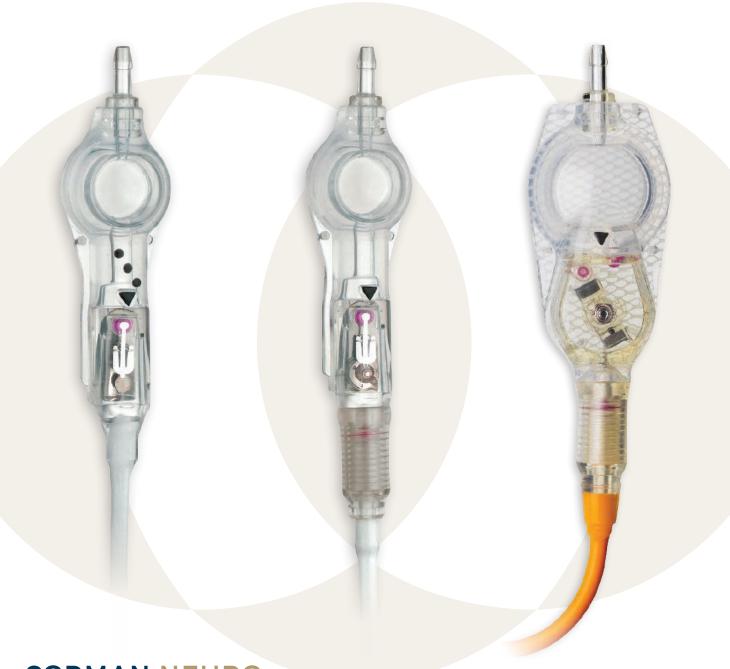


# HYDROCEPHALUS CATALOG



**CODMAN NEURO** 



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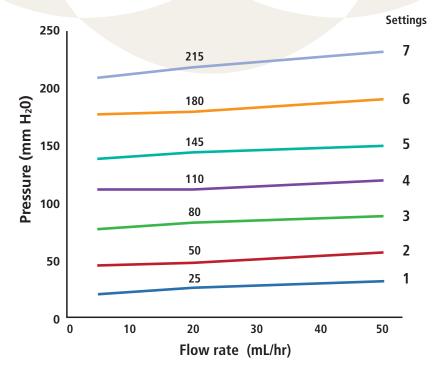
## CODMAN CERTAS® PLUS PROGRAMMABLE VALVES

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 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." This programmability may negate the need for revision surgery to alter the valve pressure.

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. The CODMAN CERTAS Plus Programmable Valve is available in eight basic configurations.



## Performance Setting Guide



The valves perform within a tolerance range of the average pressure as shown here, regardless of gravitational orientation:

Settings 1, 2, 3	±20 mm H <sub>2</sub> O		
Setting 4	±25 mm H <sub>2</sub> O		
Settings 5, 6, 7	±35 mm H <sub>2</sub> O		
Setting 8	is intended to limit flow through the valve and has a minimum pressure of 400 mm H <sub>2</sub> O.		
CODMAN CERTAS® Plus Programmable Valves were made available			

after March 2015

## **CODMAN CERTAS® TOOL KIT**

A versatile Tool Kit to verify and adjust the CODMAN CERTAS Plus Programmable Valve.

### Adjustable Height Locator Tool

The Adjustable Height Locator Tool provides freedom to select the optimal height so that the skin is just below the valve cut-out. This allows the Indicator and Adjustment Tools to sit as closely to the valve mechanism as possible without touching the skin, facilitating correct indication and adjustment. This Locator Tool is also used to program the valve in the package.



### Low Profile Locator Tool

The Low Profile Locator Tool is for use when tissue thickness above the valve is greater than 10 mm or when edema is present. This tool has a flat bottom so it can sit flush against the skin.







### Indicator Tool

Provides rapid reading of the valve's performance setting. The position of the number in the window helps confirm that the tools are properly aligned with the valve.

### Adjustment Tool

Changes the valve's performance setting. It provides an audible click and tactile response as you turn to each setting. It also features a safety stop between settings 1 and 8.



### X-Ray Overlay Tool

Use this tool when viewing the x-ray film or screen to confirm the valve setting.



Please refer to the Instructions for Use (in pocket of carrying case) for step-by-step instructions of pre- and post-implantation procedures for indicating and programming the CODMAN CERTAS Plus Programmable Valve.



IFU enclosed in rear pocket



### **Product Code**

82-8800

### Valve only, includes:

- Valve with integrated plastic connectors
- Priming adaptor, plastic



### **Product Code**

82-8801

### Valve System, includes:

- Valve with integrated plastic connectors
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic
- Right angle adaptor, plastic



#### **Product Code**

82-8802

### Valve System (unitized), includes:

- Valve with integrated plastic connector
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right angle adaptor, plastic



### **Product Code**

82-8803

### Valve System (unitized), includes:

- Valve with integrated plastic connector
- 14 cm BACTISEAL Ventricular Catheter (ref. 82-3073)
- Stainless steel stylet
- 120 cm distal BACTISEAL Catheter, unitized (ref. 82-3074)
- Priming adaptor, plastic
- Right angle adaptor, plastic



### **Product Code**

82-8804

- Valve with integrated plastic connectors and SIPHONGUARD® Device
- Priming adaptor, plastic



### **Product Code**

### Valve System, includes:

- Valve with integrated plastic connectors and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic
- · Right angle adaptor, plastic



### **Product Code**

### Valve System (unitized), includes:

- Valve with integrated plastic connectors and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right angle adaptor, plastic



### **Product Code**

### Valve System (unitized), includes:

- Valve with integrated plastic connectors and SIPHONGUARD Device
- 14 cm BACTISEAL Ventricular Catheter (ref. 82-3073)
- Stainless steel stylet
- 120 cm distal BACTISEAL Catheter, unitized (ref. 82-3074)
- Priming adaptor, plastic
- Right angle adaptor, plastic



### **Product Code**

82-8851

### **CODMAN CERTAS® Tool Kit**

• Includes Indicator Tool, Adjustment Tool, 2 Locator Tools, X-Ray Overlay Tool and Instructions for Use.





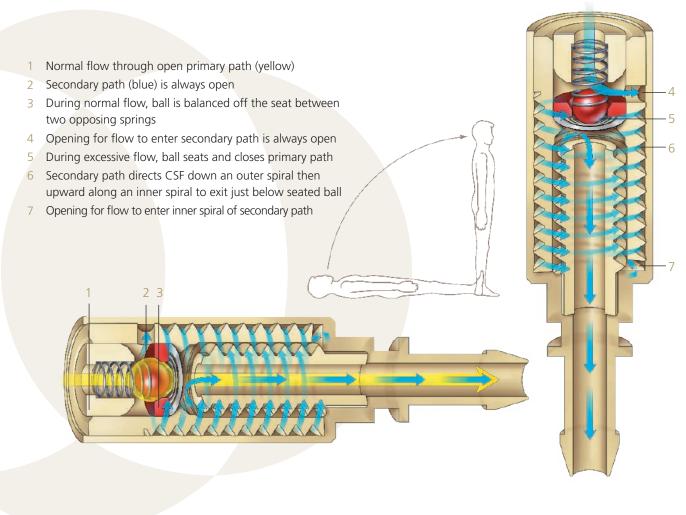






## SIPHONGUARD® CSF FLOW CONTROL DEVICE

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 Valve technologies, or as a stand alone upgrade to current shunt implants. The stand alone device is placed anywhere distal to any valve and includes all the mechanical and durability design features that make SIPHONGUARD Device so robust.





### **Product Code**

82-3090

### Description

SIPHONGUARD CSF Flow Control Device

 Cut the inlet tubing of the SIPHONGUARD Device to the desired length and connect it to the shunt valve outlet, after the valve has been implanted.

## PROGRAMMABLE VALVES

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<sub>2</sub>O and 200 mm H<sub>2</sub>O 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 eight basic configurations.



