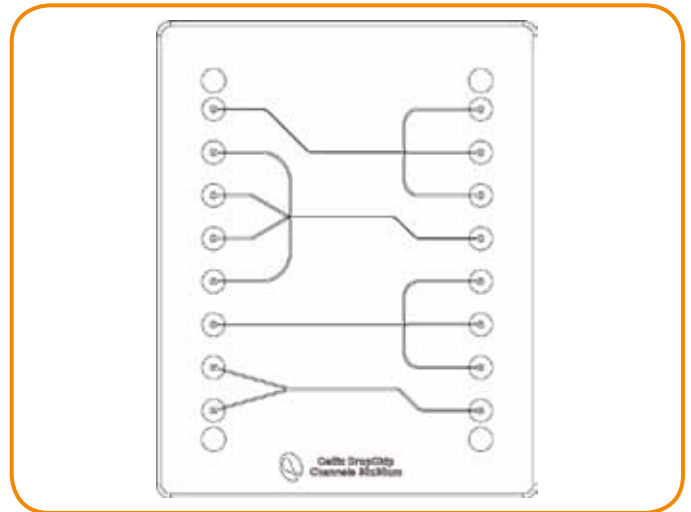


Cellix's Droplet Generation Kit

Droplet Generation Kit includes everything you need to get started:

- 2 x ExiGo pumps: iPad mini or LabVIEW control
- 2 x Flow sensors
- 2 x DropChips
- Tubing sets
- Oil



For more information about our range of microfluidic solutions, visit us at www.cellixltd.com



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Cellix Ltd

DropChip

For high throughput generation of microdroplets and monodispersed emulsions

DropChips contain 3 “droplet generators” and one “splitter” (Y-junction channel) for splitting the continuous phase (oil or water). The channel surface properties are optimized according to the type of application:

- Hydrophobic channels for water-in-oil (W/O) droplets
- Hydrophilic channels for oil-in-water (O/W) and gas-in-water droplets.

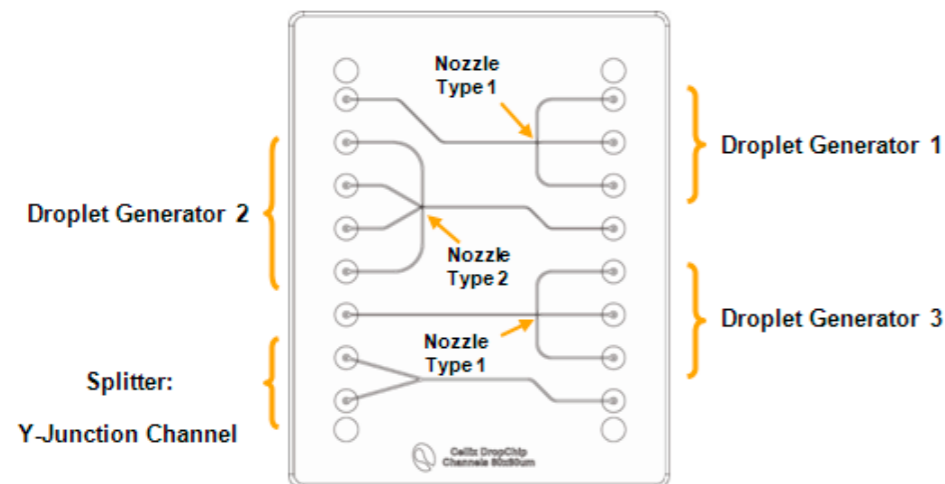
Frequency and size of the droplets can vary depending on several factors: channel dimensions; flow rates; oil type; surfactant type and surfactant concentration.

Fluidic ports (not displayed in the drawing) allow the user to plug directly a 25 Gauge needle into the inlet without using any additional glue or connector. Suitable tubing sets can be purchased directly from Cellix Ltd.

