



expel[®]

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Stephen Harrison, Production Manager, Crime Rigg



original AVC

EXPEL for the Aggregate Industry

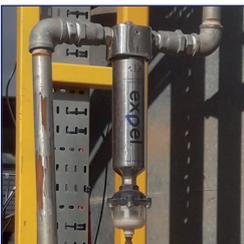
Compressed air is the lifeblood of many aggregate processes – for example, it controls valves and actuators in asphalt plants or pneumatic vibrators on the side of silos in concrete and mortar plants. For quarries, asphalt and concrete plants, water in compressed air lines usually leads to equipment failure, production downtime and increased maintenance.

Here at **Original AVG** we have developed a solution to all of these problems with the **EXPEL** filter. This easy-to-fit unit continuously removes **ALL liquids from compressed air systems, as well as solids down to 1 micron**. The result is **NO MORE** equipment failure or downtime because of water.

EXPEL represents a unique approach to compressed air filtration. It is the only compressed air filter that can separate liquids and solid contaminants from a compressed air line with zero maintenance. **No replacement filter elements** are required – **just fit and forget** and look forward to having a clean, liquid-free air supply for all your pneumatic equipment.

Try Expel

- We are offering a **FREE demonstration** of the Expel compressed air filter so you can learn about how Expel works
- **FREE Trial Unit:** We are so confident that you will be pleased with the performance of our Expel filter that we offer a no strings attached trial period. If you're not 100% satisfied with Expel you are under no obligation to buy and can simply return your Expel unit back to us at Original AVG
- **FREE on-site survey,** one of our Sales Representatives will come to your site free of charge to show you where the most effective places to install Expel on your site/s.



"We install Expel before every valve and solenoid, in the past we put them just after the compressor but now we know where to put them and how to get the best efficiency out of them. We didn't know anything about Expel and usually we don't buy new products to try, but we decided to trial Expel because you gave us one and knew if it wasn't effective, we could just send it back... But Expel has made our system a damn lot better."

Stephen Jones - Workshop Manager of North East Breedon sites



"Expels were put into protect a bitumen selector valve and air controlled dust valve that suffered from water damage. We now have no issues and are extremely happy with the Expel."

Jason Fairbrother – Asphalt Plant manager – Tarmac – Mountsorrel Asphalt Plant



"We had problems with dampness getting into the solenoids, so it was causing them to stick which causes problems with bin doors opening so it would cause loss of production. We looked at a dryer but the Expel was much more competitive and you didn't have the running costs of electricity and servicing costs, so it was much more efficient. We found expel very efficient, we are very pleased with it we would recommend it"

Stephen Harrison – Production Manager – Breedon – Crime Rigg Concrete Plant

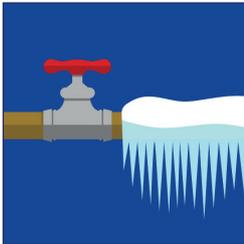
Problem



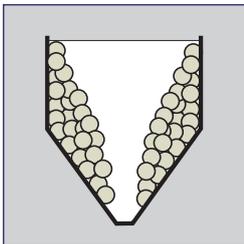
Solenoid valves failing; if the solenoid valve on the bin door fails, the door will stick which can affect your weighing systems accuracy.



Damaged Namur valves will not trigger the actuators, causing butterfly valves to fail.



Issues with water freezing in compressed air lines (from a burner, for instance) in winter will inevitably cause damage to the internal parts of the machinery. This can result in faulty operation of controls and costly repairs. The addition of antifreeze lube oil only makes the corrosion worse.



Pneumatic vibrators (e.g. MVE vibrators) on the side of silos getting clogged due to moist air. This can be extremely damaging to the storage silos causing bridging and ratholing and even the caving of a silo container.



Oil carry over from air compressors can combine with dust and dirt in compressed air lines to create a grinding mix that erodes seals on pneumatic valves and cylinders/piston.



Water in your compressed air leads to pitting and rusting on cylinders. These need replacing... which is costly.



