

TITUS™

FOBA®

Think small. Achieve bigger!

Make your mark with Titus™, the smallest, lightest and easiest-to-integrate laser marking head in the world.

For bigger integration flexibility, bigger usability, bigger throughput and bigger savings.



Weight: ~640 g marking head



Size: 205 mm with 0° beam exit

Size: 214 mm with 90° beam exit



1:1

ORIGINAL SIZE

Laser Marking +
Engraving Solutions

∅ 41.3 mm



FOBA Titus™ – The world's smallest laser marking head
Get more details, visit → www.titus-laser.com

FOBA®
Laser at your service

Laser Marking +
Engraving Solutions



FOBA Y.0200-xs/Y.0300-xs

*Uncover your parts marking potential with Titus™:
The smallest, lightest and easiest to integrate laser marking
head in the world – and a true game changer in its field!*

Give it a try!

*Make your mark with Titus™:
→ Just take him with you to your production
line and see how nicely this small guy fits.*

Think small. Achieve bigger!

All big things start small. Like Titus™. Titus™ will stay small, because this is what makes him so great. Titus™ stands for "tiny tubus" and represents the smallest, most lightweight and easiest-to-install, easiest-to-integrate and easiest-to-operate laser marking head in the world.

Whenever manufacturing space is at a premium, Titus™ is THE solution. With Titus™, the novel 20 W and 30 W fiber laser markers are not only incredibly small, but also dramatically simplify integration and open new areas of application for fast direct parts marking – especially for manufacturers in the automotive, aerospace or electronics industries.

By offering full integration flexibility, high throughputs and decisive TCO savings, Titus™ will help you uncover and unleash your full laser part marking potential.

Think small. Achieve bigger.

*From our Customers we learned
that easy mechanical integration
and a really small sized marking
head will
→ solve the biggest direct parts
marking related problems of
our clients and will help them
→ achieve bigger integration
flexibility, bigger throughputs
and bigger savings.*

Your product benefits

- **Small size:** up to 90% less size and weight compared to current market offerings; designed and built for small spaces and seamless and easy line integration
- **Easy to integrate:** easiest integration and speedy setup through small size and innovative features: 0° and 90° beam orientations for installation in tight spaces; 3 m fiber laser umbilical length for flexible integration and 10 m for more complex setups; clamp'n go-laser head brackets; integrated pilot laser and focus finder for quick job setup and focus adjustment; wide range of communication protocols and interfaces
- **Easy to use:** three easy-to-use user interfaces (FOBA Go, FOBA Draw, FOBA MarkUS) for simple to complex marking job needs

