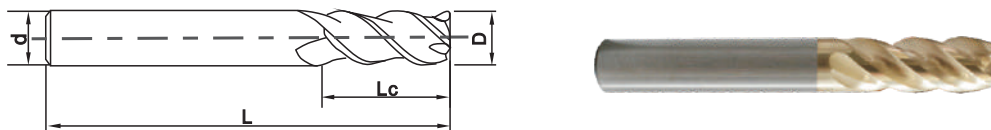


Variable Lead Square End Mill(HRC48)



2 FLUTES SQUARE [1.5D]



 2 Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-2F-1.5D	1.0	4	1.5	50	2	\$21.30
TOTIME3538-MS015S-50-2F-1.5D	1.5	4	2.3	50	2	\$21.30
TOTIME3538-MS020S-50-2F-1.5D	2.0	4	3.0	50	2	\$21.30
TOTIME3538-MS030S-50-2F-1.5D	3.0	4	4.5	50	2	\$21.30
TOTIME3538-MS040S-50-2F-1.5D	4.0	4	6.0	50	2	\$21.30
TOTIME3538-MS040S-75-2F-1.5D	4.0	4	6.0	75	2	\$29.40
TOTIME3538-MS050S-50-2F-1.5D	5.0	6	7.5	50	2	\$30.10
TOTIME3538-MS060S-50-2F-1.5D	6.0	6	9.0	50	2	\$30.10
TOTIME3538-MS060S-75-2F-1.5D	6.0	6	9.0	75	2	\$41.70
TOTIME3538-MS060S-100-2F-1.5D	6.0	6	9.0	100	2	\$53.30
TOTIME3538-MS080S-60-2F-1.5D	8.0	8	12.0	60	2	\$53.30
TOTIME3538-MS080S-75-2F-1.5D	8.0	8	12.0	75	2	\$65.60
TOTIME3538-MS080S-100-2F-1.5D	8.0	8	12.0	100	2	\$79.40
TOTIME3538-MS100S-75-2F-1.5D	10.0	10	15.0	75	2	\$75.10
TOTIME3538-MS100S-100-2F-1.5D	10.0	10	15.0	100	2	\$97.90
TOTIME3538-MS120S-75-2F-1.5D	12.0	12	18.0	75	2	\$108.20
TOTIME3538-MS120S-100-2F-1.5D	12.0	12	18.0	100	2	\$137.10
TOTIME3538-MS160S-100-2F-1.5D	16.0	16	24.0	100	2	\$249.80
TOTIME3538-MS160S-150-2F-1.5D	16.0	16	24.0	150	2	\$346.00
TOTIME3538-MS200S-100-2F-1.5D	20.0	20	30.0	100	2	\$425.60
TOTIME3538-MS200S-150-2F-1.5D	20.0	20	30.0	150	2	\$498.40

Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87~P.88

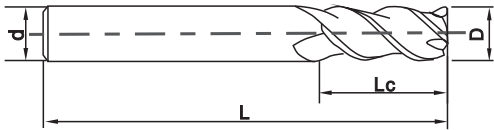


Carbide End Mill Cutter
For Stainless Steels,Heat Resistant Material,Titanium Alloys

Variable Lead Square End Mill(HRC48)



2 FLUTES SQUARE [2.5D]



 2 Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-2F-2.5D	1.0	4	2.5	50	2	\$21.30
TOTIME3538-MS015S-50-2F-2.5D	1.5	4	3.8	50	2	\$21.30
TOTIME3538-MS020S-50-2F-2.5D	2.0	4	5.0	50	2	\$21.30
TOTIME3538-MS030S-50-2F-2.5D	3.0	4	8.0	50	2	\$21.30
TOTIME3538-MS040S-50-2F-2.5D	4.0	4	10.0	50	2	\$21.30
TOTIME3538-MS040S-75-2F-2.5D	4.0	4	10.0	75	2	\$29.40
TOTIME3538-MS050S-50-2F-2.5D	5.0	6	12.0	50	2	\$30.10
TOTIME3538-MS060S-50-2F-2.5D	6.0	6	15.0	50	2	\$30.10
TOTIME3538-MS060S-75-2F-2.5D	6.0	6	15.0	75	2	\$41.70
TOTIME3538-MS060S-100-2F-2.5D	6.0	6	15.0	100	2	\$53.30
TOTIME3538-MS080S-60-2F-2.5D	8.0	8	20.0	60	2	\$53.30
TOTIME3538-MS080S-75-2F-2.5D	8.0	8	20.0	75	2	\$65.60
TOTIME3538-MS080S-100-2F-2.5D	8.0	8	20.0	100	2	\$79.40
TOTIME3538-MS100S-75-2F-2.5D	10.0	10	25.0	75	2	\$75.10
TOTIME3538-MS100S-100-2F-2.5D	10.0	10	25.0	100	2	\$97.90
TOTIME3538-MS120S-75-2F-2.5D	12.0	12	30.0	75	2	\$108.20
TOTIME3538-MS120S-100-2F-2.5D	12.0	12	30.0	100	2	\$137.10
TOTIME3538-MS160S-100-2F-2.5D	16.0	16	40.0	100	2	\$249.80
TOTIME3538-MS160S-150-2F-2.5D	16.0	16	40.0	150	2	\$346.00
TOTIME3538-MS200S-100-2F-2.5D	20.0	20	50.0	100	2	\$425.60
TOTIME3538-MS200S-150-2F-2.5D	20.0	20	50.0	150	2	\$498.40

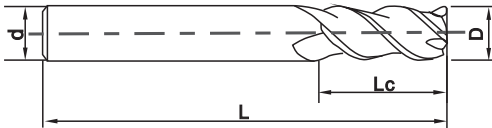
Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87~P.88

Variable Lead Square End Mill(HRC48)



2 FLUTES SQUARE [3D]



 2 Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-2F-3D	1.0	4	3.0	50	2	\$21.30
TOTIME3538-MS015S-50-2F-3D	1.5	4	4.5	50	2	\$21.30
TOTIME3538-MS020S-50-2F-3D	2.0	4	6.0	50	2	\$21.30
TOTIME3538-MS030S-50-2F-3D	3.0	4	9.0	50	2	\$21.30
TOTIME3538-MS040S-50-2F-3D	4.0	4	12.0	50	2	\$21.30
TOTIME3538-MS040S-75-2F-3D	4.0	4	12.0	75	2	\$29.40
TOTIME3538-MS050S-50-2F-3D	5.0	6	15.0	50	2	\$30.10
TOTIME3538-MS060S-50-2F-3D	6.0	6	18.0	50	2	\$30.10
TOTIME3538-MS060S-75-2F-3D	6.0	6	18.0	75	2	\$41.70
TOTIME3538-MS060S-100-2F-3D	6.0	6	18.0	100	2	\$53.30
TOTIME3538-MS080S-60-2F-3D	8.0	8	24.0	60	2	\$53.30
TOTIME3538-MS080S-75-2F-3D	8.0	8	24.0	75	2	\$65.60
TOTIME3538-MS080S-100-2F-3D	8.0	8	24.0	100	2	\$79.40
TOTIME3538-MS100S-75-2F-3D	10.0	10	30.0	75	2	\$75.10
TOTIME3538-MS100S-100-2F-3D	10.0	10	30.0	100	2	\$97.90
TOTIME3538-MS120S-75-2F-3D	12.0	12	36.0	75	2	\$108.20
TOTIME3538-MS120S-100-2F-3D	12.0	12	36.0	100	2	\$137.10
TOTIME3538-MS160S-100-2F-3D	16.0	16	48.0	100	2	\$249.80
TOTIME3538-MS160S-150-2F-3D	16.0	16	48.0	150	2	\$346.00
TOTIME3538-MS200S-100-2F-3D	20.0	20	60.0	100	2	\$425.60
TOTIME3538-MS200S-150-2F-3D	20.0	20	60.0	150	2	\$498.40

Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87~P.88

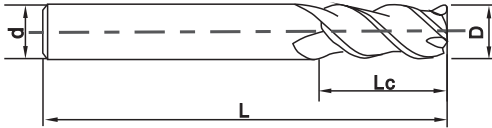


Carbide End Mill Cutter
For Stainless Steels,Heat Resistant Material,Titanium Alloys

Variable Lead Square End Mill(HRC48)



2 FLUTES SQUARE [5D]



 2 Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-2F-5D	1.0	4	5.0	50	2	\$21.30
TOTIME3538-MS015S-50-2F-5D	1.5	4	7.5	50	2	\$21.30
TOTIME3538-MS020S-50-2F-5D	2.0	4	10.0	50	2	\$21.30
TOTIME3538-MS030S-50-2F-5D	3.0	4	15.0	50	2	\$21.30
TOTIME3538-MS040S-50-2F-5D	4.0	4	20.0	50	2	\$21.30
TOTIME3538-MS040S-75-2F-5D	4.0	4	20.0	75	2	\$29.40
TOTIME3538-MS050S-50-2F-5D	5.0	6	25.0	50	2	\$30.10
TOTIME3538-MS060S-75-2F-5D	6.0	6	30.0	75	2	\$41.70
TOTIME3538-MS060S-100-2F-5D	6.0	6	30.0	100	2	\$53.30
TOTIME3538-MS080S-100-2F-5D	8.0	8	40.0	100	2	\$79.40
TOTIME3538-MS100S-150-2F-5D	10.0	10	50.0	150	2	\$136.20
TOTIME3538-MS120S-150-2F-5D	12.0	12	60.0	150	2	\$172.10
TOTIME3538-MS160S-150-2F-5D	16.0	16	80.0	150	2	\$346.00
TOTIME3538-MS200S-200-2F-5D	20.0	20	100.0	200	2	\$664.10

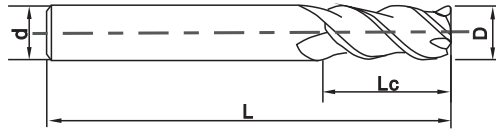
Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87~P.88

Variable Lead Square End Mill(HRC48)



4 FLUTES SQUARE [1.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-4F-1.5D	1.0	4	1.5	50	4	\$21.30
TOTIME3538-MS015S-50-4F-1.5D	1.5	4	2.3	50	4	\$21.30
TOTIME3538-MS020S-50-4F-1.5D	2.0	4	3.0	50	4	\$21.30
TOTIME3538-MS030S-50-4F-1.5D	3.0	4	4.5	50	4	\$21.30
TOTIME3538-MS040S-50-4F-1.5D	4.0	4	6.0	50	4	\$21.30
TOTIME3538-MS040S-75-4F-1.5D	4.0	4	6.0	75	4	\$29.40
TOTIME3538-MS050S-50-4F-1.5D	5.0	6	7.5	50	4	\$30.10
TOTIME3538-MS060S-50-4F-1.5D	6.0	6	9.0	50	4	\$30.10
TOTIME3538-MS060S-75-4F-1.5D	6.0	6	9.0	75	4	\$41.70
TOTIME3538-MS060S-100-4F-1.5D	6.0	6	9.0	100	4	\$53.30
TOTIME3538-MS080S-60-4F-1.5D	8.0	8	12.0	60	4	\$53.30
TOTIME3538-MS080S-75-4F-1.5D	8.0	8	12.0	75	4	\$65.60
TOTIME3538-MS080S-100-4F-1.5D	8.0	8	12.0	100	4	\$79.40
TOTIME3538-MS100S-75-4F-1.5D	10.0	10	15.0	75	4	\$75.10
TOTIME3538-MS100S-100-4F-1.5D	10.0	10	15.0	100	4	\$97.90
TOTIME3538-MS120S-75-4F-1.5D	12.0	12	18.0	75	4	\$108.20
TOTIME3538-MS120S-100-4F-1.5D	12.0	12	18.0	100	4	\$137.10
TOTIME3538-MS160S-100-4F-1.5D	16.0	16	24.0	100	4	\$249.80
TOTIME3538-MS160S-150-4F-1.5D	16.0	16	24.0	150	4	\$346.00
TOTIME3538-MS200S-100-4F-1.5D	20.0	20	30.0	100	4	\$425.60
TOTIME3538-MS200S-150-4F-1.5D	20.0	20	30.0	150	4	\$498.40

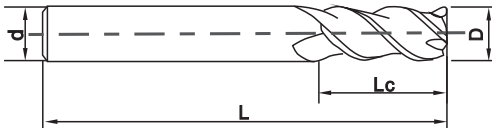
Tolerance: D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Square End Mill(HRC48)



4 FLUTES SQUARE [2.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-4F-2.5D	1.0	4	2.5	50	4	\$21.30
TOTIME3538-MS015S-50-4F-2.5D	1.5	4	3.8	50	4	\$21.30
TOTIME3538-MS020S-50-4F-2.5D	2.0	4	5.0	50	4	\$21.30
TOTIME3538-MS030S-50-4F-2.5D	3.0	4	8.0	50	4	\$21.30
TOTIME3538-MS040S-50-4F-2.5D	4.0	4	10.0	50	4	\$21.30
TOTIME3538-MS040S-75-4F-2.5D	4.0	4	10.0	75	4	\$29.40
TOTIME3538-MS050S-50-4F-2.5D	5.0	6	12.0	50	4	\$30.10
TOTIME3538-MS060S-50-4F-2.5D	6.0	6	15.0	50	4	\$30.10
TOTIME3538-MS060S-75-4F-2.5D	6.0	6	15.0	75	4	\$41.70
TOTIME3538-MS060S-100-4F-2.5D	6.0	6	15.0	100	4	\$53.30
TOTIME3538-MS080S-60-4F-2.5D	8.0	8	20.0	60	4	\$53.30
TOTIME3538-MS080S-75-4F-2.5D	8.0	8	20.0	75	4	\$65.60
TOTIME3538-MS080S-100-4F-2.5D	8.0	8	20.0	100	4	\$79.40
TOTIME3538-MS100S-75-4F-2.5D	10.0	10	25.0	75	4	\$75.10
TOTIME3538-MS100S-100-4F-2.5D	10.0	10	25.0	100	4	\$97.90
TOTIME3538-MS120S-75-4F-2.5D	12.0	12	30.0	75	4	\$108.20
TOTIME3538-MS120S-100-4F-2.5D	12.0	12	30.0	100	4	\$137.10
TOTIME3538-MS160S-100-4F-2.5D	16.0	16	40.0	100	4	\$249.80
TOTIME3538-MS160S-150-4F-2.5D	16.0	16	40.0	150	4	\$346.00
TOTIME3538-MS200S-100-4F-2.5D	20.0	20	50.0	100	4	\$425.60
TOTIME3538-MS200S-150-4F-2.5D	20.0	20	50.0	150	4	\$498.40

