

2022

MILLING TOOLS
SOLID ENDMILLS
CATALOGUE
EN

BEYOND THE MACHINING

IMAGINATION AND
FUNCTIONALITY IS
HARMONIZED WITH
MATERIALS AND
TOOL COMES TRUE...



2022
ENDMILL CATALOG



WELCOME TO THE WORLD OF **KARCAN** CUTTING TOOLS...

Who we are?

Founded in 1996 in Eskişehir, Turkey to manufacture carbide cutting tools, we are the first and largest carbide cutting tool manufacturer and one of the top 500 R&D centers in our country. From this aspect, we are the first and the only R&D Center in the cutting tool industry of Turkey.

What we manufacture?

- Carbide Endmills
- Carbide Drill Bits
- Carbide Reamers
- Form Endmills, Drill Bits, Reamers
- Form Carbide, PCD & CBN Inserts
- Micro Tools
- Combined Tools

Which industries we serve?



General
Engineering



Mold & Die



Aviation
& Aerospace



Defence



Automotive



Medical



Energy



Rail
Systems

www.karcan.com

WE ALSO BUILD THE FUTURE ALONG
WITH TODAY

**BY AIMING FOR THE
EXCELLENCE OF
PRODUCTION**



STARTING A NEW JOURNEY OF SUCCESS REQUIRES FORESEEN EXPERIENCE, EXPERT TEAM, STRATEGY AND VISION BY STRIVING FOR MANUFACTURING EXCELLENCE.

Dear Valued Customers and Business Partners

We, Karcan, as the biggest cutting tool manufacturer of Turkey with our modern machine and measuring park, R&D Center, number of qualified employees, sales figures and export share, owe you a great debt of gratitude for being a part of our journey all through these years and being a part of our achievement.

As the leading company steering the cutting tool industry of Turkey, we keep being your solution partner in machinability of hi-tech materials thanks to our highly skilled and trained R&D, process and technical sales team by following the recent developments in machining and material engineering and bringing the world's technology to your hands.

We are not just a Cutting Tools manufacturer! We make a difference in terms of our production improving activities, technical applications and consultancy services and we put all our efforts of our valued customers' gaining in 'cost per part' a competitive edge in global markets. From this point of view, we aim to provide products and services 'Beyond The Machining'.

We intend to present at our catalogue the R&D studies and improvements on the series within our standard program carried out together with the national and foreign universities, institutes, local and foreign customers and Tübitak.

We proudly present our 97 Series updated with X-Per Technology, 100 Series- our runner of last three years with the new coating technology, 101 Series highly recognised especially in stainless material face and side milling operations, 123 Series national market leader in machining aluminium with the updated geometry and coated option, again our 133 series takes part for the first time in the catalogue by it's double flute technology and special coating to machine non-ferrous materials, besides our sharpen corner 102 series, ball nose 203 series and corner radius 114 series which are widely acclaimed specially in finishing operations of heat treated materials thanks to their new geometries and last 121 Series makes a big difference in ductile steels up to 48HRC.

Besides all these innovations, we are very glad and excited to bring in our new 155 and 156 Series which made a debut at our recent catalogue; developed after a 2-year R&D study and trials, highly recognised in machining of super alloys both in national and foreign markets in last year. We enable to have high performance multi flutes cutting in super alloys especially in aviation applications by 155 & 156 Series are developed in addition to 98,99,101,111 series.

We have built our unique qualities in our micro line and completed our R&D processes. Here you can find our Mic-Cut series and solutions which can readily be compared with leading global suppliers. We had a brilliant feedback from the market thanks to our 150,153 and 250 series.

Along with our high performance Ultra-Bite series, we changed the idea of 'Cheap Tool' perception thanks to the improvements on coating and edge preparation technologies on our KSNF Series and general purpose applications series which provide economic solutions with regards to price/performance. We named the new version of these economic series as Eco+ runs properly up to 55HRC. You may find them in this catalogue as sharp, corner radius and ballnose in short and long version both.

We keep on bringing innovations to our customers in our country and 21 countries globally, and keep working with great passion in the belief that improvements are constant and a never ending process.

Welcome again to the world of Karcan Cutting Tools

On behalf of Karcan Cutting Tools,

Ümit GEZER

Founder / General Manager

www.karcan.com





GLOBAL VISION

**KARCAN
EXPORTS TO
MORE THAN
21 COUNTRIES
ON
4 CONTINENTS**

WE REACH YOU EASIER
THANKS TO OUR GROWING
EXPORT NETWORK AND
TAKE A PART IN GLOBAL
COMPETITION.

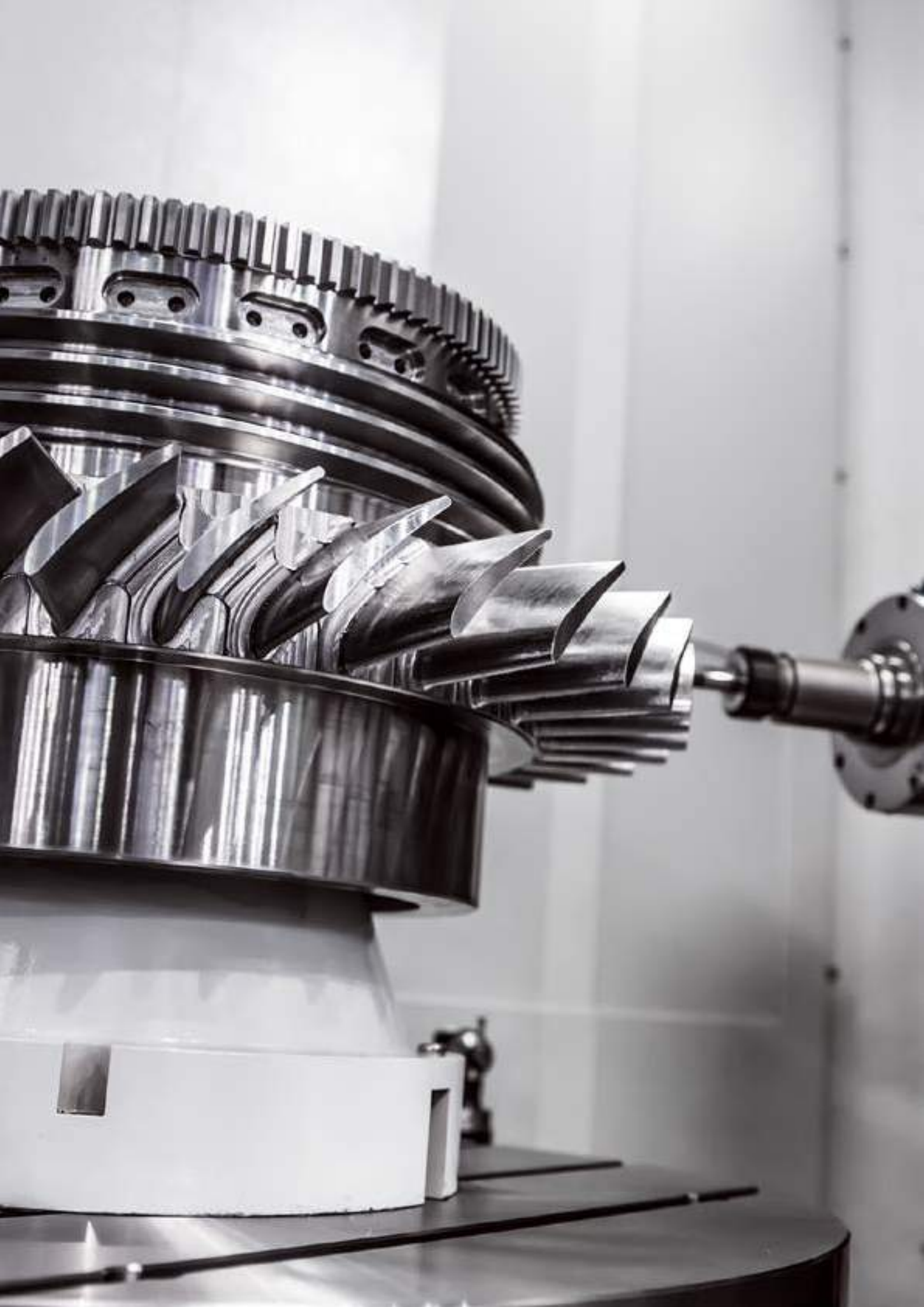


EXPER

To Expand
Tool Life...

FUTURE OF EDGE PREPARATION TECHNOLOGY

EX-PER technology developed as a result of
exhaustive Karcan R&D studies ensure a higher
performance and improved tool life.



SUPER SOLUTIONS FOR SUPER ALLOYS

WITH THE PARTNERSHIP OF KARCAN & TBİTAK

"We keep providing industrial and innovative solutions with our Ultra Bite series; Make your milling operations reliable when machining super alloys and stainless steel!"

Please meet our new generation 98,99,101 and 111 Series developed as a result of exhaustive R&D Studies !

Make a difference with our 155&156 Series which made a debut at our recent catalogue especially in machining of Inconel&Titanium,

We identified the root cause and difficulties encountered when machining super alloys and stainless steel. We have produced more reliable tools as a result of long-run tests and engineering studies which are also in accordance with our customers' improvement requests.

After the studies of 3-years, we made easier chip removal by special flute designs, angles and optimised flute depths possible by minimising the surface roughness on the cutting tool.

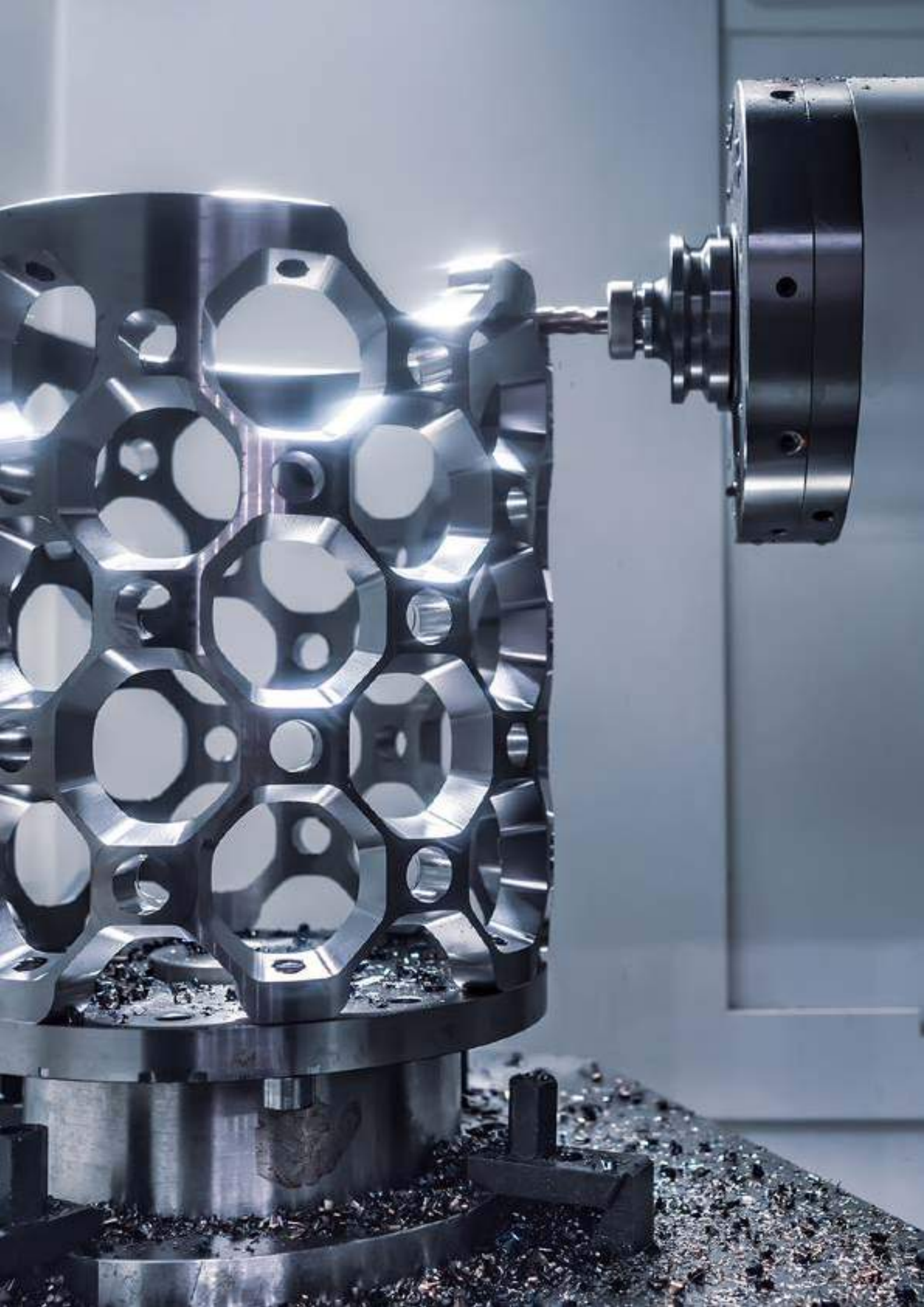
We achieved very stable cutting edges thanks to its unique form, measurable, repeatable, standardised and optimised Radius. By means of this, we improved the face milling, pocket milling, interpolation and ramping operations.





WHY KARCAN?

- Highly skilled and trained R&D, process, application and technical sales team.
- Benefit from our experiences and know-how in various areas, we provide flexible solutions.
- We are price/performance-oriented and we provide cost effective solutions with the sense of constant improvement.
- Capable to compete globally.
- Our well equipped and modern machine park ensures precision and performance at the highest level.
- Strong franchise and sales network. 7/24 available.
- 100% monitorability and repeatable quality ensure sustainable quality.
- Karcan Academy and own testing center enable you to get to know your tools in detail and choose the suitable tool you need.
- Effective stock inventory level.
- Own know-how with qualified labor force and intellectual capitals. Unique.
- Unlimited training opportunities for our customers.
- Specialised in crisis management with emergency action plans and taking quick actions.
- We closely follow the recent developments in the sector and constantly keep up with the advancing material and machining technology. We are open to innovation and improvement.
- 100% customer-oriented.
- Working with the globally verified suppliers such as machine, equipment, raw material, coating, diamond grinding wheels, filtration and coolant, which are directly related to cutting tool quality.



CHOOSE THE SUITABLE TOOL!

Raw material, geometry, edge preparation and coating in manufacturing cutting tools have a direct effect on tool quality. It is highly recommended that our customers take account of the guidances at our catalogue in order to get the optimum efficiency on our high performance series which are developed after optimising all the parameters. You can also choose the suitable tool according to the machinability of the materials or work pieces and operation method by reaching our sales representatives or application team.

Following details are very important in terms of elaboration of suggestions for machining within the shortest time,

1. Work piece to be machined? (Turbine blade, injector, engine block, brake disc etc.)
2. Material to be machined? (Inconel, titanium, stainless steel, steel, Cast Iron iron, in accordance with which of the ISO or DIN standards?)
3. Operation method? ("Side milling" "Shoulder milling" "Slotting" "Ramping" "Plunging")
4. Material Hardness? Heat-treated?
5. Type of cooling? (Oil, emulsion, air, internal or external coolant, pressure?)
6. Type of Holder? (Shrink, hydraulic, "Collet" "HSK" "BT" "SK" Etc.)
7. Type and power of spindle?
8. Machining method? (Vertical-Horizontal or 5-Axis)
9. Fixing type of work piece
10. Current tool and parameters in use, if available
11. The problems encountered with the current tool or tool life, if available.

YOU ALREADY HAVE THE ADVANTAGE!

- High performance machining
- Considerable cost reduction per work piece costs by regarding overheads and depreciation
- Our tools ensure the best possible precision and quality on the work piece machined.
- Optimal loading for your machines
- Longer tool life and holder life
- Reduced the overall cutting tool costs
- Improved utilisation of your capacity. You don't have to rush in a new machine investment.

Tools, multi-functionally optimised and standardised, marked with (*) at our catalogue are always available in stock.

