



Application Specific

Fix-Perfect	E2–E18
Top Notch Profiling	E20–E43
Railroad Machining	E44–E61
K-Lock Inserts	E62–E65

➤ **Fix-Perfect™**

Precision Ground Insert Programme Goes Above and Beyond!

The breakthrough performance characteristics of these precision ground inserts enable outstanding indexing accuracy and excellent chip flow when machining steel, cast iron, and stainless steel workpiece materials.

Fix-Perfect Beyond™ inserts are the ideal solution to machining operations in a multitude of industries, including fluid power, energy, automotive, heavy equipment, and general engineering applications.

Features, Functions, and Benefits

Features

- Tangential design.
- Rigid clamping system.
- Up to eight cutting edges (protected by pocket seat).
- Positive geometry.
- Precision ground insert.

Functions

- Stable system.
- Very stable clamping system and quick and easy cutting edge switch.
- Use up to eight edges per insert.
- Very low cutting forces and excellent chip control.
- Better indexing accuracy.

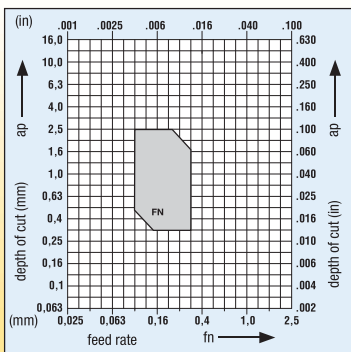
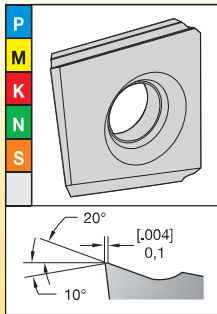


Benefits

- Process reliability and high productivity.
- Reduced machine downtime.
- Higher productivity.
- Low vibrations, smooth cut, silent cut, no workpiece deformation, and high surface quality.
- Process reliability.

Finishing

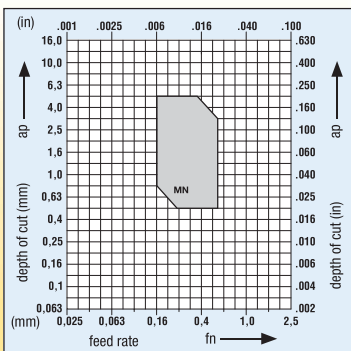
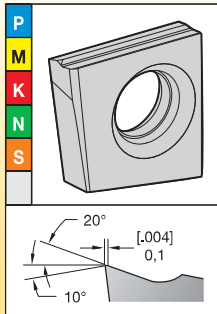
D2FIX-FN



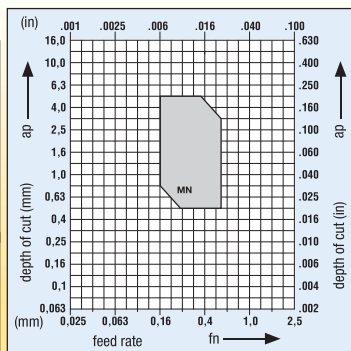
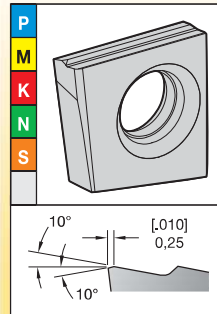
P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Materials
S	High-Temp Alloys
H	Hardened Materials

Medium Machining

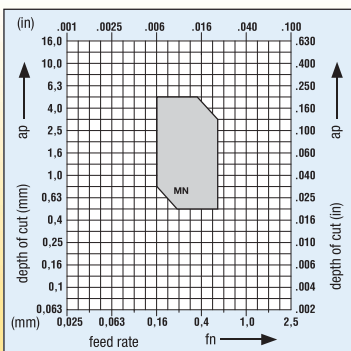
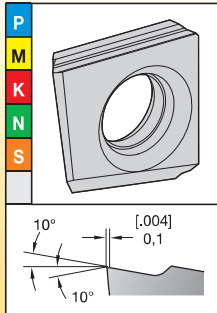
C2FIX-MN



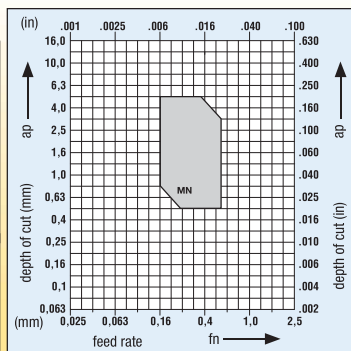
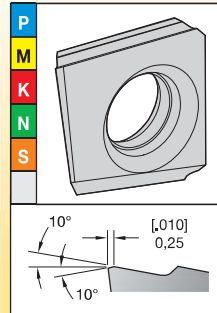
C2FIX18-MN



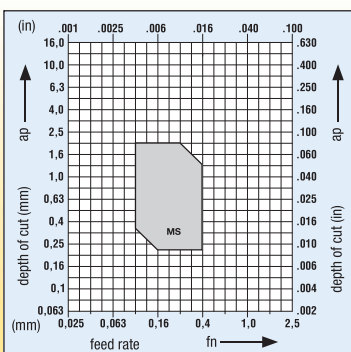
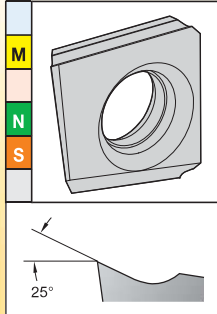
D2FIX15-MN



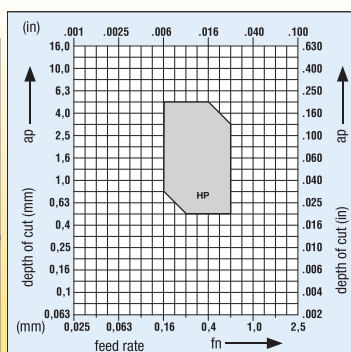
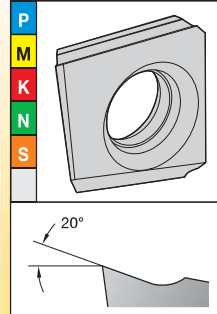
K2FIX-MN



D2FIX-MS

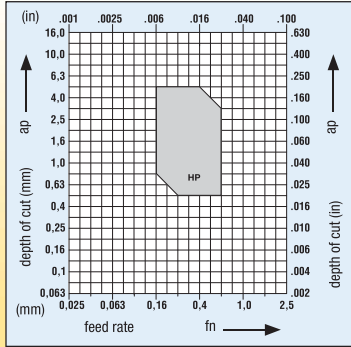
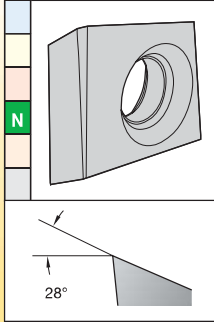


D2FIX-HP



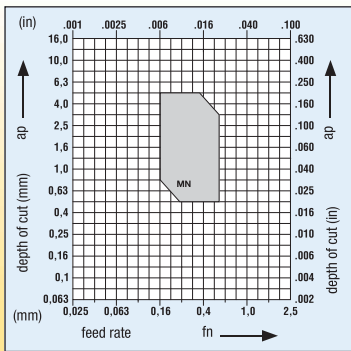
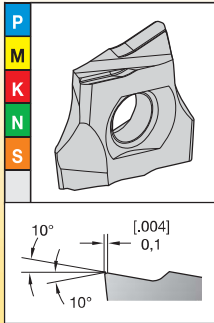
Medium Maching

E2FIX-HP

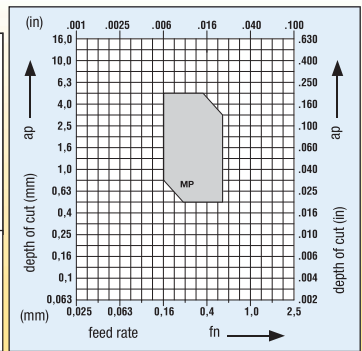
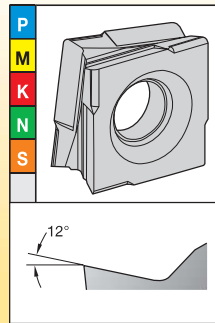


P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Materials
S	High-Temp Alloys
H	Hardened Materials

D4FIX-MN

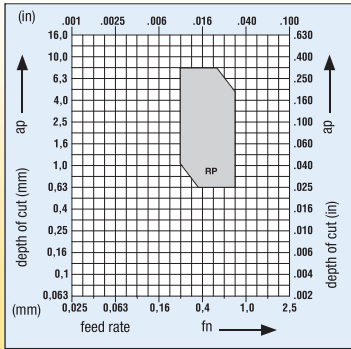
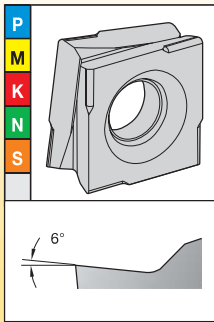


C8FIX-MP

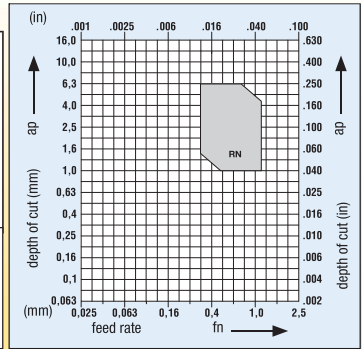
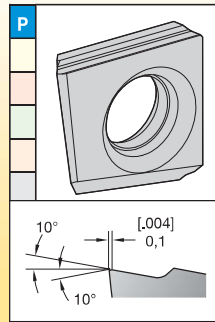


Roughing

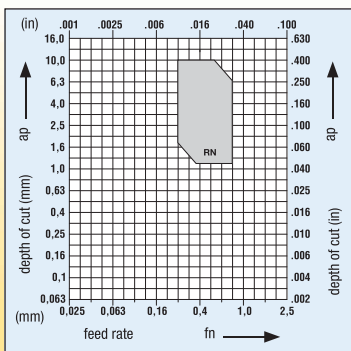
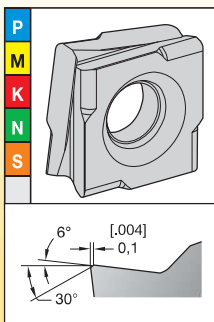
C8FIX-RP



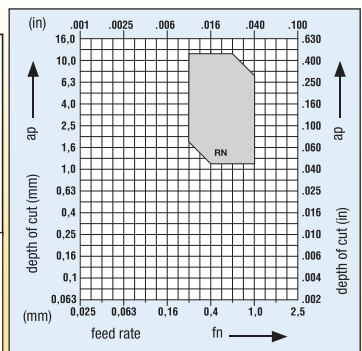
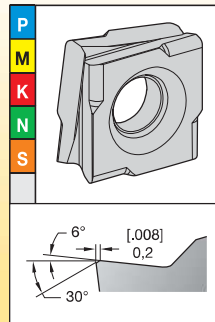
D2FIX-RN



C8FIX15-RN



C8FIX18-RN

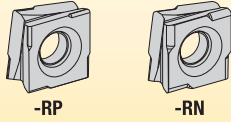


Select the Insert Geometry

8-Edged Inserts

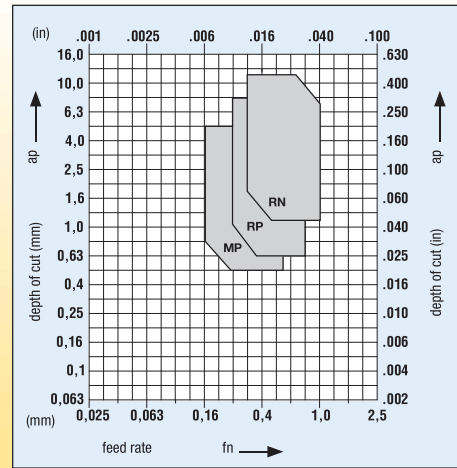
Roughing

Interrupted cut and/or heavy scale
USE: -RP OR -RN



Medium Turning

Slightly interrupted cut and/or slight scale
USE: -MP



2- and 4-Edged Inserts

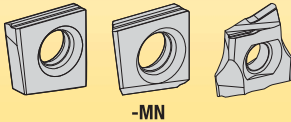
Roughing

Interrupted cut and/or heavy scale
USE: -RN



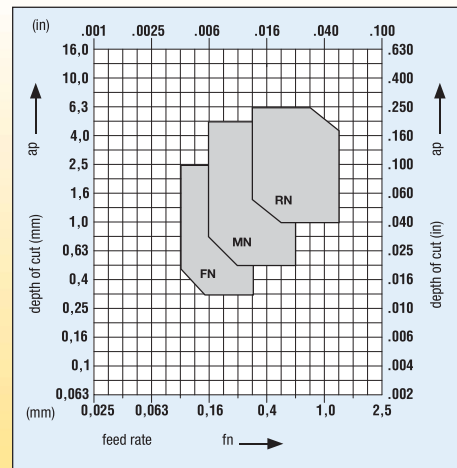
Medium Turning

Slightly interrupted cut and/or slight scale
USE: -MN



Finishing

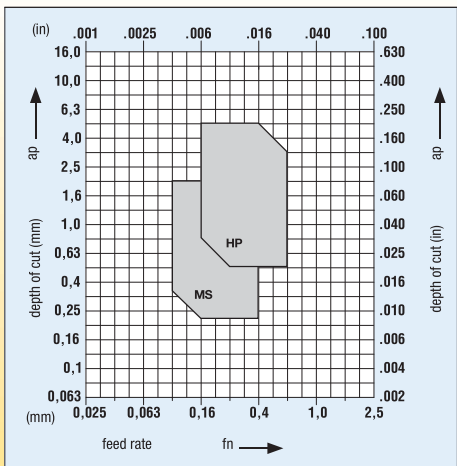
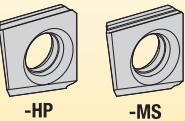
Non-interrupted cut, not scale
USE: FN



2-Edged Inserts, High Positive

Medium Turning

Slightly interrupted cut and/or slight scale
USE: -HP OR -MS



Select the grade

	P	M	K	N	S	H
heavily interrupted	KCP40/KCU25	KCU25/KCP40	KCP25/KCU25	KCU25	KCU25	–
lightly interrupted	KCP25/KCU25	KCU25/KCP40	KCP25/KCU25	KCU25	KCU25	–
varying depths of cut	KCP10/KCU10	KCU10/KCM15	KCP10/KCU10	KCU10	KCU10	KCU10
smooth	KCP10/KCU10	KCU10/KCM15	KCP10/KCU10	KCU10	KCU10	KCU10

Select the cutting speed

Steel speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	60 (200)	90 (300)	120 (400)	105 (500)	185 (617)	215 (717)	245 (800)	275 (900)	300 (1000)	m/min	SFM
P	KCP40	◇									150	500
	KCU10	◇									200	650
	KCP25	◇									200	650
	KCP10	◇									250	180

Stainless Steel speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	45 (150)	70 (233)	90 (300)	115 (383)	140 (467)	165 (550)	185 (617)	210 (700)	230 (767)	m/min	SFM
M	KCP40	◇									140	450
	KCM15	◇									165	550
	KCU25	◇									165	550
	KCU10	◇									185	600

