



AL

Application: The AL laser welder is for use when welding precious metals, copper and aluminum, mold and tool manufacture and repair, spot and seam welding.

- Suitable for applications requiring high pulse energy or pulse power, ie. welding of aluminum or copper.
- Numerous power models to conform to every need - ranging from 75 W to 500 W. You can now configure the optimum laser welding machine for your requirements.
- Can be integrated into our optional work-bench systems - AL-T.

An assortment of diverse laser objectives helps localize the laser beam at the spot you want to have it. Whether it is a simple 90° beam deflection objective, the unique turn and tilt objective, or our rotating objective, the laser beam always reaches exactly the desired location on the work piece.

In addition, many optional accessories available for the AL:

- Micro-welding appliance for welding with spot diameters < 100 µm
- Rotating axis for cylindrical welding seams
- automatic welding wire feed LAfet
- work-piece clamp
- camera system

This laser welder is mainly used for repair and material deposit in mold and tool manufacturing, thin sheet metalworking, medical technology, and sensor production.



Pressure-sensor for brake system
(Photo: ADZ NAGANO GmbH, Ottendorf)



Circular welding at stainless steel housing
(Photo: HAKAMA AG, Switzerland)

Technical data	AL 75	AL 120	AL 150	AL 200	AL 300
Laser					
Average power	75 W	120 W	150 W	200 W	300 W
Peak pulse power	7 kW	9 kW	9 kW	9 kW	9 kW
Pulse energy	60 J	75 J	75 J	90 J	90 J
Pulse duration	0.5 – 20 ms	0.5 – 20 ms	0.5 – 20 ms	0.5 – 20 ms	0.5 – 20 ms
Pulse frequency	-50 Hz	-50 Hz	-100 Hz	-100 Hz	-100 Hz (under observation)
Welding spot diameter	0.2 – 2.0 mm				
Focusing optics	150 mm				
Pulse shaping	Adjustable power-shaping within a laser pulse				
Control	User-specific operable with up to 39 data records interface for external controls				
Viewing system					
	Leica binoculars with oculars suitable for wearers of glasses				
Supply unit					
Dimensions LxWxD	820 x 400 x 910				
Weight	120 kg	120 kg	120 kg	120 kg	120 kg
Laser beam source					
With focusing unit (length x Ø)	900 x 120 mm			1100 x 120 mm	
Weight	approx. 18 kg	approx. 18 kg	approx. 18 kg	approx. 20 kg	approx. 20 kg
Electrical connection					
	200–240 V / 50–60 Hz / 16 A		3 x 400 V / 50–60 Hz / 3 x 16 A N		
Options					
	<ul style="list-style-type: none"> > Micro-welding aperture for welding spot-Ø < 100µm > Turn-and-tilt optics > Rotational welding optics > Tilttable turntable with chuck for horizontal to vertical rotation > TV system for demonstrating and observing the welding process > LA/fer* – programmable laser-wire-feeder 				