



Cast Bullet Engineering  
PRECISION BRASS BULLET MOULDS & ACCESSORIES

PO Box 122, KINGSTHORPE QLD 4400  
Ph: 0457 377 310  
Email: david@castbulletengineering.com.au  
www.castbulletengineering.com.au

Decebal Pty Ltd ACN 164 302 121  
As trustee for The Commens Family Trust  
Trading as Cast Bullet Engineering  
ABN 61 939 106 421

## INSTRUCTIONS FOR YOUR NEW CBE BULLET MOULD.

Please read the Terms and Conditions before using this mould, available at [www.castbulletengineering.com.au](http://www.castbulletengineering.com.au) or contact us for a copy.

**WARNING:** Always wear full PPE (Personal Protective Equipment) including eye protection (full face masks are recommended), leather gloves and a leather apron when working with molten lead. MOISTURE in any form will cause a severe **EXPLOSION** if allowed to contact molten lead. Sweat, rain, and condensation on ladles etc. are common causes of accidents. Always work in a well ventilated area as lead fumes are **TOXIC**. Lead can also be absorbed through the skin or by touching food so always wash your hands after handling any lead or lead-based items.

**BEFORE CASTING** remove the sprue plate and all screws for cleaning. All moulds are shipped with a protective coating of oil on all parts, which can be removed with methylated spirits, brake parts cleaner or similar cleaning fluid.

**REASSEMBLE** the sprue plate to the blocks so that the plate can move freely across the top of the blocks without lifting. Lock the sprue plate screw in position with the small grub screw provided and check the movement again. Do not use excessive force on the grub screw.

**MOULD LUBRICATION:-** We recommend our own Sprue Plate Lube to lubricate your mould with. All that is required is a drop on top of the blocks where the sprue plate pivot pin is and a drop on the alignment pins. Applied once per casting session to a warm, (not hot) mould is ample. Please use the Sprue Plate Lube sparingly, one drop goes a long way. Be sure to keep the oil out of the cavities. If the oil finds its way into the cavities, wait for the mould to completely cool, wash it out as per above instructions, and start over.

**HANDLES,** always ensure you have a good quality set of mould handles mounted securely to your mould before use, **DO NOT** attempt to use any bullet mould without appropriate handles in good working condition.

**LEAD POTS—**only ever fill the cavity of the mould when the mould has been properly aligned with the sprue plate secured in place. Following the manufacturer's instructions, use a purpose built bottom pour lead pot in good working condition or a specifically manufactured lead ladle and crucible. **DO NOT** attempt to immerse the mould directly into molten lead.

**BREAKING IN:-** Brass moulds seem to require a "break-in" period. We recommend that you bring the mould up to temperature by casting 30-50 projectiles in it, then let it completely cool to room temperature. Repeat the process 2-3 times until the mould blocks obtain a nice "golden" colour to them. Each time the mould is used after breaking in it only needs then to be brought up to operating temperature, generally the alloy temperature should be around 750F, but can be dependent on a number of factors such as the alloy being used. **DO NOT** allow the alloy to exceed 850F as the mould may warp and become inoperable. We have no issue with casters lightly smoking the mould cavities to produce sharp, clean projectiles. Please remember that only a light discolouring of the brass is all that is required. A heavy coating of smoke is not beneficial to good projectiles. It creates a thermal barrier and can also lead to sunken spots or areas on the projectile surface. Do not cut the sprue too early, ensure the alloy has had time to harden properly, smearing of lead on the top of the mould blocks is a sure sign that you are opening the sprue plate too early. Galling of the mould blocks may result, and is not covered by warranty.

**WRINKLED** and improperly filled out projectiles usually indicate that the mould and/or alloy is not hot enough. Frosted castings may indicate too much heat although some alloys may cast a good bullet with a frosted appearance. Frosted bullets can be just as accurate as nice, shiny bullets. Brass moulds retain their temperature better than other materials so you can lower your casting temperature slightly once the mould reaches operating temperature. If your mould is allowed to overheat small pieces of lead may stick to the blocks. This can usually be removed by very carefully pouring alloy onto the affected area while the mould is still hot. Alternately we have found Lead Removal Cloth to work on a cold mould. As with any mould extreme care should be used to avoid damage if trying to scrape alloy from the blocks.

**TRIPLE** cavity moulds in small rifle calibres and in fact, any mould under 30 caliber may need to be run at a higher temperature than you might be used to. Small caliber projectiles and large brass blocks take some time to get to casting temperature, maintaining a good casting temperature in the blocks is not easy, either speed up your casting cycle, or increase the alloy temperature until good, well filled bullets are produced.

**MOVEMENT** in the blocks due to wear in the dowel pin holes can be fixed by gently tapping the dowel pins out for better alignment. To obtain the best life from your mould we recommend closing the blocks gently when casting. Peening of the alignment pin holes are 80% of the problems we find with moulds returned to us. You have invested your hard-earned money on a quality mould, look after it and it will last a lifetime. All CBE bullet moulds are fitted in the shop to be quite tight when new, this is done on purpose, so that when the pins settle in to the blocks after casting a few hundred projectiles or so, the mould halves will not be too loose. If you find finning on bullets from a new mould, simply tap the alignment pins in a little further until you cannot see light between the blocks, but not so much as to feel movement between them if you rotate them together.

