

# Ocean™

## WATER SEAL CHEST DRAIN



### Instructions For Use

USA

#### Water Seal Chest Drain

GB

F

Drainage thoracique à chambre d'aspiration

D

Wassersäulengerät für Thorax-Drainage

E

Drenaje torácico con cámara de sello de agua

I

Drenaggio toracico a sigillo ad acqua

P

Drenagem torácica para aspiração a selo de água

NL

Thoraxdrain met waterslot

GR

Παροχέτευση Στήθους με Παρέμβυσμα Νερού

J

ウォーターシール胸腔ドレナージ



# ATRIUM

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**Description**

The Atrium Ocean™ chest drain is a disposable, water seal operating system with 2100ml collection volume with wet suction control and calibrated water seal. Sterile fluid (provided with selected models) is required for water seal operation and air leak detection. For suction control operation sterile water or sterile saline is required. The Ocean is packaged sterile, or is packaged in a sterile fluid path format (only the contents of the sterile patient tube pack can be entered into the sterile field). This chest drain is non-pyrogenic and is for single patient use only. Models equipped with a patient tube in-line connector provide convenient system change out or attachment of an Atrium in-line ATS bag for postoperative autotransfusion. Ocean ATS models include a filtered collection chamber with an access line for continuous autotransfusion with an infusion pump, or for use with an Atrium self-filling ATS blood bag.

**Indications For Use**

- Evacuate air and/or fluid from the chest cavity or mediastinum.
- Help re-establish lung expansion and restore breathing dynamics.
- Facilitate postoperative collection and reinfusion of autologous blood from the patient's pleural cavity or mediastinal area.

**Warnings**

1. Do not obstruct the suction control vent plug or positive pressure relief valve located on top of drain.
2. Do not manually depress high negativity vent when patient is on gravity drainage or when suction is not operating.
3. Do not separate patient tube in-line connector prior to clamping off patient tube first.
4. Do not keep patient tube clamp closed during drainage collection or patient transport.
5. Do not puncture patient tube with an 18 gauge or larger needle.
6. Do not use or puncture needleless luer port with needle.
7. Dual collection models (2 patient tubes) require both patient tubes to remain connected to the patient. When using dual collection models with only one patient tube connection (1 tube only), the patient tube not in use must remain securely clamped off at all times.
8. For models equipped with disposal port, do not open during patient use.
9. For single patient use only. Do not reuse, reprocess or resterilize. Reuse, reprocessing or re-sterilization may compromise the structural integrity of the device and/or lead to device failure which, in turn, may result in patient injury, illness or death.

**Precautions**

1. For sterile fluid path models, only the contents of the sterile patient tube pack can be entered into the sterile field.
2. Do not overfill water seal above the 2cm fill line.
3. Chest drain must be kept below the patient's chest in an upright position.
4. Water seal and suction control chambers must be filled to prescribed levels prior to use and should be checked regularly to confirm proper operation.
5. Replace chest drain if damaged or when collection volume meets or exceeds maximum capacity.
6. Patient tube connections, water seal, and suction control chamber should be checked regularly to confirm proper operation.
7. Stopcock should be left in the OPEN or ON position at all times.
8. Pre-packaged sterile fluid for chest drainage use only.

**Set Up**

- Step 1. Fill Water Seal To 2cm Line** – Hold funnel down and fill to top. Raise funnel to fill water seal to 2cm fill line. For models available with sterile fluid, twist top off bottle and insert tip into suction port. Squeeze contents into water seal until fluid reaches 2cm fill line.
- Step 2. Fill Suction Control Chamber To Desired Pressure Level** – Remove vent plug, pour water to desired suction level. Replace vent plug.
- Step 3. Connect Patient Tube To Patient** – Connect chest drain to patient prior to initiating suction.
- Step 4. Connect Suction To Chest Drain** – Attach suction line to suction port on top of chest drain. Turn suction source on until constant, gentle bubbling occurs in chamber **A**.

**Set Up for Sterile Fluid Path Models**

- Step 1. Connect Patient Tube To Patient** – Open sterile patient tube pack and pass only the sterile patient tube into sterile field. Close patient tube clamp prior to connecting patient tube to catheter.
- Step 2. Fill Water Seal To 2cm Line** – Hold funnel down and fill to top. Raise funnel to fill water seal to 2cm fill line. For models available with sterile fluid, twist top off bottle and insert tip into suction port. Squeeze contents into water seal until fluid reaches 2cm fill line.
- Step 3. Fill Suction Control Chamber To Desired Pressure Level** – Remove vent plug, pour water to desired suction level. Replace vent plug.
- Step 4. Connect Patient Tube To Chest Drain** – Pass distal end of patient tube out of sterile field for connection to chest drain. Connect chest drain to patient prior to initiating suction.
- Step 5. Connect Suction To Chest Drain** – Attach suction line to suction port on top of chest drain. Turn suction source on until constant, gentle bubbling occurs in chamber **A**.

