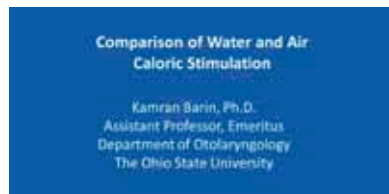


ICS AirCal - Technical Specifications	
Temperature range:	12° to 50°C
Cool stimulus:	12° to 37°C (Recommended setting: 24°C)
Warm stimulus:	37° to 50°C (Recommended setting: 50°C)
Temperature readout:	Digital
Time to temperature:	< 60 seconds
Temperature accuracy:	+/- 0.4°C
Time range:	1 to 99 seconds (Recommended setting: 60 seconds)
Flow rate range:	4 - 10 liters per minute (Recommended setting: 8 liters per minute)
Flow rate accuracy:	+/- 0.4 liters per minute
Air supply:	Internally mounted compressor
Remote control capability:	When integrated with Otometrics VNG/ENG systems
Timeout indication:	Internally generated Audible Beep
Input power:	85 VAC - 265 VAC @ 50 or 60 Hz
Maximum Current:	1.6 A @ 120 VAC, 0.8 A @ 240 VAC
Safety:	Primary temperature read-out. Separate over-temperature cut-off.
Stimulus timing activation:	Activation trigger on delivery head or foot switch.
Size	
Width	13.5 inches (34.3 cm)
Depth	12 inches (30.5 cm)
Height	4 inches (10.2 cm)
Weight	
17.5 lbs. (7.9 kg) (with empty reservoir)	
18 lbs (8.2 kg) (with full water reservoir)	
Operating Environment	
Temperature	+15°C to +35°C (59°F to +95°F)
Rel. Humidity	<90%, 35°C non-condensing
Air Pressure	600 hPa to 1060 hPa
Operations at temperatures below -20°C (-4°F) or above +60° C (140°F) may cause permanent damage.	
Storing and Handling	
Temperature	-25°C to +60°C (-4°F to +140°F)
Rel. Humidity	<90%, 35°C non-condensing
Air Pressure	500 hPa to 1060 hPa
Reservoir	If the ICS AirCal is going to be stored for an extended period of time without usage, or shipped the reservoir should be empty.
Calibration	
Calibration of this system is not required. Local government rules and regulations, if applicable, should be followed at all times. However, if the system is not performing as expected a re-calibration may be needed.	
Standards	
Safety	Complies with EN 60601-1, UL2601-1, CAN/CSAC22.2 NO 601.1-90, Class I, Type BF, IPXO
EMC	UL 60601-1

*) Barin, K. (2008). *Background and Technique of Caloric Testing*. In *Balance Function Assessment and Management*. 1st ed. San Diego: Plural Publishing:197-228 • Barin, K. (2008). *Interpretation and Usefulness of Caloric Testing*. In *Balance Function Assessment and Management*. 1st ed. San Diego: Plural Publishing: 229-252. • British Society of Audiology (1999) *Recommended Procedure: Caloric Testing*. *British Journal of Audiology* 33: 179-184. • Ford, CR & Stockwell, CW (1978) *Reliabilities of air and water caloric responses*. *Archives of Otolaryngology* 104: 380-382. • Zapala, D & Shaughnessy K *Water vs. Air - Are they equivalent caloric stimuli?* - *Mayo Clinic Jacksonville, FL* • Zapala, DA; Olsholtz KF & Lundy LB (2008) *The comparison of water and air caloric response sand their ability to distinguish between patients with normal and impaired ears*. *Ear & Hearing* 29(4): 585-600.

Watch Dr. Kamran Barin's video guides on caloric testing



otometrics.com/caloricguides

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MADSEN • AURICAL • ICS

ICS AirCal

MADSEN • AURICAL • ICS

Excellent visibility...

