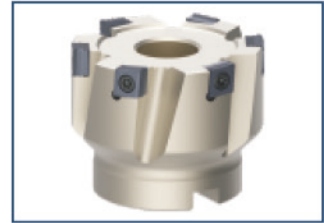


## MILLING CUTTER

INDEXABLE FACE MILLS & CARBIDE INSERTS

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112



INDEXABLE END MILLS & CARBIDE INSERTS

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122



INDEXABLE SIDE MILLING CUTTERS & CARBIDE INSERTS

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126



INDEXABLE HELICAL MILLING CUTTER & CARBIDE INSERTS

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131



SOLID CARBIDE END MILLS

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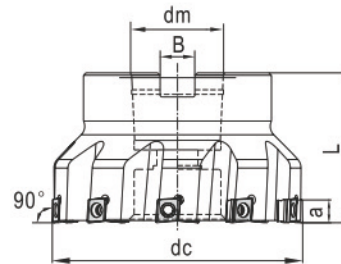
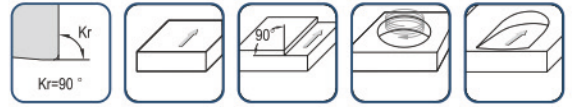
132



## SQUARE SHOULDER INDEXABLE FACE MILLS FOR CNCQ INSERTS

Features:

- 90° major cutting angle.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Big chip space for moving chip quickly and smoothly.
- Easy cutting due to big positive rake angel.
- Suitable for light to medium square shoulder milling.



Order No.	Model	Size (mm)					No.of teeth	Insert	Forcing Screw	Screw	Torx wrench
		dc	dm	a	B	L					
231-54-001	FM90-50CN09.XDZ24	50	24	9	10	50	5	CNCQ090508	MS10035	C040A11S	WT15
231-54-002	FM90-63CN09.XDZ24	63	24	9	10	50	6	CNCQ090508	MS10035	C040A11S	WT15
231-54-003	FM90-80CN09.XDZ30	80	30	9	12	55	8	CNCQ090508	MS12045	C040A11S	WT15
231-54-004	FM90-100CN09.XDZ38	100	38	9	14	63	10	CNCQ090508	SXDZ38	C040A11S	WT15
231-54-005	FM90-125CN09.XDZ48	125	48	9	16	63	12	CNCQ090508	SXDZ48	C040A11S	WT15
231-54-006	FM90-80CN12.XDZ30	80	30	12	12	55	7	CNCQ120508	MS12045	C050A12S	WT20
231-54-007	FM90-100CN12.XDZ38	100	38	12	14	63	9	CNCQ120508	SXDZ38	C050A12S	WT20
231-54-008	FM90-125CN12.XDZ48	125	48	12	16	63	11	CNCQ120508	SXDZ48	C050A12S	WT20
231-54-009	FM90-160CN12.XDZ48	160	48	12	16	63	14	CNCQ120508	SXDZ48	C050A12S	WT20

Insert not included

Recommended cutting data:

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	-	-	-	200-100	0.05-0.12	< α	120-60	0.15-0.2	< α
Stainless Steel	-	-	-	-	-	-	-	-	-
Cast iron	-	-	-	180-80	0.05-0.15	< α	150-80	0.15-0.2	< α
Non ferrous metal	-	-	-	< 2000	0.1-0.15	< α	< 2000	0.15-0.2	< α
High temperature alloy	-	-	-	-	-	-	-	-	-

## SOLID CARBIDE INSERT CNCQ

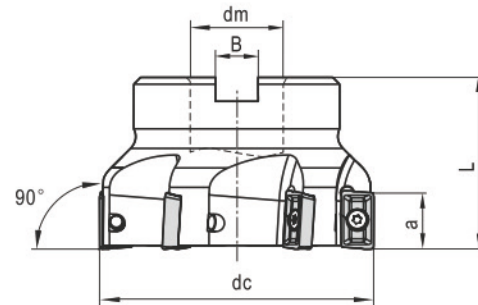
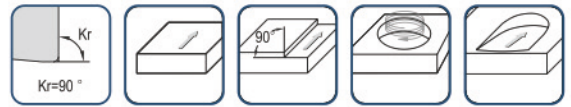


Order No.	Model	Application	Grade	Size (mm)			
				d	s	d1	r
230-54-101	CNCQ090508NF	Steel	EP2220	9.525	5.56	4.4	0.8
230-54-102	CNCQ120508NF	Steel	EP2220	12.7	5.56	5.5	0.8
230-54-103	CNCQ090508NF	Cast iron	EP3215	9.525	5.56	4.4	0.8
230-54-104	CNCQ120508NF	Cast iron	EP3215	12.7	5.56	5.5	0.8

## 90° INDEXABLE FACE MILLS FOR APKT INSERTS

Features:

- 90° major cutting angle.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision and high metal removal rate.
- Suitable for light to medium square shoulder milling.



Order No.	Model	Size (mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	B	L					
231-51-001	FM90-40AP16N	40	16	14	8.4	40	4	APKT1604	C040A09S	WT15	0.3
231-51-002	FM90-50AP16N	50	22	14	10.4	40	4	APKT1604	C040A09S	WT15	0.4
231-51-003	FM90-63AP16N	63	22	14	10.4	45	5	APKT1604	C040A09S	WT15	0.6
231-51-004	FM90-80AP16N	80	27	14	12.4	50	6	APKT1604	C040A09S	WT15	1.1
231-51-005	FM90-100AP16N	100	32	14	14.4	50	7	APKT1604	C040A09S	WT15	1.9
231-51-006	FM90-125AP16N	125	40	14	16.4	63	8	APKT1604	C040A09S	WT15	3.9
231-51-007	FM90-160AP16N	160	40	14	16.4	63	10	APKT1604	C040A09S	WT15	4.9

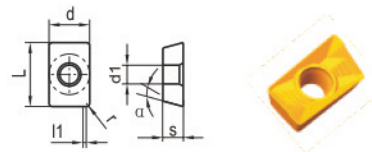
Insert not included

Recommended cutting data:

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	300-100	0.05-0.10	0.1-2.0	250-120	0.1-0.25	2-8	160-100	0.15-0.30	8-15
Stainless Steel	230-120	0.05-0.10	0.1-2.0	120-60	0.1-0.25	2-8	100-60	0.15-0.30	4-12
Cast iron	300-110	0.05-0.10	0.1-2.0	250-110	0.1-0.25	2-8	140-100	0.15-0.30	4-15
Non ferrous metal	< 2000	0.05-0.10	0.1-2.0	< 2000	0.1-0.25	2-8	< 2000	0.15-0.30	4-15
High temperature alloy	-	-	-	20-60	0.06-0.20	2-4	-	-	-

## SOLID CARBIDE INSERT APKT

Insert with highly positive geometry and helical cutting edges.

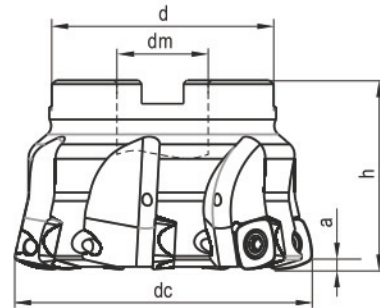
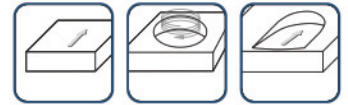


Order No.	Model	Application	Grade	Size (mm)						
				d	L	s	$\alpha$	d1	l1	r
230-51-101	APKT1604 08-ZM	Steel,Stainless steel and Cast iron	EP1315	9.51	17.56	5.735	11°	4.4	1.395	0.8
230-51-102	APKT1604 08-ZM	Stainless steel	EP1215	9.51	17.56	5.735	11°	4.4	1.395	0.8
230-51-103	APKT1604 08-ZM	Steel and Cast iron	EP2202	9.51	17.56	5.735	11°	4.4	1.395	0.8

## HIGH FEED INDEXABLE FACE MILLS FOR SDMT INSERTS

Features:

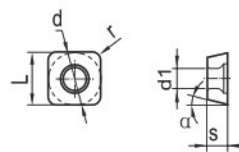
- Radial and Axial run-out less than 0.02mm
- Insert to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC50-HRC52.
- Suitable for medium cutting of steel, stainless steel and cast iron at high feed rate.



