

CSP Series 'Compact' Electrical Suction Pump

Information for Use



1. Cautions

Please read these Operating Instructions carefully. This device is to be used by personnel fully trained in the use of medical suction equipment. Ensure that the suction unit is tested for Electrical Safety at least once annually.

To operate the suction unit correctly, ensure that the Operating Instructions in this document are followed. Ensure the cleaning procedure and safety precautions are followed to avoid the risk of an electrical shock. Contact our service department immediately if an electrical fault has been detected when using the suction unit.

The unit whilst in use is be placed in a position where ease of access is readily available to the mains connection port at the back of the unit.

Ensure that you check the contents of your package thoroughly before use.

Ensure the cable is neatly wrapped prior to moving.

Please avoid using the suction unit near other types of electrical equipment that are non-approved electrical medical devices that may release strong electromagnetic/radiated emissions.

Do not use any flammable agents near or on the equipment when in use.

Do not submerge the product in water or leave resting in puddles or severe wet environments.

Do not clean the suction unit unless the plug has been removed from the mains socket supply.

Do not rinse or use excessive amounts of water or fluid over the suction unit.

Do not remove the filters, receiver jar or tubing unless the suction unit has been turned off and the mains lead has been disconnected.

Do not stretch or pull the mains cable or make contact with any sharp implements that may penetrate the cable (e.g. carpet rail, protruding nails etc.).

Warning: Electrical Safety

The CSP Series suction is operated from a 110-240 Volt mains supply. **DO NOT** remove or open the main panels of the electrical suction.

Do not position the Suction Unit in such a way that it is difficult to operate.

The panels on the product must only be opened by an Oxylitre Service Engineer or by qualified personnel



Warning: Material Compatibility*

The Oxylitre Jar and Lid supplied with CSP001 are manufactured from Polycarbonate. They should not come into contact with compounds such as Alkalis, Ammonia solutions & Amines that may be found in some strong disinfecting and sterilizing agents. Such agents can cause stress cracking.

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2 Introduction

The CSP Series Suction unit has been fully designed in accordance with the requirements of the Medical Device Directive 93/42/EC and appropriate safety/compliance standards. This enables the ESS Series Suction unit to be fully compatible for use within the European Community and Worldwide.

The Oxylitre CSP Series Suction unit has been designed for use within most types of Healthcare environments. Suction units are available in adjustable Theatre High Vacuum - High Flow, Standard High Vacuum - High Flow and Low Vacuum - High Flow models.

The units come complete with a choice of single1 litre capacity Jar(s) and the Jar type is available in either the Oxylitre reusable/Autoclaveable, Hospira "Receptal", VacSax® or Serres disposable liner type units.

(Please Note: This product is not suitable for Field or Transport use).

The robust design features a flame retardant case, with integral carry handle

The Suction unit is 230V AC mains operated. The product is a Class II Type BF Electrical Medical Device and complies with EN 60601-1: Medical electrical equipment. General requirements for safety.

Hydrophobic/Bacterial Filtration

Each unit is fitted with a Hydrophobic/Bacterial Filter. The Filter Element is 99.99% effective that provides an effective barrier against contamination and protection to the environment. The Filter also protects the Suction unit by preventing any moisture or fluid passing through.

The Oxylitre reusable receiver jar is fitted with a protective overflow float valve assembly. In the event of over filling the receiver jar whilst aspirating, the float valve assembly will automatically shut off the suction supply. Jars with liners also have cut-off devices.

Please note this device is not MR conditional.

A wall mounting docking station is also available for easy storage. It can incorporate the required recharging power cord so that the unit connects to the recharging power source automatically when the unit is mounted for storage.

Medical Purpose

To aspirate bodily fluids and collect, not to be used for continuous drainage as defined by BS EN ISO 10079-1 i.e. not to be used for specific endoscopic

use, closed system wound drainage or suction for permanent tracheostomy etc.

2.1 Pre-Use Inspection

Remove all packaging from your Compact Suction Pump, inspect all parts for any signs of damage and ensure all of the contents are there. If you see any signs or suspect that the unit may have been damaged, **DO NOT** use. Notify Oxylitre immediately.

2.2 Contraindications

None known

2.3 Warranty

The Company Warranty; in respect of durable goods (but not in respect of disposable goods) that such goods will correspond with their specification at the time of delivery and will be free from defects in material and workmanship for a period of 7 years from delivery (N.B. Warranty is 1 year for the battery and 3 years for the Oxylitre Jar).

Our full warranty statement is available on request.

