



## Desu & Linacol Product Catalogue





All products in the LINACOL Medical product portfolio; Developed as R&D Projects, they were supported by the Scientific and Technological Research Council of Turkey and KOSGEB to start production



Desu® Medical manufacturing and R&D activities are performed in Class 10.000 and 1.000 clean room facilities within the Hacettepe Technopark establishment.





## SHUNTS

Description	Page
<b>Silicone Shunts</b>	
Defit Shunts, Silicone Flat-Bottom Shunts	4
Defit Shunts, Silicone Flat-Bottom Shunt Kits	5
Decurve Shunts, Silicone Burr-Hole Shunts	6
Decurve Shunts, Silicone Burr-Hole Shunt Kits	7
<b>Polysulfone Shunts</b>	
Depus Shunts	8
Depus Shunts, Ventriculoperitoneal Shunt Kits	9
Depus Shunts, Lumboperitoneal Shunt Kits	10
Depus Shunts, Adjustable Ventriculoperitoneal Shunt	11
Kits Depus Adjustment Kit	11-13
Product References	11-13

## DRAINAGE SYSTEMS

Description	Page
External Ventricular Drainage System With Ventricular Catheter	15
External Ventricular Drainage System With Antibiotic Impregnated Ventricular Catheter	16
External Lumbar Drainage System With Lumbar Catheter	17
External Lumbar Drainage System With Antibiotic Impregnated Lumbar Catheter	18
Product Reference	19

## CATHETERS

Description	Page
<b>Shunts Catheters</b>	
Ventricular Catheter Kit	21
Peritoneal Catheter Kit	22
Ventriculoperitoneal Catheter Kit	23
Lumbar Catheter Kit	24
Lumboperitoneal Catheter Kit	25
<b>External Drainage Catheters</b>	
Ventricular Catheter Kit	26
Lumbar Catheter Kit	27
Product References	28

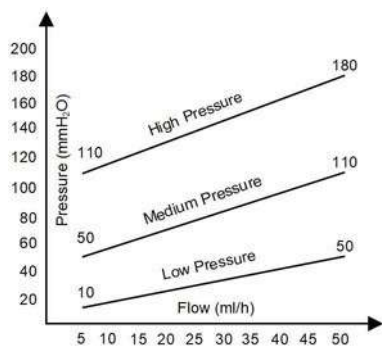
## ACCESSORIES

Description	Page
Antisiphon Device	30
Straight Catheter	30
Connector L Type Catheter	30
Connector	30
Y Type Catheter Connector	

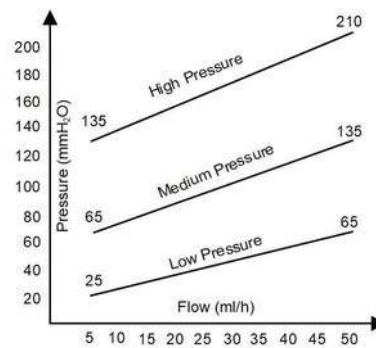
## DURA GRAFTS

Description	Page
DECOLL Collagen Dura Membrane	32
DURASHEET Collagen Dura Membrane	33

Shunt systems are drainage systems designed to reduce the intracranial pressure that occurs with hydrocephalus disease.



Normal kit graph



With antisiphon kit graph

All shunt systems are provided as sterile (Method EO-Ethylene Oxide)





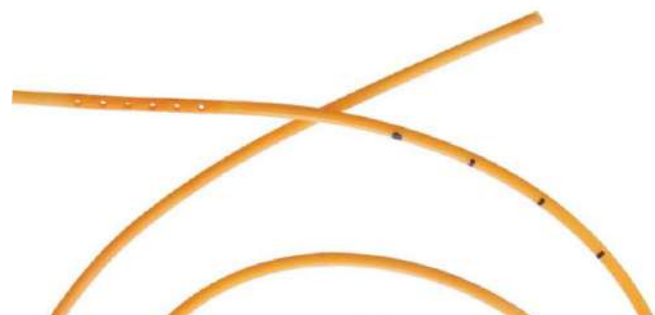
## Neurosurgical Shunt Systems

### Silicone Shunts

Silicone valves are made of polypropylene and silicone elastomer. The risk of deformation due to adhesion is minimized. Does not contain any metal parts. Suitable for MRI and CT scans. It has a reservoir structure. Antibiotic impregnated body option is available.

### Polysulfone Shunts

The mechanism inside the Polysulfone Shunts is triggered by positive ventricular pressure and the valve opens automatically. The ruby ball and titanium spring parts in the system are the main components of this system, which works with the hydrodynamic leverage method.

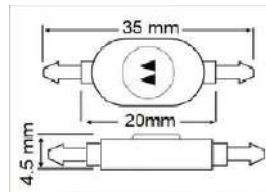


## Defit Shunts

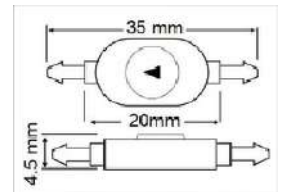
### Silicone Flat-Bottom Shunts

Ultra Small, Small and Regular sizes are available as valve and shunt kit.

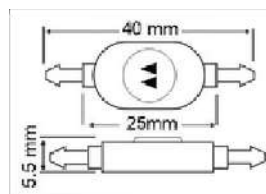
Ultra Small Defit Shunt



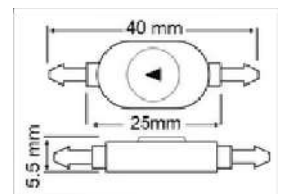
Antibiotic Impregnated Ultra Small Defit Shunt



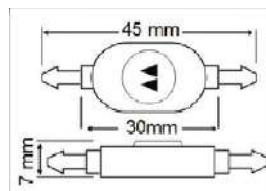
Small Defit Shunt



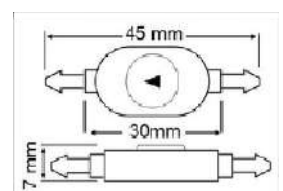
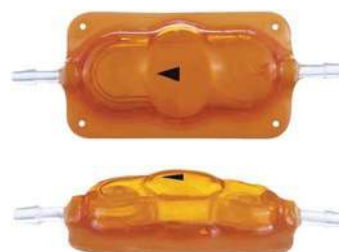
Antibiotic Impregnated Small Defit Shunt



Regular Defit Shunt



Antibiotic Impregnated Regular Defit Shunt

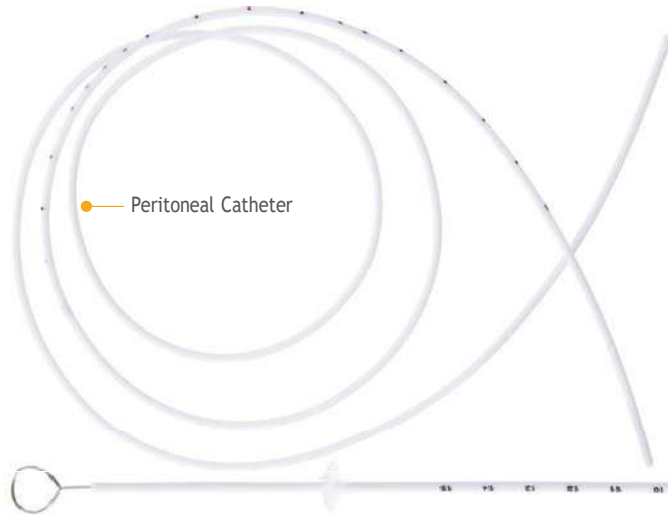


# Defit Shunts

## Silicone Flat-Bottom Shunt Kits

Ultra Small, Small and Regular sizes are available as valve and shunt kit.

Defit Shunt Kit included with; Defit Valve, Ventricular Catheter, Peritoneal Catheter, Stylet, Right Angled Connector, ASD (Optional)



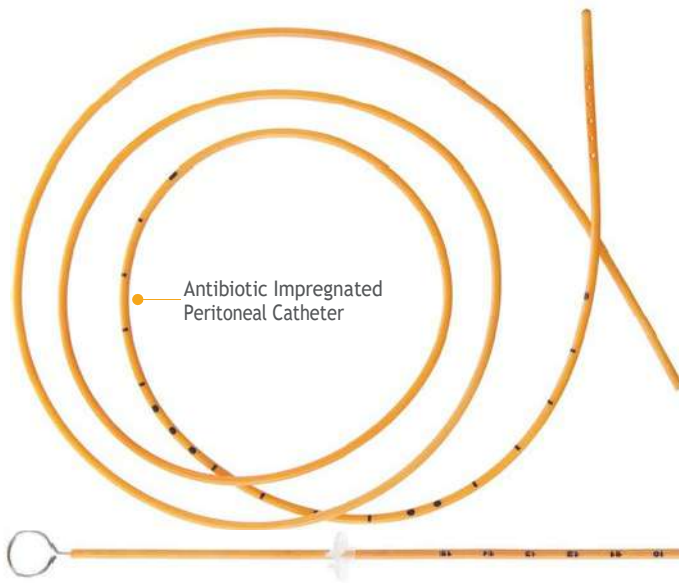
### Standard Defit Shunt Kit



Defit Shunt



ASD (Optional)



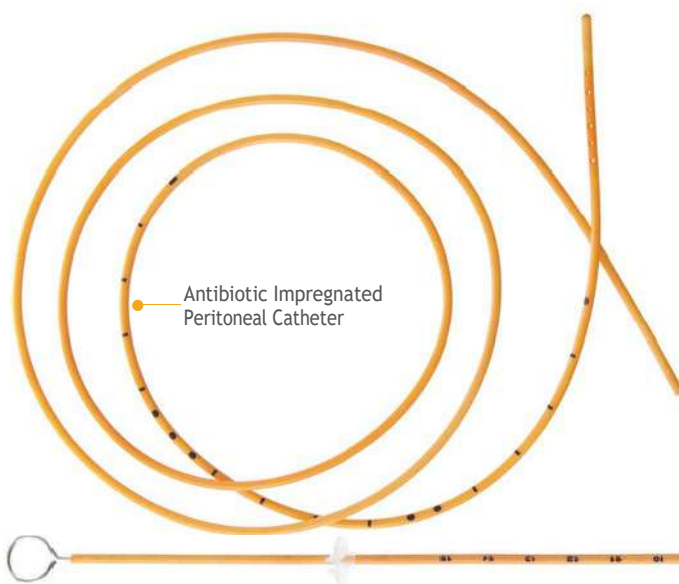
### Semi Antibiotic Defit Shunt Kit



Defit Shunt



ASD (Optional)



### Fully Antibiotic Impregnated Defit Shunt Kit



Antibiotic Impregnated Defit Shunt



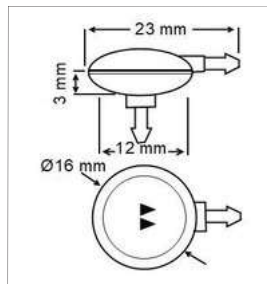
ASD (Optional)

## Decurve Shunts

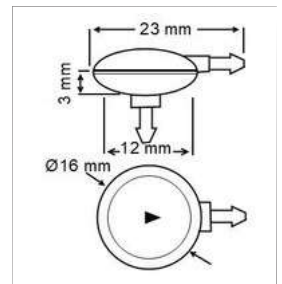
### Silicone Burr-Hole Shunts

Pediatric and Adult sizes are available as valve and shunt kit.

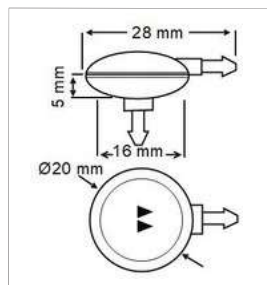
#### Pediatric Decurve Shunt



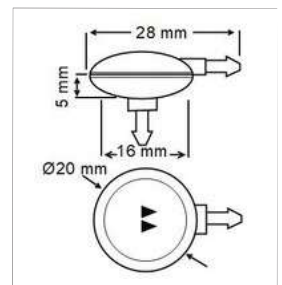
#### Antibiotic Impregnated Pediatric Decurve Shunt



