

Oasis Lead Shot Maker



Owner's manual and Instructions

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Warning !!!

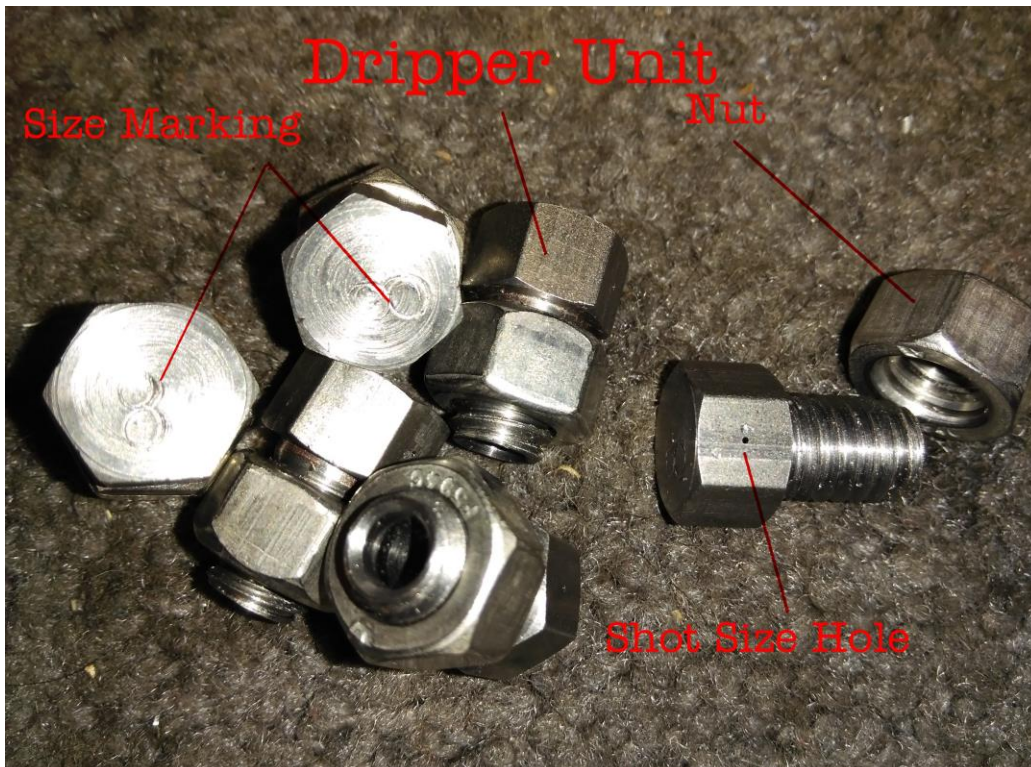
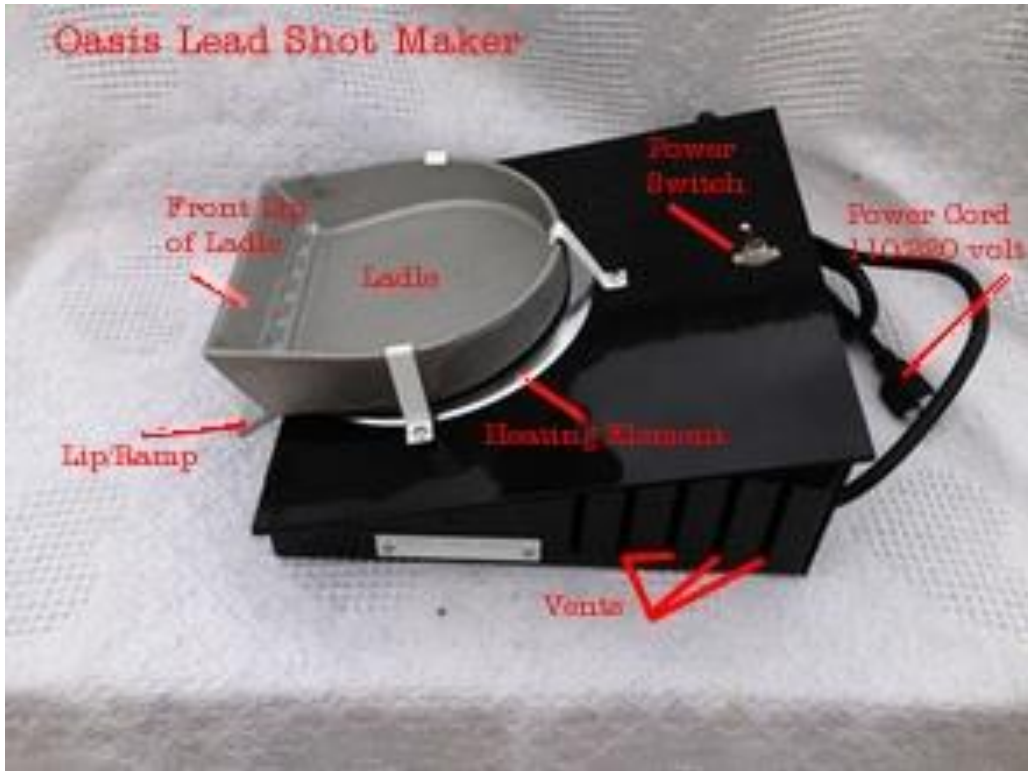
Read and Understand ALL of these instructions before using the Oasis Lead Shot Maker. Use the Oasis Lead Shot Maker in a well ventilated area. Only use non-flammable coolants or coolant with a high flash point, always stay at least 100 degrees below your coolant flash point, never allow your coolant temperature to exceed 140° degrees Fahrenheit. Never leave your Oasis Lead Shot Maker unattended.

