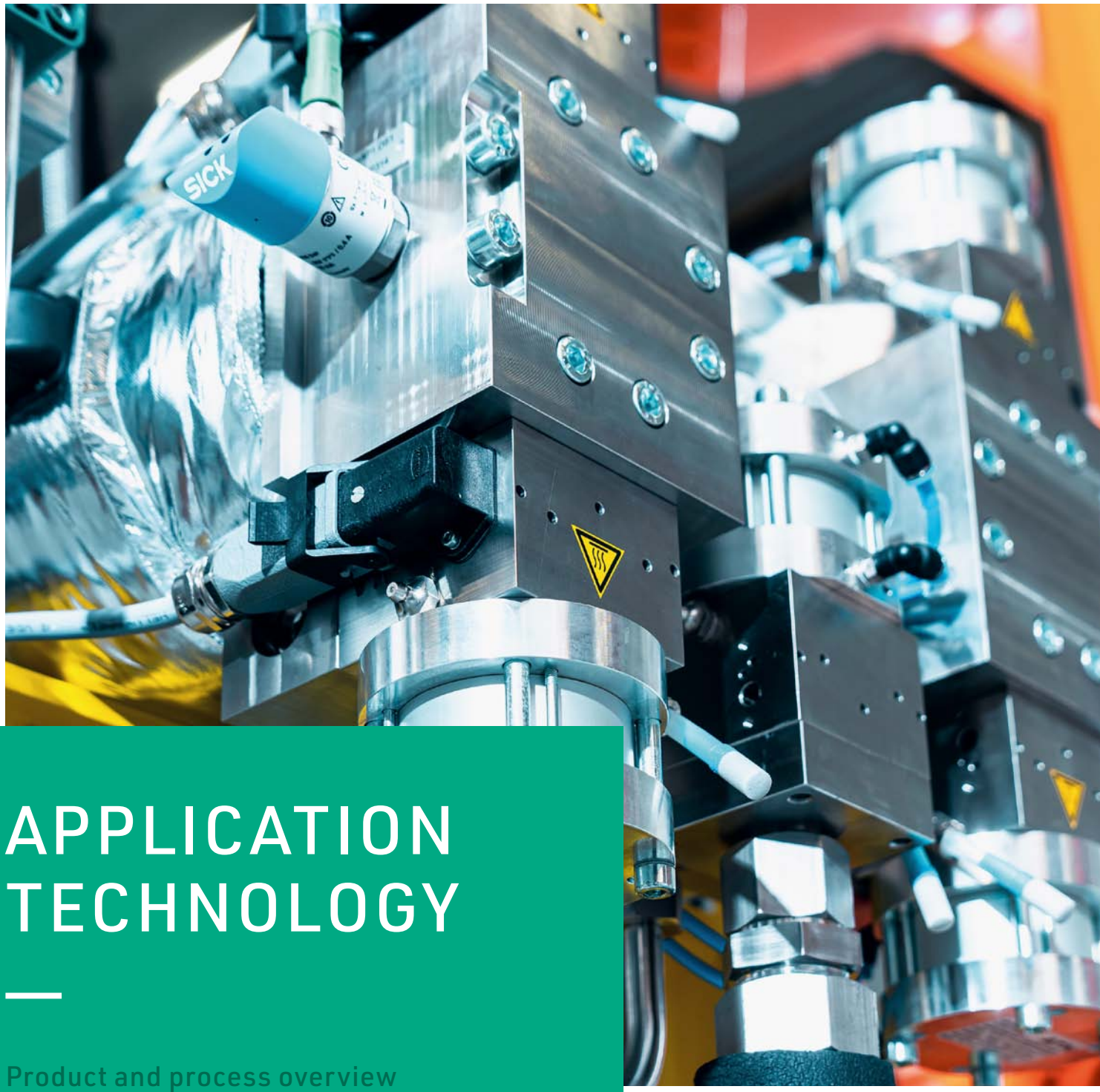
ATN

PASSION FOR
TECHNOLOGY



APPLICATION TECHNOLOGY

Product and process overview

www.atngmbh.com

ATN – Passion for Engineering

Bonding is one of the most versatile joining processes in industrial production. As such, it is set to gain ever more importance as technology continues to develop. The main aim here is not to replace other established joining processes. After all, beside its many advantages as a stand-alone joining process, bonding can be used in combination with other joining processes to create a hybrid joint, which opens up new possibilities and boosts quality. Where bonding really excels, however, is as a stand-alone joining method.

Industry requirements regarding lightweight construction, miniaturization, multi-material mixes and load-bearing capacity have changed significantly in recent years. Many of the resulting novel designs and production processes are made possible by the use of bonding. And development is set to continue: The combination of different adhesives to increase bond performance, improvements in quality monitoring and the development of releasable bonds are just some of the potential innovations.

The technology employed also covers processes that take place upstream or downstream of the actual bonding process, such as surface treatment to ensure secure bonding, or that employ the same fluid processing methods as are used for adhesives, such as filling cavities or sealing weld seams.

ATN is a global leader in industrial application systems. We offer everything from components and assemblies to complete systems for handling and processing a wide range of materials of all viscosities: from material delivery from various types of receptacle to the reliable, repeatable application of fluids. In addition to bonding systems, this includes sealing, potting, filling, cavity foaming and surface treatment.

As a full-service provider, we offer our customers individual components, systems and turnkey solutions – from the conception to commissioning of their fully automated application system. Creating application solutions that are optimized to meet our customers' requirements, we help ensure that their end products meet the highest quality standards and yield a high level of customer satisfaction.

Subject to change | 31.07.2025

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OUR PRODUCTS

OUR PROCEEDINGS

IFC application controller

The ATN independent flow controller (IFC) consists of the Industrial PC, which contains all technical components in a compact, easy-to-handle unit, and the IFC 10 touch display, which provides convenient process visualization and system control.

The IFC system lets you control and monitor the key parameters and components in your application process.

Design and function

- System consisting of control cabinet, IPC and operator panel (controller)
- Extensive diagnostic options, e.g. statistics and fault history
- Remote maintenance and remote control of the visualization via network
- Extensive logging functions
- Adjustable, configurable system for many application types

Technical data

- Intel® Atom™ processor E3827 (1.3 GHz dual-core processor)
- 2x USB 2.0
- VGA and HDMI ports
- COM port
- 2x 10/100/1000 Mbit Ethernet port
- 1x Powerlink port
- Flexible interface for connecting to higher-level control system, e.g. PROFIBUS, PROFINET or Ethernet/IP

SOLUTIONS FOR APPLICATION, AUTOMATION & ROBOTIC SYSTEMS

With our extensive experience in application systems and automation, our engineering consultants are on hand to help you plan your processes, from preparing contract tender and award documents through to the complete technical system planning.

Application towers

Application tower VDF

Application tower DUR

Application tower DDS

Application tower DB

Priming and glue application

In addition to robot-guided application, the use of application towers offers a number of advantages in automated processes. They include better handling of complex component contours and more flexible use of the robot for handling and downstream processes.

Application towers come with a range of custom configuration options. In addition to the permanently installed dosing device, which enhances process stability and application reliability, they can be fitted with cleaning and primer systems as well as nozzle cleaning units.

