FACE MILLING

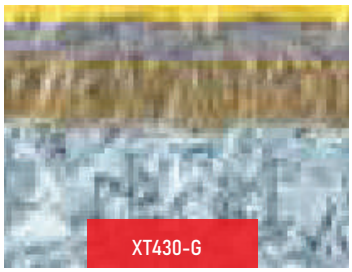
- Face milling is a common machining operation used to create flat surfaces on a workpiece using a milling cutter with multiple cutting teeth.
- It is the process of cutting a flat surface perpendicular to the axes of the milling cutter.
- Multiple approach angles are possible - 45°, 65°,88° etc. XCUT has multiple solutions in multiple corners for different materials and applications including SNMX style (8 corner) , XNKU style (14 corner) and ONMU style (16 corner)

FACE MILLING INDEX

GRADE INFORMATION

P10-P25 | M10-M20 |K05-K15

PVD coated grade, suitable for cast iron & processing whenever it is required high toughness and excellent resistance. Used with coolant in medium cutting speed, this quality ensures a remarkable insert life.



K05-K20 | P05-P20 |M10-M25

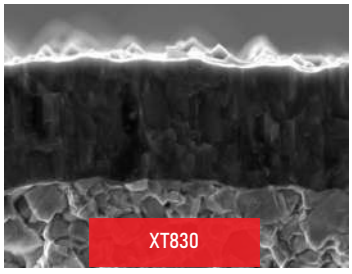
Yellow coating. ALTiN and TIN. The total thickness of coating is 3~4um. Protest insert sharpness to improve well resistance and impact.

P05-P25 |K05-K30

Uses heat-resistance PVD Al203 coating which has best hot hardness compared to previous PVD coatings, has better wear resistance. The smooth rake face and sharp cutting edge due to advanced technology with PVD coating, to ensure the workpiece without burr, also reduce the built-up edge. Suitable for Steels & Cast Iron

M10-M35 | P10-P35 | S05-S15

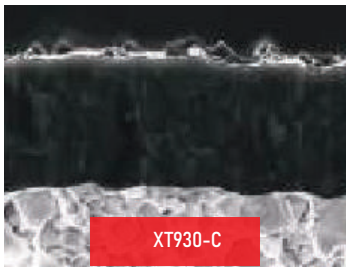
Composition: Co 10.0% other 1.5%; rest TC | Grain size: coarse Coating: PVD TIAITAN Particularly suitable for the machining of high-alloy steels, Stainless Steels and Superalloys (austenitic).



P05-P30 | M05-M20 | K05-K20 | S05-S15 | H05-H10

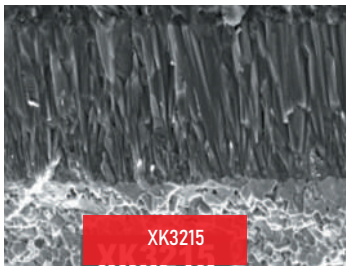
PVD coating with optimal thermal resistance & added strength. Tough carbide substrate designed for demanding application. Suitable for all materials from steels to superalloys

GRADE INFORMATION



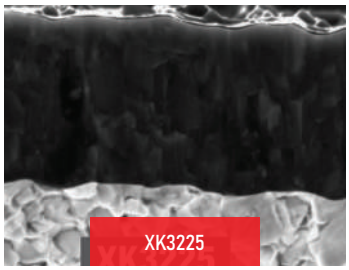
P15-P35 | M15-M35 | H05-H15

Ultra find grade with Nano coating for high heat resistance and toughness. Special AlTIMEN coating gives it a bronze shade and higher temperature resistance! The first choice for general-purpose machining of stainless steel. It can be used for supplementary machining of soft steels.



