

LASER MARKING

Superior solutions for a wide range of applications



ROFIN – LASERS FOR INDUSTRIAL MATERIAL PROCESSING

Laser marking – fast, flexible and durable

ROFIN is a global leader in developing and manufacturing of industrial lasers and laser-based products for material processing applications. With a variety of CO₂, rod, disc, fiber and diode lasers, ROFIN offers the widest and most powerful product range worldwide and combines profound experience in laser manufacturing with in-depth application expertise. In addition to plain laser sources, ROFIN offers complete solutions for a wide range of material processing applications.

Laser marking is a fast and flexible process for product identification. Compared with other marking technologies such as inkjet printing and mechanical marking, laser marking has a number of advantages. It offers very high processing speeds, low operational costs and consistent, high-quality and durable results.



To learn more about our complete product range please visit www.rofin.com

LASERS MARKERS

Our lasers provide excellent marking quality on almost any material.

PowerLine E Air 10/25 – All air-cooled laser marker with low operating costs

The PowerLine E Air 10 is an end-pumped solid-state laser, which is completely air-cooled. The operating costs of the system are low due to reduced energy consumption. Its efficient cooling technology makes it almost maintenance-free. The PowerLine E Air 25 provides best marking results even in case of dusty, oily or oxidized parts.

PowerLine F 20/20 Varia/30/50/100 – Fiber technology with compact design

The PowerLine F lasers are diode-pumped, q-switched fiber lasers. They offer attractive total operating cost, long diode life and require only minimum maintenance. The space-efficient design of the PowerLine F series facilitates integration into existing production environments. The modular design allows for on-site service and increases availability.



ALL-IN-ONE MARKING SOLUTIONS

Class 1 laser marking stations are ready-to-use solutions. Various options, fixed and selectable laser sources allow for exact adaption to every marking task.

EasyMark

With a footprint of just 60x60 cm, the EasyMark is one of the most compact laser marking devices on the market. Marking tasks on metallic surfaces and plastics are handled effortlessly and with perfect results. The laser marker operates with a conventional household power source and requires no external cooling.

LME-RM LT

The LME-RM LT offers efficient, high-quality laser marking at a very attractive price. The system comes as a standing workstation with a large working chamber, an integrated laser marker and smart operation technology. It is available with any of ROFIN's laser markers and with a wide variety of options.

LME-RM 2 and LME-RM RT

Based on ROFIN's many years of experience in manufacturing of superior laser technology, the highly-customizable LME-RM series offer reliable 24/7 operation. The robust worktables even carry large and heavy work pieces of up to 100 kg, or 50 kg per side for 2-position LME-RM RT. Available with all ROFIN's laser markers and a wealth of options.



POWERLINE E AIR 10/25

Completely air-cooled laser markers

Each component of the PowerLine E Air 10/25 laser markers is efficiently air-cooled. The operating costs of the system are low due to reduced energy consumption and use of advanced air-cooling technology. In order to perfectly meet specific application requirements, the PowerLine E Air series laser markers are available in two different power ranges. High quality markings with alphanumerics, graphics, grayscale pictures, bar codes and matrix codes on various materials are carried out within short cycle times. In order to obtain best marking results on certain metals and plastics, the PowerLine E series is also available with water-air cooling and wavelengths of 1064 nm, 532 nm and 355 nm. Double head configurations with beam splitter and beam switch offer benefits when large marking fields or minimum process times are required. PC and supply components are housed in standard 19" modules. The compact laser head and the supply and control units can be integrated in customer-specific or ROFIN-supplied laser workstations.

YOUR BENEFITS

- low operating costs due to air cooling technology
- 19" components, compact dimensions
- different power ranges
- double head configurations available



POWERLINE F 20/20 VARIA/30/50/100

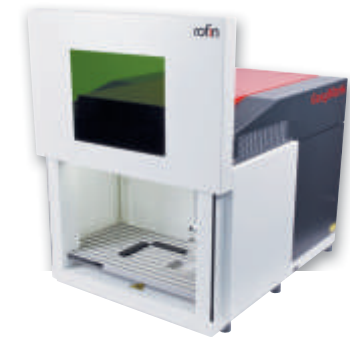
Minimum maintenance

The PowerLine F series comprises innovative fiber lasers with different power ranges. The F 20 and F 30 systems deliver 1 mJ pulse energy with a fast turn-on time and high peak power over a wide range of repetition rates. The PowerLine F 20 Varia's adjustable pulse length provides perfect results even with challenging applications (e.g. corrosion-free marking). With its single-mode beam quality, the fiber laser will produce ultra-fine, crisp marks every time.

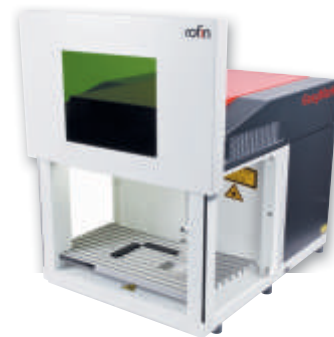
The PowerLine F 50 and F 100 are operated in pulse mode at frequencies up to 200 kHz. The emitted average laser power can be set using the fiber amplifier. Therefore those sources are perfectly suitable for high-speed marking.

YOUR BENEFITS

- low operating costs
- different power ranges
- double head configurations available
- completely air-cooled



View with door opened



With detachable side walls



EASYMARK

The compact and versatile marking system

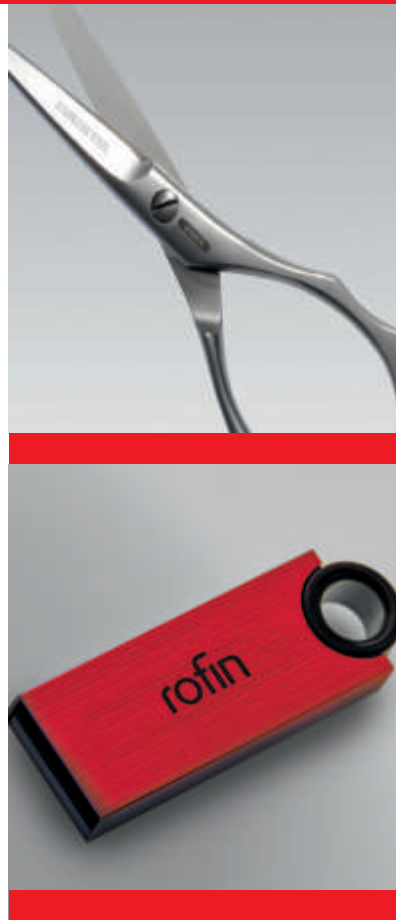
The EasyMark series is one of the most compact laser marking systems on the market. With its innovative and flexible housing it can be perfectly customized to individual applications – as well as integrated into production lines as a class 4 laser system. The supply and control units and the working chamber are designed as separate modules. The EasyMark is your laser marking solution for various production environments (semi- and fully-automated production), a wide range of applications and most different materials.

YOUR BENEFITS

- integrable into production lines
- integrated air-cooling
- low maintenance and service costs
- easy operation due to graphical user interface

OPTIONS

- rotation axis
- marking field 180 x 180 mm
- various camera viewing systems
- exhaust unit with remote control
- automatic door



LME-RM LT

Flexible, efficient and compact laser workstation

The LME-RM LT has compact dimensions and offers an efficient solution for laser marking parts in a production environment. All 19" components can be integrated into the support frame, and the laser controls are front-mounted for ease of operation. A laser-safe observation window allows monitoring of the marking progress. For easy job setup, the large access door can be configured with an optional pneumatic AutoDoor. The modular LME-RM LT offers circumferential indexers for marking cylindrical work pieces, adaptability to a variety of conveyors, X/Y tables, open-frame configurations, and a wealth of other options to make your marking project easy and efficient.

