PULSAFEEDER®

CHEM-TECH

DIAPHRAGM AND PERISTALTIC METERING PUMPS

SIMPLE, RELIABLE, REAL PERFORMANCE

REAL PERFORMANCE
CHEM-TECH

Pulsafeeder simplifies metering pump technology.

Technology is the key to delivering responsible products to the markets that we serve. Leading the way in the development of metering technologies, **Pulsafeeder continues to set the standard for accuracy, reliability and safety.**

Helping customers find a new approach to an old problem is what we do best.

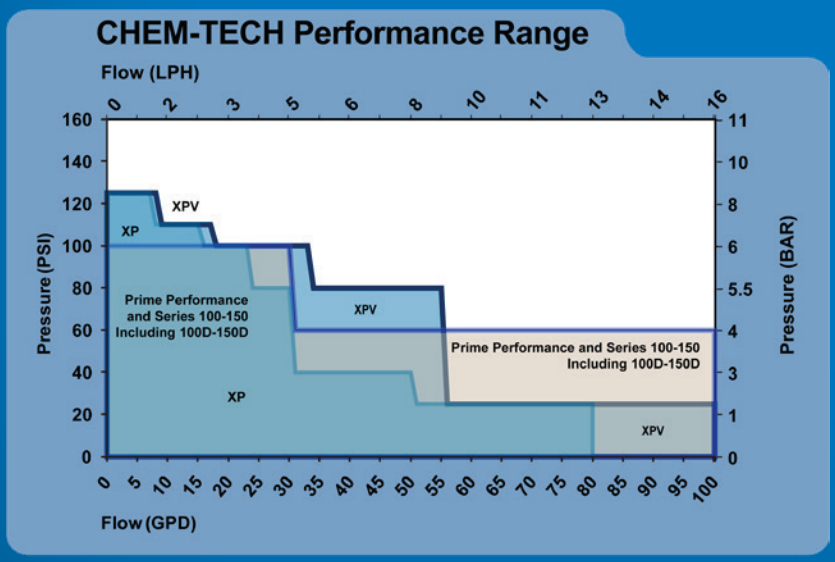
In the water conditioning market the CHEM-TECH product line has addressed the needs of professionals for over 50 years through products that are:

Reliable: Products you can rely on to precisely dose water treatment chemical(s) to meet your needs.

Easy-to-Use: Simple, intuitive products to operate and maintain, with as few parts as possible.

Affordable: True value, including initial purchase, operating costs and maintenance leading up to total cost of ownership benefit.

Long-lasting: Robust, durable components, products and systems designed and manufactured to withstand the conditions of service.



All Chem-Techs are tested and rated under hot conditions guaranteeing that the flow and pressure ratings meet the specifications.

MAKING YOUR LIFE EASY.

Pulsafeeder strives to offer everything necessary for your fluid handling needs. Offering a complete solution to your need of ancillary products that enhance and compliment Pulsafeeder pumps makes life simpler for water treaters.

DIAPHRAGM PUMPS FOR DEPENDABILITY AND EASE OF MAINTENANCE.

Diaphragm metering pumps are respected by professionals around the world for dependability, easy maintenance and versatility in a wide range of water conditioning applications. Fluid Handlers rely on Chem-Tech pumps for an economical, consistent performance.

The key element which differentiates these pumps from other types is the elastomer diaphragm. This diaphragm is sealed against the reagent head forming a seal-less, leak free pumping chamber. The motor is connected to the diaphragm to create the pumping motion. As the diaphragm moves away from the face of the reagent head, it creates a vacuum which closes the discharge check valve and opens the suction check valve, drawing the pumped fluid into the pumping chamber. As the motor forces the diaphragm toward the face of the reagent head, the suction check valve closes and the discharge check valve opens allowing the liquid to flow out the discharge valve.

100 / 150 SERIES

- Feed rates from 3 to 100 gpd (0.47 to 15.76 lph) / Pressures up to 100 psi (7 bar)
- Bleed Valve Assembly: Aids in the priming and relieves pressure from the discharge line
- pH Adjustment Applications: Soda Ash, Caustic

DEGASSING SERIES

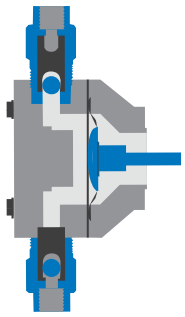
- Feed rates from 15 to 100 gpd (2.34 to 15.76 lph) / Pressures up to 100 psi (7 bar)
- Self priming
- Degass Head Assembly: Top mounted vent valve evacuates gas bubbles for return to the tank to eliminate vapor lock
- Disinfection Applications: Chlorine, Hydrogen Peroxide, Chemicals that tend to out gas

Simple Installation: Injection back pressure valve assembly enables injection at an angle and inhibits siphoning.

ADVANCED FEATURES AND FUNCTIONS TO BETTER SERVE YOUR CUSTOMERS.

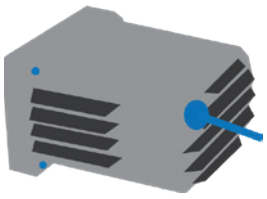
PREMIUM CONSTRUCTION.

- Few moving parts
- Chemical resistant materials: Motor and gear shaft are treated with a special lubricant to extend th life of the pump in normal operating environments
- Sealed gear train: Lowers maintenance and extends the life of the pump
- Feed rate control: The output is fully adjustable over the entire operating range



VISIBLE CHECK BALLS.

- Easy viewing to ensure proper operation on 100 / 150 Series
- Quad ball check system: Ensures accurate and reliable metering performance



MOTOR DRIVEN DIAPHRAGM.

- Cool running
- Long lasting

Features and functions that create a simple to use, reliable, robust diaphragm metering pumps that matter to Fluid Handlers, assisting them in distributing chemical into their system effectively and safely.

PERISTALTIC PUMPS INHERENTLY SELF PRIMING & OFF-GAS TOLERANT.

Peristaltic metering pumps are inherently self priming and off-gas tolerant making the Chem-Tech peristaltic pumps the ideal choice for chlorine and similarly volatile chemical applications. Fluid Handlers can select from multiple control configurations – with features and benefits that customers ask for. Fixed Rate models are simple and straight forward pumps for water conditioning applications where economy and ease-of-use are required. Adjustable Rate models with 20:1 turndown for enhanced flexibility. While the XPV Variable Rate models with LCD display makes simple, intuitive program selections and clearly displays operating parameters. Variable Rate models also allows a variety of choices of input signal types, and onboard timer programs to customize this pump to any application.

The head on a peristaltic pump consists of a piece of tubing and a roller assembly that moves chemical around the circular head. The engineered composite, three piece roller assembly reduces friction, while allowing a greater load capacity and longer tube life.

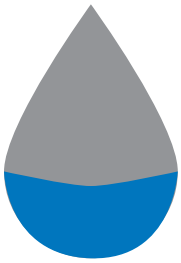
XP SERIES

- Feed rates from 4 to 80 gpd (0.60 to 12.6 lph) / Pressures up to 125 psi (8.6 bar)
- Models: Fixed or Adjustable
- Inputs: Pulse, Dry Contact, Flow Switch Activated
- Timers: 7 Day/8 Event Electronic Timer models

XPV SERIES

- Feed rates from 8 to 100 gpd (1.3 to 15.8 lph) / Pressures up to 125 psi (8.6 bar)
- Variable Speed
- Flow Totalization: Accurately reports the volume pumped at the touch of a button
- Inputs: Fully scalable 4-20 mA, Hall Effect, Contacting Head Water Meter
- Timers: Cycle or Daily

ADVANCED FEATURES AND FUNCTIONS TO BETTER SERVE YOUR CUSTOMERS.



DESIGNED WITH THE WATER CONDITIONER IN MIND.

- Sealed gear train: Rugged, sealed, all metal gears, housed in a sealed metallic housing lowers maintenance and extends the life of the pump
- Metallic gear box with gasket
- Chemical resistant materials: The tubing assembly Norprene is the only wetted component within the pump for maximum compatibility

AUTOMATIC DEGASSING TECHNOLOGY.

- Mixed fluid capable: Peristaltic tube design with triple roller assembly pump both liquid and gas without risk of vapor lock
- Inherently degassing
- Self priming

SIMPLE INSTALLATION.

- Triple roller assembly prevents siphoning and eliminates the need for a foot valve/anti-siphon
- External control capable: Inputs = Fully scalable 4-20mA, Hall effect or Contacting head water meter

Easy tool less tube replacement; Stainless Steel wing bolts allow for quick and easy tube replacement.

PULSAFEEDER®

IDEX

AN ISO 9001 CERTIFIED COMPANY

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CTI001 H24

CHEM-TECH SERIES XP PERISTALTIC METERING PUMPS

The Chem-Tech Series XP with peristaltic technology delivers worry-free dosing in a modern design. Each and every component of the Series XP is designed and manufactured for optimum reliability and durability for REAL Performance.

The electronic timing circuit in the adjustable 'A' Models provides reliable pump control, without relying on mechanical adjustment components that wear out over time.