Primer application towers

Technical details

- For applying of adhesion promoters (primers)
- Material feed through pressurized tank or canisters
- Spray, brush or felt application through spray unit, diaphragm valve or dispenser
- Purging and cleaning unit for regular cleaning
- Hinged application unit for maintenance access

Feature enhancements

- Workpiece tolerance compensation
- Expansion of primer application tower to two primer heads
- Combination of primer and cleaning head

Glue application towers

Technical details

- Material metering through EVD electronic volumetric dosing system
- Material application through 1C application head or 2C application system
- Application of profiled or round beads
- Can be used for both round and profiled beads
- Material outlet upwards/downwards according to process specifications
- Can be extended with up to 4 dosing units depending on tower
- Optional addition of nozzle cleaning unit
- Easy to maintain due to simple design and good accessibility

Feature enhancements

- Hinged application head
- Automatically traversing nozzle cleaning unit (pneumatic cleaning or felt cleaning system)
- Permanently installed tape nozzle cleaning station
- Application unit with workpiece tolerance compensation
- Vision systems for glue bead quality monitoring

Barrel emptying systems

ATN barrel emptying systems supply glues, sealants and fillers from 20 to 1000 litre barrels. They can convey low- to high-viscosity fluids as well as abrasive and aggressive media.

Our barrel emptying systems consist of various individual assemblies, which are available in standard configurations or as customized designs.

Each barrel emptying system is designed specifically for the process and materials used. Available in different sizes and versions, they can be equipped with full or partial heating of barrel pumps with pneumatic or hydraulic drive.

Preconfigured stand-alone solutions are available for applications without a higher-level system controller.

Barrel pump types

ZRP 30
Container size 20 – 30 l
Follower plate ⌀ 280 mm

ZRP 60
Container size 60 l
Follower plate ⌀ 350 mm

ZRP 200
Container size 200 l
Follower plate ⌀ 571 mm

VRP 1.000
Containers up to 1.000 l
Follower plate ⌀ 980–1100 mm

Technical details

- Suitable for low- to high-viscosity materials
- Pneumatic connection: 6 bars, filtered, dried, unoiled
- Pneumatic and hydraulic versions
- Optimized to minimize residual waste material
- Floating wiper ring for compensating barrel tolerances

Technical data	ZRP Hydraulic	ZRP and VRP Pneumatic			
Typs	**ZRP 200 HY**	**ZRP 30**	**ZRP 60**	**ZRP 200**	**VRP 1000**
Container sizes	200 litre	20 – 30 litre	60 litre	200 litre	1000 litre
Pressing force	33 kN – 98 kN	7.3 kN – 28 kN			

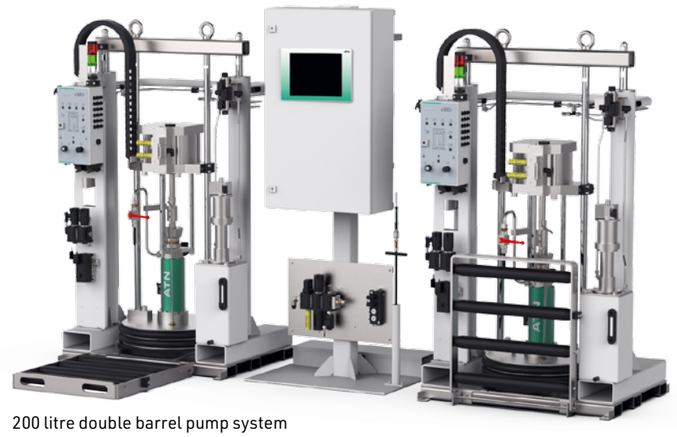
Delivery rates of scoop piston base pumps

ZRP and VRP Pneumatic		
UP 80	80 cm^3 per double stroke	2.4 l/min*
UP 150	150 cm^3 per double stroke	4.5 l/min*
UP 260	260 cm^3 per double stroke	7.8 l/min*
UP 600	600 cm^3 per double stroke	18 l/min
		(*at 30 double strokes/min)

Pressure ratio	11:1 – 72:1
Max. operating pressure	360 bar
Temperature range	0 – 100 °C
Material viscosity	Low to high viscosity

Feature enhancements for barrel emptying systems

- Heating of complete system or individual components
- Material-carrying components for aggressive materials available in stainless steel
- Pump operation via IFC Smart Box with membrane keypad
- Expandable to a double barrel pump system
- Roller tracks for easy barrel change (ZRP 200, VRP 1000)
- Material circulation under follower plate
- Enclosures for special safety regulations (clean room, gas, high temperatures)



200 litre double barrel pump system

Electronic volumetric dosing systems

With a dispensing volume of 1.1 to 850 cm³ and capable of processing materials of all viscosities, our EVD electronic volumetric dosing systems can be used in a wide range of applications. Regardless of the material's viscosity, they provide precision metering and application with a repeat accuracy of over 99%.

The flow rate is continuously controlled by the speed-dependent control of the higher-level system (e.g. the robot). An offset or fixed setpoints can be set via the dosing unit controller.

The detailed visualization allows comprehensive monitoring of the discharged material volume, fill level, temperature, pressure, torque, maintenance intervals and many other application parameters. As well as being easy to install and uninstall, the EVD series electronic volumetric dosing systems are easy to maintain throughout their long service life.

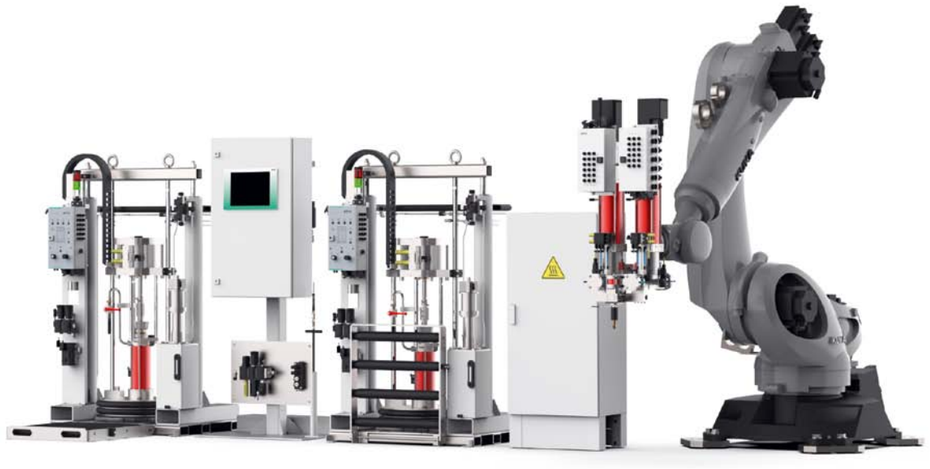
EVD 1.2 EVD 550

Feature enhancements

- Fully heated system for constant processing temperatures
- Expandable to dual dosing systems for continuous dosing
- Expandable for application of booster or 2C materials
- Special liner coatings for highly abrasive materials available (gap filler in battery production)
- Special dosing chambers for high temperature ranges up to 180 °C
- Stainless steel version available

For the following material properties

- Low to high viscosity
- Highly filled
- Abrasive
- Shear sensitive
- Aggressive



Hot butyl dual dosing system for seals with processing temperatures of up to 180 °C

Technical data	EVD 1.2	EVD 11	EVD 25
Net volume	1.10 cm³	9.66 cm³	25.60 cm³
Max. output	0.50 cm³/s	4.91 cm³/s	6.31 cm³/s
Dimensions (W/D/H)	105 x 189 x 470 mm	225 x 190 x 584 mm	262 x 278 x 1124 mm
Weight	3.2 kg	9.3 kg	20 kg