**Placement of Unit**

Always place chest drain below the patient's chest in an upright position. To help avoid accidental knock-over, place the unit on the floor or hang it bedside with the hangers provided.

**Gravity Drainage**

Disconnect the suction line and maintain drain below the patient's chest in an upright position. For models equipped with a suction control stopcock leave in the OPEN or ON position.

**Suction Port**

Suction port is located on top of the drain. It is not required to cap off suction port when suction is not connected or operating.

**Suction Control Stopcock**

For models equipped with suction control stopcock, it can be adjusted to attain gentle bubbling in suction control chamber. Stopcock should be left in the OPEN or ON position at all times.

**Suction Control Chamber**

To add water to suction control chamber **A**, temporarily turn suction source or stopcock OFF, add water to desired level and slowly increase suction to resume gentle bubbling.

**Suction Levels Greater Than -20cmH<sub>2</sub>O**

Suction greater than -20cmH<sub>2</sub>O can be imposed by taping over the vent plug with non-porous tape and reading vacuum pressure directly from regulator or pump.

**Water Seal**

The water seal must be filled to the 2cm fill line for system operation and air leak detection. Once filled, water seal becomes tinted blue. When air bubbles are observed going from right to left, this will confirm an air leak.

**Collection Chamber**

The Ocean 2002 Adult • Pediatric Model:

The first collection chamber is calibrated in 1ml increments up to 100ml and 2ml increments up to 200ml. Chamber two is calibrated in 10ml increments up to 1090ml. Chamber three is calibrated in 10ml increments up to a 2100ml.

The Ocean 2020 Dual Collection Model:

Chamber 1 is calibrated in 1ml increments up to 100ml and 2ml increments up to 200ml. Subsequent drainage is calibrated in 10ml increments up to 1090ml. Chamber 2 is calibrated in 5ml increments up to 800ml.

The Ocean 2012 Baby Drain Model:

The pediatric collection chamber is calibrated in 1ml increments up to 100ml and 2ml increments up to 200ml.

The Ocean 2050 and 2052 ATS Models:

The first collection chamber is calibrated in 10ml increments up to 1100ml. Chamber two is calibrated in 10ml increments from 1110ml up to 2100ml.

Fluid level graduations are accurate within ± 3ml or 3% of scale.

**Changes in Patient Pressure**

With suction on, patient pressure will equal suction control chamber **A** water level plus the height of water seal column level **B**. For gravity drainage (no suction) patient pressure will equal the height of the calibrated water seal column level only.

**Manual High Negativity Vent**

To lower the height of the water seal column and to lower chest drain vacuum pressure when connected to suction, depress the high negativity vent located on top of the drain until the water seal column lowers to the desired level.

**Positive Pressure Relief Valve**

PPRV located on top of drain opens instantly to release positive pressure.

**Sampling Drainage**

Must be in accordance with approved hospital infection control standards. Selected models include a needleless luer port on the patient tube connector for patient drainage sampling. Alcohol swab luer port prior to syringe attachment (no needle). Samples can also be taken directly from the patient tube by inserting a 20 gauge needle or smaller with syringe. Alcohol swab patient tube prior to inserting syringe needle at a shallow angle.














**System Disconnection**

Clamp off patient tubes or all indwelling thoracic catheters prior to disconnecting chest drain from patient.

**System Disposal**

Disposal of chest drain and its contents should be in accordance with all applicable regulations.

