Chemical Feed System

Usage Instructions

Read and save these instructions

driSteem

Table of contents

ATTENTION INSTALLER

Read this manual before installing.
Leave manual with product owner.

DriSteem® Corporation Technical Support

North America: 800-328-4447

Europe: +3211823595

Call us at 800-328-4447

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Safety instructions: Anti-scalant solution (Polymaleic acid 10-20%)

ANTI-SCALANT SOLUTION (POLYMALEIC ACID 10-20%)

	CAUTION
⚠	Causes eye irritation
	Causes mild skin irritation
	Harmful if swallowed
	May cause respiratory irritation

FIRST AID

- **Inhalation:** Move to fresh air and treat symptomatically. Provide oxygen if breathing is difficult. Give artificial respiration if the victim is not breathing. Seek prompt medical attention.
- **Skin Contact:** Wash affected areas thoroughly with soap and water for at least 15 minutes. Seek medical attention if any irritation persists. After first aid, get appropriate in-plant, paramedic or community medical support.
- **Eye Contact:** Flush eyes with a large amount of water for 15 minutes. Seek medical attention if any irritation persists. After first aid, get appropriate in-plant, paramedic or community medical support.
- **Ingestion:** If swallowed, give 2 glasses of water to drink. DO NOT induce vomiting. After first aid, IMMEDIATELY seek appropriate in-plant, paramedic, or community medical support. Never give anything by mouth to an unconscious person.

STORAGE AND HANDLING INSTRUCTIONS

- Advice on safe handling:
  - Wear personal protective equipment.
  - Handle with care.
  - Take care to avoid waste and spillage when weighing, loading and mixing the product.
- Conditions for safe storage:
  - No smoking.
  - Keep in properly labelled containers.
  - Observe label precautions.
  - Keep containers tightly closed in a dry, cool and well-ventilated place (45°F - 95°F).
- Materials to avoid:
  - Strong acids
  - Leather
  - Wool
  - Aluminum
  - Zinc
  - Tin and alloys
  - Oxidizers
- Do no freeze.
- Keep away from food and drink.
- Keep away from tobacco products.

Refer to SDS for additional information.

For industrial use only.

Keep out of reach of children.

Safety instructions: Sodium bisulfite solution

SODIUM BISULFITE SOLUTION

⚠	CAUTION
	May cause allergy or asthma symptoms or breathing difficulties if inhaled
	Causes skin irritation
	May cause an allergic skin reaction
	May cause respiratory irritation. May cause drowsiness or dizziness
	Causes damage to organs through prolonged or repeated exposure

FIRST AID

- **Inhalation:** Move from contamination and seek fresh air. Call a physician if any difficulties persist. If person has stopped breathing administer artificial respiration.
- **Skin Contact:** Wash off with soap and plenty of water. Remove contaminated garments and wash or destroy. Consult a physician if irritation develops.
- **Eye Contact**: Flush eyes with plenty of running water for 15 minutes. Seek medical attention.
- **Ingestion:** If conscious, give plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Seek medical attention.

STORAGE AND HANDLING INSTRUCTIONS

- Advice on safe handling:
  - Wear personal protective equipment.
  - Handle with care.
  - Take care to avoid waste and spillage when weighing, loading and mixing the product.
- Conditions for safe storage:
  - No smoking.
  - Keep in properly labelled containers.
  - Observe label precautions.
  - Keep containers tightly closed in a dry, cool and well-ventilated place (45°F - 95°F).
- Materials to avoid:
  - Strong acids
  - Leather
  - Wool
  - Aluminum
  - Zinc
  - Tin and alloys
  - Oxidizers
- Do no freeze.
- Keep away from food and drink.
- Keep away from tobacco products.

Refer to SDS for additional information.

For industrial use only.

Keep out of reach of children.

Safety instructions: Sodium hypochlorite

SODIUM HYPOCHLORITE

⚠	**CAUTION**
	Causes sever skin burns and eye damage
	May cause respiratory irritation
	May be corrosive to metals

FIRST AID

- **General advice:** Show the safety data sheet to the doctor in attendance. Immediate medical attention is required.
- **Inhalation:** Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
- **Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
- **Skin contact:** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
- **Ingestion:** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
- **Self-protection of the first aider:** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
- **Most important symptoms and effects, both acute and delayed:**
  - **Symptoms:** Burning. Coughing and/ or wheezing. Redness. May cause blindness.
- **Indication of any immediate medical attention and special treatment needed:**
  - **Note to physicians:** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

STORAGE AND HANDLING INSTRUCTIONS

- **Advice on safe handling**: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
- **Conditions for safe storage, including any incompatibilities:**
  - **Storage Conditions:** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.
  - **Incompatible materials:** Oxidizing agent. Acids. Ammonia. Organic material. Metals. Peroxides. Reducing agent.

Refer to SDS for additional information.

For industrial use only.

Keep out of reach of children.