Order No.	Size (mm)					No.of teeth	Insert	Screw	Torx wrench
	dc	h	d	dm	a				
231-67-005	32	40	38	16	1	3	SDMT09T307	C030A07S	WT15
231-67-010	40	40	38	16	1	4	SDMT09T307	C030A07S	WT15
231-67-015	50	40	43	22	1	5	SDMT09T307	C030A07S	WT15
231-67-020	63	40	48	22	1	6	SDMT09T307	C030A07S	WT15
231-67-030	40	40	38	16	2	3	SDMT120412	L60-M4x8.4	WT15
231-67-035	50	40	43	22	2	4	SDMT120412	L60-M4x8.4	WT15
231-67-040	63	40	48	22	2	5	SDMT120412	L60-M4x8.4	WT15
231-67-045	80	50	58	27	2	7	SDMT120412	L60-M4x8.4	WT15

Insert not included

## SOLID CARBIDE INSERT SDMT



SM



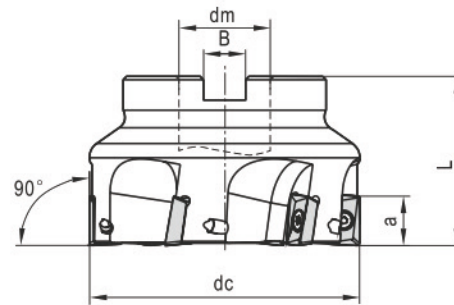
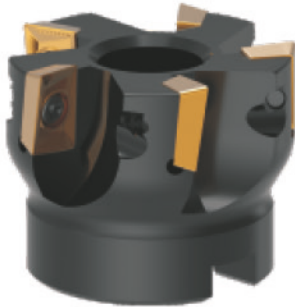
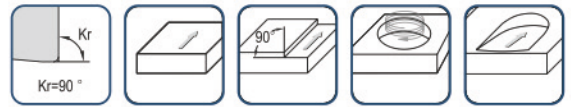
NPM

Order No.	Model	Application	Grade	Size(mm)					
				d	L	s	$\alpha$	d1	r
230-67-101	SDMT09T307-SM	Stainless steel	EP1215	9	9	3.5	16°	3.5	0.7
230-67-102	SDMT09T307-SM	Steel & Cast iron	EP2202	9	9	3.5	16°	3.5	0.7
230-67-103	SDMT09T307-SM	Universal	EP1315	9	9	3.5	16°	3.5	0.7
230-67-104	SDMT120412-NPM	Stainless steel	EP1215	12.7	12.7	4.76	15°	4.4	2
230-67-105	SDMT120412-NPM	Steel & Cast iron	EP2202	12.7	12.7	4.76	15°	4.4	2
230-67-106	SDMT120412-NPM	Universal	EP1315	12.7	12.7	4.76	15°	4.4	2

## 90° INDEXABLE FACE MILLS FOR LDFT INSERTS

Features:

- 90° major cutting angle.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision and high metal removal rate.
- Suitable for light to medium square shoulder milling.



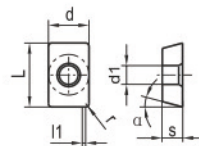
Order No.	Model	Size (mm)					No. of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	B	L					
231-52-001	FMA90-40LD15	40	16	15	8.4	40	4	LDMT1504..	C035A08S	WT15	0.3
231-52-002	FMA90-50LD15	50	22	15	10.4	40	5	LDMT1504..	C035A08S	WT15	0.4
231-52-003	FMA90-63LD15	63	22	15	10.4	40	6	LDMT1504..	C035A08S	WT15	0.6
231-52-004	FMA90-80LD15	80	27	15	12.4	50	7	LDMT1504..	C035A08S	WT15	1.1
231-52-005	FMA90-100LD15	100	32	15	14.4	50	8	LDMT1504..	C035A08S	WT15	1.9
231-52-006	FMA90-125LD15	125	40	15	16.4	63	10	LDMT1504..	C035A08S	WT15	3.9
231-52-007	FMA90-160LD15	160	40	15	16.4	63	12	LDMT1504..	C035A08S	WT15	4.9
231-52-008	FMB90-100LD15	100	32	15	14.4	50	6	LDMT1504..	C035A08S	WT15	1.9
231-52-009	FMB90-125LD15	125	40	15	16.4	63	7	LDMT1504..	C035A08S	WT15	3.9
231-52-010	FMB90-160LD15	160	40	15	16.4	63	8	LDMT1504..	C035A08S	WT15	4.9

Insert not included

Recommended cutting data:

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	350-120	0.05-0.10	0.1-2.0	240-100	0.10-0.25	2-4	150-80	0.20-0.35	< 14
Stainless Steel	250-100	0.05-0.10	0.1-2.0	200-100	0.10-0.25	2-4	140-80	0.20-0.35	< 14
Cast iron	300-120	0.05-0.10	0.1-2.0	280-90	0.10-0.25	2-4	220-80	0.20-0.35	< 14
Non ferrous metal	< 2000	0.05-0.10	0.1-2.0	< 2000	0.10-0.25	2-4	< 2000	0.20-0.35	< 14
High temperature alloy	-	-	-	75-25	0.10-0.25	2-4	-	-	-

## SOLID CARBIDE INSERT LDMT

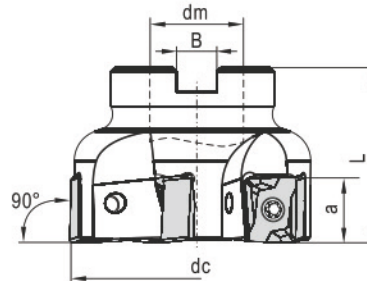
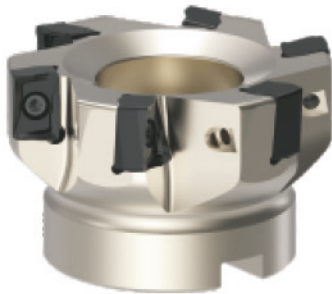
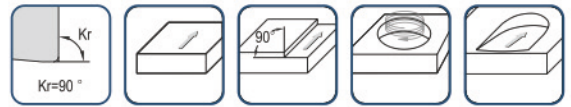


Order No.	Model	Application	Grade	Size (mm)						
				d	L	s	α	d1	l1	r
230-52-101	LDMT1504PDSR-EM	Steel	EP2220	9.525	15	4.76	15°	4.4	-	0.8
230-52-102	LDMT1504PDSR-EM	Cast iron	EP3215	9.525	15	4.76	15°	4.4	-	0.8
230-52-103	LDKT150408FR-AL	Non ferrous metal	EW5220	9.525	15	4.76	15°	4.4	-	0.8

## 90° INDEXABLE FACE MILLS FOR ANKX INSERTS

### Features:

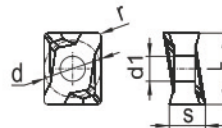
- 90° major cutting angle.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Suitable for medium to heavy cutting.



Order No.	Model	Size (mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	B	L					
232-53-001	FM90-50AN16	50	22	15	10.4	40	4	ANKX1607	C050A12S	WT20	0.5
232-53-002	FM90-63AN16	63	22	15	10.4	40	5	ANKX1607	C050A12S	WT20	0.7
232-53-003	FM90-80AN16	80	27	15	12.4	50	6	ANKX1607	C050A12S	WT20	1.2
232-53-004	FM90-100AN16	100	32	15	14.4	50	8	ANKX1607	C050A12S	WT20	2.1

Insert not included

## SOLID CARBIDE INSERT ANKX

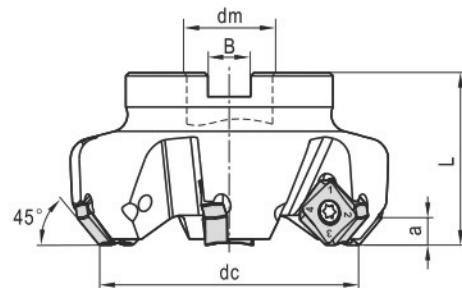
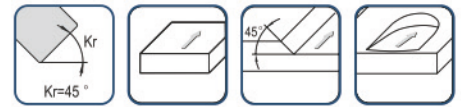


Order No.	Model	Application	Grade	Size(mm)				
				L	d	d1	S	r
230-53-101	ANKX160708R-EM	Steel,Stainless steel	EP1230	16	11.21	5.5	10.7	0.8
230-53-102	ANKX160708R-EH	Steel,Stainless steel	EP1230	16	11.21	5.5	10.7	0.8
230-53-103	ANKX160716R-EM	Steel,Stainless steel	EP1230	16	11.21	5.5	10.7	1.6
230-53-104	ANKX160716R-EH	Steel,Stainless steel	EP1230	16	11.21	5.5	10.7	1.6
230-53-105	ANKX160708R-EM	Cast iron	EC3125	16	11.21	5.5	10.7	0.8
230-53-106	ANKX160716R-EM	Cast iron	EC3125	16	11.21	5.5	10.7	1.6

## 45° INDEXABLE FACE MILLS FOR SNEU INSERTS

Features:

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Cost efficient due to 2-side insert with 8 cutting edge.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Suitable for medium to heavy cutting of steel and cast iron.