CSF Flow

## VALVE POSITION VERIFICATION AND ADJUSTMENT



#### **Product Code**

82-3190

### Description

**CODMAN HAKIM Programmer** 



### **Product Code**

82-3192R

### Description

CODMAN® VPV® Valve Position Verification Programmer

## CODMAN HAKIM CYLINDRICAL VALVE WITH PRE-CHAMBER



#### **Product Code**

### Valve System (unitized), includes:

82-3111

- Valve
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Valve introducer, plastic
- Right-angled adaptor, plastic
- Straight connector, titanium



### **Product Code**

### Valve only, includes:



- 82-3110
- Valve
- Straight connector, titanium
- Valve introducer, plastic

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

## CODMAN HAKIM CYLINDRICAL VALVE WITHOUT PRE-CHAMBER



### **Product Code**

### Valve only, includes:



82-3115

- Valve
- Straight connector, titanium
- Valve introducer, plastic

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

# CODMAN HAKIM CYLINDRICAL VALVE WITH RICKHAM® RESERVOIR



#### **Product Code**

### Valve System (unitized), includes:







- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Valve introducer, plastic

### **Product Code**

### Valve System (unitized), includes:



- Valve with 11 mm RICKHAM Reservoir plastic base
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 85 cm distal catheter with slits, unitized, 1 mm ID x 2.15 mm OD
- Valve introducer, plastic



### **Product Code**

### Valve System, includes:



• Valve with 11 mm RICKHAM Reservoir – plastic base



- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Valve introducer, plastic

### **Product Code**

### Valve System, includes:



- Valve with 17 mm RICKHAM Reservoir metal base
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Valve introducer, plastic



## CODMAN HAKIM MICRO VALVE





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

### **Product Code**

### Valve System (unitized), includes:

82-3114

- Valve
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, silicone, unitized (ref. 82-3045)
- Priming adaptor, plastic
- · Right-angled adaptor, plastic
- Straight connector, titanium



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

### **Product Code**

### Valve only, includes:

82-3112

- Valve
- Priming adaptor, plastic
- Straight connectors (2), titanium

# CODMAN HAKIM MICRO VALVE WITH RICKHAM RESERVOIR





### **Product Code**

### Valve System (unitized), includes:

82-3113

- Valve
- 120 cm peritoneal catheter, unitized (ref. 82-3045)
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- Priming adaptor

### **Product Code**

### Valve only, includes:

82-3116

- Valve
- Straight connector, titanium
- · Priming adaptor



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

## CODMAN HAKIM IN-LINE VALVE





### **Product Code**

82-3844

### Valve System (unitized), includes:

- Valve with integrated plastic connector
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic



### **Product Code**

82-3834

### Valve System, includes:

- Valve with integrated plastic connectors
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic



- Valve with integrated plastic connectors
- Priming adaptor, plastic



## CODMAN HAKIM IN-LINE VALVE WITH SIPHONGUARD DEVICE





### **Product Code**

82-3842

### Valve System (unitized), includes:

- Valve with integrated plastic connector and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic



### **Product Code**

82-3832

### Valve System, includes:

- Valve with integrated plastic connectors and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic



### **Product Code**

82-3162

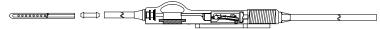
### Valve only, includes:

- Valve with integrated plastic connectors and SIPHONGUARD Device
- Priming adaptor, plastic



### **Product Code**

82-3854



2.5 cm open-ended proximal tube, 1.27 mm ID x 2.5 mm OD

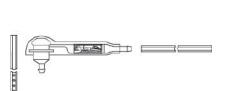
### Valve with Platform (unitized), includes:

- Valve with SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Straight connector, titanium
- HOLTER Type B Connector
- Priming adaptor, plastic
- Right-angled adaptor, plastic

## CODMAN HAKIM RIGHT ANGLE VALVE









### **Product Code**

### Valve System (unitized), includes:

82-3148

- Valve with integrated plastic connector
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic

### **Product Code**

### Valve System, includes:

82-3838

- Valve with integrated plastic connectors
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic

### **Product Code**

### Valve only, includes:

82-3184

- Valve with integrated plastic connectors
- Priming adaptor, plastic

## CODMAN HAKIM RIGHT ANGLE VALVE WITH SIPHONGUARD DEVICE









#### **Product Code**

### Valve System (unitized), includes:

82-3146

- Valve with integrated plastic connector and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic

### **Product Code**

### Valve System, includes:

82-3136

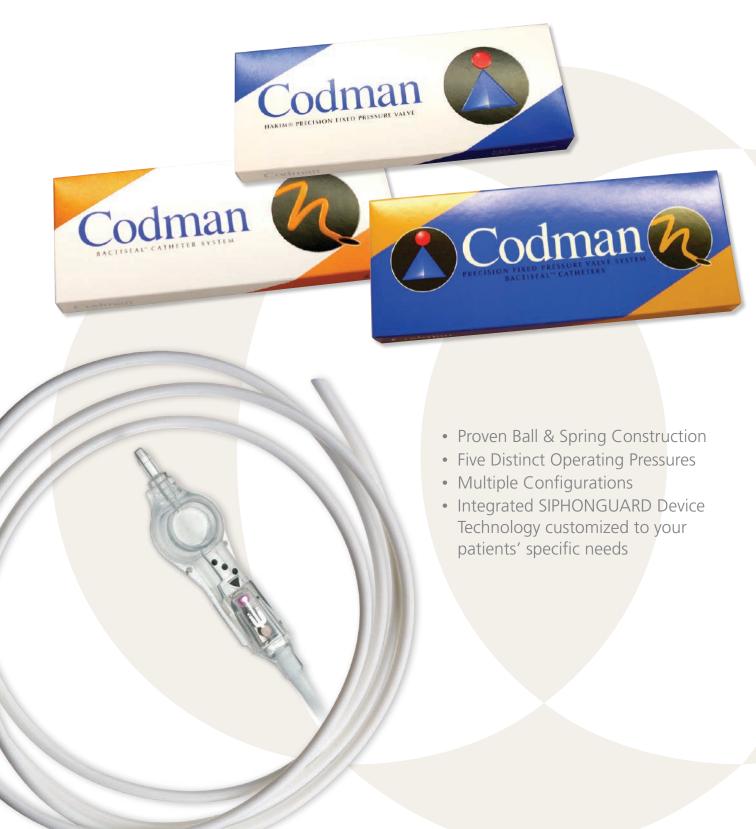
- Valve with integrated plastic connectors and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120 cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic

### **Product Code**

### Valve only, includes:

82-3182

- Valve with integrated plastic connectors and SIPHONGUARD Device
- Priming adaptor, plastic



# CODMAN HAKIM CYLINDRICAL VALVE WITH PRE-CHAMBER



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

<b>Product Code</b>	Pressure	Range	
82-3006	10 mm H <sub>2</sub> O	Very Low	•
82-3007	40 mm H <sub>2</sub> O	Low	• •
82-3008	70 mm H <sub>2</sub> O	Medium	•••
82-3009	100 mm H <sub>2</sub> O	Medium High	••••
82-3010	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Valve introducer, plastic
- Right-angled adaptor, plastic
- · Straight connector, titanium
- Stainless steel stylet



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

<b>Product Code</b>	Pressure	Range	
82-3011	10 mm H <sub>2</sub> O	Very Low	•
82-3012	40 mm H <sub>2</sub> O	Low	• •
82-3013	70 mm H <sub>2</sub> O	Medium	•••
82-3014	100 mm H <sub>2</sub> O	Medium High	••••
82-3015	130 mm H <sub>2</sub> O	High	••••

### Valve only, includes:

- Valve
- Straight connector, titanium
- Valve introducer, plastic

# CODMAN HAKIM CYLINDRICAL VALVE WITHOUT PRE-CHAMBER



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

Product Code	Pressure	Range	
82-3082	10 mm H <sub>2</sub> O	Very Low	•
82-3083	40 mm H <sub>2</sub> O	Low	• •
82-3084	70 mm H <sub>2</sub> O	Medium	•••
82-3085	100 mm H <sub>2</sub> O	Medium High	••••
82-3086	130 mm H <sub>2</sub> O	High	••••

### Valve only, includes:

- Valve
- Straight connector, titanium
- Valve introducer, plastic

## CODMAN HAKIM MICRO VALVE



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

Pressure	Range	
10 mm H <sub>2</sub> O	Very Low	•
40 mm H <sub>2</sub> O	Low	• •
70 mm H <sub>2</sub> O	Medium	•••
100 mm H <sub>2</sub> O	Medium High	•••
130 mm H <sub>2</sub> O	High	••••
	10 mm H <sub>2</sub> O 40 mm H <sub>2</sub> O 70 mm H <sub>2</sub> O 100 mm H <sub>2</sub> O	10 mm H <sub>2</sub> O Very Low 40 mm H <sub>2</sub> O Low 70 mm H <sub>2</sub> O Medium 100 mm H <sub>2</sub> O Medium High



