

# HUMA-AIR.COM

*Market Leader In Accuracy*

**Welcome to Huma-Air. We design and manufacture brand- and model specific precision regulators for PCP air rifles.**

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By using only the highest quality materials such as aircraft grade aluminum, aluminum-bronze, chrome-moly steel and precision belleville springs, our ultra-compact regulators are high performing.

**Installation guide Air Vanturi Avenger regulator**



For adjustment tips, frequently asked questions and a complete list of installation manuals and instructions on how to adjust your Huma-Air regulator

<https://www.huma-air.com/Fitting-instructions>



Or go there directly by scanning the QR code

**Before you you start, realize this:**

- Working on a high pressure rifle could potentially be harmful or lethal to you or bystanders if you do not know what you are doing.
- The pictures of the rifle parts in this manual are universal and mend as an example to explain the working principle. They might not be equal to the parts in your rifle.
- Do not attempt to install this regulator yourself if you do not have a clear understanding of how these pcp rifles and regulators work.
- Do not attempt to install this regulator if you are not skilled to work on an air rifle; contact your local gunsmith to do the fitting.
- Installation and operation is done completely at your own risk.
- Installing this regulator might void your rifle's factory warranty.
- Your rifle may never be filled higher in pressure as stated in your rifle's manual.
- Do not attempt to fit this regulator in another rifle as mentioned in our order conformation.
- These regulators are not suitable to use as a CO2 to HPA conversion, this could potentially be harmful or lethal to you or bystanders.
- We cannot be held liable for any accidents in relation to this regulator and its installation.

**Before you start, make sure that the rifle is unloaded, remove the magazine and make absolutely sure ALL the air is drained from the pressure tube. If there is a pressure gauge, it will give you just an indication. Dry fire the rifle or follow the manufactures instructions and double check to make sure all the air is out of the rifle**



**If the regulator is fitted and there is no output pressure after filling the pressure tube, something might be wrong causing the airflow to block totally.**

**Please beware even though there is no output pressure, the pressure tube/bottle is fully charged with high pressure air!!**

**If you are not able to relieve the pressure of the pressure tube according to the manufacture instructions or by dry firing the rifle then:**

**Contact a professional gunsmith to retrieve a solution!**

- **DO NOT try to unscrew or to open the pressure tube in any way.**
- **DO NOT try to pierce/drill or to use force to open the pressure tube or unscrew parts in an attempt to relieve the blocked pressure.**
- **These actions can cause serious injury or death to you or bystanders**

Before you start, we would like to advice you to read our manual how to [read and adjust the regulator pressure](#) and our [General Adjustment Tips](#) to set up your rifle perfect.

**Before you start, read the full manual.**

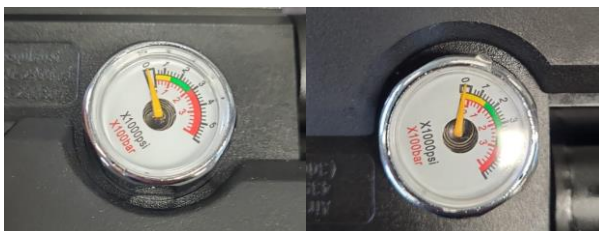
**This manual is a guideline and can be different in detail compared to your rifle.**

## **Fitting of the regulator**

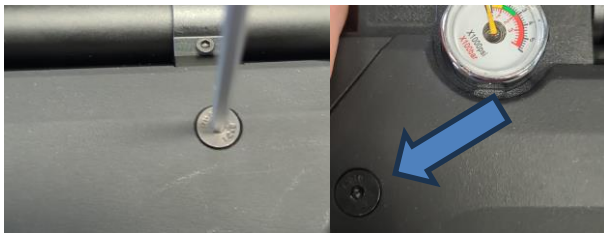
Start of venting the rifle using the breedscrew in the bottom of the stock.



Once you stop hearing air escaping check both gauges showing zero.



