Product Portfolio

FENIX FLYER
CO_2 LASER MARKER

Fenix Flyer – high speed laser marking via USB/Ethernet Control

Ideal for a wide range of product marking applications, *Fenix Flyer* utilizes new, all-digital technology to produce faster, better marks than ever before on stationary or moving parts. Easily incorporated into production processes, *Fenix Flyer* creates crisp, clear marks on glass, plastics, metals, wood, and countless other materials at speeds up to 450 characters per second.

Based on Synrad's *48-2*, 25W CO_2 laser, *Fenix Flyer* incorporates a galvo-based marking head plus internal cooling fans and power supplies in a self-contained system. So simple to use, *Fenix Flyer* is operated by a user's PC and plugs directly into a standard electrical outlet. A USB connection eliminates the need for an interface card, simplifying set-up. Once configured (through the USB connection), *Fenix Flyer* can then communicate with the computer, server or network via Ethernet interface.

Fenix Flyer meets the latest regulatory requirements for WEEE/RoHS, while retaining the same footprint as Synrad's original *Fenix* model. The new *Fenix Flyer* incorporates several design improvements , including rugged cast aluminum endcaps, a simplified control panel, and an enhanced user interface on the rear panel, including the *48-Series* DB9 Interface connector and a DB25 I/O connector, as well as Ethernet and USB ports. A choice of four different lenses covers the range of focal lengths from 370 mm, for maximum area coverage, down to 80 mm, for applications where fine mark detail is required.

Fenix Flyer is controlled by the latest version of Synrad's powerful Windows®-based software, *WinMark Pro*® (sold separately). Designed specifically for the operation of *Flyer*, this easy-to-use software enables users to perform a wide variety of marking operations, including automated functions such as serialization and bar coding.

In addition to a *Fenix Flyer* marker and *WinMark Pro* software, you will need to provide a PC, a mounting platform, an adjustable Z-axis, and a beam enclosure to complete your laser marking installation.

SYNRAD®
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Fenix Flyer Laser Marker

Marking Specifications	Focusing Lens Size			
	370mm	200mm	125mm	80mm
Field Size, typical (mm)	198 x 198	110 x 110	74 x 74	27 x 27
Spot Size, $1/e^2$ (µm)	540	290	180	116
Working Distance[1], typical (mm)	350±5	190±3	128±2	74±1
Depth of Field, typical (mm)	±10	±2.5	±1.5	±0.4
Incident Angle, max	19	16	11	5
Marking Speed[2] (characters / sec, max)	450	450	450	450
Position Accuracy (mm)	0.05	0.03	0.02	0.01
Position Resolution (µm)	<15	<9	<6	<3
Repeatability (mm)	0.063	0.038	0.025	0.015
Settling Time, Small Step - 1% of field (µs)	≤ 440	≤440	≤440	≤ 440

[1]A nominal working distance is marked on each individual focusing lens mount since this distance may vary from lens to lens up to ±10 mm. For this reason, it is important to provide a Z-axis adjustment between the marking head and the marking surface.
[2]Character height ~3mm, 200mm focusing lens.

Input Requirements

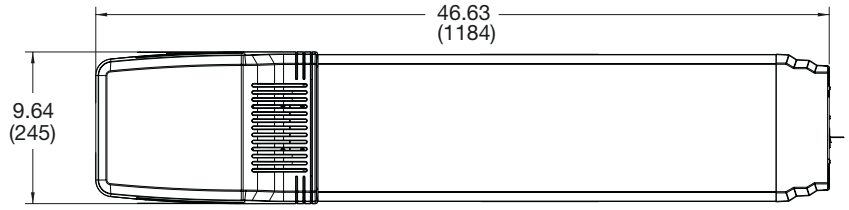
Input Power	AC 85-132 V/ 170-264 V, 1ø (Universal Mains Voltage)
Input Fuse Rating	10A, 250 VAC

Dimensions

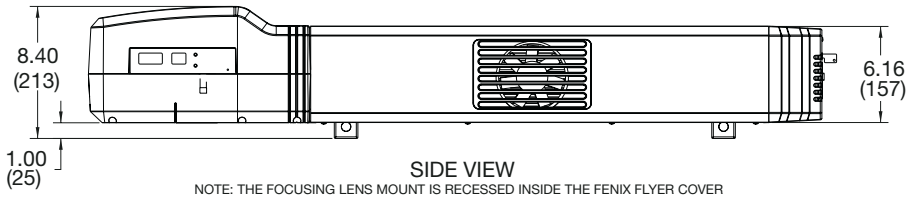
Length x Width x Height	(in)	46.63 x 9.64 x 7.40
	(mm)	1184 x 245 x 188
Weight	(lbs)	68
	(kg)	30.8

Specifications subject to change without notice

CE

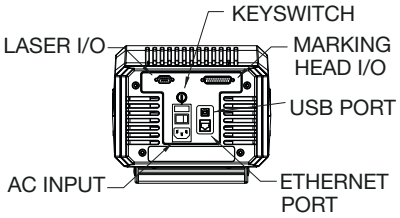


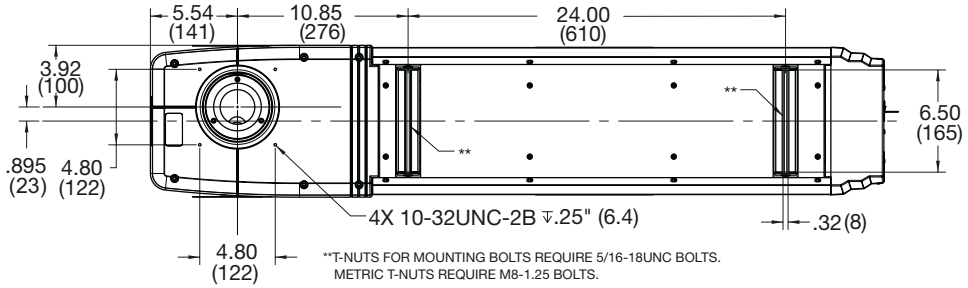
TOP VIEW



SIDE VIEW

NOTE: THE FOCUSING LENS MOUNT IS RECESSED INSIDE THE FENIX FLYER COVER AND IS NOT FLUSH WITH THE BOTTOM HOUSING.





**T-NUTS FOR MOUNTING BOLTS REQUIRE 5/16-18UNC BOLTS. METRIC T-NUTS REQUIRE M8-1.25 BOLTS.

BOTTOM VIEW

Dimensions are in inches (millimeters)

1.800.SYNRAD1

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