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

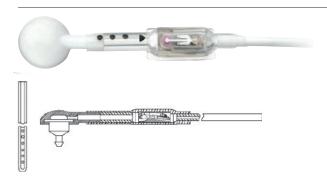
<b>Product Code</b>	Pressure	Range	
82-3026	10 mm H <sub>2</sub> O	Very Low	•
82-3027	40 mm H <sub>2</sub> O	Low	• •
82-3028	70 mm H <sub>2</sub> O	Medium	•••
82-3029	100 mm H <sub>2</sub> O	Medium High	••••
82-3030	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic
- Straight connector, titanium
- Stainless steel stylet

- Valve
- Priming adaptor, plastic
- Straight connectors (2), titanium

# CODMAN HAKIM MICRO VALVE WITH RICKHAM RESERVOIR



<b>Product Code</b>	Pressure	Range	
82-3021	10 mm H <sub>2</sub> O	Very Low	•
82-3022	40 mm H <sub>2</sub> O	Low	• •
82-3023	70 mm H <sub>2</sub> O	Medium	$\bullet \bullet \bullet$
82-3024	100 mm H <sub>2</sub> O	Medium High	••••
82-3025	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Stainless steel stylet



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

Product Code	Pressure	Range	
82-3095	10 mm H <sub>2</sub> O	Very Low	•
82-3096	40 mm H <sub>2</sub> O	Low	• •
82-3097	70 mm H <sub>2</sub> O	Medium	•••
82-3098	100 mm H <sub>2</sub> O	Medium High	••••
82-3099	130 mm H <sub>2</sub> O	High	••••

- Valve
- Priming adaptor, plastic
- Straight connector, titanium

## CODMAN HAKIM IN-LINE VALVE





<b>Product Code</b>	Pressure	Range	
82-3806	10 mm H <sub>2</sub> O	Very Low	•
82-3807	40 mm H <sub>2</sub> O	Low	• •
82-3808	70 mm H <sub>2</sub> O	Medium	•••
82-3809	100 mm H <sub>2</sub> O	Medium High	•••
82-3810	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with integrated plastic connector
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic
- Stainless steel stylet



<b>Product Code</b>	Pressure	Range	
82-5471	10 mm H <sub>2</sub> O	Very Low	•
82-5472	40 mm H <sub>2</sub> O	Low	• •
82-5473	70 mm H <sub>2</sub> O	Medium	•••
82-5474	100 mm H <sub>2</sub> O	Medium High	•••
82-5475	130 mm H <sub>2</sub> O	High	••••

- Valve with integrated plastic connectors
- Priming adaptor, plastic

## CODMAN HAKIM IN-LINE VALVE WITH SIPHONGUARD DEVICE





<b>Product Code</b>	Pressure	Range	
82-3821	10 mm H <sub>2</sub> O	Very Low	•
82-3822	$40 \text{ mm H}_2\text{O}$	Low	••
82-3823	70 mm H <sub>2</sub> O	Medium	•••
82-3824	100 mm H <sub>2</sub> O	Medium High	••••
82-3825	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with integrated plastic connector and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic
- Stainless steel stylet



<b>Product Code</b>	Pressure	Range	
82-5461	10 mm H <sub>2</sub> O	Very Low	•
82-5462	40 mm H <sub>2</sub> O	Low	• •
82-5463	70 mm H <sub>2</sub> O	Medium	•••
82-5464	100 mm H <sub>2</sub> O	Medium High	••••
82-5465	130 mm H <sub>2</sub> O	High	••••

- Valve with integrated plastic connectors and SIPHONGUARD Device
- Priming adaptor, plastic

## CODMAN HAKIM RIGHT ANGLE VALVE





<b>Product Code</b>	Pressure	Range	
82-3281	10 mm H <sub>2</sub> O	Very Low	•
82-3282	40 mm H <sub>2</sub> O	Low	• •
82-3283	70 mm H <sub>2</sub> O	Medium	•••
82-3284	100 mm H <sub>2</sub> O	Medium High	•••
82-3285	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with integrated plastic connector
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Stainless steel stylet



<b>Product Code</b>	Pressure	Range	
82-5491	10 mm H <sub>2</sub> O	Very Low	•
82-5492	40 mm H <sub>2</sub> O	Low	• •
82-5493	70 mm H <sub>2</sub> O	Medium	•••
82-5494	100 mm H <sub>2</sub> O	Medium High	••••
82-5495	130 mm H <sub>2</sub> O	High	••••

- Valve with integrated plastic connectors
- Priming adaptor, plastic

# CODMAN HAKIM RIGHT ANGLE VALVE WITH SIPHONGUARD DEVICE





<b>Product Code</b>	Pressure	Range	
82-3261	10 mm H <sub>2</sub> O	Very Low	•
82-3262	40 mm H <sub>2</sub> O	Low	• •
82-3263	70 mm H <sub>2</sub> O	Medium	•••
82-3264	100 mm H <sub>2</sub> O	Medium High	••••
82-3265	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with integrated plastic connector and SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3041)
- 120 cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Stainless steel stylet



<b>Product Code</b>	Pressure	Range	
82-5481	10 mm H <sub>2</sub> O	Very Low	•
82-5482	40 mm H <sub>2</sub> O	Low	• •
82-5483	70 mm H <sub>2</sub> O	Medium	•••
82-5484	100 mm H <sub>2</sub> O	Medium High	••••
82-5485	130 mm H <sub>2</sub> O	High	••••

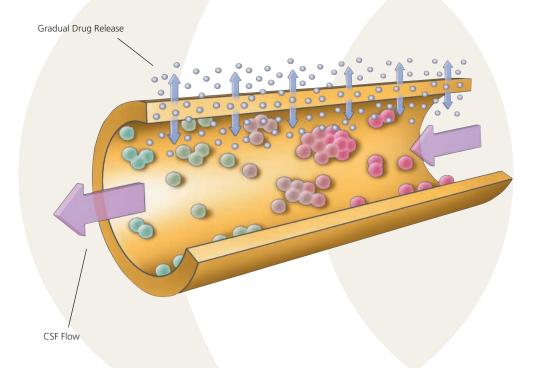
- Valve with integrated plastic connectors and SIPHONGUARD Device
- Priming adaptor, plastic

## **BACTISEAL SHUNT CATHETERS**

### BACTISEAL CATHETER: CONFIDENCE BY DESIGN

- Creates a unique, effective barrier to gram-positive bacterial colonization on all catheter surfaces.
- Maintains the critical first-month shunt implant vigil with two slow-release antibiotics.
- Reduces the potential for colonization both in the catheter lumen and on its outer surface.

### BACTISEAL ANTIBIOTIC IMPREGNATED SILICONE MATRIX





### **BACTISEAL CATHETER\***

Lumen surface of a BACTISEAL Catheter following two 14-day challenges in the in vitro model. No live bacteria are observed.



### **CONTROL CATHETER\***

Coagulase-negative staphylococci on the surface of the lumen of an untreated control catheter in the in vitro model.

<sup>\*</sup>Codman Neuro in-house testing reports, TR2213 and PVER99-133 Addendum.

# CODMAN HAKIM CYLINDRICAL VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range	
NS5401	10 mm	Very Low	•
NS5402	40 mm	Low	• •
NS5403	70 mm	Medium	•••
NS5404	100 mm	Medium High	•••
NS5405	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- 14 cm open-ended proximal tube,
   1.14 mm ID x 2.5 mm OD
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Straight connector, titanium
- Stainless steel stylet

## (2)

Product Code	Pressure	Range	
NS5411	10 mm	Very Low	•
NS5412	40 mm	Low	••
NS5413	70 mm	Medium	•••
NS5414	100 mm	Medium High	•••
NS5415	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with pre-chamber
- 14 cm open-ended proximal tube,
   1.14 mm ID x 2.5 mm OD
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Straight connector, titanium
- Stainless steel stylet



<b>Product Code</b>	Pressure	Range	
NS5309	10 mm H <sub>2</sub> O	Very Low	•
NS5310	40 mm H <sub>2</sub> O	Low	• •
NS5311	70 mm H <sub>2</sub> O	Medium	•••
NS5312	100 mm H <sub>2</sub> O	Medium High	••••
NS5313	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve
- 11 mm RICKHAM Reservoir, unitized plastic base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet

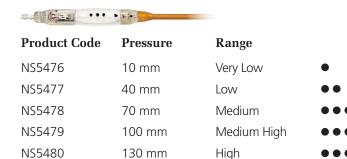


Product Code	Pressure	Range	
NS5316	10 mm H <sub>2</sub> O	Very Low	•
NS5317	40 mm H <sub>2</sub> O	Low	• •
NS5318	70 mm H <sub>2</sub> O	Medium	•••
NS5319	100 mm H <sub>2</sub> O	Medium High	•••
NS5320	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with suture tabs
- Proximal connector, no reservoir
- Unitized SIPHONGUARD Device
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet

# CODMAN HAKIM CYLINDRICAL VALVE WITH CLEAR BACTISEAL BARIUM STRIPE CATHETERS



### Valve System (unitized), includes:

- Valve
- Proximal connector no reservoir
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter, unitized (ref. NS0339)
- Right-angled adaptor
- Stainless steel stylet

<b>Product Code</b>	Pressure	Range	
NS5486	10 mm	Very Low	•
NS5487	40 mm	Low	• •
NS5488	70 mm	Medium	•••
NS5489	100 mm	Medium High	•••
NS5490	130 mm	High	••••

#### Valve System (unitized), includes:

- Valve
- 11 mm RICKHAM Reservoir, unitized plastic base
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter, unitized (ref. NS0339)
- Stainless steel stylet

# CODMAN HAKIM MICRO RICKHAM VALVE WITH BACTISEAL BARIUM CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5416	10 mm	Very Low	•
NS5417	40 mm	Low	• •
NS5418	70 mm	Medium	•••
NS5419	100 mm	Medium High	••••
NS5420	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- 11 mm integral RICKHAM Reservoir plastic base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM MICRO RICKHAM VALVE WITH CLEAR BACTISEAL BARIUM STRIP CATHETERS



### Valve System (unitized), includes:

- Valve
- 11 mm integral RICKHAM Reservoir plastic base
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter, unitized (ref. NS0339)
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM IN-LINE VALVE WITH BACTISEAL BARIUM CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5471	10 mm	Very Low	•
NS5472	40 mm	Low	• •
NS5473	70 mm	Medium	•••
NS5474	100 mm	Medium High	••••
NS5475	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- In-line reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor



<b>Product Code</b>	Pressure	Range	
NS5301	10 mm H <sub>2</sub> O	Very Low	•
NS5302	40 mm H <sub>2</sub> O	Low	• •
NS5303	70 mm H <sub>2</sub> O	Medium	•••
NS5304	100 mm H <sub>2</sub> O	Medium High	••••
NS5305	130 mm H <sub>2</sub> O	High	••••

### Valve System (unitized), includes:

- Valve with platform
- In-line reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Straight connector, titanium
- HOLTER Type B Connector
- Stainless steel stylet
- Right-angled adaptor
- Priming adaptor



<b>Product Code</b>	Pressure	Range	
NS5461	10 mm	Very Low	•
NS5462	40 mm	Low	• •
NS5463	70 mm	Medium	•••
NS5464	100 mm	Medium High	••••
NS5465	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- In-line reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM IN-LINE VALVE WITH BACTISEAL CLEAR BARIUM STRIPE CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5536	10 mm	Very Low	•
NS5537	40 mm	Low	• •
NS5538	70 mm	Medium	•••
NS5539	100 mm	Medium High	••••
NS5540	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- In-line reservoir
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter, unitized (ref. NS0339)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM RIGHT ANGLE VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range	
NS5481	10 mm	Very Low	•
NS5482	40 mm	Low	• •
NS5483	70 mm	Medium	•••
NS5484	100 mm	Medium High	•••
NS5485	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- Right angle reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor



Product Code	Pressure	Range	
NS5491	10 mm	Very Low	•
NS5492	40 mm	Low	• •
NS5493	70 mm	Medium	•••
NS5494	100 mm	Medium High	••••
NS5495	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- Right angle reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adapter

# CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5431	10 mm	Very Low	•
NS5432	40 mm	Low	• •
NS5433	70 mm	Medium	•••
NS5434	100 mm	Medium High	••••
NS5435	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- Proximal connector, no reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

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			Advantage		

<b>Product Code</b>	Pressure	Range	
NS5455	10 mm	Very Low	•
NS5456	40 mm	Low	• •
NS5457	70 mm	Medium	•••
NS5458	100 mm	Medium High	••••
NS5459	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- Prechamber with proximal connector
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

#### CA CONTRACTOR

<b>Product Code</b>	Pressure	Range	
NS5421	10 mm	Very Low	•
NS5422	40 mm	Low	• •
NS5423	70 mm	Medium	•••
NS5424	100 mm	Medium High	••••
NS5425	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- · Proximal connector, no reservoir
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

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<b>Product Code</b>	Pressure	Range	
NS5450	10 mm	Very Low	•
NS5451	40 mm	Low	• •
NS5452	70 mm	Medium	•••
NS5453	100 mm	Medium High	••••
NS5454	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- Prechamber with proximal connector
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Right-angled adaptor
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5445	10 mm	Very Low	•
NS5446	40 mm	Low	• •
NS5447	70 mm	Medium	•••
NS5448	100 mm	Medium High	••••
NS5449	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- 11 mm Salmon RICKHAM Reservoir, unitized
   plastic base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM MICRO II VALVE WITH BACTISEAL CLEAR BARIUM STRIPE CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5426	10 mm	Very Low	•
NS5427	40 mm	Low	• •
NS5428	70 mm	Medium	•••
NS5429	100 mm	Medium High	••••
NS5430	130 mm	High	••••

### Valve System (unitized), includes:

- Valve
- 11 mm RICKHAM Reservoir, unitized
   plastic base
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter, unitized (ref. NS0339)
- Stainless steel stylet
- Priming adaptor

# CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



<b>Product Code</b>	Pressure	Range	
NS5551	10 mm	Very Low	•
NS5552	40 mm	Low	• •
NS5553	70 mm	Medium	•••
NS5554	100 mm	Medium High	••••
NS5555	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- 11 mm Salmon RICKHAM Reservoir, unitized

   stainless steel base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor



<b>Product Code</b>	Pressure	Range	
NS5440	10 mm	Very Low	•
NS5441	40 mm	Low	••
NS5442	70 mm	Medium	•••
NS5443	100 mm	Medium High	••••
NS5444	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- 11 mm Salmon RICKHAM Reservoir, unitized
   plastic base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor



<b>Product Code</b>	Pressure	Range	
NS5511	10 mm	Very Low	•
NS5512	40 mm	Low	••
NS5513	70 mm	Medium	•••
NS5514	100 mm	Medium High	••••
NS5515	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- 11 mm Salmon RICKHAM Reservoir, unitized

   stainless steel base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor



<b>Product Code</b>	Pressure	Range	
NS5516	10 mm	Very Low	•
NS5517	40 mm	Low	• •
NS5518	70 mm	Medium	•••
NS5519	100 mm	Medium High	•••
NS5520	130 mm	High	••••

### Valve System (unitized), includes:

- Valve with SIPHONGUARD Device
- 11 mm Salmon RICKHAM Reservoir, unitized
   plastic base
- 14 cm ventricular catheter (ref. 82-3073)
- 120 cm peritoneal catheter, unitized (ref. 82-3074)
- Stainless steel stylet
- Priming adaptor

# BACTISEAL ENDOSCOPIC VENTRICULAR CATHETER (BEVC) PRODUCTS

<b>Product Code</b>	Description	Includes:
 82-3088 BACTISEAL Endoscopic Ventricular Catheter and	•	• 14 cm ventricular catheter (ref. 82-3073)
	Distal Catheter Kit	• 120 cm peritoneal catheter (ref. 82-3074)
		Right-angled adaptor
82-3087	BACTISEAL Endoscopic Ventricular Catheter	<ul><li>14 cm ventricular catheter (ref. 82-3073)</li><li>Right-angled adaptor</li></ul>

## BACTISEAL VENTRICULAR CATHETERS

<b>Product Code</b>	Description	Includes:
82-3073	BACTISEAL Barium, Ventricular Catheter	<ul> <li>14 cm, 1.4 mm ID x 2.7 mm OD</li> <li>3 rows of 8 holes</li> <li>Tantalum depth marks/molded tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>
Product Code	Description	Includes:
NS5073	Large BACTISEAL Barium, Ventricular Catheter	<ul> <li>15 cm, 1.5 mm ID x 3.0 mm OD</li> <li>4 rows of 5 holes</li> <li>Tantalum depth marks and tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>

