

Milling



We are dedicated to designing and developing special milling cutters and indexable inserts for machining work-pieces that range from easy-to-machine to difficult-to-machine

- _ Design of insert and cutter for maximized productivity
- _ Available in various grades such as ultra-fine, fine, medium, coarse and multi-modal to machine all material types
- _ Guaranteed increased tool life and enhanced wear resistance
- _ Economical, consistent, and reliable performance
- _ Re-sharpening & re-tipping help the tools extend their total tool life and reduce the tool cost

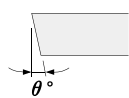


Designation system | unit : metric

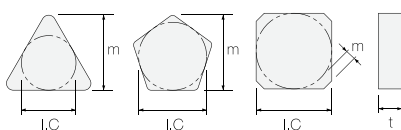


Insert shape | Clearance angle | Tolerances | Clamp type

Symbol	Shape
A	
B	
C	
H	
L	
O	
P	
R	
S	
T	
W	
X	Special



Symbol	Angle
N	0°
A	3°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°
G	30°



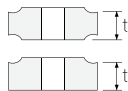
Class	I.C size (mm)	Tolerance		
		m (mm)	t (mm)	I.C (mm)
A	6.35	±0.025	±0.025	±0.025
C		±0.025	±0.025	±0.025
G	9.525	±0.13	±0.13	±0.025
H	12.7	±0.025	±0.025	±0.013
K	15.875	±0.025	±0.025	±0.05~±0.15
M	19.05	±0.13	±0.13	±0.05~±0.15
U		±0.13	±0.13	±0.08~±0.25

Symbol	Shape
A	
F	
G	
M	
N	
R	
T	
W	
X	Special


12 03 08 ED T (R)

Cutting edge length Thickness Corner radius Parallel land

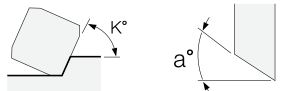
C					R,S		T		H		O		I.C size (mm)
09													
06	06	11											5.56
08		13											6.35
09	09	16											7.94
12	12	22					05						9.525
16	15	27	09										12.7
							07						15.875
19	19	33	10										17.94
25	25												19.05
													25.4



Symbol	t (mm)
01	1.59
02	2.38
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52



Symbol	R (mm)
00	Sharp
02	0.2
04	0.4
05	0.5
08	0.8
10	1.0
12	1.2
15	1.5
16	1.6
24	2.4
32	3.2
40	4.0

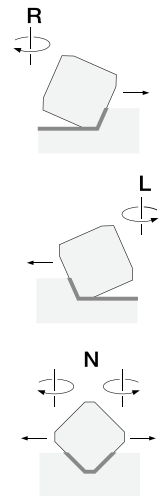


Entering angle		Clearance angle of land	
A	45°	B	5°
D	60°	C	7°
E	75°	D	15°
F	85°	E	20°
P	90°	F	25°
Z	Special	G	30°
		N	0°
		P	11°
		Z	Special

1 Edge shape

Symbol	Shape
F	
E	
T	
S	

2 Cutting direction

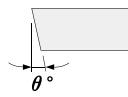


Designation system | unit : inch

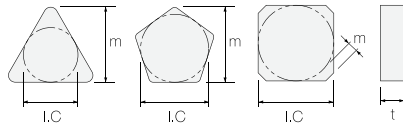


Insert shape | Clearance angle | Tolerances | Clamp type

Symbol	Shape
A	
B	
C	
H	
L	
O	
P	
R	
S	
T	
W	
X	Special



Symbol	Angle
N	0°
A	3°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°
G	30°



Class	I.C size (inch)	Tolerance		
		m (inch)	t (inch)	I.C (inch)
A	6.35	±0.0002	±0.001	±0.001
C		±0.0005	±0.001	±0.001
G	9.525	±0.001	±0.005	±0.001
H	12.7	±0.0005	±0.001	±0.0005
K	15.875	±0.0005	±0.001	±0.002-±0.006
M	19.05	±0.003-±0.008	±0.005	±0.002-±0.006
U		±0.005-±0.015	±0.005	±0.003-±0.001

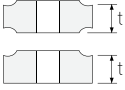
Symbol	Shape
A	
F	
G	
M	
N	
R	
T	
W	
X	Special

4 2 2 ED T (R)

Cutting edge length


C	R,S	T	H	O	Symbol	I.C size (inch)
9					1.8	7/23
06	06	11			2	1/4
09	09	16			3	3/8
12	12	22		05	4	1/2
16	15	27	09		5	5/8
19	19	33	10		6	3/4
25	25				8	1
					10	1-1/4

Thickness



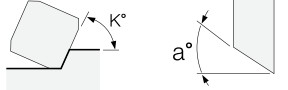
Symbol	t (inch)
1	1/16
1.5	3/32
2	1/8
2.5	5/32
3	3/16
3.5	7/32
4	1/4
5	5/16
6	3/8

Corner radius



Symbol	R (inch)
0	Sharp
1	1/64
2	1/32
3	3/64
4	1/16
6	3/32
8	1/8

Parallel land

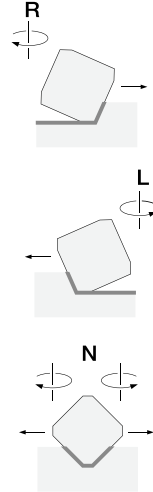


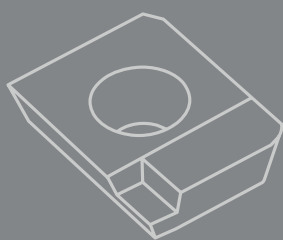
Entering angle		Clearance angle of land	
A	45°	B	5°
D	60°	C	7°
E	75°	D	15°
F	85°	E	20°
P	90°	F	25°
Z	Special	G	30°
		N	0°
		P	11°
		Z	Special

