

Using a Pressure Chamber To Create Bubble-Free Castings

WARNING: EXPLOSION RISK - Recommended working pressure is up to 60 psi (4.14 bar). Do not exceed. The safety relief valve is designed to protect the tank against excessive pressure. DO NOT attempt to make any adjustments to this valve. If the valve begins to vent air pressure, reduce the setting on the inlet regulator. DO NOT alter the tank in any way by welding, drilling or machining as this may weaken the structure of the tank. Be sure the tank pressure is completely relieved before attempting to remove the tank cover. Shut off the main air supply to the tank and vent the pressure using the tank vent valve located on the tank cover.

IMPORTANT - In order for castings made under pressure using a rubber mold to be bubble-free, the rubber mold also needs to be made under pressure.

Using the Pressure Chamber on Wheels in a Vertical Position



1 Unpack the pressure pot, the wheel assemblies and the bracket hardware.



2 Use nut & washer to attach the 4 wheel assemblies and secure with wrench.



3 Pressure chamber is fully assembled and ready to go.



4 Place a resin-filled mold inside the pressure chamber.



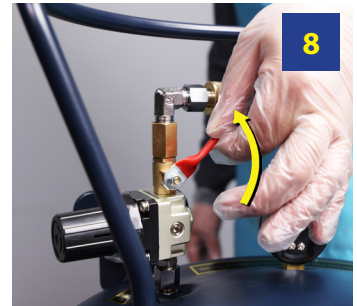
5 Align and secure the lid by tightening the wing nuts two at a time, opposite each other.



6 Using the quick connect fitting, attach an air supply hose.



7 Make sure the air compressor is on and fully charged. Initiate the air flow into the pressure chamber by lifting the air control valve lever.



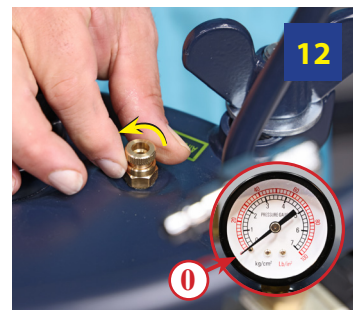
9 Do not exceed recommended 60 psi (4.14 bar).



10 Keep the air supply connected until material in mold fully cures.



11 Close air control valve and disconnect the air supply.



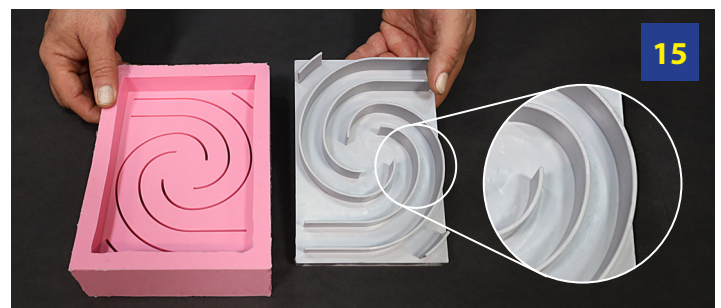
12 Turn air release valve counter clockwise to release pressure. Make sure pressure gauge indicates zero before opening lid.



13 Carefully loosen wingnuts & gently lower the holding bolt fixtures to remove lid.



14 Remove rubber mold and cured casting from chamber.

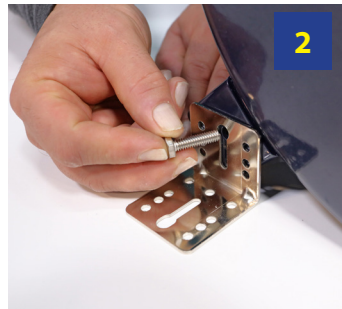


15 Demolded casting is 100% bubble-free.

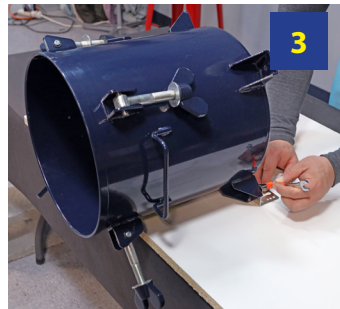
Using the Pressure Chamber on Its Side in a Horizontal Position



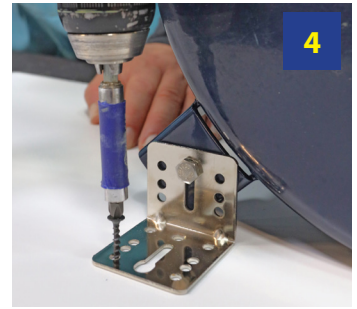
1
Unpack the pressure chamber and all its contents.



