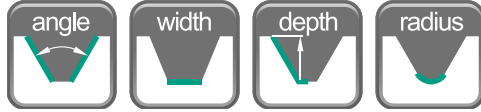




Engraving X060 >>



Features

- ▶ Custom forms based on your specification of angle, width, depth and corner radius.
- ▶ Economical
 - Each indexable insert has 2 cutting edges.
 - No resharpener required. Tool length is unchanged.
 - No need to reset after changing insert or cutting edge.



▶ Insert >>

- Minimum width of bottom : 0.1mm.
- Angle is possible from 10° up to 120°, related to the minimum width.
- Replace solid carbide engraving tool and ball nose end mill.

Angled form			Radius angled form			Radius form					
Inserts Grade	Coating	Carbide	Material			P	M	K	N	H	S
NC2071	TiN	K20F	For all kind of steel < 30 HRC.			⊙	●		⊙		
NC2032	TiAlN	K20F	For all kind of steel from 30-50HRC, carbon steel, alloy steel and casting iron.			●	○	●			
NC2035	ALDURA	K20F	For steel with heat treatment up to 56 HRC.			⊙		○		●	
NC9036	DLC	K20F	For non-ferrous metal, Al, Al-alloy, Brass, copper and long cutting chip metal.				⊙		●		⊙

● Best ⊙ Suit ○ Possible

▶ Holder >>

- One holder supports the entire X060 series of engraving inserts.

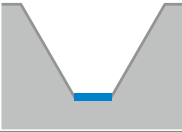


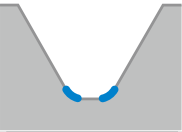







Code	Parts No.	Ød	L	Screw	Key
69X001	00-99619-X060-06	6	40	NS-22044 0.9Nm	NK-T7
69X002	00-99619-X060-06L	6	60		

► Enquiry Example >> X060 A 30 W 030 S - NC2032

Series	Angle	Bottom Form	Bottom Width	Depth	Corner Shape	Insert Grade
X060	A 30 from 10°~120°	<input checked="" type="checkbox"/> W	030	T 0.05	<input checked="" type="checkbox"/> S Flat	<input checked="" type="checkbox"/> NC2032
		<input type="checkbox"/> R			<input type="checkbox"/> R Radius	<input type="checkbox"/> NC2035
					-----	<input type="checkbox"/> NC9036
						<input type="checkbox"/> NC2017

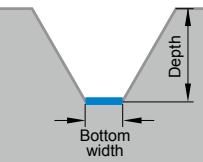
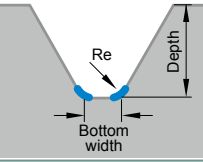
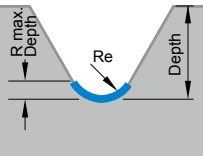
► Profile Example >>

Angled form	Angle	Bottom Form	Bottom Width	Corner Shape	Comment
	30°	W	0.30	S	Angle Possible from 10° up to 120°
					Bottom Form W for flat shape or R for radius shape
Radius angled form	Angle	Bottom Form	Bottom Width	Corner Shape	Bottom Width Bottom Width of engraving. Minimum width of bottom: 0.1 mm or 0.005"
	60°	W	0.50	R	Depth Depth of engraving
					Corner Shape S for flat shape or R for radius shape
Radius form	Angle	Bottom Form	Radius		Grade Refer to previous page
	60°	R	0.50		
					

Engraving Tool

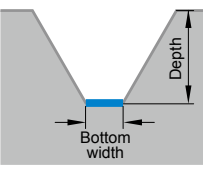
► Developed inserts (Non-stock)

