

# ILPT

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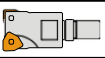


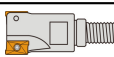

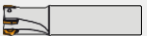



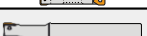


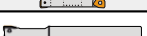












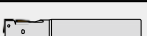

## Milling

## 2024-25


















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## Milling Cutter Index - Shoulder Milling

Cutter Series		Cutter Range	Inserts	Page
	<b>CXANF</b>	Ø40 ~ Ø100	ANMX15T6	<a href="#">A029</a>
	<b>CXSNE</b>	Ø50 ~ Ø80	SNMX1205	<a href="#">A093</a>
	<b>CXXNE</b>	Ø20 ~ Ø32	XNMX0403	<a href="#">A031</a>
	<b>CXXNM</b>	Ø17 ~ Ø32	XNMX0403	
	<b>CXXNF</b>	Ø50 ~ Ø125	XNMX0403 / XNMX0806	
	<b>CAPKE</b>	Ø16 ~ Ø32	APKT1003 / APKT1604 / APET1604	<a href="#">A034</a>
	<b>CAPKM</b>	Ø16 ~ Ø32		
	<b>CAPKF</b>	Ø50 ~ Ø125		
	<b>CARTE</b>	Ø10 ~ Ø26	WRT0702 / WRT1003	<a href="#">A037</a>
	<b>CARTM</b>	Ø10 ~ Ø21		
	<b>CASPE</b>	Ø12 ~ Ø40	SPMG..	<a href="#">A039</a>
	<b>CASPF</b>	Ø50 ~ Ø80		
	<b>CATPE</b>	Ø20 ~ Ø40	TPMX1004 / TPMX1505	<a href="#">A042</a>
	<b>CATPM</b>	Ø20 ~ Ø33	TPMX1004	
	<b>CATPF</b>	Ø50 ~ Ø80		
	<b>CAXOE</b>	Ø6 ~ Ø32	XOMT0602 / XOMT10T3	<a href="#">A045</a>
	<b>CAXOM</b>	Ø10 ~ Ø20	XOMT0602	
	<b>CBAPE</b>	Ø16 ~ Ø32	APMT1135 / APMT1604 / APGT1604	<a href="#">A048</a>
	<b>CBAPM</b>	Ø16 ~ Ø33		
	<b>CBAPF</b>	Ø50 ~ Ø80		
	<b>CR39E</b>	Ø16 ~ Ø32	W39011T3	<a href="#">A052</a>
	<b>CR39M</b>	Ø16 ~ Ø32		
	<b>CR39F</b>	Ø40 ~ Ø100		
	<b>CR49E</b>	Ø20 ~ Ø25	W49008T3	<a href="#">A055</a>
	<b>CR49F</b>	Ø40 ~ Ø80	W49008T3 / W4901404	
	<b>CWEXE</b>	Ø16 ~ Ø32	AXMT1235 / AXMT1705	<a href="#">A057</a>
	<b>CWEXF</b>	Ø50 ~ Ø100		
	<b>CWMMD</b>	Ø20 ~ Ø40	APMT1035 / APMT1605	<a href="#">A059</a>
	<b>CWMME</b>	Ø10 ~ Ø50	APMT1035 / APMT1605	
	<b>CWMMF</b>	Ø50 ~ Ø80	APMT1035 / APMT1605	

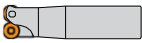




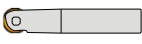



## Milling Cutter Index - High Feed Milling

Cutter Series		Cutter Range	Inserts	Page
	<b>CXBNE</b>	Ø15 ~ Ø32	BNMX0603 / BNMX0904	<a href="#">A066</a>
	<b>CXBNM</b>	Ø16 ~ Ø42		
	<b>CXBNF</b>	Ø40 ~ Ø100		
	<b>CXLNE</b>	Ø16 ~ Ø32	LNMX0303	<a href="#">A070</a>
	<b>CXLNM</b>	Ø17 ~ Ø32		
	<b>CXLNF</b>	Ø50		
	<b>CXLOE</b>	Ø16 ~ Ø35	LOGX0303	<a href="#">A073</a>
	<b>CXLOM</b>	Ø17 ~ Ø35		
	<b>CXLOF</b>	Ø50		
	<b>CXWNE</b>	Ø25 ~ Ø32	WNMX09T3	<a href="#">A076</a>
	<b>CXWNF</b>	Ø50 ~ Ø160	WNMX09T3 / WNMX1305	
	<b>CALPE</b>	Ø8 ~ Ø16	LPGX0102	<a href="#">A079</a>
	<b>CAJXE</b>	Ø32	JDMW1204	<a href="#">A082</a>
	<b>CAJXF</b>	Ø50 ~ Ø100	JDMW1204 / JDMW1405	
	<b>CASRF</b>	Ø50 ~ Ø80	SDNW1205 / SDMT1205	<a href="#">A084</a>
	<b>CF23E</b>	Ø32 ~ Ø50	WP26339 / WP26379	<a href="#">A086</a>
	<b>CF23F</b>	Ø50 ~ Ø160	WP26379	

**Milling Cutter Index - Face Milling**




Cutter Series		Cutter Range	Inserts	Page
	<b>CXHNF</b>	Ø50 ~ Ø100	HNMX0704	<a href="#">A090</a>
	<b>CXSNF</b>	Ø50 ~ Ø202.9	SNMX1205 / ONMX0505	<a href="#">A092</a>
	<b>CAOFF</b>	Ø50 ~ Ø100	OFMT05T3	<a href="#">A095</a>
	<b>CASEF</b>	Ø50 ~ Ø100	SEKT1204 / SEKW1204	<a href="#">A097</a>
	<b>CASXF</b>	Ø50 ~ Ø315	SEET13T3 / SEMT13T3	<a href="#">A099</a>
	<b>CR24F</b>	Ø50 ~ Ø315	W245-12T3	<a href="#">A101</a>

## Milling Cutter Index - Copy Milling



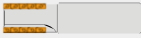


Cutter Series		Cutter Range	Inserts	Page
	<b>CARDE</b>	Ø10 ~ Ø35	RDkW0501 / RDkW0702 RDMT1003 / RDMX1003 RDMT10T3 / RDMW10T3 RDMT1204 / RDMW1204	<a href="#">A104</a>
	<b>CARDM</b>	Ø12 ~ Ø35	RDkW0501 / RDkW0702 RDMT1003 / RDMX1003 RDMT10T3 / RDMW10T3	
	<b>CARDF</b>	Ø50 ~ Ø100	RDMT1003 / RDMX1003 RDMT10T3 / RDMW10T3 RDMT1204 / RDMW1204 RDMT1604 / RDMW1604	
	<b>CARPE</b>	Ø16 ~ Ø35	RPMT08T2 RPMW1003 RPMT10T3 RPMT1204 / RPMW1204	<a href="#">A110</a>
	<b>CARPF</b>	Ø50 ~ Ø80	RPMT10T3 RPMT1204 / RPMW1204	
	<b>CF21E</b>	Ø10 ~ Ø32	WP32..	<a href="#">A114</a>
	<b>CF21M</b>	Ø10 ~ Ø32		
	<b>CF22M</b>	Ø25 ~ Ø50	WP26339 / WP26379	<a href="#">A117</a>
	<b>CGWV</b>	Ø16	WPBC16..	<a href="#">A119</a>

## Milling Cutter Index - Others




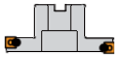
## Engraving / Chamfering

Cutter Series	Cutter Range			Inserts	Page
					
<b>DTS60</b>	Ø0.2 ~ Ø3	-	-	DCEX11T3	<a href="#">A122</a>
<b>DTS90</b>	Ø0.8 ~ Ø20	-	Ø0.8 ~ Ø11	SCGX / SCM09T3 TCGX / TCMX16T3	<a href="#">A124</a>
<b>CSPC</b>	Ø11 ~ Ø50	-	-	SPMG...	<a href="#">A128</a>

## Helical Milling

Cutter Series	Cutter Range	Inserts	Page
 <b>CAPHE</b>	Ø20 ~ Ø32	APKT1003	<a href="#">A131</a>
 <b>CAPHM</b>	Ø50 ~ Ø63	APKT1604 / APET1604	
 <b>CBAHE</b>	Ø20 ~ Ø50	APMT1135 / APMT1604 / APGT1604	<a href="#">A133</a>
 <b>CBAHM</b>	Ø50 ~ Ø63	APMT1604 / APGT1604	
 <b>C39HE</b>	Ø25 ~ Ø32	W39011T3	<a href="#">A136</a>

## Disc Milling

Cutter Series	Cutter Range	Inserts	Page
 <b>CSPTE</b>	Ø19 ~ Ø40	SPMG...	<a href="#">A139</a>
 <b>CRDTE</b>	Ø26 ~ Ø50	RDKW0501 / RDKW0620 / RDKW0702 / RPMT10T3	<a href="#">A141</a>
 <b>CSPDE</b>	Ø80 ~ Ø200	SPMG...	<a href="#">A143</a>
 <b>CSPDF</b>	Ø80 ~ Ø125		

**Milling Insert Index - A Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page					
			PVD			CVD			A	B	S	r	d1	t1							
			IL77BYP	IL681TP	IL67UYYP	IL57UYYP	IL63UBC	IL53UBC									IL90U				
	ANMX15T608-GM	●	✓	✓	✓	✓	✓						16.1	10	6.88	0.8	4.65	1.9		<a href="#">A029</a>	
	APKT100304PDER-GS		✓											10.5	6.7	3.5	0.4	2.8	-		
	APKT100304PDER-GM		✓	✓	✓	✓								10.5	6.7	3.5	0.4	2.8	-		
	APKT100308PDER-GM		✓	✓	✓	✓								10.5	6.7	3.5	0.8	2.8	-		
	APKT100304PDER-GR			✓	✓									10.5	6.7	3.5	0.4	2.8	-		
	APET160402PDFR-LA								✓					16.3	9.525	4.76	0.2	4.5	-		
	APET160404PDFR-LA								✓					16.3	9.525	4.76	0.4	4.5	-		<a href="#">A034</a>
	APET160402PDFR-GF		✓											16.3	9.525	4.76	0.2	4.5	-		
	APET160404PDFR-GF		✓											16.3	9.525	4.76	0.4	4.5	-		
	APKT160408PDER-GM		✓	✓	✓	✓								16.3	9.525	5.25	0.8	4.5	-		
	APKT160408PDER-GR		✓	✓	✓	✓								16.3	9.525	5.25	0.8	4.5	-		
	APKT170516PEER-GR		✓	✓	✓	✓								18.5	10.7	5.56	1.6	4.5	-		-
	APMT103508PDER-GR		✓	✓	✓	✓								10	6.6	3.5	0.8	3	-		
	APET160508PDFR-LA								✓					16	9.525	5.56	0.8	4.4	-		<a href="#">A059</a>
	APMT160508PDER-GR		✓	✓										16	9.525	5.56	0.8	4.4	-		



**Milling Insert Index - A Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD			A	B	S	r	d1	t1					
			IL77BY	IL68ITP	IL67UY	IL57UY	IL63UBC	IL53UBC									IL90U		
	APMT113508PDER-GM		✓	✓	✓	✓						11.0	6.35	3.5	0.8	2.8	-		
	APMT113516PDER-GM		✓	✓	✓	✓						11.0	6.35	3.5	1.6	2.8	-		
	APMT113508PDER-GR		✓	✓	✓	✓						11.0	6.35	3.5	0.8	2.8	-		
	APMT113508PDER-GH			✓	✓	✓						11.0	6.35	3.5	0.8	2.8	-		
	APGT160408PDER-LA									✓		16.5	9.525	4.76	0.8	4.4	-		
	APGT160408PDER-GF		✓									16.5	9.525	4.76	0.8	4.4	-		
	APMT160408PDER-GM		✓	✓	✓	✓				✓		16.5	9.525	4.76	0.8	4.4	-		
	APMT160416PDER-GM			✓	✓	✓						16.5	9.525	4.76	1.6	4.4	-		
	APMT160408PDER-GR		✓	✓	✓	✓						16.5	9.525	4.76	0.8	4.4	-		
	APMT160408PDER-GH		✓	✓	✓	✓						16.5	9.525	4.76	0.8	4.4	-		
	AXMT123508PEER-GR		✓	✓	✓	✓	✓					12.18	6.93	3.58	0.8	3.4	-		
	AXMT170508PEER-GR		✓	✓	✓	✓	✓					17.50	10.2	5.56	0.8	4.6	-		
	AXMT170516PEER-GR			✓	✓	✓	✓					17.50	10.2	5.56	1.6	4.6	-		

Milling Insert Index - B ~ H Style

Inserts	Description	Double Sided	Grade No.							Dimensions (mm)						Drawing	Cutter Page		
			PVD			CVD			-	A	B	S	r	d1	t1				
			IL77BY	IL68ITP	IL67UY	IL57UY	IL63UBC	IL53UBC	IL90U										
	BNMX0603-GS	●	✓	✓	✓	✓						9.0	6.38	3.75	-	3.2	-		<a href="#">A066</a>
	BNMX0603-GM	●	✓	✓	✓	✓	✓	✓				9.0	6.38	3.75	-	3.2	-		
	BNMX0603-GR	●	✓	✓	✓	✓	✓	✓				9.0	6.38	3.75	-	3.2	-		
	BNMX0904-GM	●	✓	✓	✓	✓	✓	✓				11.9	9.18	4.8	-	4.2	-		-
	CPMT090308-GM			✓								9.525	-	3.18	0.8	4.4	-		
	CPMT120408-GM			✓								12.7	-	4.76	0.8	5.5	-		-
	DCEX11T301-GS			✓								-	-	-	0.1	-	-		
	DCEX11T302-GS			✓								-	-	-	0.2	-	-		-
	DCEX11T304-GS			✓								-	-	-	0.4	-	-		
	DCEX11T301			✓								-	-	-	0.1	-	-		<a href="#">A122</a>
	DCEX11T302			✓								-	-	-	0.2	-	-		
	DCEX11T304			✓								-	-	-	0.4	-	-		
	DCEX11T308			✓								-	-	-	0.8	-	-		
	HNMX0704-GS	●		✓	✓	✓		✓				6.8	12.7	4.45	1.2	4.9	1.4		<a href="#">A090</a>

Milling Insert Index - I ~ O Style

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD		-	A	B	S	r	d1	t1					
			IL77BYP	IL68ITP	IL67UYF	IL57UYF	IL63UBC	IL53UBC									IL90U		
	JDMT150508R-GM			✓	✓	✓						15.1	9.12	5.0	0.8	4.5	-		-
	JDMW120420ZDSR-GM		✓	✓	✓	✓						2.5	12.0	4.76	2.0	4.75	-		
	JDMW120420ZDSR-GR		✓	✓	✓	✓	✓					2.5	12.0	4.76	2.0	4.75	-		
	JDMW140520ZDSR-GM			✓	✓							2.8	14.0	5.56	2.0	5.75	-		
	JDMW140520ZDSR-GR			✓	✓		✓					2.8	14.0	5.56	2.0	5.75	-		
	JDMT140520ZDSR-GM			✓	✓	✓						2.8	14.0	5.56	2.0	5.75	-		
	LNMX0303-GS	●	✓	✓	✓	✓						11.59	6.0	4.29	-	2.85	-		
	LNMX0303-GM	●	✓	✓	✓	✓						11.59	6.0	4.29	-	2.85	-		<a href="#">A070</a>
	LOGX030310-GS	●		✓	✓	✓						11.9	6.2	3.96	-	3.45	-		<a href="#">A073</a>
	LOGX030310-GM	●		✓	✓	✓						11.9	6.2	3.96	-	3.45	-		<a href="#">A073</a>
	LPGX0102-GS				✓	✓						6.26	4.19	2.19	1.0	2.2	-		<a href="#">A079</a>
	LPGX0102-GM				✓	✓						6.26	4.19	2.19	1.0	2.2	-		<a href="#">A079</a>
	OFMT05T3TN-GS			✓	✓							12.7	-	3.8	0.6	4.6	-		<a href="#">A095</a>
	OFMT05T3TN-GM			✓	✓							12.7	-	3.8	0.6	4.6	-		
	OFMT05T3TN-GR			✓	✓	✓						12.7	-	3.8	0.6	4.6	-		

**Milling Insert Index - O ~ R Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
			PVD		CVD		-		A	B	S	r	d1	t1			
			IL77BYP	IL681TP	IL67UYP	IL57UYP	IL63UBC	IL53UBC									IL90U
	ONMX0505-GM	●	✓	✓	✓					12.7	5.0	6.4	-	6	-		<a href="#">A092</a>
	ONMX0505-GR	●	✓	✓	✓	✓				12.7	5.0	6.4	-	6	-		
	RCMT1204MOE-GF		✓	✓						12	-	4.76	6	4.2	-		-
	RCMT1204MOT-GF		✓	✓						12	-	4.76	6	4.2	-		
	RDKW0501MOE		✓	✓	✓					5	-	1.59	2.5	2.2	-		<a href="#">A104</a>
	RDKW0620MOE			✓	✓					6	-	1.99	3	2.6	-		
	RDKW0702MOE		✓	✓	✓	✓				7	-	2.38	3.5	2.8	-		
	RDMT1003MOE		✓	✓	✓	✓				10	-	3.18	5	3.9	-		
	RDMT1003MOT		✓	✓	✓	✓				10	-	3.18	5	3.9	-		
	RDMX1003MOE		✓	✓	✓	✓				10	-	3.18	5	4.15	-		
	RDMX1003MOT		✓	✓	✓	✓				10	-	3.18	5	4.15	-		
	RDMT10T3MOE		✓	✓	✓	✓				10	-	3.97	5	4.5	-		
	RDMT10T3MOT		✓	✓	✓	✓				10	-	3.97	5	4.5	-		
	RDMW10T3MOE			✓	✓					10	-	3.97	5	4.5	-		
	RDMW10T3MOT			✓	✓					10	-	3.97	5	4.5	-		
	RDMT12T3MOE		✓	✓	✓		✓			12	-	3.97	6	4.1	-		
	RDMT12T3MOT		✓	✓	✓					12	-	3.97	6	4.1	-		

**Milling Insert Index - R Style**

Inserts	Description	Double Sided	Grade No.							Dimensions (mm)						Drawing	Cutter Page		
			PVD			CVD		-		A	B	S	r	d1	t1				
			IL77BYP	IL68ITP	IL67UYYP	IL57UYYP	IL63UBC	IL53UBC	IL90U										
	RDMX12T3MOE		✓	✓	✓	✓						12	-	3.97	6	4.1	-		A104
	RDMX12T3MOT		✓	✓	✓	✓						12	-	3.97	6	4.1	-		
	RDHT1204MOE			✓	✓							12	-	4.76	6	4.4	-		
	RDHT1204MOT			✓	✓							12	-	4.76	6	4.4	-		
	RDMT1204MOE		✓	✓	✓	✓						12	-	4.76	6	4.4	-		
	RDMT1204MOT		✓	✓	✓	✓						12	-	4.76	6	4.4	-		
	RDMW1204MOE			✓	✓	✓						12	-	4.76	6	4.4	-		
	RDMW1204MOT		✓	✓	✓	✓	✓					12	-	4.76	6	4.4	-		
	RDMT1604MOT		✓	✓	✓	✓						16	-	4.76	8	5.5	-		
	RDMW1604MOT		✓	✓	✓	✓	✓					16	-	4.76	8	5.5	-		
	RPMT08T2MOE			✓	✓	✓						8	-	2.78	4	3.2	-		A110
	RPMT08T2MOT			✓	✓	✓						8	-	2.78	4	3.2	-		
	RPMW1003MOE			✓	✓	✓						10	-	3.18	5	4.6	-		
	RPMW1003MOT		✓	✓	✓	✓						10	-	3.18	5	4.6	-		
	RPHT10T3MOE					✓						10	-	3.97	5	4.5	-		

**Milling Insert Index - R ~ S Style**

Inserts	Description	Double Sided	Grade No.							Dimensions (mm)						Drawing	Cutter Page		
			PVD			CVD		-	A	B	S	r	d1	t1					
			IL87UYP	IL77BYP	IL68TYP	IL67UYP	IL57UYP	IL63UBC							IL53UBC			IL90U	
	RPMT10T3MOE				✓	✓	✓					10	-	3.97	5	4.5	-	 <a href="#">A110</a>	
	RPMT10T3MOT				✓	✓	✓					10	-	3.97	5	4.5	-		
	RPHT1204MOE				✓	✓	✓					12	-	4.76	6	4.3	-		
	RPHT1204MOT				✓	✓						12	-	4.76	6	4.3	-		
	RPMT1204MOE			✓	✓	✓	✓					12	-	4.76	6	4.3	-		
	RPMT1204MOT			✓	✓	✓	✓					12	-	4.76	6	4.3	-		
	RPMW1204MOE				✓	✓	✓					12	-	4.76	6	4.3	-		
	RPMW1204MOT				✓	✓	✓					12	-	4.76	6	4.3	-		
	SCGX09T304-GA								✓			-	-	-	0.4	-	-		
	SCGX09T304-GF		✓									-	-	-	0.4	-	-		
	SCMX09T304-MS				✓							-	-	-	0.4	-	-		
	SDMX05T104-GF		✓			✓						-	-	-	0.4	-	-		
	SDMX11T308-GS					✓						-	-	-	0.8	-	-		

**Milling Insert Index - S ~ T Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD		-	A	B	S	r	d1	t1					
			IL77BYP	IL68ITP	IL67UYYP	IL57UYYP	IL63UBC	IL53UBC									IL90U		
	SDMT1205ZDSN-GM		✓	✓	✓	✓						12.7	-	5.56	15	4.6	-		<a href="#">A084</a>
	SDMT1205ZDTN-GM		✓	✓	✓	✓						12.7	-	5.56	15	4.6	-		
	SDMT1205ZDTN-GR		✓	✓	✓	✓						12.7	-	5.56	15	4.6	-		
	SDNW1205ZDSN-GM			✓	✓							12.7	-	5.56	15	4.6	-		
	SDNW1205ZDTN-GR		✓	✓	✓	✓	✓						12.7	-	5.56	15	4.6		
	SEET1204AFFN-LA										✓	12.7	-	4.76	0.8	5.5	-		<a href="#">A097</a>
	SEET1204AFFN-GF		✓									12.7	-	4.76	0.8	5.5	-		
	SEKT1204AFEN-GM			✓	✓							12.7	-	4.76	0.8	5.5	-		
	SEKT1204AFTN-GR			✓	✓	✓						12.7	-	4.76	0.8	5.5	-		
	SEKW1204AFEN			✓	✓	✓						12.7	-	4.76	0.8	5.5	-		
	SEKW1204AFTN			✓	✓		✓					12.7	-	4.76	0.8	5.5	-		
	SEMR1203AFSN-GR			✓	✓							12.7	1.6	3.18	1	2	-		-
	SEET13T3AGFN-LA										✓	13.4	1.9	3.97	1.5	4.2	-		<a href="#">A099</a>
	SEET13T3AGFN-GF		✓									13.4	1.9	3.97	1.5	4.2	-		

**Milling Insert Index - S ~ T Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD		-	A	B	S	r	d1	t1					
			IL77BYP	IL681TP	IL67UYYP	IL57UYYP	IL63UBC	IL53UBC									IL90U		
	SEMT13T3AGEN-GM		✓	✓	✓	✓						13.4	1.9	3.97	1.5	4.2	-		<a href="#">A099</a>
	SEMT13T3AGTN-GM		✓	✓	✓	✓						13.4	1.9	3.97	1.5	4.2	-		
	SEMT13T3AGTN-GR			✓	✓	✓						13.4	1.9	3.97	1.5	4.2	-		
	SNMX1205-GM	●	✓	✓	✓	✓	✓	✓				12.7	1.5	6.4	-	6	-		<a href="#">A092</a>
	SNMX1205-GR	●	✓	✓	✓	✓	✓					12.7	1.5	6.4	-	6	-		
	SPMG050204-GM			✓	✓	✓						5.00	-	2.38	0.4	2.30	-		<a href="#">A039</a> <a href="#">A128</a> <a href="#">A139</a> <a href="#">A143</a>
	SPMG060204-GM			✓	✓	✓						6.00	-	2.38	0.4	2.65	-		
	SPMG07T308-GM			✓	✓	✓						7.94	-	3.97	0.8	2.85	-		
	SPMG090408-GM			✓	✓	✓						9.80	-	4.3	0.8	4.05	-		
	SPMG090408-GR			✓	✓	✓						9.80	-	4.3	0.8	4.05	-		
	SPMG110408-GM			✓	✓	✓						11.50	-	4.8	0.8	4.45	-		
	SPMG110408-GR			✓	✓	✓						11.50	-	4.8	0.8	4.45	-		
	SPMN120308			✓								12.7	-	3.18	0.8	2	-		
	TCMX16T308-MS			✓								-	-	-	0.8	-	-		
	TPKR1603PPR-GM			✓	✓							16.5	9.525	3.1	-	2.2	1.423		
	TPKR1603PPR-GR			✓	✓	✓						16.5	9.525	3.1	-	2.2	1.423		



**Milling Insert Index - T ~ W Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD		-	A	B	S	r	d1	t1					
			IL77BYB	IL68ITP	IL67UYB	IL57UYB	IL63UBC	IL53UBC									IL90U		
	TPMX100404-GS			✓	✓							6.9	-	4	0.4	3	-		
	TPMX100408-GS			✓	✓							6.9	-	4	0.8	3	-		
	TPMX100408-GM		✓	✓	✓	✓						6.9	-	4	0.8	3	-		<a href="#">A042</a>
	TPMX150508-GM		✓	✓	✓	✓						10.7	-	5	0.8	4.85	-		
	W245-12T3-LA										✓	13.4	1.9	3.97	1.5	4.2	-		
	W245-12T3-GF		✓									13.4	1.9	3.97	1.5	4.2	-		<a href="#">A101</a>
	W245-12T3-GM		✓	✓	✓	✓	✓	✓	✓			13.4	1.9	3.97	1.5	4.2	-		
	W245-12T3-GH			✓	✓	✓	✓	✓	✓			13.4	1.9	3.97	1.5	4.2	-		
	W39011T308-GS		✓	✓	✓	✓						11	6.9	3.59	0.8	2.8	-		
	W39011T308-GM		✓	✓	✓	✓	✓	✓				11	6.9	3.59	0.8	2.8	-		
	W39011T320-GM		✓	✓	✓	✓	✓	✓				11	6.9	3.59	2.0	2.8	-		<a href="#">A052</a>
	W390170408-GM			✓	✓	✓	✓	✓				15.7	9.6	4.76	0.8	4.1	-		
	W390180612-GS			✓	✓	✓	✓	✓				15.4	11	6.33	1.2	4.2	-		
	W49008T308-GS			✓	✓	✓	✓					5.6	8.5	3.3	0.8	2.8	1.2		
	W490140408-GS				✓	✓	✓					10.3	13.8	3.9	0.8	4.1	2.0		<a href="#">A055</a>
	W490140408-GM			✓	✓	✓	✓	✓	✓			10.3	13.8	3.9	0.8	4.1	2.0		

**Milling Insert Index - W Style**

Inserts	Description	Double Sided	Grade No.							Dimensions (mm)						Drawing	Cutter Page
			PVD				CVD			A	B	S	r	d1	t1		
			IL87UYP	IL77BYYP	IL68ITP	IL67UYYP	IL57UYYP	IL63UBC	IL53UBC								
	WNMX09T316-GM	●	✓	✓	✓	✓	✓			9.525	-	3.97	1.6	3.6	-		<a href="#">A076</a>
	WNMX09T316-GR	●	✓	✓	✓	✓	✓			9.525	-	3.97	1.6	3.6	-		
	WNMX130516-GM	●	✓	✓	✓	✓	✓	✓			12.7	-	6.02	1.6	4.7		
	WP26339R14-GR		✓	✓	✓	✓				-	9.52	3.97	1.2	4.4	-		<a href="#">A086</a> <a href="#">A117</a>
	WP26379R25-GR		✓	✓	✓	✓				1.1	13	5.56	2.0	5.5	-		
	WP3210-MS		✓	✓						10	5	2.5	-	4	-		<a href="#">A114</a>
	WP3212-MS		✓	✓						12	6	2.5	-	5	-		
	WP3216-MS		✓	✓						16	6	3	-	5	-		
	WP3220-MS		✓	✓						20	6	3	-	5	-		
	WP3225-MS		✓	✓						25	9	4	-	6	-		
	WP3232-MS		✓	✓						32	10	5	-	8	-		
	WP3210-MM		✓	✓						10	5	2.5	-	4	-		
	WP3212-MM		✓	✓						12	6	2.5	-	5	-		
	WP3216-MM		✓	✓						16	6	3	-	5	-		
	WP3220-MM		✓	✓						20	6	3	-	5	-		
	WP3225-MM		✓	✓						25	9	4	-	6	-		
	WP3232-MM		✓	✓						32	10	5	-	8	-		

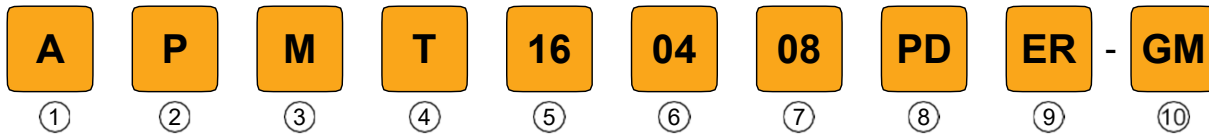
Milling Insert Index - W ~ X Style

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page		
			PVD			CVD		-	A	B	S	r	d1	t1				
			IL77BYP	IL68TTP	IL67UYP	IL57UYP	IL63UBC	IL53UBC									IL90U	
	WPBC1605-MM				✓	✓					16	6	3	0.5	5	16	 <a href="#">A119</a>	
	WPBC1610-MM				✓	✓					16	6	3	1.0	5	16		
	WPBC1613-MM				✓						16	6	3	1.3	5	16		
	WPBC1620-MM				✓						16	6	3	2.0	5	16		
	WPBC1630-MM				✓						16	6	3	3.0	5	16		
	WPMW080615ZPSR-GM			✓	✓						8	12.87	6.35	1.5	5.5	-		-
	WPMW080615ZPSR-GR			✓	✓		✓				8	12.87	6.35	1.5	5.5	-		-
	WRT070204-GR		✓	✓	✓	✓					4.30	6.4	2.38	0.4	2.2	1.3	 <a href="#">A037</a>	
	WRT100308-GM		✓	✓	✓	✓					6.35	9.3	3.4	0.8	2.9	1.8		
	WRT100308-GR		✓	✓	✓	✓					6.35	9.3	3.4	0.8	2.9	1.8		
	XDMT11T308-GM				✓	✓					10.6	6.8	3.8	0.8	2.8	1.4		-
	XNMX040304-GS	●	✓	✓	✓						6.7	-	3.285	0.4	3.15	-	 <a href="#">A031</a>	
	XNMX040304-GM	●	✓	✓	✓						6.7	-	3.285	0.4	3.15	-		
	XNMX040308-GM	●	✓	✓	✓	✓					6.7	-	3.285	0.8	3.15	-		
	XNMX080608-GM	●	✓	✓	✓	✓	✓	✓			12.53	-	6.5	0.8	4.5	-		
	XNMX080608-GR	●	✓	✓	✓	✓	✓				12.53	-	6.5	0.8	4.5	-		

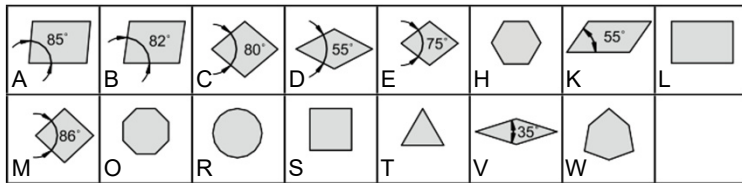
**Milling Insert Index - X Style**

Inserts	Description	Double Sided	Grade No.						Dimensions (mm)						Drawing	Cutter Page			
			PVD			CVD			A	B	S	r	d1	t1					
			IL77BYP	IL681TP	IL67UYP	IL57UYP	IL63UBC	IL53UBC									IL90U		
	XOMT060208-GS			✓	✓							7	4.09	2.45	0.8	2	-	 <a href="#">A045</a>	
	XOMT060204-GM		✓	✓	✓							7	4.09	2.45	0.4	2	-		
	XOMT060208-GM		✓	✓	✓	✓						7	4.09	2.45	0.8	2	-		
	XOMT060216-GM		✓	✓	✓	✓						7	4.09	2.45	1.6	2	-		
	XOMT10T308-GS			✓	✓	✓						11.08	6.86	3.8	0.8	3	-		
	XOMT10T308-GM			✓	✓	✓	✓	✓				11.08	6.86	3.8	0.8	3	-		
	XOMT120408-GM			✓	✓	✓	✓	✓				11.6	8.2	5.07	0.8	3.9	-		

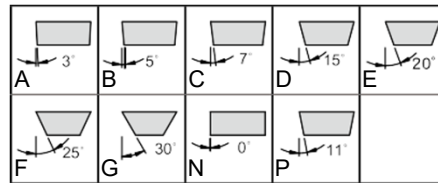
**Designations for Milling Insert**



**1 Insert Shape**



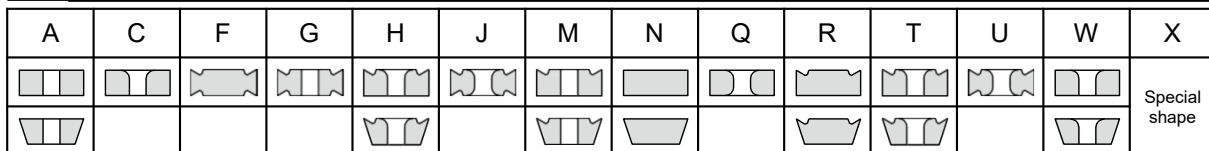
**2 Relief Angle**



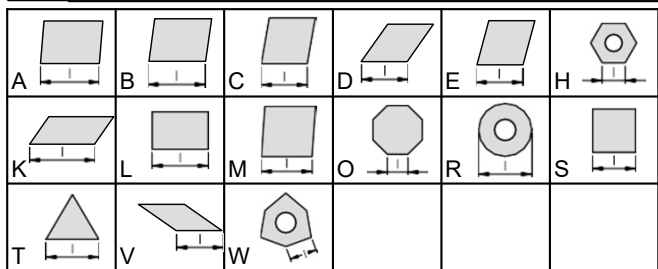
**3 Tolerance Class**

	Tolerance	A	C	E	F	G	H	J	K	L	M	N	U	
	Range of tolerance	$d \pm$	0.025	0.025	0.025	0.013	0.025	0.013	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.08-0.25
		$m \pm$	0.005	0.013	0.025	0.005	0.025	0.013	0.005	0.013	0.025	0.08-0.2	0.08-0.2	0.13-0.38
		$s \pm$	0.025	0.025	0.025	0.025	0.05-0.13	0.025	0.025	0.025	0.025	0.05-0.13	0.025	0.13

**4 Insert Features**



**5 Edge Length**



**6 Thickness**

Index	01	T1	02	03	T3	04	05	06	07	09
S(mm)	1.59	1.98	2.38	3.18	3.97	4.76	5.56	6.35	7.94	9.52

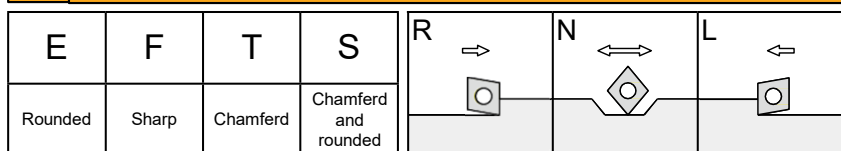
**7 Corner Radius**

02	04	08	16	20	...
0.2R	0.4R	0.8R	1.6R	2.0R	...

