Porous Metal in Medical Device Designs

Designers value the strength and durability of sintered porous metal which allows the material to hold its form, function in adverse conditions, and generally last longer than polymeric materials. It is used in a number of medical applications that require efficiency, exact flow specifications, biocompatibility, high-temperature resistance, and resistance to aggressive chemicals. Examples of these products include biocompatible porous titanium filters, implantable devices, metal filters in test stands, spargers used in cell-culture processes, filters to prevent plugging in catheters, and precision flow restrictors for the delivery of gases in life-critical systems.

In conjunction with these attributes, there are many other benefits that customers in the Medical Industry derive from using porous metal products. They include metallic integrity where the porous prevents shedding of foreign material into medical solutions; labyrinths of irregular paths within the media which perform depth filtration for foreign particulate capture; uniform controlled porosity of the material allows precise flow rates at specified pressures; and a variety of alloys to select from that ensures biocompatibility, compatibility with other materials, the ability to withstand variable temperatures and corrosive environments. Depending on the application, porous metal can be subjected to the most rigorous sterilization procedures, or simply discarded after the intended use.

Mott manufactures a variety of filtration and related devices from porous metal and has partnered with many customers on the development of innovative solutions in the medical device industry. Mott Corporation is ISO 9001:2000 Certified through Lloyd’s Registrar Quality Assurance and offers Class 100 and Class 10,000 clean room capabilities.

Information: www.mottcorp.com *[1]*.

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