Camino® ICP Monitor

The Integra Camino ICP Monitor is a compact, portable device that provides tools for continuously determining and monitoring intracranial pressure (ICP) and intracranial temperature (ICT) directly in the brain, depending on which catheters are connected to the system.
This monitor supports the following catheters:

- Series of Integra Camino Fiber Optic Catheters (110-4 series) for measuring both ICP and temperature.
- Integra Camino Flex Catheter for measuring ICP values.

Key Functions of Monitor:

- Touch screen interface for evaluating patient ICP/ICT data and setting patient parameters
- Physiological alarm that activates if the patient's Mean ICP value exceeds a user-specified limit for more than 5 seconds
- Storage of patient's ICP trend data for up to 5 days
- Outputs for transferring patient data to a patient bedside monitor
- Outputs for extracting patient data to remote media types via USB drive or digital streaming
- Rechargeable lithium ion battery that supplies power to monitor during patient transport

For instructions on using the Integra catheters, see the directions for use supplied with each respective catheter.

Catalog No. CAM02

System includes:

- **Camino® ICP Monitor**
- REF. CAMCABL (a): Camino Fiber Optic Catheters cable
- REF. FLEXEXT (b): Camino Flex catheter cable
- REF. PMIOMPM1: Main cable for connecting Integra monitor to patient bedside monitor
- REF. EXPORTCAB (c): USB-to-RS232 adapter cable
- REF. MONPWR: AC power adaptor
- REF. BAT1001: Battery

a

b

c

Intracranial Pressure Monitoring Kit

Placement: Parenchyma or subarachnoid space	
KIT COMPONENTS	
1 transducer tipped catheter	4Fr/ 1.35 mm
Camino bolt	With compression cap, turning wings and spacer to adjust seating depth of the bolt
Twist drill bit with safety stop	8Fr/2.7mm
Stylet	To clear the passage
Hex wrench	To adjust the safety stop
Zero adjustment tool	To adjust the transducer to zero

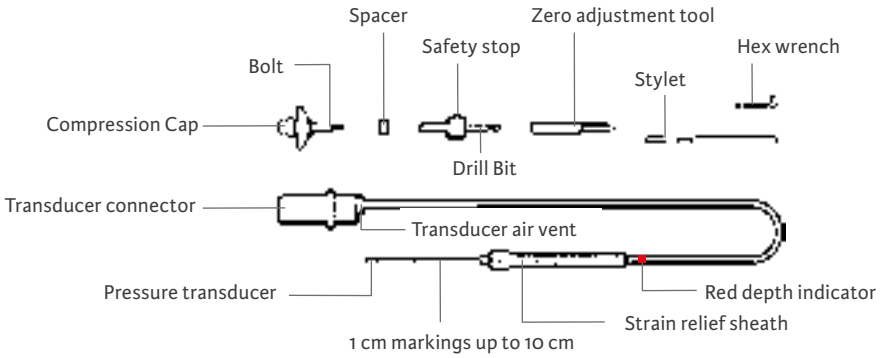
Catheter depth Markings: 1 to 10 cm markings to gauge the insertion depth

Strain relief sheath: Protective sheath

Red depth indicator: To check the depth position

Catalog No. 1104B

Packaging: 10 per cases or individually - Sterile



Intracranial Pressure and Temperature Monitoring Kit

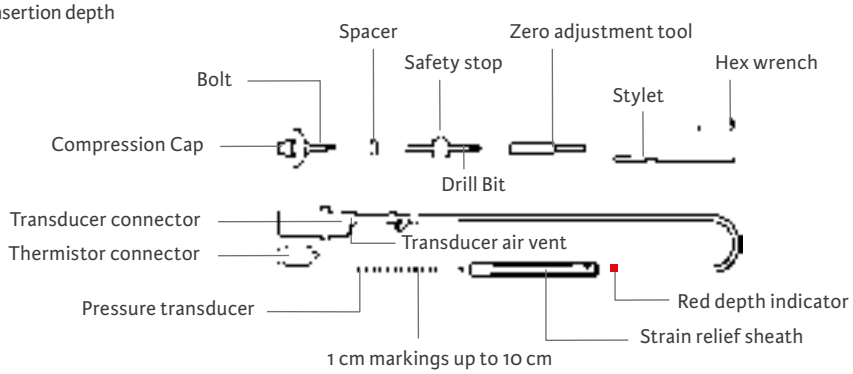
Placement: Parenchyma	
KIT COMPONENTS	
1 transducer tipped catheter with thermistor	4Fr / 1.35 mm (Thermistor is placed approx. 1 cm from the tip of the catheter)
Camino Bolt	With compression cap, turning wings and spacer to adjust seating depth of the bolt
Thermistor connector	To connect the temperature catheter
Twist drill bit (with safety stop)	8 Fr/2.7 mm
Stylet	To clear the passage
Hex wrench	To adjust the safety stop
Zero adjustment tool	To adjust the transducer to zero

