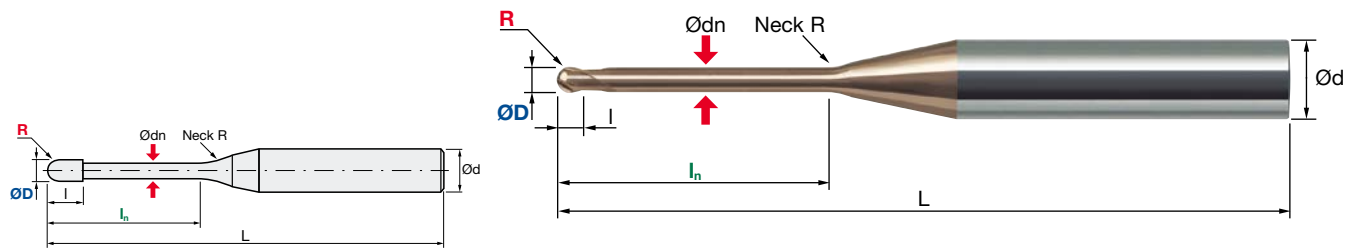
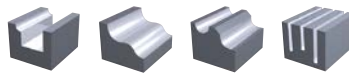


Ultra Micro Grain Solid Carbide End Mill

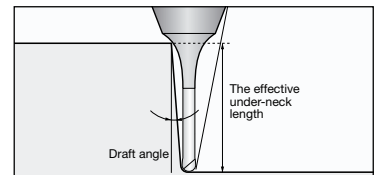
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V max High Speed
▽ Semi-Finishing
▽▽ Finishing
HRC 72
No. of Teeth 2



