

FTE2.0 - SYSTEM REQUIREMENTS WITH CAREL

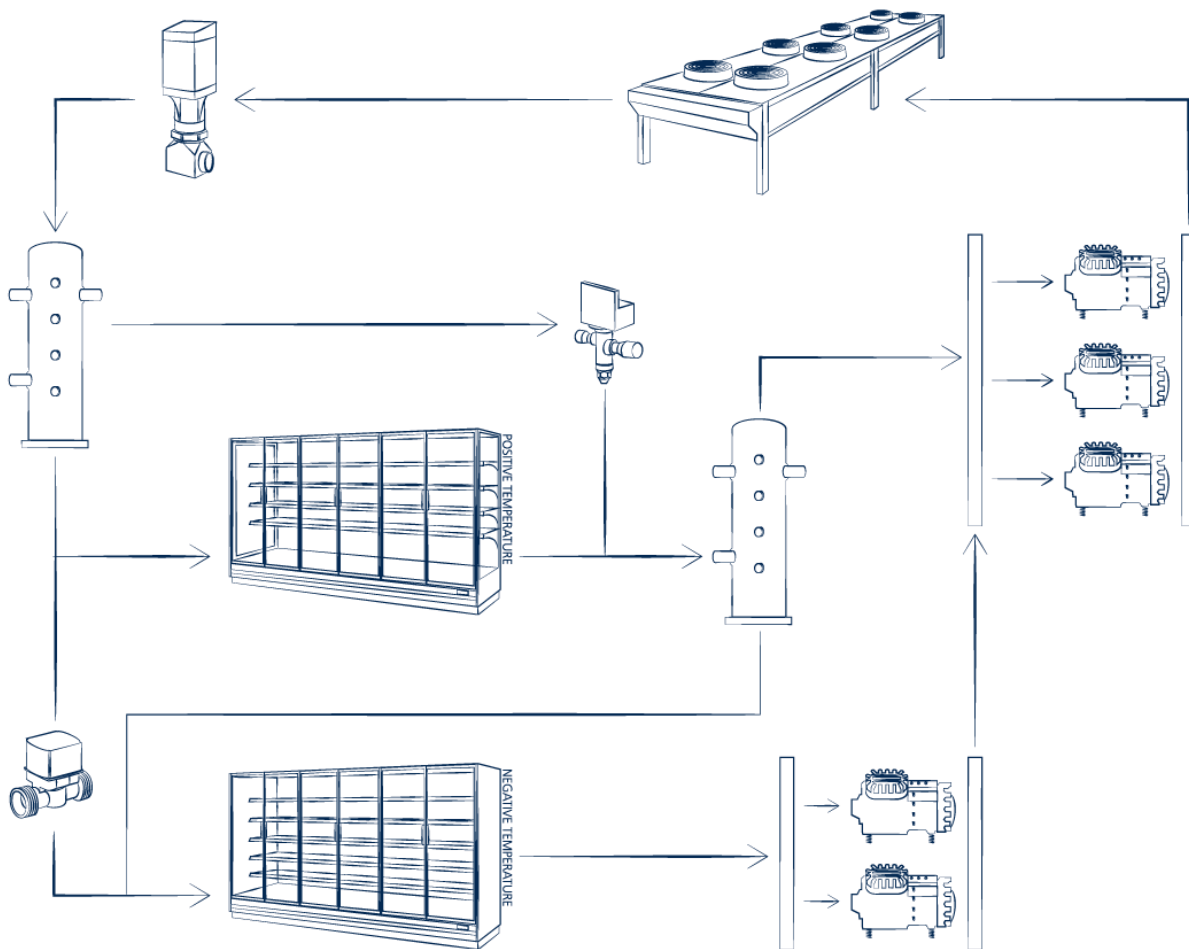
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This document is deemed as *Classified*. This means that first circulation is limited to selected people, who must diffuse it only as strictly necessary for correct operations.

FTE2.0 – System requirements with Carel

1. System requirements

Concept layout of a transcritical system equipped with the FTE technology



FTE2.0 – System requirements with Carel

1.1. **Mechanical requirements**

The mechanical requirements are the following:

Mechanical requirements	
1	Transcritical system with LT and MT loads
2	Bitzer compressors for LT and MT stage
3	Cooling power demand ratio between load LT and loads MT higher than 15%
4	Minimum number of LT loads equal or higher than 5
5	Two liquid line: <ul style="list-style-type: none"> ✓ One dedicated to the MT loads; ✓ One dedicated to the LT loads.
6	Maximum height difference between cabinets/ cold room and pack = 15 m
7	Maximum gas cooler internal volume for FTE/Liquid Receiver integrated in the pack: <ul style="list-style-type: none"> - For EC91: max 60 dmc; - For EC93 4+3: max 90 dmc; <p>In case gas coolers with bigger internal volume are needed, FTE is still available as a separated component, independent from the Liquid Receiver, with the standard internal volume as in the previous version: 110 – 180 – 250 – 300 dmc</p>

1.2. **Electrical requirements**

The electrical requirements are the following:

Electrical requirements	
1	Carel controllers for the loads (MT and LT)
2	Carel Boss Supervisor
3	Monitoring system visible from remote
5	Dedicated Modbus line to the FTE2.0 controller

1.3. **Generic requirements**

The additional requirements are the following:

Generic requirements	
1	Additional refrigerant: at least the 50% of the volume of the FTE
2	Additional compressor's oil: at least half of the volume of the oil reservoir
3	It is recommended to have at least one commissioning spare part kit for country