



ATMO
sphere

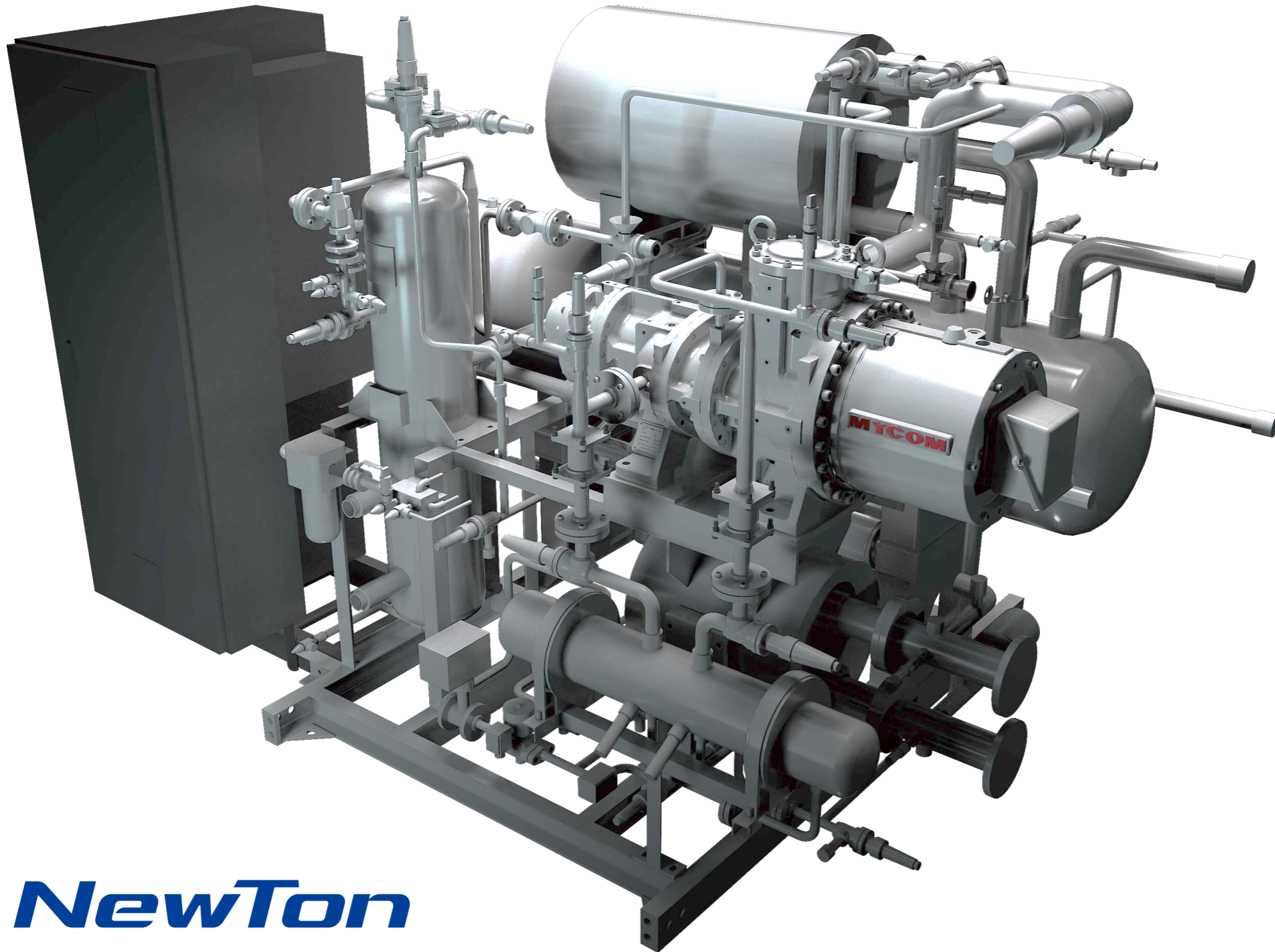




ΜΑΥΕΚΔΩΔ

Who is Mayekawa ?