# BACTISEAL VENTRICULAR CATHETERS

	Product Code	Description	Includes:
<u>9</u>	NS0338	BACTISEAL Ventricular Catheter Clear with Barium Stripe	<ul> <li>15 cm, 1.27 mm ID x 2.54 mm OD</li> <li>4 rows of 10 holes, 90° apart</li> <li>Tantalum depth marks and tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>
	Product Code	Description	Includes:
	NS5048	BACTISEAL Ventricular Catheter Clear with Barium Stripe and 1 cm Markings	<ul> <li>15 cm, 1.27 mm ID x 2.54 mm OD</li> <li>4 rows of 10 holes, 90° apart</li> <li>Tantalum depth marks and tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>
	Product Code	Description	Includes:
***************************************	NS0343	BACTISEAL Ventricular Catheter with Barium	<ul> <li>23 cm, 1.27 mm ID x 2.54 mm OD</li> <li>4 rows of 10 holes, 90° apart</li> <li>Tantalum depth marks and tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>

## BACTISEAL VENTRICULAR CATHETERS

	<b>Product Code</b>	Description	Includes:
Catal Cat	NS5115	BACTISEAL Ventricular Catheter Clear with Barium Stripe	<ul> <li>23 cm, 1.27 mm ID x 2.54 mm OD</li> <li>4 rows of 10 holes, 90° apart</li> <li>Tantalum depth marks and tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> <li>Luer/cap assembly</li> <li>Catheter anchoring clip</li> </ul>

## MEDOS BACTISEAL VENTRICULAR CATHETERS

	<b>Product Code</b>	Description	Includes:
		BACTISEAL Ventricular Catheter with Barium and with additional holes	<ul> <li>14 cm, 1.4 mm ID x 2.7 mm OD</li> <li>4 rows of 5 holes</li> <li>Tantalum depth marks/molded tip</li> </ul>
	NS5521	5 cm of holes	<ul><li>Stainless steel stylet</li><li>Right-angled adaptor</li></ul>
	NS5077	6 cm of holes	Mignitaligied adaptor
	NS5523	8 cm of holes	
	NS5078	9 cm of holes	
	Product Code	Description	Includes:
********	NS5525	BACTISEAL Ventricular Catheter with Barium and 1 cm markings	<ul> <li>14 cm, 1.4 mm ID x 2.7 mm OD</li> <li>3 rows of 8 holes</li> <li>Tantalum depth marks/molded tip</li> <li>Stainless steel stylet</li> <li>Right-angled adaptor</li> </ul>

## OPEN-ENDED BACTISEAL PERITONAL CATHETERS



### **Product Code** Description

82-3074

**BACTISEAL Peritoneal Catheter with Barium** 

• 120 cm, 1 mm ID x 2.15 mm OD



### **Product Code**

### Description

NS5074

BACTISEAL Large Peritoneal Catheter with Barium

• 120 cm, 1.5 mm ID x 3.0 mm OD



### **Product Code**

### Description

NS0339

BACTISEAL Peritoneal Catheter Clear with Barium Stripe

• 120 cm, 1.27 mm ID x 2.54 mm OD

### **Product Code**

### **Description**

NS5524

BACTISEAL Peritoneal Catheter Clear with Barium Stripe

- 120 cm, 1.27 mm ID x 2.54 mm OD
- 4 sets of drainage holes

# **BACTISEAL SHUNT CATHETER KITS**

# Product Code Description Includes: 82-3072 BACTISEAL Catheter with Barium Kit 14 cm ventricular catheter (ref. 82-3073) 120 cm peritoneal catheter (ref. 82-3074) Stainless steel stylet Right-angled adaptor



### Includes:

- Clear with barium stripe
- 15 cm ventricular catheter (ref. NS0338)
- 120 cm peritoneal catheter (ref. NS0339)
- Stainless steel stylet
- Right-angled adaptor



### **Includes:**

- 15 cm ventricular catheter (ref. NS5073)
- 120 cm peritoneal catheter (ref. NS5074)
- Stainless steel stylet
- Right-angled adaptor

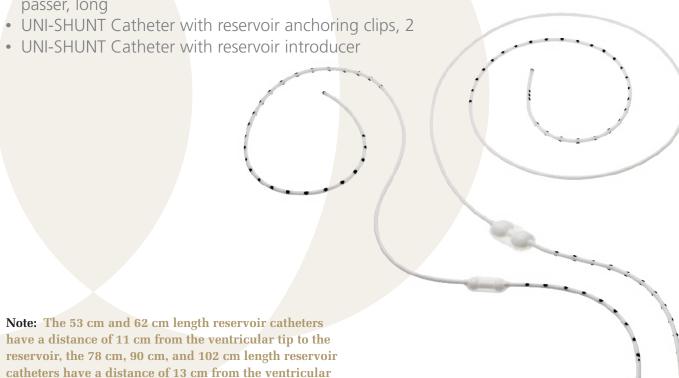
The UNI-SHUNT® System with Reservoir incorporates a double dome access port to facilitate injections and aspirations of CSF samples. It is a continuous length of barium-impregnated silicone tubing with an access reservoir made of self-sealing silicone which can be punctured with a 25 gauge or smaller Huber type needle.

The simplicity of the one-piece design means that there are no connectors, so the possibility of disconnection and subsequent complications is eliminated.

The catheter has X-ray detectable tantalum markings and tantalum tips on the ventricular and peritoneal ends. X-ray detectable pressure markings at the distal tip indicate the slit valve closing pressure.

The UNI-SHUNT Catheter with Reservoir Kit is supplied sterile with the following:

- Blunt tip needle, 17 gauge, disposable, for flushing and testing purposes
- Disposable malleable catheter passer, short. Each 90 cm and 102 cm length kits also include one disposable malleable catheter passer, long



For more information, contact your Codman Neuro Sales Representative For product information, call (800) 225-0460 www.depuysynthes.com

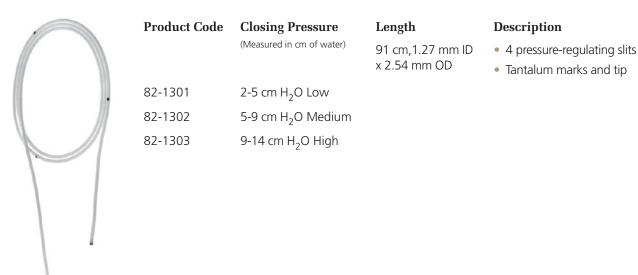
tip to the reservoir.

# **UNI-SHUNT SYSTEM**

	Product Code	Length	Closing Pressure (Measured in cm of water)
- 9 9	82-8501	53 cm	2-5 cm H <sub>2</sub> O Low
	82-8502	53 cm	5-9 cm H <sub>2</sub> O Medium
Pediatric Reservoir Kit	82-8511	62 cm	2-5 cm H <sub>2</sub> O Low
	82-8512	62 cm	5-9 cm H <sub>2</sub> O Medium
	82-8521	78 cm	2-5 cm H <sub>2</sub> O Low
	82-8522	78 cm	5-9 cm H <sub>2</sub> O Medium
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	Product Code	Length	Closing Pressure (Measured in cm of water)
	<b>Product Code</b> 82-8531	<b>Length</b> 90 cm	_
			(Measured in cm of water)
Adult Reservoir Kit	82-8531	90 cm	(Measured in cm of water)  2-5 cm H <sub>2</sub> O Low
Adult Reservoir Kit	82-8531 82-8532	90 cm 90 cm	(Measured in cm of water)  2-5 cm H <sub>2</sub> O Low  5-9 cm H <sub>2</sub> O Medium
Adult Reservoir Kit	82-8531 82-8532 82-8533	90 cm 90 cm 90 cm	(Measured in cm of water)  2-5 cm $H_2O$ Low  5-9 cm $H_2O$ Medium  9-14 cm $H_2O$ High
Adult Reservoir Kit	82-8531 82-8532 82-8533 82-8541	90 cm 90 cm 90 cm 102 cm	(Measured in cm of water)  2-5 cm $H_2O$ Low  5-9 cm $H_2O$ Medium  9-14 cm $H_2O$ High  2-5 cm $H_2O$ Low

# PERITONEAL CATHETERS, ACCU-FLO BARIUM DISTAL SLIT VALVE

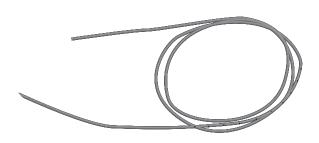
The slit valve in the  $Codman\ Neuro$  distal valve catheters are 90° apart and are precisely cut to achieve more consistent closing pressures. The dots adjacent to the slits indicate the pressure.