Cast Iron speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	90 (300)	135 (450)	180 (600)	225 (750)	275 (900)	320 (1050)	360 (1200)	410 (1350)	460 (1500)	m/min	SFM
K	KCU25	◇									140	450
	KCU10	◇									165	550
	KCP25	◇									165	550
	KCP10	◇									185	600

Non-Ferrous speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	150 (500)	225 (750)	300 (1000)	380 (1267)	460 (1533)	535 (1783)	610 (2033)	685 (2283)	760 (2533)	m/min	SFM
N	KCU10	◇									460	1500

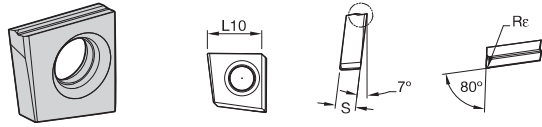
High-Temperature Alloys speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	35 (117)	45 (150)	55 (183)	65 (217)	75 (250)	85 (283)	95 (317)	120 (400)	140 (467)	m/min	SFM
S	KCU25	◇									45	150
	KCU10	◇									60	200

Hardened Steel speed — m/min (SFM) ◇ starting conditions ◇

material group	grade	5 (17)	15 (50)	25 (83)	35 (117)	45 (150)	55 (183)	65 (217)	75 (250)	85 (283)	m/min	SFM
H	KCU10	◇									30	100

beyond



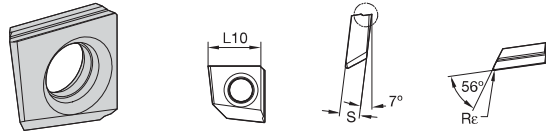
● first choice
○ alternate choice

	P	M	K	N	S	H	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
P	●	●	●	●	●	●	●	●	●	●	●	●
M	○	○	●	●	●	●	●	●	●	●	●	●
K	●	●	●	●	●	●	●	●	●	●	●	●
N	○	○	○	○	○	○	○	○	○	○	○	○
S	○	○	○	○	○	○	○	○	○	○	○	○
H	○	○	○	○	○	○	○	○	○	○	○	○

▶ C2FIX-MN

Application Specific

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
C2FIX110404RMN	10,70	4,00	0,40	-	-	-	-	●	-
C2FIX110405RMN	10,70	4,00	0,50	-	●	●	-	-	-
C2FIX150510RMN	14,50	5,00	1,00	-	●	-	-	-	-
C2FIX150512RMN	14,50	5,00	1,20	-	-	-	-	-	●
C2FIX150505RMN	14,70	5,00	0,50	-	●	-	-	-	-
left hand									
C2FIX110404LMN	10,70	4,00	0,40	-	-	-	-	-	●
C2FIX110405LMN	10,70	4,00	0,50	-	●	●	-	●	-
C2FIX110408LMN	10,70	4,00	0,80	-	●	-	-	-	-
C2FIX150510LMN	14,50	5,00	1,00	-	●	●	-	-	-
C2FIX150508LMN	14,60	5,00	0,80	-	●	-	-	●	●
C2FIX150504LMN	14,70	5,00	0,40	-	●	-	-	-	●
C2FIX150505LMN	14,70	5,00	0,50	-	●	-	-	●	-
C2FIX180610LMN	17,50	6,00	1,00	-	●	●	-	●	-

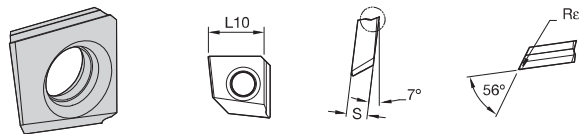


● first choice
○ alternate choice

P	●	●	●	●	●	●
M	○	○	●	●	●	●
K	●	●	●	●	●	●
N	●	●	●	●	●	●
S	○	○	●	●	●	●
H						

D2FIX-MN

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
D2FIX110405RMN	10,50	4,00	0,50	-	●	●	-	-	-
D2FIX150508RMN	14,20	5,00	0,80	-	●	-	-	-	-
D2FIX150505RMN	14,50	5,00	0,50	●	●	●	-	-	-
D2FIX150504RMN	14,60	5,00	0,40	-	●	-	-	-	-
D2FIX150503RMN	14,70	5,00	0,30	-	●	-	-	-	-
left hand									
D2FIX110405LMN	10,50	4,00	0,50	-	●	●	-	-	-
D2FIX150508LMN	14,20	5,00	0,80	-	●	-	-	-	-
D2FIX150505LMN	14,50	5,00	0,50	-	●	-	-	-	-

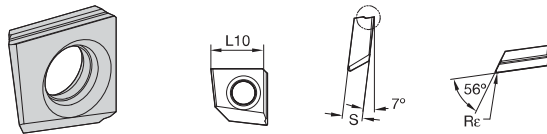


D2FIX-HP

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
D2FIX110404RHP	10,00	4,00	0,40	-	-	-	-	-	●
D2FIX110403RHP	10,10	4,00	0,30	-	●	-	-	●	-
D2FIX150508RHP	13,60	5,00	0,80	-	-	-	-	●	●
D2FIX150504RHP	14,00	5,00	0,40	-	-	-	-	●	●
D2FIX150503RHP	14,10	5,00	0,30	-	●	-	-	●	-
left hand									
D2FIX110403LHP	10,10	4,00	0,30	-	-	-	-	●	-
D2FIX150508LHP	13,60	5,00	0,80	-	-	-	-	●	-
D2FIX150503LHP	14,10	5,00	0,30	-	-	-	-	●	-

Application Specific

beyond



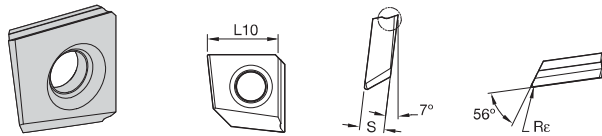
● first choice
○ alternate choice

P	●	●	●	●	●	●
M	○	○	●	●	●	●
K	●	●	●	●	●	●
N	●	●	●	●	●	●
S	○	○	●	●	●	●
H						

■ D2FIX-MS

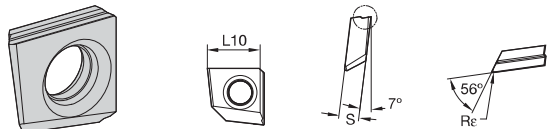
catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
D2FIX150505RMS	13,90	5,00	0,50	-	-	-	-	●	-
D2FIX150503RMS	14,10	5,00	0,30	-	-	-	-	●	-
left hand									
D2FIX150505LMS	13,90	5,00	0,50	-	-	-	-	●	-
D2FIX150503LMS	14,10	5,00	0,30	-	-	-	-	●	-

Application Specific



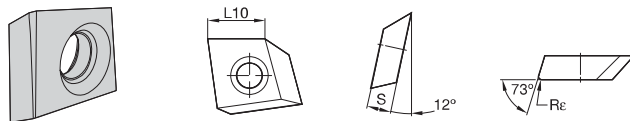
■ D2FIX-FN

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
D2FIX150505RFN	13,90	5,00	0,50	-	●	-	-	●	-



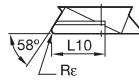
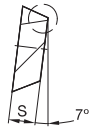
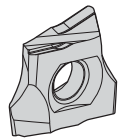
■ D2FIX-RN

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
D2FIX150505RRN	14,50	5,00	0,50	●	-	-	-	-	-
left hand									
D2FIX150505LRN	14,50	5,00	0,50	-	●	-	-	-	-



■ E2FIX-HP

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
E2FIX100505RHP	10,50	5,00	0,50	-	-	-	-	●	-
left hand									
E2FIX100505LHP	10,50	5,00	0,50	-	-	-	-	●	-

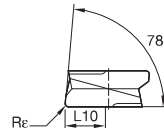
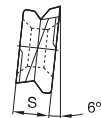
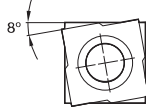
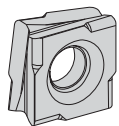
beyond


● first choice
○ alternate choice

P	●	●	●	●	●	●
M	○	○	○	○	○	○
K	●	●	●	●	●	●
N	○	○	○	○	○	○
S	○	○	○	○	○	○
H						

D4FIX-MN

catalogue number	L10	S	Re
right hand			
D4FIX140608RMN	6,70	5,90	0,80
D4FIX140605RMN	7,00	5,90	0,50
D4FIX140604RMN	7,10	5,90	0,40
D4FIX140603RMN	7,20	5,90	0,30
left hand			
D4FIX140608LMN	6,70	5,90	0,80


C8FIX-RN

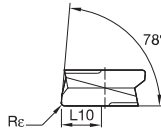
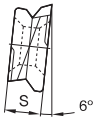
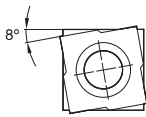
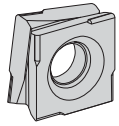
catalogue number	L10	S	Re
right hand			
C8FIX150612RRN	8,60	6,60	1,20
C8FIX150608RRN	8,90	6,60	0,80
C8FIX150605RRN	9,10	6,60	0,50
C8FIX180812RRN	10,60	7,90	1,20
C8FIX180808RRN	10,90	7,90	0,80
left hand			
C8FIX150612LRN	8,60	6,60	1,20
C8FIX150608LRN	8,90	6,60	0,80
C8FIX150605LRN	9,10	6,60	0,50
C8FIX180812LRN	10,60	7,90	1,20

KCP10	●	●	○	○	○	○
KCP25	○	○	○	○	○	○
KCP40	○	○	○	○	○	○
KCM15	○	○	○	○	○	○
KCU10	○	○	○	○	○	○
KCU25	○	○	○	○	○	○



Application Specific

beyond



● first choice
○ alternate choice

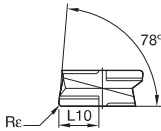
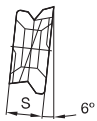
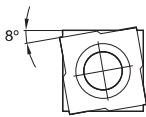
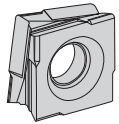
P	●	●	●	●	●	●
M	○	○	●	●	●	●
K	●	●	●	●	●	●
N	●	●	●	●	●	●
S	○	○	●	●	●	●
H						

■ C8FIX-RP



Application Specific

catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
C8FIX120508RRP	6,90	5,50	0,80	●	●	-	-	-	-
C8FIX120505RRP	7,10	5,50	0,50	-	●	●	-	-	●
C8FIX120504RRP	7,20	5,50	0,40	-	●	●	-	-	-
C8FIX120503RRP	7,30	5,50	0,30	-	●	●	-	-	-
left hand									
C8FIX120508LRP	6,90	5,50	0,80	-	●	●	-	-	-
C8FIX150612LRP	7,80	6,60	1,20	-	●	●	-	-	-
C8FIX150608LRP	8,80	6,60	0,80	-	-	-	-	-	●

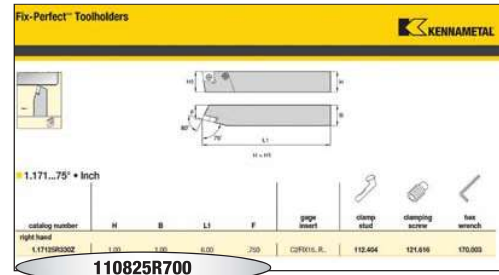


■ C8FIX-MP

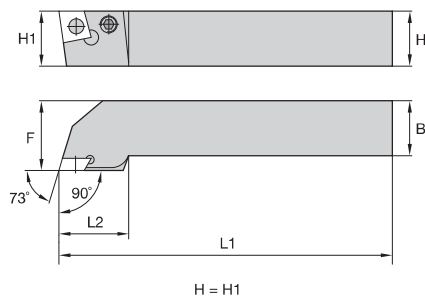
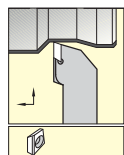
catalogue number	L10	S	Re	KCP10	KCP25	KCP40	KCM15	KCU10	KCU25
right hand									
C8FIX120503RMP	7,30	5,50	0,30	-	●	-	-	●	●
C8FIX150603RMP	9,30	6,60	0,30	●	●	-	-	●	●
C8FIX180805RMP	11,10	7,90	0,50	-	●	-	-	-	-
left hand									
C8FIX120503LMP	7,30	5,50	0,30	●	●	-	-	●	-
C8FIX150603LMP	9,30	6,60	0,30	-	●	-	-	-	-

How Do Catalogue Numbers Work?

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding image to easily identify which attributes apply.



1	1	08	25	R	7	0	0																				
Turning Programme	Number of Cutters	Version	Shaft Dimensions	Direction of Working	Insert Size and Type	Insert Shape	Clamping Screw Support																				
1 = Fix-Perfect	1 = Inserts with 2 cutting edges 3 = Inserts with 4 cutting edges 7 = Inserts with 8 cutting edges	08 = 90° or 93° setting, for machining aluminium 16 = 92° setting angle 20 = 92° setting angle 22 = 92° setting angle 30 = 75° setting angle 71 = 75° setting angle 72 = 45° setting angle 77 = 90° setting angle 80 = 90° or 93° setting angle		R = Right L = Left			0 = Activated from main cutting edge 1 = Minor cutting edge 2 = Above 5 = Main cutting edge with sharp-edged full cartridge 6 = Minor cutting edge with sharp-edged full cartridge																				
					<table border="1"> <thead> <tr> <th></th> <th>L</th> <th>cutting edges</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>8mm 20mm 25mm</td> <td>4 4 4</td> </tr> <tr> <td>1</td> <td>10,5mm 12mm</td> <td>2 8</td> </tr> <tr> <td>3</td> <td>14,5mm 15mm</td> <td>2 8</td> </tr> <tr> <td>4</td> <td>17,5mm 18mm</td> <td>2 8</td> </tr> <tr> <td>5</td> <td>23,5mm 21mm</td> <td>2 8</td> </tr> <tr> <td>7</td> <td>10,5mm</td> <td>2 Alu</td> </tr> </tbody> </table>		L	cutting edges	0	8mm 20mm 25mm	4 4 4	1	10,5mm 12mm	2 8	3	14,5mm 15mm	2 8	4	17,5mm 18mm	2 8	5	23,5mm 21mm	2 8	7	10,5mm	2 Alu	
	L	cutting edges																									
0	8mm 20mm 25mm	4 4 4																									
1	10,5mm 12mm	2 8																									
3	14,5mm 15mm	2 8																									
4	17,5mm 18mm	2 8																									
5	23,5mm 21mm	2 8																									
7	10,5mm	2 Alu																									
		<table border="1"> <thead> <tr> <th>Toolholder</th> <th>Dimensions</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>10 x 10mm</td> </tr> <tr> <td>11</td> <td>40 x 40mm</td> </tr> <tr> <td>16</td> <td>16 x 16mm</td> </tr> <tr> <td>20</td> <td>20 x 20mm</td> </tr> <tr> <td>21</td> <td>50 x 50mm</td> </tr> <tr> <td>25</td> <td>25 x 25mm</td> </tr> <tr> <td>32</td> <td>32 x 25mm 32 x 32mm</td> </tr> <tr> <td>40</td> <td>40 x 32mm</td> </tr> </tbody> </table>	Toolholder	Dimensions	10	10 x 10mm	11	40 x 40mm	16	16 x 16mm	20	20 x 20mm	21	50 x 50mm	25	25 x 25mm	32	32 x 25mm 32 x 32mm	40	40 x 32mm							
Toolholder	Dimensions																										
10	10 x 10mm																										
11	40 x 40mm																										
16	16 x 16mm																										
20	20 x 20mm																										
21	50 x 50mm																										
25	25 x 25mm																										
32	32 x 25mm 32 x 32mm																										
40	40 x 32mm																										

