

A Guide to Airless Spraying

Introduction

Your airless spray system consists of the pumping unit, hose and gun. The unit is mounted on a cart for ease of mobility. No compressor is required as paint is pumped through very small tips that atomise the paint into the spray fan. As no air is used to drive the paint through the system there is little overspray and the room does not fill with paint mist.

Tip size, pressure set, and the viscosity of the product being used determine the amount of paint delivered. Choosing the correct tip size for your job is essential to ensure fast application and a good finish.

Asturo Speedy Tips are numbered with three digits. The first digit always refers to the fan angle, the second two digits the tip orifice measured in thousandths of an inch. Let us take the example of a standard tip for emulsion paints, the 517.

The first digit = 5 refers to the fan angle, in this case 50 degrees. When spraying from around 12" from the substrate, this will relate to an approximate 10" fan. (A handy guide is that the first digit, in this case 5, multiplied by 2 gives 10, the size in inches of the fan when spraying from a distance of approx. 12").

The last two digits = 17 refer to the tip orifice, in this case 17 thousandths of an inch. The type of paint that you are using will be the main criteria to determine the correct tip size for your job. In general, the thicker the paint, the larger the tip size required. A 17 thou. tip is suitable for spraying large areas of emulsion paint.

When spraying, you may wish to cut in, assisted by a straight edge or by the prior application of masking tape. It is generally preferable to use a tip with a smaller fan angle for these operations. When reducing the fan angle to spray the same product as above, i.e. emulsion, you may also find that you have better control by having a smaller tip orifice. A 213 tip can be very useful for cutting in with emulsion paint. A tip guide is included in your pack and you may call the Spraystore Help Line on 0845 6008 999 for advice on tip selection.

Getting ready to Spray

This guide is no substitute for reading your pump, gun and Speedy Base manuals. Please ensure you read these thoroughly prior to using your spray system. You have made a significant investment in the purchase of this product and failure to read the manual thoroughly could lead you to damaging your machine. Any repair necessary under these circumstances **will not be covered by your warranty.**

Here are a few helpful hints:

1. Ensure that you have added lubricant to the piston and seals & packings are tight.
2. During assembly of your gun, make sure that the gun pencil filter is put in with the longer plastic tip faced upward.
3. When removing the transit tip guard from your gun ready to install your Speedy base and tip, ensure that the small white nozzle packing is installed between the tip diffuser and the Speedy base adapter. Ensure the adapter is wrench tight on the tip diffuser thread.
4. Use the supplied spanner to tighten your high-pressure pipe to the pump and to the base of the gun.
5. Prior to spraying with paint in your machine, circulate and spray the thinners of the paint you will be using. Should any mistake have been made during assembly, this will become apparent at this stage. This procedure will also clean out any thin film of chemical water used during testing by the manufacturer.
6. Familiarise yourself with the functions. If you are using a BAC175 ensure you are in the correct spray mode (High ratio or Low ratio). You will be able to hear the machine pumping faster or slower. Set the digital pressure gauge to your preferred measuring standard – BAR or psi. The use of the Control is described on page 6 of your pump manual.
7. When not using your system to spray, ensure that the gun **safety catch** is in its **locked position.**

Spray Procedure

It is advisable to mix your paint thoroughly prior to spraying. Paint may be thinned as directed by the paint manufacturer. When using thick emulsion paints, try to get the consistency to the point where the paint drizzles off the mixing stick and sinks into the paint without forming an 'ice cream cone' effect. A 15 litre or 25-litre scuttle is a useful container for your paint. These are easy to fit beneath the metal suction hose and sit neatly between the feet of the cart. When the paint level becomes low in your container it can be safely tipped using any form of wedge to increase the level of paint flow over the suction filter.

Set the machine to re-circulate paint, and prime your pump. Let paint flow through the system for long enough to ensure there are no air bubbles left in the system. Once your machine is primed, switch to spray mode. You will see your hose wriggle as paint is forced to the gun. Once the hose is fully pressurised, your pump will close down until it needs to re-pressure the system.

