

CellFAB One Series

Fully Automated Cell Manufacturing System

- Fully Automated Operation
- Seamless Closed-system Processing
- Integrated Sealing and Material Handling
- Modular Functional Units
- Intuitive Touchscreen Interface



Product Description

The CellFAB One Series is a next-generation, fully automated, closed-system cell manufacturing platform designed for high-efficiency processing across the entire workflow. It supports a wide range of applications, including PBMC separation and washing, magnetic bead selection and removal, cell activation, genetic modification, expansion, concentration, washing, formulation, and filling.

By integrating multiple cell processing operations onto a single platform and utilizing pre-sterilized disposable kits, the system minimizes contamination risks and cleanroom requirements. Automation reduces operator error and batch variability, ensuring reproducibility and process consistency from development through clinical and commercial production.

The CellFAB One Series delivers a reliable, high-quality, and cost-efficient solution for closed, end-to-end cell manufacturing.



CellFAB One E



CellFAB One M



CellFAB One N



CellFAB One MN



CellFAB One I

Product Advantages



Higher Automation

Interactive system design reduces manual operation time by 70%-90%, minimizes human error and batch failure risk, and ensures seamless transitions between process steps with consistent success rates.



Greater Flexibility

Users can customize and modify process parameters freely. Sampling steps can be added as needed while maintaining a closed environment that meets Grade C cleanroom standards. The software allows parameter adjustment based on standard or user-defined process templates.



Enhanced Compatibility

The system supports different sample types and process routes, offering adaptable configurations, consumables, and workflows. It accommodates various cell culture methods and flexible process setups.



Lower Costs

Cell manufacturing can be performed outside traditional cleanrooms, reducing facility and operational costs by up to 90%. This decreases infrastructure, labor, and training expenses while improving yield and scalability.



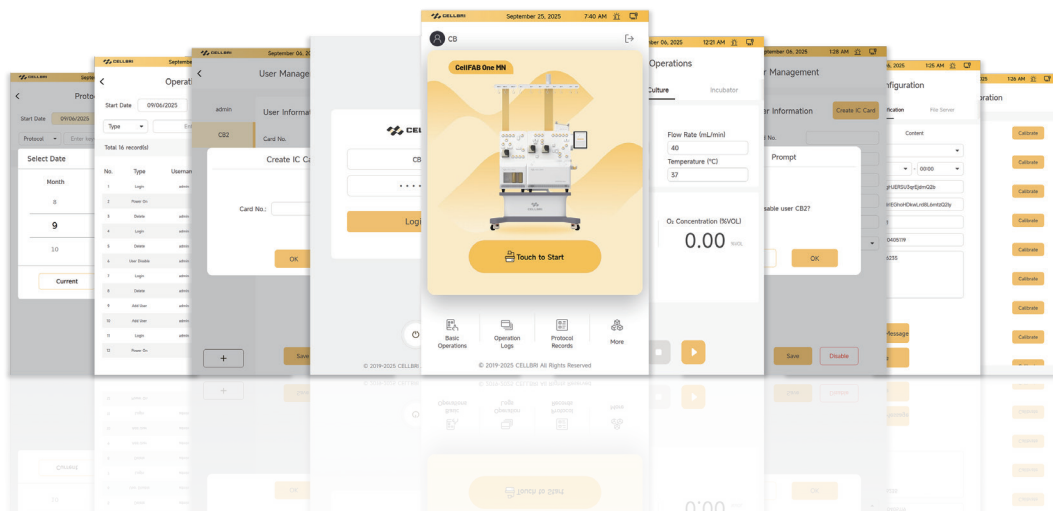
Tighter Containment

The fully closed and integrated consumable design enables complete process control from the initial material loading to final cell formulation and filling. The preconfigured consumable kit allows complex processing within a sterile environment, minimizing contamination risks and ensuring reproducibility.



Higher Reliability

- Independent Supply Chain: By 2025, CellBri will operate a large-scale automated factory capable of producing 500,000 consumable sets and 5,000 systems annually, achieving significant advantages in cost efficiency and delivery speed.
- Independent Intellectual Property: With over 300 patents filed within five years, including 60% invention patents and 20+ PCT applications, CellBri leads the industry in patent quantity, quality, and coverage. All Product lines have completed FTO (Freedom to Operate) assessments in China and the United States, ensuring customers' process platforms are fully protected by CellBri's patent portfolio.



CellFAB One E

The CellFAB One E is part of CellBri's fully automated cell manufacturing system series.

Built upon the Gentle Flex platform, the One E integrates multiple cell processing functions including PBMC separation, viral transduction, cell culture, cell harvest, formulation, and filling into a single closed and automated system.



Product Features



PBMC Separation

Supports whole blood, fresh leukopak, or peripheral blood samples for mononuclear cell isolation.



Cryopreserved PBMC Washing

Removes cryoprotectant and replaces it with culture medium; flexible parameter control minimizes cell damage.



