

# Classic Series INSTALLATION MANUAL

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CM1207

### Warranty and Service Policy

#### **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**

UPS and prepaid 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.

### Safety Information

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



**ELECTRIC SHOCK HAZARD** 



### **A 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).



#### **A AVERTISSEMENT** RISQUE DE CHOC ELECTRIQUE:

Cette pompe est équipée d'une fiche de mise à terre. Pour réduire le risque de choc électrique, s'assurer que la fiche est bien raccordée à une prise de courant avec une connexion de mise à terre. Installer seulement sur un circuit proteger par un interrupteur proteger par une mise à la terre



**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 pump 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.



#### A WARNING | RISK OF FIRE HAZARD:

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



#### **A WARNING** RISK OF CHEMICAL OVERDOSE:

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



### Safety Information continued

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

### A 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.

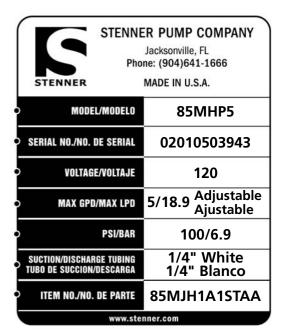
- NOTICE: Indicates special instructions or general mandatory action.
- **NOTICE:** This metering pump is portable and designed to be removable from the plumbing system without damage to the connections.
- NOTICE: This metering pump and its components have been tested for use with the following chemicals: Sodium Hypochlorite (10-15%), Muriatic Acid (20-22% Baume, 31.5% Hcl), and Soda Ash.
- NOTE: Cette a pompe de dosage et ses composants ont été testés pour utilisation avec les produits chimiques suivants; Hypochlorite de Sodium (solution de 10-15%); Acide Muriatique (20-22% Baume, 31.5% Hcl); Cendre de Soude.

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.
- A Suitable for indoor and outdoor use.
- ⚠ Convient pour usage intérieur et extérieur.

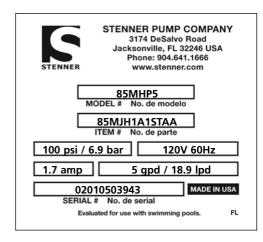
### Pump Identification

### **Box Label**



### Pump Identification continued

### **Data Label**



### Warning Label

▲ WARNING To reduce risk of electric shock, connect only to a properly grounded grounding-type receptacle.

▲ ▲ FLIGRO Para reducir el riesgo de descarga eléctrica, conéctelo a un receptáculo eléctrico con conexión a tierra adecuado.

▲ CAUTION To reduce risk of electric shock, pull plug before servicing this pump.

A CUIDADO Para reducir el riesgo de descarga eléctrica, desenchufe el dosificador antes de realizar reparaciones.

⚠ MARNING To reduce risk of electric shock, install only on a circuit protected by a ground-fault circuit Interrupter (GFCI).
⚠ MELIBRO Para reducir el riesgo de descarga eléctrica, instale el dosificador en un circuito protegido por un interruptor diferencial.

See installation instructions for overdosing protection. Lea las instrucciones de instalación para evitar sobredosis de químicos.

Thermally Protected Motor for Indoor Use. Motor termal protegido para el uso interior.

Suitable for Indoor and Outdoor Use. Adecuado para el uso interior y exterior.

Nonsubmersible Pump. Dosificador no submergible.



CONFORMS TO STD. NSF-50 M CIRCULATION SYSTEM

94247 COMPONENTS FOR SWIMMING POOLS, SPAS, OR HOT TUBS



THIS PRODUCT HAS BEEN TESTED AND CERTIFIED BY THE WATER QUALITY ASSOCIATION ACCORDING TO NSF/ANSI 61 FOR MATERIALS SAFETY ONLY.



METERING PUMP LR79585



NOTE: Agency listings vary by model.

### Outputs 45 series

#### Adjustable Output

,	·				— A <sub>l</sub>	pprox	xima <sup>-</sup>	te <b>GI</b>	PD @	60F	lz —					– A <sub>l</sub>	opro	kima	te LP	D @	50H	z —		$\neg$
Single Head Model	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	7	8	Fee 9	ed Rat	e Cont L	rol Set 1	ting 2	3	4	5	6	7	8	9	10
45MHP2* 45M1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.2	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3	0.6	0.9	1.8	2.7	3.6	4.5	5.5	6.4	7.3	8.2	9.1
45MHP10* 45M2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	0.5	1	2	3	4	5	6	7	8	9	10	1.5	3	6.1	9.1	12.1	15.1	18.2	21.2	24.2	27.3	30.3
45MHP22* 45M3	100 psi (6.9 bar) 25 psi (1.7 bar)	#7 #3	1.1	2.2	4.4	6.6	8.8	11	13.2	15.4	17.6	19.8	22	3.3	6.6	13.3	20	26.6	33.3	40	46.6	53.3	60	66.6
45M4	25 psi (1.7 bar)	#4	1.7	3.5	7	10.5	14	17.5	21	24.5	28	31.5	35	5.1	10.6	21.2	31.8	42.4	53	63.6	74.2	84.8	95.4	106
45M5	25 psi (1.7 bar)	#5	2.5	5	10	15	20	25	30	35	40	45	50	7.6	15.1	30.3	45.4	60.6	75.7	90.8	106	121.1	136.3	151.4

#### **Fixed Output**

Single Head Model	Maximum Pressure	Pump Tube Number	GPD 60Hz	LPD 50Hz
45MPHP2* 45MP1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	3	9.1
45MPHP10* 45MP2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	10	30.3
45MPHP22* 45MP3	100 psi (6.9 bar) 25 psi (1.7 bar)	#7 #3	22	66.6
45MP4	25 psi (1.7 bar)	#4	35	106
45MP5	25 psi (1.7 bar)	#5	50	151.4

