



NC Spot Drill >>>

No Need To Choose, Nine9 Does It All!

NC Spot Drill with indexable carbide insert.
High efficiency! Long tool life! Cost saving!



- ▶ Various Inserts Can Fit On The Same Tool Holder.
- ▶ One Tool For Various Applications.

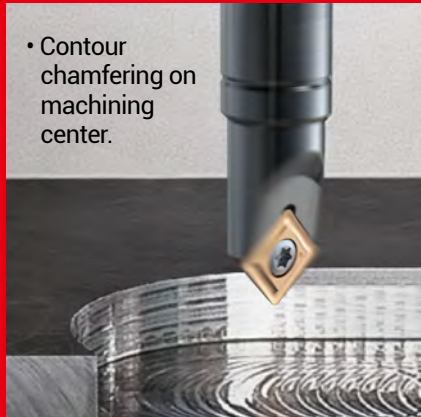


Features >>>

- ▶ Spotting Produces Better Hole Position And Geometrically Uniform Holes.
- ▶ Available Shank Diameter- $\varnothing 5, \varnothing 6, \varnothing 8, \varnothing 10, \varnothing 12, \varnothing 16, \varnothing 20, \varnothing 25\text{mm}, \varnothing 3/8", \varnothing 1/2", \varnothing 5/8", \varnothing 1/4", \varnothing 3/4", \varnothing 1", \text{M5, M6 And M8}$.
- ▶ $60^\circ / 82^\circ / 90^\circ / 100^\circ / 142^\circ / 145^\circ$ Angle For Different Applications.
 - Suitable for spotting, chamfering, facing, grooving and engraving.
 - Each insert has 2 or 4 cutting edges.
 - Increase cutting speed with coated carbide inserts.



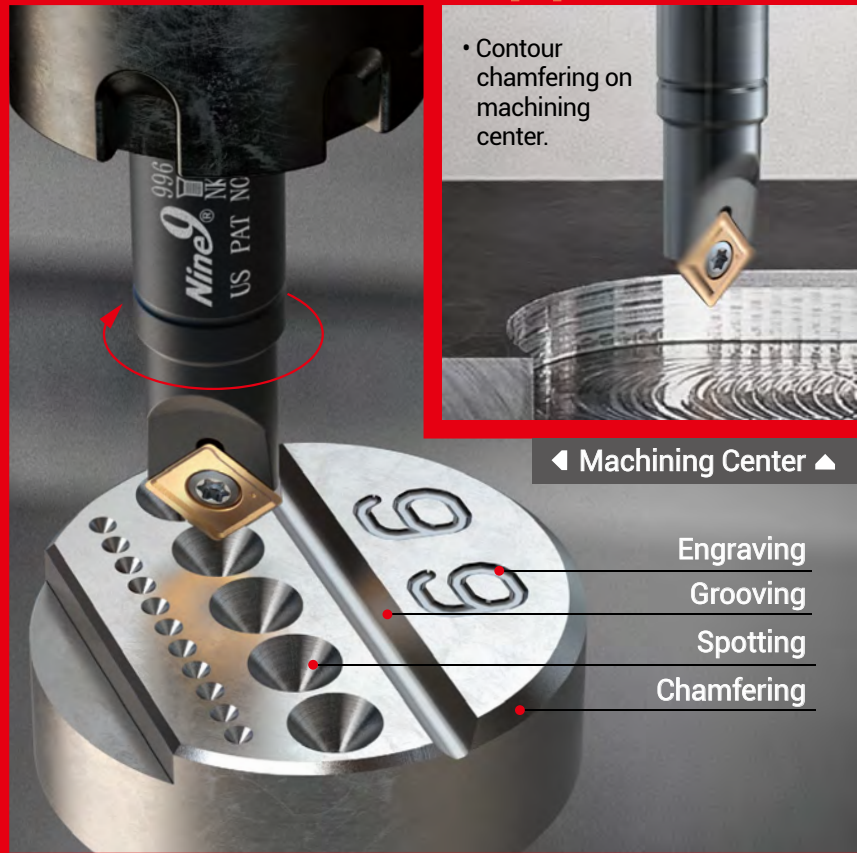
Applications



• Contour chamfering on machining center.



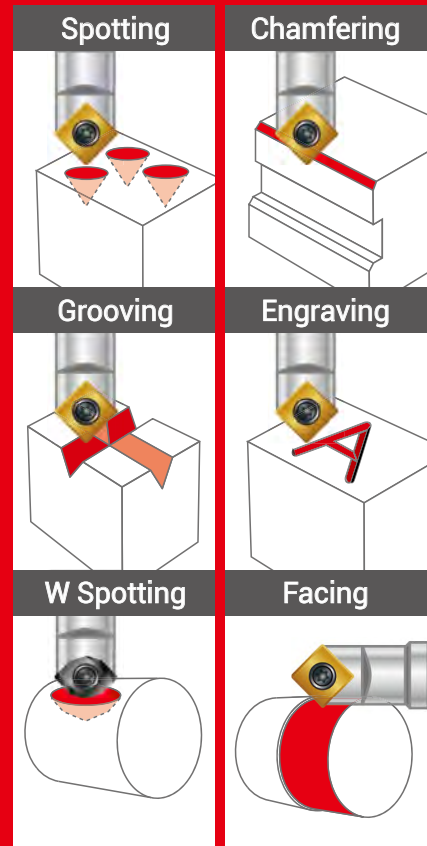
▼ CNC Lathes



◀ Machining Center ▶

- Engraving
- Grooving
- Spotting
- Chamfering

“ One tool will perform multiple applications. Suitable for spotting, chamfering, facing, grooving and engraving. ”



