Historically, Dow Hydrocarbon plant operators and employees were collectively losing an hour and a half each day, simply due to the onsite manual distribution of 60 portable gas monitors.

Onsite equipment distribution requires a series of essential in-person transactions between a craftsperson and plant operator. The employee must first complete a work permit, then receive a calibrated and bump-tested portable gas monitor, then conduct a worksite visit, and then receive a finalized and approved work permit.

**Case Study: Dow and Dräger**

**The Situation**

Historically, Dow Hydrocarbon plant operators and employees were collectively losing an hour and a half each day, simply due to the onsite manual distribution of 60 portable gas monitors.

**The Challenge**

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**The Solution**

Dräger’s Rental Robot was implemented at Dow as a way to give time back to the employees, return equity to the bottom line, and contribute to stronger productivity and onsite safety.

Dräger’s Rental Robot is an intuitive and completely customizable system that helps to optimize efficiencies and onsite safety. The Rental Robot system provided workers on-demand access to fully serviced equipment, from gas detectors to masks, at central supply points throughout Dow facilities.

Employees wishing to pick up their gas detection equipment or other forms of PPE were able to log on at the “service station” at any time, using a barcode or radio frequency identification (RFID).
Based on pre-assigned user data, the Rental Robot identified which products the employee could access and displayed those devices on a screen. Optional information on the products’ performance range could also be displayed. Then, upon the products’ return by the user, the Rental Robot automatically generated a trend analysis of device utilization.

The previous distribution method of LEL meters required human interaction and took approximately 15–20 minutes. Since the Rental Robot (Blue Box) has been installed it now takes less than 2.5 minutes to receive a meter. This means that a worker saves a minimum of 12.5 minutes during each issue process. For an average of 18 rentals per day, this translates to a total savings of 3.75 hours per day for the customer, or the equivalent of 182 8-hour workdays, over the course of a year.

The Dräger Rental Robot installed at the Dow Hydrocarbon plant has realized a daily productivity savings of almost four hours. In other words, contractors and Dow craftsmen are not only getting to the job site four hours sooner using the Rental Robot, but they are also consistently and confidently receiving an operable LEL meter—all without the previously required in-person transactions with plant operators.

Dräger’s Rental Robot effectively answered Dow’s need for greater productivity, safety compliance, and cost efficiencies. Since its first Rental Robot installation in Freeport, Dow has implemented 15 more campus-wide due to its significant contribution to worker protection and overall workflow.

One operator commented, “I can now concentrate on writing my permits and making sure everyone is safe,” since the Rental Robot helps keep operators focused by eliminating multiple equipment requests or the need for switching out disabled equipment. The Rental Robot also sends automatic reminders for needed calibrations and availability, eliminating the need for these technicians to manually check every device.
Dräger Rental Robot Benefits at Dow:

The benefits of using Dräger’s Rental Robot at Dow’s hydrocarbon plants were significant and measureable.

• **Operational Readiness**
  Safety equipment and LEL meters were fully charged and ready when Operations needed them for a permit.

• **Confidence in Proper Calibration**
  The Rental Robot provides an extra level of assurance. Operations were able to focus on a safe work permit, because employees were guaranteed equipment that was always calibrated properly. If any LEL meters were not calibrated, the locker door would simply not open. Equipment was also inspected daily and status reports could be run for audits on the safety equipment at any time.

• **Accountability**
  The Rental Robot system tracks who has an instrument and for how long. Monitors and equipment could always be traced to a user, creating 100% accountability, while also reducing the cost of replacing lost equipment. At Dow’s Bayport location, keys to a Ford minivan fleet vehicle and a Viking Trackmobile were even stored in the Rental Robot and were only accessible by authorized personnel from Operations and SGS.

• **Cost Savings**
  Use of Dräger’s Rental Robot helped save time and money on preventative maintenance, work notifications, written work orders and contractor man-hours for equipment maintenance.

• **24/7 Support**
  Dräger technicians are available 24/7, which allowed Field Techs and LEL meters to not be taken out of service.

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