

**DELO**

VOLUME  
DISPENSER  
DELO-DIV



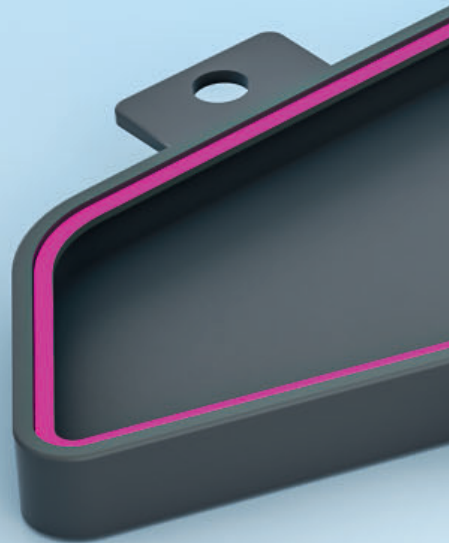
# Volumetric dispensing systems

High-precision application,  
coordinated turnkey solution

For many high-tech applications, maximum reproducible accuracy is required when dispensing adhesives, encapsulants and potting compounds, as well as other multi-functional polymers. DELO offers two volumetric dispensing systems, DELO-DIV VD450 and DELO-DIV VD600 (VD = Volume Dispenser), that meet these requirements.

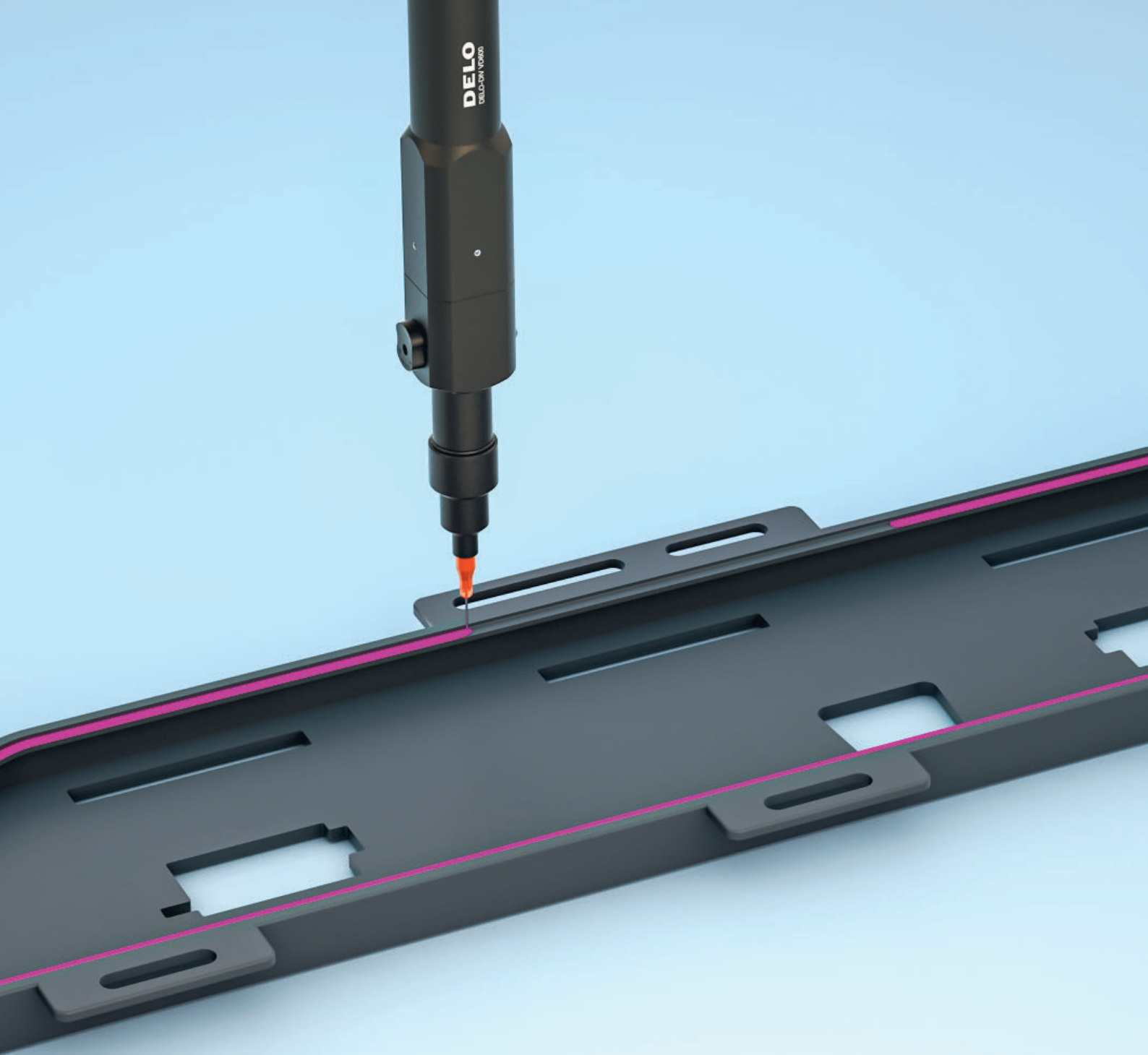
Because the systems operate on an endless-piston principle, exceptional accuracy can be achieved in dispensing the desired volume ( $\pm 1\%$ ), regardless of the viscosity of the medium. This principle also enables the medium to be placed exactly where you want it to go, eliminating satellite formation and dripping.