Recommended tubing sets:

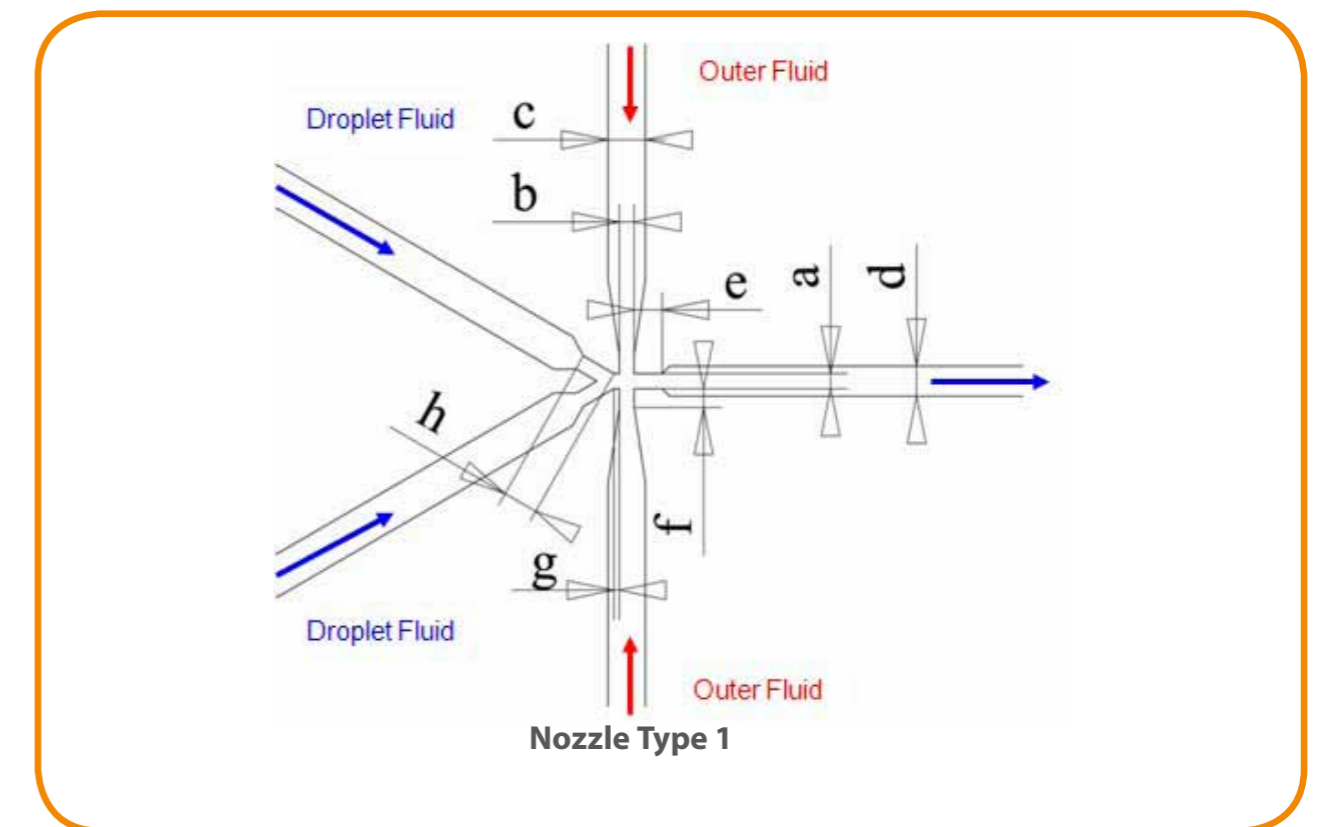
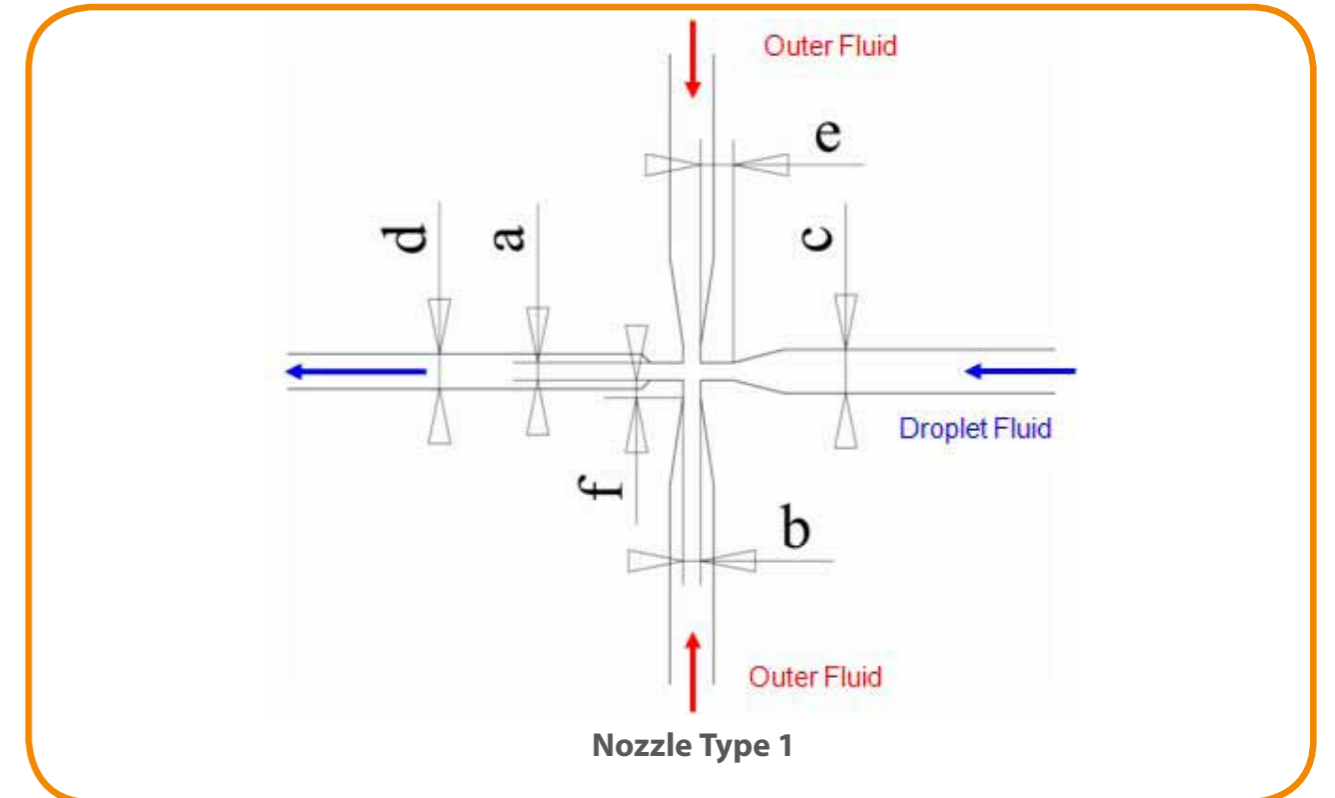
- Biochip-Connect Single Inlet Cables Pk 10 (Product Code: BIOCHIP-CONNECT-B11CPACK10)
- Biochip-Connect Single Outlet Cables Pk 10 (Product Code: BIOCHIP-CONNECT-B10CPACK10)

