



Value.Quality.Service



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**End Mill**

**2024-25**

















# Application

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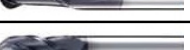



\* Produce on Request

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## Aluminum Cutting Series : Square End Mill & Ball Nose









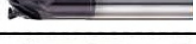
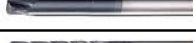


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## Solid Carbide

TYPE OF MATERIAL	WC (%)	CO (%)	GRAIN SIZE	T.R.S(N/mm <sup>2</sup> )	DENSITY(N/mm <sup>2</sup> )	HARDNESS HRA
MG 12	88	12	0.4	3800	14	92.3
MG 9	91	9	0.2	4000	14.3	94

## Diagrammatic Explanation

HELIX ANGLE		CORNER RADIUS R	
BEST FOR LONG NECK MACHINING		GRAIN SIZE	
		FLUTE	

# Hardness and Coating


## Hardness

HRC	62↑	58~62	52~58	45~52	40~45	30~40
Coolant	Air Blow	Oil Mist	Oil	Oil	Water Soluble	Water Soluble
Material	SKH(H)	HPM38(H)	NAK80 NAK66	SCM440 SUS304	S45C S50C	Copper Aluminium
Recommand Coating	<b>N X</b>	<b>X</b>	<b>E</b>	<b>F</b>	<b>F</b>	<b>C DI</b>


## Coating

Abbr.	<b>N</b>	<b>X</b>	<b>E</b>	<b>F</b>	<b>C</b>	<b>DI</b>	<b>GA</b>
Coating Name	ICE	TiSiN	AlTiN	TiAlN	CrN	DLC	Graphite
Hardness	4500	4700	3800	3000	2000	1500	8000
Thickness	4	4	4	4	5	0.5-1	5
Friction Coefficient	0.45	0.45	0.6	0.4	0.3	0.15	0.03-0.1
Max Usage Temperature	1200	900	900	800	700	1000	600
Application	<ul style="list-style-type: none"> <li>• Super high hardness</li> <li>• Super oxidation resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Extreme high hardness</li> <li>• Super oxidation resistance</li> </ul>	<ul style="list-style-type: none"> <li>• High hardness</li> </ul>	<ul style="list-style-type: none"> <li>• Low Friction</li> </ul>	<ul style="list-style-type: none"> <li>• Low Friction</li> <li>• Low Affinity</li> </ul>		
Recommendation Usage	Air Coolant	Oil/Mist Coolant	Oil/Mist/Air Coolant	Oil/Mist Coolant	Oil/Mist Coolant	Oil/Mist Coolant	Air

## Order Specified Coating



Non Request

Request Coating

- **Order with the original item number the coating will be E coating. For a specific coating, please follow the instruction as follow,**
  1. Find a coating which is suitable for your working condition on the above column “ Coating”
  2. Check the name of coating
  3. If you’d like to order the series of Aluminum/General/Miracle please see below, if no, please skip to the 4<sup>th</sup> step.
    - (1) Original item No. (E coating) : 2KES-D020-L050
    - (2) Specific coating, Put the Abbr. before the original item No.  
For example to order ICE coating (N) the item No. becomes **N**2KES-D020-L050
  4. If you’d like to order Supreme Series do as follow,
    - (1) Original item No. (E coating) : S2KES-D020-L050
    - (2) Specific coating, Put the Abbr. after the S. For example to order ICE coating (N), the item no becomes **S****N**2KES-D020-L050

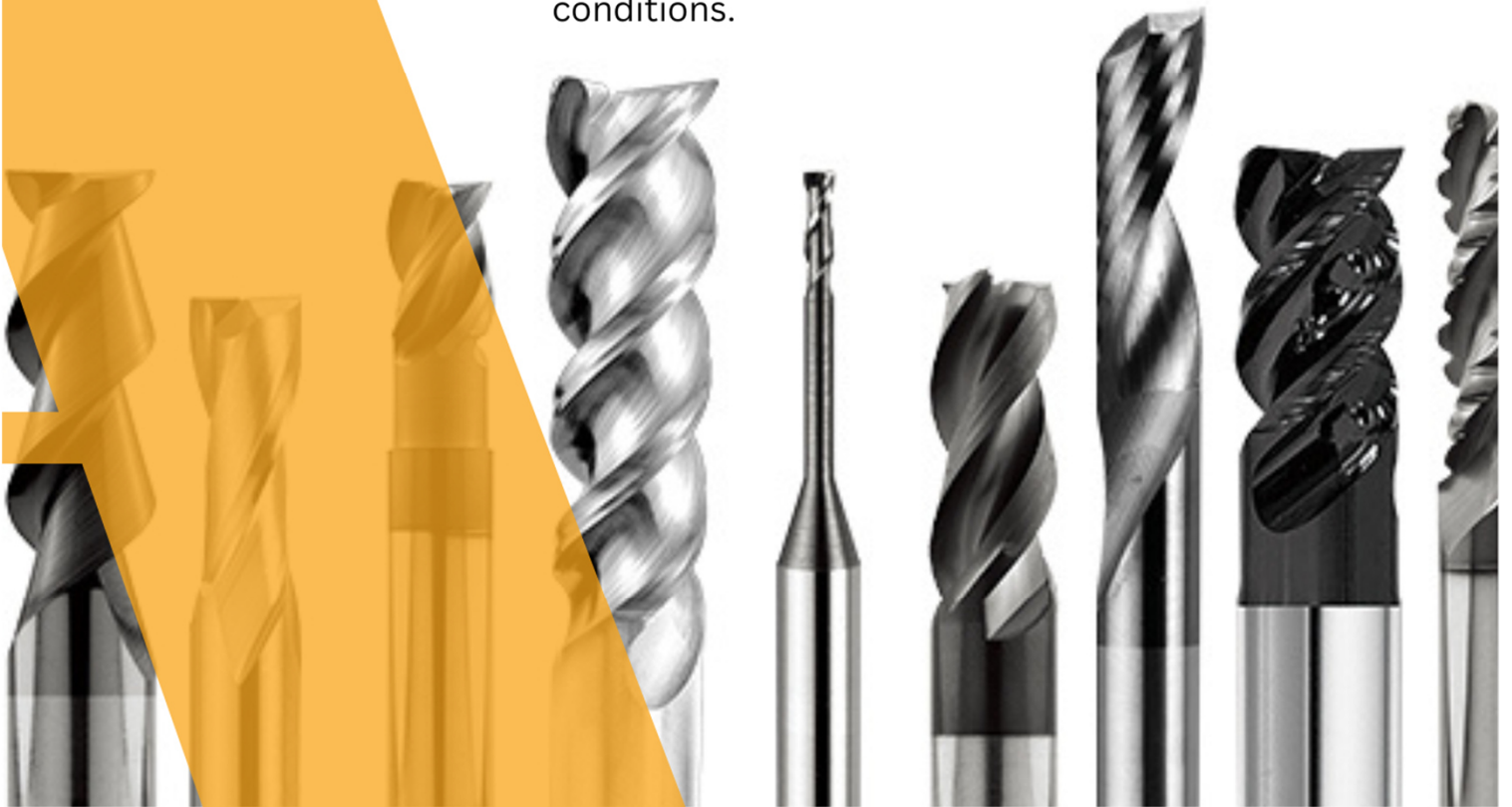
# Aluminum Series

Aluminum Series is your ideal choice to work in the soft material.

This series provides you a wide ranges of machining, such as Roughing, pocketing, finishing, slotting, side milling, helical interpolation and ramping.

It will bring you:

- High performance with optimum finishing.
- Dedicated micro geometry.
- Maximum tool life and material removal rates in all conditions.



**2AES Series**



**2AES** 2 Flute Square End Mill

D3-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	DIA.(D)	F.L. (H)	O.V.L. (L)	S.D. (d)
NKB400009	2AESD030L050	3	9	50	6
NKB400010	2AESD040L050	4	12	50	6
NKB400011	2AESD050L050	5	15	50	6
NKB400012	2AESD060L050	6	18	50	6
NKB400013	2AESD080L060	8	20	60	8
NKB400014	2AESD100L075	10	25	75	10
NKB400015	2AESD120L075	12	30	75	12



Unit : mm



**2AES** 2 Flute Square End Mill

D3-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	DIA.(D)	F.L. (H)	O.V.L. (L)	S.D. (d)
NKB400016	2AESD030L050P	3	9	50	6
NKB400017	2AESD040L050P	4	12	50	6
NKB400018	2AESD050L050P	5	15	50	6
NKB400019	2AESD060L050P	6	18	50	6
NKB400020	2AESD080L060P	8	20	60	8
NKB400021	2AESD100L075P	10	25	75	10
NKB400022	2AESD120L075P	12	30	75	12



Unit : mm



**2AEL Series**



**2AEL** 2 Flute Long Flute End Mill

D3-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	DIA.(D)	F.L. (H)	O.V.L. (L)	S.D. (d)
NKB400023	2AELD030L060	3	12	60	6
NKB400024	2AELD040L060	4	16	60	6
NKB400025	2AELD050L060	5	20	60	6
NKB400026	2AELD060L075	6	24	75	6
NKB400027	2AELD080L075	8	32	75	8
NKB400028	2AELD100L100	10	40	100	10
NKB400029	2AELD120L100	12	50	100	12



Unit : mm



**2AEL** 2 Flute Long Flute End Mill

D3-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	DIA.(D)	F.L. (H)	O.V.L. (L)	S.D. (d)
NKB400030	2AELD030L060P	3	12	60	6
NKB400031	2AELD040L060P	4	16	60	6
NKB400032	2AELD050L060P	5	20	60	6
NKB400033	2AELD060L075P	6	24	75	6
NKB400034	2AELD080L075P	8	32	75	8
NKB400035	2AELD100L100P	10	40	100	10
NKB400036	2AELD120L100P	12	50	100	12



Unit : mm

**A2NUB Series**

**A2NUB** 2 Flute Corner Radius End Mill For Deep Machining



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400037	A2NUBR001L050D1U6	1	0.1	1	6	50	4
NKB400038	A2NUBR001L050D1U8	1	0.1	1	8	50	4
NKB400039	A2NUBR001L050D1U10	1	0.1	1	10	50	4
NKB400040	A2NUBR0015L050D1.5U8	1.5	0.15	1.5	8	50	4
NKB400041	A2NUBR0015L050D1.5U12	1.5	0.15	1.5	12	50	4
NKB400042	A2NUBR0015L050D1.5U16	1.5	0.15	1.5	16	50	4
NKB400043	A2NUBR002L050D2U10	2	0.2	2	10	50	4
NKB400044	A2NUBR002L050D2U14	2	0.2	2	14	50	4
NKB400045	A2NUBR002L050D2U20	2	0.2	2	20	50	4
NKB400046	A2NUBR003L060D3U12	3	0.3	3	12	60	6
NKB400047	A2NUBR003L060D3U16	3	0.3	3	16	60	6
NKB400048	A2NUBR003L060D3U20	3	0.3	3	20	60	6
NKB400049	A2NUBR005L060D4U12	4	0.5	4	12	60	6
NKB400050	A2NUBR005L060D4U16	4	0.5	4	16	60	6
NKB400051	A2NUBR005L060D4U20	4	0.5	4	20	60	6



Unit : mm

## 3ANB Series

### 3ANB

### 3 Flute Corner Radius End Mill

D3-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03



Order Code	Description	DIA. (D) <small>0~-0.02</small>	Radius (R) <small>±0.01</small>	F.L. (H)	O.V.L. (L)	S.D. (d) <small>H6</small>
NKB400052	3ANBR005L075D3	3	0.5	8	75	6
NKB400053	3ANBR005L075D4	4	0.5	10	75	6
NKB400054	3ANBR010L075D4	4	1.0	10	75	6
NKB400055	3ANBR005L100D5	5	0.5	13	100	6
NKB400056	3ANBR010L100D5	5	1.0	13	100	6
NKB400057	3ANBR005L100D6	6	0.5	15	100	6
NKB400058	3ANBR010L100D6	6	1.0	15	100	6
NKB400059	3ANBR005L100D8	8	0.5	20	100	8
NKB400060	3ANBR010L100D8	8	1.0	20	100	8
NKB400061	3ANBR005L100D10	10	0.5	25	100	10
NKB400062	3ANBR010L100D10	10	1.0	25	100	10
NKB400063	3ANBR020L075D12	12	2.0	30	75	12



Unit : mm

**3AES Series**



**3AES** 3 Flute Square End Mill

D3-D8 : 0 ~ -0.02  
D10-D16 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400064	3AESD030L050	3	9	50	6
NKB400065	3AESD040L050	4	12	50	6
NKB400066	3AESD050L050	5	15	50	6
NKB400067	3AESD060L050	6	18	50	6
NKB400068	3AESD080L060	8	20	60	8
NKB400069	3AESD100L075	10	25	75	10
NKB400070	3AESD120L075	12	30	75	12
NKB400071	3AESD160L100	16	40	100	16



Unit : mm



**3AES** 3 Flute Square End Mill

D6-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400072	3AESD060L050P	6	18	50	6
NKB400073	3AESD080L060P	8	20	60	8
NKB400074	3AESD100L075P	10	25	75	10
NKB400075	3AESD120L075P	12	30	75	12
NKB400076	3AESD160L100P	16	60	100	16



Unit : mm

**3AEL Series & 2ABS Series**



**3AEL** 3 Flute Long Flute End Mill

D5-D8 : 0 ~ -0.02  
D9-D16 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400077	3AELD060L075P	6	24	75	6
NKB400078	3AELD080L075P	8	32	75	8
NKB400079	3AELD080L100P	8	32	100	8
NKB400080	3AELD090L100P	9	35	100	10
NKB400081	3AELD100L100P	10	40	100	10
NKB400082	3AELD120L100P	12	50	100	12
NKB400083	3AELD160L150P	16	65	150	16