By using volume dispensers from DELO, you also benefit from the expertise of a leading manufacturer of high-tech adhesives. The material, dispensing system and, if required, the UV lamps, are perfectly matched to each other, making it a seamless turnkey solution you can rely on.



Discuss your project and your requirements  
with our experts:

[equipment-experts@DELO.de](mailto:equipment-experts@DELO.de)



## Your benefits at a glance:



› Highest, reproducible accuracy in dispensed volume



› Highest spatial precision during application, no satellite formation

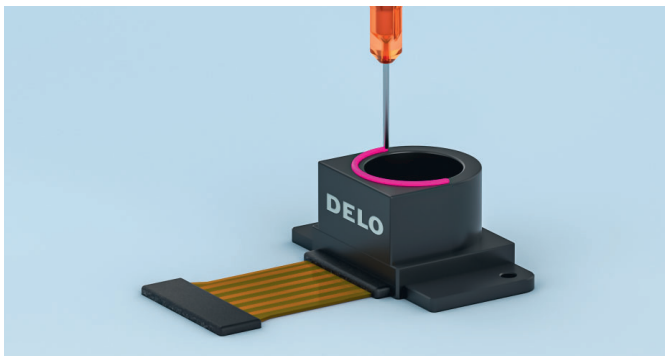


› Coordinated turnkey solution consisting of adhesive, dispensing unit and, if necessary, LED lamps

# Highest performance in practice

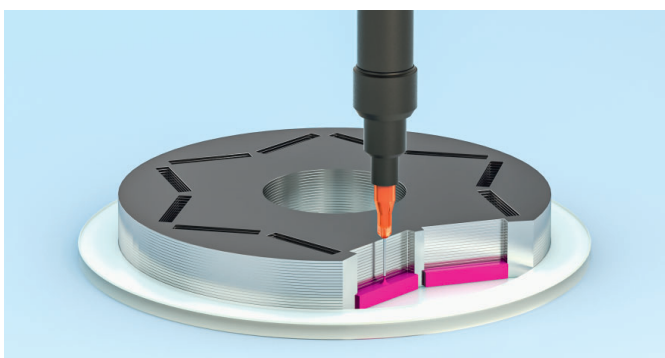


## Industry applications



### Highest precision in automotive electronics

Extreme accuracy is essential when actively aligning optoelectronic elements. To function reliably, optimum image quality is necessary for ADAS applications, like those found in traffic signs or pedestrian detection. Because of their high accuracy and reproducibility, manufacturers of automotive cameras rely on volumetric dispensing systems like the DELO-DIV.



### Large-scale production of electric motors

Volume dispensers are not just something for highly miniaturized applications. They can also be used when bonding pocket magnets for electric motors. Besides the exact dispensing of the desired quantity and the precise placement of the adhesive bead in the pocket, DELO-DIV enables high volume flows for large-scale production.



