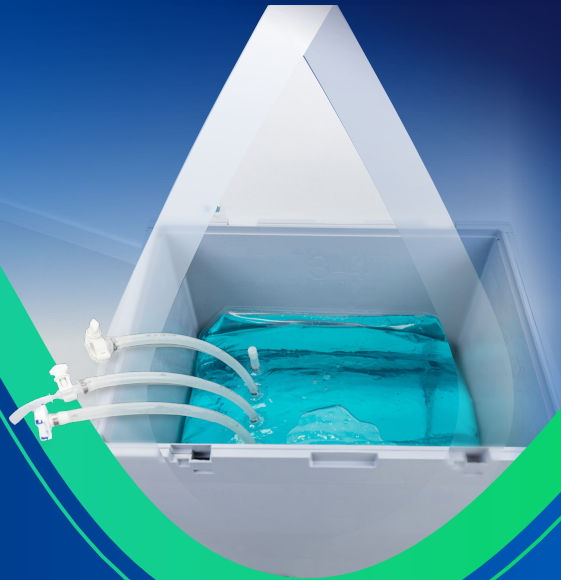


Bioprocess Containers

WHAT IS A SUPPORT CONTAINER VS. A BIOPROCESS BAG/LINER?

A support container is a reusable rigid vessel (plastic or stainless steel) designed to protect, position and enable handling of a product in a single-use bag or liner. The single-use bag is the product-contact component installed inside the support container.

HOW DO I CHOOSE BETWEEN PLASTIC AND STAINLESS-STEEL SUPPORT CONTAINERS?

Selection is typically driven by cleanroom/GMP handling or transport expectations, required durability, cleaning approach, integration needs (e.g., load cells, temperature control) and scale. Stainless-steel options are often preferred when robust, reusable GMP handling is required, while plastic options can simplify logistics when collapsibility and lightweight handling are priorities.

WHAT TYPES OF BIOPROCESS CONTAINERS DOES MASTERFLEX® OFFER?

Masterflex® provides two categories of support containers:

- Cylindrical tanks (LLDPE/Nalgene) typically supporting tank liners for open-top applications
- 3D bag cubic support containers constructed in plastic or stainless steel

WHAT APPLICATIONS ARE THESE CONTAINERS DESIGNED FOR?

Masterflex® containers support the full bioprocess workflow:

- Upstream: raw materials, media, buffer prep
- Downstream: intermediates, harvested materials
- Final fill-finish
- Chemical storage
- Waste management
- Inter- or intrafacility transportation of materials

WHAT MAKES MASTERFLEX® CONTAINERS DURABLE AND SAFE?

Key design features include:

- Robust materials of construction
- Resistance to chemicals and cleaning agents
- ISTA-certified shipping options
- Collapsible plastic stackable designs for flexible storage and staging
- Integrated pallet bases for forklift/pallet jack handling

WHAT VOLUMES ARE SUPPORTED BY STANDARD OFFERINGS?

Cylindrical tanks 50, 100, 200, 300 and 560 L

Cubic support containers

Plastic: 200, 500 and 1000 L

Stainless steel: 50, 200, 500, 1000 and 1500 L

WHAT HANDLING ACCESSORIES ARE AVAILABLE?

- Cleanroom-compatible dollies
- Options for push bars and integrated load cells
- Single-use bag powder port holders
- 2D powder and 3D direct dispense bag holders

WHAT STANDARD CONSUMABLES ARE AVAILABLE FOR THESE CONTAINERS?

Open-top tank liners

- 2D and 3D open-top geometries
- 3D closed geometries with drain lines
- Volumes: 50–560 L

3D storage bags

- 3 top ports, 1 bottom drain line
- Volumes: 50, 100, 200, 500, 1000 and 1500 L

WHAT ARE THE PRIMARY FILM CHARACTERISTICS FOR

Open-top tank liners (MGI film)

- PA/PE multilayer
- Oxygen transmission: <60 cc/m²/day
- Moisture vapor transmission: <6 g/m²/day

3D storage bags (IGB-F film)

- ULDPE contact layer
- EVOH barrier
- Oxygen transmission: 0.05 cc/m²/day
- Temperature range: –45 to 80 °C

WHAT MAINTENANCE IS REQUIRED?

Minimal. Periodic cleaning with standard, cleanroom-compatible cleaning agents is recommended.

ARE THE CONTAINERS SUITABLE FOR SHIPPING?

Yes, all cubic container shipping variants are designed with additional drain line protection and select standard plastic and stainless-steel containers are ISTA certified.

CAN CONTAINERS OR BAG ASSEMBLIES BE CUSTOMIZED?

The Masterflex® design team can create custom solutions tailored to your application:

- Nonstandard bag sizes and port locations
- Fluid management componentry supported by a component library of over 14,000 parts
- Engineered to order container designs

WHERE CAN I FIND DIMENSIONS, FOOTPRINT, MAX LOAD AND STACKING LIMITS FOR THE SUPPORT CONTAINER?

Detailed product specifications can be found within the Masterflex container datasheet. Contact your local sales rep for additional product details

ARE CONTAINERS COMPATIBLE WITH FORKLIFTS/PALLET JACKS AND CLEANROOM DOLLIES?

Masterflex plastic containers are mounted on integrated pallet bases designed for compatibility with pallet jacks and forklifts, enabling efficient interfacility transport. Stainless-steel containers can be configured with integrated locking caster wheels.

In addition, Masterflex provides both standard, configurable manual handling equipment (trolley) options and fully customized powered solutions.

Masterflex trollies are constructed from durable stainless steel. Each trolley is equipped with cleanroom-compatible 360° caster wheels featuring a locking mechanism. Configurable options include push bars and integrated load cells to support weight management and process control.

For questions, please contact your local sales rep or submit your inquiry at corporate.avantorsciences.com.