LUXINAR
INGENUITY AMPLIFIED

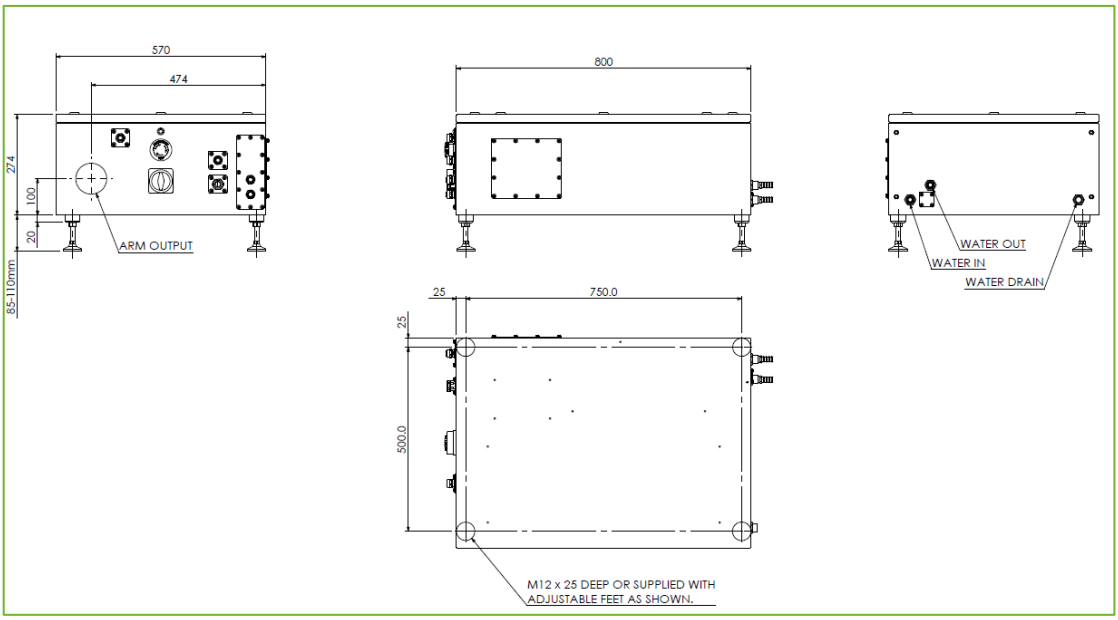
Technical Data MULTISCAN – Specification MULTISCAN HE

Laser Characteristics [1]			
Type	Sealed CO_2, RF excited SLAB		
Wavelength	10.6µm[2]	10.25µm[3]	9.3µm[4]
Rated Output Power	125W	110W	95W
Peak Power	315W	275W	239W
Minimum Shipment Power	150W	132W	114W
Typical Shipment Power	170W	145W	130W
Pulse Energy Range	5mJ to 100mJ	5mJ to 90mJ	5mJ to 76mJ
Pulse Frequency range	500Hz to 50KHz		
Duty Cycle (maximum)	60%		
Pulse width Range	2 to 400µs		
Optical rise/fall time [5]	<60µs		
Polarization [6]	Linear rotated		
Performance			
Line Speed (Max) [7]	0-500 m/min (static or 'on the fly' marking)		
Characters/second (Max) [8]	1200		
Software [9]			
Operating System	Windows 10 Embedded		
Principal features			
- (Field types)	Fixed text, date/time with offset, custom date, incremental counters, operator fields, logos, barcodes, bitmaps, composite fields, shift field and external fields.		
- (Control options)	Serial, Digital and Ethernet.		
Code Characteristics			
Scan area (standard)	70mm/105mm/140mm/210mm		
Character height	1mm – 50mm		
Spot Size ($1/e^2$ diameter) [10,11]	0.28mm		
Beam pointing stability (half angle)	<0.25mRads		
Articulated beam delivery			
Reach [12]	1.6m (7 knuckle)		
Head to product distance (nominal) [13]	150mm		
Multi axis head positioning	Standard		
Display/Keypad			
Remote VGA display (colour) and Qwerty keypad	Standard		
Fabrication			
Cabinet	316 Stainless Steel		
Beam delivery	Silver Anodised Aluminium		
Scan head	Silver Anodised Aluminium		
Dimensions and weights			
System (main cabinet)			
Water Cooled	800mm(l) x 570mm(w) x 275mm(h)		
Air Cooled	102mm(l) x 570mm(w) x 275mm(h)		
Scanning Head			
Scancube 7	78.5mm(h) x 69mm(w) x 106.5mm(d)		
Scancube 10	114mm(h) x 96.5mm(w) x 111.5mm(d)		
Scancube 14	133.5mm(h) x 99.5mm(w) x 122.8mm(d)		
Weight (total system)			
Water Cooled	103kg		
Air Cooled	115kg		