Catheter depth markings guide: 1 to 10 cm markings to gauge the insertion depth

Red depth indicator: To check the depth position

Catalog No. 1104BT

Packaging: 10 per cases or individually - Sterile

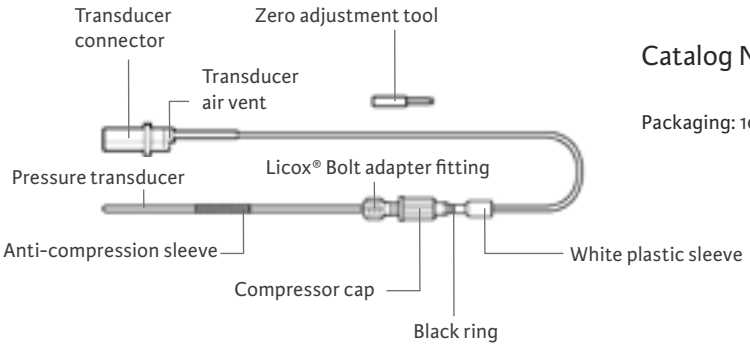


Intracranial Pressure Monitoring Catheter Kit with Licox® Bolt Fitting

Model 1104L is used to measure intracranial pressure through a Licox Introducer Kit.

Placement: Parenchyma	
KIT COMPONENTS	
1 transducer tipped catheter with Licox bolt fitting	4Fr/1.35 mm
Twist drill bit (with safety stop)	16Fr/5mm
Zero adjustment tool	To adjust the transducer to zero
Packaging	10 per cases or individually - sterile

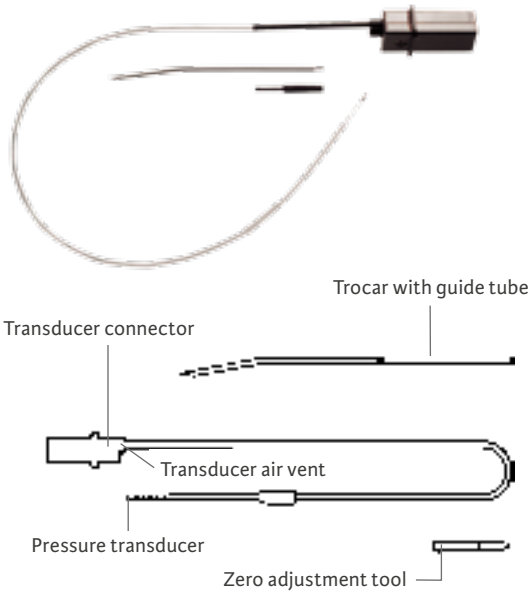
To be used in conjunction with Licox Kits
ref. IM2_EU, IM2.S_EU, IM3_EU, IM3.S_EU, IM3.ST_EU, IP2 or IP2.P



Catalog No. 1104L

Packaging: 10 per cases or individually - Sterile

Post Craniotomy Subdural Pressure Monitoring Kit



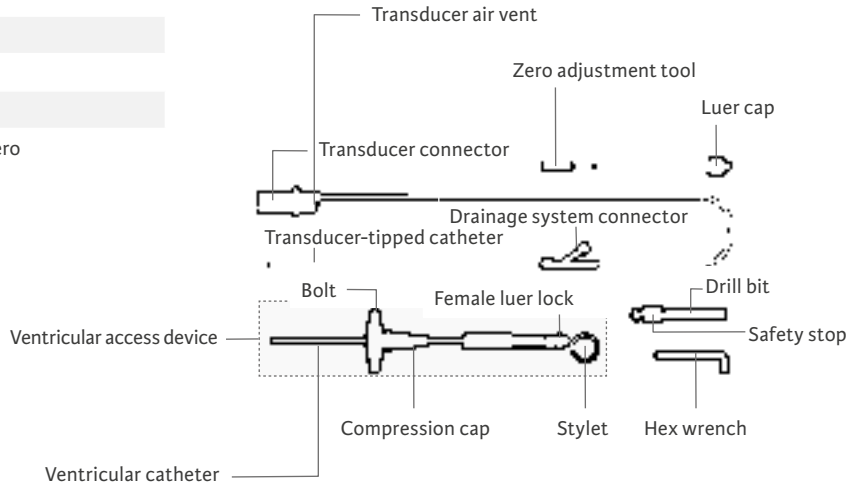
Placement: Subdural space post craniotomy	
KIT COMPONENTS	
1 transducer tipped catheter	4Fr/ 1.35 mm
Trocar with guide tube	9,5Fr /3,17 mm
Depth markings	1 to 10 cm markings to gauge the insertion depth
Zero adjustment tool	To adjust the transducer to zero

