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CPC Biopharma brings new ultra-compact sterile connector for aseptic processing

28 September 2022 | News

True alternative to tube welding at small tubing sizes

A new ultra-compact sterile connector provides biopharmaceutical and cell and gene therapy manufacturers a much-needed alternative to tube welding for their small-volume closed aseptic processes. MicroCNX® Series Connectors are the newest addition to the suite of aseptic connection solutions from CPC, including AseptiQuik® Connectors. The new product is designed to provide a smaller, easier, faster and less risky method of connecting tubing for small-format assemblies.

“MicroCNX® connectors are a critically important option for a range of bioprocessing, cell therapy and gene therapy workflows,” said Troy Ostreng, senior product manager for CPC’s biopharmaceutical business. “We hope to present a true alternative to the cumbersome process of tube welding, ending the hassle of the weld and enable operators to make sterile closed connections more efficiently. The MicroCNX® connector represents a huge innovation for the industry, in particular for those working with very small-bore tubing.”

MicroCNX® connectors are designed specifically for small-volume processes involving widely used 1/16” (1.6mm), 3/32” (2.4mm) and 1/8” (3.2mm) tubing. These include sampling, seed train expansion and early cell culture processes involving shaker flasks and rocker tables.

The easy, three-step process for using MicroCNX® connectors requires minimal training. Users simply “Pinch-Click-Pull”: 1) pinch to remove the protective cover; 2) click together the connector halves; and, 3) pull out the protective membranes so flow can start. In comparison, tube welding involves a dozen or more steps, with operator challenges including maneuvering the tube welder into position, dealing with equipment maintenance, and requiring precise technique to create a successful weld. With MicroCNX® solutions, there is no risk of faulty welds, welder breakdowns, or production delays due to weld equipment downtime.

Use of aseptic connectors eliminates the need to purchase, calibrate, validate and maintain tube welders that can cost more than €12,700 ($15,000) each. Manufacturers often need multiple welders, which take up valuable space in a cleanroom.

In order to ensure a clear flow path, tube welding requires operators to manually restore the tubing’s shape after being crimped by a weld. In contrast, MicroCNX® connectors help deliver a consistent flow path with every connection. Because MicroCNX® connectors can be incorporated into pre-made tubing assemblies, operators know where to make

connections—there’s no guesswork on their part, which supports current good manufacturing practices (cGMP). The size, weight and geometry of the new connector also fit well with the trend toward compact automated equipment for use in processes like cell expansion.