Specifications

Table 6-1:
Chemical specification

Model	Weight	Dimensions (inches)	Capacity	Storage Temperature
Anti-scalant (Polymaleic acid)	41.7 lb	11.5 (L) x 10.5 (W) x 14.5 (H)	5 gallons	45 - 95°F ambient
	120.6 lb	26.5 (H) x 14 (W)	15 gallons	
Sodium bisulfite	41.7 lb	11.5 (L) x 10.5 (W) x 14.5 (H)	5 gallons	
Sodium hypochlorite	50.0 lb	11.5 (L) x 10.5 (W) x 14.5 (H)	5 gallons	

FIGURE 6-1: 5 GALLON

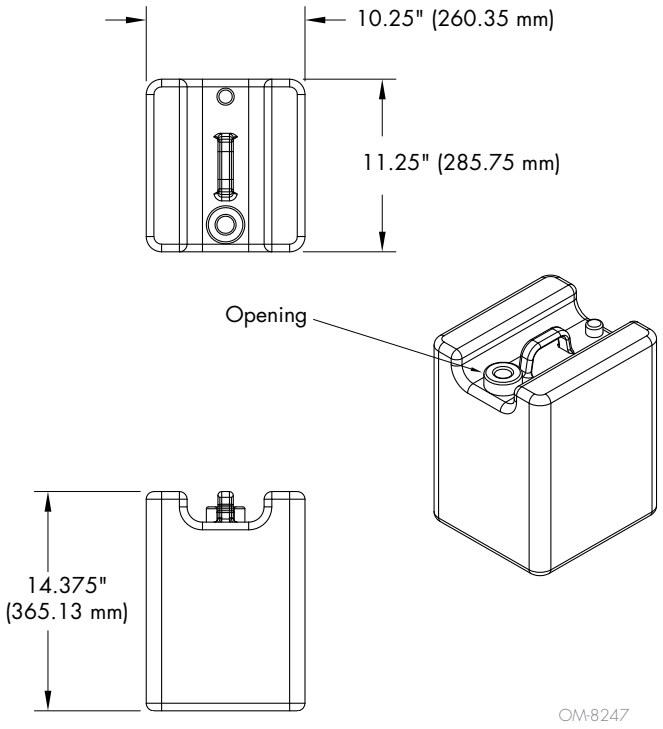
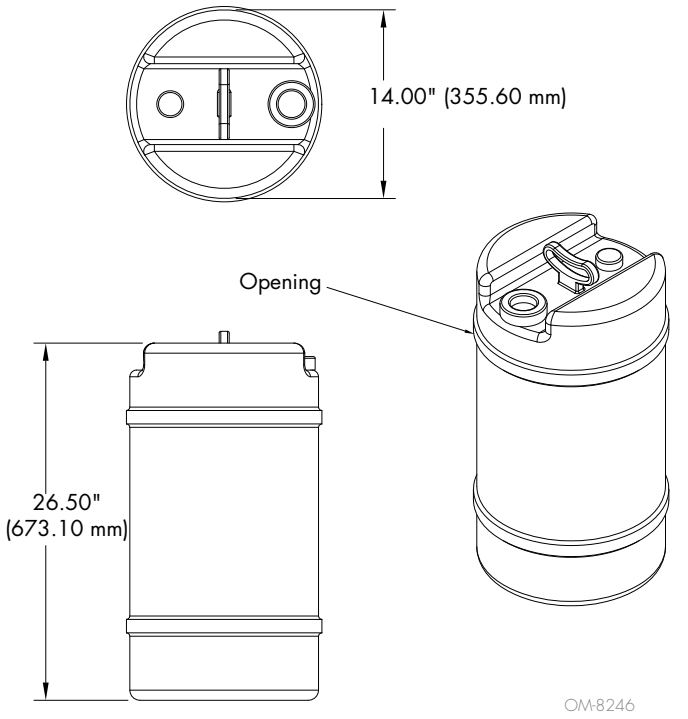


FIGURE 6-2: 15 GALLON



Usage

The following are instructions for using DriSteem anti-scalant to prevent the membranes in the RO 400 reverse osmosis system from scaling. The sodium bisulfite solution removes disinfection product from the incoming water supply to the RO 400 reverse osmosis system.

The Azone 15 product is added to the water supply to oxidize iron/ manganese and media, in a Greensand plus filter system.

IMPORTANT

Scale buildup occurs gradually on the membrane surface when adverse solubility conditions exist. Follow RO guidelines on when to clean.

IMPORTANT

These products are not to be used for cleaning DriSteem humidifiers.

SAFETY GEAR

Use proper safety gear including the following:

- Rubber or neoprene gloves
- Anti-splash goggles
- Rubber apron
- Rubber boots
- Protective clothing

SUPPLIES REQUIRED

- Anti-scalant
- Sodium bisulfite
- Chemical metering pump
- Tubing injection quill
- Foot valve
- Multifunctional valve (optional)
- Tools for servicing
- Pump manual (shipped with unit)

ANTI-SCALING PROCESS FOR RO 400 WATER TREATMENT SYSTEMS

Each RO system has a variable feed flow/recovery and chemical load potential. These feed rates are based on an average and site specific factors should be considered for optimization.

