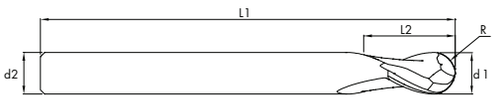
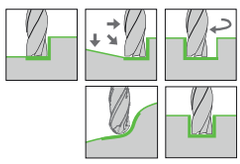
SOLID CARBIDE BALL NOSE END MILLS

VOLLHARTMETALL RADIUSFRASER

KARBÜR KÜRE FREZE UZUN BALLER BALL NOSE







BALLER BALL NOSE

<50 HRC



TYPE



QUALITY



DIAMETER



NORM

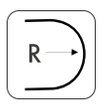

2 FLUTES



SHAFT TYPE



HELICAL

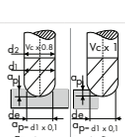


RADIUS



COATED

$d_1(e8)$	L_2	L_1	$d_2(h6)$	Z	R	Coated Code
3	6	40	3	2	1,5	4029000
4	8	50	4	2	2,0	4029010
5	10	50	5	2	2,5	4029020
6	12	57	6	2	3,0	4029030
8	14	63	8	2	4,0	4029040
10	16	72	10	2	5,0	4029050
12	18	83	12	2	6,0	4029060
14	19	83	14	2	7,0	4029070
16	20	92	16	2	8,0	4029080
18	22	92	18	2	9,0	4029090
20	24	104	20	2	10,0	4029100
3	6	65	3	2	1,5	4029110
4	8	65	4	2	2,0	4029120
5	10	80	5	2	2,5	4029130
6	12	80	6	2	3,0	4029140
8	14	88	8	2	4,0	4029150
10	16	100	10	2	5,0	4029160
12	18	100	12	2	6,0	4029170
16	20	100	16	2	8,0	4029180
3	6	100	3	2	1,5	4029190
4	8	100	4	2	2,0	4029200
5	10	100	5	2	2,5	4029210
6	12	100	6	2	3,0	4029220
8	14	100	8	2	4,0	4029230
10	16	130	10	2	5,0	4029240
12	18	130	12	2	6,0	4029250
14	19	130	14	2	7,0	4029260
16	20	130	16	2	8,0	4029270



	P (20-30 Hrc)			P (30-40 Hrc)			M			GG			AL			CU			Titan			< 52 HRC		
	1.0050-2 1.0060-2 1.0070-2			1.5864 1.6580 1.7225			1.4405 1.4460 1.4505			0.6035 0.7080 0.8055			3.2151 3.2373 3.2382			2.1247 2.0580 2.0598			3.7035 3.7055 3.7065			1.3255 1.3265 1.3333		
	Vc= 160 m/dk.			Vc = 140 m/dk.			Vc = 90 m/dk.			Vc= 240 m/dk.			Vc = 480 m/dk.			Vc = 300 m/dk.			Vc = 90 m/dk.			Vc = 90 m/dk.		
d1	de	ap	ae	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf
3	1,8	0,3	0,50	0,026	28308	750xZ	0,026	24770	650xZ	0,028	15923	450xZ	0,035	42463	1500xZ	0,050	60000	3000xZ	0,038	53000	2000xZ	0,025	15923	400xZ	0,026	15923	420xZ
4	2,8	0,4	0,55	0,042	17693	750xZ	0,042	15481	650xZ	0,045	9951	450xZ	0,057	26539	1500xZ	0,056	53078	3000xZ	0,060	33170	2000xZ	0,040	9952	400xZ	0,042	9951	420xZ
5	3,0	0,5	0,83	0,044	16985	750xZ	0,044	14862	650xZ	0,047	9554	450xZ	0,059	25478	1500xZ	0,059	50955	3000xZ	0,063	31845	2000xZ	0,042	9554	400xZ	0,044	9554	420xZ
6	3,6	0,6	1,00	0,053	14154	750xZ	0,053	12385	650xZ	0,056	7962	450xZ	0,071	21231	1500xZ	0,071	42463	3000xZ	0,075	26535	2000xZ	0,050	7962	400xZ	0,053	7962	420xZ
8	4,8	0,8	1,33	0,071	10616	750xZ	0,070	9288	650xZ	0,075	5971	450xZ	0,094	15923	1500xZ	0,094	31847	3000xZ	0,101	19900	2000xZ	0,067	5971	400xZ	0,070	5971	420xZ
10	6,0	1,0	1,66	0,088	8492	750xZ	0,088	7431	650xZ	0,094	4777	450xZ	0,118	12739	1500xZ	0,118	25478	3000xZ	0,126	15923	2000xZ	0,084	4777	400xZ	0,088	4777	420xZ
12	7,2	1,2	2,00	0,106	7077	750xZ	0,105	6192	650xZ	0,113	3981	450xZ	0,141	10616	1500xZ	0,141	21231	3000xZ	0,151	13270	2000xZ	0,101	3981	400xZ	0,106	3981	420xZ
14	8,4	1,4	2,33	0,124	6066	750xZ	0,120	5308	650xZ	0,132	3412	450xZ	0,165	9099	1500xZ	0,165	18198	3000xZ	0,176	11370	2000xZ	0,117	3412	400xZ	0,123	3412	420xZ
16	9,6	1,6	2,66	0,141	5308	750xZ	0,140	4644	650xZ	0,151	2986	450xZ	0,188	7962	1500xZ	0,180	15923	3000xZ	0,201	9952	2000xZ	0,134	2986	400xZ	0,141	2986	420xZ