	EVD 55	EVD 80	EVD 155
Net volume	55.10 cm³	76.30 cm³	147.26 cm³
Max. output	4.76 cm³/s	28.70 cm³/s	44.90 cm³/s
Dimensions (W/D/H)	262 x 278 x 1137 mm	217 x 442 x 992 mm	261 x 424 x 1064 mm
Weight	22 kg	19 kg	40 kg

	EVD 350	EVD 550	EVD 560
Net volume	350 cm³	470.46 cm³	559.23 cm³
Max. output	96.21 cm³/s	26.20 cm³/s	80.20 cm³/s
Dimensions (W/D/H)	261 x 376 x 1137 mm	374 x 399 x 870 mm	245 x 476 x 1515 mm
Weight	72 kg	72 kg	68 kg

	EVD 850
Net volume	850 cm³
Max. output	77 cm³/s
Dimensions (W/D/H)	396 x 395 x 1016 mm
Weight	70 kg

Eccentric screw pumps

Our ESP eccentric screw pumps enable a gentle, low-pulsation continuous delivery of low- to medium-viscosity materials, regardless of viscosity fluctuations. It provides precision metering with a repeat accuracy of more than 99% and prevents material accumulation at the start and completion of spot or bead application. Dripping and stringing of the material is prevented through controllable retraction. The speed control is electronic.

The eccentric screw pumps are controlled via a digital interface, field bus or dosing unit controller with an easy-to-use visualization. As well as being easy to install and uninstall, the valveless eccentric screw pumps are easy to maintain and have a long service life.
The ATN eccentric screw pumps are particularly suitable for the surface treatment of workpieces before bonding or potting in the pharmaceutical or electronics industries.

Technical details

Admission pressure	0 – 6 bar
Application pressure	max. 0 – 20 bar
Temperature range	0 – 70 °C

For the following material properties

- Low to medium viscosity
- Abrasive
- Shear sensitive
- Aggressive

ESP 40

Technical data	ESP 40	ESP 130	ESP 270
Delivery constant	0.35 ml/U	1.1 ml/U	2.3 ml/U
Min. feed rate	0.35 ml/min	1.1 ml/min	2.3 ml/min
Max. feed rate	40 ml/min	130 ml/min	270 ml/min

Dual dosing systems and processing 2C materials

As well as using just one dosing systems for dispensing single-component materials, two dosing units can be used in parallel. There are two different application scenarios: dual dosing systems and two-component dispensing systems.

2C ESP system

Dual dosing systems from ATN

ATN dual dosing systems allow uninterrupted continuous dosing. Both dosing units supply the same material and can be set to operate alternately, with one dosing device delivering material while the other is being refilled. The supply pressure for each unit can be adjusted to maintain a constant material delivery when switching between the units.

EVD 80 dual dosing system

Processing 2C materials

Two-component (2C) materials cure not through the evaporation of a substance, such as solvent or water, but through a chemical reaction. To ensure optimum curing and perfect material properties, the mixing ratio of the two components is of utmost importance. Our dosing systems allow infinite adjustment of the mixing ratio, while the remaining job parameters can be changed very quickly.

The components are reliably mixed in cost-effective static mixers or static-dynamic mixing systems.

The two-component dosing systems can be adapted to specific process, with various combinations of sealing materials, volumes and heaters ensuring optimized precision metering of the components whatever your application.

SUPERIOR PERFORMANCE & RELIABILITY

ATN

Equipment and automation systems for
your material application processes

Applicators

Beside the quality control equipment, the last components in a quality application process are the applicators. They are chosen according to the process-specific requirements, which include the type of application (bead or surface), the material type (one- or two-component) and the materials' viscosity.

A range of electrically and pneumatically operated applicators to suit various process requirements for both stationary and robot-guided application are available.

Criteria for selecting and configuring the applicator

- Field of application
- Material viscosity
- Material application form (e.g. profiled bead, round bead, wide seam)
- Material heating
- Stationary or robot-guided application

Round bead applicators

Bead shape	Round bead
Nozzle diameter	0.5–5.5 mm
Positioning	Robot-guided or stationary
Areas of application	Application of hot butyl and gap fillers (battery assembly), sealing of household goods, bonding in body shell construction (automotive), spot applications

Profile bead applicators

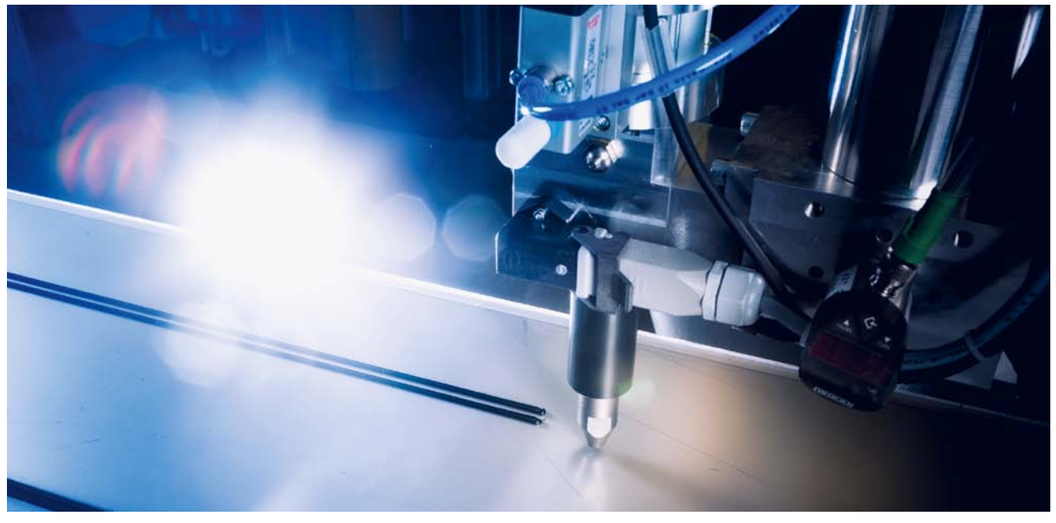
Bead shape	Profiled bead
Nozzle diameter	Custom
Positioning	Robot-guided or stationary
Areas of application	Glass bonding, panorama roof bonding (automotive final assembly)

Nozzle bar application head

Bead shape	Round bead
Nozzle diameter	Custom
Layout	Nozzle block with 4 separate nozzles, expandable
Positioning	Robot-guided or stationary
Areas of application	Bonding of roof reinforcement boards (automotive), application of hydrocolloids (pharmaceuticals), multi-track seals for household goods

Swap-nozzle application head

Nozzle shapes	Flat-stream, airless, slotted
Application angle	0°, 45°, 90°
Weight	approx. 3.4 kg
Positioning	Last robot axis
Areas of application	Weld seam sealing (vehicle body shells)



Material hoses

Barrel pumps feed the material to the metering and application system through flexible hoses of various diameters.

Our material hoses are designed for a wide range of adhesives and sealants. They excel in conveying both unheated and heated materials up to 150 °C. Even higher temperatures, such as those required in certain processes in the pharmaceutical sector or for applying hot butyl sealant in battery production, can be realized with our special heated hoses. Our sales and application systems experts can help you find the best solution for your process.

The heating output temperature for the heated versions are visualized, monitored and controlled in the dosing unit and system controller. Hoses are available in any length, with the total length being limited only by technical considerations, such as pressure loss in the overall system.