Pneumatic tools such as air-driven pin drivers and cleaning devices for cleaning sawed joints can corrode and rust quicker due to contaminated air.

Solution

Expel removes all liquids, water and particulates to 1 micron which protects solenoid from liquid water and build-up of solid contaminants.

Expel removes liquids and particulate contaminants in one filter, therefore replacing up to three traditional filters with one unit ensuring the butterfly valves are protected.

As Expel removes all liquid water, it continuously ensures there will not be enough water in the air lines to freeze and cause damage. Additionally, Expel has been manufactured from Stainless Steel making the filter itself highly robust and corrosion resistant.

Expel protects this from happening as the liquid water is removed prior to the air coming into contact with the vibrators and ensuring silos don't get clogged. This eliminates a huge cost of having to replace silos.

Expel removes 99.9999% of liquid water, oil mix and particles to 1 micron. Installing Expel reduces both your wastage and costs whilst protecting your equipment to a superior standard.

Expel protects pistons and cylinders by continuously removing any water. As well as protecting your equipment, Expel can help contribute to a company's reputation of producing minimal wastage where possible and save you money.

Expel will protect pneumatic tools from liquid water increasing life-cycle of tools and equipment. Reduce unnecessary costs and downtime.

Breedon Case Study: The Crime Rigg Quarry

What Breedon sites have already trialled/installed Expel, and what do the workforce think about it.

EXPTEL SAVES BREEDON THOUSANDS OF POUNDS WORTH OF EQUIPMENT AT FIRST SITE!

At the Crime Rigg Quarry site in Durham, Breedon produce aggregate products such as crushed rock, and a wide range of ready-mixed concrete products including sustainable, foamed and industrial concrete.

Workshop Manager for the North East, Stephen Jones was becoming increasingly concerned about the volume of water that was present in the compressed air lines and knew he needed to take action because the problems were becoming costly. Pneumatic vibrators on the side of silos getting clogged by moist air was one of the problems being seen which can be extremely damaging to the storage silos causing bridging, ratholing and even the caving of the entire silo. Another pressing problem for a number of Mr Jones's sites was the frequent disruption and failure of solenoid valves on bin doors affecting the weighing systems accuracy. Prior to trialling the Expel filter, Mr Jones had considered purchasing a refrigerant air dryer for the Crime Rigg site to try and control the water in his compressed air lines. However, as Expel offered a considerably lower-cost and huge energy saving alternative solution to the problem, Mr Jones took the educated decision to trial Expel and was very pleased with the result. Jones installed Expel with immediate effect at the Crime Rigg Quarry site and took the liberty of proclaiming the remarkable results to Production Managers Paul Cattermole and Stephen Harrison of the north-east and explained just how effective Expel is.

Production Manager Stephen Harrison echoed a similar opinion to Mr Jones stating that Expel is "very efficient" and liked that Expel is "much more energy and cost efficient than a refrigerant dryer". This waste-free aspect of the filter therefore prevents unnecessary energy wastage and no additional costs of replacing internal filter elements, making Expel much more **sustainable** and **economical** than other solutions. Additionally, Mr Harrison highlighted the fact that more savings were to be made because Expel eliminated the need for expensive callouts when equipment fails because of compressed air contaminants. Overall, the Production Manager summarised declaring that he would: **"highly recommend Expel because it solves the problem that water has been causing in our compressed air lines"**.

Since the installation of Expel at the Crime Rigg site, Mr Harrison and Mr Jones have re-evaluated the need for refrigerated driers. Harrison and Jones have concluded that the refrigerant dryers are an unnecessary expenditure, **saving the site thousands of pounds**. Being an energy conscious company, it is always beneficial for companies to cut out energy draining machinery where possible. Jones concluded that overall the team are **"really pleased with Expel and are looking at getting more Expel units installed across more of our sites"**.



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Stephen Jones, Workshop Manager for North East Breedon sites.

