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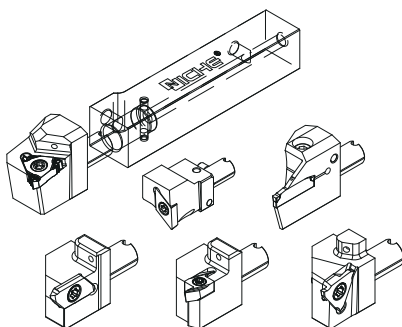
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Unified Cutting Head Sizes

Designed with common functional lengths, the cutting heads allow easy tool changes without removing the shank from the tool post.

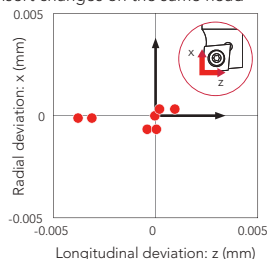


High Repeatability*

ModularMini-Turn provides the cutting edge point position with high repeatability with an accuracy of $\pm 5 \mu\text{m}$ or less for the x and z axis.

*Using the same type of head, shank, and insert shape

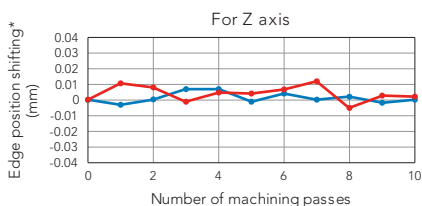
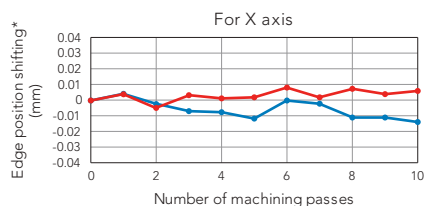
Deviations of cutting point positions after insert changes on the same head



Edge Positions Before And After Machining

ModularMini-Turn ensures high rigidity coupling to the head and shank, providing extra stability equivalent of monoblock tools.

*Using the same type of head, shank, and insert shape



*Edge Position Shifting:

shifting of cutting edge positions from the zero point (initially measured point) after machining.



Insert
Workpiece material
Cutting speed
Feed
Depth of cut
Machining
Coolant

: DCGT11T302FN-NF1 NP5030
: S45C / C45
: $V_c = 100 \text{ m/min}$
: $f = 0.07 \text{ mm/rev}$
: $a_p = 1.0 \text{ mm}$
: External turning
: Wet

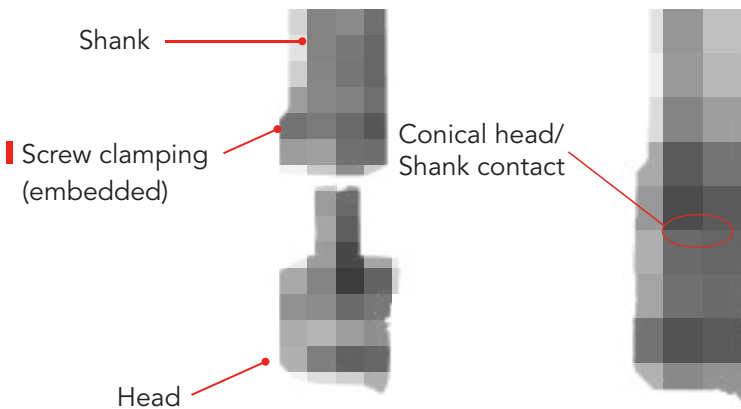


Shank Size Flexibility

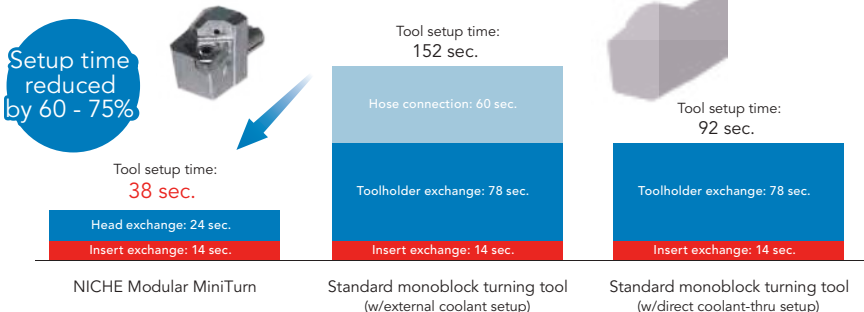
Applicable for many types of machines, due to the large variety of shank lengths. The same coupling shape allows shared heads to all types of shanks.

Unique Coupling Design

Simply loosen the clamping screw for easy tool exchanges. Unique coupling design allows extremely high repeatability.



Modular design simplifies tool change and set up, significantly reducing machine downtime





Features

Modular Head

For ISO Turning Inserts

Positive

SCLC
SDJC
SVJC



For Dedicated Inserts

Back Turning

ABS15



Grooving / Threading

TGF32
16ER / KTKF12

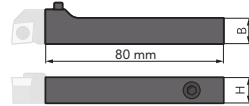


Grooving / Cut-off

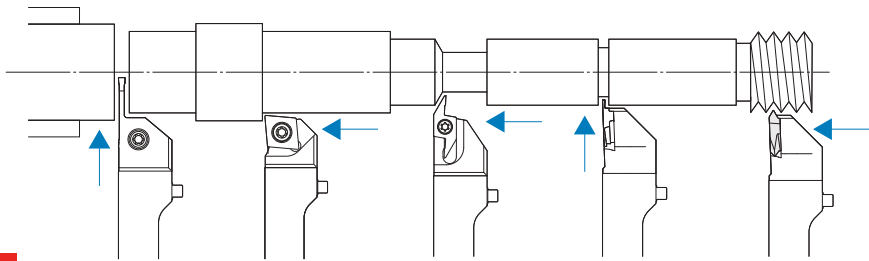
KGEH



Holder



NMT-R 1010 X80J	Height H: 10 mm	Width B: 10 mm
NMT-R 1212 X80J	Height H: 12 mm	Width B: 12 mm
NMT-R 1616 X80J	Height H: 16 mm	Width B: 16 mm
NMT-R 2020 X80J	Height H: 20 mm	Width B: 20 mm



