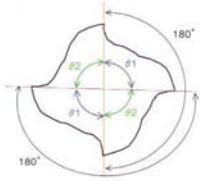
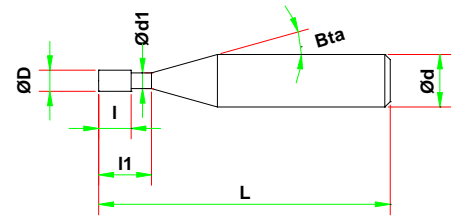


Size Dia 1.0 - 6.0 mm
Flutes 4



HLS 4 Flutes



Unequal tooth spacing to reduce chatter and improve surface finish

New 4 flute design for improved chip evacuation and high feed rates

Oil mist / Airblow coolant recommended

Applicable Work Materials

(MS = Most Suitable S = Suitable)

Work Materials										
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels			Cast Iron	Aluminium Alloy	Graphite	Copper	Plastic
			55HRC	60HRC	65HRC					
S	S	MS	MS	S		S			MS	

units = mm

Union Tool Part Number	Diameter	Effective Length	Flute Length	Neck Diameter	Shank Taper Angle	Overall Length	Shank Diameter	Price £stl	Price Euro			
	D	I ₁	I	d ₁	Bta	L	d					
HLS 4010-040	1.0	4.0	1.0	0.95	16°	50	4					
HLS 4010-060		6.0										
HLS 4010-080		8.0										
HLS 4010-100		10.0										
HLS 4010-120		12.0										
HLS 4010-160	16.0				60							
HLS 4012-060	1.2	6.0	1.2	1.14	16°	50	4					
HLS 4012-080		8.0										
HLS 4012-100		10.0										
HLS 4012-120		12.0										
HLS 4012-160		16.0									60	
HLS 4014-060	1.4	6.0	1.4	1.34	16°	50	4					
HLS 4014-080		8.0										
HLS 4014-100		10.0										
HLS 4014-120		12.0										
HLS 4014-140		14.0										
HLS 4014-160		16.0								60		
HLS 4014-220		22.0										
HLS 4015-060	1.5	6.0	1.5	1.44	16°	50	4					
HLS 4015-080		8.0										
HLS 4015-100		10.0										
HLS 4015-120		12.0										
HLS 4015-140		14.0										
HLS 4015-160		16.0								60		
HLS 4015-180		18.0										
HLS 4015-200		20.0										

	D	I ₁	I	d ₁	Bta	L	d		
HLS 4016-060	1.6	6.0	1.6	1.51	16°	50	4		
HLS 4016-080		8.0							
HLS 4016-100		10.0							
HLS 4016-120		12.0							
HLS 4016-140		14.0							
HLS 4016-160		16.0							
HLS 4016-180		18.0							
HLS 4016-200		20.0							
HLS 4016-260		26.0							
HLS 4018-060		1.8				6.0		1.8	1.71
HLS 4018-080	8.0								
HLS 4018-100	10.0								
HLS 4018-120	12.0								
HLS 4018-140	14.0								
HLS 4018-160	16.0								
HLS 4018-180	18.0								
HLS 4018-200	20.0								
HLS 4018-250	25.0								
HLS 4020-060	2.0		6.0	2.0	1.91	16°	50		
HLS 4020-080		8.0							
HLS 4020-100		10.0							
HLS 4020-120		12.0							
HLS 4020-140		14.0							
HLS 4020-160		16.0							
HLS 4020-180		18.0							
HLS 4020-200		20.0							
HLS 4020-250		25.0							
HLS 4020-300		30.0							
HLS 4025-080	2.5	8.0	2.5	2.41	16°	50	4		
HLS 4025-120		12.0							
HLS 4025-160		16.0							
HLS 4025-200		20.0							
HLS 4025-250		25.0							
HLS 4025-300		30.0							
HLS 4030-080	3.0	8.0	3.0	2.92	16°	50	6		
HLS 4030-120		12.0							
HLS 4030-160		16.0							
HLS 4030-200		20.0							
HLS 4030-250		25.0							
HLS 4030-300		30.0							
HLS 4030-400		40.0							
HLS 4040-120	4.0	12.0	4.0	3.82	16°	50	6		
HLS 4040-160		16.0							
HLS 4040-200		20.0							
HLS 4040-250		25.0							
HLS 4040-300		30.0							
HLS 4040-350		35.0							
HLS 4040-400		40.0							
HLS 4040-450		45.0							
HLS 4040-500		50.0							

	D	I₁	I	d₁	Bta	L	d		
HLS 4050-160	5.0	16.0	5.0	4.82	16°	60	6		
HLS 4050-250		25.0				70			
HLS 4050-350		35.0				80			
HLS 4050-500		50.0				110			
HLS 4060-200	6.0	20.0	6.0	5.82	-	80	6		
HLS 4060-300		30.0				90			
HLS 4060-400		40.0				100			
HLS 4060-500		50.0				110			