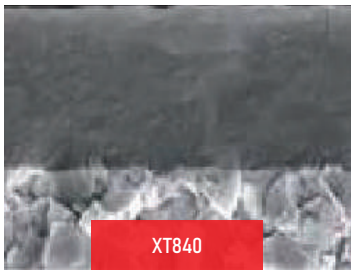
K10-K25 | P10-P20

Ultra find grade with Nano coating for high heat resistance and toughness.Special AlTiMeN coating gives it a bronze shade and higher temperature resistance! The first choice for general-purpose machining of stainless steel. It can be used for supplementary machining of soft steels.



K15-K35 | P15-P25

Low cobalt, ultra-fine wear-resistant and heat-resistant grain structure.
PVD high alumina coating to improve oxidation and wear resistance.
Suitable for high feed milling of hardened materials & superalloys.



P10-P30 | K10-K25 | M10-M25

Composition: Co 10.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1-2 µm | Hardness: HV30 1400 Coating specification: PVD TiAlTaN
First choice for dry machining of steels and CI at high cutting speeds

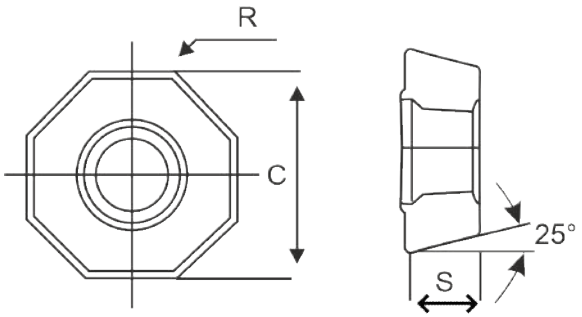
RECOMMENDED CUTTING CONDITIONS

ISO	Material Group	Relative Materials (DIN)	Hardness HB	Cutting speed (m/min)				
				XT 430	XT 430-G	XT480	XT 830	XT 840
P	Non-alloy steel	9 SMn 28, C35C50, C40E, C45E, 49 CrMo 4	125 - 250	90-250	90-250		150 - 250	90-250
	Low alloy steel	13 CrMo 44, 40NiCrM022, 58 CrV 4	200 - 350	80-200	80-200		140 - 200	80-220
	High alloy steel	X 40 CrMoV 5 1, X100 CrMoV 5 1, S6-5-5	200 - 325				80 - 130	80-180
M	Ferritic/ martensitic Stainless steel	X6Cr13, X10CrA118, X20CrNi175	200 - 240	80-200	80-200		130 - 190	
	Austenitic Stainless steel	X5 CrNi 18 9, X5 CrNiMo 17 13 3 X6 CrNiTi 18 9	180	60-180	60-160		100 -200	
K	Grey cast iron	GG15, GG20, GGG40, GG-35	180 - 260	90 - 200	90 - 200	70-320	160 - 200	
	Malleable castiron	GTS-35-10, GTS-35,GTS70-02, 20mN5	130 - 230	90 - 200	90 - 200	70-280	130 - 180	90-240
S	Fe, Ni or Co based	X12 NICrALTi 31 20, TiAl5Sn2	200 - 350				30 - 50	
	Titanium and Ti-alloy based	TiCu2, TiAl6V4, TiAl6V4ELI					35 - 75	
H	Hardended steel	C 105 W1,75 CrMoNiW 6 7	55 - 60 HRc				55 - 65	
	Chilled cast iron	G-X 260 NiCr 4 2, X15 CrNiSi 25 20	400			50-150	45 - 55	
	Cast iron	G-X 300 CrMo 15 3	55 HRc			50-120	55 - 65	

