

Standard End Mill

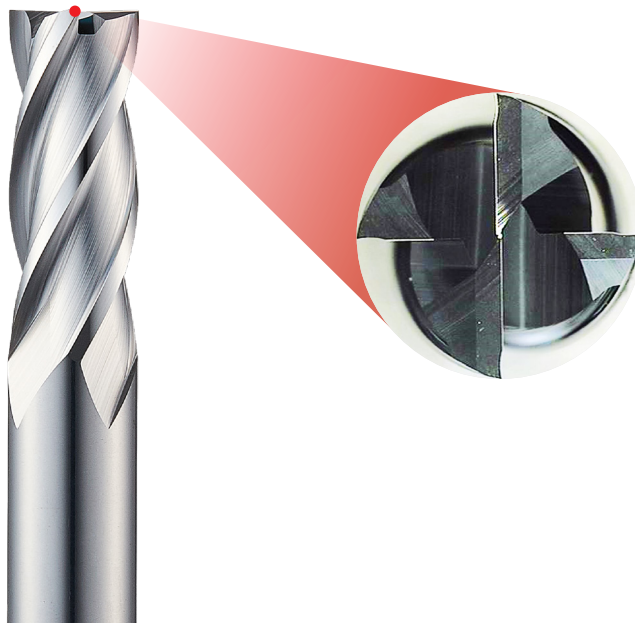
Low hardness materials under HRc 30

Characteristics

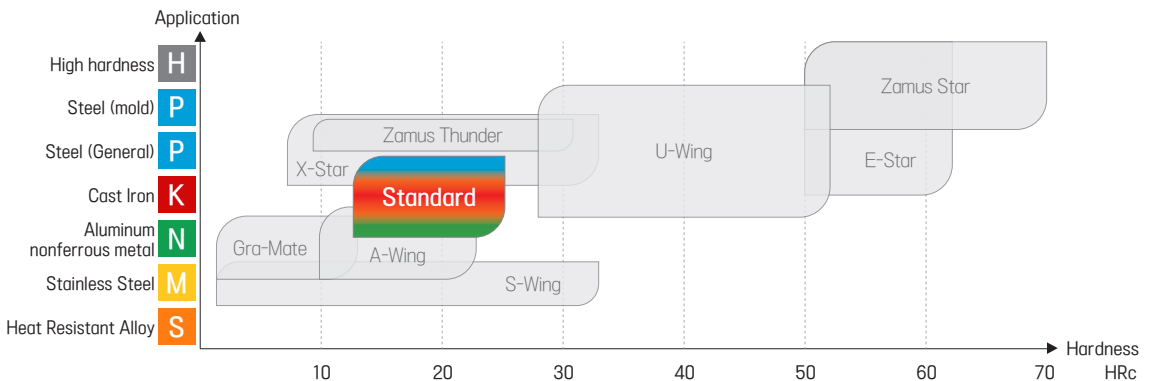
- Suitable for low hardness materials under HRc 30
- Various product line : Square, Ball, Brazing type

Features










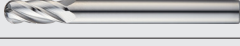

- Improved chipping resistance by using high toughness materials
- Proper cutting edge for low hardness materials



Applications



Contents

Section		EDP No	Geometry	Product	Diameter(DC)		Page
Shape	Flute				Min	Max	
Square	2F	E302		2 Flutes Square End Mill	1	25	380
	4F	E304		4 Flutes Square End Mill	2	25	381
	2F	E322		2 Flutes Long Shank Square End Mill	3	20	382
	4F	E324		4 Flutes Long Shank Square End Mill	3	20	383
	2F	EL422		2 Flutes Long Extra Square End Mill	3	10	384
	2F	EB302-W		2 Flutes Brazed Square End Mill	14	50	385
	4F	EB304-W		4 Flutes Brazed Square End Mill	14	50	386
	2F	EB322-W		2 Flutes Brazed Long Shank Square End Mill	14	26	388
	4F	EB324-W		4 Flutes Brazed Long Shank Square End Mill	14	50	389
Ball	2F	B302		2 Flutes Ball End Mill	1	25	390
	4F	B304		4 Flutes Ball End Mill	3	25	391
	2F	BL422		2 Flutes Extra Long Ball End Mill	3	20	392
	2F	BB302-W		2 Flutes Brazed Ball End Mill	15	32	393

EDP No. System

*If expressed as an integer, the decimal point is omitted.

