



Bioreactor Component Parts

Available in 2, 3, 5, 7 and 15L Sizes

Like-for-like replacement parts for Applikon® Biotechnology and Broadley-James® brand bioreactors.

Agitator Assemblies designed to ensure a contamination-free seal around the shaft.

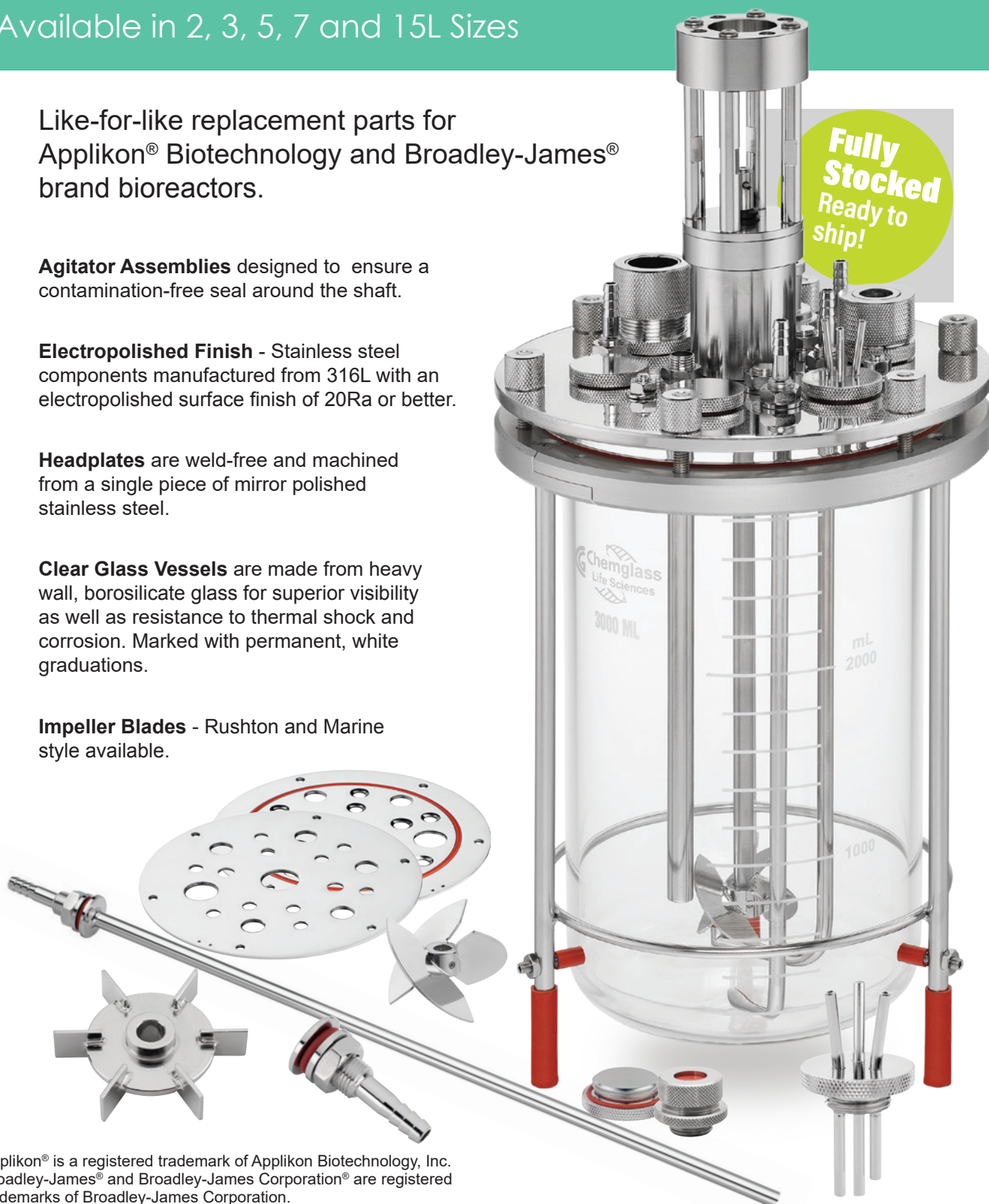
Electropolished Finish - Stainless steel components manufactured from 316L with an electropolished surface finish of 20Ra or better.

Headplates are weld-free and machined from a single piece of mirror polished stainless steel.

Clear Glass Vessels are made from heavy wall, borosilicate glass for superior visibility as well as resistance to thermal shock and corrosion. Marked with permanent, white graduations.

Impeller Blades - Rushton and Marine style available.

**Fully Stocked
Ready to
ship!**



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CLS-1380-01

Chemglass Life Sciences is pleased to announce the availability of like-for-like, replacement components for the popular 2, 3, 5, 7 and 15 liter sizes of Applikon® and Broadley-James® bioreactors. All stainless steel components are manufactured from 316L stainless with an electropolished surface finish of 20Ra or better. Borosilicate glass vessels include jacketed and unjacketed versions.

Please contact us directly if you require any parts not shown here.

UNJACKETED GLASS BIOREACTOR VESSEL

Vessels are constructed of heavy wall tubing and are graduated in 200mL subdivisions with numbers every 1000mL.

| Part Number | Vessel Cap. (L) | Vessel Min. Working Volume (L) | Vessel I.D. (mm) | Overall Height (mm) |
|-------------|-----------------|--------------------------------|------------------|---------------------|
| CLS-1379-01 | 2 | 0.5 | 105 | 246 |
| CLS-1380-01 | 3 | 0.5 | 130 | 260 |
| CLS-1382-01 | 5 | 1.0 | 160 | 260 |
| CLS-1383-01 | 7 | 2 | 160 | 360 |
| CLS-1385-01 | 15 | 2.5 | 222 | 446 |