Application Model

Grooving / Cut-off

KGEH

General External Turning

SCLC
SDJC
SVJC

Back Turning

ABS15

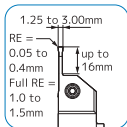
Grooving

TGF 32

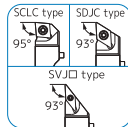
Threading

KTKF12
16ER

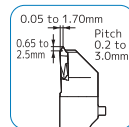
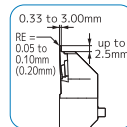
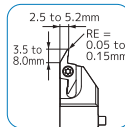
Insert Shape



Max. Cut-off Dia.
up to $\varnothing 32$ mm



SCLC type: Positive 7°
SDJC type: Positive 7°
SVJC type: Positive 5°/7°/11°

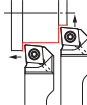
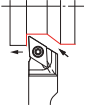
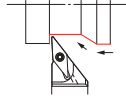
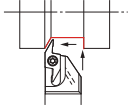


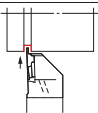
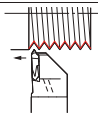
Applicable Thread Symbol

M W G/Rp/W



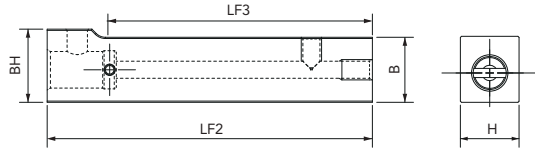
Tooling Selection

Specification	External Turning			
	General Turning / Facing	General Turning / Profiling		Back Turning
Insert Shape	80° Diamond type 	55° Diamond type 	35° Diamond type 	Dedicated Insert
Clamp Mechanism				
Screw-on				
	SCLC type	SDJC type	SVJC type	ABS type

Specification	External Grooving / Threading / Cut-off	
	Grooving	Threading
Insert Shape	Dedicated Insert	Dedicated Insert
Clamp Mechanism		
Screw-on		
	TGF type	TKFT



NMT** Holder



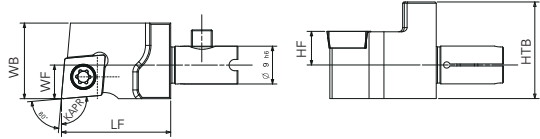
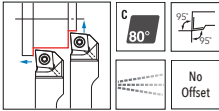
Unit: mm

Specification	Dimensions					Screw		Plug	Wrench
	H	B	LF2	BH	LF3				
NMT-R1010X80J	10	10	80	12	66.67	BTT0406T	3.0	NMT-M6	L3.0
NMT-R1212X80J	12	12	80	14	66.67	BTT0406T	3.0	NMT-NPT-1/16	L4.0
NMT-R1616X80J	16	16	80	18	65.67	BTT0507T	4.0	NMT-NPT-1/16	L4.0
NMT-R2020X80J	20	20	80	22	64.67	BTT0609T	5.0	NMT-NPT-1/16	L4.0



SCLC

External Turning And Facing



Unit: mm

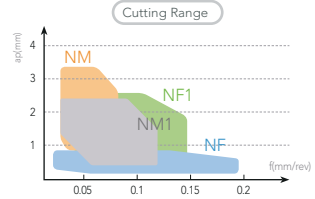
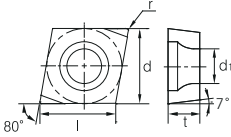
Specification	Dimensions						Insert Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	KAPR				
NMT05-SCLCR09J	12	5	17	5	26	95°	SB4085TR	3.4	T15	CC**09T3**
NMT06-SCLCR09J	14	6	19	6	26	95°	SB4085TR	3.4	T15	CC**09T3**
NMT08-SCLCR09J	18	8	23	8	26	95°	SB4085TR	3.4	T15	CC**09T3**
NMT10-SCLCR09J	22	10	27	10	26	95°	SB4085TR	3.4	T15	CC**09T3**

Insert see the next page



ISO Turning Inserts

CC**
Turning



Unit: mm

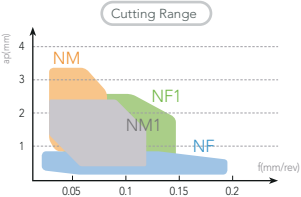
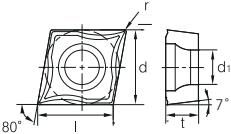
Specification	Dimensions					Coated			Uncoated
	l	Ød	t	r	Ød1	NP5030	NP9030	NP1030	NU8000
CCGT09T3005R-NM	9.8	9.525	3.97	0.05	4.4	●	●	●	●
CCGT09T301R-NM	9.6	9.525	3.97	0.1	4.4	●	●	●	●
CCGT09T302R-NM	9.2	9.525	3.97	0.2	4.4	●	●	●	●
CCGT09T3005L-NM	9.8	9.525	3.97	0.05	4.4	●	●	●	●
CCGT09T301L-NM	9.6	9.525	3.97	0.1	4.4	●	●	●	●
CCGT09T302L-NM	9.2	9.525	3.97	0.2	4.4	●	●	●	●
CCGT09T3005R-NF	9.8	9.525	3.97	0.05	4.4	●	●	●	●
CCGT09T301R-NF	9.6	9.525	3.97	0.1	4.4	●	●	●	●
CCGT09T302R-NF	9.2	9.525	3.97	0.2	4.4	●	●	●	●
CCGT09T3005L-NF	9.8	9.525	3.97	0.05	4.4	●	●	●	●
CCGT09T301L-NF	9.6	9.525	3.97	0.1	4.4	●	●	●	●
CCGT09T302L-NF	9.2	9.525	3.97	0.2	4.4	●	●	●	●

Recommended cutting data see page 14-15





CC**
Turning



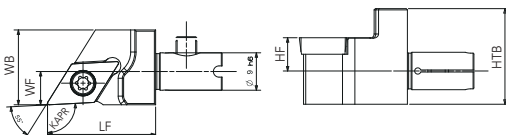
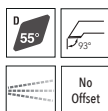
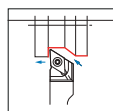
Specification	Dimensions					Coated			Uncoated
	l	Ød	t	r	Ød1	NP5030	NP9030	NP1030	NU8000
CCGT09T301-NF1	9.8	9.525	3.97	0.1	4.4	●	●	●	●
CCGT09T302-NF1	9.6	9.525	3.97	0.2	4.4	●	●	●	●
CCGT09T304-NF1	9.2	9.525	3.97	0.4	4.4	●	●	●	●

