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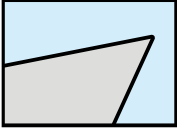
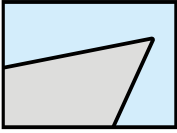
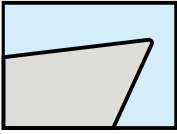
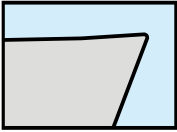
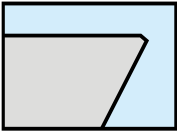
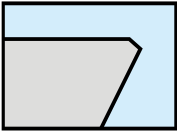


Milling Insert Grades and Chip Breakers

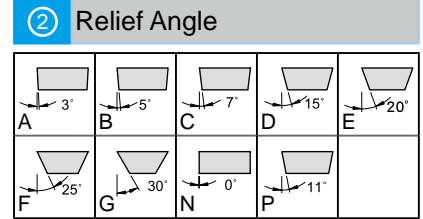
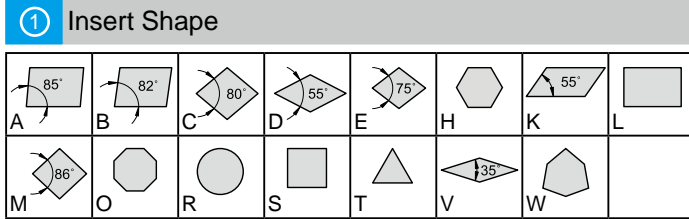
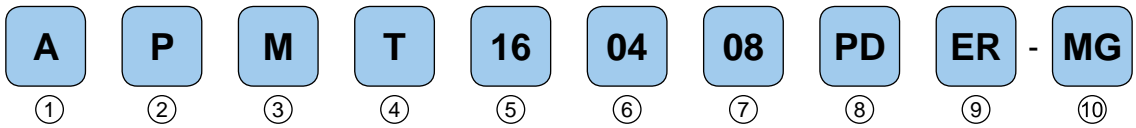
Milling Insert Grades

Grade Type	Coating Type	Properties	Application	Working Material						Industry Area
				P	M	K	N	S	H	
CX22HS	PVD	<ul style="list-style-type: none"> High Wear resistance 	<ul style="list-style-type: none"> Continuous finishing machining For Hardened steel and Cast iron 	●	●	●		○	●	<ul style="list-style-type: none"> Die and mould Hardened parts Aircraft parts
CX23TS				●	●	●		●	●	
CX31NS	PVD	<ul style="list-style-type: none"> Wear resistance Impact resistance 	<ul style="list-style-type: none"> Medium machining For Carbon steel, Alloy steel, Stainless steel and High temperature alloy 	●	●	●			○	<ul style="list-style-type: none"> Auto parts Machinery parts Aircraft parts
CX32HS				●	●	●		○	○	
CX33TS				●	●	●		●	●	
CX43TS	PVD	<ul style="list-style-type: none"> High Impact resistance High toughness 	<ul style="list-style-type: none"> Roughing or interrupted machining For Carbon steel, Alloy steel, Stainless steel and High temperature alloy 	●	●	●		●		<ul style="list-style-type: none"> Auto parts Machinery parts Aircraft parts
CX10	Uncoated	<ul style="list-style-type: none"> Superior Wear resistance 	<ul style="list-style-type: none"> Finishing and medium cutting For Aluminum alloy 					●		<ul style="list-style-type: none"> Bike and auto parts Electronic parts

Milling Insert Chip Breakers

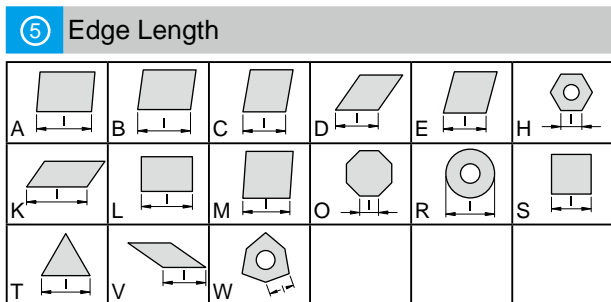
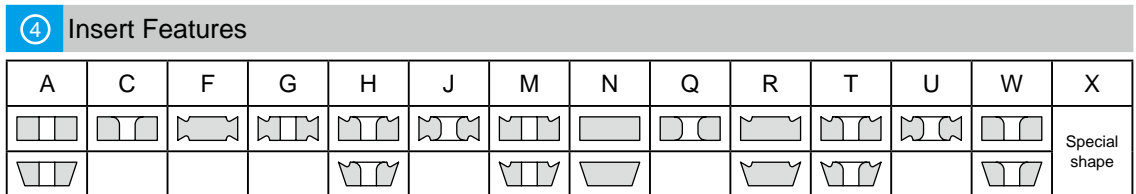
Chip Breaker		Application
	AL	Large positive rake angle with sharp cutting edge for Non-ferrous materials.
for Aluminum		
	FG	Large positive rake angle with sharp cutting edge for finishing cutting in steel.
Finishing		
	SM SG	Sharp geometry design for Semi-finishing cutting in steel, stainless and difficult-to-cut material.
Semi-Finishing		
	MF MM MG	Low cutting force for medium cutting in steel, stainless and cast iron.
Medium		
	RG	Strong geometry design for rough cutting in steel, alloy steel and hardened steel.
Roughing		
	HG	Strong, negative and big chamfering cutting edge for roughing, forging and cast skin.
Heavy-Roughing		

Designations For Milling Insert



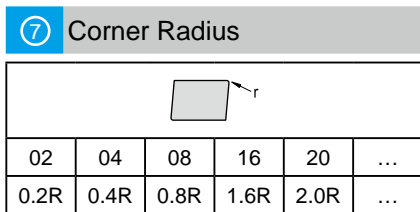
③ Tolerance Class

Tolerance	Range of tolerance	A	C	E	F	G	H	J	K	L	M	N	U	
		$d \pm$	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	0.025	0.05-0.13	0.025	0.13	



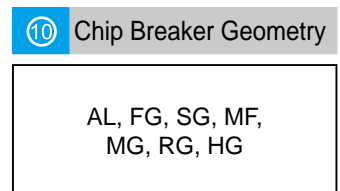
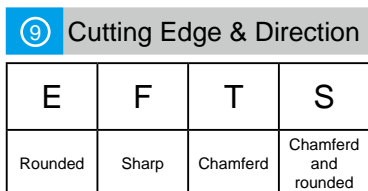
⑥ Thickness

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



⑧ Edge Clearance

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



Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
Shoulder Milling - Double-sided Inserts																
	XNMX040304-SG	✓	✓		✓	✓			6.7	-	3.285	0.4	3.15	-		A296
	XNMX040304-MG	✓			✓	✓		6.7	-	3.285	0.4	3.15	-			
	XNMX040308-MG	✓	✓		✓	✓	✓	6.7	-	3.285	0.8	3.15	-			
	XNMX080608-MG	✓	✓		✓	✓	✓	12.53	-	6.5	0.8	4.5	-			
	XNMX080608-RG				✓	✓	✓	12.53	-	6.5	0.8	4.5	-			
Shoulder Milling - Single-sided Inserts																
	APKT100304PDER-AL						✓	10.5	6.7	3.5	0.4	2.8	-		A315 A392	
	APKT100304PDER-SG	✓						10.5	6.7	3.5	0.4	2.8	-			
	APKT100304PDER-MG	✓	✓		✓	✓	✓	10.5	6.7	3.5	0.4	2.8	-			
	APKT100308PDER-MG	✓	✓		✓	✓	✓	10.5	6.7	3.5	0.8	2.8	-			
	APKT100304PDER-RG				✓	✓		10.5	6.7	3.5	0.4	2.8	-			
	APKT160408PDER-MG	✓			✓	✓	✓	16.3	9.525	5.25	0.8	4.5	-			
	APKT160408PDER-RG	✓			✓	✓	✓	16.3	9.525	5.25	0.8	4.5	-			
	APKT170516PEER-RG	✓	✓		✓	✓	✓	18.5	10.7	5.56	1.6	4.5	-			
	APET160402PDFR-AL						✓	16.3	9.525	5.25	0.2	4.5	-			
	APET160404PDFR-AL						✓	16.3	9.525	5.25	0.4	4.5	-			

* Customized insert or other grade (CX21NS, CX31NA or CX31NS) are acceptable.

Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
Shoulder Milling - Single-sided Inserts																
	APET160402PDFR-FG	✓							16.3	9.525	5.25	0.2	4.5	-		A315
	APET160404PDFR-FG	✓							16.3	9.525	5.25	0.4	4.5	-		A392
	APMT103508PDER-RG	✓			✓	✓	✓		10.64	6.5	3.5	0.8	3	-		-
	APMT113508PDER-MG	✓	✓		✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-		A323 A390
	APMT113516PDER-MG	✓				✓	✓		11.0	6.35	3.5	1.6	2.8	-		
	APMT113508PDER-RG	✓	✓		✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-		
	APMT113508PDER-HG	✓			✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-		
	APMT160408PDER-MG	✓			✓	✓	✓		16.5	9.525	4.76	0.8	4.4	-		
	APMT160416PDER-MG	✓				✓	✓		16.5	9.525	4.76	1.6	4.4	-		
	APMT160408PDER-RG	✓	✓		✓	✓	✓		16.5	9.525	4.76	0.8	4.4	-		
	APMT160408PDER-HG	✓			✓	✓	✓		16.5	9.525	4.76	0.8	4.4	-		
	APGT160408PDER-AL	✓						✓	16.5	9.525	4.76	0.8	4.4	-		
	APGT160408PDER-FG	✓							16.5	9.525	4.76	0.8	4.4	-		
	AXMT123508PEER-RG	✓			✓	✓	✓		12.18	6.93	3.58	0.8	3.4	-		A319
	AXMT170508PEER-RG	✓			✓	✓	✓		17.50	10.2	5.56	0.8	4.6	-		
	AXMT170516PEER-RG	✓			✓	✓	✓		17.50	10.2	5.56	1.6	4.6	-		

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page					
		CX22HS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1	t1							
Shoulder Milling - Single-sided Inserts																				
	CPMT090308-MG	H			✓						9.525	-	3.18	0.8	4.4	-		-		
	CPMT120408-MG	H			✓						12.7	-	4.76	0.8	5.5	-		-		
	JDMT150508R-MG	H			✓	✓	✓				15.1	9.12	5.0	0.8	4.5	-		-		
	SOMT08T308-SG	S				✓					5.6	8.5	3.3	0.8	2.8	1.2		A330		
	SOMT140408-SG	S				✓	✓				10.3	13.8	3.9	0.8	4.1	2.0				
	SPMG050204-MG	T			✓	✓	✓				5.00	-	2.38	0.4	2.30	-		A308 A388 A396 A398		
	SPMG060204-MG	T			✓	✓	✓				6.00	-	2.38	0.4	2.65	-				
	SPMG07T308-MG	T			✓	✓	✓				7.94	-	3.97	0.8	2.85	-				
	SPMG090408-MG	T			✓	✓	✓				9.80	-	4.3	0.8	4.05	-				
	SPMG090408-RG	T			✓	✓	✓				9.80	-	4.3	0.8	4.05	-				
	SPMG110408-MG	T			✓	✓	✓				11.50	-	4.8	0.8	4.45	-				
	SPMG110408-RG	T			✓	✓	✓				11.50	-	4.8	0.8	4.45	-				
	TPKR1603PPR-MG	I			✓	✓					16.5	9.525	3.1	-	2.2	1.423				-
	TPKR1603PPR-RG	I			✓	✓	✓				16.5	9.525	3.1	-	2.2	1.423				
	TPMX100408-SG	T			✓	✓					6.9	-	4	0.8	3	-				A326
	TPMX100408-MG	T	✓	✓	✓	✓	✓				6.9	-	4	0.8	3	-				
	TPMX150508-MG	T	✓	✓	✓	✓	✓				10.7	-	5	0.8	4.85	-				

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page					
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1				
Shoulder Milling - Single-sided Inserts																				
	W39011T308-MG	S	✓	✓		✓	✓	✓					11	6.9	3.59	0.8	2.8	-		A311
	W39011T320-MG	S	✓	✓		✓	✓						11	6.9	3.59	2.0	2.8	-		
	W390180612-MG	S											15.4	11	6.33	1.2	4.2	-		
	WRT070204-RG	S	✓	✓		✓	✓	✓					4.30	6.4	2.38	0.4	2.2	1.3		A304
	WRT100308-RG	S	✓	✓		✓	✓	✓					6.35	9.3	3.4	0.8	2.9	1.8		
	XOMT060208-SG	S				✓	✓						7	4.09	2.45	0.8	2	-		A300
	XOMT060204-MG	S	✓			✓	✓						7	4.09	2.45	0.4	2	-		
	XOMT060208-MG	S	✓	✓		✓	✓	✓					7	4.09	2.45	0.8	2	-		
	XOMT060216-MG	S						✓	✓				7	4.09	2.45	1.6	2	-		
	XOMT10T308-SG	S				✓	✓	✓					11.08	6.86	3.8	0.8	3	-		
High Feed Face Milling - Double-sided Inserts																				
	BNMX0603-SG	T	✓	✓		✓	✓	✓					9.0	6.38	3.75	-	3.2	-		A333
	BNMX0603-MG	T	✓	✓		✓	✓	✓					9.0	6.38	3.75	-	3.2	-		
	BNMX0603-RG	T	✓	✓		✓	✓	✓					9.0	6.38	3.75	-	3.2	-		
	BNMX0904-MG	T	✓	✓		✓	✓	✓					11.9	9.18	4.8	-	4.2	-		A337
	LNMX0303-SG	T	✓	✓		✓	✓	✓					11.59	6.0	4.29	-	2.85	-		
	LNMX0303-MG	T	✓	✓		✓	✓	✓					11.59	6.0	4.29	-	2.85	-		
	LOGX030310-SG	K				✓	✓						11.9	6.2	3.96	-	3.45	-		A341

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
High Feed Face Milling - Double-sided Inserts																
	WMMX09T316-MG K	✓			✓	✓	✓		9.525	-	3.97	1.6	3.6	-		A344
	WMMX09T316-RG K	✓	✓		✓	✓	✓		9.525	-	3.97	1.6	3.6	-		
	WMMX130516-MG S	✓	✓		✓	✓	✓		12.7	-	6.02	1.6	4.7	-		
High Feed Face Milling - Single-sided Inserts																
	ISR145 S	✓			✓	✓	✓		12	7.0	3.0	1.45	3.4	-		-
	ISR145-F S	✓			✓	✓	✓		12	7.0	3.0	1.45	3.4	-		
	JDMW120420ZDSR-MF M	✓			✓	✓	✓		2.5	12.0	4.76	2.0	4.75	-		A350
	JDMW120420ZDSR-RG M	✓	✓		✓	✓	✓		2.5	12.0	4.76	2.0	4.75	-		
	JDMW140520ZDSR-MF M				✓	✓			2.8	14.0	5.56	2.0	5.75	-		
	JDMW140520ZDSR-RG M				✓	✓			2.8	14.0	5.56	2.0	5.75	-		
	JDMT140520ZDSR-MG M				✓	✓	✓		2.8	14.0	5.56	2.0	5.75	-		
	SDMT1205ZDSN-MF H	✓			✓	✓	✓		12.7	-	5.56	15	4.6	-		
	SDMT1205ZDTN-MG H		✓		✓	✓	✓		12.7	-	5.56	15	4.6	-		A348
	SDMT1205ZDTN-RG H		✓		✓	✓	✓		12.7	-	5.56	15	4.6	-		
	SDNW1205ZDSN-MF H				✓	✓			12.7	-	5.56	15	4.6	-		
	SDNW1205ZDTN-RG H	✓	✓		✓	✓	✓		12.7	-	5.56	15	4.6	-		

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
High Feed Face Milling - Single-sided Inserts																
	WPMW080615ZPSR-MF T				✓	✓			8	12.87	6.35	1.5	5.5	-		-
	WPMW080615ZPSR-RG T				✓	✓			8	12.87	6.35	1.5	5.5	-		
Face Milling - Double-sided Inserts																
	HNMX0704-SG W				✓	✓	✓		6.8	12.7	4.45	1.2	4.9	1.4		A358
	ONMX0505-RG W	✓			✓	✓	✓		12.7	12.7	6.4	-	6	-		A354
	SNMX1205-MG W	✓			✓	✓	✓		12.7	1.5	6.4	-	6	-		
	SNMX1205-RG W	✓			✓	✓	✓		12.7	1.5	6.4	-	6	-		
Face Milling - Single-sided Inserts																
	OFMT05T3TN-MG T				✓	✓	✓		12.7	-	3.8	0.6	4.6	-		A362
	OFMT05T3TN-RG T				✓	✓	✓		12.7	-	3.8	0.6	4.6	-		
	SEMR1203AFSN-RG T				✓	✓			12.7	1.6	3.18	1	2	-		-
	SEKT1204AFEN-MF K				✓	✓			12.7	-	4.76	0.8	5.5	-		A364
	SEKT1204AFTN-RG K				✓	✓	✓		12.7	-	4.76	0.8	5.5	-		
	SEKW1204AFEN K				✓	✓			12.7	-	4.76	0.8	5.5	-		
	SEKW1204AFSN-F K				✓	✓			12.7	-	4.76	0.8	5.5	-		
	SEKW1204AFTN K				✓	✓			12.7	-	4.76	0.8	5.5	-		

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
Face Milling - Single-sided Inserts																
	SEET1204AFFN-AL K							✓	12.7	-	4.76	0.8	5.5	-		A364
	SEET1204AFFN-FG K	✓							12.7	-	4.76	0.8	5.5	-		
	SEMT13T3AGEN-MF M	✓			✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		A360
	SEMT13T3AGSN-MF M	✓			✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		
	SEMT13T3AGEN-MG M	✓			✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		
	SEMT13T3AGTN-MG M	✓			✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		
	SEMT13T3AGTN-RG M				✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		
	SEMT13T3AGTN-HG M				✓	✓	✓		13.4	1.9	3.97	1.5	4.2	-		
	SEET13T3AGFN-AL M							✓	13.4	1.9	3.97	1.5	4.2	-		
	SEET13T3AGFN-FG M	✓							13.4	1.9	3.97	1.5	4.2	-		
	SPMN120308				✓				12.7	-	3.18	0.8	2	-		-
Copy Milling - Single-sided Inserts																
	RCMT1204MO-FG S	✓			✓				12	-	4.76	-	4.2	-		-

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Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1		
Copy Milling - Single-sided Inserts															
	RDKW0501MOE S	✓			✓	✓	✓		5	-	1.59	-	2.2	-	 A367
	RDKW0501MOT S	✓			✓	✓	✓		5	-	1.59	-	2.2	-	
	RDKW0702MOE S	✓			✓	✓	✓		7	-	2.38	-	2.8	-	
	<small>NEW</small> RDKW0702MOS-F S				✓	✓			7	-	2.38	-	2.8	-	
	RDKW0702MOT S	✓			✓	✓	✓		7	-	2.38	-	2.8	-	
	RDMT1003MOE T	✓			✓	✓	✓		10	-	3.18	-	3.9	-	
	RDMT1003MOT T	✓	✓		✓	✓	✓		10	-	3.18	-	3.9	-	
	RDMX1003MOE K	✓			✓	✓	✓		10	-	3.18	-	4.15	-	
	RDMX1003MOT K	✓			✓	✓	✓		10	-	3.18	-	4.15	-	
	RDMT10T3MOE H	✓			✓	✓	✓		10	-	3.97	-	4.5	-	
	RDMT10T3MOT H	✓			✓	✓	✓		10	-	3.97	-	4.5	-	
	RDMW10T3MOE H				✓	✓			10	-	3.97	-	4.5	-	
	RDMW10T3MOT H				✓	✓			10	-	3.97	-	4.5	-	

* Customized insert or other grade (CX21NS, CX31NA or CX31NS) are acceptable.

Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page
		CX22HS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1	t1		
Copy Milling - Single-sided Inserts															
	RDMT12T3MOE <i>T</i>	✓		✓	✓			12	-	3.97	-	4.1	-		A367
	RDMT12T3MOT <i>T</i>	✓		✓	✓			12	-	3.97	-	4.1	-		
	RDMX12T3MOE <i>L</i>	✓		✓	✓	✓		12	-	3.97	-	4.1	-		
	RDMX12T3MOT <i>L</i>	✓		✓	✓	✓		12	-	3.97	-	4.1	-		
	RDMT1204MOE <i>H</i>	✓		✓	✓	✓		12	-	4.76	-	4.4	-		
	RDMT1204MOT <i>H</i>	✓		✓	✓	✓		12	-	4.76	-	4.4	-		
	RDMW1204MOE <i>W</i>	✓		✓	✓	✓		12	-	4.76	-	4.4	-		
	NEW RDMW1204MOS-F <i>W</i>				✓	✓		12	-	4.76	-	4.4	-		
	RDMW1204MOT <i>W</i>	✓		✓	✓	✓		12	-	4.76	-	4.4	-		
	RDMT1604MOT <i>H</i>	✓		✓	✓	✓		16	-	4.76	-	5.5	-		
	RDMW1604MOE <i>H</i>	✓		✓	✓	✓		16	-	4.76	-	5.5	-		
	RDMW1604MOS-F <i>H</i>	✓		✓	✓	✓		16	-	4.76	-	5.5	-		
	RDMW1604MOT <i>H</i>	✓	✓	✓	✓	✓		16	-	4.76	-	5.5	-		

* Customized insert or other grade (CX21NS, CX31NA or CX31NS) are acceptable.

Milling Inserts

Inserts	Designation	Grade No.							Dimensions (mm)						Drawing	Cutter Page
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1	t1		
Copy Milling - Single-sided Inserts																
	RPMT08T2MOE <i>M</i>				✓	✓	✓		8	-	2.78	-	3.2	-	 A373	
	RPMT08T2MOT <i>M</i>				✓	✓	✓		8	-	2.78	-	3.2	-		
	RPMW1003MOE <i>M</i>	✓			✓	✓	✓		10	-	3.18	-	4.6	-		
	<small>NEW</small> RPMW1003MOS-F <i>M</i>					✓			10	-	3.18	-	4.6	-		
	RPMW1003MOT <i>M</i>	✓			✓	✓	✓		10	-	3.18	-	4.6	-		
	RPMT10T3MOE <i>M</i>				✓	✓	✓		10	-	3.97	-	4.5	-		
	RPMT10T3MOT <i>M</i>				✓	✓	✓		10	-	3.97	-	4.3	-		
	RPMT1204MOE <i>M</i>	✓			✓	✓	✓		12	-	4.76	-	4.3	-		
	RPMT1204MOT <i>M</i>	✓			✓	✓	✓		12	-	4.76	-	4.3	-		
	RPMW1204MOE <i>M</i>				✓	✓	✓		12	-	4.76	-	4.3	-		
	RPMW1204MOT <i>M</i>				✓	✓	✓		12	-	4.76	-	4.3	-		

* Customized insert or other grade (CX21NS, CX31NA or CX31NS) are acceptable.

Milling Inserts

Inserts	Designation	Grade No.						Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1			t1
Copy Milling - Single-sided Inserts																
	WP26339R14-RG W	✓	✓		✓	✓	✓		-	9.52	3.97	1.2	4.4	-		A352 A380
	WP26379R25-RG W	✓	✓		✓	✓	✓		1.1	13	5.56	2.0	5.5	-		
	WP3212-SM W	✓							12	6	2.5	-	5	-		A377
	WP3216-SM W	✓							16	6	3	-	5	-		
	WP3220-SM W	✓							20	6	3	-	5	-		
	WP3225-SM W	✓							25	9	4	-	6	-		
	WP3232-SM W	✓							32	10	5	-	8	-		
	WP3212-MM W	✓							12	6	2.5	-	5	-		
	WP3216-MM W	✓							16	6	3	-	5	-		
	WP3220-MM W	✓							20	6	3	-	5	-		
	WP3225-MM W	✓							25	9	4	-	6	-		
	WP3232-MM W	✓							32	10	5	-	8	-		

* Customized insert or other grade (CX21NS, CX31NA or CX31NS) are acceptable.

Milling Inserts

Inserts	Designation	Grade No.							Dimensions (mm)						Drawing	Cutter Page	
		CX22HS	CX23TS	CX31NS	CX32HS	CX33TS	CX43TS	CX10	A	B	S	r	d1	t1			
Chamfering & Engraving Inserts																	
	DCEX11T301-XF				✓					-	-	-	0.1	-	-		A384
	DCEX11T302-XF				✓					-	-	-	0.2	-	-		
	DCEX11T304-XF				✓						-	-	-	0.4	-		
	DCEX11T304-XR				✓					-	-	-	0.4	-	-		A384
	DCEX11T308-XR				✓					-	-	-	0.8	-	-		
	SCGX09T304-AG							✓		-	-	-	0.4	-	-		A385
	SCGX09T304-FG	✓								-	-	-	0.4	-	-		
	SCMX09T304-SM				✓					-	-	-	0.4	-	-		
	TCGX16T308-AG							✓		-	-	-	0.8	-	-		A385
	TCGX16T308-FG	✓								-	-	-	0.8	-	-		
	TCMX16T308-MP				✓					-	-	-	0.8	-	-		

* Customized insert is acceptable.

INDEX

Shoulder Milling Cutters

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CART - single sided, 2 cutting edges.....	A304
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CAPK - single sided, 2 cutting edges.....	A315
CWEX - single sided, 2 cutting edges.....	A319
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Face Milling Cutters

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Copy Milling Cutters

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Helical Milling Cutters


























CBAH - side milling, roughing, 4 cutting edges.....	A390
CAPH - side milling, roughing, 4 cutting edges.....	A392
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Disc Milling Cutters

CSPT - side slotting.....	A396
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













Specifications

Shoulder Milling

Cutter Series	Cutter Range	Inserts	Page
Double Sided			
	CXXNE	Ø20 ~ Ø32	XNMX0403
	CXXNF	Ø50 ~ Ø125	XNMX0403 / XNMX0806
	CXXNM	Ø17 ~ Ø32	XNMX0403
	CXSNE	Ø50 ~ Ø80	SNMX1205
Single Sided			
	CAXOE	Ø10 ~ Ø32	XOMT0602 / XOMT10T3
	CAXOM	Ø10 ~ Ø20	XOMT0602
	CARTE	Ø10 ~ Ø26	WRT0702 / WRT1003
	CARTM	Ø10 ~ Ø21	
	CASPE	Ø12 ~ Ø32	SPMG..
	CASPF	Ø50 ~ Ø80	
	CR39E	Ø16 ~ Ø32	W39011T3
	CR39F	Ø50 ~ Ø80	
	CR39M	Ø16 ~ Ø32	
	CAPKE	Ø16 ~ Ø32	APKT1003 / APKT1604 / APET1604
	CAPKF	Ø50 ~ Ø100	
	CAPKM	Ø16 ~ Ø32	
	CWEXE	Ø16 ~ Ø32	AXMT1235 / AXMT1705
	CWEXF	Ø50 ~ Ø100	
	CBAPE	Ø16 ~ Ø32	APMT1135 / APMT1604 / APGT1604
	CBAPF	Ø50 ~ Ø80	
	CBAPM	Ø16 ~ Ø33	
	CATPE	Ø20 ~ Ø40	TPMX1004 / TPMX1505
	CATPF	Ø50 ~ Ø63	TPMX1004
	CATPM	Ø21 ~ Ø33	
	CR49F	Ø50 ~ Ø80	SOMT1404









Specifications

Face Milling

Cutter Series	Cutter Range	Inserts	Page
High Feed Application			
	CXBNE	Ø15 ~ Ø32	BNMX0603 / BNMX0904
	CXBNF	Ø40 ~ Ø80	
	CXBNM	Ø16 ~ Ø42	
	CXLNE	Ø16 ~ Ø32	LNMX0303
	CXLNF	Ø50	
	CXLNM	Ø17 ~ Ø32	
	CXLOE	Ø16 ~ Ø35	LOGX0303
	CXLOF	Ø50	
	CXLOM	Ø17 ~ Ø35	
	CXWNE	Ø25 ~ Ø32	WNMX09T3
	CXWNF	Ø50 ~ Ø80	WNMX09T3 / WNMX1305
	CASRF	Ø50 ~ Ø80	SDNW1205 / SDMT1205
	CAJXE	Ø32	JDMW1204
	CAJXF	Ø50 ~ Ø100	JDMW1204 / JDMW1405
	CF23E	Ø32 ~ Ø50	WP26339 / WP26379
	CF23F	Ø50 ~ Ø160	WP26379
General Application			
	CXSNF	Ø50 ~ Ø102.9	SNMX1205 / ONMX0505
	CXHNF	Ø50 ~ Ø100	HNMX0704
	CASXF	Ø50 ~ Ø100	SEET13T3 / SEMT13T3
	CAOFF	Ø50 ~ Ø100	OFMT05T3
	CASEF	Ø50 ~ Ø120	SEKT1204 / SEKW1204

Specifications

Copy Milling

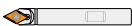
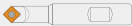

Cutter Series	Cutter Range	Inserts	Page
Corner Radius Type			
	CARDE	Ø10 ~ Ø32	A367
	CARDF	Ø50 ~ Ø100	
	CARDM	Ø12 ~ Ø42	
	CARPE	Ø16 ~ Ø32	A373
	CARPF	Ø50 ~ Ø80	
Ball Nose Type			
	CF21E	Ø12 ~ Ø32	A377
	CF21M	Ø12 ~ Ø32	
	CF22M	Ø25 ~ Ø50	A380

Milling






Indexable Milling Cutters

Specifications




Chamfering & Engraving

Cutter Series		Cutter Range	Inserts	Page
	DTS6	Ø10 ~ Ø12	DCEX11T3	A384
	DTS9	Ø10 ~ Ø20	SCGX09T3 / SCMX09T3 TCGX16T3 / TCMX16T3	A385
	CSPCE	Ø11 ~ Ø50	SPMG...	A388

Helical Milling

Cutter Series		Cutter Range	Inserts	Page
	CBAHE	Ø20 ~ Ø50	APMT1135 / APMT1604 / APGT1604	A390
	CBAHM	Ø50 ~ Ø63	APMT1604 / APGT1604	
	CAPHE	Ø20 ~ Ø32	APKT1003	A392
	CAPHM	Ø50 ~ Ø63	APKT1604 / APET1604	
	C39HE	Ø25 ~ Ø32	W39011T3	A394

Disc Milling

Cutter Series		Cutter Range	Inserts	Page
	CSPTE	Ø19 ~ Ø32	SPMG...	A396
	CSPDE	Ø80 ~ Ø200	SPMG...	A398
	CSPDF	Ø80 ~ Ø125		

CXXN Shoulder Milling



Milling

Indexable Milling Cutters

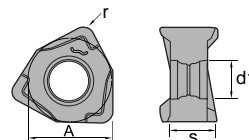
Economical solution in various end-milling applications !!!