FAILURE TO HEED ALL OF THE WARNINGS IN THIS DOCUMENT MAY RESULT IN EQUIPMENT DAMAGE, PERSONAL INJURY, FIRE, AND LOSS OF WARRANTY.

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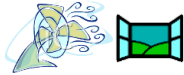
Included in Your Package



Warnings



Using common sense is a must, Lead can be poisonous and can cause some cancers and birth defects. Protect yourself from burns, property damage, or injury to children or pets.



Use the Oasis Lead Shot Maker only in a well ventilated area. This includes opening windows, using a fan, or outdoors. Use the Oasis Lead Shot Maker in temperatures no less than 65° Fahrenheit.



Using the Oasis Lead Shot Maker includes melting lead to a molting state, temperatures exceeding 600° Fahrenheit are common. Personal protective equipment and clothing must be used and include.



Eye Glasses at a minimum must be worn.



Face Shield is better protection and should be included with eye glasses



Gloves must be worn to prevent burns.



Apron will prevent burns and protect your clothing.



Masks will protect your lungs and throat from smoke and lead dust emissions.



Leather Boots will protect you from burns caused by spilled or splashed molten lead and will protect your feet in case lead ingots are dropped.

Other words on your personal and property safety



Never use your shot maker around or near water.



Electrocution can occur if unit comes in contact with water. Check cord for burns, rubs, cuts or damage.



Violent lead spatter explosions can occur if molten lead and water come in contact.

Oasis Lead Shot Maker



Avoid flammable liquids used as coolant. Never let your coolant temperature exceed 140° Fahrenheit, know the flash point of your coolant and stay at least 100° Fahrenheit below that temperature.



A fire extinguisher should be nearby in the event of a fire. Read manufactures label and know if you have the correct type of fire suppression.

Around your work area



The following items should be stored in a flame proof cabinet if used in the same room as your Oasis Lead Shot Maker:



Flammable or combustible fuels.



Paints, thinners, solvents, varnish or wood finishes, camp fuels.



Fireworks, gun powders, or flammable and explosive powders.



Small canisters of welding gasses.



Store used or soiled rags and wastes in flame proof, sealed containers.



Turn off compressed gas cylinders such as welding gases, medical oxygen cylinders, propane, and inert gasses.

While using your Oasis Lead Shot Maker

Avoid the following distractions:



Keep your mind on **WHAT YOU ARE DOING**, don't think of what your will be doing later, what you did earlier, your busy work schedule, upcoming vacations or camping trips.



Don't daydream.



Don't use social networks.



Don't Text.



Avoid phone calls.

Oasis Lead Shot Maker



Keep children and family members away from the area your Oasis Lead Shot Maker is in operation.



Keep pets away from the area your Oasis Lead Shot Maker is in operation.



Making a checklist of the above items will help you ensure you have a safe experience with your Oasis Lead Shot Maker, now, and always.

Oasis Lead Shot Maker, LLC reserves the option to void any warranty due to misuse or abuse of any Oasis Lead Shot Maker equipment. Oasis Lead Shot Maker, LLC holds no responsibility of injury from the use, misuse, abuse, or modification of any product produced by them. Users of the Oasis Lead Shot Maker use this product at their own risk. Oasis Lead Shot Maker, LLC makes no claim as to the quality or quantity of the product produced by the use of any equipment or product manufactured by them. Oasis Lead Shot Maker, LLC makes no warranty and reserves the right to void any warranties due to damage to or caused by the use of products in conjunction with the Oasis Lead Shot Maker.