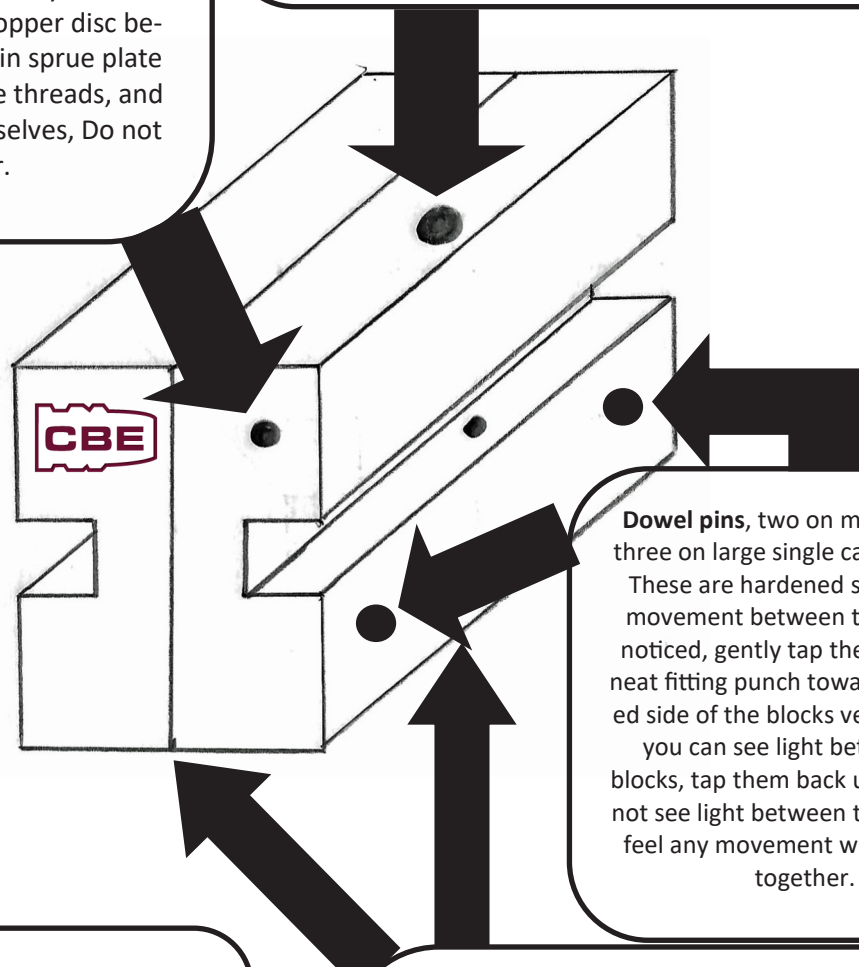
**Please Note:** CBE moulds are designed only to cast lead projectiles—**DO NOT** attempt to use them for any other purpose. Misuse of the mould is not covered by our Manufacturer's Warranty. We highly recommend reading books such as Lyman's Cast Bullet Handbook to ensure you have the knowledge to cast safely. We have no control over the use of projectiles made with our moulds, therefore we cannot accept responsibility for injuries or damage occurring from their use.

**Handloading SAFETY is your responsibility -**

Always check the firearm manufacturers recommendations before handloading for any Firearm.  
*No load data will be supplied under any circumstances.*

This little **M4 grub screw** is VERY important, this one is the lock screw that holds tension on the main sprue plate screw. Before you attempt to take out the main sprue plate screw, loosen this screw off, or you will find it difficult to turn, and may damage the threads. If you find the sprue plate becomes loose during casting, undo this screw first, then adjust the main sprue plate screw to obtain the correct tension on the sprue plate, then do this screw up fairly firmly. There is also a very small 3mm diameter copper disc between this grub screw and the main sprue plate screw, this will stop damage to the threads, and ultimately the mould blocks themselves, Do not mis-place this washer.

The **M6 thread button head cap screw** is the machine screw on top of the mould that holds the sprue plate down, and allows it to swing so sprues can be cut. There is a flat brass washer under this screw to help stop galling between the screw and the sprue plate itself. The sprue plate should swing easily without difficulty, if it is hard to swing around, loosen this screw a very small amount. If it is too tight, the sprue plate will most certainly gall the top of the mould blocks. Too loose and the bullet bases will not be flat and square, accuracy will suffer.



**Dowel pins**, two on most moulds, three on large single cavity moulds. These are hardened steel pins. If movement between the blocks is noticed, gently tap the pins with a neat fitting punch towards the vented side of the blocks very slightly. If you can see light between the blocks, tap them back until you cannot see light between the blocks, or feel any movement when rotated together.

## Get to know the parts of your CBE Bullet Mould.

On the underside of the mould blocks will be two **M4 socket head cap screws**, these two screws are the ones that hold the mould handles to the blocks. Using the supplied allen key, back these screws out until the handle slots in the mould blocks are clear of the screws, they don't need to be taken completely out. Slide your handles in and tighten these screws. They are best done up firm, but not over-tight, as the threads can be damaged. Periodically during casting, check these screws to make sure they are still firm. No one wants their mould blocks landing on the concrete because a screw fell out.