

# THE BEACON<sup>®</sup>

OPTOFLUIDIC PLATFORM

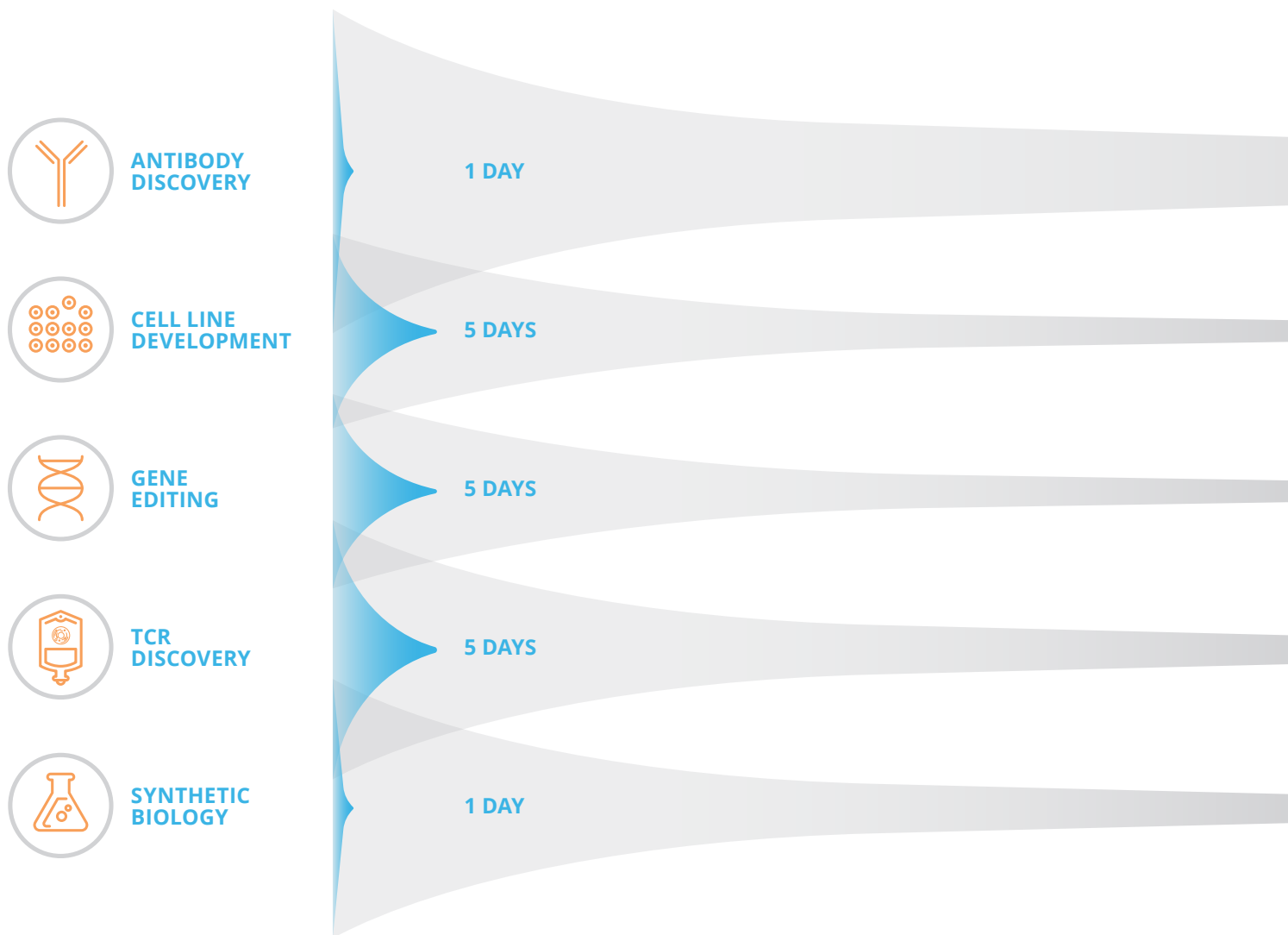
1000s of cells  
100X the insights  
10X faster  
1/X total cost



# Finding the most important individual cells requires the most **time, money and effort.**

Antibody Discovery. Cell Line Development. Gene Editing. TCR Discovery. Synthetic Biology. In these and other fields that depend on finding the right cell or clone, selecting from hundreds of thousands of cells to the handful that are most important can take 2 to 3 months or more of intensive, expensive, manual manipulation.