The intuitive interface and controls provide easy operation and the peristaltic design is virtually maintenance-free.

Tailor-made for the water conditioning market, the Series XP offer affordable solutions in both initial cost and operation.

A rugged gear train and computer-aided peristaltic design ensure long-lasting performance.

Intertek 9700150

Intertek 9700150

Tested and Certified by WQA against NSF/ANSI/CAN 61 & 372.

Chem-Tech Seires XP & XPV Pumps. See www.wqa.org for certification parameters.

FEATURES

- Fixed Models. Simple and straight forward fixed rate pumps for applications where economy and ease-of-use are required.
- Adjustable Models. Electronic timer module provides a 20:1 turndown control for enhanced flexibility.
- Pulse Input Models. Internal timer accepts pulses from a contacting head water meter. Adjustable to run the pumps form .1 to 1 sec., or .2 to 10 sec. per pulse.
- Flow Switch Activated Models. Activated when flow rate through the included ¾" NPT flow switch reaches 1 GPM and deactivated when flow rate is less than 1 GPM.
- Dry Contact Input Models. Activates pump upon closure of a dry contact switch, and deactivates when opened. Pump equipped with a 6' lead for connection to the customer supplied switch.
- Timer Models. 7 Day – 8 Event Electronic Timer.
- Duplex Head Models. Two pump heads to deliver twice the flow, or the rated flow of two different chemicals simultaneously.
- Tubing Materials. Standard Norprene tube material in Low Pressure ratings - extended tube life, High Pressure ratings - meet demanding system requirements. Fluran tubing - greater chemical resistance: contact Technical Service for compatibility.

BENEFITS

- Reliable metering performance.
- Mixed fluid capable. Inherently degassing.
- Extended tube life.
- Rugged, sealed gear train.
- Easy tube change-out.
- Self priming.
- Chemical resistant materials.
- Simple installation

MODEL SELECTION

Model	Flow	Pressure Rating - PSI (BAR)				Tube Size	Speed (RPM)
		Single Head Options			Duplex		
		"H" Tube	"L" Tube	"F" Tube	"L" Tube		
XP004	4 GPD (0.6 LPH)	125 (8.6)	80 (5.5)	60 (4.1)	80 (5.5)	2	30
XP007	7 GPD (1.1 LPH)						50
XP009	9 GPD (1.4 LPH)	110 (7.6)	70 (4.8)	50 (3.4)	70 (4.8)	3	30
XP015	15 GPD (2.4 LPH)						50
XP014	14 GPD (2.3 LPH)	100 (5.9)	50 (3.4)	40 (2.8)	50 (3.4)	4	30
XP023	23 GPD (3.6 LPH)						50
XP030	30 GPD (4.7 LPH)	80 (5.5)	40 (2.8)		40 (2.8)	6	30
XP050	50 GPD (7.9 LPH)						50
XP048	48 GPD (7.5 LPH)		25 (1.7)		25 (1.7)	8	30
XP080	80 GPD (12.6 LPH)						50

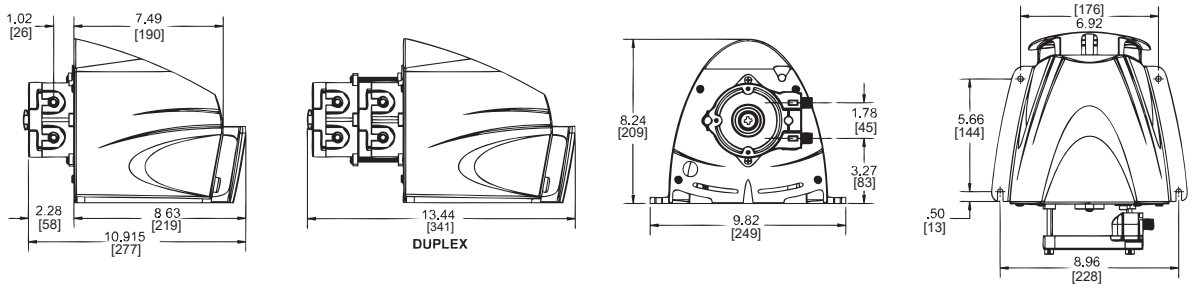
ENGINEERING DATA

Drive	
Fixed Rate	On, Off Only
	Duplex Head
	Dry Contact Input
	Flow Switch Activated
	7 Day - 8 Event Electronic Timer
Adjustable	20:1 Turndown
	Duplex Head
	Dry Contact Input
	Flow Switch Activated
Pulse Input	.1 to 1 Second Timer
	.2 to 10 Second Timer

Tubing	
Norprene Low Pressure	1/4" or 3/8" Tube Fittings
Norprene High Pressure	1/4" or 3/8" Tube Fittings
Fluran	1/4" or 3/8" Tube Fittings (Does not include strainer & Injector accessories)
Viscosity Max CPS	300 CPS
Enclosure	NEMA 3R / IP31 (In Horizontal Position)
Power Input	115 VAC/60 HZ, 1/6 HP
	230 VAC/50/60 HZ*
	230 VAC/60 HZ
Temperature Limitations	104ºF / 40ºC max.
Shipping Weight	8 lbs. / 3.63kg.
Approvals	Conforms to ANSI/NSF61 & 372 ETL and ETL Sanitation

*50 HZ:Rated for intermittent duty only. Continuous duty is not recommended.

DIMENSIONS All dimensions are in inches



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An ISO Certified Company

XP Peristaltic Pump Installation, Operation and Maintenance Manual

Fixed, Adjustable and Pulse Timer Models

XP Adjustable Pump Shown

Tested and Certified by WQA
against NSF/ANSI 61-Section 8.
and CSA B483.1

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1. Introduction

Thank you for your purchase of the Chem-Tech Series XP peristaltic pump from Pulsafeeder. We appreciate your decision to purchase a Pulsafeeder product. Please take this time to become familiar with your pump and the number of accessories that shipped with your product.

The shipping box contains the following items:

1. Peristaltic pump comprising of: (a) pump head and tube assembly, (b) Clear polycarbonate splash guard with locking thumb screw, and (c) Snap-on rear splash guard (this can be found in the sealed bag that shipped with the product).
2. Instruction Manual.
3. Factory replacement tube
4. Suction and Discharge tubing set (15-feet of 1/4-inch or 3/8-inch OD Polyethylene Tubing).
5. Injector Valve
6. Strainer w/ Ceramic Weight.

2. Safety Instructions

READ AND UNDERSTAND ALL INSTRUCTIONS PRIOR TO USE. Failure to follow or understand instructions can/may lead to serious injury or death.

- WARNING: Secure chemicals & metering pumps, making them inaccessible to children & pets.
- WARNING: DO NOT PUMP FLAMMABLE LIQUIDS.
- WARNING: To reduce the risk of electrical shock-before maintenance, repair, or moving always disconnect the power to the pump by unplugging from wall outlet.
- WARNING: Do not tamper with, cut the plug or ground lug off the electrical cord. Consult a licensed electrician for proper installation.
- WARNING: Always wear protective clothing, including gloves and safety eye protection, when working on or near chemical metering pumps, consult chemical manufacture for protective equipment recommendations.
- WARNING: Always make sure the voltage on the pump data plate matches the installation voltage before plugging the pump into a wall outlet or hooking up to an electrical supply. If you are unsure, have a licensed electrician inspect and install your pump.
- WARNING: Always depressurize system and drain the chemical prior to installation or maintenance.
- WARNING: Read and fully understand the section on tube replacement. Failure to do so may lead to serious injury.
- WARNING: DO NOT MODIFY PUMP, as this poses a potentially dangerous situation and voids the warranty.
- WARNING: If the injection point is lower than the chemical tank and pump, install an anti-siphon valve.

- WARNING: All pumps are factory tested with water. Remove tubing and thoroughly dry if the chemical being pumped will react with water (for example: sulfuric acid).
- WARNING: Only finger tighten plastic connections (Do not use a wrench).
- WARNING: Consult licensed plumber and electrician before installation to be sure to conform to local codes.
- CAUTION: Inspect tubing regularly for cracking or deterioration and replace as necessary. (Always wear protective clothing and safety eye protection when inspecting tubing.)
- CAUTION: KEEP FINGERS AWAY FROM ROTATING PARTS.
- CAUTION: If the pump is exposed to direct sunlight, use a U.V. resistant tubing.
- CAUTION: Follow directions and warnings provided with the chemical from the chemical manufacturer. The user is responsible for determining the chemical compatibility with the chemical feed pump.
- CAUTION: Consult with local health officials and qualified water conditioning specialists when treating potable water
- CAUTION: For accurate volume output, the pump must be calibrated under all operating conditions.

3. Technical Specifications

Refer to the data plate located on the back of the peristaltic pump. Note that the data plate will be located behind the back splash cover if installed. Please make note of the Electrical Rating, Feed Rate and Maximum Pressure of the pump. Use this information to complete the top three lines in Table 1 (below). For example, if the Electrical Rating indicated on the data plate of the pump is 230V/60 Hz fill in the first line of the table below. Keep this information handy for future reference and part replacement.

Figure 1 provides a quick reference for installation dimensional requirements.