**8 Edge Clearance**

	A	D	E	F	P	Z				
	45°	60°	75°	85°	90°	other				
	A	B	C	D	E	F	G	N	P	Z
	3°	5°	7°	15°	20°	25°	30°	0°	11°	other

**9 Cutting Edge & Direction**



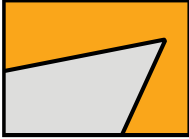
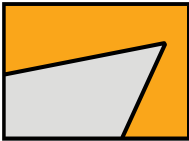
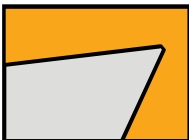



**10 Chip Breaker Geometry**

LA, GF, GS, FM,  
GM, GR, GH

**Milling Insert Grades**



Grade Type	Properties	Application	Working Material						Industry Area	Previous Grade
			P	M	K	N	S	H		
<b>IL87UYP</b> (PVD)	<ul style="list-style-type: none"> <li>• High wear resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Fine finishing machining</li> </ul>	○	○	○		○	●	<ul style="list-style-type: none"> <li>• Hardened parts</li> </ul>	<b>IL88IYP</b>
<b>IL77BYP</b> (PVD)	<ul style="list-style-type: none"> <li>• Wear resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous finishing machining</li> <li>• For hardened steel is 1st recommended</li> </ul>	○	○	○		○	●	<ul style="list-style-type: none"> <li>• Mold &amp; Die</li> <li>• Hardened parts</li> </ul>	<b>IL78IYP</b>
<b>IL67UYP</b> (PVD)	<ul style="list-style-type: none"> <li>• Wear resistance</li> <li>• Anti-corrosion</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to roughing</li> <li>• General machining</li> <li>• For carbon steel &amp; alloy steel is 1st recommended</li> </ul>	●	●	●		●	●	<ul style="list-style-type: none"> <li>• Mold &amp; Die</li> <li>• Automotive</li> <li>• Machinery</li> <li>• Aerospace</li> </ul>	<b>IL68IYP</b>
<b>IL63UBC</b> (CVD)	<ul style="list-style-type: none"> <li>• Wear resistance</li> <li>• Impact resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to roughing</li> <li>• For cast iron is 1st recommended</li> </ul>	○	○	●		○	○	<ul style="list-style-type: none"> <li>• Automotive</li> <li>• Machinery</li> </ul>	—
<b>IL57UYP</b> (PVD)	<ul style="list-style-type: none"> <li>• Tough substrate</li> <li>• Anti-corrosion</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to roughing</li> <li>• Interrupted machining</li> <li>• For stainless steel is 1st recommended</li> </ul>	●	●	●		●		<ul style="list-style-type: none"> <li>• Electronics</li> <li>• Medical</li> <li>• Aerospace</li> </ul>	—
<b>IL53UBC</b> (CVD)	<ul style="list-style-type: none"> <li>• High impact resistance</li> <li>• High toughness</li> </ul>	<ul style="list-style-type: none"> <li>• Roughing</li> <li>• Interrupted machining</li> <li>• For alloy steel &amp; exotic materials are recommended</li> </ul>	●	●	○		●	○	<ul style="list-style-type: none"> <li>• Machinery</li> <li>• Aerospace</li> <li>• Energy</li> </ul>	—
<b>IL90U</b> (Uncoated)	<ul style="list-style-type: none"> <li>• Wear resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Finishing and medium cutting</li> <li>• For aluminum alloy is 1st recommended</li> </ul>						●	<ul style="list-style-type: none"> <li>• Bike parts</li> <li>• Automotive</li> <li>• Electronics</li> </ul>	—

**Milling Insert Chip Breakers**

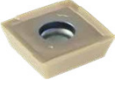






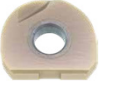
Chip Breaker		Application
	<b>LA</b>	Large positive rake angle with sharp cutting edge for Non-ferrous materials.
for Aluminum		
	<b>GF</b>	Large positive rake angle with sharp cutting edge for finishing cutting in steel.
Finishing		
	<b>GS (MS)</b>	Sharp geometry design for Semi-finishing cutting in steel, stainless steel and difficult-to-cut material.
Semi-Finishing		
	<b>GM (MM)</b>	Low cutting force for medium cutting in steel, stainless steel and cast iron.
Medium		
	<b>GR</b>	Strong geometry design for rough cutting in steel, alloy steel and hardened steel.
Roughing		
	<b>GH</b>	Strong, negative and big chamfering cutting edge for roughing, forging and cast skin.
Heavy-Roughing		

**Selection Guide**

**P Steel**

Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CAPK · APKT-GM · IL67UYP 	CXXN · XNMX-GM · IL67UYP 
High Feed Milling	CXBN · BNMX-GM · IL67UYP 	CXWN · WNMX-GM · IL67UYP 
Face Milling	CXSN · SNMX-GM · IL67UYP 	CASX · SEMT-GM · IL67UYP 
Copy Milling	CF21 · WP32-MM · IL77BYP 	CF21 · WP32-MM · IL68IYP 


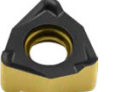

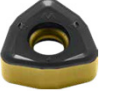

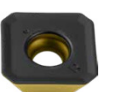

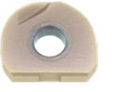
**M Stainless Steel**

Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CR49 · W490-GS · IL57UYP 	CAPK · APKT-GS · IL57UYP 
High Feed Milling	CXBN · BNMX-GS · IL57UYP 	CXLO · LOGX-GS · IL57UYP 
Face Milling	CXHN · HNMX-GS · IL57UYP 	CASX · SEMT-GM · IL57UYP 
Copy Milling	CF21 · WP32-MS · IL77BYP 	CF21 · WP32-MM · IL78IYP 



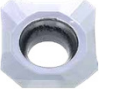


**Selection Guide**

**K Cast Iron**









Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CAPK · APKT-RG · IL63UBC 	CXXN · XNMX-RG · IL63UBC 
High Feed Milling	CXBN · BNMX-RG · IL63UBC 	CXWN · WNMX-RG · IL63UBC 
Face Milling	CXSN · SNMX-RG · IL63UBC 	CASX · SEMT-RG · IL63UBC 
Copy Milling	CF21 · WP32-MM · IL77BYP 	CF21 · WP32-MM · IL78IYP 

**N Aluminum alloy & Brass**









Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CBAP · APGT-LA · IL90U 	–
High Feed Milling	–	–
Face Milling	CASX · SEET-LA · IL90U 	CASE · SEET-LA · IL90U 
Copy Milling	–	–

**Selection Guide**

**S High Temperature Alloy**

Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CAXO · XOMT-GS · IL57UYP 	CR39 · W390-GS · IL53UBC 
High Feed Milling	CXBN · BNMX-GS · IL57UYP 	CXLO · LOGX-GS · IL57UYP 
Face Milling	CXHN · HNMX-GS · IL57UYP 	CAOF · OFMT-GS · IL57UYP 
Copy Milling	CF21 · WP32-MS · IL77BYP 	CF21 · WP32-MM · IL77BYP 

**H Hardened Steel**

Application	1st Recommendation (Series · Insert · Grade)	2nd Recommendation (Series · Insert · Grade)
Shoulder Milling	CAPK · APKT-GR · IL67UYP 	CART · WRT-GR · IL67UYP 
High Feed Milling	CXBN · BNMX-GR · IL67UYP 	CASR · SDNW-GR · IL67UYP 
Face Milling	CASE · SEKW · IL67UYP 	CXSN · SNMX-GR · IL67UYP 
Copy Milling	CF21 · WP32-MM · IL77BYP 	CF21 · WP32-MS · IL77BYP 

### Shoulder Milling Series Introduction

#### CXAN Series



- . Use ANMX double-sided inserts with 4 cutting edges.
- . Positive rake angle design for lower side cutting forces.
- . Max. 15mm depth of cut, cutter diameter 40~100mm.

\* Page [A029](#)

#### CXXN Series



- . Use XNMX double-sided inserts with 6 cutting edges.
- . Economic and high performance shoulder milling application.
- . 17~125mm cutter diameter, max. 7mm depth of cut.

\* Page [A031](#)

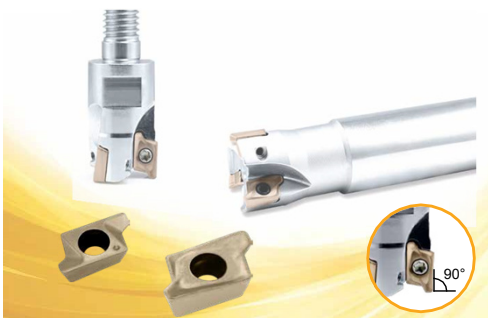
#### CAPK Series



- . Use APKT inserts with 2 cutting edges.
- . Optimized chip breaker for various applications and materials.
- . 16~125mm cutter diameter, max. 11mm depth of cut.

\* Page [A034](#)

#### CART Series



- . Use WRT inserts with 2 cutting edges.
- . Strong chip breaker provides well ramping and slotting capabilities.
- . 10~26mm cutter diameter, max. 7mm depth of cut.

\* Page [A037](#)

## Shoulder Milling Series Introduction

### CASP Series



- . Use SPMG inserts with 4 cutting edges.
- . Cost effective shoulder milling tools.
- . 12~80mm cutter diameter, max. 6mm depth of cut.

\* Page [A039](#)

### CATP Series



- . Use TPMX inserts with 3 cutting edges.
- . Sharp cutting edges for various low milling force applications.
- . 20~80mm cutter diameter, max. 11mm depth of cut.

\* Page [A042](#)

### CAXD Series



- . Use XDMT inserts with 2 cutting edges.
- . Cutter dia. : 16~32mm, max. depth of cut : 10mm.
- . Cutting edge design provides stable machining and reduces vibration during machining.

Page\* [A044-1](#)

### CAXO Series



- . Use XOMT inserts with 2 cutting edges.
- . Optimized chip breaker reduces heat generation and cutting forces.
- . 6~32mm cutter diameter, max. 7mm depth of cut.

\* Page [A045](#)

**Shoulder Milling Series Introduction**

**CBAP Series**



- . Use APMT inserts with 2 cutting edges.
- . Low cost and various geometric designs for versatile applications.
- . 16~80mm cutter diameter, max. 11mm depth of cut.

Page\* [A048](#)

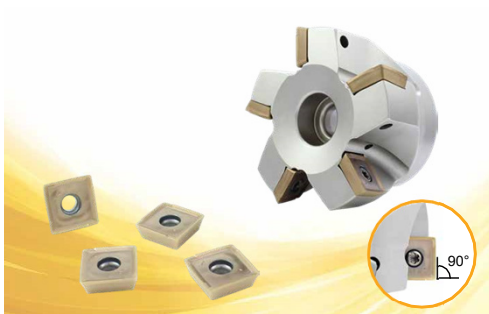
**CR39 Series**



- . Use W390 inserts with 2 cutting edges.
- . Optimized chip breaker for high efficient shoulder and side milling.
- . 16~100mm cutter diameter, max. 11mm depth of cut.

\* Page [A052](#)

**CR49 Series**



- . Use W490 inserts with 4 cutting edges.
- . Great repeat side milling capability to reduce burs and get good surface finishing.
- . 20~80mm cutter diameter, max. 9mm depth of cut.

Page\* [A055](#)

**CWEX Series**



- . Use AXMT inserts with 2 cutting edges.
- . Strong cutting edges for high removal rate shoulder milling.
- . 16~100mm cutter diameter, max. 11mm depth of cut.

Page [A057](#)

**Shoulder Milling Series Introduction**

**CWMM Series**



- . Use APMT inserts with 2 cutting edges.
- . Cutter with over-center design for drilling and milling.
- . 10~80mm cutter diameter, max. 11mm depth of cut.

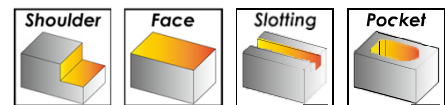
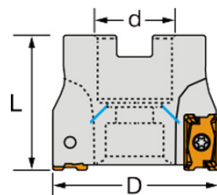
\* Page [A059](#)

**Shoulder Milling - CXAN**



- Use ANMX double-sided inserts with 4 cutting edges.
- Positive rake angle design for lower side cutting forces.
- Max. 15mm depth of cut, cutter diameter 40~100mm.

**CXANF - Milling Tools**



Order Code	Description	D	L	d	T	Coolant	Inserts	Screw	Wrench	Stock
NKB100586	CXANF504040161	40	40	16	4	✓	ANMX15T6	ITS4006	ITK15	●
NKB100587	CXANF505050221	50	40	22	5	✓				●
NKB100588	CXANF506063221	63	40	22	6	✓				●
NKB100589	CXANF507080271	80	50	27	7	✓				●
NKB100590	CXANF508100321	100	50	32	8	✓				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	110 ~ 260	0.09 ~ 0.27	0.3 ~ 15
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 15
Cast Iron	110 ~ 260	0.09 ~ 0.27	0.3 ~ 15
High Temperature Alloy	40 ~ 70	0.07 ~ 0.14	0.3 ~ 15

**Shoulder Milling - CXAN**

**Insert Specifications**

Insert	Dimensions (mm)					
	A	B	S	r	d1	t1
ANMX15T608	16.1	10	6.88	0.8	2.85	1.9

**Insert Designation**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100040	ANMX15T608 GM IL68ITP	●	●	●		○	
	NKB100041	ANMX15T608 GM IL67UYP	●	●	●		●	●
	NKB100042	ANMX15T608 GM IL57UYP	●	●	●		●	
	NKB100043	ANMX15T608 GM IL63UBC	○	○	●		○	○
	NKB100044	ANMX15T608 GM IL53UBC	●	●	○		●	○

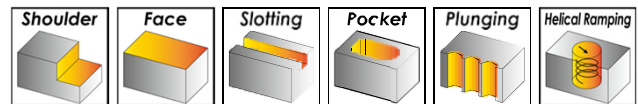
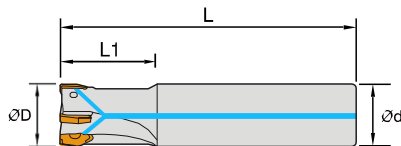


**Shoulder Milling - CXXN**



- Use XNMX double-sided inserts with 6 cutting edges.
- Economic and high performance shoulder milling application.
- 17~125mm cutter diameter, max. 7mm depth of cut.

**CXXNE - Milling Tools**

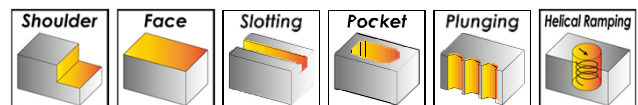
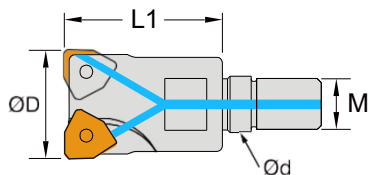


Order Code	Description	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100591	CXXNE403020111	20	28	110	20	3	✓	XNMX0403	ITS2512	ITK08	●
NKB100592	CXXNE403020150	20	40	150	20	3					●
NKB100593	CXXNE403020200	20	100	200	20	3					●
NKB100594	CXXNE404025121	25	28	120	25	4	✓				●
NKB100595	CXXNE404025150	25	40	150	25	4					●
NKB100596	CXXNE405032131	32	30	130	32	5	✓				●
NKB100597	CXXNE405032200	32	45	200	32	5					●

● stock ○ by inquiry

Customize available.

**CXXNM - Modular Milling Heads**



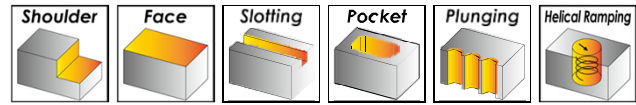
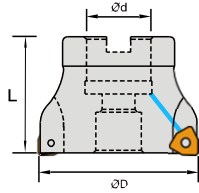
Order Code	Description	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100598	CXXNM402017081	17	26	8.5	M08	2	✓	XNMX0403	ITS2512	ITK08	●
NKB100599	CXXNM403021101	21	32	10.5	M10	3	✓				●
NKB100600	CXXNM404026121	26	38	12.5	M12	4	✓				●
NKB100601	CXXNM405032161	32	41	17	M16	5	✓				○

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Shoulder Milling - CXXN**

**CXXNF - Milling Tools**



Order Code	Description	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100602	CXXNF406050220	50	50	22	6		XNMX0403	ITS2512	ITK08	●
NKB100603	CXXNF407063220	63	50	22	7					●
NKB100604	CXXNF407063250	63	50	25.4	7					●
NKB100605	CXXNF407040161	40	40	16	7	✓				●
NKB100606	CXXNF409050221	50	40	22	9	✓				●
NKB100607	CXXNF805050221	50	40	22	5	✓	XNMX0806	ITS4006	ITK15	●
NKB100608	CXXNF806063221	63	40	22	6	✓				●
NKB100609	CXXNF807080271	80	50	27	7	✓				●
NKB100610	CXXNF811100321	100	50	32	11	✓				○
NKB100611	CXXNF811125401	125	63	40	11	✓				○

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	XNMX0403			XNMX0806		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.16	0.3 ~ 3.0	120 ~ 250	0.1 ~ 0.3	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.08 ~ 0.12	0.3 ~ 1.6	100 ~ 180	0.08 ~ 0.25	0.3 ~ 4.5
Cast Iron	120 ~ 250	0.10 ~ 0.16	0.3 ~ 3.0	120 ~ 250	0.1 ~ 0.3	0.3 ~ 7.0
High Temperature Alloy	40 ~ 100	0.08 ~ 0.12	0.3 ~ 1.5	40 ~ 100	0.08 ~ 0.18	0.3 ~ 4.0
Hardened Steel	50 ~ 100	0.09 ~ 0.13	0.3 ~ 1.5	50 ~ 100	0.09 ~ 0.19	0.3 ~ 4.0

**Shoulder Milling - CXXN**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
XNMX040304	6.7	3.285	0.4	3.15
XNMX040308	6.7	3.285	0.8	3.15
XNMX080608	12.53	6.5	0.8	4.5

**Insert Description**

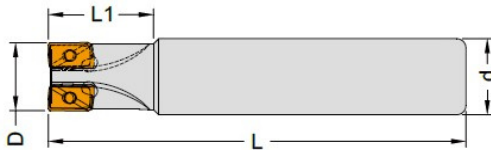
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100045	XNMX040304 GS IL77BYP	○	○	○		○	●
	NKB100046	XNMX040304 GS IL68ITP	●	●	●		○	
	NKB100047	XNMX040304 GS IL67UYP	●	●	●		●	●
	NKB100048	XNMX040304 GM IL77BYP	○	○	○		○	●
	NKB100049	XNMX040304 GM IL68ITP	●	●	●		○	
	NKB100050	XNMX040304 GM IL67UYP	●	●	●		●	●
	NKB100051	XNMX040308 GM IL77BYP	○	○	○		○	●
	NKB100052	XNMX040308 GM IL68ITP	●	●	●		○	
	NKB100053	XNMX040308 GM IL67UYP	●	●	●		●	●
	NKB100054	XNMX040308 GM IL57UYP	●	●	●		●	
	NKB100055	XNMX080608 GM IL77BYP	○	○	○		○	●
	NKB100056	XNMX080608 GM IL68ITP	●	●	●		○	
	NKB100057	XNMX080608 GM IL67UYP	●	●	●		●	●
	NKB100058	XNMX080608 GM IL57UYP	●	●	●		●	
	NKB100059	XNMX080608 GM IL63UBC	○	○	●		○	○
	NKB100060	XNMX080608 GM IL53UBC	●	●	○		●	○
	NKB100061	XNMX080608 GR IL68ITP	●	●	●		○	
	NKB100062	XNMX080608 GR IL67UYP	●	●	●		●	●
	NKB100063	XNMX080608 GR IL57UYP	●	●	●		●	
	NKB100064	XNMX080608 GR IL63UBC	○	○	●		○	○
	NKB100065	XNMX080608 GR IL53UBC	●	●	○		●	○

**Shoulder Milling - CAPK**



- Use APKT inserts with 2 cutting edges.
- Optimized chip breaker for various applications and materials.
- 16~125mm cutter diameter, max. 11mm depth of cut.

**CAPKE - Milling Tools**

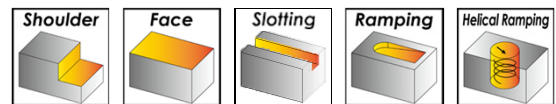
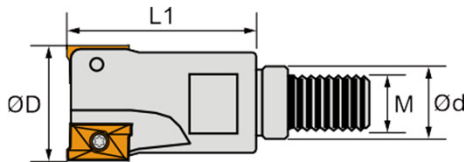


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100612	CAPKE302016120	16	25	120	16	2	APKT1003	ITS2515	ITK08	●
NKB100613	CAPKE302020120	20	30	120	20	2				●
NKB100614	CAPKE304025150	25	35	150	25	4				●
NKB100615	CAPKE305032150	32	35	150	32	5				○
NKB100616	CAPKE402025150	25	40	150	25	2	APKT1604 APET1604	ITS4004	ITK15	●
NKB100617	CAPKE402032150	32	45	150	32	2				○

● stock ○ by inquiry

Customize available.

**CAPKM - Modular Milling Heads**



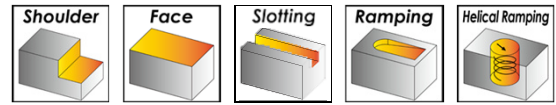
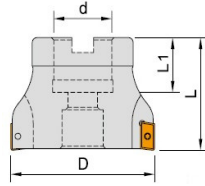
Order Code	Description	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
NKB100618	CAPKM302016080	16	26	8.5	M8	2	APKT1003	ITS2515	ITK08	●
NKB100619	CAPKM303020100	20	32	10.5	M10	3				○
NKB100620	CAPKM304025120	25	38	12.5	M12	4				●
NKB100621	CAPKM305032160	32	41	17	M16	5				○
NKB100622	CAPKM402025120	25	38	12.5	M12	2	APKT1604 APET1604	ITS4004	ITK15	○
NKB100623	CAPKM403032160	32	41	17	M16	3				○

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Shoulder Milling - CAPK**

**CAPKF - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100624	CAPKF306050220	50	20	40	22	6	APKT1003	ITS2515	ITK08	●
NKB100625	CAPKF306063220	63	21	45	22	6				●
NKB100626	CAPKF307080270	80	23	50	27	7				●
NKB100627	CAPKF404050220	50	23	50	22	4	APKT1604 APET1604	ITS4004	ITK15	●
NKB100628	CAPKF405063220	63	23	50	22	5				●
NKB100629	CAPKF405063250	63	23	50	25.4	5				●
NKB100630	CAPKF406080250	80	32	55	25.4	6				●
NKB100631	CAPKF406080270	80	32	55	27	6				●
NKB100632	CAPKF408100310	100	32	55	31.75	8				●
NKB100633	CAPKF408100320	100	32	55	32	8				●
NKB100634	CAPKF408125380	125	38	63	38.1	8	●			

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	APKT1003			APKT1604 / APET1604		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
Aluminum Alloy	-	-	-	300 ~ 1000	0.18 ~ 0.40	0.3 ~ 11.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

**Shoulder Milling - CAPK**

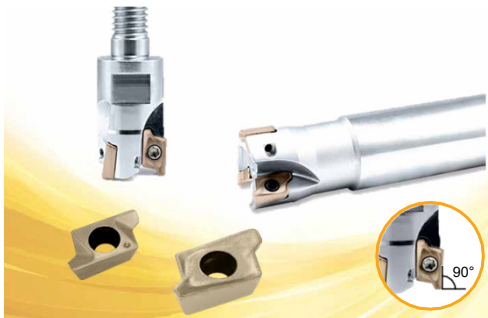
**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
APKT100304	10.5	6.7	3.5	0.4	2.8
APKT100308	10.5	6.7	3.5	0.8	2.8
APET160402	16.3	9.525	4.76	0.2	4.5
APET160404	16.3	9.525	4.76	0.4	4.5
APKT160408	16.3	9.525	5.25	0.8	4.5

**Insert Designation**

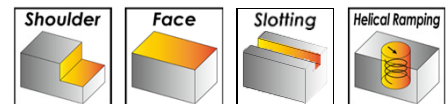
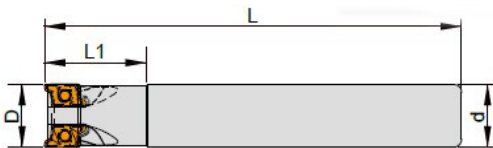
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100066	APKT100304PDER GS IL77BYP	○	○	○		○	●
	NKB100067	APKT100304PDER GM IL77BYP	○	○	○		○	●
	NKB100068	APKT100304PDER GM IL68ITP	●	●	●		○	
	NKB100069	APKT100304PDER GM IL67UYP	●	●	●		●	●
	NKB100070	APKT100304PDER GM IL57UYP	●	●	●		●	
	NKB100071	APKT100308PDER GM IL77BYP	○	○	○		○	●
	NKB100072	APKT100308PDER GM IL68ITP	●	●	●		○	
	NKB100073	APKT100308PDER GM IL67UYP	●	●	●		●	●
	NKB100074	APKT100308PDER GM IL57UYP	●	●	●		●	
	NKB100075	APKT100304PDER GR IL68ITP	●	●	●		○	
	NKB100076	APKT100304PDER GR IL67UYP	●	●	●		●	●
	NKB100077	APET160402PDFR LA IL90U				●		
	NKB100078	APET160404PDFR LA IL90U				●		
	NKB100079	APET160402PDFR GF IL77BYP	○	○	○		○	●
	NKB100080	APET160404PDFR GF IL77BYP	○	○	○		○	●
	NKB100081	APKT160408PDER GM IL77BYP	○	○	○		○	●
	NKB100082	APKT160408PDER GM IL68ITP	●	●	●		○	
	NKB100083	APKT160408PDER GM IL67UYP	●	●	●		●	●
	NKB100084	APKT160408PDER GM IL57UYP	●	●	●		●	
	NKB100085	APKT160408PDER GR IL77BYP	○	○	○		○	●
	NKB100086	APKT160408PDER GR IL68ITP	●	●	●		○	
	NKB100087	APKT160408PDER GR IL67UYP	●	●	●		●	●
	NKB100025	APKT160408PDER GR IL57UYP	●	●	●		●	

**Shoulder Milling - CART**



- Use WRT inserts with 2 cutting edges.
- Strong chip breaker provides well ramping and slotting capabilities.
- 10~26mm cutter diameter, max. 7mm depth of cut.

**CARTE - Milling Tools**

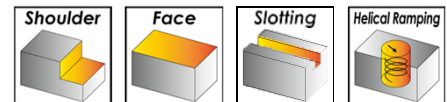
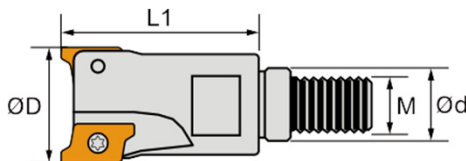


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100635	CARTE702010100	10	18	100	10	2	WRT0702	ITS2003	ITK06	○
NKB100636	CARTE702011100	11	18	100	10	2				●
NKB100637	CARTE702013100	13	20	100	12	2				●
NKB100638	CARTE703016150	16	30	150	16	3				○
NKB100639	CARTE102017150	17	30	150	16	2	WRT1003	ITS2515	ITK08	●
NKB100640	CARTE103021150	21	30	150	20	3				●
NKB100641	CARTE104026150	26	40	150	25	4				●

● stock ○ by inquiry

Customize available.

**CARTM - Modular Milling Heads**



Order Code	Description	D	L1	M	d	T	Inserts	Screw	Wrench	Stock
NKB100642	CARTM702010050	10	18	M5	5.5	2	WRT0702	ITS2003	ITK06	●
NKB100643	CARTM702011050	11	18	M5	5.5	2				●
NKB100644	CARTM702012060	12	20	M6	6.5	2				●
NKB100645	CARTM702013060	13	20	M6	6.5	2				●
NKB100646	CARTM103017080	17	30	M8	8.5	3	WRT1003	ITS2515	ITK08	●
NKB100647	CARTM103021100	21	32	M10	10.5	3				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Shoulder Milling - CART**

**Recommended Cutting Conditions**

Working Material	WRT0702			WRT1003		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 5.0	120 ~ 250	0.10 ~ 0.22	0.5 ~ 7.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 3.0	100 ~ 180	0.08 ~ 0.18	0.5 ~ 4.0
Cast Iron	120 ~ 250	0.08 ~ 0.20	0.3 ~ 4.0	120 ~ 250	0.10 ~ 0.22	0.5 ~ 6.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 3.0	40 ~ 100	0.07 ~ 0.14	0.5 ~ 4.0
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 3.0	50 ~ 100	0.07 ~ 0.15	0.5 ~ 4.0

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
WRT070204	4.30	6.4	2.38	0.4	2.2
WRT100308	6.35	9.3	3.4	0.8	2.9

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100089	WRT070204 GR IL77BYP	○	○	○		○	●
	NKB100090	WRT070204 GR IL68ITP	●	●	●		○	
	NKB100091	WRT070204 GR IL67UYP	●	●	●		●	●
	NKB100092	WRT070204 GR IL57UYP	●	●	●		●	
	NKB100093	WRT100308 GM IL77BYP	○	○	○		○	●
	NKB100094	WRT100308 GM IL68ITP	●	●	●		○	
	NKB100095	WRT100308 GM IL67UYP	●	●	●		●	●
	NKB100096	WRT100308 GM IL57UYP	●	●	●		●	
	NKB100097	WRT100308 GR IL77BYP	○	○	○		○	●
	NKB100098	WRT100308 GR IL68ITP	●	●	●		○	
	NKB100099	WRT100308 GR IL67UYP	●	●	●		●	●
	NKB100100	WRT100308 GR IL57UYP	●	●	●		●	

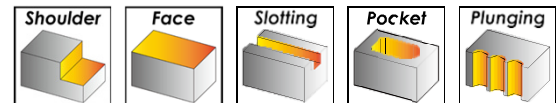
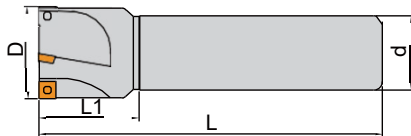


**Shoulder Milling - CASP**



- . Use SPMG inserts with 4 cutting edges.
- . Cost effective shoulder milling tools.
- . 12~80mm cutter diameter, max. 6mm depth of cut.

**CASPE - Milling Tools**



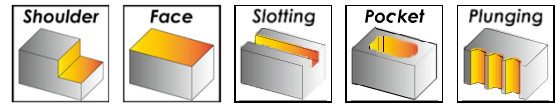
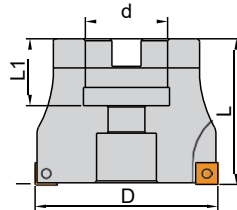
Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100648	CASPE502012100	12	20	100	12	2	SPMG0502	ITS2003	ITK06	●
NKB100649	CASPE502013100	13	20	100	12	2				●
NKB100650	CASPE502014100	14	20	100	12	2				●
NKB100651	CASPE602016120	16	25	120	16	2	SPMG0602	ITS2205	ITK06	●
NKB100652	CASPE603020120	20	30	120	20	3				●
NKB100653	CASPE604025120	25	30	120	25	4				●
NKB100654	CASPE604030120	30	30	120	25	4				●
NKB100655	CASPE605032120	32	30	120	25	5				●
NKB100656	CASPE904032150	32	40	150	32	4	SPMG0904	ITS3504	ITK15	●
NKB100657	CASPE904040150	40	40	150	32	4				●

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CASP**

**CASPF - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100658	CASPF607050220	50	20	45	22	7	SPMG0602	ITS2205	ITK06	●
NKB100659	CASPF607050250	50	20	45	25.4	7				○
NKB100660	CASPF609063220	63	20	45	22	9				●
NKB100661	CASPF609063250	63	20	45	25.4	9				●
NKB100662	CASPF611080270	80	23	50	27	11				○
NKB100663	CASPF611080250	80	23	50	25.4	11				●
NKB100664	CASPF905050220	50	20	45	22	5	SPMG0904	ITS3504	ITK15	●
NKB100665	CASPF905050250	50	20	45	25.4	5				○
NKB100666	CASPF906063220	63	20	45	22	6				●
NKB100667	CASPF906063250	63	20	45	25.4	6				○
NKB100668	CASPF907080270	80	23	50	27	7				●
NKB100669	CASPF907080250	80	23	50	25.4	7				○

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	SPMG050204 & SPMG060204			SPMT07T308 & SPMG090408		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 3.0	120 ~ 250	0.10 ~ 0.22	0.5 ~ 6.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 2.0	100 ~ 180	0.08 ~ 0.18	0.5 ~ 4.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 3.0	120 ~ 250	0.10 ~ 0.22	0.5 ~ 6.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 2.0	40 ~ 100	0.07 ~ 0.14	0.5 ~ 4.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 2.0	50 ~ 100	0.07 ~ 0.15	0.5 ~ 4.0

**Shoulder Milling - CASP**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
SPMG050204	5.00	2.38	0.4	2.30
SPMG060204	6.00	2.38	0.4	2.65
SPMG07T308	7.94	3.97	0.8	2.85
SPMG090408	9.80	4.3	0.8	4.05
SPMG110408	11.50	4.8	0.8	4.45

**Insert Designation**

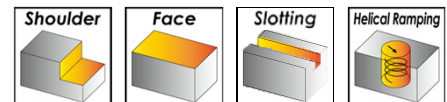
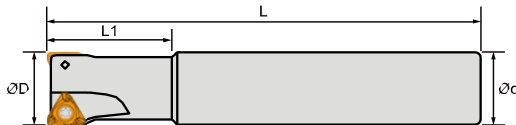
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100101	SPMG050204 GM IL68ITP	●	●	●		○	
	NKB100102	SPMG050204 GM IL67UYP	●	●	●		●	●
	NKB100103	SPMG050204 GM IL57UYP	●	●	●		●	
	NKB100104	SPMG060204 GM IL68ITP	●	●	●		○	
	NKB100105	SPMG060204 GM IL67UYP	●	●	●		●	●
	NKB100106	SPMG060204 GM IL57UYP	●	●	●		●	
	NKB100107	SPMG07T308 GM IL68ITP	●	●	●		○	
	NKB100108	SPMG07T308 GM IL67UYP	●	●	●		●	●
	NKB100109	SPMG07T308 GM IL57UYP	●	●	●		●	
	NKB100110	SPMG090408 GM IL68ITP	●	●	●		○	
	NKB100111	SPMG090408 GM IL67UYP	●	●	●		●	●
	NKB100112	SPMG090408 GM IL57UYP	●	●	●		●	
	NKB100113	SPMG090408 GR IL68ITP	●	●	●		○	
	NKB100114	SPMG090408 GR IL67UYP	●	●	●		●	●
	NKB100115	SPMG090408 GR IL57UYP	●	●	●		●	
	NKB100116	SPMG110408 GM IL68ITP	●	●	●		○	
	NKB100117	SPMG110408 GM IL67UYP	●	●	●		●	●
	NKB100118	SPMG110408 GM IL57UYP	●	●	●		●	
	NKB100119	SPMG110408 GR IL68ITP	●	●	●		○	
	NKB100120	SPMG110408 GR IL67UYP	●	●	●		●	●
	NKB100121	SPMG110408 GR IL57UYP	●	●	●		●	

**Shoulder Milling - CATP**



- Use TPMX inserts with 3 cutting edges.
- Sharp cutting edges for various low milling force applications.
- 20~80mm cutter diameter, max. 11mm depth of cut.

**CATPE - Milling Tools**

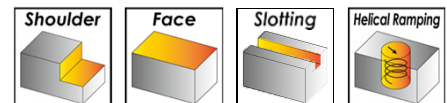
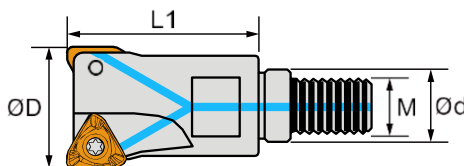


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100670	CATPE102020130	20	50	130	20	2	TPMX1004	ITS2517	ITK08	●
NKB100671	CATPE103025150	25	55	150	25	3				●
NKB100672	CATPE503033200	33	45	200	32	3	TPMX1505	ITS4014	ITK15	●
NKB100673	CATPE504040200	40	45	200	32	4				○

● stock ○ by inquiry

Customize available.

