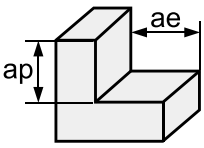
V470 Seires EPS_V4, EPC_V4, EPF_V4

※If the machine not stable, please reduce the feed about 20%.

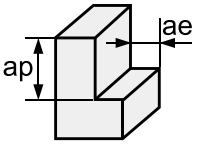
Working Material	Cutting Application	ae	ap	SFM	fz (inch/z)				
					1/8	1/4	5/16	3/8	1/2
Carbon steel (S45C, S55C)	Slot milling	1×d	0.5 ~ 1.0×d	260 ~ 475	.0008	.0012	.0016	.0019	.0025
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	295 ~ 525	.0009	.0015	.0020	.0023	.0031
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	425 ~ 740	.0006	.0010	.0014	.0017	.0023
Alloy steel (SK, SCM)	Slot milling	1×d	0.5 ~ 1.0×d	230 ~ 430	.0007	.0011	.0015	.0018	.0024
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	260 ~ 475	.0008	.0014	.0019	.0022	.0030
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	310 ~ 590	.0005	.0009	.0013	.0016	.0022
Tool Steel (SKD)	Slot milling	1×d	0.5 ~ 1.0×d	215 ~ 360	.0006	.0010	.0014	.0017	.0023
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	230 ~ 430	.0009	.0015	.0018	.0021	.0029
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	295 ~ 525	.0006	.0010	.0014	.0015	.0021
Stainless steel (SUS304, SUS316)	Slot milling	1×d	0.5 ~ 1.0×d	165 ~ 215	.0005	.0008	.0012	.0013	.0017
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	215 ~ 330	.0006	.0010	.0014	.0017	.0023
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	260 ~ 360	.0006	.0010	.0014	.0015	.0021
Hardened steel (HRC ≤ 45)	Slot milling	1×d	0.5 ~ 1.0×d	100 ~ 200	.0005	.0008	.0010	.0011	.0015
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	165 ~ 300	.0005	.0008	.0012	.0013	.0017
	Side finishing	0.1~ 0.3×d	0.7 ~ 1.5×d	215 ~ 395	.0006	.0010	.0014	.0015	.0021



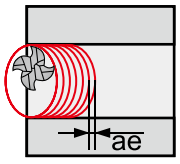
Slot milling



Side roughing



Side finishing



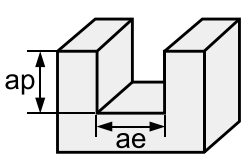
Trochoidal

Table 061

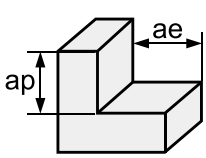
V530 Seires ESSSVA4, ESSSVB4, ESSSVC4, ESSSVC5, ESSSVD4

※If the machine not stable, please reduce the feed about 20%.

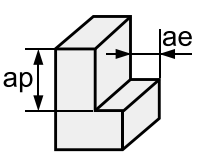
Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)				
					6mm	8mm	10mm	12mm	16mm
Carbon Steel (S45C)	Slot milling	1×d	0.5 ~ 1.0×d	100 ~ 180	0.035	0.045	0.060	0.070	0.090
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	110 ~ 200	0.040	0.055	0.070	0.085	0.100
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	160 ~ 280	0.030	0.040	0.055	0.065	0.080
Carbon Steel (S50C)	Slot milling	1×d	0.5 ~ 1.0×d	90 ~ 160	0.035	0.045	0.060	0.070	0.090
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	100 ~ 180	0.040	0.055	0.070	0.085	0.100
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	120 ~ 220	0.030	0.040	0.055	0.065	0.080
Tool Steel (SKD)	Slot milling	1×d	0.5 ~ 1.0×d	80 ~ 135	0.030	0.040	0.055	0.065	0.080
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	90 ~ 160	0.040	0.050	0.065	0.080	0.095
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	110 ~ 200	0.030	0.040	0.050	0.060	0.070
Hardened Steel (HRC < 55)	Slot milling	1×d	0.5 ~ 1.0×d	40 ~ 70	0.025	0.030	0.040	0.045	0.070
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	65 ~ 110	0.025	0.035	0.045	0.050	0.080
	Side finishing	0.1~ 0.3×d	0.7 ~ 1.5×d	80 ~ 150	0.030	0.040	0.050	0.060	0.090
Stainless Steel (SUS304, SUS316)	Slot milling	1×d	0.5 ~ 1.0×d	60 ~ 80	0.025	0.035	0.045	0.050	0.065
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	80 ~ 120	0.030	0.040	0.055	0.065	0.080
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	100 ~ 140	0.030	0.040	0.050	0.060	0.070
Superalloy, Inconel	Slot milling	1×d	0.5 ~ 1.0×d	20 ~ 30	0.015	0.020	0.025	0.030	0.040
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	25 ~ 35	0.020	0.030	0.035	0.040	0.055
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	30 ~ 45	0.020	0.030	0.035	0.040	0.055
Titanium	Slot milling	1×d	0.5 ~ 1.0×d	40 ~ 60	0.025	0.035	0.045	0.050	0.065
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	60 ~ 90	0.030	0.040	0.055	0.065	0.080
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	90 ~ 130	0.030	0.040	0.055	0.065	0.080



