



**RAUMEDIC®**

— Lifeline to Health —

# Hot Topic: ICP + Temperature

## Integrated Temperature and ICP Measurement

- Suitable for MR applications
- “plug and play” system
- No additional equipment required
- Extended temperature measuring range: 25 – 45 ° C
- Lowest tolerance: 1/10 ° C
- Highest sensitivity: 1/100 ° C
- Quickest response to temperature changes



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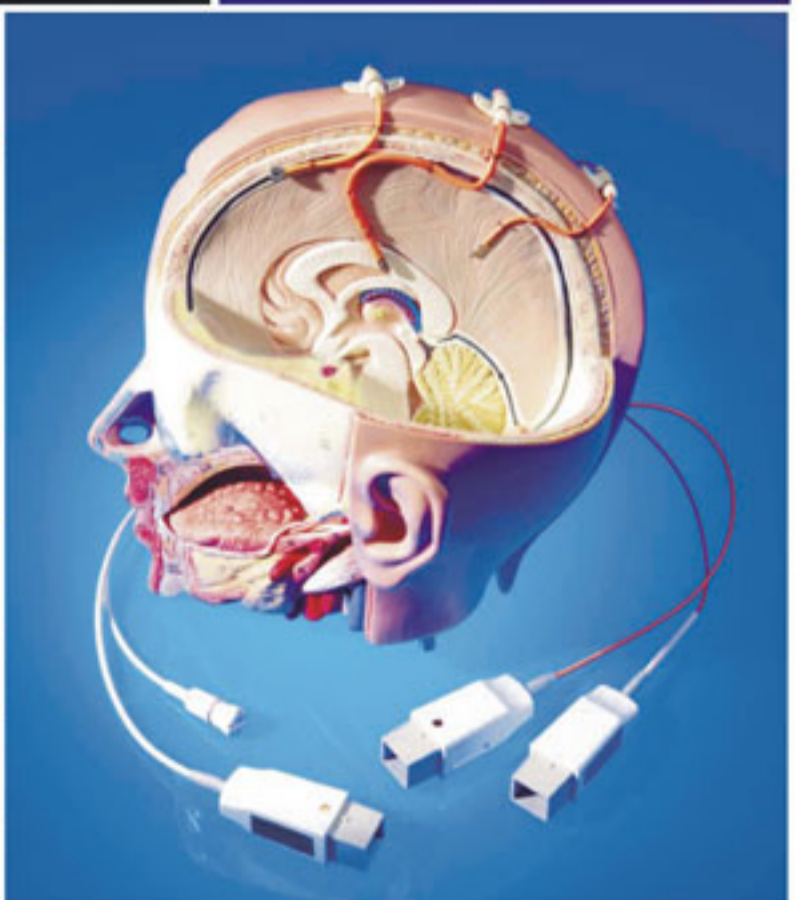


Type	Article No.
NPS 2 HP	092637
NPS 2 Siemens/ Draeger Infinity	092627
NPS 2 Marquette	093807
NPS 2 Space Labs	091715
NPS 2 Datex	090924
NPS 2 Draeger	090787
NPS 2 Spiegelberg CPP	091738
NPS 2 S&W Athena	090914

Type	Article No.
NPS 2 Spiegelberg Compliance	096013
NPS 2 Codman	091978
NPS 2 Hellige	092617
NPS 2 NIHON KODEN BSM 8800	091676
NPS 2 NIHON KODEN BSM 41xx	094716
NPS 2 Schiller ARGUS PRO	094613
NPS 2 Petas	095206
NPS 2 FUKUDA DENSHI	096003



Type	Article No.
NEUROVENT-P	092946
NEUROVENT-P Temp	094268
NEUROVENT - PTO	095008
NEURODUO	094308
NEUROVENT with stylet	092956
NEUROVENT Temp with stylet	094278
NEUROVENT inset soft guide wire	091678
NEUROVENT TEMP inset soft guide wire + temperature	094288





