STENNER PUMPS®

PERISTALTIC METERING PUMPS SINCE 1957

# CLASSIC SERIES

## PERISTALTIC METERING PUMPS

## INSTALLATION AND MAINTENANCE MANUAL

**⚠WARNING**

TO BE INSTALLED AND MAINTAINED BY PROPERLY TRAINED PROFESSIONAL INSTALLER ONLY. READ MANUAL & LABELS FOR ALL SAFETY INFORMATION & INSTRUCTIONS.

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IMCL 030221

# WARRANTY AND CUSTOMER SERVICE

## LIMITED WARRANTY

Stenner Pump Company will for a period of one (1) year from the date of purchase (proof of purchase required) repair or replace, at our option, all defective parts. Stenner is not responsible for any removal or installation costs. Pump tube assemblies and rubber components are considered perishable and are not covered in this warranty. Pump tube will be replaced each time a pump is in for service, unless otherwise specified. The cost of the pump tube replacement will be the responsibility of the customer. Stenner will incur shipping costs for warranty products shipped from our factory in Jacksonville, Florida. Any tampering with major components, chemical damage, faulty wiring, weather conditions, water damage, power surges, or products not used with reasonable care and maintained in accordance with the instructions will void the warranty. Stenner limits its liability solely to the cost of the original product. We make no other warranty expressed or implied.

## RETURNS

Stenner offers a 30-day return policy on factory direct purchases. Except as otherwise provided, no merchandise will be accepted for return after 30 days from purchase. To return merchandise at any time, call Stenner at 800.683.2378 for a Return Merchandise Authorization (RMA) number. A 15% re-stocking fee will be applied. Include a copy of your invoice or packing slip with your return.

## DAMAGED OR LOST SHIPMENTS

All truck shipments: Check your order immediately upon arrival. All damage must be noted on the delivery receipt. Call Stenner Customer Service at 800.683.2378 for all shortages and damages within seven (7) days of receipt.

## SERVICE & REPAIRS

Before returning a pump for warranty or repair, remove chemical from pump tube by running water through the tube, and then run the pump dry. Following expiration of the warranty period, Stenner Pump Company will clean and overhaul any Stenner metering pump for a minimum labor charge plus necessary replacement parts and shipping. All metering pumps received for overhaul will be restored to their original condition. The customer will be charged for missing parts unless specific instructions are given. To return merchandise for repair, call Stenner at 800.683.2378 or 904.641.1666 for a Return Merchandise Authorization (RMA) number.

## DISCLAIMER

The information contained in this manual is not intended for specific application purposes. Stenner Pump Company reserves the right to make changes to prices, products, and specifications at any time without prior notice.

## TRADEMARKS

# SAFETY INFORMATION

# IMPORTANT SAFETY INSTRUCTIONS

**When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:**

# READ AND FOLLOW ALL INSTRUCTIONS

**⚠ WARNING Warns about hazards that CAN cause death, serious personal injury, or property damage if ignored.**

**⚠ WARNING ELECTRIC SHOCK HAZARD**

**⚠ WARNING ELECTRIC SHOCK HAZARD**

Pump supplied with grounding power cord and attached plug. To reduce risk of electrical shock, connect only to a properly grounded, grounding type receptacle. Install only on a circuit protected by a Ground-Fault Circuit-Interrupter (GFCI).

**⚠ AVERTISSEMENT DANGER DE CHOC ÉLECTRIQUE**

La pompe est dotée d'un cordon d'alimentation avec mise à la terre muni d'une fiche. Pour réduire le risque de choc électrique, branchez uniquement sur une prise correctement mise à la terre. Installez uniquement sur un circuit protégé par un disjoncteur différentiel.

**DO NOT** alter the power cord or plug end.

**DO NOT** use receptacle adapters.

**DO NOT** use pump with a damaged or altered power cord or plug. Contact the factory or an authorized service facility for repair.

**⚠ WARNING HAZARDOUS VOLTAGE**

**DISCONNECT** power cord before removing motor cover for service. **Electrical service by trained personnel only.**

**⚠ WARNING EXPLOSION HAZARD**

This equipment **IS NOT** explosion proof. **DO NOT** install or operate in an explosive environment.

**⚠ WARNING RISK OF CHEMICAL EXPOSURE**

Potential for chemical burns, fire, explosion, personal injury, or property damage. To reduce risk of exposure, the use of proper personal protective equipment is mandatory.

**⚠ WARNING RISK OF FIRE HAZARD**

**DO NOT** install or operate on any flammable surface.

**⚠ WARNING RISK OF CHEMICAL OVERDOSE**

To reduce risk, follow proper installation methods and recommendations. Check your local codes for additional guidelines.

**⚠ WARNING** To reduce the risk of injury, do not permit children to use this product. This appliance is not to be used by persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction.

# SAFETY INFORMATION continued

⚠ **⚠ CAUTION** **Warns about hazards that WILL or CAN cause minor personal injury or property damage if ignored.**

⚠ **⚠ CAUTION** **PLUMBING**

Chemical feed pump installation must always adhere to your local plumbing codes and requirements. Be sure installation does not constitute a cross connection. Check local plumbing codes for guidelines.

**NOTICE: Indicates special instructions or general mandatory action.**

- This metering pump is portable and designed to be removable from the plumbing system without damage to the connections.
- Before installing or servicing the pump, read the pump manual for all safety information and complete instructions. The pump is designed for installation and service by properly trained personnel.
- Installation of product must adhere to all regulatory and compliance codes applicable to the area.
- This metering pump and its components have been tested for use with the following chemicals: Sodium Hypochlorite (10-15%), Muriatic Acid (20-22 Baume, 31.5% HCl), and Soda Ash.
- Cette pompe de dosage et ses composants ont été testés pour leur compatibilité avec les produits chimiques suivants : hypochlorite de sodium (10 à 15 %), acide chlorhydrique (20 à 22 % Baume, 31,5 % HCl), et carbonate de sodium.
- This metering pump is certified by WQA for use with Water and Sodium Hypochlorite 15%, when using Santoprene® tube material.

⚠ **This is the safety alert symbol. When displayed in this manual or on the equipment, look for one of the following signal words alerting you to the potential for personal injury or property damage.**

- ⚠ **PUMP SUITABLE FOR USE OUTDOORS** when installed with a Stenner Rain Roof Part No. MP90000.
- ⚠ Electrical installation should adhere to all national and local codes. Consult a licensed professional for assistance with proper electrical installation.
- ⚠ Removing power from pool/spa recirculation pump must also remove power from pump.
- ⚠ The use of an auxiliary safety device (not supplied), such as a flow switch or sensor, is recommended to prevent feed pump operation in the event of a recirculation pump failure or if flow is not sensed.
- ⚠ Point of chemical injection should be beyond all pumps, filters, and heaters.
- ⚠ Suitable for indoor and outdoor use.
- ⚠ Adaptée à une utilisation aussi bien à l'intérieur qu'à l'extérieur.

# SAVE THESE INSTRUCTIONS

# FLOW RATE OUTPUTS CLASSIC 45

## Single Head Adjustable – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45MHP2* | 45MJH1 | 100 / 6.9 | 1 | 0.2 | 0.3 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0 |
| 45M1 | 45MJL1 | 25 / 1.7 | | | | | | | | | | | | |
| 45MHP10* | 45MJH2 | 100 / 6.9 | 2 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 |
| 45M2 | 45MJL2 | 25 / 1.7 | | | | | | | | | | | | |
| 45MHP22* | 45MJH7 | 100 / 6.9 | 7 | 1.1 | 2.2 | 4.4 | 6.6 | 8.8 | 11.0 | 13.2 | 15.4 | 17.6 | 19.8 | 22.0 |
| 45M3 | 45MJL3 | 25 / 1.7 | 3 | | | | | | | | | | | |
| 45M4 | 45MJL4 | 25 / 1.7 | 4 | 1.7 | 3.5 | 7.0 | 10.5 | 14.0 | 17.5 | 21.0 | 24.5 | 28.0 | 31.5 | 35.0 |
| 45M5 | 45MJL5 | 25 / 1.7 | 5 | 2.5 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 | 45.0 | 50.0 |

Approximate Outputs @ 60Hz

## Single Head Adjustable – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45MHP2* | 45MJH1 | 100 / 6.9 | 1 | 0.6 | 0.9 | 1.8 | 2.7 | 3.6 | 4.5 | 5.5 | 6.4 | 7.3 | 8.2 | 9.1 |
| 45M1 | 45MJL1 | 25 / 1.7 | | | | | | | | | | | | |
| 45MHP10* | 45MJH2 | 100 / 6.9 | 2 | 1.5 | 3.0 | 6.1 | 9.1 | 12.1 | 15.1 | 18.2 | 21.2 | 24.2 | 27.3 | 30.3 |
| 45M2 | 45MJL2 | 25 / 1.7 | | | | | | | | | | | | |
| 45MHP22* | 45MJH7 | 100 / 6.9 | 7 | 3.3 | 6.6 | 13.3 | 20.0 | 26.6 | 33.3 | 40.0 | 46.6 | 53.3 | 60.0 | 66.6 |
| 45M3 | 45MJL3 | 25 / 1.7 | 3 | | | | | | | | | | | |
| 45M4 | 45MJL4 | 25 / 1.7 | 4 | 5.1 | 10.6 | 21.2 | 31.8 | 42.4 | 53.0 | 63.6 | 74.2 | 84.8 | 95.4 | 106.0 |
| 45M5 | 45MJL5 | 25 / 1.7 | 5 | 7.6 | 15.1 | 30.3 | 45.4 | 60.6 | 75.7 | 90.8 | 106.0 | 121.1 | 136.3 | 151.4 |

Approximate Outputs @ 50Hz

## Single Head Fixed – Gallons & Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | gpd @ 60Hz | lpd @ 50Hz |
|---|---|---|---|---|---|
| 45MPHP2* | 45MFH1 | 100 / 6.9 | 1 | 3.0 | 9.1 |
| 45MP1 | 45MFL1 | 25 / 1.7 | | | |
| 45MPHP10* | 45MFH2 | 100 / 6.9 | 2 | 10.0 | 30.3 |
| 45MP2 | 45MFL2 | 25 / 1.7 | | | |
| 45MPHP22* | 45MFH7 | 100 / 6.9 | 7 | 22.0 | 66.6 |
| 45MP3 | 45MFL3 | 25 / 1.7 | 3 | | |
| 45MP4 | 45MLF4 | 25 / 1.7 | 4 | 35.0 | 106.0 |
| 45MP5 | 45MLF5 | 25 / 1.7 | 5 | 50.0 | 151.4 |

Approximate Outputs @ 60 & 50Hz

* Duckbill check valve is included with pump rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# FLOW RATE OUTPUTS CLASSIC 85

## Single Head Adjustable – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 85MHP5* | 85MJH1 | 100 / 6.9 | 1 | 0.3 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 |
| 85M1 | 85MJL1 | 25 / 1.7 | | | | | | | | | | | | |
| 85MHP17* | 85MJH2 | 100 / 6.9 | 2 | 0.8 | 1.7 | 3.4 | 5.1 | 6.8 | 8.5 | 10.2 | 11.9 | 13.6 | 15.3 | 17.0 |
| 85M2 | 85MJL2 | 25 / 1.7 | | | | | | | | | | | | |
| 85MHP40* | 85MJH7 | 100 / 6.9 | 7 | 2.0 | 4.0 | 8.0 | 12.0 | 16.0 | 20.0 | 24.0 | 28.0 | 32.0 | 36.0 | 40.0 |
| 85M3 | 85MJL3 | 25 / 1.7 | 3 | | | | | | | | | | | |
| 85M4 | 85MJL4 | 25 / 1.7 | 4 | 3.0 | 6.0 | 12.0 | 18.0 | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 |
| 85M5 | 85MJL5 | 25 / 1.7 | 5 | 4.3 | 8.5 | 17.0 | 25.5 | 34.0 | 42.5 | 51.0 | 59.5 | 68.0 | 76.5 | 85.0 |

