

## Flyer 3D 3-Axis Scan Head

# COMPLETE 3-AXIS SCAN HEAD SOLUTION FOR FAST, EASY INTEGRATION

Flyer 3D empowers production lines with the ability to sharply and quickly mark or cut larger fields (up to 1084 mm x 993 mm), and longer objects such as banners with never-before-experienced accuracy, speed, and detail. Flyer 3D utilizes a third servo-driven z-axis to dynamically focus the laser beam while maintaining a small laser spot size for detailed processing results.

## PAIR WITH ANY SYNRAD CO<sub>2</sub> LASER FROM 30 TO 400 WATTS FOR LARGE AREA LASER CUTTING, ENGRAVING, AND MARKING SOLUTION

Coupled with Synrad's ti Series, p Series, and i Series CO<sub>2</sub> lasers, Flyer 3D provides the flexibility you need to pick the best laser at the right wattage, for your marking, cutting or drilling needs.



## DESIGNED FOR OEMs AND SYSTEM ARCHITECTS

- Engineered to work with Synrad high-performance CO<sub>2</sub> lasers from 30 watts to 400 watts
- Easy upgrading; backward compatible with all Synrad FH Flyer scan heads
- Built-in visible diode pointer makes set-up and beam positioning fast and easy
- Servo-driven z-axis increases field sizes, up to 914 mm x 833 mm (36" x 33") while maintaining a small spot sizes for enhanced detail and throughput
- Adjustable focal plane to accommodate varied part thicknesses and heights
- Pre-aligned and calibrated sub-assembly customized to suit your application needs and desired field size
- Easier job setup with built-in diode pointer and adjustable focal plane to accommodate varied part thicknesses and heights
- Intuitive design and control with included WinMark™ Pro software package
- Built-in Ethernet and I/O interfaces allow the scan head to be controlled via computer (tethered) or operate independently (standalone)
- Static or dynamic tracking modes enable easy integration into a custom processing station or onto full production lines

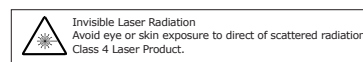


### WinMark Pro Software

WinMark Pro is custom software designed to operate with Synrad scan heads. Files can be created in the software itself, or imported from your favorite design software. Each object within the design can be assigned unique parameters to optimize application performance and allow many processes (marking, cutting, engraving, and others) to be performed in a single job file. WinMark can also be used to prepare the scan head for static or dynamic on-the-fly operation.

## FLYER 3D SPECIFICATIONS

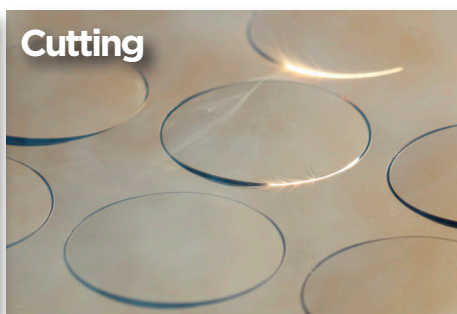
Performance	
Field Size mm (inches)	269 x 227 to 914 x 833 (10.6 x 8.9) to (36 x 33)
Spot Size 1/e <sup>2</sup> (µm)	165 - 688
Working Distance Range mm (inches)	268 - 1101 (10.5 - 43.3)
Scan Speed mm/s (inches/s)	7620 (300) - 15240 (600)
Operation	
Operating Temperature Range	0 to 40° C
Humidity	0 - 95%, non-condensing
Electrical Input	48 VDC + 2.0 VDC, 6.7 A, 20 A Peak
Heat Load, generated by the head	320 Watts nominal, 400 Watts max
Continuous Beam Input Power	500 Watts
Physical	
Dimensions w/ mounting bracket LxWxH mm (inches)	558 x 191 x 280 (21.9 x 7.5 x 11.1) - all others 580 x 191 x 280 (22.8 x 7.5 x 11.1) - p Series
Weight kg (lbs.)	9.7 (21.45)
Communication	
Tethered: PC control and mark file creation	WinMark, ActiveX
Standalone: allows API, PLC, PC or I/O control	ActiveX, Modbus I/P, Master Control File
I/O	8 inputs/8 outputs Built-in user accessible 15 V power source



## FLYER 3D RECOMMENDED APPLICATIONS



Enable fast, easy tracking and identification by applying permanent marks, text, and codes to a wide variety of materials.



