

Waterborne Drying Blowers and Towers and Fans

Oh my!

'Lions and Tigers and Bears – oh my!' were the words that Dorothy used in the Wizard of Oz

when she found herself in a scary new environment and was conjuring up the insecurities and unknowns that terrified her! You are probably wondering, 'What the heck does our transition to water base materials have to do with the Wizard of Oz?'



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As you do your best to prepare for compliance and learn what things you will need to do to continue your success in the 'scary new environment' that approaches us, you are likely suffering from information overload and find yourself mumbling, 'Blowers or Towers or Fans – oh my!'

The purpose of this column is to explain some of the differences between these new and suggested means of accelerating the drying process and the unique properties water base materials bring. Unlike Dorothy, YOUR concerns are NOT a dream and you will not wake up and find that that it's all in your imagination. Hopefully you can draw some help in making your decisions from what is to follow.

After attending a lot of paint clinics I was alarmed to find that many shop personnel thought that they would be legislated into adding some sort of accelerated drying process to their existing booth. **THIS IS NOT THE CASE.** The pending legislation *will only deal with the materials you are spraying!* Your local jobber or paint supplier will suggest the accessories required. However, what you need to add and what you have to have are two completely different situations. A new car with NO options will get you where you want to go, but if you are driving long distances, comfort becomes a factor and perhaps options (option being the operative word) will be requested or added.

You are in the same situation. Like choosing a new vehicle, a number of things must be considered prior to making your decision. The reason you are considering these things is, unlike solvent-based materials, water base does not dry as uniformly just by adding heat (your typical 'paint and cure' spray booth). Problem areas in water base paint jobs are contoured or covered areas that do not have the hot air passing directly over them (i.e. under mirrors, deep vehicle body contours, bottom sides of spoilers, etc.). This is similar to drying your hands under a blower in a public washroom. You wash your hands and then hold them palms-up, under the blower. *If you do not turn your hands over and expose the back of them to the hot blowing air, they will not dry!* This is exactly what 'Blowers and Towers and Fans' do! They increase the airflow over the wet surfaces and therefore accelerate the drying process. The normal 'cure' cycle that your booth presently has will likely dry most of your flat surfaces, however the above-mentioned 'hidden' areas may not be ready to be cleared, still wet!

The first observation you should make prior to deciding what you need to do is your 'rate of production.' Are you a high production shop doing a number of vehicles every day? Are you a medium

production shop? Or are you simply a shop that does maybe just a few cars each week?

When this waterborne adventure began I went out looking to sell our system to every shop in my territory. After attending a number of paint clinics and reconnecting with a lot of my old customers my attitude began to change, and I spent more time asking the end user what he was doing today, and where did he/she want to be tomorrow. If he/she was only interested in doing a few vehicles per week I had a hard time justifying the \$10K to \$20K it would cost to put in my system. Perhaps there was a more economical and viable alternative for this shop?

So, ask yourself, 'What am I doing today, and what do I want to be doing tomorrow?' If you want the ability to do more than a couple of vehicles today you will likely have to look into some sort of accessory. If you are happy with the rates you can achieve with standard booth flow and air dry times, perhaps you are fine and need no supplements.

Let's get to the 'Blowers and Towers and Fans!'

Blowers – Blowers are usually portable air blowers that typically mount on a stand or tree that is connected to your compressed air system and blow air in a specific area of the vehicle. These systems are available in single or multiple head designs (e.g. ITW DeVilbiss Blue System Air Dryer, Sata dry jet) or even fixed header systems with multiple heads that are mounted around the inside of the booth. They accomplish exactly what we want – the ability to aim accelerated airflow (like the hand blower previously mentioned) at the trouble spots (under mirrors, contours, spoilers etc.). Depending on the number you want, the big advantage of compressed air blower systems is that they are, by far, in the short-term, the most economical step.

Although these systems require the least amount of start-up capital there are other considerations you should look at. The air they use is from your compressor. Is this source clean and contaminant-free? You do not want to bypass your filtration system and introduce potential contamination into your booth! And the biggest area that we have seen overlooked is compressed air system capacity. These blowers run fully open and can tax a compressed air system that is presently running in your shop. Many of our customers have had to add compressors or upgrade their compressed air systems to accommodate blowers (especially multiple head systems).

If your shop is not trying to push out multiple vehicles per day this is a great way to get familiar with the 'acceleration drying' properties of the new water base materials. However, ensure your compressed air system is well filtered and your compressor(s) will support it!

Towers – Towers are usually hard-fixed onto the walls or corners

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of your booth and have multiple 'amiable' nozzles that can be directed to the problem areas on the vehicle. These systems usually draw off the air that is already blowing into the booth from the air make-up system. Some systems DO connect to your compressed air system and the above mentioned concerns would have to be taken into consideration, however, the two

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most popular systems (GFS Advance Cure, and Junair QADS) use the air replacement system as their source and you do not have to worry about potential contamination from dirty compressed air or taxing your

existing compressed air system. Once they are installed they are ready to go and will hit your wet surfaces with 250 FPM air in an aimable and controlled manner.

These systems cost the most initially, however, they seem to be the choice of the medium and high production shops. The multiple nozzles allow great flexibility depending on the size of job you are doing, and will always be able to ensure those 'hard to get at spots' are covered. This type of system has survived the test of time after first being introduced by DeVilbiss in the early 1990's.

Like any system moving air, they have a filter system and it must be changed accordingly. These systems will also infringe upon booth space and your supplier should be able to ensure they will fit in a code-compliant manner.

Also, ALWAYS remember: ANYTHING that goes inside a spray booth must be explosion proof. Both GFS and Junair have looked after this, but there are also a lot of locally made products or portable designs available across the country. We would encourage you to check out their legality with the supplier!


Fans – Another system that has become quite popular over the last couple of years is comprised of ceiling mounted fans that accelerate the downdraft airflow to speed up the cure process of the wet surfaces. These fans basically do the same thing the blower does, using the air that is already coming into the booth. The fans also pick up the air after it has passed through your ceiling filters so it is the same quality air that you are using today. It does NOT use your compressed air system, so that concern does not exist should you be considering this type of system. The cost of the fans falls between that of the blowers and the towers, so it is another price point that can be evaluated based upon your budget. The most popular system is the GARMAT Accele-Cure, and it can be found right across the country!

The accelerated airflow gives your booth the same capability as much more expensive high-flow spray booths (16,000 to 20,000 cfm) and directs the air at the vehicle. The major drawback this system has is there is no 'detailed' aiming capability. It accelerates the air throughout an entire area. Exact aiming under a spoiler or mirror is not something that can be accomplished, as the acceleration source is above the vehicle.

Conclusions – all of the above are very viable drying systems for the new water base materials (and solvent base for that matter). However, think about what you are looking for and where you want to end up.

Perhaps the best advice we can give you is to consider the source! With the pending legislation coming down, our enthusiasm to meet the deadlines sometimes clouds our thinking. All of the manufacturers listed above have been in the auto refinish industry for years and have done the proper engineering and studying to develop their products. A cottage industry has sprung up and a lot of systems have become available that do not have the same thought behind them. ALWAYS remember the interior of a paint booth is an explosion proof area and you cannot put just anything inside. Ask for listings (ETLc, ULc, CSA etc) and always consider service down the line! That's just good business.

We hope this trip was not as lengthy as Dorothy's was, down the Yellow Brick Road, however we do hope it was worthwhile and gave you some food for thought with regard to the features of each of these accelerated 'curing systems' for the oncoming waterborne wave.

Good Finishing! 

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