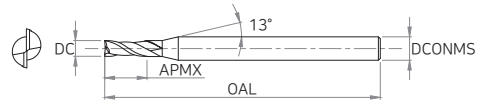


①	②	③	④	⑤	⑥
Section	Appearance	Length, Shank Type	Flutes	Cutting Dia	Shank Dia
E : Square	3 : Standard	0 : Regular Length	2 : 2 Flutes	1	3
B : Ball	4 : Long Length	2 : Long Length	4 : 4 Flutes	~	~
BL : Long Length Ball				50	42
EB : Brazed Square					
BB : Brazed Ball					

EX) 4 Flutes / Cutting Dia \varnothing 13 / Shank Dia 16 / Standard Type Square Endmill

E302 2 Flutes Square End Mill

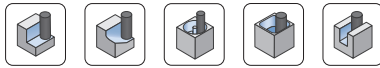
Endmill



► Tolerance

DC	Shank Dia
~ Ø3	0 ~ -0.04
Ø3.5 ~ Ø6	0 ~ -0.048
Ø6.5 ~ Ø10	0 ~ -0.058
Ø10.5 ~ Ø18	0 ~ -0.07
Ø20 ~	0 ~ -0.084

h6



EDP No	DC	APMX	OAL	DCONMS
E302 010S4	1	3	42	4
E302 010	1	3	42	6
E302 015S4	1.5	4	42	4
E302 015	1.5	4	42	6
E302 020S4	2	6	42	4
E302 020	2	6	42	6
E302 025S4	2.5	8	42	4
E302 025	2.5	8	42	6
E302 030	3	10	50	6
E302 035	3.5	10	50	6
E302 040	4	12	50	6
E302 045	4.5	14	50	6
E302 050	5	15	50	6
E302 055	5.5	15	50	6
E302 060	6	15	50	6
E302 065	6.5	18	60	8
E302 070	7	20	60	8
E302 075	7.5	20	60	8

EDP No	DC	APMX	OAL	DCONMS
E302 080	8	20	60	8
E302 085	8.5	23	70	10
E302 090	9	25	70	10
E302 095	9.5	25	70	10
E302 100	10	25	70	10
E302 105	10.5	28	75	12
E302 110	11	30	75	12
E302 115	11.5	30	75	12
E302 120	12	30	75	12
E302 130	13	35	85	14
E302 130S16	13	35	90	16
E302 140	14	35	85	14
E302 140S16	14	35	90	16
E302 150	15	40	90	16
E302 160	16	40	90	16
E302 180	18	45	100	18
E302 200	20	45	100	20
E302 250	25	50	120	25

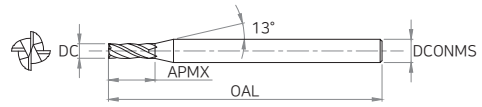
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FCD500					
		○	○							

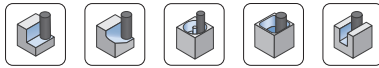
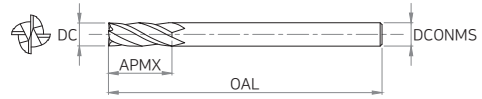
E304 4 Flutes Square End Mill

Endmill



► Tolerance

DC		Shank Dia h6
~ Ø3	0 ~ -0.04	
Ø3.5 ~ Ø6	0 ~ -0.048	
Ø6.5 ~ Ø10	0 ~ -0.058	
Ø10.5 ~ Ø18	0 ~ -0.07	
Ø20 ~	0 ~ -0.084	



EDP No	DC	APMX	OAL	DCONMS
E304 020S4	2	6	42	4
E304 020	2	6	42	6
E304 025	2.5	8	42	6
E304 030	3	10	50	6
E304 035	3.5	10	50	6
E304 040	4	12	50	6
E304 045	4.5	14	50	6
E304 050	5	15	50	6
E304 055	5.5	15	50	6
E304 060	6	15	50	6
E304 065	6.5	18	60	8
E304 070	7	20	60	8
E304 075	7.5	20	60	8
E304 080	8	20	60	8
E304 085	8.5	23	70	10
E304 090	9	25	70	10

EDP No	DC	APMX	OAL	DCONMS
E304 095	9.5	25	70	10
E304 100	10	25	70	10
E304 105	10.5	28	75	12
E304 110	11	30	75	12
E304 115	11.5	30	75	12
E304 120	12	30	75	12
E304 130	13	35	85	14
E304 130S16	13	35	90	16
E304 140	14	35	85	14
E304 140S16	14	35	90	16
E304 150	15	40	90	16
E304 160	16	40	90	16
E304 180	18	45	100	18
E304 200	20	45	100	20
E304 250	25	50	120	25

