

KingUniversal F[®] Flex

co-axial breathing circuit



Protect. Simplify. Save

KingUniversal F Flex

A 100% disposable, expandable, single-limb breathing circuit. A new King Systems circuit that continues to incorporate the revolutionary features that address common concerns like no other circuit on the market.

Protect...Both Patient and Machine

- Reduces potential for patient infection and machine contamination, when used with a variety of filter options
- Helps maintain patient's body temperature, as reported in independent studies^{1,2,5}
- 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 F Flex 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 F Flex circuit^{3,4,5}

Save...Cost Savings and Convenience

- After surgery, combine the F Flex with a King Systems Transport Kit
 - A lower cost transport option than a resuscitation bag
 - Design of the F Flex 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 F Flex with the King PACU kit
 - A potentially lower cost PACU option
 - Less overall disposable waste from surgery, through transport, to PACU

KingUniversal F[®] Flex

co-axial breathing circuit

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 14' (4.2m) reach, when the 5' (1.5m) optional flex extension is used
- 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.

King Universal F Flex Circuit Performance Data

	Thermal Efficiency ^{2,5} (C @ 4 l/m)				Humidity Delivery & Efficiency ⁵ (@500 ml Vt)		Resistance ⁵ (cm H ₂ O @ 30 l/m)			Compliance ⁵ (ml/cm H ₂ O @ 60 cm H ₂ O)
	Ivent	Iprox	Eprox	Event			Inspir	Expir		
King single-limb – initial	22.3	23.2	31.1	24.0	Relative Humidity	86%	72"	1.18	1.39	2.27
King single-limb @ 15m	23.6	29.2	31.0	25.5	Humidity Efficiency	74%	108"	1.43	1.72	3.11
Temp Change	+ 1.3	+ 6.0	- 0.1	+ 1.5	Absolute Humidity	27.8 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 Data⁵

Part #	Type	Size	Resistance (cm H ₂ O)	Volume (ml)	Absolute Humidity (mg/l)	Bacterial Efficiency	Viral Efficiency
20801	Filter	STND	0.7 @ 0.5 l/s	66	n/a	99.99%	99.99%
MS-122	Filter	LRG	0.5 @ 0.5 l/s	99	n/a	99.999%	99.999%
MS-110	HME	STND	0.5 @ 0.5 l/s	55	30 @ 1000ml Vt	n/a	n/a
AN-003	HME	STND	1.5 @ 0.5 l/s	38	31 @ 1500ml Vt	n/a	n/a
MS-102	HME	SML	0.7 @ 0.5 l/s	22	27 @ 500ml Vt	n/a	n/a
AN-001	HME	SML	2.0 @ 0.5 l/s	28	29 @ 1000ml Vt	n/a	n/a
MS-111	HME/F	STND	1.1 @ 0.5 l/s	55	32 @ 1000ml Vt	>99.99%	>99.99%
KS-1000	HME/F	STND-SML	1.4 @ 0.5 l/s	35	31 @ 500ml Vt	99.99%	99.99%

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.

Sales Company

Ambu Inc.
6740 Baymeadow Drive
Glen Burnie, MD 21060
Tel.: 1 410 768 6464
1 800 262 8462
Fax. 1 800 262 8673
www.ambuUSA.com

Manufacturer

King Systems
15011 Herriman Boulevard
Noblesville, IN 46060
Tel. 317 776 6823
Tel. 800 642 5464
Fax 317 776 6827
www.Kingsystems.com

US: Rx only