

### Features of Manometry Accessories

In our range of Manometry Accessories you will find equipment for water perfused manometry as well as for solid state manometry. We have the catheters, perfusion systems and other accessories required to set up a complete manometry system.

Our Zinetics Water Perfused Catheters are developed and manufactured in-house. Our knowledge and experience with Water Perfused Catheters help us to keep our focus on producing equipment that will give you a reliable and accurate patient diagnosis.

Medtronic Functional Diagnostics offers the possibility to design special configurations to meet your requirements for port location on water perfused manometry catheters and barostat catheters and sensor type and location on solid state catheters. Contact your local representative for any special requests but allow extra lead time for such configurations.



# Manometry Accessories

## Water Perfused Manometry Accessories

We have water perfused manometric catheters for esophageal, anorectal and vector volume examinations. All our Zinetics Water Perfused Catheters are made using clear, medical grade PVC tubing to ensure a high quality level.

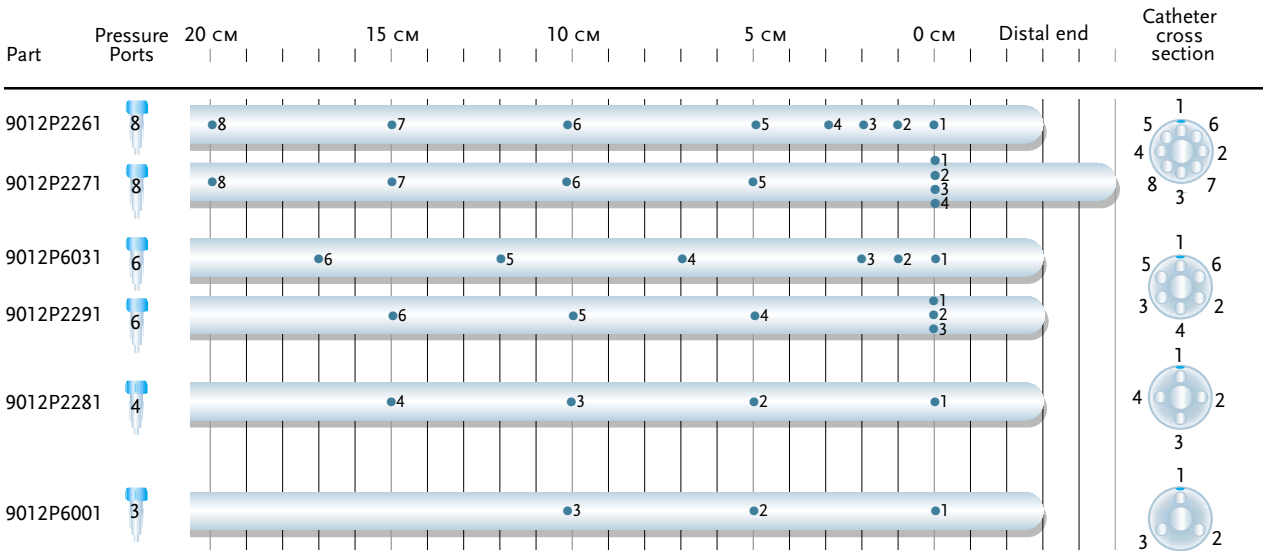
### Zinetics Esophageal Water Perfused Catheters

For pressure measurement in the esophagus you will find a number of standard catheter configurations for adult and pediatric procedures. Our catheters have the following features and benefits:

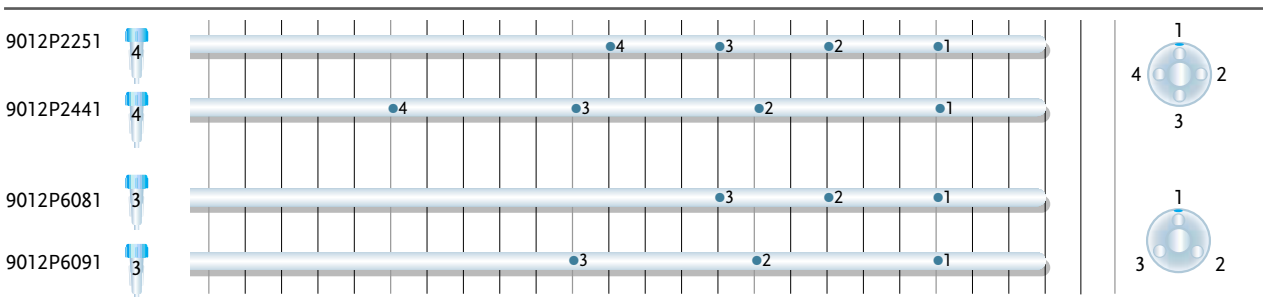
- A firm catheter body for easy intubation
- Wide range of standard and special configurations
- High quality Luer Locks for durability