- ***CXXN is the best solution 90° milling with the economy of 6 cutting edges while providing the highest performance.***
- ***Available in multiple mounting tools, such as End mill, Modular and Face mill type.***
- ***Suitable for small and large sized milling machines.***






CXXN Shoulder Milling

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 Order Code

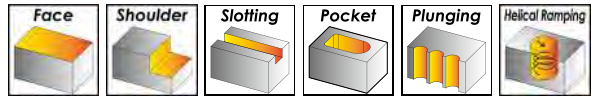
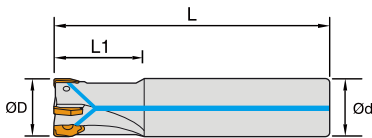
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IXNMX040304SG22HS	XNMX040304-SG-CX22HS	●	●	●		○	●
	IXNMX040304SG23TS	XNMX040304-SG-CX23TS	●	●	●		●	●
	IXNMX040304SG32HS	XNMX040304-SG-CX32HS	●	●	●		○	○
	IXNMX040304SG33TS	XNMX040304-SG-CX33TS	●	●	●		●	●
	IXNMX040304MG22HS	XNMX040304-MG-CX22HS	●	●	●		○	●
	IXNMX040304MG32HS	XNMX040304-MG-CX32HS	●	●	●		○	○
	IXNMX040304MG33TS	XNMX040304-MG-CX33TS	●	●	●		●	●
	IXNMX040308MG22HS	XNMX040308-MG-CX22HS	●	●	●		○	●
	IXNMX040308MG23TS	XNMX040308-MG-CX23TS	●	●	●		●	●
	IXNMX040308MG32HS	XNMX040308-MG-CX32HS	●	●	●		○	○
	IXNMX040308MG33TS	XNMX040308-MG-CX33TS	●	●	●		●	●
	IXNMX040308MG43TS	XNMX040308-MG-CX43TS	●	●	●		●	
	IXNMX080608MG22HS	XNMX080608-MG-CX22HS	●	●	●		○	●
	IXNMX080608MG23TS	XNMX080608-MG-CX23TS	●	●	●		●	●
	IXNMX080608MG32HS	XNMX080608-MG-CX32HS	●	●	●		○	○
	IXNMX080608MG33TS	XNMX080608-MG-CX33TS	●	●	●		●	●
	IXNMX080608MG43TS	XNMX080608-MG-CX43TS	●	●	●		●	
	IXNMX080608RG32HS	XNMX080608-RG-CX32HS	●	●	●		○	○
	IXNMX080608RG33TS	XNMX080608-RG-CX33TS	●	●	●		●	●
	IXNMX080608RG43TS	XNMX080608-RG-CX43TS	●	●	●		●	

CXXN Shoulder Milling

Recommended Cutting Conditions

Working Material	for XNMX0403			for 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

CXXNE - Milling tools



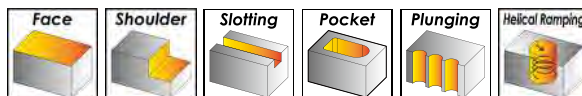
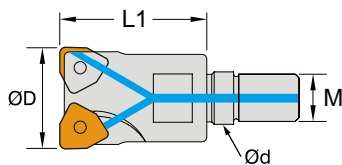
Order No.	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXXNE403020150	20	40	150	20	3		XNMX0403	ITS2512	ITK08	●
ICXXNE403020200	20	100	200	20	3					●
ICXXNE404025150	25	40	150	25	4			●		
ICXXNE405032200	32	45	200	32	5			●		
ICXXNE403020111	20	28	110	20	3	✓		●		
ICXXNE404025121	25	28	120	25	4	✓		●		
ICXXNE405032131	32	30	130	32	5	✓		●		

● stock ○ by inquiry

Customize available.

CXXN Shoulder Milling

CXXNM - Modular tools

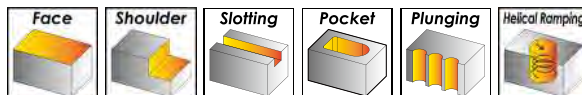
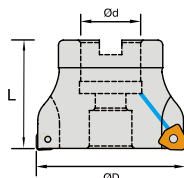


Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXXNM402017081	17	26	8.5	M08	2	✓	XNMX0403	ITS2512	ITK08	●
ICXXNM403021101	21	32	10.5	M10	3	✓				●
ICXXNM404026121	26	38	12.5	M12	4	✓				●
ICXXNM404032160	32	41	17	M16	4					○

● stock ○ by inquiry

Customize available.

CXXNF - Milling tools



Order No.	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXXNF406050220	50	50	22	6		XNMX0403	ITS2512	ITK08	●
ICXXNF407063220	63	50	22	7					●
ICXXNF407063250	63	50	25.4	7					●
ICXXNF407040161	40	40	16	7	✓				●
ICXXNF409050221	50	40	22	9	✓				●
ICXXNF805050221	50	40	22	5	✓	XNMX0806	ITS4006	ITK15	●
ICXXNF806063221	63	40	22	6	✓				●
ICXXNF807080271	80	50	27	7	✓				●
ICXXNF811100321	100	50	32	11	✓				○
ICXXNF811125401	125	63	40	11	✓				○

● stock ○ by inquiry

Customize available.



Mini Size Cutter for Wider Applications !

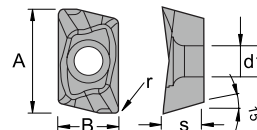


- *Ø10 cutter with 2 teeth, Ø12 cutter with 3 teeth, Ø16 cutter with 4 teeth and Ø20 cutter with 5 teeth.*
- *Replace solid end mill with better cost saving.*
- *Offering excellent tool life and precision on small to medium size work pieces.*
- *Cutter and modular head ensure better flexibility.*

CAXO Shoulder Milling

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
XOMT10T308	11.08	6.86	3.8	0.8	3



Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IXOMT060208SG32HS	XOMT060208-SG-CX32HS	●	●	●		○	○
	IXOMT060208SG33TS	XOMT060208-SG-CX33TS	●	●	●		●	●
	IXOMT060204MG22HS	XOMT060204-MG-CX22HS	●	●	●		○	●
	IXOMT060204MG32HS	XOMT060204-MG-CX32HS	●	●	●		○	○
	IXOMT060204MG33TS	XOMT060204-MG-CX33TS	●	●	●		●	●
	IXOMT060208MG22HS	XOMT060208-MG-CX22HS	●	●	●		○	●
	IXOMT060208MG23TS	XOMT060208-MG-CX23TS	●	●	●		●	●
	IXOMT060208MG32HS	XOMT060208-MG-CX32HS	●	●	●		○	○
	IXOMT060208MG33TS	XOMT060208-MG-CX33TS	●	●	●		●	●
	IXOMT060208MG43TS	XOMT060208-MG-CX43TS	●	●	●		●	
	IXOMT060216MG33TS	XOMT060216-MG-CX33TS	●	●	●		●	●
	IXOMT060216MG43TS	XOMT060216-MG-CX43TS	●	●	●		●	
	IXOMT10T308SG32HS	XOMT10T308-SG-CX32HS	●	●	●		○	○
	IXOMT10T308SG33TS	XOMT10T308-SG-CX33TS	●	●	●		●	●
	IXOMT10T308SG43TS	XOMT10T308-SG-CX43TS	●	●	●		●	

CAXO Shoulder Milling

Recommended Cutting Conditions

for XOMT0602

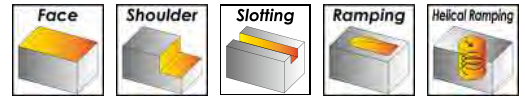
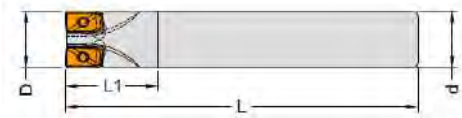
Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 3.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 2.5
Cast Iron	120 ~ 250	0.08 ~ 0.13	0.3 ~ 3.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 2.5
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 2.5

for XOMT10T3

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

CAXO Shoulder Milling

CAXOE - Milling tools

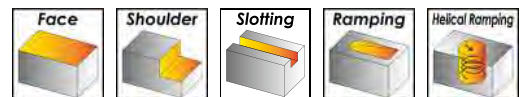
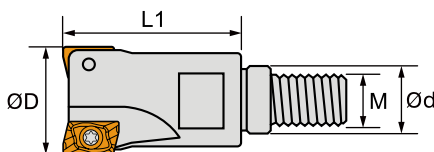


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICAXOE602010100	10	20	100	10	2	XOMT0602	ITS1801	ITK06	●
ICAXOE602012100	12	20	100	12	2				●
ICAXOE603012100	12	20	100	12	3				●
ICAXOE602013100	13	20	100	12	2				●
ICAXOE603013100	13	20	100	12	3				●
ICAXOE604016100	16	30	100	16	4				●
ICAXOE605020120	20	30	120	20	5	●			
ICAXOE102016150	16	22	150	16	2	XOMT10T3	ITS2515	ITK08	○
ICAXOE102020150	20	28	150	20	2				○
ICAXOE104025150	25	35	150	25	4				○
ICAXOE105032150	32	40	150	32	5				○

● stock ○ by inquiry

Customize available.

CAXOM - Modular tools

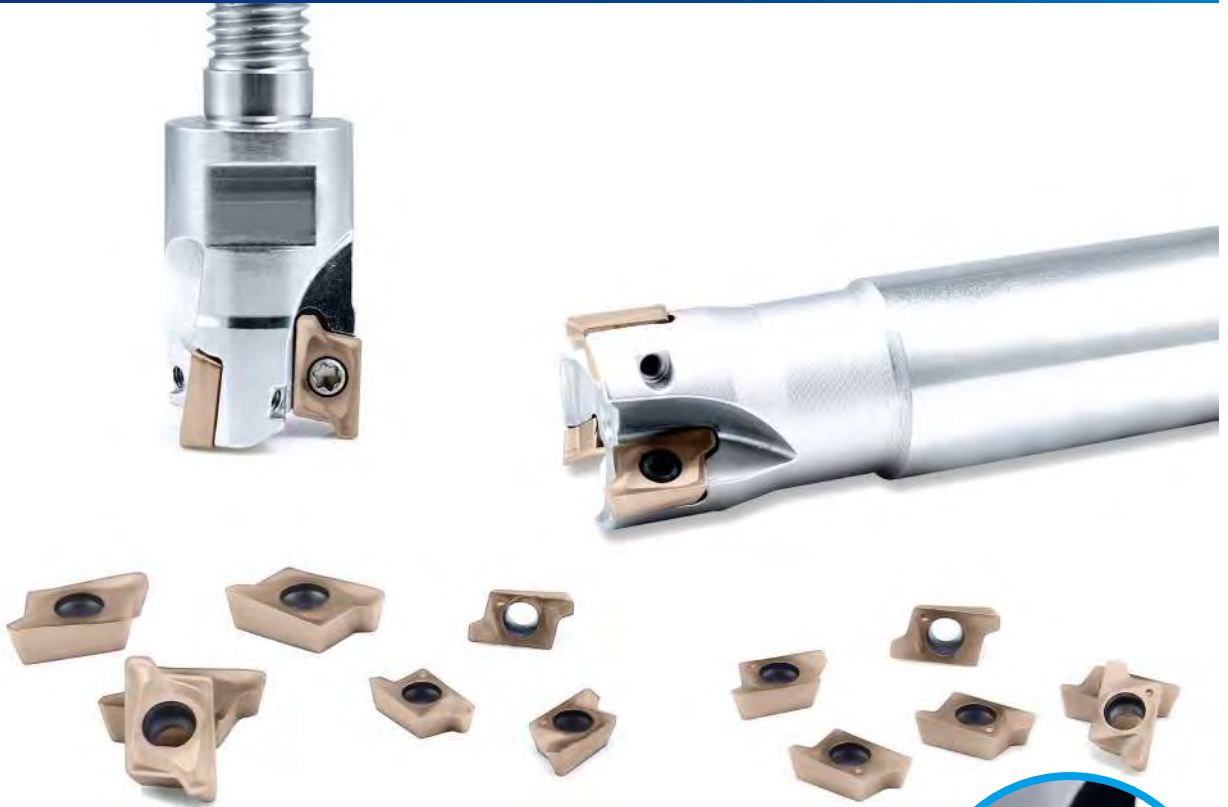


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICAXOM602010050	10	16	5.5	M5	2	XOMT0602	ITS1801	ITK06	○
ICAXOM603012060	12	18	6.5	M6	3				●
ICAXOM604016080	16	20	8.5	M8	4				●
ICAXOM605020100	20	30	10.5	M10	5				●

● stock ○ by inquiry

Customize available.

CART Shoulder Milling



Milling

Indexable Milling Cutters

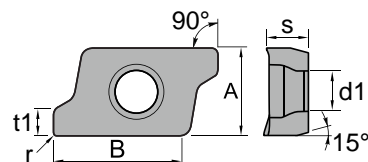
Suitable for small power machine !

- *Ø10,Ø11,Ø12,Ø13 cutter with 2 teeth and Ø16,Ø20,Ø21 cutter with 3 teeth.*
- *Strong Pocket design with excellent chip evacuation.*
- *Extreme well ramping and slotting capabilities.*
- *Unique geometry designed for low cutting force.*



CART Shoulder Milling

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 Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWRT070204RG22HS	WRT070204-RG-CX22HS	●	●	●		○	●
	IWRT070204RG23TS	WRT070204-RG-CX23TS	●	●	●		●	●
	IWRT070204RG32HS	WRT070204-RG-CX32HS	●	●	●		○	○
	IWRT070204RG33TS	WRT070204-RG-CX33TS	●	●	●		●	●
	IWRT070204RG43TS	WRT070204-RG-CX43TS	●	●	●		●	
	IWRT100308RG22HS	WRT100308-RG-CX22HS	●	●	●		○	●
	IWRT100308RG23TS	WRT100308-RG-CX23TS	●	●	●		●	●
	IWRT100308RG32HS	WRT100308-RG-CX32HS	●	●	●		○	○
	IWRT100308RG33TS	WRT100308-RG-CX33TS	●	●	●		●	●
	IWRT100308RG43TS	WRT100308-RG-CX43TS	●	●	●		●	

CART Shoulder Milling

Recommended Cutting Conditions

for WRT0702

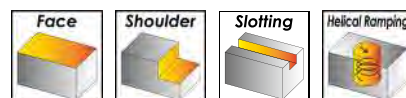
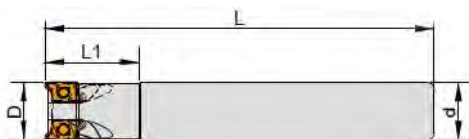
Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 5.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 3.0
Cast Iron	120 ~ 250	0.08 ~ 0.20	0.3 ~ 4.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 3.0
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 3.0

for WRT1003

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

CART Shoulder Milling

CARTE - Milling tools

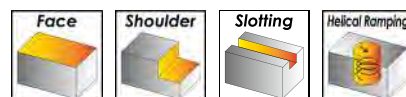
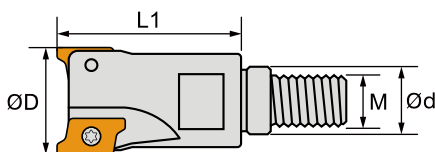


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICARTE702010100	10	18	100	10	2	WRT0702	ITS2003	ITK06	○
ICARTE702011100	11	18	100	10	2				●
ICARTE702013100	13	20	100	12	2				●
ICARTE703016150	16	30	150	16	3				○
ICARTE102017150	17	30	150	16	2	WRT1003	ITS2515	ITK08	●
ICARTE103021150	21	30	150	20	3				●
ICARTE104026150	26	40	150	25	4				●

● stock ○ by inquiry

Customize available.

CARTM - Modular tools



Order No.	D	L1	M	d	T	Inserts	Screw	Wrench	Stock
ICARTM702010050	10	18	M5	5.5	2	WRT0702	ITS2003	ITK06	●
ICARTM702011050	11	18	M5	5.5	2				●
ICARTM702012060	12	20	M6	6.5	2				●
ICARTM702013060	13	20	M6	6.5	2				●
ICARTM103017080	17	30	M8	8.5	3	WRT1003	ITS2515	ITK08	●
ICARTM103021100	21	32	M10	10.5	3				●

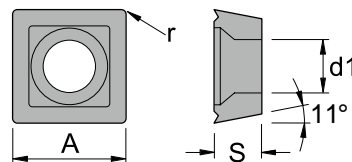
● stock ○ by inquiry

Customize available.

CASP Shoulder Milling

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 Order Code

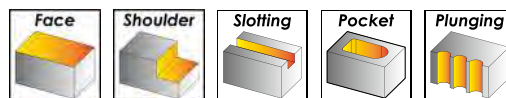
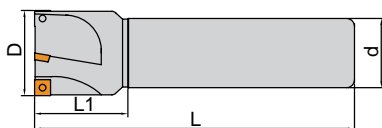
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISPMG050204MG32HS	SPMG050204-MG-CX32HS	●	●	●		○	○
	ISPMG050204MG33TS	SPMG050204-MG-CX33TS	●	●	●		●	●
	ISPMG050204MG43TS	SPMG050204-MG-CX43TS	●	●	●		●	
	ISPMG060204MG32HS	SPMG060204-MG-CX32HS	●	●	●		○	○
	ISPMG060204MG33TS	SPMG060204-MG-CX33TS	●	●	●		●	●
	ISPMG060204MG43TS	SPMG060204-MG-CX43TS	●	●	●		●	
	ISPMG07T308MG32HS	SPMG07T308-MG-CX32HS	●	●	●		○	○
	ISPMG07T308MG33TS	SPMG07T308-MG-CX33TS	●	●	●		●	●
	ISPMG07T308MG43TS	SPMG07T308-MG-CX43TS	●	●	●		●	
	ISPMG090408MG32HS	SPMG090408-MG-CX32HS	●	●	●		○	○
	ISPMG090408MG33TS	SPMG090408-MG-CX33TS	●	●	●		●	●
	ISPMG090408MG43TS	SPMG090408-MG-CX43TS	●	●	●		●	
	ISPMG090408RG32HS	SPMG090408-RG-CX32HS	●	●	●		○	○
	ISPMG090408RG33TS	SPMG090408-RG-CX33TS	●	●	●		●	●
	ISPMG090408RG43TS	SPMG090408-RG-CX43TS	●	●	●		●	
	ISPMG110408MG32HS	SPMG110408-MG-CX32HS	●	●	●		○	○
	ISPMG110408MG33TS	SPMG110408-MG-CX33TS	●	●	●		●	●
	ISPMG110408MG43TS	SPMG110408-MG-CX43TS	●	●	●		●	
	ISPMG110408RG32HS	SPMG110408-RG-CX32HS	●	●	●		○	○
	ISPMG110408RG33TS	SPMG110408-RG-CX33TS	●	●	●		●	●
	ISPMG110408RG43TS	SPMG110408-RG-CX43TS	●	●	●		●	

CASP Shoulder Milling

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

CASPE - Milling tools



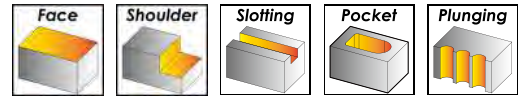
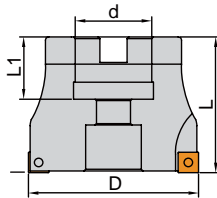
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICASPE502012100	12	20	100	12	2	SPMG0502	ITS2003	ITK06	●
ICASPE502013100	13	20	100	12	2				○
ICASPE502014100	14	20	100	12	2				○
ICASPE502015100	15	20	100	12	2				○
ICASPE602016120	16	25	120	16	2	SPMG0602	ITS2205	ITK06	●
ICASPE603020120	20	30	120	20	3				●
ICASPE603025120	25	30	120	25	3				●
ICASPE604030120	30	30	120	25	4				●
ICASPE605032120	32	30	120	25	5				●
ICASPE703025150	25	35	150	25	3	SPMG07T3	ITS3504	ITK15	●
ICASPE703030150	30	35	150	25	3				○
ICASPE704030150	30	40	150	32	4				○
ICASPE704032150	32	40	150	32	4				●

● stock ○ by inquiry

Customize available.

CASP Shoulder Milling

CASPF - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICASPF607050220	50	20	45	22	7	SPMG0602	ITS2205	ITK06	●
ICASPF607050250	50	20	45	25.4	7				○
ICASPF609063220	63	20	45	22	9				●
ICASPF609063250	63	20	45	25.4	9				●
ICASPF611080270	80	23	50	27	11				○
ICASPF611080250	80	23	50	25.4	11				●
ICASPF905050220	50	20	45	22	5	SPMG0904	ITS3504	ITK15	●
ICASPF905050250	50	20	45	25.4	5				○
ICASPF906063220	63	20	45	22	6				●
ICASPF906063250	63	20	45	25.4	6				○
ICASPF907080270	80	23	50	27	7				●
ICASPF907080250	80	23	50	25.4	7				○

● stock ○ by inquiry

Customize available.

CR39 Shoulder Milling



*Versatile concept suitable for
various applications !*

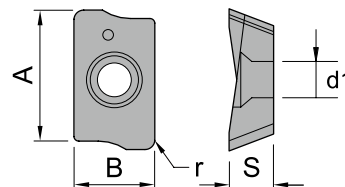


- *Specially designed for productive milling at high temperature alloys.*
- *Finishing and roughing capability in a wide range of operations and materials.*
- *High removal rates can be achieved even at smaller low powered machines.*

CR39 Shoulder Milling

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 Order Code

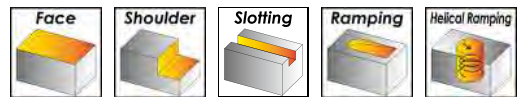
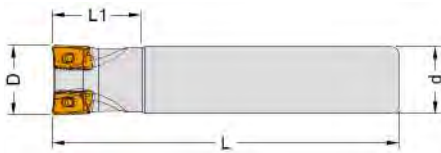
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IW39011T308MG22HS	W39011T308-MG-CX22HS	●	●	●		○	●
	IW39011T308MG23TS	W39011T308-MG-CX23TS	●	●	●		●	●
	IW39011T308MG32HS	W39011T308-MG-CX32HS	●	●	●		○	○
	IW39011T308MG33TS	W39011T308-MG-CX33TS	●	●	●		●	●
	IW39011T308MG43TS	W39011T308-MG-CX43TS	●	●	●		●	
	IW39011T320MG22HS	W39011T320-MG-CX22HS	●	●	●		○	●
	IW39011T320MG23TS	W39011T320-MG-CX23TS	●	●	●		●	●
	IW39011T320MG32HS	W39011T320-MG-CX32HS	●	●	●		○	○
	IW39011T320MG33TS	W39011T320-MG-CX33TS	●	●	●		●	●

CR39 Shoulder Milling

Recommended Cutting Conditions

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0
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

CR39E - Milling tools



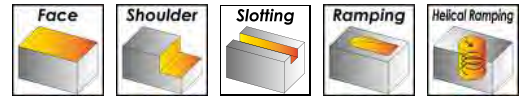
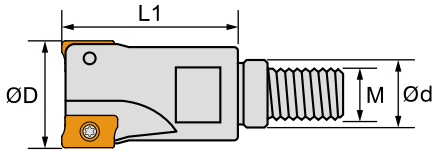
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICR39E302016150	16	30	150	16	2	W39011T3	ITS2515	ITK08	●
ICR39E303025150	25	30	150	25	3				●
ICR39E303032150	32	35	150	32	3				○

● stock ○ by inquiry

Customize available.

CR39 Shoulder Milling

CR39M - Modular tools

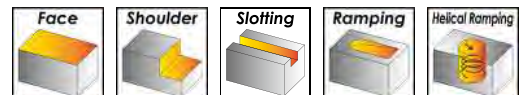
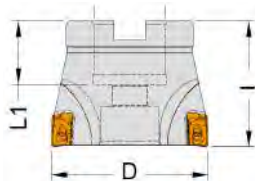


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICR39M302016080	16	26	8.5	M8	2	W39011T3	ITS2515	ITK08	<input type="radio"/>
ICR39M303020100	20	32	10.5	M10	3				<input type="radio"/>
ICR39M303025120	25	38	12.5	M12	3				<input type="radio"/>
ICR39M303032160	32	41	17	M16	3				<input type="radio"/>

● stock ○ by inquiry

Customize available.

CR39F - Milling tools



Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICR39F304050220	50	40	22	4	W39011T3	ITS2515	ITK08	<input checked="" type="radio"/>
ICR39F305063220	63	40	22	5				<input type="radio"/>
ICR39F308080270	80	50	27	8				<input type="radio"/>

● stock ○ by inquiry

Customize available.

CAPK Shoulder Milling



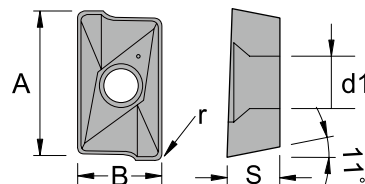
*Versatile concept suitable for
various applications !*

- *Enhancement chip breaker design for longer tool life.*
- *Offering better cost efficiency on medium to large work pieces.*
- *Medium to large sized cutter for shoulder milling and face milling available.*

CAPK Shoulder Milling

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	5.25	0.2	4.5
APET160404	16.3	9.525	5.25	0.4	4.5
APKT160408	16.3	9.525	5.25	0.8	4.5
APKT170516	18.5	10.7	5.56	1.6	4.5



Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPKT100304EAL10	APKT100304PDER-AL-CX10				●		
	IAPKT100304ESG22HS	APKT100304PDER-SG-CX22HS	●	●	●		○	●
	IAPKT100304EMG22HS	APKT100304PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100304EMG23TS	APKT100304PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100304EMG32HS	APKT100304PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100304EMG33TS	APKT100304PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100304EMG43TS	APKT100304PDER-MG-CX43TS	●	●	●		●	
	IAPKT100308EMG22HS	APKT100308PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100308EMG23TS	APKT100308PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100308EMG32HS	APKT100308PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100308EMG33TS	APKT100308PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100308EMG43TS	APKT100308PDER-MG-CX43TS	●	●	●		●	
	IAPKT100304ERG32HS	APKT100304PDER-RG-CX32HS	●	●	●		○	○
	IAPKT100304ERG33TS	APKT100304PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408EMG22HS	APKT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPKT160408EMG32HS	APKT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPKT160408EMG33TS	APKT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPKT160408EMG43TS	APKT160408PDER-MG-CX43TS	●	●	●		●	
	IAPKT160408ERG22HS	APKT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPKT160408ERG32HS	APKT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPKT160408ERG33TS	APKT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408ERG43TS	APKT160408PDER-RG-CX43TS	●	●	●		●	
	IAPKT170516ERG22HS	APKT170516PEER-RG-CX22HS	●	●	●		○	●
	IAPKT170516ERG23TS	APKT170516PEER-RG-CX23TS	●	●	●		●	●
	IAPKT170516ERG32HS	APKT170516PEER-RG-CX32HS	●	●	●		○	○
	IAPKT170516ERG33TS	APKT170516PEER-RG-CX33TS	●	●	●		○	○
	IAPKT170516ERG43TS	APKT170516PEER-RG-CX43TS	●	●	●		●	●
	IAPET160402FAL10	APET160402PDFR-AL-CX10				●		
	IAPET160404FAL10	APET160404PDFR-AL-CX10				●		
	IAPET160402FFG22HS	APET160402PDFR-FG-CX22HS	●	●	●		○	●
	IAPET160404FFG22HS	APET160404PDFR-FG-CX22HS	●	●	●		○	●

CAPK Shoulder Milling

Recommended Cutting Conditions

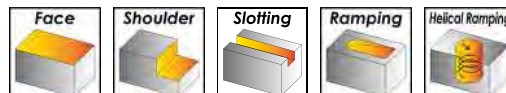
for APKT1003

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0
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

for APKT1604

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
Aluminum Alloy	300 ~ 1000	0.10 ~ 0.40	0.5 ~ 11.0
High Temperature Alloy	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

CAPKE - Milling tools



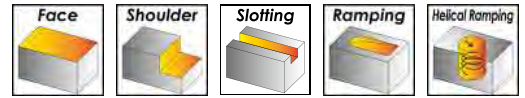
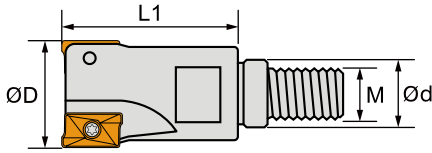
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICAPKE302016120	16	25	120	16	2	APKT1003	ITS2515	ITK08	●
ICAPKE302020120	20	30	120	20	2				●
ICAPKE304025150	25	35	150	25	4				●
ICAPKE305032150	32	35	150	32	5				○
ICAPKE402025150	25	40	150	25	2	APKT1604 or APET1604	ITS4004	ITK15	●
ICAPKE402032150	32	45	150	32	2				○

● stock ○ by inquiry

Customize available.

CAPK Shoulder Milling

CAPKM - Modular tools

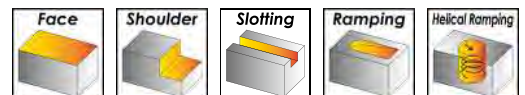
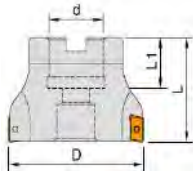


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICAPKM302016080	16	26	8.5	M8	2	APKT1003	ITS2515	ITK08	●
ICAPKM303020100	20	32	10.5	M10	3				○
ICAPKM304025120	25	38	12.5	M12	4				●
ICAPKM305032160	32	41	17	M16	5			○	
ICAPKM402025120	25	38	12.5	M12	2	APKT1604 or APET1604	ITS4004	ITK15	○
ICAPKM403032160	32	41	17	M16	3				○

● stock ○ by inquiry

Customize available.

CAPKF - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICAPKF306050220	50	20	40	22	6	APKT1003	ITS2515	ITK08	●
ICAPKF306063220	63	21	45	22	6				●
ICAPKF307080270	80	23	50	27	7				●
ICAPKF404050220	50	23	50	22	4	APKT1604 or APET1604	ITS4004	ITK15	●
ICAPKF405063220	63	23	50	22	5				●
ICAPKF406080270	80	32	55	27	6				●
ICAPKF408100320	100	32	55	32	8				●

● stock ○ by inquiry

Customize available.

CWEX Shoulder Milling



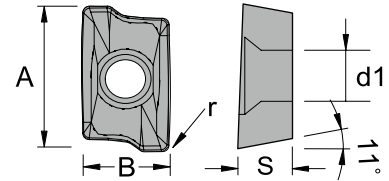
Shoulder Milling with high efficiency and high removal rates !

