ULTRA-BITE

111 Series
High Performance

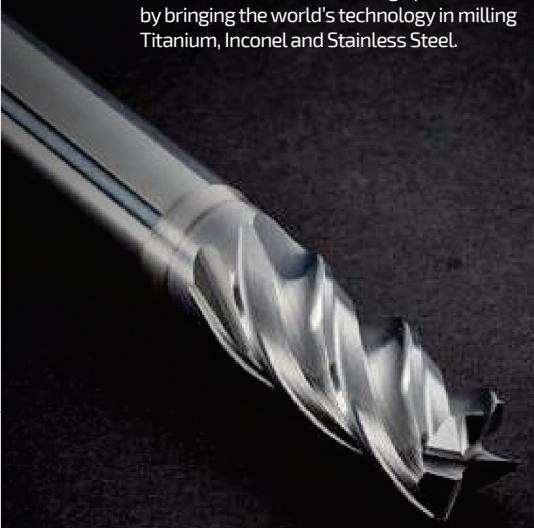
General Engineering | Mold&Die | Aviation &Aerospace | Defence | Automotive | Medical | Rail Systems

Finish | Rough

Super Solution for Super Alloys

Game changer 111 Series developed as a result of 3-Years long run R&D studies!

We intend to offer safe milling operations by bringing the world's technology in milling Titanium, Inconel and Stainless Steel.



Minimal chatter thanks to its various helix and intersections.

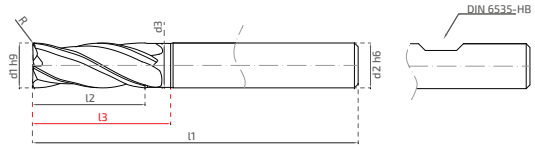
A series to make a breakthrough

AlCrN coating technology and surface quality ensure an enhanced tool life up to **%35**

Special geometry and edge preparations ensure a better chip removal up to **%40**

Optimized Radius forms ensure a better surface quality and high performance up to **%45** in operations such as face milling, pocket milling and interpolation.

CHATTER FREE



Stock	Code	d1h9	d2h6	d3	l1	l2	l3	R
*	111403002/111403002W	3	6	2,9	58	9	12	0,2
*	111404002/111404002W	4	6	3,9	58	12	14	0,2
*	111405002/111405002W	5	6	4,9	58	15	19	0,2
*	111406002/111406002W	6	6	5,9	58	16	22	0,2
*	111406005/111406005W	6	6	5,9	58	16	22	0,5
	111406010/111406010W	6	6	5,7	58	17	28	1
*	111408002/111408002W	8	8	7,8	64	20	26	0,2
	111408003/111408003W	8	8	7,8	64	20	26	0,3
*	111408005/111408005W	8	8	7,8	64	20	26	0,5
	111408010/111408010W	8	8	7,8	64	20	26	1
*	111410002/111410002W	10	10	9,8	73	22	31	0,2
*	111410005/111410005W	10	10	9,8	73	22	31	0,5
*	111410008/111410008W	10	10	9,8	73	22	31	0,8
	111410010/111410010W	10	10	9,8	73	22	31	1
*	111412002/111412002W	12	12	11,7	82	28	40	0,2
*	111412005/111412005W	12	12	11,7	82	28	40	0,5
*	111412008/111412008W	12	12	11,7	82	28	40	0,8
*	111412010/111412010W	12	12	11,7	82	28	40	1
*	111412015/111412015W	12	12	11,7	82	28	40	1,5
	111412030/111412030W	12	12	11,7	82	28	40	3
*	111416002/111416002W	16	16	15,7	93	36	48	0,2
*	111416005/111416005W	16	16	15,7	93	36	48	0,5
*	111416075/111416075W	16	16	15,7	93	36	48	0,75
	111416010/111416010W	16	16	15,8	93	36	48	1
*	111416015/111416015W	16	16	15,7	93	36	48	1,5
	111420010/111420010W	20	20	19,7	105	38	58	1

Cutting Parameters

Material	Slotting ap=1.5 - 1Ø Vc (m/min)	Slotting ap= 1.0 - 0.5Ø Vc (m/min)	Shoulder Milling ap=1.5Ø / ae=0.35 - 0.20Ø Vc (m/min)	Finish Milling ap=1.5Ø / ae=0.20 - 0.10Ø Vc (m/min)
Unalloyed Steel	100-130	120 -160	150-180	170-220
Steel	100-130	120 -150	150-180	170-220
Tempered Steel	90-120	110 -150	130-170	150-200
Cold Work Tool Steel	80 -110	100-140	120 -150	140-180
Hot Work Tool Steel	80-110	100-140	120 -150	140-180
AISI 304 - 416 - 420		50-70	70-90	80-100
AISI 316 - 440		45-70	55-80	60-90
17-4 PH 15-5 PH		45-70	55-80	60-90
Cobalt-Chrome Alloys		30-50	35-55	40-70
Duplex F51		60-80	65-85	70-90
Super Duplex F55		60-80	65-85	70-90
HRSA Hastelloy	35-60	30-50	40-60	50-70
HRSA inconel 625	35-60	30-50	40-60	50-70
HRSA inconel 718	35-60	30-50	40-60	50-70
HRSA Nimonic	35-60	30-50	40-60	50-70
Titanium	50-70	60-80	70-90	80-90
Titanium Alloys	50-70	60-80	70-90	80-90
< 54 HRC		50-70	55-75	60-85

Feed Per Tooth (mm/tooth)

Ø	ap=1.5Ø	ap=1Ø	ap=0.5Ø	ae=0.35Ø	ae=0.30Ø	ae=0.25Ø	ae=0.20Ø	ae=0.15Ø	ae=0.10Ø
3	0.003	0.004	0.005	0.007	0.007	0.007	0.008	0.008	0.010
4	0.004	0.005	0.007	0.009	0.009	0.010	0.010	0.011	0.014
5	0.006	0.007	0.009	0.012	0.013	0.013	0.014	0.015	0.019
6	0.007	0.009	0.011	0.015	0.016	0.017	0.018	0.020	0.024
8	0.011	0.014	0.016	0.022	0.023	0.024	0.025	0.028	0.034
10	0.017	0.018	0.020	0.030	0.031	0.032	0.034	0.038	0.046
12	0.021	0.024	0.028	0.040	0.041	0.043	0.045	0.050	0.061
16	0.031	0.038	0.045	0.061	0.063	0.066	0.069	0.077	0.094
20	0.042	0.052	0.063	0.083	0.086	0.090	0.094	0.105	0.128

* Marked products can be delivered quickly from stock.

Z4

≤55 HRc | +AlCrN

FORM HA DIN 6535 | FORM HB DIN 6535

Steel	◑
Stainless Steel	●
Hardened Steel ≤54 HRc	◑
Hardened Steel >54 HRc	○
Cast Iron	○
Graphite	○
Non Ferrous Material	○
HRSA	●
Titanium	●

● Recommended ◑ Acceptable ○ Not Recommended