#### Adult Decurve Shunt



#### Antibiotic Impregnated Adult Decurve Shunt



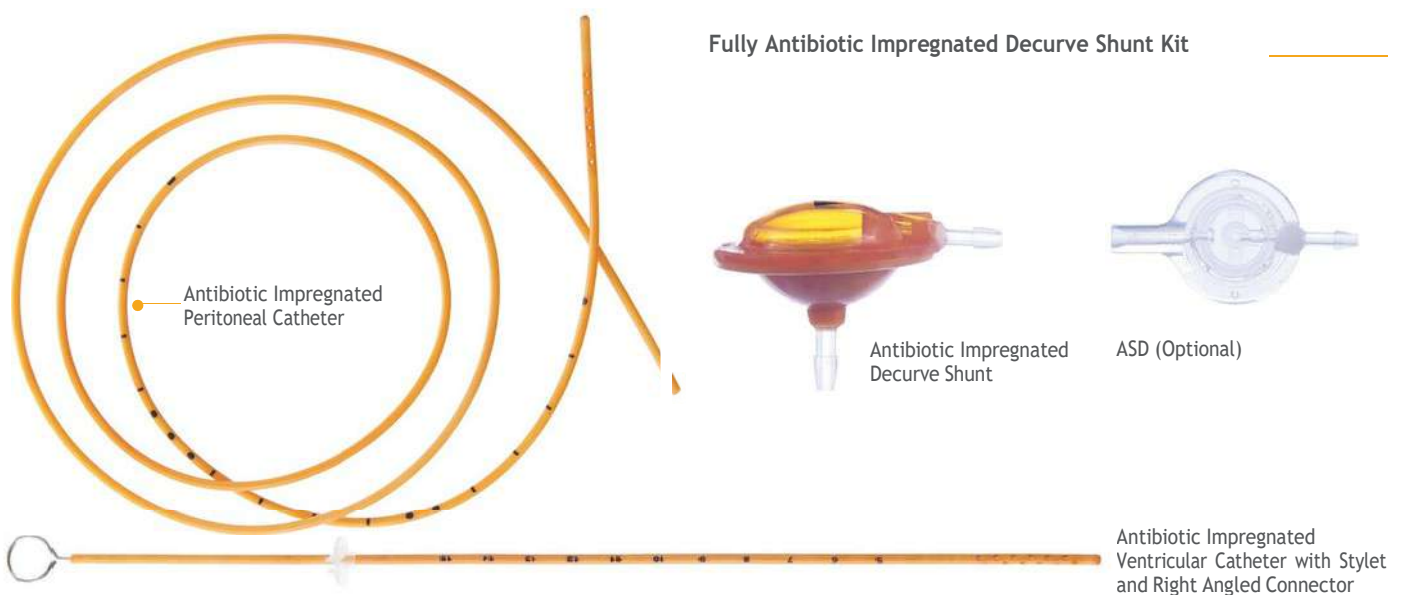
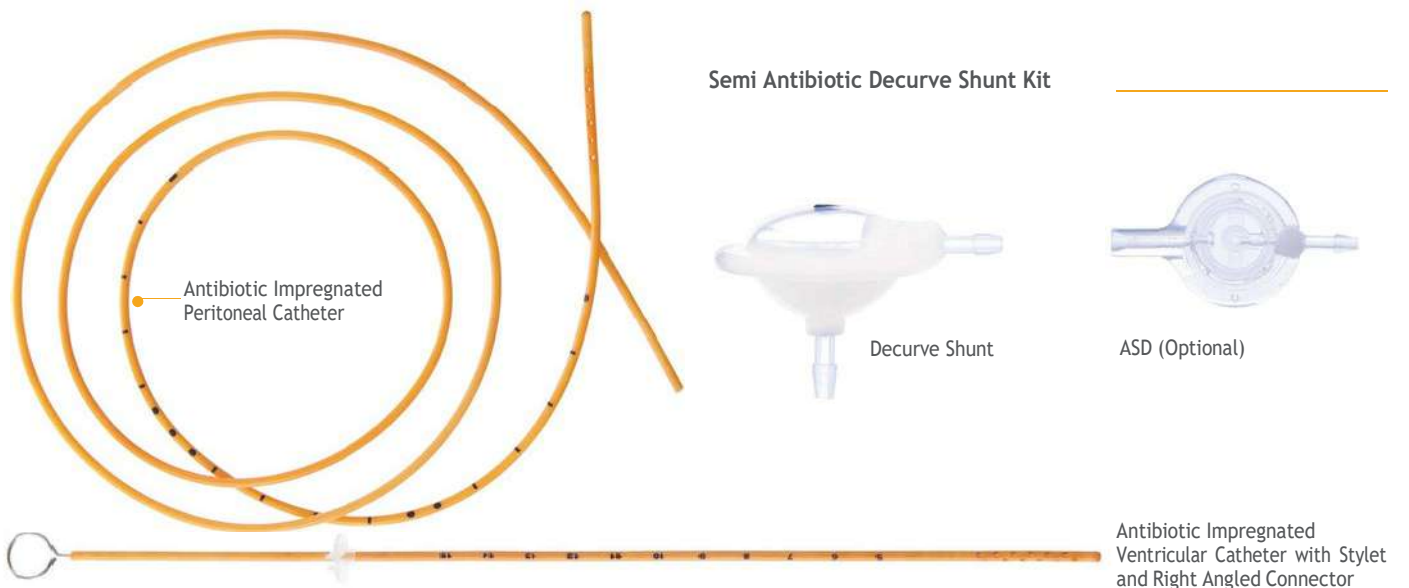
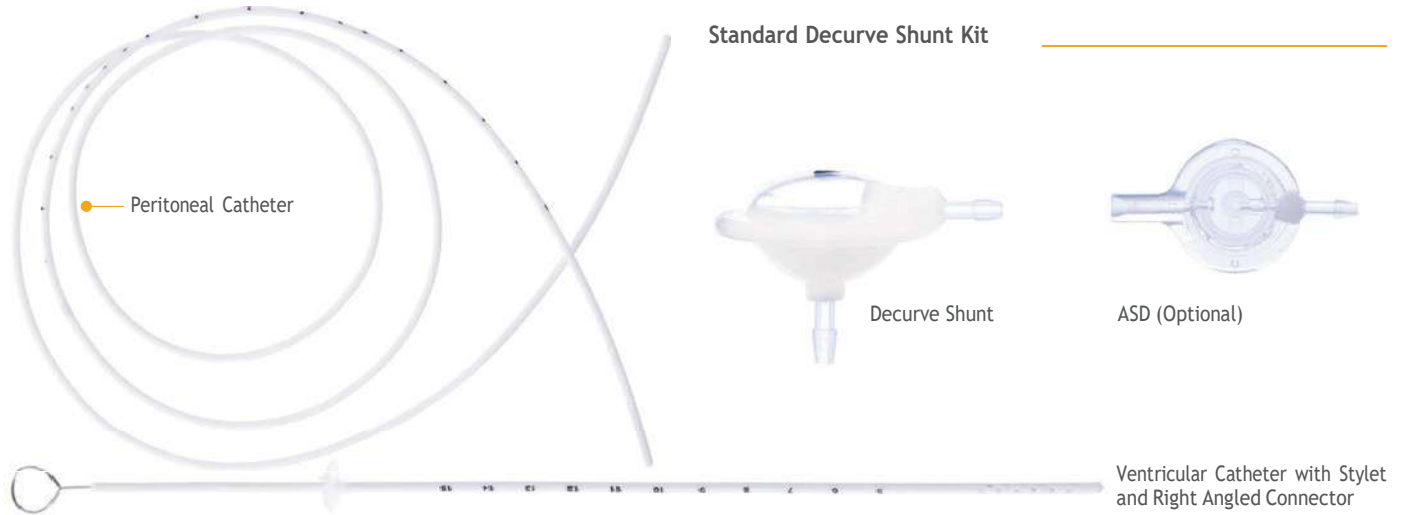


# Decurve Shunts

## Silicone Burr-Hole Shunt Kits

Pediatric and Adult sizes are available as valve and shunt kit.

Decurve Shunt Kit included with; Decurve Valve, Ventricular Catheter, Peritoneal Catheter, Stylet, Right Angled Connector, ASD (Optional)



## Depus Shunts

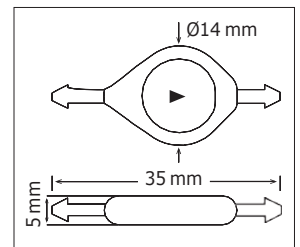
The mechanism inside the shunt is triggered by positive ventricular pressure and the valve opens automatically. The ruby ball and titanium spring parts in the system are the main components of this system, which works with the hydrodynamic leverage method.



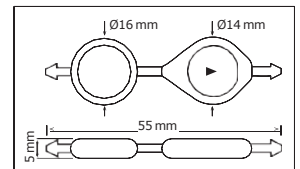
Depus Shunt



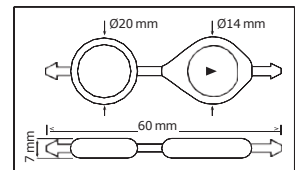
Adjustable Depus Shunt



### Depus Shunt with Flat-Bottom Reservoir

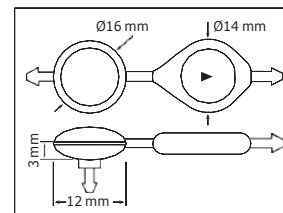


Pediatric

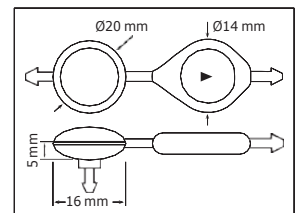


Adult

### Depus Shunt with Burr-Hole Reservoir



Pediatric



Adult

# Depus Shunts

## Ventriculoperitoneal Shunt Kits

Valve size is suitable for pediatric and adult patients. Valve and shunt kit options are available.

Depus Shunt Kit included with; Depus Valve, Ventricular Catheter, Peritoneal Catheter, Stylet, Right Angled Connector, ASD (Optional), Reservoir (Optional).

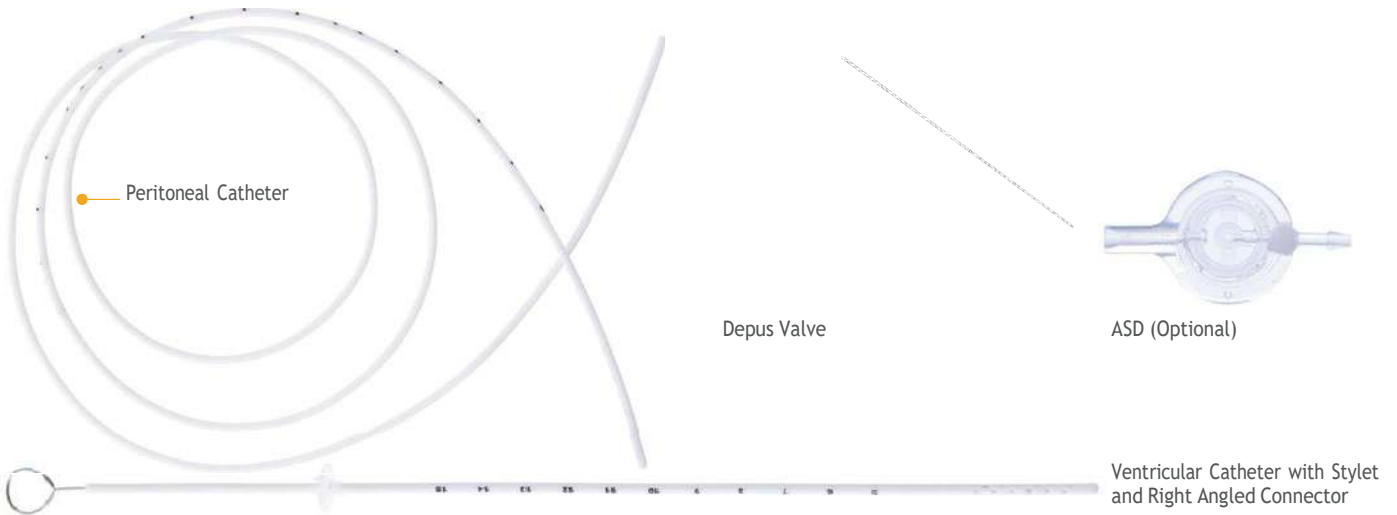


Depus Shunt with Burr-Hole Reservoir



Depus Shunt with Flat-Bottom Reservoir

### Standard Depus Shunt Kit



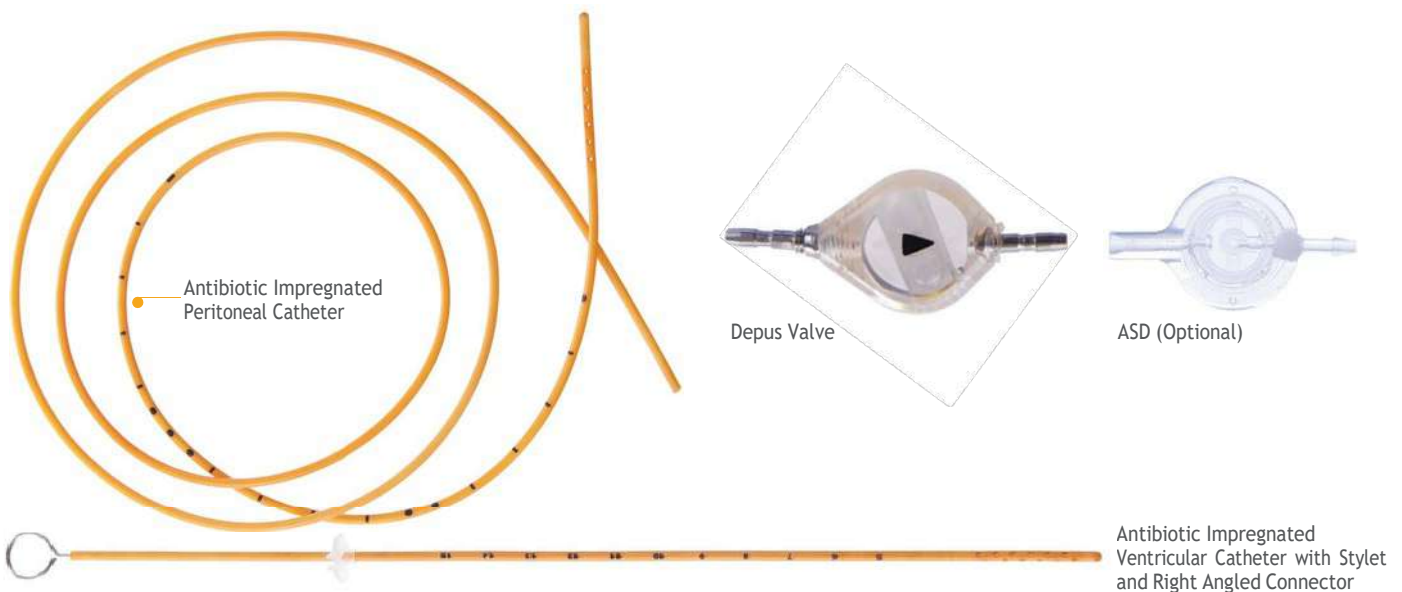
Peritoneal Catheter

Depus Valve

ASD (Optional)

Ventricular Catheter with Stylet and Right Angled Connector

### Semi Antibiotic Depus Shunt Kit



Antibiotic Impregnated Peritoneal Catheter

Depus Valve

ASD (Optional)

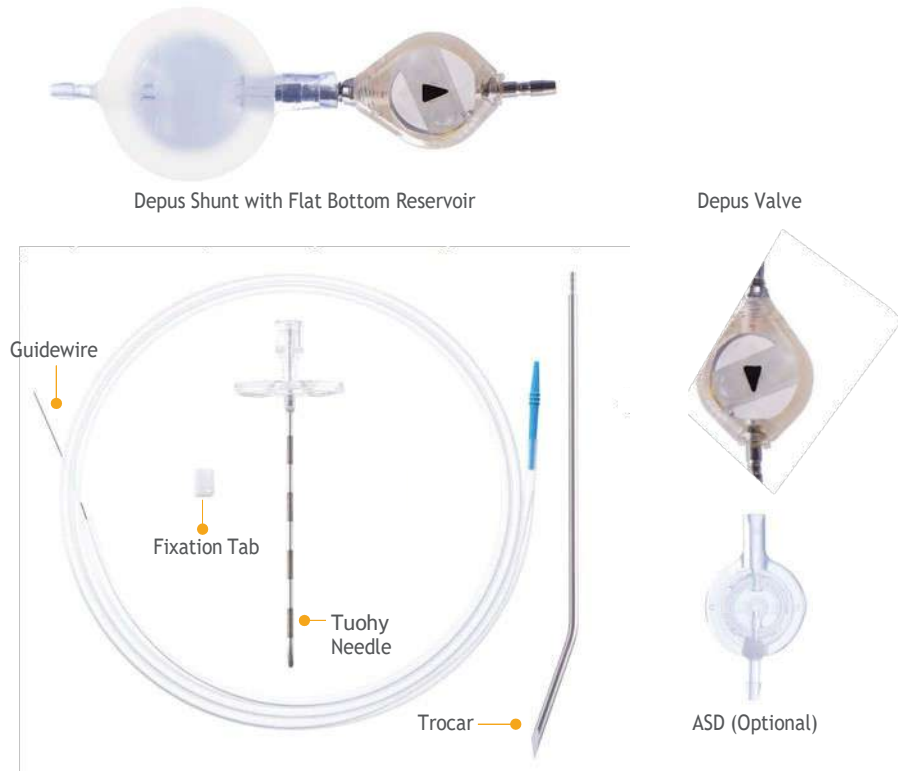
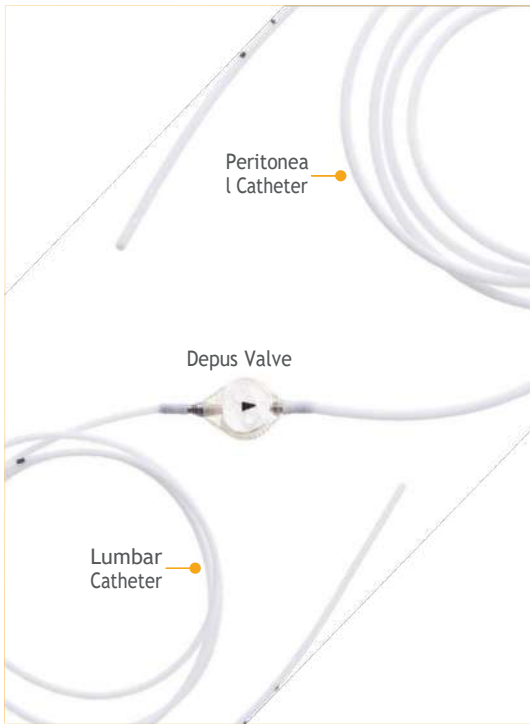
Antibiotic Impregnated Ventricular Catheter with Stylet and Right Angled Connector

