Codman®
SPECIALTY SURGICAL

A DIVISION OF INTEGRA LIFESCIENCES

# Hydrocephalus

## Product Catalogue

Codman
SPECIALTY SURGICAL

# Codman® brings you a complete range of shunt solutions

Our shunt offering provides Versatility, Precision, Flow Regulation, Infection Prevention and more.
An array of benefits for simplicity, safety, versatility and control


Codman SPECIALTY SURGICAL

# Table of Contents

Codman SPECIALTY SURGICAL

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Codman®
SPECIALTY SURGICAL



# Programmable Valves

## Codman® CERTAS™ Plus

## Codman® Hakim® Programmable Valve

## Products Comparison

| | Codman ® CERTAS™ Plus | Codman® Hakim® Programmable Valve |
|---|---|---|
| Settings | 8 (incl. Virtual Off) | 18 |
| Regular | ● | ● |
| Cylindrical | - | ● |
| Small | ● | ● |
| Right Angle / Burr Hole | ● | ● |
| SiphonGuard® integrated Option | ● | ● |
| Bactiseal® unitized Option | ● | - |
| MRI Resistance (up to 3 Tesla) | ● | - |
| MRI compatibility (Up to 3 tesla)* | ● | ● |

* Check Instructions For Use document for conditional MRI compatibility details.

## Products References Summary

All programmable valves are packaged sterile in box of 1.

### Codman® CERTAS™ Plus

| | Regular | | Small | | Right Angle | |
|---|---|---|---|---|---|---|
| | Without SiphonGuard® | With SiphonGuard® | Without SiphonGuard® | With SiphonGuard® | Without SiphonGuard® | With SiphonGuard® |
| Valve Only | 828800 | 828804 | 828810 | 828814 | 828820 | 828824 |
| Valve System | 828801 | 828805 | 828811 | 828815 | 828821 | 828825 |
| Valve System Unitized | 828802 | 828806 | 828812 | 828816 | 828822 | 828826 |
| Valve System Unitized with Bactiseal® | 828803 | 828807 | 828813 | 828817 | 828823 | 828827 |

| | |
|---|---|
| Codman CERTAS® Tool Kit | 828851 |
| Codman® CERTAS™ Plus Electronic Tool Kit | 828852 |

### Codman® Hakim® Programmable Valve

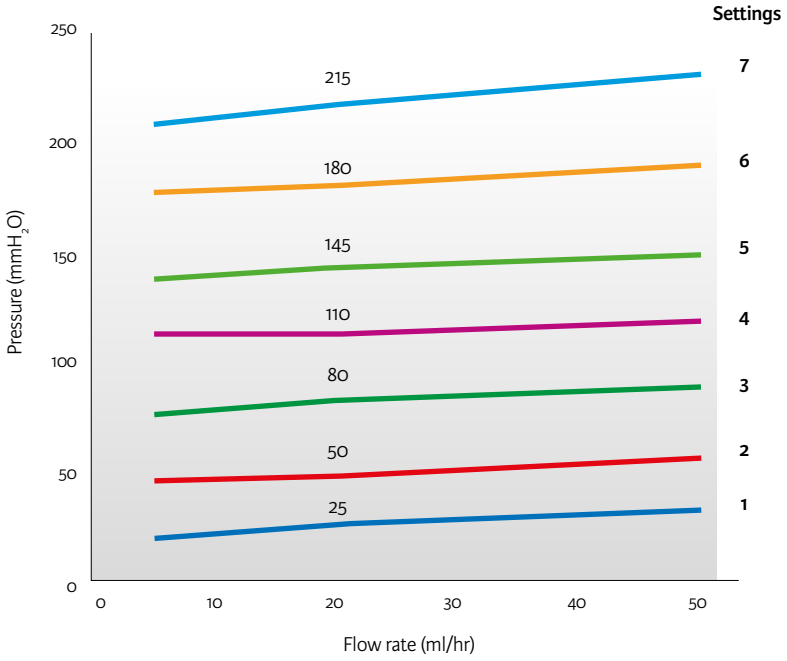
| | Cylindrical | | Micro | | Regular | | Burr Hole | |
|---|---|---|---|---|---|---|---|---|
| | Without Pre-Chamber | With Pre-Chamber | Without Rickham® Reservoir | With Rickham® Reservoir | Without SiphonGuard® | With SiphonGuard® | Without SiphonGuard® | With SiphonGuard® |
| Valve Only | 823115 | 823110 | 823112 | 823116 | 823164 | 823162 | 823184 | 823182 |
| Valve System | 823101 | 823100 | - | - | 823834 | 823832 | 823838 | 823136 |
| Valve System Unitized | - | 823111 | 823114 | 823113 | 823844 | 823842 | 823148 | 823146 |

| | |
|---|---|
| VPV® System | 823192R |
| Codman® Hakim® Programmer | 823190R |

# Codman® CERTAS™ Plus

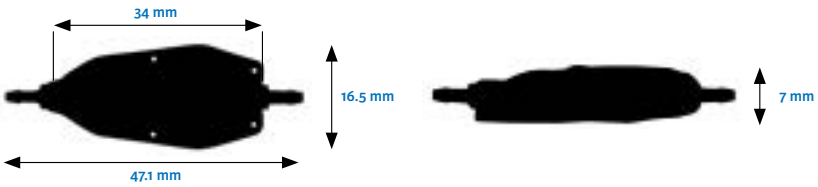
The Codman® CERTAS™ Plus programmable valve offers the ability to optimize the opening pressure of a shunt system before and after implantation. A shunted patient's condition will often change over the course of their treatment making pressure changes necessary. The Codman® CERTAS™ Plus programmable valve allows a surgeon to non-invasively change the opening pressure (from 25 to 215 mm $H_2O$) to one of eight performance settings, which range from 1 (low pressure) to 7 (high pressure), plus performance setting 8, which is a "Virtual Off." The setting of the Codman® CERTAS™ Plus programmable valve is changed through the use of an externally applied magnetic field. Applying a specific magnetic field to the adjustable valve mechanism will permit the cam to turn slightly, increasing or decreasing the tension on the spring, and changing the setting of the valve. To avoid unintended pressure setting changes, the valve is designed to withstand external magnetic influences, including MRI up to 3 Tesla. The Codman® CERTAS™ Plus programmable valve is available in 3 different designs (regular, small and right angle) and with integrated SiphonGuard® anti-siphon device and/or unitized Bactiseal® impregnated antimicrobial catheters.

## Valve Performance Chart



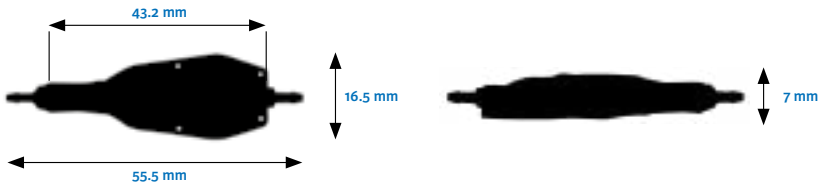

| | |
|---|---|
| **Settings 1, 2, 3** | ±20 mm $H_2O$ |
| **Setting 4** | ±25 mm $H_2O$ |
| **Settings 5, 6, 7** | ±35 mm $H_2O$ |
| **Setting 8** | Intended to limit flow. Average pressure > 400 mm $H_2O$ for flow rates 5 to 50 ml/hr |

## Codman® CERTAS™ Plus Regular



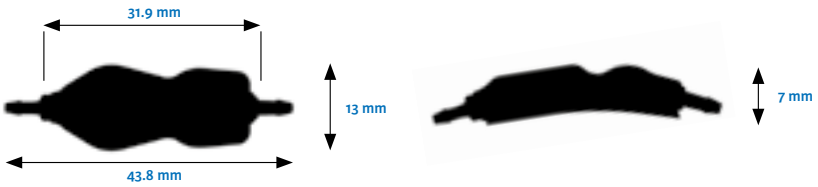

| Reference | Package Content | |
|---|---|---|
| 828800 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |  |
| 828801 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828802 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828803 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal (Ref. 823074) catheter unitized<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Codman® CERTAS™ Plus Regular - with SiphonGuard®



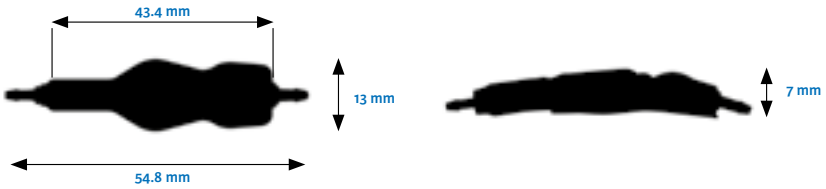

| Reference | Package Content | |
|---|---|---|
| 828804 | **Valve Only**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• Priming adaptor plastic |  |
| 828805 | **Valve System**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828806 | **Valve System Unitized**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828807 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal catheter unitized(Ref. 823074)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Codman® CERTAS™ Plus Small



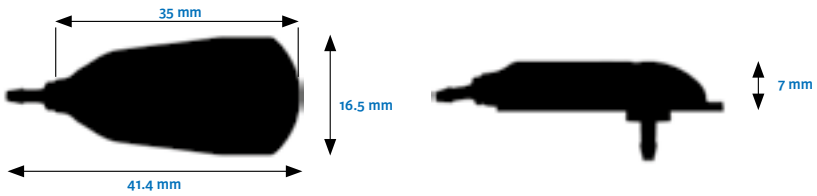

| Reference | Package Content | |
|---|---|---|
| 828810 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |  |
| 828811 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828812 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828813 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal catheter unitized (Ref. 823074)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Codman® CERTAS™ Plus Small - with SiphonGuard®



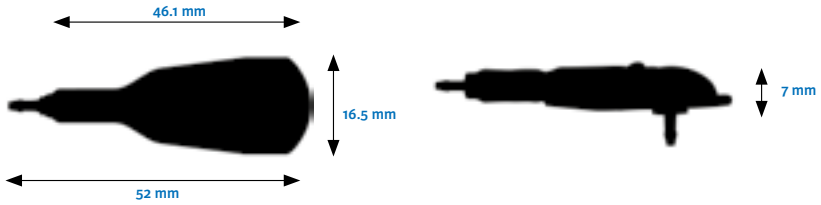

| Reference | Package Content | |
|---|---|---|
| 828814 | **Valve Only**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• Priming adaptor plastic |  |
| 828815 | **Valve System**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828816 | **Valve System Unitized**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828817 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal catheter unitized (Ref. 823074)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Codman® CERTAS™ Plus Right Angle




| Reference | Package Content | |
|---|---|---|
| 828820 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |  |
| 828821 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828822 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828823 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal catheter unitized (Ref. 823074)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Codman® CERTAS™ Plus Right Angle - with SiphonGuard®




| Reference | Package Content | |
|---|---|---|
| 828824 | **Valve Only**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• Priming adaptor plastic |  |
| 828825 | **Valve System**<br>• Valve with integrated plastic connectors and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828826 | **Valve System Unitized**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |
| 828827 | **Valve System Unitized Bactiseal®**<br>• Valve with integrated plastic connector and SiphonGuard® device<br>• 14 cm Bactiseal® ventricular catheter (Ref. 823073)<br>• Stainless steel stylet<br>• 120 cm Bactiseal® distal catheter unitized (Ref. 823074)<br>• Priming adaptor plastic<br>• Right angle adaptor plastic |  |

## Programmers

| Reference | Package Content |
|---|---|
| 828852 | **Codman® CERTAS™ Plus Electronic Tool Kit**<br>• Locator tool<br>• Adjustment tool<br>• X-Ray overlay<br>• Instructions for use<br>• Spare batteries (one set of 2 batteries)<br>• Screw driver |
| 828851 | **Codman CERTAS® Tool Kit**<br>• Indicator tool<br>• Adjustment tool<br>• Locator tool, adjustable height<br>• Locator tool, low profile<br>• X-Ray overlay<br>• Instructions for use |
| 828859 | **Codman CERTAS® X-Ray Overlay**<br>For Codman CERTAS®Tool Kit or Codman® CERTAS™ Plus Electronic Tool Kit |
| 828860 | **Codman Certas® indicator tool** |
| 828861 | **Codman Certas adjustable height locator** |

# Codman® Hakim® Programmable Valve*

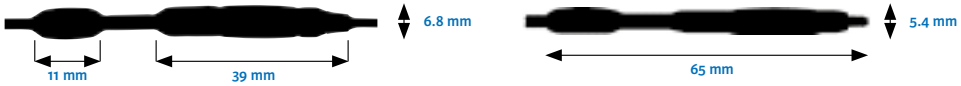
The Codman® Hakim® Programmable Valve offers the ability to optimize the opening pressure of a shunt system before and after implantation. A shunted patient's condition will often change over the course of their treatment making pressure changes necessary. The programmable valve allows a surgeon to non-invasively change the opening pressure between 30 mm $H_2O$ and 200 mm $H_2O$ in 18 steps. The setting of the Codman® Hakim® Programmable Valve is changed through the use of an externally applied, codified magnetic field. The spring in the ball-spring mechanism of the valve sits atop a rotating spiral cam which contains a stepper motor. Applying a specific magnetic field to the stepper motor will cause the cam to turn slightly, increasing or decreasing the tension on the spring, and changing the opening pressure of the valve. The Codman® Hakim® Programmable Valve is available in multiple designs (Cylindrical, Regular, Micro, Burr Hole) and configurations.