Order No.	Model	Size (mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	B	L					
232-55-001	FM45-50SN12	50	22	5	10.4	40	4	SNEU1206...	C050A12S	WT20	0.5
232-55-002	FM45-63SN12	63	22	5	10.4	40	5	SNEU1206...	C050A12S	WT20	0.6
232-55-003	FM45-80SN12	80	27	5	12.4	50	7	SNEU1206...	C050A12S	WT20	1.1
232-55-004	FM45-100SN12	100	32	5	14.4	50	8	SNEU1206...	C050A12S	WT20	1.8
232-55-005	FM45-125SN12	125	40	5	16.4	63	10	SNEU1206...	C050A12S	WT20	3.7
232-55-006	FM45-160SN12	160	40	5	16.4	63	12	SNEU1206...	C050A12S	WT20	4.5
232-55-007	FM45-200SN12	200	60	5	25.7	63	14	SNEU1206...	C050A12S	WT20	6.5
232-55-008	FM45-250SN12	250	60	5	25.7	63	16	SNEU1206...	C050A12S	WT20	14.2
232-55-009	FM45-315SN12	315	60	5	25.7	63	20	SNEU1206...	C050A12S	WT20	26

Insert not included

## SOLID CARBIDE INSERT SNEU

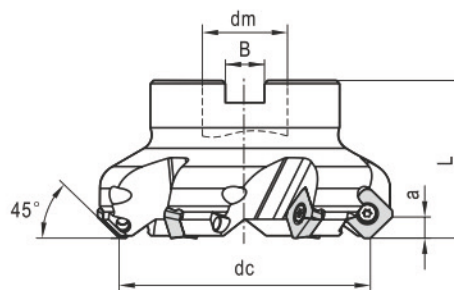
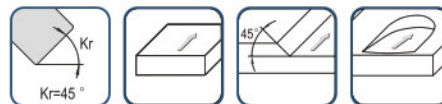


Order No.	Model	Application	Grade	Size(mm)				
				d	s	d1	l1	r
230-55-101	SNEU1206ANEN-EM	Steel	EP2230	12.7	6.35	6	2.2	0.8
230-55-102	SNEU1206ANSN-EH	Steel	EP2230	12.7	6.35	6	2.2	0.8
230-55-103	SNEU1206ANEN-EM	Cast iron	EC3215	12.7	6.35	6	2.2	0.8
230-55-104	SNEU1206ANSN-EH	Cast iron	EC3215	12.7	6.35	6	2.2	0.8

## 45° INDEXABLE FACE MILLS FOR SEMT INSERTS

### Features:

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision and high metal removal rate.
- Suitable for light to medium cutting of steel and cast iron.



Order No.	Model	Size (mm)					No. of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	B	L					
231-56-001	FM45-50SE12	50	22	6.5	10.4	45	4	SEMT..1204..	C050A12S	WT20	0.5
231-56-002	FM45-63SE12	63	22	6.5	10.4	45	5	SEMT..1204..	C050A12S	WT20	0.6
231-56-003	FM45-80SE12	80	27	6.5	12.4	50	6	SEMT..1204..	C050A12S	WT20	1.1
231-56-004	FM45-100SE12	100	32	6.5	14.4	50	7	SEMT..1204..	C050A12S	WT20	1.8
231-56-005	FM45-125SE12	125	40	6.5	16.4	63	8	SEMT..1204..	C050A12S	WT20	3.7
231-56-006	FM45-160SE12	160	40	6.5	16.4	63	10	SEMT..1204..	C050A12S	WT20	4.3

Insert not included

### Recommended cutting data:

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	350-120	0.05-0.10	0.1-2.0	240-100	0.10-0.25	2-4	150-80	0.20-0.35	< 12
Stainless Steel	250-100	0.05-0.15	0.1-2.0	200-100	0.10-0.25	1-4	180-90	0.15-0.40	< 12
Cast iron	280-150	0.05-0.15	0.1-2.0	280-90	0.10-0.25	1-4	250-80	0.15-0.40	< 12
Non ferrous metal	-	-	-	75-25	0.10-0.25	1-4	-	-	-
High temperature alloy	-	-	-	-	-	-	-	-	-

## SOLID CARBIDE INSERT SEMT



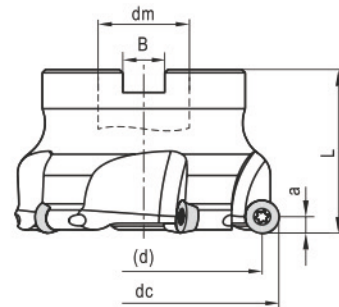
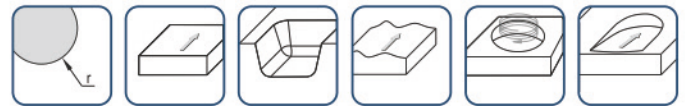
Order No.	Model	Application	Grade	Size(mm)						
				d	L	s	α	d1	l1	r
230-56-101	SEMT1204AFN-EM	Stainless steel	EP4215	12.7	12.7	4.76	20°	5.4	2.1	0.2
230-56-102	SEMT1204AFN-EM	Steel	EP2220	12.7	12.7	4.76	20°	5.4	2.1	0.2
230-56-103	SEMT1204AFN-EM	Cast iron	EP3215	12.7	12.7	4.76	20°	5.4	2.1	0.2
230-56-105	SEGT1204AFN-AL	Non ferrous metal	EW5220	12.7	12.7	4.76	20°	5.4	2.1	0.2



## INDEXABLE COPY AND FACE MILLING CUTTER

### Features:

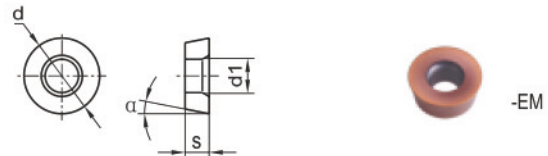
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision and high metal removal rate.
- Suitable for light to medium milling.



Order No.	Model	Size (mm)						No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	(d)	a	B	L					
231-57-001	FMR-50RD12-Z3	50	22	38	6	10.4	45	3	RDKW..1204..	C040A09S	WT15	0.4
231-57-002	FMR-50RD12-Z4	50	22	38	6	10.4	45	4	RDKW..1204..	C040A09S	WT15	0.4
231-57-003	FMR-63RD12-Z3	63	22	51	6	10.4	45	3	RDKW..1204..	C040A09S	WT15	0.6
231-57-004	FMR-63RD12-Z4	63	22	51	6	10.4	45	4	RDKW..1204..	C040A09S	WT15	0.6
231-57-005	FMR-63RD12-Z5	63	22	51	6	10.4	45	5	RDKW..1204..	C040A09S	WT15	0.6
231-57-006	FMR-80RD12-Z5	80	27	68	6	12.4	50	5	RDKW..1204..	C040A09S	WT15	1.1
231-57-007	FMR-100RD12-Z6	100	32	88	6	14.4	50	6	RDKW..1204..	C040A09S	WT15	1.8
231-57-008	FMR-125RD12-Z7	125	40	113	6	16.4	63	7	RDKW..1204..	C040A09S	WT15	3.7
231-57-009	FMR-160RD12-Z8	160	40	148	6	16.4	63	8	RDKW..1204..	C040A09S	WT15	4.9
231-57-010	FMR-80RD16	80	27	64	8	12.4	45	5	RDKW..1606	C050A12S	WT20	1.1
231-57-011	FMR-100RD16	100	32	84	8	14.4	50	6	RDKW..1606	C050A12S	WT20	1.8
231-57-012	FMR-125RD16	125	40	109	8	16.4	63	7	RDKW..1606	C050A12S	WT20	3.7
231-57-013	FMR-160RD16	160	40	144	8	16.4	63	8	RDKW..1606	C050A12S	WT20	4.9
231-57-014	FMR-100RD20	100	32	80	10	14.4	50	5	RDKW..1606	L60M6x18	WT25	1.8
231-57-015	FMR-125RD20	125	40	105	10	16.4	63	5	RDKW..1606	L60M6x18	WT25	3.7
231-57-016	FMR-160RD20	160	40	140	10	16.4	63	6	RDKW..1606	L60M6x18	WT25	4.9

Insert not included

## SOLID CARBIDE INSERT RDKW

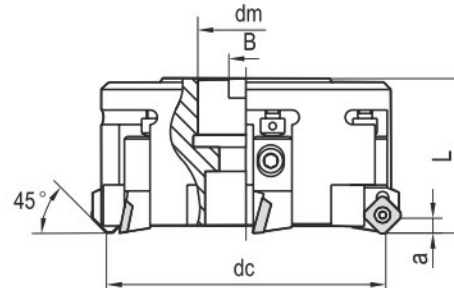
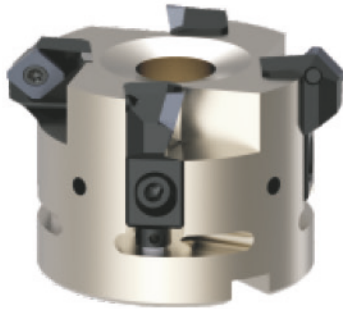


Order No.	Model	Application	Grade	Size(mm)			
				d	s	α	d1
230-57-103	RDKW1204MO-EM	Steel	EP2220	12	4.76	15°	4.4
230-57-104	RDKW1606MO-EM	Steel	EP2220	16	6.35	15°	5.56
230-57-105	RDKW2006MO-EM	Steel	EP2220	20	6.35	15°	6.55

# 45° INDEXABLE FACE MILLS WITH ALUMINUM ALLOY BODY

Features:

- Suitable for cutting both non-ferrous material and cast iron.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- 45° or 90° Lead angle can be exchanged by using different cartridges and inserts.
- Cutter made of ligh alu. alloy and hardened for high speed cutting meanwhile keeping good rigidity and deformation resistance.