Hose DN 13

Unheated	yes
Heated up to 100 °C	150 W/m
Heated up to 150 °C	290 W/m
Application at robot	yes

Hose DN 16

Unheated	yes
Heated up to 100 °C	200 W/m
Heated up to 150 °C	350 W/m
Application at robot	yes

Hose DN 25

Unheated	yes
Heated up to 100 °C	300 W/m
Heated up to 150 °C	400 W/m
Application at robot	yes

Hose DN 32

Unheated	yes
Heated up to 100 °C	300 W/m
Heated up to 150 °C	400 W/m
Application at robot	yes

Nozzle cleaning units

Residual material protruding at the application nozzle can affect the glue bead and reduce the quality of application. To ensure high application and process quality, we recommend cleaning the application nozzle before each application to a workpiece.

We supply various process-integrated nozzle cleaning systems, which provide fully automated, thorough cleaning of the application nozzle. All systems allow a combination of nozzle cleaning and purging at a single station.

Pneumatic nozzle cleaning unit

Design and function

- Material residue removal by compressed air
- Six jet nozzles
- Three compressed air reservoirs
- Fast-acting ventilation valves
- Waste collection in standard waste bag in the enclosure
- Made from stainless steel
- Nearly noiseless cleaning
- Cost-effective cleaning

Feature enhancements

- Stationary or movable installation to application tower
- Nozzle cleaning unit and purging can be combined at one workbench
- Quick-change plate for nozzle unit

Felt nozzle cleaning unit

Design and function

- Paper or felt used for cleaning
- Roller thickness and width to customer specification
- Automatic cleaning material detection (remaining stock, paper tape break)
- Easy-to-fit roller
- Mounted on base frame

Feature enhancements

- Stationary or movable installation to application tower
- Fitted to gliding system between purging unit and felt nozzle cleaning unit with fixed application point
- Support bracket for collecting container

Tape nozzle cleaning unit

Design and function

- The cleaning medium is a cleaning tape
- Automatic separation of used cleaning tape
- Mounted on base frame

Cartridge and manual application systems

Our cartridge systems and hand applicators provide backup for automated applications and are used for general manual application. For low-volume production, they are also an efficient, cost-effective alternative to semi- or fully automatic processes. They are available as stationary systems and as mobile units to cater for the particular requirements of different application processes.

HAP PR manual application gun

- Application of profiled or round beads
- User-friendly, light-weight manual application gun with an ergonomic design, facilitating easy application and long working hours
- Application of low- to high-viscosity sealants and adhesives
- Replaceable nozzle

Mobile or stationary cartridge filling station

- Trolley-mounted mobile version with barrel pump and stationary version available
- Designed for 310 ml cartridges; customizable
- Autonomous, automatic filling of cartridges directly from 20 to 200 litre barrels
- Permanently reusable of aluminium or high-pressure cartridges
- Lower costs due to procurement of less expensive barrels
- Resource-saving alternative that minimizes residual waste and reduces waste disposal costs

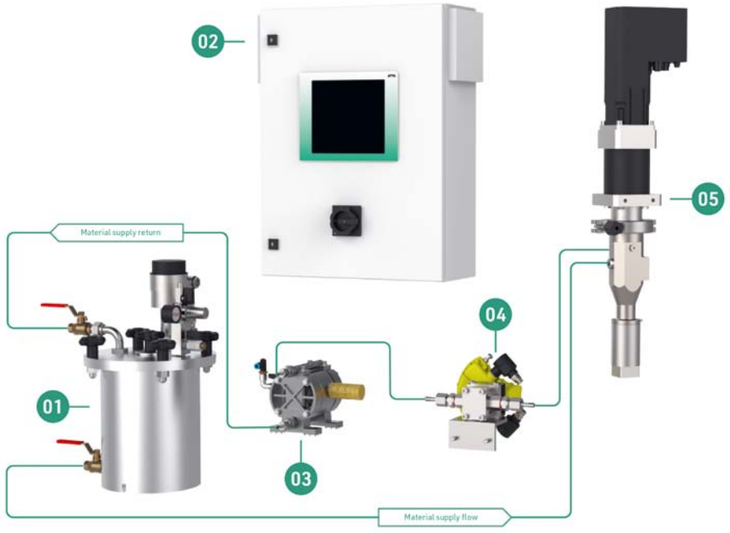
Cartridge dosing units

- Precise, repeatable automatic application of small quantities directly from cartridges
- Ideal for test and research centres
- No expensive hosing and material provision systems necessary
- Attachment to application tower or industrial robot for maximum flexibility
- Quick-change system for easy cartridge handling and changing
- Control via in-house IFC controller, enables convenient adjustment of all application parameters

A COMPREHENSIVE PRODUCT RANGE FOR YOUR APPLICATION PROCESS

With our system components and technologies, we can implement a wide range of application processes.
Our expertise in fluids processing includes application systems with parallel processing capability.

Surface treatment



SYSTEM WITH RECIRCULATION

01 Material supply system
02 IFC application controller
03 Double diaphragm pump
04 Ball valve
05 Eccentric screw pump

ATN offers a wide range of application options and the associated equipment for cleaning and activating surfaces using wet-chemical processes. Developed as a plug-and-play system, this equipment can be customized, integrated in existing automated processes or implemented as an end-to-end automation concept.

Cleaning, priming and activator fluids are generally applied by one of three methods. Which of these is chosen depends on the workpiece and its material and surface properties. These methods can also be combined in the spray-on-wipe-off process, whereby cleaning agent is first sprayed on and then immediately wiped off again with a piece of felt.

SPRAYING

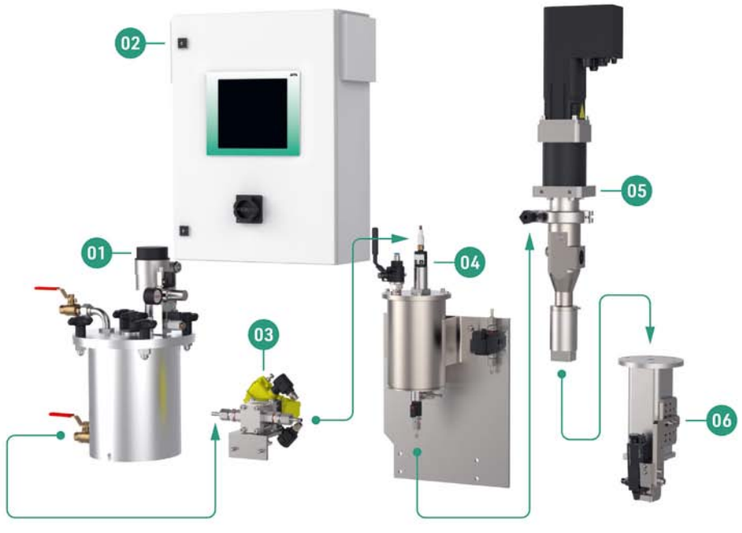
- Suitable for uneven and rough surfaces
- Spraying by spray head
- Large-surface application and wider application tracks
- Wear-free application element
- No sharply delimited application (spray mist)

FELT APPLICATION

- Suitable for smooth and level surfaces
- Application by impregnated felt
- Felt wears out and needs replacing
- Also suitable for wiping after spraying
- Limited application widths
- Sharply delimited application

BRUSH APPLICATION

- Suitable for smooth and level surfaces
- Application by impregnated brush
- Brush wears out and needs replacing
- Limited application widths
- Sharply delimited application



SYSTEM WITHOUT CIRCULATION

01 Material pressure tank
02 IFC application controller
03 Ball valve
04 Intermediate reservoir
05 Eccentric screw pump
06 Automatic sprayer

Eccentric screw pump (ESP)

In wet-chemical processes, the eccentric screw pumps ESP 40, ESP 130 and ESP 270 are used to deliver the material. You can find detailed information on the ESP product range on page 10 of this brochure.