Approximate Outputs @ 60Hz

## Single Head Adjustable – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 85MHP5* | 85MJH1 | 100 / 6.9 | 1 | 0.9 | 1.5 | 3.0 | 4.5 | 6.1 | 7.6 | 9.1 | 10.6 | 12.1 | 13.6 | 15.1 |
| 85M1 | 85MJL1 | 25 / 1.7 | | | | | | | | | | | | |
| 85MHP17* | 85MJH2 | 100 / 6.9 | 2 | 2.4 | 5.1 | 10.3 | 15.4 | 20.6 | 25.7 | 30.9 | 36.0 | 41.2 | 46.3 | 51.5 |
| 85M2 | 85MJL2 | 25 / 1.7 | | | | | | | | | | | | |
| 85MHP40* | 85MJH7 | 100 / 6.9 | 7 | 6.1 | 12.1 | 24.2 | 36.3 | 48.5 | 60.6 | 76.7 | 84.8 | 96.9 | 109.0 | 121.1 |
| 85M3 | 85MJL3 | 25 / 1.7 | 3 | | | | | | | | | | | |
| 85M4 | 85MJL4 | 25 / 1.7 | 4 | 9.1 | 18.2 | 36.3 | 54.5 | 76.7 | 90.8 | 109.0 | 127.2 | 145.3 | 163.5 | 181.7 |
| 85M5 | 85MJL5 | 25 / 1.7 | 5 | 13.0 | 25.7 | 51.5 | 77.2 | 103.0 | 128.7 | 154.4 | 180.0 | 205.9 | 231.6 | 257.4 |

Approximate Outputs @ 50Hz

## Single Head Fixed – Gallons & Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | gpd @ 60Hz | lpd @ 50Hz |
|---|---|---|---|---|---|
| 85MPHP5* | 85MFH1 | 100 / 6.9 | 1 | 5.0 | 15.1 |
| 85MP1 | 85MFL1 | 25 / 1.7 | | | |
| 85MPHP17* | 85MFH2 | 100 / 6.9 | 2 | 17.0 | 51.5 |
| 85MP2 | 85MFL2 | 25 / 1.7 | | | |
| 85MPHP40* | 85MFH7 | 100 / 6.9 | 7 | 40.0 | 121.1 |
| 85MP3 | 85MFL3 | 25 / 1.7 | 3 | | |
| 85MP4 | 85MFL4 | 25 / 1.7 | 4 | 60.0 | 181.7 |
| 85MP5 | 85MFL5 | 25 / 1.7 | 5 | 85.0 | 257.4 |

Approximate Outputs @ 60 & 50Hz

* Duckbill check valve is included with pump rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# FLOW RATE OUTPUTS CLASSIC 100

## Double Head Adjustable – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 100DMHP5* | 100JH1 | 100 / 6.9 | 1 | 0.3 | 0.6 | 1.2 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 | 6.0 |
| 100DM1 | 100JL1 | 25 / 1.7 | | | | | | | | | | | | |
| 100DMHP20* | 100JH2 | 100 / 6.9 | 2 | 1.0 | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 |
| 100DM2 | 100JL2 | 25 / 1.7 | | | | | | | | | | | | |
| 100DM3 | 100JL3 | 25 / 1.7 | 3 | 2.2 | 4.4 | 8.8 | 13.2 | 17.6 | 22.0 | 26.4 | 30.8 | 35.2 | 39.6 | 44.0 |
| 100DM4 | 100JL4 | 25 / 1.7 | 4 | 3.5 | 7.0 | 14.0 | 21.0 | 28.0 | 35.0 | 42.0 | 49.0 | 56.0 | 63.0 | 70.0 |
| 100DM5 | 100JL5 | 25 / 1.7 | 5 | 5.0 | 10.0 | 20.0 | 30.0 | 40.0 | 50.0 | 60.0 | 70.0 | 80.0 | 90.0 | 100.0 |
| | | | | Approximate Outputs @ 60Hz | | | | | | | | | | |

## Double Head Adjustable – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 100DMHP5* | 100JH1 | 100 / 6.9 | 1 | 0.9 | 1.8 | 3.6 | 5.5 | 7.3 | 9.1 | 10.9 | 12.7 | 14.5 | 16.4 | 18.2 |
| 100DM1 | 100JL1 | 25 / 1.7 | | | | | | | | | | | | |
| 100DMHP20* | 100JH2 | 100 / 6.9 | 2 | 3.0 | 6.1 | 12.1 | 18.2 | 24.2 | 30.3 | 36.4 | 42.4 | 48.5 | 54.5 | 60.6 |
| 100DM2 | 100JL2 | 25 / 1.7 | | | | | | | | | | | | |
| 100DM3 | 100JL3 | 25 / 1.7 | 3 | 6.7 | 13.3 | 26.7 | 40.0 | 53.3 | 66.6 | 79.9 | 93.3 | 106.6 | 119.9 | 133.2 |
| 100DM4 | 100JL4 | 25 / 1.7 | 4 | 10.6 | 21.2 | 42.4 | 63.6 | 84.8 | 106.0 | 127.2 | 148.4 | 169.6 | 190.8 | 212.0 |
| 100DM5 | 100JL5 | 25 / 1.7 | 5 | 15.1 | 30.3 | 60.6 | 90.8 | 121.1 | 151.4 | 181.7 | 212.0 | 242.2 | 272.5 | 302.8 |
| | | | | Approximate Outputs @ 50Hz | | | | | | | | | | |

## Double Head Fixed – Gallons & Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | gpd @ 60Hz | lpd @ 50Hz |
|---|---|---|---|---|---|
| 100DMPHP5* | 100FH1 | 100 / 6.9 | 1 | 6.0 | 18.2 |
| 100DMP1 | 100FL1 | 25 / 1.7 | | | |
| 100DMPHP20* | 100FH2 | 100 / 6.9 | 2 | 20.0 | 60.6 |
| 100DMP2 | 100FL2 | 25 / 1.7 | | | |
| 100DMP3 | 100FL3 | 25 / 1.7 | 3 | 44.0 | 133.2 |
| 100DMP4 | 100FL4 | 25 / 1.7 | 4 | 70.0 | 212.0 |
| 100DMP5 | 100FL5 | 25 / 1.7 | 5 | 100.0 | 302.8 |
| | | | | Approximate Outputs @ 60 & 50Hz | |

* Duckbill check valve is included with pump rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# FLOW RATE OUTPUTS CLASSIC 170

## Double Head Adjustable – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 170DMHP9* | 170JH1 | 100 / 6.9 | 1 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 |
| 170DM1 | 170JL1 | 25 / 1.7 | | | | | | | | | | | | |
| 170DMHP34* | 170JH2 | 100 / 6.9 | 2 | 1.7 | 3.4 | 6.0 | 9.5 | 13.6 | 17.0 | 20.4 | 23.8 | 27.2 | 30.6 | 34.0 |
| 170DM2 | 170JL2 | 25 / 1.7 | | | | | | | | | | | | |
| 170DM3 | 170JL3 | 25 / 1.7 | 3 | 4.0 | 8.0 | 16.0 | 24.0 | 32.0 | 40.0 | 48.0 | 56.0 | 64.0 | 72.0 | 80.0 |
| 170DM4 | 170JL4 | 25 / 1.7 | 4 | 6.0 | 12.0 | 24.0 | 36.0 | 48.0 | 60.0 | 72.0 | 84.0 | 96.0 | 108.0 | 120.0 |
| 170DM5 | 170JL5 | 25 / 1.7 | 5 | 8.5 | 17.0 | 34.0 | 51.0 | 68.0 | 85.0 | 102.0 | 119.0 | 136.0 | 153.0 | 170.0 |

Approximate Outputs @ 60Hz

## Double Head Adjustable – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 170DMHP9* | 170JH1 | 100 / 6.9 | 1 | 1.5 | 3.0 | 6.1 | 9.1 | 12.1 | 15.1 | 18.2 | 21.2 | 24.2 | 27.3 | 30.3 |
| 170DM1 | 170JL1 | 25 / 1.7 | | | | | | | | | | | | |
| 170DMHP34* | 170JH2 | 100 / 6.9 | 2 | 5.1 | 10.3 | 18.2 | 28.8 | 39.1 | 51.5 | 61.8 | 72.1 | 82.4 | 92.7 | 102.6 |
| 170DM2 | 170JL2 | 25 / 1.7 | | | | | | | | | | | | |
| 170DM3 | 170JL3 | 25 / 1.7 | 3 | 12.1 | 24.2 | 48.5 | 72.7 | 96.9 | 121.1 | 145.4 | 169.6 | 193.8 | 218.0 | 242.2 |
| 170DM4 | 170JL4 | 25 / 1.7 | 4 | 18.2 | 36.3 | 72.7 | 109.0 | 145.3 | 181.7 | 218.0 | 254.4 | 290.7 | 327.0 | 363.4 |
| 170DM5 | 170JL5 | 25 / 1.7 | 5 | 25.7 | 51.5 | 86.0 | 154.4 | 205.9 | 257.4 | 308.9 | 360.4 | 411.8 | 463.3 | 514.8 |

Approximate Outputs @ 50Hz

## Double Head Fixed – Gallons & Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | gpd @ 60Hz | lpd @ 50Hz |
|---|---|---|---|---|---|
| 170DMPHP9* | 170FH1 | 100 / 6.9 | 1 | 10.0 | 30.3 |
| 170DMP1 | 170FL1 | 25 / 1.7 | | | |
| 170DMPHP34* | 170FH2 | 100 / 6.9 | 2 | 34.0 | 102.6 |
| 170DMP2 | 170FL2 | 25 / 1.7 | | | |
| 170DMP3 | 170FL3 | 25 / 1.7 | 3 | 80.0 | 242.2 |
| 170DMP4 | 170FL4 | 25 / 1.7 | 4 | 120.0 | 363.4 |
| 170DMP5 | 170FL5 | 25 / 1.7 | 5 | 170.0 | 514.8 |

Approximate Outputs @ 60 & 50Hz

* Duckbill check valve is included with pump rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# FLOW RATE OUTPUTS CLASSIC 100 *DUAL CONTROL*

## DETERMINE FLOW RATE OUTPUTS FOR EACH PUMP HEAD

Use the innermost pump head flow rate outputs to determine the output for each pump head. Both feed rate controls (FRC) on setting 10 = maximum flow rate capacity of the pump.

**Innermost Pump Head**
L=5%, 1-10 = approx. 10% of maximum innermost output

**Outermost Pump Head**
Outermost Output = (Outermost FRC Setting %) x (Innermost Output)

**Example**
100MDC5 with Innermost FRC setting on 4
1. Innermost FRC setting 4 = 20 gpd
2. If outermost FRC is set on 3, then outermost output is 30% of innermost output; 0.3 x 20 gpd = 6 gpd
3. Outermost = 6 gpd, Innermost = 20 gpd, Total Pump Output = 26 gpd

### Innermost Pump Head – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100MDCHP5* | 100DH1 | 100 / 6.9 | 1 | 0.2 | 0.3 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0 |
| 100MDC1 | 100DL1 | 25 / 1.7 | | | | | | | | | | | | |
| 100MDCHP20* | 100DH2 | 100 / 6.9 | 2 | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 |
| 100MDC2 | 100DL2 | 25 / 1.7 | | | | | | | | | | | | |
| 100MDC3 | 100DL3 | 25 / 1.7 | 3 | 1.1 | 2.2 | 4.4 | 6.6 | 8.8 | 11.0 | 13.2 | 15.4 | 17.6 | 19.8 | 22.0 |
| 100MDC4 | 100DL4 | 25 / 1.7 | 4 | 1.7 | 3.5 | 7.0 | 10.5 | 14.0 | 17.5 | 21.0 | 24.5 | 28.0 | 31.5 | 35.0 |
| 100MDC5 | 100DL5 | 25 / 1.7 | 5 | 2.5 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 | 45.0 | 50.0 |
| | | | | Approximate Outputs @ 60Hz | | | | | | | | | | |