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

**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.

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### Outputs 85 series

#### Adjustable Output

					— A <sub>l</sub>	opro	xima <sup>-</sup>	te <b>G</b>	PD @	60F	lz —					— A	pprox	xima <sup>-</sup>	te <b>LF</b>	D @	50H	z		
Single Head Model	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	7	8	Feed F 9	Rate C 10	ontrol L	Settin 1	g 2	3	4	5	6	7	8	9	10
85MHP5* 85M1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.3	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	0.9	1.5	3	4.5	6.1	7.6	9.1	10.6	12.1	13.6	15.1
85MHP17* 85M2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	0.8	1.7	3.4	5.1	6.8	8.5	10.2	11.9	13.6	15.3	17	2.4	5.1	10.3	15.4	20.6	25.7	30.9	36	41.2	46.3	51.5
85MHP40* 85M3	100 psi (6.9 bar) 25 psi (1.7 bar)	#7 #3	2	4	8	12	16	20	24	28	32	36	40	6.1	12.1	24.2	36.3	48.5	60.6	76.7	84.8	96.9	109	121.1
85M4	25 psi (1.7 bar)	#4	3	6	12	18	24	30	36	42	48	54	60	9.1	18.2	36.3	54.5	76.7	90.8	109	127.2	145.3	163.5	181.7
85M5	25 psi (1.7 bar)	#5	4.3	8.5	17	25.5	34	42.5	51	59.5	68	76.5	85	13	25.7	51.5	77.2	103	128.7	154.4	180	205.9	231.6	257.4

#### **Fixed Output**

Single Head Model	Maximum Pressure	Pump Tube Number	GPD 60Hz	LPD 50Hz
85MPHP5* 85MP1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	5	15.1
85MPHP17* 85MP2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	17	51.5
85MPHP40* 85MP3	100 psi (6.9 bar) 25 psi (1.7 bar)	#7 #3	40	121.1
85MP4	25 psi (1.7 bar)	#4	60	181.17
85MP5	25 psi (1.7 bar)	#5	85	257.4

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

### Outputs 100 series

#### Adjustable Output

-					— A	opro	ximat	te <b>GI</b>	PD @	60F	łz —					— A	pprox	xima	te LP	D @	50H	z —		
Double Head Model	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	7	8	Fee	ed Rate	Cont L	rol Set 1	tting 2	3	4	5	6	7	8	9	10
100DMHP5* 100DM1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.3	0.6	1.2	1.8	2.4	3.0	3.6	4.2	4.8	5.4	6	0.9	1.8	3.6	5.5	7.3	9.1	10.9	12.7	14.5	16.4	18.2
100DMHP20* 100DM2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	1	2	4	6	8	10	12	14	16	18	20	3	6.1	12.1	18.2	24.2	30.3	36.4	42.4	48.5	54.5	60.6
100DM3	25 psi (1.7 bar)	#3	2.2	4.4	8.8	13.2	17.6	22	26.4	30.8	35.2	39.6	44	6.7	13.3	26.7	40	53.3	66.6	79.9	93.3	106.6	119.9	133.2
100DM4	25 psi (1.7 bar)	#4	3.5	7	14	21	28	35	42	49	56	63	70	10.6	21.2	42.4	63.6	84.8	106	127.2	148.4	169.6	190.8	212
100DM5	25 psi (1.7 bar)	#5	5	10	20	30	40	50	60	70	80	90	100	15.1	30.3	60.6	90.8	121.1	151.4	181.7	212	242.2	272.5	302.8

#### **Fixed Output**

Double Head Model	Maximum Pressure	Pump Tube Number	GPD 60Hz	LPD 50Hz
100DMPHP5* 100DMP1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	6	18.2
100DMPHP20* 100DMP2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	20	60.6
100DMP3	25 psi (1.7 bar)	#3	44	133.2
100DMP4	25 psi (1.7 bar)	#4	70	212
100DMP5	25 psi (1.7 bar)	#5	100	302.8

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

### Outputs 170 series

#### Adjustable Output

					— A <sub>l</sub>	ppro	ximat	te <b>G</b> l	PD @	60F	łz —					— A	ppro	xima	te <b>LF</b>	D @	50H	z		
Double Head Model	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	7	8	Feed F 9	Rate C 10	ontrol L	Settin 1	g 2	3	4	5	6	7	8	9	10
170DMHP9* 170DM1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.5	1	2	3	4	5	6	7	8	9	10	1.5	3	6.1	9.1	12.1	15.1	18.2	21.2	24.2	27.3	30.3
170DMHP34* 170DM2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	1.7	3.4	6	9.5	13.6	17	20.4	23.8	27.2	30.6	34	5.1	10.3	18.2	28.8	39.1	51.5	61.8	72.1	82.4	92.7	102.6
170DM3	25 psi (1.7 bar)	#3	4	8	16	24	32	40	48	56	64	72	80	12.1	24.2	48.5	72.7	96.9	121.1	145.4	169.6	193.8	218	242.2
170DM4	25 psi (1.7 bar)	#4	6	12	24	36	48	60	72	84	96	108	120	18.2	36.3	72.7	109	145.3	181.7	218	254.4	290.7	327	363.4
170DM5	25 psi (1.7 bar)	#5	8.5	17	34	51	68	85	102	119	136	153	170	25.7	51.5	86	154.4	205.9	257.4	308.9	360.4	411.8	463.3	514.8

#### **Fixed Output**

Double Head Model	Maximum Pressure	Pump Tube Number	GPD 60Hz	LPD 50Hz
170DMPHP9* 170DMP1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	10	30.3
170DMPHP34* 170DMP2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	34	102.6
170DMP3	25 psi (1.7 bar)	#3	80	242.2
170DMP4	25 psi (1.7 bar)	#4	120	363.4
170DMP5	25 psi (1.7 bar)	#5	170	514.8

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

### Outputs 100MDC series

### Determining Output for Dual Head Dual Control Models

- The dial ring for adjustable pumps is marked L-10; L=5%, 1-10 indicates approximately 10% increments of maximum output.
- On the MDC models, the outer pump head operates on a percentage of the inner head (closest to the motor).
- Setting #10 on both pump heads will deliver the pump's maximum output and is the only time each pump head will output the same amount.

#### **Example Using 100MDC5**

- Decide on the desired output for the inner head.
- Note the setting on the dial ring that represents the desired output.
  - For example setting #4 = 40% of max output In the 100MDC5 model, setting #4 = 20 gpd
- Repeat the above steps to calculate the output of the outer head.

Using setting #3 in this example, #3 = 30% of the inner head output 20 gpd x 30% = 6 gpd

In this example using pump model 100MDC5, the output for the inner head would be 20 gpd and 6 gpd for the outer head.

