



LCO TECHNOLOGIES

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The *CROSSFIRE*



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ULTRA-LOW POWER CHEMICAL INJECTION PUMP & INSTRUMENT AIR COMPRESSOR
CLEAN AIR & CHEMICAL MANAGEMENT SOLUTION

CROSSFIRE Chemical Injection Pump

Eliminate Methane emissions and minimize chemical waste all with the same reliability as pneumatic pumps

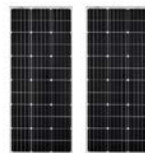
ULTRA LOW POWER CONSUMPTION

The CROSSFIRE platform is built on a highly efficient 24VDC motor that can be reliably and sustainably powered off solar energy in off grid locations. Low power consumption means small solar infrastructure required, no inrush means no replacing batteries, and most pumps can last weeks with out recharge, not days.

Example: Inject **20 L/day** at **500 PSI** = **275 mA** average current draw = **6.6 Watts**



LESS POWER THAN A
8 WATT LED LIGHT BULB



2X 100 W SOLAR PANELS & 2 110AH BATTERY
= 17 DAYS OF AUTONOMY



TRUE PROPORTIONATE CHEMICAL INJECTION

Say goodbye to wasted chemical and hit your chemical budget every month! Inject the exact volume of chemical required and automatically adjust injection rates according to production parameters. No more batch treating or timer relays - get consistent chemical dispersion and better results from your chemicals.

Max Volume: 800 L/day
Max Pressure: 10,000 PSI *

* APPLICATIONS GREATER THAN 6000 PSI REQUIRE SPECIAL PARTS *

Replace up to four pneumatic pumps with one CROSSFIRE unit

The CROSSFIRE platform can be customized with up to four standard 5100 series fluid ends. Each pump head can push against different pressures and inject different flow rates through plunger size and stroke length part selection. Standard parts means the fluid ends are field serviceable and replacement soft goods kits are readily available (they might even be in your operators tool kit already!)



Achieve profitable emission reductions programs with carbon credit offset claims. The CROSSFIRE tracks and stores time and date stamped data for claims in non-volatile memory.

1 Pump =



The average pneumatic pump emits over 70 tonnes of CO2 equivalent per year. A standard passenger car emits 5 tonnes of CO2e/year.

Instrument Air Compressor

Supply traditional low bleed pneumatic instrumentation with compressed air from the same ultra-low power CROSSFIRE technology

ELIMINATE METHANE EMISSIONS

The CROSSFIRE common platform can be converted to an instrument air compressor used to power low-bleed pneumatics. Eliminate methane emissions and keep all your pneumatic infrastructure in place - no expensive propane or electrification required. Vent clean air instead of gas!

REDUCE INSTRUMENT MAINTENANCE

Ideal for well sites that produce wet gas, foamy gas, and H2S rich gas that is un-usable on site. Pneumatic instrument maintenance will dramatically decrease when powered off clean, dry air from the CROSSFIRE compressor. No plugging or cleaning instruments anymore!

Max Volume: 1400 SCFD at 35PSI
Pressure Range: 0-50 PSI *
Continuous duty with automatic pressure RPM modulation

* CUSTOM COMPRESSOR AVAILABLE FOR 50-100 PSI APPLICATIONS *

Remotely track CROSSFIRE performance and go to site based on exception, not routine

SMART CONTROLLER

The CROSSFIRE C1 D2 controller features a high performance 32-bit processor for speed control and programmable logic control. Built in functions for proportional flow injection, toggle switch control, and MODBUS communications for remote monitoring and control is built in as a standard.

SOFTWARE & MOBILE APP

Windows software and Android or Apple applications allow for easy set up, configuration and monitoring of the CROSSFIRE platform. Use Bluetooth connectivity for wireless control and complete custom control curves with a two-stop graphical interface.