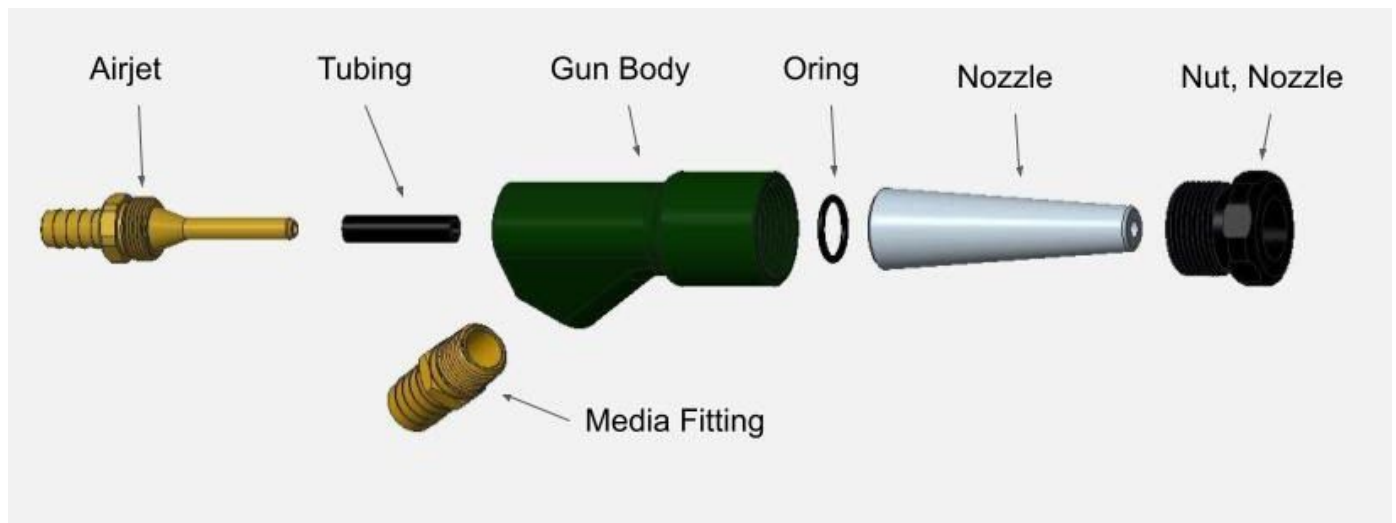




## HTMR Blast Gun Instructions

### Parts Diagram

Below is an exploded diagram of all the components and their nomenclature.