1 Edge shape

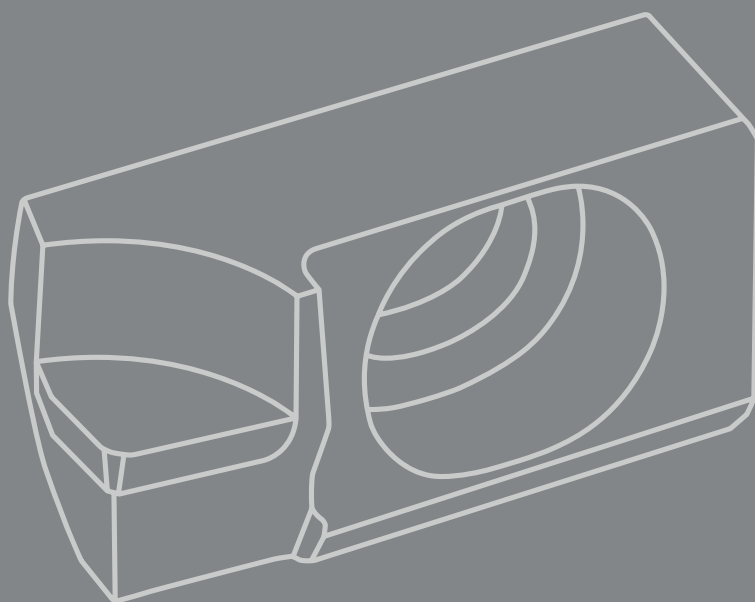
Symbol	Shape
F	
E	
T	
S	

2 Cutting direction

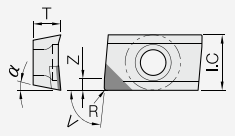




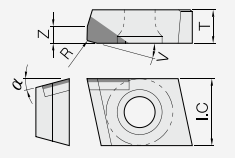
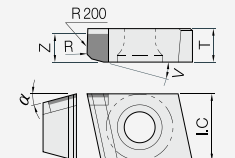
Milling_
PCD



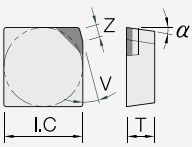
APKT

Shape	ISO code		Dimensions (mm)						PCD							
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29			
	APKT 1604PDFR		9.525	2	11			4.76								

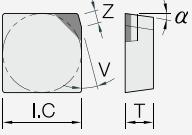
CDEW

Shape	ISO code		Dimensions (mm)						PCD							
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29			
	CDEW 1204R-R		12.7	2.4	15	15	-	4.76								
	CDEW 1204R-F		12.7	4.5	15	15	200	4.76								

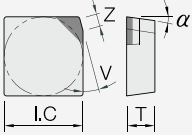
SPGN

Shape	ISO code		Dimensions (mm)						PCD								
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29				
	SPGN 1203EDR	SPGN 42EDR	12.7	1.4	11	15		3.18									
	1203EDL	42EDL	12.7	1.4	11	15		3.18									
	1504EDR	53EDR	15.875	1.4	11	15		3.18									

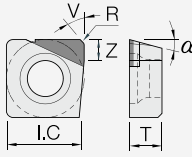
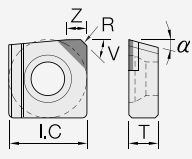
SEGN

Shape	ISO code		Dimensions (mm)						PCD								
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29				
	SEGN 1203AFN	SEGN 42AFN	12.7	2	20	45		3.18									
	1203EFR	42EFR	12.7	2	20	15		3.18									
	1504AFN	53AFN	15.875	2	20	45		4.76									
	1504EFR	53EFR	15.875	2	20	15		4.76									

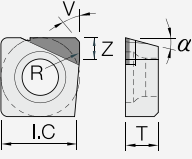
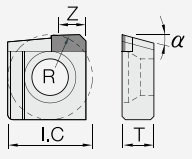
SFGN

Shape	ISO code		Dimensions (mm)						PCD								
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29				
	SFGN 1203EFR	SFGN 42EFR	12.7	2	25	15		3.18									

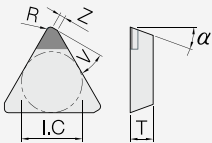
SNEW

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29
	NF-SNEW 09T3ADTR		9.525	2.35	15	45		3.97					
	09T3ADTR-R		9.525	2.35	15		0.5	3.97					
	NF-SNEW 1204AFTR		12.7	3.3	15	45		4.76					
	1204AFTR-R		12.7	3.3	15		1	4.76					

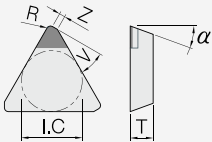
SNEW(W)

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29
	NF-SNEW 09T3ADTR-W		9.525	2.6	15	45	100	3.97					
	NF-SNEW 1204ADFR-W		12.7	5	15	45	300	4.76					

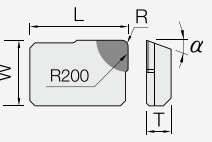
TPGN

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29
	TPGN 1603PDR	TPGN 32PDR	12.7	1.2	11	30		3.18					
	1603PDL	32PDL	12.7	1.2	11	30		3.18					
	2204PDR	43PDR	15.88	1.4	11	30		4.76					