Zamus Star
E-Star
U-Wing
Zamus Thunder
X-Star
S-Wing
A-Wing
Standard

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

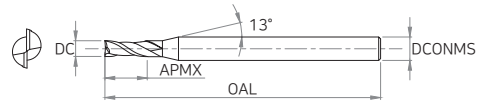
H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

Copper-Mate
Gra-Mate

E322

2 Flutes Long Shank Square End Mill

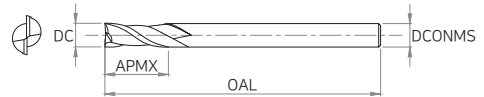
Endmill



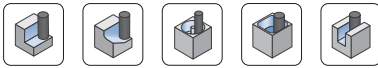
► Tolerance

DC	Shank Dia
~ Ø3	0 ~ -0.04
Ø4 ~ Ø6	0 ~ -0.048
Ø7 ~ Ø10	0 ~ -0.058
Ø12 ~ Ø18	0 ~ -0.07
Ø20 ~	0 ~ -0.084

h6



U-Wing



Zamus Thunder

EDP No	DC	APMX	OAL	DCONMS
E322 030	3	25	75	6
E322 040	4	25	75	6
E322 050	5	30	85	6
E322 060	6	30	85	6
E322 070	7	35	85	8
E322 080	8	35	85	8
E322 090	9	45	100	10
E322 100	10	45	100	10
E322 101	10	60	155	10
E322 120	12	55	120	12
E322 121	12	65	155	12
E322 140	14	60	120	14
E322 160	16	60	120	16
E322 161	16	75	165	16
E322 180	18	60	120	18
E322 200	20	60	120	20
E322 201	20	75	165	20

Gra -Mate

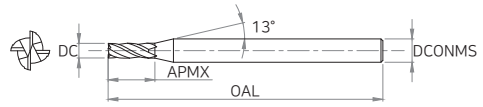
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	Steel HRC30~50	~FCD500					
		○	○							

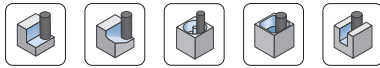
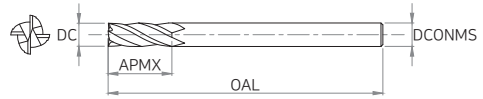
E324 4 Flutes Long Shank Square End Mill

Endmill



► Tolerance

DC		Shank Dia h6
~ Ø3	0 ~ -0.04	
Ø4 ~ Ø6	0 ~ -0.048	
Ø7 ~ Ø10	0 ~ -0.058	
Ø12 ~ Ø18	0 ~ -0.07	
Ø20 ~	0 ~ -0.084	



CARBIDE Bright 4 30° HELIX DATA P.734

EDP No	DC	APMX	OAL	DCONMS
E324 030	3	25	75	6
E324 040	4	25	75	6
E324 050	5	30	85	6
E324 060	6	30	85	6
E324 070	7	35	85	8
E324 080	8	35	85	8
E324 090	9	45	100	10
E324 100	10	45	100	10
E324 101	10	60	155	10
E324 120	12	55	120	12
E324 121	12	65	155	12
E324 140	14	60	120	14
E324 160	16	60	120	16
E324 161	16	75	165	16
E324 180	18	60	120	18
E324 200	20	60	120	20
E324 201	20	75	165	20

Zamus Star
E-Star
U-Wing
Zamus Thunder
X-Star
S-Wing
A-Wing
Standard
Copper-Mate
Gra-Mate

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

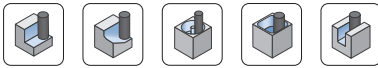
EL422

2 Flutes Long Extra Square End Mill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.04	h6
Ø4 ~ Ø6	0 ~ -0.048	
Ø8 ~ Ø10	0 ~ -0.058	



EDP No	DC	APMX	OAL	DCONMS
EL422 030	3	30	75	3
EL422 040	4	30	75	4
EL422 050	5	40	100	5
EL422 060	6	50	150	6
EL422 080	8	50	150	8
EL422 100	10	60	150	10

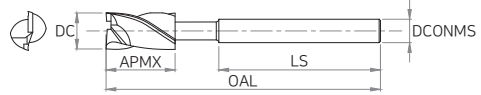
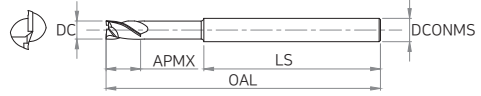
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