Catalog No. 1104G

Packaging: 10 per cases or individually - Sterile

Micro Ventricular Drainage and Pressure Monitoring Kit with Bolt

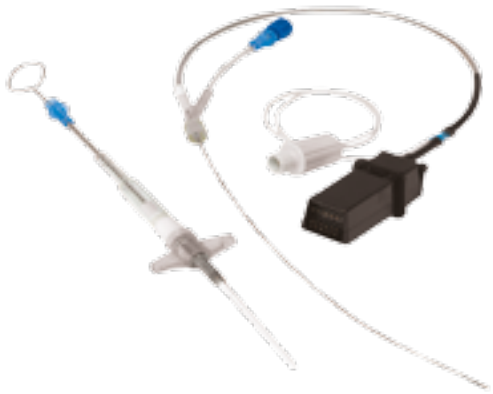
Placement: Ventricles	
KIT COMPONENTS	
1 transducer tipped catheter	4Fr / 1.35 mm
Ventricular Catheter with bolt	12Fr / 4mm
• Outside Diameter	11Fr / 3.7mm
• Inside Diameter	7 Fr / 2.2mm
• Length	6-8cm (adjustable)
Twist drill bit (with safety stop)	16Fr / 5.3mm
Hex wrench	To adjust the safety stop
Female luer lock	To connect drainage system
Zero adjustment tool	To adjust the transducer to zero



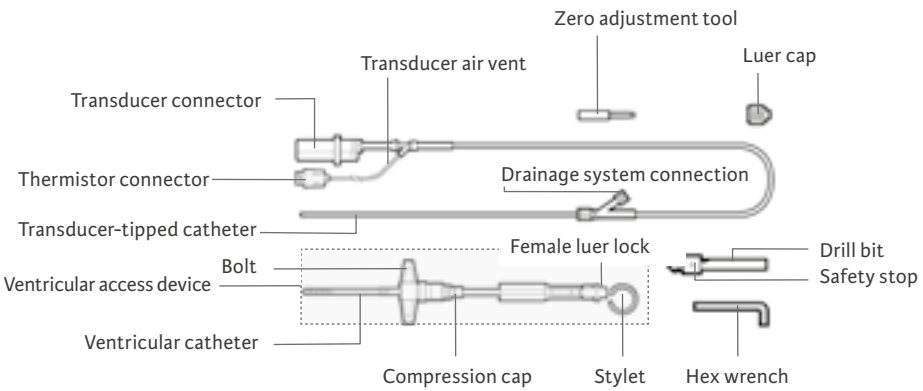
Catalog No. 1104HM

Packaging: 10 per cases or individually

Micro Ventricular Drainage, Pressure and Temperature Monitoring Kit with Bolt



Placement: Ventricles	
KIT COMPONENTS	
1 transducer tipped catheter	4Fr/ 1.35 mm
Ventricular Catheter with bolt	12Fr / 4mm
• Outside Diameter	11Fr / 3.7mm
• Inside Diameter	7 Fr / 2.2mm
• Length	6-8cm (adjustable)
Termistor connector	approx 1 cm from the tip of the catheter
Twist drill bit (with safety stop)	16Fr / 5.3mm
Hex wrench	To adjust the safety stop
Female luer lock	To connect drainage system
Zero adjustment tool	To adjust the transducer to zero



Catalog No. 1104HMT

Packaging: 10 per cases or individually

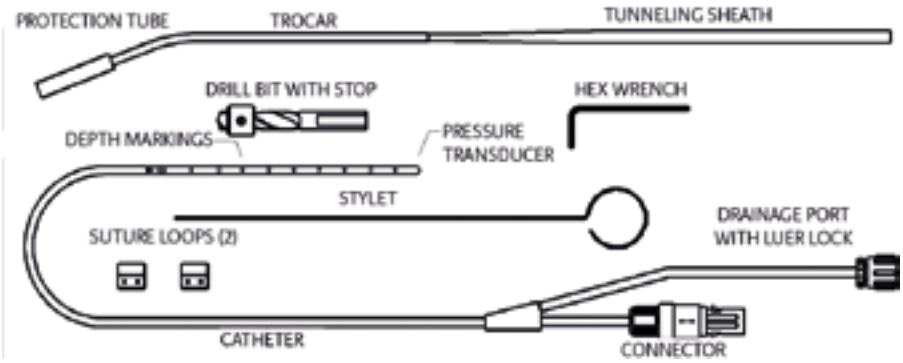
Camino® Flex Ventricular Intracranial Pressure Monitoring kit with trocar

Placement: Ventricles	
KIT COMPONENTS	
Catheter size	9/10 Fr (3.3 mm of diameter)
Trocar with tunneling sheath	
Drill Bit	7 mm of diameter
Stylet	0.7 mm of diameter
Suture loops	2 units
Hex Wrench	For adjustment of the drill stop