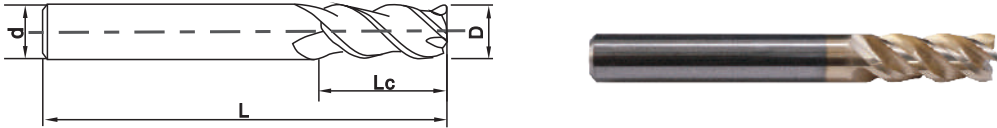
Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Square End Mill(HRC48)



4 FLUTES SQUARE [3D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-4F-3D	1.0	4	3.0	50	4	\$21.30
TOTIME3538-MS015S-50-4F-3D	1.5	4	4.5	50	4	\$21.30
TOTIME3538-MS020S-50-4F-3D	2.0	4	6.0	50	4	\$21.30
TOTIME3538-MS030S-50-4F-3D	3.0	4	9.0	50	4	\$21.30
TOTIME3538-MS040S-50-4F-3D	4.0	4	12.0	50	4	\$21.30
TOTIME3538-MS040S-75-4F-3D	4.0	4	12.0	75	4	\$29.40
TOTIME3538-MS050S-50-4F-3D	5.0	6	15.0	50	4	\$30.10
TOTIME3538-MS060S-50-4F-3D	6.0	6	18.0	50	4	\$30.10
TOTIME3538-MS060S-75-4F-3D	6.0	6	18.0	75	4	\$41.70
TOTIME3538-MS060S-100-4F-3D	6.0	6	18.0	100	4	\$53.30
TOTIME3538-MS080S-60-4F-3D	8.0	8	24.0	60	4	\$53.30
TOTIME3538-MS080S-75-4F-3D	8.0	8	24.0	75	4	\$65.60
TOTIME3538-MS080S-100-4F-3D	8.0	8	24.0	100	4	\$79.40
TOTIME3538-MS100S-75-4F-3D	10.0	10	30.0	75	4	\$75.10
TOTIME3538-MS100S-100-4F-3D	10.0	10	30.0	100	4	\$97.90
TOTIME3538-MS120S-75-4F-3D	12.0	12	36.0	75	4	\$108.20
TOTIME3538-MS120S-100-4F-3D	12.0	12	36.0	100	4	\$137.10
TOTIME3538-MS160S-100-4F-3D	16.0	16	48.0	100	4	\$249.80
TOTIME3538-MS160S-150-4F-3D	16.0	16	48.0	150	4	\$346.00
TOTIME3538-MS200S-100-4F-3D	20.0	20	60.0	100	4	\$425.60
TOTIME3538-MS200S-150-4F-3D	20.0	20	60.0	150	4	\$498.40

Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87



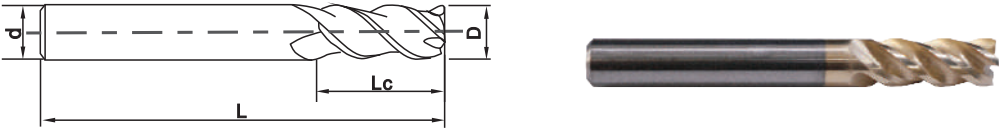
Carbide End Mill Cutter

For Stainless Steels,Heat Resistant Material,Titanium Alloys

Variable Lead Square End Mill(HRC48)



4 FLUTES SQUARE [5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010S-50-4F-5D	1.0	4	5.0	50	4	\$21.30
TOTIME3538-MS015S-50-4F-5D	1.5	4	7.5	50	4	\$21.30
TOTIME3538-MS020S-50-4F-5D	2.0	4	10.0	50	4	\$21.30
TOTIME3538-MS030S-50-4F-5D	3.0	4	15.0	50	4	\$21.30
TOTIME3538-MS040S-50-4F-5D	4.0	4	20.0	50	4	\$21.30
TOTIME3538-MS040S-75-4F-5D	4.0	4	20.0	75	4	\$29.40
TOTIME3538-MS050S-50-4F-5D	5.0	6	25.0	50	4	\$30.10
TOTIME3538-MS060S-75-4F-5D	6.0	6	30.0	75	4	\$41.70
TOTIME3538-MS060S-100-4F-5D	6.0	6	30.0	100	4	\$53.30
TOTIME3538-MS080S-100-4F-5D	8.0	8	40.0	100	4	\$79.40
TOTIME3538-MS100S-150-4F-5D	10.0	10	50.0	150	4	\$136.20
TOTIME3538-MS120S-150-4F-5D	12.0	12	60.0	150	4	\$172.10
TOTIME3538-MS160S-150-4F-5D	16.0	16	80.0	150	4	\$346.00
TOTIME3538-MS200S-200-4F-5D	20.0	20	100.0	200	4	\$664.10

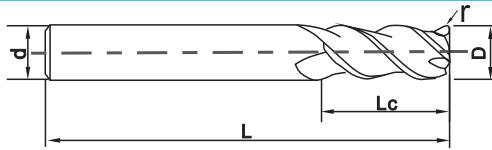
Tolerance:D≤12 -0. 02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [2.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010CR001-50-4F-2.5D	1.0	0.1	4	2.5	50	4	\$24.30
TOTIME3538-MS010CR002-50-4F-2.5D	1.0	0.2	4	2.5	50	4	\$24.30
TOTIME3538-MS015CR001-50-4F-2.5D	1.5	0.1	4	3.8	50	4	\$24.30
TOTIME3538-MS015CR002-50-4F-2.5D	1.5	0.2	4	3.8	50	4	\$24.30
TOTIME3538-MS020CR001-50-4F-2.5D	2.0	0.1	4	5.0	50	4	\$24.30
TOTIME3538-MS020CR002-50-4F-2.5D	2.0	0.2	4	5.0	50	4	\$24.30
TOTIME3538-MS020CR005-50-4F-2.5D	2.0	0.5	4	5.0	50	4	\$24.30
TOTIME3538-MS030CR001-50-4F-2.5D	3.0	0.1	4	8.0	50	4	\$24.30
TOTIME3538-MS030CR002-50-4F-2.5D	3.0	0.2	4	8.0	50	4	\$24.30
TOTIME3538-MS030CR003-50-4F-2.5D	3.0	0.3	4	8.0	50	4	\$24.30
TOTIME3538-MS030CR005-50-4F-2.5D	3.0	0.5	4	8.0	50	4	\$24.30
TOTIME3538-MS040CR002-50-4F-2.5D	4.0	0.2	4	10.0	50	4	\$24.30
TOTIME3538-MS040CR003-50-4F-2.5D	4.0	0.3	4	10.0	50	4	\$24.30
TOTIME3538-MS040CR005-50-4F-2.5D	4.0	0.5	4	10.0	50	4	\$24.30
TOTIME3538-MS040CR010-50-4F-2.5D	4.0	1.0	4	10.0	50	4	\$24.30
TOTIME3538-MS050CR002-50-4F-2.5D	5.0	0.2	6	12.0	50	4	\$34.40
TOTIME3538-MS050CR003-50-4F-2.5D	5.0	0.3	6	12.0	50	4	\$34.40
TOTIME3538-MS050CR005-50-4F-2.5D	5.0	0.5	6	12.0	50	4	\$34.40
TOTIME3538-MS050CR010-50-4F-2.5D	5.0	1.0	6	12.0	50	4	\$34.40
TOTIME3538-MS060CR002-50-4F-2.5D	6.0	0.2	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR003-50-4F-2.5D	6.0	0.3	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR005-50-4F-2.5D	6.0	0.5	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR010-50-4F-2.5D	6.0	1.0	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR015-50-4F-2.5D	6.0	1.5	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR002-75-4F-2.5D	6.0	0.2	6	15.0	75	4	\$47.90
TOTIME3538-MS060CR003-75-4F-2.5D	6.0	0.3	6	15.0	75	4	\$47.90
TOTIME3538-MS060CR005-75-4F-2.5D	6.0	0.5	6	15.0	75	4	\$47.90
TOTIME3538-MS060CR010-75-4F-2.5D	6.0	1.0	6	15.0	75	4	\$47.90
TOTIME3538-MS060CR015-75-4F-2.5D	6.0	1.5	6	15.0	75	4	\$47.90

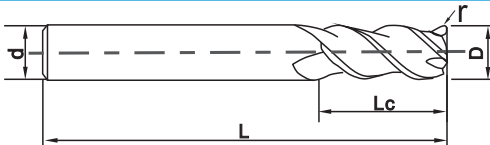
Tolerance: D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [2.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS080CR003-60-4F-2.5D	8	0.3	8	20	60	4	\$61.10
TOTIME3538-MS080CR005-60-4F-2.5D	8	0.5	8	20	60	4	\$61.10
TOTIME3538-MS080CR010-60-4F-2.5D	8	1.0	8	20	60	4	\$61.10
TOTIME3538-MS080CR015-60-4F-2.5D	8	1.5	8	20	60	4	\$61.10
TOTIME3538-MS080CR020-60-4F-2.5D	8	2.0	8	20	60	4	\$61.10
TOTIME3538-MS080CR003-75-4F-2.5D	8	0.3	8	20	75	4	\$72.10
TOTIME3538-MS080CR005-75-4F-2.5D	8	0.5	8	20	75	4	\$72.10
TOTIME3538-MS080CR010-75-4F-2.5D	8	1.0	8	20	75	4	\$72.10
TOTIME3538-MS080CR015-75-4F-2.5D	8	1.5	8	20	75	4	\$72.10
TOTIME3538-MS080CR020-75-4F-2.5D	8	2.0	8	20	75	4	\$72.10
TOTIME3538-MS100CR002-75-4F-2.5D	10	0.2	10	25	75	4	\$86.10
TOTIME3538-MS100CR003-75-4F-2.5D	10	0.3	10	25	75	4	\$86.10
TOTIME3538-MS100CR005-75-4F-2.5D	10	0.5	10	25	75	4	\$86.10
TOTIME3538-MS100CR010-75-4F-2.5D	10	1.0	10	25	75	4	\$86.10
TOTIME3538-MS100CR015-75-4F-2.5D	10	1.5	10	25	75	4	\$86.10
TOTIME3538-MS100CR020-75-4F-2.5D	10	2.0	10	25	75	4	\$86.10
TOTIME3538-MS100CR025-75-4F-2.5D	10	2.5	10	25	75	4	\$86.10
TOTIME3538-MS100CR030-75-4F-2.5D	10	3.0	10	25	75	4	\$86.10
TOTIME3538-MS100CR002-100-4F-2.5D	10	0.2	10	25	100	4	\$112.50
TOTIME3538-MS100CR003-100-4F-2.5D	10	0.3	10	25	100	4	\$112.50
TOTIME3538-MS100CR005-100-4F-2.5D	10	0.5	10	25	100	4	\$112.50
TOTIME3538-MS100CR010-100-4F-2.5D	10	1.0	10	25	100	4	\$112.50
TOTIME3538-MS100CR015-100-4F-2.5D	10	1.5	10	25	100	4	\$112.50
TOTIME3538-MS100CR020-100-4F-2.5D	10	2.0	10	25	100	4	\$112.50
TOTIME3538-MS100CR025-100-4F-2.5D	10	2.5	10	25	100	4	\$112.50
TOTIME3538-MS100CR030-100-4F-2.5D	10	3.0	10	25	100	4	\$112.50
TOTIME3538-MS120CR005-75-4F-2.5D	12	0.5	12	30	75	4	\$124.30
TOTIME3538-MS120CR010-75-4F-2.5D	12	1.0	12	30	75	4	\$124.30
TOTIME3538-MS120CR015-75-4F-2.5D	12	1.5	12	30	75	4	\$124.30
TOTIME3538-MS120CR020-75-4F-2.5D	12	2.0	12	30	75	4	\$124.30
TOTIME3538-MS120CR025-75-4F-2.5D	12	2.5	12	30	75	4	\$124.30

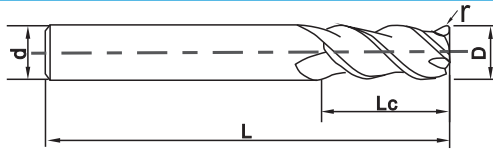
Tolerance: D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [2.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS120CR030-75-4F-2.5D	12	3.0	12	30	75	4	\$124.30
TOTIME3538-MS120CR005-100-4F-2.5D	12	0.5	12	30	100	4	\$157.50
TOTIME3538-MS120CR010-100-4F-2.5D	12	1.0	12	30	100	4	\$157.50
TOTIME3538-MS120CR015-100-4F-2.5D	12	1.5	12	30	100	4	\$157.50
TOTIME3538-MS120CR020-100-4F-2.5D	12	2.0	12	30	100	4	\$157.50
TOTIME3538-MS120CR025-100-4F-2.5D	12	2.5	12	30	100	4	\$157.50
TOTIME3538-MS120CR030-100-4F-2.5D	12	3.0	12	30	100	4	\$157.50
TOTIME3538-MS160CR005-100-4F-2.5D	16	0.5	16	40	100	4	\$287.20
TOTIME3538-MS160CR010-100-4F-2.5D	16	1.0	16	40	100	4	\$287.20
TOTIME3538-MS160CR015-100-4F-2.5D	16	1.5	16	40	100	4	\$287.20
TOTIME3538-MS160CR020-100-4F-2.5D	16	2.0	16	40	100	4	\$287.20
TOTIME3538-MS160CR025-100-4F-2.5D	16	2.5	16	40	100	4	\$287.20
TOTIME3538-MS160CR030-100-4F-2.5D	16	3.0	16	40	100	4	\$287.20
TOTIME3538-MS160CR005-150-4F-2.5D	16	0.5	16	40	150	4	\$397.80
TOTIME3538-MS160CR010-150-4F-2.5D	16	1.0	16	40	150	4	\$397.80
TOTIME3538-MS160CR015-150-4F-2.5D	16	1.5	16	40	150	4	\$397.80
TOTIME3538-MS160CR020-150-4F-2.5D	16	2.0	16	40	150	4	\$397.80
TOTIME3538-MS160CR025-150-4F-2.5D	16	2.5	16	40	150	4	\$397.80
TOTIME3538-MS160CR030-150-4F-2.5D	16	3.0	16	40	150	4	\$397.80

