







**KONRAD
TOOLS**





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INDEXABLE INSERTS
HEAVY DUTY




INSERTS

BUTTON INSERTS RCMT.. / RCMX..







-F13 ▲ Soft cutting geometry with excellent chip control for small depths of cut in finishing operations		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

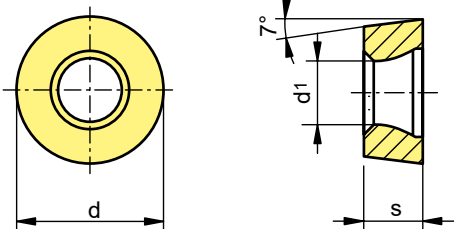
-R9 ▲ Soft cutting geometry for machining various wheels in continuous and slightly interrupted cut		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

-R10 ▲ For high surface quality in machining operations with continuous cut		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

-M15 ▲ Soft cutting geometry with a very positive rake angle in combination with a stable land ▲ For medium turning		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

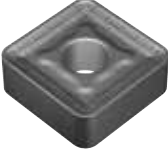



-R11 ▲ Geometry for high feed rates and large depth of cut as well as varying forging allowance ▲ For a very good chip control		Application area		
				
		A32-Z2	A52-Z2	A52-Z2
		A32-Z2	A52-Z2	A52-Z2

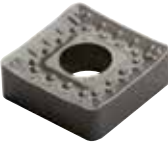



				P	M	K	Z	S	H																	d	s	d ₁
				●	○	●	●																			[mm]	[mm]	[mm]
				A32-Z2	A52-Z2																							
-F13		RCMT 1204MO-F13	●	●																	12,00	4,76	4,90					
		RCMT 1606MO-F13	●	●																	16,00	6,35	5,30					
		RCMT 2006MO-F13	●	●																	20,00	6,35	6,50					
-M18		RCMT 1204MO-M18	●	●																	12,00	4,76	4,90					
		RCMT 1606MO-M18	●	●																	16,00	6,35	5,30					
		RCMT 2006MO-M18	●	●																	20,00	6,35	6,50					
		RCMT 2507MO-M18	●	●																	25,00	7,94	7,20					
-R9		RCMX 3209MO-R9	●	●																	32,00	9,52	9,50					
-R10		RCMX 2507MO-R10	●	●																	25,00	7,94	7,20					
		RCMX 3209MO-R10	●	●																	32,00	9,52	9,50					
-M15		RCMX 2507MO-M15	●	●																	25,00	7,94	7,20					
		RCMX 3209MO-M15	●	●																	32,00	9,52	9,50					
-R11		RCMX 2507MO-R11	●	●																	25,00	7,94	7,20					
		RCMX 3209MO-R11	●	●																	32,00	9,52	9,50					
				A32-Z2	A52-Z2																	d	s	d ₁				



INSERTS

90° INSERTS SNMM..

-R12 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm²) ▲ Good chip control 		Application area			
					
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	

-R13 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines 		Application area			
					
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	





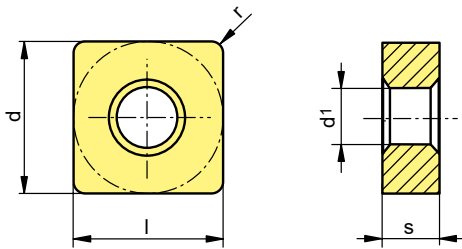




-R14 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ High feed rates ▲ Large depths of cut ▲ Heavily interrupted cut 		Application area			
					
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	
		A32-Z2	A52-Z2	A52-Z2	





	Image	Part Number	Material		d	l	s	r	d ₁
			A32-Z2	A52-Z2					
-R12		SNMM 190616-R12	•	•	19,05	19,05	6,35	1,60	7,94
		SNMM 250924-R12	•	•	25,40	25,40	9,52	2,40	9,12
-R13		SNMM 190612-R13	•	•	19,05	19,05	6,35	1,20	7,94
		SNMM 190616-R13	•	•	19,05	19,05	6,35	1,60	7,94
		SNMM 190624-R13	•	•	19,05	19,05	6,35	2,40	7,94
		SNMM 250724-R13	•	•	25,40	25,40	7,94	2,40	9,12
		SNMM 250924-R13	•	•	25,40	25,40	9,52	2,40	9,12
-R14		SNMM 190616-R14	•	•	19,05	19,05	6,35	1,60	7,94
		SNMM 190624-R14	•	•	19,05	19,05	6,35	2,40	7,94
		SNMM 250724-R14	•	•	25,40	25,40	7,94	2,40	9,12
		SNMM 250732-R14	•	•	25,40	25,40	7,94	3,20	9,12
		SNMM 250924-R14	•	•	25,40	25,40	9,52	2,40	9,12
		SNMM 250932-R14	•	•	25,40	25,40	9,52	3,20	9,12







INSERTS

80° INSERTS CNMM..