Carbide Micro Grain
TH60+ Nano-PVD Coating
Rake Angle Negative

D	(0 / -0.014 mm)
R	+0.003 / -0.007 mm
ød	h4
Helix angle	30°



Size											Interference angle	Effective Underneck Using Length by Draft Angle											
ID Code	Item Code	Z	ØD	R	Ln	I	dn	L	Ød	Neck R		0.5°	1°	1.5°	2°	3°							
EP864	EPSBE-2001-0.15-TH	2	0.1	0.05	0.15	0.08	0.08	45	45	1	11.82	0.30	0.32	0.33	0.35	0.38							
EP865	EPSBE-2001-0.3-TH				0.3						11.64	0.46	0.48	0.50	0.52	0.57							
EP866	EPSBE-2001-0.75-TH				0.75						11.12	0.93	0.97	1.01	1.04	1.10							
EP867	EPSBE-2002-0.3-TH				0.3						11.66	0.49	0.50	0.52	0.54	0.58							
EP868	EPSBE-2002-0.6-TH		0.2	0.1	0.6	0.15	0.17	45	4	2	11.30	0.80	0.83	0.86	0.88	0.93							
EP870	EPSBE-2002-1-TH				1						10.86	1.22	1.26	1.30	1.33	1.39							
EP869	EPSBE-2002-1.5-TH				1.5						10.35	1.74	1.79	1.84	1.88	2.05							
EP871	EPSBE-2002-2-TH				2						9.88	2.25	2.32	2.37	2.45	2.71							
EP872	EPSBE-2003-0.45-TH		0.3	0.15	0.45	0.25	0.27	45	4	2	11.53	0.73	0.77	0.80	0.84	0.91							
EP873	EPSBE-2003-0.9-TH				0.9						11.00	1.21	1.27	1.32	1.37	1.47							
EP874	EPSBE-2003-1.5-TH				1.5						10.36	1.84	1.92	1.99	2.06	2.18							
EP875	EPSBE-2003-2-TH				2						9.88	2.36	2.46	2.54	2.62	2.76							
EP876	EPSBE-2003-3-TH				3						9.05	3.41	3.53	3.64	3.73	4.02							
EP877	EPSBE-2004-0.6-TH				0.4						0.2	0.6	0.3	0.37	45	4	2	11.39	0.88	0.93	0.97	1.01	1.09
EP878	EPSBE-2004-1.2-TH											1.2						10.69	1.52	1.59	1.65	1.71	1.82
EP879	EPSBE-2004-2-TH											2						9.88	2.36	2.46	2.54	2.62	2.75
EP881	EPSBE-2004-3-TH		3	9.03		3.41	3.53	3.63	3.73	4.01													
EP880	EPSBE-2004-3.5-TH		0.5	0.25	3.5	0.35	0.47	45	4	2	8.65	3.93	4.06	4.18	4.27	4.67							
EP882	EPSBE-2004-4-TH				4						8.30	4.45	4.59	4.71	4.83	5.33							
EP883	EPSBE-2005-0.75-TH				0.75						11.25	1.04	1.09	1.13	1.18	1.27							
EP884	EPSBE-2005-1.5-TH	1.5			10.39						1.83	1.91	1.98	2.05	2.17								
EP885	EPSBE-2005-3-TH	0.6	0.3	3	0.4	0.57	45	4	2	9.00	3.41	3.53	3.63	3.72	3.99								
EP886	EPSBE-2005-5-TH			5						7.64	5.48	5.65	5.78	6.01	6.65								
EP887	EPSBE-2006-0.9-TH			0.9						11.10	1.33	1.42	1.51	1.59	1.75								
EP888	EPSBE-2006-1.8-TH			1.8						10.08	2.30	2.44	2.56	2.68	2.88								
EP889	EPSBE-2006-3-TH	0.8	0.4	3	0.5	0.77	45	4	2	8.98	3.58	3.77	3.93	4.07	4.32								
EP890	EPSBE-2006-5-TH			5						7.59	5.70	5.94	6.14	6.32	6.63								
EP891	EPSBE-2006-6-TH			6						7.04	6.75	7.02	7.23	7.42	7.96								
EP892	EPSBE-2008-1.2-TH			1.2						10.79	1.65	1.75	1.84	1.93	2.11								
EP893	EPSBE-2008-2.4-TH	1	0.5	2.4	0.8	0.96	45	4	2	9.47	2.94	3.10	3.24	3.36	3.59								
EP894	EPSBE-2010-1.5-TH			1.5						11.01	2.01	2.12	2.21	2.31	2.49								
EP896	EPSBE-2010-3-TH			3						9.88	3.61	3.78	3.93	4.06	4.30								
EP897	EPSBE-2010-6-TH			6						8.20	6.76	7.02	7.23	7.42	7.92								
EP898	EPSBE-2010-8-TH	1.2	0.6	8	1.1	1.15	45	4	2	7.36	8.85	9.15	9.40	9.61	10.58								
EP895	EPSBE-2010-10-TH			10						6.68	10.93	11.27	11.54	11.98	13.23								
EP899	EPSBE-2012-1.8-TH			1.8						10.78	2.36	2.47	2.58	2.68	2.86								
EP900	EPSBE-2012-3.6-TH			3.6						9.46	4.27	4.45	4.61	4.75	5.01								
EP902	EPSBE-2015-2.25-TH	1.5	0.75	2.25	1.35	1.44	45	4	2	10.43	2.87	2.99	3.10	3.20	3.40								
EP903	EPSBE-2015-4.5-TH			4.5						8.84	5.24	5.43	5.61	5.76	6.03								
EP904	EPSBE-2015-8-TH			8						7.14	8.89	9.17	9.41	9.61	10.56								
EP901	EPSBE-2015-12-TH			12						5.85	13.03	13.39	13.74	14.38	15.87								
EP908	EPSBE-2020-3-TH	2	1	3	1.7	1.92	45	4	2	9.79	3.71	3.84	3.96	4.07	4.29								
EP909	EPSBE-2020-6-TH			6						7.81	6.84	7.07	7.26	7.43	7.89								
EP910	EPSBE-2020-8-TH			8						6.88	8.92	9.19	9.42	9.61	10.54								
EP905	EPSBE-2020-12-TH			12						5.55	13.06	13.41	13.76	14.39	15.85								
EP906	EPSBE-2020-16-TH	20	16	16	1.7	1.92	45	4	2	4.65	17.19	17.59	18.32	19.17	21.16								
EP907	EPSBE-2020-20-TH									20	4.01	21.30	21.90	22.88	23.96	26.47							

Ultra Micro Grain Solid Carbide End Mill

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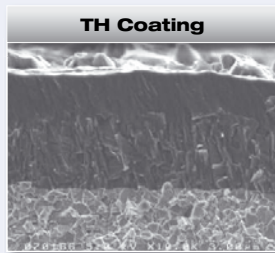
THE EFFECT OF FLUTE SHAPE, MATERIAL AND COATING:

DOUBLE-FACE EFFECT OF NEW SHAPE PREVENTS SHAPE FROM DETERIORATING

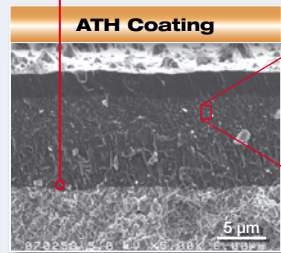
Advanced Technology – Back Draft Effect

New ATH (Advanced TH) Coating – Characteristics

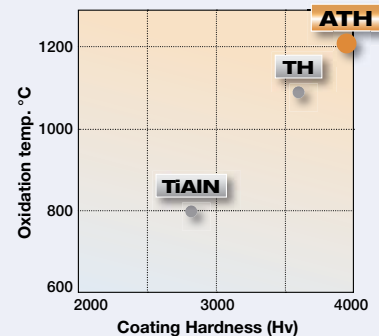
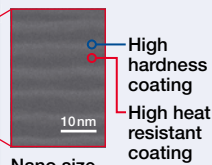
- Excellent adhesion strength
- Oxidation temperature: 1200°C
- Coating Hardness: 3800Hv
- Higher temperature resistance and wear resistance



