

MOLDERS CHOICE

presents

Molding Memos

Reducing Mold Set-up Times

Much discussion has been heard lately on reducing mold set-up times, even though many companies are not at full utilization. Management wants 1 minute changeover on all molds so they do not lose any machine time. What management does not do is support the concept with money saving devices or studies to help the process technician and set-up people to achieve quicker mold change-overs.

When called upon to give seminars on Quick Mold Change, the first discussion we have is on management's role in lean manufacturing. What is management's definition of lean? Is it reduced personnel and increased work load on the remaining people? This is usually the case. Reduce personnel, reduce overhead, do not spend a dime on time saving devices or any type of training or consultant - and then demand that they have to change molds faster or risk the job being transferred to China or a Mexican plant.

Many shops with good relationships with floor personnel acknowledge the need to equip their set-up people with even the simplest tools to make life easier and do the job right. Take a look at the photo below:



This is the most imaginative set-up cart I've seen in our plant visits over the years. Now look at what the big shops are doing:



You see, both carts bring most everything you need to the molding machine to do your mold change. Sometimes when you're not busy (haha), get your video camera and film the guys (or gals) doing a mold change. Watch them go back and forth, down the aisles, into the corners, on top of work benches, into the maintenance area dozens of times just to get parts, tools etc to do the mold change.

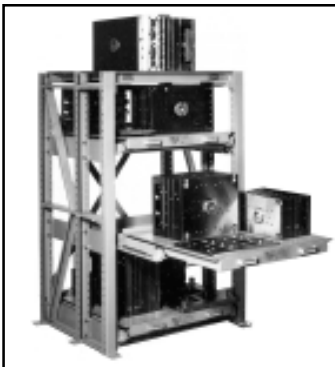
Now my opinion on hydraulic clamps and magnetic platens; they're great but the real time spent on mold changes is in the cooling lines, and plumbing the tool and being prepared for the mold change which includes no interruptions from production personnel.



We have offered mold mounted manifolds for about 8 years now that once the mold is plumbed, it is always plumbed. All your set-up people need to do is run the larger feed lines to the manifolds, one in and out for each half, and then the mold is ready to run. This reduces minutes, and in some severe cases, hours of set-up time.

And now for the freebie of the day: Install eye bolts in every mold in your shop and leave them installed! I was at a plant a few months ago and witnessed first hand a situation where a set-up gal needed a 1/2-13 eye bolt to remove a mold off of a mold rack. It took her 22 minutes to finally come back with one since a few of the other set-up people had their tool box locked up. She eventually had "picked the lock" to find the size she needed. Needless to say, this molder took our suggestion and ordered about 200 eye bolts from us.

Store your molds at the machine when practical. We have installed 2 styles of mold racks right at the machine to reduce fork lift travel in the plant and to keep handy the mold at the machine. This can reduce time as well as the molds from getting lost behind gaylords of material, stacked up high on a heavy duty rack or somewhere in the shop (we'll let your fill in the blanks of where you lose your tools at).



The first rack is the pull-out drawer unit that allows 2000 or 3000 pounds per drawer of molds that can take advantage of vertical plant space.

These units can be made to 12' high and have multiple drawers utilized, normally 3 or 4 drawers, based on the mold height. The drawers pull out so that your overhead crane can lift them off the drawer and can be easily guided to the machine nearby. Some plants have installed these between 2 machines to service each one if floor space is limited for a unit for each injection machine. These can also be used for centralized mold storage by just adding an additional upright and a set of drawers.

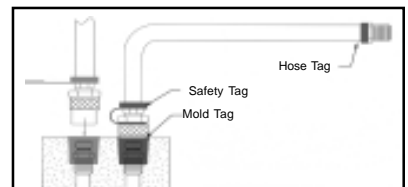
These are appropriately signified by a "Starter" unit and "Add-on" sections as seen below.



The other very unique unit we have supplied progressive molders is the Mold-Dek™. This unit takes advantage of the "dead" area above the clamp of the machine to store up to 5-6 molds that

are usually run in that particular machine. They are basically custom built for your machine with some weight restrictions for safety sake. Using again an overhead crane or a fork lift, the tool can be quickly lifted from the Mold-Dek™ and into the machine in a fraction of the time of again, finding the mold somewhere in the plant.

