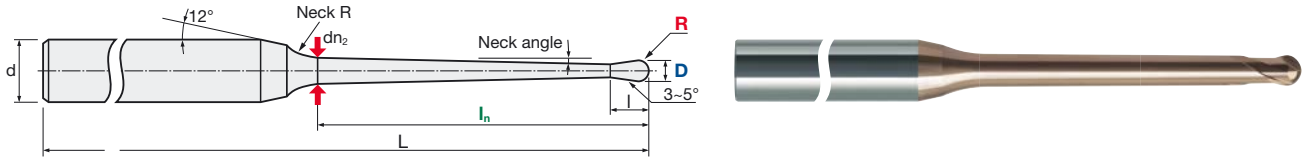
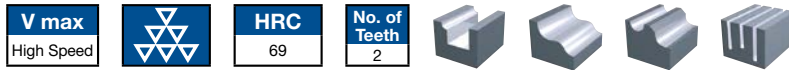




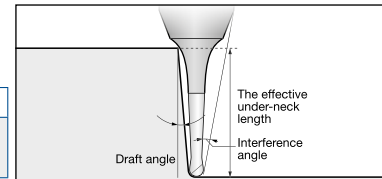
EPDBPE-ATH | Epoch Deep Ball Pencil Evolution ATH



※ Back Draft is not available for Diameters 4–6mm

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

Helix Angle	R Tol. [mm]	d Tol.
30°	R0.1~R0.25: +/-0.003 R0.3~R3: +/-0.005	h5



Size												Actual Effective Length in Incline angles				
ID Code	Item Code	Z	D	Neck angle°	In	l	dn ₂	L	d	Neck R	0.5°	1°	1.5°	2°	3°	
EP1357	EPDBPE-2002-1-04-ATH	2	0.2	0.4	1	0.15	0.182	50	4	7	1.55	1.72	1.88	2.03	2.31	
EP1358	EPDBPE-2002-1.5-04-ATH				1.5		0.189			10	2.06	2.28	2.47	2.64	2.97	
EP1359	EPDBPE-2002-2-04-ATH				2		0.196			7	2.7	3.03	3.3	3.56	4.02	
EP1360	EPDBPE-2002-3-04-ATH				3		0.21			10	3.73	4.14	4.47	4.77	5.29	
EP1361	EPDBPE-2003-2-04-ATH		0.3	0.4	0.3	2	0.294	50	4	7	2.57	2.83	3.04	3.24	3.59	
EP1362	EPDBPE-2003-3-04-ATH					3	0.308			10	3.73	4.14	4.47	4.76	5.28	
EP1363	EPDBPE-2004-2-04-ATH					2	0.394			7	2.57	2.82	3.03	3.23	3.57	
EP1364	EPDBPE-2004-3-04-ATH					3	0.408			10	3.6	3.92	4.18	4.4	4.8	
EP1365	EPDBPE-2004-4-04-ATH		0.4	0.4	0.3	4	0.422	50	4	7	4.76	5.23	5.61	5.93	6.51	
EP1366	EPDBPE-2004-5-04-ATH					5	0.436			10	5.78	6.33	6.74	7.1	7.71	
EP1367	EPDBPE-2004-6-04-ATH					6	0.45			7	6.81	7.41	7.86	8.25	8.9	
EP1368	EPDBPE-2004-2-09-ATH					2	0.423			10	2.3	2.66	2.9	3.12	3.49	
EP1369	EPDBPE-2004-4-09-ATH		0.4	0.4	0.3	4	0.486	50	4	7	2.57	4.87	5.35	5.72	6.34	
EP1370	EPDBPE-2004-5-09-ATH					5	0.518			10	2.57	5.9	6.44	6.85	7.53	
EP1371	EPDBPE-2004-6-09-ATH					6	0.549			7	2.57	6.92	7.52	7.97	8.69	
EP1372	EPDBPE-2005-4-04-ATH					4	0.521			10	4.62	5	5.3	5.55	5.99	
EP1373	EPDBPE-2005-6-04-ATH		0.5	0.4	0.35	6	0.549	50	4	7	6.8	7.41	7.86	8.24	8.89	
EP1374	EPDBPE-2005-6-09-ATH					6	0.648			10	2.62	6.92	7.52	7.97	8.69	
EP1375	EPDBPE-2005-8-09-ATH					8	0.71			7	2.62	8.96	9.67	10.18	10.99	