● Best ◎ Suit ○ Possible

Angled form	Developed Non-Stock	Angle	Coating	Re	Bottom width	Depth	P	M	K	N	H	S
	X060A30W051S-NC2032	30°	TiALN	-	0.508	2.0	●	○	●			
	X060A60W020S-NC9036	60°	DLC	-	0.2	1.2		◎		●		◎
	X060A60W030S-NC9036				0.3	2.0		◎		●		◎
Radius angled form	Developed Non-Stock	Angle	Coating	Re	Bottom width	Depth	P	M	K	N	H	S
	X060A30W040R-NC9036	30°	DLC	0.08	0.4	2.0		◎		●		◎
	X060A45W010R-NC2035	45°	ALDURA	0.02	0.1	1.5	◎		○		●	
	X060A90W030R-NC2032	90°	TiALN	0.06	0.3	0.5	●	○	●			
Radius form	Developed Non-Stock	Angle	Coating	Re	Rmax. Depth	Depth	P	M	K	N	H	S
	X060A60R040-NC2035	60°	ALDURA	0.4	0.2	1.0	◎		○		●	
	X060A60R040-NC2071		TiN	0.4	0.2	1.0	◎	●		◎		
	X060A60R050-NC2035		ALDURA	0.5	0.25	1.0	◎		○		●	

► Developed inserts (Non-stock)

● Best ◎ Suit ○ Possible

Angled form	Developed Non-Stock	Angle	Coating	Re	Bottom width	Depth	P	M	K	N	H	S
	X060A10W025S-NC9036	10°	DLC	-	0.25	0.5	○	◎	○	●		◎
	X060A20W010S-NC2032	20°	TiALN	-	0.10	0.6	●	○	●			
	X060A20W025S-NC2032		TiALN	-	0.25	1.0	●	○	●			
	X060A20W030S-NC2032		TiALN	-	0.30	2.0	●	○	●			
	X060A20W035S-NC2032		TiALN	-	0.35	1.0	●	○	●			
	X060A20W050S-NC2032		TiALN	-	0.50	1.0	●	○	●			
	X060A20W100S-NC2032		TiALN	-	1.00	1.0	●	○	●			
	X060A30W010S-NC2032		TiALN	-	0.10	1.5	●	○	●			
	X060A30W010S-NC2035	30°	ALDURA	-	0.10	1.5	◎	○	○		●	
	X060A30W030S-NC2032		TiALN	-	0.30	2.0	●	○	●			
	X060A30W040S-NC2032		TiALN	-	0.40	1.0	●	○	●			
	X060A30W051S-NC2032		TiALN	-	0.51	2.0	●	○	●			
	X060A30W100S-NC2032		TiALN	-	1.00	1.0	●	○	●			
	X060A40W010S-NC9036	40°	DLC	-	0.10	1.0		◎	○	●		◎
	X060A40W015S-NC9036		DLC	-	0.15	1.5		◎	○	●		◎
	X060A40W025S-NC2032		TiALN	-	0.25	1.0	●	○	●			
	X060A50W007S-NP9001	50°	-	-	0.07	1.0		◎	○	●		◎
	X060A60W010S-NC2032	60°	TiALN	-	0.10	0.5	●	○	●			
	X060A60W010S-NC9036		DLC	-	0.10	0.5		◎	○	●		◎
	X060A60W015S-NC9036		DLC	-	0.15	0.5		◎	○	●		◎
	X060A60W020S-NC2032		TiALN	-	0.20	1.2	●	○	●			
	X060A60W020S-NC9036		DLC	-	0.20	1.2		◎	○	●		◎
	X060A60W030S-NC2032		TiALN	-	0.30	2.0	●	○	●			
	X060A60W030S-NC9036		DLC	-	0.30	2.0		◎	○	●		◎
	X060A60W040S-NC9036		DLC	-	0.40	1.0		◎	○	●		◎
	X060A60W050S-NC2032		TiALN	-	0.50	1.0	●	○	●			
	X060A60W050S-NC9036		DLC	-	0.50	1.0		◎	○	●		◎
	X060A60W070S-NC2032		TiALN	-	0.70	1.0	●	○	●			
	X060A60W070S-NP9001		-	-	0.70	2.0		◎	○	●		◎
	X060A60W075S-NC9036		DLC	-	0.75	1.0		◎	○	●		◎
	X060A60W090S-NC9036		DLC	-	0.90	1.0		◎	○	●		◎
	X060A60W100S-NC2032		TiALN	-	1.00	1.0	●	○	●			
	X060A60W110S-NC9036		DLC	-	1.10	1.0		◎	○	●		◎
	X060A66W030S-NC2032		66°	TiALN	-	0.30	1.0	●	○	●		
	X060A70W020S-NC2032	70°	TiALN	-	0.20	1.0	●	○	●			
	X060A90W015S-NC9036	90°	DLC	-	0.15	1.0		◎	○	●		◎
	X060A90W030S-NC9036		DLC	-	0.30	1.0		◎	○	●		◎
	X060A90W050S-NC9036		DLC	-	0.50	1.0		◎	○	●		◎
	X060A90W080S-2T-NC9036		DLC	-	0.80	1.8		◎	○	●		◎

