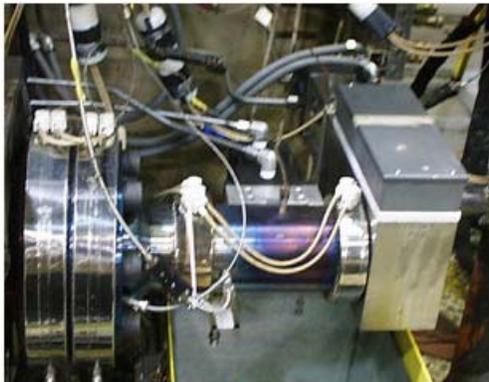


Melt Relief and Melt Shut Off Improvement Retrofits

Uniloy Milacron is proud to offer two more enhancements for existing Uniloy Structural Foam Machines. These two retrofits go hand in hand to improve your machines performance and reduce your on-going maintenance costs.



Before



After

Melt Relief Assembly

The Melt Relief Valve, sometimes referred to as the dump valve, is located at the output (head) end of the extruder. When the valve is in its normal, closed position, melt flows through the valve body, the fill pipe, and into the melt injection cylinder. When the valve is in the open position, molten material from the extruder is diverted into the dump pan below. On start-up, the valve is left open until a good flow of properly melted material is observed.

The melt relief also serves a safety purpose. If a problem occurs during the filling of the injection cylinder and the plunger reaches the maximum rearward position, the relief valve opens automatically to prevent a pressure buildup in the fill pipe and cylinder.

Improved Melt Relief Benefits:

- A larger bore diameter melt relief cylinder is used which seals better at 6000 PSI melt pressure and required air pressures. The O-ring seal in place of the gasket ring provides superior sealing.
- An 8-bolt flange replaces the 4 swing bolts. This creates better force distribution and improved sealing. The shear pins have been eliminated, which could have caused leakage.

- The swing pivots have been eliminated, allowing for easier re-assembly.
- The melt relief body and flange are now a rugged one-piece construction.
- Head heater wattage has been increased for quicker warm up.
- Externally mounted, spring-loaded, ceramic heaters have been utilized which are easier to replace, allow for thermal expansion, and have a longer useful life.
- The rupture disc has been moved from the extruder barrel to the melt relief, which eliminates pressure spikes from the screw and allows plastic to go into the dump pan.

Melt Shut Off

The Melt Shut Off is a device that can be added to machines that have one extruder supplying plastic to only one injection assembly. The melt shut off is placed between the melt relief valve and the fill pipe and closes off the passage between the two when shot size is reached and while the injection sequence is in process.

Melt Shut Off Benefits:

- Shuts off the plastic flow between the extruder and the melt injection unit while the motor is not running which keeps the plastic from backing up into the extruder when injecting.
- Improves shot to shot weight repeatability.
- Reduces bridging of plastic in the feed section.
- Reduces head pressure during injection, which helps prevent stress on the melt relief.

Notes:

- While we certainly recommend the melt shut off, it is optional. Some type of melt relief, on the other hand, is required.
- The fill pipe assembly is included in the pricing above because your existing fill pipe may not have the mounting holes required for the improved melt relief valve. It may be possible to transfer and drill the mounting holes from the new melt relief to your existing fill pipe flange at installation instead of replacing it.
- If the melt shut off is purchased, a new fill pipe is required because the mounting location shifts 6 inches. Additionally, the new fill pipe may need to be adjusted at installation in order to line up to the mounting location and holes.
- Programming changes may be required if your machine has a microprocessor control.
- Your extruder barrel will need to be modified to accept the melt relief valve body. A drawing to do this will be supplied as part of this retrofit.
- A visit to your plant by a Uniloy engineer may be required in order to obtain critical dimensions. If this trip is required, your cost will be for travel and living expenses incurred only. (In most cases, 2 days, which includes travel time will be needed).

INSTALLATION AND DELIVERY

The above pricing does not include field installation. Trained Uniloy Service Technicians are available to install these packages. We estimate 1 - twelve (12) hour shift of actual installation after the barrel is modified and reinstalled. Please allow up to 8 - 10 weeks for component delivery.