Overfeed of bisulfite can cause biological growth. Underfeed causes oxidation of membrane surface. Overfeed of polymer can foul system while under feed can increase scale; resulting in more frequent cleaning.

Overfeed of chlorine can corrode components. Underfeed will not regenerate greensand media or disinfect.

INSTRUCTIONS

1. Review SDS sheet for safe handling and proper use of anti-scalant and disinfection reducer, in addition to instructions provided in this document.
2. Remove the RO system from service before beginning to install the chemical feed. This can be accomplished by turning off power to the RO system and interlocking water supply.
3. Refer to your RO system IOM for specification information regarding how to shutdown the RO system prior to the installation of chemical feed.

Usage

FIGURE 8-1: ANTI-SCALING PUMP ASSEMBLY FOR RO 400 SERIES WATER TREATMENT SYSTEM

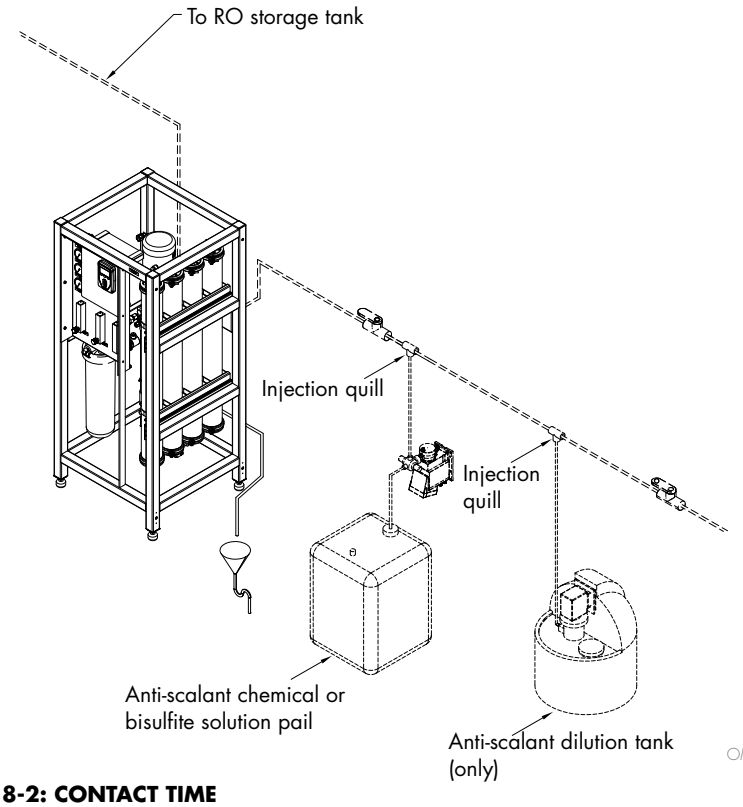


FIGURE 8-2: CONTACT TIME

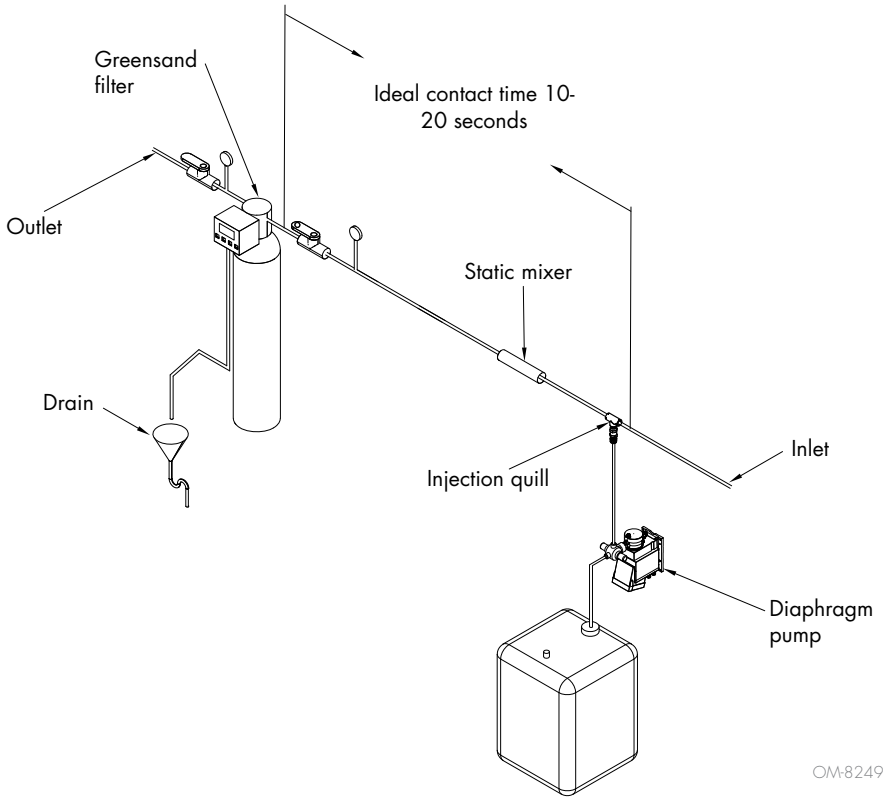


Table 8-1:
Adjustable peristaltic pump settings - Anti-scalant only

	Model	Pump settings
Hydotrue RO 400 Series Water Treatment System	401	L
	402	L
	403	1
	404	1
	406	1.5
	408	2
	412	2.75
Note: 10 parts water to 1 part chemical (by volume) for dilution.		

Table 8-2:
Dosage mL/hr for precise metering pump (neat) - Anti-scalant only

	Model	Pump settings
Hydotrue RO 400 Series Water Treatment System	401	-
	402	2.8
	403	4.4
	404	4.4
	406	6.4
	408	8.2
	412	12.3

Recommended quantity

Table 9-1:
RO system recommended quantity amounts

	Model	Inlet flow (gpm)	Anti-Scaling Solution amount	Sodium Bisulfite amount	Sodium Hypochlrite amount
			mL/hr	mL/hr	mL/hr
Hydotrue RO 400 Series Water Treatment System	401	1.9	-	-	-
	402	3.3	3.50	3.9	-
	403	5.2	5.52	6.2	3.45
	404	5.1	5.41	6.1	3.38
	406	7.5	7.96	9.0	4.98
	408	10.7	11.36	12.8	7.10
	412	14.5	15.39	17.3	9.62

Dosage of a chlorine solution should occur upstream of the greensand filter. The ideal length is 10-20 seconds upsteam of the filter. In practice, this might not be available and the next best methodology is to use a static mixer and inject as far upstream as possible. This will help the chlorine have enough contact time to react with iron, manganese, and hydrogen sulfide. A free residual of chlorine should remain on the effluent side. Use the dosage table as a starting point and optimize the feed based on a 0.3-0.5 ppm residual on the downstream side of the filtration.