Unpacking

The Oasis Lead Shot Maker comes completely assembled, minus the drippers of your choice, and no special assembly is required. Care should be used not to drop or jar the unit to avoid breaking the unit burner. When the Oasis Lead Shot Maker arrives to you a close inspection should be made of the unit and any damage due to shipping should be reported immediately. All items in the package should be counted and shortages be reported immediately, each unit should have one (1) ladle and heater assembly and seven (7) drippers in the size you ordered with the unit. (See Appendix for additional sizes and styles that are available)

Installing Drifter Nozzles (Drippers)



The Oasis Lead Shot Maker is shipped without the drifter nozzles installed. To install the drippers you will need a 9/16" and 1/2" wrench.

Remove the nuts from the nozzles and place the nozzles and nuts in a container with rubbing alcohol. Swish them around in this for a few minutes to remove any machining oil and prevent a hard crust from forming in your drippers, clogging them up. Install the drippers through the front lip of the ladle with the threaded end to the inside of the ladle. Replace the nuts onto the drifter finger tight only. Turn each drifter so the shot size holes are facing down toward the ramp. The face of the drifter with the shot size hole should be parallel to the ramp. Using the 9/16" wrench tighten the nuts while holding the drifter head with the 1/2" wrench. DO NOT over tighten the nuts, a firm snug is all that is required.

Materials Needed in Addition to Your Unit

Each of the following items must be furnished by the purchaser, these items are generally found around the house, at a local hardware store, Wal-Mart, at a local farm and ranch store, or at a surplus store. Using your imagination you can customize these items to fit your needs or work space.

- 1 or 2 coolant tanks
- 1 secondary containment tank
- A metal bench to mount the Oasis Lead Shot Maker on
- A drying screen
- Graphite
- 600 or finer grit sand paper
- Teaspoon or other item to scrape scum off molten lead
- 12" Cast Iron frying pan or other pot to pre-melt/pre-clean lead and heat source like hot plate
- Metal can for waste/containments that is scraped off molten lead
- PPE Safety clothing, glasses, gloves, hot pads
- Coolant of your choice
- Window screen and wood to make drying racks
- Separating sieves to separate produced shot

Setting Up

The beauty of making your own lead shot, other than the tremendous savings over buying commercial shot, is you can make your setup as simple or as elaborate as you want. On the simple side this can be nothing more than a large tub with a metal plate covering part of it with the Oasis Lead Shot Maker setting on it and a small trash can filled with coolant inside that tub for the molten shot to drop into. If you are real handy, or want to pay a welding shop to build you a stand, you can make a complete bench, dedicated to shot making, out of steel and/or aluminum. Here we will list out some guidelines that must be followed in order to make nearly perfect shot.



Your setup needs to be kept free of clutter, like tools that are un-needed.



A metal bench will prevent fires from spills and cleanup will be fast and easy.

Location

The location is important for your safety, the safety of your family and pets, and the quality of the shot to be produced. This area needs to be free of flammable or combustible items and flooring, and clutter. It needs to be well ventilated, an open window with a fan to vent fumes of better yet an oven hood with a fan vented outdoors is ideal. People and pet traffic needs to be controlled once the Oasis Lead Shot Maker is turned on or lead is being melted to pre-clean or pour into ingots. You will need ample power source for any hotplates, fans and your shot maker weather it is 110 or 220 volt. The area you choose must be at least 65° Fahrenheit, any cooler ambient temperature and you simply will not be able to produce quality shot nor melt ingots fast enough to maintain shot flow.

Coolants

For quality shot production with your Oasis Lead Shot Maker your selection of coolant is very important. Your coolant must have a density thick enough to produce round shot yet thin enough to cool adequately, motor oils in smaller, higher RPM automotive engines have become thinner over the years to displace heat better. Your coolant needs to do the same thing, cool efficiently and rapidly. Water would cool too fast and your shot would not be round. Oils would cool efficiently but the flammability would make them a dangerous choice, and would be difficult to wash off the shot.

At Oasis Lead Shot Maker we have found that Fabric Softener used full strength works extremely well, is not flammable, and is easy to wash off the produced shot quickly with water. The brand you get at a nearby dollar store is both affordable, around \$1.00 per bottle, and the smell left when the shot drops into the softener is not unpleasant. Most important is fabric softener leaves round to nearly round shot and is non-flammable.

Whatever your choice of coolant is keep in mind these basic guidelines; it must have some density, and flammability is important, if it has a flash point stay at least 100° Fahrenheit below that point. NEVER use diesel fuel as a coolant, the risk of fire is simply too high. (See the Appendix for other coolant ideas)



All about lead

Lead is what the Oasis Lead Shot Maker is all about, we want you to have many good experiences making quality shot and have found that your choice of lead will determine your success. Scrap lead can be hard to get ahold of at times but a search on the internet will produce ample supply of lead at an affordable cost. Wheel weights make the best lead shot, reclaimed shot can be used but will produce shot about ½ size smaller than expected.