# Depus Shunts

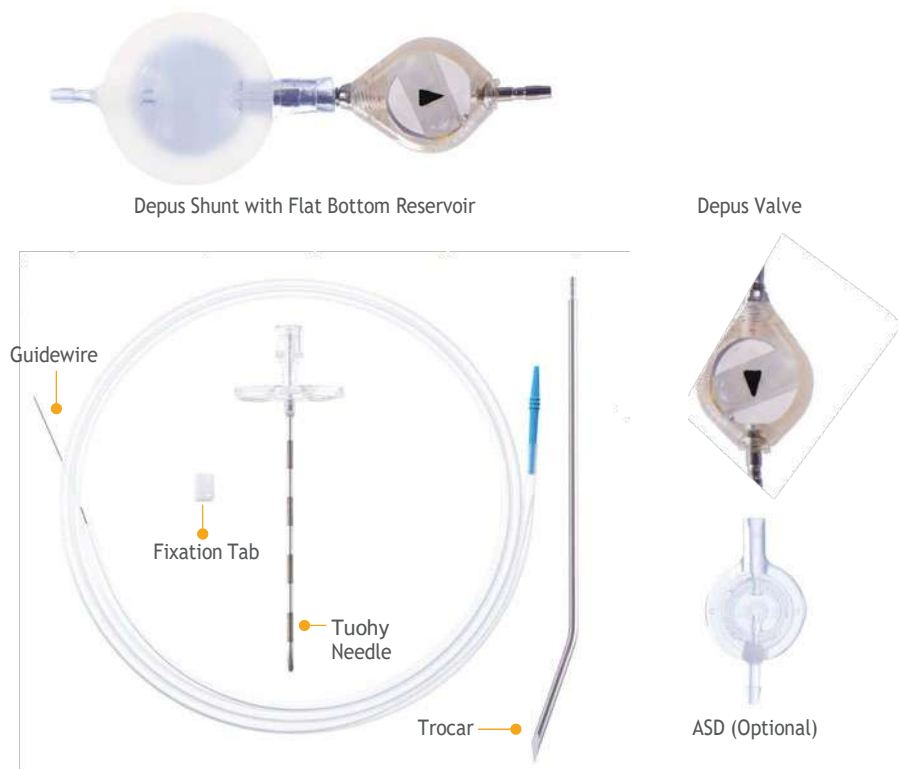
## Lumboperitoneal Shunt Kits

The valve size is suitable to use in both pediatric and adult patients.  
 Depus Shunt Kit included with; Depus Valve, Lumbar Catheter, Peritoneal Catheter, 14 G Tuohy Needle, 0,018" Guidewire, ASD (Optional), Reservoir (Optional).

### Standard Depus Shunt Kit



### Semi Antibiotic Depus Shunt Kit





# Depus Shunts

## Adjustable Ventriculoperitoneal Shunt Kits

The valve size is suitable to use in pediatric and adults. There are four different silicone reservoirs with Depus Adjustable Shunt; Adult Flat-Bottom, Pediatric Flat-Bottom, Adult Burr-Hole and Pediatric Burr-Hole. Standard and semi-antibiotic kit options are available. Depus VP Adjustable Shunt Kit Included With; Depus Valve, Ventricular Catheter, Peritoneal Catheter, Stylet, Right Angled Connector, Silicone Reservoir, ASD (Optional).

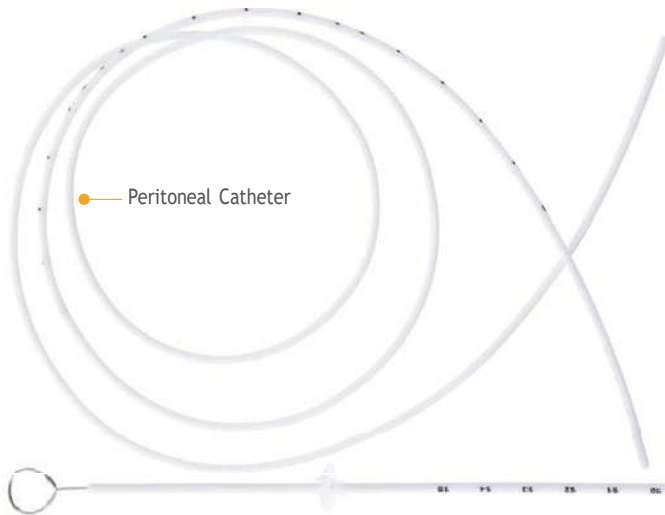


Adjustable Depus Shunt with Burr-Hole Reservoir



Adjustable Depus Shunt with Flat-Bottom Reservoir

### Standard Depus Shunt Kit



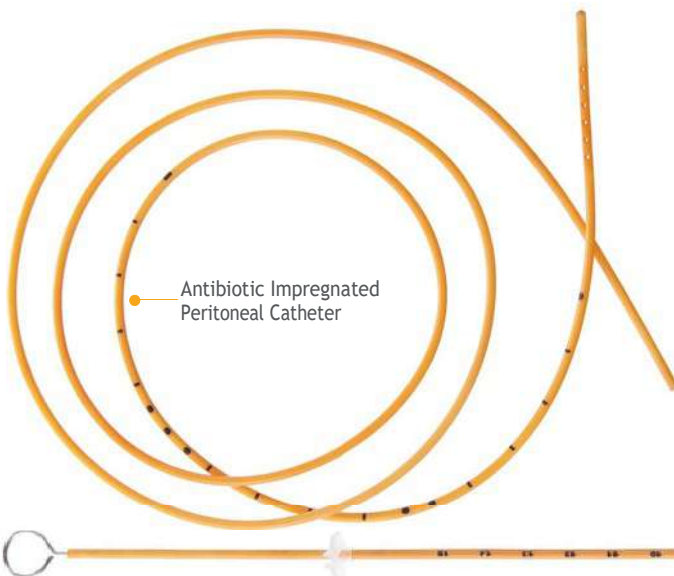
Adjustable Depus Valve



ASD (Optional)

Ventricular Catheter with Stylet and Right Angled Connector

### Semi Antibiotic Depus Shunt Kit



Adjustable Depus Valve



ASD (Optional)

Antibiotic Impregnated Ventricular Catheter with Stylet and Right Angled Connector

## Depus Adjustment Kit

Adjustment Kit is used to adjust the pressure of Adjustable Depus Shunts to different pressure levels, low, medium or high.



**Magnet**  
Adjusts the proper pressure levels

**Compass**  
Pressure monitoring

**Adjustable Depus Shunt**

**Locator**  
Determines the target directions of pressure levels



**Adjustment Kit**  
Packaged in a non-sterile and reusable box

Reference Code	Order Code
----------------	------------

DP-A-ADJKIT	D-1001
-------------	--------

# P R O D U C T   R E F E R E N C E S

Reference Code	Product Description	Order Code	Page
ASD	Antisiphone Device	D-1002	4
DCA-H	Decurve Adult HP Shunt	D-1003	5
DCA-H-VACK	Decurve Adult HP AI VP Cat Shunt Kit	D-1004	6
DCA-H-VACK-ASD	Decurve Adult HP AI VP Cat ASD Shunt Kit	D-1005	6
DCA-H-VCK	Decurve Adult HP VP Cat Shunt Kit	D-1006	6
DCA-H-VCK-ASD	Decurve Adult HP VP Cat ASD Shunt Kit	D-1007	6
DCA-L	Decurve Adult LowP Shunt	D-1008	5
DCA-L-VACK	Decurve Adult LowP AI VP Cat Shunt Kit	D-1009	6
DCA-L-VACK-ASD	Decurve Adult LowP AI VP Cat ASD Shunt Kit	D-1010	6
DCA-L-VCK	Decurve Adult LowP VP Cat Shunt Kit	D-1011	6
DCA-L-VCK-ASD	Decurve Adult LowP VP Cat ASD Shunt Kit	D-1012	6
DCA-M	Decurve Adult MP Shunt	D-1013	5
DCA-M-VACK	Decurve Adult LowP AI VP Cat Shunt Kit	D-1014	6
DCA-M-VACK-ASD	Decurve Adult LowP AI VP Cat ASD Shunt Kit	D-1015	6
DCA-M-VCK	Decurve Adult LowP VP Cat Shunt Kit	D-1016	6
DCA-M-VCK-ASD	Decurve Adult LowP VP Cat ASD Shunt Kit	D-1017	6
DCA-M-VCK-F	Decurve Adult LowP VP Cat Shunt Kit	D-1018	6
DCP-H	Decurve Pediatric HP Shunt	D-1019	5
DCP-H-VACK	Decurve Pediatric HP AI VP Cat Shunt Kit	D-1020	6
DCP-H-VACK-ASD	Decurve Pediatric HP AI VP Cat ASD Shunt Kit	D-1021	6
DCP-H-VCK	Decurve Pediatric HP VP Cat Shunt Kit	D-1022	6
DCP-H-VCK-ASD	Decurve Pediatric HP VP Cat ASD Shunt Kit	D-1023	6
DCP-L	Decurve Pediatric LowP Shunt	D-1024	5
DCP-L-VACK	Decurve Pediatric LowP AI VP Cat Shunt Kit	D-1025	6
DCP-L-VACK-ASD	Decurve Pediatric LowP AI VP Cat ASD Shunt Kit	D-1026	6
DCP-L-VCK	Decurve Pediatric LowP VP Cat Shunt Kit	D-1027	6
DCP-L-VCK-ASD	Decurve Pediatric LowP VP Cat ASD Shunt Kit	D-1028	6
DCP-M	Decurve Pediatric MP Shunt	D-1029	5
DCP-M-VACK	Decurve Pediatric MP AI VP Cat Shunt Kit	D-1030	6
DCP-M-VACK-ASD	Decurve Pediatric MP AI VP Cat ASD Shunt Kit	D-1031	6
DCP-M-VCK	Decurve Pediatric MP VP Cat Shunt Kit	D-1032	6
DCP-M-VCK-ASD	Decurve Pediatric MP VP Cat ASD Shunt Kit	D-1033	6
DCP-M-VCK-F	Decurve Pediatric MP VP Cat Shunt Kit	D-1034	6
DFR-H-PEB	Defit Adult HP Shunt	D-1035	3
DFR-H-VACK-PEB	Defit Adult HP AI VP Cat Shunt Kit	D-1036	4
DFR-H-VACK-PEB-A	Defit Adult HP AI VP Cat ASD Shunt Kit	D-1037	4
DFR-H-VACK-PEB-R	Defit Adult HP AI VP Cat Shunt Kit -R	D-1038	4
DFR-H-VCK-PEB	Defit Adult HP VP Cat Shunt Kit	D-1039	4
DFR-H-VCK-PEB-A	Defit Adult HP VP Cat ASD Shunt Kit	D-1040	4
DFR-L-PEB	Defit Adult LowP Shunt	D-1041	3
DFR-L-VACK-PEB	Defit Adult LowP AI VP Cat Shunt Kit	D-1042	4
DFR-L-VACK-PEB-A	Defit Adult LowP AI VP Cat ASD Shunt Kit	D-1043	4
DFR-L-VCK-PEB	Defit Adult LowP VP Cat Shunt Kit	D-1044	4
DFR-L-VCK-PEB-AS	Defit Adult LowP VP Cat ASD Shunt Kit	D-1045	4
DFR-M-PEB	Defit Adult MP Shunt	D-1046	3
DFR-M-VACK-PEB	Defit Adult MP AI VP Cat Shunt Kit	D-1047	4
DFR-M-VACK-PEB-A	Defit Adult MP AI VP Cat ASD Shunt Kit	D-1048	4
DFR-M-VCK-PEB	Defit Adult MP VP Cat Shunt Kit	D-1049	4
DFR-M-VCK-PEB-A	Defit Adult MP VP Cat ASD Shunt Kit	D-1050	4
DFR-M-VCK-PEB-R	Defit Adult MP VP Cat Shunt Kit -R	D-1051	4
DFS-H-PEB	Defit Small HP Shunt	D-1052	3
DFS-H-VACK-P-A	Defit Small HP AI VP Cat ASD Shunt Ki	D-1053	4
DFS-H-VACK-PEB	Defit Small HP AI VP Cat Shunt Kit	D-1054	4
DFS-H-VCK-PE-A	Defit Small HP VP Cat ASD Shunt Kit	D-1055	4
DFS-H-VCK-PEB	Defit Small HP VP Cat Shunt Kit	D-1056	4
DFS-L-PEB	Defit Small LowP Shunt	D-1057	3
DFS-L-VACK-P-A	Defit Small LowP AI VP Cat ASD Shunt Kit	D-1058	4
DFS-L-VACK-PEB	Defit Small LowP AI VP Cat Shunt Kit	D-1059	4
DFS-L-VCK	Defit Small LowP VP Cat Shunt Kit	D-1060	4
DFS-L-VCK-PE-A	Defit Small LowP VP Cat ASD Shunt Kit	D-1061	4
DFS-L-VCK-PEB	Defit Small LowP VP Cat Shunt Kit	D-1062	4
DFS-M-PEB	Defit Small MP Shunt	D-1063	3
DFS-M-VACK-P-A	Defit Small MP AI VP Cat ASD Shunt Kit	D-1064	4
DFS-M-VACK-PEB	Defit Small MP AI VP Cat Shunt Kit	D-1065	4
DFS-M-VCK	Defit Small MP VP Cat Shunt Kit	D-1066	4
DFS-M-VCK-PE-A	Defit Small MP VP Cat ASD Shunt Kit	D-1067	4

# PRODUCT REFERENCES

Reference Code	Product Description	Order Code	Page
DFS-M-VCK-PEB	Defit Small MP VP Cat Shunt Kit	D-1068	4
DFS-M-VCK-PEB-R	Defit Small MP VP Cat Shunt Kit -R	D-1069	4
DFUS-H-PEB	Defit Ultra Small HP Shunt	D-1070	3
DFUS-H-VAC-P-A	Defit Ultra Small HP AI VP Cat ASD Shunt Kit	D-1071	4
DFUS-H-VACK-PE	Defit Ultra Small HP AI VP Cat Shunt Kit	D-1072	4
DFUS-H-VCK-P-A	Defit Ultra Small HP VP Cat ASD Shunt Kit	D-1073	4
DFUS-H-VCK-PEB	Defit Ultra Small HP VP Cat Shunt Kit	D-1074	4
DFUS-L-PEB	Defit Ultra Small LowP Shunt	D-1075	3
DFUS-L-VAC-P-A	Defit Ultra Small LowP AI VP Cat ASD Shunt Kit	D-1076	4
DFUS-L-VACK-PE	Defit Ultra Small LowP AI VP Cat Shunt Kit	D-1077	4
DFUS-L-VCK-P-A	Defit Ultra Small LowP VP Cat ASD Shunt Kit	D-1078	4
DFUS-L-VCK-PEB	Defit Ultra Small LowP VP Cat Shunt Kit	D-1079	4
DFUS-M-PEB	Defit Ultra Small MP Shunt	D-1080	3
DFUS-M-VAC-P-A	Defit Ultra Small MP AI VP Cat ASD Shunt Kit	D-1081	4
DFUS-M-VACK-PE	Defit Ultra Small MP AI VP Cat Shunt Kit	D-1082	4
DFUS-M-VCK-P-A	Defit Ultra Small MP VP Cat ASD Shunt Kit	D-1083	4
DFUS-M-VCK-PEB	Defit Ultra Small MP VP Cat Shunt Kit	D-1084	4
DFUS-M-VCK-PEB-R	Defit Ultra Small MP VP Cat Shunt Kit -R	D-1085	4
DP-H	Depus HP Shunt	D-1086	7
DP-H-VACK	Depus HP AI VP Cat Shunt Kit	D-1087	8
DP-H-VCK	Depus HP VP Cat Shunt Kit	D-1088	8
DP-L	Depus LowP Shunt	D-1089	7
DP-L-VCK	Depus LowP VP Cat Shunt Kit	D-1090	8
DP-M	Depus MP Shunt	D-1091	7
DP-M-VACK	Depus MP AI VP Cat Shunt Kit	D-1092	8
DP-M-VCK	Depus MP VP Cat Shunt Kit	D-1093	8
LPDP-H-LPCK	Depus LP Shunt Lomb Cat Kit Tit Konek HP	D-1094	9
LPDP-H-LTCK	DEPUS LP Shunt Lomb Cat Kit Tit Konek HP	D-1095	9
LPDP-L-LPCK	DEPUS LP LowP Shunt Lomb Cat Kit Tit Konek DB	D-1096	9
LPDP-L-LTCK	DEPUS LP LowP Shunt Lomb Cat Kit Tit Konek DB	D-1097	9
LPDP-M-LPCK	DEPUS LP Shunt Lomb Cat Kit Tit Konek MP	D-1098	9
LPDP-M-LTACK	DEPUS LP Shunt AI Lomb Cat Kit Tit Konek MP	D-1099	9
LPDP-M-LTCK	DEPUS LP Shunt Lomb Cat Kit Tit Konek MP	D-1100	9