# LUMBAR-PERITONEAL CATHETERS

Lumbar peritoneal catheters are designed for shunting from the subarachnoid space to the peritoneal cavity. This method provides a simple means of treating communicating hydrocephalus, and is an alternative to standard V.A. or V.P. shunts in the treatment of pseudotumor cerebri, cranial and spinal CSF fistula (non-infected).

Lumbar-peritoneal catheters, James design, one-piece, sterile. Pressure is controlled through distal slit valves (5-9 cm H<sub>2</sub>O medium pressure), four slits 90° apart. The proximal tip is perforated, open-ended and angled-cut for easy insertion.



<b>Product Code</b>	Length
82-6200	25 cm, 0.76 mm ID x 1.65 mm OD
82-6201	50 cm, 0.76 mm ID x 1.65 mm OD
82-6202	80 cm, 0.76 mm ID x 1.65 mm OD

Use the 45-1020 Touhy needle for the insertion of the James lumbar-peritoneal shunt into the spinal subarachnoid space.

# HOLTER LUMBO-PERITONEAL CATHETERS

Manufactured as a one-piece silicone rubber with an ID of 1.2 mm and an OD of 2.5 mm. The 3 cm T-portion has four sets of three proximal holes, and has 1.0 mm ID and 1.8 mm OD. The peritoneal catheter end has three longitudinal slits (120° apart) to regulate flow.

82-1698





### **Product Code**

Description

**HOLTER Lumbo-Peritoneal Catheter** T-shaped, one-piece

- Length 65 cm
- 3.5 mm slit valves

# LUMBAR DRAINAGE CATHETERS

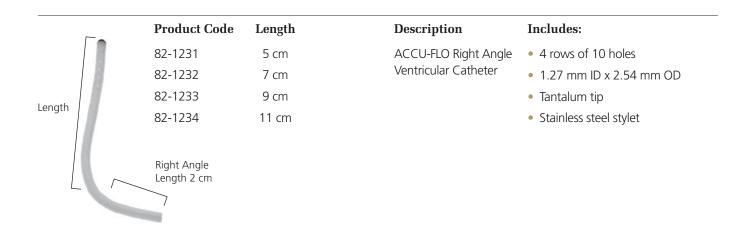
<b>Product Code</b>	Description	Includes:
 82-1706	Lumbar External	• 46 cm, 0.76 mm ID x 1.65 mm OD
	Drainage Catheter	<ul> <li>Tantalum markings</li> </ul>
		<ul> <li>Open-ended</li> </ul>
		<ul><li>Touhy needle</li></ul>
		<ul> <li>Luer-Lok connector/cap</li> </ul>
Product Code	Description	Includes:
 82-1707	Lumbar Drainage	• 80 cm, 0.76 mm ID x 1.65 mm OD
	Catheter Kit II	Tantalum markings
		Plugged end, flat
		<ul> <li>2 sets of 9 holes on closed end</li> </ul>
		Touhy needle
		Guidewire
		Luer-Lok connector/cap
		Soft suture tab

# **VENTRICULAR CATHETERS**

All ventricular catheters are packaged sterile and are made from silicone tubing.

	<b>Product Code</b>	Description	Includes:
(C)	82-1201	ACCU-FLO Barium Ventricular Catheter	• 15 cm, 1.3 mm ID x 2.5 mm OD
			<ul> <li>X-ray detectable throughout. Rounded X-ray detectable tantalum tip</li> </ul>
			<ul> <li>X-ray detectable tantalum markings,</li> <li>5 cm and 10 cm. With 40 inlet holes,</li> <li>four rows of ten holes, 90° apart</li> </ul>
			Stainless steel stylet
	Product Code	Description	Includes:
	82-1203	ACCU-FLO Clear Ventricular Catheter	• 30 cm, 1.3 mm ID x 2.5 mm OD
			<ul> <li>Rounded X-ray detectable tantalum tip</li> </ul>
)			• X-ray detectable tantalum mark at 15 cm
			<ul> <li>With 40 inlet holes, four rows of ten holes, 90° apart</li> </ul>
	n 1 (C.1	D	T 1 1
	Product Code	Description	Includes:
	82-1221	ACCU-FLO Dotted	• 15 cm, 1.3 mm ID x 2.5 mm OD
		Ventricular Catheter	<ul> <li>Rounded X-ray detectable tantalum tip</li> </ul>
		<ul> <li>Clear silicone tubing with X-ray detectable tantalum markings every 1 cm</li> </ul>	
			<ul> <li>With 40 inlet holes, four rows of ten holes, 90° apart</li> </ul>
			Stainless steel stylet

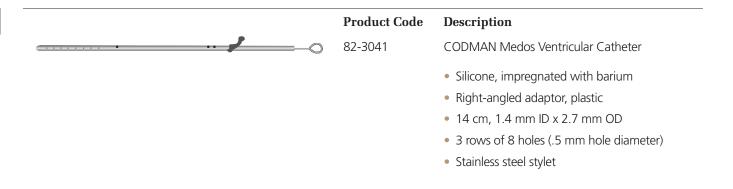
# ACCU-FLO BARIUM RIGHT ANGLE VENTRICULAR CATHETER



# HOLTER BARIUM VENTRICULAR CATHETER

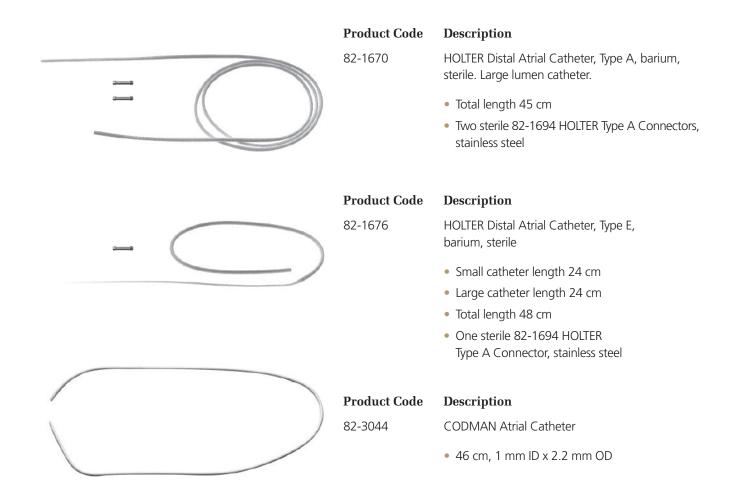
	Length				
Right Angle Length 2 cm	Product Code	Length	Number of Perforations	Description	Includes:
	82-1652	3 cm	3	Ventricular Catheter,	• 1.5 mm ID x 3.1 mm OD
	82-1654	4 cm	3	with a Right Angle	• All ventricular tips have multiple
	82-1658	6 cm	4		<ul><li>perforations</li><li>Stainless steel stylet</li></ul>
	82-1660	7 cm	5		• Stairliess steel stylet
	82-1662	8 cm	5		
	Product Code			Description	Includes:
	82-1650			Ventricular Catheter,	• 15 cm, 1.5 mm ID x 3.1 mm OD
				straight	<ul> <li>Stainless steel stylet</li> </ul>

# CODMAN VENTRICULAR CATHETER



# ATRIAL CATHETERS

HOLTER Distal Atrial Catheters, sterile, barium impregnated with two lumen configurations to meet various shunting needs. Large lumen styles have an ID of 1.2 mm and an OD of 2.5 mm. The small, or stepped down portion lumen have an ID of .8 mm and an OD of 1.3 mm.



# HOLTER DISTAL PERITONEAL CATHETERS

HOLTER Distal Peritoneal Catheters, Barium, Sterile. Barium impregnated with 1.2 mm ID x 2.5 mm OD. Supplied with two sterile HOLTER Type A Connectors (ref. 82-1694)



### **Product Code**

### Description

82-1682

**HOLTER** Distal Peritoneal Catheter

- Open end
- Two sterile 82-1694 HOLTER Type A Connectors, stainless steel

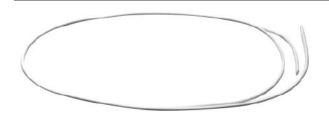


### **Product Code** Description

**HOLTER** Distal Peritoneal Catheter

- Closed tip with 4 side slits 90° apart
- Tip is solid silicone and is more heavily opacified for positive X-ray identification
- Two sterile 82-1694 HOLTER Type A Connectors, stainless steel

## MEDOS PERITONEAL CATHETER



### **Product Code**

### Description

82-3045

**CODMAN Peritoneal Catheter** 

- 120 cm, 1 mm ID x 2.2 mm OD
- Barium impregnated silicone

# **ACCU-FLO PERITONEAL CATHETERS**



### **Product Code**

### le Description

82-1380

ACCU-FLO Barium Distal Open-end Catheter

- Length 91 cm
- Made of barium impregnated silicone tubing
- 1.3 mm ID x 2.5 mm OD X-ray detectable
- Each catheter has 24 drainage holes, four rows of six holes, 90° apart
- X-ray detectable tantalum markings are at the distal 10 cm, 20 cm, and 30 cm



### Description

HOLTER Ventricular Catheter Reservoirs, barium, right angle, sterile (also referred to as Cerebral Catheter Reservoirs).