-R12 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm²) ▲ Good chip control 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





-R13 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





-R14 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ High feed rates ▲ Large depths of cut ▲ Heavily interrupted cut 		Application area		
				
		A32-Z2	A52-Z2	A52-Z2





INSERTS





80° INSERTS CNMG.. / CNMM..

-M16 ▲ Masterfinish geometry ▲ Light to medium roughing ▲ Very high feed rates ▲ High surface quality		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-M17 ▲ Light to medium roughing ▲ Skin on castings or forgings ▲ Stable cutting edge ▲ Interrupted cut ▲ For blanks and forged parts		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-R12 ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm ²) ▲ Good chip control		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

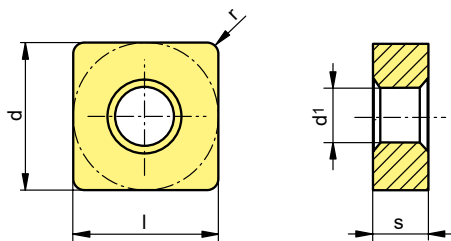
-R13 ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-R14 ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ High feed rates ▲ Large depths of cut ▲ Heavily interrupted cut		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

INSERTS





80° INSERTS CNMG.. / CNMM..





	P	M	K	N	S	H																										
																					A32-Z2	A52-Z2	A72-Z2	d	l	s	r	d ₁				
																							[mm]	[mm]	[mm]	[mm]	[mm]					
-M16		CNMG 120408-M16	●	●	●																					12,70	12,90	4,76	0,80	5,16		
		CNMG 120412-M16	●	●																							12,70	12,90	4,76	1,20	5,16	
-M17		CNMG 120408-M17	●	●	●																						12,70	12,90	4,76	0,80	5,16	
		CNMG 120412-M17	●	●																							12,70	12,90	4,76	1,20	5,16	
		CNMG 120416-M17	●	●	●																						12,70	12,90	4,76	1,60	5,16	
		CNMG 160608-M17	●	●	●																							15,88	16,10	6,35	0,80	6,35
		CNMG 160612-M17	●	●	●																							15,88	16,10	6,35	1,20	6,35
		CNMG 160616-M17	●	●	●																							15,88	16,10	6,35	1,60	6,35
		CNMG 190612-M17	●	●	●																							19,05	19,30	6,35	1,20	7,94
		CNMG 190616-M17	●	●	●																							19,05	19,30	6,35	1,60	7,94
		CNMG 190624-M17	●	●	●																							19,05	19,30	6,35	2,40	7,94
		CNMG 250924-M17	●	●	●																							25,40	25,80	9,52	2,40	9,12
-R12		CNMM 120408-R12	●	●																							12,70	12,90	4,76	0,80	5,16	
		CNMM 120412-R12	●	●	●																						12,70	12,90	4,76	1,20	5,16	
		CNMM 120416-R12	●	●	●																						12,70	12,90	4,76	1,60	5,16	
		CNMM 160612-R12	●	●	●																							15,88	16,10	6,35	1,20	6,35
		CNMM 160616-R12	●	●	●																							15,88	16,10	6,35	1,60	6,35
		CNMM 190612-R12	●	●	●																							19,05	19,30	6,35	1,20	7,94
		CNMM 190616-R12	●	●	●																						19,05	19,30	6,35	1,60	7,94	
		CNMM 190624-R12	●	●	●																						19,05	19,30	6,35	2,40	7,94	
-R13		CNMM 120408-R13	●	●																								12,70	12,90	4,76	0,80	5,16
		CNMM 120412-R13	●	●	●																						12,70	12,90	4,76	1,20	5,16	
		CNMM 120416-R13	●	●	●																						12,70	12,90	4,76	1,60	5,16	
		CNMM 160612-R13	●	●	●																							15,88	16,10	6,35	1,20	6,35
		CNMM 160616-R13	●	●	●																							15,88	16,10	6,35	1,60	6,35
		CNMM 190612-R13	●	●	●																							19,05	19,30	6,35	1,20	7,94
		CNMM 190616-R13	●	●	●																						19,05	19,30	6,35	1,60	7,94	
		CNMM 190624-R13	●	●	●																						19,05	19,30	6,35	2,40	7,94	
-R14		CNMM 250924-R13	●	●	●																					25,40	25,80	9,52	2,40	9,12		
		CNMM 190616-R14	●	●	●																						19,05	19,30	6,35	1,60	7,94	
		CNMM 190624-R14	●	●	●																						19,05	19,30	6,35	2,40	7,94	
		CNMM 190624-R14Q	●	●	●																						19,05	19,30	6,35	2,40	7,94	
CNMM 250924-R14	●	●	●																						25,40	25,80	9,52	2,40	9,12			