Unit : mm



**2ABS** 2 Flute Ball Nose

D1-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03

Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400084	2ABSR005L050	0.5	2	50	4
NKB400085	2ABSR0075L050	0.75	3	50	4
NKB400086	2ABSR010L050	1.0	4	50	4
NKB400087	2ABSR015L050	1.5	6	50	4
NKB400088	2ABSR020L050	2.0	8	50	4
NKB400089	2ABSR030L050	3.0	12	50	6
NKB400090	2ABSR040L050	4.0	16	60	8
NKB400091	2ABSR050L075	5.0	20	75	10
NKB400092	2ABSR060L075	6.0	24	75	12



Unit : mm

**V3AES Series**



**V3AES**

3 Flute Polishing End Mill

D3-D8 : 0 ~ -0.02  
D10 : 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400093	V3AESD010L050	1	2	50	6
NKB400094	V3AESD020L050	2	4	50	6
NKB400095	V3AESD030L050	3	6	50	6
NKB400096	V3AESD040L050	4	8	50	6
NKB400097	V3AESD060L050	6	12	50	6
NKB400098	V3AESD080L060	8	16	60	8
NKB400099	V3AESD100L075	10	20	75	10



Unit : mm

**Special Tools**



## Working Condition

### Working Condition / Aluminum Square End Mill

Applicable Work		C1020 or similar		A5020 or similar	
Condition DIA	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	
	R.P.M	mm/min	R.P.M	mm/min	
3	16000	1600	16000	3200	
4	12500	1250	12500	2500	
5	10000	2000	10000	2000	
6	8500	1700	8500	1700	
8	6500	1300	6500	1300	
10	12000	2400	4800	960	
12	10000	2000	4000	800	
16	6000	1050	3500	700	
20	4500	1050	3000	600	

### Working Condition / Aluminum Ball Nose End Mill

Applicable Work		C1020 or similar		A5020 or similar	
Condition DIA	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	
	R.P.M	mm/min	Speed	mm/min	
1(0.5R)	32000	600	47500	900	
1.5(0.75R)	21500	600	47500	900	
2(1R)	16500	600	24000	900	
3(1.5R)	11500	750	16500	1700	
4(2R)	8500	750	12500	1700	
5(2.5R)	6600	750	9800	1700	
6(3R)	5500	750	8200	1700	
8(4R)	4200	750	6200	1700	
10(5R)	3400	750	5000	1700	
12(6.5R)	2900	750	4400	1700	
16(8R)	2200	750	3200	1700	
20(10R)	1800	750	2500	1700	

**Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.

1. Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.
2. It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
3. Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
4. It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
5. Cutting will be influenced by work piece, machine and software; the above-mentioned date are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.
6. Use a machine tool with rigidity and rigid set-up, machine stably.
7. When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.
8. Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.

# General Series

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# General Series

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- **Application** : Iron, Carbon Steel, Cast Iron, Alloy Steel, Tool Steel, Heat Treatment Steel, Welding Steel
- This Series brings you the best performance/price ratio. The design of strong geometry on the tool will work perfectly on roughing and polishing. It is easily to apply to your job for the hardened steel (up to 60HRC). Various ranges of end mill and coating will meet your need on different machining conditions.



**2SES Series & 2KES Series**



**2SES** 2 Flute Micro Diameter Square End Mill

Order Code	Description	DIA.(D) 0~-0.015	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400100	2SESD002L050	0.2	0.4	50	4
NKB400101	2SESD003L050	0.3	0.6	50	4
NKB400102	2SESD004L050	0.4	0.8	50	4
NKB400103	2SESD005L050	0.5	1.0	50	4
NKB400104	2SESD006L050	0.6	1.2	50	4
NKB400105	2SESD007L050	0.7	1.4	50	4
NKB400106	2SESD008L050	0.8	1.6	50	4
NKB400107	2SESD009L050	0.9	1.8	50	4

2 0.4 μm 35° MG 12 HRC:45~62

Unit : mm



**2KES** 2 Flute Square End Mill

D1-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400108	2KESD010L050	1	3	50	4
NKB400109	2KESD015L050	1.5	4	50	4
NKB400110	2KESD020L050	2	5	50	4
NKB400111	2KESD025L050	2.5	7	50	4
NKB400112	2KESD030L050	3	8	50	4
NKB400113	2KESD040L050	4	10	50	4
NKB400114	2KESD020L050d6	2	5	50	6
NKB400115	2KESD030L050d6	3	8	50	6
NKB400116	2KESD040L050d6	4	10	50	6
NKB400117	2KESD050L050	5	13	50	6
NKB400118	2KESD060L050	6	15	50	6
NKB400119	2KESD080L060	8	20	60	8
NKB400120	2KESD100L075	10	25	75	10
NKB400121	2KESD120L075	12	30	75	12
NKB400122	2KESD140L100	14	35	100	14
NKB400123	2KESD160L100	16	40	100	16
NKB400124	2KESD200L100	20	45	100	20

2 0.4 μm 35° MG 12 HRC:45~62

Unit : mm

## 2KEL Series

## Working Condition / Two Flute Square End Mill

Working Material Hardness	HRC30~40		HRC50~58		HRC58~62	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition	R.P.M	mm/min	R.P.M	mm/min	R.P.M	mm/min
DIA						
D1	11500	384	8896	288	6720	243
D1.5	10800	480	8250	380	6400	290
D2.0	9472	448	8192	384	5760	320
D2.5	9100	500	8050	420	5600	320
D3	7680	550	7150	480	4991	320
D4	6950	680	6350	580	4480	350
D5	6400	700	5850	600	4310	360
D6	6200	750	5900	650	3900	380
D7	5900	850	5000	760	3700	420
D8	4500	950	2880	800	1850	470
D10	2900	1400	1500	750	1100	380
D11	2700	1300	1250	500	950	300
D12	2450	1000	1020	420	790	210
D13	1800	700	870	350	620	180
D14	1680	650	740	320	570	170
D16	1400	600	670	300	490	170
D20	920	550	440	210	310	120

**Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.

1. Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.

2. It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.

3. Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.

4. It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.

5. Cutting will be influenced by work piece, machine and software; the above-mentioned data are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.

6. Use a machine tool with rigidity and rigid set-up, machine stably.

7. When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.

8. Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.



## 2KEL 2 Flute Long Flute Square End Mill

D2-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400125	2KELD020L060	2	8	60	6
NKB400126	2KELD030L060	3	10	60	6
NKB400127	2KELD040L060	4	15	60	6
NKB400128	2KELD050L060	5	20	60	6
NKB400129	2KELD060L075	6	24	75	6
NKB400130	2KELD080L075	8	32	75	8
NKB400131	2KELD100L100	10	40	100	10
NKB400132	2KELD120L100	12	45	100	12
NKB400133	2KELD160L150	16	64	150	16
NKB400134	2KELD200L150	20	72	150	20


**HRC:45~62**

Unit : mm

**3KER Series & 3KES Series**



**3KER** 3 Flute Medium Pitch Roughing End Mill D6-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400135	3KERD060L050	6	12	50	6
NKB400136	3KERD060L100	6	12	100	6
NKB400137	3KERD080L060	8	16	60	8
NKB400138	3KERD080L100	8	16	100	8
NKB400139	3KERD100L075	10	20	75	10
NKB400140	3KERD100L100	10	20	100	10
NKB400141	3KERD120L075	12	24	75	12
NKB400142	3KERD120L100	12	24	100	12
NKB400143	3KERD160L100	16	32	100	16
NKB400144	3KERD160L150	16	32	150	16
NKB400145	3KERD200L100	20	40	100	20
NKB400146	3KERD200L150	20	40	150	20

**HRC:45~62** Unit : mm



**3KES** 3 Flute Square End Mill D3-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400147	3KESD030L050	3	8	50	6
NKB400148	3KESD040L050	4	10	50	6
NKB400149	3KESD050L050	5	13	50	6
NKB400150	3KESD060L050	6	15	50	6
NKB400151	3KESD080L060	8	20	60	8
NKB400152	3KESD100L075	10	25	75	10
NKB400153	3KESD120L075	12	30	75	12
NKB400154	3KESD160L100	16	40	100	16
NKB400155	3KESD200L100	20	45	100	20

**HRC:45~62** Unit : mm

**4KER Series & 4KES Series**



**4KER** 4 Flute Roughing End Mill

D6-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400156	4KERD060L050	6	15	50	6
NKB400157	4KERD080L060	8	20	60	8
NKB400158	4KERD100L075	10	25	75	10
NKB400159	4KERD120L075	12	24	75	12
NKB400160	4KERD160L100	16	32	100	16
NKB400161	4KERD200L100	20	40	100	20

4 0.4 μm 40° MG 12 HRC:45~62

Unit : mm



**4KES** 4 Flute Square End Mill

D1-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400162	4KESD010L050	1	3	50	4
NKB400163	4KESD020L050	2	5	50	4
NKB400164	4KESD030L050	3	8	50	4
NKB400165	4KESD040L050	4	10	50	4
NKB400166	4KESD020L050d6	2	5	50	6
NKB400167	4KESD030L050d6	3	8	50	6
NKB400168	4KESD040L050d6	4	10	50	6
NKB400169	4KESD050L050	5	13	50	6
NKB400170	4KESD060L050	6	15	50	6
NKB400171	4KESD080L060	8	20	60	8
NKB400172	4KESD100L075	10	25	75	10
NKB400173	4KESD120L075	12	30	75	12
NKB400174	4KESD140L100	14	35	100	14
NKB400175	4KESD160L100	16	40	100	16
NKB400176	4KESD200L100	20	45	100	20
NKB400177	4KESD250L150	25	50	150	25

4 0.4 μm 45° MG 12 HRC:45~62

Unit : mm

# A4KES Series

## A4KES 4 Flute Square End Mill (35°)

D1-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03



Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400178	A4KESD010L050	1	3	50	4
NKB400179	A4KESD020L050	2	5	50	4
NKB400180	A4KESD030L050	3	8	50	4
NKB400181	A4KESD040L050	4	10	50	4
NKB400182	A4KESD050L050	5	13	50	6
NKB400183	A4KESD020L050d6	2	5	50	6
NKB400184	A4KESD030L050d6	3	8	50	6
NKB400185	A4KESD040L050d6	4	10	50	6
NKB400186	A4KESD060L050	6	15	50	6
NKB400187	A4KESD080L060	8	20	60	8
NKB400188	A4KESD100L075	10	25	75	10
NKB400189	A4KESD120L075	12	30	75	12
NKB400190	A4KESD140L100	14	35	100	14
NKB400191	A4KESD160L100	16	40	100	16
NKB400192	A4KESD200L100	20	45	100	20

HRC:45~62

Unit : mm

## Working Condition / Four Flute Square End Mill

Working Material Hardness	HRC45~52		HRC52~62	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition DIA	R.P.M	mm/min	R.P.M	mm/min
D3	14040	1498	6760	749
D4	10920	1778	5200	842
D5	9360	2013	4628	983
D6	8320	2714	4160	1358
D8	4640	2714	2400	1358
D10	3360	2668	2000	1358
D12	2480	2246	1520	1123
D16	1440	1685	1080	842
D20	612	576	504	456
D25	468	360	342	216

- Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.
- Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.
  - It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
  - Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
  - It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
  - Cutting will be influenced by work piece, machine and software; the above-mentioned data are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.
  - Use a machine tool with rigidity and rigid set-up, machine stably.
  - When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.
  - Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.

**4KEL Series**



**4KEL** 4 Flute Long Flute Square End Mill

D3-D8 : 0 ~ -0.02  
D10-D25 : 0 ~ -0.03

Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400193	4KELD030L060	3	12	60	6
NKB400194	4KELD040L060	4	16	60	6
NKB400195	4KELD050L060	5	20	60	6
NKB400196	4KELD060L075	6	24	75	6
NKB400197	4KELD080L075	8	32	75	8
NKB400198	4KELD100L100	10	40	100	10
NKB400199	4KELD120L100	12	45	100	12
NKB400200	4KELD160L150	16	64	150	16
NKB400201	4KELD200L150	20	72	150	20
NKB400202	4KELD250L200	25	72	200	25

0.4 μm 45° 12 MIC HRC:45~62

Unit : mm

**Working Condition / Four Flute (Longer Length) Square End Mill**

Working Material Hardness	HRC45~52		HRC52~62	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition DIA	R.P.M	mm/min	R.P.M	mm/min
D3	5200	599	2704	300
D4	4640	711	2080	337
D5	3360	805	1851	393
D6	3080	1086	1664	543
D8	2240	1086	1248	543
D10	1800	1087	998	543
D12	1320	899	832	449
D16	680	570	624	337
D20	510	480	420	380
D25	390	300	285	180

- Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.
1. Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.
  2. It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
  3. Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
  4. It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
  5. Cutting will be influenced by work piece, machine and software; the above-mentioned date are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.
  6. Use a machine tool with rigidity and rigid set-up, machine stably.
  7. When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.
  8. Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.