RECOMMENDED CUTTING CONDITIONS

ISO	Material Group	Relative Materials (DIN)	Hardness HB			
				XT 930-C	XK 3215	XK 3225
P	Non-alloy steel	9 SMn 28, C35C50, C40E, C45E, 49 CrMo 4	125 - 250	80-200		
	Low alloy steel	13 CrMo 44, 40NiCrMO22, 58 CrV 4	200 - 350	80-180		
	High alloy steel	X 40 CrMoV 5 1, X100 CrMoV 5 1, S6-5-5	200 - 325	60-160		
M	Ferritic/ martensitic Stainless steel	X6Cr13, X10CrA118, X20CrNi175	200 - 240	60-220		
	Austenitic Stainless steel	X5 CrNi 18 9, X5 CrNiMo 17 13 3 X6 CrNiTi 18 9	180	60-180		
K	Grey cast iron	GG15, GG20, GGG40, GG-35	180 - 260		80 -160	80 -210
	Malleable castiron	GTS-35-10, GTS-35,GTS70-02, 20mN5	130 - 230		80 -160	80 -190
S	Fe, Ni or Co based	X12 NICrAlTi 31 20, TiAl5Sn2	200 - 350	40-120		
	Titanium and Ti-alloy based	TiCu2, TiAl6V4, TiAl6V4ELI		30-100		
H	Hardended steel	C 105 W1,75 CrMoNiW 6 7	55 - 60 HRc	30-120		
	Chilled cast iron	G-X 260 NiCr 4 2, X15 CrNiSi 25 20	400			
	Cast iron	G-X 300 CrMo 15 3	55 HRc			

OFMT05T3



8 CORNER 45 DEGREE LEAD ANGLE FACE MILLING INSERT.
SUITABLE FOR: SURFACING / CHAMFERING

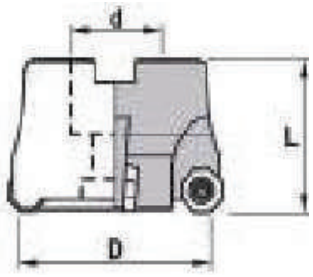
Designation	Dimensions					Feed (mm/tooth)		DEPTH OF CUT(MM)		XT830
	l	D	S	Ø	r	min	max	min	max	
OFMT05T3 TN	-	12.7	4	25	-	0.12	0.40	0.4	3.5	●

● STOCKABLE ○ NON STOCKABLE

SHELL CUTTER

Designation	D	d	L	Z	Stockable
XTSM-D63-A22-Z5-OFMT05T3	63	22	40	5	○
XTSM-D80-A27-Z6-OFMT05T3	80	27	50	6	○
XTSM-D100-A32-Z7-OFMT05T3	100	32	50	7	○
XTSM-D125-A40-Z8-OFMT05T3	125	40	63	8	○

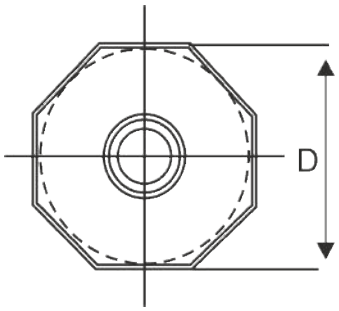
● STOCKABLE ○ NON STOCKABLE

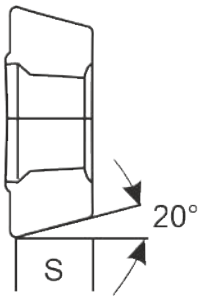


MILLING

SCREW - SCREW FOR OFMT05

SEHT1204





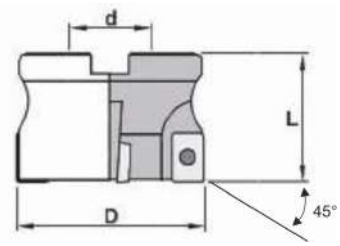
45 DEGREE LEAD ANGLE INSERT
4 CUTTING CORNER INSERT SUITABLE FOR FACE MILLING OF ALUMINIUM

Designation	Dimensions				Feed (mm/tooth)		DEPTH OF CUT(MM)		XA330
	di	F	S	r	min	max	min	max	
SEHT1204AFFN	13.29	12.7	4	-	0.12	0.40	0.4	3.5	●

