



The Industry's Most Versatile Calf Barn Ventilation System



By Ryan Leiterman, D.V.M.

FLAP DUCT is the industry's most versatile calf barn ventilation system, providing calf raisers an unmatched level of fresh air control. This technology builds on the innovation of FLIP DUCT, with internal membranes

that can be airtight, perforated, segmented and layered. This unique technology can be successfully implemented by any calf raiser regardless of calf barn style or farm size.

- FLAP DUCT's airtight membrane is an ideal solution for retrofitted stanchion barn calf housing, as it can direct and control the fresh air exiting the duct based on seasonal need.
- In naturally ventilated barns with curtain sidewalls, FLAP DUCT's perforated membrane allows for quick and easy changing between cold weather and warm weather ventilation systems.
- Many post-weaned calf barns have pens containing groups of different sized animals. As the size of the calves in each pen increases, the ventilation requirements for them increase as well. The versatility afforded by FLAP DUCT's segmented membranes allows those varying ventilation requirements to be met.

FLAP DUCT can be further customized with the addition of multiple layers of membrane. With FLAP DUCT, the ability to regulate air speed is virtually unlimited. Turn the page to learn more about the basic concepts and applications of FLAP DUCT and how Crystal Creek® can help address your calf barn ventilation needs.



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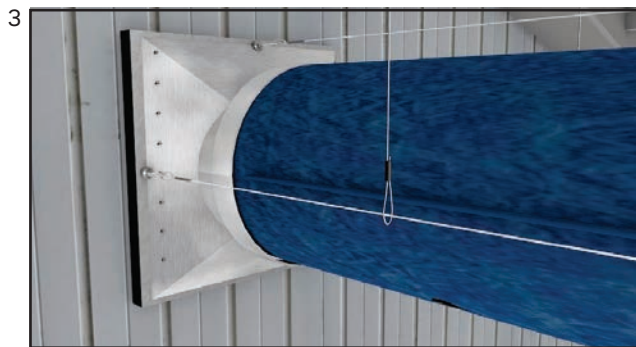
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FLAP DUCT the industry's most versatile calf barn ventilation system. Delivering an unmatched level of control.



Let's look at how easy it is to install FLAP DUCT, then see it in action.



Two horizontal cables span the length of the barn and attach to eye bolts at each end. FLAP DUCT's lightweight, inflatable material easily slips over the barn's ventilation fan shroud. A clamp secures it to the fan.



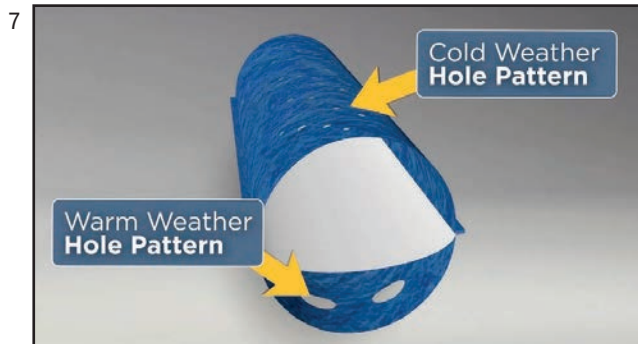
Metal snaps securely sewn into the sides and top of FLAP DUCT attach to the cables at 12, 3 and at 9 o'clock. Vertical cables suspended from the barn roof attach to the horizontal cables, preventing sag. FLAP DUCT can be designed to perform at any height or location in a barn.



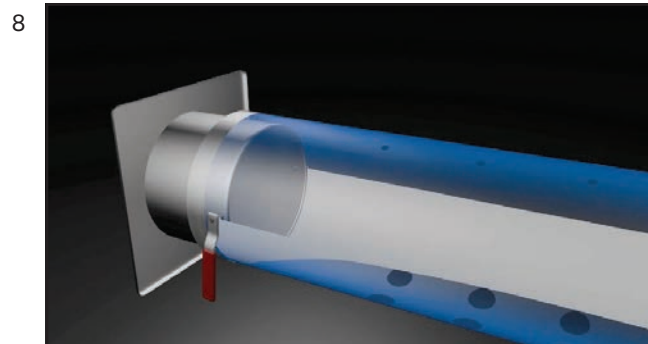
Many stanchion barns have been retrofitted into housing for calves. These barns often present challenges, such as low ceiling height and a lack of natural ventilation; making it difficult to achieve good air quality at calf level.