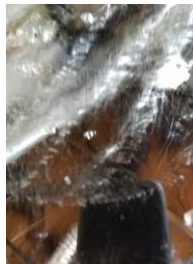
Pure lead is a poor choice, it will run from your drippers instead of dripping and may not produce round shot. Lead like Babbitt lead used in bearings has so many additives that it will not produce good results, making various shot sizes, and will not flow well through the drippers well causing blockages. A good balancing point is wheel weight lead, this lead has the proper ratio of lead, antimony, and tin and performs very well producing quality shot. Using reclaimed shot will produce shot ½ size smaller than expected.

Whatever lead you choose it must be cleaned removing any foreign material and debris, as seen in this dirty lead photo.



Notice how the crud and debris float to the top of the melted lead, clean this scum off before using.

Cleaning lead is done by melting it in a separate pot, on a hot plate or stove of some sort. Once the lead is melted scrape the scum, dirt, steel, or other metal, and fasteners off the top discarding it in a metal can. At this point the surface should be shiny and reflective as seen in the photo below photo.



Notice the reflection of the phone in this clean lead.



Old dirty lead ingots will need to be re-melted and cleaned before placing them in the Oasis Lead Shot Maker.

Now that your lead is melted and clean it is time to pour some ingots. The RCBS and Lyman ingot molds work well making 1 pound ingots. The downfall of that size ingot is you will find yourself rapidly filling the ladle with them trying to keep up with the shot output, especially on the larger size shot. Small muffin pans work really well making an ingot that is around 3 pounds. Once again, the dollar store is a great resource for these. Using all the safety precautions, and your Personal Protective Equipment, slowly pour the molten



lead into each pocket and then let them completely cool. It may take a slight tap of the pan on the bench but the ingots will drop out easily making the perfect ingot.

While making shot of larger sizes you may find that even a 3 pound ingot makes it hard to melt lead fast enough. If this is the case for you removing at least 2 of the drippers and plugging the holes with a 3/8 bolt will slow down the production of shot and the need to rapidly melt lead will be diminished.



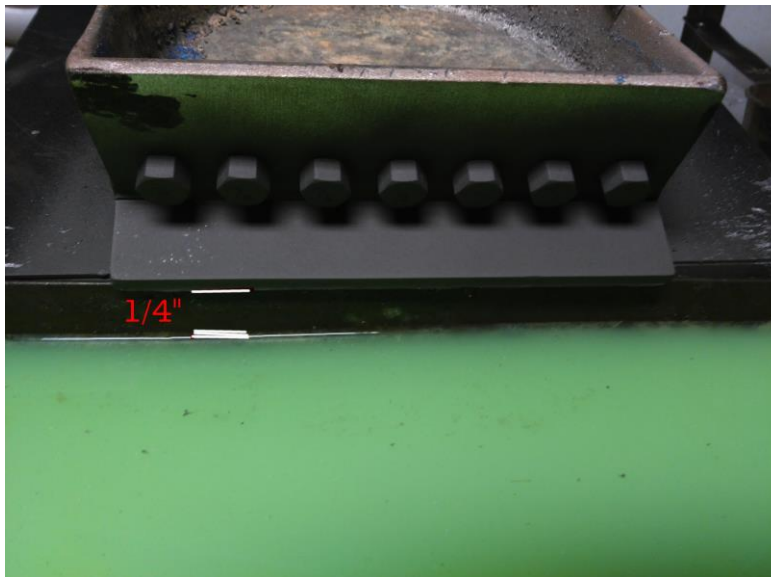
Making Lead Shot

Making lead shot with the Oasis Lead Shot Maker is easy and fast. By now you should have your work place set up and free of any clutter, pets, and family members, or other distractions. The first thing you need to do is prepare your Oasis Lead Shot Maker for use. Using your sandpaper, 600 grit or finer, lightly sand the ramp, or ladle lip, to clean any debris, scratches, or burrs from it. Put a good coating of the supplied soap stone in the lip, this will keep the lead from balling up under the drippers or causing



tear dropped shaped shot. Set up your bench, coolant tank, and recovery tub as low as possible, should you accidentally drop anything into the molten lead it will splash back on you. Always wear your PPE, gloves, glasses, apron, boots, and face shield. Molten lead can cause blindness or severe burns. Set your Oasis Lead Shot Maker on your bench and adjust your coolant tank so the highest level

of the coolant is $\frac{1}{4}$ inch below the lip of the ladle. Your shot must drop NO MORE than $\frac{1}{4}$ inch into the coolant tank or it will not be round.