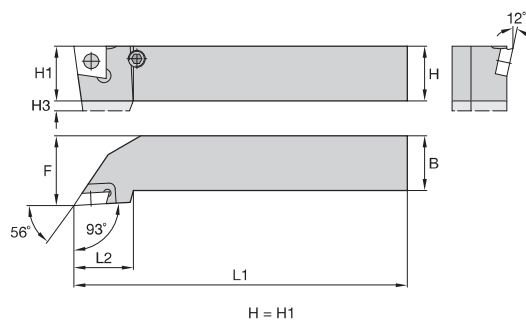
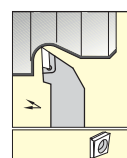


■ 1.108...90° • Metric



Application Specific

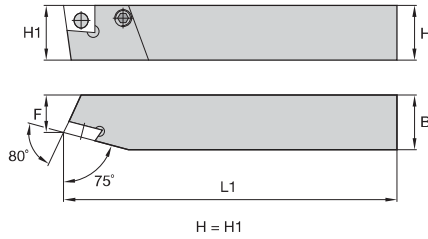
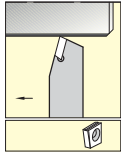
catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench
right hand								
1.10825R700	25	25	150,0	32,0	E2FIX10..R..	410.081	121.616	170.003



■ 1.108...93° • Metric

catalogue number	H	H3	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench
right hand									
1.10820R310	20	5	20	125,0	25,0	D2FIX15..RHP/FN/MS	112.403	121.612	170.003
1.10825R310	25	—	25	150,0	32,0	D2FIX15..RHP/FN/MS	112.404	121.616	170.003
left hand									
1.10825L310	25	5	25	150,0	32,0	D2FIX15..LHP/FN/MS	112.404	121.616	170.003

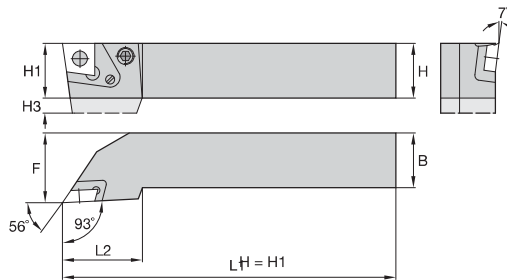
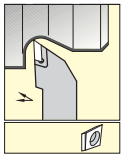



■ 1.171...75° • Metric

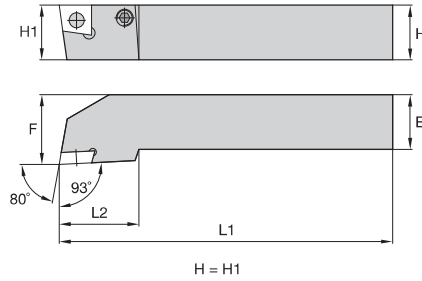
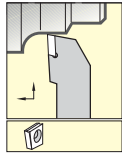
catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench
left hand								
1.17125L330	25	25	150,0	17,0	C2FIX15...L...	112.404	121.616	170.003



Application Specific


■ 1.18 • Metric

catalogue number	H	H3	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	steel nest assembly
right hand										
1.18016R110	16	4	16	100,0	24,0	D2FIX11..R..	112.244	121.612	170.003	—
1.18020R110	20	—	20	125,0	25,0	D2FIX11..R..	112.244	121.612	170.003	—
1.18020R310	20	5	20	125,0	26,0	D2FIX15..R..	112.403	121.612	170.003	—
1.18025R110	25	—	25	150,0	32,0	D2FIX11..R..	112.244	121.612	170.003	—
1.18025R310	25	—	25	150,0	32,0	D2FIX15..R..	112.404	121.616	170.003	—
1.18025R315	25	7	25	150,0	32,0	D2FIX15..R..	112.505	121.616	170.003	132.151
1.18032R315	32	—	25	170,0	32,0	D2FIX15..R..	112.505	121.616	170.003	132.151
left hand										
1.18016L110	16	4	16	100,0	24,0	D2FIX11..L..	112.244	121.612	170.003	—
1.18020L110	20	—	20	125,0	25,0	D2FIX11..L..	112.244	121.612	170.003	—
1.18025L310	25	—	25	150,0	32,0	D2FIX15..L..	112.404	121.616	170.003	—
1.18025L315	25	7	25	150,0	32,0	D2FIX15..L..	112.505	121.616	170.003	132.156
1.18032L315	32	—	25	170,0	32,0	D2FIX15..L..	112.505	121.616	170.003	132.156

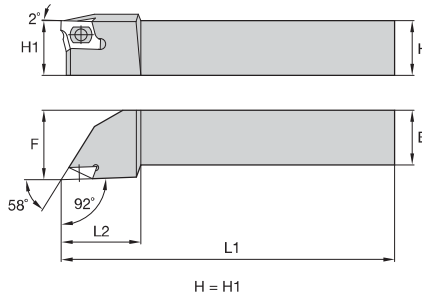
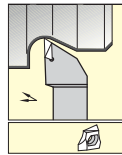


1.180...93° • Metric



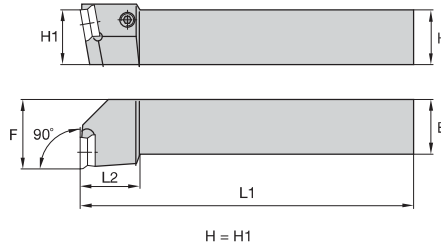
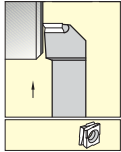
Application Specific

catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	
left hand									
1.18025L330	25	25	150,0	32,0	C2FIX15..L..	112.404	121.616	170.003	



1.380...92° • Metric

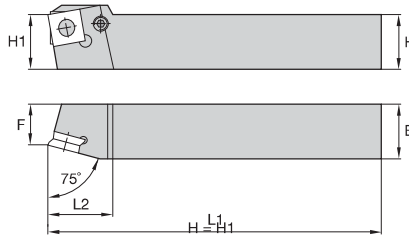
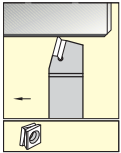
catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	
right hand									
1.38020R021	20	20	125,0	25,0	D4FIX..R..	114.111	121.812	170.004	
1.38025R021	25	25	150,0	32,0	D4FIX..R..	114.114	121.816	170.004	
left hand									
1.38025L021	25	25	150,0	32,0	D4FIX..L..	114.114	121.816	170.004	



■ 1.777...90° • Metric

catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	
right hand									
1.77725R301	25	25	150,0	32,0	C8FIX15..L..	118.314	121.816	170.004	

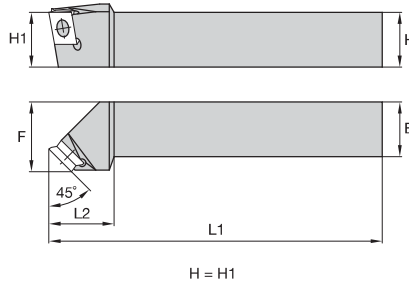
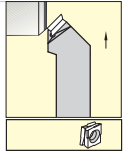
NOTE: Right-hand tool requires left-hand insert.



■ 1.771...75° • Metric

catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	
right hand									
1.77120R100	20	20	125,0	17,0	C8FIX12..R..	118.204	121.612	170.003	
1.77125R300	25	25	150,0	21,0	C8FIX115..R..	410.084	121.816	170.004	
1.77132R400	32	32	170,0	27,0	C8FIX18..R..	410.091	—	—	
left hand									
1.77120L100	20	20	125,0	17,0	C8FIX12..L..	118.204	121.612	170.003	

Application Specific

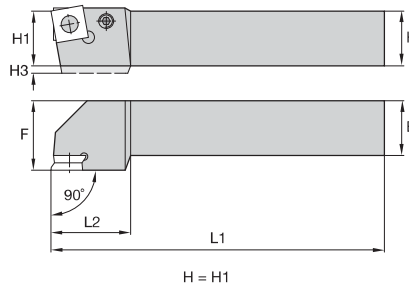
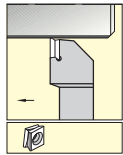


1.772...45° • Metric

Application Specific

catalogue number	H	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench	
right hand									
1.77225R301	25	25	150,0	32,0	C8FIX15..L...	118.314	121.816	170.004	

NOTE: C8FIX15..L... is usable for plunging only.
For both plunging and turning, C4FIX15..L... has to be used.



1.780...90° • Metric

catalogue number	H	H3	B	L1	F	gage insert	clamp stud	clamping screw	hex wrench
right hand									
1.78012R103	12	—	12	80,0	14,0	C8FIX12..R..	—	—	170.003
1.78016R100	16	4	16	100,0	25,0	C8FIX12..R..	118.204	121.616	170.003
1.78020R100	20	—	20	125,0	25,0	C8FIX12..R..	118.204	121.616	170.003
1.78025R100	25	—	25	150,0	32,0	1.81201R...	118.204	121.616	170.003
1.78025R300	25	—	25	150,0	32,0	C8FIX15..R..	410.084	121.816	170.004
1.78032R400	32	—	32	170,0	40,0	C8FIX18..R..	410.091	121.825	170.004
left hand									
1.78025L100	25	—	25	150,0	32,0	1.81202L...	118.204	121.616	170.003
1.78025L300	25	—	25	150,0	32,0	C8FIX15..L...	410.084	121.816	170.004

Grooving Tools and **Beyond**TM Inserts for Your Shallow Groove and Turn Operations

Top NotchTM



Top Notch Grooving Tools and Beyond Inserts are the proven solution for high productivity. The Top Notch system provides consistent tool performance, accurate indexing, and superior clamping to provide excellent surface finishing and superior tool life.

FEATURES AND BENEFITS

- The Beyond PVD coated grades are designed to cut a variety of workpiece materials.
- Rigid clamping securely locks insert in place through the toughest cuts.
- Versatile design enables one system to handle O.D. and I.D. grooving, face grooving, back turning, undercutting, and even threading operations.
- Chip control inserts provide excellent chip evacuation in grooving, and offer better chip control in multidirectional turning.

Experience the advantages at your Authorised Kennametal Distributor or at kennametal.com.



kennametal.com

➤ Beyond™ Top Notch™ Profiling

The Top Notch system is the proven solution for high productivity. The Top Notch system provides consistent tool performance, accurate indexing, and superior clamping to provide excellent surface finishing and superior tool life.

Features and Benefits

Beyond™ Grades

Higher Productivity and Profitability

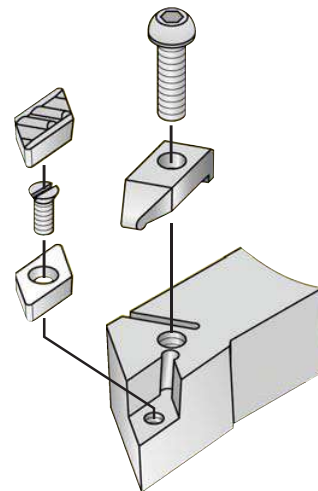
- Lower cutting forces increase speeds and reduce cycle time.
- Extended tool life.

Reliability

- Predictable tool life/uniform wear.
- Resists chip flow damage.
- Consistent surface finish.

Versatility

- Products can be applied across a wide range of applications.
- Use in low- to high-speed applications.
- Complete portfolio of products.
- For finish to rough turning of steel, cast iron, stainless steel, and high-temp alloys.



FP Geometry

- Higher metal removal rate.
- Versatility.
- Long tool life.
- Optimum chip control over wide range of cutting conditions and workpiece materials.
- Improved surface finish.
- Better indexability.
- Less adjustment during insert change.

UF Geometry

- Reduces cutting forces.
- Long tool life.
- Optimum chip control over wide range of cutting conditions.
- Chip control in finishing applications.

HP Geometry

- Reduces cutting forces.
- Long tool life.
- Interference is avoided to improve surface finish of the workpiece.
- Better indexability.
- Good control over job dimensions.
- Reduces workpiece material sticking.



■ Select the geometry —
based on feed rate and depth of cut

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

operation	insert style application	insert geometry	profile	feed rate — mm														
				0,04	0,063	0,01	0,16	0,25	0,4	0,63	1,0	1,6	2,5	5,0				
				depth of cut — mm														
				0,1	0,16	0,25	0,4	0,63	1,0	1,6	2,5	4,0	6,3	10,0				
fine finishing	DCGR-UF			0,1–0,3														
				0,1–1,3														
fine finishing	KCGR-UF			0,1–0,3														
				0,1–1,3														
finishing	DCGR			0,1–0,3														
				0,1–1,3														
	KCGR			0,1–0,4														
				0,3–2,0														
	DCGR-FP			0,063–0,25														
				0,16–1,6														
	DCGR-HP			0,1–0,4														
				0,3–2,0														
KCGR-FP			0,063–0,25															
			0,16–1,6															
KCGR-HP			0,063–0,25															
			0,16–1,6															

■ Select the geometry —
 based on feed rate and depth of cut

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

operation	insert style application	insert geometry	profile	feed rate — mm											
				0,04	0,063	0,01	0,16	0,25	0,4	0,63	1,0	1,6	2,5	5,0	
				0,1	0,16	0,25	0,4	0,63	1,0	1,6	2,5	4,0	6,3	10,0	
				depth of cut — mm											
fine finishing	VBMR-UF			0,1–0,3											
				0,1–1,3											
				0,1–0,3											
fine finishing	VCMR-UF			0,1–0,3											
				0,1–1,3											
				0,1–0,3											
fine finishing	VPGR-UF			0,1–0,3											
				0,1–1,3											
				0,1–0,3											
finishing	VBMR			0,1–0,4											
				0,3–2,0											
	VBMR-FP			0,063–0,25											
				0,16–1,6											
	VCGR			0,1–0,4											
				0,3–2,0											
VCMR-FP			0,063–0,25												
			0,16–1,6												
VPGR-FP			0,063–0,25												
			0,16–1,6												

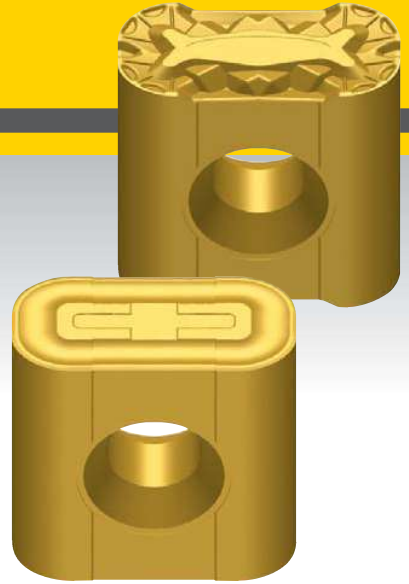
■ Select the geometry — based on feed rate and depth of cut

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

operation	insert style application	insert geometry	profile	feed rate — mm										
				0,04	0,063	0,01	0,16	0,25	0,4	0,63	1,0	1,6	2,5	5,0
				0,1	0,16	0,25	0,4	0,63	1,0	1,6	2,5	4,0	6,3	10,0
				depth of cut — mm										
finishing	VPGR-HP			0,2–0,4										
				0,6–2,3										
finishing	KNGX-15			0,2–0,4										
				0,8–2,8										
finishing	KNGX-20			0,2–0,5										
				1,0–3,0										
finishing	KNGX-25			0,3–0,6										
				1,1–3,6										
finishing	KNGX-32			0,3–0,7										
				1,5–5,1										

Kennametal Tools for Railways and Wheel Machining

Kennametal offers a complete line of tooling for wheel and axle maintenance in railroad shops. All tools incorporate the latest technology for maximum metal removal and higher productivity. They are proven performers in actual use over extended periods of time, under a wide range of operating conditions. Standard off-the-shelf inserts and fewer pieces of hardware reduce inventory and operating costs. Included in this range are tools for reconditioning mounted wheel sets, wheel boring, wheel truing, axle turning, and journal burnishing.



