

**Biopharm**

# Biopharm Specials

CUSTOM MANUFACTURED BIOPHARMACEUTICAL  
COMPONENTS

**Technology**

WWW.MKSINST.COM



# Biopharm Specials

## FOR BIOTECHNOLOGY AND PHARMACEUTICAL INDUSTRIES

MKS offers a full line of standard biopharmaceutical products including Series 25 ASME BPE compliant fittings, Series 26 stainless steel filter housings, Series 48 NEMA-rated filter housing heaters, mass flow controllers, pressure measurement and calibration instruments, as well as process monitoring software.

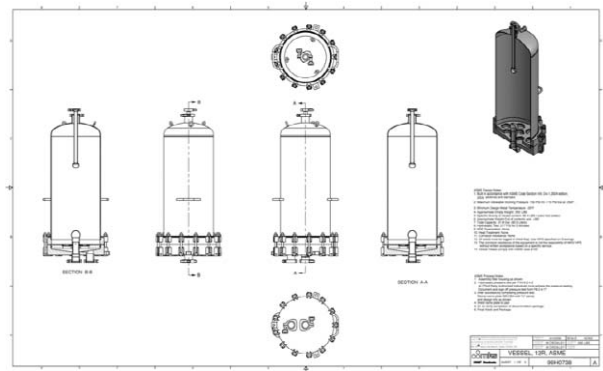
In addition to our line of standard products, the MKS engineering team can design custom solutions to meet each customer's needs, including: custom fittings, single and multi-round filter housings, special heaters, tanks, manifolds, skidded filtration systems, carts, and pre-validated spoons.

## Custom Solutions

### Filter Housings and Bases

The Series 26 modular filter housing product line offers a variety of options and flexible configurations. However, MKS offers additional solutions including custom housings, bases and inlet and outlet configurations.

- T-Lines without Gage Port
- L-Lines
- Steam Jackets
- ASME Code-Stamped Housings
- Code 0 and Code 7 Bases



### Multi-Round Housings

MKS has proven consistency in manufacturing multi-round filter housings for sanitary / industrial applications requiring higher flow rates with lower pressure drops through the filter assembly. Standard housings are available while custom housings, including integral sprayball options are quoted upon request.

- Multi-Round CIP Solution
- Fully Drainable Baseplate
- Custom Spray Ball Design
- Removable Tubesheet
- Electropolish Finish

### Custom Filter Assemblies

MKS has a complete engineering and fabrication team at your disposal. Our size and experience gives us the ability to react quickly to custom fabricated equipment such as skid mounted filtration and fill systems, portable CIP / SIP systems, or any other system your process requires. We have the ability to fabricate systems per current ASME specifications as well as design systems specific to your needs.



## Spools and Manifolds

MKS offers a total solution for all custom manifold assemblies, from transfer panels to jumpers to CIP headers. Here is what you can expect from MKS and our “quality comes first” fabrication department:

- 3rd Party QA
- Summary Material Test Reports
- ASME BPE Certification of Compliance
- Material Test Report
- Full Weld Documentation Packages Including Weld Maps and Logs
- Video Borescope Capabilities
- Hydrostatic Test
- Citric Passivation

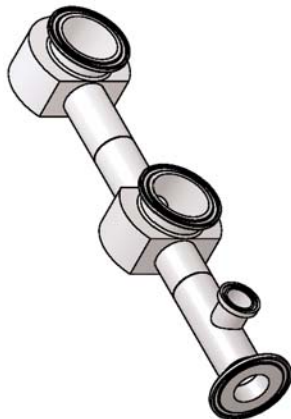


## ASME BPE Fittings

MKS' Series 25 stainless steel fittings are designed for any liquid flow process or high purity utility application where cleanability, sterility, dimensional integrity, and materials of construction are critical.

MKS can design and manufacture custom fittings designed for customers' specific needs. Similar to our standard line of Series 25 components, these fittings are also compatible with clean in place (CIP) and steam in place (SIP) processes.

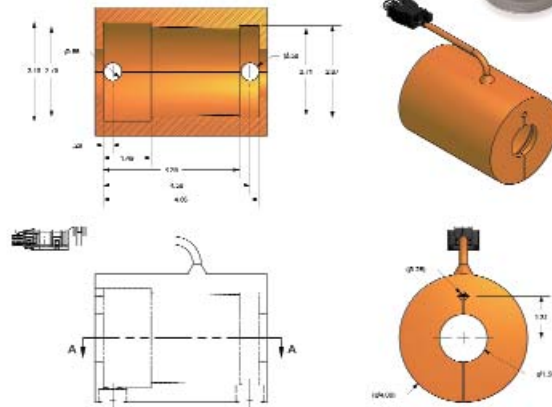
Our ASME BPE fittings are designed and manufactured according to strict tolerances for ovality, end-face squareness, wall thickness, and material chemistry.



## Electric Heaters

MKS heater jackets can be customized to heat stainless steel tubing, components and valves as well as both single-use and stainless steel housings.

The electric heaters are constructed using a patented design of molded silicone foam that provide redundant safety features for both high and low temperature control.



MKS Series 48 heaters lower the total cost of ownership by eliminating the need for steam lines and by reducing long maintenance times and safety issues associated with steam jackets. Their easy on and off design make MKS heaters ideal for both modular and portable applications within small and large scale facilities.

Series 48 heaters feature a unique temperature controller which integrates a temperature process controller, a high-low temperature alert, and power switching with a safety high limit — all inside an optional NEMA 4X enclosure. The controller features a user-friendly digital display, and an optional Modbus RTU Communications module allows users to remotely adjust parameters through its RS485 interface.



## Capabilities & Ordering Information

### Filtration Skids and Carts

- Cross-Flow Filtration
- Customer Supplied Process Knowledge
- MKS Fittings, Fabrication, Assembly
- 3rd Party On-Site Inspection
- Customer Qualification and Validation
- Aggressive Lead Times, Start to Finish



### Capabilities

MKS' wide range of resources and variety of quality components allow us to produce the optimum product for your unique requirements.

### Engineering Resources

- Mechanical, Chemical, and Electrical Engineers  
Dedicated 100% to Special / Custom Products
- Concept to Solution, or Build to Print
- Design Reviews, Manufacturing and Testing
- Complete Documentation Packages

### Documentation From Start to Finish

- Full Bill of Materials
- Full Documentation Package on File
- ISO Certified Manufacturing Processes
- Video Documentation of Welds
- Last Order Same as the First
- Positive Material Identification (PMI)
- Third Party Inspection (TPI)
- Online Documentation Available 24/7 at [www.mksinst.com](http://www.mksinst.com)

### Ordering Information

When MKS receives a request for quotation for a special product, our staff performs an analysis of the design, and a new part number is generated. When the order is placed, a drawing and bill of material are prepared and the product is added to our current parts list for instant retrieval when you order it again. This system allows us to quickly manufacture and ship your custom product.

With the breadth of products available through MKS, we are able to integrate and modify standard catalog components. Our knowledge of biopharmaceutical processes allows us to provide customized solutions for customers' unique process needs.

For more information about biopharm specials, please call (800) 345-1967 or (303) 449-9861.



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