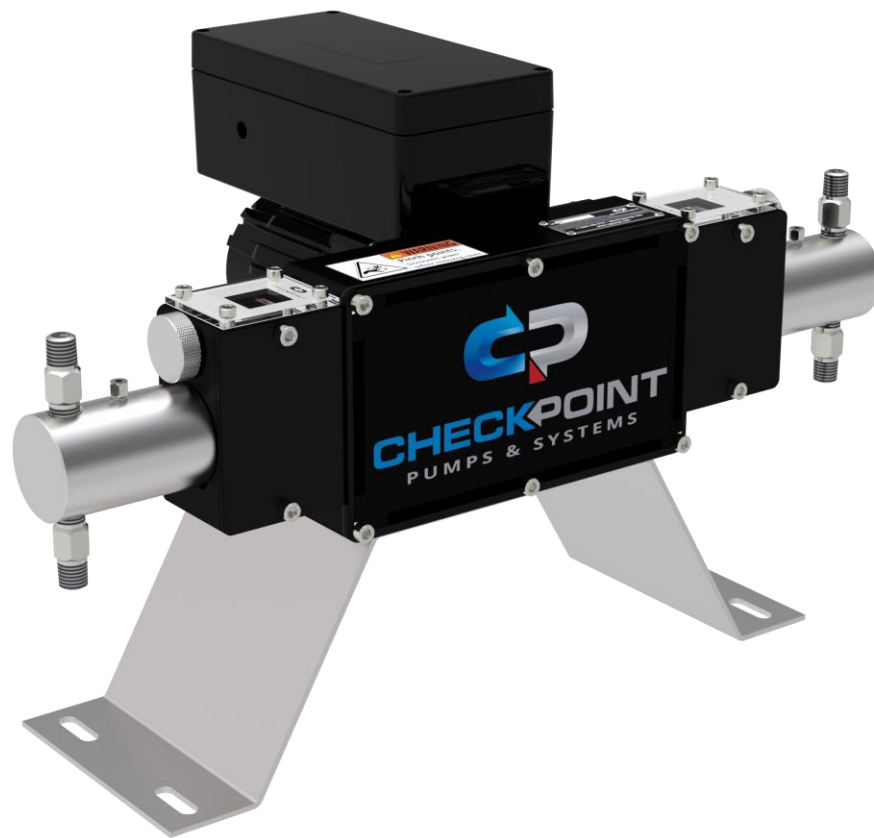


## Series ATP3 Electric Chemical Injection Pump Operating Manual



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This manual covers the installation and operation of CheckPoint Electric motor-driven ATP

**CAUTION:**

- 1. Do not operate pump without reading all of the following information.**
- 2. Follow all local rules, regulations, and safety requirements, and ensure that you are wearing proper PPE at all times.**
- 3. Before troubleshooting the pump, ensure that power is disconnected from the pump according to site protocol.**
- 4. The electric motor must be connected so that its direction of rotation is the same as the arrow on the gearbox. Motor polarity is important. The Pump Drive's input shaft must be turned counterclockwise to prevent premature failure.**

**1. MARKINGS**

Details	ATEX
Product	ATP Pump Assembly
Model	****
Serial Number	****
Hazardous Location Marking	  II 2G  Ex h IIC T3 Gb
Ambient range & Process Temperature range:	Ta: -20°C to +60°C
Ratings	5000PSI  66RPM  Shaft" 5/8"  Max Rod Force: 200lbf/.89kN

Warnings	<p>WARNING - DO NOT OPEN, MAINTAIN, OR SERVICE IN AN AREA WHERE AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT</p> <p>WARNING - THE CLEANING OF THE EQUIPMENT SHALL BE DONE ONLY WITH A DAMP CLOTH</p> <p>REFER TO MANUAL FOR CONDITIONS OF SAFE USE</p>
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## **2. SPECIAL CONDITIONS OF SAFE USE:**

- i. The maximum surface temperature rise has been assigned as T3 (200°C). Any flammable substances with an auto-ignition temperature of less than 200°C must not be used when the equipment is energized.
- ii. It is the responsibility of the end-user that the intended site of operation has been correctly classified in accordance with the ATEX Directive and that the equipment placed into service is compatible with that classification.
- iii. It is the responsibility of the end-user to ensure that an appropriate inspection and maintenance schedule is established to ensure effective operation.
- iv. Only competent, trained operators should use the equipment.
- v. The replaceable components must be identical and meet the same specifications as the replaced ones as per the OEM's recommendation. All the replacement activities shall take place only when the equipment is de-energized AND the area is known to be NON-HAZARDOUS AREA.