► Developed inserts (Non-stock)

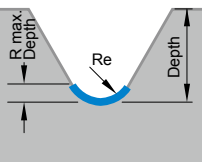
●Best ◎Suit ○Possible

Radius angled form	Developed Non-Stock	Angle	Coating	Re	Bottom width	Depth	P	M	K	N	H	S
	X060A10W020R-NC2035	10°	ALDURA	0.04	0.20	0.5	◎		○		●	
	X060A30W040R-NC2032	30°	TiALN	0.08	0.40	2.0	●	○	●			
	X060A30W040R-NC9036		DLC	0.08	0.40	2.0		◎		●		◎
	X060A30W040R-NC2038		TiCN	0.08	0.40	2.0	◎	●		◎		
	X060A35W010R-NC2035	35°	ALDURA	0.02	0.10	2.0	◎		○		●	
	X060A45W010R-NC2035	45°	ALDURA	0.02	0.10	1.5	◎		○		●	
	X060A45W020R-NC2032		TiALN	0.04	0.20	1.2	●	○	●			
	X060A45W040R-NC2038		TiCN	0.08	0.40	2.0	◎	●		◎		
	X060A45W040R-NC9036		DLC	0.08	0.40	2.0		◎		●		◎
	X060A45W040R-NP9001		-	0.08	0.40	2.0		◎		●		◎
	X060A50W020R-NC9036	50°	DLC	0.04	0.20	1.5		◎		●		◎
	X060A55W043R-NC2032	55°	TiALN	0.20	0.43	0.75	●	○	●			
	X060A55W070R-NC2032		TiALN	0.14	0.70	2.0	●	○	●			
	X060A60W010R-NC2032	60°	TiALN	0.02	0.10	1.0	●	○	●			
	X060A60W012R-NC2032		TiALN	0.07	0.12	1.5	●	○	●			
	X060A60W020R-NC2032		TiALN	0.04	0.20	1.2	●	○	●			
	X060A60W034R-NC9036		DLC	0.07	0.34	1.5		◎		●		◎
	X060A60W040R-NC2032		TiALN	0.08	0.40	2.0	●	○	●			
	X060A60W040R-NC2038		TiCN	0.08	0.40	2.0	◎	●		◎		
	X060A60W040R-NC9036		DLC	0.08	0.40	2.0		◎		●		◎
	X060A60W040R-NP9001		-	0.08	0.40	2.0		◎		●		◎
	X060A60W051R-NC2032		TiALN	0.10	0.51	2.0	●	○	●			
	X060A60W080R-NC2032		TiALN	0.20	0.80	1.7	●	○	●			
	X060A60W090R-NC2032	TiALN	0.18	0.90	1.5	●	○	●				
	X060A70W020R-NC2035	70°	ALDURA	0.04	0.20	1.0	◎		○		●	
	X060A80W060R-NC9036	80°	DLC	0.12	0.60	1.3		◎		●		◎
	X060A90W010R-NC2032	90°	TiALN	0.02	0.10	0.7	●	○	●			
	X060A90W030R-NC2032		TiALN	0.06	0.30	0.5	●	○	●			

