COMPRESSOR COLD WEATHER PROTECTION

An efficient way to avoid damage to heat pump, air conditioner, and refrigeration unit compressors

Application

Heat pumps, air conditioners, and refrigeration units all have compressors, which are pumps that move refrigerants through the systems. Compressors must be lubricated by oil to operate efficiently. When the compressor is not operating, the oil sits in a compartment located underneath the unit in a sump, or crankcase, and can get cold. If the oil is not kept warm during shutdown periods, pressure in the area will be reduced and refrigerant inside the cooling system will migrate back into the oil because refrigerant is attracted to lower pressure (colder) areas. When this happens, two problems may occur after restarting which damages the compressor.

1. The oil will boil the refrigerant, causing it to foam and carry oil away from the compressor which could lead to an insufficient amount of oil to lubricate the compressor.
2. The refrigerant mixes with, thins the oil, and reduces its ability to lubricate.

Solution

BriskHeat's crankcase heaters are the solution to keep the compressor oil at an elevated temperature to ensure the refrigerant does not migrate and mix with the oil. Each heater is composed of a long thin electrical heater with a built-in adjustable strap that easily fits around the cylindrical housing of the crankcase. They come in a variety of sizes to fit almost any size industrial or residential crankcase. They are easily wired to the electrical box of the HVAC unit, and because of the way the HVAC wiring is set-up, the crankcase heaters will only operate when the system is turned off.

Industries	
Construction	HVAC