



A GUIDE TO CNG FILTRATION

Choose Parker Finite Filtration Solutions
for Your Dual Fuel & Fracking Applications.





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Brian McNeil is currently Market Development Manager for Parker's Industrial Gas Filtration and Generation Division, U.S. With over twenty-five years' experience in filtration, from engineering to business development, he is focused on helping Parker's OE customers in Oil and Gas, CNG, and Biogas, improve their operational efficiency with optimized filtration solutions.

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CNG FINAL FILTRATION

for Well-Head Gas Utilization in Dual-Fuel and Turbine-Driven Fracking Operations

Background

As EPA Tier 4 emission standards phased in from 2008 – 2015, OEM builders of well completion equipment scrambled to meet standards with varying successes, difficulties, and failures. In seeking a work-around, manufacturers realized that moving away from diesel in part or altogether could be an option. Particularly, for well completion OEMs, focus was put on the viability of well-head gas as a fuel source. Well-head gas would burn cleaner than diesel, was readily available for well-completion phases of a drilling/production operation, was both financially and logistically viable, and presented a way through the mire of Tier 4 regulation. Slowly, manufacturers turned to dual fuel engines and aeroderivative turbines.

For these new prime movers to work, well head natural gas is first treated, which allows for the greatest savings versus trucking gas to the site or connecting to pipelines from nearby shale plays. However, treatment can yield mixed results due to changing conditions and quality of the well head gas available. Optimizing a treatment system may not always be possible all the time. A secondary filtration system after the treatment and compression and prior to injection is a safe practice. As is common with air and gas circuits, additional filtration can remove residual moisture and oil carryover (both aerosol and vapor forms), as well as particulate, and other contaminants.

Fracking Application

Secondary, “last chance” filters to treat compressed gas prior to fuel system injection and after the main pressure regulator may be adopted. Parker Finite filters can handle the constant feed pressure that the fuel



system requires (typically between 200 and 500 PSI). Water separators to remove bulk or condensed water and oil can be installed as a series with different grades of coalescing media to address water and oil aerosols and vapor, as well as various particulates. Finite provides a robust protection system to reduce unscheduled downtime, maximize production, and optimize efficiency in fracking operations.

Featured Filter: Finite H-Series

- Water separators, coalescing, particulate and adsorption filter elements
- Optional indicators, gauges, and drains
- Temperatures to 450° F (232°C).
- Pressures to 500 PSIG (34 bar)
- Connection sizes from 1/4" to 3" NPT, BSPP, & SAE
- Flows from 10 to 1660 SCFM (17-2822 m3/hr)
- CRN approved in all Canadian provinces

H-Series Benefits

- A range of nine media grades for contaminants sizes to 0.01 micron @ 99.995% coalescing efficiency
- Robustness: a 500 PSI burst with a safety factor of 4:1 in the H series
- Aluminum construction to reduce weight and make handling and servicing easier
- Element sealing options include fluorocarbon gaskets with metal end caps, along with molded urethane or silicone option
- A wide range of sizes in both porting and flow capacity, for any size dual fuel engines or turbines
- Versatile and highly configurable with a range of optional accessories



Parker Finite offers a variety of filters and elements for critical applications.



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