**6KES Series & 6KEL Series**

**6KES** 6 Flute Long Flute Square End Mill

D6-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03



Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400203	6KESD060L050	6	15	50	6
NKB400204	6KESD080L060	8	20	60	8
NKB400205	6KESD100L075	10	25	75	10
NKB400206	6KESD120L075	12	30	75	12
NKB400207	6KESD160L100	16	40	100	16
NKB400208	6KESD200L100	20	45	100	20

6 0.4 μm 45° MG 12 HRC:45~62

Unit : mm

**6KEL** 6 Flute Long Flute Square End Mill

D6-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03



Order Code	Description	DIA.(D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400209	6KELD060L075	6	24	75	6
NKB400210	6KELD080L075	8	32	75	8
NKB400211	6KELD100L100	10	40	100	10
NKB400212	6KELD120L100	12	45	100	12
NKB400213	6KELD160L150	16	64	150	16
NKB400214	6KELD200L150	20	72	150	20

6 0.4 μm 45° MG 12 HRC:45~62

Unit : mm



**2KBS Series**

**2KBS** 2 Flute Ball Nose

D3-D8 : 0 ~ -0.02  
D10-D25 : 0 ~ -0.03



Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400215	2KBSR005L050	0.5	2	50	4
NKB400216	2KBSR0075L050	0.75	3	50	4
NKB400217	2KBSR010L050	1.0	4	50	4
NKB400218	2KBSR0125L050	1.25	5	50	4
NKB400219	2KBSR015L050	1.5	6	50	4
NKB400220	2KBSR020L050	2.0	8	50	4
NKB400221	2KBSR005L050d6	0.5	2	50	6
NKB400222	2KBSR010L050d6	1.0	4	50	6
NKB400223	2KBSR015L050d6	1.5	6	50	6
NKB400224	2KBSR020L050d6	2.0	8	50	6
NKB400225	2KBSR025L050	2.5	10	50	6
NKB400226	2KBSR030L050	3.0	12	50	6
NKB400227	2KBSR040L075	4.0	16	75	8
NKB400228	2KBSR050L075	5.0	20	75	10
NKB400229	2KBSR060L075	6.0	20	75	12
NKB400230	2KBSR070L100	7.0	22	100	14
NKB400231	2KBSR080L100	8.0	24	100	16
NKB400232	2KBSR100L100	10	30	100	20

HRC:45~62

Unit : mm

**Working Condition / Ball Nose**

Working Material Hardness	HRC30		HRC52		HRC60	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition DIA R0.5 R0.75 R1 R1.25 R1.5 R2 R2.5 R3 R3.5 R4 R4.5 R5 R6 R7 R8 R10 R12.5	R.P.M	mm/min	R.P.M	mm/min	R.P.M	mm/min
	20480	768	16640	512	13440	486
	19500	820	15700	680	12700	560
	18944	896	14272	742	11520	640
	17000	1060	12800	950	10500	640
	15360	1408	11520	1024	9984	640
	14720	2048	10880	960	8960	870
	13800	2560	9984	1280	7040	768
	12800	2560	9728	1216	6400	704
	9300	2680	6800	1420	4500	780
	8320	2816	5120	1536	3200	832
	6590	2600	4100	1380	2800	750
	4864	2432	2560	1152	2048	640
	3800	2300	2560	1280	1536	576
	2200	1250	1580	690	980	420
1650	780	1050	520	700	360	
1100	600	580	410	490	245	
860	500	530	260	385	190	

- Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.
- Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.
  - It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
  - Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
  - It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
  - Cutting will be influenced by work piece, machine and software; the above-mentioned data are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.
  - Use a machine tool with rigidity and rigid set-up, machine stably.
  - When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.
  - Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.

# 2SBS Series



## 2SBS

### 2 Flute Micro Diameter Ball Nose

D3-D8 : 0 ~ -0.02  
D10-D25 : 0 ~ -0.03

Order Code	Description	Radius (R) 2R=0~-0.015	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400233	2SBSR001L050	0.1	0.4	50	4
NKB400234	2SBSR0015L050	0.15	0.6	50	4
NKB400235	2SBSR002L050	0.2	0.8	50	4
NKB400236	2SBSR0025L050	0.25	1	50	4
NKB400237	2SBSR003L050	0.3	1.2	50	4
NKB400238	2SBSR004L050	0.4	1.6	50	4

0.4 μm 30° MG 12 HRC:45~62

Unit : mm

## Working Condition / Ball Nose

Working Material Hardness	HRC45~52		HRC45~52	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition				
DIA	R.P.M	mm/min	R.P.M	mm/min
0.15R	25000	200	25000	198
0.2R	25000	275	25000	248
0.25R	25000	330	25000	297
0.3R	25000	418	25000	376
0.35R	25000	495	25000	446
0.4R	25000	561	25000	505
0.45R	25000	638	25000	574

- Attention:** In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.
1. Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of mill exceeds 0.01mm. Please cut after correcting.
  2. It is better that end mill stretches our shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
  3. Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
  4. It is the best way to cool steel material by spraying or air in order to make TiAlN efficiency; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
  5. Cutting will be influenced by work piece, machine and software; the above-mentioned date are only for reference, please improve feeding speed by 30%-50% up after cutting situation steadily.
  6. Use a machine tool with rigidity and rigid set-up, machine stably.
  7. When the revolution speed is not enough, reduce the revolution speed and table speed at the same ratio.
  8. Adjust the revolution speed and table speed, according to cutting conditions such as machining shape, rigidity of machine tool, over-hang and so on.

## 2KBL Series

### 2KBL

### 2 Flute Long Shank Ball Nose

 D1-D8 : 0 ~ -0.02  
 D10-D12 : 0 ~ -0.03


Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400239	2KBLR005L060	0.5	2	60	6
NKB400240	2KBLR005L075	0.5	2	75	6
NKB400241	2KBLR010L060	1.0	4	60	6
NKB400242	2KBLR010L075	1.0	4	75	6
NKB400243	2KBLR010L100	1.0	4	100	6
NKB400244	2KBLR015L060	1.5	6	60	6
NKB400245	2KBLR015L075	1.5	6	75	6
NKB400246	2KBLR015L100	1.5	6	100	6
NKB400247	2KBLR020L060	2.0	8	60	6
NKB400248	2KBLR020L075	2.0	8	75	6
NKB400249	2KBLR020L100	2.0	8	100	6
NKB400250	2KBLR025L075	2.5	10	75	6
NKB400251	2KBLR030L075	3.0	12	75	6
NKB400252	2KBLR030L100	3.0	12	100	6
NKB400253	2KBLR030L150	3.0	12	150	6
NKB400254	2KBLR040L100	4.0	16	100	8
NKB400255	2KBLR040L150	4.0	16	150	8
NKB400256	2KBLR050L100	5.0	20	100	10
NKB400257	2KBLR050L150	5.0	20	150	10
NKB400258	2KBLR060L100	6.0	24	100	12
NKB400259	2KBLR060L150	6.0	24	150	12


**HRC:45~62**

Unit : mm

**4KBS Series & 2TKUB Series**

**4KBS** 4 Flute Ball Nose

D1-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03



Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400260	4KBSR005L050	0.5	2	50	4
NKB400261	4KBSR0075L050	0.75	3	50	4
NKB400262	4KBSR010L050	1.0	4	50	4
NKB400263	4KBSR015L050	1.5	6	50	4
NKB400264	4KBSR020L050	2.0	8	50	4
NKB400265	4KBSR025L050	2.5	10	50	6
NKB400266	4KBSR030L050	3.0	12	50	6
NKB400267	4KBSR040L060	4.0	16	60	8
NKB400268	4KBSR050L075	5.0	20	75	10
NKB400269	4KBSR060L075	6.0	20	75	12
NKB400270	4KBSR080L100	8.0	24	100	16
NKB400271	4KBSR100L150	10.0	30	150	20

0.4 μm 35° MG 12 HRC:45~62

Unit : mm

**2TKUB** 2 Flute Taper Ball Nose For Deep Machining



Order Code	Description	T.A. (Y)	Radius (R) ±0.01	F.L. (H)	N.L. (U)	T.L. (N)	O.V.L. (L)	S.D. (d) H6
NKB400272	2TKUBR010L065Y6.5	6.5	1.0	3	8	20	65	6
NKB400273	2TKUBR010L085Y1	1	1.0	3	8	40	85	6
NKB400274	2TKUBR010L085Y3	3	1.0	3	8	40	85	6
NKB400275	2TKUBR015L065Y4.3	4.3	1.5	3.5	10	20	65	6
NKB400276	2TKUBR015L085Y1	1	1.5	3.5	12	40	85	6
NKB400277	2TKUBR015L085Y2	2	1.5	3.5	12	40	85	6
NKB400278	2TKUBR020L065Y3	3	2.0	4	12	20	65	6
NKB400279	2TKUBR020L085Y1	1	2.0	4	20	40	85	6
NKB400280	2TKUBR020L100Y1	1	2.0	4	20	60	100	6

0.4 μm 30° MG 12 Corner Radius is available! Production upon request! HRC:45~62

Unit : mm

**2TABL Series & 2KOB Series**



**2TABL** 2 Flute Taper Ball Nose

D1-D8 : 0 ~ -0.02  
D10 : 0 ~ -0.03

Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400281	2TABLR005L075	0.5	2	75	6
NKB400282	2TABLR010L075	1.0	4	75	6
NKB400283	2TABLR015L075	1.5	6	75	6
NKB400284	2TABLR020L100	2.0	8	100	8
NKB400285	2TABLR025L100	2.5	10	100	8
NKB400286	2TABLR030L100	3.0	12	100	10
NKB400287	2TABLR030L150	3.0	12	150	10
NKB400288	2TABLR040L100	4.0	16	100	12
NKB400289	2TABLR040L150	4.0	16	150	12
NKB400290	2TABLR050L100	5.0	20	100	16
NKB400291	2TABLR050L150	5.0	20	150	16

2 0.4 μm 35° MG 12 HRC:45~62

Unit : mm



**2KOB** 2 Flute Straight Ball Nose

D4-D8 : 0 ~ -0.02  
D10 : 0 ~ -0.03

Order Code	Description	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400292	2KOBR020L050	2.0	4	15	50	4
NKB400293	2KOBR020L075	2.0	4	15	75	6
NKB400294	2KOBR030L050	3.0	6	18	50	6
NKB400295	2KOBR030L075	3.0	6	18	75	6
NKB400296	2KOBR030L100	3.0	6	22	100	6
NKB400297	2KOBR040L060	4.0	8	24	60	8
NKB400298	2KOBR040L100	4.0	8	33	100	8
NKB400299	2KOBR050L075	5.0	10	30	75	10
NKB400300	2KOBR050L100	5.0	10	40	100	10

2 0.4 μm 5° MG 12 HRC:45~62

Unit : mm

## 2NB Series

## 2NB

## 2 Flute Corner Radius

D1-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400301	2NBR002L050D1	1	0.2	2	50	4
NKB400302	2NBR003L050D1	1	0.3	2	50	4
NKB400303	2NBR002L050D1.5	1.5	0.2	3	50	4
NKB400304	2NBR003L050D1.5	1.5	0.3	3	50	4
NKB400305	2NBR002L050D2	2	0.2	5	50	4
NKB400306	2NBR003L050D2	2	0.3	5	50	4
NKB400307	2NBR005L050D2	2	0.5	5	50	4
NKB400308	2NBR002L050D3	3	0.2	8	50	4
NKB400309	2NBR003L050D3	3	0.3	8	50	4
NKB400310	2NBR005L050D3	3	0.5	8	50	4
NKB400311	2NBR002L050D4	4	0.2	10	50	4
NKB400312	2NBR003L050D4	4	0.3	10	50	4
NKB400313	2NBR005L050D4	4	0.5	10	50	4
NKB400314	2NBR010L050D4	4	1.0	10	50	4
NKB400315	2NBR005L050D5	5	0.5	13	50	6
NKB400316	2NBR010L050D5	5	1.0	13	50	6
NKB400317	2NBR005L050D6	6	0.5	15	50	6
NKB400318	2NBR005L075D6	6	0.5	15	75	6
NKB400319	2NBR010L050D6	6	1.0	15	50	6
NKB400320	2NBR010L075D6	6	1.0	15	75	68
NKB400321	2NBR005L060D8	8	0.5	20	60	8
NKB400322	2NBR005L100D8	8	0.5	20	100	8
NKB400323	2NBR010L060D8	8	1.0	20	60	8
NKB400324	2NBR010L100D8	8	1.0	20	100	8
NKB400325	2NBR005L075D10	10	0.5	25	75	10
NKB400326	2NBR010L075D10	10	1.0	25	75	10
NKB400327	2NBR020L075D10	10	2.0	25	75	10
NKB400328	2NBR005L075D12	12	0.5	30	75	12
NKB400329	2NBR010L075D12	12	1.0	30	75	12
NKB400330	2NBR020L075D12	12	2.0	30	75	12



