



LOTUS
LASER SYSTEMS

nMETA

FIBER LASER MARKING WORKSTATION

Technology this good has never been so affordable

www.lotuslaser.com



WHAT IS nMETA?

nMeta is our most compact laser engraving machine, arguably the most compact fibre on the market.

Designed for use in retail spaces, workshops, jewellers and places where space is premium and quality is essential. The nMeta is Class 2, meaning it's safe for use in almost any situation, including public spaces.

It's perfectly suited to engraving metal products with logos, vectors, text, serials and more. nMeta doesn't require a separate compressor and just plugs into a typical household plug socket and uses very little power.

Boasting many of the features of our top-end industrial systems, the nMeta is an ultra-compact, heavy workload unit with exquisite laser precision.

STANDARD FEATURES

What makes the nMeta so special?

ULTRA COMPACT

Able to sit on a desktop, the nMeta is amongst the smallest fibre laser systems available. Built with heavy use in mind, using the same Siemens PLC electronics and exceptionally durable components found in our industrial units. The nMeta boasts the largest marking area vs. size for a fibre laser on the market.

EXCEPTIONAL SOFTWARE

Our V3 laser software makes it easy to operate your machines. Whether you are laser cutting, marking or engraving, it will help you through the entire process.

The 64-bit software allows for faster file processing & much larger files, plus the DLC control allows for a wider range of laser sources and settings. Intuitive and comprehensive, you can send files and vectors from your normal graphics program to the laser software, or setup more advanced serialisation marking jobs quickly and efficiently.

PROGRAMMABLE Z-AXIS

Our industrial grade, ballscrew driven, precision Z-axis is exceptionally stable. We designed and built this for the Meta range and it comes with a proven track record of intensive use over many, many years. Controllable by software our Z-axis allows for fast setup and recall, as well as the ability to mark objects at multiple heights in a single job.

GRADED LASER SOURCE

At the heart of nMeta is a powerful 20w MOPA or 1µm Q-switched pulsed fiber laser, both with a proven record of consistent and reliable operation. Boasting over 100,000 hours MTBF, graded, rated and calibrated perfectly before it leaves our doors.

STANDARD FEATURES

PRECISION WORKTABLE & POINTING LASER

Accurate and stable alignment of parts and jigs is essential for error free operation. That's why we incorporate a precision cut and drilled aluminium worktable to the nMeta. Coupled with the pointing laser delivered through the lens, set-up times can be reduced from many minutes to just a few seconds.

ROBUST, INDUSTRIAL CHASSIS

Unlike most other systems out there that will require laser re-calibration after a light tap, nMeta has been made with an uprated, industrial frame. This means it can support heavy parts and man-handling without expensive service charges.

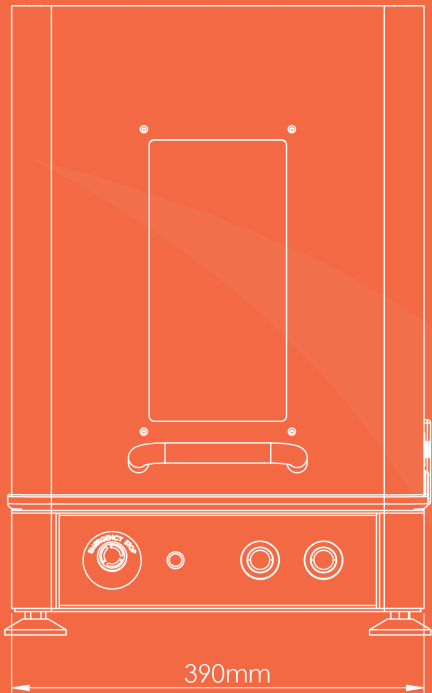
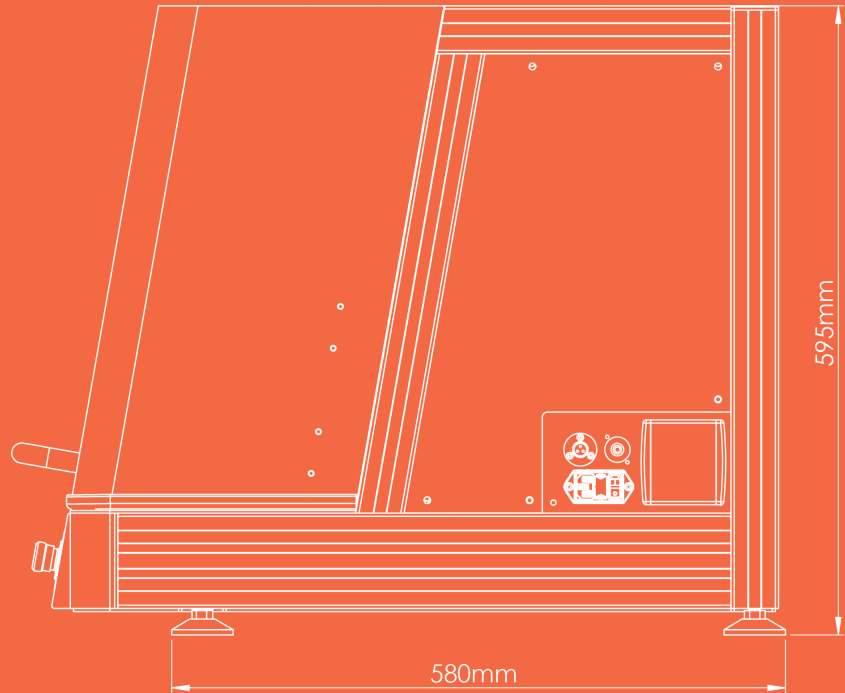
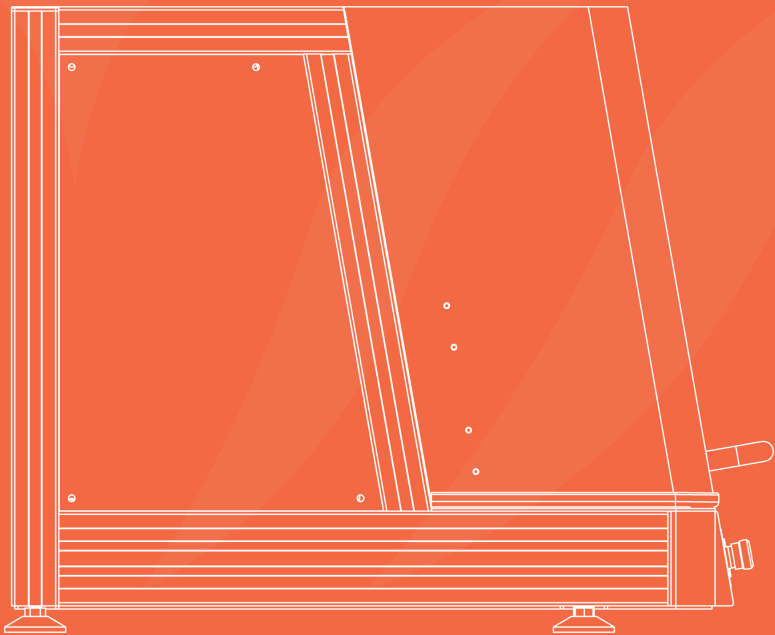
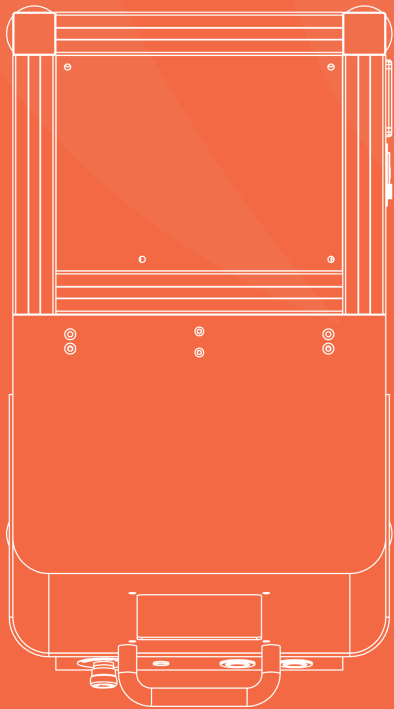
AUTOMATIC SOFT-CLOSE DOOR