Add about 6 pounds of your pre-cleaned wheel weight lead to the ladle and plug in your Oasis Lead Shot Maker. Turn the master switch on and the element will immediately start heating the ladle. As the lead melts watch closely and clean any scum off the top of the molten lead BEFORE IT REACHES THE DRIPPERS. Doing this will prevent any scum from clogging up the drippers. Keep at least one 3 pound ingot or 2 or 3-1 pound ingots towards the back, or highest end, of the ladle so it will warm up and slowly melt. As the lead melts it will flow down to the drippers and cover them. Let the molten lead cover the drippers to about $\frac{1}{8}$ inch above the top of the nuts. ***Be very cautious around the molten lead, if any water is introduced to the molten lead it will instantly explode blowing molten lead several feet in every direction. This will cause severe burns, blindness, and may cause fires. Always wear your PPE and keep any liquids away from your Oasis Lead Shot Maker.*** It is very important to keep any scum from entering the drippers, the most critical time to watch for this is when you first start a new set of drippers or if you allow the level of molten lead fall below the dripper openings. It is important during operation to keep the vents on the side of your Oasis Lead Shot Maker clear of obstructions, overheating the unit will void the warranty.



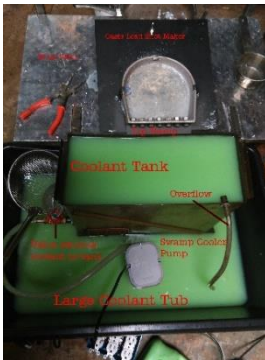
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When the Oasis Lead Shot Maker reaches operating temperature small droplets of lead will fall from the drippers and roll down the lip falling into your coolant, small light taps with a spoon on the front edge of the ladle will help get the droplets flowing or clear any clogs from the drippers. It is recommended that the first few minutes of shot be caught in a small flat tray and kept dry to be re-melted and used again. After the unit warms completely and is running good shot, let the shot fall into the coolant.

Listen to the falling shot, you should hear a steady hiss as the shot falls. If it is crackling and spitting raise your coolant level slightly. Watch that the coolant doesn't touch the lip of the ladle, this will cause the lead droplets to stick to the lip and not fall into the coolant tank.

Keep an eye on the molten lead in the ladle, you need a steady supply of fresh lead keeping the molten lead 1/8 inch above the drippers. As lead is used up you need to replace it by adding ingots of lead to the back of the ladle. Be careful not to drop the lead ingots into the molten lead as it will splash on you causing severe burns. If the warmed ingots are not melting you can use your spoon to slightly push them into the molten lead, this will increase the rate that they melt.

If the lead becomes too hot it will run from the drippers instead of dripping. If this happens you can add fresh lead or turn off the Oasis Lead Shot Maker for a short time.



You also need to watch the temperature of your coolant, keeping your coolant around room temperature (68° to 74° Fahrenheit) will work best. There is no need to work to raise or lower your coolant temperature, it will naturally do this on its own.

As the hot lead shot drops into the coolant tank it will slowly warm up the coolant. If your coolant gets above 140° Fahrenheit the quality of your shot will be reduced and the danger of burns will increase.

Coolant temperature can be cooled by allowing your coolant tank to overflow into a large tub or basin and slowly pump it back into the bottom of your coolant tank using a swamp cooler pump and a valve to control the flow. Doing this increases the surface area that cool air comes into contact with your coolant. Recirculating the cooled coolant into your coolant tank will adequately control the temperature of the coolant as the shot drops into it.

After your coolant tank is 1/3 to 1/2 full, using your PPE, you can tip the front of the Oasis Lead Shot Maker up and place a 2X2 block under the front. This will stop the flow of shot while you remove and empty your coolant tank. (See Cleaning and Screening Your Lead Shot for instructions on building a draining and drying screen) Pour your shot from your coolant tank onto a screed and drain the coolant into a separate tub. Once this is done you can replace your coolant tank and carefully lower the Oasis Lead Shot Maker to start making shot again.

Cleaning Your Lead Shot

If you are using fabric softener cleaning your lead shot is no chore at all. Simply hook a hose to a facet and place the other end in the bottom of a bucket, fill your bucket with your new shot then turn on the facet and let the water flow, in short order your shot will be clean and the water will be clear. If you are using oils for coolants you may need to add detergent such as dawn dish soap and stir and rinse in several batches.



Drying the Lead Shot



Once your shot is rinsed of all coolant it will need to be dried. This can be done by making a frame out of wood with window screen attached to it, adding chicken wire under the window screen will reinforce the screen and better support the weight of the shot. Place your trays of shot in an area where air can flow to all sides of it, adding a fan and/or heat can expedite drying.

