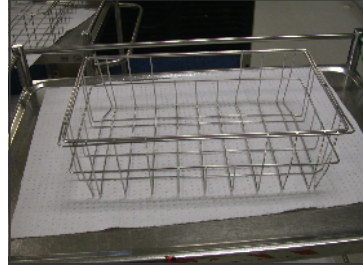
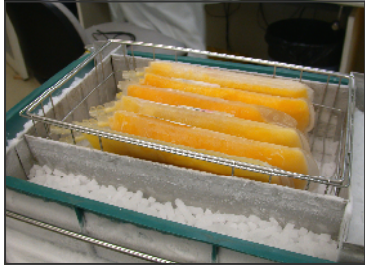


# Sub-zero blood product handling facility



**Client:**

**Australian Red  
Cross Blood Bank  
Service**

**Location:**

**NSW & Victoria**

**Value: \$25,000**

**To provide  
consultancy  
services with  
regards to the  
handling of blood  
products through  
the entire  
manufacturing  
process, including  
in sub-zero  
temperature  
environments**

## The Project

At present the Australian Red Cross Blood Bank Service (ARCBS) manufactures several different blood products, all with different pack sizes and production requirements. The ARCBS were experiencing difficulties with their manufacturing due to every product using a different basket (NSW), then at another site (VIC) all the baskets would be completely different. This made it extremely difficult to set up standard procedures, processes and equipment across the manufacturing facilities.

The baskets carrying the blood products are placed on shelves in both fridges (2°C) and freezers (-40°C). Staff must become completely suited up in appropriate PPE before entering the fridge or freezer work zones and can only stay in this environment for a very short time period.

The ARCBS wanted equipment designed specifically for their purpose & which would be common across all manufacturing sites. This included a new basket design, that would be suitable for all their products, as well as a new trolley design, that would be designed to suit the new basket & allow easy wash down. The final requirement was to have a method of storing these full baskets inside a freezer, without having to suit up an go in and out all the time.

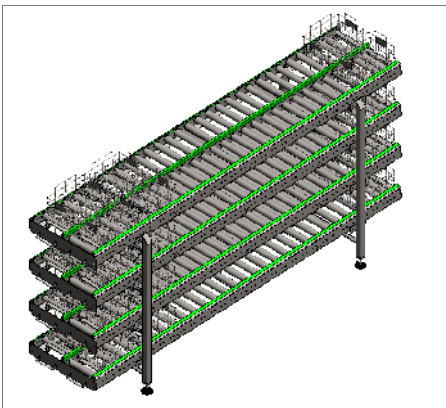
ARCBS engaged Australis Engineering to provide the following outcomes:

- Design prototype blood product handling baskets for all products in both manufacturing facilities.
- Design a roller conveyor system that will operate in in both fridges at +2°C & freezers at -40°C.
- Design a new trolley to suit the new common basket and that is capable of full wash-down.

## Engineering Design

## Manufacturing Prototypes

## Research & Development



## The Result

Australis provided the ARCBS with the following outcomes:

- Designed, through several prototypes, a common basket that could be used for all blood products in both Sydney and Melbourne;
- Designed a highly compact gravity roller conveyor system, so that blood products can be placed through a door in one end of fridge or freezer & removed from the other end, first in first out, without staff needing to suit up. These roller conveyors allowed the fridge and freezer space to be maximised.
- Designed a new trolley to suit the new common basket which could be used at all facilities & would allow the trolley full of baskets to be washed down easily in a new automated washer.

Australis provided an innovative solution that has now been included in the final design of the new production facility that was put to tender and is now under construction.

In June 2010 Australis was awarded the manufacturing contract to produce the sub-zero roller conveyors, trolleys and baskets for the ARCBS Sydney manufacturing facility.

## Innovation

A key element of the Australis solution has been the use of the stainless steel gravity roller conveyors in ARCBS's fridges and freezers, which are a robust, effective and inexpensive solution, that will prove to last the test of time until the ARCBS requires further expansion.



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