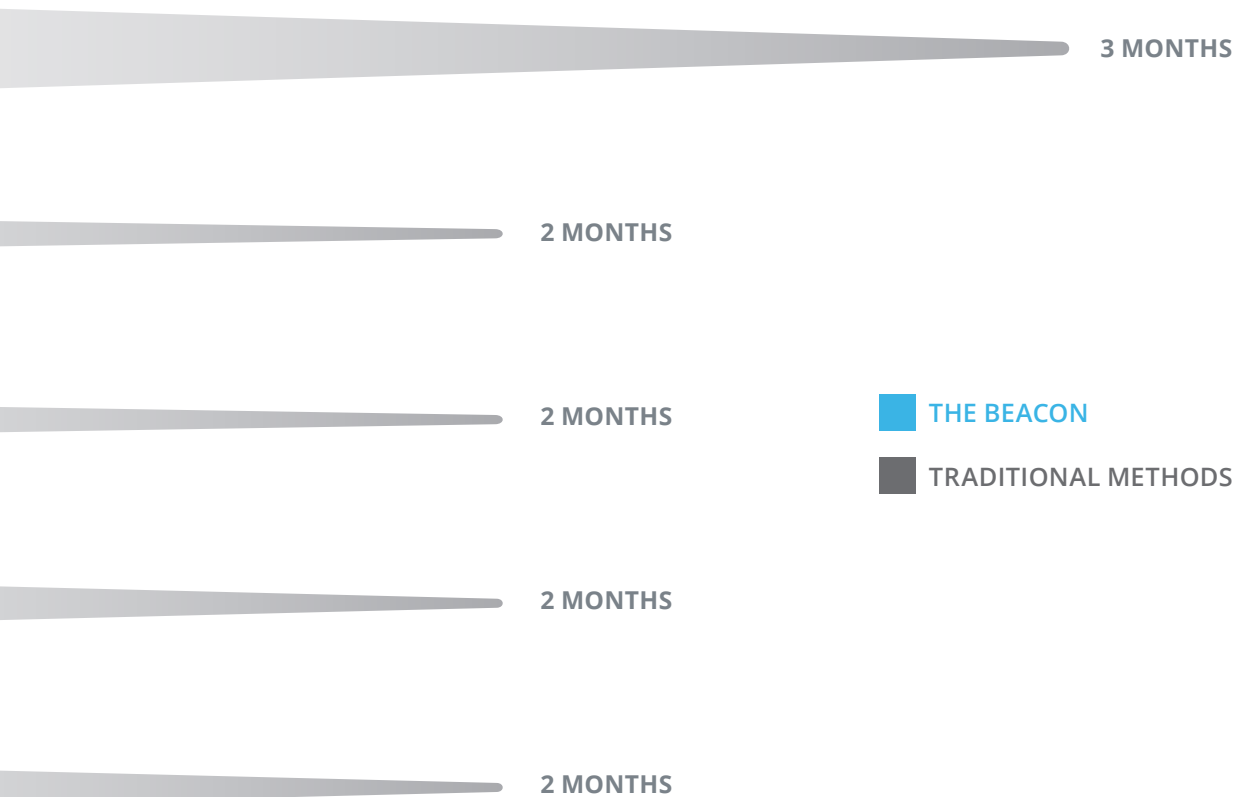
Imagine how much further you can take your product development with a cell workflow that shortens the selection process to just days. Bring the right biologic therapies into clinical testing faster. Identify the cells that matter much sooner. Move any field light-years ahead.



