

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 in tooling technology for maximum metal removal and higher productivity. All tools 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.



DISTRIBUIDOR AUTORIZADO

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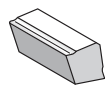
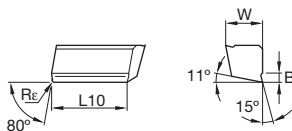
Kendex™ Mini Boring Bars

Primary Application

Ground inserts in their neutral position and the precision insert pocket combine to ensure superior surface finishes. The unique system design protects the second cutting edge from damage while the first edge is in operation.

Features and Benefits

- Kendex mini boring bars are specially designed to finish bore diameters as small as .250".
- Kendex mini inserts contain two precision ground cutting edges.
- Inserts are available in uncoated and PVD coated grades.

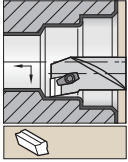

BPGF

 ● first choice
 ○ alternate choice

P	●	○
M	●	○
K	○	○
N	●	○
S	●	○
H	○	○

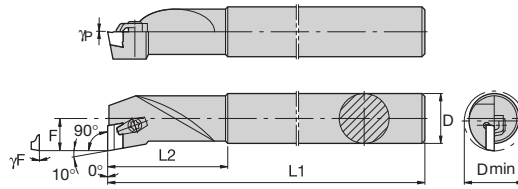
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left hand BPGF050302R12	BPGF050302R	4,50	.177	2,50	.098	0,20	.008	1,20	.047	●	●
BPGF030201L14	BPGF030201L	3,00	.118	2,00	.079	0,05	.002	1,40	.055	●	●
BPGF030202L14	BPGF030202L	3,00	.118	2,00	.079	0,20	.008	1,40	.055	●	●
BPGF050301L12	BPGF050301L	4,50	.177	2,50	.098	0,05	.002	1,20	.047	●	●
BPGF050302L12	BPGF050302L	4,50	.177	2,50	.098	0,20	.008	1,20	.047	●	●
BPGF050304L16	BPGF050304L	4,50	.177	2,50	.098	0,40	.016	1,60	.063	●	●
BPGF070304L18	BPGF070304L	7,00	.276	2,50	.098	0,40	.016	1,80	.071	●	●
BPGF080404L22	BPGF080404L	8,00	.315	4,00	.157	0,40	.016	2,20	.087	●	●



Application Specific



Steel shank without through coolant.

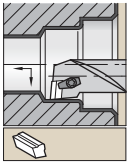


■ **S-KBFP 0°**

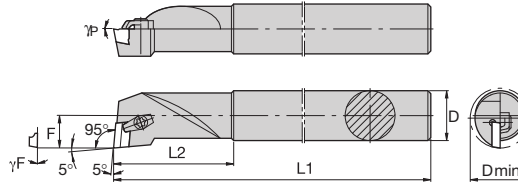
catalog number	D	D min	F	L1	L2	γF°	γP°	gage insert	clamp assembly	wrench size clamp screw
right hand										
S04KBFP03	.250	.250	.128	2.375	.625	0.0	0.0	BP..030202L	CE1031	T6
S04KBFP05	.250	.315	.177	2.375	.625	0.0	0.0	BP..050302L	CE1014	T8
S05KBFP05	.313	.394	.216	3.125	.750	0.0	0.0	BP..050302L	CE1014	T8



Application Specific



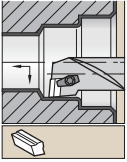
Steel Shank without through coolant.



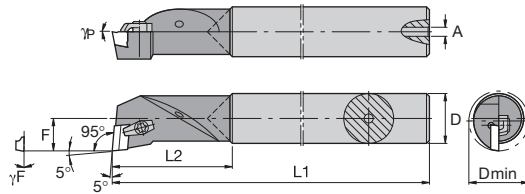
■ **S-KBLP -5°**

catalog number	D	D min	F	L1	L2	γF°	γP°	gage insert	clamp assembly	wrench size clamp screw
right hand										
S04KBLPR03	.250	.250	.128	2.375	.625	0.0	0.0	BP..030202L	CE1031	T6
S04KBLPR05	.250	.315	.177	2.375	.625	0.0	0.0	BP..050302L	CE1014	T8
S05KBLPR05	.313	.394	.216	3.125	.750	0.0	0.0	BP..050302L	CE1014	T8
left hand										
S04KBLPL03	.250	.250	.128	2.375	.625	0.0	0.0	BP..030202R	CE1031	T6
S04KBLPL05	.250	.315	.177	2.375	.625	0.0	0.0	BP..050302R	CE1014	T8
S05KBLPL05	.313	.394	.216	3.125	.750	0.0	0.0	BP..050302R	CE1014	T8





Carbide shank with through coolant.



■ E-KBLP -5°



catalog number	D	D min	F	L1	L2	A	γF°	γP°	gage insert	clamp assembly	wrench size clamp screw
right hand											
E04KBLPR03	.250	.250	.128	3.938	1.220	.06	0.0	0.0	BP..030202L	CE1031	T6
E04KBLPR05	.250	.315	.177	3.938	.630	.06	0.0	0.0	BP..050302L	CE1014	T8
E05KBLPR05	.313	.394	.216	4.922	.787	.08	0.0	0.0	BP..050302L	CE1014	T8
left hand											
E04KBLPL05	.250	.315	.177	3.938	.630	.06	0.0	0.0	BP..050302R	CE1014	T8
E05KBLPL05	.313	.394	.216	4.922	.787	.08	0.0	0.0	BP..050302R	CE1014	T8



Application Specific

Wheel Reprofilng/Wheelset Truing

Primary Application

Kennametal offers a complete line of tooling for wheel and axle maintenance in railroad shops. All tools incorporate the latest in tooling technology for maximum metal removal and higher productivity. All tools 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.

Features and Benefits

Versatility

Included in the new expanded line are tools for reconditioning mounted wheel sets, wheel boring, wheel turning, wheel truing, axle turning, and journal burnishing.

Advantages

Machining conditions for these tools vary with the type of service the wheel has seen. Among the problems encountered are skid flat areas, overheating of spinning wheels, accidental torch burns, excessive mushroom and rollovers that are hardened by unusual hump retarder pressure and mismatched wheels that cause excessive wear on the side of the flange. Each of these conditions require a different machining speed and depth of cut. Even under these tough conditions, Kennametal tools have produced superior results through reduced production time and lower maintenance costs.

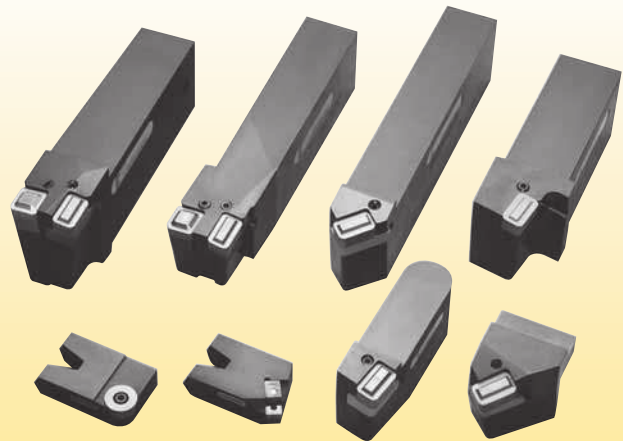


■ Wheel Lathe Tooling

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 Kennametal's grade selection delivers higher wheel turning productivity.



■ Wheelset Reconditioning

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.



LINUX-RRH



LINUX-RRP



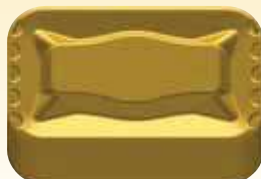
KRR6586-71



KRR6586-75



LINUX-RRSM



KRR6586-65

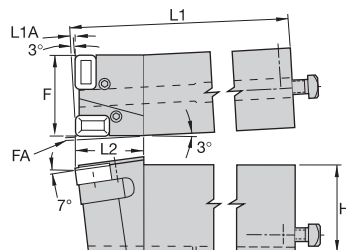
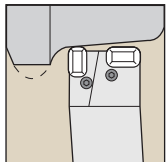


KRR6586-52



KRR6586-50

- Portal-type wheel lathe is a fully automatic, heavy-duty wheel lathe. An integrated measuring device determines wheel set profile wear to establish minimum stock removal.
- The portal-type machine bed enables roll-through operation.
- This tooling is suitable for economical machining of wheel sets for locomotives, transit, passenger, and freight cars.



Tread Profile Turning

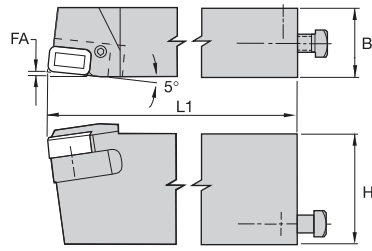
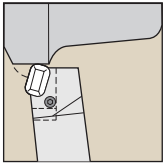
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		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
1015754	HUWTCL	80,00	3.150	76,20	3.000	275,00	10.827	63,50	2.500	3,00	.118	3,00	.118	KRR6586__
1015723	HUWTCR	80,00	3.150	76,20	3.000	275,00	10.827	63,50	2.500	3,00	.118	3,00	.118	KRR6586__

Spare Parts

catalog number	shim	shim	lock screw	cup point socket set screw	brass plug	heavy-duty clamp screw
HUWTCL	SU7	SU8	S1006PKG	S751	S1033	S1014
HUWTCR	SU6	SU8	S1006PKG	S751	S1033	S1014

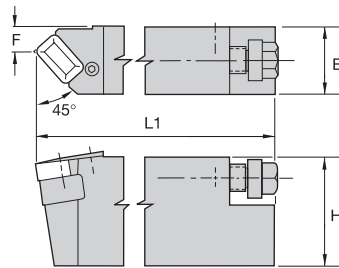
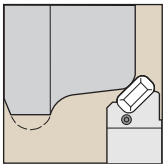
NOTE: Requires two inserts.
See page F84 for insert selection.

Application Specific



■ Flange Topping

order number	catalog number	H		B		L1		FA		insert 1
		mm	in	mm	in	mm	in	mm	in	
1015755	HUWFTR	80,00	3.150	50,00	1.969	265,00	10.433	3,53	.139	KRR6586_
1015756	HUWFTL	80,00	3.150	50,00	1.969	265,00	10.433	3,53	.139	KRR6586_



■ Mushroom Removal

order number	catalog number	H		B		F		L1		insert 1
		mm	in	mm	in	mm	in	mm	in	
1015685	HUMRR	80,00	3.150	50,00	1.969	19,50	.768	265,00	10.433	KRR6586_
1015686	HUMRL	80,00	3.150	50,00	1.969	19,50	.768	265,00	10.433	KRR6586_

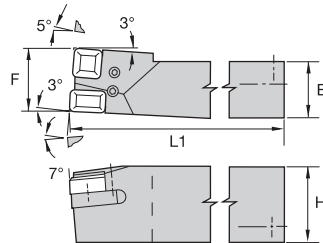
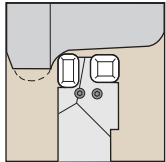
NOTE: See page F84 for insert selection.