CLS-1380-STD3
 CLS-1382-STD5
 CLS-1383-STD7
 CLS-1383-STD15

TRIPOD STAND FOR UNJACKETED VESSEL

Stand to hold unjacketed bioreaction vessels. Top, two-piece ring is made of anodized aluminum while the lower ring and legs are electropolished stainless steel. Stands come complete with silicone o-ring and six, knurled nuts to attach the headplate to the stand.

| Part Number | Vessel Cap. (L) | Replacement Silicone O-Ring |
|----------------|-----------------|-----------------------------|
| CLS-1380-STD3 | 2-3 | CLS-1705-150X4 |
| CLS-1382-STD5 | 5 | CLS-1705-177X4 |
| CLS-1383-STD7 | 7 | CLS-1705-177X4 |
| CLS-1385-STD15 | 15 | CLS-1705-274 |

JACKETED GLASS BIOREACTOR VESSEL

Jacketed vessels are constructed of heavy wall tubing and are graduated in 200mL subdivisions with numbers every 1000mL. Connections to circulator are GL-18 glass threads and are supplied complete with caps and plastic hose connections. **15L jacketed vessels available - please contact us.**

| Part Number | Vessel Cap. (L) | Vessel Min. Working Volume (L) | Vessel I.D. (mm) | Overall Height (mm) |
|-------------|-----------------|--------------------------------|------------------|---------------------|
| CLS-1381-01 | 3 | 0.5 | 130 | 275 |
| CLS-1382-30 | 5 | 1.0 | 130 | 275 |
| CLS-1384-01 | 7 | 2 | 160 | 375 |



CLS-1381-01

TRIPOD STAND FOR JACKETED VESSEL

Stand to hold jacketed bioreaction vessels. Top, two-piece ring is made of anodized aluminum while the lower ring and legs are electropolished stainless steel. Stands come complete with silicone o-ring and six, knurled nuts to attach the headplate to the stand. **Stands for 15L jacketed vessels available - please contact us.**

| Part Number | Vessel Cap. (L) | Replacement Silicone O-Ring |
|---------------|-----------------|-----------------------------|
| CLS-1381-STD3 | 2-3 | CLS-1705-150X4 |
| CLS-1386-STD5 | 5 | CLS-1705-177X4 |
| CLS-1384-STD7 | 7 | CLS-1705-177X4 |

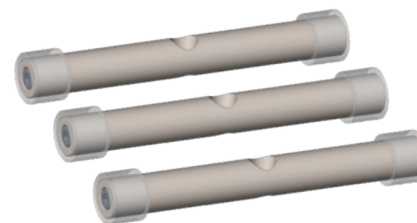
| Part Number (Replacement Part) | Description |
|--------------------------------|---|
| CLS-1380-084 | Silicone Feet (3) for 3-7L Reactor Tripod Stand |


 CLS-1381-STD3
 CLS-1381-STD5
 CLS-1384-STD7

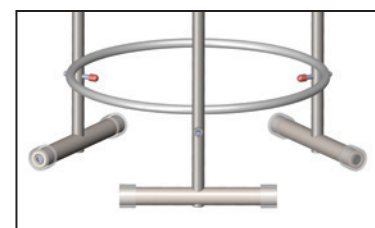
STABILIZER BARS FOR 15L STANDS, SET OF 3

Six-inch long bar attaches to legs of 15 liter stands and adds an additional measure of safety to the 15 liter bioreactor. Sold as a set of three.

| Part Number | Description |
|---------------|---|
| CLS-1385-SBD3 | Stabilizer Bars, Set of Three, for 15L Stands |



CLS-1385-SBD3



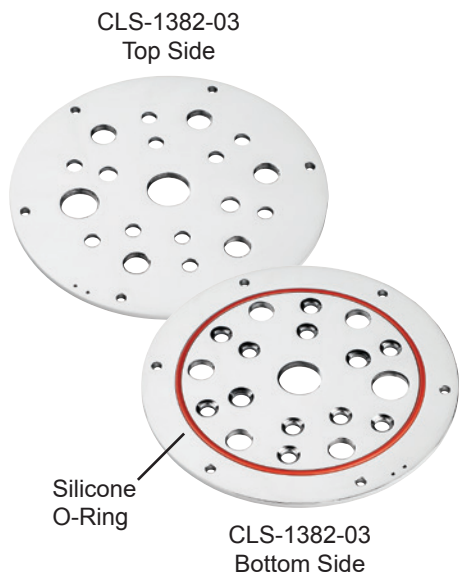
Stabilizer bars shown installed on a 15L bioreactor stand.



CLS-1380-05
CLS-1383-04
CLS-1385-05
CLS-1385-35



CLS-1380-SAR1



CLS-1382-03
Top Side

CLS-1382-03
Bottom Side

Silicone
O-Ring

AGITATOR ASSEMBLY

Agitator assembly is constructed of 316L stainless steel and screws into the M30 thread in the center of the headplate. Design ensures contamination-free sealing around the shaft. CLS-1385-05 attaches to the headplate with 4 bolts. CLS-1385-35 requires adapter plate, CLS-1385-30, for use in a 15L reactor.

| Part Number | Vessel Cap. (L) | Replacement Silicone O-ring | Length of Shaft Through Headplate (mm) | Shaft Dia. (mm) |
|-------------|-----------------|-----------------------------|--|-----------------|
| CLS-1380-05 | 2-5 | CLS-1705-124 | 222 | 8 |
| CLS-1383-04 | 7 | CLS-1705-124 | 300 | 8 |
| CLS-1385-05 | 15 | CLS-1705-131 | 392 | 15 |
| CLS-1385-35 | 15 | CLS-1705-131 | 390 | 8 |

REBUILD KITS for AGITATOR ASSEMBLIES

Kits of o-rings, seals and bearings to rebuild agitator assemblies.

| Part Number | Fits Agitator | Shaft Size (mm) |
|---------------|---|-----------------|
| CLS-1380-05PM | CLS-1380-05 CLS-1383-04 CLS-1385-35 | 8 |
| CLS-1385-05PM | CLS-1385-05 | 15 |