- *Shoulder milling with strong cutting edges for high feed rate capabilities.*
- *High efficiency and productive machining can be achieved due to optimize cutting edge geometry and high rigidity body.*

CWEX Shoulder Milling

Insert Specifications

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



Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAXMT123508ERG22HS	AXMT123508PEER-RG-CX22HS	●	●	●		○	●
	IAXMT123508ERG32HS	AXMT123508PEER-RG-CX32HS	●	●	●		○	○
	IAXMT123508ERG33TS	AXMT123508PEER-RG-CX33TS	●	●	●		●	●
	IAXMT123508ERG43TS	AXMT123508PEER-RG-CX43TS	●	●	●		●	
	IAXMT170508ERG32HS	AXMT170508PEER-RG-CX32HS	●	●	●		○	○
	IAXMT170508ERG33TS	AXMT170508PEER-RG-CX33TS	●	●	●		●	●
	IAXMT170508ERG43TS	AXMT170508PEER-RG-CX43TS	●	●	●		●	
	IAXMT170516ERG32HS	AXMT170516PEER-RG-CX32HS	●	●	●		○	○
	IAXMT170516ERG43TS	AXMT170516PEER-RG-CX43TS	●	●	●		●	●
	IAXMT170516ERG33TS	AXMT170516PEER-RG-CX33TS	●	●	●		●	

CWEX Shoulder Milling

Recommended Cutting Conditions

for AXMT1235

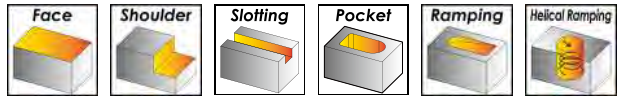
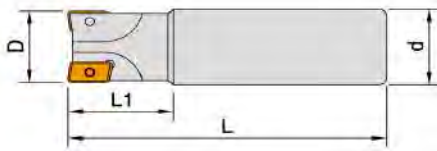
Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.08 ~ 0.18	0.3 ~ 4.0
Cast Iron	120 ~ 250	0.10 ~ 0.22	0.3 ~ 6.0
High Temperature Alloy	40 ~ 100	0.07 ~ 0.14	0.3 ~ 4.0
Hardened Steel	50 ~ 100	0.07 ~ 0.15	0.3 ~ 4.0

for AXMT1705

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

CWEX Shoulder Milling

CWEXE - Milling tools

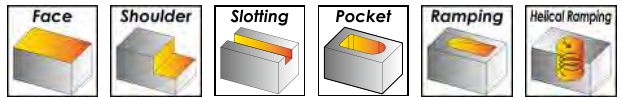
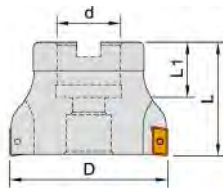


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICWEXE202016120	16	35	120	16	2	AXMT1235	ITS3002	ITK09	●
ICWEXE203020120	20	40	120	20	3				●
ICWEXE204025150	25	45	150	25	4				●
ICWEXE205032150	32	45	150	32	5				●
ICWEXE702025150	25	40	150	25	2	AXMT1705	ITS4004	ITK15	●
ICWEXE703032150	32	45	150	32	3				●

● stock ○ by inquiry

Customize available.

CWEXF - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICWEXF206050220	50	20	45	22	6	AXMT1235	ITS3002	ITK09	●
ICWEXF207063220	63	20	45	22	7				●
ICWEXF208080270	80	26	50	27	8				●
ICWEXF704050220	50	20	45	22	4	AXMT1705	ITS4004	ITK15	●
ICWEXF705063220	63	20	45	22	5				●
ICWEXF707080270	80	26	50	27	7				●
ICWEXF707100320	100	26	50	32	7				○

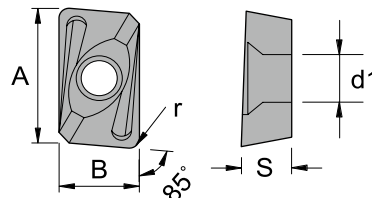
● stock ○ by inquiry

Customize available.

CBAP Shoulder Milling

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 Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPMT113508EMG22HS	APMT113508PDER-MG-CX22HS	●	●	●		○	●
	IAPMT113508EMG23TS	APMT113508PDER-MG-CX23TS	●	●	●		●	●
	IAPMT113508EMG32HS	APMT113508PDER-MG-CX32HS	●	●	●		○	○
	IAPMT113508EMG33TS	APMT113508PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113508EMG43TS	APMT113508PDER-MG-CX43TS	●	●	●		●	
	IAPMT113516EMG33TS	APMT113516PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113516EMG43TS	APMT113516PDER-MG-CX43TS	●	●	●		●	
	IAPMT113508ERG22HS	APMT113508PDER-RG-CX22HS	●	●	●		○	●
	IAPMT113508ERG23TS	APMT113508PDER-RG-CX23TS	●	●	●		●	●
	IAPMT113508ERG32HS	APMT113508PDER-RG-CX32HS	●	●	●		○	○
	IAPMT113508ERG33TS	APMT113508PDER-RG-CX33TS	●	●	●		●	●
	IAPMT113508ERG43TS	APMT113508PDER-RG-CX43TS	●	●	●		●	
	IAPMT113508EHG32HS	APMT113508PDER-HG-CX32HS	●	●	●		○	○
	IAPMT113508EHG33TS	APMT113508PDER-HG-CX33TS	●	●	●		●	●
	IAPMT113508EHG43TS	APMT113508PDER-HG-CX43TS	●	●	●		●	
	IAPMT160408EMG22HS	APMT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPMT160408EMG32HS	APMT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPMT160408EMG33TS	APMT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160408EMG43TS	APMT160408PDER-MG-CX43TS	●	●	●		●	
	IAPMT160416EMG33TS	APMT160416PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160416EMG43TS	APMT160416PDER-MG-CX43TS	●	●	●		●	
	IAPMT160408ERG22HS	APMT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPMT160408ERG23TS	APMT160408PDER-RG-CX23TS	●	●	●		●	●
	IAPMT160408ERG32HS	APMT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPMT160408ERG33TS	APMT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPMT160408ERG43TS	APMT160408PDER-RG-CX43TS	●	●	●		●	
	IAPMT160408EHG22HS	APMT160408PDER-HG-CX22HS	●	●	●		○	●
	IAPMT160408EHG32HS	APMT160408PDER-HG-CX32HS	●	●	●		○	○
	IAPMT160408EHG33TS	APMT160408PDER-HG-CX33TS	●	●	●		●	●
	IAPMT160408EHG43TS	APMT160408PDER-HG-CX43TS	●	●	●		●	

CBAP Shoulder Milling

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPGT160408EAL10	APGT160408PDER-AL-CX10				●		
	IAPGT160408EFG22HS	APGT160408PDER-FG-CX22HS	●	●	●		○	●

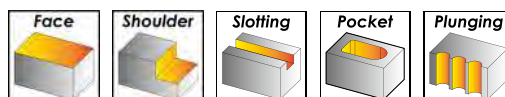
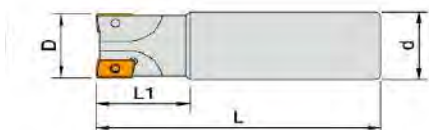
Milling

Indexable Milling Cutters

Recommended Cutting Conditions

Working Material	for APMT1135			for 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

CBAPE - Milling tools



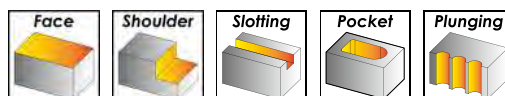
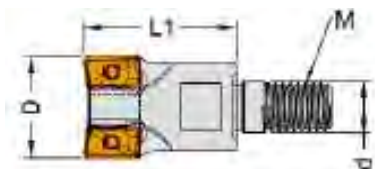
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICBAPE302016100	16	25	100	16	2	APMT1135	ITS2515	ITK08	●
ICBAPE302016160	16	35	160	16	2				●
ICBAPE302020150	20	35	150	20	2				●
ICBAPE303020100	20	30	100	20	3				●
ICBAPE303020150	20	35	150	20	3				●
ICBAPE304025100	25	35	100	25	4				○
ICBAPE304030120	30	40	120	25	4				○
ICBAPE305032120	32	40	120	32	5				○
ICBAPE402025150	25	40	150	25	2	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAPE402025200	25	70	200	25	2				○
ICBAPE403032150	32	45	150	32	3				●
ICBAPE403032200	32	80	200	32	3				●

● stock ○ by inquiry

Customize available.

CBAP Shoulder Milling

CBAPM - Modular tools

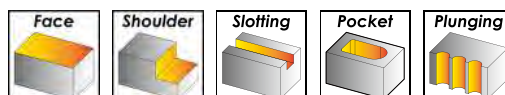
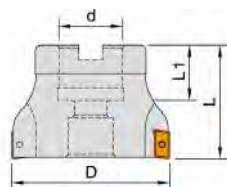


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICBAPM302016080	16	26	8.5	M8	2	APMT1135	ITS2515	ITK08	●
ICBAPM302020100	20	30	10.5	M10	2				●
ICBAPM303020100	20	30	10.5	M10	3				○
ICBAPM304025120	25	35	12.5	M12	4				●
ICBAPM305032160	32	40	17	M16	5				●
ICBAPM305033160	33	40	17	M16	5				○
ICBAPM402025120	25	35	12.5	M12	2	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAPM402032160	32	40	17	M16	3				●

● stock ○ by inquiry

Customize available.

CBAPF - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICBAPF306050250	50	45	18	25.4	6	APMT1135	ITS2515	ITK08	●
ICBAPF307063220	63	45	22	22	7				●
ICBAPF307063254	63	45	22	25.4	7				●
ICBAPF308063250	80	50	26	25.4	8				●
ICBAPF308063270	80	50	26	27	8				●
ICBAPF405050220	50	45	22	22	5	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAPF405050250	50	45	18	25.4	5				●
ICBAPF406063220	63	45	22	22	6				●
ICBAPF406063250	63	45	22	25.4	6				●
ICBAPF407080250	80	50	26	25.4	7				●
ICBAPF407080270	80	50	26	27	7				●

● stock ○ by inquiry

Customize available.

CATP Shoulder Milling



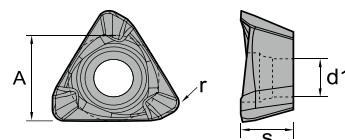
*Innovative & Economical milling
with 3 cutting edges !*

- *Ensures productive milling of true 90° machining.*
- *Provide an improved low cost per cutting edge for various milling applications.*
- *Low cutting force and excellent chip evacuation.*
- *More economical compare to AP inserts.*

CATP Shoulder Milling

Insert Specifications

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



Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ITPMX100408SG32HS	TPMX100408-SG-CX32HS	●	●	●		○	○
	ITPMX100408SG33TS	TPMX100408-SG-CX33TS	●	●	●		●	●
	ITPMX100408MG22HS	TPMX100408-MG-CX22HS	●	●	●		○	●
	ITPMX100408MG23TS	TPMX100408-MG-CX23TS	●	●	●		●	●
	ITPMX100408MG32HS	TPMX100408-MG-CX32HS	●	●	●		○	○
	ITPMX100408MG33TS	TPMX100408-MG-CX33TS	●	●	●		●	●
	ITPMX100408MG43TS	TPMX100408-MG-CX43TS	●	●	●		●	
	ITPMX150508MG22HS	TPMX150508-MG-CX22HS	●	●	●		○	●
	ITPMX150508MG23TS	TPMX150508-MG-CX23TS	●	●	●		●	●
	ITPMX150508MG32HS	TPMX150508-MG-CX32HS	●	●	●		○	○
	ITPMX150508MG33TS	TPMX150508-MG-CX33TS	●	●	●		●	●
	ITPMX150508MG43TS	TPMX150508-MG-CX43TS	●	●	●		●	

CATP Shoulder Milling

Recommended Cutting Conditions

for TPMX1004

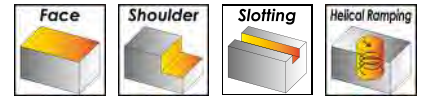
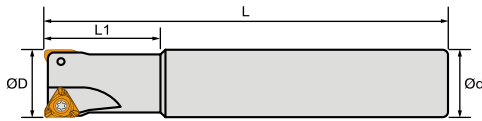
Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.08 ~ 0.20	0.3 ~ 7.0
Stainless Steel	100 ~ 180	0.05 ~ 0.15	0.3 ~ 4.0
Cast Iron	120 ~ 250	0.08 ~ 0.20	0.3 ~ 6.0
High Temperature Alloy	40 ~ 100	0.05 ~ 0.12	0.3 ~ 4.0
Hardened Steel	50 ~ 100	0.05 ~ 0.13	0.3 ~ 4.0

for TPMX1505

Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.12 ~ 0.28	0.5 ~ 11.0
Stainless Steel	100 ~ 180	0.10 ~ 0.22	0.5 ~ 7.0
Cast Iron	120 ~ 250	0.12 ~ 0.28	0.5 ~ 10.0
High Temperature Alloy	40 ~ 100	0.10 ~ 0.18	0.5 ~ 7.0
Hardened Steel	50 ~ 100	0.10 ~ 0.20	0.5 ~ 7.0

CATP Shoulder Milling

CATPE - Milling tools

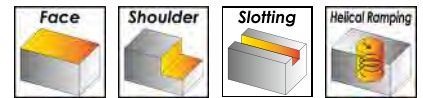
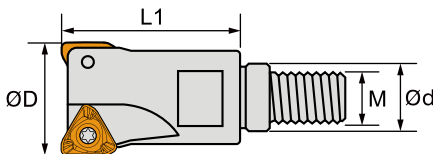


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICATPE102020130	20	50	130	20	2	TPMX1004	ITS2517	ITK08	●
ICATPE103025150	25	55	150	25	3				●
ICATPE503033200	33	45	200	32	3	TPMX1505	ITS4014	ITK15	●
ICATPE504040200	40	45	200	32	4				○

● stock ○ by inquiry

Customize available.

CATPM - Modular tools

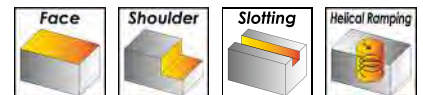
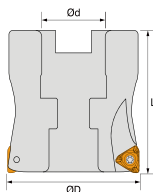


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICATPM102021100	21	35	18	M10	2	TPMX1004	ITS2517	ITK08	●
ICATPM103026120	26	35	21	M12	3				●
ICATPM105033160	33	43	29	M16	5				●

● stock ○ by inquiry

Customize available.

CATPF - Milling tools

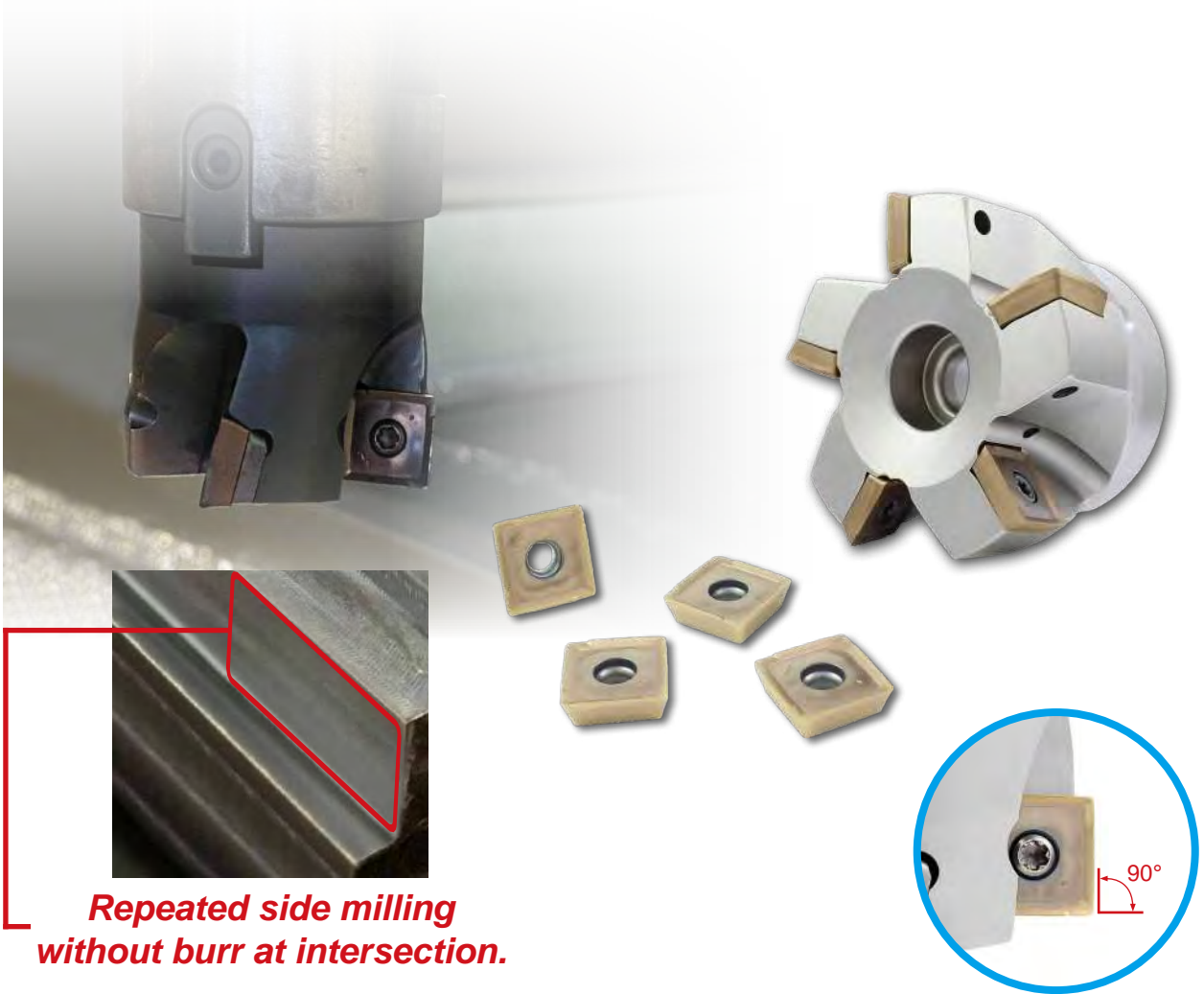


Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICATPF107050220	50	50	22	7	TPMX1004	ITS2517	ITK08	●
ICATPF109063220	63	50	22	9				●

● stock ○ by inquiry

Customize available.

CR49 Shoulder Milling



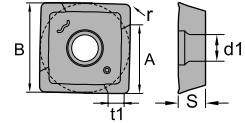
Repeated side milling without burr at intersection.

- **Good for shoulder and face milling with excellent surface finish.**
- **Repeated shoulder milling without burr.**
- **Light and quiet cutting performance provide an optimal utilization of low powered machines.**
- **Large cutting depth, max 9mm.**

CR49 Shoulder Milling

Insert Specifications

Insert	Dimensions (mm)					
	A	B	S	r	d1	t1
SOMT140408	10.3	13.8	3.9	0.8	4.1	2.0



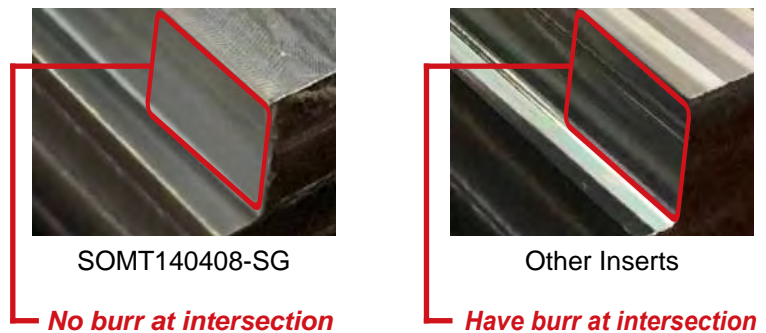
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISOMT140408SG30	SOMT140408-SG-CX30				●		
	ISOMT140408SG33TS	SOMT140408-SG-CX33TS	●	●	●		●	○
	ISOMT140408SG43TS	SOMT140408-SG-CX43TS	●	●	●		●	○

Case Study 1

Tool : 50mm / 4t
 Insert : SOMT140408-SG CX33TS
 Working Material : S45C
 Vc : 200 m/min
 fz : 0.13 mm/t
 ap : 5 mm (total depth 20mm)
 ae : 5 mm

Comparison of repeated side milling



Case Study 2

Tool : 50mm / 4t
 Insert : SOMT140408-SG CX33TS
 Working Material : Cast Iron(FCD550)
 Vc : 200 m/min
 fz : 0.29 mm/t
 ap : 8 mm, ae : 40 mm



<https://youtu.be/sQInOyNx9oU>

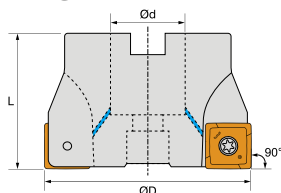
Recommended Cutting Conditions

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

Milling

Indexable Milling Cutters

CR49F - Milling tools



Order No.	D	L	d	T	Coolant	Inserts	Screw	Wrench	Stock
ICR49F404050221	50	40	22	4	✓	SOMT1404	ITS3505	ITK15	●
ICR49F405063221	63	40	22	5	✓				●
ICR49F407080271	80	50	27	7	✓				●

● stock ○ by inquiry

CXBN High Feed Face Milling



***High Feed Face Milling Offers
Increased Productivity !!!***

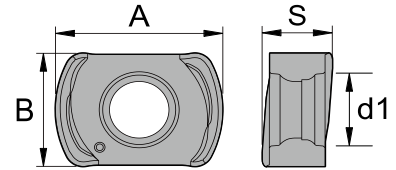


- *The CXBN Mini milling cutters offer exceptional milling performance.*
- *The BNMX0603 and BNMX0904 high feed inserts allow lowest cutting force to insure maximum productivity!*
- *Many insert geometries, wide range cutting applications, strong insert clamping and solid high feed design insure higher efficient performance!*
- *Let the CXBN stream line improve your milling process!*

CXBN High Feed Face Milling

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

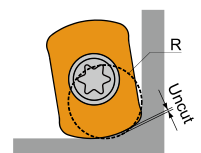


Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IBNMX0603SG22HS	BNMX0603-SG-CX22HS	●	●	●		○	●
	IBNMX0603SG23TS	BNMX0603-SG-CX23TS	●	●	●		●	●
	IBNMX0603SG32HS	BNMX0603-SG-CX32HS	●	●	●		○	○
	IBNMX0603SG33TS	BNMX0603-SG-CX33TS	●	●	●		●	●
	IBNMX0603SG43TS	BNMX0603-SG-CX43TS	●	●	●		●	
	IBNMX0603MG22HS	BNMX0603-MG-CX22HS	●	●	●		○	●
	IBNMX0603MG23TS	BNMX0603-MG-CX23TS	●	●	●		●	●
	IBNMX0603MG32HS	BNMX0603-MG-CX32HS	●	●	●		○	○
	IBNMX0603MG33TS	BNMX0603-MG-CX33TS	●	●	●		●	●
	IBNMX0603MG43TS	BNMX0603-MG-CX43TS	●	●	●		●	
	IBNMX0603RG22HS	BNMX0603-RG-CX22HS	●	●	●		○	●
	IBNMX0603RG23TS	BNMX0603-RG-CX23TS	●	●	●		●	●
	IBNMX0603RG32HS	BNMX0603-RG-CX32HS	●	●	●		○	○
	IBNMX0603RG33TS	BNMX0603-RG-CX33TS	●	●	●		●	●
	IBNMX0603RG43TS	BNMX0603-RG-CX43TS	●	●	●		●	
	IBNMX0904MG22HS	BNMX0904-MG-CX22HS	●	●	●		○	●
	IBNMX0904MG23TS	BNMX0904-MG-CX23TS	●	●	●		●	●
	IBNMX0904MG32HS	BNMX0904-MG-CX32HS	●	●	●		○	○
	IBNMX0904MG33TS	BNMX0904-MG-CX33TS	●	●	●		●	●
	IBNMX0904MG43TS	BNMX0904-MG-CX43TS	●	●	●		●	

Corner R Programming

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

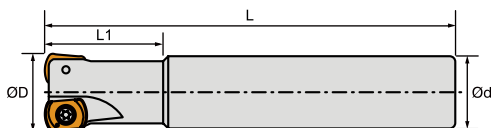


CXBN High Feed Face Milling

Recommended Cutting Conditions

Working Material	for BNMX0603			for 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

CXBNE - Milling tools



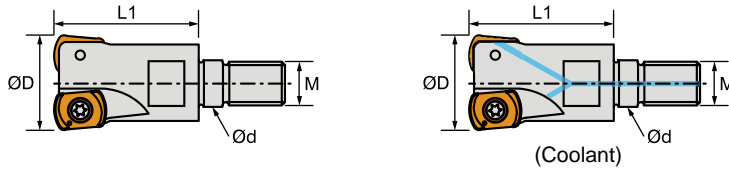
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICXBNE602015130	15	26	130	16	2	BNMX0603	ITS3004	ITK08	●
ICXBNE602016130	16	26	130	16	2				●
ICXBNE602017130	17	26	130	16	2				●
ICXBNE602018130	18	25	130	20	2				●
ICXBNE603020150	20	40	150	20	3				●
ICXBNE603021150	21	40	150	20	3				●
ICXBNE604025150	25	40	150	25	4				●
ICXBNE604026150	26	30	150	25	4				●
ICXBNE604032200	32	45	200	32	4				●
ICXBNE903025150	25	40	150	25	3	BNMX0904	ITS4009	ITK15	●
ICXBNE903032150	32	40	150	32	3				●

● stock ○ by inquiry

Customize available.

CXBN High Feed Face Milling

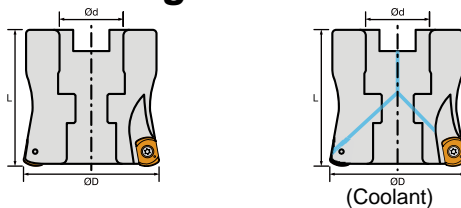
CXBNM - Modular tools



Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXBNM602016080	16	26	8.5	M8	2		BNMX0603	ITS3004	ITK08	●
ICXBNM602016081	16	26	8.5	M8	2	✓				●
ICXBNM603020100	20	30	10.5	M10	3					●
ICXBNM603020101	20	30	10.5	M10	3	✓				●
ICXBNM603021100	21	30	10.5	M10	3					●
ICXBNM603025120	25	35	12.5	M12	3					●
ICXBNM604025120	25	35	12.5	M12	4					●
ICXBNM604025121	25	35	12.5	M12	4	✓				●
ICXBNM603026120	26	35	12.5	M12	3					●
ICXBNM604032161	32	40	17.0	M16	4	✓				●
ICXBNM605032160	32	40	17.0	M16	5					●
ICXBNM606040161	40	43	17.0	M16	6	✓				●
ICXBNM903025121	25	35	12.5	M12	3	✓				BNMX0904
ICXBNM904032161	32	40	17.0	M16	4	✓	●			
ICXBNM904035161	35	43	17.0	M16	4	✓	○			
ICXBNM905042161	42	43	17.0	M16	5	✓	●			
							●			

Customize available.

CXBNF - Milling tools



Order No.	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXBNF606040220	40	50	22	6		BNMX0603	ITS3004	ITK08	●
ICXBNF606040221	40	50	22	6	✓				●
ICXBNF607050220	50	50	22	7					●
ICXBNF607050221	50	50	22	7	✓				●
ICXBNF607052221	52	50	22	7	✓				○
ICXBNF607063220	63	50	22	7		BNMX0904	ITS3504	ITK15	●
ICXBNF906050221	50	50	22	6	✓				●
ICXBNF906052221	52	50	22	6	✓				●
ICXBNF907063220	63	50	22	7			ITS4009		●
ICXBNF907063271	63	50	27	7	✓		ITS3504		●
ICXBNF907066271	66	50	27	7	✓				○
ICXBNF908080271	80	50	27	8	✓				●
ICXBNF908100321	100	50	32	8	✓		●		

● stock ○ by inquiry

Customize available.

CXLN High Feed Face Milling

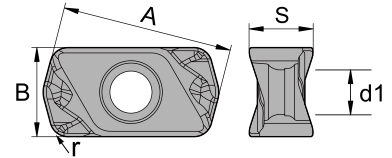


***More Speed, More Feed,
More Cutting Depth and More Performance !!***

- *Available in End mill, Modular and Face mill type.*
- *Up to 1mm D.O.C capability.*
- *Large positive insert rake angles for extremely easy cutting.*
- *Single screw design for high rigid & tensile clamping.*

Insert Specifications

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

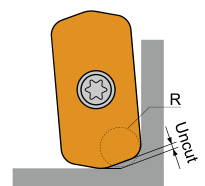


Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ILNMX0303SG22HS	LNMX0303-SG-CX22HS	●	●	●		○	●
	ILNMX0303SG23TS	LNMX0303-SG-CX23TS	●	●	●		●	●
	ILNMX0303SG32HS	LNMX0303-SG-CX32HS	●	●	●		○	○
	ILNMX0303SG33TS	LNMX0303-SG-CX33TS	●	●	●		●	●
	ILNMX0303SG43TS	LNMX0303-SG-CX43TS	●	●	●		●	
	ILNMX0303MG22HS	LNMX0303-MG-CX22HS	●	●	●		○	●
	ILNMX0303MG23TS	LNMX0303-MG-CX23TS	●	●	●		●	●
	ILNMX0303MG32HS	LNMX0303-MG-CX32HS	●	●	●		○	○
	ILNMX0303MG33TS	LNMX0303-MG-CX33TS	●	●	●		●	●
	ILNMX0303MG43TS	LNMX0303-MG-CX43TS	●	●	●		●	

Corner R Programming

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

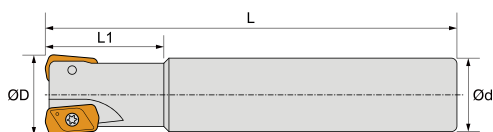


CXLN High Feed Face Milling

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

CXLNE - Milling tools



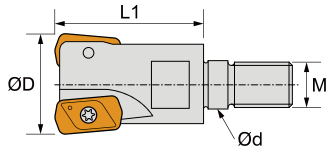
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICXLNE302016100	16	30	100	16	2	LNMX0303	ITS2535	ITK07	●
ICXLNE302016150	16	50	150	16	2				●
ICXLNE303020150	20	50	150	20	3				●
ICXLNE304020130	20	50	130	20	4				○
ICXLNE304025150	25	60	150	25	4				●
ICXLNE305025140	25	60	140	25	5				○
ICXLNE306032150	32	70	150	32	6				●

● stock ○ by inquiry

Customize available.

CXLN High Feed Face Milling

CXLNM - Modular tools

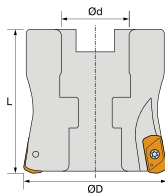


Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXLNM302017080	17	26	8.5	M8	2		LNMX0303	ITS2535	ITK07	●
ICXLNM303021100	21	32	10.5	M10	3					●
ICXLNM303021101	21	32	10.5	M10	3	✓				●
ICXLNM304026120	26	38	12.5	M12	4					●
ICXLNM304032160	32	41	17	M16	4					●

● stock ○ by inquiry

Customize available.