## **3. SYSTEM REQUIREMENTS**

### **3.1 Inspection**

Before installation, please inspect the pump carefully. If the pump appears to have sustained damage in transit, call your CheckPoint Authorized Distributor or CheckPoint Customer Service directly at +1 (504) 340-0770 to report and confirm damage. If it is determined that damage occurred in transit, a carrier claim will be required.

### **3.2 Storage**

The ATP pump has been thoroughly tested at the CheckPoint factory prior to shipment. This testing may leave residual fluids in the pump head. Although our pumps can be placed in service without environmental protection, we suggest that they are stored indoors until being commissioned.

### 3.3 Unpacking

The ATP pump can be shipped as a single-head or dual-head pump. Please ensure that unpackaged pumps are securely placed in a safe area. Refer to the CheckPoint Quick Setup Guide for installation of the ATP pump.

### 3.4 Safety

The ATP can produce high rod loads. All CheckPoint pump heads used with the ATP have been designed to eliminate pinch points

3.4.1 For safe and continuous operation, locate the pump with supplied base on a stable and level surface with sufficient access for the operator.

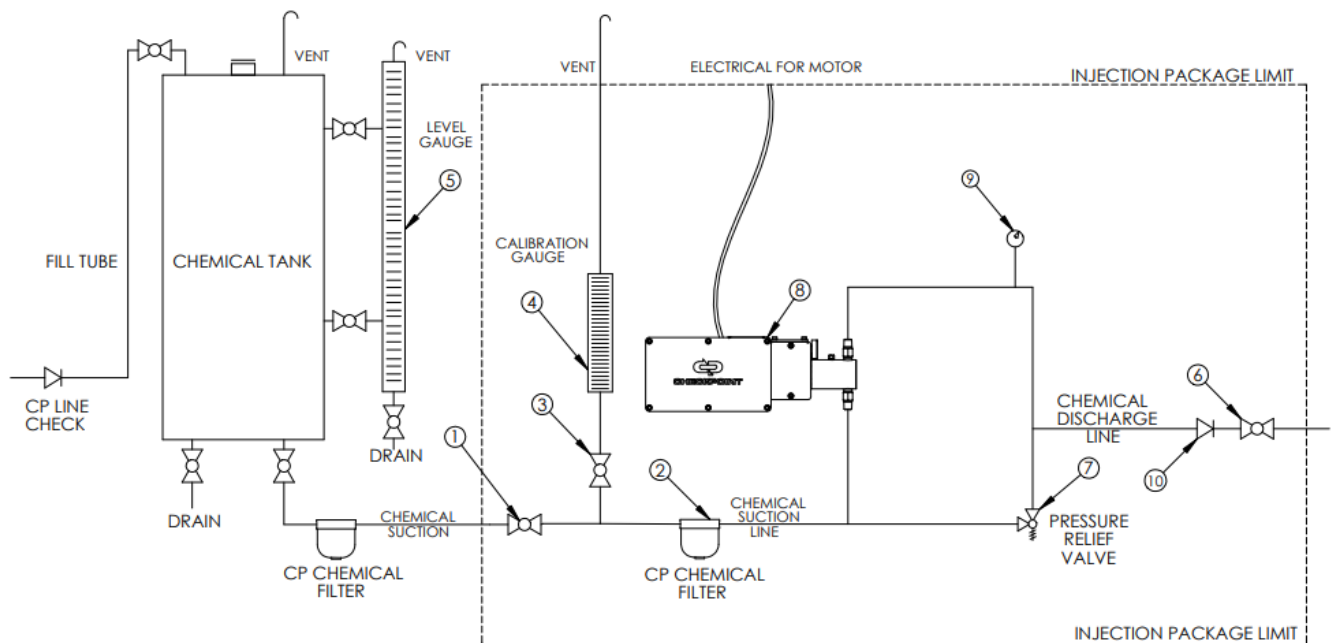
3.4.2 CheckPoint ATP requires horizontal mounting. Improper mounting could result in poor drive performance and difficulty during priming. The ATP base is provided to ensure proper orientation.