Fresh/Frozen Leukopak Washing

Process fresh or frozen leukopaks to remove plasma and replace it with magnetic separation buffer. Gentle parameters improve recovery and reduce cell stress.



Viral Transduction

Performs both static and dynamic transduction (0-420g) with adjustable time, temperature, and gas environment parameters.



Antibody Activation Culture

Automates activation and incubation with adjustable parameters for time, temperature, and reagent conditions.



Expansion Culture

Supports culture volumes of 50-250 mL with cell densities up to 5E9. Combines static and dynamic culture with automatic regulation of gas, concentration, and temperature. Sampling can be performed under Grade C aseptic conditions.



Cell Concentration

Concentrates cells according to process requirements using controlled centrifugation preparation.



Cell Washing

Supports Performs washing after antibody activation, viral transduction, or formulation preparation.



Formulation and Filling

Supports both fresh and frozen final product formulation, bulk filling, and aliquoting into vials or cryobags.

Ordering Information

Equipment

Item No.	Package	Description
01010056	1 set	CellFAB One E Fully Automated Cell Manufacturing System

Disposable Cell Preparation Kits

Item No.	Package	Description
01020260	1 set	CAR-T Cell Preparation Disposable Kit – E System
01020319	1 set	NK Cell Preparation Disposable Kit – E System

● Process Software

Item No.	Software Name	Process Description
090100021	ONE-CA-S-002	Complete CAR-T preparation workflow: fresh/frozen leukopak washing + antibody activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling
090100024	ONE-CA-S-001	Complete CAR-T preparation workflow: fresh leukopak PBMC separation + antibody activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling
090100025	ONE-CA-S-003	Complete CAR-T preparation workflow: cryopreserved PBMC washing + antibody activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling
090100026	ONE-CA-S-004	Complete NK cell preparation workflow: fresh leukopak PBMC separation + activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling

Product Specifications

General Specifications

Dimensions 835×724×1720mm³ (W×D×H)

Weight 80 kg

Power Specifications

Power Requirements 100-240 VAC, 50/60 Hz

Power Consumption 450 VA

Interface Specifications

USB Ports 2 ports

Ethernet Port 1 × 100 Mbit/s

Main Unit Specifications

Liquid Transfer Unit Equipped with weighing sensor, solenoid valves, and peristaltic pumps
(flow rate: 10–400 mL/min)

Display 10.1" TFT capacitive touchscreen

Centrifuge Chamber Integrated chamber compatible with single-use tubing set; maximum
centrifugal force: 420 g

Sensors Pressure, liquid level, temperature, leakage, and weight sensors

Centrifuge Chamber Temperature 4°C–38°C

Gas Control CO₂, compressed air, and optional O₂ mixing system

Bag Hooks 8 hooks

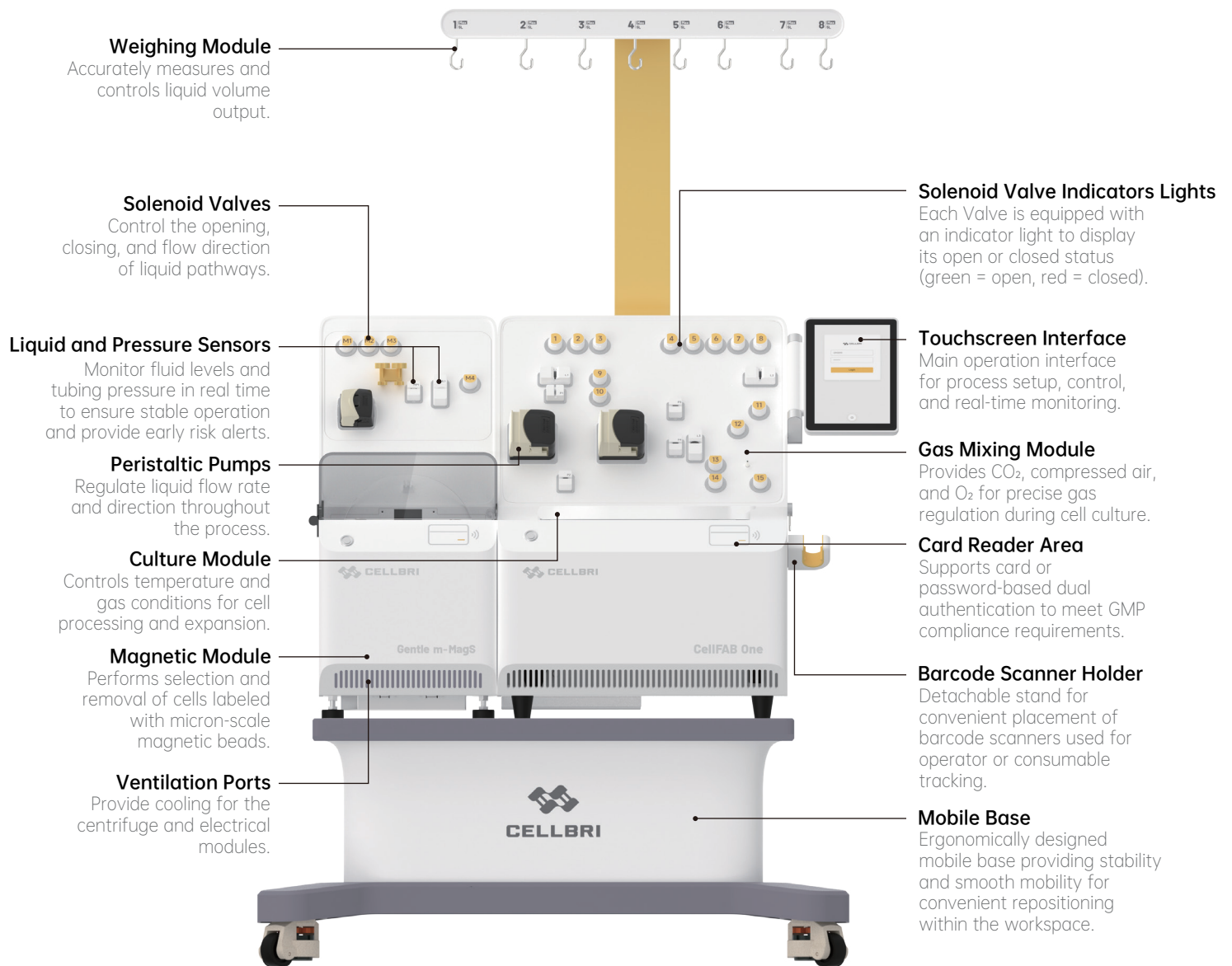
Consumables Single-use, fully closed consumable kit minimizing contamination risk