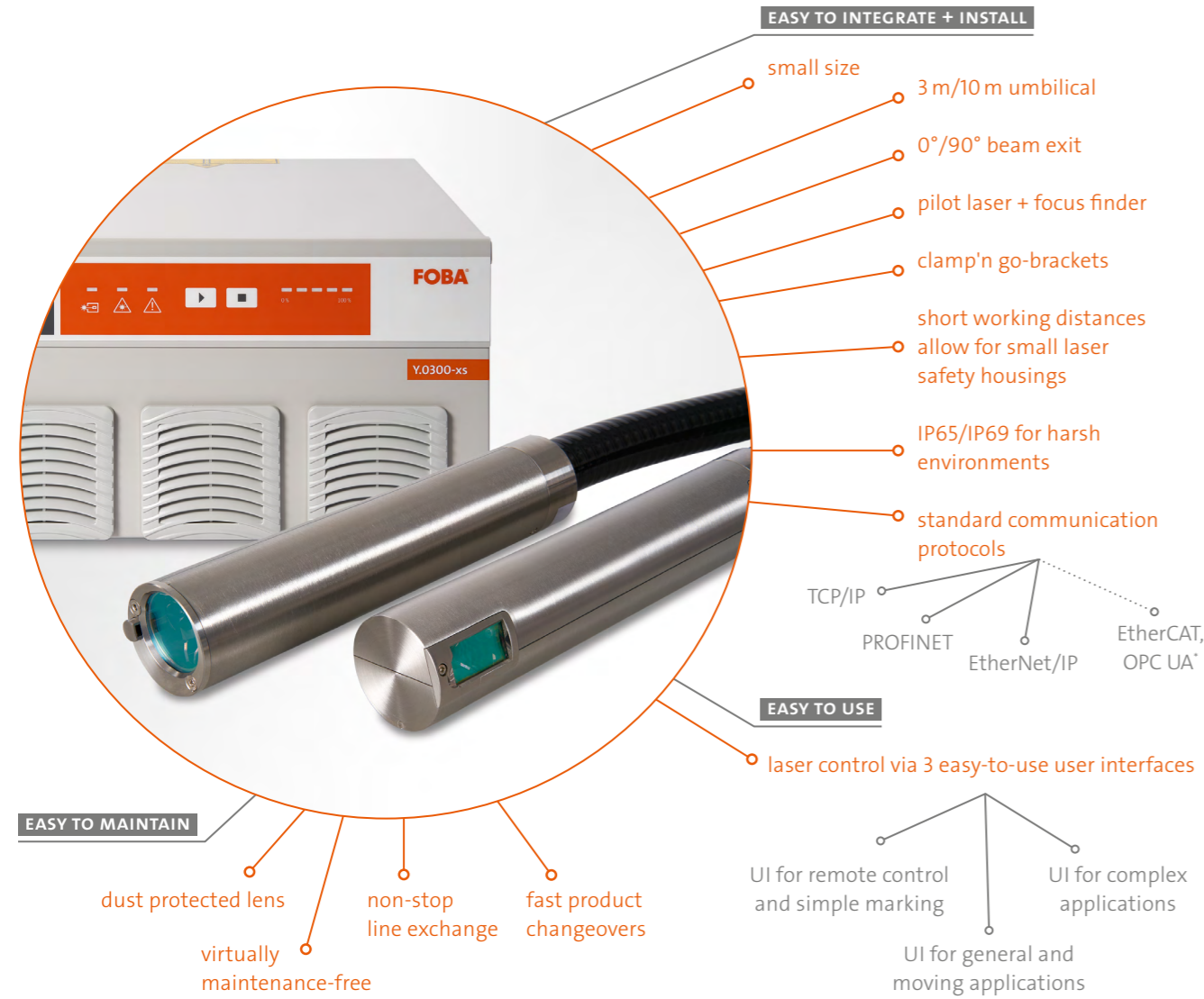


Browser enabled GUI FOBA Go





Titus™ facts and benefits at a glance



Size and speed advantages: The world's smallest laser scan head



Titus™ is extraordinary small but at the same time extremely mighty. When integration in size-limited production environments is needed, the world's smallest vector scanning laser marking head has a threefold advantage: 1) it fits easier into manufacturing lines, 2) it cuts installation time and costs, and 3) it expands the range of installation opportunities for laser markers.

Titus™ fits the most restrictive spaces

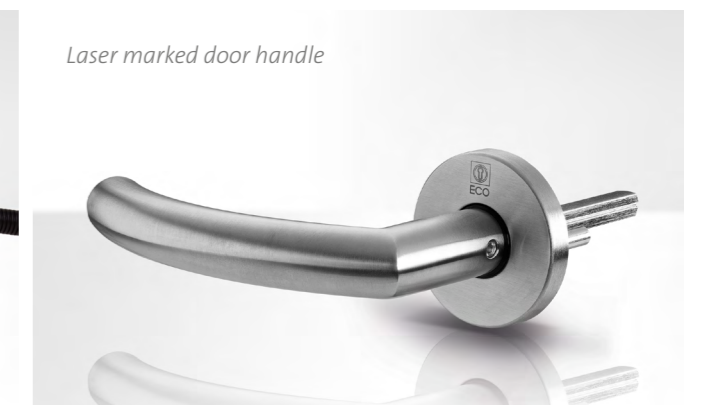
- Titus™ is the smallest and lightest fiber laser marking head on the market
- Titus™ is up to 90% smaller in size & weight compared to current state-of-the-art market offerings
- Titus™ offers simple integration at reduced installation cost and full installation flexibility