### Adult Esophageal



### Pediatric Esophageal



#### Zinetics EMC Esophageal Manometry

Outside Diameter:	4,5 mm	Total Length:	140 cm
Inside Diameter:	Pressure Lumens: 0,8 mm	Working Length:	90 cm
	Center Lumen: 1,8 mm		

#### Zinetics PMC Pediatric Esophageal Catheters

Outside Diameter:	3,5 mm	Total Length:	140 cm
Inside Diameter:	0,8 mm	Working Length:	90 cm

# Manometry Accessories

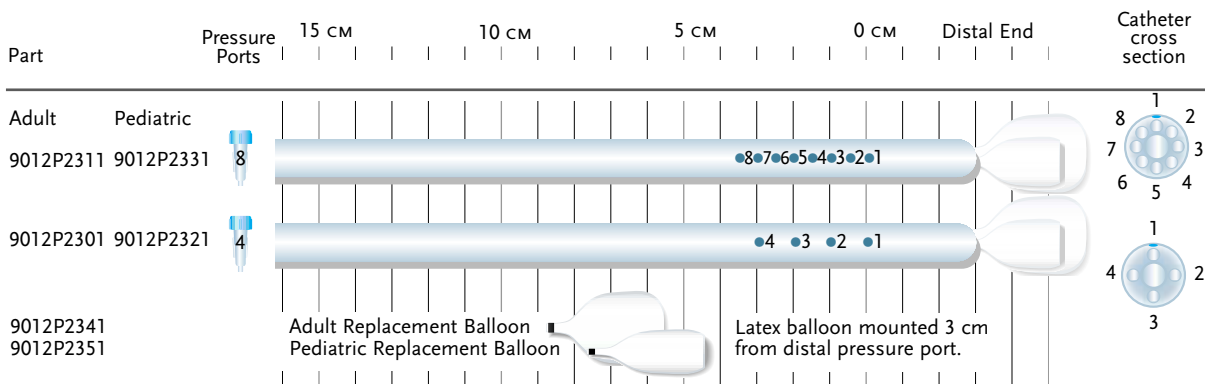


## Zinetics Anorectal Water Perfused Catheters

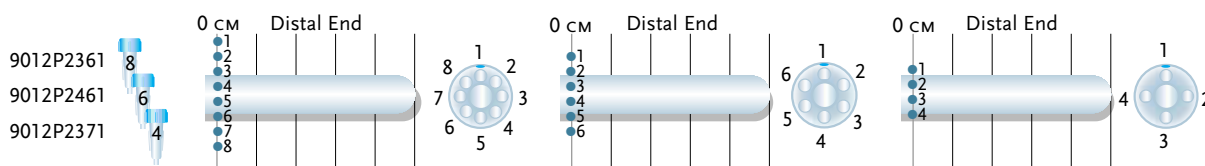
For anorectal studies we have catheters for both adult and pediatric patients. The catheters come with disposable balloons that can easily be replaced for new procedures. Our products have the following benefits and features:

- Numbered pressure channels for easy identification and attachment of transducers
- A firm catheter body for easier intubation
- Blue radiopaque line for easy identification of lumen #1

### Anorectal



### Vector Volume



#### Zinetics AMC Anorectal Catheters with balloon

Outside Diameter:	4,5 mm	Total Length:	140 cm
Inside Diameter:	Pressure Lumens: 0,8 mm	Working Length:	90 cm
	Inflation/Deflation Lumen: 1,8 mm		

Balloon: *Contains natural latex rubber which may cause allergic reactions.*

#### Zinetics VMC Vector Volume Catheters

Outside Diameter:	4,5 mm	Total Length:	140 cm
Inside Diameter:	Pressure Lumens: 0,8 mm	Working Length:	90 cm
	Center Lumen: 1,8 mm		

# Manometry Accessories

## Sleeve Catheters

Water perfused Sleeve Catheters have the significant benefit of measuring pressure over a length of the catheter, not just at one specific point. This is particularly advantageous when measuring lower esophageal sphincter pressure as the LES moves with respiration and swallowing.



