

Hydrocephalus Catalog

CODMAN® CERTAS™

82-8804



CODMAN HAKIM™
MICRO VALVE

82-3112



CODMAN HAKIM
IN-LINE with
SIPHONGUARD®

82-3854



CODMAN HAKIM
CYLINDRICAL

82-3851



CODMAN HAKIM
FIXED PRESSURE

NS5319



CONTENTS

CODMAN CERTAS VALVES 2

CODMAN® CERTAS™ Programmable Valves	2
CODMAN CERTAS TMS	2
Valves only – with or without SIPHONGUARD®	3
Valves with Unitized Catheter	3
Valves with Catheters	3
Valves with BACTISEAL® Catheter	3

SIPHONGUARD ANTI-SIPHON DEVICE 4

PROGRAMMABLE VALVES 5

Valve Position Verification and Adjustment	5
CODMAN® HAKIM® Cylindrical Valves	6
CODMAN HAKIM Micro Valves, Micro Valves with RICKHAM® Reservoir	8
In-line Valve, In-line Valve with SIPHONGUARD	9
Right Angle Valve, Right Angle Valve with SIPHONGUARD	11

PRECISION FIXED PRESSURE VALVES 13

Cylindrical Valves	14
Micro Valves	15
Micro Valve with RICKHAM Reservoir	16
In-line Valve, In-line Valve with SIPHONGUARD	17
Right Angle Valve, Right Angle Valve with SIPHONGUARD	19

PRECISION FIXED PRESSURE VALVES WITH BACTISEAL CATHETERS 21

Cylindrical Valves	22
Micro RICKHAM Valves	23
In-line Valves	24
Right Angle Valves	25
CODMAN HAKIM Micro II Valves	26

BACTISEAL CATHETERS 29

Ventricular Catheters	29
Peritoneal Catheters	32
Catheter Kits	33

SLIT VALVE CATHETERS 34

UNI-SHUNT® System	34
ACCU-FLO® Barium Distal	35
JAMES Lumbar-Peritoneal	36
HOLTER® Lumbo-Peritoneal	36

STANDARD CATHETERS 37

Lumbar-Peritoneal Catheters	37
Ventricular Catheters	38
Atrial Catheters	40
Peritoneal Catheters	41

SHUNT SYSTEMS, RESERVOIRS 42

HOLTER Cerebral Ventricular	42
RICKHAM Reservoir Sets	43
SELKER Reservoir Set	44
ACCU-FLO Reservoirs	45
CSF Reservoir Kits	45
In-line Shunt Filter	45

ACCESSORIES 46

Anchoring Clips, Adaptors, Connectors	46
Burr Hole Buttons, Covers	49
U-channel Stripping	49
Luer-Lock Connector	49
Cannulas	50
Introducers	51
Passers	51

PRODUCT INDEX 54

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



The CODMAN CERTAS THERAPY MANAGEMENT SYSTEM (TMS) allows for the non-invasive interrogation or adjustment of the Performance Setting of the CODMAN CERTAS Programmable Valve. The new setting of the valve should be determined taking into account all of the patient's clinical symptoms and the surgeon's own experience. It is advisable not to increase/decrease the setting of the valve by more than 1 setting in a 24-hour period. Palpate the scalp to locate the implanted valve, then locate the valve mechanism based on the type of housing that has been implanted.

The TMS consists of a locator tool, indicator tool, and adjustment tool nested into a customized zippered case.



Locator Tool

Designed for ease in locating the valve and correctly aligning the TMS directly over the valve.












Indicator Tool

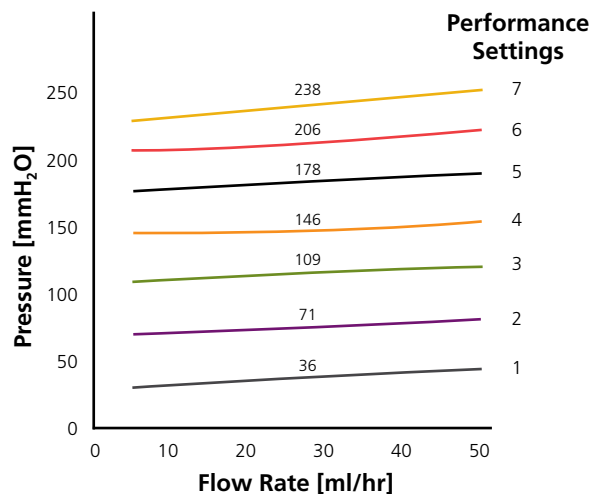
Conveniently locks the Performance Setting in the viewing window until the valve is changed to a different Performance Setting and a new reading is taken.



Adjustment Tool

Allows for easy adjustment of the valve, as it is operated like a rotary knob. Upon its removal, the valve returns to a locked-position state.

	Product Code	Product Configurations – Valves
	82-8800	CODMAN CERTAS In-line Valve only
	82-8801	CODMAN CERTAS In-line Valve with Catheters & accessories
	82-8802	CODMAN CERTAS In-line Valve with Unitized Catheter & accessories
	82-8803	CODMAN CERTAS In-line Valve with Unitized BACTISEAL® Catheter & accessories
	82-8804	CODMAN CERTAS In-line Valve-only with SIPHONGUARD® Device
	82-8805	CODMAN CERTAS In-line Valve with SIPHONGUARD Device, Catheters & accessories
	82-8806	CODMAN CERTAS In-line Valve with SIPHONGUARD Device, Unitized Catheter & accessories
	82-8807	CODMAN CERTAS In-line Valve with SIPHONGUARD Device, Unitized BACTISEAL Catheter & accessories
	82-8850	CODMAN CERTAS THERAPY MANAGEMENT SYSTEM (TMS)



Settings 1, 2, 3 → +/- 20mmH₂O

Setting 4 → +/- 25mmH₂O

Settings 5, 6 → +/- 35mmH₂O

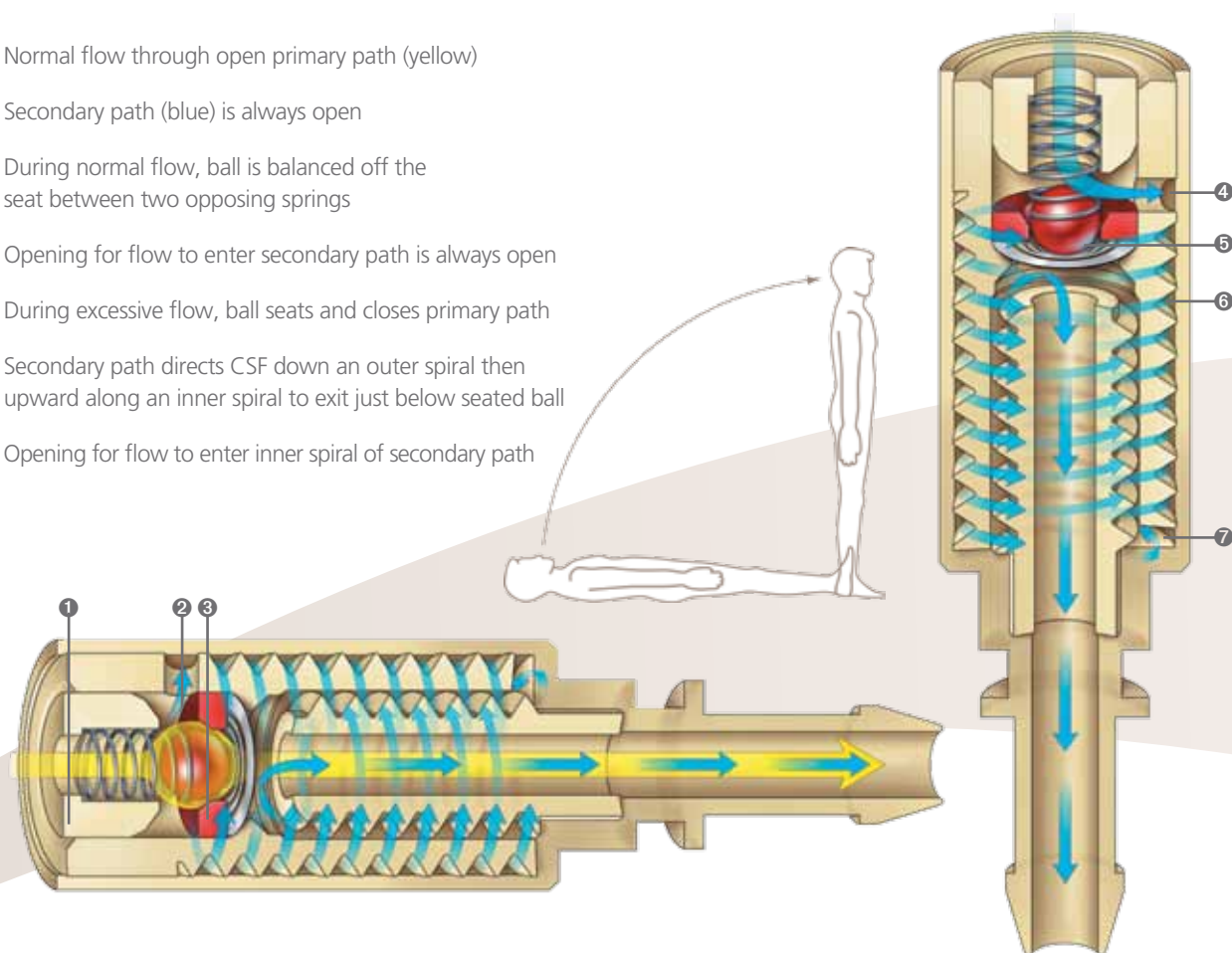
Setting 7 → +/- 50mmH₂O

Setting 8 is intended to limit flow,
Average pressure >400mmH₂O for
flow rates 5 to 50ml/hr

SIPHONGUARD CSF FLOW CONTROL DEVICE

The SIPHONGUARD Anti-Siphon Device is available as an integral component of the CODMAN CERTAS 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 so robust.

