



# I-DOT One

Immediate Drop On Demand Technology

dispendix  
break the scale

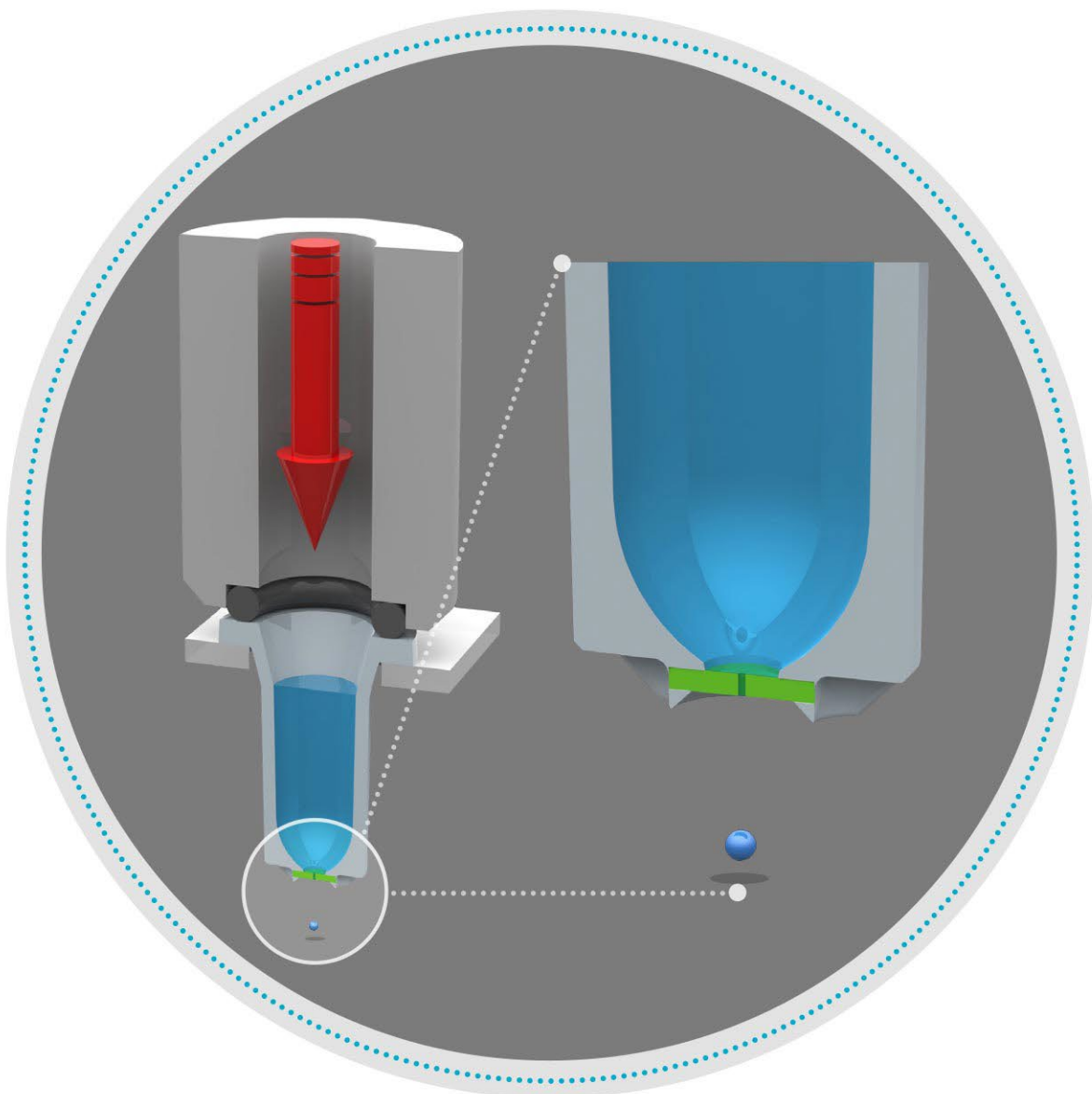


## I-DOT One – nanoliter dispensing made simple

### Simple, reliable, robust, and elegant non contact dispensing

By applying a well-defined pressure pulse on top of the well a droplet is formed and a high precise and accurate nanoliter droplet is released into or onto nearly any destination. Larger volumes are achieved by applying up to 400 pulses per second. The "Immediate Drop on Demand Technology"

(I-DOT) is a new approach for nano- to microliter liquid handling tasks. It uses a patented non-contact pressure based dispensing technology. The general principle is simply based on a hole in the bottom of a microtiter plate well. Capillary forces keep the sample liquid in the cavity.



