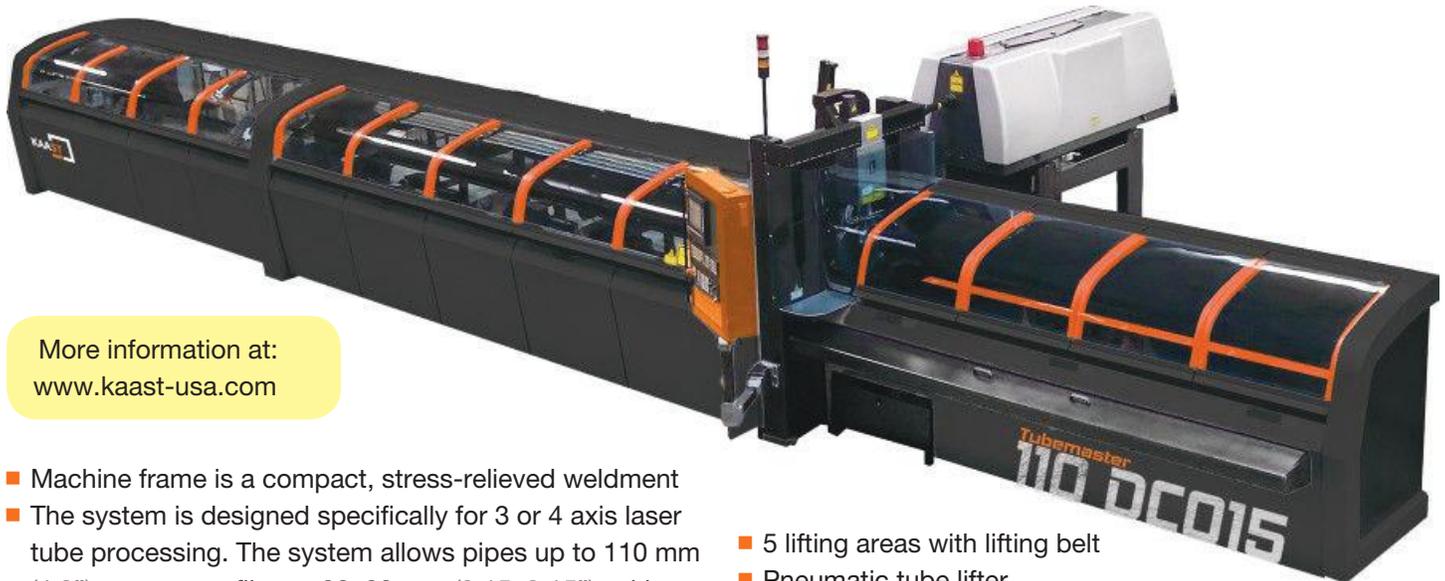




Laser cutting Tubemaster

To effectively cut tubes and profiles up to Ø110 mm (Ø4.3")



More information at:
www.kaast-usa.com

- Machine frame is a compact, stress-relieved weldment
- The system is designed specifically for 3 or 4 axis laser tube processing. The system allows pipes up to 110 mm (4.3"), square profiles to 80x80 mm (3.15x3.15"), with a max length of 7000 mm (292") [optional up to 13000 mm (512")]. Automatic loading, positioning and cutting.
- Machining of tube profiles of different cross-sections (round, square, rectangular, oval, etc.)
- Processing of tubes with a wall thickness of 1 to 5 mm (0.04 to 0.2") and a diameter range of 20 to 110 mm (0.8 to 4.3")
- Max tube diameter - 600 mm (23.6")
- The machine axes are driven by Siemens servo motors and preloaded ball screws. The drive of the tube linear transport is a rack and pinion with helical teeth

- 5 lifting areas with lifting belt
- Pneumatic tube lifter
- Tube loading magazine

150-fold savings of CO2 slab laser verses conventional laser technology!

- CO2 Slab laser makes conventional gas circulation systems, such as Roots pumps and turbines, superfluous. The built-in laser head premix gas bottle is enough for about 12-18 months of continuous use. Consumption only 0.2 l/h (0.05 gal/h) instead of the previous 30 l/h (8 gal/h)
- Energy savings due to no blowers.