Order No.	Model	Size (mm)					No. of teeth	Cartridge	Insert	Max. speed RPM	Weight (Kg)
		dc	dm	a	B	L					
232-56-007	FMM-80AL-45	80	27	6.5	12.4	63	4	SSSER16CA-12AL	SE..1204..	6000	0.9
232-56-008	FMM-100AL-45	100	32	6.5	14.4	63	5	SSSER16CA-12AL	SE..1204..	4800	1
232-56-009	FMM-125AL-45	125	40	6.5	16.4	63	6	SSSER16CA-12AL	SE..1204..	3800	1.9
232-56-010	FMM-160AL-45	160	40	6.5	16.4	63	8	SSSER16CA-12AL	SE..1204..	3000	2.7
232-56-011	FMM-200AL-45	200	60	6.5	25.7	63	10	SSSER16CA-12AL	SE..1204..	2400	4.6
232-56-012	FMM-250AL-45	250	60	6.5	25.7	63	12	SSSER16CA-12AL	SE..1204..	2000	7.2
232-56-013	FMM-315AL-45	315	60	6.5	25.7	63	14	SSSER16CA-12AL	SE..1204..	1500	10.2

Insert not included

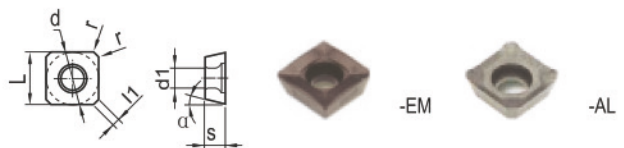
Recommended cutting data:

Application	Finish cutting			Medium cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	280-150	0.05-0.15	0.1-0.5	-	-	-
Stainless Steel	< 2000	0.05-0.15	0.1-0.5	< 2000	0.15-0.25	0.1-2.0
Cast iron	< 1200	0.05-0.15	0.1-0.5	< 1200	0.05-0.25	0.1-1.0
Non ferrous metal	< 2000	0.05-0.10	0.1-0.5	< 2000	0.05-0.25	0.1-0.5
High temperature alloy	-	-	-	-	-	-

Spare part

Cartridge	Screw	Hex wrench	Screw	Screw	Torx wrench
SSSER16CA-12AL	MS06025	S5	AS06019	C050A12S	WT20

## SOLID CARBIDE INSERT SE...

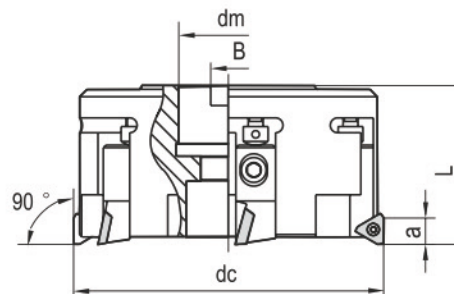
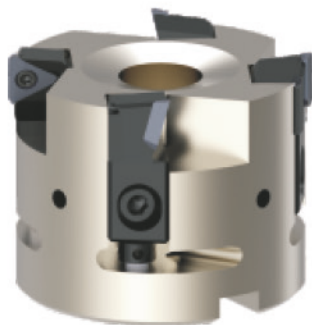
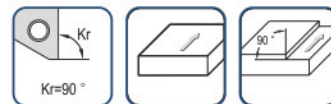


Order No.	Model	Application	Grade	Size (mm)						
				d	L	s	α	d1	l1	r
230-56-104	SEMT1204AFN-EM	Cast iron	EP3215	12.7	12.7	4.76	20°	5.4	2.1	0.2
230-56-105	SEGT1204AFN-AL	Non ferrous metal	EW5220	12.7	12.7	4.76	20°	5.4	2.1	0.2
230-56-106	SEGW1204AFN-PCD	Non ferrous metal	PCD	12.7	12.7	4.76	20°	5.4	2.1	0.2

## 90° INDEXABLE FACE MILLS WITH ALUMINUM ALLOY BODY

### Features:

- Suitable for cutting both non-ferrous material and cast iron.
- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- 45° or 90° Lead angle can be exchanged by using different cartridges and inserts.
- Cutter made of ligh alu. alloy and hardened for high speed cutting meanwhile keeping good rigidity and deformation resistance.



Order No.	Model	Size (mm)					No.of teeth	Cartridge	Insert	Max.speed RPM	Weight (Kg)
		dc	dm	a	B	L					
232-58-001	FMM-80AL-90	80	27	12	12.4	63	4	STGER16CA-16AL	TEHW16T3PER	4000	0.9
232-58-002	FMM-100AL-90	100	32	12	14.4	63	5	STGER16CA-16AL	TEHW16T3PER	3200	1.0
232-58-003	FMM-125AL-90	125	40	12	16.4	63	6	STGER16CA-16AL	TEHW16T3PER	2500	1.9
232-58-004	FMM-160AL-90	160	40	12	16.4	63	8	STGER16CA-16AL	TEHW16T3PER	2000	2.7
232-58-005	FMM-200AL-90	200	60	12	25.7	63	10	STGER16CA-16AL	TEHW16T3PER	1600	4.6
232-58-006	FMM-250AL-90	250	60	12	25.7	63	12	STGER16CA-16AL	TEHW16T3PER	1300	7.2
232-58-007	FMM-315AL-90	315	60	12	25.7	63	14	STGER16CA-16AL	TEHW16T3PER	1000	10.2

Insert not included

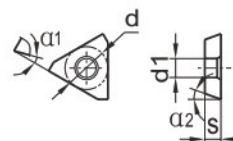
### Recommended cutting data:

Application	Finish cutting			Medium cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	280-150	0.05-0.15	0.1-0.5	-	-	-
Stainless Steel	< 2000	0.05-0.15	0.1-0.5	< 2000	0.15-0.25	0.1-2.0
Cast iron	< 1200	0.05-0.15	0.1-0.5	< 1200	0.05-0.25	0.1-1.0
Non ferrous metal	< 2000	0.05-0.10	0.1-0.5	< 2000	0.05-0.25	0.1-0.5
High temperature alloy	-	-	-	-	-	-

### Spare part

Cartridge	Screw	Hex wrench	Screw	Screw	Torx wrench
STGER16CA-16AL	MS06025	S5	AS06019	C035A08S	WT15

## SOLID CARBIDE INSERT TEHW

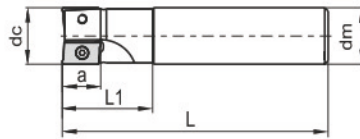


Order No.	Model	Application	Grade	Size (mm)				
				d	s	α 1	α 2	d1
230-58-101	TEHW16T3PER	Non ferrous metal and Cast iron	EW5215	9.525	3.97	20°	20°	4.4
230-58-102	TEHW16T3PER-PCD	Non ferrous metal	PCD	9.525	3.97	20°	20°	4.4

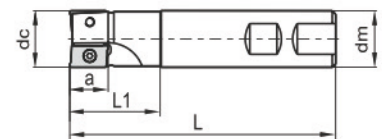
## 90° INDEXABLE END MILLS FOR APMT1135 INSERT

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- For face milling to large depths, as well as slotting.



with Cylinder Shank



with Weldon Shank

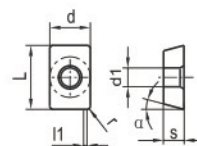
Order No.		Model		Size(mm)					No. of teeth	Insert	Screw	Torx wrench	Weight (Kg)
Weldon	Cylindrical	Weldon	Cylindrical	dc	dm	a	L1	L					
241-59-001	241-59-002	EM90-12AP11	EM90-12AP11.C	12	12	11	20	70	1	APMT1135..	C025A07S	FT7	0.1
241-59-003	241-59-004	EM90-14AP11	EM90-14AP11.C	14	16	11	25	80	1	APMT1135..	C025A07S	FT7	0.1
241-59-005	241-59-006	EM90-16AP11	EM90-16AP11.C	16	16	11	30	80	2	APMT1135..	C025A07S	FT7	0.1
241-59-007	241-59-008	EM90-20AP11	EM90-20AP11.C	20	20	11	30	90	2	APMT1135..	C025A07S	FT7	0.4
241-59-009	241-59-010	EM90-25AP11	EM90-25AP11.C	25	25	11	30	100	3	APMT1135..	C025A07S	FT7	0.5
241-59-011	241-59-012	EM90-30AP11	EM90-30AP11.C	30	25	11	30	100	3	APMT1135..	C025A07S	FT7	0.5
241-59-013	241-59-014	EM90-32AP11	EM90-32AP11.C	32	32	11	30	110	4	APMT1135..	C025A07S	FT7	0.7
241-59-015	241-59-016	EM90-40AP11	EM90-40AP11.C	40	32	11	30	110	5	APMT1135..	C025A07S	FT7	0.8
241-59-017	241-59-018	EM90-16AP11L150	EM90-16AP11L150.C	16	16	11	30	150	2	APMT1135..	C025A07S	FT7	0.2
241-59-019	241-59-020	EM90-20AP11L150	EM90-20AP11L150.C	20	20	11	30	150	2	APMT1135..	C025A07S	FT7	0.4
241-59-021	241-59-022	EM90-25AP11L165	EM90-25AP11L165.C	25	25	11	30	165	3	APMT1135..	C025A07S	FT7	0.6
241-59-023	241-59-024	EM90-25AP11L200	EM90-25AP11L200.C	25	25	11	30	200	3	APMT1135..	C025A07S	FT7	0.8
241-59-025	241-59-026	EM90-30AP11L200	EM90-30AP11L200.C	30	25	11	30	200	3	APMT1135..	C025A07S	FT7	0.9
241-59-027	241-59-028	EM90-32AP11L200	EM90-32AP11L200.C	32	32	11	30	200	4	APMT1135..	C025A07S	FT7	1.3
241-59-029	241-59-030	EM90-32AP11L250	EM90-32AP11L250.C	32	32	11	30	250	4	APMT1135..	C025A07S	FT7	1.6
241-59-031	241-59-032	EM90-32AP11L300	EM90-32AP11L300.C	32	32	11	30	300	4	APMT1135..	C025A07S	FT7	1.9
241-59-033	241-59-034	EM90-40AP11L200	EM90-40AP11L200.C	40	32	11	35	200	5	APMT1135..	C025A07S	FT7	1.4