Application Specific

- Tools and inserts are specifically designed for the feeds and speeds normally used on this type of lathe.
- Style HUTC is used for profiling the tread contours on the wheel, and style HUFT is used for normal flange topping.
- For heavy flange topping it may be necessary to use two flange-topping tools, styles HUFT-A and HUFT-B.



Hegenscheidt Portal-Type Wheel Lathe

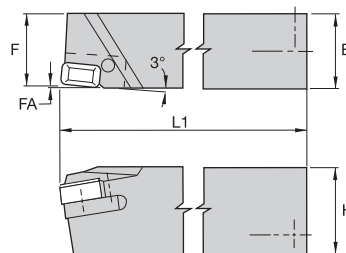
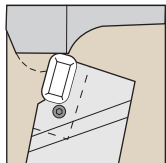


Tread Profile Turning

order number	catalog number	H		B		F		L1		insert 1	insert 2
		mm	in	mm	in	mm	in	mm	in		
1015757	HUTCR	69,85	2.750	50,00	1.969	57,15	2.250	275,00	10.827	KRR6586_	KRR86650
1015758	HUTCL	69,85	2.750	50,00	1.969	57,15	2.250	275,00	10.827	KRR6586_	KRR86650

NOTE: Requires 2 inserts.

Application Specific



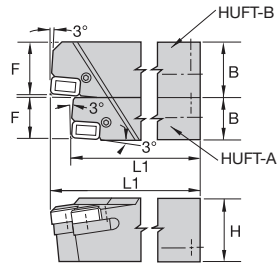
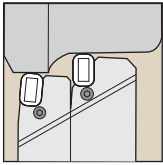
Flange Topping

order number	catalog number	H		B		F		L1		FA		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	
1015717	HUFTR	69,85	2.750	60,00	2.362	58,17	2.290	250,00	9.843	1,70	.067	KRR6586_
1015718	HUFTL	69,85	2.750	60,00	2.362	58,17	2.290	250,00	9.843	1,70	.067	KRR6586_

Spare Parts

catalog number	steel locking unit	cone point screw	optional set screw	optional brass slug	optional square head bolt
HUFTR	SU2	S1006PKG	S1015	S1033	S1014
HUFTL	SU3	S1006PKG	S1015	S1033	S1014

NOTE: See page F84 for insert selection.



■ Heavy Flange Topping

order number	catalog number	H		B		F		L1		insert 1
		mm	in	mm	in	mm	in	mm	in	
1015719	HUFTRA	69,85	2.750	47,00	1.850	45,21	1.780	228,60	9.000	KRR6586__
3385736	HUFTRB	69,85	2.750	60,00	2.362	55,12	2.170	250,00	9.843	KRR6586__
3385735	HUFTLA	69,85	2.750	47,00	1.850	45,21	1.780	228,60	9.000	KRR6586__
3385737	HUFTLB	69,85	2.750	60,00	2.362	55,12	2.170	250,00	9.843	KRR6586__

NOTE: See page F84 for insert selection.

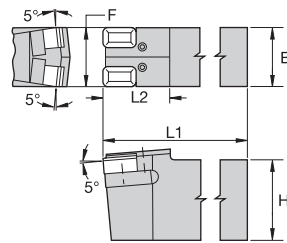
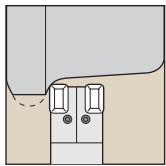


Application Specific

- Delivers maximum productivity at minimum operating costs.
- Fast insert indexing is possible with the tool mounted in the tool block.
- Individual steel locking units make it easy to index and lock each insert separately.
- Gage location on tool, over insert, is held to +/- .003" (0,08mm).
- No top clamp is used so it won't 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

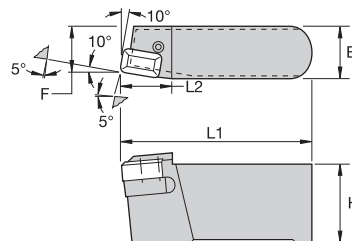
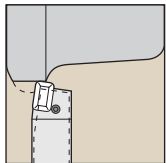


Wheel Tread Contouring

Application Specific

order number	catalog number	H		B		F		L1		L2		insert 1	steel locking unit	lock screw
		mm	in	mm	in	mm	in	mm	in	mm	in			
1015684	NUWTC	76,20	3.000	57,15	2.250	57,15	2.250	412,75	16.250	95,25	3.750	KRR6586__	SU3	S1006PKG

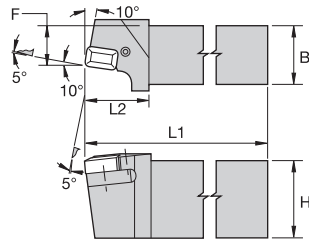
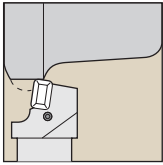
NOTE: Requires two inserts.
See page F84 for insert selection.



Wheel Flange Topping

order number	catalog number	H		B		F		L1		L2		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	
1015689	NUFRR	63,50	2.500	41,28	1.625	36,53	1.438	152,40	6.000	39,62	1.560	KRR6586__
1015690	NUFRL	63,50	2.500	41,28	1.625	36,53	1.438	152,40	6.000	39,62	1.560	KRR6586__

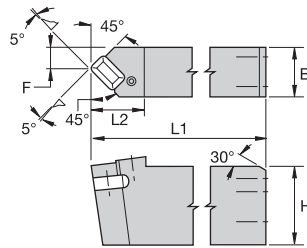
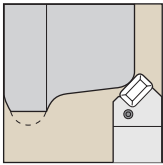
NOTE: See page F84 for insert selection.



■ Wheel Flange Roughing

order number	catalog number	H		B		F		L1		L2		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	
1015693	NUFRAR	76,20	3.000	57,15	2.250	38,10	1.500	212,85	8.380	63,50	2.500	KRR6586_
1015714	NUFRAL	76,20	3.000	57,15	2.250	38,10	1.500	212,85	8.380	63,50	2.500	KRR6586_

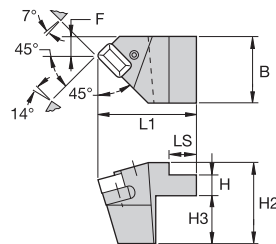
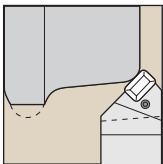
NOTE: See page F84 for insert selection.



■ Mushroom Removal

order number	catalog number	H		B		F		L1		L2		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	
3385765	NUMRAR	76,20	3.000	47,63	1.875	19,51	.768	311,15	12.250	50,80	2.000	KRR6586_
3385766	NUMRAL	76,20	3.000	47,63	1.875	19,51	.768	311,15	12.250	50,80	2.000	KRR6586_

NOTE: See page F84 for insert selection.



■ Mushroom Removal

order number	catalog number	H		H2		H3		B		F		L1		LS		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
3385767	NUMRR	19,05	.750	76,20	3.000	45,21	1.780	63,50	2.500	19,05	.750	93,52	3.682	25,40	1.000	KRR6586_
3385768	NUMRL	19,05	.750	76,20	3.000	45,21	1.780	63,50	2.500	19,05	.750	93,52	3.682	25,40	1.000	KRR6586_

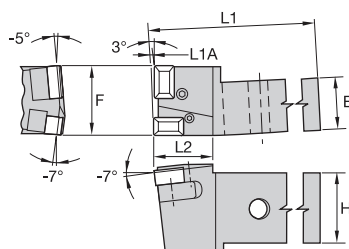
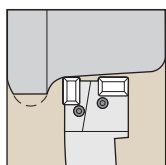
NOTE: See page F84 for insert selection.

Application Specific

- Delivers maximum productivity at minimum operating costs.
- Fast insert indexing is possible with the tool mounted in the tool block.
- Individual steel locking units make it easy to index and lock each insert separately.
- Gage location on tool, over insert, is held to +/- .003" (0,08mm).
- No top clamp is used to wear out or interfere with chip flow.
- Replaceable steel locking unit protects toolholder from damage.
- Improved inserts with chip control are offered.



Simmons-Farrel CNC Portal Wheel Lathe



Application Specific

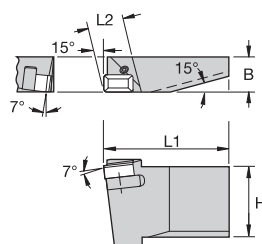
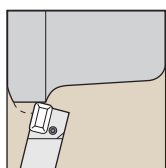
Wheel Tread Contouring

order number	catalog number	H		B		F		L1		L2		L1A		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
1015687	FUWTCR	76,20	3.000	57,15	2.250	76,20	3.000	254,00	10.000	66,55	2.620	3,05	.120	KRR6586_
1015688	FUWTCL	76,20	3.000	57,15	2.250	76,20	3.000	254,00	10.000	66,55	2.620	3,05	.120	KRR6586_

Spare Parts

catalog number	steel locking unit	steel locking unit	lock screw
FUWTCR	SU6	SU8	S1006PKG
FUWTCL	SU6	SU8	S1006PKG

NOTE: Requires two inserts.
See page F84 for insert selection.

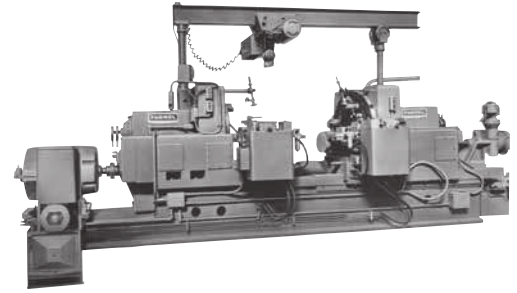


Wheel Flange Topping

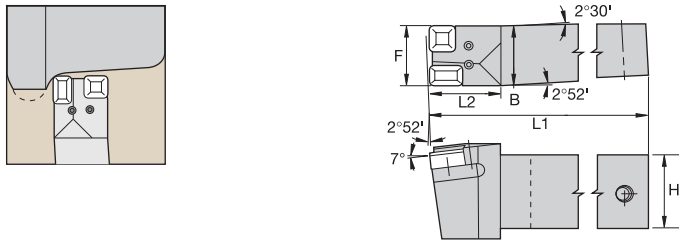
order number	catalog number	H		B		L1		L2		insert 1	steel locking unit	set screw
		mm	in	mm	in	mm	in	mm	in			
1015662	FUWFTR	76,20	3.000	38,10	1.500	133,35	5.250	38,10	1.500	KRR6586_	SU4	S1006PKG
1015663	FUWFTL	76,20	3.000	38,10	1.500	133,35	5.250	38,10	1.500	KRR6586_	SU4	S1006PKG

NOTE: See page F84 for insert selection.