Table 1: Technical Specifications

Electrical Rating	
Feed Rate (GPD) Feed Rate (LPH)	
Maximum Pressure (PSI) Maximum Pressure (Bar)	
Maximum Ambient Temperature	$104^{O}F$ $(40^{O}C)$
Pump Safety Rating	ETL,$_{C}$ETL, ETL$_{SAN}$, NSF 50*, NSF 61
Enclosure Rating	NEMA 3R (IP31)
Pump Head	PVC
Pump Head Tubing	Norprene or Fluran
Injection Fitting	PVC
Strainer	Polypropylene
Suction/Discharge Tubing	Polyethylene
Pump Housing	ABS or Polycabonate/PBT/15%GF

**Except 50GPD (7.9 LPH) and 80GPD (12.6 LPH) Feed Rate pumps.*

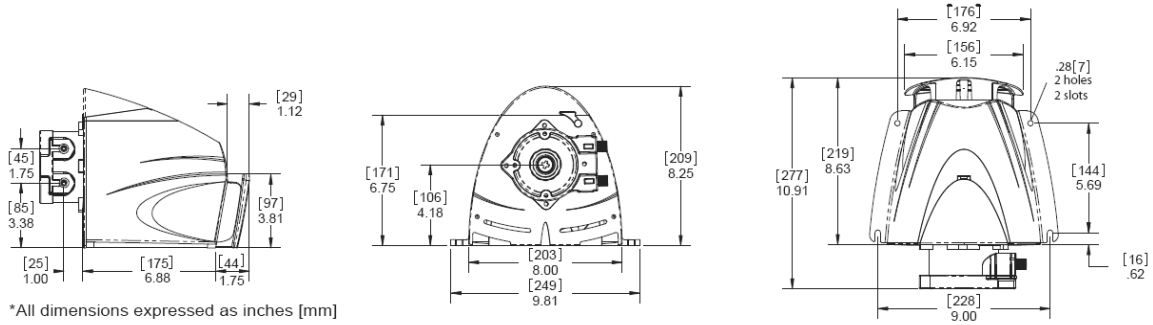


Figure 1: Pump Dimensions

4. Installation

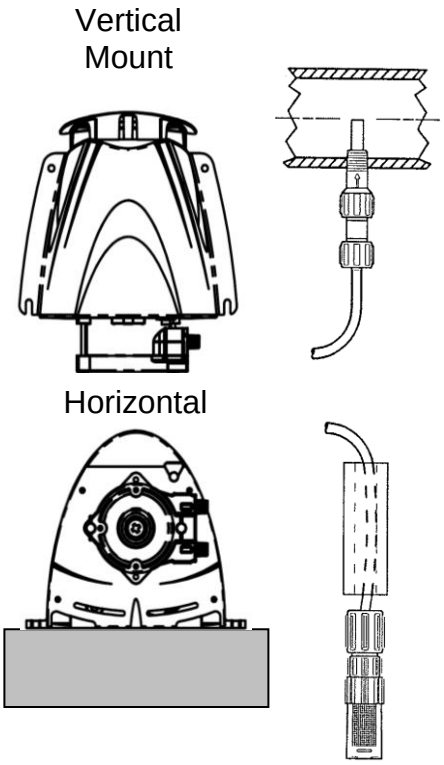


Figure 2: Injector Placement

NOTE: For pumps operating in swimming pool installations the pump is to be supplied by an isolating transformer or through a residual current device (RCD).

1. The pump can be installed either vertically or horizontally (See Figure 2). Make sure to secure the pump on a flat level surface that will support 50-lbs (22kg) and secure with four .25-in (6mm) screws in the holes provided. The guard snaps into the back of the pump via three tangs (See Figure 1). The pump should be mounted with no less than 1.75-in (44mm) of clearance around the venting on both the front and the rear of the pump. Locate the pump so there is direct access to the power cord plug.

The pump is rated for indoor use only. For applications that are subject to splashing make sure the pump is mounted horizontally level with splash guard in place. Vertical mountings require the purchase of optional hood (J63004).

2. Verify the electrical requirements for the pump as listed on the name plate and connect to an appropriate electrical source in compliance with local codes for the specific application.

3. Relieve the system pressure and drain the piping run where the injection fitting is to be installed. See Figure 2 for reference. **The injection fitting must not be installed in a dead end pipe or a deeply recessed tee. It should be installed so as to place the tip at the center of the fluid stream as indicated in Figure 2.** The injection fitting is supplied with .25-in NPT threads. If necessary drill a .44-in (11mm) diameter hole, and using care not to tap to deeply, tap for .25-in NPT.

4. Apply pipe tape to the injection fitting threads and install into piping system. **Do not remove the plastic sleeve on the tip of the fitting; it is a functional part** (See Figure 4)**.**
CAUTION: Inspect the piping system and eliminate piping cross-connections to prevent feeding chemical to areas not needing treatment.

To install tubing remove the compression fitting's coupling nut and slide onto tubing. Place tubing onto fitting and hand tighten the coupling nut. NOTE: Immerse tubing in hot water to soften prior to pushing on to fitting. **Hand-tighten only, do not use wrenches.**

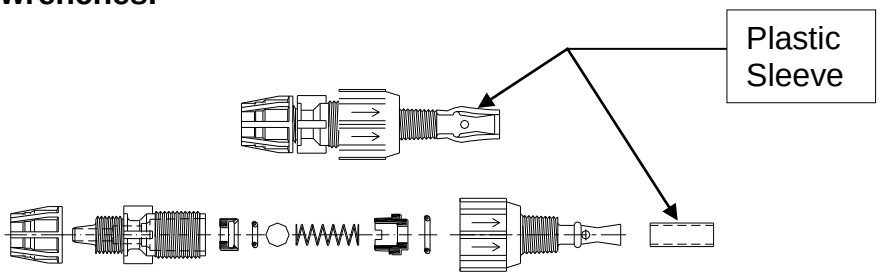


Figure 4: Injector valve

5. Referring to Figure 5, slide ceramic strainer weight on suction tubing first, then remove the coupling nut from the strainer and slide onto tubing. Next, push the end of the tubing onto the strainer and hand tighten the coupling nut. Hand-tighten only, do not use wrenches. **Note: Immerse tubing in hot water to soften prior to pushing on fitting.**

6. Install the strainer so it is off the bottom of the chemical container 1 to 2-inches (25-50mm) and measure suction tubing length required. Cut tubing ends square and install on suction fitting of the pump. Hand-tighten only, do not use wrenches.

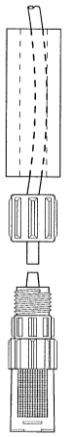


Figure 5: Ceramic-Weighted Strainer

5. Operation

WARNING: Always make sure the voltage on the pump data plate matches the installation voltage before plugging the pump into a wall outlet or hooking up to an electrical supply. If you are unsure, have a licensed electrician inspect and install your pump.

5.1. Fixed and Adjustable Speed Pumps

CAUTION: Before plugging your pump into a wall outlet, take a moment and locate the control panel of your pump. The control panel is located on top of the pump underneath a removable clear polycarbonate rain guard. A simple thumb screw secures the rain guard to the pump; its removal allows access to the control panel. Both fixed and adjustable speed pumps are equipped with a 3-position rocker switch mounted in the center of the control panel. Verify the switch in is the neutral or off-position before plugging your pump into a wall receptacle. (see Figure 6) Note that the image shown is for the Adjustable pump, the Fixed-Speed pump comes with the 3-way rocker switch, only.

As previously mentioned, the rocker switch has three positions. The off-position is the middle or neutral position of the switch. The switch also provides a momentary-on function. By depressing and holding the switch toward the pump head (100%), the pump becomes energized. Upon releasing the switch, the rocker returns to the neutral, or off-position and pump operation ceases. This function is very useful when priming and/or replacing worn tubing in the pump.

To turn the pump on, depress the rocker switch away from the pump head (switch position “|”). The switch locks in place and the pump becomes energized – see Figure 6 for specific functions. To turn the pump off (switch position “O”), return the rocker switch to the middle or neutral position.

5.2. Adjustable Rate Pumps

If you purchased a pump with the adjustable feed-rate option, the control panel on your pump includes a control knob that adjusts the pump on/off cycle time. Rates are infinitely adjustable from 5% to 100% -- see Figure 6 for an illustration.

CAUTION: DO NOT USE THE CONTROL KNOB SET TO 0% TO TURN THE PUMP OFF: ALWAYS TURN THE PUMP OFF AT THE ROCKER SWITCH.