- ❶ Normal flow through open primary path (yellow)
- ❷ Secondary path (blue) is always open
- ❸ During normal flow, ball is balanced off the seat between two opposing springs
- ❹ Opening for flow to enter secondary path is always open
- ❺ During excessive flow, ball seats and closes primary path
- ❻ Secondary path directs CSF down an outer spiral then upward along an inner spiral to exit just below seated ball
- ❼ Opening for flow to enter inner spiral of secondary path



Product Code

82-3090

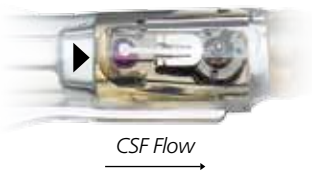
Description

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.

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 30mm H₂O and 200mm H₂O in 18 steps; negating the need for revision surgery to alter the valve pressure.

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.



VALVE POSITION VERIFICATION AND ADJUSTMENT



Product Code	Description
82-3190	CODMAN HAKIM Programmer



Product Code	Description
82-3192	CODMAN VPV® System, valve position verification programmer

CODMAN HAKIM CYLINDRICAL VALVE WITH PRE-CHAMBER

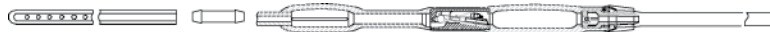


Product Code

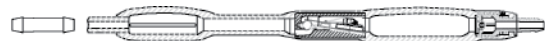
82-3111

Valve System (unitized), includes:

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



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



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

Product Code

82-3110

Valve only, includes:

- Valve
- Straight connector, titanium
- Introducer, plastic

CODMAN HAKIM CYLINDRICAL VALVE WITHOUT PRE-CHAMBER



Product Code

82-3115

Valve only, includes:

- Valve
- Straight connector, titanium
- Introducer, plastic



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

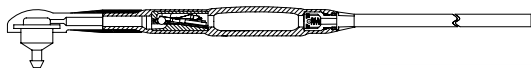


Product Code

82-3851

Valve System (unitized), includes:

- Valve with 11mm RICKHAM reservoir – plastic base
- 14cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120cm distal catheter, unitized (ref. 82-3045)
- Valve introducer

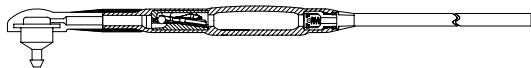


Product Code

82-3853

Valve System (unitized), includes:

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

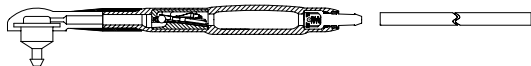


Product Code

82-3855

Valve System, includes:

- Valve with 11mm RICKHAM reservoir – plastic base
- 14cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120cm distal catheter (ref. 82-3045)
- Valve introducer



Product Code

82-3852

Valve System, includes:

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



CODMAN HAKIM MICRO VALVE



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

Product Code

82-3114

Valve System (unitized), includes:

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



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

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

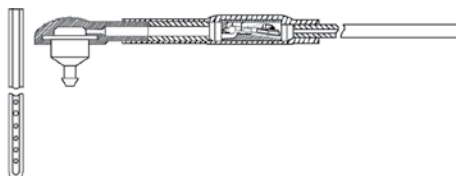
Product Code

82-3112

Valve only, includes:

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

CODMAN HAKIM MICRO VALVE WITH RICKHAM RESERVOIR



Product Code

82-3113

Valve System (unitized), includes:

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



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

Product Code

82-3116

Valve only, includes:

- Valve
- Straight connector, titanium
- Priming adaptor



Product Code

82-3844

Valve System (unitized), includes:

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



Product Code

82-3164

Valve only, includes:

- Valve with integrated plastic connectors
- Priming adaptor, plastic

CODMAN HAKIM IN-LINE VALVE WITH SIPHONGUARD


Product Code

82-3842

Valve System (unitized), includes:

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


Product Code

82-3832

Valve System, includes:

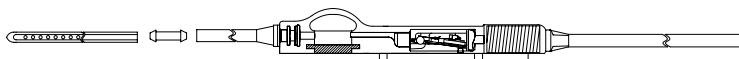
- Valve with integrated plastic connectors and SIPHONGUARD
- 14cm ventricular catheter (ref. 82-3041)
- Stainless steel stylet
- 120cm distal catheter (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic


Product Code

82-3162

Valve only, includes:

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



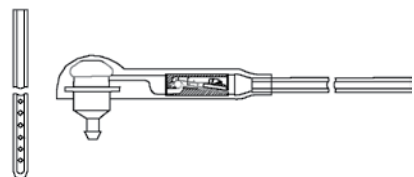
2.5cm open-ended proximal tube, 1.27mm ID x 2.5mm OD

Product Code

82-3854

Valve with Platform (unitized), includes:

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

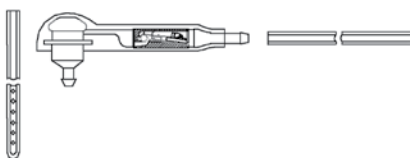


Product Code

82-3148

Valve System (unitized), includes:

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



Product Code

82-3838

Valve System, includes:

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



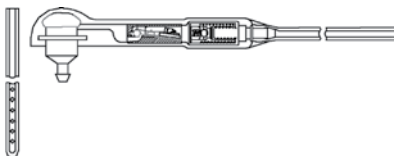
Product Code

82-3184

Valve only, includes:

- Valve with integrated plastic connectors
- Priming adaptor, plastic

CODMAN HAKIM RIGHT ANGLE VALVE WITH SIPHONGUARD

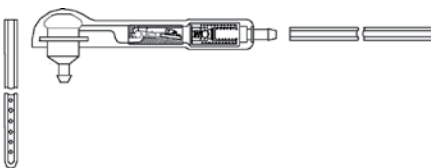


Product Code

82-3146

Valve System (unitized), includes:

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



Product Code

82-3136

Valve System, includes:

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



Product Code

82-3182

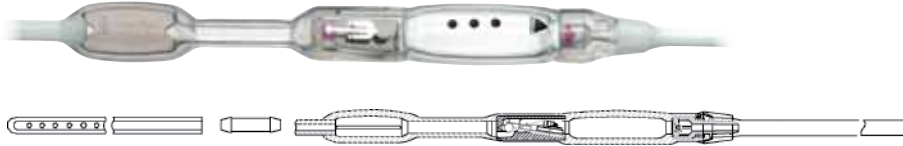
Valve only, includes:

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



- Proven Ball & Spring Construction
- Five Distinct Operating Pressures
- Multiple Configurations
- Integrated SIPHONGUARD Technology customized to your patients' specific needs

CODMAN HAKIM CYLINDRICAL VALVE WITH PRE-CHAMBER

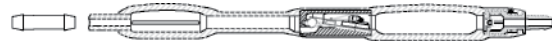


14cm open-ended proximal tube, 1.14mm ID x 2.5mm OD

Product Code	Pressure	Range	
82-3006	10mm H ₂ O	Very Low	●
82-3007	40mm H ₂ O	Low	● ●
82-3008	70mm H ₂ O	Medium	● ● ●
82-3009	100mm H ₂ O	Medium High	● ● ● ●
82-3010	130mm H ₂ O	High	● ● ● ● ●

Valve System (unitized), includes:

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



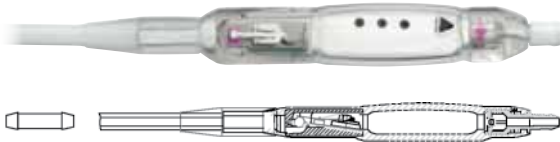
14cm open-ended proximal tube, 1.14mm ID x 2.5mm OD

