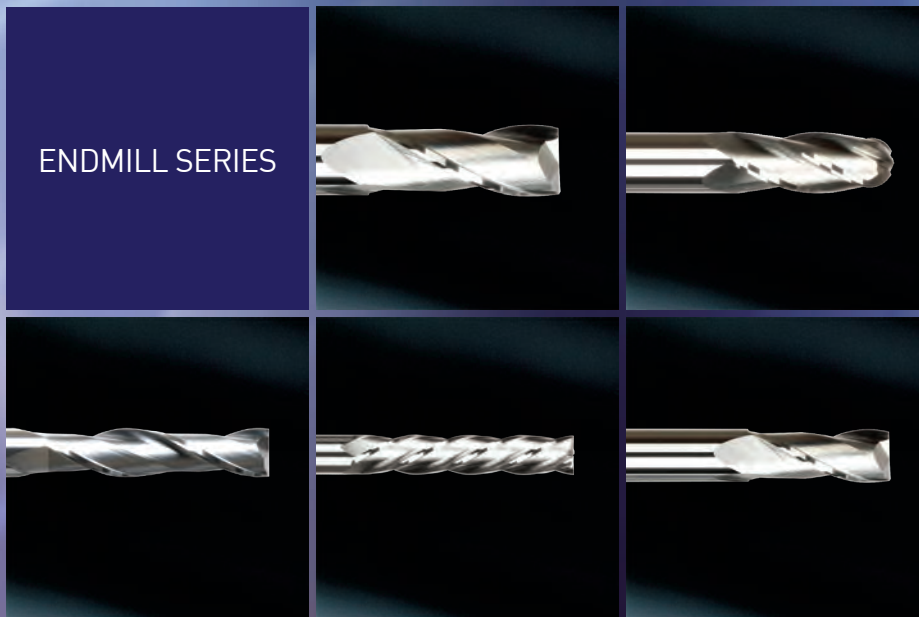














Standard End Mill Series



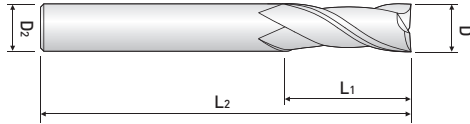
Standard End Mill Series



EDP. No.	APPEARANCE	FEATURE	STOCK	PAGE
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E322 ...series		2 FLUTE, LONG LENGTH	•	241
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2 FLUTE, REGULAR LENGTH



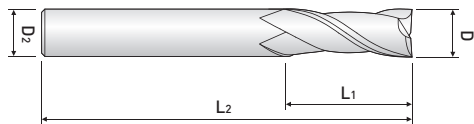
E302 ...series



EDP. No.	Dia.	L ₁	L ₂	D ₂	STOCK
E302010S4	1	3	42	4	•
E302010				6	•
E302015S4	1.5	4	42	4	•
E302015				6	•
E302020S4	2	6	42	4	•
E302020				6	•
E302025S4	2.5	8	42	4	•
E302025				6	•
E302030	3	10	50	6	•
E302035	3.5	10	50	6	•
E302040	4	12	50	6	•
E302045	4.5	14	50	6	•
E302050	5	15	50	6	•
E302055	5.5	15	50	6	•
E302060	6	15	50	6	•
E302065	6.5	18	60	8	•
E302070	7	20	60	8	•
E302075	7.5	20	60	8	•
E302080	8	20	60	8	•
E302085	8.5	23	70	10	•
E302090	9	25	70	10	•
E302095	9.5	25	70	10	•
E302100	10	25	70	10	•
E302105	10.5	28	75	12	•
E302110	11	30	75	12	•



2 FLUTE, REGULAR LENGTH



E302 ...series



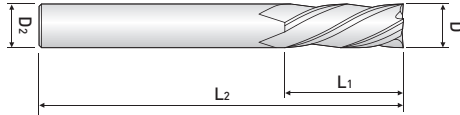
EDP. No.	Dia.	L ₁	L ₂	D ₂	STOCK
E302115	11.5	30	75	12	•
E302120	12	30	75	12	•
E302130	13	35	85	14	•
E302130S16			90	16	•
E302140	14	35	85	14	•
E302140S16			90	16	•
E302150	15	40	90	16	•
E302160	16	40	90	16	•
E302180	18	45	100	18	•
E302200	20	45	100	20	•
E302250	25	50	120	25	•