### Sleeve Catheters

Item no.	Description	Qty
9012P2501	Dentsleeve Esophagheal LES Sleeve Catheter, 8 ch	1
9012P2541	Dentsleeve Pediatric Esophagheal LES Sleeve Catheter, 7 ch	1
9012P2521	Dentsleeve Adult Antropyloroduodenal Pyloric Sleeve Catheter, 8 ch	1
9012P2531	Dentsleeve Adult Antropyloroduodenal Catheter, 8 ch	1
9012P2551	Dentsleeve Adult Small Intestine Catheter, 8 ch	1



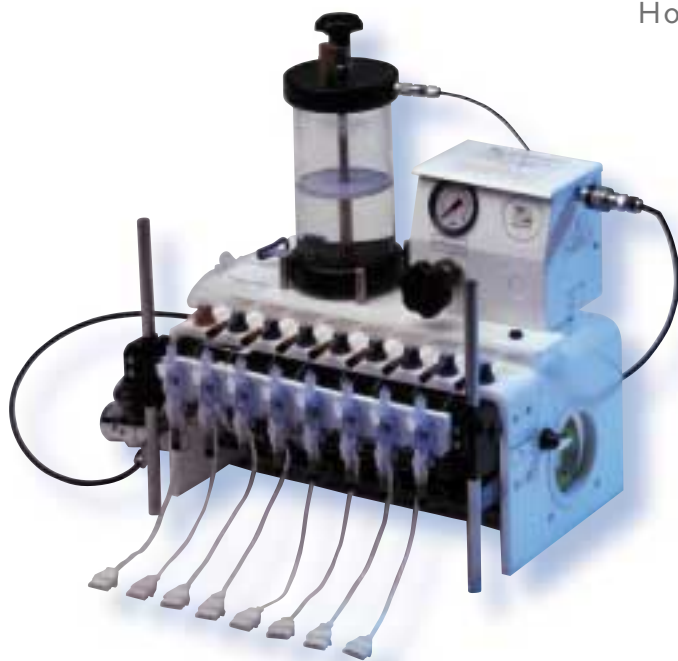
## Dentsleeve Pumps

The Dentsleeve Pump is a gas pump designed to meet a variety of needs within water perfused manometry. It features autoclavable manifolds, easily cleaned parts and simple to change resistory capillaries to ensure the flow rate you need. See next page for the horisontal pump and resistors.

### Vertical Deck Pump

Item no.	Description	Qty
9043B2211	Dentsleeve Vertical Deck Pump, 8 ch	1

## Horizontal Pump Systems for Polygraf ID and PC Polygraf HR



### Pump Systems

Item no.	Description	Qty
9043H0181	Dentsleeve Pump Perfusion System for Polygraf ID including the following:	1
	8 ch Dentsleeve Gas Perfusion Pump	1
	PVB Pressure Transducer	8
	8 ch PVB Transducer Cable	1

Item no.	Description	Qty
9043H0171	Dentsleeve Pump Perfusion System for PC Polygraf HR including the following:	1
	8 ch Dentsleeve Gas Perfusion Pump	1
	PVB Pressure Transducer	8
	PVB Transducer Cable	8

### Pumps

Item no.	Description	Qty
9043H0101	8 ch Dentsleeve Gas Perfusion Pump	1
9043H0111	16 ch Dentsleeve Manometric Infusion Pump	1

## Resistory Capillaries

The Resistors for the Dentsleeve Pump are simple to change and allow you to choose the flow rate you need.