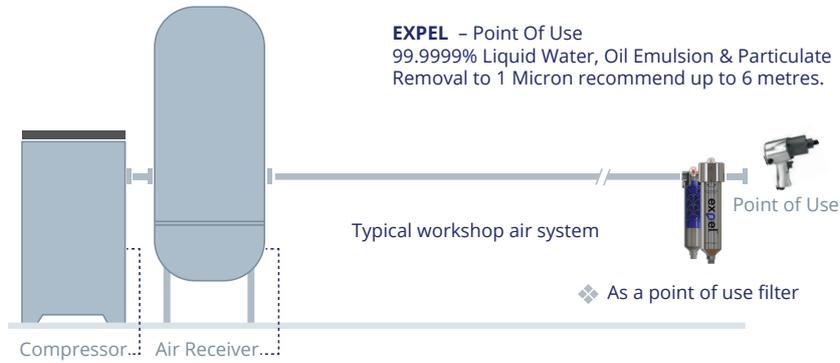
Why buy Expel? IT REALLY WORKS!

Features	Advantages	Benefits
Reduces equipment downtime	Improves the efficiency of your site, keeping costs low and production time high.	No more equipment downtime due to failed solenoid valves, pneumatic vibrators on silos getting clogged, pistons needing repair/replacement, frozen water in air line, mis-batched mixes and bin doors sticking.
No dryer required	Saves initial purchasing/installation costs. Saves on-going energy costs. Saves in servicing costs including part replacement costs, running costs and general maintenance of dryer.	This can save your site thousands! Expel works as a more effective system than a dryer as it cleans the air just before the point of use. Expel requires no running costs.
Reduces energy costs	Expel has a smaller pressure drop than traditional filters. When mesh filters collect dirt and water it creates resistance. This increases energy usage to maintain the same flow rate after the point of use, with multiple mesh filters in line causing greater energy usage costs.	Expel always maintains a low-pressure bar drop, meaning you have consistently minimal energy costs.
No more emergency call outs for breakdowns due to water in compressed air lines	Effective placement of Expel reduces call outs, downtime and costs.	Saves your site money as your production time will be higher and your maintenance costs lower.
The performance of Expel does not drop over time	Consistent performance, requiring no maintenance	Ensures smooth running of your site, eliminating problems associated with water and dirt entering compressed air lines and damaging equipment i.e. solenoid valves failing causing bin doors to stick.
No replacement filter elements are required	An instant way to stop spending money on internal parts of filters and is a good step towards your sustainability goals.	Zero maintenance and always a perfect performance. No more hassle and time spent changing internal elements on filters.
Manufactured to ISO 12500 Air Quality	Latest ISO standard specifically for compressed air filtration.	Meets stringent testing standards for the quality and performance of compressed air filters, so you have peace of mind that you have a quality product.

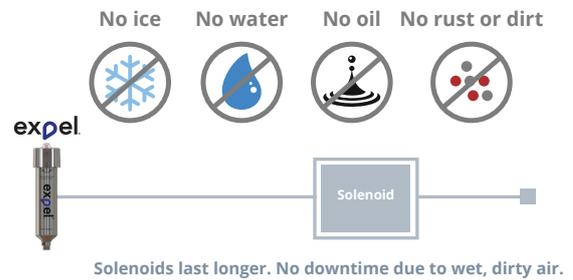
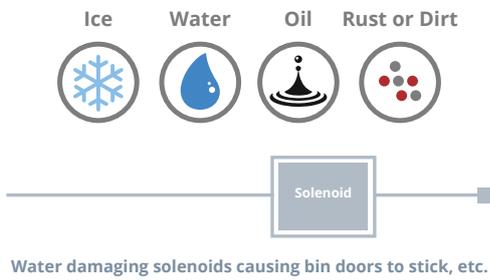
Installation guidelines

