

# The function of the generator cooling duct

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The cables or large bars between the generator and the main transformer are contained within large pipes called the Bus Duct. Fans drive air across these cables / bars to remove the heat.

Most large generators will have two distinct cooling circuits that need to be accommodated by the remote cooling system: the engine jacket water cooling and the charge air cooling.

The cooling system must be filled properly to prevent air locks. Air in the system can cause pump cavitation, resulting in premature pump wear and engine damage.

Cooling air for the generator or other driven equipment. A properly designed engine room ventilation system will maintain engine room air temperatures within 8.5 to 12.5°C (15 to 22.5°F) ...

Its primary function is to regulate the temperature of the bus duct, which transfers electrical energy from the generator to the grid or other load centers. Effective cooling is essential to prevent overheating, ...

Proper duct installation plays a crucial role in ventilating generators. Ducts move hot air out and bring fresh air in. Correct installation ensures the generator runs safely and efficiently.

The reason for this recommendation is that the air moving through a liquid cooled system is typically pulled past the engine and through the generator's radiator. The generator's radiator is placed so that ...

Cooling air ducts are installed in the cores of the stator and rotor and sometimes even on the field windings, so as to expand the surface area of contact with the cooling air.

When discharging air vertically, because the generator is surrounded on all sides, can result in higher than ambient air temperatures being pushed into inlet vents.

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