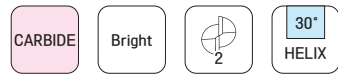
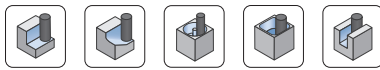
EB302-W 2 Flutes Brazen Square End Mill

Endmill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.05	h7



EDP No	DC	APMX	LS	OAL	DCON MS	EDP No	DC	APMX	LS	OAL	DCON MS
EB302 140W	14	28	60	98	16	EB302 270W	27	40	85	140	25
EB302 150W	15	28	60	98	16	EB302 280W	28	40	85	140	25
EB302 160W	16	28	60	98	16	EB302 290W	29	50	85	150	32
EB302 170W	17	32	70	115	20	EB302 300W	30	50	85	150	32
EB302 180W	18	32	70	115	20	EB302 310W	31	50	85	150	32
EB302 190W	19	32	70	115	20	EB302 320W	32	50	85	150	32
EB302 200W	20	32	70	115	20	EB302 350W	35	50	85	150	32
EB302 210W	21	32	70	115	20	EB302 360W	36	50	85	150	32
EB302 220W	22	32	70	115	20	EB302 380W	38	55	85	155	32
EB302 230W	23	40	85	140	25	EB302 400W	40	55	85	155	32
EB302 240W	24	40	85	140	25	EB302 420W	42	55	85	155	32
EB302 250W	25	40	85	140	25	EB302 450W	45	63	85	160	32
EB302 260W	26	40	85	140	25	EB302 500W	50	63	85	160	32

Zamus Star

E-Star

U-Wing

Zamus Thunder

X-Star

S-Wing

A-Wing

Standard

Copper-Mate

Gra-Mate

► Applicable Working Material

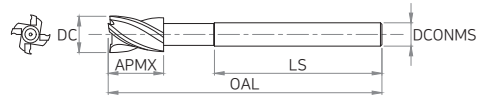
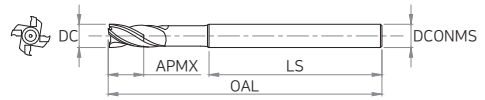
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

EB304-W

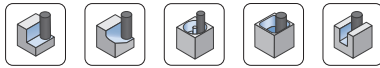
4 Flutes Brazed Square End Mill

Endmill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.05	h6



EDP No	DC	APMX	LS	OAL	DCONMS
EB304 140W	14	28	60	98	16
EB304 150W	15	28	60	98	16
EB304 160W	16	28	60	98	16
EB304 170W	17	32	70	115	20
EB304 180W	18	32	70	115	20
EB304 190W	19	32	70	115	20
EB304 200W	20	32	70	115	20
EB304 210W	21	32	70	115	20
EB304 220W	22	32	70	115	20
EB304 230W	23	40	85	140	25
EB304 240W	24	40	85	140	25
EB304 250W	25	40	85	140	25
EB304 260W	26	40	85	140	25
EB304 270W	27	40	85	140	25
EB304 280W	28	40	85	140	25
EB304 290W	29	50	85	150	32
EB304 300W	30	50	85	150	32
EB304 310W	31	50	85	150	32
EB304 320W	32	50	85	150	32
EB304 350W	35	50	85	150	32

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	Steel ~HB225	Alloy Steel HB225 ~325	Prehardened Steel HRc30~50	Cast Iron ~FCD500	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
		○	○							

EB304-W

4 Flutes Brazed Square End Mill

Endmill

EDP No	DC	APMX	LS	OAL	DCONMS
EB304 360W	36	50	85	150	32
EB304 380W	38	55	85	155	32
EB304 400W	40	55	85	155	32
EB304 420W	42	55	85	155	32
EB304 450W	45	63	85	160	32
EB304 500W	50	63	85	160	32

Zamus
Star

E-Star

U-Wing

Zamus
Thunder

X-Star

S-Wing

A-Wing

Standard

Copper
-Mate

Gra
-Mate

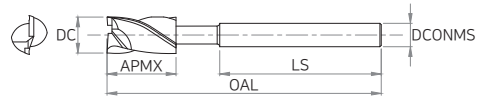
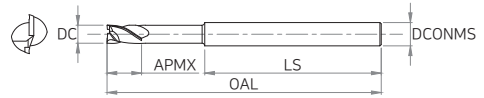
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		○	○							

