

# ET1 END MILLS

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DESIGNED  
FOR STAINLESS STEEL,  
TITANIUM,  
INCONEL

Europa Tool 8<sup>TH</sup> EDITION

## ET1 END MILL CONTENTS

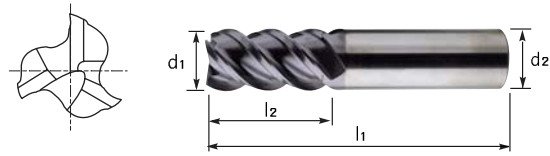
(Carbide for Stainless, Titanium, Inconel)

PRODUCTS	SERIES	SHANK TYPE	DESCRIPTION	PAGE
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## 3&4 FLUTE 50° HELIX CARBIDE TiAIN COATED END MILLS



Series No. 132123, 132323



*for Stainless Steel, Titanium, Inconel*

EDP. No		MILL DIAMETER h10(d1)	SHANK DIAMETER h6(d2)	LENGTH OF CUT l2	OVERALL LENGTH l1	NO. OF FLUTE
FLAT	STRAIGHT					
1321230600	1323230600	6.0	6.0	13.0	50.0	3
1321230800	1323230800	8.0	8.0	19.0	60.0	
1321231000	1323231000	10.0	10.0	22.0	70.0	
1321231200	1323231200	12.0	12.0	25.0	75.0	
1321231600	1323231600	16.0	16.0	32.0	90.0	
1321231800	1323231800	18.0	18.0	32.0	90.0	
1321232000	1323232000	20.0	20.0	38.0	100.0	4
1321232500	1323232500	25.0	25.0	45.0	120.0	

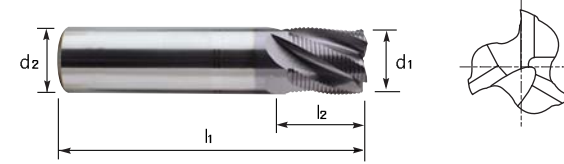
**Tolerances according to DIN h10 not e8  
Toleranzen nach DIN 7160 & 7161**

Toleranzwerte in µm / Tolerance range in µm					
Nennmaßbereich in mm / Nominal-Diameter in mm					
	won 1 bis 3 from 1 to 3	über 3 bis 6 over 3 to 6	über 6 bis 10 over 6 to 10	über 10 bis 18 over 10 to 18	über 18 bis 30 over 18 to 30
h10	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

## MULTI FLUTE 30° HELIX SHORT ROUGHING CARBIDE TiAIN COATED END MILLS



Series No. 320123, 320323



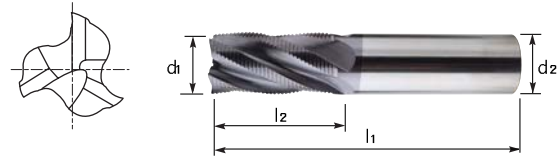
*for Stainless Steel, Titanium, Inconel*

EDP. No		MILL DIAMETER h10(d1)	SHANK DIAMETER h6(d2)	LENGTH OF CUT l2	OVERALL LENGTH l1	NO. OF FLUTE
FLAT	STRAIGHT					
3201230600	3203230600	6.0	6.0	7.0	54.0	3
3201230700	3203230700	7.0	8.0	8.0	58.0	
3201230800	3203230800	8.0		9.0	58.0	
3201230900	3203230900	9.0	10.0	13.0	66.0	4
3201231000	3203231000	10.0		14.0		
3201231200	3203231200	12.0	12.0	16.0	73.0	
3201231400	3203231400	14.0	14.0	18.0	75.0	
3201231600	3203231600	16.0	16.0	22.0	82.0	
3201231800	3203231800	18.0	18.0	24.0	84.0	
3201232000	3203232000	20.0	20.0	26.0	92.0	5
3201232500	3203232500	25.0	25.0	25.0	110.0	

**Tolerances according to DIN h10 not e8  
Toleranzen nach DIN 7160 & 7161**

Toleranzwerte in µm / Tolerance range in µm					
Nennmaßbereich in mm / Nominal-Diameter in mm					
	won 1 bis 3 from 1 to 3	über 3 bis 6 over 3 to 6	über 6 bis 10 over 6 to 10	über 10 bis 18 over 10 to 18	über 18 bis 30 over 18 to 30
h10	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

## MULTI FLUTE 30° HELIX LONG ROUGHING CARBIDE TiAIN COATED END MILLS



Series No. 118123, 118323



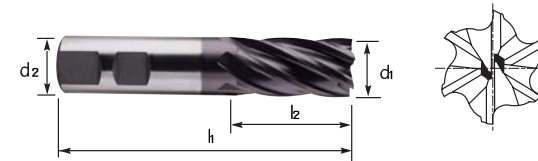
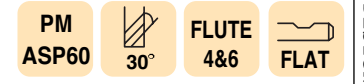
*for Stainless Steel, Titanium, Inconel*