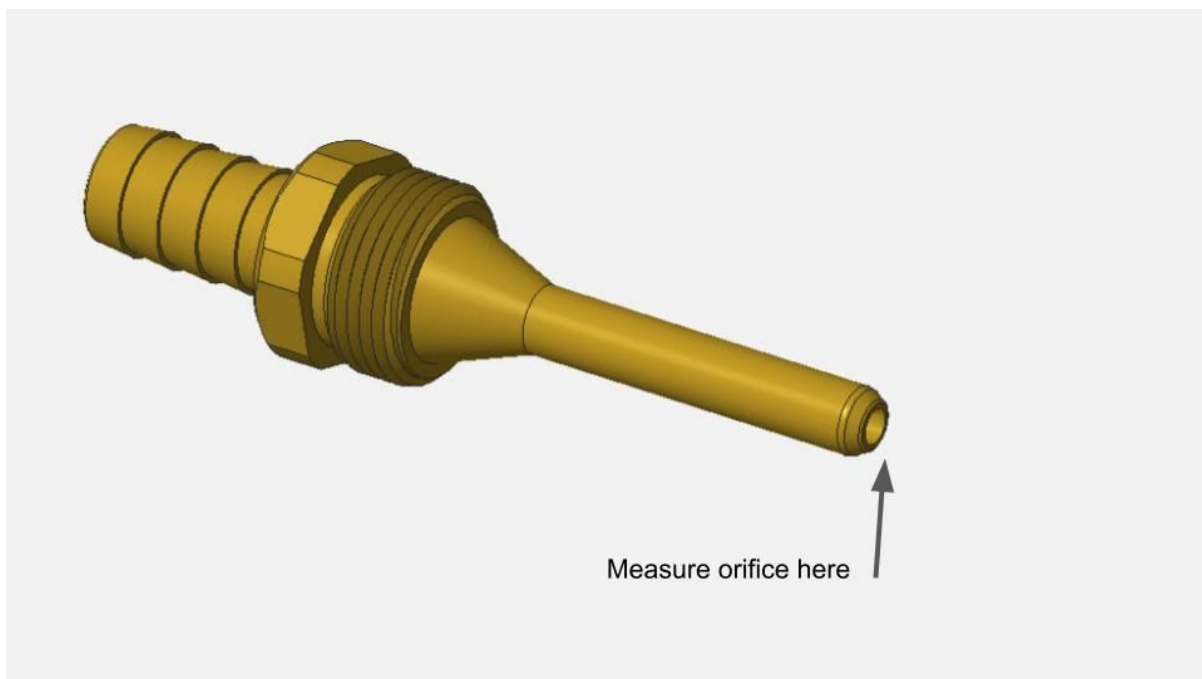
# Assembly

The only thing I want to mention here is that the airjet, media fitting, and nozzle nut simply need to be “snug”. No reason to go super tight. The nozzle nut can be hand tight. The airjet and media fitting require a  $\frac{7}{8}$ ” wrench. The nozzle nut is 1.5” hex. The media fitting has NPT thread and it is perfectly normal for some threads to be exposed. The airjet should be seated all the way in.

## Airjet

The first part of building a gun is picking how much CFM you want to consume. Generally speaking, you want an airjet that consumes a lower amount than the output of your compressor. It is OK to consume more, just keep in mind the compressor duty cycle, and you will be waiting for your compressor to catch up. The airjet can be identified by measuring the orifice diameter at the tip. Need a different size airjet? They are available separately [here](#).

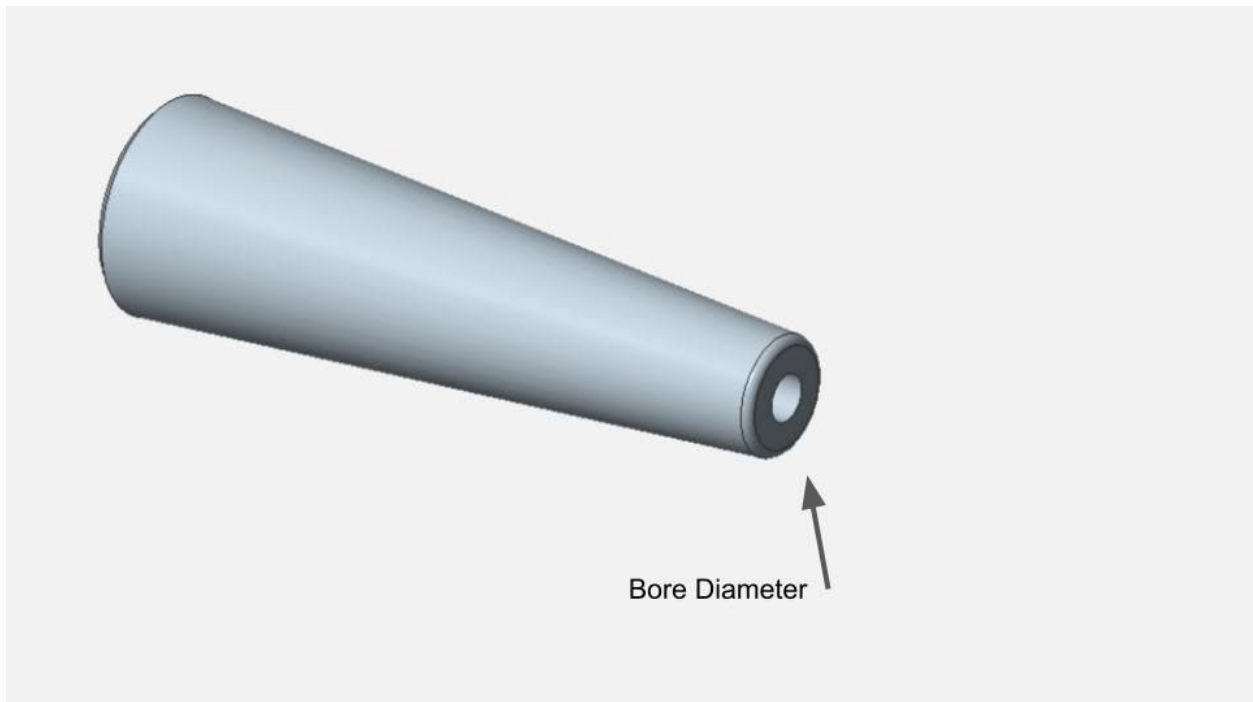
Airjet	Orifice Diameter	CFM consumption @ 60psi
5HP	.125” / 3.2mm	16
7.5HP	.156” / 4mm	25
10HP	.188” / 4.8mm	37