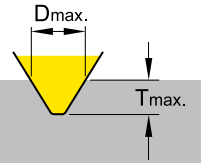
60° N9MT11T3P60



► Inserts >>

- Fully ground spotting insert, for 60 degree spotting and engraving.

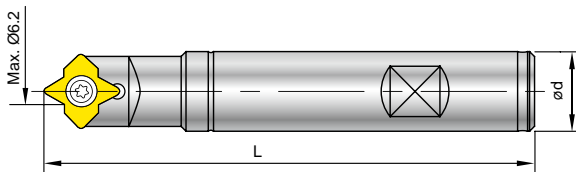
- NC40:**
- Universal grade for all unhardened steel and cast iron.
 - Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Dimensions	Dmax.	Tmax.
014204	N9MT11T3P60-NC40	TiN	P35		6.2	4

► Holder >>

- A single cutting edge design creates higher precision and position when spotting.
- Applications: For spotting, engraving, small grooving on milling machines, machining centers.



Code	Parts No.	Ød	L	Screw	Key
604002	00-99616-14-12	12	100	NS-35080 2.5 Nm	NK-T15
604004	00-99616-14	16	100		

2

NC Spot Drill

V9MT0802 / V9MT12T3

60°



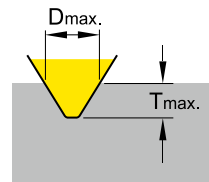
► Inserts >>

- 60 degree indexable spotting insert, Dmax 13mm.
- Special geometry with supporting edges for using in high speed machining.
- Excellent tool for grooving. Saving machining time!

NC5071: • For high alloy steel and cast iron.
• Each insert has 2 cutting edges.

NC2071: • For carbon steel, low alloy steel, stainless steel, non-ferrous and titanium.
• Each insert has 2 cutting edges.

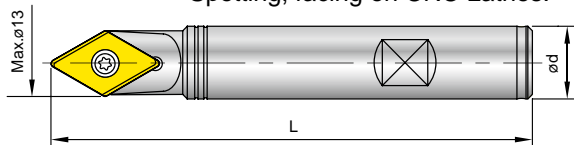
NC9076: • For non-ferrous material such as aluminum, al-alloy, titanium, brass, copper and long cutting chip metal.
• Produces excellent surface finish on non-ferrous metal.
• Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Diagram	Dimensions			Dmax.	Tmax.	
					L	S	Re			
019202	V9MT0802CT	NC5071	TiAlN & TiN		8	2.38	0.4	9	7.3	
019201		NC2071	TiN							K20F
019203		NC9076	DLC							
015204	V9MT12T3CT	NC5071	TiAlN & TiN		12.7	3.97	0.8	13	10.3	
015201		NC2071	TiN							K20F
015202		NC9076	DLC							

► Holder >>

- A single cutting edge creates higher precision and position when spotting.
- Applications:
 - Spotting, engraving, grooving and chamfering on milling machines, machining centers.
 - Spotting, facing on CNC Lathes.



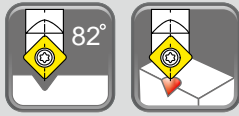
Code	Parts No.	Ød	L	Insert Type	Screw	Key
609001	00-99616-09V (Cylindrical shank)	8	60	V9MT08	*NS-25045 0.9 Nm	NK-T7
605001	00-99616-13V	16	100	V9MT12	NS-35080 2.5 Nm	NK-T15
615001	00-99616-13V-5/8	5/8"	100			

*Torque screwdriver is recommended.

2

NC Spot Drill

82° V0820802 / V08212T3



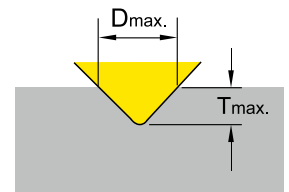
► Inserts >>

- 82 degree indexable spotting insert, Dmax. 14mm (0.551").
- Match the geometry of American standard flat head screw hole.
- Special geometry with supporting edges for high speed machining.

NC5071: • For high alloy steel and cast iron.
• Each insert has 2 cutting edges.

NC2071: • For carbon steel, low alloy steel, stainless steel, non-ferrous and titanium.
• Each insert has 2 cutting edges.