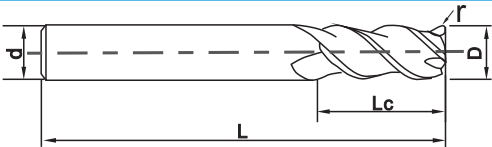
Tolerance: D ≤ 12 -0.02~0 D > 12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [3D]



	4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation		○ 2nd Recommendation					
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys	
<HRC35	<HRC48	HRC48-55	HRC55-60				
				●	●	●	

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS010CR001-50-4F-3D	1.0	0.1	4	3.0	50	4	\$24.30
TOTIME3538-MS010CR002-50-4F-3D	1.0	0.2	4	3.0	50	4	\$24.30
TOTIME3538-MS015CR001-50-4F-3D	1.5	0.1	4	4.5	50	4	\$24.30
TOTIME3538-MS015CR002-50-4F-3D	1.5	0.2	4	4.5	50	4	\$24.30
TOTIME3538-MS020CR001-50-4F-3D	2.0	0.1	4	6.0	50	4	\$24.30
TOTIME3538-MS020CR002-50-4F-3D	2.0	0.2	4	6.0	50	4	\$24.30
TOTIME3538-MS020CR005-50-4F-3D	2.0	0.5	4	6.0	50	4	\$24.30
TOTIME3538-MS030CR001-50-4F-3D	3.0	0.1	4	9.0	50	4	\$24.30
TOTIME3538-MS030CR002-50-4F-3D	3.0	0.2	4	9.0	50	4	\$24.30
TOTIME3538-MS030CR003-50-4F-3D	3.0	0.3	4	9.0	50	4	\$24.30
TOTIME3538-MS030CR005-50-4F-3D	3.0	0.5	4	9.0	50	4	\$24.30
TOTIME3538-MS040CR002-50-4F-3D	4.0	0.2	4	12.0	50	4	\$24.30
TOTIME3538-MS040CR003-50-4F-3D	4.0	0.3	4	12.0	50	4	\$24.30
TOTIME3538-MS040CR005-50-4F-3D	4.0	0.5	4	12.0	50	4	\$24.30
TOTIME3538-MS040CR010-50-4F-3D	4.0	1.0	4	12.0	50	4	\$24.30
TOTIME3538-MS050CR002-50-4F-3D	5.0	0.2	6	15.0	50	4	\$34.40
TOTIME3538-MS050CR003-50-4F-3D	5.0	0.3	6	15.0	50	4	\$34.40
TOTIME3538-MS050CR005-50-4F-3D	5.0	0.5	6	15.0	50	4	\$34.40
TOTIME3538-MS050CR010-50-4F-3D	5.0	1.0	6	15.0	50	4	\$34.40
TOTIME3538-MS060CR002-50-4F-3D	6.0	0.2	6	18.0	50	4	\$34.40
TOTIME3538-MS060CR003-50-4F-3D	6.0	0.3	6	18.0	50	4	\$34.40
TOTIME3538-MS060CR005-50-4F-3D	6.0	0.5	6	18.0	50	4	\$34.40
TOTIME3538-MS060CR010-50-4F-3D	6.0	1.0	6	18.0	50	4	\$34.40
TOTIME3538-MS060CR015-50-4F-3D	6.0	1.5	6	18.0	50	4	\$34.40
TOTIME3538-MS060CR002-75-4F-3D	6.0	0.2	6	18.0	75	4	\$47.90
TOTIME3538-MS060CR003-75-4F-3D	6.0	0.3	6	18.0	75	4	\$47.90
TOTIME3538-MS060CR005-75-4F-3D	6.0	0.5	6	18.0	75	4	\$47.90
TOTIME3538-MS060CR010-75-4F-3D	6.0	1.0	6	18.0	75	4	\$47.90
TOTIME3538-MS060CR015-75-4F-3D	6.0	1.5	6	18.0	75	4	\$47.90
TOTIME3538-MS080CR003-60-4F-3D	8.0	0.3	8	24.0	60	4	\$61.10
TOTIME3538-MS080CR005-60-4F-3D	8.0	0.5	8	24.0	60	4	\$61.10

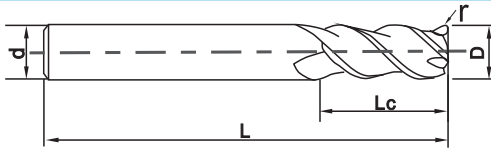
Tolerance:D≤12 -0. 02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [3D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5μm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS080CR010-60-4F-3D	8	1.0	8	24	60	4	\$61.10
TOTIME3538-MS080CR015-60-4F-3D	8	1.5	8	24	60	4	\$61.10
TOTIME3538-MS080CR020-60-4F-3D	8	2.0	8	24	60	4	\$61.10
TOTIME3538-MS080CR003-75-4F-3D	8	0.3	8	24	75	4	\$72.10
TOTIME3538-MS080CR005-75-4F-3D	8	0.5	8	24	75	4	\$72.10
TOTIME3538-MS080CR010-75-4F-3D	8	1.0	8	24	75	4	\$72.10
TOTIME3538-MS080CR015-75-4F-3D	8	1.5	8	24	75	4	\$72.10
TOTIME3538-MS080CR020-75-4F-3D	8	2.0	8	24	75	4	\$72.10
TOTIME3538-MS100CR002-75-4F-3D	10	0.2	10	30	75	4	\$86.10
TOTIME3538-MS100CR003-75-4F-3D	10	0.3	10	30	75	4	\$86.10
TOTIME3538-MS100CR005-75-4F-3D	10	0.5	10	30	75	4	\$86.10
TOTIME3538-MS100CR010-75-4F-3D	10	1.0	10	30	75	4	\$86.10
TOTIME3538-MS100CR015-75-4F-3D	10	1.5	10	30	75	4	\$86.10
TOTIME3538-MS100CR020-75-4F-3D	10	2.0	10	30	75	4	\$86.10
TOTIME3538-MS100CR025-75-4F-3D	10	2.5	10	30	75	4	\$86.10
TOTIME3538-MS100CR030-75-4F-3D	10	3.0	10	30	75	4	\$86.10
TOTIME3538-MS100CR002-100-4F-3D	10	0.2	10	30	100	4	\$112.50
TOTIME3538-MS100CR003-100-4F-3D	10	0.3	10	30	100	4	\$112.50
TOTIME3538-MS100CR005-100-4F-3D	10	0.5	10	30	100	4	\$112.50
TOTIME3538-MS100CR010-100-4F-3D	10	1.0	10	30	100	4	\$112.50
TOTIME3538-MS100CR015-100-4F-3D	10	1.5	10	30	100	4	\$112.50
TOTIME3538-MS100CR020-100-4F-3D	10	2.0	10	30	100	4	\$112.50
TOTIME3538-MS100CR025-100-4F-3D	10	2.5	10	30	100	4	\$112.50
TOTIME3538-MS100CR030-100-4F-3D	10	3.0	10	30	100	4	\$112.50
TOTIME3538-MS120CR005-75-4F-3D	12	0.5	12	36	75	4	\$124.30
TOTIME3538-MS120CR010-75-4F-3D	12	1.0	12	36	75	4	\$124.30
TOTIME3538-MS120CR015-75-4F-3D	12	1.5	12	36	75	4	\$124.30
TOTIME3538-MS120CR020-75-4F-3D	12	2.0	12	36	75	4	\$124.30
TOTIME3538-MS120CR025-75-4F-3D	12	2.5	12	36	75	4	\$124.30
TOTIME3538-MS120CR030-75-4F-3D	12	3.0	12	36	75	4	\$124.30
TOTIME3538-MS120CR005-100-4F-3D	12	0.5	12	36	100	4	\$157.50

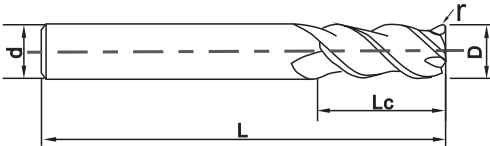
Tolerance: D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Corner Radius End Mill(HRC48)



4 FLUTES CORNER RADIUS [3D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS120CR010-100-4F-3D	12	1.0	12	36	100	4	\$157.50
TOTIME3538-MS120CR015-100-4F-3D	12	1.5	12	36	100	4	\$157.50
TOTIME3538-MS120CR020-100-4F-3D	12	2.0	12	36	100	4	\$157.50
TOTIME3538-MS120CR025-100-4F-3D	12	2.5	12	36	100	4	\$157.50
TOTIME3538-MS120CR030-100-4F-3D	12	3.0	12	36	100	4	\$157.50
TOTIME3538-MS160CR005-100-4F-3D	16	0.5	16	48	100	4	\$287.20
TOTIME3538-MS160CR010-100-4F-3D	16	1.0	16	48	100	4	\$287.20
TOTIME3538-MS160CR015-100-4F-3D	16	1.5	16	48	100	4	\$287.20
TOTIME3538-MS160CR020-100-4F-3D	16	2.0	16	48	100	4	\$287.20
TOTIME3538-MS160CR025-100-4F-3D	16	2.5	16	48	100	4	\$287.20
TOTIME3538-MS160CR030-100-4F-3D	16	3.0	16	48	100	4	\$287.20
TOTIME3538-MS160CR005-150-4F-3D	16	0.5	16	48	150	4	\$397.80
TOTIME3538-MS160CR010-150-4F-3D	16	1.0	16	48	150	4	\$397.80
TOTIME3538-MS160CR015-150-4F-3D	16	1.5	16	48	150	4	\$397.80
TOTIME3538-MS160CR020-150-4F-3D	16	2.0	16	48	150	4	\$397.80
TOTIME3538-MS160CR025-150-4F-3D	16	2.5	16	48	150	4	\$397.80
TOTIME3538-MS160CR030-150-4F-3D	16	3.0	16	48	150	4	\$397.80

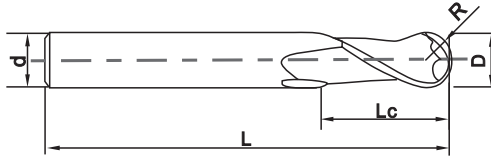
Tolerance:D≤12 -0. 02~0 D>12 -0.03~0

Recommended Cutting Conditions P.87

Variable Lead Ball Nose End Mill(HRC48)



2 FLUTES BALL NOSE [1.5D]



 2Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS020B-50-2F-1.5D	2	1.0	4	3.0	50	2	\$23.40
TOTIME3538-MS020B-75-2F-1.5D	2	1.0	4	3.0	75	2	\$32.20
TOTIME3538-MS030B-50-2F-1.5D	3	1.5	4	4.5	50	2	\$23.40
TOTIME3538-MS030B-75-2F-1.5D	3	1.5	4	4.5	75	2	\$32.20
TOTIME3538-MS040B-50-2F-1.5D	4	2.0	4	6.0	50	2	\$23.40
TOTIME3538-MS040B-75-2F-1.5D	4	2.0	4	6.0	75	2	\$32.20
TOTIME3538-MS050B-50-2F-1.5D	5	2.5	6	7.5	50	2	\$33.10
TOTIME3538-MS050B-75-2F-1.5D	5	2.5	6	7.5	75	2	\$45.80
TOTIME3538-MS050B-100-2F-1.5D	5	2.5	6	7.5	100	2	\$58.50
TOTIME3538-MS060B-50-2F-1.5D	6	3.0	6	9.0	50	2	\$33.10
TOTIME3538-MS060B-75-2F-1.5D	6	3.0	6	9.0	75	2	\$45.80
TOTIME3538-MS060B-100-2F-1.5D	6	3.0	6	9.0	100	2	\$58.50
TOTIME3538-MS080B-60-2F-1.5D	8	4.0	8	12.0	60	2	\$58.50
TOTIME3538-MS080B-75-2F-1.5D	8	4.0	8	12.0	75	2	\$72.10
TOTIME3538-MS080B-100-2F-1.5D	8	4.0	8	12.0	100	2	\$87.30
TOTIME3538-MS100B-75-2F-1.5D	10	5.0	10	15.0	75	2	\$82.60
TOTIME3538-MS100B-100-2F-1.5D	10	5.0	10	15.0	100	2	\$107.60
TOTIME3538-MS120B-75-2F-1.5D	12	6.0	12	18.0	75	2	\$118.80
TOTIME3538-MS120B-100-2F-1.5D	12	6.0	12	18.0	100	2	\$150.80
TOTIME3538-MS160B-100-2F-1.5D	16	8.0	16	24.0	100	2	\$274.60
TOTIME3538-MS160B-150-2F-1.5D	16	8.0	16	24.0	150	2	\$380.60
TOTIME3538-MS200B-100-2F-1.5D	20	10.0	20	30.0	100	2	\$468.00
TOTIME3538-MS200B-150-2F-1.5D	20	10.0	20	30.0	150	2	\$548.10