2.4 Variants High Suction (for 1000ml Jars only)

l li lii Iv	Oxylitre Receiver Jar Hospira Receptal Canister & Liner SERRES Jar & Liner Vac Sax Canister & Liner	CSP001 CSP002 CSP003 CSP004	
v	Tubing Holder	"B" Suffix on Code	

2.5 Variants Low Suction (for 100ml Jars only)

l	Oxylitre Receiver Jar	CSP001L
li	Hospira Receptal Canister & Liner	CSP002L
lii	SERRES Jar & Liner	CSP003L
lv	Vac Sax Canister & Liner	CSP004L
v	Tubing Holder	"B" Suffix on Code

3 Knowing your Compact Suction Pump

3.1 Using an Oxylitre Receiver 1000mL Jar



3.1.2 Rear Panel



Female AC/ DC Power Socket. (with blanking plugs fitted)

See separate instructions

4 Operating Instructions

Please Note: the equipment is NOT suitable for continuous drainage.

- 4.1 Before use, ensure that your new Suction unit's Rocker Switch is in the "OFF" position, before you plug the unit into the mains supply.
- 4.2 Ensure the Receiver Jar "Float Assembly" is operational. (The Float should move up/down freely). Inspect all Receiver Jar components and accompanying Tubing for wear or damage. Always replace worn or damaged components
- 4.3 Connect the supplied Suction Connecting Tube to the "Patient" Inlet on the Receiver Jar Lid and then connect the required Catheter to the male end of the Suction Connection Tube. If required, place Anti-frothing agent into the Receiver Jar (please use any Anti-frothing agent in accordance to the manufacturers instructions).
- 4.4 Insert the plug into the mains supply socket. Switch ON "O" the Green Rocker Switch to start the unit. The green neon switch will illuminate when the pump is running.
- 4.5 Adjustment for the required suction is effective by the suction Control Valve. To increase the Suction, turn the Control Valve clockwise. To decrease the required suction, turn the Control Valve anti-clockwise. With the "Patient" Connector on the Jar Lid occluded, the Vacuum Gauge will give an accurate indication of the suction being applied
- 4.6 Aspiration should be stopped when fluid has reached the top graduation. In the event of an accidental overflow, the Float Valve will operate shutting off the vacuum supply to the Receiver Jar.
- 4.7 When the Jar is full, pull out the male adapter probe from the top of the Jar Lid and unhook the Retaining Spring Clips. Remove the Jar carefully from out of the Cradle and dispose of the contents appropriately. Also unscrew the Float assembly from the base of the Jar Lid. Both the Float assembly and the Lid must be thoroughly cleaned. Re-assemble in the reverse order.

5 Jar Systems

The Compact Suction Pump can be operated with four canisters, the Oxylitre Standard Reusable Jar, the Hospira Receptal Canister and Liner System, the Serres Canister and Liner System and the Vac Sax Canister and Liner Systems as shown in section 3. All come with customized canister retainers, which are a permanent fixture to that particular model.

Caution

Check the filter after each use. If the filter is broken so liquid penetrates the membrane, the pump will be contaminated and the CSP must be returned for service.

Aspiration should stop when fluid has reached the top graduation in the receiver jar. This applies to all jar types, this is due to the float valve in the case of the Oxylitre Standard reusable jar and the filter in the disposable systems.

To continue suctioning one of the following methods should be employed.

5.1 Oxylitre 1000ml Reusable Receiver Jar



It is advised that the jar is used patient-specifically then decontamination is required to prevent the risk of cross infection. See Servicing, Preventative Maintenance & Cleaning for instructions.

If the same patient undergoes long-term treatment, empty the jar of its contents at least every 24 hours, following guide lines below.

When fluid reaches the top of the Jar, the CSP will stop suctioning. To continue suctioning, remove and empty the contents of the Receiver Jar and remove any suctioned material from the float valve under the lid. Failure to remove this material may result in the overflow system failing and material potentially damaging the device.

Disconnect the tubing from the filter and hold upright, take hold of the suction connecting tube with catheter (if connected). Hold upwards alongside of the vacuum tubing to prevent any fluid draining and spilling. Hold the two tubes in one hand and jar in the other.

Take the receiver jar to a disposal point where the jar contents can be safely released and dispose of according to local protocols.





Unscrew the lid from the jar by turning the lid anticlockwise and gently pour away the contents preventing any spillage or splashing. Rinse the jar.

Caution

WHEN HANDLING A FULL SUCTION JAR ATTENTION SHOULD BE PAID TO THE FACT THAT IT MIGHT CONTAIN INFECTIOUS WASTE.

