SWAGING WITH THE MITY MITE SYSTEM

Swaging with the Mity Mite press and dies is a huge step up from using a reloading press. It's faster, easier to use, more than doubles the power you have, so that the effort is cut by more than half, and extends the caliber and design range to dizzying heights.

You can obtain dies to make any caliber from .14 to .458, any weight up to about 450 grains, with a maximum bullet length of about 1.3 inches. You're read about the CORE SEATING DIE, POINT FORMER, and LEAD TIP DIE in the previous chapter (or, if you skipped it, you should read it now). Let's explore other kinds of dies that can actually adjust the weight of the bullet as you swage, or form boattails on the normal flat-base jacket.

There are FIVE kinds of swage dies for the Mity Mite system:

(1) The CORE SWAGE die
(2) The CORE SEATER die
(3) The POINT FORMING die
(4) The LEAD TIP die
(5) The REBATED BOATTAIL die set

In addition to swage dies, there are draw dies, and special jacket forming dies. Copper tubing can be formed into bullet jackets for those calibers where regular drawn jackets are not available, too thin for big game hunting, or too expensive and difficult to obtain. Tubing jackets can be made in the Mity Mite in 0.030-inch wall thickness, in the calibers from .308 to .458. The quality of such jackets is outstanding, even if they are produced from ordinary copper water tube. The literature that comes with the kit of dies explains the process in detail. The one die that is used in this set and not discussed here is the END ROUNDING DIE, which rolls over the tubing in preparation for closing one end. In reality, it is simply a special size of point forming die, with a round nose cavity and special punches for tubing.

The core swage die is made like a core seating die, except that both the internal and external punches are very close, sliding fits to the bore, and the bore is just large enough to accept a cast or cut lead core. Also, there are three orifices in the walls of the die, at 120-degree positions around the circumference.

You can easily tell this die from the others by looking for these three bleed holes. It is easy to determine which punches go with the die: the punches are far too small to fit closely in any other die of the same caliber set. Just try them by hand. If they fit smoothly into the die cavity, they are right.

There are really two forms of core swage die. One is the ordinary core swage, used to adjust the lead core weight shape before making a bullet from it. The other is a variation called the LEAD SEMI-WADCUTTER DIE, or LSWC-1. In the Mity Mite system, we place a -M after the model number of the die set, and for the same kind of set in the Hydro-press system, we place a -H after the model. There is no LSWC-1 or, for that matter, any kind of core swage or bleed-off die for the reloading press.

The LSWC-1-M can be used to make a complete bullet in one stroke. It has a bore size that is finished bullet diameter, and the punches have ends that are shaped just like a reverse of the bullet nose and base you want to form. Because the punch forms the nose by flowing lead into its cavity, there has to be a small shoulder between the nose and shank, where the edge of the punch presses into the core. The LSWC-1-M cannot make a smoothly curved ogive without a step.

Let's make a bullet in this die. First, cut or cast a small quantity of lead core as described in the earlier chapters. But leave from two to five grains more lead than you actually want in the final bullet weight. Locate your LSWC-1-M die set. You can see that the die has no adapter body like the reloading press die.

The Mity Mite dies don't use an adapter body, because they are made to screw directly into the RAM of the Mity Mite press! The die is a very tough knurled cylinder of costly, special steel, heat treated in electronic furnaces with a special kind of atmosphere. The Corbin process of die-making has been developed over the past twenty years to a level far beyond that used by most of the mass-production arms and ammo companies. The dies you receive are superior in construction and in design to the usual production die, and the bullets you can make in them should be superior to those you can purchase, if you do your part!

The die has an internal punch, which normally is left in the die (no need to remove it). It goes into the die from the threaded end of the die. The threaded end of the die screws directly into the press ram. This is just the opposite of reloading press dies, which screw into the press head. In the Mity Mite, the press head holds a FLOATING PUNCH HOLDER. This black oxide finished, 7/8-14 TPI threaded cylinder looks like a reloading press die. But it holds the external punch.