### Outputs 100MDC series

### **Outputs for Innermost Head Only**

					— AI	oprox	kima	te <b>GF</b>	D @	60H	Iz —					— A <sub>l</sub>	opro	ximat	te <b>LP</b>	D @	50H	z —		
Dual Head Dual Control	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	Fee 7	ed Rate 8	e Cont 9	rol Set 10	tting L	1	2	3	4	5	6	7	8	9	10
100MDCHP5* 100MDC1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.2	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3	0.6	0.9	1.8	2.7	3.6	4.5	5.5	6.4	7.3	8.2	9.1
100MDCHP20* 100MDC2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	0.5	1	2	3	4	5	6	7	8	9	10	1.5	3	6.1	9.1	12.1	15.1	18.2	21.2	24.2	27.3	30.3
100MDC3	25 psi (1.7 bar)	#3	1.1	2.2	4.4	6.6	8.8	11	13.2	15.4	17.6	19.8	22	3.3	6.6	13.3	20	26.6	33.3	40	46.6	53.3	60	66.6
100MDC4	25 psi (1.7 bar)	#4	1.7	3.5	7	10.5	14	17.5	21	24.5	28	31.5	35	5.1	10.6	21.2	31.8	42.4	53	63.6	74.2	84.8	95.4	106
100MDC5	25 psi (1.7 bar)	#5	2.5	5	10	15	20	25	30	35	40	45	50	7.6	15.1	30.3	45.4	60.6	75.7	90.8	106	121.1	136.3	151.4

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

### Outputs 170MDC series

### Determining Output for Dual Head Dual Control Models

- The dial ring for adjustable pumps is marked L-10; L=5%, 1-10 indicates approximately 10% increments of maximum output.
- On the MDC models, the outer pump head operates on a percentage of the inner head (closest to the motor).
- Setting #10 on both pump heads will deliver the pump's maximum output and is the only time each pump head will output the same amount.

#### **Example Using 170MDCHP34**

- Decide on the desired output for the inner head.
- Note the setting on the dial ring that represents the desired output.

```
For example setting #8 = 80% of max output
In the 170MDCHP34 model, setting
#8 = 13.6 gpd
```

 Repeat the above steps to calculate the output of the outer head.

```
Using setting #6 in this example,
#6 = 60% of the inner head output
13.6 gpd x 60% = 8.2 gpd
```

In this example using pump model 170MDCHP34, the output for the inner head would be 13.6 gpd and 8.2 gpd for the outer head.

### Outputs 170MDC series

### **Outputs for Innermost Head Only**

					— A <sub>l</sub>	opro	kima	te GF	D @	60F	lz —					— A	ppro	xima	te <b>LP</b>	D @	50H	<b>z</b> —		
Dual Head Dual Control	Maximum Pressure	Pump Tube Number	L	1	2	3	4	5	6	7	8	Feed F 9	Rate C	ontrol L	Settin 1	g 2	3	4	5	6	7	8	9	10
170MDCHP9* 170MDC1	100 psi (6.9 bar) 25 psi (1.7 bar)	#1	0.3	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	0.9	1.5	3	4.5	6.1	7.6	9.1	10.6	12.1	13.6	15.1
170MDCHP34* 170MDC2	100 psi (6.9 bar) 25 psi (1.7 bar)	#2	0.8	1.7	3.4	5.1	6.8	8.5	10.2	11.9	13.6	15.3	17	2.4	5.1	10.3	15.4	20.6	25.7	30.9	36	41.2	46.3	51.5
170MDC3	25 psi (1.7 bar)	#3	2	4	8	12	16	20	24	28	32	36	40	6.1	12.1	24.2	36.3	48.5	60.6	76.7	84.8	96.9	109	121.1
170MDC4	25 psi (1.7 bar)	#4	3	6	12	18	24	30	36	42	48	54	60	9.1	18.2	36.3	54.5	76.7	90.8	109	127.2	145.3	163.5	181.7
170MDC5	25 psi (1.7 bar)	#5	4.3	8.5	17	25.5	34	42.5	51	59.5	68	76.5	85	13	25.7	51.5	77.2	103	128.7	154.4	180	205.9	231.6	257.4

<sup>\*</sup>Pump supplied with injection check valve for 26-100 psi (1.7-6.9 bar) applications

### Materials of Construction

All Housings\* . . . . . . . . Lexan® Polycarbonate Plastic Peristaltic Tube\*\* . . . . . . . . Santoprene® FDA Approved Check Valve Duckbill Peristaltic Tube<sup>†</sup> . . . . . . . . . . . Tygothane<sup>®</sup> FDA Approved Check Valve Duckbill\*\* . . . . . . . Pellathane® Suction/Discharge Tubing . . . . . LDPE Polyethylene-NSF/FDA Approved Ferrules (1/4" & 6 mm) Tube Fittings ..... Type 1 Rigid PVC-NSF Listed Connecting Nuts Check Valve Fittings Weighted Suction Line Strainer All Fasteners ..... Stainless Steel \*Lexan® is a registered trademark of General Electric. Consult General Electric for chemical resistance of Lexan®. \*\*Santoprene® is a registered trademark of Advanced Elastomer System. <sup>†</sup>Tygothane<sup>®</sup> is a registered trademark of Saint-Gobain Performance Plastics.

\*\*Pellathane® is a registered trademark of The Dow Company.

### Accessory Checklist – pre-installation

#### 25 psi Accessory Kit Contents\*

- 3 Connecting Nuts 1/4" or 3/8"
- 3 Ferrules 1/4" & 6 mm Europe OR 2 Ferrules 3/8"
- 1 Injection Fitting
- 1 Weighted Suction Line Strainer 1/4", 3/8", 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 Spare Pump Tube
- 1 Mounting Bracket
- 1 Installation Manual

#### 100 psi Accessory Kit Contents\*

- 3 Connecting Nuts 1/4" or 3/8"
- 3 Ferrules 1/4" & 6 mm *Europe* OR 2 Ferrules 3/8"
- 1 Injection Check Valve
- 1 Weighted Suction Line Strainer 1/4" or 3/8", 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 Spare Pump Tube
- 1 Mounting Bracket
- 1 Installation Manual

<sup>\*</sup> 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.