YOUR BENEFITS

- spacious working chamber with observation window
- cost-optimized, flexible solution
- space-saving, compact design
- selectable laser markers based on your application
- low operating costs with actively air-cooled and efficient lasers

OPTIONS

- vision modules (2D code, read/verify, part location, and identification)
- bar code scanner with carrier integrated in support frame
- manual or automated door
- programmable Z-axis
- 250 x 250 mm XY stage (standard or tiling grade)
- circumferential indexer (3-jaw chuck or 5C collet)
- Tooling plate
- foot switch
- fume extractor



LME-RM 2 AND LME-RM RT

Rugged laser marking workstations for reliable 24/7 operation

The versatile LME-RM 2 and RT systems include such options as 36" multi-station rotary indexing table, and X/Y/Z control. Due to the positioning possibilities of the laser via the three program-controlled axes, even parts of complex geometry can be marked easily. A rotary axis, which is required for marking cylindrical parts, is available optionally. ROFIN can also provide custom engineered solutions as well as a portfolio of existing custom solutions—five-sided markers, automated loaders and/or unloaders, conveyor system integration with your existing production line, ultra-high-precision systems, automotive and medical production systems and tag markers—to name a few.

YOUR BENEFITS

- suitable for complex geometry and heavy workpieces
- worktable and rotary table versions available
- selectable laser sources
- rugged design for reliable 24/7 operation
- all components in a single package

OPTIONS

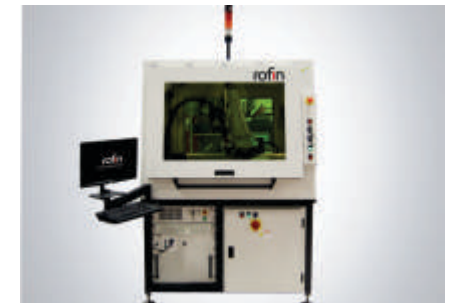
- vision modules (2D code, read/verify, part location, and identification)
- bar code scanner
- automated door (LME-RM 2)
- programmable z-axis
- circumferential indexer (3-jaw chuck or 5C collet) (LME-RM 2)
- 500 x 500 mm XY stage (standard or tiling grade) (LME-RM 2)
- 2 position or 4 position rotary (LME-RM RT)
- Tooling plate
- fume extraction unit
- foot switch



Custom Class 1 system; pick 'n place feeder system with input/output/reject bins and vision system assures mark location, uniformity and contrast

SEMI-CUSTOM OR FULLY-ENGINEERED SYSTEMS

ROFIN's customized systems group has designed and built application-specific laser marking systems for more than 35 years. Combining the key disciplines of laser technology, mechanical engineering, software and process development in a unique solution ensures quality, functionality and profitability of the production. If the laser forms a significant part of the total solution, you will find ROFIN – one of the world's largest manufacturers – has the skill, experience, and laser products needed to design and build your complete laser marking system.



300mm lens, XYZ motion stage, vision system for alignment and verification, SPC board handler, and edge-belt conveyor



Dual function; micro-machining & marking

Innovative laser system solutions for your specific application



Custom Tag Marking System with plastic tag load/unload, automatic color sensor, bar code reader



Rotary table system, 4-positions; 3 for load/unload/inspect and 1 for marking



Pass-thru conveyor, laser marking on-the-fly

Mechanical engineering. ROFIN can integrate different machine concepts and control systems, including component handling in industrial class 1 laser systems.

Ultra high-precision systems. Precise granite set-up for high-accuracy and long-term stability.

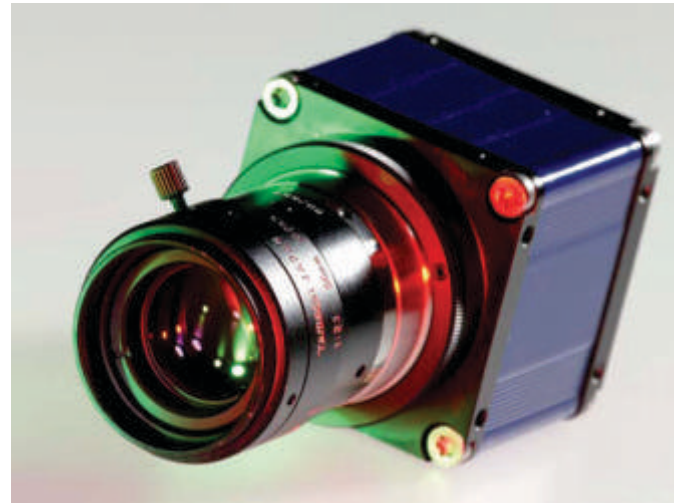
Rotary table systems. Flexible solution for semi-automatic production with interchangeable workpiece fixtures. Fast and safe laser processes through integrated sensors and actuators.

Process automation. Fully automated laser processes; conveyors, multi-position rotary tables, pick-n-place and stack/destack automation, bowl-feeder systems.

Vision System Integration. Fast pattern and optical character recognition technology, pre- and post-mark verification and part placement, camera monitoring through the laser optics.

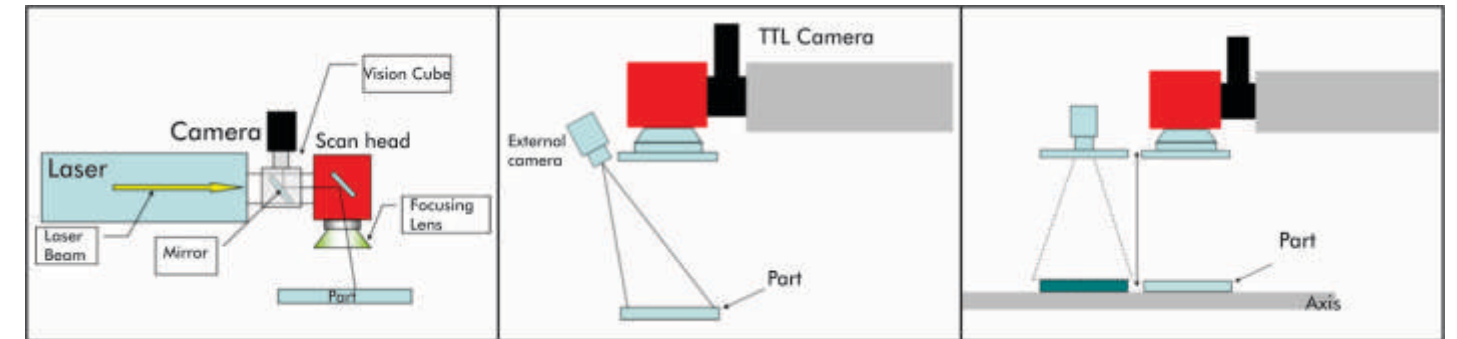
YOUR BENEFITS

- short process cycle times
- maximum positioning accuracy
- different solutions for small and large workpieces
- use with any freely-configurable ROFIN laser marker
- robust laser process; pre-mark confirmation to laser marking to post-mark inspection