Insert not included

**Recommended cutting data:**

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	300-100	0.05-0.10	0.1-2.0	250-120	0.1-0.25	2-4	160-100	0.15-0.30	4-8
Stainless Steel	230-120	0.05-0.10	0.1-2.0	120-60	0.1-0.25	2-4	100-60	0.15-0.30	4-8
Cast iron	300-110	0.05-0.10	0.1-2.0	250-110	0.1-0.25	2-4	140-100	0.15-0.30	4-8
Non ferrous metal	-	-	-	-	-	-	-	-	-
High temperature alloy	-	-	-	-	-	-	-	-	-

## SOLID CARBIDE INSERT APMT1135

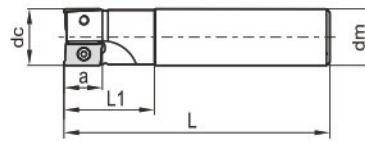


Order No.	Model	Application	Grade	Size(mm)						
				d	L	s	α	d1	l1	r
230-59-101	APMT1135PDER-EM	Steel	EP2220	6.16	11	3.5	11°	2.8	1.3	0.8
230-59-102	APMT1135PDER-EM	Cast iron	EP3215	6.16	11	3.5	11°	2.8	1.3	0.8

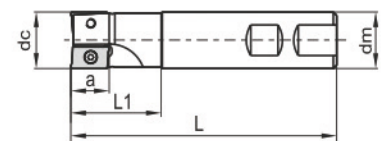
## 90° INDEXABLE END MILLS FOR APMT1604 INSERT

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Special strength design for rough cutting.



with Cylinder Shank



with Weldon Shank

**Standard Size**

Order No.		Model		Size(mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
Weldon	Cylindrical	Weldon	Cylindrical	dc	dm	a	L1	L					
241-59-035	241-59-036	EM90-16AP16M	EM90-16AP16M.C	16	16	14	30	90	1	APMT1604..	C040A09S	T15	0.1
241-59-037	241-59-038	EM90-20AP16M	EM90-20AP16M.C	20	20	14	30	90	1	APMT1604..	C040A09S	T15	0.2
241-59-039	241-59-040	EM90-25AP16M	EM90-25AP16M.C	25	25	14	30	100	2	APMT1604..	C040A09S	T15	0.4
241-59-041	241-59-042	EM90-32AP16M	EM90-32AP16M.C	32	32	14	40	110	3	APMT1604..	C040A09S	T15	0.7
241-59-043	241-59-044	EM90-40AP16M	EM90-40AP16M.C	40	32	14	40	110	4	APMT1604..	C040A09S	T15	0.8

**Long length size**

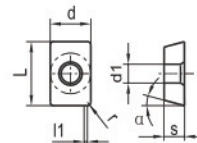
Order No.		Model		Size(mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
Weldon	Cylindrical	Weldon	Cylindrical	dc	dm	a	L1	L					
241-59-045	241-59-046	EM90-25AP16ML165	EM90-25AP16ML165.C	25	25	14	40	165	2	APMT1604.	C040A09S	T15	0.6
241-59-047	241-59-048	EM90-25AP16ML200	EM90-25AP16ML200.C	25	25	14	40	200	2	APMT1604.	C040A09S	T15	0.8
241-59-049	241-59-050	EM90-30AP16ML200	EM90-30AP16ML200.C	30	25	14	40	200	2	APMT1604.	C040A09S	T15	0.9
241-59-051	241-59-052	EM90-32AP16ML200	EM90-32AP16ML200.C	32	32	14	40	200	3	APMT1604.	C040A09S	T15	1.3
241-59-053	241-59-054	EM90-32AP16ML250	EM90-32AP16ML250.C	32	32	14	40	250	3	APMT1604.	C040A09S	T15	1.6
241-59-055	241-59-056	EM90-32AP16ML300	EM90-32AP16ML300.C	32	32	14	40	300	3	APMT1604.	C040A09S	T15	1.9
241-59-057	241-59-058	EM90-35AP16ML200	EM90-35AP16ML200.C	35	32	14	40	200	3	APMT1604.	C040A09S	T15	1.3
241-59-059	241-59-060	EM90-35AP16ML250	EM90-35AP16ML250.C	35	32	14	40	250	3	APMT1604.	C040A09S	T15	1.6
241-59-061	241-59-062	EM90-35AP16ML300	EM90-35AP16ML300.C	35	32	14	40	300	3	APMT1604.	C040A09S	T15	1.9
241-59-063	241-59-064	EM90-40AP16ML200	EM90-40AP16ML200.C	40	32	14	40	200	4	APMT1604.	C040A09S	T15	1.4

Insert not included

**Recommended cutting data:**

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	300-100	0.05-0.10	0.1-2.0	250-120	0.1-0.25	2-8	160-100	0.15-0.30	8-15
Stainless Steel	230-120	0.05-0.10	0.1-2.0	120-60	0.1-0.25	2-8	100-60	0.15-0.30	4-12
Cast iron	300-110	0.05-0.10	0.1-2.0	250-110	0.1-0.25	2-8	140-100	0.15-0.30	4-15
Non ferrous metal	-	-	-	-	-	-	-	-	-
High temperature alloy	-	-	-	-	-	-	-	-	-

## SOLID CARBIDE INSERT APMT1604

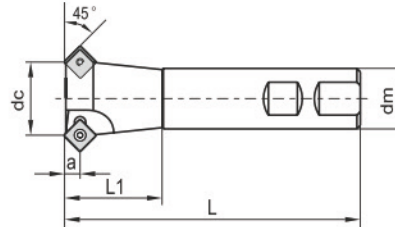


Order No.	Model	Application	Grade	Size(mm)						
				d	L	s	α	d1	l1	r
230-59-103	APMT1604 PDER-EM	Steel	EP2220	9.525	16	4.76	11°	4.4	0.9	0.8
230-59-104	APMT1604 PDER-EM	Cast iron	EP3215	9.525	16	4.76	11°	4.4	0.9	0.8

## 45° INDEXABLE END MILLS FOR SPMT0903 INSERT

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Used for both of milling and countersinking.



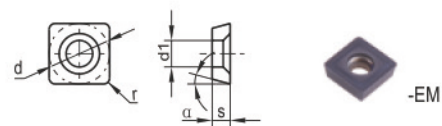
Order No.	Model	Size(mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
		dc	dm	a	L1	L					
241-60-001	EM45-10SP09	10	16	5	40	92	1	SPMT0903..	C030A07S	T9	0.1
241-60-002	EM45-12SP09	12	20	5	40	104	1	SPMT0903..	C030A07S	T9	0.2
241-60-003	EM45-16SP09	16	20	5	40	121	1	SPMT0903..	C030A07S	T9	0.3
241-60-004	EM45-20SP09	20	25	5	40	133	2	SPMT0903..	C030A07S	T9	0.5
241-60-005	EM45-25SP09	25	32	5	40	152	2	SPMT0903..	C030A07S	T9	0.9
241-60-006	EM45-32SP09	32	32	5	40	165	3	SPMT0903..	C030A07S	T9	1.0

Insert not included

**Recommended cutting data:**

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	250-80	0.05-0.10	0.1-1.0	200-70	0.10-0.25	10-2.5	150-55	0.20-0.35	< 4
Stainless Steel	190-70	0.05-0.10	0.1-1.0	150-40	0.10-0.25	1.0-2.5	-	-	-
Cast iron	-	-	-	-	-	-	-	-	-
Non ferrous metal	-	-	-	-	-	-	-	-	-
High temperature alloy	-	-	-	-	-	-	-	-	-

## SOLID CARBIDE INSERT SPMT0903

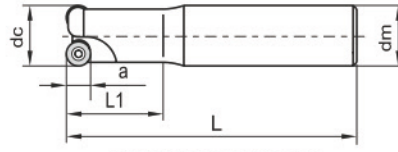
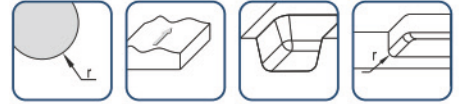


Order No.	Model	Application	Grade	Size (mm)				
				d	s	$\alpha$	d1	r
230-60-101	SPMT090308EN-EM	Steel	EP2220	9.525	3.18	11°	3.4	0.8

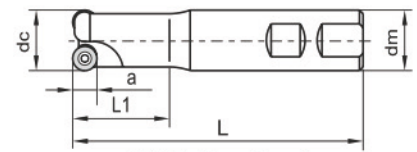
# INDEXABLE END MILLS FOR ROUND INSERT RDKW

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Especial suitable for cutting of Circular and Curved surface.