EP1376	EPDBPE-2006-2-04-ATH					2	0.592			10	2.42	2.59	2.73	2.85	3.08	
EP1377	EPDBPE-2006-4-04-ATH	0.6	0.4	0.4	4	0.62	50	4	7	4.62	5	5.29	5.54	5.98		
EP1378	EPDBPE-2006-6-04-ATH				6	0.648			10	6.8	7.41	7.85	8.23	8.88		
EP1379	EPDBPE-2006-8-04-ATH				8	0.676			7	8.85	9.56	10.07	10.5	11.22		
EP1380	EPDBPE-2006-10-04-ATH				10	0.704			10	10.89	11.7	12.27	12.73	13.52		
EP1381	EPDBPE-2006-12-04-ATH	0.6	0.4	0.4	12	0.732	55	4	7	12.94	13.83	14.44	14.95	15.79		
EP1382	EPDBPE-2006-15-04-ATH				15	0.774			10	15.99	17.01	17.68	18.24	19.27		
EP1383	EPDBPE-2006-4-09-ATH				4	0.683			7	2.67	4.7	5.07	5.37	5.85		
EP1384	EPDBPE-2006-6-09-ATH				6	0.746			10	2.67	6.92	7.51	7.96	8.68		
EP1385	EPDBPE-2006-8-09-ATH	0.6	0.4	0.4	8	0.809	50	4	7	2.67	8.96	9.67	10.18	10.98		
EP1386	EPDBPE-2006-10-09-ATH				10	0.872			10	2.67	11.01	11.81	12.37	13.25		
EP1387	EPDBPE-2006-12-09-ATH				12	0.934			7	2.67	13.05	13.94	14.54	15.49		
EP1388	EPDBPE-2006-15-09-ATH				15	1.029			10	2.67	16.1	17.11	17.78	18.81		
EP1389	EPDBPE-2008-4-04-ATH	0.8	0.4	0.5	4	0.819	50	4	7	4.61	4.99	5.28	5.53	5.97		
EP1390	EPDBPE-2008-6-04-ATH				6	0.847			10	6.66	7.14	7.5	7.79	8.3		
EP1391	EPDBPE-2008-8-04-ATH				8	0.875			7	8.85	9.56	10.06	10.49	11.21		
EP1392	EPDBPE-2008-12-04-ATH				12	0.931			10	12.93	13.83	14.44	14.94	15.77		
EP1393	EPDBPE-2008-8-09-ATH	0.8	0.4	0.5	8	1.006	55	4	7	2.77	8.96	9.66	10.17	10.97		
EP1394	EPDBPE-2008-12-09-ATH				12	1.131			10	2.77	13.04	13.93	14.54	15.48		
EP1395	EPDBPE-2008-16-09-ATH				16	1.257			7	2.77	17.12	18.16	18.85	19.9		
EP1396	EPDBPE-2009-4-04-ATH				4	0.907			10	4.5	4.75	4.94	5.11	5.41		
EP1397	EPDBPE-2009-8-04-ATH	0.9	0.4	0.6	8	0.963	50	4	7	8.75	9.3	9.7	10.03	10.6		
EP1398	EPDBPE-2009-12-04-ATH				12	1.019			10	12.99	13.86	14.46	14.95	15.78		
EP1399	EPDBPE-2009-16-04-ATH				16	1.075			7	17.07	18.08	18.77	19.33	20.54		
EP1400	EPDBPE-2009-20-04-ATH				20	1.131			10	21.13	22.29	23.05	23.66	25.68		