SARTORIUS® MOTOR ADAPTER KIT, FOR BIOREACTORS

Kit to convert Applikon® style Agitator Assemblies to fit a Sartorius® Motor

| Part Number |
|---------------|
| CLS-1380-SAR1 |

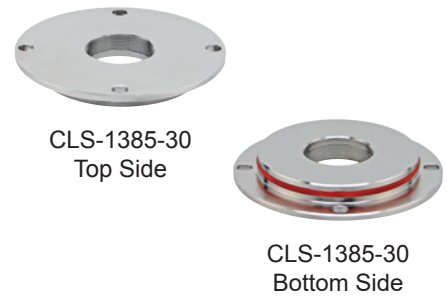
HEADPLATE

Headplate is constructed of 316L stainless steel and electropolished to a mirror finish. Supplied complete with a silicone o-ring that mates to the glass vessel. Number and size of ports as listed.

| Part Number | Vessel Cap. (L) | Replacement Silicone O-Ring | | |
|-----------------------|-------------------------------|-----------------------------|-------------|--|
| CLS-1379-02 | 2 | CLS-1705-135X4 | | |
| 16 Total Ports | M30 Center | 1 each G-3/4 | 5 each M18 | |
| | 6 each M10 | 3 each M6 | | |
| CLS-1380-03 | 3 | CLS-1705-135X4 | | |
| 18 Total Ports | M30 Center | 1 each G-3/4 | 5 each M18 | |
| | 2 each M12 | 6 each M10 | 3 each M6 | |
| CLS-1382-03 | 5 and 7 | CLS-1705-260 | | |
| 19 Total Ports | M30 Center | 1 each G-3/4 | 5 each M18 | |
| | 2 each M12 | 10 each M10 | | |
| CLS-1385-03 | 15 | CLS-1705-373 | | |
| 19 Total Ports | 69mm Center Port for Agitator | | | |
| | 6 each M27 | 2 each M12 | 10 each M10 | |

ADAPTER PLATE, 15L BIOREACTOR TO M30

For conversion of the 15 liter headplate, CLS-1385-03, from a 69mm opening to an M30 thread, thereby accepting the CLS-1385-35 agitator assembly.



Part

| Part Number | Description |
|-------------|--------------------|
| CLS-1385-30 | Adapter Plate, M30 |

MARINE STYLE IMPELLER BLADES

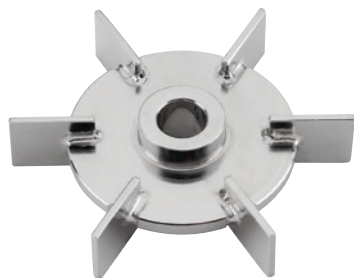
Marine style impeller blades are available in two styles, vortexing and scoping. The 2 through 7 liter sizes fit the 8mm shaft of the agitator assembly. The 15 liter has an option of either the 8mm or the 15mm shaft size. These blades are used primarily for mammalian cell culture work.



CLS-1382-06



CLS-1382-05



CLS-1382-07

| Part Number | Impeller Type | Fits Reactor (L) | Fits Shaft Size (mm) | Impeller Dia. (mm) |
|-------------|---------------|------------------|----------------------|--------------------|
| CLS-1380-06 | Vortex (Down) | 2-3 | 8 | 43 |
| CLS-1380-07 | Scoping (Up) | 2-3 | 8 | 43 |
| CLS-1382-05 | Vortex (Down) | 5-7 | 8 | 59 |
| CLS-1382-06 | Scoping (Up) | 5-7 | 8 | 59 |
| CLS-1385-06 | Vortex (Down) | 15 | 15 | 76 |
| CLS-1385-07 | Scoping (Up) | 15 | 15 | 76 |
| CLS-1385-36 | Vortex (Down) | 15 | 8 | 76 |
| CLS-1385-37 | Scoping (Up) | 15 | 8 | 76 |

RUSHTON STYLE IMPELLER BLADES

The 3 through 7 liter sizes fit the 8mm Shaft, while the 15 liter fits the 15mm shaft. These blades are used primarily for bacterial cell culture work.

| Part Number | Fits Reactor (L) | Impeller Diameter (mm) | Fits Shaft Size (mm) |
|-------------|------------------|------------------------|----------------------|
| CLS-1380-08 | 2-3 | 48 | 8 |
| CLS-1382-07 | 5-7 | 60 | 8 |
| CLS-1385-20 | 15 | 76 | 15 |
| CLS-1385-50 | 15 | 76 | 8 |



CLS-1380-100

HEADPLATE ASSEMBLY STAND

Constructed of blue anodized aluminum, stand permits easy assembly of components into headplates. Will fit from 2 to 15 liter headplates, which are secured with four nylon-tipped thumb screws. Plate is eight inches wide by eight inches deep.



Assembly Stand in Use

| Part Number | Description |
|--------------|--------------------------|
| CLS-1380-100 | Headplate Assembly Stand |

Double Port Adapter



CLS-1380-57

DOUBLE PORT ADAPTER, M18

The double port adapter fits into the headplate and has two connections that are 4mm OD to fit precision tubing size 16. Inside the reactor, the 4mm tubes are 1.25" long.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| CLS-1380-57 | M18 | CLS-1705-20x2 |



CLS-1380-09

Triple Port Adapter

TRIPLE PORT ADAPTER, M18 and M27

The triple inlet adapter fits into a headplate port and incorporates three separate pipes in one assembly for efficient use of space. The adapter has three, 1/8" (3.2mm) tubing ports for connection to flexible tubing and can be used individually for reagent addition. Inside the reactor, the 1/8" tubes are 3/4", 1" and 1 1/8" long.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| CLS-1380-09 | M18 | CLS-1705-20X2 |
| CLS-1385-08 | M27 | CLS-1705-121 |