TEGN

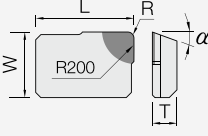
Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29
	TEGN 1603PER	TEGN 32PER	12.7	1.2	20	30	0.8	3.18					
	2204PER	43PER	15.88	1.4	20	30	0.8	4.76					

LDCN

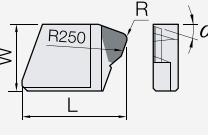
Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29
	LDCN 190412R	LDCN	12.7		15	19.05	1.2	4.76					
	190412L		12.7		15	19.05	1.2	4.76					



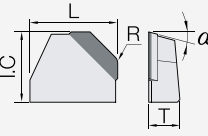
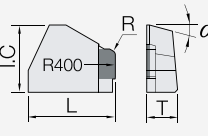
LFCN

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	W	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29
	LFCN 190412R	LFCN	12.7		25	19.05	1.2	4.76					
	190412L		12.7		25	19.05	1.2	4.76					

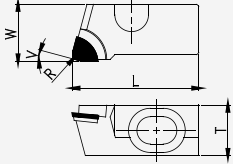
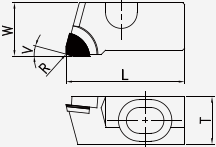
GDCN

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	W	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29
	GDCN 2004PDFR	GDCN	12.7		15	20	1.2	4.76					
	2004PDFL		12.7		15	20	1.2	4.76					

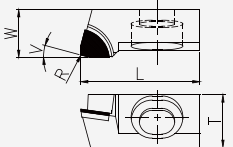
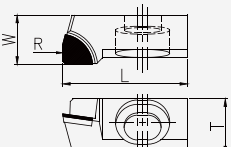
YDEN

Shape	ISO code		Dimensions (mm)						PCD				
	Metric	Inch	I.C	Z	α	V	R	T	EP20	EP55	EP750	EP58	EP29
	YDEN 1505ADFR		12.7		15	15.875	1.6	5.675					
	YDEN 1505ADFR-WD		12.28		15	15.925	0.8	5.675					

Cartridge_ SD type

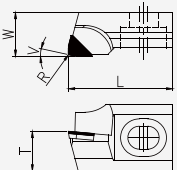
SDR	Item No.	Dimensions (mm)					PCD				
		W	V	L	R	T	EP20	EP55	EP750	EP58	EP29
	SDR	13.5	15	30		12					
	SDR-A	13.5	0	30		12					
	SDR-R	13.5	15	30	0.4	12					
	SDR-ES	13.5	15	30		12					
SDW	Item No.	Dimensions (mm)				PCD					
		W	L	R	T	EP20	EP55	EP750	EP58	EP29	
	SDW	13	30	400	12						
	SDW-ES	13	30	400	12						

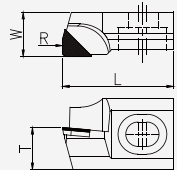
Cartridge_ High feed type

HFR	Item No.	Dimensions (mm)					PCD				
		W	V	L	R	T	EP20	EP55	EP750	EP58	EP29
	HFR	10	15	25		11					
	HFR-A	10	0	25		11					
	HFR-R	10	15	25	0.4	11					
	HFR-ES	10	15	25		11					
HFW	Item No.	Dimensions (mm)				PCD					
		W	L	R	T	EP20	EP55	EP750	EP58	EP29	
	HFW	9.8	25	400	11						
	HFW-ES	9.8	25	400	11						

- SDR** : standard face milling rough
- SDR-A** : corner milling rough
- SDR-R** : standard face milling rough with nose radius
- SDR-ES** : rough with edge hone
- SDW** : standard face milling wiper
- SDW-ES** : wiper with edge hone
- CFR** : CF milling rough
- CFW** : CF milling wiper

