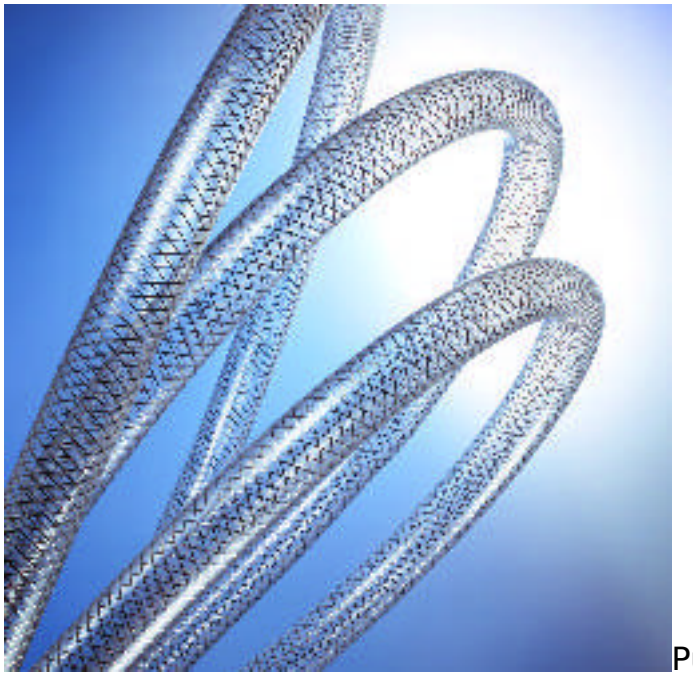
Multi-Lumen Tubing Is Wire Reinforced



Putnam Plastics, a PolyMedex Discovery Group company, introduces wire reinforced, multi-lumen tubing for minimally invasive procedures that require multiple working channels and high mechanical performance. While both multi-lumen tubing and braid reinforced tubing have been available for some time, the combination of these technologies represents a significant advancement in manufacturing technologies and a breakthrough for device engineers.
Multi-lumen tubing offers two or more passageway for gas/fluid management and mechanical/electrical delivery within minimally invasive devices can be achieved in a single extrusion. Dialysis catheters, for example, allow for blood to flow to and from the dialysis machine through separate lumens.

Reinforcements are available in coil or braid form, depending on therapeutic procedure requirements. Braided reinforcements increase burst strength and torque transmission, whereas coil reinforcements provide kink resistance. Intravascular catheters, for example, may use coil reinforced so that the shaft can be bent at sharp angles through vascular passageways without collapsing.

For example, previous endoscopic devices consisted of a large coil reinforced single lumen extrusion with numerous smaller single lumens assembled within to provide working channels. This method reduces the amount of available working space due to the wall thicknesses of each single extrusion and makes the final assembly of the medical device much more complex and therefore, more costly to produce. The new coil reinforced multi-lumen tubing consolidates these independent extrusions by increasing working space while reducing assembly time and cost.

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