Operating System Linux operating system

Standard Accessories Barcode scanner × 1, Mobile base × 1

CellFAB One M

The CellFAB One M, part of CellBri's fully automated cell manufacturing system series, is developed based on the Gentle Flex and Gentle m-Mags platforms. It integrates multiple key functions—including magnetic bead incubation, cell selection, centrifugation, washing, and cell culture into a single, fully automated cell processing system.



Product Features



PBMC Separation

Supports whole blood, fresh leukopak, or peripheral blood samples for mononuclear cell isolation.



Cryopreserved PBMC Washing

Removes cryoprotectant and replaces it with culture medium; flexible parameter control minimizes cell damage.



Fresh/Frozen Leukopak Washing

Process fresh or frozen leukopaks to remove plasma and replace it with magnetic separation buffer. Gentle parameters improve recovery and reduce cell stress.



Micron Bead Incubation

Incubation temperature, time, and mixing parameters can be customized or run with default settings.



Micron Bead Selection

Compatible with multiple brands of micron-scale magnetic beads, achieving separation performance comparable to manual processing.



Micron Bead Activation Culture

Mixing speed and incubation time are flexibly adjustable for optimized activation conditions.



Viral Transduction

Supports both static and centrifugal transduction (0-420g). Time, temperature, and gas parameters are flexibly adjustable.



Expansion Culture

Supports culture volumes of 50-250 mL with cell densities up to 5E9. Combines static and dynamic culture with automatic regulation of gas, concentration, and temperature. Sampling can be performed under Grade C aseptic conditions.



Bead Removal

Residual bead count < 100 beads per 3E6 cells.



Cell Concentration

Concentrates cells based on culture volume using either continuous-flow or single-step concentration modes.



Cell Washing

Supports Performs washing after antibody activation, viral transduction, or formulation preparation.



Formulation and Filling

Supports both fresh and frozen final product formulation, bulk filling, and aliquoting into vials or cryobags.

Ordering Information

Equipment

Item No.	Package	Description
01010057	1 set	CAR-T Cell Preparation Disposable Kit – M System

Disposable Cell Preparation Kits

Item No.	Package	Description
01010190	1 set	CAR-T Cell Preparation Disposable Kit – M System
01010191	1 set	NK Cell Preparation Disposable Kit – M System

● Process Software

Item No.	Software Name	Process Description
090100027	ONE-CM-S-001	Complete CAR-T preparation workflow: fresh/frozen apheresis washing + micron bead incubation + micron bead selection + activation culture + medium exchange + viral transduction + expansion culture + bead removal + harvest + formulation and filling
090100028	ONE-CM-S-002	Complete CAR-T preparation workflow: frozen PBMC washing + micron bead incubation + micron bead selection + activation culture + medium exchange + viral transduction + expansion culture + bead removal + harvest + formulation and filling
090100029	ONE-CM-S-003	Complete CAR-T preparation workflow: fresh apheresis PBMC separation + micron bead incubation + micron bead selection + activation culture + medium exchange + viral transduction + expansion culture + bead removal + harvest + formulation and filling