### Resistory Capillaries

Item no.	Description	Qty
9012D1201	Dentsleeve R-1 Resistor, flow rate 0.01 ml/min	1
9012D1211	Dentsleeve R-2 Resistor, flow rate 0.02 ml/min	1
9012D1221	Dentsleeve R-4 Resistor, flow rate 0.04 ml/min	1
9012D1231	Dentsleeve R-8 Resistor, flow rate 0.08 ml/min	1
9012D1241	Dentsleeve R-10 Resistor, flow rate 0.10 ml/min	1
9012D1251	Dentsleeve R-15 Resistor, flow rate 0.15 ml/min	1
9012D1261	Dentsleeve R-20 Resistor, flow rate 0.20 ml/min	1
9012D1271	Dentsleeve R-30 Resistor, flow rate 0.30 ml/min	1
9012D1281	Dentsleeve R-45 Resistor, flow rate 0.45 ml/min	1
9012D1291	Dentsleeve R-60 Resistor, flow rate 0.60 ml/min	1

## Manometry Accessories



### Mui Pump Systems for Polygraf ID and PC Polygraf HR

The Mui Pump is an electrically powered pump for water perfused manometry and does not require a gas-bottle. The Mui Pump is a practical and effective tool for your water perfused studies and can be purchased with a complete set-up of Pressure Transducers and Cables.

#### Mui Systems

Item no.	Description	Qty
9043H0311	Mui Scientific Pump Perfusion System for Polygraf ID including the following:	1
	8 ch Mui Scientific Electrical Infusion Pump	1
	PVB Pressure Transducer	8
	8 ch PVB Transducer Cable	1
	Single Transducer Holder	8

Item no.	Description	Qty
9043H0301	Mui Scientific Pump Perfusion System for PC Polygraf HR including the following:	1
	8 ch Mui Scientific Electrical Infusion Pump	1
	PVB Pressure Transducer	8
	PVB Transducer Cable	8
	Single Transducer Holder	8

#### Mui Pump

Item no.	Description	Qty
9043H0121	8 ch Mui Scientific Electrical Infusion Pump	1

### Manometry Studies with Pump Systems

The pump perfusion systems ensure accurate and reliable results:

The pump system supplies a high driving pressure allowing the system to accurately measure high esophageal pressure wave peaks.

The pump system ensures a constant water flow and stable driving pressure during the entire procedure.

## Low Cost Perfusion System

The low Cost Perfusion System is an option for measuring pressure using water perfusion. The system does not include a gas or electrical pump and is a cost-effective solution. However, for recordings with more than 4 channels we recommend a Perfusion Pump to obtain a high level of accuracy.

The Low Cost Perfusion System consists of the following:

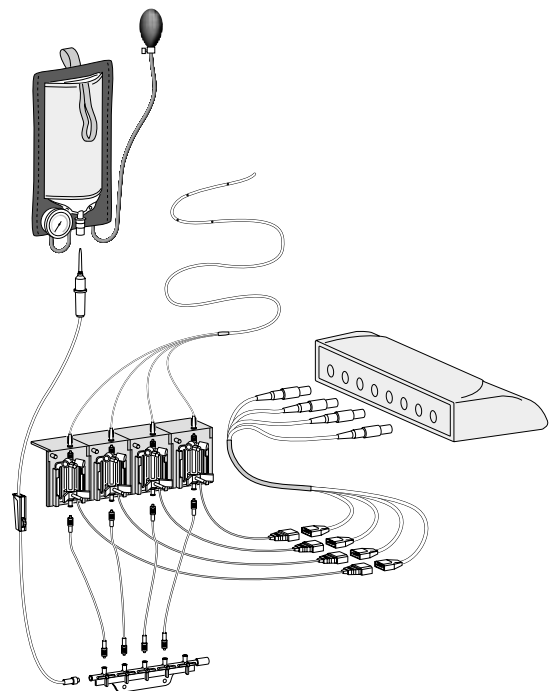
- Pressure Cuff
- Micro Drip set
- PVB Transducers
- Manifold Support Plate
- Transducer Cable
- Gender Changer
- Transducer Holder
- Calibration Sticker



### PVB Perfusion Systems

Item no.	Description	Qty
9043H0151	Low Cost Perfusion System Kit, 4 ch for Polygraf ID	1
9043H0141	Low Cost Perfusion System Kit, 6 ch for Polygraf ID	1
9043H0131	Low Cost Perfusion System Kit, 8 ch for Polygraf ID	1
G98-3070	Low Cost Perfusion System Kit, 4 ch for Polygraf HR	1
G98-3080	Low Cost Perfusion System Kit, 6 ch for Polygraf HR	1
G98-3090	Low Cost Perfusion System Kit, 8 ch for Polygraf HR	1

To set up the system use a Pressure Cuff to apply pressure to a water bag with a Micro Drip Set attached. The water flows through the Manifold Support Plate, which diverts the flow of water to the Pressure Transducers that are connected via the Gender Changers. The Pressure Transducers are attached to the catheter and the recording device.