Pull the float valve assembly from beneath receiver jar lid then remove the float from the float housing and rinse. Also thoroughly rinse jar and any tubing.

Replace the float valve assembly

Screw the jar lid on to the receiver jar, clockwise securely. Place the receiver jar into the holder at the front of the unit.

Ensuring that the tubing on the suction unit has either been replaced or cleaned, connect the vacuum tube to the filter and the other end to the connector marked "Vacuum" on the receiver jar securely.

See section 3 for tubing set up.











5.2 HOSPIRA Receptal and Canister System

Receptal disposable bags must be replaced patient-specifically. If the same patient undergoes long-term treatment, the suction bag must be replaced at least every 24 hours.

The reusable liner must be decommissioned if it has become damaged or dose not function as planned.

At the end of the procedure the vacuum supply should remain switched (ON) while the patient suction tubing is removed from the patient port and discarded.

Disconnect the liner lid tubing from the canister tee and immediately reconnect the yellow connector to the patient port with a push and twist motion

Turn the vacuum off and use the thumb tab to remove the liner for disposal. The liner lid tubing must not be used as a carrying handle.

Disposal Considerations

Safe to dispose of by landfill or incineration. Do not discharge into sewers. Dispose of in accordance with appropriate local procedures.









Caution

NOTE! REUSE OF DISPOSABLE PRODUCTS IS STRICTLY FORBIDDEN. REUSE REDUCES THE PERFORMANCE OF THE PRODUCT AND CAN CAUSE AN INFECTION RISK. WHEN HANDLING A USED SUCTION BAG ATTENTION SHOULD BE PAID TO THE FACT THAT IT MIGHT CONTAIN INFECTIOUS WASTE. Insert the liner in to the canister and make sure the liner is tightly secured in the canister by locating the thumb tab above the 'canister tee' and firmly pushing the lid.

Connect the vacuum source tubing to one side of the canister tee the other to the filter. Connect the liner lid tubing to the other side of the 'canister tee' using the 'yellow to yellow' coding.

Finally, connect the patient tubing to the patient port, directly or by using the white elbow connector.

See Section 3 for tubing set up.

Canister system is now ready for use.

5.3 SERRES 1000ml Jar and Liner System

SERRES suction bags, are disposable and must be replaced patientspecifically. If the same patient undergoes long-term treatment, the suction bag must be replaced at least every 24 hours.

The reusable liner must be decommissioned if it has become damaged or dose not function as planned.

After the suctioning procedure, disconnect the patient tube and white angled connector (or alternatively straight connector). Close the connection with the patient connector plug provided on the lid of the suction bag. Finally, turn off the vacuum source. Lift the suction bag using the handle on the lid.

DO NOT TURN OFF THE CSP BEFORE YOU HAVE CLOSED THE SUCTION BAG.













Disposal Considerations

Safe to dispose of by landfill or incineration. Do not discharge into sewers. Dispose of in accordance with appropriate local procedures.

Caution

NOTE! REUSE OF DISPOSABLE PRODUCTS IS STRICTLY FORBIDDEN. REUSE REDUCES THE PERFORMANCE OF THE PRODUCT AND CAN CAUSE AN INFECTION RISK. WHEN HANDLING A USED SUCTION BAG ATTENTION SHOULD BE PAID TO THE FACT THAT IT MIGHT CONTAIN INFECTIOUS WASTE.

The suction canister and angle connector can be washed (95 °C) and autoclaved (121 °C). Remove the grey, angled connector before washing. Other reusable products can be wiped with disinfectant.

Whilst installing the suction canister place the suction canister in a bracket in an upright position. Unfold the suction bag and place it into the suction canister.

Turn on the vacuum source and install the suction bag by using the vacuum. Close the patient connector with your finger and simultaneously push the suction bag slightly from the middle of the lid



NOTE! BEFORE USE, ENSURE THAT THE VACUUM HAS BEEN CREATED AND THE SUCTION BAG IS FULLY INFLATED. Connect the patient tube to the patient connector. The system is ready for use. See Section 3 tubing for set up.

5.4 Vac Sax 1000ml Canister Liner System

Vac Sax Suction liners, are disposable and must be replaced patientspecifically. If the same patient undergoes long-term treatment, the suction bag must be replaced at least every 24 hours.



The reusable liner must be decommissioned if it has become damaged or does not function as planned.

At the end of the procedure DO NOT turn off the CSP whilst disconnecting the patient tubing.

Remove the patient tubing connector from the male port marked 'patient' on the lid and fit the blanking stop over the port.

The blanking stop is attached to the lid of the liner directly facing the patient and vacuum ports.