Screening Lead Shot

Screening your shot is process of removing unwanted sizes and shapes of lead from the wanted sizes and shapes. Special screens, or sieves, are made for this process and are called Micron Sieves. A chart of shot sizes and screening sieve sizes can be found in the appendix at the end of these instructions. When screening your shot you want to find a screen just larger than the diameter of your shot in millimeters, a #7 ½ shot is 2.390 mm so you would use a #7 screen with an opening size of 2.830 mm or 2,830 Microns. The same screen size would be used for #6 shot because #6 shot is 2.770 mm diameter. A #5 shot at 3.050 mm would not fall through a #7 screen. If you are using 7 ½ size drippers a #7 screen would certainly catch anything that is out of round or larger like the first few minutes of shot made during each session. A search of the internet (common links are included in the Appendix) will provide several links to purchase sifting sieves like the one pictured here.



Adding Graphite

Your lead shot is ready to use just as it is but coating graphite will help it flow from your loader better and settle into the wads in your shot shell better. It will also prepare your shot for long term storage. Any shot that is not coated with graphite will soon gather moisture from the air and oxidize thus rendering it un-usable.

There are several ways to add graphite and several sources for graphite. Pencil lead is graphite, on the internet there is a guy that breaks apart pencils, grinds up the graphite, pours it into a bottle with a handful of shot and shakes it around. At \$3.00 per pack of pencils and the cost of a coffee grinder, then coating shot a handful at a time this seems to be a waste of time, and money.

Dry lock lube purchased from an automotive parts store is the same graphite used by large shot producers, it however is only a few ounces of graphite powder at a cost of \$4.00. While it will coat many pounds of shot it is still a relatively small amount of graphite for a large cost. If you are only producing a few pounds of shot at a time place a small amount of graphite (about 2oz.) in a 5 gallon bucket and add a few pounds of shot (3 or 4 pounds) and swirl and mix your shot around until it is all a consistent grey color, it will then be evenly coated with graphite and ready for loading.

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If you plan on doing large batches of lead shot graphite is much more affordable if purchased from a farm and ranch supply store. Graphite, such as this EZ-SLIDE, is used in seed drills to help seed flow from the hoppers at a more even rate and will prevent the seed from clumping up. It is 80% Talc and 20% graphite, this is the same stuff the major shot makers use after dropping shot from 100 foot towers.



Just as dropping shot from 100 foot towers the shot coming from your Oasis Lead Shot Maker won't be 100% perfect. It is about the same as dropped shot in quality, the difference is that commercial producers tumble their shot during the drying and graphitizing process. You too can do this in a cheap CLEAN concrete mixer. One word of caution, you must remove the mixing paddles from the mixer. On many inexpensive models the paddles are riveted to the drum and these rivets can be drilled out then the holes plugged with rivets or screws. A dab of silicon on the outside of the drum around the rivets or screws will seal them from leaking graphite. Make sure you rivet or screw from the inside so the smooth head is inside the drum.



Tumble drying is very efficient if a fan is placed in front of the drum opening. You can use a moisture level measurement tool used for lumber to find the content, or lack of, moisture in the shot. Once dry add about a cup of 80/20 graphite and tumble another ½ hour. As a benefit of tumbling it will make your shot as close to perfectly round as commercial shot.

Appendix

Shot Size Chart

Shot Size	Diameter (Inches)	Diameter (MM)	Aprox no. of pellets in 1oz.
000 Buck	0.360	9.140	6.2
00 Buck	0.330	8.380	8
0 Buck	0.320	8.130	9
1 Buck	0.300	7.620	11
2 Buck	0.270	6.860	15
3 Buck	0.250	6.350	19
4 Buck	0.240	6.100	21
BB	0.180	4.570	50
2	0.148	3.760	90
4	0.129	3.280	135
5	0.120	3.050	170
6	0.109	2.770	225
7.5	0.094	2.390	350
8	0.089	2.260	410
8.5	0.085	2.160	470
9	0.079	2.010	585
12	0.050	1.300	2300

Screen Size Chart for Screening Lead Shot

U.S. Mesh	Micron	Inches	Largest Shot Size that will drop thru
3	6730	0.2650	3 Buck
4	4760	0.1850	BB
5	4000	0.1570	#2
6	3360	0.1310	#4
7	2830	0.1110	#6
8	2380	0.0930	#8
10	2000	0.0787	#9
12	1680	0.0650	#12
Window Screen	18 holes per inch	0.0555	#12

If you set up your drippers for a 7 1/2 shot size use a 7 mesh screen, anything larger than 7 1/2 shot, like the beginning of your shot making session or dribbles, will be stopped by the screen. If you set up your drippers with half #7 1/2 drippers and half #8 drippers use a 8 mesh screen first to only separate the #8 shot then use a 7 mesh screen to only let thru the #7 1/2 shot and stop all the unwanted swarf.

