

**SERVICE DESCRIPTION:**

# Cleaning of Pipes by Gas Discharge Back Puffing

**Back puffing is a mechanical cleaning method using high pressure gas proven to be effective in either removing or loosening debris lodged within piping systems.**

Back puffing is particularly efficient in removing commissioning debris, pipe scale, mol sieve dust and other dry particulate.

It can either be used as a standalone cleaning treatment, or as one step in an overall cleaning program. Ocean Team recommends that back puffing and back flushing is undertaken, even if chemical treatments are planned.

**How does it work?**

To get a good burst volume, the pipe working on the outlet should be pressurised using an inert gas or dry air via a suitable connection. A polythene disc inserted between flanged joints, chosen at some suitable discharge point on the inlet side pipe work, holds the rising pressure.

This disc eventually bursts, creating a momentary high velocity pulse of gas (and any water left after flow testing) through the pipe work.

Since you should expect to perform about 4-6 gas puffs at each pipe system, using PVC sheet is considerably cheaper than buying a bursting disc holder and calibrated bursting discs.



Ocean Team supply "flexible PVC sheet" which comes in 1m squares and will be customized cut. Ocean Team typically uses 1-2 pieces of 2mm thick PVC sheet, but 10 mm is available for use in larger lines.

Ocean Team can determine the thickness required for the nozzle outlet size, at your selected burst pressure.

For example, a 3" line using a 3mm sheet thickness will burst at 8 bars. By doubling up the sheets it will provide a higher burst pressure, as scoring the disc surface will lower the burst pressure.

**Well-known Method**

Back puffing is a well-known method to clean systems in connection with commissioning and maintenance. The method is recommended by GE Energy in their procedure GEK 110483b concerning 'Cleanliness Requirements for Power Plant Installation, Commissioning, and Maintenance'.

Additionally, back puffing is widely used by for example Heatric to cleaning of their heat exchangers.