The demand of chlorine is based on the following formula:

Chlorine Dosage (mg/L)= (1 x ppm of Fe)+ (3 x ppm of Mn)+(6 x ppm H2S)+ (8x ppm NH3)

Please note that water quality can change over time and periodic measurements should be taken to verify program success. If the residual is low, than increase chemical metering pump setting. If the residual is high, than decrease the chemical metering pump setting.

Installation, piping, and wiring

UNPACKING, ASSEMBLING AND MOUNTING

The carton contains:

- Metering pump
- Clear flexible suction tubing
- Rigid white return tubing.
- Pump can be mounted on a wall shelf bracket
- Tank stand platform
- Mount direct on wall
- Mount directly on the tank cover
- Bleed valve assembly (multi-function valve)
- Instructions
- Strainer assembly with tube weight (foot valve)
- Back check valve assembly (multi-function valve)
- Rigid white discharge tubing

Installation, piping, and wiring

⚠ CAUTION

Do not force fittings, HAND TIGHTEN ONLY. Do not use additional sealants, such as pipe tape, on tubing fittings. Use additional sealants, such as pipe tape, on pipe fittings and tighten normally.

To mount the pump directly on the wall, place the pump base against the wall with the motor below the pumping head, remove four head mounting bolts, and turn head quarter turn so suction is in bottom position.

IMPORTANT:

Injection point must be higher than top of solution tank to prohibit gravity feeding. Maximum head is dependant on the pump maximum discharge rating.

Flooded suction mounting (installing the pump at the base of tank on a platform) is the most trouble free type of installation.

NOTE:

The pump is secured on the platform, and then the clear suction tubing is attached to a bulkhead fitting assembly and the suction valve housing on the pump head. Since the suction tubing is always filled with solution, priming is accomplished much more quickly and the chance of losing prime on an installation where the pump is used only a few hours a day, is greatly reduced. The pump comes with a bleed valve assembly that attaches to the discharge valve in the pump head. The bleed valve allows to manually prime the pump and depressurize the discharge line without disconnecting the pump from the tubing connections.