Titus™ is made for ultra fast marking

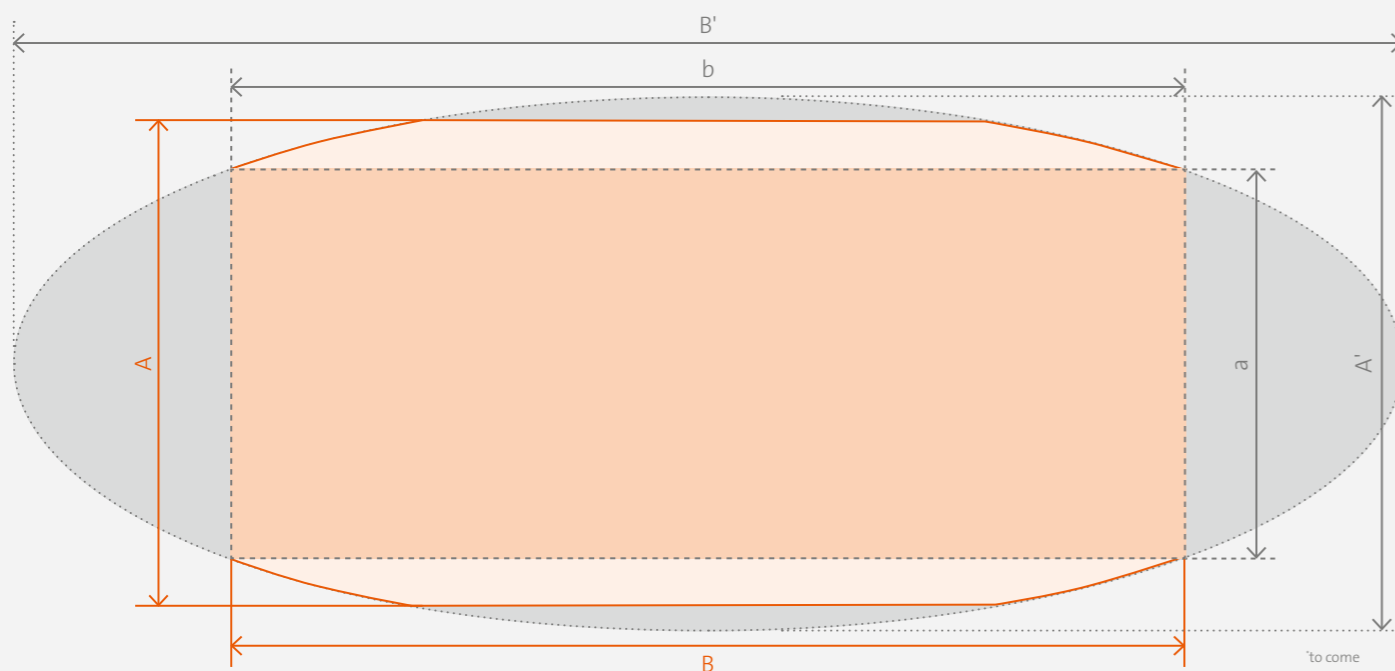
- Small laser with high marking performance
- Marking at up to 2,000 characters per second*
- Excellent beam quality and marking results on various materials incl. plastics and metals
- Three marking fields per marking head: S, M and L



"Fascinating form and size!"



"The very high marking quality this tiny laser achieves on so many materials is impressive!"



Marking Fields

Scan Head™	Working Distance (mm)	Marking Field (mm)		Elliptical Mark. Field (mm)		Rectangular Field (mm)	
		A	B	A'	B'	a	b
CFS-S	72	37.01	63.58	39.70	121.62	33.84	63.58
CFS-M	112.5	48.27	89.30	51.91	141.42	40.24	89.30
CFS-L	171	64.46	126.30	70.79	183.85	51.44	126.30
CFT-S	89	37.01	63.58	39.70	121.62	33.84	63.58
CFT-M	129.5	48.27	89.30	51.91	141.42	40.24	89.30
CFT-L	188	64.46	126.30	70.79	183.85	51.44	126.30

← Largest available field

← Largest available field

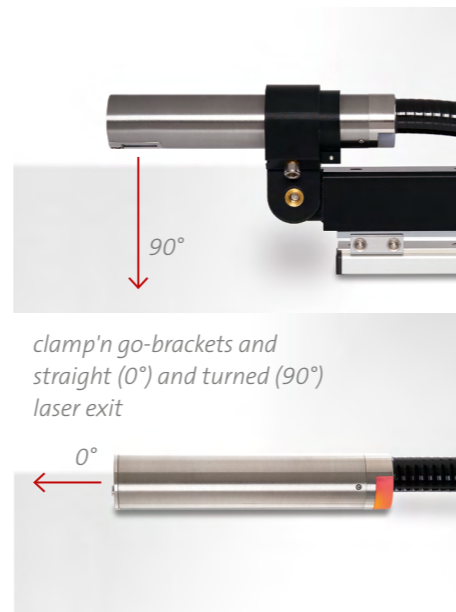
← 1:1 illustration of largest available marking fields



Integration and setup advantages: The new standard for ease of laser integration

When manufacturing space and time are limited, you need an innovative and versatile laser marking solution. The new Y.0200-xs and Y.0300-xs fiber laser markers and their tiny scan head Titus™ redefine ease of laser integration for parts marking lines.