CXLNF - Milling tools



Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICXLNF305050220	50	50	22	5	LNMX0303	ITS2535	ITK07	○

● stock ○ by inquiry

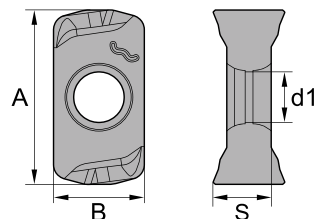
Customize available.




CXLO High Feed Face Milling

Insert Specifications

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

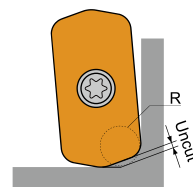


Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ILOGX030310SG32HS	LOGX030310-SG-CX32HS	●	●	●			○
	ILOGX030310SG33TS	LOGX030310-SG-CX33TS	●	●	●		○	●

Corner R Programming

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



CXLO High Feed Face Milling

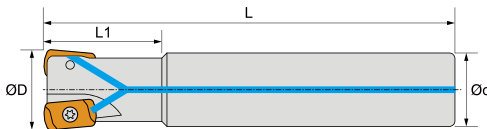
Recommended Cutting Conditions

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

Milling

Indexable Milling Cutters

CXLOE - Milling tools



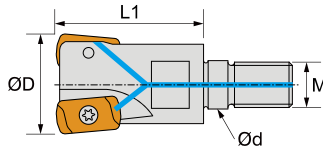
Order No.	D	L1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXLOE302016150	16	30	150	16	2		LOGX0303	ITS3004	ITK08	●
ICXLOE302016151	16	30	150	16	2	✓				●
ICXLOE302017150	17	20	150	16	2					●
ICXLOE302018150	18	20	150	16	2					●
ICXLOE303020150	20	50	150	20	3					●
ICXLOE303020151	20	50	150	20	3	✓				●
ICXLOE303021150	21	30	150	20	3					●
ICXLOE303022150	22	20	150	20	3					●
ICXLOE304025150	25	60	150	25	4					●
ICXLOE304025151	25	60	150	25	4	✓				●
ICXLOE304026150	26	35	150	25	4					●
ICXLOE304026151	26	35	150	25	4	✓				●
ICXLOE304026200	26	45	200	25	4					●
ICXLOE304028150	28	20	150	25	4					●
ICXLOE305028150	28	20	150	25	5					●
ICXLOE304030150	30	46	150	32	4					●
ICXLOE305032150	32	70	150	32	5					●
ICXLOE305033151	33	20	150	32	5	✓				●
ICXLOE305033200	33	20	200	32	5					●
ICXLOE305035200	35	20	200	32	5					●

● stock ○ by inquiry

Customize available.

CXLO High Feed Face Milling

CXLOM - Modular tools

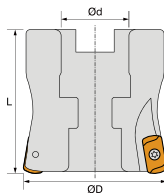


Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXL0M302017081	17	25	8.5	M8	2	✓	LOGX0303	ITS3004	ITK08	●
ICXL0M303021101	21	30	10.5	M10	3	✓				●
ICXL0M304026121	26	35	12.5	M12	4	✓				●
ICXL0M304035161	35	40	17	M16	4	✓				●
ICXL0M305035161	35	40	17	M16	5	✓				●

● stock ○ by inquiry

Customize available.

CXL0F - Milling tools



Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICXL0F307050220	50	50	22	7	LOGX0303	ITS3004	ITK08	●

● stock ○ by inquiry

Customize available.



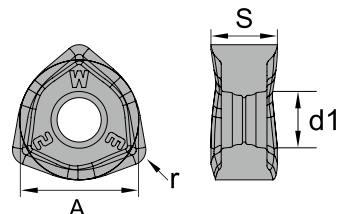
***New Economical Solution for
High Feed Face Milling Applications!!!***

- ***CXWN High Feed Face Mill Series is more economical due to the use of 6 cutting edges compared to conventional tool with a 3/4 edges positive insert.***
- ***Double sided has been designed for rigidity of cutting edge.***
- ***New insert design for multiple functional machining, such as face milling, Ramping and plunging.***

CXWN High Feed Face Milling

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

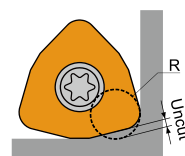


Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWNMX09T316MG22HS	WNMX09T316-MG-CX22HS	●	●	●		○	●
	IWNMX09T316MG32HS	WNMX09T316-MG-CX32HS	●	●	●		○	○
	IWNMX09T316MG33TS	WNMX09T316-MG-CX33TS	●	●	●		●	●
	IWNMX09T316MG43TS	WNMX09T316-MG-CX43TS	●	●	●		●	
	IWNMX09T316RG22HS	WNMX09T316-RG-CX22HS	●	●	●		○	●
	IWNMX09T316RG23TS	WNMX09T316-RG-CX23TS	●	●	●		●	●
	IWNMX09T316RG32HS	WNMX09T316-RG-CX32HS	●	●	●		○	○
	IWNMX09T316RG33TS	WNMX09T316-RG-CX33TS	●	●	●		●	●
	IWNMX09T316RG43TS	WNMX09T316-RG-CX43TS	●	●	●		●	
	IWNMX130516MG22HS	WNMX130516-MG-CX22HS	●	●	●		○	●
	IWNMX130516MG23TS	WNMX130516-MG-CX23TS	●	●	●		●	●
	IWNMX130516MG32HS	WNMX130516-MG-CX32HS	●	●	●		○	○
	IWNMX130516MG33TS	WNMX130516-MG-CX33TS	●	●	●		●	●
	IWNMX130516MG43TS	WNMX130516-MG-CX43TS	●	●	●		●	

Corner R Programming

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



CXWN High Feed Face Milling
Recommended Cutting Conditions
for WNMX09T3

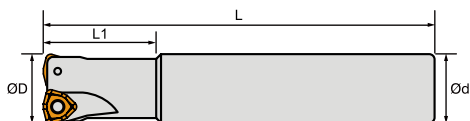
Working Material	Vc	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.35
Stainless Steel	100 ~ 180	0.4 ~ 1.2	0.4 ~ 1.0
Cast Iron	120 ~ 250	0.4 ~ 1.5	0.4 ~ 1.35
High Temperature Alloy	40 ~ 100	0.4 ~ 1.0	0.4 ~ 1.0
Hardened Steel	50 ~ 100	0.4 ~ 1.1	0.4 ~ 1.0

for 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

CXWN High Feed Face Milling

CXWNE - Milling tools

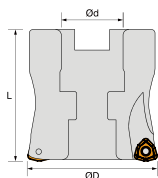


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICXWNE902025150	25	40	150	25	2	WNMX09T3	ITS3006	ITK10	●
ICXWNE903032150	32	40	150	32	3				●

● stock ○ by inquiry

Customize available.

CXWNF - Milling tools



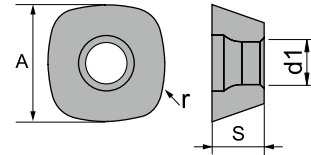
Order No.	D	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXWNF905050220	50	50	22	5		WNMX09T3	ITS3006	ITK10	●
ICXWNF905050221	50	50	22	5	✓				●
ICXWNF905063220	63	50	22	5					●
ICXWNF905063221	63	50	22	5	✓				●
ICXWNF305063220	63	50	22	5		WNMX1305	ITS4006	ITK15	●
ICXWNF307080270	80	50	27	7					●

● stock ○ by inquiry

Customize available.

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

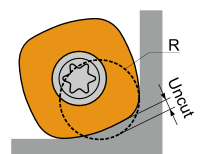


Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISDMT1205ZDSNMF22HS	SDMT1205ZDSN-MF-CX22HS	●	●	●		○	●
	ISDMT1205ZDSNMF32HS	SDMT1205ZDSN-MF-CX32HS	●	●	●		○	○
	ISDMT1205ZDSNMF33TS	SDMT1205ZDSN-MF-CX33TS	●	●	●		●	●
	ISDMT1205ZDSNMF43TS	SDMT1205ZDSN-MF-CX43TS	●	●	●		●	
	ISDMT1205ZDTNMG23TS	SDMT1205ZDTN-MG-CX23TS	●	●	●		●	●
	ISDMT1205ZDTNMG32HS	SDMT1205ZDTN-MG-CX32HS	●	●	●		○	○
	ISDMT1205ZDTNMG33TS	SDMT1205ZDTN-MG-CX33TS	●	●	●		●	●
	ISDMT1205ZDTNMG43TS	SDMT1205ZDTN-MG-CX43TS	●	●	●		●	
	ISDMT1205ZDTNRG23TS	SDMT1205ZDTN-RG-CX23TS	●	●	●		●	●
	ISDMT1205ZDTNRG32HS	SDMT1205ZDTN-RG-CX32HS	●	●	●		○	○
	ISDMT1205ZDTNRG33TS	SDMT1205ZDTN-RG-CX33TS	●	●	●		●	●
	ISDMT1205ZDTNRG43TS	SDMT1205ZDTN-RG-CX43TS	●	●	●		●	
	ISDNW1205ZDSNMF32HS	SDNW1205ZDSN-MF-CX32HS	●	●	●		○	○
	ISDNW1205ZDSNMF33TS	SDNW1205ZDSN-MF-CX33TS	●	●	●		●	●
	ISDNW1205ZDTNRG22HS	SDNW1205ZDTN-RG-CX22HS	●	●	●		○	●
	ISDNW1205ZDTNRG23TS	SDNW1205ZDTN-RG-CX23TS	●	●	●		●	●
	ISDNW1205ZDTNRG32HS	SDNW1205ZDTN-RG-CX32HS	●	●	●		○	○
	ISDNW1205ZDTNRG33TS	SDNW1205ZDTN-RG-CX33TS	●	●	●		●	●
	ISDNW1205ZDTNRG43TS	SDNW1205ZDTN-RG-CX43TS	●	●	●		●	

Corner R Programming

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

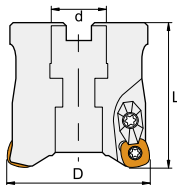


CASR High Feed Face Milling

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

CASRF - Milling tools

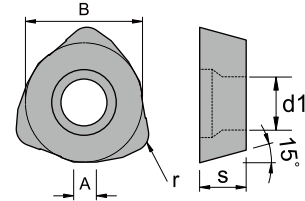


Order No.	D	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
ICASRF203050220	50	22	50	3	SDMT1205 or SDNW1205	IMS4011A	ITF15	IYR-06	IMS4008ES	●
ICASRF204050220	50	22	50	4						●
ICASRF203063220	63	22	50	3						●
ICASRF204063220	63	22	50	4						●
ICASRF204080310	80	31.75	55	4						●
ICASRF204080320	80	32	55	4						●
ICASRF205080310	80	31.75	55	5						●
ICASRF205080320	80	32	55	5						●

● stock ○ by inquiry

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

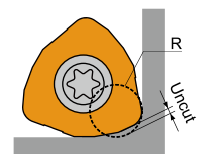


Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IJDMW120420SMF22HS	JDMW120420ZDSR-MF-CX22HS	●	●	●		○	●
	IJDMW120420SMF32HS	JDMW120420ZDSR-MF-CX32HS	●	●	●		○	○
	IJDMW120420SMF33TS	JDMW120420ZDSR-MF-CX33TS	●	●	●		●	●
	IJDMW120420SMF43TS	JDMW120420ZDSR-MF-CX43TS	●	●	●		●	
	IJDMW120420SRG22HS	JDMW120420ZDSR-RG-CX22HS	●	○	●		○	●
	IJDMW120420SRG23TS	JDMW120420ZDSR-RG-CX23TS	●	●	●		●	●
	IJDMW120420SRG32HS	JDMW120420ZDSR-RG-CX32HS	●	●	●		○	○
	IJDMW120420SRG33TS	JDMW120420ZDSR-RG-CX33TS	●	●	●		●	●
	IJDMW120420SRG43TS	JDMW120420ZDSR-RG-CX43TS	●	●	●		●	
	IJDMW140520SMF32HS	JDMW140520ZDSR-MF-CX32HS	●	●	●		○	○
	IJDMW140520SMF33TS	JDMW140520ZDSR-MF-CX33TS	●	●	●		●	●
	IJDMW140520SRG32HS	JDMW140520ZDSR-RG-CX32HS	●	●	●		○	○
	IJDMW140520SRG33TS	JDMW140520ZDSR-RG-CX33TS	●	●	●		●	●
	IJDMT140520SMG32HS	JDMT140520ZDSR-MG-CX32HS	●	●	●		○	○
	IJDMT140520SMG33TS	JDMT140520ZDSR-MG-CX33TS	●	●	●		●	●
	IJDMT140520SMG43TS	JDMT140520ZDSR-MG-CX43TS	●	●	●		●	

Corner R Programming

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

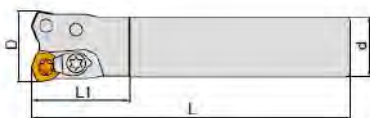


CAJX High Feed Face Milling

Recommended Cutting Conditions

Working Material	for JDMW1204			for 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

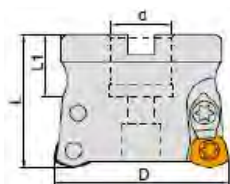
CAJXE - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
ICAJXE202032150	32	35	150	32	2	JDMW1204	ITS4008	ITK15	IAS04	IAJ4012	●

● stock ○ by inquiry

CAJXF - Milling tools



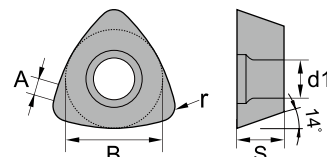
Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
ICAJXF204050220	50	23	45	22	4	JDMW1204	ITS4008	ITK15	IAS04	IAJ4012	●
ICAJXF205063220	63	23	50	22	5						●
ICAJXF206080270	80	26	55	27	6						●
ICAJXF403063220	63	23	50	22	4	JDMW1405 or JDMT1405	ITS5001	ITK20	IAS05	IAJ5014	●
ICAJXF404080270	80	26	55	27	5						●
ICAJXF405100320	100	32	55	32	6						●

● stock ○ by inquiry



CF23 High Feed Face Milling

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 Order Code

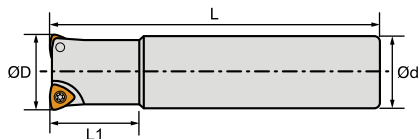
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWP26314RG22HS	WP26339R14-RG-CX22HS	●	●	●		○	●
	IWP26314RG23TS	WP26339R14-RG-CX23TS	●	●	●		●	●
	IWP26314RG32HS	WP26339R14-RG-CX32HS	●	●	●		○	○
	IWP26314RG33TS	WP26339R14-RG-CX33TS	●	●	●		●	●
	IWP26314RG43TS	WP26339R14-RG-CX43TS	●	●	●		●	
	IWP26725RG22HS	WP26379R25-RG-CX22HS	●	●	●		○	●
	IWP26725RG23TS	WP26379R25-RG-CX23TS	●	●	●		●	●
	IWP26725RG32HS	WP26379R25-RG-CX32HS	●	●	●		○	○
	IWP26725RG33TS	WP26379R25-RG-CX33TS	●	●	●		●	●
	IWP26725RG43TS	WP26379R25-RG-CX43TS	●	●	●		●	

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

CF23 High Feed Face Milling

CF23E - Milling tools

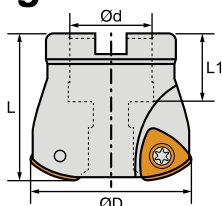


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICF23E203032150	32	28	150	32	3	WP26339R14	ITS4005	ITK15	<input type="radio"/>
ICF23E203035180	35	40	180	32	3				<input type="radio"/>
ICF23E203035230	35	40	230	32	3				<input checked="" type="radio"/>
ICF23E204040200	40	40	200	32	4				<input type="radio"/>
ICF23E202040200	40	45	200	32	2	WP26379R25	ITS5002	ITK20	<input type="radio"/>
ICF23E203050200	50	45	200	32	3				<input type="radio"/>

● stock ○ by inquiry

Customize available.

CF23F - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICF23F203050220	50	21	50	22	3	WP26379R25	ITS5002	ITK20	<input checked="" type="radio"/>
ICF23F204063220	63	21	50	22	4				<input type="radio"/>
ICF23F205080270	80	23	50	27	5				<input type="radio"/>
ICF23F206100320	100	26	50	32	6				<input checked="" type="radio"/>
ICF23F207125400	125	38	63	40	7				<input type="radio"/>
ICF23F208160400	160	38	63	40	8				<input checked="" type="radio"/>

● stock ○ by inquiry

Customize available.

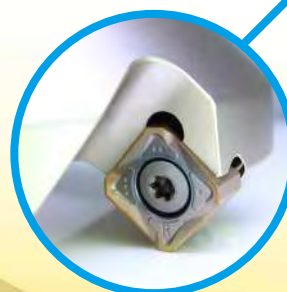
2 types of double sided inserts fit in same pocket !



Brings a top performance in face milling operation !

- *SNMX1205 - 8 cutting edges suitable for large depth of cutting.*
- *ONMX0505 - 16 cutting edges suitable for small depth of cutting.*
- *High cutting edges strength and high efficiency machining for general purpose application.*

CXSNF



SNMX1205

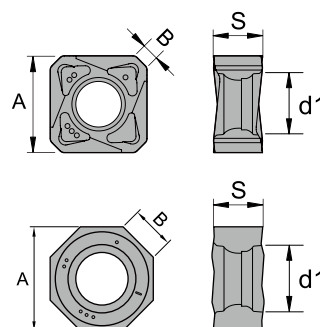


ONMX0505




CXSN Face Milling

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 Order Code

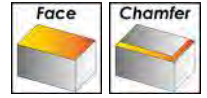
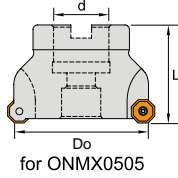
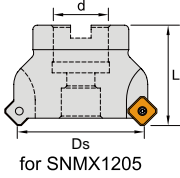
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISNMX1205MG22HS	SNMX1205-MG-CX22HS	●	●	●		○	●
	ISNMX1205MG32HS	SNMX1205-MG-CX32HS	●	●	●		○	○
	ISNMX1205MG33TS	SNMX1205-MG-CX33TS	●	●	●		●	●
	ISNMX1205MG43TS	SNMX1205-MG-CX43TS	●	●	●		●	
	ISNMX1205RG22HS	SNMX1205-RG-CX22HS	●	●	●		○	●
	ISNMX1205RG32HS	SNMX1205-RG-CX32HS	●	●	●		○	○
	ISNMX1205RG33TS	SNMX1205-RG-CX33TS	●	●	●		●	●
	ISNMX1205RG43TS	SNMX1205-RG-CX43TS	●	●	●		●	
	IONMX0505RG22HS	ONMX0505-RG-CX22HS	●	●	●		○	●
	IONMX0505RG32HS	ONMX0505-RG-CX32HS	●	●	●		○	○
	IONMX0505RG33TS	ONMX0505-RG-CX33TS	●	●	●		●	●
	IONMX0505RG43TS	ONMX0505-RG-CX43TS	●	●	●		●	

Recommended Cutting Conditions

Working Material	for SNMX1205			for 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

CXSN Face Milling

CXSNF - Milling tools



Milling

Indexable Milling Cutters

Order No.	D		L	d	T	Inserts	Screw	Wrench	Stock
	Ds	Do							
ICXSNF504050220	50	52.9	40	22	4	SNMX1205 or ONMX0505	ITS4015	ITK15	●
ICXSNF505063220	63	65.9	40	22	5				●
ICXSNF506080270	80	82.9	50	27	6				●
ICXSNF508100320	100	102.9	50	32	8				●

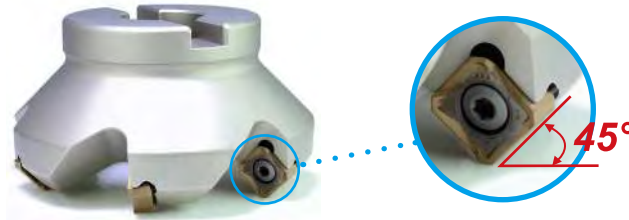
● stock ○ by inquiry

Customize available.

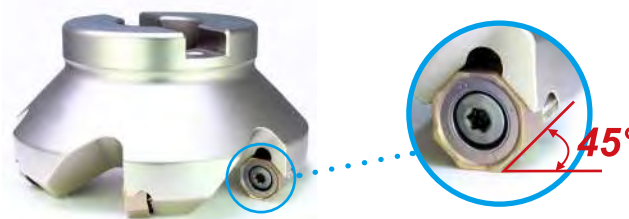
Tools Features

2 types of double sided inserts fit in same pocket !

- Depth of cutting > 2mm, use Square insert - SNMX1205 (Total 8 cutting edges)

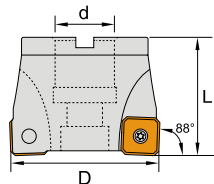


- Depth of cutting ≤ 2mm, use Octagonal insert - ONMX0505 (Total 16 cutting edges)



CXSN Shoulder Milling

CXSNE - Milling tools



Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICXSNE504050220	50	40	22	4	SNMX1205	ITS4015	ITK15	●
ICXSNE505063220	63	40	22	5				●
ICXSNE506080270	80	50	27	6				●

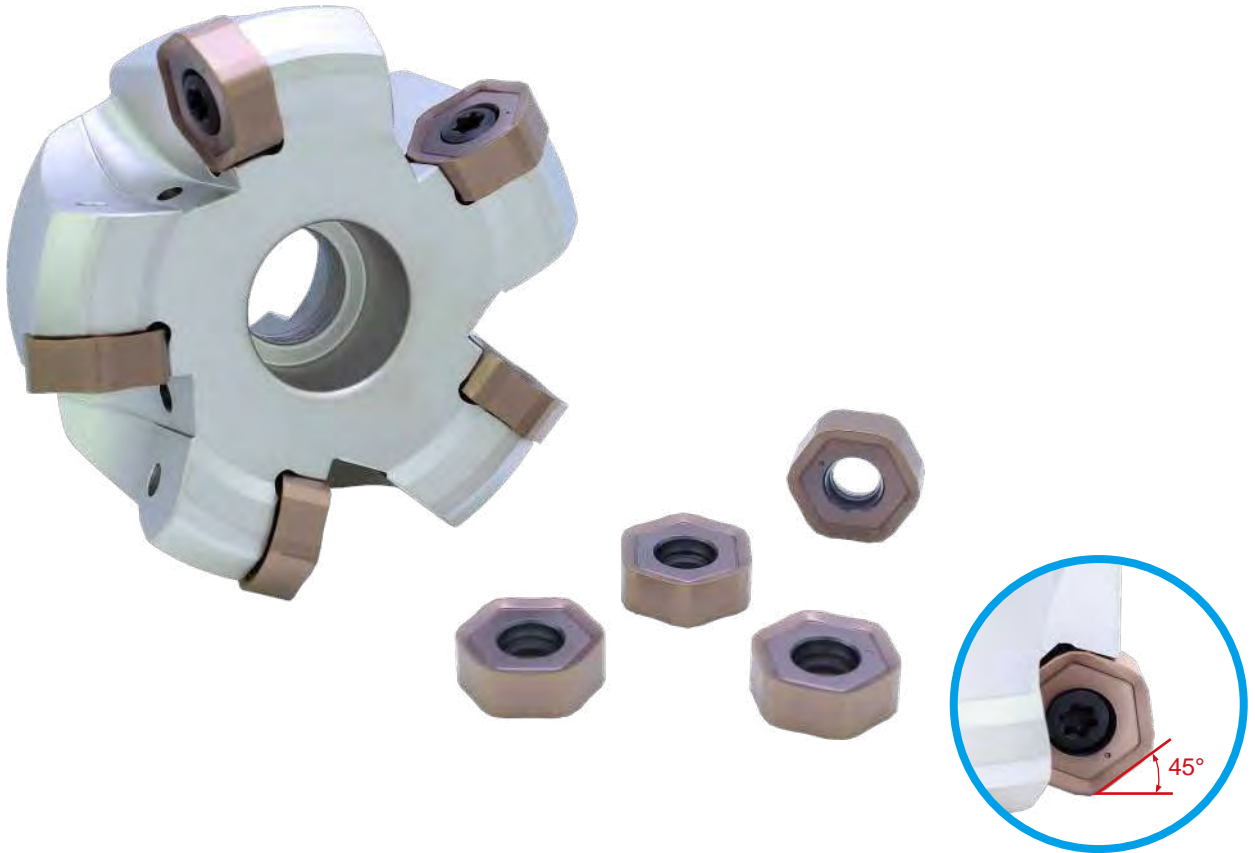
● stock ○ by inquiry

Recommended Cutting Conditions (for CXSNE)

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



CXHN Series, Double sided, 12 cutting edges

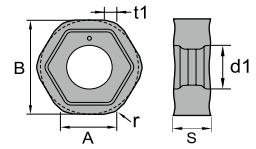


- *CXHN face milling series is more economical due to the use of 12 cutting edges insert.*
- *Sharp cutting edge design for low depth-of-cut face milling.*
- *HNMX double sided insert have excellent tool life.*
- *CX43TS grade is suitable for high temperature alloy and stainless steel machining.*

CXHN Face Milling

Insert Specification

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



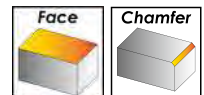
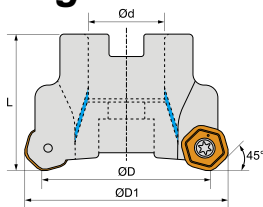
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IHNMX0704SG32HS	HNMX0704-SG-CX32HS	●	●	●		○	○
	IHNMX0704SG33TS	HNMX0704-SG-CX33TS	●	●	●		●	●
	IHNMX0704SG43TS	HNMX0704-SG-CX43TS	●	●	●		●	

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

CXHNF - Milling tools

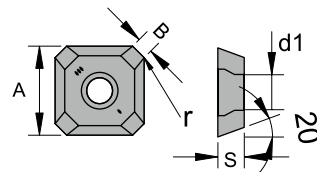


Order No.	D	D1	L	d	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXHNF705050224	50	58.7	40	22	5	✓	HNMX0704	ITS4005	ITK15	●
ICXHNF706063224	63	71.7	40	22	6	✓				●
ICXHNF708080274	80	88.7	50	27	8	✓				●
ICXHNF709100324	100	108.7	50	32	9	✓				●

● stock ○ by inquiry

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 Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISEMT13T3AGENMF22HS	SEMT13T3AGEN-MF-CX22HS	●	●	●		○	●
	ISEMT13T3AGENMF32HS	SEMT13T3AGEN-MF-CX32HS	●	●	●		○	○
	ISEMT13T3AGENMF33TS	SEMT13T3AGEN-MF-CX33TS	●	●	●		●	●
	ISEMT13T3AGENMF43TS	SEMT13T3AGEN-MF-CX43TS	●	●	●		●	
	ISEMT13T3AGSNMF22HS	SEMT13T3AGSN-MF-CX22HS	●	●	●		○	●
	ISEMT13T3AGSNMF32HS	SEMT13T3AGSN-MF-CX32HS	●	●	●		○	○
	ISEMT13T3AGSNMF33TS	SEMT13T3AGSN-MF-CX33TS	●	●	●		●	●
	ISEMT13T3AGSNMF43TS	SEMT13T3AGSN-MF-CX43TS	●	●	●		●	
	ISEMT13T3AGENMG22HS	SEMT13T3AGEN-MG-CX22HS	●	●	●		○	●
	ISEMT13T3AGENMG32HS	SEMT13T3AGEN-MG-CX32HS	●	●	●		○	○
	ISEMT13T3AGENMG33TS	SEMT13T3AGEN-MG-CX33TS	●	●	●		●	●
	ISEMT13T3AGENMG43TS	SEMT13T3AGEN-MG-CX43TS	●	●	●		●	
	ISEMT13T3AGTNMG22HS	SEMT13T3AGTN-MG-CX22HS	●	●	●		○	●
	ISEMT13T3AGTNMG32HS	SEMT13T3AGTN-MG-CX32HS	●	●	●		○	○
	ISEMT13T3AGTNMG33TS	SEMT13T3AGTN-MG-CX33TS	●	●	●		●	●
	ISEMT13T3AGTNMG43TS	SEMT13T3AGTN-MG-CX43TS	●	●	●		●	
	ISEMT13T3AGTNRG32HS	SEMT13T3AGTN-RG-CX32HS	●	●	●		○	○
	ISEMT13T3AGTNRG33TS	SEMT13T3AGTN-RG-CX33TS	●	●	●		●	●
	ISEMT13T3AGTNRG43TS	SEMT13T3AGTN-RG-CX43TS	●	●	●		●	
	ISEMT13T3AGTNHG32HS	SEMT13T3AGTN-HG-CX32HS	●	●	●		○	○
	ISEMT13T3AGTNHG33TS	SEMT13T3AGTN-HG-CX33TS	●	●	●		●	●
	ISEMT13T3AGTNHG43TS	SEMT13T3AGTN-HG-CX43TS	●	●	●		●	
	ISEMT13T3AGFNAL10	SEMT13T3AGFN-AL-CX10				●		
	ISEMT13T3AGFNFG22HS	SEMT13T3AGFN-FG-CX22HS	●	●	●		○	●

CASX Face Milling

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

CASXF - Milling tools



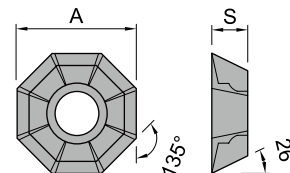
Order No.	D	L	L1	d	Dc	T	Inserts	Stock
ICASXF304050220	50	40	20	22	63	4	SEMT13T3	●
ICASXF305063220	63	40	20	22	75.9	5		●
ICASXF305063250	63	40	20	25.4	75.9	5		●
ICASXF306080250	80	50	26	25.4	93.2	6		●
ICASXF306080270	80	50	26	27	93.2	6		●
ICASXF307100310	100	50	32	31.75	113.2	7		●
ICASXF307100320	100	50	32	32	113.2	7		●

● stock ○ by inquiry

Shim	Screw	Screw	Wrench	Wrench
IAS445N	IPS35T	ITS3505	ITK15	ITK20

Insert Specifications

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



Insert Order Code

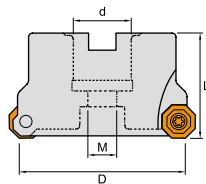
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IOFMT05T3TNMG32HS	OFMT05T3TN-MG-CX32HS	●	●	●		○	○
	IOFMT05T3TNMG33TS	OFMT05T3TN-MG-CX33TS	●	●	●		●	●
	IOFMT05T3TNMG43TS	OFMT05T3TN-MG-CX43TS	●	●	●		●	
	IOFMT05T3TNRG32HS	OFMT05T3TN-RG-CX32HS	●	●	●		○	○
	IOFMT05T3TNRG33TS	OFMT05T3TN-RG-CX33TS	●	●	●		●	●
	IOFMT05T3TNRG43TS	OFMT05T3TN-RG-CX43TS	●	●	●		●	

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

CAOF Face Milling

CAOFF - Milling tools



Order No.	D	d	L	M	T	Inserts	Screw	Wrench	Stock
ICAOFF505050220	50	22	40	11	5	OFMT05T3...	IMS4011A	ITK15	●
ICAOFF506063220	63	22	40	11	6				●
ICAOFF506063250	63	25.4	50	13	6				●
ICAOFF507080250	80	25.4	50	13	7				●
ICAOFF507080270	80	27	50	38	7				●
ICAOFF508100310	100	31.75	50	46	8				●
ICAOFF508100320	100	32	50	46	8				●

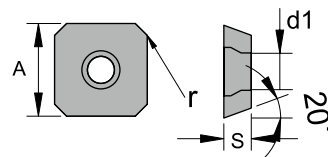
● stock ○ by inquiry










CASE Face Milling

Insert Specifications

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



Insert Order Code

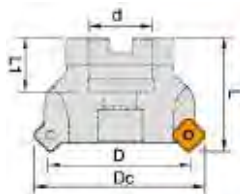
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISEKT1204AFENMF32HS	SEKT1204AFEN-MF-CX32HS	●	●	●		○	○
	ISEKT1204AFENMF33TS	SEKT1204AFEN-MF-CX33TS	●	●	●		●	●
	ISEKT1204AFTNRG32HS	SEKT1204AFTN-RG-CX32HS	●	●	●		○	○
	ISEKT1204AFTNRG33TS	SEKT1204AFTN-RG-CX33TS	●	●	●		●	●
	ISEKT1204AFTNRG43TS	SEKT1204AFTN-RG-CX43TS	●	●	●		●	
	ISEKW1204AFEN32HS	SEKW1204AFEN-CX32HS	●	●	●		○	○
	ISEKW1204AFEN33TS	SEKW1204AFEN-CX33TS	●	●	●		●	●
	ISEKW1204AFSNF32HS	SEKW1204AFSN-F-CX32HS	●	●	●		○	○
	ISEKW1204AFSNF33TS	SEKW1204AFSN-F-CX33TS	●	●	●		●	●
	ISEKW1204AFTN32HS	SEKW1204AFTN-CX32HS	●	●	●		○	○
	ISEKW1204AFTN33TS	SEKW1204AFTN-CX33TS	●	●	●		●	●
	ISEET1204AFFNAL10	SEET1204AFFN-AL-CX10				●		
	ISEET1204AFFNFG22HS	SEET1204AFFN-FG-CX22HS	●	●	●		○	●

CASE Face Milling

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

CASEF - Milling tools



Order No.	D	L	L1	d	Dc	T	Inserts	Screw	Wrench	Stock
ICASEF204050220	50	40	20	22	64	4	SEKT1204 or SEKW1204 or SEET1204	ITS5006	ITK20	●
ICASEF205063220	63	45	21	22	77	5				●
ICASEF205063250	63	45	21	25.4	77	5				○
ICASEF206080270	80	50	26	27	94	6				●
ICASEF206080310	80	50	26	31.75	94	6				○
ICASEF206100310	100	32	32	31.75	114	6				○
ICASEF206100320	100	32	32	32	114	6				○

● stock ○ by inquiry



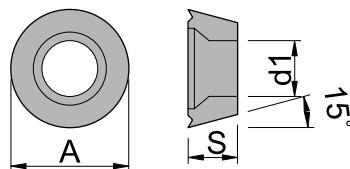
Suitable for mould & die machining and steel profiling !!

