# **CODMAN NEURO**

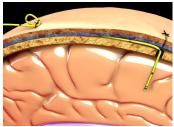
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CODMAN MICROSENSOR® ICP Transducer is MR Conditional at 1.5T and 3T

# CODMAN MICROSENSOR® ICP Transducer

### Direct Pressure Monitoring at the Source in Multiple Procedural Kit Configurations

The CODMAN MICROSENSOR<sup>®</sup> ICP Transducer consists of a miniature strain gauge pressure sensor mounted in a titanium case at the tip of a 100 cm 3F flexible nylon tube. The CODMAN MICROSENSOR ICP Transducer monitors intracranial pressure directly at the source – parenchymal, subdural, or intraventricular.



Basic Kit (Parenchymal)



Basic Kit (Subdural)



Bolt Kit



Ventricular Kit

## Small, Flexible and Low-Profile

The small size and flexibility allows for low-profile tunneling under the scalp and kinking of the transducer without breakage or monitoring interruption.

## **MR Conditional**

The CODMAN MICROSENSOR ICP Transducer is MR conditional and may be imaged in the MR environment when used in accordance with the manufacturer's instructions for use.<sup>1</sup>

Critically ill neurosurgical patients may benefit from the additional information gained through MR imaging for planning therapy and predicting outcomes.<sup>2</sup>

### Elimination of Maintenance Requirements Associated with Fluid Coupled Systems

The CODMAN MICROSENSOR ICP Transducer eliminates the need for constant alignment of the transducer to the patient's head and periodic re-zeroing. False readings associated with obstructions, air bubbles or movement of the patient fluid lines are no longer a concern.

## Minimal Drift and Accuracy

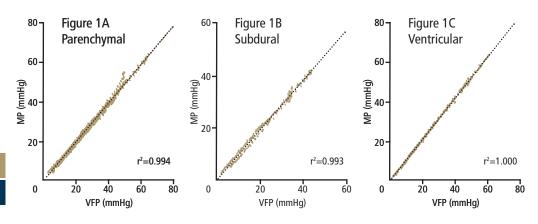
Studies performed on the CODMAN MICROSENSOR ICP Transducer<sup>3,4,5</sup> demonstrate a high degree of accuracy and stability in ICP monitoring.

One study showed a mean drift of 0.9 mm Hg over an average 7.2 days of monitoring, with 25 percent of the sensors exhibiting no drift during the entire monitoring period<sup>3</sup>.

TIME (Days)	DRIFT (Mean)
7.2 ±.04	0.9 ± 0.2 mmHg

#### Figure 1:

Comparison of CODMAN MICROSENSOR ICP Transducer versus standard ventricular pressure as measured with an external fluid transducer (a) parenchymal, (b) subdural space and (c) ventricular fluid pressure.

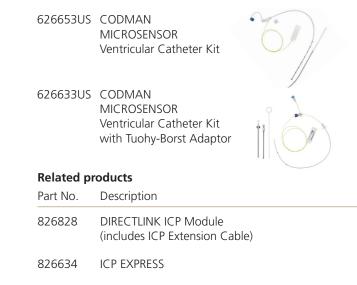


## ORDERING INFORMATION

#### CODMAN MICROSENSOR ICP Transducer

Part No. Description





#### References

- 1. CODMAN MICROSENSOR Instructions for Use, 2015.
- 2. Heidenreich JO, Stendel R, Brock M, Wolf KJ, Schilling AM. Evaluation of MR imaging compatibility of a new intracranial pressure monitoring device. AJNR Am J Neuroradiol. 2005;26(2):360-2.

 Koskinen L, Olivecrona M: Clinical Experience with the Intraparenchymal Intracranial Pressure Monitoring Codman Microsensor System. Neurosurgery 56: 693-698, 2005.
Gopinath S, Robertson C, Contant C, Narayan R, Grossman R: Clinical Evaluation of a Miniature Strain-Gauge Transducer for Monitoring Intracranial Pressure. Neurosurgery 36: 1137-1141, 1995.

5. Marmarou A, Tsuji O, Dunbar JG: Experimental Evaluation of a New Solid State ICP Monitor. Intracranial Pressure IX: 15-17, 1994.

Products may be manufactured at one of the following:

Codman & Shurtleff, Inc. 325 Paramount Drive Raynham, MA 02767-0350 USA www.depuysynthes.com Medos International SÀRL Chemin-Blanc 38

Chemin-Blanc 38 CH-2400 Le Locle Switzerland

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#### Indications

Use of the CODMAN MICROSENSOR Basic Kit and CODMAN MICROSENSOR Skull Bolt are indicated when direct intracranial pressure (ICP) monitoring is required. The kit is indicated for use in both subdural and intraparenchymal pressure monitoring applications only.

Use of the CODMAN MICROSENSOR Catheter Kit is indicated when direct intracranial pressure (ICP) monitoring is required. The kit is indicated for use in intraventricular pressure monitoring and cerebral spinal fluid (CSF) drainage applications.

See Instructions for Use for complete product information and specific MRI Safety Information.