Get to know our tools in detail, please watch the videos and animations. You can easily find these documents in our web page, YouTube, Instagram and Linked-in accounts.

www.karcan.com



YOUTUBE





	Model	Number of Teeth	Finish	Rough	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Graphite	Non Ferrous Material	HRSA	Titanium	Page
97		24			FORM HA DIN 6535 FORM HB DIN 6535	+TiSiN +AlCrN	●	◐	◐	○	●	○	○	○	○	24
98		Z3-Z4			FORM HA DIN 6535 FORM HB DIN 6535	+ZrN	○	●	○	○	○	○	○	●	◐	26
99		25			FORM HA DIN 6535 FORM HB DIN 6535	+AlCrN	●	◐	◐	○	●	○	○	●	●	28
100		24			FORM HA DIN 6535 FORM HB DIN 6535	+AlCrN	●	◐	◐	●	●	○	○	○	○	30
101		24			FORM HA DIN 6535 FORM HB DIN 6535	+AlCrN	●	●	◐	○	●	○	○	◐	◐	32
102		24			FORM HA DIN 6535	+TiSiN	◐	◐	●	●	○	○	○	○	○	34
110		Z6-Z8			FORM HA DIN 6535	+AlCrN	●	◐	◐	○	●	○	○	○	●	36
111		24			FORM HA DIN 6535 FORM HB DIN 6535	+AlCrN	◐	●	◐	○	○	○	○	●	●	38
112		Z6-Z8			FORM HA DIN 6535	+TiSiN	◐	◐	●	●	○	○	○	○	◐	40
114		24			FORM HA DIN 6535	+AlCrN	●	○	●	●	◐	○	○	○	○	42
121		24			FORM HA DIN 6535 FORM HB DIN 6535	+TiSiN +AlCrN	●	○	○	○	◐	○	○	○	○	46
203		Z2			FORM HA DIN 6535	+TiSiN	◐	◐	●	●	○	○	○	○	○	48



	Model	Number of Teeth	Finish	Rough	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Graphite	Non Ferrous Material	HRSA	Titanium	Page
155		Z5-Z6			FORM HA DIN 6535	+AlCrN	●	●	◐	○	○	○	○	●	●	52
156		Z6			FORM HA DIN 6535	+AlCrN	●	●	◐	○	○	○	○	●	●	54



	Model	Number of Teeth	Finish	Rough	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Graphite	Non Ferrous Material	HRSA	Titanium	Page
150		Z2			FORM HA DIN 6535	+TiSiN	●	●	●	●	◐	○	○	○	●	58
153		Z2			FORM HA DIN 6535	+TiSiN	●	●	●	●	◐	○	○	○	●	60
250		Z2			FORM HA DIN 6535	+TiSiN	●	●	●	●	◐	○	○	○	●	62



KSNF

KSNF

KSNF

KRUF

KSKF Z4

KSKF Z2

KKUF Z4

KKUF Z2

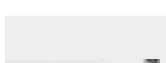
KKSF

MCV

MCX

KPAN

KTFF

Model	Number of Teeth	Finish	Rough	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Graphite	Non Ferrous Material	HRSA	Titanium	Page
	Z4			 FORM HA DIN 6535	+TiSiN										68
	Z4			 FORM HA DIN 6535	+TiSiN										70
	Z4			 FORM HA DIN 6535	+TiSiN										72
	Z4			 FORM HA DIN 6535	+TiSiN										74
	Z4			 FORM HA DIN 6535	+AlCrN										76
	Z2			 FORM HA DIN 6535	+TiSiN										78
	Z4			 FORM HA DIN 6535	+AlCrN										80
	Z2			 FORM HA DIN 6535	+TiSiN										82
	Z3			 FORM HA DIN 6535	+TiSiN										84
	Z3-Z4			 FORM HA DIN 6535	+AlCrN										86
	Z4-Z5-Z6			 FORM HA DIN 6535	+TiAlN										88
	Z1			 FORM HA DIN 6535	+Blank										90
	Z6-Z8-Z10			 FORM HA DIN 6535	+TiAlN										94



I19

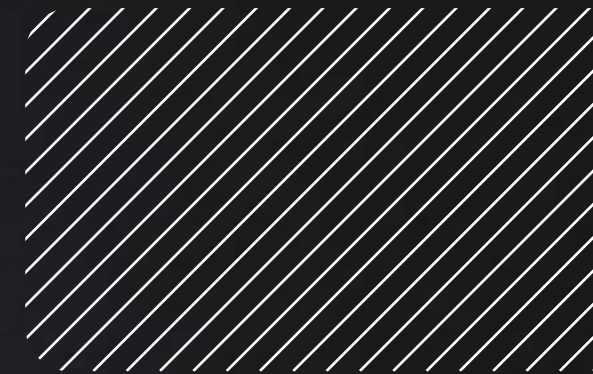
I22

I23

I33

I219

Model	Number of Teeth	Finish	Rough	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Graphite	Non Ferrous Material	HRSA	Titanium	Page
	Z1			 FORM HA DIN 6535	+Blank										98
	Z2			 FORM HA DIN 6535	+Blank										100
	Z3			 FORM HA DIN 6535	+Blank										102
	Z3			 FORM HA DIN 6535	+DLC										104
	Z2			 FORM HA DIN 6535	+Blank										106



ULTRΔ-BITE

Perfect engineering design and
high-tech material offer optimum
performance even under hardest conditions.

97 Series High Performance

General
Engineering

Mold & Die



Automotive



Defence

Rail
Systems

Finish



Rough

Full Slot! Full Performance!

Your solution partner with various helix, various intersections and special geometry offer especially milling 2XØ in full slot operations along with side milling.

Advanced Rough
Milling time
reduced up to

%50

Various coating options
and special edge
preparations ensure an
enhanced tool life up to

%50

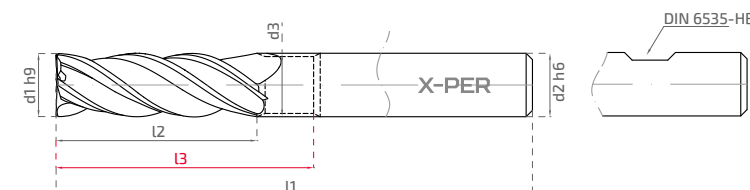
Advanced rough
milling and chatter
free geometry reduce
tensions up to

%35

Available from
stock in all sizes

%100

**CHATTER
FREE**

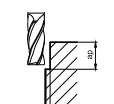
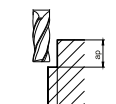
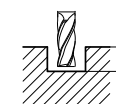


Stock	Code	d1h9	d2h6	d3	l1	l2	l3	Ch	R
*	97403000/97403000W	3	6	-	50	6	-	-	-
*	97403051/97403051W	3	6	-	51	6	-	0,1	-
*	97403058P/97403058PW	3	6	2,8	58	6	15	-	R0.15
*	97403058XL/97403058XLW	3	6	-	58	10	-	-	R0.15
*	97404000/97404000W	4	6	-	50	12	-	-	-
*	97404058/97404058W	4	6	-	58	9	-	-	R0.15
*	97404058P/97404058PW	4	6	3,8	58	9	18	-	R0.15
*	97404058XL/97404058XLW	4	6	3,8	58	12	19	-	R0.15
*	97405000/97405000W	5	6	-	50	12	-	-	-
*	97405058/97405058W	5	6	4,8	58	13	18	-	R0.15
*	97406000/97406000W	6	6	-	50	15	-	-	-
*	97406058/97406058W	6	6	5,7	58	16	23	-	R0.15
*	97408000/97408000W	8	8	-	64	20	-	-	-
*	97408064/97408064W	8	8	7,7	64	20	27	0,2	-
*	97410000/97410000W	10	10	-	73	26	-	-	-
*	97410073/97410073W	10	10	9,5	73	26	32	0,2	-
*	97412082/97412082W	12	12	11,5	82	28	38	0,3	-
*	97414082/97414082W	14	14	13,7	82	30	42	0,3	-
*	97416093/97416093W	16	16	15,5	93	36	44	0,3	-
*	97418093/97418093W	18	18	17,5	93	35	44	0,3	-
*	97420105/97420105W	20	20	19,5	105	38	54	0,3	-
*	97420000/9742000W	20	20	19,5	105	38	54	0,3	-

SLOT	*	97412082 XPER SLOT	12	12	11,7	82	28	36	0,1	-
*		97405058 UPPER	5	6	4,8	58	15	18	0,1	-
*		97406058 UPPER	6	6	5,7	58	16	23	-	R0.15
*		97408064 UPPER	8	8	7,7	64	20	27	0,15	-

Cutting Parameters

Material	Slotting ap=1.5 - 10 Vc (m/min)	Slotting ap=1.0 - 0.50 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Finish Milling ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
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Steel	Unalloyed Steel	150-190	190-220	220-250	250-300
	Steel	140-180	180-210	210-240	240-280
	Tempered Steel	80-110	100-130	130-160	160-200
	Cold Work Tool Steel	80-100	90-120	110-140	130-150
	Hot Work Tool Steel	70-100	80-110	100-130	120-140
Stainless Steel	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
Cast Iron	Super Duplex F55		60-80	65-85	70-90
	Gray Cast Iron	90-130	130-180	180-220	220-260
	Alloyed Cast Iron	90-130	130-180	180-220	220-260
	Precision Cast Iron	80-120	120-160	160-195	180-220

Feed Per Tooth (mm/tooth)

	ap=1.50	ap=10	ap=0.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
0				0.010	0.012	0.016	0.020	0.030	0.042
3	0.004	0.006	0.008	0.016	0.020	0.025	0.030	0.038	0.049
4	0.007	0.009	0.013	0.020	0.025	0.031	0.036	0.046	0.058
5	0.010	0.013	0.017	0.026	0.030	0.037	0.044	0.050	0.062
6	0.014	0.018	0.022	0.034	0.040	0.048	0.056	0.064	0.073
8	0.020	0.025	0.029	0.042	0.050	0.059	0.067	0.076	0.088
10	0.026	0.030	0.038	0.060	0.070	0.080	0.092	0.102	0.115
12	0.035	0.042	0.053	0.100	0.110	0.120	0.130	0.138	0.150
16	0.042	0.060	0.082						
20	0.05	0.065	0.085						



* Marked products can be delivered
quickly from stock.

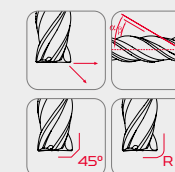
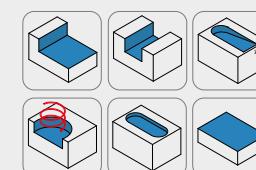
97 High Performance

Z4



≤48 HRC + TiCN + TiSiN Slot Tools

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

ULTRA-BITE

98 Series High Performance

General
EngineeringAviation
& Aerospace

Defence



Energy



Finish



Rough

High Resistance High Performance For Nickel Alloys and High Heat Resistant Materials

Benefit from Karcan's experiences and know-how, make a difference in face and side milling operations on the work pieces difficult to machine such as Inconel, Titanium and Stainless Steel.

ZrN Coating
Technology and
surface quality
ensure an enhanced
tool life up to

% 35

Special geometry
and edge
preparations
ensure a better chip
removal up

% 30

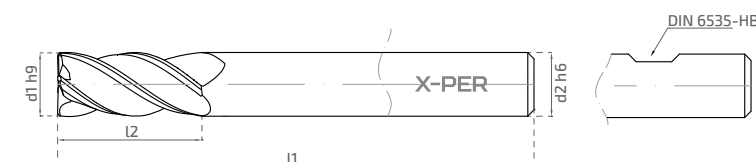
up to

% 30

reduced tensions in
the tool thanks to
optimized chatter
free geometry

CHATTER FREE

www.karcan.com

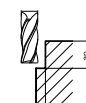
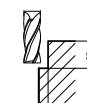


Stock	Code	d1h9	d2h6	L1	L2	Ch	R	Z
*	98303046/97303046W	3	6	46	6	0.03	-	3
*	98403002/98403002W	3	6	46	6	-	0,2	4
*	98404002/98404002W	4	6	58	12	-	0,2	4
*	98404005/98404005W	4	6	58	12	-	0,5	4
*	98404010/98404010W	4	6	58	12	-	1	4
*	98406002/98406002W	6	6	58	14	-	0,2	4
*	98406005/98406005W	6	6	58	14	-	0,5	4
	98406010/98406010W	6	6	58	14	-	1	4
*	98408002/98408002W	8	8	64	23	-	0,2	4
*	98408005/98408005W	8	8	64	23	-	0,5	4
	98408020/98408020W	8	8	64	23	-	2	4
*	98410002/98410002W	10	10	73	24	-	0,2	4
*	98410005/98410005W	10	10	73	24	-	0,5	4
	98410010/98410010W	10	10	73	24	-	1	4
	98410020/98410020W	10	10	73	24	-	2	4
*	98412002/98412002W	12	12	82	28	-	0,2	4
*	98412005/98412005W	12	12	82	28	-	0,5	4
	98412010/98412010W	12	12	82	28	-	1	4
	98412020/98412020W	12	12	82	28	-	2	4
	98412040/98412040W	12	12	82	28	-	4	4
*	98416002/98416002W	16	16	93	38	-	0,2	4
*	98416005/98416005W	16	16	93	38	-	0,5	4
	98420050/98420050W	20	20	105	44	-	5	4

SPECIAL	* SP	98408064/98408064W	8	8	64	17	0.3	-	4
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Cutting Parameters

Material	Slotting ap=1.0 - 0.50	Shoulder Milling ap=1.50 / ae=0.35 - 0.200	Finish Milling ap=1.50 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)	Vc (m/min)



Stainless Steel	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
	Chrome-Cobalt Alloy Cr - Co Al/oys	30-50	35-55	40-70
Inconel Super Alloys	Duplex F51	60-80	65-85	70-90
	Super Duplex F55	60-80	65-85	70-90
	HRSA Hastelloy	30-50	40-60	50-70
	HRSA inconel 625	30-50	40-60	50-70
Titanium	HRSA inconel 718	30-50	40-60	50-70
	HRSA Nimonic	30-50	40-60	50-70
	Titanium	60-80	70-90	80-90
	Titanium Alloys	60-80	70-90	80-90

Feed Per Tooth (mm/tooth)

	ap=10	ap=0.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
0								
3	0.006	0.007	0.007	0.007	0.007	0.008	0.008	0.010
4	0.008	0.010	0.009	0.009	0.010	0.010	0.011	0.014
5	0.011	0.014	0.012	0.013	0.013	0.014	0.015	0.019
6	0.014	0.017	0.015	0.016	0.017	0.018	0.020	0.024
8	0.020	0.024	0.022	0.023	0.024	0.025	0.028	0.034
10	0.027	0.029	0.030	0.031	0.032	0.034	0.038	0.046
12	0.035	0.040	0.040	0.041	0.043	0.045	0.050	0.061
16	0.055	0.065	0.061	0.063	0.066	0.069	0.077	0.094
20	0.075	0.090	0.083	0.086	0.090	0.094	0.105	0.128

ULTRA-BITE

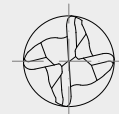
98

High Performance

Z3



Z4

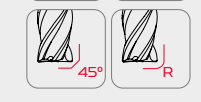
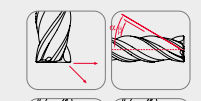
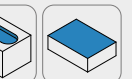
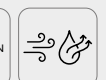


≤ 55
HRC

+ZrN

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

* Marked products can be delivered
quickly from stock.

2022
Endmill Catalog

Ultra-Bite
98

27

99 Series High Performance

General
Engineering

Mold & Die

Aviation
& Aerospace

Automotive



Medical



Energy



Finish



Rough

Endmill Standards Of Future Has Already Been Shaped

High performance in milling steel, cast iron, high heat resistant materials, titanium and stainless steel.

Make difference in
Trochoidal milling

Expert in both rough and
finishing milling

Has chatter free
feature despite
having multi flutes

Full slot milling despite
having 5-teeth

up to

% 40

higher performance
compared with
its competitors in
Trochoidal milling
thanks to Toric Radius
technology.

Better chip removal
reduces milling time
up to

% 50

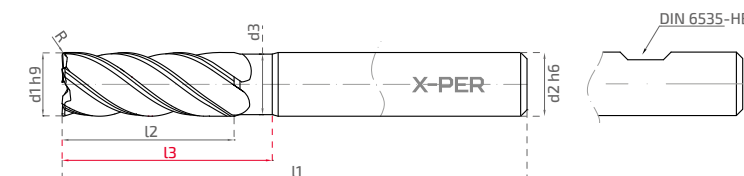
compared with its
competitors.

up to

% 40

better surface
quality in finishing
operations thanks to
its special
geometry.

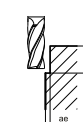
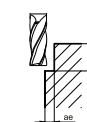
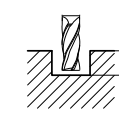
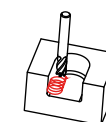
**CHATTER
FREE**



Stock	Code	d1h9	d2	d3	l1	l2	l3	R
*	99505002/99505002W	5	6	4,7	58	15	20	0,2
*	99505005/99505005W	5	6	4,7	58	15	20	0,5
*	99506002/99506002W	6	6	5,7	58	15	20	0,2
*	99506005/99506005W	6	6	5,7	58	15	20	0,5
*	99506015/99506015W	6	6	5,7	58	15	20	1,5
*	99508003/99508003W	8	8	7,7	64	22	29	0,3
*	99508005/99508005W	8	8	7,7	64	22	29	0,5
*	99510003/99510003W	10	10	9,5	73	27	33	0,3
*	99510005/99510005W	10	10	9,5	73	27	33	0,5
*	99512003/99512003W	12	12	11,5	82	30	40	0,3
*	99512005/99512005W	12	12	11,5	82	30	40	0,5
*	99512075/99512075W	12	12	11,5	82	30	40	0,75
*	99516003/99516003W	16	16	15,5	93	37	45	0,3
*	99516005/99516005W	16	16	15,5	93	37	45	0,5
*	99516075/99516075W	16	16	15,5	93	37	45	0,75
*	99516100/99516100W	16	16	15,5	100	50	58	0,75
	99518003/99518003W	18	18	17,5	93	40	50	0,3
	99518075/99518075W	18	18	17,5	93	40	50	0,75
*	99520075/99520075W	20	20	19,5	105	40	56	0,75

Cutting Parameters

Material	Trochoidal ap=1.50 / ae=0.20 - 0.100 Vc (m/min)	Slotting ap=0.50 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Finish Milling ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
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Material	Trochoidal ap=1.50 / ae=0.20 - 0.100 Vc (m/min)	Slotting ap=0.50 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Finish Milling ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
Steel				
Unalloyed Steel	170-200	130-160	150-180	170-200
Steel	170-200	130-160	150-180	170-200
Tempered Steel	160-190	120-150	140-170	160-190
Cold Work Tool Steel	100-130	80-100	90-110	100-130
Hot Work Tool Steel	90-110	70-90	80-100	90-110
AISI 304 - 416 - 420	110-130	90-110	100-120	110-130
AISI 316 - 440	110-130	90-110	100-120	110-130
17-4 PH 15-5 PH	90-110	70-90	80-100	90-110
Stainless Steel				
Chrome-Cobalt Alloy	80-100	60-80	70-90	80-100
Duplex F51	70-90	50-70	60-80	70-90
Super Duplex F55	70-90	50-70	60-80	70-90
Cast Iron				
Gray Cast Iron	150-180	120-150	140-160	150-180
Alloyed Cast Iron	140-160	110-140	130-150	140-160
Precision Cast Iron	130-150	110-130	120-140	130-150
54 HRC	120-150	80-120	110-130	120-150
Super Alloys				
HRSA hastelloy	60-80	40-60	50-70	60-80
HRSA inconel 625	60-80	40-60	50-70	60-80
HRSA inconel 718	60-80	40-60	50-70	60-80
HRSA nimonic	60-80	40-60	50-70	60-80
Titanium				
Titanium	80-100	60-80	70-90	80-100
Titanium Alloys	80-100	60-80	70-90	80-100

Feed Per Tooth (mm/tooth)

	ap=10	ap=0.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
0								
3	0,012	0,015	0,016	0,020	0,022	0,025	0,026	0,030
4	0,020	0,024	0,020	0,023	0,026	0,030	0,032	0,036
5	0,023	0,026	0,023	0,027	0,031	0,036	0,040	0,045
6	0,026	0,030	0,034	0,038	0,043	0,049	0,050	0,060
8	0,033	0,038	0,036	0,042	0,048	0,054	0,060	0,075
10	0,044	0,049	0,045	0,053	0,063	0,070	0,072	0,084
12	0,045	0,051	0,047	0,053	0,064	0,072	0,080	0,088
16	0,056	0,062	0,058	0,064	0,069	0,075	0,090	0,100
20	0,065	0,073	0,066	0,074	0,080	0,092	0,102	0,110

99

High Performance

Z5



≤ 52
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

* Marked products can be delivered
quickly from stock.

