

# THERMOGRAFIC INVESTIGATION

Proof of energy efficiency through air separation system  
Example: docking gate



Even when a truck is docked precisely, the transition area between the vehicle and the warehouse is not completely sealed. Cold air escapes from the warehouse through narrow gaps, while warm and humid outside air enters. This constant exchange of air leads to energy losses, temperature fluctuations, and increased strain on the refrigeration system.

Thermographic investigation clearly shows that when the air separation system is activated, heat exchange is effectively prevented - the temperature zones remain stably separated.

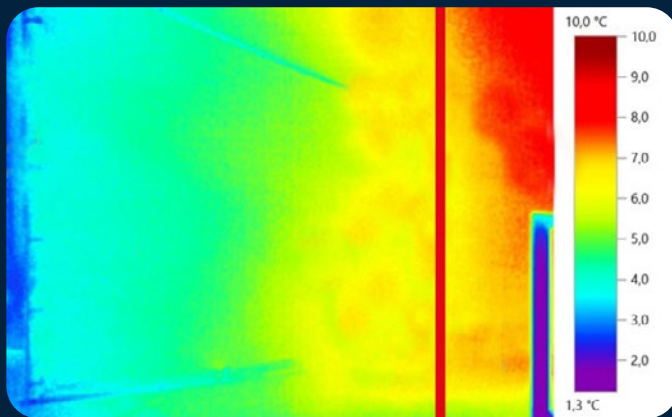
## GENERAL CONDITIONS ON SITE

The truck is docked at the gate. There is a sealing system between truck and the building an arvus air separation system with diffusers on the left and right side is installed on the gate inside the warehouse.

AREA	TEMPERATURE	REL. HUMIDITY
Outside	26,2°C	47,8 %
Inside (warehouse)	4,7 °C	78 %
docked truck* *values in loading area	12,9°C	60 %

## THERMOGRAPHIC EVALUATION

### without air separation system

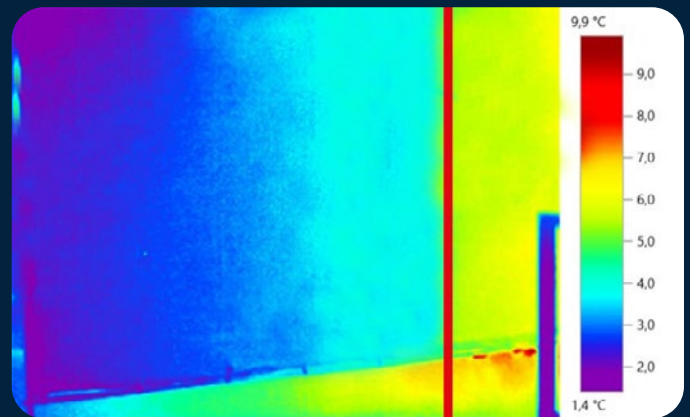


Thermographic image without air separation system

The red line marks the outlet of the diffuser.

- Air separation system is switched off
- Significant heat input from outside
- Cold air escapes visibly from the warehouse

### with air separation system



Thermographic image with air separation system

- Air separation system in operation
- Airflow from the system forms an effective barrier
- Air exchange almost completely prevented

## RESULT

Thermography proves that activating the air separating system significantly reduces heat transfer at the docking door. The different temperature zones remain stable and separated from each other.

**Conclusion:** arvus air separation systems at docking gates measurably increase **energy efficiency** and permanently reduce **operating costs**.