



CAST IRON LAMINA INSERTS



LAMINA
TECHNOLOGIES



CNMA

120408 LT 1000

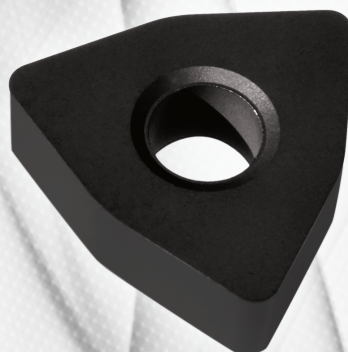
120412 LT 1000



TNMA

160408 LT 1000

160412 LT 1000



WNMA

080408 LT 1000

080412 LT 1000

Lamina Technologies Marketing team is delighted to inform you that our cast iron line of inserts is

READY FOR SALES!

You are invited to experience the **high productivity** and the **impressive tool life** of our inserts specially dedicated for cast iron machining.

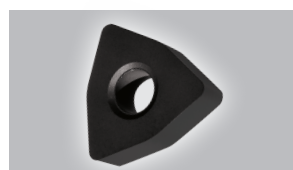
Field Testing

Cutting parameters

Geometry	WNMA 080412	WNMA 080412
Grade	LT 1000	K05
Vc [m/min]	250	200
F [mm/rev]	0.4	0.55
DOC [mm]	3	2
Coolant	Yes	Yes
Pcs/Edge	4	3
Q [cm ³ /min]	300	220

Insert

WNMA 080412 LT 1000

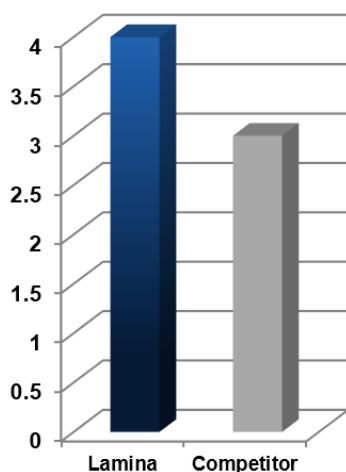


Piece

BRAKE DRUMS, GG25

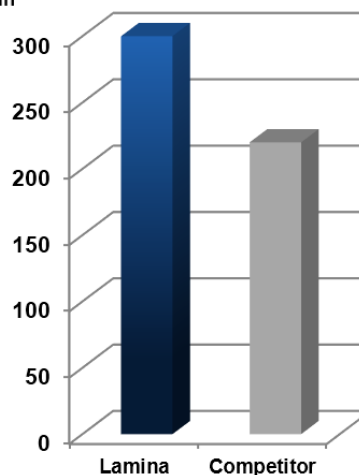
TOOL LIFE

Pcs/edge



CHIP REMOVAL RATE

cm³/min





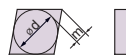
C N M A



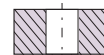
Shape



Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing

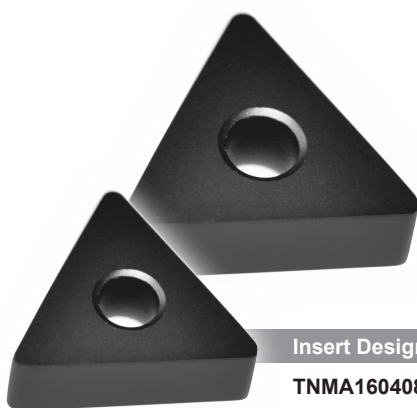
Insert Designation	Grade	l	s	r	Catalog Nr.
CNMA 120408	LT 1000	12	4.76	0.8	T0002791
CNMA 120412	LT 1000	12	4.76	1.2	T0002792

CNMA 120408

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
						min	max	min	max		min	max	D.O.C.	Feed	V _c
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	6.0	0.20	0.40	1.36	270	450	4.0	0.35	350
			15	EN-GJL-250, No30B	200 HB		6.0		0.38	1.22	200	320			250
			16		250 HB		6.0		0.36	1.22	170	240			220
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.40	1.02		260	4.0	0.32	240
			17,19		200 HB		6.0		0.38	0.88	130	230			210
			18,20		250 HB		6.0		0.36	0.82		190			180
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.20	0.27	40	60	2.0	0.18	50
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.7	1.8	0.14	0.20	0.20	30	50	1.3	0.17	40

