

Re-Defining Reliability™



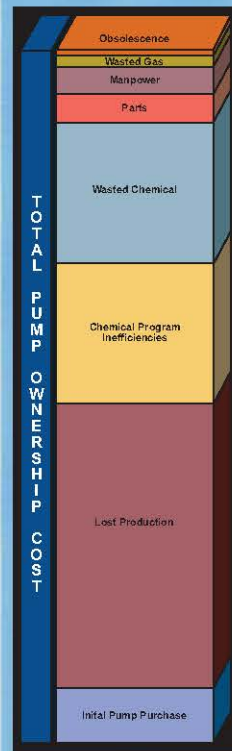
LOWEST COST OF OWNERSHIP



When you invest in a CheckPoint pump, you buy reliability. Reliability drives down production cost, and CheckPoint has demonstrated over and over that its products quite often pay for themselves within the first year of operation, due to realized cost savings.

Here are the many ways your CheckPoint pump investment will cut your operating expenses:

<b>Reduce Chemical Waste</b>	Chemicals are perhaps the most significant and the most overlooked expense when it comes to evaluating your pumping equipment. A single pump can be responsible for delivering \$100,000 worth of chemical annually, yet many customers hammer their purchasing department for the cheapest possible pump to handle that responsibility. How much sense does that make when even a 2% reduction in chemical waste would often pay for the more expensive pump? A CheckPoint pump can be expected to deliver chemical more accurately than any pump currently in use. When you set the CheckPoint pump at the proper flow rate, it will not fluctuate due to temperature, pressure, spring fatigue, or diaphragm degradation.
<b>Increase MTBF</b>	A CheckPoint pneumatic pump, on average, will perform without failure up to 8 times longer than any comparable pump, with a repair probability of less than 13% per year. Extensive, statistically-significant field data backs up this claim.
<b>Reduce Lost Production</b>	In a 24/7 operation, lost production can never be replaced. CheckPoint pumps fail less frequently, and are down for less time. Therefore, a CheckPoint pump is essential on any continuous service application. Replacing an existing pump that has often caused lost production with a CheckPoint Pump will increase production on that application.
<b>Improve Dosing Program Effectiveness</b>	In order for a chemical dosing program to be effective, dosing must occur reliably and at the dosing levels prescribed for the application. When a chemical pump is not accurate, it will over-dose or under-dose, undermining the dosing program itself and your ability to evaluate the effectiveness of that program. If a chemical does not perform as promised, was it really the wrong chemical, or could it have been an incorrect dosage? There is no way to tell unless you know for a fact it was not the pump.
<b>Reduce Repair Time</b>	CheckPoint pumps are so easy to repair that when they do go down a complete overhaul will not take more than two hours. Additionally CheckPoint exchange services can reduce overhaul time to zero. Obviously, this increases plant output per unit of time and labor hour.
<b>Eliminate Gas Consumption</b>	Many customers use natural gas to power their pneumatic pumps and other pneumatic instrumentation. Unlike others, CheckPoint pneumatic pumps can recover the gas used to run the motor at significant backpressure. That gas can then be used for other processes requiring it, thereby eliminating wasted natural gas.
<b>Reduce Parts Expense</b>	CheckPoint cares about pump sales, not parts sales. Our pump sales are our reason for being, we derive less than 15% of our revenues from parts. Fair parts pricing and simplicity of design minimize parts and labor cost.
<b>Eliminate Replacement Cost</b>	CheckPoint pumps are so durable and well-made that they will always be repairable. No CheckPoint pump has ever been scrapped because it was beyond repair.
<b>Reduce Maintenance Time</b>	CheckPoint pumps do not require frequent flow rate readjustment, lubrication, or other labor-intensive preventive maintenance (PM) efforts. Operators are freed up to spend their time on more productive activities.
<b>Reduce Inventory Carrying Cost</b>	Fewer parts in inventory are required per pump in service. Most parts are common across different CheckPoint models, due to their modular design, so fewer different kits need be stocked and each kit is less costly. For example, a Series 1250 shares many parts across different plunger sizes because only four small parts need be changed between them (plunger, packing nut, packing, and sleeve). A Series 1500 motor shares many parts with a Series 1250, a Series 5400 with a Series 8400, and so on. These factors add up to significantly reduced total inventory value, less space requirement to store that inventory, and lower inventory carrying costs.