Unit : mm

## 2NUB Series

**2NUB** 2 Flute Corner Radius For Deep Machining

D1-D8 : 0 ~ -0.02  
D10~D12: 0 ~ -0.03


Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400331	2NUBR002L050D1U4	1	0.2	2	4	50	4
NKB400332	2NUBR002L050D1U6	1	0.2	2	6	50	4
NKB400333	2NUBR002L050D1U8	1	0.2	2	8	50	4
NKB400334	2NUBR002L050D1U10	1	0.2	2	10	50	4
NKB400335	2NUBR002L050D1U12	1	0.2	2	12	50	4
NKB400336	2NUBR002L050D1U16	1	0.2	2	16	50	4
NKB400337	2NUBR002L050D1.5U4	1.5	0.2	2	4	50	4
NKB400338	2NUBR002L050D1.5U6	1.5	0.2	2	6	50	4
NKB400339	2NUBR002L050D1.5U8	1.5	0.2	2	8	50	4
NKB400340	2NUBR002L050D1.5U10	1.5	0.2	2	10	50	4
NKB400341	2NUBR002L050D2U4	2	0.2	2	4	50	4
NKB400342	2NUBR002L050D2U6	2	0.2	2	6	50	4
NKB400343	2NUBR002L050D2U8	2	0.2	2	8	50	4
NKB400344	2NUBR002L050D2U10	2	0.2	2	10	50	4
NKB400345	2NUBR002L050D2U12	2	0.2	2	12	50	4
NKB400346	2NUBR002L050D3U6	3	0.2	4	6	50	4
NKB400347	2NUBR002L050D3U8	3	0.2	4	8	50	4
NKB400348	2NUBR002L050D3U10	3	0.2	4	10	50	4
NKB400349	2NUBR002L050D3U12	3	0.2	4	12	50	4
NKB400350	2NUBR002L050D4U10	4	0.2	4	10	50	6
NKB400351	2NUBR005L050D4U10	4	0.5	4	10	50	6
NKB400352	2NUBR002L050D6U15	6	0.2	6	15	50	6
NKB400353	2NUBR005L050D6U15	6	0.5	6	15	50	6
NKB400354	2NUBR010L050D6U15	6	1.0	6	15	50	6
NKB400355	2NUBR003L060D8U20	8	0.3	8	20	60	8
NKB400356	2NUBR005L060D8U20	8	0.5	8	20	60	8
NKB400357	2NUBR010L060D8U20	8	1.0	8	20	60	8
NKB400358	2NUBR003L075D10U25	10	0.3	10	25	75	10
NKB400359	2NUBR005L075D10U25	10	0.5	10	25	75	10
NKB400360	2NUBR010L075D10U25	10	1.0	10	25	75	10
NKB400361	2NUBR020L075D10U25	10	2.0	10	25	75	10
NKB400362	2NUBR010L075D12U30	12	1.0	12	30	75	12
NKB400363	2NUBR020L075D12U30	12	2.0	12	30	75	12


**HRC:45~62**

Unit : mm

# 3NB Series

## 3NB

### 3 Flute Corner Radius

D3-D8 : 0 ~ -0.02  
D10~ D20: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400364	3NBR010L050D3	3	1.0	8	50	6
NKB400365	3NBR010L050D5	5	1.0	13	50	6
NKB400366	3NBR003L050D6	6	0.3	15	50	6
NKB400367	3NBR005L050D6	6	0.5	15	50	6
NKB400368	3NBR010L050D6	6	1.0	15	50	6
NKB400369	3NBR003L060D8	8	0.3	20	60	8
NKB400370	3NBR005L060D8	8	0.5	20	60	8
NKB400371	3NBR010L060D8	8	1.0	20	60	8
NKB400372	3NBR020L060D8	8	2.0	20	60	8
NKB400373	3NBR030L060D8	8	3.0	20	60	8
NKB400374	3NBR005L075D10	10	0.5	25	75	10
NKB400375	3NBR010L075D10	10	1.0	25	75	10
NKB400376	3NBR020L075D10	10	2.0	25	60	10
NKB400377	3NBR025L060D10	10	2.5	25	60	10
NKB400378	3NBR025L075D16	16	2.5	40	75	16
NKB400379	3NBR040L100D20	20	4.0	45	100	20






**HRC:45~62**

Unit : mm



## 4NB Series

## 4NB

## 4 Flute Corner Radius (45°)

D3-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03


Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400380	4NBR003L050D3	3	0.3	8	50	4
NKB400381	4NBR002L050D4	4	0.2	10	50	4
NKB400382	4NBR003L050D4	4	0.3	10	50	4
NKB400383	4NBR005L050D4	4	0.5	10	50	4
NKB400384	4NBR005L050D5	5	0.5	13	50	6
NKB400385	4NBR010L050D5	5	1.0	13	50	6
NKB400386	4NBR005L050D6	6	0.5	15	50	6
NKB400387	4NBR010L050D6	6	1.0	15	50	6
NKB400388	4NBR005L060D8	8	0.5	20	60	8
NKB400389	4NBR010L060D8	8	1.0	20	60	8
NKB400390	4NBR005L075D10	10	0.5	25	75	10
NKB400391	4NBR010L075D10	10	1.0	25	75	10
NKB400392	4NBR020L075D10	10	2.0	25	75	10
NKB400393	4NBR030L075D10	10	3.0	25	75	10
NKB400394	4NBR005L075D12	12	0.5	30	75	12
NKB400395	4NBR010L075D12	12	1.0	30	75	12
NKB400396	4NBR020L075D12	12	2.0	30	75	12
NKB400397	4NBR030L075D12	12	3.0	30	75	12


**HRC:45~62**

Unit : mm

# A4NB Series

## A4NB 4 Flute Corner Radius (35°)

 D3-D8 : 0 ~ -0.02  
 D10~ D12: 0 ~ -0.03


Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400398	A4NBR002L050D1	1	0.2	3	50	4
NKB400399	A4NBR002L050D1.5	1.5	0.2	4	50	4
NKB400400	A4NBR002L050D2	2	0.2	5	50	4
NKB400401	A4NBR002L050D3	3	0.2	8	50	4
NKB400402	A4NBR003L050D3	3	0.3	8	50	4
NKB400403	A4NBR002L050D4	4	0.2	10	50	4
NKB400404	A4NBR003L050D4	4	0.3	10	50	4
NKB400405	A4NBR005L050D4	4	0.5	10	50	4
NKB400406	A4NBR010L050D4	4	1.0	10	50	4
NKB400407	A4NBR005L050D5	5	0.5	13	50	6
NKB400408	A4NBR010L050D5	5	1.0	13	50	6
NKB400409	A4NBR005L050D6	6	0.5	15	50	6
NKB400410	A4NBR010L050D6	6	1.0	15	50	6
NKB400411	A4NBR005L060D8	8	0.5	20	60	8
NKB400412	A4NBR010L060D8	8	1.0	20	60	8
NKB400413	A4NBR005L075D10	10	0.5	25	75	10
NKB400414	A4NBR010L075D10	10	1.0	25	75	10
NKB400415	A4NBR020L075D10	10	2.0	25	75	10
NKB400416	A4NBR030L075D10	10	3.0	25	75	10
NKB400417	A4NBR005L075D12	12	0.5	30	75	12
NKB400418	A4NBR010L075D12	12	1.0	30	75	12
NKB400419	A4NBR020L075D12	12	2.0	30	75	12
NKB400420	A4NBR030L075D12	12	3.0	30	75	12


**HRC:45~62**

Unit : mm

**4NSB Series**

**4NSB**

**4 Flute Short Corner Radius**

D3-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	Radius (R)	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400421	4NSBR003L075D3d3	3	0.3	6	75	3
NKB400422	4NSBR005L075D4d4	4	0.5	8	75	4
NKB400423	4NSBR005L075D6	6	0.5	6	75	6
NKB400424	4NSBR010L075D6	6	1.0	6	75	6
NKB400425	4NSBR005L100D6	6	0.5	6	100	6
NKB400426	4NSBR010L100D6	6	1.0	6	100	6
NKB400427	4NSBR005L100D8	8	0.5	8	100	8
NKB400428	4NSBR010L100D8	8	1.0	8	100	8
NKB400429	4NSBR005L100D10	10	0.5	10	100	10
NKB400430	4NSBR010L100D10	10	1.0	10	100	10
NKB400431	4NSBR020L100D10	10	2.0	10	100	10
NKB400432	4NSBR030L100D10	10	3.0	10	100	10
NKB400433	4NSBR005L100D12	12	0.5	12	100	12
NKB400434	4NSBR010L100D12	12	1.0	12	100	12
NKB400435	4NSBR020L100D12	12	2.0	12	100	12
NKB400436	4NSBR030L100D12	12	3.0	12	100	12

4 0.4 μm 45° MG 12 R HRC:45~62

Unit : mm

**4NUB Series & 4NOB Series**

**4NUB**

4 Flute Corner Radius For Deep Machining

D4-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400437	4NUBR005L075D4U10	4	0.5	4	10	75	6
NKB400438	4NUBR005L075D5U13	5	0.5	5	13	75	6
NKB400439	4NUBR010L075D5U13	5	1.0	5	13	75	6
NKB400440	4NUBR005L075D6U15	6	0.5	6	15	75	6
NKB400441	4NUBR010L075D6U15	6	1.0	6	15	75	6
NKB400442	4NUBR005L100D8U20	8	0.5	8	20	100	8
NKB400443	4NUBR010L100D8U20	8	1.0	8	20	100	8
NKB400444	4NUBR005L100D10U25	10	0.5	10	25	100	10
NKB400445	4NUBR010L100D10U25	10	1.0	10	25	100	10
NKB400446	4NUBR020L100D10U25	10	2.0	10	25	100	10
NKB400447	4NUBR005L100D12U30	12	0.5	12	30	100	12
NKB400448	4NUBR010L100D12U30	12	1.0	12	30	100	12
NKB400449	4NUBR020L100D12U30	12	2.0	12	30	100	12

4 0.4 μm 35° MG 12 R C HRC:45~62

Unit : mm



**4NOB**

4 Flute Straight Corner Radius

D6-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400450	4NOBR015L075D6U15	6	1.5	6	15	75	6
NKB400451	4NOBR020L100D8U20	8	2.0	8	20	100	8
NKB400452	4NOBR020L100D10U25	10	2.0	10	25	100	10
NKB400453	4NOBR030L100D12U30	12	3.0	12	30	100	12

4 0.4 μm 90° MG 12 R HRC:45~62

Unit : mm

**6NB Series & SU4KES Series**



**6NB**

6 Flute Corner Radius

D6-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	Radius (R)	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400454	6NBR003L050D6	6	0.3	15	50	6
NKB400455	6NBR005L050D6	6	0.5	15	50	6
NKB400456	6NBR003L060D8	8	0.3	20	60	8
NKB400457	6NBR005L060D8	8	0.5	20	60	8
NKB400458	6NBR005L075D10	10	0.5	25	75	10
NKB400459	6NBR010L075D10	10	1.0	25	75	10
NKB400460	6NBR005L075D12	12	0.5	30	75	12
NKB400461	6NBR010L075D12	12	1.0	30	75	12

6 0.4 μm 45° MG 12 R HRC:45~62

Unit : mm



**SU4KES**

4 Flute Square End Mill For Stainless Steel

D4-D8 : 0 ~ -0.02  
D10~ D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400462	SU4KESD040L050	4	10	50	4
NKB400463	SU4KESD060L050	6	15	50	6
NKB400464	SU4KESD080L060	8	20	60	8
NKB400465	SU4KESD100L075	10	25	75	10

4 0.2 μm 45° MG 9 R C HRC:45~62

Unit : mm

# Miracle Series

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- **Feature** : Endurable/ Polishing/ Efficient
- **Apply in** : Side-Milling
- 4KDE is ACT patented end mill.
- SKD 11, HRC 56
- 3500 RPM
- 10 MM
- 1400 mm/min



# Miracle Series

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- This series features in its incorporate helix angle, it's a completely redesigned to improve cutting edge and chip flow. This series comes in 2, 3 and 4 flute versions and a broad range of lengths for your choice.



**2ADE Series & 3ANS Series**



**2ADE**

2 Flute Extreme Aluminum Square End Mill

D6-D8 : 0 ~ -0.02  
D10~ D16: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400466	2ADED060L075	6	18	75	6
NKB400467	2ADED080L075	8	20	75	8
NKB400468	2ADED100L075	10	25	75	10
NKB400469	2ADED100L100	10	25	100	10
NKB400470	2ADED120L075	12	30	75	12
NKB400471	2ADED160L100	16	40	100	16

0.4 μm 45° MG 12 HRC:45~62 ❖ Production upon request

Unit : mm



**3ANS**

3 Flute Extreme Rougher

D6-D8 : 0 ~ -0.02  
D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400472	3ANS060L060	6	14	60	6
NKB400473	3ANS080L060	8	18	60	8
NKB400474	3ANS120L075	12	30	75	12

0.4 μm 45° MG 12 HRC:45~62 ❖ Production upon request

Unit : mm



**4ANS Series & 4KDE Series**

**4ANS** 4 Flute Extreme Rougher

D6-D8 : 0 ~ -0.02  
D10~ D20: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400475	4ANS D060L050	6	13	50	6
NKB400476	4ANS D080L060	8	16	60	8
NKB400477	4ANS D100L075	10	20	75	10
NKB400478	4ANS D120L075	12	24	75	12
NKB400479	4ANS D140L100	14	28	100	14
NKB400480	4ANS D160L100	16	32	100	16
NKB400481	4ANS D200L100	20	40	100	20



❖ Production upon request

Unit : mm

**4KDE** 4 Flute Extreme Square End Mill

D6-D8 : 0 ~ -0.02  
D10-D20: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400482	4KDED060L060	6	15	60	6
NKB400483	4KDED080L060	8	20	60	8
NKB400484	4KDED100L075	10	25	75	10
NKB400485	4KDED120L075	12	30	75	12
NKB400486	4KDED140L100	14	35	100	14
NKB400487	4KDED160L100	16	40	100	16
NKB400488	4KDED200L100	20	45	100	20



HRC:45~62

Unit : mm

**4NDB Series**

**4NDB**

4 Flute Extreme Corner Radius End Mill

D6-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400489	4NDBR005L060D6	6.0	0.5	15	60	6
NKB400490	4NDBR010L060D6	6.0	1.0	15	60	6
NKB400491	4NDBR005L075D6	6.0	0.5	15	75	6
NKB400492	4NDBR010L075D6	6.0	1.0	15	75	6
NKB400493	4NDBR005L060D8	8.0	0.5	20	60	8
NKB400494	4NDBR010L060D8	8.0	1.0	20	60	8
NKB400495	4NDBR005L100D8	8.0	0.5	20	100	8
NKB400496	4NDBR010L100D8	8.0	1.0	20	100	8
NKB400497	4NDBR005L075D10	10.0	0.5	25	75	10
NKB400498	4NDBR010L075D10	10.0	1.0	25	75	10
NKB400499	4NDBR020L075D10	10.0	2.0	25	75	10
NKB400500	4NDBR005L100D10	10.0	0.5	25	100	10
NKB400501	4NDBR010L100D10	10.0	1.0	25	100	10
NKB400502	4NDBR020L100D10	10.0	2.0	25	100	10
NKB400503	4NDBR005L075D12	12.0	0.5	30	75	12
NKB400504	4NDBR010L075D12	12.0	1.0	30	75	12
NKB400505	4NDBR020L075D12	12.0	2.0	30	75	12
NKB400506	4NDBR005L100D12	12.0	0.5	30	100	12
NKB400507	4NDBR010L100D12	12.0	1.0	30	100	12
NKB400508	4NDBR020L100D12	12.0	2.0	30	100	12

4 0.4 μm 35° MG 12 R HRC:45~62

Unit : mm

**R4KES Series**



**R4KES**

4 Flute Square End Mill For Slotting And Roughing

D6-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400509	R4KESD060L050	6	15	50	6
NKB400510	R4KESD080L060	8	20	60	8
NKB400511	R4KESD100L075	10	25	75	10
NKB400512	R4KESD120L075	12	30	75	12

**HRC:45~62**

Unit : mm

**Special Tools**



# Supreme Series

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**PCD Tool** : PCD features in its superb hardness, wear resistance, high thermal conductivity which heat transfer will be flow quickly to the cutting edge. ACT PCD tools have mirror polished rake face to prevent friction and results in smooth cutting edges.

