In addition to our standardized robots, we are able to offer special solutions such as this dispensing robot produced entirely according to customer specifications with numerical axes with high-resolution precision, CNC control with interpolation on three axes and micro-volumetric dispenser for two-component products.

The micro-dispensing program

Dispensing station
- Motorised volumetric dispenser
- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

Dispensing robot TR 300
- Digital volumetric dispenser
- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

Dispensing robot RC 500
- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

In Switzerland and throughout the entire world, mta automation ag is your favoured partner for all your challenges in automation.
Volumetric dispensing techniques

Experience
With 10 years experience and more than 500 micro-dispensing installations delivered, we provide a unique know-how, recognized and appreciated in various industries in fields such as automotive, medical, sensors, micro-engines, watch-making, optical-electronics and domestic appliances. We offer reliable solutions not only for dispensing mono-component products but also for dispensing two-component products thanks to our unique, patented dynamic mixing system.

The techniques
With our range of volumetric dispensers, we can achieve a perfect repeatability of quantities to be dispensed from one point to another, and this for micro-volumes down to 0.1 mm³.

Our digital control dispensers enable us to provide the perfect solution, whatever the viscosity of the product.

A complete service
As well as the dispensing units themselves, we provide our customers with a complete service:
- feasibility tests in our laboratories
- advice in process optimization
- the realization of complete automated units, including construction, software, production and assembly
- on-site installation, training and assistance throughout the world

Which technique for which application?

Motorised volumetric dispenser – MVD
- Simple setting of quantity to be dispensed thanks to a regulator ring
- Adjustable dispenser volume up to 100 mm³
- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)

Numerical volumetric dispenser – NVD
- Simple setting of quantity parameters via numerical controller
- Adjustable dispenser volume of 0.05 - 1250 mm³
- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)

Numerical volumetric dispenser for two-component products – NBD
- Simple setting of quantity parameters via numerical controller
- Adjustable dispenser volume of 2 x 0.05-1250 mm³
- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)
- Mixing by dynamic or static mixer
- Low-volume dynamic mixing chamber

Micro-dispensing techniques

Volumetric dispensing for high-precision dispensing

Which technique for which application?

Examples:

<table>
<thead>
<tr>
<th>Product</th>
<th>Constant volumes</th>
<th>Variable volumes</th>
<th>Lines</th>
<th>Filling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greases</td>
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<tr>
<td>OIL</td>
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Dispensing station

For applications which do not necessitate the flexibility of a robot, the simple dispensing station satisfies all required needs. The modularity of our slides and standard elements enables us to always offer a solution adapted to the application. The programmable electronic control allows the dispensing axes and values to be set.

Dispensing robot TR 300
- Simple setting of quantity parameters via numerical controller
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- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)

Dispensing robot RC 300
- Adapted for semi-automatic and fully-automatic operations
- Work area 300 x 300 mm
- Operating system: WINDOWS
- Number of axes: 3 or 4
- X, Y and Z axes in closed loop
- Speed of axes: ≤ 200 mm/s
- Shift of axes: point by point or interpolation
- Reproduction of positioning: ±20µm
- On-line service via modem link

Possible versions:
- stand-alone
- with rotary table
- in-line with conveyer

Examples:

- MVD
- NVD
- NBD
Micro-dispensing techniques

Examples of applications

In addition to our standardized robots, we are able to offer special solutions such as this dispensing robot produced entirely according to customer specifications with numerical axes with high-resolution precision, CNC control with interpolation on three axes and micro-volumetric dispenser for two-component products.

- Motorized volumetric dispenser
- Numerical volumetric dispenser
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Dispensing station

- Motorized volumetric dispenser
- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

Dispensing robot TR 300

- Digital volumetric dispenser
- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

Dispensing robot RC 500

- Numerical volumetric dispenser
- Numerical volumetric dispenser for two-component products

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Micro-dispensing techniques

Volumetric dispensing for high-precision dispensing

Experience
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Motorised volumetric dispenser – MVD

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- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)

Numerical volumetric dispenser – NVD

- Simple setting of quantity parameters via numerical controller
- Adjustable dispenser volume of 0.05-1250 mm³
- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)

Numerical volumetric dispenser for two-component products – NBD

- Simple setting of quantity parameters via numerical controller
- Adjustable dispenser volume of 2 x 0.05-1250 mm³
- Volumetric dispensing without valve
- Ceramic dispensing piston
- Repeatability > 99%
- Liquid or viscous products dispenser
- No seals (no wear)
- Mixing by dynamic or static mixer
- Low-volume dynamic mixing chamber

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Dispensing robot TR 300

- Adapted for semi-automatic and fully-automatic operations
- Work area 500 x 500 mm
- Operating system: WINDOWS
- Number of axes: 3 or 4
- Speed of X and Y axes: ≤200 mm/s, Z: ≤100 mm/s
- Shift of axes: point by point or interpolation
- Reproduction of positioning: ±20µm
- On-line service via modem link

Possible versions:
- stand-alone
- with rotary table
- in-line with conveyor

Dispensing robot RC 500

- Adapted for semi-automatic and fully-automatic operations
- Work area 300 x 300 mm
- Operating system: WINDOWS
- Number of axes: 3 or 4
- Speed of X and Y axes: ≤200 mm/s, Z: ≤100 mm/s
- Shift of axes: point by point or interpolation
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Examples:

Greases
Oil
Paints and lacquers
Solvents
Medicines, food
UV adhesives
Two-component polyunsaturated, spray and diluents
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Micro-dispensing techniques

Examples of applications

- Drill bits for machining
- Connector for optical fibre
- Rotary pump for medical use
- Micro-engine rotors

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