### Innermost Pump Head – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100MDCHP5* | 100DH1 | 100 / 6.9 | 1 | 0.6 | 0.9 | 1.8 | 2.7 | 3.6 | 4.5 | 5.5 | 6.4 | 7.3 | 8.2 | 9.1 |
| 100MDC1 | 100DL1 | 25 / 1.7 | | | | | | | | | | | | |
| 100MDCHP20* | 100DH2 | 100 / 6.9 | 2 | 1.5 | 3.0 | 6.1 | 9.1 | 12.1 | 15.1 | 18.2 | 21.2 | 24.2 | 27.3 | 30.3 |
| 100MDC2 | 100DL2 | 25 / 1.7 | | | | | | | | | | | | |
| 100MDC3 | 100DL3 | 25 / 1.7 | 3 | 3.3 | 6.6 | 13.3 | 20.0 | 26.6 | 33.3 | 40.0 | 46.6 | 53.3 | 60.0 | 66.6 |
| 100MDC4 | 100DL4 | 25 / 1.7 | 4 | 5.1 | 10.6 | 21.2 | 31.8 | 42.4 | 53.0 | 63.6 | 74.2 | 84.8 | 95.4 | 106.0 |
| 100MDC5 | 100DL5 | 25 / 1.7 | 5 | 7.6 | 15.1 | 30.3 | 45.4 | 60.6 | 75.7 | 90.8 | 106.0 | 121.1 | 136.3 | 151.4 |
| | | | | Approximate Outputs @ 50Hz | | | | | | | | | | |

* Duckbill check valve included with pumps rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# FLOW RATE OUTPUTS CLASSIC 170 *DUAL CONTROL*

## Innermost Pump Head – Gallons per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 170MDCHP9* | 170DH1 | 100 / 6.9 | 1 | 0.3 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 |
| 170MDC1 | 170DL1 | 25 / 1.7 | | | | | | | | | | | | |
| 170MDCHP34* | 170DH2 | 100 / 6.9 | 2 | 0.8 | 1.7 | 3.4 | 5.1 | 6.8 | 8.5 | 10.2 | 11.9 | 13.6 | 15.3 | 17.0 |
| 170MDC2 | 170DL2 | 25 / 1.7 | | | | | | | | | | | | |
| 170MDC3 | 170DL3 | 25 / 1.7 | 3 | 2.0 | 4.0 | 8.0 | 12.0 | 16.0 | 20.0 | 24.0 | 28.0 | 32.0 | 36.0 | 40.0 |
| 170MDC4 | 170DL4 | 25 / 1.7 | 4 | 3.0 | 6.0 | 12.0 | 18.0 | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 |
| 170MDC5 | 170DL5 | 25 / 1.7 | 5 | 4.3 | 8.5 | 17.0 | 25.5 | 34.0 | 42.5 | 51.0 | 59.5 | 68.0 | 76.5 | 85.0 |
| | | | | Approximate Outputs @ 60Hz | | | | | | | | | | |

## Innermost Pump Head – Liters per Day

| Model | Item Number Prefix | Maximum psi / bar | Pump Tube | Feed Rate Control Setting | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 170MDCHP9* | 170DH1 | 100 / 6.9 | 1 | 0.9 | 1.5 | 3.0 | 4.5 | 6.1 | 7.6 | 9.1 | 10.6 | 12.1 | 13.6 | 15.1 |
| 170MDC1 | 170DL1 | 25 / 1.7 | | | | | | | | | | | | |
| 170MDCHP34* | 170DH2 | 100 / 6.9 | 2 | 2.4 | 5.1 | 10.3 | 15.4 | 20.6 | 25.7 | 30.9 | 36.0 | 41.2 | 46.3 | 51.5 |
| 170MDC2 | 170DL2 | 25 / 1.7 | | | | | | | | | | | | |
| 170MDC3 | 170DL3 | 25 / 1.7 | 3 | 6.1 | 12.1 | 24.2 | 36.3 | 48.5 | 60.6 | 76.7 | 84.8 | 96.9 | 109.0 | 121.1 |
| 170MDC4 | 170DL4 | 25 / 1.7 | 4 | 9.1 | 18.2 | 36.3 | 54.5 | 76.7 | 90.8 | 109.0 | 127.2 | 145.3 | 163.5 | 181.7 |
| 170MDC5 | 170DL5 | 25 / 1.7 | 5 | 13.0 | 25.7 | 51.5 | 77.2 | 103.0 | 128.7 | 154.4 | 180.0 | 205.9 | 231.6 | 257.4 |
| | | | | Approximate Outputs @ 50Hz | | | | | | | | | | |

* Duckbill check valve included with pumps rated 100 psi (6.9 bar) maximum.

**NOTICE:** The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

# MATERIALS OF CONSTRUCTION

**All Housings**
Polycarbonate

**Pump Tube**
Santoprene® (FDA approved) or Versilon®

**Check Valve Duckbill**
Santoprene® (FDA approved) or Pellethane®

**Suction/Discharge Tubing & Ferrules**
Polyethylene (FDA approved)

**Suction Line Strainer and Cap**
PVC or Polypropylene (both NSF listed); ceramic weight

**All Fasteners**
Stainless Steel

**Tube and Injection Fittings**
PVC or Polypropylene (both NSF listed)

**Connecting Nuts and 3/8" Adapter**
PVC or Polypropylene (both NSF listed)

**Pump Head Latches**
Polypropylene

# ACCESSORIES

3 Connecting Nuts 1/4" or 3/8"

3 Ferrules 1/4" or 6 mm *Europe*

1 Injection Fitting 25 psi (1.7 bar) max. or 1 Duckbill Check Valve 100 psi (6.9 bar) max.

1 Weighted Suction Line Strainer 1/4", 3/8" or 6 mm *Europe*

1 20' Roll of Suction/Discharge Tubing
1/4" or 3/8" White or UV Black or 6 mm White *Europe*

1 Additional Pump Tube

2 Additional Latches

1 Mounting Bracket

1 Manual

* Double head pumps include an additional set of the accessories listed above.

# INSTALLATION

## ADDITIONAL SAFETY INSTRUCTIONS

**NOTICE: Indicates special instructions or general mandatory action.**

- Read all safety hazards before installing or servicing the pump. The pump is designed for installation and service by properly trained personnel.
- Use all required personal protective equipment when working on or near a chemical metering pump.
- Install the pump so that it is in compliance with all national and local plumbing and electrical codes.
- Use the proper product to treat potable water systems, use only chemicals listed or approved for use.
- Install the pump to work in conjunction with pool, spa, well pump, or system controls.
- Inspect tube frequently for leakage, deterioration, or wear. Schedule a regular pump tube maintenance change to prevent chemical damage to pump and/or spillage.
- Mount pump vertically and use spill recovery to run chemical back to tank in the event of tube failure. Not recommended for acid applications.
- Pump is not recommended for installation in areas where leakage can cause personal injury or property damage.

### MOUNT PUMP

**Select a dry location (to avoid water intrusion and pump damage) above the solution tank. Best recommended location is above the solution tank in a vertical position with the pump head pointed downward and the spill recovery *(see page 18)* in place to reduce the risk and severity of damage. Spill recovery not recommended for acid applications.**

**To prevent pump damage in the event of a pump tube leak, never mount the pump vertically with the pump head up.**

**To avoid chemical damage from fumes, DO NOT mount pump directly over an open solution tank. Keep tank covered.**

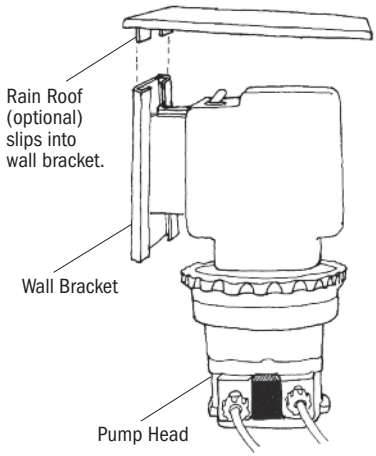
**Avoid flooded suction or pump mounted lower than the solution container. Draw solution from the top of the tank. Pump can run dry without damage. If pump is installed with a flooded suction, a shut-off valve or other device must be provided to stop flow to pump during service.**

1. Use the mounting bracket as a template to drill pilot holes in mounting location.
2. Secure bracket with fasteners or wall anchors. Slide pump into bracket.

**Provide 8" clearance to allow pump orientation to be reversed during tube replacement. DO NOT allow water intrusion into the motor or corrosion and damage will occur.**

**To prevent motor damage, verify with a volt meter that the receptacle voltage corresponds with the pump voltage.**

3. Plug cord into receptacle and turn the motor power switch on. If the pump is adjustable, turn the dial ring to 10.




4. Activate the pump by the pump control (flow switch, pressure switch, etc.) and verify rotation of the roller assembly within the clear pump head. Turn pump switch off.

# INSTALLATION continued

## ADDITIONAL INSTRUCTIONS FOR CE PUMPS WHEN APPLICABLE

### ADDITIONAL INSTALLATION INSTRUCTIONS

1. All Class II Pumps located in Zone 1 of swimming pool areas require locating where flooding cannot occur.
2. This pump is intended to be installed as "fixed" as opposed to portable.
3. The Rain Roof must be installed and "vertical orientation" mounting of entire unit observed.
4. After installation, the power supply plug must be accessible during use.
5. This unit must be scrapped if the supply cord is damaged.
6. Observe and comply with all National Wiring Standards.

---

### ZUSTAZLICHE INSTALLIERUNGSANWEISUNGUN

1. Pumpen die sich in Zone 1 vom Schwimmbecken befinden sollen sind so einzurichten daß Ueberschwemmungen nicht vorkommen werden.
2. Diese Pumpe ist als fest montierte Ausrustung bedacht und soll nicht umstellbar gebraucht werden.
3. Der Regendach muss installiert werden. Eine vertikale Asrichtung der Montage muß erzielt werden.
4. Die Stromversorgung muss nach der Installierung noch zuganglich sein.
5. Bei beschadigter Verkabelung ist dieses Gerat nicht mehr zu gebrauchen.
6. Staatliche Vernetzungsvorchriften mussen eingehalten werden.

---

### INSTRUCTIONS SUPPLÉMENTAIRES D'INSTALLTION

1. Toutes les pompes installées dans la Zone 1 du périmètre de la piscine doivent être situées de manière à ne pas pouvoir être inondées.
2. Cette pompe est prévue pour installation fixe et non pas portative.
3. L'abri anti-pluie doit être installé et l'orientation verticale doit toujours être observée.
4. Après l'installation, la prise électrique doit rester accessible pendant l'utilisation.
5. Cette unité doit être mise au rebut si le cordon électrique est endommagé.
6. Observez et adhérez à toutes les Normes Nationales pour Installations Electriques.

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### INSTRUCCIONES ADICIONALES PARA INSTALACION

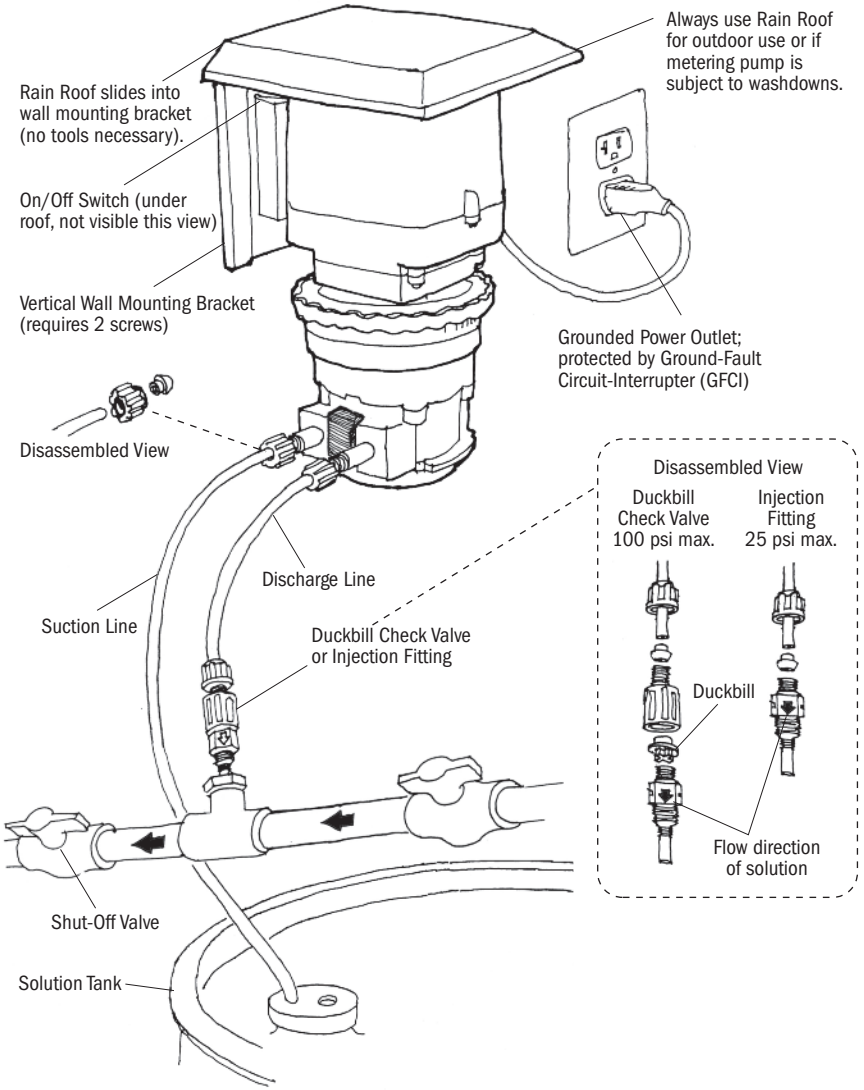
1. Todas las bombas Clase II situadas en la Zona 1 de las áreas de la piscina requieren colocarse donde no puedan ser inundadas.
2. Esta bomba es para ser instalada "fija" en vez de portátil.
3. Es necesario instalar el techo de lluvia, y montar la unidad entera siguiendo una orientación vertical.
4. Depués de la instalación el enchufe suministrador de energía debe estar accesible durante el uso.
5. Se deberá deshechar la unidad si el cordón de abastecimiento se deteriora.
6. Observe y cumpla con todas las Reglas Nacionales para Instalaciones Eléctricas.

