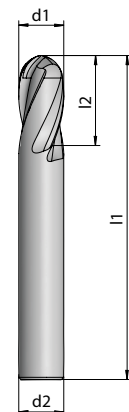
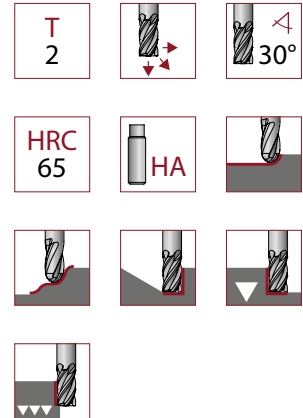


# BALL END MILLS

## K 1150

Short version				
Article no.	d1	d2	l1	l2
11500301	3	4	50	5
11500401	4	4	50	6
11500501	5	5	57	8
11500601	6	6	57	9
11500801	8	8	63	12
11501001	10	10	72	15
11501201	12	12	83	18
11501601	16	16	92	24
11502001	20	20	104	30

Long version				
Article no.	d1	d2	l1	l2
11500300	3	4	78	5
11500400	4	4	78	6
11500500	5	5	78	8
11500600	6	6	98	9
11500800	8	8	98	12
11501000	10	10	98	15
11501200	12	12	118	18
11501600	16	16	152	24
11502000	20	20	152	30



Ball track milling	$a_p \times a_e = 0.3d \times 0.3d$
Copy milling	$a_p \times a_e = 0.65d \times 1d$



Cutting data for short version		Ball track	Copy
Material	N/mm <sup>2</sup>	v <sub>c</sub> m/min	
<b>P</b> Gen. structural/ case hard. steels 1.0037   1.0570   1.0503   1.7131 Tool/ tempering steels 1.2367   1.2379   1.7225 Alloyed/ cold work steels 1.2312   1.2767   1.3505   1.7707	< 800	150	120
	< 1100	110	90
	< 1400	90	80
<b>K</b> Cast iron GG25   GG40   GGG40 Spherical cast iron GGG50   GGG60   GGG70	< 450	100-180	100-160
	< 650	80-130	80-130
<b>H</b> Hardened steel HRC 45–50 Hardened steel HRC 51–58 Hardened steel HRC 59–65	–	130	130
	–	100	100
	–	60	60

d1	Ball track	Copy
	fz mm	
3	0.050	0.020
4	0.060	0.025
5	0.065	0.035
6	0.070	0.040
8	0.080	0.045
10	0.085	0.050
12	0.085	0.070
16	0.085	0.070
20	0.085	0.070