FIGURE 11-1: GRUNDFOS INJECTION QUILL (#601379)

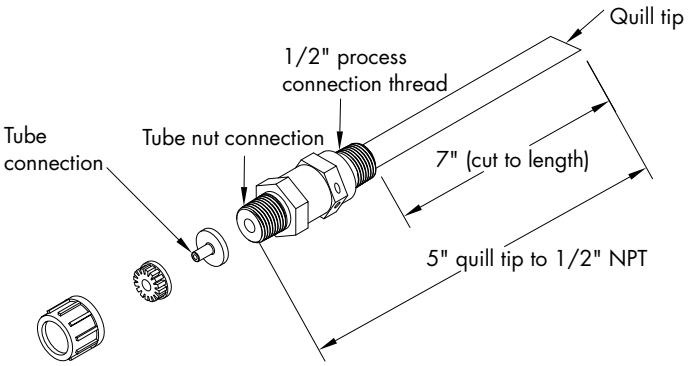
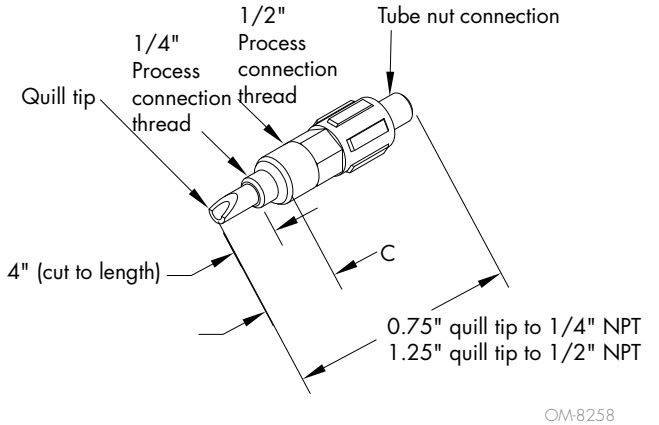


FIGURE 11-2: STENNER INJECTION QUILL (#601378)

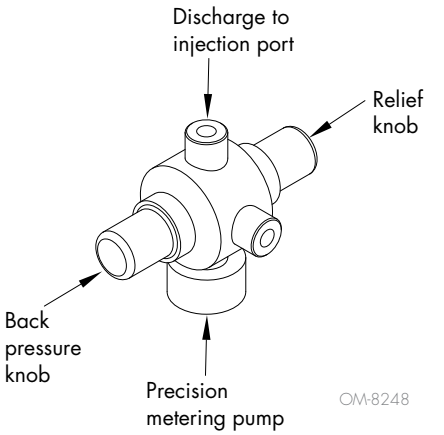


Installation, piping, and wiring

⚠ CAUTION

If water is used to dissolve solid chemicals or create a dilute solution, the chemical tanks should be manually filled or an approved means must be used to prevent a cross connection between the chemical tank contents and the potable water line. Check local plumbing regulations.

FIGURE 12-1: MULTI-FUNCTION VALVE



CHEMICAL INJECTION

Chemical injection into an open tank

The discharge tubing can be placed in an open tank with or without the injection valve assembly. Each pump is shipped with a spring loaded back check injection valve. This assists in a positive seal loaded back check injection valve. This assists in a positive seal on the discharge side of the pump head preventing back flow.

NOTE: It is recommended to install the injection assembly in a vertical position on the bottom side of the water line. This will insure proper sealing of the injection assembly check valve and prevent a back flow into the pump's discharge line. Confirm the arrow on the injection fitting is pointing upward.

ANTI-SIPHON VALVE (MULTI-FUNCTION VALVE)

Under any installation condition where the possibility of siphoning or suction may occur on the discharge side of the pump, install an anti-siphon valve on the discharge side of the pump. The anti-siphon valve is not part of the standard package. Contact DriSteem.

PRESSURE RELIEF VALVE (MULTI-FUNCTION VALVE)

Chemical pumps are rated to pump against a line pressure up to 100 PSI (7 bar). If the line pressure on an installation could fluctuate above 100 PSI (7 bar), install a pressure relief valve on the discharge side of the pump head. Once the pressure reaches a certain level, the preset relief valve will return the solution being pumped back to the solution tank. This will prevent motor burnout or diaphragm rupture. The relief valve is not part of the standard package. Contact DriSteem. Read relief valve instructions carefully before installing.

Installation, piping, and wiring

BLEED VALVE INSTALLATION (MULTI-FUNCTION VALVE)

NOTE:

After disconnecting power to the pump and taking necessary safety precautions regarding the chemical and system.

1. Remove the coupling nut and tubing from the discharge port of the pump.
2. Remove the valve housing from the discharge side of the pump head and replace it with the 0.38 inch valve housing from the kit (this step is not required if the pump is already fitted for 0.38 inch tubing.
3. Install the TFE gasket over the discharge fitting.
4. Install the bleed valve assembly over the discharge fitting and gasket.
5. Install the bypass tubing from the kit into the bypass port of the bleed valve and hand-tighten the coupling nut. Bypass tubing should be connected to return bypassed liquid back to the solution tank.
6. Install the discharge tubing into the discharge port of the bleed valve and hand tightens the coupling nut.
7. Return the system to operating conditions and reconnect the power to the pump. The pump is now ready for priming and operation. Always use caution and check for leaks at newly assembled connections.