---

### ISTRUZIONI SUPPLEMENTARI PER L' INSTALLAZIONE

1. Tutte le pompe Classe II localizzate nella Zona 1 della superficie circostante la piscina devono essere collocate dove gli allagamenti no possono accadere.
2. Questa pompa, é inteso, deve essere installata come 'fissa' e non come portatile.
3. La tettoia deve essere installata e il montaggio 'orientazione verticale' dell'intera unitá deve essere osservato.
4. Dopo l'installazione, la spina deve essere accessibile durante l'uso.
5. Questa unitá deve essere gettata via se il filo elettrico é danneggiato.
6. Osservare e aderire a tutte le Norme Nazionali Sugli Impianti Elettrici.

# INSTALLATION DIAGRAM



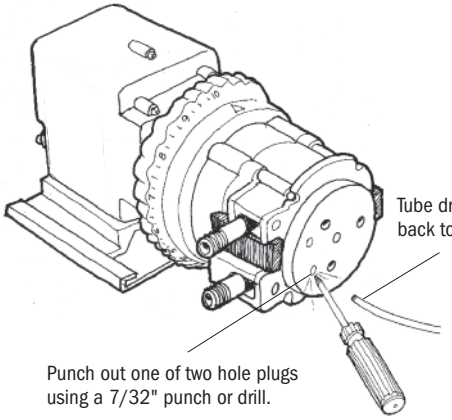
# INSTALLATION continued

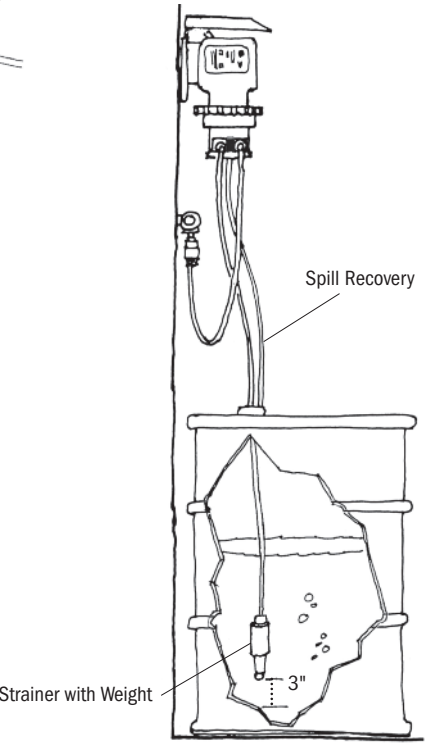
## SPILL RECOVERY

Mount the pump vertically and use the spill recovery to drain chemical back to the tank in the event of tube failure. This will help prevent chemical from collecting in the tube housing and reduces spillage on the floor.

The pump motor is ventilated and water intrusion can cause motor damage. A rain roof is recommended for outdoor and wet environments.

SPILL RECOVERY IS NOT RECOMMENDED FOR ACID APPLICATIONS.



### INSTALL SUCTION LINE TO PUMP HEAD

1. Uncoil the suction/discharge tubing. Use outside of solution tank as a guide to cut proper length of suction line ensuring it will be 2-3" above the bottom of solution tank.

**Allow sufficient slack to avoid kinks and stress cracks. Always make a clean square cut to assure that the suction line is burr free. Normal maintenance requires trimming.**

**Suction lines that extend to the bottom of the tank can result in debris pickup leading to clogged injectors and possible tube failure.**

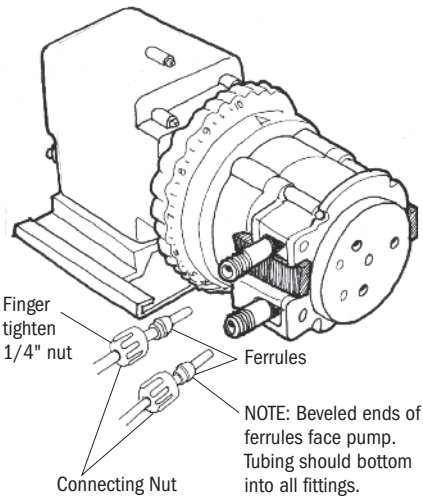
2. Make connections by sliding the line(s) through connecting nut* and ferrule and finger tighten to the corresponding tube fittings.

3. Finger tighten nut to the threaded tube fitting while holding the tube fitting.

**Over tightening the ferrule and nut may result in damaged fittings, crushed ferrules, and air pick up.**

**DO NOT use thread seal tape on pump tube connections.**

*More on next page*




DO NOT use thread seal tape on pump tube threads.

* For 3/8" connections only. Slide line through 3/8" connecting nut and finger tighten to male end of adapter or pump tube fitting . While firmly holding the adapter or tube fitting, wrench tighten the 3/8" connecting nut one additional half turn. If leak occurs, gradually tighten the 3/8" connecting nut as required.

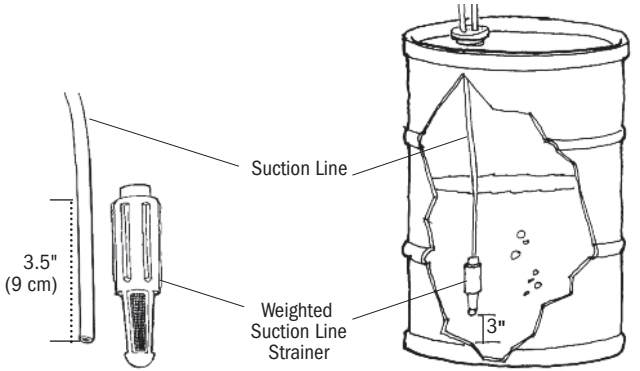
### INSTALL SUCTION WEIGHT TO SUCTION LINE

1. Drill a hole into the bung cap or solution tank lid. Slide the tubing through and secure the weighted strainer to the line.
2. To attach the strainer, push approximately 3.5" of suction line through the cap on the strainer body. Pull tubing to make sure it is secure.
3. Suspend slightly above tank bottom to reduce the chance of sediment pickup.

**DO NOT mix chemicals in the solution container. Follow recommended mixing procedures according to the manufacturer.**

**DO NOT operate pump unless chemical is completely in solution. Turn pump off when replenishing solution.**

**DO NOT slide tubing all the way to the bottom of the weighted strainer. Tubing could become flush with the nose of the strainer and the pump may not prime due to blockage.**



### INSTALL DISCHARGE LINE TO PUMP HEAD AND INJECTION POINT

1. Make a secure finger tight connection on the discharge fitting of the pump head as instructed in Install Suction Line instructions.

**DO NOT use thread seal tape on pump tube connections.**

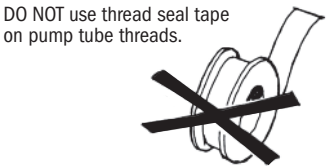
**⚠ WARNING HAZARDOUS PRESSURE: Shut off water or circulation system and bleed off any system pressure.**

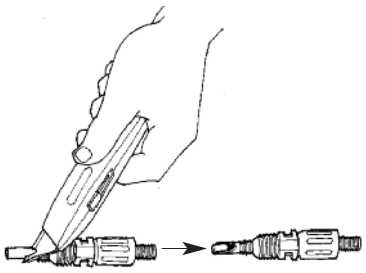
**Locate a point of injection beyond all pumps and filters or as determined by the application.**

2. A 1/4" or 1/2" Female NPT (FNPT) connection is required for installing the injection fitting. If there is no FNPT fitting available, provide one by either tapping the pipe or installing FNPT pipe tee fitting.

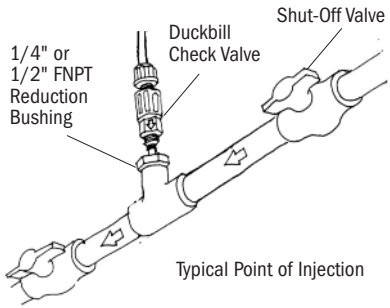
3. Wrap the Male NPT (MNPT) end of injection fitting with 2 or 3 turns of thread seal tape. If necessary, trim the injection fitting quill as required to inject product directly into flow of water.

*More on next page*



Trim Injection Fitting



**4.** Hand tighten the injection fitting into the FNPT fitting.

**Injection Fitting**

**a.** Install connecting nut and ferrule to the pump discharge line. Insert discharge line into injection fitting until it reaches base of fitting.

**b.** Finger tighten connecting nut to fitting. For 3/8" connections wrench tighten one additional 1/2 turn. If leak occurs, gradually tighten the 3/8" connecting nut as required.

**Duckbill Check Valve**

**a.** Prior to connection, test check valve and NPT threads for leaks by pressurizing system. If necessary, tighten an additional 1/4 turn.

**b.** Install connecting nut and ferrule to the pump discharge line. Insert discharge line into check valve body until it reaches base of body.

**c.** Finger tighten connecting nut to fitting. For 3/8" connections wrench tighten one additional 1/2 turn. If leak occurs, gradually tighten the 3/8" connecting nut as required.

**5.** Turn pump on and re-pressurize system. Observe chemical flow as actuated by system and check all connections for leaks.

**6.** After suitable amount of dosing time, perform tests for desired chemical readings (e.g., pH or ppm). If necessary, fine tune dosing levels by rotating dial ring (adjustable pumps only) or by adjusting solution strength.

