

CASE STUDY: Advanced DX (ADX) Ammonia



BIDVEST BIBRA LAKE Perth Australia



Type of facility: Food Service Distribution Center

Owner: Bidvest Australia Limited	Results/Benefits Delivered
Location: Perth WA, Australia	∘Total ammonia charge: 485kg (1067 lbs) ∘Ammonia charge in all evaporators: 15kg (33lbs)
Installer: Scantec Refrigeration Technologies pty.ltd.	•Estimated pumped ammonia charge: 2000kg
Floorspace: 4500 m² (46,300 sq ft)	(4400 lbs) ∘Reduction in operating cost*: 60% ∘Other:
Total refrigeration load: 496 kW (141 TR) High Stage (+4 deg C) Capacity: 300kW Low Stage (-25 deg C) Capacity: 196kW	∘Carbon tax levy reduced ∘300kW PV solar array installed on rooftop
Two-stage with VFD direct drive reciprocating compressors and evaporative condenser.	*Compared to air-cooled HFC solution.

Colmac Advanced Direct Expansion(ADX)

Benefits:

- » Significantly smaller ammonia charge
 - 7 lbs/TR vs 30 lbs/TR for pumped bottom feed
 - Reduced health and safety risks
 - Reduced regulatory burden (< 10,000 lbs)
 - Faster defrost cycle
- » Energy efficient
- » Lower first cost*
- » Simple operation



CE(PED) Certification, ASME Sec. VIII, Canadian Registration Number, UL508, Canadian Standards Association





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^{*}Compared to traditional pumped ammonia