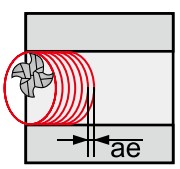
Slot milling



Side roughing



Side finishing



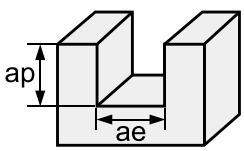
Trochoidal

Table 062

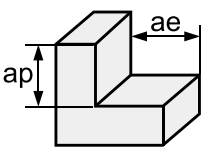
V520 Seires EMSSV4, EMSHV4, EMSRV4, EMSSV4, EMSCV4, EMSSV4, EMSCV4

※If the machine not stable, please reduce the feed about 20%.

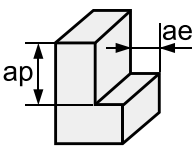
Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C, S55C)	Slot milling	1×d	0.5 ~ 1.0×d	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	90 ~ 160	0.030	0.035	0.050	0.060	0.075	0.100
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	130 ~ 225	0.020	0.025	0.035	0.045	0.055	0.072
Alloy steel (SK, SCM)	Slot milling	1×d	0.5 ~ 1.0×d	70 ~ 130	0.024	0.029	0.038	0.048	0.057	0.076
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	80 ~ 145	0.029	0.033	0.048	0.057	0.071	0.095
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	95 ~ 180	0.019	0.024	0.033	0.043	0.052	0.068
Tool steel (SKD)	Slot milling	1×d	0.5 ~ 1.0×d	65 ~ 110	0.020	0.025	0.035	0.045	0.055	0.072
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	70 ~ 130	0.030	0.035	0.045	0.055	0.070	0.088
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	90 ~ 160	0.020	0.025	0.035	0.040	0.050	0.064
Stainless steel (SUS304, SUS316)	Slot milling	1×d	0.5 ~ 1.0×d	50 ~ 65	0.015	0.020	0.030	0.035	0.040	0.056
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	65 ~ 100	0.020	0.025	0.035	0.045	0.055	0.072
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	80 ~ 110	0.020	0.025	0.035	0.040	0.050	0.064
Superalloy & Hardened steel	Slot milling	1×d	0.5 ~ 1.0×d	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	50 ~ 90	0.015	0.020	0.030	0.035	0.040	0.056
	Side finishing	0.1~ 0.3×d	0.7 ~ 1.5×d	65 ~ 120	0.020	0.025	0.035	0.040	0.050	0.064



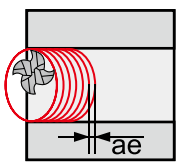
Slot milling



Side roughing



Side finishing



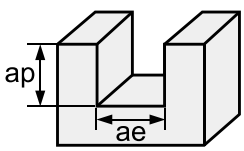
Trochoidal

Table 063

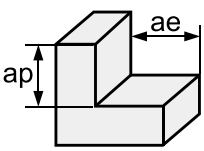
V520 Seires EMS_V4, EMC_V4, EMF_V4

※If the machine not stable, please reduce the feed about 20%.