ULTRA-BITE

100 Series High Performance

General
Engineering

Mold & Die



Automotive

Rail
Systems

Finish



Rough

100% Efficiency In Advanced Rough Operations Both Milling Hard And Soft Materials.

Designed for optimum efficiency in milling steel and cast iron, the competitor of 100 series is itself especially in side milling operations.

Top Seller of
Last 3 Year

Reduced rough
milling time up to

% **45**

compared with its
competitors.

Up to

% **40**

better surface
quality thanks to its
special geometry.

Advanced coating
and edge preparation
technology ensure an
enhanced tool life up to

% **50**

High chip removal
and chatter free
features reduce
tensions up to

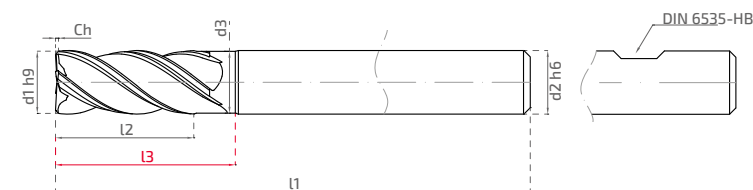
% **35**

Available from
stock in all sizes

% **100**

CHATTER FREE

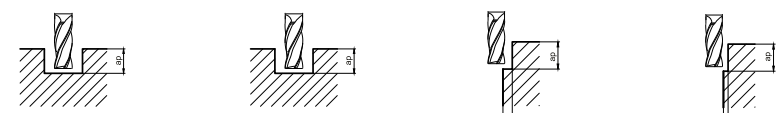
www.karcan.com



Short Series								
Stock	Code	d1h9	d2h6	d3	l1	l2	l3	Ch
	100401050	1	4		50	2,5		0
	100402050	2	4	1,95	50	4	6	0,08
	100402558	2,5	6	2,4	58	6	10	0,15
	100402558XL	2,5	6	2,4	58	12	16	0,15
*	100403058/100403058W	3	6	2,8	58	8	12	0,15
	100403058XL/100403058XLW	3	6	2,8	58	12	16	0,15
*	100404058/100404058W	4	6	3,8	58	11	15	0,15
*	100405058/100405058W	5	6	4,8	58	12	16	0,25
*	100406058/100406058W	6	6	5,8	58	14	19	0,25
*	100407064/100407064W	7	8	6,8	64	19	25	0,3
*	100408064/100408064W	8	8	7,8	64	20	28	0,3
*	100410073/100410073W	10	10	9,7	73	22	32	0,4
*	100412082/100412082W	12	12	11,7	82	27	38	0,5
*	100414082/100414082W	14	14	13,6	82	32	40	0,5
*	100416093/100416093W	16	16	15,5	93	34	49	0,6
*	100416100/100416100W	16	16	15,6	100	32	48	0,6
*	100418093/100418093W	18	18	17,6	93	35	53	0,6
*	100420105/100420105W	20	20	19,6	105	42	60	0,6

Long Series								
Stock	Code	d1h9	d2h6	d3	l1	l2	l3	Ch
*	100406100	6	6	5,8	100	25	35	0,10
*	100408100	8	8	7,8	100	35	45	0,10
*	100410110	10	10	9,7	110	40	50	0,10
*	100412110	12	12	11,7	110	40	50	0,10
*	100416125	16	16	15,6	125	55	72	0,15

Cutting Parameters				
Material	Slotting ap=1.5 - 10	Slotting ap=1.0 - 0.50	Shoulder Milling ap=1.50 / ae=0.35 - 0.200	Finish Milling ap=1.50 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)	Vc (m/min)	Vc (m/min)



		Feed Per Tooth (mm/tooth)			
		ap=1.50	ap=10	ap=0.500	ae=0.350
Steel	Unalloyed Steel	105-125	180-200	150-200	200-250
	Steel	70-90	120-150	150-180	170-220
	Tempered Steel	70-90	120-150	130-160	150-180
	Cold Work Tool Steel	55-75	100-130	120-150	130-160
	Hot Work Tool Steel	40-60	70-100	100-130	120-150
Stainless Steel	AISI 304 - 416 - 420	15-20	25-35	20-30	25-35
	AISI 316 - 440	15-20	25-35	20-30	25-35
	17-4 PH 15-5 PH	15-20	25-35	20-30	25-35
	Chrome-Cobalt Alloy	15-30	30-50	35-60	45-60
	Duplex F51	15-30	30-50	35-60	45-60
Cast Iron	Super Duplex F55	15-30	30-50	35-60	45-60
	Gray Cast Iron	70-90	120-160	160-200	180-220
	Alloyed Cast Iron	70-90	120-160	160-200	180-220
	Precision Cast Iron	70-90	120-160	160-200	180-220
	> 54 HRC	15-20	25-35	35-40	35-45

Feed Per Tooth (mm/tooth)									
	ap=1.50	ap=10	ap=0.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
0									
3	0.012	0.015	0.020	0.015	0.017	0.020	0.023	0.025	0.035
4	0.014	0.017	0.021	0.017	0.022	0.025	0.032	0.035	0.040
5	0.017	0.020	0.024	0.020	0.025	0.030	0.035	0.040	0.045
6	0.020	0.022	0.028	0.022	0.028	0.033	0.038	0.045	0.050
8	0.025	0.030	0.035	0.030	0.035	0.045	0.055	0.060	0.070
10	0.030	0.035	0.040	0.035	0.042	0.050	0.060	0.072	0.085
12	0.035	0.041	0.047	0.041	0.049	0.057	0.068	0.078	0.090
14	0.036	0.042	0.048	0.042	0.050	0.058	0.069	0.080	0.094
16	0.045	0.055	0.065	0.061	0.070	0.082	0.094	0.110	0.125
18	0.050	0.068	0.072	0.072	0.085	0.095	0.100	0.120	0.135
20	0.055	0.070	0.090	0.090	0.105	0.120	0.140	0.150	0.165



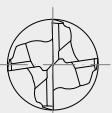
* Marked products can be delivered
quickly from stock.

ULTRA-BITE

100

High Performance

Z4



≤ 62
HRC

+AlCrN



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

● Recommended ○ Acceptable ○ Not Recommended

101 Series

High Performance

General
Engineering

Mold & Die



Automotive



Finish



Rough

Double Action

Designed for a better surface quality while evacuating high chip volumes;

101 Series with Double Flute Technology!
Highly recognized by our customers in milling steel and cast iron along with stainless steel and titanium.

Finishing milling
time reduced up to

% **45**

compared with its competitors.

Up to

% **40**

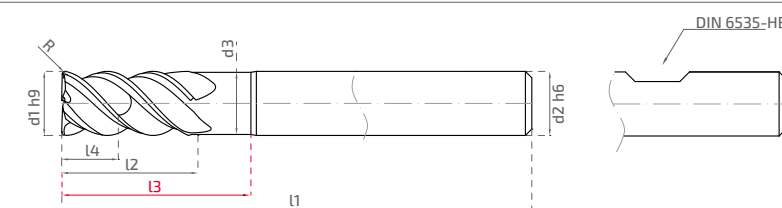
better surface quality thanks to its special geometry compared with competitors' semi roughing tools

Advanced coating and edge preparation technology ensure an enhanced tool life up to

% **50**

Chatter free geometry reduces tensions up to

% **35**



Stock	Code	d1h9	d2h6	d3	L1	L2	L3	L4	R
*	101403002/101403002W	3	6	2,8	58	11	20	5	0,2
*	101404002/101404002W	4	6	3,8	58	12	21	6	0,2
*	101405002/101405002W	5	6	4,8	58	13	17	6	0,2
*	101405005/101405005W	5	6	4,8	58	13	17	6	0,5
*	101406002/101406002W	6	6	5,7	58	15	20	8	0,2
*	101406005/101406005W	6	6	5,7	58	15	20	8	0,5
*	101407064/101407064W	7	8	6,5	64	21	27	10	0,2
*	101408002/101408002W	8	8	7,7	64	21	28	10	0,2
*	101408005/101408005W	8	8	7,7	64	21	28	10	0,5
*	101408010/101408010W	8	8	7,7	64	21	28	10	1
*	101408020/101408020W	8	8	7,7	64	21	28	10	2
*	101410002/101410002W	10	10	9,5	73	21	27	12	0,2
*	101410005/101410005W	10	10	9,5	73	21	27	12	0,5
*	101410008/101410008W	10	10	9,5	73	21	27	12	0,8
*	101410010/101410010W	10	10	9,5	73	21	27	12	1
*	101410015/101410015W	10	10	9,5	73	21	27	12	1,5
*	101410020/101410020W	10	10	9,5	73	21	27	12	2
*	101410030/101410030W	10	10	9,5	73	21	27	12	3
*	101412003/101412003W	12	12	11,5	82	29	39	16	0,3
*	101412005/101412005W	12	12	11,5	82	29	39	16	0,5
*	101412010/101412010W	12	12	11,5	82	29	39	16	1
*	101412015/101412015W	12	12	11,5	82	29	39	16	1,5
*	101412020/101412020W	12	12	11,5	82	29	39	16	2
*	101412030/101412030W	12	12	11,5	82	29	39	16	3
*	101414000/101414000W	14	14	13,5	82	26	36	13	0
*	101414003/101414003W	14	14	13,5	82	26	36	13	0,3
*	101416003/101416003W	16	16	15,5	93	36	44	21	0,3
*	101416005/101416005W	16	16	15,5	93	36	44	21	0,5
*	101416010/101416010W	16	16	15,5	93	36	44	21	1
*	101416015/101416015W	16	16	15,5	93	36	44	21	1,5
*	101420003/101420003W	20	20	19,5	105	38	54	19	0,3

Cutting Parameters			
Material	Slotting ap=1.00 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Son Yüzey Frezeleme ap=1.50 / ae=0.20 - 0.100 Vc (m/min)

		Cutting Parameters		
		Slotting ap=1.00 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Son Yüzey Frezeleme ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
Steel	Unalloyed Steel	100-130	130-160	150-180
	Steel	100-130	130-160	150-180
	Tempered Steel	80-110	110-140	130-160
	Cold Work Tool Steel	70-100	90-120	110-135
	Hot Work Tool Steel	65-95	80-110	100-125
Stainless Steel	AISI 304 - 416 - 420	20-50	30-60	50-90
	AISI 316 - 440	20-50	30-60	50-90
	17-4 PH 15-5 PH	20-40	30-50	40-70
	Chrome-Cobalt Alloy	20-40	30-50	40-70
	Gray Cast Iron	70-100	100-130	120-150
Cast Iron	Alloyed Cast Iron	70-100	90-120	110-145
	Precision Cast Iron	50-80	70-100	90-115
	< 54 HRC	25-35	35-40	35-45
	HRSA hastelloy	30-50	40-60	50-70
	HRSA inconel 625	30-50	40-60	50-70
Super Alloys	HRSA inconel 718	30-50	40-60	50-70
	HRSA nimonic	30-50	40-60	50-70
	Titanium	30-50	70-90	80-90
	Titanium Alloys	30-50	70-90	80-90

Feed Per Tooth (mm/tooth)								
Ø	ap=10	ap=1.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
3	0.003	0.004	0.010	0.012	0.013	0.015	0.016	0.017
4	0.005	0.005	0.012	0.015	0.019	0.020	0.022	0.026
5	0.006	0.007	0.015	0.018	0.022	0.027	0.030	0.035
6	0.007	0.009	0.017	0.020	0.023	0.028	0.031	0.036
8	0.011	0.014	0.019	0.022	0.025	0.029	0.032	0.037
10	0.014	0.019	0.030	0.032	0.036	0.039	0.041	0.046
12	0.020	0.025	0.034	0.038	0.041	0.045	0.047	0.051
14	0.025	0.031	0.040	0.045	0.050	0.056	0.061	0.066
16	0.031	0.038	0.050	0.056	0.062	0.068	0.073	0.078
20	0.046	0.054	0.070	0.076	0.084	0.090	0.096	0.111

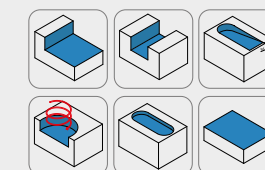


* Marked products can be delivered quickly from stock.

101

High Performance

Z4



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

● Recommended ○ Acceptable ○ Not Recommended

ULTRA-BITE

102 Series Finishing Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

High Performance In Hard Materials After Heat Treatment

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

%30

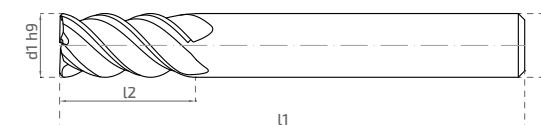
Chatter free
geometry reduces
tensions up to

%30

Available from stock
in all sizes

%100

www.karcan.com



Short Series

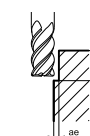
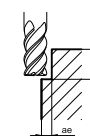
Stock	Code	d1h9	d2h6	l1	l2
*	102403045	3	6	45	8
*	102404045	4	6	45	11
*	102405050	5	6	50	13
*	102406060	6	6	60	20
*	102408060	8	8	60	20
*	102410070	10	10	70	25
*	102412075	12	12	75	26

Long Series

Stock	Code	d1h9	d2h6	l1	l2
*	102403060	3	3	60	15
*	102404075	4	4	75	15
*	102405075	5	5	75	20
*	102406080	6	6	80	20
*	102408100	8	8	100	25
*	102410100	10	10	100	30
*	102412100	12	12	100	35

Cutting Parameters

Shoulder Milling $a_p \leq 1.50$ $a_e \leq 0.050$	Shoulder Milling $a_p \leq 10$ $a_e \leq 0.030$ ($D < 03$) $a_e \leq 0.050$ ($D \geq 03$) max: 0.5mm
V_c (m/min)	V_c (m/min)
Hardened Steel / 45-55 HRC	Hardened Steel / 48-63 HRC



0	0	0	0
3	140 - 160	3	90 - 110
4	140 - 160	4	90 - 110
5	180 - 220	5	110 - 130
6	180 - 220	6	110 - 130
8	180 - 220	8	110 - 130
10	180 - 220	10	110 - 130
12	180 - 220	12	110 - 130

Feed Per Tooth (mm/tooth)

0	0	0	0
3	0.020	3	0.015
4	0.025	4	0.020
5	0.030	5	0.025
6	0.035	6	0.030
8	0.045	8	0.035
10	0.050	10	0.040
12	0.060	12	0.045

ULTRA-BITE

102

Finishing Endmill

Z4



≤ 63
HRC

+TiSiN

FORM
HA 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

* Marked products can be delivered
quickly from stock.