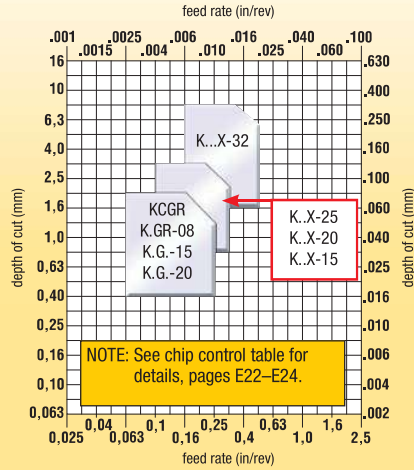
Experience the advantages at your Authorised Kennametal Distributor or at kennametal.com.



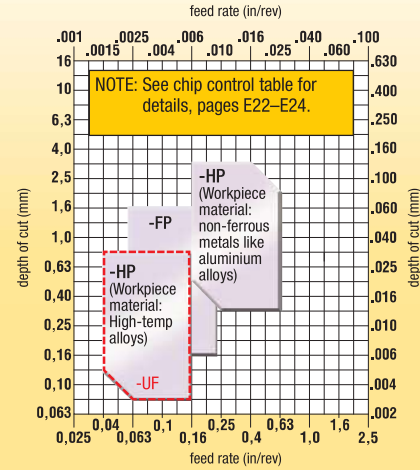
kennametal.com

■ **Step 1 • Select the insert geometry**

Negative Inserts



Positive Inserts



Chip Control Range
 -UF: feed 0,08–0,3 mm/rev; DOC 0,1–1,3mm
 -FP: feed 0,1–0,3 mm/rev; DOC 0,1–1,3mm
 -HP: feed 0,28–0,4 mm/rev; DOC 0,6–2,3mm

■ **Step 2 • Select the grade**

cutting condition	Symbol	Steel			Stainless Steel		
		Finishing	Medium Machining	Roughing	Finishing	Medium Machining	Roughing
heavily interrupted cut	⚙️	KCP25	KCM25	KCM25	KCM25	KCM25	KCM25
lightly interrupted cut	⚙️	KCP10	KCP25	KCP25	KC5010/KCU10	KC5025/KCU25	KC5025/KCU25
varying depth of cut, casting, or forging skin	⚙️	KT315	KCP25	KCP25	KT315	KCM25	KCM25
smooth cut, pre-turned surface	⚙️	KT315	KCP05/KCP10	KCP10	KT315	KC5010/KCU10	KCM25

cutting condition	Symbol	Cast Iron			Non-Ferrous		
		Finishing	Medium Machining	Roughing	Finishing	Medium Machining	Roughing
heavily interrupted cut	⚙️	KCP10	KCP10	KCP10	KC5010/KCU10	KC5010/KCU10	KC5010/313/KCU10
lightly interrupted cut	⚙️	KCP05	KCP05	KCP05	KC5410/KD1425	KC5010/KCU10	KC5010
varying depth of cut, casting, or forging skin	⚙️	KCK05	KCK05	KCK05	KD1425	KC5410	KC5410
smooth cut, pre-turned surface	⚙️	KC5010/KCU10	KC5010/KCU10	KC5010/KCU10	KD1425	KC5410	KC5410

cutting condition	Symbol	High-Temperature Alloys		
		Finishing	Medium Machining	Roughing
heavily interrupted cut	⚙️	KC5025/KUC25	K68	K68
lightly interrupted cut	⚙️	KC5010	KC5010	KCM25
varying depth of cut, casting, or forging skin	⚙️	KC5010	KC5010	KC5010
smooth cut, pre-turned surface	⚙️	KC5010/KCU10/K313	KC5010/KCU10	KC5010

Select the cutting speed

Steel speed — m/min (SFM) starting conditions

material group	grade	50 (170)	100 (330)	150 (490)	200 (655)	250 (820)	300 (980)	350 (1150)	400 (1300)	m/min	SFM
P	KT315									260	850
	KCP05/KCP10									340	800
	KCP25									180	600
	KCM25									165	550

Stainless Steel speed — m/min (SFM) starting conditions

material group	grade	50 (170)	100 (330)	150 (490)	200 (655)	250 (820)	300 (980)	350 (1150)	400 (1300)	m/min	SFM
M	KT315									230	750
	KC5010/KCU10									180	600
	KC5025/KCU25									120	400
	KCM25									150	500

Cast Iron speed — m/min (SFM) starting conditions

material group	grade	150 (490)	200 (655)	250 (820)	300 (980)	350 (1150)	400 (1300)	500 (1600)	750 (2400)	m/min	SFM
K	KB1345									760	2520
	KT315									275	900
	KC5010/KCU10									245	800
	KCK20									245	800
	KCP25									230	750

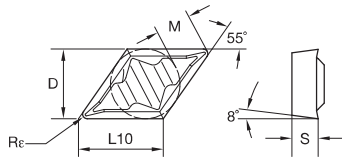
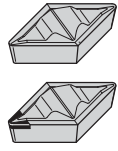
Non-Ferrous speed — m/min (SFM) starting conditions

material group	grade	250 (800)	500 (1600)	750 (2400)	1000 (3200)	1250 (4000)	1500 (4800)	1750 (5600)	2000 (6400)	m/min	SFM
N	KO1425									765	2500
	KC5410									550	1800
	KC5010/KCU10									460	1500
	K68/K313									150	500

High-Temperature Alloys speed — m/min (SFM) starting conditions

material group	grade	15 (50)	40 (120)	55 (180)	80 (250)	100 (330)	170 (550)	200 (655)	120 (400)	m/min	SFM
S	KC5010/KCU10									60	200
	KC5025/KCU25									50	170
	KCM25									70	230
	K68/K313									30	100

Represents the recommended starting conditions. Optimise for your specific application.



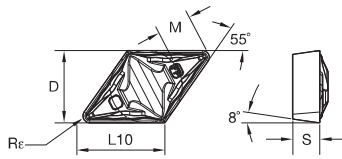
● first choice
○ alternate choice

■ DCGR • DPGR



Application Specific

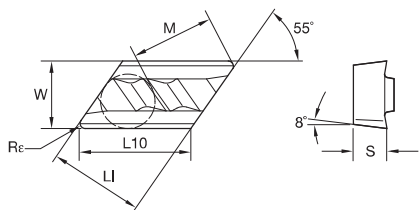
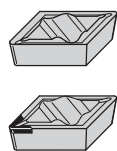
ISO catalogue number	D	L10	S	M	R _ε	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
DCGR150404	12,70	15,50	4,76	6,94	0,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DCGR150408	12,70	15,50	4,76	6,48	0,8	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DCGR150412	12,70	15,50	4,76	6,01	1,2	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-



■ DCGR-FP • DPGR-FP

ISO catalogue number	D	L10	S	M	R _ε	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
DCGR150404FP	12,70	15,50	4,76	6,94	0,4	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
DCGR150408FP	12,70	15,50	4,76	6,48	0,8	-	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-	-	-

P	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
K	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

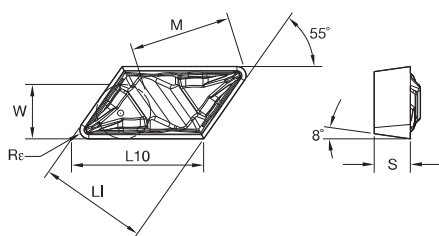
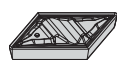


● first choice
○ alternate choice

	P	M	K	N	S	H	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425
right hand	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	●	●	-	●	-	-	●	●
KCGR110304R08	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	●	●	-	●	-	-	●	●
KCGR110308R08	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	●	●	-	●	-	-	●	●
left hand	●	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	●	●	-	●	-	-	●
KCGR110308L08	●	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	●	●	-	●	-	-	●
KCGR110304L08	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	●	●	●	●	-	-	●	●
right hand	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-
KCGR110304R08FP	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-
KCGR110308R08FP	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	●	-	-	-	-	-	-
left hand	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-
KCGR110308L08FP	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-
KCGR110304L08FP	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-	●	●	-	-	-	-	-	-

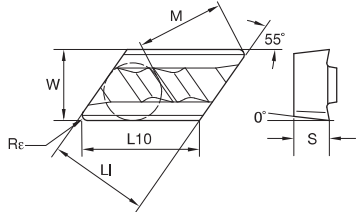
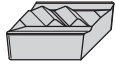
KCGR • NPGR

ISO catalogue number	LI	L10	W	S	M	R _ε
right hand						
KCGR110304R08	9,53	11,60	6,35	3,18	9,10	0,4
KCGR110308R08	9,53	11,60	6,35	3,18	8,66	0,8
left hand						
KCGR110308L08	9,53	11,60	6,35	3,18	8,66	0,8
KCGR110304L08	9,53	11,60	6,35	3,18	9,10	0,4

**KCGR-FP • NPGR-FP**

ISO catalogue number	LI	L10	W	S	M	R _ε
right hand						
KCGR110304R08FP	9,52	11,60	6,35	3,18	9,13	0,4
KCGR110308R08FP	9,52	11,63	6,35	3,18	8,73	0,8
left hand						
KCGR110308L08FP	9,52	11,63	6,35	3,18	8,73	0,8
KCGR110304L08FP	9,52	11,60	6,35	3,18	9,13	0,4

Application Specific



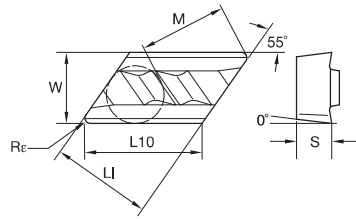
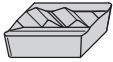
● first choice
○ alternate choice

P	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
K	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

■ KNGX • NPR/L

Application Specific

ISO catalogue number	LI	L10	W	S	M	Rε	K68	K313	KU10	KCP10	KCP25B	KCP25	KGK05	KCM15B	KCM25B	KCM25	KGU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
right hand																								
KNGX150404R20	12,68	15,44	9,47	4,76	13,46	0,4	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-
KNGX150408R20	12,68	15,44	9,47	4,76	12,99	0,8	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-
KNGX150401R15	12,70	15,44	9,53	4,76	13,76	0,1	●	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-
KNGX150402R15	12,70	15,44	9,53	4,76	13,67	0,2	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
KNGX220404R25	18,62	22,73	9,53	4,76	19,91	0,4	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
KNGX220408R32	18,62	22,73	9,53	4,76	19,47	0,8	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
left hand																								
KNGX150408L20	12,68	15,44	9,47	4,76	12,99	0,8	●	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-
KNGX150404L20	12,68	15,44	9,47	4,76	13,46	0,4	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-
KNGX220408L20	18,62	22,73	9,53	4,76	19,47	0,8	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-

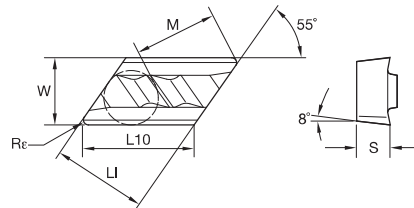
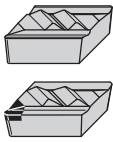


● first choice
○ alternate choice

P	M	K	N	S	H	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	○
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

■ KNUX • NPR/L

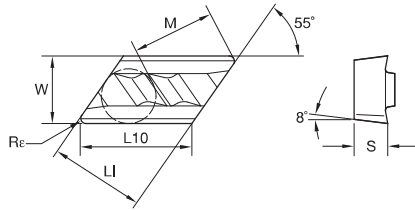
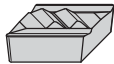
ISO catalogue number	LI	L10	W	S	M	R _e	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
right hand																								
KNUX150405R20	12,70	15,44	9,53	4,76	13,32	0,5	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KNUX150405R25	12,70	15,44	9,53	4,76	13,32	0,5	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
KNUX150410R25	12,70	15,44	9,53	4,76	12,74	1,0	●	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KNUX160405R1	16,15	17,51	9,52	4,76	-	0,5	-	-	-	-	-	-	-	●	●	●	-	●	●	●	●	●	●	●
KNUX160405R2	16,15	17,51	9,52	4,76	-	0,5	-	-	-	-	-	-	-	●	●	●	-	●	●	●	●	●	●	●
KNUX160410R1	16,15	17,51	9,52	4,76	-	1,0	-	-	-	-	-	-	-	●	●	●	-	●	●	●	●	●	●	●
KNUX160410R2	16,15	17,51	9,52	4,76	-	1,0	-	-	-	-	-	-	-	●	●	●	-	●	●	●	●	●	●	●
left hand																								
KNUX150410L25	12,70	15,44	9,53	4,76	12,74	1,0	●	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KNUX150405L25	12,70	15,44	9,53	4,76	13,32	0,5	●	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KNUX160405L1	16,15	17,51	9,52	4,76	-	0,5	-	-	-	-	-	-	●	●	●	●	-	●	●	●	●	●	●	●
KNUX160405L2	16,15	17,51	9,52	4,76	-	0,5	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-


■ KCGX • NPR/L

ISO catalogue number	LI	L10	W	S	M	R _e	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
right hand																								
KCGX110301R15	9,53	11,60	6,35	3,18	9,43	0,1	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110302R15	9,53	11,60	6,35	3,18	9,34	0,2	-	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110304R15	9,53	11,60	6,35	3,18	9,11	0,4	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110308R15	9,57	-	6,33	3,18	8,69	0,8	●	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
left hand																								
KCGX110304L15	9,53	11,60	6,35	3,18	9,11	0,4	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110302L15	9,53	11,60	6,35	3,18	9,34	0,2	-	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110301L15	9,53	11,60	6,35	3,18	9,43	0,1	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●
KCGX110308L15	9,57	-	6,33	3,18	8,69	0,8	●	●	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●



Application Specific



● first choice
○ alternate choice

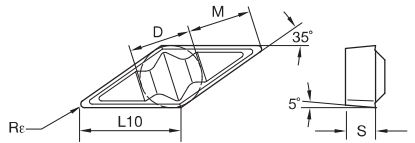
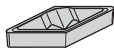
P	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
K	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

KCUX • NPR/L



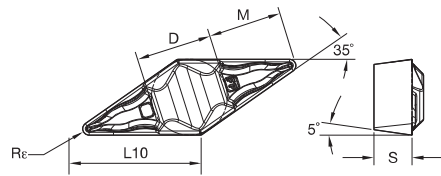
Application Specific

ISO catalogue number	LI	L10	W	S	M	Re	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
right hand																								
KCUX110302R15	9,50	11,60	6,33	3,18	9,40	0,2	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
KCUX110305R15	9,53	11,60	6,35	3,18	9,06	0,5	●	-	-	-	●	-	-	-	-	-	●	-	-	●	-	-	-	-
KNUX150405R20	12,70	15,44	9,53	4,76	13,32	0,5	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
left hand																								
KCUX110302L15	9,46	11,60	6,33	3,18	9,40	0,2	●	-	-	-	-	-	-	-	-	-	●	-	-	●	-	-	-	-
KCUX110305L15	9,53	11,60	6,35	3,18	9,06	0,5	●	-	-	-	-	-	-	-	-	-	●	-	-	●	-	-	-	-



