

What is the Ideal IUPC?

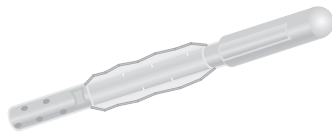
- ✓ **Accurately measures intrauterine pressure**
- ✓ **Easy to set up and manage**

- ✓ **Easy to insert and place properly**
- ✓ **Easy to troubleshoot**

	Koala®	Accu-Trace™	Intran®
1. Easy to set up and manage?	Yes	Yes	Yes
2. Easier to place?	Yes	No	No
3. Able to establish a True Zero in utero?	Yes	No	No
4. Free from thermal drift?	Yes	No	No
5. Able to thoroughly troubleshoot system?	Yes	No	No
a. Confirm placement in the amniotic space	Yes	Yes	?
b. Re-zero in utero to eliminate error and thermal drift	Yes	No	No
c. Confirm transducer accuracy in utero	Yes	No	No
d. Change transducer in utero	Yes	No	No
e. Change monitor and establish a new True Zero in utero	Yes	No	No

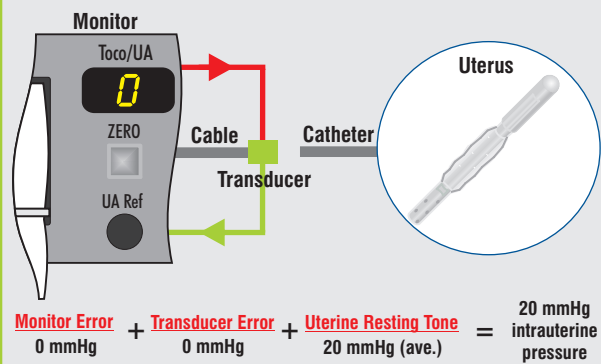
Koala[®]

Sensor-tip catheter



1. The Koala catheter and cable are easily connected to the monitor and managed.
2. The Koala is made and packaged to properly achieve fundal placement. Its small, soft tip, catheter stiffness and unique "U" shape facilitate easy insertion and optimal placement in the upper fundus area.
3. A True Zero is obtained by zeroing out the initial electrical error on both monitor and transducer while the transducer is outside the uterus, exposed to atmospheric pressure. With its transducer in the reusable cable, the Koala is the only intrauterine pressure catheter that can establish a True Zero at all times during use (see Figure A).
4. Thermal drift refers to the potential variability in intrauterine pressure readings as the transducer changes from room to body temperature. With its transducer located externally in the reusable cable, the Koala is not subject to thermal drift.
5. The Koala is able to thoroughly troubleshoot:
 - a. Its clear catheter lumen enables confirmation in the amniotic space via fluid flashback (10 holes).
 - b. It can properly re-zero error any time (see No. 3).
 - c. Its transducer accuracy is confirmed in utero by disconnecting the cable and using a test adapter.
 - d. Its transducer can be changed with catheter in utero simply by changing to a new cable.
 - e. It can remain in utero as the monitor is changed, and obtain a new True Zero in utero (see No. 3).

Figure A - Koala Zero/Re-Zero Process



Accu-Trace[™]

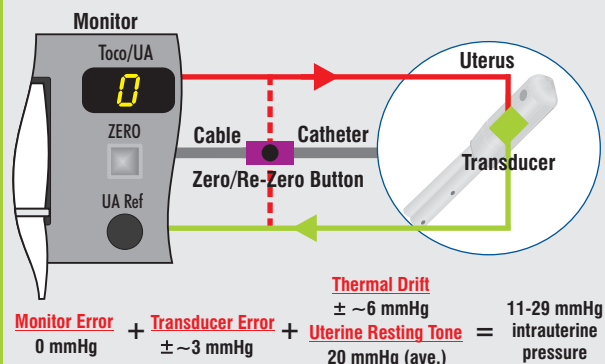
Transducer-tip catheter



1. The Accu-Trace catheter and cable are easily connected to the monitor and managed.
2. Packaging creates memory. The Accu-Trace's pretzel packaging and flimsy catheter material do not facilitate ease of insertion and optimal placement in the upper fundus area. The catheter is more likely to be placed in the extramembranous space*, and often folds over onto itself and retreats out the introitus during placement.
3. The Accu-Trace is able to establish a True Zero only when the transducer tip is outside the uterus, exposed to atmospheric pressure. However, clinicians are instructed to insert the catheter prior to zeroing, meaning any electrical error will remain on the transducer, and any ability to establish a true zero is eliminated (see Figure B).
4. With its transducer located in the catheter tip, the Accu-Trace is subject to thermal drift upon insertion.
5. The Accu-Trace is unable to thoroughly troubleshoot:
 - a. Its clear catheter lumen enables confirmation in the amniotic space via fluid flashback (2 holes).
 - b. Re-zeroing only zeroes monitor error, not transducer error or thermal drift (see No. 3).
 - c. It must be removed to confirm transducer accuracy.
 - d. It must be removed and a new catheter inserted to change the transducer.
 - e. When following its Instructions for Use, it can never establish a initial True Zero (see No. 3).

* A. Sciscione, et al. Extramembranous Placement of an Air-Coupled vs. Transducer-Tipped IUPC.

Figure B - Accu-Trace Zero/Re-Zero Process



Intran[®]

Transducer-tip catheter



1. The Intran catheter and cable are easily connected to the monitor and managed.
2. Packaging creates memory. The Intran's pretzel packaging does not facilitate ease of insertion and optimal placement in the upper fundus area. The catheter is more likely to be placed in the extramembranous space*, and often folds over onto itself and retreats out the introitus during placement.
3. The Intran is able to establish a True Zero only when the transducer tip is outside the uterus, exposed to atmospheric pressure. Once the catheter has been inserted, any further zeroing will not represent True Zero (see Figure C).
4. With its transducer located in the catheter tip, the Intran is subject to thermal drift upon insertion.
5. The Intran is unable to thoroughly troubleshoot:
 - a. Only certain models of the Intran enable confirmation in the amniotic space. The majority of models do not perform this function.
 - b. Re-zeroing only zeroes monitor error, not transducer error or thermal drift (see No. 3).
 - c. It must be removed to confirm transducer accuracy.
 - d. It must be removed and a new catheter inserted to change the transducer.
 - e. It must be removed as the monitor is changed to establish a new initial True Zero (see No. 3).

* Dowdle, M. Evaluating a New Intrauterine Pressure Catheter.

Figure C - Intran Zero/Re-Zero Process