## Programmer

| Reference | Package Content |
|---|---|
| 823192R | **VPV® System*** <br>• Programmer <br>• Transmitter <br>• Power cord <br>• Carrying case <br>• transmission gel |
| 823190R | **Codman® Hakim® Programmer** <br>• Programmer <br>• Transmitter <br>• Power cord <br>• Carrying case |

*This product (823192R) is currently non CE-marked. Please check with your local CSS Representative their availability for sale.

## Codman® Hakim® Cylindrical - with Pre-Chamber



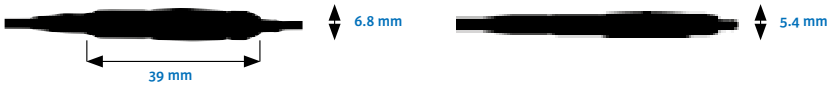

| Reference | Package Content |
|---|---|
| 823110 | **Valve Only**<br>• Valve with pre-chamber<br>• Straight connector titanium<br>• Valve introducer plastic |
| 823100 | **Valve System**<br>• Valve with pre-chamber<br>• 114 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Valve introducer plastic<br>• Right-angled adaptor plastic<br>• Straight connector titanium |
| 823111 | **Valve System Unitized**<br>• Valve with pre-chamber<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Valve introducer plastic<br>• Right-angled adaptor plastic<br>• Straight connector titanium |

14 cm open-ended proximal tube, 1.14 mm ID x 2.5 mm OD

14 cm open-ended proximal tube, 1.14 mm ID x 2.5 mm OD

14 cm open-ended proximal tube, 1.14 mm ID x 2.5 mm OD

## Codman® Hakim® Cylindrical - without Pre-Chamber

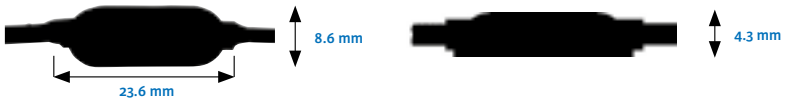



| Reference | Package Content |
|---|---|
| 823115 | **Valve Only**<br>• Valve<br>• Straight connector titanium<br>• Valve introducer plastic |
| 823101 | **Valve System**<br>• Valve<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Valve introducer plastic<br>• Right-angled adaptor plastic<br>• Straight connector titanium |

14 cm open-ended proximal tube, 1.14 mm ID x 2.5 mm OD

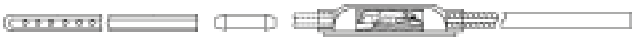
14 cm open-ended proximal tube, 1.14 mm ID x 2.5 mm OD

## Codman® Hakim® Micro



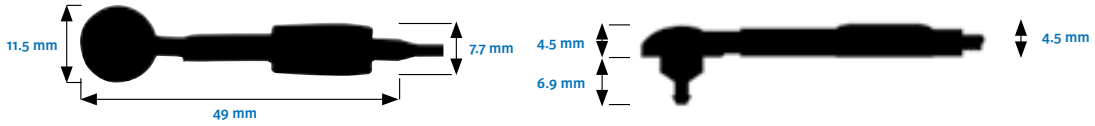

| Reference | Package Content |
|---|---|
| 823112 | **Valve Only**<br>• Valve<br>• 2 straight connectors titanium<br>• Priming adaptor plastic |
| 823114 | **Valve System Unitized**<br>• Valve<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Valve introducer plastic<br>• Right-angled adaptor plastic<br>• Straight connector titanium<br>• Priming adaptor plastic |

5 cm open-ended proximal tube, 1.4 mm ID x 2.7 mm OD
2.5 cm distal tube, 1 mm ID x 2.15 mm OD



5 cm open-ended proximal tube, 1.4 mm ID x 2.7 mm OD

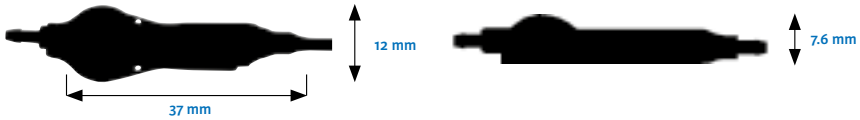
## Codman® Hakim® Micro - with Rickham™ Reservoir




| Reference | Package Content |
|---|---|
| 823116 | **Valve Only**<br>• Valve<br>• Priming adaptor plastic |
| 823113 | **Valve System Unitized**<br>• Valve<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic |

2.5 cm distal tube, 1 mm ID x 2.15 mm OD

## Codman® Hakim® Regular



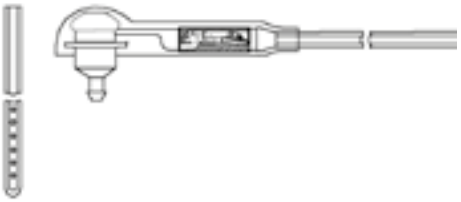

| Reference | Package Content | |
|---|---|---|
| 823164 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |  |
| 823834 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Right-angled adaptor plastic<br>• Priming adaptor plastic |  |
| 823844 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Right-angled adaptor plastic<br>• Priming adaptor plastic |  |

## Codman® Hakim® Regular - with SiphonGuard®


| Reference | Package Content | |
|---|---|---|
| 823162 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |  |
| 823832 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Right-angled adaptor plastic<br>• Priming adaptor plastic |  |
| 823842 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Right-angled adaptor plastic<br>• Priming adaptor plastic |  |

## Codman® Hakim® Burr Hole


| Reference | Package Content |
|---|---|
| 823184 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |
| 823838 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic |
| 823148 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic |



## Codman® Hakim® Burr Hole - with SiphonGuard®


| Reference | Package Content |
|---|---|
| 823182 | **Valve Only**<br>• Valve with integrated plastic connectors<br>• Priming adaptor plastic |
| 823136 | **Valve System**<br>• Valve with integrated plastic connectors<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter (Ref. 823045)<br>• Priming adaptor plastic |
| 823146 | **Valve System Unitized**<br>• Valve with integrated plastic connector<br>• 14 cm ventricular catheter (Ref. 823041)<br>• Stainless steel stylet<br>• 120 cm distal catheter unitized (Ref. 823045)<br>• Priming adaptor plastic |

Codman SPECIALTY SURGICAL



## Notes

## Notes

Codman®
SPECIALTY SURGICAL



# Flow Regulated Valves

## OSV II™

## Integra® Low Flow

## Products Comparison

| | OSV II™ |
|---|---|
| Regular | ● |
| Small | ● |
| Burr Hole | ● |
| Lumbar | ● |
| Flow Rate | 20 ml/h |
| MRI compatibility (up to 3Tesla)* | ● |

* Check Instructions For Use document for conditional MRI compatibility details.
These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL

## Products References Summary

All flow regulated valves are packaged sterile in box of 1.



### OSV II™

| | Regular | | Burr Hole | | Lumbar | | Low Pro |
|---|---|---|---|---|---|---|---|
| | With Antechamber | Without Antechamber | With Antechamber | Without Antechamber | With Antechamber | Without Antechamber | With Antechamber |
| Valve Only | 909700 | 909701 | - | - | - | - | 909700P |
| Valve System Unitized | 909707S<br>909712 | 909708S<br>909713 | 909721 | 909720 | - | - | 909712P |
| Valve System One-Piece | 909718<br>909706<br>909704 | 909719<br>909705 | - | - | 909711 | 909710 | - |

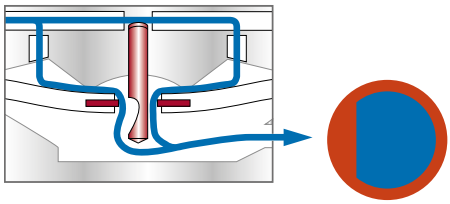
These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

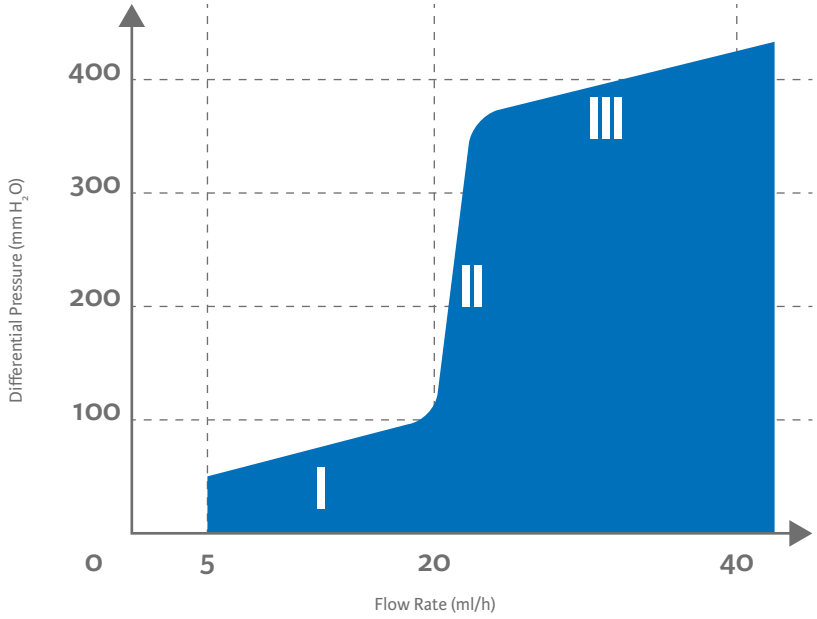
## OSV II™

Introduced in 1987, the Orbis-Sigma Valve was the first valve to manage hydrocephalus through flow-regulation rather than conventional differential pressure regulation. The valve operates a 3-stage, variable resistance mechanism that regulates flow through the valve (Stage II) at a rate close to that of CSF secretion (around 20 ml/h).

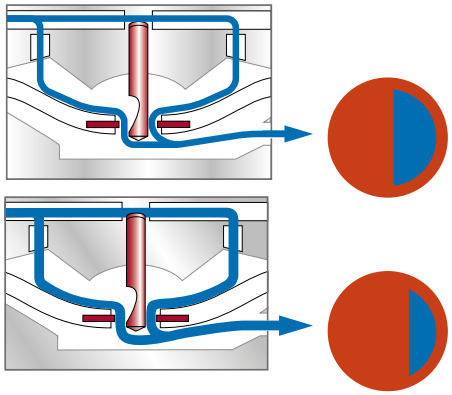
### Valve Performance Chart

**STAGE I: 30-120 mm $H_2O$**
**Differential Pressure (DP) Stage**
This stage begins when the flow rate reaches 5 ml/h.

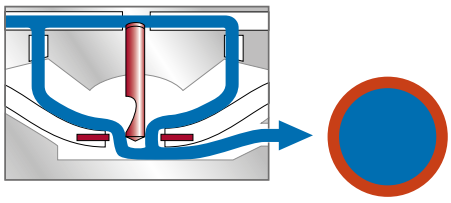





**STAGE II: 120-300 mm $H_2O$**
**Flow Regulating Stage**
Maintains a close balance between CSF flow and production rate, restricting flow around 20 ml/h, whatever the differential pressure is.



**STAGE III: Above 300 mm $H_2O$**
**Safety Stage**
Immediately restores normal ICP during unexpected pressure elevation. Rarely needed.