Then there are other simple yet very important ideas that help the set-up people. Color coding all the waterlines to blue & red for "in's" & "out's". Usually yellow hoses are used for shop air in many plants. Use of colored wire ties and a unique molder invented product of waterline safety tags for the disconnect fittings with a corresponding colored cap that is installed on the tool under the water line plug assures proper hook-up.



All these items ultimately help the process technician too as proper water hook-up's ends the surprises of core overheating, runaway mold temperatures, etc. on mold start-ups.

PLACING LATE ORDERS

Molders often say to us "What is this 24 hours a day 7 days a week nonsense? There's no way you man that office and warehouse 24/7." Well, they're right and they're wrong.

We don't have anyone here all night! But we do have someone come in early, and we do have someone stay late. The last one out of the office roll the phones over to one of our cell phones. If you call after that, you get one of us on the cell phone.



So when a Texas molder called us the evening of September 11th, the call went to Ken Berger, who had just gotten home. The man needed a nozzle body, tip and heater bands on the 12th. Ken finished his supper, drove to the warehouse, picked and packed the order and drove to the Fedex terminal 5 minutes from our office in time to catch that day's last truck.

The next day, it was Mark who got a call at home in the evening. A Michigan molder desperately needed a nozzle tip and heater band in the morning.

But this time it was too late to get to the local Fedex terminal. Mark drove the 15 miles to the warehouse, loaded up the order and drove it the 20 miles to the terminal at the airport. And that was for a \$30 order.

We don't claim to leave our supper to drive to the airport every night, but when you're a Molders Choice customer we will go out of our way to get you out of a jam.

"Whatever it takes" is our moto. Service 24 Hours a Day, 7 Days a week. We mean it when we say it.

Tools every molding technician should have!

Molding a new material and having problems? Your first call is usually to your material supplier technical support group and their question to you is: What is your melt temperature? Do all your molding techs have access to a digital pyrometer? Probably not and there are other items that you should not be without either.

Here is a list of the **BASIC MOLDING TOOLS** that every molding technician must have:

1. **Digital Thermometer** with surface probes for mold cavity temperature and other uses around the shop AND a fast response immersion probe to determine melt temperatures (See Molders Choice new Digital Thermometer and Pocket Pyrometer solutions).
2. **Flow Meter** - Find out if you're receiving the proper amount or any mold coolant to the water ports. A handy "snap-in" kit helps you to determine that chilled water or coolant medium, is sufficiently present at the mold water ports (see these Handy Flow Meter Kits in our Molders Choice catalog of solutions). These flow meters let you know if your mold lines are dirty, clean or if the lines are connected properly.
3. **Bronze Mold Tools** - Tougher than brass but softer than steel, these tools are "life savers" as well as "mold savers" when your people have a stuck part or runner. Conventional means were the ever accessible gate cutter on the operators table

or the Adjustable Pliers (the universal molder tool) in the supervisor's back pocket. Now, equip each shift's foreman or technician with a complete line of Bronze Tools that, like Sears, carries a lifetime warranty. (see Molders Choice catalog for a complete listing).

BRASS BALL VALVES - ARE THEY ALL THE SAME?

Not at all and we will tell you why. Conventional ball-valves sold by cut-rate supply houses think they are saving you money, but in essence it could be costing you cycle time by restricting the water flow to your molds thus reducing heat transfer and really costing you money over the long run. For example, a conventional low cost 1" ball valve has a ball diameter port of only .78" - which equates to a loss in area of 40%! A true FULL PORT maximum flow ball valve has a ball diameter of .98" but of course are slightly more expensive. Is cutting corners in the cost of ball valves a good idea? Molders Choice does not think so.

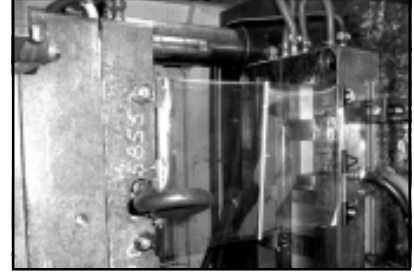
We offer both the Full Port and Conventional Port for your selection and are in stock for immediate shipment.

