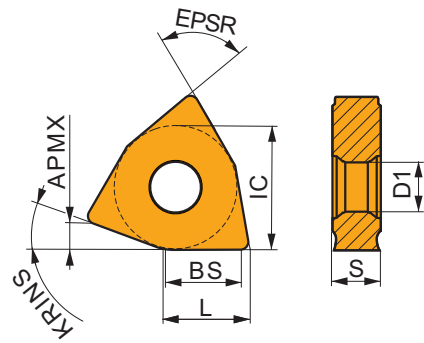
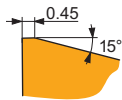
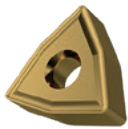


WNXJ

	L	S	APMX	KRINS	IC	EPSR	D1
	(mm)	(mm)	(mm)	(°)	(mm)	(mm)	(mm)
1509	15.00	9.52	3.50	15.0	22.225	75.0	7.94
2013	20.00	13.00	8.00	25.0	31.750	85.0	9.00

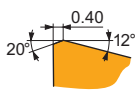


Product	RE	P	M	K	N	S	H	ap min	ap max	fz min	fn max
	(mm)							(mm)	(mm)	(mm/tooth)	(mm/rev)



Peeling geometry PM for medium depth of cut, high linear speed, wiper secondary cutting edge for stable to less stable cutting conditions.

WNXJ 150935-PM	6630	-	■	■	■	■	■	0.80	3.50	1.15	9.00
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Peeling geometry PR for large depth of cut, high linear speed, wiper secondary cutting edge for unstable cutting conditions.

WNXJ 201380-PR-S01	6630	-	■	■	■	■	■	1.00	8.00	1.20	12.00
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CUTTING CONDITIONS

Designation	Appl. area	Appl. area	Appl. area	Appl. area	Appl. area	Appl. area	f_{min}^z	f_{max}^{rev}	$a_{p\ min}$	$a_{p\ max}$	f_{min}^z	f_{max}^{rev}	$a_{p\ min}$	$a_{p\ max}$	f_{min}^z	f_{max}^{rev}	$a_{p\ min}$	$a_{p\ max}$	f_{min}^z	f_{max}^{rev}	$a_{p\ min}$	$a_{p\ max}$	Vc_{min}	Vc_{max}	Vc_{min}	Vc_{max}
LNGF 300715-MM-S01:T6310	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	45	90	35	65	10	30		
LNGF 300715-MM-S01:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	15	50		
LNGF 300715-MM-S01:T9315	■	■	■	■	■	■	0.90	10.00	0.5	1.5	-	-	-	-	-	-	-	-	55	145	-	-	-	-		
LNGF 300715-MM-S02:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	15	50		
LNGF 300715-MM-S03:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	15	50		
LNGF 300715-PM:6630	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	40	115	20	70	-	-		
LNGF 300715-PM:T6310	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	45	90	35	65	-	-		
LNGF 300715-PM:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	-	-		
LNGF 300715-PM:T9226	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	40	115	20	70	-	-		
LNGF 300715-PM:T9315	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	55	145	-	-	-	-		
LNGF 300715-PM-S02:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	-	-		
LNGF 300715-PM-S03:T7325	■	■	■	■	■	■	0.90	10.00	0.5	1.5	0.99	9.00	0.5	1.5	0.99	7.00	0.5	1.2	70	135	55	105	-	-		
LNGF 300715-PM-S03:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	50	100	35	70	10	35		
LNGF 361220-MM-S01:T6310	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	15	55		
LNGF 361220-MM-S01:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	15	55		
LNGF 361220-MM-S01:T9315	■	■	■	■	■	■	1.15	12.00	0.6	2.0	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 361220-MM-S02:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	15	55		
LNGF 361220-MM-S02:T9315	■	■	■	■	■	■	1.15	12.00	0.6	2.0	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 361220-MM-S03:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	15	55		
LNGF 361220-MM-S03:T9315	■	■	■	■	■	■	1.15	12.00	0.6	2.0	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 361220-MM-S04:H07	-	■	■	■	■	■	-	-	-	-	1.27	10.80	0.6	2.0	1.15	12.00	0.6	1.6	-	-	10	40	5	25		
LNGF 361220-PM:6630	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	40	120	25	70	-	-		
LNGF 361220-PM-S01:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	-	-		
LNGF 361220-PM-S01:T9315	■	■	■	■	■	■	1.15	12.00	0.6	2.0	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 361220-PM-S02:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	-	-		
LNGF 361220-PM-S03:T7325	■	■	■	■	■	■	1.15	12.00	0.6	2.0	1.27	10.80	0.6	2.0	1.27	8.40	0.6	1.6	60	140	45	110	-	-		
LNGF 401035-MM-S01:T6310	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	50	105	35	75	10	35		
LNGF 401035-MM-S01:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	15	55		
LNGF 401035-MM-S01:T9315	■	■	■	■	■	■	1.20	16.00	0.7	3.5	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 401035-MM-S02:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	15	55		
LNGF 401035-MM-S03:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	15	55		
LNGF 401035-PM-S01:6630	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	40	120	20	70	-	-		
LNGF 401035-PM-S01:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	-	-		
LNGF 401035-PM-S01:T9226	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	30	130	15	75	-	-		
LNGF 401035-PM-S01:T9315	■	■	■	■	■	■	1.20	16.00	0.7	3.5	-	-	-	-	-	-	-	-	50	150	-	-	-	-		
LNGF 401035-PM-S02:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	-	-		
LNGF 401035-PM-S03:T7325	■	■	■	■	■	■	1.20	16.00	0.7	3.5	1.32	14.40	0.7	3.5	1.32	11.20	0.7	2.8	65	150	50	115	-	-		
LNXR 381240-PM:T9315	■	■	■	■	■	■	1.00	16.00	0.7	4.0	-	-	-	-	-	-	-	-	50	190	-	-	-	-		
LNXR 381240-PR:6630	■	■	■	■	■	■	1.20	16.00	0.7	4.0	-	-	-	-	-	-	-	-	30	135	-	-	-	-		