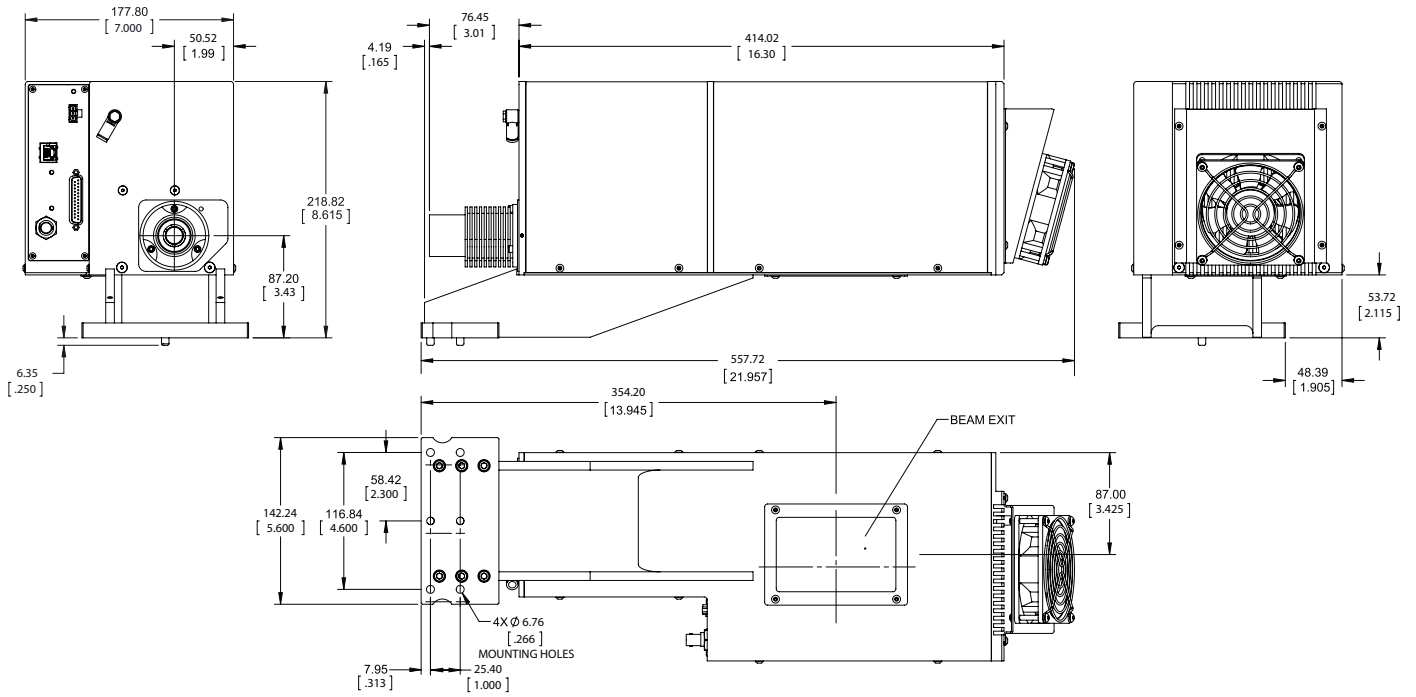
Digital control delivers crisp, clean cuts on a broad range of materials with an infinite number of patterns, and on-the-fly pattern change capability.



Enhance tactile experience or enable quick identification of organic materials by adding distinctive texture, contours, marks, or text.