## **Diamond Coating Tools :**

FOR GRAPHITE, MEDICAL APPLICATION,  
AEROSPACE MACHINING  
HIGH WEAR RESISTANCE, IMPROVE TOOL LIFE.

This series of tool offers a wide range of geometries specially designed for graphite machining. The size from diameter Ø 0.2 to Ø 12.0mm.

The coating diamond is ultra hardness, it features to protect the edge of end mill, thus the tool life have significantly increase compare to the conventional coatings.

Besides the standard Diamond range, ACT also supply custom made Diamond milling cutters.

# Supreme Series

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Based on the exclusive selected material of nano grain carbide and X coating, this series of tool has excellent performance on machining above 60 HRC.

Deep machining tools with ultra long neck, with special design neck is your ideal choice for precision machining conventionally done.



**S4KES Series & S4KEL Series**

**S4KES** 4 Flute Square End Mill

D1-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400513	S4KESD010L050	1	3	50	4
NKB400514	S4KESD020L050	2	5	50	4
NKB400515	S4KESD030L050	3	8	50	4
NKB400516	S4KESD040L050	4	10	50	4
NKB400517	S4KESD050L050	5	13	50	6
NKB400518	S4KESD060L050	6	15	50	6
NKB400519	S4KESD080L060	8	20	60	8
NKB400520	S4KESD100L075	10	25	75	10
NKB400521	S4KESD120L075	12	30	75	12

0.2 μm 45° MG 9 HRC: 62†

Unit : mm



**S4KEL** 4 Flute Long Shank Square End Mill

D5-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03

Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400522	S4KELD050L060	5	20	60	6
NKB400523	S4KELD060L075	6	24	75	6
NKB400524	S4KELD080L075	8	32	75	8
NKB400525	S4KELD100L100	10	40	100	10
NKB400526	S4KELD120L100	12	45	100	12

0.2 μm 45° MG 9 HRC: 62†

Unit : mm

## S2KUE Series

### S2KUE

2 Flute Square End Mill For Deep Machining



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400527	S2KUED010L050U4	1.0	1.5	4	50	4
NKB400528	S2KUED010L050U6	1.0	1.5	6	50	4
NKB400529	S2KUED010L050U8	1.0	1.5	8	50	4
NKB400530	S2KUED015L050U6	1.5	2.0	6	50	4
NKB400531	S2KUED015L050U8	1.5	2.0	8	50	4
NKB400532	S2KUED015L050U10	1.5	2.0	10	50	4
NKB400533	S2KUED015L050U12	1.5	2.0	12	50	4
NKB400534	S2KUED020L050U8	2.0	3.0	8	50	4
NKB400535	S2KUED020L050U10	2.0	3.0	10	50	4
NKB400536	S2KUED020L050U12	2.0	3.0	12	50	4
NKB400537	S2KUED020L050U16	2.0	3.0	16	50	4
NKB400538	S2KUED030L050U10	3.0	4.0	10	50	6
NKB400539	S2KUED030L050U12	3.0	4.0	12	50	6
NKB400540	S2KUED030L050U16	3.0	4.0	16	50	6
NKB400541	S2KUED030L060U20	3.0	4.0	20	60	6
NKB400542	S2KUED040L050U12	4.0	5.0	12	50	6
NKB400543	S2KUED040L050U16	4.0	5.0	16	50	6
NKB400544	S2KUED040L050U20	4.0	5.0	20	60	6





**HRC: 62†**

Unit : mm

**S4KUE Series & S2KBS Series**

**S4KUE** 4 Flute Square End Mill For Deep Machining



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400545	S4KUED010L050U4	1.0	1.5	4	50	4
NKB400546	S4KUED010L050U6	1.0	1.5	6	50	4
NKB400547	S4KUED010L050U8	1.0	1.5	8	50	4
NKB400548	S4KUED015L050U6	1.5	2.0	6	50	4
NKB400549	S4KUED015L050U8	1.5	2.0	8	50	4
NKB400550	S4KUED015L050U10	1.5	2.0	10	50	4
NKB400551	S4KUED015L050U12	1.5	2.0	12	50	4
NKB400552	S4KUED020L050U8	2.0	3.0	8	50	4
NKB400553	S4KUED020L050U10	2.0	3.0	10	50	4
NKB400554	S4KUED020L050U12	2.0	3.0	12	50	4
NKB400555	S4KUED020L050U16	2.0	3.0	16	50	4
NKB400556	S4KUED030L050U10	3.0	4.0	10	50	6
NKB400557	S4KUED030L050U12	3.0	4.0	12	50	6
NKB400558	S4KUED030L050U16	3.0	4.0	16	50	6
NKB400559	S4KUED030L060U20	3.0	4.0	20	60	6
NKB400560	S4KUED040L050U12	4.0	5.0	12	50	6
NKB400561	S4KUED040L050U16	4.0	5.0	16	50	6
NKB400562	S4KUED040L060U20	4.0	5.0	20	60	6

0.2 μm 35° MG 9 S HRC: 62↑

Unit : mm

**S2KBS** 2 Flute Ball Nose

D1-D8 : 0 ~ -0.02  
D10-D20 : 0 ~ -0.03



Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400563	S2KBSR005L050	0.5	2	50	4
NKB400564	S2KBSR0075L050	0.75	3	50	4
NKB400565	S2KBSR010L050	1.0	4	50	4
NKB400566	S2KBSR015L050	1.5	6	50	4
NKB400567	S2KBSR020L050	2.0	8	50	4
NKB400568	S2KBSR025L050	2.5	10	50	6
NKB400569	S2KBSR030L050	3.0	12	50	6
NKB400570	S2KBSR040L060	4.0	16	60	8
NKB400571	S2KBSR050L075	5.0	20	75	10
NKB400572	S2KBSR060L075	6.0	20	75	12
NKB400573	S2KBSR070L100	7.0	22	100	14
NKB400574	S2KBSR080L100	8.0	24	100	16
NKB400575	S2KBSR100L100	10.0	30	100	20

0.2 μm 35° MG 9 S HRC: 62↑

Unit : mm



**S2KBL Series**

**S2KBL**

2 Flute Long Shank Ball Nose

D1-D8 : 0 ~ -0.02  
D10-D12 : 0 ~ -0.03



Order Code	Description	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400576	S2KBLR005L060	0.5	2	60	6
NKB400577	S2KBLR005L075	0.5	2	75	6
NKB400578	S2KBLR010L060	1.0	4	60	6
NKB400579	S2KBLR010L075	1.0	4	75	6
NKB400580	S2KBLR010L100	1.0	4	100	6
NKB400581	S2KBLR015L060	1.5	6	60	6
NKB400582	S2KBLR015L075	1.5	6	75	6
NKB400583	S2KBLR015L100	1.5	6	100	6
NKB400584	S2KBLR020L060	2.0	8	60	6
NKB400585	S2KBLR020L075	2.0	8	75	6
NKB400586	S2KBLR020L100	2.0	8	100	6
NKB400587	S2KBLR025L075	2.5	10	75	6
NKB400588	S2KBLR030L075	3.0	12	75	6
NKB400589	S2KBLR030L100	3.0	12	100	6
NKB400590	S2KBLR030L150	3.0	12	150	6
NKB400591	S2KBLR040L100	4.0	16	100	8
NKB400592	S2KBLR040L150	4.0	16	150	8
NKB400593	S2KBLR050L100	5.0	20	100	10
NKB400594	S2KBLR050L150	5.0	20	150	10
NKB400595	S2KBLR060L100	6.0	24	100	12
NKB400596	S2KBLR060L150	6.0	24	150	12

2 0.2 μm (30°) MG 9 HRC: 62±

Unit : mm

**S2KUB Series**

**S2KUB**

2 Flute Ball Nose For Deep Machining



Order Code	Description	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400597	S2KUBR005L050U6	0.5	1.5	6	50	4
NKB400598	S2KUBR005L050U8	0.5	1.5	8	50	4
NKB400599	S2KUBR005L050U10	0.5	1.5	10	50	4
NKB400600	S2KUBR005L050U12	0.5	1.5	12	50	4
NKB400601	S2KUBR075L050U8	0.75	2	8	50	4
NKB400602	S2KUBR075L050U10	0.75	2	10	50	4
NKB400603	S2KUBR075L050U12	0.75	2	12	50	4
NKB400604	S2KUBR075L050U16	0.75	2	16	50	4
NKB400605	S2KUBR075L050U20	0.75	2	20	50	4
NKB400606	S2KUBR010L050U8	1.0	3	8	50	4
NKB400607	S2KUBR010L050U10	1.0	3	10	50	4
NKB400608	S2KUBR010L050U12	1.0	3	12	50	4
NKB400609	S2KUBR010L050U16	1.0	3	16	50	4
NKB400610	S2KUBR010L050U20	1.0	3	20	50	4
NKB400611	S2KUBR015L050U8	1.5	4	8	50	6
NKB400612	S2KUBR015L050U10	1.5	4	10	50	6
NKB400613	S2KUBR015L050U12	1.5	4	12	50	6
NKB400614	S2KUBR015L050U16	1.5	4	16	50	6
NKB400615	S2KUBR015L050U20	1.5	4	20	60	6
NKB400616	S2KUBR015L050U25	1.5	4	25	60	6
NKB400617	S2KUBR020L050U12	2.0	5	12	50	6
NKB400618	S2KUBR020L050U16	2.0	5	16	50	6
NKB400619	S2KUBR020L050U20	2.0	5	20	50	6
NKB400620	S2KUBR020L075U25	2.0	5	25	75	6
NKB400621	S2KUBR020L075U30	2.0	5	30	75	6

0.2 LITR 30° MG 9 B HRC: 62↑

Unit : mm

**S2KUBL Series & S4NB Series**

**S2KUBL** 2 Flute (Long Shank) Ball Nose For Deep Machining D3-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03



Order Code	Description	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400622	S2KUBLR0025L060U6	0.25	1.0	6	60	6
NKB400623	S2KUBLR0025L060U8	0.25	1.0	8	60	6
NKB400624	S2KUBLR0025L060U10	0.25	1.0	10	60	6
NKB400625	S2KUBLR005L060U10	0.5	1.5	10	60	6
NKB400626	S2KUBLR005L060U16	0.5	1.5	16	60	6
NKB400627	S2KUBLR005L060U20	0.5	1.5	20	60	6
NKB400628	S2KUBLR010L060U16	1.0	2.0	16	60	6
NKB400629	S2KUBLR010L075U25	1.0	2.0	25	75	6
NKB400630	S2KUBLR010L085U40	1.0	2.0	40	85	6
NKB400631	S2KUBLR020L075U25	2.0	4.0	25	75	6
NKB400632	S2KUBLR020L085U40	2.0	4.0	40	85	6
NKB400633	S2KUBLR030L075U25	3.0	6.0	25	75	6
NKB400634	S2KUBLR030L085U40	3.0	6.0	40	85	6
NKB400635	S2KUBLR040L075U40	4.0	8.0	40	75	8

0.2 μm 30° MG 9 HRC: 62

Unit : mm

**S4NB** 2 Flute Corner Radius (45°) D3-D8 : 0 ~ -0.02  
D10-D12: 0 ~ -0.03



Order Code	Description	DIA. (D) 0-0.02	Radius (R) ±0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400636	S4NBR003L050D3	3	0.3	8	50	4
NKB400637	S4NBR002L050D4	4	0.2	10	50	4
NKB400638	S4NBR003L050D4	4	0.3	10	50	4
NKB400639	S4NBR005L050D4	4	0.5	10	50	4
NKB400640	S4NBR005L050D5	5	0.5	13	50	6
NKB400641	S4NBR010L050D5	5	1.0	13	50	6
NKB400642	S4NBR005L050D6	6	0.5	15	50	6
NKB400643	S4NBR010L050D6	6	1.0	15	50	6
NKB400644	S4NBR005L060D8	8	0.5	20	60	8
NKB400645	S4NBR010L060D8	8	1.0	20	60	8
NKB400646	S4NBR005L075D10	10	0.5	25	75	10
NKB400647	S4NBR010L075D10	10	1.0	25	75	10
NKB400648	S4NBR020L075D10	10	2.0	25	75	10
NKB400649	S4NBR030L075D10	10	3.0	25	75	10
NKB400650	S4NBR005L075D12	12	0.5	30	75	12
NKB400651	S4NBR010L075D12	12	1.0	30	75	12
NKB400652	S4NBR020L075D12	12	2.0	30	75	12
NKB400653	S4NBR030L075D12	12	3.0	30	75	12