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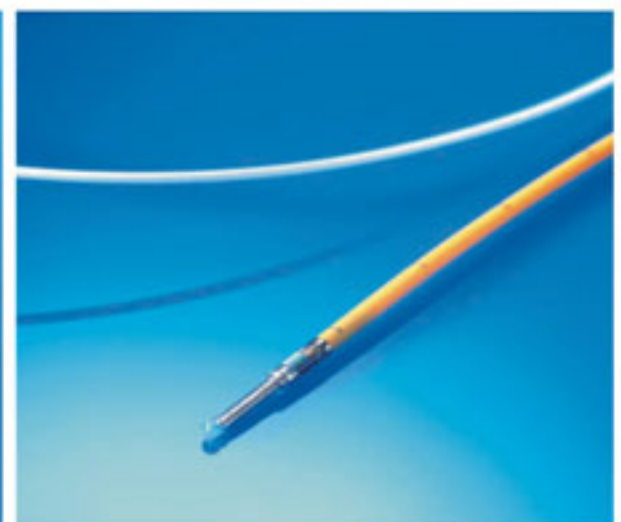
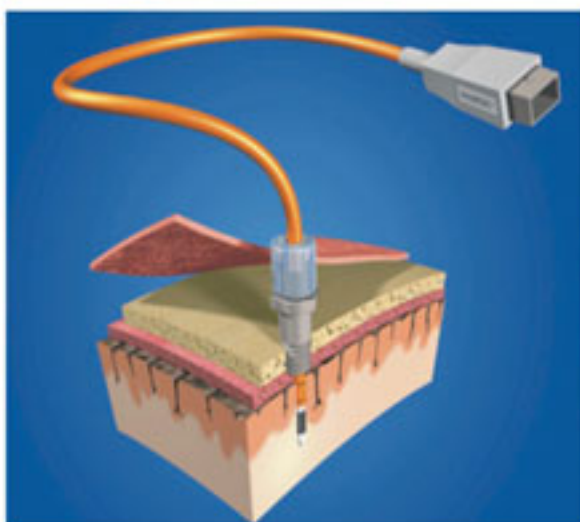
**NEW!**



## ICP + Temperature + O<sub>2</sub>

- MR compatible
- „Plug and Play“-System
- No oxygen consumption by the O<sub>2</sub> sensor
- No susceptibility to scattered light
- Excellent long time stability of measuring values
- Highest stability of temperature 1/100 °C
- Measurement of pressure, temperature and oxygen with the RAUMEDIC MPR2 logO

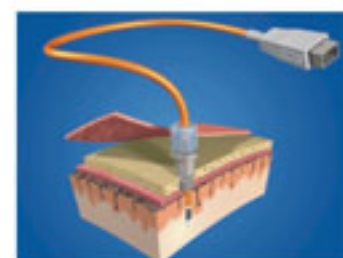
## Neurosurgical Catheters Survey of ICP RAUMEDIC catheters