Technology: Strain gauge micro electro-mechanical system (MEMS) piezoresistive silicon chip

Catalog No. VTUN

Packaging: Individual - Sterile



Licox® P_tO_2 Monitor

The Integra Licox P_tO_2 Monitor provides functionality for continuously monitoring oxygen partial pressure (P_tO_2) in brain tissue. Tissue temperature compensation, which is required for the calculation of P_tO_2 measurements, may also be continuously measured with an accuracy of ± 1°C. To measure P_tO_2 and temperature tissue compensation continuously, the Integra Licox P_tO_2 Monitor supports a series of minimally invasive probes that are inserted directly into the patient:

- The P_tO_2 probe uses an electrochemical (polarographic) micro-cell for oxygen measurements.
- The temperature probe uses a thermocouple (type K) for temperature measurements.

In place of a temperature probe, the monitor also provides an option for entering tissue temperature compensation values manually for the calculation of P_tO_2 measurements.

Key Functions of Monitor

- Touch screen interface for evaluating patient data and setting patient parameters
- Physiological alarm that activates if the patient's P_tO_2 value falls below a user-specified limit for more than 5 seconds
- Storage of patient's trend data for up to 5 days
- Outputs for transferring patient data to a patient bedside monitor
- Rechargeable lithium ion battery that supplies power to monitor during patient transport

Catalog No. LCX02

System includes:

- **Integra Licox P_tO_2 Monitor**
- **REF. BC10 Kit:** Probe cables
  - **REF. BC10PA cable:** Blue P_tO_2 probe cable
  - **REF. BC10PV cable:** Blue P_tO_2 probe extension cable
  - **REF. BC10TA cable:** Green Temperature probe cable
  - **REF. BC10TV cable:** Green Temperature probe extension cable
  - **REF. PMOCAB cable:** Blue combined P_tO_2/Temperature probe cable
  - **REF. BC10PMO cable:** Y-adapter cable for Blue combined P_tO_2/Temperature probe cable
  - **REF. BC10R:** Test set (Test smard card, test probe)
- **REF. PMIOMPM1 cable:** Main cable for connecting Licox® P_tO_2 monitor to patient bedside monitor
- **REF. EXPORTCAB cable:** USB-to-RS232 adapter cable
- **REF. MONPWR cable:** Power cable
- **REF. BAT1001:** Rechargeable Battery
- **User's Manual**

Interface cable to order separately regarding your bedside monitor:

- **ICP-XX**: Oxygen pressure adapter cable
- **ICT-XX**: Temperature adapter cable

Licox® PMO Box

Licox® PMO Box is an interface device between Licox® combined oxygen and temperature probe (CC1.P1), and bedside monitor.

Catalog No. PMOBOX

Components	Catalog No.
Licox® Interface Device	PMOBOX
Test Adaptor for Functional test	PMOFC
Test Adaptor for Patient Safety test	PMOPST
PMO Probe Cable	PMOCAB

Connects PMOBOX to bedside monitor:

Interface Cable to order separately regarding your bedside monitor	NL950MCXX

Probes only

Licox® Oxygen Probe

Probe's tube Diameter at tip	0.6 mm
Probe's tube Length	150 mm
Oxygen sensitive area	13 mm²
Distance from tip to sensitive area	5 mm
Introducer kit compatibility	IM1/ IM2_EU/IM3_EU
Storage condition	Between 2° and 10°C

- Supplied sterile

Catalog No. CC1.SB

Licox®Temperature Probe

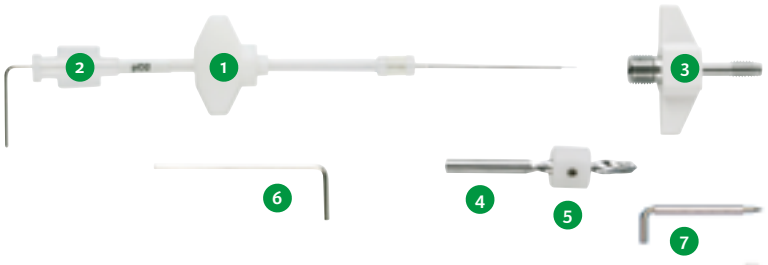
Probe's tube Diameter at tip	0.8 mm
Probe's tube Length	126 mm
Probe Type	Thermocouple Type K
Introducer kit compatibility	IM3_EU