The ram of the Mity Mite press is machined so it performs all the functions of the universal adapter body. There is a shoulder that stops the internal punch from coming out of the top of the die when you move the ram forward to swage. There is also a hardened tool steel pin with a knurled head, passing through a slot in the side of the ram. This is the STOP PIN. It's job is to stop the backward movement of the internal punch when you pull the ram back, so that the internal punch is forced to slide forward and eject the bullet. You don't need a mallet, ejector rod, or the power ejector unit with the Mity Mite.

When you consider the wide range of calibers, styles, and jobs that Mity Mite dies must do, then think of the years of development that went into the complete system of interchangable, simple dies and punches to fit the Mity Mity press, you may realize why it is better to purchase the ready-made system rather than trying to modify reloading presses, come up with custom parts or tools, or try to modify dies to work in arbor presses, hydraulic jacks, or vises. The universal interchange of calibers, jobs, and styles in the Mity Mite system is a major benefit, and the ease which which future changes or special work can be done in this system makes it far more cost-effective than trying to come up with one-of-a-kind tools for specific jobs.

The FLOATING PUNCH HOLDER, (Model FPH-1), is included with each Mity Mite press. Instead of moving the die to adjust for depth of punch insertion, you screw the die all the way into the ram until it comes to rest on a shoulder. This shoulder, not the threads, takes all the force. Adjustment is all done with the micrometer-like movement of the threaded punch holder. Screw it toward the ram to make lighter bullets, or to push a punch further into the core. Screw it away from the ram to fit a heavier core, or to push a punch a little less far into the die.

To install the LSWC-1-M die and punches in the Mity Mite, first make sure that the internal punch is correctly placed in the die. The internal punch has a 1/2-inch diameter head at one end, and a short "tail" protruding from the other side of this head. The tail is about 5/16-inch diameter, and its length varies from a quarter inch to five eighths of an inch, depending on the nominal weight (length) for which the punch was designed. This tail, working with the over-all punch length and the dimensions of the ram itself, determines the lightest and heaviest weight of bullet that you can get into the die. Lighter bullets require less of a tail, and heavier ones take a longer tail.

You don't need to know the technical details -- just let us know what general weight range you want, and we'll see that the punch provided will do it. If one punch won't handle the whole range, we may suggest a second punch. Usually, the range is so great that you can reasonably expect to make handgun weights with one punch and rifle weights with another. The punch tail determines how much volume is left in the die cavity, which

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reasonably expect to make handgun weights with one punch and rifle weights with another. The punch tail determines how much volume is left in the die cavity, which nger pressure. It isn't necessary to use a pair of pliers. Now identify the external punch.

The external punch fits the die cavity, but it has no "tail" section on its half-inch diameter head. Whereas the internal punch has to be as long as the entire die, so it can push the bullet out the mouth, the external punch needs only to fit half-way or less into the die bore. It is shorter. The part that is matched to the die cavity diameter is less than half the entire punch length. There is a section of the punch just after the head that is turned to about three eighths of an inch in diameter.

This section slips into a hardened bushing that you will find inside the floating punch holder. There are three parts in the punch holder besides the body itself. First, there is a hexagon-shaped bushing or retainer that threads into the mouth of the punch holder. Remove this bushing. It should unscrew easily by hand. Inside the punch holder are two hardened tool steel parts. One is a half-inch diameter bushing or ring. One side is flat, the other curved.

This part is called the ROCKER BUSHING. It slips over the external punch, so that the flat side rests against the head of the punch, and the curved side faces toward the small end of the punch (toward the die). On punches that must be made larger than 0.375-inch diameter, the hex bushing and the rocker bushing are permanently assembled to the punch. These punches must have the end opposite the head larger than the standard hole size in the two bushings. We make them fit the standard system by building them with a removable, cap-screw secured head. We assemble them here, so you don't have to take them apart and reassemble them every time you want to install a bushing.

If your caliber takes a punch smaller than 0.375-inch tip diameter, the rocker bushing and hex bushing supplied with the press, in the punch holder, will easily slip over the punch. Assemble them now. Put the hex bushing over the punch so it will hold the punch into the punch holder. Look inside the punch holder. If you use your little finger, or a toothpick, you can probably pick out the last part, called the ROCKER BUTTON. This part looks just like the rocker bushing, but is solid.