- ***Inserts for CARD Series
2.5R, 3.5R, 5R, 6R & 8R***
- ***Inserts for CARP Series
4R, 5R & 6R***

CARD Copy Milling

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 Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRDKW0501MOE22HS	RDKW0501MOE-CX22HS	●	●	●		○	●
	IRDKW0501MOE32HS	RDKW0501MOE-CX32HS	●	●	●		○	○
	IRDKW0501MOE33TS	RDKW0501MOE-CX33TS	●	●	●		●	●
	IRDKW0501MOE43TS	RDKW0501MOE-CX43TS	●	●	●		●	
	IRDKW0702MOSF32HS	RDKW0702MOS-F-CX32HS	●	●	●		○	○
	IRDKW0702MOSF33TS	RDKW0702MOS-F-CX33TS	●	●	●		●	●
	IRDKW0501MOT22HS	RDKW0501MOT-CX22HS	●	●	●		○	●
	IRDKW0501MOT32HS	RDKW0501MOT-CX32HS	●	●	●		○	○
	IRDKW0501MOT33TS	RDKW0501MOT-CX33TS	●	●	●		●	●
	IRDKW0501MOT43TS	RDKW0501MOT-CX43TS	●	●	●		●	
	IRDKW0702MOE22HS	RDKW0702MOE-CX22HS	●	●	●		○	●
	IRDKW0702MOE32HS	RDKW0702MOE-CX32HS	●	●	●		○	○
	IRDKW0702MOE33TS	RDKW0702MOE-CX33TS	●	●	●		●	●
	IRDKW0702MOE43TS	RDKW0702MOE-CX43TS	●	●	●		●	
	IRDKW0702MOT22HS	RDKW0702MOT-CX22HS	●	●	●		○	●
	IRDKW0702MOT32HS	RDKW0702MOT-CX32HS	●	●	●		○	○
	IRDKW0702MOT33TS	RDKW0702MOT-CX33TS	●	●	●		●	●
	IRDKW0702MOT43TS	RDKW0702MOT-CX43TS	●	●	●		●	

CARD Copy Milling

Insert Order Code










Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRDMT1003MOE22HS	RDMT1003MOE-CX22HS	●	●	●		○	●
	IRDMT1003MOE32HS	RDMT1003MOE-CX32HS	●	●	●		○	○
	IRDMT1003MOE33TS	RDMT1003MOE-CX33TS	●	●	●		●	●
	IRDMT1003MOE43TS	RDMT1003MOE-CX43TS	●	●	●		●	
	IRDMT1003MOT22HS	RDMT1003MOT-CX22HS	●	●	●		○	●
	IRDMT1003MOT23TS	RDMT1003MOT-CX23TS	●	●	●		●	●
	IRDMT1003MOT32HS	RDMT1003MOT-CX32HS	●	●	●		○	○
	IRDMT1003MOT33TS	RDMT1003MOT-CX33TS	●	●	●		●	●
	IRDMX1003MOE22HS	RDMX1003MOE-CX22HS	●	●	●		○	●
	IRDMX1003MOE32HS	RDMX1003MOE-CX32HS	●	●	●		○	○
	IRDMX1003MOE33TS	RDMX1003MOE-CX33TS	●	●	●		●	●
	IRDMX1003MOE43TS	RDMX1003MOE-CX43TS	●	●	●		●	
	IRDMX1003MOT22HS	RDMX1003MOT-CX22HS	●	●	●		○	●
	IRDMX1003MOT32HS	RDMX1003MOT-CX32HS	●	●	●		○	○
	IRDMX1003MOT33TS	RDMX1003MOT-CX33TS	●	●	●		●	●
	IRDMX1003MOT43TS	RDMX1003MOT-CX43TS	●	●	●		●	
	IRDMT10T3MOE22HS	RDMT10T3MOE-CX22HS	●	●	●		○	●
	IRDMT10T3MOE32HS	RDMT10T3MOE-CX32HS	●	●	●		○	○
	IRDMT10T3MOE33TS	RDMT10T3MOE-CX33TS	●	●	●		●	●
	IRDMT10T3MOE43TS	RDMT10T3MOE-CX43TS	●	●	●		●	
	IRDMT10T3MOT22HS	RDMT10T3MOT-CX22HS	●	●	●		○	●
	IRDMT10T3MOT32HS	RDMT10T3MOT-CX32HS	●	●	●		○	○
	IRDMT10T3MOT33TS	RDMT10T3MOT-CX33TS	●	●	●		●	●
	IRDMT10T3MOT43TS	RDMT10T3MOT-CX43TS	●	●	●		●	
	IRDMW10T3MOE32HS	RDMW10T3MOE-CX32HS	●	●	●		○	○
	IRDMW10T3MOE33TS	RDMW10T3MOE-CX33TS	●	●	●		●	●
	IRDMW10T3MOT32HS	RDMW10T3MOT-CX32HS	●	●	●		○	○
	IRDMW10T3MOT33TS	RDMW10T3MOT-CX33TS	●	●	●		●	●
	IRDMT12T3MOE22HS	RDMT12T3MOE-CX22HS	●	●	●		○	●
	IRDMT12T3MOE32HS	RDMT12T3MOE-CX32HS	●	●	●		○	○
	IRDMT12T3MOE33TS	RDMT12T3MOE-CX33TS	●	●	●		●	●
	IRDMT12T3MOT22HS	RDMT12T3MOT-CX22HS	●	●	●		○	●
	IRDMT12T3MOT32HS	RDMT12T3MOT-CX32HS	●	●	●		○	○
	IRDMT12T3MOT33TS	RDMT12T3MOT-CX33TS	●	●	●		●	●
	IRDMX12T3MOE22HS	RDMX12T3MOE-CX22HS	●	●	●		○	●
	IRDMX12T3MOE32HS	RDMX12T3MOE-CX32HS	●	●	●		○	○
	IRDMX12T3MOE33TS	RDMX12T3MOE-CX33TS	●	●	●		●	●
	IRDMX12T3MOE43TS	RDMX12T3MOE-CX43TS	●	●	●		●	
	IRDMX12T3MOT22HS	RDMX12T3MOT-CX22HS	●	●	●		○	●
	IRDMX12T3MOT32HS	RDMX12T3MOT-CX32HS	●	●	●		○	○
	IRDMX12T3MOT33TS	RDMX12T3MOT-CX33TS	●	●	●		●	●
	IRDMX12T3MOT43TS	RDMX12T3MOT-CX43TS	●	●	●		●	

Milling

Indexable Milling Cutters

CARD Copy Milling

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRDMT1204MOE22HS	RDMT1204MOE-CX22HS	●	●	●		○	●
	IRDMT1204MOE32HS	RDMT1204MOE-CX32HS	●	●	●		○	○
	IRDMT1204MOE33TS	RDMT1204MOE-CX33TS	●	●	●		●	●
	IRDMT1204MOE43TS	RDMT1204MOE-CX43TS	●	●	●		●	
	IRDMT1204MOT22HS	RDMT1204MOT-CX22HS	●	●	●		○	●
	IRDMT1204MOT32HS	RDMT1204MOT-CX32HS	●	●	●		○	○
	IRDMT1204MOT33TS	RDMT1204MOT-CX33TS	●	●	●		●	●
	IRDMT1204MOT43TS	RDMT1204MOT-CX43TS	●	●	●		●	
	IRDMW1204MOE22HS	RDMW1204MOE-CX22HS	●	●	●		○	●
	IRDMW1204MOE32HS	RDMW1204MOE-CX32HS	●	●	●		○	○
	IRDMW1204MOE33TS	RDMW1204MOE-CX33TS	●	●	●		●	●
	IRDMW1204MOE43TS	RDMW1204MOE-CX43TS	●	●	●		●	
	IRDMW1204MOSF33TS	RDMW1204MOS-F-CX33TS	●	●	●		●	●
	IRDMW1204MOSF43TS	RDMW1204MOS-F-CX43TS	●	●	●		●	
	IRDMW1204MOT22HS	RDMW1204MOT-CX22HS	●	●	●		○	●
	IRDMW1204MOT32HS	RDMW1204MOT-CX32HS	●	●	●		○	○
	IRDMW1204MOT33TS	RDMW1204MOT-CX33TS	●	●	●		●	●
	IRDMW1204MOT43TS	RDMW1204MOT-CX43TS	●	●	●		●	
	IRDMT1604MOT22HS	RDMT1604MOT-CX22HS	●	●	●		○	●
	IRDMT1604MOT32HS	RDMT1604MOT-CX32HS	●	●	●		○	○
	IRDMT1604MOT33TS	RDMT1604MOT-CX33TS	●	●	●		●	●
	IRDMT1604MOT43TS	RDMT1604MOT-CX43TS	●	●	●		●	
	IRDMW1604MOE22HS	RDMW1604MOE-CX22HS	●	●	●		○	●
	IRDMW1604MOE32HS	RDMW1604MOE-CX32HS	●	●	●		○	○
	IRDMW1604MOE33TS	RDMW1604MOE-CX33TS	●	●	●		●	●
	IRDMW1604MOE43TS	RDMW1604MOE-CX43TS	●	●	●		●	
	IRDMW1604MOSF22HS	RDMW1604MOS-F-CX22HS	●	●	●		○	●
	IRDMW1604MOSF32HS	RDMW1604MOS-F-CX32HS	●	●	●		○	○
	IRDMW1604MOSF33TS	RDMW1604MOS-F-CX33TS	●	●	●		●	●
	IRDMW1604MOSF43TS	RDMW1604MOS-F-CX43TS	●	●	●		●	
	IRDMW1604MOE22HS	RDMW1604MOT-CX22HS	●	●	●		○	●
	IRDMW1604MOE23TS	RDMW1604MOT-CX23TS	●	●	●		●	●
	IRDMW1604MOE32HS	RDMW1604MOT-CX32HS	●	●	●		○	○
	IRDMW1604MOE33TS	RDMW1604MOT-CX33TS	●	●	●		●	●
	IRDMW1604MOE43TS	RDMW1604MOT-CX43TS	●	●	●		●	

CARD Copy Milling

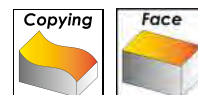
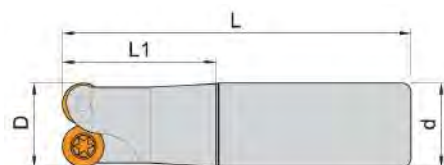
Recommended Cutting Conditions

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

Milling

Indexable Milling Cutters

CARDE - Milling tools

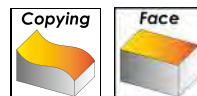
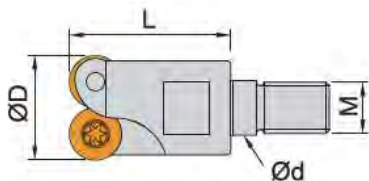


Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICARDE502010100	10	25	100	10	2	RDKW0501	ITS2003	ITK06	●
ICARDE502012100	12	25	100	12	2				○
ICARDE503016130	16	35	130	16	3				○
ICARDE703016130	16	40	130	16	3	RDKW0702	ITS2015	ITK08	○
ICARDE704020150	20	40	150	20	4				●
ICARDE704025150	25	40	150	25	4				○
ICARDE102025150	25	45	150	25	2	RDMT10T3 or RDMW10T3	ITS3504	ITK15	●
ICARDE102030150	30	45	150	25	2				●
ICARDE103032150	32	45	150	32	3				○
ICARDE202032150	32	50	150	32	2	RDMT1204 or RDMW1204	ITS4008	ITK15	○
ICARDE302020150	20	40	150	20	2	RDMT1003 or RDMX1003	IMS3507A	ITK15	●
ICARDE303025150	25	40	150	25	3				●
ICARDE303026150	26	25	150	25	3		●		
ICARDE303030150	30	25	150	25	3		●		
ICARDE304035150	35	40	150	32	4		IMS3509A		●

● stock ○ by inquiry

CARD Copy Milling

CARDM - Modular tools

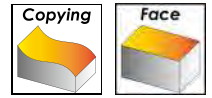
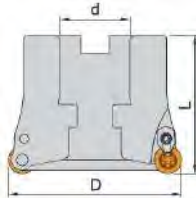


Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICARDM502012060	12	21	6.5	M06	2	RDKW0501	ITS2003	ITK06	●
ICARDM503012060	12	21	6.5	M06	3				○
ICARDM504016080	16	26	8.5	M08	4				○
ICARDM703016080	16	26	8.5	M08	3	RDKW0702	ITS2515	ITK08	○
ICARDM704020100	20	32	10.5	M10	4				○
ICARDM705025120	25	38	12.5	M12	5				○
ICARDM103025120	25	38	12.5	M12	3	RDMT10T3 or RDMW10T3	ITS3504	ITK10	●
ICARDM104030120	30	38	12.5	M12	4				●
ICARDM105032120	35	38	12.5	M12	5				○
ICARDM302020100	20	30	10.5	M10	2	RDMT1003 or RDMX1003	IMS3507A	ITK15	●
ICARDM302021100	21	30	10.5	M10	2				●
ICARDM303025120	25	35	12.5	M12	3				●
ICARDM303026120	26	35	12.5	M12	3				●
ICARDM303030120	30	35	12.5	M12	3		IMS3509A	●	

● stock ○ by inquiry

CARD Copy Milling

CARDF - Milling tools



Milling

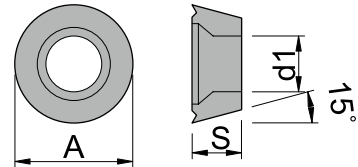
Indexable Milling Cutters

Order No.	D	L	d	T	Inserts	Screw	Wrench	Clamp	Clamp Screw	Stock
ICARDF104050220	50	45	22	4	RDMT10T3 or RDMW10T3	ITS3504	ITK15	IRD-45	ITS4009	●
ICARDF106063220	63	45	22	6						●
ICARDF204050220	50	45	22	4	RDMT1204 or RDMW1204	ITS4008	ITK15	IRD-6R	ITS5004	●
ICARDF205050220	50	45	22	5						●
ICARDF205063220	63	45	22	5						●
ICARDF206063220	63	45	22	6						●
ICARDF207080270	80	50	27	7						○
ICARDF208100320	100	50	32	8						○
ICARDF604063220	63	45	22	4	RDMT1604 or RDMW1604	ITS5007	ITK20	IRD-68	ITS5009	●
ICARDF605063220	63	45	22	5						●
ICARDF606080270	80	50	27	6						○
ICARDF607100320	100	50	32	7						○
ICARDF305050220	50	40	22	5	RDMT1003 or RDMX1003	IMS3509A	ITK15	IMC35-3V	-	●
ICARDF305050250	50	50	25.4	5						●
ICARDF306063250	63	50	25.4	6						●

● stock ○ by inquiry

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 Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRPMT08T2MOE32HS	RPMT08T2MOE-CX32HS	●	●	●		○	○
	IRPMT08T2MOE33TS	RPMT08T2MOE-CX33TS	●	●	●		●	●
	IRPMT08T2MOE43TS	RPMT08T2MOE-CX43TS	●	●	●		●	
	IRPMT08T2MOT32HS	RPMT08T2MOT-CX32HS	●	●	●		○	○
	IRPMT08T2MOT33TS	RPMT08T2MOT-CX33TS	●	●	●		●	●
	IRPMT08T2MOT43TS	RPMT08T2MOT-CX43TS	●	●	●		●	
	IRPMW1003MOE22HS	RPMW1003MOE-CX22HS	●	●	●		○	●
	IRPMW1003MOE32HS	RPMW1003MOE-CX32HS	●	●	●		○	○
	IRPMW1003MOE33TS	RPMW1003MOE-CX33TS	●	●	●		●	●
	IRPMW1003MOE43TS	RPMW1003MOE-CX43TS	●	●	●		●	
	IRPMW1003MOSF33TS	RPMW1003MOS-F-CX33TS	●	●	●		●	●
	IRPMW1003MOT22HS	RPMW1003MOT-CX22HS	●	●	●		○	●
	IRPMW1003MOT32HS	RPMW1003MOT-CX32HS	●	●	●		○	○
	IRPMW1003MOT33TS	RPMW1003MOT-CX33TS	●	●	●		●	●
	IRPMW1003MOT43TS	RPMW1003MOT-CX43TS	●	●	●		●	

Insert Order Code

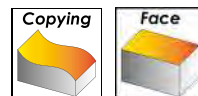
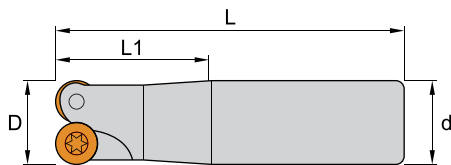
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRPMT10T3MOE32HS	RPMT10T3MOE-CX32HS	●	●	●		○	○
	IRPMT10T3MOE33TS	RPMT10T3MOE-CX33TS	●	●	●		●	●
	IRPMT10T3MOE43TS	RPMT10T3MOE-CX43TS	●	●	●		●	
	IRPMT10T3MOT32HS	RPMT10T3MOT-CX32HS	●	●	●		○	○
	IRPMT10T3MOT33TS	RPMT10T3MOT-CX33TS	●	●	●		●	●
	IRPMT10T3MOT43TS	RPMT10T3MOT-CX43TS	●	●	●		●	
	IRPMT1204MOE22HS	RPMT1204MOE-CX22HS	●	●	●		○	●
	IRPMT1204MOE32HS	RPMT1204MOE-CX32HS	●	●	●		○	○
	IRPMT1204MOE33TS	RPMT1204MOE-CX33TS	●	●	●		●	●
	IRPMT1204MOE43TS	RPMT1204MOE-CX43TS	●	●	●		●	
	IRPMT1204MOT22HS	RPMT1204MOT-CX22HS	●	●	●		○	●
	IRPMT1204MOT32HS	RPMT1204MOT-CX32HS	●	●	●		○	○
	IRPMT1204MOT33TS	RPMT1204MOT-CX33TS	●	●	●		●	●
	IRPMT1204MOT43TS	RPMT1204MOT-CX43TS	●	●	●		●	
	IRPMW1204MOE32HS	RPMW1204MOE-CX32HS	●	●	●		○	○
	IRPMW1204MOE33TS	RPMW1204MOE-CX33TS	●	●	●		●	●
	IRPMW1204MOE43TS	RPMW1204MOE-CX43TS	●	●	●		●	
	IRPMW1204MOT32HS	RPMW1204MOT-CX32HS	●	●	●		○	○
	IRPMW1204MOT43TS	RPMW1204MOT-CX43TS	●	●	●		●	●
	IRPMW1204MOT33TS	RPMW1204MOT-CX33TS	●	●	●		●	

Recommended Cutting Conditions

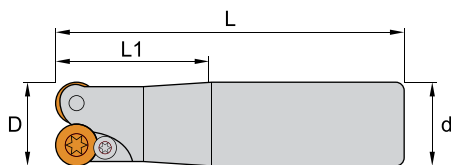
Working Material	Vc	Dia ≤ 10		Dia > 10	
		fz	ap	fz	ap
Carbon Steel / Alloy Steel	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
Stainless Steel	100 ~ 180	0.08 ~ 0.4	0.3 ~ 1.2	0.15 ~ 0.4	0.5 ~ 2.0
Cast Iron	120 ~ 250	0.1 ~ 0.6	0.3 ~ 1.5	0.2 ~ 0.8	0.5 ~ 2.5
High Temperature Alloy	40 ~ 100	0.08 ~ 0.3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

CARP Copy Milling

CARPE - Milling tools



Order No.	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICARPE802016150	16	50	150	16	2	RPMT08T2	ITS3004	ITK09	●
ICARPE802020150	20	50	150	20	2				●
ICARPE803025150	25	40	150	25	3				●
ICARPE102025150	25	40	150	25	2	RPMT10T3	ITS3503	ITK15	●
ICARPE103030150	30	40	150	25	3				●
ICARPE103032150	32	40	150	32	3				●
ICARPE202032170	32	45	170	32	2	RPMT1204 or RPMW1204	ITS4006	ITK15	●

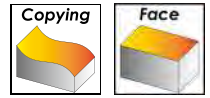
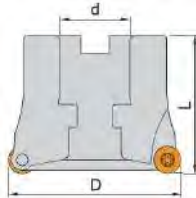


Order No.	D	L1	L	d	T	Inserts	Screw	Clamp	Wrench	Stock
ICARPE302025150	25	50	150	25	2	RPMW1003	ITS4004	IAS5	ITK15	●
ICARPE302025180	25	50	180	25	2					●
ICARPE302025200	25	50	200	25	2					●
ICARPE302025250	25	50	250	25	2					●
ICARPE302026150	26	30	150	25	2					●
ICARPE302030150	30	35	150	25	2					●
ICARPE302030200	30	35	200	25	2					●
ICARPE302030300	30	35	300	25	2					●
ICARPE303032120	32	55	125	32	3					●
ICARPE303035150	35	55	150	32	3					●
ICARPE303035250	35	55	250	32	3					●
ICARPE303035300	35	55	300	32	3					●

● stock ○ by inquiry

CARP Copy Milling

CARPF - Milling tools



Order No.	D	L	d	T	Inserts	Screw	Wrench	Stock
ICARPF305050220	50	45	22	5	RPMT10T3	ITS3503	ITK15	●
ICARPF305050250	50	45	25.4	5				●
ICARPF306063220	63	45	22	6				○
ICARPF306063250	63	45	25.4	6				○
ICARPF204050250	50	45	25.4	4	RPMT1204 or RPMW1204	ITS4006	ITK15	●
ICARPF205063220	63	45	22	5				●
ICARPF205063250	63	45	25.4	5				●
ICARPF206080250	80	50	25.4	6				●
ICARPF206080270	80	50	27	6				●

● stock ○ by inquiry



Suitable for mould & die machining and steel profiling !!

• ***CF21 Series :***

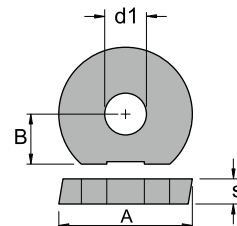
Copy milling for medium & finishing

WP32 Inserts : 6R, 8R, 10R, 12.5R & 16R











CF21 Copy Milling

Insert Specifications

Insert	Dimensions (mm)			
	A	B	S	d1
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 Order Code

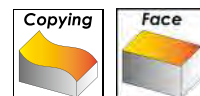
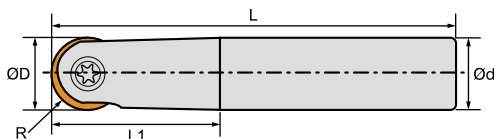
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWP3212SM22HS	WP3212-SM-CX22HS	●	●	●		○	●
	IWP3216SM22HS	WP3216-SM-CX22HS	●	●	●		○	●
	IWP3220SM22HS	WP3220-SM-CX22HS	●	●	●		○	●
	IWP3225SM22HS	WP3225-SM-CX22HS	●	●	●		○	●
	IWP3232SM22HS	WP3232-SM-CX22HS	●	●	●		○	●
	IWP3212MM22HS	WP3212-MM-CX22HS	●	●	●		○	●
	IWP3216MM22HS	WP3216-MM-CX22HS	●	●	●		○	●
	IWP3220MM22HS	WP3220-MM-CX22HS	●	●	●		○	●
	IWP3225MM22HS	WP3225-MM-CX22HS	●	●	●		○	●
	IWP3232MM22HS	WP3232-MM-CX22HS	●	●	●		○	●

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	$\leq 0.02 \times \text{ØD}$

CF21 Copy Milling

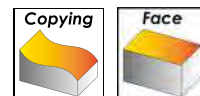
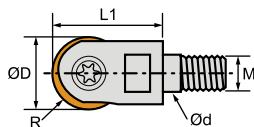
CF21E - Milling tools



Order No.	R	D	L1	L	d	T	Inserts	Screw	Wrench	Stock
ICF21E302012150	6R	12	32	150	12	2	WP3212 ..	IMGR5012	ITK20	●
ICF21E302012200	6R	12	58	200	16	2				
ICF21E302016150	8R	16	36	150	16	2	WP3216..	IMGR5016	ITK20	●
ICF21E302016200	8R	16	36	200	16	2				
ICF21E302016201	8R	16	65	200	20	2				
ICF21E302020150	10R	20	45	150	20	2	WP3220..	IMGR5020	ITK20	●
ICF21E302020200	10R	20	45	200	20	2				
ICF21E302020201	10R	20	76	200	25	2				
ICF21E302020250	10R	20	76	250	25	2				
ICF21E302025200	12.5R	25	45	200	25	2	WP3225..	IMGR6025	ITK30	●
ICF21E302025250	12.5R	25	45	250	25	2				
ICF21E302025201	12.5R	25	98	200	32	2				
ICF21E302025251	12.5R	25	98	250	32	2				
ICF21E302025300	12.5R	25	98	300	32	2				
ICF21E302032200	16R	32	50	200	32	2	WP3232..	IMGR8030	ITK30	●
ICF21E302032250	16R	32	50	250	32	2				
ICF21E302032300	16R	32	50	300	32	2				

● stock ○ by inquiry

CF21M - Modular tools



Order No.	R	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICF21M302012060	6R	12	22	6.5	M6	2	WP3212 ..	IMGR5012	ITK20	●
ICF21M302012080	6R	12	30	8.5	M8	2				
ICF21M302016080	8R	16	28	8.5	M8	2	WP3216 ..	IMGR5016	ITK20	●
ICF21M302020100	10R	20	30	10.5	M10	2	WP3220 ..	IMGR5020	ITK20	●
ICF21M302025120	12.5R	25	40	12.5	M12	2	WP3225 ..	IMGR6025	ITK30	●
ICF21M302032160	16R	32	43	17	M16	2	WP3232 ..	IMGR8030	ITK30	●

● stock ○ by inquiry



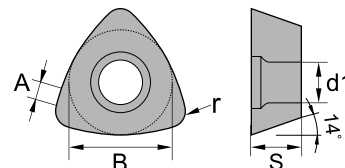
Suitable for mould & die machining and steel profiling !!