## Neurosurgical Catheters

### Survey of ICP RAUMEDIC catheters



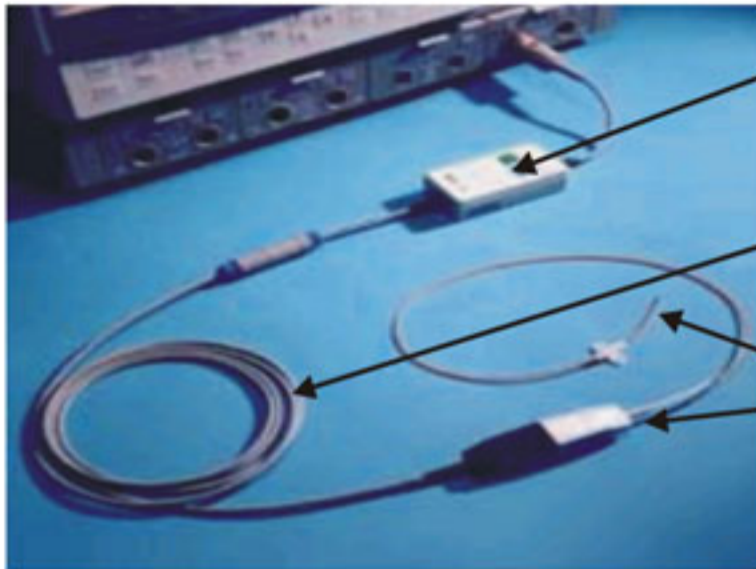
#### Accessories for NEUROVENT- P

Type	Article Number	Description	Picture
<b>BOLT KIT CH 5</b>	<b>091868</b>	Fixation kit NEUROVENT-P Composed of: 1 polymer screw CH 5 1 stylet 1 screwing in tool 1 fixing cap 1 silicone seal for CH 5	
<b>CRANIAL DRILLING KIT CH 5</b>	<b>091878</b>	1 drill (4,5mm) with stopper 1 allen key	
<b>BOLT Removal TOOL CH 5</b>	<b>094938</b>		
<b>BOLT-KIT CH 9</b>	<b>091688</b>	Fixation kit NEUROVENT-P Composed of: 1 polymer screw CH 9 1 stylet 1 screwing in tool 1 fixing cap 1 silicone seal for CH 9	
<b>CRANIAL DRILLING KIT CH 9</b>	<b>091668</b>	1 drill with stopper 1 allen key	
<b>Bolt Removal TOOL CH 9</b>	<b>094948</b>	1 six corner tag	
<b>TUNNELLING SLEEVE NEUROVENT - P</b>	<b>090506</b>	Steril packaged spliceable tunneling sleeve . Kit comosed of 5 trocars and 5 sleeves CH 8	
<b>HAND DRILL</b>	<b>231584</b>	Hand drill, steriisable/ autoclavable	



# Neurosurgical Catheters Survey of ICP RAUMEDIC catheters




## Accessories - NEUROVENT, NEUROVENT-P, NEURODUR



NPS 2

ICP Extension cable

ICP-Catheter

Type	Article Number	Description	Picture
ICP Extension cable	094328	Extension cable for connection between catheter and zero point simulator NPS2 or bifunctional adapter; cable is usable both or bifunctional ICP/TEMP- catheter and for ICP only	
Universal adapter PIC/TEMP		Bifunctional adapter, necessary for transmission of the temperature- and ICP- signal to the patient's monitor. The interface goes between the extension cable and the zero point simulator, resp. between the extension cable and the temperature monitor. For the most monitors	
Adapter ICP/TEMP Monitor HP/Philips		Bifunctional adapter, necessary for transmission of the temperature- and ICP- signal to the patient's monitor. The interface goes between the extension cable and the zero point simulator, resp. between the extension cable and the temperature monitor. Only for Philips/HP monitors	



# RAUMEDIC®

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## Measure your patient's actual stone formation risk with the UROLIZER®.

The UROLIZER is a reliable analysis device for assessing a patient's present actual risk of forming urinary calcium oxalate stones via the BONN-Risk Index. The device provides precise and fast results and is simple to handle.



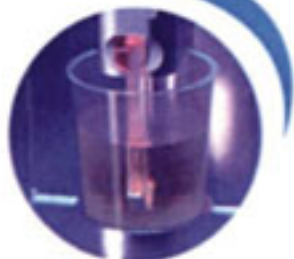
- **Precise:**  
Identification of the present actual crystallisation risk
- **Fast:**  
Results are available after around only 10 minutes
- **Simple to handle:**  
Native urine can be used.  
Requires no additional processing



 **UROLIZER®**

The UROLIZER is particularly suitable for

- Characterising **the base** risk of stone patients (prior to therapy)
- **Monitoring** the success of metaphylaxis
- Supporting patient **compliance** with metaphylaxis
- **Identifying** patients at risk (prophylaxis)