ap min may be lower than those given in this table, but then the cutting forces will be greater. For indexable inserts with a CVD coating, it should never be lower than 0.15 mm

CUTTING CONDITIONS

Material	Insert	Ap	Vc	fz	ap	vc	fp	vc	fp	vc	fp	vc	fp	vc	fp	vc	fp	vc
RNGH 381200-MM-T6310	P01-P15	M01-M15	S01-S15	1.00	8.00	3.0	12.0	1.10	7.20	3.0	12.0	1.00	8.00	3.0	9.6	50	100	35
RNGH 381200-MM-T7325	P15-P35	M10-M25	S10-S25	1.00	8.00	3.0	12.0	1.10	7.20	3.0	12.0	1.00	8.00	3.0	9.6	70	140	50
RNGH 381200-MM-T9315	P05-P25	-	-	1.00	8.00	3.0	12.0	-	-	-	-	-	-	-	-	60	150	-
RNGH 381200-MR-6640	P20-P40	M20-M35	-	1.25	10.00	3.0	12.0	1.38	9.00	3.0	12.0	-	-	-	-	35	90	20
RNGH 381200-MR-T7325	P15-P35	M10-M25	S10-S25	1.25	10.00	3.0	12.0	1.38	9.00	3.0	12.0	1.25	10.00	3.0	9.6	70	135	50
RNGH 381200-MR-T9226	P15-P35	M10-M30	S15-S25	1.25	10.00	3.0	12.0	1.38	9.00	3.0	12.0	1.25	10.00	3.0	9.6	45	110	25
RNGH 381200-MR-T9315	P05-P25	-	-	1.25	10.00	3.0	12.0	-	-	-	-	-	-	-	-	50	140	-
RNGH 5018MO-MM-M9340	P30-P50	M20-M40	S20-S30	1.50	12.00	4.5	16.0	1.50	12.00	4.5	16.0	1.50	12.00	4.5	12.8	25	65	15
RNGH 5018MO-MM-T6310	P01-P15	M01-M15	S01-S15	1.50	12.00	4.5	16.0	1.50	12.00	4.5	16.0	1.50	12.00	4.5	12.8	45	80	30
RNGH 5018MO-MM-T7325	P15-P35	M10-M25	S10-S25	1.50	12.00	4.5	16.0	1.50	12.00	4.5	16.0	1.50	12.00	4.5	12.8	60	120	45
RNGH 5018MO-MR-T9335	P20-P45	M15-M40	S15-S25	1.50	12.00	4.5	16.0	1.65	10.80	4.5	16.0	1.50	12.00	4.5	12.8	35	85	20
TNGJ 220720-PF-S01-T9315	P05-P25	-	-	0.90	9.00	0.5	2.0	-	-	-	-	-	-	-	-	55	165	-
TNGJ 220720-PF-S02-T7325	P15-P35	M10-M25	S10-S25	0.90	9.00	0.5	2.0	0.99	8.10	0.5	2.0	0.99	6.30	0.5	1.6	70	160	50
TNGJ 220720-PM-S01-T9315	P05-P25	-	-	0.90	9.00	0.5	2.0	-	-	-	-	-	-	-	-	55	165	-
TNGJ 220720-PM-S02-T7325	P15-P35	M10-M25	-	0.90	9.00	0.5	2.0	0.99	8.10	0.5	2.0	-	-	-	-	70	160	50
TNGJ 220720-PM-S02-T9226	P15-P35	M10-M30	-	0.90	9.00	0.5	2.0	0.99	8.10	0.5	2.0	-	-	-	-	40	140	20
TNGJ 220720-PM-S02-T9315	P05-P25	-	-	0.90	9.00	0.5	2.0	-	-	-	-	-	-	-	-	55	165	-
TNGJ 281025-PF-S01-T9315	P15-P35	M10-M30	S15-S25	1.00	14.00	0.6	2.5	1.10	12.60	0.6	2.5	1.10	9.80	0.6	2.0	35	125	20