### Endless-piston principle

Because an endless-piston transports the adhesive forward, temperature-related fluctuations in viscosity do not play a role. Even high-viscous, pasty and filled materials can be applied gently, in very small quantities and with high precision.

## Innovation “activation on the flow”

### New process technology

With activation on the flow, DELO has developed an innovative process technology combining dispensing the adhesive and pre-activating it with UV light in a single process step. This gives users new options for their product and process design, while reducing process costs by more than 50 % and CO<sub>2</sub> emissions by more than 98 %. The new technology, which directly integrates a volume dispenser, is particularly suitable for undercuts and shadowed areas, which are common in electronic components. This process offers an alternative to heat curing or room temperature curing.

### How it works

DELO-ACTIVIS 600, which enables the process of activation on the flow, consists of two main components: a dispensing unit and a curing unit.

Dispensing is done by DELO-DIV VD600 (1) using cartridges or bulk containers, at a precisely defined flow rate. The core of the curing unit is a translucent standard mixing tube (2) and four integrated and individually controllable DELOLUX 503 lamp heads (3), operating at a wavelength of 400 or 460 nm. Mixing coils, located in the mixing tube, ensure that the adhesive is evenly irradiated during dispensing. This can be seen through the inspection window (4). The dispensing needle (5) to be connected to the mixing tube can be selected depending on the dispensing task. DELO-ACTIVIS 600 can be used as a stand-alone device or easily integrated into existing production systems.



# Features and control

## DELO-DIV VD450, DELO-DIV VD600

The two volumetric dispensing systems offer the same high precision, but differ in terms of their size and dispensing volumes. DELO-DIV VD450 is more compact and lighter, with slightly smaller dimensions. It is suitable for tight production systems and, with its minimum dispensing volume of 4  $\mu$ l,

for highly miniaturized applications. With 15  $\mu$ l, DELO-DIV VD600 can also be used for small quantities, but with a volume flow of 1.4 – 16.0 ml/min it shows its strength to the fullest extent, especially with somewhat larger dispensing volumes.



	DELO-DIV VD450	DELO-DIV VD600
<b>Dimensions</b>	Ø 33 mm × 228 mm	Ø 40 mm × 274 mm
<b>Media viscosity</b>	Aqueous to pasty	Aqueous to pasty
<b>Volume flow</b>	0.5 – 6.0 ml/min	1.4 – 16.0 ml/min
<b>Minimum dispensing volume</b>	0.004 ml	0.015 ml
<b>Dispensing precision</b>	± 1 %	± 1 %
<b>Material input</b>	G 1/8" DIN/ISO 228	G 1/4" DIN/ISO 228
<b>Material output</b>	Luer-lock (patented)	Luer-lock (patented)
<b>Repeatability</b>	>99 %	>99 %
<b>Weight</b>	300 g	650 g



DELO-DIV VD600 with control unit DELO-DEIV pilot 1T

## DELO-DEIV pilot

For the control of your DELO-DEIV volume dispenser, you can choose between two variants depending on the intended use. DELO-DEIV pilot 1T is a touch-supported control unit. It is suited for manual workstations like those found in a laboratory, for pre-series or for small quantities.

The extremely compact, PLC-capable DELO-DEIV pilot 1i is the model of choice for highest production volumes. It can be easily integrated into fully automated systems.



	DELO-DEIV pilot 1T	DELO-DEIV pilot 1i
<b>Dimensions (W × D × H)</b>	230 mm × 175 mm × 85 mm	142 mm × 85 mm × 50 mm
<b>Supply voltage</b>	110 – 230 V AC, 50 / 60 Hz	24 V DC
<b>Operating modes</b>	Start-Stop / Quantity	Start-Stop
<b>Display</b>	7"-TFT with capacitive touch	–
<b>Interface</b>	Digital I/O, analog inputs, RS232, USB, (Ethernet)	Digital I/O, analog inputs
<b>Weight</b>	2,900 g	260 g

# DELO

## DELO Industrial Adhesives

China | Germany HQ | France | Italy | Japan | Korea  
Malaysia | Singapore | Thailand | Czech Republic | USA

The technical data is for informational purposes only. Specific values can be found in the user manual. It is the user's responsibility to test the suitability of the device for the intended purpose by considering all specific requirements. If you need support in using the devices, please feel free to ask your contacts in our Engineering Department.

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