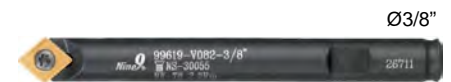
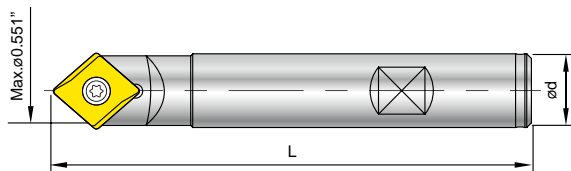
NC9076: • For non-ferrous material such as aluminum, al-alloy, titanium, brass, copper and long cutting chip metal.
• Produces excellent surface finish on non-ferrous metal.
• Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Image	Dimensions			Dmax.	Tmax.
					L	S	Re		
0108203	NC5071	TiAlN & TiN	K20F		8	2.38	0.4	9 (0.354")	4.8 (0.189")
0108201	V0820802	TiN							
0108202	NC9076	DLC							
0108213	NC5071	TiAlN & TiN	K20F		12.7	3.97	0.8	14 (0.551")	7.5 (0.295")
0108211	V08212T3	TiN							
0108212	NC9076	DLC							

► Holder >>

- Special cutting edge design gives higher precision and position when spotting.
- Applications : • Spotting, engraving, grooving and chamfering on milling machines, machining centers.
• Spotting, facing on CNC Lathes.



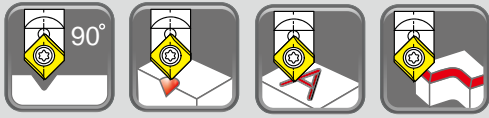
Code	Parts No.	Ød	L	Insert Type	Screw	Key
693001	00-99619-V082-3/8	3/8"	90	V0820802	NS-30055 2.0 Nm	NK-T8
693002	00-99619-V082-5/8	5/8"	100	V08212T3	NS-35080 2.5 Nm	NK-T15

2

NC Spot Drill

N9MT05T1 / N9MT0602

90°



► Inserts >>

- Mini spotting drill with indexable insert, low cutting power required.
- Especially good for Swiss type automatic lathes and CNC lathes.

NC5071: • For high alloy steel and cast iron.

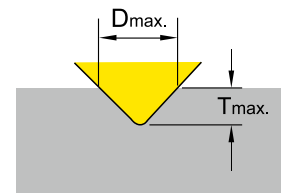
- Each insert has 2 cutting edges.

NC2071: • For carbon steel, low alloy steel, stainless steel, non-ferrous and titanium.

- Geometry with supporting edges to stabilize the cutting condition on low power machine.
- Each insert has 2 cutting edges.

NC9076: • For non-ferrous material such as aluminum, titanium, brass, copper and stainless steel.

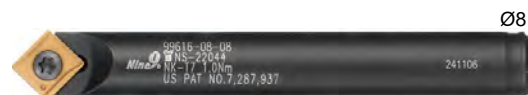
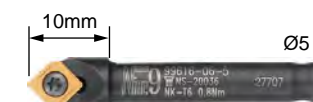
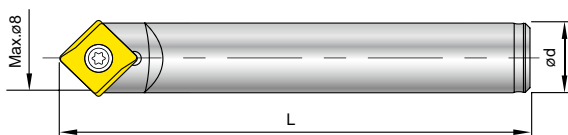
- Produces excellent surface finish on non-ferrous metal.
- Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Re	Dimensions			Dmax.	Tmax.
					L	S	Re		
011209	NC5071	TiAlN & TiN	K20F		5	1.8	0.4	6	2.8
011201	N9MT05T1CT	NC2071			TiN				
011202	NC9076	DLC							
012204	NC5071	TiAlN & TiN	K20F		6.35	2.38	0.4	8	3.8
012201	N9MT0602CT	NC2071			TiN				
012202	NC9076	DLC							

► Holder >>

- Smallest indexable spotting drill holder.
- Single cutting edge design gives higher precision when spotting.
- Applications : • Spotting, engraving, and chamfering on milling machines, machining centers.
- Spotting, facing on CNC Lathes.



Code	Parts No.	Ød	L	Insert Type	Screw	Key
601001	00-99616-06-6	6	35	N9MT05	*NS-20036 0.6 Nm	NK-T6
601002	00-99616-06-5	5	35			
601003	00-99616-06-6L	6	60			
602001	00-99616-08-8	8	60	N9MT06	*NS-22044 0.9 Nm	NK-T7

Note:601003 is carbide shank holder.

*Torque screwdriver is recommended.

