



**This note describes the basic settings for typical air assisted airless spray equipment used to apply exterior and interior water based joinery coatings. It also gives some basic guidance on spray tip selection and on the daily maintenance and cleaning of equipment.**  
**In practice, a wide variety of equipment is used in the market and specific advice is available from manufacturers or from your local Teknos representative.**

**BASIC PUMP SETTINGS**

There are two air pressure adjustments required: fluid delivery, which controls the flow and atomisation of paint through the gun; and the air cap pressure, which adjusts and softens the fan pattern.  
It is important to correctly set the fluid delivery pressure: too low a setting and the paint will not atomise sufficiently; too high can cause “orange peel”, runs, and excessive wastage. Most spray tips are optimised for an air cap pressure of 30 psi.

Although a variety of tip sizes and fan angles are available for specific uses, most spray shops standardise on an 11 thou tip 40° fan angle. These give the best balance of productivity and waste minimisation.

**POINTS TO NOTE**

- Some pressure gauges are calibrated in bar rather than psi. The conversion factor is 1 bar = 15 psi
- Tip wear is the most frequent reason for a deterioration in finish quality. As tip condition degrades, the fan width will narrow and paint delivery increase, causing “orange peel”, runs, and increased wastage. (See image 1)

	30:1 ratio pump		45:1 ratio pump		Spray tip	
	Fluid delivery pressure (psi)	Air cap pressure (psi)	Fluid delivery pressure (psi)	Air cap pressure (psi)	Nozzle	Fan width
Exterior products: primers, midcoats and topcoats	50	30	35	30	11 thou	40°
Interior products: sealers, primers and topcoats	33	30	25	30	09/11 thou	40°

# TROUBLESHOOTING

## BLOCKED TIP

If the face of the spray tip is kept clean, blockages will be kept to a minimum. A fine stiff brush (brass) should be used. On no account use a wire brush, as this will damage the tip.

Other reasons for tip blockages are an imbalance between gun filter mesh and tip size - see 'Spray and pump equipment parameters' technical sheet.

If paint accumulates quickly on the face of the tips, it is normally due to an incorrect fluid pressure setting, tip size or poor/interrupted airflow through the aircap.

The procedure for clearing tips blocked with dry paint is as follows:

- Soak tips overnight in a suitable cleaning solvent, or TEKNOCLEAN 1950
- Using a fine stiff (brass) brush, remove the dried paint from the tip. If this does not correct, increase material delivery pump pressure and see if this clears the blockage.
- If tip continues to stay blocked during periods of spraying, change over to a clean tip and soak the blocked tip in solvent, or TEKNOCLEAN 1950
- Wash tips in clean water and remove paint from the recess in the back of the tips with a cocktail stick and a paint brush. If necessary, re-soak the tips.
- For Wagner tips, clean the tip thoroughly using a reversible tip cleaning attachment and a (brass) tip cleaning brush.
- Spraying water through the tip helps the cleaning process
- For other makes of tips use tip cleaning needles or a tip cleaning broach. However, when using this method extreme care must be used as the tip can be easily damaged. Therefore, the needle or broach must only be used from the back of the tip to avoid damage to the fan pattern.
- Tip cleaning needles and reversible tip

cleaning attachments are available from spray equipment suppliers.

## TAILS

If your spray pattern has hard edges (often referred to as tails or tram lines) the procedure for resolving this is as follows:

- Check the pump pressure is correct for the product being used
- If the pump pressure is correct, try gradually increasing the air assist pressure (always within recommended range)
- If neither of these help, then check the tip quality (wear and tear)
- Check airways on aircap and gun are operating correctly.

NB: A drop in atomized paint quality can also be an indicator that the pump performance may have dropped, due to wear and tear. Please contact your Teknos coatings expert for more details on methods on monitoring tip wear.



Regular quality control checks of tips for optimum performance. Every 2-3 weeks, check the tip quality for wear and tear, against the spray template from a new tip.

**Always refer to the Technical Datasheet for full instructions on how to use Teknos products.**

For further support, contact your local Teknos coating expert or visit [teknos.co.uk](https://www.teknos.co.uk)