# Manometry Accessories

## Perfusion Accessories

Below is the range of accessories for your water perfusion setup. With this range you can buy the single items that you need for your system. The complete kits to get you started with water perfusion manometry can be seen on pages 14-16.

Choose the appropriate Pressure Transducer for your water perfusion system:

Transducers with Built-in Capillary for the Low Cost Perfusion System.

Transducers with no Capillary for both the Mui Pump and Dentsleeve Pump.



### Perfusion Accessories

Item no.	Description	Qty
9012K1001	PVB Pressure Transducer, Built-in Capillary	1
9012K1021	PVB Pressure Transducer, No Capillary	1
9028P0151	Pressure Cuff	1
9012K1011	Single Transducer Holder	1
9012D1121	Micro Drip Set	1
9012D1171	Manifold Support Plate, 5 ch	1
9012D1181	Manifold Support Plate, 3 ch	1
9012D1191	Gender Changer	1
9012K1061	Wingless Pressure Transducer	1
9012D2102	Calibration Sticker	1

### Cables

Item no.	Description	Qty
9012C1031	4 ch PVB Transducer Cable for Polygraf ID, 80 cm	1
9012C1041	6 ch PVB Transducer Cable for Polygraf ID, 80 cm	1
9012C1051	8 ch PVB Transducer Cable for Polygraf ID, 80 cm	1
9012C1021	8 ch PVB Transducer Cable for Polygraf ID, 250 cm	1
G98-3564	4 ch PVB Transducer Cable for Polygraf HR, 100 cm	1
G98-3262	PVB Transducer Cable for Polygraf HR, 100 cm	1
G98-3062	PVB Transducer Cable for Polygraf HR, 250 cm	1

### Useful hints when performing water perfused manometry:

It is a good idea before starting each study to run the perfusion pump for approximately 10 minutes in order to flush the system through.

Air bubbles in the system can be removed by gently tapping the transducer or catheter close to the bubble.

Remember to keep the water source free from particles as they might clog the system and affect the pressure reading.



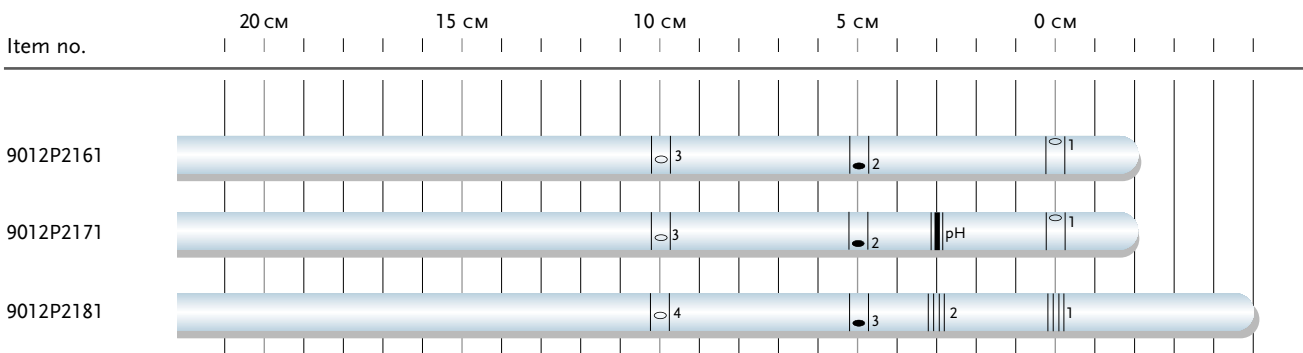
## Solid State Manometry Accessories

Konigsberg Catheters are solid state/micro tip catheters for pressure measurement. They require no water perfusion setup and are therefore easy to use and give reliable, accurate results. The catheters are available in a variety of configurations and come with attached probe adapters. It is possible to have solid state catheters custom made according to your specific requirements.



