



# Micro Spot Drill >>>

90° / 120° / 142°

0.1 & 0.2mm

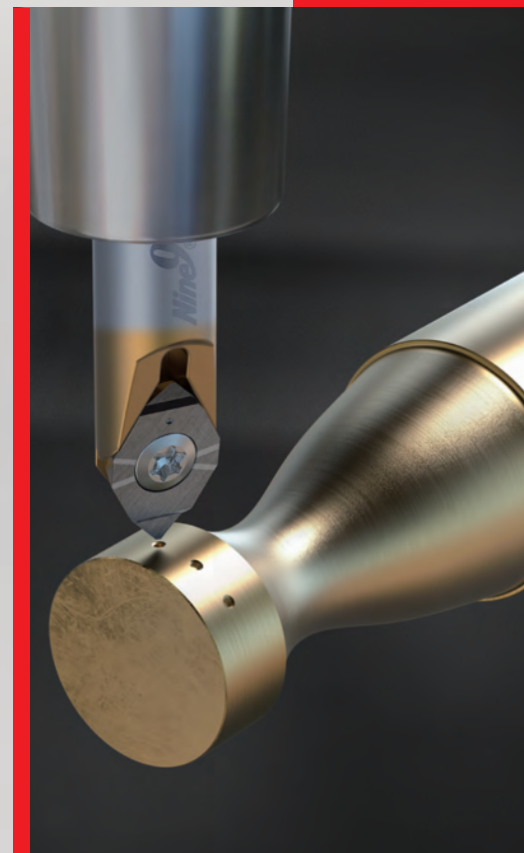
It produces a consistent surface for micro drill successfully to enter the workpiece.

**P M K N H**

► **One Holder Supports The Entire X060 Series Insert.**



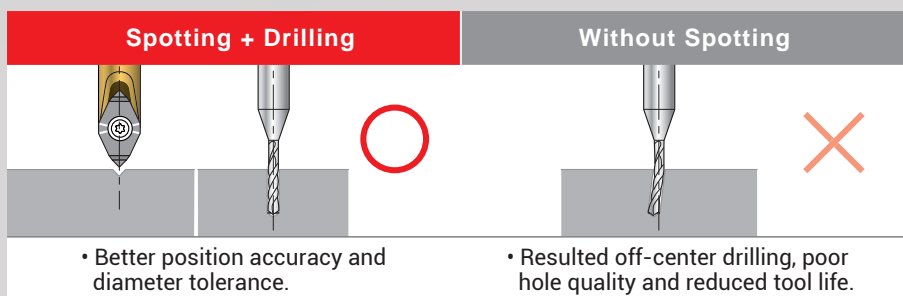
\* Most of hole size in Swiss type lathe or small milling machine is between 0.2~1mm.



## Features >

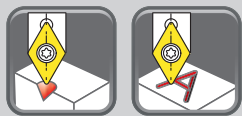
### ► Each Insert Has 2 Cutting Edges.

- Micro spot drill geometries are designed to optimize rigidity and accuracy with a point angle to guide micro drill towards the hole's center line.
- Carbide insert can stand very long tool life.
- It produces a consistent surface for micro drill to enter the workpiece especially for round, angled or curved surfaces.



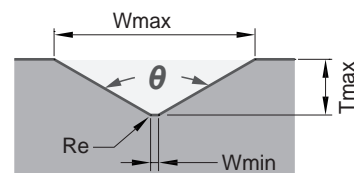
# 0.1 and 0.2<sub>mm</sub> Micro Spot Drill 90°, 120° & 142°

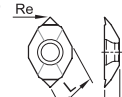
90°  
120°  
142°



## ► Inserts >>

- NC2032:** • For all kinds of steel from < HRC 40, carbon steel, alloy steel, and cast iron.
- NC2035:** • ALDURA coating, reduces heat and tool wear.  
• For steel with heat treatment up to HRC 50.
- XP9001:** • For non-ferrous metal, aluminum, brass, copper, plastic, acrylic.

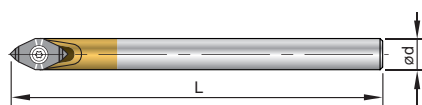


Angle ±0.5	Code	Parts No.		Coating	Grade		Dimensions			Wmin.	Wmax.	Tmax.				
							L	S	Re							
90°	01X0082	X060A90W010R	NC2032	TiAIN	K20F		6	2.05	0.02	0.1	1.1	0.5				
	01X0221		NC2035	ALDURA												
	01X0220		XP9001	Uncoated												
90°	01X0207	*X060A90W020R	NC2032	TiAIN	K20F				6	2.05	0.04	0.2	2.2	1.0		
	01X0208		NC2035	ALDURA												
	01X0209		XP9001	Uncoated												
120°	01X0222	X060A120W010R	NC2032	TiAIN	K20F						6	2.05	0.02	0.1	2.53	0.7
142°	01X0223	X060A142W010R	NC2032	TiAIN	K20F								0.02	0.1	2.42	0.4

\* X060A90W020R is also good for engraving.

## ► Holder >>

- One holder supports the entire X060 series of carbide inserts.
- XL (100mm length) is only for Al, Al-alloy cutting, unbalanced <0.6gm.



Code	Parts No.	Shank	Ød	L	Screw	Key
69X001	00-99619-X060-06	Steel	6	40	*NS-22044 0.9Nm	NK-T7
69X002	00-99619-X060-06L	Carbide	6	60		
69X003	00-99619-X060-06LS	Steel	6	60		
69X004	00-99619-X060-06XL	Carbide	6	100		
69X005	00-99619-X060-08	Steel	8	60		

\*Torque screwdriver is recommended.

## ► Cutting Data >>

Workpiece Material		S (r.p.m)	f (mm/rev.)			Grade of Insert
			X060A90W010R	X060A90W020R	X060A120W010R X060A142W010R	
P	Carbon steel	8000 ~ 40000	0.002 ~ 0.012	0.002 ~ 0.015	0.002 ~ 0.015	NC2032
	Alloy steel		0.002 ~ 0.010	0.002 ~ 0.010	0.002 ~ 0.010	NC2032, NC2035
M	Stainless steel		0.002 ~ 0.008	0.002 ~ 0.010	0.002 ~ 0.010	NC2032
K	Cast Iron		0.002 ~ 0.010	0.002 ~ 0.010	0.002 ~ 0.010	NC2032
N	Non-ferrous metal		0.002 ~ 0.015	0.002 ~ 0.020	-	XP9001
H	Hardened steel < HRC50		0.002 ~ 0.006	0.002 ~ 0.006	-	NC2035