ATN

PASSION FOR
TECHNOLOGY

APPLICATION TECHNOLOGY

for sealing, potting and insulation solutions

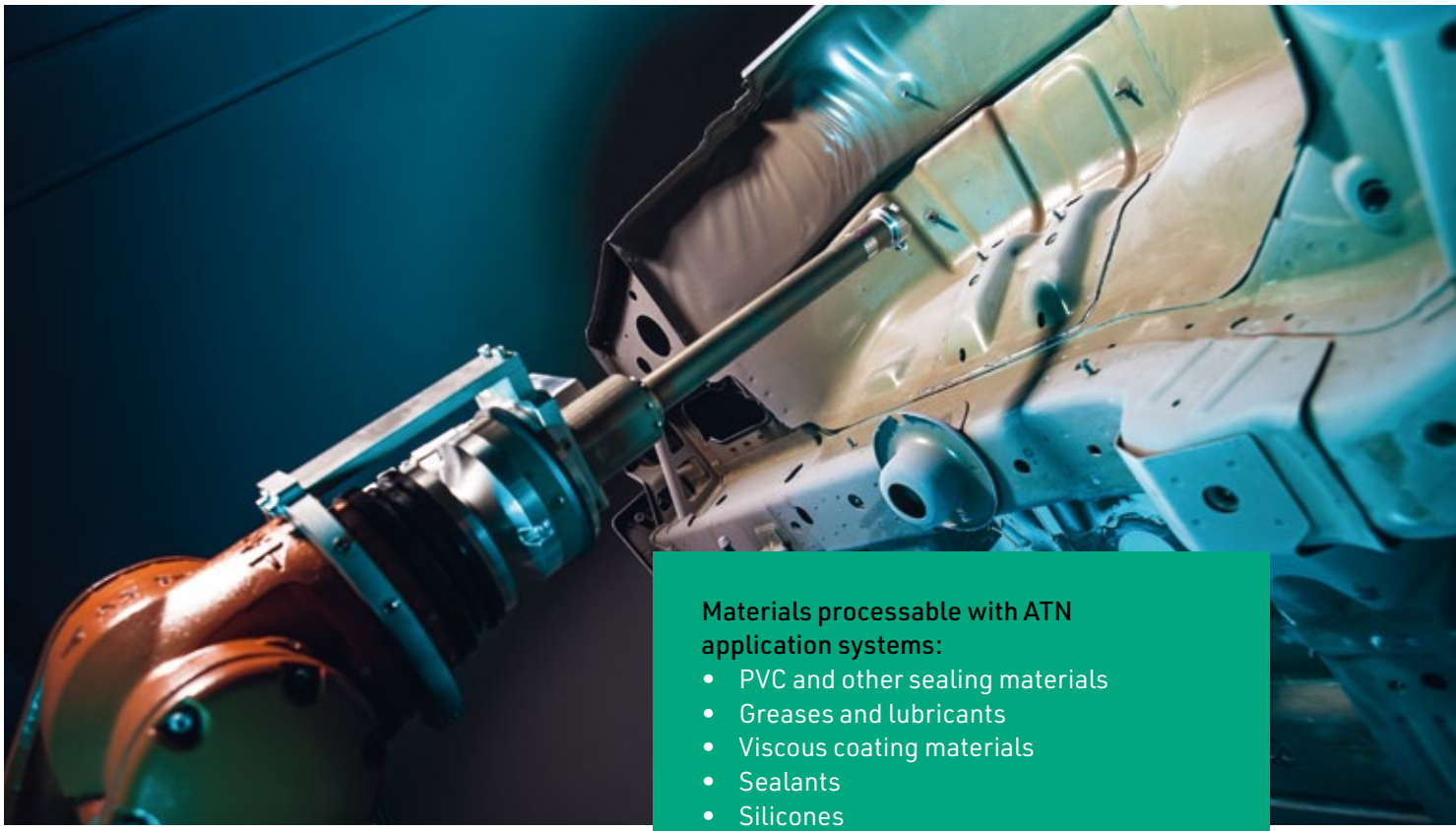
www.atngmbh.com

Sealing, potting 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 insulation prevents 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 plug-and-play systems, the components can be tailored for integration in your automated production process or implemented as a complete automation concept.



Materials processable with ATN application systems:

- PVC and other sealing materials
- Greases and lubricants
- Viscous coating materials
- Sealants
- Silicones
- Urethanes
- Epoxy resins
- Acrylates
- Potting compounds
- Anaerobic glues
- Suspensions and emulsions

Barrel pumps

The ZRP 60, ZRP 200 and VRP 1.000 barrel pumps are used for feeding low- to medium-viscosity glues, sealants and fillers from 20 to 1000 litre barrels. Various default configurations are available to suit different requirements.