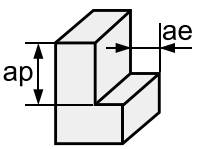
Working Material	Cutting Application	ae	ap	SFM	fz (inch/z)				
					1/8	1/4	5/16	3/8	1/2
Carbon steel (S45C, S55C)	Slot milling	1×d	0.5 ~ 1.0×d	260 ~ 475	.0008	.0012	.0016	.0019	.0025
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	295 ~ 525	.0009	.0015	.0020	.0023	.0031
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	425 ~ 740	.0006	.0010	.0014	.0017	.0023
Alloy steel (SK, SCM)	Slot milling	1×d	0.5 ~ 1.0×d	230 ~ 430	.0007	.0011	.0015	.0018	.0024
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	260 ~ 475	.0008	.0014	.0019	.0022	.0030
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	310 ~ 590	.0005	.0009	.0013	.0016	.0022
Tool Steel (SKD)	Slot milling	1×d	0.5 ~ 1.0×d	215 ~ 360	.0006	.0010	.0014	.0017	.0023
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	230 ~ 430	.0009	.0015	.0018	.0021	.0029
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	295 ~ 525	.0006	.0010	.0014	.0015	.0021
Stainless steel (SUS304, SUS316)	Slot milling	1×d	0.5 ~ 1.0×d	165 ~ 215	.0005	.0008	.0012	.0013	.0017
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	215 ~ 330	.0006	.0010	.0014	.0017	.0023
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.5×d	260 ~ 360	.0006	.0010	.0014	.0015	.0021
Superalloy & Hardened steel	Slot milling	1×d	0.5 ~ 1.0×d	100 ~ 200	.0005	.0008	.0010	.0011	.0015
	Side roughing	0.4 ~ 0.9×d	0.7 ~ 1.0×d	165 ~ 300	.0005	.0008	.0012	.0013	.0017
	Side finishing	0.1~ 0.3×d	0.7 ~ 1.5×d	215 ~ 395	.0006	.0010	.0014	.0015	.0021



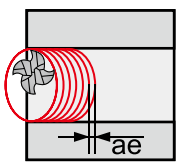
Slot milling



Side roughing



Side finishing



Trochoidal

Table 064

V520 Seires EMB_V4

※If the machine not stable, please reduce the feed about 20%.

Working Material	Cutting Application	ae	ap	SFM	fz (inch/z)				
					1/8	1/4	5/16	3/8	1/2
Carbon steel (S45C, S55C)	Slot milling	0.5×d	0.5 ~ 1.0×d	260 ~ 475	.0008	.0012	.0016	.0019	.0025
	Side roughing	0.3 ~ 0.6×d	0.6 ~ 1.0×d	295 ~ 525	.0009	.0015	.0020	.0023	.0031
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.0×d	425 ~ 740	.0006	.0010	.0014	.0017	.0023
Alloy steel (SK, SCM)	Slot milling	0.5×d	0.5 ~ 1.0×d	230 ~ 430	.0007	.0011	.0015	.0018	.0024
	Side roughing	0.3 ~ 0.6×d	0.6 ~ 1.0×d	260 ~ 475	.0008	.0014	.0019	.0022	.0030
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.0×d	310 ~ 590	.0005	.0009	.0013	.0016	.0022
Tool Steel (SKD)	Slot milling	0.5×d	0.5 ~ 1.0×d	215 ~ 360	.0006	.0010	.0014	.0017	.0023
	Side roughing	0.3 ~ 0.6×d	0.6 ~ 1.0×d	230 ~ 430	.0009	.0015	.0018	.0021	.0029
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.0×d	295 ~ 525	.0006	.0010	.0014	.0015	.0021
Stainless steel (SUS304, SUS316)	Slot milling	0.4 ~ 0.5×d	0.3 ~ 1.0×d	165 ~ 215	.0005	.0008	.0012	.0013	.0017
	Side roughing	0.3 ~ 0.6×d	0.5 ~ 1.0×d	215 ~ 330	.0006	.0010	.0014	.0017	.0023
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.0×d	260 ~ 360	.0006	.0010	.0014	.0015	.0021
Superalloy & Hardened steel	Slot milling	0.4 ~ 0.5×d	0.3 ~ 0.5×d	100 ~ 200	.0005	.0008	.0010	.0011	.0015
	Side roughing	0.3 ~ 0.6×d	0.5 ~ 1.0×d	165 ~ 300	.0005	.0008	.0012	.0013	.0017
	Side finishing	0.1 ~ 0.3×d	0.7 ~ 1.0×d	215 ~ 395	.0006	.0010	.0014	.0015	.0021

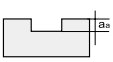
Recommended Cutting Conditions

Table 065

M500 Seires ESSSA2

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4mm	7,452	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5mm	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6mm	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8mm	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10mm	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12mm	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14mm	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16mm	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62
Milling Amount (mm)														

	aa
D ≦ ø3	0.15D
ø3 < D	0.20D



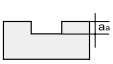
	aa
D ≦ ø6	0.10D
ø6 < D	0.15D

Table 066

M500 Seires ESSSA4

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4mm	5,732	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5mm	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6mm	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8mm	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10mm	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12mm	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14mm	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16mm	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62
Milling Amount (mm)														

	aa
D ≦ ø3	0.15D
ø3 < D	0.20D



	aa
D ≦ ø6	0.10D
ø6 < D	0.15D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

