



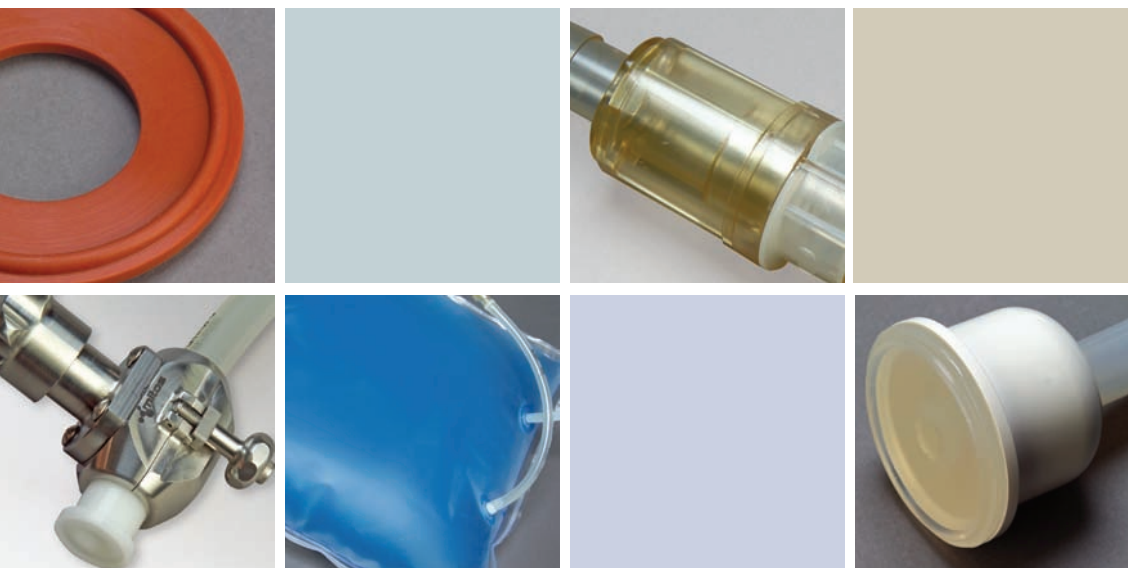
Systems  
Served

Introducing

**BIOSYSTEMS**

*Engineered Fluid-Handling Systems*





## THE KEY INGREDIENTS.

Design. Delivery. Flexibility.

These key ingredients blend to create

**BIOSYSTEMS**—a new line of engineered  
fluid-handling systems from Mitos.



# Now Serving... BIOSYSTEMS

## Design

- ▶ We create **complete systems** with the right components put together the right way. Our sales representatives and engineers are highly trained to help streamline your process and **increase efficiency** by knowing how each component works with and independent of the other pieces in your BIOSYSTEM. All you have to do is describe your needs and we'll serve you systems that better fit your process and eliminate steps wherever possible.
- ▶ BIOSYSTEMS are designed for quick installation, portability, change out and disposal. They **minimize validation costs** of capital equipment, cleaning and testing, which helps bring your product to market faster.

## Delivery

- ▶ Mitos offers the **best delivery times** in the industry. We bring things to the table quicker—whether it's pricing, solutions or final product. We can also deliver BIOSYSTEMS gamma irradiated, making them ready for use right out of the packaging.

## Flexibility

- ▶ Mitos has developed a complete line of synergistic components that can be mixed and matched to suit your tastes. The Mitos philosophy encourages **adaptation of design** so each BIOSYSTEM can evolve with your process, under your direction.



Engineered  
Fluid-Handling Systems  
by MITOS



# Menu of Options

## Bags

### ► DuraPure™ Bags

Mitos DuraPure™ bags are available in pillow and 3D styles, from 50mL to 1000L. Made from two films, DuraPure bags offer a high-purity contact surface with a durable exterior to protect your product. The inner film is virgin low-density polyethylene (LDPE). The outer film is a multifunctional co-extrusion of linear low-density polyethylene (LLDPE), ethylene vinyl alcohol (EVOH), and ethylene vinyl acetate (EVA). The outer film provides a secondary high-purity surface (LLDPE), a permeation barrier (EVOH), and puncture and tear resistance (EVA). DuraPure bags are USP Class VI and are animal free.



#### Product Contact Surface



### ► klave-it™ Bags

Now you have the option of autoclaving your bags. Mitos klave-it™ bags are made from a select Kynar® PVDF film designed to maintain flexibility, strength and impact resistance after sterilization by autoclave. Other benefits include chemical and solvent resistance, low TOC (total organic carbon) and low permeability. klave-it bags are USP Class VI, animal free and come in pillow and 3D styles.



### ► Ports

Mitos ports are made from the same material as DuraPure™ or klave-it™ bags and are sealed directly to the film. Bag ports feature a standard hose barb for tube connection and an extra-large sealing plate to maximize port-seal integrity. Ports are available in 1/8", 3/16", 1/4", 3/8", 1/2", 3/4" and 1" sizes.