Install Expel in the following locations

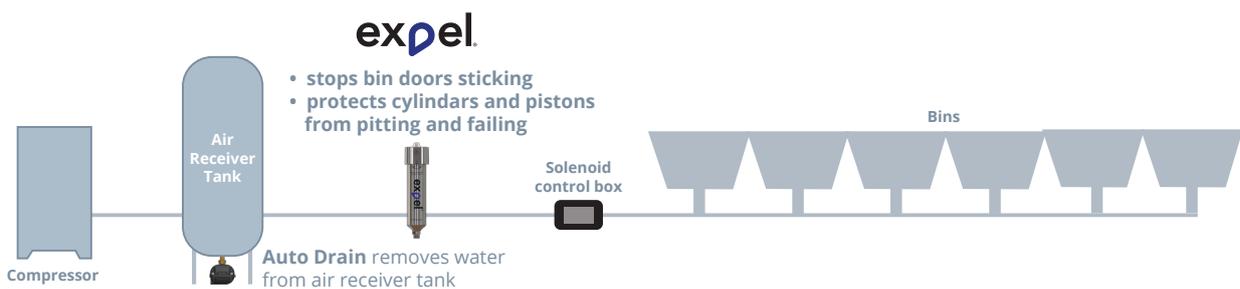
- Before the solenoid control box
- Before bin doors
- Before airlines entering silos
- Before airlines enter pneumatic tools and cleaning devices.



Install Before Any Solenoid Box



Screen House Example

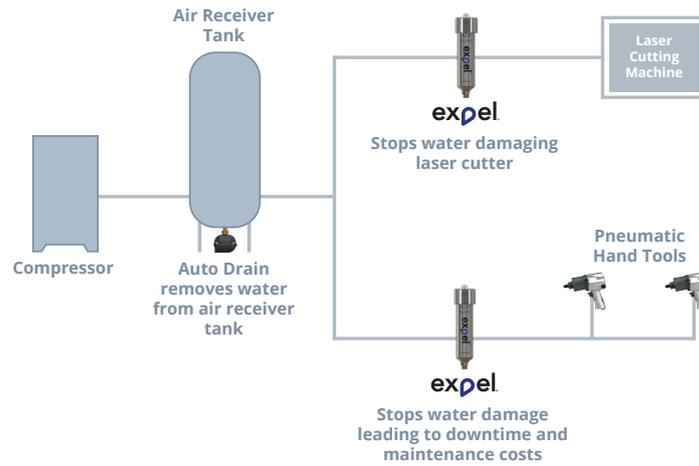


Installation guidelines

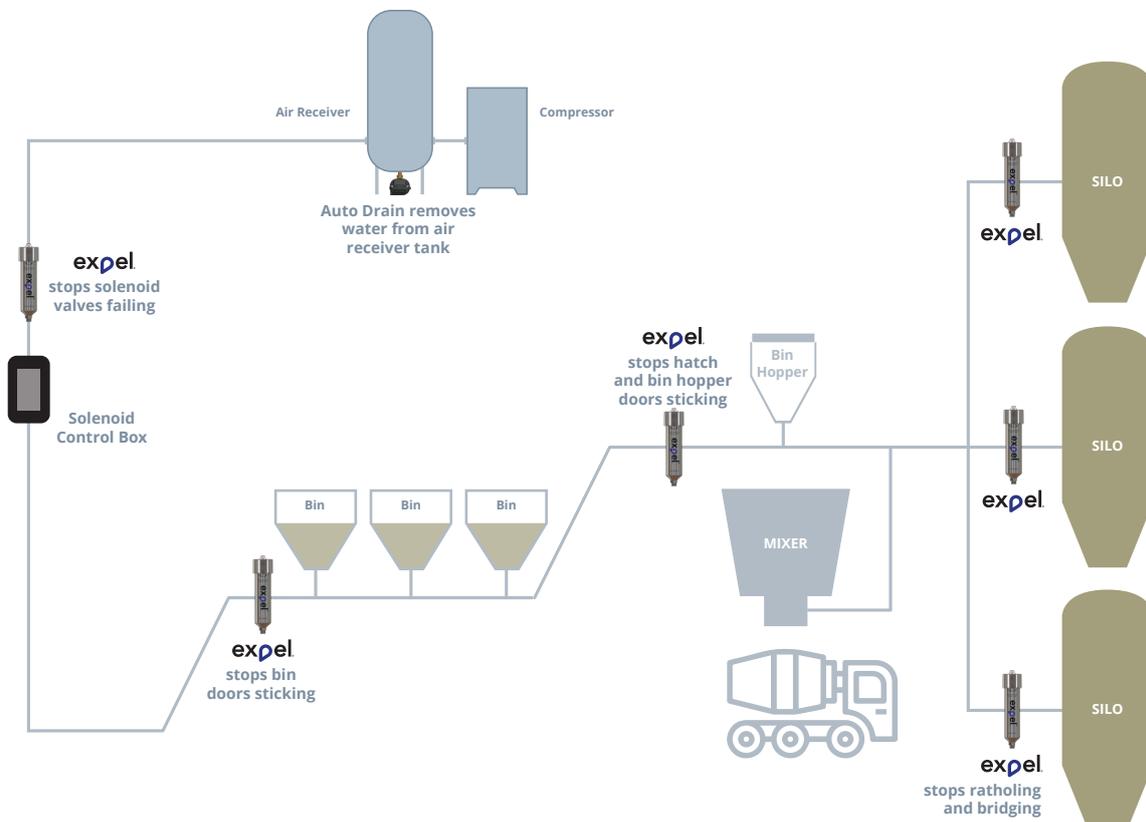
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- Before the solenoid control box
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- Before airlines entering silos
- Before airlines enter pneumatic tools and cleaning devices.

