

JetStream™ FAQs

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- How many drop coils will run from a single JetStream™ power unit?
The JetStream™ system can be expanded to incorporate up to 50 guns with drop coils. However, no more than 3 guns can be in operation at any one time.

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- What is the maximum length of delivery tubing that can be used?
The recommended maximum length of the delivery line is less than 70 metres allowing a large number of applicators to be connected to a JetStream™ power unit.

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- How many applicators can I use at the same time?
The recommended maximum number of applicators which can be used simultaneously to spray is 3 for JetStream™ and two for the Classic system. In other words, the JetStream™ system can accommodate three operators spraying at the same time and the Classic system, 2.

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- How far can I stretch the drop coil to reach the cows to be sprayed?
The drop coil is 60cm long before it is extended. It can be stretched up to a maximum length less than or equal to 1.5 metres. Stretching it to greater than 1.5m will cause it to lose memory and it will fail to retract properly. In addition, if the coil is regularly overstretched or pulled at an oblique angle then it can be pulled off at the T connector. Therefore, we recommend using one dropper to reach 2 cows on either side of the pit.

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- What is the AmbiSpanner™ used for?
The AmbiSpanner™ is a multipurpose tool that can be used to speed up installation and servicing of your teat spray system. Uses include: tightening and untightening of nuts and non-return valves, removal of the control valve on lever guns, and removal of solid cone gun nozzles. All complete systems and power units include an AmbiSpanner™ located in the JetStream™ power unit lid, but it can also be ordered as a spare part with product code AJS/2055.



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- Why should I use an intake filter?
Intake filters are used on the end of the chemical line and prevent dirt and debris from getting into the system and blocking the non-return valves in the diaphragm pump. Using an intake filter can increase the life of the pump as the majority of pump failures are linked to blocked non-return valves where debris has been drawn into the pump and non-return valves. Intake filters should be cleaned regularly and replaced if they get damaged. Replacement intake filters are available as a spare part(s), either complete with flexible tubing (ATS/412) or in a pack of 2 (ATS/419).



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- Can I use my JetStream™ with a dragline?
A JetStream™ system can be used with a dragline by fitting a gun swivel connector (part number ATS/461-1/4) in the back of the teat spray gun and running a 1/4" reinforced hose to the JetStream™ power unit. The dragline is then attached to the JetStream™ power unit using connector ATS/461-1/4F. Please note that you will need to cut the barb off the tee-piece to fit the female swivel.

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- Can I switch the JetStream™ power unit off during the milking machine wash routine?
The JetStream™ system is supplied with an in-line vacuum On/Off valve (AJS/2026) which should be fitted to the connection from the JetStream™ unit to the vacuum line. This can be used to switch the JetStream™ system off during the wash routine thus reducing wear and tear on the power unit; extending the life of the wearing parts such as the diaphragms. This is particularly useful where plant washers which have long wash routines are in use.

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- How often should I service my JetStream™?
We recommend that a minor service is made annually, with a major service every 5 years – kits are available:

Minor Service Kit – AJS/2024:



Major Service Kit – AJS/2025 or AJS/2025-V:



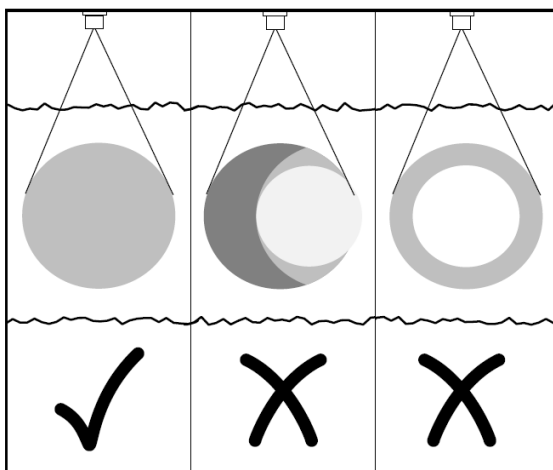
Other parts of the unit, such as the lances and the intake filter on the chemical line, should be cleaned regularly to ensure that they don't get blocked.

