

# NITROSource



## PSA NITROGEN GENERATORS

Generating nitrogen on-site provides many benefits to users, who are often unaware of hidden potential issues and additional requirements, when using gas cylinders.



## GAS CYLINDER DISADVANTAGES

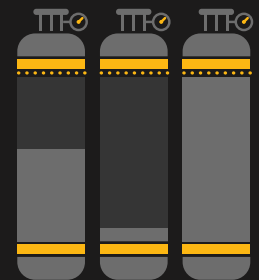


### IMPURITIES - SPOILT PROCESSES/ PRODUCTS

- Impurities desorb from the cylinder wall below 30 barg, coating equipment and pipework.
- Ruining process or product - increasing downtime and cost.

### 3 CYLINDERS POTENTIALLY RENTED FOR EVERY APPLICATION

- One in use, one empty, one full.



### WASTED GAS - COST

- 10-15% sent back unused - wasted money.



### INSPECTION REQUIREMENTS

- Time consuming and potential for dangerous errors (safety).
- At least 15 checks every time a cylinder is changed - time consuming, liability issues.
- Monitoring deliveries and stock- labour intensive.

### NO INDICATION OF VOLUME REMAINING OR ACTUAL OXYGEN CONTENT

- Gas could run out or spoil process/product or need to repeat task.



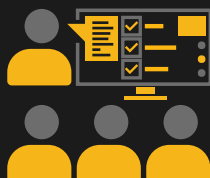
### SAFETY - INSURANCE AND HSE CONCERNS

Heavy, manual handling, stored volume of asphyxiant.

High pressure cylinders need specialist handling equipment - cost of handling equipment, possible injuries, additional risk.

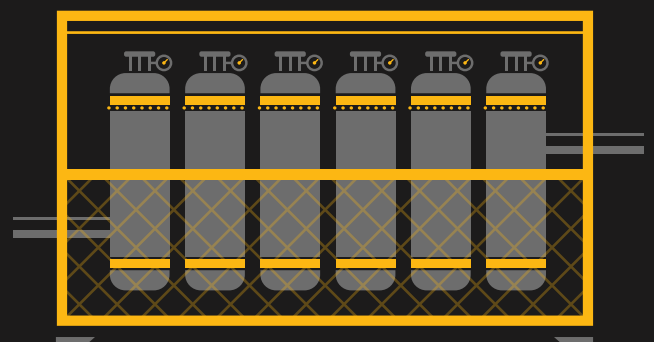
### TRAINING

- Additional cost to certify employees to work with compressed gas cylinders.
- Personnel have to be trained in cylinder handling and regulator inspection every 3 years - Additional cost and liability.



### REQUIRE SPECIALIST RACKS FOR STORAGE

- Additional cost, takes up valuable space. Requires maintenance and checking.



### ROGUE CYLINDERS

- Ruining process or product - increasing downtime and cost.