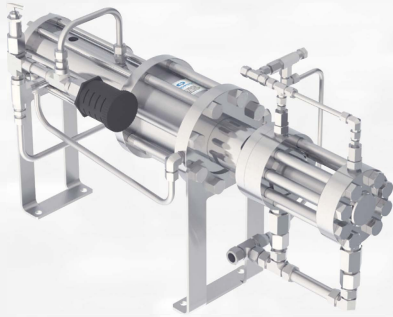


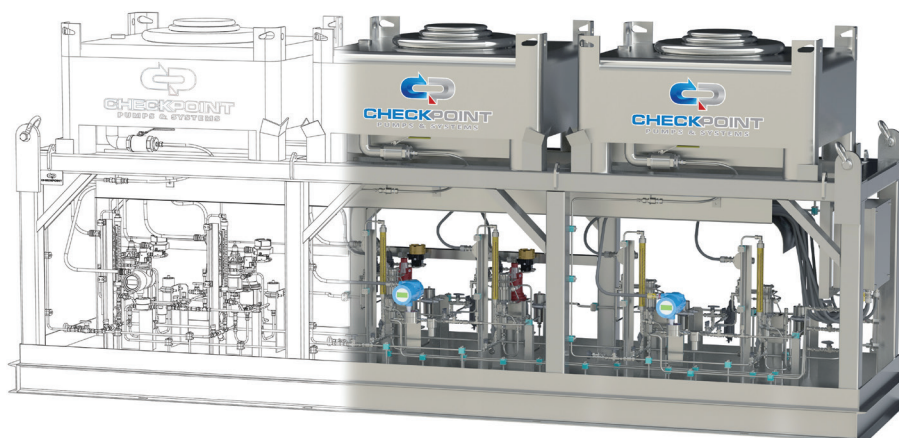


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**CHECKPOINT**  
PUMPS & SYSTEMS

# PRODUCT BROCHURE



CheckPoint® is a worldwide provider of chemical injection solutions. We design, manufacture, and market the world's most reliable chemical injection pumps and pump packages, control panels, pressure test systems, process components, and green energy solutions.

## ENGINEERING

Our engineering team utilizes your application requirements and needs, performs all necessary calculations, and sources all essential components to provide the optimum solution for your system.

## PUMP MANUFACTURING

Each CheckPoint pump is manufactured at CheckPoint's headquarters in Mandeville, Louisiana, USA. The manufacturing process involves creating and sourcing high-quality components, full product and package assembly, and total in-house quality testing before shipping.

## QUALITY CONTROL

CheckPoint's quality system ensures that all aspects of production operate with our framework of excellence in mind. We individually inspect and test each component of every product, individually and as a complete system, to ensure that every product that leaves our headquarters meets our absolute quality standards.

## SERVICE

We are committed to being your partner for the entire life cycle of the product. In addition to technical support, CheckPoint will provide on-site training, maintenance, troubleshooting, and site visits to help develop parameters such as footprint constraints or tubing sizes.

## DESIGN

Our design team generates technical drawings and models of your engineered solution from the calculations, required components, and instructions received from our engineering department.

## INNOVATION

Our experienced research and development engineers constantly push the boundaries of fluid processing possibilities. CheckPoint leads the field of chemical injection, continually defining innovative solutions focused on improving efficiency, durability, and automation.

## SUPPORT

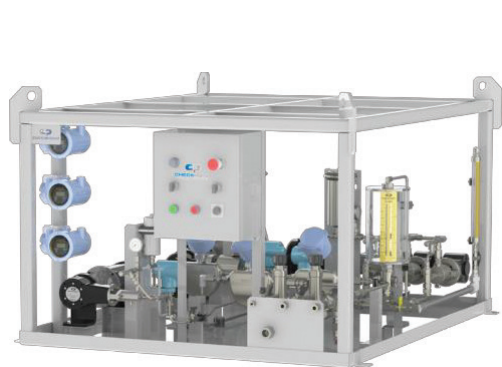
CheckPoint offers complete technical support and assistance. We will provide you with all of the documentation, technical assistance, maintenance, and information you require to ensure that your system is fully operational and functioning effectively. If you have any questions, we are always available to respond and assist.

## WORLDWIDE EXPERIENCE

We have designed, developed, produced, and serviced high-quality chemical injection pumps, systems, and total fluid processing solutions since 1993. Our products and services, proven worldwide, are designed, manufactured, and tested to the highest standard.

## OUR CAPABILITIES

- **Flow Rate:** 0.005 – 2,220 USG/H (0.02 – 8,403 L/H)
- **Pressure:** 0 – 20,000 PSIG (0 – 1,380 BARG)
- **Modular Components:** Our components are designed to be easily convertible in the field or plant setting with many shared components and common external dimensions.
- **Chemical Resistance:** All wetted parts are available in stainless steel and other high-grade metals, and all seals are available in a wide variety of materials to suit your chemical compatibility needs.
- **Applications:** CheckPoint products inject scavengers (H<sub>2</sub>S, O<sub>2</sub>) hydrate inhibitors (MeOH, MEG, LDHI), foamers, defoamers, corrosion, scale, and paraffin inhibitors, clarifiers, biocides, bleaches, and acids and provide onshore and offshore wellhead solutions.



## ISO 9001:2015

CheckPoint's management system governing the manufacture of our products and the provision of our services is ISO 9001:2015-certified (Certificate No. 43761).

ISO 9001:2015 specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

All requirements of ISO 9001:2015 are generic and are intended to be applicable to all organizations, regardless of type, size and product provided.

Source: ISO (International Organization for Standardization)

## ISNETWORLD

CheckPoint is a Member Contractor of ISNetworld (ID 400-160980).

ISNetworld brings together Hiring Clients and contractors, creating safer work environments and lasting partnerships.

## ATEX (2014/34/EU)

CheckPoint pumps are manufactured in compliance with ATEX Directive 2014/34/EU.

The objective of ATEX is to ensure the free movement of Ex products within the European Union, by offering one harmonized compliance procedure accepted by all EU countries, eradicating the need for differing national standards. This so called 'New Approach' directive removes barriers to trade by defining Essential Health and Safety Requirements (EHSRs) for Ex equipment. The EHSRs form the basis of an EU-accepted product conformity approval process that examines the potential ignition sources of equipment intended for use in explosive atmospheres.

ATEX product certification is the verification of the design specification of a manufacturer's product in relation to a series of relevant standards laid out under the directive. This certification process must be undertaken by an ATEX Notified Body. This is an organization that is appointed by its national government to issue ATEX certificates and conduct periodic surveillance of quality management systems, where necessary. The certification process includes testing and assessment of the product, with an ATEX certificate and report being issued for conforming product.

## API 674/675

### API 674

This standard covers the minimum requirements for reciprocating positive displacement pumps and pump units for use in the petroleum, petrochemical, and gas industry services. Both direct-acting and power-frame types are included. Controlled-volume pumps, hydraulically driven pumps, and rotary pumps are not included.

### API 675

This standard covers the minimum requirements for reciprocating, controlled volume pumps and pump units for use in the petroleum, petrochemical, and gas industry services. These pumps are either hydraulic diaphragm or packed plunger design. Rotary positive displacement pumps are not included. Diaphragm pumps that use direct mechanical actuation are also excluded.

## NACE MRO175

CheckPoint pumps are manufactured in compliance with NACE MR0175/ISO 15156 . Please contact CheckPoint for more information.

NACE MR0175/ISO 15156 gives requirements and recommendations for the selection and qualification of carbon and low-alloy steels, corrosion-resistant alloys, and other alloys for service in equipment used in oil and natural gas production and natural gas treatment plants in H<sub>2</sub>S-containing environments, whose failure could pose a risk to the health and safety of the public and personnel or to the equipment itself.



## INDUSTRIES SERVED

CheckPoint's application capabilities extend to many industries, including but not limited to:

- Biodiesel
- Chemical & Petrochemical
- Construction
- Electronics
- Emissions & Environmental Control
- Energy & Power Generation
- General Industrial & Manufacturing
- Marine
- Offshore Drilling & Processing
- Oil, Gas, & Petrochemical
- Polyurethane
- Pulp & Paper
- Rubber & Plastic
- Steam Generation
- Water & Wastewater Treatment



## CHEMICAL APPLICATIONS

CheckPoint products can deliver a wide variety of chemical products, including but not limited to:

- Scavengers (H<sub>2</sub>S, O<sub>2</sub>, CO<sub>2</sub>)
- Hydrate Inhibitors (MeOH, MEG, LDHI)
- Foamers and Defoamers
- Corrosion, Scale, and Paraffin Inhibitors
- Clarifiers
- Biocides
- Bleaches
- Acids
- Sodium Hypochlorite
- NGL Liquids Transfer
- Water Treatment



## ADVANTAGES

### LOW COST OF OWNERSHIP

An investment in CheckPoint promises dependability, minimal maintenance costs, and optimal process efficiency.

### EASE OF ADJUSTMENT

CheckPoint pumps utilize a simple, integrated needle valve to adjust the flow rate, allowing for maximum reliability in the field.

### NO TIMING DIAPHRAGMS

CheckPoint pneumatic pumps use a patented switching spool that offers a robust alternative to timing diaphragms or spring loaded switching valves, which are commonly associated with premature failure.

