ULTRA | PCS

Stored gas supply systems

Rechargeable or sealed-for-life

Key features

- Sealed-for-life or rechargeable systems available
- Operating temperature of -40°C to +70°C
- Charge pressures up to 550 bar (8,000 psi) depending on system
- Progressive pressure release
- High strength, corrosion resistant materials

Applications

- Missile fuel tank pressurisation / inerting
- IR seeker cooling
- Missile fin / wing deployment

Overview

Ultra PCS offers a range of gas supply systems which offer a compact, robust and best value solution to defence system needs.

High pressure dry air or an inert gas such as nitrogen is stored within high-integrity steel pressure vessels with burst disc over- pressurisation protection. The release of gas is controlled electrically through either a miniature pyro actuator for single-shot systems or a small solenoid valve for rechargeable systems.

Cold gas systems offer significant advantages over hot gas systems by allowing recharging where desirable or, for single-shot applications, a longer storage life without the performance variability associated with chemical degradation.

Once the stored gas has been released, its uses can be varied. It can either be used in its high pressure condition directly or regulated down to intermediate and low pressures.

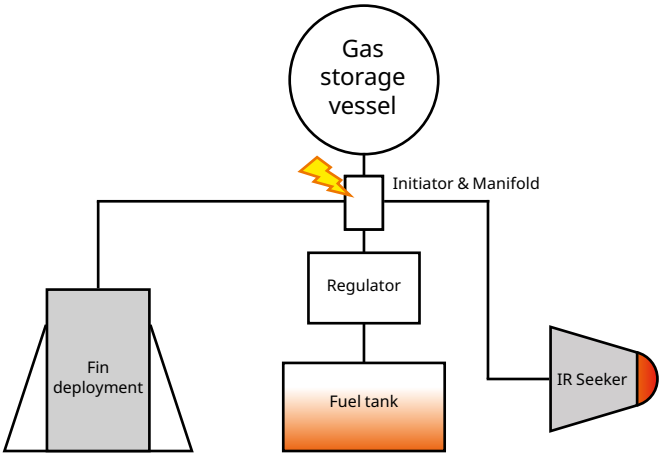
Through careful design, Ultra PCS offers a complete pneumatic system from storage to final use to ease integration and supply complexity.

Ultra PCS
+44 (0) 1242 221166
ultra-pcs.com

ULTRA | PCS

Fully integrated, multi-use, stored energy supply systems

Our gas supply systems can be mated to a Multiple Use Stored Energy (MUSE) manifold system to perform multiple functions within the platform. By utilising a single vessel of gas, significant space, weight and cost savings can be realised compared to individual systems for each function.



Through the use of MUSE, a single supply of gas can perform multiple functions within the platform such as fuel tank pressurisation, fin deployment and IR seeker cooling.

Rechargeable systems

These compact, lightweight systems are designed with pressure ratings to 414 bar (6,000 psi) at 20°C and typically incorporate a quick disconnect charge port, molecular sieve air filter, pressure gauge, pressure relief valve and electrically operated solenoid valve.

The rechargeable system is best suited for multiple deployment systems, or where the supply of pure gas needs to be turned on and off during a single-shot mission.

Sealed-for-life systems

These systems are single-shot devices that are welded closed once charged to pressures up to 550 bar (8,000 psi) ensuring zero leakage and a long storage life.

Electrical actuation of a miniature pyrotechnic device shears a break-stem to allow progressive release of the stored gas.

These systems are designed for applications where long-term storage with no maintenance is a key requirement.

Standard Configuration

- Sealed-for-life volumes of 0.75L and 2.4L
- Rechargeable volumes of 0.2L, 0.33L, 0.6L, 1.1L and 2.4L
- Non-standard configurations can be designed to suit specific customer requirements

Ultra PCS
+44 (0) 1242 221166
ultra-pcs.com