Both valves are made from heavy duty brass forgings, with a chrome plated ball, teflon washer and long lasting Viton O-ring for high temperature use. Call or fax Molders Choice for an updated data sheet showing all specifications, sizes and prices.

Molded Part Containment

Are you tired of losing parts? Are you tired of seeing that mess of parts all around the machine base? Are your parts greasy or marked from bouncing off leaders pins or tie bars?

If any of the above answer are yes in your plant, Molders Choice can help eliminate any or all of the above issues. We start at the mold by offering 2 different types of mold side shields. The first, introduced a numbers of years ago, is a unique film that rolls up in the middle of the shield and extends out to 24" coverage.

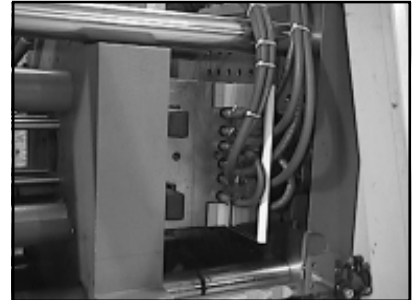


They come in heights of 8", 12", 16", 20", 24" and 32" high and as mentioned above, all open to 24". These Mold Shields™ come complete with magnets to easily mount on the side of the mold near the parting line and around waterline connections. These are more effective and last longer than window shade type side shields since:

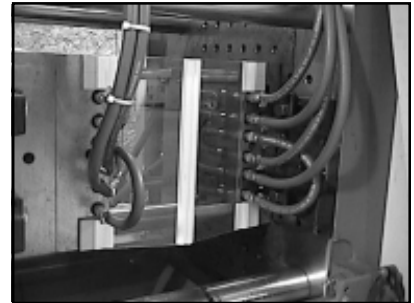
- A) There are no parts
- B) They are see through
- C) Have no springs to replace
- D) Easy to remove for access to the mold

If you would like a small sample of this unique self rolling shields that is rated between 2 and 3 million cycles, either call or email us at 800-809-4623 or molders@molderschoice.com for a free sample.

Another molder designed molder made solution we recently introduced is our Solid Folding Part Guides that are made from durable acrylic sheets and polypropylene hinges to neatly fold outward when the mold closes and opens flat near the parting line to guide the parts down between the mold halves and not out onto the floor or base of the machine.



Mold Closed



Mold Open

Molders Choice offers a few stock sizes but most are custom made for a particular mold. They are affordable and come complete with mounting hardware and high powered magnets to yield millions of cycles of part containment.

Introducing Molders Choice
MoldMakers Hi-Temp™ Lubricant Spray
Exclusive Synthetic Blend with PTFE



- Stable to 500° F
- Waterproof
- High Load Bearing
- Non-Silicone
- USDA Approved
- Non Melting
- Non Toxic

Also Available in Bulk

- 2 oz Jar
- 2 lb Easy-to-Close Plastic Tub
- 14 oz Cartridge
- 1 gal Plastic Tub
- 5 gal Plastic Pail

**24
Hour
Service
7 Days a week**

www.molderschoice.com
1-800-809-4623
(U.S.A - Canada - Caribbean)
e-mail: molders@molderschoice.com

MOLDERS CHOICE, Inc.
Your #1 Choice for Molding Solutions

THE BEST
gets BETTER
The grease
you Trust...
Now in AEROSOL!

Call for more information
or visit our website.

Molded Part Containment

Below the mold, most molders improvise the use of cardboard, plastic sheets, sheet metal, etc to form chutes to help guide parts to a box, conveyor, or other container. We offer 4 types of Mold Chutes that hold to the mold or base of the machine with the use of velco straps and magnets to totally encapsulate the discharge area of the machine and guide parts to their final destination.



Right Angle Mold chute



Tapered Mold chute



Soft Drop

By using elastic rather than part catching pleats, the chutes open and close along with the mold to help stop part loss or contamination. The Right Angle, Inline units and the Soft Drop version have a sheet of PE on the bottom to smoothly and quickly guide the parts and runners into a box or conveyor. The unique Soft Drop Chute is radiused from the top to the front discharge to gently land the parts on the super-slick PE and quickly moves them away from the machine into a box or conveyor.