# Now, the Beacon platform reduces timelines from months to days, **saving time and money.**

With the Beacon platform's light-speed workflows, you'll gain insights, iterate and innovate as fast as your inspiration.

- Replace a roomful of equipment with the Beacon system
- Work with individual cells radically faster than other technologies
- Perform assays at any time, as often as you need
- Track phenotype and genotype of single cells or clones
- Automate and scale workflows far beyond manual, time-intensive analysis
- Update workflows via software instantly, based on a day's or hour's data
- Generate greater insights through deep profiling of each cell or clone



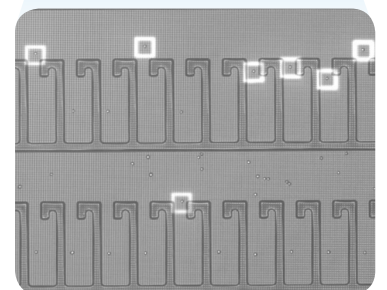
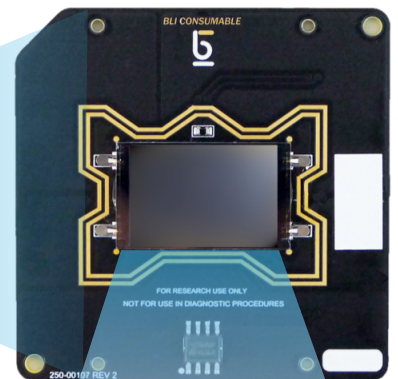
# Process and analyze cells in a faster, more insightful way.

At the core of the Beacon platform is a combination of optics and nanofluidics called optofluidics. Light and semiconductor technology combine to move single cells or beads in large numbers so they can be isolated, cultured, assayed, and exported.



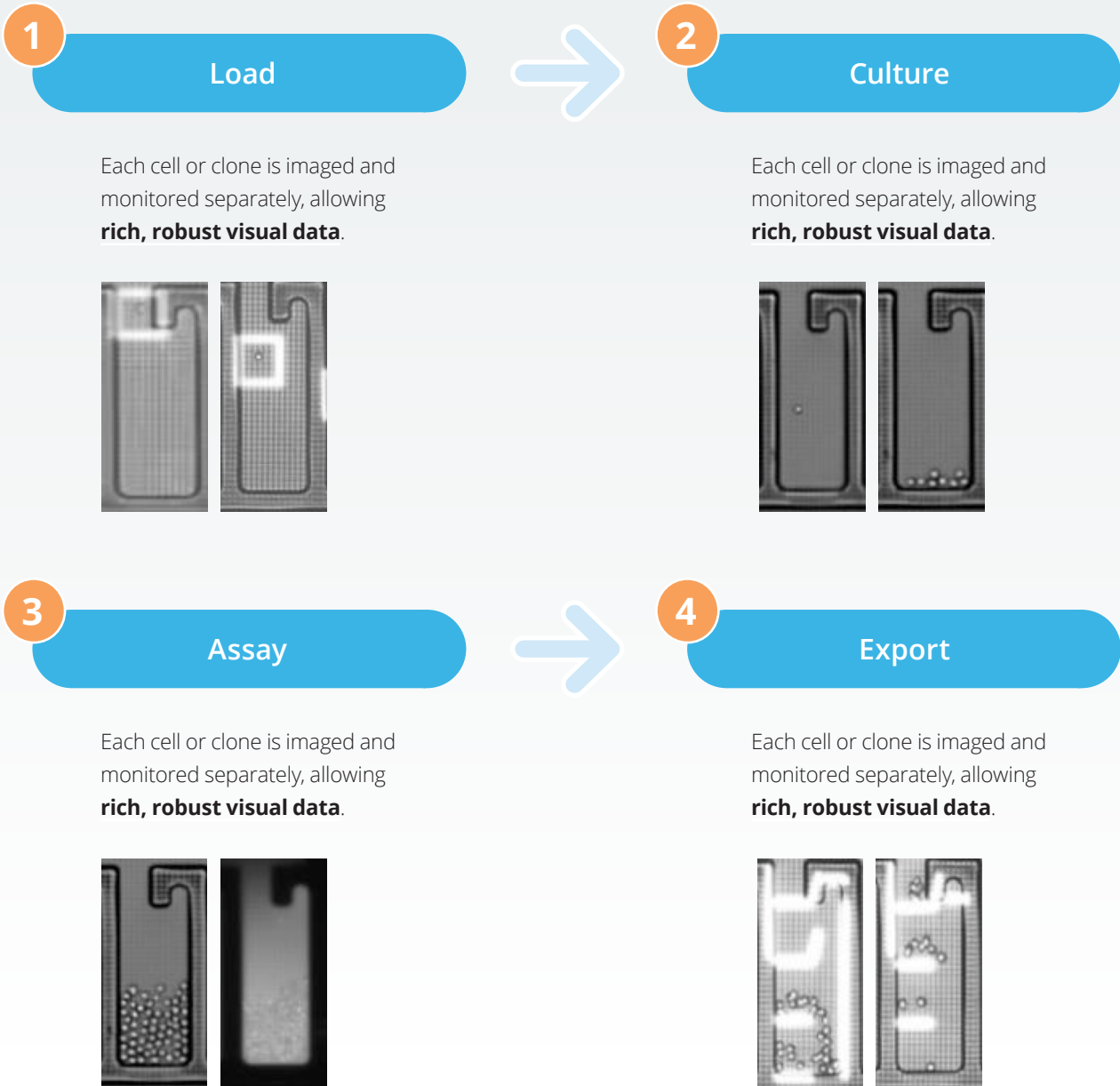
OptoSelect™ chips use light to automatically move individual cells.