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## Pump Advantages

### LOWEST COST OF OWNERSHIP

When you invest in a CheckPoint Chemical Injector, you reduce your operating costs. The investment pays back very quickly. (See reverse side for a complete explanation)

### NO TIMING DIAPHRAGMS

Most pneumatically-powered pumps utilize timing diaphragm(s) to regulate the pump rate. These are prone to failure via several means, most typically through chemical attack from distillate carryovers in natural gas service, or from simple wear. Further, timing diaphragms are sensitive to fluctuations in temperature and pressure. CheckPoint pneumatic-powered pumps use a switching spool that is not susceptible to any of these factors.

### H2S COMPATIBLE

All materials used in the CheckPoint pump are compatible with sour gas (H2S) to NACE MRO175/ISO 15156.

### EXHAUST GAS RECOVERY

No other pneumatic pump can recover exhaust gas under significant back pressure except CheckPoint. This enables customers to re-use the gas after it has powered the pump. Consider the environmental benefits - as well as the safety and the cost savings possibilities - of re-routing gas to the suction side of a gas compressor rather than spewing it into the atmosphere or in an enclosed building. Customers are using this unique feature to lower gas emissions while powering thermoelectric generators and running catalytic heaters, among other uses.

### HIGHEST FLOW TURNDOWN

CheckPoint pumps have the highest turndown ratios in the industry. As an example, our Series 1250's maximum stroke rate is 220 times its minimum. No other positive displacement pump has a turndown ratio exceeding 100, and most are below 50. The benefit of high turndown is versatility. One pump model can handle a wider range of flow rates within a given application and a wider range of applications.

### NO RETURN SPRING

No CheckPoint pneumatic pump has a return spring in the motor. Return springs weaken over the life of the pump, and eventually break, because the nature of a pneumatic return spring's function forces it to work beyond its endurance limits. The CheckPoint pneumatic pump is double-acting, meaning that the suction stroke is as powerful as the discharge stroke. No spring breakage, no rate change over time.

### ISOLATED CHEMICAL HEAD

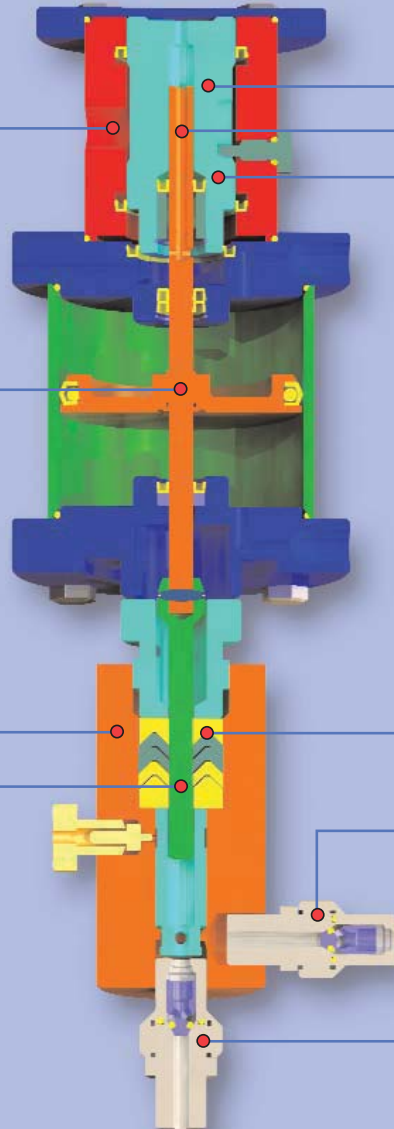
The CheckPoint pump has its chemical head completely isolated from the air motor. This prevents the significant health hazard created when chemicals mix with driver gas, causing atomized chemicals to be dispersed into the environment. Seals within the motor are fully protected from the adverse effects of corrosive chemicals.