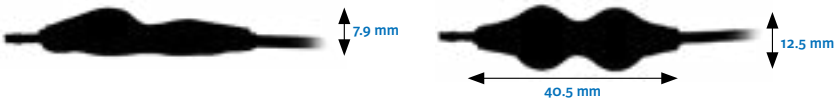


These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

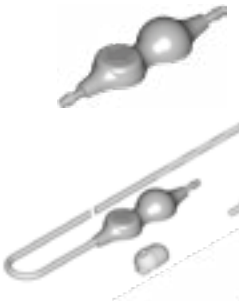
Codman SPECIALTY SURGICAL

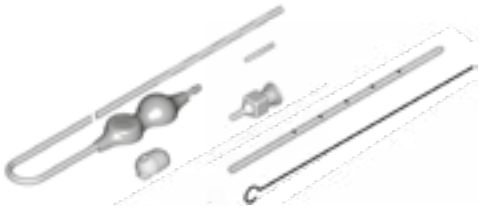


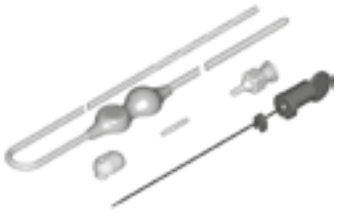
## **OSV II™** – with Antechamber




| Reference | Package Content |
|---|---|
| **909700** | **Valve Only**<br>• Valve with antechamber and integrated connectors |
| **909707S** | **Valve System Unitized** – without ventricular catheter<br>• Valve with antechamber and integrated plastic connector<br>• 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Straight connector polypropylene<br>• Luer connector<br>• Right angle guide |
| **909712** | **Valve System Unitized** – with ventricular catheter<br>• Valve with antechamber and integrated plastic connector<br>• 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Straight connector polypropylene<br>• Luer connector<br>• Right angle guide<br>• 15 cm straight ventricular catheter (F8)<br>• Introducing rod |
| | **Valve System One-Piece**<br>• Valve with antechamber<br>• Straight ventricular catheter (F8) and 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Ventricular catheter introducer<br>• Right angle guide<br>• Straight polypropylene connector<br>• Luer connector |
| **909718** | 7 cm ventricular catheter |
| **909706** | 9 cm ventricular catheter |
| **909704** | 13 cm ventricular catheter |

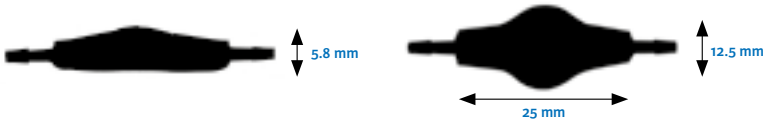




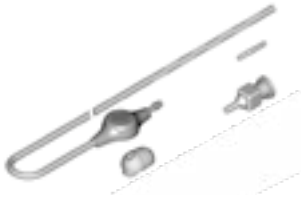


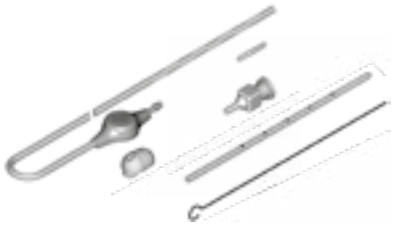
These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

## **OSV II™** - without Antechamber




| Reference | Package Content |
|---|---|
| **909701** | **Valve Only**<br>• Valve without antechamber and with integrated plastic connectors |
| **909708S** | **Valve System Unitized** - without ventricular catheter<br>• Valve without antechamber and with integrated plastic connector<br>• 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Straight polypropylene connector<br>• Luer connector<br>• Right angle guide |
| **909713** | **Valve System Unitized** - with ventricular catheter<br>• Valve without antechamber and with integrated plastic connector<br>• 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Straight polypropylene connector<br>• Luer connector<br>• Right angle guide<br>• 15 cm straight ventricular catheter (F8)<br>• Introducing rod |
| | **Valve System One-Piece**<br>• Valve without antechamber<br>• Straight ventricular catheter (F8) and 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• Ventricular catheter introducer<br>• Right angle guide<br>• Straight polypropylene connector<br>• Luer connector |
| **909719**<br>**909705** | 7 cm ventricular catheter<br>9 cm ventricular catheter |



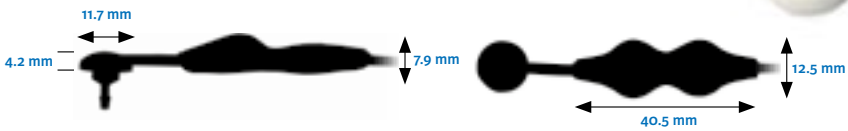


These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

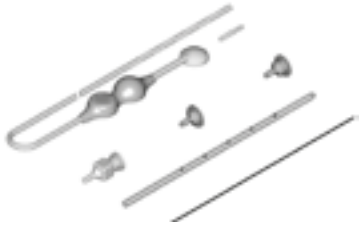
Codman SPECIALTY SURGICAL



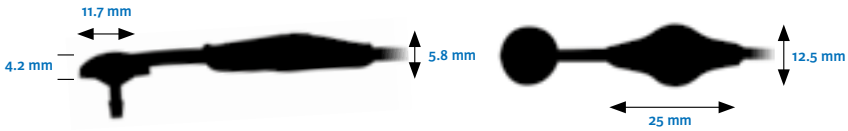
## **OSV II™ Burr Hole** - with Antechamber




| Reference | Package Content |
|---|---|
| 909721 | **Valve System Unitized**<br>• Valve with antechamber and 6.4 mm burr hole cap<br>• 10 cm open ended striped drainage distal catheter unitized (F7)<br>• 15 cm straight ventricular catheter (F8) with radiopaque length dots<br>• Introducing rod<br>• Straight polypropylene connector<br>• Regular and shallow polypropylene burr hole reservoir<br>• Luer connector |



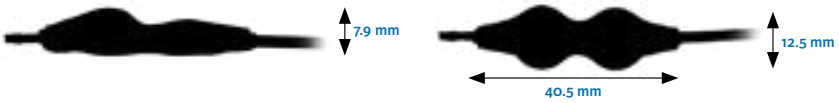
## **OSV II™ Burr Hole** - without Antechamber




| Reference | Package Content |
|---|---|
| 909720 | **Valve System Unitized**<br>• Valve without antechamber and with 6.4 mm burr hole cap<br>• 110 cm open ended striped drainage distal catheter unitized (F7)<br>• 15 cm straight ventricular catheter (F8) with radiopaque length dots<br>• Introducing rod<br>• Straight polypropylene connector<br>• Regular and shallow polypropylene burr hole reservoirs<br>• Luer connector |

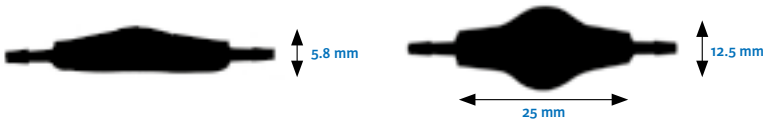
These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

## **OSV II™ Lumbar** - with Antechamber




| Reference | Package Content |
|---|---|
| 909711 | **Valve System One-Piece**<br>• Valve with antechamber<br>• 5 cm proximal tubing (F8) and 110 cm open ended striped drainage distal catheter unitized (F7)<br>• 80 cm closed tip lumbar catheter (F5)<br>• Guidewire in dispenser<br>• 14G Tuohy needle<br>• Stepdown polypropylene connector (F8/F5)<br>• Luer connector<br>• Suture clamp (F5)<br>• Straight polypropylene connector |

## **OSV II™ Lumbar** - without Antechamber



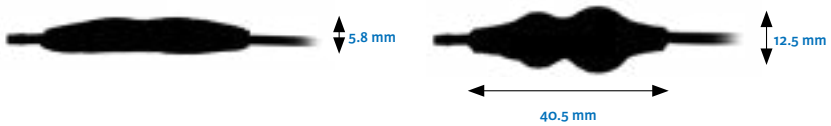

| Reference | Package Content |
|---|---|
| 909710 | **Valve System One-Piece**<br>• Valve without antechamber<br>• 5 cm proximal tubing (F8) and 110 cm open ended striped drainage distal catheter unitized (F7)<br>• 80 cm closed tip lumbar catheter (F5)<br>• Guidewire in dispenser<br>• 14G Tuohy needle<br>• Stepdown polypropylene connector (F8/F5)<br>• Luer connector<br>• Suture clamp (F5)<br>• Straight polypropylene connector |

These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL



## **OSV II™ Low Pro** - with Antechamber




| Reference | Package Content |
|---|---|
| 909700P | **Valve Only**<br>• Valve with antechamber and integrated connectors |
| 909712P | **Valve System Unitized**<br>• Valve with antechamber and integrated connector<br>• 110 cm open-ended striped drainage distal catheter unitized (F7)<br>• 15 cm straight ventricular catheter (F8) with radiopaque dots every 2 cm<br>• Introducing rod<br>• Straight polypropylene connector<br>• Luer connector<br>• Right angle guide |

These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL

## Notes

## Notes

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# Fixed Pressure Valves

## Codman® Hakim® Precision

## Essential

## Products Comparison

| | Codman® Hakim® Precision | Essential |
|---|---|---|
| Cylindrical | ● | – |
| Regular - Inline | ● | ● |
| Small | ● | – |
| Burr Hole | ● | ● |
| Lumbar | – | – |
| Pressure range | 5 | 3 |
| MRI compatibility* | ● (Up to 1.5 tesla) | ● (Up to 3 tesla) |
| SiphonGuard® unitized Option | ● | – |

* Check Instructions For Use document for conditional MRI compatibility details.

Codman SPECIALTY SURGICAL

## Products References Summary

All fixed pressure valves are packaged sterile in box of 1.

### Codman® Hakim® Precision

| Radiopaque code | Cylindrical | | Micro | |
|---|---|---|---|---|
| | Without Pre-Chamber | With Pre-Chamber | Without Rickham® Reservoir | With Rickham® Reservoir |
| Valve Only | | | | |
| ● | 823082 | 823011 | 823026 | 823095 |
| ●● | 823083 | 823012 | 823027 | 823096 |
| ●●● | 823084 | 823013 | 823028 | 823097 |
| ●●●● | 823085 | 823014 | 823029 | 823098 |
| ●●●●● | 823086 | 823015 | 823030 | 823099 |
| Valve System | | | | |
| ● | 823016 | 823001 | - | 823021 |
| ●● | 823017 | 823002 | - | 823022 |
| ●●● | 823018 | 823003 | - | 823023 |
| ●●●● | 823019 | 823004 | - | 823024 |
| ●●●●● | 823020 | 823005 | - | 823025 |
| Valve System Unitized | | | | |
| ● | - | 823006 | 823035 | - |
| ●● | - | 823007 | 823036 | - |
| ●●● | - | 823008 | 823037 | - |
| ●●●● | - | 823009 | 823038 | - |
| ●●●●● | - | 823010 | 823039 | - |

| Radiopaque code | Regular | | Burr Hole | |
|---|---|---|---|---|
| | Without SiphonGuard® | With SiphonGuard® | Without SiphonGuard® | With SiphonGuard® |
| Valve Only | | | | |
| ● | 825471 | 825461 | 825491 | 825481 |
| ●● | 825472 | 825462 | 825492 | 825482 |
| ●●● | 825473 | 825463 | 825493 | 825483 |
| ●●●● | 825474 | 825464 | 825494 | 825484 |
| ●●●●● | 825475 | 825465 | 825495 | 825485 |
| Valve System | | | | |
| ● | 823816 | 823811 | - | 823361 |
| ●● | 823817 | 823812 | 823802 | 823362 |
| ●●● | 823818 | 823813 | 823803 | 823363 |
| ●●●● | 823819 | 823814 | 823804 | 823364 |
| ●●●●● | 823820 | 823815 | 823805 | 823365 |
| Valve System Unitized | | | | |
| ● | 823806 | 823821 | 823281 | 823261 |
| ●● | 823807 | 823822 | 823282 | 823262 |
| ●●● | 823808 | 823823 | 823283 | 823263 |
| ●●●● | 823809 | 823824 | 823284 | 823264 |
| ●●●●● | 823810 | 823825 | 823285 | 823265 |

## Products References Summary

### Essential

| Radiopaque code | Flat Bottom | Burr Hole |
|---|---|---|
| Valve System Unitized | | |
| ● | NL8504120 | NL8504110 |
| ●● | NL8504121 | NL8504111 |
| ●●● | - | NL8504112 |

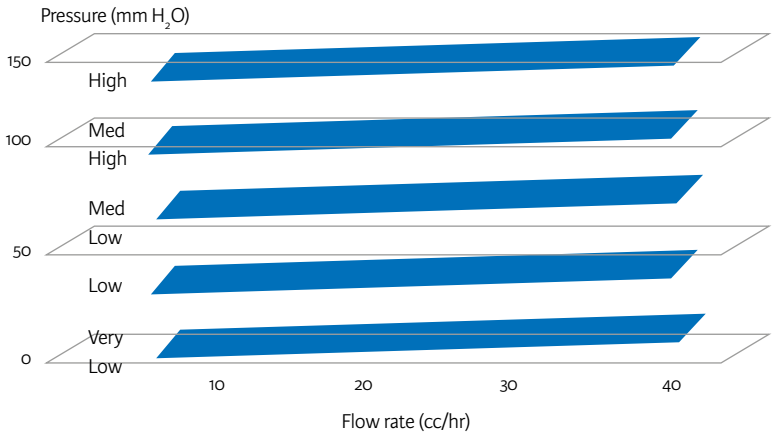
Codman SPECIALTY SURGICAL

# Codman® Hakim® Precision

The Codman® Hakim® Precision Fixed Pressure Valve features ball and spring mechanism with 5 distinct operating pressures to adapt patient's specific needs. The Codman® Hakim® Precision Valve is available in multiple designs (cylindrical, regular, micro, burr hole) and configurations including with SiphonGuard® Device integrated.



## Valve Performance Chart




For Codman® Hakim® Precision Fixed Pressure Valves dimensions, please refer to Codman® Hakim® Programmable Valves section.