**CATPM - Modular Milling Heads**



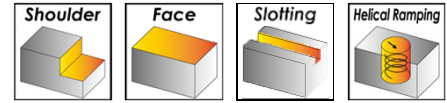
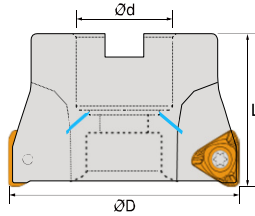
Order Code	Description	D	L1	d	M	T	Coolant	Inserts	Screw	Wrench	Stock
NKB100674	CATPM102020100	20	35	10.5	M10	2		TPMX1004	ITS2517	ITK08	○
NKB100675	CATPM102020101	20	35	18	M10	2	✓				●
NKB100676	CATPM102021100	21	35	10.5	M10	2					●
NKB100677	CATPM103025120	25	35	12.5	M12	3					○
NKB100678	CATPM103025121	25	35	21	M12	3	✓				●
NKB100679	CATPM103026120	26	35	12.5	M12	3					●
NKB100680	CATPM105032160	32	43	29	M16	5					●
NKB100681	CATPM105032161	32	43	17	M16	5	✓				●
NKB100682	CATPM105033160	33	43	17	M16	5					●
NKB100683	CATPM105033161	33	43	17	M16	5	✓				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Shoulder Milling - CATP**

**CATPF - Milling Tools**



Order Code	Description	D	L	d	T	Coolant	Inserts	Screw	Wrench	Stock
NKB100684	CATPF106050221	50	50	22	6	✓	TPMX1004	ITS2517	ITK08	●
NKB100685	CATPF107050220	50	50	22	7					●
NKB100686	CATPF107063221	63	50	22	7	✓				●
NKB100687	CATPF109063220	63	50	22	9					●
NKB100688	CATPF504040161	40	40	16	4	✓	TPMX1505	ITS4004	ITK15	●
NKB100689	CATPF505050221	50	40	22	5	✓				●
NKB100690	CATPF506063221	63	40	22	6	✓				●
NKB100691	CATPF508080271	80	50	27	8	✓				●

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	TPMX1004			TPMX1505		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 7.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 4.0	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.08 ~ 0.20	0.3 ~ 6.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 4.0	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 4.0	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

**Shoulder Milling - CATP**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
TPMX100404	6.9	4	0.4	3
TPMX100408	6.9	4	0.8	3
TPMX150508	10.7	5	0.8	4.85

**Insert Description**

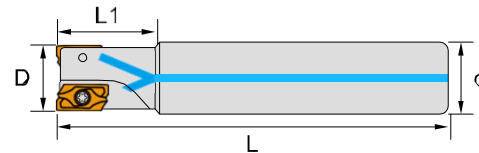
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100122	TPMX100404 GS IL68ITP	●	●	●		○	
	NKB100123	TPMX100404 GS IL67UYP	●	●	●		●	●
	NKB100124	TPMX100408 GS IL68ITP	●	●	●		○	
	NKB100125	TPMX100408 GS IL67UYP	●	●	●		●	●
	NKB100126	TPMX100408 GM IL77BYP	○	○	○		○	●
	NKB100127	TPMX100408 GM IL68ITP	●	●	●		○	
	NKB100128	TPMX100408 GM IL67UYP	●	●	●		●	●
	NKB100129	TPMX100408 GM IL57UYP	●	●	●		●	
	NKB100130	TPMX150508 GM IL77BYP	○	○	○		○	●
	NKB100131	TPMX150508 GM IL68ITP	●	●	●		○	
	NKB100132	TPMX150508 GM IL67UYP	●	●	●		●	●
	NKB100133	TPMX150508 GM IL57UYP	●	●	●		●	

**Shoulder Milling - CAXD**



- Use XDMT inserts with 2 cutting edges.
- Cutter dia. : 16~32mm, max. depth of cut : 10mm.
- Cutting edge design provides stable machining and reduces vibration during machining.

**CAXDE - Milling tools**



Order Code	Description	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100692	CAXDE102016120	16	30	120	16	2		XDMT11T3	ITS2515	ITK08	○
NKB100693	CAXDE103020120	20	30	120	20	3					●
NKB100694	CAXDE103020151	20	35	150	20	3	✓				●
NKB100695	CAXDE104025150	25	45	150	25	4					●
NKB100696	CAXDE104025151	25	45	150	25	4	✓				●
NKB100697	CAXDE105032150	32	45	150	32	5					●
NKB100698	CAXDE105032151	32	45	150	32	5	✓				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	XDMT11T3		
	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 10.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 8.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 10.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0

**Shoulder Milling - CAXD**

**Insert Specifications**

Insert	Dimensions (mm)					
	A	B	S	r	d1	t1
XDMT11T308	10.6	6.8	3.8	0.8	2.8	1.4

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100134	XDMT11T308 GM IL67UYP	●	●	●		●	●
	NKB100135	XDMT11T308 GM IL57UYP	●	●	○		●	
	NKB100136	XDMT11T308 GM IL53UBC	●	●	●		●	○

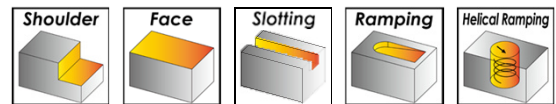
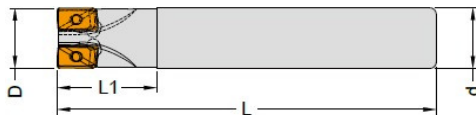


**Shoulder Milling - CAXO**



- . Use XOMT inserts with 2 cutting edges.
- . Optimized chip breaker reduces heat generation and cutting forces.
- . 6~32mm cutter diameter, max. 7mm depth of cut.

**CAXOE - Milling Tools**



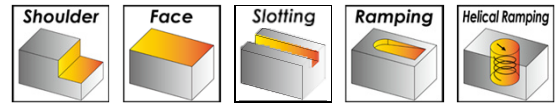
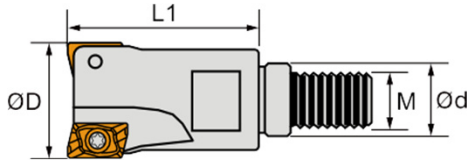
Order Code	Description	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100699	CAXOE601006080	6	10	80	6	1		XOMT0602	ITS1610	ITK06	●
NKB100700	CAXOE601008090	8	10	90	8	1					●
NKB100701	CAXOE602010100	10	20	100	10	2			ITS1801	ITK06	●
NKB100702	CAXOE602012100	12	20	100	12	2					●
NKB100703	CAXOE603012100	12	20	100	12	3					●
NKB100704	CAXOE602013100	13	20	100	12	2					●
NKB100705	CAXOE603013100	13	20	100	12	3					●
NKB100706	CAXOE604016100	16	30	100	16	4					●
NKB100707	CAXOE605020120	20	30	120	20	5					●
NKB100708	CAXOE102016150	16	22	150	16	2					XOMT10T3
NKB100709	CAXOE102020150	20	28	150	20	2		○			
NKB100710	CAXOE104025150	25	35	150	25	4		○			
NKB100711	CAXOE105032150	32	40	150	32	5		○			
NKB100712	CAXOE203025151	25	36	150	25	3	✓	XOMT1204	ITS3501	ITK15	●
NKB100713	CAXOE204032150	32	40	150	32	4					●

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CAXO**

**CAXOM - Modular Milling Heads**



Order Code	Description	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100714	CAXOM602010050	10	16	5.5	M5	2		XOMT0602	ITS1801	ITK06	○
NKB100715	CAXOM603012060	12	18	6.5	M6	3					●
NKB100716	CAXOM604016080	16	20	8.5	M8	4					●
NKB100717	CAXOM605020100	20	30	10.5	M10	5					●
NKB100718	CAXOM102016080	16	26	8.5	M8	2		XOMT10T3	TS2515	ITK08	●
NKB100719	CAXOM102016081	16	26	8.5	M8	2	✓				●
NKB100720	CAXOM103020100	20	30	10.5	M10	3					●
NKB100721	CAXOM103020101	20	30	10.5	M10	3	✓				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Recommended Cutting Conditions**

Working Material	XOMT0602			XOMT10T3		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 3.0	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 2.5	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0
Cast Iron	120 ~ 250	0.08 ~ 0.13	0.3 ~ 3.0	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 2.5	40 ~ 100	0.07 ~ 0.14	0.3 ~ 5.0
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 2.5	50 ~ 100	0.07 ~ 0.15	0.3 ~ 5.0

Shoulder Milling - CAXO

Insert Specifications

Insert	Dimensions (mm)				
	A	B	S	r	d1
XOMT060204	7	4.09	2.45	0.4	2
XOMT060208	7	4.09	2.45	0.8	2
XOMT060216	7	4.09	2.45	1.6	2
XOMT10T308	11.08	6.86	3.8	0.8	3
XOMT120408	11.6	8.2	5.07	0.8	3.9

Insert Description

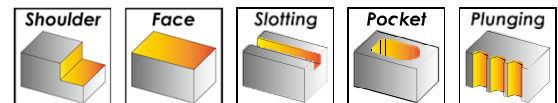
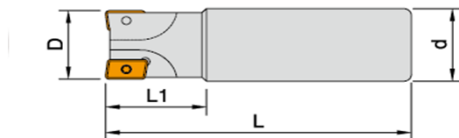
Insert	Order code	Description	Working Material					
			P	M	K	N	S	H
	NKB100137	XOMT060208 GS IL68ITP	●	●	●		○	
	NKB100138	XOMT060208 GS IL67UYP	●	●	●		●	●
	NKB100139	XOMT060204 GM IL77BYP	○	○	○		○	●
	NKB100140	XOMT060204 GM IL68ITP	●	●	●		○	
	NKB100141	XOMT060204 GM IL67UYP	●	●	●		●	●
	NKB100142	XOMT060208 GM IL77BYP	○	○	○		○	●
	NKB100143	XOMT060208 GM IL68ITP	●	●	●		○	
	NKB100144	XOMT060208 GM IL67UYP	●	●	●		●	●
	NKB100145	XOMT060208 GM IL57UYP	●	●	●		●	
	NKB100146	XOMT060216 GM IL77BYP	○	○	○		○	●
	NKB100147	XOMT060216 GM IL68ITP	●	●	●		○	
	NKB100148	XOMT060216 GM IL67UYP	●	●	●		●	●
	NKB100149	XOMT060216 GM IL57UYP	●	●	●		●	
	NKB100150	XOMT10T308 GS IL68ITP	●	●	●		○	
	NKB100151	XOMT10T308 GS IL67UYP	●	●	●		●	●
	NKB100152	XOMT10T308 GS IL57UYP	●	●	●		●	
	NKB100153	XOMT10T308 GM IL68ITP	●	●	●		○	
	NKB100154	XOMT10T308 GM IL67UYP	●	●	●		●	●
	NKB100155	XOMT10T308 GM IL57UYP	●	●	●		●	
	NKB100156	XOMT10T308 GM IL63UBC	○	○	●		○	○
	NKB100157	XOMT10T308 GM IL53UBC	●	●	○		●	○
	NKB100158	XOMT120408 GM IL68ITP	●	●	●		○	
	NKB100159	XOMT120408 GM IL67UYP	●	●	●		●	●
	NKB100160	XOMT120408 GM IL57UYP	●	●	●		●	
	NKB100161	XOMT120408 GM IL63UBC	○	○	●		○	○
	NKB100162	XOMT120408 GM IL53UBC	●	●	○		●	○

**Shoulder Milling - CBAP**



- . Use APMT inserts with 2 cutting edges.
- . Low cost and various geometric designs for versatile applications.
- . 16~80mm cutter diameter, max. 11mm depth of cut.

**CBAPE - Milling Tools**



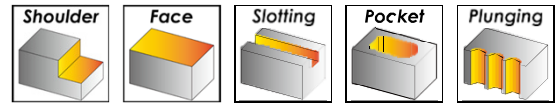
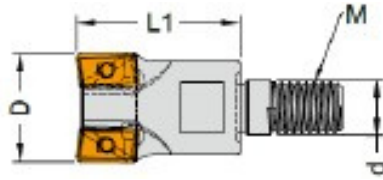
Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100722	CBAPE302016100	16	25	100	16	2	APMT1135	ITS2515	ITK08	●
NKB100723	CBAPE302016160	16	35	160	16	2				●
NKB100724	CBAPE302020150	20	35	150	20	2				●
NKB100725	CBAPE303020100	20	30	100	20	3				●
NKB100726	CBAPE303020150	20	35	150	20	3				●
NKB100727	CBAPE304025100	25	35	100	25	4				○
NKB100728	CBAPE304030120	30	40	120	25	4				○
NKB100729	CBAPE305032120	32	40	120	32	5	○			
NKB100730	CBAPE402025150	25	40	150	25	2	APMT1604 APGT1604	ITS4023	ITK15	●
NKB100731	CBAPE402025200	25	70	200	25	2				○
NKB100732	CBAPE403032150	32	45	150	32	3				●
NKB100733	CBAPE403032200	32	80	200	32	3				●

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CBAP**

**CBAPM - Modular Milling Heads**

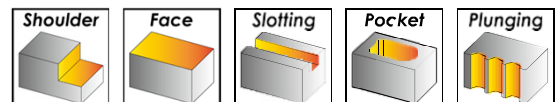
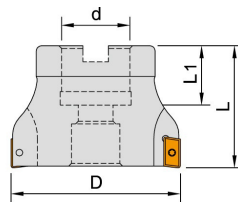


Order Code	Description	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
NKB100734	CBAPM302016080	16	26	8.5	M8	2	APMT1135	ITS2515	ITK08	●
NKB100735	CBAPM302020100	20	30	10.5	M10	2				●
NKB100736	CBAPM303020100	20	30	10.5	M10	3				○
NKB100737	CBAPM304025120	25	35	12.5	M12	4				●
NKB100738	CBAPM305032160	32	40	17	M16	5				●
NKB100739	CBAPM305033160	33	40	17	M16	5				○
NKB100740	CBAPM402025120	25	35	12.5	M12	2	APMT1604 APGT1604	ITS4023	ITK15	●
NKB100741	CBAPM403032160	32	40	17	M16	3				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**CBAPF - Milling Tools**



Order Code	Description	D	L	L1	d	T	Inserts	Screw	Wrench	Stock
NKB100742	CBAPF306050250	50	18	45	25.4	6	APMT1135	ITS2515	ITK08	●
NKB100743	CBAPF307063220	63	22	45	22	7				●
NKB100744	CBAPF307063254	63	22	45	25.4	7				●
NKB100745	CBAPF308080250	80	26	50	25.4	8				●
NKB100746	CBAPF308080270	80	26	50	27	8				●
NKB100747	CBAPF405050220	50	22	45	22	5	APMT1604 APGT1604	ITS4023	ITK15	●
NKB100748	CBAPF405050250	50	18	45	25.4	5				●
NKB100749	CBAPF406063220	63	22	45	22	6				●
NKB100750	CBAPF406063250	63	22	45	25.4	6				●
NKB100751	CBAPF407080250	80	26	26	25.4	7				●
NKB100752	CBAPF407080270	80	26	26	27	7				●

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CBAP**

**Recommended Cutting Conditions**

. For Shoulder Milling

Working Material	APMT1135			APMT1604		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.5 ~ 7.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.5 ~ 4.0	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.5 ~ 6.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Aluminum Alloy	-	-	-	300 ~ 1000	0.10 ~ 0.40	0.5 ~ 11.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.5 ~ 4.0	40 ~ 100	0.10 ~ 0.22	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.5 ~ 4.0	50 ~ 100	0.10 ~ 0.22	0.5 ~ 7.0

. For High Feed Face Milling (use APMT113516 or APMT160416 insert)

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.25 ~ 0.55	0.2 ~ 0.5
Stainless Steel	100 ~ 180	0.2 ~ 0.45	0.2 ~ 0.5
Cast Iron	120 ~ 250	0.25 ~ 0.55	0.2 ~ 0.5
High Temperature Alloy	40 ~ 100	0.175 ~ 0.35	0.2 ~ 0.5
Hardened Steel	50 ~ 100	0.175 ~ 0.375	0.2 ~ 0.5

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
APMT113508	11.0	6.35	3.5	0.8	2.8
APMT113516	11.0	6.35	3.5	1.6	2.8
APMT160408	16.5	9.525	4.76	0.8	4.4
APMT160416	16.5	9.525	4.76	1.6	4.4
APGT160408	16.5	9.525	4.76	0.8	4.4

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100163	APMT113508PDER GM IL77BYP	○	○	○		○	●
	NKB100164	APMT113508PDER GM IL68ITP	●	●	●		○	
	NKB100165	APMT113508PDER GM IL67UYP	●	●	●		●	●
	NKB100166	APMT113508PDER GM IL57UYP	●	●	●		●	
	NKB100167	APMT113516PDER GM IL77BYP	○	○	○		○	●
	NKB100168	APMT113516PDER GM IL68ITP	●	●	●		○	
	NKB100169	APMT113516PDER GM IL67UYP	●	●	●		●	●
	NKB100170	APMT113516PDER GM IL57UYP	●	●	●		●	

**Shoulder Milling - CBAP**

**Insert Description**

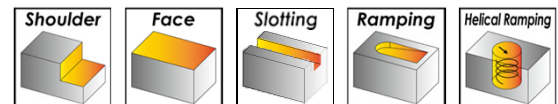
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100171	APMT113508PDER GR IL77BYP	○	○	○		○	●
	NKB100172	APMT113508PDER GR IL68ITP	●	●	●		○	
	NKB100173	APMT113508PDER GR IL67UYP	●	●	●		●	●
	NKB100174	APMT113508PDER GR IL57UYP	●	●	●		●	
	NKB100175	APMT113508PDER GH IL68ITP	●	●	●		○	
	NKB100176	APMT113508PDER GH IL67UYP	●	●	●		●	●
	NKB100177	APMT113508PDER GH IL57UYP	●	●	●		●	
	NKB100178	APGT160408PDER LA IL90U				●		
	NKB100179	APGT160408PDER GF IL77BYP	○	○	○		○	●
	NKB100180	APMT160408PDER GM IL77BYP	○	○	○		○	●
	NKB100181	APMT160408PDER GM IL68ITP	●	●	●		○	
	NKB100182	APMT160408PDER GM IL67UYP	●	●	●		●	●
	NKB100183	APMT160408PDER GM IL57UYP	●	●	●		●	
	NKB100184	APMT160408PDER GM IL53UBC	●	●	○		●	○
	NKB100185	APMT160416PDER GM IL68ITP	●	●	●		○	
	NKB100186	APMT160416PDER GM IL67UYP	●	●	●		●	●
	NKB100187	APMT160416PDER GM IL57UYP	●	●	●		●	
	NKB100188	APMT160408PDER GR IL77BYP	○	○	○		○	●
	NKB100189	APMT160408PDER GR IL68ITP	●	●	●		○	
	NKB100190	APMT160408PDER GR IL67UYP	●	●	●		●	●
	NKB100191	APMT160408PDER GR IL57UYP	●	●	●		●	
	NKB100192	APMT160408PDER GH IL77BYP	○	○	○		○	●
	NKB100193	APMT160408PDER GH IL68ITP	●	●	●		○	
	NKB100194	APMT160408PDER GH IL67UYP	●	●	●		●	●
	NKB100195	APMT160408PDER GH IL57UYP	●	●	●		●	

**Shoulder Milling - CR39**



- Use W390 inserts with 2 cutting edges.
- Optimized chip breaker for high efficient shoulder and side milling.
- 16~100mm cutter diameter, max. 11mm depth of cut.

**CR39E - Milling Tools**

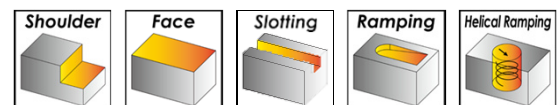
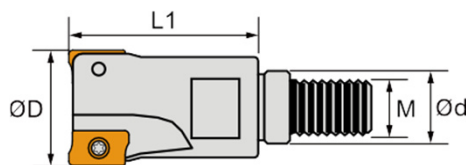


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100753	CR39E302016150	16	30	150	16	2	W39011T3	ITS2509	ITK08	●
NKB100754	CR39E303020150	20	30	150	20	3				○
NKB100755	CR39E303025150	25	30	150	25	3				●
NKB100756	CR39E303032150	32	35	150	32	3				○
NKB100757	CR39E802025150	25	35	150	25	2	W3901806	ITS4005	ITK15	○
NKB100758	CR39E803032150	32	40	150	32	3				○

● stock ○ by inquiry

Customize available.

**CR39M - Modular Milling Heads**



Order Code	Description	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
NKB100759	CR39M302016080	16	26	8.5	M8	2	W39011T3	ITS2509	ITK08	○
NKB100760	CR39M303020100	20	32	10.5	M10	3				○
NKB100761	CR39M303025120	25	38	12.5	M12	3				○
NKB100762	CR39M303032160	32	41	17	M16	3				○

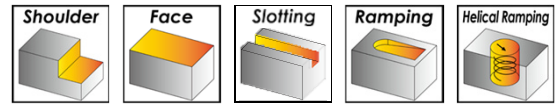
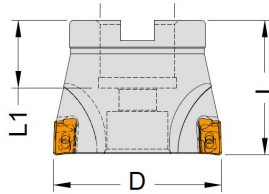
● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System



**Shoulder Milling - CR39**

**CR39F - Milling Tools**



Order Code	Description	D	L	d	T	Coolant	Inserts	Screw	Wrench	Stock
NKB100763	CR39F305040161	40	40	16	5	✓	W39011T3	ITS2509	ITK08	●
NKB100764	CR39F304050220	50	40	22	4					○
NKB100765	CR39F306050221	50	40	22	6	✓				●
NKB100766	CR39F305063220	63	40	22	5					○
NKB100767	CR39F307063221	63	50	22	7	✓				●
NKB100768	CR39F308080270	80	50	27	8					○
NKB100769	CR39F805050221	50	40	22	5	✓	W3901806	ITS4005	ITK15	●
NKB100770	CR39F806063221	63	40	22	6	✓				●
NKB100771	CR39F807080271	80	50	27	7	✓				●
NKB100772	CR39F808100321	100	50	32	8	✓				●

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	Vc	W39011T3		W3901806	
		fz	ap	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0	0.10 ~ 0.20	0.5 ~ 7.0

**Shoulder Milling - CR39**

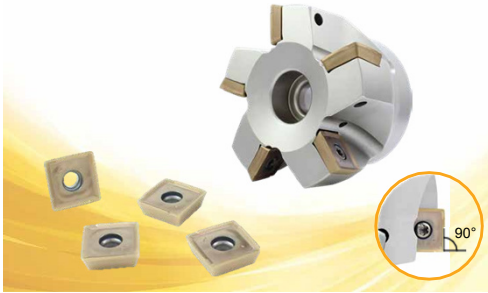
**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
W39011T308	11	6.9	3.59	0.8	2.8
W39011T320	11	6.9	3.59	2.0	2.8
W390180612	15.4	11	6.33	1.2	4.2

**Insert Description**

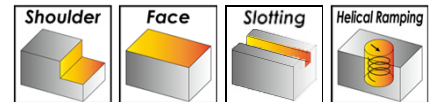
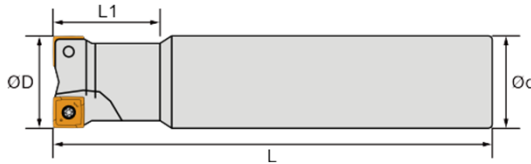
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100196	W39011T308 GS IL77BYP	○	○	○		○	●
	NKB100197	W39011T308 GS IL68ITP	●	●	●		○	
	NKB100198	W39011T308 GS IL67UYP	●	●	●		●	●
	NKB100026	W39011T308 GS IL57UYP	●	●	●		●	
	NKB100200	W39011T308 GM IL77BYP	○	○	○		○	●
	NKB100201	W39011T308 GM IL68ITP	●	●	●		○	
	NKB100202	W39011T308 GM IL67UYP	●	●	●		●	●
	NKB100203	W39011T308 GM IL57UYP	●	●	●		●	
	NKB100204	W39011T308 GM IL63UBC	○	○	●		○	○
	NKB100205	W39011T308 GM IL53UBC	●	●	○		●	○
	NKB100206	W39011T320 GM IL77BYP	○	○	○		○	●
	NKB100207	W39011T320 GM IL68ITP	●	●	●		○	
	NKB100208	W39011T320 GM IL67UYP	●	●	●		●	●
	NKB100209	W39011T320 GM IL57UYP	●	●	●		●	
	NKB100210	W39011T320 GM IL63UBC	○	○	●		○	○
	NKB100211	W39011T320 GM IL53UBC	●	●	○		●	○
	NKB100212	W390180612 GS IL68ITP	●	●	●		○	
	NKB100213	W390180612 GS IL67UYP	●	●	●		●	●
	NKB100214	W390180612 GS IL57UYP	●	●	●		●	
	NKB100215	W390180612 GS IL63UBC	○	○	●		○	○
	NKB100216	W390180612 GS IL53UBC	●	●	○		●	○

**Shoulder Milling - CR49**



- Use W490 inserts with 4 cutting edges.
- Great repeat side milling capability to reduce burs and get good surface finishing.
- 20~80mm cutter diameter, max. 9mm depth of cut.

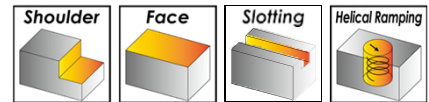
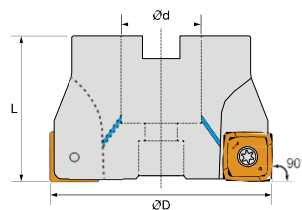
**CR49E - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100773	CR49E802020100	20	25	100	20	2	W49008T3	ITS2507	ITK08	●
NKB100774	CR49E802020150	20	25	150	20	2				●
NKB100775	CR49E803025100	25	32	100	20	3				●
NKB100776	CR49E803025150	25	32	150	20	3				●

● stock ○ by inquiry

**CR49F - Milling Tools**



Order Code	Description	D	L	d	T	Coolant	Inserts	Screw	Wrench	Stock
NKB100777	CR49F804040161	40	40	16	4	✓	W49008T3	ITS2507	ITK08	●
NKB100778	CR49F805050221	50	40	22	5	✓				●
NKB100779	CR49F806063221	63	40	22	6	✓				●
NKB100780	CR49F404050221	50	40	22	4	✓	W4901404	ITS3505	ITK15	●
NKB100781	CR49F405063221	63	40	22	5	✓				●
NKB100782	CR49F407080271	80	50	27	7	✓				●

● stock ○ by inquiry

**Shoulder Milling - CR49**

**Recommended Cutting Conditions**

Working Material	Vc	W49008T3		W4901404	
		fz	ap	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.05 ~ 0.12	0.3 ~ 5.5	0.06 ~ 0.15	0.3 ~ 9
Stainless Steel	100 ~ 180	0.04 ~ 0.10	0.3 ~ 4.5	0.05 ~ 0.12	0.3 ~ 8
Cast Iron	120 ~ 250	0.05 ~ 0.12	0.3 ~ 5.5	0.06 ~ 0.15	0.3 ~ 9
Aluminum Alloy	300 ~ 1000	-	-	0.05 ~ 0.15	0.3 ~ 9
High Temperature Alloy	40 ~ 100	0.03 ~ 0.09	0.3 ~ 4.5	0.04 ~ 0.11	0.3 ~ 8
Hardened Steel	50 ~ 100	0.03 ~ 0.09	0.3 ~ 4.5	0.04 ~ 0.11	0.3 ~ 8

**Insert Specifications**

Insert	Dimensions (mm)						
	A	B	S	r	d1	t1	
W49008T308	5.6	8.5	3.3	0.8	2.8	1.2	
W490140408	10.3	13.8	3.9	0.8	4.1	2.0	

**Insert Description**

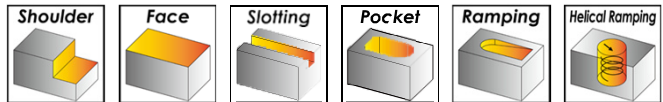
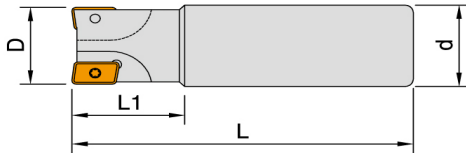
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100217	W49008T308 GS IL77BYP	○	○	○		○	●
	NKB100218	W49008T308 GS IL68ITP	●	●	●		○	
	NKB100219	W49008T308 GS IL67UYP	●	●	●		●	●
	NKB100220	W49008T308 GS IL57UYP	●	●	●		●	
	NKB100221	W490140408 GS IL68ITP	●	●	●		○	
	NKB100222	W490140408 GS IL67UYP	●	●	●		●	●
	NKB100223	W490140408 GS IL57UYP	●	●	●		●	
	NKB100224	W490140408 GM IL77BYP	○	○	○		○	●
	NKB100225	W490140408 GM IL68ITP	●	●	●		○	
	NKB100226	W490140408 GM IL67UYP	●	●	●		●	●
	NKB100227	W490140408 GM IL57UYP	●	●	●		●	
	NKB100228	W490140408 GM IL63UBC	○	○	●		○	○
	NKB100229	W490140408 GM IL53UBC	●	●	○		●	○

**Shoulder Milling - CWEX**



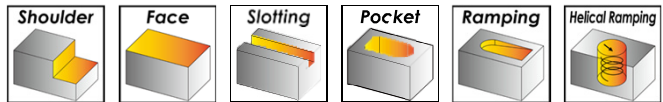
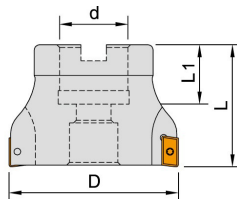
- Use AXMT inserts with 2 cutting edges.
- Strong cutting edges for high removal rate shoulder milling.
- 16~100mm cutter diameter, max. 11mm depth of cut.

**CWEXE - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100783	CWEXE202016120	16	35	120	16	2	AXMT1235	ITS3002	ITK09	●
NKB100784	CWEXE203020120	20	40	120	20	3				●
NKB100785	CWEXE204025150	25	45	150	25	4				●
NKB100786	CWEXE205032150	32	45	150	32	5				●
NKB100787	CWEXE702025150	25	40	150	25	2	AXMT1705	ITS4004	ITK15	●
NKB100788	CWEXE703032150	32	45	150	32	3				●

**CWEXF - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100789	CWEXF206050220	50	20	45	22	6	AXMT1235	ITS3002	ITK09	●
NKB100790	CWEXF207063220	63	20	45	22	7				●
NKB100791	CWEXF208080270	80	26	50	27	8				●
NKB100792	CWEXF704050220	50	20	45	22	4	AXMT1705	ITS4004	ITK15	●
NKB100793	CWEXF705063220	63	20	45	22	5				●
NKB100794	CWEXF707080270	80	26	50	27	7				●
NKB100795	CWEXF707100320	100	26	50	32	7				○

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CWEX**

**Recommended Cutting Conditions**

Working Material	AXMT1235			AXMT1705		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

**Insert Specifications**

Insert	Dimensions (mm)					
	A	B	S	r	d1	
AXMT123508	12.18	6.93	3.58	0.8	3.4	
AXMT170508	17.50	10.2	5.56	0.8	4.6	
AXMT170516	17.50	10.2	5.56	1.6	4.6	

**Insert Description**

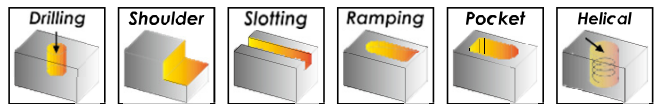
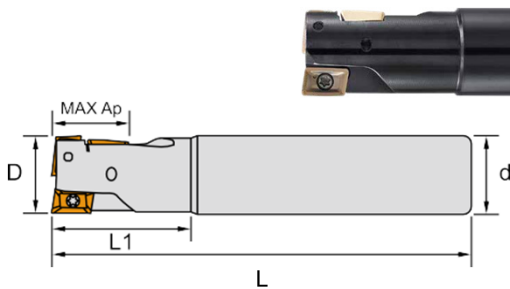
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100230	AXMT123508PEER GR IL77BYP	○	○	○		○	●
	NKB100231	AXMT123508PEER GR IL68ITP	●	●	●		○	
	NKB100232	AXMT123508PEER GR IL67UYP	●	●	●		●	●
	NKB100233	AXMT123508PEER GR IL57UYP	●	●	●		●	
	NKB100234	AXMT123508PEER GR IL63UBC	○	○	●		○	○
	NKB100235	AXMT170508PEER GR IL77BYP	○	○	○		○	●
	NKB100236	AXMT170508PEER GR IL68ITP	●	●	●		○	
	NKB100237	AXMT170508PEER GR IL67UYP	●	●	●		●	●
	NKB100238	AXMT170508PEER GR IL57UYP	●	●	●		●	
	NKB100239	AXMT170508PEER GR IL63UBC	○	○	●		○	○
	NKB100240	AXMT170516PEER GR IL68ITP	●	●	●		○	○
	NKB100241	AXMT170516PEER GR IL67UYP	●	●	●		●	●
	NKB100242	AXMT170516PEER GR IL57UYP	●	●	●		●	
	NKB100243	AXMT170516PEER GR IL63UBC	○	○	●		○	○
	NKB100244	AXMT170516PEER GR IL53UBC	●	●	○		●	○

**Drilling & Milling - CWMM**



- . Use APMT inserts with 2 cutting edges.
- . Cutter with over-center design for drilling and milling.
- . 10~80mm cutter diameter, max. 11mm depth of cut.

**CWMMD - Drilling & Milling Tools**

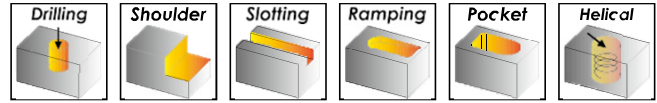
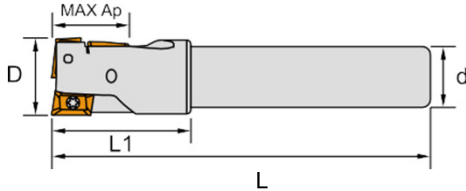


Order Code	Description	D	L1	L	d	Insert Number	Max Ap	Inserts	Screw	Wrench	Stock
NKB100796	CWMMD303020120	20	35	125	20	3	16	APMT1035	ITS2515	ITK08	●
NKB100797	CWMMD303020180	20	35	185	20	3	16				●
NKB100798	CWMMD304025140	25	35	140	25	4	24				●
NKB100799	CWMMD304025220	25	35	220	25	4	24				●
NKB100800	CWMMD604032150	32	50	150	32	4	40	APMT1605	ITS4004	ITK15	●
NKB100801	CWMMD604032230	32	60	230	32	4	40				●

● stock ○ by inquiry

**Drilling & Milling - CWMM**

**CWMMD - Drilling & Milling Tools**



Order Code	Description	D	L1	L	d	Insert Number	Max Ap	Inserts	Screw	Wrench	Stock
NKB100802	CWMMD303021120	21	35	125	20	3	16	APMT1035	ITS2515	ITK08	●
NKB100803	CWMMD304026140	26	35	140	25	4	24				●
NKB100804	CWMMD305030150	30	50	150	25	5	32				●
NKB100805	CWMMD604033150	33	50	150	32	4	40	APMT1605	ITS4004	ITK15	●
NKB100806	CWMMD604040160	40	60	160	32	4	40				●
NKB100807	CWMMD604040240	40	60	240	32	4	40				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

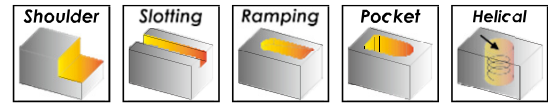
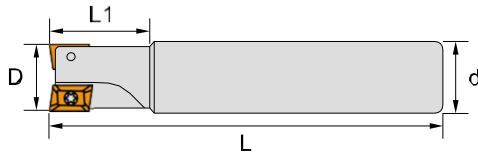
Working Material	Vc	fz					
		APMT1035			APMT1605		
		Shoulder	Slotting	Drilling	Shoulder	Slotting	Drilling
Carbon Steel / Alloy Steel	100 ~ 160	0.06 ~ 0.20	0.06 ~ 0.12	0.06 ~ 0.18	0.06 ~ 0.25	0.06 ~ 0.15	0.06 ~ 0.20
Stainless Steel	80 ~ 120	0.05 ~ 0.15	0.05 ~ 0.10	0.05 ~ 0.12	0.05 ~ 0.20	0.05 ~ 0.12	0.05 ~ 0.18
Cast Iron	90 ~ 180	0.06 ~ 0.20	0.06 ~ 0.12	0.06 ~ 0.18	0.06 ~ 0.25	0.06 ~ 0.15	0.06 ~ 0.20
High Temperature Alloy	60 ~ 100	0.05 ~ 0.12	0.05 ~ 0.08	0.05 ~ 0.10	0.05 ~ 0.17	0.05 ~ 0.10	0.05 ~ 0.15
Hardened Steel	60 ~ 100	0.05 ~ 0.12	0.05 ~ 0.08	0.05 ~ 0.10	0.05 ~ 0.17	0.05 ~ 0.10	0.05 ~ 0.15

Use step feed in drilling, per step Ap 0.5 ~ 1.0mm.