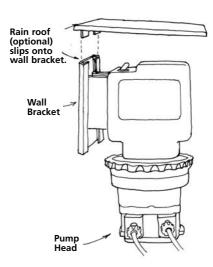
- Use the proper product to treat potable water systems, use only chemicals listed or approved for use.
- Install the pump to work in conjunction with pool, spa, well pump, or system controls.

### Installation continued — mount pump

#### **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 next page) in place to reduce the risk and severity of damage.
- 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

#### Additional Installation Instructions

- 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 Installierungsanweisung un

- 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.
- 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.
- 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.

#### Instucciones Adicionales Para instalación

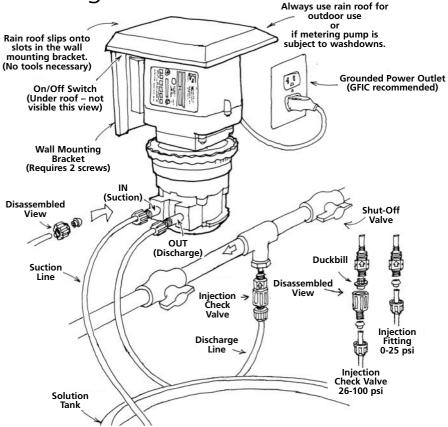
- 1. Todas las bombas Clase II situadas en la Zona 1 de las áreas de la piscina requieren colocarse donde no puedan ser inundadas.
- **2.** Esta bomba es para ser instalada "fija" en vez de portátil.
- Es necesario instalar el techo de lluvia, y montar la unidad entera siguiendo una orientación vertical.
- **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.

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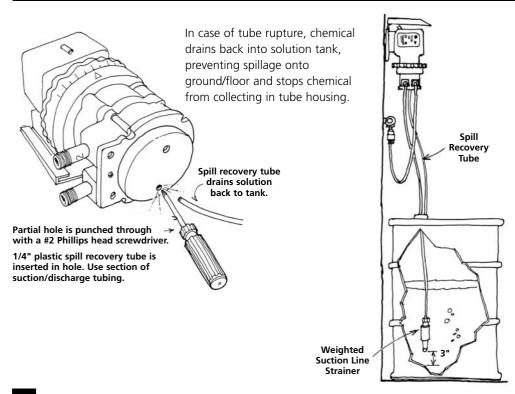
Installation Diagram



US and Canada 800.683.2378, International 904.641.1666

### Installation continued — spill recovery

### **SPILL RECOVERY**

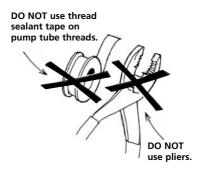


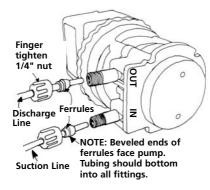
### Installation continued — suction/discharge lines

#### INSTALL SUCTION/DISCHARGE LINE TO PUMP HEAD

- 1. Uncoil the suction/discharge line. 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. Suction side tube connection is indicated by "IN" on the tube housing cover.
- **3.** Finger tighten nut to the threaded tube fitting while holding the tube fitting.
- Over tightening the ferrule and nut with a wrench may result in damaged fittings, crushed ferrules, and air pick up.
- DO NOT use thread sealant tape on pump tube connections or tools to tighten connections.

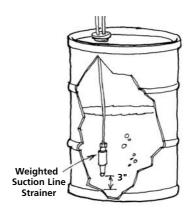
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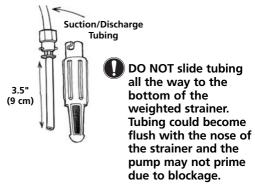




<sup>\*</sup> For 3/8" connections only. While stabilizing the tube fitting, attach female end of adapter to the tube fitting(s) (ferrule inside). Slide line through 3/8" connecting nut and finger tighten to male end of adapter. If leak occurs, gradually tighten the 3/8" connecting nut as required.

### Installation continued — suction line





#### **INSTALL SUCTION WEIGHT**

- 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, slide approximately 3 1/2" of tubing through the collet and lock into place on 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.

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### Installation continued — point of injection

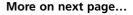
#### **INSTALL INJECTION POINT**

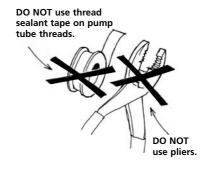
- Make a secure finger tight connection on the discharge fitting of the pump head as instructed in Install Suction Line instructions.
- DO NOT use thread sealant tape on pump tube connections or tools to tighten connections.
- **⚠** WARNING

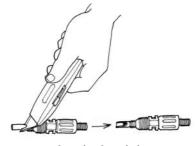
HAZARDOUS PRESSURE: Shut off water or circulation system and bleed off any system pressure.

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 threading tape. If necessary, trim the injection fitting quill as required to inject product directly into flow of water.



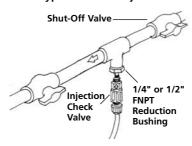




**Trim Injection Fitting** 

### Installation continued — point of injection

#### Typical Point of Injection



**⚠** WARNING

HAZARDOUS PRESSURE: Shut off water or circulation system and bleed off any system pressure. **4.** Hand tighten the injection fitting into the FNPT fitting.

### 0-25 psi Models (includes injection fitting)

- **a.** Install connecting nut\* and ferrule to the pump discharge tubing. Insert discharge tubing into injection fitting until it reaches base of fitting.
- **b.** Finger tighten connecting nut\* to fitting.

### 26-100 psi Models (includes injection check valve)

- **a.** Prior to connection, test injection 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 tubing. Insert discharge tubing into check valve body until it reaches base of body.
- c. Finger tighten connecting nut\* to fitting.

- **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.

<sup>\*</sup> For 3/8" connections, insert discharge tubing until if reaches base of injection fitting (25 psi) or check valve body (100 psi). If leak occurs, gradually tighten the 3/8" connecting nut as required.