These products can also be tailored to customer-specific processes.
The double barrel configuration ensures an uninterrupted material supply during barrel changes.

Barrel pump types

ZRP 60
Barrel size 20 – 60 L

ZRP 200
Barrel size 200 L

VRP 1.000
Barrel size 1000 L

Features

Conveyable materials	Low to medium viscosity
Feed pump	Scoop piston pump / ball pump
Feed rate	2.4 – 7.8 l/min or 60 – 600 cm^3 per double stroke
RAM pressure	7.3 kN
Pressure ratio	Discharge pressure (material) to admission pressure (air) 11:1 to 72:1

ZRP 200

Feature enhancements

- Heating of complete system or individual components
- Version for highly viscous materials
- Residue-optimised follower plate
- Extension to double barrel pump system
- Metering control

Dosing systems

Our electric volumetric dosing systems are available for volume ranges from 155 to 560 cm^3. The electrically driven dosing unit offers superior control and dosing characteristics, can be used for low- to high-viscosity materials and requires no additional system components.

Features

- Unaffected by variations in viscosity
- Repeatability > 99 %
- Easy maintenance
- Long service life
- Highly dynamic and responsive
- Stepless material quantity adjustment
- Detailed visualization with control functions

Overview of EVD volumetric dosing systems

EVD 155

Net volume	147.26 cm^3
Max. flow rate	44.90 cm^3/s

EVD 350

Net volume	350 cm^3
Max. flow rate	96.21 cm^3/s

EVD 560

Net volume	559.23 cm^3
Max. flow rate	80.20 cm^3/s

Feature enhancements

- Dosing unit heating
- 2-component system
- Dual system
- Stainless steel version
- Recirculation
- Continuous dosing

volumetric dosing system EVD 100

High-pressure multi-nozzle applicator

The high-pressure multi-nozzle applicator applies single-component materials for underbody protection, injection foam insulation and seam sealing.

The applicator features a swivel joint for optimum flexibility on the robot. The nozzle head can be swivelled independently of the electric cables and supply lines.

Features

Number of nozzles	3
Nozzle shapes	Flat-stream, airless or slotted nozzle
Application angle	0°, 45°, 90°

*The nozzles and elbows are positioned individually depending on the application process.

Weight:	4.9 kg

Feature enhancements

- Applicator heating
- Additional temperature sensors
- Pressure sensor for controlling material return pressure
- Needle stroke monitoring

MAXIMUM & RELIABLE PERFORMANCE

Application components and automation investments for sealing processes

ATN

Peltier device

Some processes require the temperature of the applied materials to be precisely controlled to reduce viscosity fluctuations and achieve a consistent application quality.

The material temperature can be influenced by changes in the ambient temperature or system-related fluctuations in the material delivery.

The Peltier device can be used to both cool and heat the material.

Features

• Heat exchanger	Air-cooled
• Air-cooled standard variants	3-stage, 600 W connected load 4-stage, 800 W connected load
• Temperature control	±1 °C from setpoint (when the Peltier device is placed near the applicator)

IFC application controller

The ATN IFC (Independent Flow Controller) consists of the IPC, 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.