ULTRA-BITE

110 Series

Finishing Endmill

General
Engineering

Mold&Die



Automotive



Finish

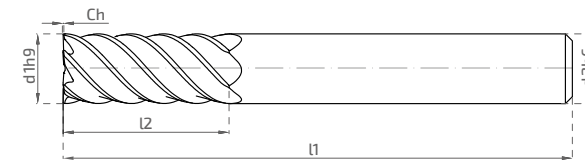


Rough

Special multi flute
geometry reduces
milling time up to

%30

www.karcan.com



Short Series

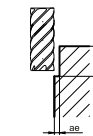
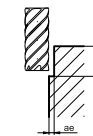
Stock	Code	d1h9	d2h6	l1	l2	Ch	Z
*	110606058	6	6	58	15	0,1	6
*	110608064	8	8	64	19	0,1	6
*	110610073	10	10	73	22	0,1	6
*	110612082	12	12	82	26	0,1	6
*	110614082	14	14	82	31	0,15	6
*	110616093	16	16	93	32	0,15	6
	110818093	18	18	93	32	0,15	8
	110820105	20	20	105	38	0,15	8

Long Series

Stock	Code	d1h9	d2h6	l1	l2	Ch	Z
*	110606080	6	6	80	30	0,1	6
*	110608090	8	8	90	40	0,1	6
*	110610100	10	10	100	45	0,1	6
*	110612110	12	12	110	55	0,1	6
*	110614110	14	14	110	60	0,15	6
*	110616125	16	16	125	70	0,15	6
	110818140	18	18	140	70	0,15	8
	110820150	20	20	150	75	0,15	8

Cutting Parameters

Material	Shoulder Milling ap=2.00 / ae=0.250	Shoulder Milling ap=2.00 / ae=0.20-0.100
	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	100-140	140-170
	Steel	80-110	110-140
	Tempered Steel	80-100	105-130
	Cold Work Tool Steel	60-80	80-105
	Hot Work Tool Steel	60-80	80-105
Stainless Steel	AISI 304 - 416 - 420	40-60	55-80
	AISI 316 - 440	40-60	55-80
	17-4 PH 15-5 PH	40-60	55-80
	Cobalt-Chrome Alloys	40-60	55-80
	Duplex F51	40-60	55-80
Cast Iron	Super Duplex F55	40-60	55-80
	Gray Cast Iron	80-110	110-140
	Alloyed Cast Iron	80-100	105-130
	Precision Cast Iron	80-100	105-130
Titanium	Titanium	40-50	50-70
	Titanium Alloys	40-50	50-70

Feed Per Tooth (mm/tooth)

	ae=0.250	ae=0.200	ae=0.100
0			
6	0.028	0.030	0.024
8	0.046	0.051	0.045
10	0.054	0.059	0.051
12	0.060	0.066	0.057
14	0.064	0.074	0.063
16	0.073	0.079	0.069
18	0.078	0.086	0.074
20	0.085	0.092	0.080

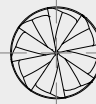
ULTRA-BITE

110

Finishing Endmill

Z6

Z8



≤48
HRC

+AICrN

FORM
HA 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

* Marked products can be delivered
quickly from stock.

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

AICrN 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

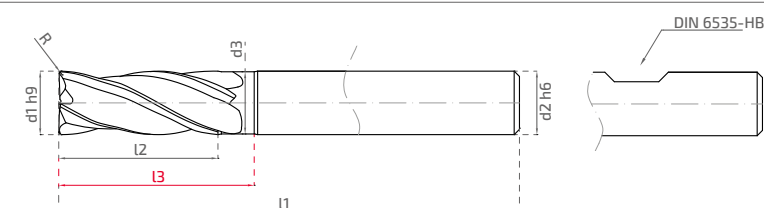
% 40

Optimized Radius forms ensure a better surface quality and high performance up to

% 45

in operations such as face milling, pocket milling and interpolation.

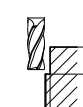
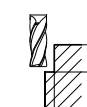
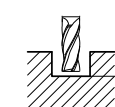
CHATTER FREE



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 - 10 Vc (m/min)	Slotting ap=1.0 - 0.50 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.35 - 0.200 Vc (m/min)	Finish Milling ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
----------	---------------------------------------	---	---	---



Material	100-130	120-160	150-180	170-220
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)

	ap=1.50	ap=10	ap=0.500	ae=0.350	ae=0.300	ae=0.250	ae=0.200	ae=0.150	ae=0.100
0									
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

111

High Performance



≤ 55 HRC

AICrN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

112 Series

Finishing Endmill

General
Engineering

Mold&Die



Automotive



Finish



Rough

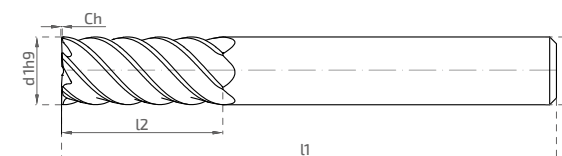
To have a super smooth surface in heat treated materials.

New geometry and developed coating ensure an expanded tool life up to

% **40**

Better surface roughness thanks to unique edge preparation.

% **30**



Short Series

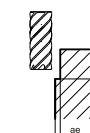
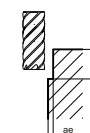
Stock	Code	d1h9	d2h6	l1	l2	Ch	Z
*	112606058	6	6	58	13	0,1	6
*	112608064	8	8	64	19	0,1	6
*	112610073	10	10	73	22	0,1	6
*	112612082	12	12	82	26	0,1	6
*	112616093	16	16	93	32	0,2	6
	112820105	20	20	105	38	0,2	8

Long Series

Stock	Code	d1h9	d2h6	l1	l2	Ch	Z
*	112606080	6	6	80	30	0,1	6
*	112608090	8	8	90	35	0,1	6
*	112610100	10	10	100	45	0,1	6
*	112612110	12	12	110	55	0,1	6
*	112616125	16	16	125	65	0,2	6
	112820150	20	20	150	75	0,2	8

Cutting Parameters

Material	Shoulder Milling ap=2.00 / ae=0.250	Shoulder Milling ap=2.00 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)



Steel	Cold Work Tool Steel	110-150	150-180
	Hot Work Tool Steel	100-140	140-170
Stainless Steel	AISI 304 - 416 - 420	70-100	100-130
	AISI 316 - 440	70-100	100-130
	17-4 PH 15-5 PH	65-90	90-120
	Chrome-Cobalt Alloy	65-90	90-120
Titanium	Duplex F51	60-80	80-110
	Super Duplex F55	60-80	80-110
	Titanium	60-80	70-100
	Titanium Alloys	55-75	65-95
	≤ 54 HRC	80-110	110-140
	>54 HRC	20-50	50-80

Feed Per Tooth (mm/tooth)

	ae=0.250	ae=0.200	ae=0.100	ae=0.100
0				
6	0.018	0.019	0.024	0.024
8	0.027	0.030	0.042	0.045
10	0.035	0.037	0.048	0.051
12	0.037	0.040	0.054	0.057
16	0.045	0.049	0.064	0.069
20	0.052	0.058	0.075	0.080

112

Finishing Endmill



Z6



Z8



≥48 HRC

62 HRC

TiSiN

FORM HA 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

* Marked products can be delivered quickly from stock.

114 Series

Corner Radius Endmill



General Engineering



Mold & Die



Automotive



Finish



Rough

Updated for optimum performance after heat treatment semi-finishing and finishing operations!

We are more competitive with new generation 114 series in milling hard materials especially for changing and growing Mold and Die industry

AICrN coating technology and surface quality ensure an enhanced tool life and resistance up to

% **35**

Flute geometry and center form ensure a better chip evacuation up to

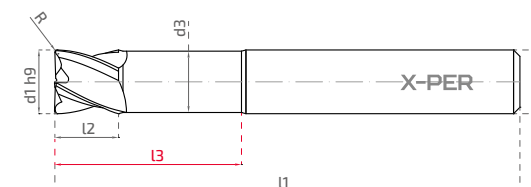
% **30** in hard materials.

Advanced coating and edge preparation technology ensure an enhanced tool life up to

% **50**

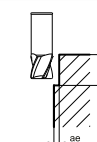
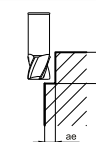
% **100** Traceability of optimized special radius forms reflect the radius form on the work piece.

Up to % **35** reduced tensions in the tool thanks to optimized chatter free geometry.



Short Series								
Stock	Code	d1h9	d2h6	d3	L1	L2	L3	R
*	114402005	2	6	1,9	58	2	12	0,5
*	114403005	3	6	2,8	58	3	16	0,5
* SP	114403005	3	3	2,8	50	3	16	0,5
*	114404005	4	6	3,8	58	4	20	0,5
*	114404010	4	6	3,8	58	4	20	1
* SP	114404005	4	4	3,8	50	4	20	0,5
* SP	114404010	4	4	3,8	50	4	20	1
*	114405005	5	6	4,8	58	5	18	0,5
*	114405010	5	6	4,8	58	5	18	1
*	114405015	5	6	4,8	58	5	18	1,5
*	114406005	6	6	5,8	58	6	23	0,5
*	114406010	6	6	5,8	58	6	23	1
*	114406015	6	6	5,8	58	6	23	1,5
*	114408005	8	8	7,7	64	8	25	0,5
*	114408010	8	8	7,7	64	8	25	1
*	114408015	8	8	7,7	64	8	25	1,5
*	114410005	10	10	9,7	73	10	32	0,5
*	114410010	10	10	9,7	73	10	32	1
*	114410015	10	10	9,7	73	10	32	1,5
*	114412005	12	12	11,7	82	12	36	0,5
*	114412010	12	12	11,7	82	12	36	1
*	114412015	12	12	11,7	82	12	36	1,5
*	114412020	12	12	11,7	82	12	36	2
*	114416010	16	16	15,5	93	16	43	1
*	114416015	16	16	15,5	93	16	43	1,5
*	114416020	16	16	15,5	93	16	43	2
*	114416030	16	16	15,5	93	16	43	3

Cutting Parameters		
Material	Shoulder Milling ap=0.100 / ae=0.25 - 0.100	Finish Milling ap=0.100 / ae=0.100
	Vc (m/min)	Vc (m/min)



Steel	Cold Work Tool Steel	110-150	150-180
	Hot Work Tool Steel	100-140	140-170
	Gray Cast Iron	70-100	100-130
	Alloyed Cast Iron	70-100	100-130
	Precision Cast Iron	65-90	90-120
	≤ 54 HRC	65-90	90-120
	>54 HRC	60-80	80-110

Feed Per Tooth (mm/tooth)						
Ø	ae=0.250	ae=0.200	ae=0.150	ae=0.100	ae=0.150	ae=0.100
4	0.031	0.034	0.037	0.040	0.044	0.047
6	0.031	0.034	0.037	0.041	0.045	0.049
8	0.038	0.042	0.047	0.053	0.058	0.066
10	0.049	0.052	0.056	0.061	0.066	0.071
12	0.052	0.056	0.062	0.068	0.074	0.079
16	0.063	0.068	0.076	0.082	0.089	0.097

114

Corner Radius Endmill



≤ 62 HRC

AICrN

FORM HA 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

* Marked products can be delivered quickly from stock.

ULTRA-BITE

114 Long Series Corner Radius Endmill



General Engineering



Mold & Die



Automotive



Finish



Rough

Updated for optimum performance after heat treatment semi-finishing and finishing operations!

We are more competitive with new generation 114 series in milling hard materials especially for changing and growing Mold and Die industry

AICrN coating technology and surface quality ensure an enhanced tool life and resistance up to

% **35**

Flute geometry and center form ensure a better chip evacuation up to

% **30** in hard materials.

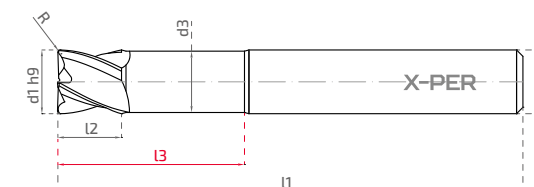
Advanced coating and edge preparation technology ensure an enhanced tool life up to

% **50**

% **100** Traceability of optimized special radius forms reflect the radius form on the work piece.

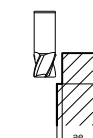
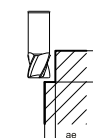
Up to % **35** reduced tensions in the tool thanks to optimized chatter free geometry.

www.karcan.com



Long Series								
Stock	Code	d1h9	d2h6	d3	L1	L2	L3	R
*	114U404005XL	4	4	3,8	74	10	20	0,5
*	114U404005	4	6	3,8	74	10	20	0,5
*	114U406005	6	6	5,8	74	16	22	0,5
*	114U406005XL	6	6	5,8	100	16	22	0,5
*	114U406010	6	6	5,8	74	16	22	1
*	114U406010XL	6	6	5,8	100	16	22	1
*	114U408005	8	8	7,7	74	16	24	0,5
*	114U408005XL	8	8	7,7	100	16	24	0,5
*	114U408010	8	8	7,7	74	16	24	1
*	114U408010XL	8	8	7,7	100	16	24	1
	114U408015	8	8	7,7	74	16	24	1,5
*	114U410005	10	10	9,7	100	18	32	0,5
*	114U410010	10	10	9,7	100	18	32	1
	114U410015	10	10	9,7	100	18	32	1,5
	114U410020	10	10	9,7	100	18	32	2
*	114U412005	12	12	11,7	100	20	36	0,5
*	114U412010	12	12	11,7	100	20	36	1
	114U412015	12	12	11,7	100	20	36	1,5
	114U412020	12	12	11,7	100	20	36	2

Cutting Parameters		
Material	Shoulder Milling ap=0.100 / ae=0.25 - 0.100	Finish Milling ap=0.100 / ae=0.100
	Vc (m/min)	Vc (m/min)



Steel	Cold Work Tool Steel	110-150	150-180
	Hot Work Tool Steel	100-140	140-170
	Gray Cast Iron	70-100	100-130
	Alloyed Cast Iron	70-100	100-130
	Precision Cast Iron	65-90	90-120
	≤ 54 HRC	65-90	90-120
Cast Iron	>54 HRC	60-80	80-110

Feed Per Tooth (mm/tooth)						
Ø	ae=0.250	ae=0.200	ae=0.150	ae=0.100	ae=0.150	ae=0.100
4	0.031	0.034	0.037	0.040	0.044	0.047
6	0.031	0.034	0.037	0.041	0.045	0.049
8	0.038	0.042	0.047	0.053	0.058	0.066
10	0.049	0.052	0.056	0.061	0.066	0.071
12	0.052	0.056	0.062	0.068	0.074	0.079

ULTRA-BITE

Long **114**
Corner Radius Endmill

Z4



≤ 62 HRC + AICrN

FORM HA 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

* Marked products can be delivered quickly from stock.

2022
Endmill Catalog



ULTRA-BITE

121 Series

High Performance

General
Engineering

Mold&Die



Automotive



Defence

Rail
Systems

Finish



Rough

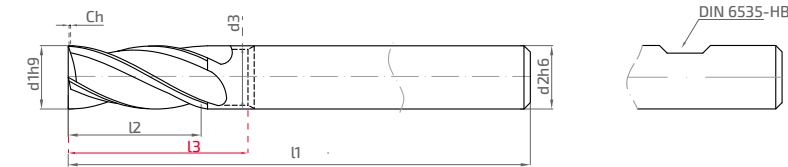
Pro-Soft - Designed to have high performance in semi-finish and roughing operations of ductile steels up to 48 HRC.

new
product

Available from
stock in all sizes

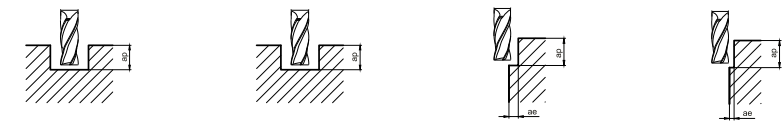
%100

www.karcan.com



Stock	Code	d1h9	d2h6	d3	l1	l2	l3	Ch
*	121403058/121403058W	3	6	2,9	58	9	12	0,15
*	121404058/121404058W	4	6	3,9	58	12	15	0,15
*	121405058/121405058W	5	6	4,9	58	15	19	0,2
*	121406058/121406058W	6	6	-	58	16	-	0,2
*	121408064/121408064W	8	8	-	64	20	-	0,2
*	121410073/121410073W	10	10	-	73	22	-	0,2
*	121412082/121412082W	12	12	-	82	28	-	0,2
*	121416093/121416093W	16	12	-	93	32	-	0,2
SLOT *	121412082/121412082W SLOT	12	12	-	82	28	-	0,2

Cutting Parameters				
Material	Slotting ap=1,5 - 10	Slotting ap=1,0 - 0,50	Shoulder Milling ap=1,50 / ae=0,35 - 0,200	Finish Milling ap=1,50 / ae=0,20 - 0,100
	Vc (m/min)	Vc (m/min)	Vc (m/min)	Vc (m/min)



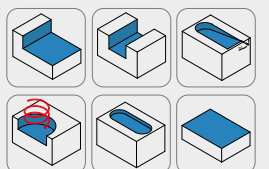
Steel	Unalloyed Steel	130-170	170-200	200-230	230-280
	Steel	120-160	160-190	190-220	220-260
	Tempered Steel	80-110	100-130	130-160	160-200
	Cold Work Tool Steel	80-100	90-120	110-140	130-150
	Hot Work Tool Steel	70-100	80-110	100-130	120-140
Cast Iron	Gray Cast Iron	90-130	130-180	180-220	220-260
	Alloyed Cast Iron	90-130	130-180	180-220	220-260
	Precision Cast Iron	80-120	120-160	160-195	180-220

Feed Per Tooth (mm/tooth)									
Ø	ap=1,50	ap=10	ap=0,500	ae=0,350	ae=0,300	ae=0,250	ae=0,200	ae=0,150	ae=0,100
3	0.004	0.006	0.008	0.010	0.012	0.016	0.020	0.030	0.0420
4	0.007	0.009	0.013	0.016	0.020	0.025	0.030	0.038	0.0490
5	0.010	0.013	0.017	0.020	0.025	0.031	0.036	0.046	0.0580
6	0.014	0.018	0.022	0.026	0.030	0.037	0.044	0.050	0.0620
8	0.020	0.025	0.029	0.034	0.040	0.048	0.056	0.064	0.0730
10	0.026	0.030	0.038	0.042	0.050	0.059	0.067	0.076	0.0880
12	0.035	0.042	0.053	0.060	0.070	0.080	0.092	0.102	0.1150
16	0.042	0.060	0.082	0.100	0.110	0.120	0.130	0.138	0.1500

ULTRA-BITE

121

High Performance

Ultra-Bite
121

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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

203 Series

Ball Nose Endmill

General
Engineering

Mold&Die



Automotive



Finish



Rough

Updated for optimum performance after heat treatment finishing operations!

We are more competitive with new generation 203 series in milling hard materials especially for changing and growing Mold and Die industry.

High performance up to **63 HRC** hardness.

Up to

%35

heat resistance and enhanced tool life with new generation TiSiN coating technology and surface quality

Up to

%30

better chip evacuation in milling hard work pieces with its developed center form.