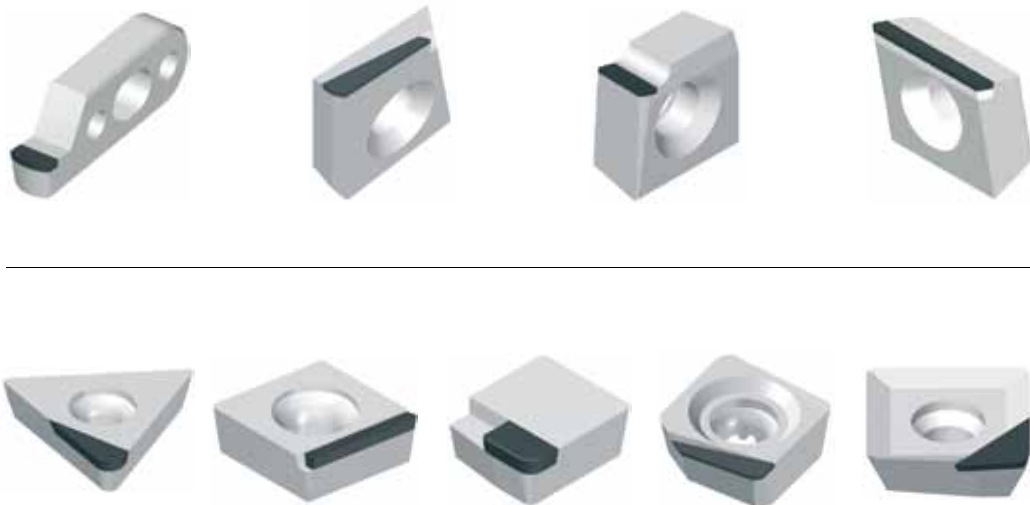
Cartridge_ CF type

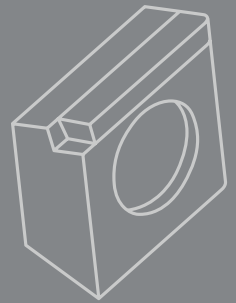
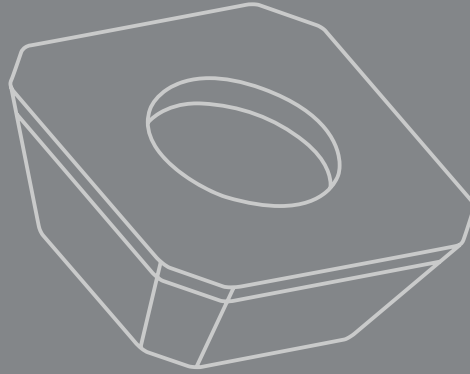
CFR	Item No.	Dimensions (mm)					PCD					
		W	V	L	R	T	EP20	EP55	EP750	EP58	EP29	
	CFR	10.5	15	25		10						
	CFR-A	10.5	0	25		10						
	CFR-R	10.5	15	25	0.4	10						
	CFR-ES	10.5	15	25		10						

CFW	Item No.	Dimensions (mm)				PCD				
		W	L	R	T	EP20	EP55	EP750	EP58	EP29
	CFW	10	25	400	10					
	CFW-ES	10	25	400	10					

Customized design

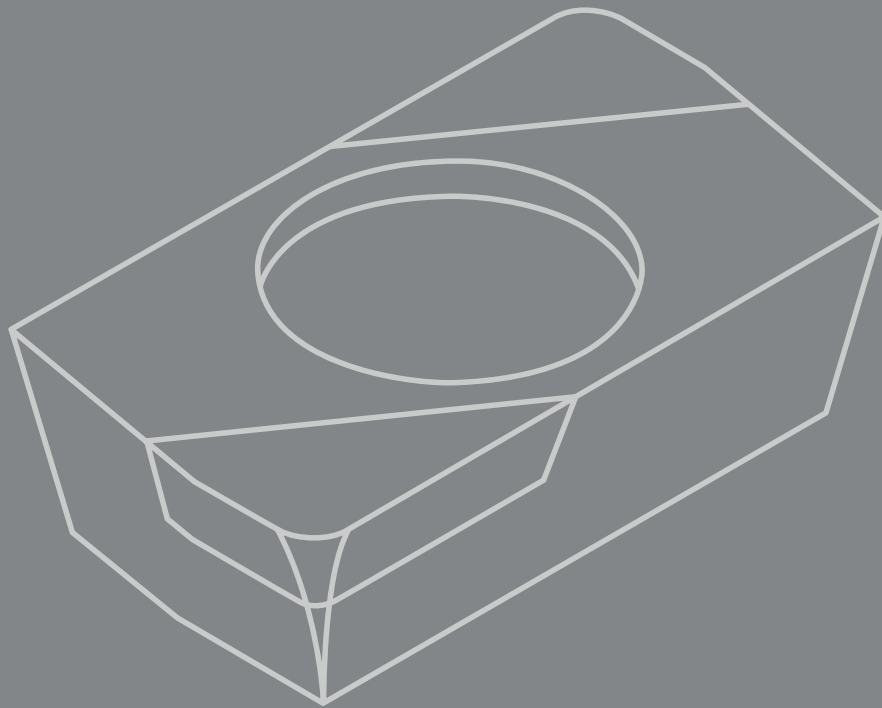
- Face, slot, chamfer, profile, etc.
- Optimized tooling service depending on the customer's demand.



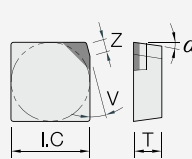


Milling_

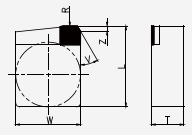
PCBN



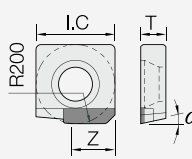
SPGN

Shape	ISO code		Dimensions (mm)						PCBN				
	Metric	Inch	I.C	Z	α	V	R	T	EB11	EB210	EB51	EB71	EB710
	SPGN 1203EDR	SPGN 42EDR	12.7	1.4	11	15		3.18					
	1203EDL	42EDL	12.7	1.4	11	15		3.18					
	1504EDR	53EDR	15.9	1.4	11	15		3.18					

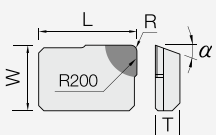
SNGN

Shape	ISO code		Dimensions (mm)						PCBN				
	Metric	Inch	W	Z	V	R	T	L	EB11	EB210	EB51	EB71	EB710
	SNGN 1506APTR	SNGN 54APTR	12.7	2.5	30	250	6.35	15.875					
	1506APTL	54APTL	12.7	2.5	30	250	6.35	15.875					

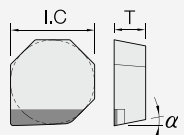
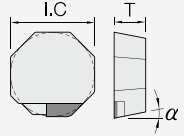
SNEW

