

SBIR 06.2 PHASE I - AWARD DETAILS	
ORGANIZATION	MPMC
TOPIC NUMBER	A06-157
CONTRACT NUMBER	
YEAR OF AWARD	
AWARD START DATE	
AWARD COMPLETION DATE	
PROPOSAL NUMBER	A062-157-1321
TITLE	Liquid-Fueled Catalytic Heater for Infusion Fluids
PROJECT MANAGER	Daniel Scott Marshall (480) 497-8400 dsmarshall@cubeinc.com
COMPANY	CUBE Technology 820 W. Warner Rd. Suite 123 Chandler AZ 85225-2940 Minority Owned: No Veteran Owned: No Number of Employees: 1
KEYWORDS	Infusion fluids, fluid warming, catalytic heater, combustor
ABSTRACT	CUBE Technology has created an extremely compact and efficient catalytic combustor dubbed a Nano-Furnace. These Nano-Furnaces have demonstrated an unprecedented operating range and have operated on fuels from hydrogen to butane to JP-8. This catalytic combustor will be the core of the infusion fluid warmer. This combustor is fast-starting and delivers its heat gently, via radiation and convection. The heat will be used to heat a metal susceptor with both an infusion fluid heat transfer system and an air cooling system to control the temperature rise of the infusion fluids. In addition, this system could incorporate a small power converter between the Nano-Furnace and the susceptor to make it self-powered after a short start-up time and even re-charge the start-up battery during operation.
BENEFITS	A fuel-based infusion warmer will be extremely useful not only for remote treatment of soldiers, but also for first responders treating victims of hurricanes and other natural disasters. The self-powered version of this infusion warmer could spawn a suite of related products including miniature power generators to power numerous portable devices.