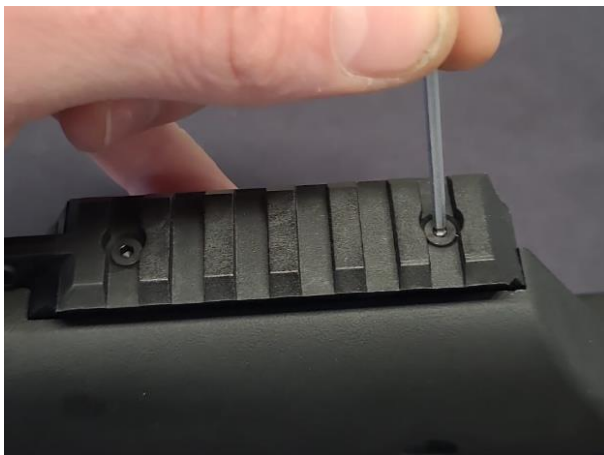
Once the gun is empty it's time to remove the front stock. Remove the 2 countersunk screws on the front stock pieces (both sides).



Now you can split the first half to expose the pressure tubes.

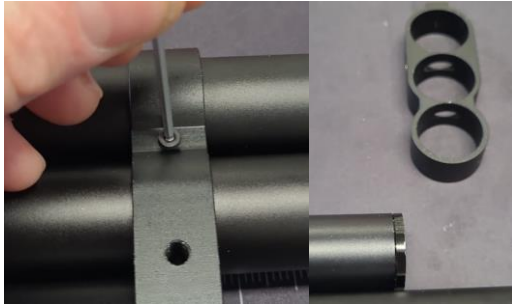


Remove the front screw from the picatinny rail that connects it to the barrel band.

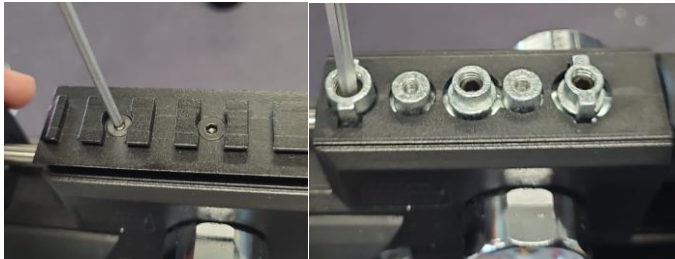


Now you can also remove the other half.

Now remove the the barrelband. Remove the two screws on either side of the barrelband. NOTE that there are Delrin balls underneath the screws that protect the tube and shroud. Now you can slide the barrelband of.



This step isn't absolutely necessary but for easier access to the pressure tubes it is easiest to also remove the barrel. This can be done by removing the front picatinny rail on the breachblock and unscrewing the three barrel locking screws that are exposed. After that the barrel can be slid out to the front.



Now unscrew the middle(long) tube from the action, in some instances the adapter might be stuck in the breachblock or in the tube. In that case we recommend a tight fitting Wrench (the Knipex 86 03 250 is our personal favourite). For added grip on the tube you can use anti slip tape (IKEA patrull is a good and cheap variant).



Our regulator will replace the adapter. Be sure to grease all the o-rings with silicone.



On the low pressure side of the regulator there is a facegroove. Special care needs to be taken when installing it so it will stay put. For this we recommend screwing in the regulator with that side facing upwards.



**Pressure setting of your new regulator**

The regulator is delivered in a range of approximately 80 to 190 bar output pressure.

The set pressure of the regulator is marked on the label of the bag (around 130 bar).  
Setting the pressure can be done by adjusting the bronze colored set screw that is visible after removing the black bottle adapter.



A 5 minutes turn counter clockwise will give a pressure increase of about 4-5 bar. Or ca 25-30 bar for ½ a turn