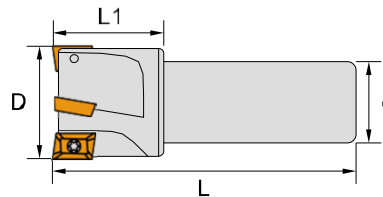


**Shoulder Milling - CWMM**

**CWMME - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100808	CWMME301010100	10	20	100	12	1	APMT1035	ITS2515	ITK08	●
NKB100809	CWMME301012100	12	25	100	12	1				●
NKB100810	CWMME302016120	16	25	120	16	2				●
NKB100811	CWMME303020120	20	30	120	20	3				●
NKB100812	CWMME304025150	25	35	150	25	4				●
NKB100813	CWMME305032150	32	45	150	32	5				●
NKB100814	CWMME602025150	25	40	150	25	2	APMT1605	ITS4004	ITK15	●
NKB100815	CWMME602025220	25	40	220	25	2				●
NKB100816	CWMME602032150	32	45	150	32	2				●
NKB100817	CWMME602032250	32	45	250	32	2				●
NKB100818	CWMME603032150	32	45	150	32	3				●

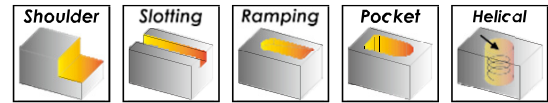
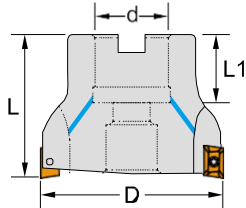


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100819	CWMME306040130	40	45	135	32	6	APMT1035	ITS2515	ITK08	○
NKB100820	CWMME306050130	50	45	135	32	6				○
NKB100821	CWMME306063130	63	45	135	32	6				○
NKB100822	CWMME603035150	35	45	150	32	3	APMT1605	ITS4004	ITK15	○
NKB100823	CWMME603035250	35	45	250	32	3				○
NKB100824	CWMME603040130	40	45	135	32	3				○
NKB100825	CWMME604050130	50	45	135	32	4				○

● stock ○ by inquiry

**Shoulder Milling - CWMM**

**CWMMF - Milling Tools**



Order Code	Description	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100826	CWMMF306050221	50	20	45	22	6	✓	APMT1035	ITS2515	ITK08	●
NKB100827	CWMMF306050250	50	20	45	25.4	6					●
NKB100828	CWMMF306063220	63	20	45	22	6					●
NKB100829	CWMMF306063250	63	20	45	25.4	6					●
NKB100830	CWMMF604050221	50	20	45	22	4	✓	APMT1605	ITS4004	ITK15	●
NKB100831	CWMMF604050251	50	20	45	25.4	4	✓				●
NKB100832	CWMMF605063220	63	20	45	22	5					○
NKB100833	CWMMF605063251	63	20	45	25.4	5	✓				●
NKB100834	CWMMF606080250	80	26	50	25.4	6					●
NKB100835	CWMMF606080270	80	26	50	27	6					○

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	APMT1035			APMT1605		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

**Shoulder Milling - CWMM**

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
APMT103508	10	6.6	3.5	0.8	3
APET160508	16	9.525	5.56	0.8	4.4
APMT160508	16	9.525	5.56	0.8	4.4

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100245	APMT103508PDER GR IL77BYP	○	○	○		○	●
	NKB100246	APMT103508PDER GR IL68ITP	●	●	●		○	
	NKB100247	APMT103508PDER GR IL67UYP	●	●	●		●	●
	NKB100248	APMT103508PDER GR IL57UYP	●	●	●		●	
	NKB100249	APET160508PDFR LA IL90U				●		
	NKB100250	APMT160508PDER GR IL68ITP	●	●	●		○	
	NKB100251	APMT160508PDER GR IL67UYP	●	●	●		●	●

**High Feed Milling Series Introduction**

**CXBN Series**



- . Use BNMX double-sided inserts with 4 cutting edges.
- . High feed and low cutting force offers better productivity.
- . 15~100mm cutter diameter, max. 1.4mm depth of cut.

\* Page [A066](#)

**CXLN Series**



- . Use LNMX double-sided inserts with 4 cutting edges.
- . High feed and sharp cutting edges for low cutting force applications.
- . 16~50mm cutter diameter, max. 0.9mm depth of cut.

\* Page [A070](#)

**CXLO Series**



- . Use LOGX double-sided inserts with 4 cutting edges.
- . High feed and high precision cutting edges for good surface finishing.
- . 16~50mm cutter diameter, max. 0.9mm depth of cut.

\* Page [A073](#)

**CXWN Series**



- . Use WNMX double-sided inserts with 6 cutting edges.
- . High feed and low cost for multi-functional applications.
- . 25~160mm cutter diameter, max. 1.35mm depth of cut.

\* Page [A076](#)

**High Feed Milling Series Introduction**

**CALP Series**



- . Use LPGX inserts with 2 cutting edges.
- . High feed and small size cutter for replacing solid carbide tools.
- . 8~16mm cutter diameter, max. 0.5mm depth of cut

\* Page [A079](#)

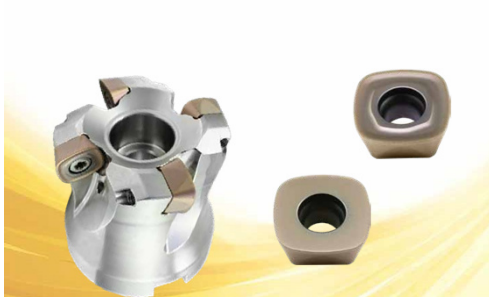
**CAJX Series**



- . Use JDMT or JDMW inserts with 3 cutting edges.
- . High feed and high rigidity cutting edge for wide range applications.
- . 32~100mm cutter diameter, max. 2mm depth of cut.

Page \*[A082](#)

**CASR Series**



- . Use SDMT or SDNW inserts with 4 cutting edges.
- . High feed and more economical for wide range applications.
- . 50~80mm cutter diameter, max. 1.5mm depth of cut.

\* Page [A084](#)

**CF23 Series**



- . Use WP26 inserts with 3 cutting edges.
- . High feed and high rigidity negative designed for hardened steel.
- . 32~160mm cutter diameter, max. 2mm depth of cut.

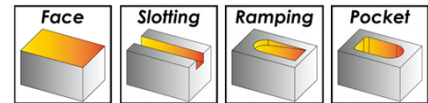
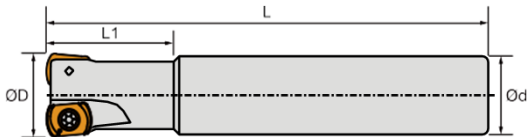
Page \*[A086](#)

**High Feed Milling - CXBN**



- Use BNMX double-sided inserts with 4 cutting edges.
- High feed and low cutting force offers better productivity.
- 15~100mm cutter diameter, max. 1.4mm depth of cut.

**CXBNE - Milling Tools**



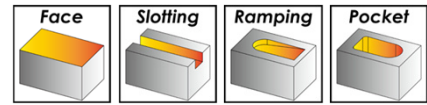
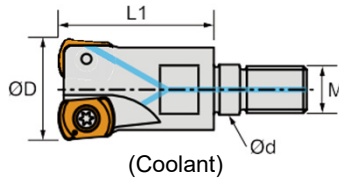
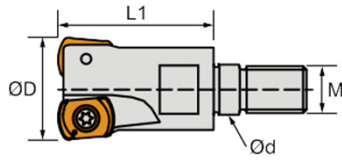
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NKB100837	CXBNE602016130	16	26	130	16	2				●
NKB100838	CXBNE602017130	17	26	130	16	2				●
NKB100839	CXBNE602018130	18	25	130	20	2				●
NKB100840	CXBNE603020150	20	40	150	20	3				●
NKB100841	CXBNE603021150	21	40	150	20	3				●
NKB100842	CXBNE604025150	25	40	150	25	4				●
NKB100843	CXBNE604026150	26	30	150	25	4				●
NKB100844	CXBNE604032200	32	45	200	32	4				●
NKB100845	CXBNE903025150	25	40	150	25	3	BNMX0904	ITS4009	ITK15	●
NKB100846	CXBNE903032150	32	40	150	32	3				●

● stock ○ by inquiry

Customize available.

**High Feed Milling - CXBN**

**CXBNM - Modular Milling Heads**



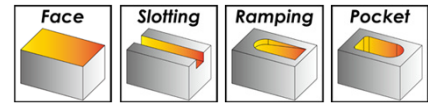
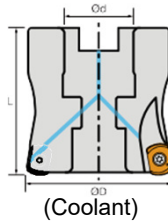
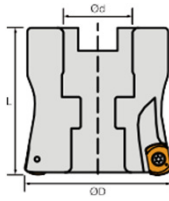
Order Code	Description	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100847	CXBNM602016080	16	26	8.5	M8	2		BNMX0603	ITS3004	ITK08	●
NKB100848	CXBNM602016081	16	26	8.5	M8	2	✓				●
NKB100849	CXBNM603020100	20	30	10.5	M10	3					●
NKB100850	CXBNM603020101	20	30	10.5	M10	3	✓				●
NKB100851	CXBNM603021100	21	30	10.5	M10	3					●
NKB100852	CXBNM603025120	25	35	12.5	M12	3					●
NKB100853	CXBNM604025120	25	35	12.5	M12	4					●
NKB100854	CXBNM604025121	25	35	12.5	M12	4	✓				●
NKB100855	CXBNM603026120	26	35	12.5	M12	3					●
NKB100856	CXBNM604032161	32	40	17.0	M16	4	✓				●
NKB100857	CXBNM605032160	32	40	17.0	M16	5					●
NKB100858	CXBNM605032161	32	40	17.0	M16	5	✓				○
NKB100859	CXBNM606040161	40	43	17.0	M16	6	✓				●
NKB100860	CXBNM903025121	25	35	12.5	M12	3	✓	BNMX0904	ITS4009	ITK15	●
NKB100861	CXBNM904032161	32	40	17.0	M16	4	✓				●
NKB100862	CXBNM904035161	35	43	17.0	M16	4	✓				○
NKB100863	CXBNM905042161	42	43	17.0	M16	5	✓				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**High Feed Milling - CXBN**

**CXBNF - Milling Tools**



Order Code	Description	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100864	CXBNF606040220	40	50	22	6		BNMX0603	ITS3004	ITK08	●
NKB100865	CXBNF606040221	40	50	22	6	✓				●
NKB100866	CXBNF607050220	50	50	22	7					●
NKB100867	CXBNF607050221	50	50	22	7	✓				●
NKB100868	CXBNF607052221	52	50	22	7	✓				○
NKB100869	CXBNF607063220	63	50	22	7				●	
NKB100870	CXBNF906050221	50	50	22	6	✓	BNMX0904	ITS3504	ITK15	●
NKB100871	CXBNF906052221	52	50	22	6	✓				ITS4009
NKB100872	CXBNF907063220	63	50	22	7					●
NKB100873	CXBNF907063271	63	50	27	7	✓				●
NKB100874	CXBNF907066271	66	50	27	7	✓				○
NKB100875	CXBNF908080271	80	50	27	8	✓		ITS3504		●
NKB100876	CXBNF910100321	100	50	32	10	✓				●

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	BNMX0603			BNMX0904		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9	120 ~ 250	0.4 ~ 2.0	0.3 ~ 1.4
Stainless Steel	100 ~ 180	0.3 ~ 1.2	0.3 ~ 0.7	100 ~ 180	0.3 ~ 1.6	0.3 ~ 1.2
Cast Iron	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9	120 ~ 250	0.4 ~ 2.0	0.3 ~ 1.4
High Temperature Alloy	40 ~ 100	0.3 ~ 0.8	0.3 ~ 0.6	40 ~ 100	0.3 ~ 1.2	0.3 ~ 1.2
Hardened Steel	50 ~ 100	0.3 ~ 1.0	0.3 ~ 0.6	50 ~ 100	0.3 ~ 1.4	0.3 ~ 1.2

**Corner R Programming**

Designation	Approx. R (mm)	
	Input. R	Uncut
BNMX0603	2.0	0.42
BNMX0904	2.5	0.61



**High Feed Milling - CXBN**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	B	S	d1
BNMX0603	9.0	6.38	3.75	3.2
BNMX0904	11.9	9.18	4.8	4.2

**Insert Description**

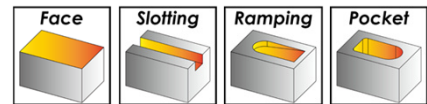
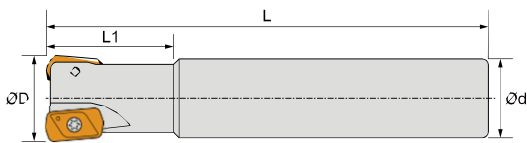
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100252	BNMX0603 GS IL77BYP	○	○	○		○	●
	NKB100253	BNMX0603 GS IL68ITP	●	●	●		○	
	NKB100254	BNMX0603 GS IL67UYP	●	●	●		●	●
	NKB100255	BNMX0603 GS IL57UYP	●	●	●		●	
	NKB100256	BNMX0603 GM IL77BYP	○	○	○		○	●
	NKB100257	BNMX0603 GM IL68ITP	●	●	●		○	
	NKB100258	BNMX0603 GM IL67UYP	●	●	●		●	●
	NKB100259	BNMX0603 GM IL57UYP	●	●	●		●	
	NKB100260	BNMX0603 GM IL63UBC	○	○	●		○	○
	NKB100261	BNMX0603 GM IL53UBC	●	●	○		●	○
	NKB100262	BNMX0603 GR IL77BYP	○	○	○		○	●
	NKB100263	BNMX0603 GR IL68ITP	●	●	●		○	
	NKB100264	BNMX0603 GR IL67UYP	●	●	●		●	●
	NKB100265	BNMX0603 GR IL57UYP	●	●	●		●	
	NKB100266	BNMX0603 GR IL63UBC	○	○	●		○	○
	NKB100267	BNMX0603 GR IL53UBC	●	●	○		●	○
	NKB100268	BNMX0904 GM IL77BYP	○	○	○		○	●
	NKB100269	BNMX0904 GM IL68ITP	●	●	●		○	
	NKB100270	BNMX0904 GM IL67UYP	●	●	●		●	●
	NKB100271	BNMX0904 GM IL57UYP	●	●	●		●	
	NKB100272	BNMX0904 GM IL63UBC	○	○	●		○	○
	NKB100273	BNMX0904 GM IL53UBC	●	●	○		●	○

**High Feed Milling - CXLN**



- Use LNMX double-sided inserts with 4 cutting edges.
- High feed and sharp cutting edges for low cutting force applications.
- 16~50mm cutter diameter, max. 0.9mm depth of cut.

**CXLNE - Milling Tools**

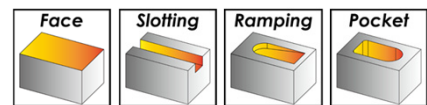
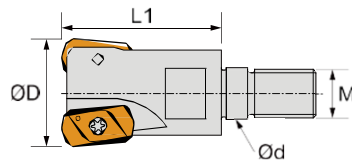


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100877	CXLNE302016100	16	30	100	16	2	LNMX0303	ITS2535	ITK07	●
NKB100878	CXLNE302016150	16	30	150	16	2				●
NKB100879	CXLNE303020150	20	50	150	20	3				●
NKB100880	CXLNE304020130	20	50	130	20	4				○
NKB100881	CXLNE304025150	25	60	150	25	4				●
NKB100882	CXLNE305025140	25	60	140	25	5				○
NKB100883	CXLNE306032150	32	70	150	32	6				●

● stock ○ by inquiry

Customize available.

**CXLNM - Modular Milling Heads**



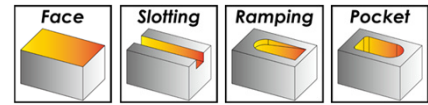
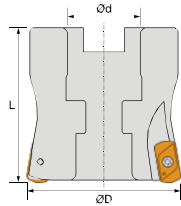
Order Code	Description	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100884	CXLNM302017080	17	26	8.5	M8	2		LNMX0303	ITS2535	ITK07	●
NKB100885	CXLNM303021100	21	32	10.5	M10	3					●
NKB100886	CXLNM303021101	21	32	10.5	M10	3	✓				●
NKB100887	CXLNM304026120	26	38	12.5	M12	4					●
NKB100888	CXLNM304032160	32	41	17	M16	4					●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**High Feed Milling - CXLN**

**CXLNF - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Stock
NKB100889	ICXLNF308050220	50	50	22	8	LNMX0303	ITS2535	ITK07	<input type="radio"/>

● stock    ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9
Stainless Steel	100 ~ 180	0.3 ~ 1.2	0.3 ~ 0.7
Cast Iron	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9
High Temperature Alloy	40 ~ 100	0.3 ~ 0.8	0.3 ~ 0.6
Hardened Steel	50 ~ 100	0.3 ~ 1.0	0.3 ~ 0.6

**Corner R Programming**

Designation	Approx. R (mm)		
	Input. R	Uncut	
LNMX0303	1.5	0.5	

**High Feed Milling - CXLN**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	B	S	d1
LNMX0303	11.59	6.0	4.29	2.85

**Insert Description**

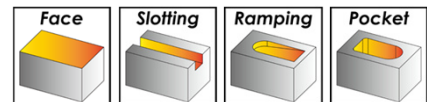
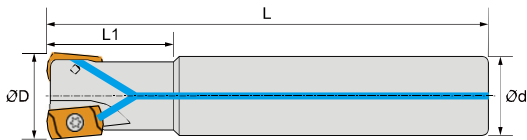
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100274	LNMX0303 GS IL77BYP	○	○	○		○	●
	NKB100275	LNMX0303 GS IL68ITP	●	●	●		○	
	NKB100276	LNMX0303 GS IL67UYP	●	●	●		●	●
	NKB100023	LNMX0303 GS IL57UYP	●	●	●		●	
	NKB100278	LNMX0303 GM IL77BYP	○	○	○		○	●
	NKB100279	LNMX0303 GM IL68ITP	●	●	●		○	
	NKB100280	LNMX0303 GM IL67UYP	●	●	●		●	●
	NKB100281	LNMX0303 GM IL57UYP	●	●	●		●	

**High Feed Milling - CXLO**



- Use LOGX double-sided inserts with 4 cutting edges.
- High feed and high precision cutting edges for good surface finishing.
- 16~50mm cutter diameter, max. 0.9mm depth of cut.

**CXLOE - Milling Tools**



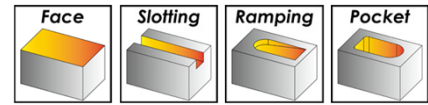
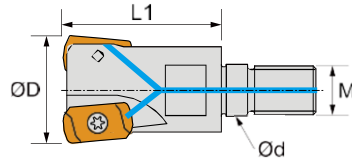
Order Code	Description	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100890	CXLOE302016150	16	30	150	16	2		LOGX0303	ITS3004	ITK08	●
NKB100891	CXLOE302016151	16	30	150	16	2	✓				●
NKB100892	CXLOE302017150	17	20	150	16	2					●
NKB100893	CXLOE302018150	18	20	150	16	2					●
NKB100894	CXLOE303020150	20	50	150	20	3					●
NKB100895	CXLOE303020151	20	50	150	20	3	✓				●
NKB100896	CXLOE303021150	21	30	150	20	3					●
NKB100897	CXLOE303022150	22	20	150	20	3					●
NKB100898	CXLOE304025150	25	60	150	25	4					●
NKB100899	CXLOE304025151	25	50	150	25	4	✓				●
NKB100900	CXLOE304026150	26	35	150	25	4					●
NKB100901	CXLOE304026151	26	35	150	25	4	✓				●
NKB100902	CXLOE304026200	26	45	200	25	4					●
NKB100903	CXLOE304028150	28	20	150	25	4					●
NKB100904	CXLOE305028150	28	20	150	25	5					●
NKB100905	CXLOE304030150	30	46	150	32	4					●
NKB100906	CXLOE305032150	32	70	150	32	5					●
NKB100907	CXLOE305033151	33	20	150	32	5	✓				●
NKB100908	CXLOE305033200	33	20	200	32	5					●
NKB100909	CXLOE305035200	35	20	200	32	5		●			

● stock ○ by inquiry

Customize available.

**High Feed Milling - CXLO**

**CXLOM - Modular Milling Heads**

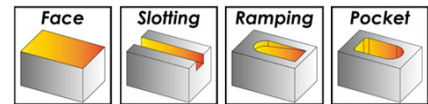
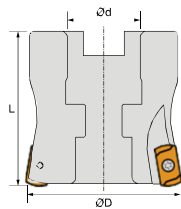


Order Code	Description	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100910	CXLOM302017081	17	25	8.5	M8	2	✓	LOGX0303	ITS3004	ITK08	●
NKB100911	CXLOM303021101	21	30	10.5	M10	3	✓				●
NKB100912	CXLOM304026121	26	35	12.5	M12	4	✓				●
NKB100913	CXLOM304035161	35	40	17	M16	4	✓				●
NKB100914	CXLOM305035161	35	40	17	M16	5	✓				●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**CXLOF - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Stock
NKB100915	CXLOF307050220	50	50	22	7	LOGX0303	ITS3004	ITK08	●

● stock ○ by inquiry

Customize available.

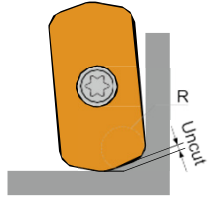
**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9
Stainless Steel	100 ~ 180	0.3 ~ 1.2	0.3 ~ 0.7
Cast Iron	120 ~ 250	0.4 ~ 1.6	0.3 ~ 0.9
High Temperature Alloy	40 ~ 100	0.3 ~ 0.8	0.3 ~ 0.6
Hardened Steel	50 ~ 100	0.3 ~ 1.0	0.3 ~ 0.6

**High Feed Milling - CXLO**

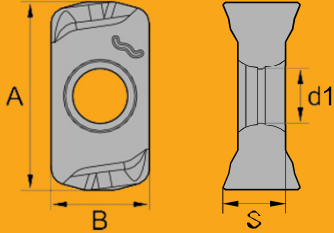
**Corner R Programming**

Designation	Approx. R (mm)	
	Input. R	Uncut
LOGX030310	1.6	0.39



**Insert Specifications**

Insert	Dimensions (mm)			
	A	B	S	d1
LOGX030310	11.9	6.2	3.96	3.45



**Insert Description**

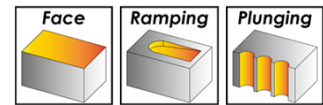
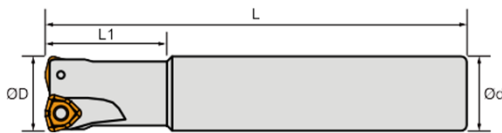
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100282	LOGX030310 GS IL68ITP	●	●	●		○	
	NKB100283	LOGX030310 GS IL67UYP	●	●	●		●	●
	NKB100284	LOGX030310 GS IL57UYP	●	●	●		●	
	NKB100285	LOGX030310 GM IL68ITP	●	●	●		○	
	NKB100286	LOGX030310 GM IL67UYP	●	●	●		●	●
	NKB100287	LOGX030310 GM IL57UYP	●	●	●		●	

**High Feed Milling - CXWN**



- . Use WNMX double-sided inserts with 6 cutting edges.
- . High feed and low cost for multi-functional applications.
- . 25~160mm cutter diameter, max. 1.35mm depth of cut.

**CXWNE - Milling Tools**

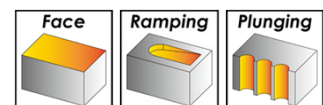
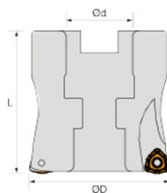


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100916	CXWNE902025150	25	40	150	25	2	WNMX09T3	ITS3006	ITK10	●
NKB100917	CXWNE903032150	32	40	150	32	3				●

● stock ○ by inquiry

Customize available.

**CXWNF - Milling Tools**



Order Code	Description	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100918	CXWNF905050220	50	50	22	5		WNMX09T3	ITS3006	ITK10	●
NKB100919	CXWNF905050221	50	50	22	5	✓				●
NKB100920	CXWNF905063220	63	50	22	5					●
NKB100921	CXWNF905063221	63	50	22	5	✓				●
NKB100922	CXWNF305063220	63	50	22	5		WNMX1305	ITS4006	ITK15	●
NKB100923	CXWNF307080270	80	50	27	7					●
NKB100924	CXWNF310160400	160	63	40	10					●

● stock ○ by inquiry

Customize available.



**High Feed Milling - CXWN**

**Recommended Cutting Conditions**

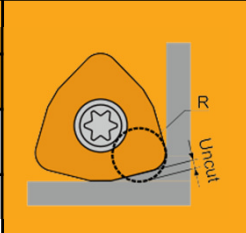
**WNMX09T3**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.35
Stainless Steel	100 ~ 180	0.4 ~ 1.2	0.4 ~ 1.0
Cast Iron	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.35
High Temperature Alloy	40 ~ 100	0.4 ~ 1.0	0.4 ~ 1.0
Hardened Steel	50 ~ 100	0.4 ~ 1.1	0.4 ~ 1.0

**WNMX1305**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 3.0	0.4 ~ 1.7
Stainless Steel	100 ~ 180	0.3 ~ 2.0	0.4 ~ 1.4
Cast Iron	120 ~ 250	0.4 ~ 3.0	0.4 ~ 1.7
High Temperature Alloy	40 ~ 100	0.3 ~ 1.6	0.4 ~ 1.3
Hardened Steel	50 ~ 100	0.3 ~ 2.0	0.4 ~ 1.3

**Corner R Programming**

Description	Approx. R (mm)		
	Input. R	Uncut	
WNMX09T3	2.5	0.6	
WNMX1305	3.0	1.0	

**High Feed Milling - CXWN**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
WNMX09T3	9.525	3.97	1.6	3.6
WNMX1305	12.7	6.0	1.6	4.7

**Insert Description**

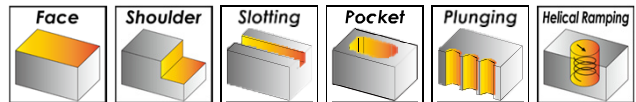
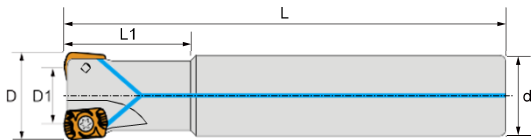
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100288	WNMX09T316 GM IL77BYP	○	○	○		○	●
	NKB100289	WNMX09T316 GM IL68ITP	●	●	●		○	
	NKB100290	WNMX09T316 GM IL67UYP	●	●	●		●	●
	NKB100291	WNMX09T316 GM IL57UYP	●	●	●		●	
	NKB100292	WNMX09T316 GM IL63UBC	○	○	●		○	○
	NKB100293	WNMX09T316 GR IL77BYP	○	○	○		○	●
	NKB100294	WNMX09T316 GR IL68ITP	●	●	●		○	
	NKB100295	WNMX09T316 GR IL67UYP	●	●	●		●	●
	NKB100296	WNMX09T316 GR IL57UYP	●	●	●		●	
	NKB100297	WNMX09T316 GR IL63UBC	○	○	●		○	○
	NKB100298	WNMX130516 GM IL77BYP	○	○	○		○	●
	NKB100299	WNMX130516 GM IL68ITP	●	●	●		○	
	NKB100300	WNMX130516 GM IL67UYP	●	●	●		●	●
	NKB100301	WNMX130516 GM IL57UYP	●	●	●		●	
	NKB100302	WNMX130516 GM IL63UBC	○	○	●		○	○
	NKB100303	WNMX130516 GM IL53UBC	●	●	○		●	○

**High Feed Milling - CALP**



- Use LPGX inserts with 2 cutting edges.
- High feed and small size cutter for replacing solid carbide tools.
- 8~16mm cutter diameter, max. 0.5mm depth of cut.

**CALPE - Milling Tools**



Order Code	Description	D	D1	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100925	CALPE101008080	8	4.2	16	80	10	1		LPGX0102	IMS1804A	ITK06	●
NKB100926	CALPE101008081	8	4.2	16	80	10	1	✓				●
NKB100927	CALPE102010080	10	6.2	20	80	10	2					●
NKB100928	CALPE102010081	10	6.2	20	80	10	2	✓				●
NKB100929	CALPE103012080	12	8.2	20	80	12	3					●
NKB100930	CALPE103012081	12	8.2	20	80	12	3	✓				●
NKB100931	CALPE104016090	16	12.2	20	90	16	4					●
NKB100932	CALPE104016091	16	12.2	20	90	16	4	✓				●

● stock ○ by inquiry

Customize available.

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.2 ~ 0.8	0.2 ~ 0.5
Stainless Steel	100 ~ 180	0.2 ~ 0.6	0.2 ~ 0.4
Cast Iron	120 ~ 250	0.2 ~ 0.8	0.2 ~ 0.5
High Temperature Alloy	40 ~ 100	0.2 ~ 0.4	0.2 ~ 0.3
Hardened Steel	50 ~ 100	0.2 ~ 0.5	0.2 ~ 0.3

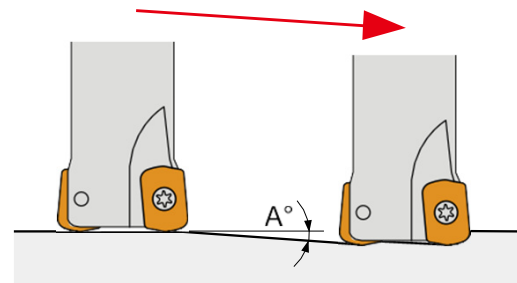
**High Feed Milling - CALP**

**Corner R Programming**

Description	Approx. R (mm)		
	Input. R	Uncut	
LPGX0102	1.2	0.17	

**For Ramping**

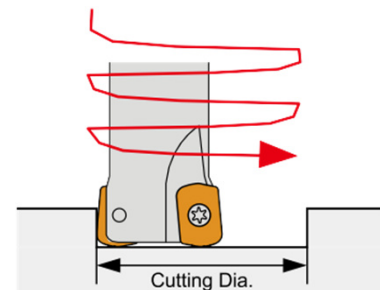
Cutter Dia. (mm)	Max. ramping angle (A°)	tan (A°)
10	3.0°	0.052
11	2.5°	0.044
12	2.0°	0.035
16	1.2°	0.021
17	1.0°	0.017



**For Helical Milling**

Mini Cutting Dia.	Max Cutting Dia.
2 × Cutter Dia. - 3.5	2 × Cutter Dia. - 2

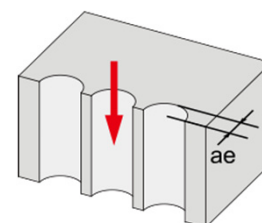
※Do not exceed the Max Cutting Dia and lower than the Mini Cutting Dia.



**For Plunging**

Max. ae
1.7mm

※Reduce feed rate to fz=0.2mm/t or less.



**High Feed Milling - CALP**

**Insert Specifications**

Insert	Dimensions (mm)					
	A	B	S	r	d1	
LPGX0102	6.26	4.19	2.19	1.0	2.2	

※Suitable for M2.0 or M1.8 screw.

**Insert Description**

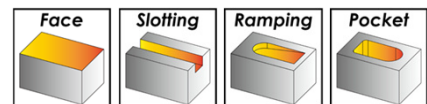
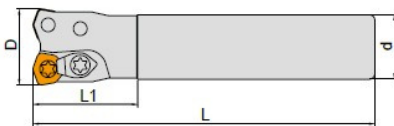
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100304	LPGX0102 GS IL67UYP	●	●	●		●	●
	NKB100305	LPGX0102 GS IL57UYP	●	●	●		●	
	NKB100306	LPGX0102 GM IL67UYP	●	●	●		●	●
	NKB100307	LPGX0102 GM IL57UYP	●	●	●		●	

**High Feed Milling - CAJX**



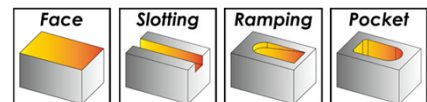
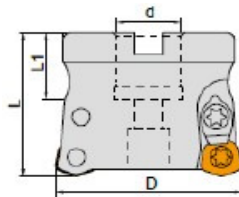
- Use JDMT or JDMW inserts with 3 cutting edges.
- High feed and high rigidity cutting edge for wide range applications.
- 32~100mm cutter diameter, max. 2mm depth of cut.

**CAJXE - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
NKB100933	CAJXE202032150	32	35	150	32	2	JDMW1204	ITS4008	ITK15	IAS04	IAJ4012	●

**CAJXF - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
NKB100934	CAJXF204050220	50	23	45	22	4	JDMW1204	ITS4008	ITK15	IAS04	IAJ4012	●
NKB100935	CAJXF205063220	63	23	50	22	5						●
NKB100936	CAJXF206080270	80	26	55	27	6						●
NKB100937	CAJXF404063220	63	23	50	22	4	JDMW1405 JDMT1405	ITS5001	ITK20	IAS05	IAJ5014	●
NKB100938	CAJXF405080270	80	26	55	27	5						●
NKB100939	CAJXF406100320	100	32	55	32	6						●

● stock ○ by inquiry

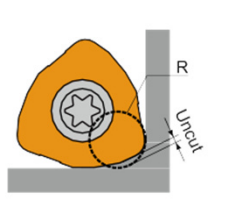
**Recommended Cutting Conditions**

Working Material	JDMW1204			JDMW1405		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.8 ~ 1.3	0.3 ~ 1.5	120 ~ 250	0.8 ~ 1.8	0.5 ~ 2.0
Stainless Steel	100 ~ 180	0.6 ~ 1.0	0.3 ~ 1.0	100 ~ 180	0.6 ~ 1.2	0.5 ~ 1.5
Cast Iron	120 ~ 250	0.8 ~ 1.3	0.3 ~ 1.5	120 ~ 250	0.8 ~ 1.8	0.5 ~ 2.0
High Temperature Alloy	40 ~ 100	0.5 ~ 1.0	0.3 ~ 1.0	40 ~ 100	0.5 ~ 1.2	0.5 ~ 1.5
Hardened Steel	50 ~ 100	0.5 ~ 1.0	0.3 ~ 1.0	50 ~ 100	0.5 ~ 1.2	0.5 ~ 1.5

**High Feed Milling - CAJX**

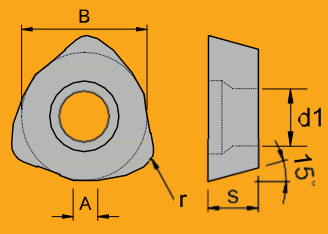
**Corner R Programming**

Description	Approx. R (mm)	
	Input. R	Uncut
JDMW1204	3.0	0.63
JDMW / JDMT1405	3.0	0.64



**Insert Specifications**

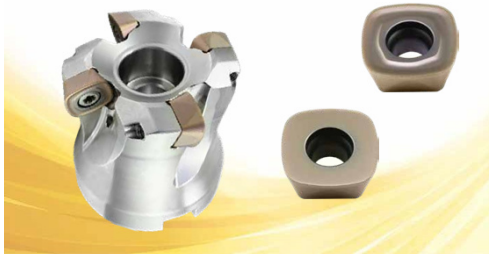
Insert	Dimensions (mm)				
	A	B	S	r	d1
JDMW1204	2.5	12.0	4.76	2.0	4.75
JDMW1405	2.8	1.4	5.56	2.0	5.75
JDMT1405	2.8	1.4	5.56	2.0	5.75



**Insert Description**

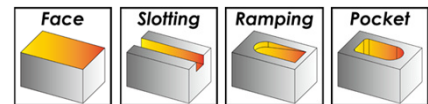
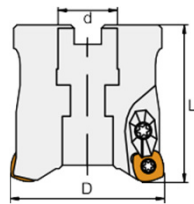
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100308	JDMW120420ZDSR GM IL77BYP	○	○	○		○	●
	NKB100309	JDMW120420ZDSR GM IL68ITP	●	●	●		○	
	NKB100310	JDMW120420ZDSR GM IL67UYP	●	●	●		●	●
	NKB100311	JDMW120420ZDSR GM IL57UYP	●	●	●		●	
	NKB100312	JDMW120420ZDSR GR IL77BYP	○	○	○		○	●
	NKB100313	JDMW120420ZDSR GR IL68ITP	●	●	●		○	
	NKB100314	JDMW120420ZDSR GR IL67UYP	●	●	●		●	●
	NKB100315	JDMW120420ZDSR GR IL57UYP	●	●	●		●	
	NKB100316	JDMW120420ZDSR GR IL63UBC	○	○	●		○	○
	NKB100317	JDMW140520ZDSR GM IL68ITP	●	●	●		○	
	NKB100318	JDMW140520ZDSR GM IL67UYP	●	●	●		●	●
	NKB100319	JDMW140520ZDSR GR IL68ITP	●	●	●		○	
	NKB100320	JDMW140520ZDSR GR IL67UYP	●	●	●		●	●
	NKB100321	JDMW140520ZDSR GR IL63UBC	○	○	●		○	○
	NKB100322	JDMT140520ZDSR GM IL68ITP	●	●	●		○	
	NKB100323	JDMT140520ZDSR GM IL67UYP	●	●	●		●	●
	NKB100324	JDMT140520ZDSR GM IL57UYP	●	●	●		●	

**High Feed Milling - CASR**



- Use SDMT or SDNW inserts with 4 cutting edges.
- High feed and more economical for wide range applications.
- 50~80mm cutter diameter, max. 1.5mm depth of cut.

