SciLog[®] SELECT GO

Single-Use Reinvented



ENGINEERING YOUR SUCCESS.



SciLog[®] SELECT GO Single-Use Assemblies

SciLog[®] SELECT GO Single-Use Assemblies offer the speed of a standard single-use solution with the design flexibility to meet the individual needs of your process.

Product contact materials utilized in single-use components and assemblies are always under the spotlight – potentially now more than ever. Choosing non-standard or non-characterized materials can lead to delays in the implementation of single-use technology and delays within manufacturing for the end user.

With this in mind, the components selected for use within the SciLog® SELECT GO range have been chosen based upon the availability of validation data and an established supply chain.

The SciLog® SELECT GO design space solution uses a toolbox of validated parts and assemblies to build a configured solution for your process. It offers increased speed to market and the benefits of a robust and reliable supply chain.



Configured-to-order single-use assemblies from Parker's design space offer:

- Rapid design turnaround
- Rapid sample manufacture
- Reliable delivery
- Extensive validation package
- Localized manufacture





Lead time of eight weeks or less after order placement

SciLog[®] SELECT GO Configured from Design Space

- Extensive compliance and validation package
- Quotation in five days or less
- Shipped within eight weeks of order placement

Further customization is available within standard lead times.

SciLog[®] SELECT GO Certification

To allow for fast and easy implementation, all components within the SciLog[®] SELECT GO Single-Use Assembly design space have been pre-qualified so assemblies can be certified to the specification detailed below:

- USP <88> Biological Reactivity Tests for Plastics Class VI – 70°C
- USP <661> Plastic Containers Physiochemical Testing
- USP <788> Particulate Matter in Injections
- USP <85> Bacterial Endotoxins
- TSE/BSE Statement
- ASTM D4169-16 (Performance Testing of Shipping Containers)
- 2 year shelf life
- Gamma irradiation and sterlization according to ISO 11137







Components in the Design Space

Tubing	Retainers & Junctions	Connect & Disconnect	Tube Terminations & Sampling	Sensors	Bioprocess Containers	Filtration
Mitos-P Platinum cured silicone for peristaltic pumps	Oetiker® Clamps (Retainer)	AseptiQuik® Aseptic connect (genderless)	Luer Caps & Barbs Needleless Injection Sites	Temperature Conductivity	C93 Durapure 2D bags	PROPOR Membrane Filters (Sterile filtration & bioburden reduction)
Mitos-R Reinforced platinum cured silicone for high pressure applications	BarbLocks® (Retainer)	HFC39 Aseptic disconnect				
		MPX/MPC Non-aseptic connect / disconnect			C93 Durapure 3D bags	
C-Flex® Thermoplastic elastomer (TPE) for heat welding / sealing	Tie Wrap (Retainer)					PROCLEAR Depth Filters (Clarification & prefiltration)
		Crimped Disconnect	Pips / Tube Plugs	Pressure	Closed System Container System bottles	
Bioprene Thermoplastic elastomer (TPE) for pumping elements	Barbed Junctions Y's, T's, X's, reducers and elbows					
		Tri-Clamp® Barbed (maxi and mini flange)				
	Overmolded Junctions Y's, T's, X's and reducers		Pipetting Needles	Flow	Sample Bottles	PVDF Vent Filters
Pharmed® Thermoplastic elastomer (TPE) for peristaltic pumps		Integtrated Silicone & TPE Tri-Clamp® Overmolded				

Tubing

Tubing is typically the key consideration of any single-use system due to its use in creating a fluid flowpath within the assembly. Within SciLog[®] SELECT GO, a selection of industry recognized tubing types have been chosen to enable a broad coverage of process conditions including:

- pumping characteristics pressure rating process compatibility
- connectability

All tubing types are available in sizes ranging from $^{1}\!/_{\!8}^{\,\prime\prime}$ to 1" ID.

Mitos-P Platinum cured silicone

Mitos-P is widely used for single-use biopharm applications such as pH control and media feed in fermentation, accurate metering, transfer and filtration.

It is transparent and colourless with a low spallation making it an ideal choice for uses which include peristaltic pumping. It is rated to 1 bar once incorporated into an assembly.

Mitos-R Platinum cured silicone (reinforced)

Mitos-R is reinforced with a polyester yarn braiding within the wall structure. It is opaque and, due to the increased rigidity, is not suitable for applications requiring peristaltic pumping.

Once incorporated into an assembly, it is capable of withstanding 4 bar pressure making it an ideal choice for higher pressure applications.

C-Flex[®] (374 &082) Thermoplastic elastomer

C-Flex[®] tubing is the most popular and widely used TPE tubing in the biopharmaceutical industry. The C-Flex range can be heat welded and sealed and is suitable for processes where permeability through the tubing is a concern. Being less flexible than silicone, it is not advised for use in peristaltic pumps. It is rated to 1 bar once incorporated into an assembly.