Material supply system

The primer supply system essentially consists of four assemblies: the pressurized tank, a diaphragm pump, a load cell and a buffer reservoir. If the material contains certain suspended particles or if inhomogeneous (non-phase-stable) materials are used, the material must be recirculated.

PRESSURIZED TANK
- Available in several sizes from 0.5 to 45 litres
- Pressurization using dried air or nitrogen (optionally controllable by proportional valve)
- Optional agitator and recirculation connection

DIAPHRAGM PUMP
- Located in the system's return flow line
- Priming fluid recirculation in circulation mode

LOAD CELL
- Filling level measurement
- Alternatively by sensors (depending on container configuration)

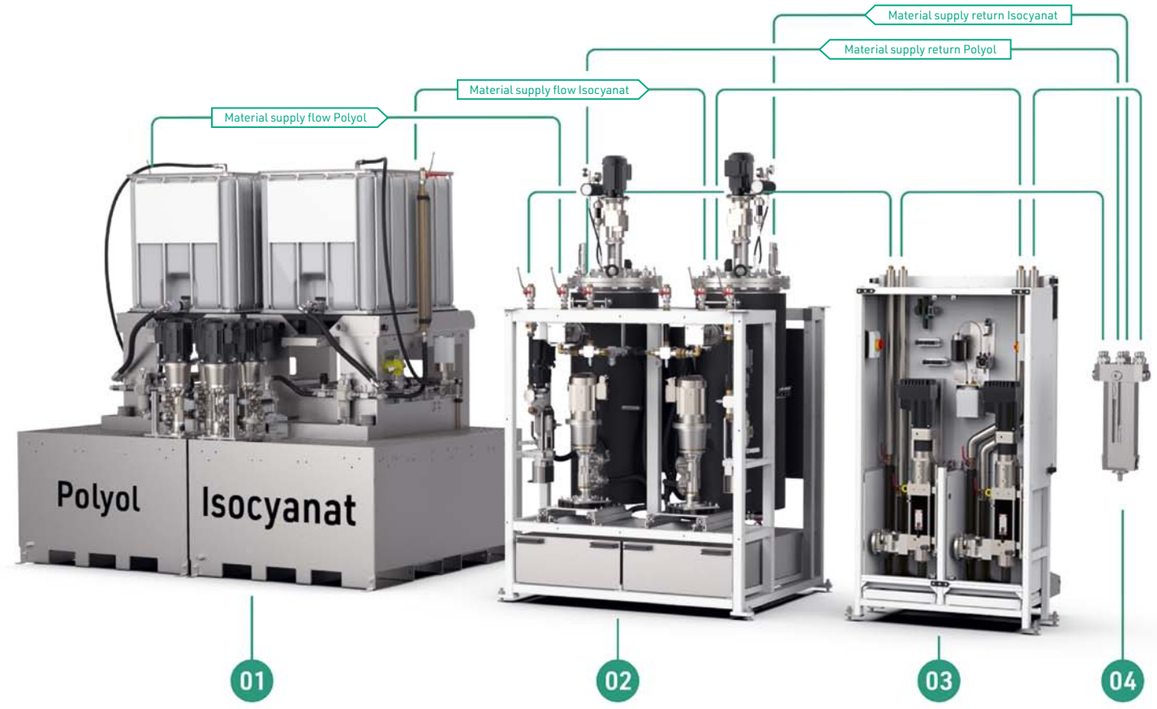
BUFFER RESERVOIR
- Ensures uninterrupted production

Cavity foaming – RIM

Reaction injection moulding (RIM) is the filling of cavities using two-component PUR foams. This is done using our tried and tested dosing systems.

ATN has developed a patented material supply system for processing PUR foams based on our proven metering and dosing technology.

You can find detailed information on the process and system design in our "Polyurethane mixing technology" brochure.



01 Material supply system
02 Day tank station
03 High-pressure unit
04 Applicator

Material supply system

EFE 0200

für 200 l barrel

EFE 1000

für 1.000 l barrel IBC

(EFE = Single barrel emptying)

Feature enhancements for material supply systems

- Filling level monitoring
- Agitator
- Air drier
- Piggyback system for continuous filling of down-stream modules with no barrel-change downtimes

Day tank station

Consists of

Recirculation module with a 50 litre storage tank (MKS 50 series)
Recirculation module with a 250 litre storage tank (MKS 280 series)

Functions

- Continuous material circulation with no downtimes
- Electric heating for compact design
- Filtration
- Pipe trace heating

Feature enhancements

- Filling level monitoring
- Agitator
- Air drier
- Redundant design improves process stability and prevents system downtimes
- Enclosed module version available

High pressure unit

- Uses volumetric dosing system with hydraulic unit for RIM application
- Material quantities between 10 and 1400 cm^3 of 2C material
- Max. shot discharge capacity 190 cm^3/s

Applicator

Function principle and characteristics

- High-pressure mixing by impingement mixing principle
- Shot discharge volume under industrial conditions
- Stable from 10 grams
- Dosing deviation <2%
- Outer nozzle diameter can be customized
- Weight 3 kg

Profile seal bonding – PDK

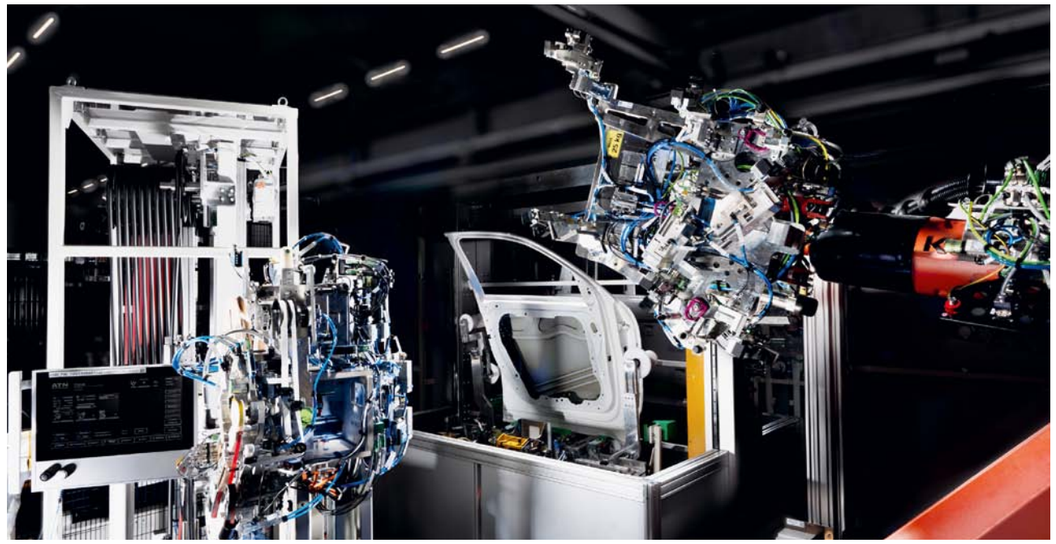
As a specialist for application systems and automation, our applications are not limited to handling fluid materials. We have also applied our extensive expertise in this field and in automotive production to develop systems for the fully automated application of profile seals to the doors of cars, lorries and off-road vehicles as well as to batteries.