Recommended cutting data see page 14-15



SDJC

External Turning And Profiling



Unit: mm

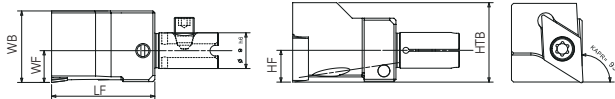
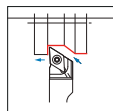
Specification	Dimensions						Insert Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	KAPR				
NMT05-SDJCR11J	12	5	17	5	26	93°	SB4085TR	3.4	T15	DC**11T3**
NMT06-SDJCR11J	14	6	19	6	26	93°	SB4085TR	3.4	T15	DC**11T3**
NMT08-SDJCR11J	18	8	23	8	26	93°	SB4085TR	3.4	T15	DC**11T3**
NMT10-SDJCR11J	22	10	27	10	26	93°	SB4085TR	3.4	T15	DC**11T3**

Insert see the next page



SDJC-Y

External Turning And Profiling



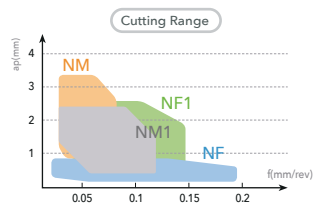
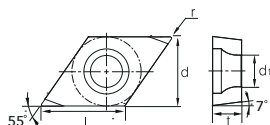
Unit: mm

Specification	Dimensions						Insert Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	KAPR				
NMT05-SDJCR11JY	12	5	14	5	26	93°	SB4085TR	3.4	T15	DC*T11T3**
NMT06-SDJCR11JY	14	6	16	6	26	93°	SB4085TR	3.4	T15	DC*T11T3**
NMT08-SDJCR11JY	18	8	20	8	26	93°	SB4085TR	3.4	T15	DC*T11T3**
NMT10-SDJCR11JY	22	10	24	10	26	93°	SB4085TR	3.4	T15	DC*T11T3**

Insert see the next page



DC** Turning



Unit: mm

Specification	Dimensions					Coated			Uncoated
	l	Ød	t	r	Ød1	NP5030	NP9030	NP1030	NU8000
DCGT11T3005R-NM	11.6	9.525	3.97	0.05	4.4	●	●	●	●
DCGT11T301R-NM	11.6	9.525	3.97	0.1	4.4	●	●	●	●
DCGT11T302R-NM	11.6	9.525	3.97	0.2	4.4	●	●	●	●
DCGT11T3005L-NM	11.6	9.525	3.97	0.05	4.4	●	●	●	●
DCGT11T301L-NM	11.6	9.525	3.97	0.1	4.4	●	●	●	●
DCGT11T302L-NM	11.6	9.525	3.97	0.2	4.4	●	●	●	●
DCGT11T3005R-NF	11.6	9.525	3.97	0.05	4.4	●	●	●	●
DCGT11T301R-NF	11.6	9.525	3.97	0.1	4.4	●	●	●	●
DCGT11T302R-NF	11.6	9.525	3.97	0.2	4.4	●	●	●	●
DCGT11T3005L-NF	11.6	9.525	3.97	0.05	4.4	●	●	●	●
DCGT11T301L-NF	11.6	9.525	3.97	0.1	4.4	●	●	●	●
DCGT11T302L-NF	11.6	9.525	3.97	0.2	4.4	●	●	●	●

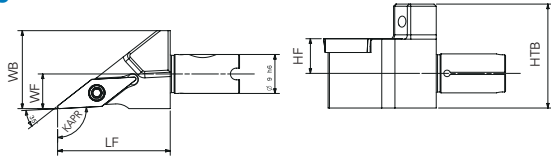
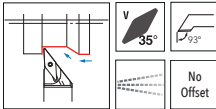
Recommended cutting data see page 14-15





SVJC

General Turning And Profiling



Unit: mm

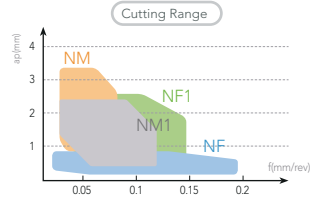
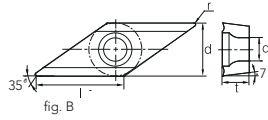
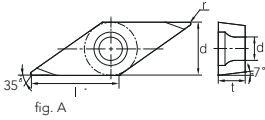
Specification	Dimensions					Insert Screw		Wrench	Insert
	WB	WF	HTB	HF	LF				
NMT05-SVJCR11J	12	5	18	5	26	SB2570TR	1.5	T8	VC**1103**
NMT06-SVJCR11J	14	6	20	6	26	SB2570TR	1.5	T8	VC**1103**
NMT08-SVJCR11J	18	8	24	8	26	SB2570TR	1.5	T8	VC**1103**
NMT10-SVJCR11J	22	10	28	10	26	SB2570TR	1.5	T8	VC**1103**

Insert see the next page



VC**

Turning



Unit: mm

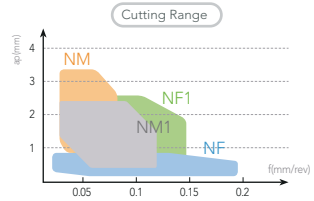
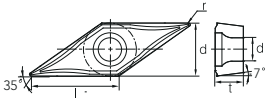
Specification	Fig.	Dimensions					Coated			Uncoated
		l	Ød	t	r	Ød1	NP5030	NP9030	NP1030	NU8000
VCGT1103003R-NF	A	11	6.35	3.18	0.03	2.8	●	●	●	●
VCGT110301R-NF	A	11	6.35	3.18	0.1	2.8	●	●	●	●
VCGT110302R-NF	A	11	6.35	3.18	0.2	2.8	●	●	●	●
VCGT1103003L-NF	A	11	6.35	3.18	0.03	2.8	●	●	●	●
VCGT110301L-NF	A	11	6.35	3.18	0.1	2.8	●	●	●	●
VCGT110302L-NF	A	11	6.35	3.18	0.2	2.8	●	●	●	●
VCGT1103003R-NM	B	11	6.35	3.18	0.03	2.8	●	●	●	●
VCGT110301R-NM	B	11	6.35	3.18	0.1	2.8	●	●	●	●
VCGT110302R-NM	B	11	6.35	3.18	0.2	2.8	●	●	●	●
VCGT1103003L-NM	B	11	6.35	3.18	0.03	2.8	●	●	●	●
VCGT110301L-NM	B	11	6.35	3.18	0.1	2.8	●	●	●	●
VCGT110302L-NM	B	11	6.35	3.18	0.2	2.8	●	●	●	●