- ✓ 10 years
- ✓ 930 systems
- ✓ 338 locations
- ✓ 9 countries

NewTon

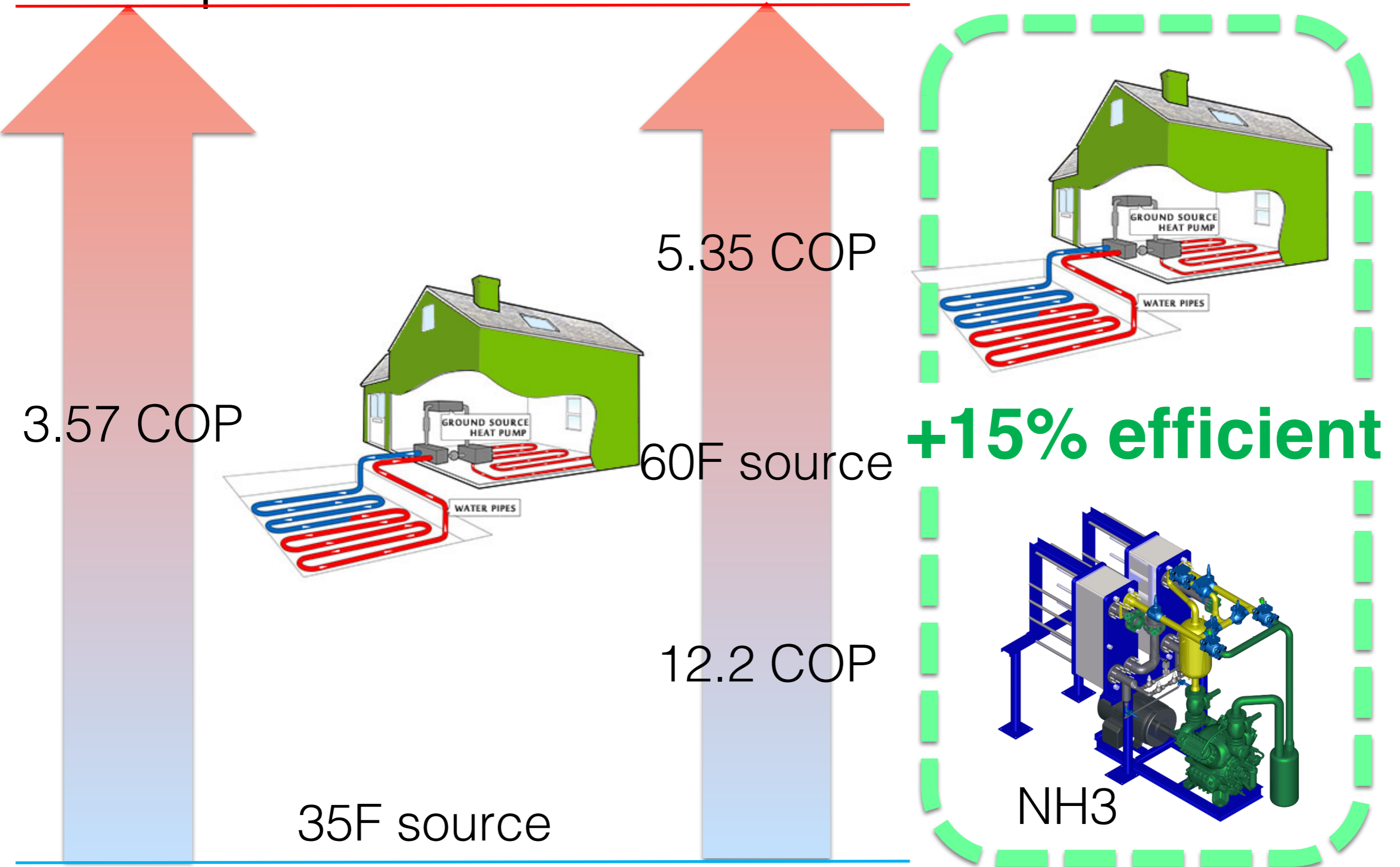


NHVAC in action



700 households

NH3 for residential district heating



EcoCute



Alaska SeaLife Center
windows to the sea



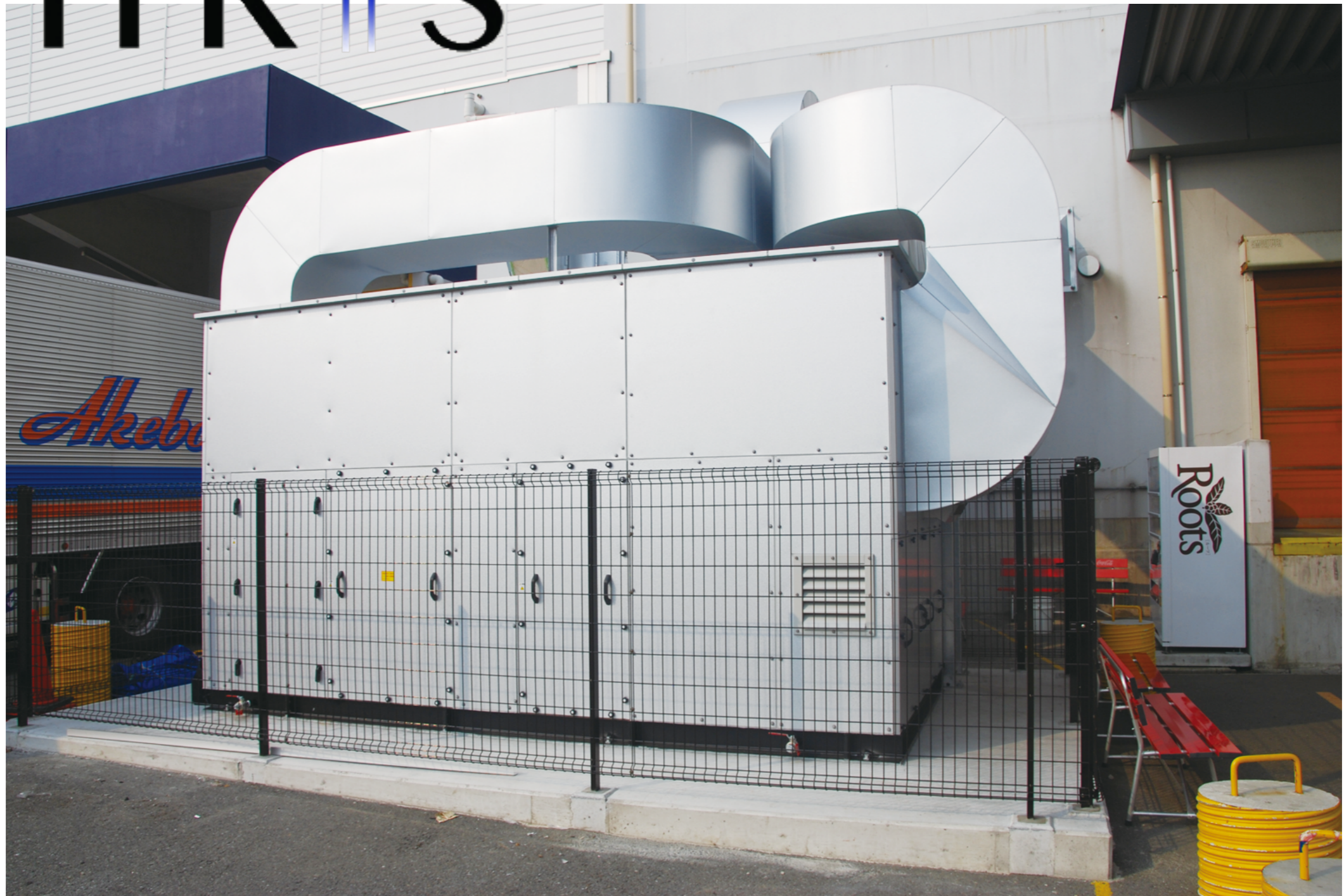
seawater source
CO2 trans-critical heat pump
194F hot water