[ CHIP SHOWN ACTUAL SIZE ]



Cells are cloned and assayed in individual 500 pL or 1 nL NanoPens™. Each pen is ~100,000 times smaller than a microwell.

# Screen the right cells easily, automatically, and precisely.

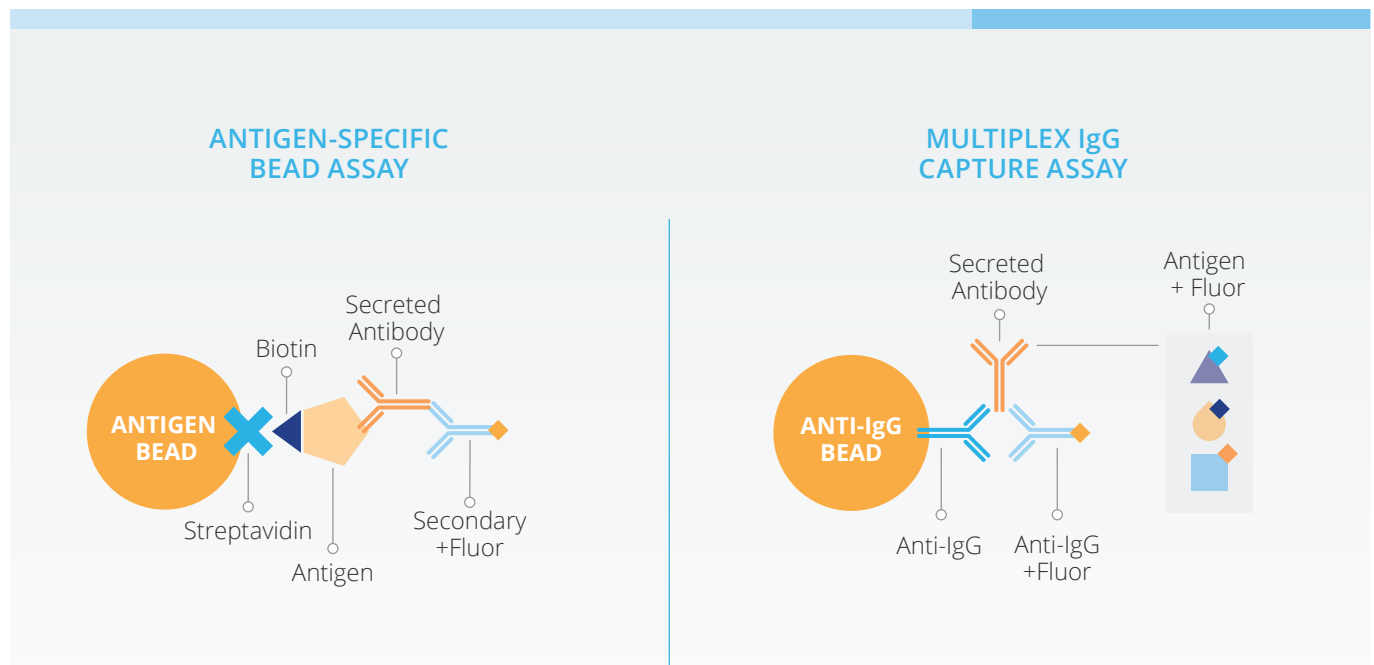


# Assays can be performed with as little as a single cell.

NanoPens are **100,000 times smaller** in volume than a microwell. That means a single cell can be isolated and assayed in its own discrete chamber. There's no need to wait weeks for a large quantity of cells to assay.

Perform secretion assays with both soluble or membrane-bound targets within hours of cloning. You have **complete flexibility** to run fully-automated assays, sequentially or simultaneously, as frequently as you choose.

