

**Thank you for choosing “THE UGLY ANNEALER”
Please read these instructions before operating the machine!
Scan QR CODE to watch instruction videos!**



**SCAN QR CODE
TO WATCH
INSTRUCTION
VIDEOS !**

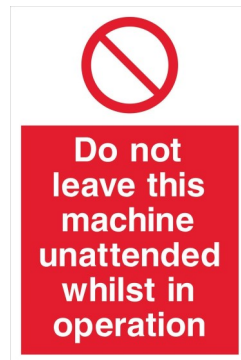


Parts near the torch flame may become very hot during operation. Parts may remain hot afterwards. Allow time for cooling before touching. Risk of burning injury!



Use this machine on non-flammable stable surface and keep operating machine away from any inflammables/live ammo/powder/primer.

DO NOT leave this machine unattended whilst in operation. Keep away from the reach of children/pets whilst operation.



Keep fingers away from moving parts whilst in operation. Risk of injury!



DO NOT anneal any brass with live primer. Explosion and serious injury may occur if you do!



It is the owner's responsibility for safety. Use this machine at your own risk!

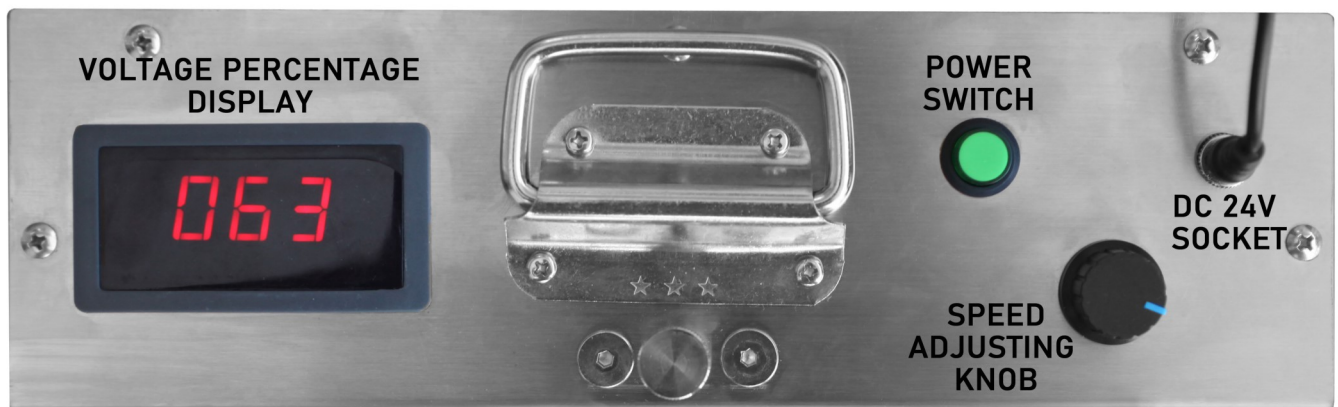
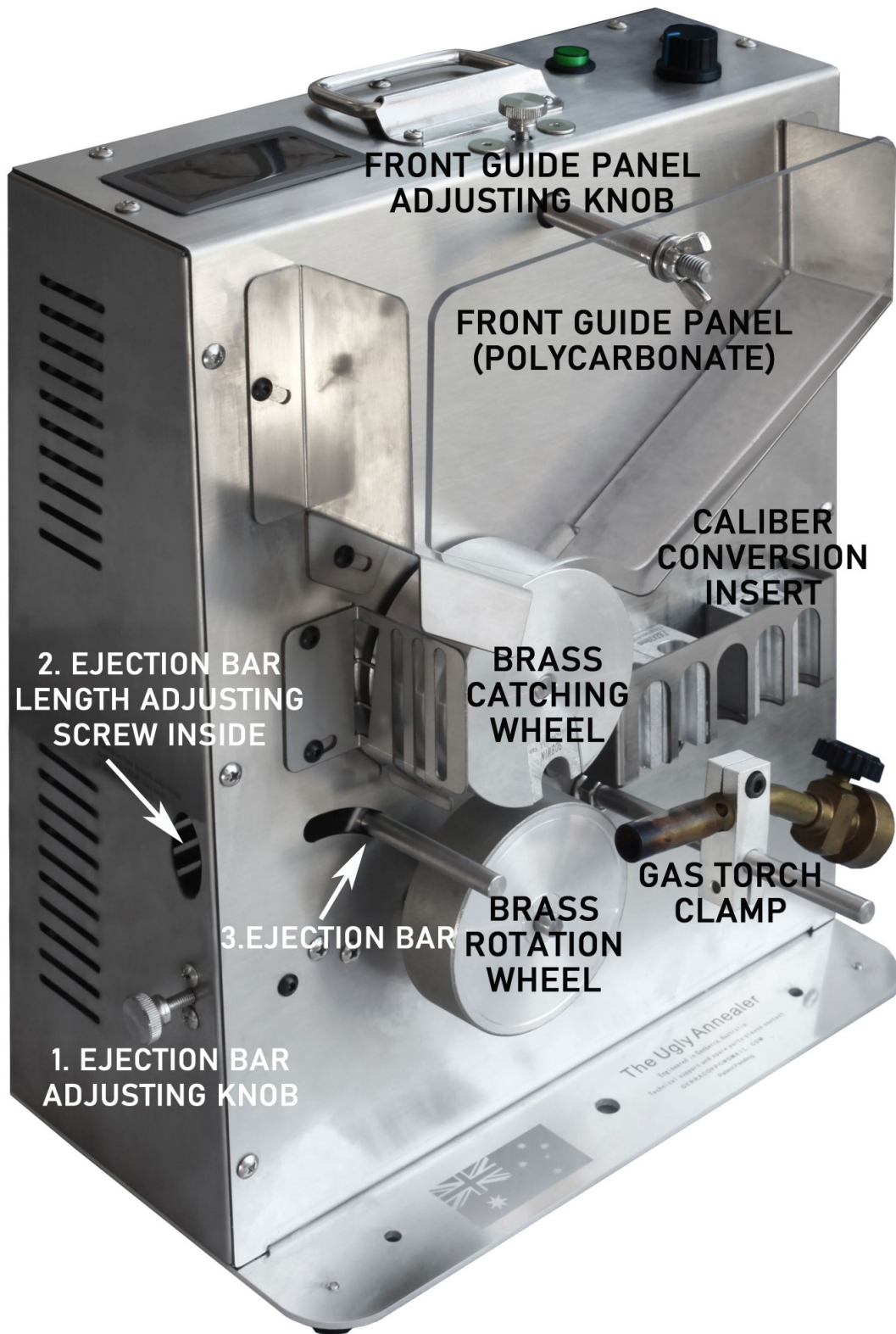