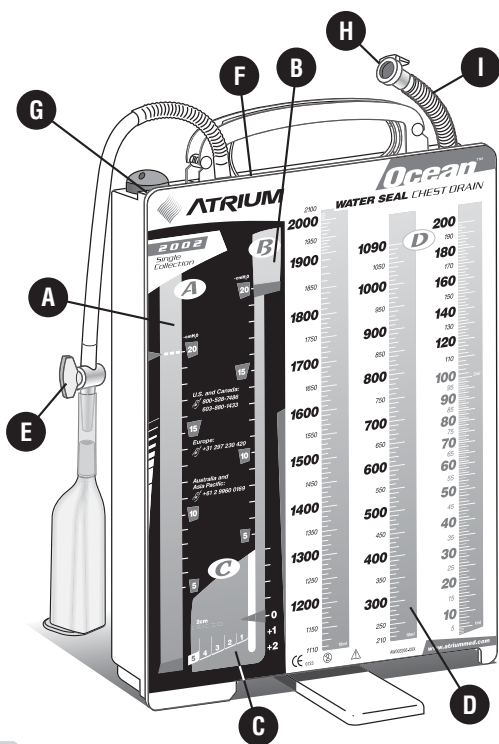
**SYMBOLS USED ON PRODUCT LABELS**

	CODE NUMBER		LOT NUMBER
		STERILE. STERILIZED BY ETHYLENE OXIDE.	
	SEE PACKAGE INSERT		SINGLE USE ONLY
	EXPIRATION DATE		
	ATS BAG COMPATIBLE		ATS CHAMBER
	STERILE FLUID PATH PACKAGE		
	LATEX FREE		CAUTION: CONTAINS LATEX

This device is covered under one or more of the following U.S. patents: 4,988,342; 5,114,416; 5,154,712; 5,286,262; 5,380,314; 5,397,299; 5,401,262. Other patents pending. Atrium and Ocean are trademarks of Atrium Medical Corporation. ©2010 All Rights Reserved.



## WATER SEAL CHEST DRAIN



### USA

#### GB Features:

- A** Suction Control Chamber
- B** Water Seal Chamber
- C** Air Leak Monitor
- D** Collection Chamber
- E** Suction Control Stopcock
- F** Manual High Negativity Vent
- G** Positive Pressure Release Valve
- H** In-Line Connector
- I** Patient Tube(s)

#### F Comprend:

- A** Chambre de contrôle de l'aspiration
- B** Chambre de scellé-sous-eau
- C** Détecteur de fuites d'air
- D** Chambre de collecte
- E** Robinet de contrôle de l'aspiration
- F** Valve manuelle de haute pression négative
- G** Soupape de haute pression positive
- H** Connecteur en ligne
- I** Tubulure(s) patient

#### D Merkmale:

- A** Saugkontrollkammer
- B** Wassersäulenkammer
- C** Luftleckmonitor
- D** Sammelkammer
- E** Absperrhahn der Saugkontrolle
- F** Manuelle Hochnegativitäts-Belüftung
- G** Überdruckventil
- H** In-Line-Schlauchverbinder
- I** Patientenschlauch/-schläuche

#### E Características:

- A** Cámara para el control de aspiración
- B** Cámara de sello de agua
- C** Monitor de fugas de aire
- D** Cámara de recolección
- E** Llave de paso para el control de aspiración
- F** Válvula manual de alta negatividad
- G** Válvula de liberación de presión positiva
- H** Conector en línea
- I** Tubo(s) del paciente

#### I Caratteristiche:

- A** Camera di controllo dell'aspirazione
- B** Camera del sigillo ad acqua
- C** Monitor delle perdite d'aria
- D** Camera di raccolta
- E** Rubinetto di controllo dell'aspirazione
- F** Sfiato manuale per l'alta negatività
- G** Valvola di sfogo della pressione positiva
- H** Connettore in linea
- I** Tubi del paziente

#### P Características:

- A** Câmara para controle de aspiração
- B** Câmara de selo de água
- C** Monitor de fugas de ar
- D** Câmara de Drenagem
- E** Válvula reguladora para controle de aspiração
- F** Válvula Manual para Alta Negatividade
- G** Válvula de Escape de Pressão Positiva
- H** Engate em linha
- I** Tubo(s) do paciente

#### NL Onderdelen:

- A** Zuigregelingskamer
- B** Waterslot
- C** Luchtlekmonitor
- D** Opgangreservoir
- E** Zuigkrachtafsluiter
- F** Handmatig bediende beluchting hoge negatieve drukontlasting
- G** Overdrukklep
- H** In-line connector
- I** Patiëntslang(en)

#### GR Χαρακτηριστικά:

- A** Θάλαμος Ελέγχου Αναρρόφησης
- B** Θάλαμος Παρεμβύσματος Νρού
- C** Μόνιτορ Διαρροής Αέρα
- D** Θάλαμος Συλλογής
- E** Στρόφιγγα Ελέγχου Αναρρόφησης
- F** Χειροκίνητος Εξεραισμός Υψηλής Αρνητικότητας
- G** Βαλβίδα Απελευθέρωσης Θετικής Πίεσης
- H** Ενσωματωμένο Βύσμα
- I** Σωλήνας(ες) Ασθενή

#### J 特徴:

- A** 吸引制御チャンバー
- B** ウォーターシール・チャンバー
- C** エアリーク・モニター
- D** 回収チャンバー
- E** 吸引制御ストップコック
- F** マニュアル高陰性ベント
- G** 陽性圧カリリース弁
- H** インライン・コネクター
- I** 患者チューブ