3.4.3 The pump may be mounted to a skid or other surface in a number of ways; however, clamping around the outside of the drive is not recommended. Proper mounting techniques increase accessibility during maintenance and troubleshooting.

3.4.4

### 3.5 Typical Installation Schematic

**FIGURE 1: TYPICAL INSTALLATION**





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CheckPoint offers Series ATP pump packages, which contain all necessary components indicated within the Package Limit Line in Figure 1. CheckPoint can also supply pump packages that contain ALL components indicated in Figure 1, including the tank, mounted on a single skid, with or without full leak containment.

- 
- |                                  |                                  |  |                            |
|----------------------------------|----------------------------------|--|----------------------------|
| 1. Suction Line Block Valve      | 4. CheckPoint Calibration Gauge* | 7. PRV – Discharge Lline               | 10. Discharge Check Valve* |
| 2. CheckPoint Chemical Filter*   | 5. Tank Gauge                    | 8. CheckPoint Series ATP Chemical Pump |                            |
| 3. Calibration Gauge Block Valve | 6. Discharge Line Block Valve    | 9. Discharge Pressure Gauge            |                            |
- 

All items in Figure 1 can be purchased from CheckPoint. Call today for our latest prices on pumps, gauges, packages and other components.

\*CheckPoint OEM products

### **3.6 Connect chemical and process lines.**

Always clean suction lines and check chemical containers to ensure that they are free of all foreign matter, sand, sludge, or chemical buildup.

**NOTE:** Even new chemical tanks can contain debris, which may cause system damage. Removing foreign debris from suction lines and chemical containers will substantially extend the life of the High Pressure Seal and other pump components.

**NOTE:** A presuction in-line chemical filter is strongly recommended to prevent early packing failure. Abrasive particles carried into the pump through suction plumbing is a common cause of high pressure seal failure. CheckPoint offers a range of chemical filters suitable for use with the ATP pump.

#### **3.6.1 Suction Check**

The attach point is a ¼" MNPT thread. Apply thread sealant, taking care to keep the sealant away from the inlet port. Sealant entering the check could cause the pump to operate incorrectly.

#### **3.6.2 Discharge Check**

The attach point is a ¼" MNPT thread. Apply thread sealant, taking care to keep the sealant away from the discharge port. Sealant entering the process line could cause issues downstream.

## **4. MOTOR INSTALLATION**

The base model ATP comes with the motor already installed. Should you need to remove the motor for any reason, install per the motor install drawing located on the CP website.

### **4.1 Motor Requirements**

#### **4.1.1 Connect Power**

- Special attention should be paid to motor type and location hazards prior to hookup. The electric motor must be connected in accordance with all local regulations and area classifications and should include overload protection.
- It is recommended that the ATP installation is equipped with an easily accessible "emergency off" switch.