Door seals protect the vehicle interior from moisture, dirt and noise ingress. With patented solutions and proven standard components that are customized for each door type and to the existing process and available space on site, we guarantee a high-quality profile seal application and high system availability.

Mobile version with travelling transport hanger

New profile seal bonding plants

- Custom concepts for profile seal application
- Choice of two fully automated systems (mobile or stationary)
- Patented solutions for vehicle doors for cars, lorries and off-road vehicles
- Automatic sealing of other components, such as panorama roofs or batteries



Profile seal bonding system with stationary application head

ATN offers two customized solutions for the fully automated installation of profile seals. Self-adhesive profile seals can be applied to vehicle doors using either a stationary or a mobile system. With the stationary system, an industrial robot takes the vehicle door to a stationary application head, which applies the seal.

With the mobile system, the application head is mounted on an industrial robot, which moves to the vehicle door on the conveyor skid.

The remaining, peripheral assemblies of the profile seal bonding system complete the fully automated seal application process. A buffer reservoir holding up to 65 metres of profile seal ensures uninterrupted production. The ATN unwinding station, which can hold reusable or single-use seal rolls weighing up to 500 kg, ensures that the profile seal unrolls evenly. Additional optional extras, such as a cleaning station, are available depending on the process.

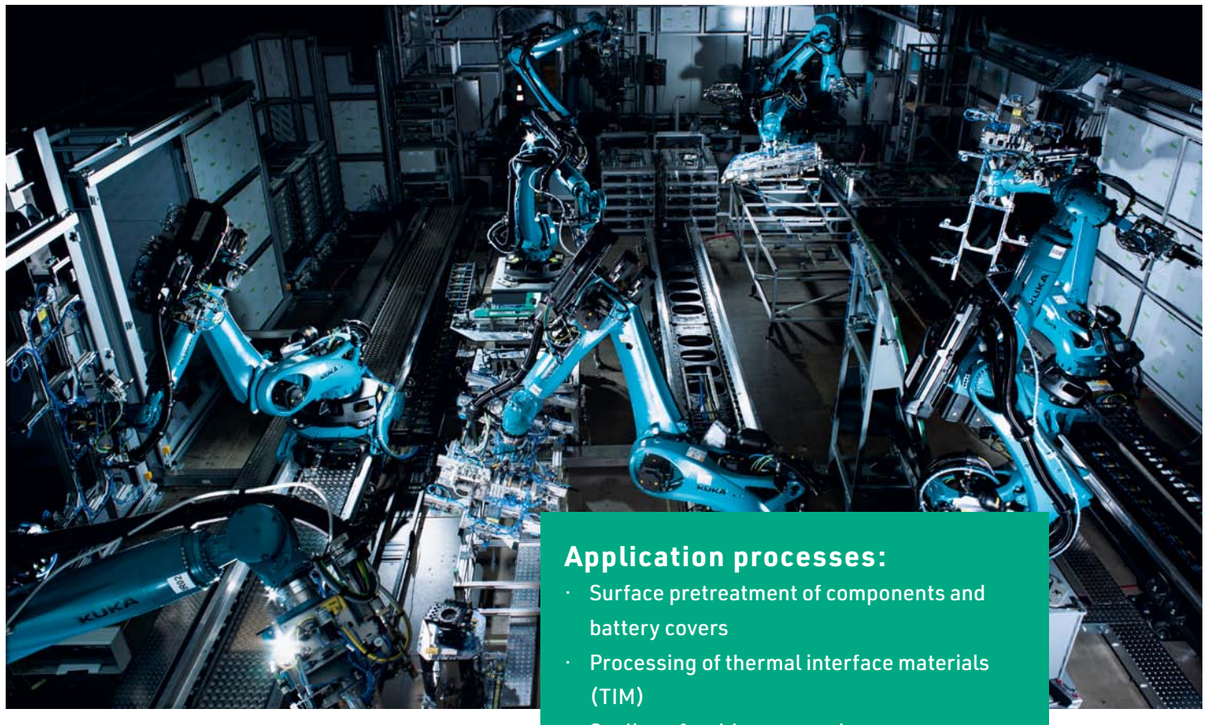
ATN's services in battery assembly

Without batteries, there would be no electromobility. They are maturing at a dizzying pace along with electromobility in general.

But these changes in drive technology present new challenges in production: long battery service life, performance and safety go hand in hand with demanding manufacturing requirements.

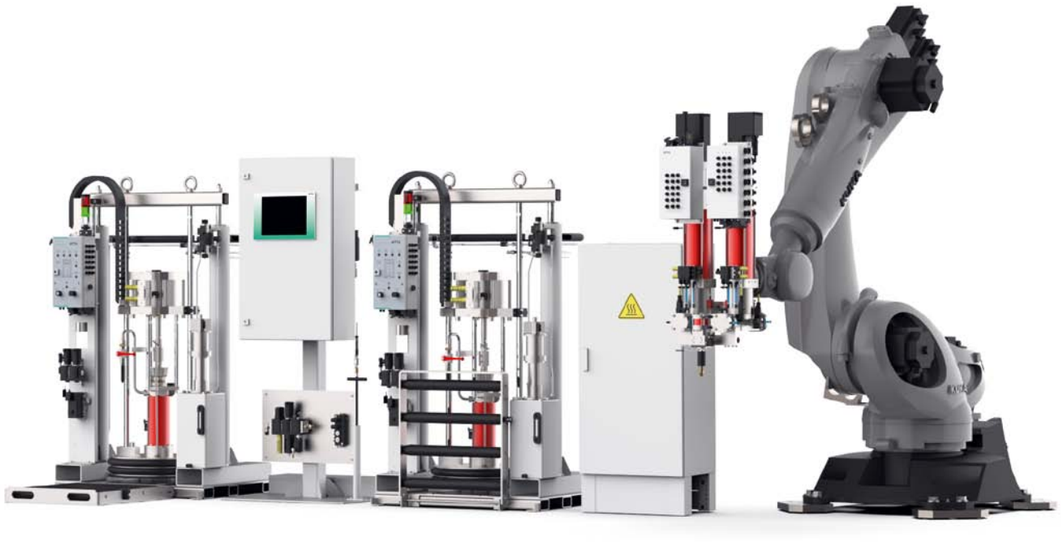
With our technical specialisation and many years' experience in developing application and automation solutions, we are also your reliable partner for battery assembly and electromobility.

We have been supporting customers with innovative solutions ever since hybrid and electric drive systems came on the market.



Application processes:

- Surface pretreatment of components and battery covers
- Processing of thermal interface materials (TIM)
- Sealing of weld seams and screw connections
- Hot butyl sealing of battery covers at up to 180 °C in continuous application



Hot butyl dual dosing system for seals with processing temperatures of up to 180 °C

As a provider of end-to-end solutions for battery production, we provide a wide range of application technology products.