Product Code	Pressure	Range	
82-3011	10mm H ₂ O	Very Low	●
82-3012	40mm H ₂ O	Low	● ●
82-3013	70mm H ₂ O	Medium	● ● ●
82-3014	100mm H ₂ O	Medium High	● ● ● ●
82-3015	130mm H ₂ O	High	● ● ● ● ●

Valve only, includes:

- Valve
- Straight connector, titanium
- Introducer, plastic

CODMAN HAKIM CYLINDRICAL VALVE WITHOUT PRE-CHAMBER

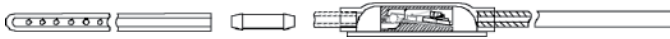


14cm open-ended proximal tube, 1.14mm ID x 2.5mm OD

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

Valve only, includes:

- Valve
- Straight connector, titanium
- Introducer, plastic



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

Product Code	Pressure	Range		Valve System (unitized), includes:
82-3035	10mm H ₂ O	Very Low	●	• Valve
82-3036	40mm H ₂ O	Low	● ●	• 14cm ventricular catheter (ref. 82-3041)
82-3037	70mm H ₂ O	Medium	● ● ●	• 120cm distal catheter, unitized (ref. 82-3045)
82-3038	100mm H ₂ O	Medium High	● ● ● ●	• Priming adaptor, plastic
82-3039	130mm H ₂ O	High	● ● ● ● ●	• Right-angled adaptor, plastic
				• Straight connector, titanium
				• Stainless steel stylet

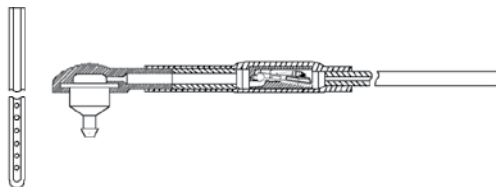


5cm open-ended proximal tube, 1.4mm ID x 2.7mm OD

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

Product Code	Pressure	Range		Valve only, includes:
82-3026	10mm H ₂ O	Very Low	●	• Valve
82-3027	40mm H ₂ O	Low	● ●	• Priming adaptor, plastic
82-3028	70mm H ₂ O	Medium	● ● ●	• Straight connectors (2), titanium
82-3029	100mm H ₂ O	Medium High	● ● ● ●	
82-3030	130mm H ₂ O	High	● ● ● ● ●	

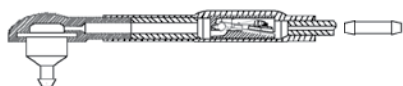
CODMAN HAKIM MICRO VALVE WITH RICKHAM RESERVOIR



Product Code	Pressure	Range	
82-3021	10mm H ₂ O	Very Low	●
82-3022	40mm H ₂ O	Low	● ●
82-3023	70mm H ₂ O	Medium	● ● ●
82-3024	100mm H ₂ O	Medium High	● ● ● ●
82-3025	130mm H ₂ O	High	● ● ● ● ●

Valve System (unitized), includes:

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



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

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

Valve only, includes:

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



Product Code	Pressure	Range	
82-3806	10mm H ₂ O	Very Low	●
82-3807	40mm H ₂ O	Low	● ●
82-3808	70mm H ₂ O	Medium	● ● ●
82-3809	100mm H ₂ O	Medium High	● ● ● ●
82-3810	130mm H ₂ O	High	● ● ● ● ●

Valve System (unitized), includes:

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



Product Code	Pressure	Range	
82-5471	10mm H ₂ O	Very Low	●
82-5472	40mm H ₂ O	Low	● ●
82-5473	70mm H ₂ O	Medium	● ● ●
82-5474	100mm H ₂ O	Medium High	● ● ● ●
82-5475	130mm H ₂ O	High	● ● ● ● ●

Valve only, includes:

- Valve with integrated plastic connectors
- Priming adaptor, plastic

CODMAN HAKIM IN-LINE VALVE WITH SIPHONGUARD



Product Code	Pressure	Range	
82-3821	10mm H ₂ O	Very Low	●
82-3822	40mm H ₂ O	Low	● ●
82-3823	70mm H ₂ O	Medium	● ● ●
82-3824	100mm H ₂ O	Medium High	● ● ● ●
82-3825	130mm H ₂ O	High	● ● ● ● ●

Valve System (unitized), includes:

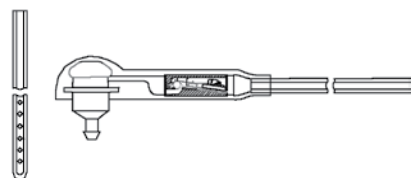
- Valve with integrated plastic connector and SIPHONGUARD
- 14cm ventricular catheter (ref. 82-3041)
- 120cm distal catheter, unitized (ref. 82-3045)
- Priming adaptor, plastic
- Right-angled adaptor, plastic
- Stainless steel stylet



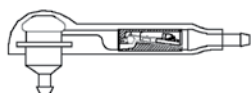
Product Code	Pressure	Range	
82-5461	10mm H ₂ O	Very Low	●
82-5462	40mm H ₂ O	Low	● ●
82-5463	70mm H ₂ O	Medium	● ● ●
82-5464	100mm H ₂ O	Medium High	● ● ● ●
82-5465	130mm H ₂ O	High	● ● ● ● ●

Valve only, includes:

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

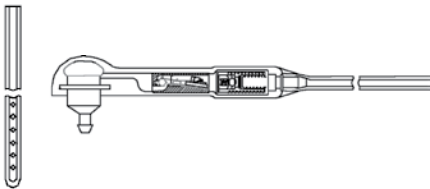


Product Code	Pressure	Range		Valve System (unitized), includes:
82-3281	10mm H ₂ O	Very Low	●	• Valve with integrated plastic connector
82-3282	40mm H ₂ O	Low	● ●	• 14cm ventricular catheter (ref. 82-3041)
82-3283	70mm H ₂ O	Medium	● ● ●	• 120cm distal catheter, unitized (ref. 82-3045)
82-3284	100mm H ₂ O	Medium High	● ● ● ●	• Priming adaptor, plastic
82-3285	130mm H ₂ O	High	● ● ● ● ●	• Stainless steel stylet



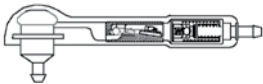
Product Code	Pressure	Range		Valve only, includes:
82-5491	10mm H ₂ O	Very Low	●	• Valve with integrated plastic connectors
82-5492	40mm H ₂ O	Low	● ●	• Priming adaptor, plastic
82-5493	70mm H ₂ O	Medium	● ● ●	
82-5494	100mm H ₂ O	Medium High	● ● ● ●	
82-5495	130mm H ₂ O	High	● ● ● ● ●	

CODMAN HAKIM RIGHT ANGLE VALVE WITH SIPHONGUARD



Product Code	Pressure	Range	
82-3261	10mm H ₂ O	Very Low	●
82-3262	40mm H ₂ O	Low	● ●
82-3263	70mm H ₂ O	Medium	● ● ●
82-3264	100mm H ₂ O	Medium High	● ● ● ●
82-3265	130mm H ₂ O	High	● ● ● ● ●

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



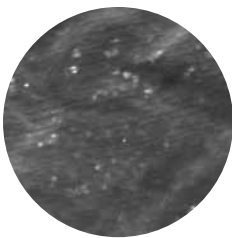
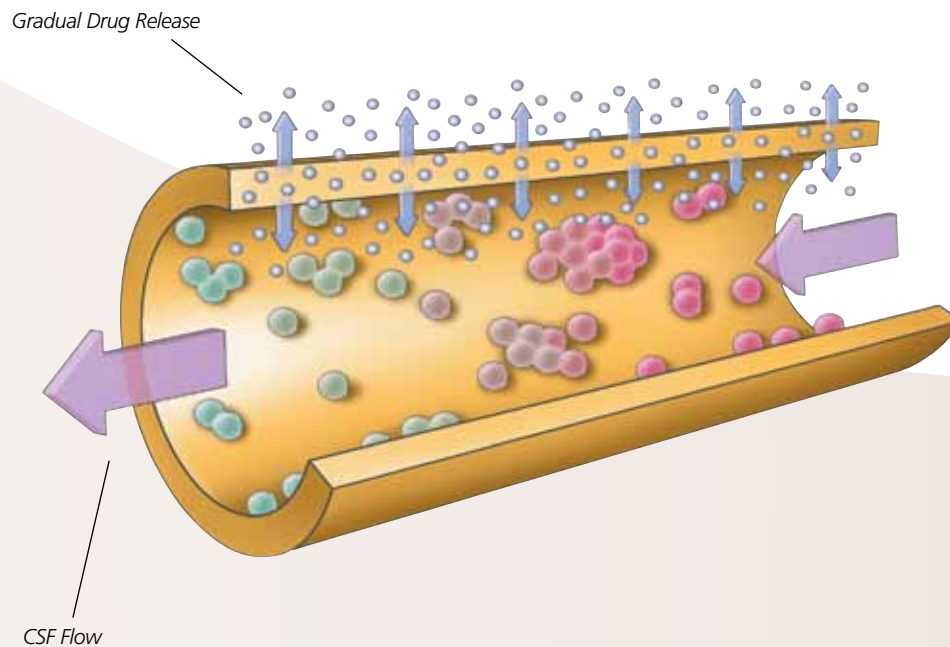
Product Code	Pressure	Range	
82-5481	10mm H ₂ O	Very Low	●
82-5482	40mm H ₂ O	Low	● ●
82-5483	70mm H ₂ O	Medium	● ● ●
82-5484	100mm H ₂ O	Medium High	● ● ● ●
82-5485	130mm H ₂ O	High	● ● ● ● ●

- Valve only, includes:**
- Valve with integrated plastic connectors and SIPHONGUARD
 - Priming adaptor, plastic

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.