- Supplied sterile

Catalog No. C8.B

Introducer Kits only

Licox® Introducer kit, Single Lumen



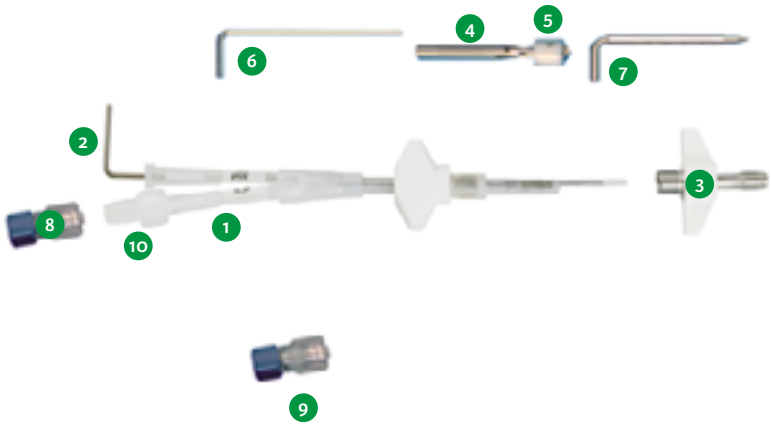
The kit includes:

1. Compression cap
2. Introducer
3. Bolt
4. ø 3.8 mm twist drill bit
5. Adjustable drill safety stop with set screw
6. Hex wrench
7. Stylet

- Supplied sterile

Catalog No. IM1

Licox® Introducer kit, Double Lumen



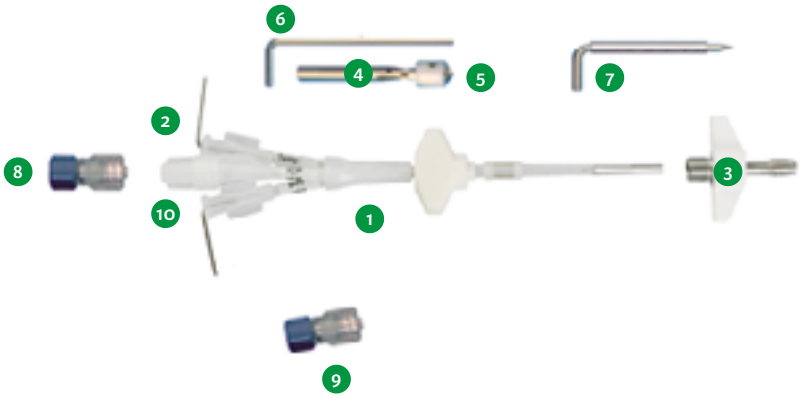
The kit includes:

1. Dual channel introducer with luer connectors
2. Guide wire
3. Bolt
4. ø 5.3 mm twist drill bit
5. Adjustable drill safety stop with set screw
6. Hex wrench
7. Stylet
8. Compression fitting for Ventrix® NL950SD ICP Catheter
9. Compression fitting for Codman® ICP Microsensor® Catheter
10. Removable ICP lumen obturator

- Supplied sterile

Catalog No. IM2_EU

Licox® Introducer kit, Triple Lumen



The kit includes:

1. Triple channel introducer with luer connectors
2. Guide wires (x2)
3. Bolt
4. ø 5.3 mm twist drill bit
5. Adjustable drill safety stop with set screw
6. Hex wrench
7. Stylet
8. Compression fitting for Ventrix® NL950SD ICP Catheter
9. Compression fitting for Codman® ICP Microsensor® Catheter
10. Removable ICP lumen obturator