## **5. INJECTION HEAD ASSEMBLY**

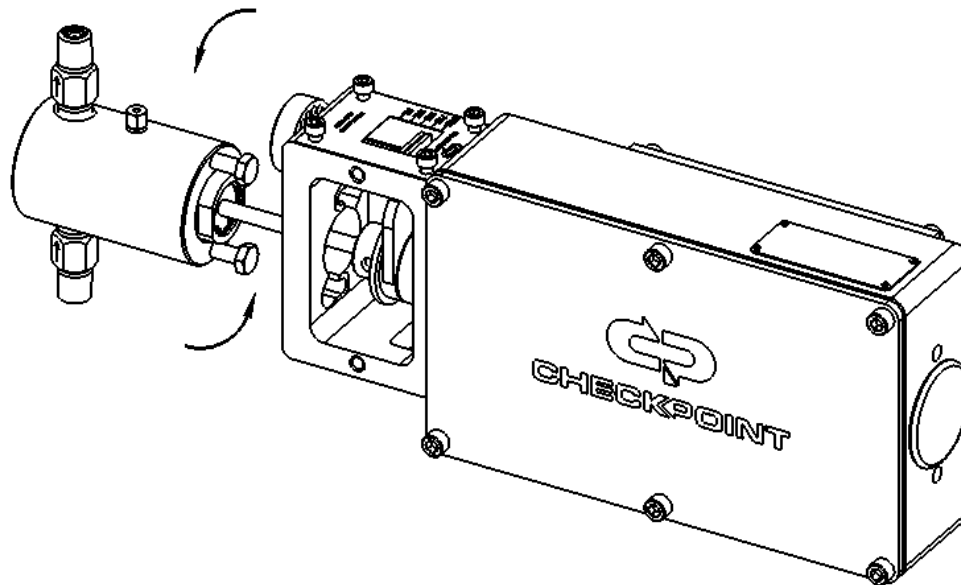
The base-level ATP pump assembly comes with a single head attached to the drive assembly (shown in Figure 2).

### **5.1 Installing the Injection Head Assembly**

To install the injection head assembly, follow the instructions below:

1. Screw in the head bolts until the hex heads are approximately  $\frac{1}{2}$ " from the injection head.
2. Carefully align head assembly onto plunger and corresponding bolt holes in the housing.
3. Gently push the injection head assembly until the bolt heads fully pass through the housing and the injection head assembly is seated against the housing.
4. Turn the injection head assembly clockwise until it stops. The check valves will be vertical when properly installed.
5. If the injection head assembly cannot be turned all the way, loosen the head bolts 1-2 turns and repeat step 4.
6. Tighten the head bolts to 45 in-lbs. Do not over tighten.

**FIGURE 2: INJECTION HEAD ASSEMBLY**



\*Motor and Base Removed for Clarity

## 6. STROKE LENGTH ADJUSTMENT

Both injection heads operate independently and have adjustable stroke lengths between 0" - 0.75".

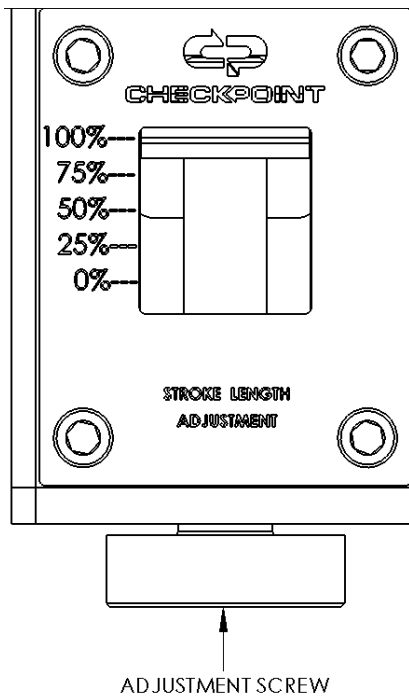
### 6.1 Adjusting the stroke length

Pump Delivery Volume is controlled by adjusting the stroke length. To change the stroke length, the adjustment screw is rotated clockwise for shorter stroke length or counterclockwise for longer stroke length. The adjustment scale on top has indicators for approximate percentage of stroke. Note: These values are only approximate. Depending on plunger size the zero point may vary slightly.

