EXERGY
HEAT TRANSFER SOLUTIONS

PARTNERS FOR COMPACT DESIGN &
UNEQUALED THERMAL PERFORMANCE

PHARMACEUTICAL CASE STUDY

Point-of-Use Vial Filling

Exergy engineered a compact, sterile Water-for-Injection (WFI) heating and dispensing system for a pharmaceutical vial filling line — delivering precise temperature control, minimal waste, and full GMP compliance.

The Challenge

The customer needed strict sterility and precision at the filling line. Key challenges included minimizing downtime, reducing WFI waste, preventing contamination, and maintaining accurate dispense temperature — all within tight space constraints.

The Solution

Exergy designed a Point-of-Use (POU) heat exchanger fabricated entirely from 316L electropolished stainless steel. The system featured low hold-up volume, rapid heat-up, precise temperature regulation, and a compact footprint for seamless filling line integration.

316L

Stainless Steel

Electropolished sanitary surfaces for full sterility assurance

GMP

Compliant

Meets all regulatory and pharmaceutical sanitary requirements

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Minimal Waste

Reduced WFI waste and downtime across the filling process

Results & Conclusion

The POU system delivered consistent, sterile WFI at the correct temperature directly at the point of need. It enhanced manufacturing flexibility, improved productivity, and required minimal maintenance. This case highlights Exergy's expertise in compact, hygienic thermal solutions for critical pharmaceutical applications.

ISO 9001:2015 Certified Quality Management System