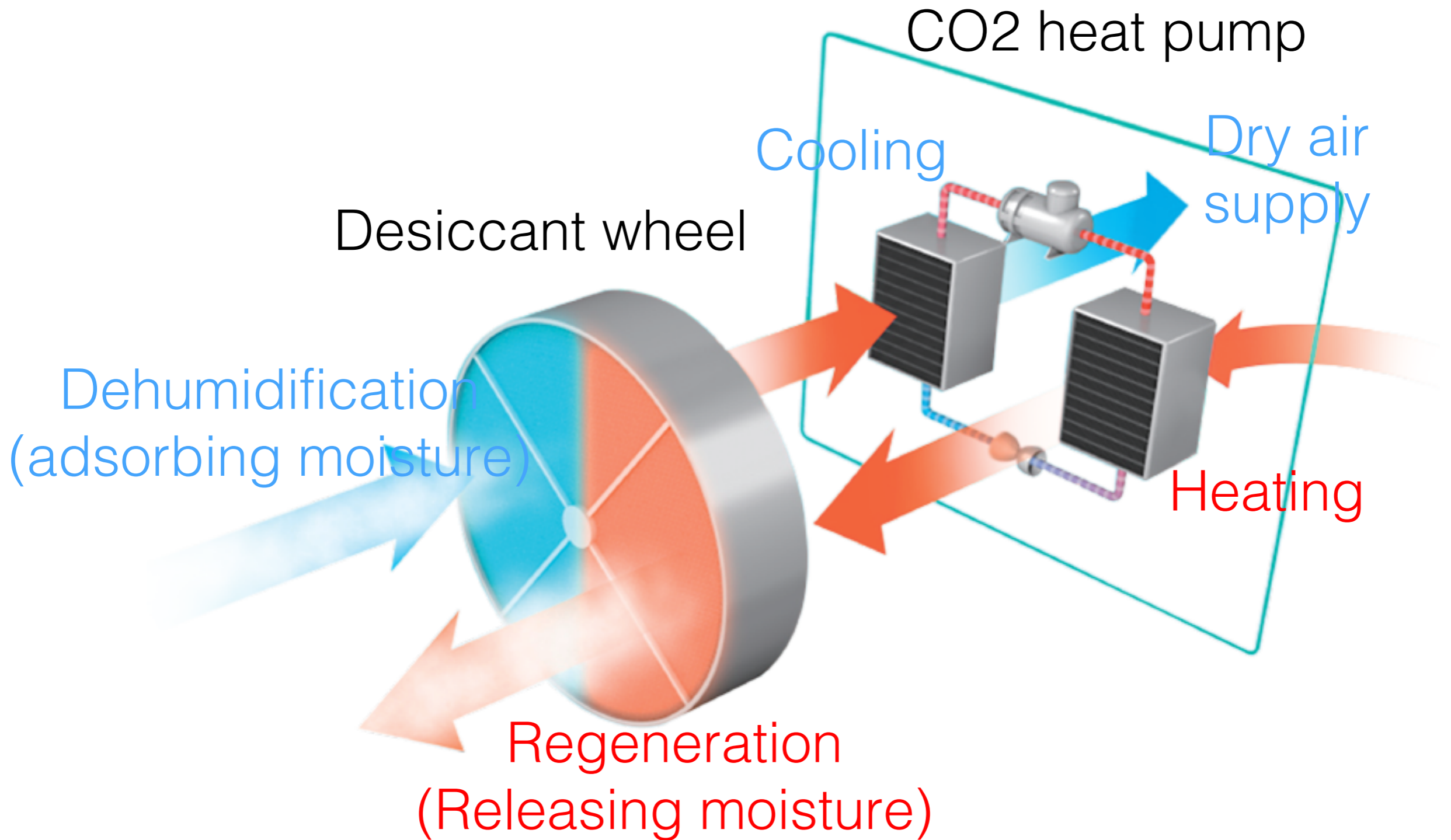
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CO2 for de-humidification