TNGJ 281025-PF-S01-T6630	P15-P35	M10-M30	S15-S25	1.00	14.00	0.6	2.5	1.10	12.60	0.6	2.5	1.10	9.80	0.6	2.0	35	130	20
TNGJ 281025-PF-S01-T9226	P15-P35	M10-M30	S15-S25	1.00	14.00	0.6	2.5	1.10	12.60	0.6	2.5	1.10	9.80	0.6	2.0	35	130	20
TNGJ 281025-PF-S01-T9315	P05-P25	-	-	1.00	14.00	0.6	2.5	-	-	-	-	-	-	-	-	40	160	-
TNGJ 281025-PF-S01-T7325	P15-P35	M10-M25	S10-S25	1.00	14.00	0.6	2.5	1.10	12.60	0.6	2.5	1.10	9.80	0.6	2.0	55	145	40
TNGJ 281025-PF-S03-T7325	P15-P35	M10-M25	S10-S25	1.00	14.00	0.6	2.5	1.10	12.60	0.6	2.5	1.10	9.80	0.6	2.0	55	145	40
WNGF 201380-MM-S01-T6310	P01-P15	M01-M15	S01-S15	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	1.20	12.00	1.0	6.4	45	105	30
WNGF 201380-MM-S01-T7325	P15-P35	M10-M25	S10-S25	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	1.20	12.00	1.0	6.4	65	145	50
WNGF 201380-MM-S01-T9315	P05-P25	-	-	1.20	12.00	1.0	8.0	-	-	-	-	-	-	-	-	45	155	-
WNGF 201380-MM-S02-T7325	P15-P35	M10-M25	S10-S25	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	1.20	12.00	1.0	6.4	65	145	50
WNGF 201380-MM-S03-M9340	P30-P50	M20-M40	S20-S30	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	1.20	12.00	1.0	6.4	25	80	15
WNGU 150935-PM-S02-T6630	P15-P35	M10-M30	-	1.15	9.00	0.8	3.5	1.15	9.00	0.8	3.5	-	-	-	-	45	140	25
WNGU 150935-PM-S02-T9226	P15-P35	M10-M30	-	1.15	9.00	0.8	3.5	1.15	9.00	0.8	3.5	-	-	-	-	45	140	25
WNMJ 201380-PM-S01-T6630	P15-P35	M10-M30	-	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	-	-	-	-	40	120	20
WNMJ 201380-PM-S01-T9226	P15-P35	M10-M30	-	1.20	12.00	1.0	8.0	1.32	10.80	1.0	8.0	-	-	-	-	40	120	20
WNMJ 201380-PR-T9226	P15-P35	-	-	1.20	12.00	1.0	8.0	-	-	-	-	-	-	-	-	40	120	-
WNMJ 201480-PR-T6630	P15-P35	-	-	1.20	12.00	1.0	8.0	-	-	-	-	-	-	-	-	40	120	-
WNMJ 201480-PR-T9226	P15-P35	-	-	1.20	12.00	1.0	8.0	-	-	-	-	-	-	-	-	40	120	-
WNXJ 150935-PM-T6630	P15-P35	M10-M30	-	1.15	9.00	0.8	3.5	1.15	9.00	0.8	3.5	-	-	-	-	45	140	25
WNXJ 201380-PR-S01-T6630	P15-P35	-	-	1.20	12.00	1.0	8.0	-	-	-	-	-	-	-	-	40	120	-

ap min may be lower than those given in this table, but then the cutting forces will be greater. For indexable inserts with a CVD coating, it should never be lower than 0.15 mm