- ***CF22 Series :***
 - Copy milling for roughing***
 - WP26 Inserts : 14R & 25R***

CF22 Copy Milling

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 Order Code

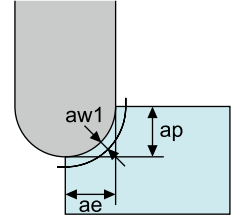
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWP26314RG22HS	WP26339R14-RG-CX22HS	●	●	●		○	●
	IWP26314RG23TS	WP26339R14-RG-CX23TS	●	●	●		●	●
	IWP26314RG32HS	WP26339R14-RG-CX32HS	●	●	●		○	○
	IWP26314RG33TS	WP26339R14-RG-CX33TS	●	●	●		●	●
	IWP26314RG43TS	WP26339R14-RG-CX43TS	●	●	●		●	
	IWP26725RG22HS	WP26379R25-RG-CX22HS	●	●	●		○	●
	IWP26725RG23TS	WP26379R25-RG-CX23TS	●	●	●		●	●
	IWP26725RG32HS	WP26379R25-RG-CX32HS	●	●	●		○	○
	IWP26725RG33TS	WP26379R25-RG-CX33TS	●	●	●		●	●
	IWP26725RG43TS	WP26379R25-RG-CX43TS	●	●	●		●	

CF22 Copy Milling

Recommended Cutting Conditions

for WP26339R14

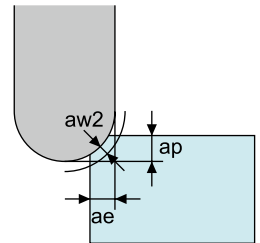
Working Material	Vc	aw1 = (0.5D, 0.5D)	aw2 = (0.25D, 0.25D)
		fz	
Carbon Steel / Alloy Steel	120 ~ 250	0.16 ~ 0.30	0.2 ~ 0.39
Stainless Steel	100 ~ 180	0.08 ~ 0.14	0.1 ~ 0.18
Cast Iron	120 ~ 250	0.16 ~ 0.30	0.2 ~ 0.39
High Temperature Alloy	40 ~ 100	0.08 ~ 0.12	0.1 ~ 0.18



$aw1 = (ap, ae)$

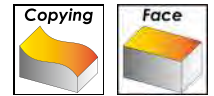
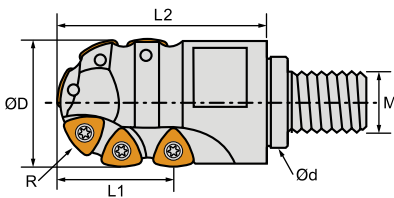
for WP26379R25

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



$aw2 = (ap, ae)$

CF22M - Modular tools

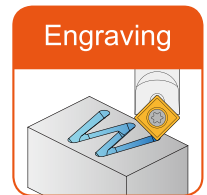
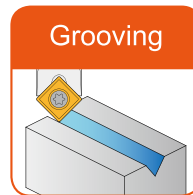
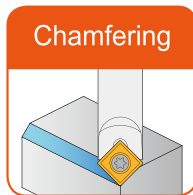
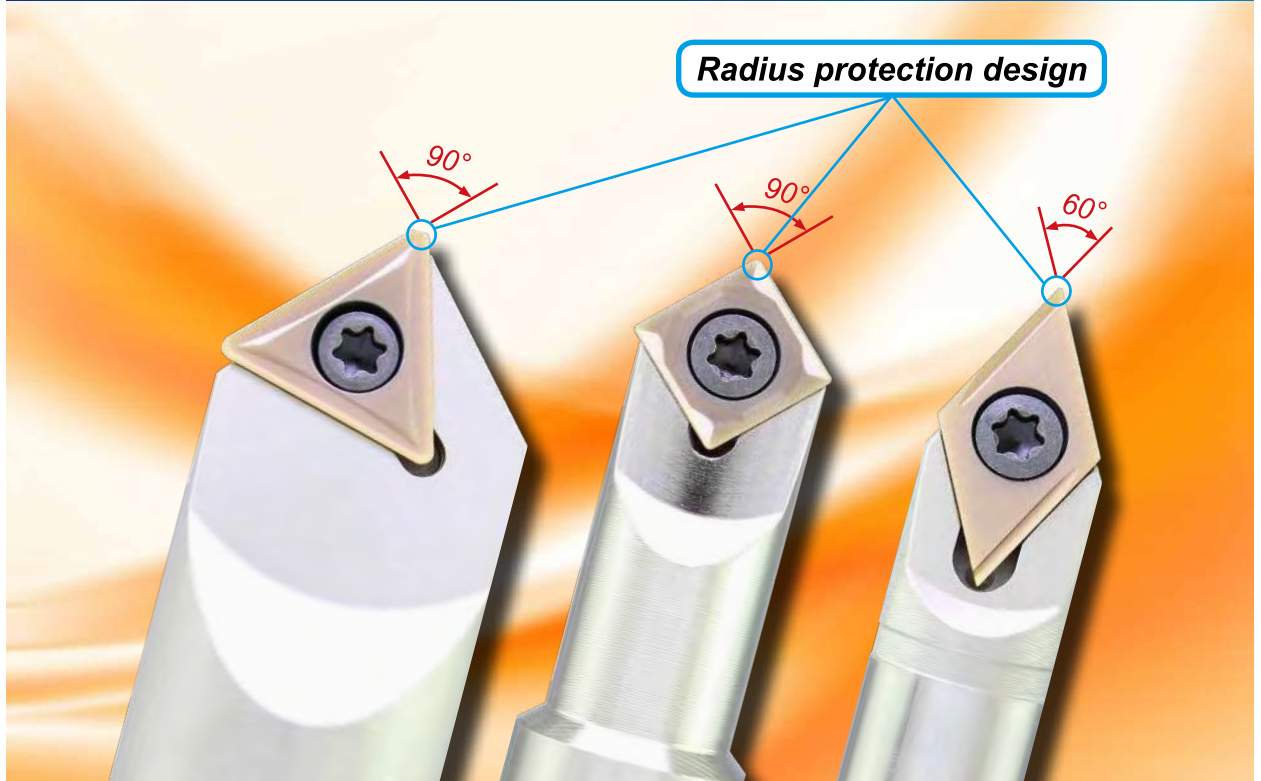


Order No.	R	D	L1	L2	d	M	T	Inserts	Screw	Wrench	Stock
ICF22M202025120	12.5R	25	21	42	12.5	M12	2	WP26339R14	ITS4023	ITK15	●
ICF22M202030120	15R	30	23	50	12.5	M12	2				●
ICF22M202032160	16R	32	23	50	17.0	M16	2				●
ICF22M202040180	20R	40	38	65	28.0	M18	2	WP26379R25	ITS5007	ITK20	○
ICF22M202050250	25R	50	45	80	36.0	M25	2				○

● stock ○ by inquiry

Customize available.

DTS Chamfering & Engraving



- Multiple-function in one tool.
- Many cutting edges insert for better cost efficiency.
- Working size up to 20mm.

DTS6 60° Chamfering & Engraving

Insert Order Code and Specifications

Insert	Order No.	Designation	r	Working Ød	Working Materials						Figure
					Engraving	P	M	K	N	S	
	IDCEX11T301XF32HS	DCEX11T301-XF-CX32HS	0.1	0.2 ~ 1	●	●	●	※	○	○	
	IDCEX11T302XF32HS	DCEX11T302-XF-CX32HS	0.2	0.4 ~ 2	●	●	●	※	○	○	
	IDCEX11T304XF32HS	DCEX11T304-XF-CX32HS	0.4	0.8 ~ 3	●	●	●	※	○	○	
	IDCEX11T304XR32HS	DCEX11T304-XR-CX32HS	0.4	0.8 ~ 3	●	●	●	※	○	○	
	IDCEX11T308XR32HS	DCEX11T308-XR-CX32HS	0.8	0.8 ~ 3	●	●	●	※	○	○	

※ To choose CX10(uncoating) for N material machining.

Recommended Cutting Conditions

for 60° Chamfering / Countersinking

	Material	Vc (m/min)	Fr (mm/rev)
P	Carbon Steel	12 ~ 180	0.05 ~ 0.15
	Alloy Steel	12 ~ 180	0.05 ~ 0.15
M	Stainless Steel	12 ~ 180	0.05 ~ 0.15
K	Cast Iron	12 ~ 180	0.05 ~ 0.15
N	Aluminum	12 ~ 180	0.10 ~ 0.20
H	Hardened Steel	12 ~ 180	0.03 ~ 0.10

for 60° Grooving / Engraving

	Material	Vc (m/min)	Fr (mm/rev)
P	Carbon Steel	10 ~ 170	0.005 ~ 0.05
	Alloy Steel	10 ~ 170	0.005 ~ 0.03
M	Stainless Steel	10 ~ 170	0.005 ~ 0.05
K	Cast Iron	10 ~ 170	0.005 ~ 0.03
N	Aluminum	10 ~ 170	0.005 ~ 0.08
H	Hardened Steel	10 ~ 170	0.005 ~ 0.02

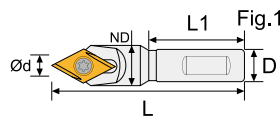
for 60° Depth of Cut and Number of Passes

No. of Passes	Material					
	Aluminum	Cast iron	Carbon steel	Alloy steel	Stainless steel	Hardened steel
	ap (mm)					
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

※ Finally ap is equal to the total depth.

MAX ap : 2mm

Holder Order Code and Specifications



Order No.	D	ND	L	L1	Degree	Fig	Insert	Screw	Wrench	Stock
IDTS1006006011	10	12	60	30	60°	1	DCEX11T3	ITS3520	ITK15	●
IDTS1210006011	12	12	100	-	60°	2				●

● stock ○ by inquiry

DTS9 90° Chamfering & Engraving

■ Insert Order Code and Specifications

Insert	Order No.	Designation	r	Working Ød		Working Materials						Figure
				Spotting	Engraving	P	M	K	N	S	H	
	ISCX09T304AG10	SCGX09T304-AG-CX10	0.4	2 ~ 11	0.8 ~ 2.5				●			
	ISCX09T304FG12HS	SCGX09T304-FG-CX12HS	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	●	●		
	ISCMX09T304SM32HS	SCMX09T304-SM-CX32HS	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●		○	○	
	ITCGX16T308AG10	TCGX16T308-AG-CX10	0.8	3 ~ 20	1.6 ~ 4.0				●			
	ITCGX16T308FG12HS	TCGX16T308-FG-CX12HS	0.8	3 ~ 20	1.6 ~ 4.0	●	●	●	●	●		
	ITCMX16T308MP32HS	TCMX16T308-MP-CX32HS	0.8	-	-	●	●	●		○	○	

Recommended Cutting Conditions

for 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
P 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
M Stainless steel	30 ~ 60	45 ~ 120	0.02 ~ 0.04	0.04 ~ 0.06
K Cast iron	40 ~ 80	60 ~ 130	0.04 ~ 0.08	0.06 ~ 0.10
H Hardened steel	20 ~ 40	30 ~ 60	0.02 ~ 0.04	0.04 ~ 0.08

for 90° Chamfering / Countersinking

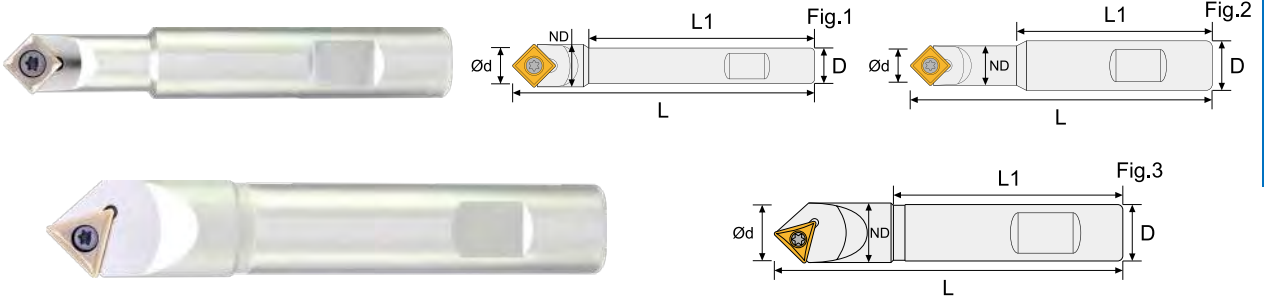
Material	Vc (m/min)	Fr (mm/rev)
P Carbon steel	60 ~ 270	0.15 ~ 0.24
Alloy steel	50 ~ 220	0.12 ~ 0.20
M Stainless steel	35 ~ 120	0.10 ~ 0.20
K Cast iron	60 ~ 220	0.15 ~ 0.25
H Hardened steel	20 ~ 60	0.03 ~ 0.08

for 90° Grooving / Engraving

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

DTS9 90° Chamfering & Engraving

Holder Order Code and Specifications



Order No.	D	ND	L	L1	Degree	Fig	Insert	Screw	Wrench	Stock
IDTS1010009009	10	12.2	100	71	90°	1	SCGX09T3 or SCMX09T3	ITS3520	ITK15	●
IDTS1210009009	12	12.2	100	71	90°	2				●
IDTS1610009009	16	12.2	100	71	90°					●
IDTS1613009009	16	12.2	130	101	90°	●				
IDTS2012009016	20	21.2	120	78	90°	3	TCGX16T3 or TCMX16T3	ITS3521	ITK15	●

● stock ○ by inquiry

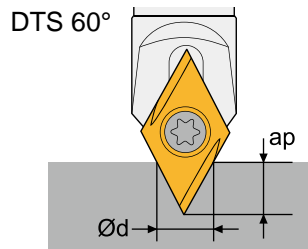
DTS Chamfering & Engraving

■ How to calculate Ød ,RPM and Feed

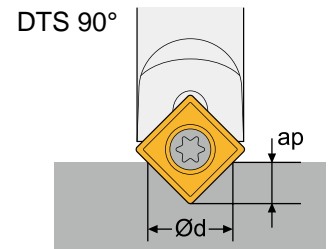
Formula :

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

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



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



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

EX :

Working Material = Cast iron

Use 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 $Vc \cong 85 \text{ m/min}$ and $Fr \cong 0.075 \text{ mm/rev}$

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

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

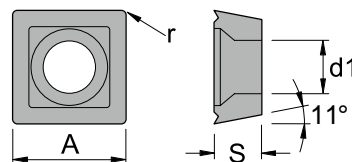
■ Working Demonstration



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

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 Order Code

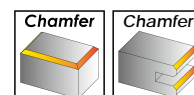
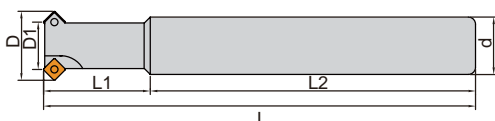
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISPMG050204MG32HS	SPMG050204-MG-CX32HS	●	●	●		○	○
	ISPMG050204MG33TS	SPMG050204-MG-CX33TS	●	●	●		●	●
	ISPMG050204MG43TS	SPMG050204-MG-CX43TS	●	●	●		●	
	ISPMG060204MG32HS	SPMG060204-MG-CX32HS	●	●	●		○	○
	ISPMG060204MG33TS	SPMG060204-MG-CX33TS	●	●	●		●	●
	ISPMG060204MG43TS	SPMG060204-MG-CX43TS	●	●	●		●	
	ISPMG07T308MG32HS	SPMG07T308-MG-CX32HS	●	●	●		○	○
	ISPMG07T308MG33TS	SPMG07T308-MG-CX33TS	●	●	●		●	●
	ISPMG07T308MG43TS	SPMG07T308-MG-CX43TS	●	●	●		●	
	ISPMG090408MG32HS	SPMG090408-MG-CX32HS	●	●	●		○	○
	ISPMG090408MG33TS	SPMG090408-MG-CX33TS	●	●	●		●	●
	ISPMG090408MG43TS	SPMG090408-MG-CX43TS	●	●	●		●	
	ISPMG090408RG32HS	SPMG090408-RG-CX32HS	●	●	●		○	○
	ISPMG090408RG33TS	SPMG090408-RG-CX33TS	●	●	●		●	●
	ISPMG090408RG43TS	SPMG090408-RG-CX43TS	●	●	●		●	

CSPC Chamfering

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

CSPCE - Milling tools



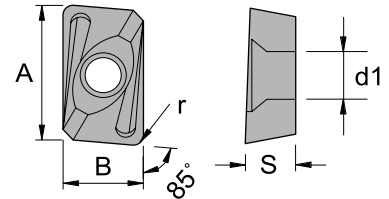
Order No.	D	D1	d	L1	L2	L	T	Inserts	Screw	Wrench	Stock
ICSPCE501011100	11	6	10	17	83	100	1	SPMG0502	ITS2003	ITK06	●
ICSPCE502015120	15	10	12	20	100	120	2				●
ICSPCE503017150	17	11	16	25	125	150	3				●
ICSPCE503019150	19	13	16	30	120	150	3				●
ICSPCE504024150	24	18	20	35	115	150	4				●
ICSPCE603022120	22	16	16	30	80	120	3	SPMG0602	ITS2205	ITK06	●
ICSPCE703027120	27	17	20	30	80	120	3	SPMG07T3	ITS2511	ITK08	●
ICSPCE902030150	30	19	20	40	110	150	2	SPMG0904	ITS3504	ITK15	●
ICSPCE903040150	40	29	25	40	110	150	3				●
ICSPCE904050150	50	39	25	40	110	150	4				●

● stock ○ by inquiry

CBAH Helical Milling

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 Order Code

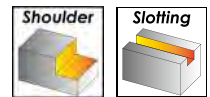
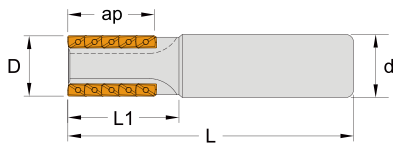
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPMT113508EMG22HS	APMT113508PDER-MG-CX22HS	●	●	●		○	●
	IAPMT113508EMG23TS	APMT113508PDER-MG-CX23TS	●	●	●		●	●
	IAPMT113508EMG32HS	APMT113508PDER-MG-CX32HS	●	●	●		○	○
	IAPMT113508EMG33TS	APMT113508PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113508EMG43TS	APMT113508PDER-MG-CX43TS	●	●	●		●	
	IAPMT113516EMG33TS	APMT113516PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113516EMG43TS	APMT113516PDER-MG-CX43TS	●	●	●		●	
	IAPMT113508ERG22HS	APMT113508PDER-RG-CX22HS	●	●	●		○	●
	IAPMT113508ERG23TS	APMT113508PDER-RG-CX23TS	●	●	●		●	●
	IAPMT113508ERG32HS	APMT113508PDER-RG-CX32HS	●	●	●		○	○
	IAPMT113508ERG33TS	APMT113508PDER-RG-CX33TS	●	●	●		●	●
	IAPMT113508ERG43TS	APMT113508PDER-RG-CX43TS	●	●	●		●	
	IAPMT113508EHG32HS	APMT113508PDER-HG-CX32HS	●	●	●		○	○
	IAPMT113508EHG33TS	APMT113508PDER-HG-CX33TS	●	●	●		●	●
	IAPMT113508EHG43TS	APMT113508PDER-HG-CX43TS	●	●	●		●	
	IAPMT160408EMG22HS	APMT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPMT160408EMG32HS	APMT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPMT160408EMG33TS	APMT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160408EMG43TS	APMT160408PDER-MG-CX43TS	●	●	●		●	
	IAPMT160416EMG33TS	APMT160416PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160416EMG43TS	APMT160416PDER-MG-CX43TS	●	●	●		●	
	IAPMT160408ERG22HS	APMT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPMT160408ERG23TS	APMT160408PDER-RG-CX23TS	●	●	●		●	●
	IAPMT160408ERG32HS	APMT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPMT160408ERG33TS	APMT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPMT160408ERG43TS	APMT160408PDER-RG-CX43TS	●	●	●		●	
	IAPMT160408EHG22HS	APMT160408PDER-HG-CX22HS	●	●	●		○	●
	IAPMT160408EHG32HS	APMT160408PDER-HG-CX32HS	●	●	●		○	○
	IAPMT160408EHG33TS	APMT160408PDER-HG-CX33TS	●	●	●		●	●
	IAPMT160408EHG43TS	APMT160408PDER-HG-CX43TS	●	●	●		●	
	IAPGT160408EAL10	APGT160408PDER-AL-CX10					●	
	IAPGT160408EFG22HS	APGT160408PDER-FG-CX22HS	●	●	●		○	●

CBAH Helical Milling

Recommended Cutting Conditions

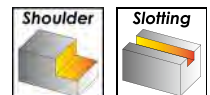
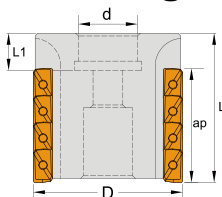
Working Material	for APMT1135		for APMT1604	
	Vc	fz	Vc	fz
Carbon Steel / Alloy Steel	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Stainless Steel	100 ~ 180	0.08 ~ 0.18	100 ~ 180	0.10 ~ 0.22
Cast Iron	120 ~ 250	0.10 ~ 0.22	120 ~ 250	0.12 ~ 0.28
Aluminum Alloy	-	-	300 ~ 1000	0.10 ~ 0.40
High Temperature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

CBAHE - Milling tools



Order No.	D	ap	L1	L	d	T x Pcs	Inserts	Screw	Wrench	Stock
ICBAHE305020100	20	28	42	107	20	1 x 5	APMT1135	ITS2515	ITK08	●
ICBAHE308025120	25	35	50	125	25	2 x 4				●
ICBAHE315032130	32	44	60	135	32	3 x 5				●
ICBAHE324040170	40	72	94	175	32	3 x 8				●
ICBAHE406032130	32	42	55	135	32	2 x 3	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAHE410040170	40	68	94	175	32	2 x 5				●
ICBAHE415040170	40	68	94	175	32	3 x 5				●
ICBAHE424050220	50	100	128	224	50.8	3 x 8				●
ICBAHE436050280	50	158	188	284	50.8	3 x 12				●

CBAHF - Milling tools



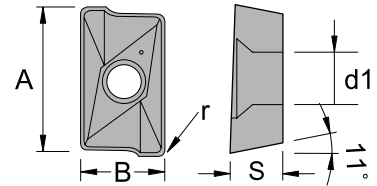
Order No.	D	ap	L1	L	d	T x Pcs	Inserts	Screw	Wrench	Stock
ICBAHF409050220	50	42	21	69	22	3 x 3	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAHF412063250	63	42	38	69	25.4	4 x 3				●
ICBAHF420063250	63	68	38	97	25.4	4 x 5				●

● stock ○ by inquiry

CAPH Helical Milling

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	5.25	0.2	4.5
APET160404	16.3	9.525	5.25	0.4	4.5
APKT160408	16.3	9.525	5.25	0.8	4.5



Insert Order Code

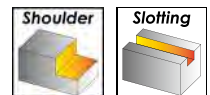
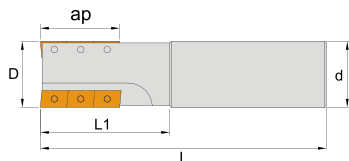
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPKT100304EAL10	APKT100304PDER-AL-CX10				●		
	IAPKT100304ESG22HS	APKT100304PDER-SG-CX22HS	●	●	●		○	●
	IAPKT100304EMG22HS	APKT100304PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100304EMG23TS	APKT100304PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100304EMG32HS	APKT100304PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100304EMG33TS	APKT100304PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100304EMG43TS	APKT100304PDER-MG-CX43TS	●	●	●		●	
	IAPKT100308EMG22HS	APKT100308PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100308EMG23TS	APKT100308PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100308EMG32HS	APKT100308PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100308EMG33TS	APKT100308PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100308EMG43TS	APKT100308PDER-MG-CX43TS	●	●	●		●	
	IAPKT100304ERG32HS	APKT100304PDER-RG-CX32HS	●	●	●		○	○
	IAPKT100304ERG33TS	APKT100304PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408EMG22HS	APKT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPKT160408EMG32HS	APKT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPKT160408EMG33TS	APKT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPKT160408EMG43TS	APKT160408PDER-MG-CX43TS	●	●	●		●	
	IAPKT160408ERG22HS	APKT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPKT160408ERG32HS	APKT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPKT160408ERG33TS	APKT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408ERG43TS	APKT160408PDER-RG-CX43TS	●	●	●		●	
	IAPET160402FAL10	APET160402PDFR-AL-CX10				●		
	IAPET160404FAL10	APET160404PDFR-AL-CX10				●		
	IAPET160402FFG22HS	APET160402PDFR-FG-CX22HS	●	●	●		○	●
	IAPET160404FFG22HS	APET160404PDFR-FG-CX22HS	●	●	●		○	●

CAPH Helical Milling

Recommended Cutting Conditions

Working Material	for APKT1003		for 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

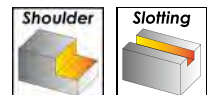
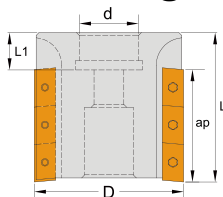
CAPHE - Milling tools



Order No.	D	ap	L1	L	d	T x Pcs	Inserts	Screw	Wrench	Stock
ICAPHE305020100	20	28	42	107	20	1 x 5	APKT1003	ITS2515	ITK08	●
ICAPHE308025120	25	35	50	125	25	2 x 4				●
ICAPHE315032130	32	44	60	135	32	3 x 5				●

● stock ○ by inquiry

CAPHF - Milling tools



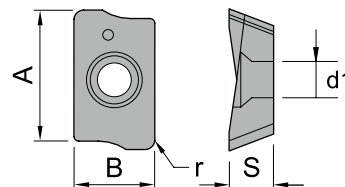
Order No.	D	ap	L2	L	d	T x Pcs	Inserts	Screw	Wrench	Stock
ICAPHF409050220	50	42	21	69	22	3 x 3	APKT1604 or APET1604	ITS4023	ITK15	●
ICAPHF412063250	63	42	38	69	25.4	4 x 3				●
ICAPHF420063252	63	68	38	97	25.4	4 x 5				●

● stock ○ by inquiry

C39H Helical Milling

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



Milling

Indexable Milling Cutters

Insert Order Code

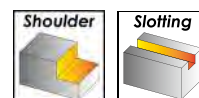
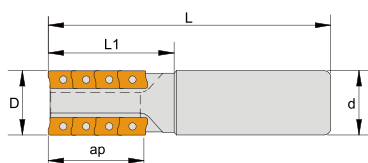
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IW39011T308MG22HS	W39011T308-MG-CX22HS	●	●	●		○	●
	IW39011T308MG23TS	W39011T308-MG-CX23TS	●	●	●		●	●
	IW39011T308MG32HS	W39011T308-MG-CX32HS	●	●	●		○	○
	IW39011T308MG33TS	W39011T308-MG-CX33TS	●	●	●		●	●
	IW39011T308MG43TS	W39011T308-MG-CX43TS	●	●	●		●	
	IW39011T320MG22HS	W39011T320-MG-CX22HS	●	●	●		○	●
	IW39011T320MG23TS	W39011T320-MG-CX23TS	●	●	●		●	●
	IW39011T320MG32HS	W39011T320-MG-CX32HS	●	●	●		○	○
	IW39011T320MG33TS	W39011T320-MG-CX33TS	●	●	●		●	●

C39H Helical Milling

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

C39HE - Milling tools

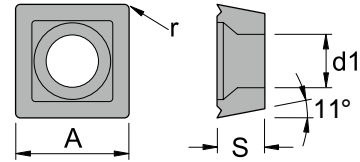


Order No.	D	ap	L1	L	d	T x Pcs	Inserts	Screw	Wrench	Stock
IC39HE308025110	25	36	50	110	25	2 x 4	W39011T3	ITS2515	ITK08	●
IC39HE308032120	32	36	50	125	32	2 x 4				●

● stock ○ by inquiry

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 Order Code

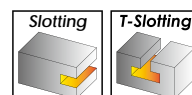
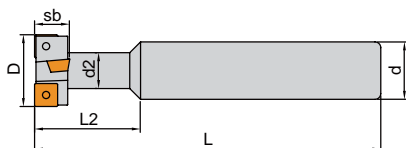
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISPMG050204MG32HS	SPMG050204-MG-CX32HS	●	●	●		○	○
	ISPMG050204MG33TS	SPMG050204-MG-CX33TS	●	●	●		●	●
	ISPMG050204MG43TS	SPMG050204-MG-CX43TS	●	●	●		●	
	ISPMG060204MG32HS	SPMG060204-MG-CX32HS	●	●	●		○	○
	ISPMG060204MG33TS	SPMG060204-MG-CX33TS	●	●	●		●	●
	ISPMG060204MG43TS	SPMG060204-MG-CX43TS	●	●	●		●	
	ISPMG07T308MG32HS	SPMG07T308-MG-CX32HS	●	●	●		○	○
	ISPMG07T308MG33TS	SPMG07T308-MG-CX33TS	●	●	●		●	●
	ISPMG07T308MG43TS	SPMG07T308-MG-CX43TS	●	●	●		●	
	ISPMG090408MG32HS	SPMG090408-MG-CX32HS	●	●	●		○	○
	ISPMG090408MG33TS	SPMG090408-MG-CX33TS	●	●	●		●	●
	ISPMG090408MG43TS	SPMG090408-MG-CX43TS	●	●	●		●	
	ISPMG090408RG32HS	SPMG090408-RG-CX32HS	●	●	●		○	○
	ISPMG090408RG33TS	SPMG090408-RG-CX33TS	●	●	●		●	●
	ISPMG090408RG43TS	SPMG090408-RG-CX43TS	●	●	●		●	

CSPT Disc Milling

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

CSPT - Milling tools

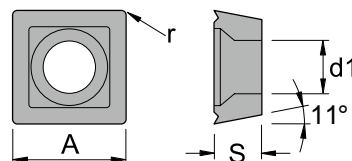


Order No.	D	sb	d2	L2	L	d	T	Inserts	Screw	Wrench	Stock
ICSPTE504019950	19	8	9.5	25	95	16	4	SPMG0502	ITS2003	ITK06	○
ICSPTE604021100	21	9	11	27	100	16	4	SPMG0602	ITS2205	ITK06	●
ICSPTE504022090	22	6.3	15	15	90	20	4	SPMG0502	ITS2003	ITK06	●
ICSPTE704025110	25	11	12	31	110	20	4	SPMG07T3	ITS2511	ITK08	●
ICSPTE904032110	32	14	17	39	110	25	4	SPMG0904	ITS3504	ITK15	●

● stock ○ by inquiry

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 Order Code

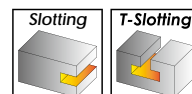
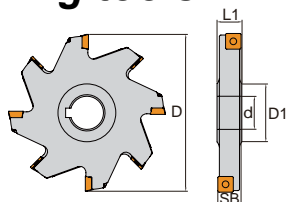
Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ISPMG050204MG32HS	SPMG050204-MG-CX32HS	●	●	●		○	○
	ISPMG050204MG33TS	SPMG050204-MG-CX33TS	●	●	●		●	●
	ISPMG050204MG43TS	SPMG050204-MG-CX43TS	●	●	●		●	
	ISPMG060204MG32HS	SPMG060204-MG-CX32HS	●	●	●		○	○
	ISPMG060204MG33TS	SPMG060204-MG-CX33TS	●	●	●		●	●
	ISPMG060204MG43TS	SPMG060204-MG-CX43TS	●	●	●		●	
	ISPMG07T308MG32HS	SPMG07T308-MG-CX32HS	●	●	●		○	○
	ISPMG07T308MG33TS	SPMG07T308-MG-CX33TS	●	●	●		●	●
	ISPMG07T308MG43TS	SPMG07T308-MG-CX43TS	●	●	●		●	
	ISPMG090408MG32HS	SPMG090408-MG-CX32HS	●	●	●		○	○
	ISPMG090408MG33TS	SPMG090408-MG-CX33TS	●	●	●		●	●
	ISPMG090408MG43TS	SPMG090408-MG-CX43TS	●	●	●		●	
	ISPMG090408RG32HS	SPMG090408-RG-CX32HS	●	●	●		○	○
	ISPMG090408RG33TS	SPMG090408-RG-CX33TS	●	●	●		●	●
	ISPMG090408RG43TS	SPMG090408-RG-CX43TS	●	●	●		●	
	ISPMG110408MG32HS	SPMG110408-MG-CX32HS	●	●	●		○	○
	ISPMG110408MG33TS	SPMG110408-MG-CX33TS	●	●	●		●	●
	ISPMG110408MG43TS	SPMG110408-MG-CX43TS	●	●	●		●	
	ISPMG110408RG32HS	SPMG110408-RG-CX32HS	●	●	●		○	○
	ISPMG110408RG33TS	SPMG110408-RG-CX33TS	●	●	●		●	●
	ISPMG110408RG43TS	SPMG110408-RG-CX43TS	●	●	●		●	