## **Codman® Hakim® Precision Cylindrical** - with Pre-Chamber

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **823011** | 10 mm $H_2O$ | Very Low | ● |
| **823012** | 40 mm $H_2O$ | Low | ●● |
| **823013** | 70 mm $H_2O$ | Medium | ●●● |
| **823014** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823015** | 130 mm $H_2O$ | High | ●●●●● |
| **823001** | 10 mm $H_2O$ | Very Low | ● |
| **823002** | 40 mm $H_2O$ | Low | ●● |
| **823003** | 70 mm $H_2O$ | Medium | ●●● |
| **823004** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823005** | 130 mm $H_2O$ | High | ●●●●● |
| **823006** | 10 mm $H_2O$ | Very Low | ● |
| **823007** | 40 mm $H_2O$ | Low | ●● |
| **823008** | 70 mm $H_2O$ | Medium | ●●● |
| **823009** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823010** | 130 mm $H_2O$ | High | ●●●●● |

### Package Content

**Valve Only**

- Valve with pre-chamber and integrated plastic connector
- Valve introducer plastic
- Straight connector titanium

**Valve System**

- Valve with pre-chamber and integrated plastic connector
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Valve introducer plastic
- Right-angled adaptor plastic
- Straight connector titanium

**Valve System Unitized**

- Valve with pre-chamber
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone unitized
- Valve introducer plastic
- Right-angled adaptor plastic
- Straight connector titanium

## **Codman® Hakim® Precision Cylindrical** - without Pre-Chamber

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **823082** | 10 mm $H_2O$ | Very Low | ● |
| **823083** | 40 mm $H_2O$ | Low | ●● |
| **823084** | 70 mm $H_2O$ | Medium | ●●● |
| **823085** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823086** | 130 mm $H_2O$ | High | ●●●●● |
| **823016** | 10 mm $H_2O$ | Very Low | ● |
| **823017** | 40 mm $H_2O$ | Low | ●● |
| **823018** | 70 mm $H_2O$ | Medium | ●●● |
| **823019** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823020** | 130 mm $H_2O$ | High | ●●●●● |

### Package Content

**Valve Only**

- Valve with integrated plastic connector
- Valve introducer plastic
- Straight connector titanium

**Valve System**

- Valve with integrated plastic connector
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Valve introducer plastic
- Right-angled adaptor plastic
- Straight connector titanium

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## Codman® Hakim® Precision Micro

| Reference | Pressure | Pressure | Radiopaque code |
|---|---|---|---|
| **823026** | 10 mm $H_2O$ | Very Low | ● |
| **823027** | 40 mm $H_2O$ | Low | ●● |
| **823028** | 70 mm $H_2O$ | Medium | ●●● |
| **823029** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823030** | 130 mm $H_2O$ | High | ●●●●● |
| **823035** | 10 mm $H_2O$ | Very Low | ● |
| **823036** | 40 mm $H_2O$ | Low | ●● |
| **823037** | 70 mm $H_2O$ | Medium | ●●● |
| **823038** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823039** | 130 mm $H_2O$ | High | ●●●●● |

**Valve Only**

- Valve
- 2 straight connectors titanium
- Priming adaptor plastic

**Valve System Unitized**

- Valve
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone Unitized
- Right-angled adaptor plastic
- Straight connector titanium
- Priming adaptor plastic

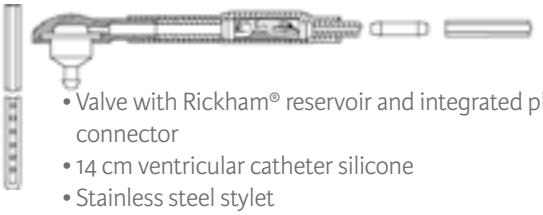
## Codman® Hakim® Precision Micro - with Rickham® Reservoir

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **823095** | 10 mm $H_2O$ | Very Low | ● |
| **823096** | 40 mm $H_2O$ | Low | ●● |
| **823097** | 70 mm $H_2O$ | Medium | ●●● |
| **823098** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823099** | 130 mm $H_2O$ | High | ●●●●● |
| **823021** | 10 mm $H_2O$ | Very Low | ● |
| **823022** | 40 mm $H_2O$ | Low | ●● |
| **823023** | 70 mm $H_2O$ | Medium | ●●● |
| **823024** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823025** | 130 mm $H_2O$ | High | ●●●●● |

**Valve Only**

- Valve with Rickham® reservoir and integrated plastic connector
- Straight connector titanium
- Priming adaptor plastic

**Valve System**



- Valve with Rickham® reservoir and integrated plastic connector
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Priming adaptor plastic

## Codman® Hakim® Precision Regular

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **825471** | 10 mm $H_2O$ | Very Low | ● |
| **825472** | 40 mm $H_2O$ | Low | ●● |
| **825473** | 70 mm $H_2O$ | Medium | ●●● |
| **825474** | 100 mm $H_2O$ | Medium High | ●●●● |
| **825475** | 130 mm $H_2O$ | High | ●●●●● |
| **823816** | 10 mm $H_2O$ | Very Low | ● |
| **823817** | 40 mm $H_2O$ | Low | ●● |
| **823818** | 70 mm $H_2O$ | Medium | ●●● |
| **823819** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823820** | 130 mm $H_2O$ | High | ●●●●● |
| **823806** | 10 mm $H_2O$ | Very Low | ● |
| **823807** | 40 mm $H_2O$ | Low | ●● |
| **823808** | 70 mm $H_2O$ | Medium | ●●● |
| **823809** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823810** | 130 mm $H_2O$ | High | ●●●●● |

### Package Content

**Valve Only**

- Valve with integrated plastic connectors
- Priming adaptor plastic

**Valve System**

- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Priming adaptor plastic
- Right angled adaptor plastic

**Valve System Unitized**

- Valve with integrated plastic connector
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone unitized
- Priming adaptor plastic
- Right angled adaptor plastic

## Codman® Hakim® Precision Regular - with SiphonGuard®

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **825461** | 10 mm $H_2O$ | Very Low | ● |
| **825462** | 40 mm $H_2O$ | Low | ●● |
| **825463** | 70 mm $H_2O$ | Medium | ●●● |
| **825464** | 100 mm $H_2O$ | Medium High | ●●●● |
| **825465** | 130 mm $H_2O$ | High | ●●●●● |
| **823811** | 10 mm $H_2O$ | Very Low | ● |
| **823812** | 40 mm $H_2O$ | Low | ●● |
| **823813** | 70 mm $H_2O$ | Medium | ●●● |
| **823814** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823815** | 130 mm $H_2O$ | High | ●●●●● |
| **823821** | 10 mm $H_2O$ | Very Low | ● |
| **823822** | 40 mm $H_2O$ | Low | ●● |
| **823823** | 70 mm $H_2O$ | Medium | ●●● |
| **823824** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823825** | 130 mm $H_2O$ | High | ●●●●● |

### Package Content

**Valve Only**

- Valve with integrated plastic connectors
- Priming adaptor plastic

**Valve System**

- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Priming adaptor plastic
- Right angled adaptor plastic

**Valve System Unitized**

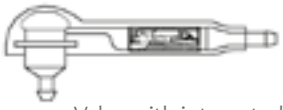
- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone unitized
- Priming adaptor plastic
- Right angled adaptor plastic

Codman SPECIALTY SURGICAL

## Codman® Hakim® Precision Burr Hole

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **825491** | 10 mm $H_2O$ | Very Low | ● |
| **825492** | 40 mm $H_2O$ | Low | ●● |
| **825493** | 70 mm $H_2O$ | Medium | ●●● |
| **825494** | 100 mm $H_2O$ | Medium High | ●●●● |
| **825495** | 130 mm $H_2O$ | High | ●●●●● |

**Valve Only**



- Valve with integrated plastic connectors
- Priming adaptor plastic

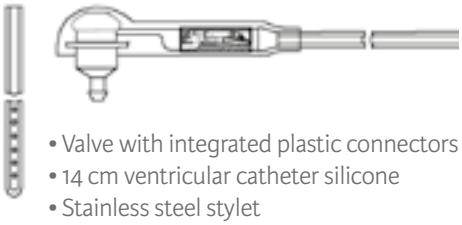
| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **823802** | 40 mm $H_2O$ | Low | ●● |
| **823803** | 70 mm $H_2O$ | Medium | ●●● |
| **823804** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823805** | 130 mm $H_2O$ | High | ●●●●● |

**Valve System**

- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Priming adaptor plastic

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **823281** | 10 mm $H_2O$ | Very Low | ● |
| **823282** | 40 mm $H_2O$ | Low | ●● |
| **823283** | 70 mm $H_2O$ | Medium | ●●● |
| **823284** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823285** | 130 mm $H_2O$ | High | ●●●●● |

**Valve System Unitized**



- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone unitized
- Priming adaptor plastic

## Codman® Hakim® Precision Burr Hole - with SiphonGuard®

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **825481** | 10 mm $H_2O$ | Very Low | ● |
| **825482** | 40 mm $H_2O$ | Low | ●● |
| **825483** | 70 mm $H_2O$ | Medium | ●●● |
| **825484** | 100 mm $H_2O$ | Medium High | ●●●● |
| **825485** | 130 mm $H_2O$ | High | ●●●●● |
| **823361** | 10 mm $H_2O$ | Very Low | ● |
| **823362** | 40 mm $H_2O$ | Low | ●● |
| **823363** | 70 mm $H_2O$ | Medium | ●●● |
| **823364** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823365** | 130 mm $H_2O$ | High | ●●●●● |
| **823261** | 10 mm $H_2O$ | Very Low | ● |
| **823262** | 40 mm $H_2O$ | Low | ●● |
| **823263** | 70 mm $H_2O$ | Medium | ●●● |
| **823264** | 100 mm $H_2O$ | Medium High | ●●●● |
| **823265** | 130 mm $H_2O$ | High | ●●●●● |

### Package Content

**Valve Only**

- Valve with integrated plastic connectors
- Priming adaptor plastic

**Valve System**

- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone
- Priming adaptor plastic

**Valve System Unitized**

- Valve with integrated plastic connectors
- 14 cm ventricular catheter silicone
- Stainless steel stylet
- 120 cm distal catheter silicone unitized
- Priming adaptor plastic

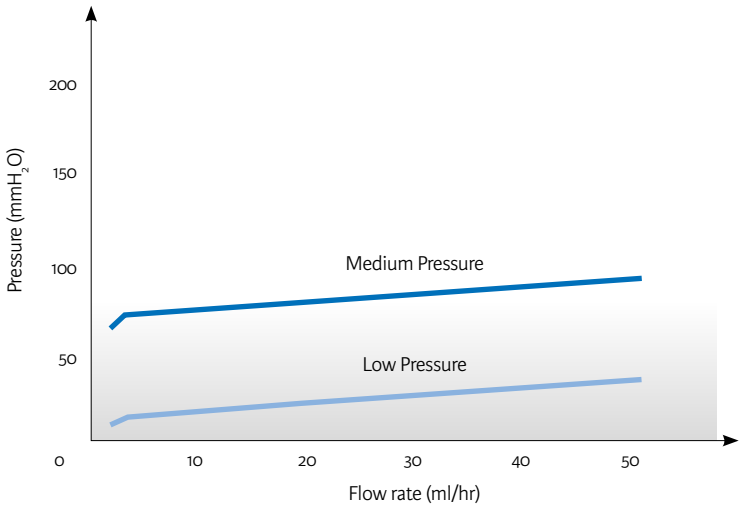
Codman SPECIALTY SURGICAL

# Essential

The Essential Shunt Kit Flat Bottom Design, can be used in (but is not restricted to) situations where skin erosion may be a problem. The Essential Shunt Kit Burr Hole allows to accomodate surgical preferences. Valve and catheters contains barium sulfate. No metal part used in the system eliminating possibility of interference with imaging technology. The implantation is simplified by eliminating connections. The shunt is available in two configurations (flat bottom and burr hole) with varying pressure ranges.



## Essential Flat Bottom




| | | |
|---|---|---|
| **Closing Pressure** | 5 - 50 mm $H_2O$ | 51 – 110 mm $H_2O$ |
| **Pressure Range** | Low | Medium |
| **Radiopaque Code** | ●● | ●●● |

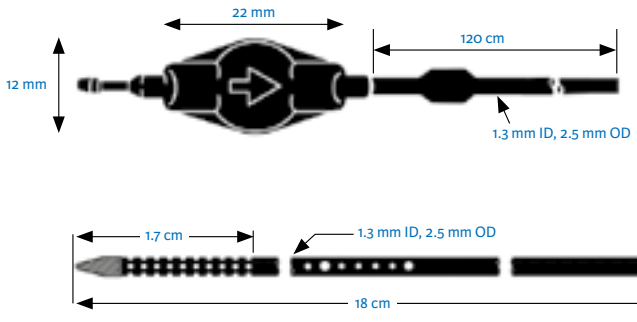
*Note: The above curves describe typical in-vitro valve performance characteristics for each closing pressure range. Due to characteristics of silicone materials, some variation in pressure performance may occur which historically has no compromised effective control and treatment of hydrocephalus. Trimming the peritoneal catheter will result in an overall decrease in system pressure of approximately 1 mm H2O at a flow rate of 23 ml/h for each 6 cm of catheter length removed.*

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **NL8504120** | 5-50 mm $H_2O$ | Low | ● |
| **NL8504121** | 51-110 mm $H_2O$ ● | Medium | ●● |

