

Produce A Better Product and Save Money!



Does Your Injection Unit Provide You with the Correct Amount of Plastic Material? This is a difficult question for any molder to answer. However the following examples will help you determine if a Downsize / Upsize Conversion from Services For Plastics, Inc. could save you time and money.

Rule #1: The standard “rule-of-thumb” for an injection unit utilization is between 30% - 70% of the total stroke distance. If you are using less than 30% of the stroke distance, your residence time for the plastic may be too long. In addition, if using more than 70%, you may have to plasticize at too high of a rate over shearing material which will prematurely wear out the injection unit components. Here are some examples of these problems.

Downsizing Problem:

Ever had the problem that regardless of what you try, there is still degradation in your plastic resin? You have carefully measured the injection unit for material hang-ups, and you have even taken off the heater bands and thermocouples and qualified them. Yet nothing seems to be wrong. However, someone brings it to your attention that of the 8 inches of stroke available, the process requires only 1 inch of stroke to fill the mold. All of the material that is stored in the injection unit is subject to the heat energy of the barrel, which is referred to as residence time. When a plastic material is subject to heat energy for too long a period of time, it will degrade. Once degraded, there is little hope that this defect will go unnoticed. Even if the part design is able to hide this degradation, the plastic material has still lost the properties for which the material was originally selected.



SFP Solution:

The only true solution to this problem is to downsize the injection unit. Services For Plastics, Inc. is able to help processors by re-designing the injection unit of the molding machine to produce less output. By reducing the amount of plastic contained within the injection unit, we are able to significantly lower residence time and eliminate the effects of degradation due to overexposure to heat energy.

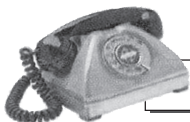
Downsizing Example:

Services For Plastics, Inc. engineered a 30-ounce, 400-Ton Van Dorn press in which the molder was only utilizing 6 ounces of unfilled ABS resin. The customer complained of continuing degradation being found in the part, which was in turn rejected by their customer. After exhausting all options on how to process around the problem, they finally turned to SFP. for a solution. SFP worked with the customer to calculate the maximum residence time to eliminate the degradation in the ABS resin. This time was determined to be 3 minutes and 45 seconds. From there the SFP design engineering team went to work on the downsize. In five weeks from the conception of this project, the molder installed the new downsized injection unit onto the press. After stabilizing the process, and documenting the new process parameters, the results were clear, no degraded material appeared in any of the shots. After six months of continuous monitoring by the customer, they reported that no degraded material had been found in the parts for this period.

How can Services For Plastics, Inc. save you time and money?

Before the downsizing of this machine, the customer had been required to sort and scrap on four separate occasions a total of 62,000 pieces of product. Over the two years the project had been online, this results in charge-backs, sorting labor, and lost production exceeding \$125,000. With the small amount of cost associated with the downsizing of this injection unit, they not only eliminated all future costs or sorting defective parts due to injection unit degradation, they also decrease their total PPM to the customer which enable them to win out on a new contract from that customer.

CALL TODAY FOR MORE
INFORMATION ON
SCREWS & BARRELS
800-627-1033



Services For Plastics, Inc. Can Save Your Company Time and Money!



Upsizing Problem:

Nothing is worse than setting up a mold in your injection press to find out that you have enough tonnage to clamp the tool, but the machine cannot produce enough plastic to fill the mold.



SFP Solution:

Typically, the only solution for processors would be to move the mold to another press that could supply the proper tonnage or outsource the project. With SFP's design engineering team in your corner, we offer another option.

In most cases, molding machine injection units can be engineered to increase the volume of plastic that is injected for every shot. Typically, an engineered solution can expect to yield up to 15% additional shot weight without having to replace screw drive motors or injection cylinders.

Upsizing Example:

The 41-ounce, 500-Ton Cincinnati Milacron press does not have enough material to fill, pack and hold your eight-cavity mold and runner system that required 48 ounces. Generally there are no other options than to put this mold into an even larger press even when the additional tonnage is not needed.

Services For Plastics, Inc. can take your existing injection unit and rebuild it to oversize specifications that will increase the shot size to produce slightly over 48 ounces in every shot. **Quality, Service and Experience. This is the Services For Plastics, Inc. Advantage!**

CALL TODAY FOR MORE
INFORMATION ON
SCREWS & BARRELS



800-627-1033



quickQUOTE

www.servicesforplastics.com