%40

better surface quality

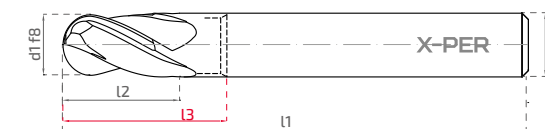
Up to

%35

reduced tensions in the tool thanks to optimized chatter free geometry.

Available from stock in all sizes

%100



Short Series

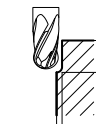
Stock	Code	d1f8	d2h6	L1	L2
*	203203058	3	6	58	6
*	203204058	4	6	58	9
*	203205058	5	6	58	10
*	203206058	6	6	58	12
*	203208064	8	8	64	15
*	203210073	10	10	73	20
*	203212082	12	12	82	22

Long Series

Stock	Code	d1f8	d2h6	d3	L1	L2	L3
*	203203050	3	3	2,9	50	5	15
*	203203080	3	3	2,9	80	5	30
*	203204050	4	4	3,8	50	6	15
*	203204080	4	4	3,8	80	6	35
*	203205050	5	5	4,8	50	7	15
*	203205080	5	5	4,8	80	10	35
*	203206080	6	6	5,8	80	10	35
*	203206100	6	6	5,8	100	10	45
*	203208100	8	8	7,7	100	12	45
*	203210110	10	10	9,7	110	14	55
*	203212110	12	12	11,7	110	16	55

Cutting Parameters

Material	Kopya Frezeleme ap=0.25 - 0.100 / ae=0.25 - 0.100 Vc (m/min)	Finish Milling ap=0.100 / ae=0.100 Vc (m/min)
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Steel	Cold Work Tool Steel	170-200	190-230
Steel	Hot Work Tool Steel	160-190	180-220
Stainless Steel	AISI 304 - 416 - 420	90-120	120-150
Stainless Steel	AISI 316 - 440	80-110	110-140
Stainless Steel	17-4 PH 15-5 PH	80-110	110-140
Stainless Steel	Chrome-Cobalt Alloy	70-100	100-130
Stainless Steel	≤ 54 HRC	90-120	120-150
Stainless Steel	>54 HRC	60-90	90-120

Feed Per Tooth (mm/tooth)

Ø	ae=0.250	ae=0.200	ae=0.150	ae=0.100	ae=0.100	ae=0.100
3	0,050	0,054	0,059	0,062	0,065	0,070
4	0,051	0,058	0,065	0,070	0,074	0,080
6	0,059	0,070	0,083	0,087	0,093	0,100
8	0,061	0,073	0,086	0,091	0,097	0,115
10	0,069	0,082	0,095	0,107	0,114	0,125
12	0,080	0,09	0,110	0,122	0,130	0,140

203

Ball Nose Endmill

Z2



≥43 HRC | ≤63 HRC

TiSiN

FORM HA 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

* Marked products can be delivered quickly from stock.

HPC

HIGH PERFORMANCE CUTTING

Developing machining technologies and increasing machine abilities enable a faster machining of heat resistant materials. Choosing the best tool is crucial in here. It is why Karcan R&D department developed for you as an essential of new machining era ;

Gen - Z [Generation Z]

Designed to have high performance machining of advanced technology materials.

We reduce your cost per part by new Gen-Z Series while you machine super alloys in next-generation machining methods such as high performance cutting, high speed machining or trochoidal machining.

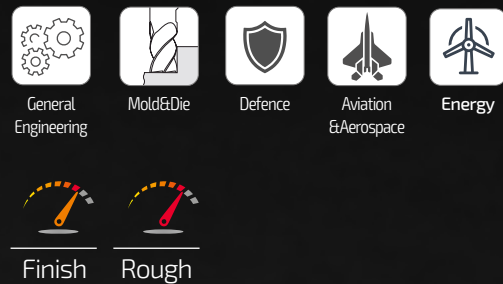
HIGH
PERFORMANCE
MACHINING.

HIGH SPEED
MACHINING.

HPC

155 Gen-Z Series

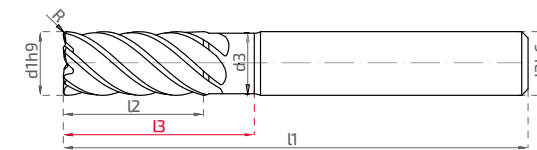
High Performance Machining



Designed to have high performance machining of advanced technology materials.

new
product

www.karcan.com



Short Series									
Stock	Code	d1h9	d2h6	d3	l1	l2	l3	R	Z
	155506005	6	6	5,7	58	13	20	0,5	5
	155508005	8	8	7,6	64	18	25	0,5	5
	155610005	10	10	7,5	73	22	30	0,5	6
	155610010	10	10	7,5	73	22	30	1	6
	155612005	12	12	11,4	82	26	36	0,5	6
*	155612010	12	12	11,4	82	26	36	1	6
*	155616003	16	16	15,2	93	34	42	0,3	6
*	155616010	16	16	15,2	93	34	42	1	6
*	155616020	16	16	15,2	93	34	42	2	6
	155620030	20	20	19	105	42	52	3	6

Long Series									
Stock	Code	d1h9	d2h6	d3	l1	l2	l3	R	Z
	155U610100	10	10	-	100	40	-	1	6
	155U612100	12	12	-	100	48	-	1	6
SP	155U616010	16	16	-	100	48	-	1	6
	155U616125	16	16	-	125	64	-	2	6
	155U620165	20	20	-	165	80	-	3	6

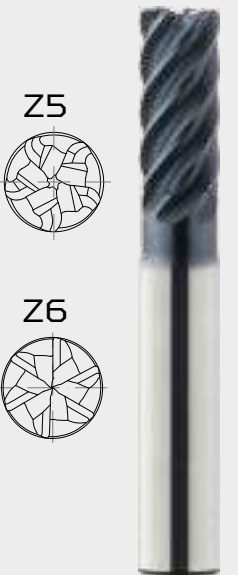
Cutting Parameters - Trochoidal			
Material	Shoulder Milling ap=2xØ/ae=0,05-0,12Ø Vc (m/min)	Shoulder Milling ap=3xØ/ae=0,05-0,10 Vc (m/min)	Shoulder Milling ap=4xØ/ae=0,05-0,10 Vc (m/min)
Steel	Unalloyed Steel 220-250 Steel 210-240 Tempered Steel 110-140 Cold Work Tool Steel 80-110 Hot Work Tool Steel 80-110	220-250 210-240 110-140 75-105 75-105	200-230 190-220 100-120 70-90 70-90
Stainless Steel	AISI 304-416-420 120-150 AISI 316-440 100-130 17-4 PH 15-5 PH 90-120 Chrome-Cobalt Alloy 70-100 Duplex F51 90-130 Super Duplex F55 90-130	120-150 90-120 80-110 70-90 90-130 90-130	95-125 80-110 70-100 65-85 70-110 70-110
Cast Iron	Gray Cast Iron 200-235 Alloyed Cast Iron 200-240 Precision Cast Iron 200-245	200-235 200-240 200-245	195-215 190-220 190-225
Titanium	Iron-Based Super Alloys 45-65 Nickel-Based Super Alloys 40-55 Titanium-Based Super Alloys 100-120	45-65 40-55 95-115	40-60 40-50 90-105

Feed Per Tooth (mm/tooth)			
	ap=2xØ	ap=3xØ	ap=4xØ
Ø			
4	0,016-0,032		
6	0,036-0,072	0,036-0,072	0,04-0,07
8	0,048-0,096	0,048-0,086	0,05-0,08
10	0,075-0,15	0,06-0,12	0,05-0,08
12	0,09-0,18	0,072-0,144	0,06-0,09
14	0,105-0,21	0,084-0,168	0,07-0,1
16	0,12-0,24	0,07-0,1	0,07-0,1
18	0,135-0,27	0,12-0,15	0,12-0,15
20	0,15-0,3	0,12-0,24	0,13-0,16

HPC

Gen-Z 155

High Performance Machining



≤ 52 HRC +AlCrN

FORM HA DIN 6535



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

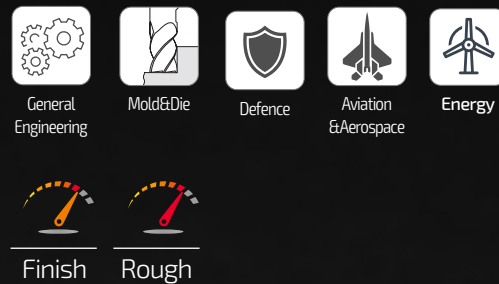
● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

HPC

156 Gen-Z Series

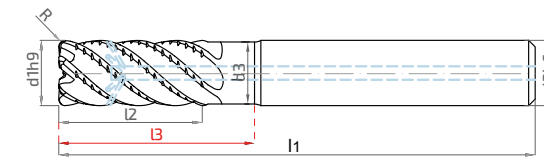
High Performance Machining



Designed to have high performance machining of advanced technology materials.

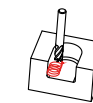
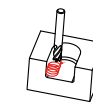
new product

www.karcan.com



Short Series							
Stock	Code	d1h9	d2h6	d3	l1	l2	l3 R
	156606005	6	6	5,7	58	13	20 0,5
	156608005	8	8	7,6	64	18	25 0,5
	156610005	10	10	7,5	73	22	30 0,5
	156610010	10	10	7,5	73	22	30 1
	156612005	12	12	11,4	82	26	36 0,5
	156612010	12	12	11,4	82	26	36 1
	156616010	16	16	15,2	93	34	42 1
	156616020	16	16	15,2	93	34	42 2
	156620030	20	20	19	105	42	52 3

Cutting Parameters - Trochoidal			
Material	Shoulder Milling ap=2xØ/ae=0,05-0,120 Vc (m/min)	Shoulder Milling ap=3xØ/ae=0,05-0,10 Vc (m/min)	Shoulder Milling ap=4xØ/ae=0,05-0,10 Vc (m/min)



Steel	Unalloyed Steel	220-250	220-250	200-230
	Steel	210-240	210-240	190-220
	Tempered Steel	110-140	110-140	100-120
	Cold Work Tool Steel	80-110	75-105	70-90
	Hot Work Tool Steel	80-110	75-105	70-90
Stainless Steel	AISI 304-416-420	120-150	120-150	95-125
	AISI 316-440	100-130	90-120	80-110
	17-4 PH 15-5 PH	90-120	80-110	70-100
	Chrome-Cobalt Alloy	70-100	70-90	65-85
	Duplex F51	90-130	90-130	70-110
Cast Iron	Super Duplex F55	90-130	90-130	70-110
	Gray Cast Iron	200-235	200-235	195-215
	Alloyed Cast Iron	200-240	200-240	190-220
	Precision Cast Iron	200-245	200-245	190-225
Titanium	Iron-Based Super Alloys	45-65	45-65	40-60
	Nickel-Based Super Alloys	40-55	40-55	40-50
	Titanium-Based Super Alloys	100-120	95-115	90-105

Feed Per Tooth (mm/tooth)			
Ø	ap=2xØ	ap=3xØ	ap=4xØ
0	0,016-0,032		
4	0,036-0,072		
6	0,048-0,096	0,036-0,072	0,04-0,07
8	0,075-0,15	0,048-0,086	0,05-0,08
10	0,09-0,18	0,06-0,12	0,05-0,08
12	0,105-0,21	0,072-0,144	0,06-0,09
14	0,12-0,24	0,084-0,168	0,07-0,1
16	0,135-0,27	0,07-0,1	0,07-0,1
18	0,15-0,3	0,12-0,15	0,12-0,15
20		0,12-0,24	0,13-0,16

HPC

Gen-Z 156

High Performance Machining



Z6



≤ 52 HRC

+AlCrN

FORM HA 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

* Marked products can be delivered quickly from stock.

MIC-CUT

**High Precision, Advanced Technology,
Know-how,**

Swiss and German technologies met Karcan
expertise and passion, we intended to
achieve Japanese performance, here's our
new series; 150, 153 and 250.

MIC-CUT

150 Series Micro Straight Endmill

General
Engineering

Mold & Die



Finish



Rough

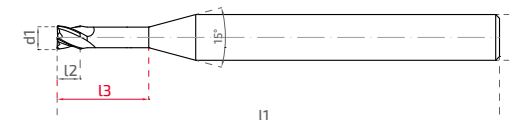
High Precision, Advanced Technology, Know-how

Swiss and German technologies met Karcan expertise and passion, we intended to achieve Japanese performance, here's our new series; 150, 153 and 250.

High efficiency and precision milling on work pieces up to **63HRC**.

Up to **40%** enhanced tool life with special grades and coating technology developed for micro end mills.

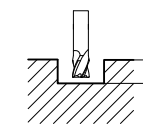
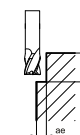
www.karcan.com



Stock	Code	d1	d2h5	l1	l2	l3
*	150200502	0,5	4	50	0,5	2
*	150200503	0,5	4	50	0,5	3
*	150200504	0,5	4	50	0,5	4
*	150201002	1	4	50	1	2
*	150201004	1	4	50	1	4
*	150201006	1	4	50	1	6
*	150201008	1	4	50	1	8
*	150201010	1	4	50	1	10
*	150201012	1	4	50	1	12
*	150201014	1	4	50	1	14
*	150201016	1	4	50	1	16
*	150215004	1,5	4	50	1,5	4
*	150215006	1,5	4	50	1,5	6
*	150215008	1,5	4	50	1,5	8
*	150215010	1,5	4	50	1,5	10
*	150215012	1,5	4	50	1,5	12
*	150215014	1,5	4	50	1,5	14
*	150215016	1,5	4	50	1,5	16
*	150202004	2	4	50	2	4
*	150202006	2	4	50	2	6
*	150202008	2	4	50	2	8
*	150202010	2	4	50	2	10
*	150202012	2	4	50	2	12
*	150202016	2	4	50	2	16
*	150202020	2	4	50	2	20
*	150225006	2,5	4	50	2,5	6
*	150225008	2,5	4	50	2,5	8
*	150225010	2,5	4	50	2,5	10
*	150225012	2,5	4	50	2,5	12
*	150225020	2,5	4	50	2,5	20

Cutting Parameters

Material	Shoulder Milling ap=0.20 / ae=0.20 - 0.100	Slotting ap=0.10
	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	170-220	170-220
	Steel	170-220	170-220
	Tempered Steel	140-180	140-180
	Cold Work Tool Steel	140-180	140-180
	Hot Work Tool Steel	110-150	110-150
Stainless Steel	AISI 304 - 416 - 420	80-130	80-130
	AISI 316 - 440	70-120	70-120
	17-4 PH 15-5 PH	70-100	70-100
	Cobalt-Chrome Alloys	60-100	60-10
	Duplex F51	50-80	50-80
Cast Iron	Super Duplex F55	50-80	50-80
	Gray Cast Iron	110-150	110-150
Titanium	Titanium	30-60	30-60
	Titanium Alloys	30-60	30-60
Superalloys	≤ 54 HRC	100-140	100-140
	> 54 HRC	70-90	70-90

Feed Per Tooth (mm/tooth)

Ø	ae=0.200	ae=0.100	ae=0.200	ae=0.100
1	0.015	0.020	0.015	0.020
1,5	0.018	0.025	0.018	0.025
2	0.022	0.031	0.022	0.031
2,5	0.027	0.038	0.027	0.038

MIC-CUT

150 Micro Straight Endmill



+0/-0.01

Z2



≥43 HRC

63 HRC

TiSiN

FORM HA DIN 6535



90°



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

2022
Endmill Catalog



MIC-CUT

250 Series

Micro Ball Nose Endmill

General
Engineering

Mold & Die



Finish



Rough

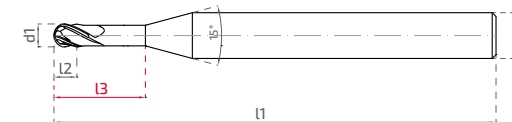
High Precision, Advanced Technology, Know-how

Swiss and German technologies met Karcan expertise and passion, we intended to achieve Japanese performance, here's our new series; 150, 153 and 250.

High efficiency and precision milling on work pieces up to **63HRC**.

Up to **40%** enhanced tool life with special grades and coating technology developed for micro end mills.

www.karcan.com



Short Series

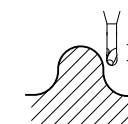
Stock	Code	d1	d2h5	l1	l2	l3
	250200502	0,5	4	50	0,5	2
	250200503	0,5	4	50	0,5	3
	250200504	0,5	4	50	0,5	4
*	250201006	1	4	50	1	6
*	250201008	1	4	50	1	8
*	250201010	1	4	50	1	10
*	250201012	1	4	50	1	12
*	250215006	1,5	4	50	1,5	6
*	250215008	1,5	4	50	1,5	8
*	250215010	1,5	4	50	1,5	10
*	250215012	1,5	4	50	1,5	12
*	250202006	2	4	50	2	6
*	250202008	2	4	50	2	8
*	250202010	2	4	50	2	10
*	250202012	2	4	50	2	12

Long Series

Stock	Code	d1	d2h5	l1	l2	l3
*	250201016	1	4	50	1	16
	250201020	1	4	50	1	20
*	250215016	1,5	4	50	1,5	16
	250215020	1,5	4	50	1,5	20
*	250202016	2	4	50	2	16
	250202020	2	4	50	2	20

Cutting Parameters

Material	Shoulder Milling ap=0.100 / ae=0.20 - 0.100 Vc (m/min)
----------	--



Steel	Unalloyed Steel	170-220
	Steel	170-220
	Tempered Steel	140-180
	Cold Work Tool Steel	140-180
	Hot Work Tool Steel	110-150
Stainless Steel	AISI 304 - 416 - 420	80-130
	AISI 316 - 440	70-120
	17-4 PH 15-5 PH	70-100
	Cobalt-Chrome Alloys	60-100
	Duplex F51	50-80
Cast	Super Duplex F55	50-80
	Gray Cast Iron	110-150
	Titanium	30-60
	Titanium Alloys	30-50
Sintered/High Speed Steel	≤ 54 HRC	100-140
	> 54 HRC	70-90

Feed Per Tooth (mm/tooth)

	ae=0.200	ae=0.100
0	0.015	0.020
1	0.018	0.025
1,5	0.022	0.031

MIC-CUT

250

Micro Ball Nose Endmill



+0/-0.01

Z2



≥43 HRC | 63 HRC



TiSiN



FORM HA 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

* Marked products can be delivered quickly from stock.