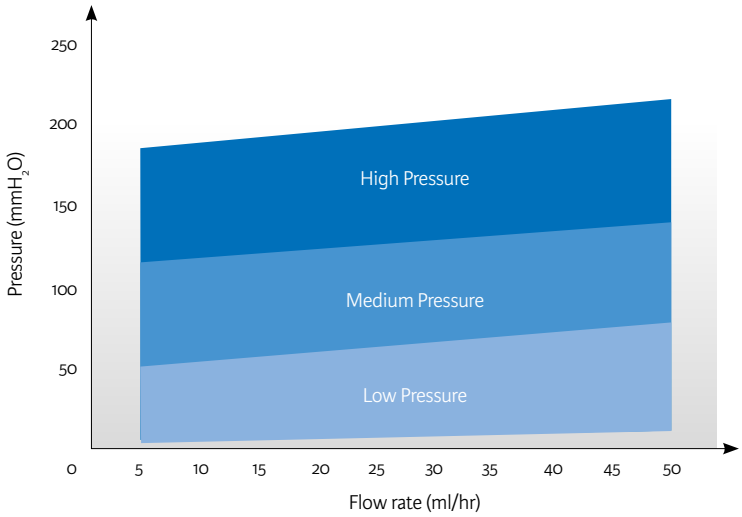
### Package Content

**Valve System Unitized**

- Valve
- 120 cm kink resistant striped peritoneal catheter unitized
- 18 cm ventricular catheter with radiopaque markers
- Stylet
- Right angle guide



## Essential Burr Hole




| | | | |
|---|---|---|---|
| **Closing Pressure Range** | 5 - 50 mm $H_2O$ | 51 – 110 mm $H_2O$ | 111 – 180 mm $H_2O$ |
| **Pressure at 5 ml/h Flow** | 5 mm $H_2O$ | 50 mm $H_2O$ | 110 mm $H_2O$ |
| **Pressure at 50 ml/h Flow** | 75 mm $H_2O$ | 140 mm $H_2O$ | 220 mm $H_2O$ |
| **Pressure Range** | Low | Medium | High |
| **Radiopaque Code** | ● | ●● | ●●● |

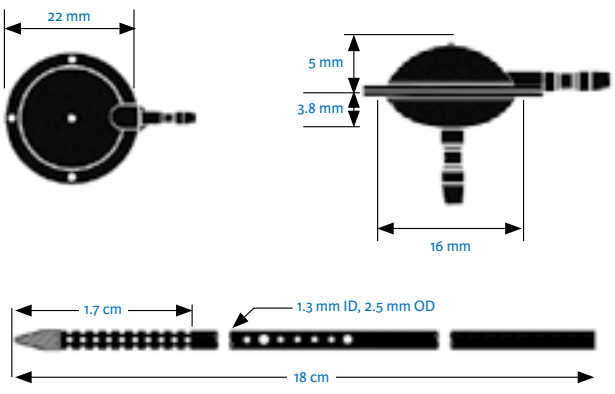
*Note: Values shown in the flow/pressure-range chart are the low point of the established 5 ml/h range and the high point of the 50 ml/h range.*

| Reference | Pressure | | Radiopaque code |
|---|---|---|---|
| **NL8504110** | 5-50 mm $H_2O$ | Low | ● |
| **NL8504111** | 51-110 mm $H_2O$ | Medium | ●● |
| **NL8504112** | 111-180 mm $H_2O$ | High | ●●● |

### Package Content

**Valve System**

- Valve
- 120 cm kink resistant striped peritoneal catheter
- 18 cm ventricular catheter with radiopaque markers
- Stylet



Codman SPECIALTY SURGICAL

## Notes

## Notes

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SPECIALTY SURGICAL

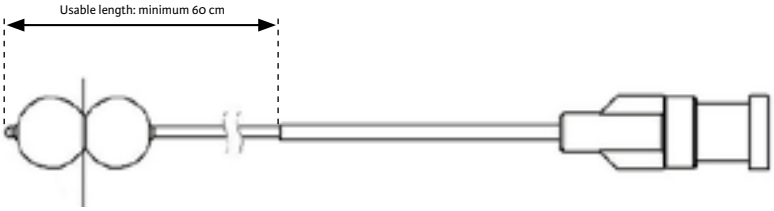


# Neuro Endoscopy
# NeuroBalloon™ Catheter

## NeuroBalloon™

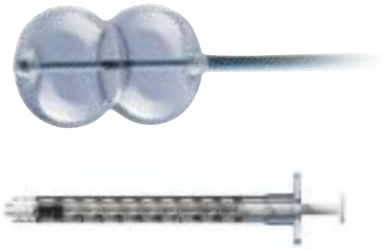
# NeuroBalloon™

The NeuroBalloon™ Catheter is designed for dilatation of prepunctured cerebral membrane fenestrations such as for Endoscopic Third Ventriculostomies (ETVs). The unique double balloon design assures its positioning. The dilatation of the membrane can be observed through the transparent silicone material of the NeuroBalloon™ catheter. This positioning is especially important during ETVs.




The NeuroBalloon™ Catheter is compatible with a F4 working channel lumen diameter of 1.35 mm minimum. Diameter of the waist when inflated with 0.6 ml (cc) of air and after a pre-inflation with 1 ml (cc) is 3.5 mm minimum. Diameter of the waist when inflated with 1 ml (cc) of air and after a pre-inflation with 1 ml (cc) is 6.0 mm maximum.

| Reference | Package Content |
|---|---|
| 7CBD10 | **NeuroBalloon™ Catheter**<br>• 60 cm minimum usable length catheter with female luer lock connector and silicone balloon<br>• 1 ml syringe supplied sterile |



These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL

## Notes

## Notes

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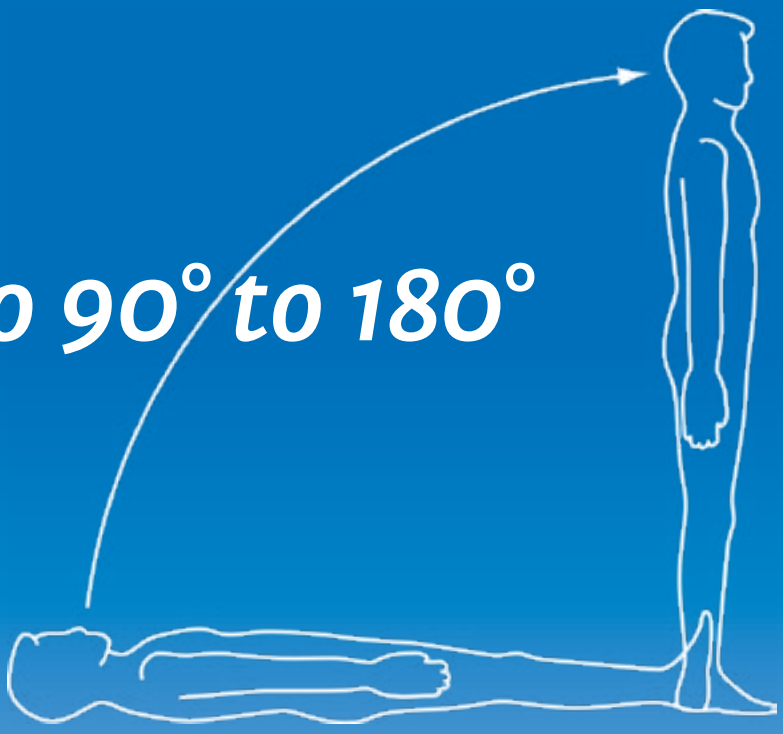
# Specialty Drainage Products

## SiphonGuard®

## Anti-Siphon Device

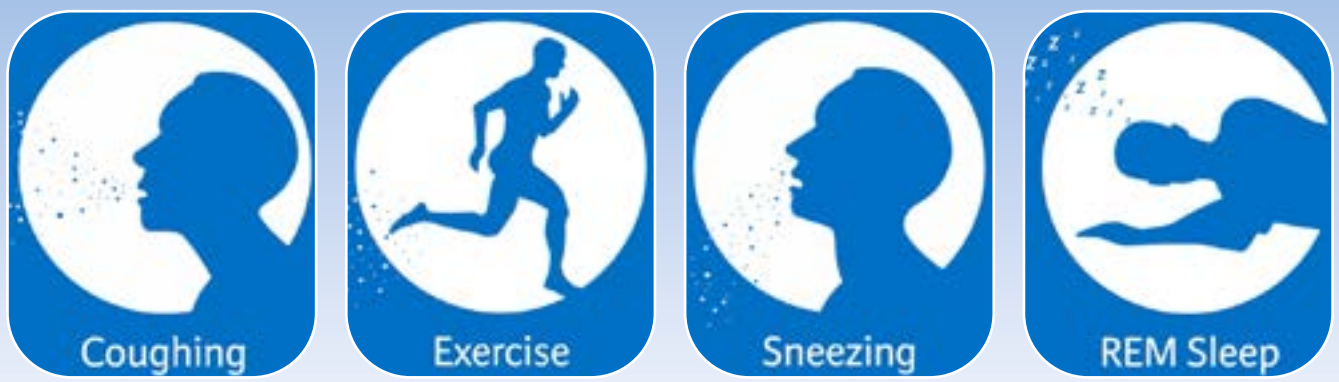
# SiphonGuard®*



## *Up to 90° to 180°*

***Any position; supine, reclined or upright.***

*Flow-sensing SiphonGuard protects patients when everyday activities cause increased CSF production or flow that may not be detected by a gravitational device.*



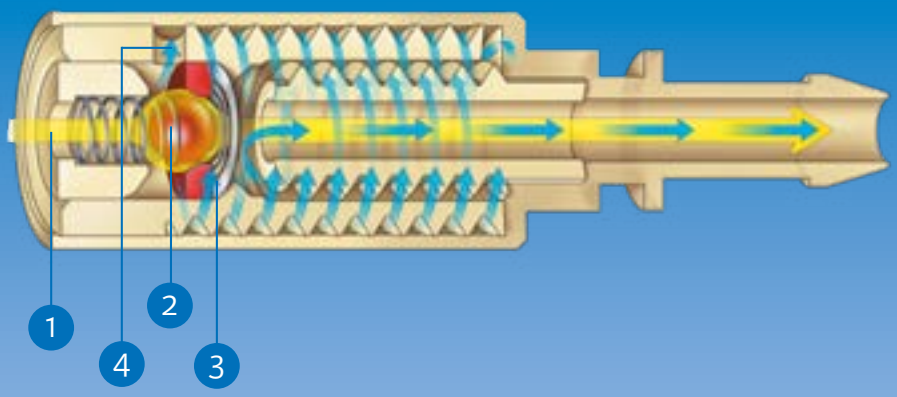

These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL

The SiphonGuard® anti-siphon device is available as an integral component of the Codman® CERTAS™ Plus programmable valve and the Codman® Hakim® programmable and Precision valves, or as a stand-alone upgrade to current shunt implants. The stand-alone device is **position independent, and can be placed anywhere distal to any valve** and includes all the mechanical and durability design features that make SiphonGuard® device so robust. When added to an existing valve configuration, the inlet tubing of the SiphonGuard® device can be cut to the desired length and connected to the shunt valve outlet.
When activated, SiphonGuard anti-siphoning device does not shut down drainage totally. The reduced flow, through the secondary pathway, **could reduce the risk of excess ventricular CSF accumulation and ventriculomegaly.**

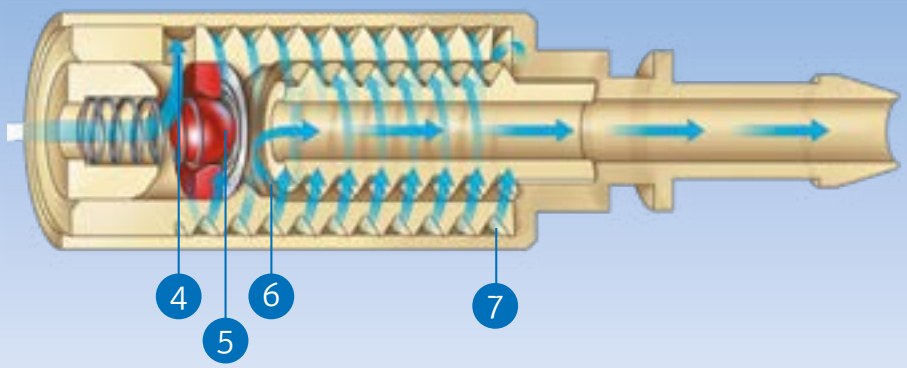
## Normal flow, (*SiphonGuard not activated*)

1. Normal flow through open primary path (yellow)
2. During normal flow, ball is balanced off the seat between two opposing springs
3. Secondary path (blue) is always open
4. Opening for flow to enter secondary path is always open




## Excessive flow *(SiphonGuard activated)*

5. During excessive flow, ball seats and closes primary path
6. Secondary path directs CSF down an outer spiral then upward along an inner spiral to exit just below seated ball
7. Opening for flow to enter inner spiral of secondary path

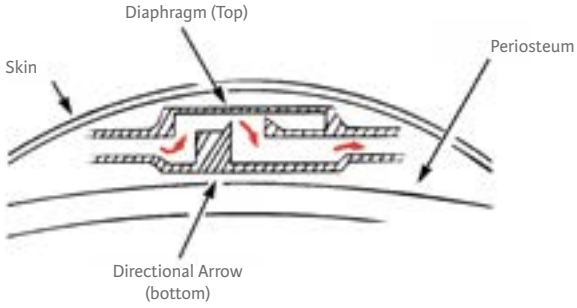


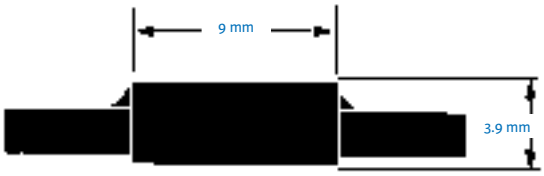

| Reference | Package Content |
|---|---|
| 823090 | SiphonGuard® CSF Flow Control Device |

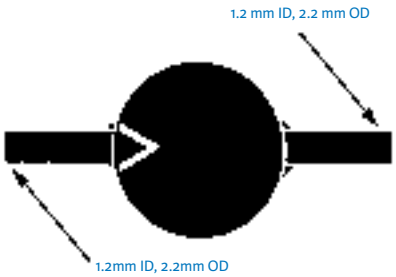
These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

# Anti-Siphon Device

The Anti-Siphon Device minimizes siphon effect by closing as the hydrostatic pressure changes relative to patient position (standing, sitting or supine).




| Reference | Package Content |
|---|---|
| NL8500200 | **Anti-Siphon Device Kit**<br>• Anti-Siphon device<br>• 2 Pudenz straight connectors |

Codman®
SPECIALTY SURGICAL

# Reservoirs

## Holter® Ventricular Catheter Integra CSF Reservoirs

## Standard Integra® CSF Reservoirs

## Side Inlet Integra® CSF Reservoirs

## Holter® Selker Ventriculostomy Reservoirs

## Holter® Rickham™ Ventriculostomy Reservoirs

## Holter® Salmon-Rickham™ Ventriculostomy Reservoirs

## Rickham™-Style Reservoirs

All reservoirs are packaged sterile in box of 1.