**The injection point and fitting require periodic maintenance to clean any deposits or buildup. To allow quick access to the point of injection, Stenner recommends the installation of shut-off valves.**

# TROUBLESHOOTING – MOTOR

**⚠ WARNING HAZARDOUS VOLTAGE**

**DISCONNECT** power cord before removing motor cover for service. **Electrical service should be performed by trained personnel only.**

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Loud or excessive noise | Worn ball bearings | Replace rotor assembly |
| | Damaged bearing brackets or tolerance rings | Replace bearing brackets and tolerance rings |
| | Insufficient gear lubrication | Apply AquaShield™ to gears and gear posts |
| | Worn gears or gear posts | Inspect and/or replace gears and gear posts |
| Motor does not work; fan does not turn | Faulty electrical supply | Check supply voltage circuit |
| | Bearing brackets broken | Replace bearing brackets |
| | Damaged motor coil | Replace motor coil |
| | Worn or damaged rotor bearings | Replace rotor assembly |
| | Damaged power cord | Inspect and/or replace power cord |
| | Rotor bound or rusted to coil | Clean off coil and rotor or replace |
| | Faulty wire connections | Inspect and/or repair electrical connections |
| | Obstructed fan | Remove obstruction |
| Motor runs; fan turns, output shaft does not | Worn or damaged gears | Replace gears as needed |
| Motor overheats and shuts off and on | Incorrect voltage | Check voltage and frequency matches data label |
| | High ambient temperature | Pumps are rated to 125˚F maximum |
| | Damaged/malfunctioning coil | Replace motor coil |
| Phenolic gear is stripping | Water intrusion | Use rain roof & replace phenolic gear |
| | Cracked bearing bracket | Replace bearing bracket & phenolic gear |
| | Worn gear posts | Replace gear posts & affected gears |
| | Rusted helical gear at end of rotor | Buff off rotor or replace rotor, replace phenolic gear |
| | Worn or cracked gear case cover | Replace gear case or gear case cover |
| | Insufficient lubrication | Apply AquaShield™ to gears and gear poststo gears and gear posts |

# TROUBLESHOOTING – FEED RATE CONTROL

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Dial ring will not turn | Seized or broken variable cam | Apply Aquashield™ to variable cam & cam slot in feed rate control housing |
| | Seized dial ring | Clean then lubricate dial ring & cam slot with AquaShield™ |
| Dial ring turns, output doesn't change | Variable cam disengaged from dial ring | Re-insert 90˚ end into ring |
| | Broken variable cam | Replace variable cam |
| Pump head does not rotate | Worn index plate | Turn over or replace index plate |
| | Motor problem | Refer to Motor section |
| | Pump head roller assembly stripped | Replace roller assembly |
| | Index pin holder loose | Tighten holder into spider assembly |
| | Index pin broken | Replace index pin and lifter assembly |
| Pump head rotates continuously | Variable cam out of place or worn | Replace or re-insert variable cam |
| Ratcheting sound | Index plate worn | Turn over or replace index plate |
| | Variable cam worn | Replace variable cam |
| | Lifter worn | Replace lifter or complete spider assembly |

# TROUBLESHOOTING – PUMP HEAD

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Roller Assembly will not expand or collapse with tube housing cover | Motor not locked | Fixed Rate Pumps: Place tube housing latch into motor slot; Adjustable Rate Pumps: Set feed rate control to 10 |
| | Stripped or cracked roller assembly hub | Replace roller assembly |
| Components cracking | Chemical attack | Check chemical compatibility |
| | Chemical intrusion from tube failure | Identify and correct cause, clean components of chemical & replace tube according to instructions |
| Pump head leaking | Pump tube rupture | Identify and correct cause, clean components of chemical & replace tube according to instructions |
| No pump output, pump head rotates | Depleted solution tank | Replenish solution |
| | Pump suction line weight is above solution | Position suction line 3" above bottom of tank |
| | Leak in the suction line | Inspect or replace suction line |
| | Ferrules installed incorrectly, missing or damaged | Replace ferrules |
| | Sleeve and/or plastic gripper inside 3/8" connecting nut is missing damaged, or incorrectly assembled | Replace if damaged or missing. Reorient if incorrectly assembled; gripper beveled end faces nut; sleeve wide end faces gripper |
| | Injection point is clogged | Inspect and clean injection point |
| | Clogged suction and/or discharge line and/or check valve | Clean and/or replace as needed |
| | Life of pump tube exhausted | Replace tube according to instructions, schedule tube replacement based on application |
| | Suction line is flush with the nose of the weighted strainer tubing at an angle | Pull suction line approximately 1" from bottom of strainer, cut bottom of suction |
| Low pump output, pump head rotates | Life of pump tube exhausted | Replace tube according to instructions, schedule tube replacement based on application |
| | Rollers worn or broken | Replace roller assembly |
| | Injection point is restricted | Inspect and clean injection point regularly |
| | Incorrect tube size | Refer to flow rate output chart and replace tube with correct size |
| | High system back pressure | Verify system pressure against tube psi, replace tube if needed |
| No pump output, pump head doesn't rotate | Stripped or cracked roller assembly hub | Replace roller assembly |
| | Feed rate control problem | Refer to feed rate control section |
| | Motor problem | Refer to motor section |
| Pump output high | Incorrect tube size or setting | Refer to flow rate output chart and replace tube with correct size or adjust settings |
| | Roller assembly broken | Replace roller assembly |
| | Malfunctioning feed rate control | Refer to feed rate control section |
| | Incorrect motor rpm | Replace with motor that matches pump model |

# TROUBLESHOOTING – PUMP TUBE

**NOTICE:** A leaking pump tube damages the metering pump. Inspect pump frequently for leakage and wear. Refer to Tube Replacement section for additional safety precautions and instructions.

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Tube leaking | Pump tube ruptured | Identify and correct cause, clean components of chemical & replace tube according to instructions |
| | Calcium or mineral deposits | Clean injection fitting; replace tube and duckbill according to instructions |
| | Excessive back pressure | Verify system pressure against tube psi, replace tube if needed |
| | Tube is twisted | Replace tube according to instructions, hold tube fitting while tightening connecting nut to prevent twisting |
| | Tube not centered | Clean components of chemical, replace tube according to instructions & confirm tube is centered |
| Tube life is shortened | Chemical attack | Check chemical compatibility |
| | Mineral deposits at injection point | Remove deposits, replace pump tube and duckbill according to instructions |
| | Sediment blockage at check valve | Clean injection fitting, ensure suction line is 3" above tank bottom. Use suction line strainer. |
| | Degraded check valve duckbill | Replace duckbill at every tube change |
| | Duckbill in wrong orientation | Reverse duckbill orientation |
| | Seized rollers caused abrasion on tube | Clean roller assembly or replace, do not lubricate |
| | Exposure to heat or sun | DO NOT store tubes in high temperatures or in direct sunlight |
| Tube connection is leaking | Ferrules installed incorrectly, missing or damaged | Replace ferrule, beveled end should face the tube fitting |
| | Crushed ferrule | Replace ferrule |
| | 3/8" nut loose | Secure adapter and tighten 3/8" nut as needed |
| | Missing ferrule in 3/8" adapter | Replace with new adapter fitting or insert new ferrule into adapter |
| | Sleeve and/or plastic gripper inside 3/8" connecting nut is missing damaged, or incorrectly assembled | Replace if damaged or missing/ Reorient if incorrectly assembled; gripper beveled end faces nut; sleeve wider end faces gripper |

# TUBE REPLACEMENT – SAFETY INFORMATION

**⚠ WARNING** **RISK OF CHEMICAL EXPOSURE**

- To reduce risk of exposure, check the pump tube regularly for leakage. At the first sign of leakage, replace the pump tube.
- To reduce risk of exposure, the use of proper personal protective equipment is mandatory when working on or near chemical metering pumps.
- To reduce risk of exposure, and also prior to service, shipping, or storage, pump generous amounts of water or a compatible buffer solution to remove chemical from pump.
- Consult chemical manufacturer and SDS sheet for additional information and precautions for the chemical in use.
- Personnel should be skilled and trained in the proper safety and handling of the chemicals in use.
- Inspect tube frequently for leakage, deterioration, or wear. Schedule a regular pump tube maintenance change to prevent chemical damage to pump and/or spillage.

**⚠ CAUTION** **PINCH POINT HAZARD**

- Use extreme caution when replacing pump tube. Be careful of your fingers and DO NOT place fingers near rollers.

**⚠ WARNING** **HAZARDOUS PRESSURE/CHEMICAL EXPOSURE**

- Use caution and bleed off all resident system pressure prior to attempting service or installation.
- Use caution when disconnecting discharge line from pump. Discharge may be under pressure. Discharge line may contain chemical.

**NOTICE: Indicates special instructions or general mandatory action.**

- **DO NOT** apply grease, oil, or lubricants to the pump tube or housing.
- Prior to pump tube replacement, inspect the entire pump head for cracks or damaged components. Ensure rollers turn freely.
- Rinse off chemical residue and clean all chemical and debris from pump head components prior to tube replacement. Apply Aquashield™ to main shaft and tube housing cover bushing during tube replacement.
- **DO NOT** pull excessively on pump tube. Avoid kinks or damage during tube installation.
- Inspect the suction and discharge lines, injection point (into pipe), and check valve duckbill for blockages after any tube rupture. Clear or replace as required.

# TUBE REPLACEMENT – SINGLE HEAD PUMPS

## PREPARATION

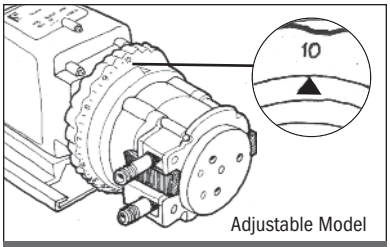
1. Follow all safety precautions prior to tube replacement.
2. Prior to service, pump water or a compatible buffer solution through the pump and suction and discharge lines to remove chemical and avoid contact.

*More on next page*

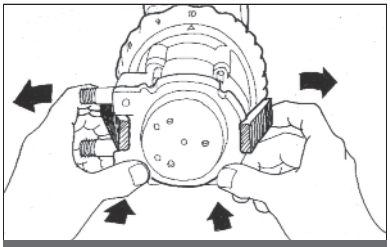
# TUBE REPLACEMENT – SINGLE HEAD PUMPS

continued

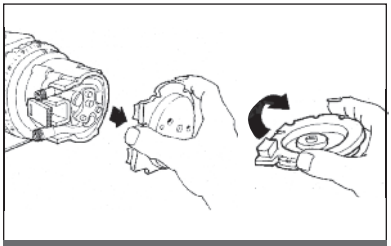
## REMOVE THE PUMP TUBE



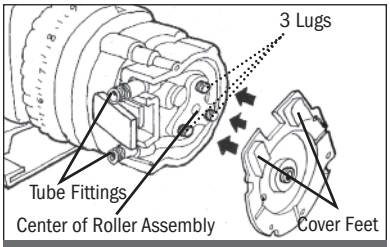

***A Adjustable model must be on setting 10***



***B Open latches***



***C Remove and invert cover***




***D Align cover feet near tube fittings***

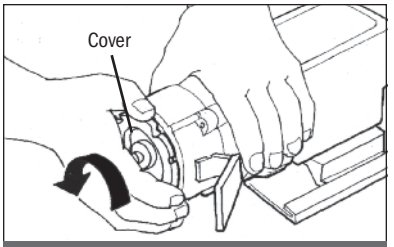
1. Turn the pump off and unplug the power cord. On the adjustable model, ensure that the feed rate control is set to 10. *Illustration A*
2. Depressurize and disconnect the suction and discharge lines.
3. Open the latches on both sides of the head. *Illustration B*
   *For CE pump only: Remove the safety screw on cover.*
4. Remove the tube housing cover and flip to use as a tool in the next step. *Illustration C*
5. Align the center of the inverted cover with the center of the roller assembly so that the three holes on the face of the cover align with the three knurled lugs on the roller assembly. Position the cover feet near the tube fittings. *Illustration D*
   NOTE: The roller assembly must be collapsed to remove the tube.

*More on next page*

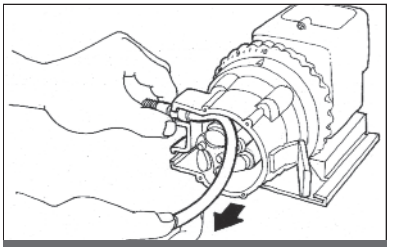
# TUBE REPLACEMENT – SINGLE HEAD PUMPS

continued

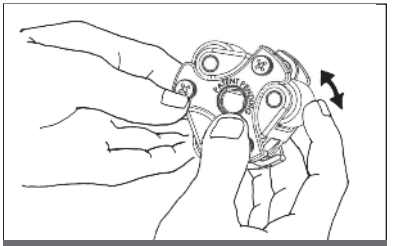
## REMOVE THE PUMP TUBE continued




*E Collapse roller assembly*



*F Remove tube*



*G Check rollers*

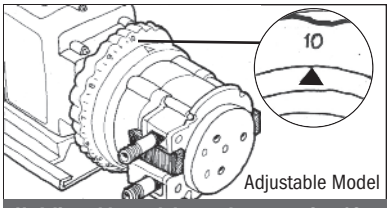
6. On the adjustable pump, hold the feed rate control securely. On the fixed output pump hold the motor securely. Use the tube housing cover as a wrench and quickly (snap) rotate the cover counterclockwise to collapse the roller assembly. The tube will no longer be pressed against the tube housing wall. *Illustration E*
7. Remove and discard the pump tube. *Illustration F*
8. Remove the roller assembly and housing. On the adjustable pump also remove the shaft. Set them aside to reinstall later.
9. Use a non-citrus all-purpose cleaner to clean chemical residue from the tube housing, roller assembly and cover.
10. Check the housing, cover and roller assembly for cracks. Replace if cracked.
11. Ensure the rollers turn freely. Replace the roller assembly if the rollers are seized or worn or if there is a reduction or lack of output from the pump. *Illustration G*
12. Reinstall the clean tube housing. On an adjustable pump, also install the shaft into the feed rate control.
13. Apply AquaShield™ to the shaft tip.
14. Install the roller assembly.