Table 067

M500 Seires ESSSB4

WORKING MATERIAL	Carbon steel (S45C)			Alloy Steel (SKD)			Stainless steel (SUS304, SUS316)		
Vc	130 m/min			90 m/min			80 m/min		
Diameter	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)
4mm	0.020	4	0.4	0.020	4	0.4	0.020	4	0.4
6mm	0.025	6	0.6	0.025	6	0.6	0.025	6	0.6
8mm	0.035	8	0.8	0.035	8	0.8	0.035	8	0.8
10mm	0.045	10	1.0	0.040	10	1.0	0.040	10	1.0
12mm	0.055	12	1.2	0.050	12	1.2	0.050	12	1.2
16mm	0.072	16	1.6	0.064	16	1.6	0.064	16	1.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

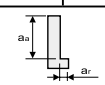
Table 068

M500 Seires ESSSW3, ESSSW4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1mm	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760	240
2mm	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3mm	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4mm	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5mm	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6mm	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8mm	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10mm	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
12mm	2,340	260	1,872	175	1,560	120	936	50	1,872	205	2,808	310
14mm	2,340	300	1,768	195	1,482	135	936	60	1,768	230	2,600	335
16mm	2,028	300	2,730	345	1,300	135	819	60	2,730	400	2,340	345
18mm	2,028	305	1,378	175	1,144	120	819	60	1,378	205	2,080	310
20mm	1,560	260	1,248	175	1,040	120	624	50	1,248	205	1,820	300

Milling Amount (mm)

	aa	ar
D<ø 6	1.0D	0.02D
ø6 ≦ D	1.0D	0.05D



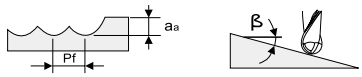
	aa	ar
D < ø 6	1.0D	0.01D
ø 6 ≦ D	1.0D	0.02D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

Table 069

M500 Seires ESBFA2, ESBSA2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~55		–		–	
Vc	94 M/min		71 M/min		44 M/min		38 M/min		71 M/min		94 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
0.5R	46,800	545	42,120	420	28,080	230	18,720	110	42,120	490	58,500	685
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
4.0R	7,488	875	5,616	560	3,744	305	2,990	175	5,616	655	7,488	875
5.0R	5,967	870	4,446	550	2,808	285	2,379	175	4,446	650	5,967	870
6.0R	4,914	860	3,744	560	2,340	285	1,976	175	3,744	655	4,914	860
8.0R	4,160	970	3,120	620	2,028	330	1,664	195	3,120	730	4,160	970
10.0R	3,380	890	2,496	560	1,690	310	1,352	175	2,496	655	3,380	890
When β is less than 15° milling speed and feed speed in the table can be increased 1.0-1.2 times.												
Milling Amount (mm)	aa = 0.02D Pf = 0.05D 											

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

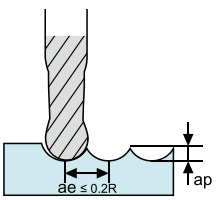
Recommended Cutting Conditions

Table 070

M500 Seires ESBHS4

Work Material	High temperature alloy (Nickel Titanium)			Hardened steel (HRC 40 ~55) (SKD11, SKD61)			Hardened steel (HRC 50~60) (SKD11, SUS420)			Hardened steel (HRC 60~65) (SKS, SKH)		
Radius (R)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)
3R	15000	3400	0.25	21000	8400	0.25	16000	4800	0.2	8000	2300	0.09
4R	12000	2600	0.3	16000	6400	0.3	12000	3600	0.2	6000	1900	0.09
5R	9600	2200	0.5	13000	5200	0.5	10000	3200	0.2	4800	1500	0.1
6R	7200	1700	0.5	9000	3600	0.5	7000	2200	0.3	3600	1100	0.1
8R	5400	1300	0.7	6800	2700	0.7	5300	1700	0.4	2700	830	0.13

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.