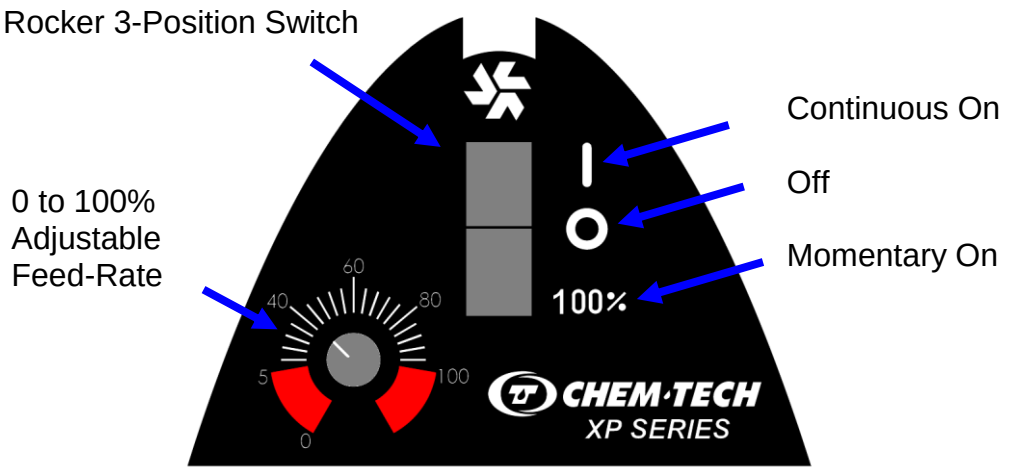
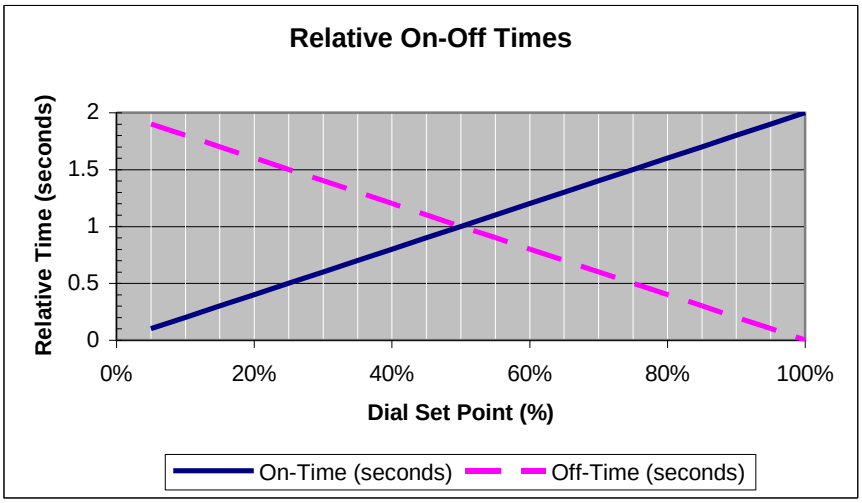


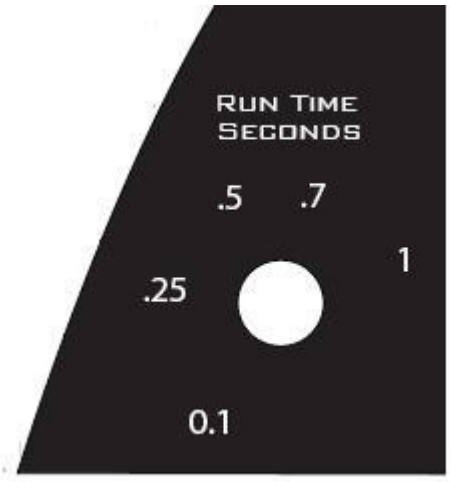
Figure 6: Adjustable Feed-Rate Pump Control Panel (Note Fixed Speed only has 3-Way Rocker Switch)

The cycle time is 2 seconds and the adjustment dial provides the setting percentage as the amount of time that the pump is on in each 2 second cycle. For example, a dial setting of 5% provides a 0.10-second on-time (0.05 X 2) and corresponding 1.90-second off-time (2 – 0.10). Conversely a setting of 95% provides a 1.90-second on-time (0.95*2) and corresponding 0.10-second (2 – 0.10) off-time. The graph below provides a convenient reference for all dial settings in terms of on and off-times.



Note that the momentary “On” (100% switch position) by-passes the adjustable timer setting of the pump, causing the pump to run continuously regardless of the timer percentage setting. When released the switch returns to the “Off” position (O).

5.3. Pulse Timer Pumps



If the pump was purchased with the pulse timer mode the pumps rate control knob will adjust the pumps run time per pulse input received. The timer does not accumulate pulses that are received during the run time. Available pulse timers are 0.1 to 1 second, 0.2 to 10 seconds and 1.2 to 60 seconds.

The pump is also provided with a 10 foot (3 meter) signal cable with two bare leads. The input is a dry contact, compatible with contacting head type water meters and the input has no polarity. No voltage is permitted on the input signal.

5.4. Dry Contact Input Pumps

If the pump was purchased with the Dry Contact Input mode, the pump will be activated and deactivated by this dry contact input. The pump is provided with a 10 foot (3 meters) signal cable with two bare leads. The input is a dry contact, intended to be connected to a dry contact switch, and the input has no polarity. No voltage is permitted on the input signal. The pump will activate and run for the full time that the switch is closed, and deactivate when the switch opens.

5.5. General Operation

DANGER: DO NOT ATTEMPT TO FEED CHEMICALS WITHOUT FIRST CONSULTING YOUR CHEMICAL FEEDER DEALER OR CHEMICAL SUPPLIER. To avoid running out of chemical, follow a regular schedule of monitoring chemical supply.

CAUTION: Inspect peristaltic tubing frequently and replace when deterioration becomes apparent. Peristaltic tubing will eventually wear and break if neglected. This occurrence will cause chemical spillage and a potential for personal injury or damage to equipment. Always refer to chemical manufacturers recommendations with regards to safety and handling of hazardous or corrosive chemicals. Always wear protective clothing and safety glasses when working near chemical feed systems.

WARNING: Do not expose the pump or tubing to pressure exceeding the pressure rating on the pump nameplate.

1. Make sure the rocker switch is in the off/neutral position...
2. Fill the chemical tank with the chemical to be fed.

3. Depress and hold the Momentary-On (100%) button until the chemical is present in the discharge line up to the injection point.
4. If the pump is an adjustable model rotate the percentage knob to the desired feed-rate setting. Turn the rocker switch to the continuous-On position.

6. Maintenance

NOTE: It is recommended that volume output be measured at initial start-up, at every tube change, and after every 250-hours of operation. Use the flow rate stated on your data label as a guide. More critical applications may require more frequent verification.

NOTE: NO USER SERVICEABLE COMPONENTS ARE INSIDE THE ENCLOSURE. IF THE POWER SUPPLY CORD BECOMES DAMAGED, IT MUST BE REPLACED BY PULSAFEEDER, ITS REPRESENTATIVE, OR A SIMILARLY QUALIFIED TECHNICIAN IN ORDER TO AVOID A HAZARD.

6.1. Tubing Assembly Removal

Always wear protective clothing and safety glasses when working on the chemical pump and refer to the chemical manufacturers' safety precautions.

1. Remove the power to the pump and place the rocker switch in the Off ("O") position.

2. Relieve the system pressure and the drain discharge and suction tubing.

3. Loosen coupling nuts and remove the tubing from suction and discharge ports. See figure 7a.

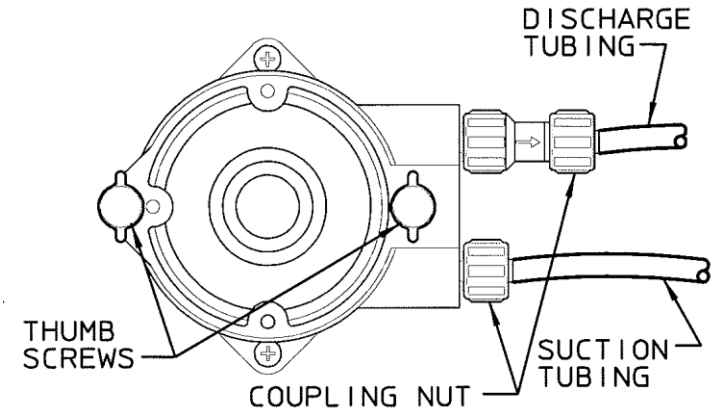


Figure 7a: Pump Head Assembly with Front Cover Attached

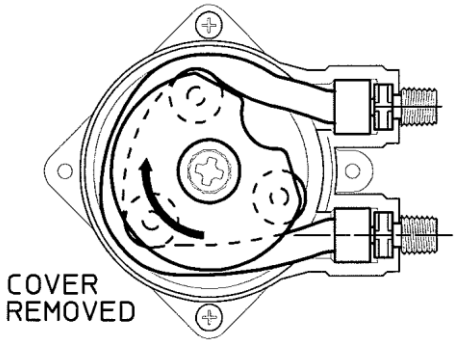


Figure 7b: Pump Head Assembly with Front Cover Removed

4. Remove the two thumb screws holding on the pump head cover and remove - See figure 7b above.

5. Remove pump head tube assembly by removing both connector fittings and pulling tubing straight out of the pump head. Tubing may retain a small amount of chemical. If the rotor assembly is removed, go to step #8.

6. Remove rotor assembly by pulling straight out of pump head. NOTE bearing lubrication every 500-hours; see section 7.1, “Tubing Assembly Installation and Lubrication”.