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

CSPD Disc Milling

CSPDE - Milling tools

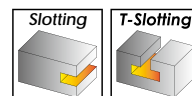
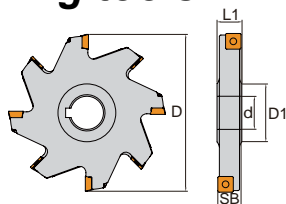


Order No.	D	L1	SB	d	D1	T	Inserts	Screw	Wrench	Stock
ICSPDE506080220	80	12	6	22	44	2 x 4	SPMG0502	ITS2003	ITK06	●
ICSPDE507080220	80	12	7	22	44	2 x 4	SPMG0502	ITS2003	ITK06	○
ICSPDE608080220	80	12	8	22	44	2 x 4	SPMG0602	ITS2205	ITK06	●
ICSPDE609080220	80	12	9	22	44	2 x 4	SPMG0602	ITS2205	ITK06	○
ICSPDE610080220	80	12	10	22	44	2 x 4	SPMG0602	ITS2205	ITK06	●
ICSPDE711080220	80	12	11	22	44	2 x 4	SPMG0703	ITS2511	ITK08	○
ICSPDE712080220	80	12	12	22	44	2 x 4	SPMG0703	ITS2511	ITK08	●
ICSPDE506100270	100	12	6	27	50	2 x 5	SPMG0502	ITS2003	ITK06	●
ICSPDE507100270	100	12	7	27	50	2 x 5	SPMG0502	ITS2003	ITK06	●
ICSPDE608100270	100	12	8	27	50	2 x 5	SPMG0602	ITS2205	ITK06	●
ICSPDE609100270	100	12	9	27	50	2 x 5	SPMG0602	ITS2205	ITK06	○
ICSPDE710100270	100	12	10	27	50	2 x 5	SPMG0703	ITS2511	ITK08	●
ICSPDE711100270	100	12	11	27	50	2 x 5	SPMG0703	ITS2511	ITK08	○
ICSPDE712100270	100	12	12	27	50	2 x 5	SPMG0703	ITS2511	ITK08	●
ICSPDE914100270	100	16	14	27	50	2 x 5	SPMG0904	ITS3504	ITK15	○
ICSPDE916100270	100	16	16	27	50	2 x 5	SPMG0904	ITS3504	ITK15	●
ICSPDE711125320	125	12	11	32	65	2 x 6	SPMG0703	ITS2511	ITK08	○
ICSPDE712125320	125	12	12	32	65	2 x 6	SPMG0703	ITS2511	ITK08	○
ICSPDE914125320	125	16	14	32	65	2 x 6	SPMG0904	ITS3504	ITK15	○
ICSPDE916125320	125	16	16	32	65	2 x 6	SPMG0904	ITS3504	ITK15	●
ICSPDE118125320	125	20	18	32	65	2 x 5	SPMG1104	ITS4006	ITK15	○
ICSPDE120125320	125	20	20	32	65	2 x 5	SPMG1104	ITS4006	ITK15	○
ICSPDE711160400	160	12	11	40	75	2 x 8	SPMG0703	ITS2511	ITK08	○
ICSPDE712160400	160	12	12	40	75	2 x 8	SPMG0703	ITS2511	ITK08	●
ICSPDE914160400	160	16	14	40	75	2 x 8	SPMG0904	ITS3504	ITK15	○
ICSPDE916160400	160	16	16	40	75	2 x 8	SPMG0904	ITS3504	ITK15	●
ICSPDE118160400	160	20	18	40	75	2 x 6	SPMG1104	ITS4006	ITK15	○
ICSPDE120160400	160	20	20	40	75	2 x 6	SPMG1104	ITS4006	ITK15	●
ICSPDE914200400	200	16	14	40	80	2 x 9	SPMG0904	ITS3504	ITK15	○
ICSPDE915200400	200	16	16	40	80	2 x 9	SPMG0904	ITS3504	ITK15	●
ICSPDE118200400	200	20	18	40	80	2 x 9	SPMG1104	ITS4006	ITK15	○
ICSPDE120200400	200	20	20	40	80	2 x 7	SPMG1104	ITS4006	ITK15	○

● stock ○ by inquiry

CSPD Disc Milling

CSPDE - Milling tools

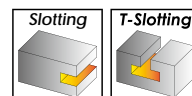
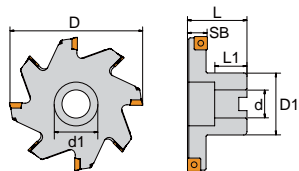




Order No.	D	L1	SB	d	D1	T	Inserts	Screw	Wrench	Stock
ICSPDE506080250	80	12	6	25.4	44	2 × 4	SPMG0502	ITS2003	ITK06	●
ICSPDE507080250	80	12	7	25.4	44	2 × 4	SPMG0502	ITS2003	ITK06	●
ICSPDE608080250	80	12	8	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
ICSPDE609080250	80	12	9	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
ICSPDE610080250	80	12	10	25.4	44	2 × 4	SPMG0602	ITS2205	ITK06	●
ICSPDE711080250	80	12	11	25.4	44	2 × 4	SPMG07T3	ITS2511	ITK08	●
ICSPDE712080250	80	12	12	25.4	44	2 × 4	SPMG07T3	ITS2511	ITK08	●
ICSPDE608100250	100	12	8	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	○
ICSPDE609100250	100	12	9	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	●
ICSPDE610100250	100	12	10	25.4	50	2 × 5	SPMG0602	ITS2205	ITK06	●
ICSPDE711100250	100	12	11	25.4	50	2 × 5	SPMG07T3	ITS2511	ITK08	○
ICSPDE712100250	100	12	12	25.4	50	2 × 5	SPMG07T3	ITS2511	ITK08	●
ICSPDE914100250	100	16	14	25.4	50	2 × 5	SPMG0904	ITS3504	ITK15	○
ICSPDE916100250	100	16	16	25.4	50	2 × 5	SPMG0904	ITS3504	ITK15	○
ICSPDE506125310	125	12	6	31.75	65	2 × 6	SPMG0502	ITS2003	ITK06	●
ICSPDE507125310	125	12	7	31.75	65	2 × 6	SPMG0502	ITS2003	ITK06	○
ICSPDE608125310	125	12	8	31.75	65	2 × 6	SPMG0602	ITS2205	ITK06	○
ICSPDE610125310	125	12	10	31.75	65	2 × 6	SPMG0602	ITS2205	ITK06	○
ICSPDE711125310	125	12	11	31.75	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
ICSPDE712125310	125	12	12	31.75	65	2 × 6	SPMG07T3	ITS2511	ITK08	○
ICSPDE914125310	125	16	14	31.75	65	2 × 6	SPMG0904	ITS3504	ITK15	●
ICSPDE916125310	125	16	16	31.75	65	2 × 6	SPMG0904	ITS3504	ITK15	○
ICSPDE118125310	125	20	18	31.75	65	2 × 5	SPMG1104	ITS4006	ITK15	○
ICSPDE120125310	125	20	20	31.75	65	2 × 5	SPMG1104	ITS4006	ITK15	○

● stock ○ by inquiry

CSPD Disc Milling

CSPDF - Milling tools



Order No.	D	L1	L	SB	d	D1	T	Inserts	 Screw	 Wrench	Stock
ICSPDF506080220	80	22	40	6	22	42	2 × 4	SPMG0502	ITS2003	ITK06	●
ICSPDF507080220	80	22	40	7	22	42	2 × 4	SPMG0502	ITS2003	ITK06	●
ICSPDF608080220	80	22	40	8	22	42	2 × 4	SPMG0602	ITS2205	ITK06	●
ICSPDF609080220	80	22	40	9	22	42	2 × 4	SPMG0602	ITS2205	ITK06	○
ICSPDF610080220	80	22	40	10	22	42	2 × 4	SPMG0602	ITS2205	ITK06	●
ICSPDF711080220	80	22	40	11	22	42	2 × 4	SPMG0703	ITS2511	ITK08	○
ICSPDF712080220	80	22	40	12	22	42	2 × 4	SPMG0703	ITS2511	ITK08	●
ICSPDF506100270	100	22	40	6	27	50	2 × 5	SPMG0502	ITS2003	ITK06	○
ICSPDF507100270	100	22	40	7	27	50	2 × 5	SPMG0502	ITS2003	ITK06	○
ICSPDF608100270	100	22	40	8	27	50	2 × 5	SPMG0602	ITS2205	ITK06	●
ICSPDF609100270	100	22	40	9	27	50	2 × 5	SPMG0602	ITS2205	ITK06	●
ICSPDF710100270	100	22	40	10	27	50	2 × 5	SPMG0703	ITS2511	ITK08	●
ICSPDF711100270	100	22	40	11	27	50	2 × 5	SPMG0703	ITS2511	ITK08	○
ICSPDF712100270	100	22	40	12	27	50	2 × 5	SPMG0703	ITS2511	ITK08	●
ICSPDF914100270	100	22	40	14	27	50	2 × 5	SPMG0904	ITS3504	ITK15	○
ICSPDF916100270	100	22	40	16	27	50	2 × 5	SPMG0904	ITS3504	ITK15	○
ICSPDF608125320	125	25	45	8	32	70	2 × 6	SPMG0602	ITS2205	ITK06	○
ICSPDF610125320	125	25	45	10	32	70	2 × 6	SPMG0602	ITS2205	ITK06	●
ICSPDF711125320	125	25	45	11	32	70	2 × 6	SPMG0703	ITS2511	ITK08	●
ICSPDF712125320	125	25	45	12	32	70	2 × 6	SPMG0703	ITS2511	ITK08	●
ICSPDF914125320	125	25	45	14	32	70	2 × 6	SPMG0904	ITS3504	ITK15	○
ICSPDF916125320	125	25	45	16	32	70	2 × 6	SPMG0904	ITS3504	ITK15	○

● stock ○ by inquiry

Solid Carbide Milling Heads

EHSWH Square Type.....	A403
EBBWH Ball Nose Type.....	A404
EHCWH Corner Radius Type.....	A405
EPFWA Chamfer Type.....	A406

Indexable Milling Heads

Shoulder milling	
CXXNM.....	A409
CAXOM.....	A410
CATPM.....	A411
CR39M.....	A412
CARTM.....	A413
CAPKM.....	A414
CBAPM.....	A416
High feed face milling	
CXBNM.....	A418
CXLNM.....	A420
Copy milling	
CARDM.....	A421
CF21M.....	A424
CF22M.....	A425

Tooling System & Accessories

Carbide adapter.....	A426
BT holder.....	A429
HSK holer.....	A430



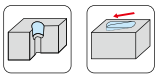
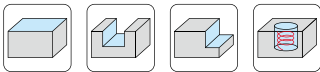
Winmaster - Square Head · 2F

EHSWH



Work Material						
Carbon Steel (S45C, S55C)	Alloy Steel (SK, SCM)	Pre-Hardened Steel / Hardened Steel			Stainless Steel (SUS304, 316)	Cast Iron
		~ HRC 40	~ HRC 45	~ HRC 55		
○	◎	◎	◎	◎	○	◎

Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (F)
EHSWH410000S	10	10	6.5	M6	4
EHSWH412000S	12	12	6.5	M6	4
EHSWH416000S	16	16	8.5	M8	4
EHSWH420000S	20	20	10.5	M10	4

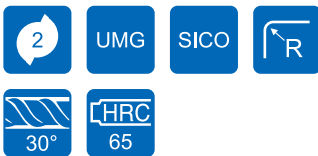
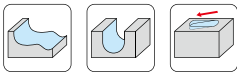


d Tolerance	
d	0 ~ -0.04



Winmaster - Ball Nose Head · 2F

EHBWH



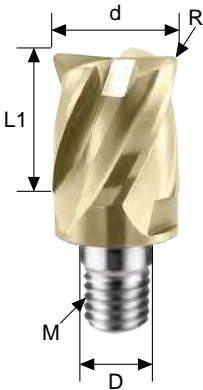
R Tolerance	
R	± 0.02

Work Material						
Carbon Steel (S45C, S55C)	Alloy Steel (SK, SCM)	Pre-Hardened Steel / Hardened Steel			Stainless Steel (SUS304, 316)	Cast Iron
		~ HRC 40	~ HRC 45	~ HRC 55		
○	⊙	⊙	⊙	⊙	○	⊙

Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (F)
EHBWH210000S	5R	10	10	6.5	M6	2
EHBWH212000S	6R	12	12	6.5	M6	2
EHBWH216000S	8R	16	16	8.5	M8	2
EHBWH220000S	10R	20	20	10.5	M10	2

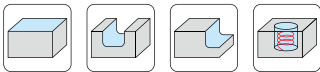
Winmaster - Corner Radius Head · 4F

EHCWH



Work Material						
Carbon Steel (S45C, S55C)	Alloy Steel (SK, SCM)	Pre-Hardened Steel / Hardened Steel			Stainless Steel (SUS304, 316)	Cast Iron
		~ HRC 40	~ HRC 45	~ HRC 55		
○	◎	◎	◎	◎	○	◎

Order No.	Dia. (d)	Radius (R)	CL (L1)	ND (D)	M (M)	Flutes (F)
EHCWH410005S	10	0.5R	10	6.5	M6	4
EHCWH410010S	10	1.0R	10	6.5	M6	4
EHCWH412005S	12	0.5R	12	6.5	M6	4
EHCWH412010S	12	1.0R	12	6.5	M6	4
EHCWH412020S	12	2.0R	12	6.5	M6	4
EHCWH412030S	12	3.0R	12	6.5	M6	4
EHCWH416010S	16	1.0R	16	8.5	M8	4
EHCWH416020S	16	2.0R	16	8.5	M8	4
EHCWH416030S	16	3.0R	16	8.5	M8	4
EHCWH420010S	20	1.0R	20	10.5	M10	4
EHCWH420020S	20	2.0R	20	10.5	M10	4
EHCWH420030S	20	3.0R	20	10.5	M10	4



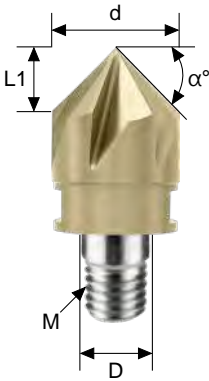
d Tolerance	
d	0 ~ -0.04

R Tolerance	
R	± 0.02



Winmaster - Chamfer Head · 4F / 6F

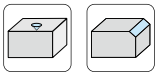
EPFWA



Work Material						
Carbon Steel (S45C, S55C)	Alloy Steel (SK, SCM)	Pre-Hardened Steel / Hardened Steel			Stainless Steel (SUS304, 316)	Cast Iron
		~ HRC 40	~ HRC 45	~ HRC 55		
○	⊙	⊙	⊙	⊙	○	⊙

Order No.	Dia. (d)	CL (L1)	α°	ND (D)	M (M)	Flutes (F)
EPFWA410090S	10	5	45°	6.5	M6	4
EPFWA412090S	12	6	45°	6.5	M6	4

EPFWA610090S	10	5	45°	6.5	M6	6
EPFWA612090S	12	6	45°	6.5	M6	6
EPFWA616090S	16	8	45°	8.5	M8	6



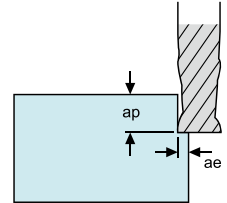
Recommended Cutting Conditions

Recommended Cutting Conditions

EHSWH4, EHCWH4 (Square Head - 4F, Corner Radius Head - 4F)

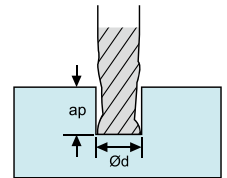
Shoulder Milling $L/D \leq 3$ (Reference L/D ratio table, reduce vc, fz and ae value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	90 ~ 150(m/min)				80 ~ 120 (m/min)				70 ~ 100 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	3820	0.05	8.0	2.0	3190	0.05	8.0	1.5	2390	0.05	8.0	1.0
12mm	3190	0.05	9.6	2.4	2650	0.05	9.6	1.8	2000	0.05	9.6	1.2
16mm	2390	0.06	12.8	3.2	2000	0.06	12.8	2.4	1500	0.06	12.8	1.6
20mm	1910	0.06	16.0	4.0	1600	0.06	16.0	3.0	1190	0.06	16.0	2.0



Slot Milling $L/D \leq 3$ (Reference L/D ratio table, reduce vc and fz value)

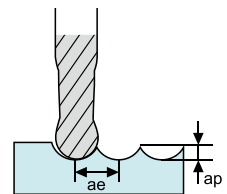
Material	Pre-Hardened Steels NAK80 CENA1			Hardened Steels SKD61,SKD11			Hardened Steels SKD11,SKH51		
Hardness	HRC 35~45			HRC 40~55			HRC 55~65		
VC	60 ~ 100(m/min)			50 ~ 90 (m/min)			40 ~ 80 (m/min)		
Dia	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)
10mm	2550	0.02	4.0	2390	0.02	4.0	1900	0.02	4.0
12mm	2120	0.02	4.8	2000	0.02	4.8	1590	0.02	4.8
16mm	1590	0.03	6.4	1490	0.03	6.4	1190	0.03	6.4
20mm	1275	0.03	8.0	1190	0.03	8.0	950	0.03	8.0



EHBWH2 (Ball Nose Head - 2F)

$L/D \leq 3$ (Reference L/D ratio table, reduce vc and fz value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	100 ~ 190(m/min)				90 ~ 160 (m/min)				70 ~ 140 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	4620	0.1	0.7	2	3980	0.05	0.4	1.5	3345	0.02	0.2	1.0
12mm	3850	0.1	0.84	2.4	3320	0.05	0.5	1.8	2790	0.02	0.2	1.2
16mm	2885	0.15	1.12	3.2	2485	0.075	0.64	2.4	2090	0.03	0.3	1.6
20mm	2300	0.2	1.4	4.0	2000	0.1	0.8	3.0	1670	0.04	0.4	2.0

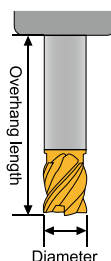


How to set cutting conditions on different overhang length

The recommended cutting condition is depended by the L/D factor.

L/D ratio table :

L/D	VC (m/min)	fz (mm/t)	ae (mm)
2 ~ 3	100%	100%	100%
4 ~ 5	70%	80%	50%
6 ~ 7	50%	70%	30%
8 ~ 9	40%	60%	20%



EX :

Tool : $\phi d=12$ mm Square Head
 Overhang length : 50mm
 $L/D : 50/12 = 4.16$
 Material HRC : 35 ~ 45
 Application : Shoulder Milling

Cutting condition is recommended as :
 $Vc = 120 * 70\% = 84$ m/min
 $fz = 0.05 * 80\% = 0.04$ mm/t
 $ap = 9.6$ mm
 $max ae = 2.4 * 50\% = 1.2$ mm

Install the Head

How to install the Head



1. Screw the adapter to the holder and clean.



2. Screw the Head to the adapter.



3. Use the spanner to screw the Head.



4. Complete installation.

How to uninstall the Head



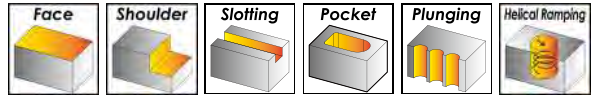
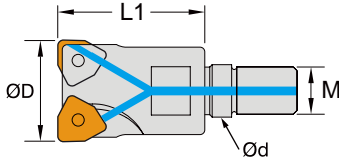
When uninstall the head, please push the spanner lightly for avoiding the neck broken.

Recommended Torque

Suitable Endmill Head Diameter	Recommended Clamping Torque (N · m)
10mm	10
12mm	10
16mm	10
20mm	10

Shoulder Milling - CXXNM

CXXNM use double sided insert with 6 cutting edges, for small and large sized milling machines.



Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXXNM402017081	17	26	8.5	M08	2	✓	XNMX0403	ITS2512	ITK08	●
ICXXNM403021101	21	32	10.5	M10	3	✓				●
ICXXNM404026121	26	38	12.5	M12	4	✓				●
ICXXNM404032160	32	41	17	M16	4					○

● stock ○ by inquiry

Customize available.

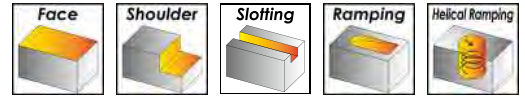
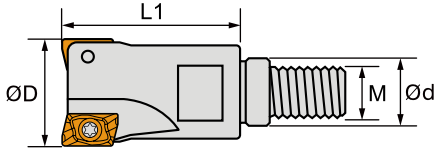
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IXNMX040304SG22HS	XNMX040304-SG-CX22HS	●	●	●		○	●
	IXNMX040304SG23TS	XNMX040304-SG-CX23TS	●	●	●		●	●
	IXNMX040304SG32HS	XNMX040304-SG-CX32HS	●	●	●		○	○
	IXNMX040304SG33TS	XNMX040304-SG-CX33TS	●	●	●		●	●
	IXNMX040304MG22HS	XNMX040304-MG-CX22HS	●	●	●		○	●
	IXNMX040304MG32HS	XNMX040304-MG-CX32HS	●	●	●		○	○
	IXNMX040304MG33TS	XNMX040304-MG-CX33TS	●	●	●		●	●
	IXNMX040308MG22HS	XNMX040308-MG-CX22HS	●	●	●		○	●
	IXNMX040308MG23TS	XNMX040308-MG-CX23TS	●	●	●		●	●
	IXNMX040308MG32HS	XNMX040308-MG-CX32HS	●	●	●		○	○
	IXNMX040308MG33TS	XNMX040308-MG-CX33TS	●	●	●		●	●
	IXNMX040308MG43TS	XNMX040308-MG-CX43TS	●	●	●		●	



Shoulder Milling - CAXOM

CAXOM is offered excellent tool life and precision on small to medium size work pieces.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICAXOM602010050	10	16	5.5	M5	2	XOMT0602	ITS1801	ITK06	○
ICAXOM603012060	12	18	6.5	M6	3				●
ICAXOM604016080	16	20	8.5	M8	4				●
ICAXOM605020100	20	30	10.5	M10	5				●

● stock ○ by inquiry

Customize available.

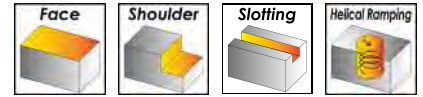
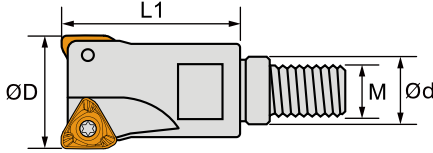
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IXOMT060208SG32HS	XOMT060208-SG-CX32HS	●	●	●		○	○
	IXOMT060208SG33TS	XOMT060208-SG-CX33TS	●	●	●		●	●
	IXOMT060204MG22HS	XOMT060204-MG-CX22HS	●	●	●		○	●
	IXOMT060204MG32HS	XOMT060204-MG-CX32HS	●	●	●		○	○
	IXOMT060204MG33TS	XOMT060204-MG-CX33TS	●	●	●		●	●
	IXOMT060208MG22HS	XOMT060208-MG-CX22HS	●	●	●		○	●
	IXOMT060208MG23TS	XOMT060208-MG-CX23TS	●	●	●		●	●
	IXOMT060208MG32HS	XOMT060208-MG-CX32HS	●	●	●		○	○
	IXOMT060208MG33TS	XOMT060208-MG-CX33TS	●	●	●		●	●
	IXOMT060208MG43TS	XOMT060208-MG-CX43TS	●	●	●		●	
	IXOMT060216MG33TS	XOMT060216-MG-CX33TS	●	●	●		●	●
	IXOMT060216MG43TS	XOMT060216-MG-CX43TS	●	●	●		●	



Shoulder Milling - CATPM

CATPM use 3 cutting edges insert to save the cost. It's more economical compared with AP series inserts, and also use for various milling applications.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICATPM102021100	21	35	18	M10	2	TPMX1004	ITS2517	ITK08	●
ICATPM103026120	26	35	21	M12	3				●
ICATPM105033160	33	43	29	M16	5				●

● stock ○ by inquiry

Customize available.

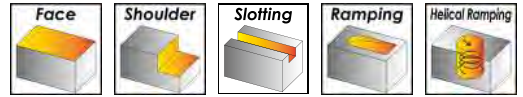
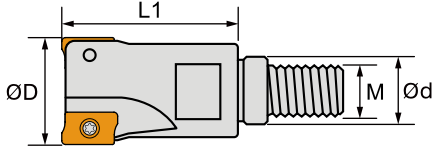
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ITPMX100408SG32HS	TPMX100408-SG-CX32HS	●	●	●		○	○
	ITPMX100408SG33TS	TPMX100408-SG-CX33TS	●	●	●		●	●
	ITPMX100408MG22HS	TPMX100408-MG-CX22HS	●	●	●		○	●
	ITPMX100408MG23TS	TPMX100408-MG-CX23TS	●	●	●		●	●
	ITPMX100408MG32HS	TPMX100408-MG-CX32HS	●	●	●		○	○
	ITPMX100408MG33TS	TPMX100408-MG-CX33TS	●	●	●		●	●
	ITPMX100408MG43TS	TPMX100408-MG-CX43TS	●	●	●		●	



Shoulder Milling - CR39M

CR39M is special on the unique designed for high productivity and high efficiency.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICR39M302016080	16	26	8.5	M8	2	W39011T3	ITS2515	ITK08	<input type="radio"/>
ICR39M303020100	20	32	10.5	M10	3				<input type="radio"/>
ICR39M303025120	25	38	12.5	M12	3				<input type="radio"/>
ICR39M303032160	32	41	17	M16	3				<input type="radio"/>

● stock ○ by inquiry

Customize available.

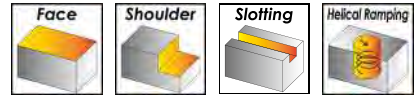
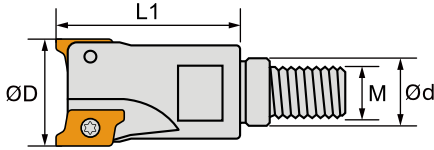
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IW39011T308MG22HS	W39011T308-MG-CX22HS	●	●	●		○	●
	IW39011T308MG23TS	W39011T308-MG-CX23TS	●	●	●		●	●
	IW39011T308MG32HS	W39011T308-MG-CX32HS	●	●	●		○	○
	IW39011T308MG33TS	W39011T308-MG-CX33TS	●	●	●		●	●
	IW39011T308MG43TS	W39011T308-MG-CX43TS	●	●	●		●	
	IW39011T320MG22HS	W39011T320-MG-CX22HS	●	●	●		○	●
	IW39011T320MG23TS	W39011T320-MG-CX23TS	●	●	●		●	●
	IW39011T320MG32HS	W39011T320-MG-CX32HS	●	●	●		○	○
	IW39011T320MG33TS	W39011T320-MG-CX33TS	●	●	●		●	●



Shoulder Milling - CARTM

CARTM used for small sized milling machine, the insert design with excellent chip evacuation.



Order No.	D	L1	M	d	T	Inserts	Screw	Wrench	Stock
ICARTM702010050	10	18	M5	5.5	2	WRT0702	ITS2003	ITK06	●
ICARTM702011050	11	18	M5	5.5	2				●
ICARTM702012060	12	20	M6	6.5	2				●
ICARTM702013060	13	20	M6	6.5	2				●
ICARTM103017080	17	30	M8	8.5	3	WRT1003	ITS2515	ITK08	●
ICARTM103021100	21	32	M10	10.5	3				●

● stock ○ by inquiry

Customize available.

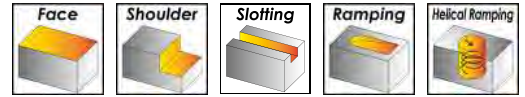
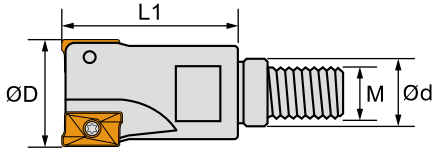
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWRT070204RG22HS	WRT070204-RG-CX22HS	●	●	●		○	●
	IWRT070204RG23TS	WRT070204-RG-CX23TS	●	●	●		●	●
	IWRT070204RG32HS	WRT070204-RG-CX32HS	●	●	●		○	○
	IWRT070204RG33TS	WRT070204-RG-CX33TS	●	●	●		●	●
	IWRT070204RG43TS	WRT070204-RG-CX43TS	●	●	●		●	
	IWRT100308RG22HS	WRT100308-RG-CX22HS	●	●	●		○	●
	IWRT100308RG23TS	WRT100308-RG-CX23TS	●	●	●		●	●
	IWRT100308RG32HS	WRT100308-RG-CX32HS	●	●	●		○	○
	IWRT100308RG33TS	WRT100308-RG-CX33TS	●	●	●		●	●
	IWRT100308RG43TS	WRT100308-RG-CX43TS	●	●	●		●	



Shoulder Milling - CAPKM

CAPKM is emphasized a new designed of the chip breaker for longer tool life.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICAPKM302016080	16	26	8.5	M8	2	APKT1003	ITS2515	ITK08	●
ICAPKM303020100	20	32	10.5	M10	3				○
ICAPKM304025120	25	38	12.5	M12	4				●
ICAPKM305032160	32	41	17	M16	5				○
ICAPKM402025120	25	38	12.5	M12	2	APKT1604 or APET1604	ITS4004	ITK15	○
ICAPKM403032160	32	41	17	M16	3				○

● stock ○ by inquiry

Customize available.

