

1-PASS OR 2-PASS RO?

EDI today must be pretreated with RO for numerous reasons. But what are the advantages and disadvantages of 1-pass and 2-pass RO as pretreatment?

Many EDI systems using Electropure™ EDI perform very well with 1-pass RO. It's easy to achieve 17+ Megohm with 1-pass RO. Most USP WFI and Purified Water systems easily meet requirements with 1-pass RO. And a 1-pass RO system is less expensive and less complex than a 2-pass RO system.

2-pass RO followed by EDI gives the following benefits, and is often used for power plants

- Lower conductivity = higher EDI quality
- Lower CO₂ = higher silica removal
- No softening required
- ppb-level contaminants means infrequent EDI cleaning
- Higher rated flows for EDI



1-pass RO can be enhanced using GTM (e.g., Liqui-Cel®) for even better EDI performance. GTM can reduce the CO₂ which enhances EDI performance, reduces scaling potential, and helps SiO₂ removal by the EDI.

In summary, EDI systems have many options:

- RO>EDI
- RO>GTM>EDI
- RO>RO>EDI

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