**CASRF - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
NKB100940	CASRF203050220	50	22	50	3	SDMT1205 SDNW1205	IMS4011A	ITF15	IYR-06	IMS4008ES	●
NKB100941	CASRF204050220	50	22	50	4						●
NKB100942	CASRF203063220	63	22	50	3						●
NKB100943	CASRF204063220	63	22	50	4						●
NKB100944	CASRF204080310	80	31.75	55	4						●
NKB100945	CASRF204080320	80	32	55	4						●
NKB100946	CASRF205080310	80	31.75	55	5						●
NKB100947	CASRF205080320	80	32	55	5						●

● stock   ○ by inquiry

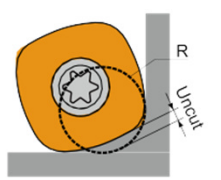
**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.8 ~ 1.8	0.3 ~ 1.5
Stainless Steel	100 ~ 180	0.6 ~ 1.2	0.3 ~ 1.0
Cast Iron	120 ~ 250	0.8 ~ 1.8	0.3 ~ 1.5
High Temperature Alloy	40 ~ 100	0.5 ~ 1.2	0.3 ~ 1.0
Hardened Steel	50 ~ 100	0.5 ~ 1.2	0.3 ~ 1.0

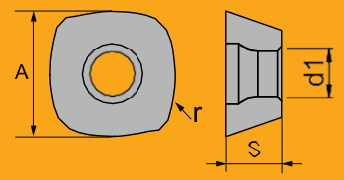


**High Feed Milling - CASR**

**Corner R Programming**

Description	Approx. R (mm)		
	Input. R	Uncut	
SDMT1205 / SDNW1205	4.5	0.83	

**Insert Specifications**

Insert	Dimensions (mm)				
	A	S	r	d1	
SDMT1205	12.7	5.56	15	4.6	
SDNW1205	12.7	5.56	15	4.6	

**Insert Description**

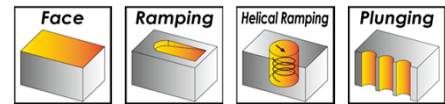
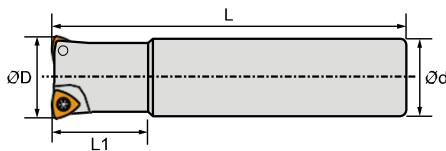
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100325	SDMT1205ZDSN GM IL77BYP	○	○	○		○	●
	NKB100326	SDMT1205ZDSN GM IL68ITP	●	●	●		○	
	NKB100327	SDMT1205ZDSN GM IL67UYP	●	●	●		●	●
	NKB100328	SDMT1205ZDSN GM IL57UYP	●	●	●		●	
	NKB100329	SDMT1205ZDTN GM IL77BYP	○	○	○		○	●
	NKB100330	SDMT1205ZDTN GM IL68ITP	●	●	●		○	
	NKB100331	SDMT1205ZDTN GM IL67UYP	●	●	●		●	●
	NKB100332	SDMT1205ZDTN GM IL57UYP	●	●	●		●	
	NKB100333	SDMT1205ZDTN GR IL77BYP	○	○	○		○	●
	NKB100334	SDMT1205ZDTN GR IL68ITP	●	●	●		○	
	NKB100335	SDMT1205ZDTN GR IL67UYP	●	●	●		●	●
	NKB100336	SDMT1205ZDTN GR IL57UYP	●	●	●		●	
	NKB100337	SDNW1205ZDSN GM IL68ITP	●	●	●		○	
	NKB100338	SDNW1205ZDSN GM IL67UYP	●	●	●		●	●
	NKB100339	SDNW1205ZDTN GR IL77BYP	○	○	○		○	●
	NKB100340	SDNW1205ZDTN GR IL68ITP	●	●	●		○	
	NKB100341	SDNW1205ZDTN GR IL67UYP	●	●	●		●	●
	NKB100342	SDNW1205ZDTN GR IL57UYP	●	●	●		●	
	NKB100343	SDNW1205ZDTN GR IL63UBC	○	○	●		○	○

**High Feed Milling - CF23**



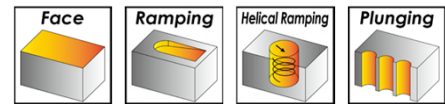
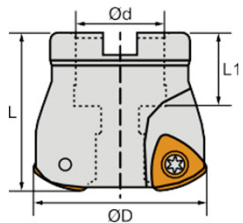
- Use WP26 inserts with 3 cutting edges.
- High feed and high rigidity negative designed for hardened steel.
- 32~160mm cutter diameter, max. 2mm depth of cut.

**CF23E - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100948	CF23E203032150	32	28	150	32	3	WP26339R14	ITS4005	ITK15	○
NKB100949	CF23E203035180	35	40	180	32	3				○
NKB100950	CF23E203035230	35	40	230	32	3				●
NKB100951	CF23E204040200	40	40	200	32	4				○
NKB100952	CF23E202040200	40	45	200	32	2	WP26379R25	ITS5002	ITK20	○
NKB100953	CF23E203050200	50	45	200	32	3				○

**CF23F - Milling Tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB100954	CF23F203050220	50	21	50	22	3	WP26379R25	ITS5002	ITK20	●
NKB100955	CF23F204063220	63	21	50	22	4				○
NKB100956	CF23F205080270	80	23	50	27	5				○
NKB100957	CF23F206100320	100	26	50	32	6				●
NKB100958	CF23F207125400	125	38	63	40	7				○
NKB100959	CF23F208160400	160	38	63	40	8				●

● stock ○ by inquiry

Customize available.

**High Feed Milling - CF23**

**Recommended Cutting Conditions**

Working Material	WP26339R14			WP26379R25		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.5	120 ~ 250	0.4 ~ 3.0	0.4 ~ 2.0
Stainless Steel	100 ~ 180	0.4 ~ 1.2	0.4 ~ 1.0	100 ~ 180	0.4 ~ 2.0	0.4 ~ 1.4
Cast Iron	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.5	120 ~ 250	0.4 ~ 3.0	0.4 ~ 2.0
High Temperature Alloy	40 ~ 100	0.4 ~ 1.0	0.4 ~ 1.0	40 ~ 100	0.4 ~ 1.6	0.4 ~ 1.2

**Insert Specifications**

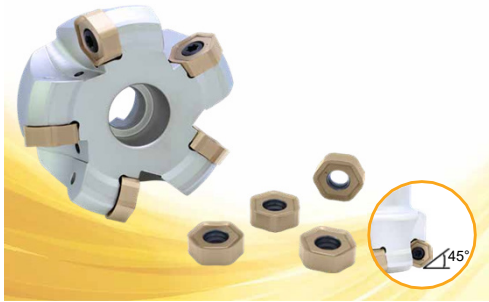
Insert	Dimensions (mm)					
	A	B	S	r	d1	
WP26339R14	-	9.52	3.97	1.2	4.4	
WP26379R25	1.1	13	5.56	2.0	5.5	

**Insert Description**

Insert	Order Description	Description	Working Material					
			P	M	K	N	S	H
	NKB100344	WP26339R14 GR IL77BYP	○	○	○		○	●
	NKB100345	WP26339R14 GR IL68ITP	●	●	●		○	
	NKB100346	WP26339R14 GR IL67UYP	●	●	●		●	●
	NKB100347	WP26339R14 GR IL57UYP	●	●	●		●	
	NKB100348	WP26379R25 GR IL77BYP	○	○	○		○	●
	NKB100349	WP26379R25 GR IL68ITP	●	●	●		○	
	NKB100350	WP26379R25 GR IL67UYP	●	●	●		●	●
	NKB100351	WP26379R25 GR IL57UYP	●	●	●		●	

**Face Milling Series Introduction**

**CXHN Series**



- . Use HNMX double-sided inserts with 12 cutting edges.
- . Sharp cutting edge design for low depth-of-cut face milling.
- . 50~100mm cutter diameter, max. 3.5mm depth of cut.

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**CXSN Series**



- . Use SNMX or ONMX double-sided inserts with 8 or 16 cutting edges.
- . 2 type inserts can fit in same cutter for multiple applications.
- . 50~202.9mm cutter diameter, max. 6mm depth of cut.

\* Page [A092](#)

**CAOF Series**



- . Use OFMT inserts with 8 cutting edges.
- . Cost effective for low depth-of-cut face milling.
- . 50~100mm cutter diameter, max. 2.8mm depth of cut.

\* Page [A095](#)

**CASE Series**



- . Use SEKT or SEKW inserts with 4 cutting edges.
- . Cost effective for wide range face milling applications.
- . 50~100mm cutter diameter, max. 5.5mm depth of cut.

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**Face Milling Series Introduction**

**CASX Series**



- . Use SEMT inserts with 4 cutting edges.
- . Cost effective for wide range face milling applications.
- . 50~315mm cutter diameter, max. 5.5mm depth of cut.

\* Page [A099](#)

**CR24 Series**



- . Use W245-12T3 inserts with 4 cutting edges.
- . High performance face milling tools for general purpose.
- . 50~315mm cutter diameter, max. 5.5mm depth of cut.

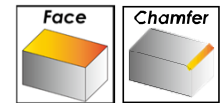
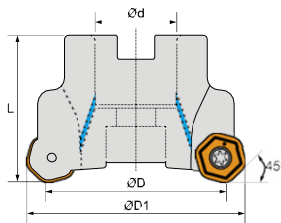
\* Page [A101](#)

**Face Milling - CXHN**



- Use HNMX double-sided inserts with 12 cutting edges.
- Sharp cutting edge design for low depth-of-cut face milling.
- 50~100mm cutter diameter, max. 3.5mm depth of cut.

**CXHNF - Milling Tools**



Order Code	Description	D	D1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
NKB100960	CXHNF705050224	50	58.7	40	22	5	✓	HNMX0704	ITS4005	ITK15	●
NKB100961	CXHNF705050224	63	71.7	40	22	6	✓				●
NKB100033	CXHNF708080274	80	88.7	50	27	8	✓				●
NKB100963	CXHNF709100324	100	108.7	50	32	9	✓				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	140 ~ 250	0.10 ~ 0.3	0.3 ~ 3.5
Stainless Steel	60 ~ 140	0.08 ~ 0.2	0.3 ~ 2.0
High Temperature Alloy	30 ~ 70	0.08 ~ 0.2	0.3 ~ 2.0

**Face Milling - CXHN**

**Insert Specifications**

Insert	Dimensions (mm)						
	A	B	S	r	d1	t1	
HNMX0704	6.8	12.7	4.45	1.2	4.9	1.4	

**Insert Description**

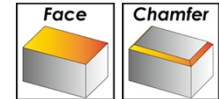
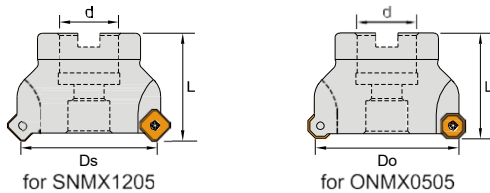
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100352	HNMX0704 GS IL68ITP	●	●	●		○	
	NKB100353	HNMX0704 GS IL67UYP	●	●	●		●	●
	NKB100354	HNMX0704 GS IL57UYP	●	●	●		●	
	NKB100024	HNMX0704 GS IL53UBC	●	●	○		●	○

**Face Milling - CXSN**



- Use SNMX or ONMX double-sided inserts with 8 or 16 cutting edges.
- 2 type inserts can fit in same cutter for multiple applications.
- 50~202.9mm cutter diameter, max. 6mm depth of cut.

**CXSNF - Milling Tools**



Order Code	Description	D		L	d	T	Inserts	Screw	Wrench	Stock
		Ds	Do							
NKB100964	CXSNF504050220	50	52.9	40	22	4	SNMX1205 or ONMX0505	ITS4015	ITK15	●
NKB100965	CXSNF505063220	63	65.9	40	22	5				●
NKB100966	CXSNF506080270	80	82.9	50	27	6				●
NKB100967	CXSNF508100320	100	102.9	50	32	8				●
NKB100968	CXSNF510125400	125	127.9	63	40	10				●
NKB100969	CXSNF512160400	160	162.9	63	40	12				●
NKB100970	CXSNF514200600	200	202.9	63	60	14				●

● stock ○ by inquiry

Customize available.

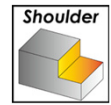
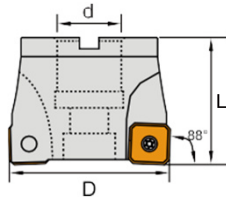
**Recommended Cutting Conditions**

Working Material	SNMX1205			ONMX0505		
	Vc	fz	ap	Vc	fz	ap
Carbon Steel / Alloy Steel	80 ~ 200	0.1 ~ 0.3	0.3 ~ 6.0	80 ~ 200	0.1 ~ 0.3	0.3 ~ 2.0
Stainless Steel	50 ~ 110	0.08 ~ 0.25	0.3 ~ 3.6	50 ~ 110	0.08 ~ 0.25	0.3 ~ 1.5
Cast Iron	80 ~ 180	0.1 ~ 0.3	0.3 ~ 6.0	80 ~ 180	0.1 ~ 0.3	0.3 ~ 2.0
High Temperature Alloy	30 ~ 60	0.08 ~ 0.2	0.3 ~ 3.6	30 ~ 60	0.08 ~ 0.2	0.3 ~ 1.5
Hardened Steel	35 ~ 70	0.08 ~ 0.23	0.3 ~ 3.6	35 ~ 70	0.08 ~ 0.23	0.3 ~ 1.5



**Shoulder Milling - CXSN**

**CXSNE - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Stock
NKB100971	CXSNE504050220	50	40	22	4	SNMX1205	ITS4015	ITK15	●
NKB100972	CXSNE505063220	63	40	22	5				●
NKB100973	CXSNE506080270	80	50	27	6				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	80 ~ 200	0.1 ~ 0.2	0.3 ~ 11
Stainless Steel	50 ~ 110	0.08 ~ 0.18	0.3 ~ 5
Cast Iron	80 ~ 180	0.1 ~ 0.2	0.3 ~ 11
High Temperature Alloy	30 ~ 60	0.08 ~ 0.14	0.3 ~ 5
Hardened Steel	35 ~ 70	0.08 ~ 0.16	0.3 ~ 5



**Face Milling - CXSN**

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	d1	
SNMX1205	12.7	1.5	6.4	6	
ONMX0505	12.7	5.0	6.4	6	

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100356	SNMX1205 GM IL77BYP	○	○	○		○	●
	NKB100357	SNMX1205 GM IL68ITP	●	●	●		○	
	NKB100016	SNMX1205 GM IL67UYP	●	●	●		●	●
	NKB100359	SNMX1205 GM IL57UYP	●	●	●		●	
	NKB100360	SNMX1205 GM IL63UBC	○	○	●		○	○
	NKB100017	SNMX1205 GM IL53UBC	○	●	○		●	○
	NKB100362	SNMX1205 GR IL77BYP	○	○	○		○	●
	NKB100363	SNMX1205 GR IL68ITP	●	●	●		○	
	NKB100018	SNMX1205 GR IL67UYP	●	●	●		●	●
	NKB100365	SNMX1205 GR IL57UYP	●	●	●		●	
	NKB100366	SNMX1205 GR IL63UBC	○	○	●		○	○
	NKB100367	ONMX0505 GR IL77BYP	○	○	○		○	●
	NKB100368	ONMX0505 GR IL68ITP	●	●	●		○	
	NKB100369	ONMX0505 GR IL67UYP	●	●	●		●	●
	NKB100370	ONMX0505 GR IL57UYP	●	●	●		●	
NKB100371	ONMX0505 GR IL63UBC	○	○	●		○	○	

**Tools Features**

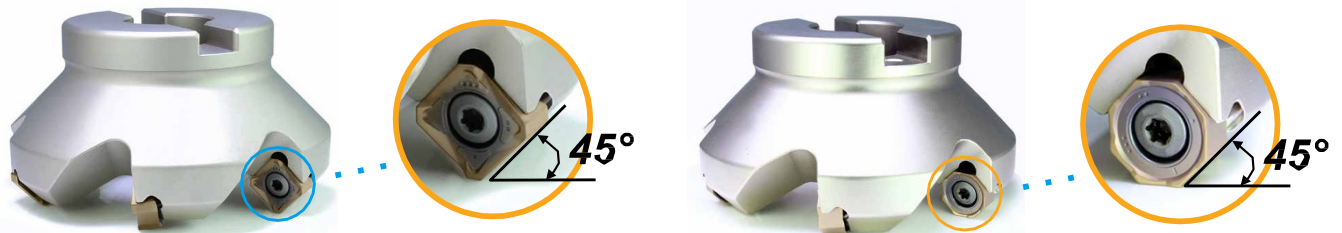
**2 types of double sided inserts fit in same pocket !**

Depth of cutting > 2mm

Depth of cutting <= 2mm

use Square insert - SNMX1205 (Total 8 cutting edges)

use Octagonal insert - ONMX0505 (Total 16 cutting edges)

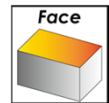
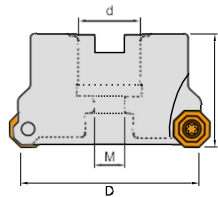


**Face Milling - CAOF**



- Use OFMT inserts with 8 cutting edges.
- Cost effective for low depth-of-cut face milling.
- 50~100mm cutter diameter, max. 2.8mm depth of cut.

**CAOFF - Milling Tools**



Order Code	Description	D	d	L	M	T	Inserts	Screw	Wrench	Stock
NKB100974	CAOFF505050220	50	22	40	11	5	OFMT05T3...	IMS4011A	ITK15	●
NKB100975	CAOFF506063220	63	22	40	11	6				●
NKB100976	CAOFF506063250	63	25.4	50	13	6				●
NKB100977	CAOFF507080250	80	25.4	50	13	7				●
NKB100978	CAOFF507080270	80	27	50	38	7				●
NKB100979	CAOFF508100310	100	31.75	50	46	8				●
NKB100980	CAOFF508100320	100	32	50	46	8				●

● stock ○ by inquiry

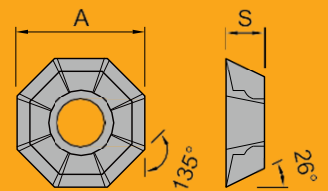
**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.30	0.3 ~ 2.8
Stainless Steel	100 ~ 180	0.08 ~ 0.25	0.3 ~ 1.7
Cast Iron	120 ~ 250	0.10 ~ 0.30	0.3 ~ 2.8
High Temperature Alloy	40 ~ 100	0.08 ~ 0.25	0.3 ~ 1.7
Hardened Steel	50 ~ 100	0.08 ~ 0.25	0.3 ~ 1.7




**Face Milling - CAOF**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
OFMT05T3	12.7	3.8	0.6	4.6



**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100372	OFMT05T3TN GS IL68ITP	●	●	●		○	
	NKB100373	OFMT05T3TN GS IL67UYP	●	●	●		●	●
	NKB100374	OFMT05T3TN GM IL68ITP	●	●	●		○	
	NKB100375	OFMT05T3TN GM IL67UYP	●	●	●		●	●
	NKB100376	OFMT05T3TN GR IL68ITP	●	●	●		○	
	NKB100377	OFMT05T3TN GR IL67UYP	●	●	●		●	●
	NKB100378	OFMT05T3TN GR IL57UYP	●	●	●		●	

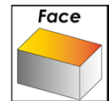
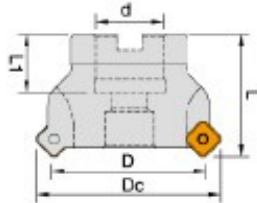


**Face Milling - CASE**



- . Use SEKT or SEKW inserts with 4 cutting edges.
- . Cost effective for wide range face milling applications.
- . 50~100mm cutter diameter, max. 5.5mm depth of cut.

**CASEF - Milling Tools**



Order Code	Description	D	L	L1	d	Dc	T	Inserts	Screw	Wrench	Stock
NKB100981	CASEF204050220	50	40	20	22	64	4	SEKT1204 SEKW1204 SEET1204	ITS5006	ITK20	●
NKB100982	CASEF205063220	63	45	21	22	77	5				●
NKB100983	CASEF205063250	63	45	21	25.4	77	5				○
NKB100984	CASEF206080270	80	50	26	27	94	6				●
NKB100985	CASEF206080310	80	50	26	31.75	94	6				○
NKB100986	CASEF206100310	100	32	32	31.75	114	6				○
NKB100987	CASEF206100320	100	32	32	32	114	6				○

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.5
Stainless Steel	100 ~ 180	0.08 ~ 0.25	0.3 ~ 3.0
Cast Iron	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.0
Aluminum Alloy	300 ~ 1000	0.10 ~ 0.40	0.3 ~ 5.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0
Hardened Steel	50 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0

**Face Milling - CASE**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
SEKT1204	12.7	4.76	0.8	5.5
SEKW1204				
SEET1204				

**Insert Description**

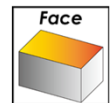
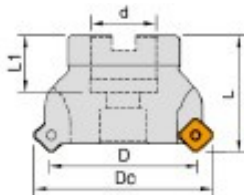
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100379	SEET1204AFFN LA IL90U				●		
	NKB100380	SEET1204AFFN GF IL77BYP	○	○	○		○	●
	NKB100381	SEKT1204AFEN GM IL68ITP	●	●	●		○	
	NKB100382	SEKT1204AFEN GM IL67UYP	●	●	●		●	●
	NKB100383	SEKT1204AFTN GR IL68ITP	●	●	●		○	
	NKB100384	SEKT1204AFTN GR IL67UYP	●	●	●		●	●
	NKB100385	SEKT1204AFTN GR IL57UYP	●	●	●		●	
	NKB100386	SEKW1204AFEN-IL68ITP	●	●	●		○	
	NKB100387	SEKW1204AFEN-IL67UYP	●	●	●		●	●
	NKB100388	SEKW1204AFEN-IL57UYP	●	●	●		●	
	NKB100389	SEKW1204AFTN-IL68ITP	●	●	●		○	
	NKB100390	SEKW1204AFTN-IL67UYP	●	●	●		●	●
	NKB100391	SEKW1204AFTN-IL63UBC	○	○	●		○	○

**Face Milling - CASX**



- Use SEMT inserts with 4 cutting edges.
- Cost effective for wide range face milling applications.
- 50~315mm cutter diameter, max. 5.5mm depth of cut.

**CASXF - Milling Tools**



Order Code	Description	D	L	L1	d	Dc	T	Inserts	Stock
NKB100988	CASXF304050220	50	40	20	22	63	4	SEMT13T3	●
NKB100989	CASXF304050250	50	40	20	25.4	63	4		●
NKB100990	CASXF305063220	63	40	20	22	75.9	5		●
NKB100991	CASXF305063250	63	40	20	25.4	75.9	5		●
NKB100992	CASXF306080250	80	50	26	25.4	93.2	6		●
NKB100993	CASXF306080270	80	50	26	27	93.2	6		●
NKB100994	CASXF307100310	100	50	32	31.75	113.2	7		●
NKB100995	CASXF307100320	100	50	32	32	113.2	7		●
NKB100996	CASXF308125380	125	63	38	38.1	138	8		●
NKB100997	CASXF308125400	125	63	38	40	138	8		●
NKB100998	CASXF310160400	160	63	38	40	173	10		●
NKB100999	CASXF310160500	160	63	38	50.8	173	10		●
NKB106000	CASXF312200470	200	63	38	47.625	212.9	12		●
NKB106001	CASXF314250470	250	63	38	47.625	262.9	14		●
NKB106002	CASXF314315470	315	63	40	47.625	327.9	14		●

● stock ○ by inquiry

**Spare parts**

Shim	Screw	Wrench	Screw	Wrench
IAS445N	IPS35T	IPL20	ITS3505	ITK15

**Face Milling - CASX**

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.5
Stainless Steel	100 ~ 180	0.08 ~ 0.25	0.3 ~ 3.0
Cast Iron	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.0
Aluminum Alloy	300 ~ 1000	0.10 ~ 0.40	0.3 ~ 5.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0
Hardened Steel	50 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0

※ Max ap of 6mm.

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
SEMT13T3	13.4	1.9	3.97	1.5	4.2
SEET13T3	13.4	1.9	3.97	1.5	4.2

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100392	SEET13T3AGFN LA IL90U				●		
	NKB100393	SEET13T3AGFN GF IL77BYP	○	○	○		○	●
	NKB100394	SEMT13T3AGEN GM IL77BYP	○	○	○		○	●
	NKB100395	SEMT13T3AGEN GM IL68ITP	●	●	●		○	
	NKB100396	SEMT13T3AGEN GM IL67UYP	●	●	●		●	●
	NKB100397	SEMT13T3AGEN GM IL57UYP	●	●	●		●	
	NKB100398	SEMT13T3AGTN GM IL77BYP	○	○	○		○	●
	NKB100399	SEMT13T3AGTN GM IL68ITP	●	●	●		○	
	NKB100400	SEMT13T3AGTN GM IL67UYP	●	●	●		●	●
	NKB100401	SEMT13T3AGTN GM IL57UYP	●	●	●		●	
	NKB100402	SEMT13T3AGTN GR IL68ITP	●	●	●		○	
	NKB100403	SEMT13T3AGTN GR IL67UYP	●	●	●		●	●
	NKB100404	SEMT13T3AGTN GR IL57UYP	●	●	●		●	

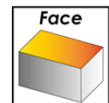
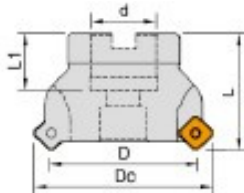


**Face Milling - CR24**



- Use W245-12T3 inserts with 4 cutting edges.
- High performance face milling tools for general purpose.
- 50~315mm cutter diameter, max. 5.5mm depth of cut.

**CR24F - Milling Tools**



Order Code	Description	D	L	L1	d	Dc	T	Inserts	Stock
NKB106003	CR24F304050220	50	40	20	22	63	4	W245-12T3	●
NKB106004	CR24F304050250	50	40	20	25.4	63	4		●
NKB106005	CR24F305063220	63	40	20	22	75.9	5		●
NKB106006	CR24F305063250	63	40	20	25.4	75.9	5		●
NKB106007	CR24F306080250	80	50	26	25.4	93.2	6		●
NKB106008	CR24F306080270	80	50	26	27	93.2	6		●
NKB106009	CR24F307100310	100	50	32	31.75	113.2	7		●
NKB106010	CR24F307100320	100	50	32	32	113.2	7		●
NKB106011	CR24F308125380	125	63	38	38.1	138	8		●
NKB106012	CR24F308125400	125	63	38	40	138	8		●
NKB106013	CR24F310160400	160	63	38	40	173	10		●
NKB106014	CR24F310160500	160	63	38	50.8	173	10		●
NKB106015	CR24F312200470	200	63	38	47.625	212.9	12		●
NKB106016	CR24F314250470	250	63	38	47.625	262.9	14		●
NKB106017	CR24F314315470	315	63	40	47.625	327.9	14		●

● stock ○ by inquiry

**Spare parts**

Shim	Screw	Wrench	Screw	Wrench
IAS445N	IPS35T	IPL20	ITS3505	ITK15

**Face Milling - CR24**

**Recommended Cutting Conditions**

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.5
Stainless Steel	100 ~ 180	0.08 ~ 0.25	0.3 ~ 3.0
Cast Iron	120 ~ 250	0.10 ~ 0.30	0.3 ~ 5.0
Aluminum Alloy	300 ~ 1000	0.10 ~ 0.40	0.3 ~ 5.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0
Hardened Steel	50 ~ 100	0.08 ~ 0.25	0.3 ~ 3.0

※ Max ap of 6mm.

**Insert Specifications**

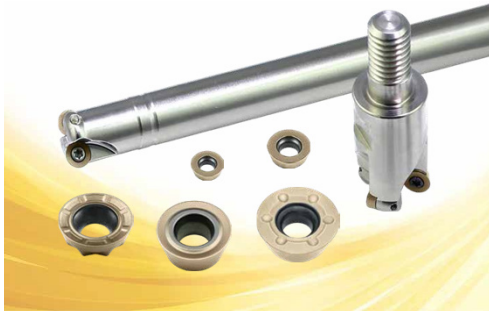
Insert	Dimensions (mm)					
	A	B	S	r	d1	
W245-12T3	13.4	1.9	3.97	1.5	4.2	

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100405	W245-12T3 LA IL90U				●		
	NKB100406	W245-12T3 GF IL77BYP	○	○	○		○	●
	NKB100407	W245-12T3 GM IL77BYP	○	○	○		○	●
	NKB100408	W245-12T3 GM IL68ITP	●	●	●		○	
	NKB100409	W245-12T3 GM IL67UYP	●	●	●		●	●
	NKB100410	W245-12T3 GM IL57UYP	●	●	●		●	
	NKB100411	W245-12T3 GM IL63UBC	○	○	●		○	○
	NKB100412	W245-12T3 GM IL53UBC	●	●	○		●	○
	NKB100413	W245-12T3 GH IL68ITP	●	●	●		○	
	NKB100414	W245-12T3 GH IL67UYP	●	●	●		●	●
	NKB100415	W245-12T3 GH IL57UYP	●	●	●		●	
	NKB100416	W245-12T3 GH IL63UBC	○	○	●		○	○
	NKB100417	W245-12T3 GH IL53UBC	●	●	○		●	○

**Copy Milling Series Introduction**

**CARD Series**



- . Use RDMT or RDMW 2.5R, 3R, 3.5R, 5R, 6R and 8R round inserts.
- . Suitable for mould & die machining and steel profiling.
- . 10~100mm cutter diameter.

\* Page [A104](#)

**CARP Series**



- . Use RPMT or RPMW 4R, 5R and 6R round inserts.
- . Suitable for mould & die machining and steel profiling.
- . 16~80mm cutter diameter.

\* Page [A110](#)

**CF21 Series**



- . Use WP325R, 6R, 8R, 10R, 12.5R and 16R ball nose inserts.
- . Suitable for mould & die finish or medium copy milling.
- . 10~32mm cutter diameter.

\* Page [A114](#)

**CF22 Series**



- . Use WP26 inserts.
- . Ball nose cutters are suitable for mould & die copy roughing.
- . 25~50mm cutter diameter.

\* Page [A117](#)

**CGWV Series**



- . Use WPBC16 inserts.
- . Various corner radii available for copy or shoulder milling.
- . 16mm cutter diameter.

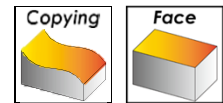
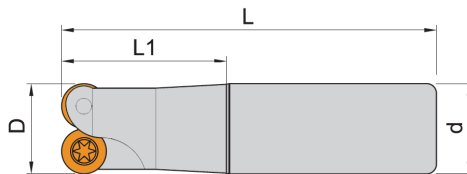
\* Page [A119](#)

**Copy Milling - CARD**



- Use RDMT or RDMW 2.5R, 3R, 3.5R, 5R, 6R and 8R round inserts.
- Suitable for mould & die machining and steel profiling.
- 10~100mm cutter diameter.