TH Coating (Conventional)



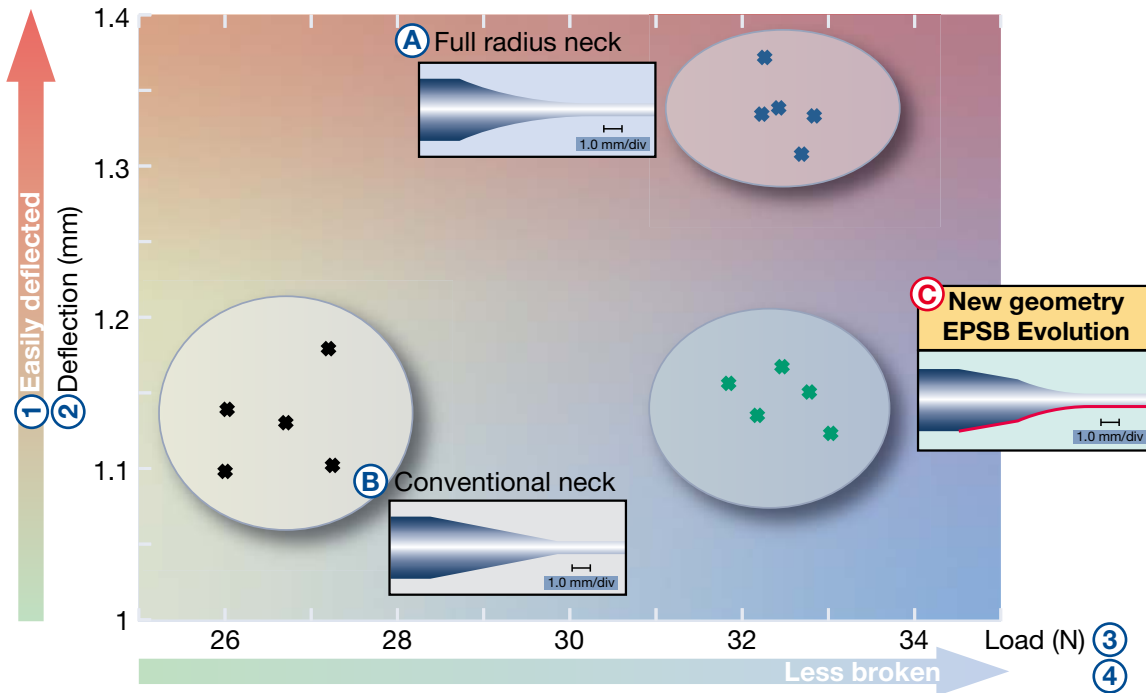
New ATH Coating for hardened steel (45HRC-65HRC)



Ultra Micro Grain Solid Carbide End Mill

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COMPARISON OF BREAKAGE IN NECK GEOMETRIES



VERGLEICH DER BIEGEBRUCHFESTIGKEIT BEI UNTERSCHIEDLICHEN SCHAFT-GEOMETRIEN

- 1) Höhere Biegeanfälligkeit
- 2) Biegung (mm)
- 3) Kraft (N)
- 4) Geringere Bruchanfälligkeit
- A) Voll-Radius Geometrie
- B) Konventionelle Geometrie
- C) Neue Geometrie der "Epoch Deep"-Serie

COMPARAZIONE TRA GEOMETRIE DI RASTREMAZIONE E ROTTURA

- 1) Alta resistenza alla flessione
- 2) Flessione
- 3) Carico (N)
- 4) Alta resistenza alla rottura
- A) Rastremazione raggiata
- B) Rastremazione convenzionale
- C) Nuova geometria

COMPARACIÓN DE LA ROTURA SEGÚN LA GEOMETRÍA DEL CUELLO

- 1) Flexa con facilidad
- 2) Flexión (mm)
- 3) Carga (N)
- 4) Menor rotura
- A) Cuello de radio
- B) Cuello convencional
- C) Nueva geometría

COMPARAISON DE BRIS DANS LA GÉOMÉTRIE DU DÉGAGEMENT

- 1) Facilement flexible
- 2) Battement (mm)
- 3) Charge (N)
- 4) Moins de bris
- A) Rayon renforcé
- B) Dégagement conventionnelle
- C) Nouvelle géométrie