Also available: **4-Port Adapters (Thread Size: M27)** and **5-Port Adapters (Thread Size: G 3/4)**

CLS-1380-404



CLS-1380-501



Level Sensor Adapter



CLS-1380-92

LEVEL SENSOR ADAPTER

Used to install a 1/4" OD (6.35mm) level sensor into an M10 headplate port.

| Part Number | Thread Size |
|-------------|-------------|
| CLS-1380-92 | M10 |

AERATION TUBE WITH POROUS SPARGER, M10

The 15µm, sintered metal tip produces tiny air bubbles for optimum gas distribution. The "A" dimension listed allows for placement in different ports of the headplate. **NOTE:** Replacement o-ring listed is for M10 connection.

| Part Number | Fits Reactor (L) | Immersion | Dim. "A" (mm) | Replacement Silicone O-Ring |
|-------------|------------------|-----------|---------------|-----------------------------|
| CLS-1379-04 | 2 | 236 | 48 | CLS-1705-85X25 |
| CLS-1380-12 | 3 | 238 | 50 | CLS-1705-85X25 |
| CLS-1382-08 | 5 | 238 | 73 | CLS-1705-85X25 |
| CLS-1383-06 | 7 | 330 | 73 | CLS-1705-85X25 |
| CLS-1385-11 | 15 | 420 | 93 | CLS-1705-85X25 |

Replacement Sparger Tips

| Part Number | Porosity (µm) | Replacement Silicone O-Ring |
|-------------|---------------|-----------------------------|
| CLS-1380-14 | 10 | CLS-1705-008 |
| CLS-1380-15 | 15 | CLS-1705-008 |
| CLS-1380-16 | 50 | CLS-1705-008 |
| CLS-1380-17 | 100 | CLS-1705-008 |

THERMOWELL, M10

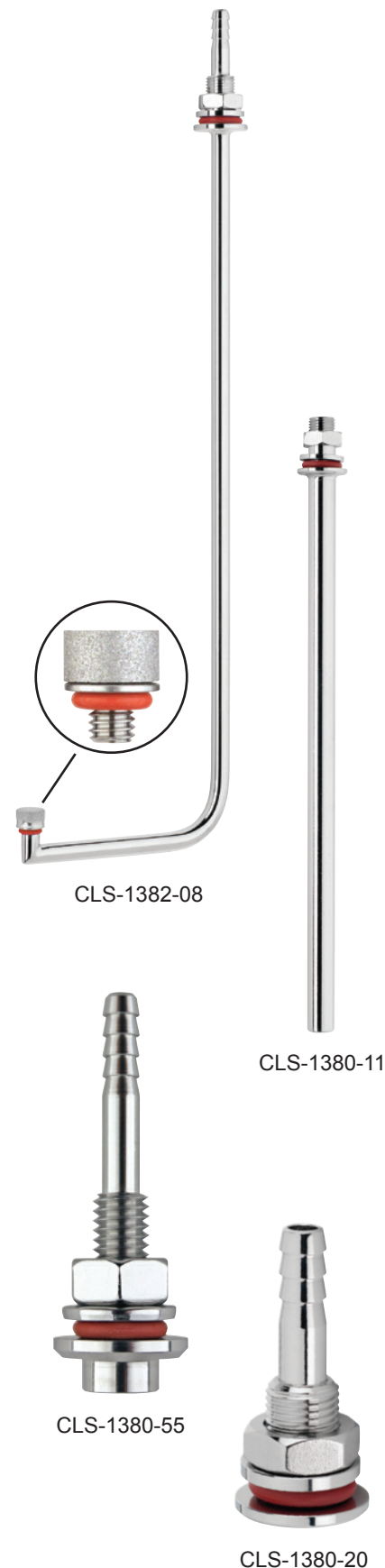
M10 threaded thermowell having an I.D. of 0.310" that will accept 1/4" thermocouple probes. To enhance temperature measurement, the thermowell should be partially filled with a heat conducting silicone or mineral oil.

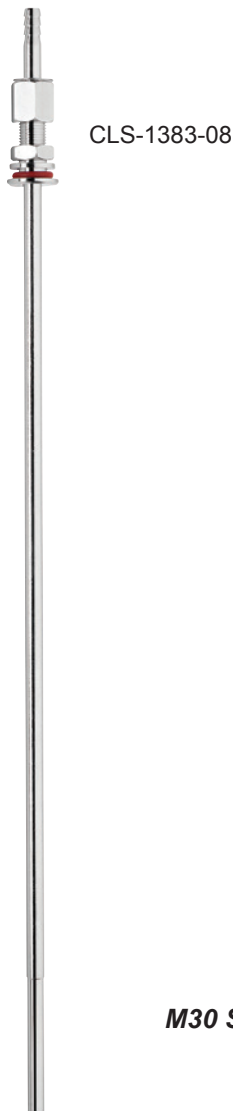
| Part Number | Fits Reactor (L) | Immersion Length (mm) | Replacement Silicone O-Ring |
|-------------|------------------|-----------------------|-----------------------------|
| CLS-1380-11 | 2-5 | 200 | CLS-1705-85X25 |
| CLS-1383-05 | 7 | 300 | CLS-1705-85X25 |
| CLS-1385-10 | 15 | 370 | CLS-1705-85X25 |

AIR INLET / OUTLET ADAPTER

Adapter can be used as a gas outlet pipe in lieu of a condenser in applications where the aeration rate or temperature is low or for short term batch application. More often, this pipe is used to provide overlay aeration.

| Part Number | Thread Size | Hose Conn. O.D. (mm) | Fits Tubing Size | Replacement Silicone O-Ring |
|-------------|-------------|----------------------|------------------|-----------------------------|
| CLS-1380-55 | M6 | 4.00 | 16 | CLS-1705-010 |
| CLS-1380-20 | M10 | 6.35 | 17 | CLS-1705-85X25 |
| CLS-1380-18 | M18 | 12.00 | 73 | CLS-1705-20X2 |
| CLS-1385-27 | M27 | 12.00 | 73 | CLS-1705-121 |