## Konigsberg Esophageal Solid State Catheters

Item no.	Name	Channels	Spacing	Diameter	Neck down	Total Length
9012P2161	Konigsberg Solid State Catheter	3 pressure	5 cm	4.00 mm	3.25	150 cm
9012P2171	Konigsberg Solid State Catheter	3 pressure 1 pH	5 cm	4.00 mm	3.25	185 cm
9012P2181	Konigsberg Solid State Catheter – Castell type	4 pressure	3,2,5 cm	4.65 mm	3.25	200 cm



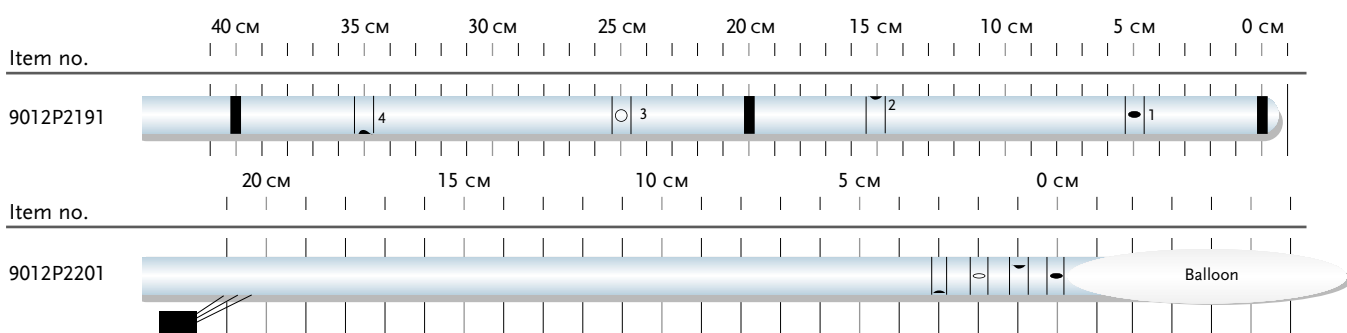
### Solid State Configuration Guide

Directional Pressure Sensor (visible from diagram view)	Directional Pressure Sensor (not visible from diagram view)	pH Sensor	Circumferential Pressure Sensor	Grasping Collar	Infusion Channel
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# Manometry Accessories

## Konigsberg Small Bowel and Anorectal Solid State Catheters

Item no.	Name	Channels	Spacing	Diameter	Neck down	Total Length
9012P2191	Konigsberg Small Bowel Solid State catheter	4 pressure	10 cm	4.65 mm	3.25 mm	250 cm
9012P2201	Konigsberg Anorectal Solid State Catheter	4 pressure	1 cm	7.9 mm	3.25 mm	140 cm



### Solid State Configuration Guide

	Directional Pressure Sensor (visible from diagram view)		Directional Pressure Sensor (not visible from diagram view)		pH Sensor		Circumferential Pressure Sensor		Grasping Collar		Infusion Channel
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## Solid State Accessories

For calibration of your solid state catheter a Pressure Chamber Calibrator is needed. The calibrator is an airtight cylinder to which you apply pressure using a manometer. This allows simultaneous calibration of all channels, with no water column required.

To complete your system, choose the cable that matches your device.



## Calibration Accessories

Item no.	Description	Length
9012D2011	Pressure Chamber Calibrator for Catheters with diameter of 4.00-4.65 mm	25 cm
9012D2021	Pressure Chamber Calibrator for Catheters with diameter of 7.9 mm (anorectal)	25 cm
9012D2031	Pressure Chamber Calibrator for Catheters with diameter of 4.00-4.65 mm	60 cm

## Cables

Item no.	Description	Qty
9012C1061	3 ch Solid State Catheter Adapter Cable for Polygraf ID	1
9012C1071	4 ch Solid State Catheter Adapter Cable for Polygraf ID	1
G92-4333	3 ch Solid State Catheter Accessory Cable for Polygraf HR	1
G92-4313	3 ch + 1 pH Solid State Accessory Cable for Polygraf HR	1
G92-4444	4 ch Solid State Accessory Cable for Polygraf HR	1