Remove the vacuum connection by twisting the tapered connector





Using the handles, lift the liner out of the canister.



Disposal Considerations

Safe to dispose of by landfill or incineration. Do not discharge into sewers. Dispose of in accordance with appropriate local procedures.



Caution

NOTE! REUSE OF DISPOSABLE PRODUCTS IS STRICTLY FORBIDDEN. REUSE REDUCES THE PERFORMANCE OF THE PRODUCT AND CAN CAUSE AN INFECTION RISK.

WHEN HANDLING A USED SUCTION BAG ATTENTION SHOULD BE PAID TO THE FACT THAT IT MIGHT CONTAIN INFECTIOUS WASTE.

Ensure the canister is clean, wipe the inner rim surface with a damp cloth if deemed necessary. To ensure a vacuum seal.

Push the liner firmly in to the canister

Push the tapered connector in to the female vacuum port, using a twisting action.

Turn on the CSP using the ON button and rotate the control knob anti clockwise to inflate the bag. Once this has been achieved turn reduce the vacuum level to desired level.

If the bag fails to inflate or vacuum level is not achieved, replace the liner and check hydrophobic filter on the unit.



Fit patient tubing and occlude and confirm that vacuum is being achieved throughout the system. The system is now ready for use. See section 3 for set up.

6 Servicing, Preventative Maintenance & Cleaning

Intended to be serviced annually, see maintenance & service manual

To ensure the quality and performance, this product should be inspected frequently (at least annually) by a Service Engineer/qualified Technician. A

Major Service is recommended every 5 years. For service/repair enquiries and information, please contact our sales office.

i **Do not** clean the suction unit unless the plug has been removed from the mains socket supply.

Do not rinse or use excessive amounts of water or fluid over the suction unit.

Do not submerse this unit in water.

ii The Hydrophobic/Bacterial Filter should be immediately replaced when found discoloured or if wetted/contaminated. Such contamination can reduce pump performance. Discolouration can be simply checked by comparing it with a new replacement filter, along with the tubing connecting the jar and filter.

It is recommended that these parts are changed on a regular basis.

- Use mild cleaning agents/detergents (e.g. diluted Dettol or similar) when cleaning the unit and Receiver Jar components (* see 'Warning' on page 2).
- The Oxylitre Receiver Jar and Lid Components are Autoclaveable up to 121°C (for 3 minutes); see Guidelines for Autoclaving Doc-OP-4403.



Be advised that the tubing and connecting catheter is to be used patient-specifically and must be disposed of and replaced after use each patient use.

iv There are no user serviceable components inside the unit's enclosure. Do not open the enclosure. Unauthorised repairs will invalidate the warranty. Refer servicing to Oxylitre qualified engineers (service@oxylitre.co.uk).

7 Replacement Parts

a. Suction Tubing with Male Tapered Connector:	Ref: S75251
b. Suction Tube:	Ref: VAC201

c.Hydrophobic/Bacterial Filter:Ref: S750 (Pack of 30)d.Suction Connecting Tube 1.8 m:Ref: 180FFMe.Suction Jar Lid:Ref: S7520f.Lid Sealing Ring:Ref: S6190g.Float Assembly:Ref: S7130h.Suction Jar:Ref: S6100

8 EQUIPMENT application specification

The CSP has been designed to meet the essential requirements of BS EN 60601-1 & BS EN 60601-1-2

Medical purpose

To aspirate bodily fluids and collect, not to be used for continuous drainage.

Intended Operator

The unit is to be used by trained medical or paramedical staff who understands the use of suction equipment to aspirate bodily fluids and the vacuum level to be applied.

Intended Patient

Age: new born to geriatric Weight: > 2.5 kg Health: not relevant PATIENT state: Not relevant - PATIENT is not the OPERATOR

Intended User Profile

Age: Adult Nationality: Multiple Gender: Male or Female Cultural: Multiple Condition: Mentally Stable Level of Competence:

> Minimum-Medically Competent, No maximum

Application Environment

Hospital Care Home/Hospice Could be damaged by impact (designed to withstand a drop of 1m onto concrete) Can withstand rainfall (IP34D) Intended to be serviced annually Meets requirements of IEC 60601-1 for environmental tests Oxylitre canister can be autoclaved up to 121°C

Conditions of visibility of Markings

Analogue Gauge visible from 1+ meter Ambient luminance 100 – 500 lux (normal conditions) Vacuum Control showing direction of increase vacuum.