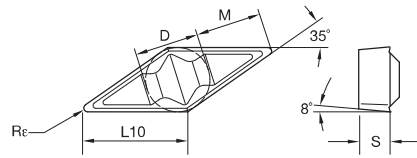
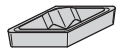
VBMR

ISO catalogue number	D	L10	S	M	Re	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
VBMR110304	6,35	11,07	3,18	6,46	0,4	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-



VBMR-FP

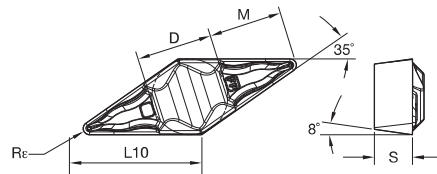
ISO catalogue number	D	L10	S	M	Re	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
VBMR110302FP	6,35	11,04	3,18	6,91	0,2	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
VBMR110304FP	6,35	11,07	3,18	6,46	0,4	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
VBMR110308FP	6,35	11,07	3,18	5,54	0,8	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-



● first choice
○ alternate choice

■ VCMR

ISO catalogue number	D	L10	S	M	Re
VCMR160404	9,53	16,61	4,76	10,15	0,4
VCMR160408	9,53	16,61	4,76	9,23	0,8

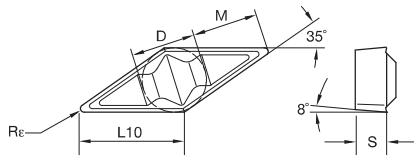
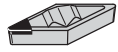


■ VCMR-FP

ISO catalogue number	D	L10	S	M	Re
VCMR160404FP	9,52	16,61	4,76	10,15	0,4
VCMR160408FP	9,52	16,61	4,76	9,23	0,8

	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425
P	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○
K	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Application Specific



● first choice
○ alternate choice

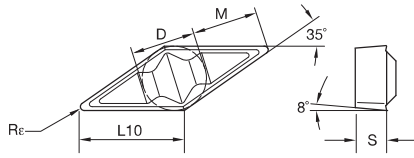
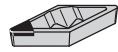
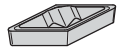
P	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●														
K	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	●	●														
H																			

■ VPGN



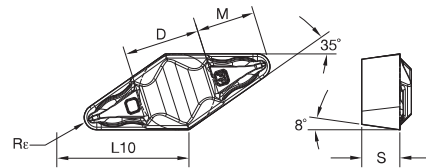
Application Specific

ISO catalogue number	D	L10	S	M	Rr	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
VCGN160404	9,53	16,61	4,76	10,15	0,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
VCGN160408	9,53	16,61	4,76	9,23	0,8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●

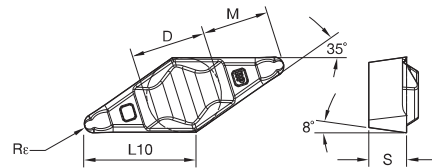


■ VCGR • VPGR

ISO catalogue number	D	L10	S	M	Rr	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425	
VCGR160402	9,53	16,61	4,76	10,60	0,2	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160404	9,53	16,61	4,76	10,15	0,4	●	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160408	9,52	16,61	4,76	9,23	0,8	●	●	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160412	9,53	16,61	4,76	8,31	1,2	●	-	-	-	-	-	-	-	-	-	●	●	-	-	-	-	-	-
VCGR160416	9,53	16,61	4,76	7,38	1,6	-	-	-	-	-	-	-	-	-	-	●	●	●	●	-	-	-	-


VCGR-FP • VPGR-FP

ISO catalogue number	D	L10	S	M	Re	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425
VCGR160402FP	9,52	16,61	4,76	10,60	0,2	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160404FP	9,52	16,61	4,76	10,15	0,4	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160408FP	9,52	16,61	4,76	9,23	0,8	-	-	-	●	-	-	-	-	-	●	-	-	-	-	-	-	-
VCGR160412FP	9,52	16,61	4,76	8,31	1,2	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
VCGR160416FP	9,52	16,61	4,76	7,38	1,6	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-


VCGR-HP • VPGR-HP

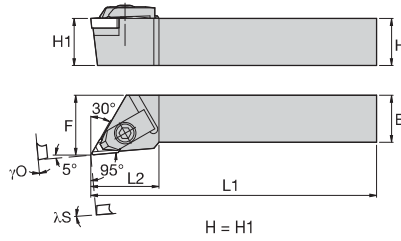
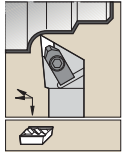
ISO catalogue number	D	L10	S	M	Re	K68	K313	KU10	KCP10	KCP25B	KCP25	KCK05	KCM15B	KCM25B	KCM25	KCU10	KCU25	KC5010	KC5025	KC5410	KT315	KD1425
VCGR160404HP	9,52	16,61	4,76	-	0,4	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

P	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
M	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
K	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
N	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
S	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● first choice
○ alternate choice



Application Specific

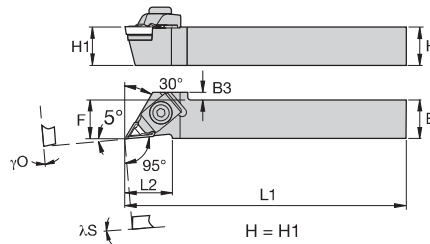
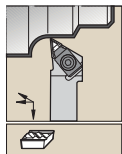


■ NKLC 95°



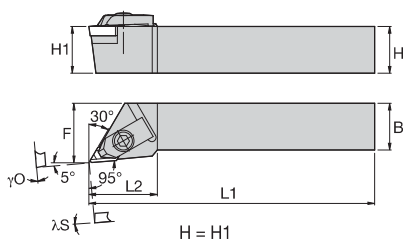
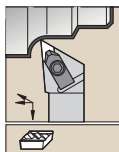
Application Specific

catalogue number	H	B	F	L1	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand													
NKLCR1616H11	16	16	20,0	100	0.0	0.0	KC..110305R	SM885	MS959	3 mm	CM68	MS524	3 mm
NKLCR2020K11	20	20	25,0	125	0.0	0.0	KC..110305R	SM885	MS959	3 mm	CM68	MS524	3 mm
NKLCR2525M11	25	25	32,0	150	0.0	0.0	KC..110305R	SM885	MS959	3 mm	CM68	MS524	3 mm
left hand													
NKLCR2020K11	20	20	25,0	125	0.0	0.0	KC..110305L	SM886	MS959	3 mm	CM68	MS524	3 mm
NKLCR2525M11	25	25	32,0	150	0.0	0.0	KC..110305L	SM886	MS959	3 mm	CM68	MS524	3 mm



■ NKLC-F 95°

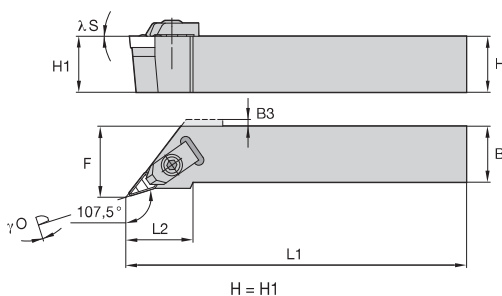
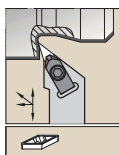
catalogue number	H	B	F	L1	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand													
NKLCRF1212M11Q	12	12	12,0	150	0.0	0.0	KC..110305R	SM885	MS959	3 mm	CM180	MS524	3 mm


NKLN 95°

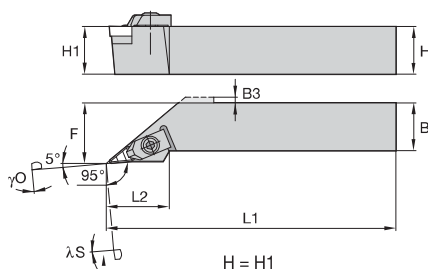
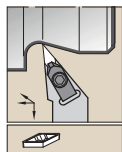
catalogue number	H	B	F	L1	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand													
NKLN2020K15	20	20	25,0	125	-2,0	-5,0	KN..150410R	SM872	MS111	2 mm	CM66	MS625	4 mm
NKLN2525M15	25	25	32,0	150	-2,0	-5,0	KN..150410R	SM872	MS111	2 mm	CM66	MS625	4 mm
left hand													
NKLN2020K15	20	20	25,0	125	-2,0	-5,0	KN..150410L	SM871	MS111	2 mm	CM66	MS625	4 mm
NKLN2525M15	25	25	32,0	150	-2,0	-5,0	KN..150410L	SM871	MS111	2 mm	CM66	MS625	4 mm



Application Specific


NVHB 107,5°

catalogue number	H	B	F	L1	LH	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand														
NVHBR2020K11	20	20	25,0	125	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM158	MS518	2.5 mm
NVHBR2525M11	25	25	32,0	150	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM158	MS518	2.5 mm
left hand														
NVHBL2020K11	20	20	25,0	125	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM159	MS518	2.5 mm
NVHBL2525M11	25	25	32,0	150	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM159	MS518	2.5 mm

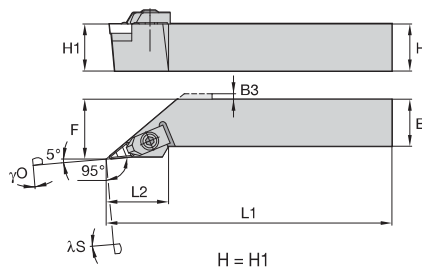
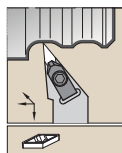


■ NVLB 95°



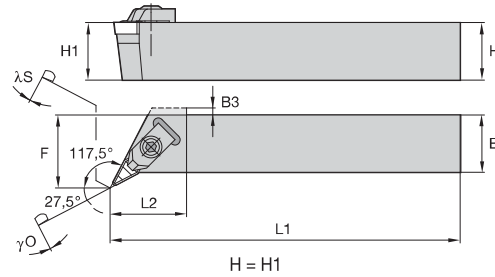
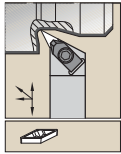
Application Specific

catalogue number	H	B	F	L1	LH	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)	
right hand															
NVLBR2020K11	20	20	25,0	125	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM158	MS518	2.5 mm	
NVLBR2525M11	25	25	32,0	150	32,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM158	MS518	2.5 mm	
left hand															
NVLBL2020K11	20	20	25,0	125	30,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM159	MS518	2.5 mm	
NVLBL2525M11	25	25	32,0	150	32,0	0,0	0,0	VB..110304	SM813	MS959	2.5 mm	CM159	MS518	2.5 mm	



■ NVLC 95°

catalogue number	H	B	F	L1	LH	B3	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand															
NVLCR1616H16	16	16	20,0	100	37,0	5,0	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
NVLCR2020K16	20	20	25,0	125	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
NVLCR2525M16	25	25	32,0	150	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
NVLCR3225P16	32	25	32,0	170	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
left hand															
NVLCCL2020K16	20	20	25,0	125	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm
NVLCCL2525M16	25	25	32,0	150	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm
NVLCCL3225P16	32	25	32,0	170	37,0	—	0,0	0,0	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm

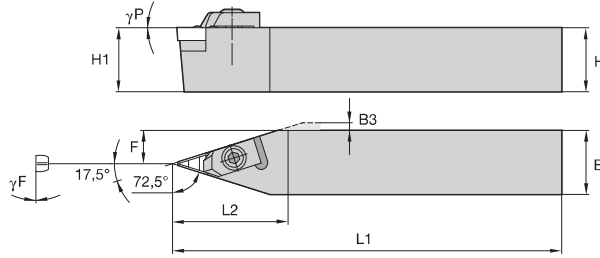


■ NVOC 117,5°



catalogue number	H	B	F	L1	LH	B3	λS°	γO°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
right hand															
NVOCR2020K16	20	20	32,0	125	29,0	3,0	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
NVOCR2525M16	25	25	32,0	150	29,0	3,0	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
left hand															
NVOCL2020K16	20	20	32,0	125	29,0	3,0	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm
NVOCL2525M16	25	25	32,0	150	29,0	3,0	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm

Application Specific



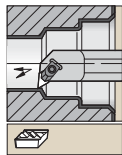
■ **NVVC 72,5°**



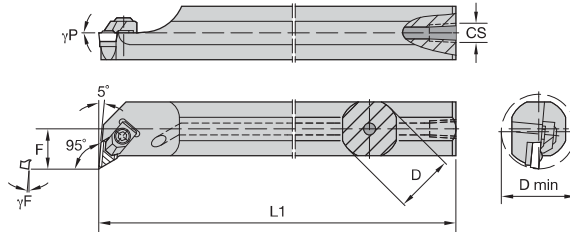
Application Specific



catalogue number	H	B	F	L1	LH	B3	γF°	γP°	gage insert	shim	shim screw	hex (mm)	clamp	clamp screw	hex (mm)
NVVCN2020K16	20	20	10,0	125	42,0	2,0	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm
NVVCN2525M16	25	25	12,5	150	42,0	—	0.0	0.0	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm



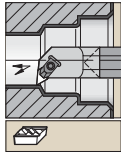
Steel shank with through coolant.



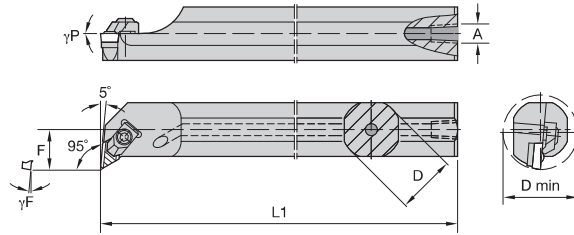
■ **A-NKLC 95°**



catalogue number	D	D min	F	L1	CS	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex	
right hand															
A12MNKLCR11	12	16,0	9,0	150	1/16-27 NPT	-5.0°	0.0°	KC..110305R	—	—	2.5 mm	CM106	MS518	2.5 mm	
A16MNKLCR11	16	20,0	11,0	150	1/8-27 NPT	-7.0°	0.0°	KC..110305L	SM886	MS959	2.5 mm	CM106	MS518	2.5 mm	
A20QNKLCR11	20	25,0	13,0	180	1/8-27 NPT	-5.0°	0.0°	KC..110305L	SM886	MS959	3 mm	CM68	MS524	3 mm	
A25RNKLCR11	25	32,0	16,0	200	1/4-18 NPT	-5.0°	0.0°	KC..110305L	SM886	MS959	3 mm	CM68	MS524	3 mm	
A32SNKLCR11	32	40,0	22,0	250	1/4-18 NPT	-5.0°	0.0°	KC..110305L	SM886	MS959	3 mm	CM68	MS524	3 mm	
left hand															
A12MNKLCL11	16	20,0	11,0	150	1/8-27 NPT	-7.0°	0.0°	KC..110305L	—	—	2.5 mm	CM106	MS518	2.5 mm	
A16MNKLCL11	16	20,0	11,0	150	1/8-27 NPT	-7.0°	0.0°	KC..110305R	SM885	MS959	2.5 mm	CM105	MS518	2.5 mm	
A20QNKLCR11	20	25,0	13,0	180	1/8-27 NPT	-5.0°	0.0°	KC..110305R	SM885	MS959	3 mm	CM68	MS524	3 mm	
A25RNKLCL11	25	32,0	16,0	200	1/4-18 NPT	-5.0°	0.0°	KC..110305R	SM885	MS959	3 mm	CM68	MS524	3 mm	



Carbide shank with through coolant.