DropChips are supplied in packs of 2, facilitating 6 droplet generators and 2 splitters per pack.



Technical Specifications

| | |
|--|---------|
| Material: | Acrylic |
| Number of droplet generators per chip: | 2 |
| Number of splitters per chip: | 1 |
| Dead volume at input port: | 0.1 µL |
| Thickness of biochip: | 2.5 mm |



DropChip

DropChip Channel Dimensions (μm)

| | | DropChip 30x30 μm | DropChip 40x40 μm | DropChip 50x50 μm | DropChip 60x60 μm | DropChip 70x70 μm | DropChip 80x80 μm |
|-----------------------------|----------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Recommended for droplets | Diameter | < 30 μm | < 40 μm | < 50 μm | < 60 μm | < 70 μm | < 80 μm |
| | Volume | < 14 pL | < 33 pL | < 65 pL | < 113 pL | < 180 pL | < 268 pL |
| Nozzle 1 | a | 30 | 40 | 50 | 60 | 70 | 80 |
| | b | 30 | 40 | 50 | 60 | 70 | 80 |
| | c | 200 | 200 | 200 | 200 | 200 | 200 |
| | d | 60 | 80 | 100 | 120 | 140 | 160 |
| | e | 150 | 150 | 150 | 150 | 150 | 150 |
| | f | 80 | 80 | 80 | 80 | 80 | 80 |
| Nozzle 2 | a | 30 | 40 | 50 | 60 | 70 | 80 |
| | b | 30 | 40 | 50 | 60 | 70 | 80 |
| | c | 200 | 200 | 200 | 200 | 200 | 200 |
| | d | 60 | 80 | 100 | 120 | 140 | 160 |
| | e | 150 | 150 | 150 | 150 | 150 | 150 |
| | f | 100 | 100 | 100 | 100 | 100 | 100 |
| | g | 60 | 50 | 50 | 40 | 40 | 30 |
| | h | 200 | 190 | 190 | 190 | 190 | 190 |
| Y-junction Channel Width | | 200 | 200 | 200 | 200 | 200 | 200 |
| Channel Depth | | 30 | 40 | 50 | 60 | 70 | 80 |