C H R I S

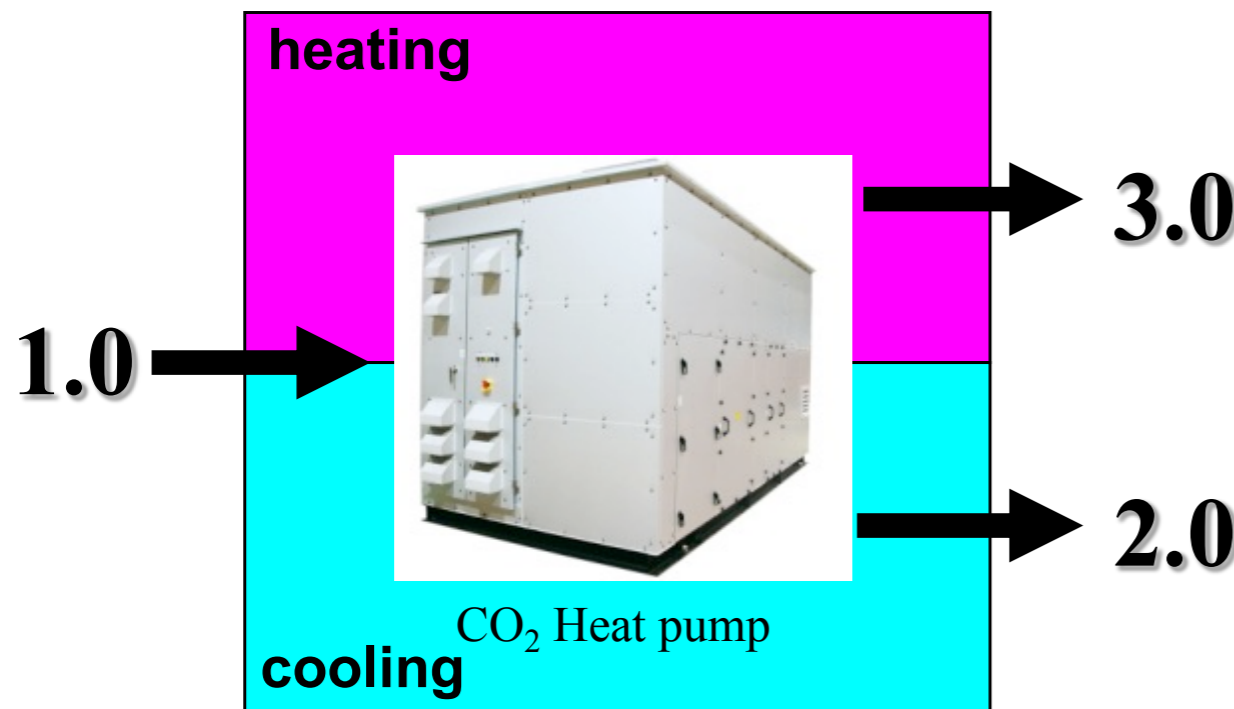


CO2 for de-humidification



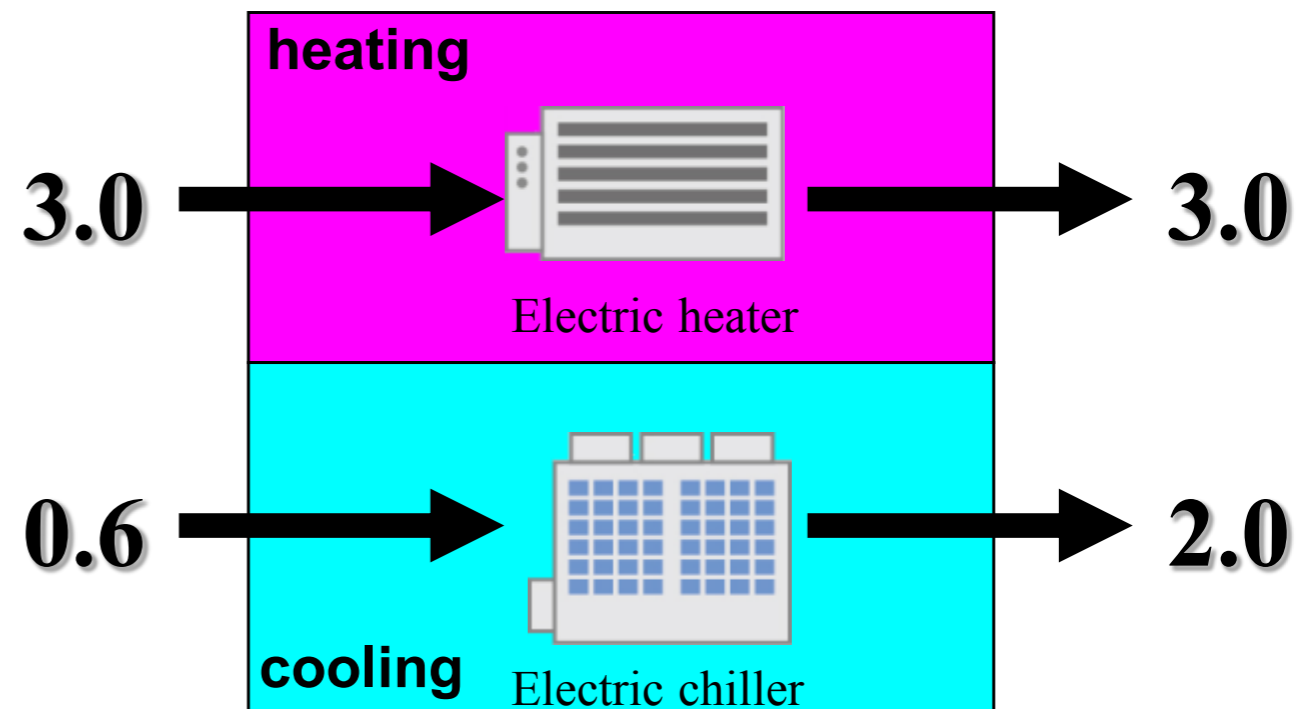
CO2 for de-humidification

Input energy = 1



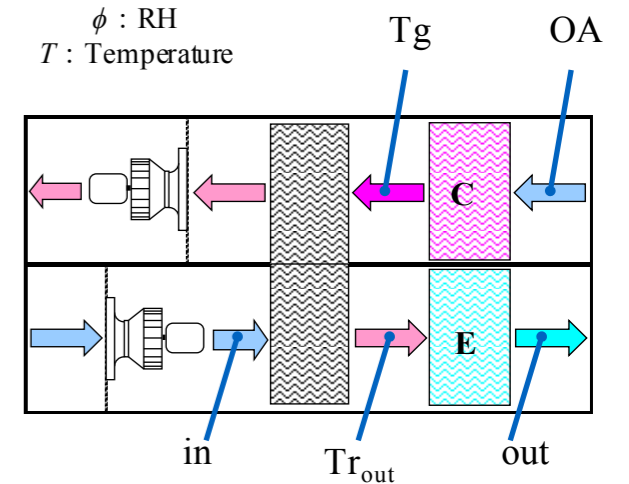
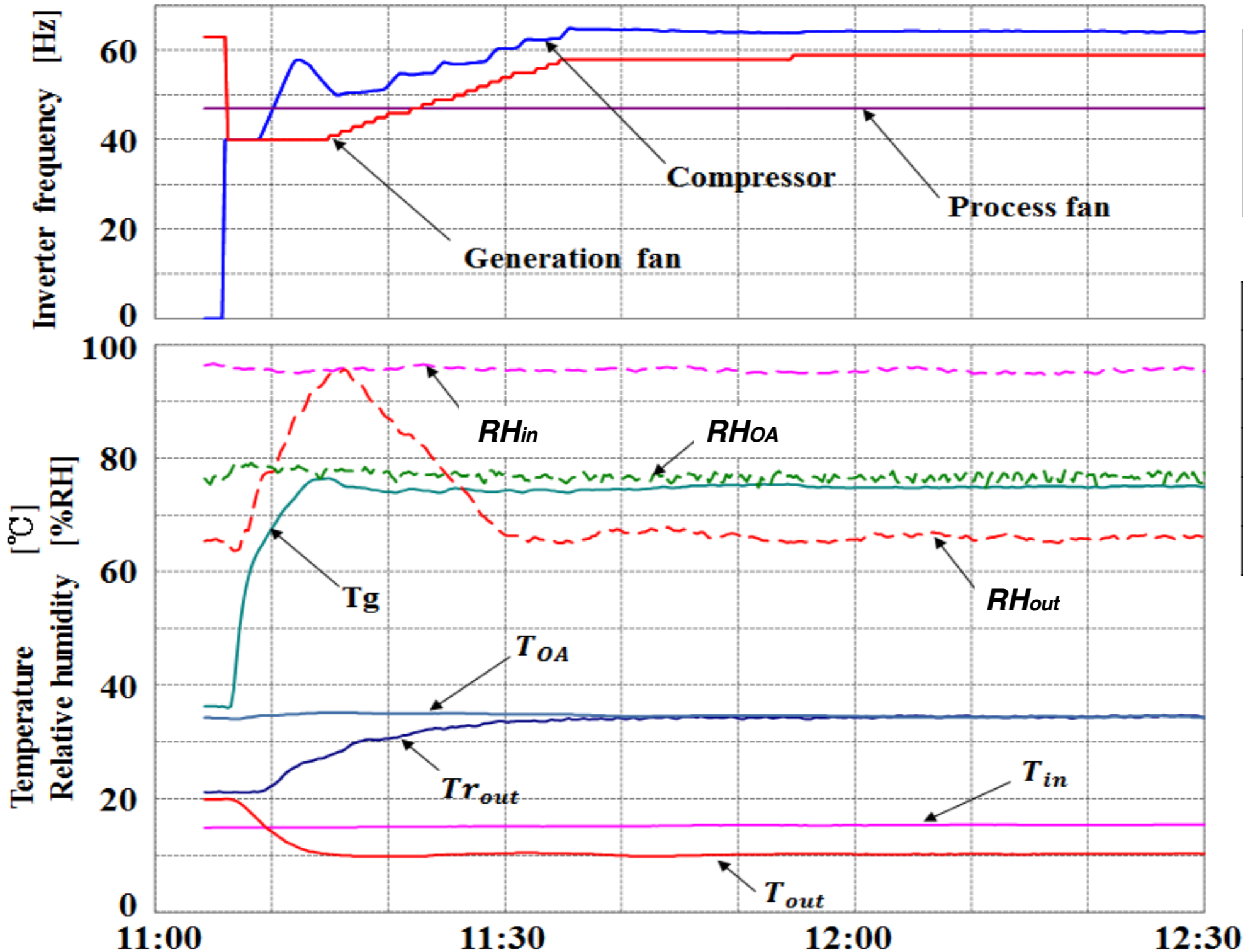