## Holter® Ventricular Catheter Reservoirs

Also referred to as Cerebral Catheter Reservoirs, the Holter® Ventricular Catheter-Reservoir is an all silicone rubber reservoir and right-angle catheter molded together as one unit, X-ray detectable. The dome-shaped reservoir has a base made of reinforced sheeting, coated with silicone rubber. The reservoir base, which extends beyond the diameter of the reservoir to accommodate sutures, has a diameter of 15.7 mm. The distal end of the Catheter Reservoir is designed to accommodate the inlet adapter of a Holter® Valve when the reservoir is used in a shunt system. The plug inserted in the distal end of the reservoir should be removed when the Holter® Ventricular Catheter-Reservoir is being used in a shunt system.

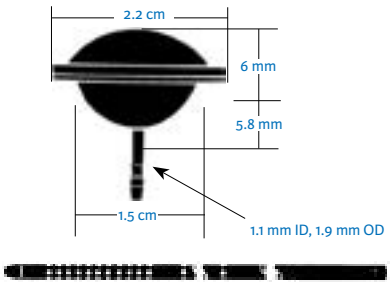
| Reference | Package Content |
|---|---|
| | **Holter® Ventricular Catheter Reservoir**<br>Height 6.0 mm, Diameter 15.7 mm, ID 1.5 mm, OD 3.1 mm, Sterile<br>• Ventricular right angle barium catheter reservoir with stainless steel plug inserted in the distal end<br>• Stainless steel stylet |
| **821630** | 3 cm length (x) |
| **821632** | 4 cm length (x) |
| **821634** | 5 cm length (x) |
| **821636** | 6 cm length (x) |
| **821638** | 7 cm length (x) |
| **821640** | 8 cm length (x) |
| **821642** | 9 cm length (x) |

Codman SPECIALTY SURGICAL

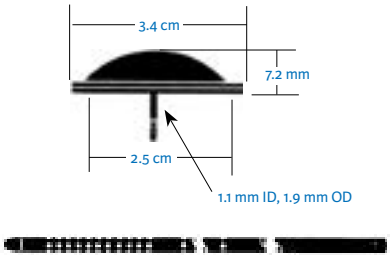
# Standard Integra® CSF Reservoirs

The Standard Integra® CSF Reservoirs consist of a single flushing reservoir, supplied with a separate ventricular catheter. The reservoir is designed for subcutaneous placement and attaches to the ventricular catheter at the straight connector. The reservoir is made with a suture flange at its base for attachment to the periosteum. The 1.5 cm size is a formal burr hole, bottom inlet design. The larger 2.5 cm reservoir is a flat bottom device requiring only a small (3 mm) burr hole opening to accommodate the inlet tubing on the base of the reservoir. The reservoir is fitted with a polypropylene needle-puncture shield. A 25G or smaller needle should be used to puncture the reservoir.

| Reference | Package Content |
|---|---|
| **NL8501210** | **Burr Hole Reservoir**<br>Size 1.5 cm, Flushing volume 0.68 ml, Sterile<br>• Reservoir with integrated connector<br>• Small Pudenz ventricular catheter<br>• Stylet |



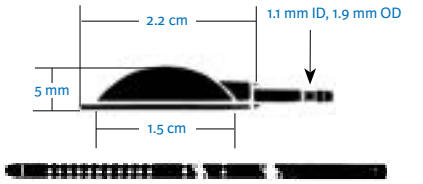

| | |
|---|---|
| **NL8501211** | **Flat-Bottom Reservoir**<br>Size 2.5 cm, Flushing volume 1.26 ml, Sterile<br>• Reservoir with integrated connector<br>• Small Pudenz ventricular catheter<br>• Stylet |

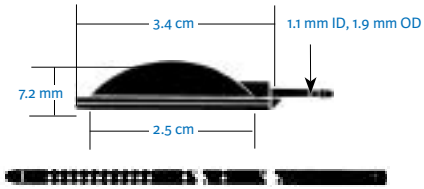


## Side Inlet Integra® CSF Reservoirs

The Side Inlet Integra® CSF Reservoirs vary from the Standard Model in that the inlet tubing enters from the side of the reservoir rather than from the base. This flat bottom side inlet design eliminates the need for a formal burr hole, provides greater latitude in positioning and allows the ventricular catheter to be revised without disturbing the reservoir. The reservoir is fitted with a polypropylene needle-puncture shield. A 25G or smaller needle should be used to puncture the reservoir.

| Reference | Package Content |
|---|---|
| NL8501214 | **Small Flat-Bottom Reservoir**<br>Size 1.5 cm, Flushing volume 0.31 ml, Sterile<br>• Reservoir with integrated connector<br>• Small Pudenz ventricular catheter<br>• Right-angle guide<br>• Stylet |
| NL8501212 | **Large Flat-Bottom Reservoir**<br>Size 2.5 cm, Flushing volume 1.14 ml, Sterile<br>• Reservoir with integrated connector<br>• Small Pudenz ventricular catheter<br>• Right-angle guide<br>• Stylet |

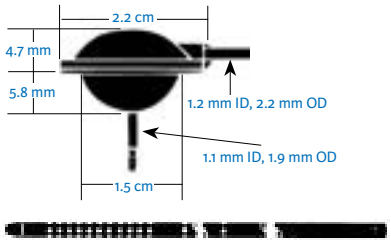


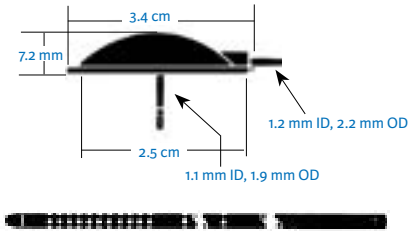




## Convertible Integra® CSF Reservoirs

The Convertible Integra® CSF Reservoirs vary from the Standard Model in incorporating an outlet tube in addition to an inlet tube. The outlet tube may be connected to a distal catheter, allowing the reservoir to be used in a shunting system, if later indicated. Since the distal tip of the outlet tube is plugged, conversion to a shunting system requires cutting off the outlet tube proximal to the plugged end for connection to a distal shunt catheter. The reservoir is fitted with a polypropylene needle-puncture shield. A 25G or smaller needle should be used to puncture the reservoir.

| Reference | Package Content |
|---|---|
| NL8501215 | **Burr Hole Convertible Reservoir**<br>Size 1.5 cm, Flushing volume 0.68 ml, Sterile<br>• Reservoir with integrated connectors<br>• Small Pudenz ventricular catheter<br>• Right-angle guide<br>• Stylet |
| NL8501213 | **Flat-Bottom Convertible Reservoir**<br>Size 2.5 cm, Flushing volume 1.31 ml, Sterile<br>• Reservoir with integrated connectors<br>• Small Pudenz ventricular catheter<br>• Right-angle guide<br>• Stylet |



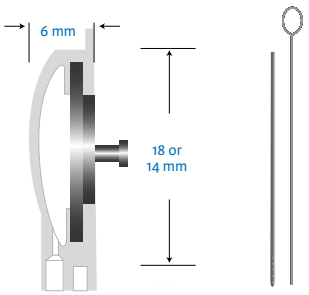



Codman SPECIALTY SURGICAL

## Holter® Selker Ventriculostomy Reservoirs

The Holter® Selker Ventriculostomy Reservoirs are flat base nylon reservoirs. Attached to the reservoir is a radiopaque silicone rubber cap with a nylon plug inserted in the lumen of the side arm. The plug is left in place for simple ventriculostomy and is removed when the reservoir is connected to the Holter(r) Valve System. The cap is equipped with four tabs to aid suturing. The Holter® Selker Ventriculostomy Reservoirs require only a 4 mm drilled hole to accommodate the ventricular catheter. This style reservoir provides a larger target area for puncturing and a low profile recommended for pediatric use. A 25G Huber type needle or smaller should be used to puncture the reservoir.

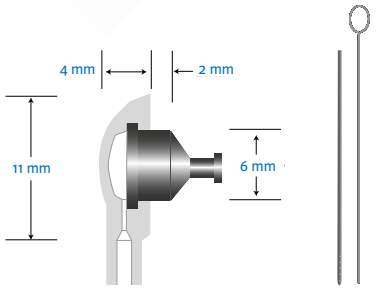
| Reference | Package Content |
|---|---|
| | **Holter® Selker Ventriculostomy Reservoir**<br>Sterile<br>• Reservoir with preassembled cap and plug<br>• 15 cm straight ventricular catheter radiopaque, ID 1.5 mm, OD 3.1 mm<br>• Stylet |
| **821618** | Small (Size 14 mm) |
| **821619** | Large (Size 18 mm) |

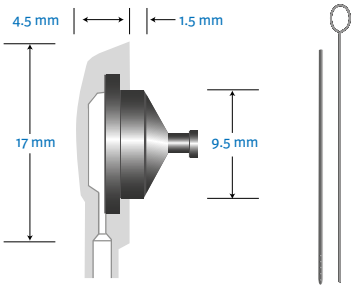



## Holter® Rickham™ Ventriculostomy Reservoirs

Holter® Rickham™ Ventriculostomy Reservoirs are available in 316 stainless steel or nylon. Attached to the reservoir is a radiopaque silicone rubber cap with a stainless steel or nylon plug inserted in the lumen of the side arm. The plug is left in place for simple ventriculostomy and is removed when the reservoir is connected to the Holter® Valve System. The Holter® Rickham™ Ventriculostomy Reservoirs require a 6 mm burr hole or skull recess. A 25G Huber type needle or smaller should be used to puncture the reservoir.

| Reference | Package Content |
|---|---|
| | **Holter® Rickham™ Ventriculostomy Reservoir Standard**<br>Size 6 mm, Sterile<br>• Reservoir with preassembled cap and plug<br>• 15 cm straight ventricular catheter radiopaque, ID 1.5 mm, OD 3.1 mm<br>• Stylet |
| **821615** | Plastic base |
| **821621** | Stainless steel base |
| | **Holter® Rickham™ Ventriculostomy Reservoir Large**<br>Size 9.5 mm, Sterile<br>• Reservoir with preassembled cap and plug<br>• 15 cm straight ventricular catheter radiopaque, ID 1.5 mm, OD 3.1 mm<br>• Stylet |
| **821616** | Plastic base |
| **821623** | Stainless steel base |

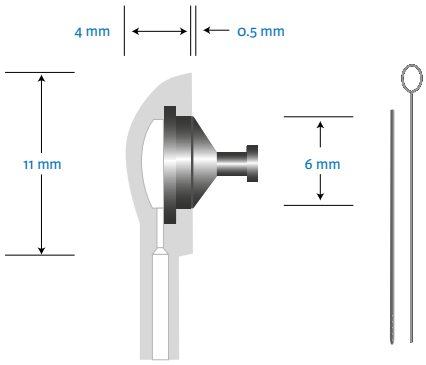


# Holter® Salmon-Rickham™ Ventriculostomy Reservoirs

The Holter® Salmon-Rickham™ Ventriculostomy Reservoirs are available in 316 stainless steel or nylon. Attached to the reservoir is a radiopaque silicone rubber cap with a stainless steel or nylon plug inserted in the lumen of the side arm. The plug is left in place for simple ventriculostomy and is removed when the reservoir is connected to the Holter® Valve System. The Holter® Salmon-Rickham™ Ventriculostomy Reservoirs are designed for pediatric use. They are ideal for seating in very thin to medium thickness cranium and require a 6 mm burr hole or drilled-skull recess. A 25G Huber type needle or smaller should be used to puncture the reservoir.