AIR BLEED OPERATION

1. While pump is running, turn the bleed valve knob counter clockwise.
2. Run with valve open until a solid stream of fluid comes out of the bypass tubing (0.38 inch tubing supplied with valve).
3. Close air bleed valve by turning the bleed valve knob clockwise.

HAND TIGHTEN FITTINGS

When connecting tubing to suction and discharge fittings, the coupling nuts should be tightened hand tight only. Excessive tightening can cause cracks in pump head.

COMMON ERRORS IN THE INJECTION OF CHEMICALS

Do not insert the injection fitting into a pipe stub in the tee. A full strength solution will often cause corrosion or scale in the pipe stub when it is not in the flowing stream. The maximum lift of the chemical pump is five feet. Do not exceed this height. Confirm the arrow on the fittings and the pump head point vertically upward in order to prevent backflow. Arrows indicate the proper flow of the chemical.

Priming

If the discharge line is connected directly to a pressurized system it should be temporarily bypassed during priming of the pump. This pump is equipped with a bleed valve to simplify this operation by allowing easy bypass of the discharge fluid. All air must be purged from the pump head before the pump will pump against pressure. Turn on the power to the pump. Loosen the locking lever by turning it counter-clockwise and turn the output adjusting knob counter-clockwise to full capacity, (one full turn only) then tighten the locking lever by turning clockwise to a hand tight position. Solution should be primed to the head within a few minutes.

AIR BLEED OPERATION

1. While pump is running, turn adjustment screw counterclockwise.
2. Run with valve open until a solid stream of fluid comes out of the bypass tubing 0.25" (0.63cm) ID x 0.38" (0.96cm) OD supplied with valve, no air bubbles.
3. Close air bleed valve by turning adjustment screw clockwise.

NOTE:

The pump is adjustable only while running; never force the output adjustment knob. Do not turn the adjustment knob while the pump is stopped. If the solution hasn't reached the head in a few minutes, disconnect power to the pump, confirm the system is depressurized, remove the discharge tubing and discharge fitting and dampen the discharge valve area (ball check and valve seats) with a few drops of solution being fed by the pump. For safety, use protective gloves and safety glasses and a proper container to hold chemical. Replace the fitting and tubing and start the pump.

4. Turn the power on once more and adjust the pump to the proper rate, using the locking lever as before.

⚠ CAUTION

When working on or around metering pump installation, protective gloves and safety glasses should be worn at all time.

⚠ CAUTION

Check calibration of the pump before leaving the installation site. A test for chemical residual in the treated water is the best indication of the correct pump setting.

Component replacement

SCALE: GASKETS AND CHECK VALVES

When checking the metering pump or providing routine maintenance, replace all valve seats or ball checks if any of the show any wear or deterioration.

Check valve seats every 4-6 months depending upon the application. Repeated deterioration of valve seats and other rubber or plastic parts within a few months period usually indicates another material should be used for the defective part. Contact DriSteem Technical Support for parts affected for possible alternate materials.

SOLUTION TANK

Check the solution tank for settling of chemicals. If there is sludge on the bottom of the solution tank, clean the strainer, the foot valve, and the solution tank. Installing the foot valve a few inches above the bottom of the tank will prevent future clogging.

NOTE:

If the chemical being pumped regularly precipitates out of solution or does not dissolve easily or completely (calcium hydroxide), mixers are readily available in different motor configurations and mounting.

OUTPUT ADJUSTING KNOB

Sometimes the output adjusting knob can move on its shaft and cause a false output indication. This can happen if the knob set-screw slips or if the unit is disassembled for any reason. The unit can be reset to "0":

1. Remove the dial stop.
2. With the pump running, loosen the locking lever and turn the adjusting knob counter-clockwise until it is "loose" to touch.
3. Slowly re-screw the knob clockwise, using very light finger pressure. It will soon start to advance in pulses as the internal cam comes in and out of contact.
4. When light finger pressure will no longer allow movement of the knob between cam contacts, grasp the knob securely and tighten the locking lever (turning clockwise) making sure that the knob does not move. To check for zero point, turn on pump. There should be no liquid coming out of discharge fitting.
5. Replace dial stop.
6. If the pointer is not at "0", loosen the set-screw on the knob (use a 0.078 in Hex key), and turn pointer to "0", then retighten the set-screw while holding the knob in place.
7. A setting of "0" will now give zero output. One full revolution of the knob counter clockwise will give maximum output. The knob should never be turned more than one full revolution.