7. Clean any tubing debris from the rotor assembly and pump head.

6.2 Tubing Assembly Installation and Lubrication

WARNING: When using the pump to load tubing the rocker switch must be in the Off (“O”) position to prevent accidental motor starting. Caution must be used to keep fingers away from rotating parts.

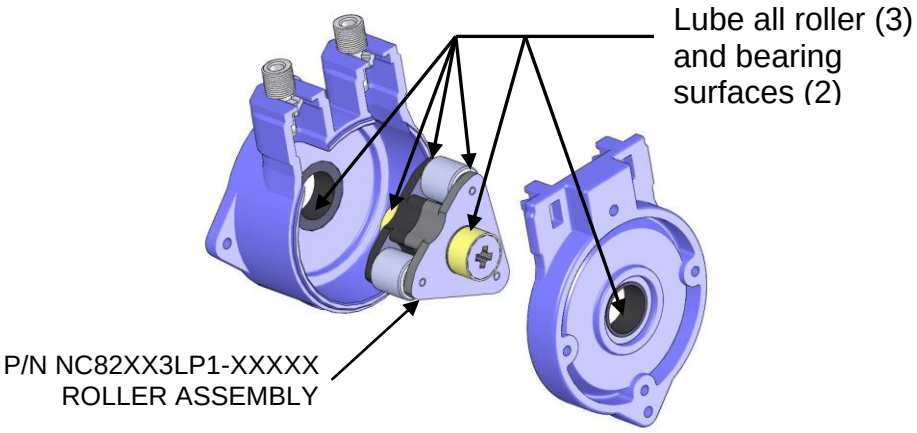


Figure 8: Pump Head w/ Rotor Assembly Removed

NOTE: Lubrication of rotor assembly should be performed at least once a year (residential service). Clean front and rear rotor bearings and surfaces with a clean shop cloth (See head assembly illustration at the end of this manual). Lubricate with a PTFE thickened, medium viscosity, synthetic grease intended for plastic parts. Ref. Grease Kit (P/N J30257) – see Figure 8.

1. Reinstall the rotor assembly by aligning the cross in the rotor to the drive shaft cross and fully insert into pump head.

2. Use the 100% button and align the rotor assembly as shown in Figure 9a.

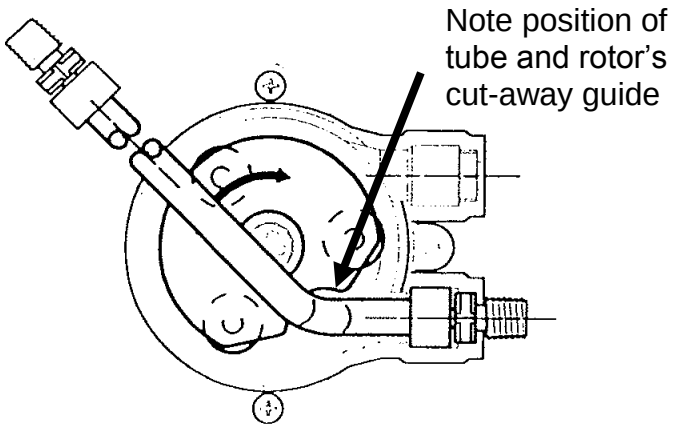
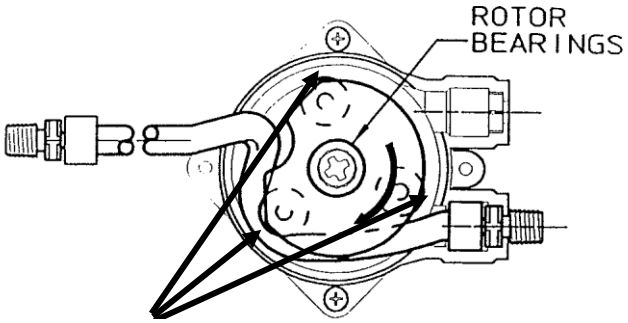


Figure 9a: Rotor Alignment at Start of Tube Installation

3. Insert one connector end of the tubing assembly into the bottom retaining slot in the pump head. Insert the tube through the guide slot in the rotor. Using caution, intermittently depress the 100% button and feed the tube around the pump head as the guide slot rotates. WARNING: **Be very careful not to get any objects (fingers, ties, hair, etc.) close to the rotors and pump head as severe pinch points exist, see Figure 9b. Keep hands and fingers away from the rotor assembly while feeding the new tube.**



WARNING: Note severe pinch points between rollers and pump housing

Figure 9b: Feeding the New Tube

When the rotor is positioned as in Figure 9c, release the 100% button. Insert the other connector into its retaining slot.

4. Align the pump head cover bearing bore with the rotor shaft and press into place.

5. Loosely reinstall the two thumb screws.

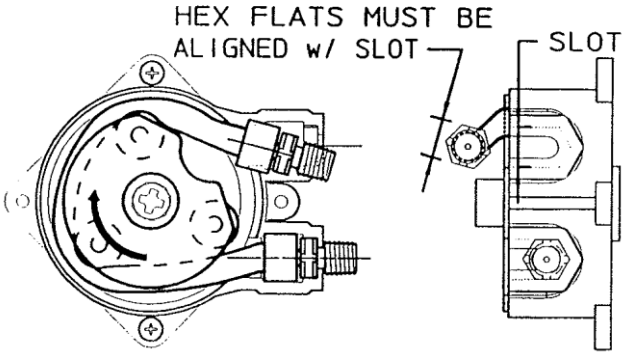


Figure 9c: Finishing the New Tube Installation

6. Using the 100% button, run the pump for several revolutions and then fully tighten the thumb screws hand tight.

7. Return the pump to service by following the procedures in the installation section.

6.3 Pools and Spas

Pumps carrying the “ETL Sanitation” (tested to NSF Standard-50) marks are listed for swimming pools, spas and hot tubs, and when proper materials are selected, are capable of handling but not limited to the following chemical solutions:

12.0% ALUMINUM SULPHATE,	5.0% SODIUM CARBONATE,
2.0% CALCIUM HYPOCHLORITE,	10.0% SODIUM HYDROXIDE,
12.5% SODIUM HYPOCHLORITE,	10.0% HYDROCHLORIC ACID.

To meet the requirements of the “ETL Sanitation Mark” qualification, (1.) Replace the peristaltic tubing (as described above), (2.) Grease the rotor bearing and (3.) Oil the three rotor rollers at intervals of 500-hours operation time (actual running time).

7. Policies and Procedures

7.1 Manufacturers Product Warranty

PULSAFEEDER warrants equipment of its manufacture to be free of defects in material or workmanship. Liability under this policy extends for 24-months from the date of shipment. The manufacturer’s liability is limited to repair or replacement of any failed equipment or part which is proven defective in material or workmanship upon manufacturers’ examination. This warranty does not include removal or installation costs and in no event shall the manufacturers liabilities exceed the selling price of such equipment or part.

The manufacturer disclaims all liability for damage to its products through improper use, installation, maintenance or attempts to operate such products beyond their functional capacity, intentionally or otherwise, or any unauthorized repair. Replaceable elastomeric parts, including peristaltic tubing, are covered for 12 months. The manufacturer is not responsible for consequential or other damages, injuries or expense incurred through the use of its products.

The above warranty is in lieu of any other warranty, either expressed or implied. The manufacturer makes no warranty of fitness or merchantability. No agent of ours is authorized to provide any warranty other than the above.

For warranty and service matters within the European Union, contact the seller or:

Pulsafeeder, Inc
Units 12 and 13, Edison Road
Highfield Industrial Estates
Eastbourne, East Sussex BN23 6PT

7.2 Returns

The Customer Service Department will issue a Return Authorization (RA) number for all returns.

The following information will be required:

1. Billing and a ship-to address.
2. Model and serial number.
3. Contact name and phone number.
4. Reason for return.
5. Purchase order (where applicable).
6. RA number on outside of the carton.
7. Type of chemical that was pumped.