### INTEGRAL CONTROLLER

CheckPoint's pneumatic motors avoid the use of springs, diaphragms, and other small, sensitive components, thereby mitigating the liability associated with multiple internal parts.

### H<sub>2</sub>S COMPATIBLE

CheckPoint's construction materials are compatible with sour gas according to NACE MRO175 and ISO 15156.

### EXHAUST GAS RECOVERY

This unique gas recovery system enables processes to reuse drive gas after it has powered the pump.

### NO LUBRICATION REQUIRED

CheckPoint's pneumatic motor runs without lubrication on wet air, dry air, or gas.

### HIGH FLOW TURNDOWN

CheckPoint offers industry-leading turn-down ratios, which represent the versatility of the pneumatic product line.

### RUNS ON FLUIDS

CheckPoint's pneumatic motor will run on many pressurized liquids; for example, several customers have experienced great results running their pump's motor using only pressurized seawater.

### NO RETURN SPRINGS

A pneumatic pump functioning without a return spring reduces motor maintenance and ensures a more consistent rate of injection over the pump's life.

### FLOW RATE CONSISTENCY

CheckPoint's patented pneumatic switching valve maintains its set stroke rate.

### CERTIFIED QUALITY

At CheckPoint, we strive for excellence in everything we do. We are committed to safety, environmental, and quality assurance. CheckPoint is ISO 9001:2008 certified, is a Member Contractor of ISNetworld® and is compliant with ATEX, NEMA, API 674/675, and NACE MR0175 standards.

### SUPERIOR SERVICE & SUPPORT

From superior warranty protection to knowledgeable, continuous support, we strive to maintain a close relationship with our customers.

### ISOLATED CHEMICAL HEAD

CheckPoint's isolated chemical head design completely eliminates mixing chemicals with driver gas, while also fully protecting seals from the adverse effects of corrosive chemicals.

### MODULAR DESIGN

CheckPoint pumps use commonly designed motors and chemical heads combined with several plunger sizes.

### HIGH CHEMICAL VISCOSITY

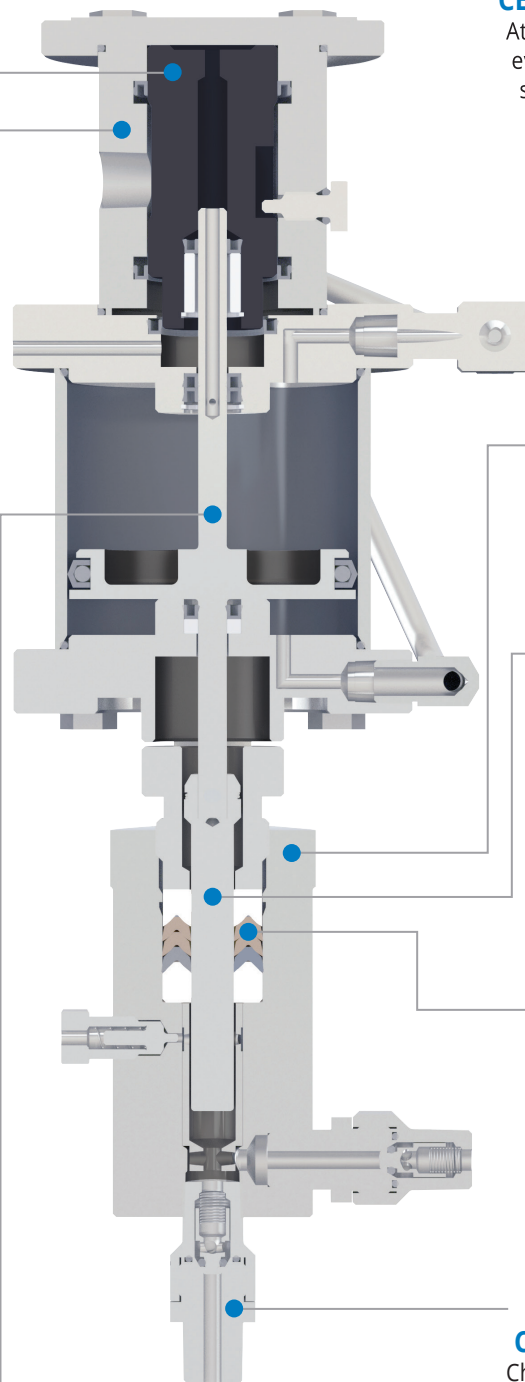
CheckPoint pumps inject a variety of viscous chemicals worldwide, including lightweight greases and drag reducing agents with viscosities as high as 1,500—2,000 cP (centipoise).

### WORLD-CLASS CHEMICAL RESISTANCE

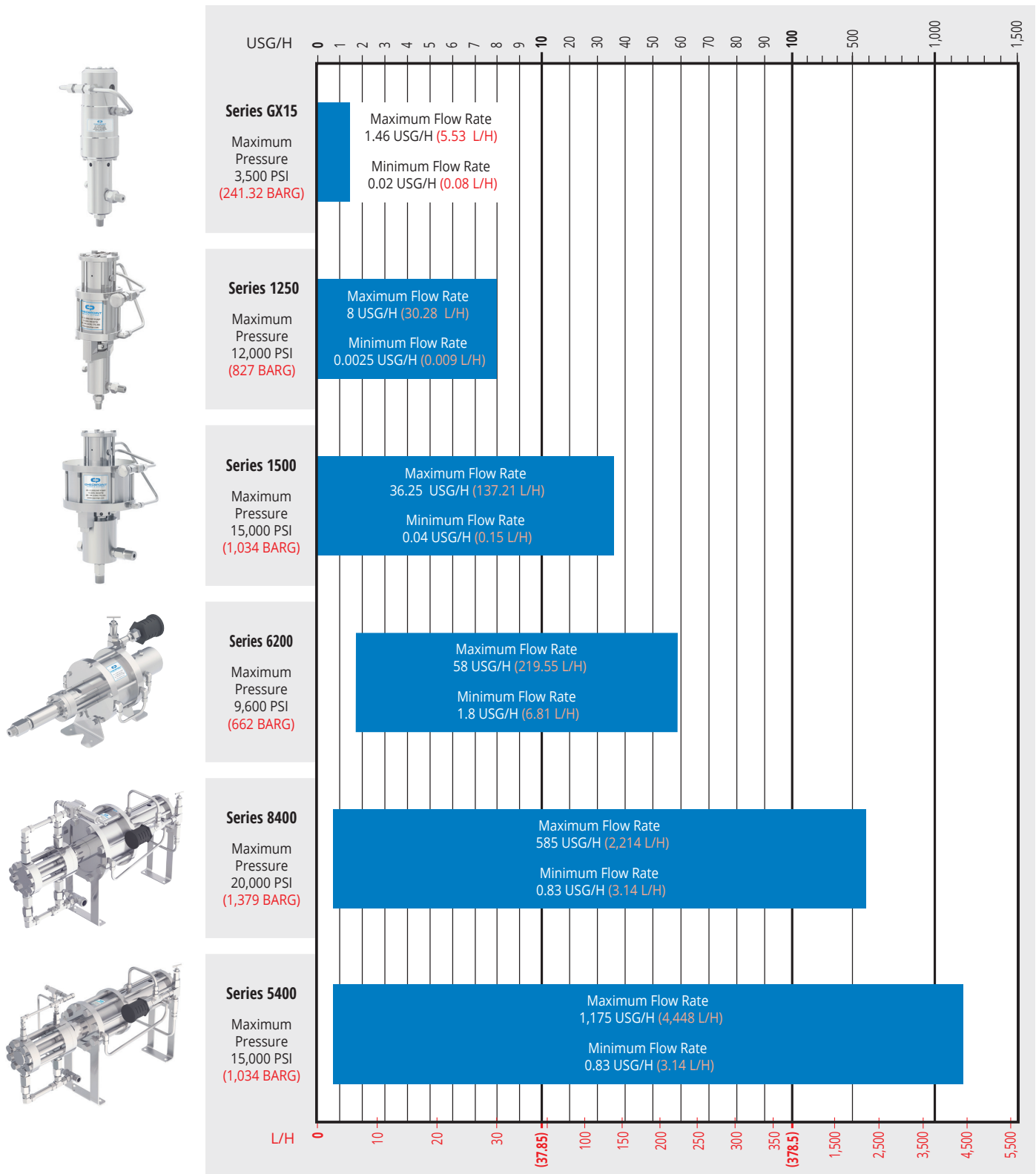
In order to meet a wide variety of chemical compatibility needs, wetted parts are available in an array of materials, such as 316 SS, Hastelloy C-276, Duplex 2205, Super Duplex 2507, PVC, ceramic and titanium, and seals are available in Viton, HNBR, FKM, and FFKM.

### BUBBLE-TIGHT, REBUILDABLE CHECK VALVES

CheckPoint pumps use poppet-style check valves that ensure bubble-tight sealing on both suction and discharge sides, at high or low pressures.



## COMPLETE RANGE



Flow rate expressed at 0 PSIG discharge pressure.

## Series GX15



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 1 in (25 mm) Fixed

### FLOW RATE

0.04 - 1.46 USG/H (0.15 - 5.53 L/H)

### PRESSURE

0 - 3,500 PSIG (0 - 241.32 BARG)

### ZERO EMISSIONS

CheckPoint offers standard integrated gas recovery capable of 120 PSIG (8.3 BARG) exhaust backpressure.



