

Mississippi State University
Notice of Proposed Sole Source Purchase

267-014

Mississippi State University anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Commodity or commodities to be purchased (make, model, description):
FluidMechatronix Process Automation System

2. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:
This procurement meets the sole source criteria for the following reasons:
 - Proprietary hardware-software integration: The FluidMechatronix™ system integrates Rockwell Automation's Studio 5000 Logix Designer and FactoryTalk View ME software licensed and pre-configured specifically for the Turbine Technologies platform. Reproducing this integration on a competing platform is not possible without Rockwell Automation's direct involvement and a separate licensing agreement – which no other educational equipment vendor offers.
 - Proprietary clear-view pump and impeller design: The transparent pump volute and interchangeable impeller system is a patented/proprietary design exclusive to Turbine Technologies. No other manufacturer produces an equivalent component compatible with industrial instrumentation at this scale.
 - Exclusive curriculum alignment: The included curriculum is written specifically for the FluidMechatronix™ hardware configuration. Purchasing a different system would require the department to develop an entirely new curriculum at significant cost in faculty time and instructional resources.
 - Existing departmental investment: The Swalm School of Chemical Engineering is building a process automation laboratory around Rockwell Automation's PAC/VFD/HMI ecosystem. Purchasing a non-Rockwell system would create an incompatible control platform, defeating the educational objective of training students on industry-standard equipment.

3. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):
Turbine Technologies, Ltd.

The department conducted a market survey of educational fluid process systems vendors. The closest alternative identified was the Armfield PCT Series offered through Technical Training Aids (TTA), Quote No. 120924SS1, dated December 9, 2024. A detailed comparison is provided below.

While the Armfield PCT Series provides basic process control training, it does not meet the department's requirements for the following reasons:

- It uses a non-industry-standard controller and does not include Rockwell Automation PAC/VFD/HMI hardware.
- It does not provide interchangeable impeller profiles or clear-view pump cavitation visualization.
- It does not include a stroboscope for live impeller observation.
- It does not include LOTO integration in the control system curriculum.
- It does not provide industrial wireless Ethernet remote control capability.

4. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable: \$48,289.45
Price reasonableness has been established through the following:

Competitive benchmark: The closest comparable alternative – the Armfield PCT Series via Technical Training Aids (Quote 120924SS1) – totals \$171,465 for a configuration that still does not match the FluidMechatronix™ feature set. The FluidMechatronix™ system at \$50,790.57 (including freight and shipping) represents substantially greater value per dollar.

- Education discount applied: Turbine Technologies, LTD has applied an education discount of \$2,541.55 off the list price of \$50,831.00, confirming the price has been negotiated favorably for the university.
- All-inclusive pricing: The quote includes the complete system, pre-installed and calibrated sensors, comprehensive curriculum, two-year full system warranty, software licenses (Studio 5000 Logix Designer, FactoryTalk View ME), freight, shipping crate, and transportation insurance. No comparable system provides this level of completeness at this price point.

- Custom manufacture: Per vendor terms, the system is manufactured specifically for the purchaser. The quoted price reflects the full cost of a purpose-built educational instrument and is consistent with similar industrial-grade educational laboratory equipment procured by peer institutions.

5. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

This procurement meets the sole source criteria for the following reasons:

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Reproducing this integration on a competing platform is not possible without Rockwell Automation's direct involvement and a separate licensing agreement – which no other educational equipment vendor offers.

- Proprietary clear-view pump and impeller design: The transparent pump volute and interchangeable impeller system is a patented/proprietary design exclusive to Turbine Technologies. No other manufacturer produces an equivalent component compatible with industrial instrumentation at this scale.
- Exclusive curriculum alignment: The included curriculum is written specifically for the FluidMechatronix™ hardware configuration. Purchasing a different system would require the department to develop an entirely new curriculum at significant cost in faculty time and instructional resources.
- Existing departmental investment: The Swalm School of Chemical Engineering is building a process automation laboratory around Rockwell Automation's PAC/VFD/HMI ecosystem. Purchasing a non-Rockwell system would create an incompatible control platform, defeating the educational objective of training students on industry-standard equipment.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Jennifer Mayfield, CPPO

Director of Procurement Services, Chief Procurement Officer

jmayfield@procurement.msstate.edu

Subject Line must read "Sole Source Objection"

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.

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