CO2 desiccant

Input energy = 3.6



Efficiency of electric heater : 1.0
COP of the electric chiller : 3.3

Conventional ?

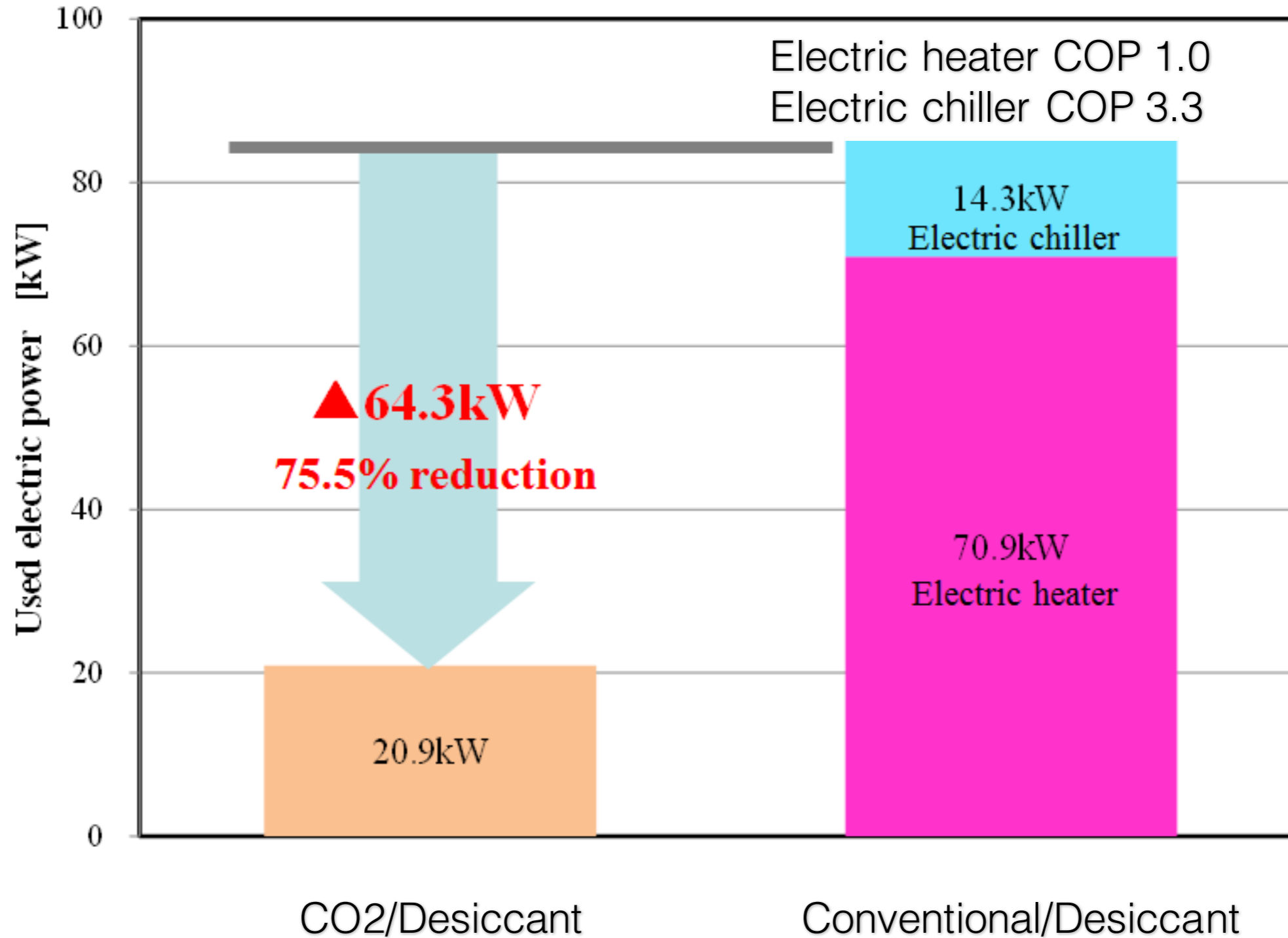


	Start	12:00
T_{in}	15 C	15 C
RH_{in}	94%	94%
T_{rout}	-	35 C
T_{out}	-	10 C
RH_{out}	94%	63%