■ Tolerance μm = 1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



4 FLUTE, REGULAR LENGTH



E304 ...series



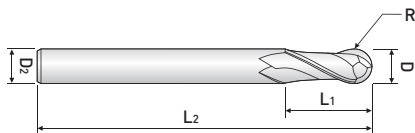
EDP. No.	Dia.	L1	L2	D2	STOCK
E304020S4	2	6	42	4	•
E304020				6	•
E304025	2.5	8	42	6	•
E304030	3	10	50	6	•
E304035	3.5	10	50	6	•
E304040	4	12	50	6	•
E304045	4.5	14	50	6	•
E304050	5	15	50	6	•
E304055	5.5	15	50	6	•
E304060	6	15	50	6	•
E304065	6.5	18	60	8	•
E304070	7	20	60	8	•
E304075	7.5	20	60	8	•
E304080	8	20	60	8	•
E304085	8.5	23	70	10	•
E304090	9	25	70	10	•
E304095	9.5	25	70	10	•
E304100	10	25	70	10	•
E304105	10.5	28	75	12	•
E304110	11	30	75	12	•
E304115	11.5	30	75	12	•
E304120	12	30	75	12	•
E304130	13	35	85	14	•
E304130S16			90	16	•
E304140	14	35	85	14	•
E304140S16			90	16	•
E304150	15	40	90	16	•
E304160	16	40	90	16	•
E304180	18	45	100	18	•
E304200	20	45	100	20	•
E304250	25	50	120	25	•

■ Tolerance μm = 1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



2 FLUTE, BALL NOSE LONG LENGTH



B302 ...series



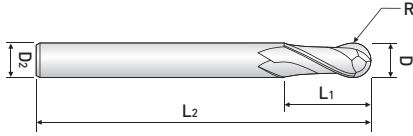
EDP. No.	Dia.	R	L ₁	L ₂	D ₂	STOCK
B302010	1	0.5	3	50	6	•
B302015	1.5	0.75	4	50	6	•
B302020	2	1	6	60	6	•
B302025	2.5	1.25	6	60	6	•
B302030	3	1.5	8	70	6	•
B302035	3.5	1.75	8	70	6	•
B302040	4	2	8	70	6	•
B302045	4.5	2.25	10	70	6	•
B302050	5	2.5	12	80	6	•
B302055	5.5	2.75	12	80	6	•
B302060	6	3	12	90	6	•
B302065	6.5	3.25	12	90	8	•
B302070	7	3.5	20	90	8	•
B302080	8	4	20	100	8	•
B302090	9	4.5	25	100	10	•
B302100	10	5	25	100	10	•
B302110	11	5.5	30	110	12	•
B302120	12	6	30	110	12	•
B302130	13	6.5	35	120	14	•
B302140	14	7	35	120	14	•
B302150	15	7.5	40	140	16	•
B302160	16	8	40	140	16	•
B302180	18	9	45	150	18	•
B302200	20	10	45	160	20	•
B302250	25	12.5	50	180	25	•

■ Tolerance μm = 1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



2 FLUTE, BALL NOSE EXTRA LONG LENGTH



BL422 ...series



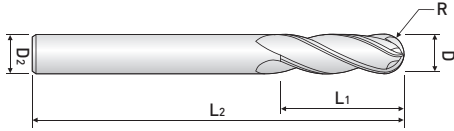
EDP. No.	Dia.	R	L ₁	L ₂	D ₂	STOCK
BL422030	3	1.5	30	75	3	•
BL422040	4	2	30	75	4	•
BL422050	5	2.5	40	100	5	•
BL422060	6	3	50	150	6	•
BL422080	8	4	50	150	8	•
BL422100	10	5	60	150	10	•
BL422120	12	6	75	150	12	•
BL422140	14	7	75	150	14	•
BL422160	16	8	75	150	16	•
BL422180	18	9	75	150	18	•
BL422200	20	10	75	150	20	•

■ Tolerance μm = 1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



4 FLUTE, BALL NOSE LONG LENGTH



B304 ...series



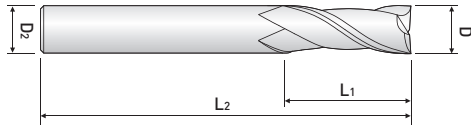
EDP. No.	Dia.	R	L ₁	L ₂	D ₂	STOCK
B304030	3	1.5	8	70	6	•
B304040	4	2	8	70	6	•
B304050	5	2.5	12	80	6	•
B304060	6	3	12	90	6	•
B304070	7	3.5	20	90	8	•
B304080	8	4	20	100	8	•
B304090	9	4.5	25	100	10	•
B304100	10	5	25	100	10	•
B304110	11	5.5	30	110	12	•
B304120	12	6	30	110	12	•
B304130	13	6.5	35	120	14	•
B304140	14	7	35	120	14	•
B304150	15	7.5	40	140	16	•
B304160	16	8	40	140	16	•
B304180	18	9	45	150	18	•
B304200	20	10	45	160	20	•
B304250	25	12.5	50	180	25	•