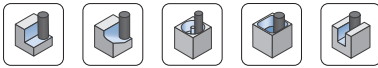
EB322-W

2 Flutes Brazed Long Shank Square End Mill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.05	h6



EDP No	DC	APMX	LS	OAL	DCONMS
EB322 140W	14	50	60	130	16
EB322 150W	15	50	60	130	16
EB322 160W	16	50	60	130	16
EB322 180W	18	60	60	140	20
EB322 200W	20	60	60	140	20
EB322 220W	22	60	60	140	20
EB322 240W	24	70	60	150	25
EB322 250W	25	70	60	150	25
EB322 260W	26	70	60	150	25
EB322 280W	28	70	60	150	25
EB322 300W	30	80	70	180	32
EB322 320W	32	90	70	190	32
EB322 350W	35	100	70	200	32
EB322 380W	38	100	70	220	32
EB322 400W	40	100	70	220	32
EB322 450W	46	120	80	230	32

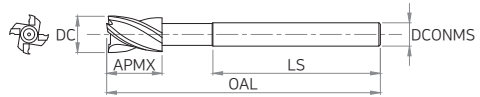
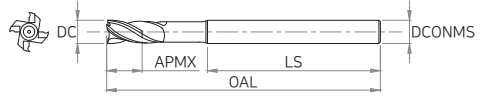
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

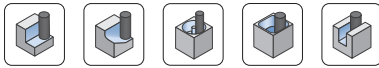
EB324-W

4 Flutes Brazed Long Shank Square End Mill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.05	h6



EDP No	DC	APMX	LS	OAL	DCONMS
EB324 140W	14	50	60	130	16
EB324 150W	15	50	60	130	16
EB324 160W	16	50	60	130	16
EB324 180W	18	60	60	140	20
EB324 200W	20	60	60	140	20
EB324 220W	22	60	60	140	20
EB324 240W	24	70	60	150	25
EB324 250W	25	70	60	150	25
EB324 260W	26	70	60	150	25
EB324 280W	28	70	60	150	25
EB324 300W	30	80	70	180	32
EB324 320W	32	90	70	190	32
EB324 350W	35	100	70	200	32
EB324 380W	38	100	70	220	32
EB324 400W	40	100	70	220	32
EB324 450W	45	120	80	230	32
EB324 500W	50	140	80	240	32

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

Endmill

Zamus Star

E-Star

U-Wing

Zamus Thunder

X-Star

S-Wing

A-Wing

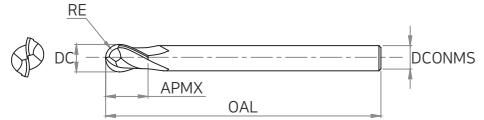
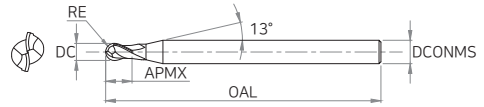
Standard

Copper-Mate

Gra-Mate

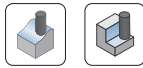
B302 2 Flutes Ball End Mill

Endmill



► Tolerance

DC	Shank Dia
Ø1 ~ Ø3	h6
Ø3.5 ~ Ø6	
Ø6.5 ~ Ø10	
Ø11 ~ Ø18	
Ø20 ~	



CARBIDE
Bright
2
30° HELIX
R ±0.02 All Sizes
DATA P.735

EDP No	DC	RE	APMX	OAL	DCONMS
B302 010	1	0.5	3	50	6
B302 015	1.5	0.75	4	50	6
B302 020	2	1	6	60	6
B302 025	2.5	1.25	6	60	6
B302 030	3	1.5	8	70	6
B302 035	3.5	1.75	8	70	6
B302 040	4	2	8	70	6
B302 045	4.5	2.25	10	70	6
B302 050	5	2.5	12	80	6
B302 055	5.5	2.75	12	80	6
B302 060	6	3	12	90	6
B302 065	6.5	3.25	12	90	8
B302 070	7	3.5	20	90	8

EDP No	DC	RE	APMX	OAL	DCONMS
B302 080	8	4	20	100	8
B302 090	9	4.5	25	100	10
B302 100	10	5	25	100	10
B302 110	11	5.5	30	110	12
B302 120	12	6	30	110	12
B302 130	13	6.5	35	120	14
B302 140	14	7	35	120	14
B302 150	15	7.5	40	140	16
B302 160	16	8	40	140	16
B302 180	18	9	45	150	18
B302 200	20	10	45	160	20
B302 250	25	12.5	50	180	25