**CARDE - Milling Tools**

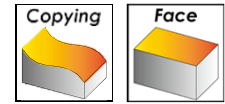
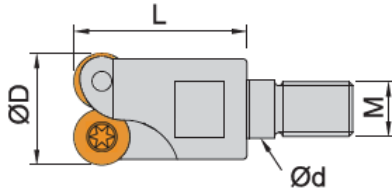


Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB106018	CARDE502010100	10	25	100	10	2	RDKW0501	ITS2003	ITK06	●
NKB106019	CARDE502012100	12	25	100	12	2				○
NKB106020	CARDE503016130	16	35	130	16	3				○
NKB106021	CARDE703016130	16	40	130	16	3	RDKW0702	ITS2515	ITK08	○
NKB106022	CARDE704020150	20	40	150	20	4				●
NKB106023	CARDE704025150	25	40	150	25	4				○
NKB106024	CARDE102025150	25	45	150	25	2	RDMT10T3 RDMW10T3	ITS3504	ITK15	●
NKB106025	CARDE102030150	30	45	150	25	2				●
NKB106026	CARDE103032150	32	45	150	32	3				○
NKB106027	CARDE202032150	32	50	150	32	2	RDMT1204 RDMW1204	ITS4008	ITK15	○
NKB106028	CARDE302020150	20	40	150	20	2	RDMT1003 RDMX1003	IMS3507A	ITK15	●
NKB106029	CARDE303025150	25	40	150	25	3				●
NKB106030	CARDE303026150	26	25	150	25	3		●		
NKB106031	CARDE303030150	30	25	150	25	3		●		
NKB106032	CARDE304035150	35	40	150	32	4		IMS3509A		●

● stock ○ by inquiry

**Copy Milling - CARD**

**CARDM - Modular Milling Heads**



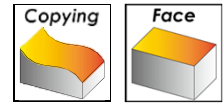
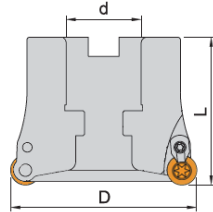
Order Code	Description	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
NKB106033	CARDM502012060	12	21	6.5	M06	2	RDKW0501	ITS2003	ITK06	●
NKB106034	CARDM503012060	12	21	6.5	M06	3				○
NKB106035	CARDM504016080	16	26	8.5	M08	4				○
NKB106036	CARDM703016080	16	26	8.5	M08	3	RDKW0702	ITS2515	ITK08	○
NKB106037	CARDM704020100	20	32	10.5	M10	4				○
NKB106038	CARDM705025120	25	38	12.5	M12	5				○
NKB106039	CARDM103025120	25	38	12.5	M12	3	RDMT10T3 RDMW10T3	ITS3504	ITK10	●
NKB106040	CARDM104030120	30	38	12.5	M12	4				●
NKB106041	CARDM105032120	35	38	12.5	M12	5				○
NKB106042	CARDM302020100	20	30	10.5	M10	2	RDMT1003 RDMX1003	IMS3507A	ITK15	●
NKB106043	CARDM302021100	21	30	10.5	M10	2				●
NKB106044	CARDM303025120	25	35	12.5	M12	3				●
NKB106045	CARDM303026120	26	35	12.5	M12	3				●
NKB106046	CARDM303030120	30	35	12.5	M12	3		IMS3509A	●	

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Copy Milling - CARD**

**CARDF - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock					
NKB106047	CARDF104050220	50	45	22	4	RDMT10T3 RDMW10T3	ITS3504	ITK15	IRD-45	ITS4009	●					
NKB106048	CARDF106063220	63	45	22	6						●					
NKB106049	CARDF204050220	50	45	22	4	RDMT1204 RDMW1204	ITS4008	ITK15	IRD-6R	ITS5004	●					
NKB106050	CARDF205050220	50	45	22	5						●					
NKB106051	CARDF205063220	63	45	22	5						●					
NKB106052	CARDF206063220	63	45	22	6						●					
NKB106053	CARDF207080270	80	50	27	7						○					
NKB106054	CARDF208100320	100	50	32	8						○					
NKB106055	CARDF604063220	63	45	22	4						RDMT1604 RDMW1604	ITS5007	ITK20	IRD-68	ITS5009	●
NKB106056	CARDF605063220	63	45	22	5											●
NKB106057	CARDF606080270	80	50	27	6	○										
NKB106058	CARDF607100320	100	50	32	7	○										
NKB106059	CARDF305050220	50	40	22	5	RDMT1003 RDMX1003	IMS3509A	ITK15	IMC35-3V	-	●					
NKB106060	CARDF305050250	50	50	25.4	5						●					
NKB106061	CARDF306063250	63	50	25.4	6						●					

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	Dia ≤ 10		Dia > 10	
		fz	ap	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
Stainless Steel	100 ~ 180	0.08 ~ 0.4	0.3 ~ 1.2	0.15 ~ 0.4	0.5 ~ 2.0
Cast Iron	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.3	0.3 ~ 1.0	0.15 ~ 0.3	0.3 ~ 2.0
Hardened Steel	50 ~ 100	0.08 ~ 0.3	0.3 ~ 1.0	0.15 ~ 0.3	0.3 ~ 2.0

**Copy Milling - CARD**

**Insert Specifications**

Insert	Dimensions (mm)		
	A	S	d1
RDKW0501	5	1.59	2.2
RDKW0702	7	2.38	2.8
RDMT1003	10	3.18	3.9
RDMX1003	10	3.18	4.15
RDMT10T3	10	3.97	4.5
RDMW10T3	10	3.97	4.5
RDMT12T3	12	3.97	4.1
RDMX12T3	12	3.97	4.1
RDMT1204	12	4.76	4.4
RDMW1204	12	4.76	4.4
RDMT1604	16	4.76	5.5
RDMW1604	16	4.76	5.5

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100418	RDKW0501MOE-IL77BYP	○	○	○		○	●
	NKB100419	RDKW0501MOE-IL68ITP	●	●	●		○	
	NKB100420	RDKW0501MOE-IL67UYP	●	●	●		●	●
	NKB100421	RDKW0702MOE-IL77BYP	○	○	○		○	●
	NKB100422	RDKW0702MOE-IL68ITP	●	●	●		○	
	NKB100423	RDKW0702MOE-IL67UYP	●	●	●		●	●
	NKB100424	RDKW0702MOE-IL57UYP	●	●	●		●	
	NKB100425	RDMT1003MOE-IL77BYP	○	○	○		○	●
	NKB100426	RDMT1003MOE-IL68ITP	●	●	●		○	
	NKB100427	RDMT1003MOE-IL67UYP	●	●	●		●	●
	NKB100428	RDMT1003MOE-IL57UYP	●	●	●		●	
	NKB100429	RDMT1003MOT-IL77BYP	○	○	○		○	●
	NKB100430	RDMT1003MOT-IL68ITP	●	●	●		○	
	NKB100431	RDMT1003MOT-IL67UYP	●	●	●		●	●
	NKB100432	RDMT1003MOT-IL68ITP	●	●	●		●	

**Copy Milling - CARD**

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100433	RDMX1003MOE-IL77BYP	○	○	○		○	●
	NKB100434	RDMX1003MOE-IL68ITP	●	●	●		○	
	NKB100435	RDMX1003MOE-IL67UYP	●	●	●		●	●
	NKB100436	RDMX1003MOE-IL57UYP	●	●	●		●	
	NKB100437	RDMX1003MOT-IL77BYP	○	○	○		○	●
	NKB100438	RDMX1003MOT-IL68ITP	●	●	●		○	
	NKB100439	RDMX1003MOT-IL67UYP	●	●	●		●	●
	NKB100440	RDMX1003MOT-IL57UYP	●	●	●		●	
	NKB100441	RDMT10T3MOE-IL77BYP	○	○	○		○	●
	NKB100442	RDMT10T3MOE-IL68ITP	●	●	●		○	
	NKB100443	RDMT10T3MOE-IL67UYP	●	●	●		●	●
	NKB100444	RDMT10T3MOE-IL57UYP	●	●	●		●	
	NKB100445	RDMT10T3MOT-IL77BYP	○	○	○		○	●
	NKB100446	RDMT10T3MOT-IL68ITP	●	●	●		○	
	NKB100447	RDMT10T3MOT-IL67UYP	●	●	●		●	●
	NKB100448	RDMT10T3MOT-IL57UYP	●	●	●		●	
	NKB100449	RDMW10T3MOE-IL68ITP	●	●	●		○	
	NKB100450	RDMW10T3MOE-IL67UYP	●	●	●		●	●
	NKB100451	RDMW10T3MOT-IL68ITP	●	●	●		○	
	NKB100452	RDMW10T3MOT-IL67UYP	●	●	●		●	●
	NKB100453	RDMT12T3MOE-IL77BYP	○	○	○		○	●
	NKB100454	RDMT12T3MOE-IL68ITP	●	●	●		○	
	NKB100455	RDMT12T3MOE-IL67UYP	●	●	●		●	●
	NKB100456	RDMT12T3MOE-IL63UBC	○	○	●		○	○
	NKB100457	RDMT12T3MOT-IL77BYP	○	○	○		○	●
	NKB100458	RDMT12T3MOT-IL68ITP	●	●	●		○	
	NKB100459	RDMT12T3MOT-IL67UYP	●	●	●		●	●
	NKB100460	RDMX12T3MOE-IL77BYP	○	○	○		○	●
	NKB100461	RDMX12T3MOE-IL68ITP	●	●	●		○	
	NKB100462	RDMX12T3MOE-IL67UYP	●	●	●		●	●
	NKB100463	RDMX12T3MOE-IL57UYP	●	●	●		●	
	NKB100464	RDMX12T3MOT-IL77BYP	○	○	○		○	●
	NKB100465	RDMX12T3MOT-IL68ITP	●	●	●		○	
	NKB100466	RDMX12T3MOT-IL67UYP	●	●	●		●	●
	NKB100467	RDMX12T3MOT-IL57UYP	●	●	●		●	



**Copy Milling - CARD**

**Insert Description**

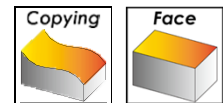
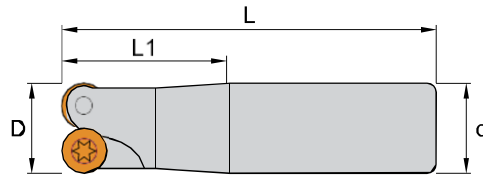
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			P	M	K	N	S	H
	NKB100468	RDHT1204MOE-IL68ITP	●	●	●		○	
	NKB100469	RDHT1204MOE-IL67UYP	●	●	●		●	●
	NKB100470	RDHT1204MOE-IL68ITP	●	●	●		○	
	NKB100471	RDHT1204MOE-IL67UYP	●	●	●		●	●
	NKB100472	RDMT1204MOE-IL77BYP	○	○	○		○	●
	NKB100473	RDMT1204MOE-IL68ITP	●	●	●		○	
	NKB100474	RDMT1204MOE-IL67UYP	●	●	●		●	●
	NKB100475	RDMT1204MOE-IL57UYP	●	●	●		●	
	NKB100476	RDMT1204MOT-IL77BYP	○	○	○		○	●
	NKB100477	RDMT1204MOT-IL68ITP	●	●	●		○	
	NKB100478	RDMT1204MOT-IL67UYP	●	●	●		●	●
	NKB100479	RDMT1204MOT-IL57UYP	●	●	●		●	
	NKB100480	RDMW1204MOE-IL68ITP	●	●	●		○	
	NKB100481	RDMW1204MOE-IL67UYP	●	●	●		●	●
	NKB100482	RDMW1204MOE-IL57UYP	●	●	●		●	
	NKB100483	RDMW1204MOT-IL77BYP	○	○	○		○	●
	NKB100484	RDMW1204MOT-IL68ITP	●	●	●		○	
	NKB100485	RDMW1204MOT-IL67UYP	●	●	●		●	●
	NKB100486	RDMW1204MOT-IL57UYP	●	●	●		●	
	NKB100487	RDMW1204MOT-IL63UBC	○	○	●		○	○
	NKB100488	RDMT1604MOT-IL77BYP	○	○	○		○	●
	NKB100489	RDMT1604MOT-IL68ITP	●	●	●		○	
	NKB100490	RDMT1604MOT-IL67UYP	●	●	●		●	●
	NKB100491	RDMT1604MOT-IL57UYP	●	●	●		●	
	NKB100492	RDMW1604MOT-IL77BYP	○	○	○		○	●
	NKB100493	RDMW1604MOT-IL68ITP	●	●	●		○	
	NKB100494	RDMW1604MOT-IL67UYP	●	●	●		●	●
	NKB100495	RDMW1604MOT-IL57UYP	●	●	●		●	
	NKB100496	RDMW1604MOT-IL63UBC	○	○	●		○	○

**Copy Milling - CARP**



- . Use RPMT or RPMW 4R, 5R and 6R round inserts.
- . Suitable for mould & die machining and steel profiling.
- . 16~80mm cutter diameter.

**CARPE - Milling Tools**



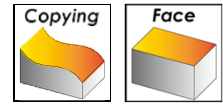
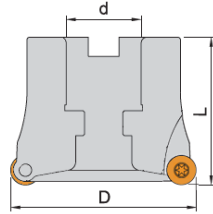
Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB106062	CARPE802016150	16	50	150	16	2	RPMT08T2	ITS3004	ITK09	●
NKB106063	CARPE802020150	20	50	150	20	2				●
NKB106064	CARPE803025150	25	40	150	25	3				●
NKB106065	CARPE102025150	25	40	150	25	2	RPMT10T3	ITS3503	ITK15	●
NKB106066	CARPE103030150	30	40	150	25	3				●
NKB106067	CARPE103032150	32	40	150	32	3				●
NKB106068	CARPE202032170	32	45	170	32	2	RPMT1204 RPMW1204	ITS4006	ITK15	●

Order Code	Description	D	L1	L	d	T	Inserts	Screw	Clamp	Wrench	Stock
NKB106069	CARPE302025150	25	50	150	25	2	RPMW1003	ITS4004	IAS5	ITK15	●
NKB106070	CARPE302025180	25	50	180	25	2					●
NKB106071	CARPE302025200	25	50	200	25	2					●
NKB106072	CARPE302025250	25	50	250	25	2					●
NKB106073	CARPE302026150	26	30	150	25	2					●
NKB106074	CARPE302030150	30	35	150	25	2					●
NKB106075	CARPE302030200	30	35	200	25	2					●
NKB106076	CARPE302030300	30	35	300	25	2					●
NKB106077	CARPE303032120	32	55	125	32	3					●
NKB106078	CARPE303035150	35	55	150	32	3					●
NKB106079	CARPE303035250	35	55	250	32	3					●
NKB106080	CARPE303035300	35	55	300	32	3					●

● stock ○ by inquiry

**Copy Milling - CARP**

**CARPF - Milling Tools**



Order Code	Description	D	L	d	T	Inserts	Screw	Wrench	Stock
NKB106081	CARPF305050220	50	45	22	5	RPMT10T3	ITS3503	ITK15	●
NKB106082	CARPF305050250	50	45	25.4	5				●
NKB106083	CARPF306063220	63	45	22	6				○
NKB106084	CARPF306063250	63	45	25.4	6				○
NKB106085	CARPF204050250	50	45	25.4	4	RPMT1204 RPMW1204	ITS4006	ITK15	●
NKB106086	CARPF205063220	63	45	22	5				●
NKB106087	CARPF205063250	63	45	25.4	5				●
NKB106088	CARPF206080250	80	50	25.4	6				●
NKB106089	CARPF206080270	80	50	27	6				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	Dia ≤ 10		Dia > 10	
		fz	ap	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
Stainless Steel	100 ~ 180	0.08 ~ 0.4	0.3 ~ 1.2	0.15 ~ 0.4	0.5 ~ 2.0
Cast Iron	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.3	0.3 ~ 1.0	0.15 ~ 0.3	0.3 ~ 2.0
Hardened Steel	50 ~ 100	0.08 ~ 0.3	0.3 ~ 1.0	0.15 ~ 0.3	0.3 ~ 2.0

**Copy Milling - CARP**

**Insert Specifications**



Insert	Dimensions (mm)		
	A	S	d1
RPMT08T2	8	2.78	3.2
RPMW1003	10	3.18	4.6
RPMT10T3	10	3.97	4.5
RPMT1204	12	4.76	4.3
RPMW1204	12	4.76	4.3

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100497	RPMT08T2MOE-IL68ITP	●	●	●		○	
	NKB100498	RPMT08T2MOE-IL67UYP	●	●	●		●	●
	NKB100499	RPMT08T2MOE-IL57UYP	●	●	●		●	
	NKB100500	RPMT08T2MOT-IL68ITP	●	●	●		○	
	NKB100501	RPMT08T2MOT-IL67UYP	●	●	●		●	●
	NKB100502	RPMT08T2MOT-IL57UYP	●	●	●		●	
	NKB100503	RPMW1003MOE-IL68ITP	●	●	●		○	
	NKB100504	RPMW1003MOE-IL67UYP	●	●	●		●	●
	NKB100505	RPMW1003MOE-IL57UYP	●	●	●		●	
	NKB100506	RPMW1003MOT-IL77BYP	○	○	○		○	●
	NKB100507	RPMW1003MOT-IL68IYP	●	●	●		○	
	NKB100508	RPMW1003MOT-IL67UYP	●	●	●		●	●
	NKB100509	RPMW1003MOT-IL57UYP	●	●	●		●	

**Copy Milling - CARP**

**Insert Description**

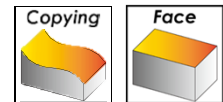
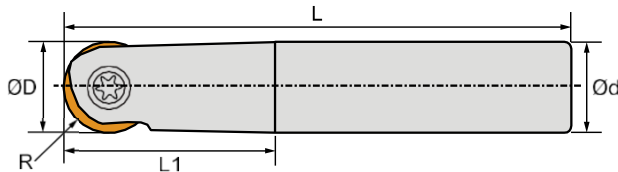
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100510	RPHT10T3MOE-IL57UYP	●	●	●		●	
	NKB100511	RPMT10T3MOE-IL68ITP	●	●	●		○	
	NKB100512	RPMT10T3MOE-IL67UYP	●	●	●		●	●
	NKB100513	RPMT10T3MOE-IL57UYP	●	●	●		●	
	NKB100514	RPMT10T3MOT-IL68ITP	●	●	●		○	
	NKB100515	RPMT10T3MOT-IL67UYP	●	●	●		●	●
	NKB100516	RPMT10T3MOT-IL57UYP	●	●	●		●	
	NKB100517	RPHT1204MOE-IL68ITP	●	●	●		○	
	NKB100518	RPHT1204MOE-IL67UYP	●	●	●		●	●
	NKB100519	RPHT1204MOE-IL57UYP	●	●	●		●	
	NKB100520	RPHT1204MOT-IL68ITP	●	●	●		○	
	NKB100521	RPHT1204MOT-IL67UYP	●	●	●		●	●
	NKB100522	RPMT1204MOE-IL77BYP	○	○	○		○	●
	NKB100523	RPMT1204MOE-IL68ITP	●	●	●		○	
	NKB100524	RPMT1204MOE-IL67UYP	●	●	●		●	●
	NKB100525	RPMT1204MOE-IL57UYP	●	●	●		●	
	NKB100526	RPMT1204MOT-IL77BYP	○	○	○		○	●
	NKB100527	RPMT1204MOT-IL68ITP	●	●	●		○	
	NKB100528	RPMT1204MOT-IL67UYP	●	●	●		●	●
	NKB100529	RPMT1204MOT-IL57UYP	●	●	●		●	
	NKB100530	RPMW1204MOE-IL68ITP	●	●	●		○	
	NKB100531	RPMW1204MOE-IL67UYP	●	●	●		●	●
	NKB100532	RPMW1204MOE-IL57UYP	●	●	●		●	
	NKB100533	RPMW1204MOT-IL68ITP	●	●	●		○	
	NKB100534	RPMW1204MOT-IL57UYP	●	●	●		●	●
	NKB100535	RPMW1204MOT-IL67UYP	●	●	●		●	

**Copy Milling - CF21**



- Use WP32 5R, 6R, 8R, 10R, 12.5R and 16R ball nose inserts.
- Suitable for mould & die finish or medium copy milling.
- 10~32mm cutter diameter.

**CF21E - Milling Tools**

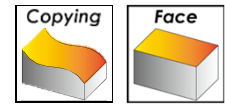
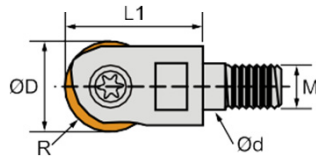


Order Code	Description	R	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB106090	CF21E302010100	5R	10	25	100	10	2	WP3210..	IMGR4012	IETL15	●
NKB106091	CF21E302010150	5R	10	25	150	10	2				●
NKB106092	CF21E302012150	6R	12	32	150	12	2	WP3212..	IMGR5012	IETL20	●
NKB106093	CF21E302012200	6R	12	58	200	16	2				●
NKB106094	CF21E302016150	8R	16	36	150	16	2	WP3216..	IMGR5016	IETL20	●
NKB106095	CF21E302016200	8R	16	36	200	16	2				●
NKB106096	CF21E302016201	8R	16	65	200	20	2				●
NKB106097	CF21E302020150	10R	20	45	150	20	2	WP3220..	IMGR5020	IETL20	●
NKB106098	CF21E302020200	10R	20	45	200	20	2				●
NKB106099	CF21E302020201	10R	20	76	200	25	2				●
NKB106100	CF21E302020250	10R	20	76	250	25	2	WP3225..	IMGR6025	IETL30	●
NKB106101	CF21E302025200	12.5R	25	45	200	25	2				●
NKB106102	CF21E302025250	12.5R	25	45	250	25	2				●
NKB106103	CF21E302025201	12.5R	25	98	200	32	2				●
NKB106104	CF21E302025251	12.5R	25	98	250	32	2				●
NKB106105	CF21E302025300	12.5R	25	98	300	32	2	WP3232..	IMGR8030	IETL30	●
NKB106106	CF21E302032200	16R	32	50	200	32	2				●
NKB106107	CF21E302032250	16R	32	50	250	32	2				●
NKB106108	CF21E302032300	16R	32	50	300	32	2				●

● stock ○ by inquiry

**Copy Milling - CF21**

**CF21M - Modular Milling Heads**



Order Code	Description	R	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
NKB106109	CF21M302010050	5R	10	20	5.5	M5	2	WP3210..	IMGR5010	IETL15	●
NKB106110	CF21M302012060	6R	12	22	6.5	M6	2	WP3212..	IMGR5012	IETL20	●
NKB106111	CF21M302012080	6R	12	30	8.5	M8	2				
NKB106112	CF21M302016080	8R	16	28	8.5	M8	2	WP3216..	IMGR5016	IETL20	●
NKB106113	CF21M302020100	10R	20	30	10.5	M10	2	WP3220..	IMGR5020	IETL20	●
NKB106114	CF21M302025120	12.5R	25	40	12.5	M12	2	WP3225..	IMGR6025	IETL30	●
NKB106115	CF21M302032160	16R	32	43	17	M16	2	WP3232..	IMGR8030	IETL30	●

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Recommended Cutting Conditions**

Working Material	Vc	fz					ap
		WP3212	WP3216	WP3220	WP3225	WP3232	
Carbon Steel / Alloy Steel	150 ~ 300	0.20	0.20	0.25	0.25	0.30	$\leq 0.03 \times \text{ØD}$
Stainless Steel	100 ~ 250	0.20	0.20	0.25	0.25	0.30	$\leq 0.03 \times \text{ØD}$
Cast Iron	90 ~ 350	0.25	0.30	0.30	0.35	0.40	$\leq 0.04 \times \text{ØD}$
Hardened Steel	100 ~ 350	0.10	0.125	0.15	0.20	0.25	$\leq 0.02 \times \text{ØD}$

**Copy Milling - CF21**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	B	S	d1
WP3210	10	5	2.5	4
WP3212	12	6	2.5	5
WP3216	16	6	3	5
WP3220	20	6	3	5
WP3225	25	9	4	6
WP3232	32	10	5	8

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100536	WP3210 MS IL87UYP	○	○	○		○	●
	NKB100537	WP3210 MS IL77BYP	○	○	○		○	●
	NKB100538	WP3212 MS IL87UYP	○	○	○		○	●
	NKB100539	WP3212 MS IL77BYP	○	○	○		○	●
	NKB100540	WP3216 MS IL87UYP	○	○	○		○	●
	NKB100541	WP3216 MS IL77BYP	○	○	○		○	●
	NKB100542	WP3220 MS IL87UYP	○	○	○		○	●
	NKB100543	WP3220 MS IL77BYP	○	○	○		○	●
	NKB100544	WP3225 MS IL87UYP	○	○	○		○	●
	NKB100545	WP3225 MS IL77BYP	○	○	○		○	●
	NKB100546	WP3232 MS IL87UYP	○	○	○		○	●
	NKB100547	WP3232 MS IL77BYP	○	○	○		○	●
	NKB100548	WP3210 MM IL87UYP	○	○	○		○	●
	NKB100549	WP3210 MM IL77BYP	○	○	○		○	●
	NKB100550	WP3212 MM IL87UYP	○	○	○		○	●
	NKB100551	WP3212 MM IL77BYP	○	○	○		○	●
	NKB100552	WP3216 MM IL87UYP	○	○	○		○	●
	NKB100553	WP3216 MM IL77BYP	○	○	○		○	●
	NKB100554	WP3220 MM IL87UYP	○	○	○		○	●
	NKB100555	WP3220 MM IL77BYP	○	○	○		○	●
	NKB100556	WP3225 MM IL87UYP	○	○	○		○	●
	NKB100557	WP3225 MM IL77BYP	○	○	○		○	●
	NKB100558	WP3232 MM IL87UYP	○	○	○		○	●
	NKB100559	WP3232 MM IL77BYP	○	○	○		○	●

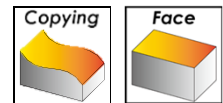
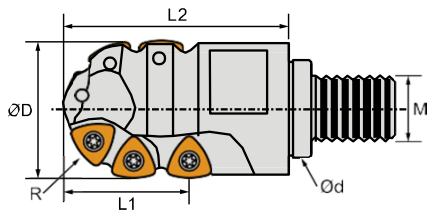


**Copy Milling - CF22**



- . Use WP26 inserts.
- . Ball nose cutters are suitable for mould & die copy roughing.
- . 25~50mm cutter diameter.

**CF22M - Modular Milling Heads**



Order Code	Description	R	D	L1	L2	d	M	T	Inserts	Screw	Wrench	Stock
NKB106116	CF22M202025120	12.5R	25	21	42	12.5	M12	2	WP26339R14	ITS4023	ITK15	●
NKB106117	CF22M202030120	15R	30	23	50	12.5	M12	2				●
NKB106118	CF22M202032160	16R	32	23	50	17.0	M16	2				●
NKB106119	CF22M202040180	20R	40	38	65	28.0	M18	2	WP26379R25	ITS5002	ITK20	○
NKB106120	CF22M202050250	25R	50	45	80	36.0	M25	2				●

● stock ○ by inquiry

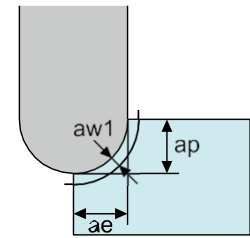
※ For screw-in type adapter, please refer to Tooling System

**Copy Milling - CF22**

**Recommended Cutting Conditions**

**WP26339R14**

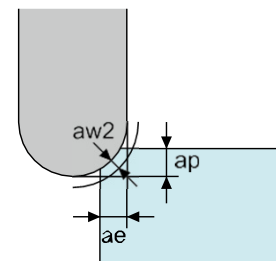
Working Material	Vc	aw1 = (0.5D, 0.5D)	aw2 = (0.25D, 0.25D)
		fz	
Carbon Steel / Alloy Steel	120 ~ 250	0.16 ~ 0.30	0.2 ~ 0.39
Stainless Steel	100 ~ 180	0.08 ~ 0.14	0.1 ~ 0.18
Cast Iron	120 ~ 250	0.16 ~ 0.30	0.2 ~ 0.39
High Temperature Alloy	40 ~ 100	0.08 ~ 0.12	0.1 ~ 0.18



$aw1 = (ap, ae)$

**WP26379R25**

Working Material	Vc	aw1 = (0.5D, 0.5D)	aw2 = (0.25D, 0.25D)
		fz	
Carbon Steel / Alloy Steel	120 ~ 250	0.20 ~ 0.36	0.26 ~ 0.46
Stainless Steel	100 ~ 180	0.08 ~ 0.14	0.10 ~ 0.18
Cast Iron	120 ~ 250	0.20 ~ 0.36	0.26 ~ 0.46
High Temperature Alloy	40 ~ 100	0.08 ~ 0.12	0.10 ~ 0.18



$aw2 = (ap, ae)$

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
WP26339R14	-	9.52	3.97	1.2	4.4
WP26379R25	1.1	13	5.56	2.0	5.5

**Insert Description**

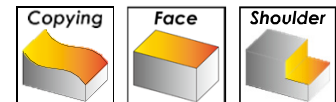
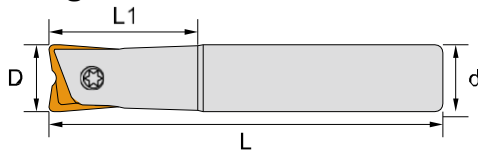
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100344	WP26339R14 GR IL77BYP	○	○	○		○	●
	NKB100345	WP26339R14 GR IL67UYP	●	●	●		○	
	NKB100346	WP26339R14 GR IL67UYP	●	●	●		●	●
	NKB100347	WP26339R14 GR IL57UYP	●	●	●		●	
	NKB100348	WP26379R25 GR IL77BYP	○	○	○		○	●
	NKB100349	WP26379R25 GR IL67UYP	●	●	●		○	
	NKB100350	WP26379R25 GR IL67UYP	●	●	●		●	●
	NKB100351	WP26379R25 GR IL57UYP	●	●	●		●	

**Copy Milling - CGWV**



- Use WPBC16 inserts.
- Various corner radii available for copy or shoulder milling.
- 16mm cutter diameter.

**CGWV - Milling tools**



Order Code	Description	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB106121	CGWVE016150	16	35	150	16	2	WPBC16..	MGR5016	ETL20	●
NKB106122	CGWVE016200	16	35	200	16	2				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

**for Copy milling**

Working Material	Vc	fz	ap	ae
Carbon Steel / Alloy Steel	170 ~ 270	0.20 ~ 0.25	≤ 0.03D	≤ 0.03D
Stainless Steel	170 ~ 190	0.20 ~ 0.25	≤ 0.03D	≤ 0.03D
Cast Iron	170 ~ 230	0.20 ~ 0.25	≤ 0.04D	≤ 0.04D
High Temperature Alloy	50 ~ 80	0.20 ~ 0.25	≤ 0.02D	≤ 0.02D
Hardened Steel	80 ~ 210	0.15 ~ 0.25	≤ 0.02D	≤ 0.02D

**for Shoulder milling**

Working Material	Vc	fz	ap	ae
Carbon Steel / Alloy Steel	120 ~ 190	0.20 ~ 0.25	0.1 ~ 3	0.1D ~ 1D
Stainless Steel	120 ~ 135	0.20 ~ 0.25	0.1 ~ 3	0.1D ~ 1D
Cast Iron	120 ~ 160	0.20 ~ 0.25	0.1 ~ 3	0.1D ~ 1D
High Temperature Alloy	35 ~ 55	0.20 ~ 0.25	0.1 ~ 0.5	0.1D ~ 1D
Hardened Steel	55 ~ 145	0.15 ~ 0.25	0.1 ~ 0.5	0.1D ~ 1D

※ D = cutter cutting diameter

**Copy Milling - CGWV**

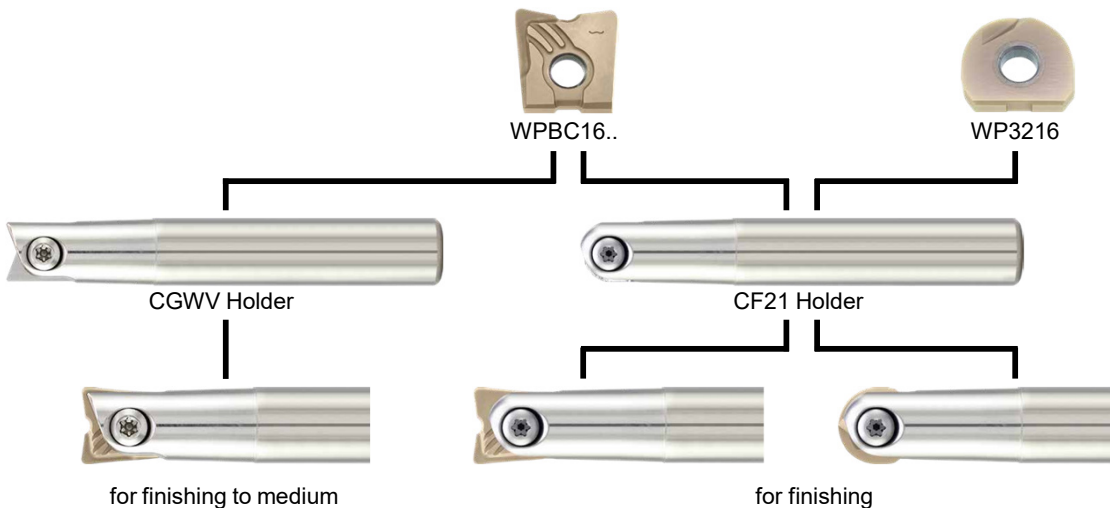
**Insert Specifications**

Insert	Dimensions (mm)							
	A	B	t1	st	S	r	d1	
WPBC1605	16	6	16	3	3	0.5	5	
WPBC1610	16	6	16	3	3	1.0	5	
WPBC1613	16	6	16	3	3	1.3	5	
WPBC1620	16	6	16	3	3	2.0	5	
WPBC1630	16	6	16	3	3	3.0	5	

**Insert Description**

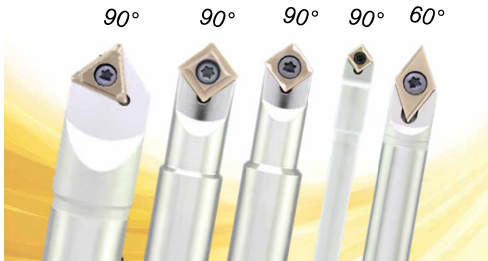
Insert	Order Code	Description	Continuous	Interrupted	Working Material					
					P	M	K	N	S	H
	NKB100560	WPBC1605 MM IL67UYP	✓		●	●	●		●	●
	NKB100561	WPBC1605 MM IL57UYP		✓	●	●	●		●	
	NKB100562	WPBC1610 MM IL67UYP	✓		●	●	●		●	●
	NKB100563	WPBC1610 MM IL57UYP		✓	●	●	●		●	
	NKB100564	WPBC1613 MM IL67UYP	✓		●	●	●		●	●
	NKB100565	WPBC1613 MM IL57UYP		✓	●	●	●		●	
	NKB100566	WPBC1620 MM IL67UYP	✓		●	●	●		●	●
	NKB100567	WPBC1620 MM IL57UYP		✓	●	●	●		●	
	NKB100568	WPBC1630 MM IL67UYP	✓		●	●	●		●	●
	NKB100569	WPBC1630 MM IL57UYP		✓	●	●	●		●	

**CF21 holder can be use WPBC16 or WP3216 inserts**



**Engraving / Chamfering Series Introduction**

**DTS Series**



- . Use DCEX, SCGX, SCM<sub>X</sub>, SDM<sub>X</sub>, TCM<sub>X</sub> inserts.
- . Engraving, chamfering, countersinking, grooving and spotting functions in one tool.

\* Page [A122](#)

**CSPC Series**



- . Use SPMG inserts with 4 cutting edges.
- . T-slot cutter with up and down chamfering applications.
- . 11~50mm cutter diameter.

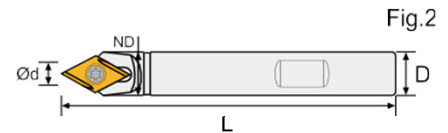
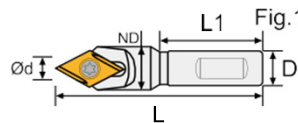
\* Page [A128](#)

**Engraving / Chamfering - DTS60**

- Use DCEX, SCGX, SCMx, SDMx, TCMx inserts.
- Engraving, chamfering, countersinking, grooving and spotting functions in one tool.