Emergency:

**Pull off the DC 24V plug for quick stop.
Turn off the gas torch regulator.**



**UNIVERSAL PROPANE
BOTTLE STAND**



Warning: DO NOT over-tighten any screw or nut. Over tightening may cause thread damage which is not covered by warranty!

Assembly:

- Install the gas torch clamp axial (8mm diameter) to the front panel. One nut on each side of the panel. There are 4 mounting holes for different flame lengths. The left 1st hole will probably be suitable for most situations.
- Install the FRONT GUIDE PANEL transparent plastic to the 10mm axial. One washer on each side of the plastic. Tighten the nut to lock. Use FRONT GUIDE PANEL ADJUST KNOB to lock and adjust the panel.
- Install the aluminum bottom panel to the machine case.
- Install the brass rolling ramp if needed. Use the black color bolt on the left.
- Long-distance transportation may cause vibration and loosen parts. Please check if all screws/grub screws were tight.
- Pull the ejection bar towards the left side. Use a torch to check through the panel hole if EJECTION BAR LENGTH ADJUSTING SCREW was tight.

Caliber setting:

The Ugly Annealer is designed for all common calibers. From 223/300ACC up to .50BMG. 22 hornet caliber insert can be purchased separately if in need.

- Rotate the upper and lower wheel to a convenient position and disconnect the power plug.
- Leave some gap clearance in between the brass catching wheel and machine front panel. Rimmed brass requires appropriate gap clearance for feeding. Lock the brass catching wheel by tightening the grub screws in the slot.
- Choose the appropriate caliber conversion insert for your brass. There are five conversion inserts. 223Rem and their family, 7.62*39R and their family, 308Win and their family, 300WM and their family, 338LM and their family. Brass catching reel without insert = .50BMG. Install insert into the brass catching wheel slot and tighten the bolt to lock it.
- **DO NOT use oversized insert for your brass as it may cause jamming.**
- Put one brass on one finger and balance it. Mark the approx. centroid line on your brass with a marker.
- Adjust left side hopper panel position to avoid brass bridging.



- Choose the right thickness brass rotation wheel. Use thinner wheel for shorter brass such as 300ACC, 7.62*39R, or 6BR. Thicker wheel for longer brass. Place the brass to the annealing position. Adjust the brass rotation wheel to the appropriate position according to the marked centroid line.
- Adjust EJECTION BAR ADJUSTING KNOB on left panel for appropriate bar position.
- Use **2.5mm** Allen key to adjust ADJUSTABLE PANEL NO.2 for appropriate brass dropping and clearance.
- Use **2.5mm** Allen key to adjust EJECTION BAR LENGTH ADJUSTING SCREW (hidden inside of hole on the left panel) for appropriate ejection bar length.
- Adjust the gas torch clamp to an appropriate position towards the brass neck. (Use provided gas bottle stand if your gas torch doesn't fit the clamp)
- Do not fire your gas torch yet. Turn on the machine and adjust SPEED ADJUSTING KNOB to a very slow speed. Stack and test run your brass until catching, feeding and rotation are smooth and stable.
- Fire the gas torch, test the annealing on one brass. Adjust flame and feeding speed to get appropriate annealing.
- Stack your brass and install the front guide panel.

