

## Large Project at Erasmus MC Hospital (Rotterdam)

In the past, Cryo Solutions has carried out a number of projects for the Erasmus MC Hospital in Rotterdam. These were so successful that we were subsequently offered an extremely large project, or to be more precise, three large projects in one go. These comprised a new outdoor filling station for filling mobile pressure vessels, the renovation and extension of the cryobank at the Josephine Nefkens Institute (JNI), and the construction of a back-up system for ultra low temperature "mechanical" freezers.

In order to keep costs low, we made use of existing vacuum piping where possible, although these were revacuumed. This project also included supplying the JNI with several storage vessels.



## Increased Efficiency for Centocor in Leiden



Following the success of previous modernisation projects, Centocor asked us to carry out a subsequent upgrade on their installation. The objective of this upgrade was to optimise the function of the installation and to reduce nitrogen consumption. Centocor also opted for the logic benefits of having their cylinder packs (for the supply of gaseous nitrogen) replaced with a bulk tank for both liquid and gaseous nitrogen. For this purpose we used a pressure reduction and regulation system.

## New Storage Vessel for Hospital in Leuven



Following very positive experience with our Planer computer freezers, the stem cell laboratory at Gasthuisberg University Hospital in Leuven (Belgium) chose Cryo Solutions to supply and install a new storage vessel. The department opted for a Chart Biomedical MVE1426 (1411) dry vapour phase storage vessel which was connected to their existing Air Liquide cryogenic installation. An external overflow protection device was also installed as an extra safety measure. In short, it was a solution providing numerous benefits with which the laboratory is more than satisfied!

## Extra Safety Measures for Sanquin Pharmaceutical Services

In the wake of problems with their Taylor Wharton 24K over filling, Sanquin Pharmaceutical Services asked us to equip this vessel with an external overflow protection device, which measures independently the nitrogen level in the vessel in addition to the vessel's standard measurement function. An extra solenoid valve closes if the level is too high. This system guarantees the highest possible safety with regard to nitrogen overflow in a storage vessel, even if the vessel's existing controls fail completely.

### Fully Up-to-Date: The Sanquin Amsterdam Cryobiology Project



The Sanquin Amsterdam Cryobiology department had already replaced its older vessels with new MVE 1841 biological storage vessels featuring TEC3000 automatic filling units. High time, therefore, for it to modernise its existing cryogenic installation... a perfect assignment for Cryo Solutions! We modernised the entire installation in line with state-of-the-art technology, and we optimised both the area layout and the positioning of the vessels. Where possible, existing vacuum insulated piping was used having first been cut and then re-welded and re-vacuumed.

### Successful Participation in Laborama 2009



The 10th edition of Laborama in Brussels was once again an enormous success for Cryo Solutions. The special MVE816 vessel for the dry storage of straws attracted particular attention. Given the excellent response and the enjoyable nature of the event, we are definitely planning to be present at the 2010 edition!

### Complete Cryobank for National Screening Programme

The University Medical Centre in Groningen asked us to build a complete cryobank for the next phase in the construction of a biobank for an extensive national screening programme LiveLines.



This project comprised the installation of many different components including vacuum insulated piping with a degas system, switch over device for the liquid nitrogen supply, several Cryo Anlagenbau CS160SK pressure tanks, two Planer 560.16 computer freezers and five Chart Biomedical MVE Eterne storage vessels. The UMCG opted specifically for the MVE 1536 (1520 Eterne) vessels, because these, in comparison with other vessels and brands, offer a large storage capacity even at very low nitrogen consumption.



### Molecular Gastronomy at the IVY



Cryo Solutions now supplies liquid nitrogen and dry ice for cryogenic cooking techniques used at the sensational new restaurant Ivy in Rotterdam. Francois Geurds has opened a beautiful, top-notch establishment with a highly innovative approach to food, dining and the experience it provides. If you would like to try this unique culinary sensation yourself, why not visit the website at [www.restaurant-ivy.nl](http://www.restaurant-ivy.nl).

### Sponsoring of the IVY and the 'How?Like So!' Quiz



Francois Geurds of top restaurant Ivy in Rotterdam has been demonstrating cryogenic cooking at a general knowledge quiz entitled Hoe?zo! 'How?Like So!' Cryo Solutions supplied the liquid nitrogen and dry ice for the event. The television programme was broadcast on 18 August at 7.30 pm but can be viewed on the internet at [www.uitzendinggemist.nl](http://www.uitzendinggemist.nl) (Dutch language only).

### ESHRE 2009 in Amsterdam



The 2009 edition of the ESHRE conference took place this year in Amsterdam. It was the perfect opportunity for Cryo Solutions to promote its activities in collaboration with cryogenic companies such as Planer, Chart MVE and Cryologic. Dirk Bullens, for example, was happy to demonstrate cryogenic cooking for us at the Planer stand. The next edition of the congress will take place in Rome in 2010.

### Low-Cost Alterations to Radboud University Cryogenic Installation



Radboud University in Nijmegen asked us to move their existing cryogenic installation for filling mobile pressure vessels in order to reduce the problem of noise. The piping layout had to be either adapted or replaced so that other areas would no longer become wet due to condensation.

Moreover, costs were to be kept as low as feasibly possible. No problem for Cryo Solutions! We moved the existing filling station in its entirety so that it could be re-used.

### Improved oxygen delivery system of Rockwool

The well-known manufacturers of insulation materials, Rockwool, asked Cryo Solutions to make improvements to, and install replacements where necessary, to their oxygen delivery system for the production of rock wool plates. Cryo Solutions accepted this project in collaboration with SPS and carried it out to the customer's full satisfaction!

**ROCKWOOL**

## Overclocking of Computers using Liquid Nitrogen

Overclocking is the process of running a computer component at a higher clock rate than specified by the manufacturer; it is a little like high-tuning a car. Various calculations are carried out on the overclocked system in order to measure a particular speed, and the system resulting in the fastest time 'wins'.

Computer components are usually cooled with air, but the cooler the components, the higher the overclock. Many overclockers therefore use larger air coolers, cooling techniques using water and even liquid nitrogen to reduce the temperature as far as possible.



## Product info

### New External Overfill Protection Device



A number of clients were contending with the problem of potential overfilling of dry vapour phase storage vessels. It was for this reason that Cryo Solutions developed an external overfill protection device that would serve as a backup.

In addition to, and separately from, the vessel's standard measurement function, this system re-measures the level in the vessel. If the level is too high, an extra solenoid valve closes after which a warning indicator is immediately activated. This system guarantees the highest possible safety with regard to nitrogen overflow in a storage vessel, even if the vessel's existing controls fail completely.

## Make Life Easy for Yourself with Cryo Logistics

Cryo Logistics is a special service provided by Cryo Solutions and one intended to make your life easier. You can have between 3 and 1000 litres of gas (liquid) delivered to your location. If you wish, you can hire liquid nitrogen vessels and purchase safety equipment and accessories such as cryogenic gloves and oxygen detectors.

We have a very wide range of applications available. Apart from biological storage systems, we also offer cold shrinkage, overclocking of computers, or molecular gastronomy. Furthermore, it is often advantageous to replacing cylinder packs with a pressure tank for liquid gas. We can