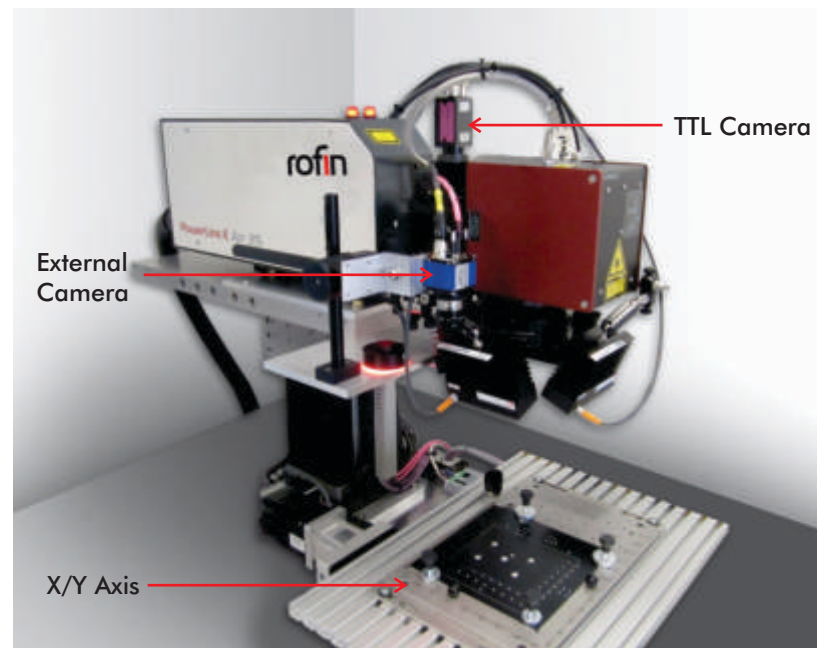
Interactive Vision Assist Systems

- Laser Marking with Vision. Compact TTL solutions for high accuracy and short process time.
- Mark Position and Alignment. External camera + TTL solution for detecting inside the marking area.
- Mark Readout and Verification. Combination of TTL and external camera for high accuracy and flexibility.



VISION SOLUTIONS

Laser marking with the utmost precision



When marking applications ask for maximum precision, ROFIN laser markers with vision systems are the perfect answer. Even without any workpiece pre-alignment, they ensure optimum positioning of the marking content.

Any freely-configurable ROFIN laser marker with 1064 nm, 532 nm, or 355 nm wavelength can be equipped with a vision system. ROFIN offers different solutions with internal and/or external camera. Typical applications are offset correction, quality testing and inspection of ID and 2D codes (bar codes, data matrix codes, etc.).

ROFIN offers Interactive Vision Assist Systems: laser marking with vision, mark position and alignment, mark readout and verification.

Part confirmation

With off-axis vision solutions, you can confirm part identity and correct assembly using: sizing, presence, color, bar code ID, sensor.

Vision targeting

Thru-the-lens or off-axis camera systems can be used to find position and orientation. Marking can be adjusted using the offsets for X-position, Y-position, Theta angular position.

Align mark to part

Using feedback from the vision system(s), laser objects can be adjusted for marking using: X-offset in the layout file, Y-offset in the layout file, Z-axis position in the layout file, angular offset in the layout file.

Fast-Focus Module

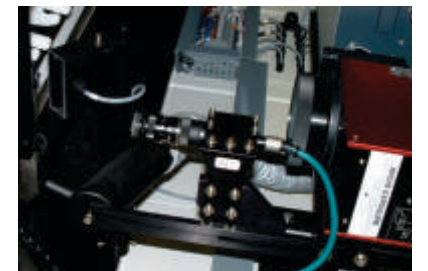
The FFM can be used to adjust the focus of the laser to accommodate different Z-heights (layers). It can also be used to defocus the laser beam, and for marking on concave, convex, and incline plane part geometry.

Post-mark inspection

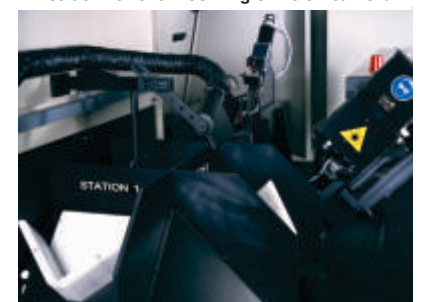
Here, vision solutions are used to inspect the mark for: grading the 2D matrix code, confirming the Optical Character Recognition (OCR and OCV), and confirming the mark presence.

Pattern recognition

Camera monitoring through the laser optics and fast pattern recognition technology can compensate positional tolerances. ROFIN offers coordinated solutions with our laser marking and code recognition systems.



Beside-the-lens mounting of vision camera



Rotary table system with 2-cameras for mark orientation + part location



XYZ motion & vision for alignment & verification

ROFIN offers you a comprehensively equipped application lab. Customer applications and lab studies can be carried out with the assistance of our experienced engineers. Virtually all of our marking systems are available for application trials. We will present you all possible laser concepts for consideration with benefits and implications, and together we will find the perfect solution for your individual task.

If your application strikes a new path in laser marking, we can call on our wide range of high-performance laser sources and combine them with efficient engineering and process technology to create a tailor-made complete system solution.

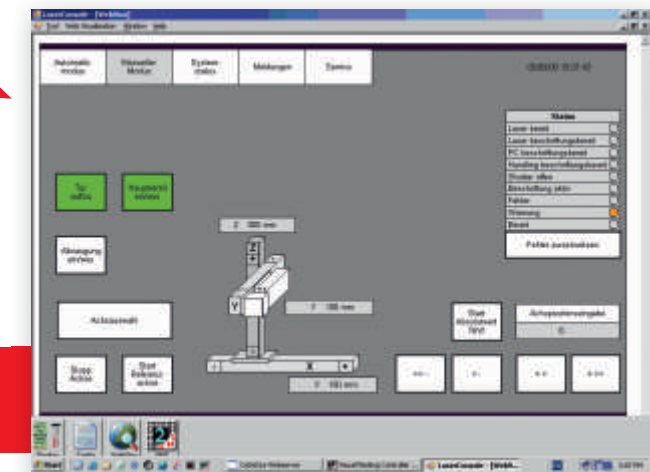
APPLICATION KNOWLEDGE



VisualLaserMarker (VLM) is a sophisticated and flexible marking software used for all ROFIN lasers. Running on a standard PC environment, layout and transfer of the marking contents is a breeze. VLM is a “what you see is what you get” type software and offers the flexibility to be simple to use and yet powerful. VLM is able to fully integrate into any production software and is configured to handle all common communication methods. True type fonts are used directly, no need to convert to special fonts. In addition to several options such as CAD functions, VLM offers a wide range of marking functions, fonts and predefined laser parameter sets. The user-interface reflects ROFIN’s long-time laser marking expertise and is clearly arranged and can be operated easily.

VLM handles a wide variety of marking content e.g. matrix-codes, bar codes and serial numbers. Extremely small marks can be realized depending on the material. The sophisticated software controls marking on flat and curved surfaces and even marking-on-the-fly applications. Via an optical fast focusing module, various workpiece heights can be processed quickly – travel time from upper to lower end position is just 15 ms.

Continuous, user oriented development, individual solutions and customer support are the focus of our software work.