# Nozzle

The blast gun comes standard with a ceramic nozzle. There are 3 sizes available, and can be identified by measuring the bore diameter. Replacement nozzles are available [here](#).

Nozzle	Bore Diameter
5HP	.250" / 6.4mm
7.5HP	.313" / 7.9mm
10HP	.375" / 9.5mm



## Airjet/Nozzle Combinations

The blast gun comes standard with the airjet and nozzle “matched” (for example: 5HP airjet & 5HP nozzle). In this “cutting” configuration, the media velocity exiting the gun is the greatest. A high media velocity is required to remove paint, corrosion, rust, etc. This configuration can also “polish” by reducing pressure to say 40psi and increasing distance from part. The nozzle to airjet ratio is 2:1 in this configuration ( $5\text{HP nozzle}/5\text{HP airjet} = .250"/.125" = 2:1$ ).

<b>“Cutting” Configuration</b>				
<b>Airjet</b>	<b>Nozzle</b>	<b>Nozzle/Airjet Ratio (Ø)</b>	<b>Media Volume</b>	<b>Media Speed</b>
5HP	5HP	2:1	Low	Fast
7.5HP	7.5HP	2:1	Low	Fast
10HP	10HP	2:1	Low	Fast

Another configuration that can be set up is “polishing”. All you have to do is install a nozzle one size larger than the air jet. This will slow down the media exit speed, while increasing media volume, to create a smoother and shinier finish in vapor blasting. This also allows you to keep your pressure higher (more CFM = more power) so you can complete the work faster. The 10HP nozzle is the largest available, so to polish with the 10HP gun in “cutting” config, simply reduce pressure to 40psi and increase distance. The nozzle to airjet ratio is 2.5:1 in this configuration ( $7.5\text{HP nozzle}/5\text{HP airjet} = .313"/.125" = 2.5:1$ ).

<b>“Polishing” Configuration</b>				
<b>Airjet</b>	<b>Nozzle</b>	<b>Nozzle/Airjet Ratio (Ø)</b>	<b>Media Volume</b>	<b>Media Speed</b>
5HP	7.5HP	2.5:1	High	Slow
7.5HP	10HP	2.5:1	High	Slow
10HP	N/A	N/A	N/A	N/A

## Media Fitting

The gun body has standard 1/2" NPT threads for the media port. Blast gun comes standard with a 1/2" NPT x 3/4"(19mm) barbed end. For vapor blasting, I recommend running a 3/4" hose and 3/4" fittings in the entire machine. This will give you the best flow to the gun.

Below are link to fittings for 5/8" & 1/2" hose if you are using this blast gun in a dry blast cabinet.

[1/2" NPT X 5/8" Barb - Grainger PN 6AFL4](#)

[1/2" NPT X 1/2" Barb - Grainger PN 6AFN9](#)

## Oring

Below are the specs and links to where orings can be purchased. I will sell replacements, however, consider that you may be able to source a 50pk locally for less money.

[Grainger PN 41UK14](#)

[McMaster PN 9452K28](#)

[Amazon](#)

### **Specs**

Dash number: 116

Material: Buna N

Durometer: 70A

## Tubing

A small piece of tubing is installed over the airjet to prevent media from deteriorating the brass. This is especially true when dry blasting with aggressive media. The gun was designed such that there is adequate flow with this tubing installed (the limiting factor will always be the nozzle).

# Hoses

The air fitting accepts a 1/2" hose. The media hose, 3/4". I really like the Flexilla brand hoses, since they are lightweight and flexible, even in cold weather. I may sell these by the foot on my website in the future. Let me know if this is a good idea since you will have a lot left over if you buy the rolls below.

[1/2" Flexilla](#)

[3/4" Flexilla](#)