"The Series Raises The Standards"

ECO⁺PLUS

Forget the first thing that comes to your mind about "Cheap Endmill", because you can't be that rich to buy cheap things...

Therefore, we developed Eco-Line series which offer cost effective solutions without compromising price/performance ratio.

We change the idea of 'Cheap Tool' perception thanks to our new generation Eco+ KSNF,KSUF,KRSF,KRUF,KSKF and KKUF Series.

We ensure a proper machining up to 55 HRC materials.



Machinability of a wide spectrum such as steel, cast iron, non-metallic materials, graphite and stainless steel.

Unbeatable Price/
Performance
Ratio

Up to
% 40

enhanced tool life thanks to newly developed coating technology.

Unique geometry allows up to

% 30

reduced tensions compared with competitors' cost effective endmills.

% 100

Available from stock in all sizes.

ECO⁺KSNF

Meet The New Generation Of **Eco+ Series!**

new
design

**Brand-New Original Geometry,
Unique Edge-Preparation,
And Advanced Coating Technology,**

Unrivalled To Machine Workpieces Till 55HRC Hardness In
Price-Performance Ratio.



ECO+PLUS

KSNF Series

General Use Endmill



General Engineering



Mold & Die



Automotive



Finish



Rough

Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 55HRC Hardness In Price-Performance Ratio.

new

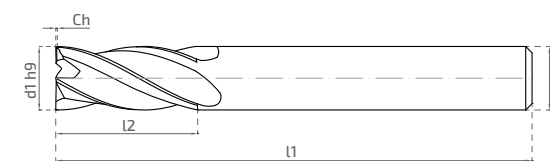
product

Meet The New Generation Of Eco+ Series!

Available from stock in all sizes

%100

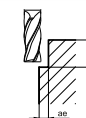
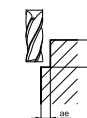
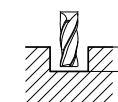
www.karcan.com



Stock	Code	d1 h9	d2 h6	l1	l2	Ch
*	KSNF401050	1	4	50	3	-
*	KSNF401550	1,5	4	50	6	-
*	KSNF402050	2	4	50	7	-
*	KSNF402550	2,5	4	50	9	-
*	KSNF403038	3	3	38	9	-
*	KSNF403050	3	4	50	9	-
*	KSNF404051	4	4	51	14	0,1
*	KSNF405051	5	5	51	15	0,1
*	KSNF406058	6	6	58	15	0,1
*	KSNF407064	7	8	64	15	0,1
*	KSNF408064	8	8	64	20	0,1
*	KSNF409073	9	10	73	21	0,1
*	KSNF410073	10	10	73	21	0,1
*	KSNF411082	11	12	82	25	0,1
*	KSNF412082	12	12	82	25	0,15
*	KSNF414082	14	14	82	30	0,15
*	KSNF416093	16	16	93	35	0,1
*	KSNF418093	18	18	93	38	0,1
*	KSNF420105	20	20	105	38	0,15

Cutting Parameters

Material	Slotting ap=0,5x0 Vc (m/min)	Shoulder Milling ae=0,5x0 ap=1x0 Vc (m/min)	Shoulder Milling ae=0,1x0 ap=1,5x0 Vc (m/min)
----------	------------------------------------	---	---



Steel	Unalloyed Steel	145	175	290
	Steel	110	135	200
	Tempered Steel	105	100	170
	Cold Work Tool Steel	80	90	130
	Hot Work Tool Steel	80	90	130
Stainless Steel	AISI 304 - 416 - 420	65	80	150
	AISI 316 - 440	60	75	120
	17-4 PH 15-5 PH	60	75	120
	Chrome-Cobalt Alloy	50	60	80
	Duplex F51	55	70	90
Cast Iron	Super Duplex F55	55	70	90
	Gray Cast Iron	140	165	150
	Alloyed Cast Iron	130	150	200
	Precision Cast Iron	125	145	155
	Iron-Based Super Alloys	30	40	50
Titanium	Nickel-Based Super Alloys	30	40	60
	Titanium-Based Super Alloys	40	50	100

Feed Per Tooth (mm/tooth)

Ø	ap=0,5x0	ae=0,5x0 ap=1x0	ae=0,1x0 ap=1,5x0
4	0,013-0,02	0,08-0,012	0,016-0,025
6	0,02-0,03	0,02-0,03	0,027-0,041
8	0,023-0,04	0,02-0,03	0,041-0,062
10	0,035-0,05	0,027-0,04	0,055-0,082
12	0,04-0,06	0,035-0,05	0,072-0,103
14	0,05-0,07	0,04-0,06	0,082-0,123
16	0,055-0,08	0,05-0,07	0,103-0,144
18	0,06-0,09	0,055-0,08	0,113-0,164
20	0,07-0,1	0,06-0,09	0,123-0,185

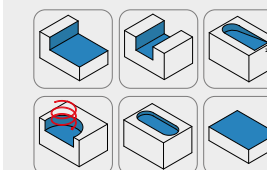
ECO+PLUS

KSNF

General Use Endmill



≤55 HRC +TiSiN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

ECO+PLUS

KSUF Series

General Use Endmill



General Engineering



Mold & Die



Automotive



Finish



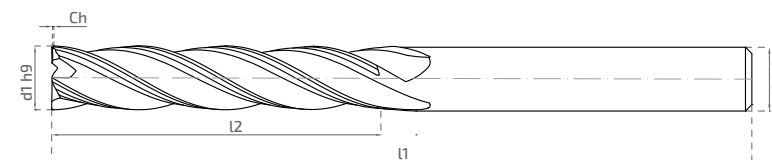
Rough

Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 55HRC Hardness In Price-Performance Ratio.

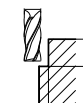
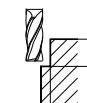
new
product

www.karcan.com



Stock	Code	d1h9	d2h6	l1	l2	Ch
*	KSUF401550	1,5	4	50	9	-
*	KSUF402050	2	4	50	12	-
*	KSUF403050	3	3	50	15	0,1
*	KSUF403075	3	3	75	15	0,1
*	KSUF404075	4	4	75	20	0,1
*	KSUF404100	4	4	100	25	0,1
*	KSUF405075	5	5	75	20	0,1
*	KSUF406075	6	6	75	25	0,1
*	KSUF406100	6	6	100	30	0,1
*	KSUF408100	8	8	100	35	0,1
*	KSUF410110	10	10	110	40	0,1
*	KSUF412110	12	12	110	45	0,15
*	KSUF412150	12	12	150	60	0,15
*	KSUF414150	14	14	150	60	0,15
*	KSUF416150	16	16	150	75	0,15
*	KSUF418150	18	18	150	75	0,15
*	KSUF420150	20	20	150	75	0,15

Cutting Parameters			
Material	Slotting ap=0.5 - 0.10	Shoulder Milling ap=1.50 / ae=0.30 - 0.200	Finish Milling ap=1.50 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	95-125	180-210	210-230
	Steel	90-120	180-210	210-230
	Tempered Steel	80-110	160-190	190-120
	Cold Work Tool Steel	70-90	150-180	170-200
	Hot Work Tool Steel	60-80	140-170	160-190
Cast Iron	Gray Cast Iron	100-130	250-280	280-330
	Alloyed Cast Iron	70-100	150-190	190-240
	Precision Cast Iron	60-90	130-160	160-210

Feed Per Tooth (mm/tooth)						
Ø	ap=0.0500	ae=0.100	ae=0.300	ae=0.200	ae=0.150	ae=0.100
3	0.005	0.006	0.031	0.036	0.038	0.040
4	0.008	0.011	0.038	0.042	0.044	0.046
5	0.013	0.017	0.041	0.043	0.045	0.047
6	0.016	0.022	0.048	0.052	0.054	0.056
8	0.021	0.027	0.054	0.058	0.061	0.064
10	0.029	0.035	0.062	0.066	0.069	0.072
12	0.038	0.043	0.067	0.072	0.075	0.079
14	0.047	0.052	0.072	0.077	0.080	0.083
16	0.056	0.063	0.076	0.081	0.086	0.090
18	0.068	0.073	0.079	0.085	0.089	0.095
20	0.078	0.084	0.084	0.092	0.097	0.098

ECO+PLUS

KSUF

General Use Endmill

Z4



≤ 55 HRC

+TiSiN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

2022
Endmill Catalog



ECO+PLUS

KRSF Series

General Use

Corner Radius Endmill



General Engineering



Mold & Die



Automotive



Finish



Rough

Brand-New Original
Geometry, Unique
Edge-Preparation,
And Advanced
Coating Technology,

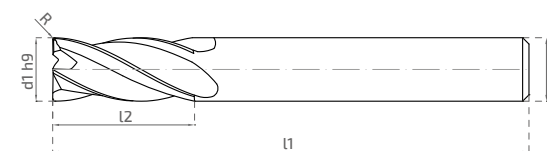
Unrivalled To Machine Workpieces Till 55HRC
Hardness In Price-Performance Ratio.

new
product

Available from
stock in all sizes

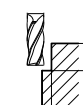
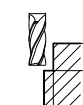
%100

www.karcan.com



Stock	Code	d1h9	d2h6	L1	L2	R
*	KRSF403005	3	3	51	6	0,5
*	KRSF403010	3	3	51	6	1
*	KRSF404005	4	4	51	8	0,5
*	KRSF404010	4	4	51	8	1
*	KRSF405005	5	5	51	11	0,5
*	KRSF405010	5	5	51	11	1
*	KRSF406005	6	6	58	12	0,5
*	KRSF406010	6	6	58	12	1
*	KRSF408005	8	8	64	20	0,5
*	KRSF408010	8	8	64	20	1
*	KRSF410005	10	10	73	21	0,5
*	KRSF410010	10	10	73	21	1
*	KRSF412005	12	12	82	25	0,5
*	KRSF412010	12	12	82	25	1

Cutting Parameters			
Material	Slotting ap=0.50	Shoulder Milling ap=1.50 / ae=0.30 - 0.200	Finish Milling ap=1.50 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	95-125	150-180	180-210
	Steel	90-120	140-170	170-200
	Tempered Steel	80-110	130-160	160-190
	Cold Work Tool Steel	70-90	120-150	150-180
	Hot Work Tool Steel	60-80	120-150	150-180
Stainless Steel	AISI 304 - 416 - 420	70-90	80-110	110-150
	AISI 316 - 440	65-85	70-100	100-130
	17-4 PH 15-5 PH	60-80	70-100	100-130
	Chrome-Cobalt Alloy	50-70	60-90	90-120
Cast Iron	Gray Cast Iron	100-130	250-280	280-330
	Alloyed Cast Iron	70-100	150-190	190-240
	Precision Cast Iron	60-90	130-160	160-210

Feed Per Tooth (mm/tooth)					
Ø	ap=1.50	ap=10	ap=0.500	ae=0.350	ae=0.300
3	0.007	0.032	0.037	0.039	0.041
4	0.012	0.039	0.043	0.045	0.047
5	0.018	0.042	0.044	0.046	0.048
6	0.023	0.049	0.053	0.055	0.057
8	0.028	0.056	0.060	0.063	0.066
10	0.036	0.064	0.068	0.071	0.074
12	0.045	0.069	0.074	0.077	0.080

ECO+PLUS

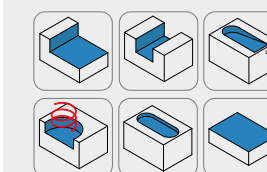
KRSF

General Use
Corner Radius
Endmill



KRSF Eco-Plus

≤55 HRC +TiSiN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

2022
Endmill Catalog



ECO+PLUS

KRUF Series

General Use

Corner Radius Endmill



General Engineering



Mold & Die



Automotive



Finish



Rough

Brand-New Original
Geometry, Unique
Edge-Preparation,
And Advanced
Coating Technology,

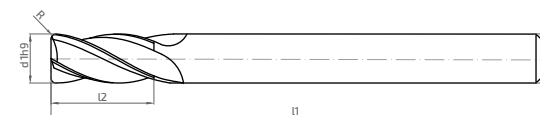
Unrivalled To Machine Workpieces Till 55HRC
Hardness In Price-Performance Ratio.

new
product

Available from
stock in all sizes

%100

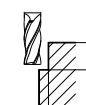
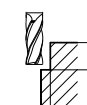
www.karcan.com



Stock	Code	d1h9	d2h6	l1	l2	R
*	KRUF403005	3	3	75	6	0,5
*	KRUF403010	3	3	75	6	1
*	KRUF404005	4	4	75	8	0,5
*	KRUF404010	4	4	75	8	1
*	KRUF405005	5	5	75	11	0,5
*	KRUF405010	5	5	75	11	1
*	KRUF406005	6	6	75	12	0,5
*	KRUF406010	6	6	75	12	1
*	KRUF406005XL	6	6	100	12	0,5
*	KRUF406010XL	6	6	100	12	1
*	KRUF408005	8	8	100	20	0,5
*	KRUF408010	8	8	100	20	1
*	KRUF410005	10	10	100	21	0,5
*	KRUF410010	10	10	100	21	1
*	KRUF412005	12	12	100	25	0,5
*	KRUF412010	12	12	100	25	1

Cutting Parameters

Material	Slotting ap=0.50 Vc (m/min)	Shoulder Milling ap=1.50 / ae=0.30 - 0.200 Vc (m/min)	Finish Milling ap=1.50 / ae=0.20 - 0.100 Vc (m/min)
----------	-----------------------------------	---	---



Steel	Unalloyed Steel	95-125	150-180	180-210
	Steel	90-120	140-170	170-200
	Tempered Steel	80-110	130-160	160-190
	Cold Work Tool Steel	70-90	120-150	150-180
	Hot Work Tool Steel	60-80	120-150	150-180
Stainless Steel	AISI 304 - 416 - 420	70-90	80-110	110-150
	AISI 316 - 440	65-85	70-100	100-130
	17-4 PH 15-5 PH	60-80	70-100	100-130
	Chrome-Cobalt Alloy	50-70	60-90	90-120
Cast Iron	Gray Cast Iron	100-130	250-280	280-330
	Alloyed Cast Iron	70-100	150-190	190-240
	Precision Cast Iron	60-90	130-160	160-210

Feed Per Tooth (mm/tooth)

	ap=1.50	ap=10	ap=0.500	ae=0.350	ae=0.300
0					
3	0.007	0.032	0.037	0.039	0.041
4	0.012	0.039	0.043	0.045	0.047
5	0.018	0.042	0.044	0.046	0.048
6	0.023	0.049	0.053	0.055	0.057
8	0.028	0.056	0.060	0.063	0.066
10	0.036	0.064	0.068	0.071	0.074
12	0.045	0.069	0.074	0.077	0.080

ECO+PLUS

KRUF

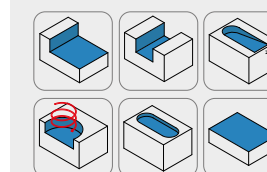
General Use
Corner Radius
Endmill

Z4



≤55 HRC +TiSiN

FORM HA 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

* Marked products can be delivered
quickly from stock.

ECO PLUS

KSKF Z4 Series

Ball Nose Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 48HRC
Hardness In Price-Performance Ratio

48 HRC
High Performance

Available from
stock in all sizes

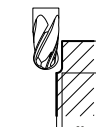
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Stock	Code	d1f8	d2h6	l1	l2
*	KSKF403038	3	3	38	12
*	KSKF404051	4	4	51	14
*	KSKF405051	5	5	51	20
*	KSKF406058	6	6	58	20
*	KSKF408064	8	8	64	20
*	KSKF410073	10	10	73	25
*	KSKF412082	12	12	82	25
* SP	KSKF416093	16	16	93	32

Cutting Parameters

Material	Shoulder Milling ap=0.10 / ae=0.30 - 0.200	Finish Milling ap=0.10 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	200-230	230-260
	Steel	200-230	230-260
	Tempered Steel	180-210	200-230
	Cold Work Tool Steel	150-180	180-210
Stainless Steel	Hot Work Tool Steel	140-170	170-200
	AISI 304 - 416 - 420	90-120	120-150
	AISI 316 - 440	80-110	110-140
	17-4 PH 15-5 PH	80-110	110-140
Cast Iron	Chrome-Cobalt Alloy	70-100	100-130
	Gray Cast Iron	280-310	310-350
	Alloyed Cast Iron	180-210	210-250
	Precision Cast Iron	150-180	180-210

Feed Per Tooth (mm/tooth)

	ae=0.300	ae=0.200	ae=0.150	ae=0.100
0				
3	0.027	0.031	0.037	0.040
4	0.031	0.037	0.041	0.045
5	0.032	0.037	0.042	0.046
6	0.041	0.046	0.052	0.057
8	0.048	0.052	0.061	0.066
10	0.053	0.057	0.066	0.072
12	0.058	0.064	0.072	0.079

ECO PLUS

KSKF

Z4 Ball Nose Endmill

Z4



KSKF Eco-Plus

≤48 HRC +AlCrN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

ECO+PLUS

KSKF^{Z2} Series Ball Nose Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 55HRC
Hardness In Price-Performance Ratio.

