



# CLONING PLATFORM

## TECHNICAL DATA SHEET

Version 1.0



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# INTRODUCTION

The iotaSciences Cloning Platform provides an automated single-cell cloning workflow, with easy verification of monoclonality in small volumes. It comprises the isoCell, a compact nanolitre fluid handling system, and the isoHub, a smart automated microscope for simple verification of single-cells and easy tracking of clonal cultures.

## MONOCLONALITY



GRIDs containing 256 chambers are made on 60 mm dishes using only fluids and so do not suffer the edge effects of conventional culture plasticware. As a result, chambers with single cells are visible immediately after plating, enabling easy verification of monoclonality.

## WORKFLOW AUTOMATION



The isoCell isolates, feeds and harvests your cells to achieve better consistency in your cloning experiment, while the isoHub moves between chambers of interest allowing easy tracking of monoclonal colonies. The integrated touch screen on both machines provides an intuitive step-by-step guide through the cloning workflow.

## WIRELESS DATA TRANSFER



A wireless connection between the isoHub and isoCell allows both systems to automatically synchronise data, so it is ready when you need it for the next step in the Cloning Platform workflow.

## COMPACT SYSTEM



The small footprint of the isoCell easily fits inside your cell culture hood with room to spare, while the isoHub can be used as a general cell culture microscope with standard microtitre plates and other lab plasticware.

## OPTIONAL FLUORESCENCE MICROSCOPY



Fluorescence microscopy is available as an optional add-on with a 16-channel LED light source. The isoHub comes with brightfield and phase contrast microscopy with 4x, 10x and 20x phase contrast objectives as standard.

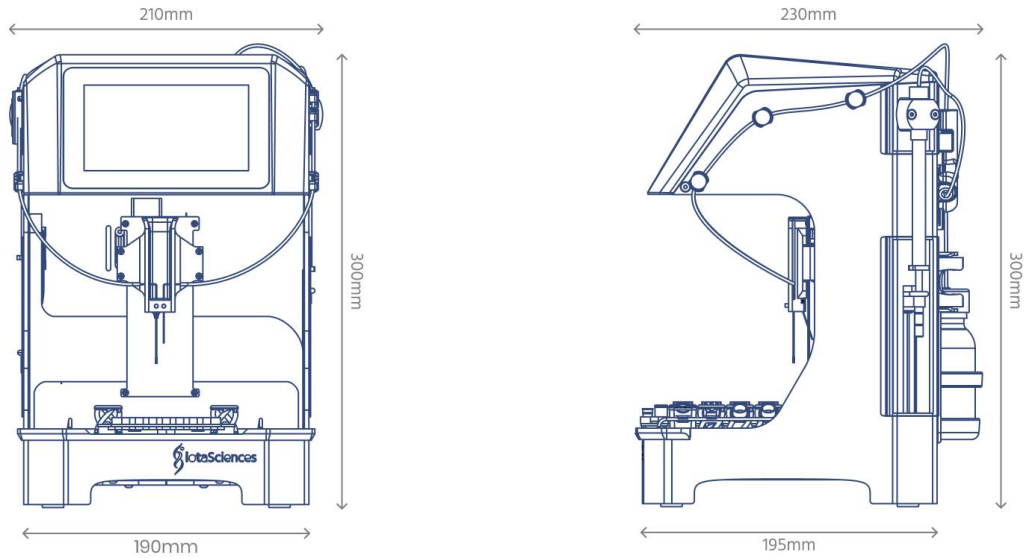
# SPECIFICATION

<p><b>AUTOMATION</b></p>	<ul style="list-style-type: none"> <li>• GRID generation</li> <li>• Single-cell plating</li> <li>• Media exchange (cell feeding)</li> <li>• Cell harvesting</li> <li>• Automated maintenance and calibration routines</li> <li>• Workflows for adhesion and suspension cells</li> <li>• Up to 36 users with nine colour-coded dishes per user</li> <li>• Intuitive GUI and touch interface guides user through the cloning process (stylus included)</li> </ul>
<p><b>GRID DETAILS</b></p>	<ul style="list-style-type: none"> <li>• A single GRID contains 256 cell-culture chambers in a 60mm culture dish</li> <li>• Compatible with commonly used reagents and coatings</li> <li>• Chamber area: 3.24 mm<sup>2</sup>, volume: less than 1 µl</li> <li>• Up to 94 single-cell chambers per dish (based on Poisson distribution)</li> </ul>
<p><b>MICROPLATE COMPATIBILITY</b></p>	<ul style="list-style-type: none"> <li>• Colonies can be harvested into either 8 strip PCR tubes or Tissue Culture Treated (TCT) flat strips</li> <li>• TCT flat strips are compatible with 96-well microplate format</li> <li>• isoHub is compatible with standard well plates, culture flasks and 6cm petri dishes</li> </ul>
<p><b>CONSUMABLES</b></p>	<ul style="list-style-type: none"> <li>• 18 colour coded dishes (TC-treated or non-treated)</li> <li>• 8 strip PCR tubes or 8 TCT flat strips (96-well microplate format)</li> <li>• Microcentrifuge tubes</li> <li>• 10ml reservoirs</li> <li>• FC40<sup>STAR</sup></li> </ul>