● STOCKABLE ○ NON STOCKABLE

SHELL MILL CUTTER

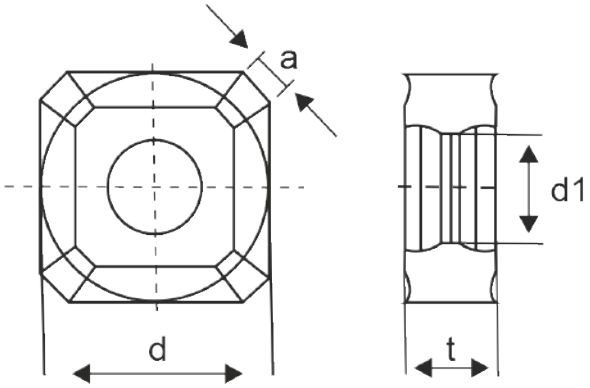
Designation	D	D1	d	l	z	Stockable
XTSM-D50-A22-Z4-SEHT12	50	60.4	4	40	22	○
XTSM-D63-A22-Z5-SEHT12	63	73.4	8	40	22	○
XTSM-D80-A27-Z6-SEHT12	80	90.4	7	50	27	○
XTSM-D100-A32-Z7-SEHT12	100	110.4	8	50	32	○
XTSM-D125-A40-Z8-SEHT12	125	135.6	10	63	40	○



● STOCKABLE ○ NON STOCKABLE

SCREW - SCREW M4 FOR SEHT12

SNMX1205



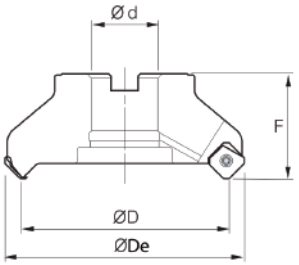
8 CORNER 45 DEGREE LEAD ANGLE FACE MILLING INSERT.
SUITABLE FOR: SURFACING / CHAMFERING

Designation	Dimensions				Feed (mm/tooth)		DEPTH OF CUT(MM)		XT110	XT820	XT840	XT930-C	XK3215
	d	a	d1	t	MIN	MAX	MIN	MAX					
SNMX1205ANN	12.7	1.8	6	5.5	0.08	0.32	0.5	5	●	●	●	●	●

● STOCKABLE ○ NON STOCKABLE

SHELL MILL CUTTER

Designation	D	De	d	f	z	Stockable
XTSM-D50-Z4-SNMX1205-45	50	63	22	40	4	●
XTSM-D63-Z6-SNMX1205-45	63	76	22	40	6	●
XTSM-D80-Z7-SNMX1205-45	80	93	27	50	7	●
XTSM-D100-Z8-SNMX1205-45	100	113	32	63	8	●
XTSM-D125-Z10-SNMX1205-45	125	138	40	63	10	●
XTSM-D160-Z12-SNMX1205-45	160	173	40	63	12	●