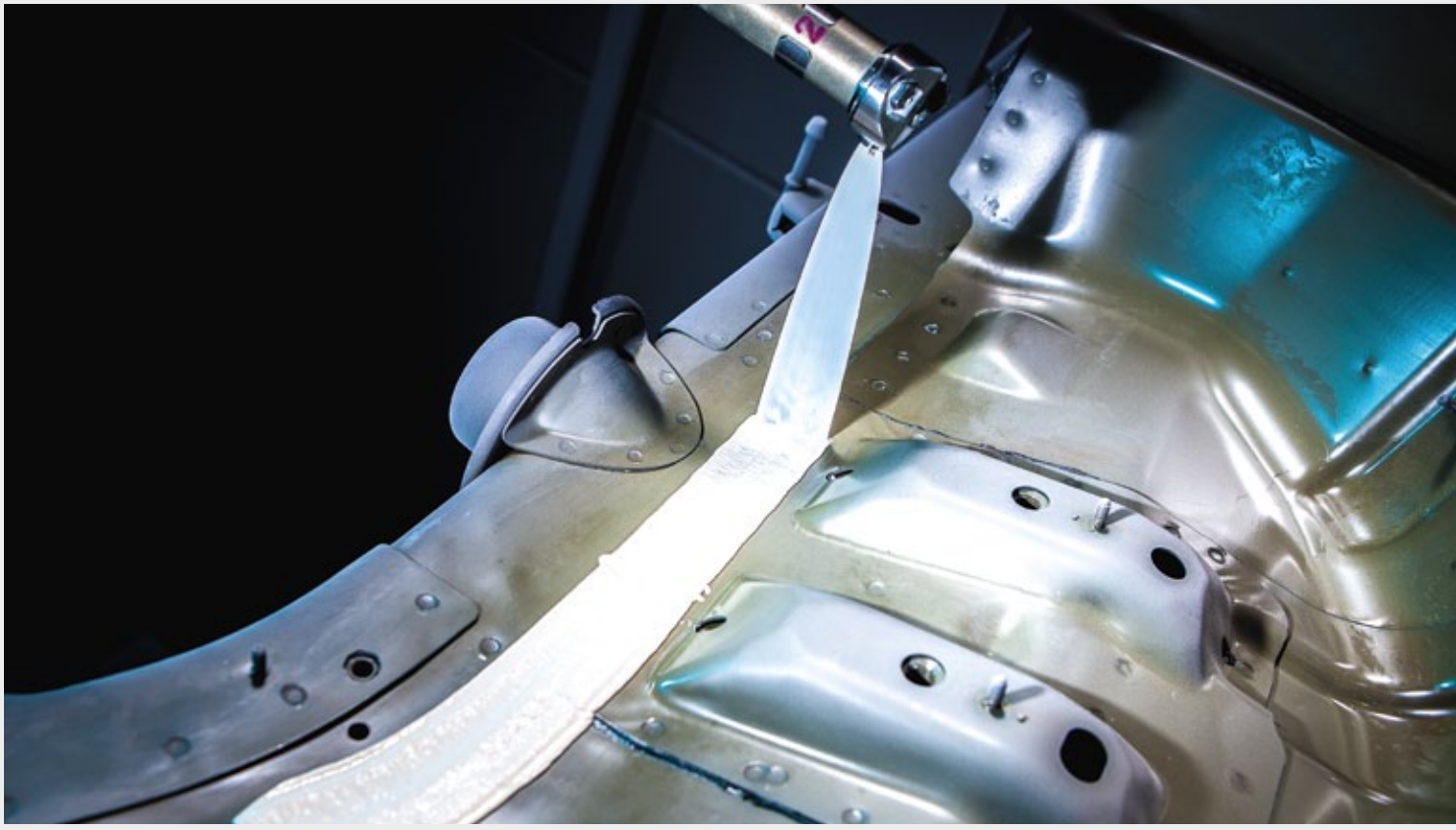
Design and functions

- System consisting of control cabinet, IPC and operator panel
- 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 type

Technical data

- Intel® Atom™ E3827 processor (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

Usage of application systems in the automotive industry



Body construction

- Anti-flutter
- Flanged seam bonding
- Structural bonding
- Hybrid bonded joints

Paint shop

- Application of insulants
- Seam and fine seam sealing
- Underbody protection
- Sill application
- Cavity foaming

Final assembly

- Glazing (windscreens, rear glass and quarter glass)
- Panorama glass roofs and sliding sunroofs
- Cockpit glue application
- Roof board glue application
- Spare wheel, battery and urea recesses
- Textile bonding
- Small parts (mirrors, spoilers, trims)
- Profile seal bonding

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.

ATN – Your application and automation systems partner in the automotive industry

As an application and automation systems specialist, ATN stands for quality, reliability and innovation.
Our expertise is based on over 25 years of experience in application technology with a focus on the automotive industry.

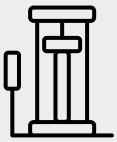
ATN is a system supplier, system integrator and provider of turnkey solutions for bodywork construction, paint shops and assembly lines.
We supply a range of application systems for different materials, application methods and overall processes.

With subsidiaries and service contractors in Brazil, Bulgaria, China, Hungary, South Africa, Spain and the USA, a contact partner near you can respond quickly to your needs and enquiries.
Our customers also benefit from a 24-hour spare parts and emergency service.

Our system components for application processes

APPLICATION CONTROL

Reliable, intuitive control of your application processes

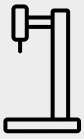


BARREL PUMPS

Conveying of adhesives, sealants and fillers from barrel sizes from 20 to 1000 L

DOSING SYSTEMS

Precision, process-optimized flow rate control

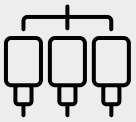


APPLICATION TOWERS

Workpiece- and robot-guided material application tailored to your overall process

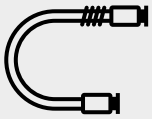
NOZZLE CLEANING UNIT

Ensuring reproducible, faultless glue bead geometry



APPLICATORS

Application-oriented material discharge in required form and volume for all requirements, also with admixtures



MATERIAL HOSES

Material feed between individual components in the application process, also temperature-controlled

MANUAL APPLICATION SYSTEMS

Cost-effective alternative for application to small batch sizes or for manual dispensing

INDIVIDUAL ADVICE

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

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Reference customers – application technology and automation

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