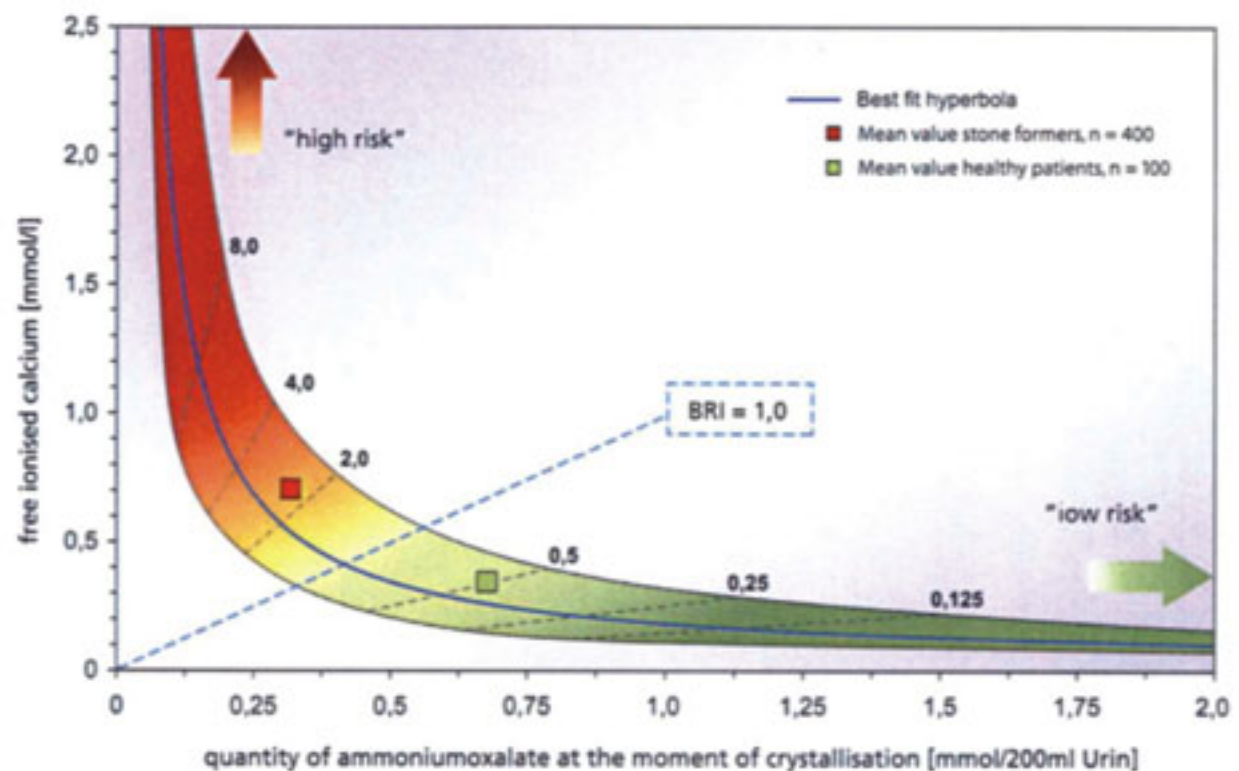


The BONN-Risk-Index (BRI) is the measured result of a standardised in-vitro test used to assess the crystallisation risk of calciumoxalate in the urine.

$$\text{BRI} = \frac{[\text{Ca}^{2+}]}{(\text{Ox}^{2-})} = \frac{\text{free ionised calcium [mmol/l]}}{\text{quantity of ammoniumoxalate at the moment of crystallisation [mmol/200ml urine]}}$$

- All components of the untreated native urine are included in the risk assessment
- The present CaOx-stone formation risk can be accurately assessed with only two parameters

### BRI risk levels simplify crystallisation risk assessment



degree	BRI interval	risk
I	BRI < 0,125	negligible
II	0,125 ≤ BRI < 0,25	very low
III	0,25 ≤ BRI < 0,50	low
IV	0,50 ≤ BRI < 1,00	moderate
V	1,00 ≤ BRI < 2,00	increased
VI	2,00 ≤ BRI < 4,00	high
VII	4,00 ≤ BRI < 8,00	very high
VIII	BRI > 8,00	extremely high



<sup>1</sup> Laube N, Hergarten S, Hoppe B, Schmidt M, Hesse A: Determination of the Calcium Oxalate Crystallization Risk from Urine Samples: the Bonn Risk Index in Comparison to other Risk Formulas. J. Urol. 172, 355-359, 2004.