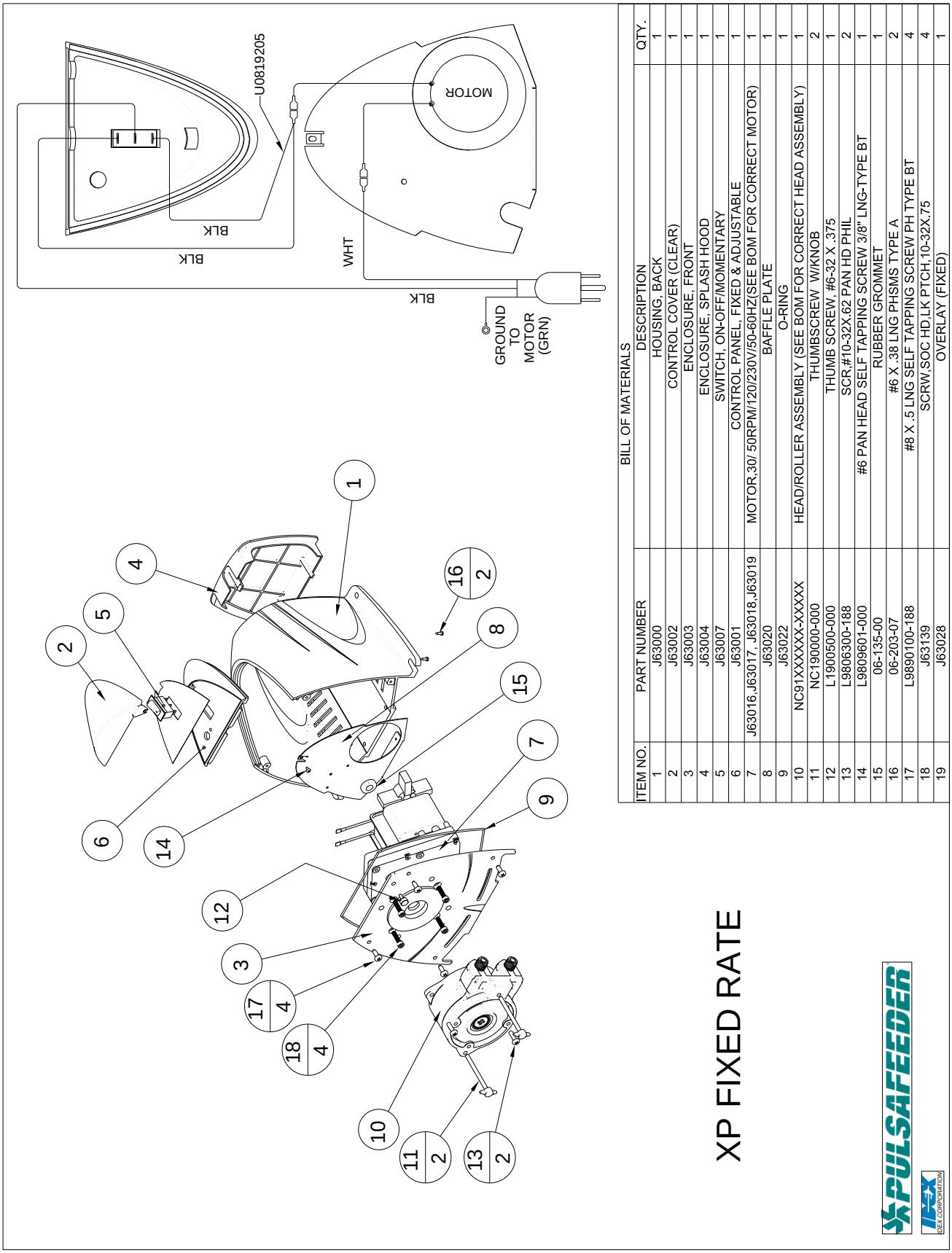
All material must be returned freight prepaid. All merchandise must be properly packaged and free of any corrosive, toxic or otherwise hazardous chemical. All items returned must reference Return Authorization number.

7.3 Credits

No equipment will be accepted beyond six months after date of shipment from the factory. Only unused and undamaged equipment will be accepted for return to stock. All credits are based on acceptance of materials as new and unused by our inspection personnel. A restocking fee will apply. All equipment returned for credit must have a RA number and be returned freight prepaid.

Appendix

7.4 Pump Assembly and Wiring Diagrams



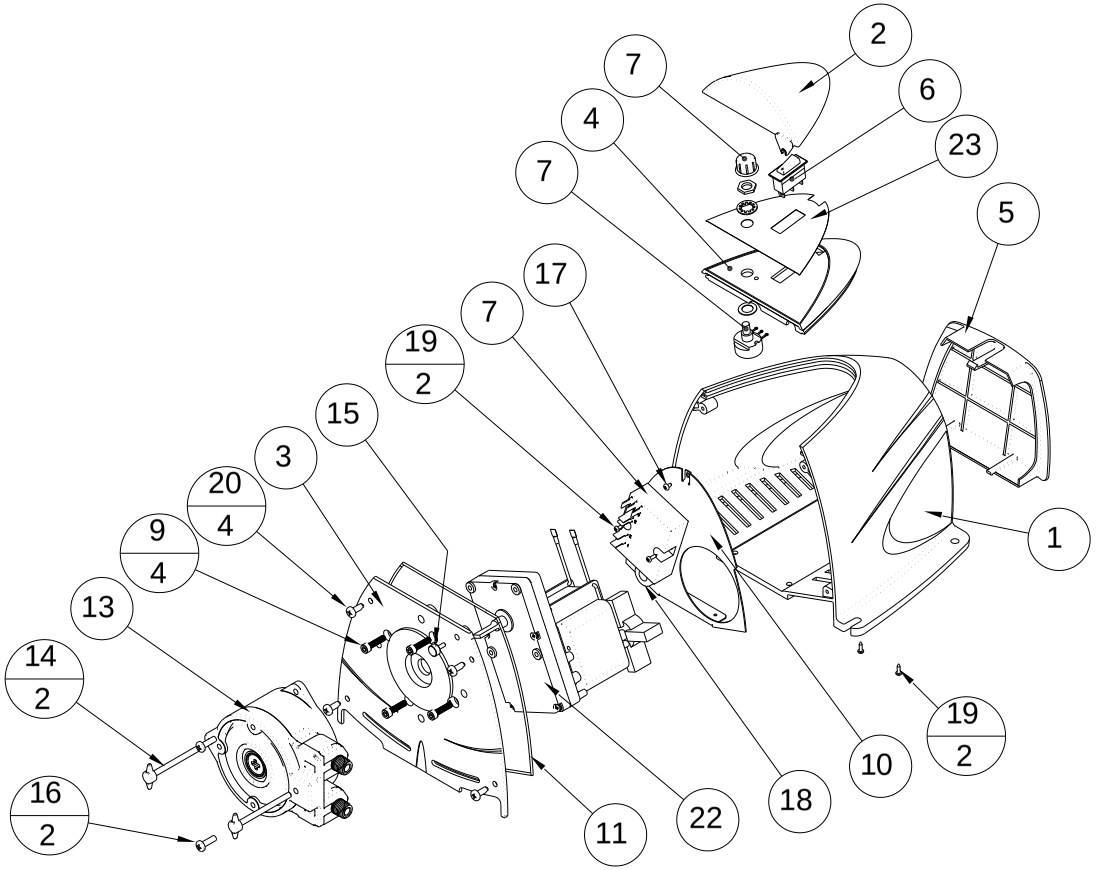
BILL OF MATERIALS

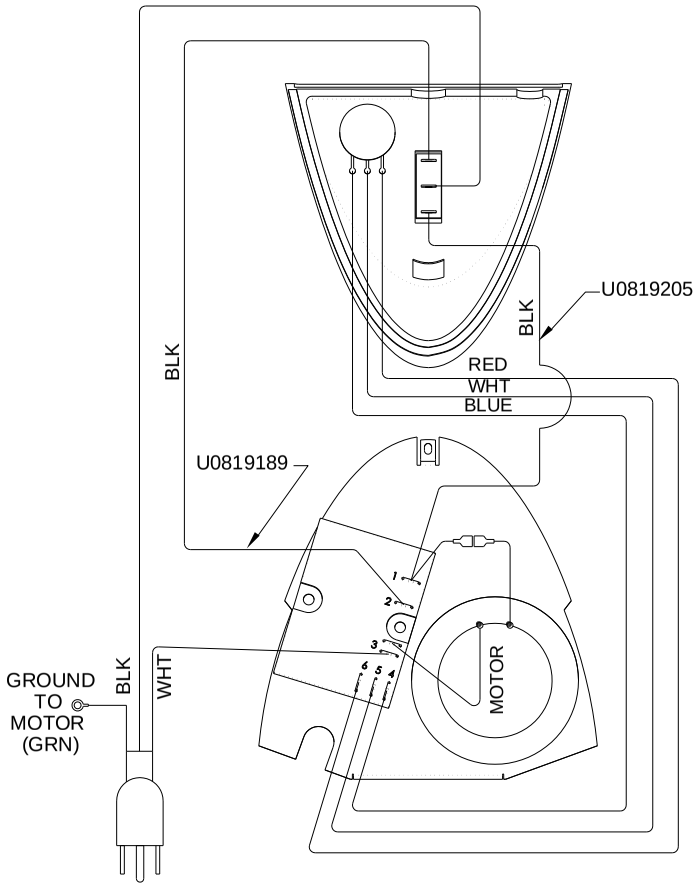
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	J63000	HOUSING, BACK	1
2	J63002	CONTROL COVER (CLEAR)	1
3	J63003	ENCLOSURE, FRONT	1
4	J63004	ENCLOSURE, SPLASH HOOD	1
5	J63007	SWITCH, ON-OFF/MOMENTARY	1
6	J63001	CONTROL PANEL, FIXED & ADJUSTABLE	1
7	J63016,J63017, J63018,J63019	MOTOR,30/ 50RPM//120/230V/50-60HZ(SEE BOM FOR CORRECT MOTOR)	1
8	J63020	BAFFLE PLATE	1
9	J63022	O-RING	1
10	NC91XXXXXX-XXXXX	HEAD/ROLLER ASSEMBLY (SEE BOM FOR CORRECT HEAD ASSEMBLY)	1
11	NC190000-000	THUMBSCREW W/KNOB	2
12	L1900500-000	THUMB SCREW, #6-32 X .375	1
13	L9806300-188	SCR,#10-32X.62 PAN HD PHIL	2
14	L9809601-000	#6 PAN HEAD SELF TAPPING SCREW 3/8" LNG-TYPE BT	1
15	06-135-00	RUBBER GROMMET	1
16	06-203-07	#6 X .38 LNG PHSMS TYPE A	2
17	L9890100-188	#8 X .5 LNG SELF TAPPING SCREW PH TYPE BT	4
18	J63139	SCRW,SOC HD,LK PTCH,10-32X.75	4
19	J63028	OVERLAY (FIXED)	1