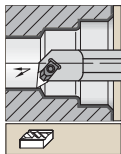


■ **E-NKLC 95°**

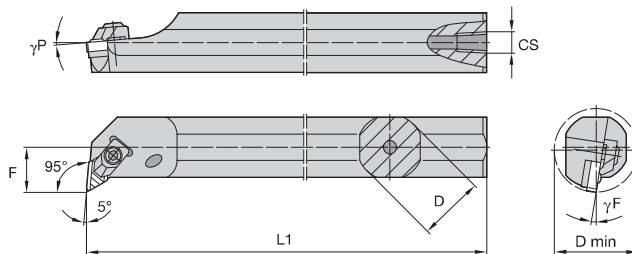
catalogue number	D	D min	F	L1	A	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex	
right hand															
E12QNKLCR11	12	16,0	9,0	180	4,8	-5.0°	0.0°	KC..110308L	—	—	2.5 mm	CM106	MS518	2.5 mm	
E16RNKLCR11	16	20,0	11,0	200	5,5	-5.0°	0.0°	KC..110308L	SM886	MS959	2.5 mm	CM106	MS518	2.5 mm	
left hand															
E12QNKLCL11	12	16,0	9,0	180	4,8	-5.0°	0.0°	KC..110308R	—	—	2.5 mm	CM105	MS518	2.5 mm	



Application Specific

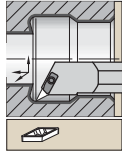


Steel shank with through coolant.

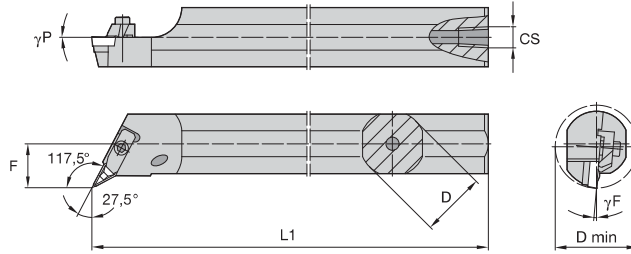


■ **A-NKLN 95°**

catalogue number	D	D min	F	L1	CS	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex	
right hand															
A40TNKLN15	40	50,0	27,0	300	1/4-18 NPT	-5.0°	-5.0°	KN..150410L	SM871	MS111	4 mm	CM66	MS624	4 mm	



Steel shank with through coolant.

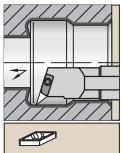


■ A-NVOC 117,5°

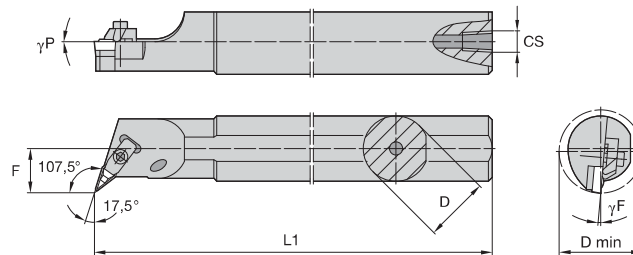


Application Specific

catalogue number	D	D min	F	L1	CS	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex	
right hand															
A32SNVOCR16	32	40,0	22,0	250	1/4-18 NPT	-2.0°	0.0°	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm	
A50UNVOCR16	50	63,0	35,0	350	1/4-18 NPT	-2.0°	0.0°	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm	
left hand															
A32SNVOCL16	32	40,0	22,0	250	1/4-18 NPT	-2.0°	0.0°	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm	
A40TNVOCL16	40	50,0	27,0	300	1/4-18 NPT	-2.0°	0.0°	VC..160408	SM812	MS959	4 mm	CM114	MS412	4 mm	

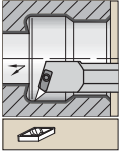


Steel shank with through coolant.

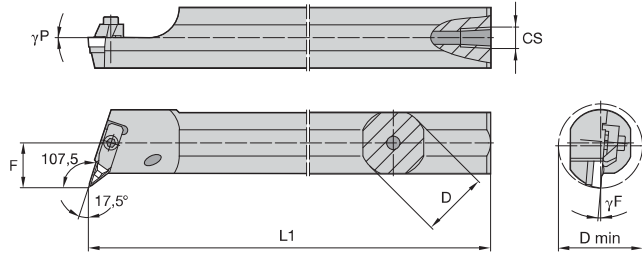


■ A-NVQB 107,5°

catalogue number	D	D min	F	L1	CS	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex	
right hand															
A25TNVQBR11	25	32,0	17,0	300	1/4-18 NPT	-5.0°	0.0°	VB..110304	SM813	MS959	2.5 mm	CM159	MS518	2.5 mm	



Steel shank with through coolant.



■ **A-NVQC 107,5°**

catalogue number	D	D min	F	L1	CS	γF°	γP°	gage insert	shim	shim screw	hex	clamp	clamp screw	hex
right hand														
A32SNVQCR16	32	40,0	22,0	250	1/4-18 NPT	-2,0°	0,0°	VC..160408	SM812	MS959	4 mm	CM113	MS412	4 mm



Application Specific

➤ Railroad

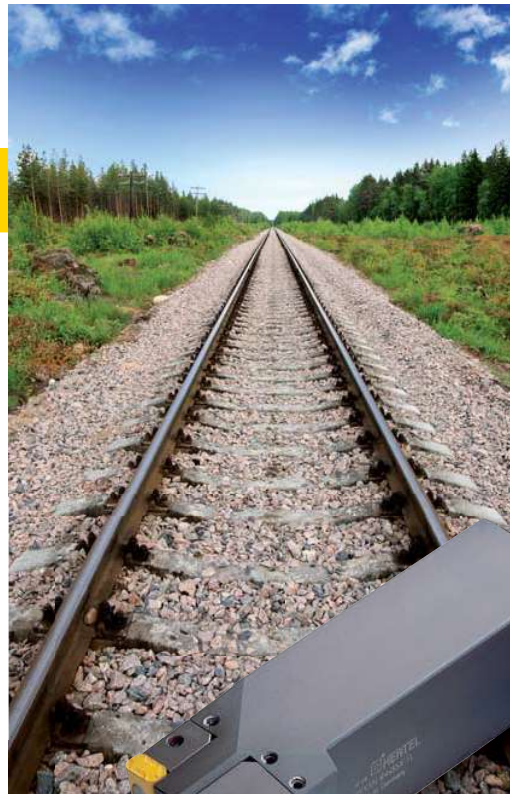
The intimate understanding Kennametal provides of the economics of the railroad value chain enables us to offer unparalleled custom solutions tailored to your needs. We deliver superior value because we listen closely to you, our customer, and innovate based on your feedback. Our goal is to help you be more competitive — both locally and on a global scale.

Best Practices in Productivity

As your trusted partner for optimised production, Kennametal offers customers a unique commitment to research and development excellence, leading to continued delivery of highly innovative ways to enhance your productivity. Certification to ISO 9001, QS 9000 TES, and VDA 6.4 guarantees the highest possible quality standards.

Best Performance, Less Environmental Impact

With technology, we can do both. Kennametal helps customers focus on the root causes of unsustainable behaviour in highly complex manufacturing systems, while at the same time improving cost structure, quality, and performance. In addition to offering the latest in metalcutting tools and technology, our Advanced Engineering Team will analyse your existing production processes and help you identify new methods to improve your overall performance.



Wheel Lathe Tooling

Kennametal railroad tooling incorporates a unique locking unit design developed through years of testing on all types of wheel lathes and machining wheels with all types of tread surfaces.

This heavy-duty, rugged design has proven to be effective in reducing machining costs on tread turning applications, the most severe machining operation encountered in wheel and axle shops.

Strong inserts, with raised chipbreaker land and honed cutting edges, offer more effective chip control and a stronger cutting edge. Combining this tool geometry with the Kennametal grade selection delivers higher wheel turning productivity.



Wheelset

Advantages of Kennametal Wheel Lathe Tools:

- No top clamp to wear out or interfere with chip flow.
- Insert locks against two walls in the toolholder to prevent insert movement under heavy cutting loads.
- Hardened steel locking unit provides positive insert seating and holder protection.
- Fast, trouble-free insert indexing — just unlock one screw to release the insert.
- Quick removal of the steel locking unit and insert for cleaning or replacement.
- Heavy-duty steel locking unit design ensures longer life and helps reduce operating costs.
- Fewer parts to inventory.
- Toolholders and steel locking units, made from heat-treated alloy steel, provide support to withstand severe roughing cuts on work-hardened wheels.



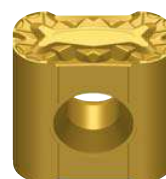
LNUX-RRF Full Radius



LNUX-RRP Full Radius



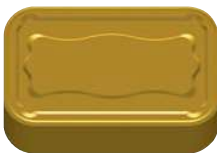
LNUX-RRH



LNUX-RRP



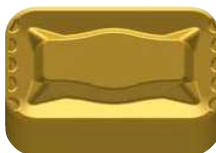
KRR6586-71



KRR6586-75



LNUX-RRSM



KRR6586-65



KRR6586-52



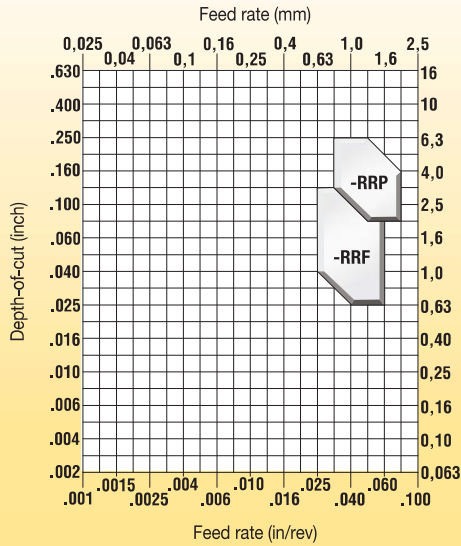
KRR6586-50

■ LNUX

Full-Radius Design

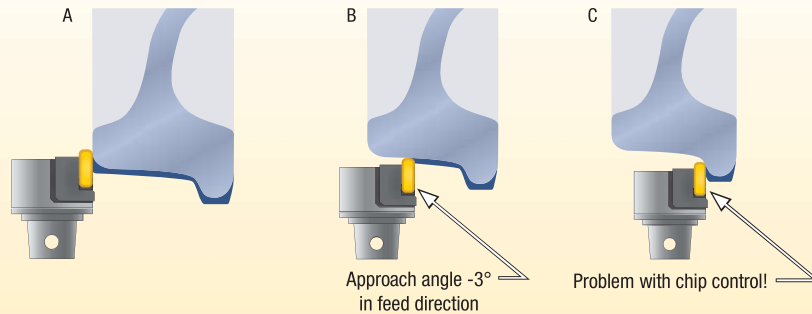
Our well-performed chipbreaking geometry RRF and RRP

- One insert can be applied in profiling and facing.
- Chip control even at smaller DOC will be improved!

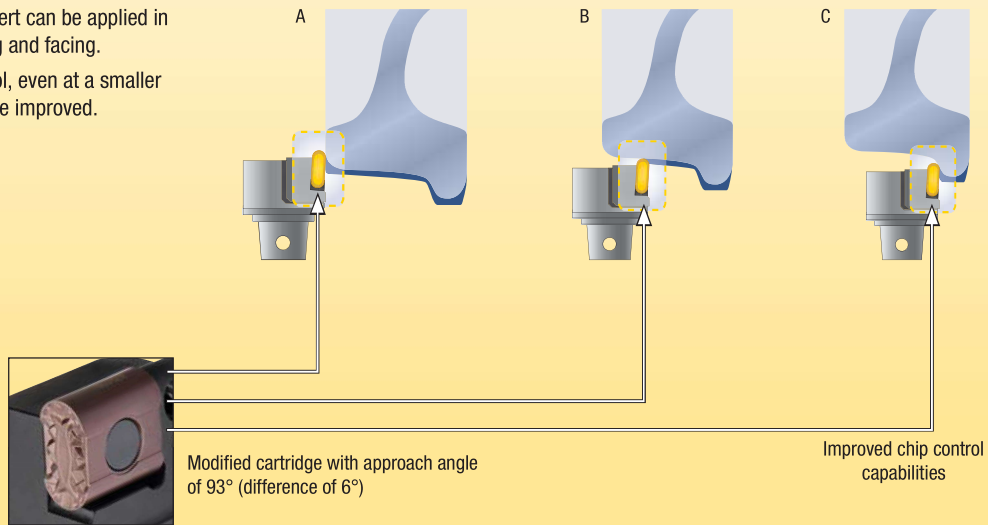


■ Application Recommendation

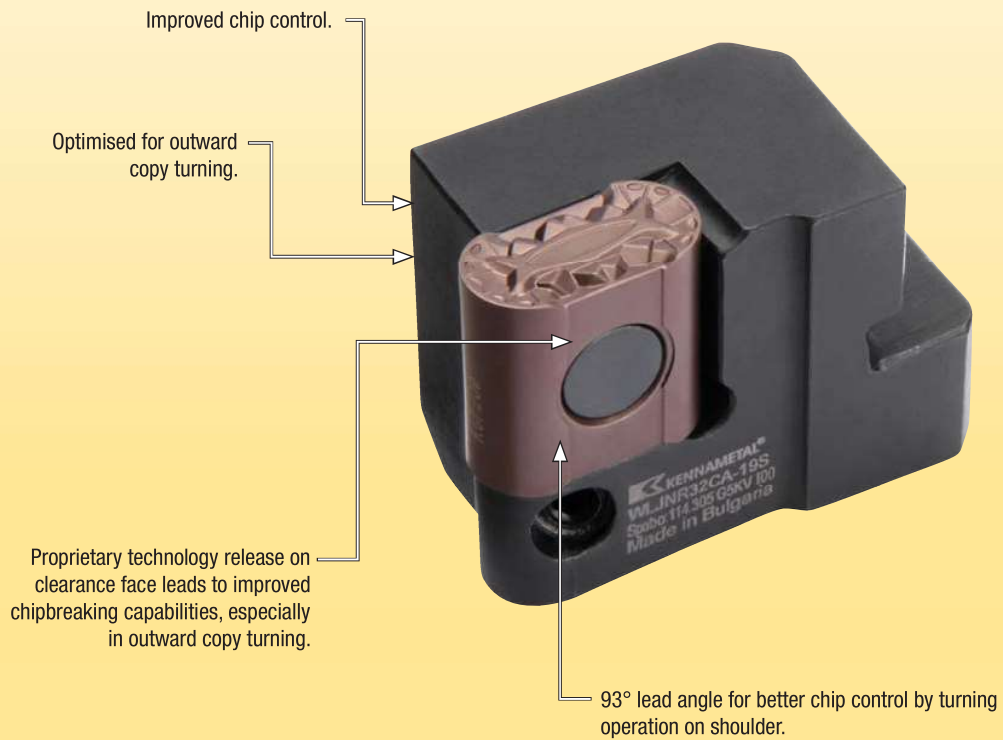
- A: At the beginning of the process, the DOC is higher because most of the bigger bur needs to be removed.
- B: The DOC is smaller, but sometimes it has “hot spots” or brake spots.
- C: Most critical area in regards to chip control because the thickness of the chip is quite thin and very difficult to manage.



