

Cooling

Tolerance e8

Coating BetaUni Iron

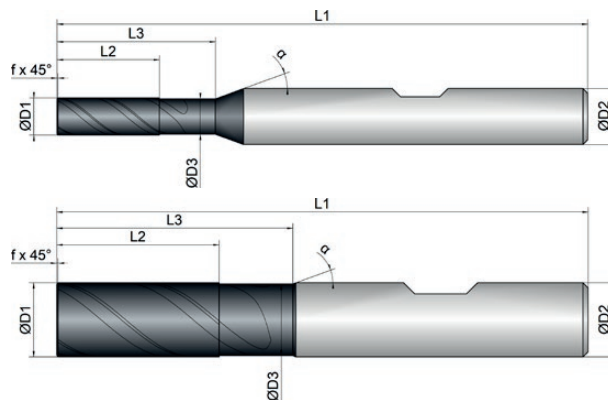
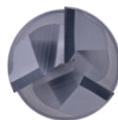
Strategy **HPC** **UNI**

Application

Features **HB** **≠**

Basic

- Adapted clearance angle for reliable machining
- Unequal tooth pitch for smooth running
- Large chip chambers for good chip evacuation



Roughing

Finishing



BCU1-M01-0114	D1	D3	L2	L3	L1	D2	z	$45^\circ$	$\circ$	$\alpha$
	mm $\varnothing$	mm $\varnothing$	mm	mm	mm	mm $\varnothing$	#	mm	$\circ$	$\circ$
3	3.0	2.8	8.0	13.0	57.0	6.0	3	0.10	45	20
4	4.0	3.8	11.0	17.0	57.0	6.0	3	0.10	45	20
5	5.0	4.8	13.0	20.0	57.0	6.0	3	0.20	45	20
6	6.0	5.8	13.0	20.0	57.0	6.0	3	0.20	45	20
8	8.0	7.7	19.0	25.0	63.0	8.0	3	0.20	45	20
10	10.0	9.7	22.0	32.0	72.0	10.0	3	0.20	45	20
12	12.0	11.6	26.0	38.0	83.0	12.0	3	0.20	45	20
16	16.0	15.5	32.0	44.0	92.0	16.0	3	0.30	45	20
20	20.0	19.5	41.0	54.0	104.0	20.0	3	0.30	45	20



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Material	Strength (N/mm <sup>2</sup> )	Dimension	Ø3		Ø4		Ø5		Ø6		Ø8		Ø10		
			ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	
		Infeed in mm	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	
		Application													
		Feed (mm/Z)	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
<b>P</b>		<b>Vc (m/min)</b>													
1.1-1.3	Steel, unalloyed	<850	170	0.02	0.025	0.02	0.025	0.03	0.035	0.04	0.045	0.05	0.06	0.055	0.07
2.1-2.2	Steel, low-alloyed	<950	160	0.015	0.02	0.015	0.02	0.025	0.03	0.035	0.04	0.045	0.055	0.05	0.065
3.1-3.2	Steel, high-alloyed	<1100	150	0.012	0.018	0.012	0.018	0.022	0.028	0.032	0.038	0.042	0.052	0.045	0.06
<b>K</b>		<b>Vc (m/min)</b>													
1.1-1.2	Grey cast iron	<1000	190	0.015	0.02	0.015	0.02	0.025	0.03	0.035	0.04	0.045	0.055	0.05	0.065
<b>M</b>		<b>Vc (m/min)</b>													
1.1	Inox, ferritic/martensitic	<850	75	0.018		0.02		0.028		0.035		0.052		0.06	
2.1	Inox, austenitic	<650	65	0.015		0.018		0.025		0.032		0.048		0.055	
<b>N</b>		<b>Vc (m/min)</b>													
1.1-2.3	Alu, alloyed, casted	<600	360	0.02	0.025	0.025	0.04	0.04	0.045	0.045	0.065	0.065	0.085	0.085	0.11
3.1-3.3	Cooper, alloyed	<600	170	0.015	0.02	0.02	0.03	0.03	0.035	0.035	0.055	0.055	0.075	0.075	0.1
<b>T</b>		<b>Vc (m/min)</b>													
2.1-2.2	Titanium, pure, alloyed	<1000	50	0.015		0.018		0.025		0.03		0.045		0.055	
<b>S</b>		<b>Vc (m/min)</b>													
1.1-1.3	Super alloys	<1450	25	0.01		0.013		0.02		0.025		0.04		0.05	

Material	Strength (N/mm <sup>2</sup> )	Dimension	Ø12		Ø16		Ø20							
			ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD	ae=1xD	ae=0.3xD						
		Infeed in mm	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD	ap=1xD						
		Application												
		Feed (mm/Z)	fz	fz	fz	fz	fz	fz						
<b>P</b>		<b>Vc (m/min)</b>												
1.1-1.3	Steel, unalloyed	<850	170	0.06	0.08	0.07	0.09	0.09	0.11					
2.1-2.2	Steel, low-alloyed	<950	160	0.055	0.075	0.06	0.08	0.08	0.1					
3.1-3.2	Steel, high-alloyed	<1100	150	0.05	0.07	0.055	0.075	0.075	0.09					
<b>K</b>		<b>Vc (m/min)</b>												
1.1-1.2	Grey cast iron	<1000	190	0.055	0.075	0.07	0.08	0.08	0.1					
<b>M</b>		<b>Vc (m/min)</b>												
1.1	Inox, ferritic/martensitic	<850	75	0.07		0.075		0.09						
2.1	Inox, austenitic	<650	65	0.065		0.07		0.08						
<b>N</b>		<b>Vc (m/min)</b>												
1.1-2.3	Alu, alloyed, casted	<600	360	0.11	0.13	0.12	0.14	0.13	0.15					
3.1-3.3	Cooper, alloyed	<600	170	0.1	0.12	0.11	0.13	0.12	0.14					
<b>T</b>		<b>Vc (m/min)</b>												
2.1-2.2	Titanium, pure, alloyed	<1000	50	0.065		0.07		0.08						
<b>S</b>		<b>Vc (m/min)</b>												
1.1-1.3	Super alloys	<1450	25	0.06		0.065		0.075						

**NOTE** | The values marked in turquoise are side applications!