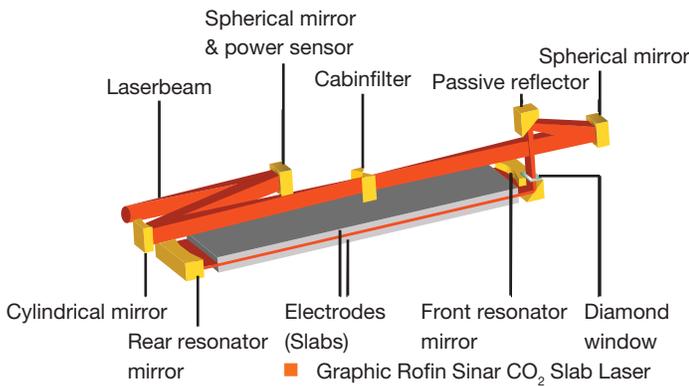
Specifications		Tubemaster 110 DC015	
Axis travel	X	mm	7000 [opt. 13000] (292" [opt. 512"])
	Y	mm	350 (13.5")
	Z	mm	120 (4.6")
	A1	deg	360°
	A2	deg	360°
Max. positioning speed	X	m/min	120 (4,680"/min)
	Y	m/min	60 (2,340"/min)
	Z	m/min	60 (2,340"/min)
	A1, A2	rpm	0-120
Working height		mm	±1000 (39")
Max. table load		kg/m	30 (20 lbs/ft)
Workpiece length		mm	3500-7000 [opt. 13000] (137-273" [opt. 512"])
Range of dimensions - round pipes		mm	20-110 (0.75-4.3")

Optional configuration

- ROFIN SINAR DC 020 Resonator (200-2000 W)
- ROFIN SINAR DC 025 Resonator (250-2500 W)
- ROFIN SINAR DC 030 Resonator (300-3000 W)
- ROFIN SINAR DC 035 Resonator (300-3500 W)
- Ethernet network card
- Siemens S7 remote diagnosis
- RS-232 Port
- Compressed air filters
- Unloading system for pipes and profiles up to L = 3000 mm (118")
- NC controlled tube catchers
- Pneumatically controlled tube catchers (L = 1m (39.4"))
- Longer loading and unloading equipment

*The above specifications are subject to change without prior notice. No liability for printing mistakes. Machine may be shown with optional equipment.

- This type of laser is characterized by the following special features:
- Very compact and low maintenance design
- High beam quality, excellent composition
- No heat exchanger for gas and turbine cooling, the pump starts only once in 72 hours.
- Low optical losses
- Low maintenance: no moving parts, copper mirrors without special coating, the diamond window is the only transmissive element
- No external gas cylinders
- Extremely low laser gas consumption [0.1 l/hr (0.26 l/h)]. Replace the internal gas cylinder only 1x per year
- Very high beam quality and cutting speeds that are well above (by 10-15%) the achievable cutting speeds of a conventional laser
- The operating and maintenance costs of this system are significantly lower than that of a conventional CO₂ laser



- The entire beam guide path is filled with air barrier for protection against the penetration of dirt particles and impurities. To prevent overheating, the transmissive optics are actively cooled
- One mirror system for beam guidance and redirection. The laser beam passes through only 2 optics (1 mirror and 1 lens)
- All systems are delivered with a cutting head and removable 5" and 7.5" lens cassettes that do not require cutting head calibration after replacement
- Extraction of fumes and vapors that arise during the processing occurs via special suction channels - a vacuum and filtration system is included
- The system is equipped with a fixed bezel for machining long pipes with a maximum diameter of 110 mm (4.3")
- Welding applications possible by using a special laser head
- The basic equipment includes an automatic loading device. Optionally, the system can be upgraded with a discharge and sorting device

Standard configuration

- ✓ CNC Siemens 840 D (RAM 3 MB RAM, 2GB Hard Drive)
- ✓ Rofin Sinar resonator DC 015 (1500 W)
- ✓ Automatic gas and air pressure adjustment control in the range of 0 to 22 bar
- ✓ CNC-controlled laser head
- ✓ 1.5" laser cutting head Precitec with 5" or 7.5" lens
- ✓ Automatic height control in Z axis
- ✓ 4-jaw turntable
- ✓ Steady rest
- ✓ Laser pointer
- ✓ Bundle system for pipes (L = 7000 mm (292"))
- ✓ Lens cooling system
- ✓ Torit system DFPRO - smoke gas filtration and extraction system
- ✓ Cutting software
- ✓ Protective covers for laser class 1
- ✓ Operation manual



Specifications		Tubemaster 110 DC015
Range of dimensions, square tubes	mm	20x20–80x80 (0.75x0.75–3.1x3.1")
Range of dimensions - rectangular and oval tubes	mm	20x30–50x100 (0.75x1.2–2x3.9")
Positioning accuracy in X, Z axes	mm	±0.02 (0.0008")
Positioning accuracy in Y-axis	mm	±0.05 (0.002")
Repeatability	mm	±0.025 (0.001")
Laser	kW	ROFIN SINAR DC 015 CO ₂ Laser 1.5 (2 Hp)
Power consumption	kW	29 (39 Hp)
Beam power	kW	1.5 (2 Hp)
Volt	V	3x400 (±10%), 50 Hz (460, 3ph, 60Hz)
Grounding	Ohm	5 or lower
Air pressure	bar	6 (85 psi)
Total power consumption	kW	65 (87 Hp)
Weight	kg	12500 (27,500 lbs)
Item No.		1200010

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