# FLYER 3D TECHNICAL ILLUSTRATIONS

Dimension are in mm (inches)



Dimensions Marking head, Synrad CO2 laser (30 - 400 W) and mounting rail

Dimensions for Flyer 3D System Pairings - mm (inches)							
	v30	ti Series	p100	p150	p250	f201	i401/p400
L	1022.21 (40.24)	1250.01 (49.21)	1272.75 (50.11)	1481.58 (58.33)	1913.28 (75.33)	1913.28 (75.33)	1914.08 (75.36)
w	203.20 (8.00)	241.30 (9.50)	241.30 (9.50)	241.30 (9.50)	355.60 (14.00)	355.60 (14.00)	355.60 (14.00)
H	231.52 (9.12)	231.52 (9.12)	293.24 (11.55)	293.24 (11.55)	263.40 (10.37)	263.40 (10.37)	429.54 (16.91)

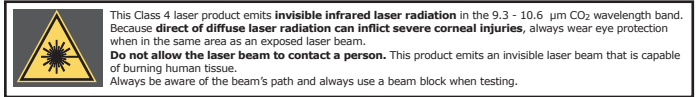
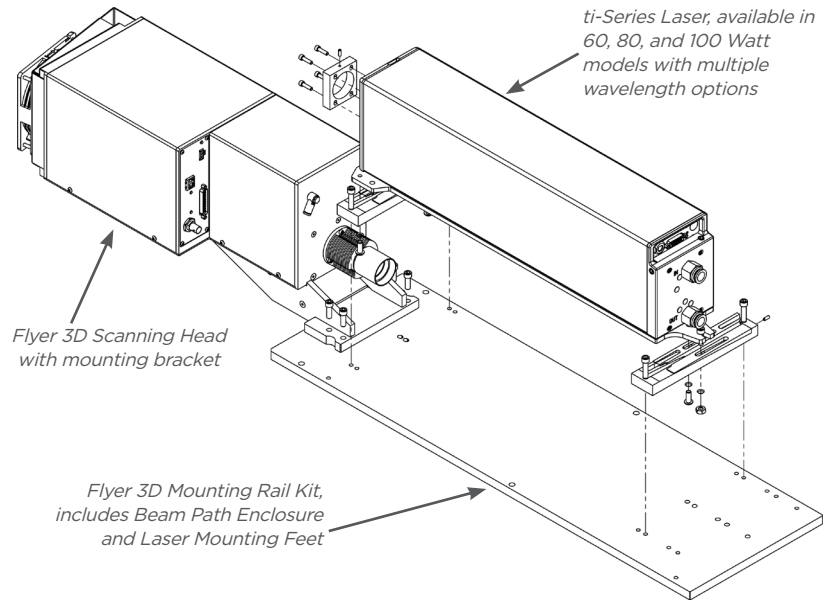
## FLYER 3D FIELD SIZE OPTIONS

Field Size (Width x Height)		Working Distance		Spot Size (µm)
Inches	mm	Inches	mm	M <sup>2</sup> = 1.2 µm
10.6 x 8.9	269 x 227	10.55	268	181
11.0 x 9.4	280 x 238	11.10	282	190
11.9 x 10.1	302 x 258	12.20	310	206
13.7 x 12.0	347 x 304	14.72	374	245
15.7 x 13.8	400 x 350	17.09	434	282
17.9 x 15.7	454 x 400	19.92	506	325
20.0 x 17.8	508 x 451	22.67	576	368
22.1 x 19.7	561 x 501	25.35	644	410
23.9 x 21.4	607 x 544	27.68	703	446
26.5 x 23.9	673 x 607	31.10	790	499
31.2 x 28.3	792 x 718	37.09	942	592
36.0 x 32.8	914 x 833	43.35	1101	688
42.7 x 39.1	1084 x 993	51.97	1320	822

## ti SERIES/FLYER 3D SUB-SYSTEMS

Each Flyer 3D & ti-Series Laser Scanning Solution includes:

- High performance ti-Series CO<sub>2</sub> laser; available in 60, 80, or 100 Watt models, and 10.6, 10.2, and 9.3  $\mu\text{m}$  wavelength options
- Fan or water cooled options
- Flyer 3D three-axis scan head
- Mounting feet (pre-aligned for installation)
- Mounting rail (base plate) with mounting screws
- Beam path enclosure with mounting screws
- WinMark Pro software
- 2-year standard depot warranty
- Communication cables
- 48 VDC power supply



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