1

AI: Antibiotic Impregnated

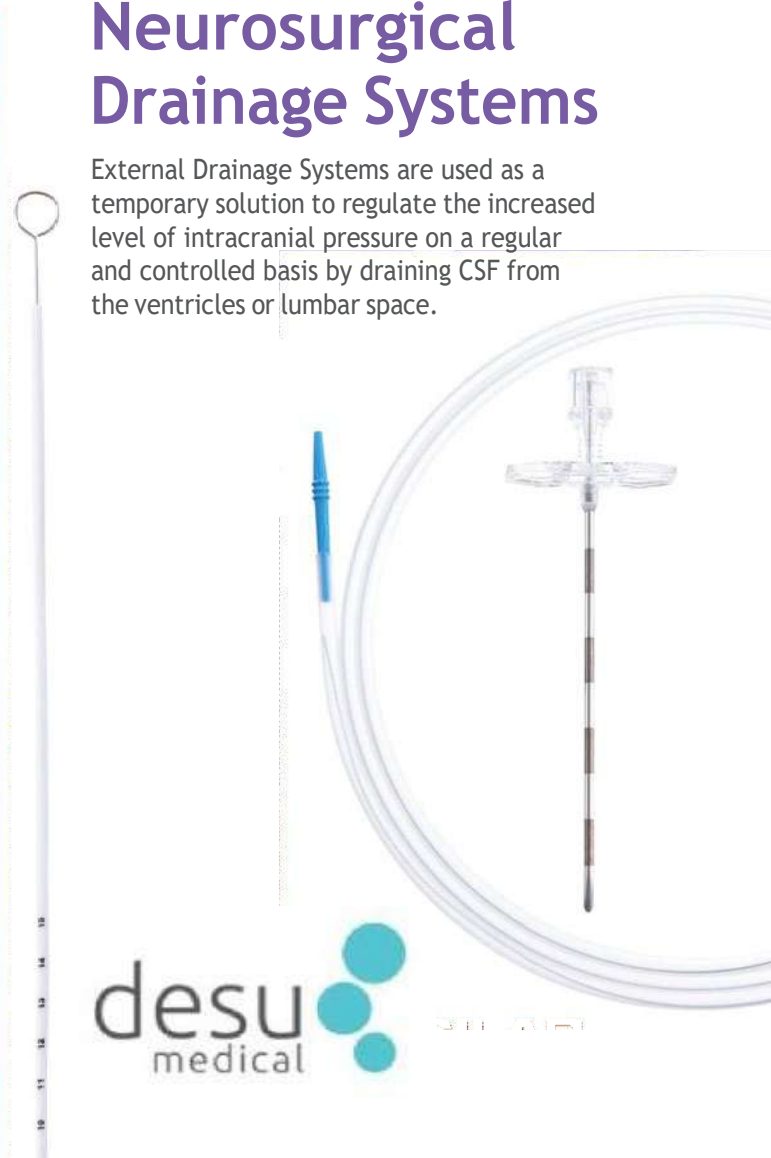
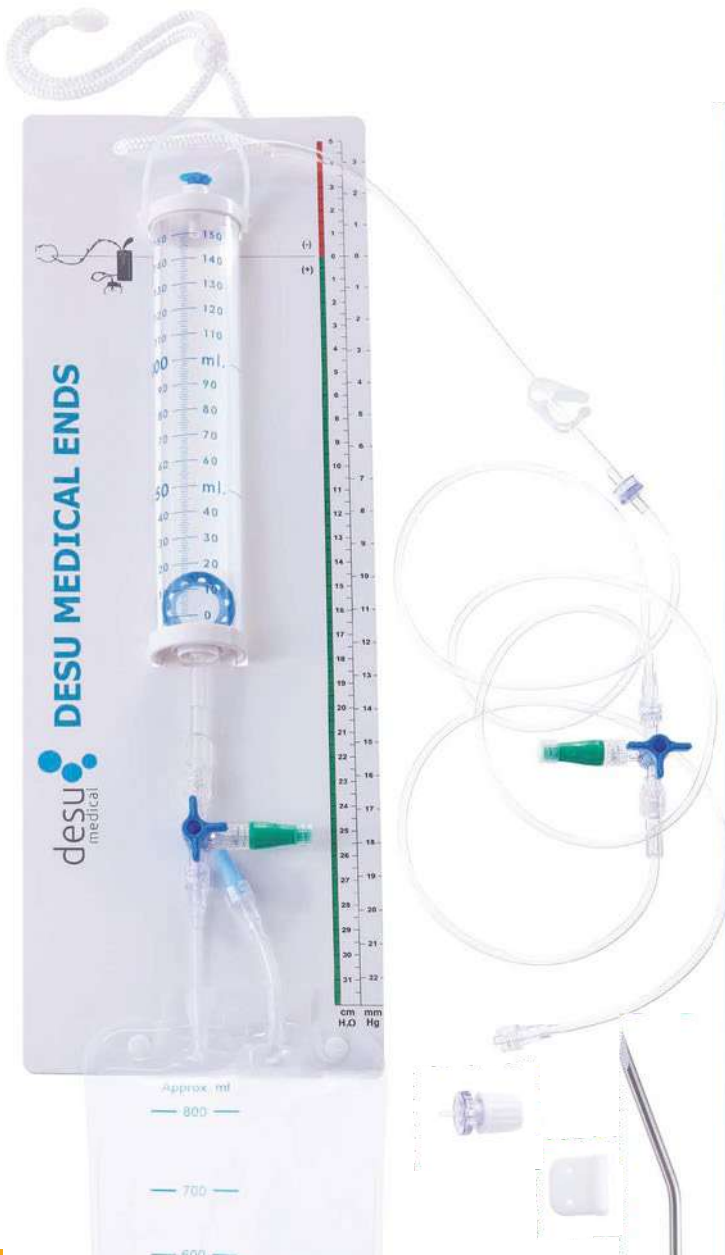
You can contact us to get information about the reference codes of the products on page 10.





## Neurosurgical Drainage Systems

External Drainage Systems are used as a temporary solution to regulate the increased level of intracranial pressure on a regular and controlled basis by draining CSF from the ventricles or lumbar space.



# External Ventricular Drainage System

With Ventricular Catheter

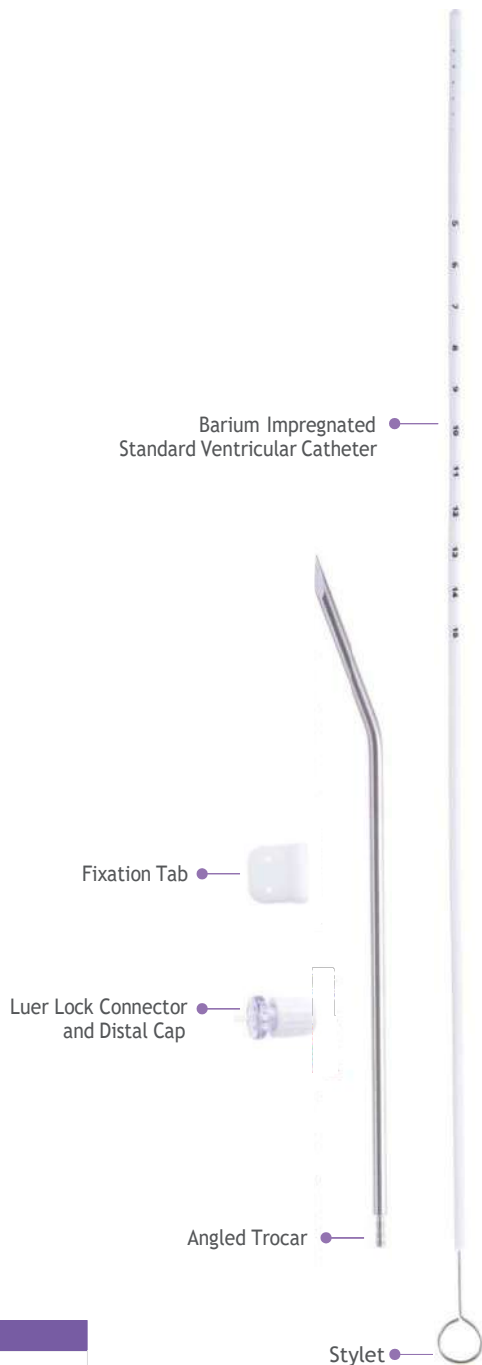
Barium Impregnated External Ventricular Drainage Catheter and Drainage System are combined to each other. System included with;

**Barium Impregnated Standard Ventricular Catheter (ID 1,5 mm, OD 3,0 mm, L 31 cm) with;**

- Stylet
- Fixation tab
- Luer Lock Connector and Distal Cap
- Angled Trocar

**Drainage System with;**

- 60 cm Reinforced Cord with Locking Mechanism
- 30 cm Measuring Chart to adjust the CSF pressure (mmHg / cmHO)
- 150 ml Drip Chamber
- 800 ml Drainage Bag with Air Filter
- Three Way Connector (x2)
- Hydrophobic Filter



Reference Code  
ENDS-C-010

# External Ventricular Drainage System

## With Antibiotic Impregnated Ventricular Catheter

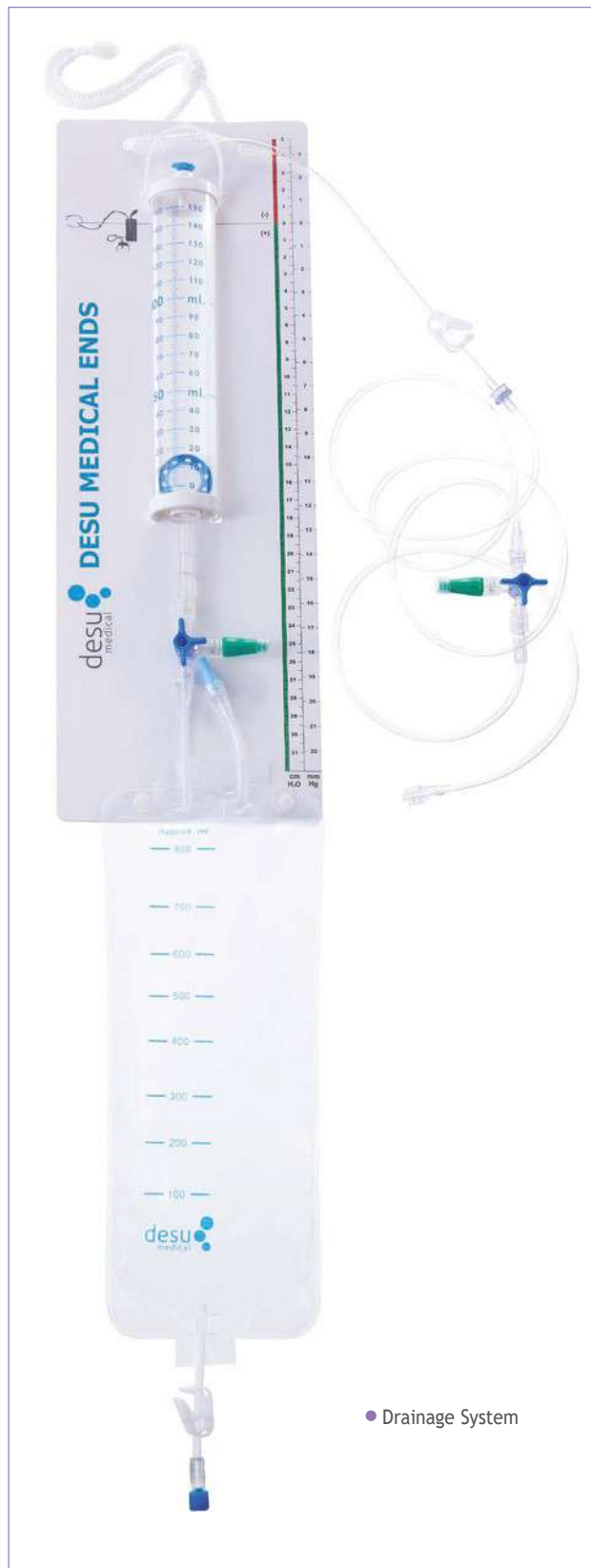
Antibiotic Impregnated External Ventricular Drainage Catheter and Drainage System are combined to each other. System included with;

**Antibiotic Impregnated Ventricular Catheter (ID 1,5 mm, OD 3,0 mm, L 31 cm) with;**

- Stylet
- Fixation tab
- Luer Lock Connector and Distal Cap
- Angled Trocar

**Drainage System with;**

- 60 cm Reinforced Cord with Locking Mechanism
- 30 cm Measuring Chart to adjust the CSF pressure (mmHg / cmHO)
- 150 ml Drip Chamber
- 800 ml Drainage Bag with Air Filter
- Three Way Connector (x2)
- Hydrophobic Filter