Annealing temperature tips:

We recommend the annealing temperature to be above **450° C**.

We no longer recommend Tempdaq (temperature indication paste) for temperature indication. As 400°C in very short time WILL cause under-anneal.

You can estimate the temperature by turning off the light and observing the glow color. If you barely see the brass glowing dark red, it is about 450° C and it is just ok. If you see it bright red. It is a bit too hot but still wont harm your brass at all. Chemical composition of your brass will NOT change until melting.

We recommend the finished brass to drop into a tray of water for fast cooling. Theoretically, fast cooling is better for annealing brass. Size after annealing.

About the gas torch:

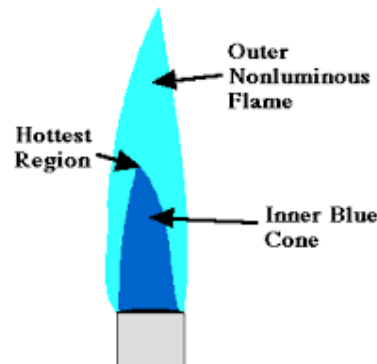
We recommend you use a propane pencil flame gas torch. Our torch clamp is suitable for any gas torch with a nozzle outer diameter in between 12.70-12.95mm. 13.0mm max.

We highly recommend Bernzomatic UL-100TK/ UL-2317 pencil flame gas torch to be used with this machine.

We **DO NOT** recommend butane cartridge-type torches as they are not consistent on pressure and temperature.

About flame:

The hottest region is on edge of inner blue cone and outer nonluminous flame. Please use the hottest region to heat the brass neck for best energy efficiency.



About Warranty:

We offer lifetime warranties against defects in material and workmanship. The warranty does not cover normal wearing or user fault damages such as damage caused by motor stall, falling, water damage. Also not covered are events beyond our control such as power surges, accidents, and your mate saying “watch this!!”

The Ugly Gas Annealer has a very simple mechanical structure. Any problem can be solved by DIY repairs by the owner. We stock all parts and offer affordable spare parts by post and we provide free technical support on DIY repairs.

For technical support and spare parts ordering please email to:

derracopp@gmail.com

About us:

The Ugly Annealer is developed by two knife makers and machining hobbyists who lost their jobs due to Covid.

We spent over one year perfecting the designs. Chose the best and most appropriate materials to make this machine. No plywood case, no cheap plastics, and no corners cut.

This machine is engineered and tested in Canberra, Australia.

For machines dispatched from Australia:

Made in Australia with components sourced in China and Taiwan.

For machines sold in other countries:

Made in China with components sourced in China and Taiwan.

We have used an appropriately powered motor for the machine, and based on the quality, estimate you should be able to anneal at least 300,000 brass (at 10 brass per minute) or 500 hours run time (at max speed without stalling) before replacement needed.

At time of printing April 2021 approx. price of motor with gear box assembly is \$25 plus postage in Australia.

Thank you for purchasing our machine. Happy annealing and shooting !

Cheng Fei (studied Civil Engineering in University of Tasmania)
 Yuedong Hou (studied Mechanical Engineering/Mold manufacturing in Luoyang Military Engineering University)

POWER ADAPTER INPUT: AC 100-240V 50-60HZ 0.6A
 POWER ADAPTER OUTPUT: DC 24V 1.0A 24W
 MOTOR RATING: DC 24V 7W
 STEP DOWN GEAR OUTPUT RPM: 4-18 RPM
 CASE MATERIAL: 201 STAINLESS STEEL
 BASE PLATE: ALUMINIUM ALLOY
 ROTATION WHEEL: ALUMINIUM ALLOY, NICKEL COATED WITH NATURAL DIAMOND GRITS

In the unlikely event that the gears should need replacing, or removed, please read the following instructions
 The gears are interchangeable, so care needs to be taken when re-installing. The gear teeth are numbered on both sides so you can flip to install clockwise or anti-clockwise.
 Brass ejection bar is triggered by lower timing gear at the back of the front panel. If you attempt to re-install the timing gears, please use the recommended gear teeth meshing sequence table to set the correct ejection timing. Each tooth is numbered from 1 to 38. The visible numbers on the upper timing gear should be in ANTI-CLOCKWISE sequence while the visible numbers on lower timing gear should be in CLOCKWISE sequence. Inappropriate setting may cause the brass ejection bar not to work correctly.

UPPER TIMING GEAR
 NUMBERS ANTI-CLOCKWISE

Recommended gear teeth meshing sequence table:

32	33	34	35	36	37	38	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	1	2

LOWER TIMING GEAR
 NUMBERS CLOCKWISE