...efficient irrigation



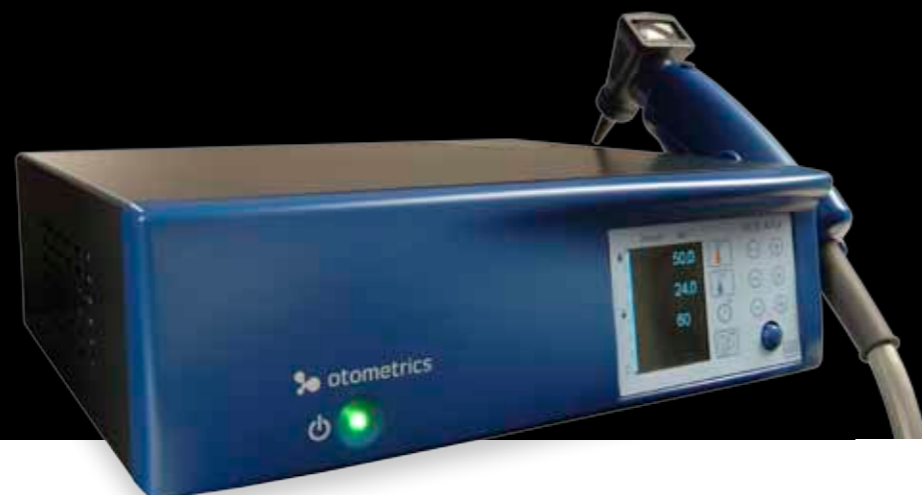
BALANCE

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Air Caloric Irrigator

ICS AirCal

Bringing diagnostic accuracy and efficiency into balance testing



Superior Visibility



Small footprint - ICS AirCal stacked with Otometrics' VNG/ENG solution

Irrigation with the ICS AirCal provides a modern choice for gold standard caloric irrigation. It combines the convenience and patient comfort of air, with the precision of water irrigation enabling you to do caloric testing with confidence. With no water to catch, the entire irrigation process is easier for the clinician and more pleasant for the patient.

Accurate stimuli without water

Research has proven that using air temperatures set at 24°C and 50°C creates a comparable response as water irrigation*. ICS AirCal heats and cools at a temperature range from 12°C to 50°C. For accuracy, the temperature is controlled at the tip of the delivery tube ensuring the air temperature transferred to the patient. With the superior delivery head the tester can see the tympanic membrane, making it easy to accurately deliver stimulus. This new design reduces the learning curve for clinicians who currently use a water irrigator.

The caloric test forms the key element in the VNG/ENG test battery with the requirement that the stimulus delivered to each ear be exactly the same.

Efficient and accurate testing

The intuitive digital display including the large buttons makes it easy to operate the device in the dark. The LED display is set at an angle and has large, bright numbers which are viewable from various positions within the room. For an efficient workflow, ICS AirCal integrates the irrigation function with Otometrics' VNG/ENG systems, enabling you to stay next to the patient while accurately completing the caloric test battery.

Flexible, quiet and portable

You can set the temperature, airflow and time to meet your clinic's requirements. Furthermore you can set the intensity of the beep that lets you know the stimulus time has been reached. The ICS AirCal is quiet, has a small footprint and low weight (18 lbs/8 Kg) making it easy to transport.

▶ Watch Dr. Kamran Barin's video guide comparing water vs. Air calorics www.otometrics.com/caloricguides

Superior delivery head

- Fully lighted unobstructed view of the tympanic membrane
- Enables you to direct the flow of air straight at the tympanic membrane for effective irrigations
- Disposable specula for irrigation as well as easy viewing of the tympanic membrane, saving time as there is no need to swap speculum
- Unique head design allows for cooling of the air without condensation build-up

Temperature control - Cools below room temperature

- Heats and cools at a temperature range from 12°C to 50°C
- Enables you to create the same response as water irrigation*
- Stabilizes at the desired temperature in less than 60 seconds of start-up

Intuitive digital display

- Easy-to-see display in the dark, and the large buttons are easy to find
- Display is viewable from many viewing angles allowing you to stay near your patient
- Water reservoir level display tells you when refill is needed

Easily operate the ICS AirCal

- Direct communication with Otometrics VNG/ENG solutions
- Selected protocol automatically sets the correct temperature (warm or cold)
- Start the VNG/ENG tracing simultaneously along with the stimulation count down timer
- Start video recording or center a tracing using the foot switch or trigger button on the delivery head

▶ Watch Dr. Kamran Barin's video guides on caloric testing www.otometrics.com/caloricguides