2

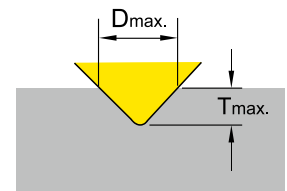
NC Spot Drill

90° N9MT0802



► Inserts >>

- NC40:**
 - General purpose, universal grade for all unhardened steel.
 - Each insert has 4 cutting edges.
- NC10:**
 - High positive angle and fully ground cutting edge and relief angle.
 - Universal grade for non-ferrous metal, cast iron and stainless steel.
 - Each insert has 4 cutting edges.
- H-NC5071:**
 - For carbon steel C>0.3%, high alloy steel C>0.3% and cast iron.
 - Each insert has 2 cutting edges.
- H-NC40:**
 - For carbon steel C<0.3%, low alloy steel C<0.3%, stainless steel, non-ferrous and titanium.
 - Each insert has 2 cutting edges.
- H-NC9076:**
 - High positive geometry and sharp edge.
 - For non-ferrous material such as aluminum, titanium, brass, copper and long cutting chip metal.
 - Produces excellent surface finish on non-ferrous metal.
 - Each insert has 2 cutting edges.

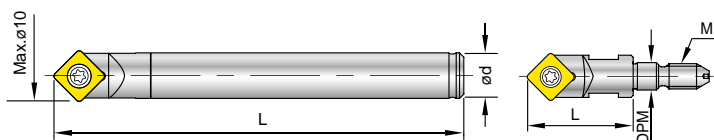


Code	Parts No.	Coating	Grade	Re	Dimensions			Dmax.	Tmax.
					L	S	Re		
013401	N9MT080208CT	NC40	TiN		8.31	2.38	10	4.5	0.8
013402	N9MT080204CT	NC40	TiN						0.4
013403		NC10	TiAlN						0.4
013206		H-NC5071	TiAlN & TiN						0.8
013201	N9MT0802CT2T	H-NC40	TiN						0.8
013202		H-NC9076	DLC						

* H type is with supporting edge.

► Holder >>

- Single cutting edge design gives higher precision when spotting.
- Applications :
 - Spotting, engraving, grooving and chamfering on milling machines, machining centers.
 - Spotting, facing, turning on CNC Lathes.



Code	Parts No.	Ød	L	M	DPM	Screw	Key
603001	00-99616-10	10	90	-	-		
603003	00-99616-10-SL10 (Weldon shank)	10	90	-	-		
613001	00-99616-3/8	3/8"	90	-	-	NS-30055 2.0 Nm	NK-T8
623001	00-99616-10-M5	-	25	M5xP0.8	5.5		
623002	00-99616-10-M6	-	25	M6xP1.0	6.5		

• Refer to Page 9-156 for extension bars.

2

NC Spot Drill

N9MT0802

90°




► Single Set >>

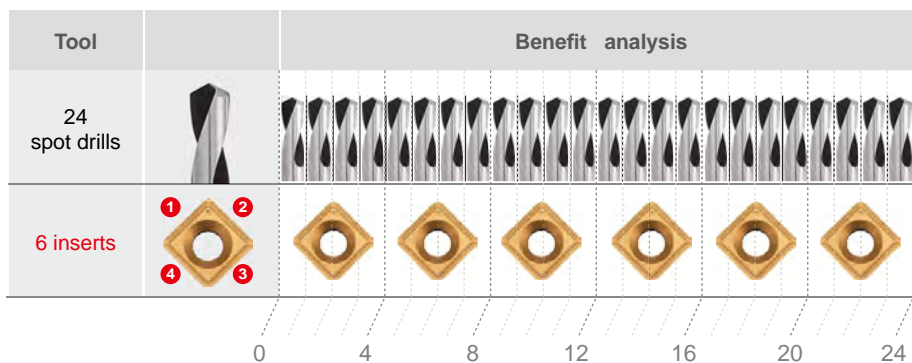
Code	Parts No.	Ød	Total Length	Insert fitted	Dmax.	Tmax.
603101-3401	00-99616-10-02S	10	90	N9MT080208CT-NC40	10	4.5
603101-3403	00-99616-10-02SAL	10	90	N9MT080204CT-NC10	10	4.5

► Starter Package >>

- Selected package for starter who wants to try NC Spot Drill.
- Included one insert on tool holder and five inserts in the pocket.
- Total 6 inserts are equal to 24 spot drills.

Code	Parts No.	Ød	Insert included	Content
603201-3401	00-99616-10-ME6	10	N9MT080208CT-NC40	1 tool holder + 6 inserts + 1 key 
603201-3403	00-99616-10-ME6AL	10	N9MT080204CT-NC10	
613201-3401	00-99616-10-IN6	3/8"	N9MT080208CT-NC40	
613201-3403	00-99616-10-IN6AL	3/8"	N9MT080204CT-NC10	

► Comparison >>



Note: N9MT080201W Engraving , see page 3-72.

