

# Industrial Gas Cylinder Tracking

## Overview



Industrial Gas Companies use cylinders to deliver gases. These physical returnable assets are a huge investment. Revenue and business productivity are directly tied to optimizing the use of this big investment. Critical elements of tracking - identity, visibility, and usability directly impact the bottom line. This is a cylinder business, not a gas business.

In the cylinder business, accurate and real-time data is essential. Data acquisition is a process that is repeated multiple times throughout the course

of receiving, filling, delivery and transportation of cylinders. Manual data entry is still widely used in the cylinder business and is time consuming and error prone. It is estimated that 20% of manual data entries are incorrect, which has a major negative impact on data integrity and data usability. Within the cylinder business, data needs to be timely and available at the point of use. Existing cylinder tracking methods do not offer this feature and the lack of readily available data results in the inability to know asset status.

## Challenges with Existing Systems

- **Use of ERP systems based on following controls**
  - Managing the cylinder by quantity and not individually
  - Using Asset Maximum Outstanding to control the assets with end-user
  - Using the average cylinder rotation as performance metrics
  - End-users know how to game and circumvent these controls
- **Focus on Location based transactions**
  - Paper based
  - "Last Mile" Vehicle delivery is where it goes wrong – different cylinder, gas, and or valve
  - Inability to identify when and where Asset damage occurs and attribute it to a customer
- **Customer Confirmation**
  - Paper based
  - Non-productive time spent in reconciling asset holding
  - No customer validation except signature on paper
- **Identity Asset**
  - Difficulty in identifying clear asset ownership
  - Difficulty in reading identity: missing – illegible – poor lighting – non- readable
  - Identification issues leads to increased operation time and lost productivity
  - Loss of Assets from improper identification directly negates the bottom line
- **Safety**
  - Eye balling only
  - Most of the time the test identity ring is missing and test information is not readable
  - Associate is too busy doing other steps and normally ignores this information
  - Inability to isolate assets due for scheduled maintenance and testing
- **Data acquisition**
  - Errors due to manual data collection, reading and writing, and entering in system
  - Inefficient and inaccurate methods lead to underutilization of assets
  - Periodic Inventory is time consuming and difficult
  - Inability to locate individual assets
  - Increased operation time and lost productivity

## Solution - trakaid cylotrak



The trakaid cylotrak Solution is the first cost-effective end-to-end comprehensive solution for the industrial gas cylinder industry that fully integrates with all AutoID technologies.

The Solution is cloud hosted and covers all aspects of the business including Receipt, Issue, Delivery, Pickup, Service, Inventory and supports multi location. Customers can view their critical asset data in real-time and its impact on associated business processes. The Solution offers rich dynamic on-line reports complemented with rule-based alerts and notifications that helps manage assets proactively and apply timely controls. It enables customized controlled role-based access to the system. One may export data using a built-in interface to the existing ERP system.

The Solution uses the - latest web, mobile, AutoID, and database technologies - agile, modular and scalable architecture – data validation and processes in compliance with good manufacturing practice – and Information Governance for ensuring data integrity.

The Solution uses the latest mobile technology that works with all AutoID technologies. Data acquisition is automated using Radio Frequency Identification (RFID) AutoID technology. Data is acquired when the cylinder passes in front of a UHF RFID reader - IoT fixed or a hand-held. This results in faster processing, eliminates manual entry errors, provides 100 percent accuracy, reduces repetitive monotonous effort, and results in lower labor cost.

The Solution empowers the user by providing intelligent actionable data at point of use. It brings the process validation in the hands of the user for managing manufacturing processes or logistics functions of pickup or delivery.

The Solution provides an economical and efficient approach to keep data on asset status and location current. Identity, Visibility, and Usability helps implement standard operating practices, increases the bottom line, improves overall efficiency, increases individual asset rotation, eliminates manual number transcription errors to avoids the loss of cylinders.