EDP. No		MILL DIAMETER h10(d1)	SHANK DIAMETER h6(d2)	LENGTH OF CUT l2	OVERALL LENGTH l1	NO. OF FLUTE
FLAT	STRAIGHT					
1181230600	1183230600	6.0	6.0	16.0	57.0	3
1181230700	1183230700	7.0	8.0	16.0	63.0	
1181230800	1183230800	8.0		16.0		
1181230900	1183230900	9.0	10.0	19.0	72.0	4
1181231000	1183231000	10.0		22.0		
1181231200	1183231200	12.0	12.0	26.0	83.0	
1181231400	1183231400	14.0	14.0	26.0		
1181231600	1183231600	16.0	16.0	32.0	92.0	
1181231800	1183231800	18.0	18.0	32.0		
1181232000	1183232000	20.0	20.0	38.0	104.0	5
1181232500	1183232500	25.0	25.0	45.0	121.0	

**Tolerances according to DIN h10 not e8  
Toleranzen nach DIN 7160 & 7161**

Toleranzwerte in µm / Tolerance range in µm					
Nennmaßbereich in mm / Nominal-Diameter in mm					
	von 1 bis 3 from 1 to 3	über 3 bis 6 over 3 to 6	über 6 bis 10 over 6 to 10	über 10 bis 18 over 10 to 18	über 18 bis 30 over 18 to 30
h10	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

## 4&6 FLUTE 30° HELIX SHORT ASP60 TiAIN COATED END MILLS



Series No. 107122



*for Stainless Steel, Titanium, Inconel*

EDP. No		MILL DIAMETER e8(d1)	SHANK DIAMETER h6(d2)	LENGTH OF CUT l2	OVERALL LENGTH l1	NO. OF FLUTE
FLAT	STRAIGHT					
1071220300	—	3.0	6.0	8.0	52.0	4
1071220400	—	4.0		11.0	55.0	
1071220500	—	5.0		13.0	57.0	
1071220600	—	6.0	13.0			
1071220800	—	8.0	10.0	19.0	69.0	6
1071221000	—	10.0		22.0	72.0	
1071221200	—	12.0	12.0	26.0	83.0	
1071221400	—	14.0		26.0		
1071221600	—	16.0	16.0	32.0	92.0	
1071221800	—	18.0		32.0		
1071222800	—	20.0	20.0	38.0	104.0	
1071222500	—	25.0	25.0	45.0	121.0	

**Tolerances according to DIN 7160 & 7161(ASP-60)**

Toleranzwerte in µm / Tolerance range in µm					
Nennmaßbereich in mm / Nominal-Diameter in mm					
	von 1 bis 3 from 1 to 3	über 3 bis 6 over 3 to 6	über 6 bis 10 over 6 to 10	über 10 bis 18 over 10 to 18	über 18 bis 30 over 18 to 30
MILL DIA.	+30 0				
h6	0 -6	0 -8	0 -9	0 -11	0 -13

## ET1 CUTTING CONDITION

### 3 & 4 FLUTE ET1 50° HIGH HELIX

132123, 132323



#### SIDE CUTTING

MATERIAL	STAINLESS STEEL TITANIUM ALLOY		INCONEL	
	DIAMETER	RPM	FEED	RPM
6	2840	210	1050	55
8	2100	220	840	50
10	1680	220	680	50
12	1370	180	560	45
16	1050	135	420	35
18	950	125	370	30
20	840	145	340	30
25	670	115	270	25

#### SLOTING

MATERIAL	STAINLESS STEEL TITANIUM ALLOY		INCONEL	
	RPM	FEED	RPM	FEED
6	1580	90	1160	40
8	1160	100	840	40
10	1010	105	670	40
12	840	90	560	30
16	630	65	420	25
18	560	60	370	20
20	510	55	320	20
25	400	45	270	15

R.P.M = rev./min, Feed = mm/min

### MULTI FLUTE ET1 ROUGHING END MILLS

320323, 320123, 118123, 118323



#### SIDE CUTTING

MATERIAL	STAINLESS STEEL TITANIUM ALLOY		INCONEL	
	DIAMETER	RPM	FEED	RPM
6	8400	570	2400	190
8	6300	570	1800	180
10	5100	570	1300	190
12	4200	570	1200	190
14	3600	570	900	130
16	3300	510	800	110
18	2700	420	700	100
20	2400	360	660	100
25	2160	410	600	110

R.P.M = rev./min, Feed = mm/min

### 4 & 6 FLUTE ET1 ASP60

107122



#### SIDE CUTTING

MATERIAL	STAINLESS STEEL TITANIUM ALLOY		INCONEL	
	DIAMETER	RPM	FEED	RPM
6	8400	570	2400	190
8	6300	570	1800	180
10	5100	570	1300	190
12	4200	570	1200	190
14	3600	570	900	130
16	3300	510	800	110
18	2700	420	700	100
20	2400	360	660	100
25	2160	410	600	110

R.P.M = rev./min, Feed = mm/min