Recommended cutting data see page 14-15





VC** Turning



Unit: mm

Specification	Dimensions					Coated			Uncoated
	l	Ød	t	r	Ød1	NP5030	NP9030	NP1030	NU8000
VCGT110301-NF1	11	6.35	3.18	0.1	2.8	●	●	●	●
VCGT110302-NF1	11	6.35	3.18	0.2	2.8	●	●	●	●
VCGT110304-NF1	11	6.35	3.18	0.4	2.8	●	●	●	●

Recommended cutting data see page 14-15



External Turning (Positive Insert)

ISO	Workpiece Material	Hardness	Cutting Range	Applications	Chipbreaker	Insert Grade	Corner-R (RE)	Lower limit - Recommendation- Upper limit		
								Vc (m/min)	ap (mm)	f (mm/rev)
P	Low Carbon Steel Low Carbon Alloy	HB ≤ 300	Precision Finishing	Continuous Interruption	NF	NP5030	0.05	100 - 150 - 200	0.05-0.07 - 0.15	0.03-0.05 - 0.1
						NP5030	0.2	80 - 120 - 160	0.05- 0.1 - 0.2	0.03- 0.1 - 0.15
			Precision Finishing Molded Chipbreaker	Continuous	NF1	NP5030	0.2	100 - 150 - 200	0.02-0.05- 0.1	0.02-0.05-0.12
			Finishing	Continuous Interruption	NF1	NP5030	0.2	100 - 140 - 180	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
	Medium Carbon Steel Medium Carbon Alloy	HB ≤ 330				NP5030	0.4	80 - 120 - 160	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
			Finishing-Medium	Continuous Interruption	NM1	NP5030	0.2	80 - 120 - 160	0.8 - 3.0 - 5.0	0.03-0.05- 0.1
						NP5030	0.4	60 - 100 - 140	0.8 - 2.0 - 3.0	0.03-0.05- 0.1
			Precision Finishing	Continuous Interruption	NF	NP5030	0.05	100 - 150 - 200	0.05-0.07-0.15	0.03-0.05 - 0.1
	High Carbon Alloy	HB ≤ 280				NP5030	0.2	80 - 120 - 160	0.05- 0.1 - 0.2	0.03 - 0.1 - 0.15
			Precision Finishing Molded Chipbreaker	Continuous	NF1	NP5030	0.2	100 - 150 - 200	0.02-0.05- 0.1	0.02-0.05-0.12
			Finishing	Continuous Interruption	NF1	NP5030	0.2	100 - 140 - 180	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
						NP5030	0.4	80 - 120 - 160	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.2
M	Stainless Steel (Austenitic related)	HB ≤ 220	Finishing	Continuous Interruption	NF1	NP5030	0.2	80 - 100 - 120	0.1 - 0.3 - 0.5	0.03-0.05 - 0.1
						NP9030	0.4	60 - 80 - 100	0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous Interruption	NM1	NP5030	0.2	80 - 100 - 120	0.5 - 1.5 - 3.0	0.03-0.08-0.12
						NP9030	0.4	60 - 80 - 100	0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15
	Stainless Steel (Precipitation Hardening)	HB ≤ 300	Finishing	Continuous Interruption	NF1	NP5030	0.2	40 - 60 - 80	0.1 - 0.3 - 0.5	0.03-0.05 - 0.1
						NP9030	0.4	30 - 50 - 70	0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous Interruption	NM1	NP5030	0.2	40 - 60 - 80	0.5 - 1.0 - 2.0	0.03-0.08-0.12
						NP9030	0.4	30 - 50 - 70	0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15



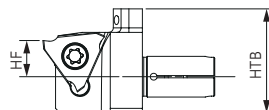
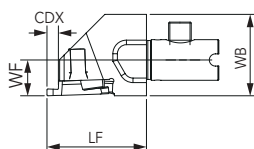
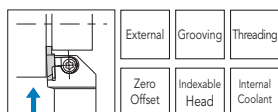
Recommended Cutting Data

External Turning (Positive Insert) - Cutting Diameter Under Ø16mm

ISO	Workpiece Material	Hardness	Cutting Range	Applications	Chipbreaker	Insert Grade	Corner-R (RE)	Lower limit - Recommendation - Upper limit		
								Vc (m/min)	ap (mm)	f (mm/rev)
K	Gray Cast Iron	HB ≤ 250	Finishing	Continuous	Standard	NC6010	0.4	100 - 120 - 150	0.2 - 0.5 - 1.0	0.1 - 0.15 - 0.2
				Interruption		NC6015	0.4	80 - 100 - 120	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	Standard	NC6010	0.4	100 - 120 - 150	0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2
	Nodular Cast Iron	HB ≤ 270	Finishing	Continuous	Standard	NC6010	0.4	80 - 100 - 120	0.2 - 0.5 - 1.0	0.1 - 0.15 - 0.2
				Interruption		NC6015	0.4	60 - 80 - 100	0.2 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Medium	Continuous	Standard	NC6010	0.4	80 - 100 - 120	0.5 - 1.0 - 2.0	0.1 - 0.15 - 0.2
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys (Si10% or less) etc.	HB ≤ 100	High speed machining (Rainbow surface gloss)	Continuous	-	PCD800	0.2	150 - 250 - 350	0.05 - 0.1 - 0.3	0.05 - 0.1 - 0.15
			Finishing (Long tool life)	Continuous	AL	MU8100	0.2	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		MU8100	0.4	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
			Finishing	Continuous	AL	NP1030	0.2	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		NP1030	0.4	100 - 150 - 200	0.05 - 0.3 - 0.5	0.02 - 0.07 - 0.1
			Medium	Continuous	AL	NP1030	0.2	100 - 150 - 200	0.2 - 0.5 - 1.5	0.03 - 0.1 - 0.2
S	Titanium Alloys	HB ≤ 400	Precision Finishing (Rainbow surface gloss)	Continuous	-	PCD800	0.2	100 - 120 - 150	0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1
			Medium	Interruption		PCD800	0.4	70 - 100 - 120	0.05 - 0.1 - 0.3	0.03 - 0.07 - 0.1
				Continuous	F	NP1030	0.4	30 - 50 - 70	0.1 - 0.5 - 1.0	0.03 - 0.1 - 0.2
	Heat-resistant Alloys	HB ≤ 350	Finishing	Continuous	-	NP1030	0.4	10 - 30 - 50	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
				Interruption		NP1030	0.8	10 - 30 - 50	0.2 - 0.5 - 0.7	0.03 - 0.05 - 0.1
			Finishing	Continuous	F	NP9030	0.4	40 - 60 - 80	0.1 - 0.3 - 0.5	0.03 - 0.05 - 0.1
T	Hardened Steel Hard Materials	HRC 40 - 50	Finishing	Continuous	F	NP5030	0.2	40 - 60 - 80	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		NP5030	0.4	40 - 60 - 80	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
		HRC 50 - 68	Finishing	Continuous	T	NBT9540	0.2	80 - 120 - 150	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1
				Interruption		NBT9540	0.4	60 - 100 - 120	0.1 - 0.3 - 0.5	0.02 - 0.07 - 0.1

