

To: **BASF Agriculture**
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Attn: **David Sova**

Pfaudler Order #: **0052002319**

Customer PO #: **4956556146**

The following drawing(s) and Order Specification Data Sheet(s) have been released for fabrication:

<u>Document</u>	<u>Rev</u>	<u>Date Sent</u>	<u>Description</u>
V161094 approval drawing	B	5/11/20	5000-gallon reactor approval drawing
0052002319 OSDS	1	5/11/20	0052002319 order specification data sheet

You are responsible for verifying the drawing(s) and Order Specification Data Sheet(s) listed above for compliance with your Purchase Order and notifying Pfaudler immediately of any apparent discrepancies.

Revisions after your approval will incur a minimum fee of \$500.00.

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ORDER Specification Data Sheet

1) Reconditioned RS-108-5000-90-125 Glass-lined Carbon Steel RS-Series Reactor

Equipment	
Reconditioned 5,000 gallon capacity, one piece reactor. Refer to DS81-500-D. 108" I.D. x 111" straight side. Original Serial Number: J010979 Original Drawing Number: R971029	
Design Conditions [rev 1, 5/1/20]	
Internal: 90 psig or full vacuum at -20 degrees Fahrenheit to +400 degrees Fahrenheit with or without full jacket vacuum. Jacket: 125 psig or full vacuum at -20 degrees Fahrenheit to +400 degrees Fahrenheit with or without full internal vacuum.	
Openings	
<u>Top Head:</u> <u>Cover</u> 1 – 24" manhole opening. 1 – 8" nozzle drive nozzle 3 - 8" nozzles, nozzle at 60° with baffle bosses. 3 - 6" nozzle 3 – 4" nozzles <u>Bottom Head:</u> 1 – 6" nozzle.	
Capacity	
Nominal capacity	5,000-gallons
Capacity full	5,830-gallons
Jacket volume	630-gallons
Total heat transfer area	356 sq. ft

Code
Built and stamped in accordance with the ASME Code, Section VIII, Division 1.
Glass Lining
<u>Vessel Lining</u> 9115 dark blue Glasteel, World Wide Glass (WWG), offering superior resistance to acid and alkali corrosion. Factory tested at 15,000 volts. This vessel will be supplied PLUG FREE. Refer to SB95-910.
Exterior Coating
Amerlock 400 high solids, amine modified polyamide epoxy, horizon blue, per data sheet DS61-200, standard system. Refer to DS61-200.
Jacket
Conventional, one chamber jacket assembly.
One set of Cl. 150 flanged lap joint jacket connections consisting of: 1 – 4" overflow connection, 3 – 3" flanged jacket shell connections with pad mounted jacket connections, 1 – 3" head connections, 1 – 3" head drain connections, 1 each – 1/2" sealer vent and diaphragm drain 3000# threaded couplings.
Supports
Four – side supports designed for S.G. = 1.2, designed for seismic loads per vessel destination (IBC 2012), no wind load. Site class = D, risk class = IV.
Documentation
Manufacturer's Data Report, National Board registration, certified drawings, and Installation and Maintenance manuals.
Inspection
Customer in-process or hold point inspections are not included at this time. These can be provided, however, please note that these may result in longer lead times and/or additional costs. If these are required, please notify Pfaudler prior to placing an order and Pfaudler will review for potential schedule or cost impact. Pfaudler will provide 2 weeks' notice for mutually agreed-upon hold points. As part of our standard practices, Pfaudler completes a thorough inspection of all equipment per our internal quality procedures. The inspections and tests depend on the type of equipment and include, but are not limited to, visual inspection, spark test (glass-lined equipment only), hydrotest, agitator run tests (agitated vessels only), etc. The results can be made available prior to shipment, upon request, or provided with the equipment documentation package.

Other Items Included
<u>Ladder Tabs</u> – Include 6 ladder tabs on the top head. [rev 1, 5/1/20]
Notes 1. These commodities, technology or software are subject to the laws of their country of export and may also be subject to the laws of their country of origin. Re-export or diversion contrary to applicable law may be prohibited, especially with respect to commodities, technology, or software exported from the U.S. 2. Our goal is to provide a competitive price and the best delivery. As such, this vessel may be fabricated at our facility in Rochester, Brazil or Germany.
Customer Specifications
Applicable customer specifications and exceptions that pertain to this order: None.