Tolerance: R ≤ 1.5 -0.01~0 1.5 < R ≤ 3 -0.015~0 R ≥ 3 -0.02~0

Recommended Cutting Conditions P.88

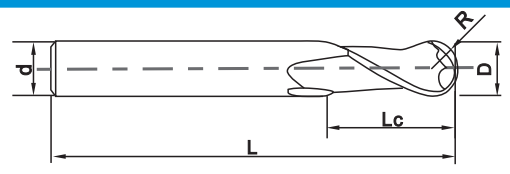


Carbide End Mill Cutter
For Stainless Steels, Heat Resistant Material, Titanium Alloys

Variable Lead Ball Nose End Mill(HRC48)



2 FLUTES BALL NOSE [2D]



 2Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS020B-50-2F-2D	2	1.0	4	4	50	2	\$23.40
TOTIME3538-MS020B-75-2F-2D	2	1.0	4	4	75	2	\$32.20
TOTIME3538-MS030B-50-2F-2D	3	1.5	4	6	50	2	\$23.40
TOTIME3538-MS030B-75-2F-2D	3	1.5	4	6	75	2	\$32.20
TOTIME3538-MS040B-50-2F-2D	4	2.0	4	8	50	2	\$23.40
TOTIME3538-MS040B-75-2F-2D	4	2.0	4	8	75	2	\$32.20
TOTIME3538-MS050B-50-2F-2D	5	2.5	6	10	50	2	\$33.10
TOTIME3538-MS050B-75-2F-2D	5	2.5	6	10	75	2	\$45.80
TOTIME3538-MS050B-100-2F-2D	5	2.5	6	10	100	2	\$58.50
TOTIME3538-MS060B-50-2F-2D	6	3.0	6	12	50	2	\$33.10
TOTIME3538-MS060B-75-2F-2D	6	3.0	6	12	75	2	\$45.80
TOTIME3538-MS060B-100-2F-2D	6	3.0	6	12	100	2	\$58.50
TOTIME3538-MS080B-60-2F-2D	8	4.0	8	16	60	2	\$58.50
TOTIME3538-MS080B-75-2F-2D	8	4.0	8	16	75	2	\$72.10
TOTIME3538-MS080B-100-2F-2D	8	4.0	8	16	100	2	\$87.30
TOTIME3538-MS100B-75-2F-2D	10	5.0	10	20	75	2	\$82.60
TOTIME3538-MS100B-100-2F-2D	10	5.0	10	20	100	2	\$107.60
TOTIME3538-MS120B-75-2F-2D	12	6.0	12	24	75	2	\$118.80
TOTIME3538-MS120B-100-2F-2D	12	6.0	12	24	100	2	\$150.80
TOTIME3538-MS160B-100-2F-2D	16	8.0	16	32	100	2	\$274.60
TOTIME3538-MS160B-150-2F-2D	16	8.0	16	32	150	2	\$380.60
TOTIME3538-MS200B-100-2F-2D	20	10.0	20	40	100	2	\$468.00
TOTIME3538-MS200B-150-2F-2D	20	10.0	20	40	150	2	\$548.10

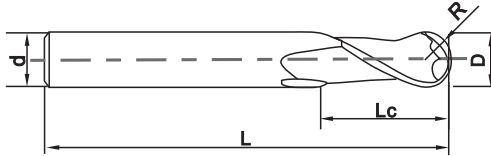
Tolerance: $R \leq 1.5$ -0.01~0 $1.5 < R < 3$ -0.015~0 $R \geq 3$ -0.02~0 Recommended Cutting Conditions P.88

TOTIME48 for General Steels
TOTIME3538 for Stainless Steels Titanium Alloys
TOTIME65 for Die Steels Hardened Steels
TOTIME48 for Non-ferrous Metal
Variable Lead for Roughing
TDIA for Graphite
Micro for Aluminium Alloys Copper Alloys
Taper Neck Draft for High Hardend Steels
CBN for High Hardend Steels

Variable Lead Ball Nose End Mill(HRC48)



4 FLUTES BALL NOSE [1.5D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5μm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS040B-50-4F-1.5D	4	2.0	4	6.0	50	4	\$24.30
TOTIME3538-MS040B-75-4F-1.5D	4	2.0	4	6.0	75	4	\$33.70
TOTIME3538-MS050B-50-4F-1.5D	5	2.5	6	7.5	50	4	\$34.40
TOTIME3538-MS050B-75-4F-1.5D	5	2.5	6	7.5	75	4	\$47.90
TOTIME3538-MS050B-100-4F-1.5D	5	2.5	6	7.5	100	4	\$61.10
TOTIME3538-MS060B-50-4F-1.5D	6	3.0	6	9.0	50	4	\$34.40
TOTIME3538-MS060B-75-4F-1.5D	6	3.0	6	9.0	75	4	\$47.90
TOTIME3538-MS060B-100-4F-1.5D	6	3.0	6	9.0	100	4	\$61.10
TOTIME3538-MS080B-60-4F-1.5D	8	4.0	8	12.0	60	4	\$61.10
TOTIME3538-MS080B-75-4F-1.5D	8	4.0	8	12.0	75	4	\$72.10
TOTIME3538-MS080B-100-4F-1.5D	8	4.0	8	12.0	100	4	\$91.20
TOTIME3538-MS100B-75-4F-1.5D	10	5.0	10	15.0	75	4	\$86.10
TOTIME3538-MS100B-100-4F-1.5D	10	5.0	10	15.0	100	4	\$112.50
TOTIME3538-MS120B-75-4F-1.5D	12	6.0	12	18.0	75	4	\$124.30
TOTIME3538-MS120B-100-4F-1.5D	12	6.0	12	18.0	100	4	\$157.50
TOTIME3538-MS160B-100-4F-1.5D	16	8.0	16	24.0	100	4	\$287.20
TOTIME3538-MS160B-150-4F-1.5D	16	8.0	16	24.0	150	4	\$397.80
TOTIME3538-MS200B-100-4F-1.5D	20	10.0	20	30.0	100	4	\$489.30
TOTIME3538-MS200B-150-4F-1.5D	20	10.0	20	30.0	150	4	\$573.00

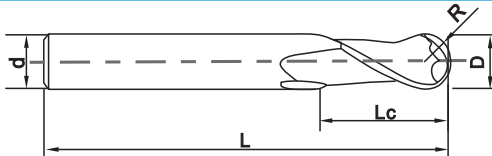
Tolerance: $R \leq 1.5$ -0.01~0 $1.5 < R < 3$ -0.015~0 $R \geq 3$ -0.02~0

Recommended Cutting Conditions P.89

Variable Lead Ball Nose End Mill(HRC48)



4 FLUTES BALL NOSE [2D]



 4Flutes	Cobalt 10%	HRC 48	GS Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
				●	●	●

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3538-MS040B-50-4F-2D	4	2.0	4	8	50	4	\$24.30
TOTIME3538-MS040B-75-4F-2D	4	2.0	4	8	75	4	\$33.70
TOTIME3538-MS050B-50-4F-2D	5	2.5	6	10	50	4	\$34.40
TOTIME3538-MS050B-75-4F-2D	5	2.5	6	10	75	4	\$47.90
TOTIME3538-MS050B-100-4F-2D	5	2.5	6	10	100	4	\$61.10
TOTIME3538-MS060B-50-4F-2D	6	3.0	6	12	50	4	\$34.40
TOTIME3538-MS060B-75-4F-2D	6	3.0	6	12	75	4	\$47.90
TOTIME3538-MS060B-100-4F-2D	6	3.0	6	12	100	4	\$61.10
TOTIME3538-MS080B-60-4F-2D	8	4.0	8	16	60	4	\$61.10
TOTIME3538-MS080B-75-4F-2D	8	4.0	8	16	75	4	\$72.10
TOTIME3538-MS080B-100-4F-2D	8	4.0	8	16	100	4	\$91.20
TOTIME3538-MS100B-75-4F-2D	10	5.0	10	20	75	4	\$86.10
TOTIME3538-MS100B-100-4F-2D	10	5.0	10	20	100	4	\$112.50
TOTIME3538-MS120B-75-4F-2D	12	6.0	12	24	75	4	\$124.30
TOTIME3538-MS120B-100-4F-2D	12	6.0	12	24	100	4	\$157.50
TOTIME3538-MS160B-100-4F-2D	16	8.0	16	32	100	4	\$287.20
TOTIME3538-MS160B-150-4F-2D	16	8.0	16	32	150	4	\$397.80
TOTIME3538-MS200B-100-4F-2D	20	10.0	20	40	100	4	\$489.30
TOTIME3538-MS200B-150-4F-2D	20	10.0	20	40	150	4	\$573.00

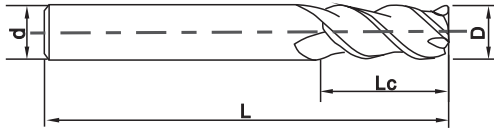
Tolerance:R≤1. 5 -0. 01~0 1. 5<R<3 -0. 015~0 R≥3 -0. 02~0

Recommended Cutting Conditions P.89

High Speed and High Hardness Square End Mill(HRC65)



4 FLUTES SQUARE [2.5D]



 4Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
	●	●	●			

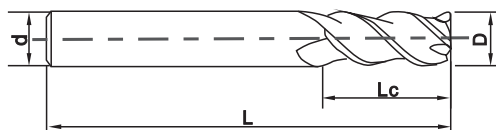
Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H010S-50-4F-2.5D	1.0	4	2.5	50	4	\$22.60
TOTIME65-H015S-50-4F-2.5D	1.5	4	3.8	50	4	\$22.60
TOTIME65-H020S-50-4F-2.5D	2.0	4	5.0	50	4	\$22.60
TOTIME65-H030S-50-4F-2.5D	3.0	4	8.0	50	4	\$22.60
TOTIME65-H040S-50-4F-2.5D	4.0	4	10.0	50	4	\$22.60
TOTIME65-H040S-75-4F-2.5D	4.0	4	10.0	75	4	\$29.90
TOTIME65-H050S-50-4F-2.5D	5.0	6	12.0	50	4	\$31.80
TOTIME65-H060S-50-4F-2.5D	6.0	6	15.0	50	4	\$31.80
TOTIME65-H060S-75-4F-2.5D	6.0	6	15.0	75	4	\$44.10
TOTIME65-H060S-100-4F-2.5D	6.0	6	15.0	100	4	\$56.30
TOTIME65-H080S-60-4F-2.5D	8.0	8	20.0	60	4	\$55.10
TOTIME65-H080S-75-4F-2.5D	8.0	8	20.0	75	4	\$62.60
TOTIME65-H080S-100-4F-2.5D	8.0	8	20.0	100	4	\$80.90
TOTIME65-H100S-75-4F-2.5D	10.0	10	25.0	75	4	\$87.10
TOTIME65-H100S-100-4F-2.5D	10.0	10	25.0	100	4	\$111.60
TOTIME65-H120S-75-4F-2.5D	12.0	12	30.0	75	4	\$111.60
TOTIME65-H120S-100-4F-2.5D	12.0	12	30.0	100	4	\$142.20
TOTIME65-H160S-100-4F-2.5D	16.0	16	40.0	100	4	\$315.20
TOTIME65-H160S-150-4F-2.5D	16.0	16	40.0	150	4	\$440.70
TOTIME65-H200S-100-4F-2.5D	20.0	20	50.0	100	4	\$500.70
TOTIME65-H200S-150-4F-2.5D	20.0	20	50.0	150	4	\$700.60

Tolerance:D≤12 -0. 02~0 D>12 -0.03~0

Recommended Cutting Conditions P.92

High Speed and High Hardness Square End Mill(HRC65)

4 FLUTES SQUARE [3D]



	4Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation							
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys	
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65				
	●	●	●				

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H010S-50-4F-3D	1.0	4	3.0	50	4	\$22.60
TOTIME65-H015S-50-4F-3D	1.5	4	4.5	50	4	\$22.60
TOTIME65-H020S-50-4F-3D	2.0	4	6.0	50	4	\$22.60
TOTIME65-H030S-50-4F-3D	3.0	4	9.0	50	4	\$22.60
TOTIME65-H040S-50-4F-3D	4.0	4	12.0	50	4	\$22.60
TOTIME65-H040S-75-4F-3D	4.0	4	12.0	75	4	\$29.90
TOTIME65-H050S-50-4F-3D	5.0	6	15.0	50	4	\$31.80
TOTIME65-H060S-50-4F-3D	6.0	6	18.0	50	4	\$31.80
TOTIME65-H060S-75-4F-3D	6.0	6	18.0	75	4	\$44.10
TOTIME65-H060S-100-4F-3D	6.0	6	18.0	100	4	\$56.30
TOTIME65-H080S-60-4F-3D	8.0	8	24.0	60	4	\$55.10
TOTIME65-H080S-75-4F-3D	8.0	8	24.0	75	4	\$62.60
TOTIME65-H080S-100-4F-3D	8.0	8	24.0	100	4	\$80.90
TOTIME65-H100S-75-4F-3D	10.0	10	30.0	75	4	\$87.10
TOTIME65-H100S-100-4F-3D	10.0	10	30.0	100	4	\$111.60
TOTIME65-H120S-75-4F-3D	12.0	12	36.0	75	4	\$111.60
TOTIME65-H120S-100-4F-3D	12.0	12	36.0	100	4	\$142.20
TOTIME65-H160S-100-4F-3D	16.0	16	48.0	100	4	\$315.20
TOTIME65-H160S-150-4F-3D	16.0	16	48.0	150	4	\$440.70
TOTIME65-H200S-100-4F-3D	20.0	20	60.0	100	4	\$500.70
TOTIME65-H200S-150-4F-3D	20.0	20	60.0	150	4	\$700.60

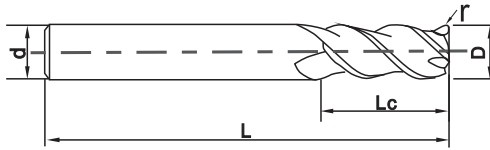
Tolerance: D ≤ 12 -0.02~0 D > 12 -0.03~0

