



### CONDENSATION DRYING

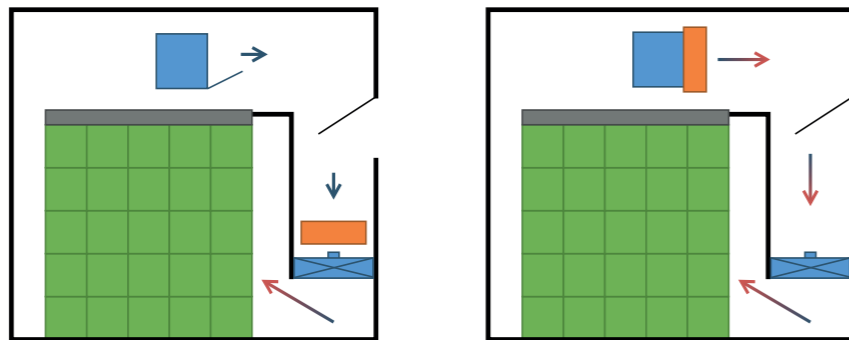
Condensation drying is the storage technology of the future. Because the product can be dried continuously, completely independent of prevailing weather conditions, product quality is maintained and gas heaters are not required. A condensation drying facility works by cooling the air, causing moisture to condense, and re-heating this air using a heating block (bypass condenser). The dry, heated air is then conveyed to the stored product. The product loses moisture to the dry air and is maintained at the correct temperature. The moist air is returned to the cooler and the process of cooling, condensation and heating is repeated. Condenser drying is possible for both high and low storage temperatures, so it is also suitable for products that need to be both kept dry and stored at low temperatures to inhibit germination. A condensation drying installation can be configured in different ways in the storage facility; the air cooler and heating block can be built in such a way as to match an existing ventilation system.

### PROPANE: SUSTAINABLE, EFFICIENT AND FUTURE-PROOF

In future, prevailing legislation will mean that only natural refrigerants will be permitted. Tolsma-Grisnich can provide a wide range of direct and indirect cooling installations with a GWP value of 3, using propane (R290) as a refrigerant. These installations are energy-efficient, sustainable and designed to ensure minimal drying-out of the product. Propane has clear benefits for the storage of agricultural products because it is odourless and can be used in a wide range of applications. Easy to use and maintain, these installations are also safe by virtue of their design.



- : Heater block
- : Cooling block
- : Boxes



# MECHANICAL COOLING

Intelligent technology, highest output



- State-of-the-art cooling installations
- Energy-efficient
- Intelligent control
- Minimal product dehumidification
- Highest storage output

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### HANG-IN COOLING UNITS

The product range includes special 'hang-in' cooling units for smaller spaces in need of cooling. These pre-fabricated units are fixed to the wall in their entirety, and require no extensive installation. Hang-in units can be supplied with a cooling capacity of between 5 and 15 kW.

### GCU R290

The GCU (Green Cool Unit) is a direct expansion cooling system that will make your storage as efficient as it can possibly be. This cooling system uses propane as a refrigerant. The combination of modern compressor technology and intelligent control reduces energy costs as well as minimising dehumidification of the product. The GCU is available with cooling capacities ranging from 25 to 90 kW.

### GCU-I R290 - COOLANT

The GCU-I (Green Cool Unit-Indirect) is particularly suitable in a situation where different products must be stored in different climatic conditions. The GCU-I uses propane in the primary circuit and a coolant in the indirect circuit. The indirect cooling system makes it possible to refrigerate several cells at different temperatures. This cooling system ensures optimal storage efficiency thanks to the minimal temperature difference across the evaporator. The GCU-I is available with cooling capacities of between 65 and 570 kW and features



one or more cooling circuits. The cooling system can be configured to comply with (national) fiscal arrangements that stimulate energy efficiency.

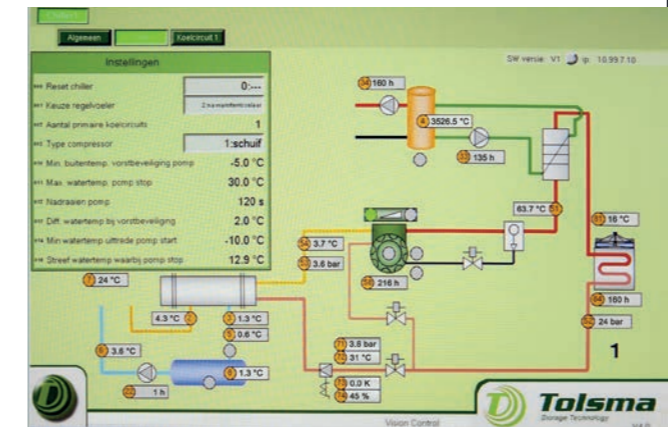
### GCU-I HP R290 - COOLANT

This GCU-I version features a free cooler. In addition to cooling and drying, the system can also heat up the product internally independently of the cooling demand of other cells. With this, a heat treatment can also be given to the product. The heat that is released during the cooling process can be diverted for use beyond the storage facility, for example, to heat business premises. This system is available with cooling capacities ranging from 65 to 360 kW and features one or more cooling circuits.



### CONTROL OF COOLING SYSTEMS

The cooling installation is controlled by the intelligent Vision Control climate computer. The user-friendly touch screen provides a well-organised and graphic rendering of temperatures, pressures, running hours and valve positions. Because the Vision Control controls both cooling and fans, these can be optimally fine-tuned which contributes to the storage efficiency.



### LEGAL REQUIREMENTS AND MAINTENANCE

All installations developed by Tolsma-Grisnich comply with the new and much more stringent European legislation for refrigerants. New installations must meet the actual GWP (Global Warming Potential) values for refrigerants. Special legal requirements in terms of management, control, maintenance and supervision apply to cooling installations. When performing regular maintenance, Tolsma-Grisnich specialists check the functioning of the compressor, condenser and evaporator/air cooler among other things, as well as screening for any leakage of refrigerants.