US Sieve and Tyler Equivalent Chart

Used to determine Sieve size needed to screen shot

US Sieve Size	Tyler Equivalent	Opening	
		mm	in
-	2½ Mesh	8	0.312
-	3 Mesh	6.73	0.265
No. 3½	3½ Mesh	5.66	0.233
No. 4	4 Mesh	4.76	0.187
No. 5	5 Mesh	4	0.157
No. 6	6 Mesh	3.36	0.132
No. 7	7 Mesh	2.83	0.111
No. 8	8 Mesh	2.38	0.0937
No.10	9 Mesh	2	0.0787
No. 12	10 Mesh	1.68	0.0661
No. 14	12 Mesh	1.41	0.0555
No. 16	14 Mesh	1.19	0.0469
No. 18	16 Mesh	1	0.0394
No. 20	20 Mesh	0.841	0.0331
No. 25	24 Mesh	0.707	0.0278
No. 30	28 Mesh	0.595	0.0234
No. 35	32 Mesh	0.5	0.0197
No. 40	35 Mesh	0.42	0.0165
No. 45	42 Mesh	0.354	0.0139
No. 50	48 Mesh	0.297	0.0117
No. 60	60 Mesh	0.25	0.0098
No. 70	65 Mesh	0.21	0.0083
No. 80	80 Mesh	0.177	0.007
No.100	100 Mesh	0.149	0.0059
No. 120	115 Mesh	0.125	0.0049
No. 140	150 Mesh	0.105	0.0041
No. 170	170 Mesh	0.088	0.0035
No. 200	200 Mesh	0.074	0.0029
No. 230	250 Mesh	0.063	0.0025
No. 270	270 Mesh	0.053	0.0021
No. 325	325 Mesh	0.044	0.0017
No. 400	400 Mesh	0.037	0.0015

Useful Resources

Sieve Screens

Instruments Online by far has the best selection of sieves and their ordering system/cart is the most user friendly. Prices are slightly higher than some of the others found online but customer service is friendly and available.

http://www.instrumentsonline.com/Sieves-C48.aspx?gclid=CjwKEAjlplBRCx4eT8l9W26igSJAuQ_HGg_33sGp8FwyOdc5gxfx4CNj1HWsW_pPt-yreRZzFhoCPyiw_wcB

Amazon saves you money but they are a brokerage for other company's products. Shipping can sometimes be slow, customer service is poor, and they know nothing about the products they sell. Consider them the Wal-Mart of the internet, you get what you bargain for.

https://www.amazon.com/Advantech-Stainless-Sieves-Diameter-Height/dp/B007F18UDQ/ref=sr_1_2?ie=UTF8&qid=1493568875&sr=8-2&keywords=%237+Sieve

https://www.seedburo.com/product.asp_Q_catID_E_518_A_subCatID_E_2517_A_Hand_Test_Screens_and_Shakers_E_Hand_Test_Screens_and_Shakers

<http://www.industrialnetting.com/applications/sieves-screens.html>

Scrap Lead

<https://www.rotometals.com/3000-pounds-reclaimed-lead-shot-loose-with-freight/>

<http://www.used.forsale/scrap-lead>

<http://www.pacific-steel.com/locations>

Coolants

Water Soluble Oil.



Water soluble oil comes in many forms and brands. The object is to dilute it with water to decrease its density, or thin it out some. You must use a thinner base oil to begin with, NAPA's cutting and grinding oil as it comes out of the bottle is about 90 weight, it calls for a cutting dilution of 1 part oil to 40 parts water, this would be a poor choice for coolant. Rustlick on the other hand is about 20 weight out of the bottle and calls for a dilution of 1 part oil to 10 parts water. While this may be a better choice some experimentation would be necessary to get a dilution that would work. Even though water soluble oil does not separate like fabric softener does it will smoke and steam while in use and the smell can be unpleasant. Water soluble oil will grow a bacteria that eventually can have a foul smell and some people can have violent allergic reactions to it.

If you choose to use water soluble oil a good place to start is with a dilution of 2 parts oil to 3 parts distilled water. Metsafe FR 210 seems to be the best choice but can be expensive. If your shot is out of round add more water and mix well. If your shot has dimples add a little more oil and mix well.

The downfall of using water soluble oil is the cleaning of your shot afterward's, it will be necessary to use a detergent such as Borax laundry soap and agitating the shot while in the detergent. Rinse the shot very well before drying and applying graphite to your shot.