Product Specifications

General Specifications

Dimensions 1155×724×1723 mm³ (W×D×H)

Weight 152 kg

Power Specifications

Power Requirements 100-240 VAC, 50/60 Hz

Power Consumption 900 VA

Interface Specifications

USB Ports 2 ports

Ethernet Port 100 Mbit/s Ethernet interface

Main Unit Specifications

Liquid Transfer Unit Weight sensor, pinch valve, peristaltic pump; pump speed 10–400 mL/min

Display 10.1" TFT capacitive touchscreen

Cell Separation / Standard magnet + auxiliary magnet

Magnetic Bead Removal Unit

Centrifuge Chamber Compatible with single-use tubing set; centrifugal force up to 420 g

Sensors Pressure, liquid, temperature, leak, weight, and angle sensors

Centrifuge Chamber Temperature 4°C-38°C

Gas Control CO₂, compressed air, and optional O₂ mixing system

Bag Hooks 8 hooks

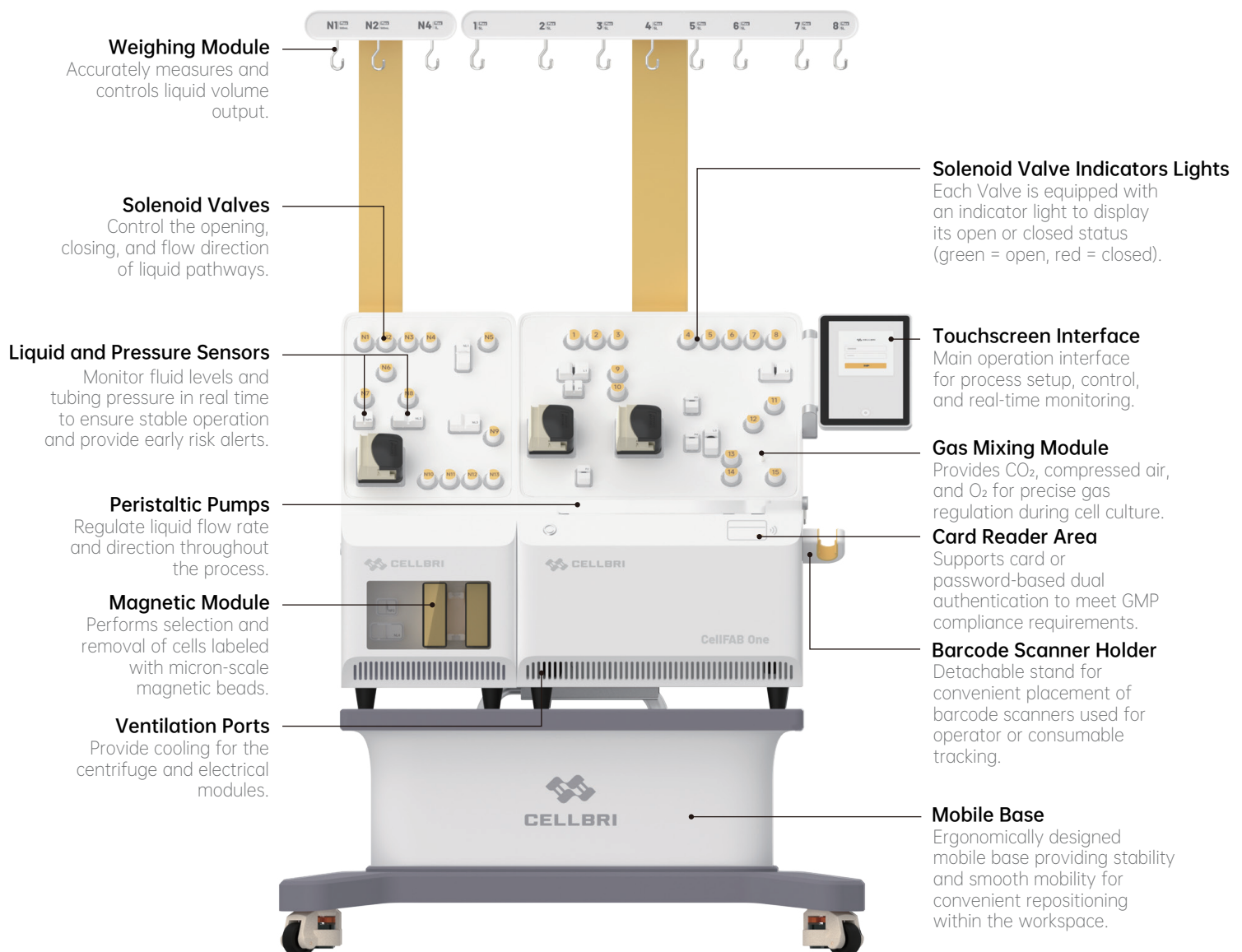
Consumables Fully closed single-use consumables minimizing contamination risk

Software Linux operating system

Included Accessories Magnet ×2, barcode scanner ×1, cart ×1

CellFAB One N

The CellBri Fully Automated Cell Manufacturing System, CellFAB One N, is developed based on the Gentle Flex and Gentle n-Mags series platforms. It integrates multiple functions including magnetic bead incubation, cell separation, centrifugation, washing, and cell culture into one fully automated cell processing system.