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
GX15 1/4"	0.04 (0.15)	1.46 (5.53)	3,500 (241.32)	1.5 (38.10)	1/4 (6.35)	4.75 (121) X 5.47 (139) X 10.6 (269)	8.05 (3.65)	1/4" MNPT	1/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.

## Series 1250



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 1 in (25mm) Fixed

### FLOW RATE

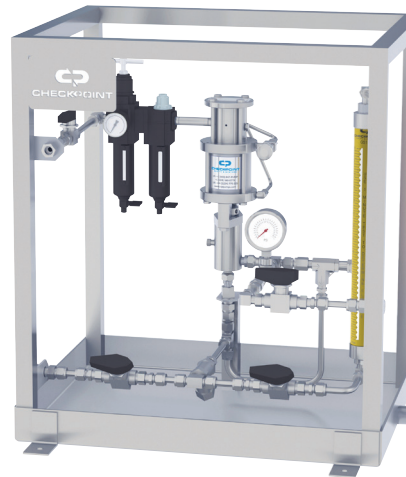
0.002 - 8.0 USG/H (0.007 - 30.28 L/H)

### PRESSURE

0 - 12,000 PSIG (0 - 827.4 BARG)

### OPTIONS

GR: Zero emissions with 170 PSIG (11.7 BARG) gas recovery capability  
EV: Extreme Viscosity for liquids up to 2,500 cP



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1250B 1/8"	0.002 (0.007)	0.47 (1.8)	12,000 (827.4)	2.5 (63.5)	1/8 (3.2)	5.54 (141) x 6.50 (165) x 12.07 (307)	11 (5)	1/4" MNPT	1/4" MNPT
1250B 3/16"	0.007 (0.026)	1.14 (4.3)	7,500 (517.1)	2.5 (63.5)	3/16 (4.9)	5.54 (141) x 6.50 (165) x 12.07 (307)	11 (5)	1/4" MNPT	1/4" MNPT
1250B 1/4"	0.013 (0.05)	2.0 (7.6)	12,000 (827.4)	2.5 (63.5)	1/4 (6.4)	5.54 (141) x 6.50 (165) x 12.07 (307)	11 (5)	1/4" MNPT	1/4" MNPT
1250B 3/8"	0.04 (0.16)	4.67 (17.7)	9,000 (620.5)	2.5 (63.5)	3/8 (9.5)	5.54 (141) x 6.50 (165) x 12.07 (307)	11 (5)	1/4" MNPT	1/4" MNPT
1250B 1/2"	0.08 (0.31)	8.0 (30.3)	5,000 (344.7)	2.5 (63.5)	1/2 (12.7)	5.54 (141) x 6.50 (165) x 12.07 (307)	11 (5)	1/4" MNPT	1/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection. This performance data represents the standard Series 1250. Contact CheckPoint for additional data.

## Series 1500



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 1 in (25 mm) Fixed

### FLOW RATE

0.04 - 36.25 USG/H (0.16 - 137.21 L/H)

### PRESSURE

0 - 15,000 PSIG (0 - 1,034 BARG)

### OPTIONS

GR: Zero Emissions with 170 PSIG (11.7 BARG) gas recovery capability  
EV: Extreme Viscosity for liquids up to 2,500 cP



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1500B 3/8"	0.041 (0.16)	2.3 (8.44)	15,000 (1,034)	5 (127)	3/8 (9.5)	7.33 (186) x 6.75 (171) x 13.10 (333)	27 (12.24)	1/2" MNPT	3/8" AC
1500B 1/2"	0.06 (0.24)	3.42 (12.93)	10,000 (689)	5 (127)	1/2 (12.7)	7.33 (186) x 6.75 (171) x 13.10 (333)	26 (11.79)	1/2" MNPT	1/2" MNPT
1500B 3/4"	0.12 (0.47)	9.58 (36.27)	9,000 (621)	5 (127)	3/4 (19)	7.33 (186) x 6.75 (171) x 13.10 (333)	26 (11.79)	1/2" MNPT	1/2" MNPT
1500B 1"	0.79 (3)	16.04 (60.72)	5,000 (345)	5 (127)	1 (25)	7.33 (186) x 6.75 (171) x 13.10 (333)	26 (11.79)	1/2" MNPT	1/2" MNPT
1500B 1-1/2"	1.42 (5.36)	36.25 (137.21)	2,275 (157)	5 (127)	1-1/2 (38)	6.75 (171) x 8.40 (213) x 14.29 (363)	40 (18.14)	3/4" MNPT	3/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection. This performance data represents the standard Series 1500. Contact CheckPoint for additional data.

## Series 6200



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 2 in (51 mm) Fixed

### FLOW RATE

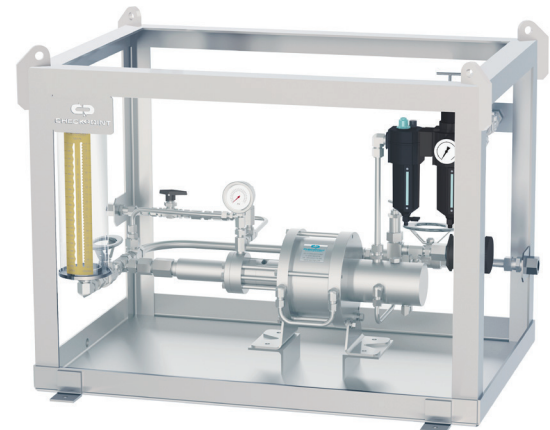
1.8 - 58.0 USG/H (6.8 - 219.5 L/H)

### PRESSURE

0 - 10,000 PSIG (0 - 689 BARG)

### ZERO EMISSIONS

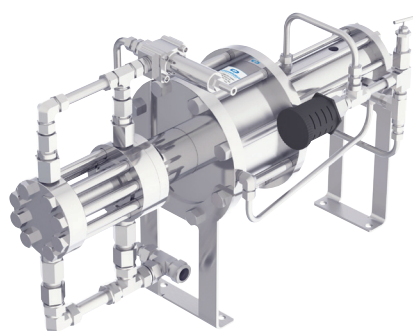
CheckPoint offers standard integrated gas recovery capable of 120 PSIG (8.3 BARG) exhaust backpressure.



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
6212	1.8 (6.8)	58.0 (219.5)	10,000 (689)	6 (152.4)	3/4 (19)	28.39 (721) X 10.17 (258) X 11.51 (292)	68 (30.8)	3/4" MNPT	3/8" FNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.

## Series 8400



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 4 in (102 mm) Fixed

### FLOW RATE

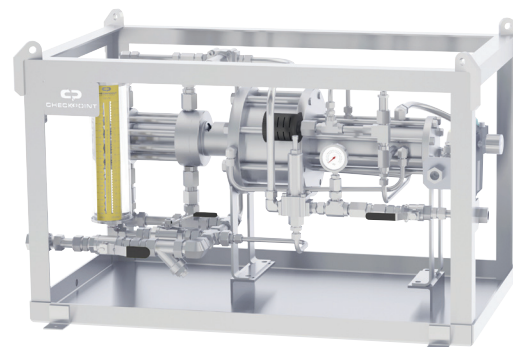
0.83 - 585 USG/H (3.14 - 2,214.47 L/H)

### PRESSURE

0 - 20,000 PSIG (0 - 1,379 BARG)

### ZERO EMISSIONS

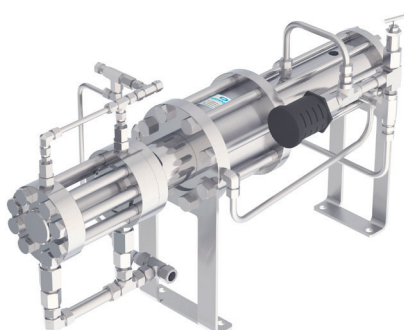
CheckPoint offers standard integrated gas recovery capable of 170 PSIG (11.7 BARG) exhaust backpressure.



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
8408	0.83 (3.14)	11.8 (44.67)	20,000 (1,379)	8 (203.2)	1/2 (12.7)	31 (787) X 15.12 (384) X 21.17 (538)	186 (84.3)	1/2" MNPT	3/8" MP AC
8412	3.0 (11.36)	42.5 (160.88)	20,000 (1,379)	8 (203.2)	3/4 (19.2)	34.03 (864) X 15.12 (384) X 21.17 (538)	222 (100.7)	3/4" Tube	3/8" MP AC
8416	7 (26.50)	75 (283.91)	12,750 (879)	8 (203.2)	1 (25.4)	38.74 (984) X 15.12 (384) X 21.99 (559)	222 (100.7)	3/4" Tube	3/8" MP AC
8428	19 (71.92)	245 (927.43)	4,000 (276)	8 (203.2)	1-3/4 (44.5)	34.03 (864) X 15.28 (388) X 22.97 (583)	223 (101)	1" Tube	3/4" FNPT
8440	40 (151.42)	585 (2,214.47)	2,075 (143)	8 (203.2)	2-1/2 (63.5)	34.03 (864) X 15.12 (384) X 22.97 (583)	226 (102.5)	1" Tube	3/4" FNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.

