# Cerebrovascular Flowprobes<sup>®</sup> To Fit Your Needs

Available in Reusuable 16-time Use or Pre-Sterilized Single-Use Flowprobes

Charbel Intracranial Micro-Flowprobe®



Charbel Intracranial Micro-Flowprobes<sup>®</sup> are designed for deep intracranial surgery (aneurysm clipping, AVM & tumor resections, EC-IC Bypass). Its long bayonet handle permits use under a surgical microscope and its flexible neck segment permits the probe to be optimally positioned around a vessel.

## Charbel Extracranial Micro-Flowprobe®



Comparison of Flowprobe bodies of Intracranial Flowprobes (top) and Extracranial Flowprobes.



Extracranial-Micro-Flowprobes (3 mm, 4 mm, 6 mm) feature a shorter bayonet handle and larger flowsensing body to be used during on extracranial vessels during EC-IC bypass surgery.



## Transonic: The Cerebrovascular **Flowprobe Innovator**

### Charbel Intracranial & Extracranial Micro-Flowprobes®



Charbel Intracranial Micro-Flowprobes® are available in 1.5, 2 and 3 mm sizes.



Comparison of bayonet handles of the -MB-Series Charbel Micro-Flowprobes® for intracranial vessels and the -MB-S & -MR-S-Series Micro-Flowprobes for extracranial vessels during EC-IC bypass surgery.

"Flow is a vital parameter during cerebrovascular surgery; including flow in my surgical approach gives me a high degree of control over surgical outcome. When I close the patient, I know the patient will recover without ischemia surprises. This translates into peace of mind for the patient and me, and saves money for the hospital.

F Charbel, MD, FACS

"Transit-time flow measurements are useful for surgical management during cerebrovascular surgery. The technique was simple to use and provided sensitive, stable, reliable results. The method revealed distal branch flow drop after aneurysm clipping, or residual flow during temporary clipping, and has the potential to predict post-operative complications in bypass or carotid endarterectomy surgeries.

N Nakayama, MD

6-USE	PROBE	SPECIFIC	CATIONS
		51	

PROBE	VESSEL SIZE	CATALOG #		
size	outer diameter mm			
INTRACRANIAL PROBES				
1.5 mm 2 mm 3 mm	1.0 - 1.5 1.5 - 2.7 2.5 - 3.4	HQE 15 MR HQE 2 MR HQE 3 MR		
EXTRACRANIAL PROBES				
3 mm 4 mm 6 mm	2.5 - 3.3 3.3 - 4.9 4.4 - 6.9	HQE3MR-S HQE4MR-S HQE6MR-S		

HQE-MR-Series Flowprobes are reusable (up to 16 sterilization cycles).

#### SINGLE-USE PROBE SPECIFICATIONS

PROBE	VESSEL SIZE	CATALOG #		
size	outer diameter mm			
INTRACRANIAL PROBES				
1.5 mm 2 mm 3 mm	1.0 - 1.7 1.5 - 2.7 2.3 - 3.4	HQG 15 MB HQG 2 MB HQG 3 MB		
EXTRACRANIAL PROBES				
3 mm 4 mm 6 mm	2.5 - 3.3 3.3 - 4.9 4.4 - 6.9	HQG 3 MB-S HQG 4 MB-S HQG 6 MB-S		
HQG-MB-Series Flowprobes ship pre-sterilized				

for single use where Creutzfeldt-Jakobs disease transmission is a concern.



Transonic Systems Inc. is a global manufacturer of innovative biomedical measurement equipment. Founded in 1983, Transonic sells "gold standard" transit-time ultrasound flowmeters and monitors for surgical, hemodialysis, pediatric critical care, perfusion, interventional radiology and research applications. In addition, Transonic provides pressure and pressure volume systems, laser Doppler flowmeters and telemetry systems.

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