The rocker button fits into a V-shaped surface in the bottom of the punch holder cavity. It allows the head of the punch to transfer all the tons of swaging force to the punch holder in a safe manner, yet still allows the punch to rotate slightly so it can line up with the die bore perfectly. If the punch were held rigid, it could not self-align or float to keep the punch perfectly aligned under stress. This is another advantage of the Mity Mite system over other swaging methods.

Notice that the rocker button has a curve on one side, and is flat on the other. Make sure that you put this button into the punch holder so that the curved side goes in first. You want the punch head to rest against the flat side of the button. And the flat side of the rocker bushing presses against the other side of the punch head. The curved side of the rocker bushing matches a curve machined in the inside edge of the hex bushing. When you screw it all into the punch holder, the punch is held so that the exact center of its head is in the center of a 1-1/4 inch ball, most of which is not physically present, but the working parts of which are formed by the curves and their mating surfaces.

You don't need to take any special precautions with this assembly. It doesn't need oiling or maintenance. Just make sure you assemble it correctly. Look at the pictures in this manual before you try it. If any of the three parts are missing, your punch will not be properly supported and could be damaged under swaging pressure. Many people purchase spare punch holders so that they can assemble the punch and leave it, locking the lock ring on the punch holder to repeat their favorite adjustment quickly. This is nearly as fast as having several presses, since it is the only adjustment that ever needs to be made.

With the die assembled into the ram, and the external punch in the punch holder, back off the punch holder several turns away from the ram. Pick up a core, moisten it with a little Corbin Swage Lube (or Corbin Dip Lube, if you want to make a lead bullet with a wax film for up to 1200 fps velocity), and place it into the die mouth.

The core must fit into the die easily. If it won't fit, it is too large and you should not attempt to swage it. Never swage anything too large to fit into the die by hand. If it is far too small, you will tend to get folds and wrinkles in the shank, and it will be hard to get enough weight without having the core stick out the die mouth. The maximum length of core still must fit into the die before any pressure is noticed on the handle. Never try to swage something that is just barely inside the die, or sticks out of the die mouth.

Carefully move the ram forward so that you can align the external punch and die. Don't pinch your fingers! Just help the punch go into the die this first time, and then, when you have it inside, gently snug up the hex bushing so that the punch doesn't move freely (it will still move under swaging forces).

The Mity Mite press is so powerful it can pinch your finger off just by dropping the handle with your finger between the die and punch. Always keep your hand firmly on the handle when you are adjusting a punch, and don't trust gravity or friction to keep the handle from falling! I never place my finger between the die and punch. Any time I make a manual adjustment or help the punch line up the first time, I always keep my fingers on the sides of the punch, away from the tip. If I should drop the handle on the press, the die would move my hand out of the way. I might pinch myself against the end of the punch holder, but that wouldn't be too bad.

If the punch won't reach into the die at this point, move the punch holder forward. The ram should be moved to its foremost position, so it reaches as close to the press head as it can go. This happens at the point of maximum leverage, with the pivots in the handle lined up in a straight line with the ram centerline. This press is unique in having all its linkage and ram concentric and in a straight line with maximum forward travel. Most presses have a side-torque caused by offsetting the handle, and several can't reach full leverage because they physically run out of travel before then.

If the die can't be moved forward because the lead core comes up against the external punch, back off the external punch by turning the punch holder. When you have the ram all the way forward, hold it there and screw the punch holder toward the die until you can't turn it any more. The punch will have come up against the lead core.

Back off the ram slightly, and move the floating punch holder half a turn forward. Stroke the press forward again. Then pull the handle back and almost, but not quite, eject the bullet. You can see the bullet at the die mouth, ready to be ejected. Notice whether or not the nose is completely filled out. If not, adjust the punch holder forward another half turn and swage the bullet again. Within a few strokes you will have the press set up so that the nose is forming completely.

A small quantity of lead should begin to move out the bleed holes. I like to make my cores so that about one eighth of an inch of lead extrusion comes out the bleed holes on every stroke. Also, I like to swage the cores so that they are double-swaged: every stroke goes over and past the "top dead center" position, and then passes "over the top" again on the back stroke. You will notice that the Mity Mite retracts the ram slightly as you continue through the end of the stroke. This slight retraction gives you a double-swaging action on each stroke, if you use it.