Up to

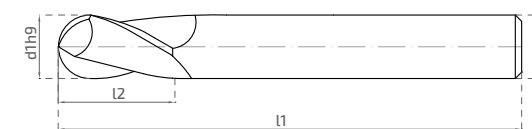
%40

longer tool life
thanks to it's new
geometry and
developed coating

Available from
stock in all sizes

%100

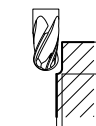
www.karcan.com



Stock	Code	d1h9	d2h6	l1	l2
*	KSKF201050	1	4	50	2
*	KSKF201550	1,5	4	50	3
*	KSKF202050	2	4	50	4
*	KSKF202550	2,5	4	50	5
*	KSKF203050	3	4	50	8
*	KSKF204050	4	4	51	8
*	KSKF205051	5	5	51	10
*	KSKF206058	6	6	58	12
*	KSKF208064	8	8	64	14
*	KSKF210073	10	10	73	18
*	KSKF212082	12	12	82	22

Cutting Parameters

Material	Shoulder Milling ap=0,10 / ae=0,30-0,200	Finish Milling ap=0,10 / ae=0,20-0,100
	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	200-230	230-260
	Steel	200-230	230-260
	Tempered Steel	180-210	200-230
	Cold Work Tool Steel	150-180	180-210
	Hot Work Tool Steel	140-170	170-200
Stainless Steel	AISI 304 - 416 - 420	90-120	120-150
	AISI 316 - 440	80-110	110-140
	17-4 PH 15-5 PH	80-110	110-140
	Chrome-Cobalt Alloy	70-100	100-130
Cast Iron	Gray Cast Iron	280-310	310-350
	Alloyed Cast Iron	180-210	210-250
	Precision Cast Iron	150-180	180-210

Feed Per Tooth (mm/tooth)

Ø	ae=0.300	ae=0.200	ae=0.150
3	0,020	0,023	0,027
4	0,023	0,027	0,030
5	0,024	0,027	0,030
6	0,030	0,035	0,040
8	0,036	0,040	0,045
10	0,040	0,042	0,050
12	0,045	0,048	0,055

ECO+PLUS

KSKF^{Z2}

Ball Nose
Endmill



KSKF Z2 Eco-Plus

≤ 55
HRC

+TiSiN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

ECO PLUS

KKUF Z4 Series

Ball Nose Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

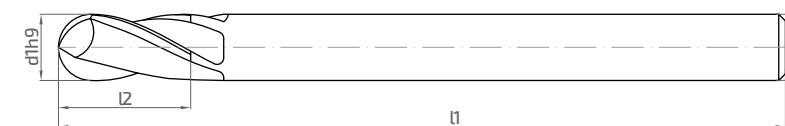
Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 48HRC
Hardness In Price-Performance Ratio

Available from
stock in all sizes

%100

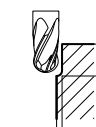
www.karcan.com



Stock	Code	d1h9	d2h6	l1	l2
*	KKUF403075	3	3	75	8
*	KKUF404075	4	4	75	10
*	KKUF405075	5	5	75	10
*	KKUF406075	6	6	75	10
*	KKUF406100	6	6	100	15
*	KKUF408075	8	8	75	10
*	KKUF408100	8	8	100	15
*	KKUF410110	10	10	110	20
*	KKUF412110	12	12	110	20

Cutting Parameters

Material	Shoulder Milling ap=0.10 / ae=0.30 - 0.200	Finish Milling ap=0.10 / ae=0.20 - 0.100
	Vc (m/min)	Vc (m/min)



Steel	Unalloyed Steel	200-230	230-260
	Steel	200-230	230-260
	Tempered Steel	170-200	200-230
	Cold Work Tool Steel	150-180	180-210
	Hot Work Tool Steel	140-170	170-200
Stainless Steel	AISI 304 - 416 - 420	90-120	120-150
	AISI 316 - 440	80-110	110-140
	17-4 PH 15-5 PH	80-110	110-140
	Chrome-Cobalt Alloy	70-100	100-130
	Gray Cast Iron	280-310	310-350
Cast Iron	Alloyed Cast Iron	180-210	210-250
	Precision Cast Iron	150-180	180-210

Feed Per Tooth (mm/tooth)

	ae=0.300	ae=0.200	ae=0.150	ae=0.100
0				
3	0.027	0.031	0.037	0.040
4	0.031	0.037	0.041	0.045
5	0.032	0.037	0.042	0.046
6	0.041	0.046	0.052	0.057
8	0.048	0.052	0.061	0.066
10	0.053	0.057	0.066	0.072
12	0.058	0.064	0.072	0.079

ECO PLUS

KKUF Z4

Ball Nose Endmill

Z4



KKUF Eco-Plus

≤48
HRC

+AlCrN



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

2022
Endmill Catalog



ECO PLUS

KKUF Z2 Series

Ball Nose Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

Brand-New Original Geometry, Unique Edge-Preparation, And Advanced Coating Technology,

Unrivalled To Machine Workpieces Till 55HRC
Hardness In Price-Performance Ratio.

Up to

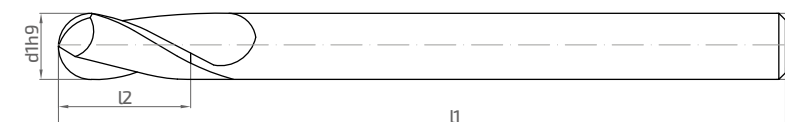
%40

longer tool life
thanks to it's new
geometry and
developed coating

Available from
stock in all sizes

%100

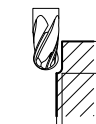
www.karcan.com



Stock	Code	d1h9	d2h6	l1	l2
*	KKUF203075	3	3	75	8
*	KKUF204075	4	4	75	10
*	KKUF205075	5	5	75	10
*	KKUF206075	6	6	75	10
*	KKUF206100	6	6	100	15
*	KKUF208100	8	8	100	15
*	KKUF210110	10	10	110	20
*	KKUF212110	12	12	110	22

Cutting Parameters

Material	Shoulder Milling ap=0,10 / ae=0,30-0,200 Vc (m/min)	Finish Milling ap=0,10 / ae=0,20-0,100 Vc (m/min)



Steel	Unalloyed Steel	200-230	230-260
	Steel	200-230	230-260
	Tempered Steel	180-210	200-230
	Cold Work Tool Steel	150-180	180-210
Stainless Steel	Hot Work Tool Steel	140-170	170-200
	AISI 304 - 416 - 420	90-120	120-150
	AISI 316 - 440	80-110	110-140
	17-4 PH 15-5 PH	80-110	110-140
Cast Iron	Chrome-Cobalt Alloy	70-100	100-130
	Gray Cast Iron	280-310	310-350
	Alloyed Cast Iron	180-210	210-250
	Precision Cast Iron	150-180	180-210

Feed Per Tooth (mm/tooth)

	ae=0.300	ae=0.200	ae=0.150
0			
3	0,020	0,023	0,027
4	0,023	0,027	0,030
5	0,024	0,027	0,030
6	0,030	0,035	0,040
8	0,036	0,040	0,045
10	0,040	0,042	0,050
12	0,045	0,048	0,055

ECO PLUS

KKUF Z2

Ball Nose Endmill



KKUF Eco-Plus

≤55 HRC

+TiSiN

FORM HA 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

* Marked products can be delivered
quickly from stock.

ECO PLUS

KKSF Series Tapered Endmill

General
Engineering

Mold & Die



Automotive



Finish

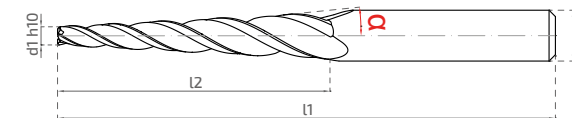


Rough

Designed For
Aluminium Mold
Makers , Became The
Favourite Of Export.

Reinforced corner
radiuses ensure an
expanded tool life
up to

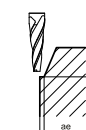
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Stock	Code	d1h10	d2h6	L1	L2	α (°)
*	KKSF01502004	2	4	64	35	1,5°
*	KKSF01502504	2,5	4	64	30	1,5°
*	KKSF01704006	4	6	75	33	1,7°
	KKSF02002006	2	6	75	38	2°
	KKSF02002506	2,5	6	82	43	2°
	KKSF02002508	2,5	8	82	30	2°
	KKSF02003006	3	6	82	43	2°
*	KKSF02003008	3	8	82	40	2°
	KKSF02004008	4	8	75	35	2°
	KKSF02103006	3	6	82	40	2,1°
	KKSF02202506	2,5	6	82	42	2,2°
*	KKSF02302006	2	6	82	50	2,3°
*	KKSF02802806	2,8	6	64	33	2,8°
*	KKSF02804008	4	8	82	40	2,8°
*	KKSF03002006	2	6	82	38	3°
	KKSF03002506	2,5	6	82	33	3°
*	KKSF03002508	2,5	8	82	42	3°
	KKSF03003008	3	6	82	27	3°
*	KKSF03003008	3	8	82	42	3°
*	KKSF03003000	3	8	110	40	3°
	KKSF03004008	4	8	82	38	3°
	KKSF05002508	2,5	8	82	31	5°
	KKSF05003008	3	8	82	28	5°
	KKSF05003010	3	10	110	40	5°
	KKSF05003012	3	12	100	50	5°
	KKSF05004012	4	12	100	45	5°

Cutting Parameters

Material	Shoulder Milling ap=0.10 / ae=0.30 - 0.200 Vc (m/min)
----------	---



Steel	Unalloyed Steel	100-130
	Steel	100-130
	Tempered Steel	90-120
	Cold Work Tool Steel	80-110
	Hot Work Tool Steel	70-100
Stainless Steel	AISI 304 - 416 - 420	50-80
	AISI 316 - 440	30-60
	17-4 PH 15-5 PH	30-60
	Duplex F51	25-40
Non Ferrous Cast Material Iron	Gray Cast Iron	100-130
	Copper Alloys	100-130
HRSA	HRSA Hastelloy	10-20
	HRSA inconel 625	10-20
	HRSA inconel 718	10-20
	HRSA Nimonic	10-20
Titanium	Titanium	20-30
	Titanium Alloys	20-30

Feed Per Tooth (mm/tooth)

	ae=0.150	ae=0.100
0		
2	0.005	0.005
2,5	0.006	0.006
3	0.008	0.008
4	0.012	0.012

ECO PLUS

KKSF

Tapered Endmill

Z3



≤48 HRC + TiSiN

FORM HA 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

* Marked products can be delivered
quickly from stock.

ECO PLUS

MCV Series

Edge Preparation

General
Engineering

Mold & Die



Automotive



Finish



Rough

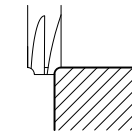
www.karcan.com



Stock	Code	d1	d2h6	l1	l2	R (±0,02)	Z
	MCV305058	4,5	6	58	7	0,5	3
	MCV307558	4,5	6	58	7	0,75	3
	MCV410064	6	8	64	10	1	4
	MCV415064	5	8	64	10	1,5	4
	MCV420073	5,5	10	73	12	2	4
	MCV425073	3,5	10	73	12	2,5	4
	MCV430082	3,5	12	82	14	3	4
	MCV440082	5,5	14	82	16	4	4
	MCV450093	6	16	93	20	5	4
	MCV460105	8	20	105	20	6	4

Cutting Parameters

Material	Çeyrek Daire
	Vc (m/min)



Steel	Unalloyed Steel	280-320
	Steel	220-250
	Tempered Steel	190-220
	Cold Work Tool Steel	100-130
Stainless Steel	Hot Work Tool Steel	100-130
	AISI 304 - 416 - 420	80-110
	AISI 316 - 440	80-110
	17-4 PH 15-5 PH	60-90
Cast Iron	Chrome-Cobalt Alloy	60-90
	Duplex F51	50-70
	Super Duplex F55	50-70
	Gray Cast Iron	200-240
Non Ferrous Material	Alloyed Cast Iron	200-240
	Precision Cast Iron	180-215
	Aluminum Alloys	230-370
	Copper Alloys	650-680
Titanium	Iron-Based Super Alloys	40-50
	Nickel-Based Super Alloys	40-50
	Titanium-Based Super Alloys	70-90

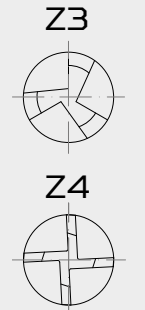
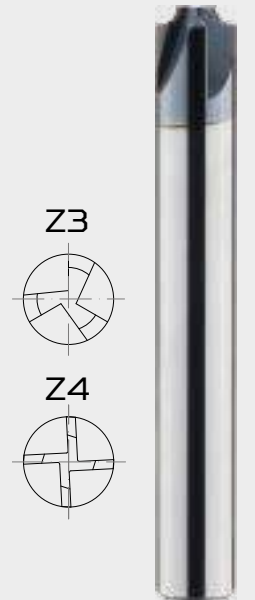
Feed Per Tooth (mm/tooth)

	ae=0,1xØ ap=0,1xØ
0	0,05-0,11
4	0,06-0,15
6	0,08-0,2
8	0,1-0,26
10	0,1-0,26
12	0,1-0,26
14	0,12-0,26
16	0,16-0,44
20	

ECO PLUS

MCV

Edge Preparation



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

ECO PLUS

MCX Series Chamfering Endmill

General
Engineering

Mold & Die



Automotive



Finish



Rough

Available from
stock in all sizes

%100

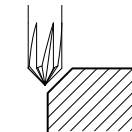
www.karcan.com



Stock	Code	d1	d2h6	l1	α (°)	Z
*	MCX404051	4	6	51	90°	4
*	MCX406058	6	6	58	90°	4
*	MCX508064	8	8	64	90°	5
*	MCX610073	10	10	73	90°	6
*	MCX612082	12	12	82	90°	6

Cutting Parameters

Material	Pah Kirma Freze
	Vc (m/min)



Steel	Unalloyed Steel	280-320
	Steel	220-250
	Tempered Steel	190-220
	Cold Work Tool Steel	100-130
	Hot Work Tool Steel	100-130
Stainless Steel	AISI 304 - 416 - 420	80-110
	AISI 316 - 440	80-110
	17-4 PH 15-5 PH	60-90
	Chrome-Cobalt Alloy	60-90
	Duplex F51	50-70
Cast Iron	Super Duplex F55	50-70
	Gray Cast Iron	200-240
	Alloyed Cast Iron	200-240
	Precision Cast Iron	180-215
	Aluminum Alloys	230-370
Non Ferrous Material	Copper Alloys	650-680
	Iron-Based Super Alloys	40-50
	Nickel-Based Super Alloys	40-50
	Titanium-Based Super Alloys	70-90

Feed Per Tooth (mm/tooth)

	ae=0,1xØ ap=0,1xØ
Ø	
4	0,05-0,11
6	0,06-0,15
8	0,08-0,2
10	0,1-0,26
12	0,1-0,26
14	0,1-0,26
16	0,12-0,26
20	0,16-0,44

ECO PLUS

MCX Chamfering Endmill

Z4



Z5



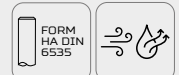
Z6



MCX Eco-Plus

≤48
HRC

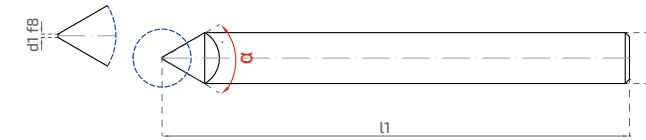
+TiAlN

α
90°

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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.



Stock	Code	d1f8	d2h6	l1	α (°)
	KPAN01015	0,1	3	39	15°
	KPAN02015	0,2	3	39	15°
	KPAN03030	0,3	3	39	30°
	KPAN05015	0,5	3	39	15°
	KPAN07015	0,7	3	39	15°
	KPAN10015	1	3	39	15°
	KPAN01030	0,1	3	39	30°
	KPAN02030	0,2	3	39	30°
	KPAN05030	0,5	3	39	30°
	KPAN07030	0,7	3	39	30°
	KPAN10030	1	3	39	30°
	KPAN01045	0,1	3	39	45°
	KPAN02045	0,2	3	39	45°
	KPAN05045	0,5	3	39	45°
	KPAN07045	0,7	3	39	45°
	KPAN10045	1	3	39	45°

KPAN

Engraving Pen



KPAN Eco-Plus



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.