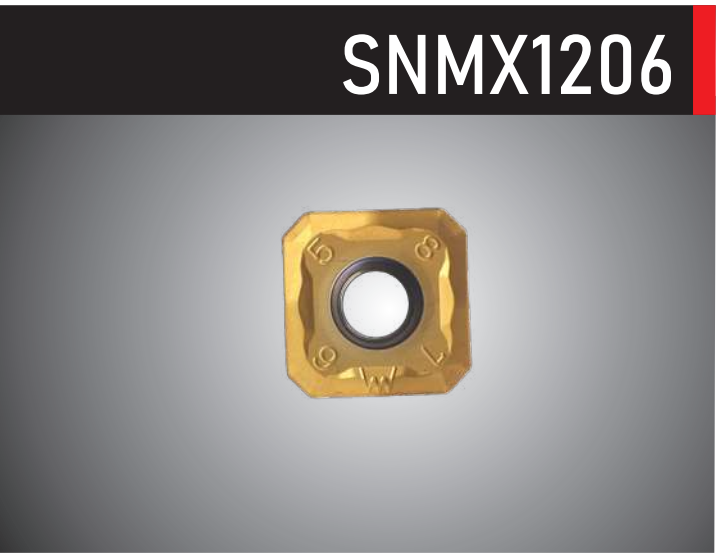
● STOCKABLE ○ NON STOCKABLE

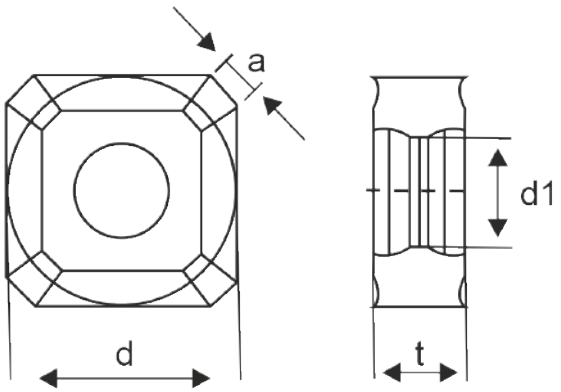
SCREW - SCREW M4 FOR SNMX1205

*LH Cutters available on request

*Corner Radius 1.2 available on request

SNMX1206





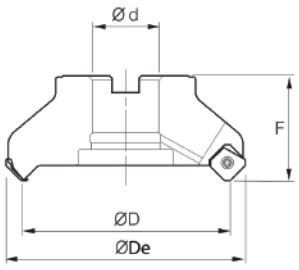
45 DEGREE LEAD ANGLE INSERT
8 CUTTING CORNER INSERT SUITABLE FOR FACE MILLING

Designation	Dimensions				Feed (mm/tooth)		DEPTH OF CUT(MM)		XT430-G	XT480	XT830	XT840	XT930-C
	d	a	d1	t	MIN	MAX	MIN	MAX					
SNMX1206ANN	12.7	1.8	6	5.5	0.08	0.25	0.5	5	●	●	●	●	●

● STOCKABLE ○ NON STOCKABLE

SHELL MILL CUTTER

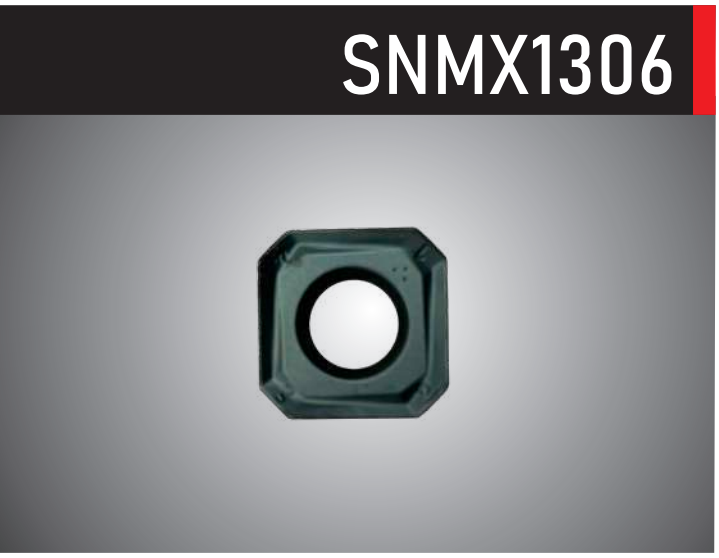
Designation	D	D1	d	l	z	Stockable
XTSM-D50-Z4-SNMX1206-45	50	63	22	40	4	●
XTSM-D63-Z6-SNMX1206-45	63	76	22	40	6	●
XTSM-D80-Z7-SNMX1206-45	80	93	27	50	7	●
XTSM-D100-Z8-SNMX1206-45	100	113	32	63	8	●
XTSM-D125-Z10-SNMX1206-45	125	138	40	63	10	●
XTSM-D160-Z12-SNMX1206-45	160	173	40	63	12	●

