



ATMO sphere

San Diego. June 5-7, 2017





**COLD STORAGE DISTRIBUTION CENTER DESIGN
WITH NATURAL REFRIGERANTS**



ATMO sphere





 **Frialisa**
SOLUCIONES LOGÍSTICAS PARA LA
CADENA DE FRÍO

 **FB INDUSTRIAL**

Location	Culiacán
Company	FRIALSA
Cold Storage	1.250 kW - 355 TR
Frozen Storage	457 kW - 130 TR
Blast Freezing	250 kW - 71 TR



TEWIS SOLUTIONS FOR INDUSTRIAL PLANTS

SOLUTION A
REEZE (25%)

RACK NH₃ + CHILLER + RACK CO₂ DIRECT EXP.

- ENERGY EFFICIENCY: A+
- LATENT RISK: CO₂, NH₃
- EASY PLUG & PLAY: High
- HARDWARE COST: High
- KIND OF PRODUCT: High

SOLUTION C
FREEZE (≤ 25%)

RACK NH₃ + CHILLER + COND. UNIT CO₂ DIRECT EXP.

INSTALLATION WITH CO₂ CONDENSER UNITS

- ENERGY EFFICIENCY: A+
- LATENT RISK: CO₂, NH₃
- EASY PLUG & PLAY: High
- HARDWARE COST: High
- KIND OF PRODUCT: High

SOLUTION B
REEZE (≥ 50%)

RACK NH₃ + CHILLER + RACK CO₂ + FLOODED PUMPED

- ENERGY EFFICIENCY: A+
- LATENT RISK: CO₂, NH₃
- EASY PLUG & PLAY: High
- HARDWARE COST: High
- KIND OF PRODUCT: High

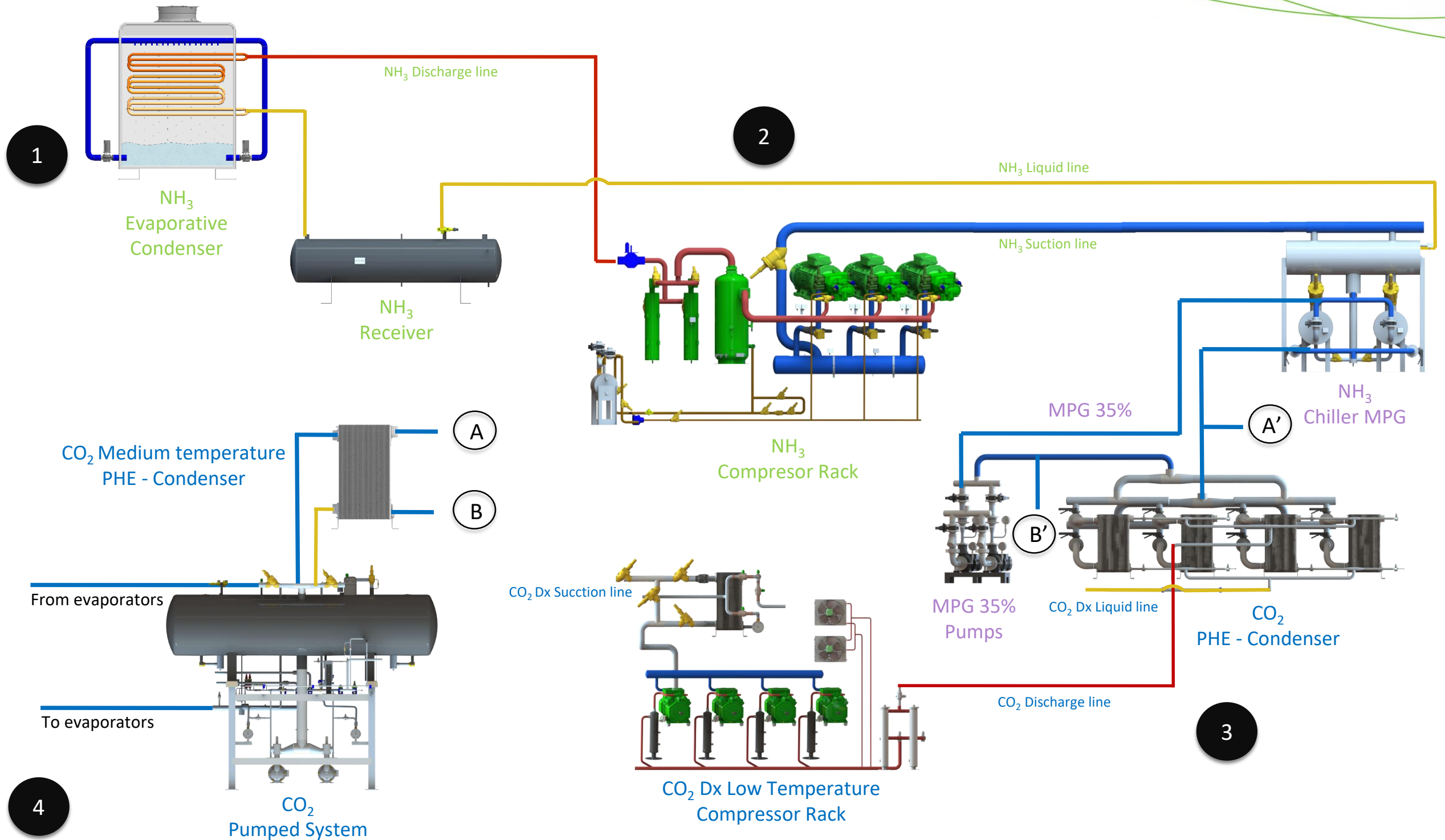
SOLUTION D [CONVENTIONAL]
FRESH • FREEZE