*More on next page*

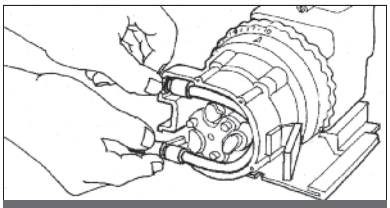
# TUBE REPLACEMENT – SINGLE HEAD PUMPS

continued

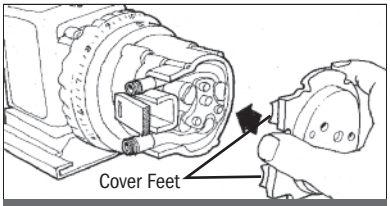
## INSTALL THE TUBE/EXPAND THE ROLLER ASSEMBLY



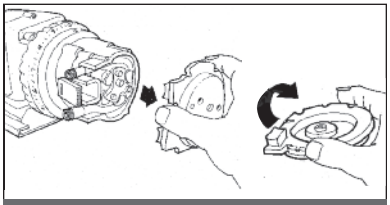

***H Adjustable model must be on setting 10***



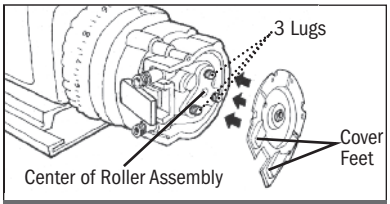
***I Place new tube***




***J Install cover feet first***



***K Remove and invert cover***




***L Align cover feet near the bottom***

1. Ensure the power to the pump is off and the power cord is unplugged. On the adjustable model, ensure that the feed rate control is set to 10. *Illustration H*
2. Place the new tube in the pump head and use your fingers to center it on the rollers. *Illustration I*
3. Place the tube housing cover (feet first) on the tube housing, affix the front of the latches to the cover lip and then press the latches back to secure. Be sure the cover is seated with the sleeve bearing on the shaft and is flush with the housing before latching. *Illustration J*
4. With the cover latched, plug the pump in and turn the power on. Allow the pump to run the roller assembly in its collapsed position for approximately two minutes to relax the tube.
5. Turn the pump off and unplug the power cord.
6. Remove the tube housing cover and flip to use as a tool in the next step. *Illustration K*
7. Align the center of the inverted cover with the center of the roller assembly so that the three holes on the face of the cover align with the three knurled lugs on the roller assembly. Position the cover feet near the tube fittings. *Illustration L*

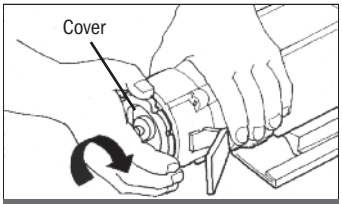
*More on next page*

# TUBE REPLACEMENT – SINGLE HEAD PUMPS

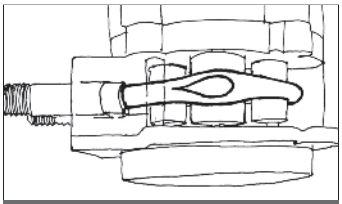
continued

## INSTALL THE TUBE/EXPAND THE ROLLER ASSEMBLY continued

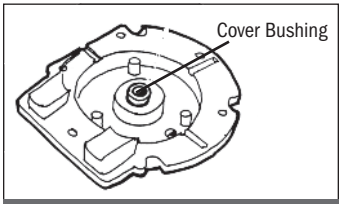
**IMPORTANT: THE ROLLER ASSEMBLY MUST BE EXPANDED** so the tube is pressed against the tube housing wall.



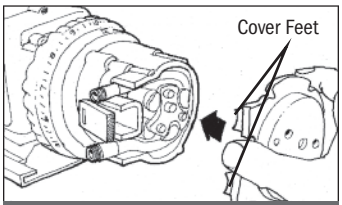

***M Expand roller assembly***



***N Confirm roller assembly is expanded***




***O Apply Aquashield™ to cover bushing***



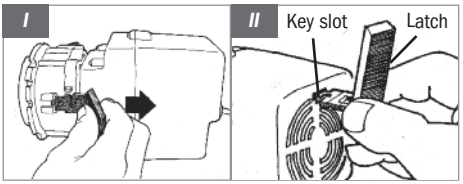

***P Install cover feet first***

**8.** Expand roller assembly.

### Adjustable Models

Hold the feed rate control securely, use the cover as a wrench and quickly (snap) rotate the roller assembly clockwise to expand the roller assembly. The tube will be pressed against the tube housing wall. *Illustrations M & N* Proceed to step 9.

### Fixed Output Models (motor vent with key slot, manufactured after 04/29/11)




a. Slide one latch out to remove it from the tube housing. Insert the latch end into the key slot in the vent in the rear of the motor housing. While pressing the latch into the rear of the motor, gently rotate the cover clockwise until it stops. *Illustrations I & II*

b. Holding the motor securely, use the cover as a wrench and quickly (snap) rotate the roller assembly clockwise to expand the roller assembly. The tube will be pressed against the tube housing wall. *Illustrations M & N*

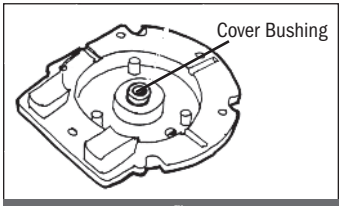
c. Remove the latch from the vent and re-attach it to the tube housing. Proceed to step 9.

*More on next page*

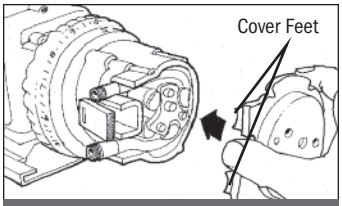
# TUBE REPLACEMENT – SINGLE HEAD PUMPS

continued

## INSTALL THE TUBE/EXPAND THE ROLLER ASSEMBLY continued




***O Apply Aquashield™ to cover bushing***




***P Install cover feet first***

**9.** Apply a small amount of AquaShield™ to the cover bushing ONLY. **DO NOT** lubricate the pump tube. *Illustration O*

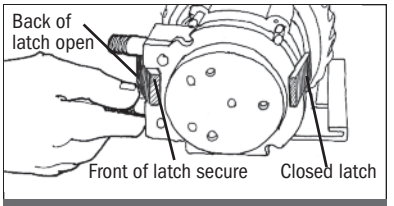
**10.** Place the tube housing cover (feet first) on the tube housing, affix the front of the latches to the cover lip and then press the latches back to secure. Be sure the cover is seated with the sleeve bearing on the shaft and is flush with the housing, before latching. *Illustration P*

*More on next page*

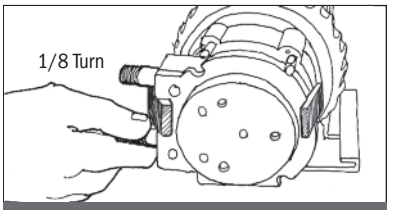
# TUBE REPLACEMENT – SINGLE HEAD PUMPS

continued

## CENTER THE TUBE




*Q Prepare to center tube*




*R Center tube*

1. Ensure the pump is off. Lift the latch located between the tube fittings, leaving the end of the latch engaged with the lip on the tube housing cover. Leave the latch on the opposite side engaged. *Illustration Q*
2. Plug the pump in and turn it on. Turn the tube fitting on the suction side not more than 1/8 of a turn in the direction the tube must move. *Illustration R*
3. **DO NOT** let go of the fitting until the tube rides approximately in center of the rollers.
4. Turn the pump off, let go of the fitting, and secure the latch between the fittings. *For CE pump only: Reinstall the safety screw on the cover.*
5. Inspect the suction and discharge lines, point of injection, and check valve duckbill for blockages. Clean all deposits and/or replace parts as required. Failure to do so may lead to poor pump performance, including shortened tube life.
6. Reconnect the suction and discharge lines. **DO NOT** allow the tube fittings to turn inside the pump housing.
7. Turn the pump on and run for two minutes to verify operation.

# CLEANING THE POINT OF INJECTION – SAFETY INFORMATION

**NOTICE: Indicates special instructions or general mandatory action.**

Pumps rated 25 psi maximum are installed with an injection fitting and pumps rated 100 psi maximum are installed with a duckbill check valve. Both allow the extension tip to be installed in the center of the pipe directly in the flow of water to help reduce deposit accumulation.

**⚠ WARNING Warns about hazards that CAN cause death, serious personal injury, or property damage if ignored.**

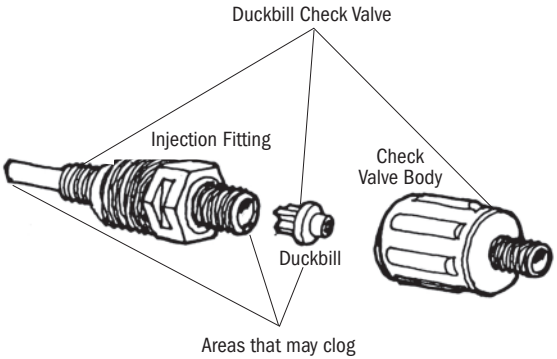
**This is the safety alert symbol. When displayed in this manual or on the equipment, look for one of the following signal words alerting you to the potential for personal injury or property damage.**

**⚠ WARNING HAZARDOUS PRESSURE/CHEMICAL EXPOSURE**

Use caution and bleed off all resident system pressure prior to attempting service or installation.

Use caution when disconnecting discharge line from pump. Discharge line may be under pressure. Discharge line may contain chemical.

To reduce risk of exposure, the use of proper personal protective equipment is mandatory when working on or near chemical metering pumps.



# CLEANING THE POINT OF INJECTION continued

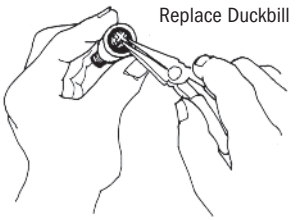
1. Turn metering pump off and unplug cord. Disable water pump or auxiliary equipment electrical supply.
2. Depressurize system and bleed pressure from pump discharge line.
3. Loosen and remove connecting nut and ferrule from the check valve or injection fitting to disconnect discharge tubing.

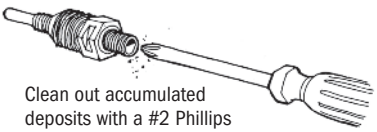
   **Duckbill Check Valve, go to 4.**

   **Injection Fitting, skip 4 and go to 5.**

4. - Unscrew the top fitting (check valve body) to disassemble. The bottom fitting (injection fitting with arrow) should remain attached to the pipe.
   - Remove duckbill from check valve body and replace it.
   - Examine o-ring in the injection fitting and replace if deteriorated or damaged.
5. Insert a #2 Phillips head screwdriver through injection fitting into the pipe to locate or break up accumulated deposits. If screwdriver cannot be inserted, drill the deposit out of the injection fitting (DO NOT drill through the opposite pipe wall).

*More on next page*



Clean out accumulated deposits with a #2 Phillips head screwdriver.

Periodic inspection and cleaning of the point of injection will maintain proper pump operation and provide maximum tube life.

# CLEANING THE POINT OF INJECTION continued

**6.** Replace discharge line if cracked or deteriorated. If the end is clogged, cut off the calcified or blocked section of discharge line.

**7.**

**Duckbill Check Valve**

**a.** Reassemble the duckbill check valve.

**b.** Replace ferrule and reinstall the discharge line to the check valve approximately 3/4" until it stops.

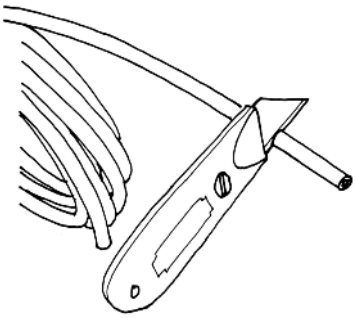
**Injection Fitting**

Replace ferrule and reinstall the discharge line to the injection fitting approximately 3/4" until it stops.