- Delivers maximum productivity at minimum operating costs.
- Fast insert indexing is possible with the tool mounted in the tool block.
- Individual steel locking units make it easy to index and lock each insert separately.
- Minimum parts for lower inventory.
- No top clamp is used 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-Farrel (Sellers) Tracer Wheel Lathe



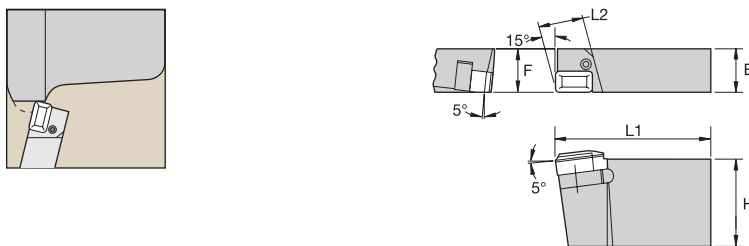
Wheel Tread Contouring

order number	catalog number	H		B		F		L1		L2		insert 1	insert 2
		mm	in	mm	in	mm	in	mm	in	mm	in		
1015658	SUWTCR	76,20	3.000	57,15	2.250	57,15	2.250	254,00	10.000	66,55	2.620	KRR6586__	KRR86650
1015659	SUWTCL	76,20	3.000	57,15	2.250	57,15	2.250	254,00	10.000	66,55	2.620	KRR6586__	KRR86650

Spare Parts

catalog number	shim	shim	cone point socket set screw	lock screw
SUWTCR	SU2	SU11	S939	S1006PKG
SUWTCL	SU3	SU10	S939	S1006PKG

NOTE: Requires two inserts.
See page F84 for insert selection.



Wheel Flange Topping

order number	catalog number	H		B		F		L1		L2		insert 1	steel locking unit	cone point set screw
		mm	in	mm	in	mm	in	mm	in	mm	in			
1864582	SUWFTR	76,20	3.000	38,10	1.500	38,10	1.500	133,35	5.250	37,72	1.485	KRR6586__	—	—
1015661	SUWFTL	76,20	3.000	38,10	1.500	38,10	1.500	133,35	5.250	37,72	1.485	KRR6586__	SU5	S1006PKG

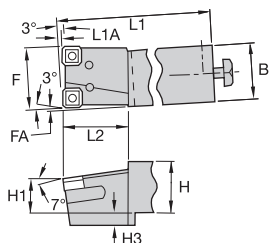
NOTE: See page F84 for insert selection.

Application Specific

- Kennametal tooling for underfloor wheel lathes features a steel sliding shim unit. The sliding shim unit holds the insert securely in the pocket, ensures easy insert indexing, and is simple and economical to replace.
- The insert used in these holders, KRR-6610, features improved chip control for safer and easier chip disposal.



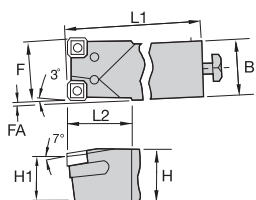
Hegenscheidt Underfloor Wheel Lathe



Model 104 Tread Profile Turning

order number	catalog number	H		H1		H3		B		F		L1		L2		FA		L1A		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
1015759	H104R55	49,91	1.965	31,88	1.255	12,00	.472	54,86	2.160	54,86	2.160	250,00	9.843	63,50	2.500	3,00	.118	3,00	.118	KRR6610
1015760	H104R60	49,91	1.965	31,88	1.255	12,00	.472	54,86	2.160	59,87	2.357	250,00	9.843	63,50	2.500	3,00	.118	3,00	.118	KRR6610
1015761	H104L55	49,91	1.965	31,88	1.255	12,00	.472	54,86	2.160	54,86	2.160	250,00	9.843	63,50	2.500	3,00	.118	3,00	.118	KRR6610
1015762	H104L60	49,91	1.965	31,88	1.255	12,00	.472	54,86	2.160	59,87	2.357	250,00	9.843	63,50	2.500	3,00	.118	3,00	.118	KRR6610

Application Specific



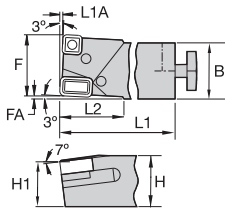
Model 106 Tread Profile Turning

order number	catalog number	H		H1		B		F		L1		L2		FA		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
3385769	H106R55	49,91	1.965	43,87	1.727	54,86	2.160	54,86	2.160	225,00	8.858	63,50	2.500	3,00	.118	KRR6610
1015763	H106R60	49,91	1.965	43,87	1.727	54,86	2.160	59,87	2.357	225,00	8.858	63,50	2.500	3,00	.118	KRR6610
3385770	H106L55	49,91	1.965	43,87	1.727	54,86	2.160	54,86	2.160	225,00	8.858	63,50	2.500	3,00	.118	KRR6610
1015784	H106L60	49,91	1.965	43,87	1.727	54,86	2.160	59,87	2.357	225,00	8.858	63,50	2.500	3,00	.118	KRR6610

Spare Parts

catalog number	steel locking unit	steel locking unit	cone point set screw	optional socket set screw	optional brass slug	optional square head bolt
H106R55	SU12	SU13	S1006PKG	S749	S1033	S1014
H106R60	SU12	SU13	S1006PKG	S749	S1033	S1014
H106L60	SU12	SU13	S1006PKG	S749	S1033	S1014
H106L60	SU12	SU13	S1006PKG	S749	S1033	S1014

NOTE: Requires two inserts.
See page F84 for insert selection.



■ Model 106 Tread Profile Turning • Carbide Shim

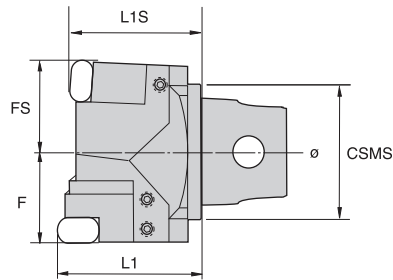
order number	catalog number	H		H1		B		F		L1		L2		FA		L1A		insert 1	insert 2
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
1015557	H106R60H	50,00	1.969	43,87	1.727	54,86	2.160	59,87	2.357	225,00	8.858	63,50	2.500	3,00	.118	3,00	.118	KRR658671	KRR6610
1015558	H106L60H	50,00	1.969	43,87	1.727	54,86	2.160	59,87	2.357	225,00	8.858	63,50	2.500	3,00	.118	3,00	.118	KRR658671	KRR6610

■ Spare Parts

catalog number	steel locking unit	cone point set screw	optional socket set screw	optional brass slug	optional square head bolt
H106R60H	SU6B	S1006PKG	S751	S1033	S1014
H106L60H	SU7B	S1006PKG	S751	S1033	S1014

NOTE: Requires two inserts.
See page F84 for insert selection.





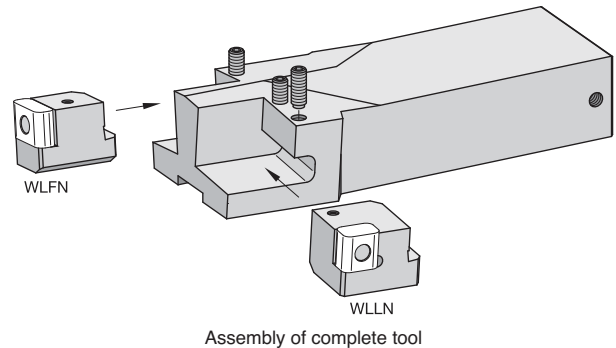
TK

order number	catalog number	CSMS system size	F		FS		L1		L1S	
			mm	in	mm	in	mm	in	mm	in
1781756	TK01339D	KM63	42,50	1.673	42,50	1.673	66,00	2.598	60,00	2.362
1781755	TK01338D	KM63	42,50	1.673	42,50	1.673	66,00	2.598	60,00	2.362

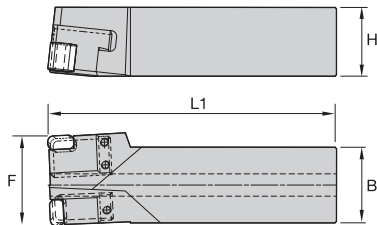
NOTE: See page F86 for insert selection.

Assembly Instructions

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



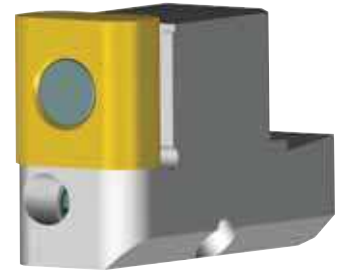
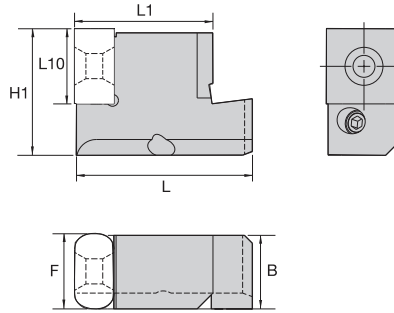
Application Specific



Basic Shank WXXN

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

NOTE: See page F86 for insert selection.



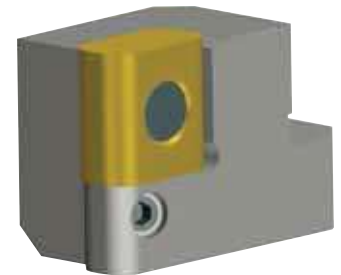
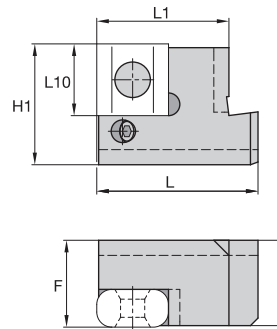
■ Cartridge WLFN

order number	catalog number	H1		B		F		L10		L1		L		gage insert
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
2435187	WLFNR32CA19S	32,00	1.260	18,60	.732	19,00	.748	19,00	.748	35,00	1.378	45,00	1.772	LNUX191940...
2435188	WLFNL32CA19S	32,00	1.260	18,60	.732	19,00	.748	19,00	.748	35,00	1.378	45,00	1.772	LNUX191940...

■ Spare Parts

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

NOTE: See page F86 for insert selection.



Application Specific

■ Cartridge WLLN

order number	catalog number	H1		B		F		L10		L1		L		gage insert
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
2435183	WLLNR32CA19S	32,00	1.260	22,60	.890	23,00	.906	19,00	.748	35,00	1.378	45,00	1.772	LNUX191940...
2435185	WLLNR32CA30S	32,00	1.260	22,60	.890	23,00	.906	30,00	1.181	35,00	1.378	45,00	1.772	LNUX301940...
2435184	WLLNL32CA19S	32,00	1.260	22,60	.890	23,00	.906	19,00	.748	35,00	1.378	45,00	1.772	LNUX191940...
2435186	WLLNL32CA30S	32,00	1.260	22,60	.890	23,00	.906	30,00	1.181	35,00	1.378	45,00	1.772	LNUX301940...

■ Spare Parts

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

NOTE: See page F86 for insert selection.

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

- **Wheel boring** — molded 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 molded chipbreakers.
- **Wheel truing** — round buttons with center hole for locking.