We were very successful at an automotive supplier of a fuse box for one of "Big 3" that experience part damage. When the parts were ejected, one part would collide with another one or it bounced off the hard conveyor belt thus being scrapped out. This was very expensive as it was a very heavy engineered grade of material some with inserts that would have to be simply thrown out since it was hard, if not impossible to remove

the inserts. However, with the Soft Drop Chute we were able to solve their dilemma by greatly reducing the scrap and helped them becoming profitable on their jobs to the stingy auto maker.

So next time you find more parts around the machine base than are in the box, remember our Mold Side Shields and Part Contaminate Chutes and Skirts to make your job more trouble-free and profitable!

You save on part shortage, contamination from grease and end up making money on the job when it's completed on time and on schedule.

Coil Heated Nozzles

Another processing solution

One of our leading products and problem solver is our Coil Heated Nozzle. This unique nozzle design utilizes a rugged coil heater that is slid onto a turned down conventional nozzle body which brings the heat source closer to the melt stream. With the built-in thermocouple at the end of the heater, very precise nozzle tip temperature control is achieved.

Some of the obvious benefits are:

- Slim line OD to reach into recessed sprue bushings.
- Robust steel cover to protect the coil heater.
- Wire exit from heater compact and neat, no "spaghetti" around hex, less chance of heater failure.
- Reduced heater failure from plastic contamination, steel shield protects heating element.



However, the most successful benefit that has been achieved is in the processing of engineering grade materials.

When running Nylon or Acetals, the tip will not freeze off or drool as the temperature of the tip is strictly maintained at the required set-point. Stringing is eliminated as attested by numerous molders who have placed orders for these nozzles for all of their machines after they trial the first unit. This is probably the best testimony we could possibly have with numerous molders placing repeat orders.

For molders running Rynite or Ultem at elevated temperatures, the added wattage we pack into heater allows the material to flow properly without any freeze-offs or drop in material integrity. Most nozzle temperature for these 2 rare materials should be in the range of 650-725°F. For conventional mica bands, trying to reach and maintain these elevated high temperature is next to impossible. In fact, one of our customers lead us to introducing a Nozzle Insulation Wrap that covers the heater band to try to maintain the nozzle temperature over 600°F. It's very effective keeping the heat in but the mica insulation in the band heater will burn out prematurely as mica breaks down at 800°F, the internal temperature of the element.

Try a Molders Choice Coil Heated Nozzle. Like other molders worldwide, you'll come back and outfit all your machines with this trouble-free, precise heat, easy-to-maintain nozzle assembly.

POKR - Plastic Mold Tool

Reduce Damage to your Molds, use the POKR!



NEW

REMOVES STUCK PARTS & RUNNERS

USE TO REMOVE PLASTIC DROOL

UNCLOG MACHINE HOPPERS OR

JAMMED UP GRINDERS

STOP USING BRASS TOOLS that can harm the finish of your tools.

The POKR is made of 100% recyclable 6/6 Nylon and wont mark up your tool



Simply cut, grind, sand or form a new tip when worn or sculpture the tip for a special application.

Part #	QTY	PRICES
POKR	1-25	\$2.21
	26-49	\$2.17
	50 +	\$2.09

Buy one for every machine and Process Engineer in your plant.

Nozzle Leak Detector

Prevents heater-band damage & downtime.

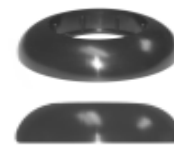


Whether caused by misalignment, a cracked tip, a plugged gate or some other reason, the Nozzle Leak Detector reacts to plastic material drooling back along an injection molding nozzle by sounding an audible alarm and illuminating an alarm light. It is suitable for any machine. Can save molders hundreds and even thousands of dollars in machine down time.

PROPANE CYLINDER BASE

The safe way is the best way!

- Designed to prevent tip-over
- 5" base is small enough for everyday use
- Fits all standard 14.1 oz. cylinders



Part #	Price
PCSS500	\$3.00



MOLDERS CHOICE, Inc.

27000 Richmond Rd - Unit 9
Solon, Ohio 44139

ADDRESS LABEL