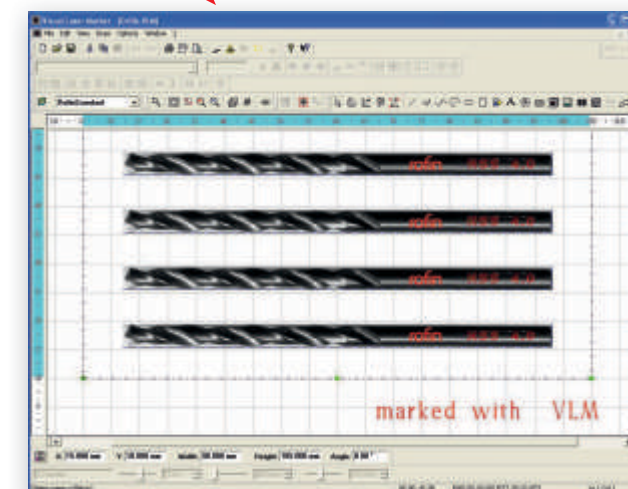
Laser workstation oriented visualization via web interface

VisualLaserMarker SOFTWARE —

Powerful and simple to use



Laser display and graphical user interface



Row and column marking of workpieces



ROFIN offers a solution specifically developed for fast, high-quality, on-the-fly marking of moving work pieces. Linear as well as rotational movement can be handled. In the latter case, the marking is carried out tangentially on the surface shell without any distortions. Positioning and movement compensation data is processed in real-time. The software even handles speed changes during the marking process.

The VisualLaserMarker Software will help you to design the marking layout. It offers various possibilities for creating marking objects and work pieces and is extendable with VBScript macros. All laser markers have a wide range of interfaces, so even complex work-flows or data integration is handled easily.



Screenshot marking on-the-fly

LASER MARKING

Efficient on-the-fly marking of workpieces

FEATURES AT A GLANCE

- short cycle times
- excellent marking results without visible overlaps or gaps
- available with any ROFIN laser marker
- wide application range



Marking of a continuously rotating workpiece



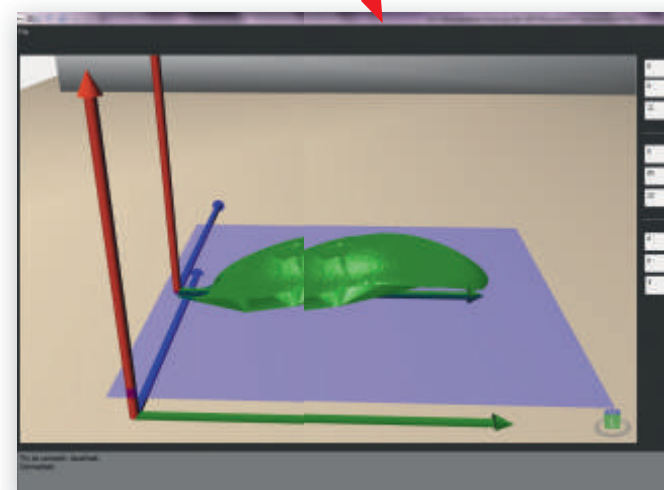
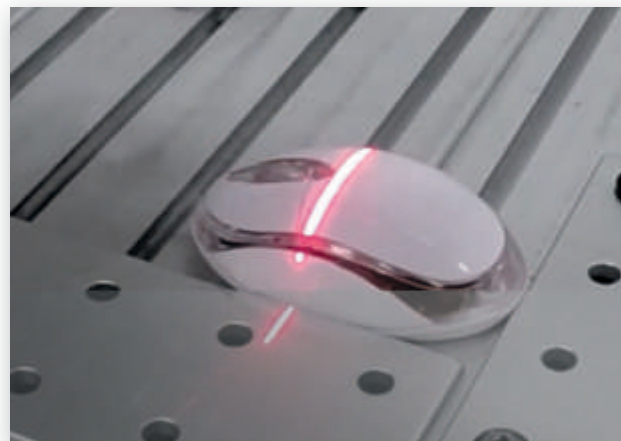
ROFIN's software comes with an integrated module, which offers distortion-free parallel projection of marking contents onto free-form surfaces. Parallel projection ensures geometrically-correct marking layout reproductions even on curved or irregular shaped surfaces. Dimensional variation or distortion are a matter of the past. The software incorporates a 3D correction field when preparing the data for the laser marking process.

Prior to this, the 3D correction field is generated with a 3D simulation, where the virtual marking field is placed within or above the visualized workpiece. The optionally available Fast Focusing Module (FFM) brings free form marking to perfection, particularly when large marking fields are required or pieces with bigger height variations have to be processed.

PERFECT LASER MARKING

Of free-form surfaces

Distortion-free
marking of three-
dimensional objects



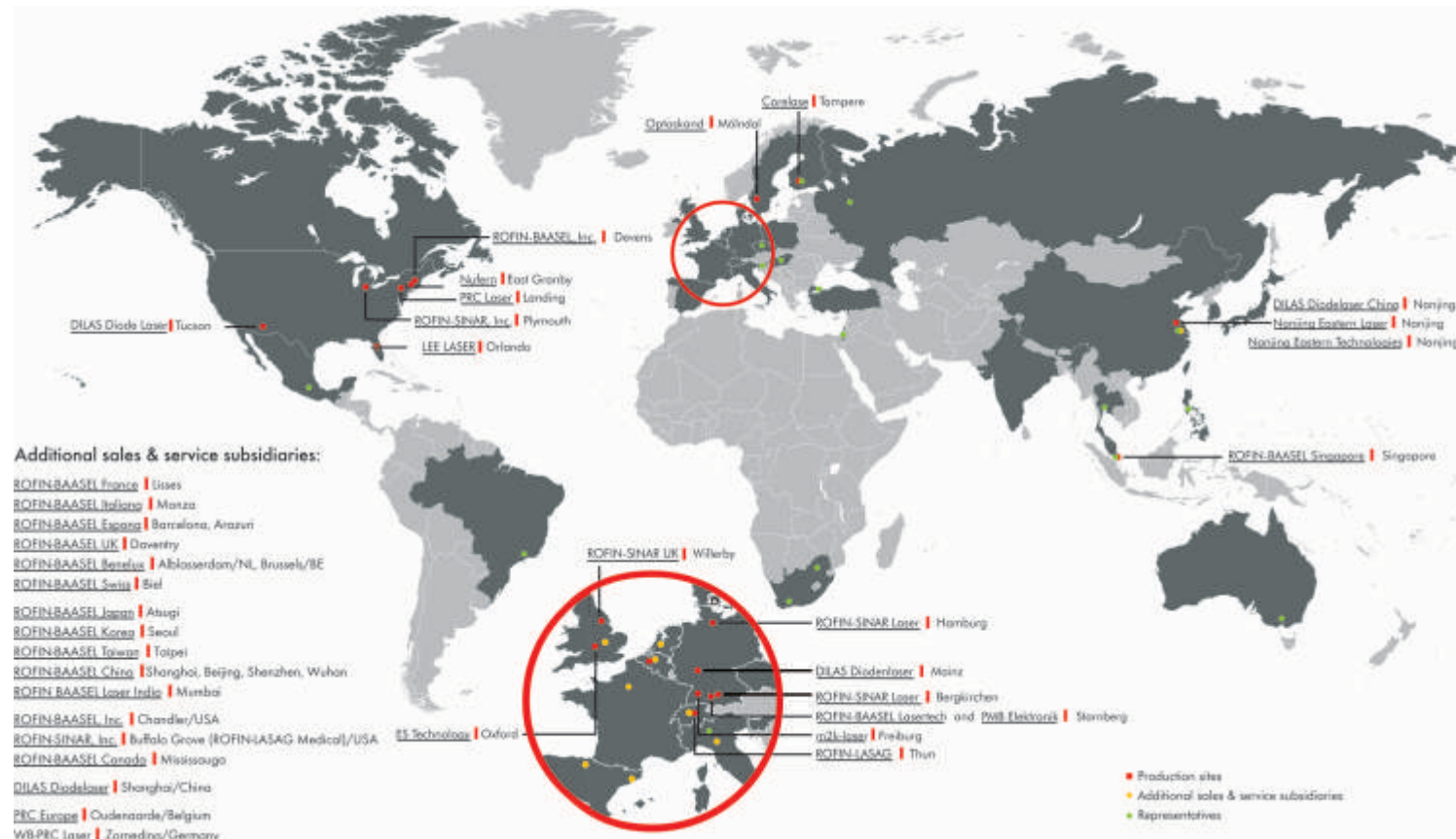
3D model
positioning

YOUR BENEFITS

- 100% correct geometry reproduction
- no dimensional variation or distortion
- arbitrary free form surfaces are possible
- fully automatic correction