Shape	ISO code		Dimensions (mm)						PCBN				
	Metric	Inch	I.C	Z	α	V	R	T	EB11	EB210	EB51	EB71	EB710
	SNEW 09T3ADFR	SNEW 3(2.5)ADFR	9.525	2.6	15	45		3.97					
	1203ADTR	42ADTR	12.7	7	15	45	300	3.18					

LDCN

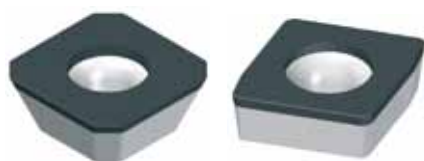
Shape	ISO code		Dimensions (mm)						PCBN				
	Metric	Inch	W	Z	α	L	R	T	EB11	EB210	EB51	EB71	EB710
	LDCN 190412R		12.7		15	19.1	1.2	4.76					
	190412L		12.7		15	19.1	1.2	4.76					

OPHX

Shape	ISO code		Dimensions (mm)						PCBN				
	Metric	Inch	I.C	Z	α	V	R	T	EB11	EB210	EB51	EB71	EB710
	OPHX 0504ZZN-R		12.7		11		-	4.76					
	0504ZZR		12.7		11		300	4.76					
	0504ZZL		12.7		11		300	4.76					
													

Customized design

- Face, slot, chamfer, profile, etc.
- Optimized tooling service depending on the customer's demand.



Milling_
Cutter body_Aluminum



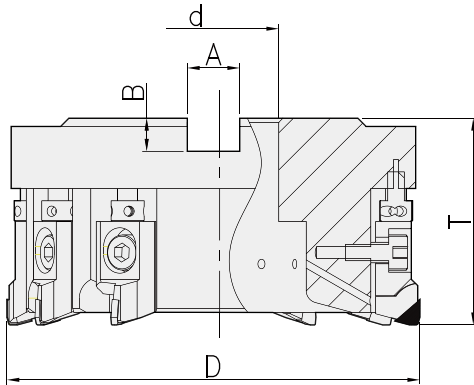


Aluminum body and special inserts designed for high- speed / high precision cutting.
The light weight body makes tool setting easy.

- _ Easy setting with light aluminum body
(50% lighter than steel body)
 - _ Excellent milling performance and quality
- Excellent durability and low cutting resistance
- High productivity and process stability

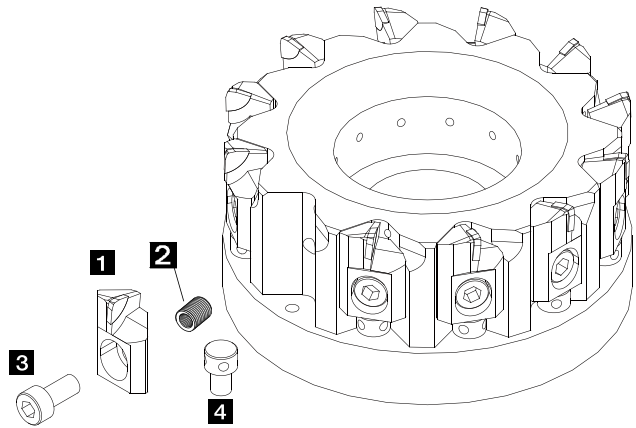
Cutter body_Aluminum & Steel

CF type



Item No.		Dimensions (mm)					Tooth		Weight (kg)	Cartridge	Arbor
Standard	High feed	ØD	Ød	A	B	T	standard	High feed			
CF 08050-6R(L)	CF 08050-10R(L)	80	25.4	9.5	6	50	6	10	0.7	ROUGH CFR(R) CFR(L)	FMA 25.4
CF 10063-10R(L)	CF 10063-12R(L)	100	31.75	12.7	8	63	10	12	1.0		FMA 31.75
CF 12563-12R(L)	CF 12563-16R(L)	125	38.1	15.9	10	63	12	16	1.8	WIPER CFW (R) CFW (L)	FMA 38.1
CF 16063-16R(L)	CF 16063-18R(L)	160	50.8	19.0	11	63	16	18	2.9		FMA 50.8
CF 20063-20R(L)	CF 20063-24R(L)	200	47.625	25.4	14	63	20	24	4.5	CFW (R) CFW (L)	FMA 47.625
CF 25063-24R(L)	CF 25063-30R(L)	250	47.625	25.4	14	63	24	30	7.0		FMA 47.625

- Shoulder type cartridge can be offered by customer's demand.

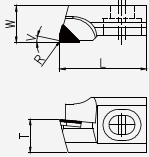


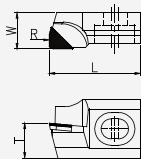
Spare parts

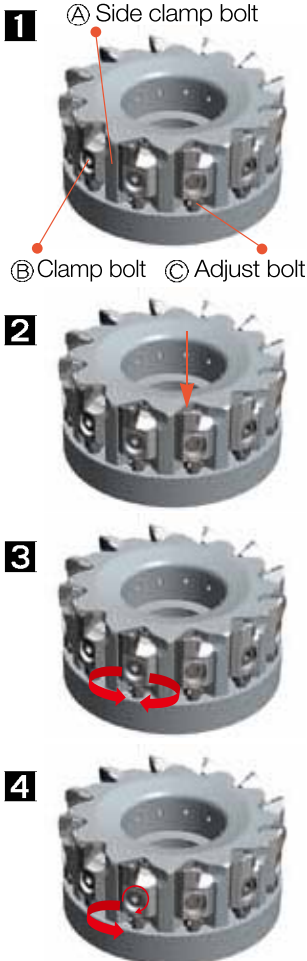
1 Cartridge (Rough) CFR	1 Cartridge (Wiper) CFW	2 Double Bolt M8M5-7	3 Clamp Bolt M5x12	4 Adjust Bolt M5x8	Coolant Bolt

- Every spare parts be offered by extra charge.