SPECIFIC CUTTING FORCE TABLE

TABLE

				Ultimate tensile strength Mpa (N/mm ²)	Specific Cutting force kc1 N/mm ²	Increase Value mc
P	P1	P1.1	Free machining sulfurized carbon steel with a hardness of < 240 HB	≤ 830	1500	0.24
		P1.2	Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	≤ 620	1250	0.24
		P1.3	Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of <180 HB	≤ 620	1250	0.24
	P2	P2.1	Plain low carbon steel containing < 0.25 %C with a hardness of < 180 HB	≤ 620	1250	0.24
		P2.2	Plain medium carbon steel containing < 0.55%C with a hardness of < 240 HB	≤ 830	1500	0.24
		P2.3	Plain high carbon steel containing > 0.55%C, with a hardness of < 300HB	≤ 1030	1650	0.24
	P3	P3.1	Alloy steel with a hardness of < 190 HB	≤ 620	1550	0.24
		P3.2	Alloy steel with a hardness of 180–260 HB	> 620 ≤ 900	1650	0.24
		P3.3	Alloy steel with a hardness of 260–360 HB	> 900 ≤ 1240	1750	0.24
	P4	P4.1	Tool steel with a hardness of < 26 HRC	≤ 900	1800	0.24
P4.2		Tool steel with a hardness of 26-39 RC	> 900 ≤ 1240	2000	0.24	
P4.3		Tool steel with a hardness of 39-45 HRC	> 1250 ≤ 1450	2300	0.24	
M	M1	M1.1	Stainless steel, ferritic with a hardness of < 160 HB	≤ 520	1750	0.20
		M1.2	Stainless steel, ferritic with a hardness of 160–220 HB	> 520 ≤ 700	1950	0.20
	M2	M2.1	Stainless steel, martensitic with a hardness of < 200 HB	> 670	2100	0.20
		M2.2	Stainless steel, martensitic with a hardness of 200–280 HB	> 670 ≤ 950	2200	0.20
		M2.3	Stainless steel, martensitic with a hardness of 280–380 HB	> 950 ≤ 1300	2450	0.20
	M3	M3.1	Stainless steel, austenitic with a hardness of < 200 HB	≤ 730	1900	0.20
		M3.2	Stainless steel, austenitic with a hardness of 200–260 HB	> 750 ≤ 870	2100	0.20
		M3.3	Stainless steel, austenitic with a hardness of 260-300 HB	> 870 ≤ 1040	2200	0.20
	M4	M4.1	Stainless steel, austenitic-ferritic or super-austenitic with a hardness of < 300 HB	≤ 990	2350	0.20
		M4.2	Stainless steel, precipitation hardening austenitic with a hardness of 300–380 HB	≤ 1320	2500	0.20
S	S1	S1.1	Titanium or titanium alloys, with a hardness of < 200 HB	≤ 660	1400	0.22
		S1.2	Titanium alloys, with a hardness of 200–280 HB	> 660 ≤ 950	1500	0.22
		S1.3	Titanium alloys, a hardness of 280–360 HB	> 950 ≤ 1200	1600	0.22
	S2	S2.1	High-temperature Fe-based alloys with a hardness of < 200 HB	≤ 690	2450	0.24
		S2.2	High-temperature Fe-based alloys with a hardness of 200–280 HB	> 690 ≤ 970	2550	0.24
	S3	S3.1	High-temperature Ni-based alloys with a hardness of < 260 HB	≤ 940	2850	0.24
		S3.2	High-temperature Ni-based alloys with a hardness of 280–360 HB	> 940 ≤ 1200	3100	0.24
	S4	S4.1	High-temperature Co-based alloys with a hardness of < 240HB	≤ 800	2880	0.24
S4.2		High-temperature Co-based alloys with a hardness of 240–320 HB	>800 ≤ 1070	3100	0.24	