If you eject the bullet and weigh it, you can see whether or not to adjust the punch holder and in what direction. If the bullet is too light, then you may need to adjust the punch holder away from the ram (to make more room in the die at the end of the stroke, and extrude less lead). If it is too heavy, then you need to adjust the punch holder toward the ram (to reduce the volume in the die at the end of the stroke, and force more lead out the bleed holes).

Obviously, if your lead cores start out too light, there is no way to make them all weigh the same by swaging and still come up with a heavier bullet. The only way to get consistent core weight by this method is to start out with plenty of lead, and remove all the surplus along with the variation. The hardness of the lead has a good deal to do with consistency of weight. Harder lead will flow more slowly. You may get variations in weight with harder lead, because you don't allow enough time for the lead to quit flowing. I recommend only pure, soft lead for the Mity Mite. You can get by with alloys of up to 3% antimony, in the smaller calibers.

If you don't notice any lead coming out the bleed holes, stop swaging and figure out whether the core is so short that it lets the external punch move past the bleed hole location. If this happens to be the case, then you need an internal punch with a shorter tail section. Most people assume the external punch is too short. But making it any other size tends to cause other problems. The right way to adjust for extreme weight ranges is with the design of the internal punch tail.

After you have swaged some bullets, the internal punch may be more difficult to move. This is because the three extrusion holes in the die become filled with the last lead wire extrusion made. The ends of the lead wire press against the punch sides. This is normal. You should still be able to remove and re-insert the external punch, though there is no reason to do so unless you want to change to another style (such as going from flat base to cup base).

Read this part over again and make sure you understand the principle involved. This is the same operation you use with all the various core swages and lead semi-wadcutter dies. It works the same way whether you use the automatic proximity detectors and pressure transducers of the Hydro-press or whether you do it by hand on the Mega Mite or Mity Mite press. It doesn't matter whether you are making benchrest .224 rifle cores, handgun .44 Magnum cores, or .40 Sharps rifle bullets for paper-patching. Airgun pellets or precision lead weights for phonograph cartridges all are made exactly this way.

Two notes about high precision: (1) Make sure the ram does indeed go past the "top of stroke" position each time, and (2) try to use the same timing for each stroke. Timing is important because lead flows on an exponential curve with time. Lead has a creep rate that can continue for years under a constant low stress. If you maintain a steady rate, your cores will come out much closer than if you whip the handle back and forth one time, and lean on it to drink a cup of coffee the next.

You should be able to get less than 1% variation in total core weight on your first attempt. If you are really good, you can get less than 0.5% variation. Some people actually achieve such high precision that there is no discernable weight variation on a normal reloading scale. It is all the same equipment. Your skill in operating it makes the difference.

But think about what this means: If you start with a 100 grain core, one percent is one grain. Half a percent is half a grain. With a 50 grain core, one percent is half a grain. With a 500 grain core, one percent is five grains. In other words, don't just expect half a grain or less on everything, because it is very sloppy for light bullets and beyond any reasonable expectation for heavier ones. Besides which, weight variation alone has very little to do with accuracy.

Weight variation that is caused by differences in jacket thickness or alloy composition is a bad thing for accuracy. It means the trouble is elsewhere, and it means differences in bore friction, bullet upset, and other factors. Weight variation that is merely the result of having another grain or two of lead is quite insignificant. I have won matches with bullets that varied more than five grains in weight. Fortunately, there was nothing else wrong with them. A great number of factory bullets have horrible weight variation from lot to lot. If it came from having more or less core material, I wouldn't worry about it. But usually it comes from having differences in jacket material, and that affects groups.

You've made some nice lead semi-wadcutter bullets now, using the LSWC-1-M, and they are ready to shoot if you used Dip Lube on them. Using Corbin Swage Lube, you would have made lead cores that could then be further processed into bullets. In that case, you would want to clean off the cores to remove any lube before putting them into jackets. The reason is that any lube inside the jacket contributes to a possible unbalance of the bullet.