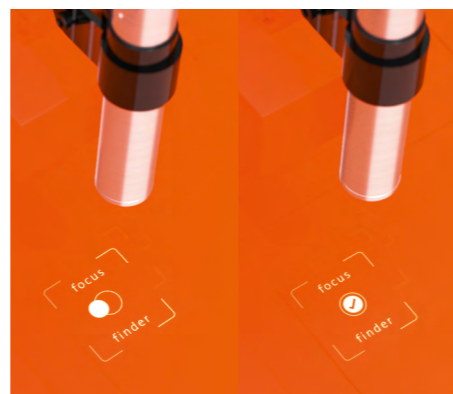
You need ...	Titus™ offers ...
simple mechanical integration with minimal space requirements	<ul style="list-style-type: none"> → the smallest and lightest fiber laser scan head → clamp'n go-brackets for non-stop installation/exchange → easy-to-use user interfaces for quick job setup
fast installation and setup	<ul style="list-style-type: none"> → up to 90% installation time reduction with small component size and reduced bracketry → an integrated focus finder for quickly finding the right focus during laser and job setup → a pilot laser for marking content simulation
full integration flexibility ...	<ul style="list-style-type: none"> → marking head with straight-out (0°) and turned (90°) beam exit options for easy and flexible integration → 3 m and 10 m fiber laser umbilicals – <i>10 m cords are a complete novum on the market and allow for setups where the supply unit is placed further away from the point of marking</i> → short working distances for much smaller laser safety housings → a wide range of communication protocols, incl. TCP/IP, PROFINET, EtherNet/IP (EtherCAT and OPC UA to come)
... even in harsh environments	<ul style="list-style-type: none"> → IP65 and IP69 rated Titus™ marking head → no additional housing or protective equipment needed
easy serviceability and product changeover	<ul style="list-style-type: none"> → clamp'n go-brackets for quick and easy marking head adjustment and repositioning → an integrated focus finder for quick focus finding → a pilot laser for marking content simulation



clamp'n go-brackets and straight (0°) and turned (90°) laser exit

To sum it up: When manufacturing space and time are at a premium and you wish to increase the range of laser installation opportunities, FOBA Titus™ is the solution. **The miniature laser marker scan head ensures an easier, faster and error-free laser installation, setup and service process and quick product changeovers, both for production lines and OEM and complex equipment.**

Ultra quick job setup with built-in pilot laser that is used as a focus finder and marking content simulator



Operation advantages: Simple usability – for daily use, maintenance and service



The Y.OX00-xs fiber laser markers will make industrial part marking much easier. Clients can choose between three easy-to-use and easy-to-connect interfaces: FOBA's MarkUS GUI enables custom user interfaces; clients who value utmost flexibility will benefit from remote control on various devices with FOBA Go; and clients with marking-on-the-fly applications can select FOBA Draw. With standard communication protocols such as TCP/IP and I/Os, connecting customer software is as flexible as it can be.

Simple to operate

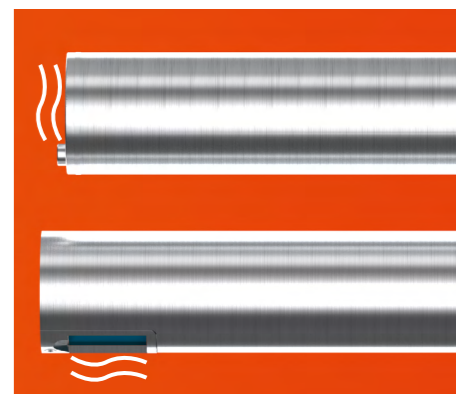
Available User Interfaces		
FOBA Go	FOBA Draw (Smart Graph)	FOBA MarkUS
Browser enabled GUI for remote laser control from either a PC, the FOBA Touch display, a mobile or a tablet	PC based interface	PC based interface
<ul style="list-style-type: none"> → For simple marking jobs with remote connectivity and marking on the fly → Multi-laser functionality with web browser → Software installation is not needed 	<ul style="list-style-type: none"> → For general marking applications and marking on the fly (serial numbers, barcodes, 2D codes) 	<ul style="list-style-type: none"> → For more sophisticated and complex markings → Intuitive high-performance laser marking software → Customized user workflows (AOP Advanced Operator Plugin)
FOBA Draw users can import marking jobs into FOBA Go		



