Causes of Cathode/ Target Overheating

- Insufficient coolant flow.
    a. Need at least 1 gallon per minute (4 liters per minute) for every 4 kilowatts of power
- Coolant temperature is too high.
    a. 65 °F (18 °C) inlet recommended. Range 55 - 75 °F (13 - 24 °C). Rise in outlet should not exceed 22 °F (12 °C).
    b. Inlet temperature should remain above local dew point to prevent condensation on target surface.
- Running too much power for a given target material.
    a. The maximum power for every target is different based upon their individual characteristics. Click here for further explanation on maximum power ratings.
- Stress in the target causes it to deflect losing contact with cathode body.
- Target dimensions are too large so when it heats up and expands it causes the target to deflect and lose contact with cathode body.
- Target is not centered on cathode body.
- Target is not flat.
- Target is not fastened properly to the cathode body.
- Cathode is positioned too close to another heat source.
- Trapped air in cathode body prevents good thermal transfer.
- Poor contact between target and cathode body.
    a. Use thermal paste or conductive foil to provide better surface contact.