OPTIONS

- Fast Focusing Module (FFM) for fast focal shift
- perfectly even line widths within large marking fields
- optimum marking quality within the entire marking area



Preventive Maintenance and Extended Warranty Contracts; protection for your investment

We offer a variety of maintenance contracts tailored to meet our Customer's needs. From basic preventive maintenance to comprehensive emergency service coverage to all-inclusive coverage—ROFIN worldwide service delivers.

- Preventive Maintenance Agreements
- On-Site Response Contracts
- Extended Warranty Agreements

Factory or On-Site Customer Training

Factory hardware and software training is essential to fully realize the benefits of the tool, and to protect your laser marking investment. ROFIN offers scheduled certificate training courses at our main facility in Devens, MA. On-demand maintenance and applications classes may be scheduled at our Chandler, AZ and Plymouth, MI facilities. Email to training@rofin-baasel.com.

Programming and Applications

A four-day training class for VLM or LaserCAD software and applications. This course is designed for Programmers, Project Managers, and those who design mark layouts.

Preventive and Corrective Maintenance

Designed for Maintenance Personnel and Engineers, this intensive, 4-day hands-on course includes laser safety, basic preventive maintenance, troubleshooting, and advanced corrective maintenance procedures.

SERVICE AND TRAINING

We are where you are

ROFIN optimized the design of its marking lasers for easy servicing. Maintenance work is reduced to a minimum. Just in case: ROFIN's worldwide service network is ready for support on-site when required.

We offer local spare parts centers with modern logistics. Our customers all over the world benefit from individual service agreements and hotline support.

Modern industrial laser marking equipment requires a qualified knowledge of laser technology and of its applications. At the ROFIN Laser Marking Training Center, we can offer you a choice of various training programs. With our operation, maintenance, and programming courses we provide the qualified training necessary to meet these demands.

ROFIN-BAASEL takes pride in its factory-trained staff of field service engineers who efficiently install and test our equipment and provide valuable on-site training for your personnel. We have a technical support department ready to answer your questions on system operation, maintenance, or applications. And, as part of our ongoing support capability, we are prepared to respond to your service needs for additional on-site technical assistance and consultation services. Other ongoing support programs include regularly-scheduled as well as remedial maintenance of your system, and extended warranty service and maintenance agreements.



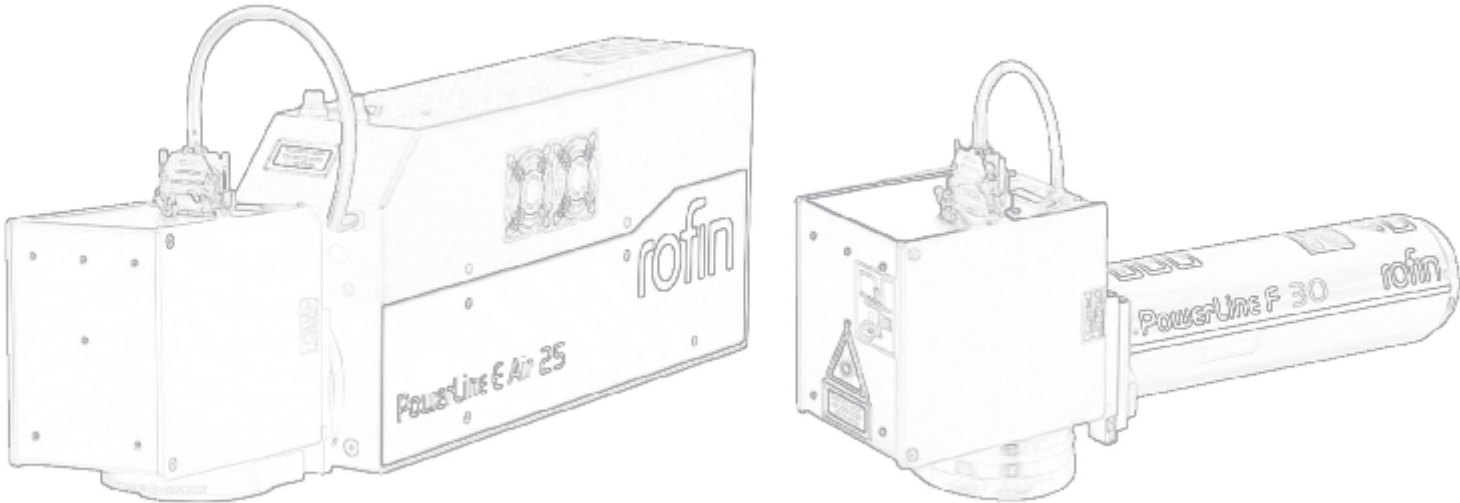
In North America:

Call 978 635-9100,
 Option 1 for Service
 Option 2 for Spare or
 Replacement Parts.