Put the cores in a strainer or wire basket and slosh them around in a strong solvent. Corbin Cleaning Solvent comes in pint cans, and is able to remove any lubricant traces, fingerprints, and grease from either cores, jackets, or from your guns. It will remove some finishes, too, so be careful around stocks and table tops! After cleaning the cores, spread them out to dry. Change the core swage die for the core seating die.

We've already talked about the reloading press core seating die. It is exactly like the one for the Mity Mite and Hydro-press systems. Only differences in size and how it is held in the press apply. A core seating die looks like a core swage without any bleed holes. That is your first clue. The second is that the bore is larger, and it accepts the right caliber of jacket for the bullet you want to make. Try a jacket in the die -- if it fits, probably it is the same caliber as the die. A positive test for caliber is to swage a lead core in the core seating die, and then use your trusty micrometer to measure the diameter of the lead after swaging.

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Core seating dies or rifle bullets, and there is no need to purchase another special die for lead bullets, and (2) you can sometimes get a more precisely formed bullet for critical applications by doing it in more steps. This is especially true for harder lead alloys.

The internal punch of the core seating die fits into the die bore, and either has a flat face, a probe (for hollow base bullets), a dome (for a dish or cup base bullet), or it can have a cavity (for some kinds special bases, not usually on jacketed bullets as the jacket edge has a hard time jumping over the edge of the punch). The external punch can be almost anything!

If you want to make a handgun bullet, the external punch will have a nose cavity shaped like a mirror image of the nose. This is only for lead nose bullets, not for those with the jacket curved around the ogive. If you want to make an open tip bullet, as most rifle bullets tend to be, then the external punch should fit into the jacket rather than the sides of the die. This means that the external punch can be quite a bit smaller than the die bore.

A hollow point bullet uses a core seating punch with a probe machined on the tip. This probe pushes down into the lead core and displaces lead around itself. The punch is made so that it centers itself either in the jacket (for an internal hollow point, having the jacket wrapped around it), or on the die walls (a typical lead tip hollow point). This keeps the cavity concentric with the sides of the bullet.

You can use another external punch in the same die. First press a cavity into the lead core, as deep as you wish (you don't have to use the full extension of the punch into the core, you know...). Then, change punches and push a Keith nose or a round nose punch into the die, setting the adjustment so that you don't completely reform and close the cavity you just made. Again, you will soon see that there is a lot of control possible between not forming the bullet sufficiently, and completely forming it to the punch shape.

Your first punch should be used with reasonable force, compressing the lead core and filling out the jacket to meet the die walls. It should leave the jacket and core in the die, not pull it out with the punch. But any subsequent punch that you want to use does not have to be pushed so far or hard into the core. The shank is already formed. Everything else is just a matter of styling the bullet. Go ahead and experiment. Two punches can make twenty different bullet shapes if you use them with various degrees of insertion and in different orders.

But the point forming die really brings out the power to experiment! You read about this die already under the reloading press section. It has a cavity shaped just like the bullet, except there is a little hole in the tip for a strong, spring-wire ejection pin to push the bullet back out again. In the Mity Mite system, this die has a major difference from the reloading press types. It has a captive internal punch instead of a retraction spring.

You'll recall that the point forming die has a very small ejection pin instead of a conventional internal punch, and it is held out of the die cavity by a spring. In the Mity Mite press, there is no spring. That stop pin we discussed earlier is pulled out of the top of the press, and slipped into a slot in the head of the ejection pin after you screw the die into place. Don't forget to do this, or you can damage the ejection pin.

The first thing I do is pull out the stop pin. Then I place the ejection pin in the end of my point forming die (it goes in from the threaded end, just like all internal punches in all dies), and screw it into the ram as one assembly. With the ram in the right position, it is easy to grasp the tip of the ejection pin while it sticks out the die mouth. I do this, and slide and turn the ejection pin until I can see the slot underneath the stop pin hole. Then I push the stop pin back into place, and give the ejection pin a tug to make sure it is actually locked in place.

