

START-UP & SHUT-DOWN PROCEDURES

Start-up and shut-down procedures are a key factor in preventing broken valve tips and screws. Moreover, if these procedures are not followed properly, they can contribute to adhesive, abrasive, and corrosive wear.

Start-Up Procedures

Reiloy recommends following the resin manufacturer's recommendation. However, the following procedure has been shown to eliminate damage due to cold start-ups:

- When starting the machine, set the barrel to desired operating temperatures.
- After achieving temperatures at set point, let the heat soak into the screw (from 30 to 60 minutes or longer, depending on the screw diameter with larger screws requiring more time). However, please note, if the soak period is too long, there may be issues feeding the resin.
- Once all zones have reached set point and soak time is met, it is recommended that the screw be moved to full forward position, then slowly rotated back at 20 RPM's or less to help center the screw and barrel by filling the machine with plastic. Continue purging at low RPM's as this will help heat to be introduced to the pellets for easier melting.

Starting the machine at a higher RPM will push the resin up the screw with little to no residence time causing blockages. This in turn causes the screw to be pushed into the inside diameter of the barrel with great force providing the opportunity to accelerate wear on the outside diameter of the screw, inside diameter of the barrel and the valve assembly.

Shut-Down Procedures Reiloy recommends following the resin manufacturer's recommendation. However

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- Purge at low RPM's until the barrel is empty.
- After purging the system empty, decompress 30 – 50% of the maximum screw stroke distance.

This helps diminish the possibility of having a large mass of unmelted resin that needs to melt upon the next start-up.

 Another recommendation is to purge any filled resins or corrosive resins with an un-filled general purpose type resin such as PS, PP, or HDPE etc.

One last reminder, the barrel should not be left at production temperature for extended periods of time as this will result in resin degradation as well as black specks and cause corrosive wear.



For further information, contact:

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