LINUX-RRH



WTS10P



LINUX-RRP



LINUX-RRSM



KRR6586-65



KRR6586-71



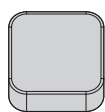
KRR6586-75



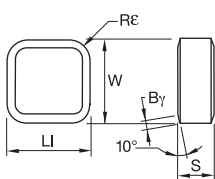
KRR6586-52



KRR6586-50



■ KRR-K



● first choice
○ alternate choice

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

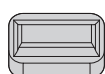
Application Specific

ISO catalog number
KRR16K

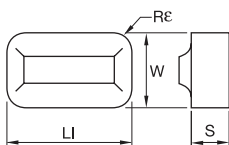
ANSI catalog number
KRR16K

W LI S Re D1 By

mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
25,40	1.000	25,40	1.000	9,53	3/8	4,76	3/16	—	—	0,76	.030	●	●



■ KRR-6566

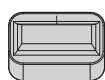


W LI S Re D1 By

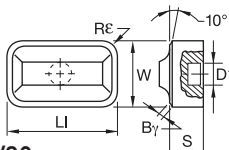
ISO catalog number
KRR6566

ANSI catalog number
KRR6566

mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
19,05	.750	31,75	1.250	9,53	3/8	4,76	3/16	—	—	—	—	●	●



■ KRR-6586-50/80



W LI S Re D1 By

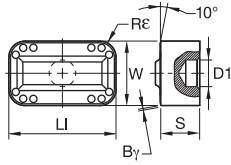
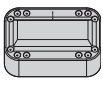
ISO catalog number
KRR658650
KRR658680

ANSI catalog number
KRR658650
KRR658680

mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020	●	●
19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020	●	●

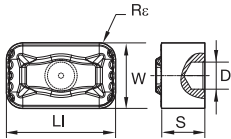
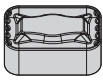
P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
K	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● first choice
○ alternate choice



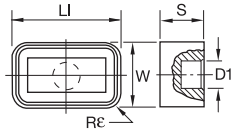
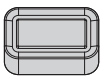
■ KRR-6586-52

ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in												
KRR658652	KRR658652	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020							●	●	●	●	●	



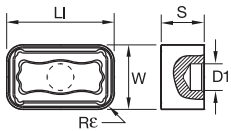
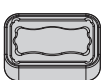
■ KRR-6586-65

ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in											
KRR658665	KRR658665	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	—	—											●



■ KRR-6586-71

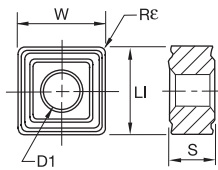
ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in											
KRR658671	KRR658671	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	—	—	●					●					



■ KRR-6586-75

ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in											
KRR4210R	KRR4210R	12,70	.500	12,70	.500	3,18	1/8	—	—	—	—	—	—		●									
KRR6566	KRR6566	19,05	.750	31,75	1.250	9,53	3/8	4,76	3/16	—	—	—	—	●										●
KRR658650	KRR658650	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020	●				●			●	●	●	●
KRR658652	KRR658652	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020	●							●	●	●	●
KRR658665	KRR658665	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	—	—								●	●	●	●
KRR658671	KRR658671	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	—	—	●					●				●	
KRR658680	KRR658680	19,05	.750	31,75	1.250	12,70	1/2	4,76	3/16	7,87	.310	0,51	.020						●		●			
KRR6610	KRR6610	19,05	.750	19,05	.750	9,53	3/8	4,00	5/32	7,87	.310	—	—	●									●	
KRR86650	KRR86650	25,40	1.000	25,40	1.000	9,53	3/8	4,76	3/16	7,87	.310	0,51	.020	●										

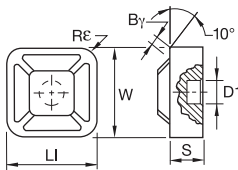
Application Specific



● first choice
○ alternate choice

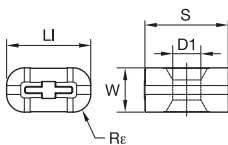
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M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
K	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in												
KRR6610	KRR6610	19,05	.750	19,05	.750	9,53	3/8	4,00	5/32	7,87	.310	—	—	●										●	



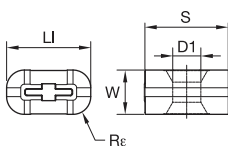
ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in												
KRR86650	KRR86650	25,40	1.000	25,40	1.000	9,53	3/8	4,76	3/16	7,87	.310	0,51	.020	●											

Application Specific



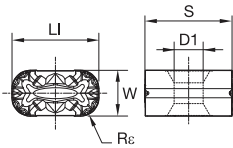
ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in												
LNUX191940RRF	LNUX191940RRF	10,00	.394	19,00	.748	19,05	3/4	4,00	5/32	6,35	.250	—	—				●	●							
LNUX301940RRF	LNUX301940RRF	12,00	.472	30,00	1.181	19,05	3/4	4,00	5/32	6,35	.250	—	—				●	●							

NOTE: Also available in KC9105.



ISO catalog number	ANSI catalog number	W		LI		S		Re		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in												
LNUX191940RRH	LNUX191940RRH	10,00	.394	19,00	.748	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●								
LNUX301940RRH	LNUX301940RRH	12,00	.472	30,00	1.181	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●								

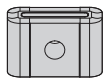
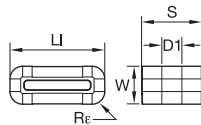
NOTE: Also available in KC9105.


LNUX-RRP


● first choice
○ alternate choice

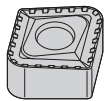
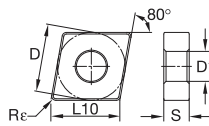
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K	●	●	●	●	●	●	●	●	●	●	●	●
N	●	●	●	●	●	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●	●	●	●	●	●
H	●	●	●	●	●	●	●	●	●	●	●	●

ISO catalog number	ANSI catalog number	W		LI		S		Rε		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in											
LNUX191940RRP	LNUX191940RRP	10,00	.394	19,00	.748	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●	●	●	●	●	●	●	●
LNUX301940RRP	LNUX301940RRP	12,00	.472	30,00	1.181	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●	●	●	●	●	●	●	●

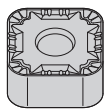
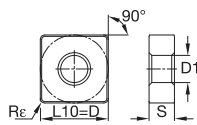

LNUX-RRSM


ISO catalog number	ANSI catalog number	W		LI		S		Rε		D1		By		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in											
LNUX191940RRSM	LNUX191940RRSM	10,00	.394	19,00	.748	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●	●	●	●	●	●	●	●
LNUX301940RRSM	LNUX301940RRSM	12,00	.472	30,00	1.181	19,05	3/4	4,00	5/32	6,35	.250	—	—	●	●	●	●	●	●	●	●	●	●	●

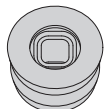
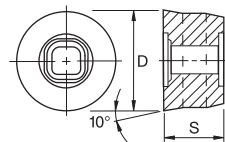
NOTE: Also available in KC9105™.


CNMM-RRP


ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
CNMM190740RRP	CNMM190740RRP	19,05	3/4	19,34	.762	7,94	5/16	4,00	5/32	7,93	.313	●	●	●	●	●	●	●	●	●	●	●	●


SNMX-RRP


ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
SNMX190640RRP	SNMX190640RRP	19,05	3/4	19,05	.750	6,350	1/4	4,000	5/32	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●


WTS-P


ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
WTS10P	WTS10P	15,82	.623	—	—	9,525	3/8	—	—	—	—	●	●	●	●	●	●	●	●	●	●	●	●

Application Specific

Kennametal Tools for Railways and Wheel Machining

Primary Application

Kennametal offers a complete line of tooling that incorporates the latest technology for maximum metal removal and higher productivity. All tools perform 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. Tools in this range are for reconditioning mounted wheel sets, wheel boring, wheel truing, axle turning and journal burnishing.

Features and Benefits

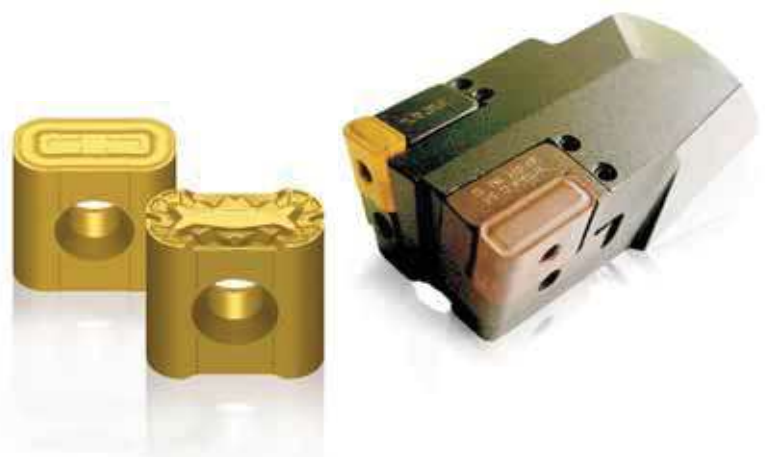
Machining conditions vary with the wheel's type of service. Reduced production time and lower maintenance costs produce superior results even under these tough conditions.

- 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 side of the flange.

Each of these conditions requires a different machining speed and depth of cut.

Advantages of Wheelset Reconditioning with Kennametal Wheel Lathe Tools.

- Heavy-duty steel locking unit ensures longer life and reduces operating costs.
- No top clamp to wear out or interfere with chip flow.
- Hardened-steel locking unit locks the insert against two walls in the toolholder to prevent insert movement under heavy cutting loads.
- Quick removal of the steel locking unit.
- Fast trouble free insert indexing.
- Made from heat-treated alloy steel to withstand severe roughing cuts on work-hardened wheels.



■ **L-Type Boring Bars**

Railroad wheels are wrought steel and cast steel made in a number of designs. Steel wheels are classified as multiple-wear, two-wear, or one-wear wheels.

Composition and specifications of wheels include Class A, a relatively low carbon steel wheel; Class L, a lower carbon content than Class A; Class B, an intermediate carbon steel; and Class C, a relatively high-carbon steel wheel.

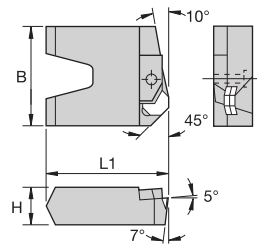
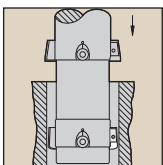


Kennametal provides L-type bar tooling to bore wheels to match journal sizes from 4 1/2" x 8" to 8" x 16".

- Tools are precision ground and hardened for maximum life.
- Lower profile permits use in L-type bars without modification.
- Fast insert indexing reduces tool changing downtime.
- Enables free cutting action at higher feed rates.
- Delivers good chip control under a wide range of conditions.
- Inserts are available in both coated and uncoated grades.
- Kennametal also provides cartridges to fit Kennametal-supplied bars to run on CNC boring machines.
- Most bars and cartridges are supplied as specials per machine manufacturers' specifications.

Application Specific

- Uses OPG-524 positive rake, octagonal inserts for free cutting action while finish boring.
- Tool positions the insert parallel to the bore in the operation.
- Consistently produces bore finishes to specifications.
- Inserts have eight indexable cutting edges.
- Available in 11 sizes to fit L-type boring bars.

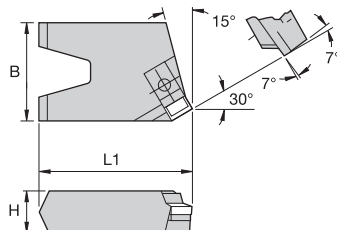
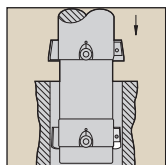


■ **OWF-Style Tools for Roughing**

order number	catalog number	min wheel bore		H		B		L1		journal size	insert 1	shim	shim screw	clamp	clamp screw
		mm	in	mm	in	mm	in	mm	in						
1015785	OWF744SET	139,70	5.500	22,23	.875	50,80	2.000	69,06	2.719	4 1/2 X 8	OPG524	SM159	S125	CMR15	S472
1015793	OWF863SET	200,03	7.875	25,40	1.000	57,15	2.250	99,21	3.906	6 1/2 X 12	OPG524	SM159	S125	CMR15	S421

NOTE: Tool sets contain a ground matched pair of toolholders.
See page F97 for insert selection.