Recommended Cutting Conditions

Table 071

M500 Seires ESCSA4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3mm	9,828	455	7,098	295	6,084	195	3,900	90	7,488	345	11,232	520
4mm	7,020	430	5,616	295	4,680	200	2,808	85	5,616	345	8,424	520
5mm	5,850	450	4,446	290	3,744	200	2,340	90	4,446	345	6,552	505
6mm	4,680	430	3,744	295	3,042	195	1,872	85	3,744	345	5,616	520
8mm	3,510	430	2,808	295	2,340	200	1,404	85	2,808	345	4,212	520
10mm	2,808	430	2,223	290	1,872	200	1,131	85	2,223	340	3,276	505
12mm	2,340	430	1,872	295	1,560	200	936	85	1,872	345	2,808	520
Milling Amount (mm)												

	aa	ar
D<ø6	1.0D	0.02D
ø6≦D	1.0D	0.05D

	aa	ar
D < ø6	1.0D	0.01D
ø6≦D	1.0D	0.02D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 072

A300 Seires ECSSF

Material	CFRP			GFRP		
Vc	160 ~ 220 m/min			100 ~ 160 m/min		
Dia (mm)	ap (mm)	ae (mm)	fz (mm/tooth)	ap (mm)	ae (mm)	fz (mm/tooth)
6	1.5×d	≤ 0.35×d	0.020	1.5×d	≤ 0.35×d	0.020
8	1.5×d	≤ 0.35×d	0.030	1.5×d	≤ 0.35×d	0.030
10	1.5×d	≤ 0.35×d	0.030	1.5×d	≤ 0.35×d	0.030
12	1.5×d	≤ 0.35×d	0.035	1.5×d	≤ 0.35×d	0.035

Table 073

A300 Seires ECSSF

Material	CFRP			GFRP		
Vc	140 ~ 200 m/min			90 ~ 140 m/min		
Dia (mm)	ap (mm)	ae (mm)	fz (mm/tooth)	ap (mm)	ae (mm)	fz (mm/tooth)
6	2×d	0.35×d	0.020	2×d	0.35×d	0.020
8	2×d	0.35×d	0.030	2×d	0.35×d	0.030
10	2×d	0.35×d	0.030	2×d	0.35×d	0.030
12	2×d	0.35×d	0.035	2×d	0.35×d	0.035

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

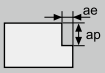
Table 074

A100 Seires ENSSC1

Material	Aluminum			
Application	Slot Milling 			
Vc	150 ~ 250 m/min			
Dia (mm)	RPM	Feed (mm/min)	fz (mm/tooth)	ap (mm)
4	15000	5000	0.33	0.5×d
6	10000	5000	0.50	0.5×d
8	8400	4000	0.48	0.5×d
10	6700	4000	0.60	0.5×d
12	5000	4000	0.80	0.5×d

Table 075

A100 Seires ENSSP1

Material	Aluminum				
Application	Side Milling 				
Vc	150 ~ 250 m/min				
Dia (mm)	RPM	Feed (mm/min)	fz (mm/tooth)	ap (mm)	ae (mm)
4	15000	5000	0.33	1×d	0.3×d
6	10000	5000	0.50	1×d	0.3×d
8	8400	4000	0.48	1×d	0.3×d
10	6700	4000	0.60	1×d	0.3×d
12	5000	4000	0.80	1×d	0.3×d

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions

Table 076

A100 Seires ENSSS2, ENSSS3, ENSCS3, ENSSH3

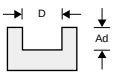
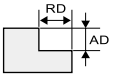
WORKING MATERIAL	ALLUMINUM ALLOY			
CODE	A5052			
	Slotting		Side Milling	
Vc	196 M/min		325 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3mm	20,800	1,200	34,580	1,350
4mm	15,600	1,000	26,000	1,350
5mm	12,480	900	20,670	1,350
6mm	10,400	820	17,290	1,350
8mm	7,800	750	13,000	1,350
10mm	6,240	680	10,270	1,350
12mm	5,200	620	8,580	1,350
Milling Amount (mm)	Ad = 0.1D  			

Table 077

A100 Seires ENSSB3

WORKING MATERIAL	ALLUMINUM ALLOY				
Application	Shoulder Milling			Slot Milling	
Vc	200 ~400 m/min			150 ~ 300 m/min	
DIAMETER	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)
4mm	0.0200	≤ 1.5×d	≤ 0.3×d	0.030	≤ 1×d
5mm	0.0250	≤ 1.5×d	≤ 0.3×d	0.040	≤ 1×d
6mm	0.0350	≤ 1.5×d	≤ 0.3×d	0.057	≤ 1×d
8mm	0.0450	≤ 1.5×d	≤ 0.3×d	0.075	≤ 1×d
10mm	0.0570	≤ 1.5×d	≤ 0.3×d	0.096	≤ 1×d
12mm	0.0670	≤ 1.5×d	≤ 0.3×d	0.110	≤ 1×d
16mm	0.0880	≤ 1.5×d	≤ 0.3×d	0.145	≤ 1×d
20mm	0.1200	≤ 1.5×d	≤ 0.3×d	0.180	≤ 1×d