SAMPLING TUBE, ADJUSTABLE, M10

This sampling tube is adjustable to permit the culture fluid to be sampled at any desired level. Tubing is 1/4" OD.

| Part Number | Fits Reactor (L) | Maximum Immersion Length (mm) | Replacement Silicone O-Ring |
|-------------|------------------|-------------------------------|-----------------------------|
| CLS-1380-21 | 2-5 | 232 | CLS-1705-85X25 |
| CLS-1383-08 | 7 | 325 | CLS-1705-85X25 |
| CLS-1385-13 | 15 | 390 | CLS-1705-85X25 |

BLIND STOPPERS

Stoppers can be used to close off any of the unused openings in the headplate. The M6, M10 and M12 sizes are fitted into the headplate from the inside, leaving a flat surface, while the M18, M27 and G-3/4 are threaded into the ports from the outside.

| Part Number | Size | Replacement Silicone O-Ring |
|-------------|-------|-----------------------------|
| CLS-1380-22 | M6 | CLS-1705-010 |
| CLS-1380-23 | M10 | CLS-1705-85X25 |
| CLS-1380-24 | M12 | CLS-1705-111 |
| CLS-1380-25 | M18 | CLS-1705-20X2 |
| CLS-1385-14 | M27 | CLS-1705-121 |
| CLS-1380-26 | G-3/4 | CLS-1705-023 |
| CLS-1380-80 | M30 | CLS-1705-026 |

M30 Size Stopper



CLS-1380-22
CLS-1380-23
CLS-1380-24



CLS-1380-25
CLS-1385-14
CLS-1380-26
CLS-1380-80

SAMPLING TUBE, FIXED, M10

Fixed height sampling tubes for bioreactors. Tubing is 1/4" OD.

| Part Number | Fits Reactor (L) | Maximum Immersion Length (mm) | Replacement Silicone O-Ring |
|-------------|------------------|-------------------------------|-----------------------------|
| CLS-1380-33 | 2-5 | 212 | CLS-1705-85X25 |
| CLS-1383-14 | 7 | 315 | CLS-1705-85X25 |
| CLS-1385-26 | 15 | 400 | CLS-1705-85X25 |

SAMPLING TUBE, REDUCED DIAMETER FIXED, M6

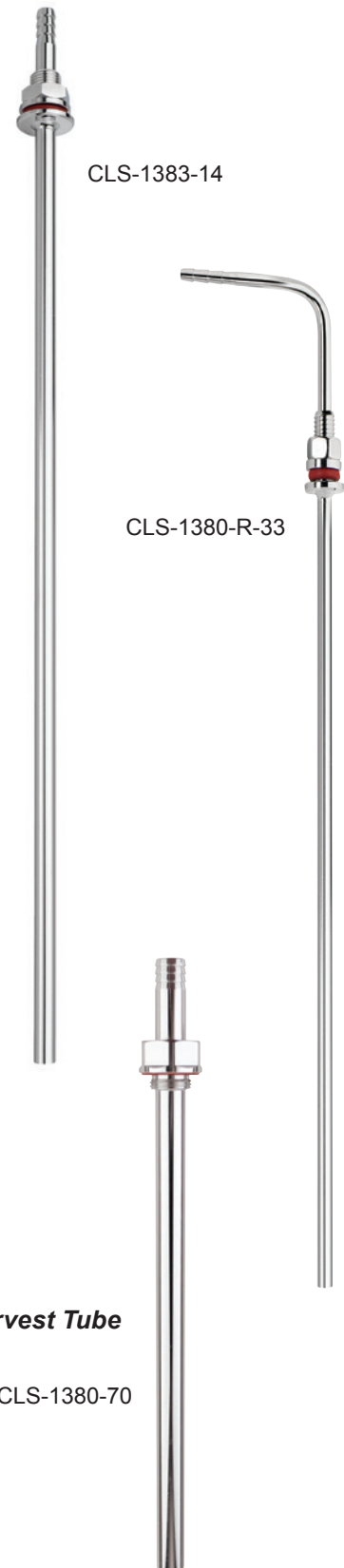
Sampling tube with a reduced diameter which requires a smaller amount of sample to be drawn from the reactor. Tubing is 1/8" OD.

| Part Number | Fits Reactor (L) | Maximum Immersion Length (mm) | Replacement Silicone O-Ring |
|---------------|------------------|-------------------------------|-----------------------------|
| CLS-1380-R-33 | 2-5 | 210 | CLS-1705-010 |

SAMPLING PIPE / HARVEST TUBE, LARGE DIAMETER, M18

Pipe will fit a 2 to 5 liter reactor and has a lower diameter of 1/2" and a length of 212mm into the reactor. The serrated hose connection is also 1/2" (12.7mm) OD. Can also be used as a quick way to harvest material due to its size.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| CLS-1380-70 | M18 | CLS-1705-20x2 |

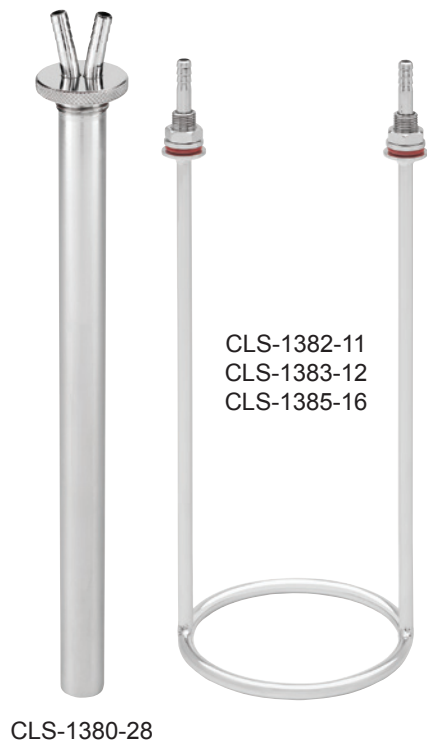


Sampling Pipe / Harvest Tube

CLS-1380-70

HEAT EXCHANGERS

Heat exchangers are available in a choice of two different styles. The cold finger style is for use with 2 - 5 liter reactors and fits into the headplate via an M18 threaded port. The second style is a loop type exchanger and is available for 5 - 15 liter reactors. It fits into two, M10 ports of the headplate.