**8.** Tighten the connecting nut finger tight.

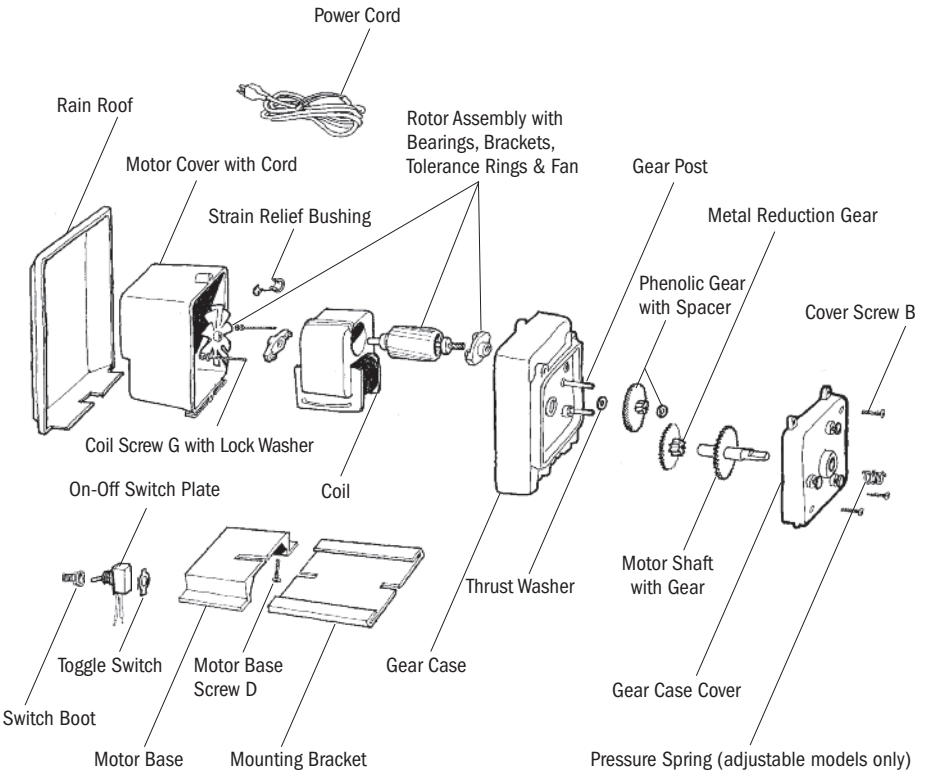
**9.** Enable the water pump electrical supply and pressurize the water system.
NOTE: The roller assembly needs to be expanded so the tube is pressed against the tube housing wall.

**10.** Put the metering pump back in service and inspect all connections for leaks.



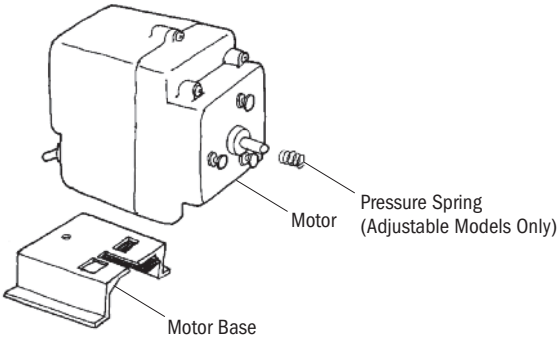
Cut off the calcified or blocked section.

# MOTOR EXPLODED VIEW




Contact factory for part numbers.

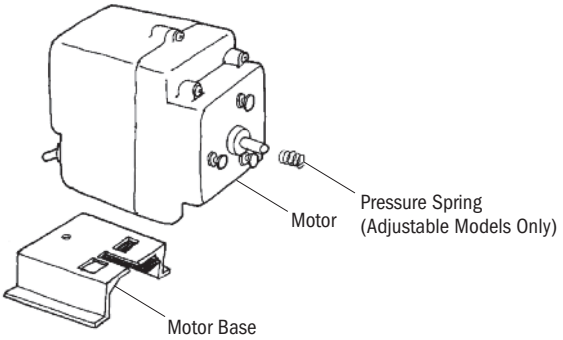
# MOTOR 60Hz




**MOTOR 60Hz**

| DESCRIPTION | WORKS WITH | PART NUMBER | UM |
|---|---|---|---|
| 120V | Classic Adjustable 45, 100 | **PM6041D** | EA |
| 220V | | **PM6042D** | EA |
| 120V | Classic Adjustable 85, 170 | **PM6081D** | EA |
| 220V | | **PM6082D** | EA |
| 120V | Classic Fixed 45 | **ME6041D** | EA |
| 220V | | **ME6042D** | EA |
| 120V | Classic Fixed 85 | **ME6081D** | EA |
| 220V | | **ME6082D** | EA |
| 120V | Classic Fixed 100 | **DM6041D** | EA |
| 220V | | **DM6042D** | EA |
| 120V | Classic Fixed 170 | **DM6081D** | EA |
| 220V | | **DM6082D** | EA |

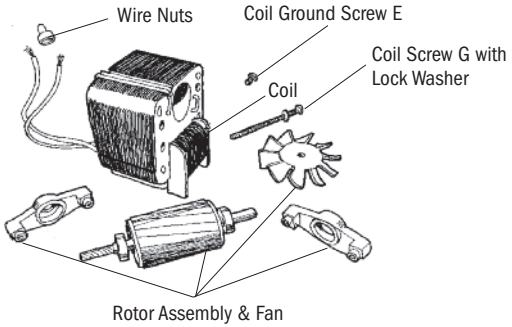
# MOTOR 50Hz *International*




**MOTOR 50Hz *International***

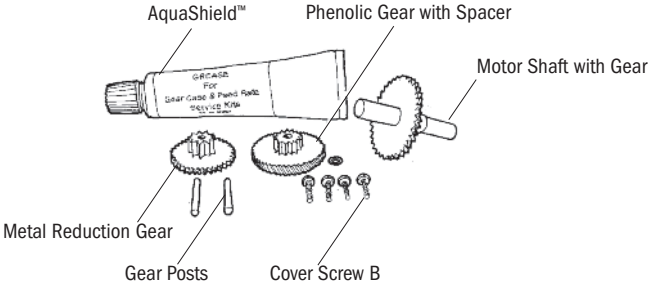
| DESCRIPTION | WORKS WITH | PART NUMBER | UM |
|---|---|---|---|
| 230V | Classic Adjustable 45, 100 | **PM64230** | EA |
| 250V | | **PM6426D** | EA |
| 230V | Classic Adjustable 85, 170 | **PM68230** | EA |
| 250V | | **PM6826D** | EA |
| 230V | Classic Fixed 45 | **ME64230** | EA |
| 250V | | **ME6426D** | EA |
| 230V | Classic Fixed 85 | **ME68230** | EA |
| 250V | | **ME6826D** | EA |
| 230V | Classic Fixed 100 | **DM64230** | EA |
| 250V | | **DM64250** | EA |
| 230V | Classic Fixed 170 | **DM68230** | EA |
| 250V | | **DM68250** | EA |

# MOTOR SERVICE KITS




### MOTOR SERVICE KIT 60HZ

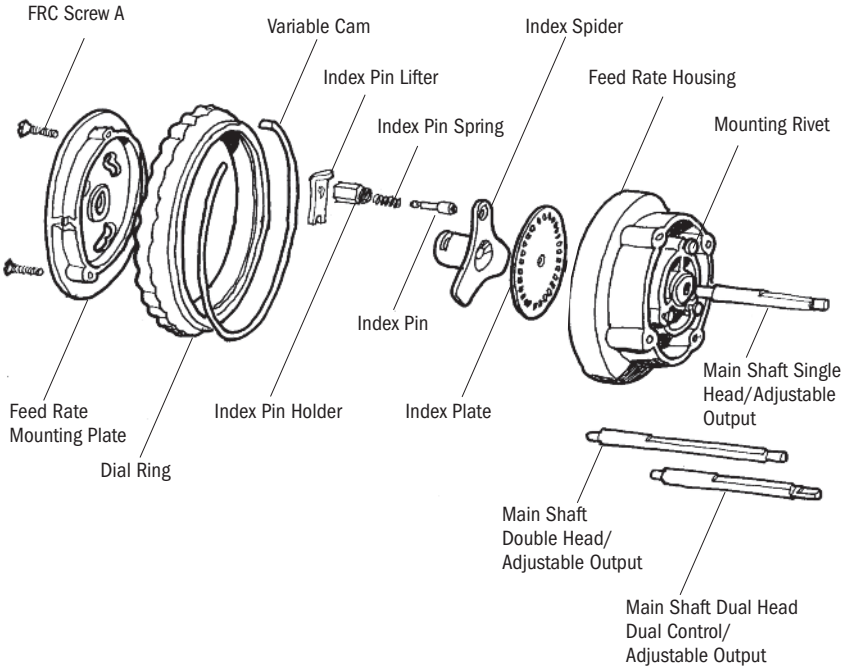
| DESCRIPTION | PART NUMBER | UM |
|---|---|---|
| 120V | **MSK120** | KIT |
| 220V | **MSK220** | KIT |




### GEAR CASE SERVICE KIT

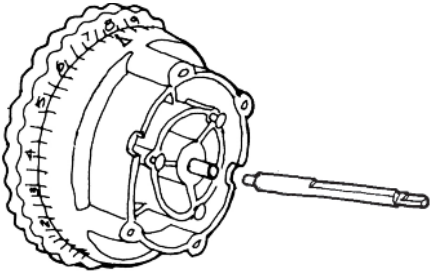
| WORKS WITH | PART NUMBER | UM |
|---|---|---|
| Classic Adjustable 45, 100 | **GSK45A** | KIT |
| Classic Adjustable 85, 170 | **GSK85A** | KIT |
| Classic Fixed 45 | **GSK45F** | KIT |
| Classic Fixed 85 | **GSK85F** | KIT |

# FEED RATE CONTROL EXPLODED VIEW



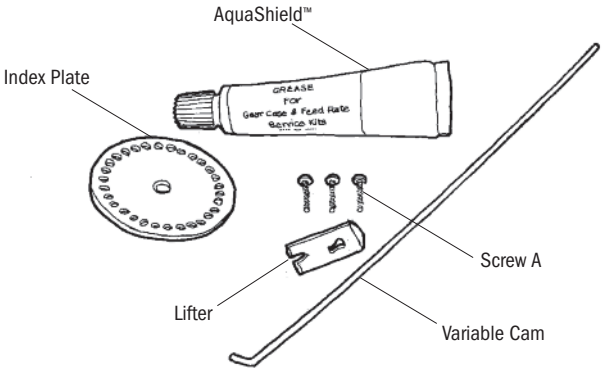

Contact factory for part numbers.