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 078

A100 Seires ENSSF3

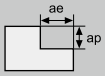
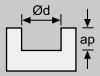
Material	Aluminum Alloy						
Application	Shoulder Milling 				Slot Milling 		
Vc	55 ~ 225 (m/min)				55 ~ 225 (m/min)		
Dia (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)
1	17800	590	1 ~ 2×d	0.05 ~ 0.15×d	17800	470	0.2×d
2	17800	620	1 ~ 2×d	0.05 ~ 0.15×d	17800	500	0.2×d
3	15000	650	1 ~ 2×d	0.05 ~ 0.15×d	15000	520	0.2×d
4	13000	685	1 ~ 2×d	0.05 ~ 0.15×d	13000	550	0.2×d
5	12000	720	1 ~ 2×d	0.05 ~ 0.15×d	12000	580	0.2×d
6	10000	760	1 ~ 2×d	0.05 ~ 0.15×d	10000	610	0.2×d
8	8500	840	1 ~ 2×d	0.05 ~ 0.15×d	8500	670	0.2×d
10	7000	920	1 ~ 2×d	0.05 ~ 0.15×d	7000	740	0.2×d
12	6000	1010	1 ~ 2×d	0.05 ~ 0.15×d	6000	810	0.2×d

Table 079

A100 Seires ENSSP3

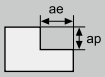
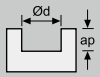
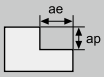
Material	Aluminum Alloy						
Application	Shoulder Milling 				Slot Milling 		
Vc	150 ~ 350 (m/min)				120 ~ 300 (m/min)		
Dia (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)
6	16000	1280	1 ~ 2×d	0.05 ~ 0.15×d	13000	880	0.2×d
8	12000	1520	1 ~ 2×d	0.05 ~ 0.15×d	9500	960	0.2×d
10	9500	1520	1 ~ 2×d	0.05 ~ 0.15×d	7600	960	0.2×d
12	8000	1520	1 ~ 2×d	0.05 ~ 0.15×d	6400	960	0.2×d
16	6000	1520	1 ~ 2×d	0.05 ~ 0.15×d	4800	960	0.2×d

Table 080

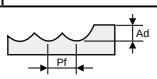
A100 Seires ENSSV3

Material	**Aluminum alloy (AL5052 / 6061 / 7075)**				
Application	Shoulder Milling 			Slot Milling 	
Vc	200 ~ 400 m/min			150 ~ 300 m/min	
Dia (mm)	ap (mm)	ae (mm)	fz (mm/tooth)	ap (mm)	fz (mm/tooth)
3	1.5×d	0.1~0.5×d	0.02	0.5~1.0×d	0.01
4	1.5×d	0.1~0.5×d	0.03	0.5~1.0×d	0.02
5	1.5×d	0.1~0.5×d	0.03	0.5~1.0×d	0.02
6	1.5×d	0.1~0.5×d	0.05	0.5~1.0×d	0.03
8	1.5×d	0.1~0.5×d	0.07	0.5~1.0×d	0.04
10	1.5×d	0.1~0.5×d	0.09	0.5~1.0×d	0.06
12	1.5×d	0.1~0.5×d	0.11	0.5~1.0×d	0.08
16	1.5×d	0.1~0.5×d	0.15	0.5~1.0×d	0.10

※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

Table 081

A100 Seires ENBSA2

WORKING MATERIAL	ALLUMINUM ALLOY	
CODE	A5052	
Vc	327 M/min	
DIAMETER	R.P.M	FEED (mm/min)
2mm	50,700	2,000
3mm	33,800	2,000
4mm	26,000	2,000
5mm	20,800	2,000
6mm	16,900	2,000
8mm	13,000	2,000
10mm	10,400	2,000
12mm	7,800	2,000
16mm	6,500	2,000
Milling Amount (mm)	Ad = 0.1D 	