EPDBPE-ATH | Epoch Deep Ball Pencil Evolution ATH

ID Code	Item Code	Z	Size							Actual Effective Length in Incline angles													
			D	Neck angle°	In	l	dn ₂	L	d	Neck R	0.5°	1°	1.5°	2°	3°								
EP1401	EPDBPE-2010-6-04-ATH	2	1	0.4	6	0.8	1.013	50	6	7	6.82	7.24	7.57	7.85	8.34								
EP1402	EPDBPE-2010-8-04-ATH				8		1.041	55			8.85	9.36	9.74	10.07	10.62								
EP1403	EPDBPE-2010-10-04-ATH				10		1.068	60			11.07	11.79	12.33	12.78	13.54								
EP1404	EPDBPE-2010-15-04-ATH				15		1.138	60			16.16	17.08	17.73	18.27	19.31								
EP1405	EPDBPE-2010-20-04-ATH				20		1.208	65			21.23	22.33	23.08	23.69	25.73								
EP1406	EPDBPE-2010-25-04-ATH				25		1.278	70			26.31	27.56	28.38	29.05	32.15								
EP1407	EPDBPE-2010-30-04-ATH				30		1.348	75			31.37	32.76	33.66	34.82	38.57								
EP1408	EPDBPE-2010-6-09-ATH			6	1.103		50	5.47		6.91	7.32	7.65	8.19										
EP1409	EPDBPE-2010-10-09-ATH			10	1.229		55	5.47		11.2	11.91	12.44	13.28										
EP1410	EPDBPE-2010-15-09-ATH			15	1.386		60	5.47		16.28	17.19	17.84	18.84										
EP1411	EPDBPE-2010-20-09-ATH			20	1.543		65	5.47		21.35	22.44	23.18	24.68										
EP1412	EPDBPE-2010-25-09-ATH			25	1.7		70	5.47		26.42	27.66	28.48	30.83										
EP1413	EPDBPE-2010-30-09-ATH			30	1.857		75	5.47		31.49	32.86	33.75	36.98										
EP1414	EPDBPE-2010-35-09-ATH			35	2.015		80	5.47		36.55	38.04	39	43.12										
EP1415	EPDBPE-2015-8-04-ATH		1.5	0.4	8	1.35	1.513	55	6	7	8.95	9.41	9.78	10.09	10.62								
EP1416	EPDBPE-2015-10-04-ATH				10		1.541				10.97	11.52	11.93	12.28	12.9								
EP1417	EPDBPE-2015-12-04-ATH				12		1.569				13	13.62	14.07	14.45	15.47								
EP1418	EPDBPE-2015-30-04-ATH				30		1.82				75	31.46	32.79	33.68	34.85	38.57							
EP1419	EPDBPE-2015-10-09-ATH				10		1.692				55	7.83	11.08	11.61	12.02	12.67							
EP1420	EPDBPE-2015-15-09-ATH				15		1.849				60	7.83	16.4	17.25	17.88	18.86							
EP1421	EPDBPE-2015-20-09-ATH				20		2.006				65	7.83	21.47	22.49	23.21	24.72							
EP1422	EPDBPE-2015-30-09-ATH			30	2.32		75			7.83	31.59	32.9	33.78	37.01									
EP1423	EPDBPE-2020-8-04-ATH			2	0.4		8			1.7	2.008	6	6	4	8.7	9.03	9.28	9.5	10.27				
EP1424	EPDBPE-2020-12-04-ATH						12				2.064				55	13	13.61	14.06	14.43	15.4			
EP1425	EPDBPE-2020-16-04-ATH						16				2.12				60	17.05	17.79	18.31	18.74	20.54			
EP1426	EPDBPE-2020-20-04-ATH						20				2.176				65	21.33	22.37	23.09	23.68	25.67			
EP1427	EPDBPE-2020-25-04-ATH						25				2.245				65	26.4	27.59	28.39	29.05	32.09			
EP1428	EPDBPE-2020-30-04-ATH						30				2.315				70	31.46	32.79	33.67	34.81	38.51			
EP1429	EPDBPE-2020-40-04-ATH	40	2.455			80	41.58	43.14	44.26		46.39				x								
EP1430	EPDBPE-2020-12-09-ATH	0.9	12		12	1.7	2.244	6	6		7			8.3	13.11	13.7	14.14	14.84					