■ Tolerance μm = 1/1000mm

Tolerance	Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0	0	0	0	0	0
	-40	-48	-58	-70	-84	
Shank(h6)	0	0	0	0	0	0
	-6	-8	-9	-11	-13	



2 FLUTE, LONG LENGTH



E322 ...series



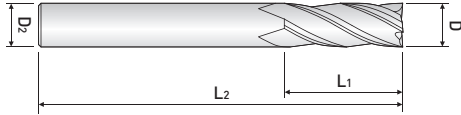
EDP. No.	Dia.	L ₁	L ₂	D ₂	STOCK
E322030	3	25	75	6	•
E322040	4	25	75	6	•
E322050	5	30	85	6	•
E322060	6	30	85	6	•
E322070	7	35	85	8	•
E322080	8	35	85	8	•
E322090	9	45	100	10	•
E322100	10	45	100	10	•
E322101		60	155		•
E322120	12	55	120	12	•
E322121		65	155		•
E322140	14	60	120	14	•
E322160	16	60	120	16	•
E322161		75	165		•
E322180	18	60	120	18	•
E322200	20	60	120	20	•
E322201		75	165		•

■ Tolerance μm = 1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



4 FLUTE, LONG LENGTH



E324 ...series



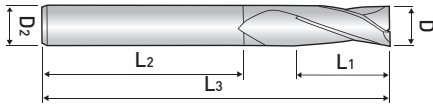
EDP. No.	D	L ₁	L ₂	D ₂	STOCK
E324030	3	25	75	6	•
E324040	4	25	75	6	•
E324050	5	30	85	6	•
E324060	6	30	85	6	•
E324070	7	35	85	8	•
E324080	8	35	85	8	•
E324090	9	45	100	10	•
E324100	10	45	100	10	•
E324101		60	155		•
E324120	12	55	120	12	•
E324121		65	155		•
E324140	14	60	120	14	•
E324160	16	60	120	16	•
E324161		75	165		•
E324180	18	60	120	18	•
E324200	20	60	120	20	•
E324201		75	165		•

■ Tolerance μm=1/1000mm

Tolerance \ Dia.	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
Cutting Edge(h10)	0 -40	0 -48	0 -58	0 -70	0 -84
Shank(h6)	0 -6	0 -8	0 -9	0 -11	0 -13



2 FLUTE, REGULAR LENGTH - BRAZED TYPE



EB302 ...series

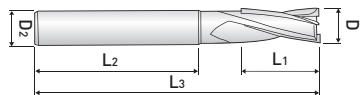


EDP. No.	D	L ₁	L ₂	L ₃	D ₂	STOCK
EB302140	14	28	60	98	16	•
EB302150	15	28	60	98	16	•
EB302160	16	28	60	98	16	•
EB302170	17	32	70	115	20	•
EB302180	18	32	70	115	20	•
EB302190	19	32	70	115	20	•
EB302200	20	32	70	115	20	•
EB302210	21	32	70	115	20	•
EB302220	22	32	70	115	20	•
EB302230	23	40	85	140	25	•
EB302240	24	40	85	140	25	•
EB302250	25	40	85	140	25	•
EB302260	26	40	85	140	25	•
EB302270	27	40	85	140	25	•
EB302280	28	40	85	140	25	•
EB302290	29	50	85	150	32	•
EB302300	30	50	85	150	32	•
EB302310	31	50	85	150	32	•
EB302320	32	50	85	150	32	•
EB302350	35	50	85	150	32	•
EB302360	36	50	85	150	32	•
EB302380	38	55	85	155	32	•
EB302400	40	55	85	155	32	•
EB302420	42	55	85	155	32	•
EB302450	45	63	85	160	32	•
EB302500	50	63	85	160	32	•

■ Tolerance

Mill Dia. (mm)	Shank Dia.
0 ~ -0,05	h7

※ Items can be changed for quality improvement without notice.