Recommended Cutting Conditions P.92

High Speed and High Hardness Corner Radius End Mill(HRC65)



4 FLUTES CORNER RADIUS [2D]



	4Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation		○ 2nd Recommendation					
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys	
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65				
	●	●	●				

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H010CR001-50-4F-2D	1.0	0.1	4	2	50	4	\$25.60
TOTIME65-H010CR002-50-4F-2D	1.0	0.2	4	2	50	4	\$25.60
TOTIME65-H015CR001-50-4F-2D	1.5	0.1	4	3	50	4	\$25.60
TOTIME65-H015CR002-50-4F-2D	1.5	0.2	4	3	50	4	\$25.60
TOTIME65-H020CR001-50-4F-2D	2.0	0.1	4	4	50	4	\$25.60
TOTIME65-H020CR002-50-4F-2D	2.0	0.2	4	4	50	4	\$25.60
TOTIME65-H020CR005-50-4F-2D	2.0	0.5	4	4	50	4	\$25.60
TOTIME65-H030CR001-50-4F-2D	3.0	0.1	4	6	50	4	\$25.60
TOTIME65-H030CR002-50-4F-2D	3.0	0.2	4	6	50	4	\$25.60
TOTIME65-H030CR003-50-4F-2D	3.0	0.3	4	6	50	4	\$25.60
TOTIME65-H030CR005-50-4F-2D	3.0	0.5	4	6	50	4	\$25.60
TOTIME65-H040CR002-50-4F-2D	4.0	0.2	4	8	50	4	\$25.60
TOTIME65-H040CR003-50-4F-2D	4.0	0.3	4	8	50	4	\$25.60
TOTIME65-H040CR005-50-4F-2D	4.0	0.5	4	8	50	4	\$25.60
TOTIME65-H040CR010-50-4F-2D	4.0	1.0	4	8	50	4	\$25.60
TOTIME65-H050CR002-50-4F-2D	5.0	0.2	6	10	50	4	\$34.00
TOTIME65-H050CR003-50-4F-2D	5.0	0.3	6	10	50	4	\$34.00
TOTIME65-H050CR005-50-4F-2D	5.0	0.5	6	10	50	4	\$34.00
TOTIME65-H050CR010-50-4F-2D	5.0	1.0	6	10	50	4	\$34.00
TOTIME65-H060CR002-50-4F-2D	6.0	0.2	6	12	50	4	\$34.00
TOTIME65-H060CR003-50-4F-2D	6.0	0.3	6	12	50	4	\$34.00
TOTIME65-H060CR005-50-4F-2D	6.0	0.5	6	12	50	4	\$34.00
TOTIME65-H060CR010-50-4F-2D	6.0	1.0	6	12	50	4	\$34.00
TOTIME65-H060CR015-50-4F-2D	6.0	1.5	6	12	50	4	\$34.00
TOTIME65-H060CR002-75-4F-2D	6.0	0.2	6	12	75	4	\$48.40
TOTIME65-H060CR003-75-4F-2D	6.0	0.3	6	12	75	4	\$48.40
TOTIME65-H060CR005-75-4F-2D	6.0	0.5	6	12	75	4	\$48.40
TOTIME65-H060CR010-75-4F-2D	6.0	1.0	6	12	75	4	\$48.40
TOTIME65-H060CR015-75-4F-2D	6.0	1.5	6	12	75	4	\$48.40
TOTIME65-H080CR003-60-4F-2D	8.0	0.3	8	16	60	4	\$68.80

Tolerance: D ≤ 12 -0.02~0 D > 12 -0.03~0

Recommended Cutting Conditions P.92

High Speed and High Hardness Corner Radius End Mill(HRC65)

MGHM

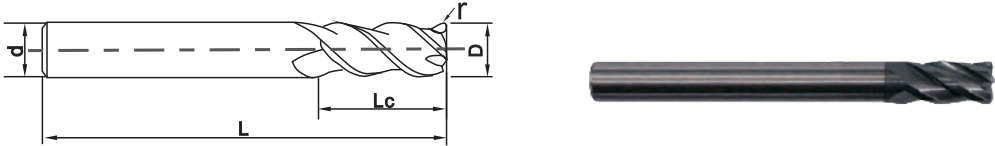
4

ALDUA

45°

Corner-R

4 FLUTES CORNER RADIUS [2D]



 4Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
	●	●	●			

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H080CR005-60-4F-2D	8	0.5	8	16	60	4	\$68.80
TOTIME65-H080CR010-60-4F-2D	8	1.0	8	16	60	4	\$68.80
TOTIME65-H080CR015-60-4F-2D	8	1.5	8	16	60	4	\$68.80
TOTIME65-H080CR020-60-4F-2D	8	2.0	8	16	60	4	\$68.80
TOTIME65-H080CR003-75-4F-2D	8	0.3	8	16	75	4	\$80.90
TOTIME65-H080CR005-75-4F-2D	8	0.5	8	16	75	4	\$80.90
TOTIME65-H080CR010-75-4F-2D	8	1.0	8	16	75	4	\$80.90
TOTIME65-H080CR015-75-4F-2D	8	1.5	8	16	75	4	\$80.90
TOTIME65-H080CR020-75-4F-2D	8	2.0	8	16	75	4	\$80.90
TOTIME65-H100CR002-75-4F-2D	10	0.2	10	20	75	4	\$102.20
TOTIME65-H100CR003-75-4F-2D	10	0.3	10	20	75	4	\$102.20
TOTIME65-H100CR005-75-4F-2D	10	0.5	10	20	75	4	\$102.20
TOTIME65-H100CR010-75-4F-2D	10	1.0	10	20	75	4	\$102.20
TOTIME65-H100CR015-75-4F-2D	10	1.5	10	20	75	4	\$102.20
TOTIME65-H100CR020-75-4F-2D	10	2.0	10	20	75	4	\$102.20
TOTIME65-H100CR025-75-4F-2D	10	2.5	10	20	75	4	\$102.20
TOTIME65-H100CR030-75-4F-2D	10	3.0	10	20	75	4	\$102.20
TOTIME65-H100CR002-100-4F-2D	10	0.2	10	20	100	4	\$129.90
TOTIME65-H100CR003-100-4F-2D	10	0.3	10	20	100	4	\$129.90
TOTIME65-H100CR005-100-4F-2D	10	0.5	10	20	100	4	\$129.90
TOTIME65-H100CR010-100-4F-2D	10	1.0	10	20	100	4	\$129.90
TOTIME65-H100CR015-100-4F-2D	10	1.5	10	20	100	4	\$129.90
TOTIME65-H100CR020-100-4F-2D	10	2.0	10	20	100	4	\$129.90
TOTIME65-H100CR025-100-4F-2D	10	2.5	10	20	100	4	\$129.90
TOTIME65-H100CR030-100-4F-2D	10	3.0	10	20	100	4	\$129.90
TOTIME65-H120CR005-75-4F-2D	12	0.5	12	24	75	4	\$138.10
TOTIME65-H120CR010-75-4F-2D	12	1.0	12	24	75	4	\$138.10
TOTIME65-H120CR015-75-4F-2D	12	1.5	12	24	75	4	\$138.10
TOTIME65-H120CR020-75-4F-2D	12	2.0	12	24	75	4	\$138.10
TOTIME65-H120CR025-75-4F-2D	12	2.5	12	24	75	4	\$138.10
TOTIME65-H120CR030-75-4F-2D	12	3.0	12	24	75	4	\$138.10

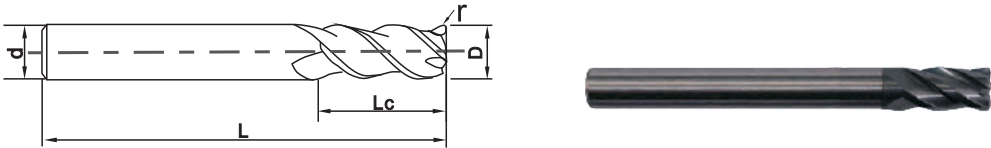
Tolerance:D≤12 -0.02~0 D>12 -0.03~0

Recommended Cutting Conditions P.92

High Speed and High Hardness Corner Radius End Mill(HRC65)



4 FLUTES CORNER RADIUS [2D]



 4Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
	●	●	●			

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H120CR005-100-4F-2D	12	0.5	12	24	100	4	\$169.80
TOTIME65-H120CR010-100-4F-2D	12	1.0	12	24	100	4	\$169.80
TOTIME65-H120CR015-100-4F-2D	12	1.5	12	24	100	4	\$169.80
TOTIME65-H120CR020-100-4F-2D	12	2.0	12	24	100	4	\$169.80
TOTIME65-H120CR025-100-4F-2D	12	2.5	12	24	100	4	\$169.80
TOTIME65-H120CR030-100-4F-2D	12	3.0	12	24	100	4	\$169.80
TOTIME65-H160CR005-100-4F-2D	16	0.5	16	32	100	4	\$364.50
TOTIME65-H160CR010-100-4F-2D	16	1.0	16	32	100	4	\$364.50
TOTIME65-H160CR015-100-4F-2D	16	1.5	16	32	100	4	\$364.50
TOTIME65-H160CR020-100-4F-2D	16	2.0	16	32	100	4	\$364.50
TOTIME65-H160CR025-100-4F-2D	16	2.5	16	32	100	4	\$364.50
TOTIME65-H160CR030-100-4F-2D	16	3.0	16	32	100	4	\$364.50
TOTIME65-H160CR005-150-4F-2D	16	0.5	16	32	150	4	\$508.70
TOTIME65-H160CR010-150-4F-2D	16	1.0	16	32	150	4	\$508.70
TOTIME65-H160CR015-150-4F-2D	16	1.5	16	32	150	4	\$508.70
TOTIME65-H160CR020-150-4F-2D	16	2.0	16	32	150	4	\$508.70
TOTIME65-H160CR025-150-4F-2D	16	2.5	16	32	150	4	\$508.70
TOTIME65-H160CR030-150-4F-2D	16	3.0	16	32	150	4	\$508.70

Tolerance:D≤12 -0. 02~0 D>12 -0.03~0

Recommended Cutting Conditions P.92

High Speed and High Hardness Ball Nose End Mill(HRC65)

MG HM

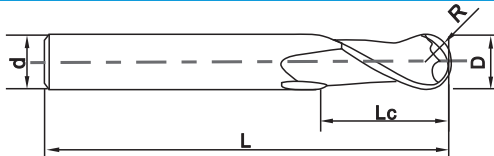
2

ALDUA

30°

Ball Nose

2 FLUTES BALL NOSE [1.5D]



 2Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
	●	●	●			

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H020B-50-2F-1.5D	2	1.0	4	3.0	50	2	\$24.70
TOTIME65-H020B-75-2F-1.5D	2	1.0	4	3.0	75	2	\$31.80
TOTIME65-H030B-50-2F-1.5D	3	1.5	4	4.5	50	2	\$24.70
TOTIME65-H030B-75-2F-1.5D	3	1.5	4	4.5	75	2	\$31.80
TOTIME65-H040B-50-2F-1.5D	4	2.0	4	6.0	50	2	\$24.70
TOTIME65-H040B-75-2F-1.5D	4	2.0	4	6.0	75	2	\$31.80
TOTIME65-H050B-50-2F-1.5D	5	2.5	6	7.5	50	2	\$32.70
TOTIME65-H050B-75-2F-1.5D	5	2.5	6	7.5	75	2	\$45.20
TOTIME65-H050B-100-2F-1.5D	5	2.5	6	7.5	100	2	\$57.90
TOTIME65-H060B-50-2F-1.5D	6	3.0	6	9.0	50	2	\$32.70
TOTIME65-H060B-75-2F-1.5D	6	3.0	6	9.0	75	2	\$45.20
TOTIME65-H060B-100-2F-1.5D	6	3.0	6	9.0	100	2	\$57.90
TOTIME65-H080B-60-2F-1.5D	8	4.0	8	12.0	60	2	\$63.20
TOTIME65-H080B-75-2F-1.5D	8	4.0	8	12.0	75	2	\$74.80
TOTIME65-H080B-100-2F-1.5D	8	4.0	8	12.0	100	2	\$99.20
TOTIME65-H100B-75-2F-1.5D	10	5.0	10	15.0	75	2	\$98.50
TOTIME65-H100B-100-2F-1.5D	10	5.0	10	15.0	100	2	\$123.90
TOTIME65-H120B-75-2F-1.5D	12	6.0	12	18.0	75	2	\$124.40
TOTIME65-H120B-100-2F-1.5D	12	6.0	12	18.0	100	2	\$156.40
TOTIME65-H160B-100-2F-1.5D	16	8.0	16	24.0	100	2	\$346.60
TOTIME65-H160B-150-2F-1.5D	16	8.0	16	24.0	150	2	\$484.60
TOTIME65-H200B-100-2F-1.5D	20	10.0	20	30.0	100	2	\$550.60
TOTIME65-H200B-150-2F-1.5D	20	10.0	20	30.0	150	2	\$770.40

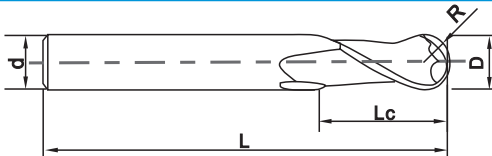
Tolerance:R≤3 ±0. 003 R>3 ±0. 005

Recommended Cutting Conditions P.92

High Speed and High Hardness Ball Nose End Mill(HRC65)



2 FLUTES BALL NOSE [2D]



 2Flutes	Cobalt 10%	HRC 65	ALDUA Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
	●	●	●			