**Figure:** Immediate Drop on Demand Technology (I-DOT) – droplet generation.

## I-DOT One – how you break the scale



Non-contact, no pipetting tips, means no carry-over and cross contamination



Dispense a variety of liquids, including but not limited to aqueous solutions, PCR-buffer, DMSO up to 100%

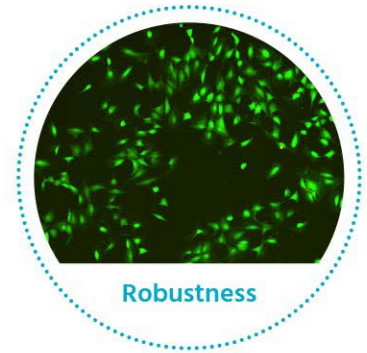
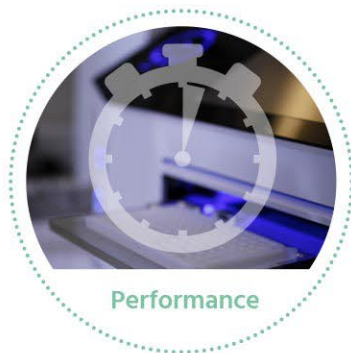


Dispense living cells



Scalable, from single samples to high throughput

## I-DOT One – generate robust and reliable results using the most simple and elegant technology



I-DOT extends your capabilities	Plate format	Dispensing time	Cell printing with high cell viability of > 95%
<ul style="list-style-type: none"> <li>Up to 96 different reagents per source plate</li> <li>Any position on destination plate accessible</li> <li>DMSO or surfactant-containing aqueous solutions</li> <li>Glycerin</li> <li>Cells</li> </ul>	384 well plate, 100 nl <hr/> 1536 well plate, 100 nl	< 20 seconds <hr/> < 80 seconds <ul style="list-style-type: none"> <li>Ultra-fast method for complex dispensing tasks</li> <li>Reformatting, direct serial dilution, IC50, cherry picking, mixing, array generation</li> <li>Dispensing precision &lt; 3% CV</li> </ul>	<b>Cell lines</b> <ul style="list-style-type: none"> <li>Fibroblasts (3T3)</li> <li>Breast Cancer (MCF-7)</li> </ul> <hr/> <b>Primary cells</b> <ul style="list-style-type: none"> <li>Human skin fibroblasts</li> <li>Human skin keratinocytes</li> <li>Human umbilical vein endothelial cells (HUVEC)</li> <li>Human brain vascular pericytes (HBVP)</li> </ul> <hr/> <b>Stem cells</b> <ul style="list-style-type: none"> <li>Human mesenchymal stem cells</li> <li>Induced pluripotent stem cells (iPSC)</li> </ul>

## I-DOT One – specification

### I-DOT One dispensing specifications

<b>Volume range</b>	2.0 nL – 80 µL
<b>Accuracy</b>	< 5 % (aqueous solutions)
<b>Precision</b>	< 3 % CV
<b>Dead volume</b>	< 1 µl
<b>Time to dispense a 384 well plate</b>	< 20 seconds
<b>Time to dispense a 1536 well plate</b>	< 80 seconds
<b>Source</b>	I-DOT Silica Plate
<b>Destination</b>	All SBS format microplates, any other not exceeding 127 mm width x 85 mm depth x 16 mm height
<b>Fluid compatibility</b>	DMSO up to 100 %, glycerin up to 50 %, PCR-buffers, aqueous solutions

### I-DOT One automation specifications

<b>Software</b>	Reformatting, direct serial dilution, IC50, cherry picking, mixing, array, generation
<b>Operating system</b>	Windows XP or Windows 7
<b>LAN</b>	10 / 100 MBit/s
<b>SiLA compatible</b>	3rd party integration possible

### I-DOT One site requirements

<b>Dimensions</b>	47 cm width x 52 cm depth x 27 cm height
<b>Weight</b>	30.3 kg
<b>Power supply</b>	AC 100-120 V, 50/60 Hz, 10 A or AC 200-240V, 50/60 Hz, 5 A
<b>Compressed air supply</b>	Filtered, oil-free, dry air, 6 Bar (87 PSI) – 10 Bar (145 PSI)
<b>Operating conditions</b>	22°C ± 5°C (72°F ± 9°F)

**Intrigued and want to learn more? Please contact:**

#### **Dispendix GmbH**

Meitnerstraße 9  
70563 Stuttgart  
Germany

Phone: +49 (0) 7 11 - 9 70 12 34

E-Mail: [info@dispendix.com](mailto:info@dispendix.com)

Web: [www.dispendix.com](http://www.dispendix.com)