# Troubleshooting – motor

MARNING HAZARDOUS VOLTAGE  DISCONNECT power cord before removing	r. I motor cover for service. <b>Electrical service sho</b> u	uld be by trained personnel only.
Loud or excessive noise	Worn ball bearings	Replace rotor assembly
	Insufficient lubrication	AquaShield® grease 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
	Rotor bound to coil	Replace bearing brackets if cracked
	Damaged motor coil	Replace motor coil
	Worn or damaged motor bearings	Replace rotor assembly
	Damaged power cord	Inspect and/or replace power cord
	Rotor rusted to coil	Clean off coil and motor or replace
	Faulty wire connections	Inspect and/or repair electrical connections
	Obstructed fan	Remove obstruction
Motor runs; fan turns; output shaft does not	Check all 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 at 125°F maximum
	Damaged/malfunctioning coil	Replace motor coil
Phenolic gear is stripping	Water intrusion	Use rain roof
	Cracked bearing bracket	Replace bearing bracket
	Worn gear posts	Replace gear posts
	Rusted helical gear at end of rotor	Buff off rotor or replace rotor
	Worn gear case cover	Replace gear case
	Insufficient lubrication	Lubricate with AquaShield®

### Troubleshooting continued — feed rate control

PROBLEM	POSSIBLE CAUSE	SOLUTION
Adjustment ring will not turn	Seized variable cam	Grease variable cam & cam slot
	Seized adjustment ring	Clean then lubricate ring with AquaShield®
Adjustment ring turns, output doesn't change	Variable cam disengaged from 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	Replace or re-insert variable cam
Erratic indexing	Index plate worn	Turn over or replace index plate
	Variable cam worn	Replace variable cam
	Lifter worn	Replace index pin & lifter assembly

# Troubleshooting continued — pump head

PROBLEM	POSSIBLE CAUSE	SOLUTION
Components cracking	Chemical attack	Check chemical compatibility
Pump head leaking	Pump tube rupture	Replace pump tube, ferrules; center tube
No pump output, pump head rotates	Depleted solution tank	Replenish solution
	Pump suction line weight is above solution	Replenish solution
	Leak in the suction line	Inspect or replace suction line
	Ferrules installed incorrectly, missing or damaged	Replace ferrules
	Injection point is clogged	Inspect and clean injection point
	Clogged suction/discharge tubing and/or injection check valve	Clean and/or replace as needed
	Life of pump tube exhausted	Replace pump tube, ferrules; center tube
	Suction tubing is flush with the nose of the weighted strainer	Pull suction tubing approximately 1" from bottom of strainer Cut bottom of suction tubing at an angle
Low pump output, pump head rotates	Life of pump tube exhausted	Replace pump tube, ferrules; center tube
	Rollers worn or broken	Replace roller assembly
	Injection point is restricted	Inspect and clean injection point
	Incorrect tube size	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 roller assembly	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	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 continued — pump tube

PROBLEM	POSSIBLE CAUSE	SOLUTION
NOTICE: A leaking pump t	ube damages the metering pump. Inspect pump frequer tion for additional safety precautions and instructions.	ntly for leakage and wear.
Tube leaking	Pump tube ruptured	Replace pump tube, ferrules; center tube
j	Calcium or mineral deposits	Clean injection fitting, replace pump tube, ferrules; center tube
	Excessive back pressure	Verify system pressure against tube psi, replace tube if needed
	Tube is twisted	Replace pump tube, ferrules; center tube
	Tube not centered	Replace pump tube, ferrules; center tube
Tube life is shortened	Chemical attack	Check chemical compatibility
	Mineral deposits at injection point	Remove deposits, replace pump tube, ferrules; center tube
	Sediment blockage at check valve	Maintain suction line 2-3" above bottom of tank
	Degraded check valve duckbill	Replace duckbill at every tube change
	Duckbill in wrong orientation	Reverse duckbill orientation
	Tube manually stretched or pinched during replacement	Follow tube replacement instructions and allow roller assembly to stretch tube into place
	Seized rollers caused abrasion on tube	Clean roller assembly or replace
	Exposure to heat or sun	Do not store tubes in high temperatures or in direct sunlight
Tube connection is leaking	Missing ferrule on 1/4" line	Replace ferrule
	Crushed ferrule	Replace ferrule
	Ferrule in wrong orientation	Reverse orientation of 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

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### Tube Replacement – safety information

### N 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 MSDS 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.

### **A CAUTION** PINCH POINT HAZARD:

① Use extreme caution when replacing pump tube. Be careful of your fingers and **DO NOT** place fingers near rollers.

### MARNING HAZARDOUS PRESSURE/CHEMICAL EXPOSURE:

- Use caution and bleed off all resident system pressure prior to attempting service or installation.
- ① Use caution when disconnecting discharge tubing from pump. Discharge may be under pressure. Tubing may contain chemical.
- NOTICE: Indicates special instructions or general mandatory action.
- **NOTICE: DO NOT** apply grease, oil, or lubricants to the pump tube or housing.
- **NOTICE:** Prior to pump tube replacement, inspect the entire pump head for cracks or damaged components. Ensure rollers turn freely.
- **NOTICE:** Rinse off chemical residual and clean all chemical and debris from pump head components prior to tube replacement. Apply Stenner grease to main shaft and tube housing cover bushing during tube replacement.
- **NOTICE: DO NOT** pull excessively on pump tube. Avoid kinks or damage during tube installation.
- **NOTICE:** Inspect the suction/discharge tubing, injection point (into pipe), and injection check valve duckbill for blockages after any tube rupture. Clear or replace as required.

### Tube Replacement continued — preparation

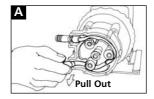
- **1.** Follow all safety precautions prior to tube replacement.
- 2. Prior to service, pump water or a compatible buffer solution through the pump and suction/discharge line to remove chemical and avoid contact.
- 3. Turn pump off.
- **4.** Disconnect the suction and discharge connections from pump head.
- **5.** Plug power cord into constantly energized, properly grounded receptacle for service.

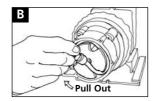
### Tube Replacement continued – remove old tube

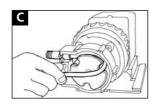
#### **REMOVE OLD TUBE**

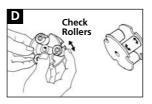
- 1. Remove and set aside cover and screws.
- 2. Set feed rate dial on the low setting until finished
- Turn pump on and let it run until one of three roller assembly slots lines up with the tube fitting on the suction side.
   Illustration A
- **4.** Turn pump off.
- **5.** Lift tube fitting out of housing slot and pull it toward center of roller assembly. *Illustration B*
- **6.** Turn pump on and allow roller assembly to jog while guiding tube, with tension, up and out of housing. *Illustration C*
- **7.** Turn pump off. Remove and discard pump tube.