with Cylinder Shank



with Weldon Shank

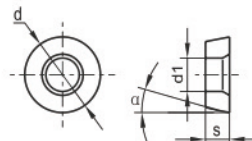
Order No.		Model		Size(mm)					No.of teeth	Insert	Screw	Torx wrench	Weight (Kg)
Weldon	Cylindrical	Weldon	Cylindrical	dc	dm	a	L1	L					
241-57-001	241-57-002	EMR-12RD08	EMR-12RD08.C	12	16	8	30	90	1	RDKW0803..	C030A07S	T9	0.1
241-57-003	241-57-004	EMR-14RD08	EMR-14RD08.C	14	16	8	30	100	1	RDKW0803..	C030A08S	T10	0.1
241-57-005	241-57-006	EMR-16RD08	EMR-16RD08.C	16	16	8	30	100	2	RDKW0803..	C030A09S	T11	0.2
241-57-007	241-57-008	EMR-20RD08	EMR-20RD08.C	20	20	8	30	120	2	RDKW0803..	C030A10S	T12	0.2
241-57-009	241-57-010	EMR-25RD10	EMR-25RD10.C	25	25	10	40	120	2	RDKW10T3..	C030A08S	T15	0.5
241-57-011	241-57-012	EMR-30RD10	EMR-30RD10.C	30	25	10	40	133	2	RDKW10T3..	C030A09S	T16	0.7
241-57-013	241-57-014	EMR-32RD10	EMR-32RD10.C	32	32	10	40	133	2	RDKW10T3..	C030A10S	T17	0.8
241-57-015	241-57-016	EMR-40RD10	EMR-40RD10.C	40	32	10	40	152	3	RDKW10T3..	C030A11S	T18	1.0
241-57-017	241-57-018	EMR-50RD10	EMR-50RD10.C	50	32	10	40	165	3	RDKW10T3..	C030A12S	T19	1.1
241-57-019	241-57-020	EMR-32RD12	EMR-32RD12.C	32	32	12	40	133	2	RDKW1204..	C040A09S	T15	0.9
241-57-021	241-57-022	EMR40RD12	EMR40RD12.C	40	32	12	40	152	3	RDKW1204..	C040A09S	T15	1.0
241-57-023	241-57-024	EMR-16RD08L150	EMR-16RD08L150.C	16	16	8	30	150	2	RDKW0803..	C030A07S	T9	0.3
241-57-025	241-57-026	EMR-20RD08L160	EMR-20RD08L160.C	20	20	8	30	160	2	RDKW0803..	C030A07S	T9	0.4
241-57-027	241-57-028	EMR-25RD10L200	EMR-25RD10L200.C	25	25	10	40	200	2	RDKW10T3..	C035A08S	T15	0.8
241-57-029	241-57-030	EMR-25RD10L250	EMR-25RD10L250.C	25	25	10	40	250	2	RDKW10T3..	C035A08S	T15	1.0
241-57-031	241-57-032	EMR-30RD10L200	EMR-30RD10L200.C	30	25	10	40	200	2	RDKW10T3..	C035A08S	T15	0.9
241-57-033	241-57-034	EMR-30RD10L250	EMR-30RD10L250.C	30	25	10	40	250	2	RDKW10T3..	C035A08S	T15	1.4
241-57-035	241-57-036	EMR-32RD10L250	EMR-32RD10L250.C	32	32	10	40	250	2	RDKW10T3..	C035A08S	T15	1.5
241-57-037	241-57-038	EMR-32RD10L300	EMR-32RD10L300.C	32	32	10	40	300	2	RDKW10T3..	C035A08S	T15	1.9
241-57-039	241-57-040	EMR-35RD10L200	EMR-35RD10L200.C	35	32	10	40	200	3	RDKW10T3..	C035A08S	T15	1.3
241-57-041	241-57-042	EMR-35RD10L250	EMR-35RD10L250.C	35	32	10	40	250	3	RDKW10T3..	C035A08S	T15	1.6
241-57-043	241-57-044	EMR-40RD10L250	EMR-40RD10L250.C	40	32	10	40	250	3	RDKW10T3..	C035A08S	T15	1.7
241-57-045	241-57-046	EMR40RD10L300	EMR40RD10L300.C	40	32	10	40	300	3	RDKW10T3..	C035A08S	T15	2.0

Insert not included

**Recommended cutting data:**

Application	Finish cutting			Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	150-80	0.05-0.10	1.5-2.0	120-80	0.15-0.35	2.5-3.0	100-60	0.1-0.2	< d/2
Stainless Steel	100-90	0.05-0.10	1.5-2.0	80-70	0.15-0.35	2.5-3.0	80-60	0.1-0.2	< d/2
Cast iron	150-100	0.05-0.10	1.5-2.0	120-90	0.15-0.35	2.5-3.0	90-60	0.1-0.2	< d/2
Non ferrous metal	-	-	-	-	-	-	-	-	-
High temperature alloy	-	-	-	-	-	-	-	-	-

## Solid carbide insert rdkw

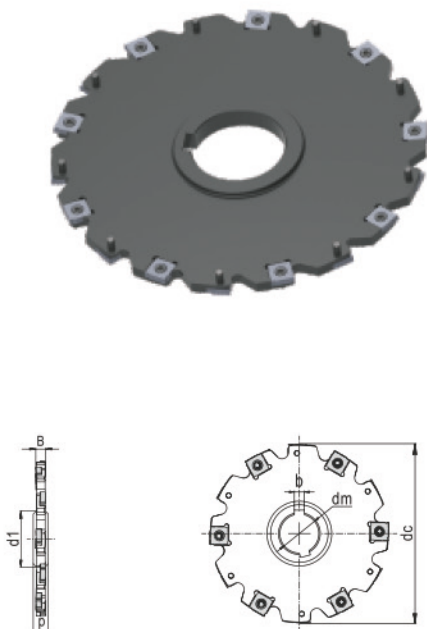


Order No.	Model	Application	Grade	Size (mm)			
				d	s	α	d1
230-57-101	RDKW0803MO-EM	Steel	EP2220	8	3.18	15°	3.4
230-57-102	RDKW10T3MO-EM	Steel	EP2220	10	3.97	15°	4.4
230-57-103	RDKW1204MO-EM	Steel	EP2220	12.0	4.76	15°	4.4

## INDEXABLE SIDE MILLING CUTTERS FOR SNCQ INSERT

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision for quality surface.



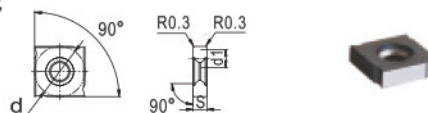
Order No.	Size(mm)						No. of teeth	Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-61-001	80	38	22	12	6	6	4*2	SNCQ123503N	ST4073-91F	WT15
251-61-003	100	45	27	12	6	7	5*2	SNCQ123503N	ST4073-91F	WT15
251-61-005	125	55	40	12	6	10	6*2	SNCQ123503N	ST4073-91F	WT15
251-61-007	160	55	40	12	6	10	8*2	SNCQ123503N	ST4073-91F	WT15
251-61-009	200	69	50	12	6	12	9*2	SNCQ123503N	ST4073-91F	WT15
251-61-011	250	69	50	12	6	12	12*2	SNCQ123503N	ST4073-91F	WT15
251-61-013	80	38	22	12	7	6	4*2	SNCQ120403N	ST409-91F	WT15
251-61-015	100	45	27	12	7	7	5*2	SNCQ120403N	ST409-91F	WT15
251-61-017	125	55	40	12	7	10	6*2	SNCQ120403N	ST409-91F	WT15
251-61-019	160	55	40	12	7	10	8*2	SNCQ120403N	ST409-91F	WT15
251-61-021	200	69	50	12	7	12	9*2	SNCQ120403N	ST409-91F	WT15
251-61-023	250	69	50	12	7	12	12*2	SNCQ120403N	ST409-91F	WT15
251-61-025	80	38	22	12	8	6	4*2	SNCQ124503N	ST409-91F	WT15
251-61-027	100	45	27	12	8	7	5*2	SNCQ124503N	ST409-91F	WT15
251-61-029	125	55	40	12	8	10	6*2	SNCQ124503N	ST409-91F	WT15
251-61-031	160	55	40	12	8	10	8*2	SNCQ124503N	ST409-91F	WT15
251-61-033	200	69	50	12	8	12	9*2	SNCQ124503N	ST409-91F	WT15
251-61-035	250	69	50	12	8	12	12*2	SNCQ124503N	ST409-91F	WT15
251-61-037	100	45	27	12	9	7	5*2	SNCQ120503N	ST409-91F	WT15
251-61-039	125	55	40	12	9	10	6*2	SNCQ120503N	ST409-91F	WT15
251-61-041	160	55	40	12	9	10	8*2	SNCQ120503N	ST409-91F	WT15
251-61-043	200	69	50	12	9	12	9*2	SNCQ120503N	ST409-91F	WT15
251-61-045	250	69	50	12	9	12	12*2	SNCQ120503N	ST409-91F	WT15

Insert not included

**Recommended cutting data:**

Application	Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	200-100	0.05-0.12	< α	120-60	0.15-0.2	< α
Stainless Steel	-	-	-	-	-	-
Cast iron	180-80	0.05-0.15	< α	150-80	0.15-0.2	< α
Non ferrous metal	< 2000	0.1-0.15	< α	< 2000	0.15-0.2	< α
High temperature alloy	-	-	-	-	-	-