- Supplied sterile

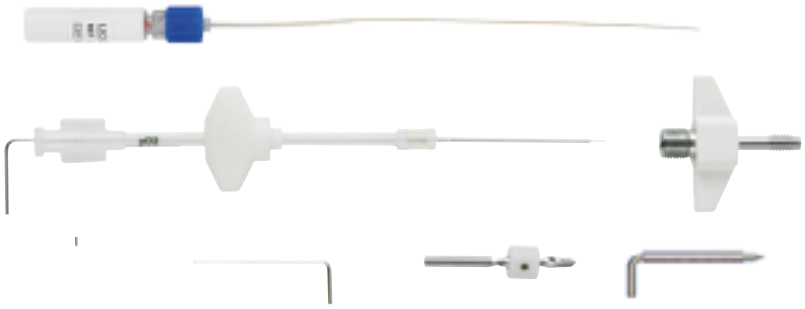
Catalog No. IM3_EU

Complete Probe Kits

Licox® Complete Brain Probe Kit, Single Lumen

The kit includes:	
Oxygen probe	CC1.SB
Single Lumen Introducer	IM1

- Storage condition: between 2° and 10°C
- Supplied sterile

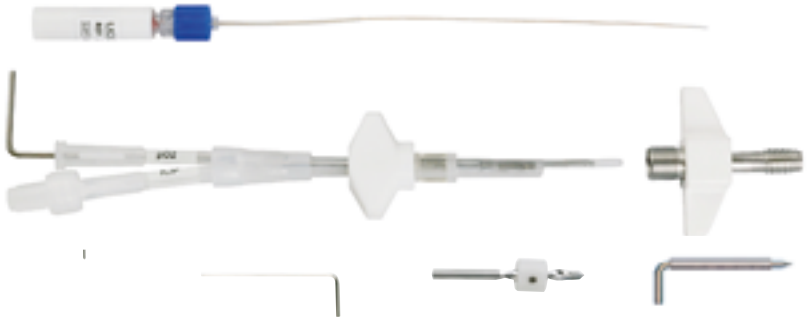


Catalog No. IM1.S

Licox® Complete Brain Probe Kit, Double Lumen

The kit includes:	
Oxygen probe	CC1.SB
Double Lumen Introducer	IM2_EU

- Storage condition: between 2° and 10°C
- Supplied sterile

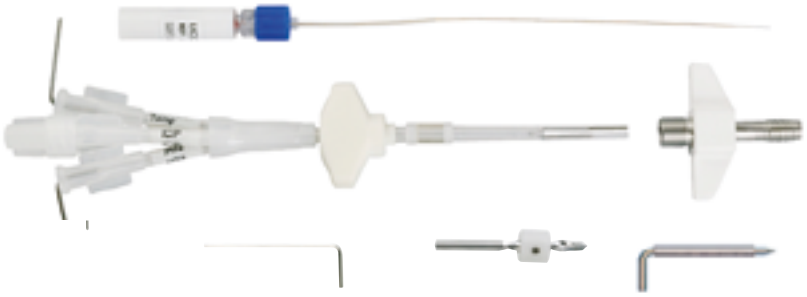


Catalog No. IM2.S_EU

Licox® Complete Brain Probe Kit, Triple Lumen

The kit includes:	
Oxygen probe	CC1.SB
Triple Lumen Introducer	IM3_EU

- Storage condition: between 2° and 10°C
- Supplied sterile

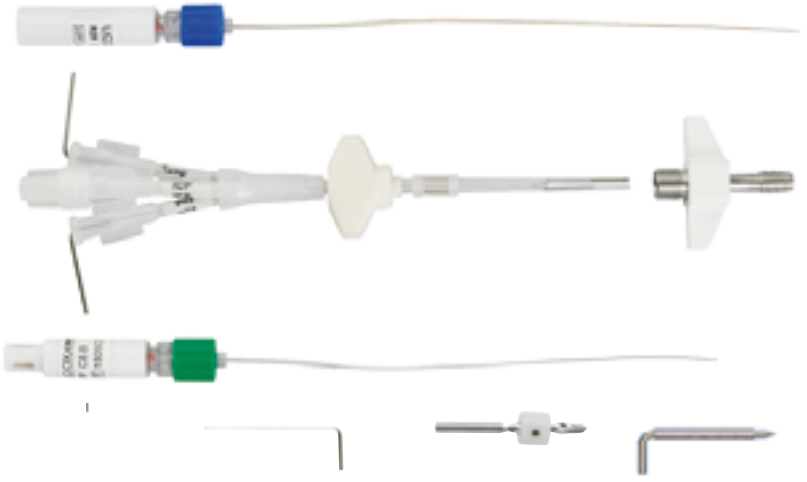


Catalog No. IM3.S_EU

Licox® Complete Brain Probe Kit with Temperature Probe, Triple Lumen

The kit includes:	
Oxygen probe	CC1.SB
Temperature probe	C8.B
Triple Lumen Introducer	IM3_EU

- Storage condition: between 2° and 10°C
- Supplied sterile



Catalog No. IM3.ST_EU

Combined Probe only and Introducer kits

Licox® Combined Oxygen and Temperature Probe

Probe's tube Diameter at probe tip	0.65mm
Probe's tube Length	460 mm
Oxygen sensitive area	18 mm^2
Distance from tip to sensitive area	5mm
Compatibility with	IP1/IP2/VK5.2

Storage condition: between 2° and 10°C

Supplied sterile

Catalog No. CC1.P1

Licox® Single Lumen Introducer Kit

The kit includes:

- Bolt with single lumen introducer
- Guide wire
- Compression cap
- Drill bit diam. 3.8 mm
- Adjustable drill stop with set screw
- Hex wrench for adjustment of drill stop
- Stylet

Supplied sterile

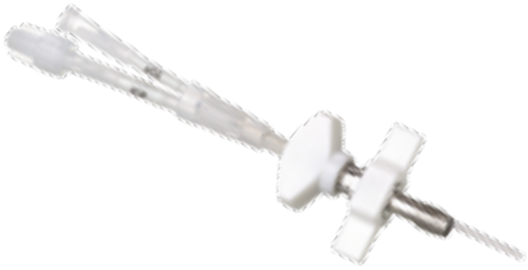
Catalog No. IP1

Licox® Double Lumen Introducer Kit

The kit includes:

- Bolt with double lumen introducer for Licox® PMO combined oxygen and temperature probe and Camino® ICP catheter 1104L or Ventrix® ICP catheter NL 950SD.
- Guide wire
- Compression cap fitting for ICP catheter
- Drill bit diam. 6.3 mm
- Adjustable drill stop with set screw
- Hex wrench for adjustment of drill stop
- Stylet

Supplied sterile



Catalog No. IP2

Combined Probe with Bolted and Tunneling Introducer kits

Licox® Complete Brain Probe Kit, Single Lumen

The kit includes:	
Combined Oxygen and Temperature Probe	CC1.P1
Single Lumen Introducer Kit	IP1

- Probe must be stored between 2°C and 10°C.
- Supplied sterile

Catalog No. IP1.P

Licox® Complete Brain Probe Kit, Double Lumen

The kit includes:	
Combined Oxygen and Temperature Probe	CC1.P1
Double Lumen Introducer Kit	IP2

- Probe must be stored between 2°C and 10°C.
- Supplied sterile

Catalog No. IP2.P

Licox® Parenchymal Probe Guide

- Strong needle: Length 150 mm, diam. 3.2 mm
- Probe guiding tube: Length 415 mm, diam. 2.8 mm with suture rings diam. 4 mm
- Drill bit 5.3 mm
- Adjustable drill stop with set screw
- Hex wrench for adjustment of the drill stop
- Supplied sterile

Catalog No. VK5.2

Licox® Complete Brain Tunneling Probe Kit

The kit includes:	
Combined Oxygen and Temperature Probe	CC1.P1
Parenchymal Probe Guide	VK5.2

- Probe must be stored between 2°C and 10°C.
- Supplied sterile

Catalog No. IT2_EU

Measuring Intracranial Pressure with Licox® Brain Probe Kits

Components
Camino® Intracranial Pressure Monitoring Catheter with Integrated Licox® Introducer Fitting Used with all Camino® monitors CAM01, CAM02, MPM1 and SPM1

Catalog No. 1104L

Cranial Access Kit (without Prep Solutions)

The Cranial Access Kit is a convenient pre-packaged sterile set containing all necessary components for burr-hole entry into the cranium. This kit does not include prep solutions.

- Sterile, packaged 5 per case or individually

Catalog No.INS5HND

Components	
Disposable razor	Adson forcep-serrated
12 ml safety syringes (2)	Adson forceps, 1 x 2 teeth
18 G x 1-1/2" needles (2)	Needle holder
25 G x 5/8" needle	2 oz medicine cup (2)
18 G x 3-1/2" spinal needle	Self-retaining retractor
12 G x 5-1/2" ventricular needle	Scissors
15" x 15" fenestrated drape with barrier	5.31 mm drill bit with depth guard
18" x 26" white absorbent towels (3)	3-0 nylon suture (packaged outside kit)
4" x 4" gauze sponges (10)	Marker
Hand drill	Flexible ruler
#11 scalpel with handle	Hex wrench for depth guard adjustment
#15 scalpel with handle	

Hand Drill

Hand drill (bit not included) intended for single-use in neurosurgical procedures.

- Sterile, packaged individually

Catalog No. INS030

Drill Bits

Drill bits intended for single-use in neurosurgical procedures.

- Sterile, packaged individually

Components	Catalog No.
Single drill bit with collar, 5/32" (3.97 mm)	SP0075
Single drill bit with collar, 13/64" (5.31 mm)	SP0087
Single drill bit with collar, 1/4" (6.35 mm)	SP0088

Note: When using the Camino® or Ventrix® Monitoring Kits, please use the drill bit provided with that kit.

INTEGRA®
LIMIT UNCERTAINTY

Integra Neurocritical care
Indications/ Contraindications

Camino ICP Monitor CAM02

INDICATIONS

- The Integra® Camino® ICP Monitor is indicated for use by qualified neurosurgeons or neurointensivists for measurement of intracranial pressure and temperature.

CONTRAINDICATIONS

- The Integra Camino ICP Monitor and its accessories are contraindicated for use in a Magnetic Resonance (MR) environment.

Camino 1104B

INDICATIONS

- The use of the OLM* Intracranial Pressure Monitoring Kit by a qualified neurosurgeon is indicated when direct measurement of intracranial pressure in the parenchyma or the subarachnoid space, is clinically important.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated.
- Magnetic Resonance Imaging (MRI) Safety Information: The Camino 1104B is MR Unsafe. Do not bring catheter or accessories into the MR environment.

Camino 1104BT

INDICATIONS

- The Camino Intracranial Pressure Temperature Monitoring Kit is indicated for use by qualified neurosurgeons for measurement of intracranial pressure and temperature in the parenchyma.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated. This device is contraindicated for use in the MRI field.