20.9kw input
 ↓
 70.9kw heating
 50.0kw cooling

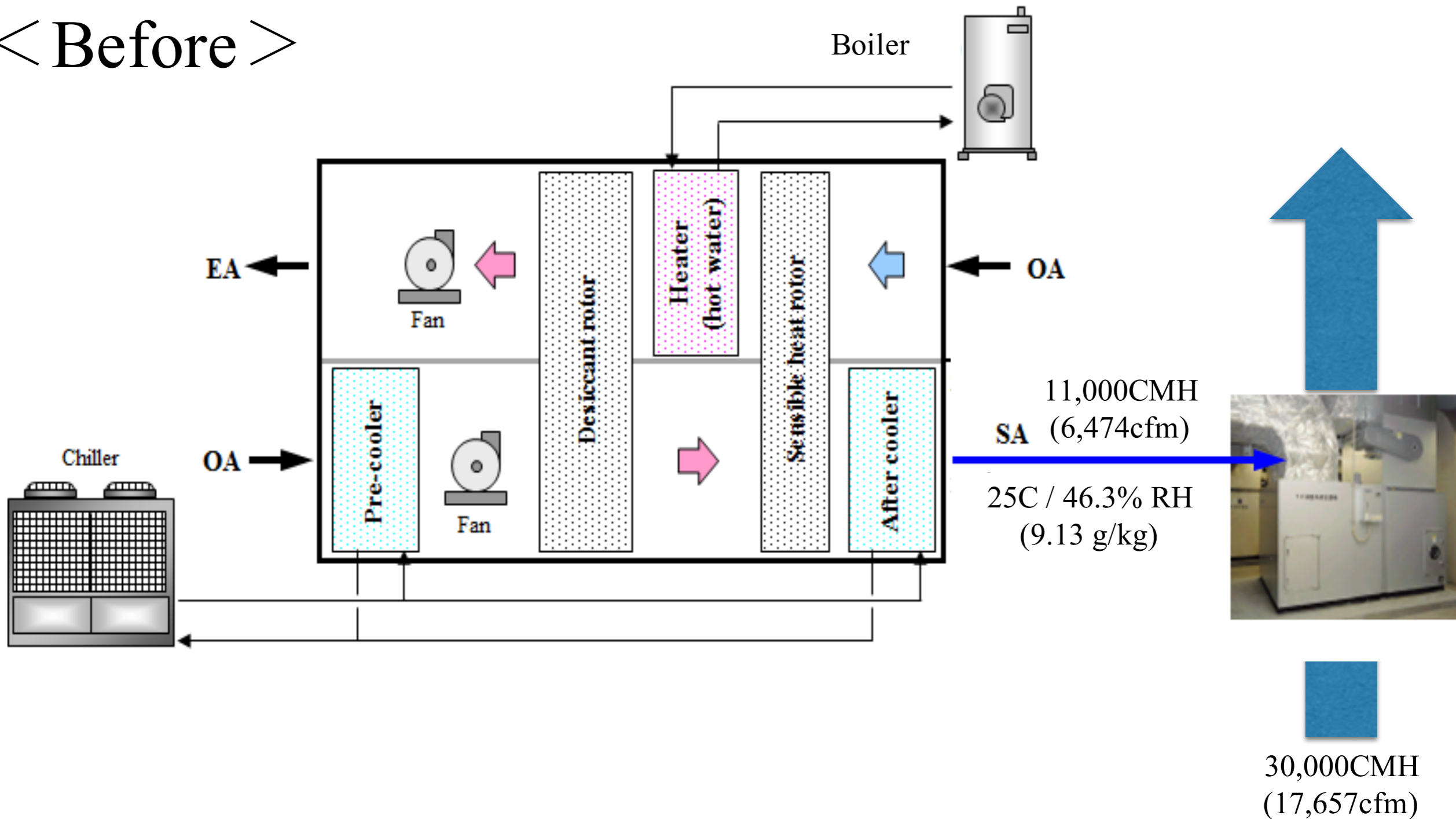


CO2 for de-humidification



CO2 for de-humidification

< Before >

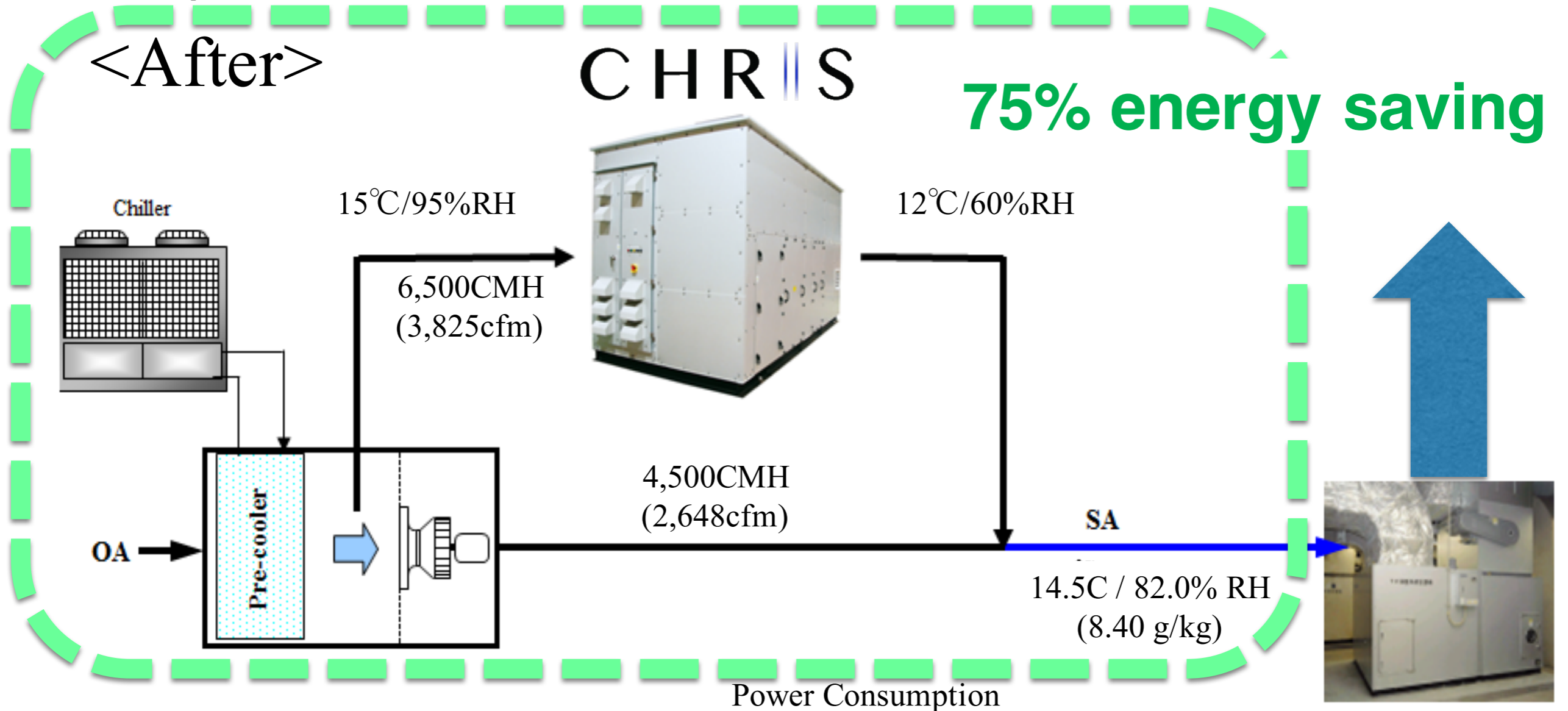


CO2 for de-humidification

<After>

CHRIS

75% energy saving



30,000CMH
(17,657cfm)