- A, B, & C: One insert can be applied in profiling and facing.
- A & C: Chip control, even at a smaller DOC, will be improved.



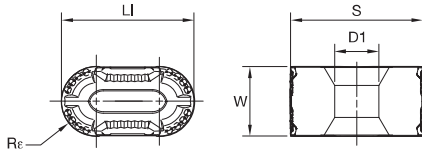
■ Features and Benefits



- The well performed RRF and RRP chipbreaker geometry with a full-radius design offers better chip control even at smaller DOC.

- first choice
- alternate choice

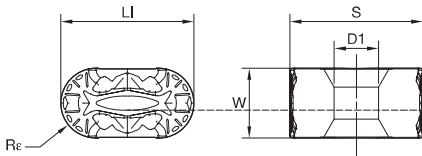
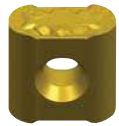
P	●	●
M	○	○
K	○	○
N	○	○
S	○	○
H	○	○



■ LNUX-RRF Full-Radius

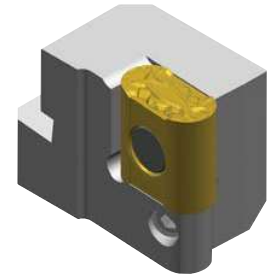
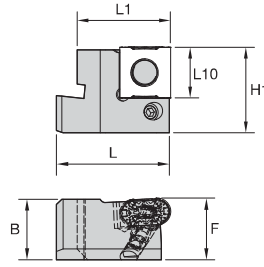
Application Specific

ISO catalogue number	W	LI	S	Re	D1	KCP10B	KCP25B
LNUX191950RRF	10,00	19,05	19,05	5,00	6,35	●	●



■ LNUX-RRP Full-Radius

ISO catalogue number	W	LI	S	Re	D1	KCP10B	KCP25B
LNUX191950RRP	10,00	19,05	19,05	5,00	6,35	●	●
LNUX301960RRP	12,00	30,00	19,05	6,00	6,35	●	●

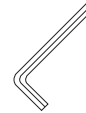


■ Cartridge WLJN

order number	catalogue number	H1	B	F	L10	L1	L	gage insert
6049016	WLJNL32CA19S	1.260	.890	.906	.750	1.38	1.681	LNUX191950RRP
6049018	WLJNL32CA30S	1.260	.890	.925	1.181	1.38	1.772	LNUX301960RRP
6049015	WLJNR32CA19S	1.260	.890	.906	.750	1.38	1.681	LNUX191950RRP
6049017	WLJNR32CA30S	1.260	.890	.925	1.181	1.38	1.772	LNUX301960RRP

Application Specific

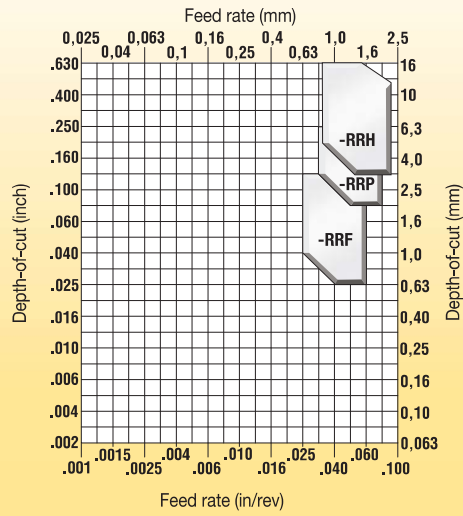
■ Spare Parts



catalogue number	clamp stud	clamp screw	hex wrench
WLJNL32CA19S	114.305	121.616	170.003
WLJNL32CA30S	114.305	121.616	170.003
WLJNR32CA19S	114.305	121.616	170.003
WLJNR32CA30S	114.305	121.616	170.003

■ **New Chipbreaking Geometry**

For Rail Wheel Machining — RRF



-RRH

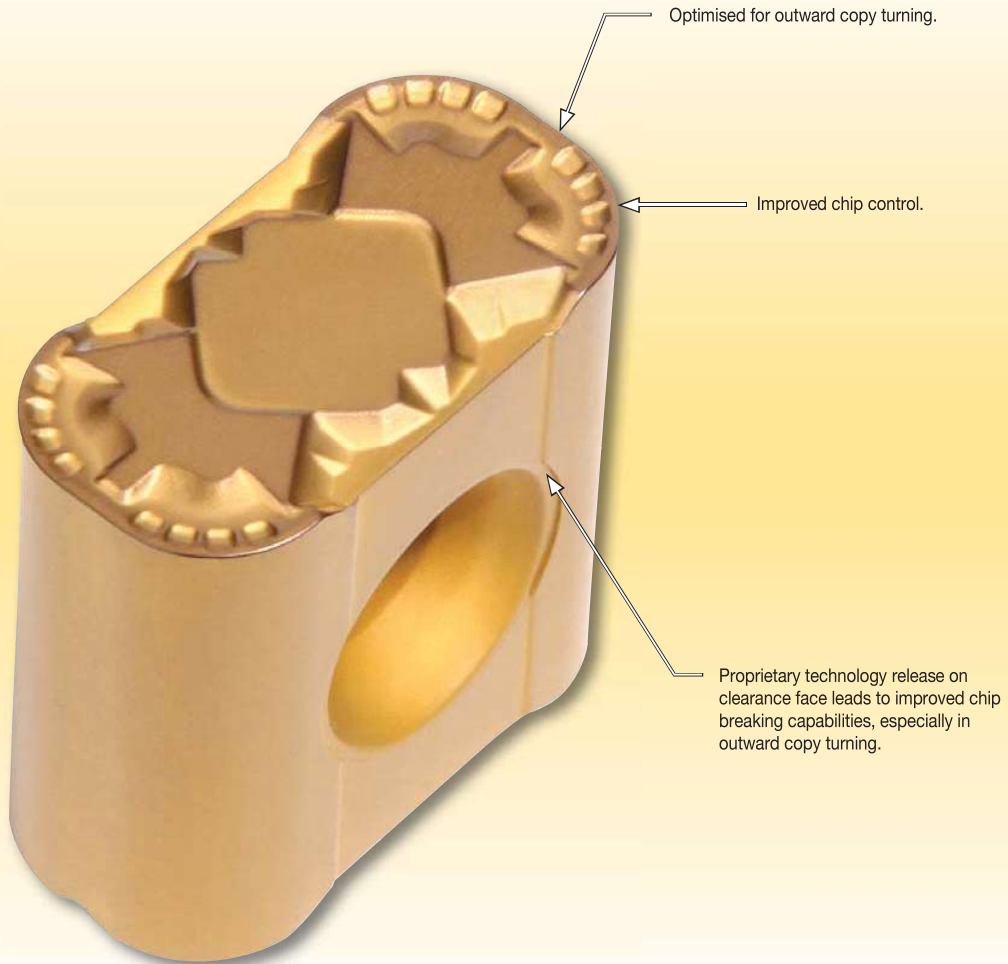


-RRP



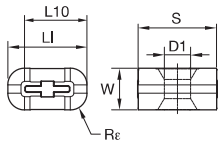
-RRF

■ **Small DOC Re-Profiling**



Kennametal stocks a complete line of standard inserts for wheel and axle machining. Inserts are available in various styles, sizes, and grades.

- **Wheel boring** — moulded chipbreaker inserts in round, square, octagon, and regrindable inserts.
- **Axle turning** — triangle- and diamond-shaped inserts with chipbreakers.
- **Wheel turning** — rectangular and square styles, with or without moulded chipbreakers.
- **Wheel truing** — round buttons with centre hole for locking.



- first choice
- alternate choice

■ LNUX-RRF

ISO catalogue number	W	LI	L10	S	Re	D1				
LNUX191940RRF	10,00	19,00	19,00	19,05	4,00	6,35	—	●	○	○
LNUX301940RRF	12,00	30,00	30,00	19,05	4,00	6,35	—	●	○	○

NOTE: Also available in KC9105™.

■ LNUX-RRH

ISO catalogue number	W	LI	L10	S	Re	D1				
LNUX191940RRH	10,00	19,00	19,00	19,05	4,00	6,35	—	●	○	○
LNUX301940RRH	12,00	30,00	30,00	19,05	4,00	6,35	—	●	○	○

NOTE: Also available in KC9105.

P	●	○	○	○
M	○	○	○	○
K	○	○	○	○
N	○	○	○	○
S	○	○	○	○
H	○	○	○	○

KCP10B	○	○	○	○
KCP10	○	○	○	○
KCP25B	○	○	○	○
KCP25	○	○	○	○

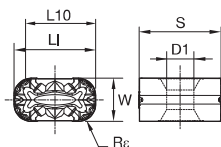
Application Specific

Kennametal stocks a complete line of standard inserts for wheel and axle machining. Inserts are available in various styles, sizes, and grades.

- **Wheel boring** — moulded chipbreaker inserts in round, square, octagon, and regrindable inserts.
- **Axle turning** — triangle- and diamond-shaped inserts with chipbreakers.
- **Wheel turning** — rectangular and square styles, with or without moulded chipbreakers.
- **Wheel truing** — round buttons with centre hole for locking.

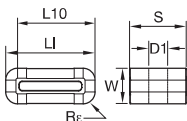
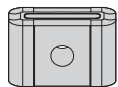


Application Specific



■ LNUX-RRP

ISO catalogue number	W	LI	L10	S	Re	D1				
LNUX191940RRP	10,00	19,00	19,00	19,05	4,00	6,35	-	•	-	-
LNUX301940RRP	12,00	30,00	30,00	19,05	4,00	6,35	-	-	-	•



■ LNUX-RRSM

ISO catalogue number	W	LI	L10	S	Re	D1				
LNUX191940RRSM	10,00	19,00	19,00	19,05	4,00	6,35	-	-	-	-
LNUX301940RRSM	12,00	30,00	30,00	19,05	4,00	6,35	•	-	-	-

NOTE: Also available in KC9105™.

- first choice
- alternate choice

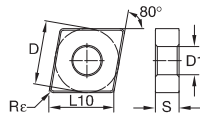
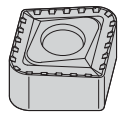
P	•	•	•	•
M	•	•	•	•
K	○	○	○	○
N	•	•	•	•
S	•	•	•	•
H	•	•	•	•

KCP10B
KCP10
KCP25B
KCP25

KCP10B
KCP10
KCP25B
KCP25

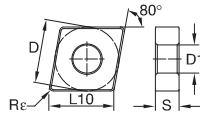
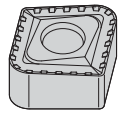
Kennametal stocks a complete line of standard inserts for wheel and axle machining. Inserts are available in various styles, sizes, and grades.

- **Wheel boring** — moulded chipbreaker inserts in round, square, octagon, and regrindable inserts.
- **Axle turning** — triangle- and diamond-shaped inserts with chipbreakers.
- **Wheel turning** — rectangular and square styles, with or without moulded chipbreakers.
- **Wheel truing** — round buttons with centre hole for locking.



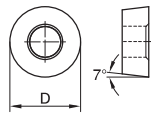
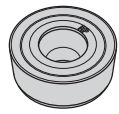
■ CNMM-RRP

ISO catalogue number	L10	S	Rε	D1	KCP10B	KCP10	KCP25B	KCP25
CNMM190740RRP	19,34	7,94	4,00	7,93	●	-	-	-



■ LNUX-WT5

ISO catalogue number	L10	S	Rε	D1	KCP10B	KCP10	KCP25B	KCP25
LNUX191940S-WT5	19,05	19,05	4,00	6,35	-	-	●	-
SNMX190640S-WT5	19,05	6,35	4,00	6,35	-	-	●	-



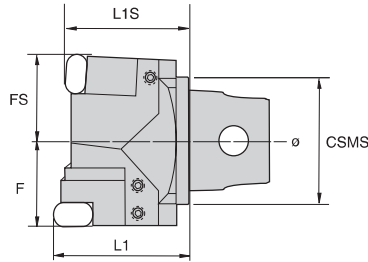
■ RCMX

ISO catalogue number	L10	S	Rε	D1	KCP10B	KCP10	KCP25B	KCP25
RCMX2507M076	-	7,94	-	7,40	-	-	●	-

● first choice
○ alternate choice

P	●	●	●	●
M	●	●	●	●
K	●	●	●	●
N	●	●	●	●
S	●	●	●	●
H	●	●	●	●

Application Specific



■ TK

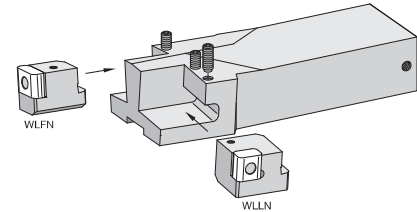


Application Specific

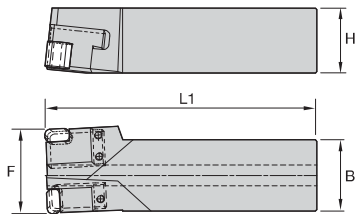
order number	catalogue number	CSMS system size	F	FS	L1	L1S
1781755	TK01338D	KM63	42,50	42,50	66,00	60,00
1781756	TK01339D	KM63	42,50	42,50	66,00	60,00

Assembly Instructions

basic/KM shank	cartridge WLLN..	cartridge WLFN..
right	right	left
left	left	right

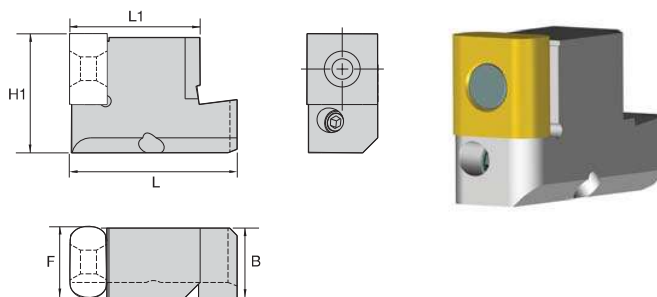


Assembly of complete tool



■ Basic Shank WXXN

order number	catalogue number	H		B		F assembly		L1 assy		clamp screw
		mm	in	mm	in	mm	in	mm	in	
1251261	WXXNL4455X-FL	50,00	1.969	55,00	2.165	65,00	2.559	210,00	8.268	PT00163
1251262	WXXNR4455X-FL	50,00	1.969	55,00	2.165	65,00	2.559	210,00	8.268	PT00163



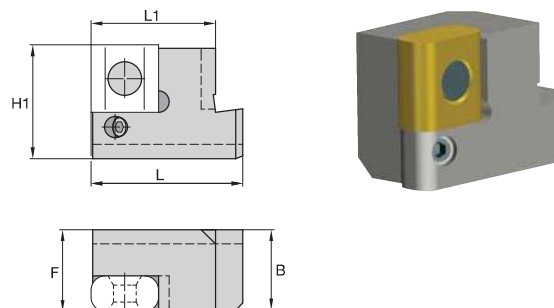
■ Cartridge WLFN

order number	catalogue number	H1	B	F	L1	L	insert 1
2435188	WLFNL32CA19S	32,00	18,60	19,00	35,00	42,70	LNUX191940...
2435187	WLFNR32CA19S	32,00	18,60	19,00	35,00	42,70	LNUX191940...