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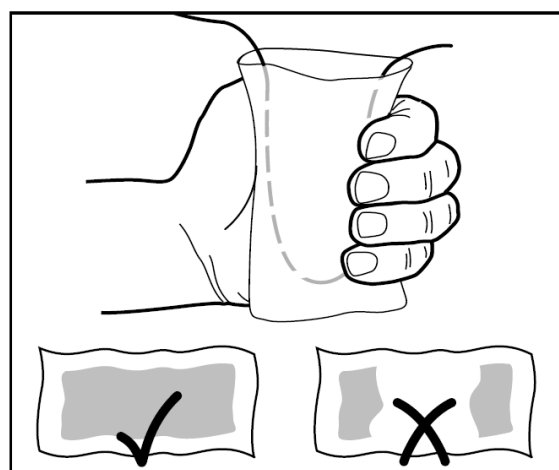
- What is the optimum spray pattern?

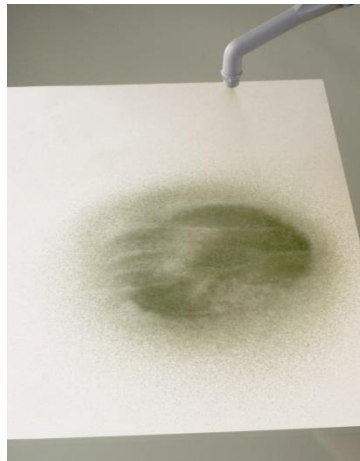
The entire teat surface should be covered to ensure effective teat disinfection. We recommend that teats are sprayed at an angle and that the gun is rotated in a 'circular' motion underneath the udder for complete coverage of the teat surfaces. With a solid cone nozzle we would expect to see an even and regular filled circle on a piece of paper, and complete teat coverage of a disposable towel when the teat is wiped – see below:

Check spray pattern



Check technique





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- What is the correct layout to adopt for my milking parlour?

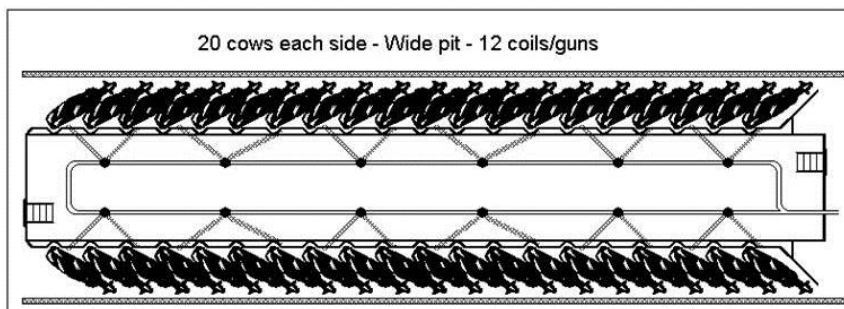
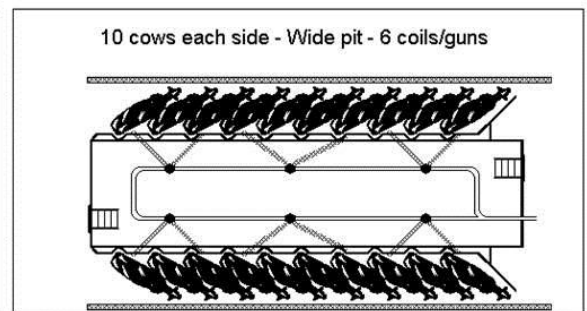
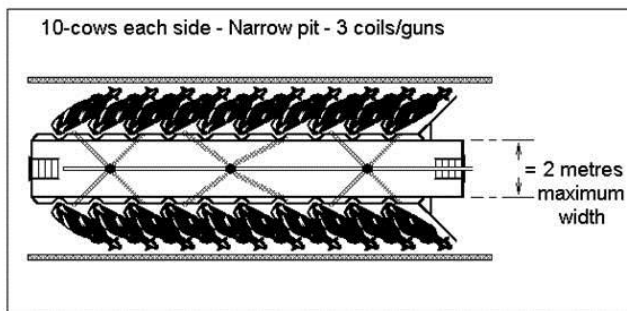
The droppers need to be positioned in the milking system to ensure ease of access to each milking point. This will vary from milking system to milking system depending on such variables as parlour width and the angle at which the cows are standing. As a general 'rule of thumb' the droppers should be positioned to reach 2 cows on each side of the pit; on average you will need one dropper for every four cow standings.