## Series 5400



### PUMP CATEGORY

Type: Plunger  
Control: Cycle Speed  
Stroke: 4 in (102 mm) Fixed

### FLOW RATE

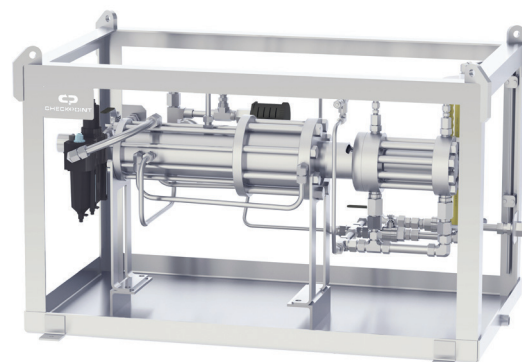
0.83 - 1,107 USG/H (3.14 - 4,190 L/H)

### PRESSURE

0 - 15,000 PSIG (0 - 1,034 BARG)

### ZERO EMISSIONS

CheckPoint offers standard integrated gas recovery capable of 170 PSIG (11.7 BARG) exhaust backpressure.



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
5408	0.83 (3.1)	26.5 (100.3)	15,000 (1,034)	5 (127)	1/2 (12.7)	30.75 (781) X 13.35 (339) X 20.88 (530)	148 (67)	1/2" MNPT	3/8" MP AC
5412	3.0 (11.4)	122 (461.8)	6,500 (448)	5 (127)	3/4 (19.2)	33.78 (858) X 13.35 (339) X 20.88 (530)	177 (80.5)	3/4" Tube	3/8" Tube
5416	4.79 (18.1)	175 (662.4)	5,200 (359)	5 (127)	1 (25.4)	33.78 (858) X 13.35 (339) X 20.88 (530)	177 (80.5)	3/4" Tube	3/8" Tube
5428	19.0 (71.9)	640 (2,422.7)	1,775 (122)	5 (127)	1-3/4 (44.5)	33.78 (858) X 13.35 (339) X 22.78 (579)	185 (84)	1" Tube	3/4" FNPT
5440	36.0 (136.3)	1,107 (4,190.4)	650 (45)	5 (127)	2-1/2 (63.5)	33.53 (852) X 13.35 (339) X 22.78 (579)	188 (85.4)	1" Tube	3/4" FNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.

## Gas Recovery

All pneumatic pumps work on differential (inlet less exhaust) pressure acting on a piston. When using a gas recovery model pump, back-pressure will develop at the exhaust, since it is not immediately dissipated to the atmosphere. This greater exhaust pressure must be taken into consideration when maintaining the minimum differential pressure required to achieve the application flow rate at injection pressure. Gas recovery pumps are recommended to use wherever a consistent differential exists, such as between the outlet and inlet of a compressor, the upstream and downstream sides of a choke, or lines routed to flare.

### FEATURES

- Recover 100% of pump exhaust
- Recapture and sell gas
- Redirect harmful emissions
- Prevent greenhouse gas emissions
- High back-pressure capability
- Standard design feature in most CheckPoint pneumatic pumps
- Reduce noise
- Option on Series 1250 and 1500.
- Standard on Series GX, 6200, 5400, and 8400.



## Standard Options

CheckPoint offers a variety of options for all pneumatic pumps. Our selection of high-quality materials paired with our pumps' versatility ensures long-term use, regardless of the application.

### PLUNGER MATERIALS

316 SS, Titanium, Hastelloy, Duplex, Super Duplex, Ceramic Coated

### HEAD MATERIALS

316 SS, Titanium, Hastelloy, Duplex, Super Duplex, PVC, Kynar

### PACKING MATERIALS

HNBR, FKM, FFKM, VITON A

### MODULARITY

Many CheckPoint pumps feature interchangeable parts within a series, to increase the range of use and minimize required spares.



## TECHNOLOGY OVERVIEW

CheckPoint offers an array of electric pump designs to fit your specific needs while adhering to the high quality standards for which we are known.

### HDA

Hydraulic metallic diaphragm pump with fixed stroke length drive. Flow controlled by VFD or variator. Leak proof. Rupture detection.



### FXA

Plunger pump with fixed stroke length drive. Flow controlled by VFD or variator. Modular head design. Simple.



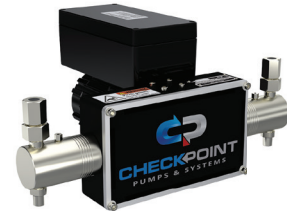
### FXS SOLAR

Plunger pump with fixed stroke length drive. Flow controlled by variable speed DC motor. Optimized for solar applications. Continuous Injection. Modular head design.



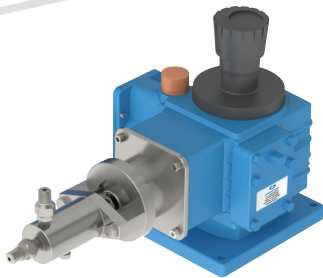
### ATP

Economical electric pump. Suited for solar, AC, and DC service. Expandable to two heads.



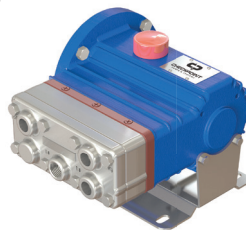
### E/F

Plunger pump with variable stroke length drive. Flow controlled by mechanically adjusting displacement per cycle. Modular head design. Multiplex capability.



### MD

Multiple elastomer diaphragm pump with fixed displacement per cycle. Flow controlled by VFD. Continuous flow. Particulate tolerant.

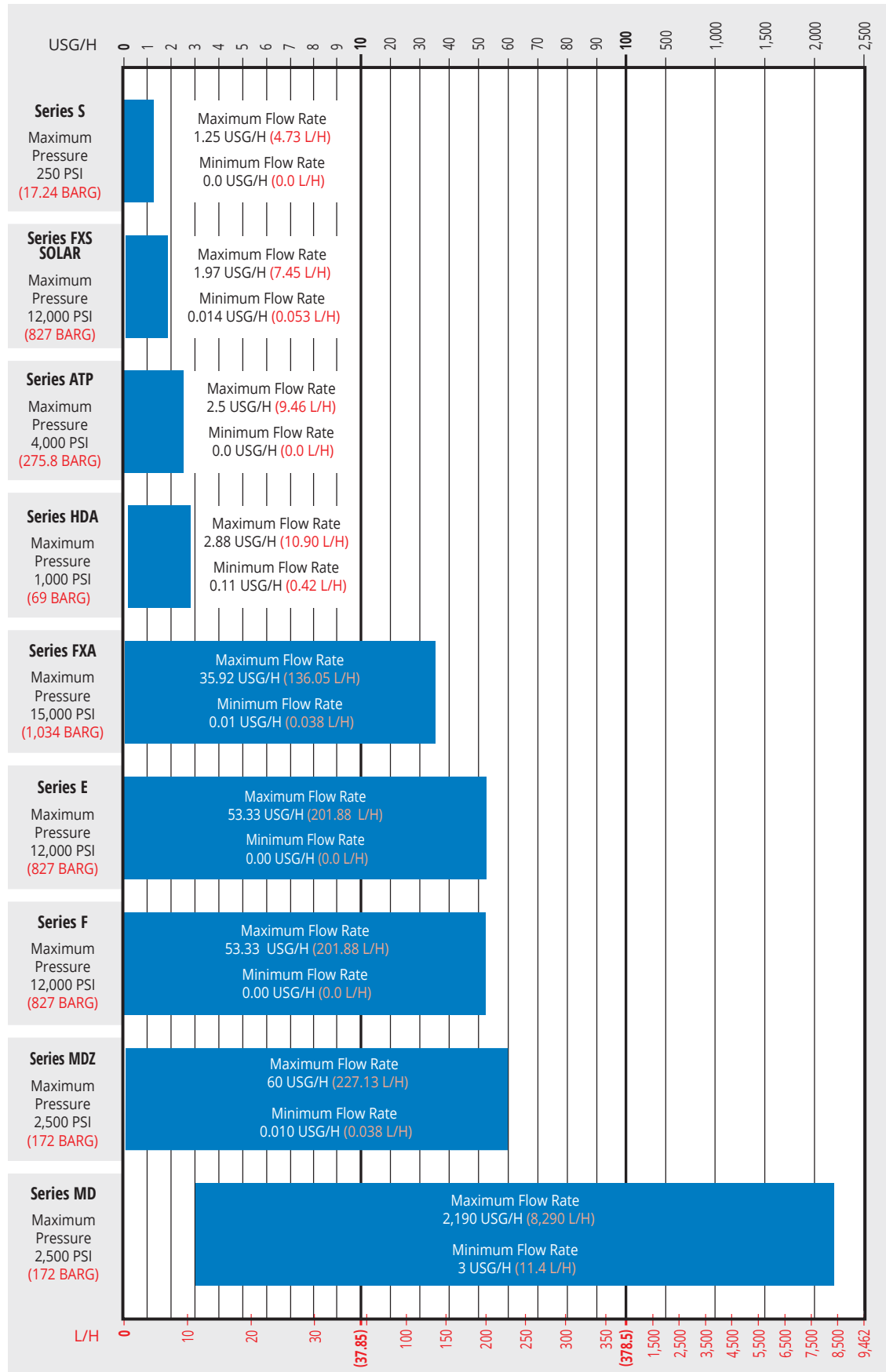


### S

Solenoid-driven pump. Cycle speed control. Digital speed adjustment with wide turndown range.



