



MILLING

A BRAND® AE-H

Advanced Performance Carbide End Mills for Hardened Steels

High Precision Machining of High Hardened Steels

PRIMARY TARGETS

- Die Mold Shops Machining Hard Materials that Need Long Tool Life
- Hard Steel Applications (*Over 55HRC*)

SOLUTIONS

- Offers High Precision and Long Reliable Tool Life
- Best Choice Ball End Mill for Hardened Material Applications

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WHAT OUR CUSTOMERS SEE

- These Tools *Doubled My Tool Life in Hardened Steel!*
- Reduced My Bench Time Significantly!

HOW DOES IT WORK?

Durable Geometry

- Tools Have Special Geometry to Maximize Life

DUROREY Coating

- Extremely Hard and Wear Resistant Coating

Three Styles for Various Applications

- 4-Flute Regular Length
- 2-Flute Regular Length
- 2-Flute Long Neck

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Advanced Performance Carbide End Mills for Hardened Steels

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Carbide ball end mills for high -precision finishing of high-hardness steel with emphasis on machined surface accuracy. The new DUOREY coating enables longer tool life in high-hardness steel and is high chipping resistant in work materials exceeding 60 HRC.

CARBIDE	DUOREY	R ± 0.003 R≤0.25	R ± 0.005 0.25<R	R ± 0.005 R≤1.5	R ± 0.007 1.5<R≤3	R ± 0.01 3<R	R ± 0.005	25°	30°	40°	SHANK h4	SHRINK FIT
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Features & Benefits

- **OSG's DUOREY coating** enables superior heat resistance and high toughness optimized for high-hardness steel milling.
- **Thickening of the center core** to prevent deformation of the ball tip and improve control of chipping.
- **Superior ball R precision** +/- 0.005mm.
- **Superior shank accuracy** can support h4 tolerance (0/-0.004mm).

List Numbers

8410 - A Brand® AE-BD-H (Inch)
8510 - A Brand® AE-BD-H (Metric)
8590 - A Brand® AE-LNBD-H (Metric)
8430 - A Brand® AE-BM-H (Inch)
8530 - A Brand® AE-BM-H (Metric)

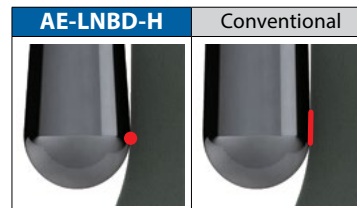
Size Range

1/32"-1/2"
0.2mm-12mm
0.1mm-6mm
1/8"-1/2"
1mm-12mm

Teardrop-Shaped Outer Periphery

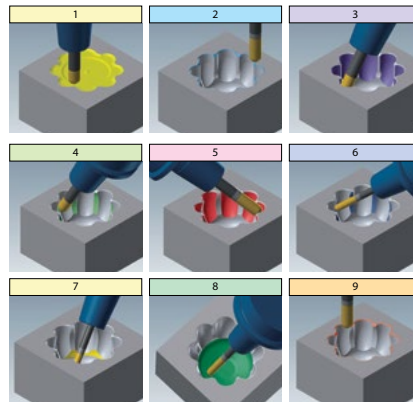
AE-LNBD-H

Strong back taper geometry enables milling by point, which prevents chattering and chirping, resulting in improvement of surface accuracy.



3 Styles for a Wide Range of Milling Applications

AE-H Features 3 Styles to Cover a Wide Range of Applications



Process	Milling Part	Milling Method	Milling Process	Tool
1	Overall	3-axis contouring line	High-efficiency roughing	AE-BM-H R5
2	Chamfer	3-axis contouring line	Semi-roughing	
3	Groove	5-axis profiling	Semi-roughing	
4	Ridge	5-axis turn milling	Roughing/Semi-roughing	
5	Groove	5-axis profiling	High-precision finishing	AE-BD-H R5x30
6	Ridge	5-axis profiling	High-precision finishing	
7	Middle bottom	5-axis turn milling	High-precision finishing	AE-LNBD-H R3x40x6
8	Bottom	5-axis turn milling	High-precision finishing	
9	Chamfer	3-axis contouring line	High-precision finishing	AE-BD-H R5x30

Work Material	YXR3 (60HRC)
Machine	5-Axis Machining Center
Main Spindle	HSK63
Coolant	MQL
Max RPM	25,000min ⁻¹
Holder	Shrink Fit



osgtool.com

OSG USA, Inc. : 800-837-2223

OSG Canada, Ltd. : 905-632-8032 • OSG Royco (Mexico) : (52) 477 478-02-00

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