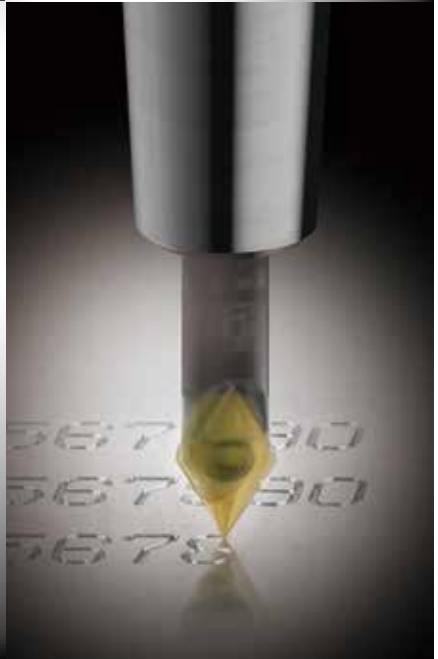
2016.08.31

► Developed inserts (Non-stock)

● Best ◎ Suit ○ Possible

Radius form	Developed Non-Stock	Angle	Coating	Re	Rmax. Depth	Depth	P	M	K	N	H	S
	X060A20R010-NC9036	20°	DLC	0.10	0.08	0.50		◎		●		◎
	X060A21R060(T1.2)-NC2032	21°	TiALN	0.60	0.49	1.20	●	○	●			
	X060A30R010-NC2032	30°	TiALN	0.10	0.07	1.00	●	○	●			
	X060A30R010-NC9036		DLC	0.10	0.07	2.00		◎		●		◎
	X060A30R030-NC2032		TiALN	0.30	0.22	1.50	●	○	●			
	X060A30R030-NC2071		TiN	0.30	0.22	1.50	◎	●		◎		
	X060A325R06(T1.2)-NC2032	32.5°	TiALN	0.60	0.43	1.20	●	○	●			
	X060A40R040-NC2032	40°	TiALN	0.40	0.26	1.00	●	○	●			
	X060A40R080-NC2032		TiALN	0.80	0.53	1.50	●	○	●			
	X060A45R010-NC2032	45°	TiALN	0.10	0.06	1.00	●	○	●			
	X060A45R010-NC2035		ALDURA	0.10	0.06	1.00	◎		○		●	
	X060A45R013-NC2032		TiALN	0.13	0.08	0.28	●	○	●			
	X060A60R010-NC2032	60°	TiALN	0.10	0.05	0.20	●	○	●			
	X060A60R010-NC2035		ALDURA	0.10	0.05	0.2	◎		○		●	
	X060A60R012-NC2032		TiALN	0.12	0.06	1.00	●	○	●			
	X060A60R012-NC2071		TiN	0.12	0.06	1.00	◎	●		◎		
	X060A60R012-NP9001		-	0.12	0.06	1.00		◎		●		◎
	X060A60R040-NC2032		TiALN	0.40	0.20	1.00	●	○	●			
	X060A60R040-NC2035		ALDURA	0.40	0.20	1.00	◎		○		●	
	X060A60R040-NC2071		TiN	0.40	0.20	1.00	◎	●		◎		
	X060A60R050-NC2035		ALDURA	0.40	0.25	1.00	◎		○		●	
	X060A60R060-NC2032		TiALN	0.60	0.30	1.70	●	○	●			
	X060A90R010-NC2035	90°	ALDURA	0.10	0.03	0.60	◎		○		●	
	X060A90R010-NC2071		TiN	0.10	0.03	0.60	◎	●		◎		
	X060A90R010-NC9036		DLC	0.10	0.03	0.60		◎		●		◎

2016.08.31



You will be interested to know the whole range of Nine9 tools.