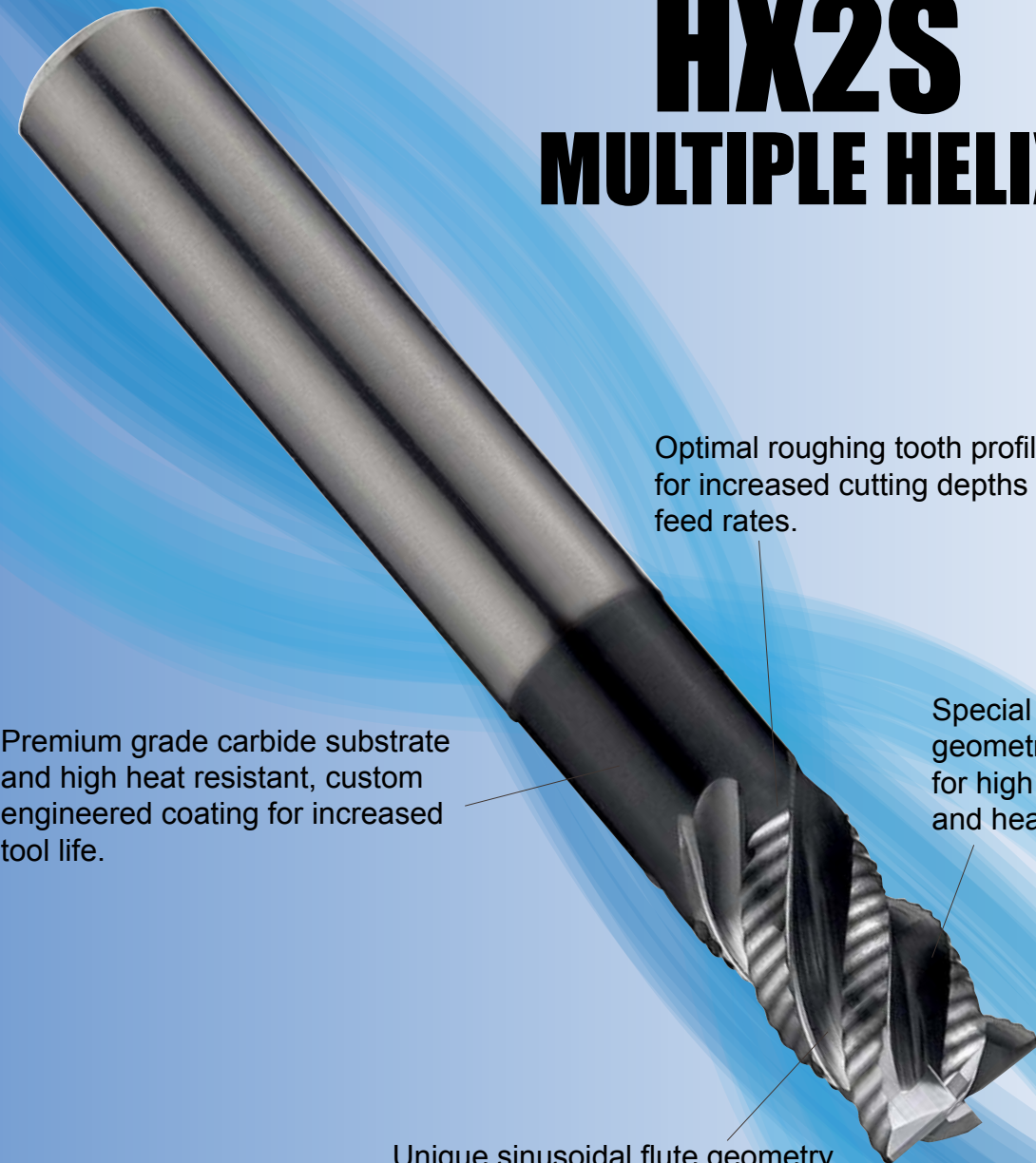


SUPERIOR PERFORMANCE



HX2S MULTIPLE HELIX



Optimal roughing tooth profile allows for increased cutting depths and feed rates.

Premium grade carbide substrate and high heat resistant, custom engineered coating for increased tool life.

Special tool geometry designed for high feed rate and heavy cutting.

Unique sinusoidal flute geometry for reduced resonance vibration and smooth chip evacuation.