- Uses SNMG-style molded chipbreaker inserts with eight cutting edges.
- Available in 11 sizes to fit L-type boring bars.
- Employs a low-profile design.
- Delivers fast insert indexing while maintaining bore size.
- Tools have a protective insert seat.



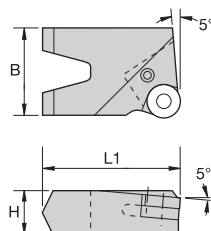
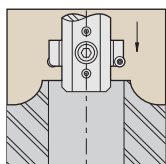
■ SWR-Style Tools for Roughing

Application Specific

order number	catalog number	min wheel bore		H		B		L1		journal size	insert 1
		mm	in	mm	in	mm	in	mm	in		
1015559	SWR744SET	234,95	9.250	22,23	.875	50,80	2.000	69,06	2.719	4 1/2 X 8	SNMG433
1015560	SWR750SET	158,75	6.250	22,23	.875	50,80	2.000	78,59	3.094	5 X 9	SNMG433
1015561	SWR754SET	171,45	6.750	22,23	.875	50,80	2.000	84,94	3.344	5 1/2 X 10	SNMG433
1015562	SWR759SET	187,33	7.375	22,23	.875	50,80	2.000	92,86	3.656	6 X 11	SNMG433
1015563	SWR763SET	200,03	7.875	22,23	.875	50,80	2.000	99,21	3.906	6 1/2 X 12	SNMG433
1015584	SWR770SET	222,25	8.750	22,23	.875	50,80	2.000	107,16	4.219	7 X 14	SNMG433
1015585	SWR854SET	171,45	6.750	25,40	1.000	57,15	2.250	84,94	3.344	5 1/2 X 10	SNMG433
1015586	SWR859SET	187,33	7.375	25,40	1.000	57,15	2.250	92,86	3.656	6 X 11	SNMG433
1015587	SWR863SET	200,03	7.875	25,40	1.000	57,15	2.250	99,21	3.906	6 1/2 X 12	SNMG433
1015588	SWR870SET	222,25	8.750	25,40	1.000	57,15	2.250	107,16	4.219	7 X 14	SNMG433
1015589	SWR874SET	234,95	9.250	25,40	1.000	57,15	2.250	116,69	4.594	8 X 16	SNMG433

NOTE: Tool sets contain a ground matched pair of toolholders.
See page F96 for insert selection.

- Available in the rugged unit locking design for operating at higher feed ranges.
- Unit locking design ensures maximum insert locking by pulling the insert down and back into the pocket.
- Locking unit protects the holder and properly seats the insert.
- Insert can be released quickly for fast indexing, minimizing downtime.
- Available in 11 sizes to fit L-type boring bars.



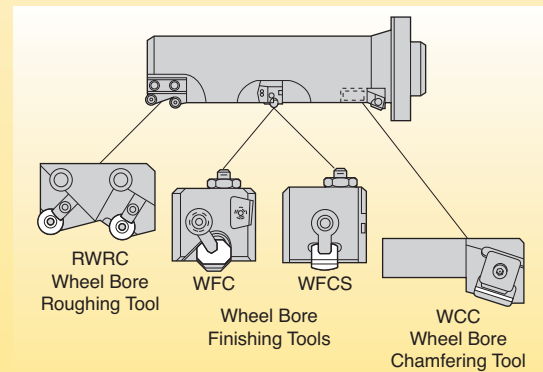
■ RUWR-Style Tools for Roughing

order number	catalog number	min wheel bore		H		B		L1		journal size	insert 1
		mm	in	mm	in	mm	in	mm	in		
1015656	RUWR870SET	222,25	8.750	25,40	1.000	57,15	2.250	107,16	4.219	7 X 14	RNMG64

NOTE: Tool sets contain a ground matched pair of toolholders.
See page F96 for insert selection.

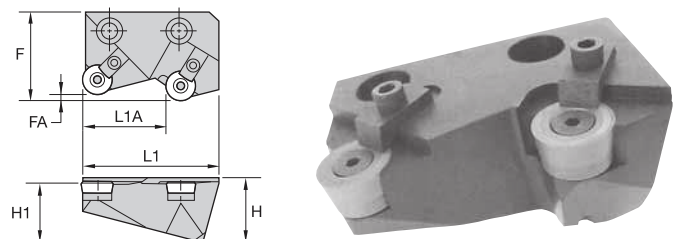
■ **Advantages of Kennametal Wheel Boring Tools**

- Available in several styles for rough and finish boring.
- Tools are available for finishing KRR- or OPG-style inserts.
- Rough boring tools use RCMH round inserts.
- Tools keep the insert parallel to the bore during operation to ensure a smooth cut within established finish specifications.
- All styles of tools are designed with insert locking confined within the shank height. This enables the tools to be retracted to bore the smaller sizes without modifying the standard bar.
- Check the catalog number and dimensions of your cartridges before ordering. Bars and cartridges on older machines may not be the same. Call Kennametal's Customer Application Support team for assistance.



Application Specific

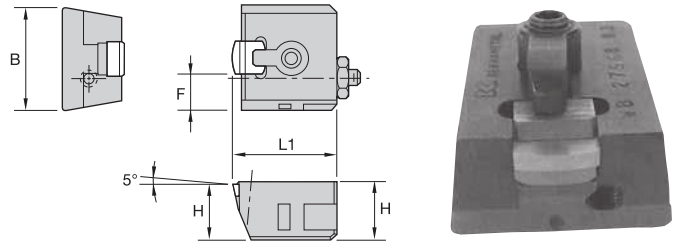
- Uses RCMH-style inserts for free cutting action while rough boring.
- This is a double-pocket cartridge and requires two inserts and two sets of hardware.
- Cartridges are easily replaceable.



■ **RWRC-Style Tools for Roughing**

order number	catalog number	H		H1		F		L1		FA		L1A		insert 1	insert		clamp	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		screw	shim	clamp	screw
1015616	RWRC	41,15	1.620	38,10	1.500	57,11	2.249	85,85	3.380	4,75	.187	52,38	2.062	RCMH64	S1001	SM381	S412	S412

NOTE: See page F95 for insert selection.



■ **WFC5-Style Tools for Finishing**

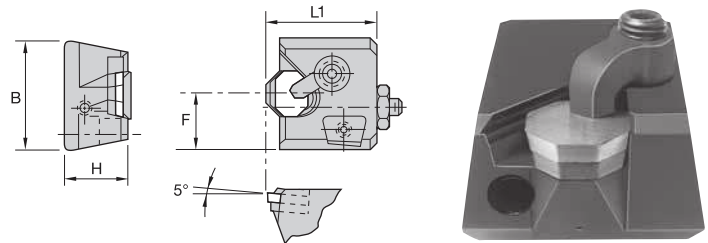
order number	catalog number	H		B		F		L1		H1		insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	
1015615	WFC5	23,88	.940	39,68	1.562	14,28	.562	41,15	1.620	22,23	.875	KRR4210R

■ **Spare Parts**

catalog number	adjusting screw	jam nut	chipbreaker	shim	shim screw	clamp	clamp screw
WFC5	S846	S936	CBS16	SRR4210R	S111	CK13	STC4

NOTE: See page F97 for insert selection.

Application Specific



■ **WFC-Style Tools for Finishing**

order number	catalog number	H		B		F		L1		insert 1
		mm	in	mm	in	mm	in	mm	in	
1177582	WFC	23,80	.937	39,68	1.562	20,63	.812	41,15	1.620	OPG524

■ **Spare Parts**

catalog number	adjusting screw	jam nut	chipbreaker	shim	shim screw	clamp	clamp screw
WFC	S846	S936	CBO560	SM159	S125	CK13	STC4

NOTE: See page F97 for insert selection.

■ Axle Turning Tools

Freight car and passenger car axles are usually made of carbon steel and may be heat treated or untreated. Locomotive axles, electric transit axles, and industrial-use axles are made of a variety of carbon and alloy steels. The alloy steel axles are heat treated, while the carbon steel axles are either heat treated or untreated.

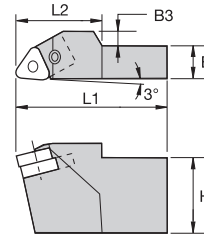
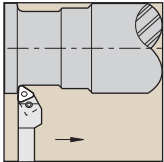
Kennametal offers two styles of holders to suit user needs for re-machining journal surfaces on car axles.

- These two standard designs use indexable inserts and have a 3° lead built into the holder to conform to the AAR standards.
- To use these tools in some dual-end-drive axle lathes, a slight modification to the existing tool block is necessary. This is required to clear the head portion of the tool to generate the required radius on the axle.
- Kennametal offers a wide variety of standard off-the-shelf tooling as well as special tooling for all types of machining applications on various machines for reconditioning axles.



Application Specific

- Steel locking unit design ensures maximum insert locking pressure.
- Insert locks firmly in place against the one-wall pocket for fast insert indexing.
- Locking unit protects holders and provides secure seating for the insert.
- Indexable inserts eliminate regrinding.
- Uses 1/2" IC triangular inserts that provide up to six cutting edges.



JTU-Style Tools

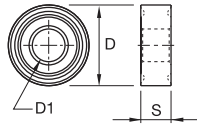
order number	catalog number	H		B		B3		L1		L2		insert 1	lock screw	steel locking unit
		mm	in	mm	in	mm	in	mm	in	mm	in			
1015592	JTU56R	38,10	1.500	15,88	.625	6,35	.250	73,03	2.875	41,15	1.620	TNMP438_/KRRT438	S1007PKG	SU9
1015593	JTU56L	38,10	1.500	15,88	.625	6,35	.250	73,03	2.875	41,15	1.620	TNMP438_/KRRT438	S1007PKG	SU9

NOTE: See page F97 for insert selection.