## Tubing

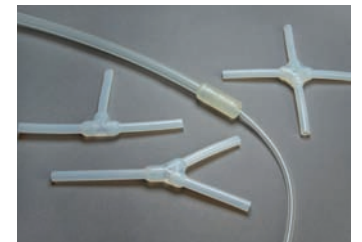
► Mitos offers an array of tubing ideal for any application. All tubing options are fully validated USP Class VI material manufactured under cGMPs with lot traceability and gamma irradiation and/or autoclave compatibility. mitos-P, mitos-C, mitos-R, STA-PURE® and C-FLEX® 374 are animal free. All styles are available in sizes 1/8", 3/16", 1/4", 3/8", 1/2", 3/4" and 1".

mitos-C	mitos-P	mitos-R	STA-PURE®	C-FLEX®374	Bioprene®
Nonreinforced platinum-cured silicone tubing designed for economy.	Nonreinforced platinum-cured silicone tubing with lot and part number etched on tubing. Ideal for peristaltic pumping and manifolds.	Polyester braid-reinforced platinum-cured silicone tubing with lot and part number etched on tubing. Designed for higher pressure applications.	Nonreinforced platinum-cured silicone tubing strengthened with Teflon® for superior peristaltic pump performance. Not gamma stable.	Thermoplastic elastomer with low permeability that can be heat sealed and bonded. Now animal free. Also available in 072 & 082 formulations.	Thermoplastic elastomer with low permeability that can be heat sealed and bonded. Performs well in peristaltic pumps.

## Connections

### ► Junction

Our connections give you flexibility in design and material. Available in silicone and thermoplastic elastomers (such as C-FLEX® and Bioprene®), connections come in any industry-standard shape, such as a T, Y, cross or reducer, and are available on tubing sizes 1/8" through 1".



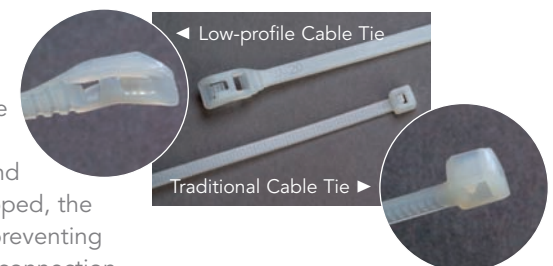
### ► CPC® Quick Disconnects

Quick Disconnects from CPC® are ideal for rapid change out and compatibility between components. Constructed of polysulfone or polycarbonate, Quick Disconnects feature a thumb latch that, when depressed, separates or reconnects the two pieces in seconds. The famous audible click lets you know that a secure connection has been made. Couplings are available for 1/4" ID to 1/2" ID tubing, with an optional shutoff valve that stops flow to prevent fluid spills upon disconnect.

\* Aseptic connecting devices are available. Please consult Mitos.

### ► Cable Ties

Mitos offers low-profile cable ties to secure barb connections. Compared with traditional cable ties, low-profile cable ties feature a contoured head to prevent puncture to packaging and surrounding components. When clipped, the stub retracts into the head, further preventing damage while maintaining a secure connection.



# Menu of Options

## Tri-Clamp® Fittings

### ► Integrated Silicone Fittings

Integrated silicone fittings are the ideal option for high reliability where product value is greatest. Integrated fittings are permanently bonded to the tubing to form a seamless fluid path with no leak points. Standard fittings feature an integrated gasket that makes connecting fittings faster and easier. Integrated silicone fittings are available on mitos-P, mitos-C, mitos-R and STA-PURE® tubing in mini, standard and step-up Tri-Clamp® styles. Each end comes with a polysulfone backup cup with a full wraparound design that makes it impossible to pull off.



### ► Integrated TPE Fittings—C-FLEX® & Bioprene®

Integrated fittings from Mitos are now available in TPE (thermoplastic elastomer). Known better by trade names such as C-FLEX and Bioprene, this material can be molded into mini and standard Tri-Clamp® styles. TPE fittings are permanently bonded to the tubing and provide an uninterrupted and reliable flow path.

End caps, gaskets and clamps are available for sealing off molded or plastic Tri-Clamp ends and are compatible with any size fitting available on your BIOSYSTEM.



## Steam-Sterilizable Fittings

### ► Steam-Thru™ Connectors

CPC's Steam-Thru™ Connector (STC) makes the steam-in-place process faster and easier. Steam passes directly through the connection, creating a one-step steam-in-place process without "dead leg" to reduce the risk of contamination. Constructed of polysulfone, the STC comes with a 3/8" or 1/2" barb and mini or standard Tri-Clamp® terminations.



### ► Mitos FREE FLOW™ Valve

The patented Mitos FREE FLOW™ valve never touches product so it never has to be cleaned between samples or additions. The valve is suitable for steam on/steam off requirements and multiple steamed connections. Just wrap the valve body around the integrated sanitary fitting on your BIOSYSTEM, attach it to your process line, steam to it, and then sample or add. Beyond steaming, the FREE FLOW valve is perfect for clamping tubing to isolate filters. Available in IDs up to 1", the FREE FLOW valve's seamless, straight-through fluid path is ideal for shear-sensitive products and can transfer volume fast.

