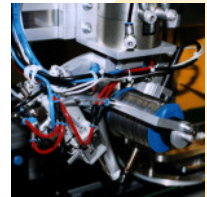


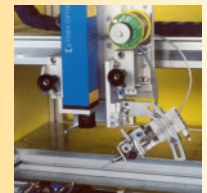
ATN

Automatisierungstechnik
Niemeier GmbH

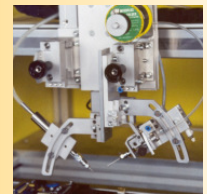
Automated Single Point Soldering with ...



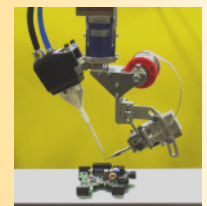
hot iron



laser



flame



induction

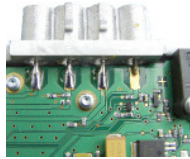
Today, a lot of soldering joints still need to be soldered sequentially, most of them manually. The components and soldering-systems from ATN make it possible to automate manual work in a cost effective way.

Robot soldering in electronic production

Not all soldering connections in electronic production are able to produce with automated mass soldering methods – like reflow- or micro wave soldering. Characteristically of all this connections is demand for single point soldering – normally a manually task. The consequence: clearly higher costs and a quality, which depends on workers feeling. These processes can be automatized in a cost effective way. Some examples:

specific solder joints

e.g. wired component on a PCB in SMD-Technology



reel to reel production

e.g. capacitor on flexible flat cable (FFC)

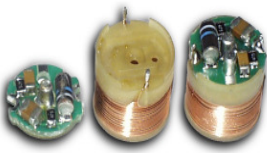
small number of solder joints

e.g. cable onto printed circuit board or ceramic substrate



temperatur sensitive substrates

e.g. LEDs onto Flex (PEN/PET)



by restriction of assembly caused solder joints

e.g. a complete printed circuit board has to be soldered with the two connectors of a spool without re-melting the existing solder joints

ATN Automatisierungstechnik Niemeier

With the light soldering system LightBeam ATN is a market leader for selective light soldering. The ATN develops, produces and distributes components and software for the manufacturing of electronics, in particular for the automated single point soldering.

ATN was founded in 1996 in the Production Technology Center Berlin (PTZ) and developed 1998 into the ATN Automatisierungstechnik Niemeier GmbH. In the same year ATN moved to the economic and Science Center Adlershof (WISTA) in Berlin. Today ATN has 15 employees.



Our success is based on an customer-oriented work:

For our clients we accomplish soldering attempts and configure systems according to the individual requirements. All technical data and operational sequences are documented, completely illustrated by photos, videos and process investigations and form an important decision basis for our customers.



... gives technical support for your special soldering application and recommends you a suitable system from the ATN at optimal costs.

... supports your investment project by application tests with yours construction unit samples, determines optimal process parameters and proposes a soldering process suitable for you!

... automates your manual soldering workshop places, you save time and costs in manufacturing!

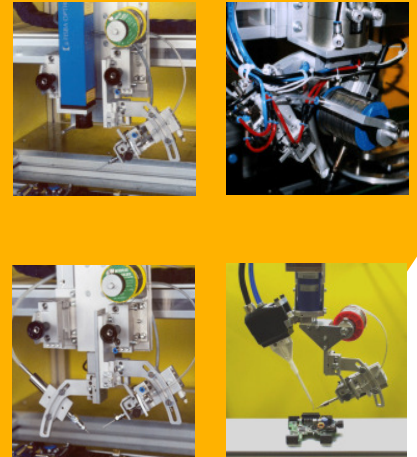
... realizes your soldering application reliably, you are able to improve the quality of your products with optimal investment and operating costs of the soldering system!

... can refer to know-how of many years in the soldering technology and to a multiplicity of installed systems in production, research and process evaluation with considerable manufacturers and institutes.