Another choice of coolants is Liquid Soap. The best of these seems to be ALL, this is available in most locations and rinses off the shot well if using lots of water. You will need to thin the detergent a little with distilled water, watch your shot for out of round or dimples and add distilled water or soap as needed. We do not recommend this as a coolant because it is so hard to wash off.

An easy choice of coolants to find is antifreeze, the best seems to be RV antifreeze. Use antifreeze straight with no dilution, again, this is hard to wash off and requires lots of soap and lots of rinsing.

Several customers have reported very good results with Altra Performance Products FR 200 WG from Alegany Petroleum. This water soluble, flame retardant machine oil is used without dilution as it is a 10 weight oil. While it does not cause dimples it is hard to rinse off the shot and requires soap and water, lots of water.



Fabric Softener, the cheap stuff can be purchased at any dollar store. Some of the cheaper softeners may separate and look white in color, replace it with the cheap stuff or spending a little more will achieve a quality that lasts longer before separating.

Other Products Needed



Franklin Drop Out. This can be sprayed on the lip under the drippers instead of using soapstone. It is a graphite spray that can be purchased where reloading and bullet molding products are sold. If you cannot find it in your area you can find Graphite Paint used on farm disks, seeders, and other equipment, it is essentially the same stuff. The lip must be polished with 600 grit sandpaper and free of soaps, oils, and water before applying. Apply it while the Oasis Lead Shot Maker is cool, applying when hot can cause a fire. Let this and similar products dry completely before using your Oasis Lead Shot Maker.

Tanks, Tubs, and Basins



When choosing tanks and tubs there are some important considerations to keep in mind. The depth of your coolant tank needs to be relatively deep, if it is shallow your shot will pile up against each other before it is cooled, this will cause deformities in your shot. Your coolant tank can never really be too deep, but at some point it becomes so deep that you can't reach the shot in the bottom and too bulky to handle for emptying of the coolant and shot.

While there is a wide variety of choices avail be what seems to work best and is easy to find is a 50 caliber military ammo can. These can be found at most sporting goods stores or military surplus stores. 30 caliber cans are also available but fill with shot quickly and if the shot that is dropping into the coolant falls onto the cooled shot before it is cooled it will lose its round shape. Another drawback of a coolant tank that is too small is that the coolant temperature will rise quickly and may be hard to control.

A basin is needed that your coolant tank sets in to catch the coolant that is displaced by the falling shot. This basin needs to be durable enough to withstand the weight of your coolant tank as it fills with many pounds of shot. A very good strong and durable tank is one used for mixing concrete. Home improvement DIY stores like Menards or Home Depot are a good source and will have these basins in the patio and deck section of the store.

Any plumbing needed like swamp cooler pumps, plastic tubing, valves, and pipe fittings can be found at a home improvement store as well.

At a very minimum you will need a coolant tank and a catch basin or tub. It won't be necessary to use pumps and fancy setups if you are only making small batches of shot at a time.

Trouble Shooting

Problem	Diagnoses	Solution(s)
Shot out of round	<ul style="list-style-type: none"> • Molten lead is dropping more than ¼" • Coolant is too thick. • Lead droplets sticking to lip of ladle. • Molten lead is too cool • Lead shot in coolant is too high, falling shot may be touching cooled shot before it cools. 	<ul style="list-style-type: none"> • Position the coolant tank closer to the ladle lip. • Add a little distilled water • Clean and recoat the lip with soapstone. • Allow unit to heat up more • Clean out cooled shot or use a deeper coolant tank.
Dimples on shot Lead runs instead of dripping	<ul style="list-style-type: none"> • Coolant is too thin. • Lead is too hot 	<ul style="list-style-type: none"> • Add a little oil or soap. • Add lead • Turn unit off momentarily
Lead will not drip or is unusual size	<ul style="list-style-type: none"> • Drippers are dirty or have scum in them 	<ul style="list-style-type: none"> • Tap top front edge of ladle sharply with a spoon • Remove and clean drippers

Removing Drippers. Using your PPE tip the Oasis Lead Shot Maker back and place a 2X2 block under the front lip. Turn off and unplug the unit and let it completely cool. Using ½" and 9/16" wrenches remove the clogged dripper. Hold the dripper with pliers and heat it sufficiently to melt any lead left in it. While it is hot rap it sharply on a block dislodging any debris inside it. Reinstall the dripper and lower the unit off the 2X2 before re-starting your Oasis Lead Shot Maker.

Accessories

Drippers \$40.00 plus \$4.49 Shipping per set of 7
Sizes Available

- #5
- #6
- #7
- #7 ½
- #8
- #9

Double Drippers available by special order

Sizes Available

- #5
- #6
- #7
- #7 ½
- #8
- #9