## COMPLETE RANGE



Flow rate expressed at 0 PSIG discharge pressure.

## Series FXS



### PUMP CATEGORY

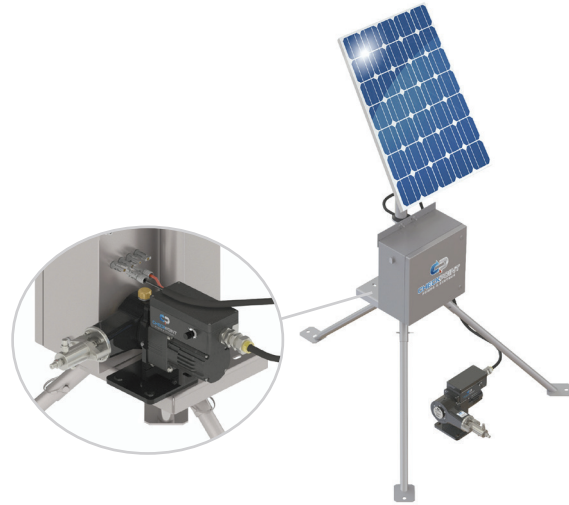
Optimized for Solar  
 Type: Plunger  
 Control: Motor Speed  
 Stroke: 0.75 in (19 mm) Fixed

### FLOW RATE

0.014 - 1.97 USG/H (0.053 - 7.45 L/H)

### PRESSURE

0 - 12,000 PSIG (0 - 827.37 BARG)



FXS MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	PACKAGE WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1250 1/8"	0.014 (0.053)	0.11 (0.42)	12,000 (827.37)	1/8 (3.18)	40.34 (1,025) x 45.65 (1,160) x 85 (2,159)	254 (115)	1/4" MNPT	1/4" MNPT
1250 3/16"	0.032 (0.12)	0.24 (0.90)	7,500 (517.11)	3/16 (4.76)	40.34 (1,025) x 45.65 (1,160) x 85 (2,159)	254 (115)	1/4" MNPT	1/4" MNPT
1250 1/4"	0.061 (0.23)	0.51 (1.93)	7,500 (517.11)	1/4 (6.35)	40.34 (1,025) x 45.65 (1,160) x 85 (2,159)	254 (115)	1/4" MNPT	1/4" MNPT
1250 3/8"	0.10 (0.39)	1.04 (3.92)	3,250 (224.08)	3/8 (9.53)	40.34 (1,025) x 45.65 (1,160) x 85 (2,159)	254 (115)	1/4" MNPT	1/4" MNPT
1250 1/2"	0.24 (0.89)	1.97 (7.45)	1,850 (127.55)	1/2 (12.70)	40.34 (1,025) x 45.65 (1,160) x 85 (2,159)	254 (115)	1/4" MNPT	1/4" MNPT

Chart data reflects system as shown featuring one (1) solar panel.  
 Minimum flow represents lowest capability independent of insolation factor.  
 Maximum flow rates based on insolation factor of 7.0 against 0 PSIG (0 BARG) discharge pressure.  
 Table data ranges above should be for quick reference only. See complete charts for system selection.

## Series FXA



### PUMP CATEGORY

Type: Plunger  
 Control: DFC, HSV, or Motor Speed  
 Stroke: 0.75 in (19 mm) Fixed

### FLOW RATE

0.01 - 35.92 USG/H (0.037 - 136.05 L/H)

### PRESSURE

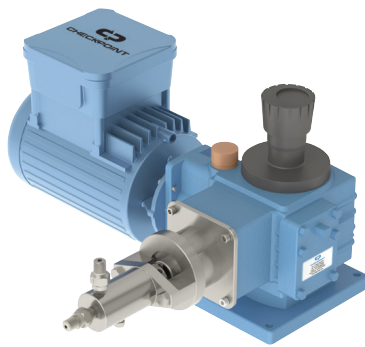
0 - 15,000 PSIG (0 - 1,034 BARG)



FXA MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1250 1/8" HP	0.01 (0.04)	0.22 (0.83)	12,000 (827)	1/8 (3.2)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1250 3/16"	0.02 (0.08)	0.50 (1.91)	7,500 (517)	3/16 (4.89)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1250 1/4"	0.04 (0.15)	0.91 (3.44)	7,500 (517)	1/4 (6.4)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1250 1/4" HP	0.04 (0.15)	0.91 (3.44)	12,000 (827)	1/4 (6.4)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1250 3/8"	0.09 (0.34)	2.13 (8.08)	7,500 (517)	3/8 (9.5)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1250 1/2"	0.15 (0.57)	3.85 (14.57)	7,500 (517)	1/2 (12.7)	22 (558) X 15.3 (389) X 12.3 (312)	64 (29)	1/4" MNPT	1/4" MNPT
1500 3/8" HP	0.086 (0.33)	2.13 (8.08)	15,000 (1,034)	3/8 (9.52)	22.7 (577) X 16.6 (421) X 12.8 (325)	71 (32)	1/2" MNPT	3/8" AC
1500 1/2" HP	0.15 (0.57)	3.85 (14.57)	10,000 (689)	1/2 (12.7)	22.7 (577) X 16.6 (421) X 12.8 (325)	71 (32)	1/2" MNPT	1/2" MNPT
1500 3/4"	0.34 (1.29)	8.75 (33.15)	4,500 (310)	3/4 (19.05)	22.7 (577) X 16.6 (421) X 12.8 (325)	71 (32)	1/2" MNPT	1/2" MNPT
1500 1"	0.61 (2.31)	15.74 (59.63)	2,500 (172)	1 (25.4)	22.7 (577) X 16.6 (421) X 12.8 (325)	71 (32)	1/2" MNPT	1/2" MNPT
1500 1-1/2"	1.38 (5.22)	35.92 (136.05)	1,100 (76)	1-1/2 (38.1)	22.6 (575) X 17.7 (451) X 12.8 (325)	86 (39)	3/4" MNPT	3/4" MNPT

Tabular data represents VFD controlled version and should be used for quick reference only. See performance curves for accurate pump selection.  
 FXA series pumps are available in single, dual and triple-headed configurations. Chart reflects single head pump with 1,750 RPM motor and 15:1 reducer. For 1,450 RPM motor, multiply flow by 0.83.  
 Gearboxes vary. Contact CheckPoint for additional data.

## Series E



### PUMP CATEGORY

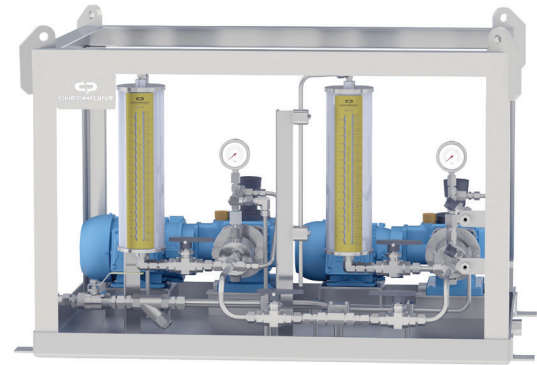
Type: Plunger  
 Control: Stroke Length Adjustment  
 Stroke: 0-0.6 in (0-15 mm)  
 Maximum Rod Load: 450 lb<sub>f</sub> (2 kN)

### FLOW RATE

0.0 - 53.33 USG/H (0.0 - 201.88 L/H)

### PRESSURE

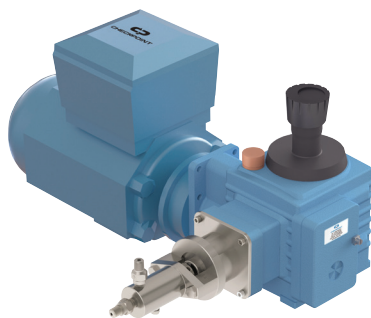
0 - 12,000 PSIG (0 - 827 BARG)



1/2" E MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1250 1/8"	0.0 (0.0)	0.34 (1.29)	12,000 (827)	1/8 (3.2)	18.1 (460) X 16.4 (417) X 10.1 (257)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 3/16"	0.0 (0.0)	0.77 (2.91)	7,500 (517)	3/16 (4.89)	18.1 (460) X 16.4 (417) X 10.1 (257)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 1/4"	0.0 (0.0)	1.37 (5.19)	9,000 (620)	1/4 (6.4)	18.1 (460) X 16.4 (417) X 10.1 (257)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 3/8"	0.0 (0.0)	3.16 (11.96)	4,000 (276)	3/8 (9.5)	18.1 (460) X 16.4 (417) X 10.1 (257)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 1/2"	0.0 (0.0)	5.92 (22.41)	2,200 (152)	1/2 (12.7)	18.1 (460) X 16.4 (417) X 10.1 (257)	58.4 (26)	1/4" MNPT	1/4" MNPT
1500 3/4"	0.0 (0.0)	13.33 (50.46)	1,000 (69)	3/4 (19.05)	18.8 (478) X 17.4 (442) X 10 (254)	66 (30)	1/2" MNPT	1/2" MNPT
1500 1"	0.0 (0.0)	23.70 (89.71)	570 (39)	1 (25.4)	18.8 (478) X 17.4 (442) X 10 (254)	66 (30)	1/2" MNPT	1/2" MNPT
1500 1-1/2"	0.0 (0.0)	53.33 (201.88)	250 (17)	1-1/2 (38.1)	18.8 (478) X 17.9 (455) X 10 (254)	79 (36)	3/4" MNPT	3/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.  
 Graph reflects single head pump with 1,750 RPM motor and 8.33:1 reducer. Multiply flow by 0.83 for 1,450 RPM motor.  
 Series E pumps are available with other gear reduction ratios and multiple heads. Contact CheckPoint for additional data.