TGF32

External Grooving



Unit: mm

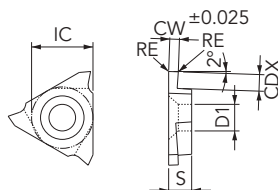
Specification	Dimensions						Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	CDX				
NMT5-TGF32RJ	12	5	17	5	22	2.8	SB4085TR	3.4	T15	TGF32R...
NMT6-TGF32RJ	14	6	19	6	22	2.8	SB4085TR	3.4	T15	TGF32R...
NMT8-TGF32RJ	18	8	23	8	22	2.8	SB4085TR	3.4	T15	TGF32R...
NMT10-TGF32RJ	22	10	27	10	22	2.8	SB4085TR	3.4	T15	TGF32R...

Insert see the next page 



TGF32 Grooving Inserts

TGF32 Grooving



Unit: mm

Specification	Dimensions						Tolerance	NP5030	NP9030	NP1030	NU8000
	CW	CDX	RE	IC	S	D1	CWmin.-max.				
TGF32R033-005	0.33	0.8	0.05	9.525	3.18	4.6	-0.025~+0.025	●	●	●	○
TGF32R050-005	0.5	1.2	0.05	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R075-010	0.75	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R095-010	0.95	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R100-010	1	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R120-010	1.2	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	○	○	○
TGF32R125-010	1.25	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R140-010	1.4	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	○	○	○
TGF32R145-010	1.45	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R150-010	1.5	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R175-010	1.75	2	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R200-010	2	2.5	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●
TGF32R250-010	2.5	2.5	0.1	9.525	3.18	4.6	-0.025~+0.025	●	●	●	●

See the next page



Recommended cutting conditions

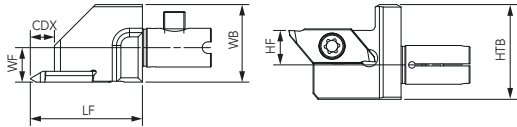
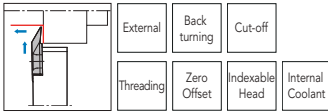
Workpiece material	Recommended insert grades (Vc: m/min)				(1) f for grooving (mm/rev) (2) f for turning (mm/rev) (3) ap for turning (mm)				Remarks
	PVD Carbide				TGF32 033-050-005	TGF32 075-095-010	TGF32 100-145-010	TGF32 150-250-010	
Carbon steel	★ 80-180	☆ 80-180	☆ 80-180	-	(1) 0.01-0.05 (2) Not recom. (3) Not recom.	(1) 0.02-0.07 (2) Not recom. (3) Not recom.	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	Coolant
Alloy steel	★ 80-160	☆ 80-160	☆ 80-160	-	(1) 0.01-0.04 (2) Not recom. (3) Not recom.	(1) 0.02-0.06 (2) Not recom. (3) Not recom.	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	
Stainless steel	☆ 60-130	☆ 60-130	★ 60-130	-	(1) 0.01-0.04 (2) Not recom. (3) Not recom.	(1) 0.02-0.06 (2) Not recom. (3) Not recom.	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	
Cast iron	-	-	-	★ 60-100	(1) 0.01-0.05 (2) Not recom. (3) Not recom.	(1) 0.02-0.07 (2) Not recom. (3) Not recom.	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	
Aluminum alloys	-	-	-	★ 150-400	(1) 0.01-0.05 (2) Not recom. (3) Not recom.	(1) 0.02-0.07 (2) Not recom. (3) Not recom.	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	(1) 0.03-0.08 (2) 0.03-0.06 (3) Max. 0.2	
Brass	-	-	-	★ 150-300	(1) 0.01-0.04 (2) Not recom. (3) Not recom.	(1) 0.02-0.06 (2) Not recom. (3) Not recom.	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	(1) 0.03-0.07 (2) 0.02-0.05 (3) Max. 0.2	

★:1st recommendation ☆:2nd recommendation



KTKF12

Back Turning/Cutting-off Threading



Unit: mm

Specification	Dimensions						Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	CDX				
NMT5-KTKF12RJ	12	5	15	5	26	4.46	4590TRWN	3.0	T10	TKF(B/T)12R**
NMT6-KTKF12RJ	14	6	17	6	26	4.46	4590TRWN	3.0	T10	TKF(B/T)12R**
NMT8-KTKF12RJ	18	8	21	8	26	4.46	4590TRWN	3.0	T10	TKF(B/T)12R**
NMT10-KTKF12RJ	22	10	25	10	26	4.46	4590TRWN	3.0	T10	TKF(B/T)12R**

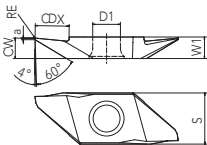
Insert see the next page





TKFB12

Back Turning



Unit: mm

Specification	Dimensions							Coated			Uncoated
	CW	CDX	S	D1	RE	W1	a	NP5030	NP9030	NP1030	NU8000
TKFB12R15005M	1.5	2.6	8.7	5.2	< 0.05	3	0.25	●	●	●	●
TKFB12R28005M	2.8	4.6	8.7	5.2	< 0.05	3	0.3	●	●	●	●
TKFB12R28010M	2.8	4.6	8.7	5.2	< 0.1	3	0.3	●	●	●	●