0.4 μm 45° MG 12 HRC: 62

Unit : mm

**S2SNUB Series & S2NUBL Series**

**S2SNUB** 2 Flute Corner Radius For Deep Machining



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400654	S2SNUBR001L050U4	1	0.1	1	4	50	4
NKB400655	S2SNUBR001L050U6	1	0.1	1	6	50	4
NKB400656	S2SNUBR001L050U8	1	0.1	1	8	50	4
NKB400657	S2SNUBR001L050U10	1	0.1	1	10	50	4
NKB400658	S2SNUBR001L050U12	1	0.1	1	12	50	4
NKB400659	S2SNUBR0015L050U6	1.5	0.15	1.5	6	50	4
NKB400660	S2SNUBR0015L050U8	1.5	0.15	1.5	8	50	4
NKB400661	S2SNUBR0015L050U12	1.5	0.15	1.5	12	50	4
NKB400662	S2SNUBR0015L050U16	1.5	0.15	1.5	16	50	4
NKB400663	S2SNUBR002L050U6	2	0.2	2	6	50	4
NKB400664	S2SNUBR002L050U10	2	0.2	2	10	50	4
NKB400665	S2SNUBR002L050U14	2	0.2	2	14	50	4
NKB400666	S2SNUBR002L050U16	2	0.2	2	16	50	4
NKB400667	S2SNUBR002L050U20	2	0.2	2	20	50	4
NKB400668	S2SNUBR003L060U10	3	0.3	4	10	60	6
NKB400669	S2SNUBR003L060U12	3	0.3	4	12	60	6
NKB400670	S2SNUBR003L060U16	3	0.3	4	16	60	6
NKB400671	S2SNUBR003L060U20	3	0.3	4	20	60	6
NKB400672	S2SNUBR005L060U12	4	0.5	5	12	60	6
NKB400673	S2SNUBR005L060U16	4	0.5	5	16	60	6
NKB400674	S2SNUBR005L060U20	4	0.5	5	20	60	6

0.2 (μm) 35° HRC: 62±

Unit : mm

**S2NUBL** 2 Flute (Long Shank) Corner Radius For Deep Machining



Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400675	S2NUBLD1R02U10L60	1	0.2	1.5	10	60	6
NKB400676	S2NUBLD1R02U16L60	1	0.2	1.5	16	60	6
NKB400677	S2NUBLD1R02U20L60	1	0.2	1.5	20	60	6
NKB400678	S2NUBLD2R02U25L75	2	0.2	2	25	75	6
NKB400679	S2NUBLD2R02U40L85	2	0.2	2	40	85	6
NKB400680	S2NUBLD2R05U16L60	2	0.5	2	16	60	6
NKB400681	S2NUBLD2R05U20L60	2	0.5	2	20	60	6
NKB400682	S2NUBLD2R05U25L75	2	0.5	2	25	75	6
NKB400683	S2NUBLD4R02U16L60	4	0.2	4	16	60	6
NKB400684	S2NUBLD4R02U25L75	4	0.2	4	25	75	6
NKB400685	S2NUBLD4R02U40L85	4	0.2	4	40	85	6
NKB400686	S2NUBLD4R05U25L75	4	0.5	4	25	75	6
NKB400687	S2NUBLD4R05U40L85	4	0.5	4	40	85	6
NKB400688	S2NUBLD4R10U10L60	4	1.0	4	10	60	6
NKB400689	S2NUBLD4R10U25L75	4	1.0	4	25	75	6
NKB400690	S2NUBLD6R05U40L85	6	0.5	6	40	85	6
NKB400691	S2NUBLD6R10U25L75	6	1.0	6	25	75	6
NKB400692	S2NUBLD6R10U40L85	6	1.0	6	40	85	6
NKB400693	S2NUBLD8R05U40L85	8	0.5	8	40	85	8
NKB400694	S2NUBLD8R10U40L85	8	1.0	8	40	85	8

0.2 (μm) 40° HRC: 62±

Unit : mm

**S4NUB Series & S2NKB Series**



**S4NUB**

4 Flute Corner Radius For Deep Machining

Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400695	S4NUBR005L075D4U10	4	0.5	4	10	75	6
NKB400696	S4NUBR005L075D4U10d4	4	0.5	4	10	75	4
NKB400697	S4NUBR005L075D5U13	5	0.5	5	13	75	6
NKB400698	S4NUBR010L075D5U13	5	1.0	5	13	75	6
NKB400699	S4NUBR005L075D6U15	6	0.5	6	15	75	6
NKB400700	S4NUBR005L100D8U20	8	0.5	8	20	100	8
NKB400701	S4NUBR010L075D6U15	6	1.0	6	15	75	6
NKB400702	S4NUBR010L100D8U20	8	1.0	8	20	100	8
NKB400703	S4NUBR020L100D10U25	10	2.0	10	25	100	10
NKB400704	S4NUBR010L100D10U25	10	1.0	10	25	100	10
NKB400705	S4NUBR010L100D12U30	12	1.0	12	30	100	12
NKB400706	S4NUBR020L100D12U30	12	2.0	12	30	100	12

0.2 μm 35° MG 9 R HRC: 62+

Unit : mm



**S2NKB**

2 Flute High Feed Machining End Mill

Order Code	Description	DIA. (D) 0~-0.02	Radius (R) ±0.01	F.L. (H)	N.L. (U)	O.V.L. (L)	S.D. (d) H6
NKB400707	S2NKBR004L060D3	3	0.4	2	15	60	4
NKB400708	S2NKBR005L060D4	4	0.5	3	15	60	4
NKB400709	S2NKBR006L060D5	5	0.6	4	30	60	6
NKB400710	S2NKBR0075L075D6	6	0.75	5	30	75	6
NKB400711	S2NKBR008L075D8	8	0.8	7	30	75	8

0.2 μm 90° MG 9 R HRC: 62+

Unit : mm



**Special Tools**

## Working Condition of S2NB

### Working Condition S2NB / Supreme Corner Radius

Working Material Hardness	HRC45~52		HRC52~57		HRC58~65	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
Condition DIA	R.P.M	mm/min	R.P.M	mm/min	R.P.M	mm/min
D2.0x0.1R	8820	630	6860	525	5040	350
D2.0x0.2R	8820	630	6860	525	5040	350
D2.0x0.3R	8820	630	6860	525	5040	350
D3.0x0.1R	6860	840	5740	735	5250	350
D3.0x0.2R	6860	840	5740	735	5250	350
D3x0.3R	6860	840	5740	735	5250	350
D4x0.2R	6510	735	5495	595	4760	350
D4x0.3R	6510	735	5495	595	4760	350
D2x0.5R	9100	630	7700	525	6440	420
D3x0.5R	6860	1050	5740	770	5250	350
D4x0.5R	6510	735	5495	595	4760	350
D6x0.5R	6160	1400	5040	1050	3220	525
D8x0.5R	3745	1190	3255	840	2695	574
D10x0.5R	2240	770	1890	665	1155	406
D12x0.5R	1540	665	1260	560	910	371
D3.0x1R	7889	1208	5601	886	6038	403
D4.0x1R	7487	846	6320	685	5474	403
D6.0x1R	7084	1610	5796	1208	3703	604
D8.0x1R	4307	1369	3744	966	3100	660
D10.0x1R	2576	886	2174	765	1329	467
D12.0x1R	1771	998	1449	644	1047	427
D6.0x1.5R	7392	1680	6048	1260	3864	630
D8.0x1.5R	4494	1428	3906	1008	3234	689
D10.0x1.5R	2688	924	2268	798	1386	487
D12.0x1.5R	1848	798	1512	672	1092	445
D6.0x2R	8088	1820	6552	1365	4186	683
D8.0x2R	4869	1547	4232	3504	3502	746
D10.0x2R	2912	1001	2457	1502	1502	528
D12.0x2R	2002	865	1638	1183	1183	482
D8.0x3R	5056	1607	4359	1134	3640	775
D10.0x3R	3024	1040	2552	898	1560	548
D12.0x3R	2079	898	1701	756	1229	501

**Working Condition of S2KES & S4NB**

**Working Condition S2KES / Supreme Square End Mill**

Working Material Hardness	HRC45~52		HRC52~57		HRC58~65	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
	R.P.M	mm/min	R.P.M	mm/min	R.P.M	mm/min
Condition DIA						
D1.0	11120	360	10400	320	8400	304
D2.0	10240	480	8920	464	7200	400
D3.0	7840	720	7200	640	6240	400
D4.0	7200	750	6800	600	5600	544
D5.0	7120	1040	6240	640	4400	480
D6.0	6560	960	6080	760	4000	440
D8.0	3600	1200	3200	960	2000	520
D10.0	2000	880	1600	720	1280	400
D12.0	2000	960	1600	800	960	360

**Working Condition S4NB / Supreme Four Flute Corner Radius**

Working Material Hardness	HRC45~52		HRC52~57		HRC58~65	
	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed	Rotational Speed	Feeding Speed
	R.P.M	mm/min	R.P.M	mm/min	R.P.M	mm/min
Condition DIA						
D3.0x0.1R	4527	554	3788	485	3456	231
D3.0x0.2R	4527	554	3788	485	3456	231
D3.0x0.3R	4527	554	3788	485	3465	231
D4.0x0.3R	4296	485	3626	392	3141	231
D4.0x0.3R	4296	485	36226	392	3141	231
D2.0x0.5R	6006	415	5082	346	4250	277
D3.0x0.5R	4527	693	3788	508	3465	231
D4.0x0.5R	4296	485	3626	392	3141	231
D5.0x0.5R	4065	924	3326	693	2125	346
D6.0x0.5R	2471	785	2148	554	1778	378
D10.0x0.5R	1478	508	1247	438	762	268
D12.0x0.5R	1016	438	831	369	600	245
D3.0x1R	5206	797	4357	584	3985	266
D4.0x1R	4941	557	4171	452	3612	266
D6.0x1R	4675	1062	3825	797	2444	398
D8.0x1R	2842	903	2470	638	2046	398
D10.0x1R	1700	584	1431	504	876	308
D12.0x1R	1169	658	955	424	690	284
D6.0x1.5R	4878	1108	3991	831	2546	415
D8.0x1.5R	2965	842	2578	665	2134	454
D10.0x1.5R	1774	509	1479	526	915	321
D12.0x1.5R	1219	525	997	443	720	293
D6.0x2R	5285	1201	4324	900	2763	451
D8.0x2R	3213	1020	2792	2312	2312	492
D10.0x2R	1921	661	1621	991	991	384
D12.0x2R	1321	570	1081	781	781	317
D8.0x3R	3337	1060	2900	748	2402	511
D10.0x3R	1995	686	1684	592	1029	361
D12.0x3R	1371	592	1123	499	810	331

# CNC 2DMS

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# CNC Drill Series

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## 2 Flute CNC Drill End Mill



**2DMS Series & 2DMS-B Series**

**2DMS**

2 Flute CNC Drill End Mill

D4-D8 : 0 ~ -0.02  
D10-D20: 0 ~ -0.03



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400712	2DMSD040L050	4	8	50	4
NKB400713	2DMSD050L060	5	15	50	6
NKB400714	2DMSD060L060	6	15	60	6
NKB400715	2DMSD080L060	8	20	60	8
NKB400716	2DMSD100L075	10	25	75	10
NKB400717	2DMSD120L075	12	25	75	12
NKB400718	2DMSD140L100	14	25	100	14
NKB400719	2DMSD160L100	16	25	100	16
NKB400720	2DMSD200L100	20	30	100	20
NKB400721	2DMSD200L150	20	30	150	20

0.4 μm MG 12 60° 90° 120° HRC:45~62

Unit : mm

**2DMS-B**

2 Flute Ball Nose



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6	Angle
NKB400722	2DMS-BD010L050A6B	1	2	50	4	60
NKB400723	2DMS-BD010L050A9B	1	2	50	4	90
NKB400724	2DMS-BD015L050A6B	1.5	2	50	4	60
NKB400725	2DMS-BD015L050A9B	1.5	2	50	4	90
NKB400726	2DMS-BD020L050A6B	2	3	50	4	60
NKB400727	2DMS-BD020L050A9B	2	3	50	4	90
NKB400728	2DMS-BD025L050A6B	2.5	3	50	4	60
NKB400729	2DMS-BD025L050A9B	2.5	3	50	4	90
NKB400730	2DMS-BD030L050A6B	3	4	50	4	60
NKB400731	2DMS-BD030L050A9B	3	4	50	4	90
NKB400732	2DMS-BD040L050A6B	4	5	50	4	60
NKB400733	2DMS-BD040L050A9B	4	5	50	4	90

0.4 μm MG 12 60° 90° HRC:45~62

Unit : mm

**2CTC Series**

**2CTC** 2 Flute Center Spot And Chamfer



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6	Angle
NKB400734	2CTCD030L050A6	3	10	50	3	60
NKB400735	2CTCD040L050A6	4	12	50	4	60
NKB400736	2CTCD050L050A6	5	15	50	5	60
NKB400737	2CTCD060L050A6	6	20	50	6	60
NKB400738	2CTCD070L050A6	7	20	50	7	60
NKB400739	2CTCD080L060A6	8	20	60	8	60
NKB400740	2CTCD100L075A6	10	22	75	10	60
NKB400741	2CTCD120L075A6	12	25	75	12	60