Reference Code

ENDS-AC-010

# External Lumbar Drainage System

## With Lumbar Catheter

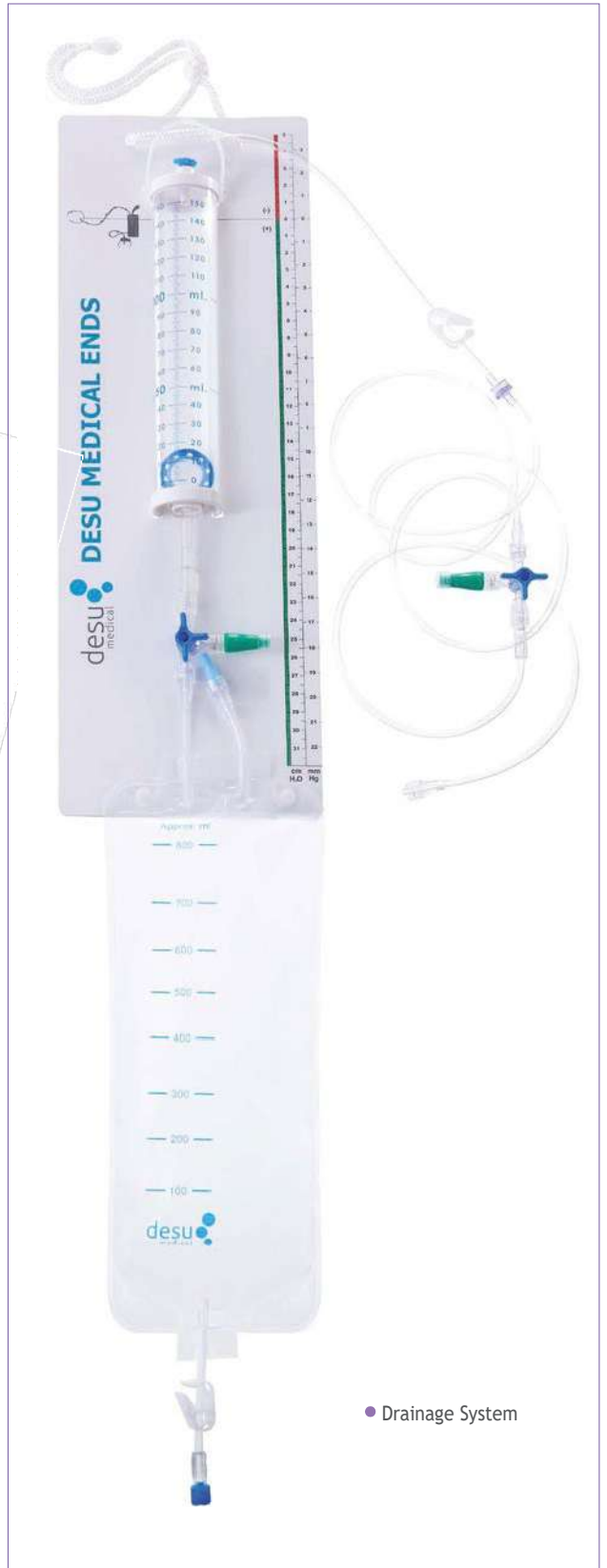
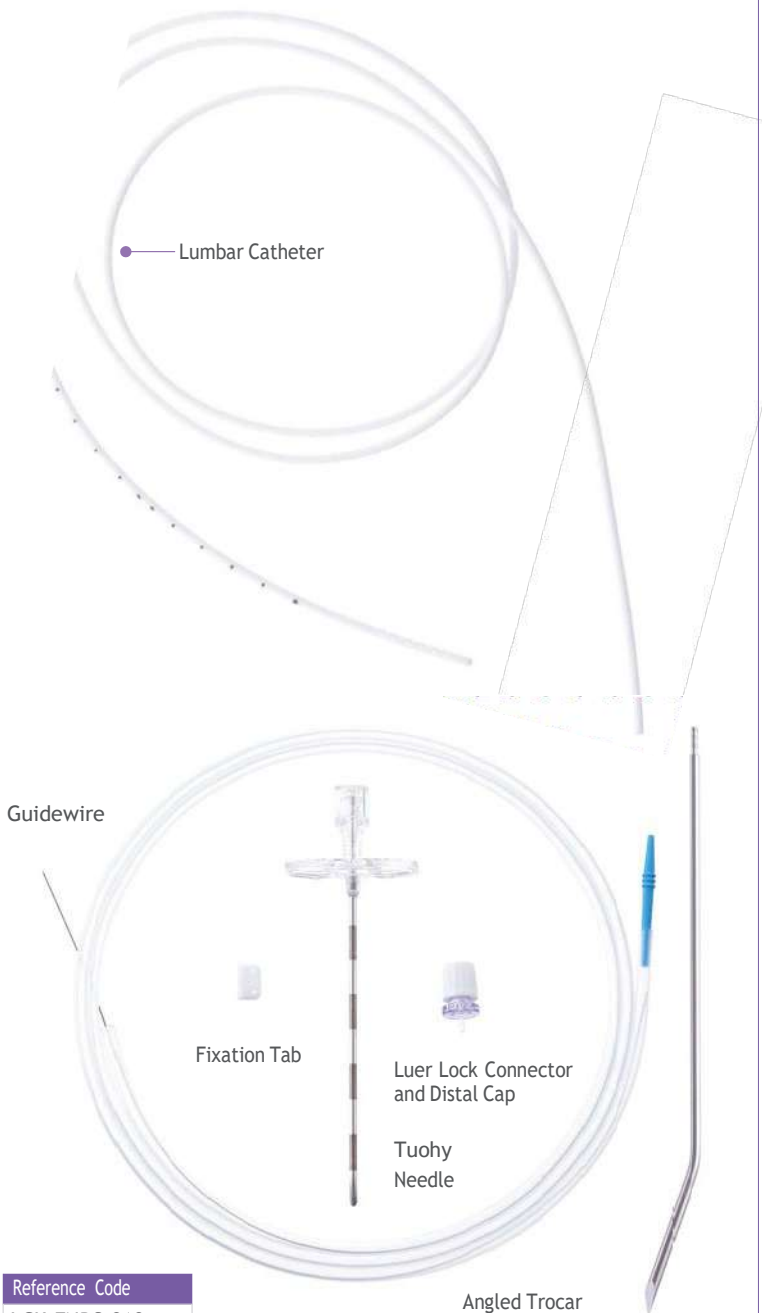
Barium Impregnated External Lumbar Drainage Catheter and Drainage System are combined to each other. System included with;

**Barium Impregnated Lumbar Catheter (ID 0,8 mm, OD 1,6 mm, L 80 cm) with;**

- Fixation Tab
- Luer Lock Connector
- Angled Trocar
- 14G Tuohy Needle
- Guidewire

**Drainage System with;**

- 60 cm Reinforced Cord with Locking Mechanism
- 30 cm Measuring Chart to adjust the CSF pressure (mmHg / cmHO)
- 150 ml Drip Chamber
- 800 ml Drainage Bag with Air Filter
- Three Way Connector (x2)
- Hydrophobic Filter



Reference Code  
LCK-ENDS-010



# External Lumbar Drainage System

## With Antibiotic Impregnated Lumbar Catheter

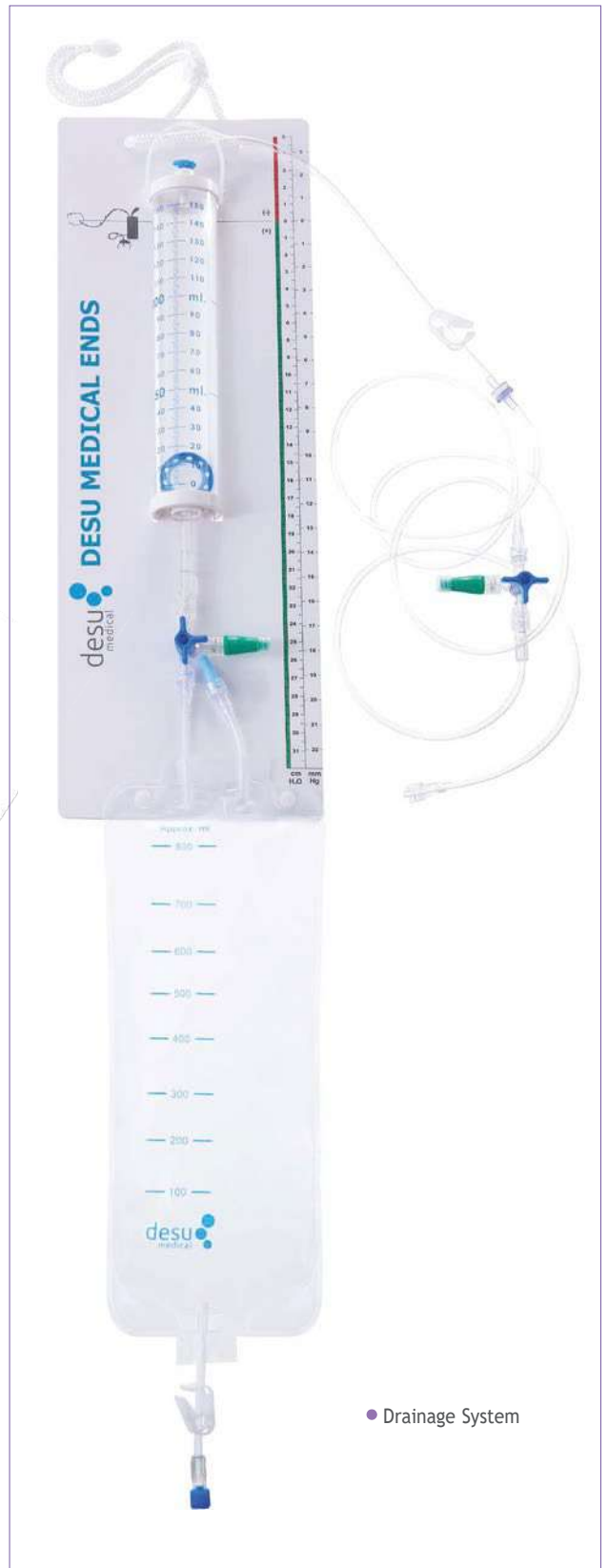
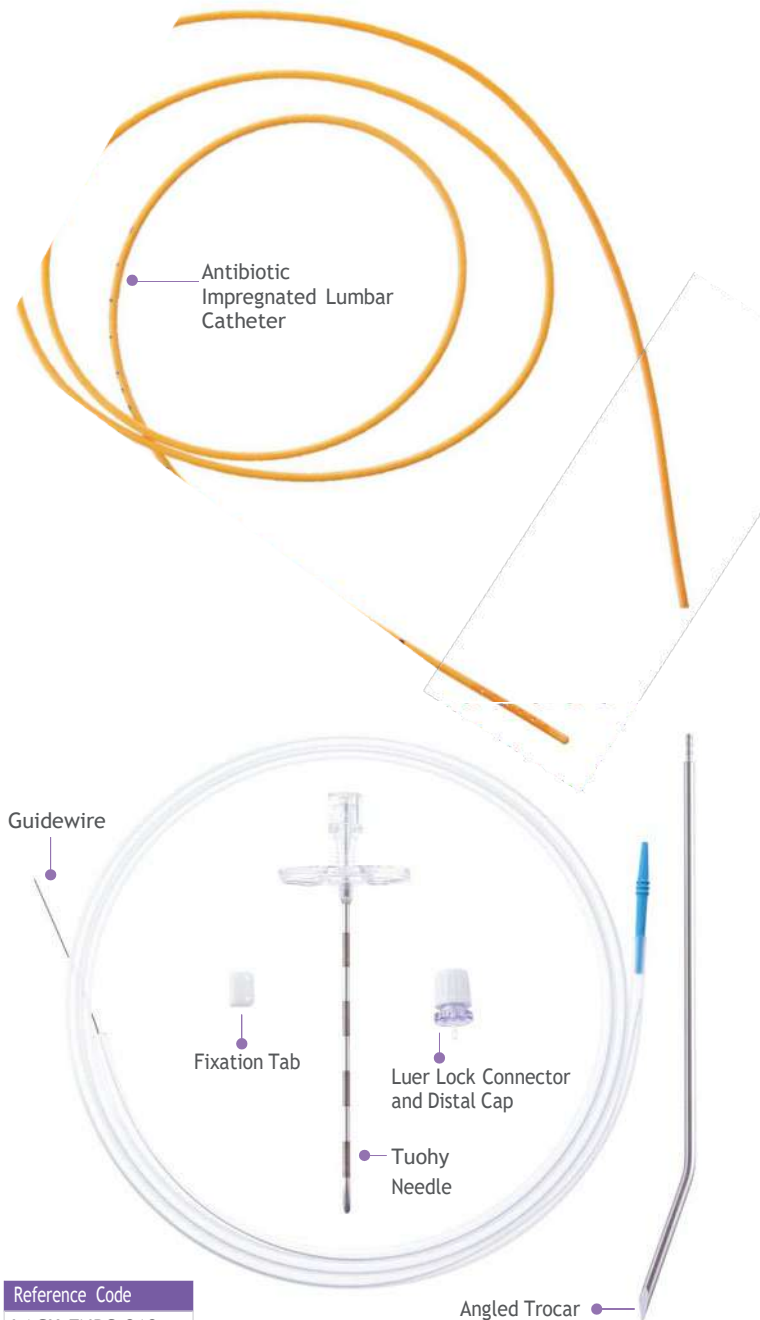
Antibiotic Impregnated External Lumbar Drainage Catheter and Drainage System are combined to each other. System included with;

**Antibiotic Impregnated Lumbar Catheter (ID 0,8 mm, OD 1,6 mm, L 80 cm) with;**

- Fixation Tab
- Luer Lock Connector
- Angled Trocar
- 14G Tuohy Needle
- Guidewire

**Drainage System with;**

- 60 cm Reinforced Cord with Locking Mechanism
- 30 cm Measuring Chart to adjust the CSF pressure (mmHg / cmHO)
- 150 ml Drip Chamber
- 800 ml Drainage Bag with Air Filter
- Three Way Connector (x2)
- Hydrophobic Filter



Reference Code  
LACK-ENDS-010

# PRODUCT REFERENCES

Reference Code	Product Description	Order Code	Page
ENDS-C-010	External Ventricular Drainage System with Ventricular Catheter	D-1101	1
ENDS-AC-010	External Ventricular Drainage System with AI Ventricular Catheter	D-1102	5
LCK-ENDS-010	External Lumbar Drainage System with Lumbar Catheter	D-1103	1
LACK-ENDS-010	External Lumbar Drainage System with AI Lumbar Catheter	D-1104	6

*AI: Antibiotic Impregnated*



## Neurosurgical Catheters

Catheter Systems are designed to be used with shunt or drainage systems for the controlled drainage of cerebrospinal fluid (CSF).



## Ventricular Catheter Kit

Catheters are made of barium silicon material. Tantalum length markings are located on the catheter in each centimeter from the 5th centimeter of the catheter to 15th. At the proximal end of the catheter, there are 6 drainage holes along 4 rows.