Built with stability and safety in mind, the nMeta door automatically closes softly and gently when you start engraving. This means your product remains perfectly positioned and isn't jolted around. We use the highest quality Italian pneumatics designed to operate over millions of operations, ensuring all seals are perfect for safe Class 2 operation.

ROTARY DEVICE

For accurate engraving of cylindrical products, the nMeta rotary device grips the part while automatically turning it during the engraving process. It can support up to 2KG.

GENERAL
TECHNICAL
DATA



WEIGHT & DIMENSIONS	
Width	395mm
Depth	690mm (725mm to handle)
Height	595mm
Weight	50kg approx

LASER SOURCE: 20W Q-Switched option

Q-switched fiber laser	
1060-1085nm optically isolated with random polarization	
Pulse energy 1mJ @ 20kHz, M ² <1.5	
PRF 20-60kHz	
Pulse width <120ns	
Integrated (red) pointer <0.99mW @655nm	

LASER SOURCE: 20W MOPA option

MOPA fiber laser	
1064nm optically isolated with random polarization	
Pulse energy 0.8mJ @ 20kHz, M ² <1.4	
PRF 1-4000kHz	
Pulse width 2-350ns, 16 selectable waveforms	
Integrated (red) pointer <0.99mW @655nm	

POWER REQUIREMENT

Single phase auto switching	
230 VAC 50Hz	Consumption <3A 350W approx
120 VAC 60Hz	Consumption <6A
Air Cooled	

COMPUTER

Operating System	Windows
Connection	USB max 2.5m

MAXIMUM PART LOAD

X	250mm
Y	250mm
Z with 110mm lens	290mm
Z with 180mm lens	200mm
Weight	30kg

MAXIMUM PART LOAD USING ROTARY, AXIS (option)

X	200mm
Diameter	100mm
Weight	2kg depending on fixture

SAFETY & SECURITY

Laser class	Class 2
Emergency stop	Standard
Keyswitch power on/off	none
Laser safe viewing window	135mmx270mm
CE and RoHS	Compliant
FDA	Approved 1320021-000

MISCELLANEOUS

Table size	250x250
Standard lens scan area	110mm
Optional lens scan area	70mm
Semi automatic door	Standard
Z-axis programmable by software	Standard
Lotus mark control software (v3)	Standard
Rotary axis with chuck	Optional
Fume extraction	Optional, Automatic

WARRANTY (T&C's apply)

Main system: 3 years	Labour: Variable by territory
Laser source: 3 years	
Warranty extension	Optional up to 5 years
Service plans	Optional

PERFORMANCE

Scan Head signal	Digital
Standard head max velocity	6000mm/sec

ENVIRONMENTAL REQUIREMENTS

Typical Ambient temp. (min/max)	15°C to 30°C
Fume extraction rate	Apps dependant, contact us
Protect from direct sunlight, vibration, high humidity, dampness, unstable power supply.	

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