IDEAL FOR MATERIAL GROUPS



HX2S & SABRE ROUGHING END MILLS



Carbide and powder metallurgy for Steel, Cast iron, Stainless steel and Nickel alloys



www.europatool.co.uk

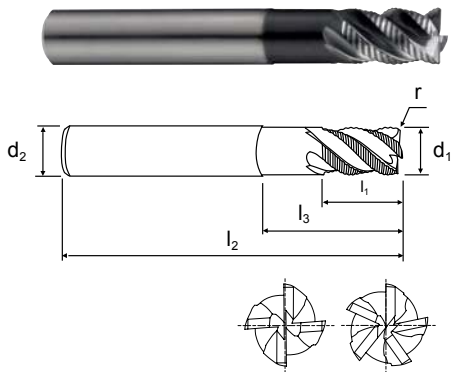
4&5 FLUTE HX2S EXTENDED NECK
MULTI HELIX CORNER RADIUS



Series No. 169123, 169323

► cutting conditions : p.268-269

Unique flute design for excellent chip evacuation and vibration reduction.
Optimal roughing tooth profile to reduce cutting forces.
Special tool geometry for high feed rate and heavy cutting.
Strong end tooth design for plunge and pocket milling.
Custom engineered coating to allow long tool life and excellent chip evacuation.



EUROPA CODE FLATTED	EUROPA CODE PLAIN	CUTTING DIAMETER d ₁	CORNER RADIUS r	SHANK DIAMETER d ₂	LENGTH OF CUT l ₁	EFFECTIVE LENGTH l ₃	OVERALL LENGTH l ₂	NO. OF FLUTE z
1691230600	1693230600	6.0	0.5	6	9.0	18.0	57	4
1691230800	1693230800	8.0	0.5	8	12.0	24.0	63	4
1691231000	1693231000	10.0	0.5	10	15.0	30.0	72	4
1691231200	1693231200	12.0	0.5	12	18.0	36.0	83	4
1691231600	1693231600	16.0	1.0	16	24.0	48.0	100	5
1691232000	1693232000	20.0	1.0	20	30.0	60.0	110	5

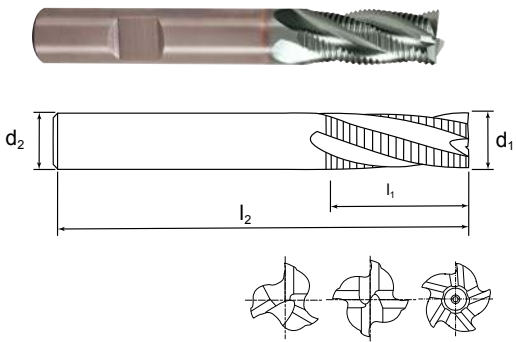
MILL DIA TOLERANCE	SHANK DIA TOLERANCE
0~-0.05	h6

MULTIFLUTE SABRE SHORT LENGTH
FINE PITCH



Series No. 190140

► cutting conditions : p.270



Suitable for high feed roughing.
Designed for Steel, Stainless steel and Nickel alloys.
Sabre coating suitable for high speed cutting.
Centre cutting up to ø 20.0mm, non-centre cutting from ø 22.0mm.

EUROPA CODE	CUTTING DIAMETER d ₁	SHANK DIAMETER d ₂	LENGTH OF CUT l ₁	OVERALL LENGTH l ₂	NO. OF FLUTE z
1901400600	6.0	6	13.0	57	3
1901400700	7.0	10	16.0	66	3
1901400800	8.0	10	19.0	69	3
1901400900	9.0	10	19.0	69	3
1901401000	10.0	10	22.0	72	4
1901401200	12.0	12	26.0	83	4
1901401400	14.0	12	26.0	83	4
1901401600	16.0	16	32.0	92	4
1901401800	18.0	16	32.0	92	4
1901402000	20.0	20	38.0	104	4
1901402200	22.0	20	38.0	104	5
1901402500	25.0	25	45.0	121	5

Tolerances according to DIN 7160 & 7161

Tolerance range in µm				
Nominal Diameter in mm				
	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
MILL DIA js12	± 60	± 75	± 90	± 105
SHANK DIA h6	0 - 8	0 - 9	0 - 11	0 - 13

●: Excellent ○: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				●	●									
13	14	16	23		33	34	51	52	53	71	72	73	74	83	
●	●				●	●									

●: Excellent ○: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	○	○									
13	14	16	23		33	34	51	52	53	71	72	73	74	83	
●	●		●		○	○	○	○	○						