	Before (kw)	After (kw)
Re-generation Heat	142.0	25.0
After-cooler	40.9	
Pre-cooler		42.1
Total	182.9	67.1

15hp NH3 scroll chiller

Water

or

CO2



15hp NH3 scroll chiller

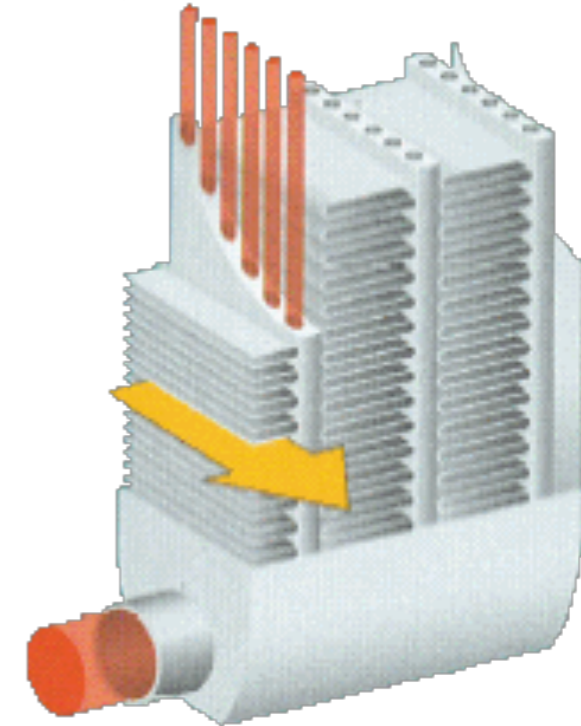




Compact, self-contained, SLC-NH3



water/glycol chiller



Micro-channel



[N6KHM45]