CNMA 120412

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
						min	max	min	max		min	max	D.O.C.	Feed	V _c
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	0.20	0.60	1.70	270	450	4.0	0.40	350	
			15	EN-GJL-250,	200 HB			6.0	0.58	1.53	200			320	250
			16	No30B	250 HB			6.0	0.56	1.53	170			240	220
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	0.20	0.52	1.28	260	4.0	0.38	240		
			17,19		200 HB			6.0	0.50	1.11			130	230	210
			18,20		250 HB			6.0	0.48	1.02			190	180	
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.25	0.34	40	60	2.0	0.22	50
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.7	1.8	0.14	0.20	0.26	30	50	1.3	0.18	40



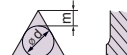
T N M A



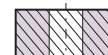
Shape



Clearance Angle



Tolerance
s ± 0.13
For l = 16, d ± 0.05 m ± 0.08
For l = 22, d ± 0.08 m ± 0.13



Fixing

Insert Designation	Grade	l	s	r	Catalog Nr.
TNMA160408	LT 1000	16	4.76	0.8	T0002837
TNMA 160412	LT 1000	16	4.76	1.2	T0003238

TNMA 160408

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions			
						min	max	min	max		min	max	D.O.C.	Feed	V _c	
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.15	0.35	1.30	270	450	3.0	0.30	350	
			15		200 HB				5.0	0.33	1.18	200			320	250
			16		250 HB				5.0	0.30	1.18	170			240	220
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.35	1.30	260	3.0	0.28	240		
			17,19		200 HB				5.0	0.33	1.18			130	230	210
			18,20		250 HB				5.0	0.30	1.18			190	180	
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.18	0.25	40	60	1.7	0.15	50	
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.7	1.5	0.11	0.18	0.18	30	50	1.0	0.14	40	

TNMA 160412

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
						min	max	min	max		min	max	D.O.C.	Feed	V _c
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	5.0	0.15	0.38	1.32	270	450	3.5	0.33	350
		15	EN-GJL-250,	200 HB	5.0		0.35		1.20	200	320	250			
		16	No30B	250 HB	5.0		0.32		1.20	170	240	220			
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.38	1.32	130	260	3.0	0.30	240
		17,19	200 HB		5.0		0.35		1.20	230		210			
		18,20	250 HB		5.0		0.32		1.20	190		180			
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.20	0.26	40	60	1.7	0.16	50
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.11	0.20	0.19	30	50	1.0	0.15	40



W

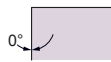
N

M

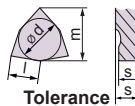
A



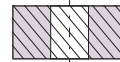
Shape



Clearance Angle



Tolerance



Fixing

s ± 0.13
For l = 06, d ± 0.05 m ± 0.08
For l = 08, d ± 0.08 m ± 0.13

Insert Designation

Grade

l

s

r

Catalog Nr.

WNMA 080408

LT 1000

6

4.76

0.8

T0002840

WNMA 080412

LT 1000

6

4.76

1.2

T0002841

WNMA 080408

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
						min	max	min	max		min	max	D.O.C.	Feed	V _c
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	4.0	0.20	0.40	1.02	270	450	4.0	0.35	350
			15	EN-GJL-250,	200 HB		0.38		0.92	200	320	250			
			16	No30B	250 HB		0.36		0.92	170	240	220			
	Malleable & Nodular	8	17,19	GGG40, GGG70,	150 HB	0.7	4.0	0.20	0.40	0.77	260	4.0	0.32	240	
			17,19	50005	200 HB		0.38		0.66	130	230			210	
			18,20	250 HB	0.36		0.61		190	180					
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.20	0.20	40	60	2.0	0.18	50
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.7	1.8	0.14	0.20	0.15	30	50	1.3	0.17	40

WNMA 080412

Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
						min	max	min	max		min	max	D.O.C.	Feed	V _c
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.7	4.0	0.20	0.60	1.19	270	450	4.0	0.40	350
			15	EN-GJL-250,	200 HB		0.58		1.07	200	320	250			
			16	No30B	250 HB		0.56		1.07	170	240	220			
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	4.0	0.20	0.52	0.89	130	260	4.0	0.38	240
			17,19		200 HB		0.50		0.77	230		210			
			18,20		250 HB		0.48		0.71	190		180			
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.25	0.24	40	60	2.0	0.22	50
	White Cast Iron		41	G-X300CrMo15	55 HRC	0.7	1.8	0.14	0.20	0.18	30	50	1.3	0.18	40