XP FIXED RATE

PULSAFEEDER

IDEX CORPORATION



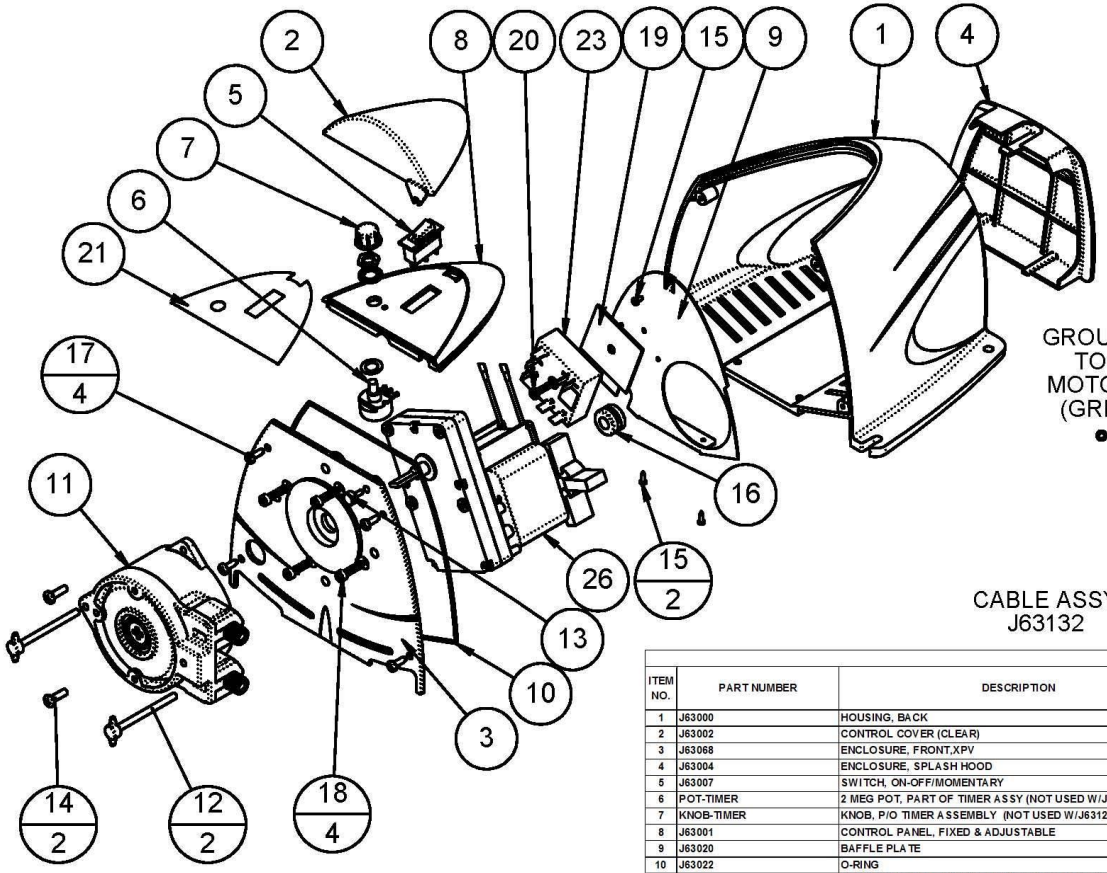


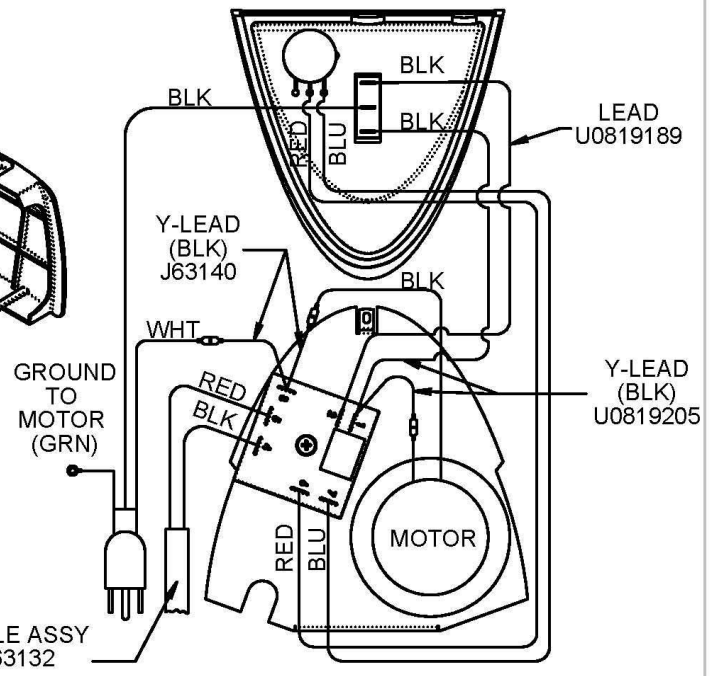
XP ADJUSTABLE

BILL OF MATERIALS			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	J63000	HOUSING, BACK	1
2	J63002	CONTROL COVER (CLEAR)	1
3	J63003	ENCLOSURE, FRONT	1
4	J63001	CONTROL PANEL, FIXED & ADJUSTABLE	1
5	J63004	ENCLOSURE, SPLASH HOOD	1
6	J63007	SWITCH, ON-OFF/MOMENTARY	1
7	J63013	TIMER,SOLID STATE	1
	POTJ63013	2 MEG POT, PART OF TIMER ASSY	
	KNOBJ63013	KNOB	
9	J63139	SCRW,SOC HD,LK PTCH,10-32X.75	4
10	J63020	BAFFLE PLATE	1
11	J63022	O-RING	1
12	J63029	OVERLAY, CONTROL PANEL (ADJUSTABLE)	1
13	NC91XXXXXX-XXXXX	HEAD/ROLLER ASSEMBLY (SEE BOM FOR CORRECT HEAD ASSEMBLY)	1
14	NC190000-000	THUMBSCREW W/KNOB	2
15	L1900500-000	THUMB SCREW, #6-32 X .375	1
16	L9806300-188	SCR,#10-32X.62 PAN HD PHIL	2
17	L9809601-000	#6 PAN HEAD SELF TAPPING SCREW 3/8" LNG-TYPE BT	1
18	06-135-00	RUBBER GROMMET	1
19	06-203-07	#6 X .38 LNG PHSMS TYPE A	4
20	L9890100-188	#8 X .5 LNG SELF TAPPING SCREW PH TYPE BT	4
22	J63016,J63017, J63018,J63019	MOTOR,30/ 50RPM/120/230V/50-60HZ (SEE BOM FOR CORRECT MOTOR)	1
23	J63030	OVERLAY (ADJUSTABLE)	1