### MODULAR DESIGN

CheckPoint plunger pumps use a common motor and chemical head across several different plunger sizes, with each chemical head typically convertible to multiple plunger sizes at a very low cost. No other plunger pump offers this flexibility. CheckPoint Type E and F pumps are likewise modular between heads and gearboxes. With this design benefit, when you switch chemicals, move the pump to a different location, or boost line pressure, odds are good you will not need to buy a whole new pump. This reduces plumbing modifications in the field as well.

### HIGHEST CHEMICAL VISCOSITY

CheckPoint pumps are currently in service worldwide pumping extremely viscous chemicals, including lightweight greases and drag reducing agents at 1500-2000 CP (Centipoise), the highest demonstrated viscosity performance of any chemical pump.



### EASE OF ADJUSTMENT

CheckPoint pneumatic pumps require only stroke frequency adjustment to set the chemical flow rate. There is no need to adjust the stroke length due to the tremendous turndown capability of the CheckPoint product. Mechanical stroke length adjusters are prone to loosening and add a degree of complexity for operators when setting and readjusting the pump flow rate.

### INTEGRAL CONTROLLER

The CheckPoint pneumatic shuttle valve controller is integral and contains three highly durable moving parts, no springs, and no diaphragms. By comparison, most other controllers are external, bulky, and contain a multitude of springs, valves, and assorted seals and diaphragms. Some pumps with larger piston diameters also require an additional "pneumatic relay" with yet more parts. Other pump companies have internal controllers, but all contain a multitude of small, sensitive components. No CheckPoint pump has any spring, diaphragm, or other small, sensitive component in the motor.

### NO LUBRICATION REQUIRED

The CheckPoint pneumatic motor runs without lubrication on wet or dry air or gas. Our competitors' manuals specify using only "clean, dry regulated air," and field experience shows they require continuous lubrication to prevent early pump failure. Even without any lubrication whatsoever, our pneumatic motors are far and away the most durable in the world.

### RUNS ON MANY FLUIDS

The CheckPoint pneumatic motor will run on many pressurized liquids. Several customers have run our motors using only pressurized seawater. No other pneumatic pump in the world besides ours can operate on liquid.

### FLOW RATE CONSISTENCY

The patented CheckPoint pneumatic switching valve maintains its set stroke rate. Normal wear and tear, fluctuating gas inlet pressures, temperature changes, and liquid carryovers will not greatly affect the CheckPoint's chemical delivery rate. In contrast, most other controllers require frequent readjustment and are quite sensitive to temperature and supply and discharge pressure fluctuations. Any liquid introduced into most pneumatic pumps will stall them, whereas a CheckPoint pump will run using pure liquid as a power source.

### API 675 COMPLIANCE

Most CheckPoint pumps exceed all relevant requirements for positive-displacement pumps set forth by the American Petroleum Institute's API 675 standard.

### WORLD-CLASS CHEMICAL RESISTANCE

CheckPoint offers a full range of elastomers and seals - such as Kalrez™, Viton™, and Teflon™ - and only premium engineering materials like 316L SS, super-hard ceramic, and Hastelloy™, ensuring we can meet the challenge of any chemical under any conditions.

### BUBBLE-TIGHT, REBUILDABLE CHECK VALVES

The CheckPoint pump uses rebuildable poppet-style check valves that ensure bubble-tight sealing on both suction and discharge, at high or low pressures. When a check clogs or malfunctions, it can easily be dismantled in the field, cleaned, and rebuilt at minimal cost.

### SUPERIOR SERVICE & SUPPORT

- From superior warranty protection to knowledgeable sales and after-sales support, CheckPoint goes out of our way to retain our customers:
- 100% "no questions asked" money-back guarantee on all engineered products sold for the first 90 days of ownership
- Full one-year warranty on parts and labor covering any defects in materials and workmanship
- Shipment on the following business day for typical orders
- Worldwide customer support including a 24-hr troubleshooting service by phone, as well as qualified repair services and exchange programs at distributor sites
- An exchange program where customers can get a reconditioned pump cross-shipped to them from the factory prior to sending in a failed pump