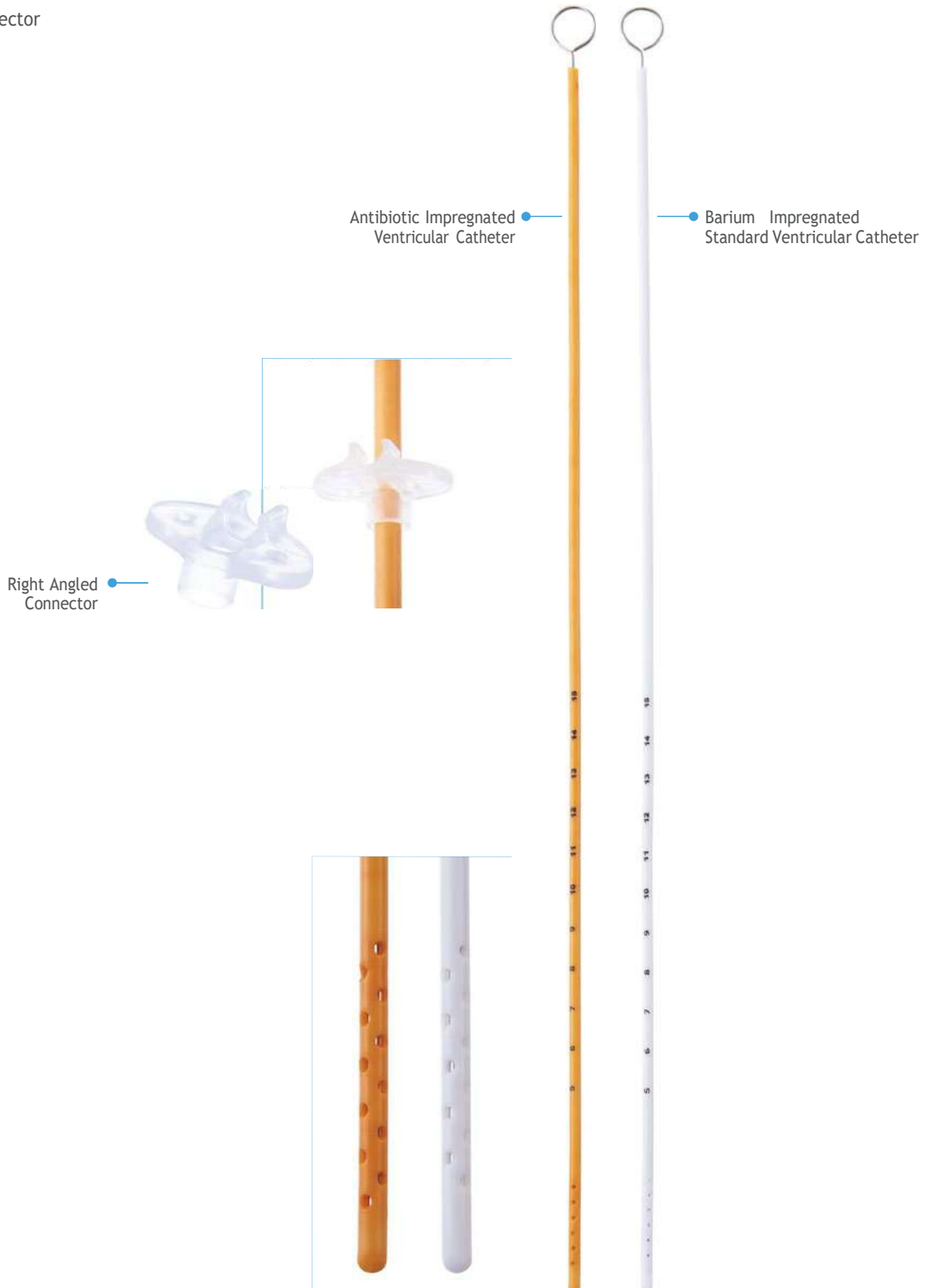
Ventricular Catheters are also available with an antibiotic-impregnated option. Clindamycin HCl and Rifampicin, which are impregnated on the catheters, are released in a controlled manner for 28 days.

Ventricular Catheter Kit included with;

Ventricular Catheter (ID:1,3 mm OD:2,5 mm L:23 cm)

• Stylet

• Right Angled Connector



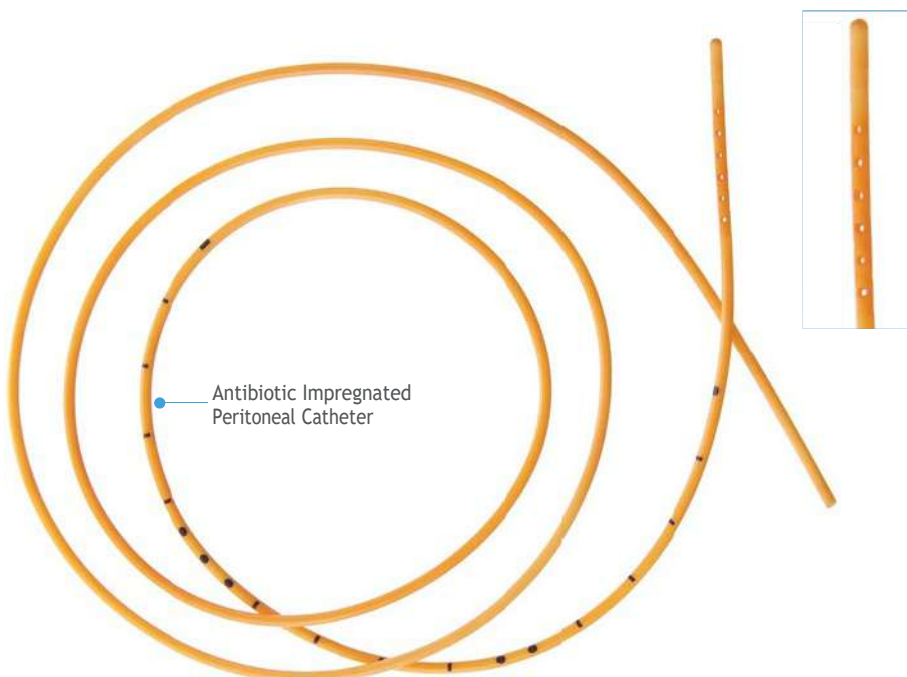


# Peritoneal Catheter Kit

Peritoneal Catheters are made of barium silicon material. Tantalum length markings are located on the catheter in each centimeter from the 5th centimeter of the catheter to 20th. At the proximal end of the catheter, there are 6 drainage holes along 4 rows.

Peritoneal Catheters are also available with an antibiotic-impregnated option. Clindamycin HCl and Rifampicin, which are impregnated on the catheters, are released in a controlled manner for 28 days.

**Peritoneal Catheter Kit included with;**  
● Peritoneal Catheter (ID:1,1 mm OD:2,5 mm L:120 cm)

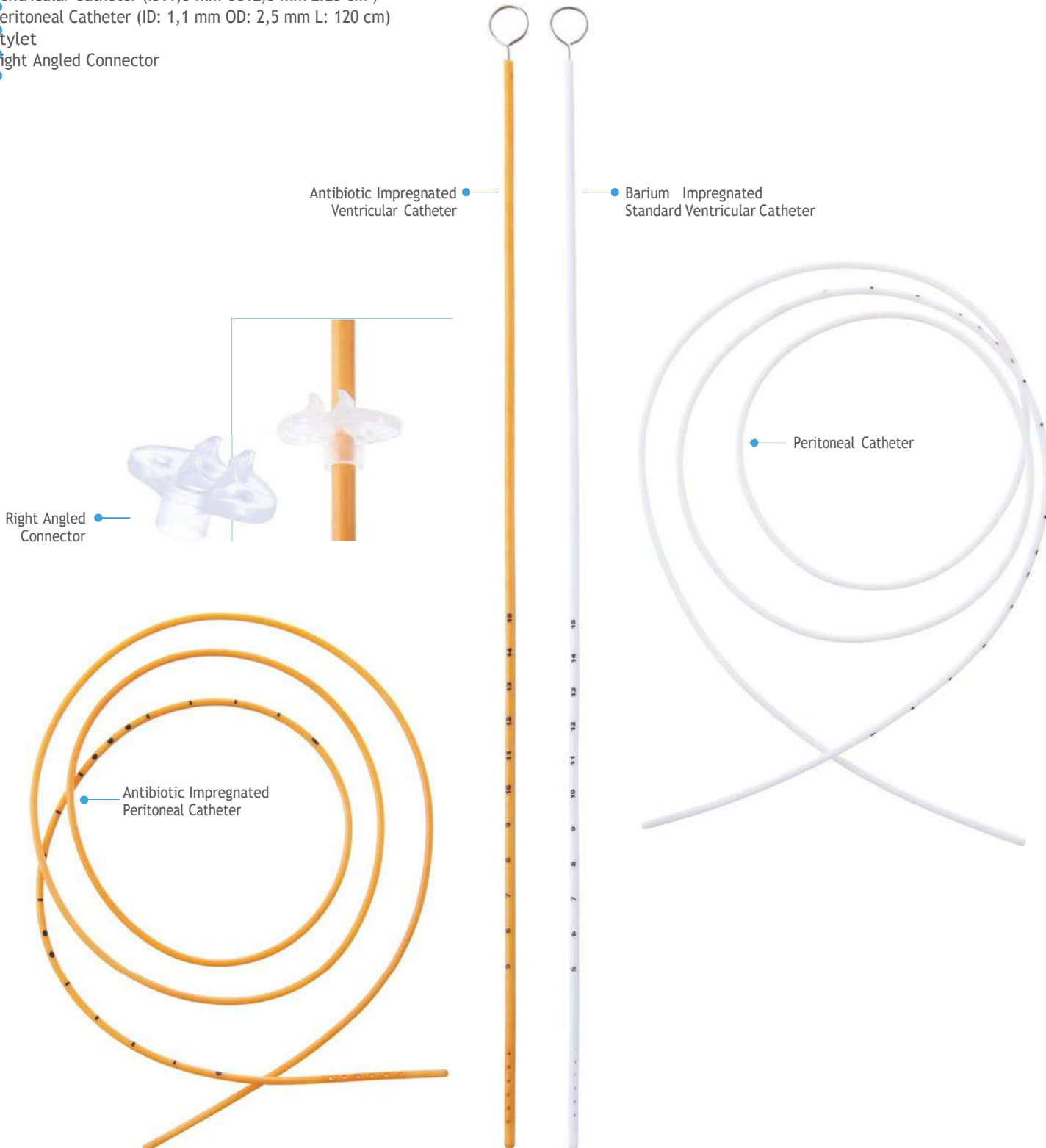


## Ventriculoperitoneal Catheter Kit

Ventriculoperitoneal Catheters are made of barium silicon material. Tantalum length markings are located on the Ventricular Catheter in each centimeter from the 5th centimeter of the catheter to 15th, on the Peritoneal Catheter in each centimeter from the 5th centimeter of the catheter to 20th. The 24 drainage holes are located at the proximal end of the catheter as 6 drainage holes along 4 rows.

Ventriculoperitoneal Catheters are also available with an antibiotic-impregnated option. Clindamycin HCl and Rifampicin, which are impregnated on the catheters, are released in a controlled manner for 28 days.

- Ventriculoperitoneal Catheter Kit included with;**  
 Ventricular Catheter (ID:1,3 mm OD:2,5 mm L:23 cm )  
 Peritoneal Catheter (ID: 1,1 mm OD: 2,5 mm L: 120 cm)  
 Stylet  
 Right Angled Connector



# Lumbar Catheter Kit

Lumbar catheters are made of barium silicon material. Tantalum length markings are located on the catheter in each centimeter from the 5th centimeter of the catheter to 20th. The 24 drainage holes are located at the proximal end of the catheter as 6 drainage holes along 4 rows.

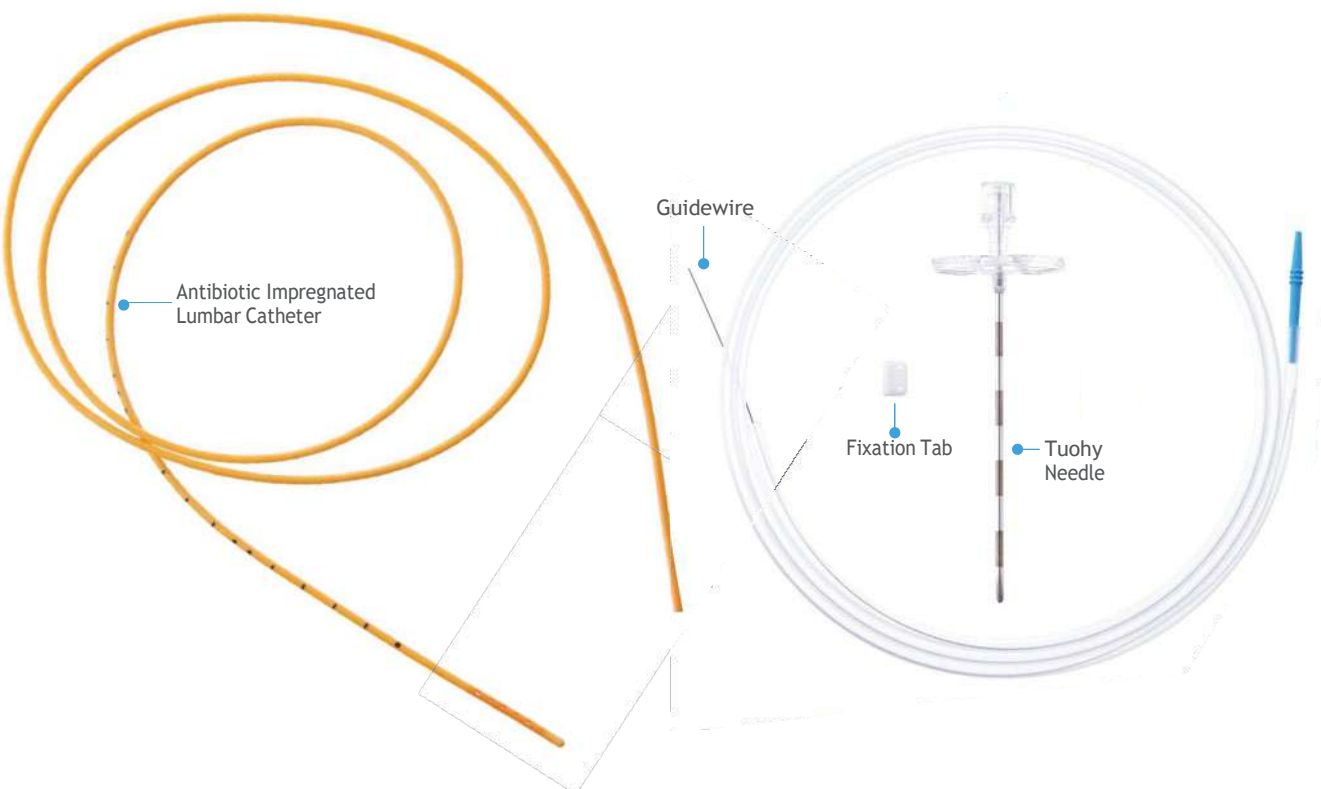
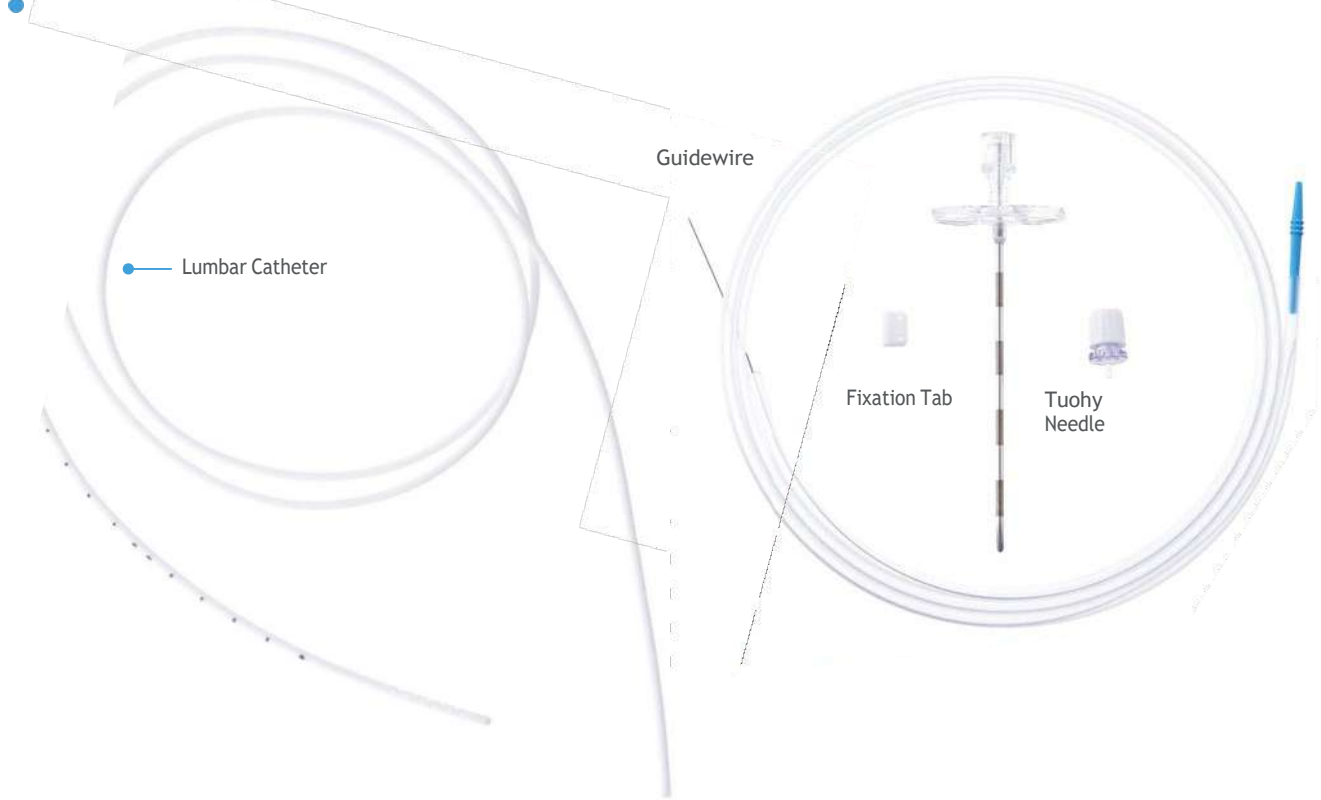
## Lumbar Catheter included with;

Lumbar Catheter (ID: 0,8 mm OD: 1,6 mm L: 100 cm)

14G Tuohy Needle

Guidewire

Fixation Tab



## Lumboperitoneal Catheter Kit

Lumboperitoneal Catheters are made of barium silicon material. Tantalum length markings are located on the Lumbar Catheter in each centimeter from the 5th centimeter of the catheter to 20th, on the Peritoneal Catheter in each centimeter from the 5th centimeter of the catheter to 20th. The 24 drainage holes are located at the proximal end of the catheter as 6 drainage holes along 4 rows.

