NEOMETRIX DEFENCE NMX-ADU-27

Shipboard Compressed Air Drying Unit

CAPABILITY SHEET · TWIN-TOWER DESICCANT · CONTINUOUS DUTY · ENGINEERED TO ORDER

THE ONE IDEA

PRINCIPLE	One tower dries the air. The other tower dries itself. Continuous dry air is only possible because the offline tower is always being regenerated, ready to take over the instant the cycle switches.
WHY DESICCANT	A refrigerated dryer's dew point ceiling stops just above freezing. A desiccant bed reaches a dew point well below freezing, the class of performance shipboard control and instrument air is held to.

THE SYSTEM

TWIN TOWERS	Two desiccant towers alternate roles on a timed cycle - one drying the incoming air while the other is purged of the moisture it adsorbed - so delivered air is never interrupted.
REGENERATION	The offline tower is purged using a fraction of the unit's own dried air, expanded to near-atmospheric pressure, carrying the adsorbed moisture back out of the desiccant.
MONITORING	A dew point monitor and differential-pressure indicators confirm the unit is doing its job, not just running.

CONFIGURATIONS

HEATLESS	Pressure-swing regeneration, no external heat source - the simplest, most reliable choice for shipboard duty.
HEATED	Blower-purge regeneration, using less of the unit's own dried output.
HEAT-OF-COMPRESSION	Regenerated from the compressor's own waste heat - the most efficient option, paired to a compatible compressor.

STANDARDS & SCOPE

STANDARDS	ISO 8573-1 is the reference for the delivered air's quality class. IACS Unified Requirements are the reference framework for compressed air systems aboard classed vessels.
SCOPE BOUNDARY	This is the drying unit itself - twin towers, switching valves, purge control - not the compressor that generates the ship's compressed air.
STATUS	Neometrix engineers shipboard compressed air drying units to order, and no delivered air drying unit is claimed.

DEFENCE PROGRAMMES DESK

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