## SOLID CARBIDE INSERT SNCQ



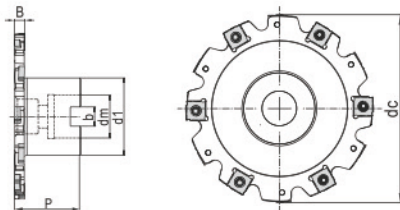
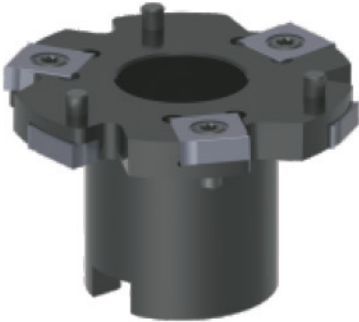
Order No.	Model	For cutting width	Application	Grade	Size(mm)		
					s	d	d1
230-61-101	SNCQ123503N	6-7mm	Steel	EP2220	3.5	12.7	4.5
230-61-102	SNCQ120403N	7-8mm	Steel	EP2220	4	12.7	4.5
230-61-103	SNCQ124503N	8-9mm	Steel	EP2220	4.5	12.7	4.5
230-61-104	SNCQ120503N	9-10mm	Steel	EP2220	5	12.7	4.5
230-61-105	SNCQ123503N	6-7mm	Cast iron	EP3215	3.5	12.7	4.5
230-61-106	SNCQ120403N	7-8mm	Cast iron	EP3215	4	12.7	4.5
230-61-107	SNCQ124503N	8-9mm	Cast iron	EP3215	4.5	12.7	4.5
230-61-108	SNCQ120503N	9-10mm	Cast iron	EP3215	5	12.7	4.5



## INDEXABLE SIDE MILLING CUTTERS FOR SNCQ INSERT

### Features:

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision for quality surface.



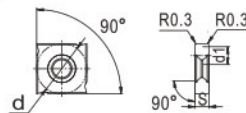
Order No.	Size(mm)						No. of teeth	Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-61-002	63	42	22	50	6	10.4	3*2	SNCQ123503N	ST4073-91F	WT15
251-61-004	80	42	22	50	6	10.4	4*2	SNCQ123503N	ST4073-91F	WT15
251-61-006	100	60	27	50	6	12.4	5*2	SNCQ123503N	ST4073-91F	WT15
251-61-008	125	78	32	50	6	14.4	6*2	SNCQ123503N	ST4073-91F	WT15
251-61-010	160	89	40	50	6	16.4	8*2	SNCQ123503N	ST4073-91F	WT15
251-61-012	63	42	22	50	7	10.4	3*2	SNCQ120403N	ST409-91F	WT15
251-61-014	80	42	22	50	7	10.4	4*2	SNCQ120403N	ST409-91F	WT15
251-61-016	100	60	27	50	7	12.4	5*2	SNCQ120403N	ST409-91F	WT15
251-61-018	125	78	32	50	7	14.4	6*2	SNCQ120403N	ST409-91F	WT15
251-61-020	160	89	40	50	7	16.4	8*2	SNCQ120403N	ST409-91F	WT15
251-61-022	63	42	22	50	8	10.4	3*2	SNCQ124503N	ST409-91F	WT15
251-61-024	80	42	22	50	8	10.4	4*2	SNCQ124503N	ST409-91F	WT15
251-61-026	100	60	27	50	8	12.4	5*2	SNCQ124503N	ST409-91F	WT15
251-61-028	125	78	32	50	8	14.4	6*2	SNCQ124503N	ST409-91F	WT15
251-61-030	160	89	40	50	8	16.4	8*2	SNCQ124503N	ST409-91F	WT15
251-61-032	100	60	27	50	8	12.4	5*2	SNCQ120503N	ST409-91F	WT15
251-61-034	125	78	40	50	8	14.4	6*2	SNCQ120503N	ST409-91F	WT15
251-61-036	160	89	40	50	8	16.4	8*2	SNCQ120503N	ST409-91F	WT15

Insert not included

### Recommended cutting data:

Application	Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	200-100	0.05-0.12	< $\alpha$	120-60	0.15-0.2	< $\alpha$
Stainless Steel	-	-	-	-	-	-
Cast iron	180-80	0.05-0.15	< $\alpha$	150-80	0.15-0.2	< $\alpha$
Non ferrous metal	< 2000	0.1-0.15	< $\alpha$	< 2000	0.15-0.2	< $\alpha$
High temperature alloy	-	-	-	-	-	-

## SOLID CARBIDE INSERT SNCQ

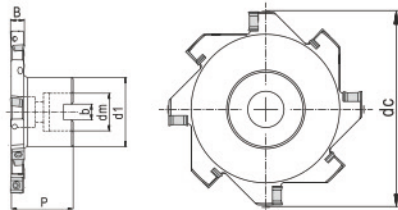
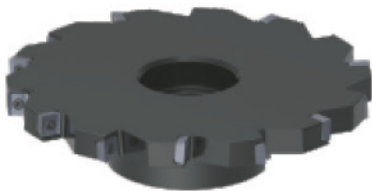
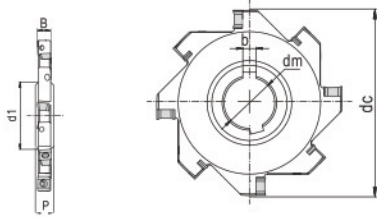


Order No.	Model	For cutting width	Application	Grade	Size(mm)		
					s	d	d1
230-61-101	SNCQ123503N	6-7mm	Steel	EP2220	3.5	12.7	4.5
230-61-102	SNCQ120403N	7-8mm	Steel	EP2220	4	12.7	4.5
230-61-103	SNCQ124503N	8-9mm	Steel	EP2220	4.5	12.7	4.5
230-61-104	SNCQ120503N	9-10mm	Steel	EP2220	5	12.7	4.5
230-61-105	SNCQ123503N	6-7mm	Cast iron	EP3215	3.5	12.7	4.5
230-61-106	SNCQ120403N	7-8mm	Cast iron	EP3215	4	12.7	4.5
230-61-107	SNCQ124503N	8-9mm	Cast iron	EP3215	4.5	12.7	4.5
230-61-108	SNCQ120503N	9-10mm	Cast iron	EP3215	5	12.7	4.5

## INDEXABLE SIDE MILLING CUTTERS FOR LNCT INSERT

Features:

- Radial and Axial run-out less than 0.02mm.
- Made of quality alloy steel and hardness HRC45-HRC48.
- Inserts to be hold by swiss SFS high strength screws.
- High precision for quality surface.



Order No.	Size(mm)						No. of teeth	Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-62-001	100	46	32	16	10	8	4*2	LNCT070408N	C030A07S	WT9
251-62-003	125	55	40	16	10	10	5*2	LNCT070408N	C030A08S	WT9
251-62-005	160	55	40	16	10	10	6*2	LNCT070408N	C030A09S	WT9
251-62-007	200	69	50	16	10	12	7*2	LNCT070408N	C030A10S	WT9
251-62-009	100	46	32	18	12	8	4*2	LNCT090408N	C035A08S	WT15
251-62-011	125	55	40	18	12	10	5*2	LNCT090408N	C035A08S	WT15
251-62-013	160	55	40	18	12	10	6*2	LNCT090408N	C035A08S	WT15
251-62-015	200	69	50	18	12	12	7*2	LNCT090408N	C035A08S	WT15
251-62-017	250	69	50	18	12	12	8*2	LNCT090408N	C035A08S	WT15
251-62-019	125	55	40	24	16	10	5*2	LNCT120508N	C035A09S	WT15
251-62-021	160	55	40	24	16	10	6*2	LNCT120508N	C035A09S	WT15
251-62-023	200	69	50	24	16	12	7*2	LNCT120508N	C035A09S	WT15
251-62-025	250	69	50	24	12	12	8*2	LNCT120508N	C035A09S	WT15

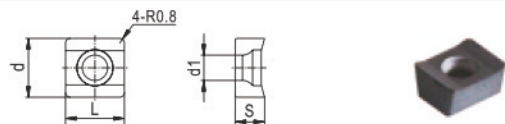
Order No.	Size(mm)						No. of teeth	Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-62-002	80	42	22	50	10	10.4	4*2	LNCT070408N	C030A07S	WT9
251-62-004	100	60	27	50	10	12.4	5*2	LNCT070408N	C030A07S	WT9
251-62-006	125	78	32	50	10	14.4	6*2	LNCT070408N	C030A07S	WT9
251-62-008	160	89	40	50	10	16.4	7*2	LNCT070408N	C030A07S	WT9
251-62-010	100	60	27	50	12	12.4	5*2	LNCT090408N	C035A08S	WT15
251-62-012	125	78	32	50	12	14.4	6*2	LNCT090408N	C035A08S	WT15
251-62-014	160	89	40	50	12	16.4	7*2	LNCT090408N	C035A08S	WT15
251-62-016	200	89	40	50	12	16.4	8*2	LNCT090408N	C035A08S	WT15
251-62-018	125	78	32	50	16	14.4	5*2	LNCT120508N	C040A09S	WT15
251-62-020	160	89	40	50	16	16.4	6*2	LNCT120508N	C040A09S	WT15
251-62-022	200	89	40	50	16	16.4	7*2	LNCT120508N	C040A09S	WT15
251-62-024	250	129	60	50	16	25.7	8*2	LNCT120508N	C040A09S	WT15