# FEED RATE CONTROL AND SERVICE KIT



### FEED RATE CONTROL WITH SHAFT

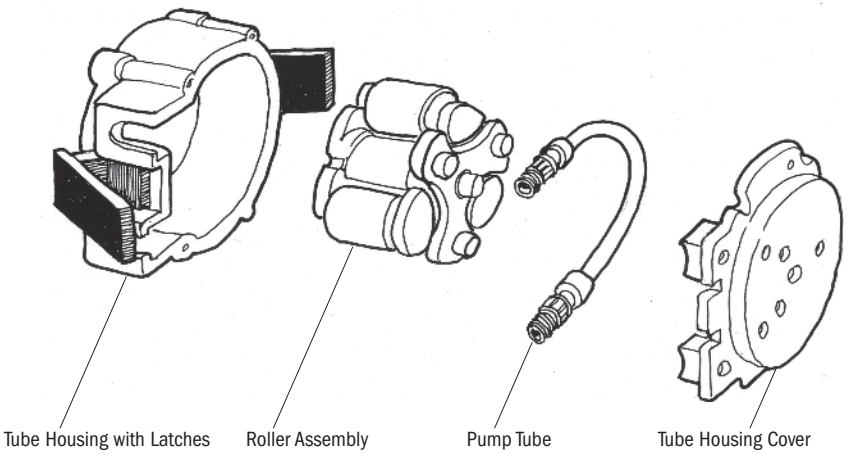
| WORKS WITH | PART NUMBER | UM |
|---|---|---|
| Classic Adjustable 45, 85 | FC5040D | EA |
| Classic Adjustable 100, 170 | DM5040D | EA |
| Classic Dual Control 100, 170 | DM504DC | EA |




### FEED RATE CONTROL SERVICE KIT

| WORKS WITH | PART NUMBER | UM |
|---|---|---|
| Classic Adjustable 45, 85, 100, 170 | FSK100 | KIT |

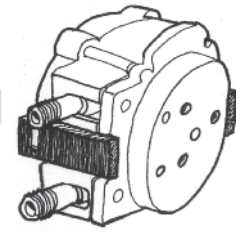
# PUMP HEAD EXPLODED VIEW




## PUMP HEAD PARTS

| DESCRIPTION | EA | 2-PK | 4-PK |
|---|---|---|---|
| Tube Housing & Latches | QP400-1 | QP400-2 | ———— |
| Latches | ———— | QP401-2 | ———— |
| Roller Assembly | QP500–1 | ———— | QP500–4 |
| Tube Housing Cover & Bushing | QP100–1 | ———— | QP100–4 |

# PUMP HEAD



Refer to the **FLOW RATE OUTPUT** chart to match the pump with the correct tube

### PUMP HEAD 25 psi max.

Includes tube, ferrules 1/4"

| DESCRIPTION | EA | 2-PK |
|---|---|---|
| #1 Santoprene® QP Pump Head | QP251-1 | QP251-2 |
| #2 Santoprene® QP Pump Head | QP252-1 | QP252-2 |
| #3 Santoprene® QP Pump Head | QP253-1 | QP253-2 |
| #4 Santoprene® QP Pump Head | QP254-1 | QP254-2 |
| #5 Santoprene® QP Pump Head | QP255-1 | QP255-2 |
| #1 Versilon® QP Pump Head | QP25T1–1 | ------- |
| #2 Versilon® QP Pump Head | QP25T2–1 | ------- |
| #3 Versilon® QP Pump Head | QP25T3-1 | ------- |
| #4 Versilon® QP Pump Head | QP25T4-1 | ------- |
| #5 Versilon® QP Pump Head | QP25T5–1 | ------- |

### PUMP HEAD 100 psi max.

Includes tube, duckbill, ferrules 1/4"

| DESCRIPTION | EA |
|---|---|
| #1 Santoprene® QP Pump Head | QP101-1 |
| #2 Santoprene® QP Pump Head | QP102-1 |
| #7 Santoprene® QP Pump Head (excludes Classic 100 or 170) | QP107-1 |
| #1 Versilon® QP Pump Head | QP10T1-1 |
| #2 Versilon® QP Pump Head | QP10T2-1 |

### PUMP HEAD 1.7 bar max. *EUROPE*

Includes tube, ferrules 6 mm

| DESCRIPTION | EA | 2-PK |
|---|---|---|
| #1 Santoprene® QP Pump Head | QP171–1 | QP171–2 |
| #2 Santoprene® QP Pump Head | QP172–1 | QP172–2 |
| #3 Santoprene® QP Pump Head | QP173–1 | QP173–2 |
| #4 Santoprene® QP Pump Head | QP174-1 | QP174-2 |
| #5 Santoprene® QP Pump Head | QP175-1 | QP175-2 |
| #1 Versilon® QP Pump Head | QP17T1-1 | ------- |
| #2 Versilon® QP Pump Head | QP17T2-1 | ------- |
| #3 Versilon® QP Pump Head | QP17T3-1 | ------- |
| #4 Versilon® QP Pump Head | QP17T4-1 | ------- |
| #5 Versilon® QP Pump Head | QP17T5-1 | ------- |

### PUMP HEAD 6.9 bar max. *EUROPE*

Includes tube, duckbill, ferrules 6 mm

| DESCRIPTION | EA |
|---|---|
| #1 Santoprene® QP Pump Head | QP691-1 |
| #2 Santoprene® QP Pump Head | QP692-1 |
| #7 Santoprene® QP Pump Head (excludes Classic 100 or 170) | QP697-1 |
| #1 Versilon® QP Pump Head | QP69T1-1 |
| #2 Versilon® QP Pump Head | QP69T2-1 |

NOTE: Confirm chemical compatibility with the chemical resistance guide in the catalog.

# PUMP HEAD SERVICE KITS

Roller Assembly

Latches

Ferrules 1/4" or 6 mm *Europe*

Connecting Nuts 1/4"

Pump Tube

Duckbill
(100 psi)

### PUMP HEAD SERVICE KIT 25 psi max.

Includes roller assembly, tube, nuts, ferrules 1/4", latches

| DESCRIPTION | KIT |
|---|---|
| #1 Santoprene® QP Kit | QP251K |
| #2 Santoprene® QP Kit | QP252K |
| #3 Santoprene® QP Kit | QP253K |
| #4 Santoprene® QP Kit | QP254K |
| #5 Santoprene® QP Kit | QP255K |
| #1 Versilon® QP Kit | QP25T1K |
| #2 Versilon® QP Kit | QP25T2K |
| #3 Versilon® QP Kit | QP25T3K |
| #4 Versilon® QP Kit | QP25T4K |
| #5 Versilon® QP Kit | QP25T5K |

### PUMP HEAD SERVICE KIT 100 psi max.

Includes roller assembly, tube, duckbill, nuts, ferrules 1/4", latches

| DESCRIPTION | KIT |
|---|---|
| #1 Santoprene® QP Kit | QP101K |
| #2 Santoprene® QP Kit | QP102K |
| #7 Santoprene® QP Kit | QP107K |
| #1 Versilon® QP Kit | QP10T1K |
| #2 Versilon® QP Kit | QP10T2K |

### PUMP HEAD SERVICE KIT 1.7 bar max. *EUROPE*

Includes roller assembly, tube, nuts, ferrules 6 mm, latches

| DESCRIPTION | KIT |
|---|---|
| #1 Santoprene® QP Kit | QP171K |
| #2 Santoprene® QP Kit | QP172K |
| #3 Santoprene® QP Kit | QP173K |
| #4 Santoprene® QP Kit | QP174K |
| #5 Santoprene® QP Kit | QP175K |
| #1 Versilon® QP Kit | QP17T1K |
| #2 Versilon® QP Kit | QP17T2K |
| #3 Versilon® QP Kit | QP17T3K |
| #4 Versilon® QP Kit | QP17T4K |
| #5 Versilon® QP Kit | QP17T5K |

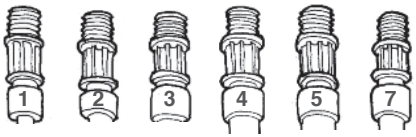
### PUMP HEAD SERVICE KIT 6.9 bar max. *EUROPE*

Includes roller assembly, tube, duckbill, nuts, ferrules 6 mm, latches

| DESCRIPTION | KIT |
|---|---|
| #1 Santoprene® QP Kit | QP691K |
| #2 Santoprene® QP Kit | QP692K |
| #7 Santoprene® QP Kit | QP697K |
| #1 Versilon® QP Kit | QP69T1K |
| #2 Versilon® QP Kit | QP69T2K |

NOTE: Confirm chemical compatibility with the chemical resistance guide in the catalog.

# PUMP TUBES




Tube number located on fitting

Refer to the **FLOW RATE OUTPUT** chart to match the pump with the correct tube

**PUMP TUBE** Includes ferrules 1/4"

| DESCRIPTION | 2-PK | 5-PK |
|---|---|---|
| #1 Santoprene® Tube | UCCP201 | MCCP201 |
| #2 Santoprene® Tube | UCCP202 | MCCP202 |
| #3 Santoprene® Tube | UCCP203 | MCCP203 |
| #4 Santoprene® Tube | UCCP204 | MCCP204 |
| #5 Santoprene® Tube | UCCP205 | MCCP205 |
| #7 Santoprene® Tube (excludes Classic 100 or 170) | UCCP207 | MCCP207 |
| #1 Versilon® Tube | UCTYG01 | MCTYG01 |
| #2 Versilon® Tube | UCTYG02 | MCTYG02 |
| #3 Versilon® Tube | UCTYG03 | MCTYG03 |
| #4 Versilon® Tube | UCTYG04 | MCTYG04 |
| #5 Versilon® Tube | UCTYG05 | MCTYG05 |

**PUMP TUBE & DUCKBILL**
Includes ferrules 1/4"

| DESCRIPTION | 2-PK |
|---|---|
| #1 Santoprene® Tube & Duckbill | UCCIFD |
| #2 Santoprene® Tube & Duckbill | UCCP2FD |
| #7 Santoprene® Tube & Duckbill (excludes Classic 100 or 170) | UCCP7FD |
| #1 Versilon® Tube & Duckbill | UCTY1FD |
| #2 Versilon® Tube & Duckbill | UCTY2FD |

**PUMP TUBE *EUROPE*** Includes ferrules 6 mm

| DESCRIPTION | 2-PK | 5-PK |
|---|---|---|
| #1 Santoprene® Tube | UCCP21CE | MCCP21CE |
| #2 Santoprene® Tube | UCCP21CE | MCCP21CE |
| #3 Santoprene® Tube | UCCP23CE | MCCP23CE |
| #4 Santoprene® Tube | UCCP24CE | MCCP24CE |
| #5 Santoprene® Tube | UCCP25CE | MCCP25CE |
| #7 Santoprene® Tube (excludes Classic 100 or 170) | UCCP27CE | MCCP27CE |
| #1 Versilon® Tube | UCTY1CE | MCTY1CE |
| #2 Versilon® Tube | UCTY2CE | MCTY2CE |
| #3 Versilon® Tube | UCTY3CE | MCTY3CE |
| #4 Versilon® Tube | UCTY4CE | MCTY4CE |
| #5 Versilon® Tube | UCTY5CE | MCTY5CE |

**PUMP TUBE & DUCKBILL *EUROPE***
Includes ferrules 6 mm

| DESCRIPTION | 2-PK |
|---|---|
| #1 Santoprene® Tube & Duckbill | UC1FDCE |
| #2 Santoprene® Tube & Duckbill | UC2FDCE |
| #7 Santoprene® Tube & Duckbill (excludes Classic 100 or 170) | UC7FDCE |
| #1 Versilon® Tube & Duckbill | UCTY1DCE |
| #2 Versilon® Tube & Duckbill | UCTY2DCE |

NOTE: Confirm chemical compatibility with the chemical resistance guide in the catalog.

# INJECTION FITTINGS & CHECK VALVES

1/4" Duckbill Check Valve

3/8" Duckbill Check Valve

6 mm Duckbill Check Valve

### INJECTION FITTINGS 25 psi max.

| DESCRIPTION | EA | 5-PK |
|---|---|---|
| 1/4" Injection Fitting with Nut & Ferrule | UCAK300 | MCAK300 |
| 3/8" Injection Fitting with Nut | UCAK400 | ——— |

### INJECTION FITTINGS 1.7 bar max. *EUROPE*

| DESCRIPTION | EA |
|---|---|
| 6 mm Injection Fitting with Nut & Ferrule | UCAK3CE |

### DUCKBILL CHECK VALVES 100 psi max.

| DESCRIPTION | EA | 5-PK |
|---|---|---|
| 1/4" Includes Santoprene® Duckbill, Nut, Ferrule | UCDBINJ | MCDBINJ |
| 1/4" Includes Pellethane® Duckbill, Nut, Ferrule | UCTYINJ | MCTYINJ |
| 1/4" Includes FKM Duckbill, Nut, Ferrule | UCKMINJ | MCKMINJ |
| 3/8" Includes Santoprene® Duckbill, Nut | UCINJ38 | MCINJ38 |
| 3/8" Includes Pellethane® Duckbill, Nut | UCTYIJ38 | MCTYIJ38 |
| 3/8" Includes FKM Duckbill, Nut | UCKMI38 | MCKMI38 |

### DUCKBILL CHECK VALVES 6.9 bar max. *EUROPE*

| DESCRIPTION | EA | 5-PK |
|---|---|---|
| 6 mm Includes Santoprene® Duckbill, Nut, Ferrule | UCINJCE | MCINJCE |
| 6 mm Includes Pellethane® Duckbill, Nut, Ferrule | UCTINJCE | MCTINJCE |
| 6 mm Includes FKM Duckbill, Nut, Ferrule | UCKMJCE | MCKMJCE |

NOTE: Confirm chemical compatibility with the chemical resistance guide in the catalog.

# FOR YOUR RECORDS

Pump Item Number

Serial Number

Date of Installation

STENNER PUMPS

**STENNER PUMP COMPANY**

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Mon.–Thu. 7:30 am–5:30 pm
Fri. 7:00 am–5:30 pm


Assembled in the USA



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