The 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 has a height of 6.0 mm, and the base, which extends beyond the diameter of the reservoir to accommodate sutures, has a diameter of 15.7 mm.

The catheter segment and distal end of the catheter reservoir has a 1.5 mm ID and a 3.1 mm OD. The distal end of the catheter reservoir is designed to accommodate the inlet adaptor of a HOLTER Valve when the reservoir is used in a shunt system.

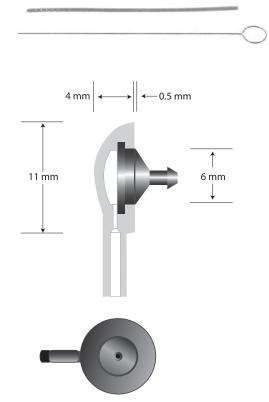
Included with the HOLTER Ventricular Catheter Reservoir are:

- A stainless steel stylet, for the insertion of the ventricular portion of the catheter
- A stainless steel plug, inserted in the distal end of the reservoir

**Note:** The plug should be removed when the HOLTER Ventricular Catheter Reservoir is being used in a shunt system.

Product code	Length	<b>Number of Perforations</b>
82-1630	3 cm	3
82-1632	4 cm	3
82-1634	5 cm	4
82-1636	6 cm	4
82-1638	7 cm	5
82-1640	8 cm	5
82-1642	9 cm	5

# SHUNT SYSTEM RESERVOIRS



### **Description**

HOLTER Salmon-RICKHAM Ventriculostomy Reservoir, low profile, sterile. Requires a 6 mm burr hole or drilled-skull recess.

**Note:** A 24 or 26 gauge "Huber" type needle should be used to puncture the HOLTER Reservoir Cap.

### Product code Incl

### **Includes:**

82-1625

- 11 mm reservoir cap with low profile stainless steel base
- Stainless steel plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet

82-1617

- 11 mm reservoir cap with low profile plastic base
- Plastic reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet



### Description

HOLTER RICKHAM Ventriculostomy Reservoir, standard, sterile.

Requires a 6 mm burr hole or skull recess.

**Note:** A 24 or 26 gauge "Huber" type needle should be used to puncture the HOLTER Reservoir Cap.

### Product code

### Includes:

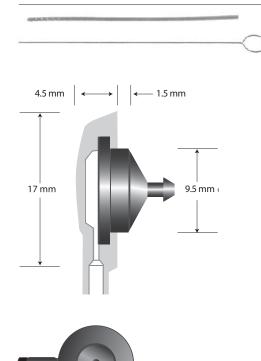
82-1621

- 11 mm reservoir cap with stainless steel base
- Stainless steel reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet

82-1615

- 11 mm reservoir cap with plastic base
- Plastic reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet

# SHUNT SYSTEM RESERVOIRS



### Description

HOLTER RICKHAM Ventriculostomy Reservoir, large, sterile.

Requires a 9 mm burr hole or drilled-skull recess.

**Note:** A 24 or 26 gauge "Huber" type needle should be used to puncture the HOLTER Reservoir Cap.

# Product code Includes: 82-1616 17 mm reservoir cap with plastic base Plastic reservoir plug 15 cm HOLTER Ventricular Catheter (ref. 82-1650) Stainless steel stylet

82-1623

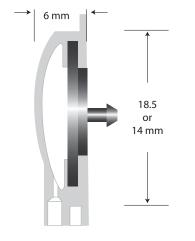
- 17 mm reservoir cap with stainless steel base
- Stainless steel reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet



### Description

**HOLTER Selker Ventriculostomy Reservoir Sets** 

**Note:** A 24 or 26 gauge "Huber" type needle should be used to puncture the HOLTER Reservoir Cap.



### **Product code**

### **Includes:**

82-1618

- 14 mm reservoir cap with plastic base
- Plastic reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet

82-1619

- 18 mm reservoir cap with plastic base
- Plastic reservoir plug
- 15 cm HOLTER Ventricular Catheter (ref. 82-1650)
- Stainless steel stylet



# SHUNT SYSTEM RESERVOIRS

### Description

ACCU-FLO Reservoirs, used in-line in the ACCU-FLO System, between the ventricular portion and distal catheter portion. Each reservoir has suture holes for anchoring purposes.

Reservoir only provided.



### **Product Code Includes:**

ACCU-FLO Burr Hole Reservoir 82-1401

• 14 mm

ACCU-FLO Single Dome Flat Bottom Reservoir 82-1411

With reinforced backing

### Description

ACCU-FLO CSF Reservoirs are made from one-piece puncturable silicone with an embedded plastic base, with suture holes for anchoring. Each reservoir has been pretested for pressure leaks and is packaged sterile.

Note: A 25 gauge, or smaller, "Huber" type needle should be used to puncture the ACCU-FLO Reservoirs.



### **Product Code Includes:**

82-6100 ACCU-FLO CSF Reservoir Kit

• 14 mm, fits 14 mm burr hole

• 15 cm ACCU-FLO Ventricular Catheter (ref. 82-1201)

Stainless steel stylet

ACCU-FLO Connector, stainless steel (ref. 82-1501)

ACCU-FLO CSF Reservoir 82-6101

• 24 mm, fits 24 mm burr hole

• 15 cm ACCU-FLO Ventricular Catheter (ref. 82-1201)

Stainless steel stylet

ACCU-FLO Connector, stainless steel (ref. 82-1501)



### **Product Code**

### **Description**

82-1697

HOLTER In-Line Shunt Filter, sterile.

A 3.9 micron cellulosic filter designed specifically for use with the HOLTER Shunt System to prevent the transfer of cells larger than 3.9 microns through the system. The filter has a surface area of 68 square millimeters supported in a stainless steel mesh and totally encased in silicone. The silicone casing contains an inlet and outlet port, both with an ID of 1.5 mm, for connection to the shunt system. The filter can be implanted just behind the mastoid air cells so it is exposed to the radiotherapy field, if radiotherapy is used.

 Each package contains one filter and two sterile 82-1694 HOLTER Type A Connectors, stainless steel



### **Product Code** Description

82-4092 Right Angle Cranial Clip with Tabs, secures the ventricular end of a hydrocephalic catheter with an outer diameter of approximately 2.5 mm and bends the catheter to an approximate 90° angle for

subcutaneous placement where the catheter exits the skull.

Right-angled adaptor with tabs, plastic

• 2 adaptors, packaged separately



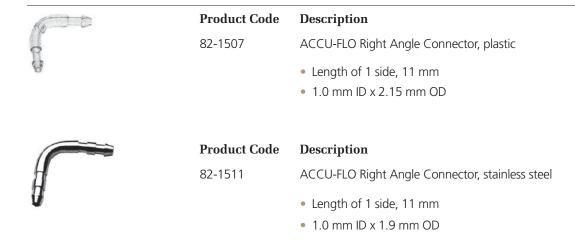
# Product Code Description 82-8591 Right-angled Adaptor, plastic 2 adaptors, packaged separately 82-3052 Right-angled Adaptor, plastic 1 adaptor per package

# SHUNT SYSTEM CONNECTORS

All ACCU-FLO Connectors are 316-L stainless steel or plastic, with beveled ends. The connectors are grooved to hold sutures for preventing catheter disconnection.

0 ( ) 0	<b>Product Code</b>	Description
	82-1504	ACCU-FLO Straight Connector, plastic
		• 17 mm plastic, 1.0 mm ID x 2.15 mm OD
der ment hale	<b>Product Code</b>	Description
	82-1501	ACCU-FLO Straight Connector, stainless steel
		• 11 mm metal, 1.0 mm ID x 1.9 mm OD

# SHUNT SYSTEM CONNECTORS



ACCU-FLO Three Way Connectors, Y-shaped, sterile, with a straight metal or plastic non-spring connector in each leg.