Product Features



PBMC Separation

Supports whole blood, fresh leukopak, or peripheral blood samples for mononuclear cell isolation.



Cryopreserved PBMC Washing

Removes cryoprotectant and replaces it with culture medium; flexible parameter control minimizes cell damage.



Fresh/Frozen Leukopak Washing

Process fresh or frozen leukopaks to remove plasma and replace it with magnetic separation buffer. Gentle parameters improve recovery and reduce cell stress.



Micron Bead Incubation

Incubation temperature, time, and mixing parameters can be customized or run with default settings.



Micron Bead Selection

Compatible with multiple brands of micron-scale magnetic beads, achieving separation performance comparable to manual processing.



Activation Culture

Allows flexible adjustment of agitation speed and incubation time to meet specific culture requirements.



Viral Transduction

Supports both static and centrifugal transduction (0-420g). Time, temperature, and gas parameters are flexibly adjustable.



Expansion Culture

Supports culture volumes of 50-250 mL with cell densities up to 5E9. Combines static and dynamic culture with automatic regulation of gas, concentration, and temperature. Sampling can be performed under Grade C aseptic conditions.



Cell Concentration

Offers both continuous-flow and single-batch concentration modes depending on culture volume and density.



Cell Washing

Supports Performs washing after antibody activation, viral transduction, or formulation preparation.



Formulation and Filling

Supports both fresh and cryopreserved formulation. After formulation, products can be directly filled—three bags per batch—with options for multi-bag filling.

Ordering Information

Equipment

Item No.	Package	Description
01010059	1 set	CellFAB One N Fully Automated Cell Manufacturing System

Disposable Cell Preparation Kits

Item No.	Package	Description
01020259	1 set	CAR-T Cell Preparation Disposable Kit – N System
01020373	1 set	NK Cell Preparation Disposable Kit – N System

● Process Software

Item No.	Software Name	Process Description
090100030	ONE-CN-S-001	Complete CAR-T preparation workflow: fresh leukopak PBMC separation + nanobead incubation + nanobead separation + activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling
090100031	ONE-CN-S-002	Complete CAR-T preparation workflow: fresh/frozen leukopak washing + nanobead incubation + nanobead separation + activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling
090100032	ONE-CN-S-003	Complete CAR-T preparation workflow: cryopreserved PBMC washing + nanobead incubation + nanobead separation + activation culture + medium exchange + viral transduction + expansion culture + harvest + formulation and filling

