



# CRYOGENIC PRODUCTS & SERVICES

Design

Installation

Service

Inspection

THAMES CRYOGENICS LTD

Total Cryogenic Solutions



## Internally Sited Intermediate Storage (ISIS)

An ISIS system creates a convenient and safe method of providing a volume of liquid nitrogen where it is required without either the losses inherent with piping systems or the manual handling issues associated with moving heavy dewars around. The system includes a stainless steel frame on which are mounted all the valves and control valves, a control panel and a dewar (either pre-existing or supplied as part of the system)

### Key Features

-  Local buffer of liquid nitrogen for use anytime you want it (240 or 400 ltr)
-  High reliability electro-pneumatically actuated valves
-  Built around customer owned vessel or supplied with a new one from our TPV range.
-  All relief valves are piped back into the system and away to atmosphere
-  Hot gas bypass system prevents 'warm' gas entering the during during line cool-down.
-  Contents gauge fitted to dewar can be used to auto-fill when predetermined level is reached
-  Dead-man's handle facility for local decanting complete with decant flexible hose.

### Applications

ISIS systems can be used in any application that would normally be supplied by a dewar. A larger vessel should be placed outside, typically 950 litres and upwards and then SIVL piped from it to the point where the ISIS (or multiple ISIS's) are located. If more than one ISIS is to be deployed, on different floors for example, then it is possible to get them to operate together thus reducing the cool-down losses in the SIVL.

The ISIS can be used purely for the purposes of providing a ready supply of liquid nitrogen for handy decanting, or for downstream processes, for example cryopreservation freezers, by means of a manifold system with interlocks to prevent the ISIS refilling during freezer use.

Controlled rate freezers are particular well suited to being fed from an ISIS system

[www.thamescryogenics.com](http://www.thamescryogenics.com)

Email: [sales@thamescryogenics.com](mailto:sales@thamescryogenics.com)

Tel: +44 (0)1235 815777



## Technical Specification

### Required footprint

1910mm(H) 900mm(W) 1250mm(D)

### Required:

Fused spur - 240V 5A Unswitched

5-8 bar pneumatic supply

## Optional Extras

### Compressor

A compressor to supply the 5-8 pneumatic supply required by the valve train.

### Pressurised vessel

240 litre, 8 bar vessel, suitable for connection to a bulk source.

## Optional Extras

### Oxygen Depletion Monitoring

Oxygen depletion monitoring for any area where an ISIS is going to be installed is recommended and we can supply.

### SIVL

Vacuum Insulated Pipework (SIVL) is the best way to deliver LN<sub>2</sub> from a bulk store to an ISIS and can be custom built to suit your requirements.

### Design and installation

Thames Cryogenics can advise on how to integrate your existing equipment and/or design systems to suit specific requirements and maximise safety and reliability. We provide expertise in cryogenic pipeline and storage systems to deliver integrated solutions.

### Maintenance and refurbishment

A maintenance check is advised every 12 months on all cryogenic equipment. Thames Cryogenics offer a choice of site based maintenance contracts and will refurbish/upgrade products regardless of age or condition.