INSERTS





55° INSERTS DNMG.. / DNMM..

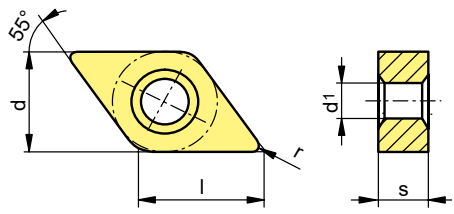
-M16 ▲ Masterfinish geometry ▲ Light to medium roughing ▲ Very high feed rates ▲ High surface quality		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-M17 ▲ Light to medium roughing ▲ Skin on castings or forgings ▲ Stable cutting edge ▲ Interrupted cut ▲ For blanks and forged parts		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-R12 ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm ²) ▲ Good chip control		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





-R13 ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





			Material												d [mm]	l [mm]	s [mm]	r [mm]	d _i [mm]			
			P	M	K	N	S	H	Al	Al	Al	Al	Al	Al								
			A32-Z2	A52-Z2	A72-Z2																	
-M16		DNMG 150608-M16	●	●	●												12,70	15,50	6,35	0,80	5,16	
		DNMG 150612-M16	●	●														12,70	15,50	6,35	1,20	5,16
-M17		DNMG 110408-M17	●	●	●												9,52	11,60	4,76	0,80	3,81	
		DNMG 110412-M17	●	●														9,52	11,60	4,76	1,20	3,81
		DNMG 150408-M17	●	●	●													12,70	15,50	4,76	0,80	5,16
		DNMG 150412-M17	●	●														12,70	15,50	4,76	1,20	5,16
		DNMG 150416-M17	●	●	●													12,70	15,50	4,76	1,60	5,16
		DNMG 150608-M17	●	●	●													12,70	15,50	6,35	0,80	5,16
		DNMG 150612-M17	●	●														12,70	15,50	6,35	1,20	5,16
		DNMG 150616-M17	●	●	●													12,70	15,50	6,35	1,60	5,16
-R12		DNMM 150612-R12	●	●	●												12,70	15,50	6,35	1,20	5,16	
		DNMM 150616-R12	●	●														12,70	15,50	6,35	1,60	5,16
-R13		DNMM 150612-R13	●	●	●												12,70	15,50	6,35	1,20	5,16	
		DNMM 150616-R13	●	●														12,70	15,50	6,35	1,60	5,16



INSERTS

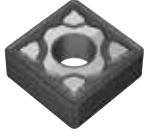



BUTTON INSERTS RCGT..., RCMT..

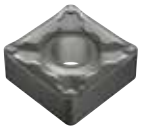



<p>-F13</p> <p>▲ Soft cutting geometry with excellent chip control for small depths of cut in finishing operations</p>		Application area		
		 A32-Z2	 A52-Z2	 A72-Z2

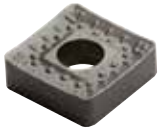



<p>-M18</p> <p>▲ Medium machining ▲ Universal application ▲ Stable cutting edge ▲ Inconsistent cutting depth ▲ Wide range of applications</p>		Application area		
		 A32-Z2	 A52-Z2	 A72-Z2

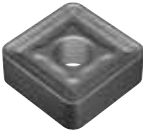



INSERTS





90° INSERTS SNMG.. / SNMM.. / SNMT..