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME65-H020B-50-2F-2D	2	1.0	4	4	50	2	\$24.70
TOTIME65-H020B-75-2F-2D	2	1.0	4	4	75	2	\$31.80
TOTIME65-H030B-50-2F-2D	3	1.5	4	6	50	2	\$24.70
TOTIME65-H030B-75-2F-2D	3	1.5	4	6	75	2	\$31.80
TOTIME65-H040B-50-2F-2D	4	2.0	4	8	50	2	\$24.70
TOTIME65-H040B-75-2F-2D	4	2.0	4	8	75	2	\$31.80
TOTIME65-H050B-50-2F-2D	5	2.5	6	10	50	2	\$32.70
TOTIME65-H050B-75-2F-2D	5	2.5	6	10	75	2	\$45.20
TOTIME65-H050B-100-2F-2D	5	2.5	6	10	100	2	\$57.90
TOTIME65-H060B-50-2F-2D	6	3.0	6	12	50	2	\$32.70
TOTIME65-H060B-75-2F-2D	6	3.0	6	12	75	2	\$45.20
TOTIME65-H060B-100-2F-2D	6	3.0	6	12	100	2	\$57.90
TOTIME65-H080B-60-2F-2D	8	4.0	8	16	60	2	\$63.20
TOTIME65-H080B-75-2F-2D	8	4.0	8	16	75	2	\$74.80
TOTIME65-H080B-100-2F-2D	8	4.0	8	16	100	2	\$99.20
TOTIME65-H100B-75-2F-2D	10	5.0	10	20	75	2	\$98.50
TOTIME65-H100B-100-2F-2D	10	5.0	10	20	100	2	\$123.90
TOTIME65-H120B-75-2F-2D	12	6.0	12	24	75	2	\$124.40
TOTIME65-H120B-100-2F-2D	12	6.0	12	24	100	2	\$156.40
TOTIME65-H160B-100-2F-2D	16	8.0	16	32	100	2	\$346.60
TOTIME65-H160B-150-2F-2D	16	8.0	16	32	150	2	\$484.60
TOTIME65-H200B-100-2F-2D	20	10.0	20	40	100	2	\$550.60
TOTIME65-H200B-150-2F-2D	20	10.0	20	40	150	2	\$770.40

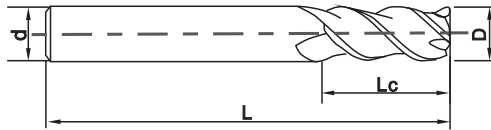
Tolerance:R≤3 ±0. 003 R>3 ±0. 005

Recommended Cutting Conditions P.92

Square End Mill(HRC48)



3 FLUTES TAC COATING SQUARE [2. 5D]



 3Flutes	Cobalt 10%	HRC 48	TAC Coating	MG 0.8µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
					●	●

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME48-C010AL-50-3F-2.5D	1.0	4	2.5	50	3	\$25.10
TOTIME48-C015AL-50-3F-2.5D	1.5	4	3.8	50	3	\$25.10
TOTIME48-C020AL-50-3F-2.5D	2.0	4	5.0	50	3	\$25.10
TOTIME48-C030AL-50-3F-2.5D	3.0	4	7.5	50	3	\$25.10
TOTIME48-C040AL-50-3F-2.5D	4.0	4	10.0	50	3	\$25.10
TOTIME48-C040AL-75-3F-2.5D	4.0	4	10.0	75	3	\$31.20
TOTIME48-C050AL-50-3F-2.5D	5.0	6	12.0	50	3	\$34.40
TOTIME48-C060AL-50-3F-2.5D	6.0	6	15.0	50	3	\$34.40
TOTIME48-C060AL-75-3F-2.5D	6.0	6	15.0	75	3	\$42.80
TOTIME48-C060AL-100-3F-2.5D	6.0	6	15.0	100	3	\$59.10
TOTIME48-C080AL-60-3F-2.5D	8.0	8	20.0	60	3	\$57.20
TOTIME48-C080AL-75-3F-2.5D	8.0	8	20.0	75	3	\$69.30
TOTIME48-C080AL-100-3F-2.5D	8.0	8	20.0	100	3	\$88.00
TOTIME48-C100AL-75-3F-2.5D	10.0	10	25.0	75	3	\$87.50
TOTIME48-C100AL-100-3F-2.5D	10.0	10	25.0	100	3	\$115.30
TOTIME48-C120AL-75-3F-2.5D	12.0	12	30.0	75	3	\$111.00
TOTIME48-C120AL-100-3F-2.5D	12.0	12	30.0	100	3	\$137.90
TOTIME48-C160AL-100-3F-2.5D	16.0	16	40.0	100	3	\$280.60
TOTIME48-C160AL-150-3F-2.5D	16.0	16	40.0	150	3	\$386.00
TOTIME48-C200AL-100-3F-2.5D	20.0	20	50.0	100	3	\$480.90
TOTIME48-C200AL-150-3F-2.5D	20.0	20	50.0	150	3	\$559.50

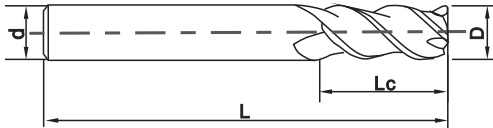
Tolerance: D≤10 -0.01~0 D>10 -0.02~0

Recommended Cutting Conditions P.91

Square End Mill(HRC48)



3 FLUTES TAC COATING SQUARE [3D]



	3Flutes	Cobalt 10%	HRC 48	TAC Coating	MG 0.8μm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation							
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys	
<HRC35	<HRC48	HRC48-55	HRC55-60				
					●	●	

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME48-C010AL-50-3F-3D	1.0	4	3.0	50	3	\$25.10
TOTIME48-C015AL-50-3F-3D	1.5	4	4.5	50	3	\$25.10
TOTIME48-C020AL-50-3F-3D	2.0	4	6.0	50	3	\$25.10
TOTIME48-C030AL-50-3F-3D	3.0	4	9.0	50	3	\$25.10
TOTIME48-C040AL-50-3F-3D	4.0	4	12.0	50	3	\$25.10
TOTIME48-C040AL-75-3F-3D	4.0	4	12.0	75	3	\$31.20
TOTIME48-C050AL-50-3F-3D	5.0	6	15.0	50	3	\$34.40
TOTIME48-C060AL-50-3F-3D	6.0	6	18.0	50	3	\$34.40
TOTIME48-C060AL-75-3F-3D	6.0	6	18.0	75	3	\$42.80
TOTIME48-C060AL-100-3F-3D	6.0	6	18.0	100	3	\$59.10
TOTIME48-C080AL-60-3F-3D	8.0	8	24.0	60	3	\$60.70
TOTIME48-C080AL-75-3F-3D	8.0	8	24.0	75	3	\$69.30
TOTIME48-C080AL-100-3F-3D	8.0	8	24.0	100	3	\$88.00
TOTIME48-C100AL-75-3F-3D	10.0	10	30.0	75	3	\$87.50
TOTIME48-C100AL-100-3F-3D	10.0	10	30.0	100	3	\$115.30
TOTIME48-C120AL-75-3F-3D	12.0	12	36.0	75	3	\$111.00
TOTIME48-C120AL-100-3F-3D	12.0	12	36.0	100	3	\$137.90
TOTIME48-C160AL-100-3F-3D	16.0	16	48.0	100	3	\$280.60
TOTIME48-C160AL-150-3F-3D	16.0	16	48.0	150	3	\$386.00
TOTIME48-C200AL-100-3F-3D	20.0	20	60.0	100	3	\$480.90
TOTIME48-C200AL-150-3F-3D	20.0	20	60.0	150	3	\$559.50

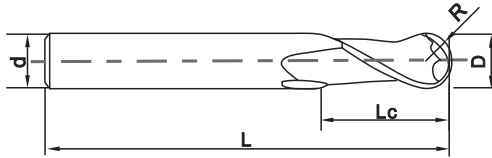
Tolerance:D≤10 -0. 01~0 D>10 -0.02~0

Recommended Cutting Conditions P.91

Ball Nose End Mill(HRC48)



2 FLUTES BALL NOSE [1.5D]



	2Flutes	Cobalt 10%	HRC 48	No Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation		○ 2nd Recommendation					
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys	
<HRC35	<HRC48	HRC48-55	HRC55-60				
					●	●	

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME48-010ALB-50-2F-1.5D	1.0	0.50	4	1.5	50	2	\$23.10
TOTIME48-010ALB-50-2F-1.5D	1.5	0.75	4	2.3	50	2	\$23.10
TOTIME48-020ALB-50-2F-1.5D	2.0	1.00	4	3.0	50	2	\$23.10
TOTIME48-030ALB-50-2F-1.5D	3.0	1.50	4	4.5	50	2	\$23.10
TOTIME48-040ALB-50-2F-1.5D	4.0	2.00	4	6.0	50	2	\$23.10
TOTIME48-060ALB-50-2F-1.5D	6.0	3.00	6	9.0	50	2	\$31.30
TOTIME48-060ALB-75-2F-1.5D	6.0	3.00	6	9.0	75	2	\$39.70
TOTIME48-080ALB-60-2F-1.5D	8.0	4.00	8	12.0	60	2	\$59.40
TOTIME48-080ALB-75-2F-1.5D	8.0	4.00	8	12.0	75	2	\$71.90
TOTIME48-080ALB-100-2F-1.5D	8.0	4.00	8	12.0	100	2	\$85.30
TOTIME48-100ALB-75-2F-1.5D	10.0	5.00	10	15.0	75	2	\$95.20
TOTIME48-100ALB-100-2F-1.5D	10.0	5.00	10	15.0	100	2	\$122.90
TOTIME48-120ALB-75-2F-1.5D	12.0	6.00	12	18.0	75	2	\$127.40
TOTIME48-120ALB-100-2F-1.5D	12.0	6.00	12	18.0	100	2	\$159.10

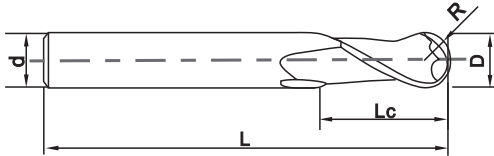
Tolerance: $R \leq 3 \pm 0.015$ $R > 3 \pm 0.02$

Recommended Cutting Conditions P.90

Ball Nose End Mill(HRC48)



2 FLUTES BALL NOSE [2D]



 2Flutes	Cobalt 10%	HRC 48	No Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
					●	●

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME48-010ALB-50-2F-2D	1.0	0.50	4	2	50	2	\$23.10
TOTIME48-015ALB-50-2F-2D	1.5	0.75	4	3	50	2	\$23.10
TOTIME48-020ALB-50-2F-2D	2.0	1.00	4	4	50	2	\$23.10
TOTIME48-030ALB-50-2F-2D	3.0	1.50	4	6	50	2	\$23.10
TOTIME48-040ALB-50-2F-2D	4.0	2.00	4	8	50	2	\$23.10
TOTIME48-060ALB-50-2F-2D	6.0	3.00	6	12	50	2	\$31.30
TOTIME48-060ALB-75-2F-2D	6.0	3.00	6	12	75	2	\$39.70
TOTIME48-080ALB-60-2F-2D	8.0	4.00	8	16	60	2	\$59.40
TOTIME48-080ALB-75-2F-2D	8.0	4.00	8	16	75	2	\$71.90
TOTIME48-080ALB-100-2F-2D	8.0	4.00	8	16	100	2	\$85.30
TOTIME48-100ALB-75-2F-2D	10.0	5.00	10	20	75	2	\$95.20
TOTIME48-100ALB-100-2F-2D	10.0	5.00	10	20	100	2	\$122.90
TOTIME48-120ALB-75-2F-2D	12.0	6.00	12	24	75	2	\$127.40
TOTIME48-120ALB-100-2F-2D	12.0	6.00	12	24	100	2	\$159.10

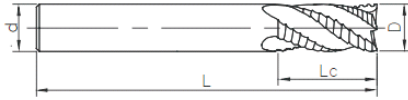
Tolerance:R≤3 ±0. 015 R>3 ±0. 02

Recommended Cutting Conditions P.90

Variable Lead Roughing_(HRC55)



4 FLUTES ROUGHING



 4Flutes	Cobalt 10%	HRC 55	TiAlN Coating	UMG 0.6µm	Carbide Materials	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Heat Resistant Material	Titanium Alloys
<HRC35	<HRC48	HRC48-55	HRC55-65			
	●	●				

Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME3839-060R-S-4F	6	6	15	50	4	\$40.00
TOTIME3839-080R-S-4F	8	8	20	60	4	\$67.70
TOTIME3839-100R-S-4F	10	10	30	75	4	\$105.30
TOTIME3839-120R-S-4F	12	12	32	75	4	\$135.90
TOTIME3839-160R-S-4F	16	16	45	100	4	\$269.40
TOTIME3839-200R-S-4F	20	20	50	100	4	\$358.80

Tolerance: D ≤ 8 0~0.01 D > 8 0~0.02

Recommended Cutting Conditions P.93~P.94

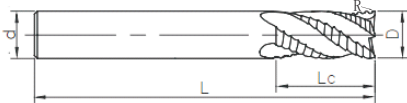


Carbide End Mill Cutter
For Alloy Steel,Hardened Steel,Carbon Steel,Cast Iron

Low Helix Variable Lead Roughing(HRC55)



4 FLUTES CORNER RADIUS ROUGHING



 4Flutes	Cobalt 10%	HRC 55	TiAlN Coating	UMG 0.6µm	Carbide Materials	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Cast Iron	Titanium Alloys
<HRC35	<HRC48	HRC40-55	HRC55-65			
●	●			○	●	