Description

	1 Todact Code	Description
10.00	82-1520	Plastic Connectors (ref. 82-1504)
		<ul> <li>Approx. length of longest dimension 34.3 mm</li> <li>Length across the "Y" 20.8 mm</li> </ul>
	Product Code	Description
	<b>Product Code</b> 82-1521	<b>Description</b> Metal Connectors (ref. 82-1501), stainless steel

Product Code

# SHUNT SYSTEM CONNECTORS

	Product Code	Description
	82-3048	Straight Connector, stainless steel
		• 10.4 mm, 1.07 mm ID x 2.08 mm OD
	Product Code	Description
	82-3053	Straight Connector, titanium
		• 14 mm, 1.04 mm ID x 2.16 mm OD
	Product Code	Description
	82-1694	HOLTER Type A Straight Connector, stainless steel
		• 10.4 mm, 1.07 mm ID x 2.08 mm OD
		• Non-sterile
		• 5 per package
	Product Code	Description
With the second of the second		
	82-1695	HOLTER Type B Straight Connector, stainless steel
		For joining silicone tubing with a nominal ID of .8 mm to silicone tubing with a nominal ID of 1.2 mm
		• 8 mm, .78 mm ID
		Non-sterile
		• 5 per package

# **ACCU-FLO BURR HOLE BUTTONS**



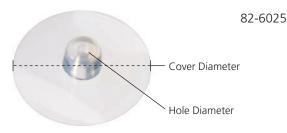
### Product Code

82-6010

### Description

### **Includes:**

- ACCILEI O Cilisono Burrillolo Butto
  - ACCU-FLO Silicone Burr Hole Buttons
  - These buttons secure the bone flap into place, eliminating the need to wire the bone flap after a craniotomy. They allow slight flap movement in case of swelling after surgery.
- Button length 35 mm
- Cover diameter 29 mmStem thickness 4.1 mm
- 10 units per box



### Product Code Description

ACCU-FLO Silicone Burr Hole Covers

Each burr hole cover has a low profile design to fit into a burr hole after cranial surgery. There is a center hole for insertion of a ventricular needle, if needed postoperatively.

### **Includes:**

- Hole diameter 3 mm
- Cover diameter 35 mm
- Silicone rubber
- Seat diameter 10 mm
- Seat depth 6 mm
- 10 units per box

## LUER CONNECTOR



### **Product Code** Description

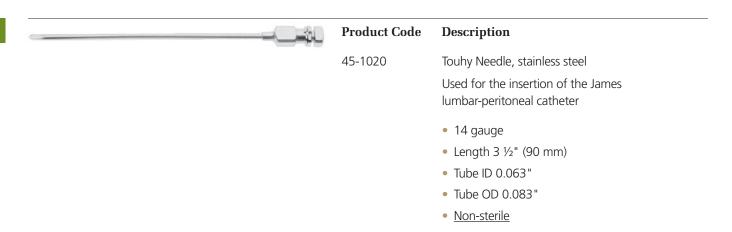
16-1057

CODMAN Disposable ICP Luer Lock Connector

Sterile, consists of a female Luer lock connector and a male Luer lock cap. Designed to connect a silicone ventricular catheter (ID from 1.3 mm to 1.5 mm) to a CSF drainage or monitoring device. May be used to occlude ventricular catheter by utilizing male Luer lock cap

### **Includes:**

- 3 per box
- Cap/Luer: Plastic (ABS)



Needle length given is exclusive of hub and stylet

# VENTRICULAR CANNULA, ELSBERG, NON-STERILE



Stainless steel, graduated in centimeters, closed end, three side holes.	Product Code	Diameter	Description
	16-1015	5 Fr.	4" (102 mm)
	16-1016	7 Fr.	4" (102 mm)
	16-1017	9 Fr.	4" (102 mm)

# VENTRICULAR CANNULA, SCOTT, STERILE

Product Code	Description	Includes:
	Scott Ventricular	• 1.27 mm ID x 2.5 mm OD
	Cannula	• 5 per box
16-1055	Length 80 mm	<ul> <li>A stainless steel stylet and plastic cap provided with each</li> </ul>
16-1056	Length 100 mm	

# SHUNT SYSTEM PASSERS

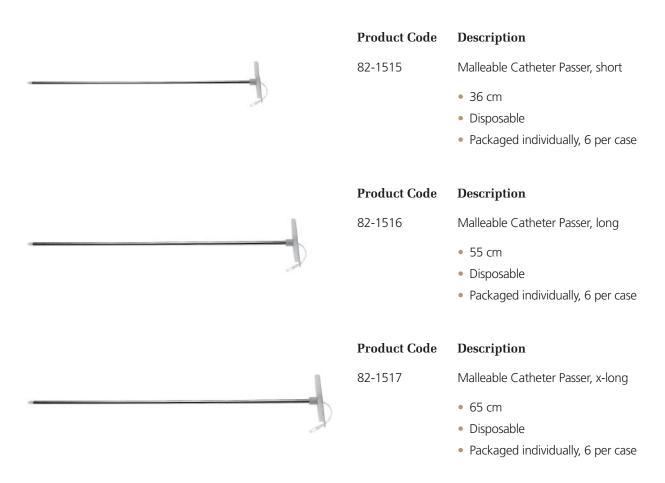
## **Product Code Description** 82-3055 **CODMAN Medos Valve Introducer** • 21.8 cm Valve introducer, plastic Single-use **Product Code Description** 82-4095 Split Trocar, disposable For the placement of the UNI-SHUNT Catheter in both the ventricle and peritoneum. The unique open/close obturator prevents excessive loss of CSF in the ventricle. • 10 cm Exterior trocar stainless steel • Interior trocar Delrin plastic

# PEEL-AWAY CATHETER INTRODUCERS

<b>Product Code</b>	Description
	Peel-Away Teflon Catheter Introducer with Polypropylene Luer
	Used as a guide for catheter insertion. Introducer can be peeled apart permitting optimal positioning of a ventricular catheter.
	<ul> <li>Overall length 7" (18.0 cm)</li> <li>Peel Away Sheath length 6" (14.7 cm)</li> <li>10 units per box</li> </ul>
83-1325	12.5 Fr.
83-1326	14 Fr.
83-1323	9 Fr.
	83-1325 83-1326

# MALLEABLE PASSERS

Malleable Catheter Passers, used to pass the distal catheter to the peritoneum. Stainless Steel Passer Tube with Nylon Catheter Passer, Handle, and Tip.



# SHUNT SYSTEM PASSERS

<b>Product Code</b>	Description
82-1692	HOLTER Distal Catheter Passer, Salmon style
	Used for subcutaneous passage and placement of an atrial or peritoneal catheter. The catheter is passed through the tubular body of the instrument.
	• Length from tip to finger pad 29.2 cm
	• Tube 3.2 mm ID x 4.2 mm OD
	• Stainless steel
	• Non-sterile
Product Code	Description
82-1693	HOLTER Distal Catheter Placement Instrument
	For the subcutaneous passage and placement of the distal peritoneal catheter.
	• Rod 3.2 mm OD, tip 7 mm, hole diameter 2.75 mm
	Total length 56 cm
	Stainless steel
	• Non-sterile
 Product Code	Description
82-1715	Hoffman Shunt Passer, short
	Used for the subcutaneous passage and placement of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  • Tube 3.2 mm ID x 4.2 mm OD
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm
Product Code	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  • Tube 3.2 mm ID x 4.2 mm OD  • Tunneling length 42 cm  • Stainless steel
Product Code 82-1716	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm  Stainless steel  Non-sterile
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm  Stainless steel  Non-sterile  Description
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm  Stainless steel  Non-sterile  Description  Hoffman Shunt Passer, long
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm  Stainless steel  Non-sterile  Description  Hoffman Shunt Passer, long  Tube 3.2 mm ID x 4.2 mm OD
	of the distal peritoneal catheter. After subcutaneous tunneling, the malleable passer is connected to a suction source to provide quick positioning of the distal catheter.  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 42 cm  Stainless steel  Non-sterile  Description  Hoffman Shunt Passer, long  Tube 3.2 mm ID x 4.2 mm OD  Tunneling length 68 cm

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82-1625	45	82-3048	50	82-3832	12	82-8803	4
82-1630	44	82-3052	48	82-3834	11	82-8804	4
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# **CODMAN NEURO**



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