Application Specific

								<table border="1"> <tr><td>P</td><td>●</td><td>●</td><td>○</td><td>○</td><td>●</td><td>●</td></tr> <tr><td>M</td><td>●</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>K</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>N</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>S</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> <tr><td>H</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td><td>○</td></tr> </table>					P	●	●	○	○	●	●	M	●	○	○	○	○	○	K	○	○	○	○	○	○	N	○	○	○	○	○	○	S	○	○	○	○	○	○	H	○	○	○	○	○	○
P	●	●	○	○	●	●																																																
M	●	○	○	○	○	○																																																
K	○	○	○	○	○	○																																																
N	○	○	○	○	○	○																																																
S	○	○	○	○	○	○																																																
H	○	○	○	○	○	○																																																
		● first choice ○ alternate choice																																																				
		D		D1		S																																																
ISO catalog number		mm		in		mm		in		KCP10	KCP25	KCK20	KCU10	KC9110	KC9125																																							
■ RCMH-UP																																																						
ANSI catalog number																																																						
RCMH2507M0TUP		25 .984		7,55 .297		7,94 .313				●	●	●	●	●	●																																							
RCMH3209M0TUP		32 1.260		10,35 .407		9,53 .375				●	●	●	●	●	●																																							
■ RCMH-RU																																																						
ANSI catalog number																																																						
RCMH2507M0RU		25 .984		7,55 .297		7,94 .313				●	●	●	●	●	●																																							
RCMH3209M0RU		32 1.260		10,35 .407		9,53 .375				●	●	●	●	●	●																																							
■ RCMX-UP																																																						
ANSI catalog number																																																						
RCMX2507M0TUP		25 .984		7,19 .283		7,94 .313				●	●	●	●	●	●																																							
RCMX3209M0TUP		32 1.260		9,78 .385		9,53 .375				●	●	●	●	●	●																																							
■ RCMX-RU																																																						
ANSI catalog number																																																						
RCMX2507M0RU		25 .984		7,19 .283		7,94 .313				●	●	●	●	●	●																																							
RCMX3209M0RU		32 1.260		9,78 .385		9,53 .375				●	●	●	●	●	●																																							

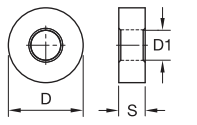
Application Specific



● first choice
○ alternate choice

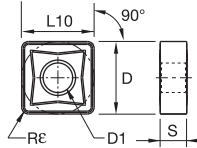
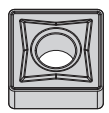
P	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
K	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

ISO catalog number	ANSI catalog number	D		L10		S		R _e		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
		RNMG4009M0 RNMG190600	RNMG4009M0 RNMG64	40,00	1.57	—	—	9,52	3/8	—	—												12,70
		19,05	3/4	—	—	6,35	1/4	—	—	7,93	.313					●		●					

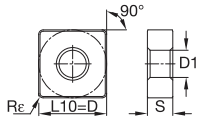


ISO catalog number	ANSI catalog number	D		L10		S		R _e		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
		RNMG090300RN RNMG120400RN	RNMG32RN RNMG43RN	9,53	3/8	—	—	3,18	1/8	—	—												3,81
		12,70	1/2	—	—	4,76	3/16	—	—	5,16	.203												
RNMG150600RN RNMG190600RN	RNMG54RN RNMG64RN	15,88	5/8	—	—	6,35	1/4	—	—	6,35	.250	●	●	●	●								
		19,05	3/4	—	—	6,35	1/4	—	—	7,93	.313												
RNMG190900RN RNMG250900RN	RNMG66RN RNMG86RN	19,05	3/4	—	—	9,52	3/8	—	—	7,93	.313	●											
		25,40	1	—	—	9,53	3/8	—	—	9,12	.359					●	●	●					

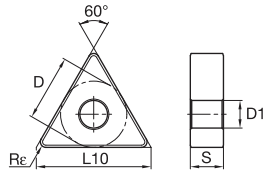
Application Specific



ISO catalog number	ANSI catalog number	D		L10		S		R _e		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
		SNMG120412 SNMG190612	SNMG433 SNMG643	12,70	1/2	12,70	.500	4,76	3/16	1,20	3/64												5,16
		19,05	3/4	19,05	.750	6,35	1/4	1,20	3/64	7,93	.312							●					
SNMG190616 SNMG250924	SNMG644 SNMG866	19,05	3/4	19,05	.750	6,35	1/4	1,60	1/16	7,93	.313												
		25,40	1	25,40	1.000	9,53	3/8	2,40	3/32	9,12	.359												

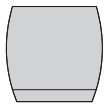
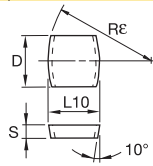


ISO catalog number	ANSI catalog number	D		L10		S		R _e		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
		SNMG090412RN SNMG120408RN	SNMG333RN SNMG432RN	9,53	3/8	9,53	.375	4,76	3/16	1,20	3/64												3,81
		12,70	1/2	12,70	.500	4,76	3/16	0,80	1/32	5,16	.203												
SNMG120412RN SNMG120416RN	SNMG433RN SNMG434RN	12,70	1/2	12,70	.500	4,76	3/16	1,20	3/64	5,16	.203	●	●	●	●								
		12,70	1/2	12,70	.500	4,76	3/16	1,60	1/16	5,16	.203												
SNMG150608RN SNMG150612RN	SNMG542RN SNMG543RN	15,88	5/8	15,88	.625	6,35	1/4	0,80	1/32	6,35	.250	●	●	●	●								
		15,88	5/8	15,88	.625	6,35	1/4	1,20	3/64	6,35	.250												
SNMG150616RN SNMG190608RN	SNMG544RN SNMG642RN	15,88	5/8	15,88	.625	6,35	1/4	1,60	1/16	6,35	.250	●	●	●	●								
		19,05	3/4	19,05	.750	6,35	1/4	0,80	1/32	7,93	.313												
SNMG190612RN SNMG190616RN	SNMG643RN SNMG644RN	19,05	3/4	19,05	.750	6,35	1/4	1,20	3/64	7,93	.313	●	●	●	●								
		19,05	3/4	19,05	.750	6,35	1/4	1,60	1/16	7,93	.313												
SNMG190624RN	SNMG646RN	19,05	3/4	19,05	.750	6,35	1/4	2,40	3/32	7,93	.313	●	●	●	●								

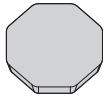
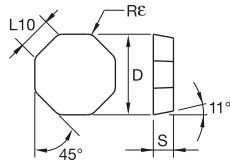

TNMG-RP

 ● first choice
 ○ alternate choice

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

ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
TNMG160408RP	TNMG332RP	9,53	3/8	16,50	.650	4,76	3/16	0,79	1/32	3,81	.150	●	●	●	●	●	●	●	●	●	●	●	●
TNMG160412RP	TNMG333RP	9,53	3/8	16,50	.650	4,76	3/16	1,20	3/64	3,81	.150	●	●	●	●	●	●	●	●	●	●	●	●
TNMG160416RP	TNMG334RP	9,53	3/8	16,50	.650	4,76	3/16	1,60	1/16	3,81	.150	●	●	●	●	●	●	●	●	●	●	●	●
TNMG220408RP	TNMG432RP	12,70	1/2	22,00	.866	4,76	3/16	0,79	1/32	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMG220412RP	TNMG433RP	12,70	1/2	22,00	.866	4,76	3/16	1,19	3/64	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMG220416RP	TNMG434RP	12,70	1/2	22,00	.866	4,76	3/16	1,59	1/16	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMG220432RP	TNMG438RP	12,70	1/2	22,00	.866	4,76	3/16	3,18	1/8	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMG270612RP	TNMG543RP	15,88	5/8	27,50	1.083	6,35	1/4	1,19	3/64	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●
TNMG270616RP	TNMG544RP	15,88	5/8	27,50	1.083	6,35	1/4	1,60	1/16	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●
TNMG330924RP	TNMG666RP	19,05	3/4	33,00	1.299	9,53	3/8	2,38	3/32	7,92	.312	●	●	●	●	●	●	●	●	●	●	●	●


KRR4210R


ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
KRR4210R	KRR4210R	12,70	1/2	12,70	.500	3,18	1/8	—	—	—	—	●	●	●	●	●	●	●	●	●	●	●	●


OPG


ISO catalog number	ANSI catalog number	D		L10		S		Rε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
OPGN060316	OPG524	15,88	5/8	6,58	.259	3,18	1/8	1,60	1/16	—	—	●	●	●	●	●	●	●	●	●	●	●	●

Application Specific

New Railroad Wheel Manufacturing Tooling

Features and Benefits

Wheel Production

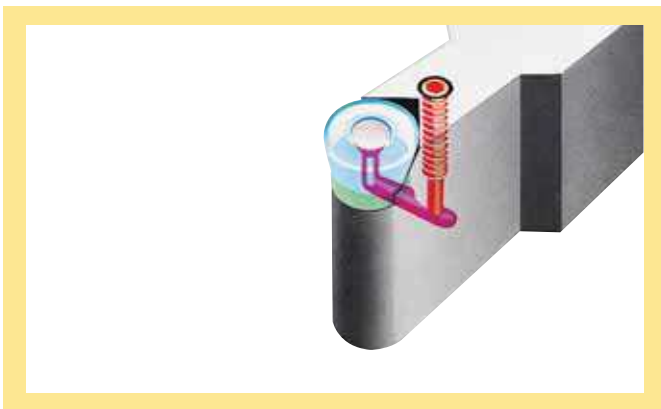
In wheel production, the forged blanks are mainly machined using RC.. inserts.

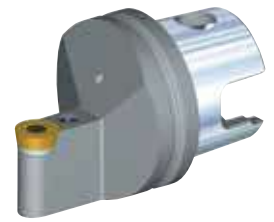
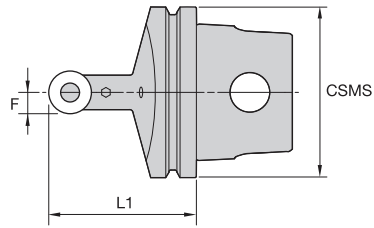
For this, Kennametal offers a comprehensive range of high-performance indexable inserts. Proprietary coatings combined with application-specific chipbreakers make these inserts well suited for new wheel production.

Together with the KM™ quick change tooling system, high stability, repeatability, and process security are ensured.

Clamping System

Our Fix-Perfect™ clamping system will provide optimum security during the most arduous machining process. With just a few revolutions of the clamping screw, the complete insert set (insert, shim, and clamping stud) can be changed.

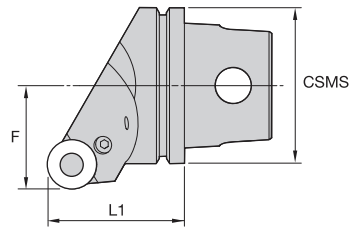




■ KM-PRDCN

order number	catalog number	CSMS system size	F		L1		insert 1	shim	clamp stud	set screw
			mm	in	mm	in				
3662606	KM80SPRDCN20	KM80TS	10,00	.394	70,00	2.756	RCMT2006M0	169.333	119.073	121.820
3662607	KM80SPRDCN25	KM80TS	12,50	.492	70,00	2.756	RCMX2507M0RP	169.337	118.404	121.820

NOTE: Engineered solutions available.
KM100 units are made to order.
KM80 units require torque wrench TWH60R, which must be purchased separately.
See page F107 for insert selection.

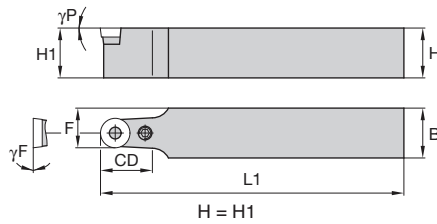
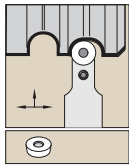


Application Specific

■ KM-PRGC

order number	catalog number	CSMS system size	F		L1		insert 1	shim	clamp stud	set screw
			mm	in	mm	in				
1238702	KM80PRGCL32	KM80	53,00	2.087	80,00	3.150	RC..3209M0	169.339	118.604	121.030
1238697	KM80PRGCR20	KM80	53,00	2.087	70,00	2.756	RC..2006M0	169.333	119.073	121.820

NOTE: Engineered solutions available.
KM100 units are made to order.
KM80 units require torque wrench TWH60R, which must be purchased separately.
See page F107 for insert selection.



