

Air Blasting post-process



Objective – What do you achieve with this process?

It is a necessary step of the cleaning process after Bead Blasting.

General overview

This is an operation based in shooting compressed air to the part after the bead blasting process, to remove the rests of unattached powder and abrasive media that is present in the surface of the part.

Workflow

Just after the bead blasting process, it will be necessary to perform an air blasting procedure in order to remove all remaining powder and abrasive media from the surface.

Recommendations

This procedure is easy to use. The air pressure can (and must) be regulated. It is recommended to use a closed cabin machine in order to keep the environment clean of powder.

Suitable applications

For all applications, Air Blasting processing is a pre-requisite, except if the cleaning process selected is Water jetting. This process MUST be done after the Bead Blasting and before any other post-process such as dyeing, painting, tumbling, etc.

What do you need?

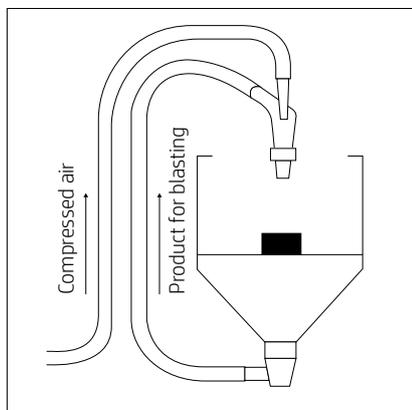
Recommended equipment

For Air Blasting machine, standard requirements will satisfy the needs. Nevertheless, please consider a minimum air pressure of 3 bar, although more pressure might be preferred for better results. It will depend on the part geometry and fragility.

HP recommends same machine and settings that were recommended for Bead Blasting processing. The only difference is that the machine must be clean of abrasive media.

Site requirements

The site needs compressed air installation



There are no other restrictions such as waste disposal, etc. although it is highly recommended to use mask, gloves and glasses in order to reduce contact and breathe of powder.

Consumables

No consumables needed.

How does it work?

Settings

Variables of the post processing are:

- Air Pressure: The air pressure should be set between 3 to 5 bar (make sure your selected machine can cover this range), being the best one **4 bar** for non-fragile parts and using **3.5 bar** or even **3 bar** for more fragile models.
- Distance to part: Based on these values for air pressure, we consider that best distance is 15 cm, but could it be less for some geometries. Please, consider the fragility of the part as well.
- Time to clean the part: It depends on the operator, his experience, etc. This person has to consider if the part is clean enough or not. It also depends on the complexity and size of the part. Taking different sizes we have considered an average time of 5"- 15" per average size and complex part. Fragile or very detailing parts need an extra care, including reducing air pressure, so it might be necessary to use more time than the average values considered here.

Procedure

1. Set the air blasting machine configuration as specified in the previous step
2. Set the part inside the machine and close the front door
3. Put both hands inside the gloves in the front of the machine
4. Use the pedal to start air blasting
5. Clean the surface of the part, paying special attention to fragile parts and not getting too close from source.
Remember: The average distance suggested is 15 cm
If parts are small and not very fragile, it might be helpful a container to put several of these parts and clean them all at once
6. When finished cleaning. Open the front door and remove the part from inside the machine

Troubleshooting

Tips and tricks found and their solutions or workarounds

Sometimes, for very complex parts, the powder, even is not stuck to the part's surface, might get stuck in some areas of the geometry. To remove it, it might be necessary to do it manually, using some tool. Then, continue using the Air Blaster machine.

Impact on part properties

Non dimensional variation, mechanical properties haven't been observed, neither in look and feel characteristics. This process does not help to get a uniform color.

