



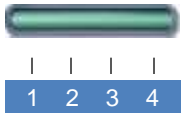
New Product:

## TNUX 160404 L LT-10

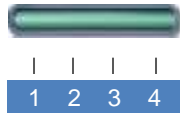
Lamina Technologies SA, the world leader of **Multi-Mat®** inserts, is pleased to announce the release of the TNUX 160404 L LT-10 insert for insert for left-hand profiling turning operations (similar to KNUX), with 6 cutting corners , PVD coated on Sub-micron substrate.

### Applications guide

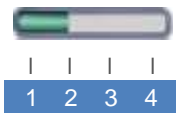
#### Semi Finishing



#### Finishing



#### Super Finishing



- 1 -Not recommended
- 2 -Acceptable
- 3 -Recommended
- 4 -Excellent

### Applications

TNUX 160404 LT-10 is designed for:

- Semi finish and finish operations
- Good for turning with unstable conditions

### Key advantages

- High productivity insert
- Positive geometry for low cutting forces performance
- Excellent chip control functionality
- Good for dry and wet machining (according to Lamina's specifications)
- Superior toughness & wear resistance for consistent performance and tool life
- **Multi -Mat®** product - one insert for multiple materials
- Top **Swiss** quality with proprietary sub-micron and PVD technologies

### Competing with

- Sandvik TNMG 160404 L-K

### Tool holders

Fits standard ISO tool holders

### Order

Catalog number: **T0001877**



## Cutting Conditions TNUX 160404 L LT-10

### Turning Tips:

- The cutting conditions are Lamina Technologies guidelines for optimal machining, however our inserts can work in a wider range of cutting conditions to meet special machining needs.
- If working according to our recommended cutting conditions A-max should be respected.
- For Stainless Steel, work over the minimum speed, as machining Stainless Steel at low speeds causes material sticking.
- Coolant recommendations: Use coolant with materials from groups 6, 7, 8, 9, 10, 11, 12. Do not use coolant with materials from groups 1, 2, 4. Use coolant with materials from groups 3, 5 - depending on the application.
- Always verify that the tool holder and shim are in good conditions (not damaged).
- If cutting chips are too long, we recommend increasing feed rate.
- If cutting chips are not controlled (vary in shape and size), we recommend increasing feed rate and reducing depth-of-cut.
- For internal boring operation, the tool holder should be as short as possible and shank as wide as possible.
- In any case of vibrations, we recommend reducing cutting speed, and increasing feed rate.
- In strong interrupted cut, feed rate should be reduced.

Material Group	Group	Material Example	Brinell Hardness	d.o.c (mm)		d (mm/rev)		A max [mm2]		Vc (m/min)		Optimal cutting conditions	
				min	max	min	max	min	max	min	max	d.o.c	feed
Low Carbon Steel	1	Ck15, Ck45 1020, 1045	150	0.2	5.0	0.12	0.30	1.20	180	330	1 - 3	0.16	
			180		4.0		0.28	0.84		280			
			210		4.0		0.25	0.75		250			
Alloy Steel	2	42 CrMo 4, St 50-2 Ck60, 1060 4140	180	0.2	4.0	0.10	0.28	0.84	120	280	1 - 2.5	0.15	
			230		4.0		0.25	0.75		250			
			280		3.0	0.22	0.55	210					
			320		3.0	0.08	0.20	0.50		180			
High Alloy Steel	3	X40 CrMoV5 1 40 NiCrMo 6 S 2-10-1-8 H13	220	0.2	3.0	0.08	0.23	0.58	70	190	1 - 2	0.12	
			280		3.0		0.21	0.53		150			
			320		3.0		0.18	0.45		130			
			350		3.0		0.16	0.40		100			
Hardened Steel		D2 HSS M42	400	0.2	1.0	0.03	0.08	0.07	40	70	0.7	0.06	
			480		0.8		0.07	0.06	40	70	0.6	0.05	
			550		0.6		0.06	0.04	30	50	0.6	0.04	
Austenitic and Duplex Stainless Steel	4	X5 CrNi 18 9 304	210 - 250	0.2	4.0	0.12	0.23	0.69	170	270	1 - 3	0.16	
	5	X2 CrNiMo 17 2 2 316	230 - 270		3.0		0.10	0.21	0.53	160	210	1 - 2.5	0.14
	6	X6 CrNiMoTi 17 12 2 316 Ti, Duplex / Nitronic	----		3.0		0.08	0.18	0.45	70	150	1 - 2	0.20
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.2	3.0	0.10	0.22	0.55	170	250	1 - 2.5	0.15	
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed Treated	0.2	3.0	0.10	0.22	0.55	170 120	250 190	1 - 2.5	0.15	
Grey Cast Iron	9	GG 20	140 - 230	0.2	5.0	0.12	0.30	1.20	170	250	1 - 3	0.16	
		GG 25						1.20		230			
		GG 30						1.20		210			
Nodular Cast Iron	10	GGG 40	210	0.2	4.0	0.10	0.25	0.75	120	230	1 - 2.5	0.13	
		GGG 50	260					0.75		190			
		GGG 70	310					0.75		150			
White Cast Iron		G-X260NiCr42	400	0.5	1.2	0.04	0.09	0.08	30	50	0.6	0.07	
Ni based Alloy	11	Inconel 625	----	0.2	3.0	0.08	0.22	0.55	25	35	0.5 - 2	0.12	
		Inconel 718						0.55	28	40			
		Hastelloy C						0.55	40	65			
Ti based Alloy	12	TiAl 6 V4	----	0.2	3.0	0.08	0.23	0.58	35	60	0.5 - 2	0.12	
		T40					0.21	0.53	28	40			