- **8.** Remove roller assembly, shaft, and housing.
- **9.** Use non-citrus all-purpose cleaner to clean chemical residue from pump head housing, roller, and cover.
- **10.** Check housing for cracks. Replace if cracked.
- **11.** Ensure rollers spin freely. *Illustration D*
- **12.** Replace roller assembly if: seized, excessive side play from bore wear, or if rollers are visibly worn.
- 13. Reinstall clean tube housing.
- 14. Grease shaft tip and install.
- **15.** Install roller assembly.



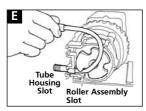


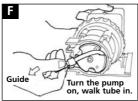


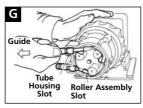


### Tube Replacement continued — install new tube

### IMPORTANT! DO NOT lubricate pump tube or roller assembly.







**NOTE:** Cover screws are self-tapping and must be backed in to locate original thread before securing. If a screw boss is stripped, use alternate bosses and position opposite from each other. Never secure the cover plate with more than 2 screws.

#### **INSTALL NEW TUBE**

- 1. Manually rotate the roller assembly counter clockwise to align one of three roller assembly slots with the suction side housing slot.
- Place tube fitting into suction side slot of the housing and the roller assembly slot.
   Illustration E
- **3.** With pump setting on low, hold tube fitting and jog roller assembly by turning pump on.

**IMPORTANT!** Avoid rotating wrist, which can result in a twisted tube that will not center. **DO NOT** force tube and be careful of your fingers.

**4.** Guide tube, with slight tension (toward the center) to prevent pinching between housing and roller assembly. *Illustration F* 

- **5.** When tube reaches the top housing slot, turn pump off.
- **6.** Turn dial ring to setting 10, hold tube fitting firmly, and turn pump on.

**NOTE:** A used tube will have stretched approximately 3/4" and the new tube will appear to be stiff and short. Follow directions to allow rollers to stretch tube into place.

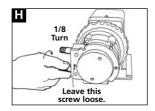
- **7.** Allow rollers to stretch tube into place while guiding tube into slot. *Illustration G*
- **8.** Turn pump off.
- Apply a small amount of grease (AquaShield®) to cover bushing ONLY and replace cover and two screws, leaving front screw in-between the fittings loose.

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### Tube Replacement continued — center new tube

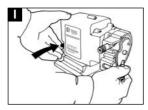
#### **CENTER NEW TUBE**

- To center pump tube on rollers, set feed rate dial to setting 10. Turn pump on. Illustration H
- **2.** Turn the tube fitting on the suction side not more than 1/8 of a turn in the direction tube must move.
- **3. DO NOT** let go of fitting until tube rides approximately in center of rollers.
- **4.** Turn pump off, let go of fitting, and tighten cover screws. Cover is not on securely if there is a gap between screw boss and cover.

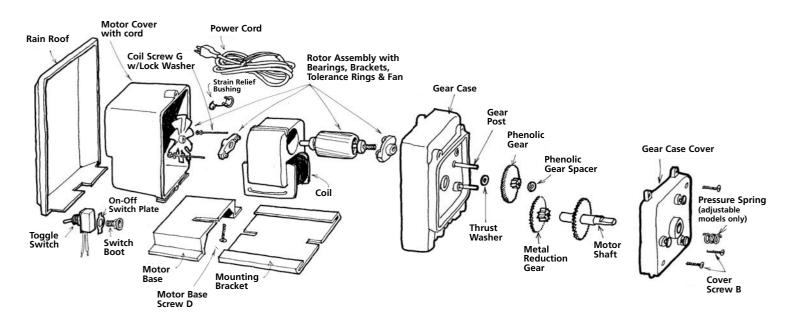


#### **TUBE CHANGE FOR FIXED OUTPUT PUMP**

. To install a new tube in a fixed output pump, follow the instructions above and utilize the on/off switch to jog the roller assembly in the absence of the feed rate control. *Illustration I* 



### Motor – exploded view



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## Motor continued — subassemblies

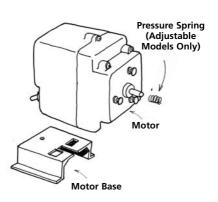
#### **MOTORS**

DESCRIPTION	PART NUMBER	UM	PART NUMBER	UM
Motor 60Hz Adjustable output 45 & 100 series	(120V) <b>PM6041D</b>	EA	(220V) <b>PM6042D</b>	EA
Motor 60Hz Adjustable output 85 & 170 series	(120V) <b>PM6081D</b>	EA	(220V) <b>PM6082D</b>	EA
Motor 60Hz Fixed output 45MP series	(120V) <b>ME6041D</b>	EA	(220V) <b>ME6042D</b>	EA
Motor 60Hz Fixed output 85MP series	(120V) <b>ME6081D</b>	EA	(220V) <b>ME6082D</b>	EA
Motor 60Hz Fixed output 100DMP series	(120V) <b>DM6041D</b>	EA	(220V) <b>DM6042D</b>	EA
Motor 60Hz Fixed output 170DMP series	(120V) <b>DM6081D</b>	EA	(220V) <b>DM6082D</b>	EA

#### INTERNATIONAL

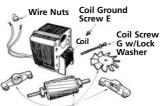
Motor 50Hz Adjustable output 45 & 100 series	(230V) <b>PM64230</b>	EA	(250V) <b>PM6426D</b>	EA
Motor 50Hz Adjustable output 85 & 170 series	(230V) <b>PM68230</b>	EA	(250V) <b>PM6826D</b>	EA
Motor 50Hz Fixed output 45MP series	(230V) <b>ME64230</b>	EA	(250V) <b>ME6426D</b>	EA
Motor 50Hz Fixed output 85MP series	(230V) <b>ME68230</b>	EA	(250V) <b>ME6826D</b>	EA
Motor 50Hz Fixed output 100DMP series	(230V) <b>DM64230</b>	EA	(250V) <b>DM64250</b>	EA
Motor 50Hz Fixed output 170DMP series	(230V) <b>DM68230</b>	EA	(250V) <b>DM68250</b>	EA
Miotor Sorie Fixed output 17 oblivir series	(230 ) 510100230		(2307) 510100230	

