

## Understanding your business



## Ask the expert

Helping welders find ways to improve efficiency, Air Products emphasises the importance of choosing between having gas supplied in cylinders, cylinder packs, microbulk or liquid bulk form.

- Why is the choice between cylinders, cylinder packs, microbulk or liquid bulk important?
- What is the most common mode of supply?
- When is the right time to consider switching to liquid storage?
- Is liquid storage just for larger scale users?
- What are the other benefits of liquid or microbulk storage?
- When is microbulk storage not suitable?
- How easy is it to install a liquid storage system?
- Where can I find out more about modes of supply?
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### Why is the choice between cylinders, cylinder packs, microbulk or liquid bulk important?

When using compressed gases for welding and cutting applications it is important to get the right mode of supply to ensure maximum efficiency by reducing costs and minimising downtime. Each process application is different and depending on the volume of gas used, it could be more practical to switch from cylinders or cylinder packs, to microbulk or liquid storage.

### What is the most common mode of supply?

Single cylinders and cylinder packs are by far the most common. The main advantage of using a cylinder is that it can be moved around the workshop relatively easily and when using one of our Integra® cylinders, which come with a built-in regulator, they are suitable for a wide range of mobile welding jobs. Cylinder packs are ideal for those who need large volumes of gas for one-off jobs. Packs are also very popular because they provide a practical storage solution to cope with intermittent large requirements.

### When is the right time to consider switching to liquid storage?

In most cases, we advise production managers that if they are using more than 10 cylinders of high-purity gases - such as argon, oxygen or nitrogen - per month, they should consider switching to microbulk. If using mixed gases on the other hand, then the tipping point at which to consider switching is probably around 30 cylinders per month.

### Is liquid storage just for larger scale users?

Actually, microbulk – which is a form of liquid storage albeit on a smaller scale than bulk storage – is a viable alternative for a wider range of processes than you might think. The storage capacity of our smallest CryoEase® system is 180 litres, which is suitable for sites using around 12 cylinders per month, and we don't regard these as large scale users.

But it's not all about cost-efficiency: switching at the right time can bring a wide range of benefits to medium-sized and larger scale users of compressed gases alike.

### **What are the other benefits of liquid or microbulk storage?**

Liquid storage makes life easier for the production manager by taking the hassle out of stock control and management. Each CryoEase® tank is remotely monitored by Air Products to ensure a continuous gas supply is maintained at all times.

There are important safety and productivity benefits too: for example, most compressed gas cylinders weigh between 80 – 100 kilogrammes, well above the current manual lifting limit specified by the Health and Safety Executive (HSE) and therefore they must be handled with care. By switching to a microbulk storage system, production managers can reduce the risk of injury associated with cylinder changes, as well as downtime.

Liquid storage also means that compressed gases are made available to the welder at a much lower pressure, which minimises the risks associated with their use.

### **When is microbulk storage not suitable?**

In nine out of ten applications, when usage levels exceed 10 cylinders per month, microbulk systems are recommended. However, when mixed gases are used, production managers should bear in mind that installing a microbulk system may require more investment. For example, it may be necessary to install more than one storage tank and a mixer or blending system too. Furthermore, microbulk systems are not ideal for mobile applications where the welder has to work in difficult locations and single cylinders offer the manoeuvrability required. In general, however, liquid storage is an extremely versatile and cost-effective solution for most moderate to high users of pure gases.

### **How easy is it to install a liquid storage system?**

Easier than you might think. CryoEase® installations carried out by Air Products are completed in accordance with the Pressure Systems Safety Regulations (PSSR) 2000 and guidance set out by the British Compressed Gases Association (BCGA). Also, as the installations are pallet-mounted, they do not usually require planning permission and landlords are less likely to object to them. From start to finish, once the system has been designed, a CryoEase® installation can be completed in as little as four weeks.

### **Where can I find out more about modes of supply?**

To find out more about the options available to you, visit  
> [www.airproducts.co.uk/safewelding](http://www.airproducts.co.uk/safewelding) or phone 0800 389 0202.

### **Ask the expert**

If you would like to Ask the Expert a specific question or for further advice on quality standards, please email [apukinfo@airproducts.com](mailto:apukinfo@airproducts.com)