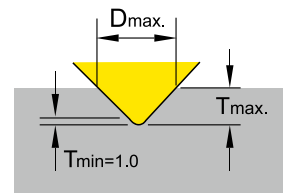


90° N9MT11T3

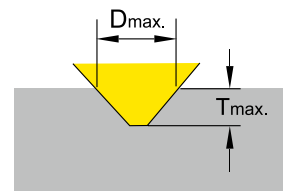


► Inserts >>

- NC40:**
 - Wiper design, universal grade for all unhardened steel.
 - Each insert has 4 cutting edges.
- NC10:**
 - High positive angle and fully ground cutting edge and relief angle.
 - Universal grade for non-ferrous metal, cast iron and stainless steel.
 - Each insert has 4 cutting edges.
- NC60:**
 - Wiper design cermet insert, for hardened steel up to 56 HRC.
 - Each insert has 4 cutting edges.
- H-NC5071:**
 - For carbon steel $C > 0.3\%$, high alloy steel $C > 0.3\%$ and cast iron.
 - Each insert has 2 cutting edges.
- H-NC40:**
 - For carbon steel $C < 0.3\%$, low alloy steel $C < 0.3\%$, stainless steel, non-ferrous and titanium.
 - Each insert has 2 cutting edges.
- H-NC9076:**
 - High positive geometry and sharp edge.
 - For non-ferrous material such as aluminum, titanium, brass, copper and long cutting chip metal.
 - Produces excellent surface finish on non-ferrous metal.
 - Each insert has 2 cutting edges.



NC40 / Wiper design / NC60



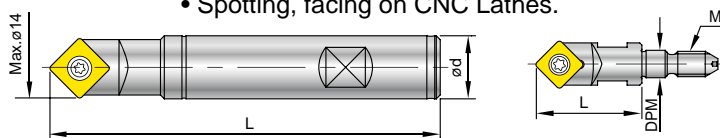
Other grade

Code	Parts No.	Coating	Grade	Re	Dimensions			Dmax.	Tmax.
					L	S	Re		
014401	NC40	TiN	P35		11.11	3.97	14	7	0.8
014402	NC10	TiAlN	K10F						(0.3)
014403	NC60	CERMET							0.8
014234	H-NC5071	TiAlN & TiN	K20F						0.8
014202	H-NC40	TiN	K20F						0.8
014203	H-NC9076	DLC	K20F						0.8

* H type is with supporting edge.

► Holder >>

- Single cutting edge design gives higher precision when spotting.
- Applications :
 - Spotting, engraving, grooving and chamfering on milling machines, machining centers.
 - Spotting, facing on CNC Lathes.



Code	Parts No.	Ød	L	M	DPM	Screw	Key
604002	00-99616-14-12	12	100	-	-	NS-35080 2.5 Nm	NK-T15
604004	00-99616-14	16	100	-	-		
604007	00-99616-14-150L	16	150	-	-		
604009	00-99616-14-220L	20	220	-	-		
614001	00-99616-14-1/2	1/2"	100	-	-		
614002	00-99616-14-5/8	5/8"	100	-	-		
624001	00-99616-14-M8	-	30	M8xP1.25	8.5		

• Refer to Page 9-156 for extension bars.

N9MT11T3

90°



► Single Set >>

Code	Parts No.	Ød	Total Length	Insert fitted	Dmax.	Tmax.
604104-4401	00-99616-14-02S	16	100	N9MT11T3CT-NC40	14	7
604104-4402	00-99616-14-02SAL			N9MT11T3CT-NC10	14	7
614102-4401	00-99616-14-5/8-02S	5/8"	100	N9MT11T3CT-NC40	0.551"	0.276"
614102-4402	00-99616-14-5/8-02SAL			N9MT11T3CT-NC10	0.551"	0.276"

2

NC Spot Drill

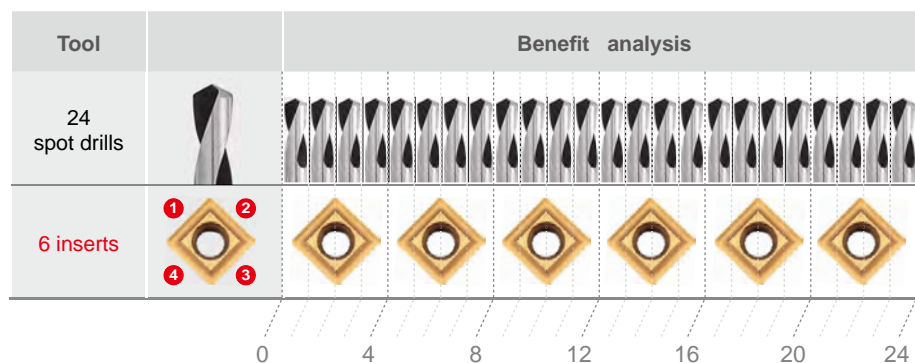
► Starter Package >>

- Selected package for starter who wants to try NC Spot Drill.
- Included one insert on tool holder and five inserts in the pocket.
- Total 6 inserts are equal to 24 spot drills.

Code	Parts No.	Ød	Insert included	Content
604204-4401	00-99616-14-ME6	16	N9MT11T3CT-NC40	1 tool holder + 6 inserts + 1 key
604204-4402	00-99616-14-ME6AL		N9MT11T3CT-NC10	
614202-4401	00-99616-14-IN6	5/8"	N9MT11T3CT-NC40	
614202-4402	00-99616-14-IN6AL		N9MT11T3CT-NC10	



► Comparison >>



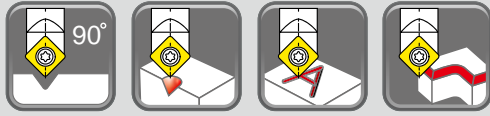
Low Cost! Economy!