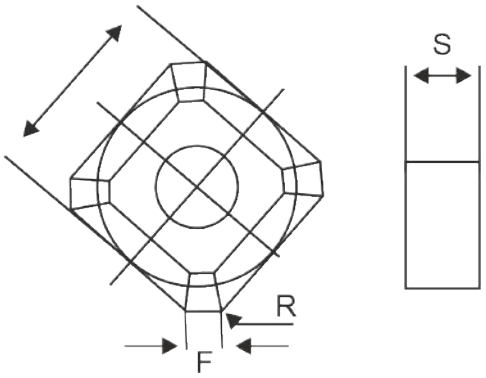


● STOCKABLE ○ NON STOCKABLE

SCREW - SCREW M4 FOR SNMX1206
*LH Cutters available on request

SNMX1306





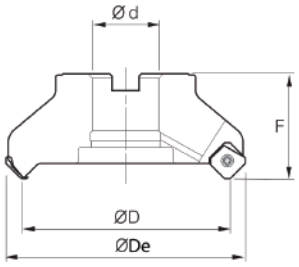
45 DEGREE LEAD ANGLE INSERT
8 CUTTING CORNER INSERT SUITABLE FOR FACE MILLING

Designation	Dimensions				Feed (mm/tooth)		DEPTH OF CUT(MM)		XT480
	dl	F	S	R	MIN	MAX	MIN	MAX	
SNMX130605	13	3	6.2	0.5	0.05	0.2	0.5	4	O

● STOCKABLE O NON STOCKABLE

SHELL MILL CUTTER

Designation	D	D1	d	L	Z	Stockable
H-SOSF45-8/16-D40-04-22R	40	50.4	4	40	22	O
H-SOSF45-8/16-D50-04-22R	50	60.4	4	40	22	O
H-SOSF45-8/16-D63-08-22R	63	73.4	8	40	22	O
H-SOSF45-8/16-D80-07-27R	80	90.4	7	50	27	O
H-SOSF45-8/16-D100-08-32R	100	110.4	8	50	32	O
H-SOSF45-8/16-D125-10-40R	125	135.6	10	63	40	O
H-SOSF45-8/16-D160-12-40R	160	170.4	12	63	40	O

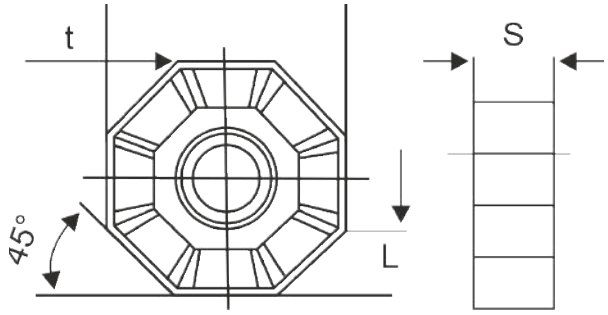


● STOCKABLE O NON STOCKABLE

SCREW - SCREW FOR SNMX13

*CUTTER CAN BE USED WITH 2 TYPES OF INSERTS
SNMX130605 & ONMX130605 (PG. 318)

ONMX1306



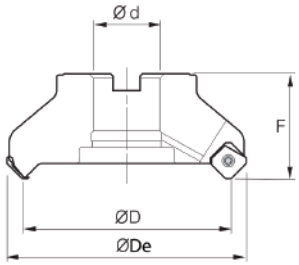
45 DEGREE LEAD ANGLE INSERT
16 CUTTING CORNER INSERT SUITABLE FOR FACE MILLING

Designation	Dimensions				Feed (mm/tooth)		DEPTH OF CUT(MM)		XT480
	L	D	S	r	min	max	min	max	
ONMX130605	13	3.5	5.5	0.5	0.08	0.22	0.5	2.5	●

● STOCKABLE ○ NON STOCKABLE

SHELL MILL CUTTER

Designation	D	D1	d	l	z	Stockable
H-SOSF45-8/16-D040-04-22R	40	45	22	40	4	○
H-SOSF45-8/16-D050-04-22R	50	55	22	50	4	○
H-SOSF45-8/16-D063-06-22R	63	68	22	50	6	○
H-SOSF45-8/16-D080-07-27R	80	85	27	50	7	○
H-SOSF45-8/16-D100-08-32R	100	105	32	50	8	○
H-SOSF45-8/16-D125-10-40R	125	130	40	63	10	○
H-SOSF45-8/16-D160-12-40R	160	165	40	63	12	○