Cartridge_ CF type

CFR	Item No.	Dimensions (mm)					PCD					
		W	V	L	R	T	EP20	EP55	EP750	EP58	EP29	
	CFR	10.5	15	25		10						
	CFR-A	10.5	0	25		10						
	CFR-R	10.5	15	25	0.4	10						
	CFR-ES	10.5	15	25		10						

CFW	Item No.	Dimensions (mm)				PCD						
		W	L	R	T	EP20	EP55	EP750	EP58	EP29		
	CFW	10	25	400	10							



Setting manual

1. Installaion of cartridge

Install the Ⓒ Adjust bolt on the cutter body, and insert the cartridge. Then, gently tightening the Ⓑ Clamp bolt and Ⓐ Side clamp bolt.

2. Installaion of bolt

When tightening, secure the cartridge by pressing it downward. Then using a torque wrench. Temporarily tighten the clamp bolt and side clamp bolt to 3N.m using a torque wrench.

3. Cutting edge height adjustment

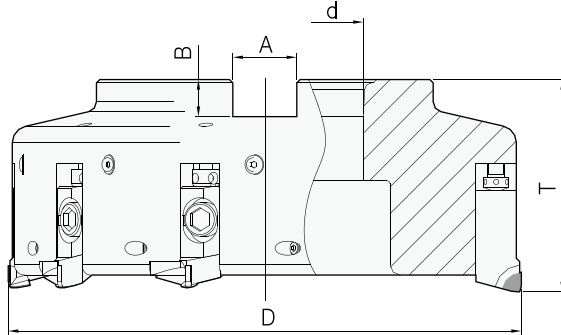
Turn the adjustment bolt and adjust so that the height of the front cutter is $-10\mu\text{m}$ from the target value.

4. Final adjustment

Using a torque wrench, tighten the clamp bolt and side clamp bolt to 10N.m. After then turn the adjustment bolt, And adjust to the target height.

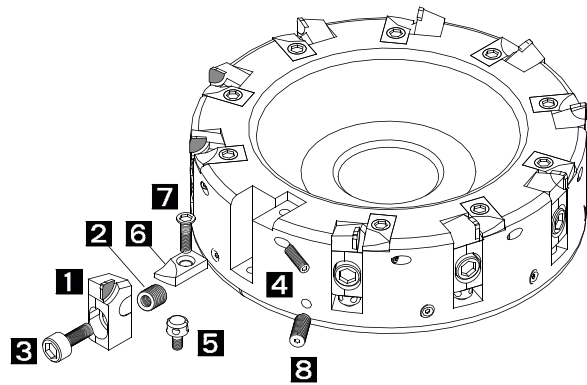
Cutter body_Aluminum & Steel

SD type



Item No. Inch type	Dimensions (mm)					Tooth	Weight (kg)	Cartridge	Arbor
	∅D	∅d	A	B	T				
SD 08050-6R(L)	80	25.4	9.5	6	50	6	0.7	ROUGH	FMA 25.4
SD 10063-8R(L)	100	31.75	12.7	8	63	8	1.0	SDR (R) SDR (L)	FMA 31.75
SD 12563-10R(L)	125	38.1	15.9	10	63	10	1.8	SDR (L)	FMA 38.1
SD 16063-12R(L)	160	50.8	19.0	11	63	12	2.9	WIPER	FMA 50.8
SD 20063-16R(L)	200	47.625	25.4	14	63	16	4.5	SDW (R) SDW (L)	FMA 47.625
SD 25063-18R(L)	250	47.625	25.4	14	63	18	7.0	SDW (L)	FMA 47.625

- Shoulder type cartridge can be offered by customer's demand.

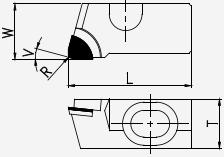


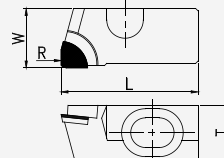
Spare parts

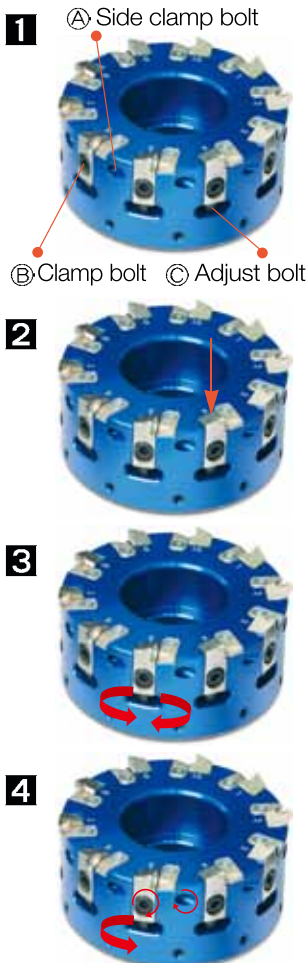
1 Cartridge (Rough) SDR	1 Cartridge (Wiper) SDW	2 Double Bolt M6xM10-8	3 Clamp Bolt M6x15	4 Side Clamp Bolt M6x10
5 Adjust Bolt M5x0.8	6 Chip Cover 4x9.5x18	7 Chip Cover Bolt M4x10	8 Balancing Bolt M6x10	Coolant Bolt

- Every spare parts be offered by extra charge.