Insert not included

Recommended cutting data:

Application	Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	200-100	0.05-0.12	< α	120-60	0.15-0.2	< α
Stainless Steel	-	-	-	-	-	-
Cast iron	180-80	0.05-0.15	< α	150-80	0.15-0.2	< α
Non ferrous metal	< 2000	0.1-0.15	< α	< 2000	0.15-0.2	< α
High temperature alloy	-	-	-	-	-	-

## SOLID CARBIDE INSERT LNCT

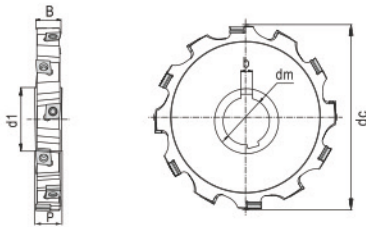
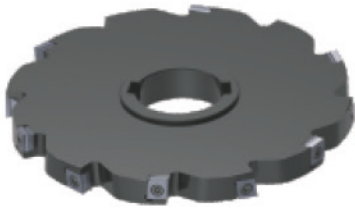


Order No.	Model	For cutting width	Application	Grade	Size(mm)			
					s	L	d	d1
230-62-101	LNCT070408N	9-13.5	Steel	EP2220	4.76	7.94	9.525	4.7
230-62-102	LNCT090408N	11-16	Steel	EP2220	4.76	9.525	9.525	5.8
230-62-103	LNCT120508N	15-22	Steel	EP2220	5.56	12.7	11.5	6
230-62-104	LNCT070408N	9-13.5	Cast iron	EP3215	4.76	7.94	9.525	4.7
230-62-105	LNCT090408N	11-16	Cast iron	EP3215	4.76	9.525	9.525	5.8
230-62-106	LNCT120508N	15-22	Cast iron	EP3215	5.56	12.7	11.5	6

## INDEXABLE SIDE MILLING CUTTERS FOR CNCQ INSERT

**Features:**

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision for quality surface.



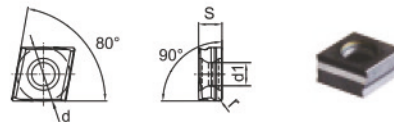
Order No.	Size(mm)						No.of teeth	Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-54-001	100	46	32	16	14	8	4*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-003	125	55	40	16	14	10	4*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-005	160	55	40	16	14	10	6*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-007	200	69	50	16	14	12	7*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-009	250	69	50	16	14	12	9*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-011	100	46	32	22	20	8	4*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-013	125	55	40	22	20	10	4*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-015	160	55	40	22	20	10	6*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-017	200	69	50	22	20	12	7*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-019	250	69	50	21	20	12	9*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-021	125	55	40	27	24	10	4*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-023	160	55	40	27	24	10	6*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-025	200	69	50	27	24	12	7*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-027	250	69	50	27	24	12	9*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20

Insert not included

**Recommended cutting data:**

Application	Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	200-100	0.05-0.12	< α	120-60	0.15-0.2	< α
Stainless Steel	-	-	-	-	-	-
Cast iron	180-80	0.05-0.15	< α	150-80	0.15-0.2	< α
Non ferrous metal	< 2000	0.1-0.15	< α	< 2000	0.15-0.2	< α
High temperature alloy	-	-	-	-	-	-

## SOLID CARBIDE INSERT CNCQ

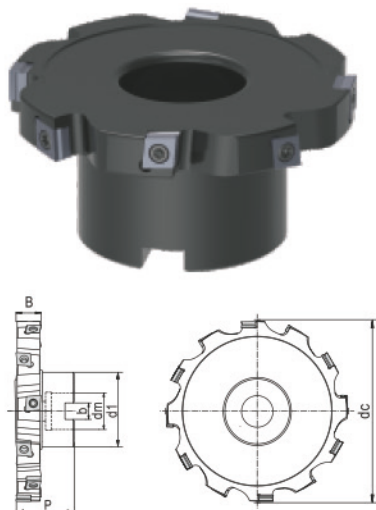


Order No.	Model	For cutting width	Application	Grade	Size(mm)			
					s	d	d1	r
230-54-105	CNCQ090504L/R	13.5-18.5mm	Steel	EP2220	5.56	9.525	4.4	0.4
230-54-106	CNCQ090508L/R	13.5-18.5mm	Steel	EP2220	5.56	9.525	4.4	0.8
230-54-107	CNCQ120504L/R	18.5-24mm	Steel	EP2220	5.56	12.7	5.5	0.4
230-54-108	CNCQ120508L/R	18.5-24mm	Steel	EP2220	5.56	12.7	5.5	0.8
230-54-109	CNCQ150504L/R	24-30.5mm	Steel	EP2220	5.56	15.875	5.5	0.4
230-54-110	CNCQ090504L/R	13.5-18.5mm	Cast iron	EP3215	5.56	9.525	4.4	0.4
230-54-111	CNCQ090508L/R	13.5-18.5mm	Cast iron	EP3215	5.56	9.525	4.4	0.8
230-54-112	CNCQ120504L/R	18.5-24mm	Cast iron	EP3215	5.56	12.7	5.5	0.4
230-54-113	CNCQ120508L/R	18.5-24mm	Cast iron	EP3215	5.56	12.7	5.5	0.8
230-54-114	CNCQ150504L/R	24-30.5mm	Cast iron	EP3215	5.56	15.875	5.5	0.4

## INDEXABLE SIDE MILLING CUTTERS FOR CNCQ INSERT

Features:

- Radial and Axial run-out less than 0.02mm.
- Inserts to be hold by swiss SFS high strength screws.
- Made of quality alloy steel and hardness HRC45-HRC48.
- High precision for quality surface.



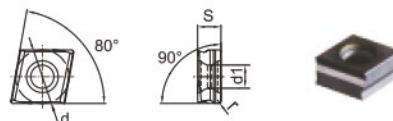
Order No.	Size(mm)							Insert	Screw	Torx wrench
	dc	d1	dm	P	B	b				
251-54-002	80	42	22	50	14	10.4	3*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-004	100	60	27	50	14	12.4	4*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-006	125	78	32	50	14	14.4	4*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-008	160	89	40	50	14	16.4	6*2	CNCQ0905..L CNCQ0905..R	C040A09S	WT15
251-54-010	100	60	27	50	20	12.4	4*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-012	125	78	32	50	20	14.4	4*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-014	160	89	40	50	20	16.4	6*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-016	200	89	40	50	20	16.4	8*2	CNCQ1205..L CNCQ1205..R	C050A12S	WT20
251-54-018	125	78	32	50	24	14.4	4*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-020	160	89	40	50	24	16.4	6*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-022	200	89	40	50	24	16.4	7*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20
251-54-024	250	129	60	50	24	25.7	9*2	CNCQ1505..L CNCQ1505..R	C050A12S	WT20

Insert not included

Recommended cutting data:

Application	Medium cutting			Rough cutting		
	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)	Surface speed Vc(m/min)	Feed per tooth fz(mm)	Cutting depth ap(mm)
Steel	200-100	0.05-0.12	< $\alpha$	120-60	0.15-0.2	< $\alpha$
Stainless Steel	-	-	-	-	-	-
Cast iron	180-80	0.05-0.15	< $\alpha$	150-80	0.15-0.2	< $\alpha$
Non ferrous metal	< 2000	0.1-0.15	< $\alpha$	< 2000	0.15-0.2	< $\alpha$
High temperature alloy	-	-	-	-	-	-

## SOLID CARBIDE INSERT CNCQ



Order No.	Model	For cutting width	Application	Grade	Size(mm)			
					s	d	d1	r
230-54-105	CNCQ090504L/R	13.5-18.5mm	Steel	EP2220	5.56	9.525	4.4	0.4
230-54-106	CNCQ090508L/R	13.5-18.5mm	Steel	EP2220	5.56	9.525	4.4	0.8
230-54-107	CNCQ120504L/R	18.5-24mm	Steel	EP2220	5.56	12.7	5.5	0.4
230-54-108	CNCQ120508L/R	18.5-24mm	Steel	EP2220	5.56	12.7	5.5	0.8
230-54-109	CNCQ150504L/R	24-30.5mm	Steel	EP2220	5.56	15.875	5.5	0.4
230-54-110	CNCQ090504L/R	13.5-18.5mm	Cast iron	EP3215	5.56	9.525	4.4	0.4
230-54-111	CNCQ090508L/R	13.5-18.5mm	Cast iron	EP3215	5.56	9.525	4.4	0.8
230-54-112	CNCQ120504L/R	18.5-24mm	Cast iron	EP3215	5.56	12.7	5.5	0.4
230-54-113	CNCQ120508L/R	18.5-24mm	Cast iron	EP3215	5.56	12.7	5.5	0.8
230-54-114	CNCQ150504L/R	24-30.5mm	Cast iron	EP3215	5.56	15.875	5.5	0.4