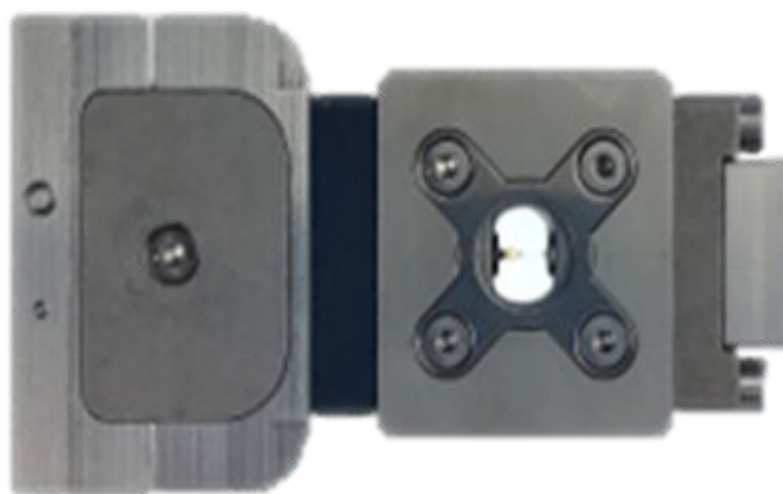
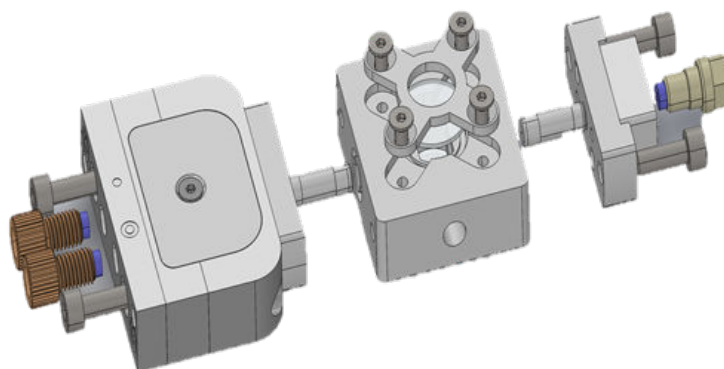


# RAYDROP DOUBLE EMULSION

## PRODUCT DESCRIPTION

P/N: O-DE-STD-PCK

VERSION MAR. 21



## DESCRIPTION

The Fluigent RayDrop chip is a patented device for droplet generation presenting most of the advantages of a glass chips as resistance to strong chemicals and compatibility with high pressures ( > 2 bar).

Although glass chips represent a very expensive disposable in everyday lab work, they can lead to leakage issues and have limited lifetimes as they are almost impossible to recover once clogged. The RayDrop device uses standard fittings leading to sealed connections and its design allows for easy recovery and cleaning if clogging occurs.

The RayDrop technology has three additional features:

Double emulsions can be produced in only one step in a single device

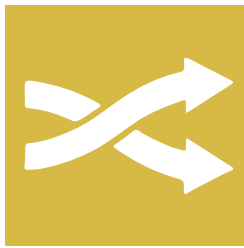
It can produce water-oil-water and oil-water-oil droplets without any surface coatings needed.

The system does not need any surfactant for droplet formation.

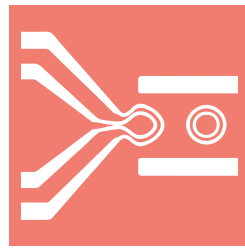
## ADVANTAGES & BENEFITS



**Droplet size from  
70µm to 150µm  
diameter**



**Easy to clean  
exchangeable  
nozzle**



**Perform double  
emulsion in one  
single device**



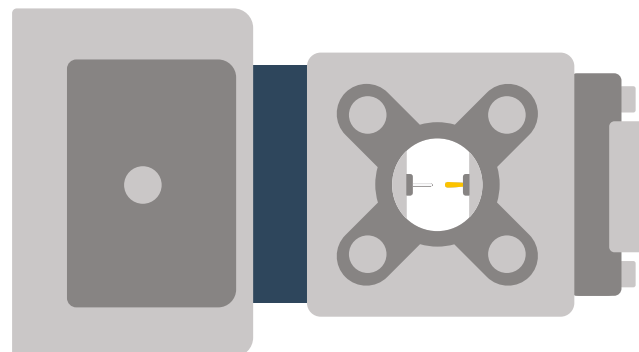
**Highly flexible  
(w/o/w or o/w/o)**

- » Surface coating free
- » No need of surfactants for droplet formation
- » Up to 5 000 Hz droplet generation rate \*
- » No leakage, uses standard HPLC PEEK connectors
- » Easy microscope visualization

## CONTENT

1\* RayDrop

1\* Double Emulsion connector and tubing kit



## TECHNICAL SPECIFICATIONS

| BEADS PRODUCTION                        |  |
|---|--|
| <b>Chip characteristics</b>             | Co-flow focusing design<br>3 inputs, 1 output<br>Water-in oil-in-water and oil-in-water-in-oil double emulsion |
| <b>Connectors</b>                       | Standard ¼-28 flat-bottom connectors   |
| <b>Double emulsion size</b>             | Shell: from 70 to 150 µm<br>Core: from 20 to 120 µm  |
| <b>Generation rate</b>                  | 5 000 Hz (measured for the smallest double emulsion size) can go higher under specific conditions              |
| <b>Capillaries dimension</b>            | Nozzle: Core: 30 µm ID<br>Shell: 70 µm ID<br>Output: 150 µm ID   |
| <b>External dimension</b>               | 92.5*52*13.5 mm3   |
| <b>Weight</b>                           | 340g   |
| <b>Operating Pressure</b>               | 0-5 bar  |
| <b>Burst pressure</b>                   | 10 bar   |
| <b>Wetted material continuous phase</b> | PEEK, FEP, glass, stainless steel 316L, polyimide, Viton (seal), resin (nozzle)                                |
| <b>Wetted material dispersed phase</b>  | PEEK, FEP, Glass, resin (nozzle)   |
| <b>Solvent compatibility</b>            | Water, mineral oil, fluorinated oil, ethanol, ethyl acetate, acetone, acid (ph>5), tetrahydrofurane            |