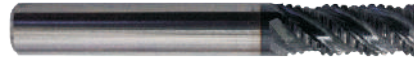
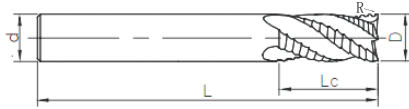
Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME1921-060R-50-4F	6	R0.5	6	15	50	4	\$34.60
TOTIME1921-070R-60-4F	7	R0.5	8	18	60	4	\$52.80
TOTIME1921-080R-60-4F	8	R0.5	8	20	60	4	\$52.80
TOTIME1921-080R-75-4F	8	R0.5	8	25	75	4	\$61.30
TOTIME1921-090R-75-4F	9	R0.5	10	25	75	4	\$81.70
TOTIME1921-100R-75-4F	10	R0.5	10	25	75	4	\$81.70
TOTIME1921-110R-75-4F	11	R0.5	12	28	75	4	\$106.60
TOTIME1921-120R-75-4F	12	R0.5	12	30	75	4	\$106.60
TOTIME1921-130R-100-4F	13	R1.0	14	35	100	4	\$165.00
TOTIME1921-140R-100-4F	14	R1.0	14	35	100	4	\$165.00
TOTIME1921-150R-100-4F	15	R1.0	16	38	100	4	\$210.40
TOTIME1921-160R-100-4F	16	R1.0	16	40	100	4	\$210.40
TOTIME1921-170R-100-4F	17	R1.0	20	43	100	4	\$295.40
TOTIME1921-180R-100-4F	18	R1.0	20	45	100	4	\$295.40
TOTIME1921-200R-100-4F	20	R1.0	20	50	100	4	\$295.40

Tolerance:D≤8 0~0.01 D>8 0~0.02 Recommended Cutting Conditions P.93~P.94

Variable Lead Roughing_(HRC55)



4 FLUTES CORNER RADIUS ROUGHING



 4Flutes	Cobalt 10%	HRC 55	TiAlN Coating	UMG 0.6μm	Carbide Materials	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Cast Iron	Titanium Alloys
<HRC35	<HRC48	HRC40-55	HRC55-65			
●	●			○	●	

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TOTIME4345-060R-50-4F	6	R0.5	6	15	50	4	\$35.20
TOTIME4345-070R-60-4F	7	R0.5	8	18	60	4	\$53.90
TOTIME4345-080R-60-4F	8	R0.5	8	20	60	4	\$53.90
TOTIME4345-080R-75-4F	8	R0.5	8	25	75	4	\$63.00
TOTIME4345-090R-75-4F	9	R0.5	10	25	75	4	\$83.40
TOTIME4345-100R-75-4F	10	R0.5	10	25	75	4	\$83.40
TOTIME4345-110R-75-4F	11	R0.5	12	28	75	4	\$108.90
TOTIME4345-120R-75-4F	12	R0.5	12	30	75	4	\$108.90
TOTIME4345-130R-100-4F	13	R1.0	14	35	100	4	\$169.00
TOTIME4345-140R-100-4F	14	R1.0	14	35	100	4	\$169.00
TOTIME4345-150R-100-4F	15	R1.0	16	38	100	4	\$214.90
TOTIME4345-160R-100-4F	16	R1.0	16	40	100	4	\$214.90
TOTIME4345-170R-100-4F	17	R1.0	20	43	100	4	\$302.20
TOTIME4345-180R-100-4F	18	R1.0	20	45	100	4	\$302.20
TOTIME4345-200R-100-4F	20	R1.0	20	50	100	4	\$302.20

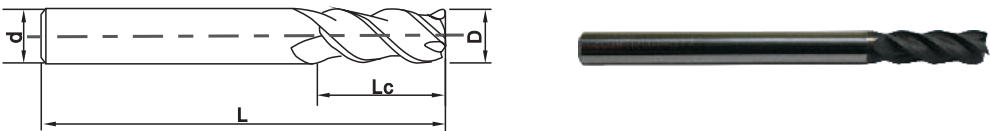
Tolerance: D ≤ 8 0~0.01 D > 8 0~0.02

Recommended Cutting Conditions P.93~P.94

Diamond Coating Square End Mill



4 FLUTES SQUARE



 4Flutes	Cobalt 10%	HRC 48	Diamond Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Graphite	Aluminum
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
					●	○

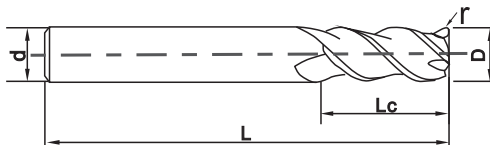
Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TDIA-010S-50-4F	1	4	3	50	4	\$83.40
TDIA-020S-50-4F	2	4	6	50	4	\$83.40
TDIA-030S-50-4F	3	4	9	50	4	\$83.40
TDIA-040S-50-4F	4	4	12	50	4	\$83.40
TDIA-040S-60-4F	4	4	12	60	4	\$83.40
TDIA-040S-75-4F	4	4	12	75	4	\$87.90
TDIA-040S-100-4F	4	4	20	100	4	\$92.40
TDIA-060S-50-4F	6	6	20	50	4	\$128.60
TDIA-060S-60-4F	6	6	20	60	4	\$133.10
TDIA-060S-75-4F	6	6	25	75	4	\$137.70
TDIA-060S-100-4F	6	6	30	100	4	\$146.70
TDIA-060S-150-4F	6	6	40	150	4	\$169.30
TDIA-080S-50-4F	8	8	20	50	4	\$192.00
TDIA-080S-60-4F	8	8	20	60	4	\$201.00
TDIA-080S-75-4F	8	8	30	75	4	\$210.00
TDIA-080S-100-4F	8	8	30	100	4	\$219.10
TDIA-080S-150-4F	8	8	40	150	4	\$237.20
TDIA-100S-60-4F	10	10	25	60	4	\$273.40
TDIA-100S-75-4F	10	10	30	75	4	\$291.50
TDIA-100S-100-4F	10	10	30	100	4	\$309.60
TDIA-100S-150-4F	10	10	40	150	4	\$345.80
TDIA-120S-100-4F	12	12	40	100	4	\$363.90
TDIA-120S-150-4F	12	12	50	150	4	\$400.00
TDIA-120S-180-4F	12	12	50	180	4	\$436.20

Tolerance:D<6 -0. 02~0 6≤D≤12 -0. 03~0
Recommended Cutting Conditions P.107

Diamond Coating Corner Radius End Mill



4 FLUTES CORNER RADIUS



	4Flutes	Cobalt 10%	HRC 48	Diamond Coating	UMG 0.5µm	Materials Carbide
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Graphite	Aluminum
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
					●	○

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TDIA-030CR002-60-4F	3	0.2	3	10	60	4	\$87.90
TDIA-030CR002-75-4F	3	0.2	3	10	75	4	\$92.40
TDIA-030CR002-100-4F	3	0.2	3	10	100	4	\$97.00
TDIA-030CR003-60-4F	3	0.3	3	10	60	4	\$87.90
TDIA-030CR005-60-4F	3	0.5	3	10	60	4	\$87.90
TDIA-030CR005-75-4F	3	0.5	3	10	75	4	\$92.40
TDIA-030CR005-100-4F	3	0.5	3	10	100	4	\$97.00
TDIA-040CR001-40-4F	4	0.1	4	6	40	4	\$87.90
TDIA-040CR002-50-4F	4	0.2	4	6	50	4	\$87.90
TDIA-040CR002-60-4F	4	0.2	4	12	60	4	\$87.90
TDIA-040CR002-75-4F	4	0.2	4	20	75	4	\$92.40
TDIA-040CR002-100-4F	4	0.2	4	20	100	4	\$97.00
TDIA-040CR005-50-4F	4	0.5	4	6	50	4	\$87.90
TDIA-040CR005-60-4F	4	0.5	4	12	60	4	\$87.90
TDIA-040CR005-75-4F	4	0.5	4	12	75	4	\$92.40
TDIA-040CR005-100-4F	4	0.5	4	20	100	4	\$97.00
TDIA-060CR003-75-4F	6	0.3	6	20	75	4	\$133.10
TDIA-060CR003-100-4F	6	0.3	6	30	100	4	\$142.20
TDIA-060CR005-60-4F	6	0.5	6	20	60	4	\$128.60
TDIA-060CR005-75-4F	6	0.5	6	20	75	4	\$133.10
TDIA-060CR005-100-4F	6	0.5	6	25	100	4	\$137.70
TDIA-080CR003-75-4F	8	0.3	8	25	75	4	\$214.60
TDIA-080CR003-100-4F	8	0.3	8	30	100	4	\$223.60

Tolerance: D<6 -0.02~0 6≤D≤12 -0.03~0

Recommended Cutting Conditions P.107

TOTIME48
for General Steels

TOTIME3538
for Stainless Steels
Titanium Alloys

TOTIME65
for Die Steels
Hardened Steels

TOTIME48
for Non-ferrous Metal

Variable Lead
for Roughing

TDIA
for Graphite

Micro
for Aluminum Alloys
Copper Alloys

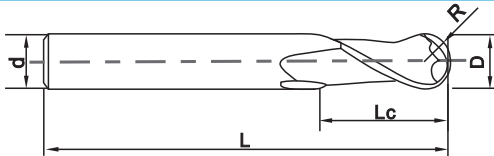
Taper Neck Draft
for High Hardend
Steels

CBN
for High Hardend
Steels

Diamond Coating Ball Nose End Mill



2 FLUTES BALL NOSE



 2Flutes	Cobalt 10%	HRC 48	Diamond Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Graphite	Aluminum
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
					●	○

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TDIA-030B-50-2F	3	1.5	3	6	50	2	\$83.40
TDIA-030B-60-2F	3	1.5	3	6	60	2	\$83.40
TDIA-030B-75-2F	3	1.5	3	6	75	2	\$87.90
TDIA-030B-100-2F	3	1.5	3	6	100	2	\$92.40
TDIA-040B-50-2F	4	2.0	4	8	50	2	\$83.40
TDIA-040B-60-2F	4	2.0	4	8	60	2	\$83.40
TDIA-040B-75-2F	4	2.0	4	8	75	2	\$87.90
TDIA-040B-100-2F	4	2.0	4	10	100	2	\$92.40
TDIA-060B-60-2F	6	3.0	6	12	60	2	\$128.60
TDIA-060B-75-2F	6	3.0	6	12	75	2	\$137.70
TDIA-060B-100-2F	6	3.0	6	16	100	2	\$146.70
TDIA-060B-150-2F	6	3.0	6	20	150	2	\$164.80
TDIA-080B-75-2F	8	4.0	8	16	75	2	\$210.00
TDIA-080B-100-2F	8	4.0	8	16	100	2	\$219.10
TDIA-080B-150-2F	8	4.0	10	30	150	2	\$237.20
TDIA-100B-100-2F	10	5.0	10	20	100	2	\$309.60
TDIA-100B-150-2F	10	5.0	10	30	150	2	\$345.80
TDIA-120B-100-2F	12	6.0	12	30	100	2	\$363.90
TDIA-120B-150-2F	12	6.0	12	30	150	2	\$400.00

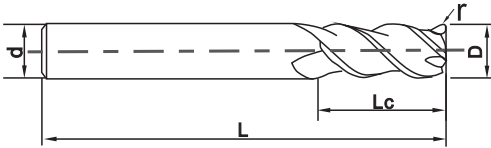
Tolerance:R<3 -0. 02~0 3≤R≤6 -0. 03~0

Recommended Cutting Conditions P.107

Diamond Coating Corner Radius End Mill



4 FLUTES CORNER RADIUS



 4Flutes	Cobalt 10%	HRC 48	Diamond Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Die Steel	Hardened Steel	Hardened Steel	Stainless Steel	Graphite	Aluminum
<HRC35	HRC32-HRC48	HRC48-55	HRC55-65			
					●	○

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TDIA-080CR005-75-4F	8	0.5	8	30	75	4	\$214.60
TDIA-080CR005-100-4F	8	0.5	8	30	100	4	\$223.60
TDIA-080CR005-150-4F	8	0.5	8	40	150	4	\$241.70
TDIA-100CR005-75-4F	10	0.5	10	25	75	4	\$296.00
TDIA-100CR005-100-4F	10	0.5	10	30	100	4	\$314.10
TDIA-100CR005-150-4F	10	0.5	10	40	150	4	\$350.30
TDIA-120CR005-100-4F	12	0.5	12	30	100	4	\$372.90
TDIA-120CR005-150-4F	12	0.5	12	40	150	4	\$409.10

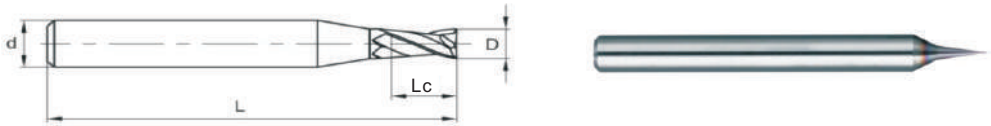
Tolerance:D<6 -0.02~0 6≤D≤12 -0.03~0

Recommended Cutting Conditions P.107

Micro Square End Mill



2 FLUTES SQUARE



 2Flutes	Cobalt 10%	HRC 48	X3H Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
					●	●

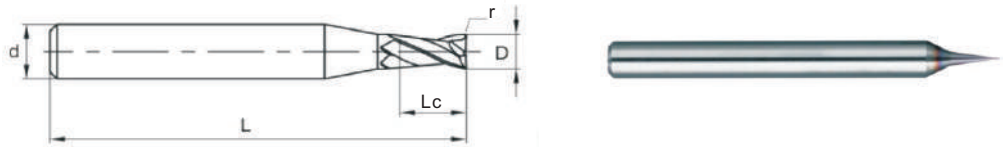
Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMALS010-2F	0.10	4	0.2	50	2	\$35.10
TMALS015-2F	0.15	4	0.3	50	2	\$29.00
TMALS020-2F	0.20	4	0.4	50	2	\$23.40
TMALS025-2F	0.25	4	0.5	50	2	\$22.20
TMALS030-2F	0.30	4	0.6	50	2	\$21.00
TMALS035-2F	0.35	4	0.7	50	2	\$19.70
TMALS040-2F	0.40	4	0.8	50	2	\$18.50
TMALS045-2F	0.45	4	0.9	50	2	\$17.90
TMALS050-2F	0.50	4	1.0	50	2	\$17.30
TMALS060-2F	0.60	4	1.2	50	2	\$17.30
TMALS070-2F	0.70	4	1.4	50	2	\$17.30
TMALS080-2F	0.80	4	1.6	50	2	\$17.30
TMALS090-2F	0.90	4	1.8	50	2	\$17.30