PULSAFEEDER

IDEX CORPORATION



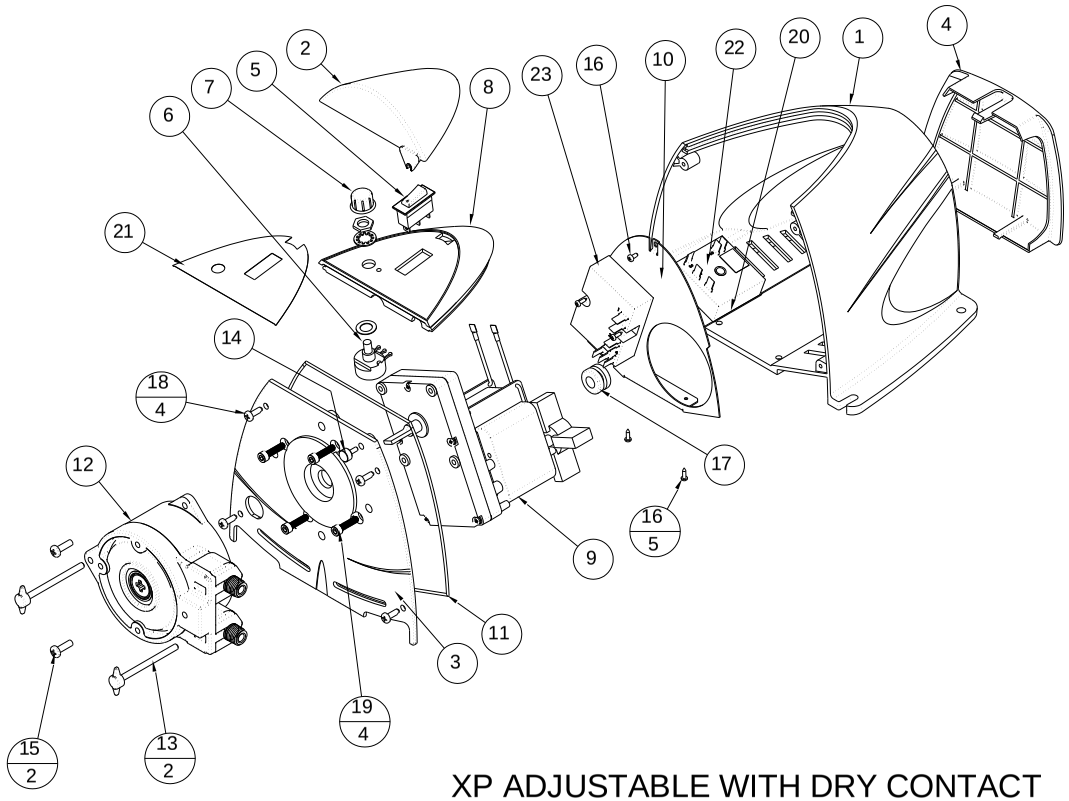


XP PULSE TIMER

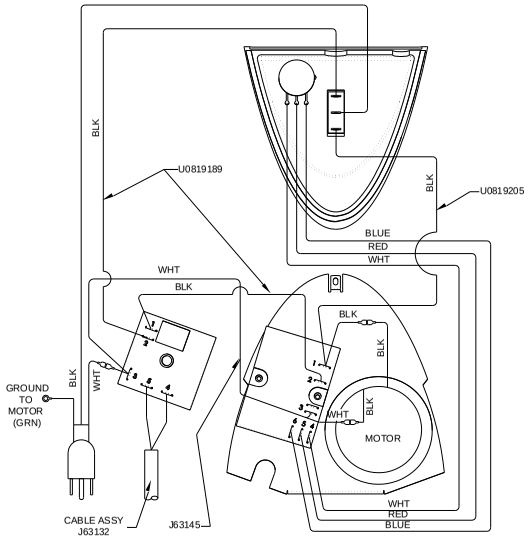
PULSAFEEDER
IDEX CORPORATION

BILL OF MATERIALS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY XPxxxL1xx	QTY XPxxxL2xx	QTY XPxxxL3xx	QTY XPxxxL4xx	QTY XPxxxH1xx XPxxxR1xx	QTY XPxxxH2xx XPxxxR2xx	QTY XPxxxH3xx XPxxxR3xx	QTY XPxxxH4xx XPxxxR4xx
1	J63000	HOUSING, BACK	1	1	1	1	1	1	1	1
2	J63002	CONTROL COVER (CLEAR)	1	1	1	1	1	1	1	1
3	J63068	ENCLOSURE, FRONT,XPV	1							
4	J63004	ENCLOSURE, SPLASH HOOD	1	1	1	1	1	1	1	1
5	J63007	SWITCH, ON-OFF/MOMENTARY	1	1	1	1	1	1	1	1
6	POT-TIMER	2 MEG POT, PART OF TIMER ASSY (NOT USED W/J63127 &J63128)	1	1	1	1	1	1	1	1
7	KNOB-TIMER	KNOB, P/O TIMER ASSEMBLY (NOT USED W/J63127 &J63128)	1	1	1	1	1	1	1	1
8	J63001	CONTROL PANEL, FIXED & ADJUSTABLE	1	1	1	1	1	1	1	1
9	J63020	BAFFLE PLATE	1	1	1	1	1	1	1	1
10	J63022	O-RING	1	1	1	1	1	1	1	1
11	NC91XXXXXX-XXXXX	HEAD/ROLLER ASSEMBLY (SEE BOM FOR CORRECT HEAD ASSEMBLY)	1	1	1	1	1	1	1	1
12	NC190000-000	THUMBSCREW W/KNOB	2	2	2	2	2	2	2	2
13	L1900500-000	THUMB SCREW, #6-32 X .375	1	1	1	1	1	1	1	1
14	L9806300-188	SCR,#10-32X.62 PAN HD PHIL	2	2	2	2	2	2	2	2
15	06-203-07	#6 X .38 LNG PHSMS TYPE A	3	3	3	3	3	3	3	3
16	06-135-00	RUBBER GROMMET	1	1	1	1	1	1	1	1
17	L9809602-188	#8 X .5 LNG SELF TAPPING SCREW PH TYPE BT	4	4	4	4	4	4	4	4
18	J63139	SCRW,SOC HD,LK PTCH,10-32X.75	4	4	4	4	4	4	4	4
19	U0020522.	TAPE, 2"X2"-W DBL STICK FOAM	1	1	1	1	1	1	1	1
20	06-008-26-E	SCR(SST),#8X1.0-LG TYPE-BT PHP	1	1	1	1	1	1	1	1
21	J63028	OVERLAY,CONTROL PANEL,FIXED XP	-	-	-	1	-	-	-	1
	J63131	OVERLAY,XPT,PLS TMR .1-1SEC	1	-	-	-	1	-	-	-
	J63133	OVERLAY,XPT,PLS TMR .1-10SEC	-	1	-	-	-	1	-	-
	J63134	OVERLAY,XPT,PLS TMR 1-60SEC	-	-	1	-	-	-	1	-
23	J63121	TIMER, .1 TO 1 SEC. 115V 10AW/2 MEG OHM POT & KNOB	1	-	-	-	-	-	-	-
	J63122	TIMER, .1 TO 10 SEC. 115V 10AW/2 MEG OHM POT & KNOB	-	1	-	-	-	-	-	-
	J63123	TIMER, .1 TO 1 SEC. 230V 10AW/2 MEG OHM POT & KNOB	-	-	-	-	1	-	-	-
	J63124	TIMER, .1 TO 10 SEC. 230V 10AW/2 MEG OHM POT & KNOB	-	-	-	-	-	1	-	-
	J63125	TIMER, 1 TO 60 SEC. 115V 10AW/2 MEG OHM POT & KNOB	-	-	1	-	-	-	-	-
	J63126	TIMER, 1 TO 60 SEC. 230V 10AW/2 MEG OHM POT & KNOB	-	-	-	-	-	-	1	-
	J63127	TIMER, DRY CONTACT, FIXED 115V 10A (POT & KNOB NOT USED)	-	-	-	1	-	-	-	-
	J63128	TIMER, DRY CONTACT, FIXED 230V 10A (POT & KNOB NOT USED)	-	-	-	-	-	-	-	1
26	J63016,J63017, J63018,J63019	MOTOR,30/ 50RPM/120/230V/50-60HZ(SEE BOM FOR CORRECT MOTOR)	1							



XP ADJUSTABLE WITH DRY CONTACT



7.4 Maintenance Record

Date	Maintenance Performed

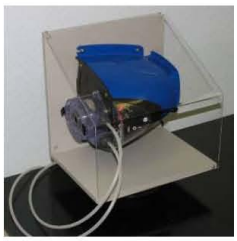
8. PARTS

Chem-Tech XP Series Spare Parts

U8800712 1/4" OD Tubing Injection valve assembly

U8800705 3/8" OD Tubing injection valve assembly

Strainer assembly
J60609 (1/4" Tubing)
J60664 (3/8" Tubing)



J63049 Optional Weather shield.

03-174-02 Injection valve 1/2" MNPT adapter

NC110002-PVC PVC Suction and discharge Coupling Nut, .25 NPT

NC110016-000 Suction and discharge tubing Sleeve, .25 OD Tube

J63004 Rain Shield

U0818286 1/4" OD Suction and discharge tubing 15 feet (4.5m) PE white/translucent

U0818994 1/4" OD Suction and discharge tubing 15 feet (4.5 m) optional, Black/UV resistant

U0810294 3/8" OD Suction and discharge tubing 15 feet (4.5m) PE white/translucent

U0818502 3/8" OD Suction and discharge tubing 15 feet (4.5 m) optional, Black/UV resistant

J63135 3/8" OD tubing adapter from 1/4" FNPT

Keep On Pumping Kits

The KOPkit part number is located behind the rain shield on the pumps data label.

When you need a part, you've got it! A KOPkit can help you cut downtime and put you back in business fast. Use KOPkits also for preventive maintenance, to ensure continuous high performance from your Pulsafeeder metering pump.

Save money too, buying parts in KOPkits instead of ordering individual parts. KOPkits include the pump head, the rotor, new hardware and a replacement tube

PULSAFEEDER® GENUINE PARTS

EC Declaration of Conformity

We, Pulsafeeder Inc., declare under sole responsibility that the Series XP metering pump, to which this declaration relates, is in sole conformity with relevant sections of the applicable EC standards and other normative documents listed on this document. If changes are made to the product which is covered by this declaration of conformity, the declaration of conformity is no longer valid.

- Application of Council Directive: 73/23/EEC and 93/68/EEC

- Standard to Which Conformity is Declared: IEC/EN 60335-2-41