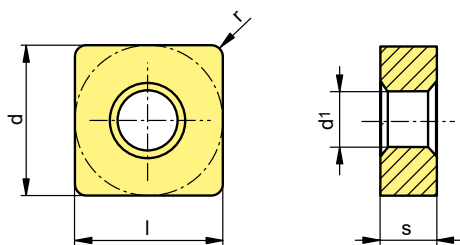
-M17 <ul style="list-style-type: none"> ▲ Light to medium roughing ▲ Skin on castings or forgings ▲ Stable cutting edge ▲ Interrupted cut ▲ For blanks and forged parts 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-R12 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm²) ▲ Good chip control 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2

-R13 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





-R14 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ High feed rates ▲ Large depths of cut ▲ Heavily interrupted cut 		Application area		
				
		A32-Z2	A52-Z2	A72-Z2





			Material						d	l	s	r	d _i
			P	M	K	N	S	H					
-M17		SNMG 120408-M17	•	•	•				12,70	12,70	4,76	0,80	5,16
		SNMG 120412-M17	•	•	•				12,70	12,70	4,76	1,20	5,16
		SNMG 120416-M17	•	•	•				12,70	12,70	4,76	1,60	5,16
		SNMG 150612-M17	•	•	•				15,88	15,88	6,35	1,20	6,35
		SNMG 150616-M17	•	•	•				15,88	15,88	6,35	1,60	6,35
		SNMG 190612-M17	•	•	•				19,05	19,05	6,35	1,20	7,94
		SNMG 190616-M17	•	•	•				19,05	19,05	6,35	1,60	7,94
		SNMG 190624-M17	•	•	•				19,05	19,05	6,35	2,40	7,94
		SNMG 250924-M17	•	•	•				25,40	25,40	9,52	2,40	9,12
-R12		SNMM 150612-R12	•	•	•				15,88	15,88	6,35	1,20	6,35
		SNMM 150616-R12	•	•	•				15,88	15,88	6,35	1,60	6,35
		SNMM 190616-R12	•	•	•				19,05	19,05	6,35	1,60	7,94
		SNMM 250724-R12	•	•	•				25,40	25,40	7,94	2,40	9,12
		SNMM 250924-R12	•	•	•				25,40	25,40	9,52	2,40	9,12
-R13		SNMM 120408-R13	•	•	•				12,70	12,70	4,76	0,80	5,16
		SNMM 120412-R13	•	•	•				12,70	12,70	4,76	1,20	5,16
		SNMM 150612-R13	•	•	•				15,88	15,88	6,35	1,20	6,35
		SNMM 150616-R13	•	•	•				15,88	15,88	6,35	1,60	6,35
		SNMM 190612-R13	•	•	•				19,05	19,05	6,35	1,20	7,94
		SNMM 190616-R13	•	•	•				19,05	19,05	6,35	1,60	7,94
		SNMM 190624-R13	•	•	•				19,05	19,05	6,35	2,40	7,94
		SNMM 250724-R13	•	•	•				25,40	25,40	7,94	2,40	9,12
		SNMM 250924-R13	•	•	•				25,40	25,40	9,52	2,40	9,12
-R14		SNMM 190616-R14	•	•	•				19,05	19,05	6,35	1,60	7,94
		SNMM 190624-R14	•	•	•				19,05	19,05	6,35	2,40	7,94
		SNMM 250724-R14	•	•	•				25,40	25,40	7,94	2,40	9,12
		SNMM 250732-R14	•	•	•				25,40	25,40	7,94	3,20	9,12
		SNMM 250924-R14	•	•	•				25,40	25,40	9,52	2,40	9,12
		SNMM 250932-R14	•	•	•				25,40	25,40	9,52	3,20	9,12
		SNMT 310932-R14	•	•	•				31,75	31,75	9,52	3,20	9,12
SNMT 310932-R14	•	•	•				31,75	31,75	9,52	3,20	9,12		










INSERTS

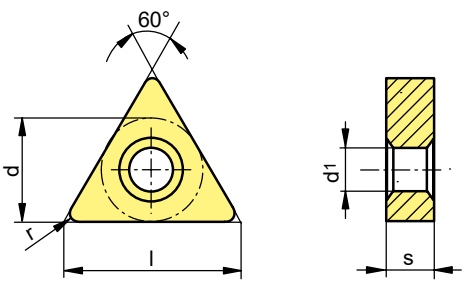
60° INSERTS TNMG.. / TNMM..