service@rofin-baasel.com
parts@rofin-baasel.com
training@rofin-baasel.com

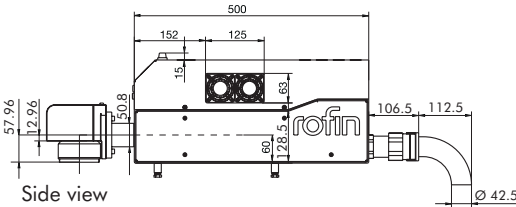


TECHNICAL DATA POWERLINE E AIR 10 AND 25

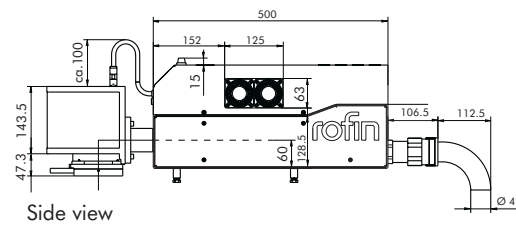


LASER COMPARISON AT A GLANCE

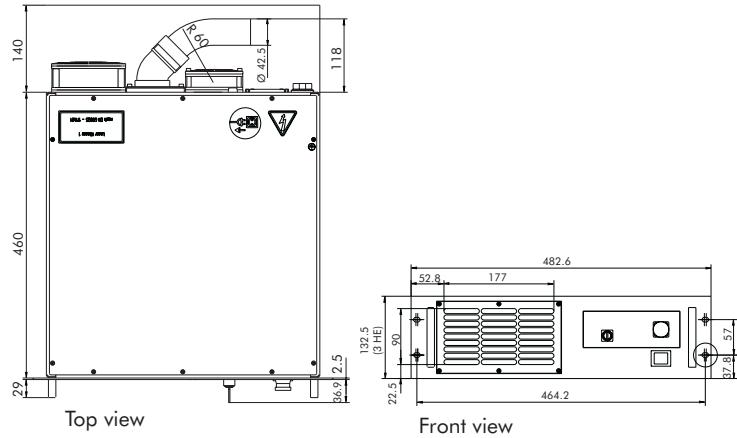
Laser and galvo PowerLine E Air 10



Laser and galvo PowerLine E Air 25



Supply unit for PowerLine E Air 10/25 and PowerLine F 20/30



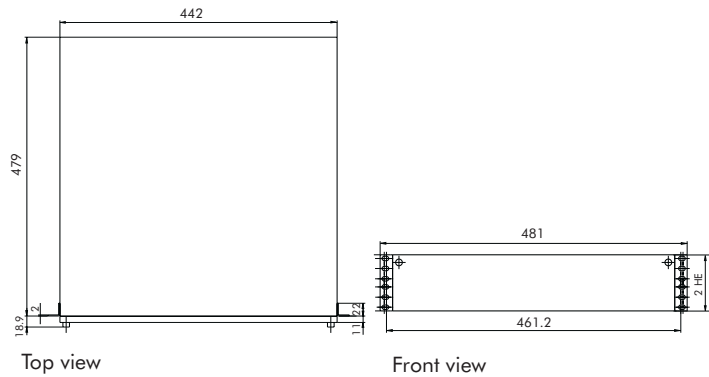
Laser head	
Wavelength (nm):	1064
Pulse frequency (kHz):	0 – 200, cw as well
Laser dimensions (W x L x H, mm):	118 x 500 x 220
Laser weight (kg):	approx. 18
Ingress protection:	IP 54
Air flow (m³/h):	approx. 120

Marking unit	
Field Size (mm):	120 x 120 (other sizes on request)
Ingress protection:	IP 54

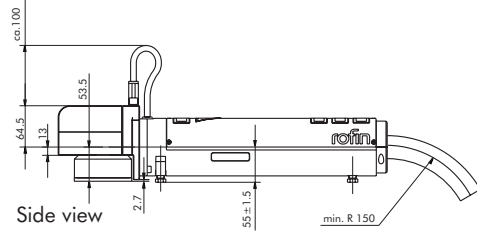
Supply unit and PC (19")	
Supply unit dimensions (W x L x H, mm):	483 (19") x 460 x 3 rack units
Supply unit weight (kg):	approx. 28
PC dimensions (W x L x H, mm):	483 (19") x 479 x 2 rack units
Software:	Windows Embedded 2009, Windows Embedded Standard 7
Cooling:	integrated air cooling
Power supply:	120 – 240 VAC, ±10% VAC, 50 – 60 Hz (E Air 10) 208 – 240 VAC, ±10% VAC, 50 – 60 Hz (E Air 25)
Power consumption supply unit incl. PC(W):	500 (PowerLine E Air 10) 610 (PowerLine E Air 25)
Ingress protection:	IP 20
Operating temperature (°C):	15 – 35
Air flow 19" supply unit (m³/h):	approx. 250

TECHNICAL DATA POWERLINE F 20, 20 VARIA AND 30

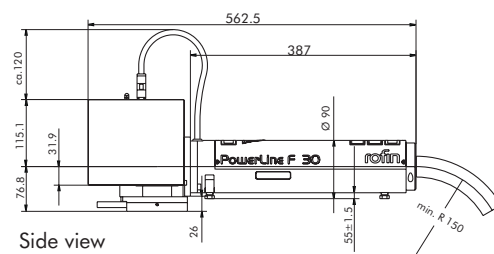
PC PowerLine E Air 10/25 and PowerLine F 20/30



Laser and galvo PowerLine F 20



Laser and galvo PowerLine F 30



Laser head

Wavelength, typ. (nm):	1064
Pulse frequency (kHz):	PowerLine F 20: 20 – 100 PowerLine F 20 Varia: 1.6 – 1000 PowerLine F 30: 30 – 100
Pulse width (ns):	PowerLine F 20 Varia: 4 – 200, adjustable
Laser dimensions (mm):	length 387, Ø 90 PowerLine F 20 Varia: length 594, Ø 100
Laser weight (kg):	PowerLine F 20: 5.5 / PowerLine F 30: 5.7 / PowerLine F 20 Varia: approx. 8.6
Ingress protection:	IP 54

Marking unit

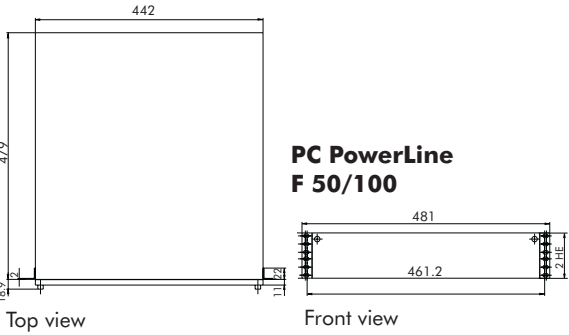
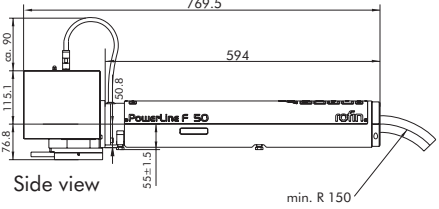
Field Size (mm):	120 x 120
Ingress protection:	IP 54

Supply unit and PC (19")

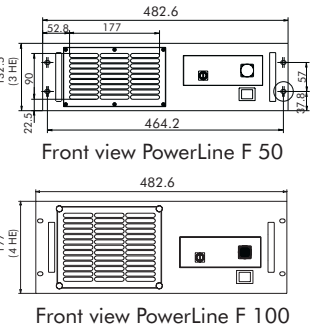
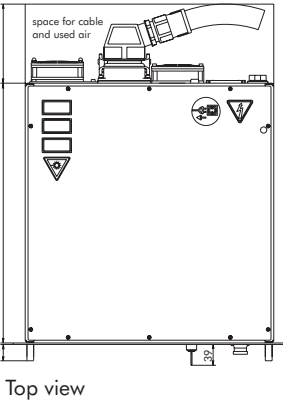
Supply unit dimensions (W x L x H, mm):	483 (19") x 460 x 3 rack units
Supply unit weight (kg):	23.5, PowerLine F 20 Varia: approx. 25
PC dimensions (W x L x H, mm):	483 (19") x 479 x 2 rack units
Software:	Windows Embedded 2009, Windows Embedded Standard 7
Cooling:	integrated air cooling
Power supply:	115 – 240 VAC, ±10% VAC, 50 – 60 Hz (E Air 10)
Power consumption supply unit incl. PC(W):	PowerLine F 20: approx. 330 PowerLine F 30: approx. 390 PowerLine F 20 Varia: approx. 350 610 (PowerLine E Air 25)
Ingress protection:	IP 20
Operating temperature (°C):	15 – 35
Air flow 19" supply unit (m³/h):	approx. 130, approx. 170 by PowerLine F 20 Varia

TECHNICAL DATA POWERLINE F 50 AND 100

Laser and galvo PowerLine F 50/100



Supply unit PowerLine F 50/100



Laser head

Wavelength, typ. (nm):	1064
Power class (W):	50/100
Pulse frequency (kHz):	F 50: 50 – 200 F 100: 5.1 – 200
Laser dimensions (mm):	length 594, Ø 100
Laser weight (kg):	approx. 8.6
Ingress protection:	IP 54