Product Specifications

General Specifications

Dimensions	1155×724×1723 mm ³ (W×D×H)
Weight	150 kg

Power Specifications

Power Requirements	100-240 VAC, 50/60 Hz
Power Consumption	900 VA

Interface Specifications

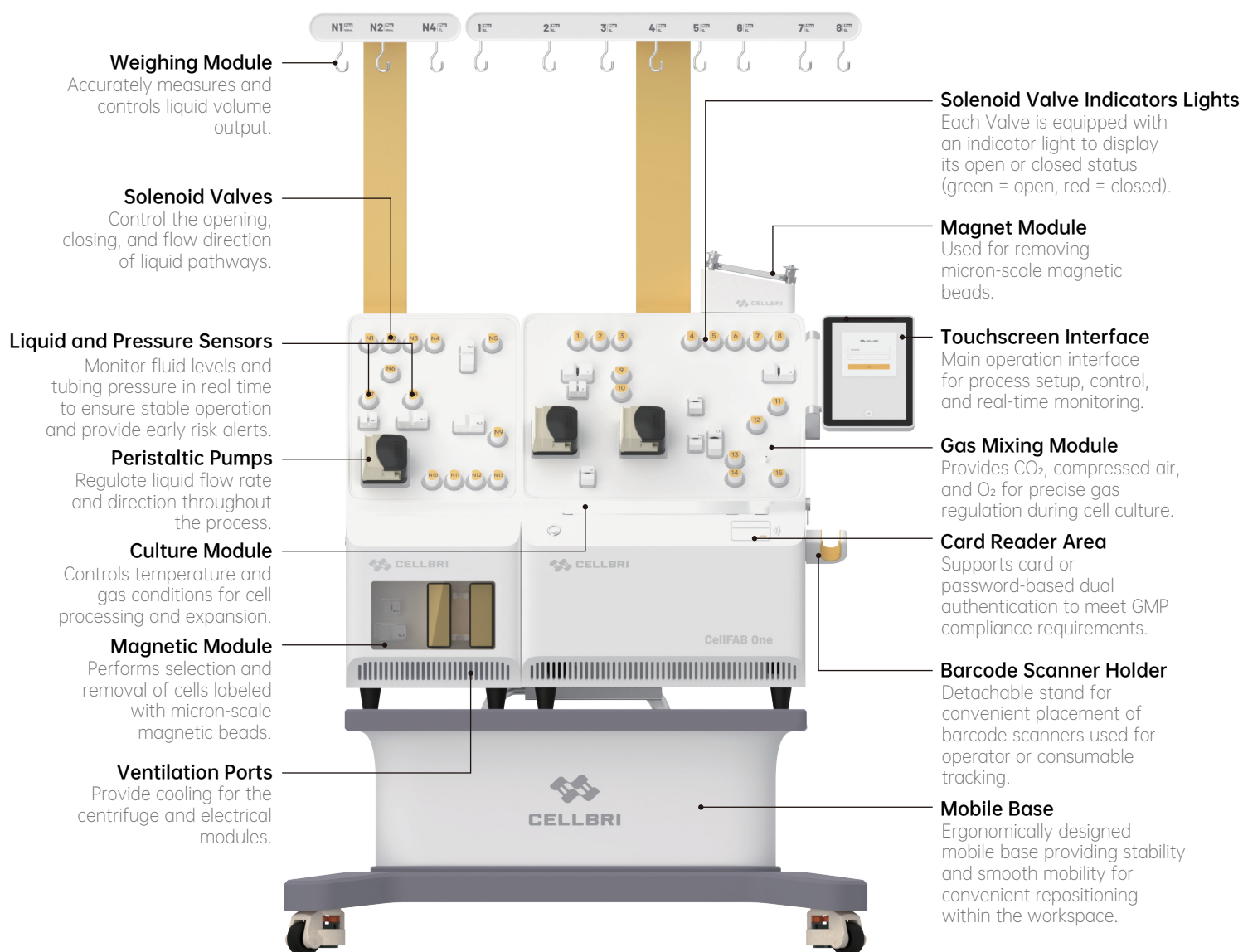
USB Ports	2 ports
Ethernet Port	100 Mbit/s Ethernet interface

Main Unit Specifications

Liquid Transfer Unit	Equipped with load cell, pinch valves, and peristaltic pumps; adjustable pump rate: 10–400 mL/min
Display	10.1" TFT capacitive touchscreen
Cell Separation Unit	Magnetic separation module
Centrifuge Chamber	Compatible with disposable tubing set; max centrifugal force: 420 g
Sensors	Pressure, liquid, temperature, leak, weight, and angle sensors
Centrifuge Chamber Temperature	4°C-38°C
Gas Control	Integrated mixing unit for CO ₂ , compressed air, and optional O ₂
Bag Hooks	11 hooks
Consumables	Fully enclosed disposable consumables minimize contamination risk
Software	Linux operating system
Included Accessories	Magnet ×1, barcode scanner ×1, cart ×1

CellFAB One MN

The CellFAB One MN, part of the fully automated cell manufacturing series by CellBri, is developed based on the Gentle Flex and Gentle Mags platforms. It integrates multiple functions—including magnetic bead incubation, cell separation, centrifugation, washing, cell culture, and magnetic bead removal—into one fully automated cell processing system.



Product Features



PBMC Separation

Supports whole blood, fresh leukopak, or peripheral blood samples for mononuclear cell isolation.



Fresh/Frozen Leukopak Washing

Process fresh or frozen leukopaks to remove plasma and replace it with magnetic separation buffer. Gentle parameters improve recovery and reduce cell stress.



Nanobead Separation

Integrates pre-filtration materials to reduce tubing blockage; supports column-free separation and compatibility with multiple magnetic bead brands.



Viral Transduction

Perform both static and dynamic centrifugal transduction (0-420g). Time, temperature, and gas parameters are flexibly adjustable for process optimization.



Magnetic Bead Removal

Residual beads <math>< 100 / 3 \times 10^6</math> cells.



Cell Washing

Supports washing after activation, post-transduction washing, and pre-formulation washing steps.



Cryopreserved PBMC Washing

Removes cryoprotectant and replaces it with culture medium; flexible parameter control minimizes cell damage.



Nanobead Incubation

Incubation temperature, time, and mixing parameters can be customized or run with default settings.



Activation Culture

Allows flexible adjustment of agitation speed and incubation time to meet specific culture requirements.



Expansion Culture

Supports culture volumes of 50-250 mL with cell densities up to $5E9$. Combines static and dynamic culture with automatic regulation of gas, concentration, and temperature. Sampling can be performed under Grade C aseptic conditions.



Cell Concentration

Offers both continuous-flow and single-batch concentration modes depending on culture volume and density.



Formulation and Filling

Supports both fresh and cryopreserved formulation. After formulation, products can be directly filled—three bags per batch—with options for multi-bag filling.