EP1431	EPDBPE-2020-16-09-ATH				16		2.369							60	8.3	17.16	17.88	18.39	19.76				
EP1432	EPDBPE-2020-20-09-ATH				20		2.495							65	8.3	21.48	22.49	23.2	24.68				
EP1433	EPDBPE-2020-25-09-ATH				25		2.652							65	8.3	26.54	27.7	28.5	30.82				
EP1434	EPDBPE-2020-30-09-ATH				30		2.809							70	8.3	31.6	32.9	33.77	36.97				
EP1435	EPDBPE-2020-35-09-ATH				35		2.966							75	8.3	36.66	38.08	39.02	x				
EP1436	EPDBPE-2020-40-09-ATH				40		3.123							80	8.3	41.72	43.25	44.5	x				
EP1437	EPDBPE-2020-50-09-ATH		50	3.438	90		8.3			51.82	53.56	55.58	x										
EP1438	EPDBPE-2030-8-04-ATH		3	0.4	8		2.5			2.937	8	8	4	8.87	9.13	9.35	9.55	10.33					
EP1439	EPDBPE-2030-16-04-ATH				16					3.048				55	17.25	17.89	18.38	18.79	20.6				
EP1440	EPDBPE-2030-20-04-ATH				20					3.104				60	21.29	22.04	22.6	23.34	25.74				
EP1441	EPDBPE-2030-30-04-ATH				30					3.244				70	31.67	32.88	33.73	34.92	x				
EP1442	EPDBPE-2030-40-04-ATH				40					3.384				80	41.78	43.23	44.38	x	x				
EP1443	EPDBPE-2030-50-04-ATH				50					3.523				90	51.87	53.53	55.41	x	x				
EP1444	EPDBPE-2030-15-09-ATH	15			20	15		2.5	3.253	8				8	7	13.78	16.35	16.95	17.41	18.64			
EP1445	EPDBPE-2030-20-09-ATH			20		3.41			60				13.78			21.4	22.14	22.68	24.78				
EP1446	EPDBPE-2030-30-09-ATH			30		3.724			70				13.78			31.82	33	33.84	x				
EP1447	EPDBPE-2030-40-09-ATH			40		4.038			80				13.78			41.92	43.34	x	x				
EP1448	EPDBPE-2030-50-09-ATH			50		4.352			90				13.78			52.01	53.64	x	x				
EP1449	EPDBPE-2030-60-09-ATH			60		4.667			100				13.78			62.1	x	x	x				
EP1450	EPDBPE-2040-20-09-ATH			20		30			20				8			4.237	8	8	7	20.79	21.76	22.37	22.87
EP1451	EPDBPE-2040-30-09-ATH	30			4.551				80						25.53	31.83				32.66	33.95	37.45	
EP1452	EPDBPE-2040-40-09-ATH	40	4.865		90		25.53		42.31		43.56	45.04			x								
EP1453	EPDBPE-2040-60-09-ATH	60	5.494		110		25.53		62.46		64.14	x			x								
EP1454	EPDBPE-2050-30-09-ATH	30	40		30		10		5.488		8	8			7	29.41				31.92	32.71	34.04	x
EP1455	EPDBPE-2050-40-09-ATH				40				5.803							90				29.41	41.98	43.12	45.12
EP1456	EPDBPE-2050-60-09-ATH			60	6.431	110			29.41							62.56			x	x	x		
EP1457	EPDBPE-2050-90-09-ATH			90	7.373	140			29.41							x			x	x	x		
EP1458	EPDBPE-2060-30-09-ATH			30	45	30		12	6.426	10				10		7			30.63	32	32.76	x	x
EP1459	EPDBPE-2060-45-09-ATH					45			6.897										95	33.29	47.09	x	x
EP1460	EPDBPE-2060-60-09-ATH	60	7.368			110			33.29						62.65				64.34	x	x		
EP1461	EPDBPE-2060-80-09-ATH	80	7.996			130			33.29						82.78				x	x	x		

Cutting Conditions Schnittwerte		D	Page Seite	D	Page Seite
Roughing		D0.2 – D1.5	8–9	D2.0 – D6.0	10–11
Finishing		D0.2 – D1.0	12–13	D1.5 – D6.0	14–15