Workshop Example

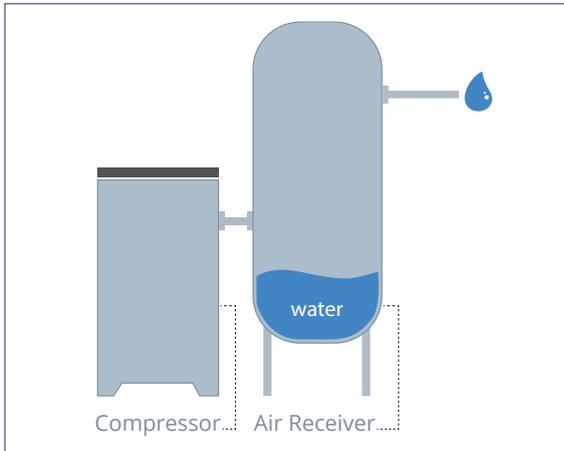


Concrete Plant Example



Why install one of our Original AVG drains on your air receiver tank?

Draining water manually from the air receiver tank has a number of issues

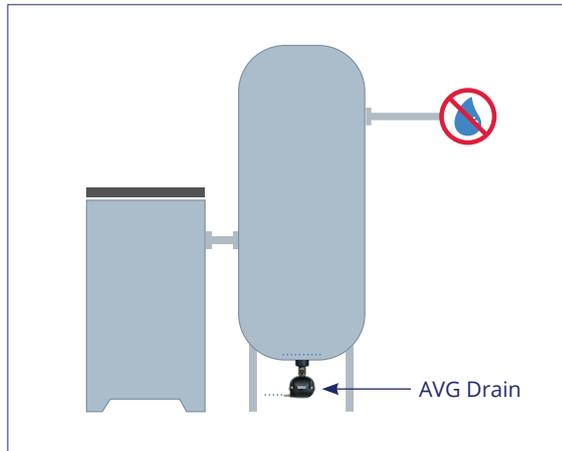


ISSUES

Pressure loss if air escapes during manual draining

Human error leads to build up of water that ends up going through airlines and damaging valves and equipment

Takes up more time and is an additional job to have to remember



SOLUTIONS

Auto drain has zero pressure loss so no air lost during draining

The auto drain will continuously automatically drain any water build up

Installing an auto drain will give you one less job to worry about, you will not have to remember to drain the tank manually, it will be done for you.



Drains for Aggregate Industry

For every Expel filter we sell, we recommend a selection of our professional AVG drains specifically for your industry.