## Tube Terminations

### ► Luer Caps & Barbs

Luer caps and barbs are constructed of natural polypropylene and available for 1/8", 3/16" and 1/4" tubing in female and male styles.

### ► Injection sites

Needleless, swabbable injection sites allow for non-sterile sampling or withdrawal from a BIOSYSTEM without contaminating the product stored within the system. Injection sites have a polycarbonate body and silicone valve.

### ► CPC® Quick Disconnect Caps & Plugs

CPC® Quick Disconnects are available in caps and plugs, sizes 1/4", 3/8", 1/2" and 3/4". Caps and plugs provide system integrity with the flexibility of attaching to connectors on other BIOSYSTEMS or equipment.

### ► Plugs

A simple, excellent method for sealing off open tube ends and maintaining the integrity of systems that have been gamma irradiated or sterilized. Standard plugs are made from natural polypropylene and are available in 1/8", 3/16", 1/4", 3/8" and 1/2" sizes.

### ► Heat-Sealed Ends

TPE tubing such as C-FLEX® and Bioprene® can be heat sealed, providing an impenetrable barrier to contaminants.



## Filters



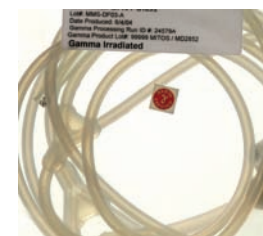
### ► U Speq™

Mitos' signature approach to specifying filters. During your design consultation, Mitos will characterize filter specifications based on your process and BIOSYSTEM design. With U Speq, you are not limited to a particular filter brand or style.

## Gamma Irradiation & Autoclave Options

### ► Gamma Irradiation

An excellent option for cost and time efficiency. Your BIOSYSTEM can be designed, constructed and gamma irradiated by Mitos to arrive at your door ready for use. This eliminates in-house assembly labor, cleaning procedures and validation and overall process time. Products are exposed to a min/max radiation range of 25 kGy to 45 kGy and shipped with a Certificate of Processing detailing the irradiation run and BIOSYSTEM lot number.



### ► Autoclave

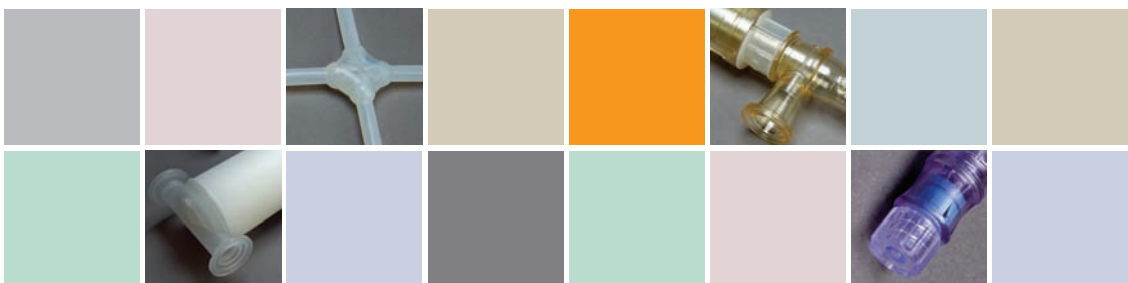
Some BIOSYSTEMS need to be sterilized after they have been connected to plant equipment or introduced to product. Mitos klave-it™ bags are the perfect option when sterilization by autoclave is required. Call us at 1.888.MITOS.01 for more details.



## ▶ THE MITOS PROCESS

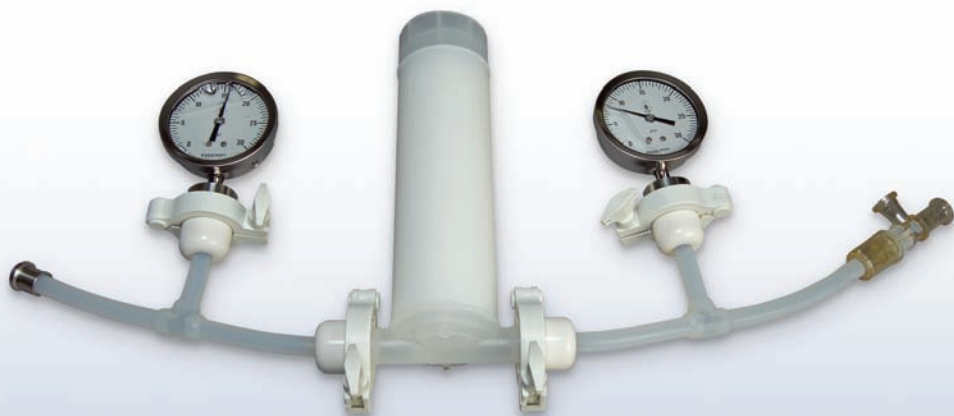
1. Call MitoS toll free at 1.888.MITOS.01 (1.888.648.6701).
2. Meet with MitoS. Describe your needs. A BIOSYSTEM is designed.
3. MitoS sends proposal.
4. Place your order.
5. Approve final drawings.
6. Your system is served.





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