



**SANDVIK**  
Coromant

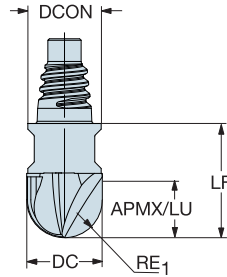
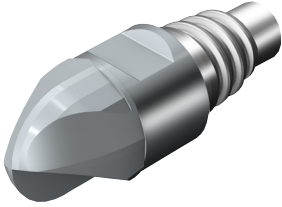
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# Ordering information

ISO S ceramic ball nose end mill

# ISO S Ceramic ball nose end mill

Coromant EH



## Metric version

DC	CZC <sub>MS</sub>	APMX	RE <sub>1</sub>	ZEFP	Ordering code	6060	DCON	LF
10.00	E10	7.00	5.00	2	E316-10BM200-10050G 6060	☆	9.70	15.30
12.00	E10	7.00	6.00	2	E316-10BM200-12060G 6060	☆	9.70	15.30

## Inch version

DC	CZC <sub>MS</sub>	APMX	RE <sub>1</sub>	ZEFP	Ordering code	6060	DCON	LF
.375	E10	.276	.188	2	EA316-10BM200-03748G 6060	☆	.364	.604
.500	E10	.276	.250	2	EA316-10BM200-05064G 6060	☆	.394	.604

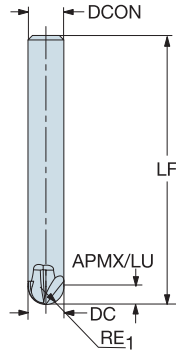
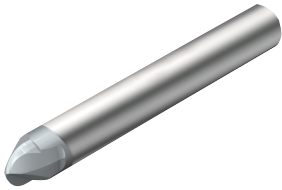
## Examples of cutting parameters

- Ø12 in Inconel718
- Vc=600m/min (16,000rpm)
  - ap=0.8mm
  - fz=0.04mm/rev
  - hex=0.019 for inclination of 43°

- Ø10 in Inconel718
- Vc=560m/min (18,000rpm)
  - ap=0.6mm
  - fz=0.04mm/rev
  - hex=0.018 for inclination of 43°

# ISO S Ceramic ball nose end mill

Cylindrical shank



## Metric version

DC	CZC <sub>MS</sub>	APMX	RE <sub>1</sub>	ZFP	Ordering code	6060	DCON	LF
6.00	6.00	5.00	3.00	2	3B010-0600-SA 6060	☆	6.00	71.50
8.00	8.00	5.00	4.00	2	3B010-0800-SA 6060	☆	8.00	82.70

## Inch version

DC	CZC <sub>MS</sub>	APMX	RE <sub>1</sub>	ZFP	Ordering code	6060	DCON	LF
.250	.250	.197	.125	2	3B010-0635-SA 6060	☆	.250	2.814
.313	.313	.197	.156	2	3B010-0794-SA 6060	☆	.313	3.258

## Examples of cutting parameters

Ø8 in Inconel718

- Vc=570m/min (24,000rpm)
- ap=0.5mm
- fz=0.03mm/rev
- hex=0.014 for inclination of 43°

# ISO S Ceramic ball nose end mill

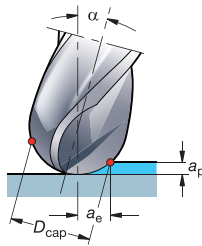
## Recommendations

- Stable set-up (machine and workpiece)
- Put the tool shank in axial support inside the holder for maximum stability
- Always have the shortest possible overhang to avoid vibrations (TailorMade!)
- When the overhang is high, consider using carbide shanks for the EH couplings
- Balance the assembly to G2.5 at the maximum rotation speed you will be cutting
- For the diameter you have chosen, use at least VC=550m/min at the depth of cut
- Use the recommended hex as starting point
- Always tilt the tool to ensure working on the radius as much as possible
- Use in dry condition

## $h_{ex}$ calculation

$$D_{cap} = D_3 \sin \left( \alpha + \cos^{-1} \left( \frac{D_3 - 2a_p}{D_3} \right) \right)$$

$$h_{ex} = \frac{f_z \sqrt{D_{cap}^2 - (D_{cap} - 2a_p)^2}}{D_3}$$



## Cutting data recommendations

ISO S	
Diameter in mm	Hex recommended in mm
6.00	0.011
8.00	0.014
10.00	0.019
12.00	0.019

Diameter in inch	Hex recommended in inch
.250	.00043
.313	.00055
.375	.00075
.500	.00075

Example:  
 E316-10BM200-10050G 6060  
 Ø10 mm EH; Z=2  
 D3=10mm  
 ap=0.7mm  
 Tilt angle  $\alpha=43^\circ$   
 DCap=9.6mm  
 fz=0.04 mm/tooth  
 hex=0.020

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C-1040:185 en-GB © AB Sandvik Coromant 2017