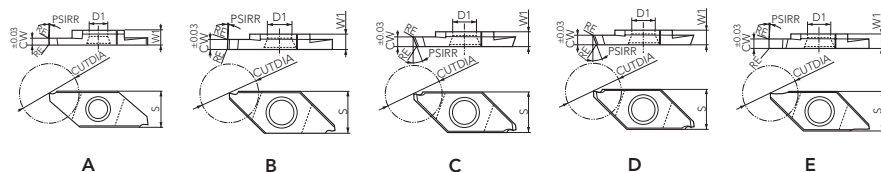
Recommended cutting data see page 23-24





TKF12 Cutting-off Inserts

TKF12 Cutting-off



Unit: mm

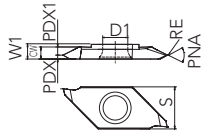
Specification	Fig.	Dimensions						Angle (°)	Tolerance	Carbide			
		CW	S	D1	RE	W1	CUTDIA	PSIRR	CWmin.-max	NP5030	NP9030	NP1030	NU8000
TKF12R050-S	A	0.5	8.7	5	0.03	3	5	0	-0.03~+0.03	●	○	○	○
TKF12R070-S	A	0.7	8.7	5	0.03	3	8	0	-0.03~+0.03	●	○	○	○
TKF12R100-T	B	1	8.7	5	0.08	3	12	0	-0.03~+0.03	●	○	○	○
TKF12R150-T	B	1.5	8.7	5	0.08	3	12	0	-0.03~+0.03	●	○	○	○
TKF12R200-T	B	2	8.7	5	0.08	3	12	0	-0.03~+0.03	●	○	○	○
TKF12R050-S-16DR	C	0.5	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R070-S-16DR	C	0.7	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R100-S-16DR	C	1	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R125-S-16DR	C	1.25	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R150-S-16DR	C	1.5	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R200-S-16DR	C	2	8.7	5	0.03	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R100-T-16DR	D	1	8.7	5	0.08	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R150-T-16DR	D	1.5	8.7	5	0.08	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R200-T-16DR	D	2	8.7	5	0.08	3	12	16	-0.03~+0.03	●	○	○	○
TKF12R050-NB	E	0.5	8.7	5	0	3	5	0	-0.03~+0.03	●	○	○	○
TKF12R070-NB	E	0.7	8.7	5	0	3	8	0	-0.03~+0.03	●	○	○	○
TKF12R100-NB	E	1	8.7	5	0	3	12	0	-0.03~+0.03	●	○	○	○
TKF12R150-NB	E	1.5	8.7	5	0	3	12	0	-0.03~+0.03	●	○	○	○
TKF12R200-NB	E	2	8.7	5	0	3	12	0	-0.03~+0.03	●	○	○	○

Recommended cutting data see page 23-24





TKFT12 Threading



Right-hand shown

Unit: mm

Specification	Fig.	Dimensions							Carbide			
		CW	S	D1	RE	W1	PDX	PDX1	NP5030	NP9030	NP1030	NU8000
TKFT12RA6000	A	2.5	8.7	5.2	Max. 0.05	3	0.4	2.1	●	●	●	●
TKFT12RB6000	A	2.5	8.7	5.2	Max. 0.05	3	2.1	0.4	●	●	●	●
TKFT12RA60005	A	2.5	8.7	5.2	0.05	3	0.8	1.7	●	●	●	●
TKFT12RB60005	A	2.5	8.7	5.2	0.05	3	1.7	0.8	●	●	●	●
TKFT12RN6001	A	2.5	8.7	5.2	0.1	3	1.25	1.25	●	●	●	●

Unit: mm

Specification	Fig.	Thread type	Symbol thread type	Pitch		Profile type	Thread angle PNA (°)
				M(mm) min.-max	UN, G, R, W (TPI) min.-max		
TKFT12RA6000	A	Metric Unified	M/UN	0.2~0.6	64~48	Partial profile	60
TKFT12RB6000	A	Metric Unified	M/UN	0.2~0.6	64~48	Partial profile	60
TKFT12RA60005	A	Metric Unified	M/UN	0.5~1.25	48~24	Partial profile	60
TKFT12RB60005	A	Metric Unified	M/UN	0.5~1.25	48~24	Partial profile	60
TKFT12RN6001	A	Metric Unified	M/UN	1~1.5	24~18	Partial profile	60

Recommended cutting data see page 23-24





Recommended Cutting Data

Recommended cutting conditions (TKF12)

Workpiece Material	Recommended Insert Grades (Vc: m/min)					TKF12						Remarks
	Carbide PVD	Carbide PVD	Carbide PVD	DLC coated carbide	Carbide PVD	Edge width CW (mm)						
						0.5	0.7	1.0	1.25	1.5	2.0	
	NP5030	NP9030	NP9030	MU8100	NP1030	f (mm/rev)						
Carbon Steel	70 ~ 170 (50 ~ 140)★	70 ~ 150 (50 ~ 120)☆	70 ~ 150 (50 ~ 120)☆	-	-	0.01 ~ 0.02	0.01 ~ 0.03	0.01 ~ 0.04 (0.01~0.05)	0.01 ~ 0.04	0.01 ~ 0.04 (0.02~0.1)	0.01 ~ 0.04 (0.02~0.1)	Coolant
Alloy Steel	70 ~ 170 (50 ~ 140)★	70 ~ 150 (50 ~ 120)☆	70 ~ 150 (50 ~ 120)☆	-	-	0.01 ~ 0.02	0.01 ~ 0.03	0.01 ~ 0.04 (0.01 ~ 0.05)	0.01 ~ 0.04	0.01 ~ 0.04 (0.02 ~ 0.1)	0.01 ~ 0.04 (0.02 ~ 0.1)	
Stainless Steel	60 ~ 140 (40 ~ 120)☆	60 ~ 120 (40 ~ 100)★	60 ~ 120 (40 ~ 100)☆	-	-	0.005 ~ 0.015	0.01 ~ 0.02	0.01 ~ 0.02 (0.01 ~ 0.03)	0.01 ~ 0.02	0.01 ~ 0.02 (0.01 ~ 0.05)	0.01 ~ 0.02 (0.01 ~ 0.05)	
Cast Iron	-	-	-	-	50 ~ 100★	0.01 ~ 0.03	0.01 ~ 0.04	0.01~0.05	0.01 ~ 0.05	0.01~0.05	0.01~0.05	
Aluminum Alloys	-	-	-	200 ~ 500★	200 ~ 450☆	0.01 ~ 0.03	0.01 ~ 0.04	0.01~0.05	0.01 ~ 0.05	0.01~0.05	0.01~0.05	
Brass	-	-	-	-	100 ~ 200★	0.01 ~ 0.03	0.01 ~ 0.04	0.01~0.06	0.01 ~ 0.06	0.01~0.06	0.01~0.06	

☆(): Tough edge type (TKF..T.)

