

DISPENSING CELL

Stability and Performance



INFOTECH DISPENSING CELL

The robust and fast dispensing cell allows highly precise dispensing processes for the manufacturing of various products. The system can stand on its own as well as be integrated into a production line.

Multiple axes can be used both autonomously and simultaneously. A wide selection of dispensing valves from different manufacturers – time / pressure, precision micro-screw, jet dispense valves and piston valves – are ready to be mounted at the dispensing axis. In combination with the integrated vision system, standard applications such as underfill, Glob-Top or Conformal Coating are possible as well as complex 2D or 3D dispensing tasks.



Dispensing of minimum quantities in the nanolitre range



2D and 3D dispensing



A wide selection of dispensing valves, as time / pressure, precision screw, jetter and pistons



Dispensing of grease, oils, paints, silicones, gels, epoxies, glues, bonding agents and many other liquids



MAIN FEATURES

The ultra rapid inline Dispensing Production System with a wide open application range for combined 2D and 3D miniature fluid handling for automated operations with up to four parallel working dispensing valves:

- X-, Y-system with linear motors and linear encoders
- Distributed and synchronized closed loop motion system with GigE guided vision control system
- PC user interface with graphical dispensing pattern editor
- Optionally CAD-import and import based on Gerber-files
- Vision support for operational training, fiducial reading, needle / nozzle position calibrating and dispensing results included in the base package (Vision Cognex Vpro)
- Automatic needle and nozzle offset calibrations in X-, Y- and Z
- Visual inspection, the dispensed pattern can be inspected directly after material deposition
- Time/pressure dispensing head included in the base package, optional precision micro screw or different jet dispensing heads
- Purge station, strip off station and manual camera calibration unit included in the base package
- Optional optimized configuration with vision process camera and up to four independent single or parallel working jet dispensing valves with a distance between the single units of 21 mm ... 24 mm
- Optional three buffer transport system with manual width adjustment from 50 mm to 330 mm, or special conveyor upon request with force detection or heating plates

BASE CONFIGURATION

Dispensing system time / pressure base configuration:

The system is ready to dispense using an internal time / pressure control system. The time / pressure valve is near the syringe and includes hold back vacuum to prevent the syringe from dripping. Viscosity compensation included.

The following modules are included in this configuration:

- Dispensing cell: X 270 mm, Y 400 mm and Z 60 / 68 mm
- PC-Control module incl. TFT-monitor and RAID-controller
- SW-License VisualMachines™ (application software)
- Down looking vision system using "Vision Cognex Vpro" with a field of view of 12,3 x 9,8 mm (1280 x 1024 pixels)
- Time/pressure dispensing unit with internal controller
- Time/pressure dispensing interface centered on the Z-axis
- Dispense purge station incl. strip off wire
- Up looking touch probe

DISPENSING VALVES– OPTIONS

- Time / pressure syringe holder and needle heater
- Precision micro screw dispense unit with rotary drive
- Up to four parallel jet-dispense heads
- Various electro pneumatic dispense heads
- Various piezoelectric dispense heads

Each dispense head type can be configured application specific with multiple dispense head options. All dispense valves use the standardized Luer-Lock® interface for the syringe and for the dispense needles, where needles are used. Different needle types, diameters and lengths are available. Syringe sizes of 3 cc, 5 cc, 10 cc or 30 (55 cc) are supported. Supported and automatic calibration and compensation features are available.

DISPENSING PERIPHERALS – OPTIONS

MICROSCREW – Micro precision screw dispensing unit

The option MICROSCREW allows the repeatable processing of dispensing mediums with fillers

- Pump can be removed easily together with the syringe, fast and simple to clean
- With pump heating 10 mm Luer-Lok® style needles ¼", ½", 1" or ceramic precision needles

JET – Jet-dispensing unit for micro dispensing

The option JET can be used to jet lubricants grease or oils, colors, silicones, gels, organic solvents, epoxies, adhesives and many other liquids. Allows touchless dispensing of any dispensing pattern

- Easy exchange of the valve together with the syringe
- Fast and simple to clean
- Optional with nozzle heating
- **JET EL-PNEU**
- **JET PIEZO**

ZHEIGHT – Z-Height measurement

The option ZHEIGHT includes the single pneumatic Z-slide and the down looking touch probe

- Automatic Z-height calibration e.g. on substrates
- Repeatable accuracy 0.003 mm @ 3σ
- Moves in Z-direction onto different heights
- Optimal when using dispensing needles to calibrate the difference in length automatically
- Automatically calibrated

CALIBETAPE – Calibration-, Purge- and Cleaning tape

The dispense calibration tape unit can be used for all dispense unit types as purge unit and as calibration unit

- 2D Dot or matrix measurement
- With automatic tape feed
- Optional CALIBTAPECLEAN with the cleaning tape for Jet-dispensing units with flat nozzles
- Easy removable to exchange tapes

NEEDLENOZZLECLEAN – Needle- / nozzle cleaning station

- Cleans dispensing needles touchless
- To clean and vent Jet-dispensing valves
- Can be removed easily, fast and easy to clean
- Based on compressed air, no vacuum needed

TRANSPORT

The option **TRANSPORT** contains a three buffer transport system with manual width adjustment, with an input buffer, an output buffer and a centering station.

- Manual width adjustment from 50 mm to 330 mm
- For the direct transport of substrates, printed circuit boards, lead frames, master cards and boats
- Optional with ID-reading unit
- Optional with application specific centering stations

ZAXIS

One Z-axis is included in the base package. It is possible to install up to four independent working Z-axes on the system:

- Mounting of dispense valves, according to the width of the dispense valves and the size of the cartridge used, up to four dispense valves can be mounted in parallel (valve width <=21 mm)
- Mounting of optional Z-Height measurement
- Mounting of optional laser distance sensor (**ZLASER**)

FURTHER OPTIONS - Infotech Component Matrix

- IC-1200, IC-1800, IC-2000 also with two dispense platforms
- Heating- or UV-process station
- SW-License Traceability
- SW-License CAD-Data import
- Different transport systems and centering stations
- Loading / unloading systems for magazines
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Please ask for further options for your requirements.

Infotech

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