2 0.4 μm MG 12 60° HRC:45~62

Unit : mm

**2CTC** 2 Flute Center Spot And Chamfer



Order Code	Description	DIA. (D) 0~-0.02	F.L. (H)	O.V.L. (L)	S.D. (d) H6	Angle
NKB400742	2CTCD030L050A9	3	10	50	3	90
NKB400743	2CTCD040L050A9	4	12	50	4	90
NKB400744	2CTCD050L050A9	5	15	50	5	90
NKB400745	2CTCD090L050A9	6	20	50	6	90
NKB400746	2CTCD070L050A9	7	20	50	7	90
NKB400747	2CTCD080L090A9	8	20	60	8	90
NKB400748	2CTCD100L075A9	10	22	75	10	90
NKB400749	2CTCD120L075A9	12	25	75	12	90

2 0.4 μm MG 12 90° HRC:45~62

Unit : mm

## 2CTC Series & SAWC



### 2CTC 2 Flute Center Spot And Chamfer

Order Code	Description	DIA. (D) <small>0~-0.02</small>	F.L. (H)	O.V.L. (L)	S.D. (d) <small>H6</small>	Angle
NKB400750	SAWCD030L050A12	3	10	50	3	120
NKB400751	SAWCD040L050A12	4	12	50	4	120
NKB400752	SAWCD050L050A12	5	15	50	5	120
NKB400753	SAWCD0120L050A12	6	20	50	6	120
NKB400754	SAWCD070L050A12	7	20	50	7	120
NKB400755	SAWCD080L0120A12	8	20	60	8	120
NKB400756	SAWCD100L075A12	10	2	75	10	120
NKB400757	SAWCD120L075A12	12	25	75	12	120



HRC:45~62

Unit : mm

### SAWC CARBIDE SAW

Outside Dia (D)	20	25	35	40	45	50	60	75	85	100	125
Hole Dia (d)	6	6	8	8	12.7	12.7	12.7	25.4	25.4	25.4	25.4
Thickness (T)	Teeth Number (Z)										
0.3	30	30	40	40	40						
0.4	30	30	40	40	40						
0.5	30	30	40	40	40	54	64				
0.6	30	30	40	40	40	54	64	64	64	72	86
0.7	30	30	40	40	40	54	64	64	64	72	86
0.8	30	30	40	40	40	54	64	64	64	72	86
0.9	30	30	40	40	40	54	64	64	64	72	86
1	30	30	40	40	40	54	64	64	64	72	86
1.2	30	30	40	40	40	54	64	64	64	72	86
1.4	30	30	40	40	40	54	64	64	64	72	86
1.6	30	30	40	40	40	54	64	64	64	72	86
1.8	30	30	40	40	40	54	64	64	64	72	86
2	30	30	40	40	40	54	64	64	64	72	86

Unit : mm

## 2DRS Series

### 2DRS Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)
NKB400758	2DRS010026	1.0	6	26
NKB400759	2DRS011028	1.1	7	28
NKB400760	2DRS012030	1.2	8	30
NKB400761	2DRS013030	1.3	8	30
NKB400762	2DRS014032	1.4	9	32
NKB400763	2DRS015032	1.5	9	32
NKB400764	2DRS016034	1.6	10	34
NKB400765	2DRS017034	1.7	10	34
NKB400766	2DRS018036	1.8	11	36
NKB400767	2DRS019036	1.9	11	36
NKB400768	2DRS020038	2.0	12	38
NKB400769	2DRS021038	2.1	12	38
NKB400770	2DRS022040	2.2	13	40
NKB400771	2DRS023040	2.3	13	40
NKB400772	2DRS024043	2.4	14	43
NKB400773	2DRS025043	2.5	14	43
NKB400774	2DRS026043	2.6	14	43
NKB400775	2DRS027046	2.7	14	46
NKB400776	2DRS028046	2.8	16	46
NKB400777	2DRS029046	2.9	16	46
NKB400778	2DRS030046	3.0	16	46
NKB400779	2DRS031049	3.1	18	49
NKB400780	2DRS032049	3.2	18	49
NKB400781	2DRS033049	3.3	18	49
NKB400782	2DRS034052	3.4	20	52
NKB400783	2DRS035052	3.5	20	52
NKB400784	2DRS036052	3.6	20	52
NKB400785	2DRS037052	3.7	20	52
NKB400786	2DRS038055	3.8	22	55
NKB400787	2DRS039055	3.9	22	55
NKB400788	2DRS040055	4.0	22	55
NKB400789	2DRS041055	4.1	22	55
NKB400790	2DRS042055	4.2	22	55
NKB400791	2DRS043058	4.3	24	58
NKB400792	2DRS044058	4.4	24	58
NKB400793	2DRS045058	4.5	24	58
NKB400794	2DRS046058	4.6	24	58
NKB400795	2DRS047058	4.7	24	58

Unit : mm

## 2DRS Series

### 2DRS Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)
NKB400796	2DRS048062	4.8	26	62
NKB400797	2DRS049062	4.9	26	62
NKB400798	2DRS050062	5.0	26	62
NKB400799	2DRS051062	5.1	26	62
NKB400800	2DRS052065	5.2	26	65
NKB400801	2DRS053065	5.3	26	65
NKB400802	2DRS054066	5.4	28	66
NKB400803	2DRS055066	5.5	28	66
NKB400804	2DRS056066	5.6	28	66
NKB400805	2DRS057066	5.7	28	66
NKB400806	2DRS058066	5.8	28	66
NKB400807	2DRS059066	5.9	28	66
NKB400808	2DRS060066	6.0	31	66
NKB400809	2DRS061070	6.1	31	70
NKB400810	2DRS062070	6.2	31	70
NKB400811	2DRS063070	6.3	31	70
NKB400812	2DRS064070	6.4	31	70
NKB400813	2DRS065070	6.5	31	70
NKB400814	2DRS066070	6.6	31	70
NKB400815	2DRS067070	6.7	31	70
NKB400816	2DRS068074	6.8	34	74
NKB400817	2DRS069074	6.9	34	74
NKB400818	2DRS070074	7.0	34	74
NKB400819	2DRS071074	7.1	34	74
NKB400820	2DRS072074	7.2	34	74
NKB400821	2DRS073074	7.3	34	74
NKB400822	2DRS074074	7.4	34	74
NKB400823	2DRS075074	7.5	34	74
NKB400824	2DRS076079	7.6	37	79
NKB400825	2DRS077079	7.7	37	79
NKB400826	2DRS078079	7.8	37	79
NKB400827	2DRS079079	7.9	37	79
NKB400828	2DRS080079	8.0	37	79
NKB400829	2DRS081079	8.1	37	79
NKB400830	2DRS082079	8.2	37	79
NKB400831	2DRS083079	8.3	37	79
NKB400832	2DRS084079	8.4	37	79
NKB400833	2DRS085079	8.5	37	79

Unit : mm

## 2DRS Series

### 2DRS Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)
NKB400834	2DRS086084	8.6	40	84
NKB400835	2DRS087084	8.7	40	84
NKB400836	2DRS088084	8.8	40	84
NKB400837	2DRS089084	8.9	40	84
NKB400838	2DRS090084	9.0	40	84
NKB400839	2DRS091084	9.1	40	84
NKB400840	2DRS092084	9.2	40	84
NKB400841	2DRS093084	9.3	40	84
NKB400842	2DRS094084	9.4	40	84
NKB400843	2DRS095084	9.5	40	84
NKB400844	2DRS096089	9.6	43	89
NKB400845	2DRS097089	9.7	43	89
NKB400846	2DRS098089	9.8	43	89
NKB400847	2DRS099089	9.9	43	89
NKB400848	2DRS100089	10.0	43	89
NKB400849	2DRS101089	10.1	43	89
NKB400850	2DRS102089	10.2	43	89
NKB400851	2DRS103089	10.3	43	89
NKB400852	2DRS104089	10.4	43	89
NKB400853	2DRS105089	10.5	43	89
NKB400854	2DRS106089	10.6	43	89
NKB400855	2DRS107089	10.7	43	89
NKB400856	2DRS108089	10.8	43	89
NKB400857	2DRS109089	10.9	43	89
NKB400858	2DRS110089	11.0	43	89
NKB400859	2DRS111095	11.1	47	95
NKB400860	2DRS112095	11.2	47	95
NKB400861	2DRS113095	11.3	47	95
NKB400862	2DRS114095	11.4	47	95
NKB400863	2DRS115095	11.5	47	95
NKB400864	2DRS116095	11.6	47	95
NKB400865	2DRS117095	11.7	47	95
NKB400866	2DRS118095	11.8	47	95
NKB400867	2DRS119095	11.9	47	95
NKB400868	2DRS120095	12.0	47	95
NKB400869	2DRS121102	12.1	51	102
NKB400870	2DRS122102	12.2	51	102
NKB400871	2DRS123102	12.3	51	102

Unit : mm

## 2DRS Series

### 2DRS Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)
NKB400872	2DRS124102	12.4	51	102
NKB400873	2DRS125102	12.5	51	102
NKB400874	2DRS126102	12.6	51	102
NKB400875	2DRS127102	12.7	51	102
NKB400876	2DRS128102	12.8	51	102
NKB400877	2DRS129102	12.9	51	102
NKB400878	2DRS130102	13.0	51	102
NKB400879	2DRS131102	13.1	51	102
NKB400880	2DRS132102	13.2	51	102
NKB400881	2DRS133102	13.3	51	102
NKB400882	2DRS134102	13.4	51	102
NKB400883	2DRS135102	13.5	51	102
NKB400884	2DRS136102	13.6	51	102
NKB400885	2DRS137102	13.7	51	102
NKB400886	2DRS138102	13.8	51	102
NKB400887	2DRS139102	13.9	51	102
NKB400888	2DRS140102	14.0	51	102

Unit : mm



## 2DRSD Series

### 2DRSD Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400889	2DRSD010038	1.0	6	38	3
NKB400890	2DRSD011038	1.1	7	38	3
NKB400891	2DRSD012038	1.2	8	38	3
NKB400892	2DRSD013038	1.3	8	38	3
NKB400893	2DRSD014038	1.4	9	38	3
NKB400894	2DRSD015038	1.5	9	38	3
NKB400895	2DRSD016038	1.6	10	38	3
NKB400896	2DRSD017038	1.7	10	38	3
NKB400897	2DRSD018038	1.8	11	38	3
NKB400898	2DRSD019038	1.9	11	38	3
NKB400899	2DRSD020038	2.0	12	50	3
NKB400900	2DRSD021050	2.1	12	50	3
NKB400901	2DRSD022050	2.2	13	50	3
NKB400902	2DRSD023050	2.3	13	50	3
NKB400903	2DRSD024050	2.4	14	50	3
NKB400904	2DRSD025050	2.5	14	50	3
NKB400905	2DRSD026050	2.6	14	50	3
NKB400906	2DRSD027050	2.7	14	50	3
NKB400907	2DRSD028050	2.8	16	50	3
NKB400908	2DRSD029050	2.9	16	50	3
NKB400909	2DRSD030050	3.0	16	50	3
NKB400910	2DRSD031060	3.1	18	60	4
NKB400911	2DRSD032060	3.2	18	60	4
NKB400912	2DRSD033060	3.3	18	60	4
NKB400913	2DRSD034060	3.4	20	60	4
NKB400914	2DRSD035060	3.5	20	60	4
NKB400915	2DRSD036060	3.6	20	60	4

Unit : mm

## 2DRSD Series

### 2DRSD Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400916	2DRSD037060	3.7	20	60	4
NKB400917	2DRSD038060	3.8	22	60	4
NKB400918	2DRSD039060	3.9	22	60	4
NKB400919	2DRSD040060	4.0	22	60	4
NKB400920	2DRSD041060	4.1	22	60	6
NKB400921	2DRSD042060	4.2	22	60	6
NKB400922	2DRSD043060	4.3	24	60	6
NKB400923	2DRSD044060	4.4	24	60	6
NKB400924	2DRSD045060	4.5	24	60	6
NKB400925	2DRSD046060	4.6	24	60	6
NKB400926	2DRSD047060	4.7	24	60	6
NKB400927	2DRSD048060	4.8	26	60	6
NKB400928	2DRSD049060	4.9	26	60	6
NKB400929	2DRSD050060	5.0	26	60	6
NKB400930	2DRSD051060	5.1	26	60	6
NKB400931	2DRSD052060	5.2	26	60	6
NKB400932	2DRSD053060	5.3	26	60	6
NKB400933	2DRSD054060	5.4	28	60	6
NKB400934	2DRSD055060	5.5	28	60	6
NKB400935	2DRSD056060	5.6	28	60	6
NKB400936	2DRSD057060	5.7	28	60	6
NKB400937	2DRSD058060	5.8	28	60	6
NKB400938	2DRSD059060	5.9	28	60	6
NKB400939	2DRSD060060	6.0	28	60	6