### Lumboperitoneal Catheter Kit included with;

- Lumbar Catheter (ID: 0,8 mm OD: 1,6 mm L: 100 cm)
- Peritoneal Catheter (ID: 1,1 mm OD: 2,5mm L: 120cm)
- 14G Tuohy Needle
- Guidewire



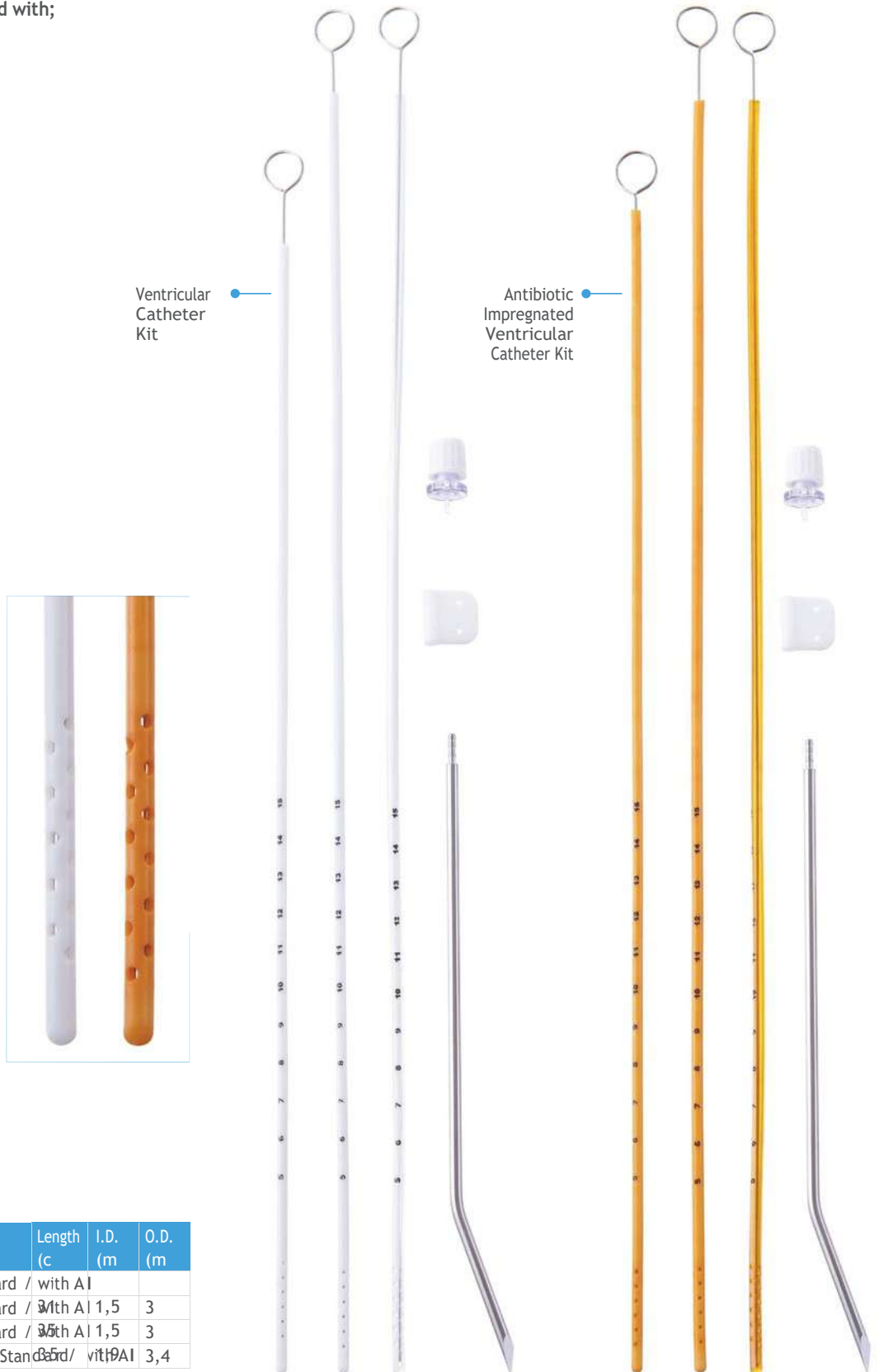
## Ventricular Catheter Kit

Catheters are made of barium silicon material. Tantalum length markings are located on the Lumbar Catheter in each centimeter from the 5th centimeter of the catheter to 15th. The 24 drainage holes are located at the proximal end of the catheter as 6 drainage holes along 4 rows.

Ventricular Catheters are also available with an antibiotic-impregnated option. Clindamycin HCl and Rifampicin, which are impregnated on the catheters, are released in a controlled manner for 28 days.

### Ventricular Catheter Kit included with;

- Ventricular Catheter
- Stylet
- Angled Trocar
- Luer Lock Connector
- Distal Cap



### Ventricular Catheters

Catheter Description	Length (cm)	I.D. (mm)	O.D. (mm)
External Ventricular Catheter Standard / with AI	35	1,5	3
External Ventricular Catheter Standard / with AI	35	1,5	3
External Ventricular Clear Catheter Standard / without AI	35	1,9	3,4

AI: Antibiotic Impregnated



## Lumbar Catheter Kit

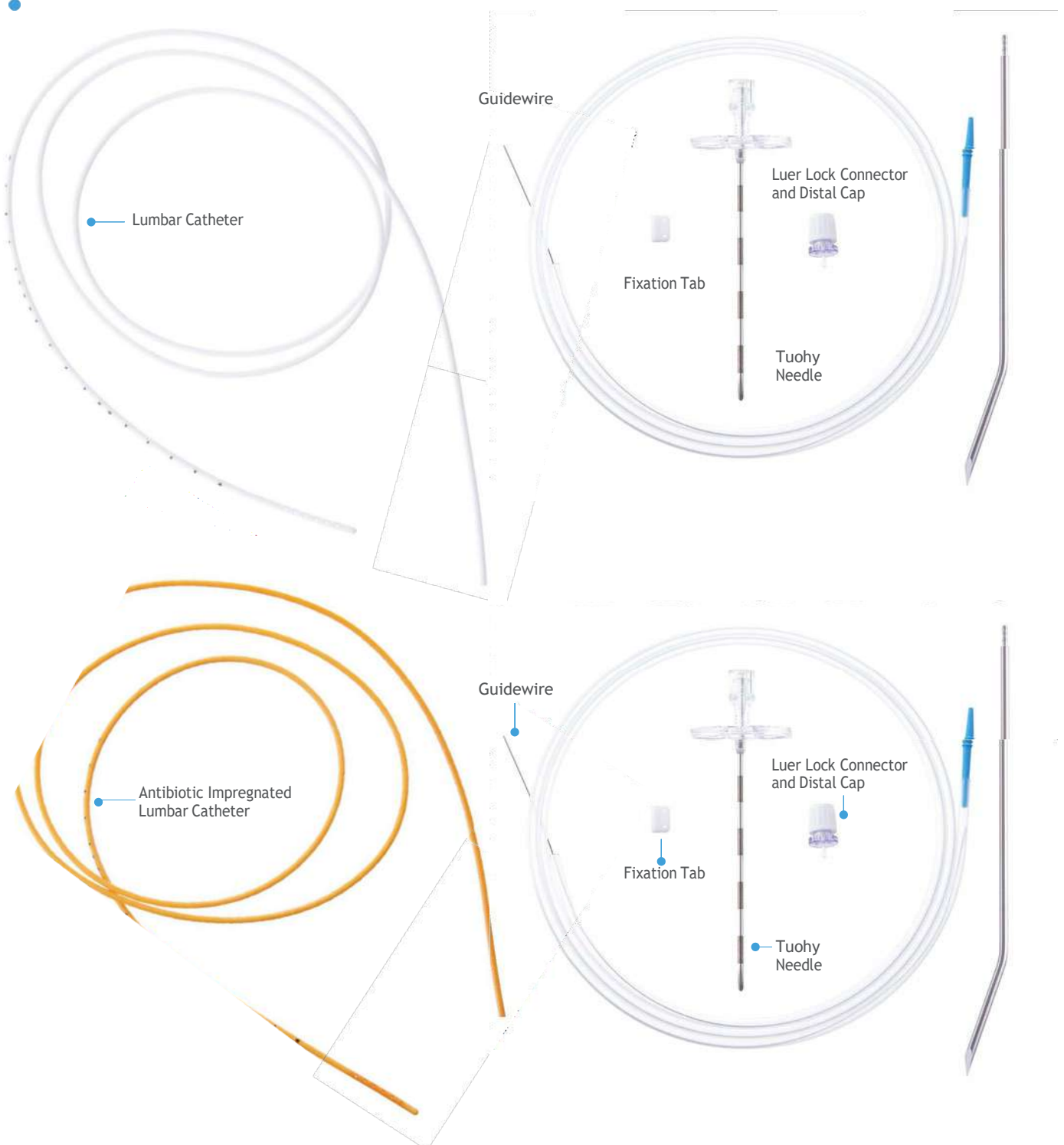
Lumbar Catheters are made of barium silicon material. Tantalum length markings are located on the catheter in each centimeter from the 5th centimeter of the catheter to 20th. The 24 drainage holes are located at the proximal end of the catheter as 6 drainage holes along 4 rows.

Lumbar Catheters are also available with an antibiotic-impregnated option. Clindamycin HCl and Rifampicin, which are impregnated on the catheters, are released in a controlled manner for 28 days.

Lumbar Catheter Kit included with;

Lumbar Catheter (ID: 0,8 mm OD: 1,6 mm L: 80 cm)

- Tuohy Needle
- Guidewire
- Angled Trocar
- Luer Lock Connector
- Fixation Tab
- 



# P R O D U C T   R E F E R E N C E S

Reference Code	Product Description	Order Code	Page
SVCK	Ventricular Catheter	D-1105	21
ASVCK	AI Ventricular Catheter	D-1106	21
SPCK	Peritoneal Catheter	D-1107	22
ASPCCK	AI Peritoneal Catheter	D-1108	22
SVPCCK	Ventriculoperitoneal Catheter	D-1109	23
ASVPCCK	AI Ventriculoperitoneal Catheter	D-1110	23
LPCKK	Lumboperitoneal Catheter Kit	D-1111	24
LPACK-16081000	AI Lumboperitoneal Catheter Kit (ID:0.8 OD:1.6mm L:100 cm)	D-1112	24
LPCK	Lumbar Catheter	D-1113	25
LPACK	AI Lumbar Catheter	D-1114	25
EVDCK-1530310	External Ventricular Drainage Catheter(ID:1.5 OD:3.0 mm L:31 cm)	D-1115	26
EVDACK-1530310	AI External Ventricular Drainage Catheter(ID:1.5 OD:3.0 mm L:31 cm)	D-1116	26
EVDACK-1530350	AI External Ventricular Drainage Catheter(ID:1.5 OD:3.0 mm L:35 cm)	D-1117	26
EVDACKS-1934350	AI External Ventricular Drainage Catheter(ID:1.9 OD:3.4 mm L:35 cm)	D-1118	26
EVDACK-1934350	AI External Ventricular Drainage Catheter(ID:1.9 OD:3.4 mm L:35 cm)	D-1119	26
ELCK	External Lumbar Catheter	D-1120	27
ELACK-1608800	AI External Lumbar Catheter	D-1121	27

AI:Antibiotic Impregnated



## Neurosurgical Product Accessories



## Antisiphon Device

Antisiphon device is used to avoid from siphon effect that may occur when the peritoneal catheter turn to vertical position from horizontal during the drainage or shunting of the cerebrospinal fluid.

The basic principle is to create an immediate closure effect to prevent excess drainage when the siphon effect occurs.



## Straight Catheter Connector

It is a subsidiary accessory used to connect different catheter parts during surgery when needed.



## L Type Catheter Connector

It is a subsidiary accessory used to guide the Ventricular / Peritoneal Catheter when needed without causing kinking and clogging, also to connect different catheter parts together during surgery.



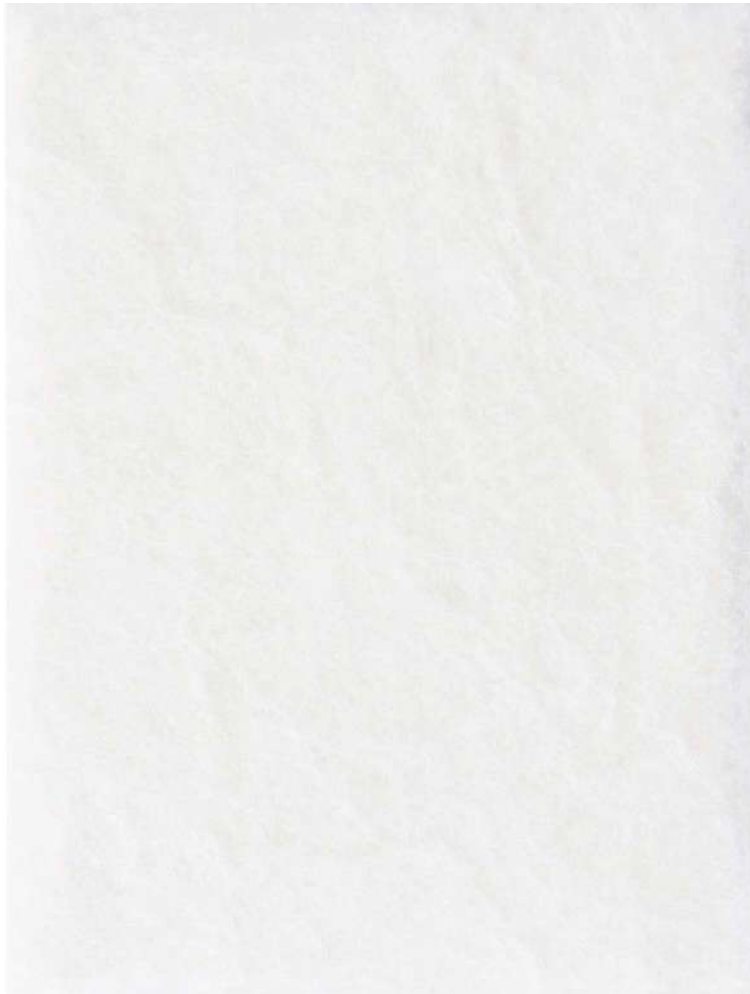
## Y Type Catheter Connector

It is a subsidiary accessory used to combine two shunts with a peritoneal catheter if needed, also provide output for two peritoneal catheters from a shunt, or to provide two ventricular catheter input into a shunt.