## Series F



### PUMP CATEGORY

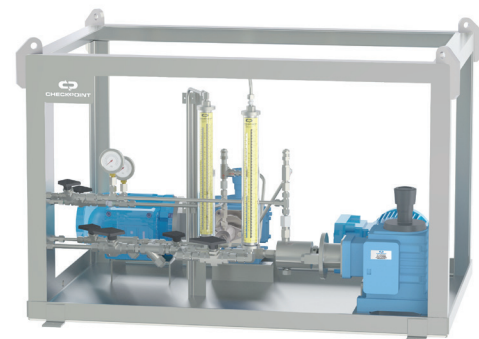
Type: Plunger  
 Control: Stroke Length Adjustment  
 Stroke: 0-0.6 in (0-15 mm)  
 Maximum Rod Load: 1,124 lb<sub>f</sub> (5 kN)

### FLOW RATE

0.0 - 53.33 USG/H (0.0 - 201.88 L/H)

### PRESSURE

0 - 12,000 PSIG (0 - 827 BARG)



F MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PLUNGER DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
1250 1/8"	0.0 (0.0)	0.34 (1.29)	12,000 (827)	1/8 (3.2)	25.1 (645) X 17.8 (452) X 12.5 (318)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 3/16"	0.0 (0.0)	0.77 (2.91)	7,500 (517)	3/16 (4.89)	25.1 (645) X 17.8 (452) X 12.5 (318)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 1/4"	0.0 (0.0)	1.37 (5.19)	12,000 (827)	1/4 (6.4)	25.1 (645) X 17.8 (452) X 12.5 (318)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 3/8"	0.0 (0.0)	3.16 (11.96)	7,500 (517)	3/8 (9.5)	25.1 (645) X 17.8 (452) X 12.5 (318)	58.4 (26)	1/4" MNPT	1/4" MNPT
1250 1/2"	0.0 (0.0)	5.92 (22.41)	5,700 (393)	1/2 (12.7)	25.1 (645) X 17.8 (452) X 12.5 (318)	58.4 (26)	1/4" MNPT	1/4" MNPT
1500 3/8"	0.0 (0.0)	3.16 (11.96)	10,000 (689)	3/8 (9.5)	25.1 (645) X 18.9 (480) X 12.5 (318)	110 (50)	1/2" MNPT	3/8" AC
1500 1/2"	0.0 (0.0)	5.92 (22.41)	5,700 (393)	1/2 (12.7)	25.1 (645) X 18.9 (480) X 12.5 (318)	110 (50)	1/2" MNPT	1/2" MNPT
1500 3/4"	0.0 (0.0)	13.33 (50.46)	2,500 (172)	3/4 (19.05)	25.1 (645) X 18.9 (480) X 12.5 (318)	110 (50)	1/2" MNPT	1/2" MNPT
1500 1"	0.0 (0.0)	23.70 (89.71)	1,400 (97)	1 (25.4)	25.1 (645) X 18.9 (480) X 12.5 (318)	110 (50)	1/2" MNPT	1/2" MNPT
1500 1-1/2"	0.0 (0.0)	53.33 (201.88)	630 (43)	1-1/2 (38.1)	25.1 (645) X 19.3 (490) X 12.5 (318)	124.3 (56)	3/4" MNPT	3/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection.  
 Graph reflects single head pump with 1,750 RPM motor and 8.33:1 reducer. Multiply flow by 0.83 for 1,450 RPM motor.  
 Series F pumps are available with other gear reduction ratios and multiple heads. Contact CheckPoint for additional data.

## Series MD



### PUMP CATEGORY

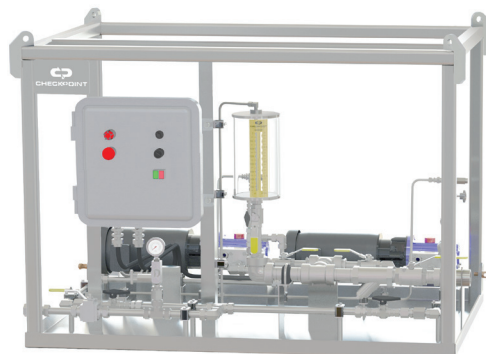
Type: Multiple Elastomer Diaphragm  
Control: Motor Speed

### FLOW RATE

3 - 2,190 USG/H (11.36 - 8,290.1 L/H)

### PRESSURE

0 - 2,500 PSIG (0 - 172.4 BARG)



MD MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	DRIVE MECHANISM	PUMP ONLY DIMENSIONS L X W X H IN (MM)	PUMP ONLY WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
MDA	3 (11.4)	180 (681.4)	1,200 (82.7)	Cam Shaft	9.92 (252) x 10.1 (256.5) x 7.5 (190.5)	28 (12.7)	1/2" NPT	3/8" NPT
MDB	10.8 (40.9)	180 (681.4)	2,500 (172.4)	Cam Shaft	9.93 (252.2) x 10.38 (263.7) x 8.71 (221.2)	37 (16.8)	1/4" NPT	1/2" NPT
MDC	2.4 (9.1)	480 (1,817)	1,000 (68.9)	Wobble Plate	11.2 (284.5) x 7.3 (185.4) x 9.5 (241.3)	48 (21.7)	1" NPT	3/4" NPT
MDD	80.4 (304.3)	804 (3,043.5)	2,500 (172.4)	Wobble Plate	16.0 (406.4) x 10.0 (254) x 12.42 (315.5)	145 (66)	1-1/4" NPT	3/4" NPT
MDE	72 (272.5)	1,200 (4,542.5)	1,000 (68.9)	Wobble Plate	17.01 (432.1) x 9.44 (239.8) x 10.34 (262.6)	125 (56.8)	1-1/2" NPT	1" NPT
MDF	21 (79.5)	2,190 (8,290.1)	1,100 (75.8)	Wobble Plate	17.01 (432.1) x 9.44 (239.8) x 10.34 (262.6)	240 (109)	2-1/2" NPT	1-1/4" NPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection. This tabular data represents the metallic head configuration. Non-metallic head data available upon request. Contact CheckPoint for additional data.

## Series MDZ



### PUMP CATEGORY

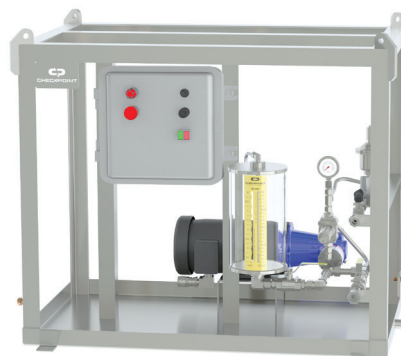
Type: Non-metallic Monodiaphragm  
Control: Motor Speed

### FLOW RATE

0.05 - 60 USG/H (0.19 - 227.13 L/H)

### PRESSURE

0 - 1,500 PSIG (0 - 103 BARG)



MDZ MODEL	GEARBOX RATIO	FLOW RATE (MINIMUM) USG/H (L/H) 250 RPM	FLOW RATE (MAXIMUM) USG/H (L/H) 1,750 RPM (60Hz)	FLOW RATE (MAXIMUM) USG/H (L/H) 1,450 RPM (50Hz)	PUMP ONLY DIMENSIONS L X W X H IN (MM)	PUMP ONLY WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
MDZ-001	N/A	8.57 (32.44)	60 (227.13)	49.71 (188.17)	7.09 (180) X 10.02 (255) X 6.5 (165)	12 (5.4)	1/2" FNPT	3/8" FNPT
MDZ-005	5:1	1.72 (6.51)	12.04 (45.58)	9.98 (37.78)	9.07 (230) X 11.57 (294) X 5.9 (150)	18.5 (8.4)	1/2" FNPT	3/8" FNPT
MDZ-010	10:1	0.84 (3.18)	5.87 (22.22)	4.86 (18.40)	9.07 (230) X 11.57 (294) X 5.9 (150)	18.5 (8.4)	1/2" FNPT	3/8" FNPT
MDZ-025	25:1	0.31 (1.17)	2.17 (8.21)	1.80 (6.81)	9.07 (230) X 11.57 (294) X 5.9 (150)	18.5 (8.4)	1/2" FNPT	3/8" FNPT
MDZ-050	50:1	0.13 (0.49)	0.94 (3.56)	0.78 (2.95)	9.07 (230) X 11.57 (294) X 5.9 (150)	18.5 (8.4)	1/2" FNPT	3/8" FNPT
MDZ-100	100:1	0.05 (0.19)	0.32 (1.21)	0.27 (1.02)	9.07 (230) X 11.57 (294) X 5.9 (150)	18.5 (8.4)	1/2" FNPT	3/8" FNPT

Reduction ratios other than shown here are available upon request. MDZ-001 model does not use a reduction gear drive. Flow Rate values shown are at 1,000 PSIG (69.0 BARG) discharge with elastomeric diaphragms. Consult factory for PTFE diaphragms. Tabular data should be used for quick reference only. See performance curves for accurate pump selection. A minimum of 50 PSIG (3.45 BARG) back pressure is required to maintain flow accuracy. Maximum Head Discharge Pressure: 1,500 PSIG (103 BARG) Metallic; 350 PSIG (24 BARG) PVDF; 250 PSIG (17 BARG) Polypropylene. Maximum Inlet Pressure: 250 PSIG (All Head Materials). Max Suspended Solids Size: 200 microns. Weight & dimensions exclude motor. Weights shown are for metallic head.