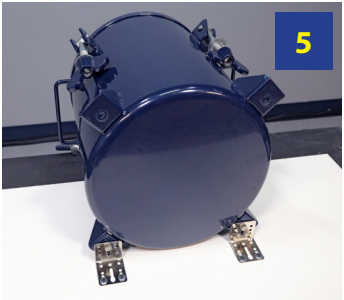
2
Use the enclosed hardware to attach the two brackets to the chamber.



3
The chamber opening is positioned so it extends 4.5" (12 cm) over table edge.



4
Use the self-starting screws to secure the chamber to the table top.



5
The pot is in working position and almost ready for pressure casting.



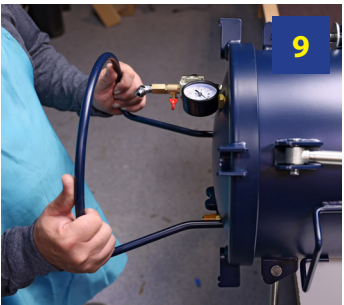
6
Make sure the chamber is level from front to back.



7
Place a board to use as a level surface inside the pressure chamber.



8
Place the resin-filled mold inside the pressure pot on the level board.



9
Position the lid on the pressure chamber.



10
Use your body to hold the lid in place as you tighten the wing nuts.



11
Attach air supply and follow steps 7 through 15 on the previous page.

WARNING: Do not exceed recommended 60 psi (4.14 bar).

The air pressure valve is preset to 60 psi. Read and observe all safety precautions.

Limited Warranty - Pressure Chamber

Proof of purchase is your original invoice which should be retained in the event that a warranty claim is necessary. This warranty is made to the original purchaser of a pressure chamber (5 gallon pail capacity) purchased from Smooth-On, Inc. or an authorized Smooth-On distributor. It does not cover used equipment or product sold by unauthorized third parties.

Smooth-On warrants that unit will be free from defects in material and workmanship for 90 days from date of the original invoice. The warranty does not cover physical damage or deformity caused by impact, excessive force, chemical contamination, misuse or improper storage. It does not cover usage in a way inconsistent with directions provided with the unit (or available at smooth-on.com) or operation outside of the published specifications. As we have no control over user aptitude, compressor quality or vacuum pump quality, Smooth-On does not warrant that the operation of this unit will be uninterrupted or error free.

Limitations of Warranty - To the extent allowed by local law, Smooth-On makes no other warranty or condition of any kind, whether express or implied warranty or conditions of merchantability, satisfactory quality and fitness for a particular purpose.

Limitations of Liability - To the extent allowed by local law, the remedies provided in the Limited Warranty Statement are the customer's sole and exclusive remedies. To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event shall Smooth-On or its distributors be liable for direct, indirect, special, incidental or consequential damages, whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

Making a Warranty Claim: 1. Contact the Smooth-On technical assistance line at (484) 546-0466. Have the original invoice on hand as proof of purchase when you call. You will be asked to provide information from that invoice. 2. Describe the problem to Smooth-On technical personnel. Smooth-On may make a repair recommendation that you can easily perform yourself that might save you time and money. 3. If problem cannot be determined without physical examination, returning the unit to Smooth-On may be necessary. Smooth-On may also request that the unit be returned to its facility for examination or repair. You will be asked to carefully pack the unit and return it freight prepaid with a copy of your original invoice including contact phone number and e-mail address. If defect is due to material or workmanship and defect will be repaired at no cost to the user within the 90 day warranty period, Smooth-On (at its discretion) may replace a part(s) or the entire unit. Freight charges to Smooth-On will be refunded to sender and return freight will be paid by Smooth-On. If defect is not due to material or workmanship related, Smooth-On will offer a quotation to affect repairs. You have 7 business days to authorize the repairs or have the unit returned to you. We accept Visa, MasterCard or American express. Freight charges for the unit to and from Smooth-On will be the responsibility of the sender. The unit will be considered "abandoned" after 45 days following notification of repair options and may be repurposed or discarded.