1 2
4 3

6 inserts
12 inserts
24 inserts

24 spot drills
48 spot drills
96 spot drills

90° N9MT1704



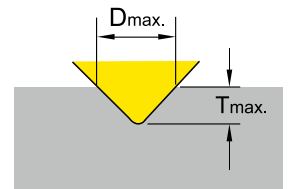
► Inserts >>

- 90 degree indexable spot drill insert, Dmax. 22mm.

- NC5071:**
- High positive geometry, fully ground cutting edge and relief angle.
 - For high alloy steel and cast iron.
 - Each insert has 2 cutting edges.

- NC9036:**
- For non-ferrous material such as aluminum, acrylic, brass, copper, titanium and long cutting chip materials.
 - High positive geometry and sharp edge produces excellent surface finish.
 - Each insert has 2 cutting edges.

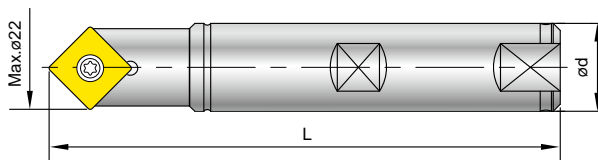
- NC2071:**
- For carbon steel, low alloy steel, stainless steel, non-ferrous and titanium.
 - Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Image	Dimensions			Dmax.	Tmax.
					L	S	Re		
016216	NC5071	TiAlN & TiN	K20F		17	4.76	1.2	22	10.4
016211	N9MT1704CT NC9036	DLC	K20F						
016201	NC2071	TiN	K20F						

► Holder >>

- Single cutting edge design gives high precision when spotting.
- Applications : • Spotting, engraving, grooving and chamfering on milling machines, machining centers.
- Spotting, facing on CNC Lathes.



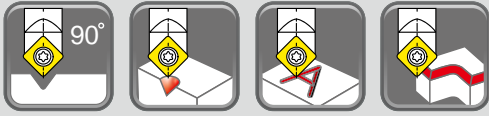
Code	Parts No.	Ød	L	Screw	Key
606001	00-99616-22	20	100	NS-50125 5.5 Nm	NK-T20
606002	00-99616-22-25	25	150		

2

NC Spot Drill

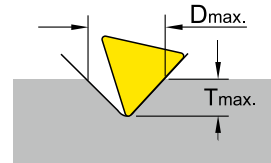
N9MT220408 / N9MT2506

90°



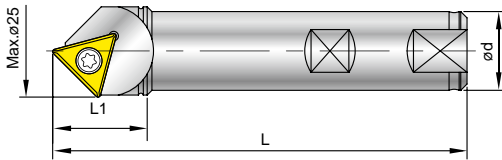
► N9MT220408

- NC40:**
- Universal grade for carbon steel, alloy steel and cast iron.
 - Each insert has 3 cutting edges.



Code	Parts No.	Coating	Grade	Diagram	Dimensions			Dmax.	Tmax.
					L	S	Re		
017301	N9MT220408CT-NC40	TiN	P35		20.83	4.76	---	25	12.2

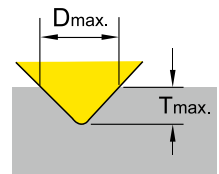
* 5 pcs per box.



Code	Parts No.	Ød	L	L1	Screw	Key
607001	00-99616-25-CT28	25	120	30	NS-40100 3.5 Nm	NK-T15
617001	00-99616-1-CT28	1"				

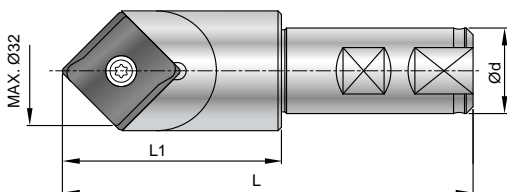
► N9MT2506 >>

- NC2033:**
- For carbon steel, alloy steel, high alloy steel, cast iron and hardened steel < 50 HRC.
 - Each insert has 2 cutting edges.
- XP9000:**
- High positive geometry and sharp edge produces excellent surface finish.
 - For non-ferrous material such as aluminum, titanium, brass, copper and long cutting chip metal.
 - Each insert has 2 cutting edges.



Code	Parts No.	Coating	Grade	Diagram	Dimensions			Dmax.	Tmax.
					L	S	Re		
018201	N9MT2506CT	NC2033	TiAlN		25	6.35	1.2	32	15.4
018202		XP9000	Uncoated						

* 2 pcs per box.