Camino 1104HM

INDICATIONS

- The use of the Camino Micro Ventricular Pressure Monitoring Kit by a qualified neurosurgeon is indicated when direct pressure measurement and cerebro-spinal fluid drainage is clinically important. The Camino Micro Ventricular Pressure Monitoring Kit is intended to be used with an external drainage system as
- indicated by individual manufacturers.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated.

Camino 1104HMT

INDICATIONS

- The Camino Micro Ventricular Bolt Pressure-Temperature Monitoring Kit is indicated for use by qualified neurosurgeons for measurement of intracranial pressure and temperature in the ventricles and for cerebrospinal fluid drainage.
- The Camino Micro Ventricular Bolt Pressure-Temperature Monitoring Kit is intended to be used with an external drainage system as indicated by individual manufacturers.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated. This device is contraindicated for use in the MRI field.

Camino 1104G

INDICATIONS

- The use of the Post Craniotomy Subdural Pressure Monitoring Catheter by a qualified neurosurgeon is indicated when direct pressure measurement in the subdural space, post craniotomy, is clinically important.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated.
- Magnetic Resonance Imaging (MRI) Safety Information: The Camino 1104G is MR Unsafe. Do not bring catheter or accessories into the MR environment.

Camino 1104L

INDICATIONS

- The use of the Camino Intracranial Pressure Monitoring Kit by a qualified neurosurgeon is indicated when direct measurement of intracranial pressure in the parenchyma or the subarachnoid space, is clinically important.

CONTRAINDICATIONS

- This device is not intended for any use other than that indicated.
- Magnetic Resonance Imaging (MRI) Safety Information: The Camino 1104L is MR Unsafe. Do not bring catheter or accessories into the MR environment.

Camino Flex VTUN

INDICATIONS

- Use of the Integra® Camino® Flex Ventricular Intracranial Pressure Monitoring Kit with Integra Camino Flex Adapter is indicated when direct and continuous intraventricular intracranial pressure (ICP) monitoring and cerebrospinal fluid (CSF) drainage are required. ICP monitoring, using this device, is an invasive method for measuring intracranial pressure.

CONTRAINDICATIONS

- ICP monitoring should not be conducted where components of the monitoring system will come in direct contact with any infected tissue. This includes, but is not limited to: infections of the scalp, bone, meninges, ventricles, and blood stream. Monitoring is also contraindicated in patients who are receiving anti-coagulants or are known to have a bleeding diathesis. ICP monitoring is contraindicated where trained personnel are not available to continuously supervise monitoring.
- This device is not designed, sold, or intended for any use except as indicated.

Licox PtO2 Monitor LCX02

INDICATIONS

- The Integra® Licox® PtO2 Monitor measures oxygen partial pressure (PtO2) and temperature in brain tissue and these parameters are used together as an aid in the determination of the perfusion status of cerebral tissue local to sensor placement. Monitor values are relative within an individual, and should not be used as the sole basis for determining a diagnosis or therapy. It is intended to provide data additional to that obtained by current clinical practice in cases where hypoxia or ischemia are a concern.

CONTRAINDICATIONS

- The Integra Licox PtO2 Monitor and its accessories are contraindicated for use in a Magnetic Resonance (MR) environment.

Licox IM1.S, IM2.S_EU, IM3.ST_EU, IP1.P, IP2.P, IT2_EU (included CC1.SB, C8.B, CC1.P1, IM1, IM2_EU, IM3_EU, IM3.S_EU, IP1, IP2 and VK5.2)

INDICATIONS

- The Licox Brain Oxygen Monitoring System measures intracranial oxygen and temperature and is intended as an adjunct monitor of trends of these parameters, indicating the perfusion status of cerebral tissue local to sensor placement. Licox System values are relative within an individual, and should not be used as the sole basis for decisions as to diagnosis or therapy. It is intended to provide data additional to that obtained by current clinical practice in cases where hypoxia or ischemia are a concern

CONTRAINDICATIONS

- Licox products are not intended for any use other than that indicated.
- Contraindications for device insertion into the body apply, e.g. coagulopathy and/or susceptibility to infections or infected tissue. A platelet count of less than 50 000 per µl is considered a contraindication. This value may differ according to different hospital protocols.

Cranial Access Kit INS5HND

INDICATIONS

- The Cranial Access Kit allows foraccess to the subarachnoid space or thelateral ventricles of the brain. The kit isintended to be used with an externaldrainage and monitoring system inselected patients to reduce intracranialpressure (ICP), to monitor CSF, toprovide temporary drainage of CSF, andto monitor ICP.

CONTRAINDICATIONS

- This product is not designed, sold, orintended for use except as indicated.

Notes

INTEGRA®
LIMIT UNCERTAINTY

Products
References

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