<b>Benefits of trakaid cylotrak</b>	
<b>Accurate Data Entry = Ensure Data Integrity</b>	<ul style="list-style-type: none"> <li>• Manual data entry is time consuming, repetitive and labor intensive</li> <li>• Manual data entry has up to a 20% error rate due to number transposition, poor visibility and unreadable numbers</li> </ul>
<b>Reduction of Time = Efficiency and Improvement in Processes</b>	<ul style="list-style-type: none"> <li>• 80% increase in data entry efficiency</li> <li>• 33% labor cost reduction due to increased productivity</li> </ul>
<b>Elimination of Bottlenecks = Faster Turnaround of Assets</b>	<ul style="list-style-type: none"> <li>• Scan eliminates the need to decipher unreadable cylinder numbers</li> <li>• Lineup of receipts and shipments at shipping dock in the morning and evening</li> </ul>
<b>Visibility of Assets = Full use of Assets and Customer Accountability</b>	<ul style="list-style-type: none"> <li>• Real-time simplified Asset Information at point of use aids informed decision-making</li> <li>• Can deliver the right product to right customer at right time</li> </ul>
<b>Increased Safety = Safety First</b>	<ul style="list-style-type: none"> <li>• Check Compliance at data acquisition and Block them from process</li> <li>• Uncompromised safety of workers and customers</li> </ul>
<b>Eliminate 99% of Errors = Better Customer Satisfaction</b>	<ul style="list-style-type: none"> <li>• Elimination of filling wrong cylinder/wrong gas and filling gas in cylinder due for testing</li> <li>• Elimination to errors due to shipment of empty cylinders instead of filled cylinder</li> </ul>
<b>Data you can Trust</b>	<ul style="list-style-type: none"> <li>• Built-in robust processes and validations based on Good Manufacturing Practices</li> <li>• Information Governance controls by monitoring important changes</li> </ul>

## Why trakaid cylotrak?

Trakaid cylotrak offers modular solutions for tracking and process management with built in process controls, data validations, and Information Governance. With minimal training, everybody follows the same standard processes. In this age of speed, competition, revenue compression and spiraling expectations, you must get it right the first time and every time. There are no second chances for you or your customer. The Solution integrates four factors that separate winners from losers – Value – Convenience – Innovation – Distribution.

You can trust your data and so can your customer



## Remember: It's a cylinder business, not a gas business.

The ratio of cylinder to gas cost is 75:1. Cylinders are not only expensive returnable moveable assets but are also inventory items critical to the business. Achieving efficiencies in cylinder rotation is of paramount importance. The Solution focuses on timely return of assets, and eliminates cylinder loss and "Rotation! Rotation! Rotation!"

## Service! Continuity! Dedicated Teams at Fractional Cost!

The Solution is supported by a dedicated service team with in-depth knowledge of both the solution and underlying software tools. Additionally, the team is supported by experts with domain experience. A dedicated support team proactively manages, administers, and monitors the solution remotely and provides customer help desk support via phone, email, and Skype. The Service Team functions as your IT team at a fraction of cost of hiring skilled personnel whose services may not be needed full time.



## Mobility

- Smart Phone Mobility with intuitive user-friendly interface and Real-time data at point of use
- Eliminate "Last Mile" errors and deliver right product to the right customer
- Workflows that give end-to-end asset traceability
- Paperless documentation validated by electronic customer signature and Geo Location
- 100% asset reconciliation with customer

It not only automates data acquisition, but processes as well

## Identity



**TRAKAID**

**CAN YOU GUESS WHO'S TOM?**

Would you be able to tell Tom from Bob and Jack if they all looked the same?

Cylinder identification poses a similar problem. Visual identification is difficult and may lead to errors in delivery or maintenance. Sometimes these errors can be costly and dangerous. ▶

- Use of RFID Auto ID to Automate Data Capture - reading, writing, and entering data into the system
- Specially designed curved UHF RFID Tag is attached to each cylinder with permanent structural adhesive that does not peel off under harsh environment
- Tag provides a unique identity to each cylinder and cannot be duplicated
- Tag is read when it passes in front of IoT reader or using a mobile UHF RFID
- Read data is collected and correlated into central database

100% data accuracy is achieved and each cylinder gets a unique identity. You can trust your data, eliminate fakes, and get end-to-end traceability.

It helps you help your customer to trust you

## Visibility



- Visibility: See More. Do even more.
- Value and Values: ROI and Trust
- Customers want a genuine product and the right product at the right time
- Need for end-to-end traceability and production data transparency

The Solution enables you to know the last scanned location of your asset and eliminates loss of cylinders.

**Gain customer trust and confidence**

## Usability



- Eliminate errors and Maximize safety
- Holistic data view for informed decisions
- Mark issues as and when they come to notice to ensure safety
- Let asset tell its own story and the process be based on it
- Take the guesswork out of the hands of the worker

The Solution helps you develop a sound strategy for asset management and increases cylinder rotation.

**Asset reliability is a performance indicator**