## Series HDA



### PUMP CATEGORY

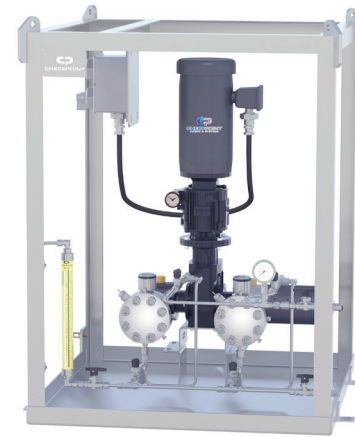
Type: Electric Metallic Diaphragm  
Control: HSV or Motor Speed

### FLOW RATE

0.11 - 2.88 USG/H (0.42 - 10.90 L/H)

### PRESSURE

0 - 1,000 PSIG (0 - 68.95 BARG)



MODEL	FLOW RATE (MINIMUM) USG/H (L/H)	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PISTON DIAMETER IN (MM)	DIAPHRAGM DIAMETER IN (MM)	DIMENSIONS L X W X H IN (MM)	WEIGHT LB (KG)	SUCTION CONNECTION	DISCHARGE CONNECTION
HDA	0.11 (0.42)	2.88 (10.90)	1,000 (69)	0.394 (10)	3.94 (100)	17 (432) X 14.25 (362) X 11.25 (286)	51 (23)	1/4" MNPT	1/4" MNPT

Tabular data should be used for quick reference only. See performance curves for accurate pump selection. Series HDA pumps are available in single and dual head configurations. This performance data represents the standard Series HDA with 1800 RPM motor and 13:1 reducer. Contact CheckPoint for additional data.

## Series S



### PUMP CATEGORY

Type: Solenoid Driven Diaphragm  
Control: Cycle Speed 1 - 125 SPM  
Stroke Length 10 - 100%

### FLOW RATE

0.0 - 1.25 USG/H (0.0 - 4.73 L/H)

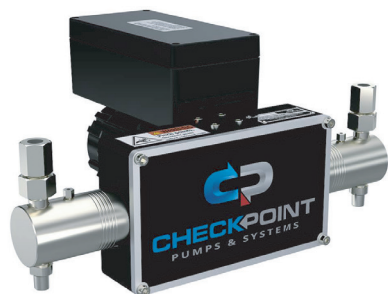
### PRESSURE

0 - 250 PSIG (0 - 17.24 BARG)

SERIES S MODEL	FLOW RATE (MAXIMUM) USG/H (L/H)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	HEAD MATERIAL	CHECK VALVE	SEAL MATERIAL	POWER INPUT
S1X072PCTA10	0.71 (2.69)	250 (17.24)	PVDF	Ceramic Ball	Teflon	120VAC 50/60 Hz USA Plug
S1X072SSTA10	0.71 (2.69)	250 (17.24)	SS316	SS316 Ball	Teflon	120VAC 50/60 Hz USA Plug

For other models, options, or additional accessories, contact CheckPoint.  
Suction and discharge connections: 1/4" MNPT  
Dimensions L x W x H: 10.6 x 4.13 x 7.5 in (269 x 105 x 191 mm)  
Approx. Weight: 10.0 lb (4.54 kg)

## Series ATP



### PUMP CATEGORY

Type: Electric  
Control: Stroke Length Adjustment and Motor Speed<sup>1</sup>  
Stroke: 0 to 100%

### POWER OPTIONS

12 VDC (Solar) or 120 VAC/60 Hz/1-Phase

### FLOW RATE

0.0 - 60.0 USG/D (0.0 - 227.1 L/D)

### PRESSURE

0 - 4,000 PSIG (0 - 275.8 BARG)



MODEL	MOTOR TYPE	FLOW RATE (MINIMUM) USG/D (L/D)	FLOW RATE (MAXIMUM) USG/D (L/D)	WORKING PRESSURE (MAXIMUM) PSIG (BARG)	PLUNGER DIAMETER IN (MM)	SUCTION CONNECTION	DISCHARGE CONNECTION
ATP 1/4"	12VDC	0.0 (0.0)	13.7 (51.9)	4,000 (276)	1/4 (6.4)	1/4" MNPT	1/4" FNPT
ATP 1/4"	120VAC	0.0 (0.0)	12.9 (48.8)	4,000 (276)	1/4 (6.4)	1/4" MNPT	1/4" FNPT
ATP 3/8"	12VDC	0.0 (0.0)	33.5 (126.9)	1,800 (124)	3/8 (9.5)	1/4" MNPT	1/4" FNPT
ATP 3/8"	120VAC	0.0 (0.0)	31.5 (119.2)	1,800 (124)	3/8 (9.5)	1/4" MNPT	1/4" FNPT
ATP 1/2"	12VDC	0.0 (0.0)	60.0 (227.1)	1,000 (69)	1/2 (12.7)	1/4" MNPT	1/4" FNPT
ATP 1/2"	120VAC	0.0 (0.0)	56.4 (213.5)	1,000 (69)	1/2 (12.7)	1/4" MNPT	1/4" FNPT

CONFIGURATION	DIMENSIONS	WEIGHT LB (KG)
1-HEAD PUMP	12.0 (304) X 10.4 (265) X 8.0 (203)	13 (6)
1-HEAD PUMP + STAND	20.0 (509) X 15.3 (384) X 26.4 (671)	16 (7)
2-HEAD PUMP	15.1 (384) X 10.4 (265) X 8.0 (203)	17 (8)
2-HEAD PUMP + STAND	20.0 (509) X 15.1 (384) X 26.4 (671)	20 (9)

Flow rates shown are per head. Any plunger combination is available for the 2-head Series ATP.  
Motor Type 12VDC = Variable Speed 6-67 RPM Motor, Class 1 Division 2  
Motor Type 120VAC = 1-Phase/60Hz Fixed Speed Motor, Class 1 Division 2  
Flow data shown is a general overview. Refer to the flow curves for more specific information to size pumps.  
<sup>1</sup>Dependent on motor selection

## Solar Power Systems

CheckPoint offers a number of solar power options, including battery boxes, panel mounts, and tripod stands. The battery boxes and panel mounts can accompany a ground mount or a pole mount, and the tripod stand is a freestanding mount for panels and batteries.

### GROUND MOUNT



### TRIPOD STAND

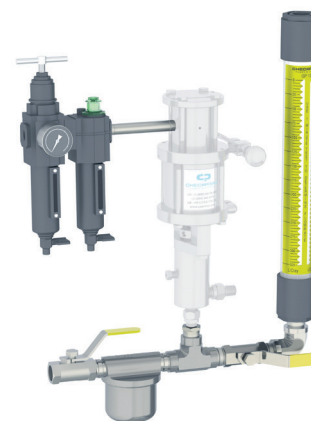


### POLE MOUNT



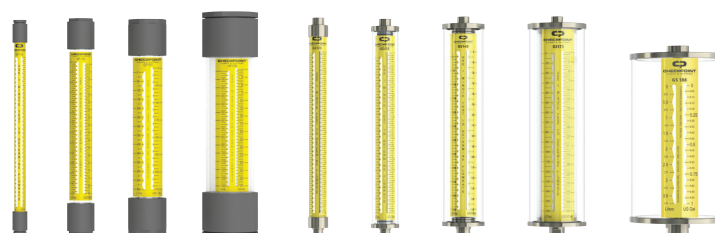
## INSTALLATION KIT

- Includes pump components, fittings, and ball valves
- Guarantees safe and effective pump installation
- Quikclamp™ connections and quick-release bayonet bowl
- Lubricator flow sensor provides constant oil/air ratio
- Lubricator sight-feed dome offers 360° visibility
- Regulator-balanced valve minimizes effects of inlet pressure variation on outlet pressure
- Contains CheckPoint ST Chemical Filter, CheckRate GS Calibration Gauge, 316 SS ball valves, fittings, and 1 pint of Kilfrost



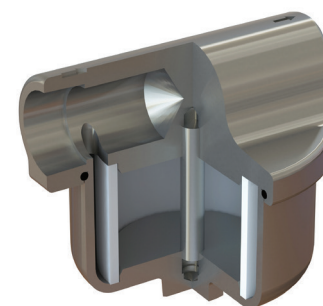
## CALIBRATION GAUGES

- Constructed with mandrel-formed glass
- Internal diameter accuracy of 0.001 in (0.025 mm)
- Volumetric accuracy within 1%
- Borosilicate glass and 316L SS wetted components sealed with FKM O-rings eliminate creep deformation
- Internal tensioning bar/seal system ensures minimal leakage, even in extreme weather conditions
- UV-stabilized and chemically resistant PVC shield reduces cracking and yellowing in harsh offshore conditions
- Highly visible decal is easy to read and fully protected by PVC shield
- All GS Calibration Gauges are available in PVC
- Calibration certificates available upon request



## CHEMICAL FILTER

- Utilizes filtration qualities found in high-pressure filters
- Increased system protection
- Housed in 316L SS
- Chemically inert element available in 316L SS and UHMWP
- Tighter filtration (as little as 40 microns) due to large surface area of filter elements
- Simple flow-through design minimizes pressure drop through the filter, allowing for the bowl to be removed for service with minimal spillage
- Disassembly for maintenance requires no tools
- Low clearance for easy access



## FAILSAFE™ CHECK VALVES

- Patented poppet and seat design
- O-ring can roll away from the seat as it swells, ensuring a bubble-tight seal and avoiding damage
- Grooved body interacts with poppet and O-ring to allow foreign particles to flow through without clogging the check
- 316 SS materials combined with FKM, FFKM, or HNBR O-rings ensure compatibility with almost any chemical
- Check rebuild kits are stocked for expedient handling and delivery, ensuring minimal downtime



\* CheckPoint also offers exotic material construction of pumps and accessories upon request.