Zamus Star

E-Star

U-Wing

Zamus Thunder

X-Star

S-Wing

A-Wing

Standard

Copper -Mate

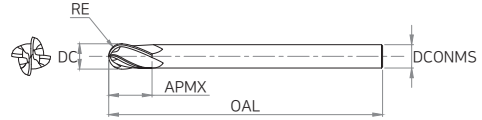
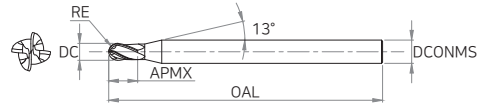
Gra -Mate

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

B304 4 Flutes Ball End Mill



► Tolerance

DC		Shank Dia h6
~ Ø3	0 ~ -0.04	
Ø4 ~ Ø6	0 ~ -0.048	
Ø7 ~ Ø10	0 ~ -0.058	
Ø11 ~ Ø18	0 ~ -0.07	
Ø20 ~	0 ~ -0.084	



CARBIDE
Bright
4
30° HELIX
R ±0.02 All Sizes
DATA P.735

EDP No	DC	RE	APMX	OAL	DCONMS
B304 030	3	1.5	8	70	6
B304 040	4	2	8	70	6
B304 050	5	2.5	12	80	6
B304 060	6	3	12	90	6
B304 070	7	3.5	20	90	8
B304 080	8	4	20	100	8
B304 090	9	4.5	25	100	10
B304 100	10	5	25	100	10
B304 110	11	5.5	30	110	12
B304 120	12	6	30	110	12
B304 130	13	6.5	35	120	14
B304 140	14	7	35	120	14
B304 150	15	7.5	40	140	16
B304 160	16	8	40	140	16
B304 180	18	9	45	150	18
B304 200	20	10	45	160	20
B304 250	25	12.5	50	180	25

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

Endmill

Zamus Star

E-Star

U-Wing

Zamus Thunder

X-Star

S-Wing

A-Wing

Standard

Copper-Mate

Gra-Mate

BL422 2 Flutes Extra Long Ball End Mill

Endmill



► Tolerance

DC	Shank Dia
~ Ø3	0 ~ -0.04
Ø4 ~ Ø6	0 ~ -0.048
Ø8 ~ Ø10	0 ~ -0.058
Ø12 ~ Ø18	0 ~ -0.07
Ø20 ~	0 ~ -0.084

h6

Zamus Star

E-Star

U-Wing



CARBIDE
Bright
2
30° HELIX
R ±0.02
DATA P.735

All Sizes

Zamus Thunder

X-Star

S-Wing

A-Wing

EDP No	DC	RE	APMX	OAL	DCONMS
BL422 030	3	1.5	30	75	3
BL422 040	4	2	30	75	4
BL422 050	5	2.5	40	100	5
BL422 060	6	3	50	150	6
BL422 080	8	4	50	150	8
BL422 090	9	4.5	60	150	10
BL422 100	10	5	60	150	10
BL422 120	12	6	75	150	12
BL422 140	14	7	75	150	14
BL422 160	16	8	75	150	16
BL422 180	18	9	75	150	18
BL422 200	20	10	75	150	20

Standard

Copper -Mate

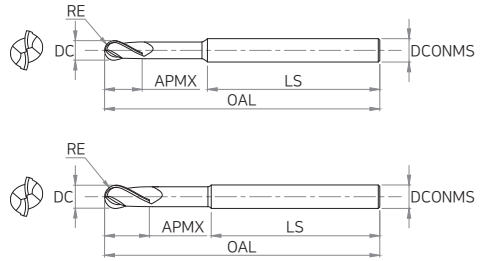
Gra -Mate

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FC500					
		○	○							

BB302-W 2 Flutes Brazen Ball End Mill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.05	h7



EDP No	DC	RE	APMX	LS	OAL	DCONMS
BB302 150W	15	7.5	28	55	100	16
BB302 160W	16	8	28	55	100	16
BB302 180W	18	9	29	55	110	20
BB302 200W	20	10	29	55	110	20
BB302 220W	22	11	36	60	110	25
BB302 240W	24	12	37	60	110	25
BB302 250W	25	12.5	38	60	120	25
BB302 280W	28	14	40	65	120	32
BB302 300W	30	15	46	65	130	32
BB302 320W	32	16	47	65	140	32

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	○							

Endmill

Zamus Star

E-Star

U-Wing

Zamus Thunder

X-Star

S-Wing

A-Wing

Standard

Copper-Mate

Gra-Mate