★: 1st Recommendation ☆: 2nd Recommendation

Recommended cutting conditions

Workpiece Material	Recommended insert grades		
	Carbide PVD	Carbide PVD	Carbide PVD
	NP5030	NP9030	NP1030
Carbon Steel	Vc = 70 ~170 m/mim		-
	First ap (Radial): 0.2mm and under		
Alloy Steel	Vc = 70 ~170 m/mim		-
	First ap (Radial): 0.2 mm and under		
Stainless Steel	Vc = 60~100 m/mim		-
	First ap (Radial): 0.15 mm and under		
Cast Iron	-		Vc = 100 m/mim
			First ap (Radial): 0.2 mm and under
Aluminum Alloys	-		Vc = 150~400 m/mim
			First ap (Radial): 0.2 mm and under
Brass	-		Vc = 150~300 m/mim
			First ap (Radial): 0.15 mm and under

- Coolant is recommended.

- In case of threading stainless steel, please set two to three passes more than <ap - passes> listed below.



Depth Of Cut & Number Of Passes

TKFT 60° / 55° Partial profile

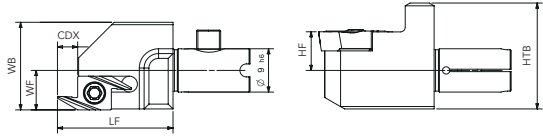
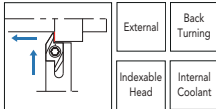
(ap shows the value of radial ap)

Type	Pitch (mm/TPI)	Description	Corner-R (RE)	Total ap (mm)	No. of passes	1	2	3	4	5	6	7	8	9	10	11
Metric	External thread	TKFT 12R/L A/B6000	Max 0.05 Flat	0.15	4	0.06	0.04	0.03	0.02							
				0.19	4	0.07	0.06	0.04	0.02							
				0.23	4	0.08	0.07	0.06	0.02							
				0.27	5	0.08	0.07	0.06	0.04	0.02						
				0.30	5	0.10	0.08	0.06	0.04	0.02						
				0.34	6	0.10	0.08	0.06	0.04	0.04	0.02					
		TKFT 12R/L A/B6000 12R/L A/B60005	0.05	0.38	6	0.10	0.10	0.07	0.05	0.04	0.02					
				0.33	5	0.10	0.10	0.07	0.04	0.02						
		TKFT 12R/L A/B6000 12R/L A/B60005	Max 0.05 Flat	0.45	7	0.10	0.10	0.08	0.06	0.05	0.04	0.02				
				0.05	6	0.10	0.10	0.08	0.06	0.04	0.02					
		TKFT 12R/L A/B60005	0.05	0.48	6	0.10	0.10	0.10	0.10	0.06	0.02					
				0.05	7	0.10	0.10	0.10	0.08	0.07	0.05	0.02				
		TKFT 12R/L A/B60005	0.05	0.56	7	0.10	0.10	0.10	0.10	0.08	0.06	0.02				
				0.05	8	0.15	0.15	0.12	0.10	0.08	0.06	0.03	0.02			
		TKFT 12R/L A/B60005 12R/L N6001	0.10	0.66	7	0.18	0.15	0.12	0.10	0.06	0.03	0.02				
				0.05	9	0.20	0.18	0.13	0.10	0.10	0.07	0.05	0.05	0.02		
				0.05	8	0.20	0.18	0.13	0.10	0.10	0.07	0.05	0.02			
				0.10	10	0.20	0.18	0.14	0.12	0.10	0.10	0.08	0.05	0.05	0.02	
Parallel pipe	External thread	TKFT 12R/L A/B55005	0.05	0.67	7	0.18	0.15	0.12	0.10	0.06	0.04	0.02				
			0.05	1.01	9	0.20	0.18	0.14	0.12	0.12	0.10	0.08	0.05	0.02		
	External thread	TKFT 12R/L A/B55005	0.05	0.79	8	0.18	0.18	0.12	0.10	0.08	0.07	0.04	0.02			
			0.05	0.96	9	0.20	0.20	0.15	0.10	0.10	0.08	0.06	0.05	0.02		
Whitworth	External thread	TKFT 12R/L A/B55005	0.05	1.07	10	0.20	0.18	0.15	0.12	0.10	0.10	0.08	0.07	0.05	0.02	
			0.05	1.21	11	0.20	0.18	0.15	0.15	0.12	0.10	0.10	0.08	0.07	0.04	0.02



ABS15

Back Turning



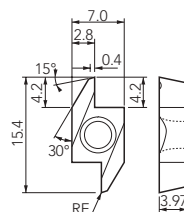
Unit: mm

Specification	Dimensions						Screw		Wrench	Insert
	WB	WF	HTB	HF	LF	CDX				
NMT05-ABS15R4J	12	5	16	5	24	4	BFTX0307N	2.0	T10	ABS15R4
NMT06-ABS15R4J	14	6	18	6	24	4	BFTX0307N	2.0	T10	ABS15R4
NMT08-ABS15R4J	18	8	22	8	24	4	BFTX0307N	2.0	T10	ABS15R4
NMT10-ABS15R4J	22	10	26	10	24	4	BFTX0307N	2.0	T10	ABS15R4

Insert see the next page



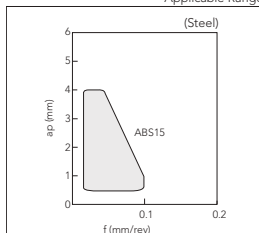
ABS15 Back Turning



Unit: mm

Specification	Dimensions	Carbide				Cermet	
		PVD				-	PVD
	RE	NF5030	NP9030	NP1030	NU8000	NN5000	NN5100
ABS15R4005M	< 0.05	●	●	●	○	○	○
ABS15R4015M	< 0.15	●	●	●	○	○	○
ABS15R4005	0.05	○	○	○	●	●	●
ABS15R4015	0.15	○	○	○	●	●	●

Applicable Range



Recommended cutting data see the next page





Recommended Cutting Data

ABS15

Workpiece Material		Carbide PVD				Remarks
		NP5030		NP1030		
		Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy steel	Vc (m/min)	★60 ~ 180		☆80 ~ 100		Coolant
	f (mm/rev)	0.02	0.02 ~ 0.07	0.02	0.02 ~ 0.07	
Stainless Steel	Vc (m/min)	☆30 ~ 130		☆30 ~ 50		
	f (mm/rev)	0.02	0.02 ~ 0.05	0.02	0.02 ~ 0.05	