Troubleshooting

Table 16-1:
Troubleshooting guide

Problem	Possible cause	Action
Loss of chemical residual	Pump setting too low	Adjust to higher setting (pump must be operating during the stroke length adjustment).
	Scale at injection point	Clean injection parts with 8% muriatic acid or undiluted vinegar.
	Solution container allowed to run dry	Refill the tank with solution and prime.
Too much chemical	Pump setting too high	Lower pump setting (pump must be operating to adjust the dial).
	Chemical in solution tank too rich	Dilute chemical solution. NOTE: For chemical that reacts with water, it may be necessary to purchase a more dilute grade of chemical direct from a chemical supplier.
	Siphoning of chemical into well or main line	Test for suction or vacuum at the injection point. If suction exists, install an anti-siphon valve.
Leakage around tubing connections	Worn tube ends	Cut off the end of tubing (about 1") and then slip on as before or replace suction valve housing and compression fitting to prevent leakage.
	Chemical attack	Consult your chemical supplier for compatible materials.
Failure to pump or feed	Leak in suction side of pump	Examine suction tubing. If worn a the end, cut approximately an inch off and replace or replace valve body and coupling nut.
	Valve seats not sealing	Clean valve seats if dirty ore replace with proper material if deterioration is noted.
	Low setting on pump	When pumping against pressure, the dial should be set above 40% maximum rated capacity for a reliable feed rate.
	Diaphragm ruptured	Replace diaphragm. Check for pressure above pump maximum pressure at the injection point. NOTE: Chemical incompatibility with diaphragm material can cause diaphragm rupture and leakage around the pump head.
	Pump head cracked or broken	Replace pump head. Do not use pipe tape or other sealants. Hand tight only. Using pliers or wrench can crack pump head. Chemical incompatibility can cause cracking and subsequent leakage.
	Pump head contains air or chlorine gas	While pump is running, turn bleed valve adjustment screw counter-clockwise until air is purged. Close bleed valve.
Pump loses prime	Dirty check valve	Remove and replace or clean off any scale or sediment.
	Ball checks not seating or not sealing properly	Check seat and ball checks for chips, clean gently. If deformity of deterioration is noted, replace part with proper material. Chemical crystallization can hold check valves open. Valve must be disassembled and cleaned. Replace parts as needed.
	Solution container allowed to run dry	Refill the tank with solution and prime
Leakage at fitting	Loose fittings	Hand tight all fittings to prevent leakage. Clean off chemicals which have spilled on pump.
	Broken or twisted gasket	Check gaskets and replace if broken or damaged.
	Chemical attach	Consult your chemical supplier for compatible materials.

Troubleshooting

Table 17-1: Troubleshooting guide

Problem	Possible cause	Action
Pump will not prime	Too much pressure at discharge	Open bleed valve and circulate fluid until all air is purged from pump head assembly. Close bleed valve.
	Check valves not sealing	Disassemble, loosen, clean and check for deterioration or swelling.
	Output dial not set at maximum	Always prime pump with output dial set at maximum rated capacity.
Anti-siphon valve malfunction	Scale or particles have plugged diaphragm	Remove, clean and reassemble, being careful not to wrinkle the diaphragm. Check sequence and position of parts to be sure reassembly is correct.
	Ruptured valves	Consult your distributor for replacement.
Pump motor stalls	Pumping against excessive pressure	Test pressure to determine if it exceeds pump specifications. If so, consult your distributor.
	Low voltage to pump	Confirm voltage of power source matches the voltage on the pump specifications label. if not transformers are available.
Motor running very hot	Low voltage	Power supply voltage should match voltage on pump specification label.
	If using a step-down transformer, it may be undersized for the pump	Check the transformer to be sure it has at least 100 watts capacity.