Ordering Information

Equipment

Item No.	Package	Description
01010060	1 set	CellFAB One MN Fully Automated Cell Manufacturing System

Disposable Cell Preparation Kits

Item No.	Package	Description
01020484	1 set	CAR-T Cell Preparation Disposable Kit – MN System

● Process Software

Item No.	Software Name	Process Description
090100033	ONE-CMN-S-001	Complete CAR-T preparation workflow: fresh leukopak PBMC separation + nano magnetic bead incubation + nano bead separation + micron bead activation culture + medium exchange + viral transduction + expansion culture + micron bead removal + harvest + formulation and filling
090100034	ONE-CMN-S-002	Complete CAR-T preparation workflow: fresh/frozen leukopak washing + nano magnetic bead incubation + nano bead separation + micron bead activation culture + medium exchange + viral transduction + expansion culture + micron bead removal + harvest + formulation and filling
090100035	ONE-CMN-S-003	Complete CAR-T preparation workflow: cryopreserved PBMC washing + nano magnetic bead incubation + nano bead separation + micron bead activation culture + medium exchange + viral transduction + expansion culture + micron bead removal + harvest + formulation and filling

Product Specifications

General Specifications

Dimensions	1155×724×1723 mm ³ (W×D×H)
Weight	152 kg

Power Specifications

Power Requirements	100-240 VAC, 50/60 Hz
Power Consumption	900 VA

Interface Specifications

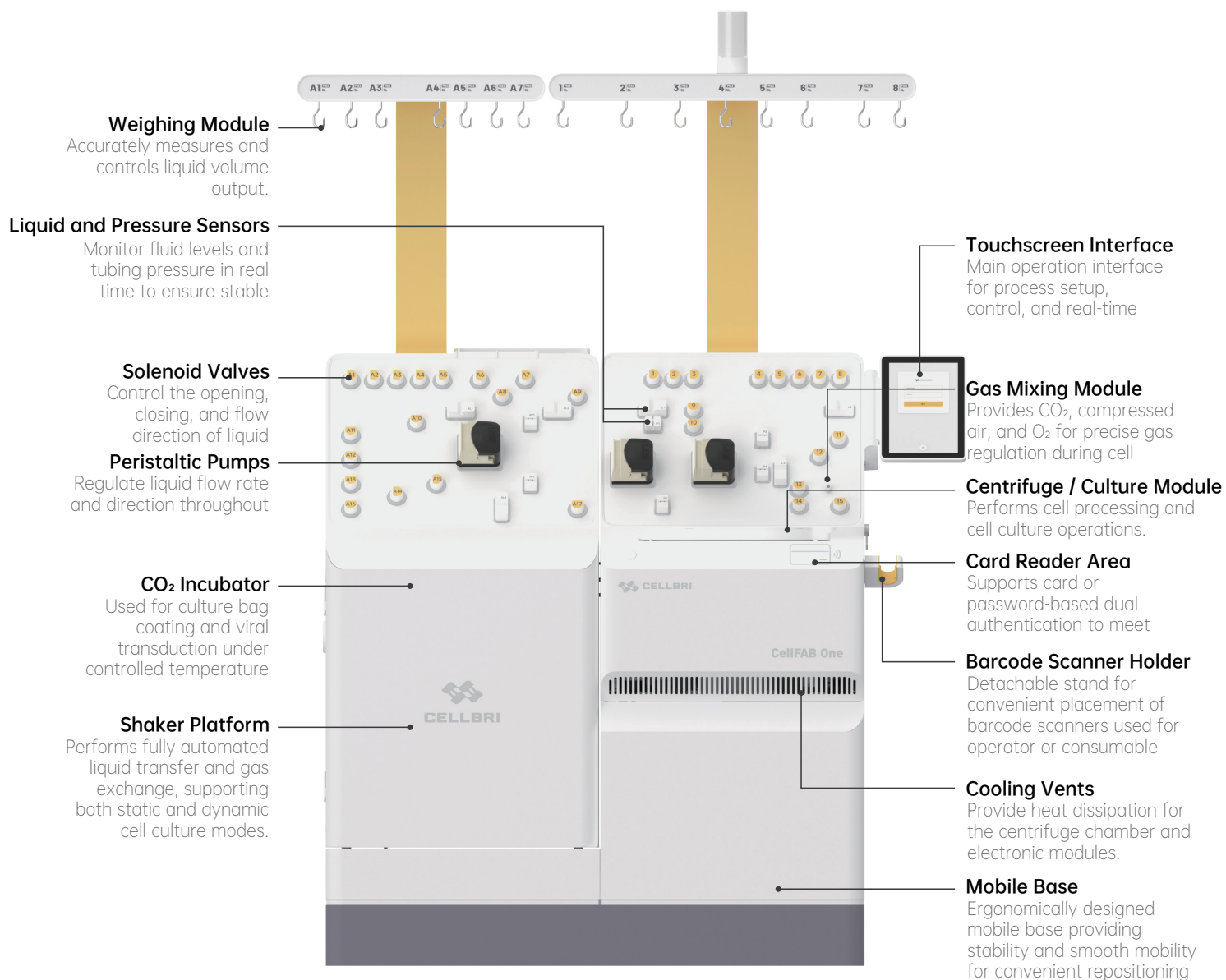
USB Ports	2 ports
Ethernet Port	100 Mbit/s Ethernet interface