Now, the ejection pin will be retracted automatically from the die without any spring pressure, and it will be held in place to eject the bullet. The Mity Mite system has less of a problem with a stuck bullet, since you can use the press to retract the pin again and make another attempt to swage it. If you feel resistance to ejection, it is usually better to unscrew the die and use a short piece of the same diameter of spring wire as the ejection pin, along with a small mallet, to tap the bullet out. This happens when you use over-sized components, try to reswage a finished factory bullet in the same diameter of die (many people do this, not realizing that you usually need a slightly larger die for it to work), or forget to use the right lubricant.

The most common problem people have when first starting to swage is bending the ejection pin. After a while, you get a better feel for the kind of resistance that is normal, and bent pins become less and less frequent. It is a good idea to purchase spares if you would be under any pressure because of having your set out of commission for a little while due to a damaged ejection pin or a stuck bullet (usually the cause). One or two spare ejection pins can save your day.

Now let's talk about a set of dies that we usually consider one package: the RBT-2 set, or rebated boattail forming dies. This is actually a matched pair of dies, not just one. They replace the usual straight-walled core seater whenever you want to make a rebated boattail bullet.

A rebated boattail bullet has a step, or shoulder, like a Keith nose on a pistol bullet. That step acts like a spoiler to break up the blast of hot muzzle gas just as the bullet exists your barrel. On a conventional smooth boattail design, the gas flows with the streamlined shape and zips past the bullet, flows along the ogive, and then breaks up right in front of the bullet as it tries to get away. A boattail means that you are probably shooting through your own muzzle blast turbulence! That can add perhaps another 10% error factor to the bullet dispersion.

The small rebate has a minor drag effect, but over-all, the improvement in total performance is greater. Not only do you gain ballistic coefficient by reducing base drag, but you also retain the natural good disperson characteristics of the flat base bullet during that critical exit time from the muzzle. Add to that the fact that the dies and punches last longer, there is less gas cutting and a better seal in your barrel. Those are compelling reasons to forget about a conventional boattail design if you have the option of making your own bullets.

The process is just like seating a regular core. You use the same external core seating punch that you would use with your flat-base core seater. But instead of using the flat base core seating die, place the core and jacket into the BT-1 or BOATTAIL PREFORMING die. This die has a standard boattail shape inside. You push the flat-base jacket into this die, seat the core, and the jacket is converted into a boattail.

Having this taper on the bottom of the jacket makes it easy to form the rebated step or edge. The next die, BT-2 or RBT FINISHING DIE, has a shoulder that transposes itself into the jacket when you once again seat the core. If you tried to use this die alone, the shoulder would catch the jacket bottom and tear it. But the taper gets the bottom of the jacket past the shoulder before any real pressure is applied. The jacket moves outward to take on the die shape, instead of trying to draw over this shoulder.

Included with the RBT-2-M set (which can be purchased as an add-on to a conventional three-die or four-die set) is a special external punch for the point forming die. This punch has a cavity in the tip, to match the shape of the boattail. The punch supports the rebated boattail shape, and keeps it from being mashed out of form. The punch is a little fragile, so don't use it for other experiments without considering the forces you plan to apply to those edges.

In a short, fat pistol caliber, you can use a Keith nose punch for a rebated boattail bullet. First form a conventional jacketed bullet with a nice truncated conical nose. This is done in the point forming die. In fact, you can make the whole bullet in the point forming die if you put the jacket into this die backward (base first) and then use a core seating punch to seat the core. Eject this bullet, turn it over, and now you have a tapered section facing out of the die and an open tip flat end facing in. Use the Keith punch to push the bullet into the die.

The tapered nose will fit into the Keith punch nicely, and will be made into a rebated boattail base. The flat open end will be formed into a new nose in the point forming die. It is simple, effective, and the bullets seem to gain between 20% and 40% in ballistic coefficient at subsonic speeds. This doesn't work if the bullet is much longer than its caliber, so don't try it with conventional rifle bullets.

Lead tip dies for the Mity Mite system are just like those described for reloading presses, except, of course, they are made to fit the press ram. They look very much like a core seating die. Some people wonder why we can't use a core seating die. The reason is that the bullet won't slip back into the core seater after it is finished at full diameter. It will go in, but only under some force. And the force is greater than that required to form the lead tip.