*Codman in-house testing reports, TR2213 and PVER99-133 Addendum.

CODMAN HAKIM CYLINDRICAL VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5401	10mm	Very Low	●	• Valve
NS5402	40mm	Low	● ●	• 14cm open-ended proximal tube, 1.14mm ID x 2.5mm OD
NS5403	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5404	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5405	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Straight connector, titanium
				• Stylet



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5411	10mm	Very Low	●	• Valve
NS5412	40mm	Low	● ●	• 14cm open-ended proximal tube, 1.14mm ID x 2.5mm OD
NS5413	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5414	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5415	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Straight connector, titanium
				• Stylet



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5309	10mm H ₂ O	Very Low	●	• Valve
NS5310	40mm H ₂ O	Low	● ●	• 11mm RICKHAM reservoir, unitized – plastic base
NS5311	70mm H ₂ O	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5312	100mm H ₂ O	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5313	130mm H ₂ O	High	● ● ● ● ●	• Stylet



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5316	10mm H ₂ O	Very Low	●	• Valve with suture tabs
NS5317	40mm H ₂ O	Low	● ●	• Proximal connector, no reservoir
NS5318	70mm H ₂ O	Medium	● ● ●	• Unitized SIPHONGUARD
NS5319	100mm H ₂ O	Medium High	● ● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5320	130mm H ₂ O	High	● ● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
				• Right-angled adaptor
				• Stylet

CODMAN HAKIM CYLINDRICAL VALVE BACTISEAL CLEAR WITH BARIUM STRIPE CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5476	10mm	Very Low	●	• Valve
NS5477	40mm	Low	● ●	• Proximal connector – no reservoir
NS5478	70mm	Medium	● ● ●	• 15cm ventricular catheter (ref. NS0338)
NS5479	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. NS0339)
NS5480	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5486	10mm	Very Low	●	• Valve
NS5487	40mm	Low	● ●	• 11mm RICKHAM reservoir, unitized – plastic base
NS5488	70mm	Medium	● ● ●	• 15cm ventricular catheter (ref. NS0338)
NS5489	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. NS0339)
NS5490	130mm	High	● ● ● ● ●	• Stylet

CODMAN HAKIM MICRO RICKHAM VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5416	10mm	Very Low	●	• Valve
NS5417	40mm	Low	● ●	• 11mm integral RICKHAM reservoir – plastic base
NS5418	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5419	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5420	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor

CODMAN HAKIM MICRO RICKHAM VALVE BACTISEAL CLEAR WITH BARIUM STRIPE CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5406	10mm	Very Low	●	• Valve
NS5407	40mm	Low	● ●	• 11mm integral RICKHAM reservoir – plastic base
NS5408	70mm	Medium	● ● ●	• 15cm ventricular catheter (ref. NS0338)
NS5409	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. NS0339)
NS5410	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor

CODMAN HAKIM IN-LINE VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5471	10mm	Very Low	●	• Valve
NS5472	40mm	Low	● ●	• In-line reservoir
NS5473	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5474	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5475	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5301	10mm H ₂ O	Very Low	●	• Valve with platform
NS5302	40mm H ₂ O	Low	● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5303	70mm H ₂ O	Medium	● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5304	100mm H ₂ O	Medium High	● ● ● ●	• Straight connector, titanium
NS5305	130mm H ₂ O	High	● ● ● ● ●	• Holter Type B connector
				• Stylet
				• Right-angled adaptor
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5461	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5462	40mm	Low	● ●	• In-line reservoir
NS5463	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5464	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5465	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor

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



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5536	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5537	40mm	Low	● ●	• In-line reservoir
NS5538	70mm	Medium	● ● ●	• 15cm ventricular catheter (ref. NS0338)
NS5539	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. NS0339)
NS5540	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor

CODMAN HAKIM RIGHT ANGLE VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5481	10mm	Very Low	●	• Valve
NS5482	40mm	Low	● ●	• Right angle reservoir
NS5483	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5484	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5485	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5491	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5492	40mm	Low	● ●	• Right angle reservoir
NS5493	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5494	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5495	130mm	High	● ● ● ● ●	• Stylet
				• Priming adapter

CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5431	10mm	Very Low	●	• Valve
NS5432	40mm	Low	● ●	• Proximal connector, no reservoir
NS5433	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5434	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5435	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5455	10mm	Very Low	●	• Valve
NS5456	40mm	Low	● ●	• Prechamber with proximal connector
NS5457	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5458	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5459	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5421	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5422	40mm	Low	● ●	• Proximal connector, no reservoir
NS5423	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5424	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5425	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5450	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5451	40mm	Low	● ●	• Prechamber with proximal connector
NS5452	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5453	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5454	130mm	High	● ● ● ● ●	• Right-angled adaptor
				• Stylet
				• Priming adaptor

CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5445	10mm	Very Low	●	• Valve
NS5446	40mm	Low	● ●	• 11mm SALMON RICKHAM® reservoir, unitized – plastic base
NS5447	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5448	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5449	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor

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



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5426	10mm	Very Low	●	• Valve
NS5427	40mm	Low	● ●	• 11mm RICKHAM reservoir, unitized – plastic base
NS5428	70mm	Medium	● ● ●	• 15cm ventricular catheter (ref. NS0338)
NS5429	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. NS0339)
NS5430	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor

CODMAN HAKIM MICRO II VALVE WITH BACTISEAL BARIUM CATHETERS



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5551	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5552	40mm	Low	● ●	• 11mm SALMON RICKHAM reservoir, unitized – stainless steel base
NS5553	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5554	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5555	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5440	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5441	40mm	Low	● ●	• 11mm RICKHAM reservoir, unitized – plastic base
NS5442	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5443	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5444	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5511	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5512	40mm	Low	● ●	• 11mm RICKHAM reservoir, unitized – stainless steel base
NS5513	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5514	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5515	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor



Product Code	Pressure	Range		Valve System (unitized), includes:
NS5516	10mm	Very Low	●	• Valve with SIPHONGUARD
NS5517	40mm	Low	● ●	• 11mm SALMON RICKHAM reservoir, unitized – plastic base
NS5518	70mm	Medium	● ● ●	• 14cm ventricular catheter (ref. 82-3073)
NS5519	100mm	Medium High	● ● ● ●	• 120cm peritoneal catheter, unitized (ref. 82-3074)
NS5520	130mm	High	● ● ● ● ●	• Stylet
				• Priming adaptor



Product Code	Description	Includes:
82-3088	BACTISEAL Endoscopic Ventricular Catheter and Distal Catheter Kit	<ul style="list-style-type: none"> • 14cm ventricular catheter (ref. 82-3073) • 120cm peritoneal catheter (ref. 82-3074) • Right-angled adaptor
82-3087	BACTISEAL Endoscopic Ventricular Catheter	<ul style="list-style-type: none"> • 14cm ventricular catheter (ref. 82-3073) • Right-angled adaptor

VENTRICULAR CATHETERS – BACTISEAL TREATED SILICONE CATHETERS



Product Code	Description	Includes:
82-3073	BACTISEAL Barium, Ventricular Catheter	<ul style="list-style-type: none"> • 14cm, 1.4mm ID x 2.7mm OD • 3 rows of 8 holes (MEDOS® style) • Tantalum marks/molded tip • Stylet • Right-angled adaptor



Product Code	Description	Includes:
NS5073	Large BACTISEAL Barium, Ventricular Catheter	<ul style="list-style-type: none"> • 15cm, 1.5mm ID x 3.0mm OD • 4 rows of 5 holes (HOLTER® style) • Tantalum marks and tip • Stylet • Right-angled adaptor



Product Code

NS0338

Description

BACTISEAL Clear with Barium Stripe Ventricular Catheter

Includes:

- 15cm, 1.27mm ID x 2.54mm OD
- 4 rows of 10 holes (ACCU-FLO® style)
- Tantalum marks and tip
- Stylet
- Right-angled adaptor



Product Code

NS5048

Description

BACTISEAL Clear with Barium Stripe Ventricular Catheter with 1cm Markings

Includes:

- 15cm, 1.27mm ID x 2.54mm OD
- 4 rows of 10 holes (ACCU-FLO style)
- Tantalum marks and tip
- Stylet
- Right-angled adaptor



Product Code

NS0343

Description

BACTISEAL Barium Ventricular Catheter

Includes:

- 23cm, 1.27mm ID x 2.54mm OD
- 4 rows of 10 holes (ACCU-FLO style)
- Tantalum marks and tip
- Stylet
- Right-angled adaptor



Product Code	Description	Includes:
NS5115	BACTISEAL Clear with Barium Stripe Ventricular Catheter	<ul style="list-style-type: none"> • 23cm, 1.27mm ID x 2.54mm OD • 4 rows of 10 holes (ACCU-FLO style) • Tantalum marks and tip • Stylet • Right-angled adaptor • Luer/cap assembly • Catheter anchoring clip

MEDOS VENTRICULAR CATHETERS



Product Code	Description	Includes:
	BACTISEAL Barium Ventricular Catheter, with additional holes	<ul style="list-style-type: none"> • 14cm, 1.4mm ID x 2.7mm OD • (HOLTER style) See NS codes • Tantalum marks/molded tip • Stylet • Right-angled adaptor
NS5077	6cm of holes	
NS5078	9cm of holes	
NS5521	5cm of holes	
NS5523	8cm of holes	



Product Code	Description	Includes:
NS5525	BACTISEAL Barium Ventricular Catheter with 1cm markings	<ul style="list-style-type: none"> • 14cm, 1.4mm ID x 2.7mm OD • 3 rows of 8 holes (MEDOS style) • Tantalum marks/molded tip • Stylet • Right-angled adaptor



Product Code	Description
82-3074	BACTISEAL Barium Peritoneal Catheter <ul style="list-style-type: none">• 120cm, 1mm ID x 2.15mm OD



Product Code	Description
NS5074	Large Barium Peritoneal Catheter <ul style="list-style-type: none">• 120cm, 1.5mm ID x 3.0mm OD



Product Code	Description
NS0339	Clear with Barium Stripe Peritoneal Catheter <ul style="list-style-type: none">• 120cm, 1.27mm ID x 2.54mm OD



Product Code	Description
NS5524	Clear with Barium Stripe Peritoneal Catheter <ul style="list-style-type: none">• 120cm, 1.27mm ID x 2.54mm OD• 4 sets of drainage holes



Product Code **Description**
 82-3072 BACTISEAL Barium Catheter Kit

Includes:

- 14cm ventricular catheter (ref. 82-3073)
- 120cm peritoneal catheter (ref. 82-3074)
- Stylet
- Right-angled adaptor



Product Code **Description**
 NS0340 BACTISEAL Clear with Barium Stripe Catheter Kit

Includes:

- Clear with barium stripe .050 x .100 (1.3mm x 2.5mm)
- 15cm ventricular catheter (ref. NS0338)
- 120cm peritoneal catheter (ref. NS0339)
- Stylet
- Right-angled adaptor



Product Code **Description**
 NS5075 BACTISEAL Large Barium Catheter Kit

Includes:

- 15cm ventricular catheter (ref. NS5073)
- 120cm peritoneal catheter (ref. NS5074)
- 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.

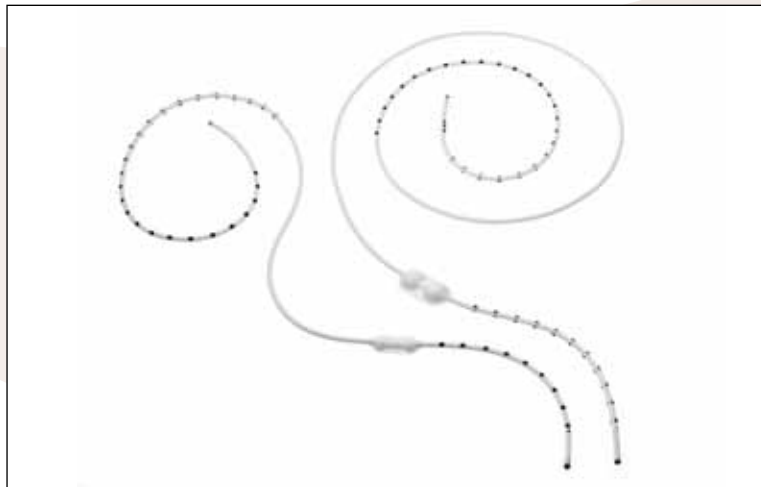
The simplicity of the one-piece design means that there are no connectors, so the possibility of disconnection and subsequent complications is eliminated.

The catheter has rounded X-ray detectable tantalum ventricular and distal tips, X-ray detectable pressure markings at the distal tip, and X-ray detectable markings on the ventricular and peritoneal ends.

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 90cm and 102cm length kits also include one disposable malleable catheter passer, long
- UNI-SHUNT with reservoir anchoring clips, 2
- UNI-SHUNT with reservoir introducer
- Marking pen, sterile
- Measuring tape, **non-sterile**

Note: The 53cm and 62cm length reservoir catheters have a distance of 11cm from the ventricular tip to the reservoir; the 78cm, 90cm, and 102cm length reservoir catheters have a distance of 13cm from the ventricular tip to the reservoir.





Pediatric Reservoir Kit

Product Code	Length	Closing Pressure (Measured in cm of water)
82-8501	53cm	2-5cm H ₂ O Low
82-8502	53cm	5-9cm H ₂ O Medium
82-8511	62cm	2-5cm H ₂ O Low
82-8512	62cm	5-9cm H ₂ O Medium
82-8521	78cm	2-5cm H ₂ O Low
82-8522	78cm	5-9cm H ₂ O Medium



Adult Reservoir Kit

Product Code	Length	Closing Pressure (Measured in cm of water)
82-8531	90cm	2-5cm H ₂ O Low
82-8532	90cm	5-9cm H ₂ O Medium
82-8533	90cm	9-14cm H ₂ O High
82-8541	102cm	2-5cm H ₂ O Low
82-8542	102cm	5-9cm H ₂ O Medium
82-8543	102cm	9-14cm H ₂ O High

PERITONEAL CATHETERS, ACCU-FLO BARIUM DISTAL SLIT VALVE

The slit valves in CODMAN's 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.

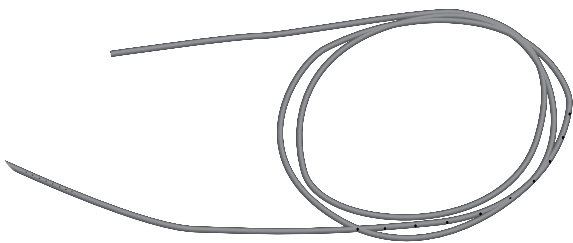


Product Code	Closing Pressure (Measured in cm of water)	Length	Description
		91cm, 1.27mm ID x 2.54mm OD	<ul style="list-style-type: none"> • 4 pressure-regulating slits • Tantalum marks and tip
82-1301	2-5cm H ₂ O Low		
82-1302	5-9cm H ₂ O Medium		
82-1303	9-14cm H ₂ O High		

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 (5-9cm H₂O medium pressure), four slits 90° apart. The proximal tip is perforated, open-ended and angled-cut for easy insertion.



Product Code	Length
82-6200	25cm, 0.76mm ID x 1.65mm OD
82-6201	50cm, 0.76mm ID x 1.65mm OD
82-6202	80cm, 0.76mm ID x 1.65mm 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 1.2mm and an OD of 2.5mm. The 3cm T-portion has four sets of three proximal holes, and has 1.0mm ID and 1.8mm OD. The peritoneal catheter end has three longitudinal slits (120° apart) to regulate flow.




