In-Line Jets
LL, LM, LH, GL, GH, ELL, HLM, RJ

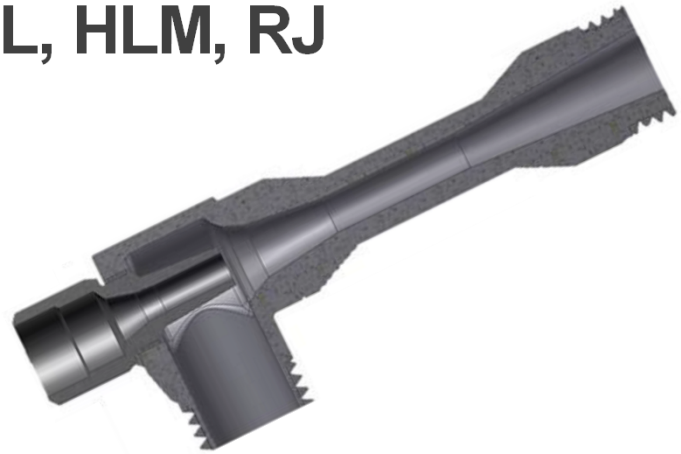


Table of Contents

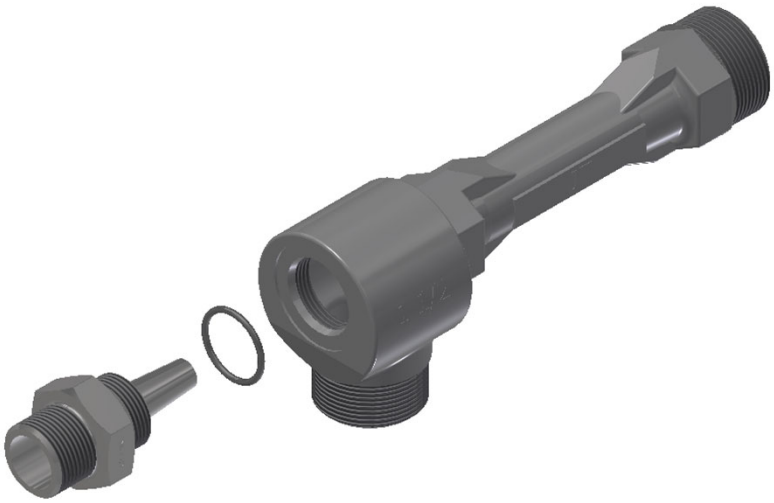
Management of Change – Page 2

Background – Page 2

Question & Answer Checklist – Page 2-3

Component Comparison – Page 3

Conclusion – Page 4



Management of Change

Management of Change (MOC) is a procedure used to proactively manage changes that have the potential to impact management of the products within a plant. Evaluating new techniques for improving MOC approval procedures can have an impact on plant efficiency. Historically, upgrading obsolete products or replacing existing process control equipment had been delayed or abandoned due to the extensive paperwork involved in completing a complex MOC approval sheet.

Background

Penberthy works to continuously improve product efficiency and longevity in service. The updated in-line jets continues in this tradition. All-inline jets have the same performance, using the same pump, compressor, or steam flow for all models, sizes, and pressures. The difference is that the new jets include a vacuum-tight O-ring seal between the nozzle and the body as shown on page 1.

Question & Answer Checklist

1 **Q:** Does this product modification cause any changes to the piping and instrumentation diagram (P&ID)?

A: No. The unit connections sizes, overall length, centerline to suction, and centerline to motive are the same as before.

2 **Q:** Does this product modification change process chemistry, technology, or operating and control philosophies?

A: No.

3 **Q:** Have the operating and design limits of the proposed modification changed?

A: No.

4 **Q:** Have the codes and standards to which the new equipment has been designed changed?

A: No.

5 **Q:** Does this product modification change the Hazardous Area Classification?

A: No. There are no hazardous area classifications for in-line jets.

6 **Q:** Does this product modification introduce new equipment that needs to be operated and, has a new operations list been stated?

A: No. The new units operate and provide the same information as before.

7 **Q:** Does this product modification introduce new equipment items that require spare parts, training manuals, maintenance procedures or training to teach the maintenance department how to maintain them?

A: Yes. The 2025 and newer nozzles and bodies will not connect to the 2204 and earlier nozzles and bodies. The inclusion of the O-ring changes the connection between the two components.

8 **Q:** Does this product modification change the spares for existing pieces of equipment?

A: Yes, in the rare event the nozzle is replaced as a spare. The update means that the customer would have to purchase a complete assembly to replace a unit made prior to 2025.

9 **Q:** Does this product modification introduce new equipment items that require periodic predictive maintenance?

A: There is no change to the inspection requirements. Unit longevity within service will be the same as before or potentially longer.

10 **Q:** Does this product modification result in a change in appearance that could raise a question about form, fit, or function?

A: Yes.
Externally, the body has a slightly larger hex in two places, and the nozzle hex is slightly thicker. Internally, the O-ring at the back of the nozzle thread is new. None of this impacts the performance.

In-line Jet Quick Comparison Chart for 2025 and Newer Units

Attribute	2025 CTE2 compared to 2024 & Earlier CT Units
Dimensions	The connections sizes, overall length, centerline to suction, and centerline to motive are all the same.
Interchangeability	New nozzles cannot be used in old bodies & vice versa
Performance	Unchanged for all sizes and all pressures
Motive flow	Unchanged for all sizes and all pressures
Suction flow	Unchanged for all sizes and all pressures
Outlet head	Unchanged for all sizes and all pressures
Cast Iron	Discontinued, use Carbon steel
Bronze material	B62 now standard
Selection Guide	New selection guide in place, part number change eliminates possibility of incorrectly identifying version

Conclusion

Penberthy in-line jets meet all prior unit performance and physical installation criteria, making them fully interchangeable with prior jets at the assembly level.

This page intentionally left blank

This page intentionally left blank