## Standard Packages

CheckPoint recommends our “Plug & Play” injection packages as an optimum solution to efficiently and effectively integrate chemical injection into your processes. CheckPoint has engineered, manufactured, and sourced high-quality components which, combined in a package with our pumps, maximize product life and optimize productivity. We also offer custom system design and technical services to meet specialty product requirements. CheckPoint will create a solution that meets your specific chemical injection needs, from concept to completion.

### HIGH-QUALITY COMPONENTS

We are committed to quality in every aspect of our business. Each component of our standard packages has been sourced to optimize the effectiveness and lifetime of the system and to match the quality of the CheckPoint pump on the package. Each standard package includes:

- CheckPoint Frame
- CheckPoint Pump
- ST Calibration Gauge
- Y-Strainer
- Pressure Relief Valve (PRV)
- Inline Check Valve
- Regular/Lubricator/Filter (pneumatic packages only)



## Automation

Automation has become a common practice, as companies recognize the benefits of precisely injecting chemical and optimizing personnel resources to reduce overall production costs. CheckPoint is experienced in designing and manufacturing turnkey systems to support this growing need. There are endless possibilities when it comes to monitoring and control schemes and equipment, and CheckPoint can provide a multitude of solutions to fit specific application requirements. The philosophy stays the same, but the equipment to accomplish flow control typically changes based on drive type.

### DRIVE TYPES

- Pneumatic
- Electric (AC)
- Solar (DC)

### CONTROL DEVICE

- Ready to tie into client DCS
- Local PLC

### TANK LEVEL MONITOR

- Turn pump off if below preset to avoid run dry damage
- Alarm for refill

### PRESSURE SENSOR

- Pump off for exceeding high or low presets
- Alarm for safety

### CHEMICAL FLOW METER

- Alarm for no flow
- Alarm for pump maintenance

### CHEMICAL FLOW CONTROL

- Pneumatic: Solenoid valve only for ESD and On/Off cycle time flow OR solenoid for ESD and process control valve for pump speed adjustment
- Electric (AC): Rotary Actuator for Stroke Length OR VFD for Motor Speed
- Solar (DC): Cycle time power to fixed speed motor OR analog signal to variable speed motor
  - Increase or decrease flow rate
  - Couple with Chemical Flow Meter to meet target, Proportional flow

### COMBINE CHEMICAL FLOW METER + CONTROL

- Maintain a target flow rate (closed loop)
- Maintain a target ppm ratio with a process flow meter (proportional closed loop)



Dual FXA auto-ready injection package with 250 Gallon SS316 tote tank with level monitor, Class 1, Div 1.  
Final destination: U.A.E



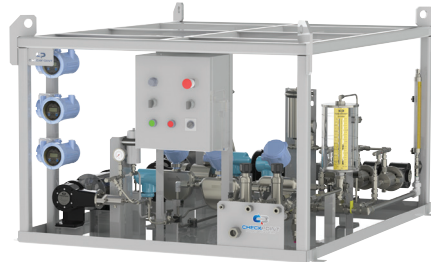
Dual pump pneumatic 1250 sodium hypochlorite injection package with CPVC suction and discharge components and integrated 110 Gallon poly tank.  
Final destination: Kazakhstan



Solar powered dual FXS fully automated injection package with IntellijECT-Lite cellular communications for automated proportional chemical flow with tank level monitor and remote or local flow adjustment.  
Final destination: Permian Basin, TX



Quad pump pneumatic 1250 auto ready injection package remote and local flow control, solenoid valves for emergency shutdown, flow and pressure transmitters, and 550 gallon 316SS tank with level transmitter and 130% containment bund. Three primary pumps, one fully redundant backup (3A + 1B).  
Final destination: Marshall County, WV



Triple pump electric injection package designed for an industry leading process chemical manufacturer containing three different pump technologies to determine the best suited pump style needed to inject typically difficult to pump chemicals.  
Final destination: Trade show/lab use



IntellijECT PLC controlled fully automated portable 8400 high pressure injection package with local, remote and automated flow control with flow, pressure and temperature transmitters, actuated discharge ball valve and fire fuse for emergency shutdown. Class 1, Div 1.  
Final destination: GOM



Pneumatic 1250 sodium hypochlorite injection package with CPVC suction and discharge components and integrated 35 Gallon poly tank (tank not shown in rendering).  
Final destination: Brazil



NACE compliant portable 6212 batch treatment injection package with 2507 tubing and fittings, custom fabricated top mounted 35 gallon SS316 chemical tote tank with level gauge and flame arrester.  
Final destination: GOM floating drill rig



Six pump 1250 injection package with two 275 gallon poly tote tanks with level transmitters, flow switches and emergency shutdown solenoid valves.  
Final destination: Bolivia

## ON-SITE CALLS

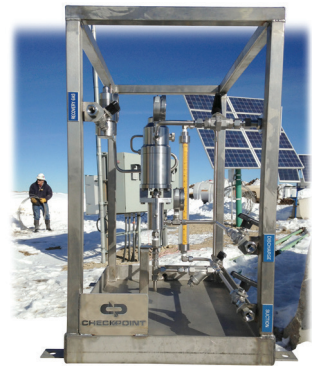
CheckPoint's technicians are always available to conduct on-site surveys, perform maintenance, and answer questions related to pumps, systems, and sites. Our experienced service team will pick up, service, and troubleshoot a variety of brands and types of pumps, such as diaphragm, centrifugal, gear pumps and more. With pride and focus driving our superior service, our team is always prepared to assist our customers with any and all process equipment needs.

## REPAIRS AND RETURNS

CheckPoint will restore any pump back to its factory settings and return it completely refurbished. Our customers can expect a full review and diagnosis, complete with findings. Proactive services are proven to extend the useful life of the pump, system, and process equipment. This complete refurbishment is provided by expert technicians who handle and service OEM parts, pumps, and assemblies every day. CheckPoint's repair process includes honing the cylinder and piston rod, heat-washing all parts, and replacing all seals. With thorough operations and attention to detail, this repair and return program provides a quick, efficient, and complete method of pump service. By allowing the chemical injection experts to overhaul their pumps properly and thoroughly, our customers receive the level of service and expertise that CheckPoint guarantees in every aspect of its business.

## EXCHANGES

CheckPoint recognizes the cost of downtime and has developed a program to ensure expedient service. Our Exchange Program guarantees that a replacement pump will leave our facility within 24 hours of a request. Once our customer receives the exchange pump, the customer simply sends CheckPoint the pump requiring service. CheckPoint only charges for the parts and labor required to bring that pump to its original specifications. This ensures a seamless transition between pumps without any disruption to production and effectively reduces both cost and downtime.



### SHORT NOTICE

Chemical injection systems can be available within 24 hours and can be rented for as long as necessary.



### IDEAL FOR TESTING

Qualify your chemical compatibility before purchasing equipment.



### ELIMINATE CAPITAL EXPENSES

A leased package can be expensed instead of capitalized.



### MAINTENANCE COSTS

All maintenance costs are included in the rental price, so there are no surprise expenses.



### MINIMAL DOWNTIME

Our rental process was designed to efficiently switch out and maintain equipment with minimal production disruption.



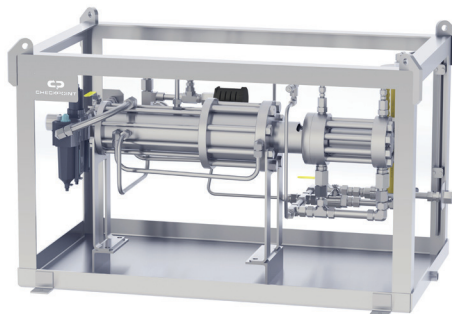
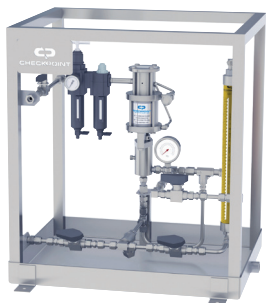
### TECHNICAL ASSISTANCE

CheckPoint will train any personnel on-site to set up and maintain equipment.



### BILLING

Rental charges begin the day our equipment is dispatched from your nearest CheckPoint warehouse and cease on the day our equipment is returned.





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**Authorized CheckPoint Distributors**  
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