Main Unit Specifications

Liquid Transfer Unit	Equipped with load cell, pinch valves, and peristaltic pumps; adjustable pump rate: 10–400 mL/min
Display	10.1" TFT capacitive touchscreen
Cell Separation Module	Separation column
Magnetic Bead Removal Module	Magnetic module
Centrifuge Chamber	Compatible with disposable tubing set; max centrifugal force: 420 g
Sensors	Pressure, liquid, temperature, leakage, and weight sensors
Centrifuge Chamber Temperature	4°C-38°C
Gas Control	CO ₂ , compressed air, and optional O ₂ mixing system
Bag Hooks	11 hooks
Consumables	Fully enclosed disposable consumables minimize contamination risk
Software	Linux operating system
Included Accessories	Magnet ×1, barcode scanner ×1, mobile cart ×1

CellFAB One I

The CellFAB One I is a fully automated cell processing system developed on the foundation of the Gentle Flex series platform. It integrates multiple cell manufacturing functions — including PBMC separation, cell activation, culture bag coating and viral transduction, cell harvesting, and formulation and filling — into a single streamlined and automated platform.



Product Features



PBMC Separation

Supports whole blood, fresh leukopak, or peripheral blood samples for mononuclear cell isolation.



Frozen PBMC Washing

Removes cryoprotectant and replaces it with culture medium; flexible parameter control minimizes cell damage.



Fresh/Frozen Leukopak Washing

Process fresh or frozen leukopaks to remove plasma and replace it with magnetic separation buffer. Gentle parameters minimize cell damage.



Antibody Activation Culture

Configurable agitation speed and incubation time parameters allow flexible process optimization for activation efficiency.



Viral Transduction

Perform both static and dynamic centrifugal transduction (0-420g). Time, temperature, and gas parameters are flexibly adjustable for process optimization.



Expansion Culture

Supports culture volumes of 50–250 mL with cell densities up to 5×10^9 cells through combined static and dynamic culture with automated gas and temperature regulation. Enables in-process sampling under ISO Class C conditions.



Cell Concentration

Offers both continuous-flow and single-batch concentration modes depending on culture volume and density.



Cell Washing

Supports washing after activation, post-transduction washing, and pre-formulation washing steps.



Formulation and Filling

Supports both fresh and cryopreserved formulation. After formulation, products can be directly filled—three bags per batch—with options for multi-bag filling.

Ordering Information

Equipment

Item No.	Package	Description
01010164	1 set	CellFAB One I Fully Automated Cell Manufacturing System

Disposable Cell Preparation Kits

Item No.	Package	Description
01020320	1 set	CAR-T Cell Preparation Disposable Kit – I System

● Process Software

Item No.	Software Name	Process Description
090100039	ONE-CMN-S-001	Complete CAR-T preparation workflow: PBMC separation + antibody activation culture + culture bag coating + viral transduction + expansion culture + harvest + formulation and filling

Product Specifications

General Specifications

Dimensions	1316 × 724 × 1723 mm ³ (W × D × H)
Weight	180 kg

Power Specifications

Power Requirements	100-240 VAC, 50/60 Hz
Power Consumption	900 VA

Interface Specifications

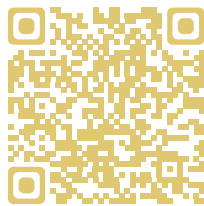
USB Ports	2 ports
Ethernet Port	100 Mbit/s Ethernet interface

Main Unit Specifications

Liquid Transfer Unit	Equipped with load cell, pinch valves, and peristaltic pumps; adjustable pump rate: 10–400 mL/min
Display	10.1" TFT capacitive touchscreen
Centrifuge Chamber	Compatible with disposable tubing set; max centrifugal force: 420 g
Sensors	Pressure, liquid, temperature, leakage, and weight sensors
Centrifuge Chamber Temperature	4°C-38°C
Gas Control	CO ₂ , compressed air, and optional O ₂ mixing system, supports gas input to culture incubator
Bag Hooks	12 hooks
Consumables	Fully enclosed disposable consumables minimize contamination risk
Software	Linux operating system
Included Accessories	Barcode scanner ×1, mobile cart ×1

Intelligent Equipment Supplier

Cell and Gene Therapy



Tel: 0755-27106806

Web: www.cellbri.com

E-mail: marketing@cellbri.com

Add: Building D, Zone 2, SynBio Industrial Park, Yinhe Avenue, Xinxu Street, Guangming District, Shenzhen, China