Recommended Cutting Conditions P.95

Micro Corner Radius End Mill



2 FLUTES CORNER RADIUS



 2Flutes	Cobalt 10%	HRC 48	X3H Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
					●	●

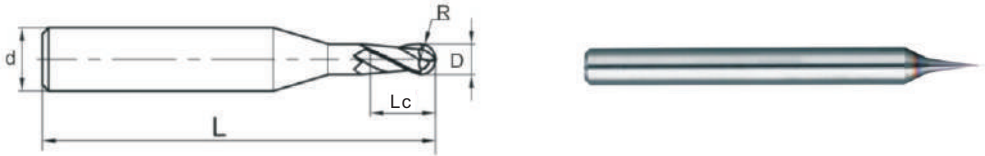
Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMALCR0202-2F	0.2	0.02	4	0.4	50	2	\$32.00
TMALCR0205-2F	0.2	0.05	4	0.4	50	2	\$29.00
TMALCR0305-2F	0.3	0.05	4	0.6	50	2	\$26.50
TMALCR0310-2F	0.3	0.10	4	0.6	50	2	\$24.70
TMALCR0405-2F	0.4	0.05	4	0.8	50	2	\$24.70
TMALCR0410-2F	0.4	0.10	4	0.8	50	2	\$22.80
TMALCR0505-2F	0.5	0.05	4	1.0	50	2	\$22.80
TMALCR0510-2F	0.5	0.10	4	1.0	50	2	\$21.00
TMALCR0605-2F	0.6	0.05	4	1.2	50	2	\$22.80
TMALCR0610-2F	0.6	0.10	4	1.2	50	2	\$21.00
TMALCR0705-2F	0.7	0.05	4	1.4	50	2	\$22.80
TMALCR0710-2F	0.7	0.10	4	1.4	50	2	\$21.00
TMALCR0805-2F	0.8	0.05	4	1.6	50	2	\$22.80
TMALCR0810-2F	0.8	0.10	4	1.6	50	2	\$21.00

Recommended Cutting Conditions P.95

Micro Ball Nose End Mill



2 FLUTES BALL NOSE



 2Flutes	Cobalt 10%	HRC 48	X3H Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	<HRC48	HRC48-55	HRC55-60			
					●	●

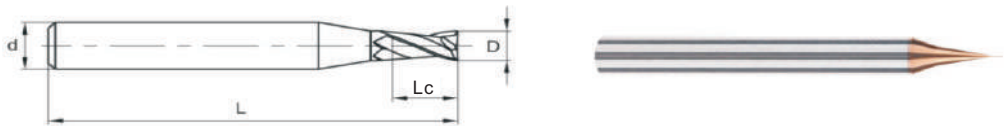
Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMALB020-2F	0.2	0.10	4	0.4	50	2	\$24.00
TMALB030-2F	0.3	0.15	4	0.6	50	2	\$21.60
TMALB040-2F	0.4	0.20	4	0.8	50	2	\$19.70
TMALB050-2F	0.5	0.25	4	1.0	50	2	\$17.90
TMALB060-2F	0.6	0.30	4	1.2	50	2	\$17.90
TMALB070-2F	0.7	0.35	4	1.4	50	2	\$17.90
TMALB080-2F	0.8	0.40	4	1.6	50	2	\$17.90

Recommended Cutting Conditions P.95

Micro Square End Mill



2 FLUTES SQUARE



 2Flutes	Cobalt 10%	HRC 48	AP Coating	MG 0.8μm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	HRC35-45	HRC45-55	HRC55-60			
●	●			●		

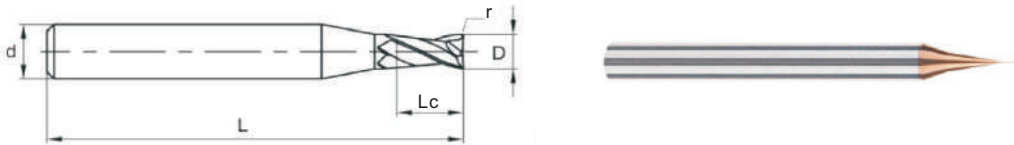
Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMUS010-2F	0.10	4	0.2	50	2	\$41.80
TMUS015-2F	0.15	4	0.3	50	2	\$34.50
TMUS020-2F	0.20	4	0.4	50	2	\$27.90
TMUS025-2F	0.25	4	0.5	50	2	\$26.40
TMUS030-2F	0.30	4	0.6	50	2	\$25.00
TMUS035-2F	0.35	4	0.7	50	2	\$23.50
TMUS040-2F	0.40	4	0.8	50	2	\$22.00
TMUS045-2F	0.45	4	0.9	50	2	\$21.30
TMUS050-2F	0.50	4	1.0	50	2	\$20.60
TMUS060-2F	0.60	4	1.2	50	2	\$20.60
TMUS070-2F	0.70	4	1.4	50	2	\$20.60
TMUS080-2F	0.80	4	1.6	50	2	\$20.60
TMUS090-2F	0.90	4	1.8	50	2	\$20.60

Recommended Cutting Conditions P.96

Micro Corner Radius End Mill



2 FLUTES CORNER RADIUS



 2Flutes	Cobalt 10%	HRC 48	AP Coating	MG 0.8µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	HRC35-45	HRC45-55	HRC55-60			
●	●			●		

Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMUCR0202-2F	0.2	0.02	4	0.4	50	2	\$38.10
TMUCR0205-2F	0.2	0.05	4	0.4	50	2	\$34.50
TMUCR0305-2F	0.3	0.05	4	0.6	50	2	\$31.60
TMUCR0310-2F	0.3	0.10	4	0.6	50	2	\$29.40
TMUCR0405-2F	0.4	0.05	4	0.8	50	2	\$29.40
TMUCR0410-2F	0.4	0.10	4	0.8	50	2	\$27.20
TMUCR0505-2F	0.5	0.05	4	1.0	50	2	\$27.20
TMUCR0510-2F	0.5	0.10	4	1.0	50	2	\$25.00
TMUCR0605-2F	0.6	0.05	4	1.2	50	2	\$27.20
TMUCR0610-2F	0.6	0.10	4	1.2	50	2	\$25.00
TMUCR0705-2F	0.7	0.05	4	1.4	50	2	\$27.20
TMUCR0710-2F	0.7	0.10	4	1.4	50	2	\$25.00
TMUCR0805-2F	0.8	0.05	4	1.6	50	2	\$27.20
TMUCR0810-2F	0.8	0.10	4	1.6	50	2	\$25.00

Recommended Cutting Conditions P.96

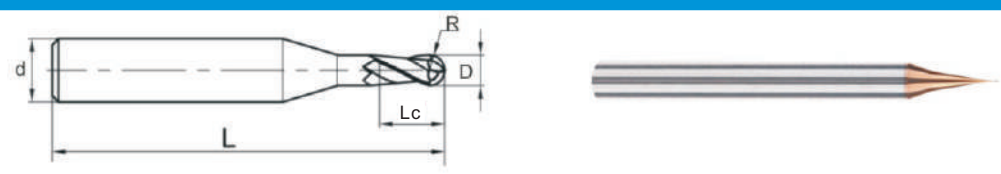


Carbide End Mill Cutter
For Carbon Steel, Cast Iron, Alloy Steel, Stainless Steel

Micro Ball Nose End Mill



2 FLUTES BALL NOSE



 2Flutes	Cobalt 10%	HRC 48	AP Coating	MG 0.8µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	HRC35-45	HRC45-55	HRC55-60			
●	●			●		

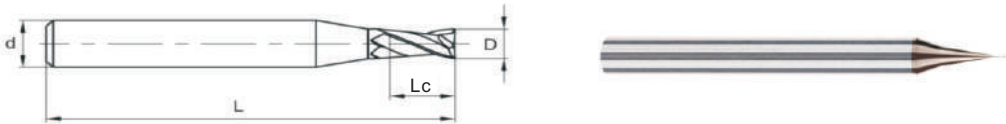
Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMUB020-2F	0.2	0.10	4	0.4	50	2	\$28.60
TMUB030-2F	0.3	0.15	4	0.6	50	2	\$25.70
TMUB040-2F	0.4	0.20	4	0.8	50	2	\$21.30
TMUB050-2F	0.5	0.25	4	1.0	50	2	\$21.30
TMUB060-2F	0.6	0.30	4	1.2	50	2	\$21.30
TMUB070-2F	0.7	0.35	4	1.4	50	2	\$21.30
TMUB080-2F	0.8	0.40	4	1.6	50	2	\$21.30

Recommended Cutting Conditions P.96

Micro Square End Mill



2 FLUTES SQUARE



	2Flutes	Cobalt 10%	HRC 48	X6H Coating	MG 0.8μm	Materials Carbide
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	HRC35-45	HRC48-55	HRC55-60			
		●	●			

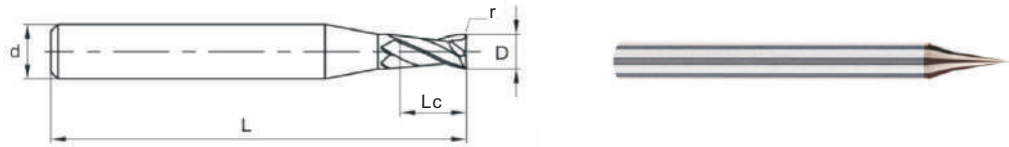
Order No.	D(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMHS010-2F	0.10	4	0.2	50	2	\$46.20
TMHS015-2F	0.15	4	0.3	50	2	\$38.90
TMHS020-2F	0.20	4	0.4	50	2	\$32.30
TMHS025-2F	0.25	4	0.5	50	2	\$30.80
TMHS030-2F	0.30	4	0.6	50	2	\$29.40
TMHS035-2F	0.35	4	0.7	50	2	\$27.90
TMHS040-2F	0.40	4	0.8	50	2	\$26.40
TMHS045-2F	0.45	4	0.9	50	2	\$25.70
TMHS050-2F	0.50	4	1.0	50	2	\$25.00
TMHS060-2F	0.60	4	1.2	50	2	\$25.00
TMHS070-2F	0.70	4	1.4	50	2	\$25.00
TMHS080-2F	0.80	4	1.6	50	2	\$25.00
TMHS090-2F	0.90	4	1.8	50	2	\$25.00

Recommended Cutting Conditions P.97

Micro Corner Radius End Mill



2 FLUTES CORNER RADIUS



	2Flutes	Cobalt 10%	HRC 48	X6H Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation		○ 2nd Recommendation					
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys	
<HRC35	HRC35-45	HRC48-55	HRC55-60				
		●	●				

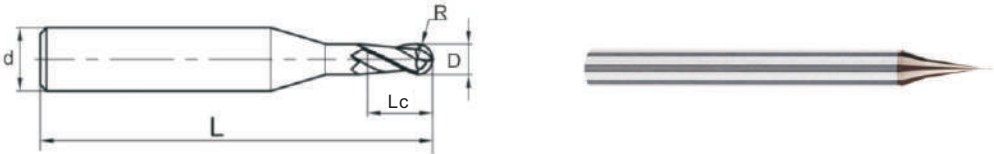
Order No.	D(mm)	r(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMHCR0202-2F	0.2	0.02	4	0.4	50	2	\$42.50
TMHCR0205-2F	0.2	0.05	4	0.4	50	2	\$38.90
TMHCR0305-2F	0.3	0.05	4	0.6	50	2	\$35.90
TMHCR0310-2F	0.3	0.10	4	0.6	50	2	\$33.70
TMHCR0405-2F	0.4	0.05	4	0.8	50	2	\$33.70
TMHCR0410-2F	0.4	0.10	4	0.8	50	2	\$31.60
TMHCR0505-2F	0.5	0.05	4	1.0	50	2	\$31.60
TMHCR0510-2F	0.5	0.10	4	1.0	50	2	\$29.40
TMHCR0605-2F	0.6	0.05	4	1.2	50	2	\$31.60
TMHCR0610-2F	0.6	0.10	4	1.2	50	2	\$29.40
TMHCR0705-2F	0.7	0.05	4	1.4	50	2	\$31.60
TMHCR0710-2F	0.7	0.10	4	1.4	50	2	\$29.40
TMHCR0805-2F	0.8	0.05	4	1.6	50	2	\$31.60
TMHCR0810-2F	0.8	0.10	4	1.6	50	2	\$29.40

Recommended Cutting Conditions P.97

Micro Ball Nose End Mill



2 FLUTES BALL NOSE



 2Flutes	Cobalt 10%	HRC 48	X6H Coating	UMG 0.5µm	Materials Carbide	
● 1st Recommendation ○ 2nd Recommendation						
Carbon Steel Cast Iron	Alloy Steel	Hardened Steel	Hardened Steel	Stainless Steel	Aluminium Alloys	Copper Alloys
<HRC35	HRC35-45	HRC48-55	HRC55-60			
		●	●			

Order No.	D(mm)	R(mm)	d(mm)	Lc(mm)	L(mm)	Flutes	List USD
TMHB020-2F	0.2	0.10	4	0.4	50	2	\$33.00
TMHB030-2F	0.3	0.15	4	0.6	50	2	\$30.10
TMHB040-2F	0.4	0.20	4	0.8	50	2	\$27.90
TMHB050-2F	0.5	0.25	4	1.0	50	2	\$25.70
TMHB060-2F	0.6	0.30	4	1.2	50	2	\$25.70
TMHB070-2F	0.7	0.35	4	1.4	50	2	\$25.70
TMHB080-2F	0.8	0.40	4	1.6	50	2	\$25.70

Recommended Cutting Conditions P.97