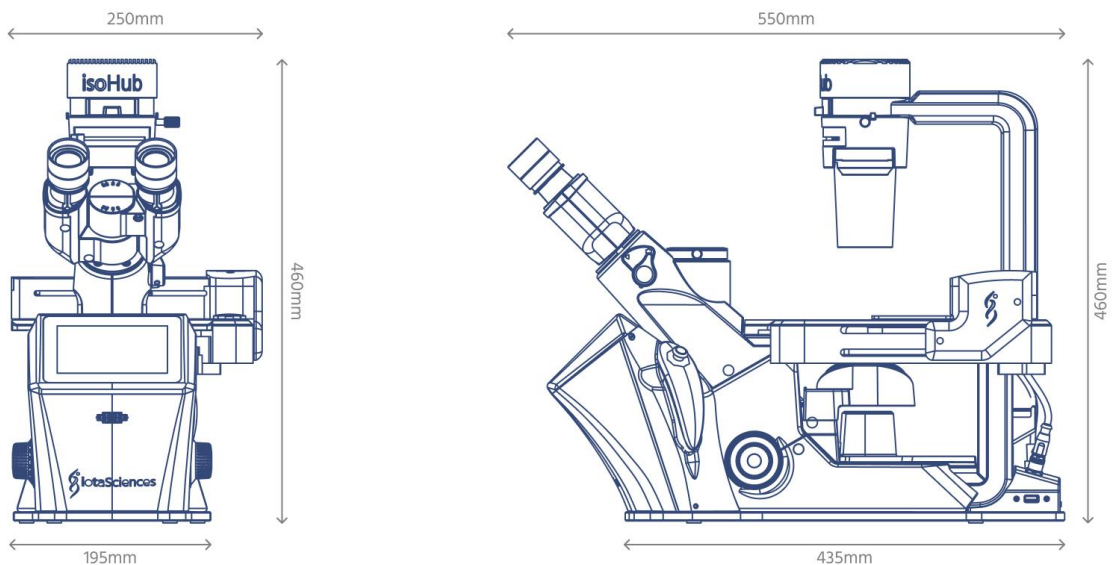
<p><b>ISOCELL SYSTEM FEATURES</b></p>	<ul style="list-style-type: none"> <li>• Nanolitre fluid handling system</li> <li>• Heated bed for improved cell health</li> <li>• UV light and ethanol resistant</li> <li>• Rapid exchange of wetted parts</li> <li>• 2.4GHz wireless communication between isoCell and isoHub for automated data transfer</li> <li>• USB port for software updates (requires Windows 10)</li> </ul>
<p><b>ISOHUB SYSTEM FEATURES</b></p>	<ul style="list-style-type: none"> <li>• High-quality optics from market-leader Evident (previously Olympus)</li> <li>• Easy data input with hand-held controller</li> <li>• Camera port</li> <li>• Brightfield and phase contrast microscopy</li> <li>• 4, 10 and 20x magnification objectives</li> <li>• 16-channel fluorescence microscopy available</li> <li>• Heated bed for improved cell health (optional)</li> <li>• UV light and ethanol resistant</li> <li>• 2.4GHz wireless communication between isoCell and isoHub for automated data transfer</li> <li>• USB port for software updates (requires Windows 10)</li> </ul>
<p><b>OPERATING REQUIREMENTS</b></p>	<ul style="list-style-type: none"> <li>• Temperature: 16–35°C (60–95°F)</li> <li>• Humidity: 40% to 60%</li> <li>• Altitude: less than 2000m</li> <li>• Power supply input: 90-260V AC, 50-60Hz, minimum 1A at 115V, 0.7A at 230V</li> <li>• isoCell/isoHub power input: 24V DC, 50W</li> </ul>
<p><b>PHYSICAL CHARACTERISTICS</b></p>	<ul style="list-style-type: none"> <li>• isoCell dimensions: 210x230x300mm, weight: 4.3 kg</li> <li>• isoHub dimensions: 250x550x460mm, weight: 8.0 kg</li> </ul>

# PRODUCT SCHEMATIC

## isoCell



## isoHub



### Disclaimer

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