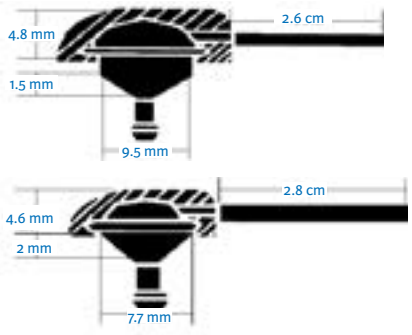
| Reference | Package Content |
|---|---|
| | **Holter® Salmon-Rickham™ Ventriculostomy Reservoir**<br>Low Profile, Size 6 mm, Sterile<br>• Reservoir with preassembled cap and plug<br>• 15 cm straight ventricular catheter radiopaque, ID 1.5 mm, OD 3.1 mm<br>• Stylet |
| **821617** | Plastic base |
| **821625** | Stainless steel base |




# Rickham™-Style Reservoirs

The Rickham™-Style Reservoirs consist of a dome, manufactured from barium-sulfate-impregnated silicone elastomer, and a nylon base which acts as a needle-puncture shield. The reservoir dome may be injected with a 25G or smaller needle.

| Reference | Package Content |
|---|---|
| **NL8501132** | **Large Rickham™-Style Reservoir**<br>Size 9.5 mm, Sterile |
| **NL8501121** | **Small Rickham™-Style Reservoir**<br>Size 7.7 mm, Sterile |



Codman SPECIALTY SURGICAL

## Notes

## Notes

Codman®
SPECIALTY SURGICAL

# Catheters

## Bactiseal® Catheters

## Ventricular Catheters

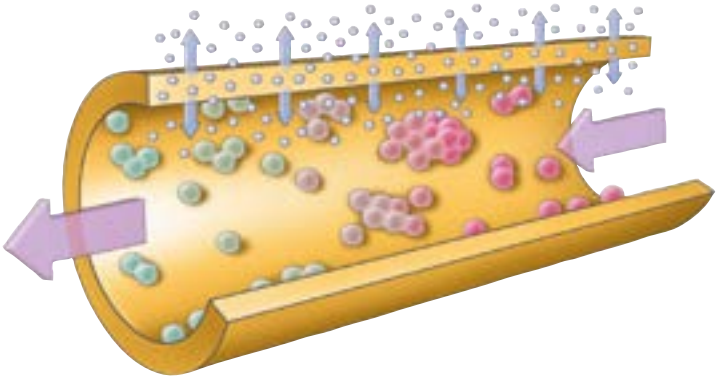
## Peritoneal Catheters

## Lumbar-Peritoneal Catheters

## Atrial Catheters

# Bactiseal® Catheters

Bactiseal® antimicrobial silicone impregnated catheter with 0.15% of Clindamycin and 0.054% of Rifampicin targets infections caused by Gram Positive bacteria. The highest at risk groups are the PAEDIATRIC group, especially neonates. Bactiseal® offers proven dual-drug action against Gram Positive bacteria, kills 100% of target organisms within 52 h and provides 50 days of constant protection on all catheter surfaces.



| Reference | Package Content |
|---|---|
| 823072 | **Bactiseal® Catheters Kit**<br>• Ventricular catheter<br>• Peritoneal catheter |
| 823073 | **Bactiseal® Ventricular Catheter**<br>Length 14 cm, ID 1.4 mm, OD 2.7 mm<br>• Ventricular catheter<br>• Stainless steel stylet<br>• Right angle adapter |
| 823074 | **Bactiseal® Peritoneal Catheter**<br>Length 120 cm, ID 1.0 mm, OD 2.2 mm<br>• Peritoneal catheter |

All catheters are packaged sterile in box of 1.

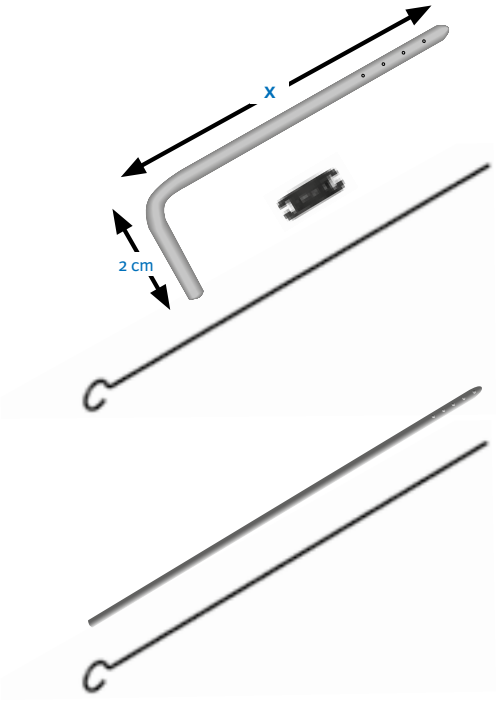
# Ventricular Catheters*

## Codman® Hakim® Ventricular Catheter

| Reference | Package Content |
|---|---|
| 823041 | **Codman® Hakim® Ventricular Catheter**<br>Silicone impregnated with barium sulphate, Sterile<br>Length 14 cm, ID 1.4 mm, OD 2.7 mm<br>• Ventricular catheter<br>• Stainless steel stylet<br>• Right-angled adaptor plastic |

## Holter® Ventricular Catheters

| Reference | Package Content |
|---|---|
| | **Holter® Right Angle Ventricular Catheter**<br>Silicone impregnated with barium, radiopaque, multiple perforations, Sterile<br>ID 1.5 mm, OD 3.1 mm<br>• Ventricular catheter<br>• Stainless steel stylet<br>• Right-angled adaptor plastic |
| 821652 | 3 cm length (x) |
| 821654 | 4 cm length (x) |
| 821656 | 5 cm length (x) |
| 821658 | 6 cm length (x) |
| 821660 | 7 cm length (x) |
| 821662 | 8 cm length (x) |
| 821664 | 9 cm length (x) |
| 821666 | 10 cm length (x) |
| 821650 | **Holter® Straight Ventricular Catheter**<br>Silicone impregnated with barium, radiopaque, multiple perforations, Sterile<br>Length 15 cm, ID 1.5 mm, OD 3.1 mm<br>• Ventricular catheter<br>• Stainless steel stylet |




## Portnoy Ventricular Catheter

7 elastomer flanges spaced approximately 2.5 mm apart along 15 mm of the proximal end to help reduce the possibility of obstruction of the drainage holes during insertion and resultant occlusion of the catheter.

| Reference | Package Content |
|---|---|
| NL8501229 | **Portnoy Ventricular Catheter**<br>Barium impregnated, Sterile<br>Length 18 cm, ID 1.3 mm, OD 2.2 mm<br>• Ventricular catheter<br>• Introducing rod |

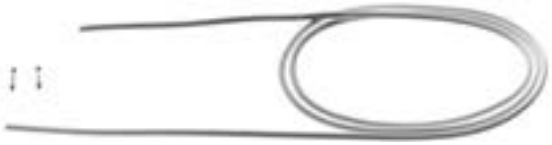
# Peritoneal Catheters

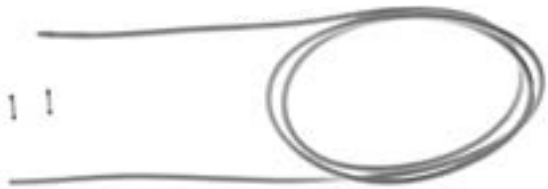
## Codman® Peritoneal Catheter*

| Reference | Package Content |
|---|---|
| 823045 | **Codman® Peritoneal Catheter**<br>Silicone, Sterile<br>Length 120 cm, ID 1 mm, OD 2.2 mm<br>• Peritoneal catheter |

## Holter® Distal Peritoneal Catheters

| Reference | Package Content |
|---|---|
| 821682 | **Holter® Distal Peritoneal Catheter**<br>Barium impregnated, open end, Sterile<br>Length 90 cm, ID 1.2 mm, OD 2.5 mm<br>• Peritoneal catheter<br>• 2 stainless steel Holter® type A connectors |
| 821684 | **Holter® Distal Peritoneal Catheter** Salmon Style<br>Barium impregnated, closed distal tip with 4 side slits 90° apart, tip in solid silicone to be more heavily opacified for positive X-ray identification, Sterile<br>Length 90 cm, ID 1.2 mm, OD 2.5 mm<br>• Peritoneal catheter<br>• 2 stainless steel Holter® type A connectors |

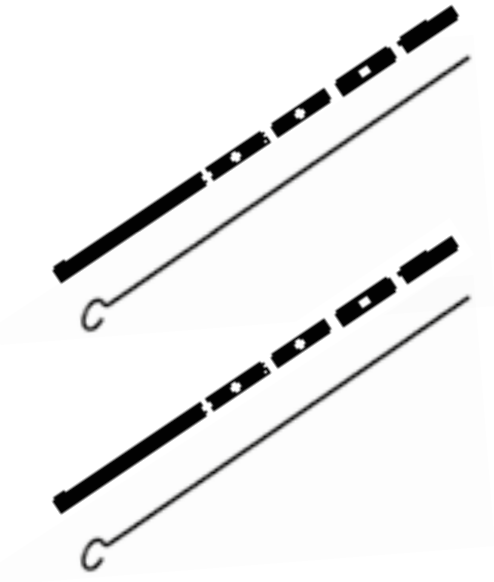




## Peritoneal Catheters Open-Ended with Slits

Distal end of the catheter with 4 staggered rows of 6 mm slits. If distal outlet hole of the catheter becomes obstructed, slits open for drainage.

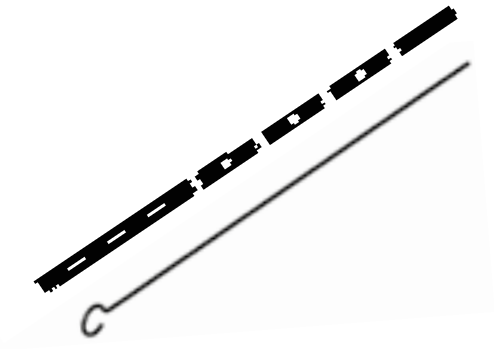
| Reference | Package Content |
|---|---|
| | **Peritoneal Catheters Open-Ended with Slits**, Barium stripe<br>Barium stripe, Sterile<br>• Peritoneal catheter<br>• Introducing rod |
| **NL8501376** | Length 120 cm, ID 1.3 mm, OD 2.5 mm |



## Reflux Control Peritoneal Catheter

Minimum flow resistance through a series of slits along the catheter's distal section. One set of 4 slits at the catheter's distal end and two sets of 4 slits spaced at 2.5 cm intervals along the catheter help resist retrograde flow of CSF while minimizing occlusion at the distal catheter tip. Catheter made of high durometer silicone elastomer. Stripe, made of barium sulfate-impregnated silicone elastomer imbedded in the wall of the catheter, make the catheter radiopaque throughout its entire length .

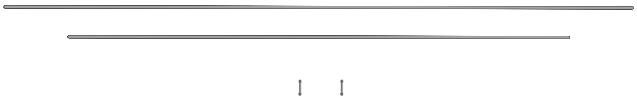
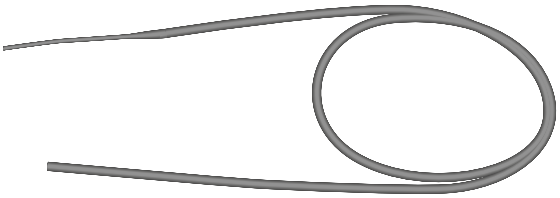
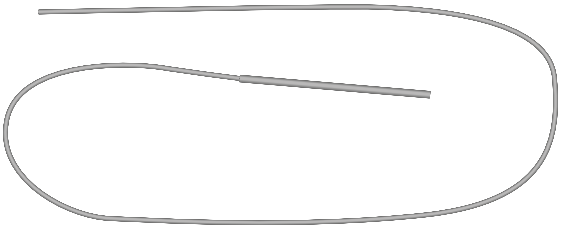
| Reference | Package Content |
|---|---|
| **NL8501375** | **Reflux Control Peritoneal Catheter**<br>Barium sulfate impregnated, Sterile<br>Length 120 cm, ID 1.3 mm, OD 2.5 mm<br>• Peritoneal catheter<br>• Introducing rod |



# Atrial Catheters

## Holter® Distal Atrial Catheters

Barium impregnated with 2 lumen configurations to meet various shunting needs.

| Reference | Package Content | |
|---|---|---|
| 821670 | **Holter® Distal Atrial Catheter Type A**<br>Barium impregnated, Large lumen, Sterile<br>Length 45 cm, ID 1.2 mm, OD 2.5 mm<br>• Atrial catheter<br>• 2 stainless steel Holter® type A connectors |  |
| 821672 | **Holter® Distal Atrial Catheter Type B**<br>Barium impregnated, Large lumen, Sterile<br>Length 38 cm, ID 1.2 mm, OD 2.5 mm<br>• Atrial catheter<br>• 2 Holter® type B connectors |  |
| 821674 | **Holter® Distal Atrial Catheter Type C**<br>Barium impregnated, Large lumen, Sterile<br>Length 42 cm, ID 1.2 mm, OD 2.5 mm<br>• Atrial catheter |  |
| 821676 | **Holter® Distal Atrial Catheter Type E**<br>Barium impregnated, Sterile<br>Small Catheter - Length 24 cm, ID 0.8 mm, OD 1.3 mm<br>Large Catheter - Length 24 cm, ID 1.2 mm, OD 2.5 mm<br>Total length 48 cm<br>• Atrial catheter<br>• 1 stainless steel Holter® type A connector |  |
| 821678 | **Holter® Distal Atrial Catheter Type H**<br>Barium impregnated, Large lumen, Sterile<br>Length 42 cm, ID 1.2 mm, OD 2.5 mm<br>• Atrial catheter |  |

## Codman® Atrial Catheter*

| Reference | Package Content |
|---|---|
| 823044 | **Codman® Atrial Catheter*** <br> Silicone, Sterile <br> Length 46 cm, ID 1 mm, OD 2.2 mm <br> • Atrial catheter |



*This product (823044) is currently non CE-marked. Please check with your local CSS Representative their availability for sale.