Reference Code	Product Description	Order Code
ASD	Antisifon Device	D-1122
PPCCO	Straight Catheter Connector	D-1123
PPRAC	L Type Catheter Connector	D-1124
PP3WCCO	Y Type (3-way) Catheter Connector	D-1125





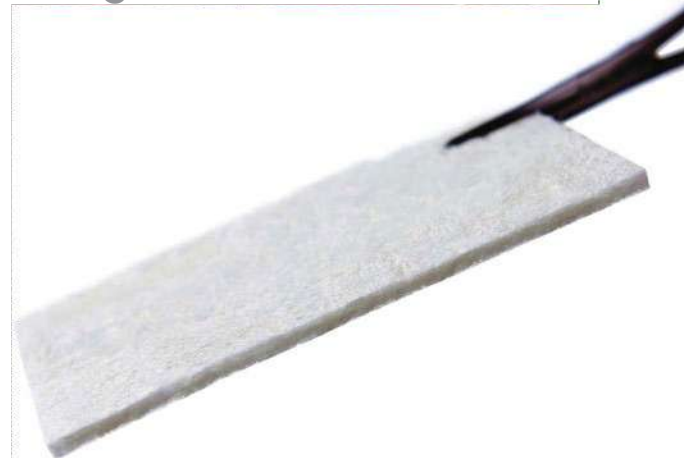
## Dura Grafts

**DECOLL**

Collagen Dura Membrane

**DURASHEET**

Collagen Dura Membrane





## DECOLL Collagen Dura Membrane

Decoll is designed for the substitute of a dura when repairing the defects on the dura mater.

It is a collagen barrier produced from ultra pure type-1 bovine collagen (contains > 95.5 % type-1 collagen)

Collagen-based, biodegradable to assist in fast healing

Usable for various CSF pressure levels so it can be applied to a wide variety of cases

Prevent the leakage a lot better than existing devices due to its impermeable pore structure

It can be used as onlay

Sterilized with Gamma

A ready-to-use product that does not require pre-processing

It can be used to treat dural defects due to surgical operations such as spinal tumor, trauma meningocele, myelomeningocele and lipoma



● DECOLL Collagen Dura Membrane

Designed in various dimensions and are available to use in different size dural and spinal defects.

Reference Code	Product Description	Order Code
DCL2525	DECOLL Collagen Dura Membrane 2.5x2.5cm	D-1126
DCL5050	DECOLL Collagen Dura Membrane 5x5 cm	D-1127
DCL7575	DECOLL Collagen Dura Membrane 7.5x7.5cm	D-1128
DCL100100	DECOLL Collagen Dura Membrane 10x10cm	D-1129



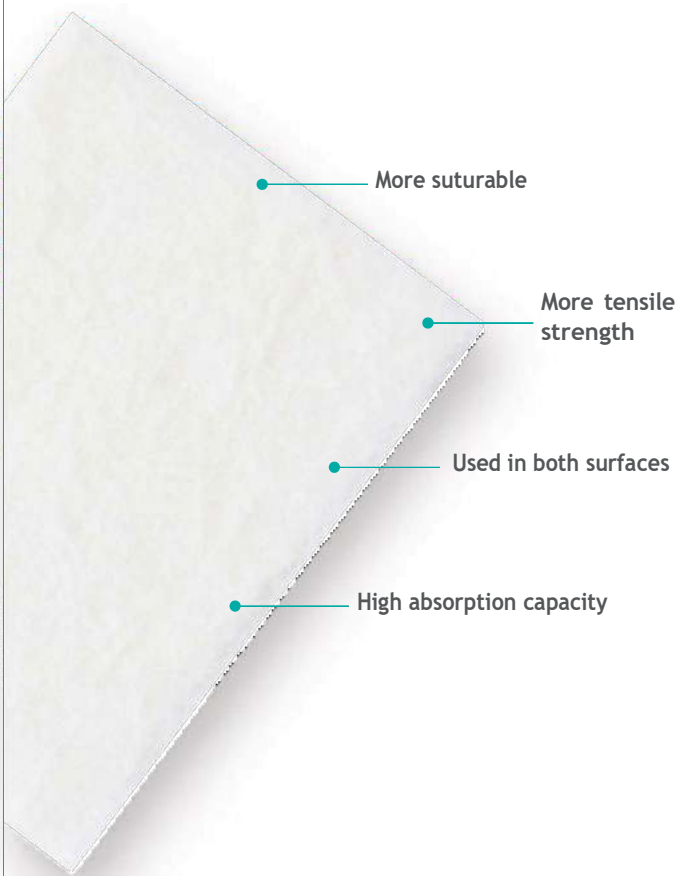
● Both surfaces can be used as wet or dry

## DURASHEET Collagen Dura Membrane

Durasheet is designed for the substitute of a dura when repairing the defects on the dura mater.

- It is a collagen barrier produced from ultra pure type-1 bovine collagen (contains > 95.5 % type-1 collagen)
- Collagen-based, biodegradable to assist in fast healing
- Usable for various CSF pressure levels so it can be applied to a wide variety of cases
- Prevent the leakage a lot better than existing devices due to its impermeable pore structure
- It can be used as onlay
- Sterilized with Gamma
- A ready-to-use product that does not require pre-processing
- It can be used to treat dural defects due to surgical operations such as spinal tumor, trauma meningocele, myelomeningocele and lipoma

### Highlights of DURASHEET:



Designed in various dimensions and are available to use in different size dural and spinal defects.

Reference Code /	Product Description	Order Code
DRS2525	DURASHEET Collagen Dura Membrane 2.5x2.5cm	D-1130
DRS5050	DURASHEET Collagen Dura Membrane 5x5cm	D-1131
DRS7575	DURASHEET Collagen Dura Membrane 7.5x7.5cm	D-1132
DRS100100	DURASHEET Collagen Dura Membrane 10x10cm	D-1133

● Both surfaces can be used as wet or dry



## Collagen Based Bone Grafts

### **DEBONE**

Collagen Based Bone Graft

### **XENOBONE**

Collagen Based Animal Origin Bone Graft

## DEBONE Collagen Based Bone Graft

- DEBONE consists of Type 1 bovine collagen.
- B-TCP is added.
- bioabsorbable
- It is an osteoconductive bone matrix containing more than 95% collagen.
- Supports osteoinductive properties thanks to type-1 collagen molecules in its structure,
- Creates a growth matrix for osteoblasts
- Contributes to bone development.
- Used to help repair all bone defects
- It is designed in two different forms as granule and sponge to adapt to different bone defects.



<b>DEBONE Collagen Based Bone Graft Matrix - Granule / Spongy-Granule</b>	DBN-0715W-5CC DBN-23W-5CC DBNG-5C-D03 DBNG-5C-D04	5 cc / 0.7-1.5 mm 5 cc / 2-3 mm 5 cc / 4-5 mm 5 cc / 6-7 mm
<b>DEBONE Collagen Based Bone Graft Matrix - Granule / Spongy-Granule</b>	DBN-0715W-10CC DBN-23W-10CC DBNG-10C-D03 DBNG-10C-D04	10 cc / 0.7-1.5 mm 10 cc / 2-3 mm 10 cc / 4-5 mm 10 cc / 6-7 mm
<b>DEBONE Collagen Based Bone Graft Matrix - Granule / Spongy-Granule</b>	DBN-0715W-15CC DBN-23W-15CC DBNG-15C-D03 DBNG-15C-D04	15 cc / 0.7-1.5 mm 15 cc / 2-3 mm 15 cc / 4-5 mm 15 cc / 6-7 mm
<b>DEBONE Collagen Based Bone Graft Matrix - Granule / Spongy-Granule</b>	DBN-0715W-20CC DBN-23W-20CC DBNG-20C-D03 DBNG-20C-D04	20 cc / 0.7-1.5 mm 20 cc / 2-3 mm 20 cc / 4-5 mm 20 cc / 6-7 mm
<b>DEBONE Collagen Based Bone Graft Matrix - Granule / Spongy-Granule</b>	DBN-0715W30CC DBN-23W-30CC DBNG-35C-D03 DBNG-35C-D04	30 cc / 0.7-1.5 mm 30 cc / 2-3 mm 30 cc / 4-5 mm 30 cc / 6-7 mm



## XENOBONE Collagen Based Animal Origin Bone Graft

It is a B-TCP supplemented, bioabsorbable osteoconductive bone matrix consisting of Xenobone type-1 bovine collagen and containing more than 95% collagen. Thanks to the type-1 collagen molecules in its structure, it supports osteoinductive properties, creates a growth matrix for osteoblasts and contributes to bone development.

0.7-1.5 mm.  
2-3 mm.  
4-5 mm



Packing of 1 cc or 5x1 cc vial bottles





## Bone Cement

DEFIX®

## Bone Grafts

CUREOS®

CUREOS® Putty

## ICP

KIBO®

Intracranial pressure monitoring



## DeFix Bone Cement

DeFix® is a Radiopaque, PMMA-based bone cement with antibiotic or standard variants. It is used in a wide variety of medical procedures, such as joint replacements or cataract surgeries in the eyes.

While the prosthetic bonds the joint and bone together, it remains flexible enough to allow movement and absorb forces acting on the body. It is also used to reshape lost bone and fill gaps in bones.

### DeFix® Vertebroplasty Bone Cement

Standard/ Antibiotic

DeFix® Vertebroplasty Bone Cement is indicated for fixation of pathological fractures of the vertebral body (vertebroplasty and kyphoplasty).

DeFix® Vertebroplasty Bone Cement is indicated for fixation of pathological fractures of the vertebral body (vertebroplasty and kyphoplasty).

- Easy to use

- Biocompatible

High radio-opacity

- Appropriate working time

### Cranioplasty Bone Cement

Standard/ Antibiotic

Poly-methyl-methacrylate (PMMA) is the most widely used biomaterial for cranioplasty.

The product has two main components: liquid monomer and powdered polymer.

The powder contains PMMA with dibenzoyl peroxide, a barium sulfate radiopacifier, and gentamicin as an antibiotic.

PRODUCT	REFERENCE CODE	CONTENT
DEFIX Standard Bone Cement	DeFix SM40	40 gr / Standard
DEFIX Standard Bone Cement	DeFix SM60	60 gr / Standard
DEFIX Standard Bone Cement	DeFix SAM40	40 gr / with Antibiotic
DEFIX Standard Bone Cement	DeFix SAM60	60 gr / with Antibiotic
DEFIX Vertebroplasty Bone Cement	DeFix SH20	20 gr / Standard
DEFIX Vertebroplasty Bone Cement	DeFix SH40	40 gr / Standard
DEFIX Cranioplasty Bone Cement	DeFix SL20	20 gr / Standard
DEFIX Cranioplasty Bone Cement	DeFix SL40	40 gr / Standard



## CureOs® Bone Graft

It is an FDA Approved bone product used to help repair all iatrogenic or acquired bone defects. It strongly supports the formation of new bone. It helps in the treatment of bone defects. It contains >95%  $\beta$ -TCP and >80% porosity, which accelerates new bone formation compared to its competitors.

CureOs® is also indicated for use in all traumatic bone defects, pathological bone defects, osteosynthesis, broken bones, dental cases and whenever a medical practitioner deems it necessary.



Product	A (mm)	B(mm)	C (mm)	D (mm)	E (mm)	F (Angle°)
CRS-01A-H6	9	6	3,5	23,5	24	6
CRS-01A-H7	9	7	4,5	23,5	24	6
CRS-01A-H8	9	8	5,5	23,5	24	6
CRS-01A-H9	9	9	6,5	23,5	24	6
CRS-01A-H10	9	10	7,5	23,5	24	6
CRS-01A-H11	9	11	8,5	23,5	24	6
CRS-01A-H12	9	12	9,5	23,5	24	6
CRS-01A-H13	9	13	10,5	23,5	24	6
CRS-01A-H14	9	14	11,5	23,5	24	6
CRS-01A-H15	9	15	12,5	23,5	24	6



Product	A (mm)	Product	A (mm)	Product	A (mm)
CRS-05C-C01	2,5	CRS-05C-C02	4,5	CRS-05C-C03	6,5
CRS-10C-C01	2,5	CRS-10C-C02	4,5	CRS-10C-C03	6,5
CRS-15C-C01	2,5	CRS-15C-C02	4,5	CRS-15C-C03	6,5
CRS-20C-C01	2,5	CRS-20C-C02	4,5	CRS-20C-C03	6,5
CRS-35C-C01	2,5	CRS-35C-C02	4,5	CRS-35C-C03	6,5
CRS-05G-C01	2,5	CRS-05G-C02	4,5	CRS-05G-C03	6,5
CRS-10G-C01	2,5	CRS-10G-C02	4,5	CRS-10G-C03	6,5
CRS-15G-C01	2,5	CRS-15G-C02	4,5	CRS-15G-C03	6,5
CRS-20G-C01	2,5	CRS-20G-C02	4,5	CRS-20G-C03	6,5
CRS-25G-C01	2,5	CRS-25G-C02	4,5	CRS-25G-C03	6,5



## CureOs® Putty Injectable Bone Graft

CureOs® Putty is a biocompatible and bioabsorbable injectable, osteoconductive bone substitute that promotes new bone formation at the defect area.

CureOs® Putty Injectable  $\beta$ -TCP Bone Matrix is a fully synthetic product designed for the repair of traumatic or pathological bone defects.

bio-absorbable,

Supports and accelerates bone formation,

Quick and easy use,

It does not require mixing and is applied directly,

It can be mixed with bone marrow, blood and other clinically known bone grafts.

Product	Volume	Product Code
Injectable $\beta$ -TCP Bone Graft	0,5 cc	CRS-PTY-005
Injectable $\beta$ -TCP Bone Graft	1,0 cc	CRS-PTY-010
Injectable $\beta$ -TCP Bone Graft	2,0 cc	CRS-PTY-020
Injectable $\beta$ -TCP Bone Graft	2,5 cc	CRS-PTY-025
Injectable $\beta$ -TCP Bone Graft	3,0 cc	CRS-PTY-030
Injectable $\beta$ -TCP Bone Graft	4,0 cc	CRS-PTY-040
Injectable $\beta$ -TCP Bone Graft	5,0 cc	CRS-PTY-050
Injectable $\beta$ -TCP Bone Graft	7,5 cc	CRS-PTY-075
Injectable $\beta$ -TCP Bone Graft	10,0 cc	CRS-PTY-100
Injectable $\beta$ -TCP Bone Graft	15,0 cc	CRS-PTY-150
Injectable $\beta$ -TCP Bone Graft	30,0 cc	CRS-PTY-300



## Kibo® Intracranial Pressure Monitoring System

The Linacol® Intracranial Pressure Measurement Kit is used when an increase or decrease in intracranial pressure needs to be observed.

KIBO® is a kit that digitally measures intracranial pressure values.

KIBO® is used with a digital measuring device and measuring sensor.

Simple installation process,  
High accuracy and reliability with laser pointer,  
digital view,  
Monitoring the intracranial pressure values in cm H<sub>2</sub>O unit.