4 FLUTE, REGULAR LENGTH - BRAZED TYPE

EB304 ...series

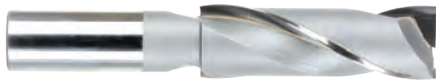


EDP. No.	D	L ₁	L ₂	L ₃	D ₂	STOCK
EB304140	14	28	60	98	16	•
EB304150	15	28	60	98	16	•
EB304160	16	28	60	98	16	•
EB304170	17	32	70	115	20	•
EB304180	18	32	70	115	20	•
EB304190	19	32	70	115	20	•
EB304200	20	32	70	115	20	•
EB304210	21	32	70	115	20	•
EB304220	22	32	70	115	20	•
EB304230	23	40	85	140	25	•
EB304240	24	40	85	140	25	•
EB304250	25	40	85	140	25	•
EB304260	26	40	85	140	25	•
EB304270	27	40	85	140	25	•
EB304280	28	40	85	140	25	•
EB304290	29	50	85	150	32	•
EB304300	30	50	85	150	32	•
EB304310	31	50	85	150	32	•
EB304320	32	50	85	150	32	•
EB304350	35	50	85	150	32	•
EB304360	36	50	85	150	32	•
EB304380	38	55	85	155	32	•
EB304400	40	55	85	155	32	•
EB304420	42	55	85	155	32	•
EB304450	45	63	85	160	32	•
EB304500	50	63	85	160	32	•

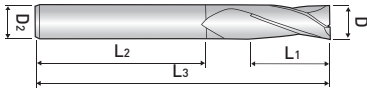
■ Tolerance

Mill Dia. (mm)	Shank Dia.
0 ~ -0,05	h7

※ Items can be changed for quality improvement without notice.



2 FLUTE, LONG LENGTH - BRAZED TYPE



EB322 ...series



EDP. No.	D	L ₁	L ₂	L ₃	D ₂	STOCK
EB322140	14	50	60	130	16	•
EB322150	15	50	60	130	16	•
EB322160	16	50	60	130	16	•
EB322180	18	60	60	140	20	•
EB322200	20	60	60	140	20	•
EB322220	22	60	60	140	20	•
EB322240	24	70	60	150	25	•
EB322250	25	70	60	150	25	•
EB322260	26	70	60	150	25	•
EB322280	28	70	60	150	25	•
EB322300	30	80	70	180	32	•
EB322320	32	90	70	190	32	•
EB322350	35	100	70	200	32	•
EB322380	38	100	70	220	32	•
EB322400	40	100	70	220	32	•
EB322450	45	120	80	230	32	•

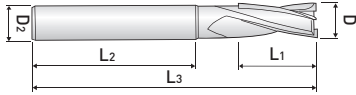
■ Tolerance

Mill Dia. (mm)	Shank Dia.
0 ~ -0,05	h7

※ Items can be changed for quality improvement without notice.



4 FLUTE, LONG LENGTH - BRAZED TYPE



EB324 ...series

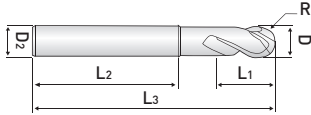


EDP. No.	D	L ₁	L ₂	L ₃	D ₂	STOCK
EB324140	14	50	60	130	16	•
EB324150	15	50	60	130	16	•
EB324160	16	50	60	130	16	•
EB324180	18	60	60	140	20	•
EB324200	20	60	60	140	20	•
EB324220	22	60	60	140	20	•
EB324240	24	70	60	150	25	•
EB324250	25	70	60	150	25	•
EB324260	26	70	60	150	25	•
EB324280	28	70	60	150	25	•
EB324300	30	80	70	180	32	•
EB324320	32	90	70	190	32	•
EB324350	35	100	70	200	32	•
EB324380	38	100	70	220	32	•
EB324400	40	100	70	220	32	•
EB324450	45	120	80	230	32	•
EB324500	50	140	80	240	32	•

■ Tolerance

Mill Dia. (mm)	Shank Dia.
0 ~ -0.05	h7

※Items can be changed for quality improvement without notice.



**2 FLUTE, BALL NOSE REGULAR LENGTH
- BRAZED TYPE**

BB302 ...series



EDP. No.	D	R	L ₁	L ₂	L ₃	D ₂	STOCK
BB302150	15	7.5	28	55	100	16	•
BB302160	16	8	28	55	100	16	•
BB302180	18	9	29	55	110	20	•
BB302200	20	10	29	55	110	20	•
BB302220	22	11	36	60	110	25	•
BB302240	24	12	37	60	110	25	•
BB302250	25	12.5	38	60	120	25	•
BB302280	28	14	40	65	120	32	•
BB302300	30	15	46	65	130	32	•
BB302320	32	16	47	65	140	32	•

■ Tolerance

Mill Dia. (mm)	Shank Dia.
0 ~ -0,05	h7

※Items can be changed for quality improvement without notice.