■ PRCC

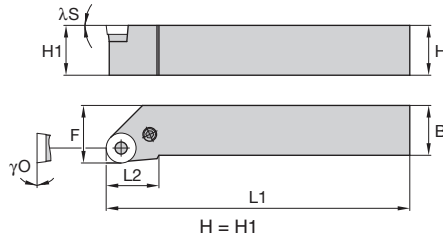
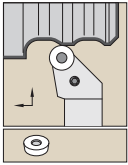
order number	catalog number	H		B		F		L1		CD		γF°	γP°	insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in			
1244761	PRCCN2020K08H1	20,00	.787	20,00	.787	14,00	.551	125,00	4.921	16,00	.630	0.0	0.0	RC..0803M0
1244762	PRCCN2020K10H1	20,00	.787	20,00	.787	15,00	.591	125,00	4.921	24,00	.945	0.0	0.0	RC..1003M0
1244826	PRCCN2525M08H1	25,00	.984	25,00	.984	16,50	.650	150,00	5.906	16,00	.630	0.0	0.0	RC..0803M0
1244827	PRCCN2525M10H1	25,00	.984	25,00	.984	17,50	.689	150,00	5.906	24,00	.945	0.0	0.0	RC..1003M0
1244828	PRCCN2525M12H1	25,00	.984	25,00	.984	18,50	.728	150,00	5.906	24,00	.945	0.0	0.0	RC..1204M0
5002098	PRCCN2020M0H1	31,75	1.250	31,75	1.250	25,62	1.009	152,40	6.000	31,80	1.250	0.0	0.0	RCMT2006M0
1192388	PRCCN3225P16H1	32,00	1.260	25,00	.984	20,50	.807	170,00	6.693	33,00	1.299	0.0	0.0	RC..1606M0
1192389	PRCCN3232P20H1	32,00	1.260	32,00	1.260	26,00	1.024	170,00	6.693	32,00	1.260	0.0	0.0	RC..2006M0
5002099	PRCCN2425M0H1	38,10	1.500	38,10	1.500	31,30	1.232	177,80	7.000	38,10	1.500	0.0	0.0	RCMX2507M0-RP
1228888	PRCCN4040S25H1	40,00	1.575	40,00	1.575	32,50	1.280	250,00	9.843	78,00	3.071	0.0	0.0	RC..2507M0

Application Specific

■ Spare Parts

catalog number	shim	clamp stud	clamp screw	hex wrench
PRCCN2020K08H1	—	119.069	—	170.001
PRCCN2020K10H1	169.325	119.069	—	170.001
PRCCN2525M08H1	—	119.069	—	170.001
PRCCN2525M10H1	169.325	119.069	—	170.001
PRCCN2525M12H1	169.322	119.071	—	170.002
PRCCN2020M0H1	169.333	119.073	121.820	—
PRCCN3225P16H1	169.327	410.081	—	170.003
PRCCN3232P20H1	169.333	119.073	121.820	170.004
PRCCN2425M0H1	169.337	118.404	121.820	—
PRCCN4040S25H1	169.337	118.404	121.820	170.004

NOTE: Engineered solutions available.
See page F107 for insert selection.



■ PRGC

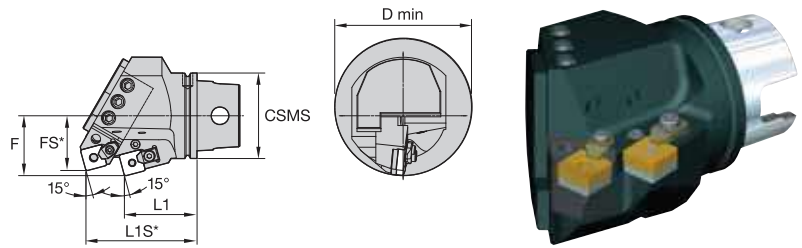
order number	catalog number	H		B		F		L1		L2		λS°	γO°	insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in			
1244829	PRGCL4040S25H1	40,00	1.575	40,00	1.575	50,00	1.969	250,00	9.843	47,00	1.850	0.0	0.0	RC..2507M0
1192390	PRGCL6050U32H1	60,00	2.362	50,00	1.969	60,00	2.362	350,00	13.780	75,00	2.953	0.0	0.0	RC..3209M0
1192391	PRGCR6050U32H1	60,00	2.362	50,00	1.969	60,00	2.362	350,00	13.780	75,00	2.953	0.0	0.0	RC..3209M0
1197549	PRGCR4040S25H1	40,00	1.575	40,00	1.575	50,00	1.969	250,00	9.843	47,00	1.850	0.0	0.0	RC..2507M0

■ Spare Parts

catalog number	shim	clamp stud	clamp screw	hex wrench
PRGCL4040S25H1	169.337	118.404	121.820	170.004
PRGCL6050U32H1	169.339	118.604	121.030	170.005
PRGCR6050U32H1	169.339	118.604	121.030	170.005
PRGCR4040S25H1	169.337	118.404	121.820	170.004

NOTE: See page F107 for insert selection.

Application Specific



■ KM-PSDN 95° with Adjustable Cartridge

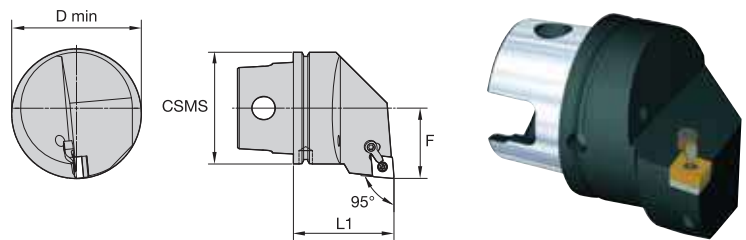
order number	catalog number	CSMS system size	F		FS		L1		L1S		D min		insert 1
			mm	in	mm	in	mm	in	mm	in	mm	in	
1152381	KM100-TK00055D	KM100	70,00	2.756	64,00	2.520	85,00	3.347	130,00	5.118	160,00	6.299	SN..250724/SN..856

■ Cartridge • PSDN 95°

order number	catalog number	CSMS system size	F		L1		gage insert
			mm	in	mm	in	
1178625	PSDNN3240X25-01	—	21,00	.827	120,00	4.724	SN..250724/SN..856

NOTE: Adjustable top cartridge.
Made to order.
See page F107 for insert selection.

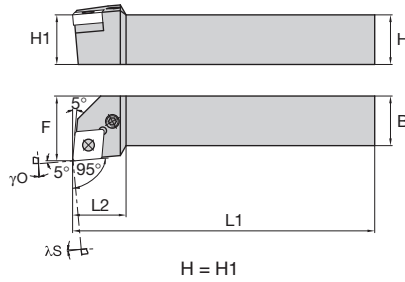
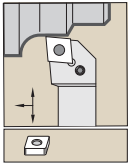
Application Specific



■ KM • MCLN 95°

order number	catalog number	CSMS system size	D min		F		L1		insert 1
			mm	in	mm	in	mm	in	
1151977	KM100-TK00344D	KM100	116,00	4.567	63,00	2.480	90,00	3.543	CN..190612/CN..643

NOTE: Made to order.
See page F107 for insert selection.



■ PCLN 95°

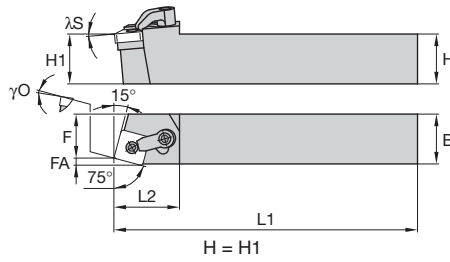
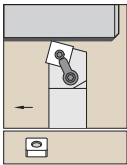
order number	catalog number	H		B		F		L1		L2		λS°	γO°	insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in			
	right hand													
1192379	PCLNR4040S19	40,00	1.575	40,00	1.575	50,00	1.969	250,00	9.843	36,00	1.417	-6.000	-6.000	CN..190612
	left hand													
1192377	PCLNL4040S19	40,00	1.575	40,00	1.575	50,00	1.969	250,00	9.843	36,00	1.417	-6.000	-6.000	CN..190612

■ Spare Parts

catalog number	shim	shim pin	toggle lever	clamp screw	punch
right hand					
PCLNR4040S19	512.123	513.033	511.033	514.133	515.022
left hand					
PCLNL4040S19	512.123	513.033	511.033	514.133	515.022

NOTE: Engineered solutions available.
See page F107 for insert selection.





■ MSBN 75°

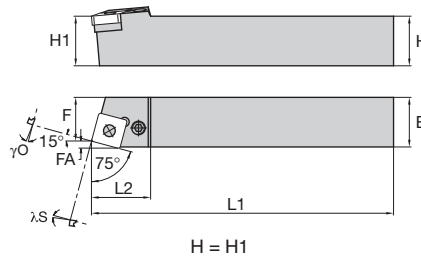
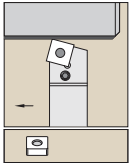
order number	catalog number	H		B		F		L1		L2		FA		λS°	γO°	insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in			
1101954	MSBNR4040R19	40,00	1.575	40,00	1.575	35,00	1.378	200,00	7.874	40,00	1.575	4,60	.181	-5.000	-5.000	SN..190612
1099148	MSBNL4040R19	40,00	1.575	40,00	1.575	35,00	1.378	200,00	7.874	40,00	1.575	4,60	.181	-5.000	-5.000	SN..190612

■ Spare Parts

catalog number	shim	lock pin	clamp	clamp screw
MSBNR4040R19	ISSN633	KLM68	CKM12	STCM4
MSBNL4040R19	ISSN633	KLM68	CKM12	STCM4

NOTE: Engineered solutions available.
See page F108 for insert selection.

Application Specific



■ PSBN 75°

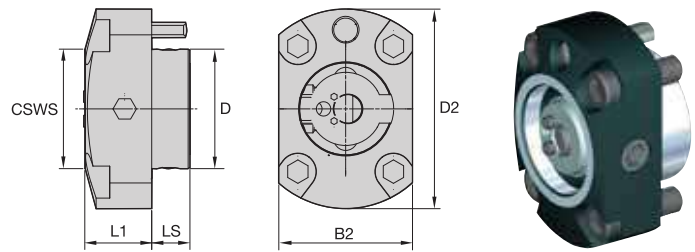
order number	catalog number	H		B		F		L1		L2		FA		λS°	γO°	insert 1
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in			
1244682	PSBNR4040S19	40,00	1.575	40,00	1.575	35,00	1.378	250,00	9.843	38,00	1.496	4,60	.181	-6.000	-6.000	SN..190612
1244683	PSBNR4040S25	40,00	1.575	40,00	1.575	35,00	1.378	250,00	9.843	47,00	1.850	5,90	.232	-6.000	-6.000	SN..250724
1244674	PSBNL4040S19	40,00	1.575	40,00	1.575	35,00	1.378	250,00	9.843	38,00	1.496	4,60	.181	-6.000	-6.000	SN..190612
1244675	PSBNL4040S25	40,00	1.575	40,00	1.575	35,00	1.378	250,00	9.843	47,00	1.850	5,90	.232	-6.000	-6.000	SN..250724

■ Spare Parts

catalog number	shim	shim pin	toggle lever	clamp screw	punch
PSBNR4040S19	512.083	513.033	511.033	514.133	515.022
PSBNR4040S25	512.092	513.038	511.038	514.138	515.028
PSBNL4040S19	512.083	513.033	511.033	514.133	515.022
PSBNL4040S25	512.092	513.038	511.038	514.138	515.028

NOTE: Engineered solutions available.
See page F108 for insert selection.