AVG AD Zero pressure loss 1 *part number 5000-200*

- Zero pressure loss
- All-weather resistant, this drain will not crack or break in frost/cold/hot climates.
- No electricity required
- Fit and forget
- Corrosion resistant
- Recommended if Expel is near a wall



AVG AD Zero pressure loss 2 *part number 6100-032*

- Ideal for air receiver tanks with limited space underneath for drain
- All-weather resistant, this drain will not crack or break in frost/cold/hot climates.
- A heater can be attached to this drain for particularly cold climates to make it frost proof.
- Zero pressure loss
- No electricity required
- Fit and forget
- Corrosion resistant



AVG AD Pro *part number 6100-033*

- Ideal for environments that have very dirty airlines, drain everything including larger particulates
- All-weather resistant, this drain will not crack or break in frost/cold/hot climates.
- A heater can be attached to this drain for particularly cold climates to make it frost proof.
- Test button for routine maintenance.
- Corrosion resistant.
- Ideal for air receiver tanks with limited space underneath for drain
- No electricity required.

Part numbers



Part number	Name
6000-003	Expel 30
6100-034	AVG Heater 230VAC
6100-035	AVG Heater 24VDC

Frequently Asked Questions

If I am not having problems with water in my compressed air lines, do I still need Expel?

Yes! Everyone will be switching to this new technology; it is just a case of when you will upgrade. It replaces old filters which need maintaining and it can replace dryers in a lot of circumstance (speak to our sales team).

Traditional filter performance drops over time but Expel never becomes saturated and there is never a decrease in performance because it does not contain any easily perishable or saturable materials.

Can I trial an Expel unit without committing to buying?

Yes! We are so confident that you will be pleased with the performance of our Expel filter that we offer a no strings attached trial period.

If you're not 100% satisfied with Expel you are under no obligation to buy and can simply return your Expel unit back to us at Original.

How do I know that Expel actually works?

We have manufactured Expel to ISO 12500 - the latest ISO standard for compressed air filtration. Therefore, you can be rest assured that Expel's performance has been extensively tested to ensure it meets an internationally recognised standard.

We have gathered feedback from our existing customers from your industry, so that you can have their honest opinions about the effectiveness and quality of Expel.

Additionally, we are offering our customers a trial period free of charge so you can see that it really does work!

5 years manufacturers guarantee.

Do I still need a refrigerant dryer if I install Expel?

No! Expel has saved some of our customers thousands of pounds worth of expensive equipment running and servicing costs.

Most of our customers have found our Expel unit is so effective that the need for a refrigerant dryer has been eliminated across their sites. Contact our sales team and they will talk you through your set up and find out whether Expel can do the same for you!

Do I need to buy anything to go with my Expel unit?

No! Our Expel unit comes with everything you need to install. We do recommend that you purchase one of our professional **AVG drains** with every Expel purchased, we have created an industry specific drain page.

World's first cleanable and reusable compressed air filter

Removes 99.9999% liquid condensate, liquid oil (or oil / water emulsion mix) and solid particles down to 1 micron



IMPROVED
PERFORMANCE



NO
DOWNTIME



MONEY
SAVING



EFFECTIVE
SOLUTION

EXPEL stops downtime and equipment failure that is caused by air contamination.

Replaces your four conventional filters, removing bulk water, mist water, oil down to 1 micron particulates. All in one filter.

REQUIRES NO REPLACEMENT FILTER ELEMENTS • NO MAINTENANCE COST • REQUIRES NO MAINS POWER

In every industry using compressed air, there is a desperate need for clean and dry air. Simply because wet and contaminated compressed air damages crucial pneumatic components, not only causing valuable downtime, but huge expenses that could have been avoided, with a simple yet effective solution... a solution we call EXPEL.

DO YOU HAVE PROBLEMS WITH WATER, EMULSION FLUIDS
(OIL MIX) AND PARTICLES IN YOUR COMPRESSED AIR SYSTEM?



FIT AND FORGET. NO REDUCTION IN PERFORMANCE OVER TIME

TRY IT AS WE GUARANTEE IT!

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