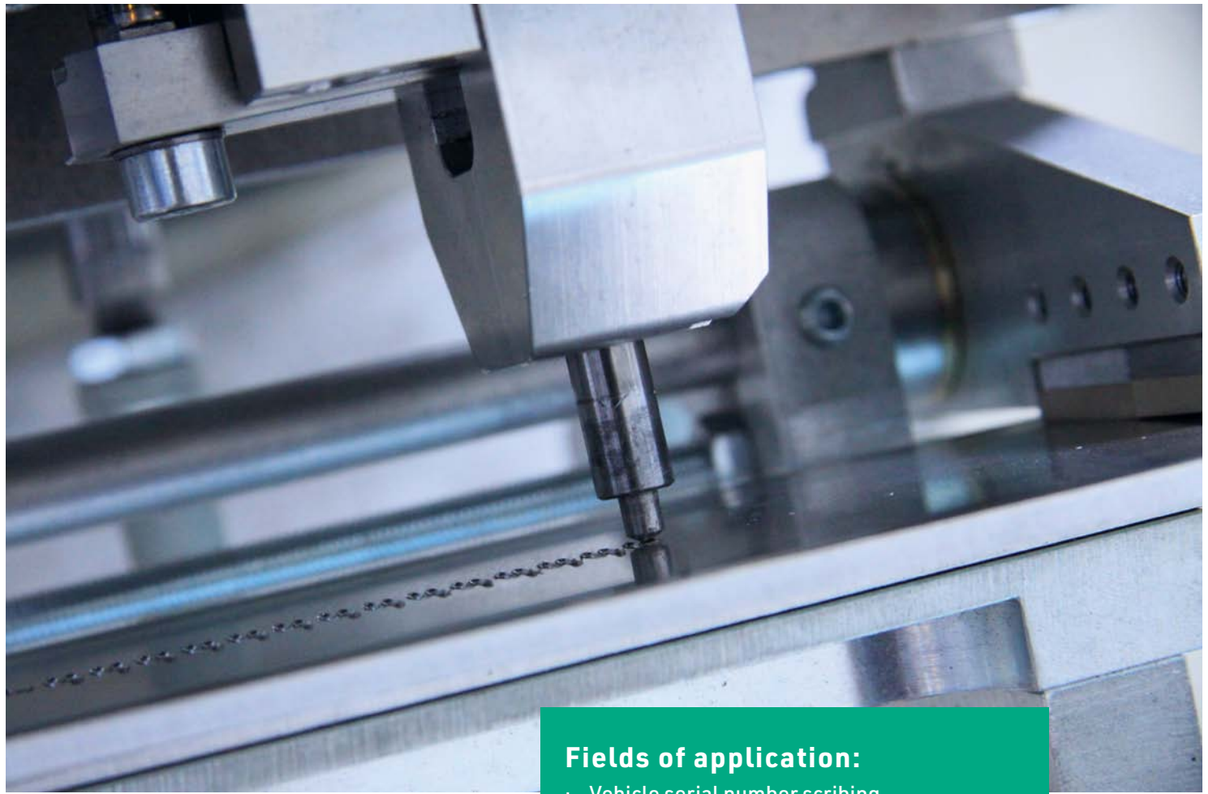
We use our expertise to develop and produce different adhesive, filler and sealant applications of superior quality tailored to the requirements of the processed materials.

In our in-house technology centre, we also perform materials tests and develop customer-specific solutions from the test series to production readiness.

ATN scribing and marking systems

Legal requirements stipulate that vehicles and its components must be marked with a unique, tamper-proof identification number. This is applied to the material at a defined position on the vehicle or component and can be engraved using either a diamond-tipped scribe marker or by laser application.

For engraving by scribe marker, we offer a range of products that can be tailored to customer requirements, the components to be marked and the application process.



Fields of application:

- Vehicle serial number scribing
- Compliance markings, such as CE

In co-operation with laser application specialist Trotec Laser, we also offer an automated solution for laser-engraving vehicle identification numbers.

Laser engraving is a contact-free engraving method and an effective alternative to scribe marking and embossing. Its easy configurability for different materials, short cycle times and the safe working environment afforded by the robust, compact laser engravers make this a highly efficient application method.

Our partnership with Trotec unites our respective expertise in automation and laser engraving.

Combining powerful Trotec laser engravers with ATN automation and robotics solutions allows us to deliver turnkey VIN marking systems for the automotive industry and its suppliers as well as other sectors.

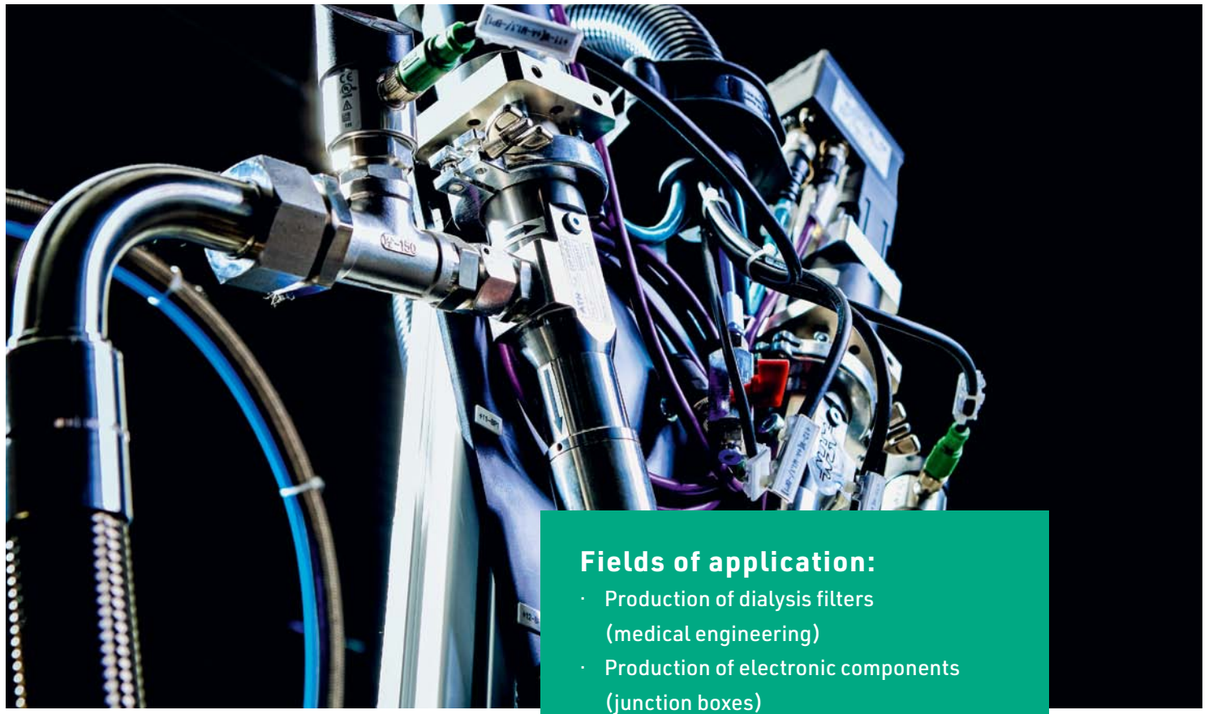
ATN potting systems

Two-component polymer potting joins components together while also protecting them from external factors. This is becoming increasingly important in electrical engineering and electromobility, where components must be protected from moisture, dust and heat.

Polymer potting also increases components' vibration and insulation resistance – a vital consideration especially in the production and operation of battery modules for electric vehicles.

