

Food & Beverage : Agricultural Spray Tool

The Objective

Exergy's engineered heat exchanger solved a specific customer challenge in agricultural spraying. It highlights the customer's requirements, Exergy's tailored solution, the performance results, and the long-term value delivered. By presenting this success story, Exergy reinforces its credibility as a trusted partner for precise, reliable, and sustainable thermal solutions.

The Challenge

The customer required a heat exchanger for a plant spraying process in an agricultural environment. Both the tube side and shell side fluids were water. The product temperature on the tube side was 90°F, and the working fluid on the shell side was 55°F. The target temperature on the tube side was 75°F. A small geometry of the unit was a key driver in the application requirements.

The Solution

Exergy supplied a Shell & Tube Heat Exchanger with sanitary flange on the tube side (60 Series). The exchanger was manufactured entirely from 316L Stainless Steel with NPT shell side fittings. This configuration ensured compatibility with agricultural standards while providing reliability, durability, and optimal thermal performance.

The Results / Benefits

The final design delivered the required cooling performance, successfully reducing the tube side product temperature from 90°F to 75°F. The compact geometry (2.5" shell diameter and 30" tube length) met the customer's space constraints. The unit's 13.08 ft² heat transfer area, full drainability on the tube side, and cleanability further enhanced usability and long-term performance. A full material certification package provided additional assurance.

Conclusion

Exergy's custom-engineered heat exchanger solution addressed the agricultural spraying application's unique challenges. The compact, fully drainable, and cleanable design ensured reliable operation, compliance with industry requirements, and long-term performance. By delivering the precise thermal solution needed, Exergy supported efficient and sustainable agricultural processes.



ISO 9001:2015 CERTIFIED
QUALITY MANAGEMENT SYSTEM