Laser Marking +
Engraving Solutions

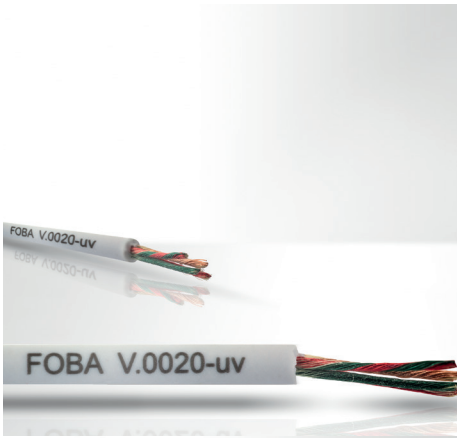
FOBA®
Laser at your service

FOBA V.0020-uv

UV laser marker for high-contrast marks on highly sensitive products

FOBA's V.0020-uv marking laser achieves high-contrast marks on sensitive materials using an ultraviolet wavelength. Because the material's surface is photo-chemically altered, very little heat is transferred to the material and it remains virtually undamaged and unchanged. Products made from highly sensitive or unique materials such as aircraft cables, translucent or colored tubes for various industries, medical plastics for invasive applications, flame-resistant plastics for electronic housings and even glass can be marked safely with high resolution and contrast.

Through the photo-chemical effect, the FOBA V.0020-uv creates a contrasting and permanent color change on the surface of the processed product instead of disrupting or displacing the material allowing the product itself to remain undamaged. Laser marks that are resistant to typical sterilization processes can now be achieved on medical devices, such as catheters or insulin pumps, and filigree and brilliant laser marks can be applied on glass. With the V.0020-uv, even silicones or white polyamides can now be laser marked. Marking highly sensitive and previously unmarkable materials without damage makes FOBA's UV laser marker an industry pioneer.



Cable with color change
Tube for invasive use with laser mark that can be sterilized
Charger with color change and UDI code

Your product benefits

- **Safety and integrity** for sensitive and critical materials
- **Hygiene and sterility** for UV laser marked medical plastics
- **Filigree and high-contrast markings** with high resolution
- **Solvent-free and additive-free marking** of plastics
- **Economical and low-maintenance** with efficient air-cooling and long-lasting optical components

Technical Data → M3000-B/P with UV

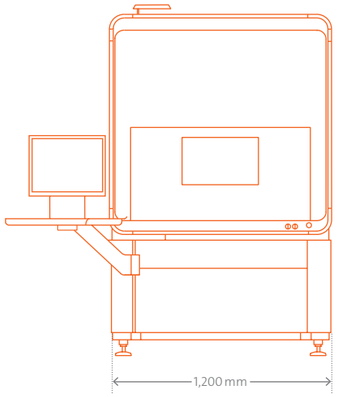
Model	B: Laser marking workstation with worktable and programmable Z-axis P: Laser marking workstation with programmable axes (X, Y, Z)
Available laser systems	**UV:** V.0020-uv
Workstation	**M3000-B/P UV**
Features	B: Worktable, Z-axis, electric lift door | P: Axes X, Y, Z, electric lift door
User interfaces	Laser marking software FOBA MarkUS
Axes***	Programmable Z-axis → Travel 350 mm → Travel speed 25 mm/s (1.5 m/min) Programmable axes X and Y → Travel X-axis 520 mm → Travel Y-axis 150 - 225 mm → Travel speed 100 mm/s (6 m/min) each
Dimensions (W x D x H, mm)	with UV: 1,200 x 1,688 x (1,899 up to 2,199)*
Footprint (m^2)	with UV: 2
Working chamber (m^3)	0.2
Door opening (W x H, mm)	970 x 450
Weight** (kg)	with UV approx. 675
Safety classes	→ Laser class 1 (according to IEC 60825-1) → IP22
Max. load (kg)	B: 50 | P: 30
Max. workpiece size (W x D x H, mm)	B: 970 x 380 x 450 P: 970 x 490 x 450
Supply	→ Depends on workspace and utilized laser system
Electrical requirements	1/N/PE, AC 110/230 V, 50/60 Hz
Power consumption	Depends on utilized laser system, < 2 kW
Temperature | Humidity	15–40 °C | 90 % (max. 20 °C), 30 % (max. 40 °C), non-condensing
Options/accessories	→ Exhaust systems → Vision systems → Other axes on request → Interfaces for the integration of client processes → Laser Power Meter → PlugIns (Advanced Operator PlugIn) → Footswitch

* Height adjustment range (incl. feet) ** Without laser and external components *** Depends on configuration and laser and mounting position

