

Pipeline Pig Velocity  
Control Solutions  
Powered by  
Wainbee Expertise



# What is Pipeline Pigging and the Risks

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The process of pipeline pigging is vital, and commonly used to clean pipes in many industries, such as the energy, oil, and natural gas industries. However, there is a common problem facing companies performing pipeline pigging – the risk of overpressure and a stuck pig causing damage to pipes.

Not sure what we're talking about? Don't worry. We'll explain the process of pipeline pigging – and how Wainbee used a special Proportion-Air mass flow controller to solve the dangers of stuck and uncontrollable pipeline pigs.

## What Is Pipeline Pigging?

Put pork and bacon out of your mind. Pipeline pigging is the process of using specialized devices called “pigs” to perform maintenance and inspections on pipelines of many sizes. Pigs can clean pipes, check for proper flow and pressure, and perform diagnostics on the pipes themselves, ensuring they're in good shape.

Most commonly, a pig is placed into a “pig launcher” or launching station. Then, the pipe is closed, and pressure – typically air pressure – is used to move it along the pipeline.

## The Risks of Pipeline Pigging – Excessive Pressure Leads to Pipe Damage.

A relatively common issue in pipeline pigging is excess pressure build-up. Pipes are rarely perfectly clean and can sometimes be bent or otherwise imperfect. This means a pipeline pig can get “stuck” in one area, if there is a lot of dirt or buildup, or another issue with the pipe.

If this happens, air pressure will typically continue to build behind the pig, until the pressure is so high that the pig breaks free, and blasts past the obstacle at an uncontrollable speed. This allows the pig to pass through most obstacles – but the risk is that, if the velocity is not controlled properly, piping may be damaged. This is a particular concern in areas of piping where there are many twists and turns.

# Wainbee Solution

## Smart Air-Flow Control to allow bypassing of obstacles, but minimize risk.

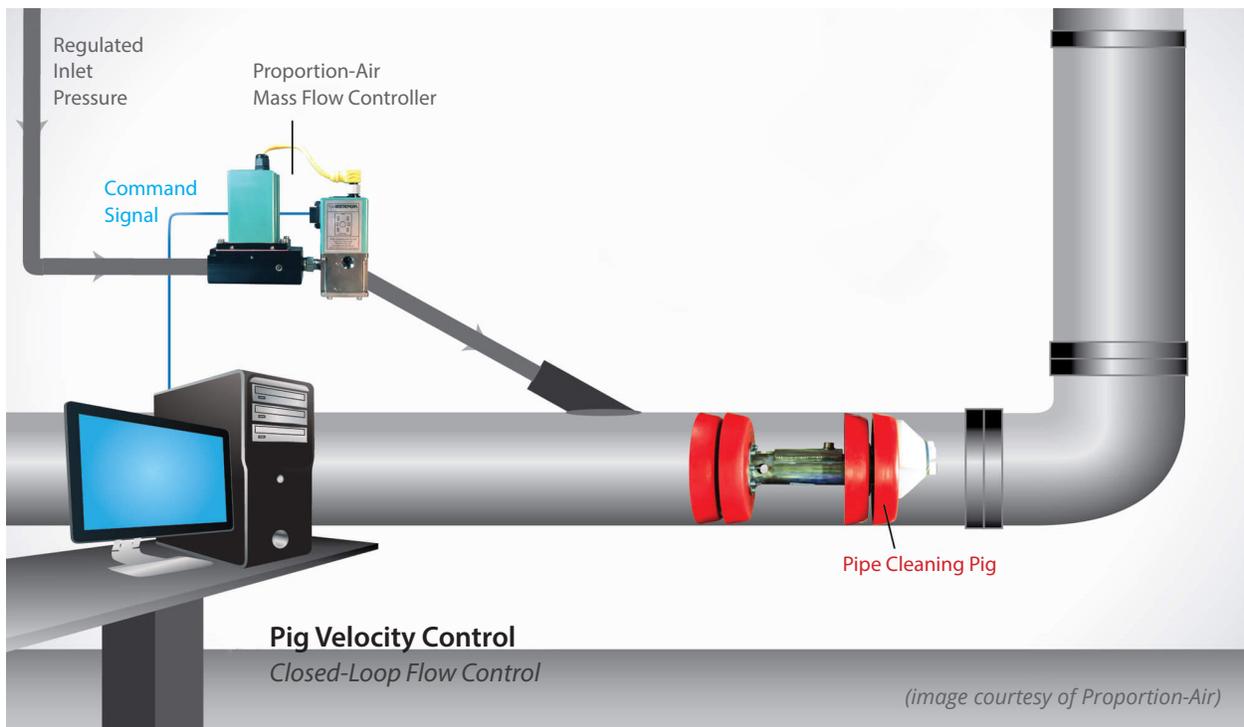
The buildup of air pressure to allow a pipe pig to get past an obstacle is necessary – but must be controlled. That's why Wainbee has built a special control system, which uses an FQB3 and F-series flow assembly to control the speed of a pig as it moves through piping.

Using a Proportion-Air mass flow controller, the speed of the pig can be monitored and adjusted, by adjusting the flow of air. If the pig is stuck, air pressure will continue to build up. But, as soon as the controller recognizes an increase in air flow – due to the pig “breaking” away from the obstacle – airflow is reduced, with a delay of less than 10 milliseconds.

This keeps the pig from reaching an unsafe velocity, and reduces the potential for damage – while also increasing the ability to fine-tune the speed of the pipe pig during normal operation.



**Proportion-Air Mass Flow Controller FQB3 & F-Series**  
Min Flow Range: 1 to 10 SCFM (28.3 to 283 LPM)  
Max Flow Range: 2.5 to 25 SCFM (70.8 to 708 LPM)



# Wainbee Innovative Solutions to Age-Old Problems!

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At Wainbee, we pride ourselves on using modern controllers and technology to solve our client's issues. So, whether you're interested in one of our advanced pipe pigging systems – or you have any other engineering need – we'd be happy to hear from you.

Feel free to get in touch right away, or browse our website to learn more about our solutions, case studies, and the industries which we serve.



[salesinfo@wainbee.com](mailto:salesinfo@wainbee.com)



1-888-**WAINBEE** (924-6233)



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