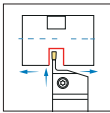
★: 1st recommendation

☆: 2nd recommendation

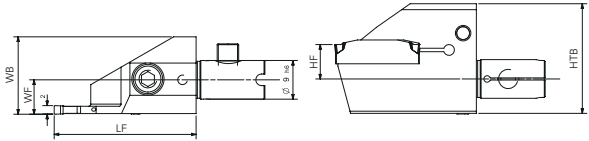


KGEH

Grooving



External	Grooving
Zero Offset	Indexable Head
	Internal Coolant



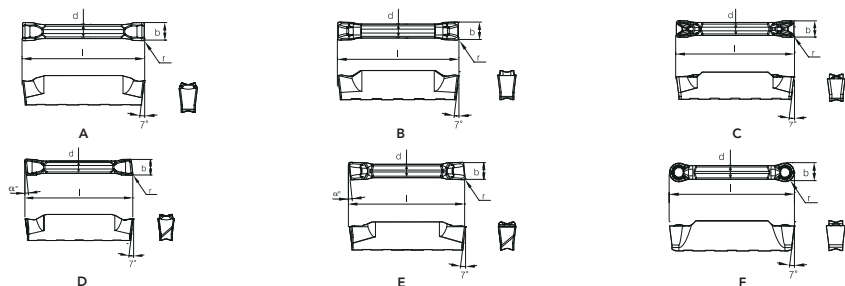
Unit: mm

Specification	Dimensions					Screw		Wrench	Insert
	WB	WF	HTB	HF	LF				
NMT08-KGEHRJ	18	8	25.5	8	33	ASM0416	4.0	L03	KG MN***
NMT10-KGEHRJ	22	10	29.5	10	33	ASM0416	4.0	L03	KG MN***



KGMN

Grooving



Unit: mm

Specification	Application	Fig.	Dimensions					Coated			
			b	r	ℓ	d	α°	NC3225	NC5330	PC5300	PC9030
KGMN200-02-L	Grooving	A	2	0.2	20	1.7	-	●	●	●	●
KGMN300-02-L	Grooving	A	3	0.2	20	2.3	-	●	●	●	●
KGMN200-02-R	Grooving · Parting off	B	2	0.2	20	1.7	-	●	●	●	●
KGMN300-02-R	Grooving · Parting off	B	3	0.2	20	2.3	-	●	●	●	●
KGMN200-02-T	Grooving · turning	C	2	0.2	20	1.7	-	●	●	●	●
KGMN300-02-T	Grooving · turning	C	3	0.2	20	2.3	-	●	●	●	●
KGMN300-04-T	Grooving · turning	C	3	0.4	20	2.3	-	●	●	●	●
KGMN200-6D-LP	Parting off	D	2	0.2	20	1.7	6	○	●	●	○
KGMR200-15D-LP	Parting off	D	2	0.2	20	1.7	15	○	●	●	○
KGMN200-6D-RP	Parting off	D	3	0.2	20	2.3	6	○	●	●	○
KGMR200-15D-RP	Parting off	D	3	0.2	20	2.3	15	○	●	●	○
KGMR200-6D-RP	Parting off	E	2	0.2	20	1.7	6	○	●	●	○
KGMR300-6D-RP	Parting off	E	2	0.2	20	1.7	15	○	●	●	○
KGMR300-6D-RP	Parting off	E	3	0.2	20	2.3	6	○	●	●	○
KGMR300-15D-RP	Parting off	E	3	0.2	20	2.3	15	○	●	●	○
KRMN200-C	Grooving · Turning	H	2	1	20	1.7	-	●	●	●	○
KRMN300-C	Grooving · Turning	H	3	1.5	20	2.2	-	●	●	●	○

Recommended cutting data see the next page





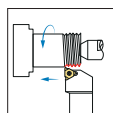
Grades for recommended application range

Workpiece	Grade	Order of recommended grade	Recommended cutting speed (m/min)									
			50	100	150	200	800					
P	Steel	PC5300 1			70	120						
		NC3225 2				130	220					
		NC5330 3				120	200					
	Alloy Steel	PC5300 1		60	105							
		NC3225 2				130	200					
		NC5330 3			90	180						
M	Stainless steel	PC5300 1			70	120						
		PC9030 2			70	115						
		NC5330 3			75	125						
K	Cast iron	PC5300 1			55	90						
		NC5330 2				95	160					
S	HRSA	PC5300 1	20		35							

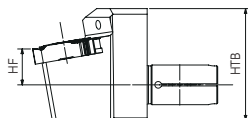
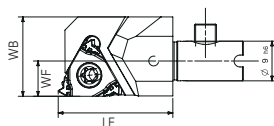


16ER

Threading



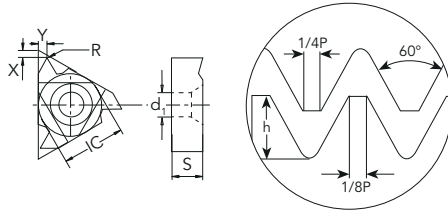
External	Threading
Indexable Head	Internal Coolant



Unit: mm

Specification	Dimensions					Screw		Wrench	Insert
	WB	WF	HTB	HF	LF				
NMT05-16ERJ	12	5	19.3	5	26	ISM03585	3.0	T15	16ER**
NMT06-16ERJ	14	6	21.3	6	26	ISM03585	3.0	T15	16ER**
NMT08-16ERJ	18	8	25.3	8	26	ISM03585	3.0	T15	16ER**
NMT10-16ERJ	22	10	29.3	10	26	ISM03585	3.0	T15	16ER**

16ER Threading



Unit: mm

Specification	Pitch	Dimensions						Carbide	
		X	Y	R	IC	S	d1	NP5600	NU8600
16ER1.00ISO	1.00	0.8	0.7	0.14	9.525	3.47	4	●	●
16ER1.25ISO	1.25	0.8	0.9	0.18	9.525	3.47	4	●	●
16ER1.50ISO	1.50	0.8	1.0	0.22	9.525	3.47	4	●	●
16ER1.75ISO	1.75	1.2	1.2	0.25	9.525	3.47	4	●	●
16ER2.00ISO	2.00	1.2	1.3	0.29	9.525	3.47	4	●	●
16ER2.50ISO	2.50	1.2	1.5	0.36	9.525	3.47	4	●	●
16ER3.00ISO	3.00	1.2	1.5	0.43	9.525	3.47	4	●	●

MEMO

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