Soldering system LightBeam and laser, hot iron, flame and induction



The soldering system LightBeam operates with IR-light focussed by convergence mirrors and optics. The heat radiation generated in this way produces the temperature required at the Soldering Point. The energy can be regulated very exactly. Thus the light soldering is suitable in particular for the selective reflow-soldering. To meet the most different requirements ATN offers beyond that further soldering procedures: Contacts mounted into plastic casings are frequently soldered with the automated soldering iron and solder wire feeder. The micro flame and the induction brazing are two contactless soldering procedures offered by ATN, which are suitable for warming up of solid components. Miniaturised applications are realised with the beam of a high-power diode laser.



lead free • lead free
All procedures are suitable for lead free soldering. We support you by the developing your process

Modular Systems

Depending upon requirement two basic modules are available:
 - the compact desktop device Economic and
 - the fully automatic selective soldering machine VARIO.

The base cell VARIO is basic module of a standardised unit construction system. Up to 4 automatic stations can be integrated in one machine. According to the customer specific application these stations are configured from
 - 15 different tools and
 - 8 axis systems with 3 speed ranges in each case.

The modular structure permits different variants of part supply e.g. inline conveyors, change cartridges or a rotary indexing table. This modular system offers a set of advantages:
 - application of the optimal procedure
 - use of established standard components
 - uniform control concept
 - flexibility concerning extension/adjustment to new products

and thus
 - **high process security and availability**
 - **minimale costs and**
 - **high investment security references:**

Kinematics
 - pneumatik modules
 - XY-gantryl
 - Z-axis
 - rotation-axis

logistics
 - rotation table
 - change cartridges
 - SMEMA conveyour
 - assembly systems
 Bosch TS1/TS2

prozesses
 Soldering
 - LightBeam
 - LightBeam w. wire
 - Laser
 - Laser with wire
 - hot iron w. wire
 - Induction
 - Induction w. wire
 - Flame with wire
 others
 - Dispensing
 - Fluxing
 - Preheating
 - Assembly
 - Test
 ...

width
 - 1.000 - 2.400 mm
 - 1 / 2 / 3 / 4 stations

References:

Considerable companies of the automobile supplying and electronic industry as well as mechanical engineering enterprises and institutes for development already successfully use the ATN systems, e.g.:

<p>Automotive Bosch Conti Temic Hungary Coroplast Delphi ETO Magnetic Hirschmann Leoni Bordnetze METHODE Electronics Malta Pierburg Preh ...</p>	<p>Elektronics Infineon Braun BuS Elektronik Funkwerk Dabendorf Osram Philips Phoenix Tyco Pretma Vishay Wiebrock ...</p>	<p>Mechanical Engineering Bosch ATMO Clausing Maschinenbau GL Engineering IMS B.V. Almelo Kurth Elektronik Preh Engineering Ruhlmat TAS Maschinenbau Teamtechnik Seho ...</p>	<p>Research & Development FH Augsburg FNE Freiberg Fraunhofer IPA, Stuttgart Fraunhofer IPK, Berlin Fraunhofer ILT, Aachen Inst.f.Solartechnik, Frankfurt Technische Uni Berlin Technische Uni Dresden Universität Stuttgart Universität Wien ...</p>
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Components and systems for automated single point soldering

Components

- IR-emitter LightBeam
- Solder Wire Feeder Mosquito
- Rotary Valve



Standard Machines

- inline-soldering system VARIO
- benchtop machine ECONOMIC



Customer Specific Machines

Different kinds from semi-automated up to fully automated machines



Your contact:

"ATN as a competent manufacturer of selective soldering systems offers a wide range of standard components and machine platforms, with which automation solutions for the customers can be realised at optimal costs. The user gets individually designed procedure solutions for automation problems around his specific task of soldering."

from:
PLUS PRODUKTION VON LEITERPLATTEN UND SYSTEMEN 11/2002