Cartridge_ SD type

SDR	Item No.	Dimensions (mm)						PCD				
		W	V	α	L	R	T	EP20	EP55	EP750	EP58	EP29
	SDR	13.5	15	11	30		12					
	SDR-A	13.5	0	11	30		12					
	SDR-R	13.5	15	11	30	0.4	12					
	SDR-ES (EDGE HONE)	13.5	15	11	30		12					

SDW	Item No.	Dimensions (mm)						PCD				
		W	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29
	SDW	13		11	30	400	12					
	SDW-ES (EDGE HONE)	13		11	30	400	12					



Setting manual

1. Installaion of cartridge

Install the Ⓒ Adjust bolt on the cutter body, and insert the cartridge. After then, gently tightening the Ⓑ Clamp bolt and Ⓐ Side clamp bolt.

2. Installaion of bolt

When tightening, secure the cartridge by pressing it downward. And using a torque wrench, temporarily tighten the clamp bolt and side clamp bolt to 3N·m.

3. Cutting edge height adjustment

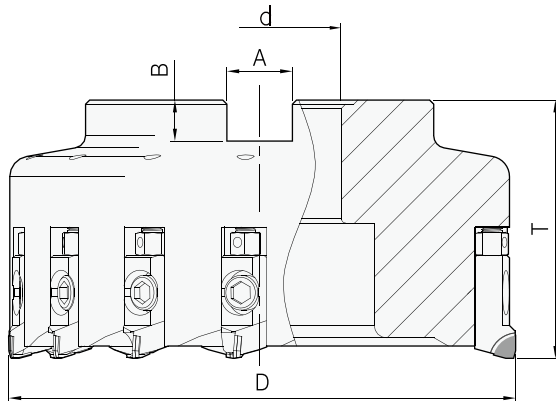
Turn the adjustment bolt and adjust so that the height of the front cutter is $-10\mu\text{m}$ from the target value.

4. Final adjustment

Using a torque wrench, tighten the clamp bolt and Side clamp bolt to 10N·m. And turn the adjustment bolt, then adjust to the target height.

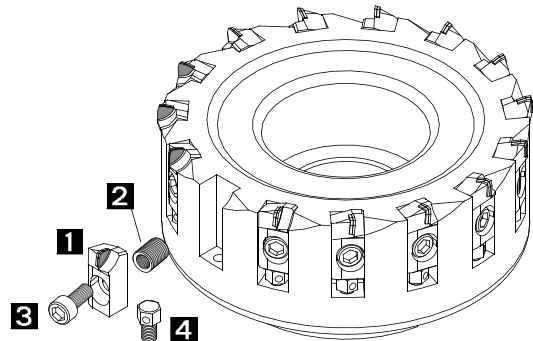
Cutter body_Aluminum & Steel

HF type



Item No. Inch type	Dimensions (mm)					Tooth	Weight (kg)	Cartridge	Arbor
	∅D	∅d	A	B	T				
HF 08050-10R(L)	80	25.4	9.5	6	50	10	0.7	ROUGH	FMA 25.4
HF 10063-12R(L)	100	31.75	12.7	8	63	12	1.0	HFR(R) HFR(L)	FMA 31.75
HF 12563-15R(L)	125	38.1	15.9	10	63	15	1.8	HFR(L)	FMA 38.1
HF 16063-18R(L)	160	50.8	19.0	11	63	18	2.9	WIPER	FMA 50.8
HF 25063-24R(L)	200	47.625	25.4	14	63	24	4.5	HFWR(R) HFWR(L)	FMA 47.625
HF 25063-30R(L)	250	47.625	25.4	14	63	30	7.0	HFWR(L)	FMA 47.625

- Shoulder type cartridge can be offered by customer's demand.

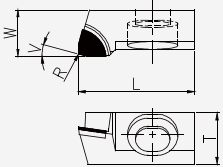


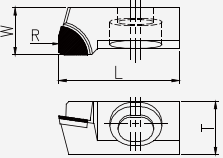
Spare parts

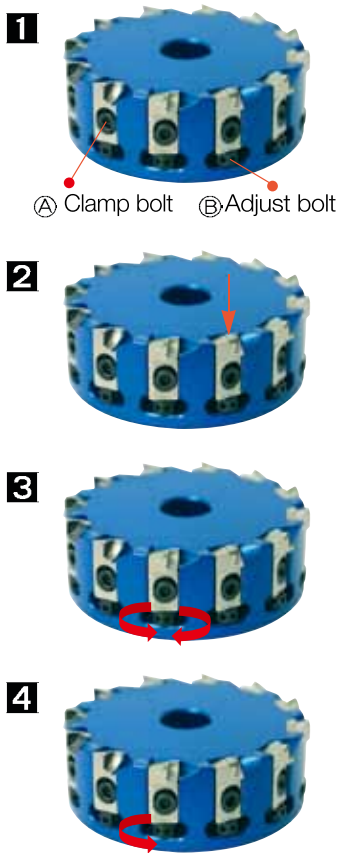
1 Cartridge (Rough) HFR	1 Cartridge (Wiper) HFW	2 Double Bolt M8M5-7	3 Clamp Bolt M5x12	4 Adjust Bolt M5x8	Coolant Bolt

- Every spare parts be offered by extra charge.