Product Code	Description
82-1698	HOLTER LUMBO-PERITONEAL Catheter T-shaped, one-piece
	<ul style="list-style-type: none"> Length 65cm 3.5mm slit valves



"T" Detail

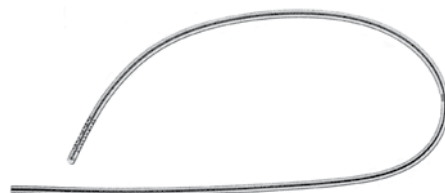
	Product Code	Description	Includes:
	82-1706	Lumbar External Drainage Catheter	<ul style="list-style-type: none">• 46cm, 0.76mm ID x 1.65mm OD• Tantalum markings• Open-ended• Touhy needle• Luer-Lok connector/cap

	Product Code	Description	Includes:
	82-1707	Lumbar Drainage Catheter Kit II	<ul style="list-style-type: none">• 80cm, 0.76mm ID x 1.65mm OD• Tantalum markings• Plugged end, flat• 2 sets of 9 holes on closed end• Touhy needle• Guidewire• Luer-Lok connector/cap• Soft suture tab

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



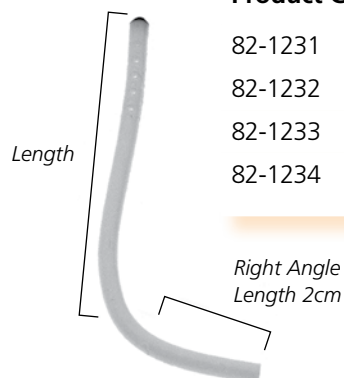
Product Code	Description	Includes:
82-1201	ACCU-FLO Barium Ventricular Catheter	<ul style="list-style-type: none"> • 15cm, 1.3mm ID x 2.5mm OD • X-ray detectable throughout. Rounded X-ray detectable tantalum tip • X-ray detectable tantalum markings, 5cm and 10cm. With 40 inlet holes, four rows of ten holes, 90° apart • Stainless steel stylet



Product Code	Description	Includes:
82-1203	ACCU-FLO Clear Ventricular Catheter	<ul style="list-style-type: none"> • 30cm, 1.3mm ID x 2.5mm OD • Rounded X-ray detectable tantalum tip • X-ray detectable tantalum mark at 15cm • With 40 inlet holes, four rows of ten holes, 90° apart

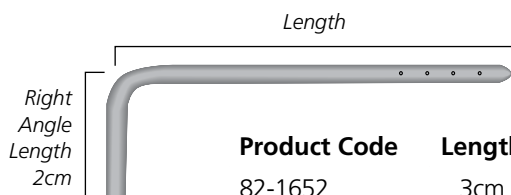


Product Code	Description	Includes:
82-1221	ACCU-FLO Dotted Ventricular Catheter	<ul style="list-style-type: none"> • 15cm, 1.3mm ID x 2.5mm OD • Rounded X-ray detectable tantalum tip • Clear silicone tubing with X-ray detectable tantalum markings every 1cm • With 40 inlet holes, four rows of ten holes, 90° apart • Stainless steel stylet



Product Code	Length	Description	Includes:
82-1231	5cm	ACCU-FLO Right Angle Ventricular Catheter	<ul style="list-style-type: none"> • ACCU-FLO hole pattern • 1.27mm ID x 2.54mm OD • Tantalum tip • Stylet
82-1232	7cm		
82-1233	9cm		
82-1234	11cm		

HOLTER BARIUM VENTRICULAR CATHETER



Product Code	Length	Number of Perforations	Description	Includes:
82-1652	3cm	3	Ventricular Catheter, with a Right Angle	<ul style="list-style-type: none"> • 1.5mm ID x 3.1mm OD • All ventricular tips have multiple perforations • Stylet
82-1654	4cm	3		
82-1658	6cm	4		
82-1660	7cm	5		
82-1662	8cm	5		

Product Code	Description	Includes:
82-1650	Ventricular Catheter, straight	<ul style="list-style-type: none"> • 15cm, 1.5mm ID x 3.1mm OD • Stylet

Product Code	Description	Includes:
83-1371	Pre-slit HOLTER Design Ventricular Catheter for endoscopic shunt placement	<ul style="list-style-type: none"> • Slit catheter tip • 15cm, 1.5mm ID x 3.0mm OD • HOLTER hole pattern • Tantalum markings

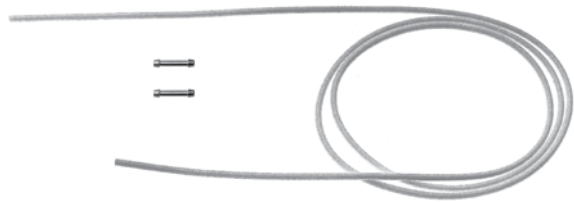
CODMAN VENTRICULAR CATHETER



Product Code	Description
82-3041	CODMAN Medos Ventricular Catheter <ul style="list-style-type: none"> • Silicone, impregnated with barium • Right-angled adaptor, plastic • 14cm, 1.4mm ID x 2.7mm OD • 3 rows of 8 holes (.5mm hole diameter) • Stylet

ATRIAL CATHETERS

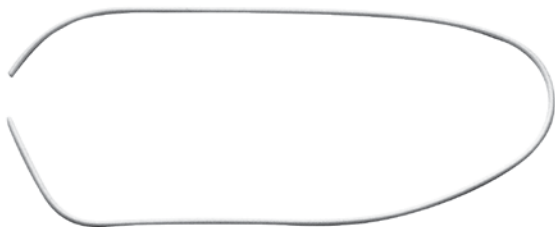
HOLTER Distal Atrial Catheters, sterile, barium impregnated with two lumen configurations to meet various shunting needs. Large lumen styles have an ID of 1.2mm and an OD of 2.5mm. The small, or stepped down portion lumen have an ID of .8mm and an OD of 1.3mm.



Product Code	Description
82-1670	HOLTER Distal Atrial Catheter, Type A, barium, sterile. Large lumen catheter. <ul style="list-style-type: none"> • Total length 45cm • Supplied with two sterile 82-1694 HOLTER Type A connectors



Product Code	Description
82-1676	HOLTER Distal Atrial Catheter, Type E, barium, sterile <ul style="list-style-type: none"> • Small catheter length 24cm • Large catheter length 24cm • Total length 48cm • Supplied with one sterile 82-1694 HOLTER type A connector



Product Code	Description
82-3044	CODMAN Atrial Catheter <ul style="list-style-type: none"> • 46cm, 1mm ID x 2.2mm OD

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



Product Code	Description
82-1682	HOLTER Distal Peritoneal Catheter
	<ul style="list-style-type: none"> Open end



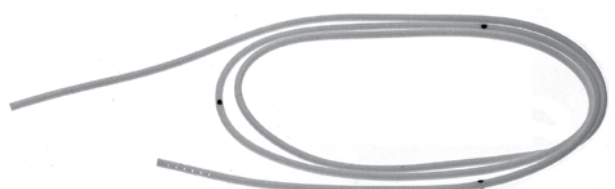
Product Code	Description
82-1684	HOLTER Distal Peritoneal Catheter
	<ul style="list-style-type: none"> SALMON style, closed distal tip with four side slits 90° apart Tip is solid silicone and is more heavily opacified for positive X-ray identification

MEDOS PERITONEAL CATHETER



Product Code	Description
82-3045	CODMAN Peritoneal Catheter
	<ul style="list-style-type: none"> 120cm, 1mm ID x 2.2mm OD Barium impregnated silicone

ACCU-FLO PERITONEAL CATHETERS



Product Code	Description
82-1380	ACCU-FLO Barium Distal Open-end Catheter
	<ul style="list-style-type: none"> Length 91cm Made of barium impregnated silicone tubing 1.3mm ID x 2.5mm 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 10cm, 20cm, and 30cm



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

The catheter segment and distal end of the catheter reservoir has a 1.5mm ID and a 3.1mm 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	Number of Perforations
82-1630	3cm	3
82-1632	4cm	3
82-1634	5cm	4
82-1636	6cm	4
82-1638	7cm	5
82-1640	8cm	5
82-1642	9cm	5

Description

HOLTER SALMON RICKHAM Ventriculostomy Reservoir, low profile, sterile.

Ideal for seating in very thin to medium thickness cranium. Requires a 6mm burr hole or drilled-skull recess.

Note: A 24 or 26 gauge "Huber" type needle or smaller should be used to puncture the HOLTER reservoir cap.

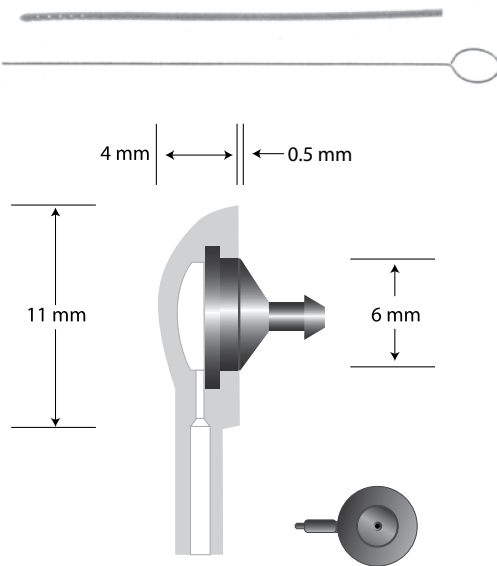
Product code**Includes:**

82-1625

- 11mm reservoir cap with low profile stainless steel base
- Stainless steel plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

82-1617

- 11mm reservoir cap with low profile plastic base
- Plastic reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

**Description**

HOLTER RICKHAM Ventriculostomy Reservoir, standard, sterile.

Requires a 6mm burr hole or skull recess.

Note: A 24 or 26 gauge "Huber" type needle or smaller should be used to puncture the HOLTER reservoir cap.