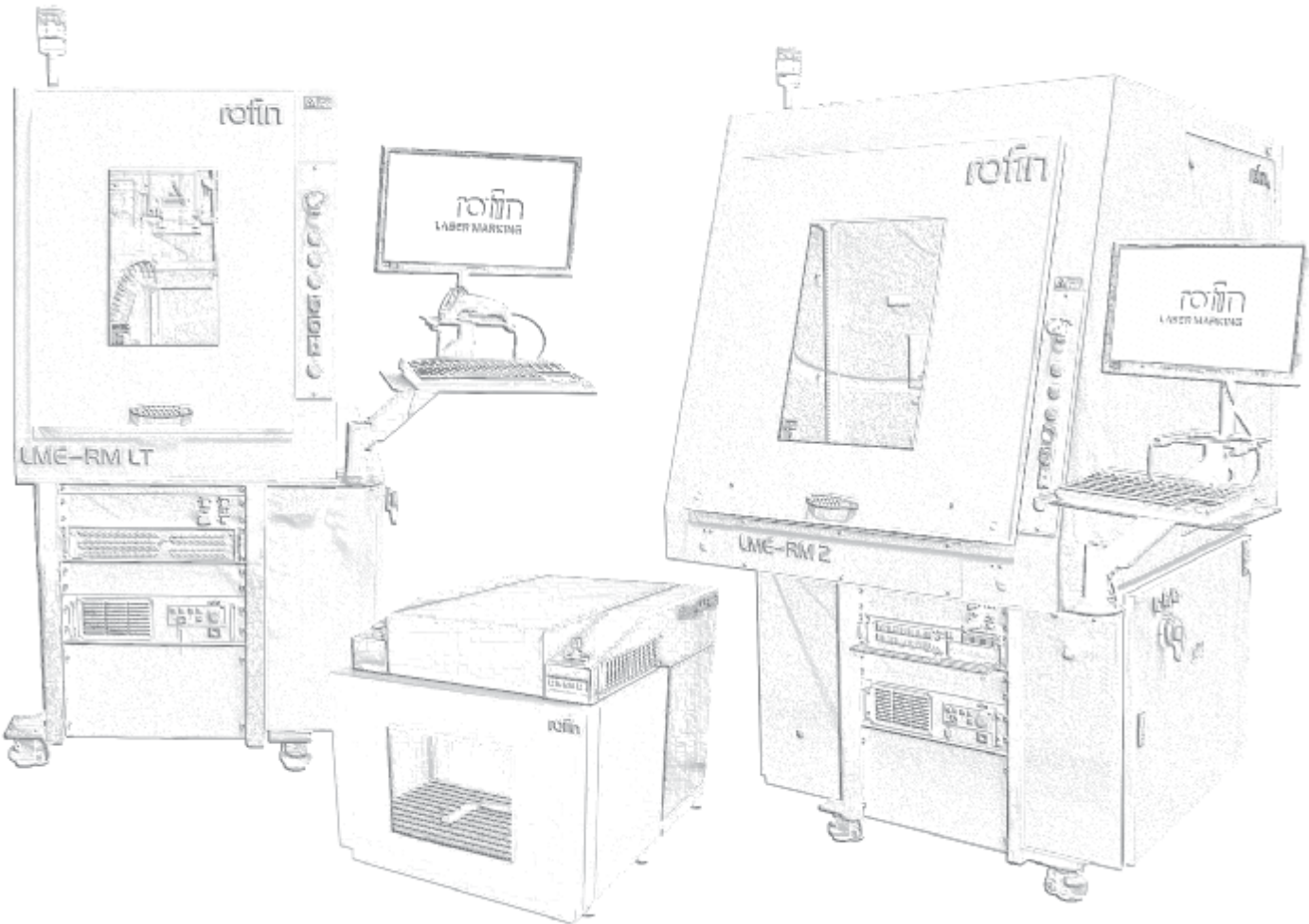
Marking unit

Field Size (mm):	120 x 120
Ingress protection:	IP 54

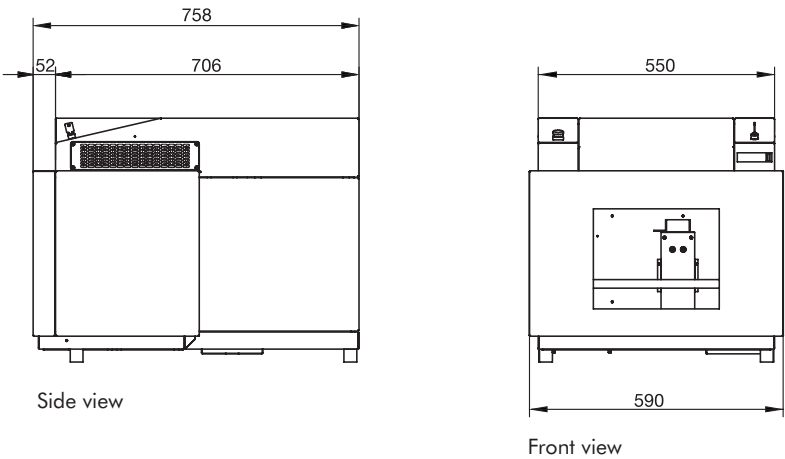
Supply unit and PC (19")

Supply unit dimensions (W x L x H, mm):	19" x 460 x 3 rack units (F 50) 19" x 460 x 4 rack units (F 100)
Supply unit weight (kg):	approx. 28
PC dimensions (W x L x H, mm):	19" x 479 x 2 rack units
PC weight (kg):	10
Software:	Windows Embedded 2009, Windows Embedded Standard 7
Cooling:	integrated air cooling
Power supply:	115 – 240 VAC, ±10% VAC, 50 – 60 Hz
Power consumption supply unit incl. PC(W):	approx. 470 (F 50); approx. 570 (F 100)
Ingress protection:	IP 20
Operating temperature (°C):	15 – 35
Air flow 19" supply unit (m³/h):	approx. 130 (F 50); approx. 170 (F 100)

TECHNICAL DATA EASYMARK



LASER WORKSTATION COMPARISON AT A GLANCE



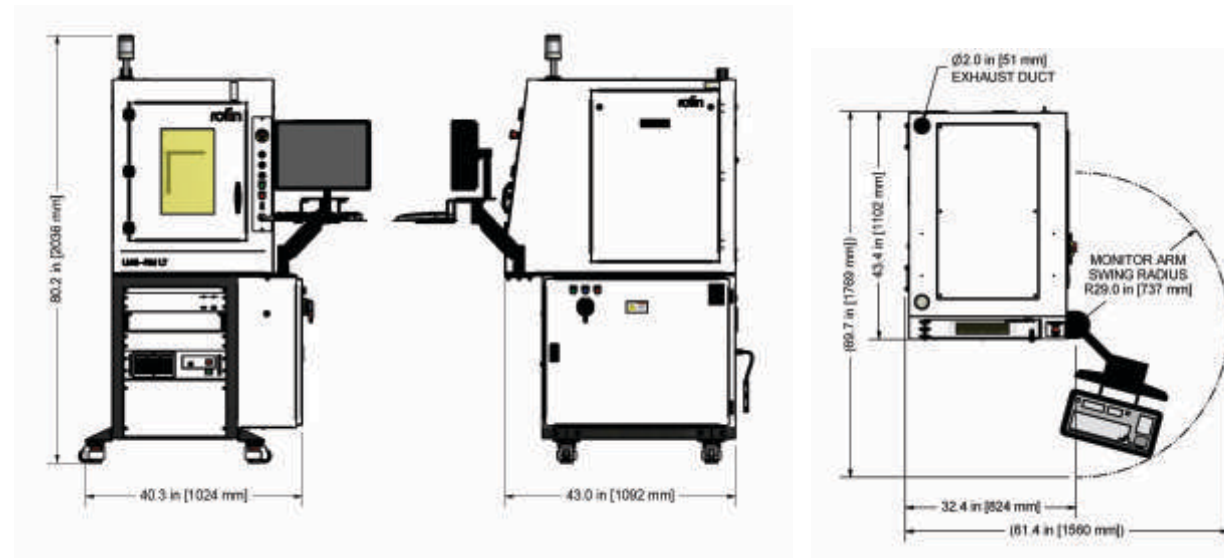
EasyMark

Marking laser:	PowerLine E Air 10 PowerLine F 20/30/50
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Supply and Marking unit

