

S7 Series Medical Suction Controller

Operating & Safety Instructions.



High
Suction



Low
Suction



Thoracic
Drainage

1. Introduction

The Oxylitre S7 series Suction Controllers have been designed specifically for Medical use. Products are available as colour coded* High Suction-High Flow (Yellow), Low Suction-High Flow (Black) and Thoracic Drainage (Green) Models with either Direct or Remote (Rail or "V" male) fittings. The Suction Controllers comply with the requirements of BS EN ISO 10079-3 and Medical Device Directive 93/42/EEC.

2. Specifications

Vacuum Source Connector

The S7 series Suction Controller are available with either a British Standard (BS5682) probe or a 9/16 unf L/H fitting. The 9/16 unf L/H connection can be attached to various types of remote fittings i.e. Rail or "V" male mounted, with remote Hose Assemblies.

Patient Inlet Connection and Filter

The High Vacuum-High Flow and Low Vacuum-High Flow models are fitted with a Disposable Hydrophobic Filtration Cartridge that has been designed specifically to prevent the ingress of fluid and/or bacteria into the Suction Controller and the Vacuum Pipeline System. The Thoracic Drainage model is fitted with a bacterial filter cartridge. In all cases the Inlet Connector is an integral part of the Filter Cartridge.

Vacuum Gauge

Each Suction Controller is fitted with a easy to read, dual scale Gauge

Scale readings:

High Suction (Yellow Banding*)	= 0 to -760mmHg (0 to -100kPa)
Low Suction (Black Banding*)	= 0 to -200mmHg (0 to -25kPa)
Thoracic Drainage (Green Banding*)	= 0 to -70cmH ₂ O (0 to -7kPa)

Safety Valve

The units are fitted with an internal safety valve system. This will protect the Suction Controller from being damaged in the event of the unit being accidentally connected to a positive pressure source.

Receiver Jars and Tubing

The Oxylitre Suction unit has been designed to connect to the following recommended Fluid Receiver Jars:

Oxylitre 1800mL Receiver Jar:	Ref: S7500B (Rail Mounted).
	Ref: S7500A ("V" Bracket Mounted).
Oxylitre A/S Suction Tubing:	Ref: VAC201 (per 1 meter Length) - Yellow.

Receiver Jars with Hydrophobic Filter protected Disposable Liners may be used.

3. Operating the Suction Controller

To Increase/Decrease the Suction

The Control Knob is graduated from the "OFF" position to the maximum "MAX" which is marked approximately on two-thirds rotation of the Control Knob. To operate, ensure that the Suction Controller is in the "OFF" position then connect the Suction Controller to the Vacuum source i.e. a Wall Mounted Terminal. Connect the Suction Tube to the base of the Filter and ensure the other side is connected to the Vacuum Inlet on the Receiver Jar. Gently squeeze the Suction Tube or fold to fully occlude the air supply to the Suction Unit^{1,2}. By observing the Indicator Gauge simply rotate the Control Knob (anti-clockwise) into the graduations then stop at required suction level.

Note: Occluding the Suction Tube when setting the suction level is very important and ensures that the patient does not receive excessive suction.

1. Excerpt from American Association of Respiratory Care 2010 published Guidelines 'Endotracheal Suctioning of Mechanically Ventilated Patients with Artificial Airways'; Section 2.3

2. Enhancing the Safety of Medical Suction Through Innovative Technology; Patricia Carroll; RT: For Decision Makers in Respiratory Care – February 2008

Release the Suction Tube and straighten out so that the vacuum begins to evacuate the Receiver Jar. The Suction supply can be turned off immediately by turning the Control Knob to the OFF position. This will automatically drain off all the remaining suction accumulated in the Suction Tubing and Receiver Jar. Ensure the Receiver Jars' "Float Assembly" is operational, i.e. the float moves up/down freely (Liner type Receptacles may be fitted with a Filter/Fluid Trap). Inspect all Receiver Jar components for wear or damage. Replace damaged components if necessary.

When an 1800 ml type Jar is full, pull the male adapter probe from the top of the Jar lid and unhook the retaining spring clips. Remove the Jar carefully from the cradle and dispose the contents appropriately. Unscrew the Float Assembly from the base of the Jar Lid, then Float Assembly, Jar Lid, and Jar must be thoroughly cleaned and re-assembled in the reverse order.

