Why the Heaters Fail?

For over 3 decades, **EXCEL** has been solving complex and unique application problems of heaters. We are continuously improving our design and application knowledge through our engineering expertise and our experience with end - user applications, resulting in the best heat solutions.

The following are some helpful hints to keep the heaters running smoothly

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REASONS	SOLUTIONS
Loose fitting on the cylinder (barrel)	■ Refer "right mounting of band heaters - Installation procedure"
The selection of the wrong watt densities	■ Match the heater wattage as closely as possible to the actual load requirements to limit ON / OFF cycling ■ The watt densities shouldn't exceed recommended limit
Defective temperatures sense by the thermocouple	■ The "below" (tip) of thermocouple should be inserted deeply in the cylinder ■ The "below" (tip) should not vibrate ■ Check the polarity of thermocouple with temperature controllers
Leakage of polymer melt or oil	■ Rectify the leakage immediately
Voltage fluctuation	■ Check the voltage regularly
Heater that is forced to operate beyond its maximum capacity to operate the temperatures	■ To prevent premature failure, the heater shouldn't operate beyond its maximum recommended temperatures
The wrong reading of the temperature controllers	■ Check ON / OFF cycles of temperature controller ■ It is important that All heaters should be used with appropriate, approved and precise temperature control/sensor device(s)
The smallest amount of contamination can cause electrical shorts creating heater failure.	■ Before installation & during operation, the outer surface of the barrel and inside surface of band heater must be cleaned & should be free of all contamination.
Serrated edges may begin to collapse and thrust outwards.	■ Tighten the Allen bolt until the serrated edges become firmly in direct contact with the barrel.
Incorrect wiring and loose contacts leads to sparks resulting in fire or heaters failure.	■ Keep all electrical connections properly protected to avoid electrical hazards to machine operators.
Terminals not well insulated and protected from moisture	■ Ensure that the terminals are well insulated and protected since the heater terminals are prone to attracting moisture.
Use of substandard raw material & manufacturing defects.	■ Standard raw material should be used & without any manufacturing default.
Combustible gases or vapours.	■ Avoid using heaters in an atmosphere containing combustible gases or vapours.
Incorrect wiring .	■ Electrical wiring on any type of heaters should be done by a qualified person complying with local electrical codes.