In instances where the pit is narrow it is possible to run the distribution line down the centre of the pit, but wider pits will require two distributions lines - one down each side of the pit – or a ring main. The amount of other equipment mounted in the pit will also have a bearing on where the droppers are positioned.

In instances where there are distribution lines on each side of the pit it is generally a good idea to link them to create a ring main as this reduces recovery times and improves performance.

The maximum reach of the drop coils is less than 1.5 metres.

The following are examples of parlour layouts for different types of milking parlour:



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Chemicals

- What chemicals can use with my JetStream™?

The Ambic JetStream™ is suitable for use with most chemicals, including Iodine and Chlorhexidine. For Lactic Acid and Chlorine Dioxide we would recommend using the Viton version which uses a different type of diaphragm that is more resistant to the effects of Lactic Acid. A conversion kit containing viton diaphragms is available (AJS/2023-V).



The JetStream™ and the Viton JetStream™ systems are not suitable for use with Sodium Hypochlorite or with Peracetic Acid.

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- Can I use my JetStream™ to spray teats with Peracetic Acid?

We do not recommend that the JetStream™ or any of our systems are used for teat spraying with Peracetic Acid due to the nature of the chemical and the likelihood of aerosol production caused by the spray pressure of the guns. Peracetic Acid can cause irritation to the eyes, the skin and the mucous membranes of the respiratory tract.

The JetStream™ and the Viton JetStream™ systems are definitely not suitable for use with Peracetic Acid as the chemical reacts with some of the seals and components. Our PeraSpray™ system, which has been designed specifically as a cluster spray system, uses special nozzles and contains special seals and components that are resistant to Peracetic Acid.

The guns used for teat spraying will need to be from either the JetStream™ or the Classic range and are likely to need to be replaced more frequently than when used with other chemicals. Please note that due to the nature of Peracetic Acid, we would still not advise use of this chemical for spraying teats.

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- I've changed to a different chemical - can I convert my system?

This really depends upon the chemicals being used.

A Viton version of the JetStream™ is available. If the new chemical contains Lactic acid or Chlorine Dioxide then we recommend using a Viton JetStream™. A conversion kit containing viton diaphragms is available (AJS/2023-V).



Where both chemicals are suitable for use with the JetStream™ the system should be flushed through with plenty of water, and the flushed chemical should be disposed of according to local regulations, before starting to use the new chemical.

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Troubleshooting

- **I've just installed a new JetStream™ and it isn't working – what should I do?**

We would recommend that you go through a number of checks to make sure that the unit has been installed correctly.

- 1) With the vacuum pump switched on, check that the vacuum link is airtight and vacuum is reaching the unit by pulling off the supply pipe (ATS/413) and testing with your finger.
- 2) Ensure that the chemical container has been filled and that the intake filter and tubing is fully seated in the liquid.
- 3) Make sure that the Directional Valve (ATS/425) is [clicking](#) properly and that it is clean. The red [Bleed Valve](#) may be blocked and require cleaning using the wire supplied with it.
- 4) Check the Diaphragm Pump (AJS/2004) to make sure that it is pumping. The [non-return valves](#) ATS/445 and ATS/446 can be removed for cleaning or replacement if required.

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- **My unit has stopped working – what should I do?**

We would recommend that you go through a number of checks to find the fault.

- 1) Ensure that the chemical container is filled and that the intake filter and tubing is fully seated in the liquid.
- 2) Check that the intake filter is not blocked or has not dropped off. It can be removed for cleaning, but replacements are available as spare parts, either as a pack of 2 (ATS/419) or complete with flexible tubing (ATS/412). If the system is taking up muck because no filter is in use then it is likely that this will block up the pump or the guns.



