

Inert Entry Support

Praxair Services, Inc. ("Praxair") is leading the industry in safety and reliability for your inert entry support operations with our quieter non-motorized, no fuel required, TMVU-100 vaporizing unit. The TMVU-100 is able to provide constant flow of nitrogen with minimal potential of unexpected supply disruption that could occur with other motorized equipment arrangements. We are also able to reduce your equipment footprint and the associated time and labor cost.

Acting either as your primary or secondary nitrogen supplier, Praxair has the resources and experience to optimize your inert entry support requirements while maintaining sufficient supply configurations.

Specifications

During the inert entry support service, nitrogen is supplied continuously, by utilizing atmospheric or steam vaporization, into the vessel until it is purged for safe entry and the project is complete. Any inert entry support service typically requires the presence of two nitrogen (N₂) supply sources – Praxair has the capability to act as the primary and/or the back-up supplier.

With Praxair as the **primary supplier**, you can rest assured that we take all precautions to ensure safety during this life-critical service.

Applications

We typically provide inert entry support service to maintain an inert atmosphere during confined space entry and catalyst maintenance for refining, chemical and petrochemical industries.

Specific to refineries, we are able to perform inert entry support at any of the following units:

- Sulfur Recovery Unit
- Isomerization Unit
- Hydrocracker
- Hydrotreater
- Reformer



Inert Entry Support with TMVU-100

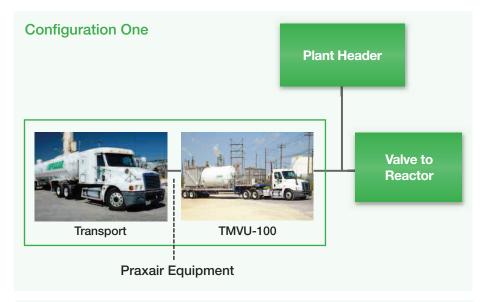
- TMVU-100 vaporizing unit provides safer and more reliable nitrogen flow
- Non-motorized equipment has minimal potential for mechanical failure and reduced noise output
- No fuel required eliminates diesel fuel emissions and reduces cost
- More cost-effective with less equipment for supply configuration
- Hot work permit not required TMVU-100 does not have an ignition source

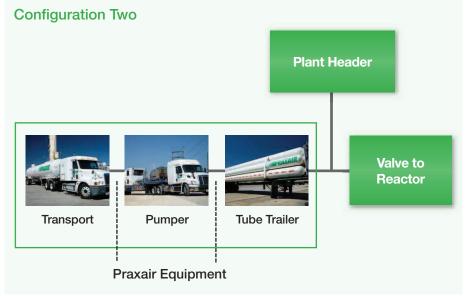
We highly recommend using our TMVU-100 as the safer option however we do provide a secondary configuration option for certain circumstances. See acceptable equipment configurations for Inert Entry Support Work.

Configuration One uses a TMVU-100 which provides the most reliable option.

Configuration Two uses a nitrogen pumper which is a motor driven piece of equipment and is subject to mechnical failure, but a "ballast" in the form of a tube trailer provides a reserve supply of nitrogen.

The "ballast" supply should be sufficient to provide the customer with enough time to safely evacuate affected personnel and secure their reactor until we can safely resume normal supply of nitrogen.





In both configurations, the plant header is the secondary supply and the customer is responsible for ensuring that it is, and will remain, at sufficient capacity for the service being performed. Praxair may also provide a TMVU-100 or Tube Trailer to act as **secondary supply**.

For more information, call 1-800-PRAXAIR or visit us online at www.praxair.com/industrialservices



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