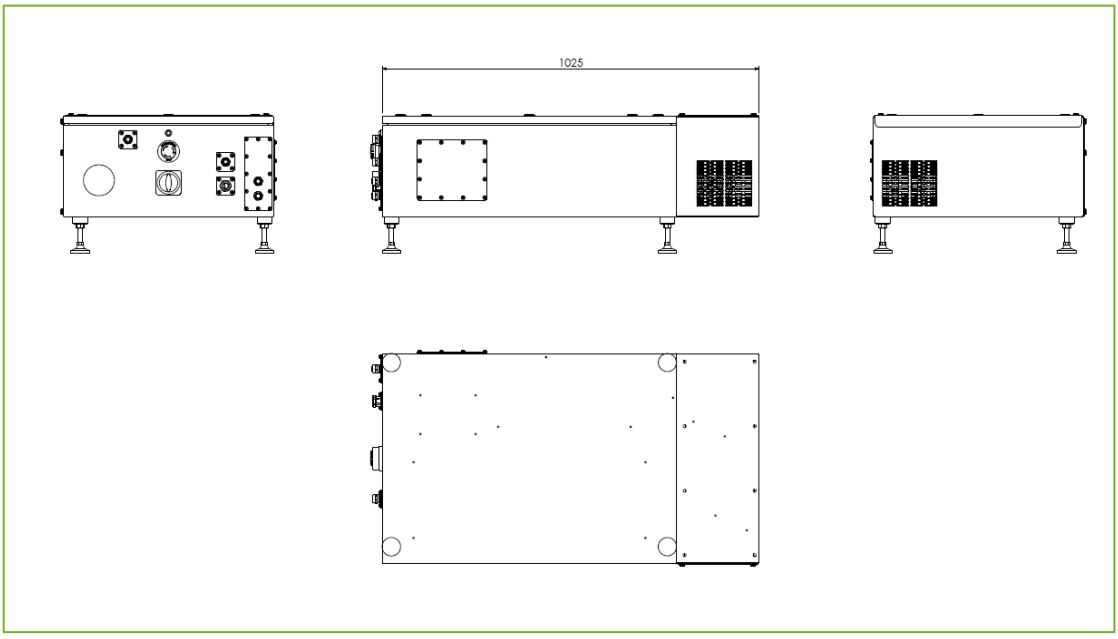
Electrical Ratings	
Voltage	230VAC ± 10%; 50/60 Hz; single phase or line to line
Typical Power consumption [14]	1.2kW
Cooling	
Type	Integral (external water) – Standard
Operating temperature (Air cooled) [15]	+5 to +35°C (Above dew point)
Operating temperature (Closed cycle) [15]	+5 to +40°C (Above dew point)
Storage temperature	-10 to +70°C
Environmental	
Lens Protection (air curtain)	20psig 25 litres/min, purified
Humidity	10 to 90% non-condensing
Storage temperature	-10 to +70°C
Sealing	IP66
Interface	
Inputs	
Product detector	Two independent inputs for NPN or PNP 24 or 12VDC
Shaft encoder	Input for control of variable speed production lines, dual channel quadrature input, max 200kHz
Interlocks	Dual channel interlock, dual channel Estop.
System enable	Input for the provision of externally enabling or disabling the system
Extractor fault	Input for monitoring the status of the extractor
Remote Control/File download	RS232, with Ethernet options
Outputs	
Product detector output	Two outputs for monitoring the two detector input signals
System on	Output for monitoring the on/off power
Ready to print	Output for monitoring the status i.e. Standby or Ready to Print
Product reject	Output for rejecting unmarked product
Shutter status	Two independent outputs for monitoring the safety shutter status
Extractor enable	Output to enable the extractor when the system is ready to print
Good mark	Output for monitoring of the status of each individual mark
Maintenance required	Output for indication that maintenance is required
System fault	Output for monitoring when the system has a fault
Options	Air cooled system 7mm Aperture head[11] 14mm Aperture head[11] Scanning lens focal lengths 75mm – 435mm[11] Additional beam delivery options: Arm support, head support

Notes:

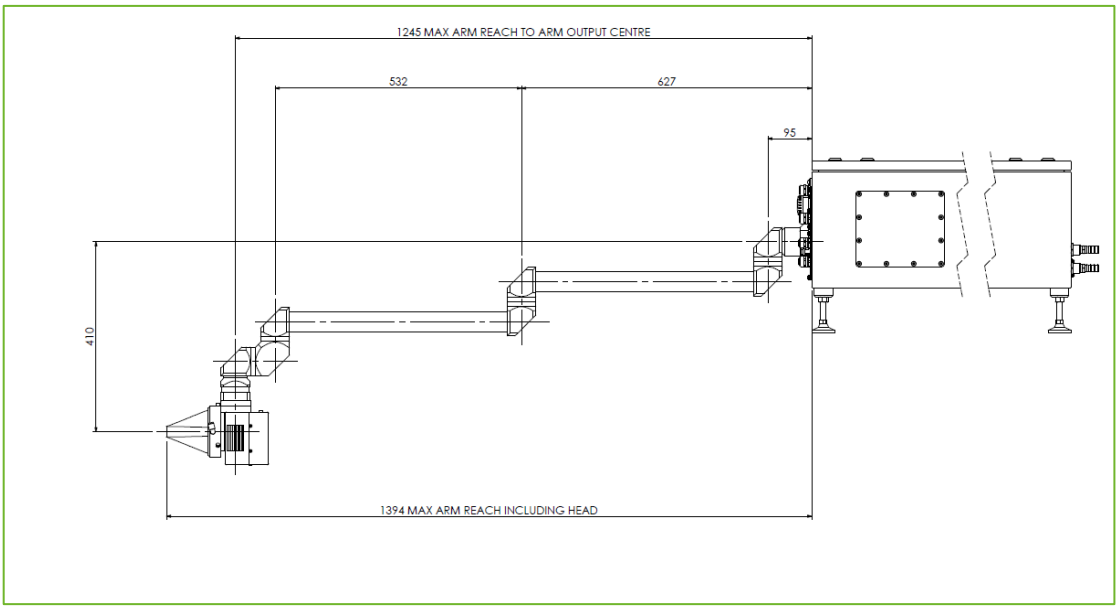
1. Powers and energies are quoted at the point where the beam exits the cabinet. For each knuckle in the articulated beam delivery there is an expected power loss of between 0.5% and 1%. Operating with the galvanometer head gives a further expected power loss between 6% and 12%.
2. 10.6µm is the predominant wavelength. This can typically vary in the range 10.2µm – 10.7µm.
3. 10.25µm is the predominant wavelength. This can typically vary in the range 10.17µm – 10.33µm.
4. 9.27µm is the predominant wavelength. This can typically vary in the range 9.2µm – 9.4µm.
5. Rise and fall times are quoted between the 10% and 90% levels
6. Polarization angle is dependent upon the orientation of the articulated arm
7. Maximum line speed is assuming a single line 8-character code on an inked paper label. Please note that maximum line speed is dependent upon the nature of the material and the size/quantity/complexity of the mark.
8. Character generation speed in a single line format with a code height of 2mm. Faster generation speeds are possible at smaller code heights. Mark quality dependent upon character height, material and speed of marking.
9. Also refer to Technical datasheet 903-0065-00
10. Operating with 10mm aperture head, 150mm focal length lens.
11. For options see document 903-0146-00
12. Approximate distance between first articulated knuckle and actual product.
13. Operating with a 150mm focal length scanning lens
14. Typical average power consumption assumes a 50% coding duty cycle
15. Maximum operating temperature is dependent on the overall duty of the system. Refer to document 903-0125-00 for further information.



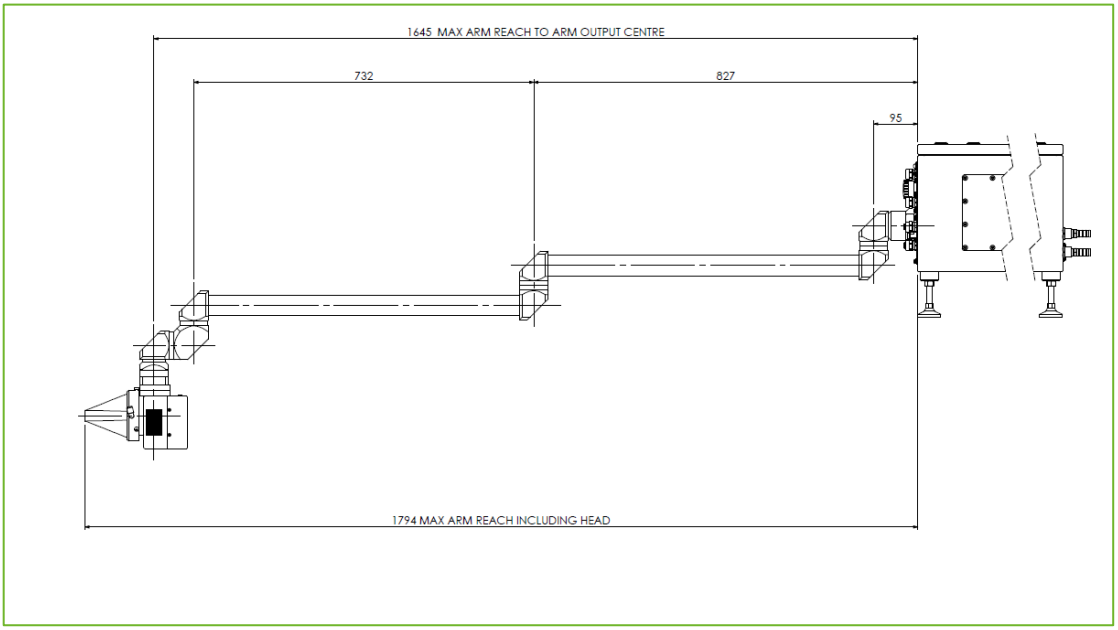
MULTISCAN HE Water Cooled



MULTISCAN HE Air Cooled



MULTISCAN HE 470mm Arm



MULTISCAN HE 640mm Arm