-M17 <ul style="list-style-type: none"> ▲ Light to medium-rough machining ▲ Skin on castings or forgings ▲ Stable cutting edge ▲ Interrupted cut ▲ Blanks and forged parts 		Application area			
					
		A32-Z2	A52-Z2	A72-Z2	

-R12 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning, profiling ▲ Inconsistent cutting depth ▲ For steels with high strength (800 N/mm²) ▲ Good chip control 		Application area			
					
		A32-Z2	A52-Z2	A72-Z2	





-R13 <ul style="list-style-type: none"> ▲ Single-sided roughing geometry ▲ Longitudinal and face turning ▲ Slightly interrupted cut ▲ Low cutting forces ▲ Unstable machines 		Application area			
					
		A32-Z2	A52-Z2	A72-Z2	


			Material												d	l	s	r	d ₁
			P	M	K	N	S	H	Al	Al	Al	Al	Al	Al					
			A32-Z2	A52-Z2	A72-Z2														
-M17		TNMG 160408-M17	•	•	•										9,52	16,50	4,76	0,80	3,81
		TNMG 160412-M17	•	•	•										9,52	16,50	4,76	1,20	3,81
		TNMG 220404-M17	•	•	•										12,70	22,00	4,76	0,40	5,16
		TNMG 220408-M17	•	•	•										12,70	22,00	4,76	0,80	5,16
		TNMG 220412-M17	•	•	•										12,70	22,00	4,76	1,20	5,16
		TNMG 220416-M17	•	•	•										12,70	22,00	4,76	1,60	5,16
-R12		TNMM 220416-R12	•	•	•									12,70	22,00	4,76	1,60	5,16	
-R13		TNMM 220412-R13	•	•	•									12,70	22,00	4,76	1,20	5,16	

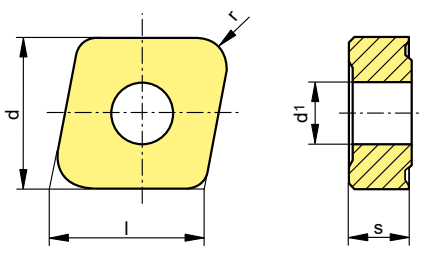


INSERTS

80°insert CNMX 19..





<p>CNMX19.. -S1</p> <ul style="list-style-type: none"> ▲ Special geometry for wheel reprofiling ▲ For excellent chip control 		Application area			
					
		C42-Z2	A32-Z2		





-S1		CNMX 190740-S1	C42-Z2		A32-Z2												d	l	s	r	d ₁																			
			●	○	●	○	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]																									
			●	○	●	○																																		
			●	○	●	○																																		





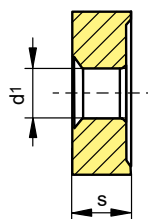
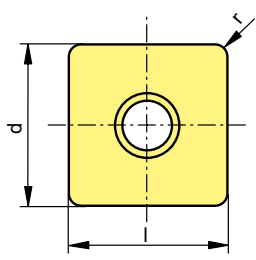
INSERTS

90°INSERTS SNMG 21..

<p>SNMG 21.. -R15</p> <ul style="list-style-type: none"> ▲ Roughing geometry for wheel reprofiling ▲ Stable geometry for long tool life ▲ For excellent chip control 		Application area		
				
		A32-Z2	A52-Z2	A52-Z2





<p>SNMG 21.. -F14</p> <ul style="list-style-type: none"> ▲ Finishing geometry for wheel set machining ▲ Very soft cutting action for excellent surface quality ▲ Special chip groove for good chip control ▲ Short chipping at low feed rates 		Application area		
				
		A32-Z2	A52-Z2	A52-Z2





		P	M	K	N	H																								
		●	○	●	○		A32-Z2	A52-Z2																						
										d	l	s	r	d _i																
										[mm]	[mm]	[mm]	[mm]	[mm]																
-R15							●	●		21.00	21.00	10.50	4.00	7.84																
-F14							●	●		21.00	21.00	10.50	4.00	7.84																
										d	l	s	r	d _i																










INSERTS

90°INSERTS LNUX 19.. / LNUX 30..

LNUX 19.. -R15 ▲ Roughing geometry for wheel reprofiling ▲ Stable geometry for long tool life ▲ Very stable cutting edge for difficult cutting conditions ▲ For excellent chip control		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

LNUX 30.. -R15 ▲ Roughing geometry for wheel reprofiling ▲ Stable geometry for long tool life ▲ Very stable cutting edge for difficult cutting conditions ▲ For excellent chip control		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

LNUX 19.. -M19 ▲ Universal geometry for wheel set machining ▲ For soft cut, short chipping		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

LNUX 30.. -M19 ▲ Universal geometry for wheel reprofiling ▲ For soft cut, short chipping		Application area		
				
		A32-Z2	A52-Z2	A52-Z2