Code	Parts No.	Ød	L	L1	Screw	Key
608001	00-99616-32-25	25	120	64	NS-60180 5.5 Nm	NK-UT25
618001	00-99616-32-1	1"				

2
NC Spot Drill

100° N9MT11T3CT2T-H



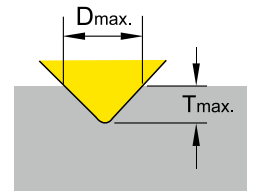
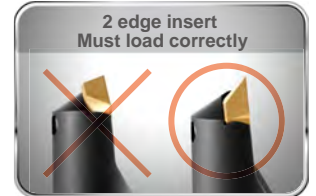
► Inserts >>

• For aircraft 100° normal rivet hole and screw hole.

H-NC5071: • For carbon steel C>0.3%, high alloy steel C>0.3% and cast iron.
• Each insert has 2 cutting edges.

H-NC40: • For carbon steel C<0.3%, low alloy steel C<0.3%, stainless steel, non-ferrous and titanium.
• Each insert has 2 cutting edges.

H-NC9076: • High positive geometry and sharp edge.
• For non-ferrous material such as aluminum, titanium, brass, copper and long cutting chip metal.
• Produces excellent surface finish when chamfering non-ferrous metal.
• Each insert has 2 cutting edges.

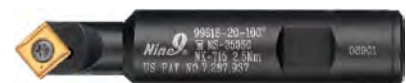
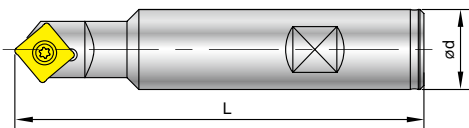


Code	Parts No.	Coating	Grade	Diagram	Dimensions			Dmax.	Tmax.
					L	S	Re		
014234	H-NC5071	TiAlN & TiN	K20F		11	3.97	0.8	16	6.3
014202	H-NC40	TiN							
014203	H-NC9076	DLC							

* H type is with supporting edge.

► Holder >>

• Spotting produces better hole position and geometrically uniform holes.
• Increase tool life of the next drilling operation.



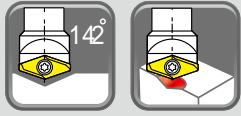
Code	Parts No.	Ød	L	Screw	Key
604011	00-99616-20-100	20	100	NS-35080 2.5 Nm	NK-T15

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NC Spot Drill

V14208 / V14216

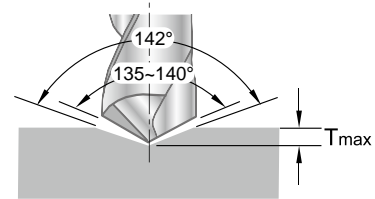
142°



► Inserts >>

- For spotting before drilling by 135° - 140° point angle high performance drill.
- 142 degree indexable spotting drills. Dmax. 32mm.

- NC2071:**
- High positive geometry, fully ground cutting edge and relief angle.
 - Universal grade for all unhardened steel and cast iron.
 - Each insert has 2 cutting edges.

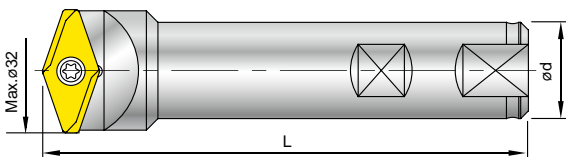


Code	Parts No.	Coating	Grade	Diagram	Dimensions			Dmax.	Tmax.
					L	S	Re		
0114201	V1420803-NC2071	TiN	K20F		8	2.38	0.8	16	2.8
0114211	V1421604-NC2071				14	4.76	1.2	32	5.5

The quantity of insert per box.:	V1420803	V1421604
	10	5

► Holder >>

- Spotting produces better hole position and geometrically uniform holes.
- Extend your drill life with 142° spotting. Reduce your drilling cost.
- Higher accuracy of positioning and diameter tolerance !



Code	Parts No.	Ød	L	Insert Type	Screw	Key
696001	00-99619-V142-16	16	100	V1420803	NS-30072 2.0 Nm	NK-T9
696002	00-99619-V142-32	25	120	V1421604	NS-50125 5.5 Nm	NK-T20

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NC Spot Drill

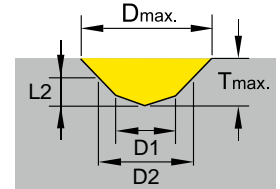
145°
+
90°

WSP Spotting New Geometry of Spotting Tool

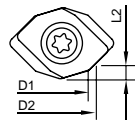


▶ Inserts >>

- NC2033:**
- Fully ground cutting edge and relief angle.
 - Universal grade for steel, cast iron and hardened steel < 50 HRC.
 - Each insert has 2 cutting edges.