#### **Motor Subassembly**



## Motor continued — service kits

#### **Motor Service Kit**

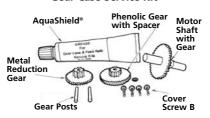


Rotor Assembly with Bearings, Brackets, Tolerance Rings & Fan

#### **MOTOR SERVICE KITS**

DESCRIPTION	<b>PART NUMBER</b>	UM	PART NUMBER	UM
Motor Service Kit 60Hz	(120V) <b>MSK120</b>	KIT	(220V) <b>MSK220</b>	KIT

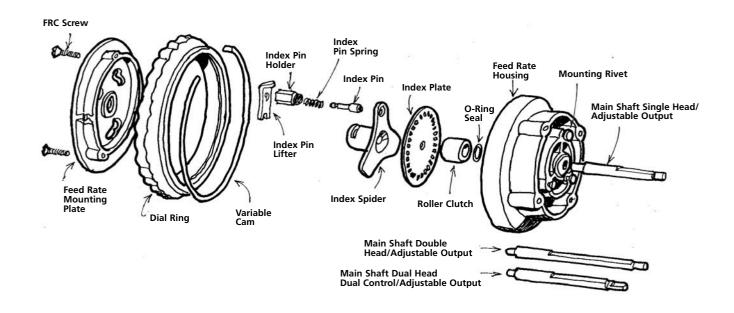
#### **Gear Case Service Kit**



### **GEAR CASE SERVICE KITS**

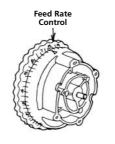
DESCRIPTION	PART NUMBER	UM
Gear Case Service Kit		
Adjustable output 45 & 100 series	GSK45A	KIT
Gear Case Service Kit		
Adjustable output 85 & 170 series	GSK85A	KIT
Gear Case Service Kit		
Fixed output 45MP series	GSK45F	KIT
Gear Case Service Kit		
Fixed output 85MP series	GSK85F	KIT

## Feed Rate Control – exploded view



Contact factory for part numbers.

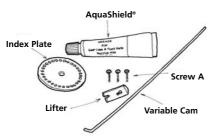
## Feed Rate Control continued — subassemblies & service kits



#### **FEED RATE CONTROLS**

DESCRIPTION	PART NUMBER	UM
Feed Rate Control with shaft		
Single head 45 & 85 adjustable series	FC5040D	EA
Feed Rate Control with shaft		
Double head 100 & 170 adjustable series	DM5040D	EA
Feed Rate Control with shaft		
Dual head dual control 100MDC & 170MDC series	DM504DC	EA

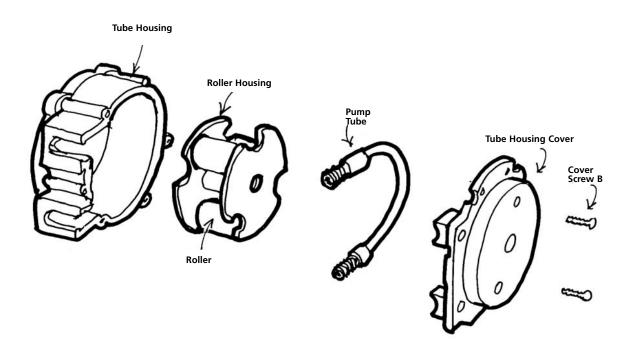
**Feed Rate Control Service Kit** 



#### FEED RATE CONTROL SERVICE KIT

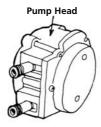
DESCRIPTION	PART NUMBER	UM
Feed Rate Control Service Kit	FSK100	KIT

## Pump Head – exploded view



Contact factory for part numbers.

## Pump Head continued — subassemblies



#### **PUMP HEADS**

DESCRIPTION	PART NUMBER	UM P	ART NUMBER	UM
Pump Head includes SANTOPRENE® pump tube,	UCTHC <u>*</u> D	EA   N	ICTHC <u>*</u> D	PK of 2
ferrules 1/4"	* select tube num	ıber 1, 2, 3, 4	4, 5, 7	
Pump Head includes SANTOPRENE® pump tube	UCPH_*_FD	EA	n/a	
& duckbill, ferrules 1/4"	* select tube num	ber 1, 2, 7		
Pump Head includes TYGOTHANE® pump tube,	UCPHT0_*_	EA	n/a	
ferrules 1/4"	* select tube num	ber 2, 5 <sup>'</sup>		
Pump Head includes TYGOTHANE®#2 pump tube,	UCPHTD2	EA	n/a	
PELLATHANE® duckbill, ferrules 1/4"		ı		

#### **EUROPE**

Pump Head includes SANTOPRENE®	UCTH <u>*</u> CE	EA   I	MCTH <u>*</u> CE	PK of 2
pump tube, ferrules 6 mm	* select tube numb	er 1, 2, 3,	4, 5, 7	
Pump Head includes SANTOPRENE®	UCPH_*_CE	EA	n/a	
pump tube & duckbill, ferrules 6 mm	* select tube numb	er 1, 2, 7		
Pump Head includes TYGOTHANE®	UCPHT_*_CE	EA	n/a	
pump tube, ferrules 6 mm	* select tube numb	er 2, 5 <sup>'</sup>		
Pump Head includes TYGOTHANE® #2 pump tube,	UCPHD2CE	EA	n/a	
PELLATHANE® duckbill, ferrules 6 mm		1		

#### **Pump Tube Numbers**

#1 and #2 for 26-100 psi pump (when used with check valve).

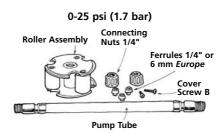
#1, 2, 3, 4, 5 for 0-25 psi pump.

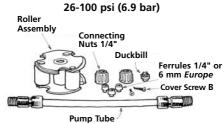
#7 tube for 26-100 psi single head pump only.