Application Specific



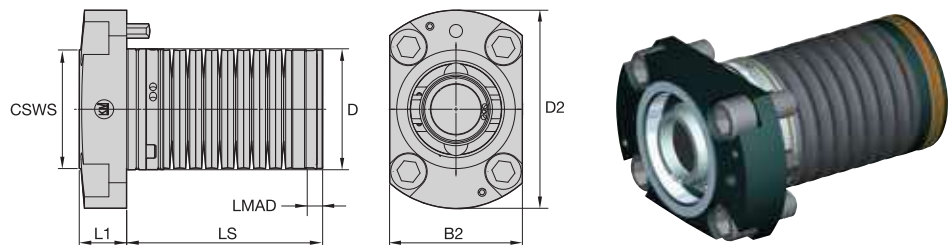
■ KM-NCM-EF

order number	catalog number	CSWS system size	L1		LS		B2		D		D2		KM spare parts package	screw
			mm	in	mm	in	mm	in	mm	in	mm	in		
2420366	KM100NCMEF	KM100	56,00	2.205	32,00	1.260	112,00	4.409	100,00	3.937	167,00	6.575	—	—
1021576	KM32NCMEF	KM32	20,00	.787	12,00	.472	36,00	1.417	32,00	1.260	54,00	2.126	KM32PKG3L	—
1021642	KM40NCMEF	KM40	25,00	.984	15,00	.591	44,00	1.732	40,00	1.575	68,00	2.677	KM40PKG3L	MS1217
1021749	KM50NCMEF	KM50	30,00	1.181	20,00	.787	55,00	2.165	50,00	1.969	84,00	3.307	KM50PKG3L	MS1361
1021753	KM63NCMEF	KM63	40,00	1.575	20,00	.787	72,00	2.835	63,00	2.480	102,00	4.016	KM63PKG3L	MS1460
1144799	KM80NCMEF	KM80	50,00	1.969	25,00	.984	90,00	3.543	80,00	3.150	132,00	5.197	KM80PKG3L	DWG MS1599

NOTE: KM100 clamping units are made to order.



Application Specific



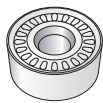
■ KM100-Spring Packs

order number	catalog number	CSWS system size	L1		LS		LMAD travel		B2		D		D2		KM spare parts package	screw
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		
1178668	KM100-PK00001D	KM100	40,00	1.575	165,25	6.506	13,00	.512	112,00	4.409	101,98	4.015	167,00	6.575	KM80PKG3L	MS1566

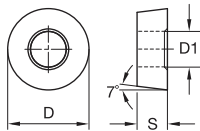
NOTE: KM100 clamping units are made to order.

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

● first choice
○ alternate choice



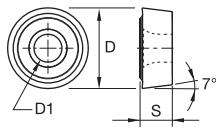
RCMX-RH



ISO catalog number	ANSI catalog number	D		L10		S		R _ε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
RCMT2006M0RH	RCMT2006M0RH	20,00	.787	—	—	6,35	1/4	—	—	6,50	.256	●	●	●	●								
RCMX2507M0RH	RCMX2507M0RH	25,00	63/64	—	—	7,94	5/16	—	—	7,55	.297	●	●	●	●								
RCMX3209M0RH	RCMX3209M0RH	32,00	1.2598	—	—	9,53	3/8	—	—	10,20	.402	●	●	●	●								

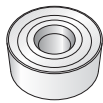


RCMT-RM

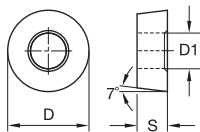


ISO catalog number	ANSI catalog number	D		L10		S		R _ε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
RCMT2006M0RM	RCMT2006M0RM	20,00	.787	—	—	6,35	1/4	—	—	6,50	.256	●	●	●	●								

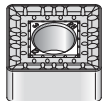
Application Specific



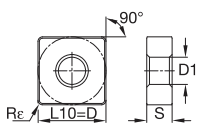
RCMX-RP



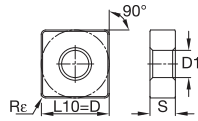
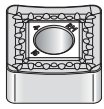
ISO catalog number	ANSI catalog number	D		L10		S		R _ε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
RCGT0602M0RP	RCGT0602M0RP	6,00	—	—	—	2,38	3/32	—	—	2,85	.112	●	●	●	●								
RCGT0803M0RP	RCGT0803M0RP	8,00	.315	—	—	3,18	1/8	—	—	3,40	.134	●	●	●	●								
RCMT1204M0RP	RCMT1204M0RP	12,00	.472	—	—	4,76	3/16	—	—	4,40	.173	●	●	●	●								●
RCMT1606M0RP	RCMT1606M0RP	16,00	.630	—	—	6,35	1/4	—	—	5,50	.217	●	●	●	●								●
RCMT2006M0RP	RCMT2006M0RP	20,00	.787	—	—	6,35	1/4	—	—	6,50	.256	●	●	●	●								●
RCMX1003M0RP	RCMX1003M0RP	10,00	.3937	—	—	3,18	1/8	—	—	3,80	.150	●	●	●	●								●
RCMX2507M0RP	RCMX2507M0RP	25,00	63/64	—	—	7,94	5/16	—	—	7,55	.297	●	●	●	●								
RCMX3209M0RP	RCMX3209M0RP	32,00	1.2598	—	—	9,53	3/8	—	—	10,20	.402	●	●	●	●								



SNMM-RH



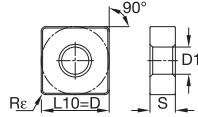
ISO catalog number	ANSI catalog number	D		L10		S		R _ε		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
SNMM190612RH	SNMM643RH	19,05	3/4	19,05	.750	6,35	1/4	1,20	3/64	7,93	.313	●	●	●	●								
SNMM190616RH	SNMM644RH	19,05	3/4	19,05	.750	6,35	1/4	1,60	1/16	7,93	.313	●	●	●	●								
SNMM190624RH	SNMM646RH	19,05	3/4	19,05	.750	6,35	1/4	2,40	3/32	7,93	.313	●	●	●	●								
SNMM250724RH	SNMM856RH	25,40	1	25,40	1.000	7,94	5/16	2,40	3/32	9,12	.359	●	●	●	●								
SNMM250732RH	SNMM858RH	25,40	1	25,40	1.000	7,94	5/16	3,20	1/8	9,12	.359	●	●	●	●								
SNMM250924RH	SNMM866RH	25,40	1	25,40	1.000	9,53	3/8	2,40	3/32	9,12	.359	●	●	●	●								


SNMM-RM

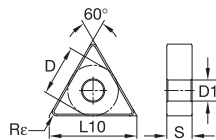
● first choice
○ alternate choice

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

ISO catalog number	ANSI catalog number	D		L10		S		Rr		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
SNMM120408RM	SNMM432RM	12,70	1/2	12,70	.500	4,76	3/16	0,80	1/32	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
SNMM120412RM	SNMM433RM	12,70	1/2	12,70	.500	4,76	3/16	1,20	3/64	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
SNMM120416RM	SNMM434RM	12,70	1/2	12,70	.500	4,76	3/16	1,60	1/16	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
SNMM150612RM	SNMM543RM	15,88	5/8	15,88	.625	6,35	1/4	1,20	3/64	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●
SNMM150616RM	SNMM544RM	15,88	5/8	15,88	.625	6,35	1/4	1,60	1/16	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●
SNMM190612RM	SNMM643RM	19,05	3/4	19,05	.750	6,35	1/4	1,20	3/64	7,93	.313	●	●	●	●	●	●	●	●	●	●	●	●
SNMM190616RM	SNMM644RM	19,05	3/4	19,05	.750	6,35	1/4	1,60	1/16	7,93	.313	●	●	●	●	●	●	●	●	●	●	●	●
SNMM190624RM	SNMM646RM	19,05	3/4	19,05	.750	6,35	1/4	2,40	3/32	7,93	.313	●	●	●	●	●	●	●	●	●	●	●	●
SNMM250724RM	SNMM856RM	25,40	1	25,40	1.000	7,94	5/16	2,40	3/32	9,12	.359	●	●	●	●	●	●	●	●	●	●	●	●
SNMM250924RM	SNMM866RM	25,40	1	25,40	1.000	9,53	3/8	2,40	3/32	9,12	.359	●	●	●	●	●	●	●	●	●	●	●	●


SNMM-RW

ISO catalog number	ANSI catalog number	D		L10		S		Rr		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
SNMM190624RW	SNMM646RW	19,05	3/4	19,05	.750	6,35	1/4	2,40	3/32	7,93	.313	●	●	●	●	●	●	●	●	●	●	●	●
SNMM250724RW	SNMM856RW	25,40	1	25,40	1.000	7,94	5/16	2,40	3/32	9,12	.359	●	●	●	●	●	●	●	●	●	●	●	●
SNMM250924RW	SNMM866RW	25,40	1	25,40	1.000	9,53	3/8	2,40	3/32	9,12	.359	●	●	●	●	●	●	●	●	●	●	●	●


TNMM-RM

ISO catalog number	ANSI catalog number	D		L10		S		Rr		D1		K40	KC9110	KC9125	KCP10	KCP25	KC9110RR	KC9115RR	KC9125RR	KC5115RR	KC5125RR	KCK20	
		mm	in	mm	in	mm	in	mm	in	mm	in												
TNMM160408RM	TNMM332RM	9,53	3/8	16,50	.650	4,76	3/16	0,80	1/32	3,81	.150	●	●	●	●	●	●	●	●	●	●	●	●
TNMM160412RM	TNMM333RM	9,53	3/8	16,50	.650	4,76	3/16	1,20	3/64	3,81	.150	●	●	●	●	●	●	●	●	●	●	●	●
TNMM220408RM	TNMM432RM	12,70	1/2	22,00	.866	4,76	3/16	0,80	1/32	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMM220412RM	TNMM433RM	12,70	1/2	22,00	.866	4,76	3/16	1,20	3/64	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMM220416RM	TNMM434RM	12,70	1/2	22,00	.866	4,76	3/16	1,60	1/16	5,16	.203	●	●	●	●	●	●	●	●	●	●	●	●
TNMM270612RM	TNMM543RM	15,88	5/8	27,50	1.083	6,35	1/4	1,20	3/64	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●
TNMM270616RM	TNMM544RM	15,88	5/8	27,50	1.083	6,35	1/4	1,60	1/16	6,35	.250	●	●	●	●	●	●	●	●	●	●	●	●

Application Specific