**DTS60 - Milling Tools**



DTS 60 - DCEX11T3

Order Code	Description	D	ND	L	L1	Fig	Insert	Screw	Wrench	Stock
NKB106123	DTS1006006011	10	12	60	30	1	DCEX11T3	ITS3520	ITK15	●
NKB106124	DTS1210006011	12	12	100	-	2				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

**DTS 60 Chamfering / Countersinking**

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	12 ~ 180	0.05 ~ 0.15
Alloy steel	12 ~ 180	0.05 ~ 0.15
Stainless steel	12 ~ 180	0.05 ~ 0.15
Cast iron	12 ~ 180	0.05 ~ 0.15
Aluminum	12 ~ 180	0.10 ~ 0.20
Hardened steel	12 ~ 180	0.03 ~ 0.10

**DTS 60 Grooving / Engraving**

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	10 ~ 170	0.005 ~ 0.05
Alloy steel	10 ~ 170	0.005 ~ 0.03
Stainless steel	10 ~ 170	0.005 ~ 0.05
Cast iron	10 ~ 170	0.005 ~ 0.03
Aluminum	10 ~ 170	0.005 ~ 0.08
Hardened steel	10 ~ 170	0.005 ~ 0.02



**DTS 60 Cutting Depth of Passes**

No. of Passes	ap of one pass (mm)					
	Aluminum	Cast iron	Carbon steel	Alloy steel	Stainless steel	Hardened steel
1	1.0	0.8	0.8	0.6	0.5	0.2
2	0.8	0.7	0.6	0.5	0.4	0.2
3	0.2	0.3	0.3	0.3	0.3	0.15
4		0.2	0.2	0.3	0.3	0.15
5			0.1	0.2	0.2	0.1
6				0.1	0.2	0.1
7					0.1	0.1

※ Max ap is 2mm

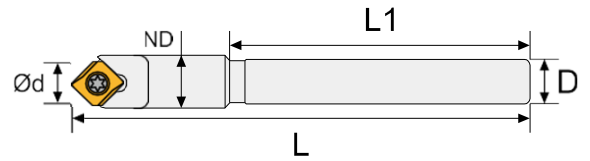
**Engraving / Chamfering - DTS60**

**Insert Description**

Insert	Order Code	Description	r	Engraving Ød	P	M	K	N	S	H
	NKB100570	DCEX11T301 GS IL68ITP	0.1	0.2 ~ 1	●	●	●	●	●	
	NKB100571	DCEX11T302 GS IL68ITP	0.2	0.4 ~ 2	●	●	●	●	●	
	NKB100572	DCEX11T304 GS IL68ITP	0.4	0.8 ~ 3	●	●	●	●	●	
	NKB100573	DCEX11T301-IL68ITP	0.1	0.8 ~ 3	●	●	●		●	●
	NKB100574	DCEX11T302-IL68ITP	0.2	0.8 ~ 3	●	●	●		●	●
	NKB100575	DCEX11T304-IL68ITP	0.4	0.8 ~ 3	●	●	●		●	●
	NKB100576	DCEX11T308-IL68ITP	0.8	0.8 ~ 3	●	●	●		●	●

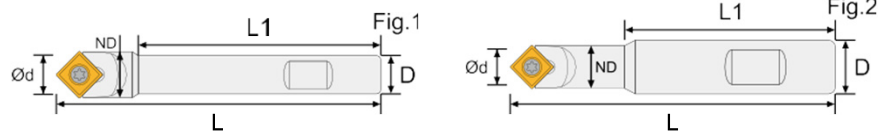
**Engraving / Chamfering - DTS90**

**DTS90 - Milling Tools**



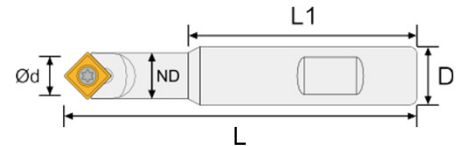
DTS90 - SDM X05T1 (for small lathe)

Order Code	Description	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
NKB106125	DTS0604009005	6	40	7	20	1 ~ 5	0.8 ~ 1.5	SDM X05T1	ITS1801	ITK06	●
NKB106126	DTS0606009005	6	60	7	40						●



DTS90 - SCGX09T3, SCM X09T3

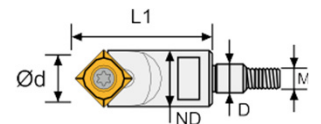
Order Code	Description	D	L	ND	L1	Fig	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
NKB106127	DTS1010009009	10	100	12.2	71	1	2 ~ 11	0.8 ~ 2.5	SCGX09T3 SCM X09T3	ITS3520	ITK15	●
NKB106128	DTS1210009009	12	100	12.2	71							●
NKB106129	DTS1610009009	16	100	12.2	2	●						
NKB106130	DTS1613009009	16	130	12.2		101						●



DTS90 - SDM X11T3

Order Code	Description	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
NKB106131	DTS1610009011	16	100	14.1	71	3 ~ 14	1.6 ~ 4.0	SDM X11T3	ITS3521	ITK15	●

**DTS90 - Modular Milling Heads**



Order Code	Description	L1	ND	D	M	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
NKB106132	DTSM603009009	30	12.4	6.5	M6	2 ~ 11	0.8 ~ 2.5	SCM X09T3	ITS3520	ITK15	○

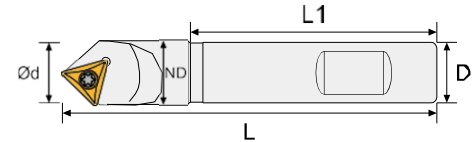
● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System



**Engraving / Chamfering - DTS90**

**DTS90 - Milling Tools**



DTS90 - TCMX16T3

Order Code	Description	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
NKB106133	DTS2012009016	20	120	21.2	78	3 ~ 20	1.6 ~ 4.0	TCMX16T3	ITS3521	ITK15	●

● stock ○ by inquiry

**Recommended Cutting Conditions**

**DTS 90 Spotting**

Material	Vc (m/min)		Fr (mm/rev)	
	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm
Carbon steel	60 ~ 120	90 ~ 220	0.04 ~ 0.08	0.06 ~ 0.10
Alloy steel	50 ~ 100	75 ~ 180	0.03 ~ 0.06	0.05 ~ 0.08
Stainless steel	30 ~ 60	45 ~ 120	0.02 ~ 0.04	0.04 ~ 0.06
Cast iron	40 ~ 80	60 ~ 130	0.04 ~ 0.08	0.06 ~ 0.10
Hardened steel	20 ~ 40	30 ~ 60	0.02 ~ 0.04	0.04 ~ 0.08

**DTS 90 Chamfering / Countersinking**








Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	60 ~ 270	0.15 ~ 0.24
Alloy steel	50 ~ 220	0.12 ~ 0.20
Stainless steel	35 ~ 120	0.10 ~ 0.20
Cast iron	60 ~ 220	0.15 ~ 0.25
Hardened steel	20 ~ 60	0.03 ~ 0.08

**DTS 90 Grooving / Engraving**

Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	40 ~ 140	0.12 ~ 0.18
Alloy steel	35 ~ 120	0.10 ~ 0.14
Stainless steel	25 ~ 70	0.08 ~ 0.12
Cast iron	30 ~ 100	0.12 ~ 0.18
Hardened steel	20 ~ 50	0.02 ~ 0.04

**Engraving / Chamfering - DTS90**

**Insert Description**

Insert	Order Code	Description	r	Spotting Ød	Engraving Ød	P	M	K	N	S	H
	NKB100577	SCGX09T304-AG-IL90U	0.4	2 ~ 11	0.8 ~ 2.5				●		
	NKB100578	SCGX09T304 GF IL87UYP	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	●
	NKB100579	SCMX09T304 MS IL67UYP	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	○
	NKB100580	SDMX05T104 GF IL87UYP	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	NKB100581	SDMX05T104 GF IL67UYP	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	NKB100582	SDMX11T308 GS IL67UYP	0.8	3 ~ 14	1.6 ~ 4.0	●	●	●		●	●
	NKB100583	TCMX16T308 MS IL68ITP	0.8	3 ~ 20	1.6 ~ 4.0	●	●	●	○	●	●

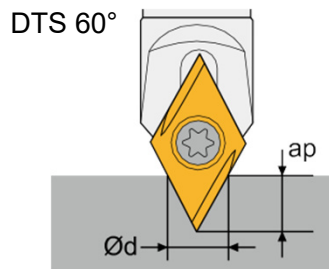
**Engraving / Chamfering - DTS**

**How to calculate Ød ,RPM and Feed**

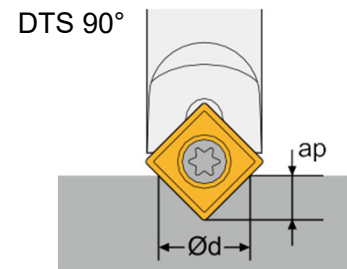
Formula :

$$RPM = \frac{Vc \times 1000}{\text{Ød} \times \pi}$$

$$\text{Feed} = RPM \times fr$$



$$\text{Ød} \approx (0.577 \times (ap + r) + 0.05) \times 2$$



$$\text{Ød} \approx (0.4r + ap + 0.05) \times 2$$

EX :

Working Material : Cast iron  
 Insert : SCGX09T304  
 Application : 90° Spotting  
 ap : 2.5mm

$$\text{Ød} = (0.4r + ap + 0.05) \times 2 = (0.4 \times 0.4 + 2.5 + 0.05) \times 2 = 5.42 \text{ mm}$$

Reference conditions table get Vc ≈ 85 m/min and fr ≈ 0.075 mm/rev

$$RPM = (Vc \times 1000) / (\text{Ød} \times \pi) = (85 \times 1000) / (5.42 \times \pi) \approx 5000$$

$$\text{Feed} = RPM \times fr = 5000 \times 0.075 = 375 \text{ mm/min}$$

**Working Demonstration**



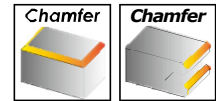
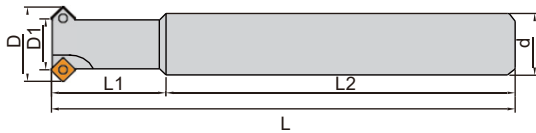
Cutting parameter	
Tools	DTS 90° with SCMX09T304-SP CX32HS
Material	Cast Iron
Coolant	Dry
Application	Spotting
Vc	85 m/min
S	4800 rpm
Feed	360 mm/min
ap	2.5 mm

**Chamfering - CSPC**



- . Use SPMG inserts with 4 cutting edges.
- . T-slot cutter with up and down chamfering applications.
- . 11~50mm cutter diameter.

**CSPCE - Milling Tools**



Order Code	Description	D	D1	d	L1	L2	L	T	Inserts	Screw	Wrench	Stock
NKB106134	CSPCE501011100	11	6	10	17	83	100	1	SPMG0502	ITS2003	ITK06	●
NKB106135	CSPCE502015120	15	10	12	20	100	120	2				●
NKB106136	CSPCE503017150	17	11	16	25	125	150	3				●
NKB106137	CSPCE503019150	19	13	16	30	120	150	3				●
NKB106138	CSPCE504024150	24	18	20	35	115	150	4				●
NKB106139	CSPCE603022120	22	16	16	30	90	120	3	SPMG0602	ITS2205	ITK06	●
NKB106140	CSPCE703027120	27	17	20	30	90	120	3	SPMG07T3	ITS2511	ITK08	●
NKB106141	CSPCE902030150	30	19	20	40	110	150	2	SPMG0904	ITS3504	ITK15	●
NKB106142	CSPCE903040150	40	29	25	40	110	150	3				●
NKB106143	CSPCE904050150	50	39	25	40	110	150	4				●

● stock   ○ by inquiry

**Chamfering - CSPC**

**Recommended Cutting Conditions**

Working Material	Vc	fz				
		Ø11 ~ Ø15	Ø16 ~ Ø22	Ø23 ~ Ø33	Ø34 ~ Ø41	Ø42 ~ Ø50
Carbon Steel / Alloy Steel	120 ~ 250	0.06 ~ 0.12	0.06 ~ 0.12	0.06 ~ 0.12	0.12 ~ 0.24	0.12 ~ 0.25
Stainless Steel	100 ~ 180	0.05 ~ 0.10	0.05 ~ 0.10	0.05 ~ 0.10	0.10 ~ 0.17	0.10 ~ 0.17
Cast Iron	120 ~ 250	0.06 ~ 0.12	0.06 ~ 0.12	0.06 ~ 0.12	0.12 ~ 0.24	0.12 ~ 0.25
High Temperature Alloy	40 ~ 100	0.03 ~ 0.06	0.03 ~ 0.06	0.03 ~ 0.06	0.05 ~ 0.10	0.05 ~ 0.10
Hardened Steel	50 ~ 100	0.03 ~ 0.06	0.03 ~ 0.06	0.03 ~ 0.06	0.05 ~ 0.10	0.05 ~ 0.10

**Insert Specifications**

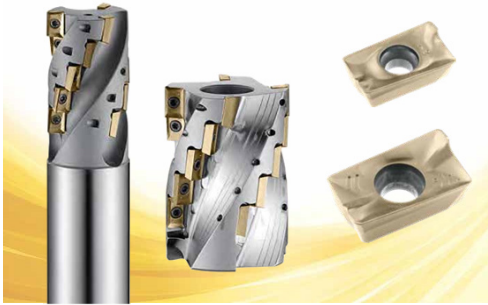
Insert	Dimensions (mm)			
	A	S	r	d1
SPMG050204	5.00	2.38	0.4	2.30
SPMG060204	6.00	2.38	0.4	2.65
SPMG07T308	7.94	3.97	0.8	2.85
SPMG090408	9.80	4.3	0.8	4.05

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100101	SPMG050204 GM IL68ITP	●	●	●		○	
	NKB100102	SPMG050204 GM IL67UYP	●	●	●		●	●
	NKB100103	SPMG050204 GM IL57UYP	●	●	●		●	
	NKB100104	SPMG060204 GM IL68ITP	●	●	●		○	
	NKB100105	SPMG060204 GM IL67UYP	●	●	●		●	●
	NKB100106	SPMG060204 GM IL57UYP	●	●	●		●	
	NKB100107	SPMG07T308 GM IL68ITP	●	●	●		○	
	NKB100108	SPMG07T308 GM IL67UYP	●	●	●		●	●
	NKB100109	SPMG07T308 GM IL57UYP	●	●	●		●	
	NKB100110	SPMG090408 GM IL68ITP	●	●	●		○	
	NKB100111	SPMG090408 GM IL67UYP	●	●	●		●	●
	NKB100112	SPMG090408 GM IL57UYP	●	●	●		●	
	NKB100113	SPMG090408 GR IL68ITP	●	●	●		○	
	NKB100114	SPMG090408 GR IL67UYP	●	●	●		●	●
	NKB100115	SPMG090408 GR IL57UYP	●	●	●		●	

**Helical Milling Series Introduction**

**CAPH Series**



- . Use APKT inserts with 2 cutting edges.
- . Offers large depth of cut in rough contouring applications.
- . 20~63mm cutter diameter.

\* Page [A131](#)

**CBAH Series**



- . Use APMT inserts with 2 cutting edges.
- . Offers large depth of cut in rough contouring applications.
- . 20~63mm cutter diameter.

\* Page [A133](#)

**C39H Series**



- . Use W390 inserts with 2 cutting edges.
- . High efficient and large depth of cut in rough contouring applications.
- . 25~32mm cutter diameter.

\* Page

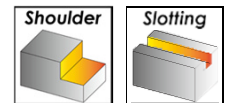
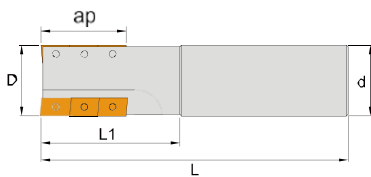
[A136](#)

**Helical Milling - CAPH**



- Use APKT inserts with 2 cutting edges.
- Offers large depth of cut in rough contouring applications.
- 20~63mm cutter diameter.

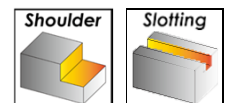
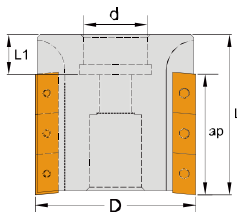
**CAPHE - Milling Tools**



Order Code	Description	D	ap	L1	L	d	T × Pcs	Inserts	Screw	Wrench	Stock
NKB106144	CAPHE305020100	20	28	42	107	20	1 x 5	APKT1003	ITS2515	ITK08	●
NKB106145	CAPHE308025120	25	35	50	125	25	2 x 4				●
NKB106146	CAPHE315032130	32	44	60	135	32	3 x 5				●

● stock ○ by inquiry

**CAPHF - Milling Tools**



Order Code	Description	D	ap	L2	L	d	T × Pcs	Inserts	Screw	Wrench	Stock
NKB106147	CAPHF409050220	50	42	21	69	22	3 x 3	APKT1604 or APET1604	ITS4023	ITK15	●
NKB106148	CAPHF412063250	63	42	38	69	25.4	4 x 3				●
NKB106149	CAPHF420063252	63	68	38	97	25.4	4 x 5				●

● stock ○ by inquiry

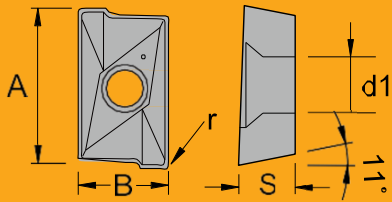
Helical Milling - CAPH

Recommended Cutting Conditions

Working Material	APKT1003		APKT1604	
	Vc	fz	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Stainless Steel	100 ~ 180	0.08 ~ 0.18	100 ~ 180	0.10 ~ 0.22
Cast Iron	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Aluminum Alloy	-	-	300 ~ 1000	0.10 ~ 0.40
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	40 ~ 100	0.10 ~ 0.18

Insert Specifications

Insert	Dimensions (mm)				
	A	B	S	r	d1
APKT100304	10.5	6.7	3.5	0.4	2.8
APKT100308	10.5	6.7	3.5	0.8	2.8
APET160402	16.3	9.525	4.76	0.2	4.5
APET160404	16.3	9.525	4.76	0.4	4.5
APKT160408	16.3	9.525	5.25	0.8	4.5



Insert Description

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100066	APKT100304PDER GS IL77BYP	○	○	○		○	●
	NKB100067	APKT100304PDER GM IL77BYP	○	○	○		○	●
	NKB100068	APKT100304PDER GM IL68ITP	●	●	●		○	
	NKB100069	APKT100304PDER GM IL67UYP	●	●	●		●	●
	NKB100070	APKT100304PDER GM IL57UYP	●	●	●		●	
	NKB100071	APKT100308PDER GM IL77BYP	○	○	○		○	●
	NKB100072	APKT100308PDER GM IL68ITP	●	●	●		○	
	NKB100073	APKT100308PDER GM IL67UYP	●	●	●		●	●
	NKB100074	APKT100308PDER GM IL57UYP	●	●	●		●	
	NKB100075	APKT100304PDER GR IL68ITP	●	●	●		○	
	NKB100076	APKT100304PDER GR IL67UYP	●	●	●		●	●
	NKB100077	APET160402PDFR LA IL90U				●		
	NKB100078	APET160404PDFR LA IL90U				●		
	NKB100079	APET160402PDFR GF IL77BYP	○	○	○		○	●
	NKB100080	APET160404PDFR GF IL77BYP	○	○	○		○	●
	NKB100081	APKT160408PDER GM IL77BYP	○	○	○		○	●
	NKB100082	APKT160408PDER GM IL68ITP	●	●	●		○	
	NKB100083	APKT160408PDER GM IL67UYP	●	●	●		●	●
	NKB100084	APKT160408PDER GM IL57UYP	●	●	●		●	
	NKB100085	APKT160408PDER GR IL77BYP	○	○	○		○	●
	NKB100086	APKT160408PDER GR IL68ITP	●	●	●		○	
	NKB100087	APKT160408PDER GR IL67UYP	●	●	●		●	●
	NKB100025	APKT160408PDER GR IL57UYP	●	●	●		●	

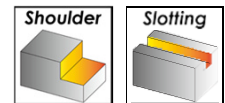
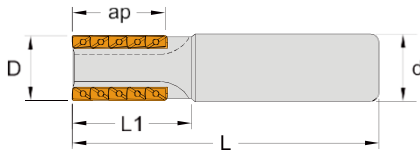


**Helical Milling - CBAH**



- Use APMT inserts with 2 cutting edges.
- Offers large depth of cut in rough contouring applications.
- 20~63mm cutter diameter.

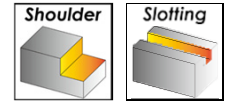
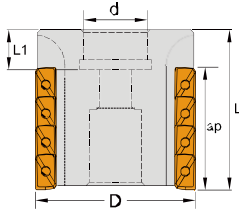
**CBAHE - Milling Tools**



Order Code	Description	D	ap	L1	L	d	T × Pcs	Inserts	Screw	Wrench	Stock
NKB106150	CBAHE305020100	20	28	42	107	20	1 x 5	APMT1135	ITS2515	ITK08	●
NKB106151	CBAHE308025120	25	35	50	125	25	2 x 4				●
NKB106152	CBAHE315032130	32	44	60	135	32	3 x 5				●
NKB106153	CBAHE324040170	40	72	94	175	32	3 x 8				●
NKB106154	CBAHE406032130	32	42	55	135	32	2 x 3	APMT1604 or APGT1604	ITS4023	ITK15	●
NKB106155	CBAHE410040170	40	68	94	175	32	2 x 5				●
NKB106156	CBAHE415040170	40	68	94	175	32	3 x 5				●
NKB106157	CBAHE424050220	50	100	128	224	50.8	3 x 8				●
NKB106158	CBAHE436050280	50	158	188	284	50.8	3 x 12				●

**Helical Milling - CBAH**

**CBAHF - Milling Tools**



Order Code	Description	D	ap	L1	L	d	T × Pcs	Inserts	Screw	Wrench	Stock
NKB106159	CBAHF409050220	50	42	21	69	22	3 x 3	APMT1604			●
NKB106160	CBAHF412063250	63	42	38	69	25.4	4 x 3	or APGT1604	ITS4023	ITK15	●
NKB106161	CBAHF420063250	63	68	38	97	25.4	4 x 5				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	APMT1135		APMT1604	
	Vc	fz	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Stainless Steel	100 ~ 180	0.08 ~ 0.18	100 ~ 180	0.10 ~ 0.22
Cast Iron	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Aluminum Alloy	-	-	300 ~ 1000	0.10 ~ 0.40
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	40 ~ 100	0.10 ~ 0.22

**Helical Milling - CBAH**

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
APMT113508	11.0	6.35	3.5	0.8	2.8
APMT113516	11.0	6.35	3.5	1.6	2.8
APMT160408	16.5	9.525	4.76	0.8	4.4
APMT160416	16.5	9.525	4.76	1.6	4.4
APGT160408	16.5	9.525	4.76	0.8	4.4

**Insert Description**

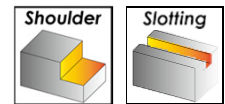
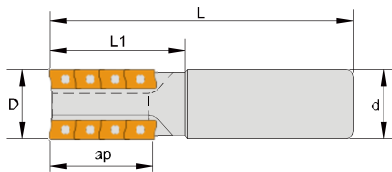
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100163	APMT113508PDER GM IL77BYP	○	○	○		○	●
	NKB100164	APMT113508PDER GM IL68ITP	●	●	●		○	
	NKB100165	APMT113508PDER GM IL67UYP	●	●	●		●	●
	NKB100166	APMT113508PDER GM IL57UYP	●	●	●		●	
	NKB100167	APMT113516PDER GM IL77BYP	○	○	○		○	●
	NKB100168	APMT113516PDER GM IL68ITP	●	●	●		○	
	NKB100169	APMT113516PDER GM IL67UYP	●	●	●		●	●
	NKB100170	APMT113516PDER GM IL57UYP	●	●	●		●	
	NKB100171	APMT113508PDER GR IL77BYP	○	○	○		○	●
	NKB100172	APMT113508PDER GR IL68ITP	●	●	●		○	
	NKB100173	APMT113508PDER GR IL67UYP	●	●	●		●	●
	NKB100174	APMT113508PDER GR IL57UYP	●	●	●		●	
	NKB100175	APMT113508PDER GH IL68ITP	●	●	●		○	
	NKB100176	APMT113508PDER GH IL67UYP	●	●	●		●	●
	NKB100177	APMT113508PDER GH IL57UYP	●	●	●		●	
	NKB100178	APGT160408PDER LA IL90U				●		
	NKB100179	APGT160408PDER GF IL77BYP	○	○	○		○	●
	NKB100180	APMT160408PDER GM IL77BYP	○	○	○		○	●
	NKB100181	APMT160408PDER GM IL68ITP	●	●	●		○	
	NKB100182	APMT160408PDER GM IL67UYP	●	●	●		●	●
	NKB100183	APMT160408PDER GM IL57UYP	●	●	●		●	
	NKB100184	APMT160408PDER GM IL53UBC	●	●	○		●	○
	NKB100185	APMT160416PDER GM IL68ITP	●	●	●		○	
	NKB100186	APMT160416PDER GM IL67UYP	●	●	●		●	●
	NKB100187	APMT160416PDER GM IL57UYP	●	●	●		●	
	NKB100188	APMT160408PDER GR IL77BYP	○	○	○		○	●
	NKB100189	APMT160408PDER GR IL68ITP	●	●	●		○	
	NKB100190	APMT160408PDER GR IL67UYP	●	●	●		●	●
	NKB100191	APMT160408PDER GR IL57UYP	●	●	●		●	
	NKB100192	APMT160408PDER GH IL77BYP	○	○	○		○	●
	NKB100193	APMT160408PDER GH IL68ITP	●	●	●		○	
	NKB100194	APMT160408PDER GH IL67UYP	●	●	●		●	●
	NKB100195	APMT160408PDER GH IL57UYP	●	●	●		●	

**Helical Milling - C39H**



- Use W390 inserts with 2 cutting edges.
- High efficient and large depth of cut in rough contouring applications.
- 25~32mm cutter diameter.

**C39HE - Milling Tools**



Order Code	Description	D	ap	L1	L	d	T × Pcs	Inserts	Screw	Wrench	Stock
NKB106162	C39HE308025110	25	36	50	110	25	2 × 4	W39011T3	ITS2509	ITK08	●
NKB106163	C39HE308032120	32	36	50	125	32	2 × 4				●

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22
Stainless Steel	100 ~ 180	0.08 ~ 0.18
Cast Iron	120 ~ 250	0.10 ~ 0.22
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14

**Helical Milling - C39H**

**Insert Specifications**

Insert	Dimensions (mm)				
	A	B	S	r	d1
W39011T308	11	6.9	3.59	0.8	2.8
W39011T320	11	6.9	3.59	2.0	2.8

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100196	W39011T308 GS IL77BYP	○	○	○		○	●
	NKB100197	W39011T308 GS IL68ITP	●	●	●		○	
	NKB100198	W39011T308 GS IL67UYP	●	●	●		●	●
	NKB100026	W39011T308 GS IL57UYP	●	●	●		●	
	NKB100200	W39011T308 GM IL77BYP	○	○	○		○	●
	NKB100201	W39011T308 GM IL68ITP	●	●	●		○	
	NKB100202	W39011T308 GM IL67UYP	●	●	●		●	●
	NKB100203	W39011T308 GM IL57UYP	●	●	●		●	
	NKB100204	W39011T308 GM IL63UBC	○	○	●		○	○
	NKB100205	W39011T308 GM IL53UBC	●	●	○		●	○
	NKB100206	W39011T320 GM IL77BYP	○	○	○		○	●
	NKB100207	W39011T320 GM IL68ITP	●	●	●		○	
	NKB100208	W39011T320 GM IL67UYP	●	●	●		●	●
	NKB100209	W39011T320 GM IL57UYP	●	●	●		●	
	NKB100210	W39011T320 GM IL63UBC	○	○	●		○	○
	NKB100211	W39011T320 GM IL53UBC	●	●	○		●	○

**Disc Milling Series Introduction**

**CSPT Series**



- . Use SPMG inserts with 4 cutting edges.
- . For side slotting and T-slotting applications.
- . 19~40mm cutter diameter.

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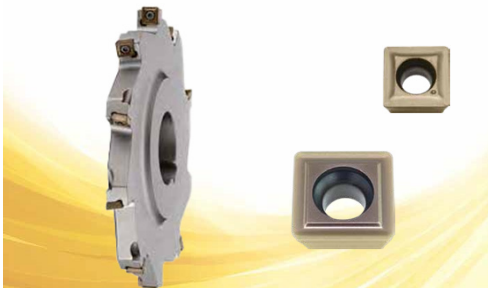
**CRDT Series**



- . Use RDKW or RPMT round inserts.
- . For side R slotting and T-slotting applications.
- . 26~50mm cutter diameter.

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**CSPD Series**



- . Use SPMG inserts with 4 cutting edges.
- . Economical and versatile disc cutting solution.
- . 80~200mm cutter diameter.

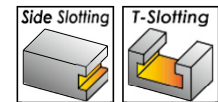
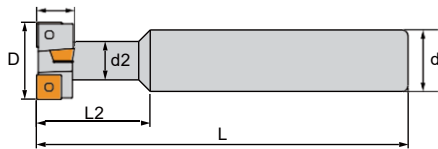
\* Page [A143](#)

**Disc Milling - CSPT**



- . Use SPMG inserts with 4 cutting edges.
- . For side slotting and T-slotting applications.
- . 19~40mm cutter diameter.

**CSPT - T-Slot Milling Tools**



Order Code	Description	D	t	d2	L2	L	d	T	Inserts	Screw	Wrench	Stock
NKB106164	CSPTE504019090	19	8	9.5	25	95	16	4	SPMG0502	ITS2003	ITK06	●
NKB106165	CSPTE604021100	21	9	11	27	100	16	4	SPMG0602	ITS2205	ITK06	●
NKB106166	CSPTE504022090	22	6.3	15	15	90	20	4	SPMG0502	ITS2003	ITK06	●
NKB106167	CSPTE704025110	25	11	12	31	110	20	4	SPMG07T3	ITS2511	ITK08	●
NKB106168	CSPTE504032110	32	7.8	19	9.5	110	20	4	SPMG0502	ITS2003	ITK06	●
NKB106169	CSPTE504032112	32	8	19	9.5	110	20	4	SPMG0502	ITS2003	ITK06	●
NKB106170	CSPTE904032110	32	14	17	39	110	25	4	SPMG0904	ITS3504	ITK15	●
NKB106171	CSPTE104040120	40	18	21	49	125	25	4	SPMG1104	ITS4006	ITK15	●

● stock   ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.12
Stainless Steel	100 ~ 180	0.07 ~ 0.10
Cast Iron	120 ~ 250	0.08 ~ 0.12
High Temperature Alloy	40 ~ 100	0.05 ~ 0.08
Hardened Steel	50 ~ 100	0.05 ~ 0.08

**Disc Milling - CSPT**

**Insert Specifications**

Insert	Dimensions (mm)			
	A	S	r	d1
SPMG050204	5.00	2.38	0.4	2.30
SPMG060204	6.00	2.38	0.4	2.65
SPMG07T308	7.94	3.97	0.8	2.85
SPMG090408	9.80	4.3	0.8	4.05

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100101	SPMG050204 GM IL68ITP	●	●	●		○	
	NKB100102	SPMG050204 GM IL67UYP	●	●	●		●	●
	NKB100103	SPMG050204 GM IL57UYP	●	●	●		●	
	NKB100104	SPMG060204 GM IL68ITP	●	●	●		○	
	NKB100105	SPMG060204 GM IL67UYP	●	●	●		●	●
	NKB100106	SPMG060204 GM IL57UYP	●	●	●		●	
	NKB100107	SPMG07T308 GM IL68ITP	●	●	●		○	
	NKB100108	SPMG07T308 GM IL67UYP	●	●	●		●	●
	NKB100109	SPMG07T308 GM IL57UYP	●	●	●		●	
	NKB100110	SPMG090408 GM IL68ITP	●	●	●		○	
	NKB100111	SPMG090408 GM IL67UYP	●	●	●		●	●
	NKB100112	SPMG090408 GM IL57UYP	●	●	●		●	
	NKB100113	SPMG090408 GR IL68ITP	●	●	●		○	
	NKB100114	SPMG090408 GR IL67UYP	●	●	●		●	●
	NKB100115	SPMG090408 GR IL57UYP	●	●	●		●	

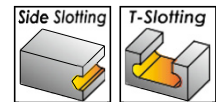
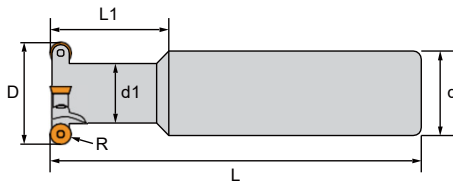


**Disc Milling - CRDT**



- . Use RDKW or RPMT round inserts.
- . For side R slotting and T-slotting applications.
- . 26~50mm cutter diameter.

**CRDTE - T-Slot Milling Tools**



Order Code	Description	D	R	d1	L1	L	d	T	Inserts	Screw	Wrench	Stock
NKB106172	CRDTE505026100	26	2.5	18	21	105	25	5	RDKW0501	ITS2001	ITK06	●
NKB106173	CRDTE506033110	33	2.5	23	25	110	32	6	RDKW0501	ITS2001	ITK06	●
NKB106174	CRDTE604030110	30	3	18	35	110	25	4	RDKW0620	ITS2205	ITK06	●
NKB106175	CRDTE606050110	50	3	32	30	110	32	6	RDKW0620	ITS2504	ITK08	●
NKB106176	CRDTE705039110	39.3	3.5	26	26	110	32	5	RDKW0702	ITS2515	ITK08	●
NKB106177	CRPTE104050150	50	5	28	35	150	32	4	RPMT10T3	ITS3503	ITK15	○

● stock ○ by inquiry

**Recommended Cutting Conditions**

Working Material	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.12
Stainless Steel	100 ~ 180	0.07 ~ 0.10
Cast Iron	120 ~ 250	0.08 ~ 0.12
High Temperature Alloy	40 ~ 100	0.05 ~ 0.08
Hardened Steel	50 ~ 100	0.05 ~ 0.08

**Disc Milling - CRDT**

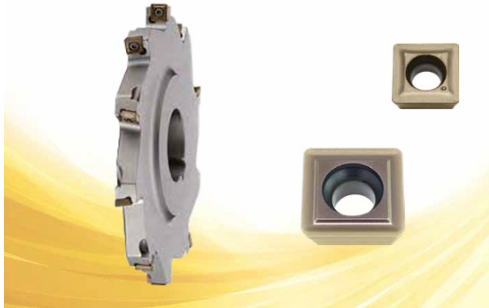
**Insert Specifications**

Insert	Dimensions (mm)			
	A	r	S	d1
RDKW0501	5	2.5	1.59	2.2
RDMW0620	6	3.0	1.99	2.6
RDKW0702	7	3.5	2.38	2.8
RPMT10T3	10	5.0	3.97	4.5

**Insert Description**

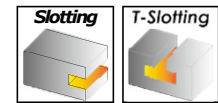
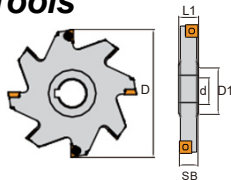
Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100418	RDKW0501MOE-IL77BYP	○	○	○		○	●
	NKB100419	RDKW0501MOE-IL68ITP	●	●	●		○	
	NKB100420	RDKW0501MOE-IL67UYP	●	●	●		●	●
	NKB100584	RDKW0620MOE-IL68ITP	●	●	●		○	
	NKB100585	RDKW0620MOE-IL67UYP	●	●	●		●	●
	NKB100421	RDKW0702MOE-IL77BYP	○	○	○		○	●
	NKB100422	RDKW0702MOE-IL68ITP	●	●	●		○	
	NKB100423	RDKW0702MOE-IL67UYP	●	●	●		●	●
	NKB100424	RDKW0702MOE-IL57UYP	●	●	●		●	
	NKB100511	RPMT10T3MOE-IL68ITP	●	●	●		○	
	NKB100512	RPMT10T3MOE-IL67UYP	●	●	●		●	●
	NKB100513	RPMT10T3MOE-IL57UYP	●	●	●		●	
	NKB100514	RPMT10T3MOT-IL68ITP	●	●	●		○	
	NKB100515	RPMT10T3MOT-IL67UYP	●	●	●		●	●
	NKB100516	RPMT10T3MOT-IL57UYP	●	●	●		●	

**Disc Milling - CSPD**



- . Use SPMG inserts with 4 cutting edges.
- . Economical and versatile disc cutting solution.
- . 80~200mm cutter diameter.