Making a lead tip bullet requires a little experience. At first, you will probably have some experimenting to do, because you need to have just enough lead protruding so that the cavity in the internal punch of the lead tip die can reshape it fully. Too much lead showing doesn't hurt, but too little is a problem. It can't fill the cavity, and won't shape up properly. With the lead tip die, it is necessary to use very light pressure. Pressing too hard makes a ring in the ogive of the bullet. In some small tips, it helps to grind a sharp wedge shape on the ejection pin of the point forming die. Then, the ejection pin will split the protruding, deformed lead and come to rest against the jacket edge.

The jacket edge won't split easily, so the bullet can be ejected. Then, when you put the bullet into the lead tip die to finish the end, the neatly split blob of lead will reform nicely and become whole again. This technique is useful for problem cases, where one must have a small tip size and bring the jacket nearly closed. Generally it isn't required. Large handgun-style lead tips, which are probably a quarter of the caliber or more, don't generally require the lead tip die in order to form properly. A conventional three-die package for open tip bullets works well for making large lead tips of this type.

The lead tip die (LT-1-M) can be purchased separately as an add-on, or it can be included with your set of dies in the LTFB-4-M, RBTL-5-M, or the FRBL-6-M sets. These all have an "L" in their catalog number. The "L" stands for "Lead Tip". All it means is that a lead tip die has been included: you can still make open tip bullets. All the various sets of dies are assembled from the same basic individual dies. Everything but the LSWC-1-M set starts with a core swage and a core seating die, and adds a point forming die, and various combinations of lead tip and rebated boattail dies.

A "FB" in the catalog number means "Flat Base". It indicates that you have a standard core seating die in the package, not necessarily that you are limited to flat base rather than cup, dish, or hollow bases. In fact, if you order a pistol set with the cup base specified, you could very well receive a set that doesn't have a flat base punch at all, but it still has the basic ability to make one if you get the right punch. We'd still call it a "FJFB-3-M" if it has a core swage, core seat, and point forming die.

The "FJ" only stands for "Full Jacket", and is primarily to fill in space in the catalog number, since any set with a point forming die can be used to make a full jacket bullet. The letters "RB" or "RBT" in the catalog number stand for "Rebated Boattail", and they mean that the two RBT dies are included, along with the proper RBT punch for the point forming die. If the "F" for "Flat base" is also in the catalog number, then it means that you can make both flat and RBT bullets. Both the standard core seater and the two RBT core seaters are included, in that case.

The number in the catalog number tells how many dies are in the set. For instance, in a "FRBL-6-M" set, you have flat base (F) core seater, two RBT core seaters (RB), a lead tip die (L), and of course a core swage and point former, which are assumed present in anything above a two-die set. That makes six dies, ae both flat and RBT bullets.

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The number in the catalog number tells how many dies are in the set. For instance, in a "FRBL-6-M" set, you have flat base (F) core seater, two RBT core seaters (RB), a lead tip die (L), and of course a core swage and point former, which are assumed present in anything above a two-die set. That makes six dies, a one die with matching punches, and it makes the same kind of bullet with the exception that you cannot use jackets so long that they cover the bleed holes. That means half-jacket and straight lead bullets are the proper kind for a LSWC-1-M.

The techniques of swaging are covered in much greater detail in the other books. I recommend that you invest a little time in reading about the process, if you have not done it before. Bullet swaging is quite simple, but also quite powerful. Because there are so many possible variations, it is far more important to learn the principles than it is to try and follow a block of pictures and repeat each step exactly. With six different kinds of dies, and hundreds of different techniques and styles in thousands of calibers, can you imagine the number of pages you'd need to keep on hand, in order to have a "1-2-3-" cookbook to follow for each possible bullet you wanted to make?

On the other hand, if you understand how a core swage works, how to use a core seater, and what kind of bullets you could expect from a point forming die and a lead tip die, you can work out all the variations for yourself, and probably come up with others that none of us have yet discovered! In the Mity Mite system, pressures run from 20,000 to 50,000 psi or more. That is some kind of power! And, it's all under your control.