| Part Number | Fits Reactor (L) | Exchanger Style | Replacement Silicone O-Ring |
|-------------|------------------|-----------------|-----------------------------|
| CLS-1380-28 | 2-5 | Cold Finger | CLS-1705-20X2 |
| CLS-1382-11 | 5 | Loop | CLS-1705-85X25 |
| CLS-1383-12 | 7 | Loop | CLS-1705-85X25 |
| CLS-1385-16 | 15 | Loop | CLS-1705-85X25 |

ADDITION PIPE

This adapter can be used to add fluids or gases to the bioreactor.



| Part Number | Fits Reactor (L) | Thread Size | Replacement Silicone O-Ring |
|-------------|------------------|-------------|-----------------------------|
| CLS-1380-31 | 2-7 | M10 | CLS-1705-85X25 |
| CLS-1380-40 | 3-15 | M12 | CLS-1705-111 |
| CLS-1380-51 | 2-7 | M18 | CLS-1705-20X2 |

Custom component? We can do it . . .



Whether it's a slight modification to a standard part or a completely new component, our skilled engineering and production teams are glad to partner with you to meet your product expectations.

We've been providing quality CNC machining services as well as bending, welding and electropolishing to science professionals for decades.

Chemglass Life Sciences' experienced technical service representatives are ready to discuss your requirements. Get in touch today.

BAFFLE ASSEMBLY

Baffles are used to increase the mixing efficiency inside the bioreactor and are mounted near the reactor wall for optimum mixing performance.

| Part Number | Fits Reactor (L) | Thread Size | Replacement Silicone O-Ring |
|-------------|------------------|-------------|-----------------------------|
| CLS-1381-04 | 2-3 | M6 | CLS-1705-010 |
| CLS-1382-10 | 5 | M10 | CLS-1705-85X25 |
| CLS-1383-11 | 7 | M10 | CLS-1705-85X25 |
| CLS-1385-17 | 15 | M10 | CLS-1705-85X25 |

AIR AERATION TUBE, M10

This tube is to be used when high gas flow rates are required. The sparger pipe extends to the bottom of the vessel and terminates just below the impellers on the stirrer shaft. This allows bubbles coming out of the sparger to rise up into the impellers where they are broken up for improved oxygen transfer.

| Part Number | Fits Reactor (L) | Length of Tube Below the Headplate (mm) | Replacement Silicone O-Ring |
|-------------|------------------|---|-----------------------------|
| CLS-1379-06 | 2 | 236 | CLS-1705-85X25 |
| CLS-1381-05 | 3-5 | 236 | CLS-1705-85X25 |
| CLS-1384-06 | 7 | 330 | CLS-1705-85X25 |
| CLS-1385-18 | 15 | 420 | CLS-1705-85X25 |

HARVEST TUBE, M10 and M27

Mounts into the outer M10 thread on standard headplates. Tapered tip extends to within 2mm of the vessel bottom to allow complete harvesting of cells. The 15 liter size has an M27 thread with 1/2" tubing for quicker harvest.

| Part Number | Vessel Capacity (L) | Replacement Silicone O-Ring |
|-------------|---------------------|-----------------------------|
| CLS-1380-32 | 3 | CLS-1705-85X25 |
| CLS-1382-12 | 5 | CLS-1705-85X25 |
| CLS-1383-13 | 7 | CLS-1705-85X25 |
| CLS-1385-23 | 15 | CLS-1705-121 |



CLS-1381-04

CLS-1384-06

CLS-1380-32



CLS-1381-08

PROBE HOLDER, 12MM, FIXED HEIGHT

Probe holder for 12mm probes. These are non-height adjustable.

| Part Number | Thread Size | Replacement Silicone O-Ring | |
|-------------|-------------|-----------------------------|---------------|
| | | Interior | Exterior |
| CLS-1381-08 | M18 | CLS-1705-111 | CLS-1705-20X2 |
| CLS-1381-09 | G-3/4 | CLS-1705-111 | CLS-1705-023 |
| CLS-1385-21 | M27 | CLS-1705-111 | CLS-1705-121 |



CLS-1381-06

PROBE HOLDER, 12MM, ADJUSTABLE HEIGHT

Probe holder for 12mm probes. Height adjustable with compression fitting.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| | | |
| CLS-1381-06 | M18 | CLS-1705-20X2 |
| CLS-1381-07 | G-3/4 | CLS-1705-023 |
| CLS-1385-19 | M27 | CLS-1705-121 |

Replacement FKM Compression Ring for 12mm Probe

| Part Number | | Pkg. Qty. |
|-------------|----------------------|-----------|
| 1380-027 | FKM Compression Ring | 1 |



CLS-1381-10

PROBE HOLDER, 19MM, ADJUSTABLE HEIGHT

Probe holder for 19mm probes. Height adjustable with compression fitting.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| | | |
| CLS-1381-10 | G-3/4 | CLS-1705-023 |
| CLS-1385-22 | M27 | CLS-1705-121 |

Replacement FKM Compression Ring for 19mm Probe

| Part Number | | Pkg. Qty. |
|-------------|----------------------|-----------|
| 1381-009 | FKM Compression Ring | 1 |



CLS-1380-10

SEPTUM HOLDER, M18 and M27

The septum holder is supplied with a silicone rubber septum and can be used as a universal addition port for fluid or gas. Replacement septa are available.

| Part Number | Thread Size | Replacement Silicone O-Ring |
|-------------|-------------|-----------------------------|
| | | |
| CLS-1380-10 | M18 | CLS-1705-20X2 |
| CLS-1385-09 | M27 | CLS-1705-121 |

Replacement Septa

| Part Number | | Pkg. Qty. |
|--------------|------------------------|-----------|
| CLS-1380-014 | Silicone Rubber Septum | 10 |

CONDENSERS, GLASS AND STAINLESS STEEL

Condensers aid in removing moisture from exhaust gases which can clog filters. They also help minimize loss of material from the bioreactor due to evaporation during fermentation.