Milling

Modular Milling Tools



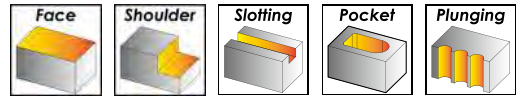
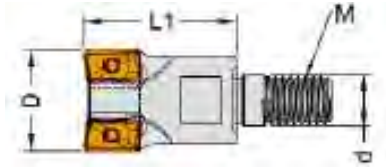
Shoulder Milling - CAPKM

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPKT100304EAL10	APKT100304PDER-AL-CX10				●		
	IAPKT100304ESG22HS	APKT100304PDER-SG-CX22HS	●	●	●		○	●
	IAPKT100304EMG22HS	APKT100304PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100304EMG23TS	APKT100304PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100304EMG32HS	APKT100304PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100304EMG33TS	APKT100304PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100304EMG43TS	APKT100304PDER-MG-CX43TS	●	●	●		●	
	IAPKT100308EMG22HS	APKT100308PDER-MG-CX22HS	●	●	●		○	●
	IAPKT100308EMG23TS	APKT100308PDER-MG-CX23TS	●	●	●		●	●
	IAPKT100308EMG32HS	APKT100308PDER-MG-CX32HS	●	●	●		○	○
	IAPKT100308EMG33TS	APKT100308PDER-MG-CX33TS	●	●	●		●	●
	IAPKT100308EMG43TS	APKT100308PDER-MG-CX43TS	●	●	●		●	
	IAPKT100304ERG32HS	APKT100304PDER-RG-CX32HS	●	●	●		○	○
	IAPKT100304ERG33TS	APKT100304PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408EMG22HS	APKT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPKT160408EMG32HS	APKT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPKT160408EMG33TS	APKT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPKT160408EMG43TS	APKT160408PDER-MG-CX43TS	●	●	●		●	
	IAPKT160408ERG22HS	APKT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPKT160408ERG32HS	APKT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPKT160408ERG33TS	APKT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPKT160408ERG43TS	APKT160408PDER-RG-CX43TS	●	●	●		●	
	IAPET160402FAL10	APET160402PDFR-AL-CX10				●		
	IAPET160404FAL10	APET160404PDFR-AL-CX10				●		
	IAPET160402FFG22HS	APET160402PDFR-FG-CX22HS	●	●	●		○	●
	IAPET160404FFG22HS	APET160404PDFR-FG-CX22HS	●	●	●		○	●

Shoulder Milling - CBAPM

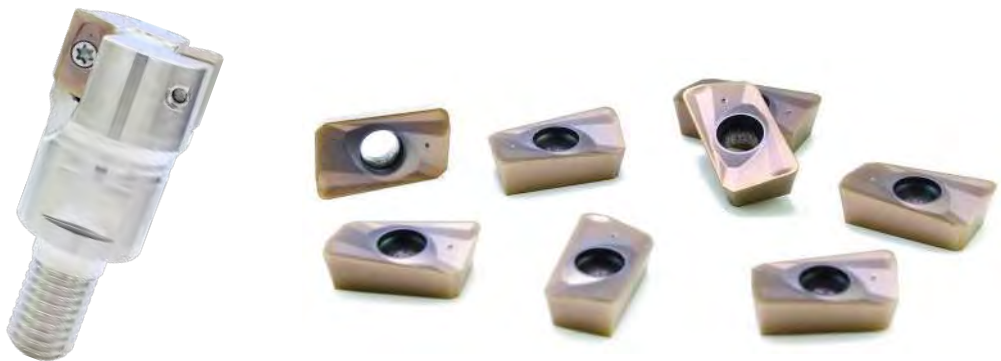
CBAPM is the most economical choose for your machining.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICBAPM302016080	16	26	8.5	M8	2	APMT1135	ITS2515	ITK08	●
ICBAPM302020100	20	30	10.5	M10	2				●
ICBAPM303020100	20	30	10.5	M10	3				○
ICBAPM304025120	25	35	12.5	M12	4				●
ICBAPM305032160	32	40	17	M16	5				●
ICBAPM305033160	33	40	17	M16	5				○
ICBAPM402025120	25	35	12.5	M12	2	APMT1604 or APGT1604	ITS4023	ITK15	●
ICBAPM402032160	32	40	17	M16	3				●

● stock ○ by inquiry

Customize available.



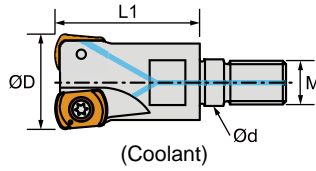
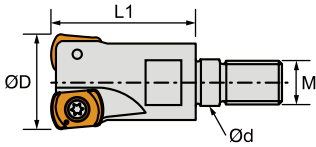
Shoulder Milling - CBAPM

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IAPMT113508EMG22HS	APMT113508PDER-MG-CX22HS	●	●	●		○	●
	IAPMT113508EMG23TS	APMT113508PDER-MG-CX23TS	●	●	●		●	●
	IAPMT113508EMG32HS	APMT113508PDER-MG-CX32HS	●	●	●		○	○
	IAPMT113508EMG33TS	APMT113508PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113508EMG43TS	APMT113508PDER-MG-CX43TS	●	●	●		●	
	IAPMT113516EMG33TS	APMT113516PDER-MG-CX33TS	●	●	●		●	●
	IAPMT113516EMG43TS	APMT113516PDER-MG-CX43TS	●	●	●		●	
	IAPMT113508ERG22HS	APMT113508PDER-RG-CX22HS	●	●	●		○	●
	IAPMT113508ERG23TS	APMT113508PDER-RG-CX23TS	●	●	●		●	●
	IAPMT113508ERG32HS	APMT113508PDER-RG-CX32HS	●	●	●		○	○
	IAPMT113508ERG33TS	APMT113508PDER-RG-CX33TS	●	●	●		●	●
	IAPMT113508ERG43TS	APMT113508PDER-RG-CX43TS	●	●	●		●	
	IAPMT113508EHG32HS	APMT113508PDER-HG-CX32HS	●	●	●		○	○
	IAPMT113508EHG33TS	APMT113508PDER-HG-CX33TS	●	●	●		●	●
	IAPMT113508EHG43TS	APMT113508PDER-HG-CX43TS	●	●	●		●	
	IAPMT160408EMG22HS	APMT160408PDER-MG-CX22HS	●	●	●		○	●
	IAPMT160408EMG32HS	APMT160408PDER-MG-CX32HS	●	●	●		○	○
	IAPMT160408EMG33TS	APMT160408PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160408EMG43TS	APMT160408PDER-MG-CX43TS	●	●	●		●	
	IAPMT160416EMG33TS	APMT160416PDER-MG-CX33TS	●	●	●		●	●
	IAPMT160416EMG43TS	APMT160416PDER-MG-CX43TS	●	●	●		●	
	IAPMT160408ERG22HS	APMT160408PDER-RG-CX22HS	●	●	●		○	●
	IAPMT160408ERG23TS	APMT160408PDER-RG-CX23TS	●	●	●		●	●
	IAPMT160408ERG32HS	APMT160408PDER-RG-CX32HS	●	●	●		○	○
	IAPMT160408ERG33TS	APMT160408PDER-RG-CX33TS	●	●	●		●	●
	IAPMT160408ERG43TS	APMT160408PDER-RG-CX43TS	●	●	●		●	
	IAPMT160408EHG22HS	APMT160408PDER-HG-CX22HS	●	●	●		○	●
	IAPMT160408EHG32HS	APMT160408PDER-HG-CX32HS	●	●	●		○	○
	IAPMT160408EHG33TS	APMT160408PDER-HG-CX33TS	●	●	●		●	●
	IAPMT160408EHG43TS	APMT160408PDER-HG-CX43TS	●	●	●		●	
	IAPGT160408EAL10	APGT160408PDER-AL-CX10				●		
	IAPGT160408EFG22HS	APGT160408PDER-FG-CX22HS	●	●	●		○	●

High Feed Face Milling - CXBNM

CXBNM use double sided insert with 4 cutting edges for high feed face milling to increased productivity.



Milling

Modular Milling Tools

Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock			
ICXBNM602016080	16	26	8.5	M8	2		BNMX0603	ITS3004	ITK08	●			
ICXBNM602016081	16	26	8.5	M8	2	✓				●			
ICXBNM603020100	20	30	10.5	M10	3					●			
ICXBNM603020101	20	30	10.5	M10	3	✓				●			
ICXBNM603021100	21	30	10.5	M10	3					●			
ICXBNM603025120	25	35	12.5	M12	3					●			
ICXBNM604025120	25	35	12.5	M12	4					●			
ICXBNM604025121	25	35	12.5	M12	4	✓				●			
ICXBNM603026120	26	35	12.5	M12	3					●			
ICXBNM604032161	32	40	17.0	M16	4	✓				●			
ICXBNM605032160	32	40	17.0	M16	5					●			
ICXBNM606040161	40	43	17.0	M16	6	✓				●			
ICXBNM903025121	25	35	12.5	M12	3	✓				BNMX0904	ITS3504	ITK15	●
ICXBNM904032161	32	40	17.0	M16	4	✓							●
ICXBNM904035161	35	43	17.0	M16	4	✓	○						
ICXBNM905042161	42	43	17.0	M16	5	✓	●						

● stock ○ by inquiry

Customize available.



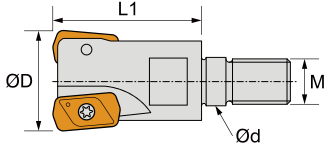
High Feed Face Milling - CXBNM

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IBNMX0603SG22HS	BNMX0603-SG-CX22HS	●	●	●		○	●
	IBNMX0603SG23TS	BNMX0603-SG-CX23TS	●	●	●		●	●
	IBNMX0603SG32HS	BNMX0603-SG-CX32HS	●	●	●		○	○
	IBNMX0603SG33TS	BNMX0603-SG-CX33TS	●	●	●		●	●
	IBNMX0603SG43TS	BNMX0603-SG-CX43TS	●	●	●		●	
	IBNMX0603MG22HS	BNMX0603-MG-CX22HS	●	●	●		○	●
	IBNMX0603MG23TS	BNMX0603-MG-CX23TS	●	●	●		●	●
	IBNMX0603MG32HS	BNMX0603-MG-CX32HS	●	●	●		○	○
	IBNMX0603MG33TS	BNMX0603-MG-CX33TS	●	●	●		●	●
	IBNMX0603MG43TS	BNMX0603-MG-CX43TS	●	●	●		●	
	IBNMX0603RG22HS	BNMX0603-RG-CX22HS	●	●	●		○	●
	IBNMX0603RG23TS	BNMX0603-RG-CX23TS	●	●	●		●	●
	IBNMX0603RG32HS	BNMX0603-RG-CX32HS	●	●	●		○	○
	IBNMX0603RG33TS	BNMX0603-RG-CX33TS	●	●	●		●	●
	IBNMX0603RG43TS	BNMX0603-RG-CX43TS	●	●	●		●	
	IBNMX0904MG22HS	BNMX0904-MG-CX22HS	●	●	●		○	●
	IBNMX0904MG23TS	BNMX0904-MG-CX23TS	●	●	●		●	●
	IBNMX0904MG32HS	BNMX0904-MG-CX32HS	●	●	●		○	○
	IBNMX0904MG33TS	BNMX0904-MG-CX33TS	●	●	●		●	●
	IBNMX0904MG43TS	BNMX0904-MG-CX43TS	●	●	●		●	

High Feed Face Milling - CXLNM

CXLNM use double sided insert with 4 cutting edges for high feed face milling on small machines.



Order No.	D	L1	d	M	T	Coolant Hole	Inserts	Screw	Wrench	Stock
ICXLNM302017080	17	26	8.5	M8	2		LNMX0303	ITS2535	ITK07	●
ICXLNM303021100	21	32	10.5	M10	3					●
ICXLNM303021101	21	32	10.5	M10	3	✓				●
ICXLNM304026120	26	38	12.5	M12	4					●
ICXLNM304032160	32	41	17	M16	4					●

● stock ○ by inquiry

Customize available.

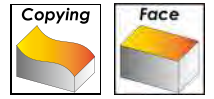
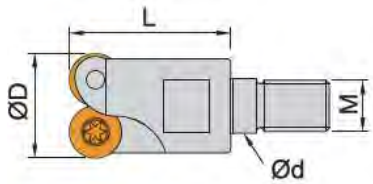
Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	ILNMX0303SG22HS	LNMX0303-SG-CX22HS	●	●	●		○	●
	ILNMX0303SG23TS	LNMX0303-SG-CX23TS	●	●	●		●	●
	ILNMX0303SG32HS	LNMX0303-SG-CX32HS	●	●	●		○	○
	ILNMX0303SG33TS	LNMX0303-SG-CX33TS	●	●	●		●	●
	ILNMX0303SG43TS	LNMX0303-SG-CX43TS	●	●	●		●	
	ILNMX0303MG22HS	LNMX0303-MG-CX22HS	●	●	●		○	●
	ILNMX0303MG23TS	LNMX0303-MG-CX23TS	●	●	●		●	●
	ILNMX0303MG32HS	LNMX0303-MG-CX32HS	●	●	●		○	○
	ILNMX0303MG33TS	LNMX0303-MG-CX33TS	●	●	●		●	●
	ILNMX0303MG43TS	LNMX0303-MG-CX43TS	●	●	●		●	



Copy Milling - CARDM

CARDM suit for mould & die machining and steel profiling.



Order No.	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICARDM502012060	12	21	6.5	M06	2	RDKW0501	ITS2003	ITK06	●
ICARDM503012060	12	21	6.5	M06	3				○
ICARDM504016080	16	26	8.5	M08	4				○
ICARDM703016080	16	26	8.5	M08	3	RDKW0702	ITS2515	ITK08	○
ICARDM704020100	20	32	10.5	M10	4				○
ICARDM705025120	25	38	12.5	M12	5				○
ICARDM103025120	25	38	12.5	M12	3	RDMT10T3 or RDMW10T3	ITS3504	ITK10	●
ICARDM104030120	30	38	12.5	M12	4				●
ICARDM105032120	35	38	12.5	M12	5				○
ICARDM302020100	20	30	10.5	M10	2	RDMT1003 or RDMX1003	IMS3507A	ITK15	●
ICARDM302021100	21	30	10.5	M10	2				●
ICARDM303025120	25	35	12.5	M12	3				●
ICARDM303026120	26	35	12.5	M12	3				●
ICARDM303030120	30	35	12.5	M12	3		IMS3509A	●	

● stock ○ by inquiry



Copy Milling - CARDM

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRDKW0501MOE22HS	RDKW0501MOE-CX22HS	●	●	●		○	●
	IRDKW0501MOE32HS	RDKW0501MOE-CX32HS	●	●	●		○	○
	IRDKW0501MOE33TS	RDKW0501MOE-CX33TS	●	●	●		●	●
	IRDKW0501MOE43TS	RDKW0501MOE-CX43TS	●	●	●		●	
	IRDKW0702MOSF32HS	RDKW0702MOS-F-CX32HS	●	●	●		○	○
	IRDKW0702MOSF33TS	RDKW0702MOS-F-CX33TS	●	●	●		●	●
	IRDKW0501MOT22HS	RDKW0501MOT-CX22HS	●	●	●		○	●
	IRDKW0501MOT32HS	RDKW0501MOT-CX32HS	●	●	●		○	○
	IRDKW0501MOT33TS	RDKW0501MOT-CX33TS	●	●	●		●	●
	IRDKW0501MOT43TS	RDKW0501MOT-CX43TS	●	●	●		●	
	IRDKW0702MOE22HS	RDKW0702MOE-CX22HS	●	●	●		○	●
	IRDKW0702MOE32HS	RDKW0702MOE-CX32HS	●	●	●		○	○
	IRDKW0702MOE33TS	RDKW0702MOE-CX33TS	●	●	●		●	●
	IRDKW0702MOE43TS	RDKW0702MOE-CX43TS	●	●	●		●	
	IRDKW0702MOT22HS	RDKW0702MOT-CX22HS	●	●	●		○	●
	IRDKW0702MOT32HS	RDKW0702MOT-CX32HS	●	●	●		○	○
	IRDKW0702MOT33TS	RDKW0702MOT-CX33TS	●	●	●		●	●
	IRDKW0702MOT43TS	RDKW0702MOT-CX43TS	●	●	●		●	
	IRDMT1003MOE22HS	RDMT1003MOE-CX22HS	●	●	●		○	●
	IRDMT1003MOE32HS	RDMT1003MOE-CX32HS	●	●	●		○	○
	IRDMT1003MOE33TS	RDMT1003MOE-CX33TS	●	●	●		●	●
	IRDMT1003MOE43TS	RDMT1003MOE-CX43TS	●	●	●		●	
	IRDMT1003MOT22HS	RDMT1003MOT-CX22HS	●	●	●		○	●
	IRDMT1003MOT23TS	RDMT1003MOT-CX23TS	●	●	●		●	●
	IRDMT1003MOT32HS	RDMT1003MOT-CX32HS	●	●	●		○	○
	IRDMT1003MOT33TS	RDMT1003MOT-CX33TS	●	●	●		●	●
	IRDMT1003MOT43TS	RDMT1003MOT-CX43TS	●	●	●		●	

Milling

Modular Milling Tools

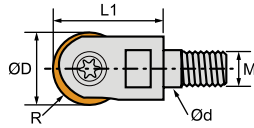
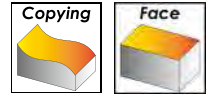
Copy Milling - CARDM

Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IRDMX1003MOE22HS	RDMX1003MOE-CX22HS	●	●	●		○	●
	IRDMX1003MOE32HS	RDMX1003MOE-CX32HS	●	●	●		○	○
	IRDMX1003MOE33TS	RDMX1003MOE-CX33TS	●	●	●		●	●
	IRDMX1003MOE43TS	RDMX1003MOE-CX43TS	●	●	●		●	
	IRDMX1003MOT22HS	RDMX1003MOT-CX22HS	●	●	●		○	●
	IRDMX1003MOT32HS	RDMX1003MOT-CX32HS	●	●	●		○	○
	IRDMX1003MOT33TS	RDMX1003MOT-CX33TS	●	●	●		●	●
	IRDMX1003MOT43TS	RDMX1003MOT-CX43TS	●	●	●		●	
	IRDMT10T3MOE22HS	RDMT10T3MOE-CX22HS	●	●	●		○	●
	IRDMT10T3MOE32HS	RDMT10T3MOE-CX32HS	●	●	●		○	○
	IRDMT10T3MOE33TS	RDMT10T3MOE-CX33TS	●	●	●		●	●
	IRDMT10T3MOE43TS	RDMT10T3MOE-CX43TS	●	●	●		●	
	IRDMT10T3MOT22HS	RDMT10T3MOT-CX22HS	●	●	●		○	●
	IRDMT10T3MOT32HS	RDMT10T3MOT-CX32HS	●	●	●		○	○
	IRDMT10T3MOT33TS	RDMT10T3MOT-CX33TS	●	●	●		●	●
	IRDMT10T3MOT43TS	RDMT10T3MOT-CX43TS	●	●	●		●	
	IRDMMW10T3MOE32HS	RDMW10T3MOE-CX32HS	●	●	●		○	○
	IRDMMW10T3MOE33TS	RDMW10T3MOE-CX33TS	●	●	●		●	●
	IRDMMW10T3MOT32HS	RDMW10T3MOT-CX32HS	●	●	●		○	○
	IRDMMW10T3MOT33TS	RDMW10T3MOT-CX33TS	●	●	●		●	●

Copy Milling - CF21M

CF21M suit for mould & die medium & finishing.



Order No.	R	D	L1	d	M	T	Inserts	Screw	Wrench	Stock
ICF21M302012060	6R	12	22	6.5	M6	2	WP3212 ..	IMGR5012	ITK20	●
ICF21M302012080	6R	12	30	8.5	M8	2				
ICF21M302016080	8R	16	28	8.5	M8	2	WP3216 ..	IMGR5016	ITK20	●
ICF21M302020100	10R	20	30	10.5	M10	2	WP3220 ..	IMGR5020	ITK20	●
ICF21M302025120	12.5R	25	40	12.5	M12	2	WP3225 ..	IMGR6025	ITK30	●
ICF21M302032160	16R	32	43	17	M16	2	WP3232 ..	IMGR8030	ITK30	●

● stock ○ by inquiry

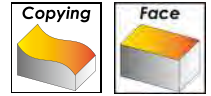
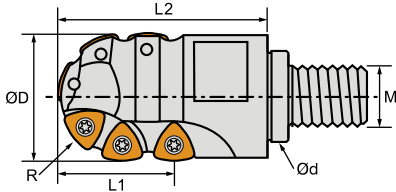
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWP3212SM22HS	WP3212-SM-CX22HS	●	●	●		○	●
	IWP3216SM22HS	WP3216-SM-CX22HS	●	●	●		○	●
	IWP3220SM22HS	WP3220-SM-CX22HS	●	●	●		○	●
	IWP3225SM22HS	WP3225-SM-CX22HS	●	●	●		○	●
	IWP3232SM22HS	WP3232-SM-CX22HS	●	●	●		○	●
	IWP3212MM22HS	WP3212-MM-CX22HS	●	●	●		○	●
	IWP3216MM22HS	WP3216-MM-CX22HS	●	●	●		○	●
	IWP3220MM22HS	WP3220-MM-CX22HS	●	●	●		○	●
	IWP3225MM22HS	WP3225-MM-CX22HS	●	●	●		○	●
	IWP3232MM22HS	WP3232-MM-CX22HS	●	●	●		○	●



Copy Milling - CF22M

CF22M suit for mould & die roughing.



Order No.	R	D	L1	L2	d	M	T	Inserts	Screw	Wrench	Stock
ICF22M202025120	12.5R	25	21	42	12.5	M12	2	WP26339R14	ITS4023	ITK15	●
ICF22M202030120	15R	30	23	50	12.5	M12	2				●
ICF22M202032160	16R	32	23	50	17.0	M16	2				●
ICF22M202040180	20R	40	38	65	28.0	M18	2	WP26379R25	ITS5007	ITK20	○
ICF22M202050250	25R	50	45	80	36.0	M25	2				○

● stock ○ by inquiry

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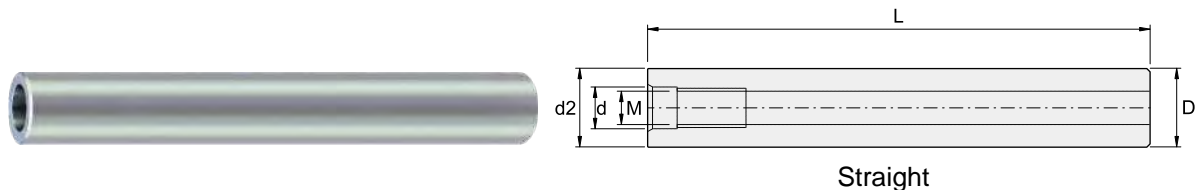
Insert Order Code

Insert	Order No.	Designation	Working Material					
			P	M	K	N	S	H
	IWP26314RG22HS	WP26339R14-RG-CX22HS	●	●	●		○	●
	IWP26314RG23TS	WP26339R14-RG-CX23TS	●	●	●		●	●
	IWP26314RG32HS	WP26339R14-RG-CX32HS	●	●	●		○	○
	IWP26314RG33TS	WP26339R14-RG-CX33TS	●	●	●		●	●
	IWP26725RG22HS	WP26379R25-RG-CX22HS	●	●	●		○	●
	IWP26725RG23TS	WP26379R25-RG-CX23TS	●	●	●		●	●
	IWP26725RG32HS	WP26379R25-RG-CX32HS	●	●	●		○	○
	IWP26725RG33TS	WP26379R25-RG-CX33TS	●	●	●		●	●



Adapter - ISO M Threads

SWMEA - Carbide Adapter (Straight)

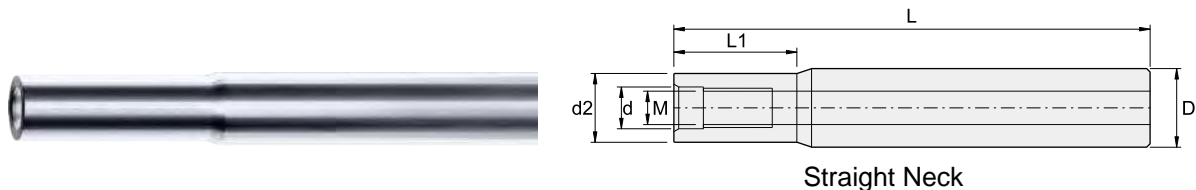


Order No.	Dimensions (mm)				
	d2	d	L	D	M
ISWMEA10075050	10	5.5	75	10	M5
ISWMEA10100050	10	5.5	100	10	M5
ISWMEA10150050	10	5.5	150	10	M5
ISWMEA10100060	10	5.5	100	10	M6
ISWMEA10150060	10	5.5	150	10	M6
ISWMEA11100060	11	6.5	100	11	M6
ISWMEA11150060	11	6.5	150	11	M6
ISWMEA12075060	12	6.5	75	12	M6
ISWMEA12100060	12	6.5	100	12	M6
ISWMEA12150060	12	6.5	150	12	M6
ISWMEA12200060	12	6.5	200	12	M6
ISWMEA15100080	15	8.5	100	15	M8
ISWMEA15150080	15	8.5	150	15	M8
ISWMEA15200080	15	8.5	200	15	M8
ISWMEA16100080	16	8.5	100	16	M8
ISWMEA16150080	16	8.5	150	16	M8
ISWMEA16200080	16	8.5	200	16	M8
ISWMEA16250080	16	8.5	250	16	M8
ISWMEA20100100	20	10.5	100	20	M10
ISWMEA20150100	20	10.5	150	20	M10
ISWMEA20200100	20	10.5	200	20	M10
ISWMEA20250100	20	10.5	250	20	M10
ISWMEA20300100	20	10.5	300	20	M10
ISWMEA25100120	25	12.5	100	25	M12
ISWMEA25150120	25	12.5	150	25	M12
ISWMEA25200120	25	12.5	200	25	M12
ISWMEA25250120	25	12.5	250	25	M12
ISWMEA25300120	25	12.5	300	25	M12
ISWMEA32200160	32	17.0	200	32	M16
ISWMEA32300160	32	17.0	300	32	M16

Customize available.

Adapter - ISO M Threads

SWMEB - Carbide Adapter (Straight Neck)

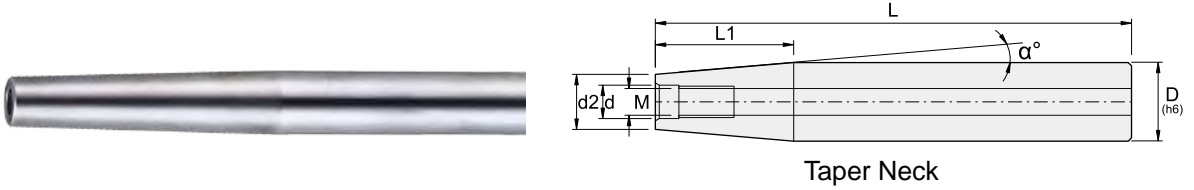


Straight Neck

Order No.	Dimensions (mm)					
	d2	d	L1	L	D	M
ISWMEB12100060	11.5	6.5	24	100	12	M6
ISWMEB12100061	11.5	6.5	40	100	12	M6
ISWMEB12100062	11.5	6.5	60	100	12	M6
ISWMEB12150060	11.5	6.5	24	150	12	M6
ISWMEB12150061	11.5	6.5	100	150	12	M6
ISWMEB16150082	13.0	8.5	32	150	16	M8
ISWMEB16150080	15.0	8.5	30	150	16	M8
ISWMEB16150081	15.0	8.5	100	150	16	M8
ISWMEB16200080	15.0	8.5	40	200	16	M8
ISWMEB16200081	15.0	8.5	120	200	16	M8
ISWMEB20150102	17.0	10.5	40	150	20	M10
ISWMEB20150100	19.0	10.5	40	150	20	M10
ISWMEB20150101	19.0	10.5	100	150	20	M10
ISWMEB20200100	19.0	10.5	40	200	20	M10
ISWMEB20200101	19.0	10.5	120	200	20	M10
ISWMEB25150120	24.0	12.5	48	150	25	M12
ISWMEB25150121	24.0	12.5	100	150	25	M12
ISWMEB25200120	24.0	12.5	48	200	25	M12
ISWMEB25200121	24.0	12.5	100	200	25	M12

Customize available.

SWMET - Carbide Adapter (Taper Neck)

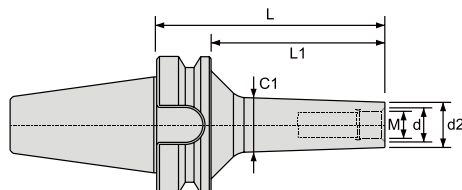


Order No.	Dimensions (mm)						
	d2	d	α°	L1	L	D	M
ISWMET12150050	9.8	5.5	1°	60	150	12	M5
ISWMET12150060	9.8	5.5	1°	60	150	12	M6
ISWMET16150060	11.8	6.5	1.5°	70	150	16	M6
ISWMET20200080	15.5	8.5	1.5°	90	200	20	M8
ISWMET25200100	19.8	10.5	1.5°	90	200	25	M10
ISWMET32200120	24.5	12.5	2	90	200	32	M12

Customize available.

BT Tool Holder - ISO M Threads

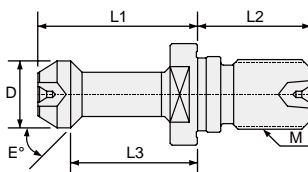
BT40/50 - Replaceable Integrated Shank



Order No.	d2	d	C1	L1	L	M	Arbor Type
IBT40DM08050	13	8.5	15	23	50	M8	BT40
IBT40DM10057	18	10.5	21	30	57	M10	
IBT40DM12080	21	12.5	25	53	80	M12	
IBT40DM16087	28	17.0	31	60	87	M16	
IBT40FMC403060	36	28.0	40	30	60	M18	
IBT40FMC406090	36	28.0	40	60	90	M18	
IBT50FMC5003065	48	36.0	50	30	65	M25	BT50
IBT50FMC50080115	48	36.0	50	80	115	M25	
IBT50FMC50130165	48	36.0	50	130	165	M25	

Customize available.

Pull Studs

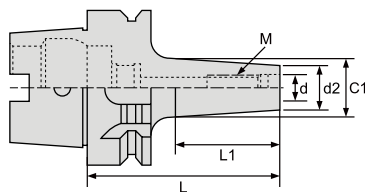


Order No.	Dimensions (mm)						For Shank
	L1	L2	L3	D	E°	M	
IP40T01	35	25	28	15	45°	M16	BT40
IP40T02	35	25	28	15	60°	M16	BT40
IP50T01	45	40	35	23	45°	M24	BT50
IP50T02	45	40	35	23	60°	M24	BT50



HSK Tool Holder - ISO M Threads

HSK63 - Replaceable Integrated Shank



Order No.	d2	d	C1	L1	L	M
IHSK63AM08050	17	8.5	18	16	50	M8xP1.25
IHSK63AM10060	18	10.5	23	26	60	M10xP1.5
IHSK63AM10080	20	10.5	24	44	80	M10xP1.5
IHSK63AM12060	23	12.5	24	26	60	M12xP1.75
IHSK63AM12080	21	12.5	24	44	80	M12xP1.75
IHSK63AM16080	29	17	34	46	80	M16xP2.0
IHSK63AM16100	34	17	34	66	100	M16xP2.0

Milling

Modular Milling Tools