Bioprene Thermoplastic elastomer

Bioprene tubing is a low spallation TPE tubing which is capable of withstanding 4 bar of pressure once incorporated into an assembly. This makes it an excellent choice when TPE is required for use within a peristalitc pump in higher pressure applications.

PharMed[®] BPT Thermoplastic elastomer

PharMed[®] BPT tubing is an ideal tubing for peristaltic pumping of sensitive bioprocess fluids and for clean-in-place and steam-in-place cleaning. It is less permeable to gases and vapours than silicone tubing and has excellent chemical resistance. Due to it being opaque to visable and UV light, it is ideal when protecting light sensitive fluids.









Bioprocess Containers

Within SciLog[®] SELECT GO, a selection of industry recognized fluid contact materials have been selected to ensure that there is broad compatibility. Selection of the correct type of bioprocess container is dependent of end-user needs with some criteria being:

- temperature
- process compatibility
- volume
- connectability

All bags are supplied with LDPE ports for connection to tubing in sizes ranging from 1/8 to 1" ID.

C93 Durapure 2D bags

C93 is a high clarity, medical grade film designed to provide strength, flexibility and a gas barrier as well as low extractables. The product contact layer of this five-layer film is ultra low density polyethylene (ULDPE) and the gas barrier is ethylene vinyl alcohol (EVOH). The recommended working temperature is 0 to 60 °C. The bags can be supplied in both pillow and hanging formats.

C93 Durapure 3D bags

C93 is a high clarity, medical grade film designed to provide strength, flexibility and a gas barrier as well as low extractables. The product contact layer of this five layer film is ultra low density polyethylene (ULDPE) and the gas barrier is ethylene vinyl alcohol (EVOH). The recommended working temperature is 0 to 60 °C. 3D bags should be supported with an appropriate tote.

Closed System Container System bottles

Parker's patented closed system container is available in a variety of sizes and enables secure and integral storage of biopharmaceutical solutions, not only in storage and transport, but also during freeze thaw. The bottle is designed to retain its sealing forces down to -90 °C due to the design of the patented energizer system.

Sample bottles

A range of polycarbonate and PETG sample bottles are available upon request.







Retainers

Retainers form an integral part of any singe-use assembly. Whether it is to secure tubing to joint, an end fitting or a bioprocess container, retainers ultimately ensure the robustness of the assembly and prevent against unwanted leaks. There are several retainer types within SciLog® SELECT GO with some of the selection critera being:

• material of construction • attachment mechanism • process compatibility • connectability

Oetiker[®] Clamp Barbed

Oetiker[®] clamps are made from stainless steel and offer a 360 degree compression with an automated tensioning system which can be applied to a known force. They have a long history of being used within high pressure hose applications.

They work with all flexible tubing and are available in many sizes.

Barblock[®] Barbed

Barblocks[®] are available in either polypropylene or PVDF and offer a 360 degree compression with an automated attachment mechanism.

They work with all flexible tubing and are available in many sizes.

Tie Wrap Barbed

Tie wraps are available in a wide range of sizes and they work with all flexible tubing.







Junctions

Junctions determine the overall flowpath of the bioprocess solution by allowing tubing to be connected together and are available in many different shapes and sizes to match the tubing size range mentioned earlier. Within SciLog® SELECT GO, a selection of barbed or overmolded junctions are available with some of the selection critia being:

• process compatibility • availability of sizes • tubing types • connectability

Polypropylene Barbed

Polypropylene junctions are available in the following versions:

• barbed T • barbed X • barbed Y • barbed reducers / straights • barbed elbows

They work with all flexible tubing and are available in many sizes.

Silicone & TPE Overmolded

Silicone overmolded junctions are available in the following versions:

• overmolded T • overmolded X • overmolded Y • overmolded reducers / straights

Overmolded junctions can only be used to join the same tubing types and are not suitable for all scenarios.



Quick Connect and Disconnect

Where there is a requirement for tubing to be either connected or disconnected in a robust manner, a range of connection types have been incorporated into SciLog[®] SELECT GO. The choice is utlimately down to the end-user's process with some of the selection criteria being:

• sterility requirements • location of process • process compatibility • connectability

AseptiQuik[®] Aseptic connect (genderless)

AseptiQuik[®] connectors enable quick and easy sterile connections even in non-sterile environments. They are available in sizes ranging from 1/8 to 1" and their genderless format makes it easier to plan and connect assemblies.

HFC39 Aseptic disconnect

HFC39 series couplings provide aseptic disconnect functionality. Automatic shutoff valves close off the flowpath at disconnection, protecting valuable media while also eliminating the need for pinch clamps and tube welders. An easy-to-use thumb latch design provides a secure, leak-free connection as well as enabling one-handed disconnects.