Simple to service and maintain

- Titus™ features a **dust protected lens** – a constant air stream keeps the lens free of dust, daily lens cleaning intervals belong to the past and do no longer interrupt production
- Titus™ is so easy to mount that **line and product changes can be done in minutes** and are nothing to worry about any longer
- Virtually **no maintenance** due to very few wear parts and thus reduced number of parts
- Benefit from a range of **preventative products and services**: fume extraction, filters, end-user changeable protection window, FOBA Remote Services (i.e. for application consulting, user training)

The integrated air knife ensures a constant air stream that keeps the lens dust-free



FOBA Y.0200-xs/ Y.0300-xs Fiber Laser Markers

Technical Data

Marking features

- Marking heads** → CFS – straight out (0°) beam exit
→ CFT – turned (90°) beam exit
3 precision optics for focusing (S, M, L)
- Marking fields** 3 marking fields per marking head (S, M, L)
- Marking speed*** Up to 2,000 characters/sec.

Laser

- Type** → Pulsed Ytterbium fiber laser, 20 W and 30 W
→ Pulse frequency range 1 kHz – 400 kHz
→ Wavelength within 1,040 – 1,090 nm
- Laser class** 4 (acc. to IEC 60825-1)

User Interfaces

- PC UIs FOBA Draw and FOBA MarkUS
→ Browser-enabled Touch Control UI FOBA Go (optionally on FOBA Touch Display)

Interfaces

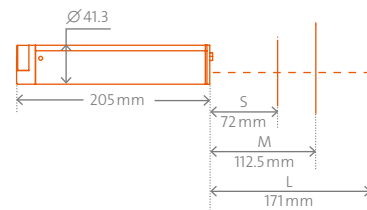
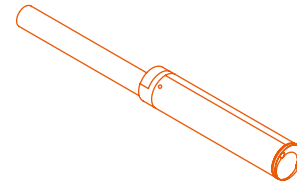
- Communication protocols (TCP/IP, PROFINET, EtherNet/IP; EtherCAT and OPC UA to come)
→ Control interfaces (Trigger, Encoder, I/O customer interface)

Supply

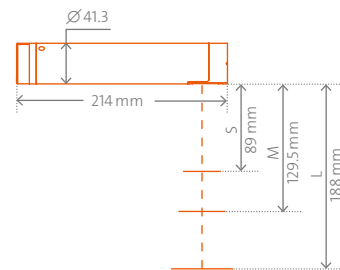
- Electrical requirements** L/N/PE 100 – 240 VAC, 50/60 Hz
- Power consumption** 360 VA max.
- IP rating** → Marking head and umbilical IP65, IP69
→ Supply unit IP21
- Umbilical length** → 3 m (20 W and 30 W) → 10 m (30 W)
- Cooling** Air-cooled
- Cleaning** Self-cleaning of lens with air blade
- Temperature** 5 – 40 °C
- Humidity** 10 – 90 %, non-condensing
- Weight** → Titus™ marking heads ~0.64 kg
→ Supply unit with 3 m umbilical 23 kg
→ Supply unit with 10 m umbilical 27 kg

- Scope of delivery** → Fiber laser marker with Titus™ marking head (0°/90°)
→ Fully integrated pilot laser for focus finding and simulation of marking content

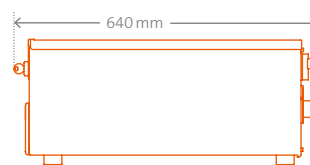
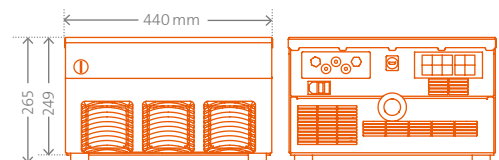
- Options, accessories** → Exhaust units
→ Integration brackets
→ FOBA Touch display for FOBA Go UI



0° Marking head (CFS)



90° Marking head (CFT)



Supply unit

* Depends on the application