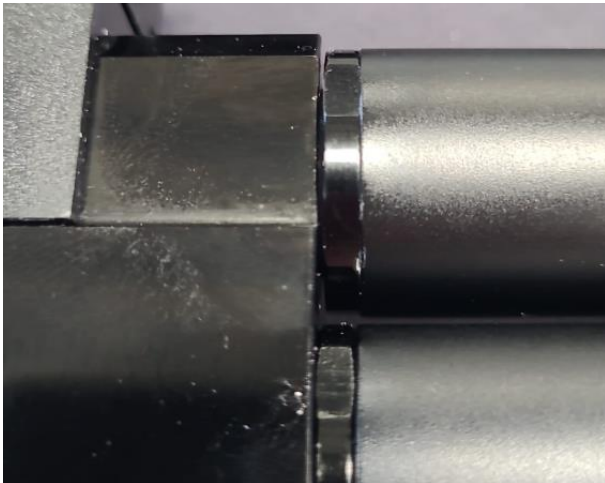
The pressure range of this regulator is between 110 and 210 bar. Use a small screwdriver that fits the internal (2<sup>nd</sup> screwdriver slot of the regulator adjustment screw)

For installation it may be easiest to first screw the regulator into the tube, and then screw it into the breechblock.



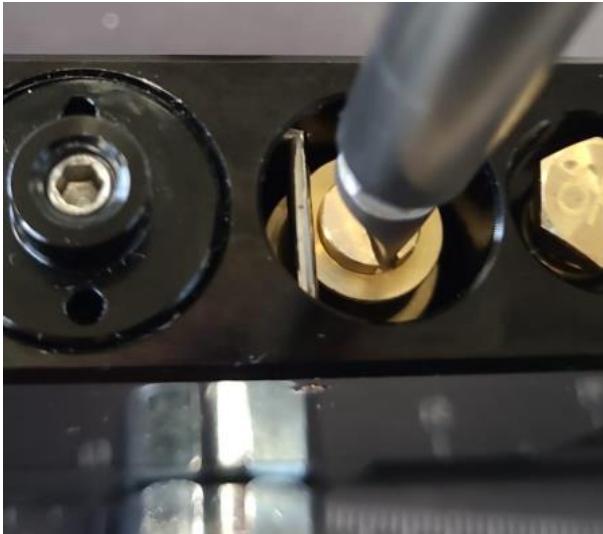
After installation of the regulator and tube you can reinstall the barrel and rail.

After installation there will be a small gap visible between the regulator and the breechblock. This is by design to make sure the little oring on the regulator makes good contact with the bottom of the hole.





Now it's time to pressurize the rifle. First start by adjusting in the factory regulator as far as it goes and pressurize the rifle. You will see that the tubes fill but no or very little pressure is indicated on the factory regulator gauge. Now wind up the pressure on the original regulator while keeping an eye on the gauge.

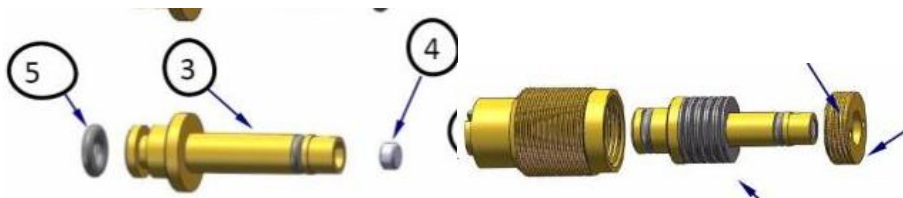


You will notice that pressure will first start to rise but it will stop rising after the set pressure of our gauge has been reached. You should be able to turn up the original regulator further until it reaches the stop pin. This way you have ensured that the function of the original regulator has been taken over by ours. Via this method it is however not possible to set our regulator above the max factory setting. It is theoretically possible to completely disable the original regulator but it will require further skill. If you don't feel comfortable doing this we recommend the above method.

If you feel you have the skill in doing so you can proceed with the below instructions. But realise that in doing so you may permanently diable the OEM regulator.

Before proceding with the below instructions make sure you again empty the gun. Now remove the crosspin to be able to remove the piston adjuster.

In order to fully bypass the OEM regulator you can either remove the seal (4) from the piston nose. Or rearrange the Belleville washers so they are all stacked as a solid stack. ((((((((((



The latter might require a small shim to be made to fill up some of the space because the above stack is a little less tall.

When all this is done you can reinstall the piston assembly and crosspin. Adjust the piston assembly again until it reached the stopping in order to get the largest air channel available.

Reassemble the rest of the rifle and you now have your HuMa-Air regulated Air Venturi Avenger ready!