Cartridge_ High feed type

HFR	Item No.	Dimensions (mm)						PCD					
		W	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29	
	HFR	10	15	11	25		11						
	HFR-A	10	0	11	25		11						
	HFR-R	10	15	11	25	0.4	11						
	HFR-ES	10	15	11	25		11						

HFW	Item No.	Dimensions (mm)						PCD					
		W	Z	α	L	R	T	EP20	EP55	EP750	EP58	EP29	
	HFW	9.8			25	400	11						
	HFW-ES	9.8			25	400	11						



Setting manual

1. Installaion of cartridge

Install the (B) adjust bolt on the cutter body, and insert the cartridge. After then, gently tightening the (A) Clamp bolt.

2. Installaion of bolt

When tightening, secure the cartridge by pressing it downward. And using a torque wrench, temporarily tighten the clamp bolt 3N·m.

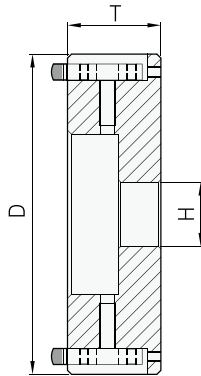
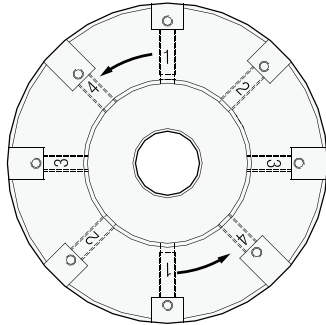
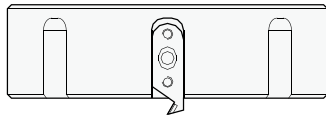
3. Cutting edge height adjustment

Turn the adjustment bolt and adjust so that the height of the front cutter is -10 μ m from the target value.

4. Final adjustment

Using a torque wrench, tighten the clamp Bolt to 10N·m. And turn the adjustment bolt, then adjust to the target height.

Cutter body_Aluminum



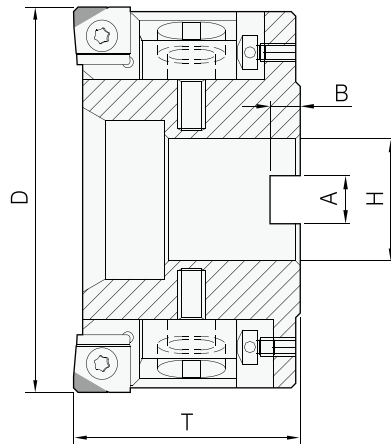
Item No. Inch type	Dimensions (mm)			
	D	Z	H	T
120D-35T-24H-10Z-RH	120	10	24	35
120D-35T-24H-10Z-LH	120	10	24	35
158D-40T-70H-6Z-RH	158	6	70	40
158D-40T-70H-6Z-LH	158	6	70	40
198D-45T-40H-6Z-RH	198	6	40	45
198D-45T-40H-6Z-LH	198	6	40	45
220D-40T-65H-6Z-RH	220	6	65	40
220D-40T-65H-6Z-LH	220	6	65	40
248D-45T-40H-12Z-RH	248	12	40	45
248D-45T-40H-12Z-LH	248	12	40	45

Milling



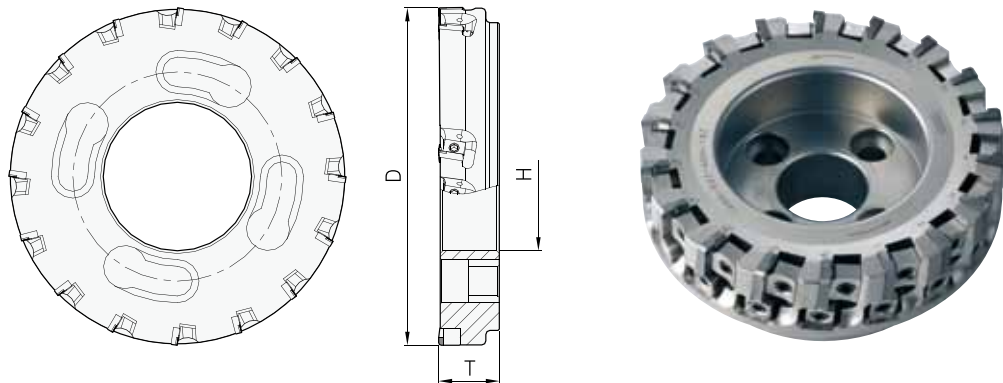
Order made

- PCD inserts and Cartridges can be customized.
- Samples are requested for Cartridge production.



Milling_
Cutter body_Steel





Item No. Inch type	Dimensions (mm)			
	D	Z	H	T
125D-63T-40H-16Z	125	16	40	63
160D-63T-40H-18Z	160	18	40	63
200D-63T-60H-12Z	200	12	60	63
250D-63T-50H-24Z	250	24	50	63
250D-45T-109.88H-16Z	250	16	109.88	45

SNGN

Shape	ISO code		Dimensions (mm)							PCBN				
	Metric	Inch	W	Z	α	V	R	T	L	EB11	EB210	EB51	EB71	EB710
	SNGN 1506APTR	SNGN 54APTR	12.7	5	11	45	250	6.35	15.9					
	1506APTL	54APTL	12.7	5	11	45	250	6.35	15.9					

Customized design

- Customized PCBN inserts and Cartridges
- Must have either samples or drawings of current tool in use