FLAP DUCT's airtight membrane is an ideal solution for this type of calf housing, as it can direct and control the fresh air exiting the duct based on seasonal need.



A cold weather hole pattern is placed on the top of the duct and a warm weather hole pattern is placed on the bottom of the duct.



The end of the membrane is first attached to a lever control mechanism. Then, the duct is attached to the fan shroud.



In warm weather, turn the variable speed fan to high, increasing air flow and position the internal membrane to the top of the duct using the lever control mechanism.



Air from the fan will force the airtight internal membrane to the top of the duct, blocking the holes on the top and forcing air through the series of large-diameter holes at the bottom of the duct...showering calves with high speed, cooling air. This high-speed air also blows away annoying flies and helps to keep bedding dry.

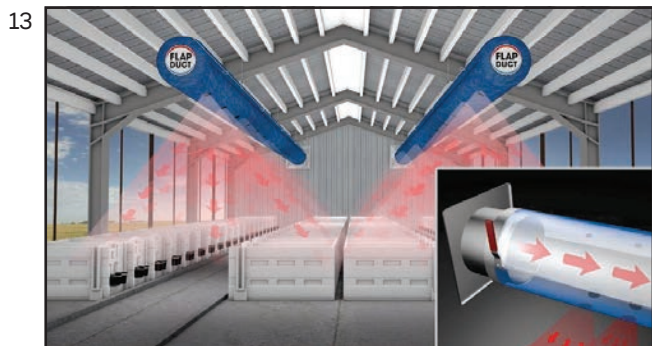


In cold weather, turn the variable speed fan to low, decreasing air flow and use the lever control mechanism to position the airtight internal membrane to the bottom of the duct, blocking the large diameter holes. This diverts the fresh air through multiple small holes in the top of the duct, causing it to deflect off the ceiling and gently fall into the calf pen.

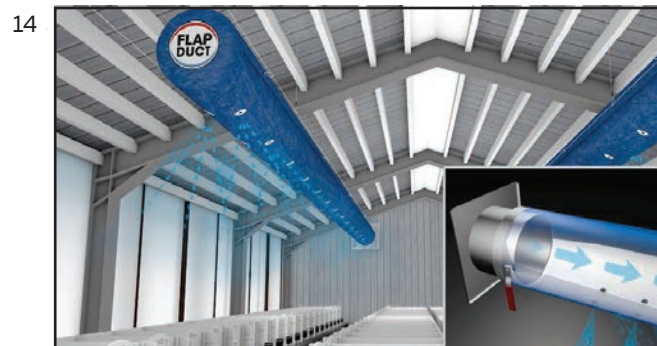


In this barn setting, FLAP DUCT's perforated membrane allows for quick and easy changing between cold weather and warm weather ventilation systems.

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During summer, the variable speed fan is set to HIGH and the membrane is in the up position, allowing the large diameter holes in the bottom of the duct to discharge high volumes of fast cooling air to the calves.



In the winter, turn the variable speed fan to low and move the membrane to the down position, overlapping the large diameter exterior holes with the smaller holes in the membrane, creating weak, thready air jets that deliver low volume, slow, non-drafty air to calves.



Additional "relief" holes can be added to the top of the duct to discharge excess air safely away from calves in cold weather.



Being able to rapidly switch between a cold weather and warm weather system, with just the flick of a lever, is particularly useful in the spring and fall when the nights are cold and the days warm.

Crystal Creek



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Count on Crystal Creek to provide practical, innovative solutions that help calves become healthy, productive cows.

For more information, contact us at Crystal Creek®. We'd be happy to discuss how FLAP DUCT can work in your calf barn. Visit our "CALF BARN VENTILATION" page on our website to view a number of educational videos on FLAP DUCT and other ventilation solutions.