Woven Ceramic Matrix

Born in NASA’s shuttle research program, this unique ceramic fibre is designed to withstand the heat generated from the orbit re-entry of the shuttle. The alumina-based ceramic fibre is made into thread and woven into a ceramic matrix fabric to form one of the most advanced combustion surfaces for burners. The voids created in the weaving process act the same as the holes in ceramic tiles or openings in wire mesh burners. The precision-controlled weaving process provides an extremely uniform burning area without a need for internal diffusion plates or baffles. Flexibility of ceramic fibre provides second-to-none thermal and mechanical shock resistance for these burners.

ADVANTAGES
- At a melting temperature of 3200°F, the iTS’s WCM burners are indestructible
- Heat loading of over 7000 BTUH/hr sq inch down to 400 BTUH/hr sq inch provides a turn down of more than 17 to one in some applications
- The WCM burners are a perfect combination of wire mesh and ceramic tile burners; combining the superb characteristics of ceramics such as low thermal conductivity and high temperature resistance, with the flexibility and durability of wire mesh
- WCM burners are available in a variety of geometrical shapes, including cylindrical burners, which are ideal for all fluid immersion heating (boilers, fryers, water heaters)

APPLICATIONS
- Bake ovens
- Boilers
- Broilers
- Convection ovens
- Dishwashers
- Evaporators
- Fryers
- Furnaces
- Griddles
- Hold ovens
- Hot water heaters
- Pizza ovens
- Ranges
- Rotisserie ovens
- Steak cookers

SPECIFICATIONS
- Firing rate of 350 to 7000 BTUH/sq inch (depending on the application)
- Operation mode: Infrared and blue flame
- Rapid heat up and cool down
- Available in flat, semi-flat (dome), semi-cylindrical and cylindrical shapes
- Low emissions of NOx and other pollutants
- No substrate or baffles for distribution required

INNOVATIVE THERMAL SYSTEMS, LLC

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