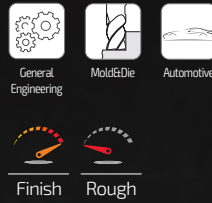


ULTRA-BITE

203 Series Ball Nose Endmill



Updated for optimum performance after heat treatment finishing operations!

We are more competitive with new generation 203 series in milling hard materials especially for changing and growing Mold and Die industry.

High performance up to **63 HRC** hardness.



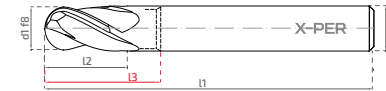
Up to **%35** heat resistance and enhanced tool life with new generation TiSiN coating technology and surface quality

Up to **%30** better chip evacuation in milling hard work pieces with its developed center form.

%40 better surface quality

Up to **%35** reduced tensions in the tool thanks to optimized chatter free geometry.

Available from stock in all sizes **%100**



Short Series					
Stock	Code	d1f8	d2h6	l1	l2
*	203203058	3	6	58	6
*	203204058	4	6	58	9
*	203205058	5	6	58	10
*	203206058	6	6	58	12
*	203208064	8	8	64	15
*	203210073	10	10	73	20
*	203212082	12	12	82	22

Long Series							
Stock	Code	d1f8	d2h6	d3	l1	l2	l3
*	203203050	3	3	2,9	50	5	15
*	203203080	3	3	2,9	80	5	30
*	203204050	4	4	3,8	50	6	15
*	203204080	4	4	3,8	80	6	35
*	203205050	5	5	4,8	50	7	15
*	203205080	5	5	4,8	80	10	35
*	203206080	6	6	5,8	80	10	35
*	203206100	6	6	5,8	100	10	45
*	203208100	8	8	7,7	100	12	45
*	203210110	10	10	9,7	110	14	55
*	203212110	12	12	11,7	110	16	55

Cutting Parameters		
Material	Kopya Frezeleme	Finish Milling
	ap=0.25 - 0.100 / ae=0.25 - 0.100 Vc (m/min)	ap=0.100 / ae=0.100 Vc (m/min)



Steel	170-200	190-230
Cold Work Tool Steel	170-200	190-230
Hot Work Tool Steel	160-190	180-220
AISI 304 - 416 - 420	90-120	120-150
AISI 316 - 440	80-110	110-140
17-4 PH 15-5 PH	80-110	110-140
Chrome-Cobalt Alloy	70-100	100-130
≤ 54 HRC	90-120	120-150
>54 HRC	60-90	90-120

Feed Per Tooth (mm/tooth)						
Ø	ae=0.250	ae=0.200	ae=0.150	ae=0.100	ae=0.100	ae=0.100
3	0,050	0,054	0,059	0,062	0,065	0,070
4	0,051	0,058	0,065	0,070	0,074	0,080
6	0,059	0,070	0,083	0,087	0,093	0,100
8	0,061	0,073	0,086	0,091	0,097	0,115
10	0,069	0,082	0,095	0,107	0,114	0,125
12	0,080	0,09	0,110	0,122	0,130	0,140

ULTRA-BITE

203 Ball Nose Endmill



Steel	○
Stainless Steel	○
Hardened Steel ≤54 HRC	●
Hardened Steel >54 HRC	●
Cast Iron	○
Graphite	○
Non Ferrous Material	○
HRSA	○
Titanium	○

● Recommended ○ Not Recommended

* Marked products can be delivered quickly from stock.