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Table 082

A100 Seires ENSRC2

Material		Copper							Copper Tungsten (W70%-Cu30%)						
Application		Side Milling				Slotting			Side Milling				Slotting		
Dia (mm)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)
0.5	1.5	40000	900	0.5	0.025	40000	800	0.070	30000	650	0.3	0.02	30000	550	0.05
	2	38000	800	0.5	0.02	35000	700	0.055	28000	550	0.3	0.016	26000	450	0.04
	3	35000	700	0.5	0.015	32000	600	0.040	26000	500	0.3	0.012	25000	400	0.03
	4	28000	550	0.5	0.008	26000	500	0.030	24000	400	0.3	0.005	22000	300	0.02
	6	18000	350	0.5	0.005	18000	300	0.015	15000	220	0.3	0.003	15000	180	0.01
1	3	24000	2200	1	0.06	24000	2000	0.22	20000	1600	0.8	0.04	20000	1400	0.16
	4	24000	2000	1	0.05	22000	1800	0.20	20000	1400	0.8	0.035	18000	1100	0.14
	5	22000	1700	1	0.04	20000	1500	0.16	18000	1200	0.8	0.028	16000	950	0.12
	6	20000	1500	1	0.03	18000	1200	0.14	16000	1000	0.8	0.02	14000	800	0.10
	8	16000	1200	1	0.025	15000	1000	0.10	14000	800	0.8	0.018	12000	650	0.08
	10	14000	1000	1	0.02	12000	800	0.07	12000	650	0.8	0.014	11000	550	0.05
	12	10000	700	1	0.01	10000	650	0.05	9000	450	0.8	0.007	8000	400	0.035
2	6	18000	2500	2	0.10	16000	2200	0.45	14000	1800	1.5	0.08	12000	1500	0.30
	8	16000	2200	2	0.09	14000	1900	0.40	12000	1500	1.5	0.07	12000	1400	0.28
	10	14000	1900	2	0.08	12000	1600	0.35	10000	1200	1.5	0.06	10000	1000	0.24
	12	12000	1600	2	0.07	11000	1400	0.28	10000	1100	1.5	0.05	9000	900	0.20
	14	11000	1400	2	0.06	10000	1200	0.24	9000	950	1.5	0.04	8000	800	0.16
	16	10000	1200	2	0.045	9000	1000	0.18	8000	800	1.5	0.03	7000	650	0.12
	20	9000	1000	2	0.03	8000	850	0.12	7000	700	1.5	0.02	6000	550	0.08
3	10	16000	2400	3	0.12	14000	2000	0.7	12000	1800	2.4	0.08	11000	1500	0.5
	16	14000	2100	3	0.10	12000	1600	0.6	11000	1600	2.4	0.07	9000	1100	0.4
	20	11000	1500	3	0.07	10000	1200	0.4	9000	1100	2.4	0.05	8000	900	0.3
	25	10000	1300	3	0.05	9000	1000	0.2	8000	900	2.4	0.03	7000	700	0.15
4	16	12000	2400	4	0.20	10000	2000	0.9	9000	1600	3	0.15	8000	1400	0.7
	20	10000	2000	4	0.15	8000	1600	0.7	8000	1400	3	0.10	6000	1000	0.5
	25	9000	1700	4	0.10	8000	1500	0.5	7000	1200	3	0.07	6000	1000	0.3

Table 083

A100 Seires ENBRC2

Material		Copper				Copper Tungsten (W70%-Cu30%)			
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.25R	2	40000	800	0.08	0.15	30000	500	0.08	0.15
	3	35000	600	0.06	0.1	27000	400	0.06	0.08
	4	30000	400	0.04	0.08	22000	200	0.025	0.05
	5	25000	300	0.02	0.04	18000	150	0.01	0.02
0.5R	3	40000	2800	0.25	0.4	30000	2000	0.25	0.4
	4	40000	2400	0.2	0.4	30000	1600	0.2	0.4
	5	35000	2000	0.16	0.3	27000	1400	0.12	0.25
	6	30000	1600	0.14	0.3	25000	1000	0.1	0.25
	8	25000	1000	0.12	0.2	18000	500	0.06	0.1
	10	20000	800	0.08	0.15	16000	300	0.03	0.05
	12	16000	600	0.06	0.1	12000	200	0.015	0.04
1.0R	4	30000	4000	0.45	0.8	22000	2400	0.45	0.8
	6	27000	3000	0.45	0.8	20000	1800	0.45	0.8
	8	25000	2400	0.4	0.8	18000	1600	0.4	0.8
	10	22000	2000	0.3	0.6	16000	1400	0.25	0.5
	12	16000	1400	0.3	0.6	12000	900	0.25	0.5
	16	12000	1000	0.25	0.5	9000	500	0.12	0.25
	20	10000	800	0.15	0.3	8000	350	0.06	0.1
	25	8000	600	0.08	0.15	6000	200	0.03	0.05
1.5R	8	22000	3800	0.8	1.95	18000	2800	0.7	1.3
	10	20000	3400	0.7	1.5	16000	2400	0.6	1.2
	16	18000	3000	0.6	1.0	14000	2000	0.6	1.2
	20	16000	2400	0.5	0.8	12000	1400	0.4	0.6
	25	12000	1800	0.4	0.6	10000	900	0.2	0.3
	30	8000	1200	0.2	0.4	6000	500	0.08	0.15
2.0R	12	16000	4000	1.0	1.6	12000	2800	0.8	1.6
	16	16000	3400	0.8	1.6	12000	2400	0.8	1.6
	20	14000	3000	0.8	1.6	10000	2000	0.8	1.6
	25	14000	3000	0.6	1.2	10000	2000	0.5	1.0
	30	12000	2400	0.5	1.0	7000	1200	0.3	0.5
	40	8000	1200	0.4	0.8	5000	500	0.15	0.3