## SOME TYPICAL BEACON ASSAYS.

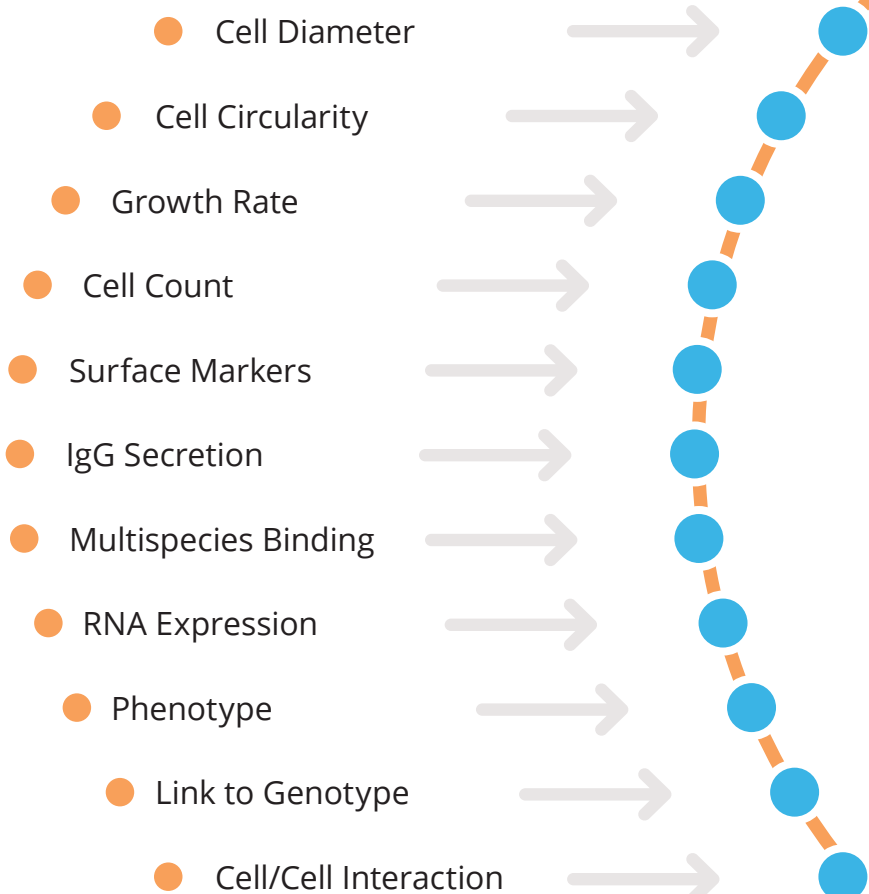


# Illuminate new insights with rich fingerprints at every cell stage.

Older technologies limit cellular discoveries with limited data. But now, with the Beacon platform, you can capture bright field and fluorescence images of each NanoPen™ at any time.

As you compare results through multiple chips and runs over time, **deep profiling** captures richly detailed “fingerprints” of your cells and clones that reveal valuable insights you can’t get any other way.

## BEACON PLATFORM MEASURES.

- 
- Cell Diameter
  - Cell Circularity
  - Growth Rate
  - Cell Count
  - Surface Markers
  - IgG Secretion
  - Multispecies Binding
  - RNA Expression
  - Phenotype
  - Link to Genotype
  - Cell/Cell Interaction



# Beacon Platform

## FEATURES

<b>APPLICATIONS</b>	Cell Line Development Plasma B Discovery Other R&D Workflows
<b>ASSAYS</b>	Antigen Specificity Quantitative Secretion Assay Multiplexed Fluorescent Assays Lead Selection Assays Custom Assay Development
<b>CELL TYPES</b>	CHO, Plasma B cells, Memory B cells, T cells, Hybridoma cells, primary cells, adherent cells, others

## SPECIFICATIONS

<b>IMPORT</b>	Recommended input density: 1e5 - 5e6 cells/mL Formats: 1.5mL Eppendorf tubes, 0.2mL PCR tubes Std. height (up to 16mm) 96 well microtiter plates