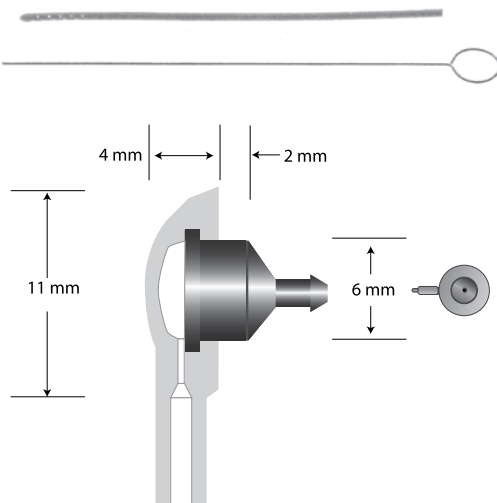
Product code**Includes:**

82-1615

- 11mm reservoir cap with stainless steel base
- Stainless steel reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

82-1621

- 11mm reservoir cap with plastic base
- Plastic reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet



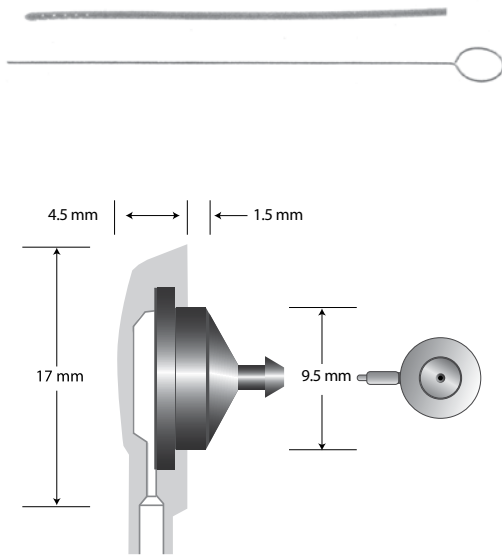
SHUNT SYSTEMS, RESERVOIRS

Description

HOLTER RICKHAM Ventriculostomy Reservoir, large, sterile.

Requires a 9.5mm burr hole or drilled-skull recess.

Note: A 24 or 26 gauge "Huber" type needle or smaller should be used to puncture the HOLTER reservoir cap.

**Product code****Includes:**

82-1616

- 17mm reservoir cap with plastic base
- Plastic reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

82-1623

- 17mm reservoir cap with stainless steel base
- Stainless steel reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

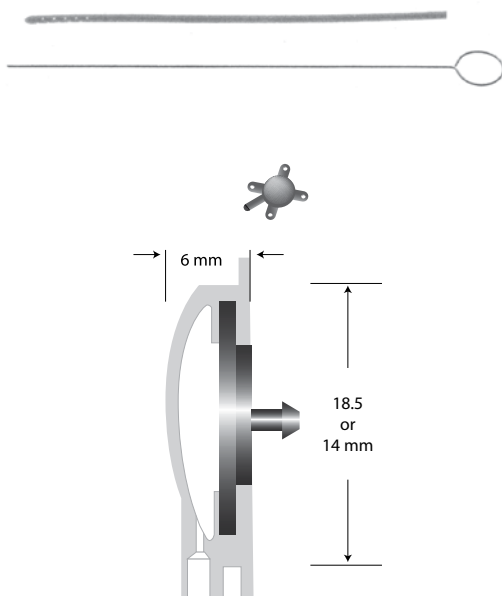
Description

HOLTER SELKER Ventriculostomy Reservoir Sets

Requires only a 4mm 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.

Note: A 24 or 26 gauge "Huber" type needle or smaller should be used to puncture the HOLTER reservoir cap.

**Product code****Includes:**

82-1618

- 14mm reservoir cap with plastic base
- Plastic reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

82-1619

- 18mm reservoir cap with plastic base
- Plastic reservoir plug
- 15cm HOLTER ventricular catheter (ref. 82-1650)
- Stylet

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:**

82-1401 ACCU-FLO Burr Hole Reservoir

- 14mm

82-1411 ACCU-FLO Single Dome Flat Bottom Reservoir

- 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.

ACCU-FLO Reservoirs are used for ventricular medication or aspiration. Each one is provided with a barium ventricular catheter (82-1201), stylet and a straight connector (82-1501).

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

- 14mm, fits 14mm burr hole

82-6101 ACCU-FLO CSF Reservoir

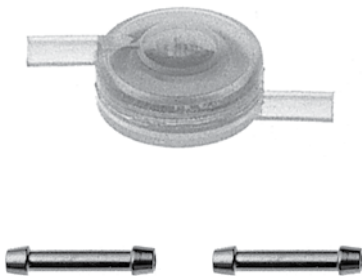
- 24mm, fits 24mm burr hole

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 1.5mm, 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.



CRANIAL CLIPS



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 2.5mm and bends the catheter to an approximate 90° angle for subcutaneous placement where the catheter exits the skull. Right-angled adaptor with tabs, plastic <ul style="list-style-type: none"> • 2 per package

RIGHT ANGLE ADAPTOR



Product Code	Description
82-8591	Right-angled Adaptor, plastic <ul style="list-style-type: none"> • 2 per package
82-3052	Right-angled Adaptor, plastic <ul style="list-style-type: none"> • 1 per package

SHUNT SYSTEMS, 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.



Product Code	Description
82-1504	ACCU-FLO Straight Connector, plastic <ul style="list-style-type: none"> • 17mm plastic, 1.0mm ID x 2.15mm OD



Product Code	Description
82-1501	ACCU-FLO Straight Connector, stainless steel <ul style="list-style-type: none"> • 11mm metal, 1.0mm ID x 1.9mm OD



Product Code	Description
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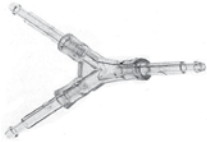
82-1507	ACCU-FLO Right Angle Connector, plastic <ul style="list-style-type: none"> • Length of 1 side, 11mm • 1.0mm ID x 2.15mm OD
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Product Code	Description
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82-1511	ACCU-FLO Right Angle Connector, stainless steel <ul style="list-style-type: none"> • Length of 1 side, 11mm • 1.0mm ID x 1.9mm OD
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ACCU-FLO Three Way Connectors, Y-shaped, sterile, with a straight metal or plastic non-spring connector in each leg.



Product Code	Description
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82-1520	Plastic Connectors (ref. 82-1504) <ul style="list-style-type: none"> • Approx. length of longest dimension 34.3mm • Length across the "Y" 20.8
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Product Code	Description
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82-1521	Metal Connectors (ref. 82-1501) <ul style="list-style-type: none"> • Approx. length of longest dimension 28.7mm • Length across the "Y" 17.8
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**Product Code Description**

- 82-3048 Straight Connector, stainless steel
- 10.4mm, 1.07mm ID x 2.08mm OD

**Product Code Description**

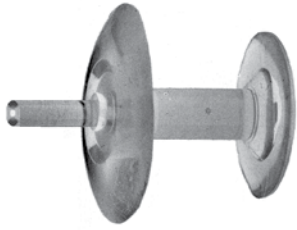
- 82-3053 Straight Connector, titanium
- 14mm, 1.04mm ID x 2.16mm OD

**Product Code Description**

- 82-1694 HOLTER Type A Straight Connector, stainless steel
- 10.4mm, 1.07mm ID x 2.08mm OD
 - **Non-sterile**
 - 5 per package

**Product Code Description**

- 82-1695 HOLTER Type B Straight Connector, stainless steel
- For joining silicone tubing with a nominal ID of .8mm to silicone tubing with a nominal ID of 1.2mm
- 8mm, .78mm ID
 - **Non-sterile**
 - 5 per package


Product Code

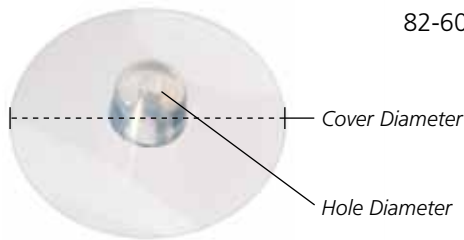
82-6010

Description
ACCU-FLO 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.

Includes:

- Button length 35mm
- Cover diameter 29mm
- Stem thickness 4.1mm
- 10 units per box


Product Code

82-6025

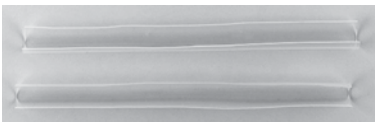
Description
ACCU-FLO Burr Hole Covers

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

U-CHANNEL STRIPPING


Product Code

82-6001

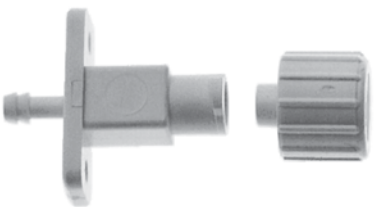
Description
U-CHANNEL Stripping

A preformed U-shaped silicone rubber used in the treatment of cranial stenosis.

Includes:

- Thickness .5mm
- Width 10mm
- Length 150mm
- 2 strippings per package

LUER CONNECTOR


Product Code

16-1057

Description
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 1.3mm to 1.5mm) to a CSF drainage or monitoring device. May be used to occlude ventricular catheter by utilizing male luer lock cap.

