

Accessories for Precision Perivascular Flowprobes for TS420 Flowmeters Modules

ACCESSORIES FOR ACUTE APPLICATIONS

Acoustic couplant gel is used to displace the air between the flowprobe and the vessel during acute application because air will block transmission of the ultrasound signal. Appropriate coupling gels for use with Transonic flowprobes have acoustic properties at various temperatures that closely match blood. See TN#9 for complete listing.

Surgilube: (# ZC510 4.25 oz. tube)
Bacteriostatic Surgical Lubricant from E. Fougera & Co.

H-R Jelly (discontinued) Water soluble hospital lubricant

NALCO 1181 (# APNALCO 6 oz.):
Superabsorbant powder to thicken Surgilube gel for long experiments. For terminal use only.

MRI COMPATIBILITY

Transonic ultrasonic transit time flowprobes can be made from nonmagnetic components for flow measurements during magnetic resonance imaging.

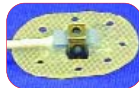
Contact Customer Service to special order: ceramic or brass reflector, nonmagnetic connector, probe ID key for use with extra long extension cables.

PROBE CUSTOMIZATIONS FOR CHRONIC IMPLANT

SILICONE FLANGE (-SF)

for coronary implants.

Mesh-reinforced silicone flange cemented around the perimeter of probe is sutured to the myocardium to stabilize the probe on the heart in LAD artery application; also used in umbilical artery (fetal sheep) application. Can also be used to hold coupling gel in place during acute experiments and to keep the probe riding



2PSS (back view)



3PSB (back view)

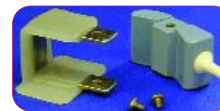


3PSB (front view)

SILICONE SHIELDS

U-reflectors on PS-Series probes may be silicone encapsulated for chronic implant.

NARROW SHIELD (-USN)



Cushions vessel for ascending aorta and pulmonary artery implant.



WIDE SHIELD (-USW)



Stabilizes probe on collapsible vessels (i.e. portal vein); keeps fat from infiltrating probe.

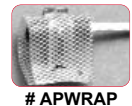
PROBE & CONNECTOR STABILIZATION PRODUCTS

MERSILENE MESH: (# APMERSILENE): 6 x 6" square soft interlocked polyester fiber mesh implanted under connector fortifies thin skin for cuff or button sutures. Also available from Ethicon (RM-L).

PROLENE MESH: (# APPROLENE): 6 x 6" square non-absorbable polypropylene mesh. For use with 14 - 36 mm PAX probes for chronic implant to protect the ascending aorta against long-term erosion. (Ethicon PMH)

ULTRACELL SPONGE (# APSPONGE): Soft absorbable sponge for use with PAX-probes for chronic implant to cushion the ascending aorta against erosion. Package of 5.

SILICONE WRAPPING STRIP (# APWRAP): Thin silicone strip reinforced with mesh wraps around outside of a probe to stabilize the probe on a vessel. Provides additional suture points to surrounding tissue and keeps fat from infiltrating the probe over long implants.



APWRAP

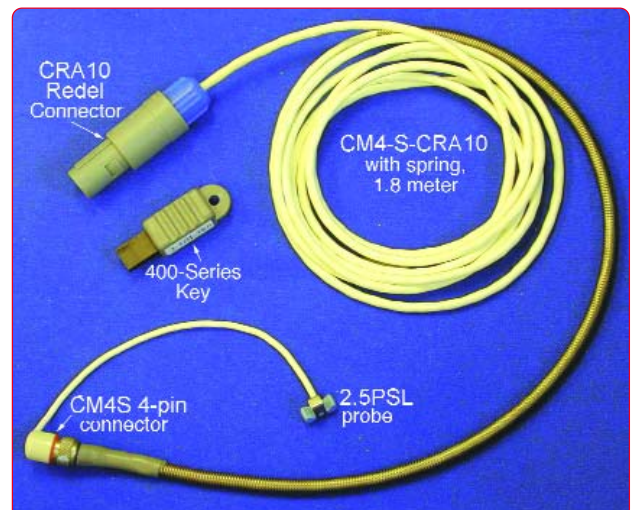
A WORD ABOUT THE CALIBRATION OF OUR FLOWPROBES

Transonic Precision Perivascular Flowprobes are precalibrated for absolute blood flow measurement at 37 C° using a gravity-fed constant flow bench setup with water at prescribed temperatures (see TN # 5). We calibrate probes for their intended use (acute vs. chronic) to compensate for the different acoustic conditions when using an acoustic gel in acute applications versus fibrotic tissue infiltration that stabilizes the probe in a chronic implant. Probes calibrated for acute use are calibrated to read 10% higher than probes for chronic implant (exception: PAX- and A-series are only calibrated for acute use). Sub-acute applications of only 1 - 2 days more closely mimic an acute preparation and should be calibrated for such. Acute calibration is also recommended for probes that are used for both acute and chronic application since acute measurements are more often interpreted in absolute terms. Chronic protocols are generally evaluated in relative terms as changes in flow over time. Custom calibration for atypical use is available (ex: calibration for fish at 10 degrees C°).

EXTENSION CABLES: TS420 PERIVASCULAR PROBES

CATALOG #	TYPE	DESCRIPTION
CRA10-S-CRA10	10-PIN	1.25 meter standard length
CRA10-M2-CRA10	10-PIN	2 meter (not for use with nanoprobes)
CRA10-M3-CRA10	10-PIN	3 meter (not for use with nanoprobes)
CRA10-X-CRA10	10-PIN	Custom length for MRI - specify
CM12-S-CRA10	12-PIN	1.8 meter cable
CM12-X-CRA10	12-PIN	Custom length - specify
CM4-S-CRA10	4-PIN	1.8 meter standard length
CM4-M3-CRA10	4-PIN	3 meter (not for use with nanoprobes)
CM4-X-CRA10	4-PIN	Custom length, no spring
CA4-S-CRA10	4-PIN	Mouse cable, 1.8 meter standard length
CH10-M2-CRA10	CONVERSION	2 meter length; probes require 400 ID keys FOR TX06 PROBES

PROBE WITH ACCESSORIES



Probe & Accessories: Composite picture of a 2.5PSL probe (MC2.5PSL-JN-WC10-CM4S-GC) connected to a CM4-S-CRA10 (1.8 meter) extension cable. The extension cable plugs into the front of the TS420 flowmeter module. The Probe ID key (for 4-pin connectors or skin buttons) must also be plugged into a port on the flowmeter module to provide probe calibration information.