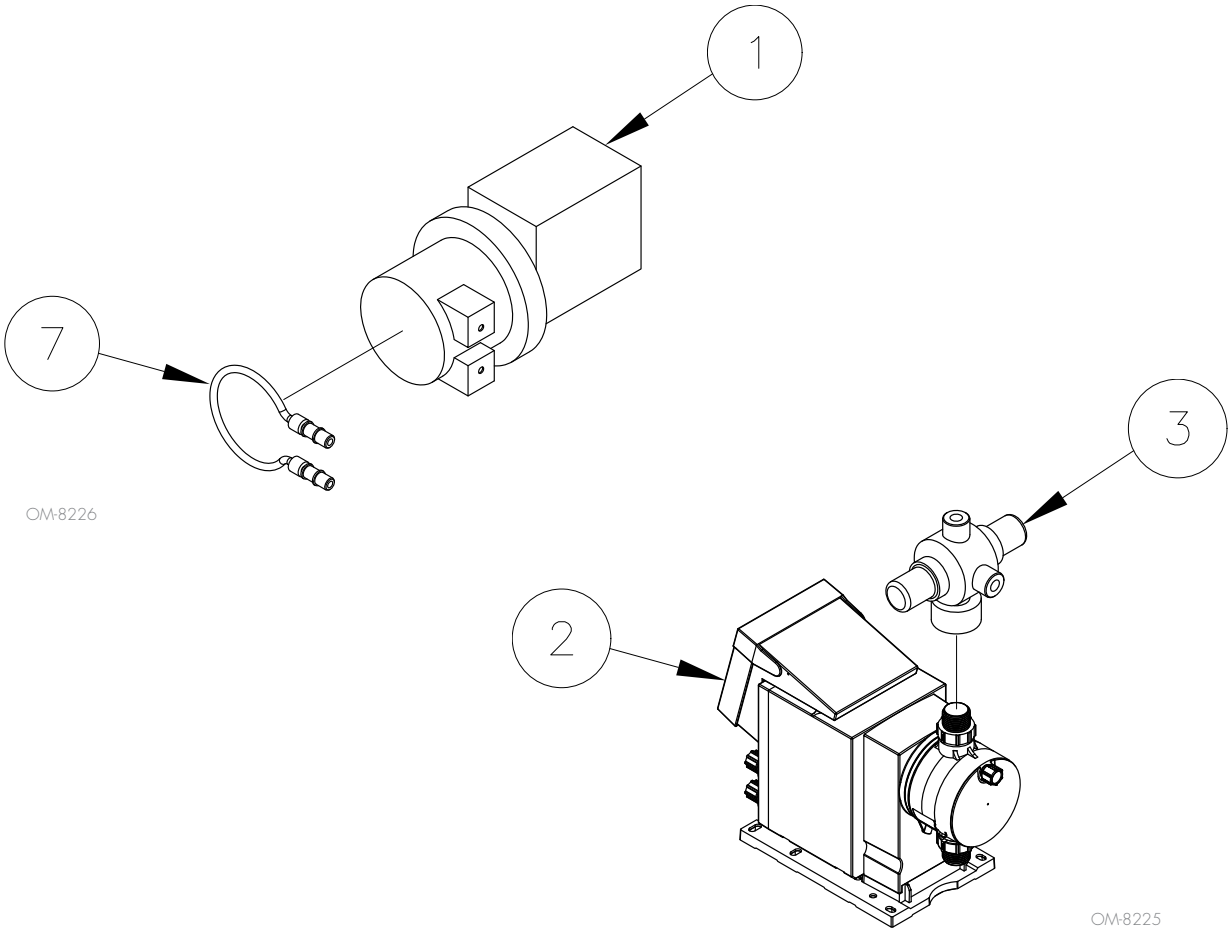
DriSteem Technical Support

Have the following information ready when calling Technical Support. See phone number inside front cover of this manual.

Model number
Serial number
When issue began
_____
Issue description
_____
_____

Chemical feed system

FIGURE 18-1: CHEMICAL FEED SYSTEMS



Chemical feed system

Table 19-1:
Chemical feed system replacements parts

No.	Description	Qty.	Part No.
1	PUMP,METERING,120V,45MHP2,3 GPD,STENNER	1	601307
2	PUMP,DOSING,100-240V,DDA 7.5-16,GRUNDFOS	1	601308
3	VALVE,MULTIFUNCTION,GRUNDFOS	1	601309
4*	CHEM,ANTI-SCALANT,5 GAL	1	601318-005
	CHEM,ANTI-SCALANT,15 GAL	1	601318-015
5*	CHEM,CHLORINE REDUCTION,5 GAL	1	601319-005
6*	CHEM, SODIUM HYPOCHLORITE, 5 GAL	1	601325-005
7	TUBE,PUMP,#1 SANTOPRENE 1/4",2-PK	1	601321
8*	CABLE,INPUT,16FT,GRUNDFOS	1	601320
9*	TUBING,INSTALLATION KIT,1/4",GRUNDFOS	1	601322
10	INJECTION QUILL STENNER (see Figure 11-2)	1	601378
11	INJECTION QUILL DDA (see Figure 11-1)	1	601379
12*	TUBING 3/8" OD X 1/4" ID POLYETH 50FEET	1	100139-051
	TUBING 1/4" OD X 1/8" ID POLYETH 50FEET	1	100139-053
13*	SUCTION LINE STRAINER STENNER	1	601380
14*	FOOT VALVE DDA	1	601381
15*	STATIC MIXER 3/4" NPT	1	601346-075
	STATIC MIXER 1" NPT	1	601346-100
	STATIC MIXER 1.5" NPT	1	601346-150
	STATIC MIXER 2" NPT	1	601346-200

*Not shown

Expect quality from the industry leader

Since 1965, DriSteem has led the industry with innovative methods for humidifying and cooling air with precise control. Our focus on ease of ownership is evident in the design of our humidifiers. DriSteem also leads the industry with a Two-year Limited Warranty and optional extended warranty.

For more information
www.dristeem.com
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For the most recent product information visit our Web site: www.dristeem.com

DRI-STEEM Corporation

a subsidiary of Research Products Corporation
DriSteem U.S. operations are ISO 9001:2015 certified

U.S. Headquarters:

14949 Technology Drive
Eden Prairie, MN 55344
800-328-4447 or 952-949-2415
952-229-3200 (fax)

Continuous product improvement is a policy of DriSteem; therefore, product features and specifications are subject to change without notice.

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Part No. 890000-172 REV A