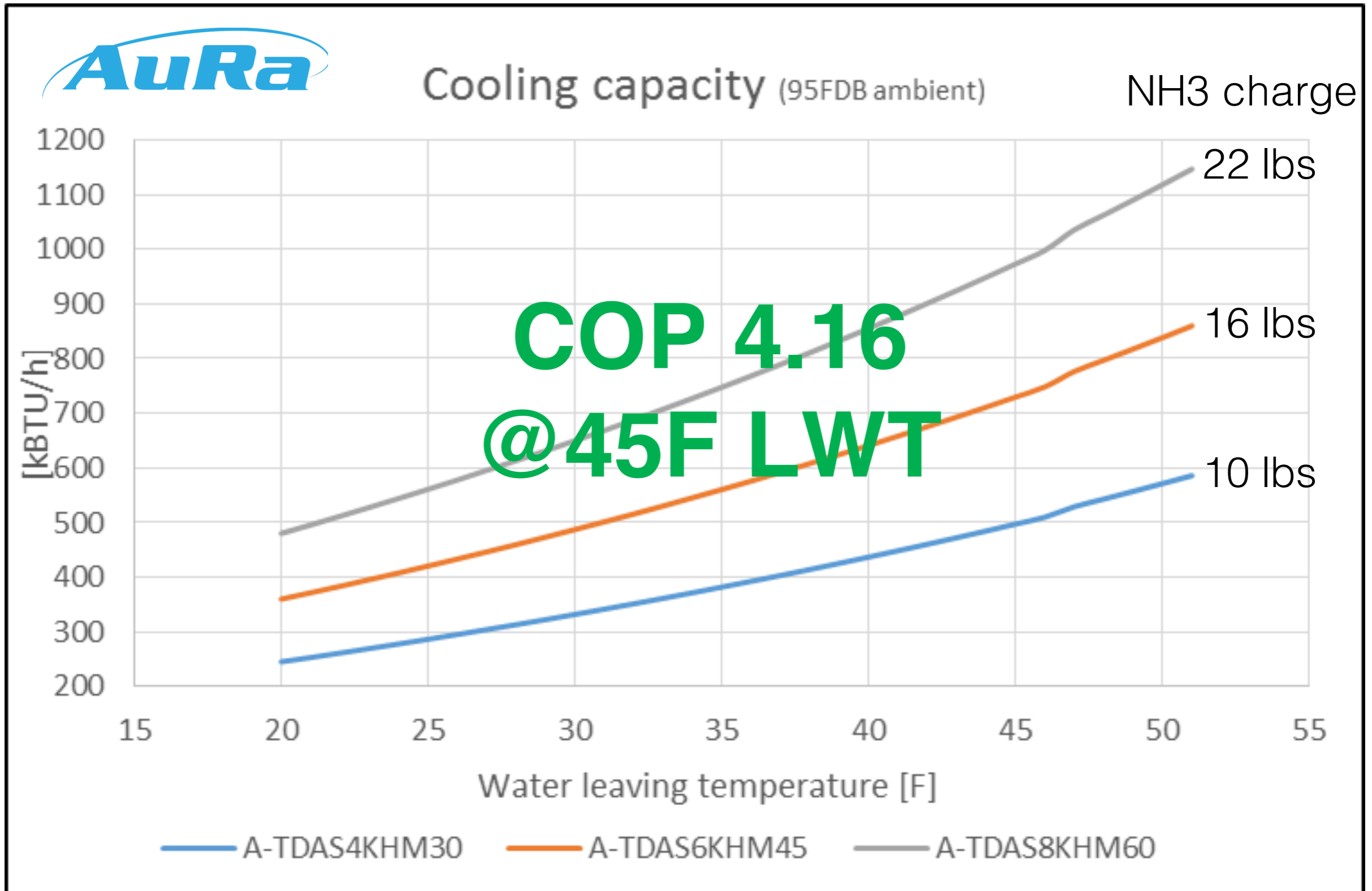
Semi-hermetic

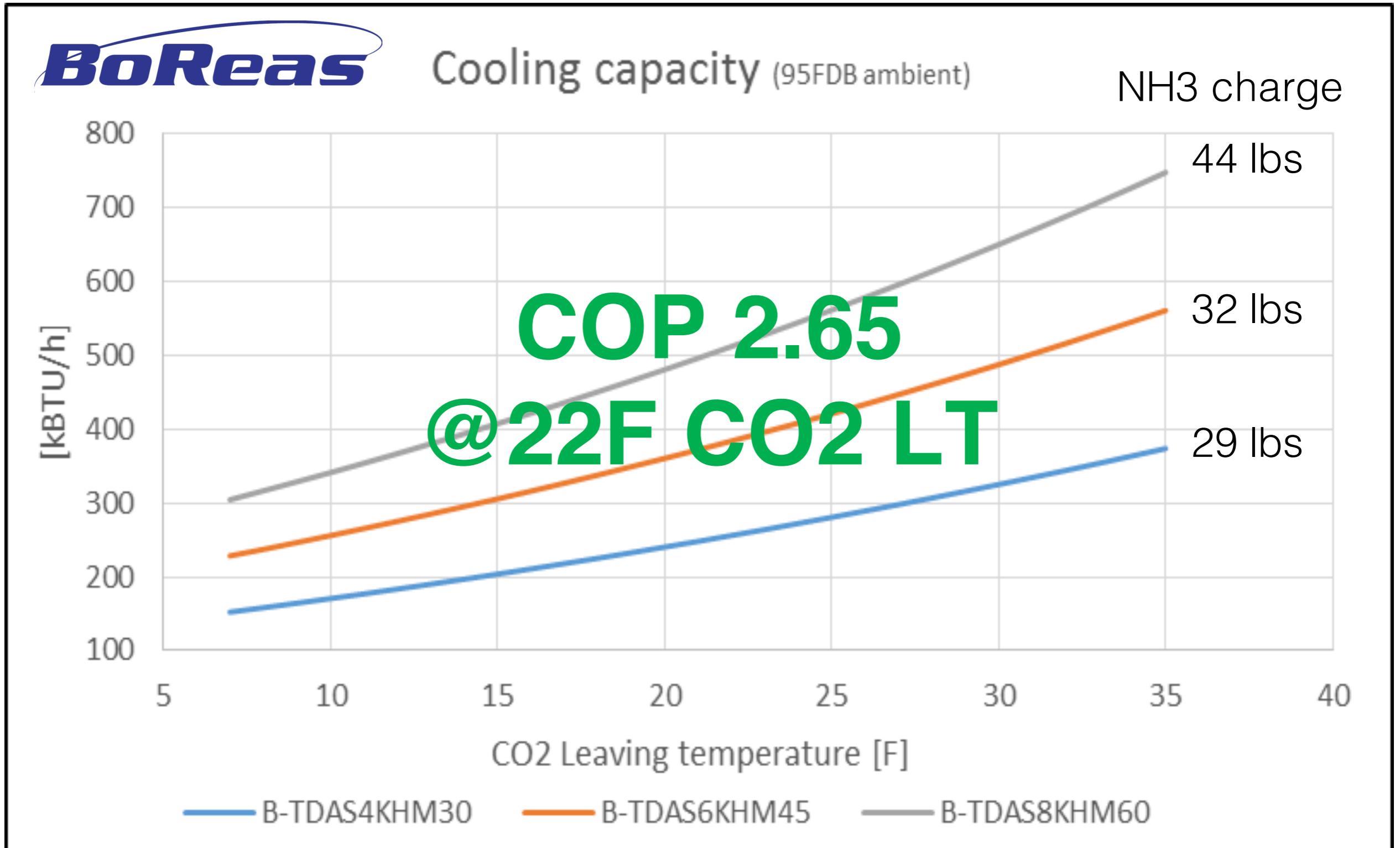


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Compact, self-contained, SLC-NH3







Being odd is normal
NHVAC is real



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Thank you very much!