WARNING: There are internal 'stops' at the 'OFF' and 'Max' positions on the control knob. Do not try to force the control knob past these setting or damage could occur to the device. Similarly do not attempt to over-tighten the grub screws on the control knob for the same reason.



4. Replacing the Filter

After using the equipment, inspect the White Filter Element in the Filter Cartridge fitted at the base of the Suction Controller. Replace the Filter Cartridge if found to be discoloured or wetted. A contaminated Filter may restrict the performance of the product. To replace the Filter, simply disconnect the Suction Tube (if connected) from the Filter Cartridge then unscrew the Cartridge (anti-clockwise) from beneath the Suction Controller. Screw the replacement Filter Cartridge onto the unit hand tight.

5. Cleaning

Prior to use, the device Filter Cartridge must be inspected as stated in above section. The Suction unit should be cleaned on a regular basis as per the organisations contamination control policies. All external surface areas are to be cleaned by wiping only. A clean cloth damped with a diluted solution of detergent such as Dettol may be used. Alcohol based wipes may be used after ensuring that they do not damage any surface areas. To clean internal areas, the device will require dismantling and must only be performed by qualified Medical Engineers only. The 1800mL Oxylitre Receiver Jar, Jar Lid, Float Assembly & Seals is Autoclaveable to 134°C (see Doc-OP 4403).

6. Maintenance

A medical Suction Controller forms part of an essential life supporting system and must be treated with care. It is recommended that each device should be regularly maintained and inspected at least every 12 months (and any faulty parts replaced) to ensure that the quality of the unit is retained, and that a Major Service be conducted after 5 years from purchase (using Service Kit SK17). Qualified Medical Engineers only should carry out servicing.

For service enquiries and information please contact Oxylitre to arrange a quotation etc.



Replacement Filters

Ref: S750 (Bacterial/Hydrophobic) or S760 (Laser/Diathermy) per box of 30 units.

Accessories and Replacement Jar components

a.	Ref: S6100	Oxylitre Unbreakable 1800ml Jar
b.	Ref: S7130	Float Assembly Complete
c.	Ref: S7520A	Suction Jar Lid
d.	Ref: S7510A	Suction Jar Cradle & "V" Plate Fitting
e.	Ref: S7510B	Suction Jar Cradle & Rail Clamp Fitting
f.	Ref: S7525	Male Tapered Suction Connector
g.	Ref: 180FFM	Suction Connecting Tube

7. Technical Data

Specifications

High Suction High-Flow Dial Gauge reading: 0 to -760mmHg (0 to -100kPa)

Low Suction High-Flow Dial Gauge reading: 0 to -200mmHg (0 to -25kPa)

Thoracic Drainage High Flow Dial reading: 0 to -70cmH₂O (0 to -7kPa)

Fittings

British Standard Direct Probe

9/16 unf L/H screw fitting (to remote couplings)

Weight/Dimensions: S713/S714/S715

Weight 500g

Height 175mm

Width 75mm

Depth 143mm (*with BS probe*)

Depth 106mm (*with 9/16 unf fitting*)

Test Specifications

High Suction Controller vacuum source at = -500mmHg (-66.5kPa)

Outlet flow = 40LPM

Controller reading gain from = 0 to -450mmHg

Flow indications:

at - 100mmHg (-13.3kPa) = 20LPM

at - 200mmHg (-26.6kPa) = 30LPM

at - 300 to -400mmHg (-39.9 to -59.8kPa) = 32LPM

Air evacuation of an 1800mL Receiver Jar at - 500mmHg = 7 to 8 seconds.

Warranty

It is recommended that a Suction Controller is maintained/inspected at least every 12 months. Each unit comes complete with a Manufacturer's 7 Year Warranty.

Note: Phthalates are used in the manufacture of the yellow hose and VAC201 tubing that can be used with the Suction Controller (details available on request).

*Models with colour banding from circa 3rd quarter 2011.

Manufactured by:

Oxylitre Limited

Morton House

Skerton Road

Old Trafford

Manchester

M16 0WJ

England



Tel: (0)161 872 6322

Fax: (0)161 848 7914

email: sales@oxylitre.co.uk



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