

Chilled and sub-zero applications

Arvus air separation units – express clarity

By means of arvus air-separation technology, differing temperature regimes can be reliably parted. This thorough separation, a result of the reduction of warmth- and substance transfer, is achieved by means of three elements:

- Significant reduction of cold air egress from the coldstore
- Marked reduction of warm air ingress from the anteroom
- Demisting at the interface between the barrier-forming airstreams (inside and outside) based on regulation of water vapour pressure

Optimising energy

In sub-zero applications, arvus air-separation units can be equipped with an electronic control system for governing the demisting function. This control creates a regulated supply-air temperature, the design temperature dependent on the air quality in the anteroom.

This leads to:

- A significant reduction of energy consumption and heat input to the coldstore
- A secure demisting function even with temperature variations in the connected energy supply



Coldstore logistics doorway



Coldstore conveyor doors to inert storage zone



Blast freezer

Your benefits

- Smooth operation of transport and logistics
- Compliant storage based on consistent temperature-control
- Enhanced effectivity via high energy-savings
- Cost-conscious temperature-controlled logistics

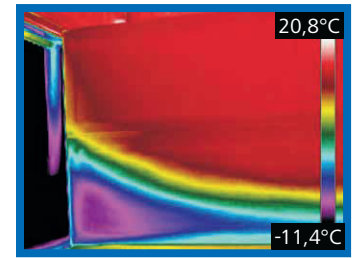
Applications

- Frozen and chilled logistics doorways
- Conveyor doorways
- Blast freezers
- Oxygen-reduced inert storage

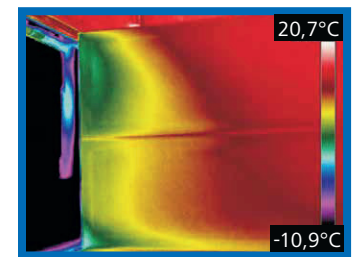
Example

Thermographic study example

Without arvus air separation, a massive air transfer between the sub-zero zone (-24°C) and the warm anteroom (+17°C) takes place. Unhindered egress of cold air at floor level causes ingress of warm air at high level.



When arvus air separation is running, the exchange of warm and cold air is brought to a standstill. The cold zone is consistently separated from the warm zone. This relies on especially effective directional linear diffusers. The airstreams generated are orientated to counter the natural airflow tendencies.



Special Design KIM – combined diffuser with integrated fan unit

KIM is a cost-efficient alternative for docking doors. The new arvus unit type combines the patented arvus diffuser and the normally detached fan module into a combined diffuser / integrated fan unit. KIM convinces by means of its efficient and flexible deployment.



Your benefits

- Reduced design and installation effort
- Individual changeover from left to right (summer and winter operation)
- Simplified installation

References

