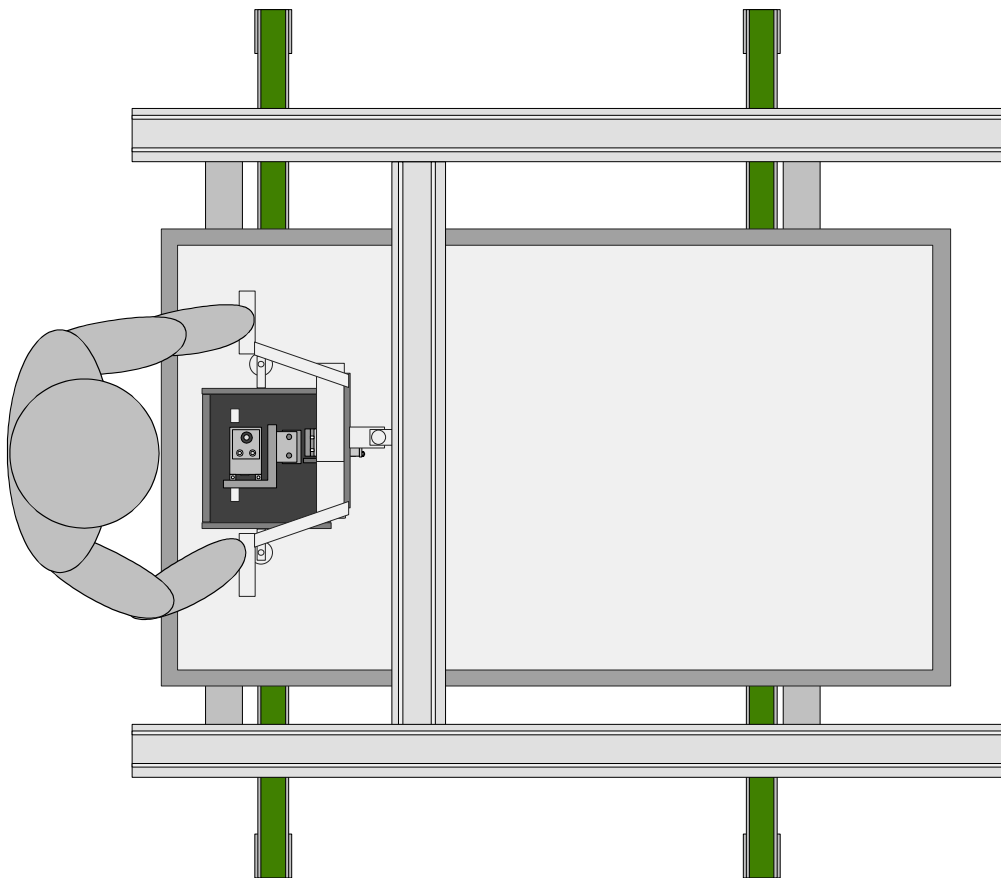


# *Automatically soldering for J-Box of solar panels*



- *high process reliability achieved by induction soldering (patented)*
- *Flexible, for different connection geometry*
- *with active and passive transfer (roller conveyors / conveyor belts)*
- *Design can be adapted to customer-specific applications*

## System description

One of the manufacturing processes that greatly affect the quality of the product is soldering of the junction box (J-Box). This is conventionally done manually, but with specially designed J-boxes mounting and soldering can be done automatically.

A suitable, fast and safe process is induction soldering. Soldering the connection tabs of the J-box is achieved with a ceramic hold-down that incorporates the induction coil. Mating parts are pressed against each other and heated inductively until the solder joint has been created.

Depending in the type of solar module there are different connection geometry (footprints).

For processing, the module is loaded into the system and aligned. The operator then positions the soldering head above the J-Box with the system's controls. When the soldering head is being lowered it automatically is centered and aligned onto the J-Box.

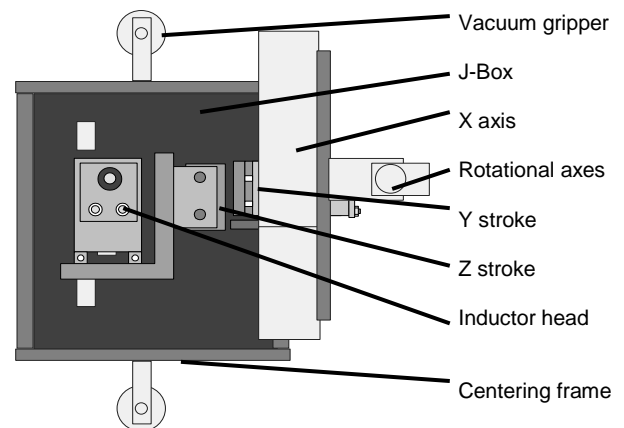
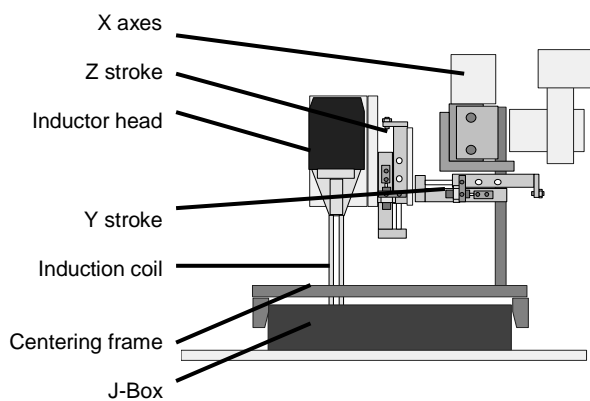
Two vacuum grippers secure the robotic tool head to the solar module, then the four solder joints are automatically created consecutively by positioning the soldering head along the tool's three robotic axes (XYZ).

e.g. qualified for SolarSpec™





TM Trademark of molex

## Soldering system



## Technical data

Soldering heads per system	1 or 2	 HF generator	 Water cooling system	 Flux dispensing system
Power HF generator	3,5 kW			
Water cooling (closed loop)	C15S 1 head C25S 2 heads	 Controller		
Module dimensions	max. 1.000x1.800 mm			
System dimensions (WLH)	2.400x2.400x1.800 mm			
Controller	Mini-PLC			
Power supply	240V, 50/60Hz			

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Specifications subject to  
change without notice.



Automatisierungstechnik Niemeier GmbH

Segelfliegerdamm 94-98  
12487 Berlin - Germany  
Tel.: +49 30 565 9095-0  
Fax: +49 30 565 9095-60  
Web: www.atn-berlin.de