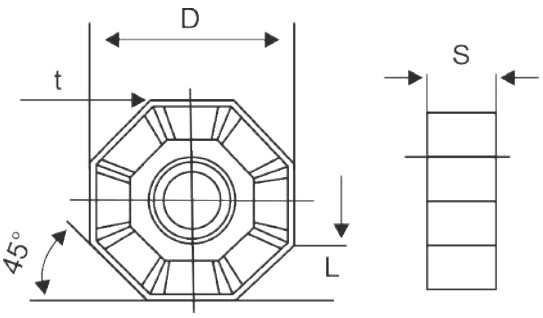
● STOCKABLE ○ NON STOCKABLE

SCREW - SCREW FOR ONMX13

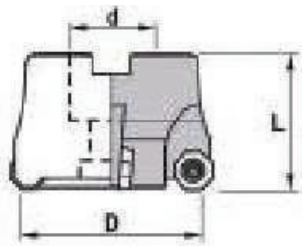
*CUTTER CAN BE USED WITH 2 TYPES OF INSERTS

SNMX130605 (PG.317) & ONMX130605
605 (PG.317) & ONMX130605

ONMU0806



45 DEGREE LEAD ANGLE INSERT
16 CUTTING CORNER INSERT SUITABLE FOR FACE MILLING
Can Take DOC UPTO 3MM ON VMC/ HMC/ SPM



INDUSTRY APPLICATION

- Automotive
- General Engineering
- Defence
- Valve Industry

Designation	Dimensions					Feed (mm/tooth)		DEPTH OF CUT(MM)		XT430	XT430-G	XT830	XT930-C	XK3215	XK3225
	L	D	S	Ø	R	min	max	min	max						
ONMU080608	6	20.2	6	-	0.8	0.1	0.3	0.5	3.5	O	●	●	●	●	●

SHELL MILL CUTTER

Designation	D	d	L	Z	Stockable
XTSM-D50-Z4-ONMU0806	50	22	40	4	●
XTSM-D63-Z5-ONMU0806	63	22	40	5	●
XTSM-D80-Z6-ONMU0806	80	27	50	6	●
XTSM-D100-Z7-ONMU0806	100	32	50	7	●
XTSM-D125-Z8-ONMU0806	125	40	63	8	●
XTSM-D160-Z10-ONMU0806	160	40	63	10	●
XTSM-D160-Z12-ONMU08	160	40	63	12	●
XTSM-D200-Z14-ONMU08	200	60	63	14	●
XTSM-D250-Z16-ONMU08	250	60	63	16	O
XTSM-D315-Z20-ONMU08	315	60	63	20	O

*LH Cutter available on request
SCREW - SCREW M5 FOR ONMU08
SCREW - SCREW M5 FOR ONMU08

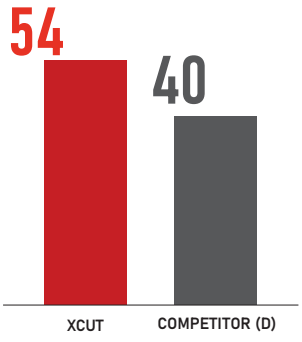
● STOCKABLE O NON STOCKABLE

ONMU WEDGE TYPE CUTTER

Designation	D	Z	A	CLAMPING WEDGE CODE	SCREW CODE	Stockable
XTSM-D63-Z8-ONMU0806WG	63	8	22	CLAMPING WEDGE FOR ONMU08	WEDGESCREW FOR ONMU08	○
XTSM-D80-Z10-ONMU0806WG	80	10	27			●
XTSM-D100-Z14-ONMU0806WG	100	14	32			●
XTSM-D125-Z18-ONMU0806WG	125	18	40			○

