

HV Series

2D Laser Processing System

The Standard in Hybrid Laser Processing Systems



Features:

- Machine available with 2000 and 4000W Resonator.
- Available in 4x4, 4x8 and 5x10 Table.
- New HVP offers Simple Automation to Increase Productivity.
- Work Piece Accessibility.
- Superior Patented Cross Flow Resonator for Optimal Cutting power.
- Low Cost of Ownership.
- Excellent Processing Performance is achieved through Constant Gas Flow and Beam Quality.
- Intelligent Assist Gas Monitoring, resulting in Less Scrapped parts.
- Automatic Quick Change Gas Function.
- The DR Control combines Real Time Power Ramping with Acceleration or Deceleration - Dramatically Reducing Dross adhesion and Thermal Influences.
- All Critical Components are Manufactured by Mitsubishi.
- Superior Patented Cross Flow Resonator for Optimal Cutting Power.

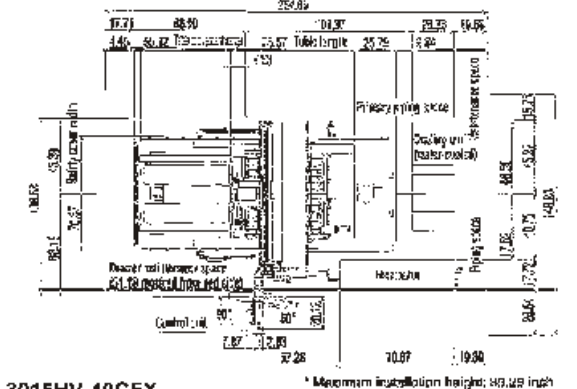


HV Series System Specifications

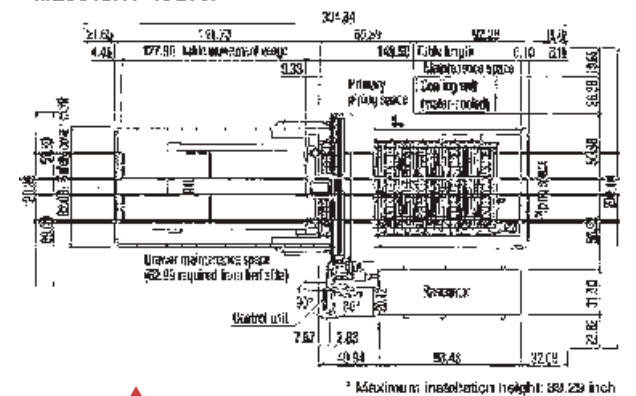
Model Name	ML1212HV	ML2512HV	ML3015HV
Motion Drive System Design	Precision Ball Screw		
Travel Drive Method	X-Y-Z-W-U Simultaneous 5-axes		
Max. Workpiece Size (mm)	1220 x 1220	2450 x 1220	3050 x 1525
Table Pass Height (mm)	850	850	850
Processing Access	Operator Hinge Door		
Pallet Changer	NA		
X-Axis Stroke (mm)	1250 + 150 (Load/Unload)	2500 + 5150 (Load/Unload)	3100 + 150 (Load/Unload)
Y-Axis Stroke (mm)	1250	1250	1550
Z-axis Stroke (mm)	300		
Rapid Travel (X,Y) (mm/min)	50000 (single axis)		
Max Processing Feedrate (mm/min)	30000 (X-Y)		
Positioning Precision (mm)	0.01/508 (X, Y axis), .099/101.6 (Z axis)		
Repeatability (mm)	(+/-)0.005 (X, Y axis)		
Drive Motor Type	Intelligent Smart Servo		
Max Workpiece Weight (Kg)	190	375(20CF2) / 595 (40CFX)	585 (20CF2) / 930 (40CFX)
Machine Unit Dimensions (WxDxH) (mm)	4089.4 x 2227.6x 2301.2	6090.9x 2227.6x 2301.2	7289.8 x 2227.6 x2301.2
Machine System Weight (Kg)	7817.8 (20CF2) / 8817.3 (40CFX)	8819.6 (20CF2) / 9819.5 (40CFX)	10823.5 (20CF2) / 11823.4 (40CFX)
Installation Dimensions (WxD) (mm)	5958.8 x 3759.2 (20CF2) 6240.7x 4244.3(40CFX)	7200.9 x 3759.2 (20CF2) 6347.5x 4246.9(40CFX)	8204.2x4058.9 (20CF2) 8239.8 x 4546.6 (40CFX)
Floor Space Req. (sq. ft.)	241 (20CF2) / 285 (40CFX)	291 (20CF2) / 342 (40CFX)	358 (20CF2) / 403 (40CFX)
Machine Power Requirements	38 KVA (20CF2) 3Ø 208 VAC +5% 60Hz 106 Full Load Amps		71 KVA (40CFX) 3Ø 208 VAC +5% 60Hz 197 Full Load Amps

Resonator Model	20CF2	40CFX
Excitation Method	3-Axis Cross Flow, Silent-Discharge	
Rated Output Power (W)	2000	4000
Control Method	Power Feedback	
Power Stability	Less than ±1% of rated power	
Beam Mode	Low-order (main component TEM01*)	
Beam Outer Diameter (mm)	21.08	25.9
Beam Divergence (mrad)	Approx. 2.5 or less (total angle)	Approx. 3.5 or less (total angle)
Laser Gas Composition CO ₂ :CO:N ₂ :He	8:4:60:28	
Laser Gas Consumption Rate (l/hr)	2	3.0
Gas Sealing Time (Hr)	12 (During rated continuous oscillation)	24 (During rated continuous oscillation)
Wave Length (µm)	10.6	
Frequency Setting Range (Hz)	10 ~ 3000	
Duty Range (%)	0 ~ 100 adjustable	
Output Power Adjustment Range %	0 ~ 100 of rating	
Resonator Unit Dimensions (WxDxH) (mm)	1988.8 x 1620.5 x 459.7	2499.4 x 1811 x 800.1
Resonator Unit Weight (Kg)	1204.4	2204.3
Chiller Power Requirements	38 KVA 3Ø 208 VAC +5% 60Hz 65 Full Load Amps	42 KVA 3Ø 208 VAC ± 10% 60Hz 118 Full Load AMPS

ML1212HV-20CF2



ML3015HV-40CFX



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