Set the desired spraying pressure at your Control, and if using paints such as emulsion, select high ratio (BAC175). At this stage your machine is ready to spray paint, but may need some adjustment of pressure to ensure the desired flow for the paint you are using.

Unlock the safety catch on your gun and you can start spraying. As you pull the trigger you will find that the paint is sprayed instantly. Get your hand in motion prior to squeezing the trigger and you will not have an overloaded patch at the start of your pass. At the end of your pass, release the trigger. Each time you make a pass, remember, Hand in motion, pull trigger, make your pass, release trigger.

Now look at the pattern of the spray fan. If you have heavy lines and light lines of coverage within the fan, known as fingering, you have insufficient pressure. Increase the pressure and do another pass. It is possible that you may have even coverage in the centre of the fan, with lines at either top or bottom of the fan, known as top and tail. Many sprayers are not bothered by this as on each pass you should re-cover 50% of this area with your next pass.

Spray Procedure.. Continued

You may however wish to increase the pressure until such time that you have even coverage across the whole of the fan. Beware you do not want to overload your surface. Once you have achieved this even coverage across the fan, you are spraying at the optimum high pressure.

Maximum paint transfer is achieved by holding the gun at the correct distance from the surface to be sprayed. This can vary depending on the type of paint you are using and the pressure at which you are spraying. Around 12” is a good starting point for most applications. Try to keep your hand steady and at the same distance from the surface during your spray pass. If you stand in one place, you will spray in an arc motion, delivering more paint in the centre of the arc than at the outsides. The secret is to gently move with your gun, working at a speed that you find comfortable. If you find there is too much delivery of paint for you to keep up with, reduce the pressure (even if this produces some top and tail). You may also choose to change to a tip with the same fan angle, but with a smaller orifice, which will give you better control.

You will find that after some 10 minutes spraying with your machine, your confidence will grow and your application will become fluent. It is recommended that your first use of your machine be in a situation where you can spend some time becoming accustomed to the delivery of the machine **whether you are an experienced sprayer or completely new** to powered paint application.

Whenever you take a break spraying, lock the safety catch on your gun. If you are going to resume spraying within a short time, there is no need to shut down or clean your machine. Ensure that the suction filter is still covered with fluid paint as this can dry out and prevent suction. Your machine will continue spraying at the same pressure when you resume your work.

Your Speedy tip is reversible to allow blockages to be cleared whilst working. Should you experience ‘spit’, loosen the speedy base, reverse the tip, re-tighten and dispense the offending material into a bucket. Once the blockage is cleared, re-set your tip to spray position and continue spraying.

Cleaning your Machine

When you have finished your job or you take a long break, it is necessary to clean your machine. The cleaning procedure is undoubtedly the most important task for you to ensure the continued reliable use of your machine. Passing the thinners of the paint used through the machine, pipes and gun effects cleaning.

It is important that once the wet end of the machine and all pipes are running clear thinners that you remove and clean the filters. This will increase their working life. You may remove and take apart your speedy base to clean these parts. From time to time, the dismantled Speedy Base and tip, all filters and holders may be left for around 10 minutes to clean in Cellulose Thinners. This will loosen any build up of paint allowing thorough cleaning. When using Cellulose Thinners, ensure you use a metal container, and that you are in a well ventilated environment. Dispose of any used Cellulose thinners in a responsible manner.

When replacing cleaned filters, springs and Tip assembly, ensure that all parts are fitted in the prescribed manner. Your machine will not function if filters or parts are fitted incorrectly.

Changing Paint Type

When you wish to go from using emulsion or water based paint to a solvent based product:

- Clean the machine thoroughly
- Pass Gun Wash through the whole system (prime and pass through paint hose and gun)
- Pass the thinner of the new solvent based product (e.g. White Spirit) through the whole system
- Prime and paint with the new product.

The reverse procedure applies when going from solvent based to water based products. Failure to follow this procedure can produce an unwanted chemical reaction needing return to your retailer for service that is **not covered under your warranty**.