



Plastics Injection-Molding

Since its foundation in 1997 DEMGY Frasne has specialized in plastics injection & micro injection molding. We have been manufacturing Lab on Chips out of injection molding since 2006.

A cost effective piece price

Due to its high through put, the injection molding process is a competitive manufacturing method for production quantities larger than 50 000 pieces / year.

A reliable production process

Injection molding being a repeatable process, the part dimensions are very stable over a production batch. The plastics cartridge is automatically handled in clean room conditions.

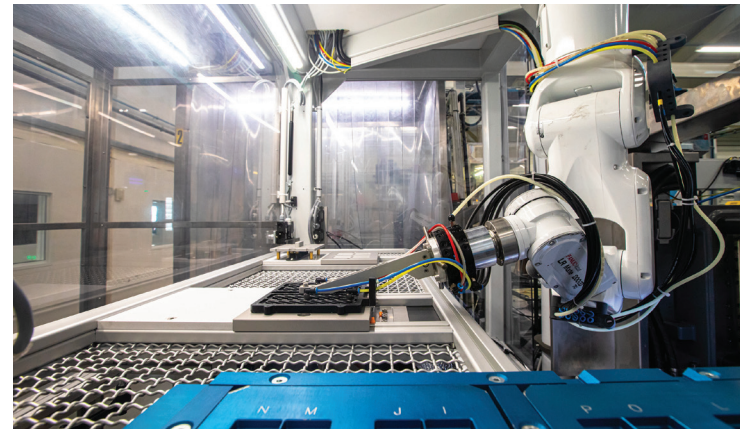


Design for manufacture & tool making

Wherever relevant we validate the part conception with Moldflow simulations.

We manufacture our molds to ensure part precision. We use the latest micro milling and wire EDM machines, with precisions of 1 µm.

We can also integrate LIGA technology into the molds.



About us

- In-house precision tool making: 20 molds/year
- Automated production in clean room
- 77 Mio parts per year
- ISO 9001 & ISO 13 485
- 60% exports

10 sites
in **4** countries
France, Germany,
Romania, USA

2 R&D
centers

1 sales office: UK



4 of our facilities are ISO 13485 certified: Chicago, Atlantic, Normandy & Frasne

Conception: Vitamines Conseil / Kosept - ©Photos: DEMGY / October 2023

MINIATURE | PRECISE | TECHNICAL



Microfluidics & Lab-on-a-chip

Contact us demgy.com



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Microfluidic Devices

DEMGY Frasne can industrialise your customized microfluidic devices:

- Lab on a chip,
- bioChips,
- mTas
- Microfluidic cartridges...

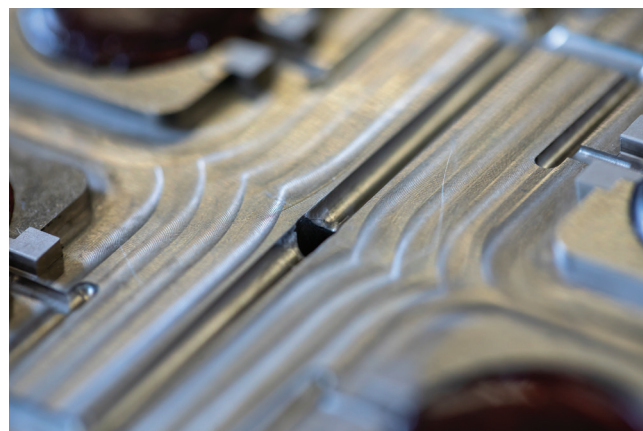
They all present a combination of features, microstructures connected through micro channels so as to achieve a function.



Applications

The need for microfluidic components increases as they offer improved performance through miniaturization in a wide range of applications:

- In Vitro, Diagnostics, Point Of Care,
- Life sciences, biotechnology molecularbiology, cell culture, single cell analysis...),
- Bioreactor i.e. Radiopharmacy,
- Chemical analysis (fuel and oil cells...),
- Environmental tests...



Integrated Functions

Miniature features measuring a few μm can be integrated in the cartridge during the injection molding:

- Reservoirs,
- Micro-pillars,
- PCR cycles,
- Valves,
- Micro-filters...

They enable functions like splitting, spacing, mixing samples.



Fluidic connections

The cartridge manufactured by DEMGY Frasne may be connected through luer and gasket fittings.

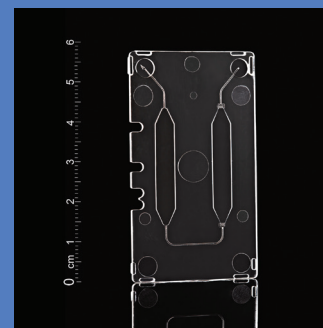
Plane microfluidic plates can be fitted with through holes.



Interactions

It may interact with actuators and devices.

The chip may also be fitted with an integrated sensor (pH, temperature).



Capabilities

- Injection in clean-room ISO 7, class 10 000
- Assembly
- Optical quality control
- Unit packaging

- Possible polymers: COC, PS, PC, TPX, PEEK...
- Cartridge template up to 100X80 mm
- Detail size down to 7 μm
- Radius down to 1.3 μm



Use cases

- **Nuclear medicine application:**
 - > production of CF18
 - > 3-layer LOC
 - > Size: 99X79 mm. Thickness: 1.5 mm
 - > Material: TPX
 - > Filter size: 14 μm , depth 100 μm
- **Quality control chip:**
 - > 2-layer LOC
 - > Size: 56X31 mm. Thickness: 1 mm
 - > Material: COC
 - > Filter size: 7 μm , depth: 50 μm
 - > Temperature and pH sensor integration