Applied Part Interaction

There is no direct contact with the patient – an attachment for aspirating will be fitted to the patient tube via the catheter connector. The patient tube and catheter connecter is classed as an Applied Part as it is attached to another device, e.g. catheter to the male end of the Suction Connection Tube, this could have contact with the patient. The tubing could come into contact with the patient during use.

Working vacuum up to 500mmHg (or 150mmHg – Low Vacuum) Weight 4.59kg Integral carrying handle Flame retardant structure enclosure

Frequency of use

Once a year up to 10+ times a day

Mobility

Not. for field use

9 Technical Specifications

Warning the modification of the equipment or the removal of any parts is strictly prohibited and will rescind your warranty. Such action may lead to the unit failing in service.

9.1 1000mL Receiver Jar

1000mL (100ml marking divisions)
Float valve shut off
Mild detergent (diluted to detergent instructions)
Autoclaveable to 121°C
Mainly Polycarbonate
±10% Full scale

9.2 Performance:

Units:	mmHg
Vacuum Range:	60 to 500 minimum (High Suction Models)
	10 to 150 maximum (Low Suction Models)

	Accuracy: Flow Rates:	±10% on indicated value >25lpm (High Vacuum) >18lpm (Low Vacuum)
	Noise Level	<65dB
9.3	Filtration Input Filtration:	Disposable Hydrophobic/Bacterial Filter, 99.99% effective against 0.6 micron particles.
9.4	Applied Parts Tubing: Tubing Connection:	Silicone wide bore (7 x 3mm), maximum length 1.75m Single Use Maximum temperature 40 ºC Angled Tubing Tail
9.5	Dimensions Height: Width: Depth: Weight:	315mm 305mm 175mm (225mm with docking station) 4.59kg (without docking station) Can withstand rainfall (IP34D)
10	Motor Motor: Standard Supply Max Amp: Fuse type:	Enclosed 12 Volts DC 5A 12V AC (F) 5A
11	Electrical Mains Input Voltage:	110-240V AC (Via mains lead) Maximum current 10 Amps, Fuse 5A
	Method of Isolation	Remove plug from mains supply safely
	Watts: Frequency: Phase: Fuse Type: Classification:	60 50/60 Hz Single T8 amperes Class II

Level of protection: Type BF Plug Fuse: 5A

Electrical Testing

Electrical/Electronic Safety:	BS EN 60601-1
EMC emissions:	BS EN 60601-1-2

12 Environmental Conditions for use Transport and Storage

Operating/Charging Temperature:	0° C (32°F) to + 40° C (104° F)
Recommended Charging	15°C (59°F) to + 25°C (77°F)
Temperature:	
Long term Storage Temperature:	0° C (32°F) to + 40° C (104° F)
Max. 24 hour Storage Temperature:	-30° C (-22°F) to + 70° C (158° F)
Humidity (Operating & Storage):	5-95% RH non-condensing
Atmospheric pressure range:	50kPa to 106kPa

13 Material Specification

Outer Case (Front)	PC/ABS
Outer Case (Rear)	PC/ABS
Jar Retaining Bracket	PC/ABS
Jar Retainer Insert (Reusable Jar only)	NBR
Anti-slip Feet strip	Santoprene
Reusable Jar Lid	PC
Reusable Jar only	PC
Sealing Ring for Lid	Neoprene
Float Housing only	PC
Float Body Assembly	PC
Float Valve only	Silicone
O Ring for Float Housing	Nitrile
Patient & Filter Tubing	Silicone
Suction Catheter Connector	Styrene-Butadiene
Filter Disk	Styrene-Butadiene
Screws	Steel

14 Disposal Guide lines



Not for general waste. At the end of life cycle, the CSP is to be disposed of in accordance with the European Directive on the safe disposal of Electrical / Electronic Products and as such shall be handed over to the applicable collection center for the recycling of

electrical / electronic equipment.

All items to be disposed of should first be decontaminated to reduce the risk of contamination.

Alternatively you should contact Oxylitre to arrange for the collection of the equipment.

15 Symbol Definition



Class II equipment

Alternating current (AC)



MR UNSAFE



Type BF applied part



Rating of the degree of protection against intrusive implements and the protection of the environment.



The product has been designed to comply with the safety and design requirements of the European Directives for Medical Devices including Council Directive 92/43/EEC



Follow instructions for use.



Indicates: "Caution"



Waste Electrical & Electronic Equipment (WEEE) compliance (Environmental Agency Producer Registration Number: WEE/AJ0509VR).

Please contact Oxylitre for details of obligated waste collection.



Do not reuse.



Warning electricity.



Manufacturer



Date of Manufacture





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