- 3) Check that the gun nozzle isn't blocked. Most of our nozzles can be disassembled for cleaning.
- 4) Make sure that you are using a suitable chemical. The JetStream™ and the Viton JetStream™ systems are not suitable for use with Sodium Hypochlorite or with Peracetic Acid. A Viton JetStream™ is required for Chlorine Dioxide or Lactic Acid. A conversion kit containing viton diaphragms is available (AJS/2023-V).



- 5) Make sure that the Directional Valve (ATS/425) is [clicking](#) properly and that it is clean. The red [Bleed Valve](#) may be blocked and require cleaning using the wire supplied with it.
- 6) With the vacuum pump switched on, check that the vacuum link is airtight and vacuum is reaching the unit by pulling off the supply pipe and testing with your finger.

- My unit doesn't click – why not?

The clicking sound is made by movement of a slide valve in the Directional Valve (ATS/425) at a rate of 30-33 beats per minute. Therefore, if the units stops clicking then there is likely to be a fault with the Directional Valve. We do provide a service kit (ATS/448) and a number of spare parts.

The fibre filter can get soiled reducing the effectiveness of the product, but this can be replaced with new filters (ATS/444) and we would advise doing this at least every 1000 hours.

The red bleed insert (ATS/447) contains some tiny restrictor holes (with o'rings) which can get blocked. The thin wire wrapped around the bleed insert can be used to poke through these holes and remove any ingrained dirt. Make sure that when you put the bleed insert back into the Directional Valve that the o'rings are still correctly seated, otherwise the unit will not seal properly and you will get vacuum leakage.

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- Why am I getting excessive vacuum consumption?

This can be caused by failure of the Directional Valve diaphragm. We would recommend that you first make sure that the bleed insert is correctly and fully inserted. Make sure that the 'o' rings on both sides of the bleed insert are not distorted, damaged or missing as this can cause vacuum leakage. The bleed insert can be replaced – product code ATS/447.



If this does not resolve the issue then remove and carefully inspect the diaphragm for signs of perishing or small punctures. Replacement diaphragm assemblies can be purchased separately (ATS/443) or as part of the Directional Valve Service Kit (ATS/448). When putting the diaphragm assembly back, or replacing it, make sure that you line up the holes properly so that you get vacuum.



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- Why are my non-return valves blocked?

Non-return valves contain a small glass ball which moves up and down with the flow of the chemical through the pump. If intake filters are not in use, or a chemical has dried inside the pump then it is possible for these to get blocked.



If there is a problem, then the non-return valves can be removed for checking and cleaning (using an AmbiSpanner™). We recommend warming the tubing before removing it from the nipple and before replacing it, so that no damage occurs. Simply rinse the non-return valves

through with fresh water and check that the ball is moving freely and that the 'o'rings (marked with black dots on the drawings above) are in place. Make sure that the correct valves are being used as the inlet and outlet valves are NOT interchangeable. The outlet valves must be sited on the side of the pump head with the arrow. Replacement valves are available with the product codes ATS/445 and ATS/446.

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- My lever gun is leaking – what can I do?

Lever guns can get blocked up, especially if an intake filter is not in use. When it is blocked it either stops working altogether, or leaks because the control valve is being held open. In order to unblock it we would recommend that you carefully remove the control valve at the back of the gun (using the AmbiSpanner™). Make sure not to lose the 'o' ring, the spring or the control valve. Wash through the gun with clean water and also clean the control valve itself, before fixing it back together using the AmbiSpanner™. The groove on the screw plug should line up with the length of the lance.

If any of the parts are missing or damaged then they can be replaced using a Trigger valve service kit – available in blue, green or yellow to match your lance (ATS/405, ATS/405-Y, ATS/405-G).



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- My chemical consumption is too high.

The level of chemical consumption is largely dependent upon the time taken to spray the cows' teats and the amount of attention to detail that is paid when spraying. Consumption will generally be higher than for dipping, but can be minimised by adopting a circular spraying motion to ensure all surfaces of the teat are covered. On average this should last only about 1 second and, depending on the chemical used, consumption should be in the region of 15ml per cow.

More information is available from the research conducted with Professor Paul Miller at Silsoe Research Institute.

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- My question has not been covered – how can I get more information?

For further technical information please contact Ambic either by email or by telephone:

tech@ambic.co.uk

Tel: +44 (0) 1993 776555

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