

# KingFlex2™

co-axial breathing circuit



Protect. Simplify. Save

## KingFlex2

The first expandable, single-limb breathing circuit. A revolutionary design that addresses common concerns like no other circuit on the market.

### Protect...Both Patient and Machine

- Minimizes the potential for disconnects, with only one connection to the machine
- Reduces potential for patient infection and machine contamination, with only one bidirectional co-axial filter
- Helps maintain patient's body temperature, as reported in independent studies<sup>1,2,5</sup>
- Can provide 100% oxygen to patient during transport, when combined with a King Systems Transport Kit

### Simplify...Reduce SKU's to Inventory

- Reduce the variety of circuit lengths stocked, because flex tubing is expandable to multiple lengths
- Minimize the variety of circuit types stocked, because the Flex2 can be used wherever an adult or pediatric two-limb circuit is used
- Eliminate the need to stock HME's, based on independent studies demonstrating the moisture efficiency of the Flex2 circuit<sup>3,4,5</sup>

### Save...Cost Savings and Convenience

- After surgery, combine the Flex2 with a King Systems Transport Kit
  - A lower cost transport option than a resuscitation bag
  - Design of the Flex2 reduces torque at the patient end
  - Clinician can be the length of the circuit away from the patient while delivering up to 100% oxygen
- After transport, combine the Flex2 with the King PACU kit
  - A potentially lower cost PACU option
  - Less overall disposable waste from surgery, through transport, to PACU

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### Options

- Available in a 72" (1.8m) flex length, expandable from 21" to 72" (0.5 to 1.8m)
- Available in a 108" (2.7m) flex length, expandable from 38" to 108" (1.0 to 2.7m)
- Up to a 15' (4.5m) reach, when the 6' (1.8m) optional flex extension is used
- Available with or without the HEPA rated co-axial filter pre-assembled
- Circuit and kit configurations are customizable to the clinician's/hospital's preferences, including (but not limited to):
  - King Big Blue mask
  - Gas sampling lines
  - Yankauers and/or Stylets
  - Fresh Scent & Sweet Dreams Facemasks™
  - Sample port elbows
  - Electrodes
  - Contour Breathing Bag®
  - Suction tubes
  - EKG pads
  - Rainbow Breathing Bags®
  - Filters, HME's, or HME/F's
  - Temperature strips

For additional information, please call 1-800-642-5464, or visit [www.kingsystems.com/customer-support](http://www.kingsystems.com/customer-support).

### KingFlex2 Circuit Performance Data

	Thermal Efficiency <sup>2,5</sup> (C @ 4 l/m)				Humidity Delivery & Efficiency <sup>5</sup> (@500 ml Vt)		Resistance <sup>5</sup> (cm H <sub>2</sub> O @ 30 l/m)			Compliance <sup>5</sup> (ml/cm H <sub>2</sub> O @ 60 cm H <sub>2</sub> O)
	Ivent	Iprox	Eprox	Event			Inspir	Expir		
King single-limb – initial	22.3	23.2	31.1	24.0	Relative Humidity	82%	72"	1.23	1.41	2.20
King single-limb @ 15m	23.6	29.2	31.0	25.5	Humidity Efficiency	70.3%	108"	1.67	2.04	2.83
Temp Change	+ 1.3	+ 6.0	- 0.1	+ 1.5	Absolute Humidity	26.4 mg/l				
Std two-limb – initial	21.5	23.1	29.6	23.8						
Std two-limb @ 15m	21.6	23.9	29.5	25.7						
Temp Change	+ 0.1	+ 0.8	- 0.1	+ 1.5						

### Basic Filter/HME Performance Data<sup>5</sup>

Part #	Type	Size	Resistance (cm H <sub>2</sub> O)	Volume (ml)	Absolute Humidity (mg/l)	Bacterial Efficiency	Viral Efficiency	HEPA Rating @0.3 Micron Challenge
co-ax (F2)	Filter	STND	0.8 @ 0.5 l/s	86	n/a	99.9999%	99.999%	>99.97%
MS-110	HME	STND	0.5 @ 0.5 l/s	55	30 @ 1000ml Vt	n/a	n/a	n/a
AN-003	HME	STND	1.5 @ 0.5 l/s	38	31 @ 1500ml Vt	n/a	n/a	n/a
MS-102	HME	SML	0.7 @ 0.5 l/s	22	27 @ 500ml Vt	n/a	n/a	n/a
AN-001	HME	SML	2.0 @ 0.5 l/s	28	29 @ 1000ml Vt	n/a	n/a	n/a
MS-111	HME/F	STND	1.1 @ 0.5 l/s	55	32 @ 1000ml Vt	>99.99%	>99.99%	n/a
KS-1000	HME/F	STND-SML	1.4 @ 0.5 l/s	35	31 @ 500ml Vt	99.99%	99.99%	n/a

### References/Studies:

1. The Universal F Breathing System Reduces the Number of Hypothermic Patients Entering the PACU. Thompson, Rast, Carson.
2. Evaluation of the King Systems Universal F Anesthesia Breathing Circuit. Campbell, Branson, Johnson, et. al.
3. Anesthesia Circuits, Humidity Output, and Mucociliary Structure and Function. Branson, Campbell, Davis, Porembka.
4. Humidification During Anesthesia: How and How Much. Branson, Davis, Porembka.
5. Test results and filter data on file.

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