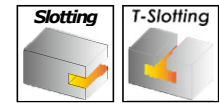
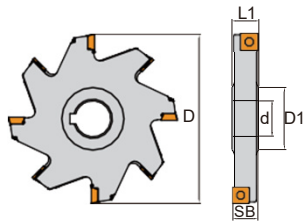
**CSPDE - Milling Tools**



Order Code	Description	D	L1	SB	d	D1	T	Inserts	Screw	Wrench	Stock
NKB106178	CSPDE506080220	80	12	6	22	44	2 × 4	SPMG0502	ITS2003	ITK06	●
NKB106179	CSPDE507080220	80	12	7	22	44	2 × 4	SPMG0502	ITS2003	ITK06	○
NKB106180	CSPDE608080220	80	12	8	22	44	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106181	CSPDE609080220	80	12	9	22	44	2 × 4	SPMG0602	ITS2205	ITK06	○
NKB106182	CSPDE610080220	80	12	10	22	44	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106183	CSPDE711080220	80	12	11	22	44	2 × 4	SPMG07T3	ITS2511	ITK08	○
NKB106184	CSPDE712080220	80	12	12	22	44	2 × 4	SPMG07T3	ITS2511	ITK08	●
NKB106185	CSPDE506100270	100	12	6	27	50	2 × 5	SPMG0502	ITS2003	ITK06	●
NKB106186	CSPDE507100270	100	12	7	27	50	2 × 5	SPMG0502	ITS2003	ITK06	●
NKB106187	CSPDE608100270	100	12	8	27	50	2 × 5	SPMG0602	ITS2205	ITK06	●
NKB106188	CSPDE609100270	100	12	9	27	50	2 × 5	SPMG0602	ITS2205	ITK06	○
NKB106189	CSPDE710100270	100	12	10	27	50	2 × 5	SPMG07T3	ITS2511	ITK08	●
NKB106190	CSPDE711100270	100	12	11	27	50	2 × 5	SPMG07T3	ITS2511	ITK08	○
NKB106191	CSPDE712100270	100	12	12	27	50	2 × 5	SPMG07T3	ITS2511	ITK08	●
NKB106192	CSPDE914100270	100	16	14	27	50	2 × 5	SPMG0904	ITS3504	ITK15	○
NKB106193	CSPDE916100270	100	16	16	27	50	2 × 5	SPMG0904	ITS3504	ITK15	●
NKB106194	CSPDE711125320	125	12	11	32	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
NKB106195	CSPDE712125320	125	12	12	32	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
NKB106196	CSPDE914125320	125	16	14	32	65	2 × 6	SPMG0904	ITS3504	ITK15	○
NKB106197	CSPDE916125320	125	16	16	32	65	2 × 6	SPMG0904	ITS3504	ITK15	●
NKB106198	CSPDE118125320	125	20	18	32	65	2 × 5	SPMG1104	ITS4006	ITK15	○
NKB106199	CSPDE120125320	125	20	20	32	65	2 × 5	SPMG1104	ITS4006	ITK15	○
NKB106200	CSPDE711160400	160	12	11	40	75	2 × 8	SPMG07T3	ITS2511	ITK08	○
NKB106201	CSPDE712160400	160	12	12	40	75	2 × 8	SPMG07T3	ITS2511	ITK08	●
NKB106202	CSPDE914160400	160	16	14	40	75	2 × 8	SPMG0904	ITS3504	ITK15	○
NKB106203	CSPDE916160400	160	16	16	40	75	2 × 8	SPMG0904	ITS3504	ITK15	●
NKB106204	CSPDE118160400	160	20	18	40	75	2 × 6	SPMG1104	ITS4006	ITK15	○
NKB106205	CSPDE120160400	160	20	20	40	75	2 × 6	SPMG1104	ITS4006	ITK15	●
NKB106206	CSPDE914200400	200	16	14	40	80	2 × 9	SPMG0904	ITS3504	ITK15	○
NKB106207	CSPDE915200400	200	16	16	40	80	2 × 9	SPMG0904	ITS3504	ITK15	●
NKB106208	CSPDE118200400	200	20	18	40	80	2 × 9	SPMG1104	ITS4006	ITK15	○
NKB106209	CSPDE120200400	200	20	20	40	80	2 × 7	SPMG1104	ITS4006	ITK15	○

**Disc Milling - CSPD**

**CSPDE - Milling Tools**

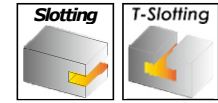
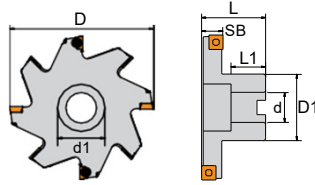


Order Code	Description	D	L1	SB	d	D1	T	Inserts	Screw	Wrench	Stock
NKB106210	CSPDE506080250	80	12	6	25.4	44	2 × 4	SPMG0502	ITS2003	ITK06	●
NKB106211	CSPDE507080250	80	12	7	25.4	44	2 × 4	SPMG0502	ITS2003	ITK06	●
NKB106212	CSPDE608080250	80	12	8	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106213	CSPDE609080250	80	12	9	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106214	CSPDE610080250	80	12	10	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106215	CSPDE711080250	80	12	11	25.4	44	2 × 4	SPMG07T3	ITS2511	ITK08	●
NKB106216	CSPDE712080250	80	12	12	25.4	44	2 × 4	SPMG07T3	ITS2511	ITK08	●
NKB106217	CSPDE608100250	100	12	8	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	○
NKB106218	CSPDE609100250	100	12	9	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	●
NKB106219	CSPDE610100250	100	12	10	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	●
NKB106220	CSPDE711100250	100	12	11	25.4	50	2 × 5	SPMG07T3	ITS2511	ITK08	○
NKB106221	CSPDE712100250	100	12	12	25.4	50	2 × 5	SPMG07T3	ITS2511	ITK08	●
NKB106222	CSPDE914100250	100	16	14	25.4	50	2 × 5	SPMG0904	ITS3504	ITK15	○
NKB106223	CSPDE916100250	100	16	16	25.4	50	2 × 5	SPMG0904	ITS3504	ITK15	○
NKB106224	CSPDE506125310	125	12	6	31.75	65	2 × 6	SPMG0502	ITS2003	ITK06	●
NKB106225	CSPDE507125310	125	12	7	31.75	65	2 × 6	SPMG0502	ITS2003	ITK06	○
NKB106226	CSPDE608125310	125	12	8	31.75	65	2 × 6	SPMG0602	ITS2205	ITK06	○
NKB106227	CSPDE610125310	125	12	10	31.75	65	2 × 6	SPMG0602	ITS2205	ITK06	○
NKB106228	CSPDE711125310	125	12	11	31.75	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
NKB106229	CSPDE712125310	125	12	12	31.75	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
NKB106230	CSPDE914125310	125	16	14	31.75	65	2 × 6	SPMG0904	ITS3504	ITK15	●
NKB106231	CSPDE916125310	125	16	16	31.75	65	2 × 6	SPMG0904	ITS3504	ITK15	○
NKB106232	CSPDE118125310	125	20	18	31.75	65	2 × 5	SPMG1104	ITS4006	ITK15	○
NKB106233	CSPDE120125310	125	20	20	31.75	65	2 × 5	SPMG1104	ITS4006	ITK15	○

● stock ○ by inquiry

**Disc Milling - CSPD**

**CSPDF - Milling Tools**



Order Code	Description	D	L1	L	SB	d	D1	T	Inserts	Screw	Wrench	Stock
NKB106234	CSPDF506080220	80	22	40	6	22	42	2 × 4	SPMG0502	ITS2003	ITK06	●
NKB106235	CSPDF507080220	80	22	40	7	22	42	2 × 4	SPMG0502	ITS2003	ITK06	●
NKB106236	CSPDF608080220	80	22	40	8	22	42	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106237	CSPDF609080220	80	22	40	9	22	42	2 × 4	SPMG0602	ITS2205	ITK06	○
NKB106238	CSPDF610080220	80	22	40	10	22	42	2 × 4	SPMG0602	ITS2205	ITK06	●
NKB106239	CSPDF711080220	80	22	40	11	22	42	2 × 4	SPMG07T3	ITS2511	ITK08	○
NKB106240	CSPDF712080220	80	22	40	12	22	42	2 × 4	SPMG07T3	ITS2511	ITK08	●
NKB106241	CSPDF506100270	100	22	40	6	27	50	2 × 5	SPMG0502	ITS2003	ITK06	○
NKB106242	CSPDF507100270	100	22	40	7	27	50	2 × 5	SPMG0502	ITS2003	ITK06	○
NKB106243	CSPDF608100270	100	22	40	8	27	50	2 × 5	SPMG0602	ITS2205	ITK06	●
NKB106244	CSPDF609100270	100	22	40	9	27	50	2 × 5	SPMG0602	ITS2205	ITK06	●
NKB106245	CSPDF610100270	100	22	40	10	27	50	2 × 5	SPMG0602	ITS2511	ITK08	●
NKB106246	CSPDF711100270	100	22	40	11	27	50	2 × 5	SPMG07T3	ITS2511	ITK08	○
NKB106247	CSPDF712100270	100	22	40	12	27	50	2 × 5	SPMG07T3	ITS2511	ITK08	●
NKB106248	CSPDF914100270	100	22	40	14	27	50	2 × 5	SPMG0904	ITS3504	ITK15	○
NKB106249	CSPDF916100270	100	22	40	16	27	50	2 × 5	SPMG0904	ITS3504	ITK15	○
NKB106250	CSPDF608125320	125	25	45	8	32	70	2 × 6	SPMG0602	ITS2205	ITK06	○
NKB106251	CSPDF610125320	125	25	45	10	32	70	2 × 6	SPMG0602	ITS2205	ITK06	●
NKB106252	CSPDF711125320	125	25	45	11	32	70	2 × 6	SPMG07T3	ITS2511	ITK08	●
NKB106253	CSPDF712125320	125	25	45	12	32	70	2 × 6	SPMG07T3	ITS2511	ITK08	●
NKB106254	CSPDF914125320	125	25	45	14	32	70	2 × 6	SPMG0904	ITS3504	ITK15	○
NKB106255	CSPDF916125320	125	25	45	16	32	70	2 × 6	SPMG0904	ITS3504	ITK15	○

● stock ○ by inquiry

**Disc Milling - CSPD**

**Recommended Cutting Conditions**

Working Material	Vc	fz
Carbon Steel / Alloy Steel	100 ~ 220	0.10 ~ 0.35
Stainless Steel	130 ~ 200	0.12 ~ 0.30
Cast Iron	100 ~ 210	0.10 ~ 0.20

**Insert Specifications**

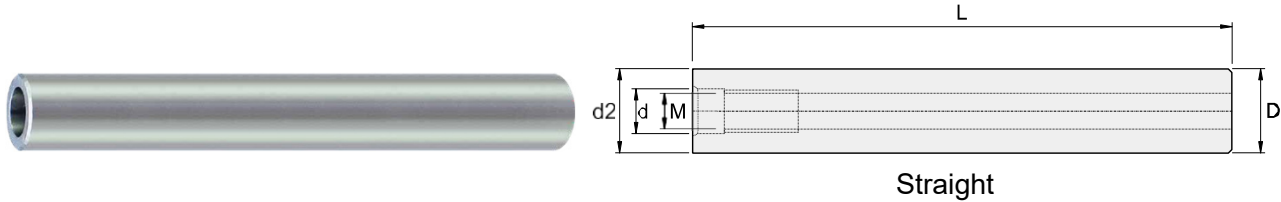
Insert	Dimensions (mm)			
	A	S	r	d1
SPMG050204	5.00	2.38	0.4	2.30
SPMG060204	6.00	2.38	0.4	2.65
SPMG07T308	7.94	3.97	0.8	2.85
SPMG090408	9.80	4.3	0.8	4.05
SPMG110408	11.50	4.8	0.8	4.45

**Insert Description**

Insert	Order Code	Description	Working Material					
			P	M	K	N	S	H
	NKB100101	SPMG050204 GM IL68ITP	●	●	●		○	
	NKB100102	SPMG050204 GM IL67UYYP	●	●	●		●	●
	NKB100103	SPMG050204 GM IL57UYYP	●	●	●		●	
	NKB100104	SPMG060204 GM IL68ITP	●	●	●		○	
	NKB100105	SPMG060204 GM IL67UYYP	●	●	●		●	●
	NKB100106	SPMG060204 GM IL57UYYP	●	●	●		●	
	NKB100107	SPMG07T308 GM IL68ITP	●	●	●		○	
	NKB100108	SPMG07T308 GM IL67UYYP	●	●	●		●	●
	NKB100109	SPMG07T308 GM IL57UYYP	●	●	●		●	
	NKB100110	SPMG090408 GM IL68ITP	●	●	●		○	
	NKB100111	SPMG090408 GM IL67UYYP	●	●	●		●	●
	NKB100112	SPMG090408 GM IL57UYYP	●	●	●		●	
	NKB100113	SPMG090408 GR IL68ITP	●	●	●		○	
	NKB100114	SPMG090408 GR IL67UYYP	●	●	●		●	●
	NKB100115	SPMG090408 GR IL57UYYP	●	●	●		●	
	NKB100116	SPMG110408 GM IL68ITP	●	●	●		○	
	NKB100117	SPMG110408 GM IL67UYYP	●	●	●		●	●
	NKB100118	SPMG110408 GM IL57UYYP	●	●	●		●	
	NKB100119	SPMG110408 GR IL68ITP	●	●	●		○	
	NKB100120	SPMG110408 GR IL67UYYP	●	●	●		●	●
	NKB100121	SPMG110408 GR IL57UYYP	●	●	●		●	

## Carbide Adapter - ISO M Threads

### SWMEA - Carbide Adapter (Straight)

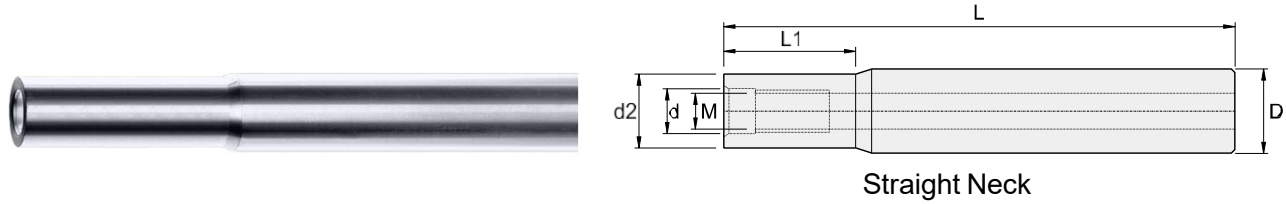


Order Code	Description	Dimensions (mm)				
		d2	d	L	D	M
NKB106256	SWMEA10075050	10	5.5	75	10	M5
NKB106257	SWMEA10100050	10	5.5	100	10	M5
NKB106258	SWMEA10150050	10	5.5	150	10	M5
NKB106259	SWMEA10100060	10	5.5	100	10	M6
NKB106260	SWMEA10150060	10	5.5	150	10	M6
NKB106261	SWMEA11100060	11	6.5	100	11	M6
NKB106262	SWMEA11150060	11	6.5	150	11	M6
NKB106263	SWMEA12075060	12	6.5	75	12	M6
NKB106264	SWMEA12100060	12	6.5	100	12	M6
NKB106265	SWMEA12150060	12	6.5	150	12	M6
NKB106266	SWMEA12200060	12	6.5	200	12	M6
NKB106267	SWMEA15100080	15	8.5	100	15	M8
NKB106268	SWMEA15150080	15	8.5	150	15	M8
NKB106269	SWMEA15200080	15	8.5	200	15	M8
NKB106270	SWMEA16100080	16	8.5	100	16	M8
NKB106271	SWMEA16150080	16	8.5	150	16	M8
NKB106272	SWMEA16200080	16	8.5	200	16	M8
NKB106273	SWMEA16250080	16	8.5	250	16	M8
NKB106274	SWMEA20100100	20	10.5	100	20	M10
NKB106275	SWMEA20150100	20	10.5	150	20	M10
NKB106276	SWMEA20200100	20	10.5	200	20	M10
NKB106277	SWMEA20250100	20	10.5	250	20	M10
NKB106278	SWMEA20300100	20	10.5	300	20	M10
NKB106279	SWMEA25100120	25	12.5	100	25	M12
NKB106280	SWMEA25150120	25	12.5	150	25	M12
NKB106281	SWMEA25200120	25	12.5	200	25	M12
NKB106282	SWMEA25250120	25	12.5	250	25	M12
NKB106283	SWMEA25300120	25	12.5	300	25	M12
NKB106284	SWMEA32200160	32	17.0	200	32	M16
NKB106285	SWMEA32300160	32	17.0	300	32	M16

*Customize available.*

**Carbide Adapter - ISO M Threads**

**SWMEB - Carbide Adapter (Straight Neck)**



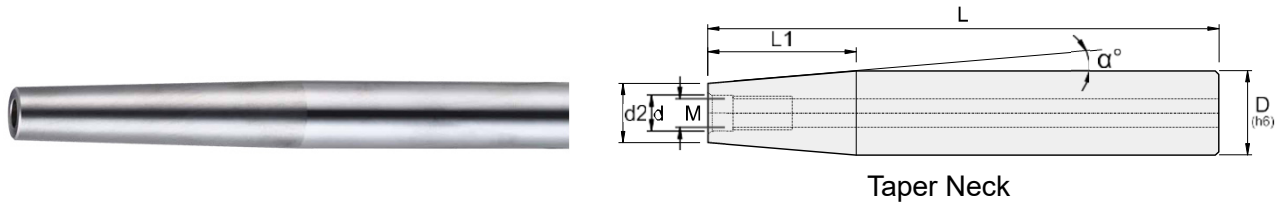
Order Code	Description	Dimensions (mm)					
		d2	d	L1	L	D	M
NKB106286	SWMEB12100060	11.5	6.5	24	100	12	M6
NKB106287	SWMEB12100061	11.5	6.5	40	100	12	M6
NKB106288	SWMEB12100062	11.5	6.5	60	100	12	M6
NKB106289	SWMEB12150060	11.5	6.5	24	150	12	M6
NKB106290	SWMEB12150061	11.5	6.5	100	150	12	M6
NKB106291	SWMEB16150082	13.0	8.5	32	150	16	M8
NKB106292	SWMEB16150080	15.0	8.5	30	150	16	M8
NKB106293	SWMEB16150081	15.0	8.5	100	150	16	M8
NKB106294	SWMEB16200080	15.0	8.5	40	200	16	M8
NKB106295	SWMEB16200081	15.0	8.5	120	200	16	M8
NKB106296	SWMEB20150102	17.0	10.5	40	150	20	M10
NKB106297	SWMEB20150100	19.0	10.5	40	150	20	M10
NKB106298	SWMEB20150101	19.0	10.5	100	150	20	M10
NKB106299	SWMEB20200100	19.0	10.5	40	200	20	M10
NKB106300	SWMEB20200101	19.0	10.5	120	200	20	M10
NKB106301	SWMEB25150120	24.0	12.5	48	150	25	M12
NKB106302	SWMEB25150121	24.0	12.5	100	150	25	M12
NKB106303	SWMEB25200120	24.0	12.5	48	200	25	M12
NKB106304	SWMEB25200121	24.0	12.5	100	200	25	M12

*Customize available.*



**Carbide Adapter - ISO M Threads**

**SWMET - Carbide Adapter (Taper Neck)**



Order Code	Description	Dimensions (mm)						
		d2	d	$\alpha^\circ$	L1	L	D	M
NKB106305	SWMET12150050	9.8	5.5	1°	60	150	12	M5
NKB106306	SWMET12150060	9.8	5.5	1°	60	150	12	M6
NKB106307	SWMET16150060	11.8	6.5	1.5°	70	150	16	M6
NKB106308	SWMET20200080	15.5	8.5	1.5°	90	200	20	M8
NKB106309	SWMET25200100	19.8	10.5	1.5°	90	200	25	M10
NKB106310	SWMET32200120	24.5	12.5	2	90	200	32	M12

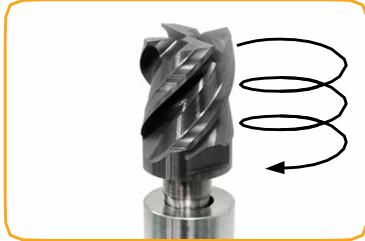
*Customize available.*

**Modular Tools Installation**

**How to install the Modular Solid Head**



1. Screw the adapter to the holder and clean.



2. Screw the Solid Head to the adapter.



3. Use the spanner to screw the Solid Head.



4. Complete installation.

**How to uninstall the Modular Solid Head**



When uninstall the Solid head, please push the spanner lightly for avoiding the neck broken.

**Recommended Torque**

Suitable Modular Solid Head Diameter	Recommended Clamping Torque (N. m)
10mm	10
12mm	10
16mm	12
20mm	12

**Modular Tools Installation**

**How to install the Modular Milling Head**



1. Screw the adapter to the holder and clean.



2. Screw the Milling Head to the adapter.



3. Use the spanner to screw the Milling Head.



4. Complete installation.

**How to uninstall the Modular Milling Head**



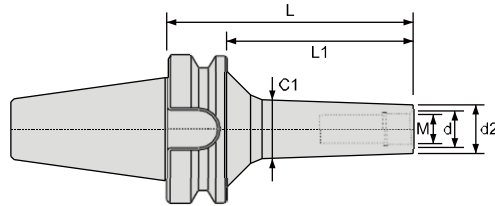
When uninstall the Milling head, please push the spanner lightly for avoiding the neck broken.

**Recommended Torque**

Suitable Modular Milling Head	Recommended Clamping Torque (N. m)
M5	10
M6	15
M8	23
M10	46
M12	80
M16	90

**BT40/50 Adapter- ISO M Threads**

**BT40/50 Adapter**

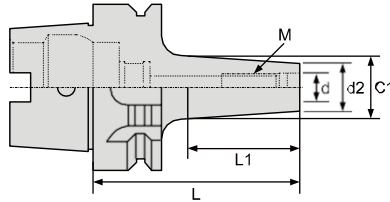


Order Code	Description	d2	d	C1	L1	L	M	Arbor Type
NKB106311	BT40DM08050	13	8.5	15	23	50	M8	BT40
NKB106312	BT40DM10057	18	10.5	21	30	57	M10	
NKB106313	BT40DM12080	21	12.5	25	53	80	M12	
NKB106314	BT40DM16087	28	17.0	31	60	87	M16	
NKB106315	BT40FMC403060	36	28.0	40	30	60	M18	
NKB106316	BT40FMC406090	36	28.0	40	60	90	M18	
NKB106317	BT50FMC5003065	48	36.0	50	30	65	M25	BT50
NKB106318	BT50FMC50080115	48	36.0	50	80	115	M25	
NKB106319	BT50FMC50130165	48	36.0	50	130	165	M25	



**HSK63 Adapter- ISO M Threads**

**HSK63 Adapter**

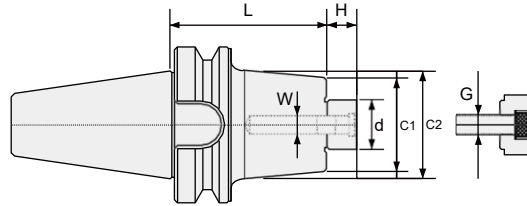


Order Code	Description	d2	d	C1	L1	L	M
NKB106320	HSK63AM08050	17	8.5	18	16	50	M8×P1.25
NKB106321	HSK63AM10060	18	10.5	23	26	60	M10×P1.5
NKB106322	HSK63AM10080	20	10.5	24	44	80	M10×P1.5
NKB106323	HSK63AM12060	23	12.5	24	26	60	M12×P1.75
NKB106324	HSK63AM12080	21	12.5	24	44	80	M12×P1.75
NKB106325	HSK63AM16080	29	17	34	46	80	M16×P2.0
NKB106326	HSK63AM16100	34	17	34	66	100	M16×P2.0



**BT Face Milling Holder**

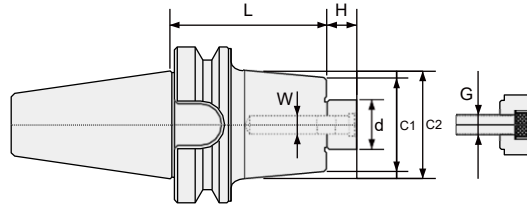
**BT FMA Series (BT30, BT40, BT50)**



Order Code	Description	Dimensions (mm)							
		Cutter dia.	d	L	C1	C2	H	W	G
NKB106327	BT30FMA25045	76	25.4	45	45	-	20	9.5	M12
NKB106328	BT30FMA31045	100	31.75	45	60	-	22	12.7	M12
NKB106329	BT40FMA25045	76	25.4	45	50	-	20	9.5	M12
NKB106330	BT40FMA25090	76	25.4	90	50	60	20	9.5	M12
NKB106331	BT40FMA31045	100	31.75	45	60	-	22	12.5	M12
NKB106332	BT40FMA31075	100	31.75	75	60	70	22	12.5	M12
NKB106333	BT40FMA31105	100	31.75	105	60	70	22	12.5	M12
NKB106334	BT50FMA25045	76	25.4	45	50	-	20	9.5	M12
NKB106335	BT50FMA25075	76	25.4	75	50	60	20	9.5	M12
NKB106336	BT50FMA25100	76	25.4	100	50	60	20	9.5	M12
NKB106337	BT50FMA31045	100	31.75	45	60	-	20	12.5	M12
NKB106338	BT50FMA31075	100	31.75	75	60	70	20	12.5	M12
NKB106339	BT50FMA31100	100	31.75	100	60	70	20	12.5	M12

**BT Face Milling Holder**

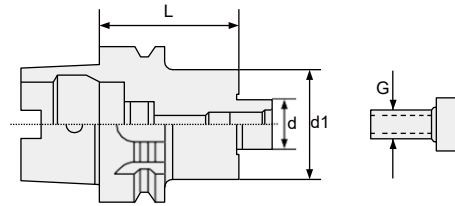
**BT FMB Series (BT30, BT40, BT50)**



Order Code	Description	Dimensions (mm)							
		Cutter dia.	d	L	C1	C2	H	W	G
NKB106340	BT30FMB22045	60	22	45	56	-	18	10	M10
NKB106341	BT30FMB27045	80	27	45	64	-	20	12	M12
NKB106342	BT30FMB32045	100	32	45	70	-	20	14	M16
NKB106343	BT40FMB22045	60	22	45	50	-	18	10	M10
NKB106344	BT40FMB22060	60	22	60	50	60	18	10	M10
NKB106345	BT40FMB22090	60	22	90	50	60	18	10	M10
NKB106346	BT40FMB27045	80	27	45	60	-	20	12	M12
NKB106347	BT40FMB27060	80	27	60	60	-	20	12	M12
NKB106348	BT40FMB27090	80	27	90	60	-	20	12	M12
NKB106349	BT40FMB27105	80	27	105	60	-	20	12	M12
NKB106350	BT40FMB32045	100	32	45	78	-	20	14	M16
NKB106351	BT40FMB40060	125	40	60	85	-	22	16	M16
NKB106352	BT50FMB22060	60	22	60	50	-	18	10	M10
NKB106353	BT50FMB22090	60	22	90	50	60	18	10	M10
NKB106354	BT50FMB22150	60	22	150	50	60	18	10	M10
NKB106355	BT50FMB27045	80	27	45	60	-	20	12	M12
NKB106356	BT50FMB27090	80	27	90	60	70	20	12	M12
NKB106357	BT50FMB27150	80	27	150	60	70	20	12	M12
NKB106358	BT50FMB32045	100	32	45	70	-	20	14	M16
NKB106359	BT50FMB32090	100	32	90	70	80	20	14	M16
NKB106360	BT50FMB40045	125	40	45	90	-	23	16	M16
NKB106361	BT50FMB40090	125	40	90	90	100	23	16	M16

**HSK Face Milling Holder**

**HSK63 FMA / FMB Series**

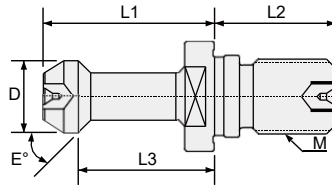


Order Code	Description	Dimensions (mm)			
		d	d1	L	G
NKB106362	HSK63AFMA25050	25.4	52	50	M12
NKB106363	HSK63AFMA25075	25.4	51	75	M12
NKB106364	HSK63AFMA25105	25.4	54	105	M12
NKB106365	HSK63AFMA25150	25.4	54	150	M12
NKB106366	HSK63AFMB16045	16	37	45	M8
NKB106367	HSK63AFMB22050	22	45	50	M10
NKB106368	HSK63AFMB22075	22	47	75	M10
NKB106369	HSK63AFMB22105	22	47	105	M10
NKB106370	HSK63AFMB22150	22	47	150	M10
NKB106371	HSK63AFMB27050	27	52	50	M12
NKB106372	HSK63AFMB27150	27	58	150	M12
NKB106373	HSK63AFMB32150	32	76	150	M16



**BT Pull Studs**

**BT Pull Studs**



Order Code	Description	Dimensions (mm)						For Shank
		L1	L2	L3	D	E°	M	
NKB106374	P30T01	23	20	18	11	45°	M12	BT30
NKB106375	P30T02	23	20	18	11	60°	M12	BT30
NKB106376	P40T01	35	25	28	15	45°	M16	BT40
NKB106377	P40T02	35	25	28	15	60°	M16	BT40
NKB106378	P50T01	45	40	35	23	45°	M24	BT50
NKB106379	P50T02	45	40	35	23	60°	M24	BT50

**Milling Inserts Grade Comparison - PVD**

ISO Code	ILPT	Mitsubishi	Hitachi	Sumitomo	Kyocera	Tungaloy	Korloy	TaeguTec
<b>P</b> Steel	P10		JP4115	ACU2500 ACP200	PR1225 PR1230 PR1525		PC2005 PC2010	TT2510
	P20	IL77BYP IL68ITP IL67UYYP	MP6120 VP15TF	JP4020 JP4120 CP9020 CY150	ACP3000 ACU2500 ACP200 ACP300	PR1225 PR1230 PR1525	AH725 AH120 AH330	PC3600 PC3700 PC2510 TT7080 TT7030
	P30	IL68ITP IL68IYP IL67UYYP IL57UYYP	VP15TF MP6120 MP6130 VP30RT	JS4045 CY250 CY25	ACP3000 ACU2500 ACP200 ACP300	PR1225 PR1230 PR1525	AH725 AH130 AH140 AH730	PC5300 TT9080 TT9030
	P40	IL57UYYP	VP30RT	JS4060 JS4160 JX1060	ACP3000 ACU2500 ACP300		AH140 AH3035	PC5400 TT8080 TT8020
<b>M</b> Stainless Steel	M10			ACM100 ACU2500 ACK300 ACP300	PR1225 PR1525			
	M20	IL77BYP	VP15TF MP7130 MP7140 VP20RT	JP4020 JP4120	ACM300 ACU2500 ACP300	PR1225 PR1525 PR1535	AH725 AH120 AH330 GH110	PC210F PC5300 TT9080 TT9030
	M30	IL67UYYP IL57UYYP	VP15TF MP7130 MP7140 VP30RT	JS4045 CY250 CY25	ACM300	PR1225 PR1525 PR1535	AH725 AH130 AH730 GH130	PC9530 TT3540 TT8080 TT8020
	M40	IL57UYYP	MP7140 VP30RT	JM4160	ACM300	PR1525 PR1535	AH140 AH3135 AH4035	PC5400 PC9540 TT3540
<b>K</b> Cast Iron	K01		MP8010	ATH80D TH308		PR1510	AH110 GH110 AH330	PC8110
	K10	IL77BYP	MP8010	TH315 CY100H	ACK3000 ACU2500	PR1210 PR1510	AH110 AH120 GH110 AH725 AH330	PC6510 TT7515 TT6080
	K20	IL68IYP IL67UYYP	VP15TF VP20RT	CY150 JP4120 CY9020	ACK3000 ACU2500 ACK300	PR1210 PR1510	GH130	PC5300 TT7515 TT6080
	K30	IL67UYYP IL57UYYP	VP15TF VP20RT	CY250 JS4045	ACK3000 ACU2500 ACK300	PR1510		PC5300 TT3080
<b>S</b> High-Temp Alloy	S01		PN08M PN208	ACM100 ACU2500 ACK300 ACP300	PR905 PR1210 PR1535	AH110 AH710		
	S10	IL67UYYP	MP9120 VP15TF	JS1025 JP4120	ACM100 ACU2500 ACK300 ACP300	PR905 PR1210 PR1535	AH120 AH725	TT9030 TT9080 TT8080
	S20	IL67UYYP IL57UYYP	MP9120 VP15TF MP9130 MP9030	PTH30H	ACM300 ACU2500 ACP300	PR905 PR1210 PR1535	AH725 AH130 AH6030	PC5300 TT8080 TT8020
	S30	IL57UYYP	MP9140	JM4160	ACM300	PR1535	AH130	PC3545 TT3540 TT8020

The above table is selected from a publication for reference only, which is not obtained approval from each brand.

**Milling Inserts Grade Comparison - PVD**

ISO Code	ILPT	Sandvik	Iscar	Kennametal	SECO	Walter
<b>P</b> Steel	P10	GC1010	IC903 IC4100 IC4050	KC715M KC930M KC935M		WKP25 WKP25S WPP20 WKK20S
	P20	IL77BYP IL67UYP	GC1010 GC1030 GC1130 GC2030	IC8080 IC810 IC928 IC380	KC715M KC930M KC935M	F25M MP3000 WSM20
	P30	IL67UYP IL57UYP	GC1010 GC1030 GC1130 GC2030	IC830 IC928 IC330	KC735M KC530M KC537M	F30M F40M MP3000 WSM30 WSM35
	P40	IL57UYP	GC2030 GC1030 GC1130		KC735M KC537M KCPM40	F40M T60M WKP45 WP45S WSP45
<b>M</b> Stainless Steel	M10		GC1025 GC1030	IC903	KC715M KC515M	
	M20	IL77BYP	GC1025 GC1030 GC1040 GC2230	IC908 IC928	KC635M KC730M KC525M KCPM40	F25M MP3000 WSM35 WXM35
	M30	IL67UYP IL57UYP	S30T GC1040 GC2230	IC328 IC330 IC830	KC530M KC537M K735M KCPM40	F30M F40M MP3000 WSM35 WXM35
	M40	IL57UYP		IC328 IC300 IC330		F40M WSP45 WSM45S
<b>K</b> Cast Iron	K01					
	K10	IL77BYP	GC1010	IC350 IC810	KC514M KC515M KC527M KC635M	MK1500 WAK15
	K20	IL67UYP	GC1010 GC1020	IC5100 IC830	KC514M KC610M KC520M KC620M	MK1500 MK2000 T150M WAK15 WKK25 WKP25S
	K30	IL67UYP IL57UYP	GC1020	IC810 IC908 IC910 IC928 IC950	KC522M KC725M KC524M KC735M	MK2000 MK2050 WKP35S WPP20
<b>S</b> High-Temp Alloy	S01		GC1010	IC808 IC907 IC908	KC510M	
	S10	IL67UYP	S30T GC1010 GC1030 GC2030	IC808 IC907 IC908 IC903	KC510M KC610M	MS2050
	S20	IL67UYP IL57UYP	S30T GC1030 GC1040 GC2030 GC2040	IC300 IC900 IC830 IC928	KC522M KC525M KC610M	MS2050 F40M WSM35 WSM36
	S30	IL57UYP	S30T GC1040 GC2040	IC830 IC928	KC522M KC525M KC725M	MS2050 F40M WSM35 WSM36 WSP45 WSP46

The above table is selected from a publication for reference only, which is not obtained approval from each brand.

**Milling Inserts Grade Comparison - CVD**

ISO Code	ILPT	Mitsubishi	Hitachi	Sumitomo	Kyocera	Tungaloy	Korloy	TaeguTec	
<b>P</b> Steel	P10			XCU2500 ACP2000 ACP100					
	P20	IL53UBC	F7030 MC7020	GX2140	XCU2500 ACP2000 ACP100		T3130 T3225	NC5330	
	P30	IL53UBC	F7030 MC7020	GX2140 GX2160	XCU2500 ACP2000 ACP100		T3130 T3225	NC5330 NCM535	TT8525B
	P40			GX2030 GX30 GX2160				NCM545	TT8525B
<b>M</b> Stainless Steel	M10			XCU2500 ACM200			NC5330		
	M20	IL53UBC	F7030 MC7020	AX2040 GX2140	XCU2500 ACM200	CA6535	T3130 T3225	NC5330	TT9540
	M30	IL53UBC	F7030 FC7020 MC7020	AX2040 GX2140 GX2160 GX30	XCU2500 ACM200	CA6535	T3130 T3225	NCM535 NCM545	TT8525B TT9540
	M40			GX2030 GX2160 GX30				NCM545	TT8525B TT9540
<b>K</b> Cast Iron	K01								
	K10	IL63UBC	MC5020		XCK2000 ACK2000 ACK200	CA420M	T1215 T1115 T1015	NC5330	TT7515
	K20	IL53UBC	MC5020		XCK2000 XCU2500 ACK2000 ACK200		T1115 T1015	NC5330	TT7515
	K30			GX30				NCM535	TT7515







*The above table is selected from a publication for reference only, which is not obtained approval from each brand.*

**Milling Inserts Grade Comparison - CVD**

ISO Code	ILPT	Sandvik	Iscar	Kennametal	SECO	Walter	
<b>P</b> Steel	P10		IC9080 IC4100 IC9015		MP1500	WKP25	
	P20	IL63UBC	GC4220	IC5500 IC5100 IC520M	MP1500 MP2500	WKP35	
	P30	IL63UBC	GC4330 GC4230	IC5500 IC4050	KCPK30 KC930M	MP2500	
	P40	IL53UBC	GC4340 GC4240		KC935M KC530M KCPM20		
<b>M</b> Stainless Steel	M10		IC9250				
	M20		IC520M IC9350	KC925M	MP2500 MM4500		
	M30	IL53UBC	GC2040	IC9350 IC4050	KC930M KCPM20	MP2500 MM4500	
	M40			IC635	KC930M KC935M		
<b>K</b> Cast Iron	K01						
	K10					WAK15	
	K20	IL63UBC	GC3220 GC3330 K20W	IC5100 IC9150	KC915M	MK1500 MK2000	WKP25
	K30	IL63UBC IL53UBC	GC3330 GC3040	IC4100 IC4050 IC520M	KC920M KC925M KCPK30 KC930M KC935M KCPM20	MK2000 MK3000	WKP35

The above table is selected from a publication for reference only, which is not obtained approval from each brand.

**Troubleshooting in Insert**

Trouble	Occurrences	Countermeasures
 <p>Thermal Cracking</p>	<p>Intermittent heating of the cutting edge. High speed, high volume metal removal.</p>	<ol style="list-style-type: none"> <li>1. Use heat resistant grades</li> <li>2. Use positive or large rake tools</li> <li>3. Increase nose radius</li> <li>4. Reduce speed, feed or depth of cut</li> </ol>
 <p>Chipping</p>	<p>Cutting tool excessively brittle.</p>	<ol style="list-style-type: none"> <li>1. Use tougher grades</li> <li>2. Use negative or smaller rake tools</li> <li>3. Increase nose radius</li> <li>4. Use increased edge land</li> <li>5. Increase cutting speed</li> </ol>
 <p>Excessive Flank Wear</p>	<p>Cutting tool too soft. Surface speed too fast.</p>	<ol style="list-style-type: none"> <li>1. Use harder and more wear resistant grade</li> <li>2. Reduce cutting speed</li> <li>3. Increase feed</li> <li>4. Use coolant</li> </ol>
 <p>Notching</p>	<p>Cutting material working harden cause serious wear of insert.</p>	<ol style="list-style-type: none"> <li>1. Increase approach angle</li> <li>2. Reduce cutting speed and feed</li> <li>3. Use high lubricity coolant</li> </ol>
 <p>Built-Up-Edge</p>	<p>Cutting speed too slow for material being machined.</p>	<ol style="list-style-type: none"> <li>1. Increase cutting speed</li> <li>2. Use friction reducing grade</li> <li>3. Use high lubricity coolant</li> </ol>
 <p>Deformation</p>	<p>Heavy feeds or higher cutting speed.</p>	<ol style="list-style-type: none"> <li>1. Reduce cutting speed or feed</li> <li>2. Use polished tools to reducing friction</li> <li>3. Use more heat resistant grade</li> </ol>
 <p>Crater Wear</p>	<p>Excessive heat and pressure welding of chip to rake.</p>	<ol style="list-style-type: none"> <li>1. Use a harder grade</li> <li>2. Reduce cutting speed and feed</li> <li>3. Use high lubricity coolant</li> </ol>



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