Includes:

- 3 per box

**Product Code****Description**

45-1020

Touhy Needle

Used for the insertion of the JAMES LUMBAR-PERITONEAL catheter

- 14 gauge
- Length 3 ½" (90mm)
- Tube ID 0.063"
- Tube OD 0.083"
- Non-sterile

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****Length**

16-1015

5 Fr.

4" (102mm)

16-1016

7 Fr.

4" (102mm)

16-1017

9 Fr.

4" (102mm)

VENTRICULAR CANNULA, SCOTT, STERILE

**Product Code****Description****Includes:**

SCOTT Ventricular Cannula

16-1055

Length 80mm

16-1056

Length 100mm

- 1.27mm ID x 2.5mm OD
- 5 per box
- A stylet and cap provided with each



Product Code	Description
82-3055	CODMAN MEDOS Valve Introducer <ul style="list-style-type: none"> • 21.8cm • Plastic • Single-use



Product Code	Description
82-4095	Split Trocar, disposable <p>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.</p> <ul style="list-style-type: none"> • 10cm • Exterior trocar stainless steel • Interior trocar plastic

INTRODUCERS, PEEL AWAY CATHETER



Product Code	Description
	Peel-Away Catheter Introducer <p>Used as a guide for catheter insertion. Introducer can be peeled apart permitting optimal positioning of a ventricular catheter.</p> <ul style="list-style-type: none"> • Overall length 7" (18.0cm) • Peel Away Sheath length 6" (14.7cm) • 10 units per box
83-1325	12.5 Fr.
83-1326	14 Fr.

MALLEABLE Catheter Passers, used to pass the distal catheter to the peritoneum.



Product Code	Description
82-1515	MALLEABLE Catheter Passer, short <ul style="list-style-type: none"> • 36cm • Disposable • Packaged individually, 6 per case



Product Code	Description
82-1516	MALLEABLE Catheter Passer, long <ul style="list-style-type: none"> • 55cm • Disposable • Packaged individually, 6 per case



Product Code	Description
82-1517	MALLEABLE Catheter Passer, x-long <ul style="list-style-type: none"> • 65cm • Disposable • Packaged individually, 6 per case



Product Code	Description
82-1692	<p>HOLTER Distal Catheter Passer, SALMON style</p> <p>Used for subcutaneous passage and placement of an atrial or peritoneal catheter. The catheter is passed through the tubular body of the instrument.</p> <ul style="list-style-type: none"> • Length from tip to finger pad 29.2cm • Tube 3.2mm ID x 4.2mm OD • Stainless steel • <u>Non-sterile</u>



Product Code	Description
82-1693	<p>HOLTER Distal Catheter Placement Instrument</p> <p>For the subcutaneous passage and placement of the distal peritoneal catheter.</p> <ul style="list-style-type: none"> • Rod 3.2mm OD, tip 7mm, hole diameter 2.75mm • Total length 56cm • Stainless steel • <u>Non-sterile</u>



Product Code	Description
82-1715	<p>HOFFMAN Shunt Passer, short</p> <p>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.</p> <ul style="list-style-type: none"> • Tube 3.2mm ID x 4.2mm OD • Tunneling length 42cm • Stainless steel • <u>Non-sterile</u>



Product Code	Description
82-1716	<p>HOFFMAN Shunt Passer, long</p> <ul style="list-style-type: none"> • Tube 3.2mm ID x 4.2mm OD • Tunneling length 68cm • Stainless steel • <u>Non-sterile</u>

PRODUCT CODE	PAGE	PRODUCT CODE	PAGE	PRODUCT CODE	PAGE	PRODUCT CODE	PAGE
16-1015	50	82-1694	48	82-3110	6	82-5474	17
16-1016	50	82-1695	48	82-3111	6	82-5475	17
16-1017	50	82-1697	45	82-3112	8	82-5481	20
16-1055	50	82-1698	36	82-3113	8	82-5482	20
16-1056	50	82-1706	37	82-3114	8	82-5483	20
16-1057	49	82-1707	37	82-3115	6	82-5484	20
45-1020	50	82-1715	53	82-3116	8	82-5485	20
82-1201	38	82-1716	53	82-3136	12	82-5491	19
82-1203	38	82-3006	14	82-3146	12	82-5492	19
82-1221	38	82-3007	14	82-3148	11	82-5493	19
82-1231	39	82-3008	14	82-3162	10	82-5494	19
82-1232	39	82-3009	14	82-3164	9	82-5495	19
82-1233	39	82-3010	14	82-3182	12	82-6001	49
82-1234	39	82-3011	14	82-3184	11	82-6010	49
82-1301	35	82-3012	14	82-3190	5	82-6025	49
82-1302	35	82-3013	14	82-3192	5	82-6100	45
82-1303	35	82-3014	14	82-3261	20	82-6101	45
82-1380	41	82-3015	14	82-3262	20	82-6200	36
82-1401	45	82-3021	16	82-3263	20	82-6201	36
82-1411	45	82-3022	16	82-3264	20	82-6202	36
82-1501	46	82-3023	16	82-3265	20	82-8501	35
82-1504	46	82-3024	16	82-3281	19	82-8502	35
82-1507	47	82-3025	16	82-3282	19	82-8511	35
82-1511	47	82-3026	15	82-3283	19	82-8512	35
82-1515	52	82-3027	15	82-3284	19	82-8521	35
82-1516	52	82-3028	15	82-3285	19	82-8522	35
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82-1615	43	82-3036	15	82-3809	17	82-8541	35
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82-1617	43	82-3038	15	82-3821	18	82-8543	35
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82-1619	44	82-3041	40	82-3823	18	82-8800	3
82-1621	43	82-3044	40	82-3824	18	82-8801	3
82-1623	44	82-3045	41	82-3825	18	82-8802	3
82-1625	43	82-3048	48	82-3832	10	82-8803	3
82-1630	42	82-3052	46	82-3834	9	82-8804	3
82-1632	42	82-3053	48	82-3838	11	82-8805	3
82-1634	42	82-3055	51	82-3842	10	82-8806	3
82-1636	42	82-3072	33	82-3844	9	82-8807	3
82-1638	42	82-3073	29	82-3851	7	82-8850	3
82-1640	42	82-3074	32	82-3852	7	83-1325	51
82-1642	42	82-3082	14	82-3853	7	83-1326	51
82-1650	39	82-3083	14	82-3854	10	83-1371	39
82-1652	39	82-3084	14	82-3855	7	NS0338	30
82-1654	39	82-3085	14	82-4092	46	NS0339	32
82-1658	39	82-3086	14	82-4095	51	NS0340	33
82-1660	39	82-3087	29	82-5461	18	NS0343	30
82-1662	39	82-3088	29	82-5462	18	NS5048	30
82-1670	40	82-3090	4	82-5463	18	NS5073	29
82-1676	40	82-3095	16	82-5464	18	NS5074	32
82-1682	41	82-3096	16	82-5465	18	NS5075	33
82-1684	41	82-3097	16	82-5471	17	NS5077	31
82-1692	53	82-3098	16	82-5472	17	NS5078	31
82-1693	53	82-3099	16	82-5473	17	NS5115	31

PRODUCT CODE	PAGE	PRODUCT CODE	PAGE	PRODUCT CODE	PAGE
NS5301	24	NS5446	27	NS5524	32
NS5302	24	NS5447	27	NS5525	31
NS5303	24	NS5448	27	NS5536	25
NS5304	24	NS5449	27	NS5537	25
NS5305	24	NS5450	26	NS5538	25
NS5309	22	NS5451	26	NS5539	25
NS5310	22	NS5452	26	NS5540	25
NS5311	22	NS5453	26	NS5551	28
NS5312	22	NS5454	26	NS5552	28
NS5313	22	NS5455	26	NS5553	28
NS5316	22	NS5456	26	NS5554	28
NS5317	22	NS5457	26	NS5555	28
NS5318	22	NS5458	26		
NS5319	22	NS5459	26		
NS5320	22	NS5461	24		
NS5401	22	NS5462	24		
NS5402	22	NS5463	24		
NS5403	22	NS5464	24		
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NS5414	22	NS5480	23		
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NS5423	26	NS5489	23		
NS5424	26	NS5490	23		
NS5425	26	NS5491	25		
NS5426	27	NS5492	25		
NS5427	27	NS5493	25		
NS5428	27	NS5494	25		
NS5429	27	NS5495	25		
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NS5434	26	NS5515	28		
NS5435	26	NS5516	28		
NS5440	28	NS5517	28		
NS5441	28	NS5518	28		
NS5442	28	NS5519	28		
NS5443	28	NS5520	28		
NS5444	28	NS5521	31		
NS5445	27	NS5523	31		

Refer to the product instructions for use (IFU) for indications, contraindications, warnings and precautions.

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