MPX/MPC Non-aseptic connect / disconnect

Choose from a full range of connectors and configurations, including pressure sealing caps and plugs in sizes ranging from 1/8 to 3/4. MPX / MPC couplings offer optional locking sleeves to further guard against accidental disconnects. In addition coupling halves can be rotated when connected to reduce tube kinks.

Crimped Disconnects

Novaseal[™] stainless steel crimps are ideal for protecting process fluids from the outside environment at all times. Ideal for sampling, transporting or transferring fluid, the crimp utilizes its metallic wall structure to compress the tubing together to form a robust seal without introducing any additional materials of construction.







Traditional Sanitary Connections

Where there is a requirement for tubing to be either connected or disconnected using traditional sanitary fittings, a range of Tri-Clamp[®] styles and sizes have been incorporated into SciLog[®] SELECT GO. The choice is ultimately down to the end user's process, with some of the selection critera being:

- process compatibility
- location of process
- material of construction connectability

connectability

Tri-Clamp[®] Barbed (maxi and mini flange)

Made from polypropylene, these fittings feature a radiused flow surface controlled to a 15 micron Ra to ensure a smooth, uninterupted flow and no particulate build-up. They can be used with all tubing types.



Integrated Silicone & TPE Tri-Clamp® Overmolded

Integrated silicone fittings are an option for high reliability where product value is greatest. They offer a seamless fluid path with no leak points and are available for Mitos-P, Mitos-R and C-Flex® tubing.



Accessories

End caps, gaskets and clamps are available for sealing of molded or plastic Tri-Clamp[®] ends and are compatible with any size fitting.

Tube Terminations & Sampling

Where there is a requirement for tubing to be either closed or a requirement for sampling, a range of tube terminations and sampling options have been incorporated into SciLog® SELECT GO. The choice is ultimately down to the end user's process with some of the selection criteria being:

• protection requirements • sampling methodology • location of process • connectability

Luer Caps & Barbs

Manufactured from polypropylene, luer caps and barbs are available for $\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ tubing in female and male format.

Needleless Injection Sites

Needleless, swabable injection sites allow for sampling without contaminating the product stored within the system. They have a polycarbonate body and silicone valve.

Pips / Tube Plugs

Pips or tube plugs provide a simple method for sealing off open tube ends and maintaining the integrity of systems that have been gamma irradiated or sterilized. They are manufactured from polypropylene.

Pipetting Needles

A range of blunted end needles manufactured from either 304 or 316 stainless steel and fitted with stainless steel hubs designed for specialist applications, corrosive materials or critical procedures.











Single-use sensors are designed for incorporation into single-use systems to allow for greater process control. The sensors are pre-calibrated which reduces set-up time and avoids contamination risks associated with field calibration. Measurement requirements include:

- pressure
- conductivity
- temperature

• flow

Sensors are available in several connection sizes for ease of scale-up througout process development.

SciLog[®] SciPres Single-use pressure sensors

Parker's proprietory pressure sensors arrive pre-calibrated and include a gamma-stable memory device that stores calibration data and sensor-specific information for traceability. The monitoring and control of process pressures can increase the efficiency and safety of filtration and purification operations.

SciLog[®] SciCon Single-use conductivity sensors

Parker's proprietory conductivity sensors arrive pre-calibrated and include a gammastable memory device that stores calibration data and sensor-specific information for traceability. The monitoring and control of process conductivities can increase the efficiency of downstream operations such as diafiltration and chromatography.

SciLog[®] SciTemp Single-use temperature sensors

Parker's proprietory temperature sensors arrive pre-calibrated and include a gammastable memory device that stores calibration data and sensor-specific information for traceability. Typical uses include the monitoring and control of critical applications such as virus filtration that are validated within a specific temperature range.

Equflow Flow sensors

Equflow turbine flow sensors offer a wide array of features and are uniquely suited for many bioprocess flow measurement challenges. Equflow sensors arrive with a pre-calibrated K-factor, are gamma-stable, and have the added simplicity of the electronics being located within a range of associated guick release mounts.







Filtration

From media preparation and cell culture harvest to purification and final fill, Parker offers a range of filtration capsules for integration into SciLog[®] SELECT GO single-use assemblies with selection based on the following critera:

- pore size
- filtration method
- process compatibility
- connectability

PROPOR & PROCLEAR Normal flow filters

Parker's PROPOR range of PES membrane filters combined with the PROCLEAR range of prefilters are specifically designed and validated for use in all biopharmaceutical normal flow filtration applications such as Mycoplasma removal, sterilization, bioburden reduction and general clarification.

PVDF Vent Filters

A range of PVDF hydrophobic vent filters are available which can be attached to various locations on the assembly - whether it is tubing, bags or bottles - to ensure that internal pressure can be released while protecting the contents of the assembly from the outside atmosphere.



SciLog[®] Automated Bioprocess Systems

SciLog[®] SELECT GO single-use assemblies can be integrated into automated systems for applications such as:

• normal flow filtration

• tangential flow filtration

• virus filtration

• bulk final fill



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