## Pump Head continued – service kits

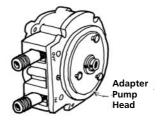
#### **PUMP HEAD SERVICE KITS**

DESCRIPTION	PART NUMBER	UM
SANTOPRENE® <b>Kit</b> 0-25 psi (0-1.7 bar)	PSKLO_*_	KIT
	* select tube number 1, 2, 3, 4, 5	
SANTOPRENE® <b>Kit</b> 26-100 psi (1.7-6.9 bar)	PSKH0 <u>*</u>	KIT
	* select tube number 1, 2, 7	
TYGOTHANE® <b>Kit</b> 0-25 psi (0-1.7 bar)	PSKLT_*_	KIT
	* select tube number 2 or 5	
<b>Kit</b> 26-100 psi (1.7-6.9 bar) includes	PSKHT2	KIT
TYGOTHANE® #2 Pump Tube		
& PELLATHANE® duckbill		
EUROPE		
SANTOPRENE® <b>Kit</b> 0-1.7 bar	PSKL * CE	KIT
	* select tube number 1, 2, 3, 4, 5	
SANTOPRENE® <b>Kit</b> 1.7-6.9 bar	PSKH_*_CE	KIT
	* select tube number 1, 2, 7	
TYGOTHANE® <b>Kit</b> 0-1.7 bar	PSKLT <u>*</u> CE	KIT
	* select tube number 2 or 5	
Kit 1.7-6.9 bar includes	PSKHT2CE	KIT
TYGOTHANE® #2 Pump Tube		
& PELLATHANE® duckbill		





## Adapter Pump Heads – subassemblies



#### **ADAPTER PUMP HEADS**

DESCRIPTION	PART NUMBER	UM	PART NUMBER	UM
Adapter Pump Head includes	UC1ATC <u>*</u>	EA	MC1ATC_*_	PK of 2
SANTOPRENE® pump tube, ferrules 1/4"	* select tube nu	mber 1, 2, :	3, 4, 5	
Adapter Pump Head includes	UCAH_*_FD	EA	n/a	
SANTOPRENE® pump tube & duckbill, ferrules 1/4"	* select tube nu	mber 1, 2		
Adapter Pump Head includes	UCAHT0_*_	EA	n/a	
TYGOTHANE® pump tube, ferrules 1/4"	* select tube nu	mber 2, 5		
Adapter Pump Head includes	UCAHTD2	EA	n/a	
#2 TYGOTHANE® pump tube		'		
PELLATHANE® duckbill, ferrules 1/4"				

#### **EUROPE**

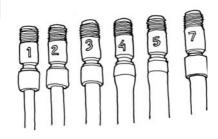
Adapter Pump Head includes	UCAP <u>*</u> CE	EA	MCAP <u>*</u> CE	PK of 2
SANTOPRENE® pump tube, ferrules 6 mm	* select tube nur	mber 1, 2, 3	3, 4, 5	
Adapter Pump Head includes	UCAH_*_CE	EA	n/a	
SANTOPRENE® pump tube & duckbill, ferrules 6 mm	* select tube nur	mber 1, 2		
Adapter Pump Head includes	UCAT_*_CE	EA	n/a	
TYGOTHANE® pump tube, ferrules 6 mm	* select tube nur	mber 2, 5		
Adapter Pump Head includes	UCT2DCE	EA	n/a	
#2 TYGOTHANE® pump tube,		'		
PELLATHANE® duckbill, ferrules 6 mm				

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## Pump Tubes

#### **PUMP TUBES**

DESCRIPTION	PART NUMBER	UM	PART NUMBER	UM
SANTOPRENE® <b>Pump Tube</b>	UCCP20_*_	PK of 2	MCCP20_*_	PK of 5
ferrules 1/4"	* select tube nu	mber 1, 2,	3, 4, 5, 7	
SANTOPRENE® Pump Tube & Duckbill,	UCCP_*_FD	PK of 2	n/a	
ferrules 1/4"	* select tube nu	mber 1, 2,	7	
TYGOTHANE® <b>Pump Tube,</b>	UCTYG0_*_	PK of 2	MCTYG0_*_	PK of 5
ferrules 1/4"	* select tube nu	mber 2, 5	•	
TYGOTHANE® <b>#2 Pump Tube &amp;</b>	UCTY2FD	PK of 2	n/a	
PELLATHANE® <b>Duckbill</b> , ferrules 1/4"			•	



#### **EUROPE**

SANTOPRENE® Pump Tube	UCCP2 <u>*</u> CE	PK of 2   MCCI	P2 <u>*</u> CE	PK of 5	
ferrules 6 mm	* select tube number 1, 2, 3, 4, 5, 7				
SANTOPRENE® Pump Tube & Duckbill,	UC <u>*</u> FDCE	PK of 2	n/a		
ferrules 6 mm	* select tube number 1, 2, 7				
TYGOTHANE® Pump Tube	UCTY_*_CE	PK of 2   MCT	Y_*_CE	PK of 5	
ferrules 6 mm	* select tube nu	mber 2, 5 <sup>'</sup>			
TYGOTHANE® <b>#2 Pump Tube</b> &	UCTY2DCE	PK of 2	n/a		
PELLATHANE® <b>Duckbill</b> , ferrules 6 mm		'			

#### **Pump Tube Numbers**

#1 and #2 for 26-100 psi pump (when used with check valve).

#1, 2, 3, 4, 5 for 0-25 psi pump.

#7 tube for 26-100 psi single head pump only.

## Check Valves

### **CHECK VALVES** 26-100 psi (1.7-6.9 bar)

Injection Check Valve 1/4"



**DESCRIPTION** PART NUMBER UM PART NUMBER UM **Check Valve** includes PK of 5 UCDBINJ EΑ MCDBINJ SANTOPRENE® duckbill, ferrules 1/4" PK of 5 Check Valve includes UCTYINJ EΑ MCTYINJ PELLATHANE® duckbill, ferrules 1/4"

Injection Check Valve 3/8"



Check Valve includes SANTOPRENE® duckbill, ferrules 3/8"	UCINJ38	EA		MCINJ38	PK of 5
Check Valve includes	UCTYIJ38	EA		MCTYIJ38	PK of 5
PELLATHANE® duckbill, ferrules 3/8"			'		

Injection Check Valve 6 mm



# EUROPE Check Valve includes SANTOPRENE® duckbill, ferrules 6 mm Check Valve includes UCTINJCE EA | MCINJCE PK of 5 PELLATHANE®duckbill, ferrules 6 mm

## For Your Records

lodel:
erial Number:
ate of Installation:



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