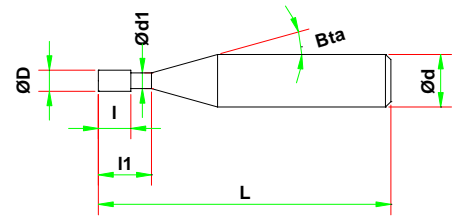


Size Dia 0.2 - 6.0 mm
Flutes 2



HLS



For outstanding heat resistance and lubrication ability on hard milling up to 65 HRC

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
	D	I ₁	I	d ₁	Bta	L	d	
HLS 2002-005	0.2	0.5	0.3	0.18	16°	45	4	
HLS 2002-010		1.0						
HLS 2002-015		1.5						
HLS 2003-010	0.3	1.0	0.4	0.28	16°	45	4	
HLS 2003-020		2.0						
HLS 2003-030		3.0						
HLS 2003-060		6.0						
HLS 2003-090		9.0						
HLS 2004-020	0.4	2.0	0.6	0.38	16°	45	4	
HLS 2004-030		3.0						
HLS 2004-040		4.0						
HLS 2004-050		5.0						
HLS 2004-080		8.0						
HLS 2004-120		12.0						
HLS 2005-020	0.5	2.0	0.7	0.48	16°	45	4	
HLS 2005-040		4.0						
HLS 2005-060		6.0						
HLS 2005-080		8.0						
HLS 2005-100		10.0						
HLS 2005-150		15.0						
HLS 2006-020	0.6	2.0	0.9	0.58	16°	45	4	
HLS 2006-040		4.0						
HLS 2006-060		6.0						
HLS 2006-080		8.0						
HLS 2006-100		10.0						
HLS 2006-120		12.0						
HLS 2006-180		18.0						
HLS 2007-020	0.7	2.0	1.0	0.68	16°	45	4	
HLS 2007-040		4.0						
HLS 2007-060		6.0						
HLS 2007-080		8.0						
HLS 2007-100		10.0						

	D	I ₁	I	d ₁	Bta	L	d	
HLS 2002-005		0.5						
HLS 2008-040	0.8	4.0	1.2	0.78	16°	45	4	
HLS 2008-060		6.0						
HLS 2008-080		8.0						
HLS 2008-100		10.0						
HLS 2008-120		12.0				50		
HLS 2008-160		16.0						
HLS 2008-240		24.0				60		
HLS 2009-040		0.9				4.0		1.3
HLS 2009-060	6.0							
HLS 2009-080	8.0							
HLS 2009-100	10.0							
HLS 2009-150	15.0		50					
HLS 2010-040	1.0	4.0	1.5	0.95	16°	45	4	
HLS 2010-060		6.0						
HLS 2010-080		8.0						
HLS 2010-100		10.0						
HLS 2010-120		12.0						
HLS 2010-140		14.0						
HLS 2010-160		16.0				50		
HLS 2010-200		20.0				55		
HLS 2010-250		25.0				70		
HLS 2010-300		30.0						
HLS 2012-060	1.2	6.0	1.8	1.14	16°	45	4	
HLS 2012-080		8.0						
HLS 2012-100		10.0						
HLS 2012-120		12.0						
HLS 2012-160		16.0				50		
HLS 2012-200		20.0				60		
HLS 2014-060	1.4	6.0	2.1	1.34	16°	45	4	
HLS 2014-080		8.0						
HLS 2014-100		10.0						
HLS 2014-120		12.0						
HLS 2014-140		14.0						
HLS 2014-160		16.0				50		
HLS 2014-220		22.0				55		
HLS 2015-060	1.5	6.0	2.3	1.44	16°	45	4	
HLS 2015-080		8.0						
HLS 2015-100		10.0						
HLS 2015-120		12.0						
HLS 2015-140		14.0						
HLS 2015-160		16.0						50
HLS 2015-180		18.0				55		
HLS 2015-200		20.0						
HLS 2015-250		25.0						
HLS 2015-300		30.0				70		
HLS 2015-350		35.0						
HLS 2015-400		40.0				80		
HLS 2015-450		45.0						
HLS 2016-060	1.6	6.0	2.4	1.51	16°	45	4	
HLS 2016-080		8.0						

	D	I ₁	I	d ₁	Bta	L	d						
HLS 2002-005		0.5											
HLS 2030-300	3.0	30.0	4.5	2.92	16°	80	6						
HLS 2030-350		35.0				90							
HLS 2030-400		40.0				100							
HLS 2030-500		50.0											
HLS 2040-120	4.0	12.0	6.0	3.82	16°	50	6						
HLS 2040-160		16.0				60							
HLS 2040-200		20.0				70							
HLS 2040-250		25.0				80							
HLS 2040-300		30.0				90							
HLS 2040-350		35.0				100							
HLS 2040-400		40.0				110							
HLS 2040-450		45.0											
HLS 2040-500		50.0											
HLS 2040-600		60.0											
HLS 2050-160		5.0				16.0		7.5	4.82	16°	60	6	
HLS 2050-200						20.0					80		
HLS 2050-250	25.0		110										
HLS 2050-300	30.0		120										
HLS 2050-350	35.0												
HLS 2050-400	40.0												
HLS 2050-500	50.0												
HLS 2050-600	60.0												
HLS 2060-200	6.0	20.0	9.0	5.82	-	80	6						
HLS 2060-300		30.0				100							
HLS 2060-400		40.0				120							
HLS 2060-500		50.0											
HLS 2060-600		60.0											