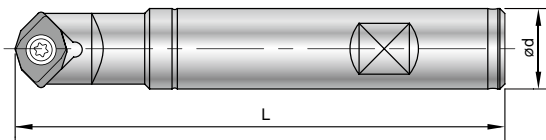
Code	Parts No.	Coating	Grade	Thread Size	Dimensions			Dmax.	Tmax.
					*D1±0.05	D2	L2		
013203	N9MT0802M04C-NC2033	TiAlN	K20F	M4x0.7	3.30	4.20	0.93	8	2.83
013204	N9MT0802M05C-NC2033			M5x0.8	4.20	5.25	1.14		2.52
013205	N9MT0802M06C-NC2033			M6x1.0	5.00	6.30	1.39		2.24
014219	N9MT11T3M08C-NC2033	TiAlN	K20F	M8x1.25	6.80	8.40	1.81	13	4.11
014220	N9MT11T3M10C-NC2033			M10x1.5	8.50	10.50	2.28		3.53
014221	N9MT11T3UNC25-NC2033	TiAlN	K20F	1/4-20 UNC	5.08	6.70	1.55	13	4.70
014222	N9MT11T3UNC31-NC2033			5/16-18 UNC	6.53	8.40	1.90		4.20
014223	N9MT11T3UNC38-NC2033			3/8-16 UNC	7.94	10.00	2.22		3.72
016205	N9MT1704M12C-NC2033	TiAlN	K20F	M12x1.75	10.25	12.60	2.91	20	6.61
016206	N9MT1704M14C-NC2033			M14x2.0	12.00	14.70	3.22		5.87
016207	N9MT1704M16C-NC2033			M16x2.0	14.00	16.80	3.51		5.11



Note: *D1 refer to the Tap Pre-drilling sizes. D2 : Thread size x 5%. L2 : Depth of D2., see page 2-35 for example.

▶ Holder >>

- Utilizes standard **NC Spot Drill** basic holder.
- Holders and inserts are interchangeable.



Code	Parts No.	Ød	L	Insert Type	Screw	Key
603001	00-99616-10	10	89.08±0.29	N9MT0802	NS-30055 2.0Nm	NK-T8
613001	00-99616-3/8	3/8"				
604004	00-99616-14	16	97.55±0.55	N9MT11T3	NS-35080 2.5Nm	NK-T15
614002	00-99616-14-5/8	5/8"				
606001	00-99616-22	20	96.24±0.64	N9MT1704	NS-50125 5.5Nm	NK-T20
616001	00-99616-22-3/4	3/4"				

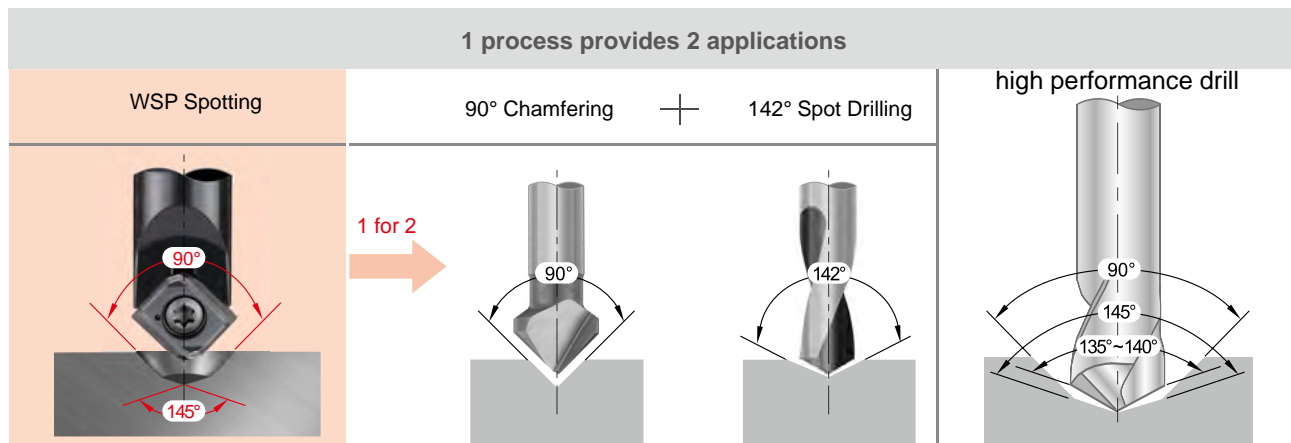
2

NC Spot Drill - WSP

Performance

► Combined spotting and chamfering 145° + 90° >>

- Reduces process to one operation. Shorten cycle time.
- Use to spot prior to drilling with high performance drills for higher accuracy of hole position.
- Good support spotting process for round parts.



► Comparison >>

WSP Spotting + Drill	Drill + Spotting	Step Drill
<ul style="list-style-type: none"> • Shorter drilling time • Guided at the strongest corner of drill • Longer tool life • Good position accuracy 	<ul style="list-style-type: none"> • Longer drilling time • Guided at the weakest corner of drill • Shorter tool life 	<ul style="list-style-type: none"> • Tool cost is high • Shorter tool life • Can't drill directly from solid on round parts. • Bad position accuracy.

► Example >>

- The recommended chamfering is 5% of the nominal diameter of the thread, for example 6.3 mm for M6 thread.
- If you need larger chamfer, it can be calculated the required depth of spotting.