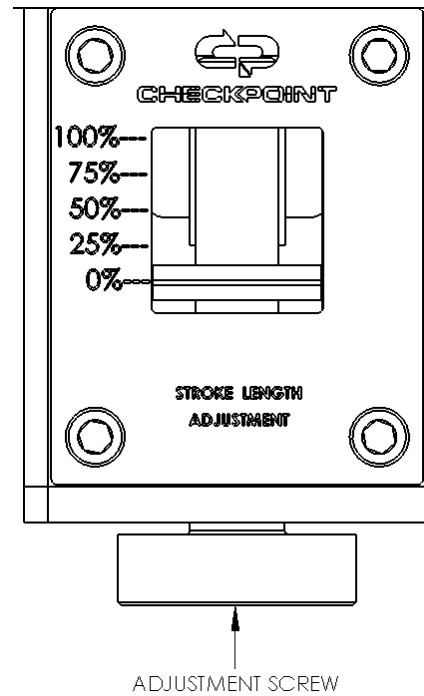
**Max. stroke length (  $\frac{3}{4}$ " )** - Line up the adjustment indicator to the 100% marking for max stroke length

**Min. stroke length (0")** - Line up the adjustment indicator to the 0% marking for minimum stroke length

**FIGURE 3: SHOWN AT 100% STROKE**



**FIGURE 4: SHOWN AT 0% STROKE**



## **7. OPERATION & MAINTENANCE**

The ATP drive requires no additional lubrication. The ATP drive has sufficient grease in the drive assembly prior to shipment.

### **Pump Flow Rate – DC Motor**

- The flow rate is adjusted by changing the motor rpm and by changing the stroke length.

NOTE: Adjusting the motor's rpm during operation will not damage the ATP pump. Refer to your motor manufacturer's manual to determine the effects of adjusting RPM during operation.
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### **Pump Flow Rate – AC Motor**

- The AC motor does not include an integral speed adjustment. The flow rate can only be varied by adjusting the stroke length.

## **7.1 Initial Startup**

7.1.1 Ensure that no leaks are visible prior to startup.

7.1.2 Disconnect the power to the motor.

NOTE: The pump was tested in-house prior to shipping, using water with 5% water-based lubricant. If the residual liquid remaining in the pump from testing could cause issues with the chemical, flush the head prior to use.
---

7.1.3 Open the chemical supply and system pressure valves.

7.1.4 Start the motor.

7.1.5 Bleed the injection head.

7.1.6 Adjust the flow rate.

## **8. TROUBLESHOOTING**

### **8.1 Pump does not stroke**

8.1.1 Check the power to the motor.

8.1.2 Ensure proper motor sizing for the particular application. Contact CheckPoint or your Authorized CheckPoint Distributor for sizing assistance.

8.1.3 Check to see if there is damage to the keyway. A key may have sheared during an overload situation. Inspect all bores and keyways for damage or missing components.

### **8.2 Drive is excessively noisy**

8.2.1 Drive components may be worn.

8.2.2 The motor or gear reducer may be worn. Contact your drive component manufacturer.

### **8.3 Miscellaneous**

If you are experiencing an operating problem not listed above, or if none of the above troubleshooting actions solve your operating problem, please contact your Authorized CheckPoint Distributor, or contact CheckPoint directly at +1 (504) 340-0770 or [HELP@cppumps.com](mailto:HELP@cppumps.com). We will work to assist you in determining the appropriate next steps. Once CheckPoint has had the opportunity to assist you with troubleshooting your problem, please keep in mind the following information regarding repairs.

8.3.1 CheckPoint offers exchange programs to keep you in service.

8.3.2 CheckPoint will ship you a rebuilt pump, which you will be able to install prior to sending us your existing pump. Upon receipt of your pump, we will tear it down, rebuild it, and report to you our findings. We offer a fixed-price exchange plan, an actual-cost plan, and a consigned exchange plan. Please contact CheckPoint to learn more about our unique exchange services.

8.3.3 Although the Series ATP has been designed for easy operation and repair, the best way to ensure continued reliable service is to have your pump repaired by CheckPoint's factory. OEM repair services ensure CheckPoint quality and reliability.

8.3.4 After your CheckPoint pump has been repaired, it should perform like new

8.3.5 If your pump is anything less than exceptional, call us to determine what can be done to restore the pump to "like-new" performance.

8.3.6 Training sessions are available. CheckPoint strives to maintain excellence in all that we do, and we are happy to share our knowledge with you. If you would like to train your employees regarding anything involving CheckPoint Pumps & Systems, please contact us to discuss training options.



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