Dimensions (W x D x H, mm):	590 x 760 x 570 (160 mm objective) 590 x 760 x 690 (254 mm objective)
Machine weight (kg):	80
Max. workpiece dimension (W x D x H, mm):	300 x 120 x 200
Max workpiece weight including fixture (kg):	max. 10
Marking field size (mm):	120 x 120 (160 mm objective) 180 x 180 (254 mm objective)
z-axis travel (mm):	120
Door:	manual
Lateral feeding of the workpiece:	optional
Power supply:	100 – 240 VAC, ±10%, 50/60 Hz
Max. power consumption (W):	<600
Cooling:	integrated air cooling
Color:	RAL 9016 / RAL 7016 / RAL 3020

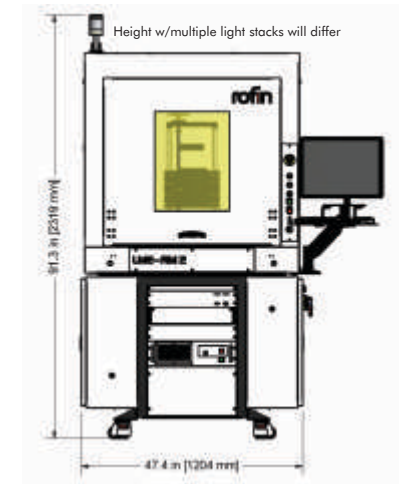
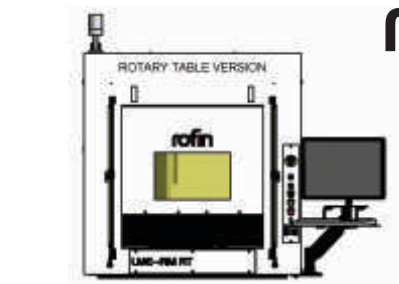
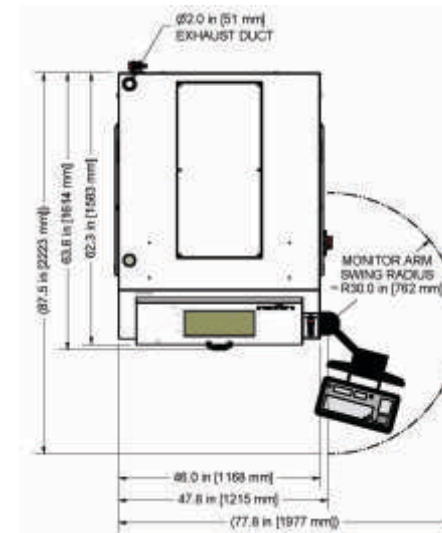
TECHNICAL DATA LME-RM LT



LME-RM LT

Marking laser:	PowerLine F 20/20 Varia/30/50/100 PowerLine E 20/25/40 PowerLine E Air 10 THG PowerLine Pico 10, SHG, and THG	PowerLine E Air 10/25 PowerLine E 20/25 SHG PowerLine E 20 THG
Dimensions (W x D x H, mm):	1024 x 1092 x 2036 (closed). Dimensions for systems with optional manual lift door, auto-door, or multiple light stacks will differ.	
Machine weight:	Depending on laser system, max. 450 kg.	
Max. workpiece dimension (W x D x H, mm):	ca. 350 x 350 x 350 mm (height depends on optics).	
Max workpiece weight including fixture:	100 kg.	
Marking field size (mm):	120 x 120 (f=160, standard; other sizes available).	
Z-axis travel (mm):	Max. 300, depending on optics and laser system.	
Door:	Manual side-swing door. Optional manual lift door or Auto Door.	
Lateral feeding of the workpiece:	Customized solution.	
Power supply:	220 VAC, $\pm 5\%$, 60 Hz; 20A Current.	
Max. power consumption (W):	650 (depending on configuration).	
Compressed air (bar):	6–10 optionally; compressor.	
Color:	RAL 7016, RAL 9016.	
Options:	Manual lift door or Auto door option Vision modules Programmable Z-axis 250 x 250 mm XY stage Circumferential indexer Foot switch Tooling plate Compressor (if no pneumatic supply) Fume extractor controlled by system interface Bar code scanner w/carrier integrated in support frame Additional voltages available upon request	

TECHNICAL DATA LME-RM SERIES



LME-RM 2

Marking laser:	PowerLine F 20/20 Varia/30/50/100 PowerLine E Air 10/25 PowerLine E 20/25/40 PowerLine E 20/25 SHG PowerLine E Air 10 THG PowerLine E 20 THG PowerLine Pico 10, SHG, and THG	PowerLine F 20/20 Varia/30/50/100 PowerLine E Air 10/25 PowerLine E 20/25/40 PowerLine E 20/25 SHG PowerLine E Air 10 THG PowerLine E 20 THG PowerLine Pico 10, SHG, and THG
Dimensions (W x D x H, mm):	1204 x 1551 x 2319 w/closed door	1204 x 1551 x 2319
Machine weight:	Max. 450 kg	Max 500 kg
Max. workpiece dimension:	760 x 600 x 500 (W x D x H, mm)	400 x 300 x 295 (W x D x H, mm)
Max workpiece weight incl. fixture:	100 kg	50 kg ea/side 2 pos/25 kg ea/side 4 pos
Marking field size (mm):	120 x 120 (f=160, standard; other sizes available)	120 x 120 (f=160, standard; other sizes available)
Z-axis travel (mm):	300	300
Rotary table diameter (mm):	N/A	900
Rotation time of rotary table(s):	N/A	2 pos.=1.2 second; 4 pos.=1 second
Door:	Manual standard; optional AutoDoor	N/A; rotary table
Power supply:	220 VAC, $\pm 5\%$, 60 Hz; 20A Current	220 VAC, $\pm 5\%$, 60 Hz; 20A Current
Max. power consumption (kW):	Approx. 4 kW (at 60 Hz)	Approx. 4 kW (at 60 Hz)
Color:	RAL 7016, RAL 9016	RAL 7016, RAL 9016
Options:	Vision modules 500 x 500 mm XY Stage Programmable Z-axis Circumferential indexer Interface-controlled fume extractor Foot switch Bar code scanner w/carrier Additional voltages available AutoDoor (90 psi compressed air) Compressor (if no pneumatic supply)	Vision modules Std 2-position rotary; 4-position optional Programmable Z-axis Circumferential indexer Interface-controlled fume extractor Foot switch Bar code scanner w/carrier Additional voltages available

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