<b>FLUORESCENCE CAPABILITIES</b>	Brightfield Up to 5 colors Standard configuration: DAPI: Ex: 370 – 410nm / Em: 429 – 475nm FITC: Ex 450 – 500nm / Em: 515 – 565nm TxRed: Ex: 542 – 582nm / Em: 604 – 644nm Cy5: Ex: 608 – 648nm / Em: 672 – 712nm
<b>CULTURE</b>	Customer defined media Per chip temperature control: 10°C to 40°C
<b>EXPORT FORMAT</b>	Automated Recovery Format: 96 well microtiter plate Well plate temp control 10°C to 40°C

## INPUTS

<b>POWER</b>	Dedicated 110 -240 V AC, 50Hz-60Hz, 20A circuit
<b>GAS SUPPLY</b>	CDA: 20-120psi, 6mm push-to-connect fitting* >99% CO <sub>2</sub> : 20-120psi, 6mm push-to- connect fitting* <i>*Other NPT compatible fitting options available</i>
<b>STERILITY</b>	Integrated BSC Class II, A1 compatible airflow Dual ULPA filtration. Exceeds Cleanroom Class 100, ISO Class 5
<b>RECOMMENDED CLEARANCE</b>	36 in (91 cm) aisle in front of workstation 3 in (7.6 cm) rear 12 in (30 cm) left & right sides
<b>OTHER CONNECTIONS</b>	Ethernet
<b>COMPUTER</b>	Windows 10, i7 processor, 8GB Memory, 2TB RAID1 data drive Data Capacity: 250 experiments or 6-12 months
<b>WORKING ENVIRONMENT</b>	Temperature: 64-79° F (18-26° C) Humidity: 20-80% Altitude: <6,500 ft (2,000 m)

## ATTRIBUTES

<b>DIMENSIONS</b>	Width: 46 in/116.8 cm Depth: 34 in/86.4 cm Height: 71.5 in/181.6 cm
<b>WEIGHT</b>	Crated for shipment: 1700 lb/770 kg Free-standing: 1260 lb/571 kg



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