KPAN

Series
Engraving Pen



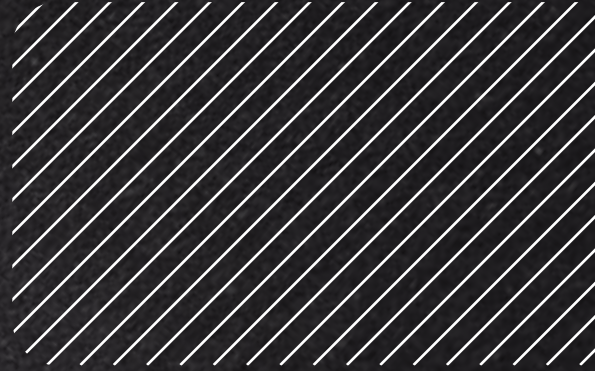
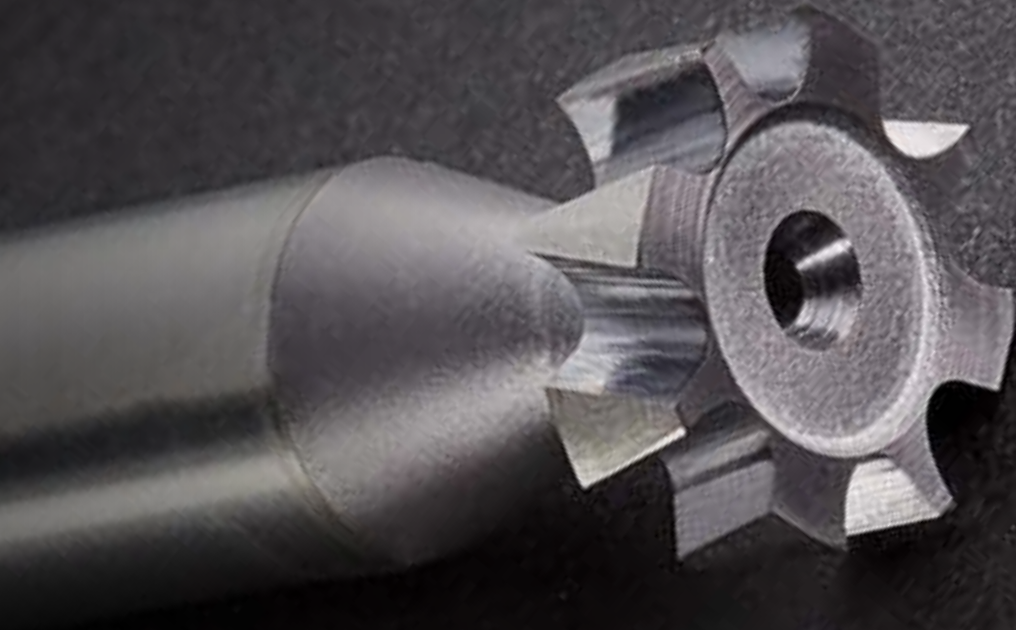
General
Engineering



Mold&Die



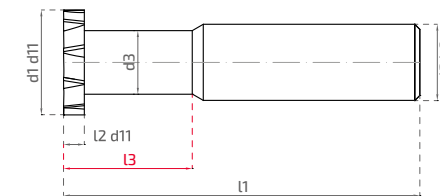
Automotive



T-SLOTTING MILL

KTFF Series

T-Slotting Mill



Stock	Code	d1d11	d2h6	d3	l1	l2 d11	l3	Z
	KTFF604510	4,5	6	3	50	1	15	6
	KTFF607515	7,5	6	4	50	1,5	15	6
	KTFF607520	7,5	6	4	50	2	15	6
	KTFF610520	10,5	6	5	50	2	15	6
	KTFF610525	10,5	6	5	50	2,5	15	6
	KTFF610530	10,5	6	5	50	3	15	6
	KTFF813530	13,5	10	8	56	3	20	8
	KTFF813540	13,5	10	8	56	4	20	8
	KTFF816530	16,5	12	10	56	3	20	8
	KTFF816540	16,5	12	10	56	4	20	8
	KTFF816550	16,5	12	10	56	5	20	8
	KTFF101953	19,5	14	12	56	3	20	10
	KTFF101954	19,5	14	12	56	4	20	10
	KTFF101955	19,5	14	12	56	5	20	10
	KTFF102254	22,5	14	12	63	4	20	10
	KTFF102255	22,5	14	12	63	5	20	10
	KTFF102256	22,5	14	12	63	6	20	10
	KTFF102555	25,5	16	14	63	5	20	10
	KTFF102556	25,5	16	14	63	6	20	10
	KTFF102557	25,5	16	14	63	7	20	10
	KTFF102558	25,5	16	14	63	8	20	10
	KTFF102855	28,5	18	16	63	5	20	10
	KTFF102856	28,5	18	16	63	6	20	10
	KTFF102857	28,5	18	16	63	7	20	10
	KTFF102858	28,5	18	16	63	8	20	10

T-Slotting Mill

KTFF

T-Slotting Mill

Z6



Z8



Z10



≤48 HRC +TiAlN

FORM HA 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

* Marked products can be delivered quickly from stock.



ALU-MAC

Meet our **119, 122, 123, 219 and 133** series has double flute technology which offer high performance in aviation and automotive applications in machining of non-ferrous materials.

ALU-MAC

119 Series

Z1 Aluminium Endmill



General
Engineering



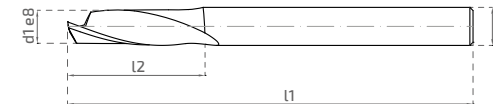
Automotive



Finish



Rough



Stock	Code	d1 e8	d2 h6	l1	l2
	119103051	3	4	51	12
	119104051	4	4	51	15
	119105058	5	6	58	16
	119106058	6	6	58	19
	119107064	7	8	64	19
	119108064	8	8	64	22
	119109073	9	10	73	23
	119110073	10	10	73	23
	119111082	11	12	82	25
	119112082	12	12	82	25

Cutting Parameters

Material	Shoulder Milling ae=0,4xØ ap=1xØ Vc (m/min)
----------	---



Non Ferrous
Material

Aluminum Based
Alloys

250-450

Feed Per Tooth (mm/tooth)

Ø	ae=1xØ ap=1xØ	ae=0,4xØ ap=1xØ	ae=0,1xØ ap=1xØ
2	0,016-0,018	0,024-0,026	0,018-0,022
3	0,024-0,026	0,032-0,036	0,027-0,033
4	0,032-0,034	0,042-0,048	0,036-0,044
5	0,04-0,043	0,056-0,06	0,036-0,044
6	0,048-0,051	0,066-0,072	0,054-0,066
8	0,06-0,07	0,09-0,1	0,07-0,09
10	0,08-0,09	0,11-0,12	0,09-0,11
12	0,09-0,1	0,125-0,14	0,11-0,13

ALU-MAC

119

Z1 Aluminium Endmill



90°

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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

ALU-MAC

122 Series High Performance Aluminium Endmill



General
Engineering



Aviation
& Aerospace



Defence



Finish



Rough

Renewed to have
longer tool life in
roughing operations
of Aluminium.

Up to

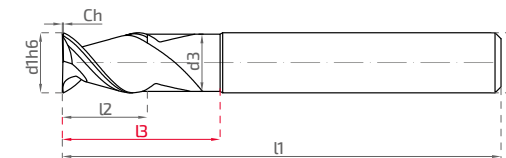
% **40**

longer tool life
thanks to it's new
geometry and
developed coating

Available from
stock in all sizes

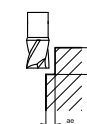
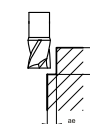
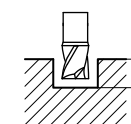
% **100**

www.karcan.com



Stock	Code	d1h6	d2h6	d3	l1	l2	l3	Ch
*	122203058	3	6	2,7	58	6	12	0,1
*	122204058	4	6	3,7	58	6	12	0,15
*	122205058	5	6	4,7	58	8	15	0,15
*	122206058	6	6	5,7	58	8	16	0,15
*	122208064	8	8	7,4	64	10	20	0,15
*	122210073	10	10	9,4	73	12	30	0,15
*	122212082	12	12	11,4	82	15	30	0,15

Cutting Parameters			
Material	Slotting ae=0,1-0,2xØ ap=1xØ	Shoulder Milling ae=0,3-0,4xØ ap=1xØ	Shoulder Milling ae=0,6-1xØ ap=1xØ
	Vc (m/min)	Vc (m/min)	Vc (m/min)



Non Ferrous Material	Aluminum Alloys	250-400	230-380	200-350
	Copper Alloys	175-200	160-190	150-180

Feed Per Tooth (mm/tooth)			
Ø	ae=0,1-0,2xØ ap=1xØ	ae=0,3-0,4xØ ap=1xØ	ae=0,6-1xØ ap=1xØ
0			
2	0,018-0,036	0,014-0,028	0,01-0,02
3	0,027-0,054	0,021-0,042	0,015-0,03
4	0,036-0,072	0,028-0,055	0,02-0,04
5	0,05-0,09	0,037-0,067	0,025-0,045
6	0,06-0,1	0,045-0,075	0,03-0,05
8	0,08-0,12	0,06-0,089	0,04-0,06s
10	0,1-0,14	0,075-0,104	0,05-0,07
12	0,12-0,16	0,089-0,119	0,06-0,08

ALU-MAC

122

High Performance
Aluminium Endmill

Z2



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered
quickly from stock.

2022
Endmill Catalog



123 Series

High Performance Aluminium Endmill



General Engineering



Aviation & Aerospace



Defence



Finish



Rough

Rough Milling, Semi-Finishing, Finishing
All meets in one series.

Single solution in various aluminum milling operations.

Updated geometry ensures milling at high feed rates and high chip evacuation volumes along with up to 35% better surface quality compared with its competitors.

Market Leader

Up to

%60

enhanced tool life with coated option in milling high-alloy Aluminum.

Up to

%45

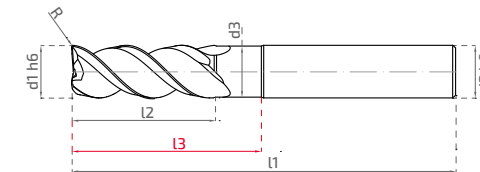
enhanced tool life and up to 35% improved bottom surface roughness thanks to optimized and 100% traceable special Radius forms

improved bottom roughness

%35

Available from stock in all sizes

%100



Short Series

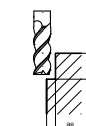
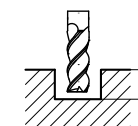
Stock	Code	d1h6	d2h6	d3	L1	L2	L3	R
*	123303058	3	6	2,8	58	8	13	0,2
*	123304058	4	6	3,8	58	13	15,4	0,2
*	123305058	5	6	4,8	58	15	21	0,2
*	123306058	6	6	5,7	58	17	26	0,2
*	123308064	8	8	7,7	64	22	30	0,2
*	123310073	10	10	9,7	73	25	35	0,2
*	123312082	12	12	11,7	82	28	40	0,2
*	123314082	14	14	13,7	82	28	40	0,2
*	123316093	16	16	15,7	93	37	53	0,2
*	123320105	20	20	19,7	105	38	54	0,2

Long Series

Stock	Code	d1h6	d2h6	d3	L1	L2	L3	R
*	123306108	6	6	5,8	108	15	45	0,2
*	123308108	8	8	7,8	108	18	62	0,2
*	123310108	10	10	9,8	108	20	62	0,2
*	123312125	12	12	11,8	125	25	80	0,2
*	123316160	16	16	15,8	160	30	110	0,2
*	123320200	20	20	19,8	200	30	115	0,2

Cutting Parameters

Material	Slotting ap=1,5-1,00 Vc (m/min)	Shoulder Milling ap=1,50 / ae=0,3 - 0,2 - 0,10 Vc (m/min)
----------	---------------------------------------	---



Non Ferrous Material

Aluminum Alloys
Copper Alloys

250-300
200-250

350-400
300-350

Feed Per Tooth (mm/tooth)

	ap=1,500	ap=10	ae=0,300	ae=0,200	ae=0,100
0					
3	0,050	0,061	0,120	0,160	0,200
4	0,056	0,068	0,130	0,178	0,221
5	0,062	0,076	0,152	0,190	0,240
6	0,068	0,080	0,161	0,200	0,262
8	0,072	0,083	0,168	0,210	0,281
10	0,075	0,088	0,173	0,220	0,300
12	0,084	0,093	0,200	0,260	0,325
16	0,090	0,103	0,240	0,300	0,360
20	0,100	0,112	0,280	0,340	0,400

123

High Performance
Aluminium Endmill

Z3



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.

ALU-MAC

133 Series

High Performance Corner Radius



General Engineering



Aviation & Aerospace



Defence



Finish



Rough

High Performance In High-Alloy Aluminiums !

Thanks to it's double-action double flute technology, optimised corner radius, unique geometry and coating, 133 Series brings lots of advantages with it in alloyed aluminiums.

Various corner radius alternatives better for aviation applications.

High Chip-Removal In High Speed Machining.

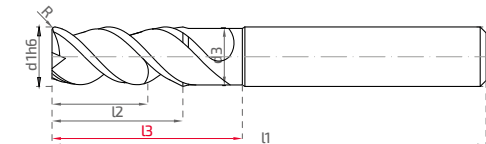
Better Surface Roughness by comparisons with equivalents.

Longer Tool Life

new
product

CHATTER
FREE

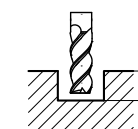
www.karcan.com



Stock	Code	d1h6	d2h6	d3	l1	l2	l3	R
	133303015	3	6	2,8	58	8	13	0,15
	133304015	4	6	3,8	58	11	15,4	0,15
	133305015	5	6	4,8	58	13	21	0,15
*	133306002	6	6	5,5	58	13	21	0,2
*	133306005	6	6	5,5	58	13	21	0,5
*	133308025	8	8	7,5	64	21	27	0,25
	133308005	8	8	7,5	64	21	27	0,5
	133308010	8	8	7,5	64	21	27	1
*	133310003	10	10	9,5	73	22	32	0,3
*	133310005	10	10	9,5	73	22	32	0,5
	133310010	10	10	9,5	73	22	32	1
*	133312003	12	12	11,5	82	26	38	0,3
*	133312005	12	12	11,5	82	26	38	0,5
	133312010	12	12	11,5	82	26	38	1
*	133316004	16	16	15,5	93	36	44	0,4
	133316010	16	16	15,5	93	36	44	1
	133316020	16	16	15,5	93	36	44	2
*	133320005	20	20	19,5	105	41	54	0,5
	133320020	20	20	19,5	105	41	54	2

Cutting Parameters

Material	Slotting ap=1xØ / ae=1xØ Vc (m/min)	Shoulder Milling ap=1xØ / ae=0,5xØ Vc (m/min)



Non Ferrous Material	Aluminum Alloys	<%6 Si	380-430	380-430
		<%12 Si	330-380	330-380
		>%12 Si	200-250	200-250
	Copper Alloys		140-180	140-180

Feed Per Tooth (mm/tooth)

	ap=1.500	ap=10	ae=0.300	ae=0.200	ae=0.100
Ø					
3	0,050	0,061	0,120	0,160	0,200
4	0,056	0,068	0,130	0,178	0,221
5	0,062	0,076	0,152	0,190	0,240
6	0,068	0,080	0,161	0,200	0,262
8	0,072	0,083	0,168	0,210	0,281
10	0,075	0,088	0,173	0,220	0,300
12	0,084	0,093	0,200	0,260	0,325
16	0,090	0,103	0,240	0,300	0,360
20	0,100	0,112	0,280	0,340	0,400

ALU-MAC

133

High Performance Corner Radius

Z3



+ DLC

FORM HA 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

* Marked products can be delivered quickly from stock.

ALU-MAC

219 Series

High Performance Ball Nose Endmill



General Engineering



Aviation & Aerospace



Finish

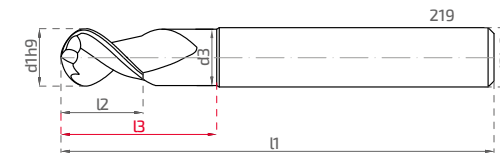


Rough

Designed To Have Better Surfaces In Finishing Operations Of Non-Ferrous Materials.

Available from stock in all sizes

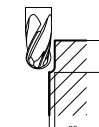
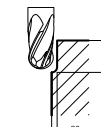
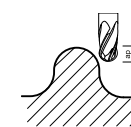
%100



Stock	Code	d1h9	d2h6	d3	l1	l2	l3
*	219203058	3	6	2,6	58	6	12
*	219204058	4	6	3,7	58	6	13
*	219205058	5	6	4,5	58	8	15
*	219206058	6	6	5,5	58	8	16
*	219208064	8	8	7,5	64	10	20
*	219210073	10	10	9,4	73	12	30
*	219212082	12	12	11,3	82	15	30

Cutting Parameters

Material	Slotting ae=0,1-0,2xØ ap=0,03xØ Vc (m/min)	Shoulder Milling ae=0,3-0,4xØ ap=0,03xØ Vc (m/min)	Shoulder Milling ae=0,6-1xØ ap=0,03xØ Vc (m/min)



Non Ferrous Material

Aluminum Alloys	250-400	230-380	200-350
Copper Alloys	175-200	160-190	150-180

Feed Per Tooth (mm/tooth)

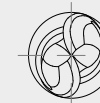
	ae=0,1-0,2xØ ap=1xØ	ae=0,3-0,4xØ ap=1xØ	ae=0,6-1xØ ap=1xØ
Ø			
3	0,027-0,054	0,021-0,042	0,015-0,03
4	0,036-0,072	0,028-0,055	0,2-0,4
5	0,05-0,09	0,037-0,067	0,025-0,045
6	0,06-0,1	0,045-0,075	0,03-0,05
8	0,08-0,012	0,06-0,089	0,04-0,06
10	0,1-0,14	0,075-0,104	0,05-0,07
12	0,12-0,16	0,089-0,119	0,06-0,08

ALU-MAC

219

High Performance Ball Nose Endmill

Z2



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

● Recommended ○ Acceptable ○ Not Recommended

* Marked products can be delivered quickly from stock.



SPECIAL SOLUTIONS

**SPECIAL SOLUTIONS FOR THE
HIGH-TECH MANUFACTURING
INDUSTRIES**

We provide feasible solutions with new ideas for the high-tech manufacturing industries with our carbide cutting tools, we carry on the entire process carefully from design to material selection, planning to production. Our products suitable for many industries such as Aerospace and Aviation, Automotive, Defence, Mold and Die and becomes solutions that offer advantages.



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Cutting parameters and feed rates stated in this catalogue are recommended values, Karcan does not bear any responsibility with respect to machine and equipment breakdowns.

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Test Center

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