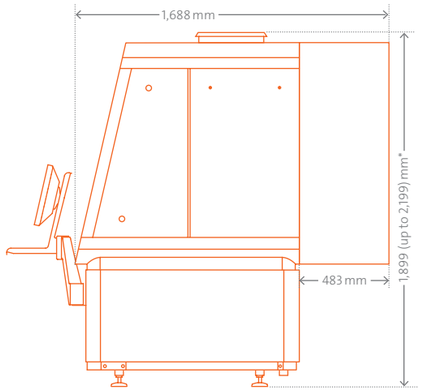
Available Workstations FOBA M-Series with UV marking laser V.0020-uv

One housing size	for processing medium-size and large (M3000) parts
Two workstation models	→ with worktable (M3000-B UV) → with three axes (X/Y/Z) (M3000-P UV) > other axes on request

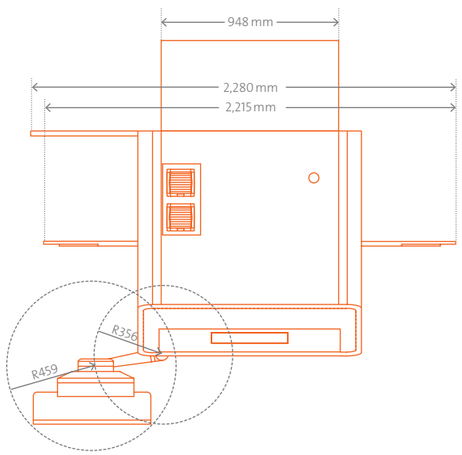
Dimensioned Drawings → M3000-B/P



Front view



Side view
* Height adjustable from 1,899 – 2,199 mm (incl. feet)



Top view
with open doors

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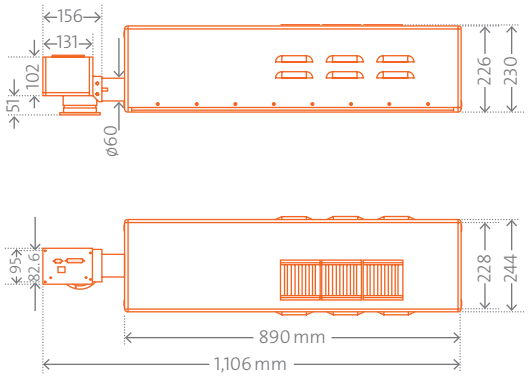
Technical Data → V.0020-uv

Marking features	
Marking heads	SS10 and SS7 with four focus lenses (f=103 mm/160 mm/214 mm/511 mm)
Marking fields*	From 64 x 76 mm² (SS10, f=103 mm) to 375 x 375 mm² (SS10/SS7, f=511 mm)
Marking speed*	Up to 5,000 mm/s or 500 characters/s
Line width	From 10 µm (depends on focusing optic)
Laser	→ Pulsed Nd:YVO_4 laser (Vanadate), diode pumped, wavelength 355 nm, Laser class 4 (acc. to IEC 60825-1)
User interfaces	
PC software	FOBA MarkUS or FOBA Draw (on separate, external, optional Windows 7 PC)
Interfaces	Ethernet interface
Supply	
Electrical requirements	L/N/PE 100–240 VAC, 50/60 Hz
Power consumption	Typically 400 W
IP rating | Colling	→ Marking unit IP20 → Supply unit IP21 | Air-cooled
Temperature | Humidity	15–40 °C | 90 % (max. 20 °C), 30 % (max. 40 °C), non-condensing
Weight	→ Marking unit approx. 25 kg** | → Supply unit approx. 20 kg
Other options	

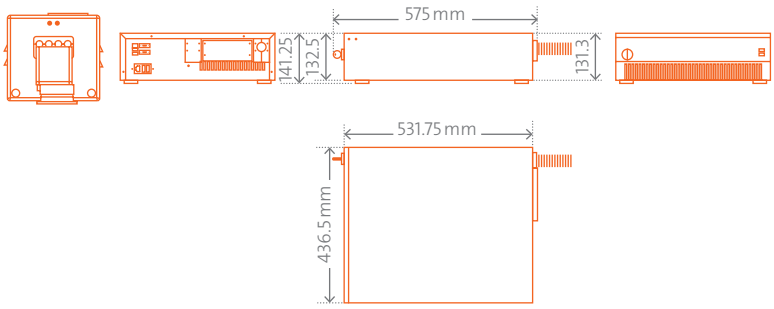
→ Vision alignment system: Intelligent Mark Positioning (IMP) for the precise position detection of parts/to-be-processed areas and automatic alignment of marking/engraving/finishing
→ Laser pointer
→ Interface: Profibus, PROFINET, EtherCAT* (*with MarkUS 2.12)

* Depends on the application ** without F-Theta lens

Dimensioned Drawings → V.0020-uv



Marking unit (marking head SS7 and lens)



Supply unit

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