Glass condensers are available in bulb and coil styles and are more economical than stainless steel.

Stainless steel condensers consist of 4 components:

1. Jacketed condenser body with two 1/4-inch hose connections
2. Internal stainless steel baffle
3. 90° gas outlet tube with 1/4-inch hose connection
4. Threaded compression nut

Condensers are connected to bioreactors by use of 12mm, adjustable height, probe adapters, CLS-1381-06 or CLS-1381-07 which are sold separately.

| Part Number | Type | Style | Fits Reactor (L) | Overall Length (mm) |
|--------------|-----------|------------|------------------|---------------------|
| CLS-1380-GC1 | Glass | Bulb-Style | 2 - 5 | 150 |
| CLS-1380-GC2 | Glass | Bulb-Style | 7 | 250 |
| CLS-1385-GC3 | Glass | Coil-Style | 15 | 250 |
| CLS-1380-27 | Stainless | — | 2 - 5 | 165 |
| CLS-1383-09 | Stainless | — | 7 | 230 |



Glass Condenser Bulb-Style

Stainless Steel Condenser with Internal Baffle

Also available:

ChemRxnHub Benchtop and Large Capacity Process Reactors



ChemRxnHub Benchtop Process Reactors

- Available sizes: 300 ml, 500 ml, 1 l, 2 l and 5 l
- Jacketed reactor vessels
- Systems include glassware, a digital overhead stirrer and a stand
- Optional: Inlet and outlet manifold assemblies including triple insulated hose for connection to the vessel jacket
- Single, dual and triple support stands available



Large Capacity Process Reactors

- Capacities of up to 100 l
- Jacketed and unjacketed reactor vessels
- Tall or low profile vessels for 50 l and 100 l capacities
- Support frames for 100 l systems includes safety shields



CLS-1399-100
Stirrer, Controller and
Cable

STIRRERS, COMPLETE, BIOREACTORS

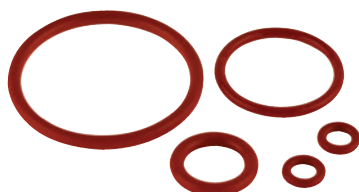
Stand alone stirrer fits Applikon®-style vessels from 1 to 7 liters. The motor has incredible power for its size, 91 in-oz. The control box is extremely small, measuring only 3.5" wide x 4.5" high x 2.5" deep, and includes a clamp that allows it to be attached to reactor support legs up to 14mm in diameter. Unit also has a RS-232 port for PC control and data logging.

Specifications

| | |
|-----------------------------|----------------------------|
| Fits Applikon-Style Vessels | 1-7 Liters |
| Speed Range | 10-800 RPM |
| Power | 91 (in-oz.) |
| Voltage Requirements | 110 to 240 VAC, 50-60 Hz |
| Wattage | 240 Watts Max, Peak 2 Amps |
| Operating Temperature Range | 5 to 40°C |

Note: Only highlighted portion of inset image is included.

| Part Number | Description |
|---------------|-------------------------------------|
| CLS-1399-100E | Stirrer Motor, Controller and Cable |



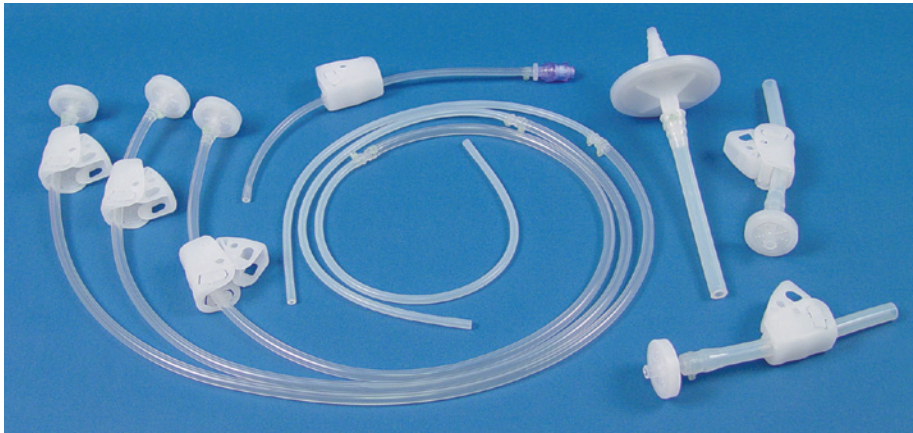
CLS-1705-series

REPLACEMENT SILICONE O-RINGS

Orange silicone o-ring replacements for bioreactors conform to FDA 21CFR Part 177.2600.

| Part Number | I.D. x Cross Section (mm) | Pkg. Qty. |
|----------------|---------------------------|-----------|
| CLS-1705-008 | 4.47 x 1.78 | 20 |
| CLS-1705-010 | 6.07 x 1.78 | 20 |
| CLS-1705-85X25 | 8.50 x 2.50 | 20 |
| CLS-1705-111 | 10.70 x 2.6 | 20 |
| CLS-1705-18X3 | 18.0 x 3.0 | 20 |
| CLS-1705-20X2 | 20.0 x 2.00 | 20 |
| CLS-1705-023 | 26.7 x 1.78 | 10 |
| CLS-1705-121 | 26.6 x 2.62 | 10 |
| CLS-1705-124 | 31.4 x 3.30 | 10 |
| CLS-1705-131 | 42.5 x 2.62 | 10 |
| CLS-1705-135X4 | 135 x 4.00 | 1 |
| CLS-1705-150X4 | 150 x 4.00 | 1 |
| CLS-1705-260 | 166 x 3.00 | 1 |
| CLS-1705-177X4 | 177 x 4.00 | 1 |
| CLS-1705-373 | 228 x 5.33 | 1 |
| CLS-1705-274 | 253 x 3.53 | 1 |

SINGLE-USE BIOREACTOR ACCESSORY KITS



Pre-assembled Kits can be customized to any validated components currently specified on your bioreactor design.