TRIAL REPORTS

PRODUCT DESCRIPTION	ONMU080608-XT830	
FORGED STEEL		
PARAMETERS	COMPETITOR (D)	XCUT
Depth of Cut	1.5mm	1.5mm
Vc: m/min	188	207
Fz: mm./tooth	0.1	0.12
Life increased by 35%		



TOOL LIFE (NO. OF COMPONENTS)

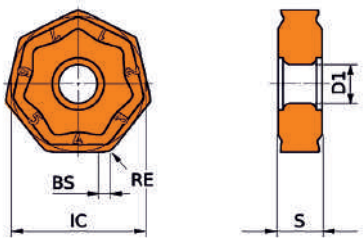
XNKU2007

XNKU2006

14 CORNER FACE MILLING INSERT FOR HIGH PERFORMANCE INDEXABLE MILLING CAN TAKE DOC UPTO 5MM!

INDUSTRY APPLICATION

- Automotive
- General Engineering
- Defence

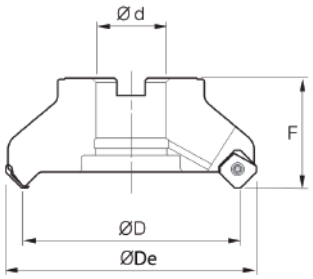


INSERT DETAILS

DESIGNATION	DIMENSIONS					FEED (MMTOOTH)		DEPTH OF CUT(MM)		XT820	XK3215	XK3225	XT930-C
	BS	D1	IC	S	SE	MIN	MAX	MIN	MAX				
XNKU2006ZN	0.99	5.69	20	6.1	0.8	0.1	0.35	0.5	5.5	●	●	●	
XNKU200708EN	0.99	5.68	19.98	7.28	0.8	0.12	0.35	0.5	5.5				●

● STOCKABLE ○ NON STOCKABLE

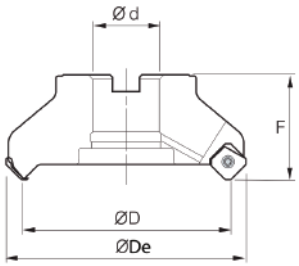
CUTTER DETAILS



DESIGNATION	D	d	De	F	Z	AVAILABILITY
XTSM-D50-24-XNKU2006	50	22	63	40	4	●
XTSM -D63-Z5-XNKU2006	63	22	76	40	5	●
XTSM-D80-Z6-XNKU2006	80	27	93	50	6	●
XTSM -D100-Z7-XNKU2006	100	32	113	50	7	●
XTSM-D125-28-XNKU2006	125	40	138	63	8	●
XTSM -D160-29-XNKU2006	160	40	173	63	9	●
XTSM-D200-Z12-XNKU2006	200	60	213	63	12	●
XTSM -D250-Z16-XNKU2006	225	60	263	63	16	○

● STOCKABLE ○ NON STOCKABLE

CUTTER DETAILS



DESIGNATION	D	d	De	F	Z	AVAILABILITY
XTSM-D63-Z6-WG-XNKU2006	63	27	76	40	6	●
XTSM-D80-Z8-WG-XNKU2006	80	27	93	50	8	●
XTSM-D100-Z10-WG-XNKU2006	100	32	113	50	10	○
XTSM-D100-Z12-WG-XNKU2006	100	32	113	50	12	●
XTSM-D125-Z12-WG-XNKU2006	125	40	138	63	12	○
XTSM-D125-Z18-WG-XNKU2006	125	40	138	63	18	●
XTSM-D160-Z16-WG-XNKU2006	165	40	173	63	19	○

● STOCKABLE ○ NON STOCKABLE

SPARE PARTS

IMAGE	DESCRIPTION	XCUT CODE
	Insert Screw	Screw M5 for XNKU2006
	Wrench	T15
	Wedge	Wedge - XN20
	Wedge Screw	Wedge Screw - XN20(M6)