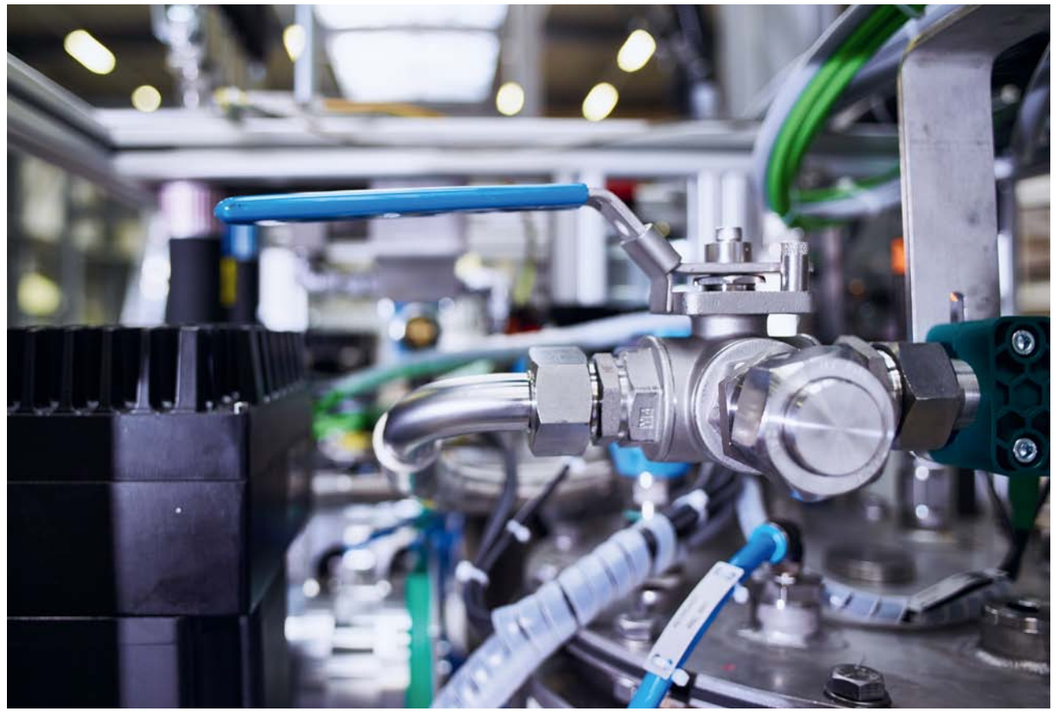
Potting also improves heat dissipation and optimizes thermal management, making components more durable with fewer failures.

In medical engineering, potting systems are used, for example, in the manufacture of dialysis filters.



Fields of application:

- Production of dialysis filters (medical engineering)
- Production of electronic components (junction boxes)
- Thermal management in battery production (electromobility)



Our extensive expertise in processing polyurethanes, silicones and epoxy resins make ATN a strong partner in the field of polymer potting.

Our potting systems are highly accurate, reliable and precise. The modular design of the equipment allows it to be precisely customized to your requirements and process specifications.

For applications in the low-pressure range up to 30 bars, the proven ATN eccentric screw pumps with a feed rate of 40 to 270 ml/min are used.

For gentle handling of the material processed, the standard units, such as day tanks or controllers, can be augmented with additional agitators or static-dynamic mixing systems to optimize material preparation and application.

Sealing, coating and insulation solutions

In car manufacturing, various sealants and protection coatings are applied that extend the life of vehicles by avoiding damage caused by moisture ingress, gap corrosion or mechanical influences.

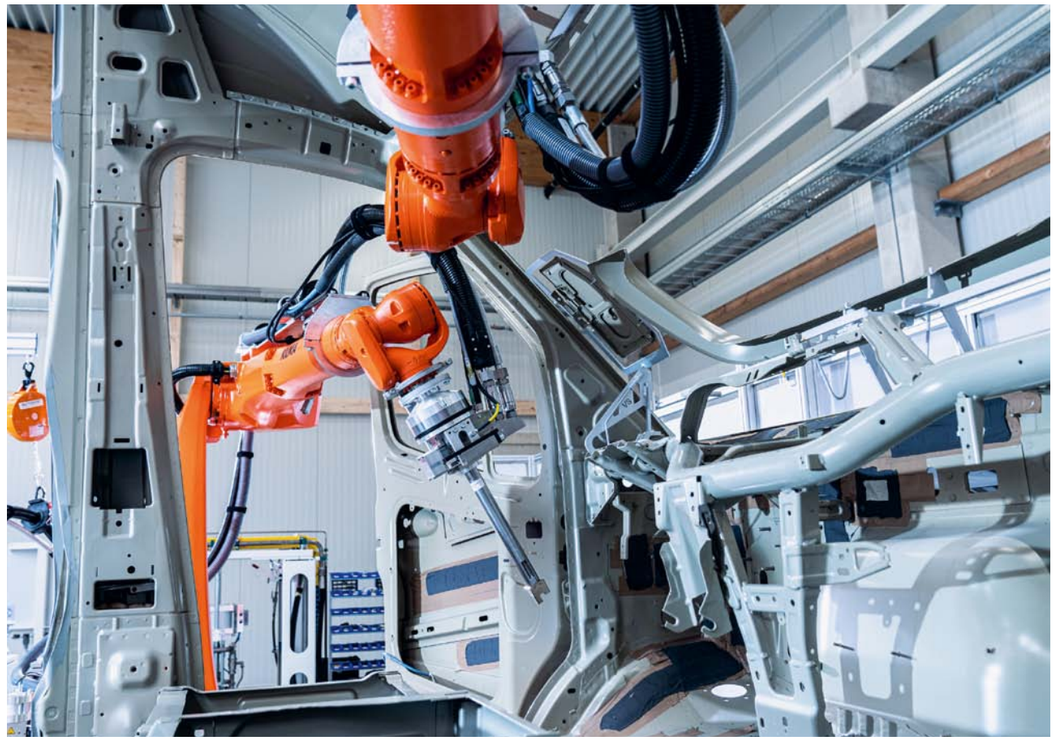
Surface and cavity injection foam insulants prevent vibrations and reduces noise inside the vehicle.

ATN supplies proven paint shop application technology and automation solutions tried and tested by carmakers throughout the world.

Developed as a plug-and-play system, our components can be tailored for integration in your automated production process or implemented as an end-to-end automation concept.

Fields of application:

- Seam sealing
- Underbody protection
- Sprayable insulating mats
- Sprayable acoustic mats
- Wax application



Our wide range of in-house-developed and produced application systems – from barrel pumps for up to 1000 litre barrels to dosing systems, comprising electronic volumetric dosing units and eccentric screw pumps, through to specially developed applicators – are the cornerstones for successful automated sealing and insulation systems.

For aqueous materials, all material-carrying components of our application systems are available in stainless steel to prevent corrosion and damage. Special Peltier devices can optionally be used to provide reliable temperature control of the material to be applied.

Engineering Consulting

ATN has a track record as a reliable partner for comprehensive application technology, automation and robotics solutions. Our long-standing experience in implementing automation projects shows that getting our specialists involved early in the process shortens the time it takes to issue and award your tender as well as speeding up your planning.

Our customers benefit from this consulting and support service in bringing their projects to a successful conclusion. Our engineering consultants have plenty experience and expertise as well as an extensive range of tools at their disposal. They will always find the best possible solution for our customers, be it through exploratory discussions, workshops or complex engineering projects.

.01
Preliminary system planning

- Consultancy services for all aspects of plant engineering
- Layout development of individual cells and cell clusters
- Process and workflow planning
- Cycle time analyses
- Support in drawing up specifications

.02
Feasibility analyses

- Verification of product manufacturability with robot systems
- Identification of conclusions on required product properties
- Recommendations for action with variant comparison for critical conditions

.03
Investigation of application processes

- Technology recommendation based on available parameters
- Application process feasibility analysis
- Identification of technical limits for e.g. discharge quantities, accuracies and cycle times
- Integration in automation projects
- Test project planning
- Material, process and component testing

Individual advice

If you have any questions, please contact us at kontakt@atngmbh.de or +49 35936 335-0

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References

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