■ Spare Parts

catalogue number	clamp stud	clamp screw	hex wrench
WLFNL32CA19S	114.305	121.616	170.003
WLFNR32CA19S	114.305	121.616	170.003

■ Cartridge WLLN



order number	catalogue number	H1	B	F	L1	L	insert 1
2435184	WLLNL32CA19S	32,00	22,60	23,00	35,00	42,70	LNUX191940...
2435186	WLLNL32CA30S	32,00	22,60	23,00	35,00	42,70	LNUX301940...
2435183	WLLNR32CA19S	32,00	22,60	23,00	35,00	42,70	LNUX191940...
2435185	WLLNR32CA30S	32,00	22,60	23,00	35,00	42,70	LNUX301940...

■ Spare Parts

catalogue number	clamp stud	clamp screw	hex wrench
WLLNL32CA19S	114.305	121.616	170.003
WLLNL32CA30S	114.305	121.616	170.003
WLLNR32CA19S	114.305	121.616	170.003
WLLNR32CA30S	114.305	121.616	170.003

➤ Wheel and Wheelset Truing with **Beyond™** RU and UP Geometries

Kennametal tooling incorporates the latest technology for maximum metal removal and higher productivity. Standard off-the-shelf inserts and fewer pieces of hardware reduce inventory and operating costs. These tools are for reconditioning mounted wheel sets, wheel boring, wheel truing, axle turning, and journal burnishing.




Features and Benefits

Advantages of Kennametal Wheel Lathe Tools

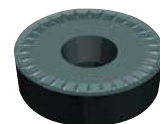
- Heavy-duty steel locking unit.
- No top clamp to wear out or interfere with chip flow.
- Hardened-steel locking unit prevents insert movement.
- Quick removal of the steel locking unit.
- Fast trouble-free insert indexing.
- Withstand severe roughing cuts on work-hardened wheels.

Achieve superior results while lowering production time and maintenance costs in these tough conditions:

- Skid flat areas.
- Accidental torch burns.
- Overheating of spinning wheels.
- Excessive mushroom and rollovers that are hardened by unusual hump retarder pressure.
- Mismatched wheels that cause excessive wear on the flange side.

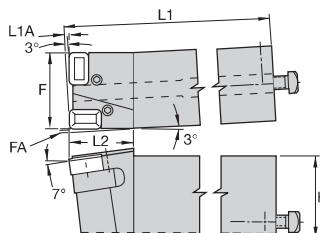
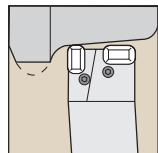


RU-Roughing Universal



UP-Universal Positive

- Fully automatic, heavy-duty wheel lathe with integrated measuring device to determine wheel set profile wear.
- Portal-type machine bed enables roll-through operation.
- Suitable for machining wheel sets for locomotives, transit, passenger, and freight cars.



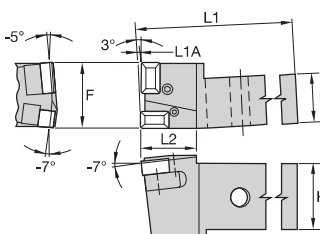
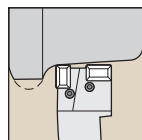
Application Specific

Tread Profile Truing

order number	catalogue number	H	F	L1	L2	FA	L1A	insert 1
1015754	HUWTCL	80,00	76,20	275,00	63,50	3,00	3,00	KRR6586__
1015723	HUWTCR	80,00	76,20	275,00	63,50	3,00	3,00	KRR6586__

NOTE: Requires two inserts.

- Maximum productivity at minimum operating costs.
- Fast insert indexing while tool is mounted in the tool block.
- Individual steel locking units make it easy to index and lock each insert.
- Gage location on tool, over insert, is held to +/- 0,08mm.
- No top clamp to wear out or interfere with chip flow.
- Replaceable steel locking unit protects toolholder from damage.
- Improved inserts with chip control.



Wheel Tread Contouring

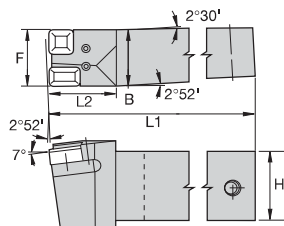
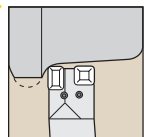
order number	catalogue number	H	B	F	L1	L2	L1A	insert 1
1015688	FUWTCL	76,20	57,15	76,20	254,00	66,55	3,05	KRR6586__
1015687	FUWTCR	76,20	57,15	76,20	254,00	66,55	3,05	KRR6586__

NOTE: Requires two inserts.

- Maximum productivity at minimum operating costs.
- Fast insert indexing tool mounted in tool block.
- Individual steel locking units make it easy to index and lock each insert.
- Minimum parts for lower inventory.
- No top clamp to wear out or interfere with chip flow.
- Replaceable steel locking unit protects toolholder from damage.
- Indexable inserts with pre-formed chipbreakers deliver chip control at optimum feeds and speeds.



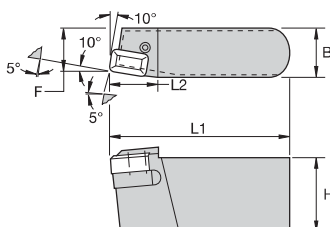
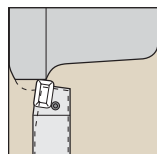
Application Specific



Wheel Tread Contouring

order number	catalogue number	H	B	F	L1	L2	insert 1
1015659	SUWTCL	76,20	57,15	57,15	254,00	66,55	KRR6586__
1015658	SUWTCR	76,20	57,15	57,15	254,00	66,55	KRR6586__

NOTE: Requires two inserts.



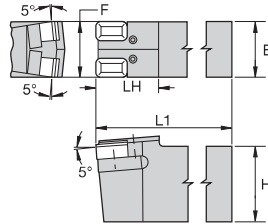
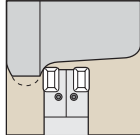
Wheel Flange Topping

order number	catalogue number	H	B	F	L1	L2	insert 1
1015690	NUFRL	63,50	41,28	36,53	152,40	39,62	KRR6586__
1015689	NUFRR	63,50	41,28	36,53	152,40	39,62	KRR6586__

- Maximum productivity at minimum operating costs.
- Fast insert indexing tool mounted in tool block.
- Individual steel locking units make it easy to index and lock each insert.
- Gage location on tool, over insert, is held to +/- 0,08mm.
- No top clamp to wear out or interfere with chip flow.
- Replaceable steel locking unit protects toolholder from damage.
- Indexable inserts with pre-formed chipbreakers deliver chip control at optimum feeds and speeds.



Simmons-Niles Wheel Turning Lathe



■ **Wheel Tread Contouring**

order number	catalogue number	H	B	F	L1	LH	insert 1	steel locking unit	lock screw
1015684	NUWTC	76,20	57,15	57,15	412,75	95,25	KRR6586_	SU3	S1006PKG

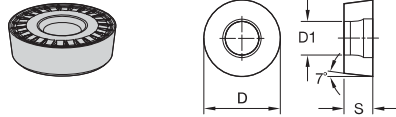
NOTE: Requires two inserts.



Application Specific

P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

● first choice
○ alternate choice

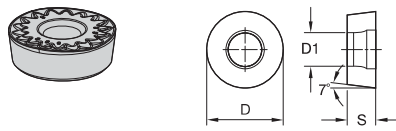


■ RCMH-UPG

ISO catalogue number	D	D1	S	KCK15B	KCK20	KCP10	KCP10B	KCP25	KCP25B	KCPK05	KCU10
RCMH2507M0TUPG	25	7,55	7,94	-	-	-	●	-	●	-	-
RCMH3209M0TUPG	32	10,35	9,52	-	-	-	●	-	●	-	-

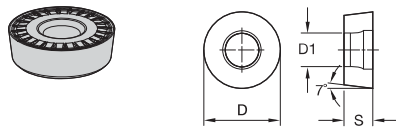


Application Specific



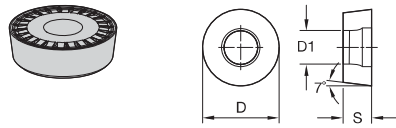
■ RCMH-RU

ISO catalogue number	D	D1	S	KCK15B	KCK20	KCP10	KCP10B	KCP25	KCP25B	KCPK05	KCU10
RCMH2507M0RU	25	7,55	7,94	-	-	-	-	●	-	-	-
RCMH3209M0RU	32	10,35	9,53	-	-	-	-	●	-	-	-



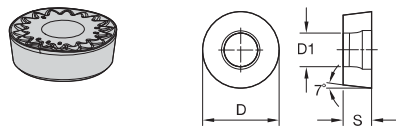
■ RCMT-UPG

ISO catalogue number	D	D1	S	KCK15B	KCK20	KCP10	KCP10B	KCP25	KCP25B	KCPK05	KCU10
RCMT1606M0UPG	16	5,50	6,35	●	-	-	●	-	●	●	-
RCMT2006M0UPG	20	6,50	6,35	●	-	-	●	-	●	●	-



■ RCMX-UPG

ISO catalogue number	D	D1	S
RCMX2507M0TUPG	25	7,19	7,94
RCMX3209M0TUPG	32	9,78	9,52



■ RCMX-RU

ISO catalogue number	D	D1	S
RCMX2507M0RU	25	7,19	7,94
RCMX3209M0RU	32	9,78	9,53

● first choice
○ alternate choice

P	M	K	N	S	H	KCK15B	KCK20	KCP10	KCP10B	KCP25	KCP25B	KCPK05	KCU10
○	○	○	○	○	○	-	-	-	●	-	●	-	-
○	○	○	○	○	○	-	-	-	●	-	●	-	-
○	○	○	○	○	○	-	-	-	●	-	●	-	-
○	○	○	○	○	○	-	-	-	●	-	●	-	-
○	○	○	○	○	○	-	-	-	●	-	●	-	-
○	○	○	○	○	○	-	-	-	●	-	●	-	-



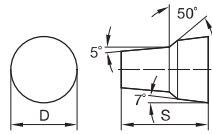
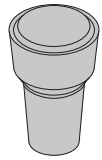
Application Specific

> K-Lock™ Inserts

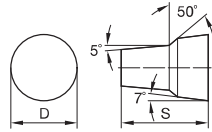


Features and Benefits

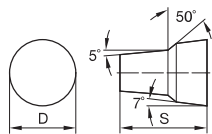
- K-Lock inserts are ideal for deep grooving and profiling.
- A unique insert clamping system enables unimpeded chip flow.
- Available in moulded and ground peripheries.


RCGK-FS

ISO catalogue number	D	S	K68	KCU10	KCU25	KC5010	KC5025	KC5410
RCGK040300FS	4,76	6,38	-	•	-	-	-	-
RCGK060400FS	6,35	9,09	-	•	-	-	-	-
RCGK090700FS	9,53	13,23	-	•	-	•	-	-
RCGK120800FS	12,70	16,61	-	•	-	-	-	-


RCGK-HP

ISO catalogue number	D	S	K68	KCU10	KCU25	KC5010	KC5025	KC5410
RCGK040300HP	4,76	6,38	-	•	-	-	-	-
RCGK060400HP	6,35	9,09	-	•	-	-	-	-
RCGK090700HP	9,53	13,23	-	•	-	-	•	-
RCGK120800HP	12,70	16,61	-	•	-	-	•	-


RCMK

ISO catalogue number	D	S	K68	KCU10	KCU25	KC5010	KC5025	KC5410
RCMK040300	4,76	6,38	-	•	-	-	-	-
RCMK060400	6,35	9,09	-	•	-	-	-	-
RCMK090700	9,53	13,23	-	•	-	•	-	-
RCMK120800	12,70	16,61	-	•	-	-	-	-

• first choice
 ○ alternate choice

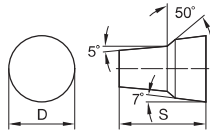
P	○	○	○	○	○	○	○	○
M	○	○	○	○	○	○	○	○
K	○	○	○	○	○	○	○	○
N	•	○	○	○	○	○	○	○
S	•	•	•	•	•	•	•	•
H	•	•	•	•	•	•	•	•



Application Specific

- Medium geometry with positive rake face for chip control in difficult materials.

- first choice
- alternate choice



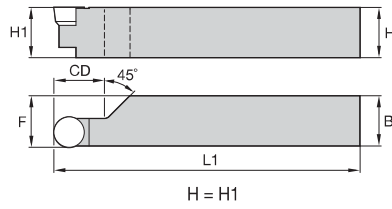
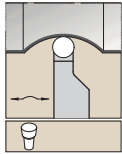
P							
M		•	•	•	•		
K							
N						•	
S	•	•	•	•	•	•	
H							



RCMK-MP

Application Specific

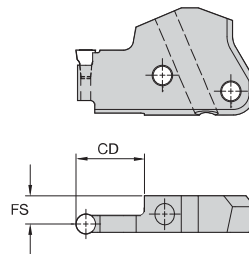
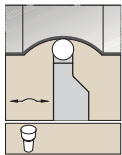
ISO catalogue number	D	L10	R _ε	K68	KCU10	KCU25	KC5010	KC5025	KC5410	KCS10
RCMK060400MP	6,35	—	—	—	—	—	—	—	—	•
RCMK090700MP	9,53	—	—	—	—	—	—	—	—	•
RCMK120800MP	12,70	—	—	—	—	—	—	—	—	•


TRAO

catalogue number	H1	B	F	L1	CD	gage insert
right hand						
TRAOR2525M04	25	25	25,4	150	20	RC..040300
TRAOR2525M06	25	25	25,5	150	20	RC..060400
TRAOR3225P06	32	25	25,5	170	20	RC..060400
left hand						
TRAOL2525M06	25	25	25,5	150	20	RC..060400

Application Specific

Modular Blades


TRM

catalogue number	CD	FS	cartridge size	gage insert
right hand				
TRM50R0432M	32	9,62	50	RCMK152
TRM50R0620M	19	8,98	50	RCMK23
TRM50R0632M	32	8,98	50	RCMK-23
TRM50R0640M	38	8,98	50	RCGK23
TRM50R0720M	19	8,42	50	RCMK-2.55
TRM50R0920M	19	7,64	50	RC_K35
TRM50R0932M	32	7,65	50	RCMK-35
TRM50R0940M	38	7,64	50	RC_K35
TRM50R0950M	50	7,65	50	RCMK-35
left hand				
TRM50L0432M	32	9,62	50	RCMK152
TRM50L0620M	19	8,98	50	RCMK23
TRM50L0632M	32	8,98	50	RCMK-23
TRM50L0640M	38	8,98	50	RCGK23
TRM50L0920M	19	7,64	50	RC_K35
TRM50L0932M	32	7,65	50	RCMK-35
TRM50L0950M	50	7,65	50	RCMK-35