Table 084

A100 Seires ENCRC2

Material			Copper				Copper Tungsten (W70%-Cu30%)			
Dia (mm)	Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.5	0.1R	2	40000	800	0.06	0.25	36000	720	0.054	0.23
		3	35000	640	0.05	0.25	32000	580	0.045	0.23
		4	30000	480	0.036	0.25	27000	420	0.032	0.23
		5	25000	400	0.024	0.25	23000	360	0.022	0.23
1	0.1R	3	25000	2400	0.06	0.6	23000	2200	0.054	0.55
		4	25000	2200	0.055	0.6	23000	2000	0.05	0.55
		5	22000	2000	0.05	0.6	20000	1800	0.045	0.55
		6	20000	1800	0.045	0.6	18000	1600	0.04	0.55
		8	16000	1400	0.04	0.6	14000	1200	0.036	0.55
		10	12000	1000	0.03	0.6	11000	900	0.027	0.55
	0.2R	3	25000	2400	0.12	0.6	23000	2200	0.11	0.55
		4	25000	2200	0.11	0.6	23000	2000	0.10	0.55
		5	22000	2000	0.10	0.6	20000	1800	0.09	0.55
		6	20000	1800	0.09	0.6	18000	1600	0.08	0.55
		8	16000	1400	0.08	0.6	14000	1200	0.07	0.55
		10	12000	1000	0.06	0.6	11000	900	0.054	0.55
2	0.1R	5	16000	3000	0.06	1.2	14000	2700	0.054	1.1
		8	14000	2600	0.06	1.2	13000	2400	0.054	1.1
		10	12000	2000	0.06	1.2	11000	1800	0.054	1.1
		15	10000	1600	0.05	1.2	9000	1400	0.045	1.1
		20	8000	1200	0.04	1.2	7000	1100	0.036	1.1
	0.3R	5	16000	3000	0.18	1.2	14000	2700	0.16	1.1
		8	14000	2600	0.18	1.2	13000	2400	0.16	1.1
		10	12000	2000	0.18	1.2	11000	1800	0.16	1.1
		15	10000	1600	0.14	1.2	9000	1400	0.13	1.1
		20	8000	1200	0.10	1.2	7000	1100	0.09	1.1
3	0.2R	12	14000	3000	0.12	1.8	13000	2700	0.11	1.6
		15	13000	2600	0.12	1.8	12000	2400	0.11	1.6
		18	12000	2400	0.10	1.8	11000	2200	0.09	1.6
		24	10000	1800	0.08	1.8	9000	1600	0.07	1.6
		30	8000	1400	0.07	1.8	7000	1200	0.06	1.6
	0.5R	12	14000	3000	0.30	1.8	13000	2700	0.27	1.6
		15	13000	2600	0.30	1.8	12000	2400	0.27	1.6
		18	12000	2400	0.25	1.8	11000	2200	0.23	1.6
		24	10000	1800	0.20	1.8	9000	1600	0.18	1.6
		30	8000	1400	0.16	1.8	7000	1200	0.14	1.6
4	0.2R	16	10000	2800	0.14	2.8	9000	2500	0.13	2.5
		24	8000	2200	0.12	2.8	7000	1900	0.11	2.5
		32	6000	1600	0.10	2.8	5500	1400	0.09	2.5
	0.5R	16	10000	2800	0.30	2.4	9000	2500	0.27	2.2
		24	8000	2200	0.24	2.4	7000	1900	0.22	2.2
		32	6000	1600	0.18	2.4	5500	1400	0.16	2.2