RACK NH₃ + FLOODED PUMPED + RACK NH₃ LOW TEMP. + FLOODED PUMPED

SOLUTION E
RACK NH₃ + RACK CO₂

- ENERGY EFFICIENCY: A+
- LATENT RISK: NH₃
- EASY PLUG & PLAY: High
- HARDWARE COST: High
- KIND OF PRODUCT: High







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1 NH₃ Evap. condenser



2 NH₃ Chiller MPG 35%



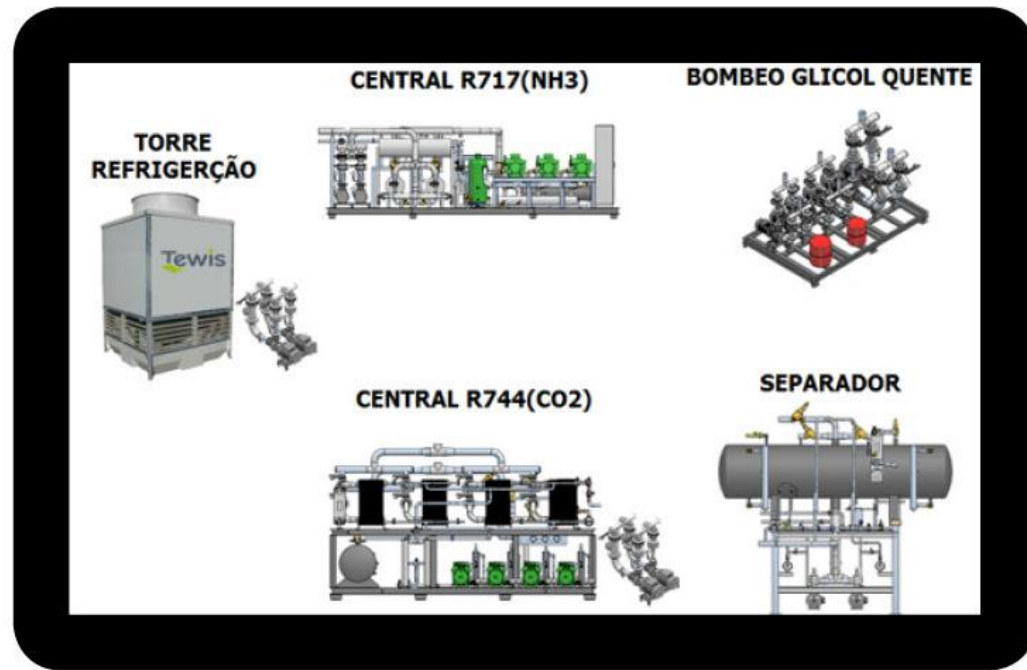
3 CO₂ Compressors rack



4 CO₂ Pumped system



Outdoor option



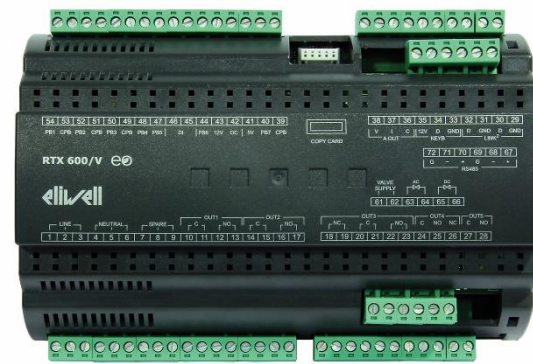
Control Panel / HMI



InterNet

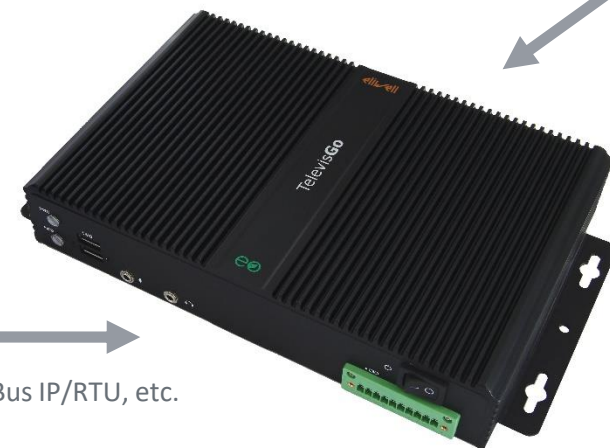


IntraNet



Field Controls

Profibus, ModBus IP/RTU, etc.



Central Control /
Web Server



ATMO
sphere

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Thank you very much!