Unit : mm

## 2DRSE Series

### 2DRSE Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400940	2DRSE015047	1.5	10	47	4
NKB400941	2DRSE016047	1.6	10	47	4
NKB400942	2DRSE017047	1.7	10	47	4
NKB400943	2DRSE018047	1.8	12	47	4
NKB400944	2DRSE019047	1.9	12	47	4
NKB400945	2DRSE020055	2.0	15	55	4
NKB400946	2DRSE021055	2.1	15	55	4
NKB400947	2DRSE022055	2.2	15	55	4
NKB400948	2DRSE023055	2.3	15	55	4
NKB400949	2DRSE024055	2.4	15	55	4
NKB400950	2DRSE025055	2.5	15	55	4
NKB400951	2DRSE026055	2.6	18	55	4
NKB400952	2DRSE027055	2.7	18	55	4
NKB400953	2DRSE028055	2.8	18	55	4
NKB400954	2DRSE029055	2.9	18	55	4
NKB400955	2DRSE030062	3.0	20	62	4
NKB400956	2DRSE031062	3.1	20	62	4
NKB400957	2DRSE032062	3.2	20	62	4
NKB400958	2DRSE033062	3.3	20	62	4
NKB400959	2DRSE034062	3.4	20	62	4
NKB400960	2DRSE035062	3.5	20	62	6
NKB400961	2DRSE036062	3.6	20	62	6
NKB400962	2DRSE037062	3.7	20	62	6
NKB400963	2DRSE038062	3.8	20	62	6
NKB400964	2DRSE039062	3.9	20	62	6
NKB400965	2DRSE040066	4.0	24	66	6
NKB400966	2DRSE041066	4.1	24	66	6
NKB400967	2DRSE042066	4.2	24	66	6
NKB400968	2DRSE043066	4.3	24	66	6
NKB400969	2DRSE044066	4.4	24	66	6
NKB400970	2DRSE045066	4.5	24	66	6
NKB400971	2DRSE046066	4.6	24	66	6

Unit : mm

## 2DRSE Series

### 2DRSE Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB400972	2DRSE047066	4.7	28	66	6
NKB400973	2DRSE048066	4.8	28	66	6
NKB400974	2DRSE049066	4.9	28	66	6
NKB400975	2DRSE050066	5.0	28	66	6
NKB400976	2DRSE051066	5.1	28	66	6
NKB400977	2DRSE052066	5.2	28	66	6
NKB400978	2DRSE053066	5.3	28	66	6
NKB400979	2DRSE054066	5.4	28	66	6
NKB400980	2DRSE055066	5.5	28	66	8
NKB400981	2DRSE056066	5.6	28	66	8
NKB400982	2DRSE057066	5.7	28	66	8
NKB400983	2DRSE058066	5.8	28	66	8
NKB400984	2DRSE059066	5.9	28	66	8
NKB400985	2DRSE060066	6.0	28	66	8
NKB400986	2DRSE061079	6.1	34	79	8
NKB400987	2DRSE062079	6.2	34	79	8
NKB400988	2DRSE063079	6.3	34	79	8
NKB400989	2DRSE064079	6.4	34	79	8
NKB400990	2DRSE065079	6.5	34	79	8
NKB400991	2DRSE066079	6.6	34	79	8
NKB400992	2DRSE067079	6.7	34	79	8
NKB400993	2DRSE068079	6.8	34	79	8
NKB400994	2DRSE069079	6.9	34	79	8
NKB400995	2DRSE070079	7.0	34	79	8
NKB400996	2DRSE071079	7.1	41	79	8
NKB400997	2DRSE072079	7.2	41	79	8
NKB400998	2DRSE073079	7.3	41	79	8
NKB400999	2DRSE074079	7.4	41	79	8
NKB401000	2DRSE075079	7.5	41	79	8
NKB401001	2DRSE076079	7.6	41	79	8
NKB401002	2DRSE077079	7.7	41	79	8
NKB401003	2DRSE078079	7.8	41	79	8

Unit : mm

## 2DRSSE Series

### 2DRSSE Solid Carbide Drill



Order Code	Description	DIA. (D) 0~-0.01	F.L. (H)	O.V.L. (L)	S.D. (d) H6
NKB401004	2DRSE079079	7.9	41	79	8
NKB401005	2DRSE080079	8.0	41	79	8
NKB401006	2DRSE081089	8.1	47	89	10
NKB401007	2DRSE082089	8.2	47	89	10
NKB401008	2DRSE083089	8.3	47	89	10
NKB401009	2DRSE084089	8.4	47	89	10
NKB401010	2DRSE085089	8.5	47	89	10
NKB401011	2DRSE086089	8.6	47	89	10
NKB401012	2DRSE087089	8.7	47	89	10
NKB401013	2DRSE088089	8.8	47	89	10
NKB401014	2DRSE089089	8.9	47	89	10
NKB401015	2DRSE090089	9.0	47	89	10
NKB401016	2DRSE091089	9.1	47	89	10
NKB401017	2DRSE092089	9.2	47	89	10
NKB401018	2DRSE093089	9.3	47	89	10
NKB401019	2DRSE094089	9.4	47	89	10
NKB401020	2DRSE095089	9.5	47	89	10
NKB401021	2DRSE096089	9.6	47	89	10
NKB401022	2DRSE097089	9.7	47	89	10
NKB401023	2DRSE098089	9.8	47	89	10
NKB401024	2DRSE099089	9.9	47	89	10
NKB401025	2DRSE100089	10.0	47	89	10
NKB401026	2DRSE101102	10.1	55	102	12
NKB401027	2DRSE102102	10.2	55	102	12
NKB401028	2DRSE103102	10.3	55	102	12
NKB401029	2DRSE104102	10.4	55	102	12
NKB401030	2DRSE105102	10.5	55	102	12
NKB401031	2DRSE106102	10.6	55	102	12
NKB401032	2DRSE107102	10.7	55	102	12
NKB401033	2DRSE108102	10.8	55	102	12
NKB401034	2DRSE109102	10.9	55	102	12
NKB401035	2DRSE110102	11.0	55	102	12

Unit : mm

## SSR Series

### SSR Carbide Reamer



Order Code	Description	Flute	DIA. (D) H7	F.L. (H)	N.L. (U)	O.V.L. (L)
NKB401036	4SSR010036	4	1.0	5.5	14	36
NKB401037	4SSR011036	4	1.1	6.5	14	36
NKB401038	4SSR012036	4	1.2	7.5	14	36
NKB401039	4SSR013036	4	1.3	7.5	14	36
NKB401040	4SSR014043	4	1.4	8	16	43
NKB401041	4SSR015043	4	1.5	8	16	43
NKB401042	4SSR016043	4	1.6	9	16	43
NKB401043	4SSR017043	4	1.7	9	16	43
NKB401044	4SSR018049	4	1.8	10	20	49
NKB401045	4SSR019049	4	1.9	10	20	49
NKB401046	4SSR020049	4	2.0	11	22	49
NKB401047	4SSR021049	4	2.1	14	28	49
NKB401048	4SSR022057	4	2.2	14	28	57
NKB401049	4SSR023057	4	2.3	14	28	57
NKB401050	4SSR024057	4	2.4	14	28	57
NKB401051	4SSR025057	4	2.5	14	28	57
NKB401052	4SSR026057	4	2.6	14	28	57
NKB401053	4SSR027061	4	2.7	15	30	61
NKB401054	4SSR028061	4	2.8	15	30	61
NKB401055	4SSR029061	4	2.9	15	30	61
NKB401056	4SSR030061	4	3.0	15	30	61
NKB401057	4SSR031065	4	3.1	16	33	65
NKB401058	4SSR032065	4	3.2	16	33	65
NKB401059	4SSR033065	4	3.3	16	33	65
NKB401060	4SSR034070	4	3.4	18	39	70
NKB401061	4SSR035070	4	3.5	18	39	70
NKB401062	4SSR036070	4	3.6	18	39	70
NKB401063	4SSR037070	4	3.7	18	39	70
NKB401064	4SSR038070	4	3.8	18	39	70
NKB401065	4SSR039075	4	3.9	19	44	75
NKB401066	6SSR040075	6	4.0	19	44	75
NKB401067	6SSR041075	6	4.1	19	44	75
NKB401068	6SSR042075	6	4.2	19	44	75
NKB401069	6SSR043080	6	4.3	21	49	80
NKB401070	6SSR044080	6	4.4	21	49	80
NKB401071	6SSR045080	6	4.5	21	49	80
NKB401072	6SSR046080	6	4.6	21	49	80
NKB401073	6SSR047080	6	4.7	21	49	80
NKB401074	6SSR048086	6	4.8	23	55	86

Unit : mm

## SSR Series

**SSR** Carbide Reamer


Order Code	Description	Flute	DIA. (D) H7	F.L. (H)	N.L. (U)	O.V.L. (L)
NKB401075	6SSR049086	6	4.9	23	55	86
NKB401076	6SSR050086	6	5.0	23	55	86
NKB401077	6SSR051086	6	5.1	23	55	86
NKB401078	6SSR052086	6	5.2	23	55	86
NKB401079	6SSR053086	6	5.3	23	61	86
NKB401080	6SSR054093	6	5.4	26	61	93
NKB401081	6SSR055093	6	5.5	26	61	93
NKB401082	6SSR056093	6	5.6	26	61	93
NKB401083	6SSR057093	6	5.7	26	61	93
NKB401084	6SSR058093	6	5.8	26	61	93
NKB401085	6SSR059093	6	5.9	26	61	93
NKB401086	6SSR060093	6	6.0	26	61	93
NKB401087	6SSR061101	6	6.1	28	70	101
NKB401088	6SSR062101	6	6.2	28	70	101
NKB401089	6SSR063101	6	6.3	28	70	101
NKB401090	6SSR064101	6	6.4	28	70	101
NKB401091	6SSR065101	6	6.5	28	70	101
NKB401092	6SSR066101	6	6.6	28	70	101
NKB401093	6SSR067101	6	6.7	28	70	101
NKB401094	6SSR068109	6	6.8	31	77	109
NKB401095	6SSR069109	6	6.9	31	77	109
NKB401096	6SSR070109	6	7.0	31	77	109
NKB401097	6SSR071109	6	7.1	31	77	109
NKB401098	6SSR072109	6	7.2	31	77	109
NKB401099	6SSR073109	6	7.3	31	77	109
NKB401100	6SSR074109	6	7.4	31	77	109
NKB401101	6SSR075109	6	7.5	31	77	109
NKB401102	6SSR076109	6	7.6	31	77	109
NKB401103	6SSR077117	6	7.7	33	80	117
NKB401104	6SSR078117	6	7.8	33	80	117
NKB401105	6SSR079117	6	7.9	33	80	117
NKB401106	6SSR080117	6	8.0	33	80	117
NKB401107	6SSR081117	6	8.1	33	80	117
NKB401108	6SSR082117	6	8.2	33	80	117
NKB401109	6SSR083117	6	8.3	33	80	117
NKB401110	6SSR084117	6	8.4	33	80	117
NKB401111	6SSR085117	6	8.5	33	80	117
NKB401112	6SSR086117	6	8.6	33	80	117
NKB401113	6SSR087125	6	8.7	36	90	125

Unit : mm

## SSR Series

**SSR** Carbide Reamer


Order Code	Description	Flute	DIA. (D) H7	F.L. (H)	N.L. (U)	O.V.L. (L)
NKB401114	6SSR088125	6	8.8	36	90	125
NKB401115	6SSR089125	6	8.9	36	90	125
NKB401116	6SSR090125	6	9.0	36	90	125
NKB401117	6SSR091125	6	9.1	36	90	125
NKB401118	6SSR092125	6	9.2	36	90	125
NKB401119	6SSR093125	6	9.3	36	90	125
NKB401120	6SSR094125	6	9.4	36	90	125
NKB401121	6SSR095125	6	9.5	36	90	125
NKB401122	6SSR096125	6	9.6	36	90	125
NKB401123	6SSR097133	6	9.7	38	95	133
NKB401124	6SSR098133	6	9.8	38	95	133
NKB401125	6SSR099133	6	9.9	38	95	133
NKB401126	6SSR100133	6	10.0	38	95	133
NKB401127	6SSR101133	6	10.1	38	95	133
NKB401128	6SSR102133	6	10.2	38	95	133
NKB401129	6SSR103133	6	10.3	38	95	133
NKB401130	6SSR104133	6	10.4	38	95	133
NKB401131	6SSR105133	6	10.5	38	95	133
NKB401132	6SSR106133	6	10.6	38	95	133
NKB401133	6SSR107142	6	10.7	41	105	142
NKB401134	6SSR108142	6	10.8	41	105	142
NKB401135	6SSR109142	6	10.9	41	105	142
NKB401136	6SSR110142	6	11.0	41	105	142
NKB401137	6SSR111142	6	11.1	41	105	142
NKB401138	6SSR112142	6	11.2	41	105	142
NKB401139	6SSR113142	6	11.3	41	105	142
NKB401140	6SSR114142	6	11.4	41	105	142
NKB401141	6SSR115142	6	11.5	41	105	142
NKB401142	6SSR116142	6	11.6	41	105	142
NKB401143	6SSR117142	6	11.7	41	105	142
NKB401144	6SSR118142	6	11.8	41	105	142
NKB401145	6SSR119151	6	11.9	44	115	151
NKB401146	6SSR120151	6	12.0	44	115	151
NKB401147	6SSR121151	6	12.1	44	115	151
NKB401148	6SSR122151	6	12.2	44	115	151
NKB401149	6SSR123151	6	12.3	44	115	151
NKB401150	6SSR124151	6	12.4	44	115	151
NKB401151	6SSR125151	6	12.5	44	115	151
NKB401152	6SSR126151	6	12.6	44	115	151
NKB401153	6SSR127151	6	12.7	44	115	151
NKB401154	6SSR128151	6	12.8	44	115	151
NKB401155	6SSR129151	6	12.9	44	115	151
NKB401156	6SSR130151	6	13.0	44	115	151

Unit : mm





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