Contact us for custom accessory kits and large volume discounts.

This pre fabricated, single-use bioreactor kit consists of the 8 components listed. They are packed in an ISO Class 7 clean room, double bagged and ready for use. Kits are fabricated with full traceability and accompanying validation documentation, which meets USP Class VI requirements.

Single-Use

- Minimize Labor Costs
- Eliminates Cleaning Validation
- Reduces Set up Time and Costs

Pre-Fabricated Assemblies

- Minimize Injuries associated with cutting in-house
- Improved consistency

Offers Closed System

- Gives the ability to assemble in Open Lab type Environment
- Provides aseptic solution to close off an unused line

| Part Number | Description |
|-------------|-----------------------------------|
| CLS-1390-01 | Complete Bioreactor Accessory Kit |

Kit Includes 1 Each of the Following

| Part Number | Description | Pkg. Qty. |
|-------------|------------------------------|-----------|
| CLS-1390-10 | Media Inlet Line Assembly | 1 |
| CLS-1390-11 | Sparger Line Assembly | 1 |
| CLS-1390-12 | Condenser Vent Line Assembly | 1 |
| CLS-1390-13 | Sample Line Assembly | 1 |
| CLS-1390-14 | Overlay Gas Assembly | 1 |
| CLS-1390-15 | Tri Port Assembly | 3 |

CABLE TIE GUN, PLASTIC, ADJUSTABLE TENSION, ZIP-TIE

Plastic cable tie gun works with cable ties up to 0.19" wide and produces 18-50lbs of tensile strength. Gun tightens and cuts. Not compatible with stainless steel ties.

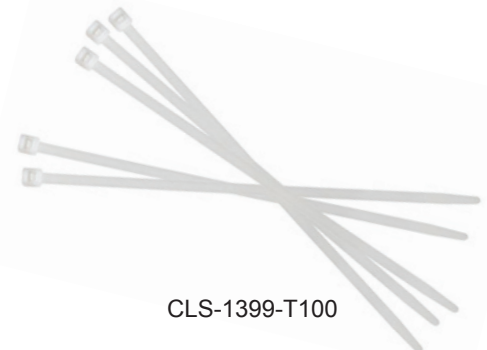


CLS-1399-G100

| Part Number | Description |
|---------------|--|
| CLS-1399-G100 | Cable Tie Gun, Plastic, Adjustable Tension |

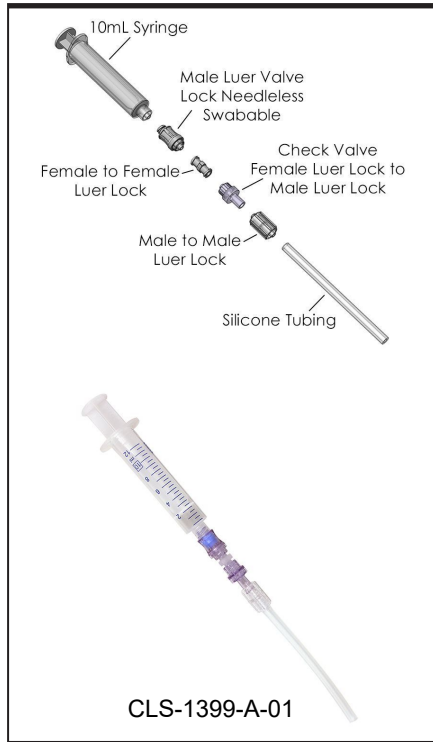
CABLE TIES, 4-INCH LENGTH, NYLON 6.6, AUTOCLAVABLE

Tie wraps are injection-molded of 6.6 nylon and won't corrode or stretch. Durable locking mechanism holds securely. Each natural-color, 4-inch tie is 1/8" wide and has an 18lb strength. Maximum bundle / wrap diameter is 1-inch. Long term temperature range is -40 to 85°C. Short term temperature range is 180°C. Autoclavable.



CLS-1399-T100

| Part Number | Description | Pkg. Qty. |
|---------------|--|-----------|
| CLS-1399-T100 | Cable Tie, 4" Long, Nylon 6.6, Natural | 100 |



LUER LOCK CONNECTIONS, SAMPLER, 10mL SYRINGE, BIOREACTORS

The sampler can be used with spinner flasks, bioreactors or bags.

- The Sampler uses all Luer style connections, eliminating any needle sampling and risk of puncture injuries.

No valves. The sampling valve is opened by the attachment of the sampling syringe and automatically closes once the syringe is removed. Due to the check valve positioning, it is not possible to re-inject the sample taken back into the reactor.

- **Note:** The Sampler is supplied assembled, but not sterilized. It must be autoclaved prior to use. Syringes are individually sterile strip packed.

| Part Number | Description | Pkg. Qty. |
|---------------|--|-----------|
| CLS-1399-A-01 | Sampler, Luer Lock Connection, 10mL Syringe | 10 |
| CLS-1399-F50 | Male Luer Lock, Needleless Injection Site, Swabable, Polycarbonate, Silicone | 25 |
| CLS-1399-F55 | Female to Male Luer Lock, Polycarbonate | 25 |



CLS-1399-F50



CLS-1399-F55



Bioreactor Components

Available in 2, 3, 5, 7 and 15L Sizes

Like-for-like replacement parts for Applikon® Biotechnology and Broadley-James® brand bioreactors.

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