## Notes

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# Connectors

## Metal Connectors

## Plastic Connectors

## Catheter Accessories

The connectors are X-ray detectable, except for radiolucent ones. They have beveled ends and are grooved to hold sutures for preventing catheter disconnection.

## Straight Connectors

| Reference | Package Content | |
|---|---|---|
| 823048 | **Straight Connector*** <br> Stainless steel, Sterile <br> Length 10.4 mm, ID 1.10 mm, OD 1.95 mm <br> Box of 1 |  |
| 823053 | **Straight Connector** <br> Titanium, Sterile <br> Length 14 mm, ID 1.0 mm, OD 2.2 mm <br> Box of 1 |  |
| 821694 | **Holter® Type A Connectors** <br> Stainless steel, Non-sterile <br> Length 10.4 mm, ID 1.4 mm, OD 2.0 mm <br> Box of 5 |  |

## Right Angle Connector*

| Reference | Package Content | |
|---|---|---|
| 823049 | **Right Angle Connector*** <br> Stainless steel, Sterile <br> ID 1.1 mm, OD 1.9 mm <br> Box of 1 |  |

*These products (823048, 823049) are currently non CE-marked. Please check with your local CSS Representative their availability for sale.

Codman SPECIALTY SURGICAL

### Stepdown Stepup Connectors

| Reference | Package Content |
|---|---|
| 821695 | **Holter® Type B Connectors (Stepdown/Stepup)**<br>Stainless steel, Non-sterile<br>Length 7.9 mm, ID 1.0–1.2 mm, OD 1.3–1.9 mm<br>Box of 5 |

### Threaded Connectors

| Reference | Package Content |
|---|---|
| NL8501911 | **Threaded Straight Connector**<br>Nylon, Sterile<br>Length 16.0 mm, ID 1.1 mm, OD 1.9 mm<br>Box of 1 |

| Reference | Package Content |
|---|---|
| NL8501919 | **Double-Threaded Straight Connector**<br>Nylon, Sterile<br>Length 17.0 mm, ID 1.1 mm, OD 1.9 mm<br>Box of 1 |

## Catheter Accessories

| Reference | Package Content |
|---|---|
| | **CODMAN®-MEDOS® Right Angle Adaptor**<br>Plastic, Sterile |
| 823052 | Box of 1 |

## Notes

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# Tunnelers and Introducers

## Valve Introducer

## Single Use Distal Catheter Introducers

## Valve Introducer

The Codman® Medos Valve Introducer is intended for use with Codman® Hakim® Programmable Valve and Codman® Hakim® Precision Valve cylindrical design only.

| Reference | Package Content |
|---|---|
| **823055** | **Codman® Medos Valve Introducer**<br>Plastic, Length 21.8 cm<br>Sterile, Box of 1<br>Single use |



## Single Use Distal Catheter Introducers

| Reference | Package Content |
|---|---|
| | **Codman® Malleable Catheter Passers**<br>Sterile, Box of 6 |
| **821515** | Short - Length 36 cm |
| **821516** | Long - Length 55 cm |
| **821517** | XLong - Length 65 cm |

Codman SPECIALTY SURGICAL

## Notes

## Notes

Codman®
SPECIALTY SURGICAL

# Indications and Contraindications

## Programmable Valves

### Codman® CERTAS™ Plus

**Indications**
Certas implants are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman CERTAS® Tool Kit - Codman® CERTAS™ Plus Electronic Tool Kit

(ref 828851) (ref 828852)

**Indications**
The Certas programmer is a device allowing the noninvasive reading or adjustment of the programmable valve setting.

### Codman® Hakim® Programmable Valve

**Indications**
The Codman Hakim Programmable Valves are implantable devices that provide constant intraventricular pressure and drainage of CSF for the management of hydrocephalus.

### Codman® Hakim® Programmer

(ref 823190R)

**Indications**
The Hakim programmer is a device allowing the noninvasive adjustment of the programmable valve setting.

### VPV® System*

(ref 823192R)

**Indications**
The Hakim programmer is a device allowing the noninvasive adjustment of the programmable valve setting.

## Flow Regulated Valves*

### OSV II™

**Indications**
CSF Management systems are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### OSV II™ Lumbar

**Indications**
CSF Management systems are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

## Fixed Pressure Valves

### Codman® Hakim® Precision

**Indications**
Hakim implants are intended to be used for the drainage of cerebrospincal fluid (CSF) in the mangement of Hydrocephalus.

### Essential

**Indications**
CSF Management systems are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

## Neuro Endoscopy Catheter*

### NeuroBalloon™

**Indications**
The NeuroBalloon™ Catheter is intended for dilatation of cerebral membrane fenestrations under direct or endoscopic visualization during intracranial procedures.

## Speciality Drainage Products

### SiphonGuard®*

(ref 823090)

**Indications**
Siphonguard implant is intended to be used for the drainage of cerebrospinal fluid (CSF) in the mangement of Hydrocephalus

### Anti-Siphon Device

(ref NL8500200)

**Indications**
The Anti-Siphon Device is intended to be used for the drainage of cerebrospincal fluid (CSF) in the mangement of Hydrocephalus

## Reservoirs

### Integra® CSF Reservoirs

(ref NL8501210, NL8501211, NL8501214, NL8501212, NL8501215, NL8501213)

**Indications**
CSF Management systems are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Rickham™-Style Reservoirs

(ref NL8501132, NL8501121)

**Indications**
CSF Management systems are intended to be used for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Holter® Ventricular Catheter Reservoirs

(ref 821630, 821632, 821634, 821636, 821638, 821640, 821642)

**Indications**
The Cerebral Catheter Reservoir is indicated for use as a component of a shunting system to gain access to the cerebral ventricles or other intracranial cavities for the purpose of diagnostic studies, therapeutic drug administration, or the diversion of fluid.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated.

### Holter® Selker Ventriculostomy Reservoirs

(ref 821618, 821619)

**Indications**
The Ventriculostomy Reservoir Set is indicated for use to gain access to the cerebral ventricles or other intracranial cavities for the purpose of diagnostic studies or therapeutic drug administration with or without a shunting device. When used with the shunting device, the ventriculostomy reservoir is also indicated for use as the proximal fluid pathway.

*These products are currently non-CE Marked. Please check with your local CSS representative their availability for sale.

Codman SPECIALTY SURGICAL

### Holter® Rickham™ Ventriculostomy Reservoirs
(ref 821615, 821621, 821616, 821623)

**Indications**
The Ventriculostomy Reservoir Set is indicated for use to gain access to the cerebral ventricles or other intracranial cavities for the purpose of diagnostic studies or therapeutic drug administration with or without a shunting device. When used with the shunting device, the ventriculostomy reservoir is also indicated for use as the proximal fluid pathway.

### Holter® Salmon-Rickham™ Ventriculostomy Reservoirs
(ref 821625, 821617)

**Indications**
The Ventriculostomy Reservoir Set is indicated for use to gain access to the cerebral ventricles or other intracranial cavities for the purpose of diagnostic studies or therapeutic drug administration with or without a shunting device. When used with the shunting device, the ventriculostomy reservoir is also indicated for use as the proximal fluid pathway.

## Catheters

### Bactiseal®
(ref 823072, 823073, 823074)

**Indications**
CSF Management Bactiseal catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Portnoy Ventricular Catheter
(ref NL8501229)

**Indications**
The Portnoy Ventricular Catheter CSF Management catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Reflux Control Peritoneal Catheter & Peritoneal Open-Ended Catheter with Slits
(ref NL8501375, NL8501376)

**Indications**
The Peritoneal Reflux Control CSF Management catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Peritoneal Catheter
(ref 823045)

**Indications**
CSF Management catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Holter® Distal Peritoneal Catheter
(ref 821682, 821684)

**Indications**
CSF Management catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Hakim® Ventricular Catheter
(ref 823041)

**Indications**
Hakim implants are intended to be used for the drainage of cerebrospincal fluid (CSF) in the mangement of Hydrocephalus.

### Holter® Ventricular Catheter
(ref 821652, 821654, 821656, 821658, 821660, 821662, 821664, 821666, 821650)

**Indications**
CSF Management catheters are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Holter® Type A Distal Atrial Catheter
(ref 821670)

**Indications**
The Type "A" Atrial Catheter is indicated for use to shunt cerebrospinal fluid, when shunting of cerebrospinal fluid to the atrium is the procedure of choice in the treatment of hydrocephalus.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Ventriculoatrial shunting is contraindicated in patients with infection (e.g., meningitis, septicemia), risk of infection, pulmonary emboli, or a high right atrial pressure associated with congenital heart disease.

### Holter® Type B Distal Atrial Catheter
(ref 821672)

**Indications**
The Type "B" Atrial Catheter is indicated for use to shunt cerebrospinal fluid, when shunting of cerebrospinal fluid to the atrium is the procedure of choice in the treatment of hydrocephalus.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Ventriculoatrial shunting is contraindicated in patients with infection (e.g., meningitis, septicemia), risk of infection, pulmonary emboli, or a high right atrial pressure associated with congenital heart disease.

### Holter® Type C Distal Atrial Catheter
(ref 821674)

**Indications**
The Type "C" Atrial Catheter is indicated for use to shunt cerebrospinal fluid, when shunting of cerebrospinal fluid to the atrium is the procedure of choice in the treatment of hydrocephalus.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Ventriculoatrial shunting is contraindicated in patients with infection (e.g., meningitis, septicemia), risk of infection, pulmonary emboli, or a high right atrial pressure associated with congenital heart disease.

### Holter® Type E Distal Atrial Catheter
(ref 821676)

**Indications**
The Type "E" Atrial Catheter is indicated for use to shunt cerebrospinal fluid, when shunting of cerebrospinal fluid to the atrium is the procedure of choice in the treatment of hydrocephalus.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Ventriculoatrial shunting is contraindicated in patients with infection (e.g., meningitis, septicemia), risk of infection, pulmonary emboli, or a high right atrial pressure associated with congenital heart disease.

### Holter® Type H Distal Atrial Catheter
(ref 821678)

**Indications**
The Type "H" Atrial Catheter is indicated for use to shunt cerebrospinal fluid, when shunting of cerebrospinal fluid to the atrium is the procedure of choice in the treatment of hydrocephalus.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Ventriculoatrial shunting is contraindicated in patients with infection (e.g., meningitis, septicemia), risk of infection, pulmonary emboli, or a high right atrial pressure associated with congenital heart disease.

### Codman® Distal Atrial Catheter *
(ref 823044)

**Indications**
For use in the treatment of hydrocephalus as a component of a shunt system when draining or shunting of cerebrospinal fluid (CSF) is indicated.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated. Use of this device is contraindicated if systemic infection is present. Use of this device is contraindicated in patients receiving anticoagulants or who are known to have a bleeding diathesis.

## Connectors

### Connectors
(ref NL8501911, NL8501919)

**Indications**
CSF Management connectors and right angle adaptors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### CODMAN®-MEDOS®Right Angle Adapter
(ref 823052)

**Indications**
CSF Management connectors and right angle adaptors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Stainless Steel Connectors*
(ref 823049, 823048)

**Indications**
CSF Management connectors and right angle adaptors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Type A Stainless Steel Connectors
(ref 821694)

**Indications**
CSF Management connectors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Type B Stainless Steel Connectors
(ref 821695)

**Indications**
CSF Management connectors and right angle adaptors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

### Codman® Titanium Connector*
(ref 823053)

**Indications**
CSF Management connectors and right angle adaptors are intended to be used as components of systems for the drainage of cerebrospinal fluid (CSF) in the management of hydrocephalus.

## Tunnelers and Introducers

### Codman® Medos Valve Introducer
(ref 823055)

**Indications**
The Codman® Medos Valve Introducer, is a disposable instrument, specifically designed as an aid when passing the Codman® Hakim® Valve from the burr hole site to the mastoidal incision through the proper line of cleavage (between the galea and periosteum). Due to the malleability of this introducer, it can be performed to a desired curvature prior to valve placement. The introducer protects the valve unit tip connector, facilitates passage of the valve unit, and helps minimize tissue trauma.

**Contraindications**
This device is not designed, sold, or intended for use except as indicated.

### Codman® Malleable Catheter Passer
(ref 821515, 821516, 821517)

**Indications**
The Catheter Passer is indicated for use as a subcutaneous guide in the placement of a hydrocephalic catheter for ventriculo-peritoneal shunting of CSF.

*These products are currently non CE-marked. Please check with your local CSS Representative their availability for sale.

## Notes

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# Product References

# Index

## Letters

## Notes

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## Notes

## Notes

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